Report of Phase II Environmental Site Assessment
Former Sanitary Laundry Property
625 N. Broadway, Knoxville, Tennessee
S&ME Project No. 4143-17-016
EPA Brownfields Cooperative
Agreement No. BF-00D47816-0

PREPARED FOR:

City of Knoxville Office of Redevelopment
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September 14, 2018

September 14, 2018

City of Knoxville Office of Redevelopment
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Knoxville, Tennessee 37902

Attention: Ms. Anne Wallace

Reference: **Report of Phase II Environmental Site Assessment**
Former Sanitary Laundry Property
Knoxville, Tennessee
EPA Brownfields Cooperative Agreement No. BF-00D47816-0
S&ME Project No. 4143-17-016

Dear Anne:

S&ME, Inc. (S&ME) has completed an additional Phase II Environmental Site Assessment (ESA) of the Former Sanitary Laundry Facility located at 625 N. Broadway in Knoxville, Tennessee. The purpose of the additional Phase II ESA was to further assess the nature and distribution of vapor-phase contamination associated with the past use of the subject site in order to address data gaps identified in planning for the site mitigation and cleanup, and to provide current supplemental data for remediation design purposes.

S&ME appreciates this opportunity to be of service to you. Please call if you have questions concerning this report or any of our services.

Sincerely,

S&ME, Inc.

Nathan J. Peterson, PG
Field Team Leader

Elizabeth M. Porter, PG, PMP
Project Manager

Senior Reviewed by Rick Bruce, PG, CHMM, Quality Assurance Officer

cc: Olga Perry, USEPA
Justin Fisher, TDEC Knoxville
Paula Middlebrooks, TDEC

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Executive Summary

S&ME Inc. (S&ME) conducted an additional Phase II Environmental Site Assessment (Phase II ESA) of the sub-slab conditions at the Former Sanitary Laundry Facility located in Knoxville, Tennessee. This Phase II ESA, conducted on behalf of the City of Knoxville, was performed to further evaluate the nature and distribution of vapor-phase contamination resulting from past use of the property in order to address data gaps identified in planning for the site cleanup, and to provide current supplemental data for remediation and mitigation design purposes. This assessment was performed under a Brownfields Cleanup Grant provided by the United States Environmental Protection Agency (EPA), Region 4, under EPA Brownfields Cooperative Agreement No. BF-00D47816-0. The additional Phase II ESA activities consisted of the collection and laboratory analysis of 12 sub-slab soil gas samples and six flux chamber vapor samples from the building basement floor.

Sub-slab Gas

The results of sub-slab gas analysis identified detectable concentrations of petroleum and solvent-related volatile organic compounds (VOCs) in each of the 12 samples analyzed. Concentrations in excess of the corresponding EPA May 2018 Industrial and Residential Regional Screening Levels (RSL_{ind} and RSL_{res}, respectively) for air samples were reported.

The Vapor Intrusion Screening Level (VISL) calculator was used to evaluate the analytical results. Under a residential land-use scenario the VISL calculator identified a vapor intrusion (VI) carcinogenic risk exceeding the Target Carcinogenic Risk (TCR) of 1×10^{-6} for carbon tetrachloride, chloroform, 1,2-dichloroethane, naphthalene, 1,1,2,2,-tetrachlroethane, tetrachloroethylene, 1,1,2-trichloroethane, trichloroethylene, and vinyl chloride. A VI hazard was identified in excess of the Target Hazard Quotient (THQ) of 0.1 for chloroform, 1,2-dichloroethane, tetrachloroethylene, 1,1,2-trichloroethane, trichloroethylene, and vinyl chloride.

The results of VISL screening under an industrial/commercial scenario identified a VI carcinogenic risk in excess of the TCR (1×10^{-6}) for chloroform, 1,2-dichloroethane, 1,1,1,2-tetrachlroethane, tetrachlroroethylene, 1,1,2-trichloroethane, trichloroethylene, and vinyl chloride. A VI hazard was identified in excess of the THQ (0.1) for trichloroethylene.

Flux Chamber Gas

Because of the current building conditions, with multiple missing windows allowing passive blending of outdoor and indoor air, flux chamber samples were collected in lieu of indoor air samples to measure the vapor flux potential above the existing concrete slab at discrete locations within the building. The sample results are not considered to be representative of indoor air conditions but rather an indication of vapor flux at locations where the existing concrete slab exhibits varying degrees of competency. From the six flux chamber gas samples collected at the site, a total of 10 analytes reported exceedances of the RSL_{res} and a total of eight analytes reported exceedances of the RSL_{ind} for air samples. Using the results for VISL screening under a residential and industrial/commercial scenario for ambient air identified a VI carcinogenic risk in excess of the TCR (1×10^{-6}) and a VI hazard in excess of the THQ (0.1) for multiple analytes. The flux chamber samples indicate that vapor intrusion resulting from the presence of chlorinated solvent and petroleum sources are occurring both through cracks in the concrete slab and also emanating from presumed competent sections of the concrete slab. The values

reported from the samples collected on the southwest side of the building (FC-1 and FC-2) indicate relatively higher concentrations of chlorinated compounds, possibly due to the proximity to a former solvent underground storage tank (UST) and operations on this side of the building. Petroleum and chlorinated solvent-related VOCs are present in comparable levels in the samples collected in the central portion (FC-3 and FC-4) and northern portion (FC-5 and FC-6) of the site. Based upon the current building conditions mentioned above, the VISL calculator results for flux chamber samples collected are not considered a direct indicator of indoor air conditions within the building.

S&ME provided available analytical results for this project to Clean Vapor LLC (Clean Vapor), a firm specializing in the design and installation of vapor mitigation systems. Clean Vapor performed additional diagnostics testing and provided a vapor mitigation plan design based on their building and subsurface diagnostics. The Clean Vapor mitigation plan is presented in the updated Analysis of Brownfield Cleanup Alternatives (ABCA) to be submitted under separate cover.

1.0 Project Approach

S&ME collected 12 sub-slab gas samples and six flux chamber gas samples from within the basement of the former facility. The sample locations were established based on previous sampling events in order to update analytical data for design of the vapor mitigation system. Sample locations were recorded in a field logbook as sampling was conducted.

1.1 Report Organization

The site background information that guided the sampling approach is presented in Section 2. The procedures of the sampling and analyses are summarized in Section 3. Specific details on sampling and analyses for the site are provided in Section B of the corresponding Site-Specific Quality Assurance Project Plan (SSQAPP). The results of the sampling and analyses are provided in Section 4. Conclusions are discussed in Section 5. The qualifications to the report are indicated in Section 6. References cited in the text are provided in Section 7.

2.0 Background

The following presents the site characteristics, background historical information, and surrounding property descriptions that were used to guide the selection of sample locations and analytical parameters.

2.1 Site Characteristics

The City of Knoxville, Tennessee (City) has received a U.S. Environmental Protection Agency (EPA) Brownfields Cleanup Grant to address the Sanitary Laundry property, a previously identified Brownfield site. The former Sanitary Laundry property consists of one parcel containing approximately 0.3 acre, owned by the City, and located at 625 North Broadway in Knoxville, Tennessee (Figures 1 and 2, Appendix I). The property center is located at 35.975358° N latitude and -83.924359° W longitude. The property is identified on the Knox County Tax Assessor's Tax Map as Tax Map 94D, Group P, Parcel 13.

The property is occupied by a currently vacant, 30,000 square-foot structure used for dry cleaning operations between 1926 and 1993. The 30,000 square-foot building occupies two levels, each comprising approximately 15,000 square feet. The general topographic slope in the vicinity of the site is down to the northwest. Published geologic information indicates that the site is underlain by bedrock of the Bays Formation of the Chickamauga Group. This formation is primarily composed of calcareous mudstone and siltstone that is maroon in color and the upper portion is commonly mottled with sandstone and metabentonite. The Bays Formation commonly weathers to produce a thin silty, sandy residual soil.

S&ME previously generated the following reports to document site assessment activities:

- *S&ME Report of Phase I Environmental Site Assessment*, *Former Sanitary Laundry and Dry Cleaning Property*, July 31, 2013
- *S&ME Report of Phase II Environmental Site Assessment, Former Sanitary Laundry Property*, September 12, 2014
- *S&ME Report of Limited Asbestos and Lead-Based Paint Survey, 625 North Broadway Former Sanitary Laundry Facility*, October 22, 2014

Numerous additional reports and site-related documents are available in the extensive Tennessee Department of Environment and Conservation (TDEC) file. It is worthwhile to note that the reports referenced above and present in the TDEC files include both the parcel at 625 North Broadway and the parcel at 750-760 Stone Street, located west and adjacent to the subject property, and part of the former Sanitary Laundry operation. The parcel at 750-760 Stone Street contained the boiler house and a loading and vehicle maintenance building. The Stone Street parcel is currently owned by others and is excluded from the proposed cleanup activities.

As summarized in the referenced reports and previous documentation available in TDEC files, one dry cleaning solvent and two gasoline underground storage tanks (UST) utilized by the dry cleaner were located on the property or on the Stone Street parcel behind the building, which was also former Sanitary Laundry property. The gasoline USTs were permanently closed by removal in 1993. The dry cleaning UST was emptied in 1994 but remains on the property, behind the building. TDEC, Division of Remediation (DOR) personnel (Ms. Erin Sutton and Mr. Dan Hawkins) have indicated that the dry cleaning solvent tank was filled with concrete sometime in the 1990's. TDEC records reviewed previously by S&ME confirm that in 1994, the tank that previously held dry cleaning solvent was emptied and subsequently filled with concrete.

Minor staining of the concrete floor was observed throughout the building during the Phase I Environmental Site Assessment (ESA) site reconnaissance. A loading dock was observed on the west side of the building. A large boiler was observed on the northeast portion of the building. An adjoining elevated concrete trough was also observed. The past use of this trough was not evident based on site observations. Steam piping used in the dry cleaning process was also observed throughout the building.

Previous investigations performed at the site have identified soil and groundwater contaminated with dry cleaning compounds, solvents, and petroleum products. The Phase I ESA documented evidence of recognized environmental conditions relative to former uses of the subject property. The recognized environmental conditions (RECs) documented in the Phase I ESA include:

- The subject property operated as a dry cleaner from 1926 until 1993.
- The subject property was identified on multiple regulatory databases.
- Dry cleaning compounds and solvents at concentrations that exceed primary drinking water Maximum Contaminant Levels (MCLs) have been detected in groundwater.
- Two gasoline USTs and one heating oil aboveground storage tank (AST) have been located on or behind the subject property in the past (on the 750-760 Stone Street parcel).
- Evidence of one dry cleaning solvent UST was observed on the subject property. The contents of the UST were reportedly removed in 1994 but no soil testing was documented at that time.
- Numerous 55 gallon drums of dry cleaning fluids and oil were observed and removed from the Sanitary Laundry property in 1999.
- Two groundwater monitoring wells are located in the courtyard area west of the North Broadway building.
- One in-ground hydraulic lift was observed in the garage building behind the subject property (on the 750-760 Stone Street parcel).
- The subject property was placed on the State Superfund list in 1994.

In 1994, the subject property was added to the List of Inactive Hazardous Substance Sites by action of the Tennessee Solid Waste Disposal Control Board. The subject property was identified as Site No. 47-545, Sanitary

Laundry and Dry Cleaners. A Notice of a Hazardous Substance Site was filed with the Knox County Register's Office in 1997. An Imminent, Substantial Danger Memorandum was issued by the TDEC Commissioner in 1999, due to the presence of multiple 55-gallon drums of hazardous substances on-site. TDEC initiated emergency removal actions in 1994, and again in 1999, addressing the USTs and two barrels of dry cleaning fluid in 1994, and implementing an emergency removal of the drums in 1999.

Based on the Phase I ESA findings, in 2014 S&ME conducted a Phase II ESA on behalf of the City to determine the nature and extent of subsurface contamination resulting from past use of the property. The Phase II ESA consisted of the collection and laboratory analysis of 34 passive soil vapor modules, subsurface soil samples, groundwater samples, soil gas samples and ambient air samples from the former Sanitary Laundry property, which included the subject site and the west adjacent parcel formerly owned by Sanitary Laundry. A Geoprobe® rig was used to obtain subsurface soil samples for field and laboratory analyses. Groundwater samples were collected from two existing monitoring wells and from six piezometers installed during the Phase II ESA sampling.

The analysis of soil samples revealed arsenic concentrations in 14 samples that exceed the EPA May 2014 Residential Soil Regional Screening Level (RSL_{res}), and 13 samples that exceed the Industrial Soil RSL (RSL_{ind}) for arsenic. However, the reported arsenic concentrations did not vary significantly with depth or location and are therefore interpreted as naturally-occurring background. Of the volatile organic compounds (VOCs) and polynuclear aromatic hydrocarbon (PAHs) compounds detected in soil samples, only tetrachloroethylene (PCE) and benzo(a)pyrene exceed respective RSL_{res} values. None of the reported VOC or PAH concentrations exceed the corresponding RSL_{ind} values.

Concentrations of petroleum hydrocarbons (extractable petroleum hydrocarbons (EPH), and total petroleum hydrocarbons (TPH)) that exceeded the TDEC Division of Solid Waste Management (DSWM) clean fill criteria of 100 milligrams per kilogram (mg/kg) were reported in soil samples collected from within the Sanitary Laundry building, the former auto repair building (west adjacent parcel) and the former UST locations (west adjacent parcel).

Arsenic concentrations detected in groundwater samples exceeded the corresponding arsenic Tapwater RSL. Lead concentrations detected in each groundwater sample exceed the corresponding EPA drinking water maximum contaminant level (MCL). Concentrations of benzene and the chlorinated compounds PCE, trichloroethylene (TCE), cis-1,2-dichloroethene and vinyl chloride which exceeded their respective EPA May 2014 Tapwater RSLs and MCLs were detected in groundwater samples. Also notable was the detection of 1,2-dichlorobenzene, ethylbenzene, naphthalene, n-propylbenzene, the trimethylbenzene isomers, and xylenes in concentrations that exceed the EPA May 2014 Tapwater RSLs.

The eight soil gas samples collected during the 2014 Phase II ESA reported concentrations of benzene, ethylbenzene, carbon tetrachloride, chloroform, PCE, TCE, 1,1-dichloroethane, 1,1-dichloroethene, and vinyl chloride that exceed the respective May 2014 EPA RSL_{res} and RSL_{ind} values. It is notable that PCE concentrations exceeded the respective Air RSL_{ind}, by up to three orders of magnitude in sub-slab samples. PCE and TCE concentrations were reported in the soil gas below the building slab with maximum concentrations of 68,000 micrograms per cubic meter ($\mu g/m^3$) and 10,000 $\mu g/m^3$, respectively.

Indoor air sampling resulted in concentrations of benzene, carbon tetrachloride, chloroform, chloromethane, ethylbenzene, PCE and TCE that exceed RSL_{res} and RSL_{ind}, values. The highest chloromethane, ethylbenzene, PCE

and TCE concentrations were reported for air samples collected in the former main Sanitary Laundry building, which occupies the subject property. A maximum concentration of PCE in ambient air was detected at 46 µg/m^3, and TCE was detected at 6.4 µg/m^3. Indoor air samples collected by TDEC on April 1, 2015 in the adjoining buildings detected solvent-related compounds, but at concentrations that TDEC indicated were "significantly below our risk based remedial goals."

The TDEC DOR has been involved with this site in a regulatory capacity for many years. In an effort to support the City's redevelopment efforts, and to secure an approach to site redevelopment that is consistent with applicable regulations, TDEC has executed a Brownfield Voluntary Agreement (BVA) (Site No. 47-545) for the subject property. TDEC and the City have agreed that the BVA is to be made a condition of sale of the property. The BVA established for the site requires an engineered vapor mitigation system to be incorporated for any building construction or renovation on the property to address those chemical constituents identified in previous assessment activities. The goal of the soil vapor mitigation system would be to break the exposure pathway for vapor migration.

The City recently replaced the roof on the former Sanitary Laundry property. Based on the historic significance of the site, and the investment in improving the existing structure, redevelopment using existing foundations is the preferred option for site redevelopment, rather than demolishing the existing structure and foundations. In order to support this method of site redevelopment, an engineered vapor mitigation system is warranted to mitigate those chemical constituents identified in previous assessment activities. The building currently has some broken windows allowing passive blending of outdoor and indoor air, as well as holes in the floor that allow air movement between the basement and the first floor. In addition, there is no current heating or cooling system operating in the building, and a design for the redevelopment of the structure has not yet been proposed. Because of the current conditions within this vacant building, TDEC recommended that ambient air samples not be collected at this time, as the results would not reflect typical conditions if the building was occupied. Therefore, to gather current site information to support the vapor mitigation system design, S&ME updated the sub-slab soil gas evaluation, and incorporated data from flux chamber samples to provide supplemental data for design purposes. In addition, S&ME utilized a subcontractor, Clean Vapor LLC (Clean Vapor) to perform sub-slab communication testing to support the system design.

2.2 Surrounding Area Description

The current uses of the adjoining properties were identified to the extent that they were visually observed from the subject property during our Phase I ESA field reconnaissance, or were identified in interviews or in previous records review. Evidence of previous land uses, including retail and commercial uses, was observed on adjoining and surrounding properties.

Descriptions of adjoining and surrounding properties are provided below:

- **North** – A building listed in the Knoxville Geographic Information System (KGIS) as Broadway Electric Service adjoins the subject property to the north and shares a common wall with the subject property. Additional retail businesses are located further north, along North Broadway and North Central Street.
- **South** – A building currently operated as a bicycle shop that shares a common wall with the subject property is immediately south of the subject property. Commercial businesses, including Dixie Kitchen are further south, along North Broadway.

- **East** – North Broadway adjoins the subject property to the east. Retail businesses are located on the east side of North Broadway. Additional retail and commercial businesses are further east.
- **West** – The parcel at 750-760 Stone Street that contained the boiler house and loading and vehicle maintenance building previously associated with Sanitary Laundry is currently operated as a commercial establishment owned by others. Stone and Sumpter Streets adjoin this property to the west. Commercial businesses are located to the west with cemeteries beyond.

Surface topography on and near the subject property appears to slope down to the northwest. Surface drainage on-site appears to follow the topography of the site.

3.0 Sampling and Analyses

The following presents the sampling, data analyses, and data validation procedures used for the additional environmental assessment activities. The sample locations are presented on Figure 2 in Appendix I.

3.1 General Sample Collection Procedures

Following is a brief summary of the sampling activities that were performed as part of the Phase II ESA. The activities, which are described in detail in the sections below, included:

- Collection of 12 soil gas samples (including one field duplicate) from the site to evaluate for sub-slab VOCs.
- Collection of six flux chamber samples from the site to evaluate the flux potential for VOCs.

3.1.1 Soil Gas Sampling

S&ME performed sub-slab soil gas sampling by collecting 12 sub-slab soil gas samples to update the analytical data derived from previous sampling events. The locations of samples were selected based on previous sample locations and results of the assessment conducted in 2014. Soil gas sampling locations are depicted on Figure 2 in Appendix I.

Sampling probe installation was conducted using an electric rotary hammer drill, stainless steel expendable points, and sample trains as described below:

- At each of the sub-slab soil gas locations (SS-1 to SS-12), a pilot hole was drilled through concrete slab with a one-inch masonry bit and electric hammer drill to depths ranging from six inches to one foot below ground surface to penetrate the underlying sub-grade material (i.e. soil). At the target depth, an expendable stainless steel probe point, connected to a ¼-inch outer diameter (O.D.) nylon tubing was embedded into the subgrade using a hollow, stainless steel drive rod.
- The sample train tubing was fitted with push-to-connect valves to ensure integrity of the sampling system and provide an outlet for purging ambient air. Hydrated bentonite was used to create a surface seal between the ground surface and the sample train tubing.
- The sample train was connected to a six-liter SUMMA canister and vacuum tested using a hand-held vacuum pump at a vacuum of at least 20 inches mercury (Hg) for two minutes to confirm that a sufficient seal between the tubing and sample train fittings had been established.

- The total volume of the borehole, sample train tubing and valves was calculated and converted to liters. A total of three volumes of ambient air were purged from the sample train using a low-volume air sampling pump calibrated to a flow range of 0.195 liters per minute.

Upon completion of the installation and initial testing of each soil gas sampling system, the soil gas was sampled using six-liter SUMMA canisters at each selected location. Each canister comes from the laboratory at a preset vacuum of approximately -30 inches of Hg.

Each canister was equipped with a pre-set vacuum regulator. This mechanism was factory-machined to allow for the sample to be drawn into the canister over a period of 30 minutes. Start and end times for sample collection and vacuum pressures were recorded for each sample. Field collection data from soil gas sampling activities is included in Appendix II.

Following the soil gas sampling event, the 12 sample canisters (including one field duplicate collected at SS-12) were sealed, packed, and shipped under chain-of-custody to ESC Laboratory (ESC) in Mt. Juliet, Tennessee for laboratory analyses of VOCs by EPA Method TO-15.

3.1.2 Flux Chamber Sampling

A total of six flux chamber gas samples were collected from the basement concrete slab floor. Locations FC-1, FC-4, and FC-5 were collected over existing cracks in the concrete slab floor and locations FC-2, FC-3, and FC-6 were collected over apparent competent concrete. The two conditions were sampled for comparison purposes, to generally evaluate the preferential migration of vapors through floor cracks, and to generally evaluate flux potential of vapors from the slab in areas where the concrete is presumably competent. The soil gas samples were collected using a 24-inch diameter acrylic dome (flux chamber) with a fitted air sampling port. The flux chamber was set onto the concrete floor and sealed with hydrated bentonite. The sample was collected over a period of 30 minutes using a six-liter SUMMA canister with a preset vacuum of approximately -30 inches of Hg. The flux chamber was purged of ambient air for a period of 15 minutes prior to beginning sample collection. Once sample collection was begun the SUMMA canister valve was opened slowly to avoid a rapid pressure change within the chamber, which could potentially pull ambient air into the chamber. Upon completion of the sampling event, the SUMMA canister valve was closed and the canister was labeled and shipped to ESC for analysis of VOCs by EPA Method TO-15.

3.2 Sample Analysis

3.2.1 Laboratory Sample Analysis

Soil gas and flux chamber samples collected from the site were submitted for laboratory analyses to ESC. Sample analyses included the following analytes and methods:

- US EPA Method TO-15 for VOCs in soil gas.
- US EPA Method TO-15 SIM for VOCs in flux above the concrete slab.

As specified in the SSQAPP, the quality assurance (QA) samples to be submitted for laboratory analysis should number at least 10 percent of the total number of samples collected. A total of 12 soil gas and six flux chamber

samples were collected from the site. As such, per the Brownfields QAPP guidance, at least one QA sample should be selected for analysis. For this project, one duplicate QA sample was selected for analysis from the soil gas samples.

3.3 Data Validation

The data were validated by S&ME in general accordance with US-EPA's Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review, January 2017, and National Functional Guidelines for Inorganic Superfund Methods Data Review, January 2017 (References 8 and 9). Organic data validation consisted of a review of the following quality control (QC) parameters: holding times, instrument performance checks, initial and continuing calibrations, blank results, surrogate recovery results, laboratory control sample (LCS) results, internal standard response, and target compound identification and quantitation. Inorganic data validation consisted of a review of the following QC parameters: holding times, initial and continuing calibrations, blank results, inductively coupled plasma interference check sample results, LCS results, duplicate sample results, and sample result quantitation. None of the data were rejected due to quality control concerns. The samples submitted to ESC for analysis were analyzed within the applicable holding times.

If a target parameter was outside the method limits, every sample that was affected was flagged with the appropriate qualifier in the analytical report. The laboratory blanks did not have detectable concentrations of analyzed constituents. Laboratory duplicate results were comparable to the laboratory samples. The percent recovery for constituents analyzed in the laboratory controls was within established criteria, with several exceptions as noted below. None of the reported data were rejected, and all of the constituents were reported as valid or useable.

Abbreviations and Definitions	
SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.

Qualifier	Description
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
J4	The associated batch QC was outside the established quality control range for accuracy.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
T8	Sample(s) received past/too close to holding time expiration.
V	The sample concentration is too high to evaluate accurate spike recoveries.

3.3.1 Data Validation for Soil Gas and Flux Chamber Samples

The ESC Level IV analytical packages for soil gas and flux chamber gas data were evaluated per the *Generic Quality Assurance Project Plan*. A summary of findings is listed below:

- One duplicate sample of sub-slab gas sample SS-12 was collected and analyzed for VOCs. Overall the majority of the constituent results were comparable.
- No equipment rinseate samples were collected during the soil gas and flux chamber gas sampling events since dedicated sample collectors and disposable tubing were used. The soil gas and flux chamber gas data were evaluated and determined valid and usable.

4.0 Results

4.1 Field Observations

This sampling event was devised based on information obtained from previous sampling events, including soil gas sampling conducted in 2014. The sample locations were intended to update the data collected during the previous 2014 sampling event. Field activities for this sampling event were conducted April 23 and 24, 2018.

4.2 Analytical Results

Constituent concentrations detected in the sub-slab gas and flux chamber samples were compared to the May 2018 EPA RSLs for industrial and residential air (Target Carcinogenic Risk (TCR) = $1x10^{-6}$ and a Target Hazard Quotient for Non-carcinogens (THQ) = 0.1)). Where detected sub-slab constituents and laboratory detection limits exceeded the corresponding target soil gas concentrations, they also were evaluated for vapor intrusion (VI) hazard and VI Carcinogenic Risk using the Office of Solid Waste and Emergency Response (OSWER) Vapor Intrusion Screening Level (VISL) Calculator (Version 3.5, June 2017), with a TCR = $1x10^{-6}$ and a THQ = 0.1 under a commercial land use scenario, adjusted using a factor of 0.03 to account for attenuation. The residential land use scenario was not evaluated, because based on current and historic contaminant levels, the VISL findings under a commercial scenario, the BVA, TDEC input and current City plans, the site is anticipated to be limited to commercial uses.

The following sections present summaries of the results of this sampling event. The laboratory analytical reports are provided in Appendix III.

4.2.1 Sub-slab Gas

Each of the sub-slab gas samples (SS-1 through SS-12 and one field duplicate) was analyzed for VOCs by TO-15 Volatile Organics in Air. Table II-1 in Appendix II presents the results of detected constituents as compared to the EPA RSLs. Nineteen analytes exceeded both residential and industrial RSLs in at least one sample, and tetrachloroethylene exceeded the RSL_{ind} in each of the twelve samples and the duplicate, with a maximum detected concentration of 303,000 µg/m^3 in sample SS-4.

4.2.1.1 Screening using the EPA VISL Calculator

Detected compounds exceeded their corresponding target sub-slab concentrations were evaluated for vapor intrusion hazard and vapor intrusion carcinogenic risk using the EPA VISL calculator. Table II-3 presents the highest detected concentration of an individual compound that exceeded the RSLs at each location. The values of TCR = $1x10^{-6}$, THQ = 0.1 and an attenuation factor of 0.03 were used to predict calculated indoor air values, and to calculate VI carcinogenic risk and VI hazard under the industrial/commercial scenario.

The results of VISL screening under a commercial scenario identified a VI Carcinogenic Risk in excess of the TCR (1 x 10^{-6}) for chloroform, 1,2-dichloroethane, 1,1,1,2-tetrachloroethane, tetrachloroethylene, 1,1,2-trichloroethane, trichloroethylene, and vinyl chloride. A VI Hazard was identified in excess of the THQ (0.1) for 1,2-dichloroethane, trichloroethylene, tetrachloroethylene, 1,1,2-trichloroethane and vinyl chloride.

4.2.2 Flux Chamber Sample Results

The analytical results from the flux chamber sampling reported concentrations of 12 analytes which exceeded corresponding RSL_{res} values and eight analytes which exceeded the respective RSL_{ind} values. Table II-2 in Appendix II provides a summary of the detected analytes and the RSL comparison values for each analyte.

The flux chamber samples generally demonstrated lower VOC concentrations than proximal sub-slab samples, as would be expected. There was generally no strong correlation between the flux chamber samples collected over concrete exhibiting cracks vs. the flux chamber samples collected over concrete presumed to be competent. Both

the samples collected over cracks within the concrete slab (FC-1, FC-4, and FC-5) and those collected over apparent competent concrete (FC-2, FC-3, and FC-6) reported elevated levels of chlorinated and petroleum hydrocarbon-related analytes.

5.0 Conclusions

S&ME conducted an additional environmental assessment of the Former Sanitary Laundry facility located in Knoxville, Tennessee. This assessment consisted of the collection and laboratory analysis of sub-slab and flux chamber gas samples from the site.

5.1 Sub-slab Gas

The results of sub-slab gas analysis identified detectable concentrations of petroleum and solvent-related VOCs in each of the 12 samples analyzed. Concentrations in excess of the corresponding RSL_{res} and RSL_{ind} values were reported.

The results of VISL screening under a commercial scenario identified a VI Carcinogenic Risk in excess of the TCR (1×10^{-6}) for chloroform, 1,2-dichloroethane, 1,1,1,2-tetrachloroethane, tetrachloroethylene, 1,1,2-trichloroethane, trichloroethylene, and vinyl chloride. A VI Hazard was identified in excess of the THQ (0.1) for 1,2-dichloroethane, trichloroethylene, tetrachloroethylene, 1,1,2-trichloroethane and vinyl chloride.

5.2 Flux Chamber Gas

The analytical results from the flux chamber sampling reported concentrations of 12 analytes which exceeded the corresponding RSL_{res} value and eight analytes which exceeded the RSL_{ind} value. The flux chamber samples generally demonstrated lower VOC concentrations than proximal sub-slab samples, as would be expected. There was generally no strong correlation between the flux chamber samples collected over concrete exhibiting cracks vs. the flux chamber samples collected over concrete presumed to be competent. Both the samples collected over cracks within the concrete slab (FC-1, FC-4, and FC-5) and those collected over apparent presumably competent concrete (FC-2, FC-3, and FC-6) reported elevated levels of chlorinated solvents and petroleum hydrocarbon analytes.

Based on the findings of the S&ME Phase II assessment activities, S&ME provided the analytical results to Clean Vapor LLC (Clean Vapor), a firm specializing in the design and installation of vapor mitigation systems. Clean Vapor performed additional diagnostics testing and provided a mitigation plan design based on their building and subsurface diagnostics. The Clean Vapor mitigation plan design is presented in the updated Analysis of Brownfield Cleanup Alternatives (ABCA) to be submitted under separate cover.

6.0 Qualifications of Report

This report is provided for the sole use of the City of Knoxville per the S&ME Agreement for Services. The Phase II ESA was generally conducted as outlined in the *Quality Assurance Project Plan* dated August 28, 2017 and *Site Specific Quality Assurance Project Plan Former Sanitary Laundry Property* dated February 14, 2018 as modified

during the project. Use of this report by any third parties will be at such parties' sole risk and S&ME disclaims liability for any use or reliance by third parties.

The report's findings are based on conditions encountered at the locations on the dates of S&ME's investigations and should not be relied upon to precisely represent conditions at any other time. The scope of services was not intended to provide the information needed to completely establish the quantity of impacted material present at the site or to determine the cost of remediating the site.

The conclusions included in this report are based on S&ME's observations of existing site conditions, our interpretation of site history and usage information, and the results of a limited program of subsurface exploration, sample screening, and chemical testing. The concentration of contaminants S&ME measured may not be representative of conditions between locations sampled. Be aware that conditions may change at any sampled or un-sampled location as a function of time in response to natural conditions, chemical reactions, and/or other events. Conclusions about site conditions under no circumstances comprise a warranty that conditions in all areas within the site are of the same quality as those sampled.

The scope of services S&ME implemented was based, in part, on rules and regulations that S&ME understood to be current or expected at the time S&ME conducted the work. Changes in regulations, interpretations, and/or enforcement policies may occur at any time and such changes could affect the extent of remediation, if required. Any additional information about this site that becomes available should be provided to S&ME for its review, so S&ME can modify its recommendations as necessary.

7.0 References

1. S&ME *Report of Phase I Environmental Site Assessment, Former Sanitary Laundry and Dry Cleaning Property,* July 31, 2013
2. S&ME *Report of Phase II Environmental Site Assessment, Former Sanitary Laundry Property*, September 12, 2014
3. S&ME *Report of Limited Asbestos and Lead-Based Paint Survey, 625 North Broadway Former Sanitary Laundry Facility*, October 22, 2014
4. S&ME, *Quality Assurance Project Plan for Sanitary Laundry and McClung Warehouses Cleanup Grants, Knoxville, Tennessee*, August 28, 2017.
5. S&ME, *Site Specific Quality Assurance Project Plan Former Sanitary Laundry Property, Knoxville, Tennessee*, February 14, 2018.
6. U.S. EPA Region 4, SESD, *Field Branches Quality System and Technical Procedures* including:
   - *Field Equipment Cleaning and Decontamination*, dated December 18, 2015;
   - *Field Sampling Quality Control*, dated April 26, 2017;
   - *Ambient Air Sampling*, dated March 30, 2016;
   - *Soil Gas Sampling*, dated May 14, 2014;
7. US EPA, 1998, *Quality Assurance Guidance for conducting Brownfields Site Assessments*, September 1998.
8. US EPA, 2017, *National Functional Guidelines for Organic Superfund Methods Data Review*, January 2017.
9. US EPA, 2017, *National Functional Guidelines for Inorganic Superfund Methods Data Review*, January 2017.
10. USEPA, Regional Screening Level (RSL) Summary Table (TR=1.0E-06, HQ=0.1), May 2018.

Appendices

Appendix I – Figures

Figure 1: Aerial Site Vicinity Map

Figure 2: Sample Location Map

REFERENCE:
GIS BASE LAYERS WERE OBTAINED FROM GOOGLE. THIS MAP IS FOR INFORMATIONAL PURPOSES ONLY. ALL FEATURE LOCATIONS DISPLAYED ARE APPROXIMATED. THEY ARE NOT BASED ON CIVIL SURVEY INFORMATION, UNLESS STATED OTHERWISE.

Drawing Path: R:_GIS PROJECTS\2017_Projects\4143-17-016 Sanitary Laundry\FIGURE 1_SITE LOCATIONS MAP.mxd plotted by jrowe 06-20-2018

	AERIAL SITE VICINITY MAP	SCALE: 1 " = 400 '	FIGURE NO.
	FORMER SANITARY LAUNDRY PROPERTY 625 N. BROADWAY KNOXVILLE, TENNESSEE	DATE: 6-20-18 PROJECT NUMBER: 4143-17-016	1

Drawing Path: R:_GIS PROJECTS\2017_Projects\4143-17-016 Sanitary Laundry\FIG2 SANITARY LAUNDRY .mxd plotted by jrowe 06-20-2018

REFERENCE:
GIS BASE LAYERS WERE OBTAINED FROM GOOGLE. THIS MAP IS FOR INFORMATIONAL PURPOSES ONLY. ALL FEATURE LOCATIONS DISPLAYED ARE APPROXIMATED. THEY ARE NOT BASED ON CIVIL SURVEY INFORMATION, UNLESS STATED OTHERWISE.

SAMPLE LOCATION MAP

FORMER SANITARY LAUNDRY PROPERTY
625 N. BROADWAY
KNOXVILLE, TENNESSEE

SCALE:	FIGURE NO.
1 " = 50 '	2
DATE: 6-20-18	
PROJECT NUMBER: 4143-17-016	

Appendix II – Tables

Table II-1: Summary of Soil Gas Analytical Data - Sub-slab Gas

Table II-2: Summary of Analytical Data - Flux Chambers

Table II-3: VISL Calculator – Commercial/Industrial Scenario

Table II -1: Summary of Soil Gas Analytical Data – Sub-Slab

Sampled April 23, 2018

Sample ID	SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8	SS-9	SS-10	SS-11	SS-12	DUP	RSL_{ind}	RSL_{res}
Acetone	<14.9	15.9	819	1360	<29.7	<2.97	115	10.1	40.5	211	17.9	4.42	4.54	14000	3200
Benzene	<3.19	<0.639	<63.9	<63.9	<6.39	**1.89**	**4.61**	<0.639	**0.697**	**4.22**	**1.75**	**1.62**	**1.45**	1.6	0.36
Bromodichloromethane	<6.71	<1.34	<134	<134	<13.4	<1.34	<1.34	**1.63**	<1.34	<1.34	<1.34	**1.38**	<1.34	0.33	0.076
Carbon disulfide	<3.11	1.56	**125**	**76.5**	<6.22	0.724	7	3.06	**117**	9.17	0.983	<0.622	<0.622	310	73
Carbon tetrachloride	<6.30	**49.2**	<126	<126	<12.6	<1.26	**1.57**	<1.26	<1.26	**1.65**	<1.26	<1.26	<1.26	2	0.47
Chloroform	**402**	**11.2**	**105**	<97.3	<9.73	<0.973	<0.973	**12.5**	**21.8**	**18.7**	**1.48**	**4.6**	**4.56**	0.53	0.12
Chloromethane	<2.07	<0.413	<41.3	<41.3	<4.13	<0.413	<0.413	<0.413	<0.413	1.85	3.5	<0.413	<0.413	39	9.4
Cyclohexane	<3.44	<0.689	**7960**	<68.9	<6.89	4.66	48.5	4.23	1.97	2.75	2.3	5.59	5.44	2600	630
1,2-Dichloroethane	<4.05	<0.810	**151**	<81.0	<8.10	<0.810	<0.810	<0.810	<0.810	<0.810	<0.810	<0.810	<0.810	0.47	0.11
1,1-Dichloroethane	<4.01	<0.802	<80.2	<80.2	**11.5**	<0.802	<0.802	<0.802	<0.802	<0.802	<0.802	<0.802	<0.802	7.7	1.8
1,1-Dichloroethene	<3.96	<0.793	**422**	<79.3	<7.93	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	<0.793	88	21
cis-1,2-Dichloroethene	<3.96	<0.793	433	2780	593	0.886	<0.793	<0.793	<0.793	25.9	<0.793	10.6	10.5	NL	NL
trans-1,2-Dichloroethene	<3.96	<0.793	<79.3	224	<7.93	<0.793	<0.793	<0.793	<0.793	5.89	<0.793	2.14	2.06	NL	NL
Ethanol	<5.94	15.8	<119	1760	<11.9	1.75	2.22	<1.19	1.76	33.1	1.66	1.81	<1.19	NL	NL
Ethylbenzene	<4.34	<0.867	<86.7	<86.7	<8.67	<0.867	**1.58**	<0.867	<0.867	<0.867	<0.867	<0.867	<0.867	4.9	1.1
4-Ethyltoluene	<4.91	<0.982	<98.2	<98.2	<9.82	<0.982	<0.982	<0.982	<0.982	**1.96**	<0.982	<0.982	<0.982	NL	NL
Trichlorofluoromethane	**7.98**	**3.68**	<112	<112	<11.2	**2.77**	**2.56**	**2.56**	**2.13**	**2.1**	**1.72**	**1.56**	**1.43**	NL	NL
Dichlorodifluoromethane	<4.95	1.72	<98.9	<98.9	<9.89	1.65	2.52	1.87	2.07	1.84	1.45	1.99	1.98	44	10
Heptane	<4.09	<0.818	**229**	<81.8	<8.18	<0.818	11.3	0.947	4.84	0.903	2.74	4.41	4.3	180	42
n-Hexane	<3.53	<0.705	**850**	**446**	<7.05	1.47	13	1.62	3.43	3.25	3.48	6.45	5.85	310	73
Methylene Chloride	<3.47	<0.694	<69.4	**879**	<6.94	<0.694	<0.694	<0.694	<0.694	1.38	<0.694	0.728	<0.694	260	63
Methyl Butyl Ketone	<25.6	**5.44**	**641**	<511	<51.1	<5.11	<5.11	<5.11	<5.11	<5.11	<5.11	<5.11	<5.11	13	3.1
2-Butanone (MEK)	<18.4	<3.69	<369	<369	<36.9	<3.69	16	<3.69	<3.69	17.6	<3.69	<3.69	<3.69	2200	520
Naphthalene	<16.5	<3.30	<330	<330	<33.0	<3.30	<3.30	<3.30	<3.30	**3.96**	<3.30	<3.30	<3.30	0.36	0.083
2-Propanol	<15.4	8.22	<307	<307	<30.7	5.66	<3.07	<3.07	<3.07	11.3	<3.07	<3.07	<3.07	88	21
Propene	<3.44	0.698	**399**	<68.9	<6.89	<0.689	<0.689	<0.689	<0.689	<0.689	<0.689	<0.689	<0.689	1300	310
Styrene	<4.25	<0.851	**179**	<85.1	<8.51	<0.851	<0.851	<0.851	<0.851	<0.851	<0.851	<0.851	<0.851	440	100
1,1,2,2-Tetrachloroethane	<6.87	<1.37	**384**	<137	<13.7	<1.37	<1.37	<1.37	<1.37	<1.37	<1.37	<1.37	<1.37	0.21	0.048
Tetrachloroethylene	**96.9**	**332**	**26300**	**303000**	**59900**	**6480**	**262**	**52.3**	**476**	**31.9**	**5270**	**3870**	**3690**	18	4.2
Tetrahydrofuran	<2.95	<0.590	<59.0	<59.0	<5.90	<0.590	<0.590	<0.590	<0.590	**0.93**	<0.590	<0.590	<0.590	880	210
Toluene	<3.77	2.36	<75.3	113	<7.53	9.31	32.6	1.2	1.86	7.78	2.51	3.72	3.66	2200	520

Notes: Bold values indicate exceedance of May 2018 Residential RSLs
Bold shaded values indicate exceedance of May 2018 Industrial and Residential RSLs
Color shaded indicates VI Carcinogenic Risk – Residential; Highest value used for all analytes except benzene, where risk was evaluated for all concentrations

Table II -1 (Continued): Summary of Soil Gas Analytical Data – Sub-Slab

Sampled April 23, 2018

Sample ID	SS-1	SS-2	SS-3	SS-4	SS-5	SS-6	SS-7	SS-8	SS-9	SS-10	SS-11	SS-12	DUP	RSL_{ind}	RSL_{res}
1,1,1-Trichloroethane	<5.44	2.83	<109	<109	<10.9	2.53	1.23	<1.09	<1.09	<1.09	1.11	21.6	21.2	2200	520
1,1,2-Trichloroethane	<5.44	<1.09	**449**	<109	<10.9	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	<1.09	0.088	0.021
Trichloroethylene	<5.36	<1.07	**2270**	**12300**	**6670**	**11.1**	<1.07	<1.07	<1.07	**67.1**	**96.4**	**311**	**299**	0.88	0.21
1,2,4-Trimethylbenzene	<4.91	<0.982	<98.2	**106**	<9.82	<0.982	2.11	<0.982	<0.982	3.11	<0.982	<0.982	<0.982	26	6.3
1,3,5-Trimethylbenzene	<4.91	<0.982	<98.2	<98.2	<9.82	<0.982	1.05	<0.982	<0.982	<0.982	<0.982	<0.982	<0.982	26	6.3
2,2,4-Trimethylpentane	<4.67	<0.934	<93.4	<93.4	<9.34	<0.934	6.06	<0.934	1.33	4.29	<0.934	1.38	<0.934	NL	NL
Vinyl chloride	<2.56	<0.511	**3040**	<51.1	**5.5**	<0.511	<0.511	<0.511	<0.511	<0.511	<0.511	<0.511	<0.511	2.8	0.17
m&p-Xylene	<8.67	<1.73	<173	<173	<17.3	4.32	10.7	<1.73	<1.73	3.54	<1.73	2.89	2.9	44	10
o-Xylene	<4.34	<0.867	<86.7	<86.7	<8.67	2.16	6.21	<0.867	<0.867	1.96	<0.867	1.25	1.26	44	10

Notes: Bold values indicate exceedance of May 2018 Residential RSLs
Bold shaded values indicate exceedance of May 2018 Industrial and Residential RSLs
Color shaded indicates VI Carcinogenic Risk – Residential; Highest value used for all analytes except benzene, where risk was evaluated for all concentrations

Table II-2 Summary of Analytical Data – Flux Chambers

Sampled April 24, 2018

Sample ID	FC-1	FC-2	FC-3	FC-4	FC-5	FC-6	RSL_{ind}	RSL_{res}
Benzene	**3.43**	**7.23**	**10**	**13.5**	**8.22**	**9.31**	1.6	0.36
Carbon tetrachloride	**0.534**	**0.509**	**0.495**	**0.538**	**0.497**	**0.501**	2	0.47
Chloroethane	<0.106	0.12	<0.106	<0.106	<0.106	<0.106	4400	1000
Chloroform	**5.38**	**2.21**	**0.285**	<0.0973	**0.261**	**0.245**	0.53	0.12
Chloromethane	0.888	0.449	0.928	0.961	0.924	0.885	39	9.4
1,1-Dichloroethane	**1.97**	**3.58**	<0.0802	<0.0802	<0.0802	<0.0802	7.7	1.8
1,2-Dichloroethane	<0.0810	<0.0810	<0.0810	<0.0810	**0.122**	<0.0810	0.47	0.11
1,1-Dichloroethene	0.111	1.26	<0.0793	<0.0793	<0.0793	<0.0793	88	21
cis-1,2-Dichloroethene	**470**	**176**	**6.7**	**1.64**	**0.964**	**0.565**	NL	NL
trans-1,2-Dichloroethene	**86.2**	**1.86**	**0.269**	**0.129**	**0.0903**	<0.0793	NL	NL
1,2-Dichloropropane	**0.66**	**0.455**	<0.139	<0.139	<0.139	<0.139	1.8	0.42
Ethylbenzene	**1.8**	**2.83**	**5.15**	**8.41**	**4.03**	**5.07**	4.9	1.1
1,1,2,2-Tetrachloroethane	**2.01**	<0.137	<0.137	<0.137	<0.137	<0.137	0.21	0.048
Tetrachloroethylene	**12000**	**2930**	**658**	**258**	**83.5**	**46.4**	18	4.2
1,1,1-Trichloroethane	<0.109	<0.109	<0.109	0.13	<0.109	0.222	2200	520
Trichloroethylene	**2140**	**662**	**46.9**	**12.8**	**6.61**	**4.47**	0.88	0.21
Vinyl chloride	**0.469**	**6.04**	<0.0511	<0.0511	<0.0511	<0.0511	2.8	0.17

Notes: Bold values indicate exceedance of May 2018 Residential RSLs
Bold shaded values indicate exceedance of May 2018 Industrial and Residential RSLs
Color shaded indicates VI Carcinogenic Risk – Residential; Highest value used for all analytes except benzene, where risk was evaluated for all concentrations

Table II-3 VISL Calculator - Commercial/Industrial Scenario

Analyte	Sample Used in VISL	Sub-slab Gas Concentration	EPA RSL_{ind}	VISL Calculated Indoor Air Concentration	VI Carcinogenic Risk (Target = 1 $x10^{-6}$)	VI Hazard (Target = 0.1)
Benzene	SS-7	4.61	1.6	$1.38x10^{-1}$	$8.8x10^{-8}$	$1.1x10^{-3}$
Bromodichloromethane	SS-8	1.63	0.33	$4.89x10^{-2}$	$1.5x10^{-7}$	No RfC
Carbon Disulfide	SS-3	125	310	3.75	No IUR	$1.2x10^{-3}$
Carbon Tetrachloride	SS-2	49.2	2.0	1.48	$7.2x10^{-7}$	$3.4x10^{-3}$
Chloroform	SS-1	402	0.53	$1.21x10^{1}$	$2.3x10^{-5}$	$2.8x10^{-2}$
Cyclohexane	SS-3	7960	2600	$2.39x10^{2}$	No IUR	$9.1x10^{-3}$
1,2-Dichloroethane	SS-3	151	0.47	4.53	$9.6x10^{-6}$	$1.5x10^{-1}$
1,1-Dichloroethane	SS-5	11.5	7.7	$3.45x10^{-1}$	$4.5x10^{-8}$	No RfC
1,1-Dichloroethene	SS-3	422	88	1.27	No IUR	$1.4x10^{-2}$
Heptane	SS-3	229	180	6.87	No IUR	$3.9x10^{-3}$
n-Hexane	SS-3	850	310	$2.55x10^{+1}$	No IUR	$8.3x10^{-3}$
Methylene Chloride	SS-4	879	260	$2.64x10^{1}$	$2.2x10^{-8}$	$1.0x10^{-2}$
Napthalene	SS-10	3.96	0.36	$1.19x10^{-1}$	$3.3x10^{-7}$	$9.0x10^{-3}$
1,1,2,2-Tetrachloroethane	SS-3	384	0.21	$1.15x10^{1}$	$5.4x10^{-5}$	No RfC
Tetrachloroethylene	SS-4	303000	18	$3.69x10^{2}$	$1.9x10^{-4}$	$5.2x10^{1}$
1,1,2-Trichloroethane	SS-3	449	0.088	$1.35x10^{1}$	$1.8x10^{-5}$	$1.5x10^{1}$
Trichloroethylene	SS-4	12300	0.88	$3.69x10^{2}$	$1.2x10^{-4}$	$4.2x10^{1}$
1,2,4-Trimethylbenzene	SS-4	106	26	3.18	No IUR	$1.2x10^{-2}$
Vinyl Chloride	SS-3	3040	2.8	$9.12x10^{1}$	$3.3x10^{-5}$	$2.1x10^{-1}$

Notes: Sub-Slab and RSL values reported in ug/mg^3

Shaded values indicate VI carcinogenic risk and/or VI hazard

No IUR = No Inhalation Unit Factor

No RfC = No reference concentration for chemical

Appendix III – Field Logs

Sub-slab Gas Sample Collection Field Log

Flux Chamber Sample Collection Field Log

Soil Gas Field Log											
Field Data	**Units**	**Soil Gas Locations and Corresponding Values**									
Sample ID		**SS-1**	**SS-2**	**SS-3**	**SS-4**	**SS-5**	**SS-6**	**SS-7**	**SS-8**	**SS-9**	**SS-10**
Lab canister ID	#	6135	8820	7167	8870	5743	9055	8515	5850	6921	8756
Lab canister volume	Liters	6	6	6	6	6	6	6	6	6	6
Flow controller ID	#	6315	6767	5964	7484	5946	5646	5952	9082	6486	6661
Flow controller pre-set	Minutes/ Hours	30 min	30 min	30 min	30 min	30 min	30 min	30 min	30 min	30 min	30 min
Sample Depth	Feet										
Sample train purge volume	Liters	0.02235	0.02235	0.02235	0.02235	0.02235	0.02235	0.02235	0.02235	0.02235	0.02235
Vacuum test (initial)	Inches Hg	20	20	20	20	20	20	20	20	20	20
Vacuum test (final)	Inches Hg	20	20	20	20	20	20	20	20	20	20
Sample start	Military time	10:23	10:28	10:32	10:36	10:41	10:44	10:47	10:51	10:57	11:02
Sample stop	Military time	10:53	10:58	11:02	11:06	11:11	11:14	11:17	11:21	11:27	11:32
Canister vacuum (initial)	Inches Hg	29	30	29	30	25	29	30	29	30	30
Canister vacuum (final)	Inches Hg	2	3	2	4	1	1	5	4	4	4
Total sample time	Minutes	30	30	30	30	30	30	30	30	30	30
Date collected	Date	4/23/2018	4/23/2018	4/23/2018	4/23/2018	4/23/2018	4/23/2018	4/23/2018	4/23/2018	4/23/2018	4/23/2018

Formula for calculating pre-sample purge volume: **(radius of the tubing (in))^2 (length of sample train (in)) (3.1416) + (radius of the borehole (in))^2 (depth of borehole (in)) (3.1416)**

Tubing size: 0.180 inches I.D.

Purge Device Flow (L/min): 0.195 L/min

Diameter of the borehole: 1 inch

Cubic inches to Liters: 1 cubic inch = 0.0164 L

Soil Gas Field Log											
Field Data	**Units**	**Soil Gas Locations and Corresponding Values**									
Sample ID		**SS-11**	**SS-12**	**DUP (SS-12)**							
Lab canister ID	#	8773	7168	7348							
Lab canister volume	Liters	6	6	6							
Flow controller ID	#	7086	8423	6660							
Flow controller pre-set	Minutes/ Hours	30 min	30 min	30 min							
Sample Depth	Feet										
Sample train purge volume	Liters	0.02235	0.02235	0.02235							
Vacuum test (initial)	Inches Hg	20	20	20							
Vacuum test (final)	Inches Hg	20	20	20							
Sample start	Military time	11:06	11:12	11:12							
Sample stop	Military time	11:36	11:32	11:32							
Canister vacuum (initial)	Inches Hg	29	27	29							
Canister vacuum (final)	Inches Hg	4	5	4							
Total sample time	Minutes	30	30	30							
Date collected	Date	4/23/2018	4/23/2018	4/23/2018							

Formula for calculating pre-sample purge volume: **(radius of the tubing (in))^2 (length of sample train (in)) (3.1416) + (radius of the borehole (in))^2 (depth of borehole (in)) (3.1416)**

Tubing size: 0.180 inches I.D.

Purge Device Flow (L/min): 0.195 L/min

Diameter of the borehole: 1 inch

Cubic inches to Liters: 1 cubic inch = 0.0164 L

Appendix IV – Laboratory Analytical Reports

ESC Lab Report – Sub-slab Gas Samples

ESC Lab Report – Flux Chamber Samples

ANALYTICAL REPORT

April 30, 2018

S&ME Inc. - Knoxville

Sample Delivery Group:	L988471
Samples Received:	04/25/2018
Project Number:	4143-17-016
Description:	Former Sanitary Laundry
Report To:	Nate Peterson / Liz Porter 1413 Topside Rd Louisville, TN 37777

Entire Report Reviewed By:

Tom Mellette
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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SS-1 L988471-01 Air

Collected by	Collected date/time	Received date/time
N. Peterson	04/23/18 10:53	04/25/18 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1103323	5	04/26/18 15:58	04/26/18 15:58	AMC

SS-2 L988471-02 Air

Collected by	Collected date/time	Received date/time
N. Peterson	04/23/18 10:53	04/25/18 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1103323	1	04/26/18 16:41	04/26/18 16:41	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1103956	20	04/27/18 12:36	04/27/18 12:36	AMC

SS-3 L988471-03 Air

Collected by	Collected date/time	Received date/time
N. Peterson	04/23/18 11:02	04/25/18 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1103966	100	04/27/18 13:35	04/27/18 13:35	AMC

SS-4 L988471-04 Air

Collected by	Collected date/time	Received date/time
N. Peterson	04/23/18 11:06	04/25/18 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1103323	100	04/26/18 17:59	04/26/18 17:59	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1103956	4000	04/27/18 13:22	04/27/18 13:22	AMC

SS-5 L988471-05 Air

Collected by	Collected date/time	Received date/time
N. Peterson	04/23/18 11:11	04/25/18 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1103323	10	04/26/18 18:37	04/26/18 18:37	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1103956	200	04/27/18 14:08	04/27/18 14:08	AMC

SS-6 L988471-06 Air

Collected by	Collected date/time	Received date/time
N. Peterson	04/23/18 11:14	04/25/18 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1103323	1	04/26/18 19:20	04/26/18 19:20	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1103956	80	04/27/18 14:56	04/27/18 14:56	AMC

SS-7 L988471-07 Air

Collected by	Collected date/time	Received date/time
N. Peterson	04/23/18 11:17	04/25/18 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1103323	1	04/26/18 20:03	04/26/18 20:03	AMC

SS-8 L988471-08 Air

Collected by	Collected date/time	Received date/time
N. Peterson	04/23/18 11:21	04/25/18 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1103323	1	04/26/18 20:47	04/26/18 20:47	AMC

SS-9 L988471-09 Air

Collected by	Collected date/time	Received date/time
N. Peterson	04/23/18 11:27	04/25/18 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1103323	1	04/26/18 21:30	04/26/18 21:30	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1103956	20	04/27/18 15:44	04/27/18 15:44	AMC

SS-10 L988471-10 Air

Collected by	Collected date/time	Received date/time
N. Peterson	04/23/18 11:32	04/25/18 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1103323	1	04/26/18 22:13	04/26/18 22:13	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1103956	20	04/27/18 16:32	04/27/18 16:32	AMC

SS-11 L988471-11 Air

Collected by	Collected date/time	Received date/time
N. Peterson	04/23/18 11:36	04/25/18 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1103323	1	04/26/18 22:57	04/26/18 22:57	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1103956	80	04/27/18 17:19	04/27/18 17:19	AMC

SS-12 L988471-12 Air

Collected by	Collected date/time	Received date/time
N. Peterson	04/23/18 11:42	04/25/18 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1103323	1	04/26/18 23:42	04/26/18 23:42	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1103956	25	04/27/18 18:07	04/27/18 18:07	AMC

DUP L988471-13 Air

Collected by	Collected date/time	Received date/time
N. Peterson	04/23/18 00:00	04/25/18 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1103323	1	04/27/18 00:25	04/27/18 00:25	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1103956	25	04/27/18 18:55	04/27/18 18:55	AMC

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Tom Mellette
Technical Service Representative

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	6.25	14.9	ND	ND		5	WG1103323
Allyl chloride	107-05-1	76.53	1.00	3.13	ND	ND		5	WG1103323
Benzene	71-43-2	78.10	1.00	3.19	ND	ND		5	WG1103323
Benzyl Chloride	100-44-7	127	1.00	5.19	ND	ND		5	WG1103323
Bromodichloromethane	75-27-4	164	1.00	6.71	ND	ND		5	WG1103323
Bromoform	75-25-2	253	3.00	31.0	ND	ND		5	WG1103323
Bromomethane	74-83-9	94.90	1.00	3.88	ND	ND		5	WG1103323
1,3-Butadiene	106-99-0	54.10	10.0	22.1	ND	ND		5	WG1103323
Carbon disulfide	75-15-0	76.10	1.00	3.11	ND	ND		5	WG1103323
Carbon tetrachloride	56-23-5	154	1.00	6.30	ND	ND		5	WG1103323
Chlorobenzene	108-90-7	113	1.00	4.62	ND	ND		5	WG1103323
Chloroethane	75-00-3	64.50	1.00	2.64	ND	ND		5	WG1103323
Chloroform	67-66-3	119	1.00	4.87	82.6	402		5	WG1103323
Chloromethane	74-87-3	50.50	1.00	2.07	ND	ND		5	WG1103323
2-Chlorotoluene	95-49-8	126	1.00	5.15	ND	ND		5	WG1103323
Cyclohexane	110-82-7	84.20	1.00	3.44	ND	ND		5	WG1103323
Dibromochloromethane	124-48-1	208	1.00	8.51	ND	ND		5	WG1103323
1,2-Dibromoethane	106-93-4	188	1.00	7.69	ND	ND		5	WG1103323
1,2-Dichlorobenzene	95-50-1	147	1.00	6.01	ND	ND		5	WG1103323
1,3-Dichlorobenzene	541-73-1	147	1.00	6.01	ND	ND		5	WG1103323
1,4-Dichlorobenzene	106-46-7	147	1.00	6.01	ND	ND		5	WG1103323
1,2-Dichloroethane	107-06-2	99	1.00	4.05	ND	ND		5	WG1103323
1,1-Dichloroethane	75-34-3	98	1.00	4.01	ND	ND		5	WG1103323
1,1-Dichloroethene	75-35-4	96.90	1.00	3.96	ND	ND		5	WG1103323
cis-1,2-Dichloroethene	156-59-2	96.90	1.00	3.96	ND	ND		5	WG1103323
trans-1,2-Dichloroethene	156-60-5	96.90	1.00	3.96	ND	ND		5	WG1103323
1,2-Dichloropropane	78-87-5	113	1.00	4.62	ND	ND		5	WG1103323
cis-1,3-Dichloropropene	10061-01-5	111	1.00	4.54	ND	ND		5	WG1103323
trans-1,3-Dichloropropene	10061-02-6	111	1.00	4.54	ND	ND		5	WG1103323
1,4-Dioxane	123-91-1	88.10	1.00	3.60	ND	ND		5	WG1103323
Ethanol	64-17-5	46.10	3.15	5.94	ND	ND		5	WG1103323
Ethylbenzene	100-41-4	106	1.00	4.34	ND	ND		5	WG1103323
4-Ethyltoluene	622-96-8	120	1.00	4.91	ND	ND		5	WG1103323
Trichlorofluoromethane	75-69-4	137.40	1.00	5.62	1.42	7.98		5	WG1103323
Dichlorodifluoromethane	75-71-8	120.92	1.00	4.95	ND	ND		5	WG1103323
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	1.00	7.66	ND	ND		5	WG1103323
1,2-Dichlorotetrafluoroethane	76-14-2	171	1.00	6.99	ND	ND		5	WG1103323
Heptane	142-82-5	100	1.00	4.09	ND	ND		5	WG1103323
Hexachloro-1,3-butadiene	87-68-3	261	3.15	33.6	ND	ND		5	WG1103323
n-Hexane	110-54-3	86.20	1.00	3.53	ND	ND		5	WG1103323
Isopropylbenzene	98-82-8	120.20	1.00	4.92	ND	ND		5	WG1103323
Methylene Chloride	75-09-2	84.90	1.00	3.47	ND	ND		5	WG1103323
Methyl Butyl Ketone	591-78-6	100	6.25	25.6	ND	ND		5	WG1103323
2-Butanone (MEK)	78-93-3	72.10	6.25	18.4	ND	ND		5	WG1103323
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	6.25	25.6	ND	ND		5	WG1103323
Methyl methacrylate	80-62-6	100.12	1.00	4.09	ND	ND		5	WG1103323
MTBE	1634-04-4	88.10	1.00	3.60	ND	ND		5	WG1103323
Naphthalene	91-20-3	128	3.15	16.5	ND	ND		5	WG1103323
2-Propanol	67-63-0	60.10	6.25	15.4	ND	ND		5	WG1103323
Propene	115-07-1	42.10	2.00	3.44	ND	ND		5	WG1103323
Styrene	100-42-5	104	1.00	4.25	ND	ND		5	WG1103323
1,1,2,2-Tetrachloroethane	79-34-5	168	1.00	6.87	ND	ND		5	WG1103323
Tetrachloroethylene	127-18-4	166	1.00	6.79	14.3	96.9		5	WG1103323
Tetrahydrofuran	109-99-9	72.10	1.00	2.95	ND	ND		5	WG1103323
Toluene	108-88-3	92.10	1.00	3.77	ND	ND		5	WG1103323
1,2,4-Trichlorobenzene	120-82-1	181	3.15	23.3	ND	ND		5	WG1103323

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	1.00	5.44	ND	ND		5	WG1103323
1,1,2-Trichloroethane	79-00-5	133	1.00	5.44	ND	ND		5	WG1103323
Trichloroethylene	79-01-6	131	1.00	5.36	ND	ND		5	WG1103323
1,2,4-Trimethylbenzene	95-63-6	120	1.00	4.91	ND	ND		5	WG1103323
1,3,5-Trimethylbenzene	108-67-8	120	1.00	4.91	ND	ND		5	WG1103323
2,2,4-Trimethylpentane	540-84-1	114.22	1.00	4.67	ND	ND		5	WG1103323
Vinyl chloride	75-01-4	62.50	1.00	2.56	ND	ND		5	WG1103323
Vinyl Bromide	593-60-2	106.95	1.00	4.37	ND	ND		5	WG1103323
Vinyl acetate	108-05-4	86.10	1.00	3.52	ND	ND		5	WG1103323
m&p-Xylene	1330-20-7	106	2.00	8.67	ND	ND		5	WG1103323
o-Xylene	95-47-6	106	1.00	4.34	ND	ND		5	WG1103323
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*96.2*				WG1103323

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.25	2.97	6.70	15.9		1	WG1103323
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG1103323
Benzene	71-43-2	78.10	0.200	0.639	ND	ND		1	WG1103323
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG1103323
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG1103323
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG1103323
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG1103323
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG1103323
Carbon disulfide	75-15-0	76.10	0.200	0.622	0.500	1.56		1	WG1103323
Carbon tetrachloride	56-23-5	154	0.200	1.26	7.82	49.2		1	WG1103323
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG1103323
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG1103323
Chloroform	67-66-3	119	0.200	0.973	2.30	11.2		1	WG1103323
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND		1	WG1103323
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG1103323
Cyclohexane	110-82-7	84.20	0.200	0.689	ND	ND		1	WG1103323
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG1103323
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG1103323
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG1103323
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG1103323
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG1103323
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG1103323
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG1103323
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1103323
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG1103323
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1103323
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG1103323
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG1103323
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG1103323
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG1103323
Ethanol	64-17-5	46.10	0.630	1.19	8.36	15.8		1	WG1103323
Ethylbenzene	100-41-4	106	0.200	0.867	ND	ND		1	WG1103323
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	WG1103323
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.655	3.68		1	WG1103323
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.347	1.72		1	WG1103323
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG1103323
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG1103323
Heptane	142-82-5	100	0.200	0.818	ND	ND		1	WG1103323
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG1103323
n-Hexane	110-54-3	86.20	0.200	0.705	ND	ND		1	WG1103323
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG1103323
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG1103323
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	1.33	5.44		1	WG1103323
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	WG1103323
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG1103323
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG1103323
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG1103323
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG1103323
2-Propanol	67-63-0	60.10	1.25	3.07	3.34	8.22		1	WG1103323
Propene	115-07-1	42.10	0.400	0.689	0.405	0.698		1	WG1103323
Styrene	100-42-5	104	0.200	0.851	ND	ND		1	WG1103323
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG1103323
Tetrachloroethylene	127-18-4	166	4.00	27.2	49.0	332		20	WG1103956
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG1103323
Toluene	108-88-3	92.10	0.200	0.753	0.627	2.36		1	WG1103323
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG1103323

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	0.520	2.83		1	WG1103323
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG1103323
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	WG1103323
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	ND	ND		1	WG1103323
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	WG1103323
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	WG1103323
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG1103323
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG1103323
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG1103323
m&p-Xylene	1330-20-7	106	0.400	1.73	ND	ND		1	WG1103323
o-Xylene	95-47-6	106	0.200	0.867	ND	ND		1	WG1103323
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*98.1*				WG1103323
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*93.3*				WG1103956

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	125	297	344	819		100	WG1103966
Allyl chloride	107-05-1	76.53	20.0	62.6	ND	ND		100	WG1103966
Benzene	71-43-2	78.10	20.0	63.9	ND	ND		100	WG1103966
Benzyl Chloride	100-44-7	127	20.0	104	ND	ND		100	WG1103966
Bromodichloromethane	75-27-4	164	20.0	134	ND	ND		100	WG1103966
Bromoform	75-25-2	253	60.0	621	ND	ND		100	WG1103966
Bromomethane	74-83-9	94.90	20.0	77.6	ND	ND		100	WG1103966
1,3-Butadiene	106-99-0	54.10	200	443	ND	ND		100	WG1103966
Carbon disulfide	75-15-0	76.10	20.0	62.2	40.3	125		100	WG1103966
Carbon tetrachloride	56-23-5	154	20.0	126	ND	ND		100	WG1103966
Chlorobenzene	108-90-7	113	20.0	92.4	ND	ND		100	WG1103966
Chloroethane	75-00-3	64.50	20.0	52.8	ND	ND		100	WG1103966
Chloroform	67-66-3	119	20.0	97.3	21.5	105		100	WG1103966
Chloromethane	74-87-3	50.50	20.0	41.3	ND	ND		100	WG1103966
2-Chlorotoluene	95-49-8	126	20.0	103	ND	ND		100	WG1103966
Cyclohexane	110-82-7	84.20	20.0	68.9	2310	7960		100	WG1103966
Dibromochloromethane	124-48-1	208	20.0	170	ND	ND		100	WG1103966
1,2-Dibromoethane	106-93-4	188	20.0	154	ND	ND		100	WG1103966
1,2-Dichlorobenzene	95-50-1	147	20.0	120	ND	ND		100	WG1103966
1,3-Dichlorobenzene	541-73-1	147	20.0	120	ND	ND		100	WG1103966
1,4-Dichlorobenzene	106-46-7	147	20.0	120	ND	ND		100	WG1103966
1,2-Dichloroethane	107-06-2	99	20.0	81.0	37.3	151		100	WG1103966
1,1-Dichloroethane	75-34-3	98	20.0	80.2	ND	ND		100	WG1103966
1,1-Dichloroethene	75-35-4	96.90	20.0	79.3	106	422		100	WG1103966
cis-1,2-Dichloroethene	156-59-2	96.90	20.0	79.3	109	433		100	WG1103966
trans-1,2-Dichloroethene	156-60-5	96.90	20.0	79.3	ND	ND		100	WG1103966
1,2-Dichloropropane	78-87-5	113	20.0	92.4	ND	ND		100	WG1103966
cis-1,3-Dichloropropene	10061-01-5	111	20.0	90.8	ND	ND		100	WG1103966
trans-1,3-Dichloropropene	10061-02-6	111	20.0	90.8	ND	ND		100	WG1103966
1,4-Dioxane	123-91-1	88.10	20.0	72.1	ND	ND		100	WG1103966
Ethanol	64-17-5	46.10	63.0	119	ND	ND		100	WG1103966
Ethylbenzene	100-41-4	106	20.0	86.7	ND	ND		100	WG1103966
4-Ethyltoluene	622-96-8	120	20.0	98.2	ND	ND		100	WG1103966
Trichlorofluoromethane	75-69-4	137.40	20.0	112	ND	ND		100	WG1103966
Dichlorodifluoromethane	75-71-8	120.92	20.0	98.9	ND	ND		100	WG1103966
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	20.0	153	ND	ND		100	WG1103966
1,2-Dichlorotetrafluoroethane	76-14-2	171	20.0	140	ND	ND		100	WG1103966
Heptane	142-82-5	100	20.0	81.8	55.9	229		100	WG1103966
Hexachloro-1,3-butadiene	87-68-3	261	63.0	673	ND	ND		100	WG1103966
n-Hexane	110-54-3	86.20	20.0	70.5	241	850		100	WG1103966
Isopropylbenzene	98-82-8	120.20	20.0	98.3	ND	ND		100	WG1103966
Methylene Chloride	75-09-2	84.90	20.0	69.4	ND	ND		100	WG1103966
Methyl Butyl Ketone	591-78-6	100	125	511	157	641		100	WG1103966
2-Butanone (MEK)	78-93-3	72.10	125	369	ND	ND		100	WG1103966
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	125	512	ND	ND		100	WG1103966
Methyl methacrylate	80-62-6	100.12	20.0	81.9	ND	ND		100	WG1103966
MTBE	1634-04-4	88.10	20.0	72.1	ND	ND		100	WG1103966
Naphthalene	91-20-3	128	63.0	330	ND	ND		100	WG1103966
2-Propanol	67-63-0	60.10	125	307	ND	ND		100	WG1103966
Propene	115-07-1	42.10	40.0	68.9	232	399		100	WG1103966
Styrene	100-42-5	104	20.0	85.1	42.2	179		100	WG1103966
1,1,2,2-Tetrachloroethane	79-34-5	168	20.0	137	55.9	384		100	WG1103966
Tetrachloroethylene	127-18-4	166	20.0	136	3880	26300		100	WG1103966
Tetrahydrofuran	109-99-9	72.10	20.0	59.0	ND	ND		100	WG1103966
Toluene	108-88-3	92.10	20.0	75.3	ND	ND		100	WG1103966
1,2,4-Trichlorobenzene	120-82-1	181	63.0	466	ND	ND		100	WG1103966

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	20.0	109	ND	ND		100	WG1103966
1,1,2-Trichloroethane	79-00-5	133	20.0	109	82.6	449		100	WG1103966
Trichloroethylene	79-01-6	131	20.0	107	423	2270		100	WG1103966
1,2,4-Trimethylbenzene	95-63-6	120	20.0	98.2	ND	ND		100	WG1103966
1,3,5-Trimethylbenzene	108-67-8	120	20.0	98.2	ND	ND		100	WG1103966
2,2,4-Trimethylpentane	540-84-1	114.22	20.0	93.4	ND	ND		100	WG1103966
Vinyl chloride	75-01-4	62.50	20.0	51.1	1190	3040		100	WG1103966
Vinyl Bromide	593-60-2	106.95	20.0	87.5	ND	ND		100	WG1103966
Vinyl acetate	108-05-4	86.10	20.0	70.4	ND	ND		100	WG1103966
m&p-Xylene	1330-20-7	106	40.0	173	ND	ND		100	WG1103966
o-Xylene	95-47-6	106	20.0	86.7	ND	ND		100	WG1103966
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*282*		J1		WG1103966

Sample Narrative:

L988471-03 WG1103966: Surrogate failure due to matrix interference.

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	125	297	573	1360		100	WG1103323
Allyl chloride	107-05-1	76.53	20.0	62.6	ND	ND		100	WG1103323
Benzene	71-43-2	78.10	20.0	63.9	ND	ND		100	WG1103323
Benzyl Chloride	100-44-7	127	20.0	104	ND	ND		100	WG1103323
Bromodichloromethane	75-27-4	164	20.0	134	ND	ND		100	WG1103323
Bromoform	75-25-2	253	60.0	621	ND	ND		100	WG1103323
Bromomethane	74-83-9	94.90	20.0	77.6	ND	ND		100	WG1103323
1,3-Butadiene	106-99-0	54.10	200	443	ND	ND		100	WG1103323
Carbon disulfide	75-15-0	76.10	20.0	62.2	24.6	76.5		100	WG1103323
Carbon tetrachloride	56-23-5	154	20.0	126	ND	ND		100	WG1103323
Chlorobenzene	108-90-7	113	20.0	92.4	ND	ND		100	WG1103323
Chloroethane	75-00-3	64.50	20.0	52.8	ND	ND		100	WG1103323
Chloroform	67-66-3	119	20.0	97.3	ND	ND		100	WG1103323
Chloromethane	74-87-3	50.50	20.0	41.3	ND	ND		100	WG1103323
2-Chlorotoluene	95-49-8	126	20.0	103	ND	ND		100	WG1103323
Cyclohexane	110-82-7	84.20	20.0	68.9	ND	ND		100	WG1103323
Dibromochloromethane	124-48-1	208	20.0	170	ND	ND		100	WG1103323
1,2-Dibromoethane	106-93-4	188	20.0	154	ND	ND		100	WG1103323
1,2-Dichlorobenzene	95-50-1	147	20.0	120	ND	ND		100	WG1103323
1,3-Dichlorobenzene	541-73-1	147	20.0	120	ND	ND		100	WG1103323
1,4-Dichlorobenzene	106-46-7	147	20.0	120	ND	ND		100	WG1103323
1,2-Dichloroethane	107-06-2	99	20.0	81.0	ND	ND		100	WG1103323
1,1-Dichloroethane	75-34-3	98	20.0	80.2	ND	ND		100	WG1103323
1,1-Dichloroethene	75-35-4	96.90	20.0	79.3	ND	ND		100	WG1103323
cis-1,2-Dichloroethene	156-59-2	96.90	20.0	79.3	702	2780		100	WG1103323
trans-1,2-Dichloroethene	156-60-5	96.90	20.0	79.3	56.6	224		100	WG1103323
1,2-Dichloropropane	78-87-5	113	20.0	92.4	ND	ND		100	WG1103323
cis-1,3-Dichloropropene	10061-01-5	111	20.0	90.8	ND	ND		100	WG1103323
trans-1,3-Dichloropropene	10061-02-6	111	20.0	90.8	ND	ND		100	WG1103323
1,4-Dioxane	123-91-1	88.10	20.0	72.1	ND	ND		100	WG1103323
Ethanol	64-17-5	46.10	63.0	119	931	1760		100	WG1103323
Ethylbenzene	100-41-4	106	20.0	86.7	ND	ND		100	WG1103323
4-Ethyltoluene	622-96-8	120	20.0	98.2	ND	ND		100	WG1103323
Trichlorofluoromethane	75-69-4	137.40	20.0	112	ND	ND		100	WG1103323
Dichlorodifluoromethane	75-71-8	120.92	20.0	98.9	ND	ND		100	WG1103323
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	20.0	153	ND	ND		100	WG1103323
1,2-Dichlorotetrafluoroethane	76-14-2	171	20.0	140	ND	ND		100	WG1103323
Heptane	142-82-5	100	20.0	81.8	ND	ND		100	WG1103323
Hexachloro-1,3-butadiene	87-68-3	261	63.0	673	ND	ND		100	WG1103323
n-Hexane	110-54-3	86.20	20.0	70.5	126	446		100	WG1103323
Isopropylbenzene	98-82-8	120.20	20.0	98.3	ND	ND		100	WG1103323
Methylene Chloride	75-09-2	84.90	20.0	69.4	253	879		100	WG1103323
Methyl Butyl Ketone	591-78-6	100	125	511	ND	ND		100	WG1103323
2-Butanone (MEK)	78-93-3	72.10	125	369	ND	ND		100	WG1103323
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	125	512	ND	ND		100	WG1103323
Methyl methacrylate	80-62-6	100.12	20.0	81.9	ND	ND		100	WG1103323
MTBE	1634-04-4	88.10	20.0	72.1	ND	ND		100	WG1103323
Naphthalene	91-20-3	128	63.0	330	ND	ND		100	WG1103323
2-Propanol	67-63-0	60.10	125	307	ND	ND		100	WG1103323
Propene	115-07-1	42.10	40.0	68.9	ND	ND		100	WG1103323
Styrene	100-42-5	104	20.0	85.1	ND	ND		100	WG1103323
1,1,2,2-Tetrachloroethane	79-34-5	168	20.0	137	ND	ND		100	WG1103323
Tetrachloroethylene	127-18-4	166	800	5430	44600	303000		4000	WG1103956
Tetrahydrofuran	109-99-9	72.10	20.0	59.0	ND	ND		100	WG1103323
Toluene	108-88-3	92.10	20.0	75.3	29.9	113		100	WG1103323
1,2,4-Trichlorobenzene	120-82-1	181	63.0	466	ND	ND		100	WG1103323

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	20.0	109	ND	ND		100	WG1103323
1,1,2-Trichloroethane	79-00-5	133	20.0	109	ND	ND		100	WG1103323
Trichloroethylene	79-01-6	131	20.0	107	2290	12300		100	WG1103323
1,2,4-Trimethylbenzene	95-63-6	120	20.0	98.2	21.7	106		100	WG1103323
1,3,5-Trimethylbenzene	108-67-8	120	20.0	98.2	ND	ND		100	WG1103323
2,2,4-Trimethylpentane	540-84-1	114.22	20.0	93.4	ND	ND		100	WG1103323
Vinyl chloride	75-01-4	62.50	20.0	51.1	ND	ND		100	WG1103323
Vinyl Bromide	593-60-2	106.95	20.0	87.5	ND	ND		100	WG1103323
Vinyl acetate	108-05-4	86.10	20.0	70.4	ND	ND		100	WG1103323
m&p-Xylene	1330-20-7	106	40.0	173	ND	ND		100	WG1103323
o-Xylene	95-47-6	106	20.0	86.7	ND	ND		100	WG1103323
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*98.4*				WG1103323
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*92.8*				WG1103956

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	12.5	29.7	ND	ND		10	WG1103323
Allyl chloride	107-05-1	76.53	2.00	6.26	ND	ND		10	WG1103323
Benzene	71-43-2	78.10	2.00	6.39	ND	ND		10	WG1103323
Benzyl Chloride	100-44-7	127	2.00	10.4	ND	ND		10	WG1103323
Bromodichloromethane	75-27-4	164	2.00	13.4	ND	ND		10	WG1103323
Bromoform	75-25-2	253	6.00	62.1	ND	ND		10	WG1103323
Bromomethane	74-83-9	94.90	2.00	7.76	ND	ND		10	WG1103323
1,3-Butadiene	106-99-0	54.10	20.0	44.3	ND	ND		10	WG1103323
Carbon disulfide	75-15-0	76.10	2.00	6.22	ND	ND		10	WG1103323
Carbon tetrachloride	56-23-5	154	2.00	12.6	ND	ND		10	WG1103323
Chlorobenzene	108-90-7	113	2.00	9.24	ND	ND		10	WG1103323
Chloroethane	75-00-3	64.50	2.00	5.28	ND	ND		10	WG1103323
Chloroform	67-66-3	119	2.00	9.73	ND	ND		10	WG1103323
Chloromethane	74-87-3	50.50	2.00	4.13	ND	ND		10	WG1103323
2-Chlorotoluene	95-49-8	126	2.00	10.3	ND	ND		10	WG1103323
Cyclohexane	110-82-7	84.20	2.00	6.89	ND	ND		10	WG1103323
Dibromochloromethane	124-48-1	208	2.00	17.0	ND	ND		10	WG1103323
1,2-Dibromoethane	106-93-4	188	2.00	15.4	ND	ND		10	WG1103323
1,2-Dichlorobenzene	95-50-1	147	2.00	12.0	ND	ND		10	WG1103323
1,3-Dichlorobenzene	541-73-1	147	2.00	12.0	ND	ND		10	WG1103323
1,4-Dichlorobenzene	106-46-7	147	2.00	12.0	ND	ND		10	WG1103323
1,2-Dichloroethane	107-06-2	99	2.00	8.10	ND	ND		10	WG1103323
1,1-Dichloroethane	75-34-3	98	2.00	8.02	2.86	11.5		10	WG1103323
1,1-Dichloroethene	75-35-4	96.90	2.00	7.93	ND	ND		10	WG1103323
cis-1,2-Dichloroethene	156-59-2	96.90	2.00	7.93	150	593		10	WG1103323
trans-1,2-Dichloroethene	156-60-5	96.90	2.00	7.93	ND	ND		10	WG1103323
1,2-Dichloropropane	78-87-5	113	2.00	9.24	ND	ND		10	WG1103323
cis-1,3-Dichloropropene	10061-01-5	111	2.00	9.08	ND	ND		10	WG1103323
trans-1,3-Dichloropropene	10061-02-6	111	2.00	9.08	ND	ND		10	WG1103323
1,4-Dioxane	123-91-1	88.10	2.00	7.21	ND	ND		10	WG1103323
Ethanol	64-17-5	46.10	6.30	11.9	ND	ND		10	WG1103323
Ethylbenzene	100-41-4	106	2.00	8.67	ND	ND		10	WG1103323
4-Ethyltoluene	622-96-8	120	2.00	9.82	ND	ND		10	WG1103323
Trichlorofluoromethane	75-69-4	137.40	2.00	11.2	ND	ND		10	WG1103323
Dichlorodifluoromethane	75-71-8	120.92	2.00	9.89	ND	ND		10	WG1103323
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	2.00	15.3	ND	ND		10	WG1103323
1,2-Dichlorotetrafluoroethane	76-14-2	171	2.00	14.0	ND	ND		10	WG1103323
Heptane	142-82-5	100	2.00	8.18	ND	ND		10	WG1103323
Hexachloro-1,3-butadiene	87-68-3	261	6.30	67.3	ND	ND		10	WG1103323
n-Hexane	110-54-3	86.20	2.00	7.05	ND	ND		10	WG1103323
Isopropylbenzene	98-82-8	120.20	2.00	9.83	ND	ND		10	WG1103323
Methylene Chloride	75-09-2	84.90	2.00	6.94	ND	ND		10	WG1103323
Methyl Butyl Ketone	591-78-6	100	12.5	51.1	ND	ND		10	WG1103323
2-Butanone (MEK)	78-93-3	72.10	12.5	36.9	ND	ND		10	WG1103323
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	12.5	51.2	ND	ND		10	WG1103323
Methyl methacrylate	80-62-6	100.12	2.00	8.19	ND	ND		10	WG1103323
MTBE	1634-04-4	88.10	2.00	7.21	ND	ND		10	WG1103323
Naphthalene	91-20-3	128	6.30	33.0	ND	ND		10	WG1103323
2-Propanol	67-63-0	60.10	12.5	30.7	ND	ND		10	WG1103323
Propene	115-07-1	42.10	4.00	6.89	ND	ND		10	WG1103323
Styrene	100-42-5	104	2.00	8.51	ND	ND		10	WG1103323
1,1,2,2-Tetrachloroethane	79-34-5	168	2.00	13.7	ND	ND		10	WG1103323
Tetrachloroethylene	127-18-4	166	40.0	272	8820	59900		200	WG1103956
Tetrahydrofuran	109-99-9	72.10	2.00	5.90	ND	ND		10	WG1103323
Toluene	108-88-3	92.10	2.00	7.53	ND	ND		10	WG1103323
1,2,4-Trichlorobenzene	120-82-1	181	6.30	46.6	ND	ND		10	WG1103323

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	2.00	10.9	ND	ND		10	WG1103323
1,1,2-Trichloroethane	79-00-5	133	2.00	10.9	ND	ND		10	WG1103323
Trichloroethylene	79-01-6	131	40.0	214	1240	6670		200	WG1103956
1,2,4-Trimethylbenzene	95-63-6	120	2.00	9.82	ND	ND		10	WG1103323
1,3,5-Trimethylbenzene	108-67-8	120	2.00	9.82	ND	ND		10	WG1103323
2,2,4-Trimethylpentane	540-84-1	114.22	2.00	9.34	ND	ND		10	WG1103323
Vinyl chloride	75-01-4	62.50	2.00	5.11	2.15	5.50		10	WG1103323
Vinyl Bromide	593-60-2	106.95	2.00	8.75	ND	ND		10	WG1103323
Vinyl acetate	108-05-4	86.10	2.00	7.04	ND	ND		10	WG1103323
m&p-Xylene	1330-20-7	106	4.00	17.3	ND	ND		10	WG1103323
o-Xylene	95-47-6	106	2.00	8.67	ND	ND		10	WG1103323
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*96.7*				WG1103323
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*93.6*				WG1103956

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.25	2.97	ND	ND		1	WG1103323
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG1103323
Benzene	71-43-2	78.10	0.200	0.639	0.591	1.89		1	WG1103323
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG1103323
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG1103323
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG1103323
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG1103323
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG1103323
Carbon disulfide	75-15-0	76.10	0.200	0.622	0.233	0.724		1	WG1103323
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG1103323
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG1103323
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG1103323
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG1103323
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND		1	WG1103323
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG1103323
Cyclohexane	110-82-7	84.20	0.200	0.689	1.35	4.66		1	WG1103323
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG1103323
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG1103323
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG1103323
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG1103323
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG1103323
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG1103323
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG1103323
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1103323
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	0.223	0.886		1	WG1103323
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1103323
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG1103323
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG1103323
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG1103323
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG1103323
Ethanol	64-17-5	46.10	0.630	1.19	0.931	1.75		1	WG1103323
Ethylbenzene	100-41-4	106	0.200	0.867	ND	ND		1	WG1103323
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	WG1103323
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.493	2.77		1	WG1103323
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.333	1.65		1	WG1103323
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG1103323
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG1103323
Heptane	142-82-5	100	0.200	0.818	ND	ND		1	WG1103323
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG1103323
n-Hexane	110-54-3	86.20	0.200	0.705	0.417	1.47		1	WG1103323
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG1103323
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG1103323
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG1103323
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	WG1103323
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG1103323
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG1103323
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG1103323
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG1103323
2-Propanol	67-63-0	60.10	1.25	3.07	2.30	5.66		1	WG1103323
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	WG1103323
Styrene	100-42-5	104	0.200	0.851	ND	ND		1	WG1103323
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG1103323
Tetrachloroethylene	127-18-4	166	16.0	109	955	6480		80	WG1103956
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG1103323
Toluene	108-88-3	92.10	0.200	0.753	2.47	9.31		1	WG1103323
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG1103323

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	0.465	2.53		1	WG1103323
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG1103323
Trichloroethylene	79-01-6	131	0.200	1.07	2.08	11.1		1	WG1103323
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	ND	ND		1	WG1103323
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	WG1103323
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	WG1103323
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG1103323
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG1103323
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG1103323
m&p-Xylene	1330-20-7	106	0.400	1.73	0.997	4.32		1	WG1103323
o-Xylene	95-47-6	106	0.200	0.867	0.498	2.16		1	WG1103323
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*97.7*				WG1103323
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*92.4*				WG1103956

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.25	2.97	48.4	115		1	WG1103323
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG1103323
Benzene	71-43-2	78.10	0.200	0.639	1.44	4.61		1	WG1103323
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG1103323
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG1103323
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG1103323
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG1103323
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG1103323
Carbon disulfide	75-15-0	76.10	0.200	0.622	2.25	7.00		1	WG1103323
Carbon tetrachloride	56-23-5	154	0.200	1.26	0.249	1.57		1	WG1103323
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG1103323
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG1103323
Chloroform	67-66-3	119	0.200	0.973	ND	ND		1	WG1103323
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND		1	WG1103323
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG1103323
Cyclohexane	110-82-7	84.20	0.200	0.689	14.1	48.5		1	WG1103323
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG1103323
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG1103323
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG1103323
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG1103323
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG1103323
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG1103323
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG1103323
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1103323
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG1103323
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1103323
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG1103323
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG1103323
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG1103323
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG1103323
Ethanol	64-17-5	46.10	0.630	1.19	1.18	2.22		1	WG1103323
Ethylbenzene	100-41-4	106	0.200	0.867	0.365	1.58		1	WG1103323
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	WG1103323
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.456	2.56		1	WG1103323
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.509	2.52		1	WG1103323
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG1103323
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG1103323
Heptane	142-82-5	100	0.200	0.818	2.76	11.3		1	WG1103323
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG1103323
n-Hexane	110-54-3	86.20	0.200	0.705	3.69	13.0		1	WG1103323
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG1103323
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG1103323
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG1103323
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	5.43	16.0		1	WG1103323
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG1103323
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG1103323
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG1103323
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG1103323
2-Propanol	67-63-0	60.10	1.25	3.07	ND	ND		1	WG1103323
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	WG1103323
Styrene	100-42-5	104	0.200	0.851	ND	ND		1	WG1103323
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG1103323
Tetrachloroethylene	127-18-4	166	0.200	1.36	38.6	262		1	WG1103323
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG1103323
Toluene	108-88-3	92.10	0.200	0.753	8.65	32.6		1	WG1103323
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG1103323

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	0.227	1.23		1	WG1103323
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG1103323
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	WG1103323
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	0.430	2.11		1	WG1103323
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	0.214	1.05		1	WG1103323
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	1.30	6.06		1	WG1103323
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG1103323
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG1103323
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG1103323
m&p-Xylene	1330-20-7	106	0.400	1.73	2.46	10.7		1	WG1103323
o-Xylene	95-47-6	106	0.200	0.867	1.43	6.21		1	WG1103323
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*97.9*				WG1103323

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.25	2.97	4.25	10.1		1	WG1103323
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG1103323
Benzene	71-43-2	78.10	0.200	0.639	ND	ND		1	WG1103323
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG1103323
Bromodichloromethane	75-27-4	164	0.200	1.34	0.243	1.63		1	WG1103323
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG1103323
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG1103323
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG1103323
Carbon disulfide	75-15-0	76.10	0.200	0.622	0.982	3.06		1	WG1103323
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG1103323
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG1103323
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG1103323
Chloroform	67-66-3	119	0.200	0.973	2.57	12.5		1	WG1103323
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND		1	WG1103323
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG1103323
Cyclohexane	110-82-7	84.20	0.200	0.689	1.23	4.23		1	WG1103323
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG1103323
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG1103323
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG1103323
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG1103323
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG1103323
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG1103323
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG1103323
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1103323
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG1103323
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1103323
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG1103323
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG1103323
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG1103323
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG1103323
Ethanol	64-17-5	46.10	0.630	1.19	ND	ND		1	WG1103323
Ethylbenzene	100-41-4	106	0.200	0.867	ND	ND		1	WG1103323
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	WG1103323
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.455	2.56		1	WG1103323
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.378	1.87		1	WG1103323
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG1103323
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG1103323
Heptane	142-82-5	100	0.200	0.818	0.231	0.947		1	WG1103323
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG1103323
n-Hexane	110-54-3	86.20	0.200	0.705	0.458	1.62		1	WG1103323
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG1103323
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG1103323
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG1103323
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	WG1103323
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG1103323
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG1103323
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG1103323
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG1103323
2-Propanol	67-63-0	60.10	1.25	3.07	ND	ND		1	WG1103323
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	WG1103323
Styrene	100-42-5	104	0.200	0.851	ND	ND		1	WG1103323
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG1103323
Tetrachloroethylene	127-18-4	166	0.200	1.36	7.70	52.3		1	WG1103323
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG1103323
Toluene	108-88-3	92.10	0.200	0.753	0.318	1.20		1	WG1103323
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG1103323

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG1103323
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG1103323
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	WG1103323
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	ND	ND		1	WG1103323
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	WG1103323
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	WG1103323
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG1103323
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG1103323
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG1103323
m&p-Xylene	1330-20-7	106	0.400	1.73	ND	ND		1	WG1103323
o-Xylene	95-47-6	106	0.200	0.867	ND	ND		1	WG1103323
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*97.7*				WG1103323

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.25	2.97	17.0	40.5		1	WG1103323
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG1103323
Benzene	71-43-2	78.10	0.200	0.639	0.218	0.697		1	WG1103323
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG1103323
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG1103323
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG1103323
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG1103323
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG1103323
Carbon disulfide	75-15-0	76.10	0.200	0.622	37.5	117		1	WG1103323
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG1103323
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG1103323
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG1103323
Chloroform	67-66-3	119	0.200	0.973	4.49	21.8		1	WG1103323
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND		1	WG1103323
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG1103323
Cyclohexane	110-82-7	84.20	0.200	0.689	0.571	1.97		1	WG1103323
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG1103323
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG1103323
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG1103323
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG1103323
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG1103323
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG1103323
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG1103323
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1103323
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG1103323
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1103323
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG1103323
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG1103323
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG1103323
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG1103323
Ethanol	64-17-5	46.10	0.630	1.19	0.933	1.76		1	WG1103323
Ethylbenzene	100-41-4	106	0.200	0.867	ND	ND		1	WG1103323
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	WG1103323
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.380	2.13		1	WG1103323
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.418	2.07		1	WG1103323
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG1103323
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG1103323
Heptane	142-82-5	100	0.200	0.818	1.18	4.84		1	WG1103323
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG1103323
n-Hexane	110-54-3	86.20	0.200	0.705	0.974	3.43		1	WG1103323
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG1103323
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG1103323
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG1103323
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	WG1103323
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG1103323
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG1103323
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG1103323
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG1103323
2-Propanol	67-63-0	60.10	1.25	3.07	ND	ND		1	WG1103323
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	WG1103323
Styrene	100-42-5	104	0.200	0.851	ND	ND		1	WG1103323
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG1103323
Tetrachloroethylene	127-18-4	166	4.00	27.2	70.1	476		20	WG1103956
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG1103323
Toluene	108-88-3	92.10	0.200	0.753	0.494	1.86		1	WG1103323
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG1103323

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG1103323
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG1103323
Trichloroethylene	79-01-6	131	0.200	1.07	ND	ND		1	WG1103323
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	ND	ND		1	WG1103323
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	WG1103323
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	0.285	1.33		1	WG1103323
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG1103323
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG1103323
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG1103323
m&p-Xylene	1330-20-7	106	0.400	1.73	ND	ND		1	WG1103323
o-Xylene	95-47-6	106	0.200	0.867	ND	ND		1	WG1103323
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*96.7*				WG1103323
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*91.6*				WG1103956

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	25.0	59.4	88.9	211		20	WG1103956
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG1103323
Benzene	71-43-2	78.10	0.200	0.639	1.32	4.22		1	WG1103323
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG1103323
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG1103323
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG1103323
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG1103323
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG1103323
Carbon disulfide	75-15-0	76.10	0.200	0.622	2.95	9.17		1	WG1103323
Carbon tetrachloride	56-23-5	154	0.200	1.26	0.262	1.65		1	WG1103323
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG1103323
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG1103323
Chloroform	67-66-3	119	0.200	0.973	3.84	18.7		1	WG1103323
Chloromethane	74-87-3	50.50	0.200	0.413	0.895	1.85		1	WG1103323
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG1103323
Cyclohexane	110-82-7	84.20	0.200	0.689	0.799	2.75		1	WG1103323
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG1103323
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG1103323
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG1103323
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG1103323
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG1103323
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG1103323
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG1103323
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1103323
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	6.54	25.9		1	WG1103323
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	1.49	5.89		1	WG1103323
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG1103323
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG1103323
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG1103323
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG1103323
Ethanol	64-17-5	46.10	0.630	1.19	17.5	33.1		1	WG1103323
Ethylbenzene	100-41-4	106	0.200	0.867	ND	ND		1	WG1103323
4-Ethyltoluene	622-96-8	120	0.200	0.982	0.399	1.96		1	WG1103323
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.374	2.10		1	WG1103323
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.371	1.84		1	WG1103323
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG1103323
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG1103323
Heptane	142-82-5	100	0.200	0.818	0.221	0.903		1	WG1103323
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG1103323
n-Hexane	110-54-3	86.20	0.200	0.705	0.922	3.25		1	WG1103323
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG1103323
Methylene Chloride	75-09-2	84.90	0.200	0.694	0.397	1.38		1	WG1103323
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG1103323
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	5.98	17.6		1	WG1103323
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG1103323
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG1103323
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG1103323
Naphthalene	91-20-3	128	0.630	3.30	0.756	3.96		1	WG1103323
2-Propanol	67-63-0	60.10	1.25	3.07	4.61	11.3		1	WG1103323
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	WG1103323
Styrene	100-42-5	104	0.200	0.851	ND	ND		1	WG1103323
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG1103323
Tetrachloroethylene	127-18-4	166	0.200	1.36	4.70	31.9		1	WG1103323
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	0.315	0.930		1	WG1103323
Toluene	108-88-3	92.10	0.200	0.753	2.07	7.78		1	WG1103323
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG1103323

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	ND	ND		1	WG1103323
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG1103323
Trichloroethylene	79-01-6	131	0.200	1.07	12.5	67.1		1	WG1103323
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	0.634	3.11		1	WG1103323
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	WG1103323
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	0.918	4.29		1	WG1103323
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG1103323
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG1103323
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG1103323
m&p-Xylene	1330-20-7	106	0.400	1.73	0.817	3.54		1	WG1103323
o-Xylene	95-47-6	106	0.200	0.867	0.452	1.96		1	WG1103323
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*103*				WG1103323
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*91.6*				WG1103956

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.25	2.97	7.55	17.9		1	WG1103323
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG1103323
Benzene	71-43-2	78.10	0.200	0.639	0.547	1.75		1	WG1103323
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG1103323
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG1103323
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG1103323
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG1103323
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG1103323
Carbon disulfide	75-15-0	76.10	0.200	0.622	0.316	0.983		1	WG1103323
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG1103323
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG1103323
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG1103323
Chloroform	67-66-3	119	0.200	0.973	0.305	1.48		1	WG1103323
Chloromethane	74-87-3	50.50	0.200	0.413	1.69	3.50		1	WG1103323
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG1103323
Cyclohexane	110-82-7	84.20	0.200	0.689	0.668	2.30		1	WG1103323
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG1103323
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG1103323
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG1103323
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG1103323
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG1103323
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG1103323
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG1103323
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1103323
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	ND	ND		1	WG1103323
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	ND	ND		1	WG1103323
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG1103323
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG1103323
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG1103323
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG1103323
Ethanol	64-17-5	46.10	0.630	1.19	0.881	1.66		1	WG1103323
Ethylbenzene	100-41-4	106	0.200	0.867	ND	ND		1	WG1103323
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	WG1103323
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.306	1.72		1	WG1103323
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.292	1.45		1	WG1103323
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG1103323
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG1103323
Heptane	142-82-5	100	0.200	0.818	0.669	2.74		1	WG1103323
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG1103323
n-Hexane	110-54-3	86.20	0.200	0.705	0.988	3.48		1	WG1103323
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG1103323
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG1103323
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG1103323
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	WG1103323
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG1103323
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG1103323
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG1103323
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG1103323
2-Propanol	67-63-0	60.10	1.25	3.07	ND	ND		1	WG1103323
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	WG1103323
Styrene	100-42-5	104	0.200	0.851	ND	ND		1	WG1103323
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG1103323
Tetrachloroethylene	127-18-4	166	16.0	109	776	5270		80	WG1103956
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG1103323
Toluene	108-88-3	92.10	0.200	0.753	0.665	2.51		1	WG1103323
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG1103323

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	0.205	1.11		1	WG1103323
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG1103323
Trichloroethylene	79-01-6	131	0.200	1.07	18.0	96.4		1	WG1103323
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	ND	ND		1	WG1103323
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	WG1103323
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	WG1103323
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG1103323
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG1103323
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG1103323
m&p-Xylene	1330-20-7	106	0.400	1.73	ND	ND		1	WG1103323
o-Xylene	95-47-6	106	0.200	0.867	ND	ND		1	WG1103323
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*98.9*				WG1103323
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*92.0*				WG1103956

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.25	2.97	1.86	4.42		1	WG1103323
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG1103323
Benzene	71-43-2	78.10	0.200	0.639	0.507	1.62		1	WG1103323
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG1103323
Bromodichloromethane	75-27-4	164	0.200	1.34	0.206	1.38		1	WG1103323
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG1103323
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG1103323
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG1103323
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG1103323
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG1103323
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG1103323
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG1103323
Chloroform	67-66-3	119	0.200	0.973	0.945	4.60		1	WG1103323
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND		1	WG1103323
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG1103323
Cyclohexane	110-82-7	84.20	0.200	0.689	1.62	5.59		1	WG1103323
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG1103323
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG1103323
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG1103323
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG1103323
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG1103323
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG1103323
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG1103323
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1103323
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	2.67	10.6		1	WG1103323
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	0.540	2.14		1	WG1103323
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG1103323
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG1103323
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG1103323
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG1103323
Ethanol	64-17-5	46.10	0.630	1.19	0.962	1.81		1	WG1103323
Ethylbenzene	100-41-4	106	0.200	0.867	ND	ND		1	WG1103323
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	WG1103323
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.277	1.56		1	WG1103323
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.403	1.99		1	WG1103323
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG1103323
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG1103323
Heptane	142-82-5	100	0.200	0.818	1.08	4.41		1	WG1103323
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG1103323
n-Hexane	110-54-3	86.20	0.200	0.705	1.83	6.45		1	WG1103323
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG1103323
Methylene Chloride	75-09-2	84.90	0.200	0.694	0.210	0.728		1	WG1103323
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG1103323
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	WG1103323
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG1103323
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG1103323
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG1103323
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG1103323
2-Propanol	67-63-0	60.10	1.25	3.07	ND	ND		1	WG1103323
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	WG1103323
Styrene	100-42-5	104	0.200	0.851	ND	ND		1	WG1103323
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG1103323
Tetrachloroethylene	127-18-4	166	5.00	33.9	570	3870		25	WG1103956
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG1103323
Toluene	108-88-3	92.10	0.200	0.753	0.987	3.72		1	WG1103323
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG1103323

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	3.96	21.6		1	WG1103323
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG1103323
Trichloroethylene	79-01-6	131	5.00	26.8	58.0	311		25	WG1103956
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	ND	ND		1	WG1103323
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	WG1103323
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	0.295	1.38		1	WG1103323
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG1103323
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG1103323
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG1103323
m&p-Xylene	1330-20-7	106	0.400	1.73	0.667	2.89		1	WG1103323
o-Xylene	95-47-6	106	0.200	0.867	0.288	1.25		1	WG1103323
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*96.2*				WG1103323
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*93.6*				WG1103956

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Acetone	67-64-1	58.10	1.25	2.97	1.91	4.54		1	WG1103323
Allyl chloride	107-05-1	76.53	0.200	0.626	ND	ND		1	WG1103323
Benzene	71-43-2	78.10	0.200	0.639	0.454	1.45		1	WG1103323
Benzyl Chloride	100-44-7	127	0.200	1.04	ND	ND		1	WG1103323
Bromodichloromethane	75-27-4	164	0.200	1.34	ND	ND		1	WG1103323
Bromoform	75-25-2	253	0.600	6.21	ND	ND		1	WG1103323
Bromomethane	74-83-9	94.90	0.200	0.776	ND	ND		1	WG1103323
1,3-Butadiene	106-99-0	54.10	2.00	4.43	ND	ND		1	WG1103323
Carbon disulfide	75-15-0	76.10	0.200	0.622	ND	ND		1	WG1103323
Carbon tetrachloride	56-23-5	154	0.200	1.26	ND	ND		1	WG1103323
Chlorobenzene	108-90-7	113	0.200	0.924	ND	ND		1	WG1103323
Chloroethane	75-00-3	64.50	0.200	0.528	ND	ND		1	WG1103323
Chloroform	67-66-3	119	0.200	0.973	0.937	4.56		1	WG1103323
Chloromethane	74-87-3	50.50	0.200	0.413	ND	ND		1	WG1103323
2-Chlorotoluene	95-49-8	126	0.200	1.03	ND	ND		1	WG1103323
Cyclohexane	110-82-7	84.20	0.200	0.689	1.58	5.44		1	WG1103323
Dibromochloromethane	124-48-1	208	0.200	1.70	ND	ND		1	WG1103323
1,2-Dibromoethane	106-93-4	188	0.200	1.54	ND	ND		1	WG1103323
1,2-Dichlorobenzene	95-50-1	147	0.200	1.20	ND	ND		1	WG1103323
1,3-Dichlorobenzene	541-73-1	147	0.200	1.20	ND	ND		1	WG1103323
1,4-Dichlorobenzene	106-46-7	147	0.200	1.20	ND	ND		1	WG1103323
1,2-Dichloroethane	107-06-2	99	0.200	0.810	ND	ND		1	WG1103323
1,1-Dichloroethane	75-34-3	98	0.200	0.802	ND	ND		1	WG1103323
1,1-Dichloroethene	75-35-4	96.90	0.200	0.793	ND	ND		1	WG1103323
cis-1,2-Dichloroethene	156-59-2	96.90	0.200	0.793	2.64	10.5		1	WG1103323
trans-1,2-Dichloroethene	156-60-5	96.90	0.200	0.793	0.520	2.06		1	WG1103323
1,2-Dichloropropane	78-87-5	113	0.200	0.924	ND	ND		1	WG1103323
cis-1,3-Dichloropropene	10061-01-5	111	0.200	0.908	ND	ND		1	WG1103323
trans-1,3-Dichloropropene	10061-02-6	111	0.200	0.908	ND	ND		1	WG1103323
1,4-Dioxane	123-91-1	88.10	0.200	0.721	ND	ND		1	WG1103323
Ethanol	64-17-5	46.10	0.630	1.19	ND	ND		1	WG1103323
Ethylbenzene	100-41-4	106	0.200	0.867	ND	ND		1	WG1103323
4-Ethyltoluene	622-96-8	120	0.200	0.982	ND	ND		1	WG1103323
Trichlorofluoromethane	75-69-4	137.40	0.200	1.12	0.254	1.43		1	WG1103323
Dichlorodifluoromethane	75-71-8	120.92	0.200	0.989	0.401	1.98		1	WG1103323
1,1,2-Trichlorotrifluoroethane	76-13-1	187.40	0.200	1.53	ND	ND		1	WG1103323
1,2-Dichlorotetrafluoroethane	76-14-2	171	0.200	1.40	ND	ND		1	WG1103323
Heptane	142-82-5	100	0.200	0.818	1.05	4.30		1	WG1103323
Hexachloro-1,3-butadiene	87-68-3	261	0.630	6.73	ND	ND		1	WG1103323
n-Hexane	110-54-3	86.20	0.200	0.705	1.66	5.85		1	WG1103323
Isopropylbenzene	98-82-8	120.20	0.200	0.983	ND	ND		1	WG1103323
Methylene Chloride	75-09-2	84.90	0.200	0.694	ND	ND		1	WG1103323
Methyl Butyl Ketone	591-78-6	100	1.25	5.11	ND	ND		1	WG1103323
2-Butanone (MEK)	78-93-3	72.10	1.25	3.69	ND	ND		1	WG1103323
4-Methyl-2-pentanone (MIBK)	108-10-1	100.10	1.25	5.12	ND	ND		1	WG1103323
Methyl methacrylate	80-62-6	100.12	0.200	0.819	ND	ND		1	WG1103323
MTBE	1634-04-4	88.10	0.200	0.721	ND	ND		1	WG1103323
Naphthalene	91-20-3	128	0.630	3.30	ND	ND		1	WG1103323
2-Propanol	67-63-0	60.10	1.25	3.07	ND	ND		1	WG1103323
Propene	115-07-1	42.10	0.400	0.689	ND	ND		1	WG1103323
Styrene	100-42-5	104	0.200	0.851	ND	ND		1	WG1103323
1,1,2,2-Tetrachloroethane	79-34-5	168	0.200	1.37	ND	ND		1	WG1103323
Tetrachloroethylene	127-18-4	166	5.00	33.9	543	3690		25	WG1103956
Tetrahydrofuran	109-99-9	72.10	0.200	0.590	ND	ND		1	WG1103323
Toluene	108-88-3	92.10	0.200	0.753	0.972	3.66		1	WG1103323
1,2,4-Trichlorobenzene	120-82-1	181	0.630	4.66	ND	ND		1	WG1103323

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
1,1,1-Trichloroethane	71-55-6	133	0.200	1.09	3.90	21.2		1	WG1103323
1,1,2-Trichloroethane	79-00-5	133	0.200	1.09	ND	ND		1	WG1103323
Trichloroethylene	79-01-6	131	5.00	26.8	55.9	299		25	WG1103956
1,2,4-Trimethylbenzene	95-63-6	120	0.200	0.982	ND	ND		1	WG1103323
1,3,5-Trimethylbenzene	108-67-8	120	0.200	0.982	ND	ND		1	WG1103323
2,2,4-Trimethylpentane	540-84-1	114.22	0.200	0.934	ND	ND		1	WG1103323
Vinyl chloride	75-01-4	62.50	0.200	0.511	ND	ND		1	WG1103323
Vinyl Bromide	593-60-2	106.95	0.200	0.875	ND	ND		1	WG1103323
Vinyl acetate	108-05-4	86.10	0.200	0.704	ND	ND		1	WG1103323
m&p-Xylene	1330-20-7	106	0.400	1.73	0.668	2.90		1	WG1103323
o-Xylene	95-47-6	106	0.200	0.867	0.290	1.26		1	WG1103323
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*97.7*				WG1103323
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*92.2*				WG1103956

Method Blank (MB)

(MB) R3305208-3 04/26/18 09:15

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Acetone	U		0.0569	1.25
Allyl Chloride	U		0.0546	0.200
Benzene	U		0.0460	0.200
Benzyl Chloride	U		0.0598	0.200
Bromodichloromethane	U		0.0436	0.200
Bromoform	U		0.0786	0.600
Bromomethane	U		0.0609	0.200
1,3-Butadiene	U		0.0563	2.00
Carbon disulfide	U		0.0544	0.200
Carbon tetrachloride	U		0.0585	0.200
Chlorobenzene	U		0.0601	0.200
Chloroethane	U		0.0489	0.200
Chloroform	U		0.0574	0.200
Chloromethane	U		0.0544	0.200
2-Chlorotoluene	U		0.0605	0.200
Cyclohexane	U		0.0534	0.200
Dibromochloromethane	U		0.0494	0.200
1,2-Dibromoethane	U		0.0185	0.200
1,2-Dichlorobenzene	U		0.0603	0.200
1,3-Dichlorobenzene	U		0.0597	0.200
1,4-Dichlorobenzene	U		0.0557	0.200
1,2-Dichloroethane	U		0.0616	0.200
1,1-Dichloroethane	U		0.0514	0.200
1,1-Dichloroethene	U		0.0490	0.200
cis-1,2-Dichloroethene	U		0.0389	0.200
trans-1,2-Dichloroethene	U		0.0464	0.200
1,2-Dichloropropane	U		0.0599	0.200
cis-1,3-Dichloropropene	U		0.0588	0.200
trans-1,3-Dichloropropene	U		0.0435	0.200
1,4-Dioxane	U		0.0554	0.200
Ethylbenzene	U		0.0506	0.200
4-Ethyltoluene	U		0.0666	0.200
Trichlorofluoromethane	U		0.0673	0.200
Dichlorodifluoromethane	U		0.0601	0.200
1,1,2-Trichlorotrifluoroethane	U		0.0687	0.200
1,2-Dichlorotetrafluoroethane	U		0.0458	0.200
Heptane	U		0.0626	0.200
Hexachloro-1,3-butadiene	U		0.0656	0.630
n-Hexane	U		0.0457	0.200
Isopropylbenzene	U		0.0563	0.200

Method Blank (MB)

(MB) R3305208-3 04/26/18 09:15

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Methylene Chloride	U		0.0465	0.200
Methyl Butyl Ketone	U		0.0682	1.25
2-Butanone (MEK)	U		0.0493	1.25
4-Methyl-2-pentanone (MIBK)	U		0.0650	1.25
Methyl Methacrylate	U		0.0773	0.200
MTBE	U		0.0505	0.200
Naphthalene	U		0.154	0.630
2-Propanol	U		0.0882	1.25
Propene	U		0.0932	0.400
Styrene	U		0.0465	0.200
1,1,2,2-Tetrachloroethane	U		0.0576	0.200
Tetrachloroethylene	U		0.0497	0.200
Tetrahydrofuran	U		0.0508	0.200
Toluene	U		0.0499	0.200
1,2,4-Trichlorobenzene	U		0.148	0.630
1,1,1-Trichloroethane	U		0.0665	0.200
1,1,2-Trichloroethane	U		0.0287	0.200
Trichloroethylene	U		0.0545	0.200
1,2,4-Trimethylbenzene	U		0.0483	0.200
1,3,5-Trimethylbenzene	U		0.0631	0.200
2,2,4-Trimethylpentane	U		0.0456	0.200
Vinyl chloride	U		0.0457	0.200
Vinyl Bromide	U		0.0727	0.200
Vinyl acetate	U		0.0639	0.200
m&p-Xylene	U		0.0946	0.400
o-Xylene	U		0.0633	0.200
Ethanol	U		0.0832	0.630
(S) 1,4-Bromofluorobenzene	*94.4*			*60.0-140*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3305208-1 04/26/18 07:53 • (LCSD) R3305208-2 04/26/18 08:33

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethanol	3.75	3.71	3.67	98.9	97.9	52.0-158			1.07	25
Propene	3.75	3.55	3.62	94.6	96.6	54.0-155			2.09	25
Dichlorodifluoromethane	3.75	4.18	4.26	111	114	69.0-143			1.95	25
1,2-Dichlorotetrafluoroethane	3.75	4.11	4.18	110	111	70.0-130			1.60	25
Chloromethane	3.75	3.83	3.84	102	103	70.0-130			0.466	25

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3305208-1 04/26/18 07:53 • (LCSD) R3305208-2 04/26/18 08:33

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Vinyl chloride	3.75	3.94	3.97	105	106	70.0-130			0.770	25
1,3-Butadiene	3.75	3.65	3.74	97.2	99.7	70.0-130			2.49	25
Bromomethane	3.75	4.26	4.27	113	114	70.0-130			0.276	25
Chloroethane	3.75	4.02	3.95	107	105	70.0-130			1.75	25
Trichlorofluoromethane	3.75	4.10	4.08	109	109	70.0-130			0.594	25
1,1,2-Trichlorotrifluoroethane	3.75	4.13	4.24	110	113	70.0-130			2.65	25
1,1-Dichloroethene	3.75	3.87	3.97	103	106	70.0-130			2.74	25
1,1-Dichloroethane	3.75	3.84	3.95	102	105	70.0-130			2.93	25
Acetone	3.75	3.86	3.88	103	103	70.0-130			0.366	25
2-Propanol	3.75	3.89	3.90	104	104	66.0-150			0.343	25
Carbon disulfide	3.75	3.96	4.03	106	107	70.0-130			1.72	25
Methylene Chloride	3.75	3.67	3.77	98.0	101	70.0-130			2.69	25
MTBE	3.75	4.09	4.12	109	110	70.0-130			0.780	25
trans-1,2-Dichloroethene	3.75	3.87	3.95	103	105	70.0-130			2.16	25
n-Hexane	3.75	3.98	4.00	106	107	70.0-130			0.426	25
Vinyl acetate	3.75	3.76	3.89	100	104	70.0-130			3.38	25
Methyl Ethyl Ketone	3.75	4.05	4.09	108	109	70.0-130			1.02	25
cis-1,2-Dichloroethene	3.75	4.05	4.12	108	110	70.0-130			1.74	25
Chloroform	3.75	4.03	4.09	107	109	70.0-130			1.52	25
Cyclohexane	3.75	4.11	4.17	110	111	70.0-130			1.29	25
1,1,1-Trichloroethane	3.75	4.17	4.26	111	114	70.0-130			2.11	25
Carbon tetrachloride	3.75	4.25	4.27	113	114	70.0-130			0.561	25
Benzene	3.75	4.11	4.11	110	110	70.0-130			0.0368	25
1,2-Dichloroethane	3.75	4.00	4.02	107	107	70.0-130			0.486	25
Heptane	3.75	4.03	4.03	108	108	70.0-130			0.0268	25
Trichloroethylene	3.75	4.22	4.24	112	113	70.0-130			0.472	25
1,2-Dichloropropane	3.75	4.00	4.01	107	107	70.0-130			0.143	25
1,4-Dioxane	3.75	4.32	4.30	115	115	70.0-152			0.470	25
Bromodichloromethane	3.75	4.28	4.15	114	111	70.0-130			3.22	25
cis-1,3-Dichloropropene	3.75	4.33	4.14	115	110	70.0-130			4.39	25
4-Methyl-2-pentanone (MIBK)	3.75	4.12	3.93	110	105	70.0-142			4.91	25
Toluene	3.75	4.42	4.43	118	118	70.0-130			0.179	25
trans-1,3-Dichloropropene	3.75	4.23	4.31	113	115	70.0-130			1.87	25
1,1,2-Trichloroethane	3.75	4.37	4.44	117	118	70.0-130			1.59	25
Tetrachloroethylene	3.75	4.63	4.71	124	125	70.0-130			1.53	25
Methyl Butyl Ketone	3.75	4.09	4.16	109	111	70.0-150			1.50	25
Dibromochloromethane	3.75	4.50	4.60	120	123	70.0-130			2.23	25
1,2-Dibromoethane	3.75	4.41	4.54	118	121	70.0-130			3.06	25
Chlorobenzene	3.75	4.59	4.66	123	124	70.0-130			1.50	25
Ethylbenzene	3.75	4.44	4.43	118	118	70.0-130			0.125	25

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3305208-1 04/26/18 07:53 • (LCSD) R3305208-2 04/26/18 08:33

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
m&p-Xylene	7.50	9.07	9.04	121	121	70.0-130			0.301	25
o-Xylene	3.75	4.50	4.48	120	119	70.0-130			0.605	25
Styrene	3.75	4.64	4.59	124	122	70.0-130			1.08	25
Bromoform	3.75	4.72	4.66	126	124	70.0-130			1.30	25
1,1,2,2-Tetrachloroethane	3.75	4.28	4.30	114	115	70.0-130			0.391	25
4-Ethyltoluene	3.75	4.56	4.59	122	122	70.0-130			0.610	25
1,3,5-Trimethylbenzene	3.75	4.61	4.61	123	123	70.0-130			0.118	25
1,2,4-Trimethylbenzene	3.75	4.55	4.56	121	121	70.0-130			0.105	25
1,3-Dichlorobenzene	3.75	4.68	4.70	125	125	70.0-130			0.379	25
1,4-Dichlorobenzene	3.75	4.80	4.84	128	129	70.0-130			0.742	25
Benzyl Chloride	3.75	4.52	4.55	120	121	70.0-144			0.626	25
1,2-Dichlorobenzene	3.75	4.65	4.64	124	124	70.0-130			0.147	25
1,2,4-Trichlorobenzene	3.75	4.87	4.92	130	131	70.0-155			1.09	25
Hexachloro-1,3-butadiene	3.75	4.72	4.75	126	127	70.0-145			0.640	25
Naphthalene	3.75	4.68	4.74	125	126	70.0-155			1.42	25
Allyl Chloride	3.75	3.67	3.78	98.0	101	70.0-130			2.89	25
2-Chlorotoluene	3.75	4.73	4.74	126	126	70.0-130			0.120	25
Methyl Methacrylate	3.75	4.15	4.13	111	110	70.0-130			0.355	25
Tetrahydrofuran	3.75	3.70	3.69	98.8	98.5	70.0-140			0.329	25
2,2,4-Trimethylpentane	3.75	4.07	4.13	109	110	70.0-130			1.49	25
Vinyl Bromide	3.75	4.22	4.18	113	112	70.0-130			0.869	25
Isopropylbenzene	3.75	4.53	4.49	121	120	70.0-130			0.888	25
(S) 1,4-Bromofluorobenzene				*98.6*	*99.3*	*60.0-140*				

Method Blank (MB)

(MB) R3305477-3 04/27/18 10:59

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Acetone	U		0.0569	1.25
Tetrachloroethylene	U		0.0497	0.200
Trichloroethylene	U		0.0545	0.200
(S) 1,4-Bromofluorobenzene	*91.1*			*60.0-140*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3305477-1 04/27/18 09:19 • (LCSD) R3305477-2 04/27/18 10:08

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	3.75	4.46	4.47	119	119	70.0-130			0.283	25
Trichloroethylene	3.75	4.37	4.38	117	117	70.0-130			0.0235	25
Tetrachloroethylene	3.75	4.21	4.26	112	114	70.0-130			1.21	25
(S) 1,4-Bromofluorobenzene				*94.6*	*95.9*	*60.0-140*				

Method Blank (MB)

(MB) R3305484-3 04/27/18 10:43

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Acetone	U		0.0569	1.25
Allyl Chloride	U		0.0546	0.200
Benzene	U		0.0460	0.200
Benzyl Chloride	U		0.0598	0.200
Bromodichloromethane	U		0.0436	0.200
Bromoform	U		0.0786	0.600
Bromomethane	U		0.0609	0.200
1,3-Butadiene	0.426	J	0.0563	2.00
Carbon disulfide	U		0.0544	0.200
Carbon tetrachloride	U		0.0585	0.200
Chlorobenzene	U		0.0601	0.200
Chloroethane	U		0.0489	0.200
Chloroform	U		0.0574	0.200
Chloromethane	U		0.0544	0.200
2-Chlorotoluene	U		0.0605	0.200
Cyclohexane	U		0.0534	0.200
Dibromochloromethane	U		0.0494	0.200
1,2-Dibromoethane	U		0.0185	0.200
1,2-Dichlorobenzene	U		0.0603	0.200
1,3-Dichlorobenzene	U		0.0597	0.200
1,4-Dichlorobenzene	U		0.0557	0.200
1,2-Dichloroethane	U		0.0616	0.200
1,1-Dichloroethane	U		0.0514	0.200
1,1-Dichloroethene	U		0.0490	0.200
cis-1,2-Dichloroethene	U		0.0389	0.200
trans-1,2-Dichloroethene	U		0.0464	0.200
1,2-Dichloropropane	U		0.0599	0.200
cis-1,3-Dichloropropene	U		0.0588	0.200
trans-1,3-Dichloropropene	U		0.0435	0.200
1,4-Dioxane	U		0.0554	0.200
Ethylbenzene	U		0.0506	0.200
4-Ethyltoluene	U		0.0666	0.200
Trichlorofluoromethane	U		0.0673	0.200
Dichlorodifluoromethane	U		0.0601	0.200
1,1,2-Trichlorotrifluoroethane	U		0.0687	0.200
1,2-Dichlorotetrafluoroethane	U		0.0458	0.200
Heptane	U		0.0626	0.200
Hexachloro-1,3-butadiene	U		0.0656	0.630
n-Hexane	U		0.0457	0.200
Isopropylbenzene	U		0.0563	0.200

Method Blank (MB)

(MB) R3305484-3 04/27/18 10:43

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Methylene Chloride	U		0.0465	0.200
Methyl Butyl Ketone	U		0.0682	1.25
2-Butanone (MEK)	U		0.0493	1.25
4-Methyl-2-pentanone (MIBK)	U		0.0650	1.25
Methyl Methacrylate	U		0.0773	0.200
MTBE	U		0.0505	0.200
Naphthalene	U		0.154	0.630
2-Propanol	U		0.0882	1.25
Propene	0.125	J	0.0932	0.400
Styrene	U		0.0465	0.200
1,1,2,2-Tetrachloroethane	U		0.0576	0.200
Tetrachloroethylene	U		0.0497	0.200
Tetrahydrofuran	U		0.0508	0.200
Toluene	U		0.0499	0.200
1,2,4-Trichlorobenzene	U		0.148	0.630
1,1,1-Trichloroethane	U		0.0665	0.200
1,1,2-Trichloroethane	U		0.0287	0.200
Trichloroethylene	U		0.0545	0.200
1,2,4-Trimethylbenzene	U		0.0483	0.200
1,3,5-Trimethylbenzene	U		0.0631	0.200
2,2,4-Trimethylpentane	U		0.0456	0.200
Vinyl chloride	U		0.0457	0.200
Vinyl Bromide	U		0.0727	0.200
Vinyl acetate	U		0.0639	0.200
m&p-Xylene	U		0.0946	0.400
o-Xylene	U		0.0633	0.200
Ethanol	U		0.0832	0.630
(S) 1,4-Bromofluorobenzene	*92.7*			*60.0-140*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3305484-1 04/27/18 09:13 • (LCSD) R3305484-2 04/27/18 09:57

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethanol	3.75	3.17	2.89	84.6	77.0	52.0-158			9.50	25
Propene	3.75	4.35	3.89	116	104	54.0-155			11.1	25
Dichlorodifluoromethane	3.75	3.47	3.30	92.5	88.0	69.0-143			4.95	25
1,2-Dichlorotetrafluoroethane	3.75	3.72	3.63	99.3	96.9	70.0-130			2.44	25
Chloromethane	3.75	3.33	3.35	88.9	89.3	70.0-130			0.475	25

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3305484-1 04/27/18 09:13 • (LCSD) R3305484-2 04/27/18 09:57

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Vinyl chloride	3.75	3.46	3.50	92.3	93.3	70.0-130			1.04	25
1,3-Butadiene	3.75	3.27	3.24	87.1	86.4	70.0-130			0.864	25
Bromomethane	3.75	3.68	3.71	98.1	98.8	70.0-130			0.782	25
Chloroethane	3.75	3.51	3.55	93.6	94.7	70.0-130			1.18	25
Trichlorofluoromethane	3.75	3.63	3.66	96.7	97.5	70.0-130			0.830	25
1,1,2-Trichlorotrifluoroethane	3.75	3.70	3.70	98.6	98.5	70.0-130			0.0839	25
1,1-Dichloroethene	3.75	3.45	3.49	92.0	93.0	70.0-130			1.13	25
1,1-Dichloroethane	3.75	3.36	3.50	89.7	93.3	70.0-130			3.91	25
Acetone	3.75	3.50	3.49	93.3	93.2	70.0-130			0.105	25
2-Propanol	3.75	3.53	3.54	94.1	94.5	66.0-150			0.408	25
Carbon disulfide	3.75	3.49	3.50	93.2	93.4	70.0-130			0.242	25
Methylene Chloride	3.75	3.12	3.19	83.2	85.0	70.0-130			2.15	25
MTBE	3.75	3.63	3.61	96.8	96.3	70.0-130			0.429	25
trans-1,2-Dichloroethene	3.75	3.52	3.52	93.9	93.8	70.0-130			0.0859	25
n-Hexane	3.75	3.46	3.51	92.4	93.7	70.0-130			1.38	25
Vinyl acetate	3.75	3.65	3.67	97.4	97.9	70.0-130			0.464	25
Methyl Ethyl Ketone	3.75	3.97	3.98	106	106	70.0-130			0.269	25
cis-1,2-Dichloroethene	3.75	3.59	3.62	95.8	96.5	70.0-130			0.678	25
Chloroform	3.75	3.61	3.58	96.2	95.5	70.0-130			0.722	25
Cyclohexane	3.75	3.72	3.68	99.1	98.2	70.0-130			0.979	25
1,1,1-Trichloroethane	3.75	3.62	3.62	96.6	96.5	70.0-130			0.0572	25
Carbon tetrachloride	3.75	3.72	3.69	99.1	98.3	70.0-130			0.877	25
Benzene	3.75	3.71	3.69	99.0	98.5	70.0-130			0.467	25
1,2-Dichloroethane	3.75	3.48	3.45	92.9	92.1	70.0-130			0.900	25
Heptane	3.75	3.34	3.31	89.0	88.2	70.0-130			0.843	25
Trichloroethylene	3.75	3.70	3.74	98.6	99.7	70.0-130			1.15	25
1,2-Dichloropropane	3.75	3.53	3.57	94.0	95.3	70.0-130			1.33	25
1,4-Dioxane	3.75	3.87	3.95	103	105	70.0-152			1.99	25
Bromodichloromethane	3.75	3.61	3.67	96.2	97.9	70.0-130			1.83	25
cis-1,3-Dichloropropene	3.75	3.78	3.78	101	101	70.0-130			0.0246	25
4-Methyl-2-pentanone (MIBK)	3.75	3.38	3.43	90.2	91.4	70.0-142			1.36	25
Toluene	3.75	3.70	3.72	98.6	99.1	70.0-130			0.483	25
trans-1,3-Dichloropropene	3.75	3.67	3.57	97.8	95.2	70.0-130			2.65	25
1,1,2-Trichloroethane	3.75	3.53	3.47	94.3	92.7	70.0-130			1.73	25
Tetrachloroethylene	3.75	3.74	3.70	99.7	98.8	70.0-130			0.899	25
Methyl Butyl Ketone	3.75	3.40	3.40	90.8	90.7	70.0-150			0.0444	25
Dibromochloromethane	3.75	3.62	3.70	96.5	98.8	70.0-130			2.36	25
1,2-Dibromoethane	3.75	3.72	3.68	99.2	98.1	70.0-130			1.15	25
Chlorobenzene	3.75	3.65	3.61	97.2	96.4	70.0-130			0.854	25
Ethylbenzene	3.75	3.92	3.88	105	103	70.0-130			1.01	25

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3305484-1 04/27/18 09:13 • (LCSD) R3305484-2 04/27/18 09:57

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
m&p-Xylene	7.50	7.64	7.68	102	102	70.0-130			0.413	25
o-Xylene	3.75	3.79	3.77	101	100	70.0-130			0.547	25
Styrene	3.75	4.11	3.93	110	105	70.0-130			4.58	25
Bromoform	3.75	4.18	4.19	111	112	70.0-130			0.263	25
1,1,2,2-Tetrachloroethane	3.75	3.69	3.74	98.4	99.7	70.0-130			1.29	25
4-Ethyltoluene	3.75	3.99	3.96	106	106	70.0-130			0.750	25
1,3,5-Trimethylbenzene	3.75	3.92	3.88	105	103	70.0-130			0.993	25
1,2,4-Trimethylbenzene	3.75	4.01	4.02	107	107	70.0-130			0.356	25
1,3-Dichlorobenzene	3.75	4.26	4.23	114	113	70.0-130			0.536	25
1,4-Dichlorobenzene	3.75	4.37	4.33	117	116	70.0-130			0.852	25
Benzyl Chloride	3.75	4.56	4.42	121	118	70.0-144			3.04	25
1,2-Dichlorobenzene	3.75	4.14	4.16	110	111	70.0-130			0.695	25
1,2,4-Trichlorobenzene	3.75	5.47	5.38	146	143	70.0-155			1.64	25
Hexachloro-1,3-butadiene	3.75	4.37	4.24	116	113	70.0-145			2.93	25
Naphthalene	3.75	4.98	4.91	133	131	70.0-155			1.31	25
Allyl Chloride	3.75	3.28	3.30	87.4	87.9	70.0-130			0.562	25
2-Chlorotoluene	3.75	3.98	3.95	106	105	70.0-130			0.673	25
Methyl Methacrylate	3.75	3.49	3.47	93.1	92.5	70.0-130			0.668	25
Tetrahydrofuran	3.75	3.40	3.38	90.6	90.1	70.0-140			0.500	25
2,2,4-Trimethylpentane	3.75	3.49	3.52	93.1	93.8	70.0-130			0.793	25
Vinyl Bromide	3.75	3.71	3.77	99.0	100	70.0-130			1.52	25
Isopropylbenzene	3.75	3.84	3.84	102	102	70.0-130			0.139	25
(S) 1,4-Bromofluorobenzene				*98.5*	*98.6*	*60.0-140*				

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.

ACCREDITATIONS & LOCATIONS

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

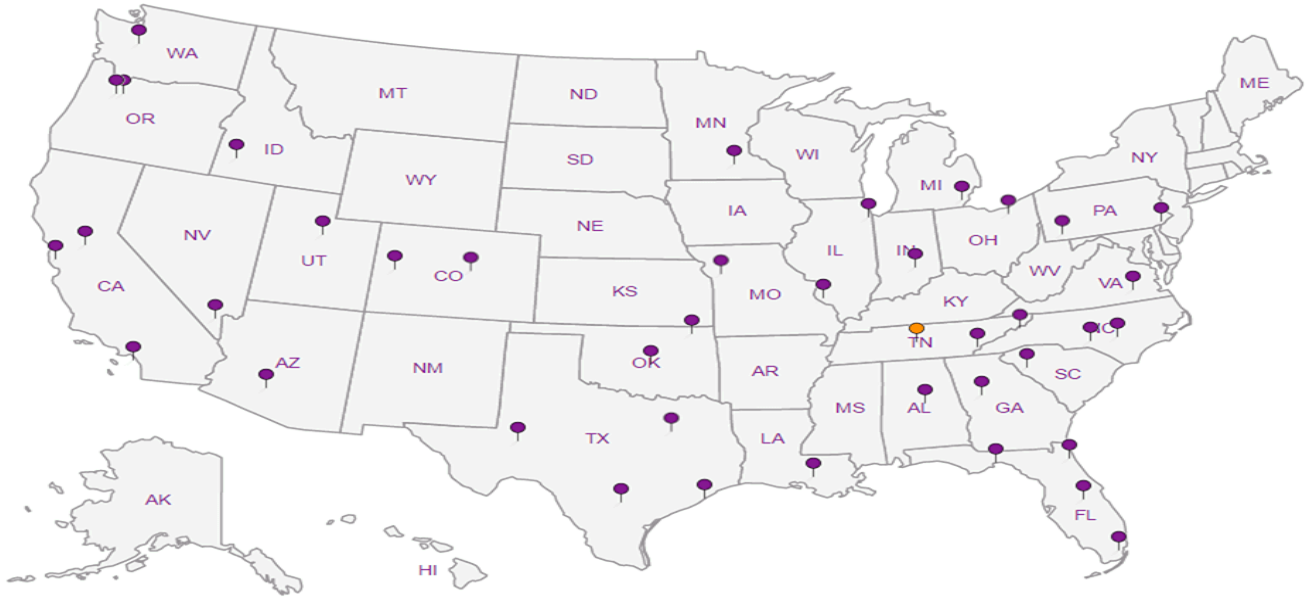
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. ESC Lab Sciences performs all testing at our central laboratory.



S&ME

Billing Information:

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 1 of 2

ESC LAB SCIENCES

YOUR LAB OF CHOICE

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

Report to: Liz Porter and Nate Peterson

Email To: Liz P and Nate P (e-mail on file)

Project Description: Former Sanitary Laundry

City/State Collected: TN

Phone: 865-970-0003
Fax:

Client Project # 4143-17-016

Lab Project # SME-4143-17-016

L# L988471

Collected by (print): N Peterson

Site/Facility ID #

P.O. #

Tal M200

Collected by (signature):

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Immediately Packed on Ice N ___ Y ___

Acctnum: SME
Template:
Prelogin:
TSR:
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	TO-15 + QC4										Remarks	Sample # (lab only)
SS-1		AIR		4/23/18	1053	1	X											-01
SS-2		AIR			1058	1	X						X					02
SS-3		AIR			1102	1	X											03
SS-4		AIR			1106	1	X											04
SS-5		AIR			1111	1	X											05
SS-6		AIR			1114	1	X											06
SS-7		AIR			1117	1	X											07
SS-8		AIR			1121	1	X											08
SS-9		AIR			1127	1	X											09
SS-10		AIR			1132	1	X											10

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: ECKN

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: __ UPS __ FedEx __ Courier __ _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
	4/24/18	1400			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	If preservation required by Login: Date/Time
	4-24-18	1700		AmB 13	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold:
				4/25/18 1015	

Condition: NCF / OK

S&ME

Billing Information:

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 2 of 2

ESC LAB SCIENCES

YOUR LAB OF CHOICE

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

Report to: **Liz Porter and Nate Peterson**

Email To: **Liz P and Nate P (e-mail on file)**

Project Description: **Former Sanitary Laundry**

City/State Collected: **TN**

Phone:
Fax:

Client Project #

Lab Project # **SME-4143-17-016**

L# L988471

Collected by (print):

Site/Facility ID #

P.O. #

Table #

Collected by (signature):

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Acctnum: **SME**

Template:

Prelogin:

TSR:

PB:

Shipped Via:

Immediately Packed on Ice N ___ Y ___

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	TO-15 + QC4	Remarks	Sample # (lab only)
SS-11	G	AIR	—	4/23/18	1136	1	X		-11
SS-12	G	AIR	—	↓	1142	1	X		12
DUP	G	AIR	—	↓	—		X		13
							X		
							X		
							X		
							X		
							X		
							X		

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: ESCKN

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: NP __Y __N
COC Signed/Accurate: A __N
Bottles arrive intact: A __N
Correct bottles used: A __N
Sufficient volume sent: A __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
	4/24/18	1400			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	If preservation required by Login: Date/Time
	4-24-18	1700		AmB 13	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: Condition: NCF / OK
				4/25/18 1015	

ANALYTICAL REPORT

May 16, 2018

S&ME Inc. - Knoxville

Sample Delivery Group:	L988471
Samples Received:	04/25/2018
Project Number:	4143-17-016
Description:	Former Sanitary Laundry
Report To:	Nate Peterson / Liz Porter 1413 Topside Rd Louisville, TN 37777

Entire Report Reviewed By:

Tom Mellette
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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WG1103966 LCS(R3305484-1) LCSD(R3305484-2) 15

Method Blank 17

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AIRMS2 042718 04/27/18 08:29 22

0427_01T 23

AIRMS4 042418A 04/24/18 11:33 24

0424A_02 25

AIRMS4 042418A 04/24/18 11:33 26

0424A_02A 27

AIRMS4 042718 04/27/18 08:29 28

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Raw Data - 0427_02 675
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SS-1 L988471-01 Air

Collected by	Collected date/time	Received date/time
N. Peterson	04/23/18 10:53	04/25/18 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1103323	5	04/26/18 15:58	04/26/18 15:58	AMC

SS-2 L988471-02 Air

Collected by	Collected date/time	Received date/time
N. Peterson	04/23/18 10:53	04/25/18 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1103323	1	04/26/18 16:41	04/26/18 16:41	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1103956	20	04/27/18 12:36	04/27/18 12:36	AMC

SS-3 L988471-03 Air

Collected by	Collected date/time	Received date/time
N. Peterson	04/23/18 11:02	04/25/18 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1103966	100	04/27/18 13:35	04/27/18 13:35	AMC

SS-4 L988471-04 Air

Collected by	Collected date/time	Received date/time
N. Peterson	04/23/18 11:06	04/25/18 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1103323	100	04/26/18 17:59	04/26/18 17:59	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1103956	4000	04/27/18 13:22	04/27/18 13:22	AMC

SS-5 L988471-05 Air

Collected by	Collected date/time	Received date/time
N. Peterson	04/23/18 11:11	04/25/18 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1103323	10	04/26/18 18:37	04/26/18 18:37	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1103956	200	04/27/18 14:08	04/27/18 14:08	AMC

SS-6 L988471-06 Air

Collected by	Collected date/time	Received date/time
N. Peterson	04/23/18 11:14	04/25/18 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1103323	1	04/26/18 19:20	04/26/18 19:20	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1103956	80	04/27/18 14:56	04/27/18 14:56	AMC

SS-7 L988471-07 Air

Collected by	Collected date/time	Received date/time
N. Peterson	04/23/18 11:17	04/25/18 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1103323	1	04/26/18 20:03	04/26/18 20:03	AMC

SS-8 L988471-08 Air

Collected by	Collected date/time	Received date/time
N. Peterson	04/23/18 11:21	04/25/18 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1103323	1	04/26/18 20:47	04/26/18 20:47	AMC

SS-9 L988471-09 Air

Collected by	Collected date/time	Received date/time
N. Peterson	04/23/18 11:27	04/25/18 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1103323	1	04/26/18 21:30	04/26/18 21:30	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1103956	20	04/27/18 15:44	04/27/18 15:44	AMC

SS-10 L988471-10 Air

Collected by	Collected date/time	Received date/time
N. Peterson	04/23/18 11:32	04/25/18 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1103323	1	04/26/18 22:13	04/26/18 22:13	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1103956	20	04/27/18 16:32	04/27/18 16:32	AMC

SS-11 L988471-11 Air

Collected by	Collected date/time	Received date/time
N. Peterson	04/23/18 11:36	04/25/18 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1103323	1	04/26/18 22:57	04/26/18 22:57	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1103956	80	04/27/18 17:19	04/27/18 17:19	AMC

SS-12 L988471-12 Air

Collected by	Collected date/time	Received date/time
N. Peterson	04/23/18 11:42	04/25/18 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1103323	1	04/26/18 23:42	04/26/18 23:42	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1103956	25	04/27/18 18:07	04/27/18 18:07	AMC

DUP L988471-13 Air

Collected by	Collected date/time	Received date/time
N. Peterson	04/23/18 00:00	04/25/18 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1103323	1	04/27/18 00:25	04/27/18 00:25	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1103956	25	04/27/18 18:55	04/27/18 18:55	AMC

1 Cp
2 Tc
3 Ss
4 Cn
5 Su
6 Gl
7 Al
8 Sc

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Tom Mellette
Technical Service Representative

TO-15 Volatile Organic Compounds (MS)

2A-OR

SURROGATE RECOVERY

Analytical Method: TO-15 **SDG:** L988471
Matrix: Air

Sample ID	ESC Sample ID	Instrument	File ID	DMC-1 % Rec.	TOT Out
SS-1	L988471-01	AIRMS5	0426_12	96.2	0
SS-2	L988471-02	AIRMS5	0426_13	98.1	0
SS-2	L988471-02	AIRMS2	0427_06	93.3	0
SS-3	L988471-03	AIRMS4	0427_08	282*	1
SS-4	L988471-04	AIRMS5	0426_15	98.4	0
SS-4	L988471-04	AIRMS2	0427_07	92.8	0
SS-5	L988471-05	AIRMS5	0426_16	96.7	0
SS-5	L988471-05	AIRMS2	0427_08	93.6	0
SS-6	L988471-06	AIRMS5	0426_17	97.7	0
SS-6	L988471-06	AIRMS2	0427_09	92.4	0
SS-7	L988471-07	AIRMS5	0426_18	97.9	0
SS-8	L988471-08	AIRMS5	0426_19	97.7	0
SS-9	L988471-09	AIRMS5	0426_20	96.7	0
SS-9	L988471-09	AIRMS2	0427_10	91.6	0
SS-10	L988471-10	AIRMS5	0426_21	103	0
SS-10	L988471-10	AIRMS2	0427_11	91.6	0
SS-11	L988471-11	AIRMS5	0426_22	98.9	0
SS-11	L988471-11	AIRMS2	0427_12	92.0	0
SS-12	L988471-12	AIRMS5	0426_23	96.2	0
SS-12	L988471-12	AIRMS2	0427_13	93.6	0
DUP	L988471-13	AIRMS5	0426_24	97.7	0
DUP	L988471-13	AIRMS2	0427_14	92.2	0
BLANK	R3305477-3	AIRMS2	0427_04	91.1	0
BLANK	R3305484-3	AIRMS4	0427_04	92.7	0
BLANK	R3305208-3	AIRMS5	0426_04	94.4	0
LCS	R3305477-1	AIRMS2	0427_02	94.6	0
LCS	R3305484-1	AIRMS4	0427_02	98.5	0
LCS	R3305208-1	AIRMS5	0426_02	98.6	0
LCSD	R3305477-2	AIRMS2	0427_03	95.9	0
LCSD	R3305484-2	AIRMS4	0427_03	98.6	0
LCSD	R3305208-2	AIRMS5	0426_03	99.3	0

Parm Abbreviation	Parameter	QC LIMITS
DMC-1	1,4-Bromofluorobenzene	60.0 - 140

*: Value outside the established quality control limits.
D: Surrogate recovery cannot be used for control limit evaluation due to dilution.

3B-OR

LABORATORY CONTROL SAMPLE
LABORATORY CONTROL SAMPLE DUPLICATE
RECOVERY

L988471-01,02,04,05,06,07,08,09,10,11,12,13

SAMPLE NO.:
R3305208-1
R3305208-2

LCS Sample / File ID:	R3305208-1 / 0426_02	**SDG:**	L988471
LCSD Sample / File ID:	R3305208-2 / 0426_03	**Analytical Batch:**	WG1103323
Instrument ID:	AIRMS5	**Dilution Factor:**	1
Analytical Method:	TO-15	**Matrix:**	Air

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	RPD	RPD Limit
	ppbv	*ppbv*	*ppbv*	*%*	*%*	*%*	*%*	*%*
Ethanol	3.75	3.71	3.67	98.9	97.9	52.0 - 158	1.07	25
Propene	3.75	3.55	3.62	94.6	96.6	54.0 - 155	2.09	25
Dichlorodifluoromethane	3.75	4.18	4.26	111	114	69.0 - 143	1.95	25
1,2-Dichlorotetrafluoroethane	3.75	4.11	4.18	110	111	70.0 - 130	1.60	25
Chloromethane	3.75	3.83	3.84	102	103	70.0 - 130	0.466	25
Vinyl chloride	3.75	3.94	3.97	105	106	70.0 - 130	0.770	25
1,3-Butadiene	3.75	3.65	3.74	97.2	99.7	70.0 - 130	2.49	25
Bromomethane	3.75	4.26	4.27	113	114	70.0 - 130	0.276	25
Chloroethane	3.75	4.02	3.95	107	105	70.0 - 130	1.75	25
Trichlorofluoromethane	3.75	4.10	4.08	109	109	70.0 - 130	0.594	25
1,1,2-Trichlorotrifluoroethane	3.75	4.13	4.24	110	113	70.0 - 130	2.65	25
1,1-Dichloroethene	3.75	3.87	3.97	103	106	70.0 - 130	2.74	25
1,1-Dichloroethane	3.75	3.84	3.95	102	105	70.0 - 130	2.93	25
Acetone	3.75	3.86	3.88	103	103	70.0 - 130	0.366	25
2-Propanol	3.75	3.89	3.90	104	104	66.0 - 150	0.343	25
Carbon disulfide	3.75	3.96	4.03	106	107	70.0 - 130	1.72	25
Methylene Chloride	3.75	3.67	3.77	98.0	101	70.0 - 130	2.69	25
MTBE	3.75	4.09	4.12	109	110	70.0 - 130	0.780	25
trans-1,2-Dichloroethene	3.75	3.87	3.95	103	105	70.0 - 130	2.16	25
n-Hexane	3.75	3.98	4.00	106	107	70.0 - 130	0.426	25
Vinyl acetate	3.75	3.76	3.89	100	104	70.0 - 130	3.38	25
Methyl Ethyl Ketone	3.75	4.05	4.09	108	109	70.0 - 130	1.02	25
cis-1,2-Dichloroethene	3.75	4.05	4.12	108	110	70.0 - 130	1.74	25
Chloroform	3.75	4.03	4.09	107	109	70.0 - 130	1.52	25
Cyclohexane	3.75	4.11	4.17	110	111	70.0 - 130	1.29	25
1,1,1-Trichloroethane	3.75	4.17	4.26	111	114	70.0 - 130	2.11	25
Carbon tetrachloride	3.75	4.25	4.27	113	114	70.0 - 130	0.561	25
Benzene	3.75	4.11	4.11	110	110	70.0 - 130	0.0368	25
1,2-Dichloroethane	3.75	4.00	4.02	107	107	70.0 - 130	0.486	25
Heptane	3.75	4.03	4.03	108	108	70.0 - 130	0.0268	25
Trichloroethylene	3.75	4.22	4.24	112	113	70.0 - 130	0.472	25
1,2-Dichloropropane	3.75	4.00	4.01	107	107	70.0 - 130	0.143	25
1,4-Dioxane	3.75	4.32	4.30	115	115	70.0 - 152	0.470	25
Bromodichloromethane	3.75	4.28	4.15	114	111	70.0 - 130	3.22	25
cis-1,3-Dichloropropene	3.75	4.33	4.14	115	110	70.0 - 130	4.39	25
4-Methyl-2-pentanone (MIBK)	3.75	4.12	3.93	110	105	70.0 - 142	4.91	25
Toluene	3.75	4.42	4.43	118	118	70.0 - 130	0.179	25
trans-1,3-Dichloropropene	3.75	4.23	4.31	113	115	70.0 - 130	1.87	25
1,1,2-Trichloroethane	3.75	4.37	4.44	117	118	70.0 - 130	1.59	25
Tetrachloroethylene	3.75	4.63	4.71	124	125	70.0 - 130	1.53	25
Methyl Butyl Ketone	3.75	4.09	4.16	109	111	70.0 - 150	1.50	25
Dibromochloromethane	3.75	4.50	4.60	120	123	70.0 - 130	2.23	25

*: Value outside the established quality control limits.

D: Surrogate recovery cannot be used for control limit evaluation due to dilution.

3B-OR

LABORATORY CONTROL SAMPLE
LABORATORY CONTROL SAMPLE DUPLICATE
RECOVERY

L988471-01,02,04,05,06,07,08,09,10,11,12,13

SAMPLE NO.:
R3305208-1
R3305208-2

LCS Sample / File ID:	R3305208-1 / 0426_02	**SDG:**	L988471
LCSD Sample / File ID:	R3305208-2 / 0426_03	**Analytical Batch:**	WG1103323
Instrument ID:	AIRMS5	**Dilution Factor:**	1
Analytical Method:	TO-15	**Matrix:**	Air

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	RPD	RPD Limit
	ppbv	*ppbv*	*ppbv*	*%*	*%*	*%*	*%*	*%*
1,2-Dibromoethane	3.75	4.41	4.54	118	121	70.0 - 130	3.06	25
Chlorobenzene	3.75	4.59	4.66	123	124	70.0 - 130	1.50	25
Ethylbenzene	3.75	4.44	4.43	118	118	70.0 - 130	0.125	25
m&p-Xylene	7.50	9.07	9.04	121	121	70.0 - 130	0.301	25
o-Xylene	3.75	4.50	4.48	120	119	70.0 - 130	0.605	25
Styrene	3.75	4.64	4.59	124	122	70.0 - 130	1.08	25
Bromoform	3.75	4.72	4.66	126	124	70.0 - 130	1.30	25
1,1,2,2-Tetrachloroethane	3.75	4.28	4.30	114	115	70.0 - 130	0.391	25
4-Ethyltoluene	3.75	4.56	4.59	122	122	70.0 - 130	0.610	25
1,3,5-Trimethylbenzene	3.75	4.61	4.61	123	123	70.0 - 130	0.118	25
1,2,4-Trimethylbenzene	3.75	4.55	4.56	121	121	70.0 - 130	0.105	25
1,3-Dichlorobenzene	3.75	4.68	4.70	125	125	70.0 - 130	0.379	25
1,4-Dichlorobenzene	3.75	4.80	4.84	128	129	70.0 - 130	0.742	25
Benzyl Chloride	3.75	4.52	4.55	120	121	70.0 - 144	0.626	25
1,2-Dichlorobenzene	3.75	4.65	4.64	124	124	70.0 - 130	0.147	25
1,2,4-Trichlorobenzene	3.75	4.87	4.92	130	131	70.0 - 155	1.09	25
Hexachloro-1,3-butadiene	3.75	4.72	4.75	126	127	70.0 - 145	0.640	25
Naphthalene	3.75	4.68	4.74	125	126	70.0 - 155	1.42	25
Allyl Chloride	3.75	3.67	3.78	98.0	101	70.0 - 130	2.89	25
2-Chlorotoluene	3.75	4.73	4.74	126	126	70.0 - 130	0.120	25
Methyl Methacrylate	3.75	4.15	4.13	111	110	70.0 - 130	0.355	25
Tetrahydrofuran	3.75	3.70	3.69	98.8	98.5	70.0 - 140	0.329	25
2,2,4-Trimethylpentane	3.75	4.07	4.13	109	110	70.0 - 130	1.49	25
Vinyl Bromide	3.75	4.22	4.18	113	112	70.0 - 130	0.869	25
Isopropylbenzene	3.75	4.53	4.49	121	120	70.0 - 130	0.888	25

*: Value outside the established quality control limits.

D: Surrogate recovery cannot be used for control limit evaluation due to dilution.

3B-OR

LABORATORY CONTROL SAMPLE
LABORATORY CONTROL SAMPLE DUPLICATE
RECOVERY

L988471-02,04,05,06,09,10,11,12,13

SAMPLE NO.:
R3305477-1
R3305477-2

LCS Sample / File ID:	R3305477-1 / 0427_02	**SDG:**	L988471
LCSD Sample / File ID:	R3305477-2 / 0427_03	**Analytical Batch:**	WG1103956
Instrument ID:	AIRMS2	**Dilution Factor:**	1
Analytical Method:	TO-15	**Matrix:**	Air

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	RPD	RPD Limit
	ppbv	*ppbv*	*ppbv*	*%*	*%*	*%*	*%*	*%*
Acetone	3.75	4.46	4.47	119	119	70.0 - 130	0.283	25
Trichloroethylene	3.75	4.37	4.38	117	117	70.0 - 130	0.0235	25
Tetrachloroethylene	3.75	4.21	4.26	112	114	70.0 - 130	1.21	25

*: Value outside the established quality control limits.

D: Surrogate recovery cannot be used for control limit evaluation due to dilution.

3B-OR

LABORATORY CONTROL SAMPLE
LABORATORY CONTROL SAMPLE DUPLICATE
RECOVERY

L988471-03

SAMPLE NO.:
R3305484-1
R3305484-2

LCS Sample / File ID:	R3305484-1 / 0427_02	**SDG:**	L988471
LCSD Sample / File ID:	R3305484-2 / 0427_03	**Analytical Batch:**	WG1103966
Instrument ID:	AIRMS4	**Dilution Factor:**	1
Analytical Method:	TO-15	**Matrix:**	Air

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	RPD	RPD Limit
	ppbv	*ppbv*	*ppbv*	*%*	*%*	*%*	*%*	*%*
Ethanol	3.75	3.17	2.89	84.6	77.0	52.0 - 158	9.50	25
Propene	3.75	4.35	3.89	116	104	54.0 - 155	11.1	25
Dichlorodifluoromethane	3.75	3.47	3.30	92.5	88.0	69.0 - 143	4.95	25
1,2-Dichlorotetrafluoroethane	3.75	3.72	3.63	99.3	96.9	70.0 - 130	2.44	25
Chloromethane	3.75	3.33	3.35	88.9	89.3	70.0 - 130	0.475	25
Vinyl chloride	3.75	3.46	3.50	92.3	93.3	70.0 - 130	1.04	25
1,3-Butadiene	3.75	3.27	3.24	87.1	86.4	70.0 - 130	0.864	25
Bromomethane	3.75	3.68	3.71	98.1	98.8	70.0 - 130	0.782	25
Chloroethane	3.75	3.51	3.55	93.6	94.7	70.0 - 130	1.18	25
Trichlorofluoromethane	3.75	3.63	3.66	96.7	97.5	70.0 - 130	0.830	25
1,1,2-Trichlorotrifluoroethane	3.75	3.70	3.70	98.6	98.5	70.0 - 130	0.0839	25
1,1-Dichloroethene	3.75	3.45	3.49	92.0	93.0	70.0 - 130	1.13	25
1,1-Dichloroethane	3.75	3.36	3.50	89.7	93.3	70.0 - 130	3.91	25
Acetone	3.75	3.50	3.49	93.3	93.2	70.0 - 130	0.105	25
2-Propanol	3.75	3.53	3.54	94.1	94.5	66.0 - 150	0.408	25
Carbon disulfide	3.75	3.49	3.50	93.2	93.4	70.0 - 130	0.242	25
Methylene Chloride	3.75	3.12	3.19	83.2	85.0	70.0 - 130	2.15	25
MTBE	3.75	3.63	3.61	96.8	96.3	70.0 - 130	0.429	25
trans-1,2-Dichloroethene	3.75	3.52	3.52	93.9	93.8	70.0 - 130	0.0859	25
n-Hexane	3.75	3.46	3.51	92.4	93.7	70.0 - 130	1.38	25
Vinyl acetate	3.75	3.65	3.67	97.4	97.9	70.0 - 130	0.464	25
Methyl Ethyl Ketone	3.75	3.97	3.98	106	106	70.0 - 130	0.269	25
cis-1,2-Dichloroethene	3.75	3.59	3.62	95.8	96.5	70.0 - 130	0.678	25
Chloroform	3.75	3.61	3.58	96.2	95.5	70.0 - 130	0.722	25
Cyclohexane	3.75	3.72	3.68	99.1	98.2	70.0 - 130	0.979	25
1,1,1-Trichloroethane	3.75	3.62	3.62	96.6	96.5	70.0 - 130	0.0572	25
Carbon tetrachloride	3.75	3.72	3.69	99.1	98.3	70.0 - 130	0.877	25
Benzene	3.75	3.71	3.69	99.0	98.5	70.0 - 130	0.467	25
1,2-Dichloroethane	3.75	3.48	3.45	92.9	92.1	70.0 - 130	0.900	25
Heptane	3.75	3.34	3.31	89.0	88.2	70.0 - 130	0.843	25
Trichloroethylene	3.75	3.70	3.74	98.6	99.7	70.0 - 130	1.15	25
1,2-Dichloropropane	3.75	3.53	3.57	94.0	95.3	70.0 - 130	1.33	25
1,4-Dioxane	3.75	3.87	3.95	103	105	70.0 - 152	1.99	25
Bromodichloromethane	3.75	3.61	3.67	96.2	97.9	70.0 - 130	1.83	25
cis-1,3-Dichloropropene	3.75	3.78	3.78	101	101	70.0 - 130	0.0246	25
4-Methyl-2-pentanone (MIBK)	3.75	3.38	3.43	90.2	91.4	70.0 - 142	1.36	25
Toluene	3.75	3.70	3.72	98.6	99.1	70.0 - 130	0.483	25
trans-1,3-Dichloropropene	3.75	3.67	3.57	97.8	95.2	70.0 - 130	2.65	25
1,1,2-Trichloroethane	3.75	3.53	3.47	94.3	92.7	70.0 - 130	1.73	25
Tetrachloroethylene	3.75	3.74	3.70	99.7	98.8	70.0 - 130	0.899	25
Methyl Butyl Ketone	3.75	3.40	3.40	90.8	90.7	70.0 - 150	0.0444	25
Dibromochloromethane	3.75	3.62	3.70	96.5	98.8	70.0 - 130	2.36	25

*: Value outside the established quality control limits.

D: Surrogate recovery cannot be used for control limit evaluation due to dilution.

3B-OR

LABORATORY CONTROL SAMPLE
LABORATORY CONTROL SAMPLE DUPLICATE
RECOVERY

L988471-03

SAMPLE NO.:
R3305484-1
R3305484-2

LCS Sample / File ID:	R3305484-1 / 0427_02	**SDG:**	L988471
LCSD Sample / File ID:	R3305484-2 / 0427_03	**Analytical Batch:**	WG1103966
Instrument ID:	AIRMS4	**Dilution Factor:**	1
Analytical Method:	TO-15	**Matrix:**	Air

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	RPD	RPD Limit
	ppbv	*ppbv*	*ppbv*	*%*	*%*	*%*	*%*	*%*
1,2-Dibromoethane	3.75	3.72	3.68	99.2	98.1	70.0 - 130	1.15	25
Chlorobenzene	3.75	3.65	3.61	97.2	96.4	70.0 - 130	0.854	25
Ethylbenzene	3.75	3.92	3.88	105	103	70.0 - 130	1.01	25
m&p-Xylene	7.50	7.64	7.68	102	102	70.0 - 130	0.413	25
o-Xylene	3.75	3.79	3.77	101	100	70.0 - 130	0.547	25
Styrene	3.75	4.11	3.93	110	105	70.0 - 130	4.58	25
Bromoform	3.75	4.18	4.19	111	112	70.0 - 130	0.263	25
1,1,2,2-Tetrachloroethane	3.75	3.69	3.74	98.4	99.7	70.0 - 130	1.29	25
4-Ethyltoluene	3.75	3.99	3.96	106	106	70.0 - 130	0.750	25
1,3,5-Trimethylbenzene	3.75	3.92	3.88	105	103	70.0 - 130	0.993	25
1,2,4-Trimethylbenzene	3.75	4.01	4.02	107	107	70.0 - 130	0.356	25
1,3-Dichlorobenzene	3.75	4.26	4.23	114	113	70.0 - 130	0.536	25
1,4-Dichlorobenzene	3.75	4.37	4.33	117	116	70.0 - 130	0.852	25
Benzyl Chloride	3.75	4.56	4.42	121	118	70.0 - 144	3.04	25
1,2-Dichlorobenzene	3.75	4.14	4.16	110	111	70.0 - 130	0.695	25
1,2,4-Trichlorobenzene	3.75	5.47	5.38	146	143	70.0 - 155	1.64	25
Hexachloro-1,3-butadiene	3.75	4.37	4.24	116	113	70.0 - 145	2.93	25
Naphthalene	3.75	4.98	4.91	133	131	70.0 - 155	1.31	25
Allyl Chloride	3.75	3.28	3.30	87.4	87.9	70.0 - 130	0.562	25
2-Chlorotoluene	3.75	3.98	3.95	106	105	70.0 - 130	0.673	25
Methyl Methacrylate	3.75	3.49	3.47	93.1	92.5	70.0 - 130	0.668	25
Tetrahydrofuran	3.75	3.40	3.38	90.6	90.1	70.0 - 140	0.500	25
2,2,4-Trimethylpentane	3.75	3.49	3.52	93.1	93.8	70.0 - 130	0.793	25
Vinyl Bromide	3.75	3.71	3.77	99.0	100	70.0 - 130	1.52	25
Isopropylbenzene	3.75	3.84	3.84	102	102	70.0 - 130	0.139	25

*: Value outside the established quality control limits.

D: Surrogate recovery cannot be used for control limit evaluation due to dilution.

4A-OR

METHOD BLANK

SAMPLE NO.:
R3305477-3

ESC Sample ID:	R3305477-3	**SDG:**	L988471
Lab File ID:	0427_04	**Preparation Date/Time:**	04/27/18 10:59
Instrument ID:	AIRMS2	**Analysis Date/Time:**	04/27/18 10:59
Analytical Batch:	WG1103956	**Dilution Factor:**	1
Analytical Method:	TO-15	**Matrix:**	Air

Sample ID	ESC Sample ID	Instrument	File ID	Analysis *date/time*
LCS	R3305477-1	AIRMS2	0427_02	04/27/18 09:19
LCSD	R3305477-2	AIRMS2	0427_03	04/27/18 10:08
SS-2	L988471-02	AIRMS2	0427_06	04/27/18 12:36
SS-4	L988471-04	AIRMS2	0427_07	04/27/18 13:22
SS-5	L988471-05	AIRMS2	0427_08	04/27/18 14:08
SS-6	L988471-06	AIRMS2	0427_09	04/27/18 14:56
SS-9	L988471-09	AIRMS2	0427_10	04/27/18 15:44
SS-10	L988471-10	AIRMS2	0427_11	04/27/18 16:32
SS-11	L988471-11	AIRMS2	0427_12	04/27/18 17:19
SS-12	L988471-12	AIRMS2	0427_13	04/27/18 18:07
DUP	L988471-13	AIRMS2	0427_14	04/27/18 18:55

4A-OR

METHOD BLANK

SAMPLE NO.:
R3305484-3

ESC Sample ID:	R3305484-3	**SDG:**	L988471
Lab File ID:	0427_04	**Preparation Date/Time:**	04/27/18 10:43
Instrument ID:	AIRMS4	**Analysis Date/Time:**	04/27/18 10:43
Analytical Batch:	WG1103966	**Dilution Factor:**	1
Analytical Method:	TO-15	**Matrix:**	Air

Sample ID	**ESC Sample ID**	**Instrument**	**File ID**	**Analysis** *date/time*
LCS	R3305484-1	AIRMS4	0427_02	04/27/18 09:13
LCSD	R3305484-2	AIRMS4	0427_03	04/27/18 09:57
SS-3	L988471-03	AIRMS4	0427_08	04/27/18 13:35

Sample Narrative:

Surrogate failure due to matrix interference.

4A-OR

METHOD BLANK

SAMPLE NO.:
R3305208-3

ESC Sample ID:	R3305208-3	**SDG:**	L988471
Lab File ID:	0426_04	**Preparation Date/Time:**	04/26/18 09:15
Instrument ID:	AIRMS5	**Analysis Date/Time:**	04/26/18 09:15
Analytical Batch:	WG1103323	**Dilution Factor:**	1
Analytical Method:	TO-15	**Matrix:**	Air

Sample ID	ESC Sample ID	Instrument	File ID	Analysis *date/time*
LCS	R3305208-1	AIRMS5	0426_02	04/26/18 07:53
LCSD	R3305208-2	AIRMS5	0426_03	04/26/18 08:33
SS-1	L988471-01	AIRMS5	0426_12	04/26/18 15:58
SS-2	L988471-02	AIRMS5	0426_13	04/26/18 16:41
SS-4	L988471-04	AIRMS5	0426_15	04/26/18 17:59
SS-5	L988471-05	AIRMS5	0426_16	04/26/18 18:37
SS-6	L988471-06	AIRMS5	0426_17	04/26/18 19:20
SS-7	L988471-07	AIRMS5	0426_18	04/26/18 20:03
SS-8	L988471-08	AIRMS5	0426_19	04/26/18 20:47
SS-9	L988471-09	AIRMS5	0426_20	04/26/18 21:30
SS-10	L988471-10	AIRMS5	0426_21	04/26/18 22:13
SS-11	L988471-11	AIRMS5	0426_22	04/26/18 22:57
SS-12	L988471-12	AIRMS5	0426_23	04/26/18 23:42
DUP	L988471-13	AIRMS5	0426_24	04/27/18 00:25

Sample Narrative:

Surrogate failure due to matrix interference.

5A-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

Lab File ID:	0417A_04	**SDG:**	L988471
Instrument ID:	AIRMS2	**Analytical Method:**	TO-15
Analysis Date/Time:	04/17/18 14:39		

Target Mass (m/e)	Relative Mass	Low Limit	High Limit	% Relative Abundance
50	95	8	40	29
75	95	30	66	57
95	95	100	100	100
96	95	5	9	7
173	174	0	2	0
174	95	50	120	71
175	174	4	9	8
176	174	93	101	98
177	176	5	9	7

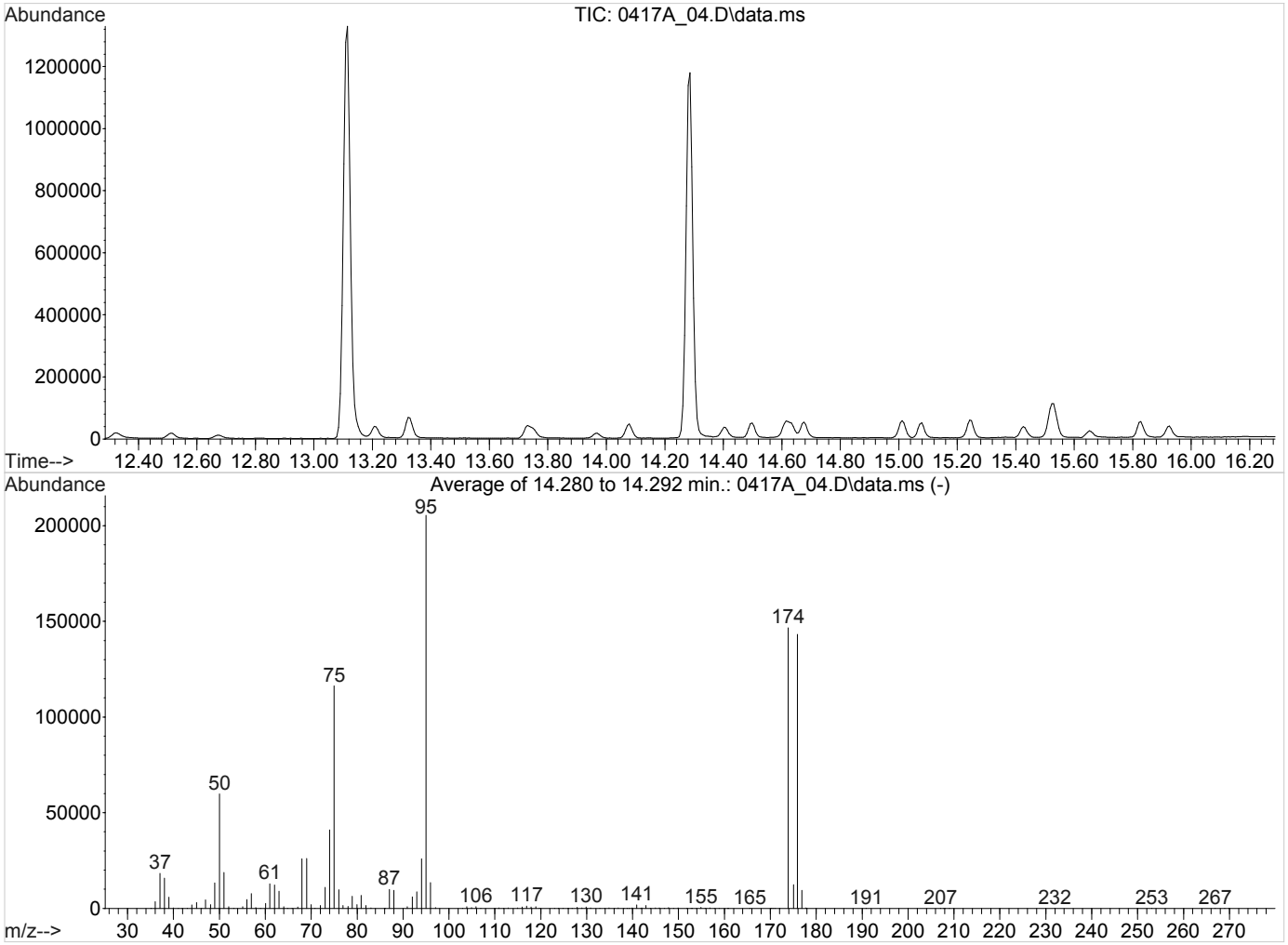
Sample ID	ESC Sample ID	File ID	Analysis date/time
STD-0.19	0.19	0417A_04	04/17/18 14:39
STD-0.31	0.31	0417A_05	04/17/18 15:26
STD-0.63	0.63	0417A_06	04/17/18 16:12
STD-1.25	1.25	0417A_07	04/17/18 16:59
STD-2.5	2.5	0417A_08	04/17/18 17:47
STD-3.75	3.75	0417A_09	04/17/18 18:36
STD-5	5	0417A_10	04/17/18 19:26
STD-10	10	0417A_11	04/17/18 20:20
STD-25	25	0417A_12	04/17/18 21:10
STD-50	50	0417A_13	04/17/18 22:05

BFB

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_04.D
Acq On : 17 Apr 2018 2:39 pm
Operator : 564
Sample : STD AMS 0.19 ppbv 18D17266
Misc : 18D17267
ALS Vial : 4 Sample Multiplier: 1

Integration File: events.e

Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Title :
Last Update : Wed Apr 18 09:08:22 2018



AutoFind: Scans 2000, 2001, 2002; Background Corrected with Scan 1993

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	29.1	59840	PASS
75	95	30	66	56.6	116305	PASS
95	95	100	100	100.0	205504	PASS
96	95	5	9	6.6	13530	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	71.3	146603	PASS
175	174	4	9	8.5	12435	PASS
176	174	93	101	97.6	143144	PASS
177	176	5	9	6.6	9403	PASS

5A-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

Lab File ID:	0427_01T	**SDG:**	L988471
Instrument ID:	AIRMS2	**Analytical Method:**	TO-15
Analysis Date/Time:	04/27/18 08:29		

Target Mass (m/e)	Relative Mass	Low Limit	High Limit	% Relative Abundance
50	95	8	40	25
75	95	30	66	53
95	95	100	100	100
96	95	5	9	6
173	174	0	2	0
174	95	50	120	78
175	174	4	9	9
176	174	93	101	98
177	176	5	9	6

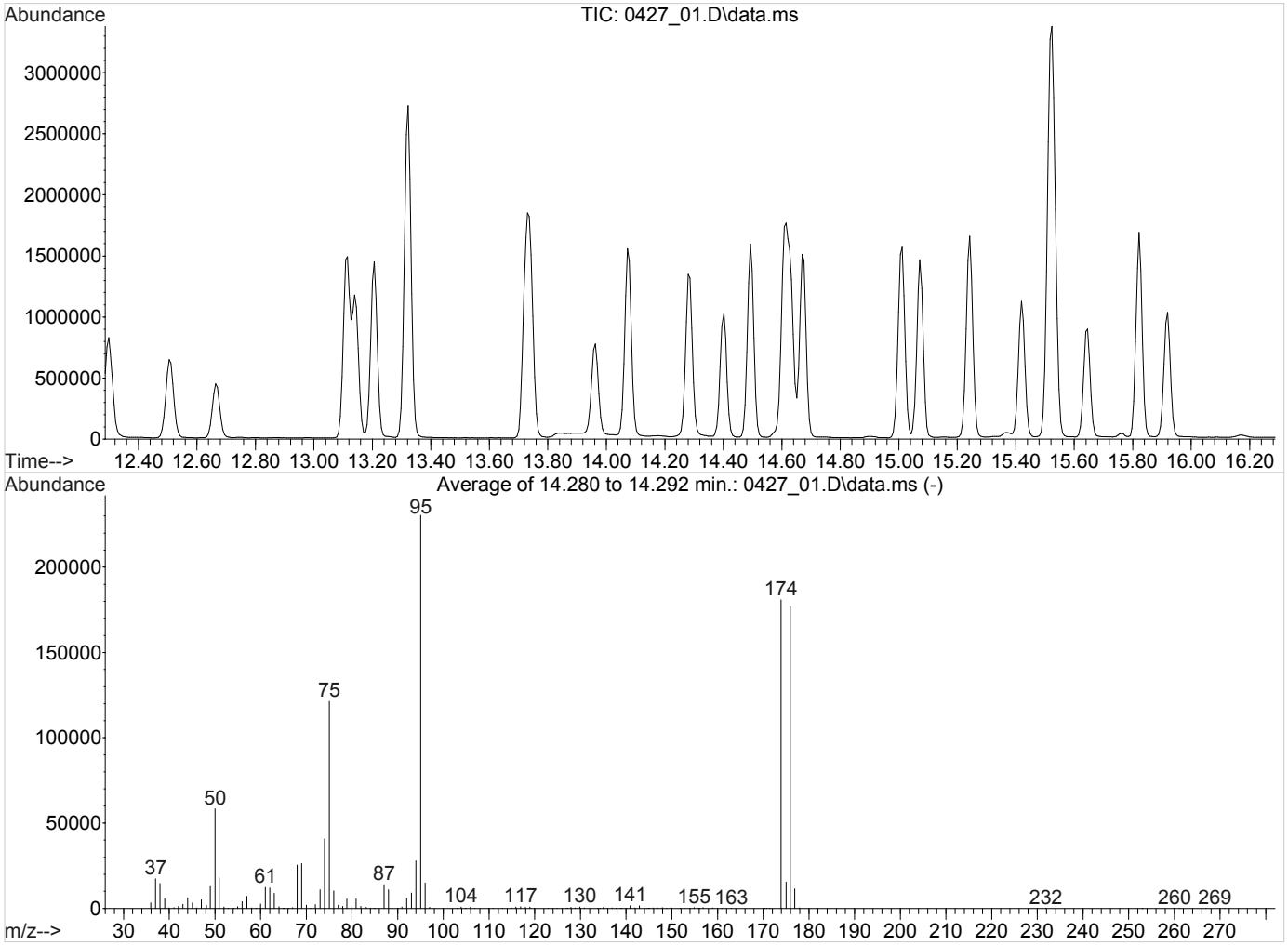
Sample ID	ESC Sample ID	File ID	Analysis date/time
ICV	AIRMS20427180427_01447748	0427_01	04/27/18 08:29
LCS	R3305477-1	0427_02	04/27/18 09:19
LCSD	R3305477-2	0427_03	04/27/18 10:08
BLANK	R3305477-3	0427_04	04/27/18 10:59
SS-2	L988471-02	0427_06	04/27/18 12:36
SS-4	L988471-04	0427_07	04/27/18 13:22
SS-5	L988471-05	0427_08	04/27/18 14:08
SS-6	L988471-06	0427_09	04/27/18 14:56
SS-9	L988471-09	0427_10	04/27/18 15:44
SS-10	L988471-10	0427_11	04/27/18 16:32
SS-11	L988471-11	0427_12	04/27/18 17:19
SS-12	L988471-12	0427_13	04/27/18 18:07
DUP	L988471-13	0427_14	04/27/18 18:55

BFB

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_01.D
Acq On : 27 Apr 2018 8:29 am
Operator : 564
Sample : ICV AMS 3.75 ppbv 18D17266
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: events.e

Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Title :
Last Update : Wed Apr 18 09:08:22 2018



AutoFind: Scans 2000, 2001, 2002; Background Corrected with Scan 1990

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	25.4	58449	PASS
75	95	30	66	52.7	121376	PASS
95	95	100	100	100.0	230507	PASS
96	95	5	9	6.5	14899	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	78.4	180821	PASS
175	174	4	9	8.6	15492	PASS
176	174	93	101	97.9	177088	PASS
177	176	5	9	6.5	11450	PASS

5A-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

Lab File ID:	0424A_02	**SDG:**	L988471
Instrument ID:	AIRMS4	**Analytical Method:**	TO-15
Analysis Date/Time:	04/24/18 11:33		

Target Mass (m/e)	Relative Mass	Low Limit	High Limit	% Relative Abundance
50	95	8	40	12
75	95	30	66	38
95	95	100	100	100
96	95	5	9	7
173	174	0	2	0
174	95	50	120	111
175	174	4	9	7
176	174	93	101	98
177	176	5	9	7

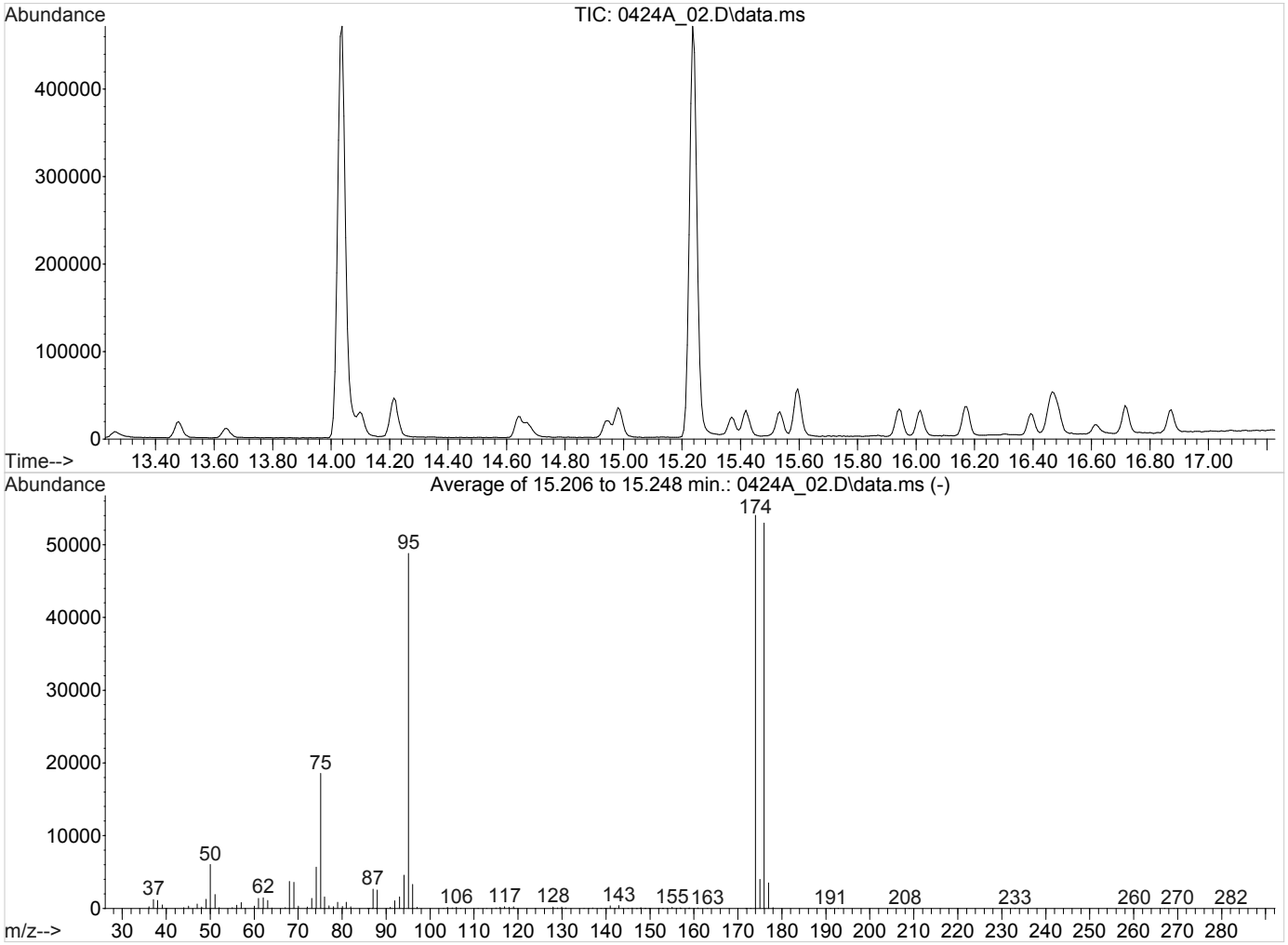
Sample ID	ESC Sample ID	File ID	Analysis date/time
STD-0.19	0.19	0424A_02	04/24/18 11:33
STD-0.31	0.31	0424A_03	04/24/18 12:15
STD-0.63	0.63	0424A_04	04/24/18 12:56
STD-1.25	1.25	0424A_05	04/24/18 13:37
STD-2.5	2.5	0424A_06	04/24/18 14:19
STD-3.75	3.75	0424A_07	04/24/18 15:03
STD-5.0	5.0	0424A_08	04/24/18 15:49
STD-50	50	0424A_11	04/24/18 18:13

BFB

Data Path : C:\msdchem\1\data\042418A\
Data File : 0424A_02.D
Acq On : 24 Apr 2018 11:33 am
Operator : 564
Sample : STD AMS 0.19 ppbv 18D19497
Misc : 18D19496
ALS Vial : 2 Sample Multiplier: 1

Integration File: events.e

Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Title : AIRMS4
Last Update : Wed Apr 25 09:34:47 2018



Spectrum Information: Average of 15.206 to 15.248 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	12.4	6037	PASS
75	95	30	66	38.0	18566	PASS
95	95	100	100	100.0	48820	PASS
96	95	5	9	6.7	3293	PASS
173	174	0.00	2	0.0	20	PASS
174	95	50	120	110.7	54068	PASS
175	174	4	9	7.4	3998	PASS
176	174	93	101	98.0	52980	PASS
177	176	5	9	6.6	3517	PASS

5A-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

Lab File ID:	0424A_02A	**SDG:**	L988471
Instrument ID:	AIRMS4	**Analytical Method:**	TO-15
Analysis Date/Time:	04/24/18 11:33		

Target Mass (m/e)	Relative Mass	Low Limit	High Limit	% Relative Abundance
50	95	8	40	12
75	95	30	66	38
95	95	100	100	100
96	95	5	9	7
173	174	0	2	0
174	95	50	120	111
175	174	4	9	7
176	174	93	101	98
177	176	5	9	7

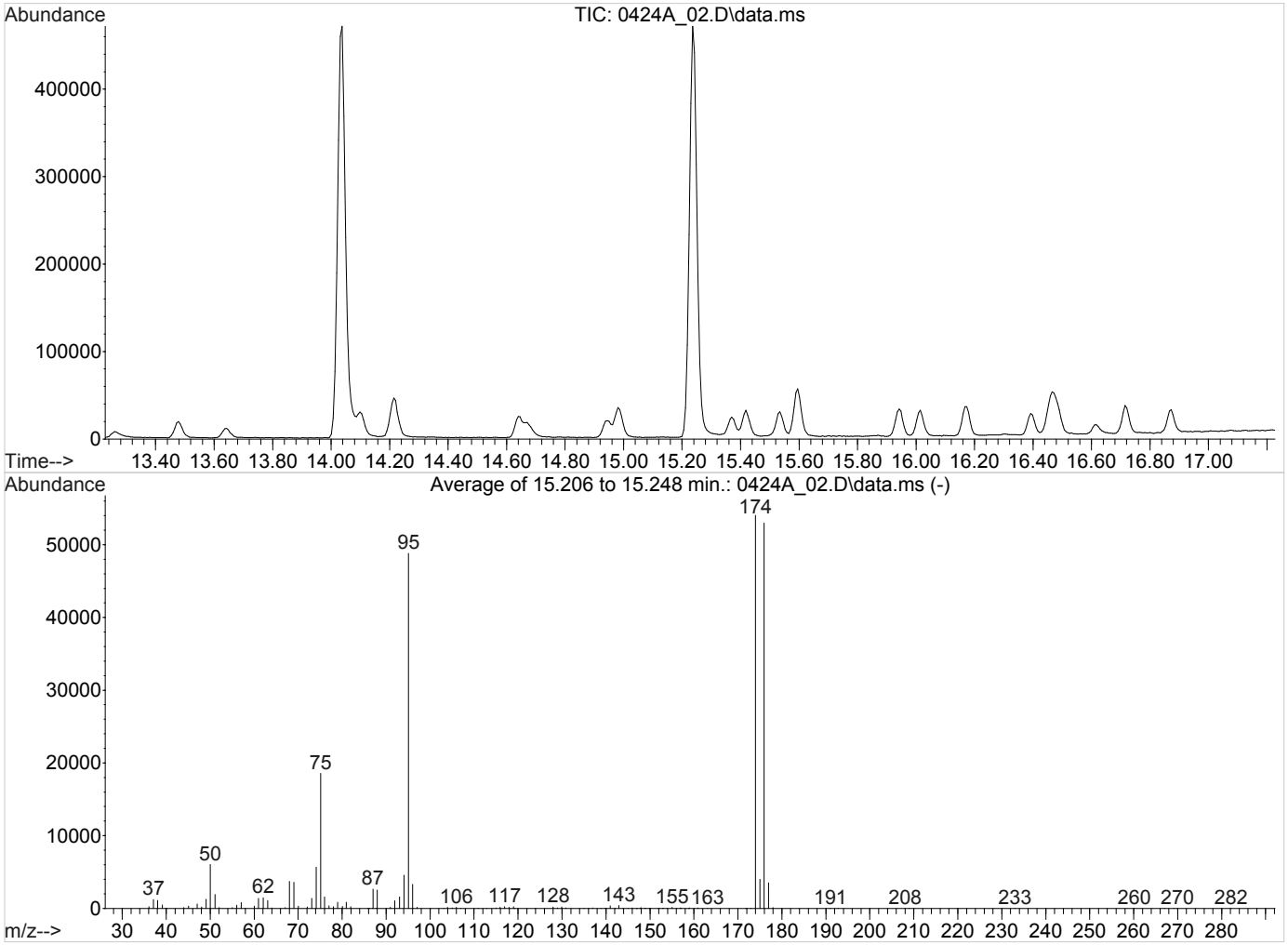
Sample ID	ESC Sample ID	File ID	Analysis date/time
STD-0.19	0.19	0424A_02	04/24/18 11:33
STD-0.31	0.31	0424A_03	04/24/18 12:15
STD-0.63	0.63	0424A_04	04/24/18 12:56
STD-1.25	1.25	0424A_05	04/24/18 13:37
STD-2.5	2.5	0424A_06	04/24/18 14:19
STD-3.75	3.75	0424A_07	04/24/18 15:03
STD-5.0	5.0	0424A_08	04/24/18 15:49
STD-50	50	0424A_11	04/24/18 18:13

BFB

Data Path : C:\msdchem\1\data\042418A\
Data File : 0424A_02.D
Acq On : 24 Apr 2018 11:33 am
Operator : 564
Sample : STD AMS 0.19 ppbv 18D19497
Misc : 18D19496
ALS Vial : 2 Sample Multiplier: 1

Integration File: events.e

Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Title : AIRMS4
Last Update : Wed Apr 25 09:34:47 2018



Spectrum Information: Average of 15.206 to 15.248 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	12.4	6037	PASS
75	95	30	66	38.0	18566	PASS
95	95	100	100	100.0	48820	PASS
96	95	5	9	6.7	3293	PASS
173	174	0.00	2	0.0	20	PASS
174	95	50	120	110.7	54068	PASS
175	174	4	9	7.4	3998	PASS
176	174	93	101	98.0	52980	PASS
177	176	5	9	6.6	3517	PASS

5A-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

Lab File ID:	0427_01T	**SDG:**	L988471
Instrument ID:	AIRMS4	**Analytical Method:**	TO-15
Analysis Date/Time:	04/27/18 08:29		

Target Mass (m/e)	Relative Mass	Low Limit	High Limit	% Relative Abundance
50	95	8	40	12
75	95	30	66	37
95	95	100	100	100
96	95	5	9	7
173	174	0	2	0
174	95	50	120	119
175	174	4	9	7
176	174	93	101	99
177	176	5	9	7

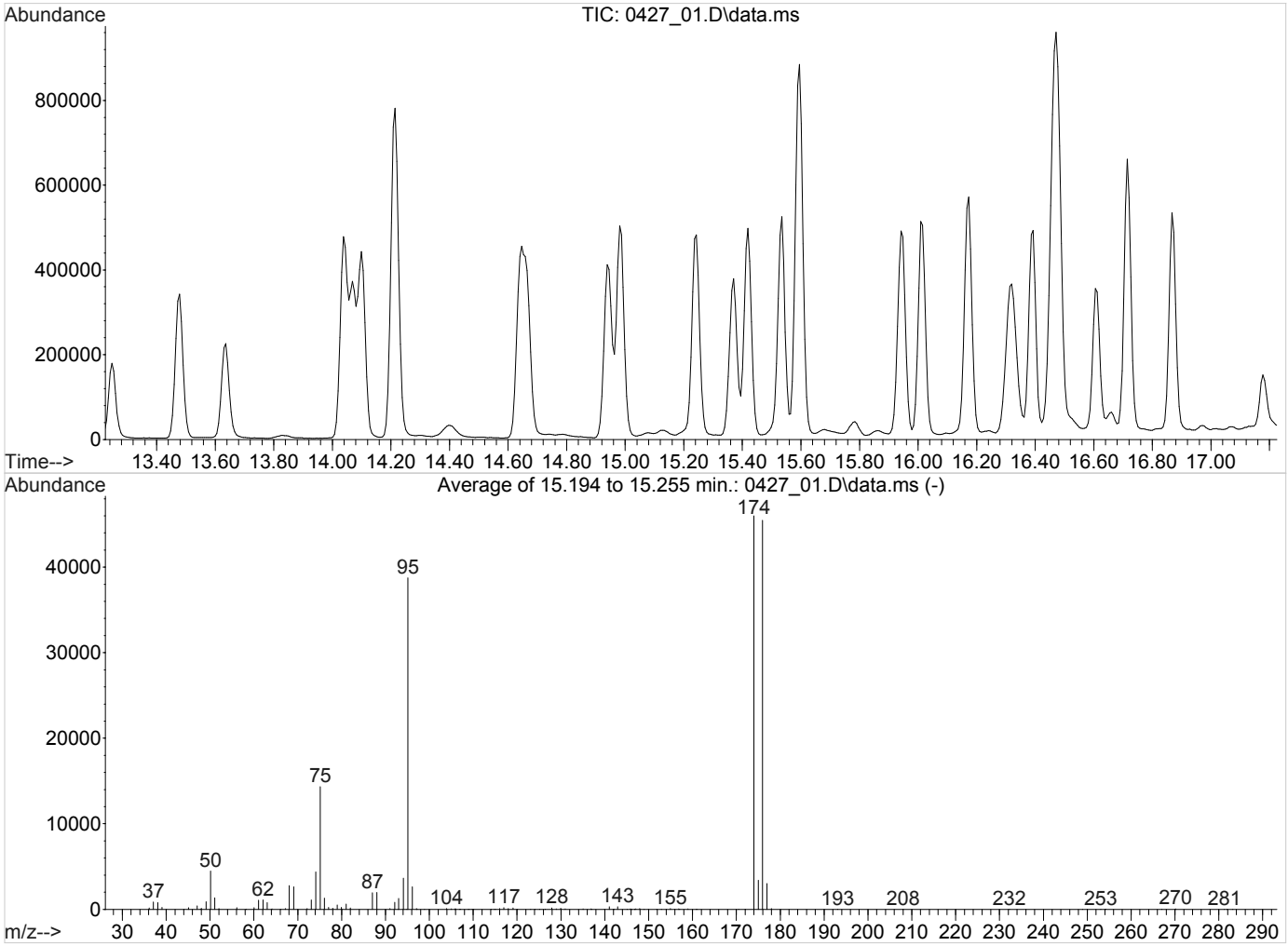
Sample ID	ESC Sample ID	File ID	Analysis date/time
ICV	AIRMS40427180427_01448077	0427_01	04/27/18 08:29
LCS	R3305484-1	0427_02	04/27/18 09:13
LCSD	R3305484-2	0427_03	04/27/18 09:57
BLANK	R3305484-3	0427_04	04/27/18 10:43
SS-3	L988471-03	0427_08	04/27/18 13:35

BFB

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_01.D
Acq On : 27 Apr 2018 8:29 am
Operator : 564
Sample : ICV AMS 3.75 ppbv
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: events.e

Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Title : AIRMS4
Last Update : Wed Apr 25 09:45:42 2018



Spectrum Information: Average of 15.194 to 15.255 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	11.6	4484	PASS
75	95	30	66	37.0	14350	PASS
95	95	100	100	100.0	38747	PASS
96	95	5	9	6.8	2622	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	118.8	46016	PASS
175	174	4	9	7.4	3388	PASS
176	174	93	101	98.8	45466	PASS
177	176	5	9	6.6	3013	PASS

5A-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

Lab File ID:	0420A_04	**SDG:**	L988471
Instrument ID:	AIRMS5	**Analytical Method:**	TO-15
Analysis Date/Time:	04/20/18 14:18		

Target Mass (m/e)	Relative Mass	Low Limit	High Limit	% Relative Abundance
50	95	8	40	14
75	95	30	66	43
95	95	100	100	100
96	95	5	9	7
173	174	0	2	0
174	95	50	120	93
175	174	4	9	8
176	174	93	101	98
177	176	5	9	7

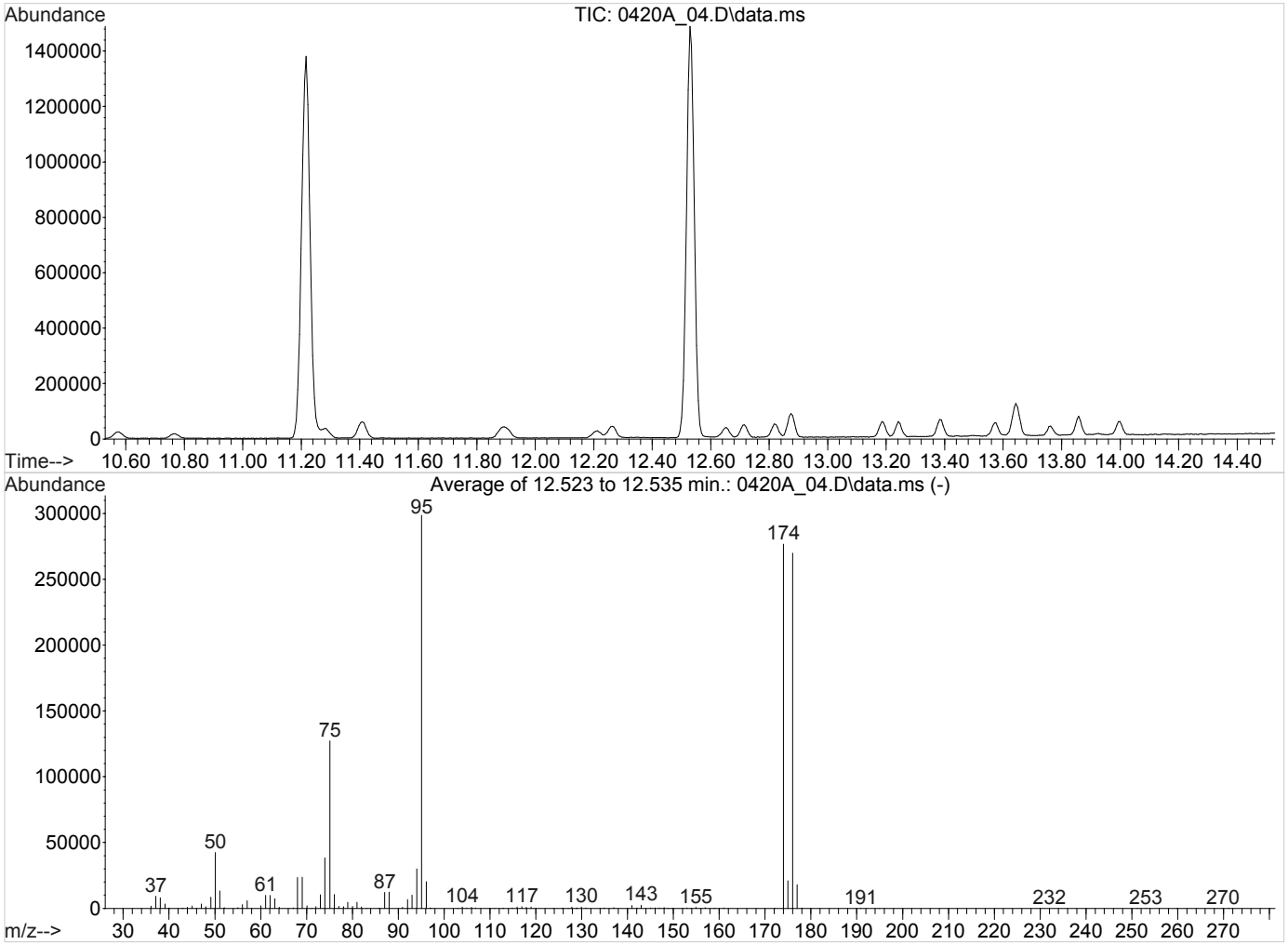
Sample ID	ESC Sample ID	File ID	Analysis date/time
STD-0.19	0.19	0420A_04	04/20/18 14:18
STD-0.31	0.31	0420A_05	04/20/18 14:56
STD-0.63	0.63	0420A_06	04/20/18 15:34
STD-1.25	1.25	0420A_07	04/20/18 16:12
STD-2.5	2.5	0420A_08	04/20/18 16:52
STD-3.75	3.75	0420A_09	04/20/18 17:32
STD-5	5	0420A_10	04/20/18 18:14
STD-10	10	0420A_11	04/20/18 19:00
STD-25	25	0420A_12	04/20/18 19:42
STD-50	50	0420A_13	04/20/18 20:29

BFB

Data Path : C:\msdchem\1\data\042018A\
Data File : 0420A_04.D
Acq On : 20 Apr 2018 2:18 pm
Operator : 564
Sample : STD AMS 0.19 ppbv 18D20628
Misc : 18D20624
ALS Vial : 4 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Title : AIRMS5
Last Update : Sat Apr 21 09:56:22 2018



AutoFind: Scans 1669, 1670, 1671; Background Corrected with Scan 1659

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	14.2	42507	PASS
75	95	30	66	42.6	127309	PASS
95	95	100	100	100.0	298752	PASS
96	95	5	9	6.7	20144	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	92.6	276608	PASS
175	174	4	9	7.6	20901	PASS
176	174	93	101	97.6	269888	PASS
177	176	5	9	6.7	18037	PASS

5A-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

Lab File ID:	0426_01T	**SDG:**	L988471
Instrument ID:	AIRMS5	**Analytical Method:**	TO-15
Analysis Date/Time:	04/26/18 07:13		

Target Mass (m/e)	Relative Mass	Low Limit	High Limit	% Relative Abundance
50	95	8	40	13
75	95	30	66	40
95	95	100	100	100
96	95	5	9	6
173	174	0	2	0
174	95	50	120	104
175	174	4	9	7
176	174	93	101	97
177	176	5	9	7

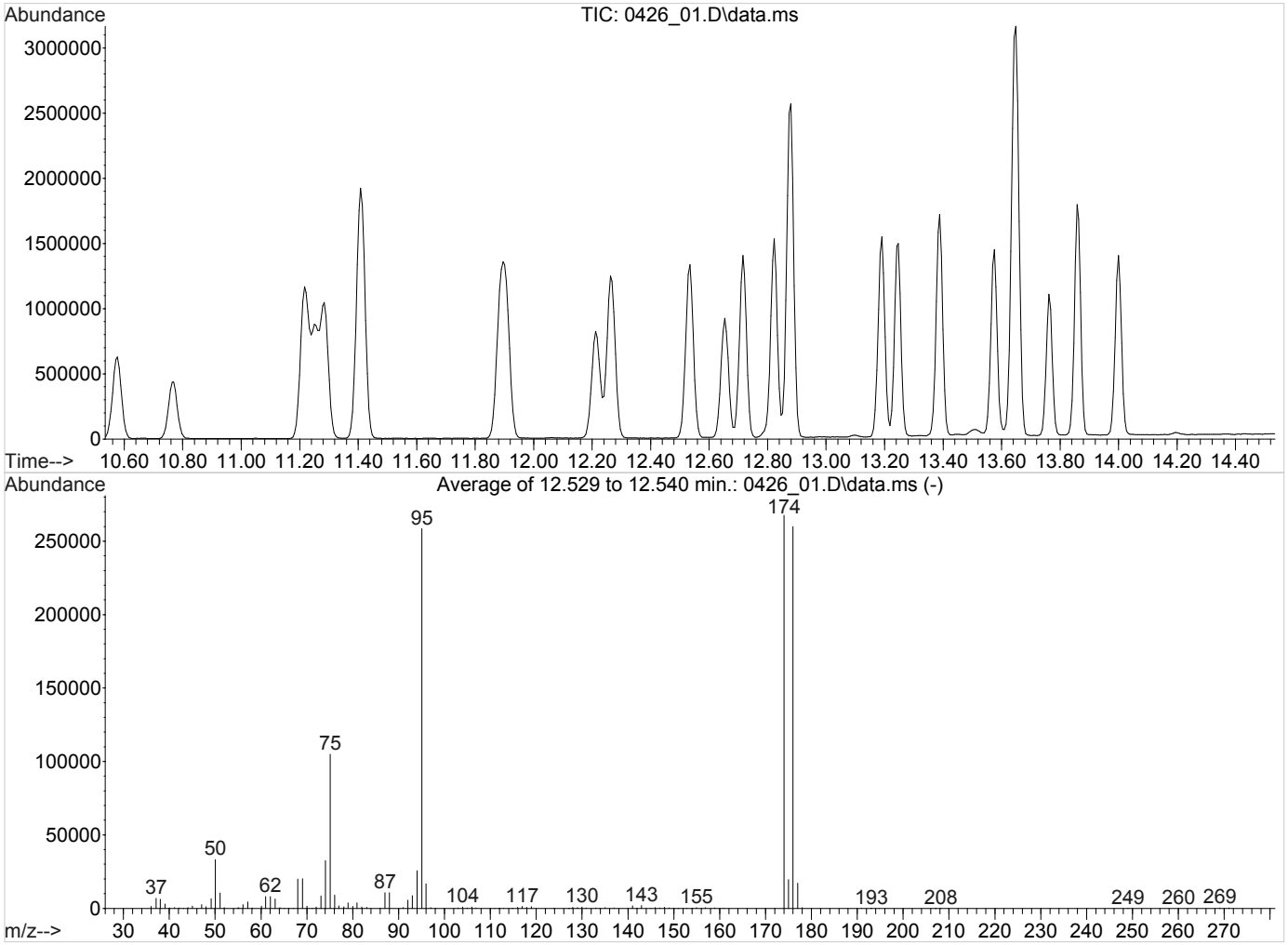
Sample ID	ESC Sample ID	File ID	Analysis date/time
ICV	AIRMS50426180426_01447910	0426_01	04/26/18 07:13
LCS	R3305208-1	0426_02	04/26/18 07:53
LCSD	R3305208-2	0426_03	04/26/18 08:33
BLANK	R3305208-3	0426_04	04/26/18 09:15
SS-1	L988471-01	0426_12	04/26/18 15:58
SS-2	L988471-02	0426_13	04/26/18 16:41
SS-4	L988471-04	0426_15	04/26/18 17:59
SS-5	L988471-05	0426_16	04/26/18 18:37
SS-6	L988471-06	0426_17	04/26/18 19:20
SS-7	L988471-07	0426_18	04/26/18 20:03
SS-8	L988471-08	0426_19	04/26/18 20:47
SS-9	L988471-09	0426_20	04/26/18 21:30
SS-10	L988471-10	0426_21	04/26/18 22:13
SS-11	L988471-11	0426_22	04/26/18 22:57
SS-12	L988471-12	0426_23	04/26/18 23:42
DUP	L988471-13	0426_24	04/27/18 00:25

BFB

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_01.D
Acq On : 26 Apr 2018 7:13 am
Operator : 564
Sample : ICV AMS 3.75 ppbv
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Title : AIRMS5
Last Update : Sat Apr 21 09:56:22 2018



AutoFind: Scans 1670, 1671, 1672; Background Corrected with Scan 1659

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	12.9	33237	PASS
75	95	30	66	40.5	104800	PASS
95	95	100	100	100.0	258517	PASS
96	95	5	9	6.5	16763	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	120	103.6	267712	PASS
175	174	4	9	7.3	19648	PASS
176	174	93	101	97.1	259904	PASS
177	176	5	9	6.6	17136	PASS

8A-OR

INTERNAL STANDARD AND RETENTION TIME

SDG:	L988471	**Analytical Method:**	TO-15
Instrument ID:	AIRMS2	**Calibration Start Date:**	04/17/18 14:39
Std File:	0427_01	**Calibration End Date:**	04/17/18 22:05
		Std Analysis Date:	04/27/18 08:29

Sample ID	File ID	DFB		BCM		CB	
		Response	*RT*	*Response*	*RT*	*Response*	*RT*
STANDARD		8072465	9.89	1894893	8.81	6944703	13.12
UPPER LIMIT		10071770		2377468		7891760	
LOWER LIMIT		4316473		1018915		3382183	
LCS R3305477-1 WG1103956 1x	0427_02	7809608	9.89	1845594	8.81	6691912	13.12
LCSD R3305477-2 WG1103956 1x	0427_03	7742865	9.89	1816808	8.81	6756127	13.12
BLANK R3305477-3 WG1103956 1x	0427_04	7626363	9.89	1743367	8.81	6578594	13.12
L988471-02 WG1103956 20x	0427_06	7585811	9.89	1774367	8.81	6437070	13.12
L988471-04 WG1103956 4000x	0427_07	7749447	9.89	1806691	8.81	6572202	13.12
L988471-05 WG1103956 200x	0427_08	7647367	9.89	1782600	8.81	6398285	13.12
L988471-06 WG1103956 80x	0427_09	7532691	9.89	1768476	8.81	6478632	13.12
L988471-09 WG1103956 20x	0427_10	7701238	9.89	1810891	8.81	6659933	13.12
L988471-10 WG1103956 20x	0427_11	7463111	9.89	1762606	8.81	6483838	13.12
L988471-11 WG1103956 80x	0427_12	7592450	9.89	1772107	8.81	6579408	13.12
L988471-12 WG1103956 25x	0427_13	7493060	9.89	1734917	8.81	6474693	13.12
L988471-13 WG1103956 25x	0427_14	7411308	9.89	1718305	8.81	6412745	13.12

DFB - 1,4-DIFLUOROBENZENE BCM - BROMOCHLOROMETHANE
CB - CHLOROBENZENE-D5

*: Value outside the established quality control limits.
D: Surrogate recovery cannot be used for control limit evaluation due to dilution.

8A-OR

INTERNAL STANDARD AND RETENTION TIME

SDG:	L988471	**Analytical Method:**	TO-15
Instrument ID:	AIRMS4	**Calibration Start Date:**	04/24/18 11:33
Std File:	0427_01	**Calibration End Date:**	04/24/18 18:13
		Std Analysis Date:	04/27/18 08:29

Sample ID	File ID	DFB		BCM		CB	
		Response	*RT*	*Response*	*RT*	*Response*	*RT*
STANDARD		5305546	10.91	1480878	9.84	3258075	14.04
UPPER LIMIT		7008318		1943038		4709711	
LOWER LIMIT		3003565		832730		2018447	
LCS R3305484-1 WG1103966 1x	0427_02	5097600	10.90	1406816	9.83	3166669	14.04
LCSD R3305484-2 WG1103966 1x	0427_03	5044409	10.90	1399755	9.82	3164082	14.04
BLANK R3305484-3 WG1103966 1x	0427_04	5052171	10.90	1396475	9.83	3112461	14.04
L988471-03 WG1103966 100x	0427_08	4558944	10.90	1237591	9.83	2369804	14.04

DFB - 1,4-DIFLUOROBENZENE BCM - BROMOCHLOROMETHANE
CB - CHLOROBENZENE-D5

*: Value outside the established quality control limits.
D: Surrogate recovery cannot be used for control limit evaluation due to dilution.

8A-OR

INTERNAL STANDARD AND RETENTION TIME

SDG:	L988471	**Analytical Method:**	TO-15
Instrument ID:	AIRMS5	**Calibration Start Date:**	04/20/18 14:18
Std File:	0426_01	**Calibration End Date:**	04/20/18 20:29
		Std Analysis Date:	04/26/18 07:13

Sample ID	File ID	DFB		BCM		CB	
		Response	*RT*	*Response*	*RT*	*Response*	*RT*
STANDARD		991473	8.10	263756	7.25	866767	11.22
UPPER LIMIT		1554482		405395		1366426	
LOWER LIMIT		666206		173741		585611	
LCS R3305208-1 WG1103323 1x	0426_02	1085206	8.12	287577	7.27	969335	11.22
LCSD R3305208-2 WG1103323 1x	0426_03	1018797	8.11	267567	7.26	927298	11.22
BLANK R3305208-3 WG1103323 1x	0426_04	907918	8.10	244851	7.25	775453	11.22
L988471-01 WG1103323 5x	0426_12	907437	8.10	243517	7.25	786286	11.22
L988471-02 WG1103323 1x	0426_13	892151	8.10	240731	7.25	789511	11.22
L988471-04 WG1103323 100x	0426_15	884375	8.11	240130	7.26	826013	11.22
L988471-05 WG1103323 10x	0426_16	951887	8.11	257461	7.26	881487	11.22
L988471-06 WG1103323 1x	0426_17	907244	8.11	243867	7.26	928928	11.23
L988471-07 WG1103323 1x	0426_18	859848	8.11	233286	7.25	772626	11.22
L988471-08 WG1103323 1x	0426_19	927273	8.11	247682	7.26	816783	11.22
L988471-09 WG1103323 1x	0426_20	900877	8.10	239906	7.25	813429	11.22
L988471-10 WG1103323 1x	0426_21	922224	8.11	247008	7.26	816016	11.22
L988471-11 WG1103323 1x	0426_22	918919	8.11	241592	7.25	907162	11.22
L988471-12 WG1103323 1x	0426_23	878996	8.11	232416	7.25	833450	11.22
L988471-13 WG1103323 1x	0426_24	896348	8.11	237099	7.25	844343	11.22

DFB - 1,4-DIFLUOROBENZENE BCM - BROMOCHLOROMETHANE
CB - CHLOROBENZENE-D5

*: Value outside the established quality control limits.
D: Surrogate recovery cannot be used for control limit evaluation due to dilution.

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS-1

ESC Sample ID:	L988471-01	**SDG:**	L988471
Client Sample ID:	SS-1	**Collected Date/Time:**	04/23/18 10:53
Lab File ID:	0426_12	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/26/18 15:58
Analytical Batch:	WG1103323	**Analysis Date/Time:**	04/26/18 15:58
Dilution Factor:	5	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	80 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	RT	Result	Qualifier	MDL	RDL
			ppbv		*ppbv*	*ppbv*
Acetone	67-64-1	5.48	ND		0.285	6.25
Allyl chloride	107-05-1	5.76	ND		0.273	1.00
Benzene	71-43-2	7.81	ND		0.230	1.00
Benzyl Chloride	100-44-7	0	ND		0.299	1.00
Bromodichloromethane	75-27-4	8.88	ND		0.218	1.00
Bromoform	75-25-2	0	ND		0.393	3.00
Bromomethane	74-83-9	0	ND		0.305	1.00
1,3-Butadiene	106-99-0	0	ND		0.282	10.0
Carbon disulfide	75-15-0	5.68	ND		0.272	1.00
Carbon tetrachloride	56-23-5	7.58	ND		0.293	1.00
Chlorobenzene	108-90-7	0	ND		0.301	1.00
Chloroethane	75-00-3	0	ND		0.245	1.00
Chloroform	67-66-3	7.26	82.6		0.287	1.00
Chloromethane	74-87-3	0	ND		0.272	1.00
2-Chlorotoluene	95-49-8	0	ND		0.303	1.00
Cyclohexane	110-82-7	7.48	ND		0.267	1.00
Dibromochloromethane	124-48-1	0	ND		0.247	1.00
1,2-Dibromoethane	106-93-4	0	ND		0.0925	1.00
1,2-Dichlorobenzene	95-50-1	0	ND		0.302	1.00
1,3-Dichlorobenzene	541-73-1	0	ND		0.299	1.00
1,4-Dichlorobenzene	106-46-7	0	ND		0.279	1.00
1,2-Dichloroethane	107-06-2	0	ND		0.308	1.00
1,1-Dichloroethane	75-34-3	0	ND		0.257	1.00
1,1-Dichloroethene	75-35-4	0	ND		0.245	1.00
cis-1,2-Dichloroethene	156-59-2	0	ND		0.195	1.00
trans-1,2-Dichloroethene	156-60-5	0	ND		0.232	1.00
1,2-Dichloropropane	78-87-5	0	ND		0.300	1.00
cis-1,3-Dichloropropene	10061-01-5	0	ND		0.294	1.00
trans-1,3-Dichloropropene	10061-02-6	0	ND		0.218	1.00
1,4-Dioxane	123-91-1	0	ND		0.277	1.00
Ethanol	64-17-5	5.04	ND		0.416	3.15
Ethylbenzene	100-41-4	0	ND		0.253	1.00
4-Ethyltoluene	622-96-8	0	ND		0.333	1.00
Trichlorofluoromethane	75-69-4	4.85	1.42		0.337	1.00
Dichlorodifluoromethane	75-71-8	3.62	ND		0.301	1.00
1,1,2-Trichlorotrifluoroethane	76-13-1	5.31	ND		0.344	1.00
1,2-Dichlorotetrafluoroethane	76-14-2	0	ND		0.229	1.00
Heptane	142-82-5	0	ND		0.313	1.00
Hexachloro-1,3-butadiene	87-68-3	0	ND		0.328	3.15
n-Hexane	110-54-3	6.22	ND		0.229	1.00
Isopropylbenzene	98-82-8	0	ND		0.282	1.00
Methylene Chloride	75-09-2	5.86	ND		0.233	1.00
Methyl Butyl Ketone	591-78-6	0	ND		0.341	6.25

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS-1

ESC Sample ID:	L988471-01	**SDG:**	L988471
Client Sample ID:	SS-1	**Collected Date/Time:**	04/23/18 10:53
Lab File ID:	0426_12	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/26/18 15:58
Analytical Batch:	WG1103323	**Analysis Date/Time:**	04/26/18 15:58
Dilution Factor:	5	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	80 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	**CAS**	**RT**	**Result**	**Qualifier**	**MDL**	**RDL**
			ppbv		*ppbv*	*ppbv*
2-Butanone (MEK)	78-93-3	0	ND		0.247	6.25
4-Methyl-2-pentanone (MIBK)	108-10-1	0	ND		0.325	6.25
Methyl methacrylate	80-62-6	8.60	ND		0.387	1.00
MTBE	1634-04-4	0	ND		0.253	1.00
Naphthalene	91-20-3	15.83	ND		0.770	3.15
2-Propanol	67-63-0	5.53	ND		0.441	6.25
Propene	115-07-1	3.57	ND		0.466	2.00
Styrene	100-42-5	0	ND		0.233	1.00
1,1,2,2-Tetrachloroethane	79-34-5	12.79	ND		0.288	1.00
Tetrachloroethylene	127-18-4	10.24	14.3		0.249	1.00
Tetrahydrofuran	109-99-9	7.26	ND		0.254	1.00
Toluene	108-88-3	9.66	ND		0.250	1.00
1,2,4-Trichlorobenzene	120-82-1	0	ND		0.740	3.15
1,1,1-Trichloroethane	71-55-6	0	ND		0.333	1.00
1,1,2-Trichloroethane	79-00-5	10.24	ND		0.144	1.00
Trichloroethylene	79-01-6	0	ND		0.273	1.00
1,2,4-Trimethylbenzene	95-63-6	13.24	ND		0.242	1.00
1,3,5-Trimethylbenzene	108-67-8	0	ND		0.316	1.00
2,2,4-Trimethylpentane	540-84-1	0	ND		0.228	1.00
Vinyl chloride	75-01-4	0	ND		0.229	1.00
Vinyl Bromide	593-60-2	0	ND		0.364	1.00
Vinyl acetate	108-05-4	0	ND		0.320	1.00
m&p-Xylene	1330-20-7	11.40	ND		0.473	2.00
o-Xylene	95-47-6	11.88	ND		0.317	1.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_12.D
Acq On : 26 Apr 2018 3:58 pm
Operator : 564
Sample : L988471-01 5x WG1103323
Misc :
ALS Vial : 12 Sample Multiplier: 5
InstName : AIRMS5

Quant Time: Apr 27 08:45:56 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration

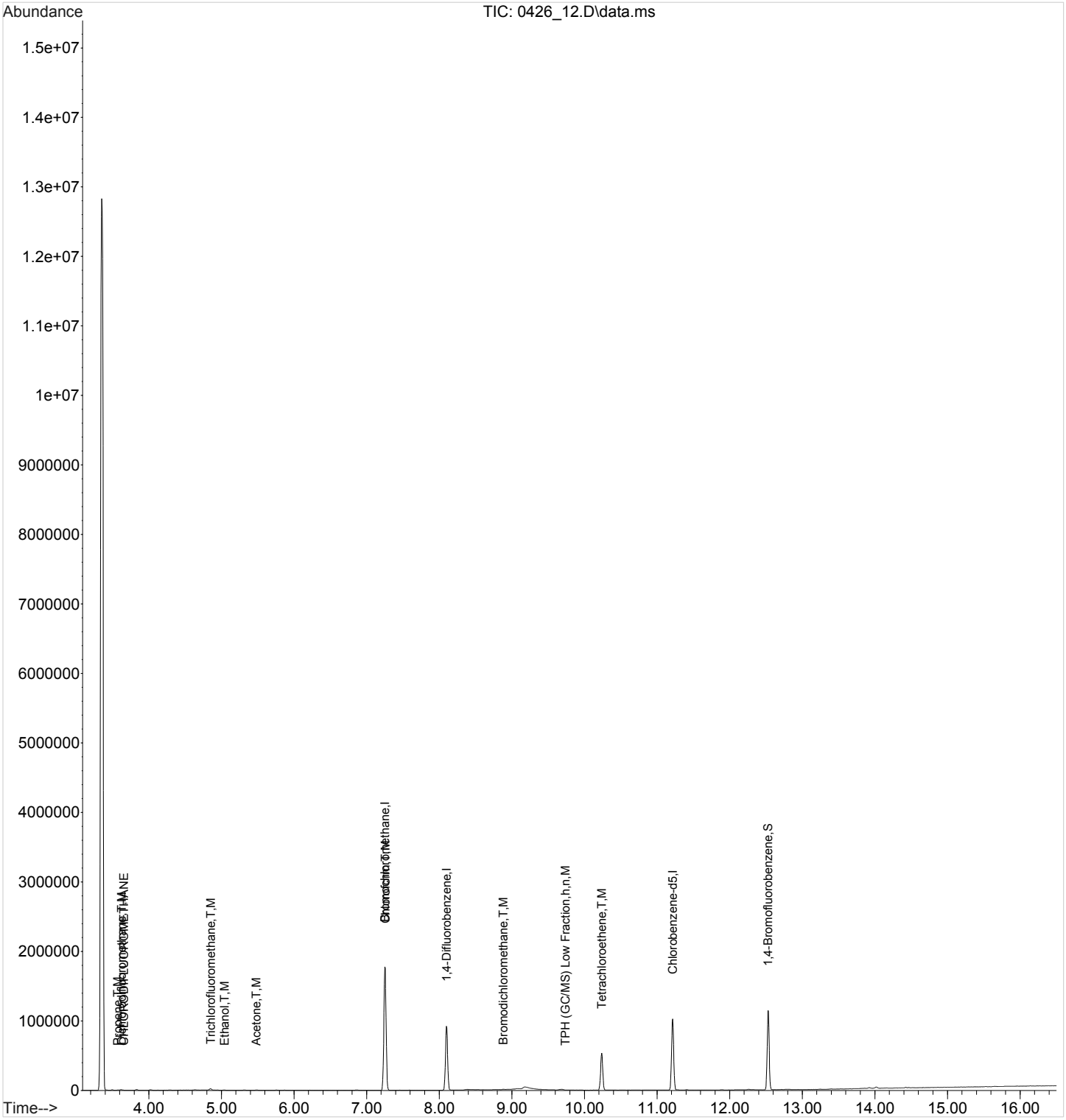
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.251	130	243517	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	8.099	114	907437	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	11.216	117	786286	4.0000000	ppbv	0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	12.529	95	453660	3.8463454	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 96.16%			
Target Compounds						Qvalue
2) Propene	3.574	41	1265	0.3194583	ppbv #	87
3) 1,1-DIFLUOROETHANE	3.585	51	1909	0.2495007	ppbv	85
4) Dichlorodifluoromethane	3.625	85	7037	0.5786038	ppbv	97
5) CHLORODIFLUOROMETHANE	3.659	51	2305	0.3147212	ppbv #	62
13) Trichlorofluoromethane	4.852	101	19324	1.4209036	ppbv	100
14) Ethanol	5.045	45	1674	0.7099045	ppbv	87
15) 1,1,2-Trichlorotrifluo...	5.311	101	1109	0.0878083	ppbv #	78
17) Acetone	5.480	58	1251	0.4177007	ppbv	86
18) 2-Propanol	5.531	45	696	0.0602942	ppbv #	1
19) Carbon Disulfide	5.678	76	1314	0.0955013	ppbv #	74
20) Allyl Chloride	5.763	41	1084	0.1420969	ppbv #	1
21) Methylene Chloride	5.859	49	913	0.1351235	ppbv #	81
25) n-Hexane	6.216	57	630	0.0655667	ppbv #	34
31) Tetrahydrofuran	7.262	42	1064	0.1385911	ppbv #	1
32) Chloroform	7.257	83	1151566	82.6049286	ppbv	98
33) Cyclohexane	7.483	84	641	0.0645040	ppbv #	48
35) Carbon Tetrachloride	7.585	117	2559	0.1769702	ppbv #	96
38) Benzene	7.805	78	1687	0.0741388	ppbv #	57
43) METHYL CYCLOHEXANE	8.541	83	1270	0.0931709	ppbv #	81
45) Methyl Methacrylate	8.603	69	975	0.1193477	ppbv #	14
47) Bromodichloromethane	8.880	83	6926	0.4497885	ppbv	99
50) Toluene	9.661	91	5558	0.1964392	ppbv	90
52) 1,1,2-Trichloroethane	10.238	97	1316	0.1334888	ppbv #	1
53) Tetrachloroethene	10.238	166	217343	14.2719280	ppbv	97
60) M&P-Xylene	11.403	91	4478	0.1560743	ppbv	86
61) O-Xylene	11.878	91	2295	0.0773619	ppbv #	75
65) 1,1,2,2-Tetrachloroethane	12.795	83	1374	0.0627241	ppbv	88
72) 1,2,4-Trimethylbenzene	13.242	105	2249	0.0664136	ppbv	89
83) Naphthalene	15.832	128	3133	0.0618463	ppbv #	80
84) TPH (GC/MS) Low Fraction	9.740	TIC	1920385m	35.9218314	ppbv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

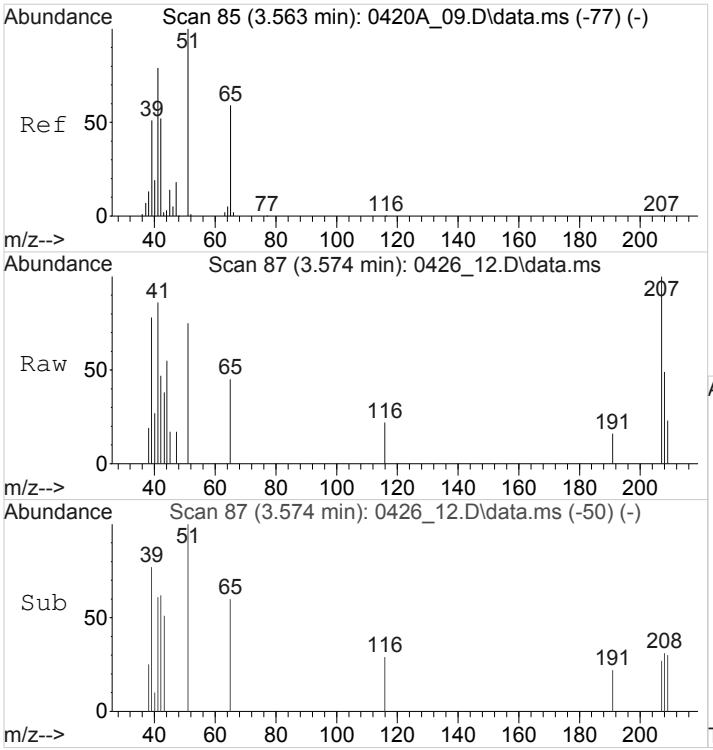
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_12.D
Acq On : 26 Apr 2018 3:58 pm
Operator : 564
Sample : L988471-01 5x WG1103323
Misc :
ALS Vial : 12 Sample Multiplier: 5
InstName : AIRMS5

Quant Time: Apr 27 08:45:56 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration



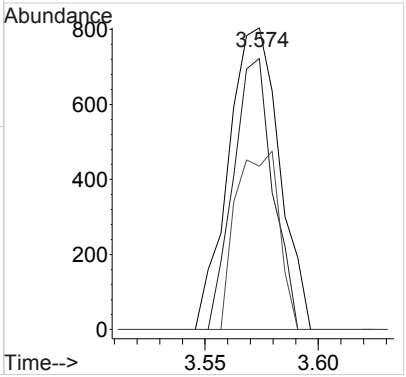
ACCOUNT:	PROJECT:	SDG:	DATE/TIME:	PAGE:
S&ME Inc. - Knoxville	4143-17-016	L988471	05/16/18 11:18	40 of 698

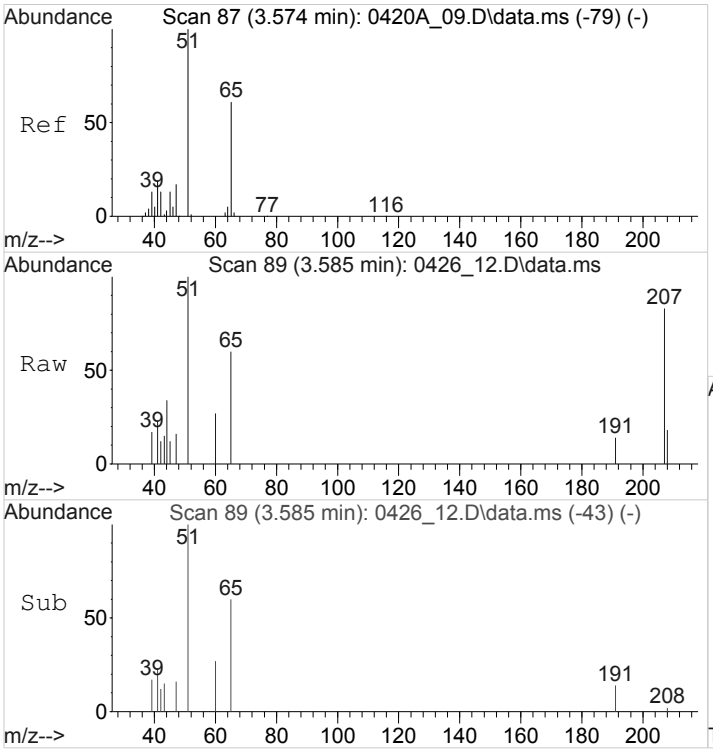


#2
Propene
Concen: 0.3194583 ppbv
RT: 3.574 min Scan# 87
Delta R.T. 0.011 min
Lab File: 0426_12.D
Acq: 26 Apr 2018 3:58 pm

Tgt Ion: 41 Resp: 1265

Ion	Ratio	Lower	Upper
41	100		
39	69.7	53.1	79.7
42	49.8	53.8	80.8#

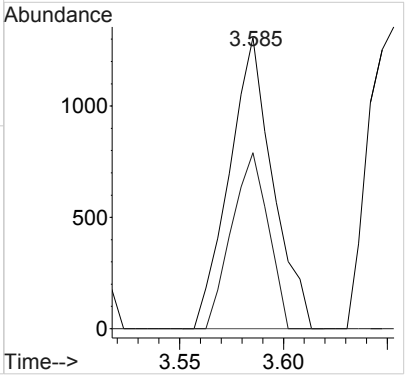


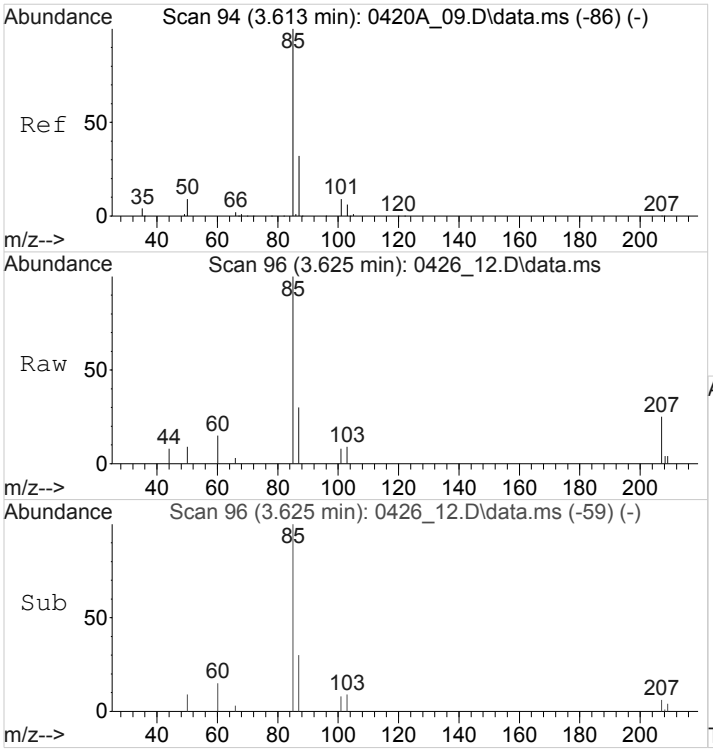


#3
1,1-DIFLUOROETHANE
Concen: 0.2495007 ppbv
RT: 3.585 min Scan# 89
Delta R.T. 0.011 min
Lab File: 0426_12.D
Acq: 26 Apr 2018 3:58 pm

Tgt Ion: 51 Resp: 1909

Ion	Ratio	Lower	Upper
51	100		
65	50.6	49.4	74.2

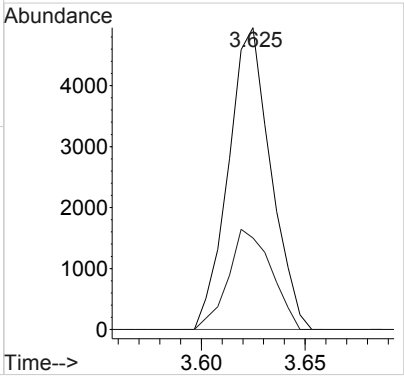


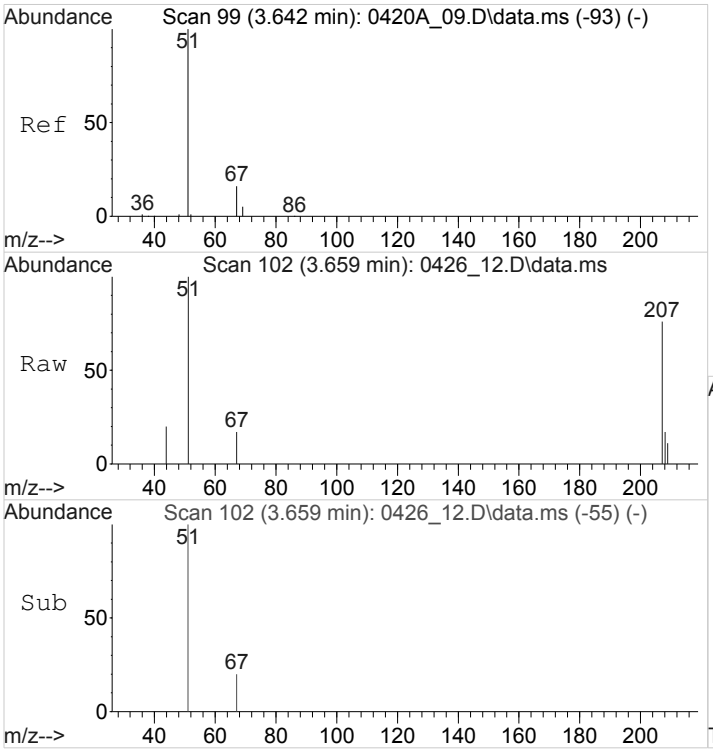


#4
Dichlorodifluoromethane
Concen: 0.5786038 ppbv
RT: 3.625 min Scan# 96
Delta R.T. 0.011 min
Lab File: 0426_12.D
Acq: 26 Apr 2018 3:58 pm

Tgt Ion: 85 Resp: 7037

Ion	Ratio	Lower	Upper
85	100		
87	33.8	25.8	38.8

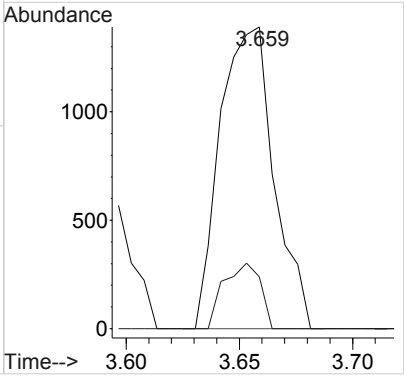


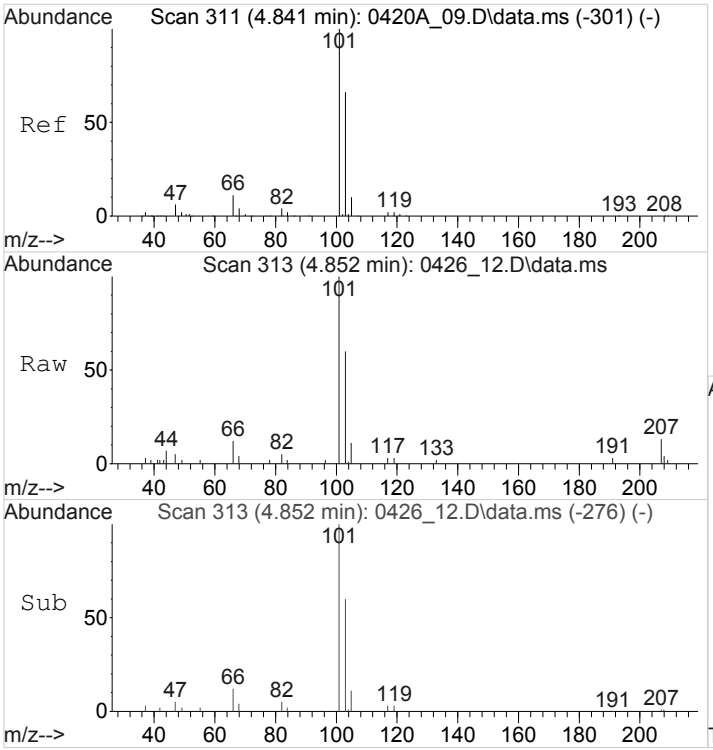


#5
CHLORODIFLUOROMETHANE
Concen: 0.3147212 ppbv
RT: 3.659 min Scan# 102
Delta R.T. 0.017 min
Lab File: 0426_12.D
Acq: 26 Apr 2018 3:58 pm

Tgt Ion: 51 Resp: 2305

Ion	Ratio	Lower	Upper
51	100		
67	0.0	12.7	19.1#

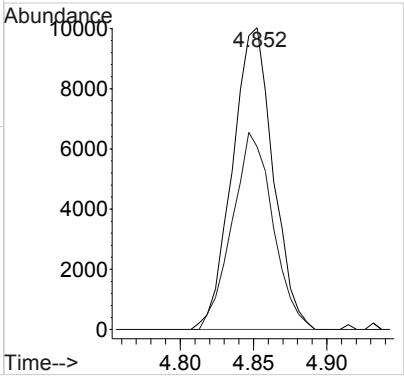


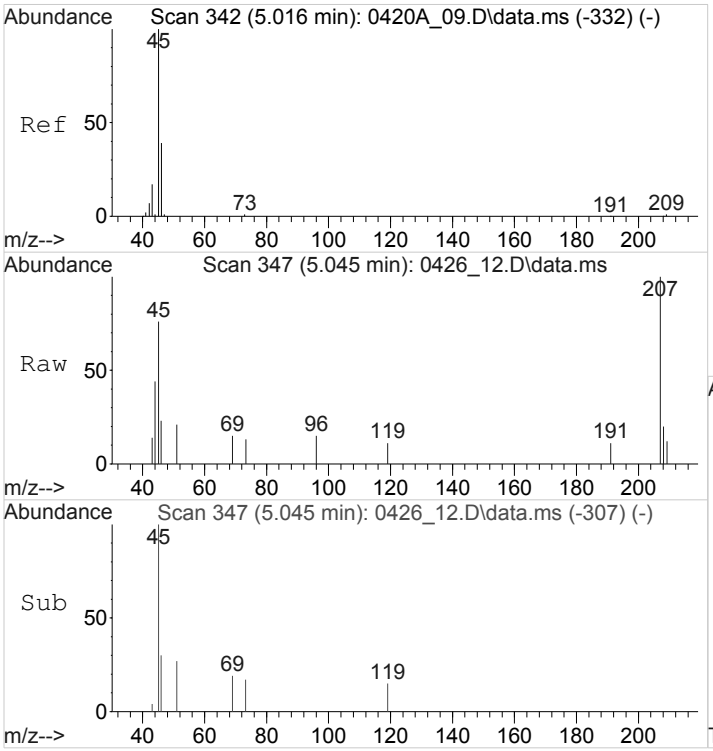


#13
Trichlorofluoromethane
Concen: 1.4209036 ppbv
RT: 4.852 min Scan# 313
Delta R.T. 0.011 min
Lab File: 0426_12.D
Acq: 26 Apr 2018 3:58 pm

Tgt Ion:101 Resp: 19324

Ion	Ratio	Lower	Upper
101	100		
103	65.5	52.6	79.0

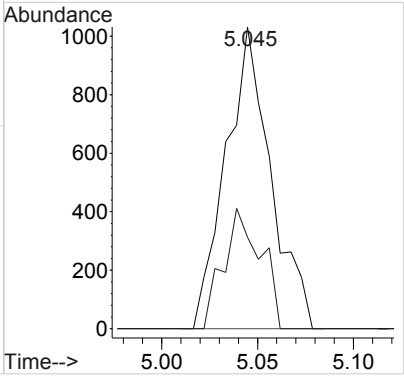


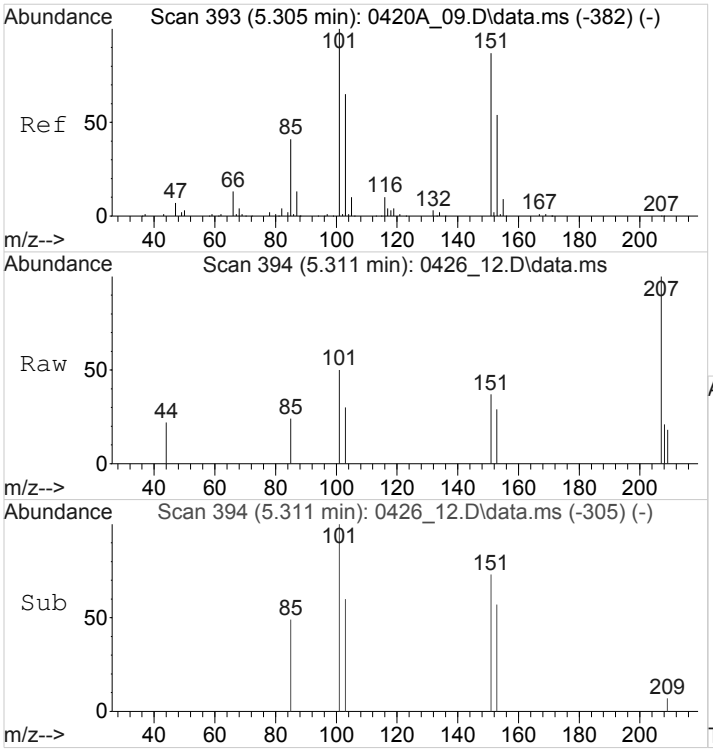


#14
Ethanol
Concen: 0.7099045 ppbv
RT: 5.045 min Scan# 347
Delta R.T. 0.028 min
Lab File: 0426_12.D
Acq: 26 Apr 2018 3:58 pm

Tgt Ion: 45 Resp: 1674

Ion	Ratio	Lower	Upper
45	100		
46	33.2	33.1	49.7

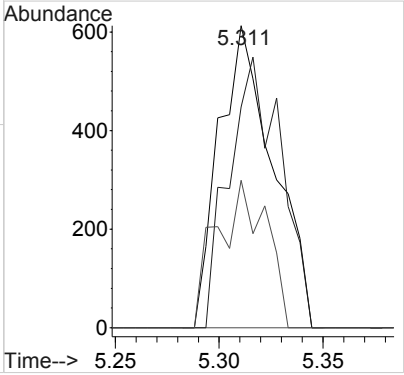


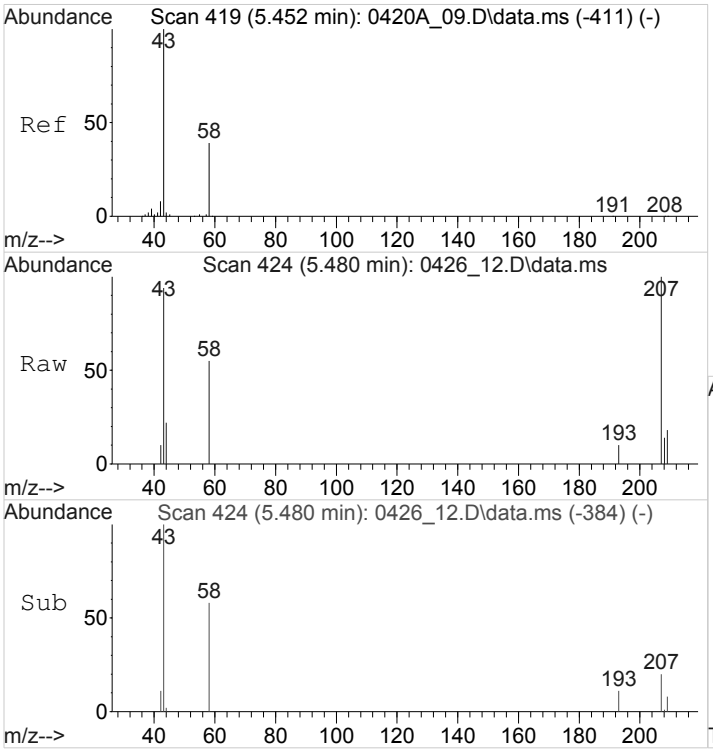


#15
1,1,2-Trichlorotrifluoroethane
Concen: 0.0878083 ppbv
RT: 5.311 min Scan# 394
Delta R.T. 0.006 min
Lab File: 0426_12.D
Acq: 26 Apr 2018 3:58 pm

Tgt Ion:101 Resp: 1109

Ion	Ratio	Lower	Upper
101	100		
151	86.1	67.9	101.9
85	0.0	32.4	48.6#

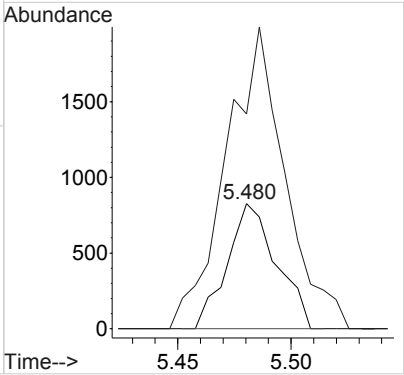


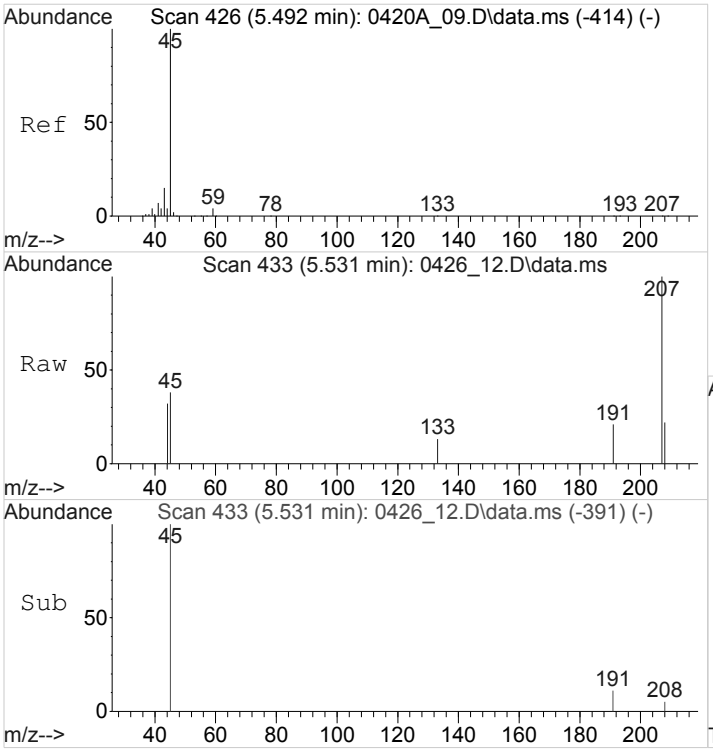


#17
Acetone
Concen: 0.4177007 ppbv
RT: 5.480 min Scan# 424
Delta R.T. 0.028 min
Lab File: 0426_12.D
Acq: 26 Apr 2018 3:58 pm

Tgt Ion: 58 Resp: 1251

Ion	Ratio	Lower	Upper
58	100		
43	288.4	252.6	379.0

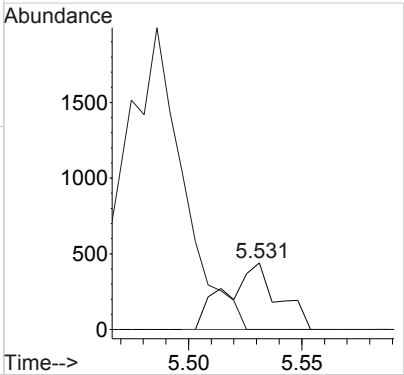


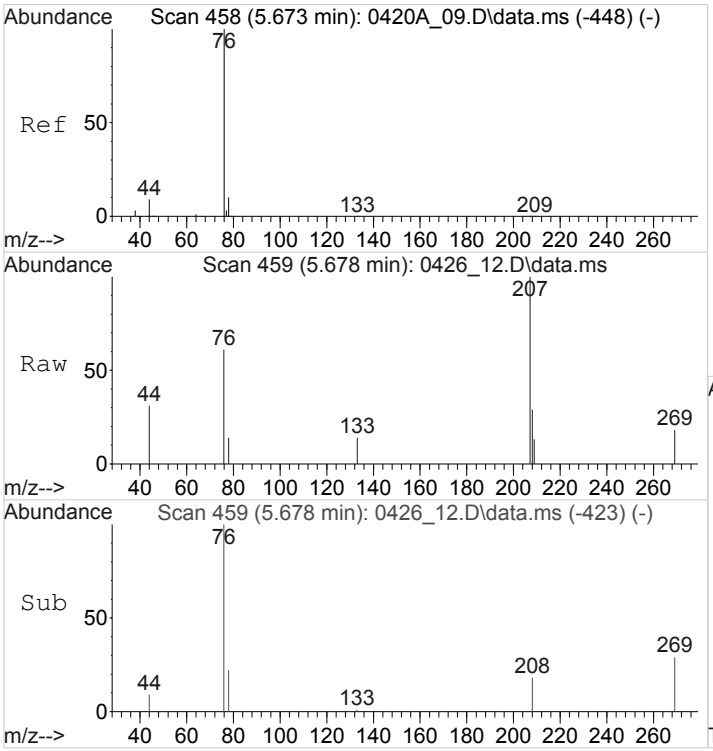


#18
2-Propanol
Concen: 0.0602942 ppbv
RT: 5.531 min Scan# 433
Delta R.T. 0.040 min
Lab File: 0426_12.D
Acq: 26 Apr 2018 3:58 pm

Tgt Ion: 45 Resp: 696

Ion	Ratio	Lower	Upper
45	100		
43	518.4	67.9	101.9#

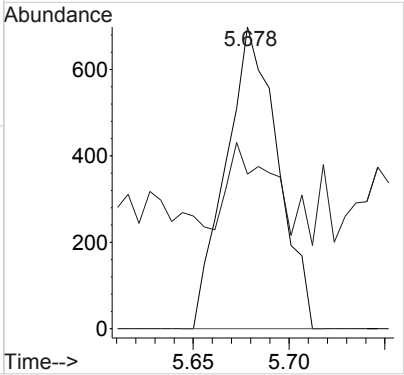


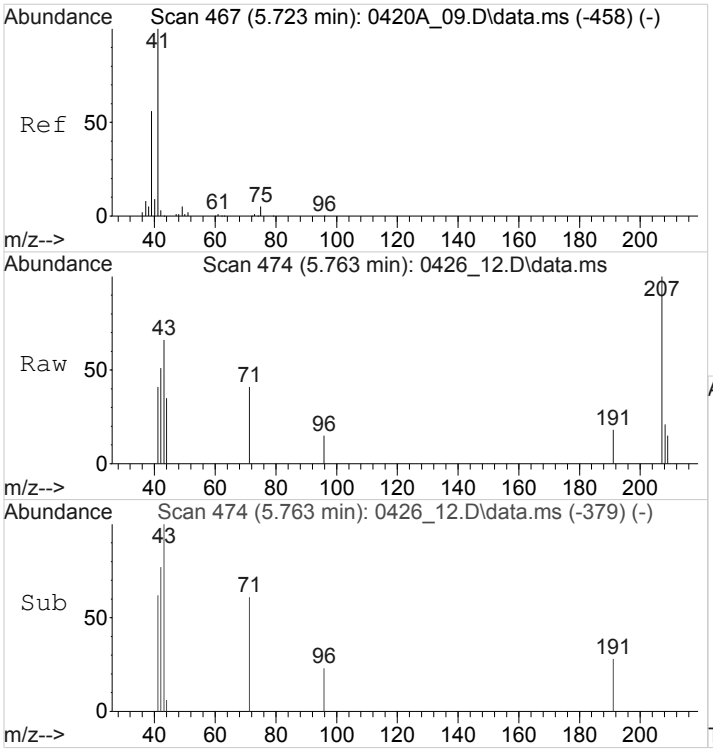


#19
Carbon Disulfide
Concen: 0.0955013 ppbv
RT: 5.678 min Scan# 459
Delta R.T. 0.006 min
Lab File: 0426_12.D
Acq: 26 Apr 2018 3:58 pm

Tgt Ion: 76 Resp: 1314

Ion	Ratio	Lower	Upper
76	100		
44	0.0	7.4	11.2#

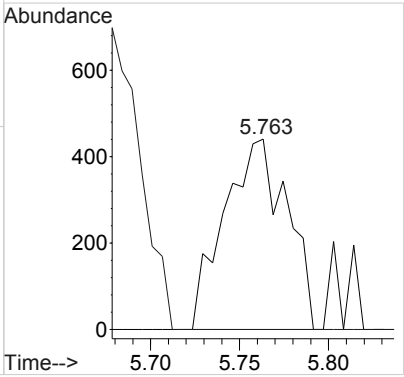


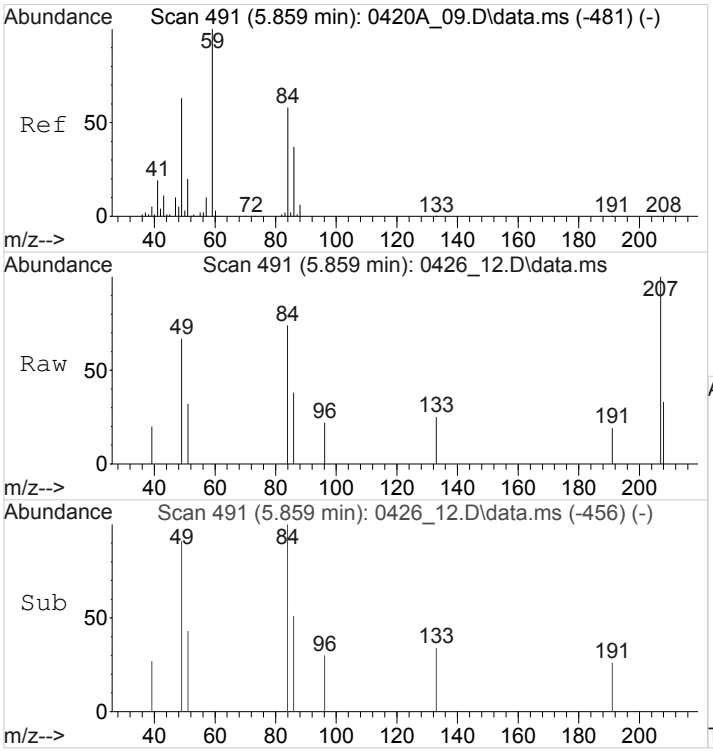


#20
Allyl Chloride
Concen: 0.1420969 ppbv
RT: 5.763 min Scan# 474
Delta R.T. 0.040 min
Lab File: 0426_12.D
Acq: 26 Apr 2018 3:58 pm

Tgt Ion: 41 Resp: 1084

Ion	Ratio	Lower	Upper
41	100		
76	121.2	32.6	48.8#

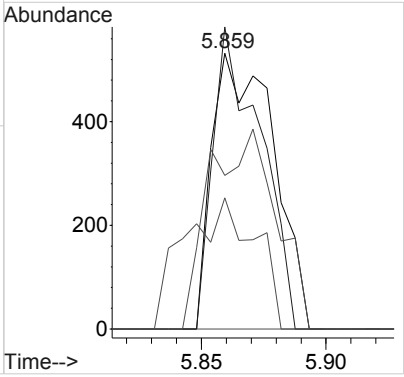


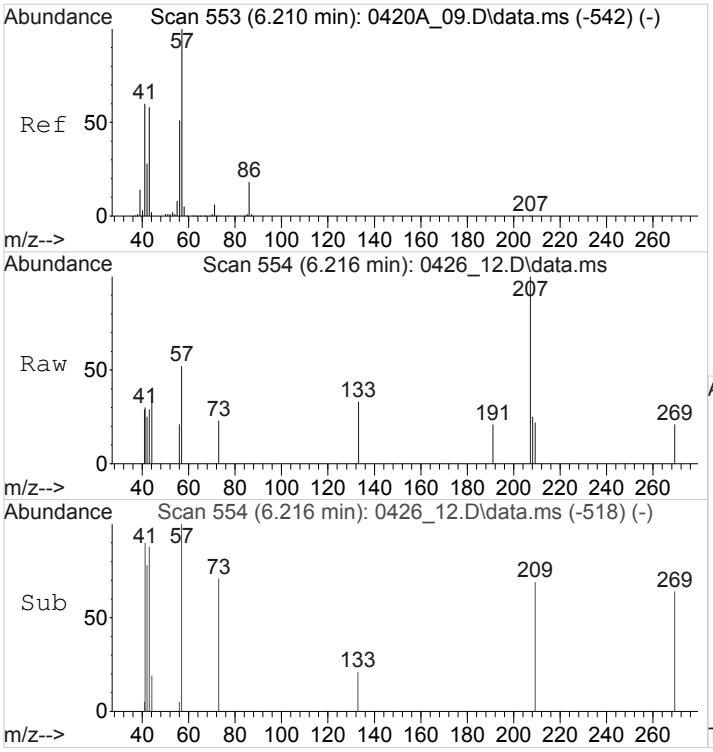


#21
Methylene Chloride
Concen: 0.1351235 ppbv
RT: 5.859 min Scan# 491
Delta R.T. 0.000 min
Lab File: 0426_12.D
Acq: 26 Apr 2018 3:58 pm

Tgt Ion: 49 Resp: 913

Ion	Ratio	Lower	Upper
49	100		
84	85.2	72.1	108.1
86	79.1	46.1	69.1#
51	55.1	25.9	38.9#

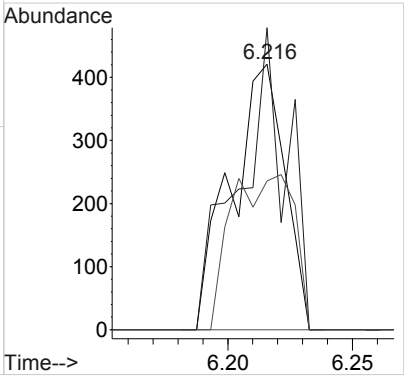


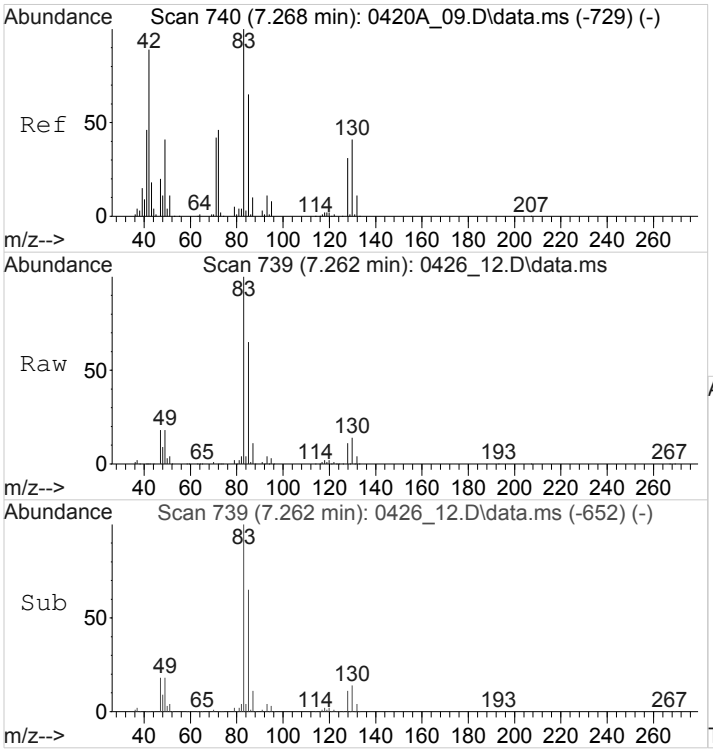


#25
n-Hexane
Concen: 0.0655667 ppbv
RT: 6.216 min Scan# 554
Delta R.T. 0.006 min
Lab File: 0426_12.D
Acq: 26 Apr 2018 3:58 pm

Tgt Ion: 57 Resp: 630

Ion	Ratio	Lower	Upper
57	100		
41	100.3	47.6	71.4#
43	0.0	46.1	69.1#

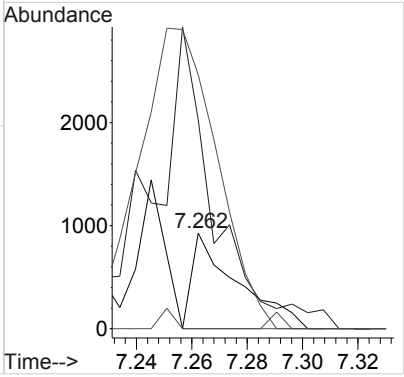


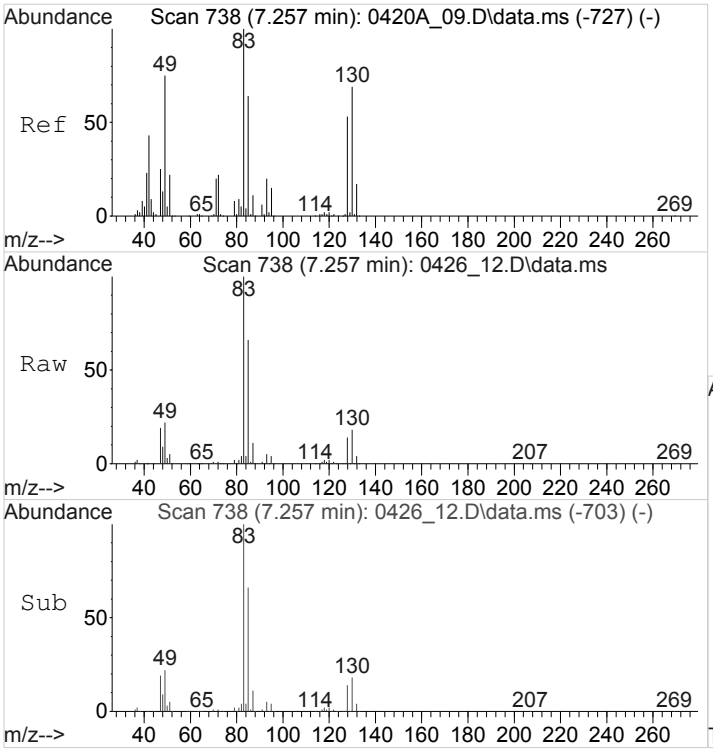


#31
Tetrahydrofuran
Concen: 0.1385911 ppbv
RT: 7.262 min Scan# 739
Delta R.T. -0.006 min
Lab File: 0426_12.D
Acq: 26 Apr 2018 3:58 pm

Tgt Ion: 42 Resp: 1064

Ion	Ratio	Lower	Upper
42	100		
41	430.3	40.8	61.2#
72	542.6	40.7	61.1#
71	0.0	37.4	56.0#

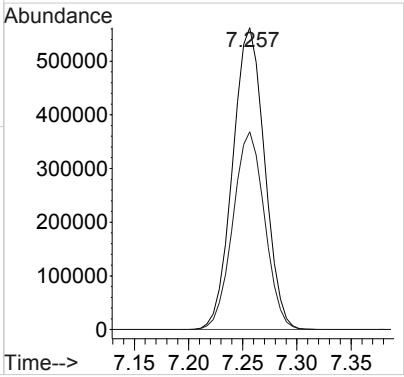


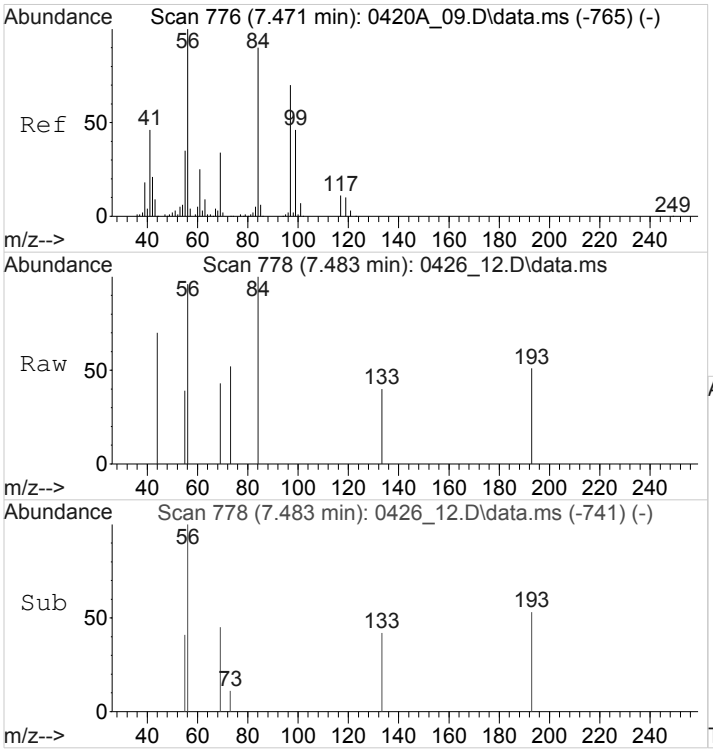


#32
Chloroform
Concen: 82.6049286 ppbv
RT: 7.257 min Scan# 738
Delta R.T. 0.000 min
Lab File: 0426_12.D
Acq: 26 Apr 2018 3:58 pm

Tgt Ion: 83 Resp: 1151566

Ion	Ratio	Lower	Upper
83	100		
85	65.3	51.3	76.9

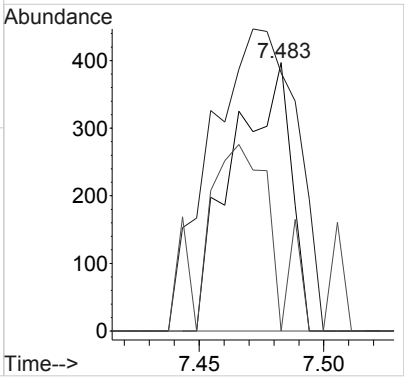


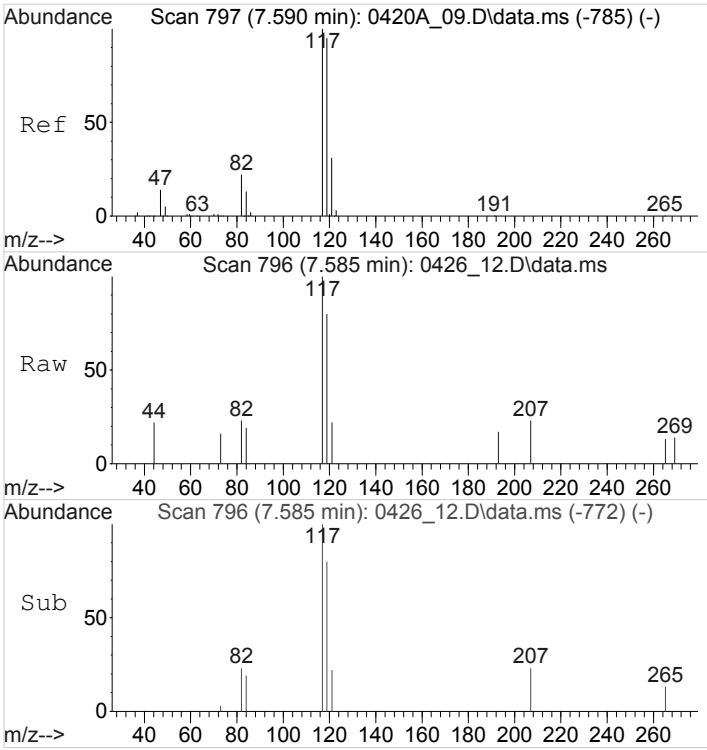


#33
Cyclohexane
Concen: 0.0645040 ppbv
RT: 7.483 min Scan# 778
Delta R.T. 0.011 min
Lab File: 0426_12.D
Acq: 26 Apr 2018 3:58 pm

Tgt Ion: 84 Resp: 641

Ion	Ratio	Lower	Upper
84	100		
56	166.8	87.6	131.4#
41	81.7	40.2	60.2#

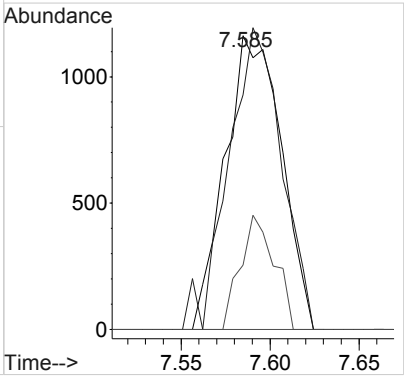


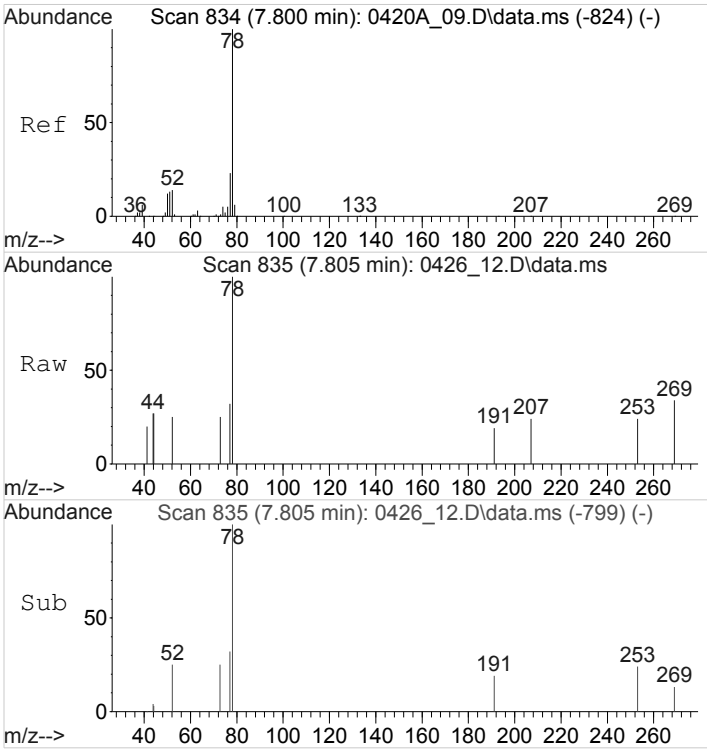


#35
Carbon Tetrachloride
Concen: 0.1769702 ppbv
RT: 7.585 min Scan# 796
Delta R.T. -0.006 min
Lab File: 0426_12.D
Acq: 26 Apr 2018 3:58 pm

Tgt Ion:117 Resp: 2559

Ion	Ratio	Lower	Upper
117	100		
119	96.8	77.1	115.7
121	23.7	24.8	37.2#

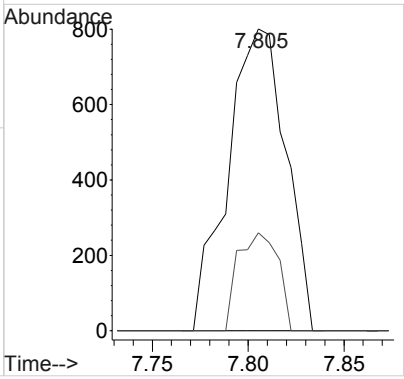


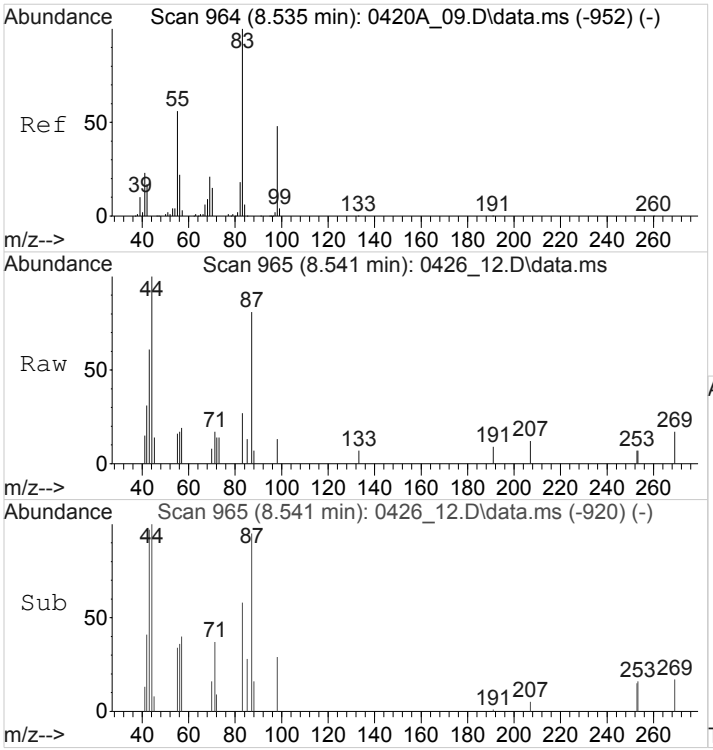


#38
Benzene
Concen: 0.0741388 ppbv
RT: 7.805 min Scan# 835
Delta R.T. 0.006 min
Lab File: 0426_12.D
Acq: 26 Apr 2018 3:58 pm

Tgt Ion: 78 Resp: 1687

Ion	Ratio	Lower	Upper
78	100		
51	0.0	11.3	16.9#
77	0.0	18.6	28.0#

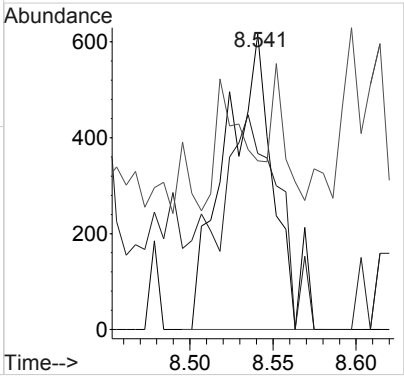


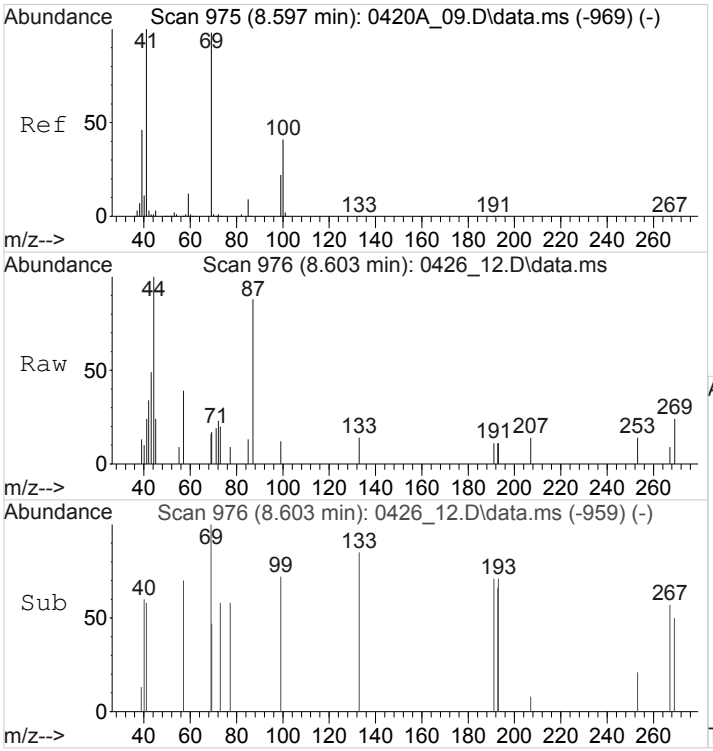


#43
METHYL CYCLOHEXANE
Concen: 0.0931709 ppbv
RT: 8.541 min Scan# 965
Delta R.T. 0.006 min
Lab File: 0426_12.D
Acq: 26 Apr 2018 3:58 pm

Tgt Ion: 83 Resp: 1270

Ion	Ratio	Lower	Upper
83	100		
55	71.1	58.5	87.7
41	0.0	25.8	38.6#

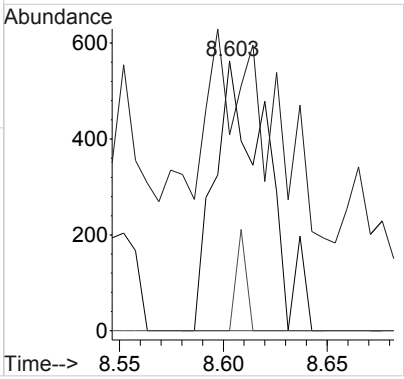


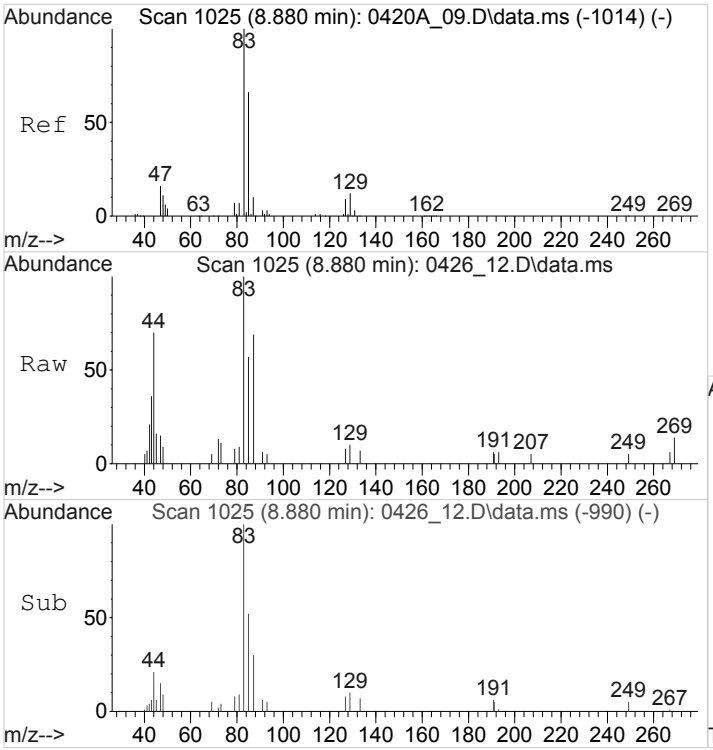


#45
Methyl Methacrylate
Concen: 0.1193477 ppbv
RT: 8.603 min Scan# 976
Delta R.T. 0.006 min
Lab File: 0426_12.D
Acq: 26 Apr 2018 3:58 pm

Tgt Ion: 69 Resp: 975

Ion	Ratio	Lower	Upper
69	100		
41	0.0	72.6	108.8#
100	0.0	32.2	48.2#

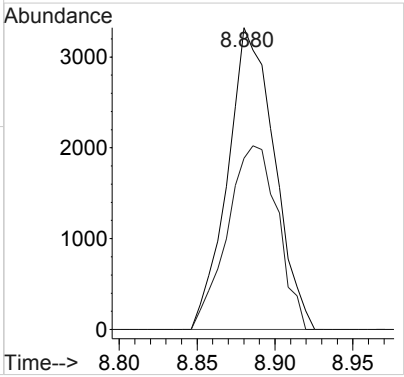


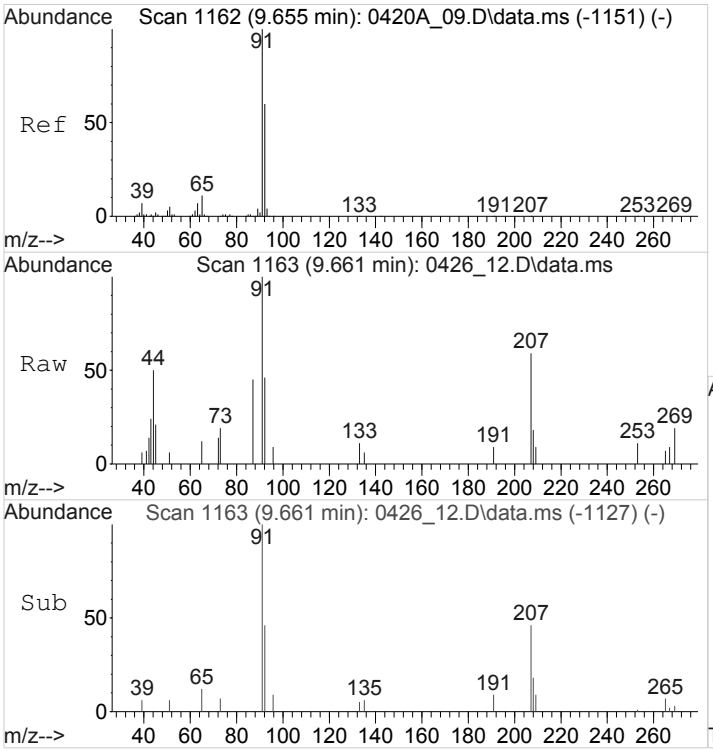


#47
Bromodichloromethane
Concen: 0.4497885 ppbv
RT: 8.880 min Scan# 1025
Delta R.T. 0.000 min
Lab File: 0426_12.D
Acq: 26 Apr 2018 3:58 pm

Tgt Ion: 83 Resp: 6926

Ion	Ratio	Lower	Upper
83	100		
85	65.6	51.8	77.8

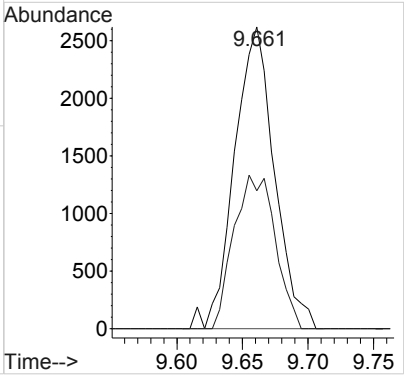


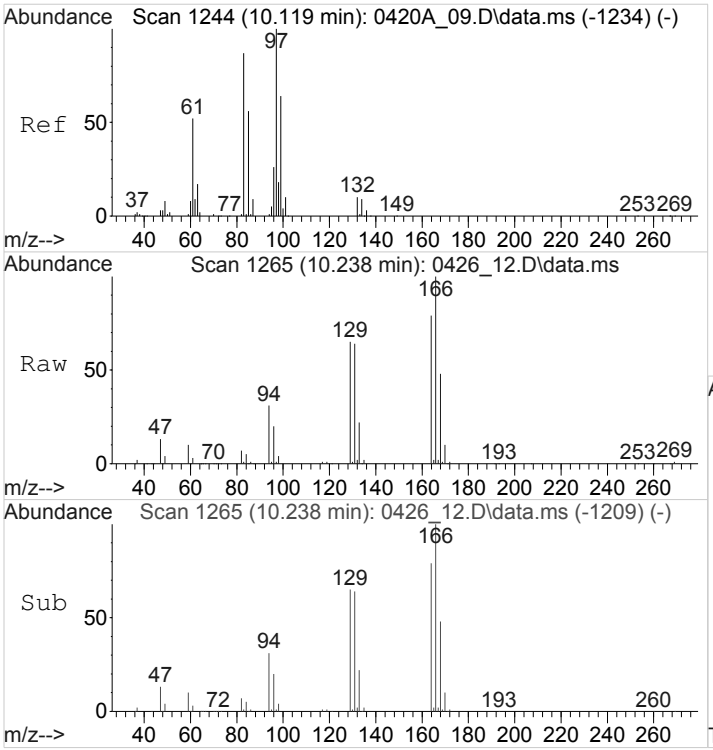


#50
Toluene
Concen: 0.1964392 ppbv
RT: 9.661 min Scan# 1163
Delta R.T. 0.006 min
Lab File: 0426_12.D
Acq: 26 Apr 2018 3:58 pm

Tgt Ion: 91 Resp: 5558

Ion	Ratio	Lower	Upper
91	100		
92	52.6	48.0	72.0

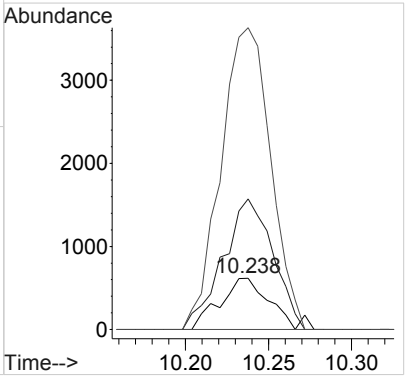


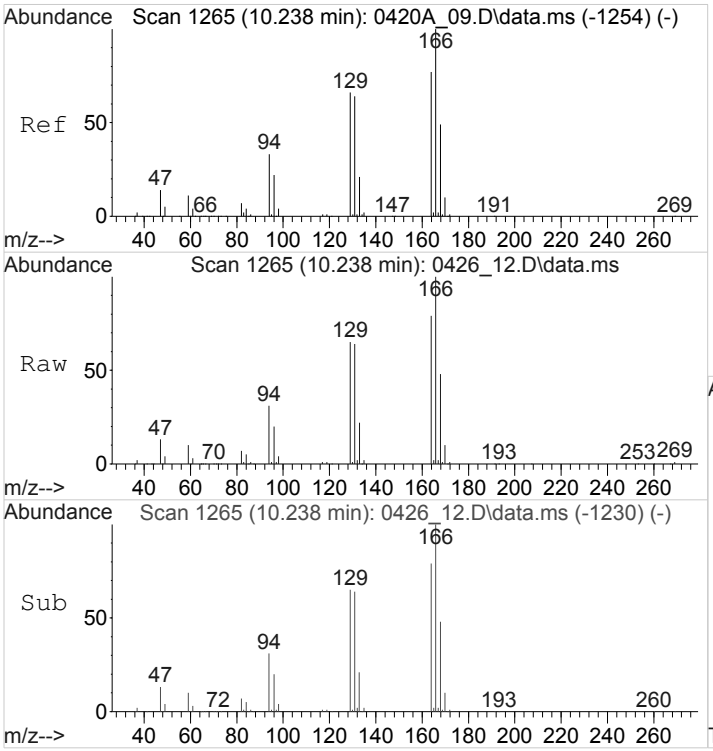


#52
1,1,2-Trichloroethane
Concen: 0.1334888 ppbv
RT: 10.238 min Scan# 1265
Delta R.T. 0.119 min
Lab File: 0426_12.D
Acq: 26 Apr 2018 3:58 pm

Tgt Ion: 97 Resp: 1316

Ion	Ratio	Lower	Upper
97	100		
83	250.9	67.5	101.3#
61	576.7	40.8	61.2#

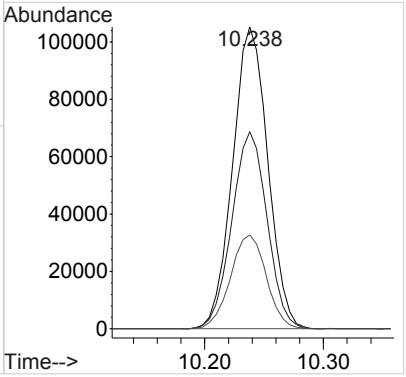


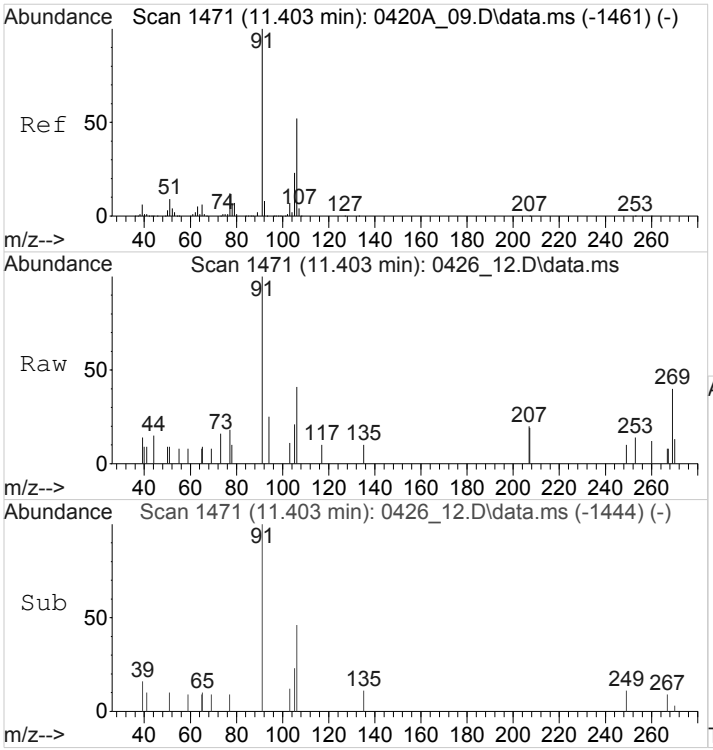


#53
Tetrachloroethene
Concen: 14.2719280 ppbv
RT: 10.238 min Scan# 1265
Delta R.T. 0.000 min
Lab File: 0426_12.D
Acq: 26 Apr 2018 3:58 pm

Tgt Ion:166 Resp: 217343

Ion	Ratio	Lower	Upper
166	100		
129	65.4	53.7	80.5
94	31.7	27.2	40.8

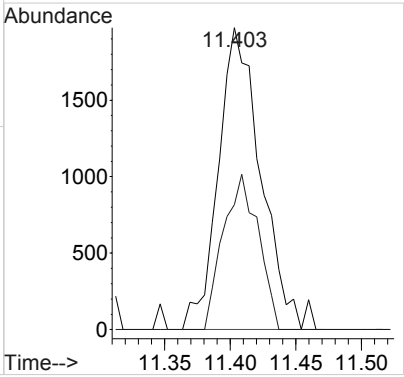


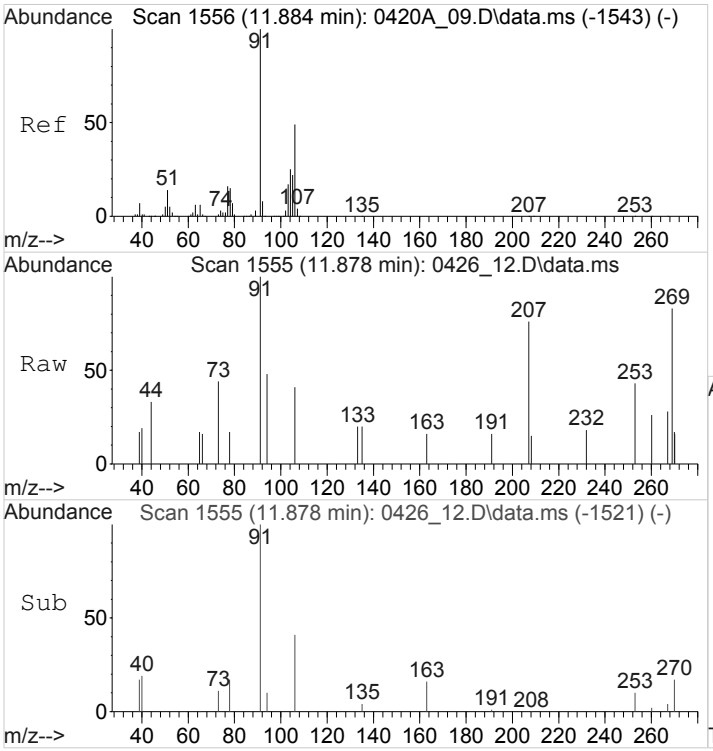


#60
M&P-Xylene
Concen: 0.1560743 ppbv
RT: 11.403 min Scan# 1471
Delta R.T. 0.000 min
Lab File: 0426_12.D
Acq: 26 Apr 2018 3:58 pm

Tgt Ion: 91 Resp: 4478

Ion	Ratio	Lower	Upper
91	100		
106	42.2	41.5	62.3

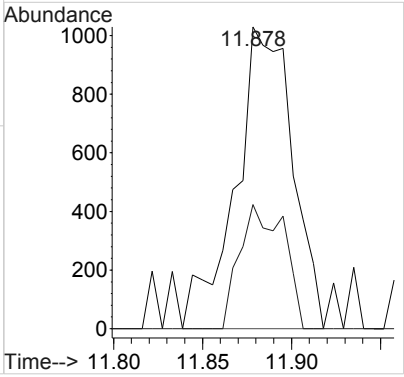


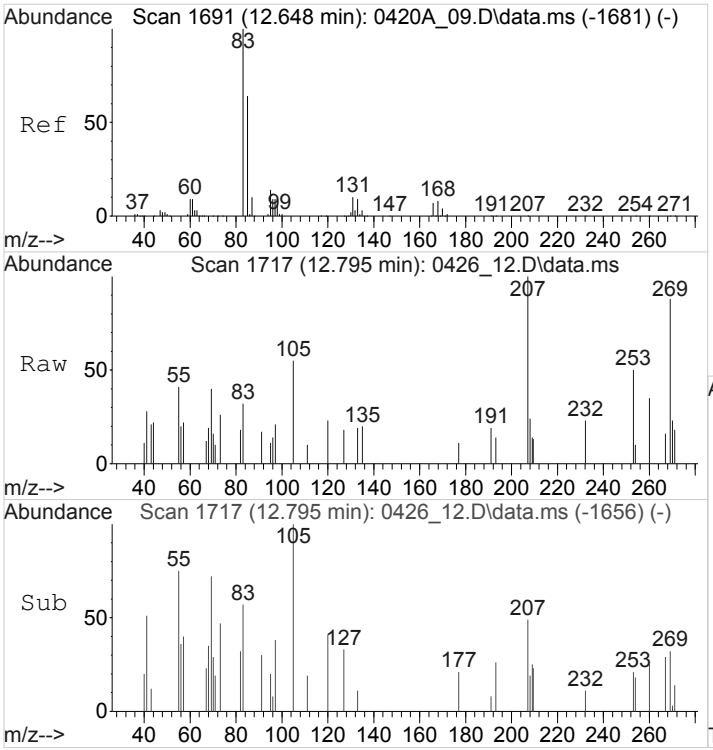


#61
O-Xylene
Concen: 0.0773619 ppbv
RT: 11.878 min Scan# 1555
Delta R.T. -0.006 min
Lab File: 0426_12.D
Acq: 26 Apr 2018 3:58 pm

Tgt Ion: 91 Resp: 2295

Ion	Ratio	Lower	Upper
91	100		
106	32.0	39.1	58.7#

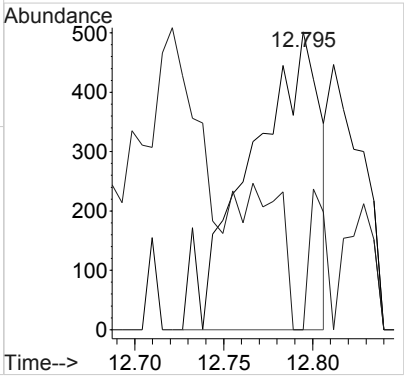


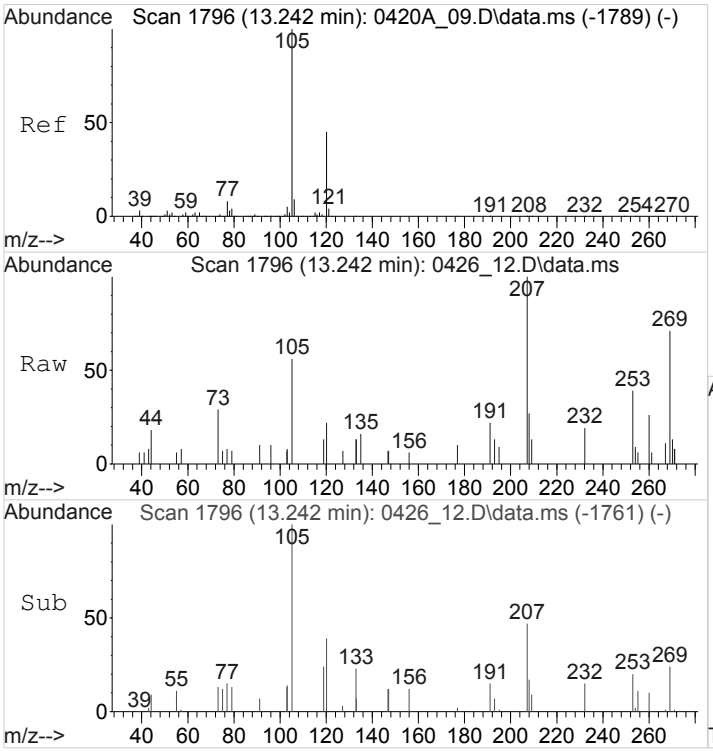


#65
1,1,2,2-Tetrachloroethane
Concen: 0.0627241 ppbv
RT: 12.795 min Scan# 1717
Delta R.T. 0.147 min
Lab File: 0426_12.D
Acq: 26 Apr 2018 3:58 pm

Tgt Ion: 83 Resp: 1374

Ion	Ratio	Lower	Upper
83	100		
85	54.6	51.2	76.8

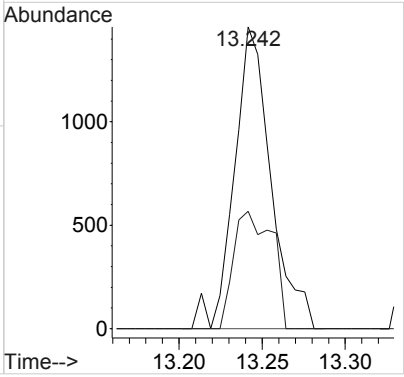


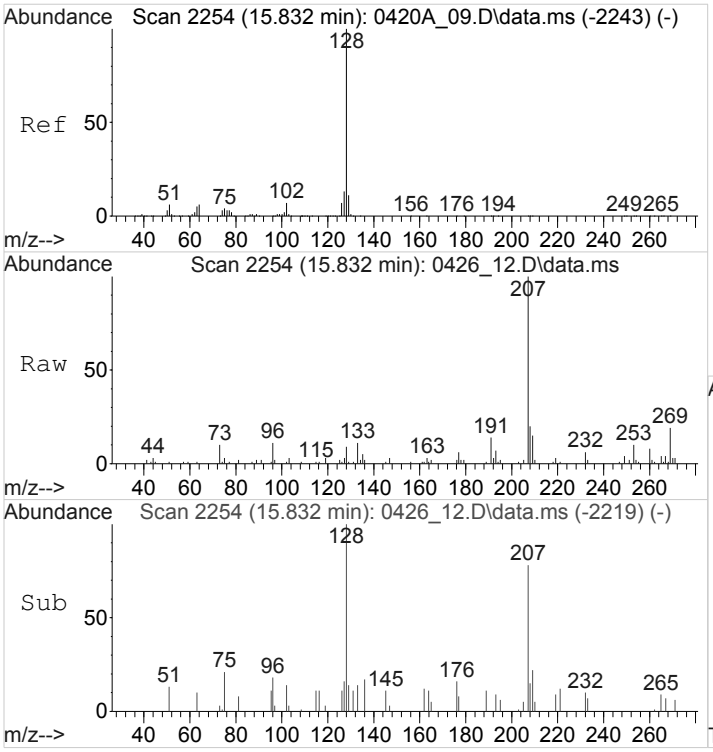


#72
1,2,4-Trimethylbenzene
Concen: 0.0664136 ppbv
RT: 13.242 min Scan# 1796
Delta R.T. 0.000 min
Lab File: 0426_12.D
Acq: 26 Apr 2018 3:58 pm

Tgt Ion:105 Resp: 2249

Ion	Ratio	Lower	Upper
105	100		
120	41.0	38.8	58.2

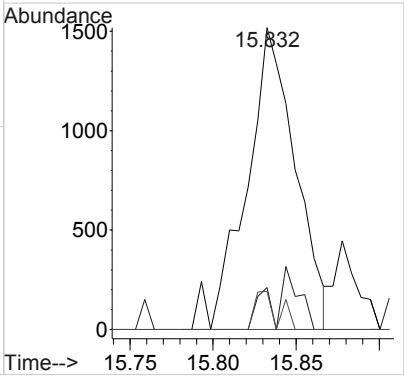


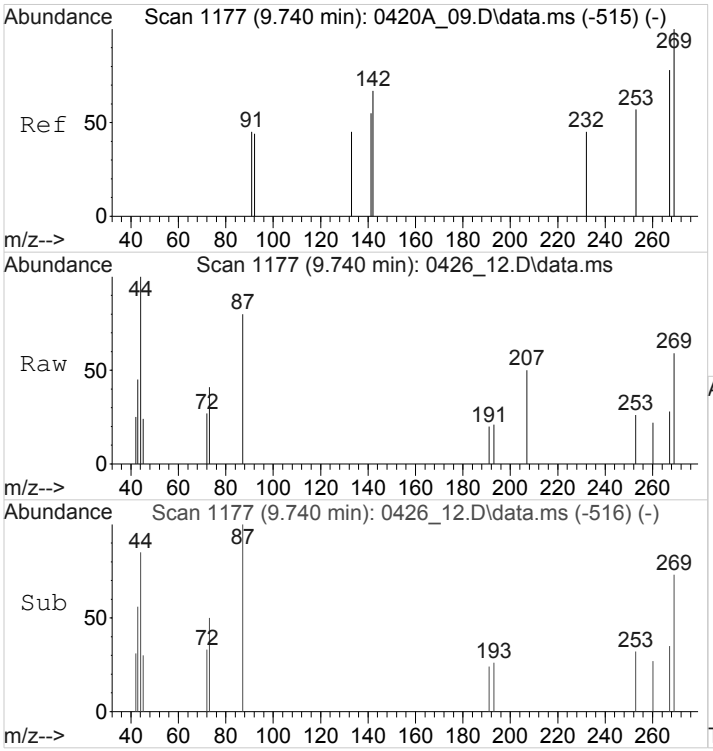


#83
Naphthalene
Concen: 0.0618463 ppbv
RT: 15.832 min Scan# 2254
Delta R.T. 0.000 min
Lab File: 0426_12.D
Acq: 26 Apr 2018 3:58 pm

Tgt Ion:128 Resp: 3133

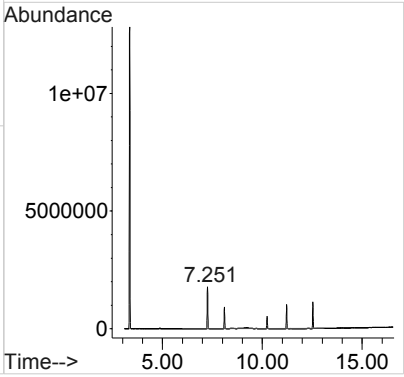
Ion	Ratio	Lower	Upper
128	100		
102	0.0	5.9	8.9#
51	0.0	4.6	7.0#





#84
TPH (GC/MS) Low Fraction
Concen: 35.9218314 ppbv m
RT: 9.740 min Scan# 1177
Delta R.T. 0.000 min
Lab File: 0426_12.D
Acq: 26 Apr 2018 3:58 pm

Tgt Ion:TIC Resp: 1920385



1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS-2

ESC Sample ID:	L988471-02	**SDG:**	L988471
Client Sample ID:	SS-2	**Collected Date/Time:**	04/23/18 10:53
Lab File ID:	0427_06	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS2	**Preparation Date/Time:**	04/27/18 12:36
Analytical Batch:	WG1103956	**Analysis Date/Time:**	04/27/18 12:36
Dilution Factor:	20	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	20 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	**CAS**	**RT**	**Result**	**Qualifier**	**MDL**	**RDL**
			ppbv		*ppbv*	*ppbv*
Tetrachloroethylene	127-18-4	12.21	49.0		0.994	4.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_06.D
Acq On : 27 Apr 2018 12:36 pm
Operator : 564
Sample : L988471-02 20x WG1103956
Misc :
ALS Vial : 6 Sample Multiplier: 20
InstName : AIRMS2

Quant Time: Apr 28 07:50:07 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:08:22 2018
Response via : Initial Calibration

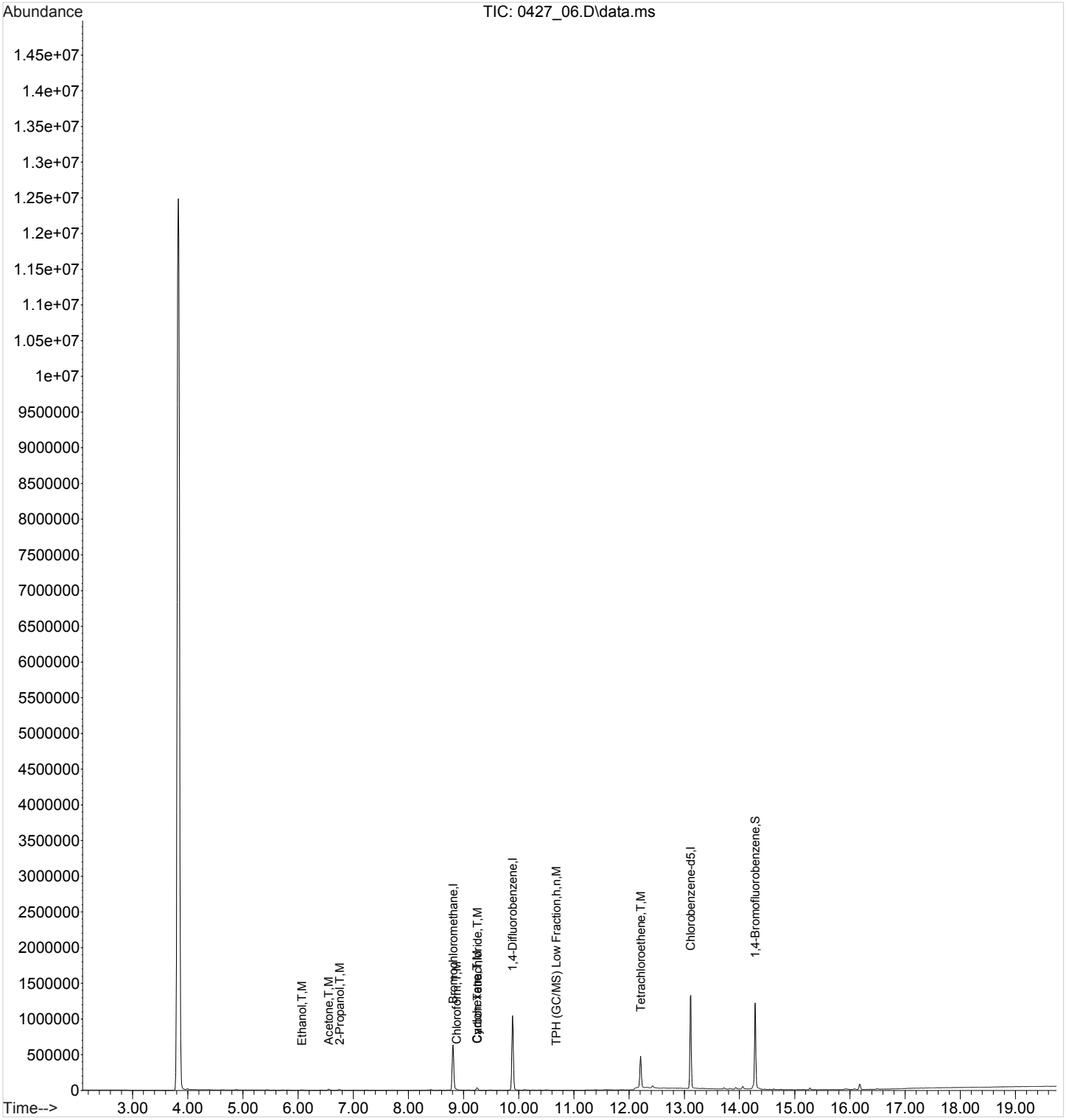
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.810	130	1774367	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	9.891	114	7585811	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	13.116	117	6437070	4.0000000	ppbv	# 0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	14.285	95	3796799	3.7330572	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 93.33%			
Target Compounds						Qvalue
14) Ethanol	6.068	45	80096	10.7263529	ppbv	99
17) Acetone	6.558	43	247633	6.9393368	ppbv	97
18) 2-Propanol	6.751	45	179766	3.7350394	ppbv #	59
22) TERT-BUTYL ALCOHOL	7.240	59	64089	1.1878419	ppbv #	51
32) Chloroform	8.869	83	75108	2.0059780	ppbv	99
33) Cyclohexane	9.246	84	40537	1.5370841	ppbv #	1
35) Carbon Tetrachloride	9.248	117	210251	6.8471304	ppbv	98
50) Toluene	11.589	91	46224	0.6723035	ppbv	98
53) Tetrachloroethene	12.209	166	1273116	48.9680172	ppbv	97
54) Methyl Butyl Ketone	12.318	43	68380	0.9857124	ppbv #	94
84) TPH (GC/MS) Low Fraction	10.675	TIC	42784602m	214.8549533	ppbv	

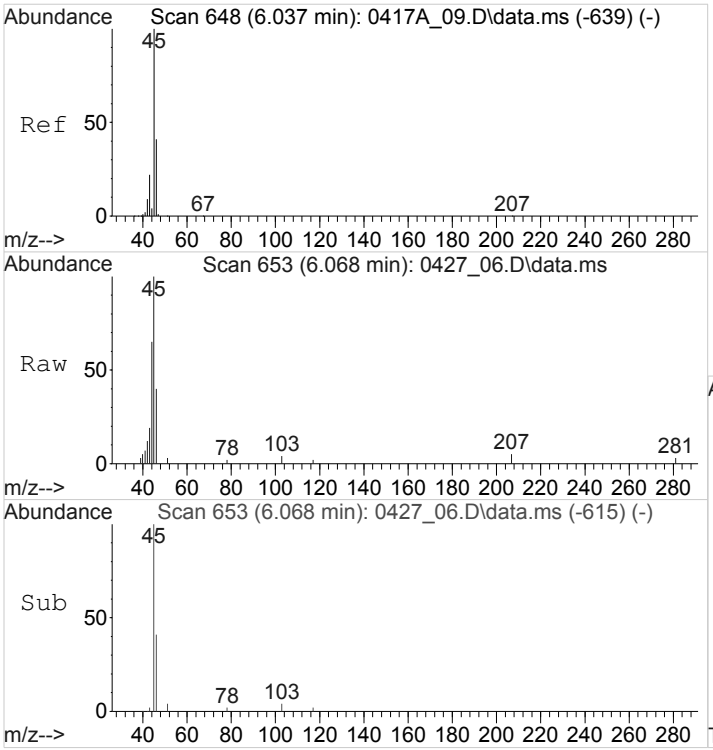
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_06.D
Acq On : 27 Apr 2018 12:36 pm
Operator : 564
Sample : L988471-02 20x WG1103956
Misc :
ALS Vial : 6 Sample Multiplier: 20
InstName : AIRMS2

Quant Time: Apr 28 07:50:07 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:08:22 2018
Response via : Initial Calibration

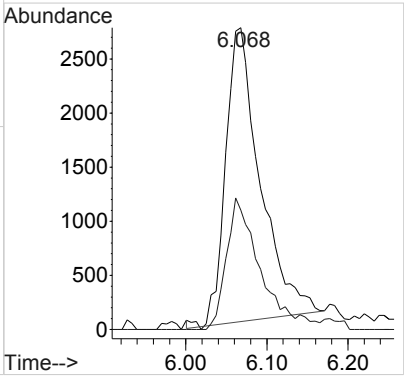


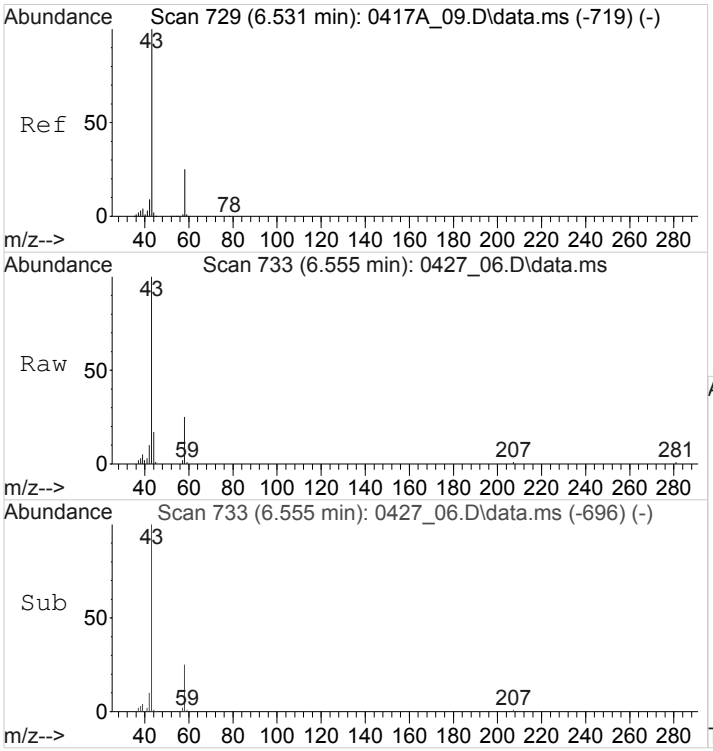


#14
Ethanol
Concen: 10.7263529 ppbv
RT: 6.068 min Scan# 653
Delta R.T. 0.030 min
Lab File: 0427_06.D
Acq: 27 Apr 2018 12:36 pm

Tgt Ion: 45 Resp: 80096

Ion	Ratio	Lower	Upper
45	100		
46	40.2	31.5	47.3

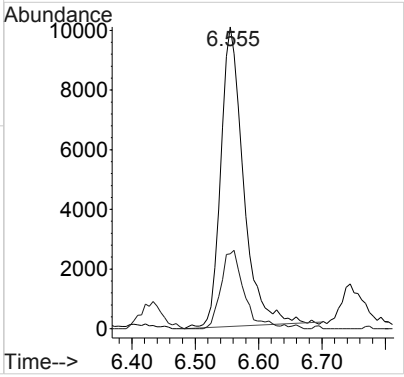


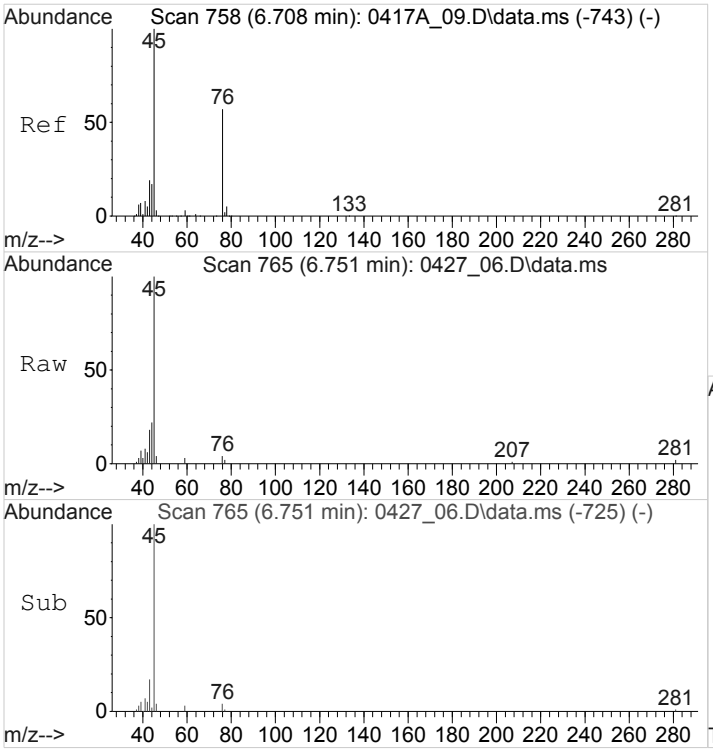


#17
Acetone
Concen: 6.9393368 ppbv
RT: 6.558 min Scan# 733
Delta R.T. 0.028 min
Lab File: 0427_06.D
Acq: 27 Apr 2018 12:36 pm

Tgt Ion: 43 Resp: 247633

Ion	Ratio	Lower	Upper
43	100		
58	27.0	20.6	30.8

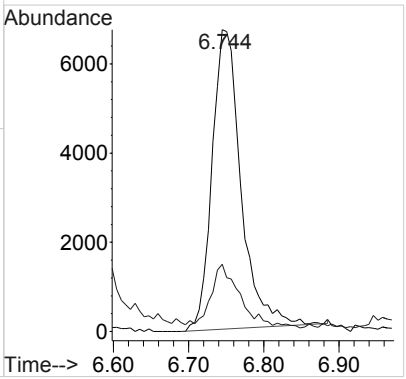


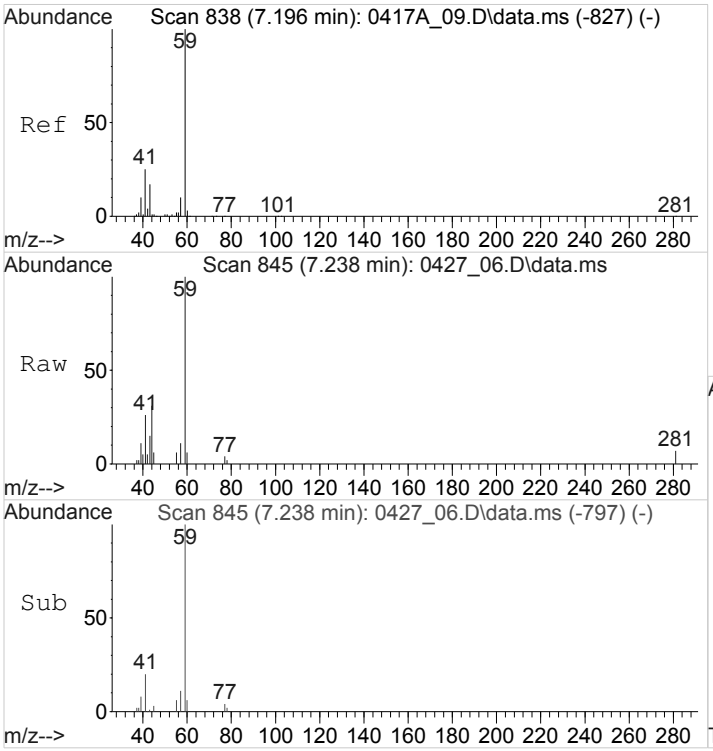


#18
2-Propanol
Concen: 3.7350394 ppbv
RT: 6.751 min Scan# 765
Delta R.T. 0.042 min
Lab File: 0427_06.D
Acq: 27 Apr 2018 12:36 pm

Tgt Ion: 45 Resp: 179766

Ion	Ratio	Lower	Upper
45	100		
43	0.0	14.4	21.6#

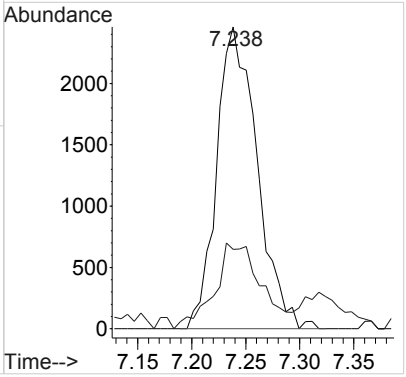


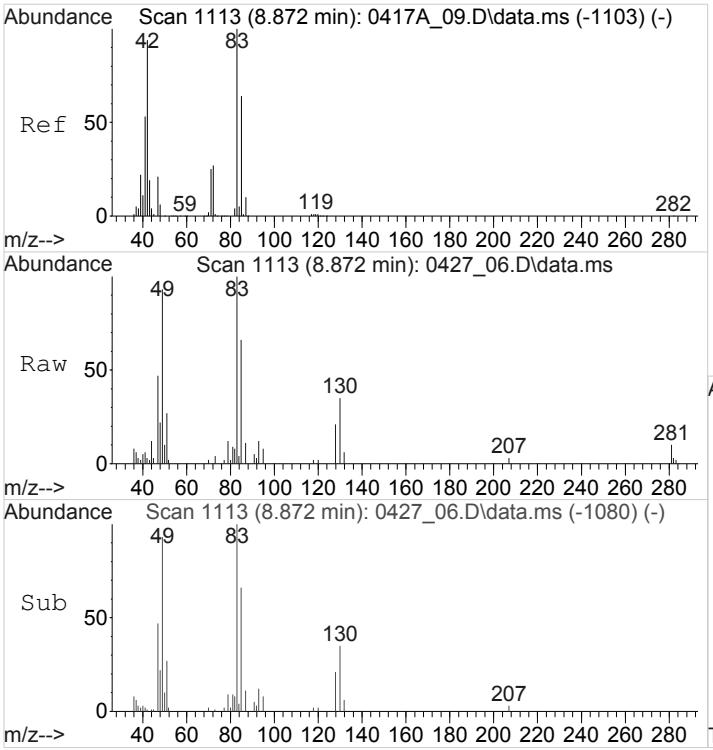


#22
TERT-BUTYL ALCOHOL
Concen: 1.1878419 ppbv
RT: 7.240 min Scan# 845
Delta R.T. 0.045 min
Lab File: 0427_06.D
Acq: 27 Apr 2018 12:36 pm

Tgt Ion: 59 Resp: 64089

Ion	Ratio	Lower	Upper
59	100		
41	0.0	19.8	29.6#

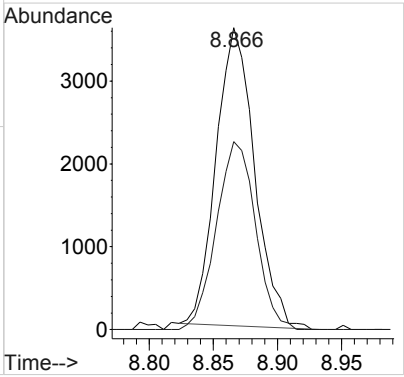


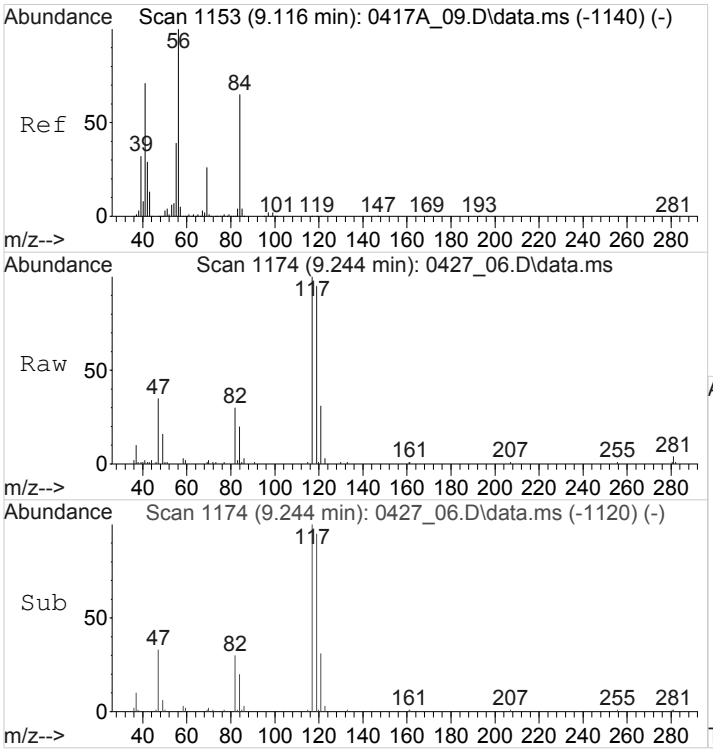


#32
Chloroform
Concen: 2.0059780 ppbv
RT: 8.869 min Scan# 1113
Delta R.T. -0.000 min
Lab File: 0427_06.D
Acq: 27 Apr 2018 12:36 pm

Tgt Ion: 83 Resp: 75108

Ion	Ratio	Lower	Upper
83	100		
85	64.0	50.4	75.6

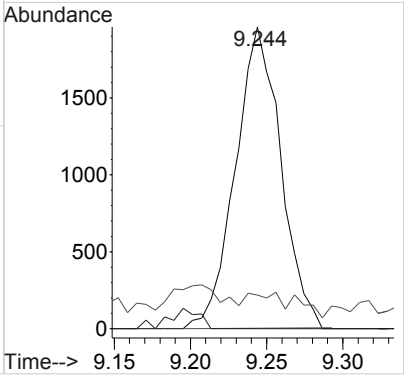


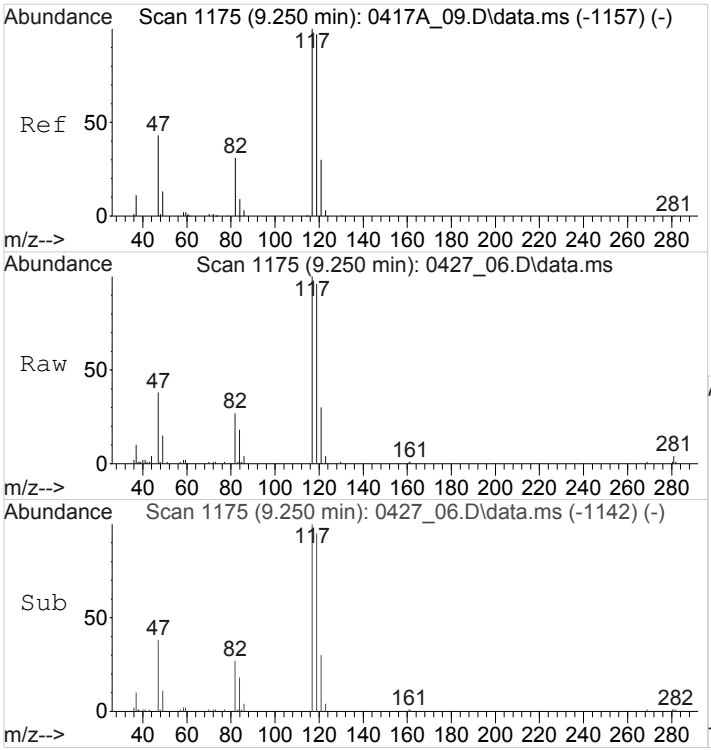


#33
Cyclohexane
Concen: 1.5370841 ppbv
RT: 9.246 min Scan# 1174
Delta R.T. 0.132 min
Lab File: 0427_06.D
Acq: 27 Apr 2018 12:36 pm

Tgt Ion: 84 Resp: 40537

Ion	Ratio	Lower	Upper
84	100		
56	0.0	126.5	189.7#
41	0.0	90.2	135.2#

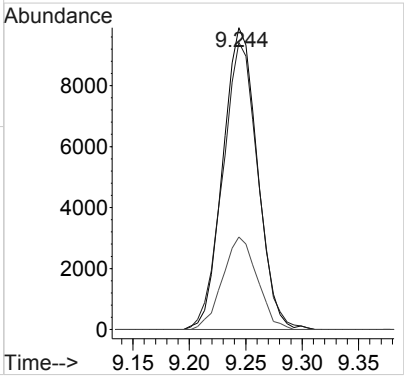


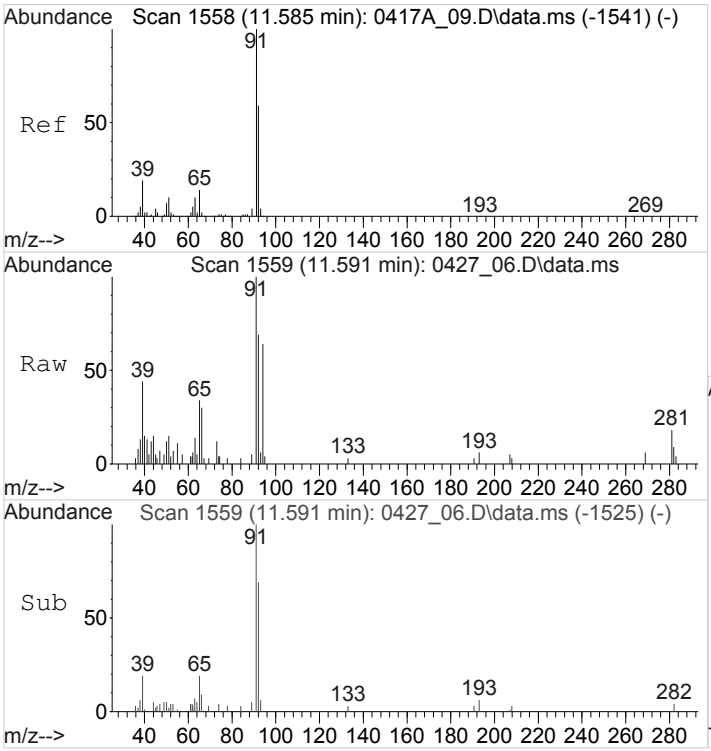


#35
Carbon Tetrachloride
Concen: 6.8471304 ppbv
RT: 9.248 min Scan# 1175
Delta R.T. -0.001 min
Lab File: 0427_06.D
Acq: 27 Apr 2018 12:36 pm

Tgt Ion:117 Resp: 210251

Ion	Ratio	Lower	Upper
117	100		
119	96.9	75.8	113.8
121	30.8	23.7	35.5

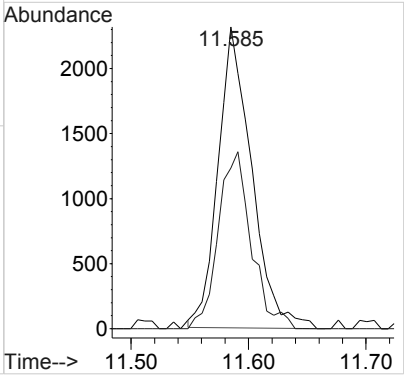


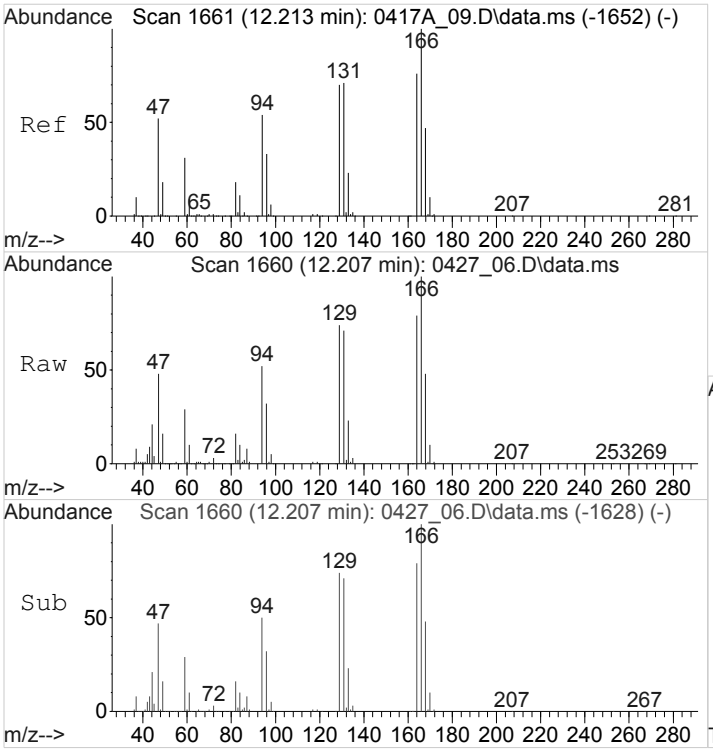


#50
Toluene
Concen: 0.6723035 ppbv
RT: 11.589 min Scan# 1559
Delta R.T. 0.004 min
Lab File: 0427_06.D
Acq: 27 Apr 2018 12:36 pm

Tgt Ion: 91 Resp: 46224

Ion	Ratio	Lower	Upper
91	100		
92	57.7	47.5	71.3

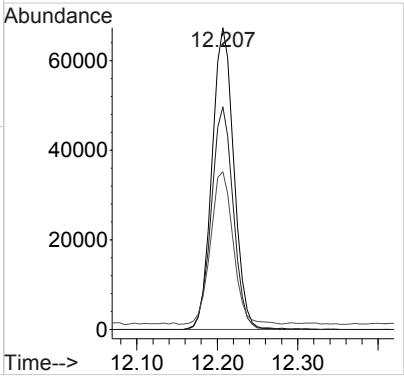


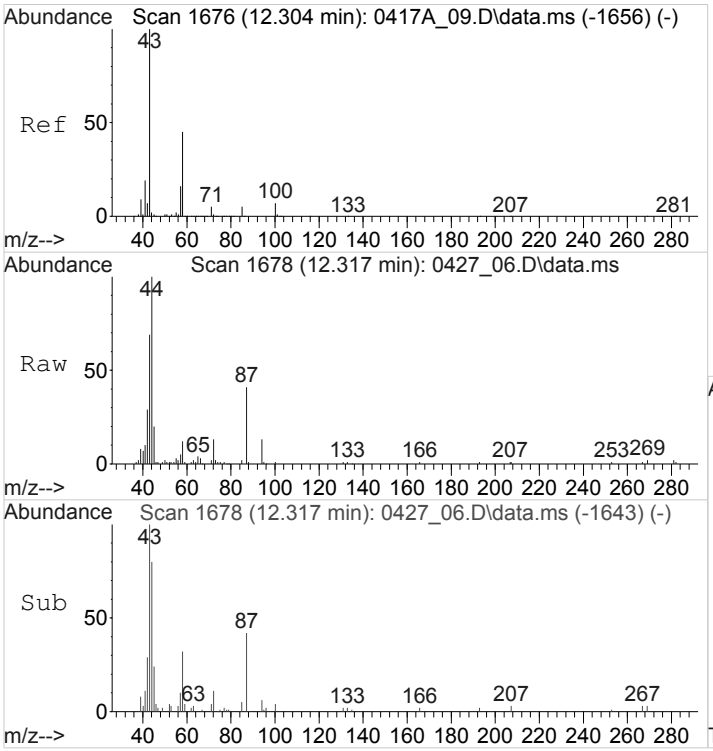


#53
Tetrachloroethene
Concen: 48.9680172 ppbv
RT: 12.209 min Scan# 1660
Delta R.T. -0.001 min
Lab File: 0427_06.D
Acq: 27 Apr 2018 12:36 pm

Tgt Ion:166 Resp: 1273116

Ion	Ratio	Lower	Upper
166	100		
129	73.5	59.6	89.4
94	51.8	45.2	67.8

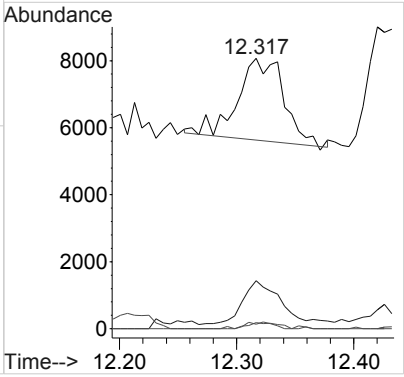


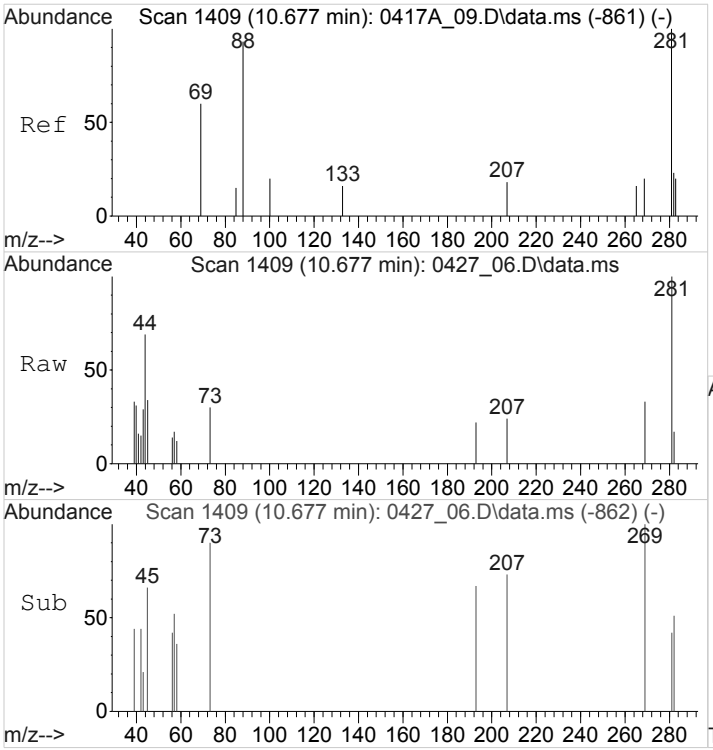


#54
Methyl Butyl Ketone
Concen: 0.9857124 ppbv
RT: 12.318 min Scan# 1678
Delta R.T. 0.016 min
Lab File: 0427_06.D
Acq: 27 Apr 2018 12:36 pm

Tgt Ion: 43 Resp: 68380

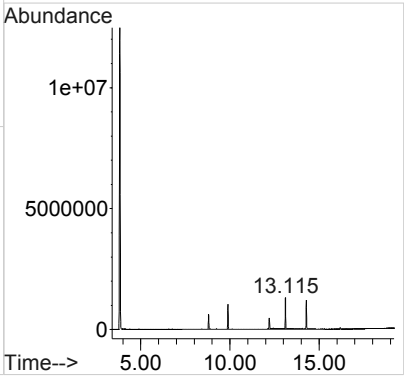
Ion	Ratio	Lower	Upper
43	100		
58	41.4	35.0	52.4
85	0.0	3.9	5.9#
100	0.0	5.3	7.9#





#84
TPH (GC/MS) Low Fraction
Concen: 214.8549533 ppbv m
RT: 10.675 min Scan# 1409
Delta R.T. 0.000 min
Lab File: 0427_06.D
Acq: 27 Apr 2018 12:36 pm

Tgt Ion:TIC Resp:42784602



1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS-2

ESC Sample ID:	L988471-02	**SDG:**	L988471
Client Sample ID:	SS-2	**Collected Date/Time:**	04/23/18 10:53
Lab File ID:	0426_13	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/26/18 16:41
Analytical Batch:	WG1103323	**Analysis Date/Time:**	04/26/18 16:41
Dilution Factor:	1	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	RT	Result	Qualifier	MDL	RDL
			ppbv		*ppbv*	*ppbv*
Acetone	67-64-1	5.46	6.70		0.0569	1.25
Allyl chloride	107-05-1	0	ND		0.0546	0.200
Benzene	71-43-2	7.81	ND		0.0460	0.200
Benzyl Chloride	100-44-7	0	ND		0.0598	0.200
Bromodichloromethane	75-27-4	0	ND		0.0436	0.200
Bromoform	75-25-2	0	ND		0.0786	0.600
Bromomethane	74-83-9	0	ND		0.0609	0.200
1,3-Butadiene	106-99-0	4.11	ND		0.0563	2.00
Carbon disulfide	75-15-0	5.68	0.500		0.0544	0.200
Carbon tetrachloride	56-23-5	7.59	7.82		0.0585	0.200
Chlorobenzene	108-90-7	0	ND		0.0601	0.200
Chloroethane	75-00-3	0	ND		0.0489	0.200
Chloroform	67-66-3	7.26	2.30		0.0574	0.200
Chloromethane	74-87-3	3.92	ND		0.0544	0.200
2-Chlorotoluene	95-49-8	0	ND		0.0605	0.200
Cyclohexane	110-82-7	7.47	ND		0.0534	0.200
Dibromochloromethane	124-48-1	0	ND		0.0494	0.200
1,2-Dibromoethane	106-93-4	0	ND		0.0185	0.200
1,2-Dichlorobenzene	95-50-1	0	ND		0.0603	0.200
1,3-Dichlorobenzene	541-73-1	0	ND		0.0597	0.200
1,4-Dichlorobenzene	106-46-7	0	ND		0.0557	0.200
1,2-Dichloroethane	107-06-2	0	ND		0.0616	0.200
1,1-Dichloroethane	75-34-3	0	ND		0.0514	0.200
1,1-Dichloroethene	75-35-4	0	ND		0.0490	0.200
cis-1,2-Dichloroethene	156-59-2	0	ND		0.0389	0.200
trans-1,2-Dichloroethene	156-60-5	0	ND		0.0464	0.200
1,2-Dichloropropane	78-87-5	0	ND		0.0599	0.200
cis-1,3-Dichloropropene	10061-01-5	0	ND		0.0588	0.200
trans-1,3-Dichloropropene	10061-02-6	0	ND		0.0435	0.200
1,4-Dioxane	123-91-1	0	ND		0.0554	0.200
Ethanol	64-17-5	5.02	8.36		0.0832	0.630
Ethylbenzene	100-41-4	11.28	ND		0.0506	0.200
4-Ethyltoluene	622-96-8	12.79	ND		0.0666	0.200
Trichlorofluoromethane	75-69-4	4.85	0.655		0.0673	0.200
Dichlorodifluoromethane	75-71-8	3.62	0.347		0.0601	0.200
1,1,2-Trichlorotrifluoroethane	76-13-1	5.31	ND		0.0687	0.200
1,2-Dichlorotetrafluoroethane	76-14-2	0	ND		0.0458	0.200
Heptane	142-82-5	7.83	ND		0.0626	0.200
Hexachloro-1,3-butadiene	87-68-3	0	ND		0.0656	0.630
n-Hexane	110-54-3	6.21	ND		0.0457	0.200
Isopropylbenzene	98-82-8	0	ND		0.0563	0.200
Methylene Chloride	75-09-2	0	ND		0.0465	0.200
Methyl Butyl Ketone	591-78-6	10.29	1.33		0.0682	1.25

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS-2

ESC Sample ID:	L988471-02	**SDG:**	L988471
Client Sample ID:	SS-2	**Collected Date/Time:**	04/23/18 10:53
Lab File ID:	0426_13	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/26/18 16:41
Analytical Batch:	WG1103323	**Analysis Date/Time:**	04/26/18 16:41
Dilution Factor:	1	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	**CAS**	**RT**	**Result**	**Qualifier**	**MDL**	**RDL**
			ppbv		*ppbv*	*ppbv*
2-Butanone (MEK)	78-93-3	6.98	ND		0.0493	1.25
4-Methyl-2-pentanone (MIBK)	108-10-1	9.42	ND		0.0650	1.25
Methyl methacrylate	80-62-6	0	ND		0.0773	0.200
MTBE	1634-04-4	0	ND		0.0505	0.200
Naphthalene	91-20-3	15.84	ND		0.154	0.630
2-Propanol	67-63-0	5.50	3.34		0.0882	1.25
Propene	115-07-1	3.57	0.405		0.0932	0.400
Styrene	100-42-5	0	ND		0.0465	0.200
1,1,2,2-Tetrachloroethane	79-34-5	0	ND		0.0576	0.200
Tetrahydrofuran	109-99-9	7.27	ND		0.0508	0.200
Toluene	108-88-3	9.66	0.627		0.0499	0.200
1,2,4-Trichlorobenzene	120-82-1	0	ND		0.148	0.630
1,1,1-Trichloroethane	71-55-6	7.46	0.520		0.0665	0.200
1,1,2-Trichloroethane	79-00-5	0	ND		0.0287	0.200
Trichloroethylene	79-01-6	0	ND		0.0545	0.200
1,2,4-Trimethylbenzene	95-63-6	13.24	ND		0.0483	0.200
1,3,5-Trimethylbenzene	108-67-8	0	ND		0.0631	0.200
2,2,4-Trimethylpentane	540-84-1	0	ND		0.0456	0.200
Vinyl chloride	75-01-4	0	ND		0.0457	0.200
Vinyl Bromide	593-60-2	0	ND		0.0727	0.200
Vinyl acetate	108-05-4	0	ND		0.0639	0.200
m&p-Xylene	1330-20-7	11.41	ND		0.0946	0.400
o-Xylene	95-47-6	11.88	ND		0.0633	0.200

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_13.D
Acq On : 26 Apr 2018 4:41 pm
Operator : 564
Sample : L988471-02 1x WG1103323
Misc :
ALS Vial : 13 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 27 08:47:21 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration

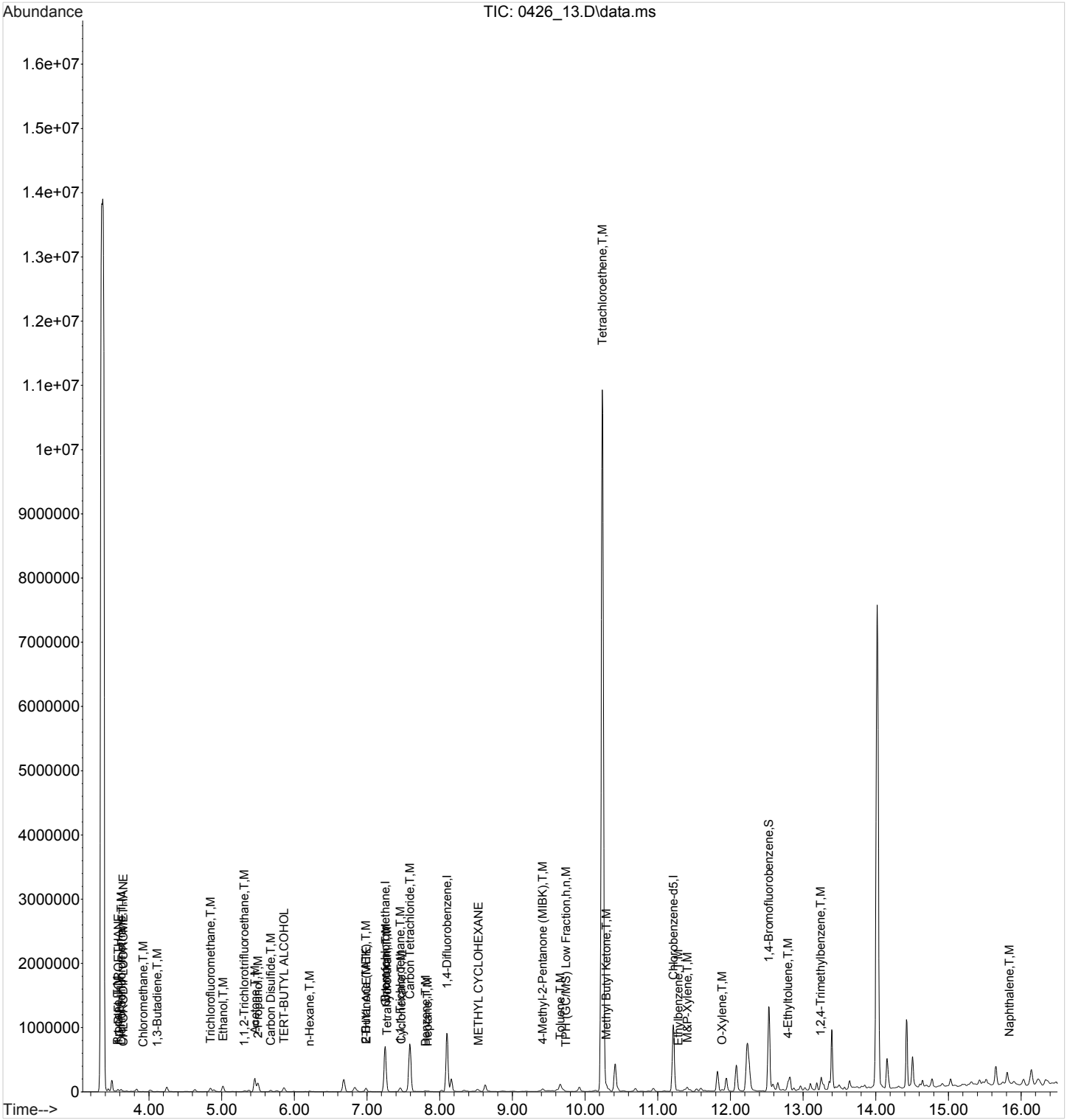
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.251	130	240731	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	8.099	114	892151	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	11.216	117	789511	4.0000000	ppbv	0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	12.529	95	464734	3.9241409	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 98.10%			
Target Compounds						Qvalue
2) Propene	3.568	41	7930	0.4051577	ppbv	93
3) 1,1-DIFLUOROETHANE	3.579	51	10381	0.2744936	ppbv	100
4) Dichlorodifluoromethane	3.619	85	20866	0.3471044	ppbv	97
5) CHLORODIFLUOROMETHANE	3.647	51	10514	0.2904359	ppbv	97
7) Chloromethane	3.919	50	1724	0.0719194	ppbv	99
9) 1,3-Butadiene	4.111	39	1351	0.0721840	ppbv #	40
13) Trichlorofluoromethane	4.847	101	44034	0.6550629	ppbv	100
14) Ethanol	5.022	45	97460	8.3617686	ppbv	99
15) 1,1,2-Trichlorotrifluo...	5.311	101	5118	0.0819844	ppbv	94
17) Acetone	5.458	58	99143	6.6972614	ppbv	82
18) 2-Propanol	5.497	45	190760	3.3433420	ppbv #	34
19) Carbon Disulfide	5.678	76	34037	0.5004866	ppbv	96
22) TERT-BUTYL ALCOHOL	5.859	59	84634	1.0936605	ppbv	99
25) n-Hexane	6.210	57	6288	0.1323984	ppbv	95
28) ETHYL ACETATE	6.991	43	76168	1.1855110	ppbv #	66
29) 2-Butanone (MEK)	6.985	72	22125	1.1534248	ppbv	99
31) Tetrahydrofuran	7.273	42	5937	0.1564545	ppbv #	80
32) Chloroform	7.257	83	158153	2.2952068	ppbv	96
33) Cyclohexane	7.471	84	4623	0.0941196	ppbv #	84
34) 1,1,1-Trichloroethane	7.460	97	35723	0.5203468	ppbv	98
35) Carbon Tetrachloride	7.590	117	558761	7.8177761	ppbv	98
38) Benzene	7.805	78	11781	0.1053224	ppbv #	95
40) Heptane	7.833	43	3816	0.0690758	ppbv	96
43) METHYL CYCLOHEXANE	8.535	83	9050	0.1350620	ppbv #	79
49) 4-Methyl-2-Pentanone (...	9.417	43	34566	0.4270516	ppbv	88
50) Toluene	9.661	91	87191	0.6268872	ppbv	99
53) Tetrachloroethene	10.238	166	4674606	62.4439136	ppbv	98
54) Methyl Butyl Ketone	10.294	43	103761	1.3311703	ppbv #	85
59) Ethylbenzene	11.284	91	14435	0.0767694	ppbv	97
60) M&P-Xylene	11.409	91	45182	0.3136644	ppbv	100
61) O-Xylene	11.884	91	19931	0.1338216	ppbv	99
67) 4-Ethyltoluene	12.789	105	29791	0.1397405	ppbv	96
72) 1,2,4-Trimethylbenzene	13.242	105	32257	0.1897334	ppbv	99
83) Naphthalene	15.838	128	36726	0.1444039	ppbv	97
84) TPH (GC/MS) Low Fraction	9.740	TIC	35516121m	132.3268597	ppbv	

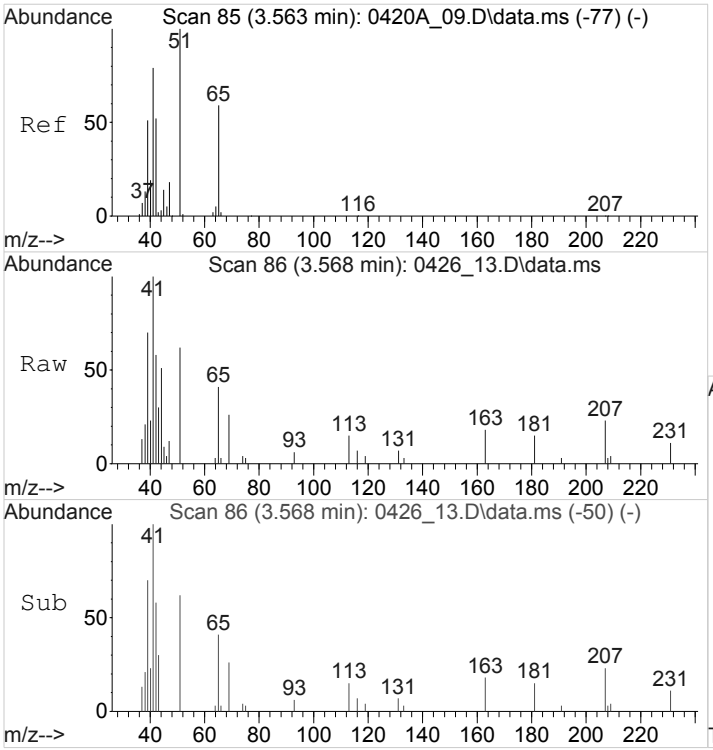
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_13.D
Acq On : 26 Apr 2018 4:41 pm
Operator : 564
Sample : L988471-02 1x WG1103323
Misc :
ALS Vial : 13 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 27 08:47:21 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration

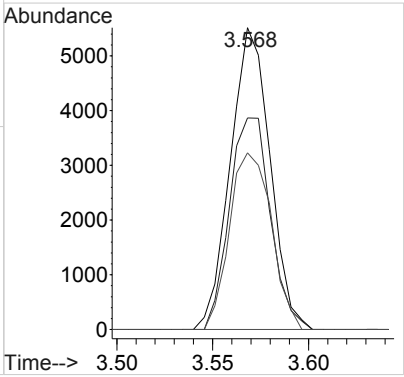


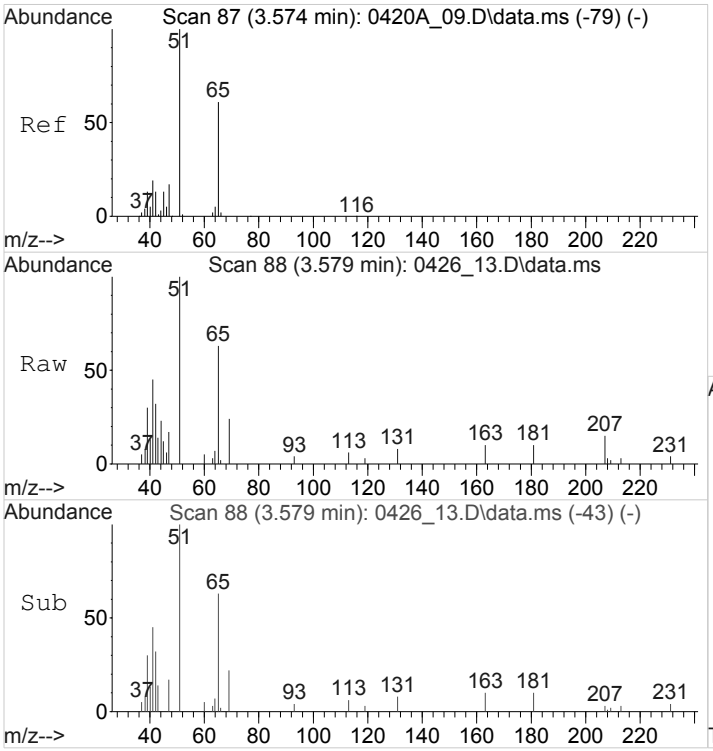


#2
Propene
Concen: 0.4051577 ppbv
RT: 3.568 min Scan# 86
Delta R.T. 0.006 min
Lab File: 0426_13.D
Acq: 26 Apr 2018 4:41 pm

Tgt Ion: 41 Resp: 7930

Ion	Ratio	Lower	Upper
41	100		
39	72.5	53.1	79.7
42	61.7	53.8	80.8

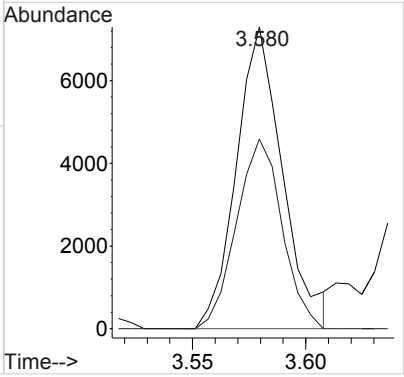


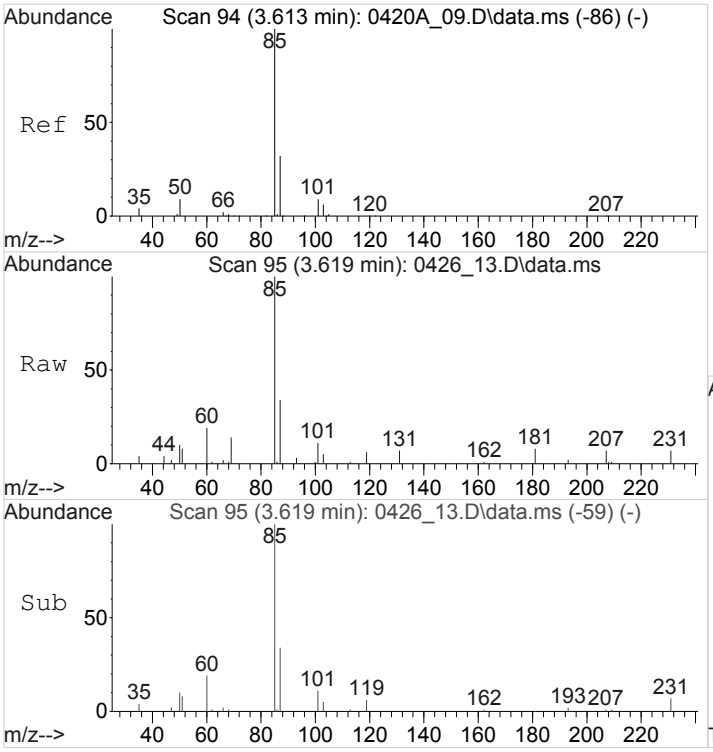


#3
1,1-DIFLUOROETHANE
Concen: 0.2744936 ppbv
RT: 3.579 min Scan# 88
Delta R.T. 0.006 min
Lab File: 0426_13.D
Acq: 26 Apr 2018 4:41 pm

Tgt Ion: 51 Resp: 10381

Ion	Ratio	Lower	Upper
51	100		
65	61.9	49.4	74.2

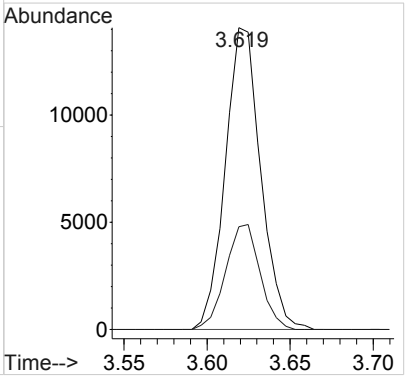


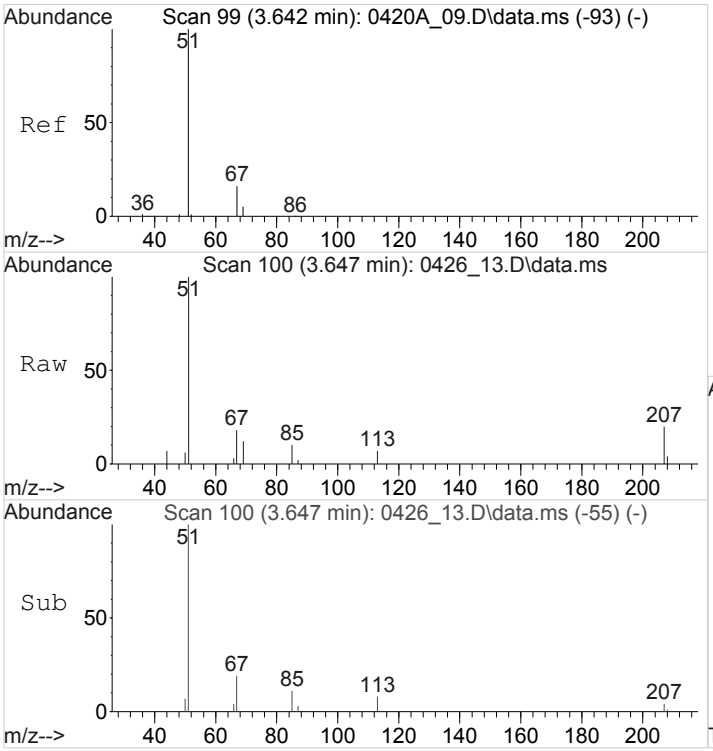


#4
Dichlorodifluoromethane
Concen: 0.3471044 ppbv
RT: 3.619 min Scan# 95
Delta R.T. 0.006 min
Lab File: 0426_13.D
Acq: 26 Apr 2018 4:41 pm

Tgt Ion: 85 Resp: 20866

Ion	Ratio	Lower	Upper
85	100		
87	33.8	25.8	38.8

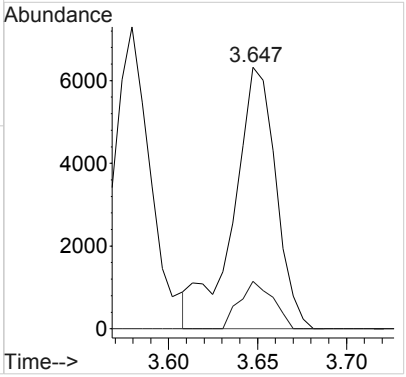


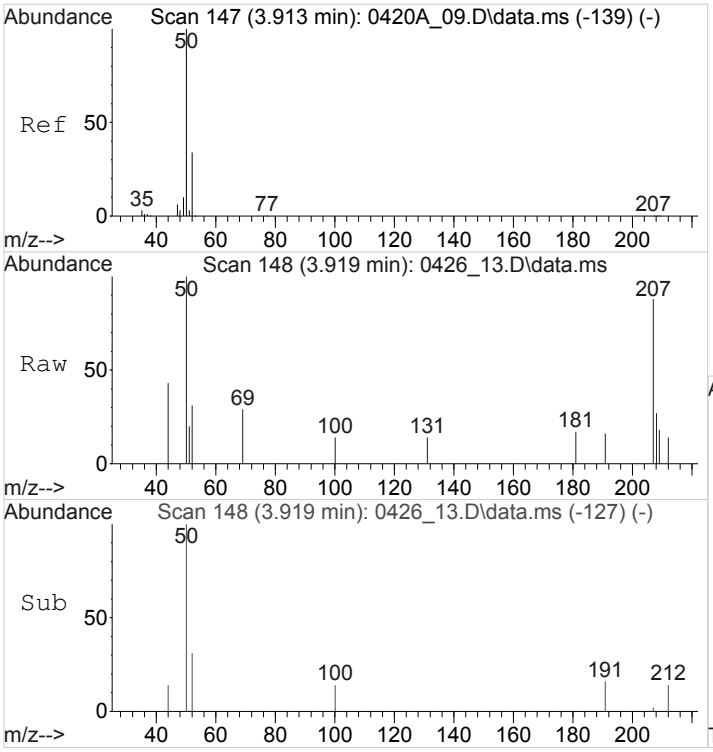


#5
CHLORODIFLUOROMETHANE
Concen: 0.2904359 ppbv
RT: 3.647 min Scan# 100
Delta R.T. 0.006 min
Lab File: 0426_13.D
Acq: 26 Apr 2018 4:41 pm

Tgt Ion: 51 Resp: 10514

Ion	Ratio	Lower	Upper
51	100		
67	14.4	12.7	19.1

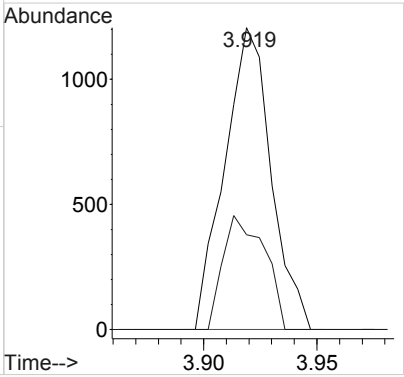


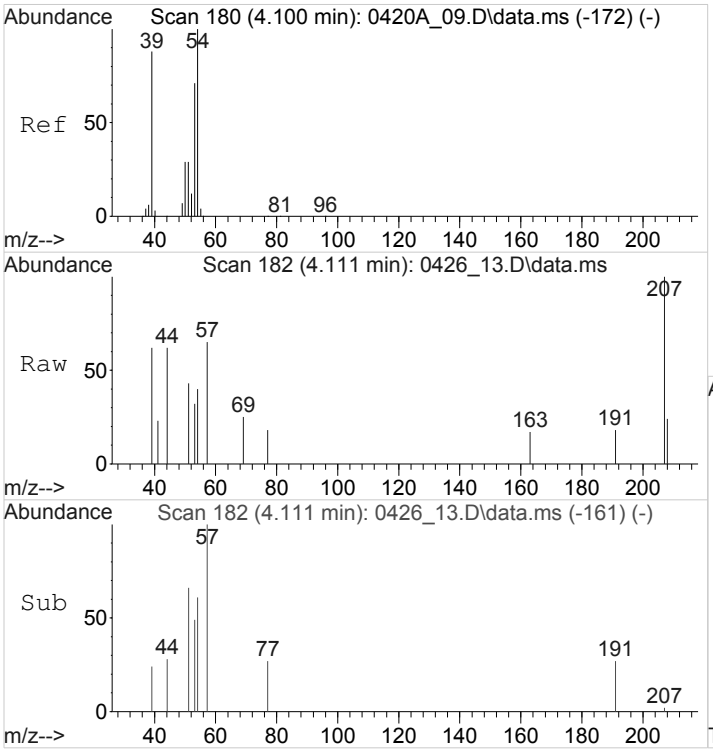


#7
Chloromethane
Concen: 0.0719194 ppbv
RT: 3.919 min Scan# 148
Delta R.T. 0.006 min
Lab File: 0426_13.D
Acq: 26 Apr 2018 4:41 pm

Tgt Ion: 50 Resp: 1724

Ion	Ratio	Lower	Upper
50	100		
52	33.8	26.5	39.7

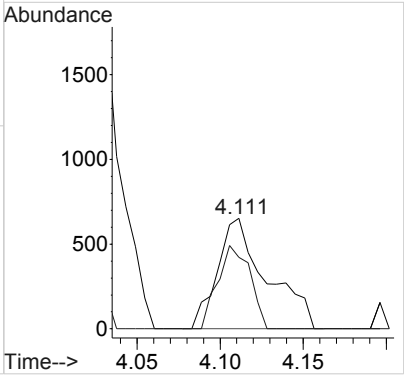


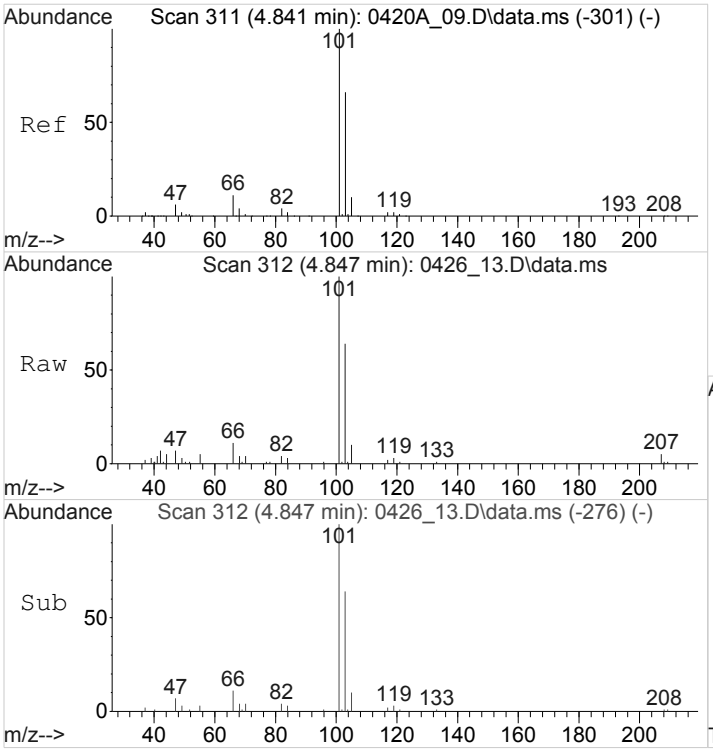


#9
1,3-Butadiene
Concen: 0.0721840 ppbv
RT: 4.111 min Scan# 182
Delta R.T. 0.011 min
Lab File: 0426_13.D
Acq: 26 Apr 2018 4:41 pm

Tgt Ion: 39 Resp: 1351

Ion	Ratio	Lower	Upper
39	100		
54	49.2	91.3	136.9#

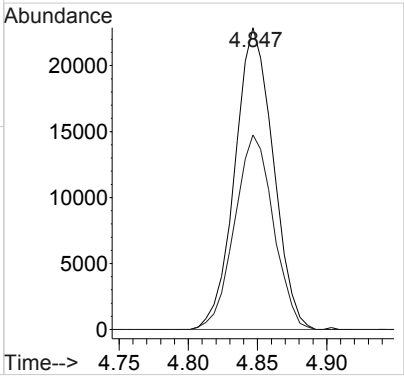


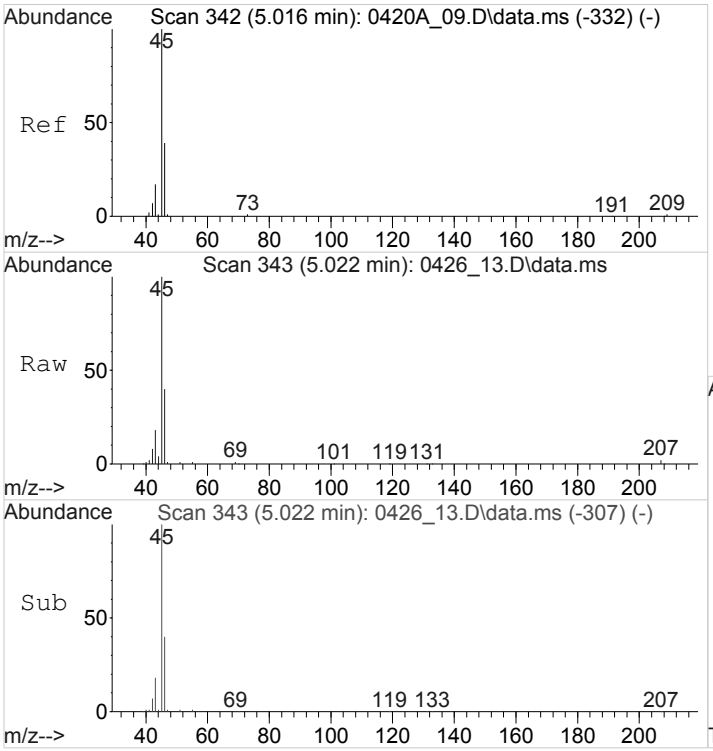


#13
Trichlorofluoromethane
Concen: 0.6550629 ppbv
RT: 4.847 min Scan# 312
Delta R.T. 0.006 min
Lab File: 0426_13.D
Acq: 26 Apr 2018 4:41 pm

Tgt Ion:101 Resp: 44034

Ion	Ratio	Lower	Upper
101	100		
103	65.4	52.6	79.0

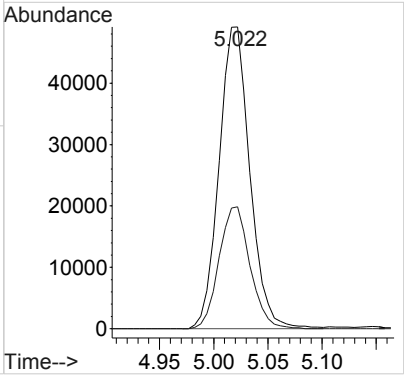


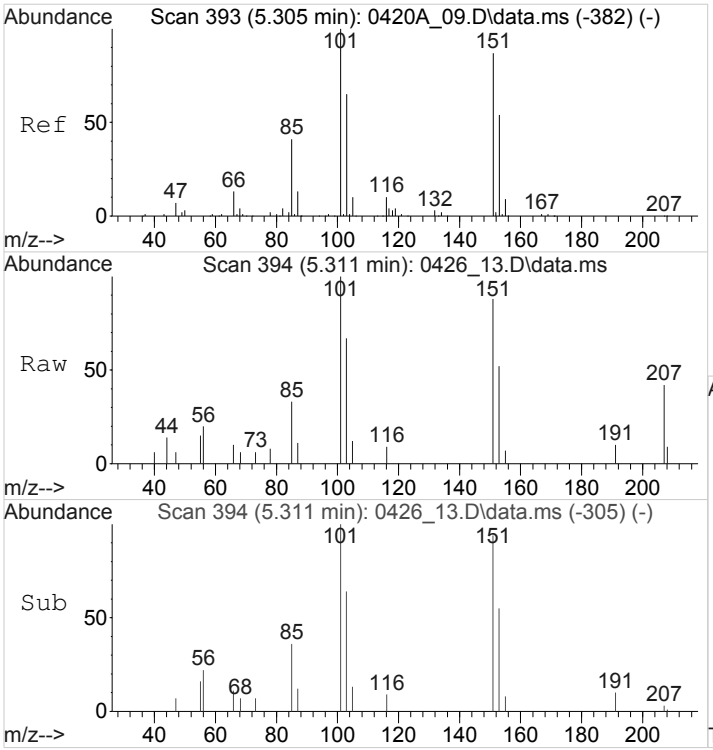


#14
Ethanol
Concen: 8.3617686 ppbv
RT: 5.022 min Scan# 343
Delta R.T. 0.006 min
Lab File: 0426_13.D
Acq: 26 Apr 2018 4:41 pm

Tgt Ion: 45 Resp: 97460

Ion	Ratio	Lower	Upper
45	100		
46	40.6	33.1	49.7

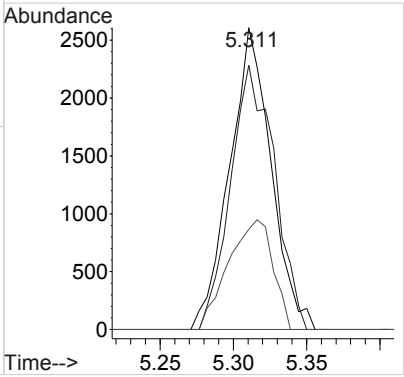


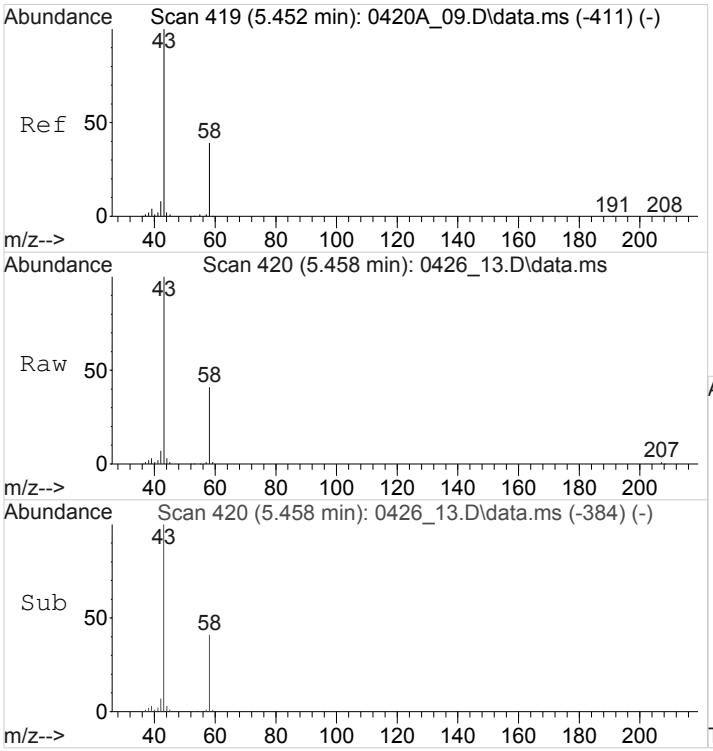


#15
1,1,2-Trichlorotrifluoroethane
Concen: 0.0819844 ppbv
RT: 5.311 min Scan# 394
Delta R.T. 0.006 min
Lab File: 0426_13.D
Acq: 26 Apr 2018 4:41 pm

Tgt Ion:101 Resp: 5118

Ion	Ratio	Lower	Upper
101	100		
151	92.6	67.9	101.9
85	39.0	32.4	48.6

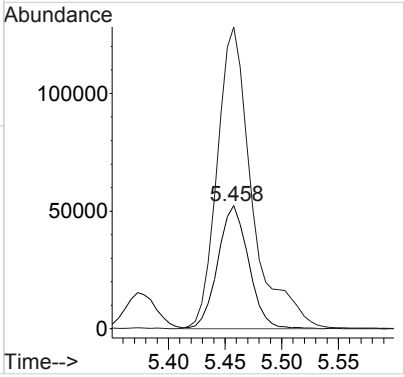


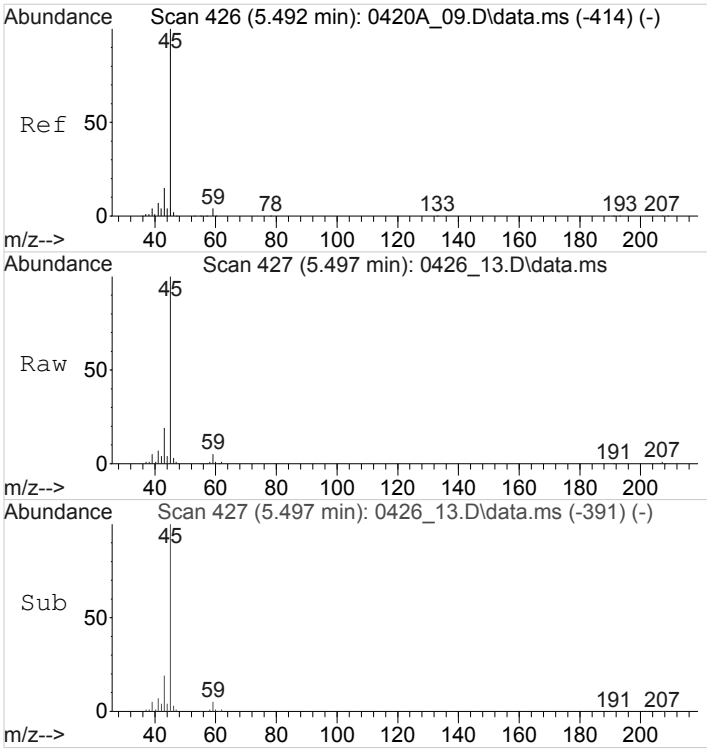


#17
Acetone
Concen: 6.6972614 ppbv
RT: 5.458 min Scan# 420
Delta R.T. 0.006 min
Lab File: 0426_13.D
Acq: 26 Apr 2018 4:41 pm

Tgt Ion: 58 Resp: 99143

Ion	Ratio	Lower	Upper
58	100		
43	279.1	252.6	379.0

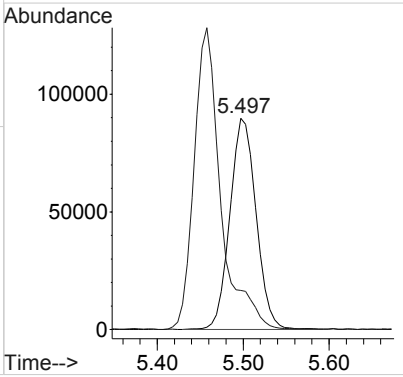


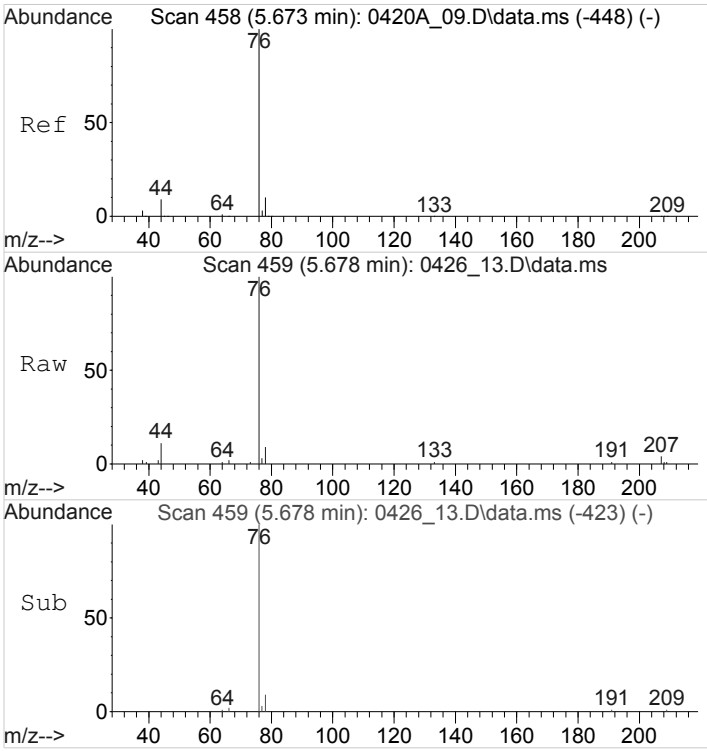


#18
2-Propanol
Concen: 3.3433420 ppbv
RT: 5.497 min Scan# 427
Delta R.T. 0.006 min
Lab File: 0426_13.D
Acq: 26 Apr 2018 4:41 pm

Tgt Ion: 45 Resp: 190760

Ion	Ratio	Lower	Upper
45	100		
43	145.1	67.9	101.9#

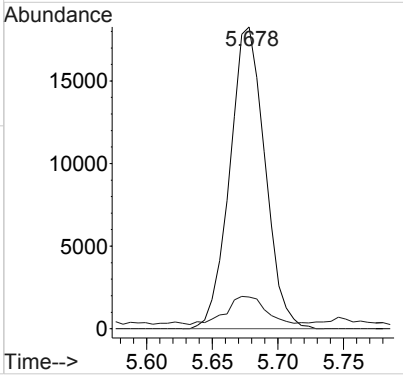


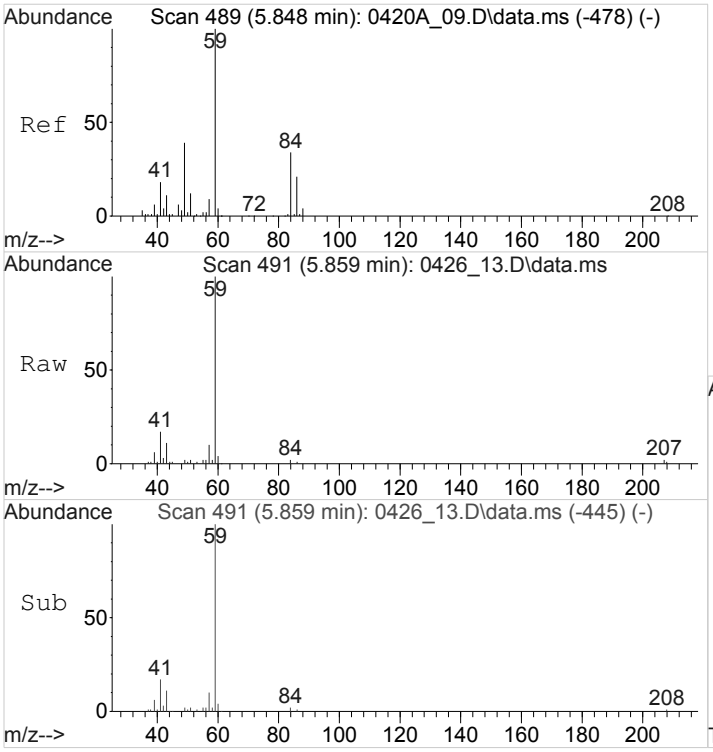


#19
Carbon Disulfide
Concen: 0.5004866 ppbv
RT: 5.678 min Scan# 459
Delta R.T. 0.006 min
Lab File: 0426_13.D
Acq: 26 Apr 2018 4:41 pm

Tgt Ion: 76 Resp: 34037

Ion	Ratio	Lower	Upper
76	100		
44	10.6	7.4	11.2

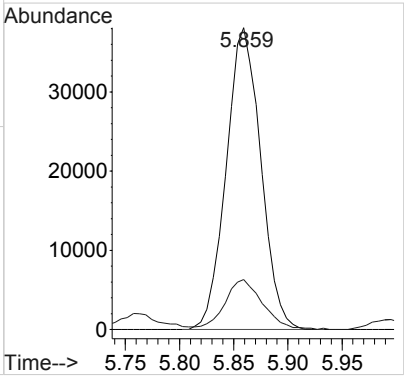


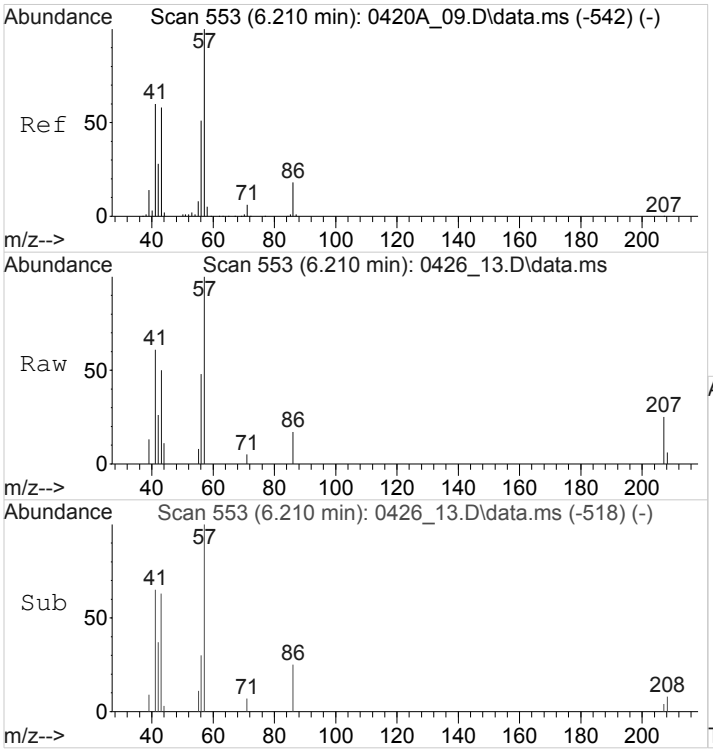


#22
TERT-BUTYL ALCOHOL
Concen: 1.0936605 ppbv
RT: 5.859 min Scan# 491
Delta R.T. 0.011 min
Lab File: 0426_13.D
Acq: 26 Apr 2018 4:41 pm

Tgt Ion: 59 Resp: 84634

Ion	Ratio	Lower	Upper
59	100		
41	18.0	14.6	22.0

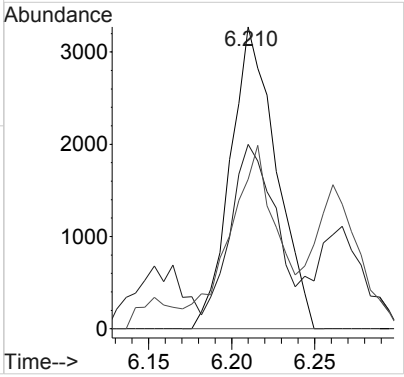


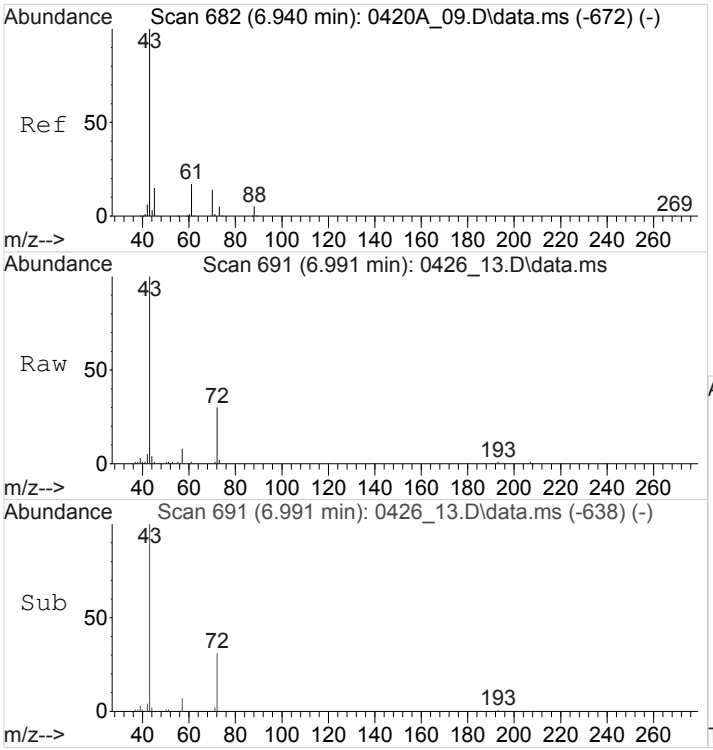


#25
n-Hexane
Concen: 0.1323984 ppbv
RT: 6.210 min Scan# 553
Delta R.T. -0.000 min
Lab File: 0426_13.D
Acq: 26 Apr 2018 4:41 pm

Tgt Ion: 57 Resp: 6288

Ion	Ratio	Lower	Upper
57	100		
41	61.4	47.6	71.4
43	62.8	46.1	69.1

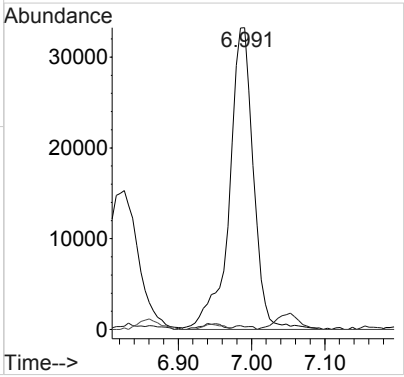


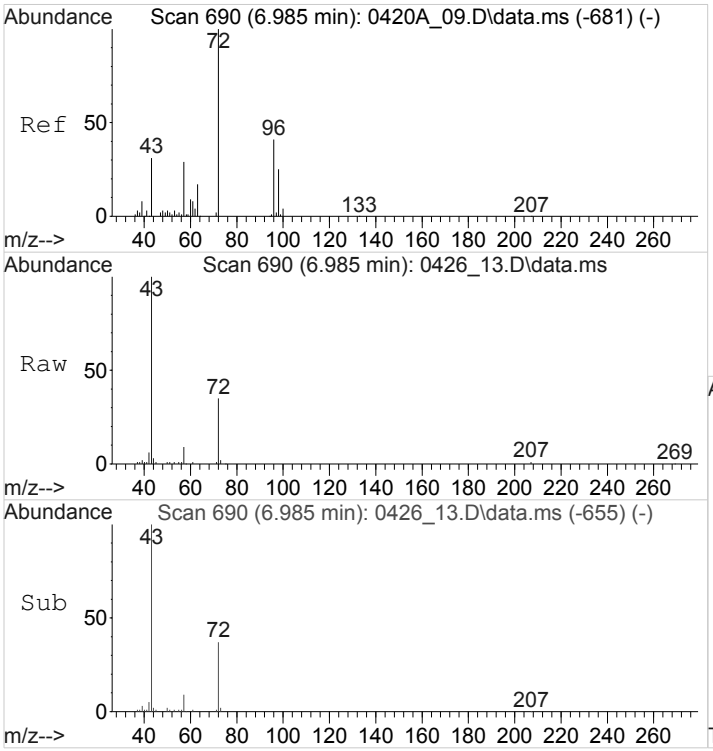


#28
ETHYL ACETATE
Concen: 1.1855110 ppbv
RT: 6.991 min Scan# 691
Delta R.T. 0.051 min
Lab File: 0426_13.D
Acq: 26 Apr 2018 4:41 pm

Tgt Ion: 43 Resp: 76168

Ion	Ratio	Lower	Upper
43	100		
45	0.8	12.0	18.0#
70	0.0	10.5	15.7#

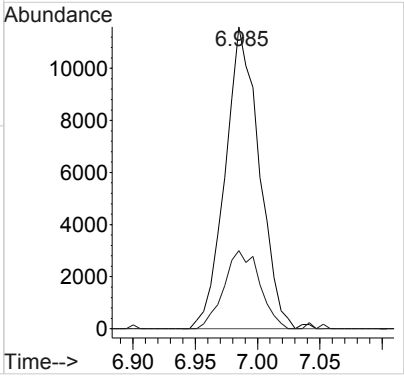


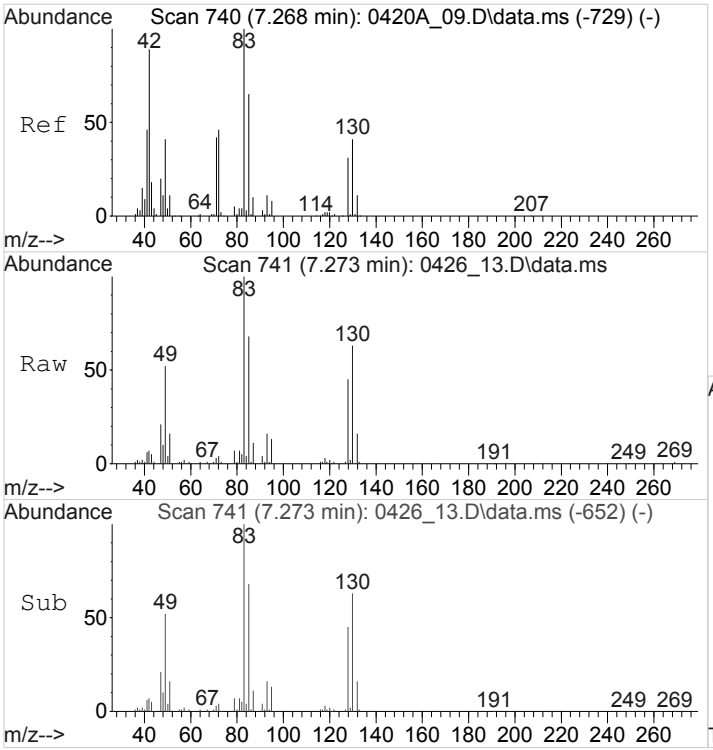


#29
2-Butanone (MEK)
Concen: 1.1534248 ppbv
RT: 6.985 min Scan# 690
Delta R.T. -0.000 min
Lab File: 0426_13.D
Acq: 26 Apr 2018 4:41 pm

Tgt Ion: 72 Resp: 22125

Ion	Ratio	Lower	Upper
72	100		
57	27.1	22.2	33.4

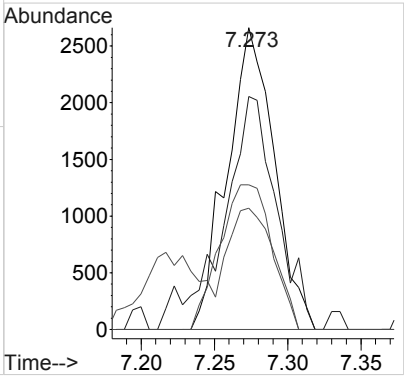


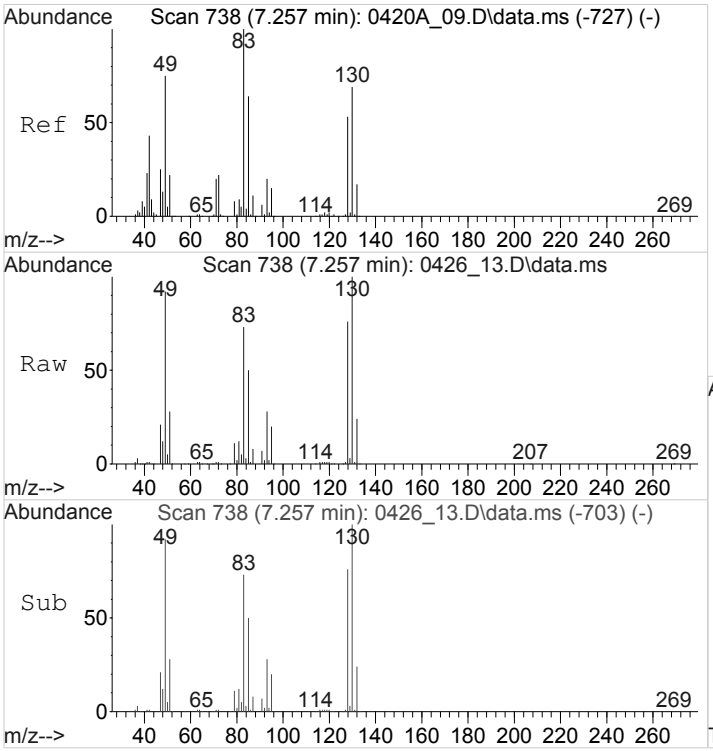


#31
Tetrahydrofuran
Concen: 0.1564545 ppbv
RT: 7.273 min Scan# 741
Delta R.T. 0.006 min
Lab File: 0426_13.D
Acq: 26 Apr 2018 4:41 pm

Tgt Ion: 42 Resp: 5937

Ion	Ratio	Lower	Upper
42	100		
41	82.8	40.8	61.2#
72	53.0	40.7	61.1
71	39.4	37.4	56.0

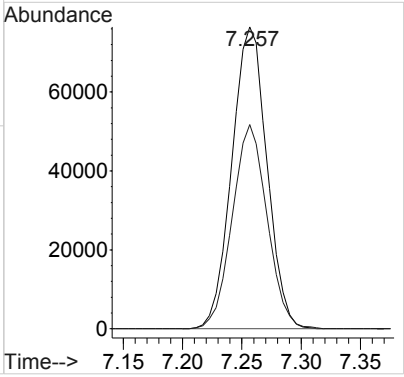


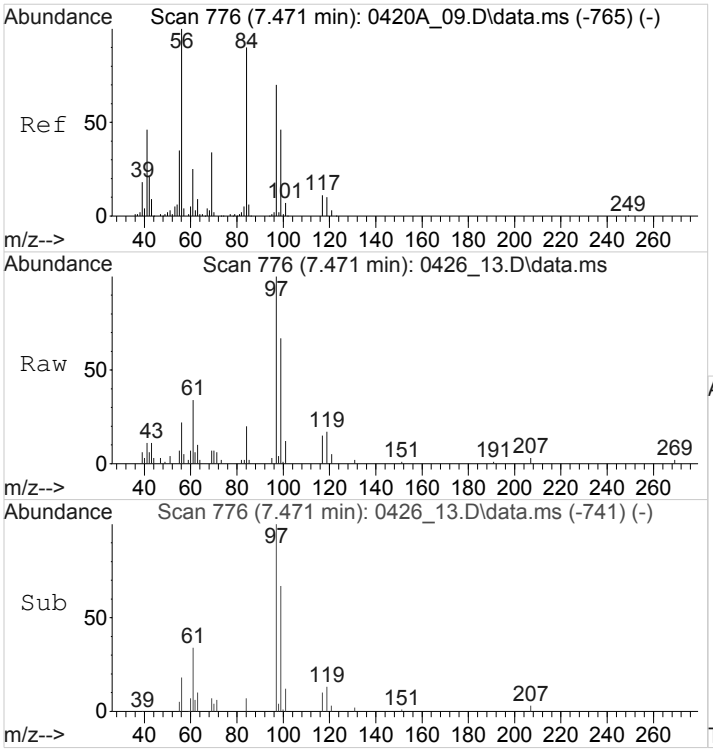


#32
Chloroform
Concen: 2.2952068 ppbv
RT: 7.257 min Scan# 738
Delta R.T. -0.000 min
Lab File: 0426_13.D
Acq: 26 Apr 2018 4:41 pm

Tgt Ion: 83 Resp: 158153

Ion	Ratio	Lower	Upper
83	100		
85	67.2	51.3	76.9

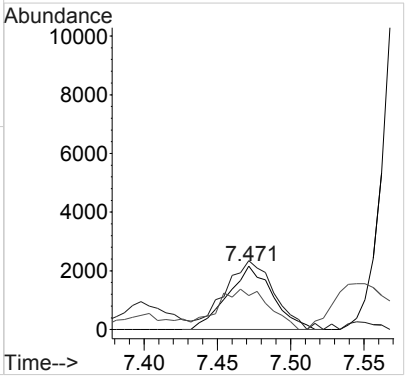


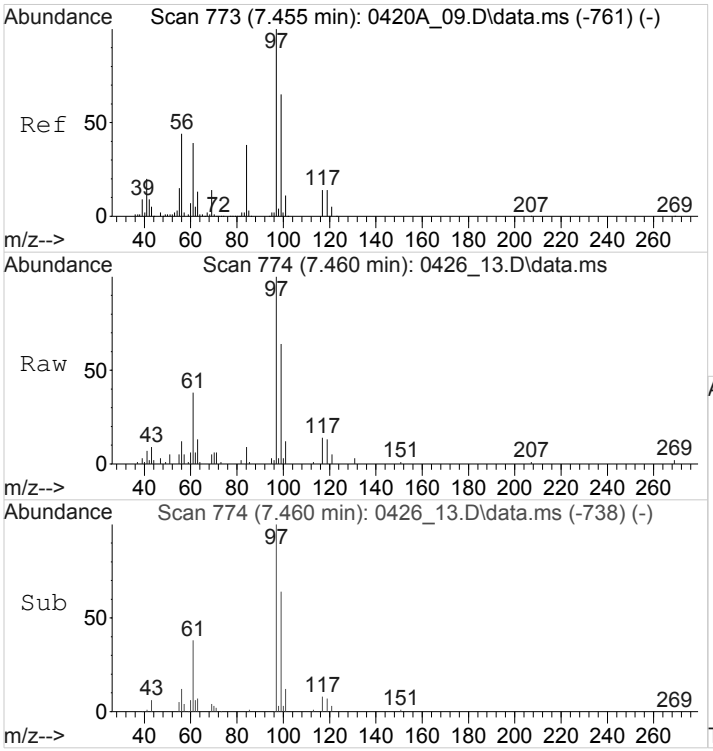


#33
Cyclohexane
Concen: 0.0941196 ppbv
RT: 7.471 min Scan# 776
Delta R.T. -0.000 min
Lab File: 0426_13.D
Acq: 26 Apr 2018 4:41 pm

Tgt Ion: 84 Resp: 4623

Ion	Ratio	Lower	Upper
84	100		
56	119.1	87.6	131.4
41	72.5	40.2	60.2#

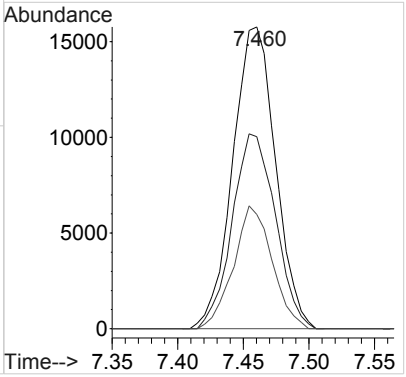


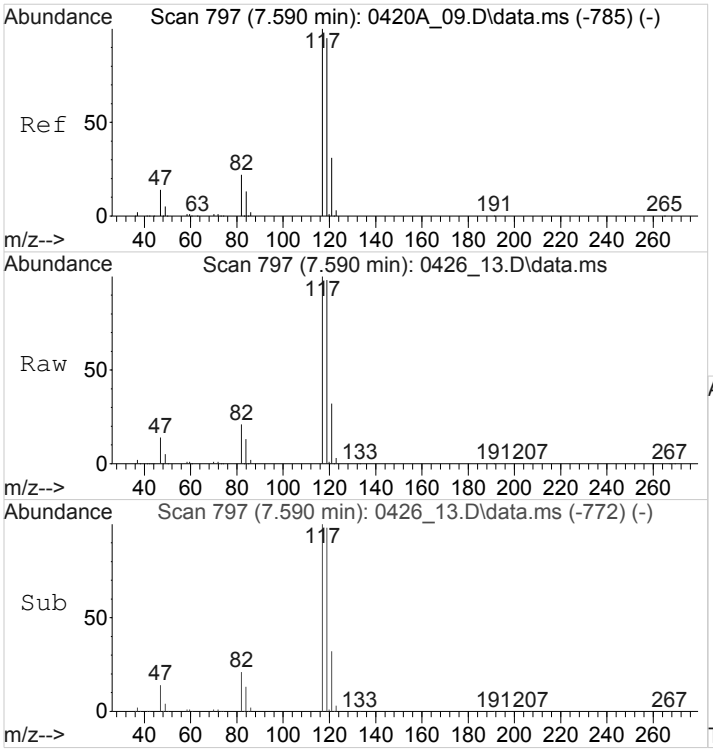


#34
1,1,1-Trichloroethane
Concen: 0.5203468 ppbv
RT: 7.460 min Scan# 774
Delta R.T. 0.006 min
Lab File: 0426_13.D
Acq: 26 Apr 2018 4:41 pm

Tgt Ion: 97 Resp: 35723

Ion	Ratio	Lower	Upper
97	100		
99	65.1	52.2	78.4
61	36.8	31.3	46.9

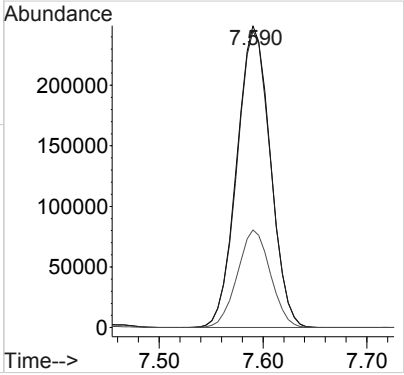


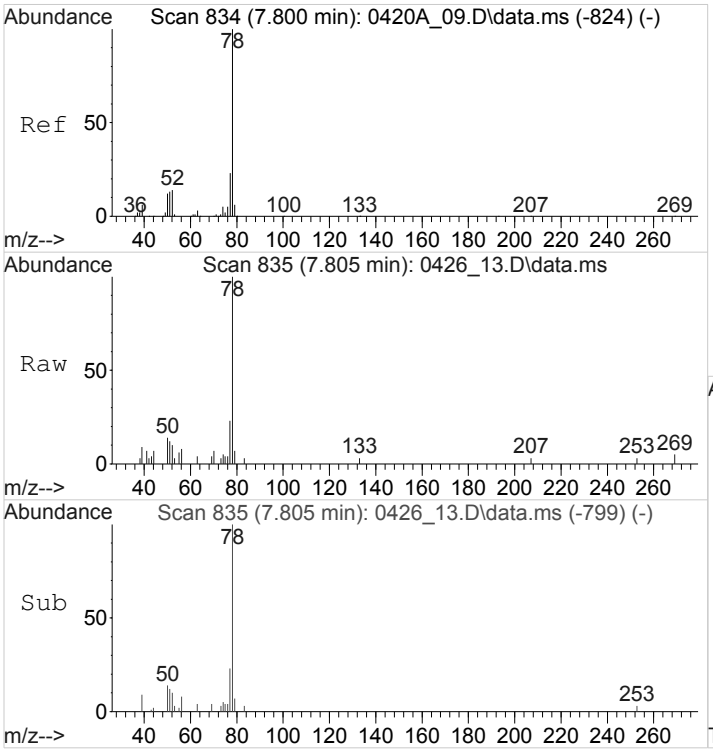


#35
Carbon Tetrachloride
Concen: 7.8177761 ppbv
RT: 7.590 min Scan# 797
Delta R.T. -0.000 min
Lab File: 0426_13.D
Acq: 26 Apr 2018 4:41 pm

Tgt Ion:117 Resp: 558761

Ion	Ratio	Lower	Upper
117	100		
119	98.3	77.1	115.7
121	31.9	24.8	37.2

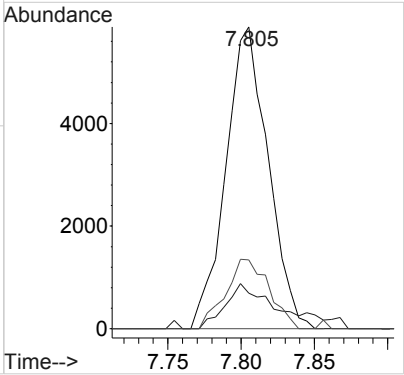


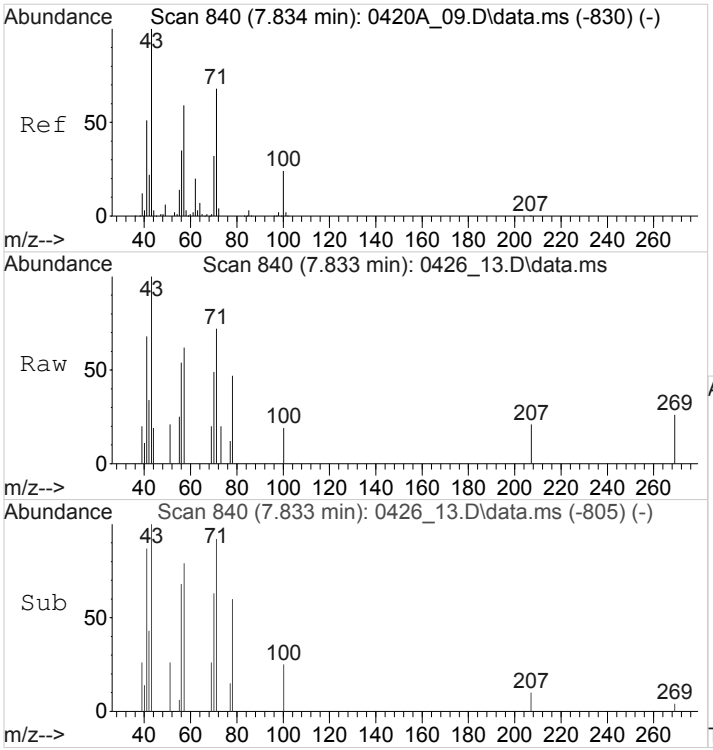


#38
Benzene
Concen: 0.1053224 ppbv
RT: 7.805 min Scan# 835
Delta R.T. 0.006 min
Lab File: 0426_13.D
Acq: 26 Apr 2018 4:41 pm

Tgt Ion: 78 Resp: 11781

Ion	Ratio	Lower	Upper
78	100		
51	19.4	11.3	16.9#
77	23.5	18.6	28.0

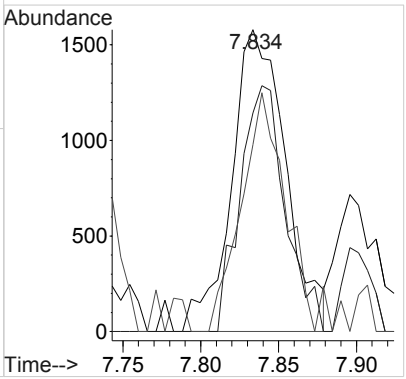


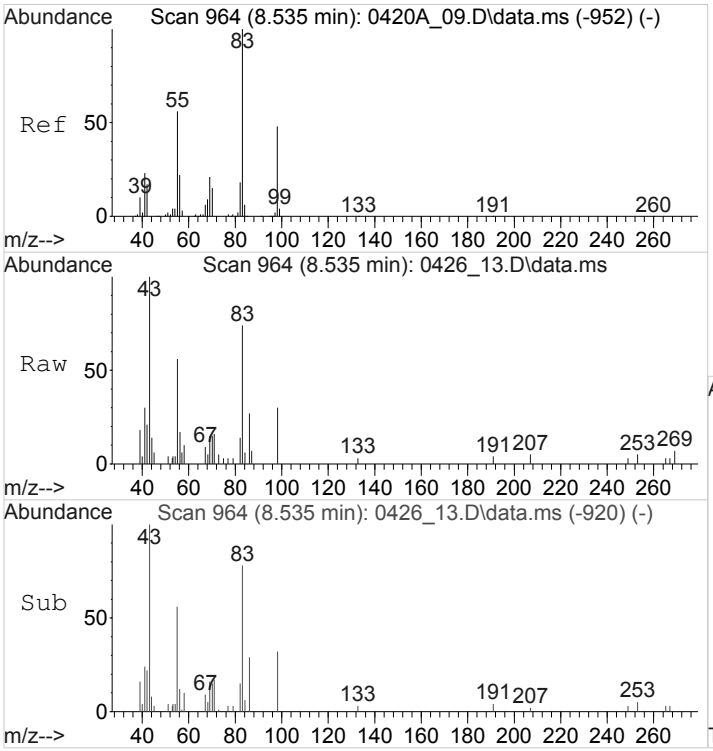


#40
Heptane
Concen: 0.0690758 ppbv
RT: 7.833 min Scan# 840
Delta R.T. -0.000 min
Lab File: 0426_13.D
Acq: 26 Apr 2018 4:41 pm

Tgt Ion: 43 Resp: 3816

Ion	Ratio	Lower	Upper
43	100		
71	67.9	56.1	84.1
57	63.9	47.1	70.7

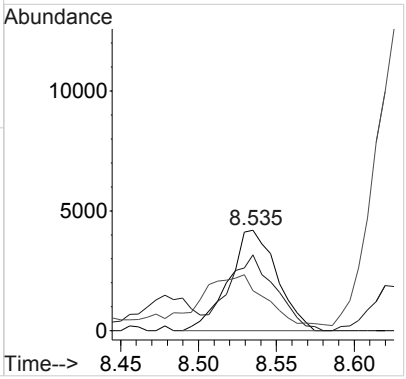


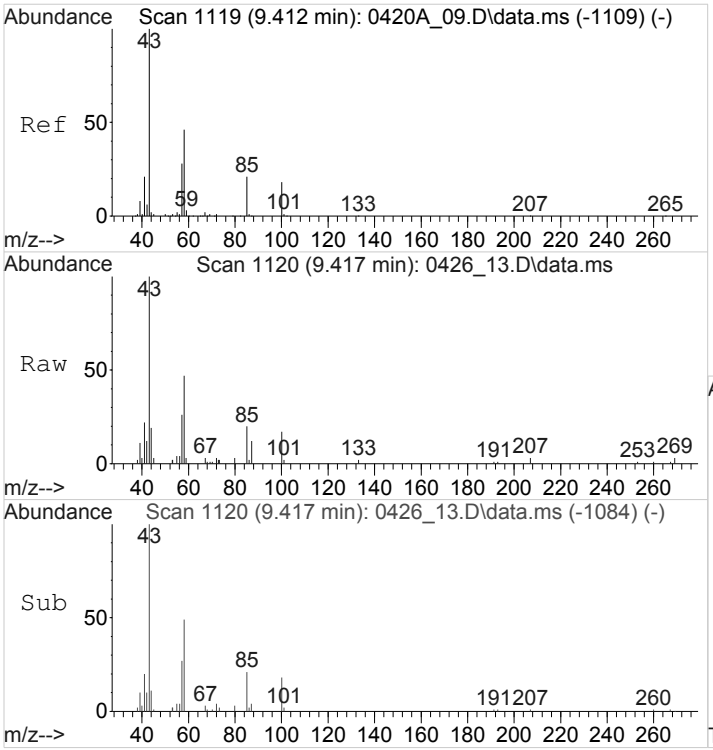


#43
METHYL CYCLOHEXANE
Concen: 0.1350620 ppbv
RT: 8.535 min Scan# 964
Delta R.T. -0.000 min
Lab File: 0426_13.D
Acq: 26 Apr 2018 4:41 pm

Tgt Ion: 83 Resp: 9050

Ion	Ratio	Lower	Upper
83	100		
55	73.9	58.5	87.7
41	69.5	25.8	38.6#

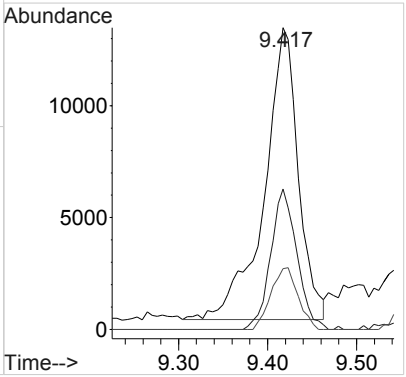


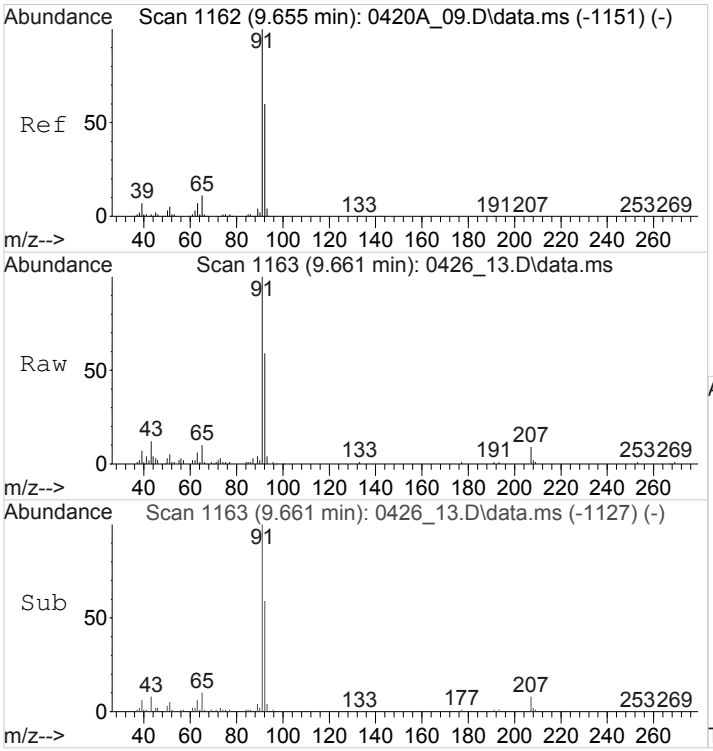


#49
4-Methyl-2-Pentanone (MIBK)
Concen: 0.4270516 ppbv
RT: 9.417 min Scan# 1120
Delta R.T. 0.006 min
Lab File: 0426_13.D
Acq: 26 Apr 2018 4:41 pm

Tgt Ion: 43 Resp: 34566

Ion	Ratio	Lower	Upper
43	100		
58	37.2	36.7	55.1
85	16.9	16.7	25.1

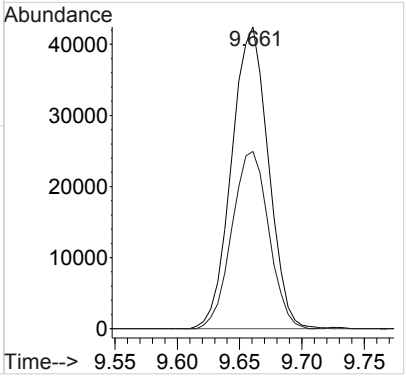


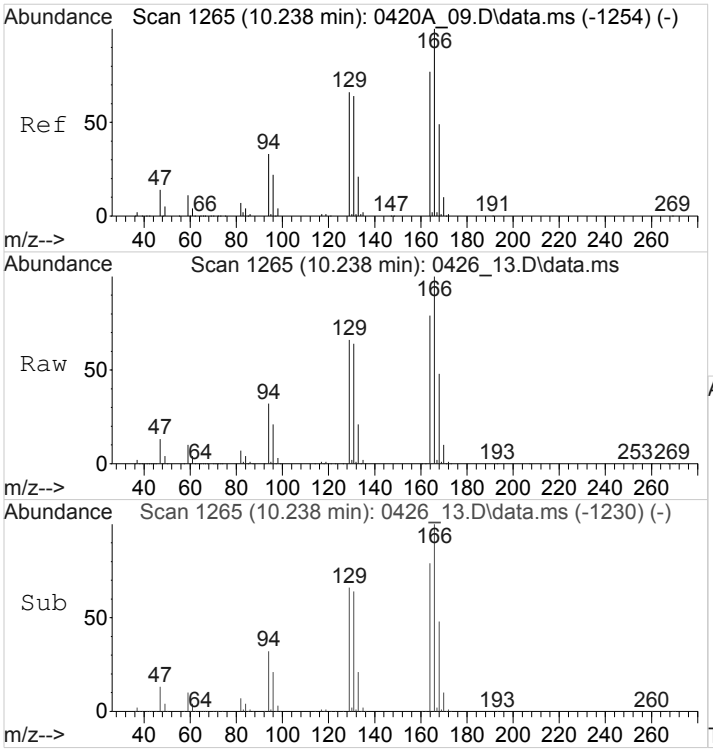


#50
Toluene
Concen: 0.6268872 ppbv
RT: 9.661 min Scan# 1163
Delta R.T. 0.006 min
Lab File: 0426_13.D
Acq: 26 Apr 2018 4:41 pm

Tgt Ion: 91 Resp: 87191

Ion	Ratio	Lower	Upper
91	100		
92	59.0	48.0	72.0

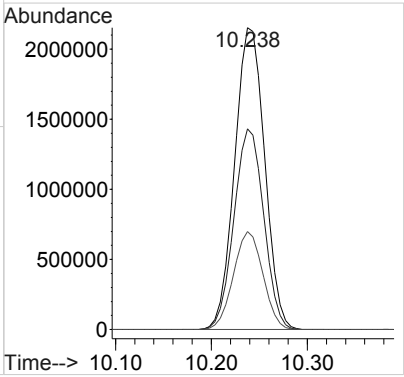


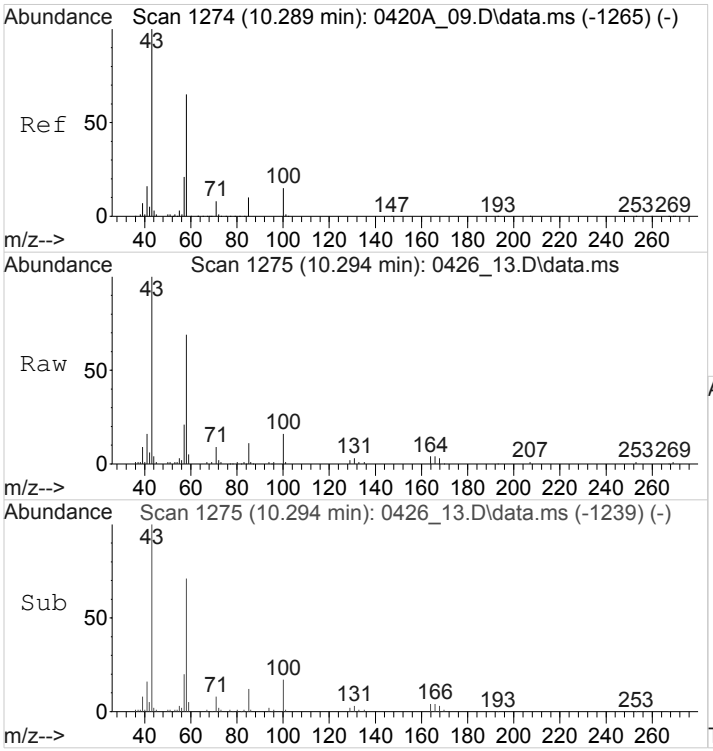


#53
Tetrachloroethene
Concen: 62.4439136 ppbv
RT: 10.238 min Scan# 1265
Delta R.T. -0.000 min
Lab File: 0426_13.D
Acq: 26 Apr 2018 4:41 pm

Tgt Ion:166 Resp: 4674606

Ion	Ratio	Lower	Upper
166	100		
129	66.0	53.7	80.5
94	31.9	27.2	40.8

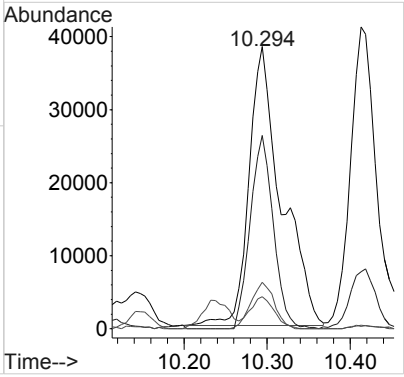


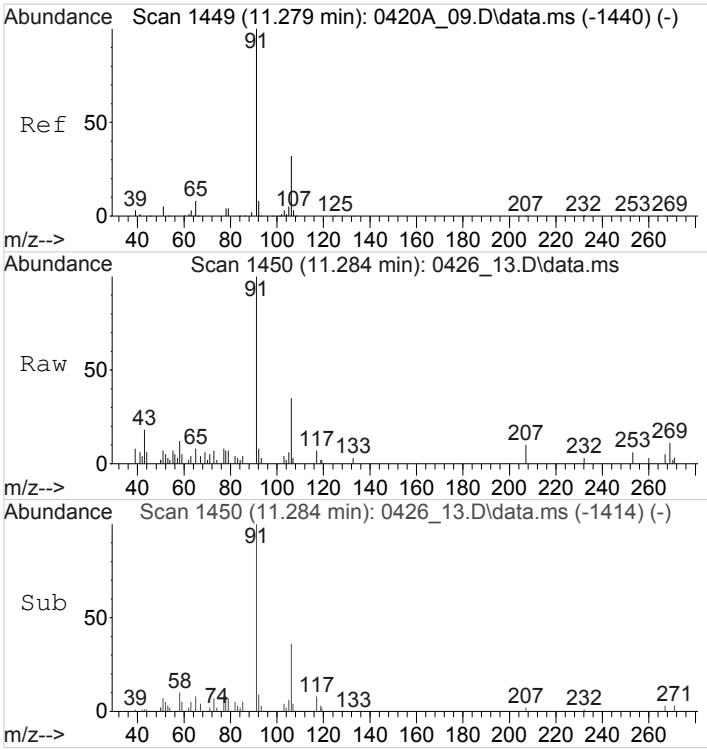


#54
Methyl Butyl Ketone
Concen: 1.3311703 ppbv
RT: 10.294 min Scan# 1275
Delta R.T. 0.006 min
Lab File: 0426_13.D
Acq: 26 Apr 2018 4:41 pm

Tgt Ion: 43 Resp: 103761

Ion	Ratio	Lower	Upper
43	100		
58	49.4	51.6	77.4#
85	8.6	8.6	13.0#
100	12.0	11.6	17.4

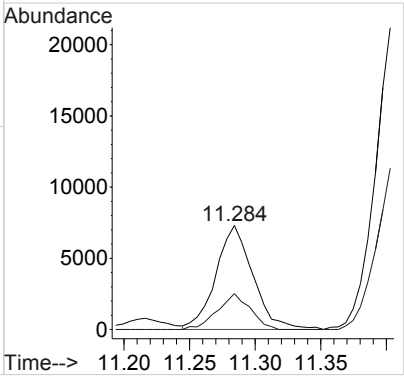


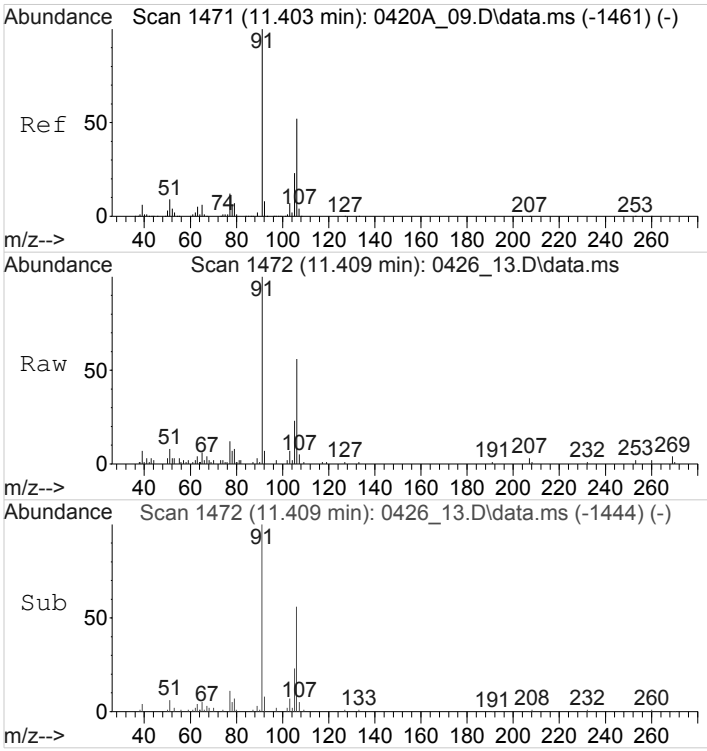


#59
Ethylbenzene
Concen: 0.0767694 ppbv
RT: 11.284 min Scan# 1450
Delta R.T. 0.006 min
Lab File: 0426_13.D
Acq: 26 Apr 2018 4:41 pm

Tgt Ion: 91 Resp: 14435

Ion	Ratio	Lower	Upper
91	100		
106	30.5	25.9	38.9

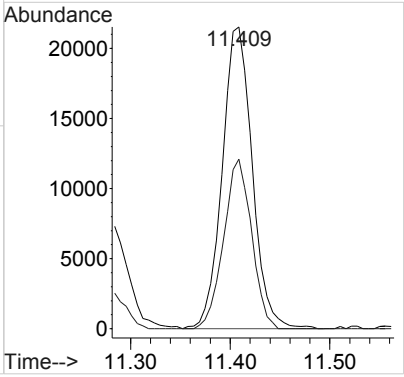


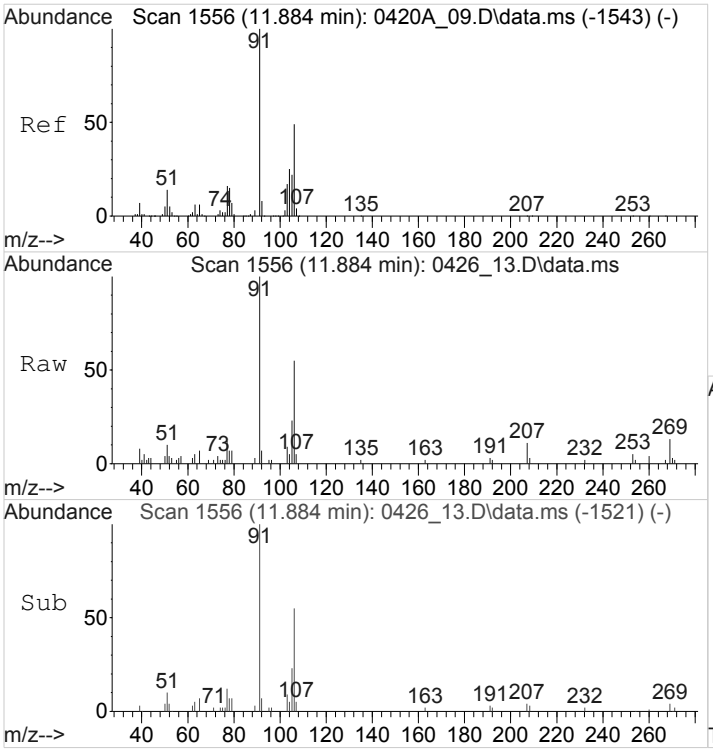


#60
M&P-Xylene
Concen: 0.3136644 ppbv
RT: 11.409 min Scan# 1472
Delta R.T. 0.006 min
Lab File: 0426_13.D
Acq: 26 Apr 2018 4:41 pm

Tgt Ion: 91 Resp: 45182

Ion	Ratio	Lower	Upper
91	100		
106	52.2	41.5	62.3

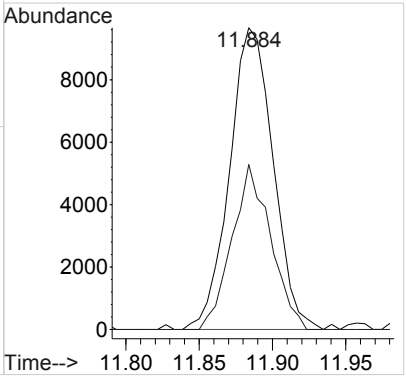


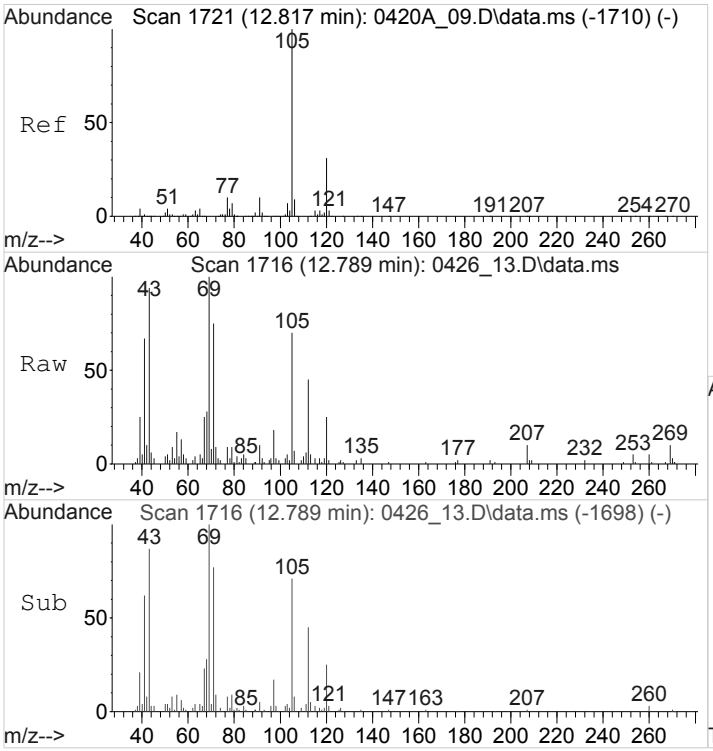


#61
O-Xylene
Concen: 0.1338216 ppbv
RT: 11.884 min Scan# 1556
Delta R.T. -0.000 min
Lab File: 0426_13.D
Acq: 26 Apr 2018 4:41 pm

Tgt Ion: 91 Resp: 19931

Ion	Ratio	Lower	Upper
91	100		
106	48.5	39.1	58.7

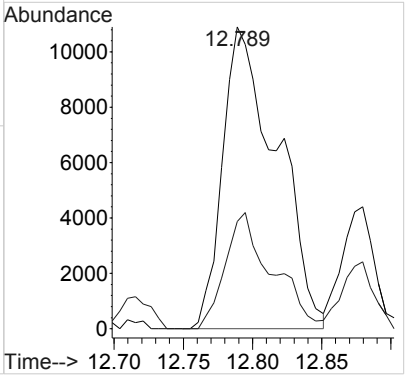


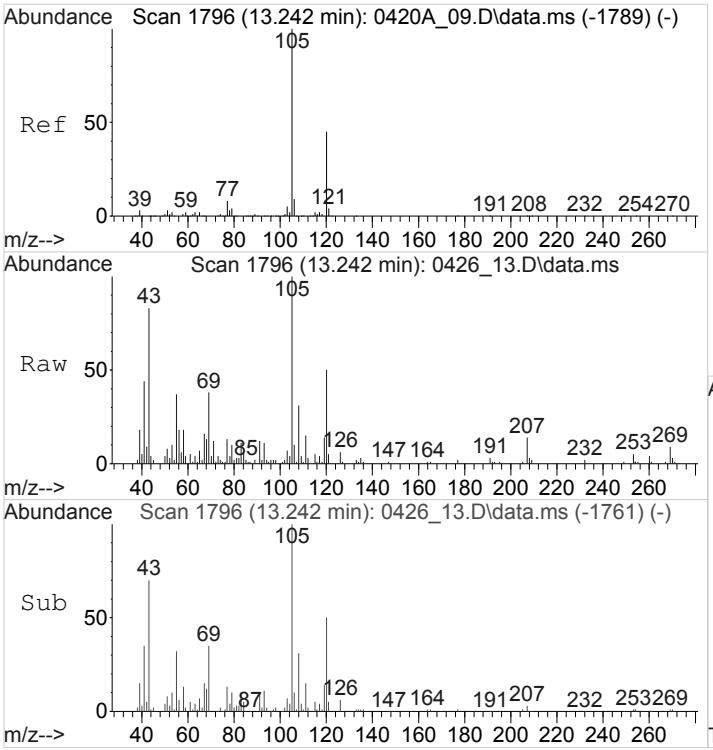


#67
4-Ethyltoluene
Concen: 0.1397405 ppbv
RT: 12.789 min Scan# 1716
Delta R.T. -0.028 min
Lab File: 0426_13.D
Acq: 26 Apr 2018 4:41 pm

Tgt Ion:105 Resp: 29791

Ion	Ratio	Lower	Upper
105	100		
120	32.9	24.8	37.2

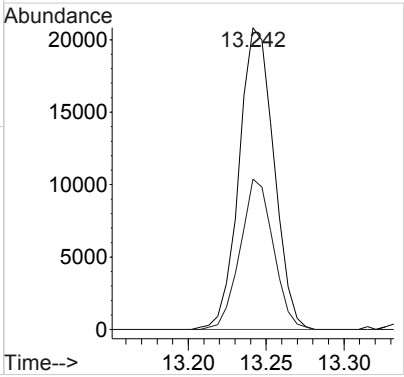


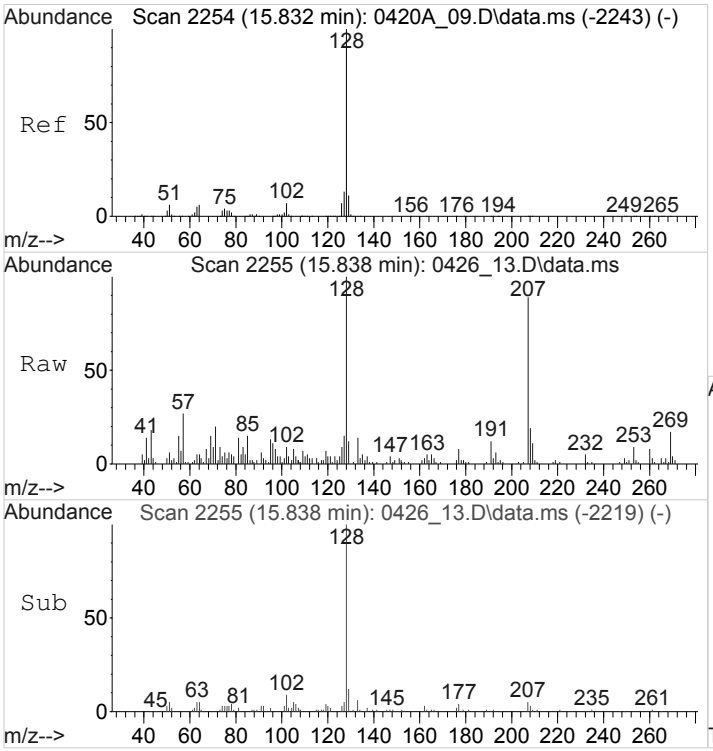


#72
1,2,4-Trimethylbenzene
Concen: 0.1897334 ppbv
RT: 13.242 min Scan# 1796
Delta R.T. -0.000 min
Lab File: 0426_13.D
Acq: 26 Apr 2018 4:41 pm

Tgt Ion:105 Resp: 32257

Ion	Ratio	Lower	Upper
105	100		
120	47.5	38.8	58.2

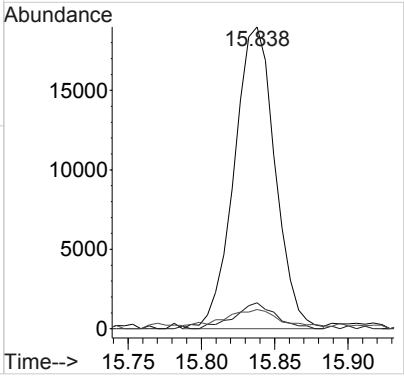


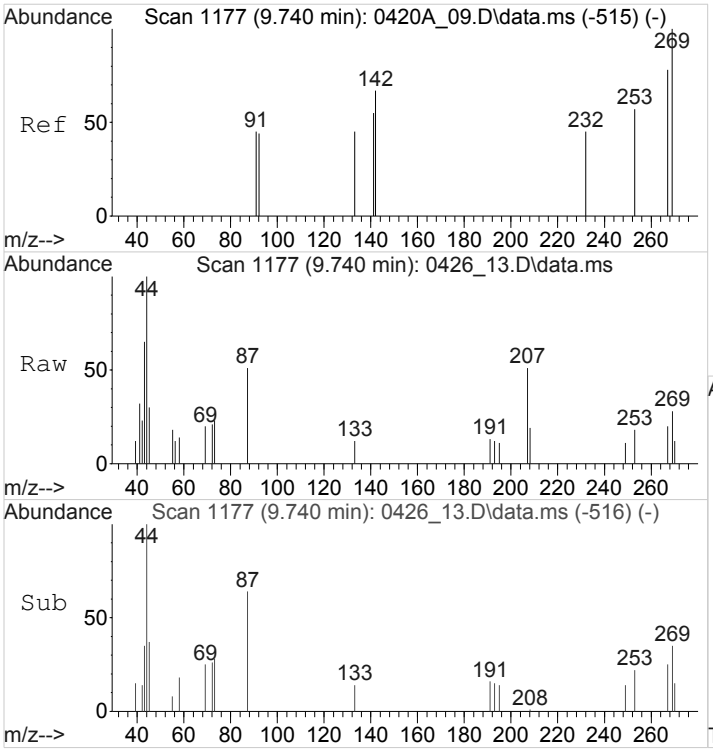


#83
Naphthalene
Concen: 0.1444039 ppbv
RT: 15.838 min Scan# 2255
Delta R.T. 0.006 min
Lab File: 0426_13.D
Acq: 26 Apr 2018 4:41 pm

Tgt Ion:128 Resp: 36726

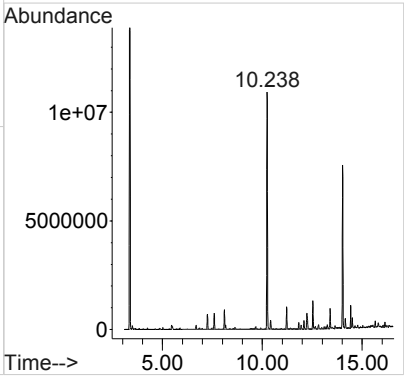
Ion	Ratio	Lower	Upper
128	100		
102	8.5	5.9	8.9
51	6.9	4.6	7.0





#84
TPH (GC/MS) Low Fraction
Concen: 132.3268597 ppbv m
RT: 9.740 min Scan# 1177
Delta R.T. 0.000 min
Lab File: 0426_13.D
Acq: 26 Apr 2018 4:41 pm

Tgt Ion:TIC Resp:35516121



1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS-3

ESC Sample ID:	L988471-03	**SDG:**	L988471
Client Sample ID:	SS-3	**Collected Date/Time:**	04/23/18 11:02
Lab File ID:	0427_08	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS4	**Preparation Date/Time:**	04/27/18 13:35
Analytical Batch:	WG1103966	**Analysis Date/Time:**	04/27/18 13:35
Dilution Factor:	100	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	4 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	RT	Result	Qualifier	MDL	RDL
			ppbv		*ppbv*	*ppbv*
Acetone	67-64-1	7.37	344		5.69	125
Allyl chloride	107-05-1	0	ND		5.46	20.0
Benzene	71-43-2	10.50	ND		4.60	20.0
Benzyl Chloride	100-44-7	0	ND		5.98	20.0
Bromodichloromethane	75-27-4	0	ND		4.36	20.0
Bromoform	75-25-2	0	ND		7.86	60.0
Bromomethane	74-83-9	0	ND		6.09	20.0
1,3-Butadiene	106-99-0	0	ND		5.63	200
Carbon disulfide	75-15-0	7.54	40.3		5.44	20.0
Carbon tetrachloride	56-23-5	10.23	ND		5.85	20.0
Chlorobenzene	108-90-7	0	ND		6.01	20.0
Chloroethane	75-00-3	0	ND		4.89	20.0
Chloroform	67-66-3	9.87	21.5		5.74	20.0
Chloromethane	74-87-3	0	ND		5.44	20.0
2-Chlorotoluene	95-49-8	15.46	ND		6.05	20.0
Cyclohexane	110-82-7	10.07	2310		5.34	20.0
Dibromochloromethane	124-48-1	0	ND		4.94	20.0
1,2-Dibromoethane	106-93-4	13.66	ND		1.85	20.0
1,2-Dichlorobenzene	95-50-1	0	ND		6.03	20.0
1,3-Dichlorobenzene	541-73-1	0	ND		5.97	20.0
1,4-Dichlorobenzene	106-46-7	0	ND		5.57	20.0
1,2-Dichloroethane	107-06-2	10.59	37.3		6.16	20.0
1,1-Dichloroethane	75-34-3	8.83	ND		5.14	20.0
1,1-Dichloroethene	75-35-4	7.19	106		4.90	20.0
cis-1,2-Dichloroethene	156-59-2	9.54	109		3.89	20.0
trans-1,2-Dichloroethene	156-60-5	8.26	ND		4.64	20.0
1,2-Dichloropropane	78-87-5	11.53	ND		5.99	20.0
cis-1,3-Dichloropropene	10061-01-5	0	ND		5.88	20.0
trans-1,3-Dichloropropene	10061-02-6	0	ND		4.35	20.0
1,4-Dioxane	123-91-1	0	ND		5.54	20.0
Ethanol	64-17-5	6.88	ND		8.32	63.0
Ethylbenzene	100-41-4	14.12	ND		5.06	20.0
4-Ethyltoluene	622-96-8	15.54	ND		6.66	20.0
Trichlorofluoromethane	75-69-4	0	ND		6.73	20.0
Dichlorodifluoromethane	75-71-8	0	ND		6.01	20.0
1,1,2-Trichlorotrifluoroethane	76-13-1	0	ND		6.87	20.0
1,2-Dichlorotetrafluoroethane	76-14-2	0	ND		4.58	20.0
Heptane	142-82-5	10.56	55.9		6.26	20.0
Hexachloro-1,3-butadiene	87-68-3	0	ND		6.56	63.0
n-Hexane	110-54-3	8.46	241		4.57	20.0
Isopropylbenzene	98-82-8	14.99	ND		5.63	20.0
Methylene Chloride	75-09-2	7.95	ND		4.65	20.0
Methyl Butyl Ketone	591-78-6	13.26	157		6.82	125

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS-3

ESC Sample ID:	L988471-03	**SDG:**	L988471
Client Sample ID:	SS-3	**Collected Date/Time:**	04/23/18 11:02
Lab File ID:	0427_08	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS4	**Preparation Date/Time:**	04/27/18 13:35
Analytical Batch:	WG1103966	**Analysis Date/Time:**	04/27/18 13:35
Dilution Factor:	100	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	4 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	RT	Result	Qualifier	MDL	RDL
			ppbv		*ppbv*	*ppbv*
2-Butanone (MEK)	78-93-3	9.57	ND		4.93	125
4-Methyl-2-pentanone (MIBK)	108-10-1	0	ND		6.50	125
Methyl methacrylate	80-62-6	0	ND		7.73	20.0
MTBE	1634-04-4	0	ND		5.05	20.0
Naphthalene	91-20-3	0	ND		15.4	63.0
2-Propanol	67-63-0	7.62	ND		8.82	125
Propene	115-07-1	4.16	232		9.32	40.0
Styrene	100-42-5	14.67	42.2		4.65	20.0
1,1,2,2-Tetrachloroethane	79-34-5	15.47	55.9		5.76	20.0
Tetrachloroethylene	127-18-4	13.17	3880		4.97	20.0
Tetrahydrofuran	109-99-9	0	ND		5.08	20.0
Toluene	108-88-3	12.64	ND		4.99	20.0
1,2,4-Trichlorobenzene	120-82-1	0	ND		14.8	63.0
1,1,1-Trichloroethane	71-55-6	0	ND		6.65	20.0
1,1,2-Trichloroethane	79-00-5	13.08	82.6		2.87	20.0
Trichloroethylene	79-01-6	11.20	423		5.45	20.0
1,2,4-Trimethylbenzene	95-63-6	16.02	ND		4.83	20.0
1,3,5-Trimethylbenzene	108-67-8	15.60	ND		6.31	20.0
2,2,4-Trimethylpentane	540-84-1	0	ND		4.56	20.0
Vinyl chloride	75-01-4	4.98	1190		4.57	20.0
Vinyl Bromide	593-60-2	0	ND		7.27	20.0
Vinyl acetate	108-05-4	0	ND		6.39	20.0
m&p-Xylene	1330-20-7	14.22	ND		9.46	40.0
o-Xylene	95-47-6	14.61	ND		6.33	20.0

Sample Narrative:

Surrogate failure due to matrix interference.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_08.D
Acq On : 27 Apr 2018 1:35 pm
Operator : 564
Sample : L988471-03 100x WG1103966
Misc :
ALS Vial : 8 Sample Multiplier: 100

Quant Time: Apr 28 08:33:53 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:45:42 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	9.828	130	1237591	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	10.901	114	4558944	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	14.039	117	2369804	4.0000000	ppbv	# 0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	15.247	95	3509422	11.2626203	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 281.57%#			
Target Compounds						Qvalue
2) Propene	4.159	41	193287	231.7720870	ppbv	89
3) 1,1-DIFLUOROETHANE	4.185	51	100545	119.7193878	ppbv #	74
5) CHLORODIFLUOROMETHANE	4.185	51	100551	123.7243664	ppbv #	63
8) Vinyl Chloride	4.983	62	2375357	1187.4996748	ppbv	99
14) Ethanol	6.884	45	23689m	47.5191642	ppbv	
16) 1,1-Dichloroethene	7.190	61	298283	106.4507417	ppbv	95
17) Acetone	7.369	43	595174	344.4974092	ppbv	96
18) 2-Propanol	7.616	45	14289	5.3650040	ppbv #	67
19) Carbon Disulfide	7.542	76	181317	40.2578063	ppbv	94
21) Methylene Chloride	7.954	49	25694	12.1335287	ppbv #	63
22) TERT-BUTYL ALCOHOL	8.097	59	210407	54.9614352	ppbv #	1
24) Trans-1,2-Dichloroethene	8.265	61	36609	16.0721639	ppbv #	1
25) n-Hexane	8.463	57	652317	241.0804231	ppbv	97
26) 1,1-Dichloroethane	8.827	63	44634	12.3178680	ppbv #	65
28) ETHYL ACETATE	9.323	45	17636	35.7974636	ppbv #	1
29) 2-Butanone (MEK)	9.572	72	26724	30.3275754	ppbv #	48
30) cis-1,2-Dichloroethene	9.536	61	333996	109.2782851	ppbv #	78
32) Chloroform	9.869	83	94272	21.4963525	ppbv #	1
33) Cyclohexane	10.070	84	6327324	2311.9751173	ppbv #	48
35) Carbon Tetrachloride	10.227	117	23144	5.0065163	ppbv #	12
38) Benzene	10.501	78	55973	8.2145755	ppbv #	1
39) 1,2-Dichloroethane	10.589	62	82079	37.2550975	ppbv	95
40) Heptane	10.565	43	184417	55.9259252	ppbv #	1
41) Trichloroethene	11.201	95	1329385	422.9290124	ppbv	97
43) METHYL CYCLOHEXANE	11.355	83	25915579	6513.0783483	ppbv #	77
44) 1,2-Dichloropropane	11.531	63	12345	5.0038183	ppbv #	1
50) Toluene	12.638	91	63522	7.9874803	ppbv #	81
52) 1,1,2-Trichloroethane	13.083	97	223081	82.5799571	ppbv #	62
53) Tetrachloroethene	13.169	166	17308657	3878.2428398	ppbv	99
54) Methyl Butyl Ketone	13.255	43	478362	156.7762239	ppbv #	26
56) 1,2-Dibromoethane	13.661	107	12633	3.0650101	ppbv #	1
59) Ethylbenzene	14.116	91	92668	14.0599227	ppbv #	42
60) M&P-Xylene	14.224	91	114329	22.4121063	ppbv #	50
61) O-Xylene	14.615	91	82030	15.5607566	ppbv #	27
62) Styrene	14.675	104	168314	42.1724681	ppbv #	24
64) Isopropylbenzene	14.989	105	13468	1.7982487	ppbv #	1
65) 1,1,2,2-Tetrachloroethane	15.467	83	247076	55.9384891	ppbv	91
66) n-Propylbenzene	15.463	91	144707	16.9325543	ppbv #	52
67) 4-Ethyltoluene	15.543	105	20391	2.7542955	ppbv #	44
68) 2-Chlorotoluene	15.462	126	31127	15.1495945	ppbv	85
70) 1,3,5-Trimethylbenzene	15.603	105	15290	2.4521034	ppbv #	26
71) Tert-Butylbenzene	15.951	119	23518	3.9547685	ppbv #	29
72) 1,2,4-Trimethylbenzene	16.021	105	65157	10.7016225	ppbv	94
76) 1,2,3-TRIMETHYLBENZENE	16.477	105	20462	3.4304897	ppbv #	31
84) TPH (GC/MS) Low Fraction	13.890	TIC	2101173141m	187384.0612043	ppbv	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_08.D
Acq On : 27 Apr 2018 1:35 pm
Operator : 564
Sample : L988471-03 100x WG1103966
Misc :
ALS Vial : 8 Sample Multiplier: 100

Quant Time: Apr 28 08:33:53 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:45:42 2018
Response via : Initial Calibration

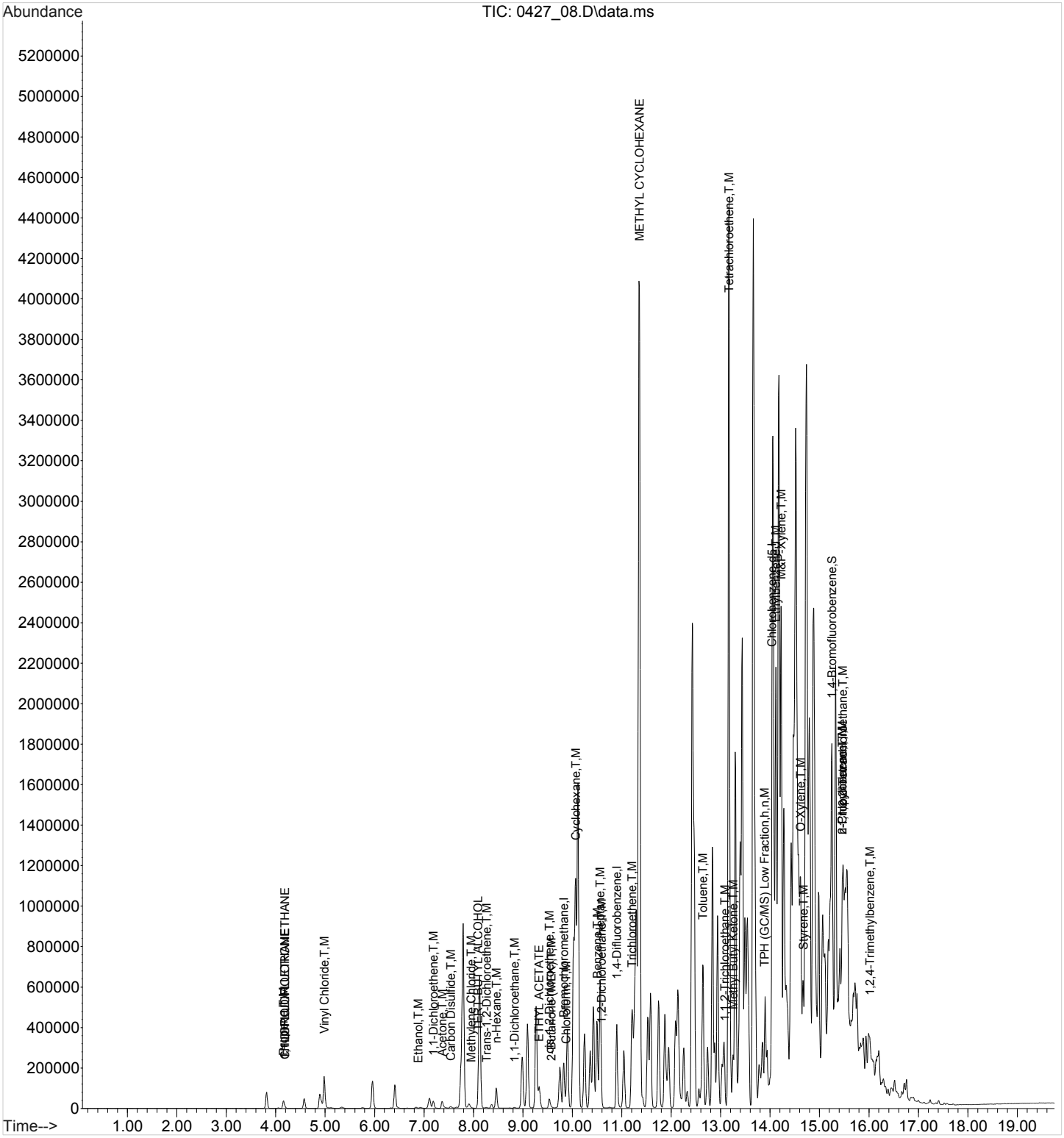
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

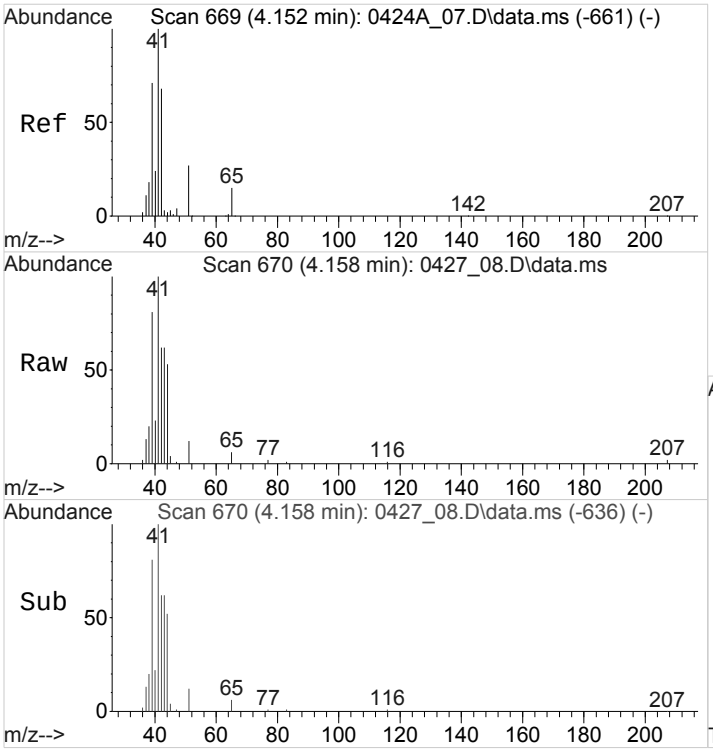
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_08.D
Acq On : 27 Apr 2018 1:35 pm
Operator : 564
Sample : L988471-03 100x WG1103966
Misc :
ALS Vial : 8 Sample Multiplier: 100

Quant Time: Apr 28 08:33:53 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:45:42 2018
Response via : Initial Calibration

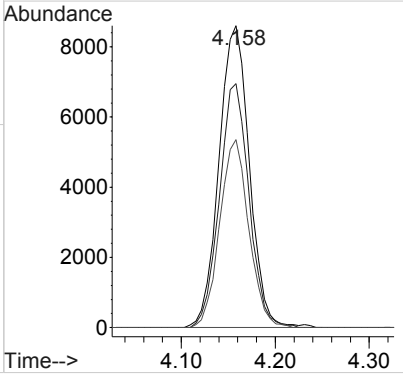


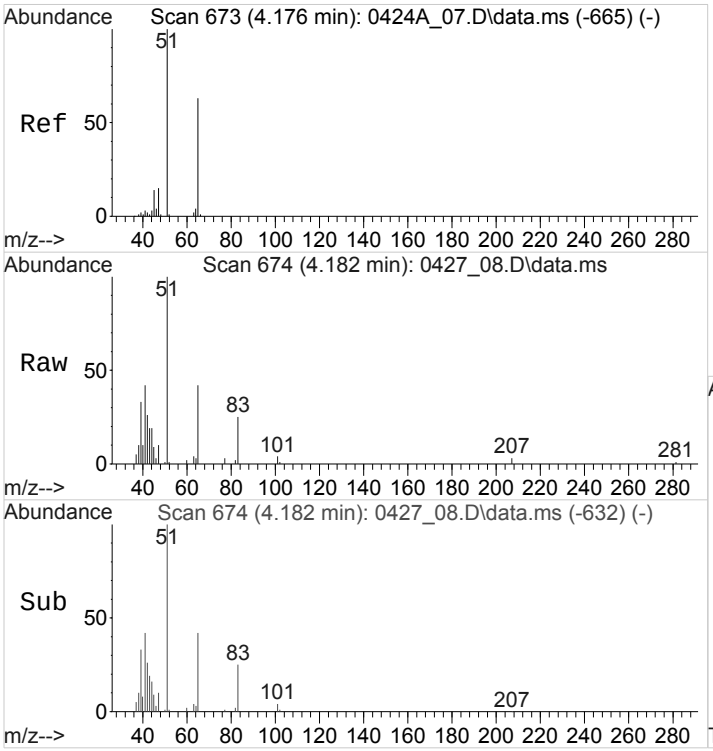


#2
Propene
Concen: 231.7720870 ppbv
RT: 4.159 min Scan# 670
Delta R.T. 0.005 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

Tgt Ion: 41 Resp: 193287

Ion	Ratio	Lower	Upper
41	100		
39	78.4	55.5	83.3
42	59.6	54.4	81.6

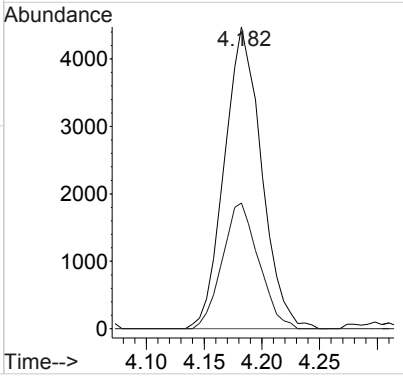


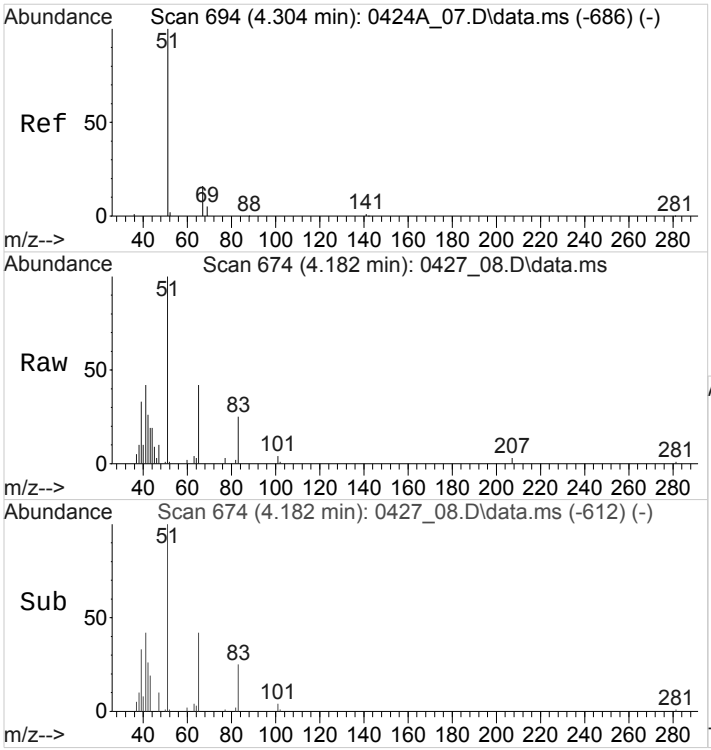


#3
1,1-DIFLUOROETHANE
Concen: 119.7193878 ppbv
RT: 4.185 min Scan# 674
Delta R.T. 0.007 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

Tgt Ion: 51 Resp: 100545

Ion	Ratio	Lower	Upper
51	100		
65	40.9	48.7	73.1#

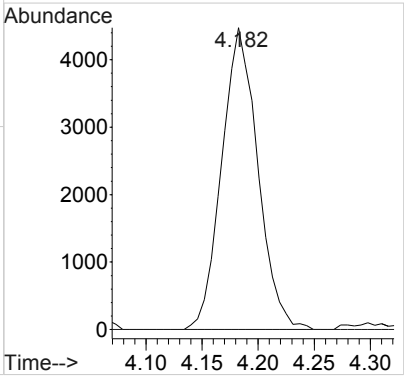


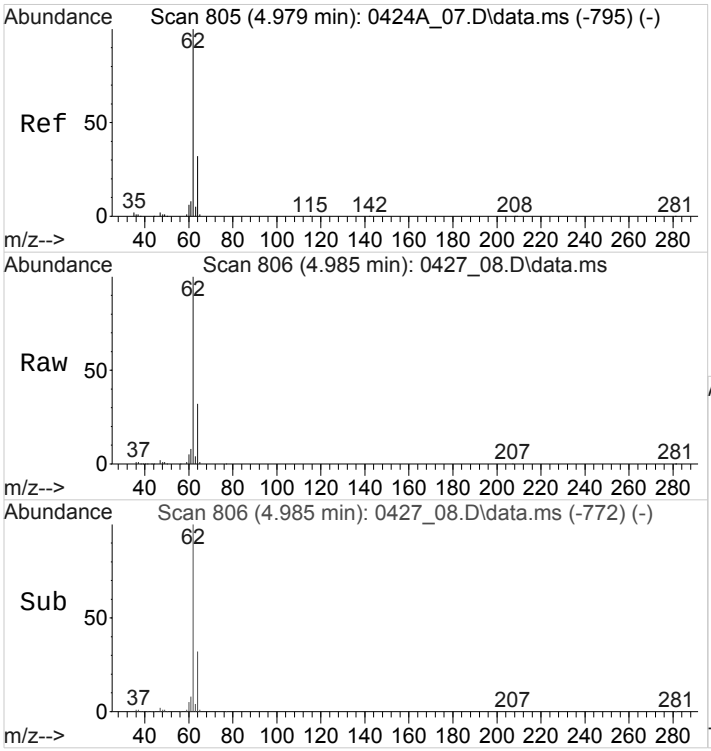


#5
CHLORODIFLUOROMETHANE
Concen: 123.7243664 ppbv
RT: 4.185 min Scan# 674
Delta R.T. -0.120 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

Tgt Ion: 51 Resp: 100551

Ion	Ratio	Lower	Upper
51	100		
67	0.0	12.5	18.7#

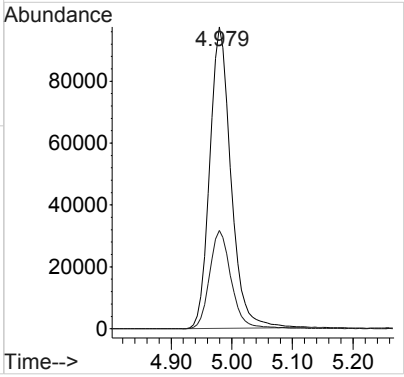


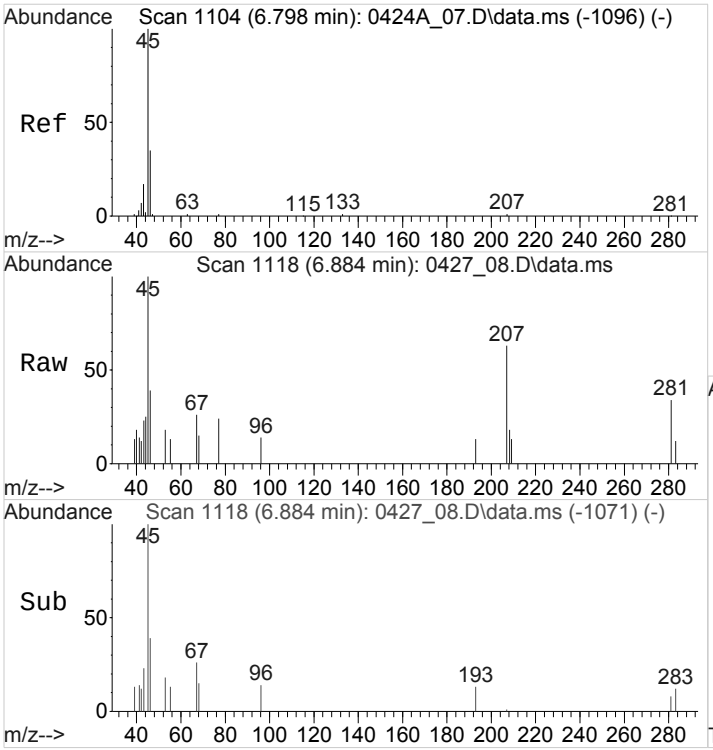


#8
Vinyl Chloride
Concen: 1187.4996748 ppbv
RT: 4.983 min Scan# 806
Delta R.T. 0.005 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

Tgt Ion: 62 Resp: 2375357

Ion	Ratio	Lower	Upper
62	100		
64	32.7	25.7	38.5

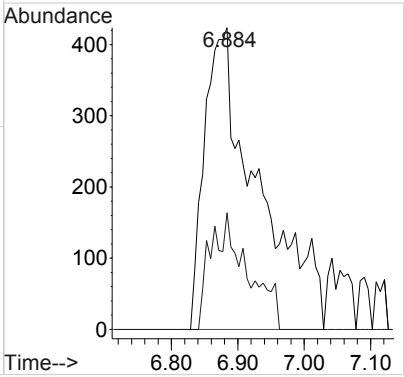


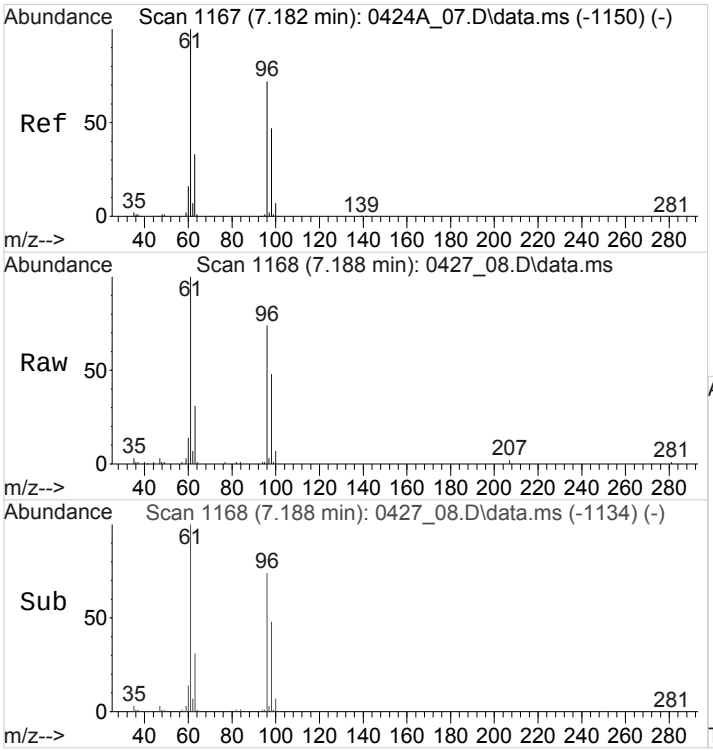


#14
Ethanol
Concen: 47.5191642 ppbv m
RT: 6.884 min Scan# 1118
Delta R.T. 0.086 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

Tgt Ion: 45 Resp: 23689

Ion	Ratio	Lower	Upper
45	100		
46	0.0	29.5	44.3#

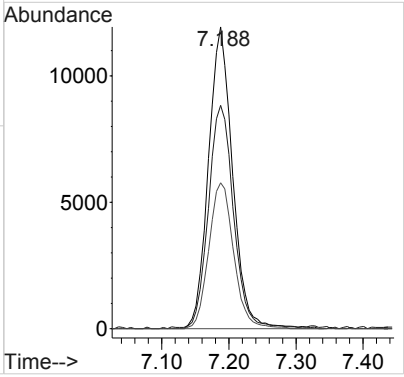


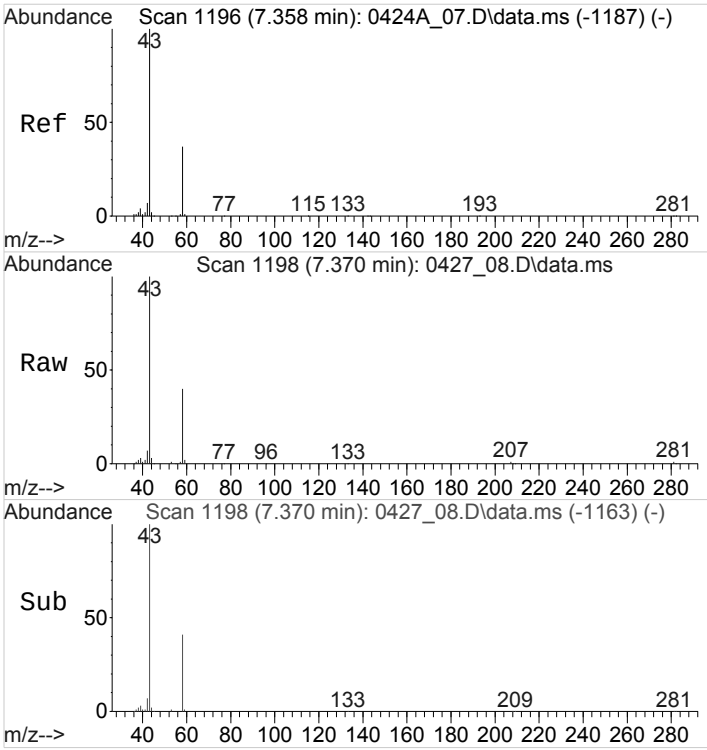


#16
1,1-Dichloroethene
Concen: 106.4507417 ppbv
RT: 7.190 min Scan# 1168
Delta R.T. 0.008 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

Tgt Ion: 61 Resp: 298283

Ion	Ratio	Lower	Upper
61	100		
96	75.1	57.3	85.9
98	49.8	37.0	55.6

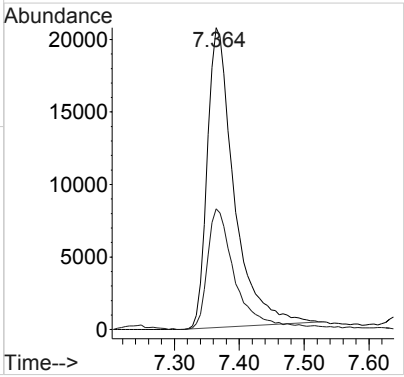


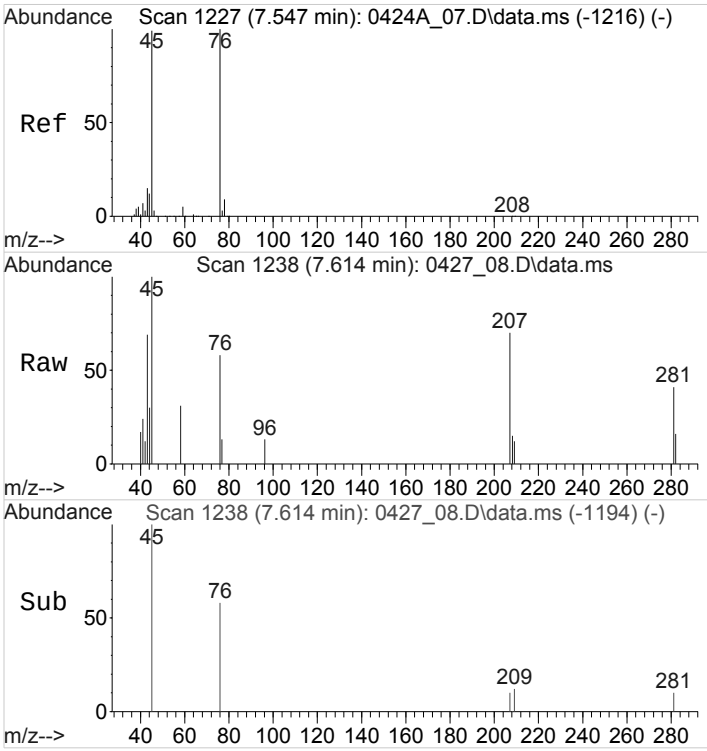


#17
Acetone
Concen: 344.4974092 ppbv
RT: 7.369 min Scan# 1198
Delta R.T. 0.010 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

Tgt Ion: 43 Resp: 595174

Ion	Ratio	Lower	Upper
43	100		
58	40.1	30.2	45.4

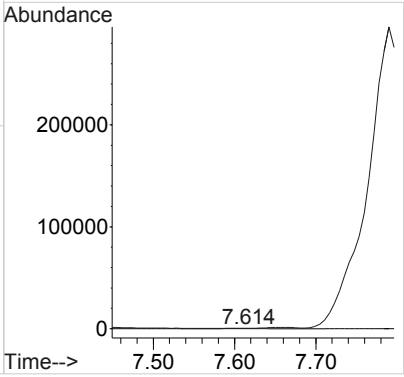


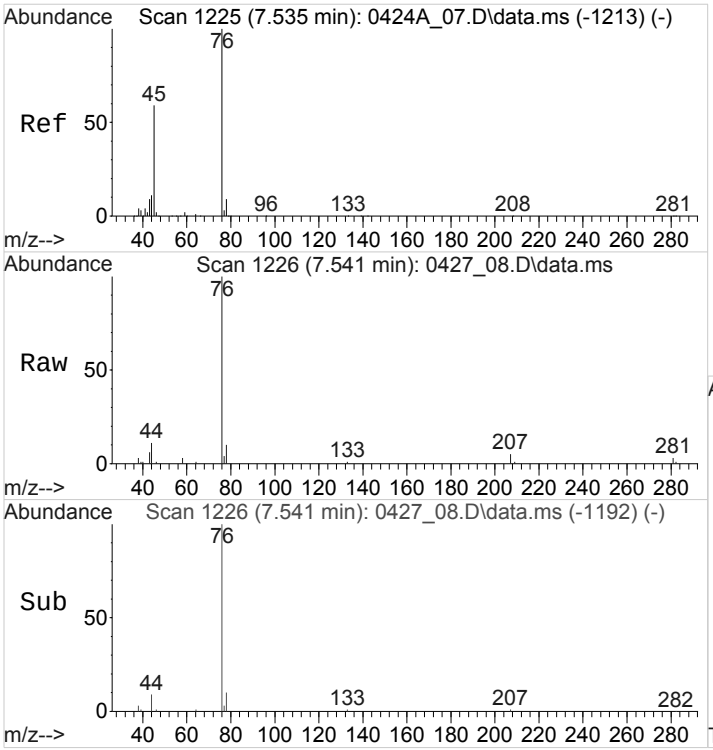


#18
2-Propanol
Concen: 5.3650040 ppbv
RT: 7.616 min Scan# 1238
Delta R.T. 0.071 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

Tgt Ion: 45 Resp: 14289

Ion	Ratio	Lower	Upper
45	100		
43	0.0	10.3	15.5#

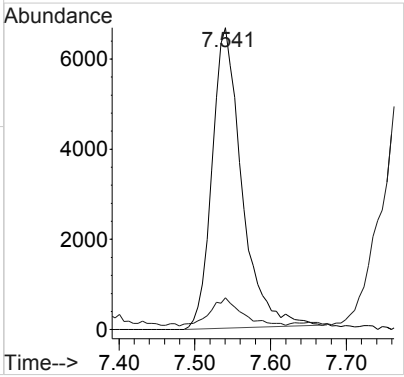


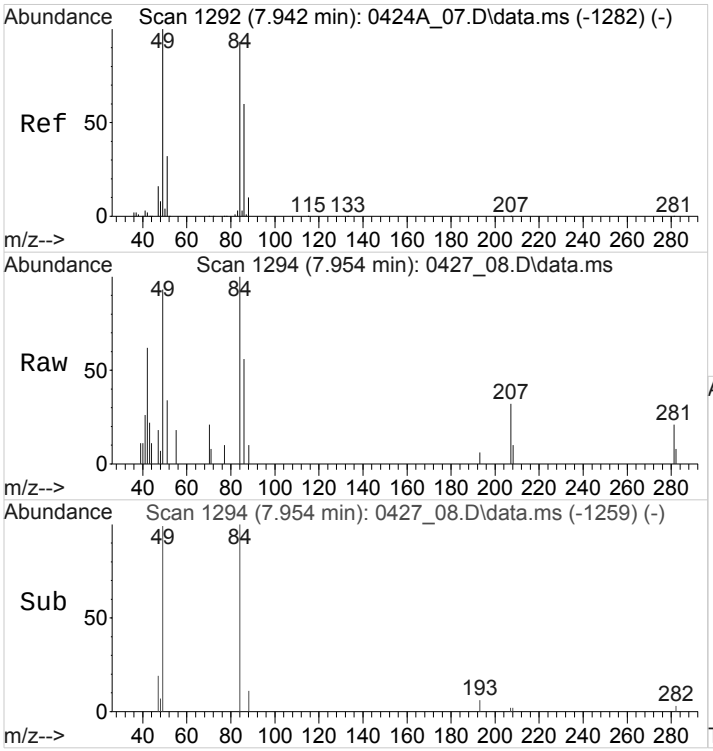


#19
Carbon Disulfide
Concen: 40.2578063 ppbv
RT: 7.542 min Scan# 1226
Delta R.T. 0.010 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

Tgt Ion: 76 Resp: 181317

Ion	Ratio	Lower	Upper
76	100		
44	9.0	8.9	13.3

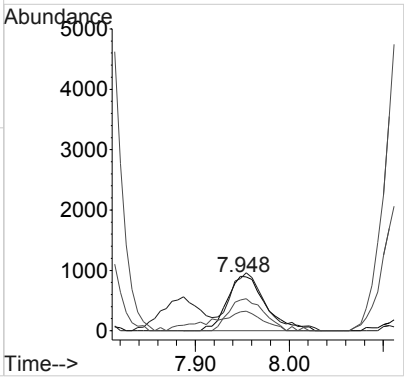


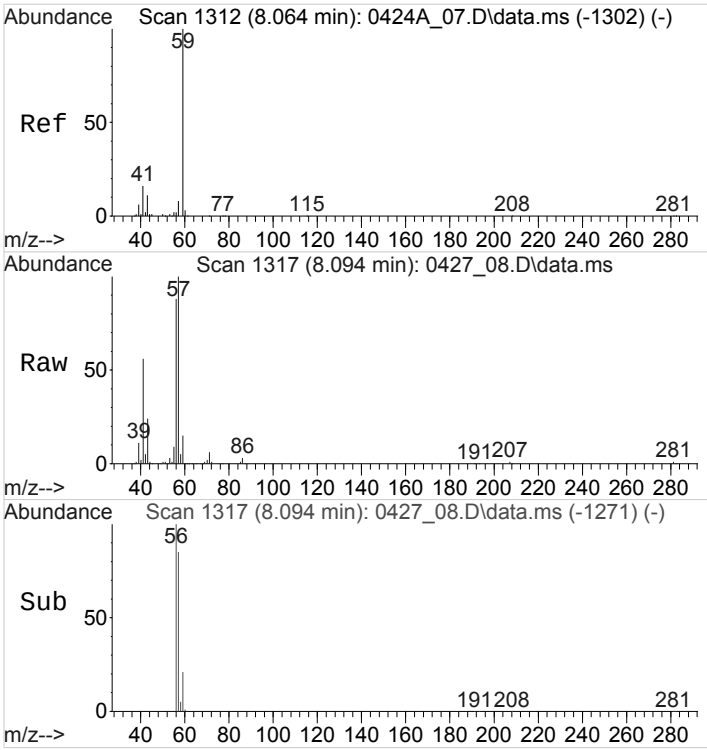


#21
Methylene Chloride
Concen: 12.1335287 ppbv
RT: 7.954 min Scan# 1294
Delta R.T. 0.014 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

Tgt Ion: 49 Resp: 25694

Ion	Ratio	Lower	Upper
49	100		
84	93.9	71.2	106.8
86	0.0	45.8	68.6#
51	0.0	24.6	36.8#

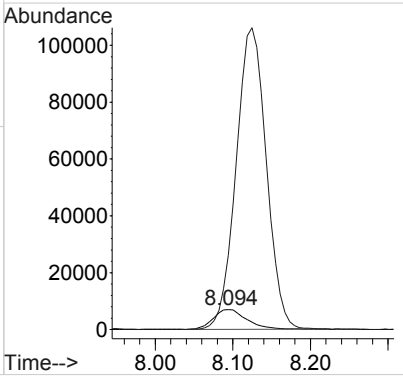


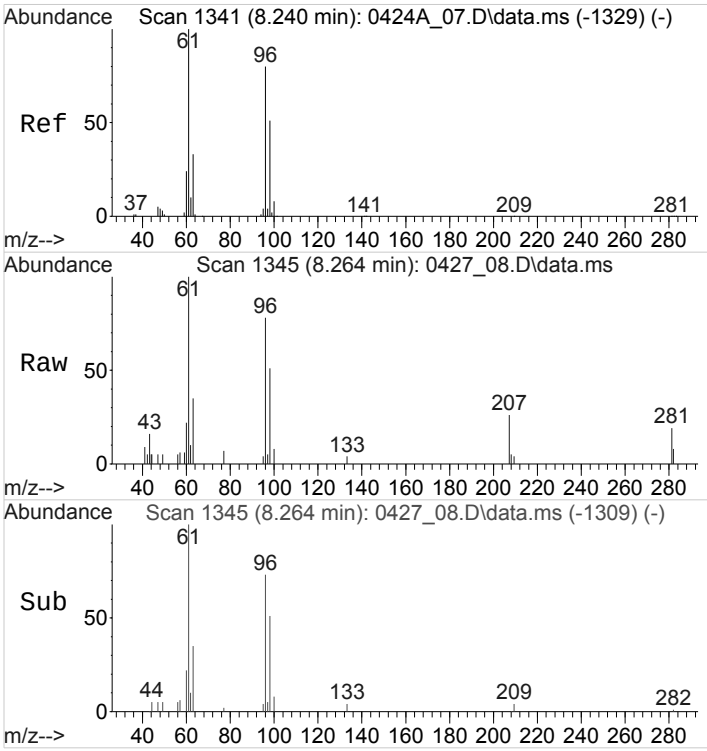


#22
TERT-BUTYL ALCOHOL
Concen: 54.9614352 ppbv
RT: 8.097 min Scan# 1317
Delta R.T. 0.031 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

Tgt Ion: 59 Resp: 210407

Ion	Ratio	Lower	Upper
59	100		
41	1365.5	13.0	19.6#

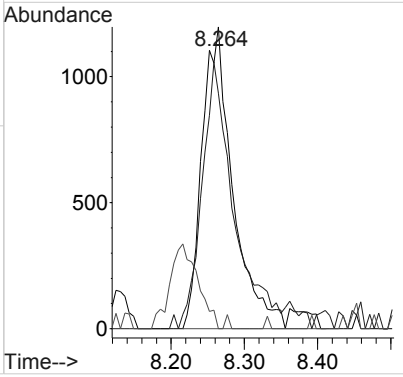


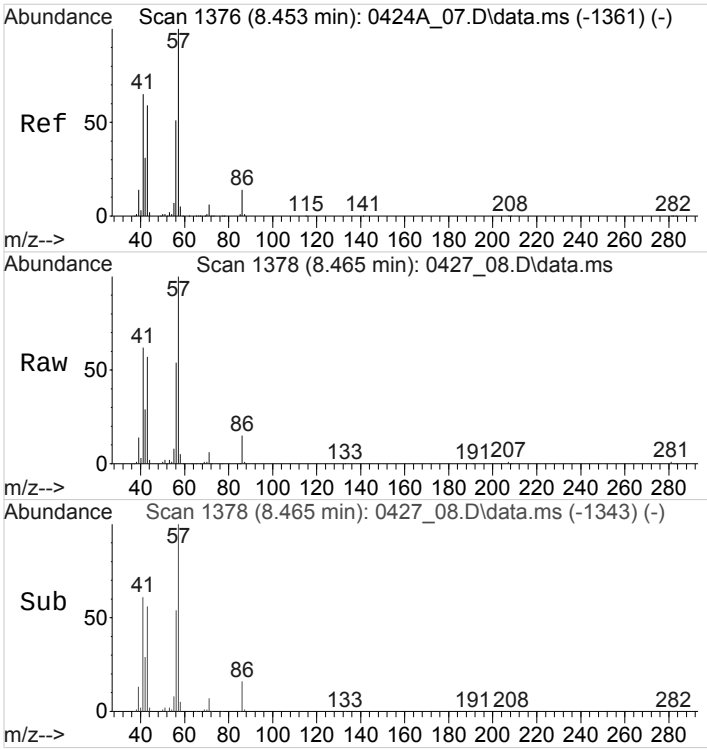


#24
Trans-1,2-Dichloroethene
Concen: 16.0721639 ppbv
RT: 8.265 min Scan# 1345
Delta R.T. 0.022 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

Tgt Ion: 61 Resp: 36609

Ion	Ratio	Lower	Upper
61	100		
96	76.2	62.8	94.2
73	0.0	176.6	265.0#

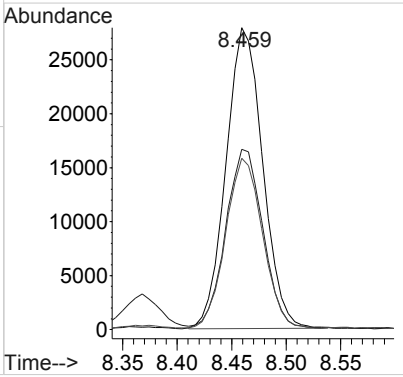


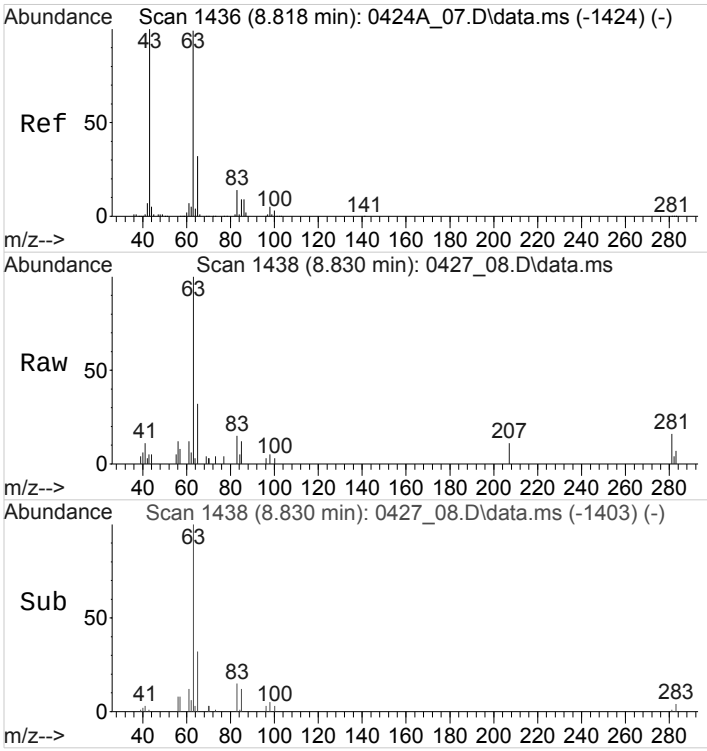


#25
n-Hexane
Concen: 241.0804231 ppbv
RT: 8.463 min Scan# 1378
Delta R.T. 0.009 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

Tgt Ion: 57 Resp: 652317

Ion	Ratio	Lower	Upper
57	100		
41	60.6	50.1	75.1
43	56.6	47.4	71.2

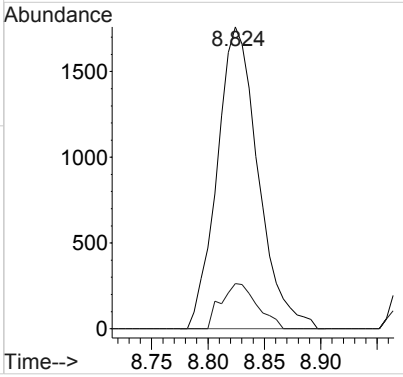


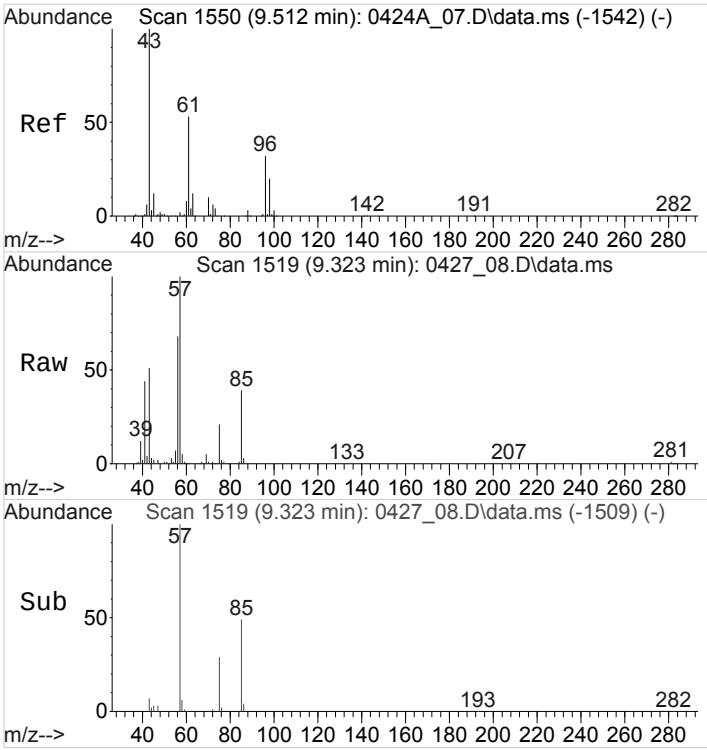


#26
1,1-Dichloroethane
Concen: 12.3178680 ppbv
RT: 8.827 min Scan# 1438
Delta R.T. 0.007 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

Tgt Ion: 63 Resp: 44634

Ion	Ratio	Lower	Upper
63	100		
83	0.0	11.4	17.2#

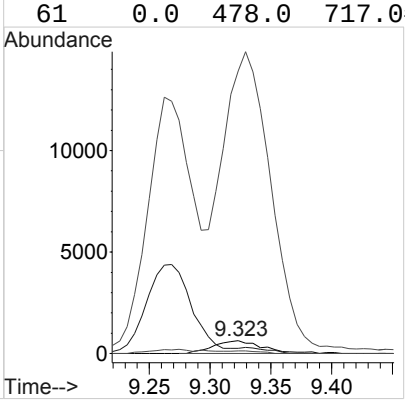


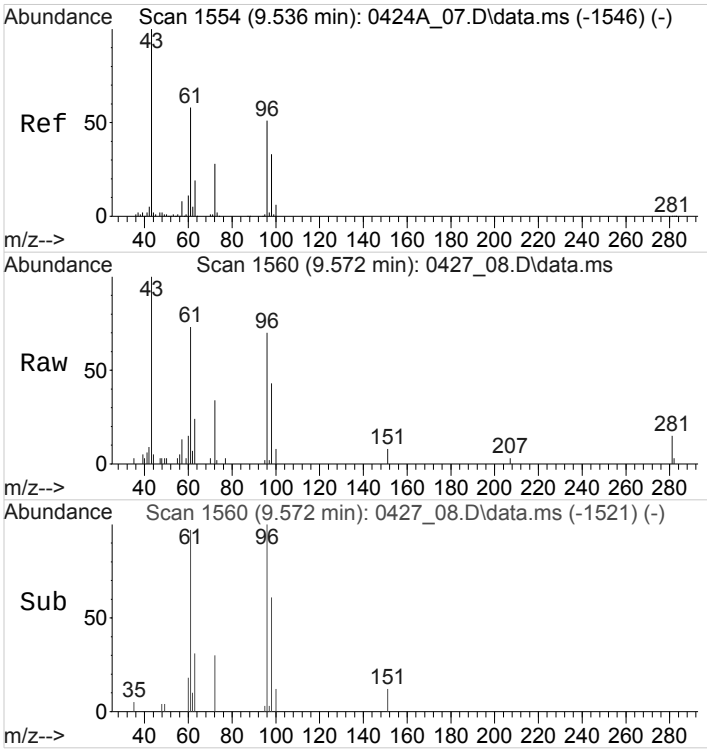


#28
ETHYL ACETATE
Concen: 35.7974636 ppbv
RT: 9.323 min Scan# 1519
Delta R.T. -0.191 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

Tgt Ion: 45 Resp: 17636

Ion	Ratio	Lower	Upper
45	100		
70	0.0	69.6	104.4#
43	0.0	1010.4	1515.6#
61	0.0	478.0	717.0#

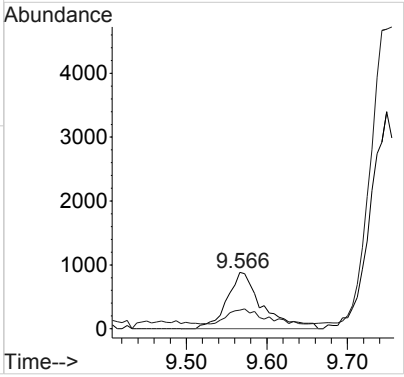


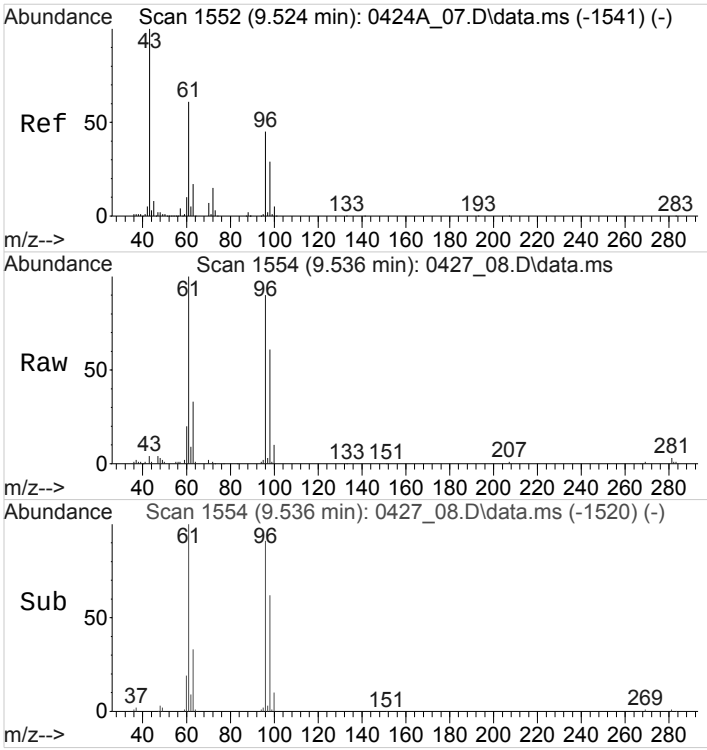


#29
2-Butanone (MEK)
Concen: 30.3275754 ppbv
RT: 9.572 min Scan# 1560
Delta R.T. 0.034 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

Tgt Ion: 72 Resp: 26724

Ion	Ratio	Lower	Upper
72	100		
57	0.0	21.7	32.5#

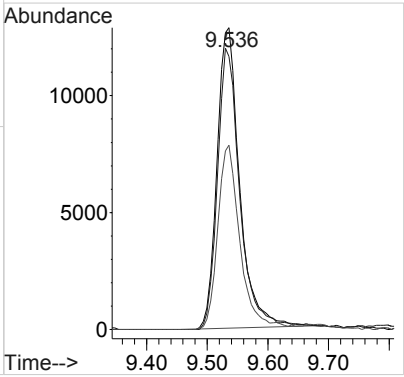


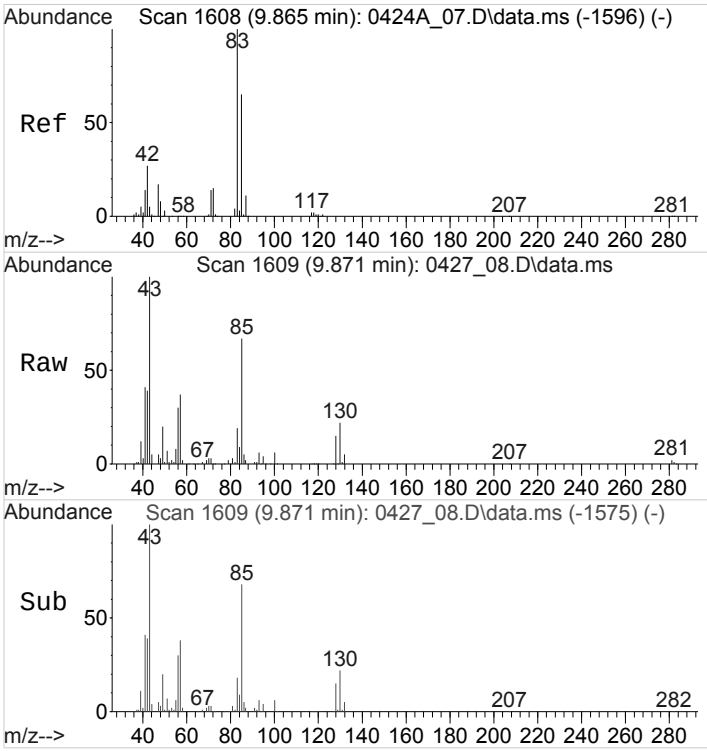


#30
cis-1,2-Dichloroethene
Concen: 109.2782851 ppbv
RT: 9.536 min Scan# 1554
Delta R.T. 0.010 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

Tgt Ion: 61 Resp: 333996

Ion	Ratio	Lower	Upper
61	100		
96	90.6	56.9	85.3#
98	58.4	36.6	54.8#

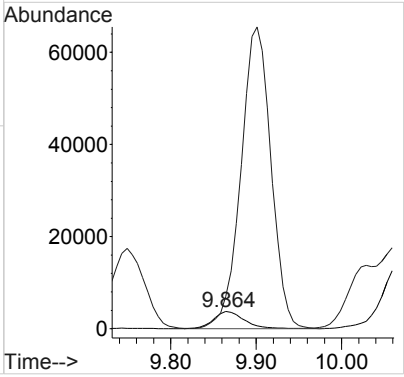


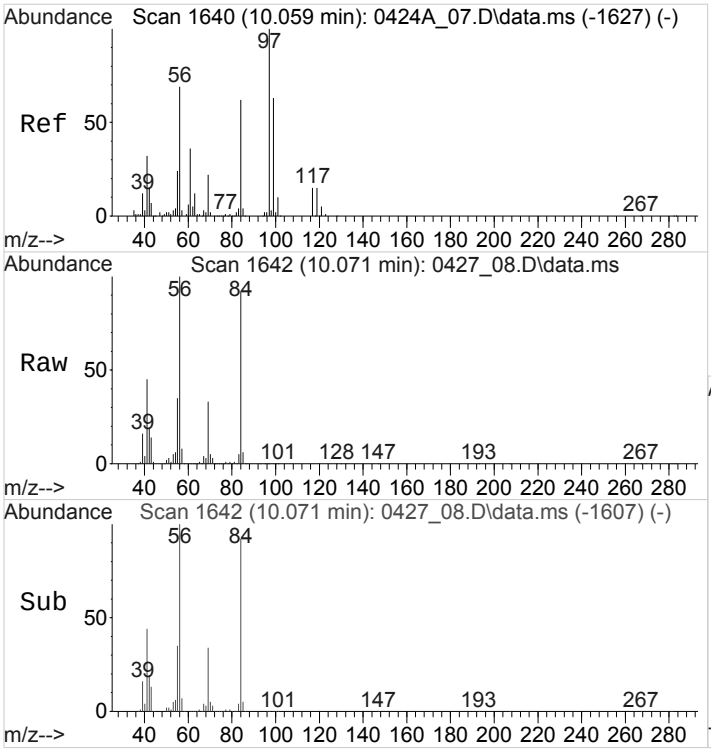


#32
Chloroform
Concen: 21.4963525 ppbv
RT: 9.869 min Scan# 1609
Delta R.T. 0.005 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

Tgt Ion: 83 Resp: 94272

Ion	Ratio	Lower	Upper
83	100		
85	1697.0	52.1	78.1#

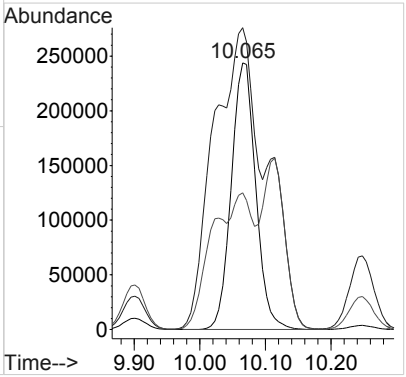


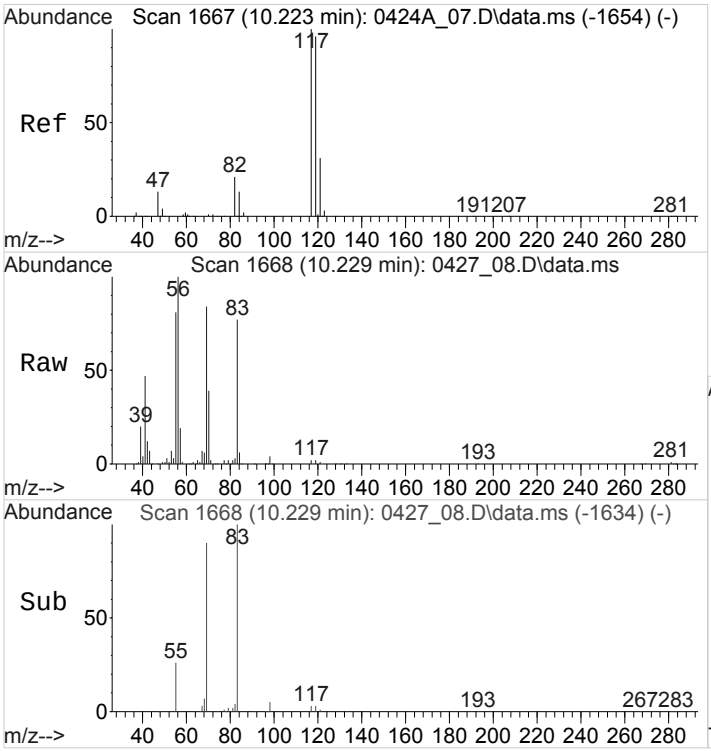


#33
Cyclohexane
Concen: 2311.9751173 ppbv
RT: 10.070 min Scan# 1642
Delta R.T. 0.009 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

Tgt Ion: 84 Resp: 6327324

Ion	Ratio	Lower	Upper
84	100		
56	186.9	88.0	132.0#
41	47.4	41.8	62.8

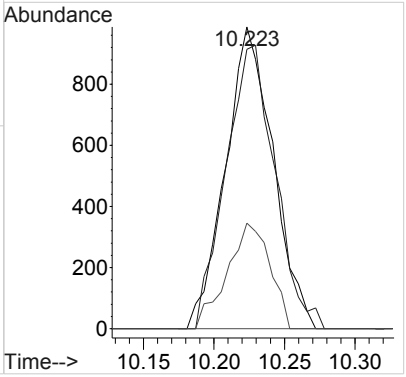


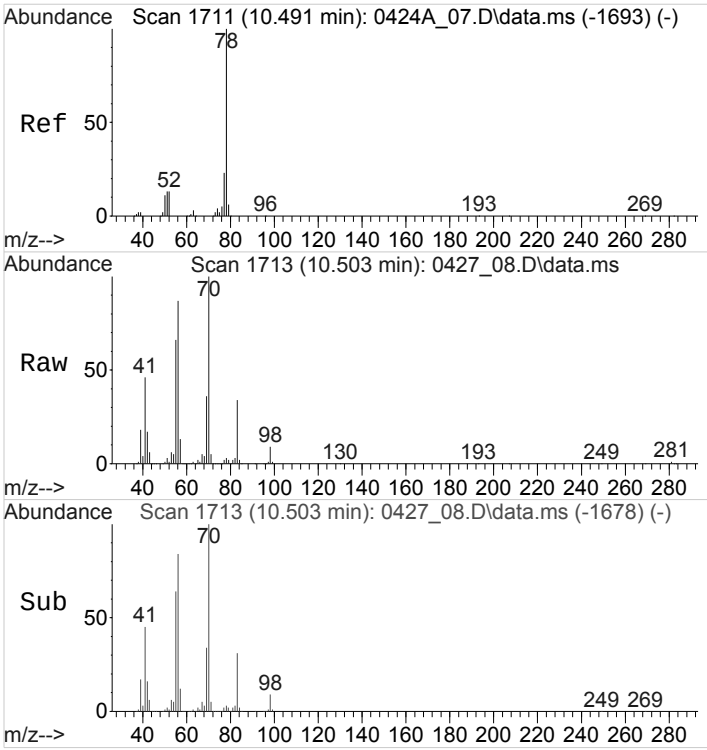


#35
Carbon Tetrachloride
Concen: 5.0065163 ppbv
RT: 10.227 min Scan# 1668
Delta R.T. 0.005 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

Tgt Ion:117 Resp: 23144

Ion	Ratio	Lower	Upper
117	100		
119	0.0	77.0	115.6#
121	0.0	25.1	37.7#

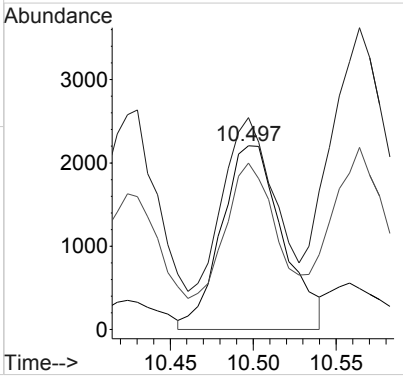


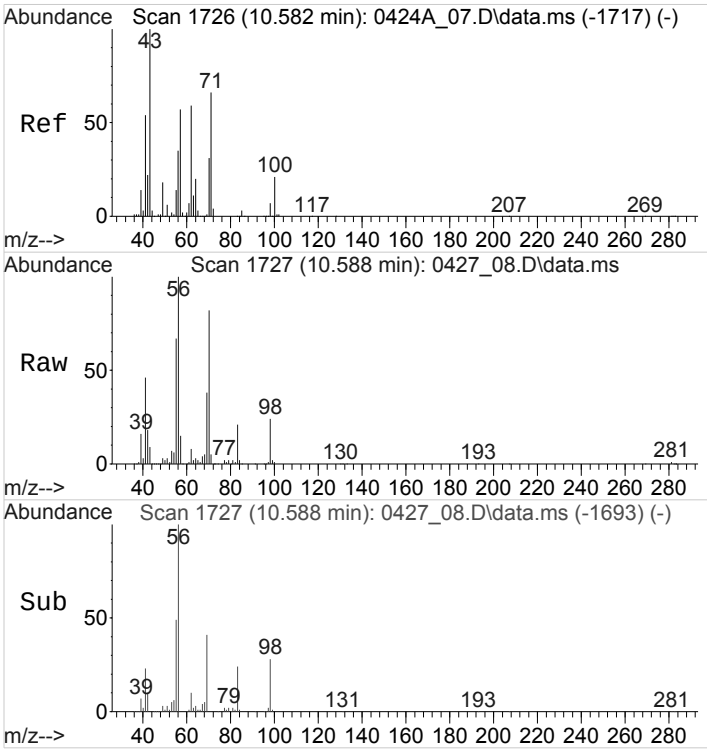


#38
Benzene
Concen: 8.2145755 ppbv
RT: 10.501 min Scan# 1713
Delta R.T. 0.011 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

Tgt Ion: 78 Resp: 55973

Ion	Ratio	Lower	Upper
78	100		
51	103.2	9.9	14.9#
77	80.6	18.3	27.5#

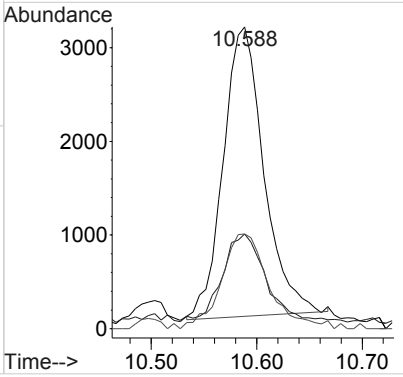


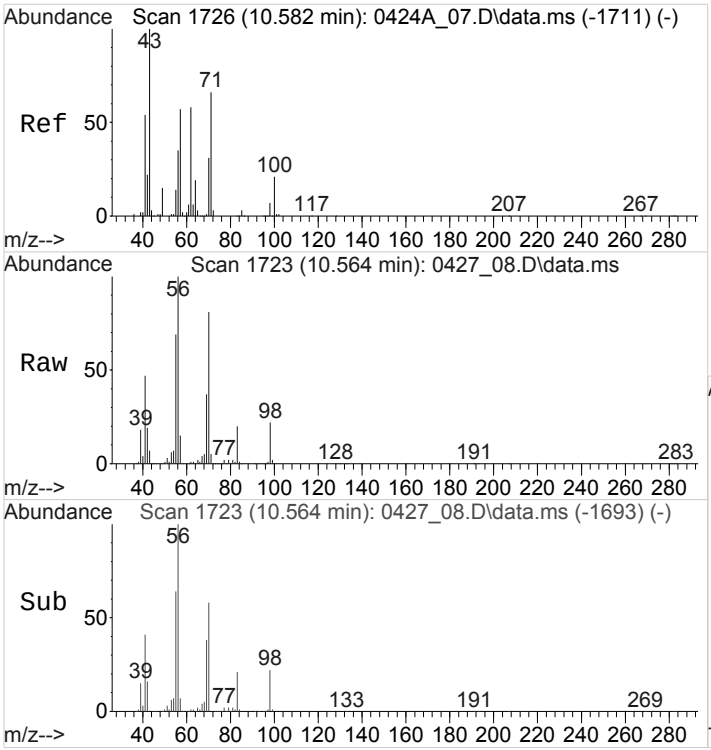


#39
1,2-Dichloroethane
Concen: 37.2550975 ppbv
RT: 10.589 min Scan# 1727
Delta R.T. 0.010 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

Tgt Ion: 62 Resp: 82079

Ion	Ratio	Lower	Upper
62	100		
49	29.9	25.2	37.8
64	37.6	26.6	40.0

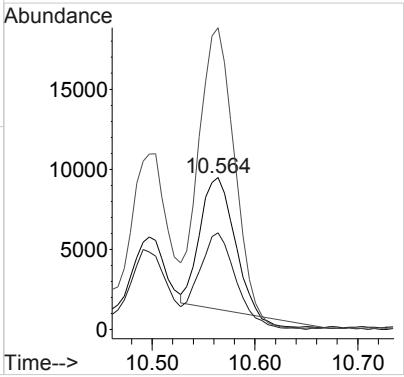


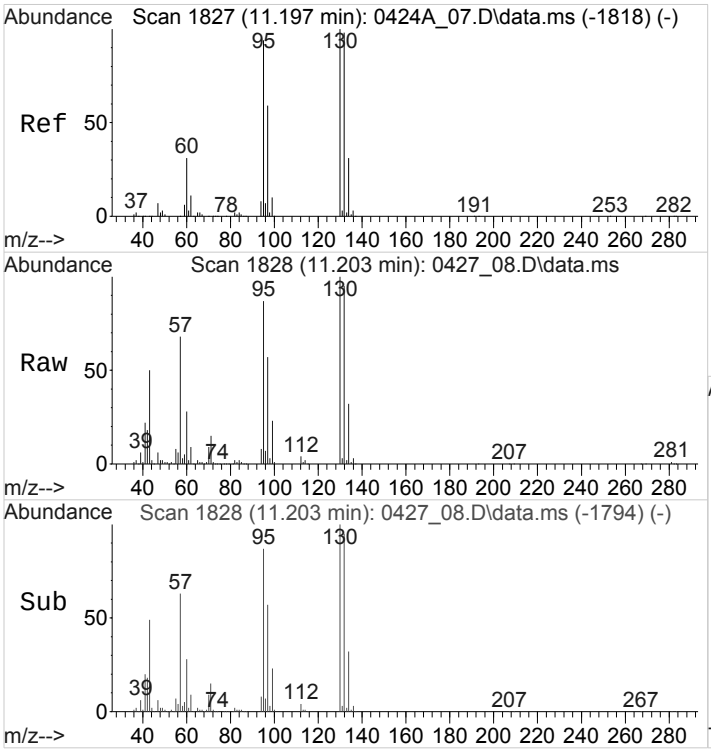


#40
Heptane
Concen: 55.9259252 ppbv
RT: 10.565 min Scan# 1723
Delta R.T. -0.019 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

Tgt Ion: 43 Resp: 184417

Ion	Ratio	Lower	Upper
43	100		
71	70.8	51.1	76.7
57	227.0	45.0	67.6#

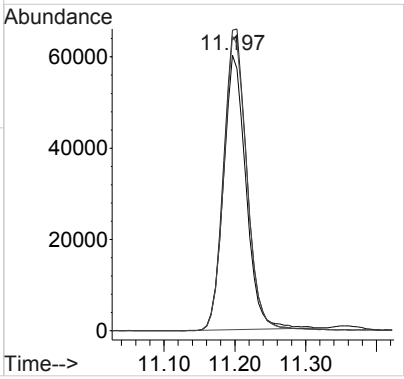


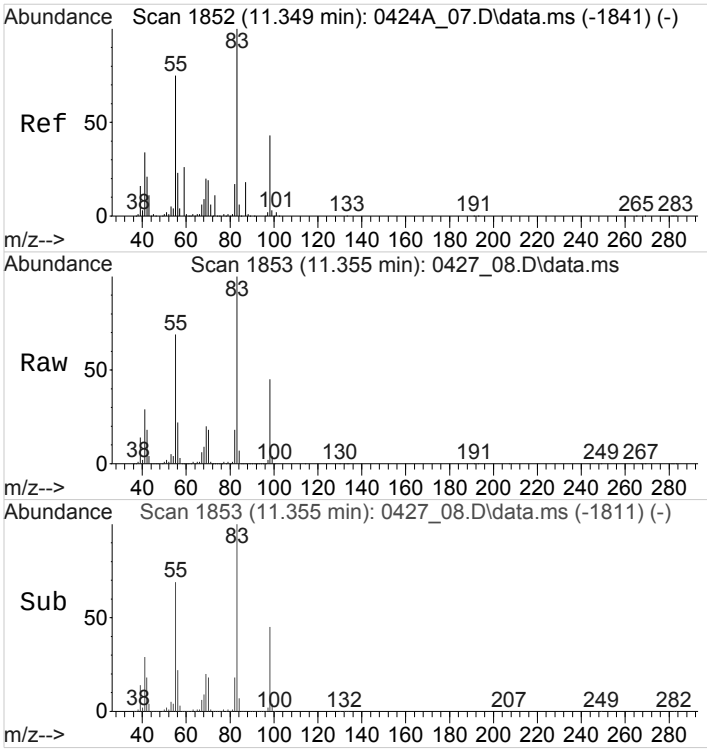


#41
Trichloroethene
Concen: 422.9290124 ppbv
RT: 11.201 min Scan# 1828
Delta R.T. 0.002 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

Tgt Ion: 95 Resp: 1329385

Ion	Ratio	Lower	Upper
95	100		
130	111.8	87.4	131.2
132	108.5	84.4	126.6

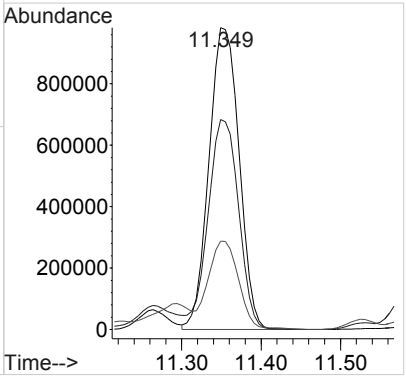


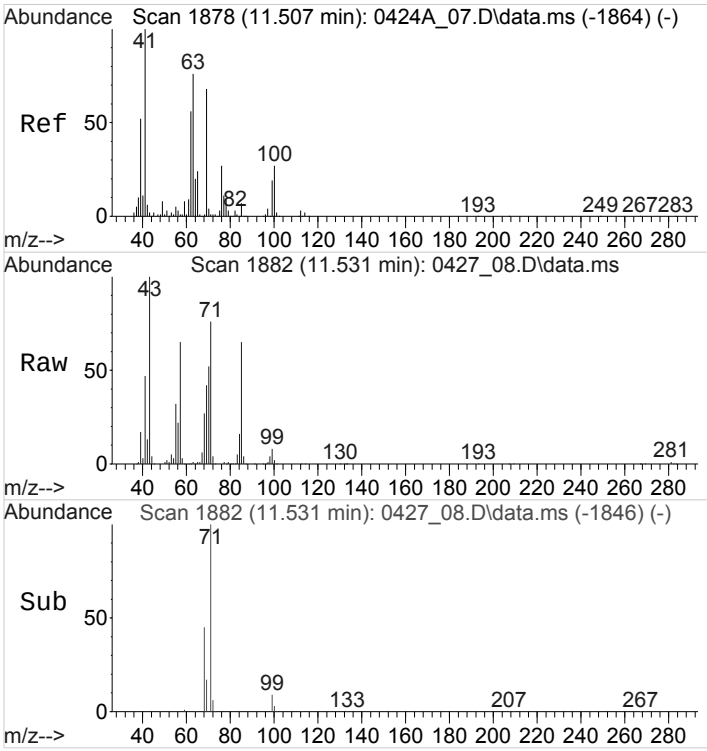


#43
METHYL CYCLOHEXANE
Concen: 6513.0783483 ppbv
RT: 11.355 min Scan# 1853
Delta R.T. 0.007 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

Tgt Ion: 83 Resp:25915579

Ion	Ratio	Lower	Upper
83	100		
55	70.9	74.5	111.7#
41	30.1	35.1	52.7#

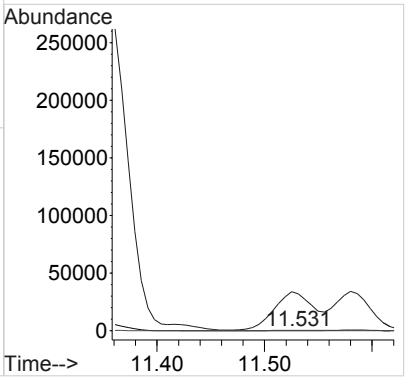


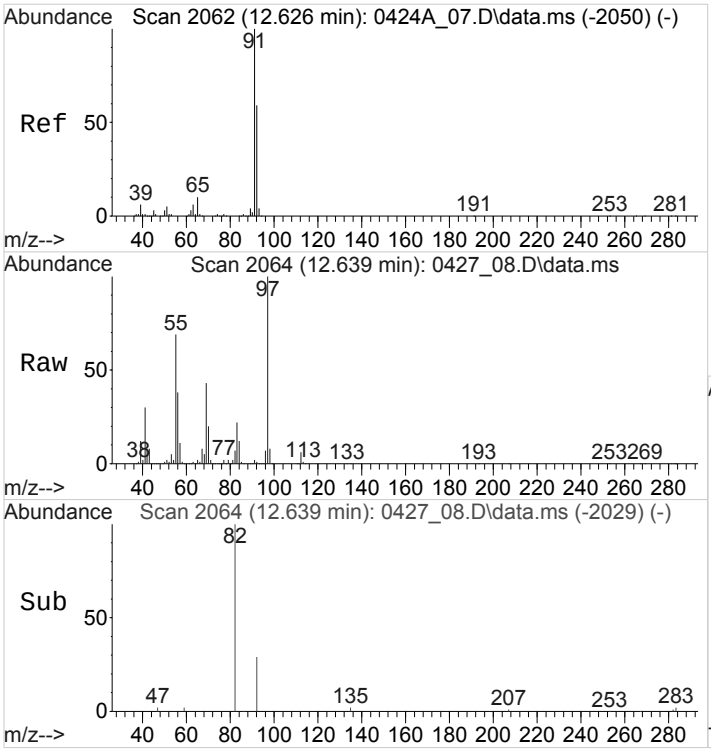


#44
1,2-Dichloropropane
Concen: 5.0038183 ppbv
RT: 11.531 min Scan# 1882
Delta R.T. 0.021 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

Tgt Ion: 63 Resp: 12345

Ion	Ratio	Lower	Upper
63	100		
41	6544.3	100.3	150.5#
76	0.0	28.2	42.4#

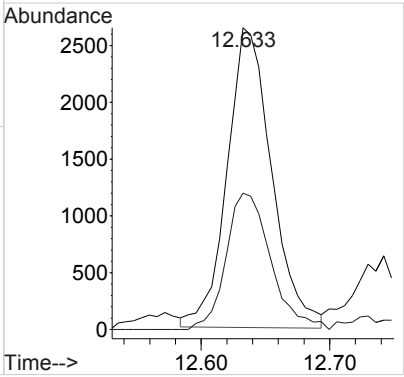


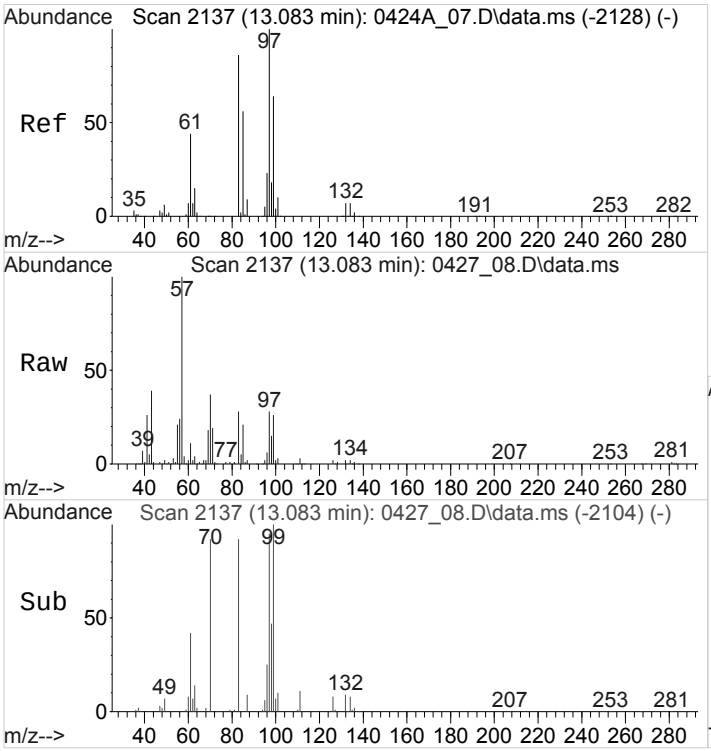


#50
Toluene
Concen: 7.9874803 ppbv
RT: 12.638 min Scan# 2064
Delta R.T. 0.014 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

Tgt Ion: 91 Resp: 63522

Ion	Ratio	Lower	Upper
91	100		
92	44.4	47.0	70.6#

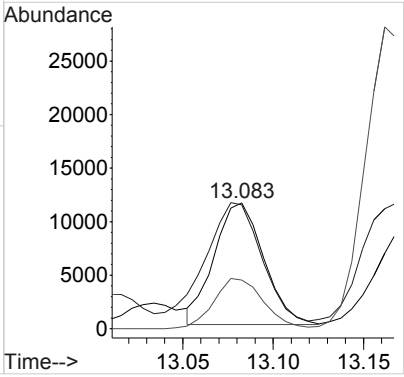


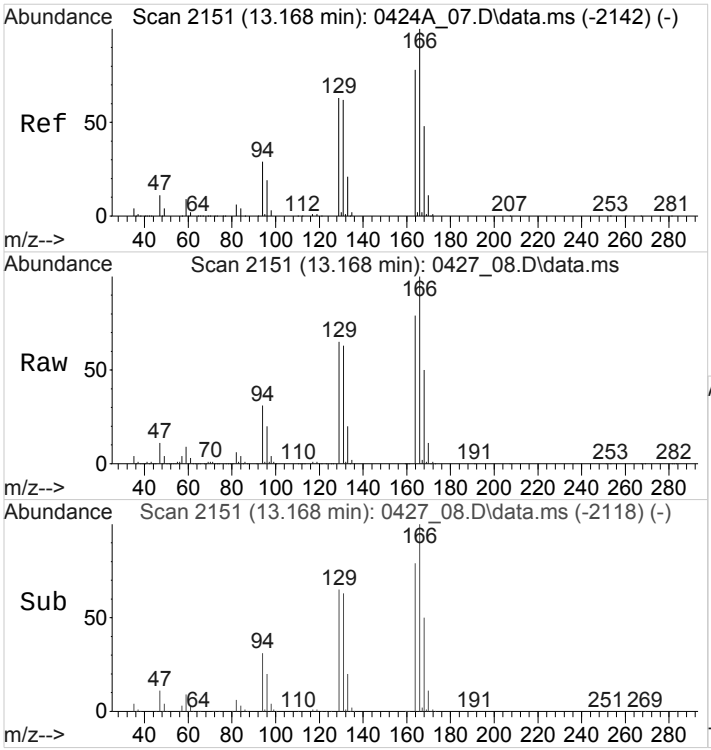


#52
1,1,2-Trichloroethane
Concen: 82.5799571 ppbv
RT: 13.083 min Scan# 2137
Delta R.T. 0.002 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

Tgt Ion: 97 Resp: 223081

Ion	Ratio	Lower	Upper
97	100		
83	104.3	67.0	100.4#
61	0.0	35.4	53.0#

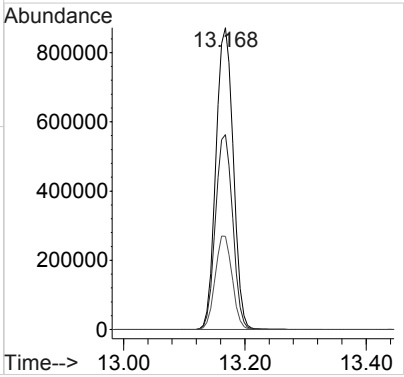


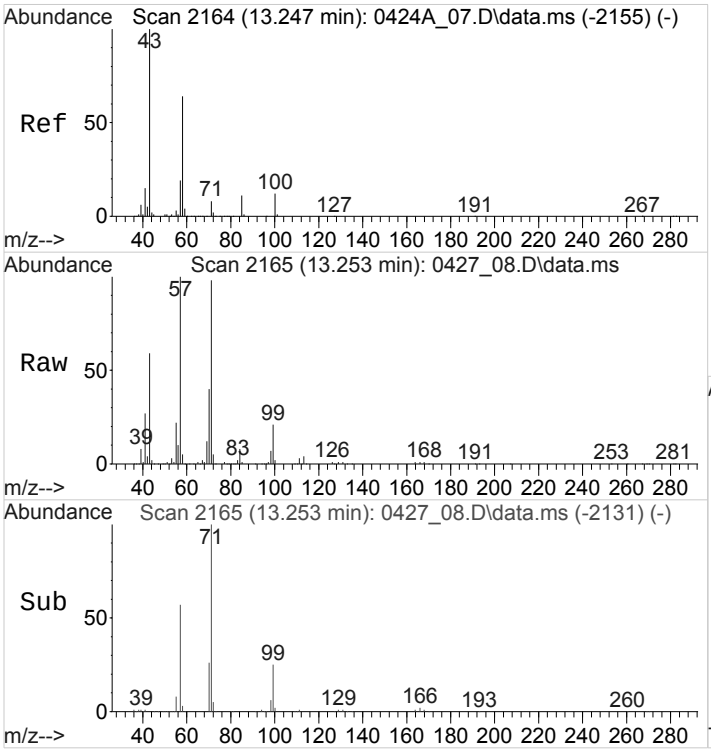


#53
Tetrachloroethene
Concen: 3878.2428398 ppbv
RT: 13.169 min Scan# 2151
Delta R.T. 0.004 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

Tgt Ion:166 Resp:17308657

Ion	Ratio	Lower	Upper
166	100		
129	64.1	51.8	77.8
94	30.3	24.6	36.8

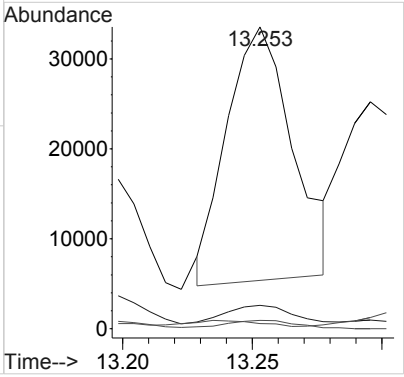


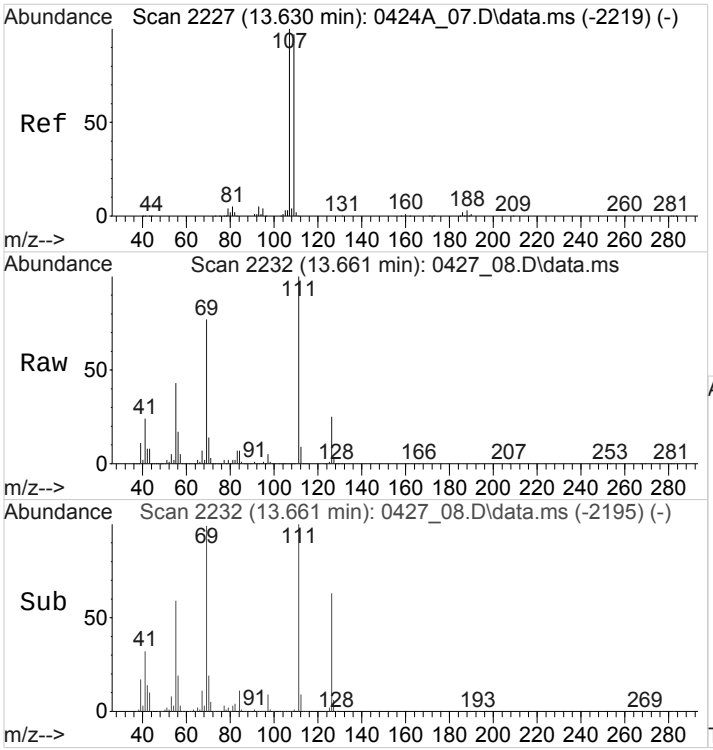


#54
Methyl Butyl Ketone
Concen: 156.7762239 ppbv
RT: 13.255 min Scan# 2165
Delta R.T. 0.009 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

Tgt Ion: 43 Resp: 478362

Ion	Ratio	Lower	Upper
43	100		
58	0.0	51.3	76.9#
85	0.0	0.0	0.0
100	0.0	9.2	13.8#

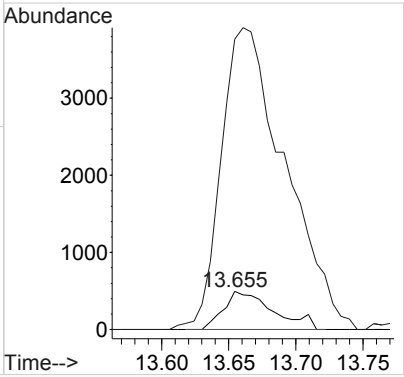


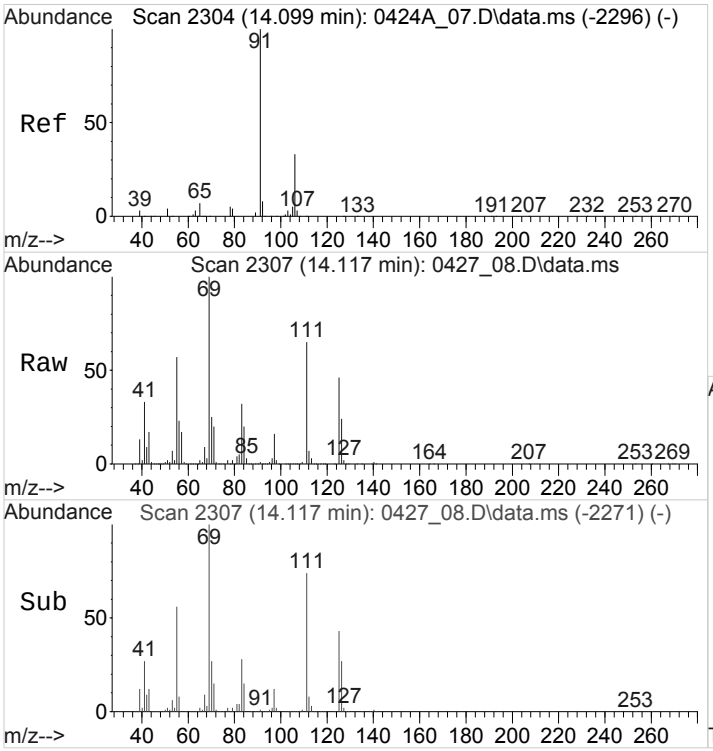


#56
1,2-Dibromoethane
Concen: 3.0650101 ppbv
RT: 13.661 min Scan# 2232
Delta R.T. 0.028 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

Tgt Ion:107 Resp: 12633

Ion	Ratio	Lower	Upper
107	100		
109	1026.6	76.2	114.2#

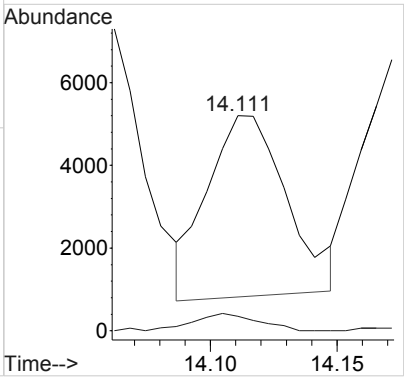


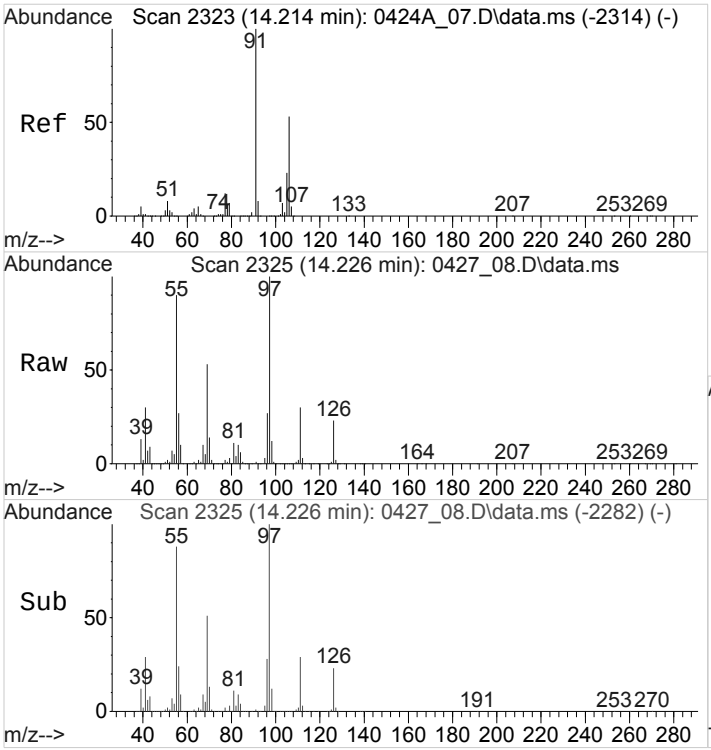


#59
Ethylbenzene
Concen: 14.0599227 ppbv
RT: 14.116 min Scan# 2307
Delta R.T. 0.017 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

Tgt Ion: 91 Resp: 92668

Ion	Ratio	Lower	Upper
91	100		
106	0.0	26.1	39.1#

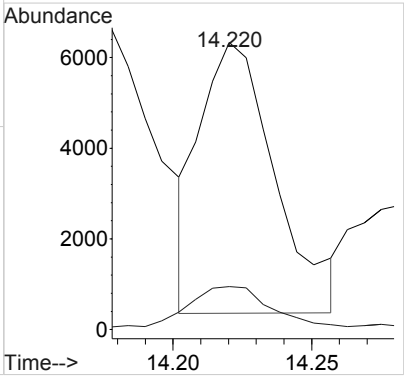


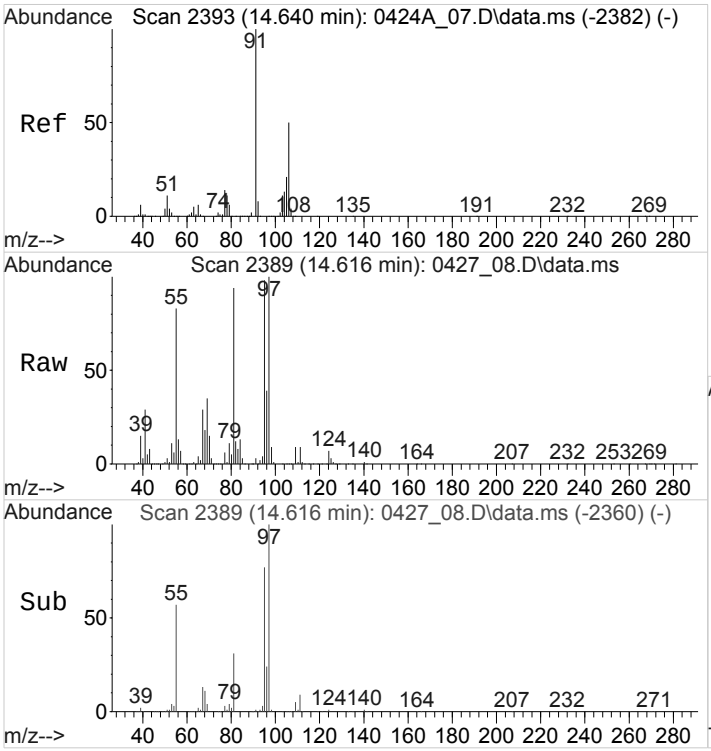


#60
M&P-Xylene
Concen: 22.4121063 ppbv
RT: 14.224 min Scan# 2325
Delta R.T. 0.012 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

Tgt Ion: 91 Resp: 114329

Ion	Ratio	Lower	Upper
91	100		
106	16.6	41.3	61.9#

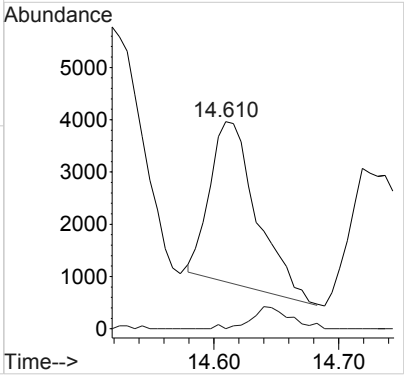


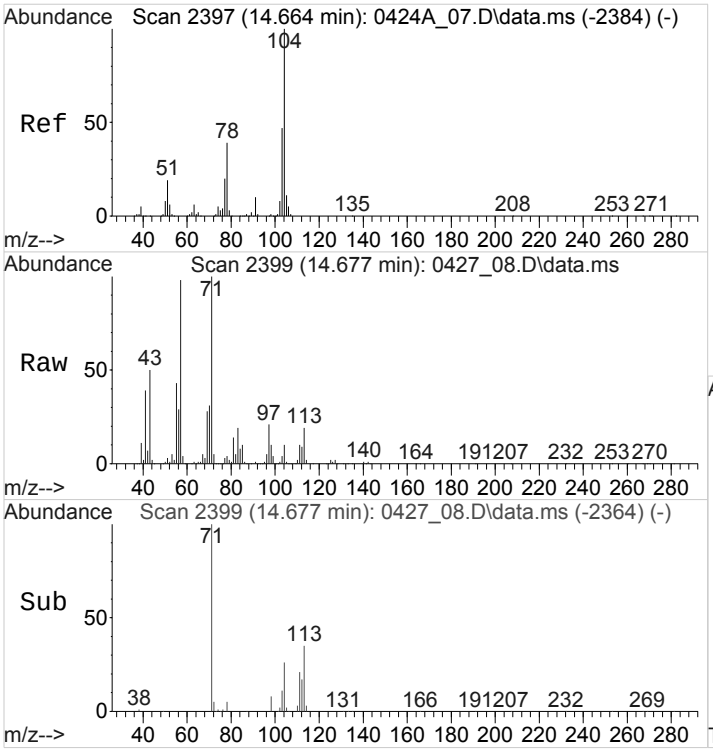


#61
O-Xylene
Concen: 15.5607566 ppbv
RT: 14.615 min Scan# 2389
Delta R.T. -0.025 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

Tgt Ion: 91 Resp: 82030

Ion	Ratio	Lower	Upper
91	100		
106	0.0	39.9	59.9#

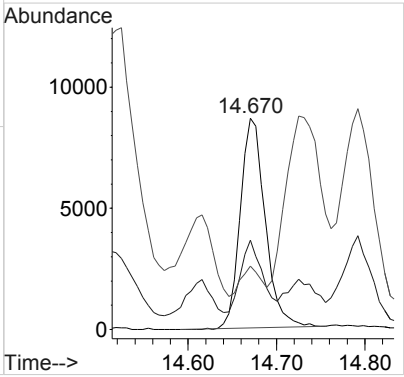


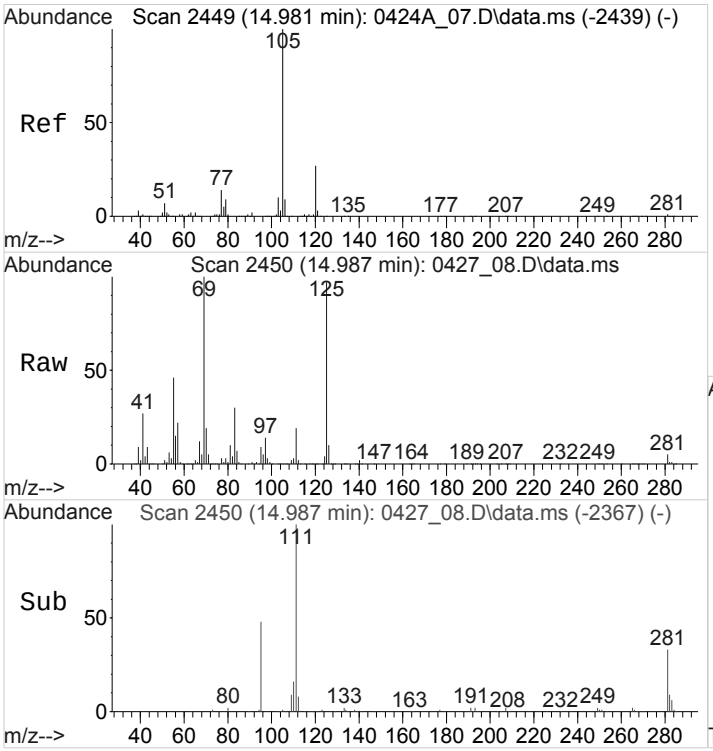


#62
Styrene
Concen: 42.1724681 ppbv
RT: 14.675 min Scan# 2399
Delta R.T. 0.010 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

Tgt Ion:104 Resp: 168314

Ion	Ratio	Lower	Upper
104	100		
78	29.6	35.6	53.4#
51	113.1	23.1	34.7#

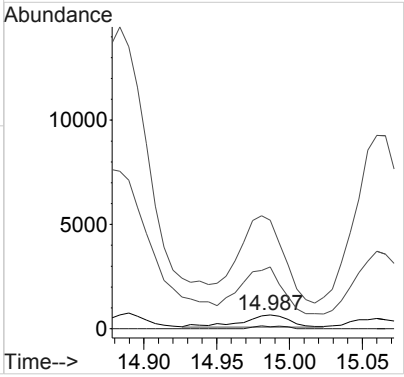


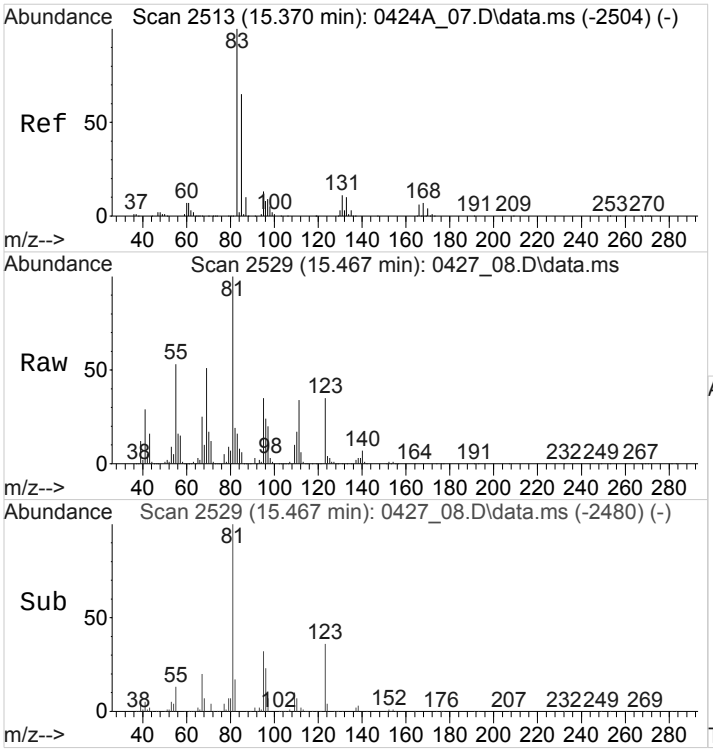


#64
Isopropylbenzene
Concen: 1.7982487 ppbv
RT: 14.989 min Scan# 2450
Delta R.T. 0.006 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

Tgt Ion:105 Resp: 13468

Ion	Ratio	Lower	Upper
105	100		
120	0.0	21.4	32.0#
77	1334.5	11.0	16.4#
51	0.0	6.0	9.0#

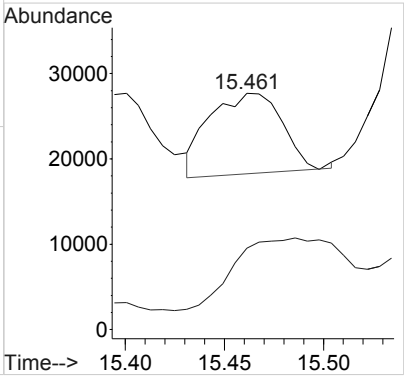


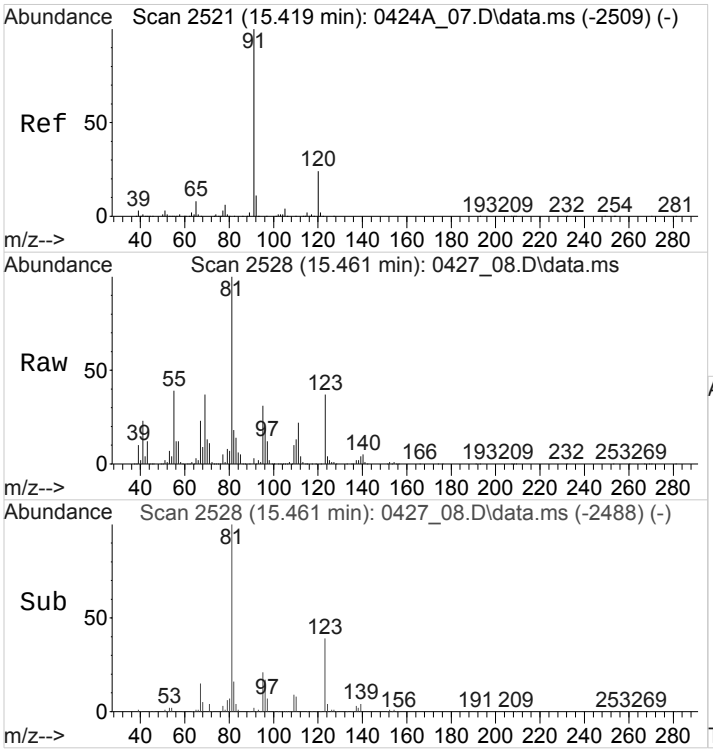


#65
1,1,2,2-Tetrachloroethane
Concen: 55.9384891 ppbv
RT: 15.467 min Scan# 2529
Delta R.T. 0.099 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

Tgt Ion: 83 Resp: 247076

Ion	Ratio	Lower	Upper
83	100		
85	72.1	51.8	77.6

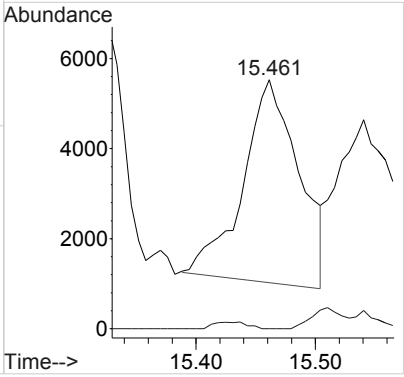


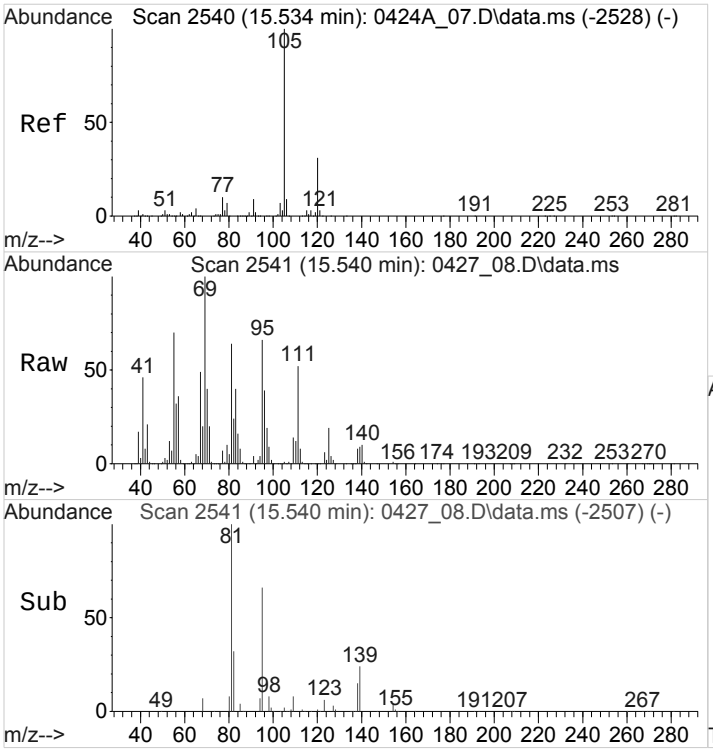


#66
n-Propylbenzene
Concen: 16.9325543 ppbv
RT: 15.463 min Scan# 2528
Delta R.T. 0.045 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

Tgt Ion: 91 Resp: 144707

Ion	Ratio	Lower	Upper
91	100		
120	0.0	18.8	28.2#

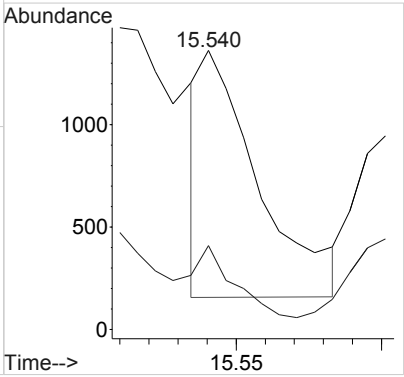


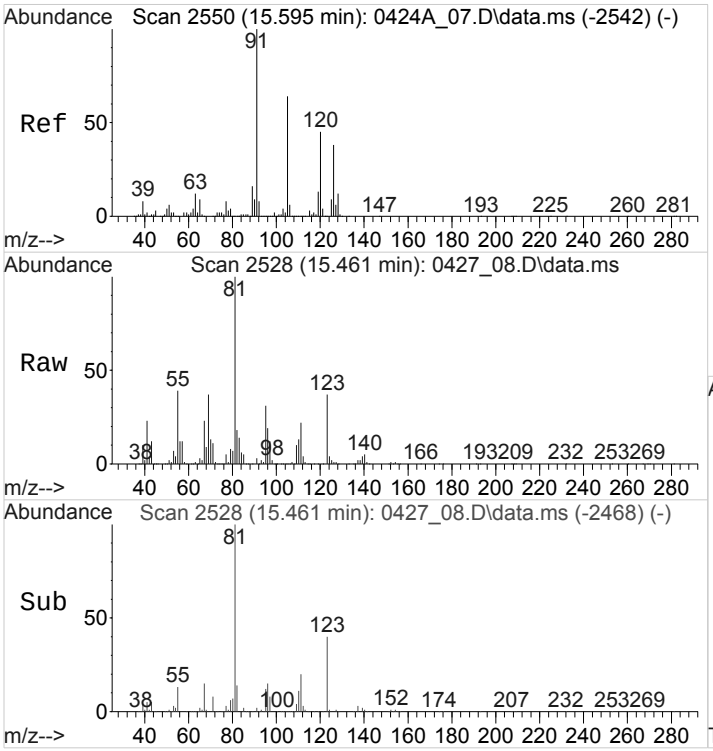


#67
4-Ethyltoluene
Concen: 2.7542955 ppbv
RT: 15.543 min Scan# 2541
Delta R.T. 0.010 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

Tgt Ion:105 Resp: 20391

Ion	Ratio	Lower	Upper
105	100		
120	0.0	24.6	37.0#

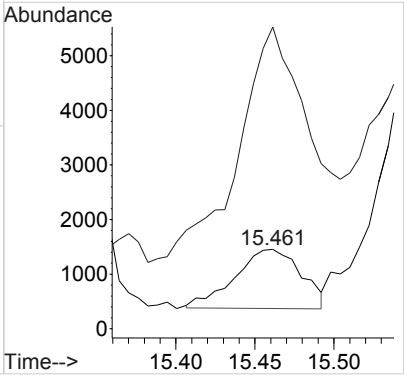


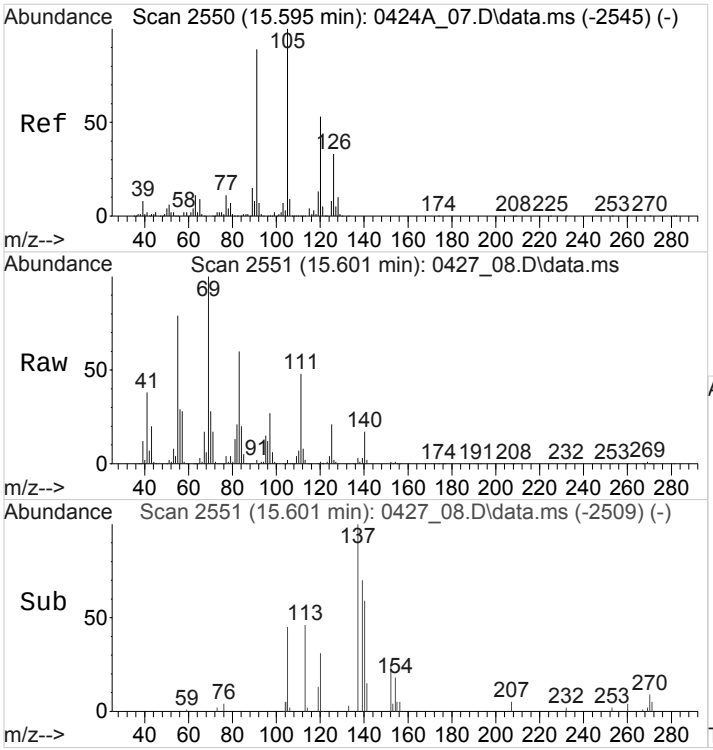


#68
2-Chlorotoluene
Concen: 15.1495945 ppbv
RT: 15.462 min Scan# 2528
Delta R.T. -0.132 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

Tgt Ion:126 Resp: 31127

Ion	Ratio	Lower	Upper
126	100		
91	249.8	223.0	334.6

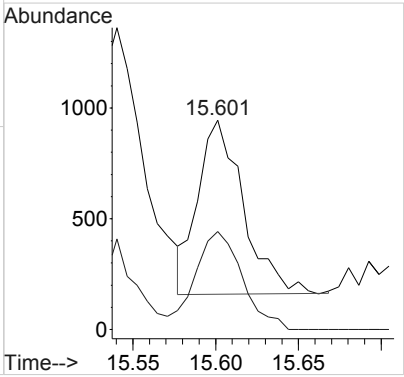


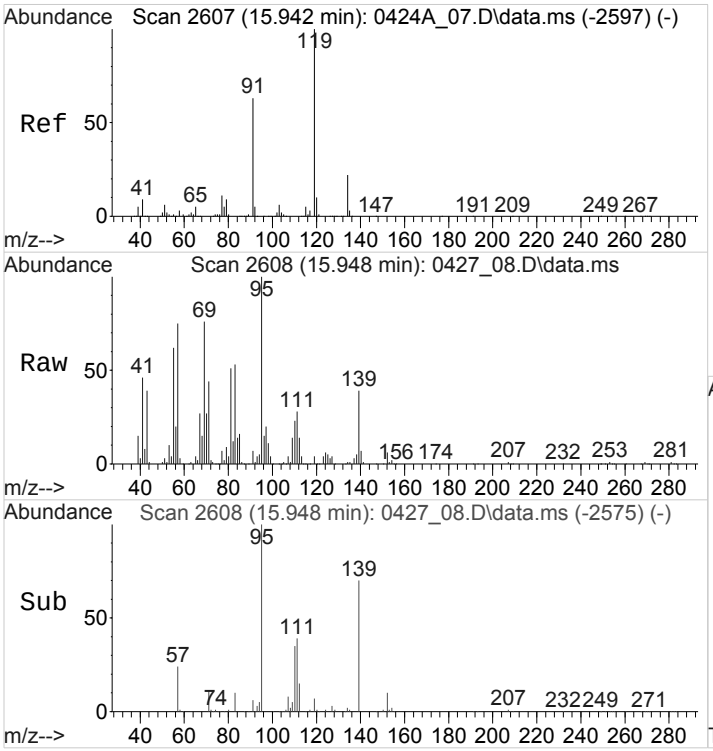


#70
1,3,5-Trimethylbenzene
Concen: 2.4521034 ppbv
RT: 15.603 min Scan# 2551
Delta R.T. 0.008 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

Tgt Ion:105 Resp: 15290

Ion	Ratio	Lower	Upper
105	100		
120	0.0	41.0	61.6#

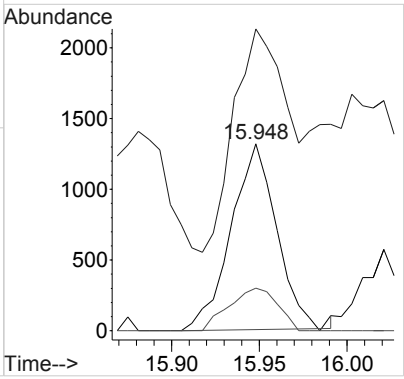


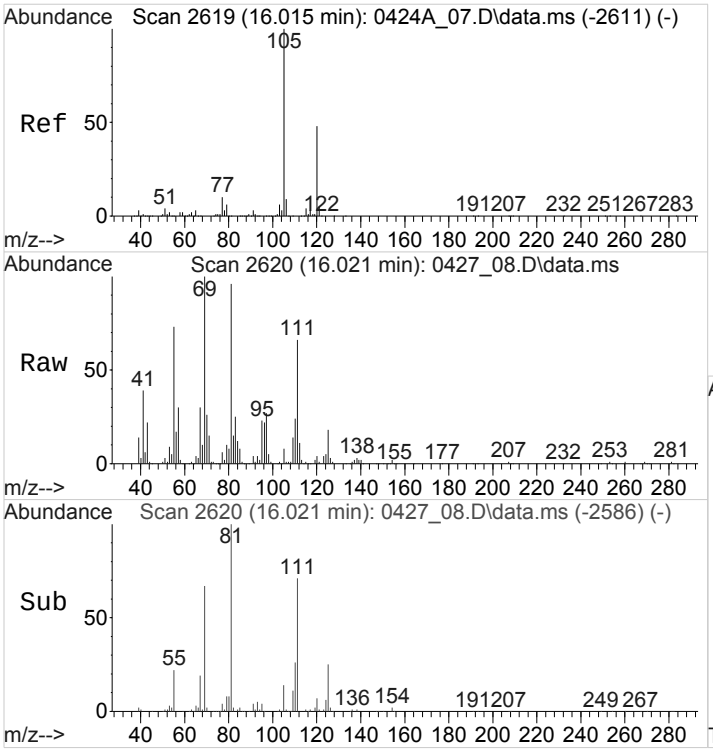


#71
Tert-Butylbenzene
Concen: 3.9547685 ppbv
RT: 15.951 min Scan# 2608
Delta R.T. 0.006 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

Tgt Ion:119 Resp: 23518

Ion	Ratio	Lower	Upper
119	100		
91	0.0	49.4	74.2#
134	0.0	18.0	27.0#

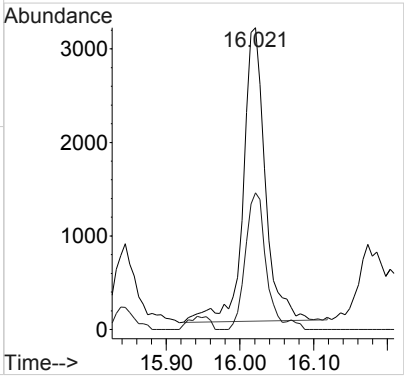


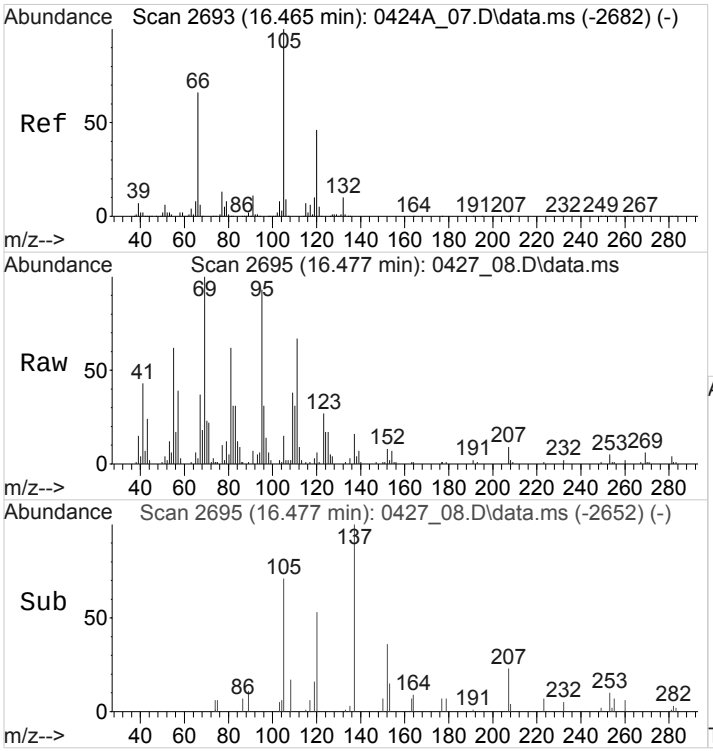


#72
1,2,4-Trimethylbenzene
Concen: 10.7016225 ppbv
RT: 16.021 min Scan# 2620
Delta R.T. 0.009 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

Tgt Ion:105 Resp: 65157

Ion	Ratio	Lower	Upper
105	100		
120	44.4	38.6	58.0

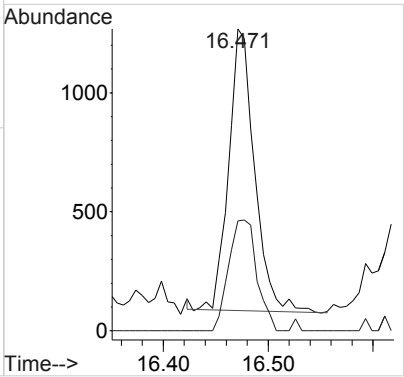


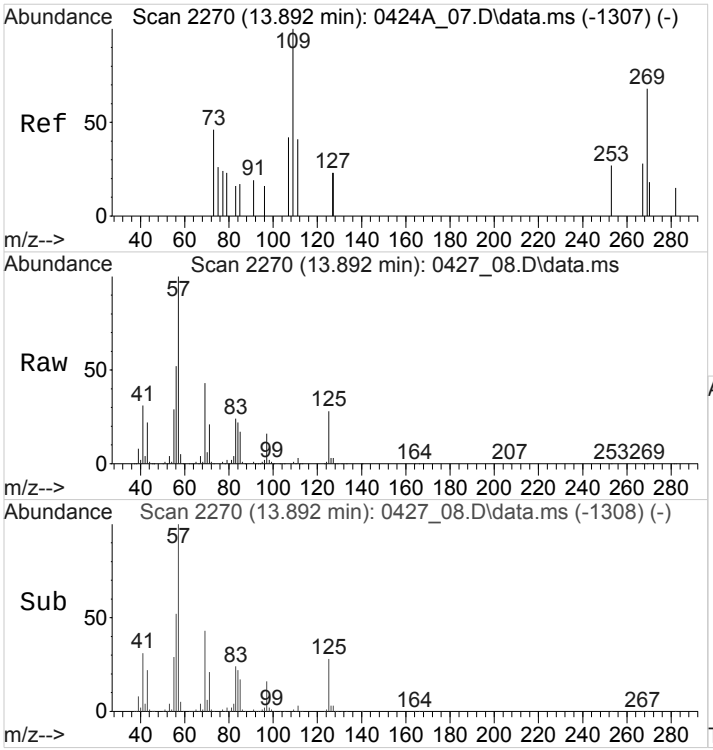


#76
1,2,3-TRIMETHYLBENZENE
Concen: 3.4304897 ppbv
RT: 16.477 min Scan# 2695
Delta R.T. 0.008 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

Tgt Ion:105 Resp: 20462

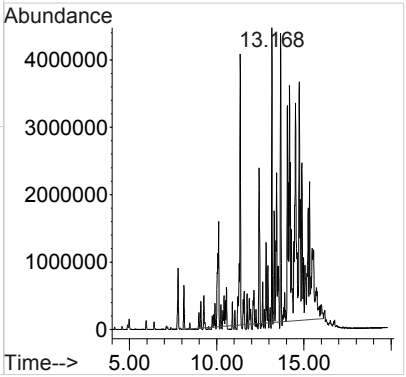
Ion	Ratio	Lower	Upper
105	100		
120	0.0	36.6	55.0#





#84
TPH (GC/MS) Low Fraction
Concen: 187384.0612043 ppbv m
RT: 13.890 min Scan# 2270
Delta R.T. 0.000 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 1:35 pm

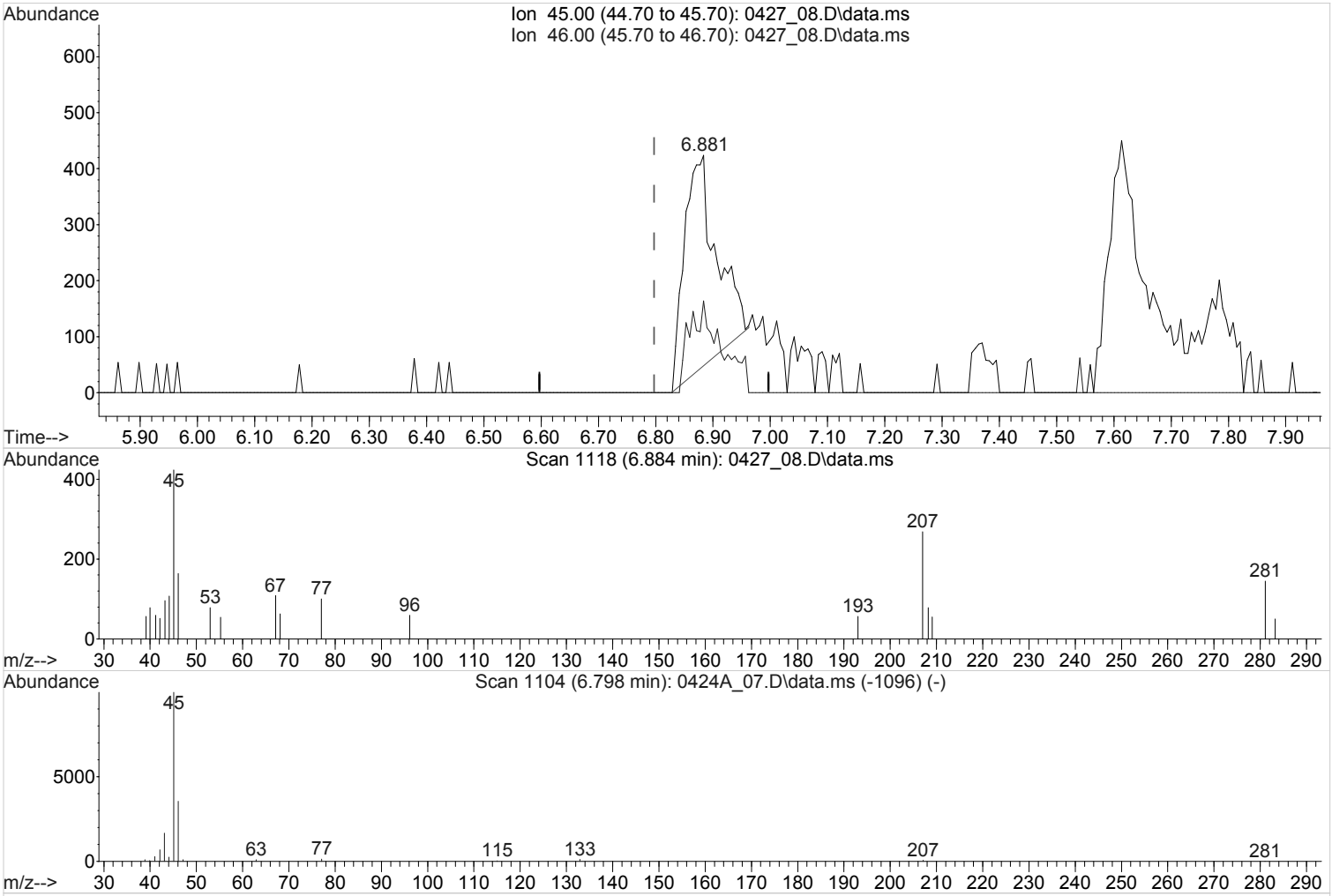
Tgt Ion:TIC Resp:2101173141



Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_08.D
Acq On : 27 Apr 2018 1:35 pm
Operator : 564
Sample : L988471-03 100x WG1103966
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 28 08:32:38 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:45:42 2018
Response via : Initial Calibration



(14) Ethanol (T,M)

6.881min (+0.084) 0.2941011 ppbv

Qvalue = 38

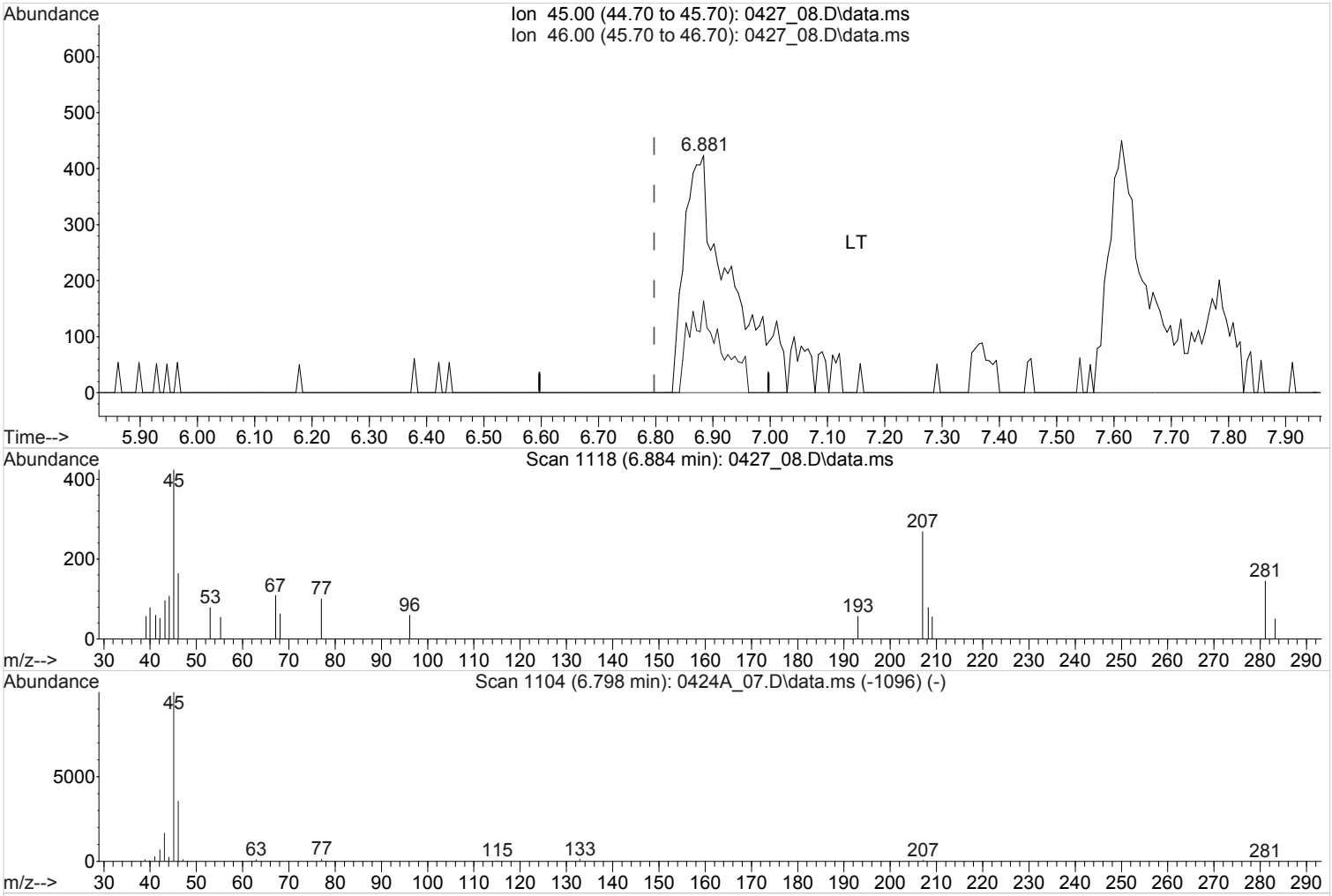
response 14661 Limit = 63.0000000

Ion	Exp%	Act%
45.00	100	100
46.00	36.90	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_08.D
Acq On : 27 Apr 2018 1:35 pm
Operator : 564
Sample : L988471-03 100x WG1103966
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 28 08:32:38 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:45:42 2018
Response via : Initial Calibration



(14) Ethanol (T,M)

6.884min (+0.086) 0.4751916 ppbv m

response 23689 Limit = 63.0000000

Ion	Exp%	Act%
45.00	100	100
46.00	36.90	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS-4

ESC Sample ID:	L988471-04	**SDG:**	L988471
Client Sample ID:	SS-4	**Collected Date/Time:**	04/23/18 11:06
Lab File ID:	0427_07	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS2	**Preparation Date/Time:**	04/27/18 13:22
Analytical Batch:	WG1103956	**Analysis Date/Time:**	04/27/18 13:22
Dilution Factor:	4000	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	0.1 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	**CAS**	**RT**	**Result**	**Qualifier**	**MDL**	**RDL**
			ppbv		*ppbv*	*ppbv*
Tetrachloroethylene	127-18-4	12.21	44600		199	800

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_07.D
Acq On : 27 Apr 2018 1:22 pm
Operator : 564
Sample : L988471-04 4000x WG1103956
Misc :
ALS Vial : 7 Sample Multiplier: 4000
InstName : AIRMS2

Quant Time: Apr 28 07:50:12 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:08:22 2018
Response via : Initial Calibration

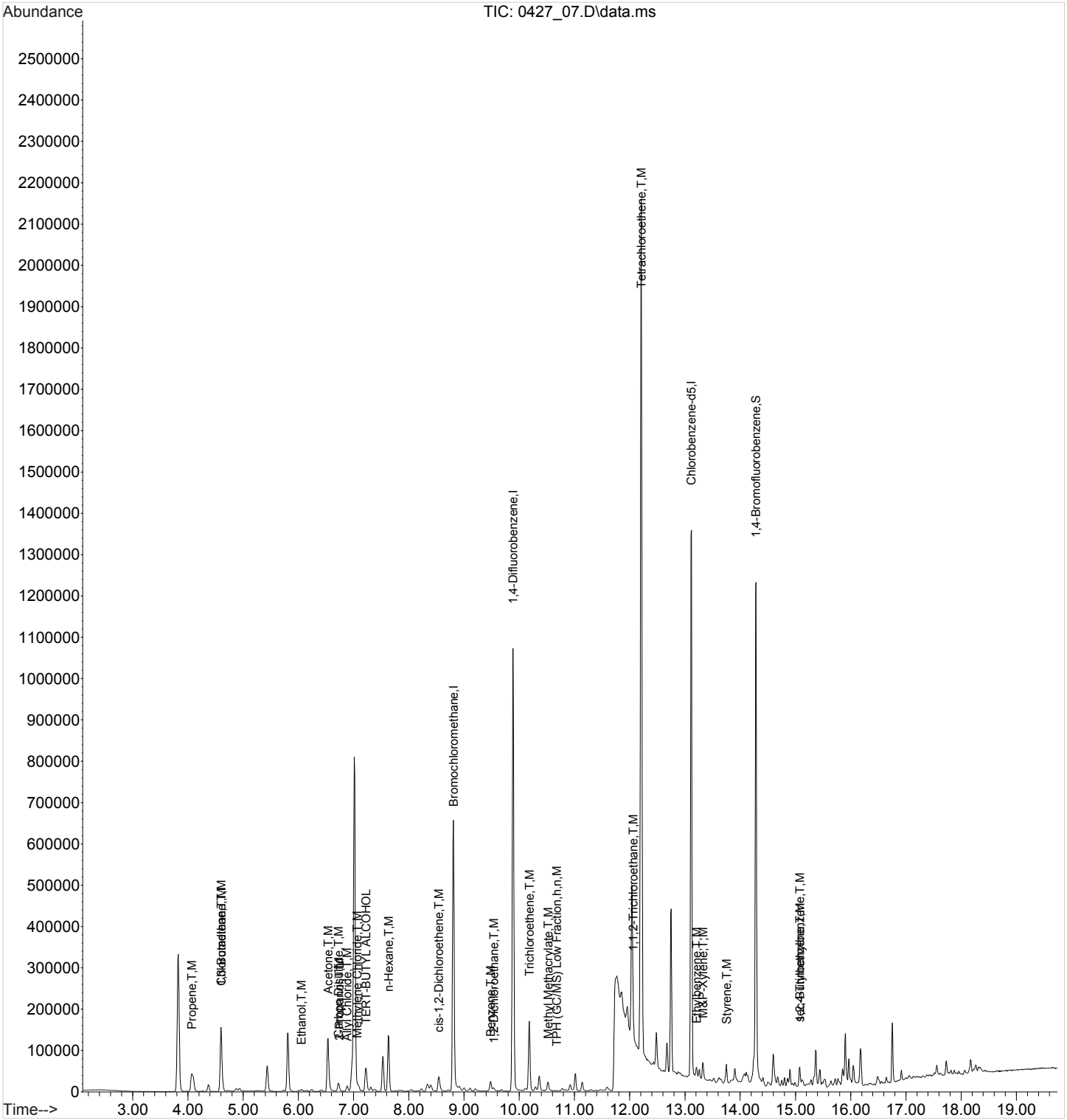
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	8.809	130	1806691	4.0000000 ppbv	0.00
37) 1,4-Difluorobenzene	9.890	114	7749447	4.0000000 ppbv	0.00
58) Chlorobenzene-d5	13.115	117	6572202	4.0000000 ppbv	# 0.00
System Monitoring Compounds					
69) 1,4-Bromofluorobenzene	14.286	95	3853878	3.7112678 ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 92.78%		
Target Compounds					Qvalue
2) Propene	4.069	41	158344	1305.5697732 ppbv #	80
7) Chloromethane	4.602	50	53391	467.5413734 ppbv #	43
9) 1,3-Butadiene	4.602	39	641979	5287.2067266 ppbv #	16
14) Ethanol	6.059	45	64199	1688.7201606 ppbv	94
17) Acetone	6.538	43	1986819	10935.9670294 ppbv	97
18) 2-Propanol	6.739	45	84894	346.4604780 ppbv #	59
19) Carbon Disulfide	6.727	76	264817	1479.8775776 ppbv #	81
20) Allyl Chloride	6.887	41	65800	331.1177695 ppbv #	54
21) Methylene Chloride	7.064	49	88737	587.5302442 ppbv #	1
22) TERT-BUTYL ALCOHOL	7.225	59	800552	2914.4374797 ppbv #	51
25) n-Hexane	7.634	57	655228	3502.8696597 ppbv	95
30) cis-1,2-Dichloroethene	8.542	61	238442	1246.5038469 ppbv #	85
32) Chloroform	8.873	83	42615	223.5601229 ppbv	96
36) 2,2,4-Trimethylpentane	9.486	57	86734	129.1799839 ppbv #	94
38) Benzene	9.479	78	111537	342.6691797 ppbv	96
39) 1,2-Dichloroethane	9.534	62	52592	320.7089423 ppbv #	67
41) Trichloroethene	10.182	95	594767	5021.9183367 ppbv	99
45) Methyl Methacrylate	10.521	69	83335	686.5956600 ppbv	95
50) Toluene	11.589	91	57307	163.1775749 ppbv	90
52) 1,1,2-Trichloroethane	12.063	97	78239	719.9534023 ppbv #	4
53) Tetrachloroethene	12.209	166	5921868	44592.7871962 ppbv	97
59) Ethylbenzene	13.212	91	142622	287.4843502 ppbv #	46
60) M&P-Xylene	13.328	91	214502	561.4527895 ppbv	98
61) O-Xylene	13.733	91	37607	98.4214624 ppbv #	31
62) Styrene	13.754	104	97197	341.7018753 ppbv #	86
64) Isopropylbenzene	14.080	105	46143	91.9364633 ppbv #	56
66) n-Propylbenzene	14.499	91	59511	93.9631901 ppbv #	58
67) 4-Ethyltoluene	14.616	105	70539	138.1537008 ppbv #	48
68) 2-Chlorotoluene	14.499	91	59374	134.9914859 ppbv #	51
70) 1,3,5-Trimethylbenzene	14.680	105	73095	171.8971649 ppbv	95
71) tert-Butylbenzene	15.080	119	28862	75.7470771 ppbv #	89
72) 1,2,4-Trimethylbenzene	15.079	105	225562	550.6208217 ppbv	98
73) sec-Butylbenzene	15.079	105	224168	361.2706469 ppbv #	73
76) 1,2,3-TRIMETHYLBENZENE	15.538	105	80086	188.6519122 ppbv	98
84) TPH (GC/MS) Low Fraction	10.675	TIC	150710823m	148255.1027185 ppbv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_07.D
Acq On : 27 Apr 2018 1:22 pm
Operator : 564
Sample : L988471-04 4000x WG1103956
Misc :
ALS Vial : 7 Sample Multiplier: 4000
InstName : AIRMS2

Quant Time: Apr 28 07:50:12 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:08:22 2018
Response via : Initial Calibration



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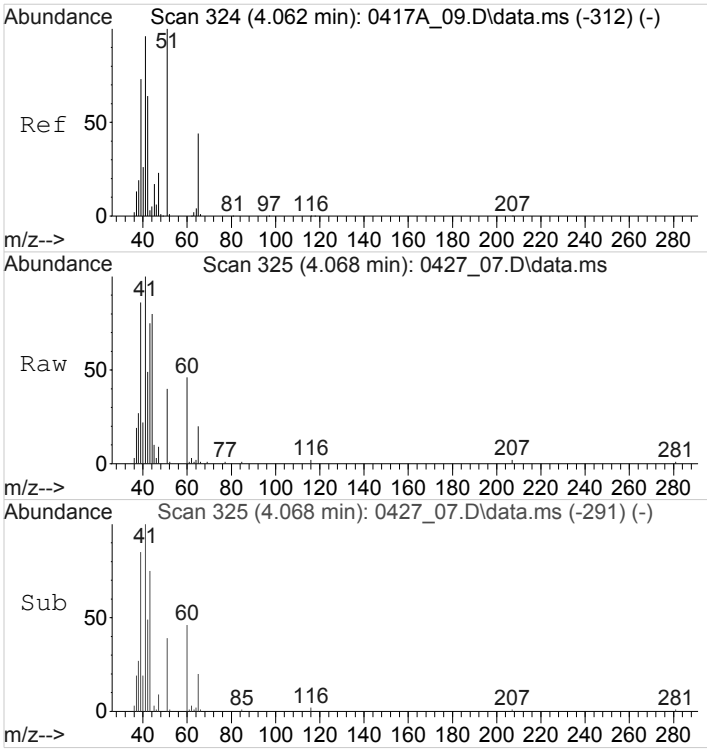
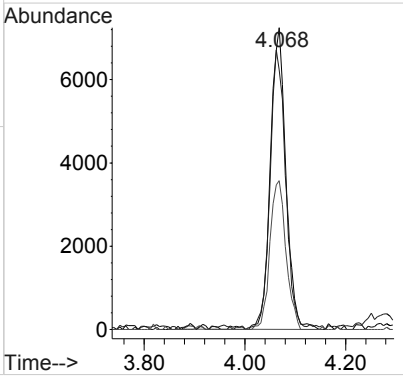
S&ME Inc. - Knoxville	4143-17-016	L988471	05/16/18 11:18	119 of 698

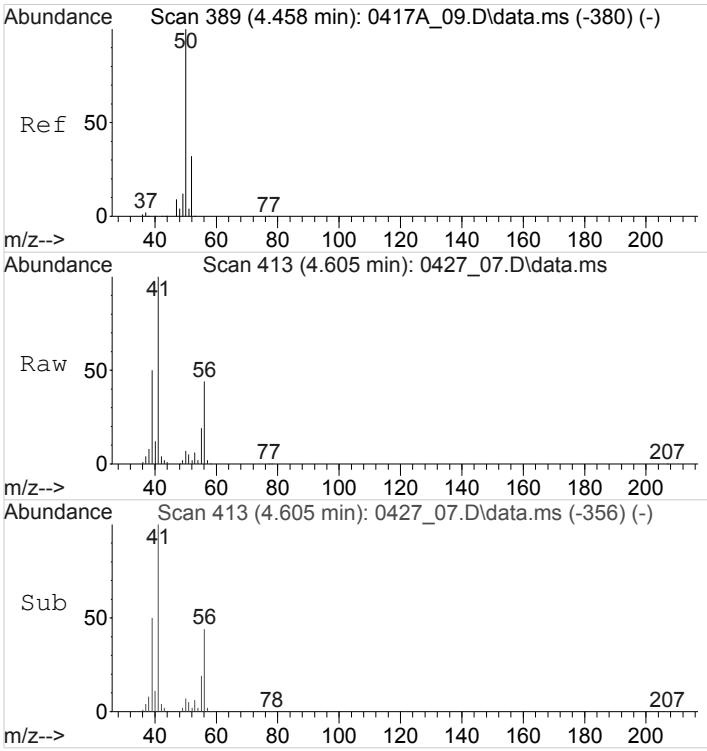


#2
Propene
Concen: 1305.5697732 ppbv
RT: 4.069 min Scan# 325
Delta R.T. 0.007 min
Lab File: 0427_07.D
Acq: 27 Apr 2018 1:22 pm

Tgt Ion: 41 Resp: 158344

Ion	Ratio	Lower	Upper
41	100		
39	91.5	57.8	86.8#
42	50.1	50.5	75.7#

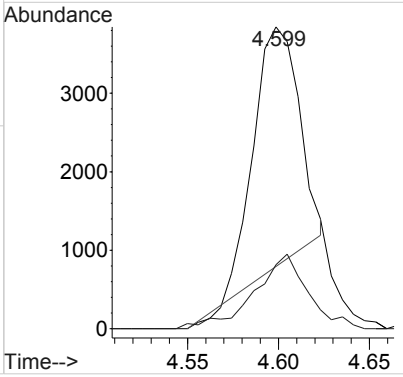


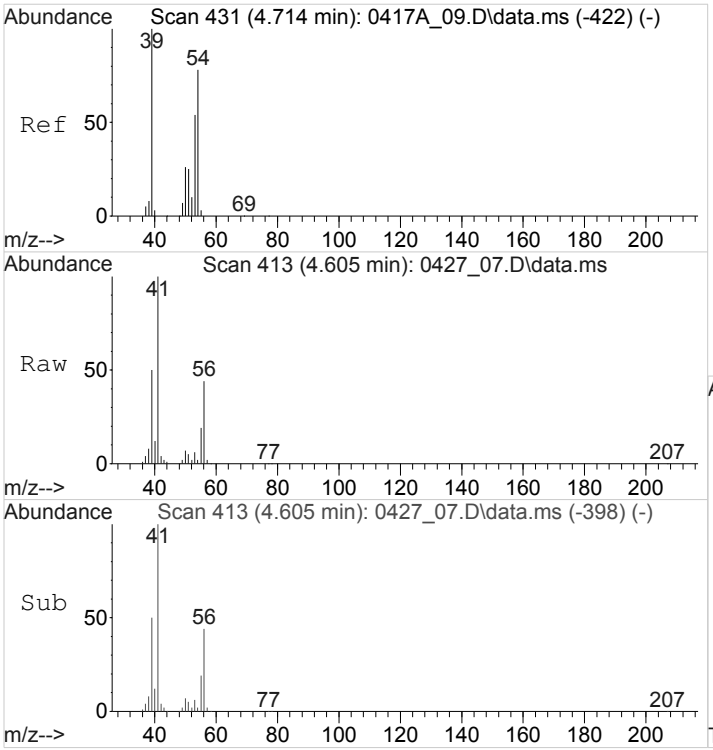


#7
Chloromethane
Concen: 467.5413734 ppbv
RT: 4.602 min Scan# 413
Delta R.T. 0.146 min
Lab File: 0427_07.D
Acq: 27 Apr 2018 1:22 pm

Tgt Ion: 50 Resp: 53391

Ion	Ratio	Lower	Upper
50	100		
52	0.0	25.5	38.3#

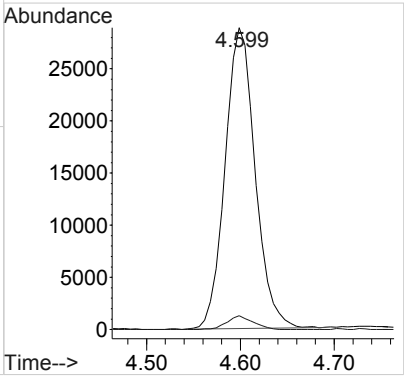


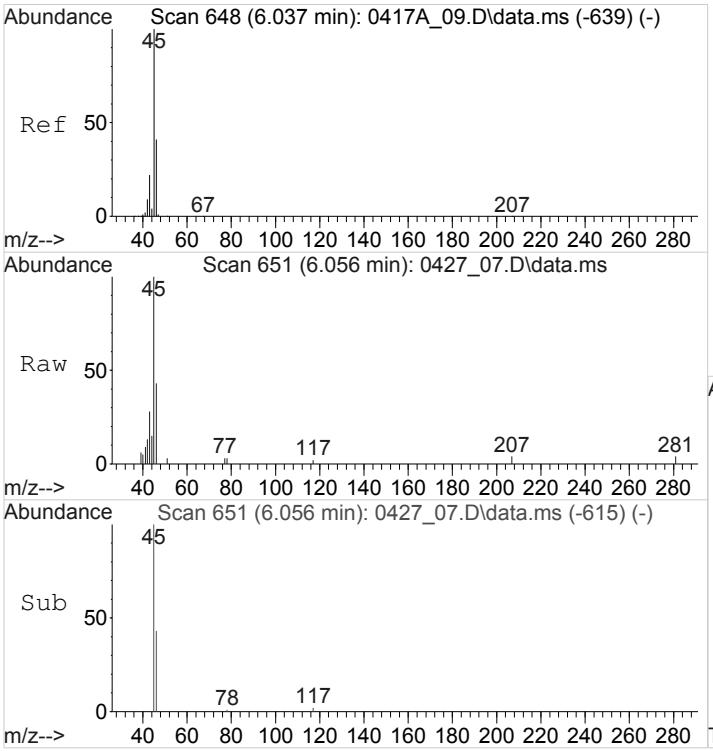


#9
1,3-Butadiene
Concen: 5287.2067266 ppbv
RT: 4.602 min Scan# 413
Delta R.T. -0.110 min
Lab File: 0427_07.D
Acq: 27 Apr 2018 1:22 pm

Tgt Ion: 39 Resp: 641979

Ion	Ratio	Lower	Upper
39	100		
54	4.0	60.6	91.0#

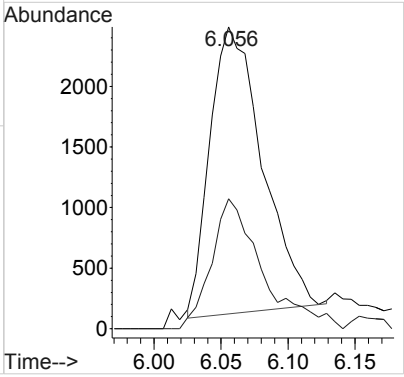


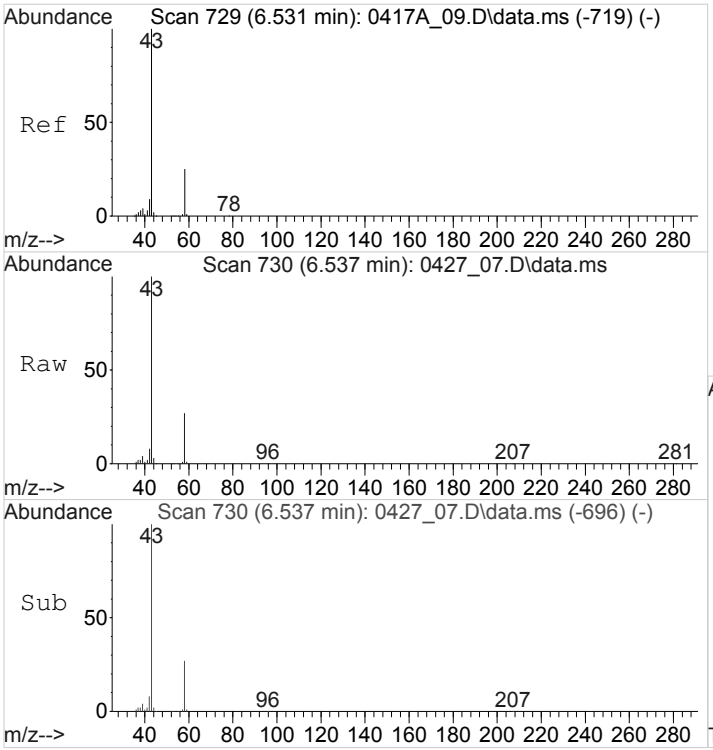


#14
Ethanol
Concen: 1688.7201606 ppbv
RT: 6.059 min Scan# 651
Delta R.T. 0.021 min
Lab File: 0427_07.D
Acq: 27 Apr 2018 1:22 pm

Tgt Ion: 45 Resp: 64199

Ion	Ratio	Lower	Upper
45	100		
46	43.1	31.5	47.3

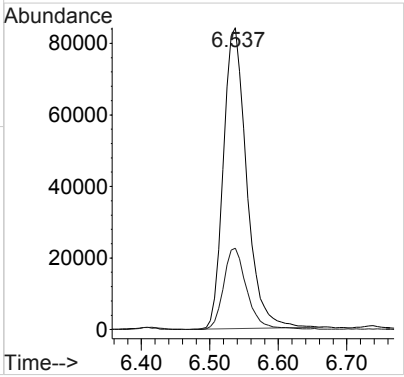


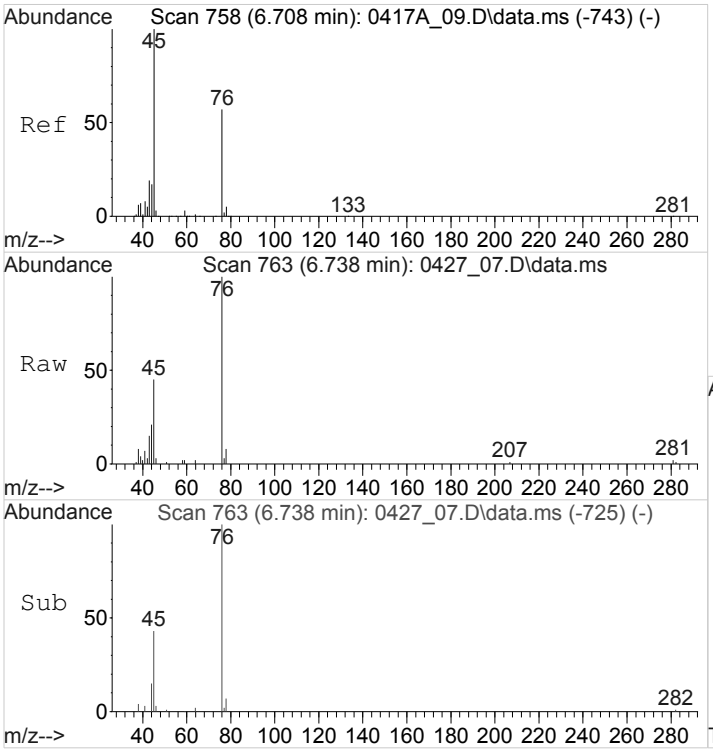


#17
Acetone
Concen: 10935.9670294 ppbv
RT: 6.538 min Scan# 730
Delta R.T. 0.007 min
Lab File: 0427_07.D
Acq: 27 Apr 2018 1:22 pm

Tgt Ion: 43 Resp: 1986819

Ion	Ratio	Lower	Upper
43	100		
58	27.0	20.6	30.8

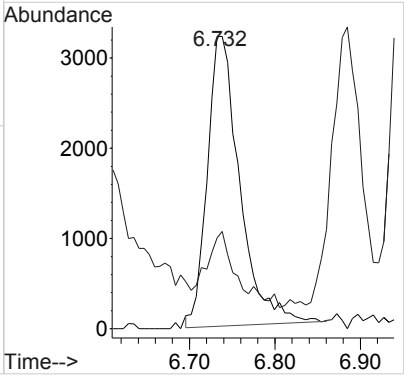


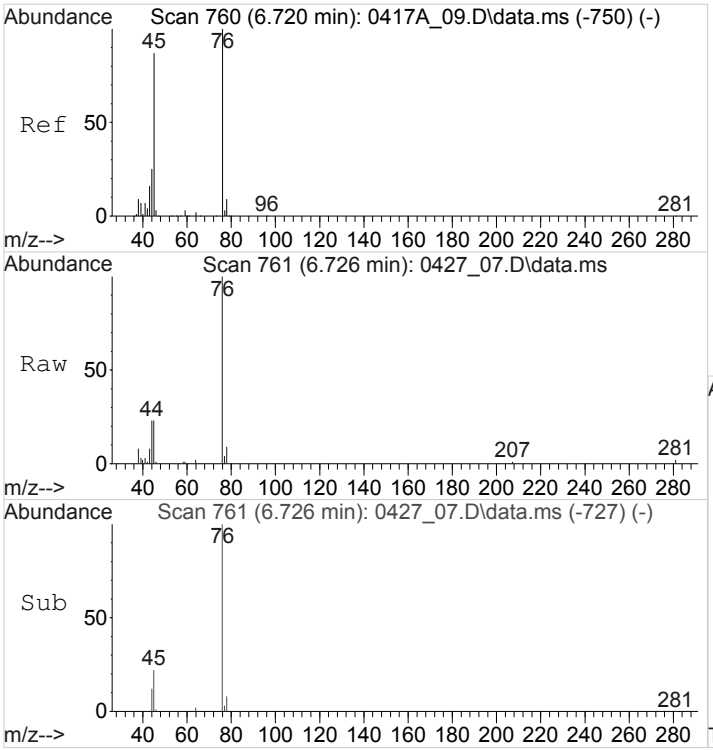


#18
2-Propanol
Concen: 346.4604780 ppbv
RT: 6.739 min Scan# 763
Delta R.T. 0.030 min
Lab File: 0427_07.D
Acq: 27 Apr 2018 1:22 pm

Tgt Ion: 45 Resp: 84894

Ion	Ratio	Lower	Upper
45	100		
43	0.0	14.4	21.6#

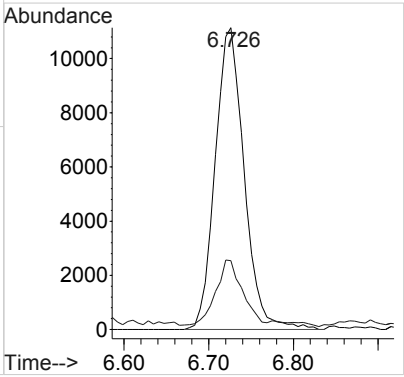


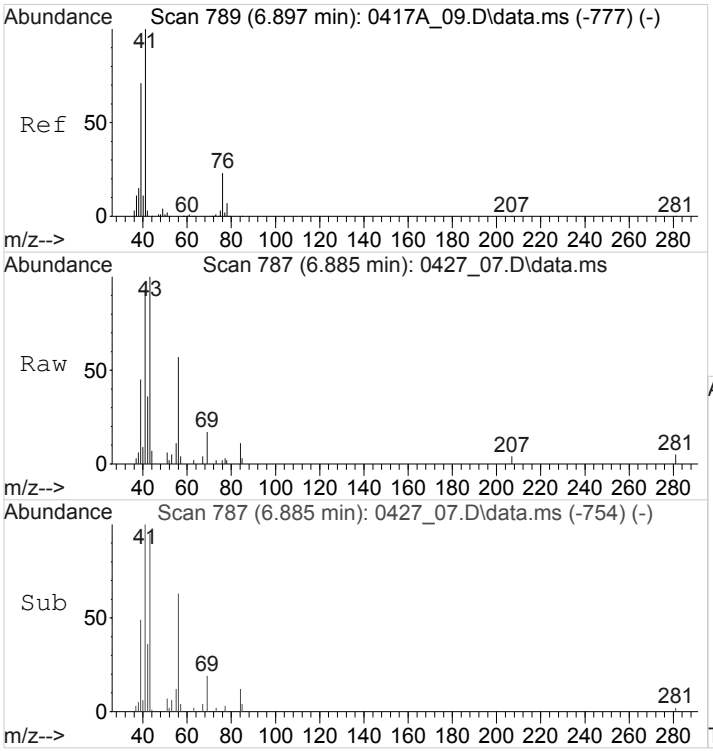


#19
Carbon Disulfide
Concen: 1479.8775776 ppbv
RT: 6.727 min Scan# 761
Delta R.T. 0.006 min
Lab File: 0427_07.D
Acq: 27 Apr 2018 1:22 pm

Tgt Ion: 76 Resp: 264817

Ion	Ratio	Lower	Upper
76	100		
44	17.5	21.9	32.9#

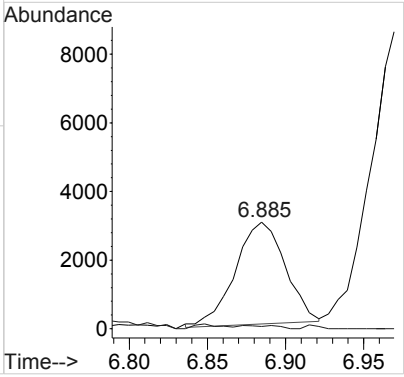


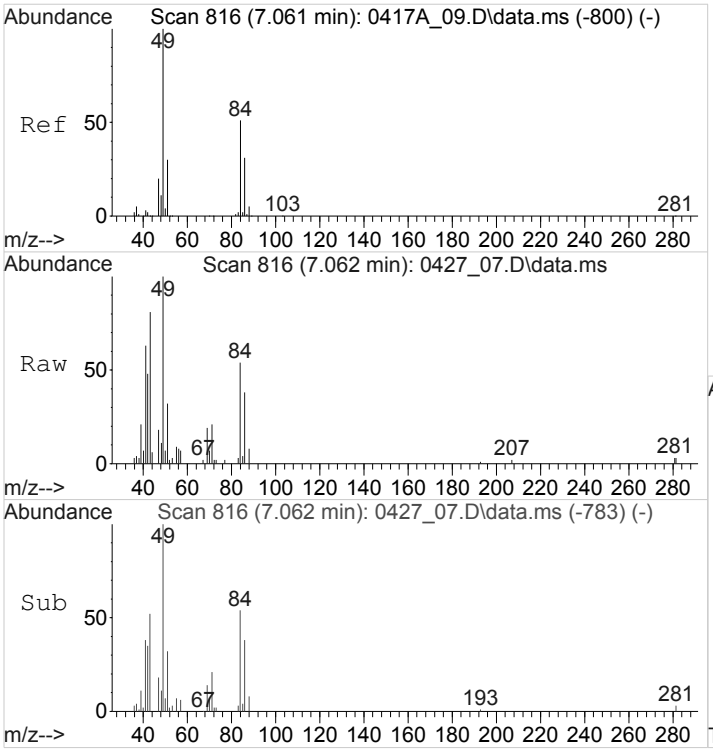


#20
Allyl Chloride
Concen: 331.1177695 ppbv
RT: 6.887 min Scan# 787
Delta R.T. -0.007 min
Lab File: 0427_07.D
Acq: 27 Apr 2018 1:22 pm

Tgt Ion: 41 Resp: 65800

Ion	Ratio	Lower	Upper
41	100		
76	0.0	17.4	26.2#

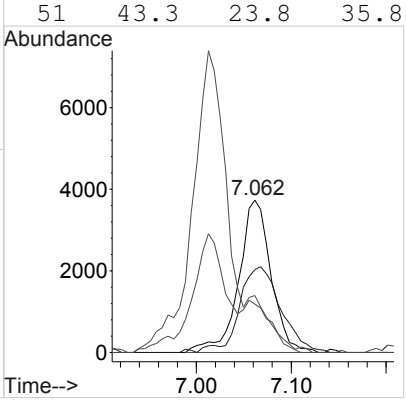


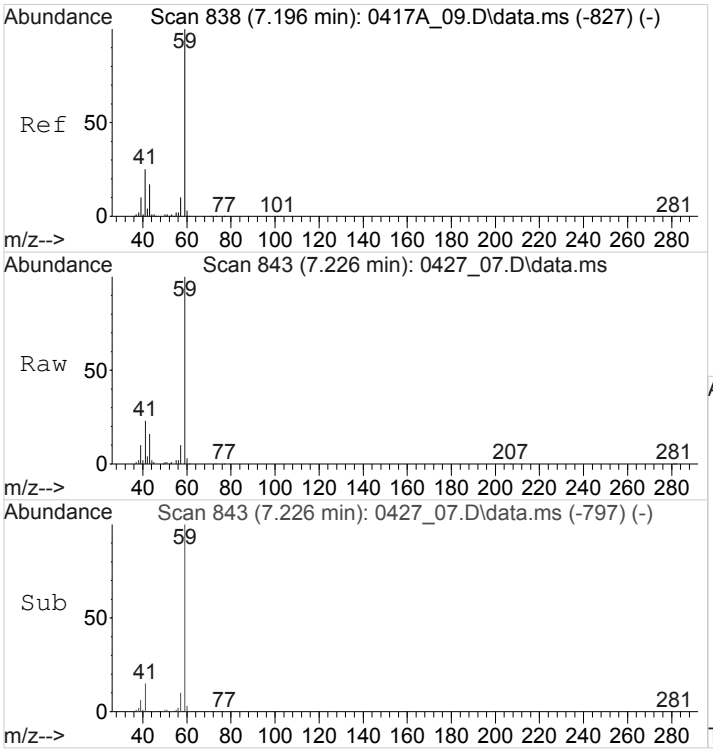


#21
Methylene Chloride
Concen: 587.5302442 ppbv
RT: 7.064 min Scan# 816
Delta R.T. 0.003 min
Lab File: 0427_07.D
Acq: 27 Apr 2018 1:22 pm

Tgt Ion: 49 Resp: 88737

Ion	Ratio	Lower	Upper
49	100		
84	71.2	39.4	59.2#
86	232.7	24.5	36.7#
51	43.3	23.8	35.8#

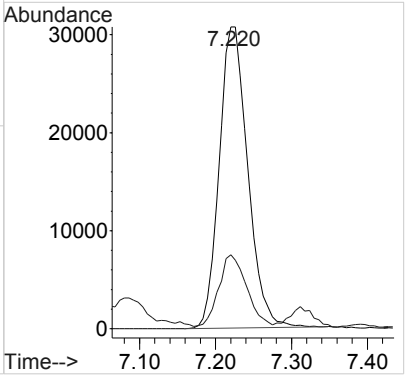


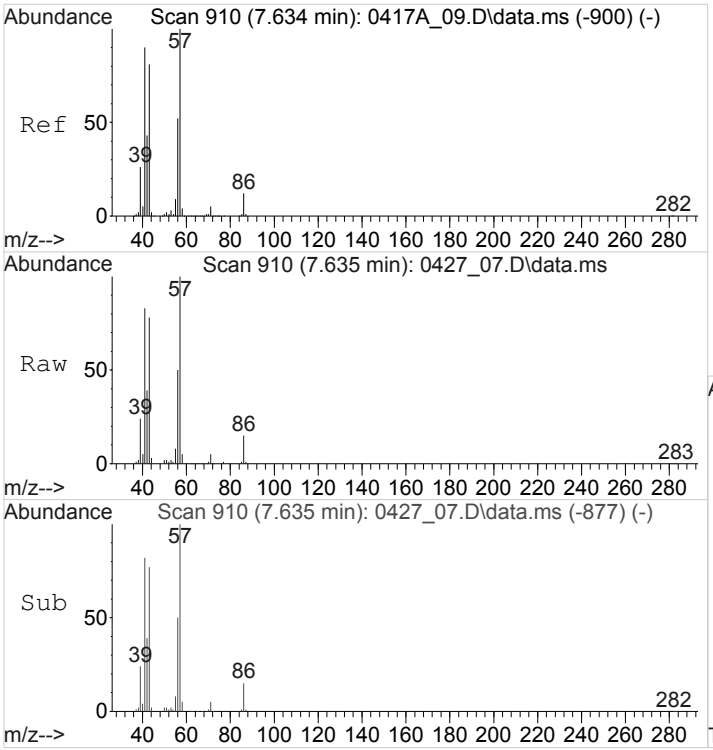


#22
TERT-BUTYL ALCOHOL
Concen: 2914.4374797 ppbv
RT: 7.225 min Scan# 843
Delta R.T. 0.029 min
Lab File: 0427_07.D
Acq: 27 Apr 2018 1:22 pm

Tgt Ion: 59 Resp: 800552

Ion	Ratio	Lower	Upper
59	100		
41	0.0	19.8	29.6#

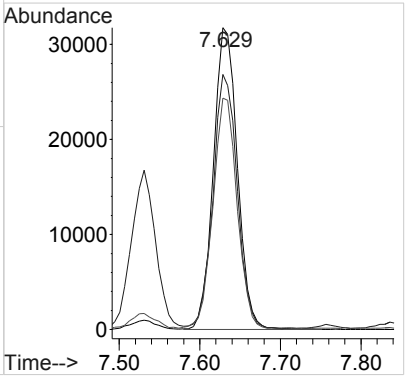


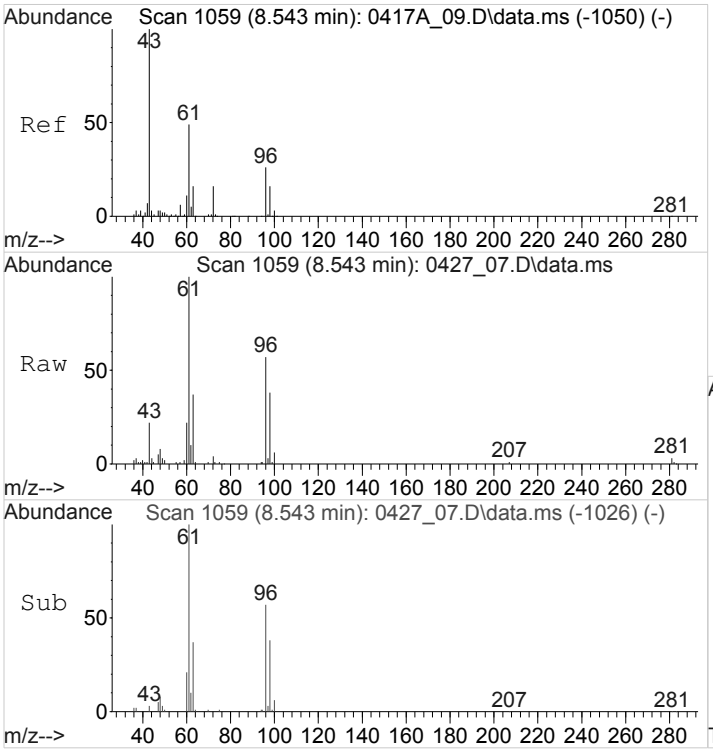


#25
n-Hexane
Concen: 3502.8696597 ppbv
RT: 7.634 min Scan# 910
Delta R.T. -0.001 min
Lab File: 0427_07.D
Acq: 27 Apr 2018 1:22 pm

Tgt Ion: 57 Resp: 655228

Ion	Ratio	Lower	Upper
57	100		
41	85.0	72.7	109.1
43	76.6	64.1	96.1

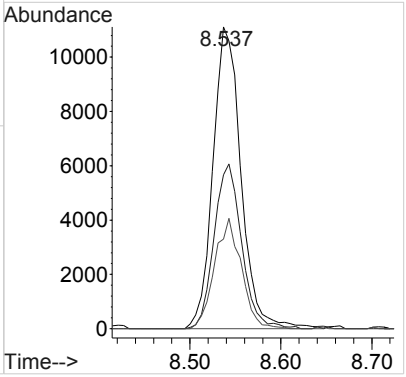


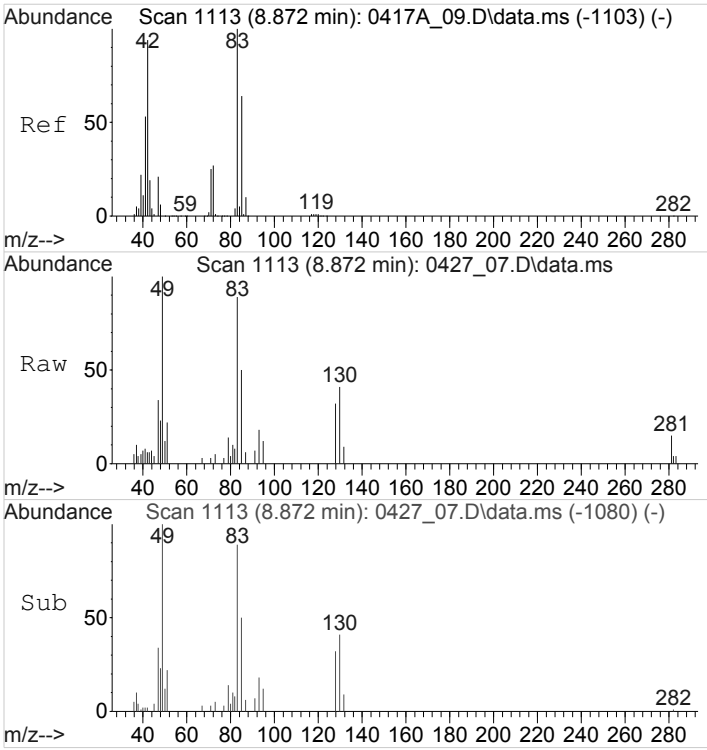


#30
cis-1,2-Dichloroethene
Concen: 1246.5038469 ppbv
RT: 8.542 min Scan# 1059
Delta R.T. -0.000 min
Lab File: 0427_07.D
Acq: 27 Apr 2018 1:22 pm

Tgt Ion: 61 Resp: 238442

Ion	Ratio	Lower	Upper
61	100		
96	53.7	34.9	52.3#
98	34.9	21.8	32.6#

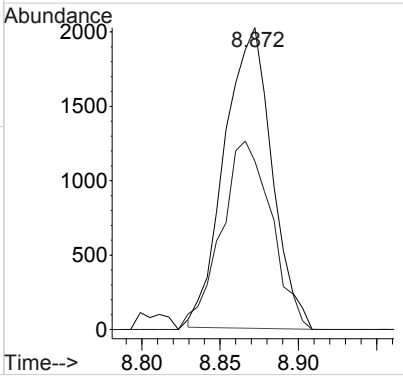


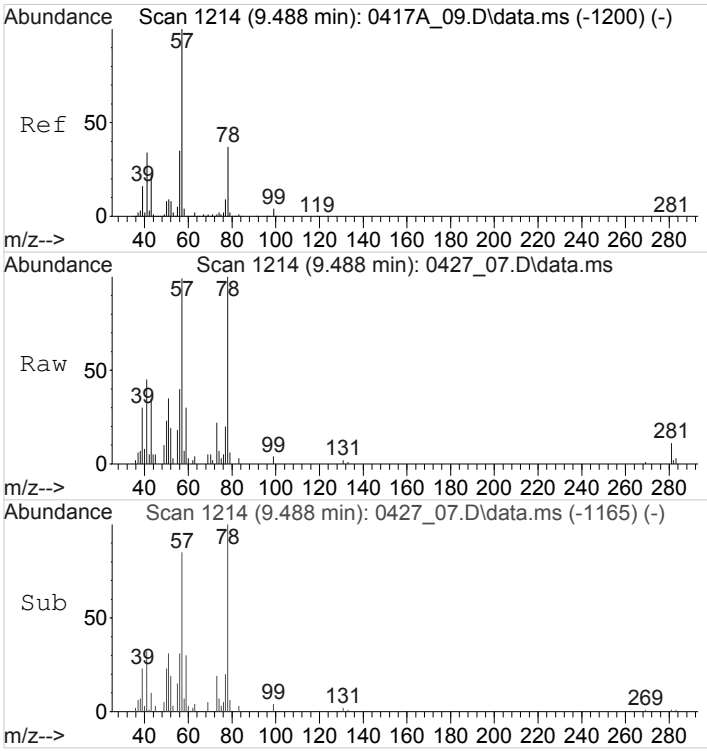


#32
Chloroform
Concen: 223.5601229 ppbv
RT: 8.873 min Scan# 1113
Delta R.T. 0.003 min
Lab File: 0427_07.D
Acq: 27 Apr 2018 1:22 pm

Tgt Ion: 83 Resp: 42615

Ion	Ratio	Lower	Upper
83	100		
85	66.2	50.4	75.6

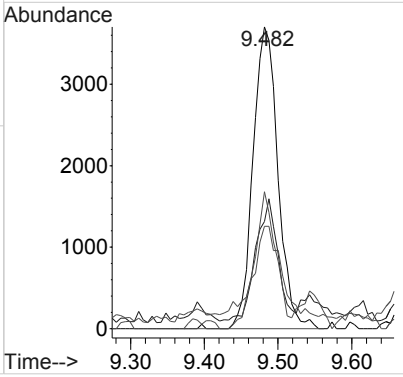


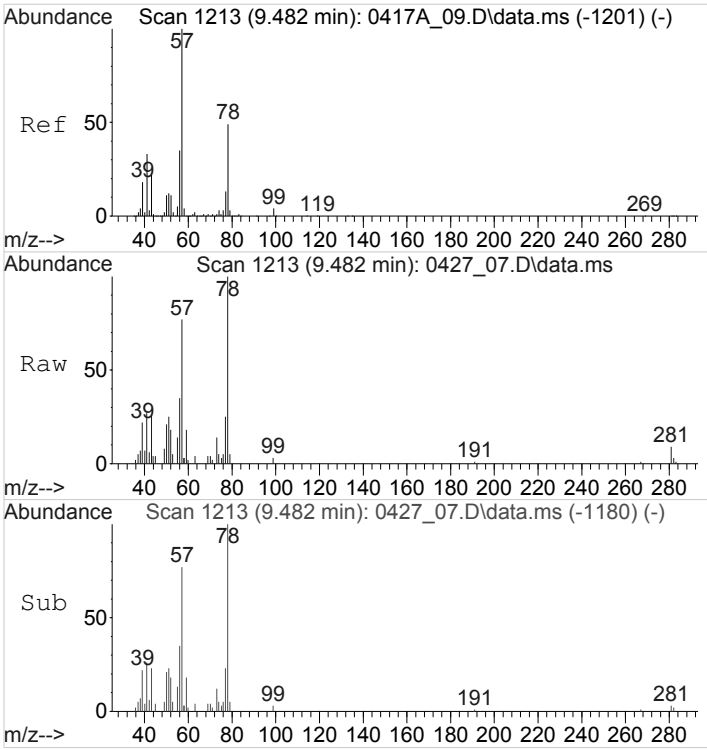


#36
2,2,4-Trimethylpentane
Concen: 129.1799839 ppbv
RT: 9.486 min Scan# 1214
Delta R.T. -0.002 min
Lab File: 0427_07.D
Acq: 27 Apr 2018 1:22 pm

Tgt Ion: 57 Resp: 86734

Ion	Ratio	Lower	Upper
57	100		
41	32.1	26.6	40.0
43	33.1	18.1	27.1#
56	34.4	27.7	41.5

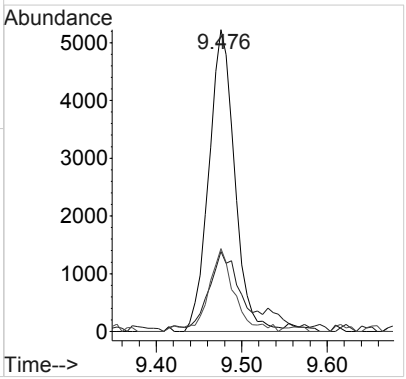


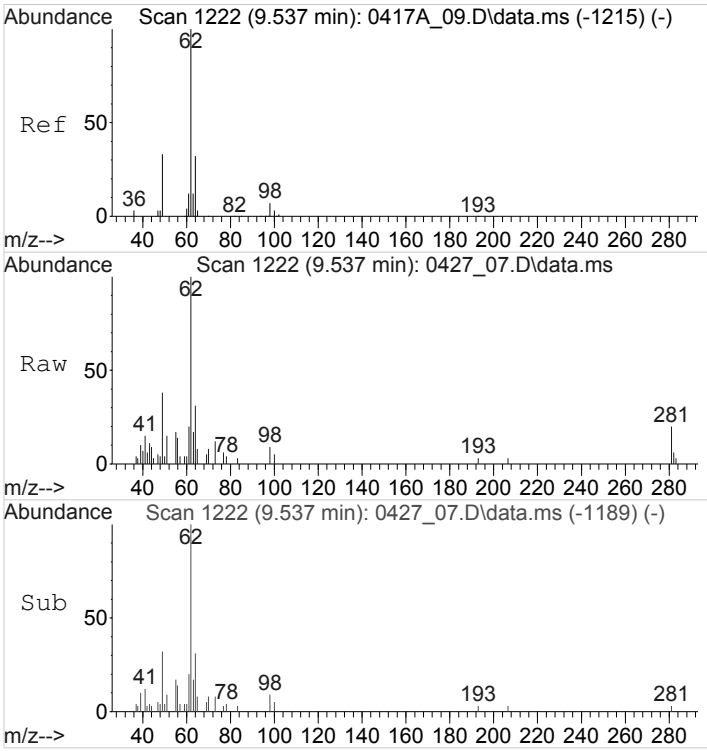


#38
Benzene
Concen: 342.6691797 ppbv
RT: 9.479 min Scan# 1213
Delta R.T. 0.000 min
Lab File: 0427_07.D
Acq: 27 Apr 2018 1:22 pm

Tgt Ion: 78 Resp: 111537

Ion	Ratio	Lower	Upper
78	100		
51	21.9	16.6	24.8
77	27.3	19.9	29.9

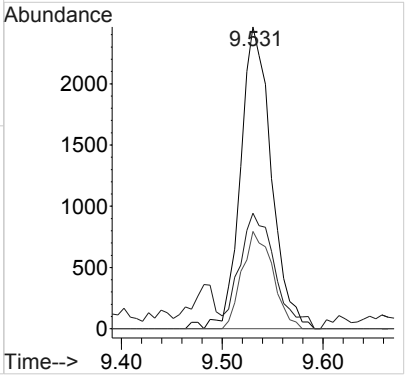


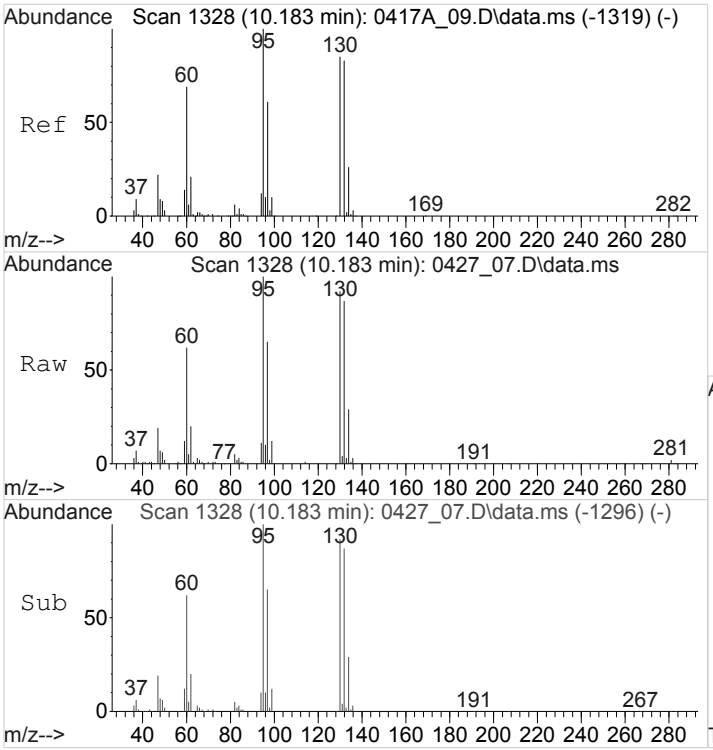


#39
1,2-Dichloroethane
Concen: 320.7089423 ppbv
RT: 9.534 min Scan# 1222
Delta R.T. 0.000 min
Lab File: 0427_07.D
Acq: 27 Apr 2018 1:22 pm

Tgt Ion: 62 Resp: 52592

Ion	Ratio	Lower	Upper
62	100		
49	0.0	28.8	43.2#
64	32.0	25.4	38.2

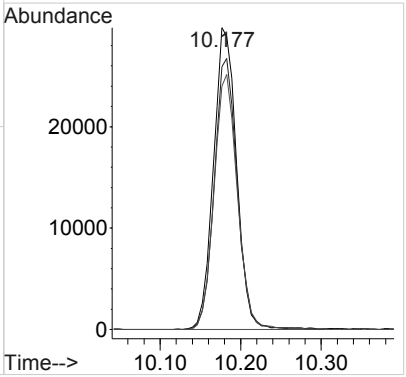


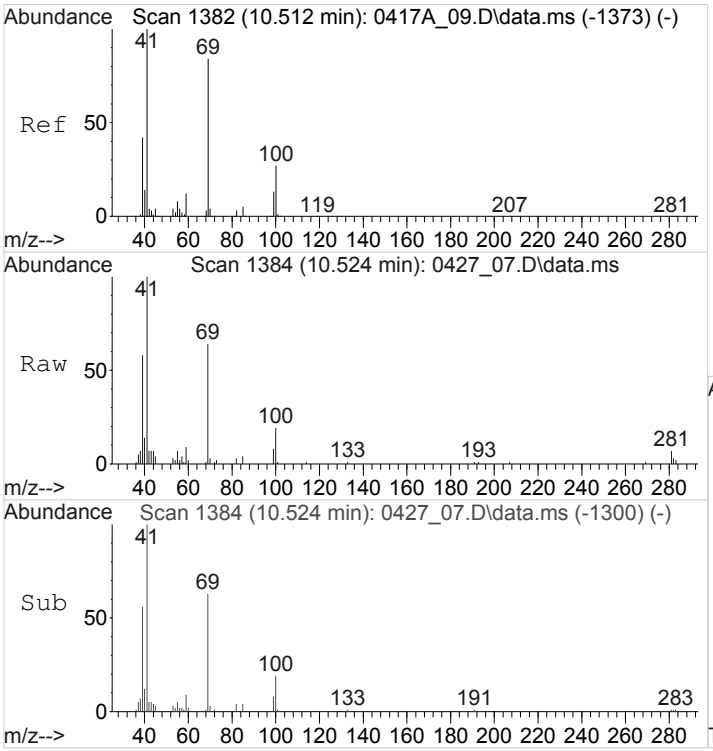


#41
Trichloroethene
Concen: 5021.9183367 ppbv
RT: 10.182 min Scan# 1328
Delta R.T. -0.002 min
Lab File: 0427_07.D
Acq: 27 Apr 2018 1:22 pm

Tgt Ion: 95 Resp: 594767

Ion	Ratio	Lower	Upper
95	100		
130	87.6	69.2	103.8
132	84.0	66.3	99.5

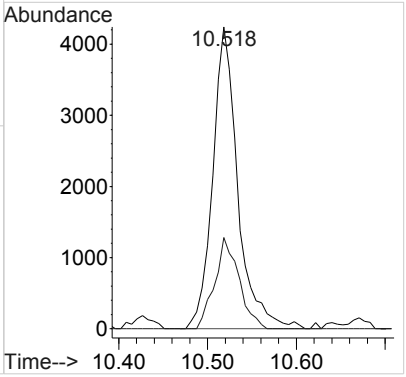


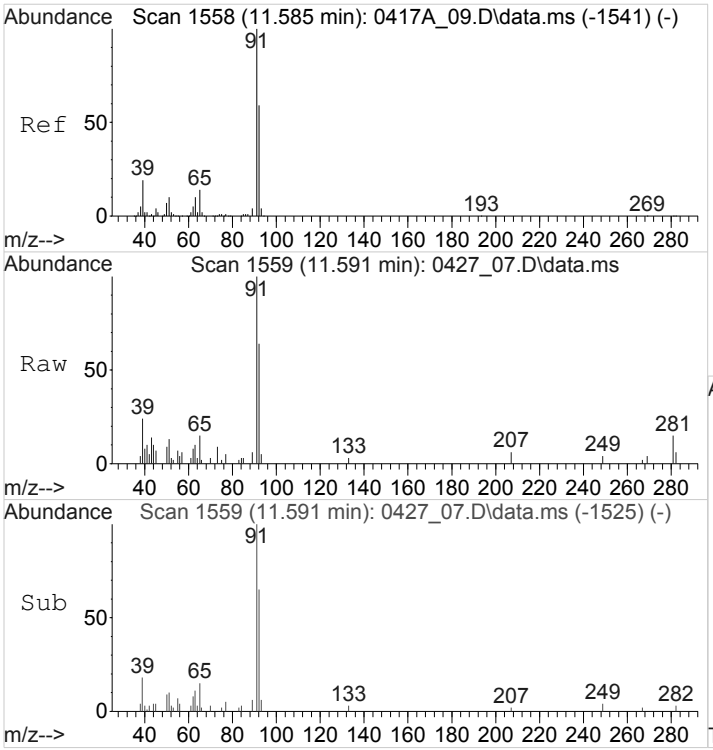


#45
Methyl Methacrylate
Concen: 686.5956600 ppbv
RT: 10.521 min Scan# 1384
Delta R.T. 0.011 min
Lab File: 0427_07.D
Acq: 27 Apr 2018 1:22 pm

Tgt Ion: 69 Resp: 83335

Ion	Ratio	Lower	Upper
69	100		
100	29.1	25.6	38.4

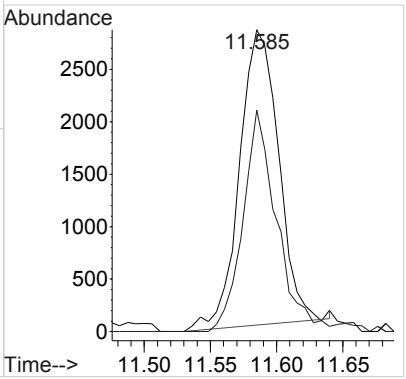


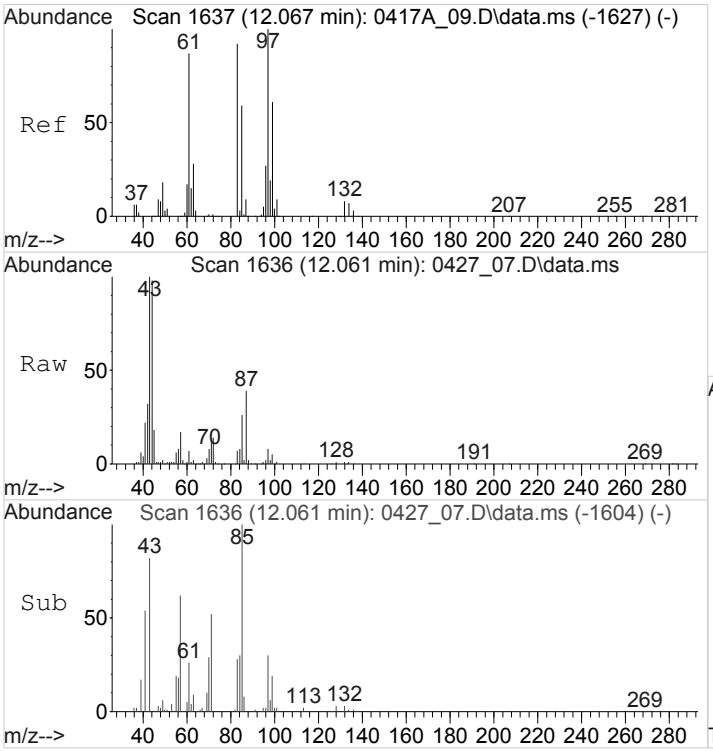


#50
Toluene
Concen: 163.1775749 ppbv
RT: 11.589 min Scan# 1559
Delta R.T. 0.004 min
Lab File: 0427_07.D
Acq: 27 Apr 2018 1:22 pm

Tgt Ion: 91 Resp: 57307

Ion	Ratio	Lower	Upper
91	100		
92	67.2	47.5	71.3

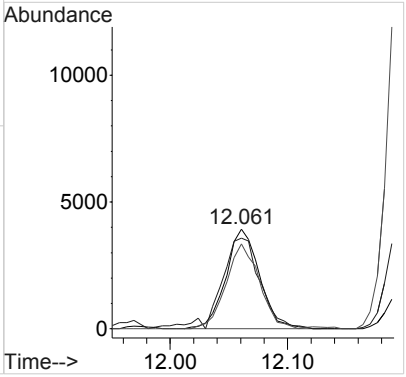


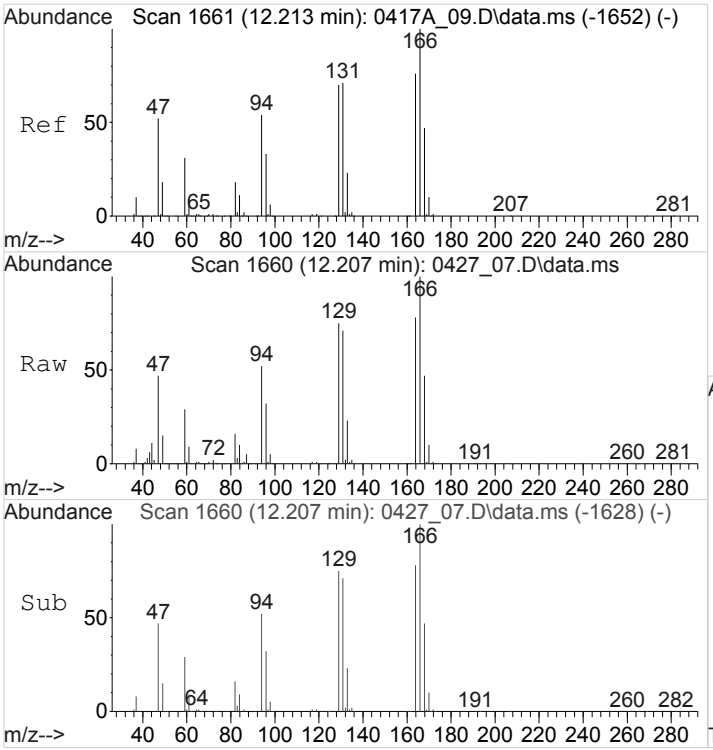


#52
1,1,2-Trichloroethane
Concen: 719.9534023 ppbv
RT: 12.063 min Scan# 1636
Delta R.T. -0.000 min
Lab File: 0427_07.D
Acq: 27 Apr 2018 1:22 pm

Tgt Ion: 97 Resp: 78239

Ion	Ratio	Lower	Upper
97	100		
83	0.0	75.2	112.8#
61	0.0	71.4	107.2#

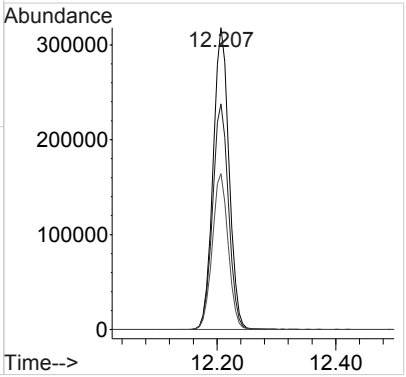


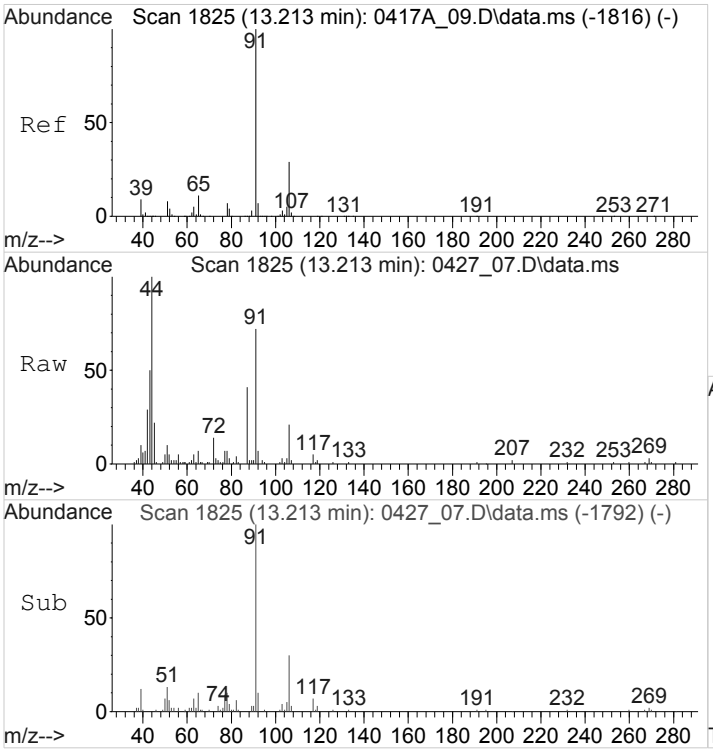


#53
Tetrachloroethene
Concen: 44592.7871962 ppbv
RT: 12.209 min Scan# 1660
Delta R.T. -0.001 min
Lab File: 0427_07.D
Acq: 27 Apr 2018 1:22 pm

Tgt Ion:166 Resp: 5921868

Ion	Ratio	Lower	Upper
166	100		
129	74.8	59.6	89.4
94	51.5	45.2	67.8

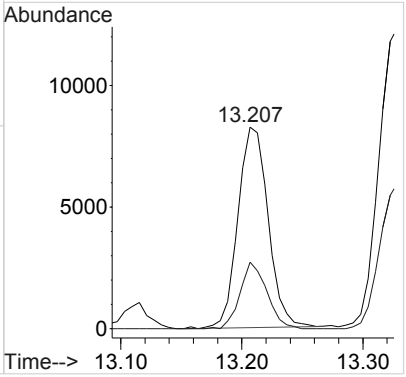


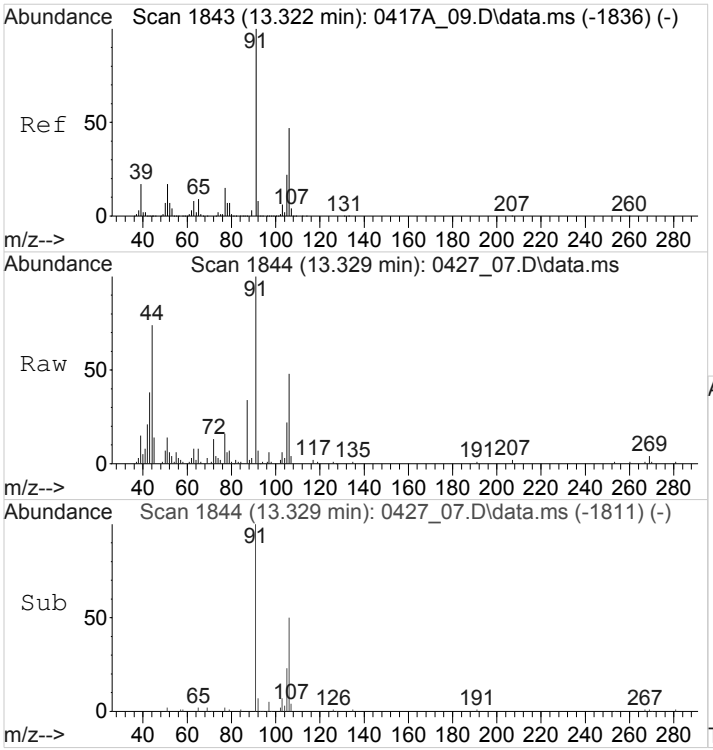


#59
Ethylbenzene
Concen: 287.4843502 ppbv
RT: 13.212 min Scan# 1825
Delta R.T. 0.002 min
Lab File: 0427_07.D
Acq: 27 Apr 2018 1:22 pm

Tgt Ion: 91 Resp: 142622

Ion	Ratio	Lower	Upper
91	100		
106	0.0	22.6	34.0#

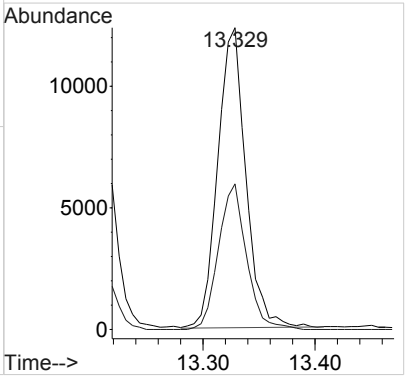


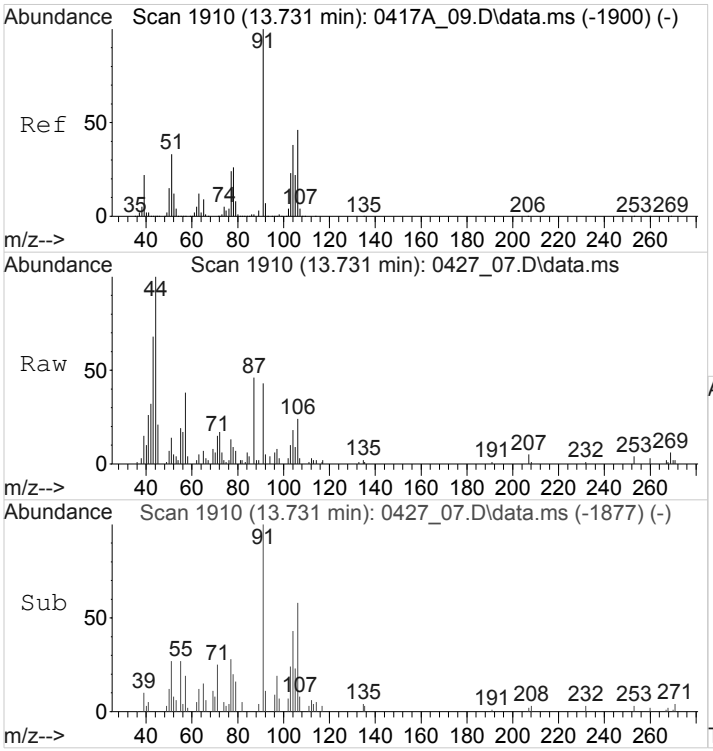


#60
M&P-Xylene
Concen: 561.4527895 ppbv
RT: 13.328 min Scan# 1844
Delta R.T. 0.004 min
Lab File: 0427_07.D
Acq: 27 Apr 2018 1:22 pm

Tgt Ion: 91 Resp: 214502

Ion	Ratio	Lower	Upper
91	100		
106	48.4	37.4	56.2

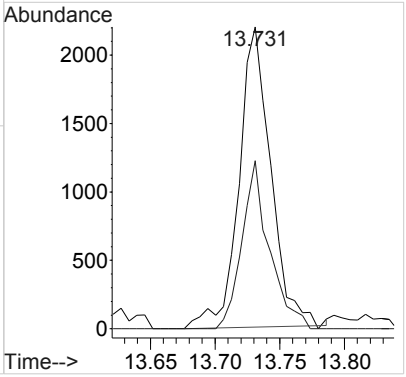


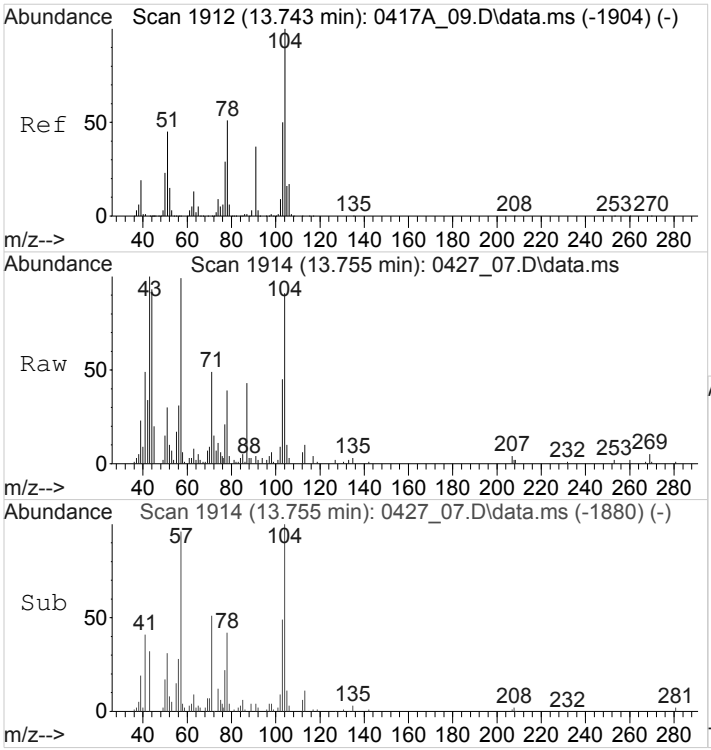


#61
O-Xylene
Concen: 98.4214624 ppbv
RT: 13.733 min Scan# 1910
Delta R.T. 0.003 min
Lab File: 0427_07.D
Acq: 27 Apr 2018 1:22 pm

Tgt Ion: 91 Resp: 37607

Ion	Ratio	Lower	Upper
91	100		
106	0.0	35.9	53.9#

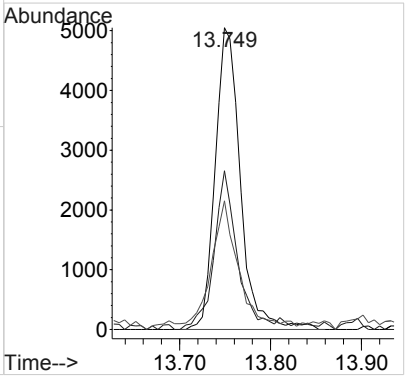


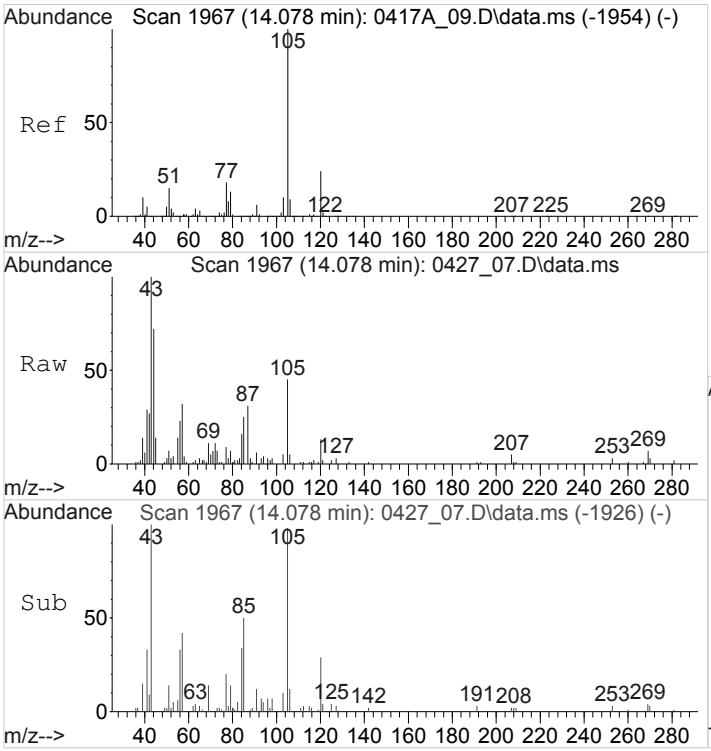


#62
Styrene
Concen: 341.7018753 ppbv
RT: 13.754 min Scan# 1914
Delta R.T. 0.009 min
Lab File: 0427_07.D
Acq: 27 Apr 2018 1:22 pm

Tgt Ion:104 Resp: 97197

Ion	Ratio	Lower	Upper
104	100		
78	48.6	45.6	68.4
51	49.2	49.6	74.4#

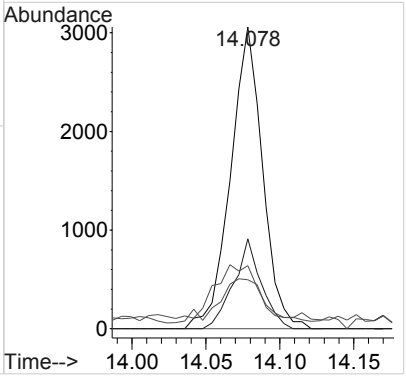


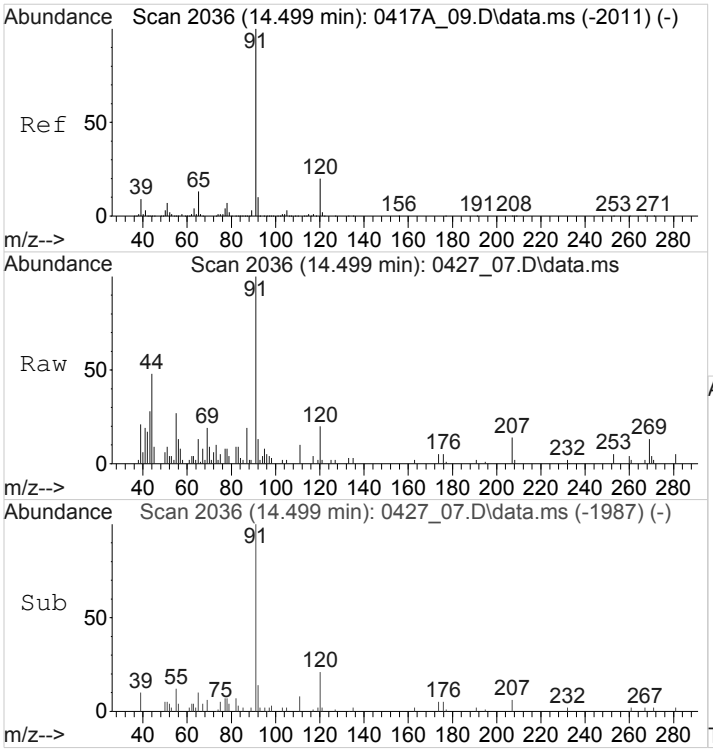


#64
Isopropylbenzene
Concen: 91.9364633 ppbv
RT: 14.080 min Scan# 1967
Delta R.T. 0.002 min
Lab File: 0427_07.D
Acq: 27 Apr 2018 1:22 pm

Tgt Ion:105 Resp: 46143

Ion	Ratio	Lower	Upper
105	100		
120	0.0	19.4	29.2#
77	0.0	15.0	22.4#
51	0.0	12.9	19.3#

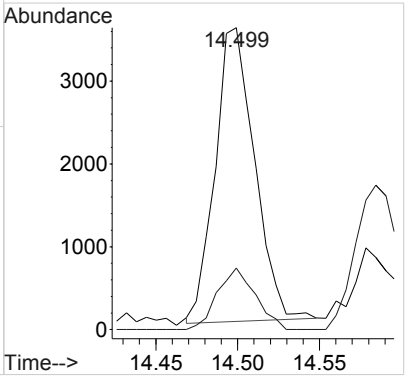


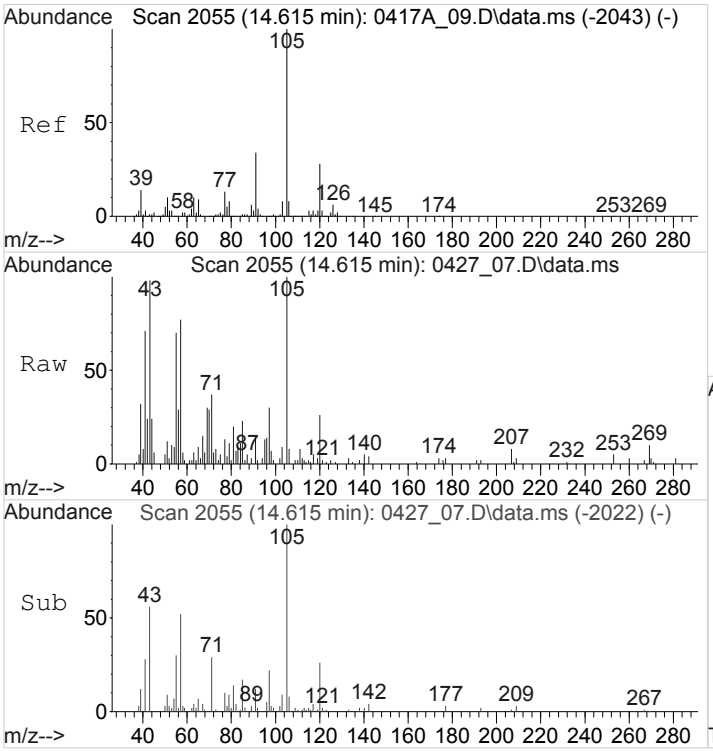


#66
n-Propylbenzene
Concen: 93.9631901 ppbv
RT: 14.499 min Scan# 2036
Delta R.T. 0.002 min
Lab File: 0427_07.D
Acq: 27 Apr 2018 1:22 pm

Tgt Ion: 91 Resp: 59511

Ion	Ratio	Lower	Upper
91	100		
120	0.0	15.3	22.9#

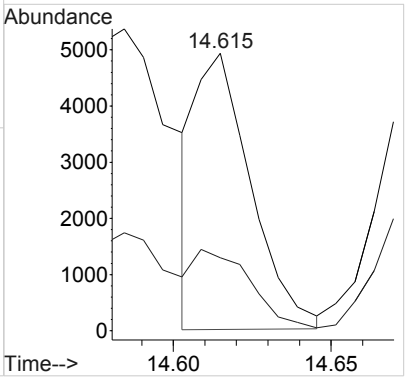


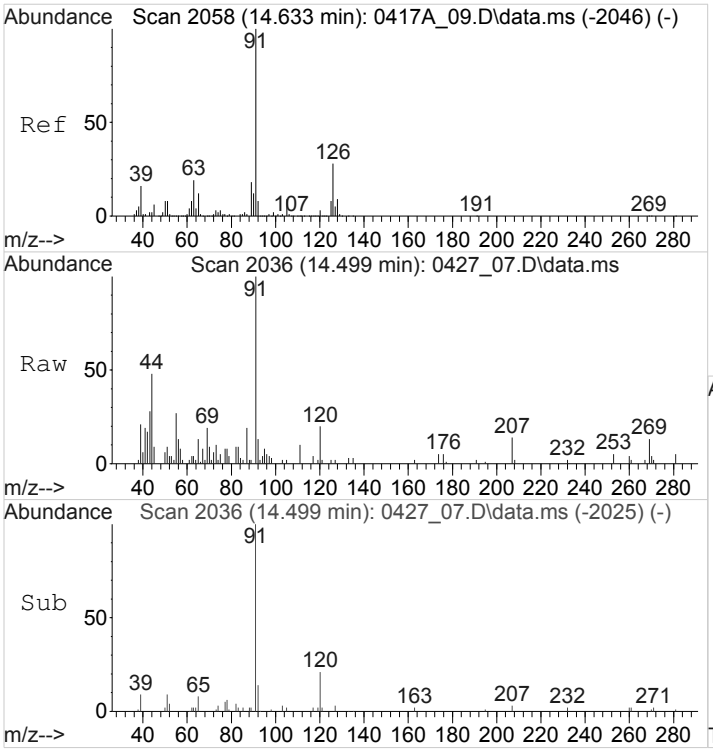


#67
4-Ethyltoluene
Concen: 138.1537008 ppbv
RT: 14.616 min Scan# 2055
Delta R.T. 0.003 min
Lab File: 0427_07.D
Acq: 27 Apr 2018 1:22 pm

Tgt Ion:105 Resp: 70539

Ion	Ratio	Lower	Upper
105	100		
120	0.0	21.8	32.6#

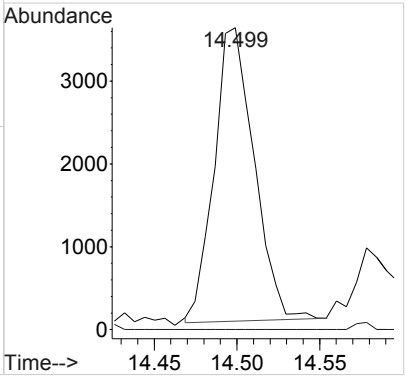


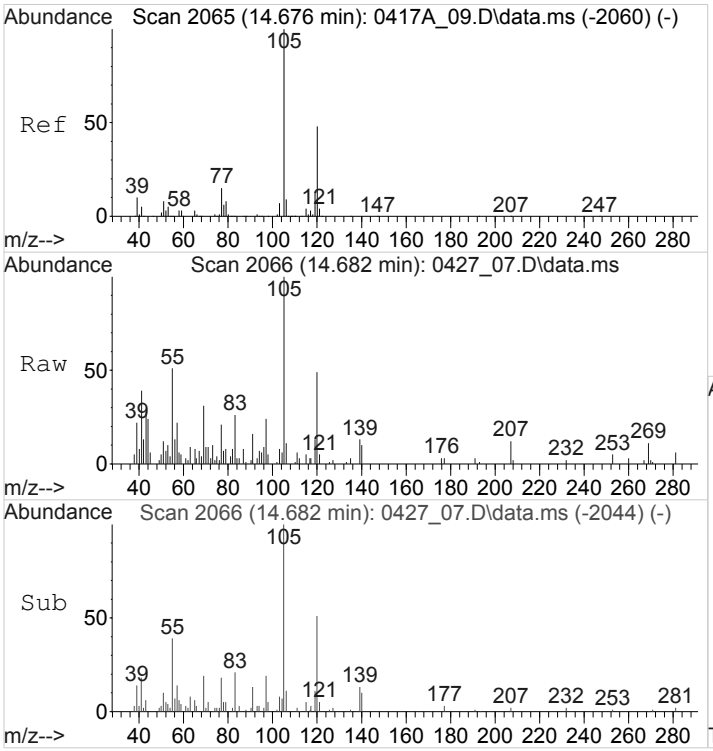


#68
2-Chlorotoluene
Concen: 134.9914859 ppbv
RT: 14.499 min Scan# 2036
Delta R.T. -0.134 min
Lab File: 0427_07.D
Acq: 27 Apr 2018 1:22 pm

Tgt Ion: 91 Resp: 59374

Ion	Ratio	Lower	Upper
91	100		
126	0.0	19.7	29.5#

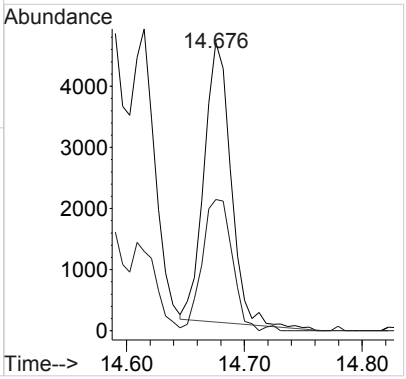


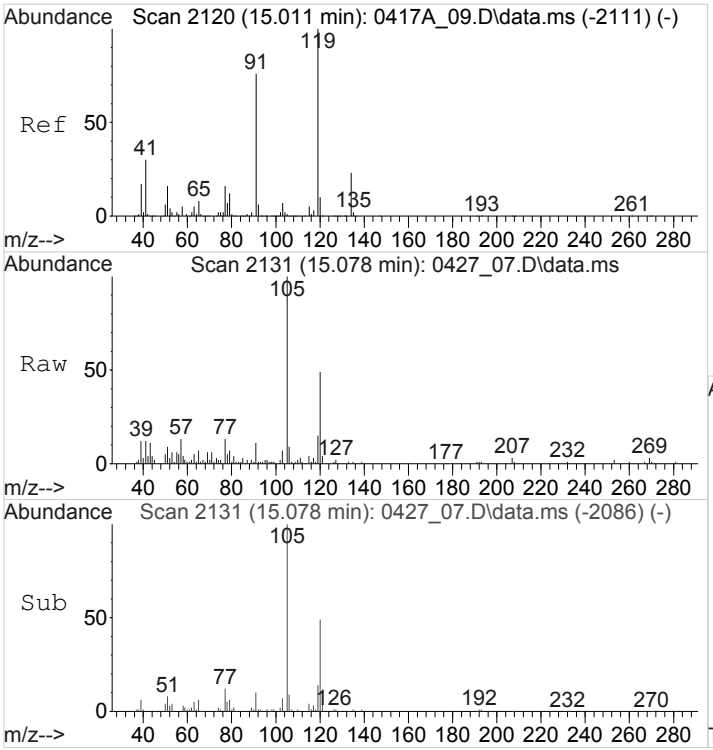


#70
1,3,5-Trimethylbenzene
Concen: 171.8971649 ppbv
RT: 14.680 min Scan# 2066
Delta R.T. 0.003 min
Lab File: 0427_07.D
Acq: 27 Apr 2018 1:22 pm

Tgt Ion:105 Resp: 73095

Ion	Ratio	Lower	Upper
105	100		
120	50.9	38.0	57.0

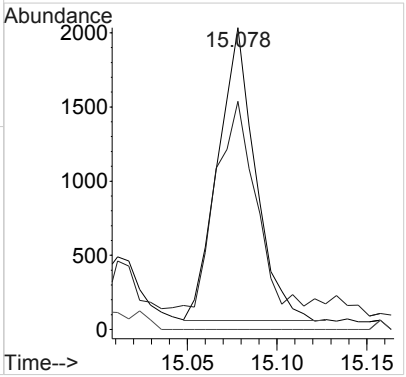


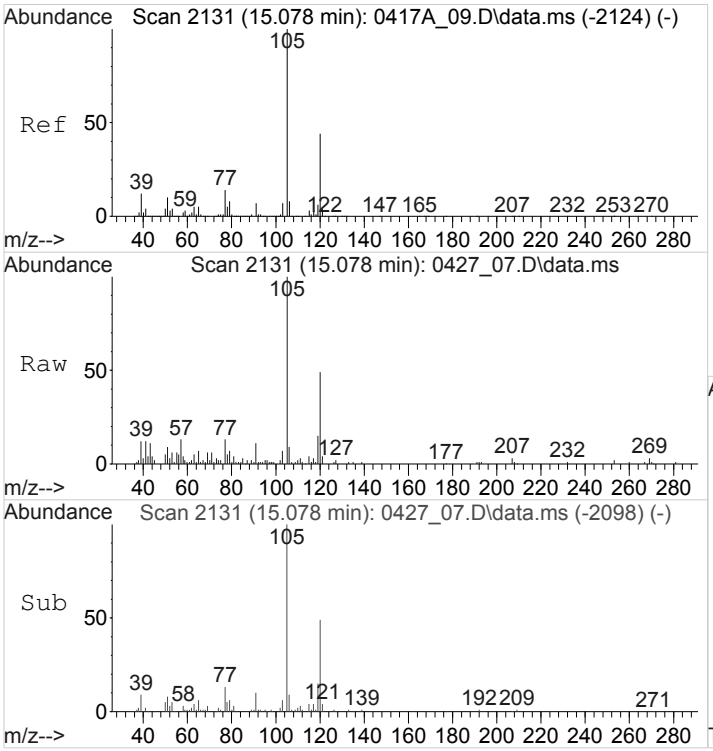


#71
tert-Butylbenzene
Concen: 75.7470771 ppbv
RT: 15.080 min Scan# 2131
Delta R.T. 0.066 min
Lab File: 0427_07.D
Acq: 27 Apr 2018 1:22 pm

Tgt Ion:119 Resp: 28862

Ion	Ratio	Lower	Upper
119	100		
91	75.5	60.2	90.2
134	0.0	18.5	27.7#

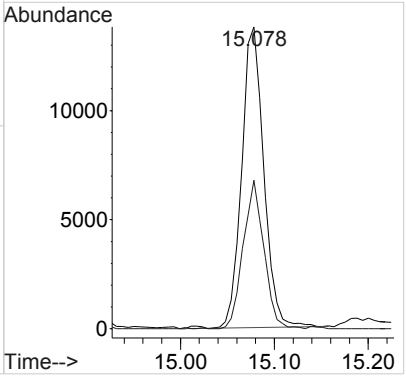


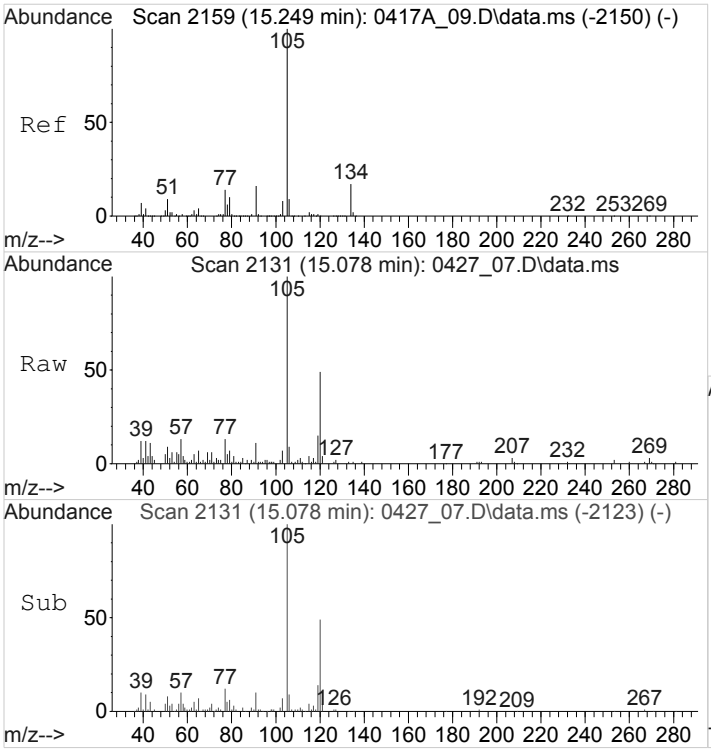


#72
1,2,4-Trimethylbenzene
Concen: 550.6208217 ppbv
RT: 15.079 min Scan# 2131
Delta R.T. 0.002 min
Lab File: 0427_07.D
Acq: 27 Apr 2018 1:22 pm

Tgt Ion:105 Resp: 225562

Ion	Ratio	Lower	Upper
105	100		
120	45.5	35.6	53.4

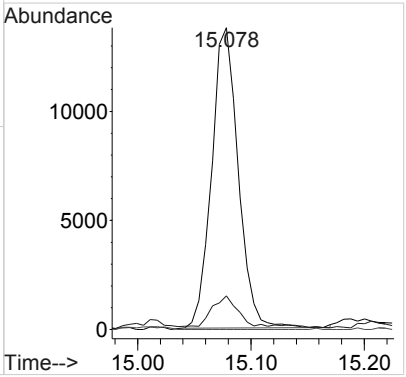


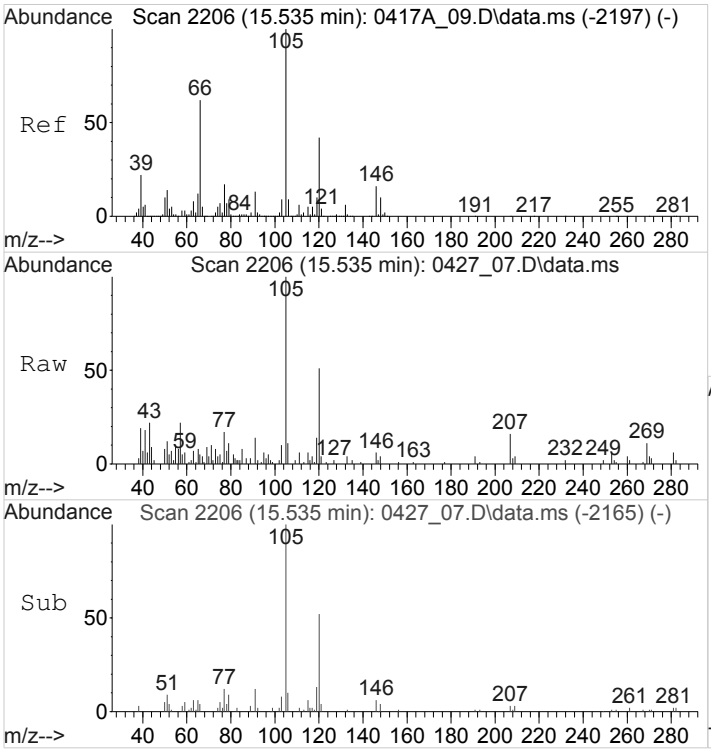


#73
sec-Butylbenzene
Concen: 361.2706469 ppbv
RT: 15.079 min Scan# 2131
Delta R.T. -0.168 min
Lab File: 0427_07.D
Acq: 27 Apr 2018 1:22 pm

Tgt Ion:105 Resp: 224168

Ion	Ratio	Lower	Upper
105	100		
91	10.5	13.1	19.7#
134	0.0	13.5	20.3#

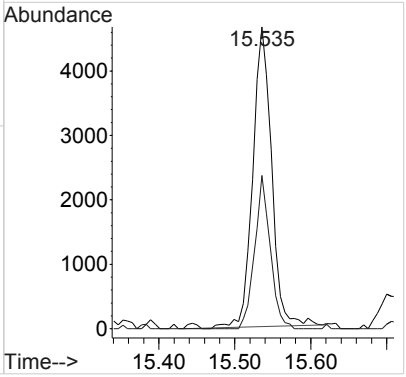


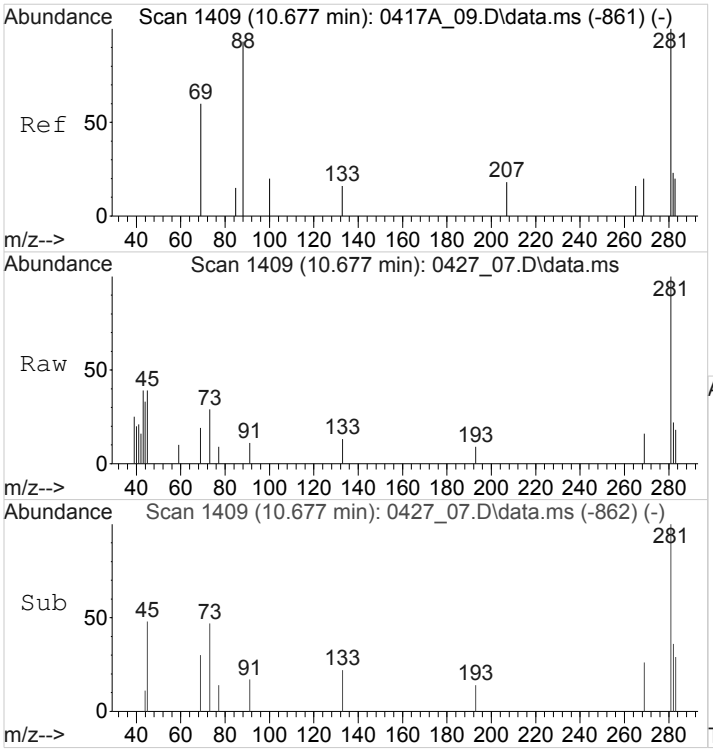


#76
1,2,3-TRIMETHYLBENZENE
Concen: 188.6519122 ppbv
RT: 15.538 min Scan# 2206
Delta R.T. 0.004 min
Lab File: 0427_07.D
Acq: 27 Apr 2018 1:22 pm

Tgt Ion:105 Resp: 80086

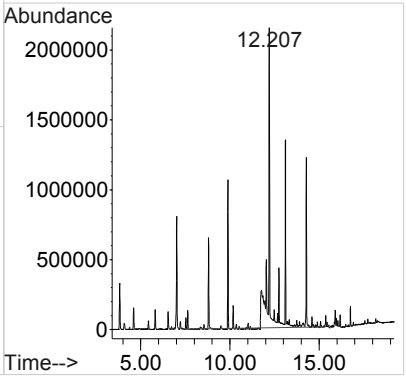
Ion	Ratio	Lower	Upper
105	100		
120	42.3	32.7	49.1





#84
TPH (GC/MS) Low Fraction
Concen: 148255.1027185 ppbv m
RT: 10.675 min Scan# 1409
Delta R.T. 0.000 min
Lab File: 0427_07.D
Acq: 27 Apr 2018 1:22 pm

Tgt Ion:TIC Resp:150710823



1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS-4

ESC Sample ID:	L988471-04	**SDG:**	L988471
Client Sample ID:	SS-4	**Collected Date/Time:**	04/23/18 11:06
Lab File ID:	0426_15	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/26/18 17:59
Analytical Batch:	WG1103323	**Analysis Date/Time:**	04/26/18 17:59
Dilution Factor:	100	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	4 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	RT	Result	Qualifier	MDL	RDL
			ppbv		*ppbv*	*ppbv*
Acetone	67-64-1	5.47	573		5.69	125
Allyl chloride	107-05-1	0	ND		5.46	20.0
Benzene	71-43-2	7.81	ND		4.60	20.0
Benzyl Chloride	100-44-7	13.77	ND		5.98	20.0
Bromodichloromethane	75-27-4	8.89	ND		4.36	20.0
Bromoform	75-25-2	0	ND		7.86	60.0
Bromomethane	74-83-9	0	ND		6.09	20.0
1,3-Butadiene	106-99-0	4.13	ND		5.63	200
Carbon disulfide	75-15-0	5.68	24.6		5.44	20.0
Carbon tetrachloride	56-23-5	7.60	ND		5.85	20.0
Chlorobenzene	108-90-7	11.25	ND		6.01	20.0
Chloroethane	75-00-3	0	ND		4.89	20.0
Chloroform	67-66-3	7.26	ND		5.74	20.0
Chloromethane	74-87-3	3.93	ND		5.44	20.0
2-Chlorotoluene	95-49-8	12.56	ND		6.05	20.0
Cyclohexane	110-82-7	7.48	ND		5.34	20.0
Dibromochloromethane	124-48-1	0	ND		4.94	20.0
1,2-Dibromoethane	106-93-4	0	ND		1.85	20.0
1,2-Dichlorobenzene	95-50-1	14	ND		6.03	20.0
1,3-Dichlorobenzene	541-73-1	13.57	ND		5.97	20.0
1,4-Dichlorobenzene	106-46-7	13.65	ND		5.57	20.0
1,2-Dichloroethane	107-06-2	7.86	ND		6.16	20.0
1,1-Dichloroethane	75-34-3	6.50	ND		5.14	20.0
1,1-Dichloroethene	75-35-4	0	ND		4.90	20.0
cis-1,2-Dichloroethene	156-59-2	7.01	702		3.89	20.0
trans-1,2-Dichloroethene	156-60-5	6.08	56.6		4.64	20.0
1,2-Dichloropropane	78-87-5	8.66	ND		5.99	20.0
cis-1,3-Dichloropropene	10061-01-5	0	ND		5.88	20.0
trans-1,3-Dichloropropene	10061-02-6	0	ND		4.35	20.0
1,4-Dioxane	123-91-1	0	ND		5.54	20.0
Ethanol	64-17-5	5.04	931		8.32	63.0
Ethylbenzene	100-41-4	11.29	ND		5.06	20.0
4-Ethyltoluene	622-96-8	12.79	ND		6.66	20.0
Trichlorofluoromethane	75-69-4	4.85	ND		6.73	20.0
Dichlorodifluoromethane	75-71-8	3.62	ND		6.01	20.0
1,1,2-Trichlorotrifluoroethane	76-13-1	5.33	ND		6.87	20.0
1,2-Dichlorotetrafluoroethane	76-14-2	0	ND		4.58	20.0
Heptane	142-82-5	7.84	ND		6.26	20.0
Hexachloro-1,3-butadiene	87-68-3	15.61	ND		6.56	63.0
n-Hexane	110-54-3	6.22	126		4.57	20.0
Isopropylbenzene	98-82-8	12.27	ND		5.63	20.0
Methylene Chloride	75-09-2	5.87	253		4.65	20.0
Methyl Butyl Ketone	591-78-6	10.34	ND		6.82	125

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS-4

ESC Sample ID:	L988471-04	**SDG:**	L988471
Client Sample ID:	SS-4	**Collected Date/Time:**	04/23/18 11:06
Lab File ID:	0426_15	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/26/18 17:59
Analytical Batch:	WG1103323	**Analysis Date/Time:**	04/26/18 17:59
Dilution Factor:	100	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	4 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	RT	Result	Qualifier	MDL	RDL
			ppbv		*ppbv*	*ppbv*
2-Butanone (MEK)	78-93-3	7	ND		4.93	125
4-Methyl-2-pentanone (MIBK)	108-10-1	9.43	ND		6.50	125
Methyl methacrylate	80-62-6	8.61	ND		7.73	20.0
MTBE	1634-04-4	6.04	ND		5.05	20.0
Naphthalene	91-20-3	15.83	ND		15.4	63.0
2-Propanol	67-63-0	5.53	ND		8.82	125
Propene	115-07-1	0	ND		9.32	40.0
Styrene	100-42-5	11.91	ND		4.65	20.0
1,1,2,2-Tetrachloroethane	79-34-5	12.63	ND		5.76	20.0
Tetrahydrofuran	109-99-9	0	ND		5.08	20.0
Toluene	108-88-3	9.66	29.9		4.99	20.0
1,2,4-Trichlorobenzene	120-82-1	15.52	ND		14.8	63.0
1,1,1-Trichloroethane	71-55-6	7.46	ND		6.65	20.0
1,1,2-Trichloroethane	79-00-5	10.12	ND		2.87	20.0
Trichloroethylene	79-01-6	8.38	2290		5.45	20.0
1,2,4-Trimethylbenzene	95-63-6	13.25	21.7		4.83	20.0
1,3,5-Trimethylbenzene	108-67-8	12.87	ND		6.31	20.0
2,2,4-Trimethylpentane	540-84-1	7.72	ND		4.56	20.0
Vinyl chloride	75-01-4	0	ND		4.57	20.0
Vinyl Bromide	593-60-2	0	ND		7.27	20.0
Vinyl acetate	108-05-4	6.49	ND		6.39	20.0
m&p-Xylene	1330-20-7	11.41	ND		9.46	40.0
o-Xylene	95-47-6	11.89	ND		6.33	20.0

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_15.D
Acq On : 26 Apr 2018 5:59 pm
Operator : 564
Sample : L988471-04 100x WG1103323
Misc :
ALS Vial : 15 Sample Multiplier: 100
InstName : AIRMS5

Quant Time: Apr 27 08:49:44 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.257	130	240130	4.0000000	ppbv	0.01
37) 1,4-Difluorobenzene	8.105	114	884375	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	11.216	117	826013	4.0000000	ppbv	0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	12.535	95	487515	3.9345895	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 98.36%			
Target Compounds						Qvalue
3) 1,1-DIFLUOROETHANE	3.580	51	157068	416.3574666	ppbv	98
4) Dichlorodifluoromethane	3.625	85	7036	11.7336302	ppbv	100
5) CHLORODIFLUOROMETHANE	3.653	51	4034	11.1713035	ppbv	95
7) Chloromethane	3.930	50	3070	12.8390501	ppbv	98
9) 1,3-Butadiene	4.128	39	913	4.8903738	ppbv #	1
13) Trichlorofluoromethane	4.852	101	3607	5.3793100	ppbv	95
14) Ethanol	5.039	45	108283	931.3600710	ppbv	99
15) 1,1,2-Trichlorotrifluo...	5.333	101	1165	1.8708658	ppbv #	71
17) Acetone	5.469	58	84589	572.8417764	ppbv	70
18) 2-Propanol	5.526	45	36909	64.8502073	ppbv #	1
19) Carbon Disulfide	5.684	76	16671	24.5747117	ppbv #	88
21) Methylene Chloride	5.871	49	84314	253.0885986	ppbv	92
22) TERT-BUTYL ALCOHOL	5.876	59	217419	281.6571349	ppbv	98
23) Methyl Tert-Butyl Ether	6.040	73	10141	10.7235763	ppbv #	1
24) Trans-1,2-Dichloroethene	6.080	61	22955	56.5906462	ppbv #	13
25) n-Hexane	6.221	57	59896	126.4310000	ppbv	93
26) 1,1-Dichloroethane	6.499	63	1717	2.9266493	ppbv #	67
27) Vinyl Acetate	6.493	43	1055	1.3337657	ppbv #	69
28) ETHYL ACETATE	6.957	43	3314	5.1709597	ppbv #	61
29) 2-Butanone (MEK)	6.996	72	6778	35.4236392	ppbv #	13
30) cis-1,2-Dichloroethene	7.013	96	268418	702.3404121	ppbv	95
32) Chloroform	7.262	83	9502	13.8243593	ppbv	95
33) Cyclohexane	7.477	84	4001	8.1660161	ppbv #	36
34) 1,1,1-Trichloroethane	7.460	97	668	0.9754545	ppbv #	24
35) Carbon Tetrachloride	7.596	117	2180	3.0577307	ppbv	93
36) 2,2,4-Trimethylpentane	7.720	57	9388	5.6025075	ppbv #	64
38) Benzene	7.811	78	10152	9.1557155	ppbv	96
39) 1,2-Dichloroethane	7.856	62	4000	10.1127610	ppbv	97
40) Heptane	7.839	43	8450	15.4303599	ppbv	88
41) Trichloroethene	8.382	95	1106641	2289.8839017	ppbv	95
42) TERT-AMYL ETHYL ETHER	8.230	73	509	1.4490455	ppbv #	1
43) METHYL CYCLOHEXANE	8.535	83	7940	11.9538263	ppbv	98
44) 1,2-Dichloropropane	8.660	63	664	1.6594923	ppbv #	1
45) Methyl Methacrylate	8.614	69	2143	5.3832119	ppbv #	63
47) Bromodichloromethane	8.891	83	892	1.1887780	ppbv #	18
49) 4-Methyl-2-Pentanone (...	9.434	43	2384	2.9712516	ppbv #	73
50) Toluene	9.661	91	41279	29.9397944	ppbv	96
52) 1,1,2-Trichloroethane	10.125	97	5662	11.7860667	ppbv	95
53) Tetrachloroethene	10.249	166	11932658	16079.9318982	ppbv	97
54) Methyl Butyl Ketone	10.340	43	2514	3.2536188	ppbv #	32
57) Chlorobenzene	11.250	112	1877	1.6229786	ppbv #	1
59) Ethylbenzene	11.290	91	8503	4.3222968	ppbv	99
60) M&P-Xylene	11.414	91	25777	17.1042246	ppbv	100
61) O-Xylene	11.890	91	12106	7.7690686	ppbv	94
62) Styrene	11.912	104	10261	8.3190246	ppbv	92

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_15.D
Acq On : 26 Apr 2018 5:59 pm
Operator : 564
Sample : L988471-04 100x WG1103323
Misc :
ALS Vial : 15 Sample Multiplier: 100
InstName : AIRMS5

Quant Time: Apr 27 08:49:44 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration

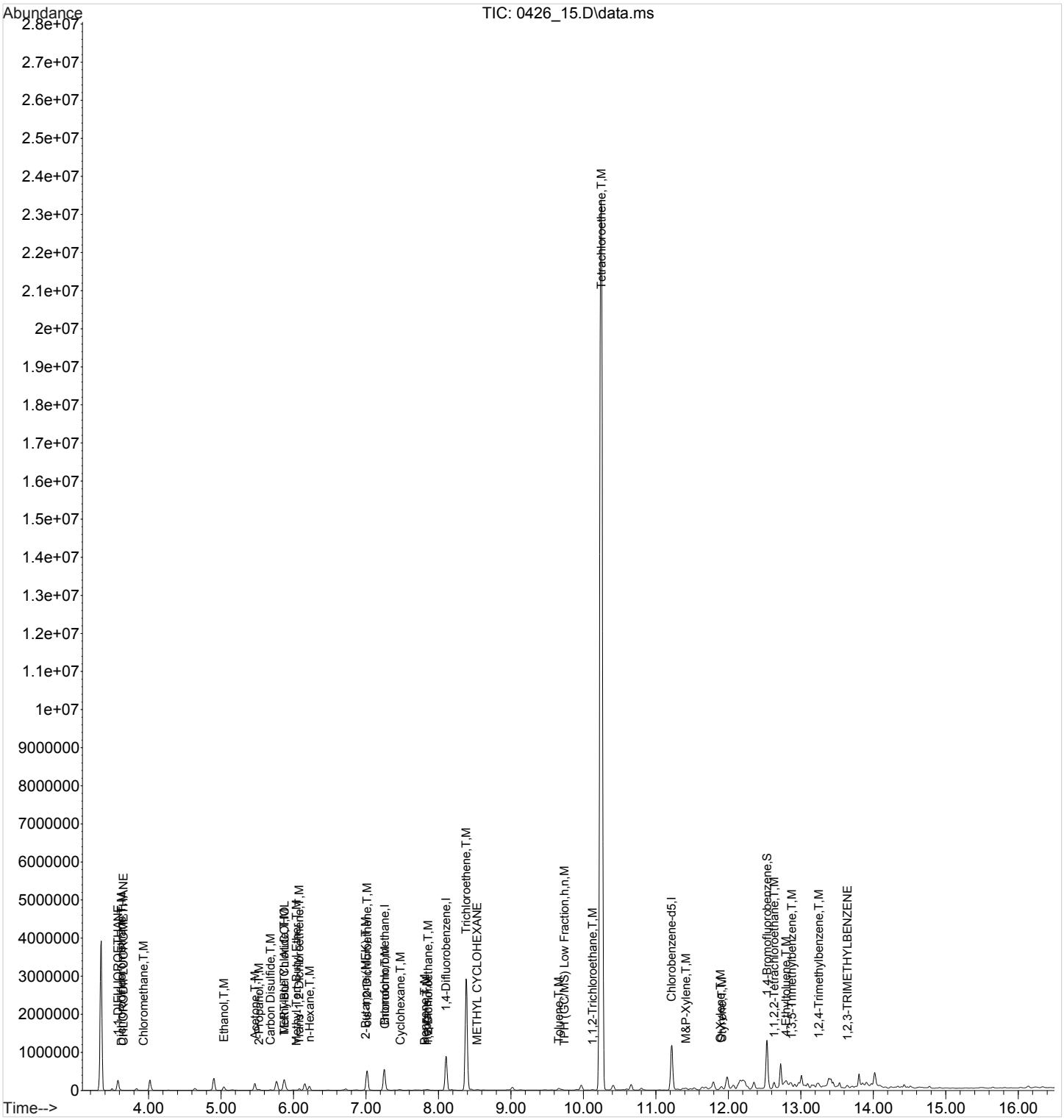
	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
64)	Isopropylbenzene	12.269	105	2545	1.1083469 ppbv #	81
65)	1,1,2,2-Tetrachloroethane	12.631	83	14965	13.0061239 ppbv #	46
66)	n-Propylbenzene	12.716	91	6802	2.6694353 ppbv	99
67)	4-Ethyltoluene	12.795	105	30522	13.6842615 ppbv	96
68)	2-Chlorotoluene	12.563	126	835	1.6035666 ppbv	89
70)	1,3,5-Trimethylbenzene	12.874	105	22764	12.9244748 ppbv	99
71)	Tert-Butylbenzene	13.185	119	2093	1.2166289 ppbv #	83
72)	1,2,4-Trimethylbenzene	13.247	105	38519	21.6553915 ppbv	98
73)	sec-Butylbenzene	13.389	134	1293	2.3311605 ppbv #	21
74)	1,3-Dichlorobenzene	13.570	146	879	0.6784122 ppbv #	1
75)	1,4-Dichlorobenzene	13.655	146	1028	0.8286628 ppbv #	1
76)	1,2,3-TRIMETHYLBENZENE	13.643	105	23297	13.7155870 ppbv	100
77)	DICYCLOPENTADIENE	13.643	66	991	0.6319560 ppbv #	66
78)	Benzyl Chloride	13.773	91	2433	1.5143299 ppbv	94
79)	n-Butylbenzene	13.858	91	3436	1.6943975 ppbv #	76
80)	1,2-Dichlorobenzene	14.000	146	2269	1.7708437 ppbv #	1
81)	1,2,4-Trichlorobenzene	15.521	180	1214	1.0189898 ppbv #	82
82)	Hexachloro-1,3-Butadiene	15.606	225	509	0.4117169 ppbv #	40
83)	Naphthalene	15.832	128	4943	1.8576643 ppbv #	88
84)	TPH (GC/MS) Low Fraction	9.740	TIC	76929847m	27396.0941855 ppbv	

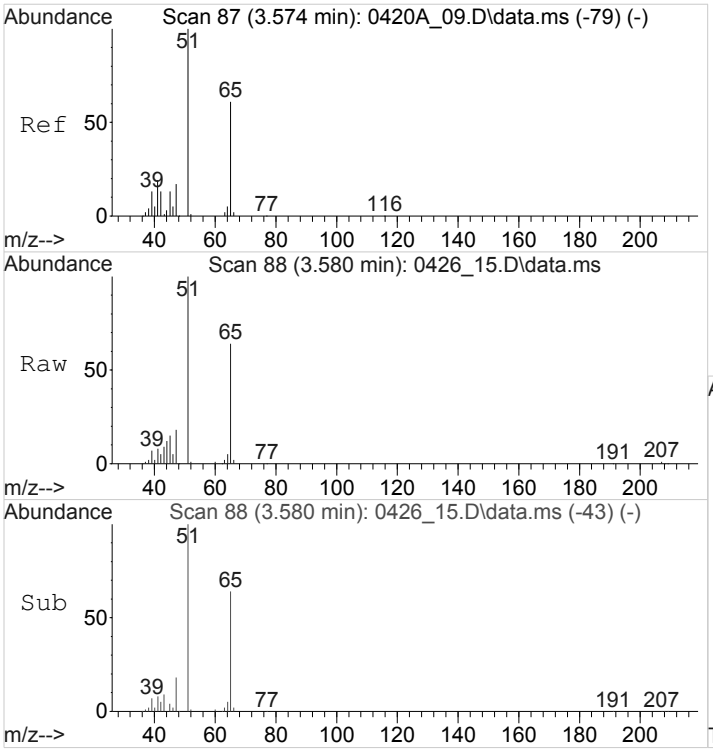
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_15.D
Acq On : 26 Apr 2018 5:59 pm
Operator : 564
Sample : L988471-04 100x WG1103323
Misc :
ALS Vial : 15 Sample Multiplier: 100
InstName : AIRMS5

Quant Time: Apr 27 08:49:44 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration

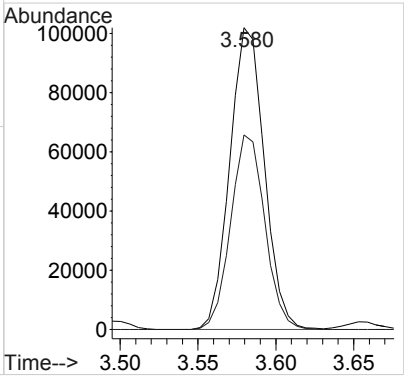


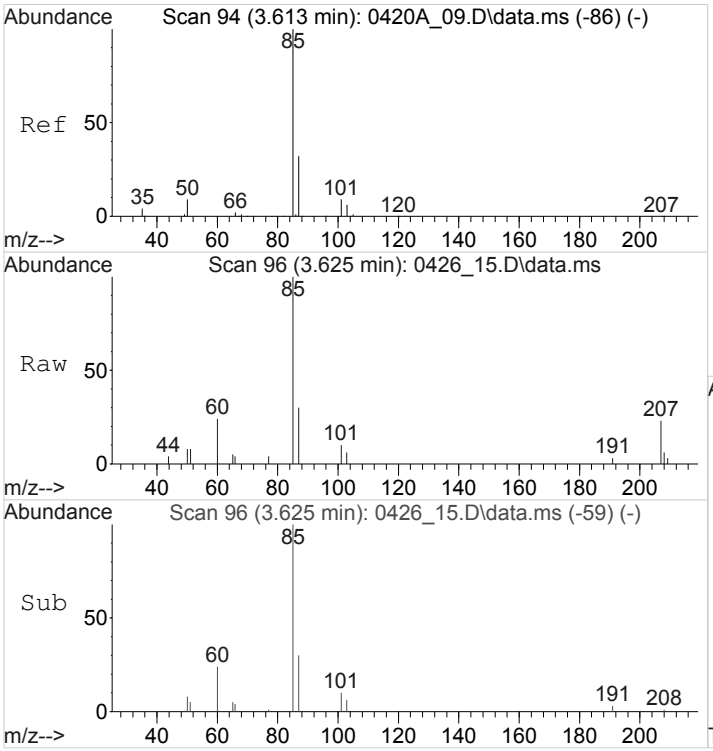


#3
1,1-DIFLUOROETHANE
Concen: 416.3574666 ppbv
RT: 3.580 min Scan# 88
Delta R.T. 0.006 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion: 51 Resp: 157068

Ion	Ratio	Lower	Upper
51	100		
65	63.7	49.4	74.2

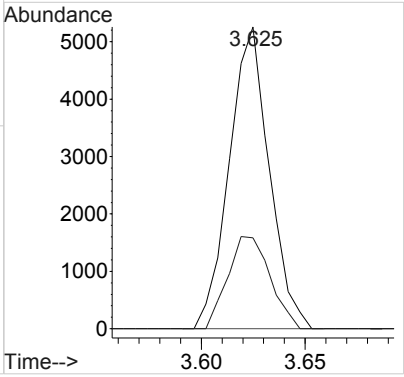


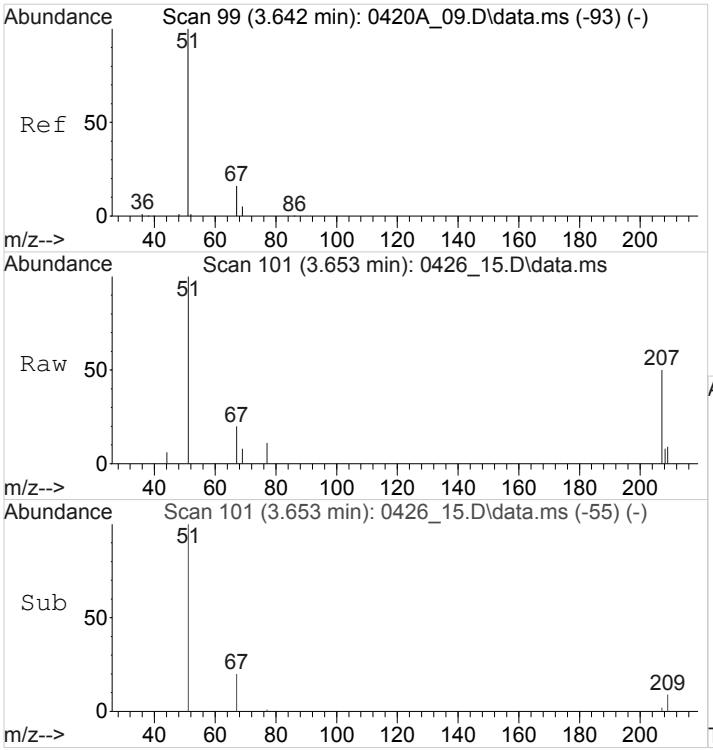


#4
Dichlorodifluoromethane
Concen: 11.7336302 ppbv
RT: 3.625 min Scan# 96
Delta R.T. 0.011 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion: 85 Resp: 7036

Ion	Ratio	Lower	Upper
85	100		
87	32.4	25.8	38.8

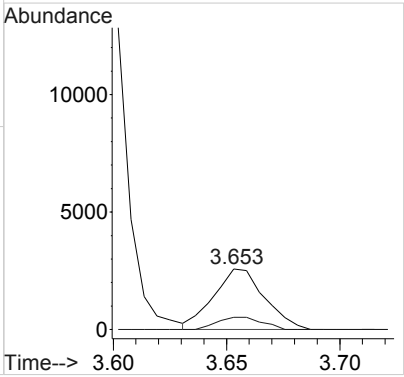


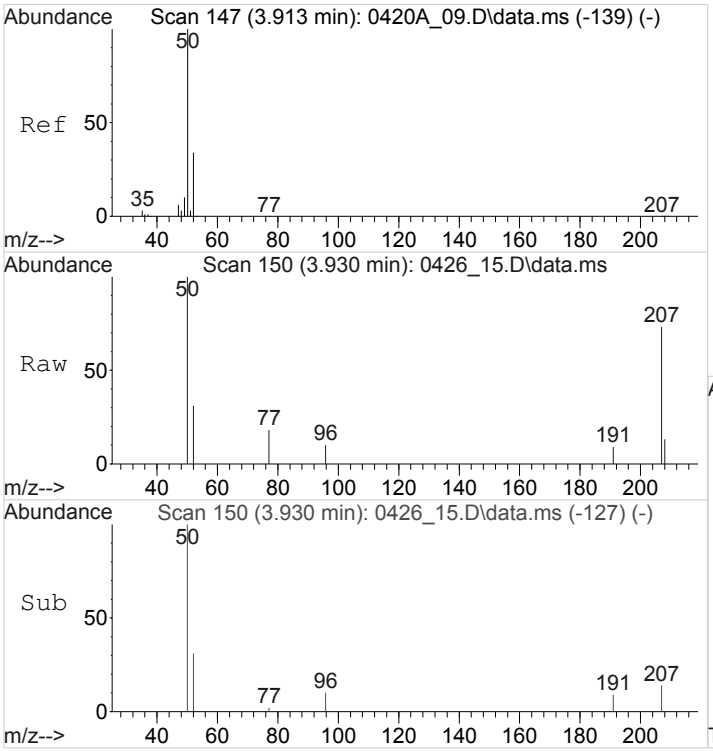


#5
CHLORODIFLUOROMETHANE
Concen: 11.1713035 ppbv
RT: 3.653 min Scan# 101
Delta R.T. 0.011 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion: 51 Resp: 4034

Ion	Ratio	Lower	Upper
51	100		
67	18.0	12.7	19.1

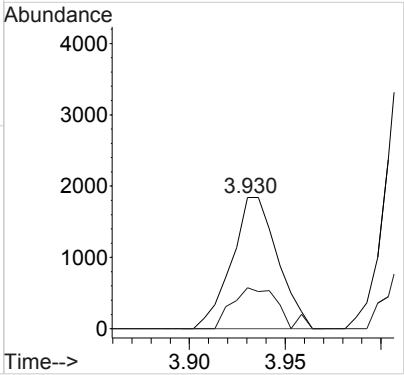


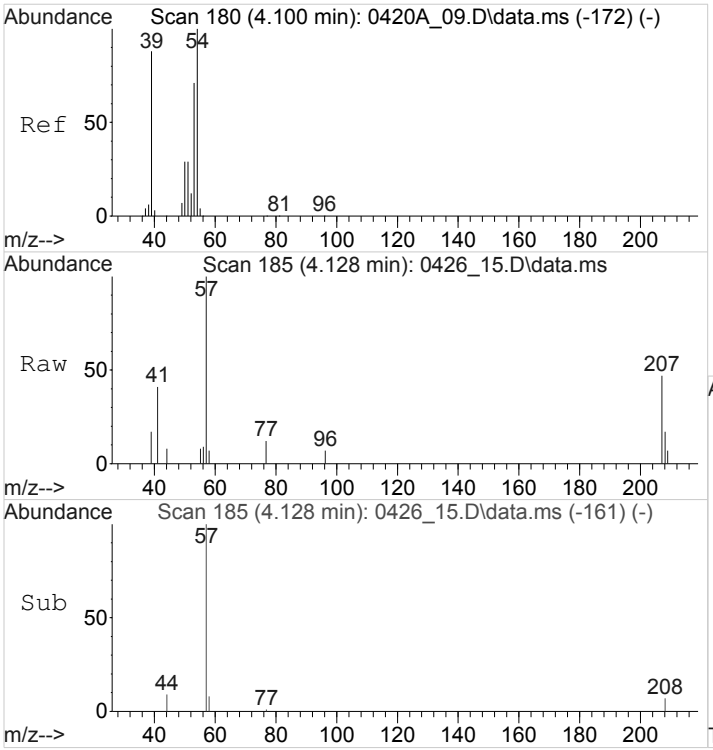


#7
Chloromethane
Concen: 12.8390501 ppbv
RT: 3.930 min Scan# 150
Delta R.T. 0.017 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion: 50 Resp: 3070

Ion	Ratio	Lower	Upper
50	100		
52	31.8	26.5	39.7

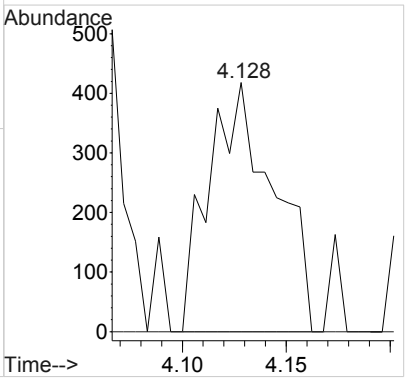


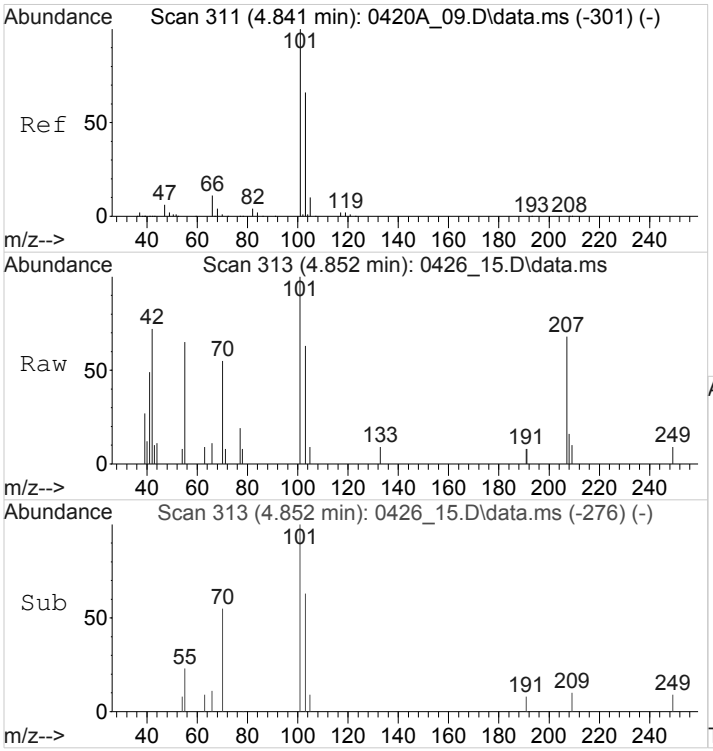


#9
1,3-Butadiene
Concen: 4.8903738 ppbv
RT: 4.128 min Scan# 185
Delta R.T. 0.028 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion: 39 Resp: 913

Ion	Ratio	Lower	Upper
39	100		
54	0.0	91.3	136.9#

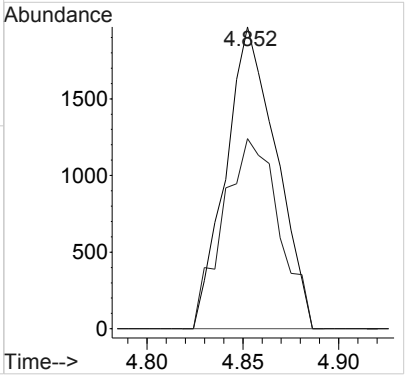


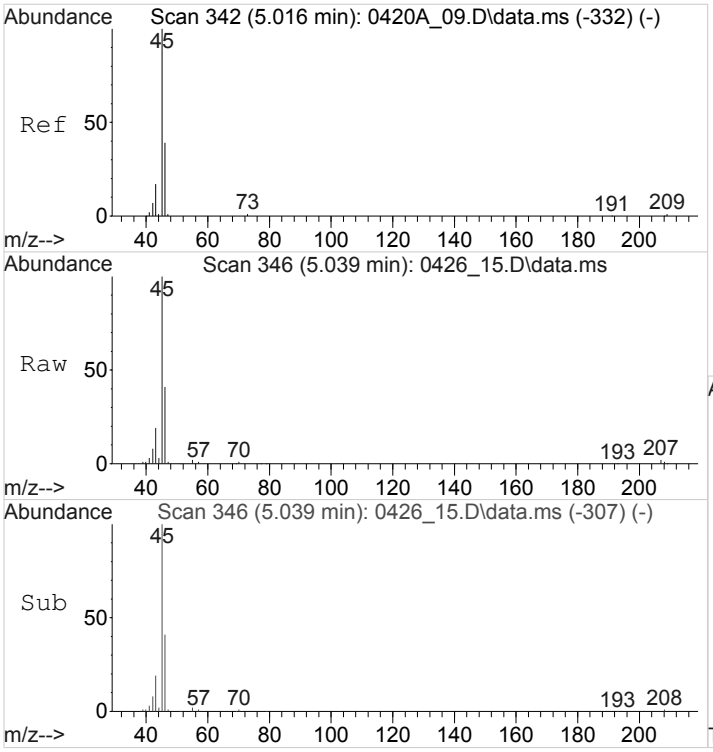


#13
Trichlorofluoromethane
Concen: 5.3793100 ppbv
RT: 4.852 min Scan# 313
Delta R.T. 0.011 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion:101 Resp: 3607

Ion	Ratio	Lower	Upper
101	100		
103	69.7	52.6	79.0

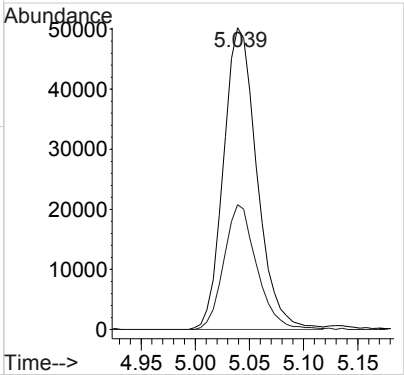


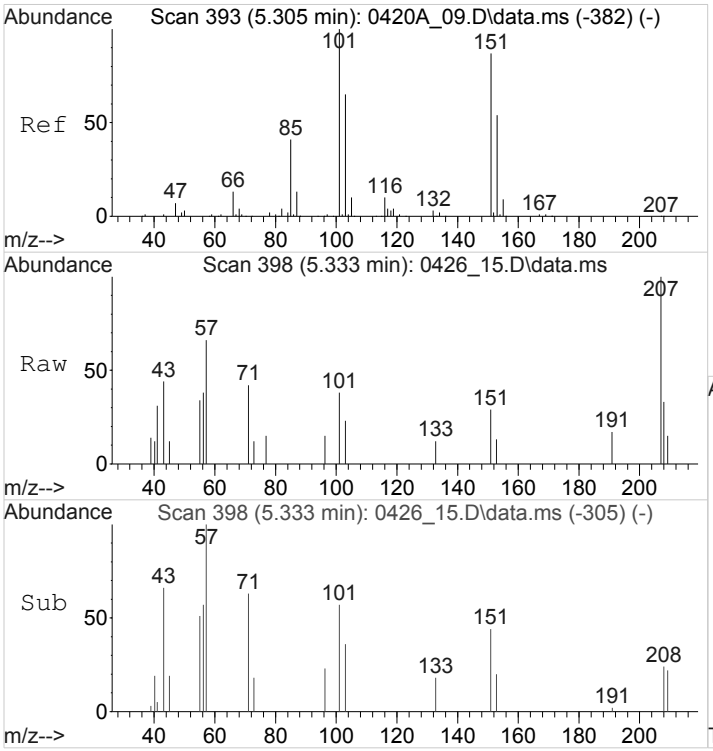


#14
Ethanol
Concen: 931.3600710 ppbv
RT: 5.039 min Scan# 346
Delta R.T. 0.023 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion: 45 Resp: 108283

Ion	Ratio	Lower	Upper
45	100		
46	40.6	33.1	49.7

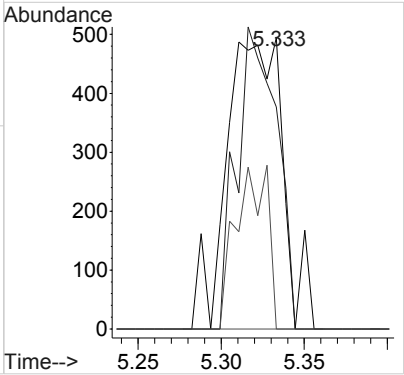


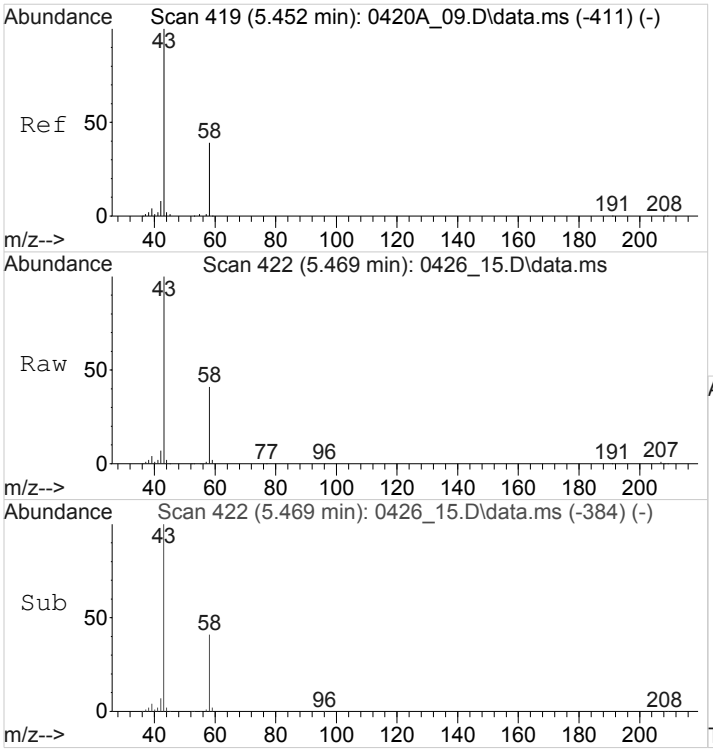


#15
1,1,2-Trichlorotrifluoroethane
Concen: 1.8708658 ppbv
RT: 5.333 min Scan# 398
Delta R.T. 0.028 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion:101 Resp: 1165

Ion	Ratio	Lower	Upper
101	100		
151	73.9	67.9	101.9
85	0.0	32.4	48.6#

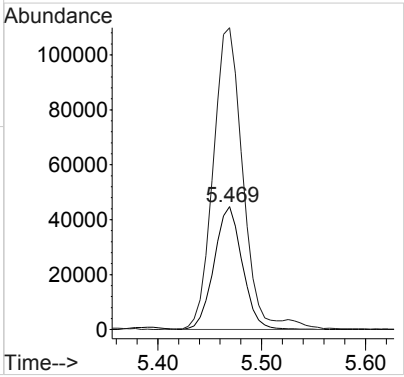


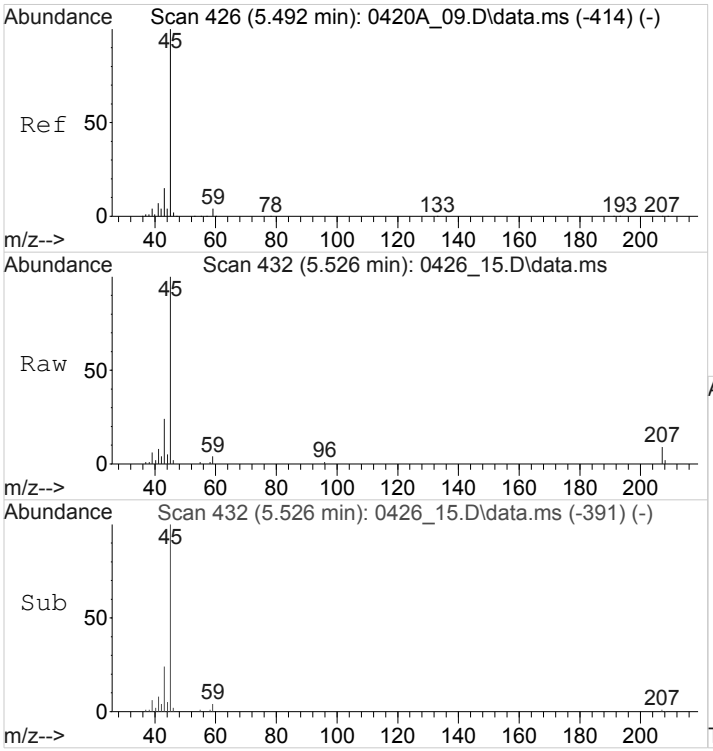


#17
Acetone
Concen: 572.8417764 ppbv
RT: 5.469 min Scan# 422
Delta R.T. 0.017 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion: 58 Resp: 84589

Ion	Ratio	Lower	Upper
58	100		
43	255.1	252.6	379.0

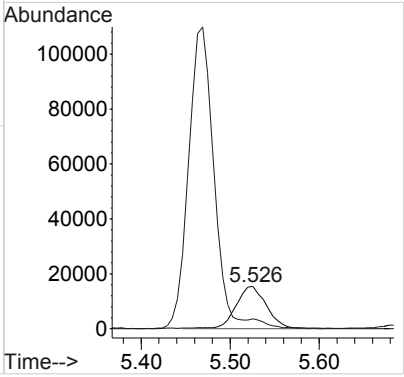


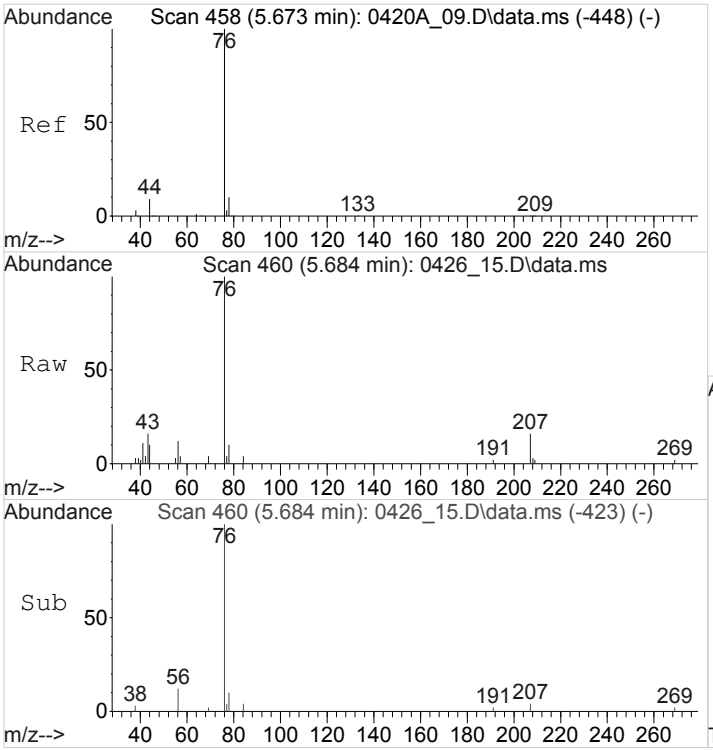


#18
2-Propanol
Concen: 64.8502073 ppbv
RT: 5.526 min Scan# 432
Delta R.T. 0.034 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion: 45 Resp: 36909

Ion	Ratio	Lower	Upper
45	100		
43	584.6	67.9	101.9#

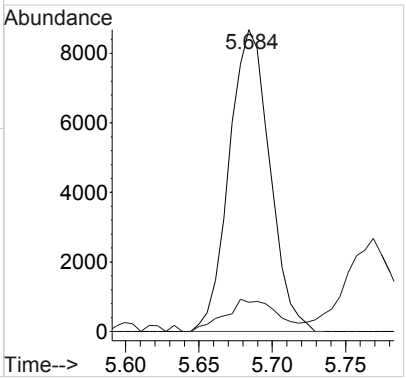


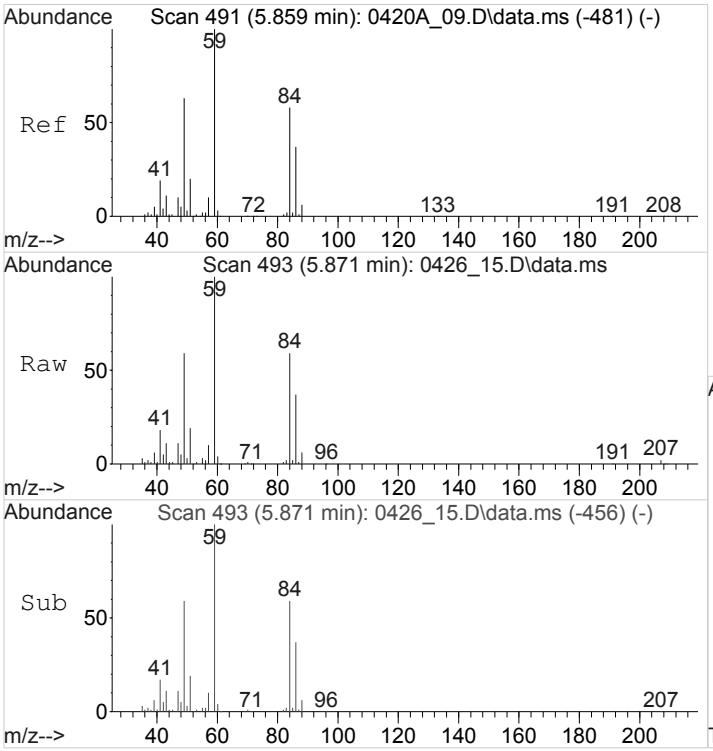


#19
Carbon Disulfide
Concen: 24.5747117 ppbv
RT: 5.684 min Scan# 460
Delta R.T. 0.011 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion: 76 Resp: 16671

Ion	Ratio	Lower	Upper
76	100		
44	13.6	7.4	11.2#

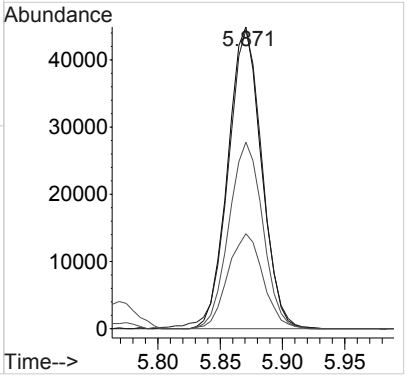


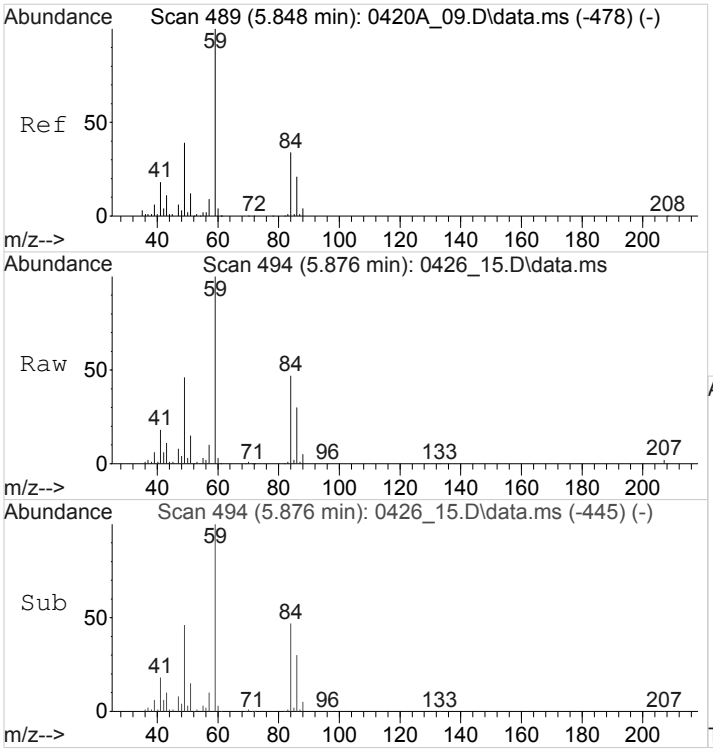


#21
Methylene Chloride
Concen: 253.0885986 ppbv
RT: 5.871 min Scan# 493
Delta R.T. 0.011 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion: 49 Resp: 84314

Ion	Ratio	Lower	Upper
49	100		
84	100.4	72.1	108.1
86	62.4	46.1	69.1
51	33.1	25.9	38.9

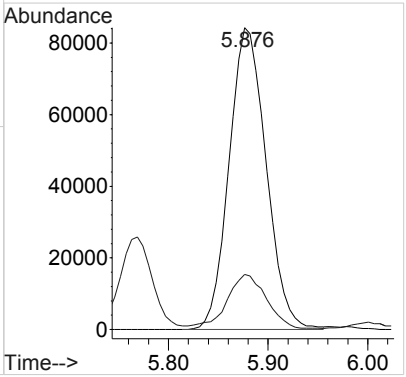


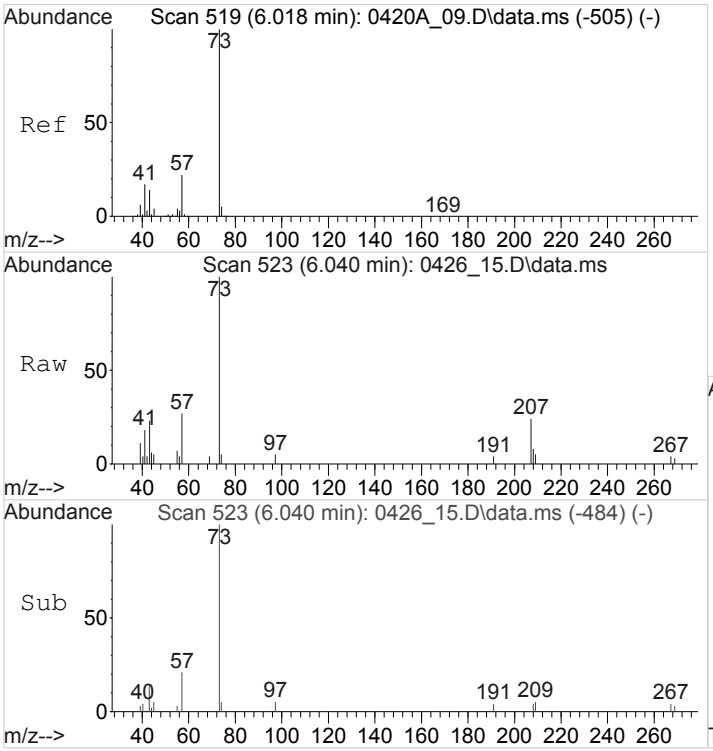


#22
TERT-BUTYL ALCOHOL
Concen: 281.6571349 ppbv
RT: 5.876 min Scan# 494
Delta R.T. 0.028 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion: 59 Resp: 217419

Ion	Ratio	Lower	Upper
59	100		
41	19.0	14.6	22.0

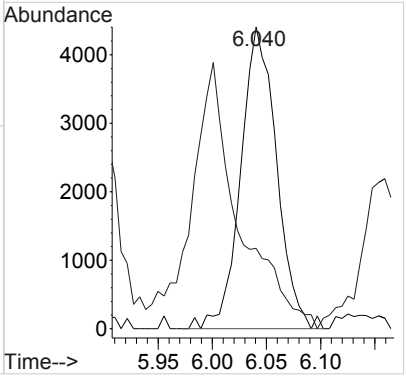


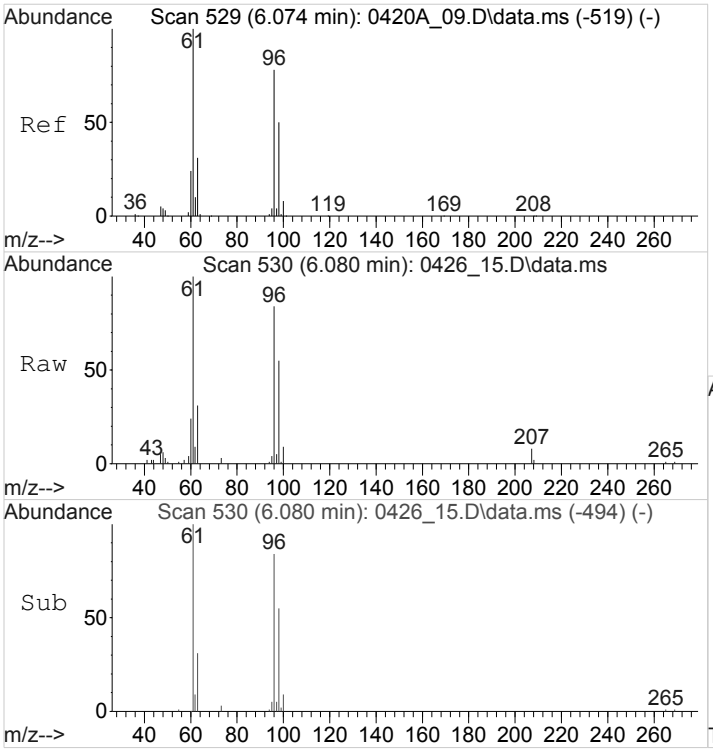


#23
Methyl Tert-Butyl Ether
Concen: 10.7235763 ppbv
RT: 6.040 min Scan# 523
Delta R.T. 0.023 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion: 73 Resp: 10141

Ion	Ratio	Lower	Upper
73	100		
57	116.1	17.8	26.6#

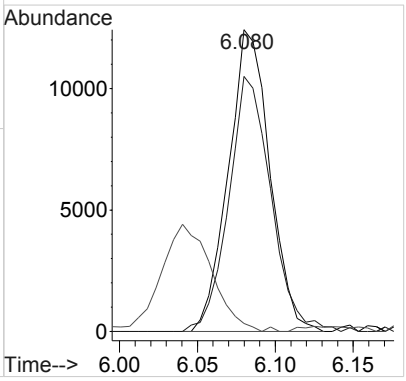


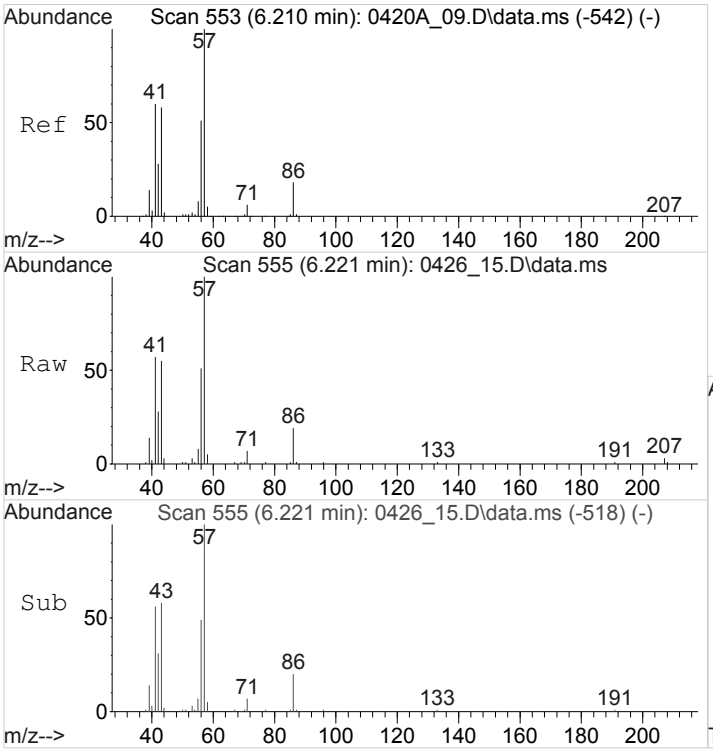


#24
Trans-1,2-Dichloroethene
Concen: 56.5906462 ppbv
RT: 6.080 min Scan# 530
Delta R.T. 0.006 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion: 61 Resp: 22955

Ion	Ratio	Lower	Upper
61	100		
96	86.1	61.0	91.4
73	44.2	184.6	276.8#

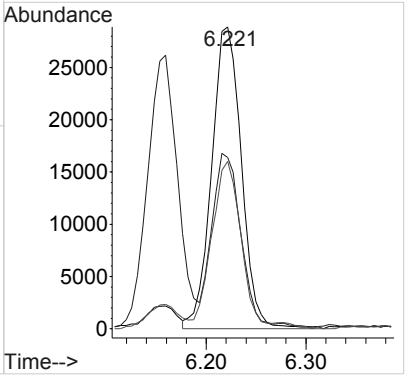


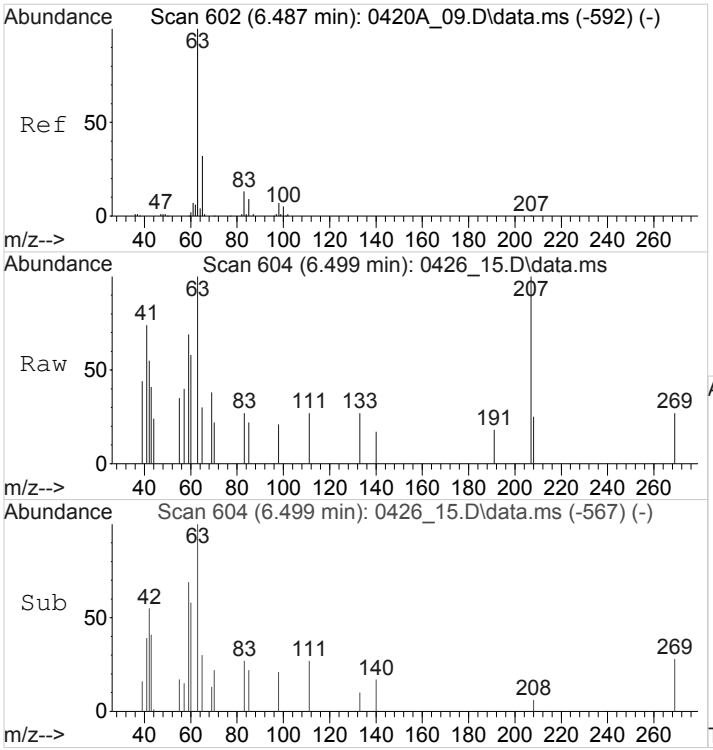


#25
n-Hexane
Concen: 126.4310000 ppbv
RT: 6.221 min Scan# 555
Delta R.T. 0.011 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion: 57 Resp: 59896

Ion	Ratio	Lower	Upper
57	100		
41	56.1	47.6	71.4
43	50.6	46.1	69.1

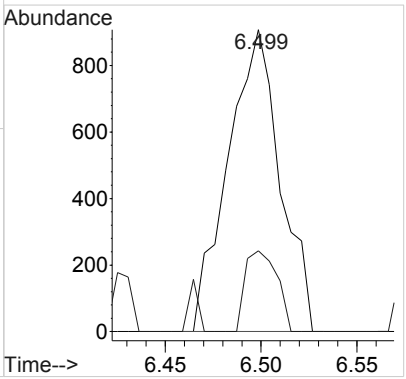


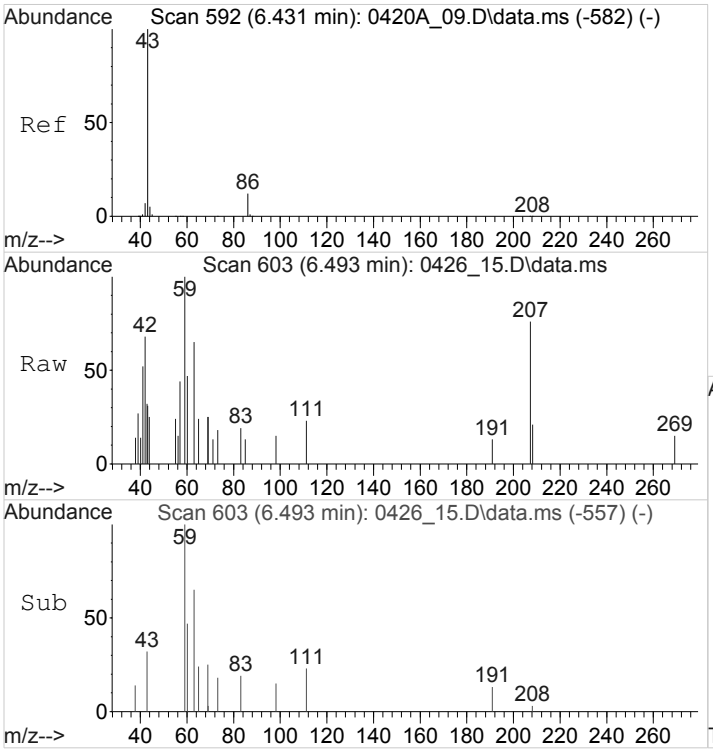


#26
1,1-Dichloroethane
Concen: 2.9266493 ppbv
RT: 6.499 min Scan# 604
Delta R.T. 0.011 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion: 63 Resp: 1717

Ion	Ratio	Lower	Upper
63	100		
83	0.0	10.5	15.7#

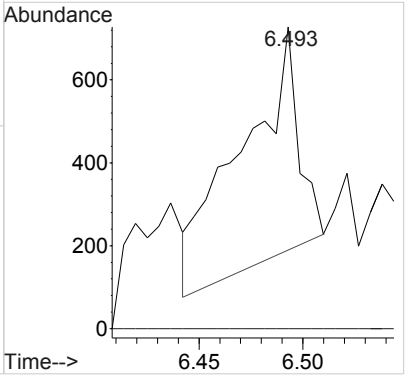


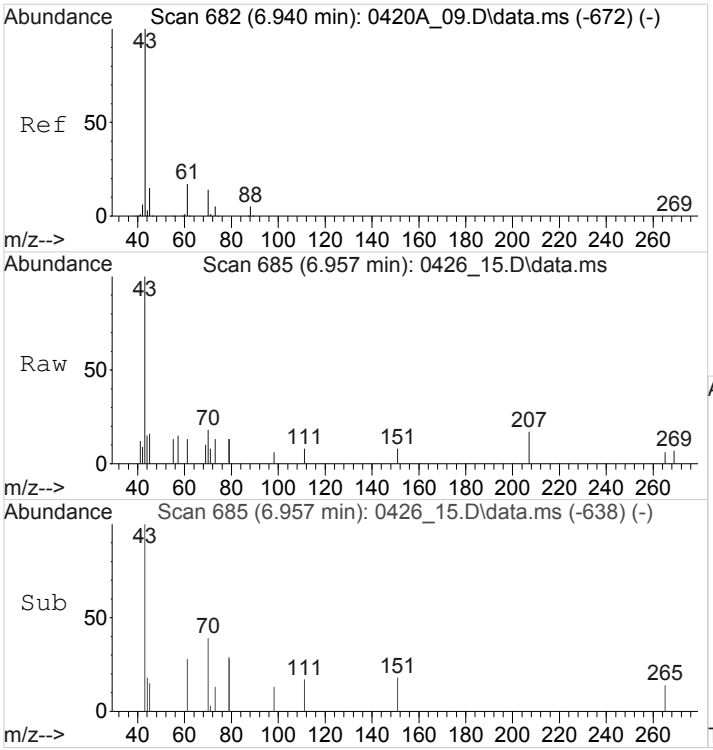


#27
Vinyl Acetate
Concen: 1.3337657 ppbv
RT: 6.493 min Scan# 603
Delta R.T. 0.062 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion: 43 Resp: 1055

Ion	Ratio	Lower	Upper
43	100		
86	0.0	9.6	14.4#

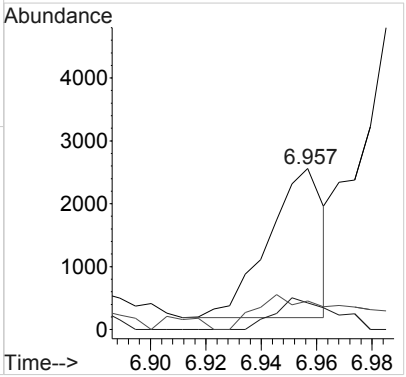


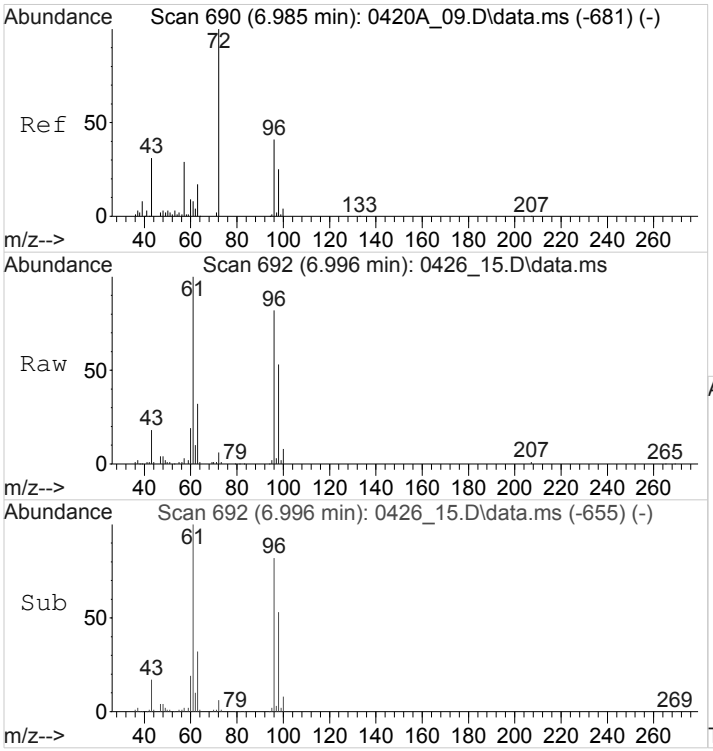


#28
ETHYL ACETATE
Concen: 5.1709597 ppbv
RT: 6.957 min Scan# 685
Delta R.T. 0.017 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion: 43 Resp: 3314

Ion	Ratio	Lower	Upper
43	100		
45	22.3	12.0	18.0#
70	38.3	10.5	15.7#

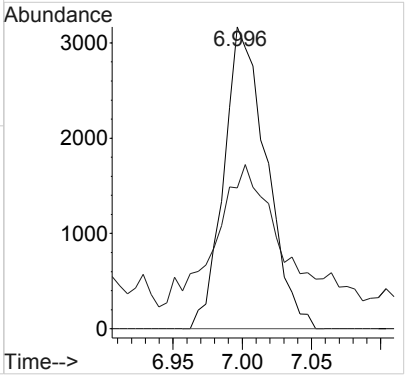


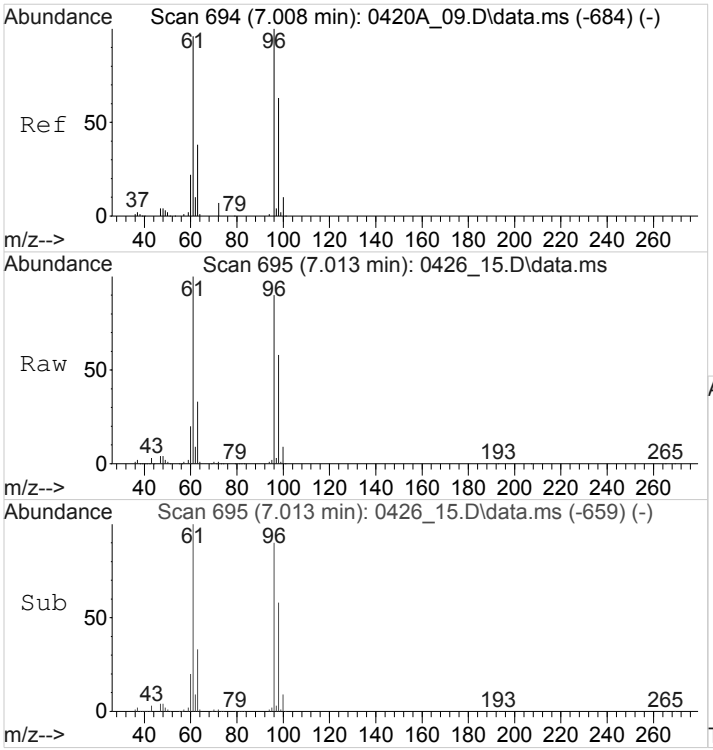


#29
2-Butanone (MEK)
Concen: 35.4236392 ppbv
RT: 6.996 min Scan# 692
Delta R.T. 0.011 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion: 72 Resp: 6778

Ion	Ratio	Lower	Upper
72	100		
57	73.5	22.2	33.4#

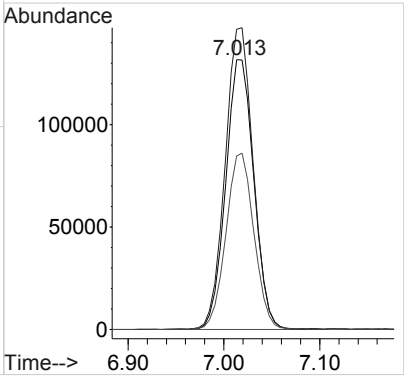


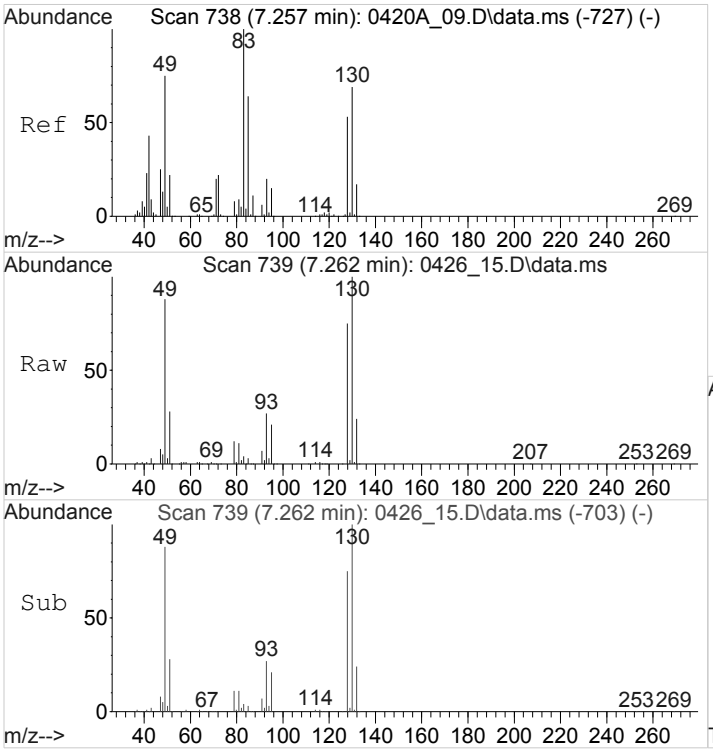


#30
cis-1,2-Dichloroethene
Concen: 702.3404121 ppbv
RT: 7.013 min Scan# 695
Delta R.T. 0.006 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion: 96 Resp: 268418

Ion	Ratio	Lower	Upper
96	100		
61	111.2	94.1	141.1
98	65.1	50.6	76.0

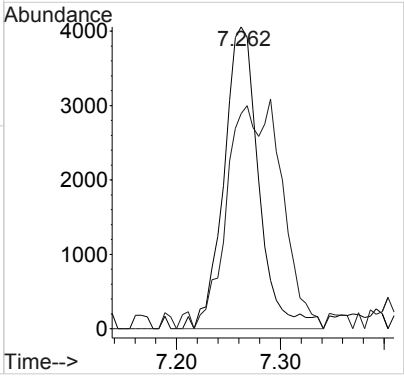


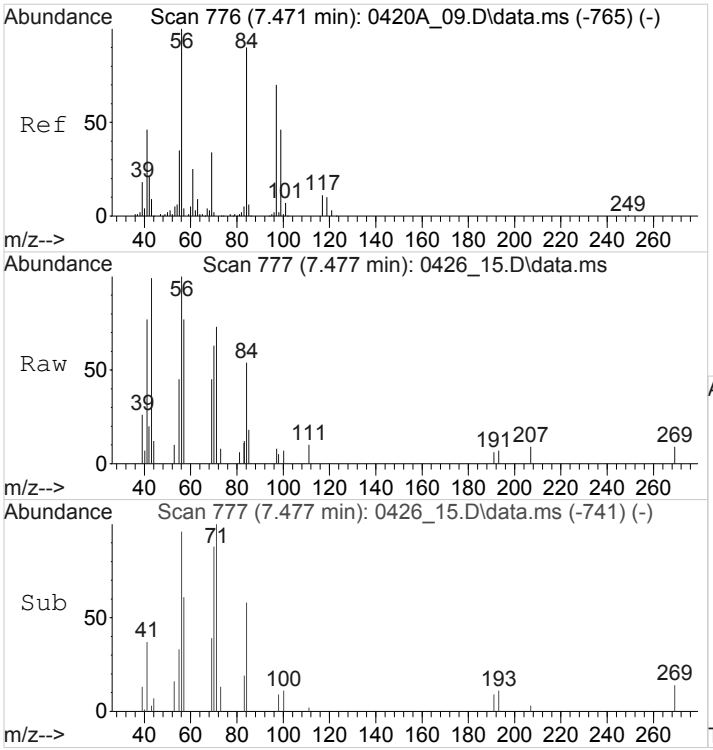


#32
Chloroform
Concen: 13.8243593 ppbv
RT: 7.262 min Scan# 739
Delta R.T. 0.006 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion: 83 Resp: 9502

Ion	Ratio	Lower	Upper
83	100		
85	68.2	51.3	76.9

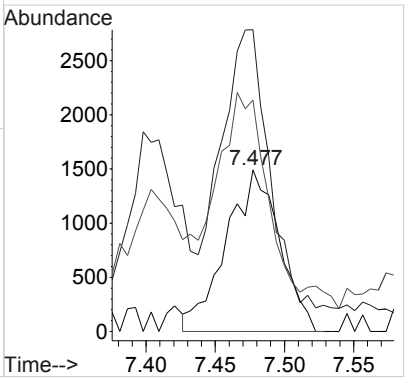


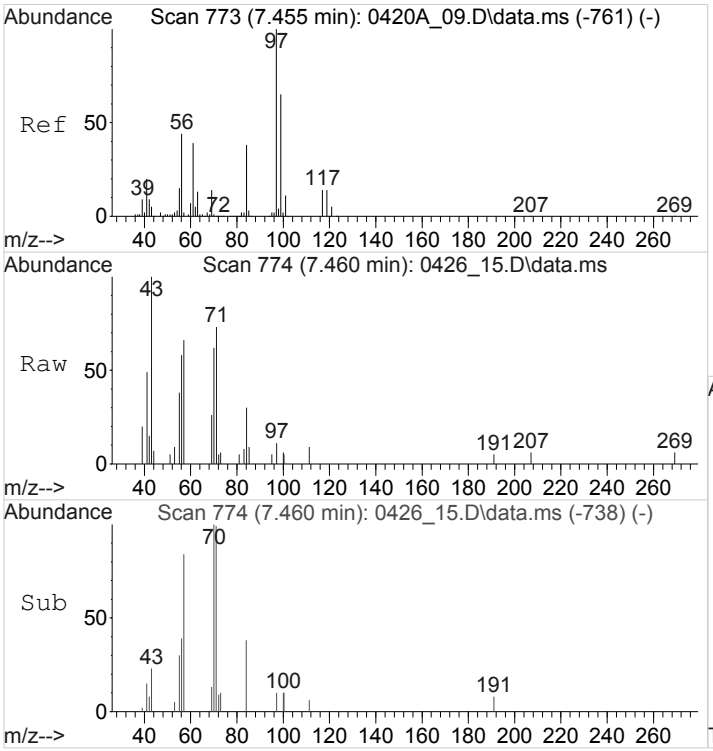


#33
Cyclohexane
Concen: 8.1660161 ppbv
RT: 7.477 min Scan# 777
Delta R.T. 0.006 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion: 84 Resp: 4001

Ion	Ratio	Lower	Upper
84	100		
56	152.9	87.6	131.4#
41	128.5	40.2	60.2#

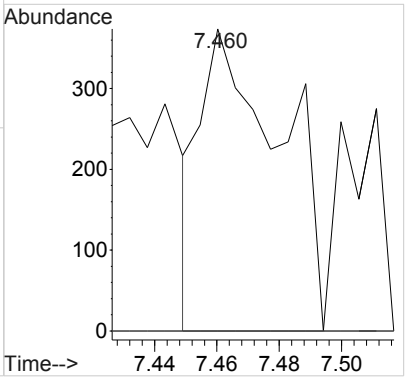


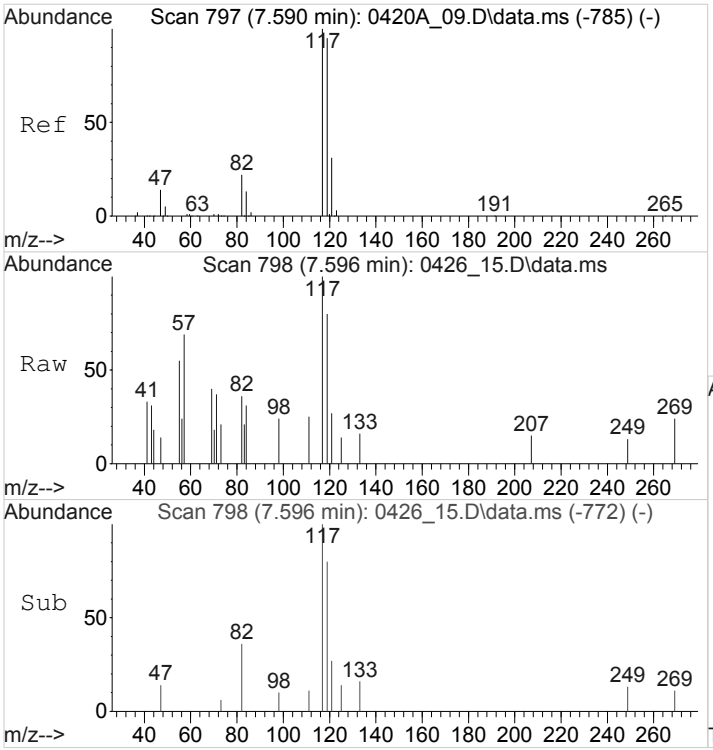


#34
1,1,1-Trichloroethane
Concen: 0.9754545 ppbv
RT: 7.460 min Scan# 774
Delta R.T. 0.006 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion: 97 Resp: 668

Ion	Ratio	Lower	Upper
97	100		
99	0.0	52.2	78.4#
61	0.0	31.3	46.9#

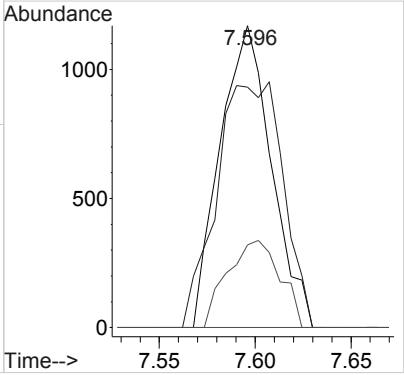


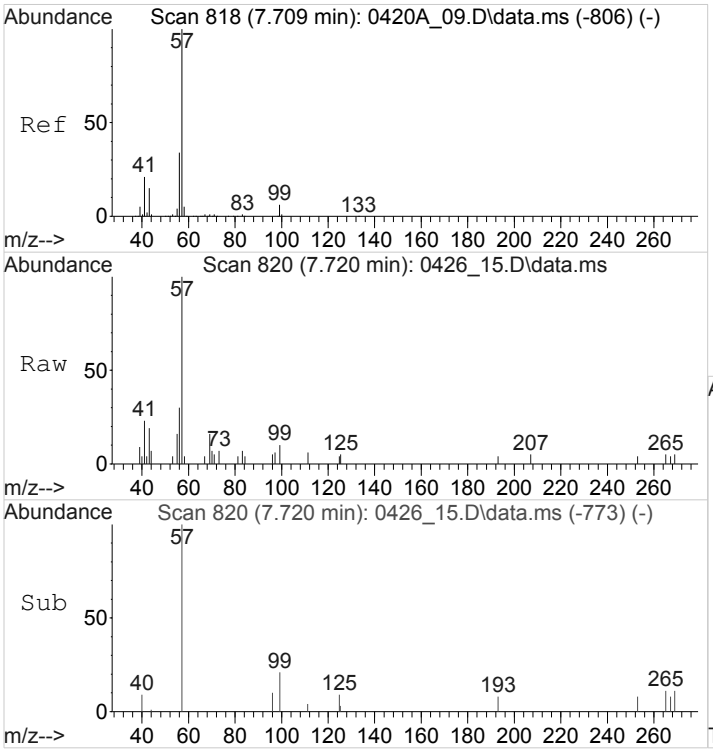


#35
Carbon Tetrachloride
Concen: 3.0577307 ppbv
RT: 7.596 min Scan# 798
Delta R.T. 0.006 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion:117 Resp: 2180

Ion	Ratio	Lower	Upper
117	100		
119	104.2	77.1	115.7
121	29.6	24.8	37.2

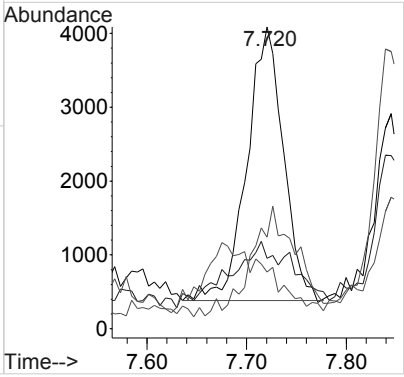


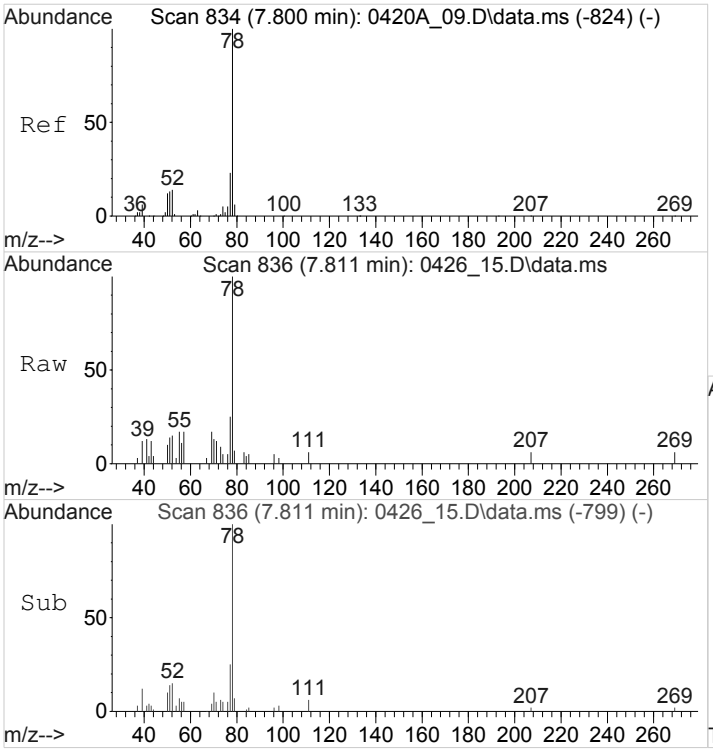


#36
2,2,4-Trimethylpentane
Concen: 5.6025075 ppbv
RT: 7.720 min Scan# 820
Delta R.T. 0.011 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion: 57 Resp: 9388

Ion	Ratio	Lower	Upper
57	100		
41	30.5	16.6	25.0#
43	44.1	12.4	18.6#
56	51.0	26.6	39.8#

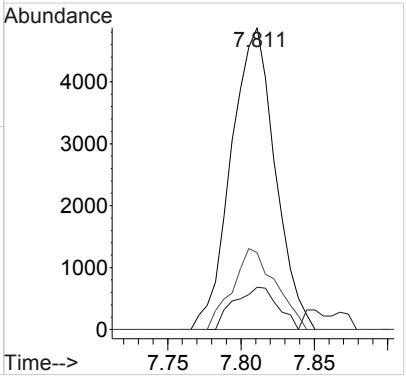


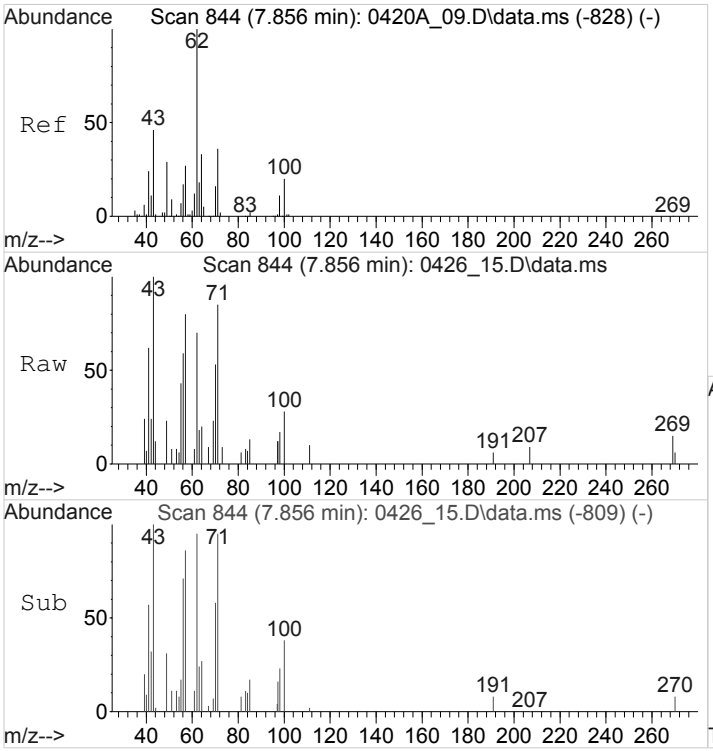


#38
Benzene
Concen: 9.1557155 ppbv
RT: 7.811 min Scan# 836
Delta R.T. 0.011 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion: 78 Resp: 10152

Ion	Ratio	Lower	Upper
78	100		
51	13.9	11.3	16.9
77	26.2	18.6	28.0

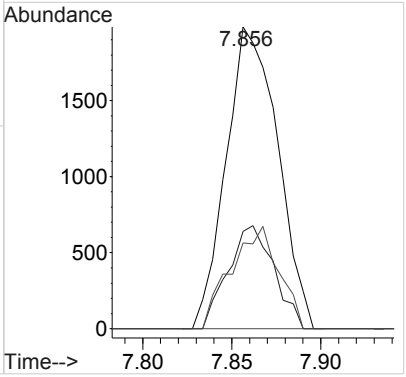


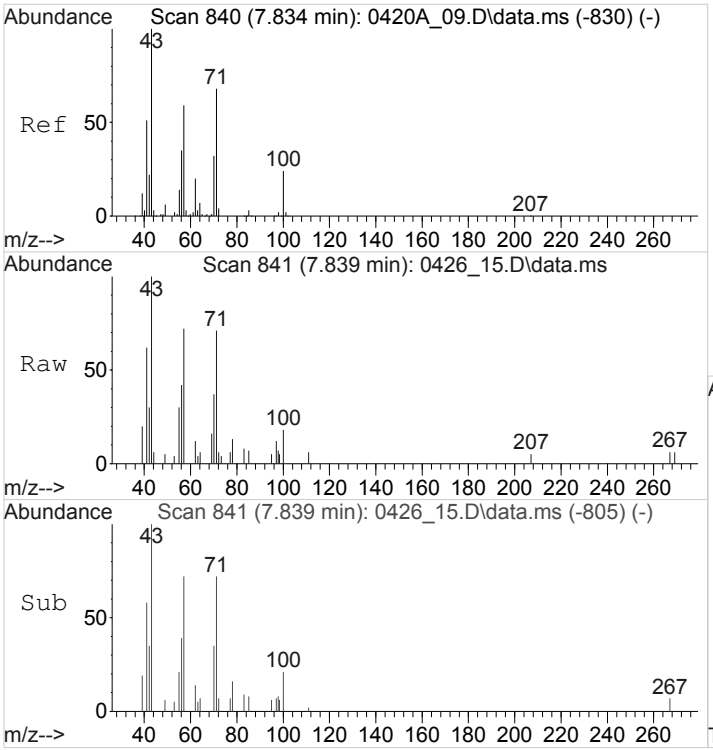


#39
1,2-Dichloroethane
Concen: 10.1127610 ppbv
RT: 7.856 min Scan# 844
Delta R.T. 0.000 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion: 62 Resp: 4000

Ion	Ratio	Lower	Upper
62	100		
49	30.4	23.4	35.2
64	31.6	26.6	39.8

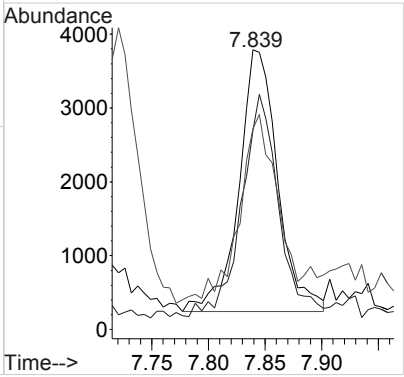


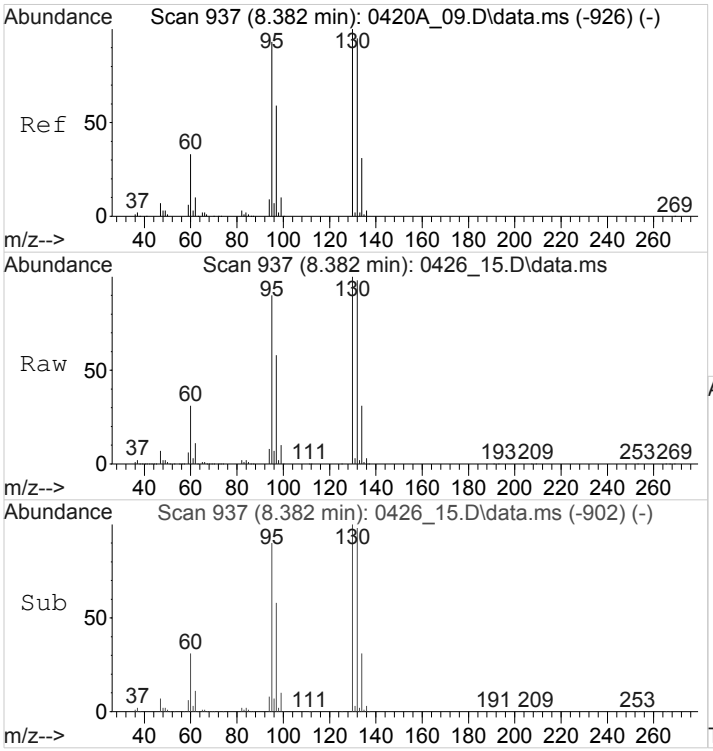


#40
Heptane
Concen: 15.4303599 ppbv
RT: 7.839 min Scan# 841
Delta R.T. 0.006 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion: 43 Resp: 8450

Ion	Ratio	Lower	Upper
43	100		
71	80.1	56.1	84.1
57	68.2	47.1	70.7

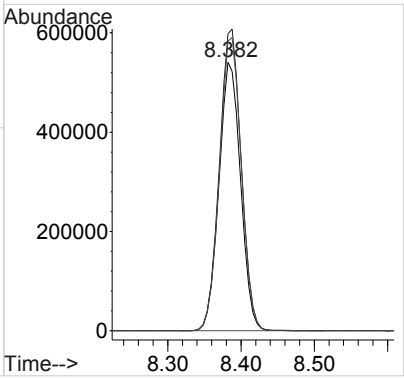


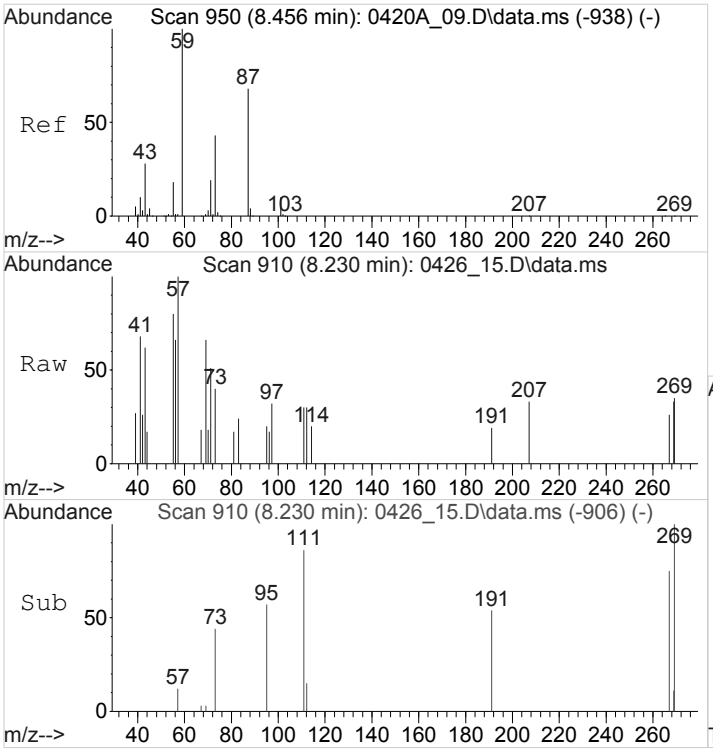


#41
Trichloroethene
Concen: 2289.8839017 ppbv
RT: 8.382 min Scan# 937
Delta R.T. 0.000 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion: 95 Resp: 1106641

Ion	Ratio	Lower	Upper
95	100		
130	113.3	86.4	129.6
132	110.2	83.6	125.4

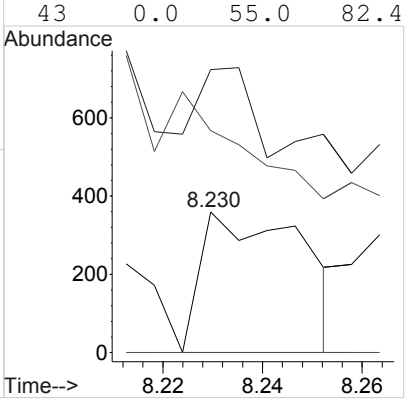


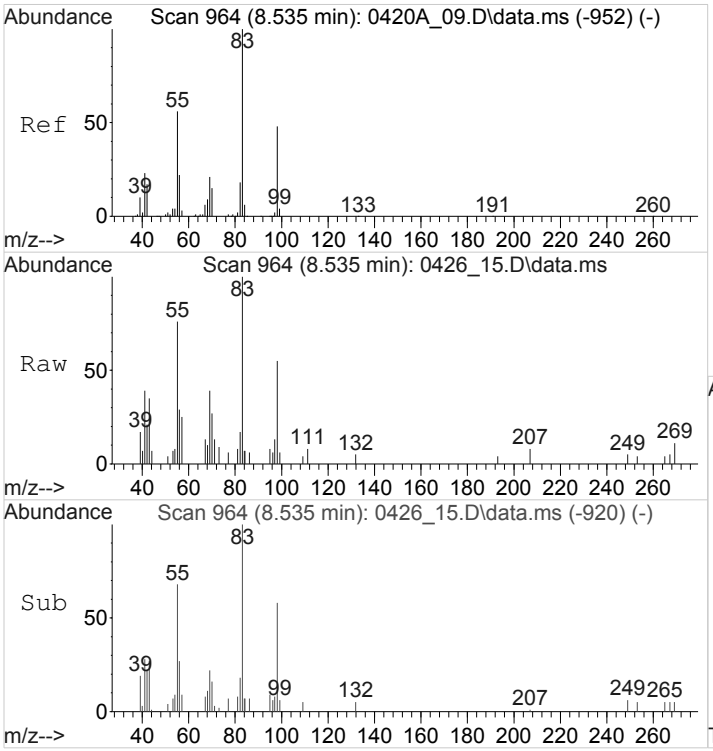


#42
TERT-AMYL ETHYL ETHER
Concen: 1.4490455 ppbv
RT: 8.230 min Scan# 910
Delta R.T. -0.226 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion: 73 Resp: 509

Ion	Ratio	Lower	Upper
73	100		
55	0.0	35.8	53.8#
87	0.0	130.3	195.5#
43	0.0	55.0	82.4#

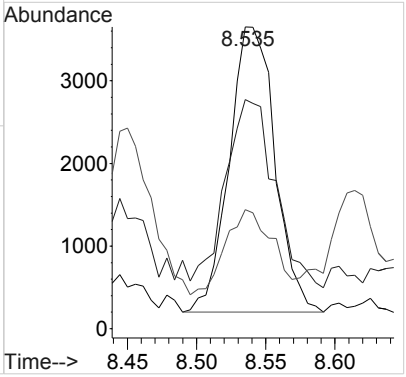


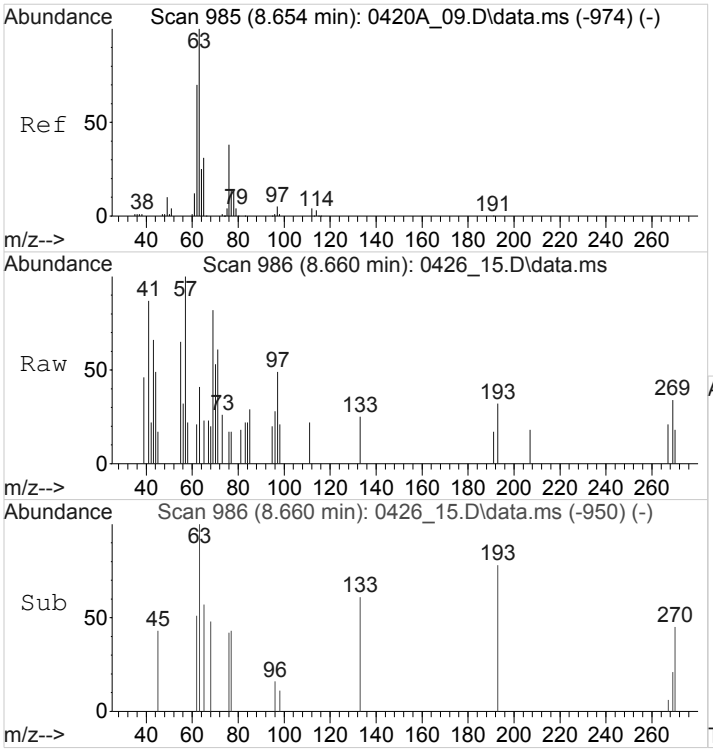


#43
METHYL CYCLOHEXANE
Concen: 11.9538263 ppbv
RT: 8.535 min Scan# 964
Delta R.T. 0.000 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion: 83 Resp: 7940

Ion	Ratio	Lower	Upper
83	100		
55	72.0	58.5	87.7
41	30.5	25.8	38.6

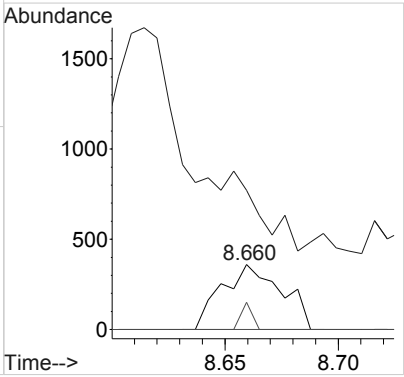


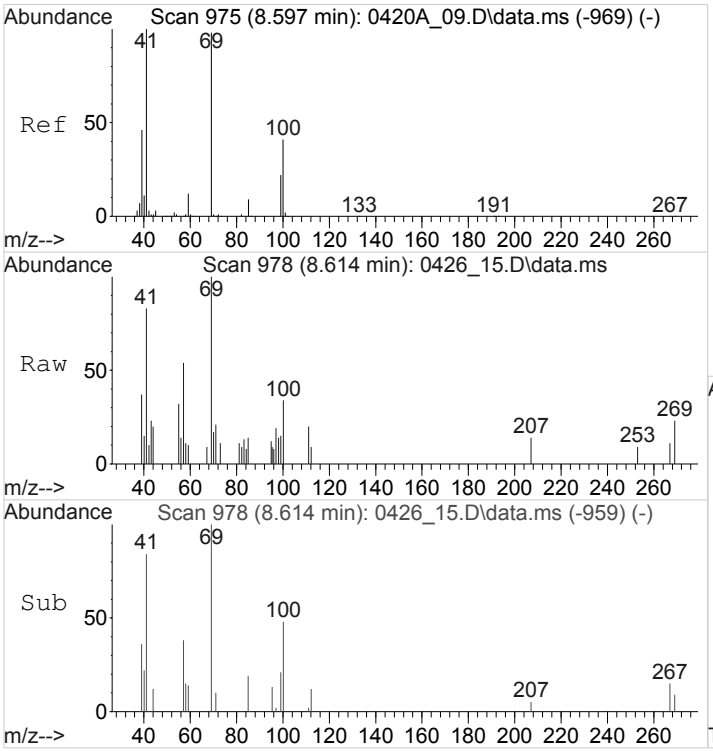


#44
1,2-Dichloropropane
Concen: 1.6594923 ppbv
RT: 8.660 min Scan# 986
Delta R.T. 0.006 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion: 63 Resp: 664

Ion	Ratio	Lower	Upper
63	100		
41	470.2	30.2	45.4#
76	0.0	29.8	44.6#

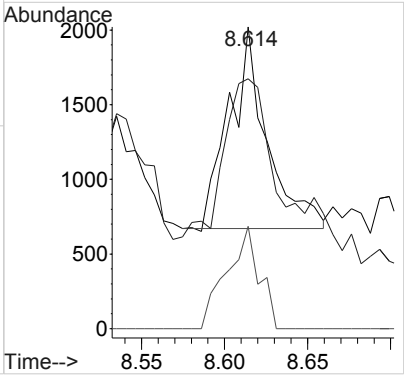


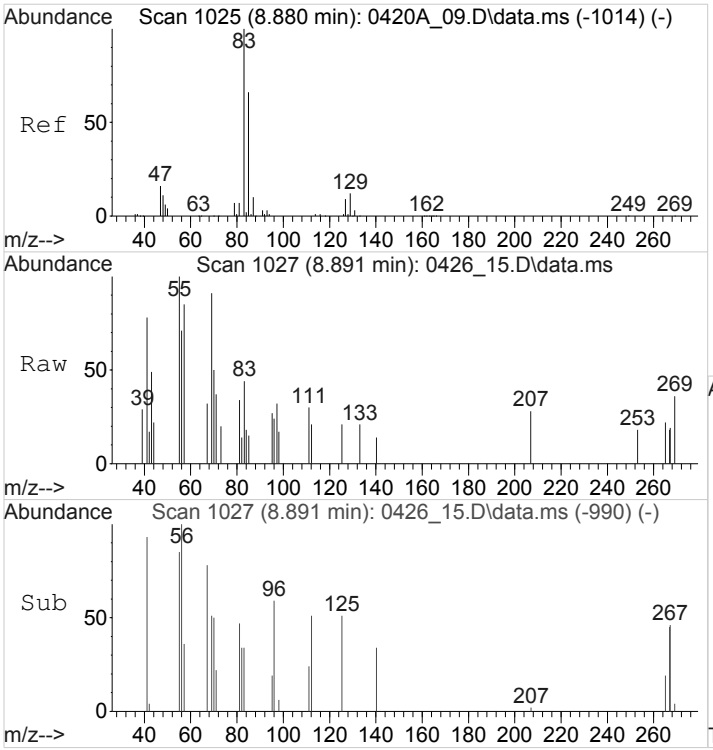


#45
Methyl Methacrylate
Concen: 5.3832119 ppbv
RT: 8.614 min Scan# 978
Delta R.T. 0.017 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion: 69 Resp: 2143

Ion	Ratio	Lower	Upper
69	100		
41	138.9	72.6	108.8#
100	43.6	32.2	48.2

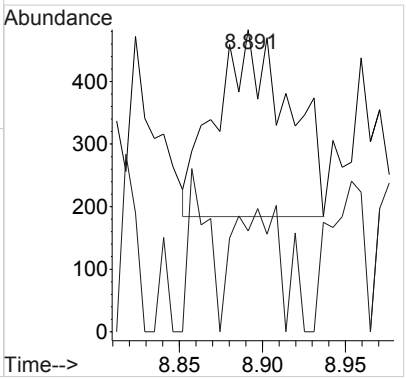


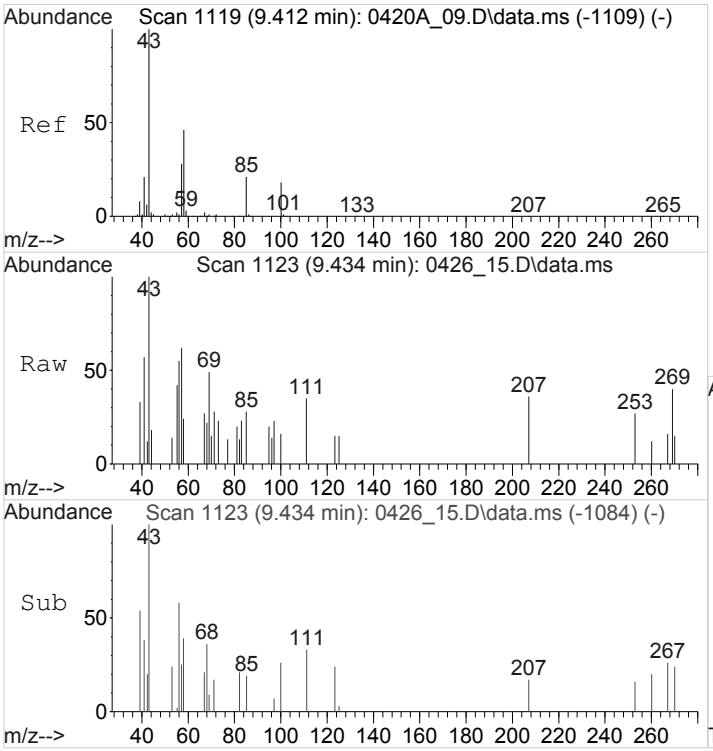


#47
Bromodichloromethane
Concen: 1.1887780 ppbv
RT: 8.891 min Scan# 1027
Delta R.T. 0.011 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion: 83 Resp: 892

Ion	Ratio	Lower	Upper
83	100		
85	0.0	51.8	77.8#

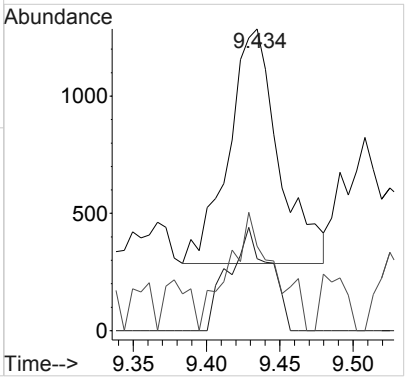


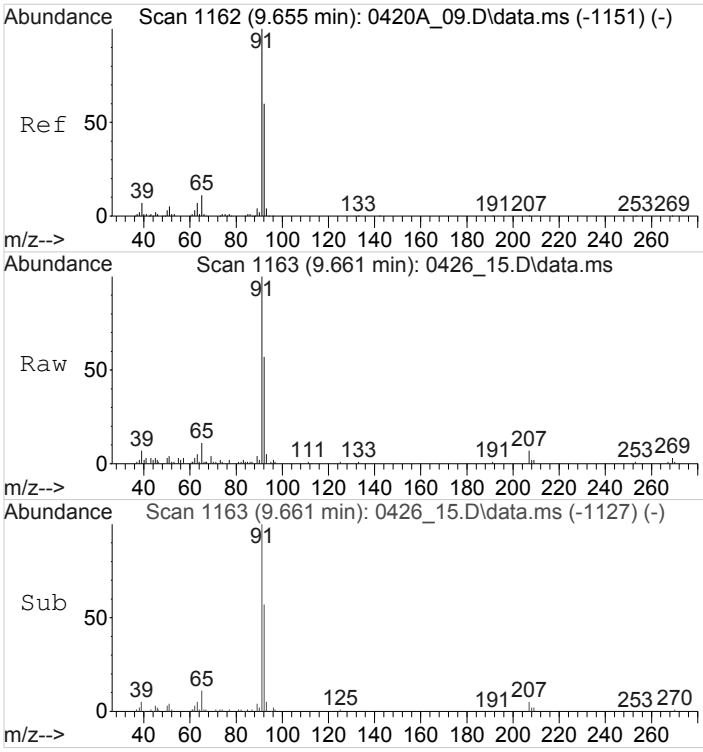


#49
4-Methyl-2-Pentanone (MIBK)
Concen: 2.9712516 ppbv
RT: 9.434 min Scan# 1123
Delta R.T. 0.023 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion: 43 Resp: 2384

Ion	Ratio	Lower	Upper
43	100		
58	35.6	36.7	55.1#
85	45.8	16.7	25.1#

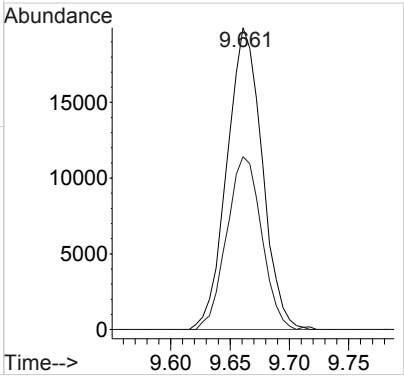


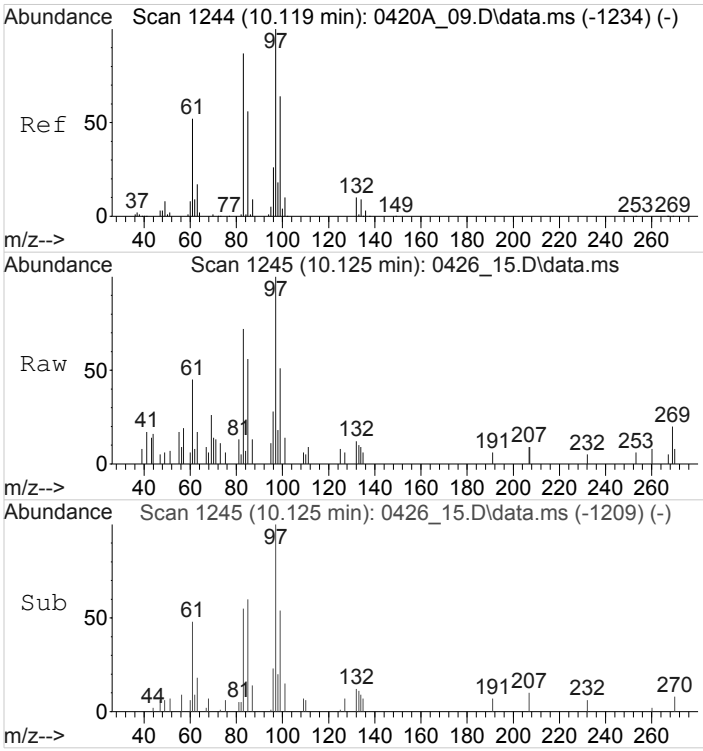


#50
Toluene
Concen: 29.9397944 ppbv
RT: 9.661 min Scan# 1163
Delta R.T. 0.006 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion: 91 Resp: 41279

Ion	Ratio	Lower	Upper
91	100		
92	56.9	48.0	72.0

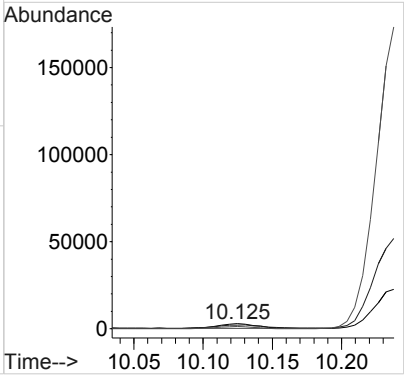


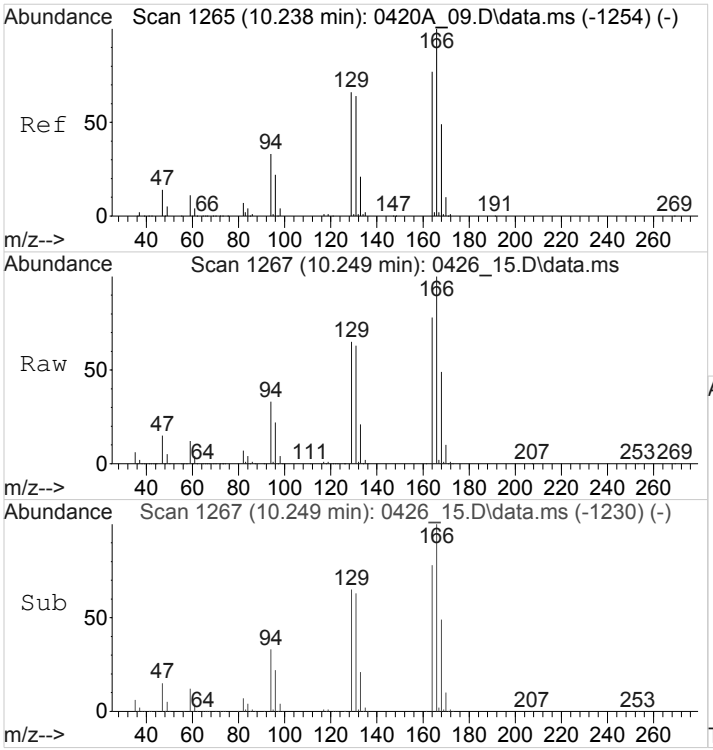


#52
1,1,2-Trichloroethane
Concen: 11.7860667 ppbv
RT: 10.125 min Scan# 1245
Delta R.T. 0.006 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion: 97 Resp: 5662

Ion	Ratio	Lower	Upper
97	100		
83	82.0	67.5	101.3
61	44.8	40.8	61.2

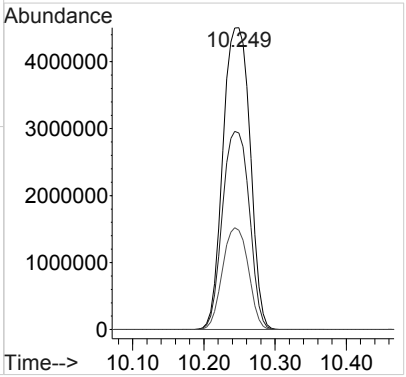


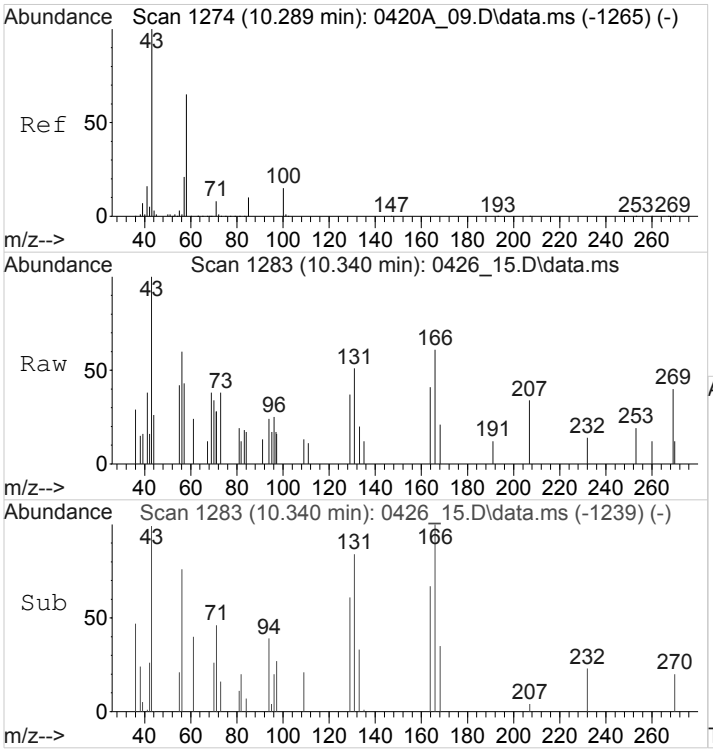


#53
Tetrachloroethene
Concen: 16079.9318982 ppbv
RT: 10.249 min Scan# 1267
Delta R.T. 0.011 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion:166 Resp:11932658

Ion	Ratio	Lower	Upper
166	100		
129	65.0	53.7	80.5
94	32.1	27.2	40.8

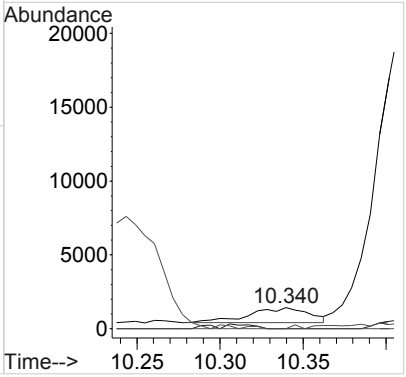


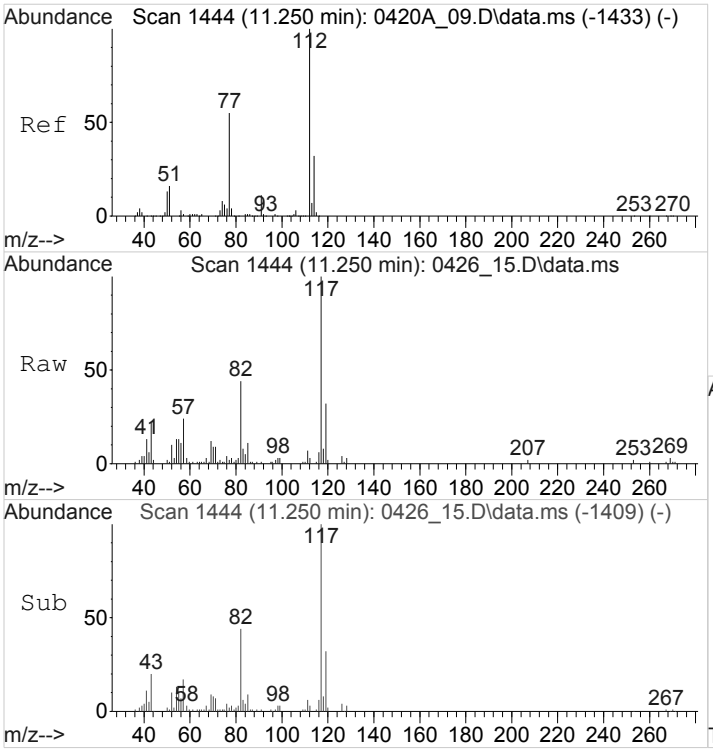


#54
Methyl Butyl Ketone
Concen: 3.2536188 ppbv
RT: 10.340 min Scan# 1283
Delta R.T. 0.051 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion: 43 Resp: 2514

Ion	Ratio	Lower	Upper
43	100		
58	0.0	51.6	77.4#
85	0.0	8.6	13.0#
100	0.0	11.6	17.4#

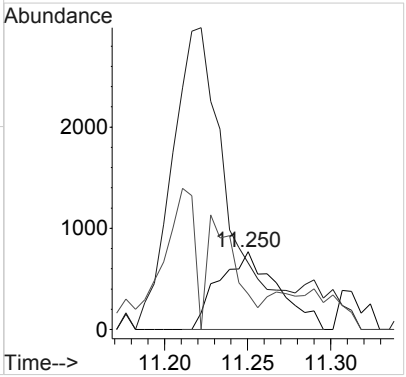


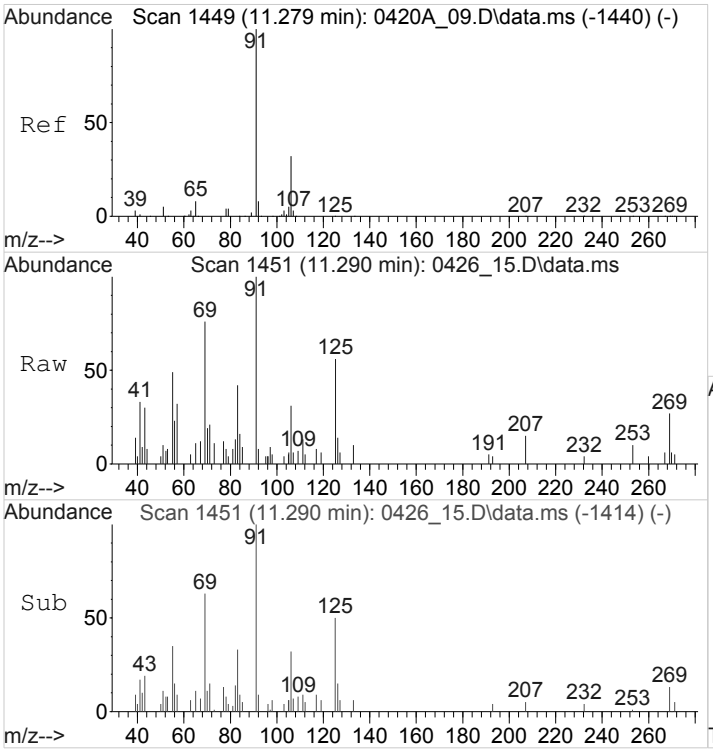


#57
Chlorobenzene
Concen: 1.6229786 ppbv
RT: 11.250 min Scan# 1444
Delta R.T. 0.000 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion:112 Resp: 1877

Ion	Ratio	Lower	Upper
112	100		
77	374.7	55.4	83.2#
51	72.2	14.6	22.0#

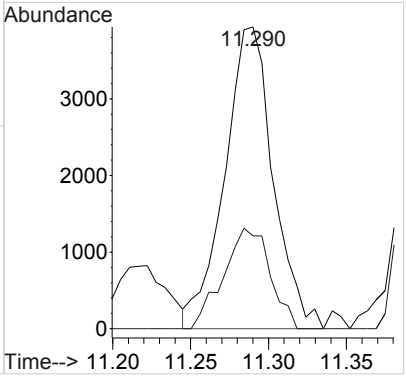


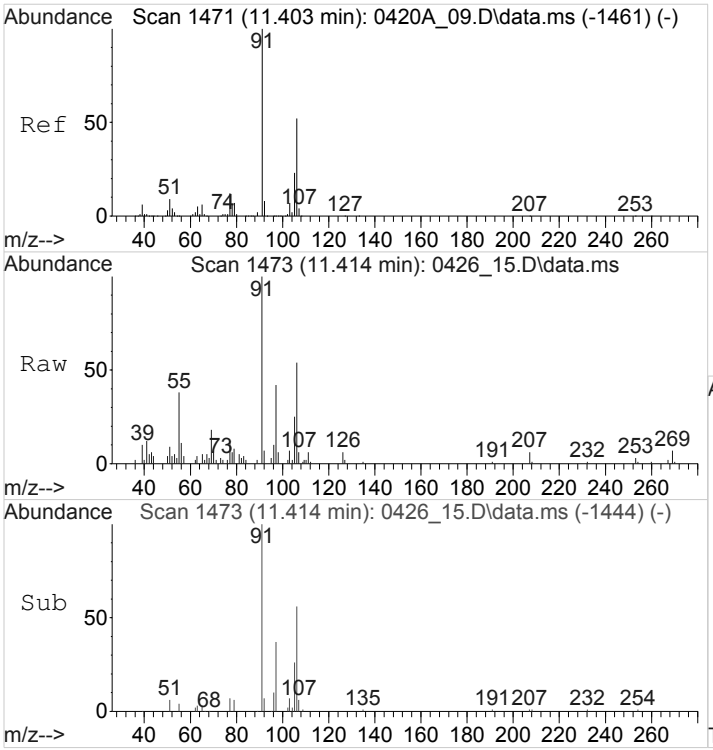


#59
Ethylbenzene
Concen: 4.3222968 ppbv
RT: 11.290 min Scan# 1451
Delta R.T. 0.011 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion: 91 Resp: 8503

Ion	Ratio	Lower	Upper
91	100		
106	32.1	25.9	38.9

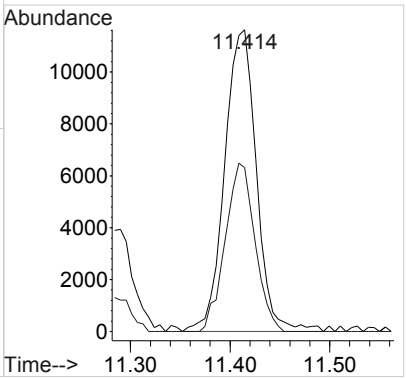


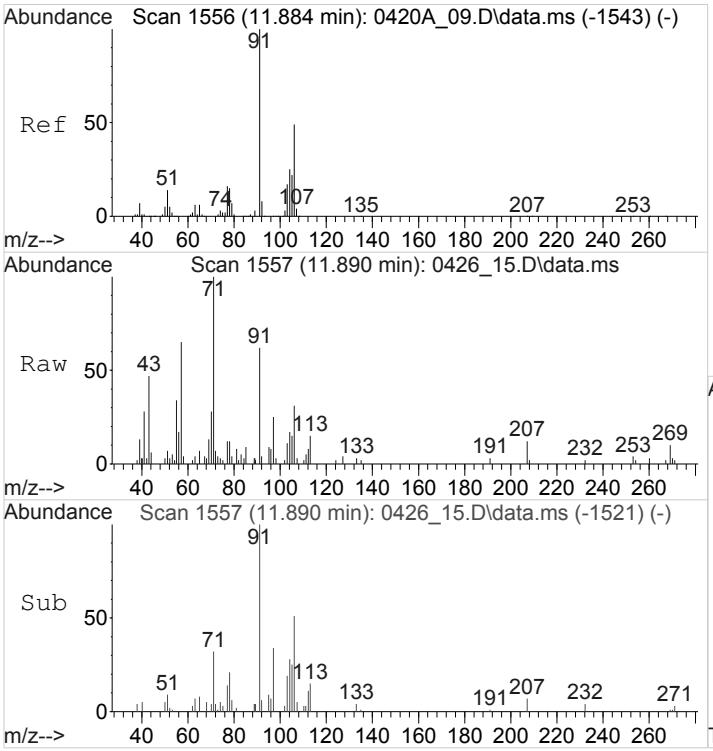


#60
M&P-Xylene
Concen: 17.1042246 ppbv
RT: 11.414 min Scan# 1473
Delta R.T. 0.011 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion: 91 Resp: 25777

Ion	Ratio	Lower	Upper
91	100		
106	52.2	41.5	62.3

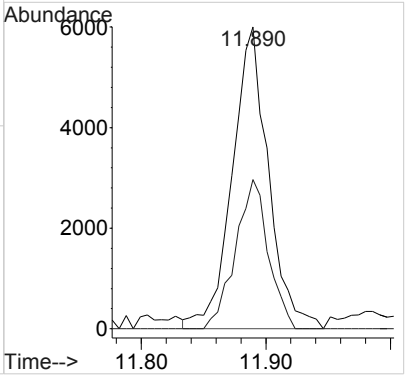


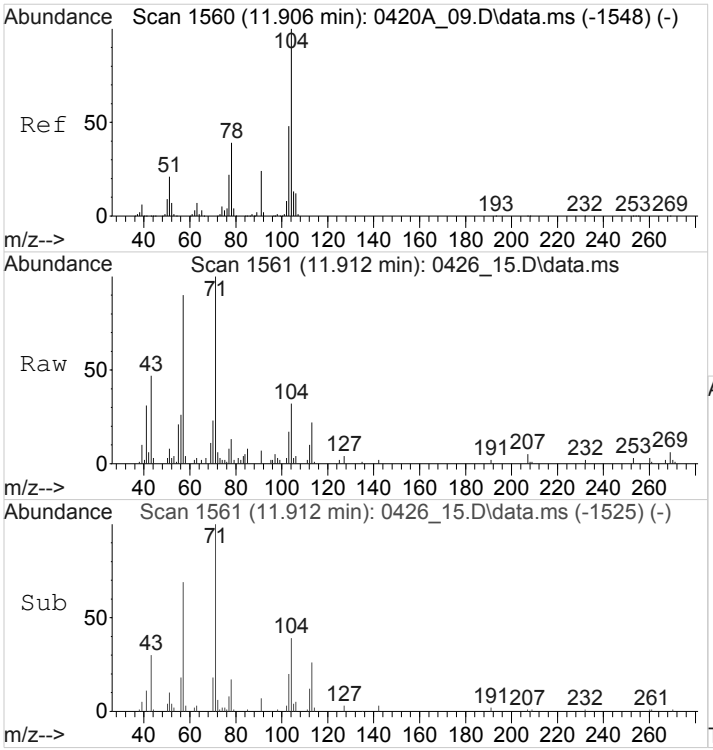


#61
O-Xylene
Concen: 7.7690686 ppbv
RT: 11.890 min Scan# 1557
Delta R.T. 0.006 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion: 91 Resp: 12106

Ion	Ratio	Lower	Upper
91	100		
106	44.9	39.1	58.7

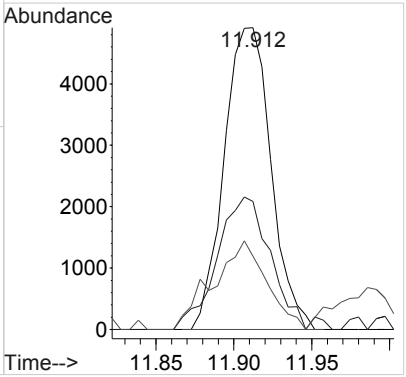


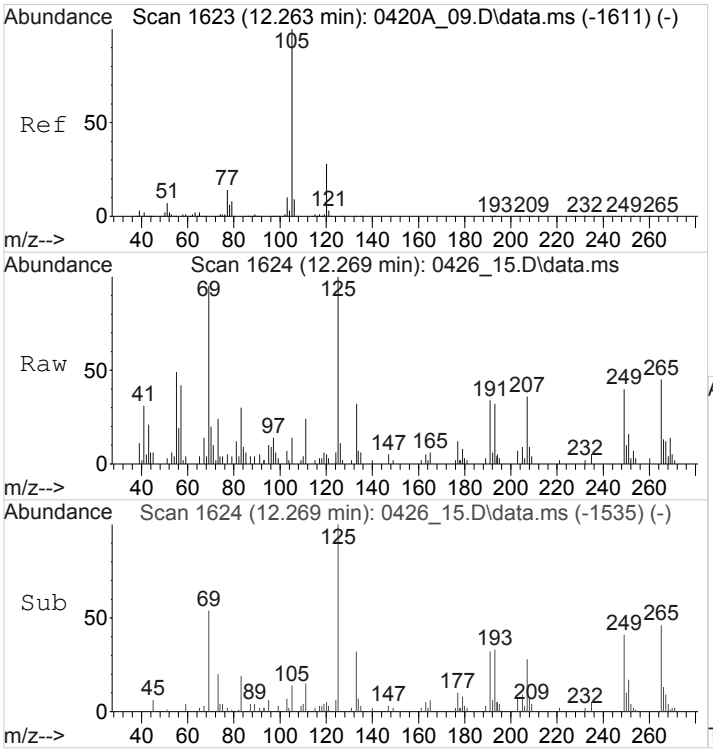


#62
Styrene
Concen: 8.3190246 ppbv
RT: 11.912 min Scan# 1561
Delta R.T. 0.006 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion:104 Resp: 10261

Ion	Ratio	Lower	Upper
104	100		
78	50.8	36.2	54.2
51	33.5	23.6	35.4

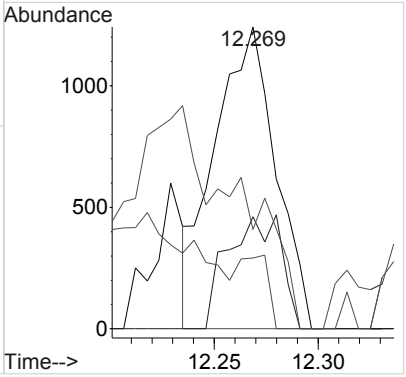


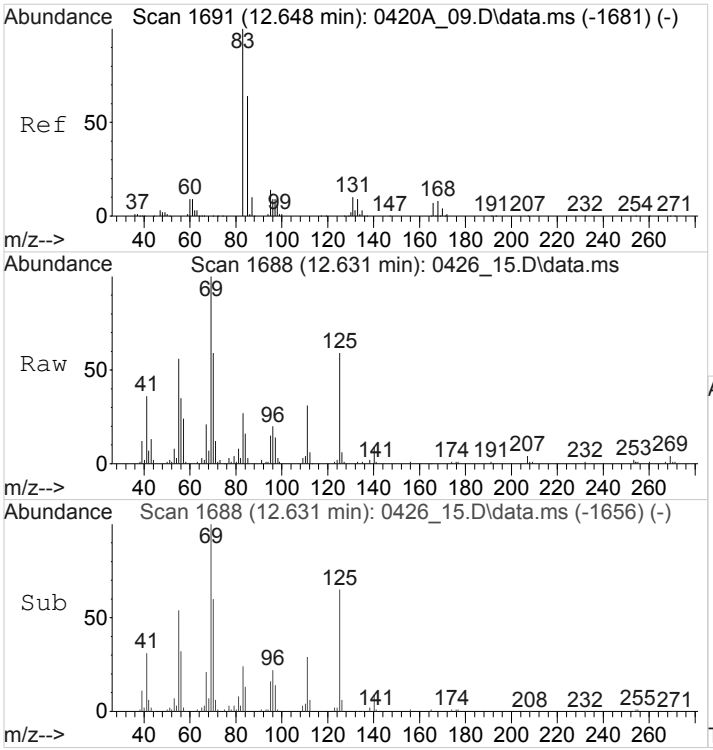


#64
Isopropylbenzene
Concen: 1.1083469 ppbv
RT: 12.269 min Scan# 1624
Delta R.T. 0.006 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion:105 Resp: 2545

Ion	Ratio	Lower	Upper
105	100		
120	32.8	22.0	33.0
77	0.0	11.1	16.7#
51	0.0	6.1	9.1#

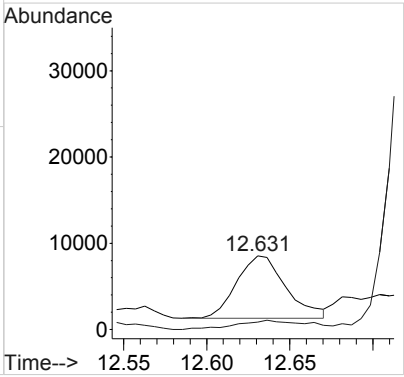


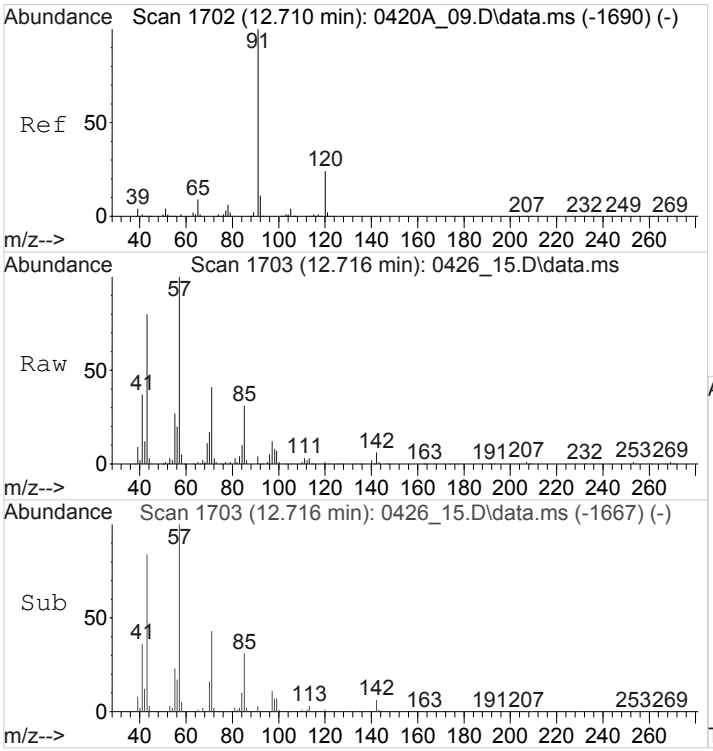


#65
1,1,2,2-Tetrachloroethane
Concen: 13.0061239 ppbv
RT: 12.631 min Scan# 1688
Delta R.T. -0.017 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion: 83 Resp: 14965

Ion	Ratio	Lower	Upper
83	100		
85	21.5	51.2	76.8#

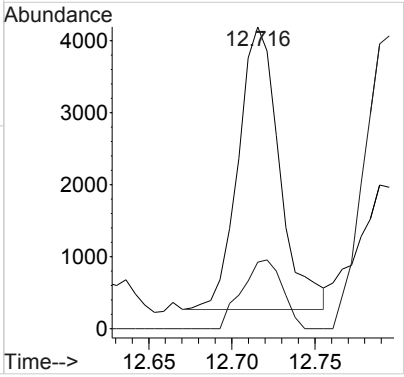


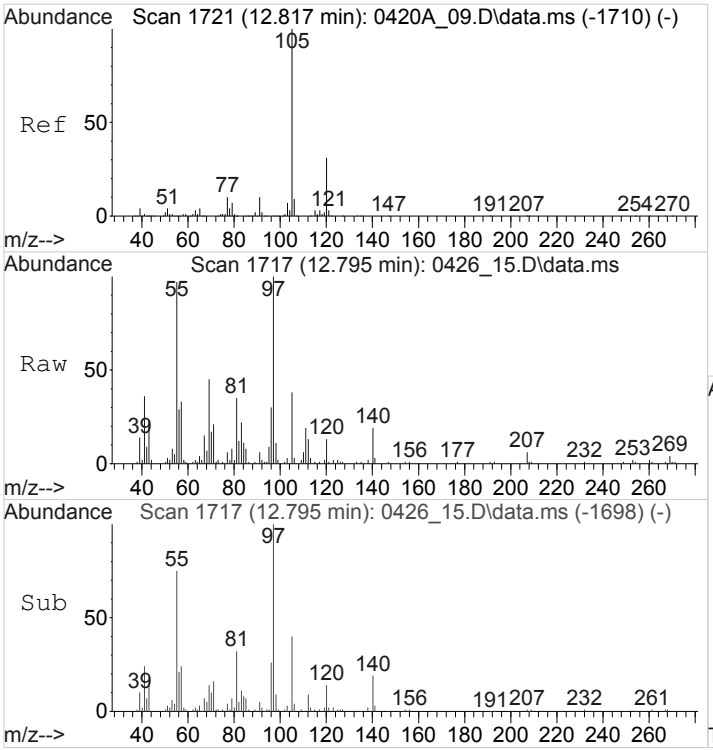


#66
n-Propylbenzene
Concen: 2.6694353 ppbv
RT: 12.716 min Scan# 1703
Delta R.T. 0.006 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion: 91 Resp: 6802

Ion	Ratio	Lower	Upper
91	100		
120	23.8	19.4	29.0

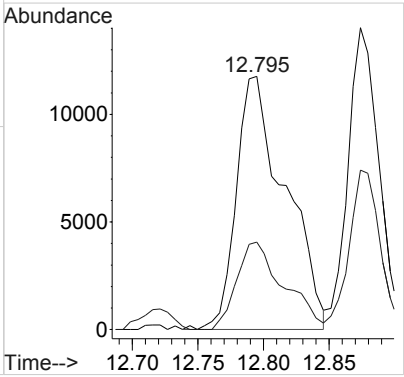


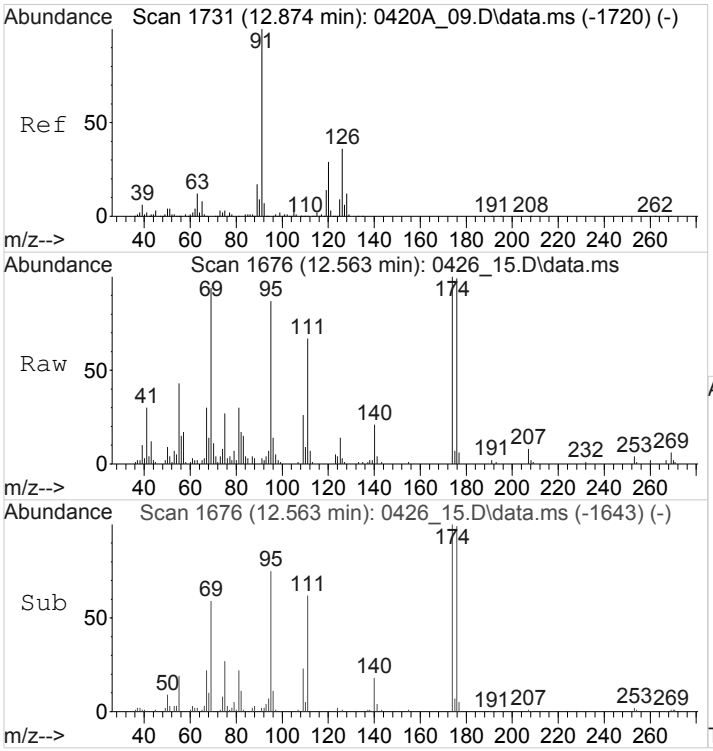


#67
4-Ethyltoluene
Concen: 13.6842615 ppbv
RT: 12.795 min Scan# 1717
Delta R.T. -0.023 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion:105 Resp: 30522

Ion	Ratio	Lower	Upper
105	100		
120	33.2	24.8	37.2

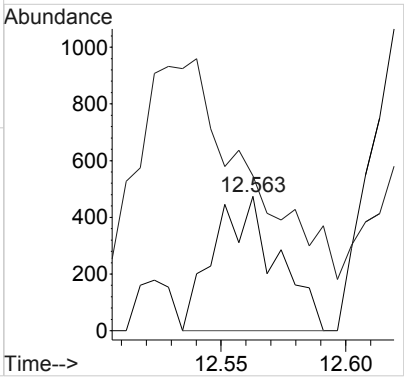


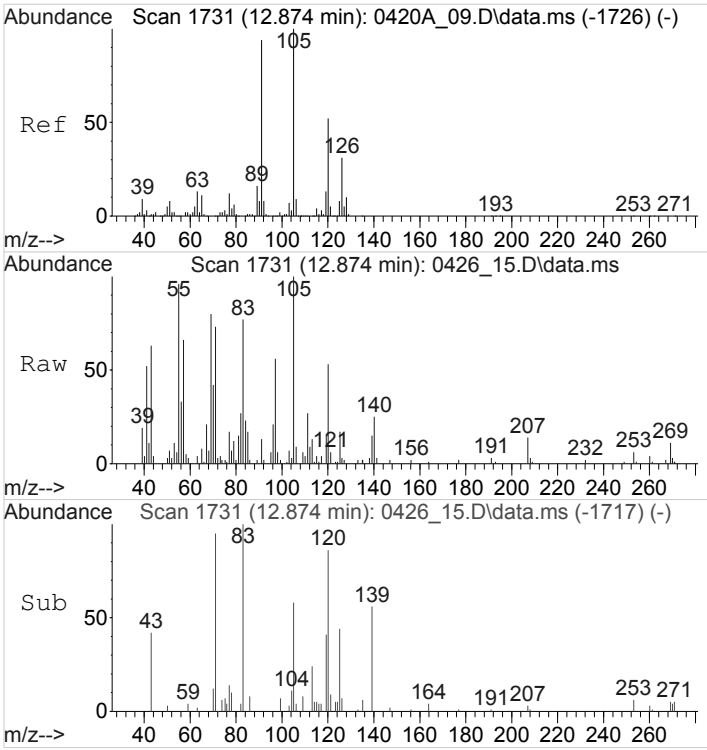


#68
2-Chlorotoluene
Concen: 1.6035666 ppbv
RT: 12.563 min Scan# 1676
Delta R.T. -0.311 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion:126 Resp: 835

Ion	Ratio	Lower	Upper
126	100		
91	284.7	245.4	368.0

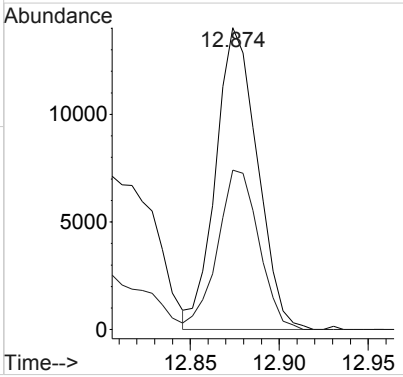


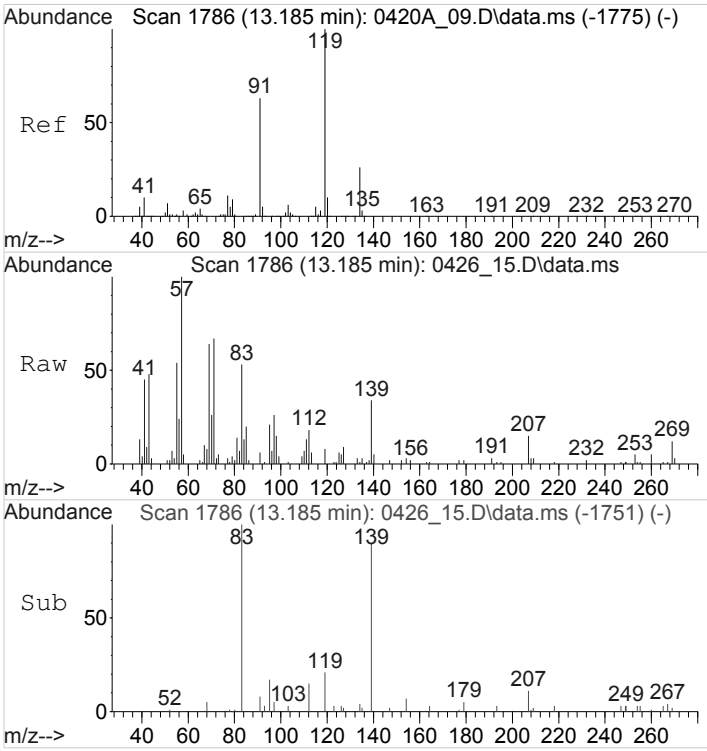


#70
1,3,5-Trimethylbenzene
Concen: 12.9244748 ppbv
RT: 12.874 min Scan# 1731
Delta R.T. 0.000 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion:105 Resp: 22764

Ion	Ratio	Lower	Upper
105	100		
120	52.5	41.4	62.0

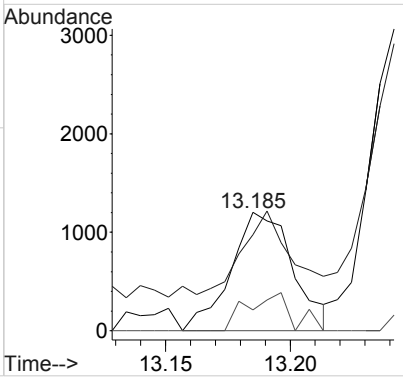


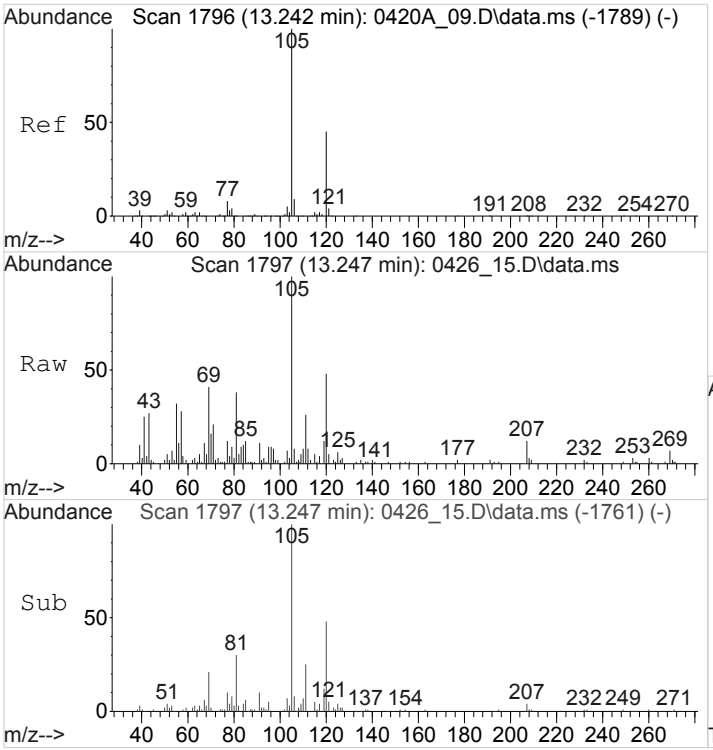


#71
Tert-Butylbenzene
Concen: 1.2166289 ppbv
RT: 13.185 min Scan# 1786
Delta R.T. 0.000 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion:119 Resp: 2093

Ion	Ratio	Lower	Upper
119	100		
91	59.7	49.5	74.3
134	0.0	20.7	31.1#

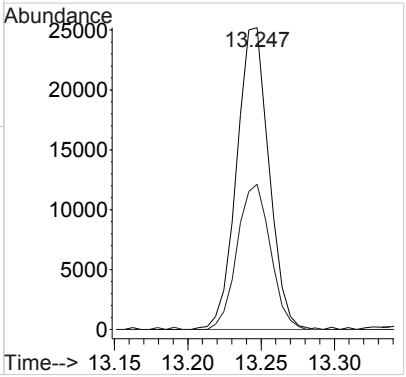


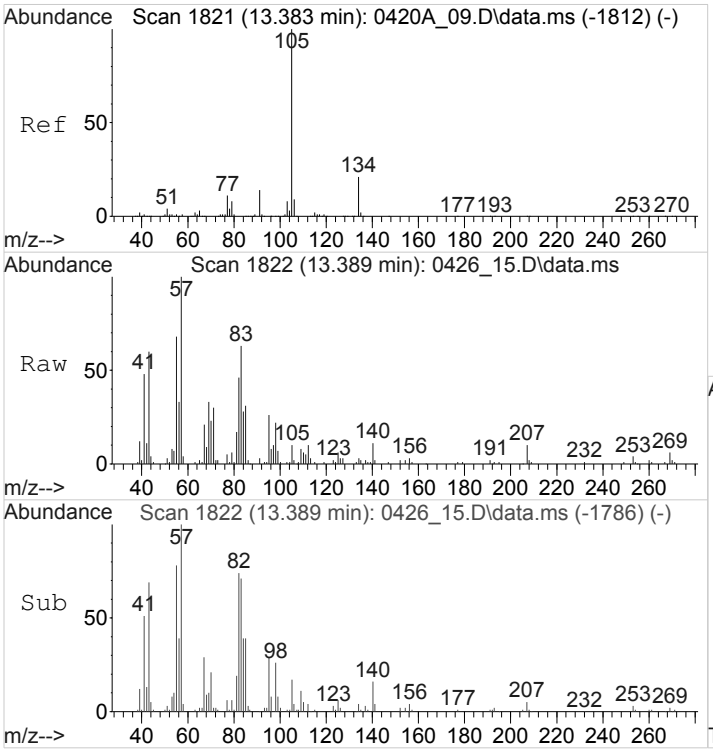


#72
1,2,4-Trimethylbenzene
Concen: 21.6553915 ppbv
RT: 13.247 min Scan# 1797
Delta R.T. 0.006 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion:105 Resp: 38519

Ion	Ratio	Lower	Upper
105	100		
120	49.6	38.8	58.2

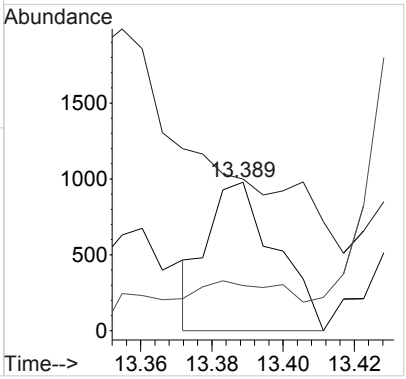


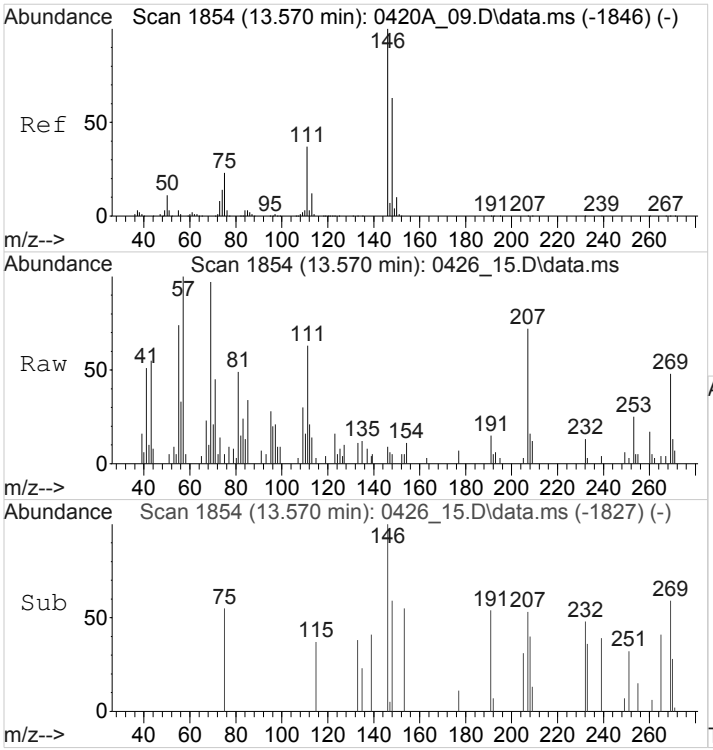


#73
sec-Butylbenzene
Concen: 2.3311605 ppbv
RT: 13.389 min Scan# 1822
Delta R.T. 0.006 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion:134 Resp: 1293

Ion	Ratio	Lower	Upper
134	100		
91	0.0	55.2	82.8#
119	0.0	5.8	8.6#

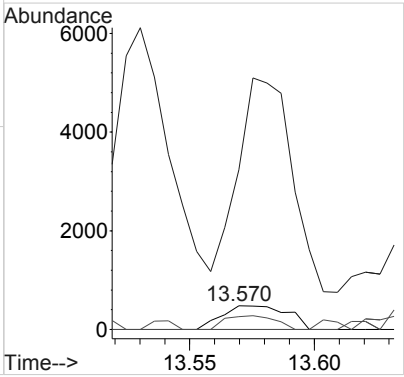


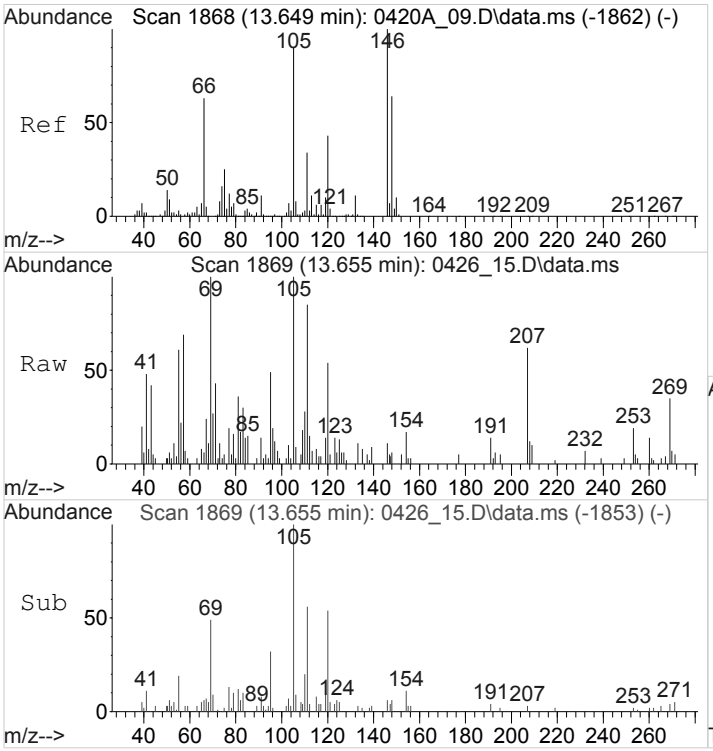


#74
1,3-Dichlorobenzene
Concen: 0.6784122 ppbv
RT: 13.570 min Scan# 1854
Delta R.T. 0.000 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion:146 Resp: 879

Ion	Ratio	Lower	Upper
146	100		
111	746.6	28.6	43.0#
75	0.0	18.5	27.7#
50	59.7	9.0	13.6#

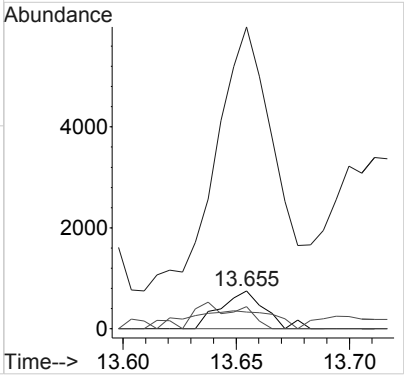


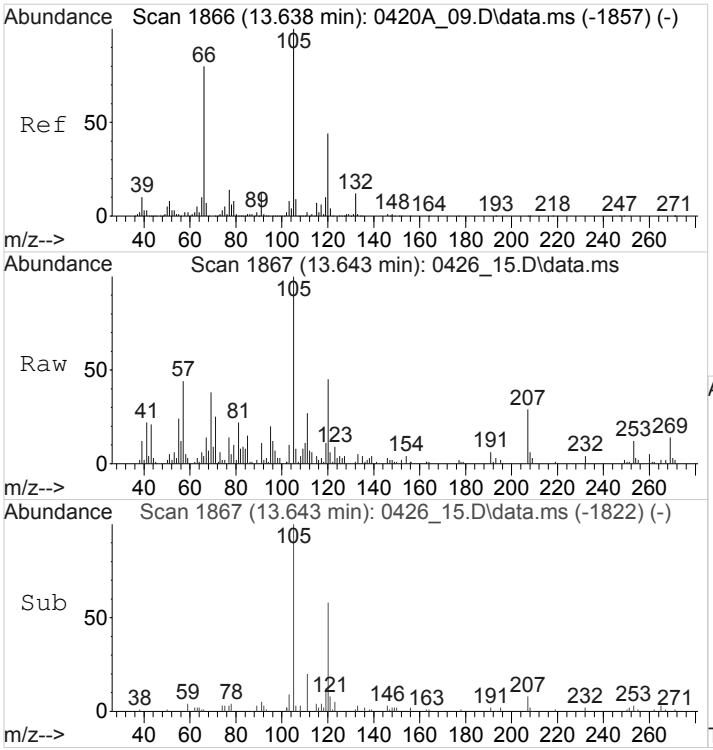


#75
1,4-Dichlorobenzene
Concen: 0.8286628 ppbv
RT: 13.655 min Scan# 1869
Delta R.T. 0.006 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion:146 Resp: 1028

Ion	Ratio	Lower	Upper
146	100		
111	917.9	27.2	40.8#
75	92.7	19.9	29.9#
50	81.4	12.6	19.0#

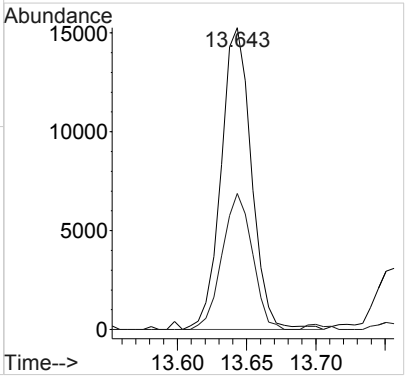


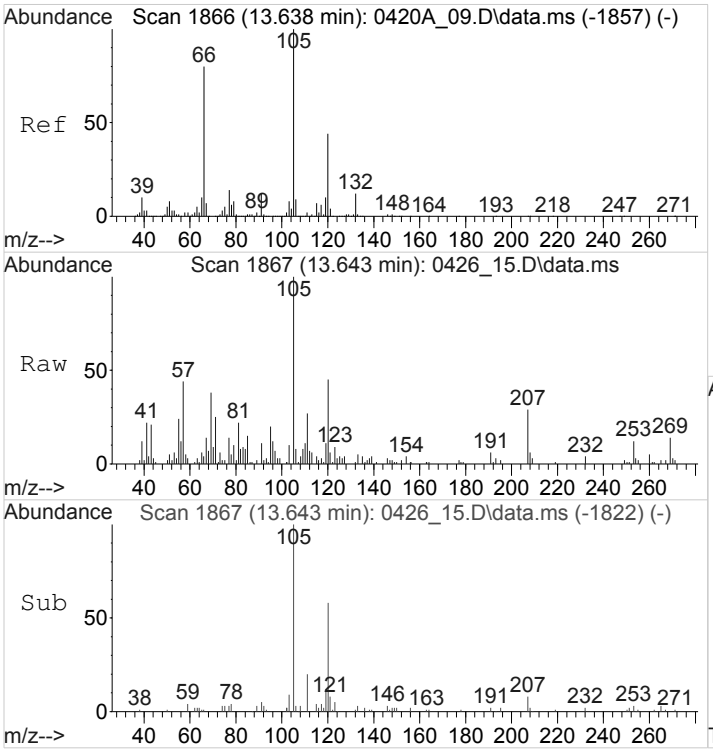


#76
1,2,3-TRIMETHYLBENZENE
Concen: 13.7155870 ppbv
RT: 13.643 min Scan# 1867
Delta R.T. 0.006 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion:105 Resp: 23297

Ion	Ratio	Lower	Upper
105	100		
120	44.7	36.0	54.0

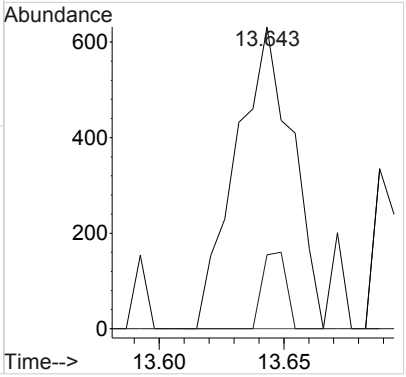


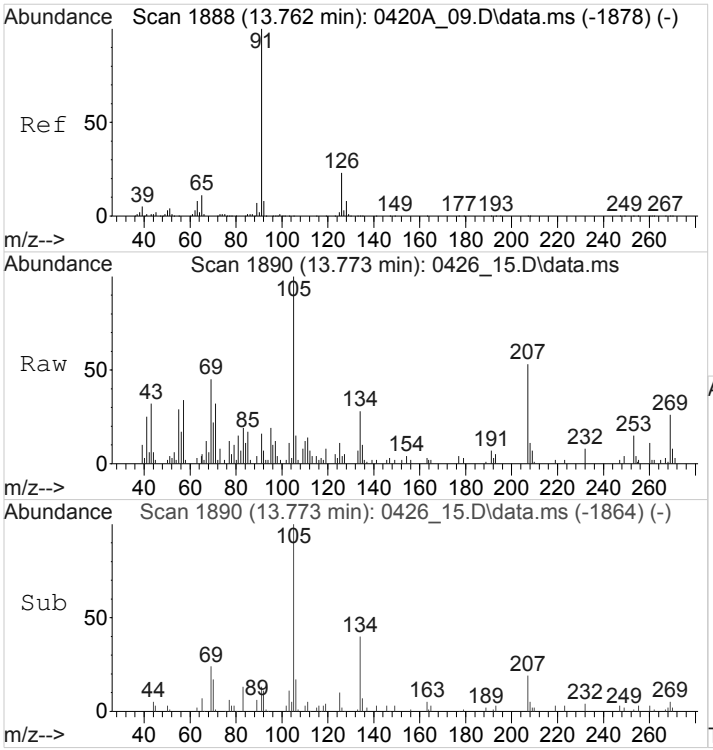


#77
DICYCLOPENTADIENE
Concen: 0.6319560 ppbv
RT: 13.643 min Scan# 1867
Delta R.T. 0.006 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion: 66 Resp: 991

Ion	Ratio	Lower	Upper
66	100		
132	0.0	11.0	16.4#

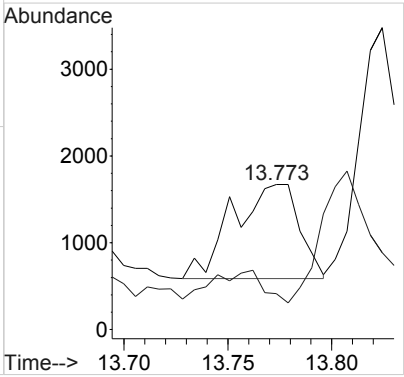


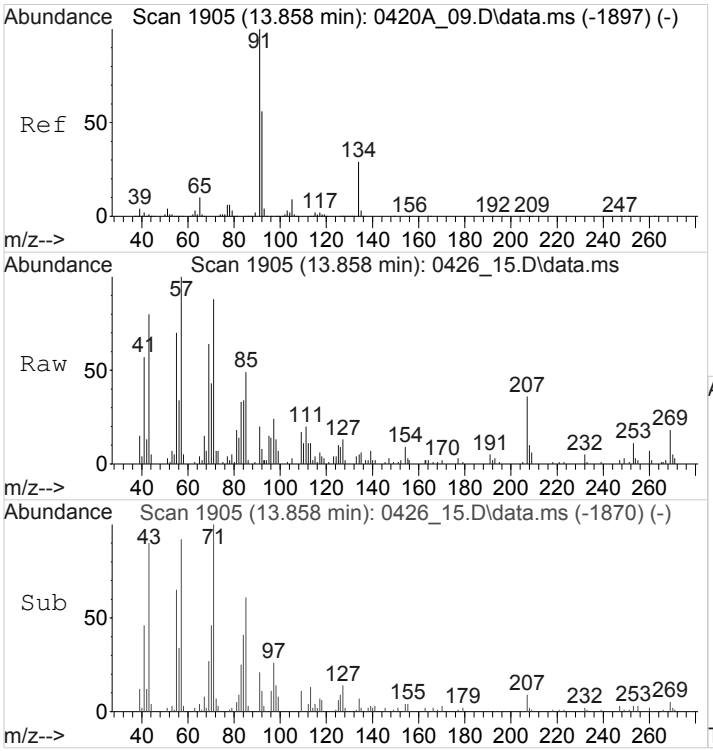


#78
Benzyl Chloride
Concen: 1.5143299 ppbv
RT: 13.773 min Scan# 1890
Delta R.T. 0.011 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion: 91 Resp: 2433

Ion	Ratio	Lower	Upper
91	100		
126	26.0	18.5	27.7

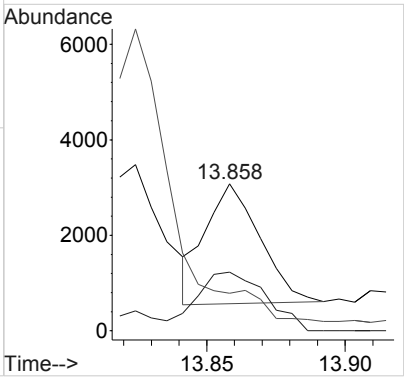


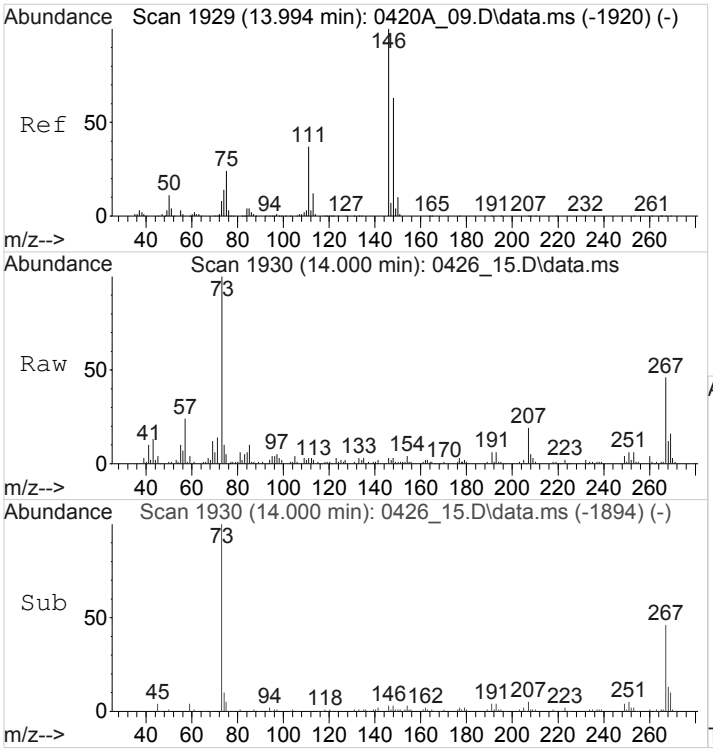


#79
n-Butylbenzene
Concen: 1.6943975 ppbv
RT: 13.858 min Scan# 1905
Delta R.T. 0.000 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion: 91 Resp: 3436

Ion	Ratio	Lower	Upper
91	100		
92	61.8	44.8	67.2
134	0.0	23.4	35.2#

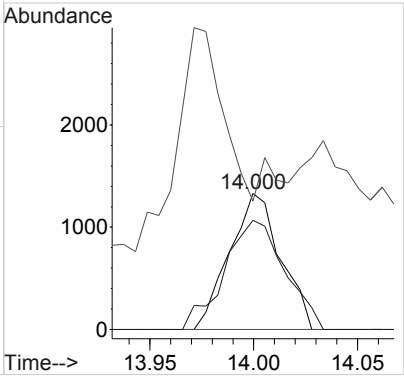


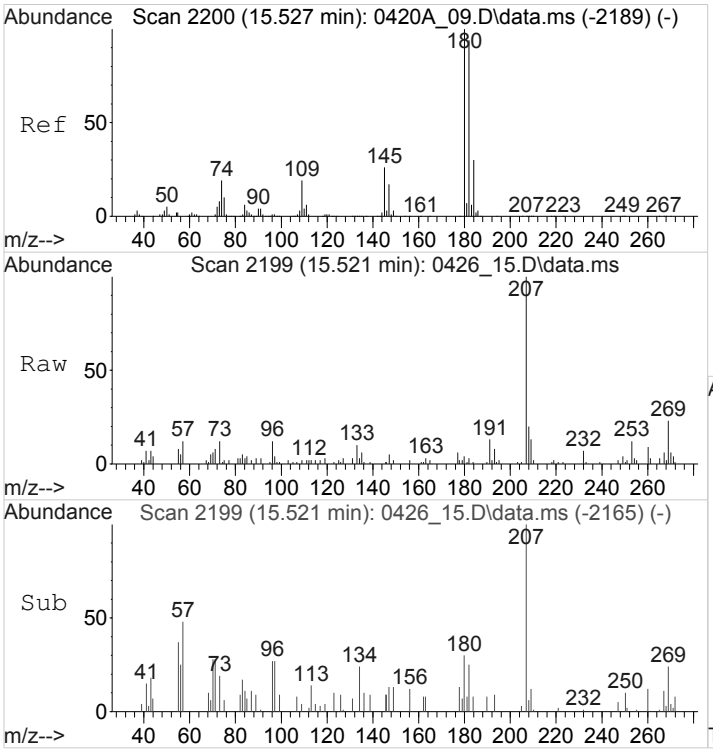


#80
1,2-Dichlorobenzene
Concen: 1.7708437 ppbv
RT: 14.000 min Scan# 1930
Delta R.T. 0.006 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion:146 Resp: 2269

Ion	Ratio	Lower	Upper
146	100		
148	95.1	51.1	76.7#
111	173.7	29.7	44.5#

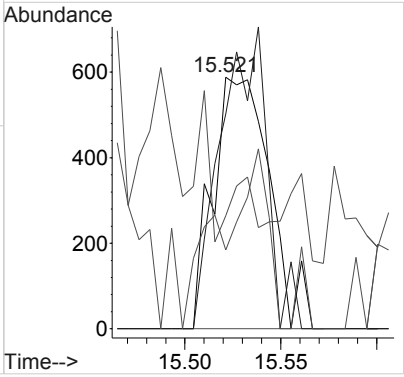


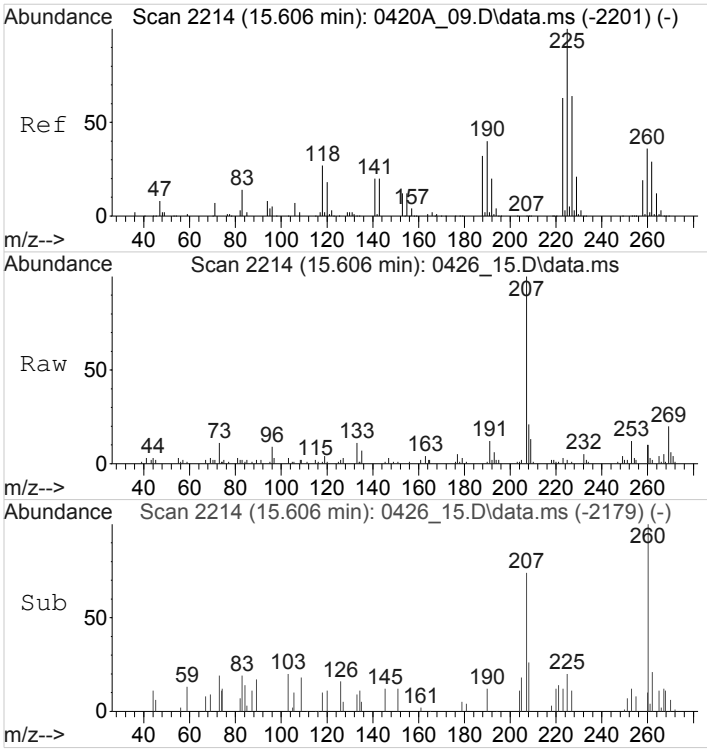


#81
1,2,4-Trichlorobenzene
Concen: 1.0189898 ppbv
RT: 15.521 min Scan# 2199
Delta R.T. -0.006 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion:180 Resp: 1214

Ion	Ratio	Lower	Upper
180	100		
182	97.5	76.1	114.1
145	0.0	21.6	32.4#
109	0.0	16.0	24.0#

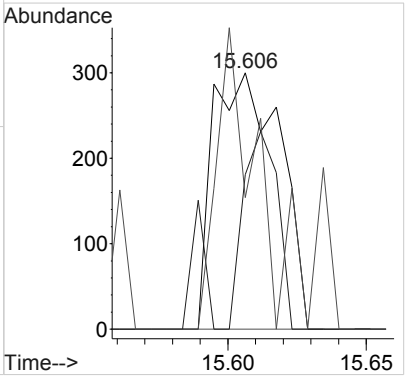


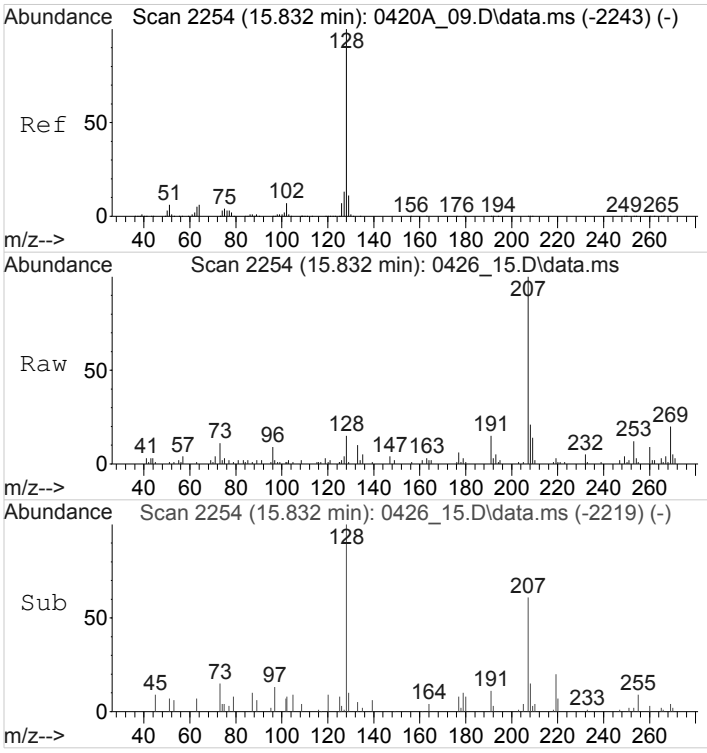


#82
Hexachloro-1,3-Butadiene
Concen: 0.4117169 ppbv
RT: 15.606 min Scan# 2214
Delta R.T. 0.000 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion:225 Resp: 509

Ion	Ratio	Lower	Upper
225	100		
190	0.0	32.2	48.4#
118	0.0	22.4	33.6#

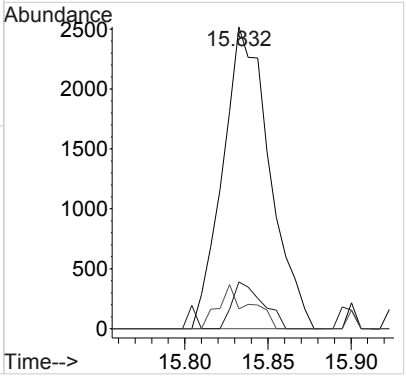


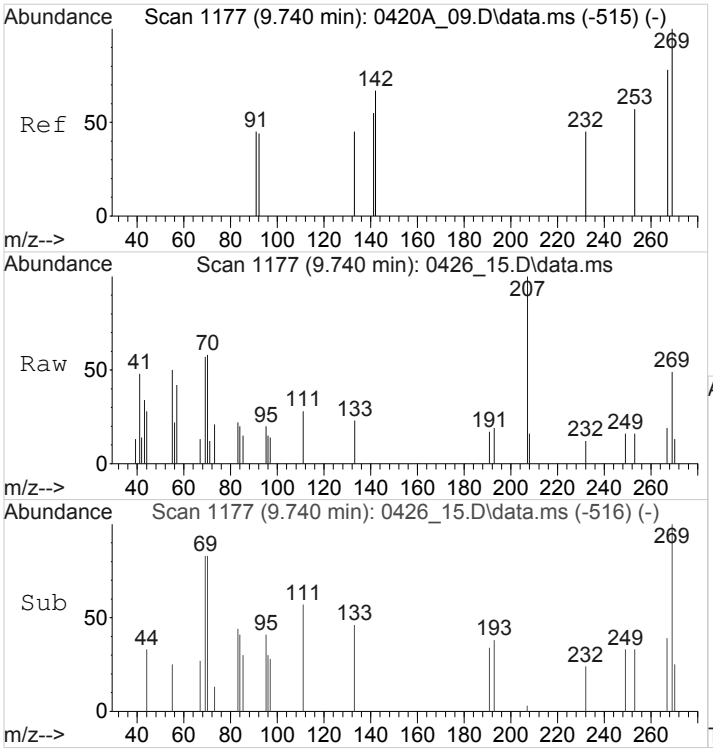


#83
Naphthalene
Concen: 1.8576643 ppbv
RT: 15.832 min Scan# 2254
Delta R.T. 0.000 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion:128 Resp: 4943

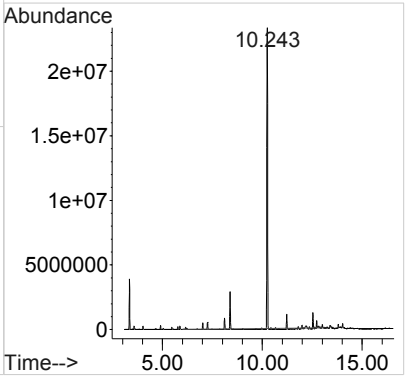
Ion	Ratio	Lower	Upper
128	100		
102	10.1	5.9	8.9#
51	0.0	4.6	7.0#





#84
TPH (GC/MS) Low Fraction
Concen: 27396.0941855 ppbv m
RT: 9.740 min Scan# 1177
Delta R.T. 0.000 min
Lab File: 0426_15.D
Acq: 26 Apr 2018 5:59 pm

Tgt Ion:TIC Resp:76929847



1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS-5

ESC Sample ID:	L988471-05	**SDG:**	L988471
Client Sample ID:	SS-5	**Collected Date/Time:**	04/23/18 11:11
Lab File ID:	0427_08	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS2	**Preparation Date/Time:**	04/27/18 14:08
Analytical Batch:	WG1103956	**Analysis Date/Time:**	04/27/18 14:08
Dilution Factor:	200	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	2 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	RT	Result	Qualifier	MDL	RDL
			ppbv		*ppbv*	*ppbv*
Tetrachloroethylene	127-18-4	12.21	8820		9.94	40.0
Trichloroethylene	79-01-6	10.18	1240		10.9	40.0

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_08.D
Acq On : 27 Apr 2018 2:08 pm
Operator : 564
Sample : L988471-05 200x WG1103956
Misc :
ALS Vial : 8 Sample Multiplier: 200
InstName : AIRMS2

Quant Time: Apr 28 07:50:17 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:08:22 2018
Response via : Initial Calibration

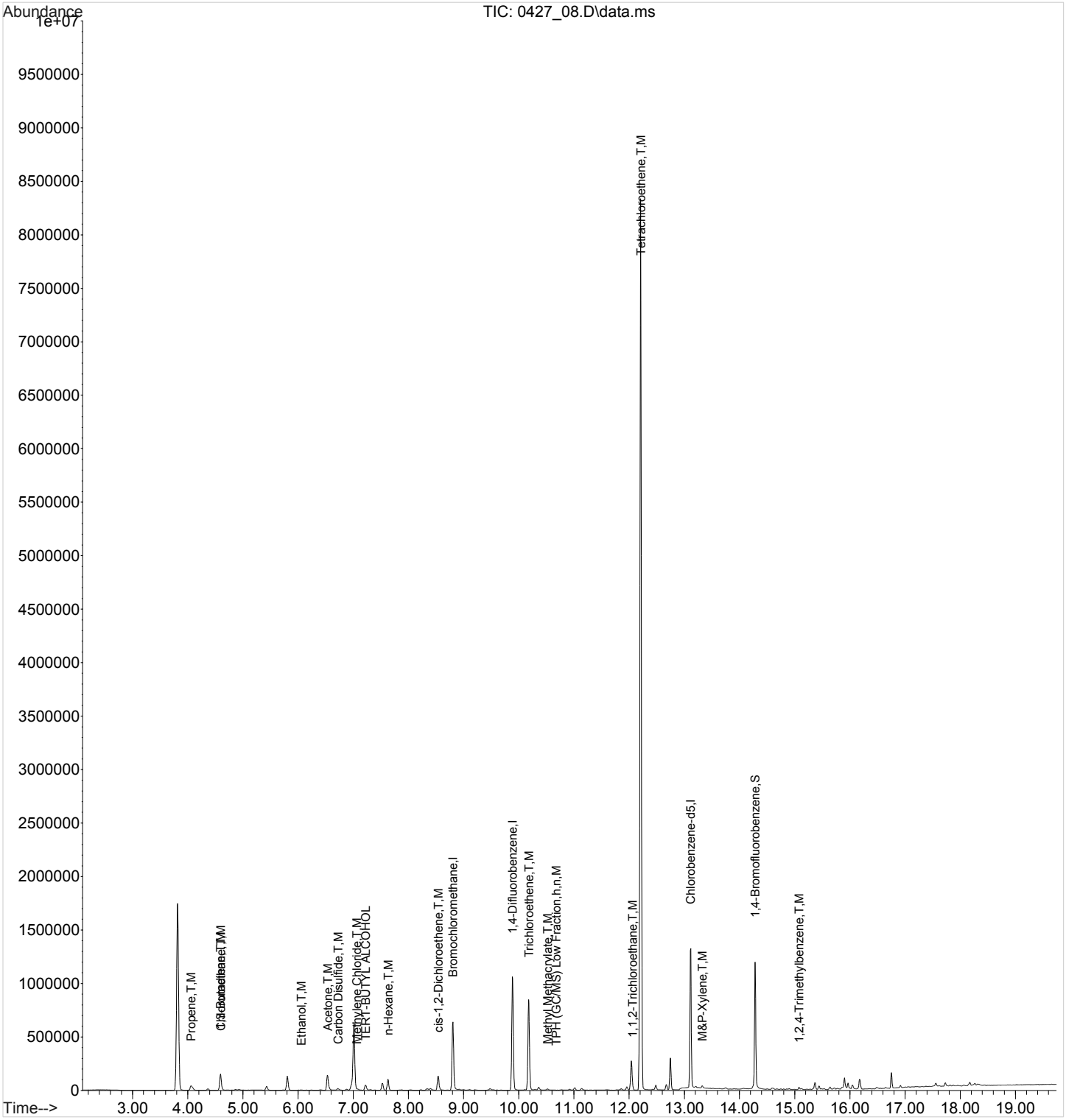
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.808	130	1782600	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	9.890	114	7647367	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	13.116	117	6398285	4.0000000	ppbv	# 0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	14.285	95	3786720	3.7457160	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 93.64%			
Target Compounds						Qvalue
2) Propene	4.060	41	181808	75.9648498	ppbv #	83
7) Chloromethane	4.597	50	67308	29.8689033	ppbv #	83
9) 1,3-Butadiene	4.595	39	634618	264.8605875	ppbv #	16
14) Ethanol	6.060	45	51481	68.6243846	ppbv #	36
17) Acetone	6.535	43	2189928	610.8419073	ppbv	99
18) 2-Propanol	6.743	45	53676	11.1008814	ppbv #	59
19) Carbon Disulfide	6.723	76	234422	66.3861937	ppbv	91
20) Allyl Chloride	6.883	41	45268	11.5438004	ppbv #	54
21) Methylene Chloride	7.063	49	56288	18.8858201	ppbv #	1
22) TERT-BUTYL ALCOHOL	7.224	59	684006	126.1900855	ppbv #	51
25) n-Hexane	7.632	57	494321	133.9184097	ppbv	95
30) cis-1,2-Dichloroethene	8.540	61	970061	256.9858871	ppbv #	83
36) 2,2,4-Trimethylpentane	9.486	57	45673	3.4471729	ppbv #	63
38) Benzene	9.479	78	74894	11.6581329	ppbv #	77
41) Trichloroethene	10.181	95	2908486	1244.2823225	ppbv	97
43) METHYL CYCLOHEXANE	10.181	83	40539	10.7885209	ppbv #	1
45) Methyl Methacrylate	10.524	69	43397	18.1161039	ppbv	99
52) 1,1,2-Trichloroethane	12.061	97	43748	20.3969814	ppbv #	4
53) Tetrachloroethene	12.211	166	23115489	8819.3735072	ppbv	96
59) Ethylbenzene	13.212	91	79770	8.2581842	ppbv #	46
60) M&P-Xylene	13.329	91	106094	14.2622658	ppbv	90
62) Styrene	13.756	104	53616	9.6806885	ppbv #	79
66) n-Propylbenzene	14.503	91	28722	2.3291373	ppbv #	58
67) 4-Ethyltoluene	14.617	105	37812	3.8034343	ppbv #	48
68) 2-Chlorotoluene	14.503	91	28504	3.3283776	ppbv #	51
70) 1,3,5-Trimethylbenzene	14.681	105	33995	4.1059485	ppbv #	29
72) 1,2,4-Trimethylbenzene	15.080	105	113178	14.1894640	ppbv	99
73) sec-Butylbenzene	15.080	105	110776	9.1689700	ppbv #	61
76) 1,2,3-TRIMETHYLBENZENE	15.538	105	39299	4.7544572	ppbv #	34
84) TPH (GC/MS) Low Fraction	10.675	TIC	198301178m	10018.6184150	ppbv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

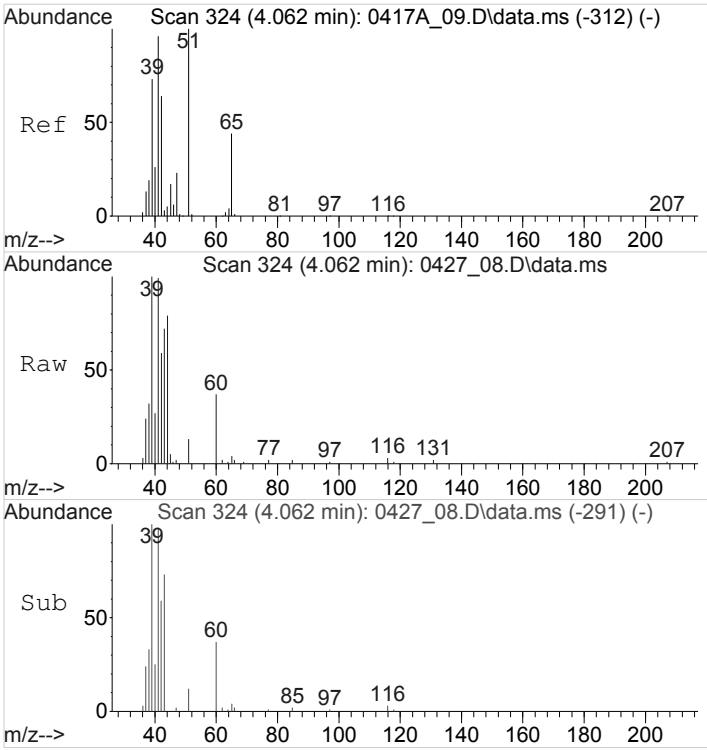
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_08.D
Acq On : 27 Apr 2018 2:08 pm
Operator : 564
Sample : L988471-05 200x WG1103956
Misc :
ALS Vial : 8 Sample Multiplier: 200
InstName : AIRMS2

Quant Time: Apr 28 07:50:17 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:08:22 2018
Response via : Initial Calibration



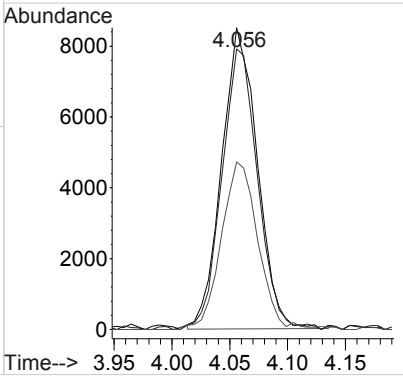
ACCOUNT:	PROJECT:	SDG:	DATE/TIME:	PAGE:
S&ME Inc. - Knoxville	4143-17-016	L988471	05/16/18 11:18	178 of 698

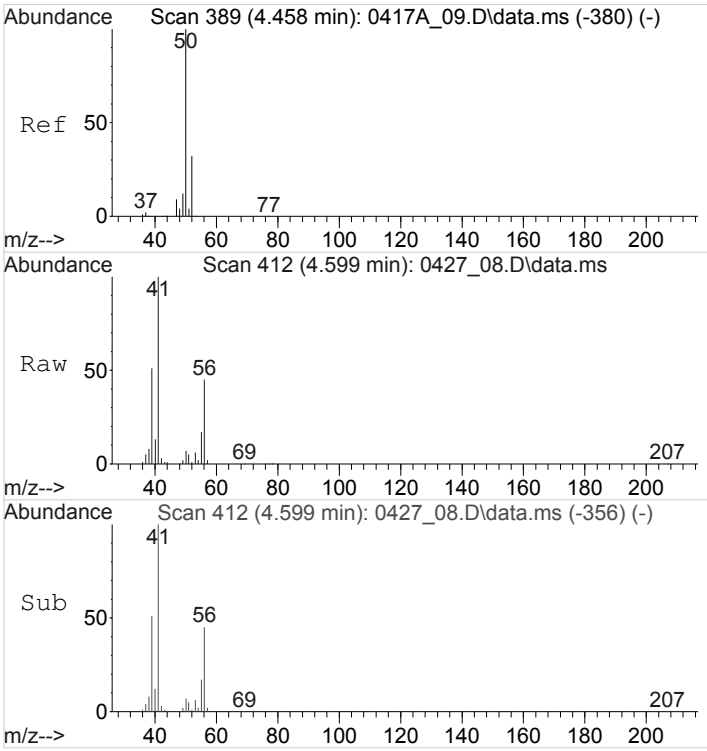


#2
Propene
Concen: 75.9648498 ppbv
RT: 4.060 min Scan# 324
Delta R.T. -0.002 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 2:08 pm

Tgt Ion: 41 Resp: 181808

Ion	Ratio	Lower	Upper
41	100		
39	93.0	57.8	86.8#
42	57.3	50.5	75.7

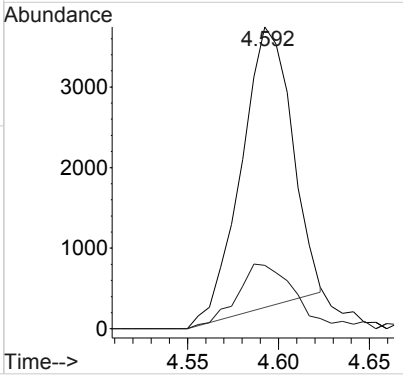


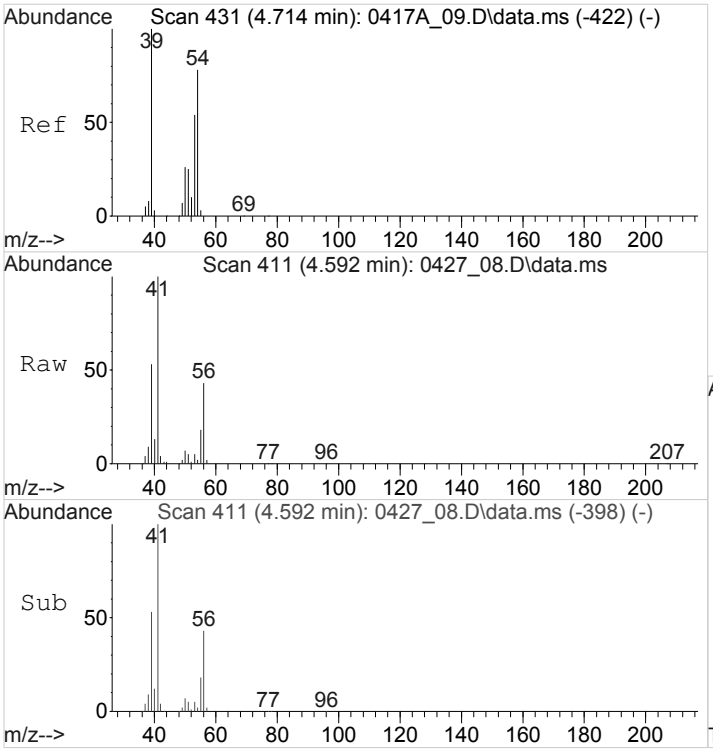


#7
Chloromethane
Concen: 29.8689033 ppbv
RT: 4.597 min Scan# 412
Delta R.T. 0.141 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 2:08 pm

Tgt Ion: 50 Resp: 67308

Ion	Ratio	Lower	Upper
50	100		
52	22.2	25.5	38.3#

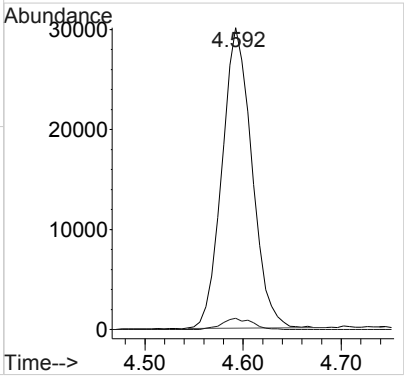


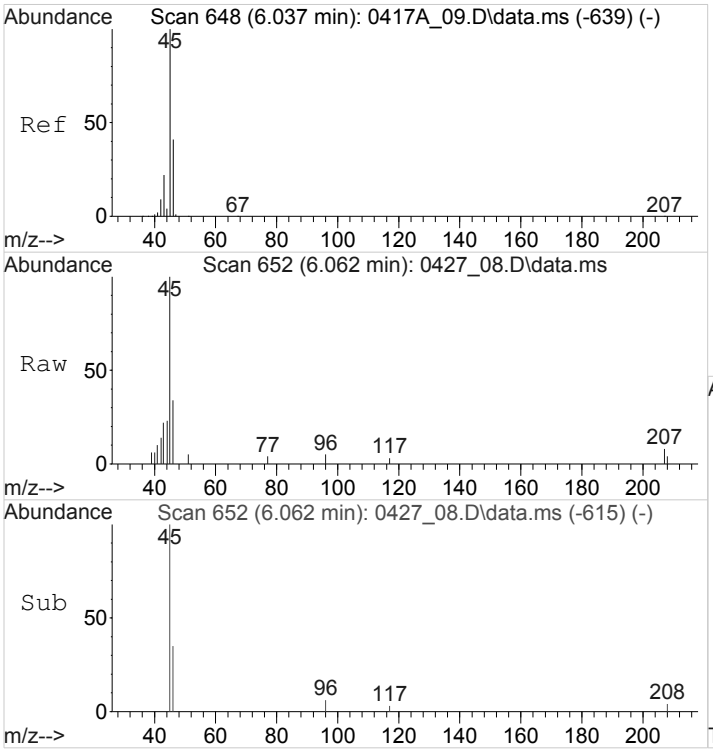


#9
1,3-Butadiene
Concen: 264.8605875 ppbv
RT: 4.595 min Scan# 411
Delta R.T. -0.117 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 2:08 pm

Tgt Ion: 39 Resp: 634618

Ion	Ratio	Lower	Upper
39	100		
54	3.8	60.6	91.0#

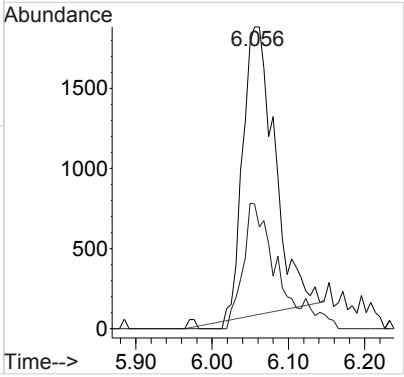


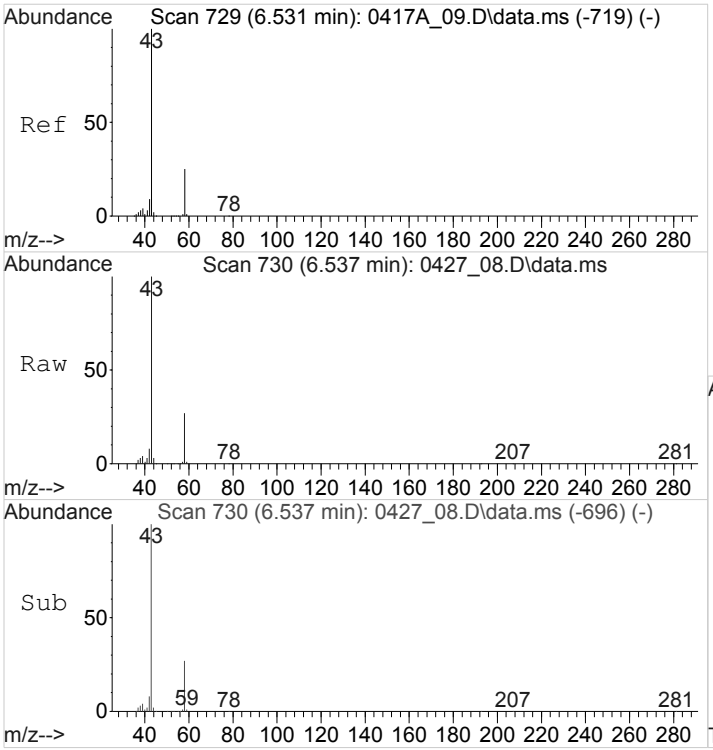


#14
Ethanol
Concen: 68.6243846 ppbv
RT: 6.060 min Scan# 652
Delta R.T. 0.022 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 2:08 pm

Tgt Ion: 45 Resp: 51481

Ion	Ratio	Lower	Upper
45	100		
46	0.0	31.5	47.3#

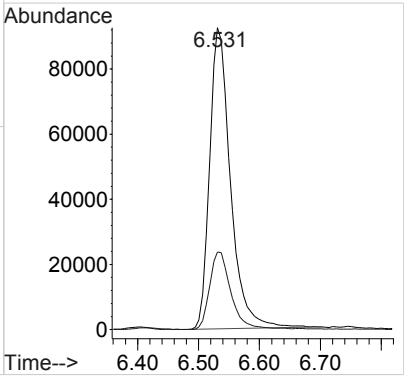


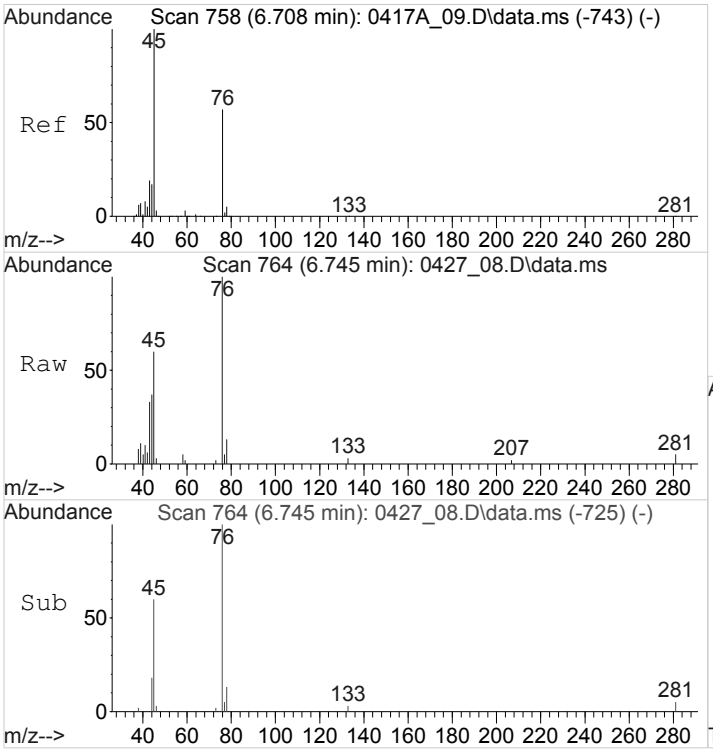


#17
Acetone
Concen: 610.8419073 ppbv
RT: 6.535 min Scan# 730
Delta R.T. 0.005 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 2:08 pm

Tgt Ion: 43 Resp: 2189928

Ion	Ratio	Lower	Upper
43	100		
58	26.2	20.6	30.8

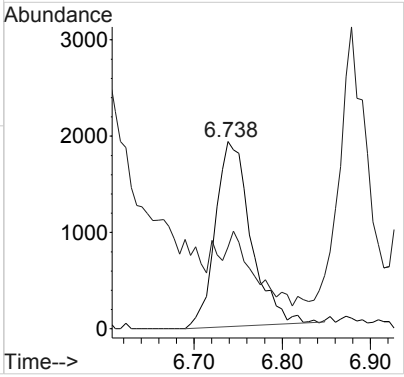


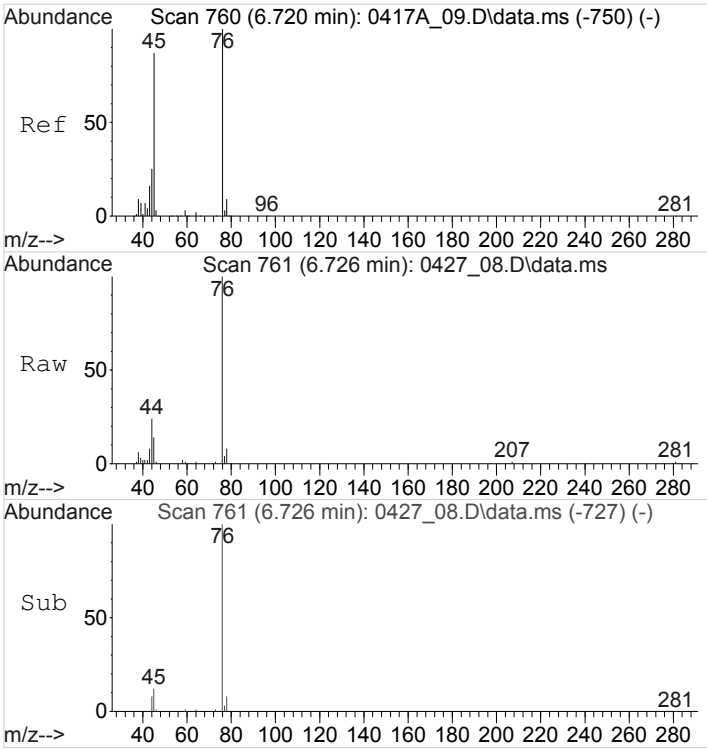


#18
2-Propanol
Concen: 11.1008814 ppbv
RT: 6.743 min Scan# 764
Delta R.T. 0.035 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 2:08 pm

Tgt Ion: 45 Resp: 53676

Ion	Ratio	Lower	Upper
45	100		
43	0.0	14.4	21.6#

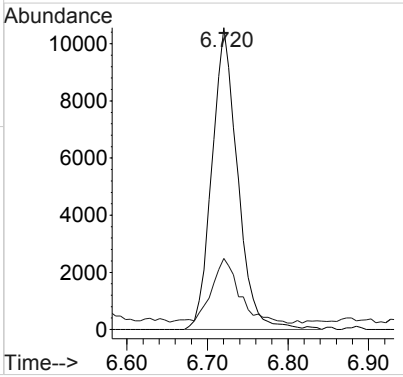


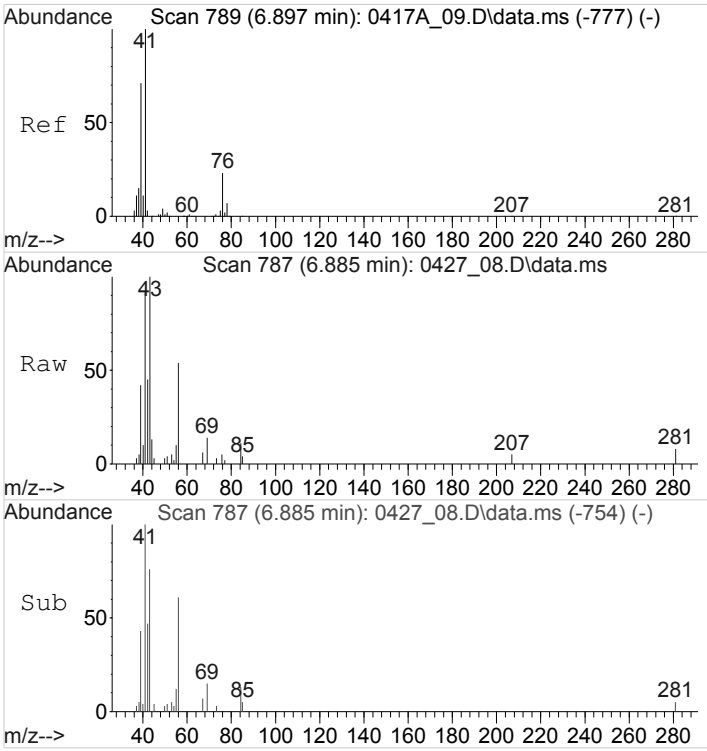


#19
Carbon Disulfide
Concen: 66.3861937 ppbv
RT: 6.723 min Scan# 761
Delta R.T. 0.002 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 2:08 pm

Tgt Ion: 76 Resp: 234422

Ion	Ratio	Lower	Upper
76	100		
44	22.5	21.9	32.9

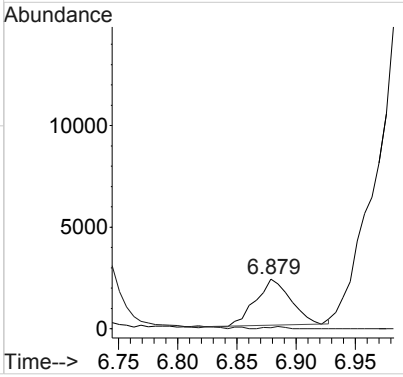


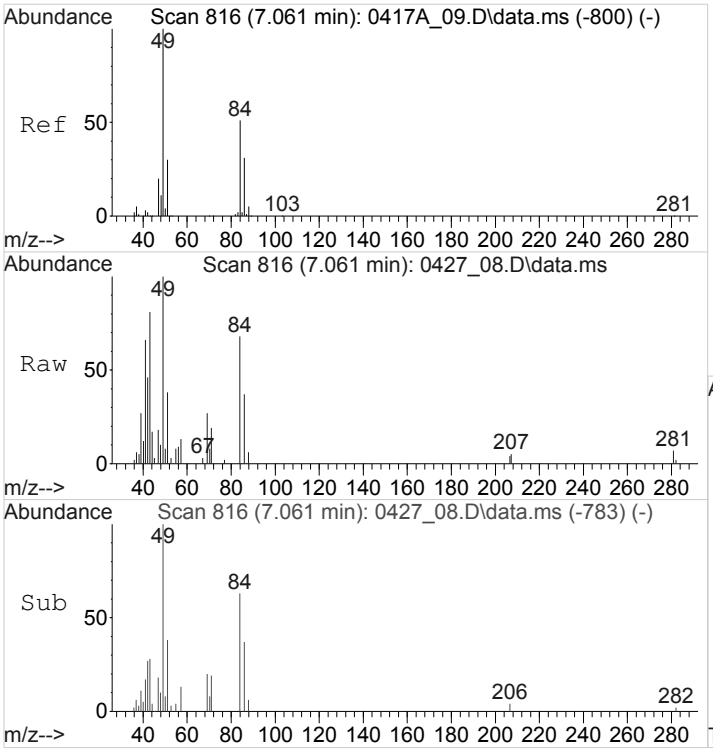


#20
Allyl Chloride
Concen: 11.5438004 ppbv
RT: 6.883 min Scan# 787
Delta R.T. -0.011 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 2:08 pm

Tgt Ion: 41 Resp: 45268

Ion	Ratio	Lower	Upper
41	100		
76	0.0	17.4	26.2#

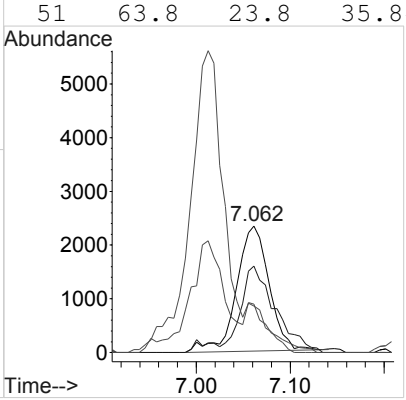


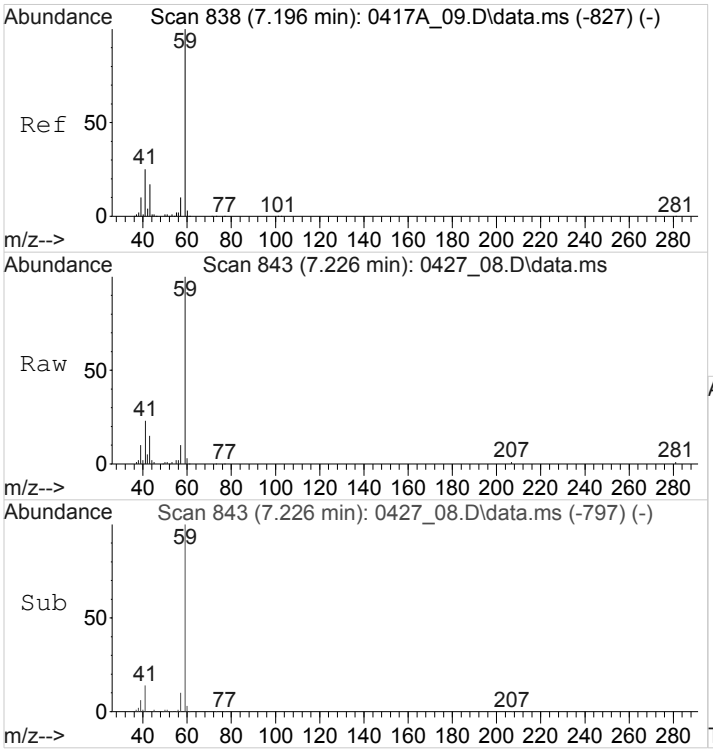


#21
Methylene Chloride
Concen: 18.8858201 ppbv
RT: 7.063 min Scan# 816
Delta R.T. 0.002 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 2:08 pm

Tgt Ion: 49 Resp: 56288

Ion	Ratio	Lower	Upper
49	100		
84	78.7	39.4	59.2#
86	196.4	24.5	36.7#
51	63.8	23.8	35.8#

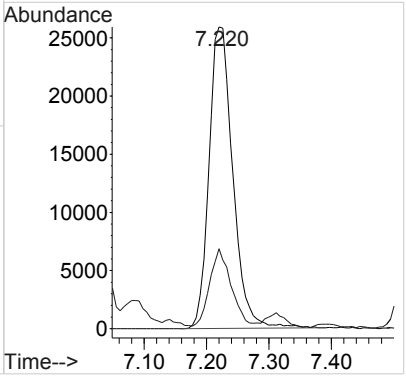


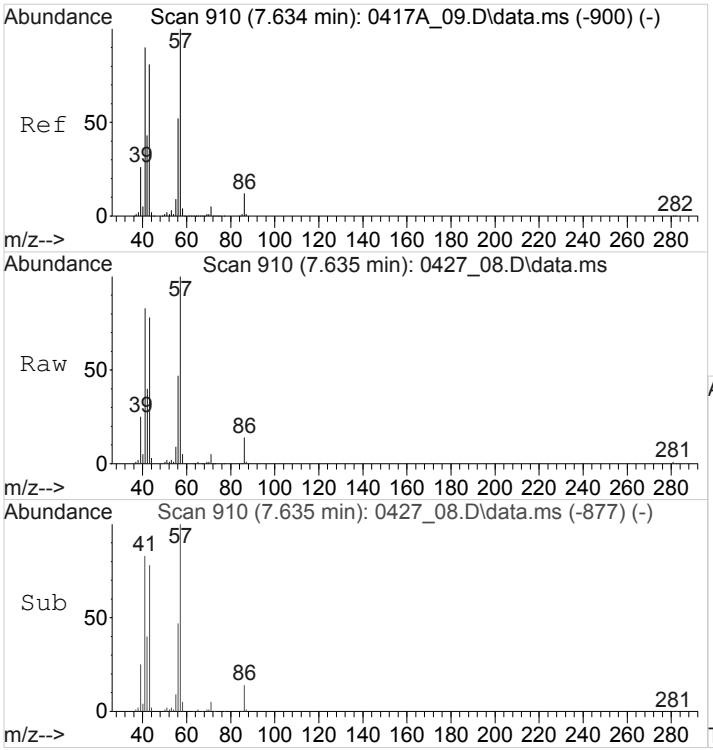


#22
TERT-BUTYL ALCOHOL
Concen: 126.1900855 ppbv
RT: 7.224 min Scan# 843
Delta R.T. 0.029 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 2:08 pm

Tgt Ion: 59 Resp: 684006

Ion	Ratio	Lower	Upper
59	100		
41	0.0	19.8	29.6#

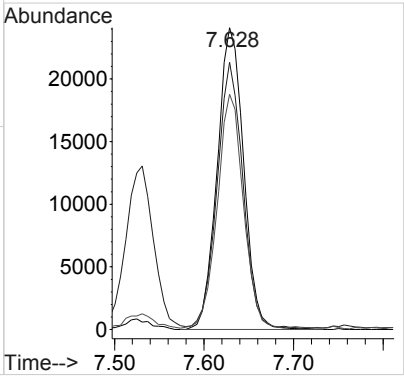


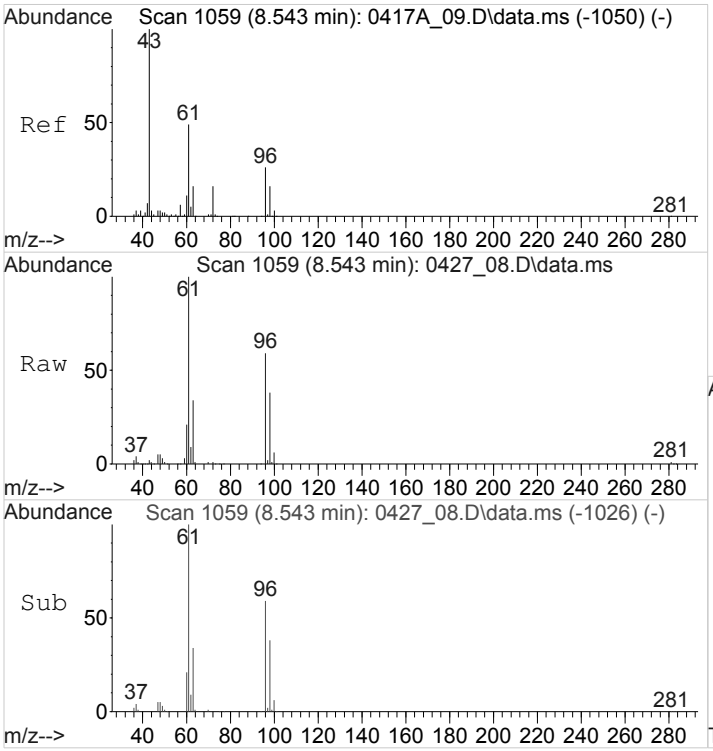


#25
n-Hexane
Concen: 133.9184097 ppbv
RT: 7.632 min Scan# 910
Delta R.T. -0.003 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 2:08 pm

Tgt Ion: 57 Resp: 494321

Ion	Ratio	Lower	Upper
57	100		
41	85.9	72.7	109.1
43	76.4	64.1	96.1

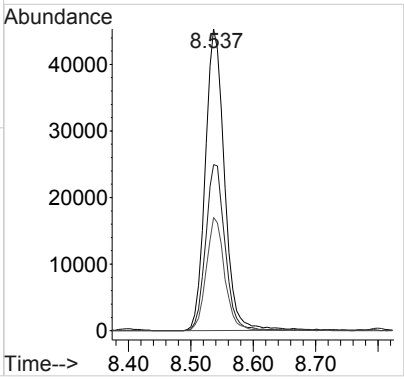


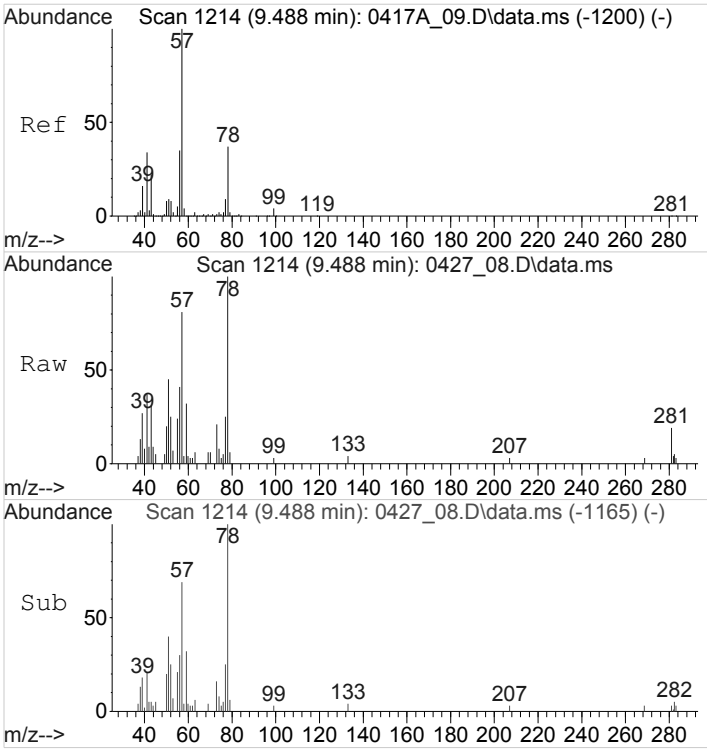


#30
cis-1,2-Dichloroethene
Concen: 256.9858871 ppbv
RT: 8.540 min Scan# 1059
Delta R.T. -0.002 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 2:08 pm

Tgt Ion: 61 Resp: 970061

Ion	Ratio	Lower	Upper
61	100		
96	55.0	34.9	52.3#
98	35.7	21.8	32.6#

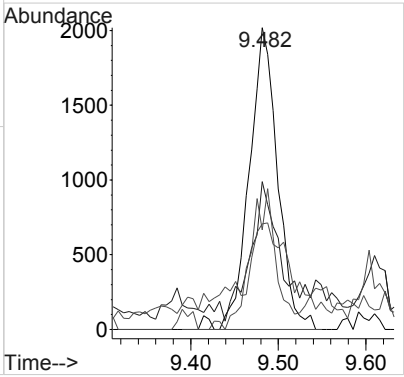


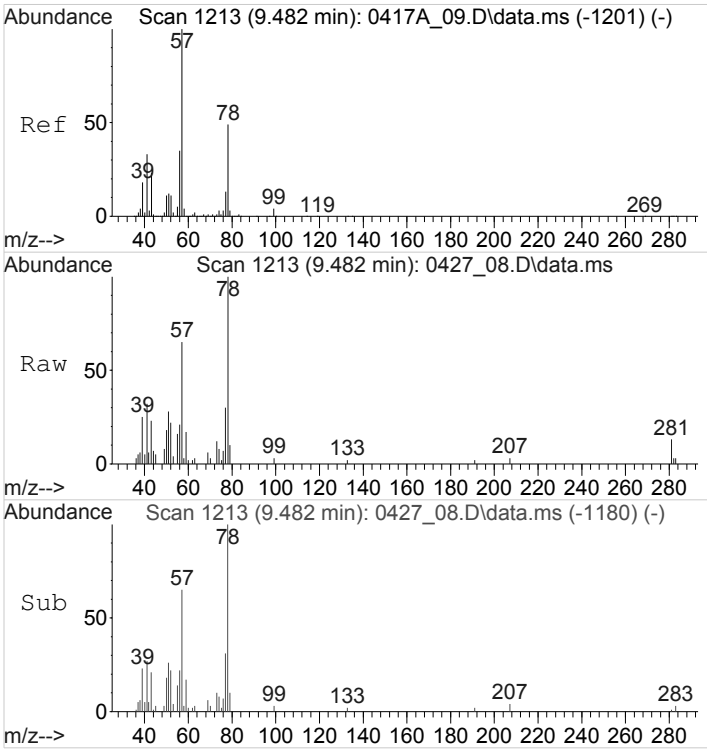


#36
2,2,4-Trimethylpentane
Concen: 3.4471729 ppbv
RT: 9.486 min Scan# 1214
Delta R.T. -0.002 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 2:08 pm

Tgt Ion: 57 Resp: 45673

Ion	Ratio	Lower	Upper
57	100		
41	44.6	26.6	40.0#
43	36.0	18.1	27.1#
56	0.0	27.7	41.5#

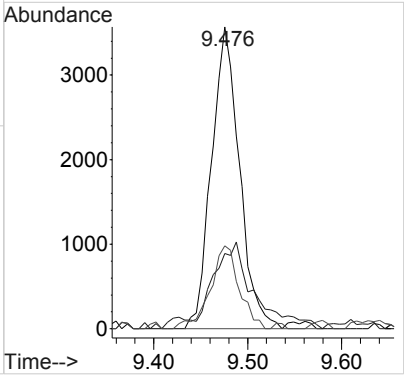


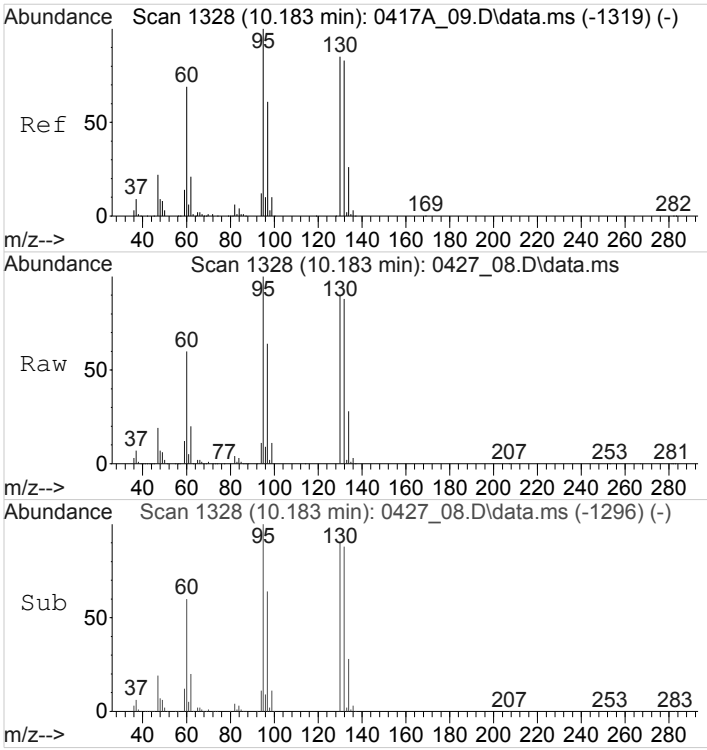


#38
Benzene
Concen: 11.6581329 ppbv
RT: 9.479 min Scan# 1213
Delta R.T. -0.000 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 2:08 pm

Tgt Ion: 78 Resp: 74894

Ion	Ratio	Lower	Upper
78	100		
51	41.3	16.6	24.8#
77	28.0	19.9	29.9

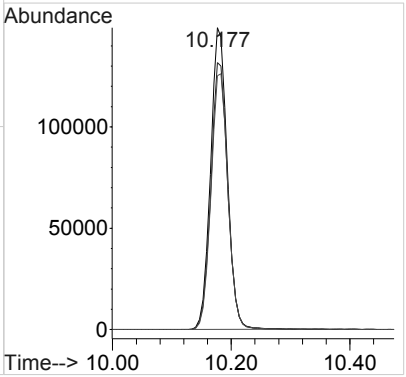


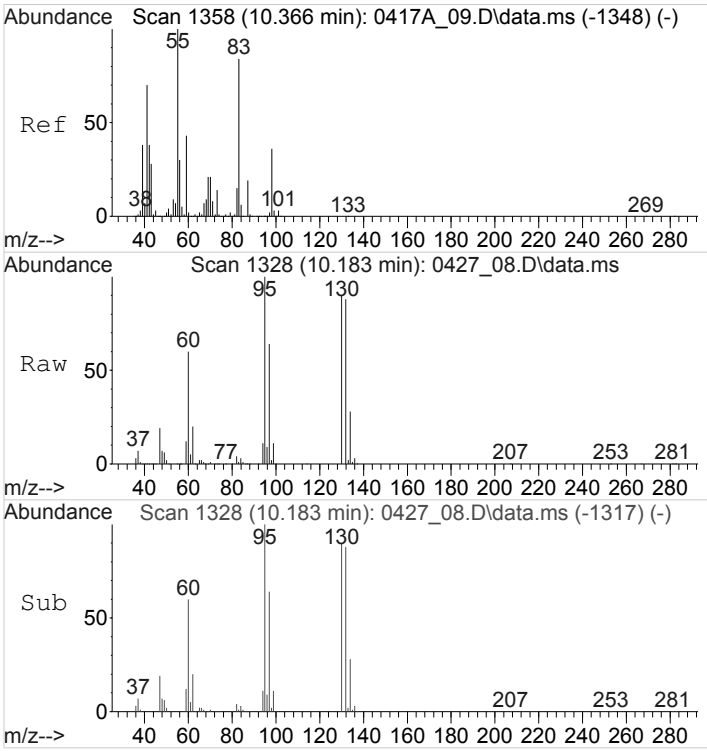


#41
Trichloroethene
Concen: 1244.2823225 ppbv
RT: 10.181 min Scan# 1328
Delta R.T. -0.003 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 2:08 pm

Tgt Ion: 95 Resp: 2908486

Ion	Ratio	Lower	Upper
95	100		
130	88.9	69.2	103.8
132	86.0	66.3	99.5

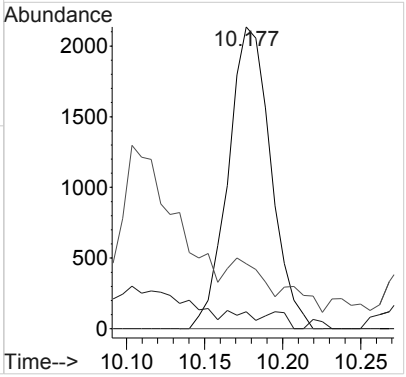


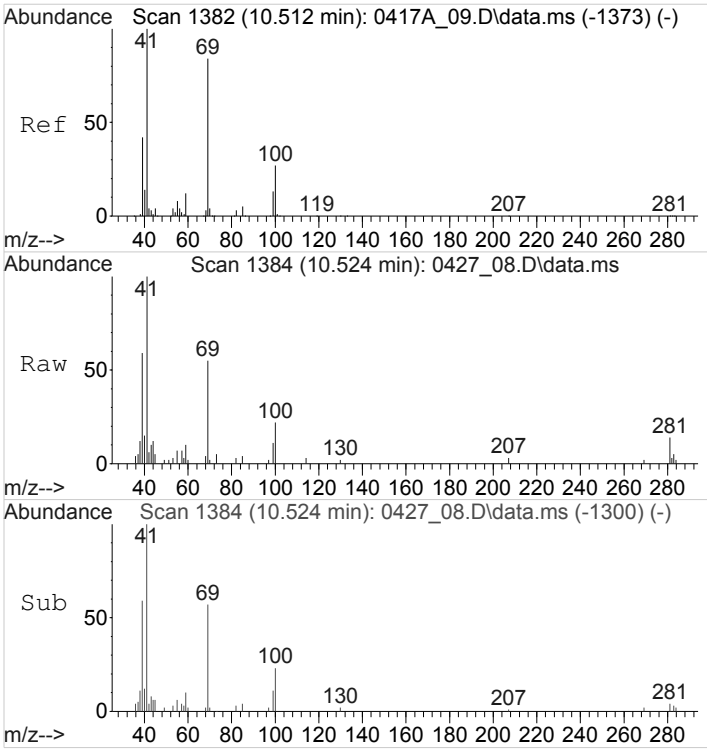


#43
METHYL CYCLOHEXANE
Concen: 10.7885209 ppbv
RT: 10.181 min Scan# 1328
Delta R.T. -0.186 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 2:08 pm

Tgt Ion: 83 Resp: 40539

Ion	Ratio	Lower	Upper
83	100		
55	0.0	112.9	169.3#
41	0.0	80.5	120.7#

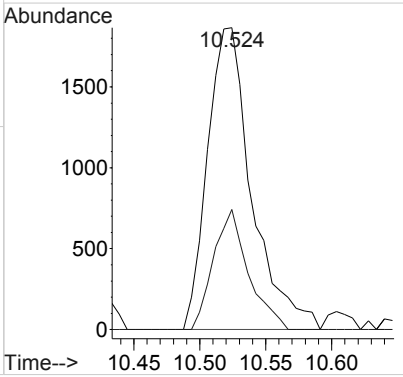


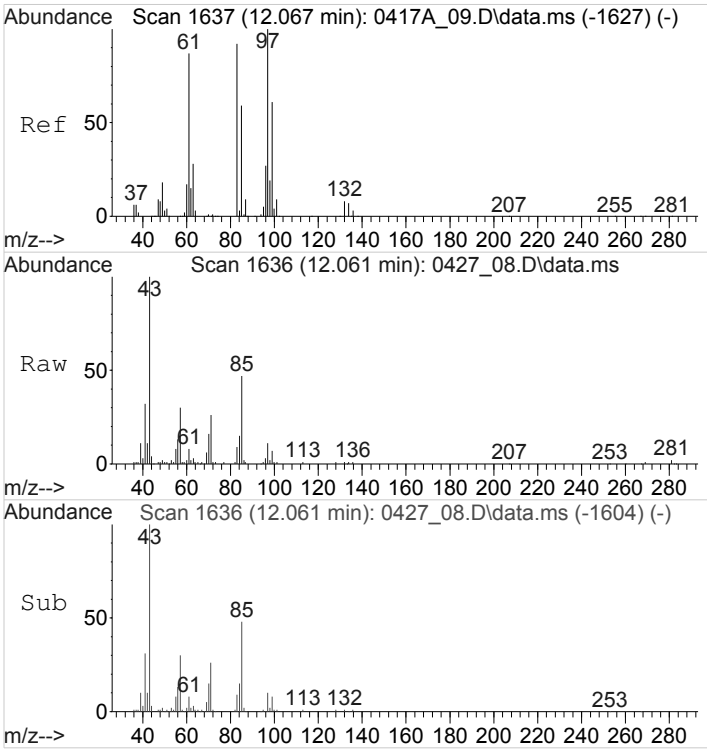


#45
Methyl Methacrylate
Concen: 18.1161039 ppbv
RT: 10.524 min Scan# 1384
Delta R.T. 0.014 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 2:08 pm

Tgt Ion: 69 Resp: 43397

Ion	Ratio	Lower	Upper
69	100		
100	31.4	25.6	38.4

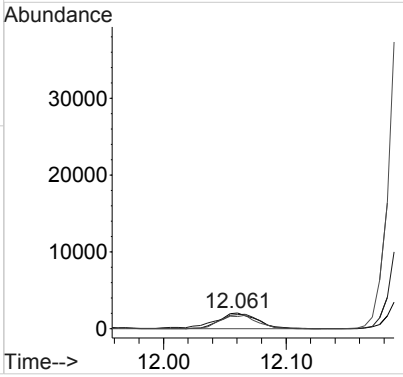


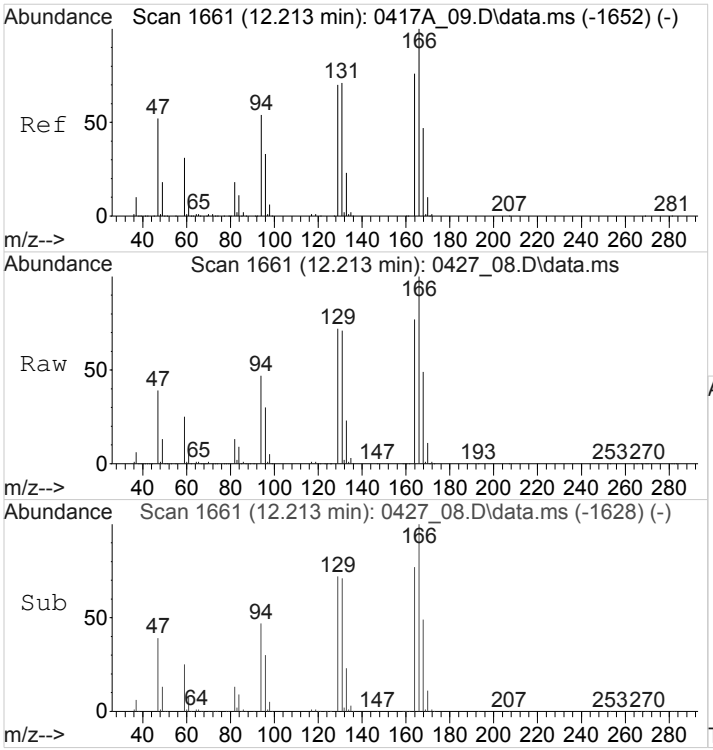


#52
1,1,2-Trichloroethane
Concen: 20.3969814 ppbv
RT: 12.061 min Scan# 1636
Delta R.T. -0.002 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 2:08 pm

Tgt Ion: 97 Resp: 43748

Ion	Ratio	Lower	Upper
97	100		
83	0.0	75.2	112.8#
61	0.0	71.4	107.2#

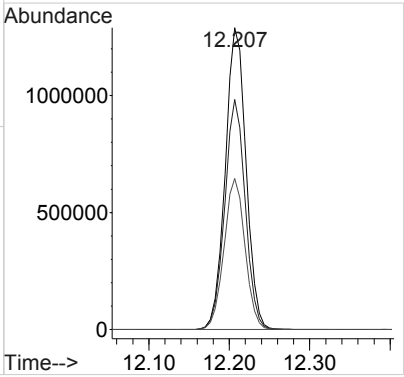


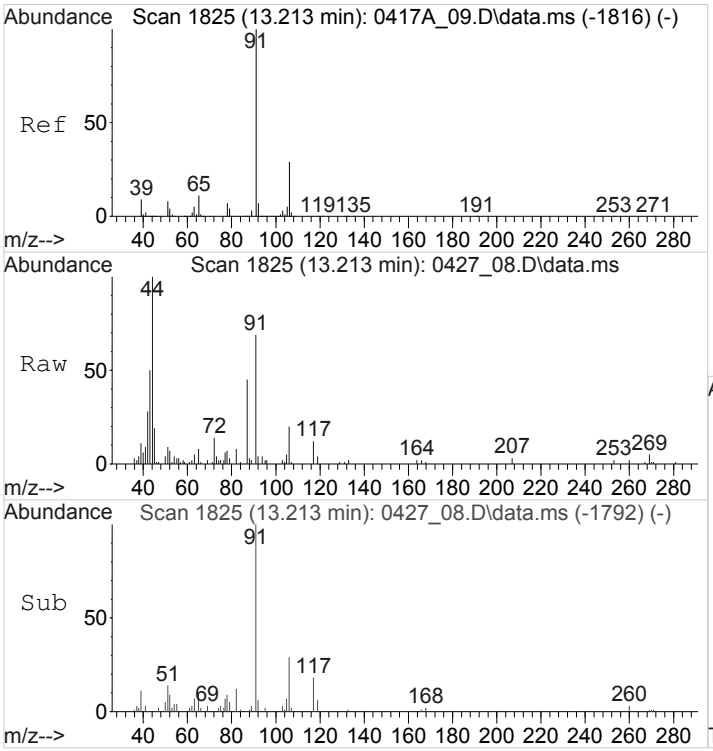


#53
Tetrachloroethene
Concen: 8819.3735072 ppbv
RT: 12.211 min Scan# 1661
Delta R.T. -0.000 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 2:08 pm

Tgt Ion:166 Resp:23115489

Ion	Ratio	Lower	Upper
166	100		
129	75.3	59.6	89.4
94	50.5	45.2	67.8

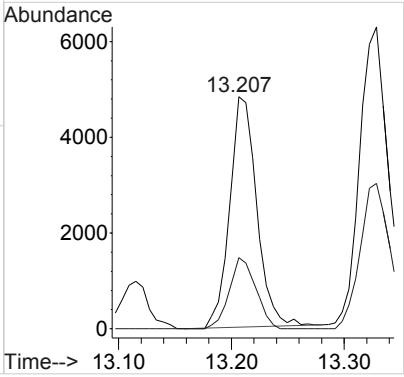


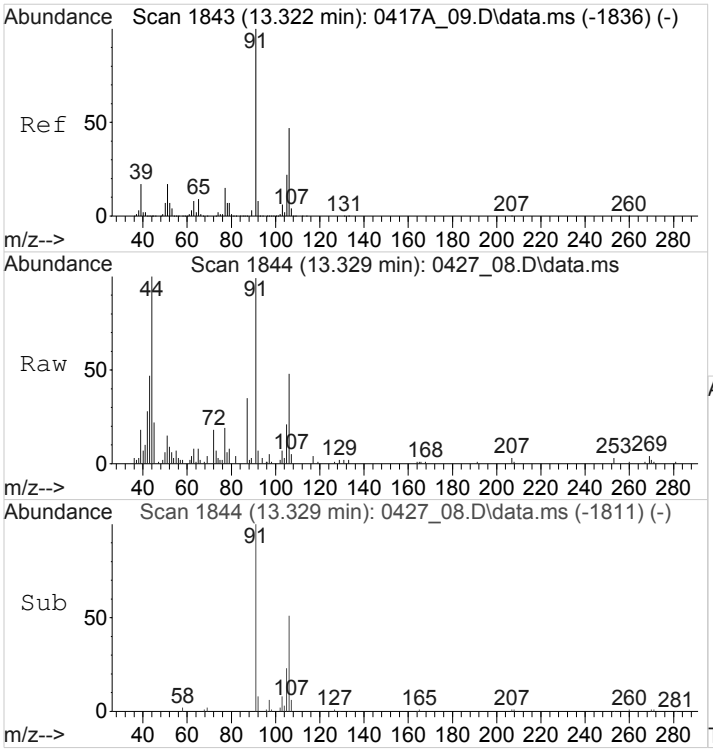


#59
Ethylbenzene
Concen: 8.2581842 ppbv
RT: 13.212 min Scan# 1825
Delta R.T. 0.003 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 2:08 pm

Tgt Ion: 91 Resp: 79770

Ion	Ratio	Lower	Upper
91	100		
106	0.0	22.6	34.0#

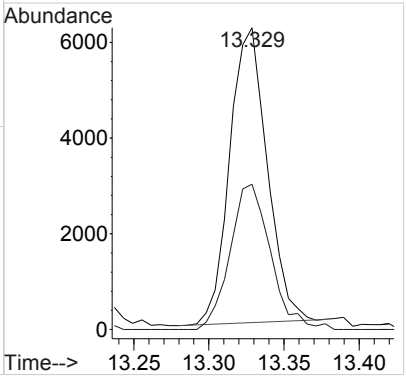


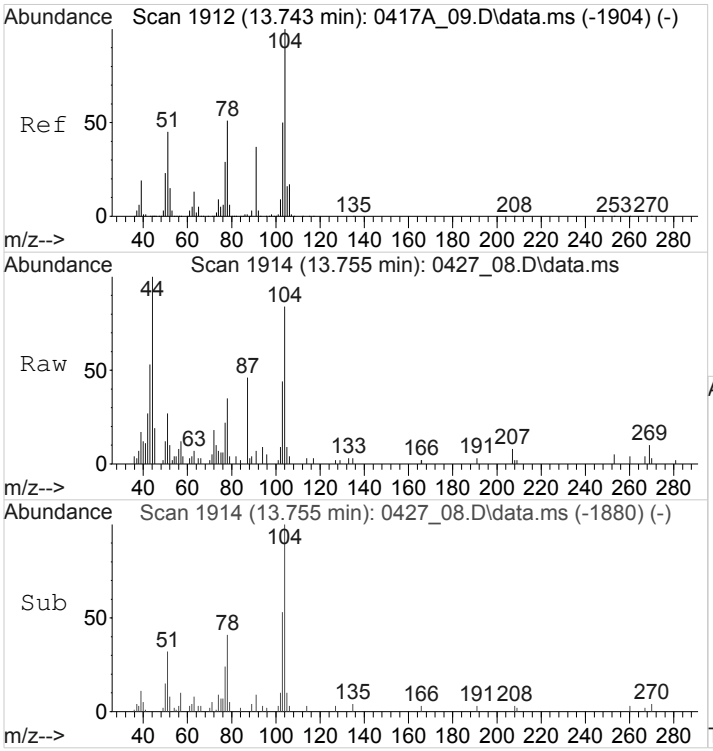


#60
M&P-Xylene
Concen: 14.2622658 ppbv
RT: 13.329 min Scan# 1844
Delta R.T. 0.004 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 2:08 pm

Tgt Ion: 91 Resp: 106094

Ion	Ratio	Lower	Upper
91	100		
106	53.5	37.4	56.2

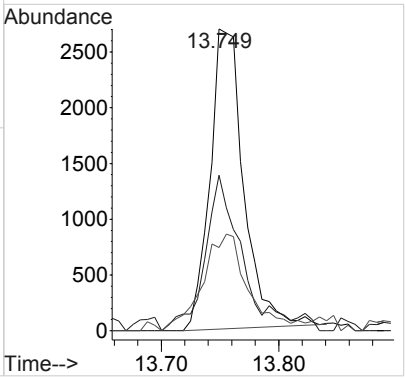


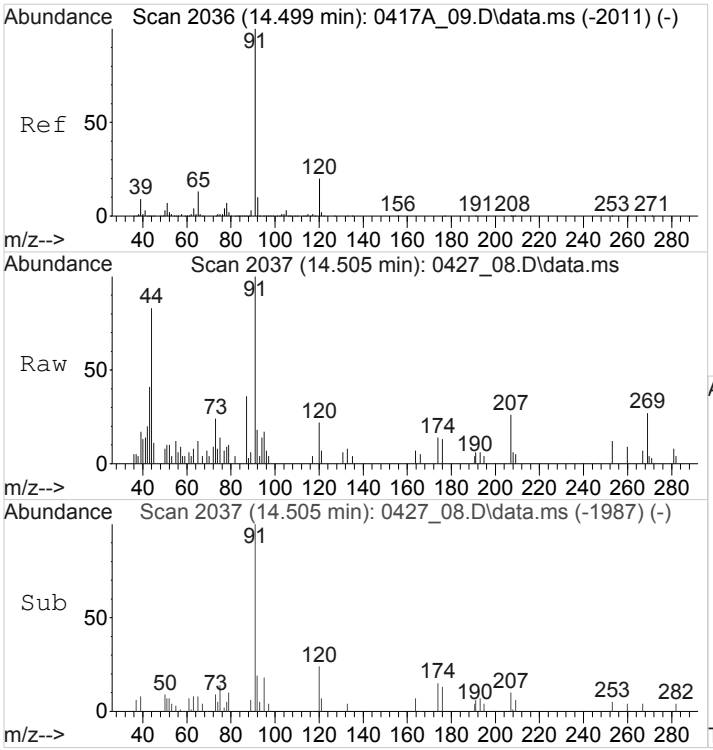


#62
Styrene
Concen: 9.6806885 ppbv
RT: 13.756 min Scan# 1914
Delta R.T. 0.010 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 2:08 pm

Tgt Ion:104 Resp: 53616

Ion	Ratio	Lower	Upper
104	100		
78	48.8	45.6	68.4
51	38.7	49.6	74.4#

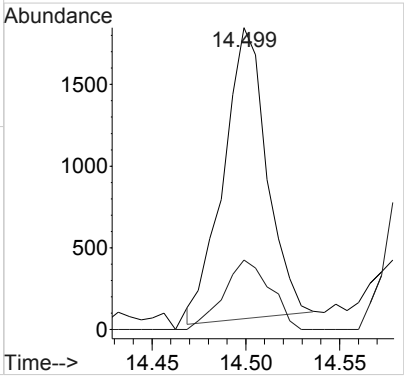


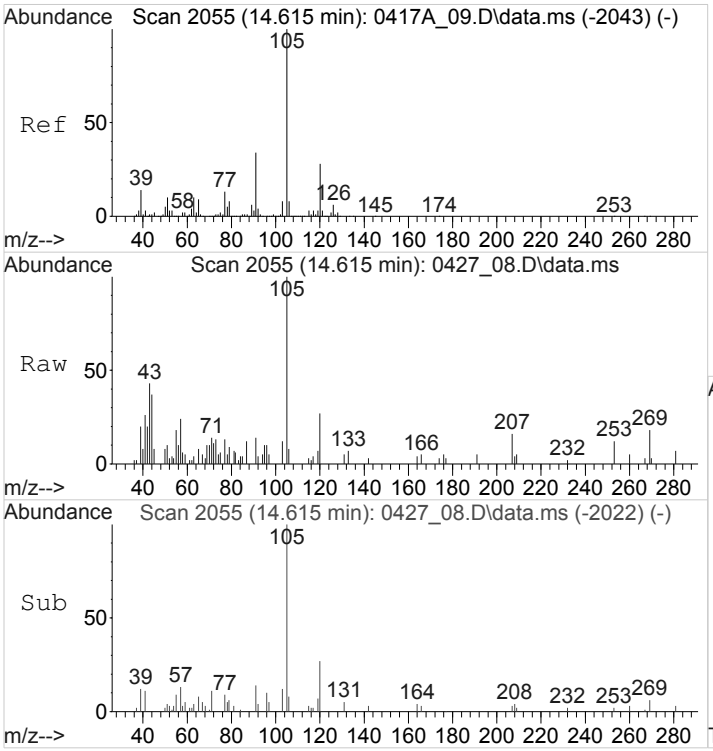


#66
n-Propylbenzene
Concen: 2.3291373 ppbv
RT: 14.503 min Scan# 2037
Delta R.T. 0.005 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 2:08 pm

Tgt Ion: 91 Resp: 28722

Ion	Ratio	Lower	Upper
91	100		
120	0.0	15.3	22.9#

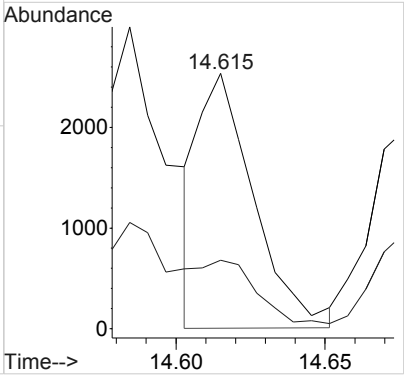


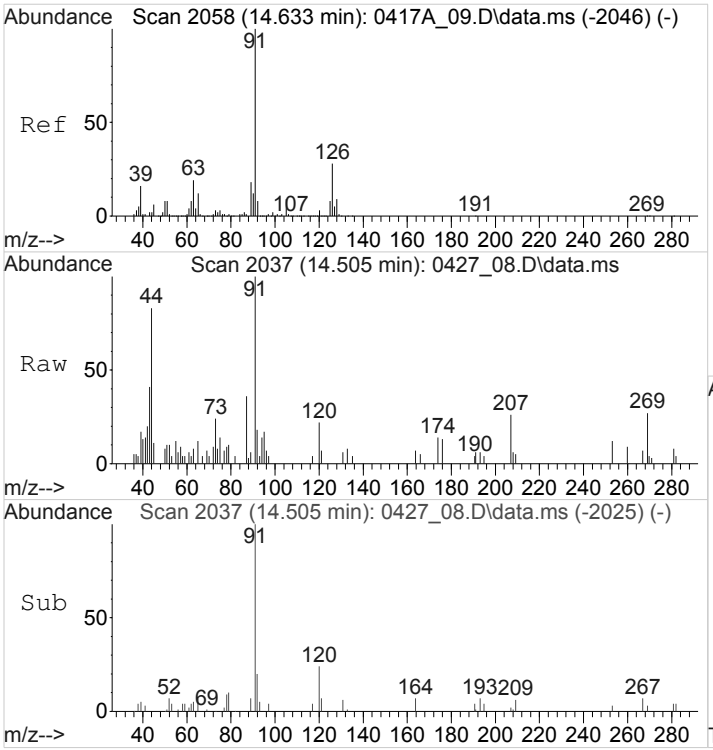


#67
4-Ethyltoluene
Concen: 3.8034343 ppbv
RT: 14.617 min Scan# 2055
Delta R.T. 0.004 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 2:08 pm

Tgt Ion:105 Resp: 37812

Ion	Ratio	Lower	Upper
105	100		
120	0.0	21.8	32.6#

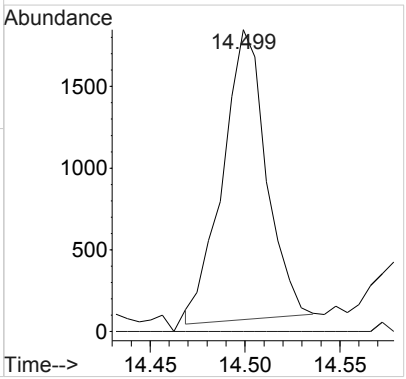


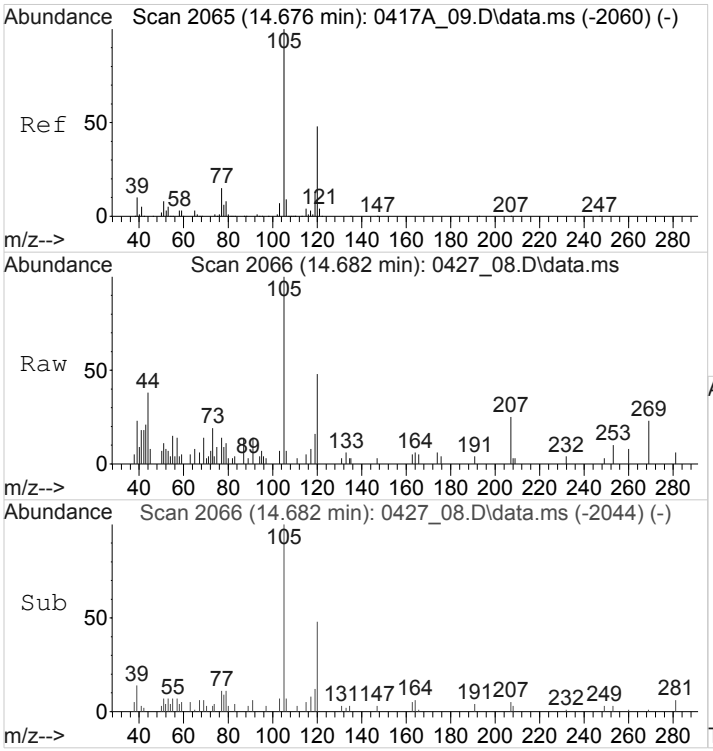


#68
2-Chlorotoluene
Concen: 3.3283776 ppbv
RT: 14.503 min Scan# 2037
Delta R.T. -0.130 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 2:08 pm

Tgt Ion: 91 Resp: 28504

Ion	Ratio	Lower	Upper
91	100		
126	0.0	19.7	29.5#

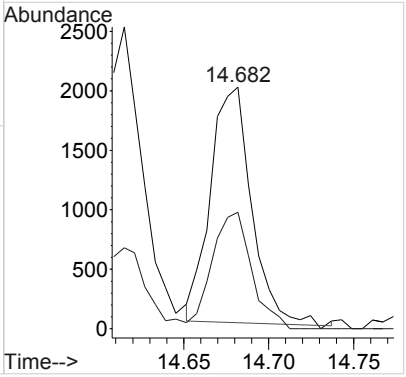


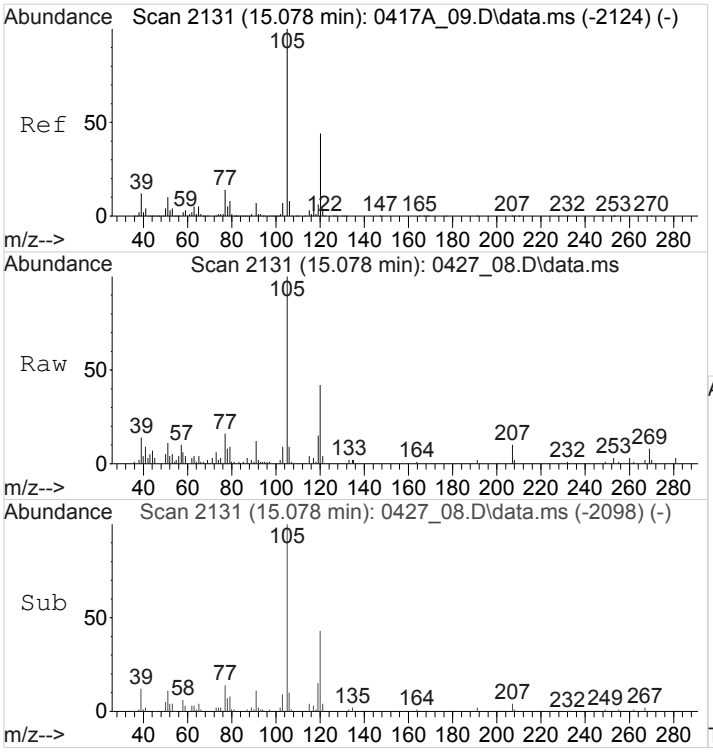


#70
1,3,5-Trimethylbenzene
Concen: 4.1059485 ppbv
RT: 14.681 min Scan# 2066
Delta R.T. 0.004 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 2:08 pm

Tgt Ion:105 Resp: 33995

Ion	Ratio	Lower	Upper
105	100		
120	0.0	38.0	57.0#

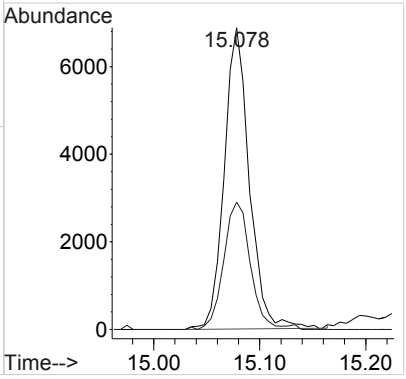


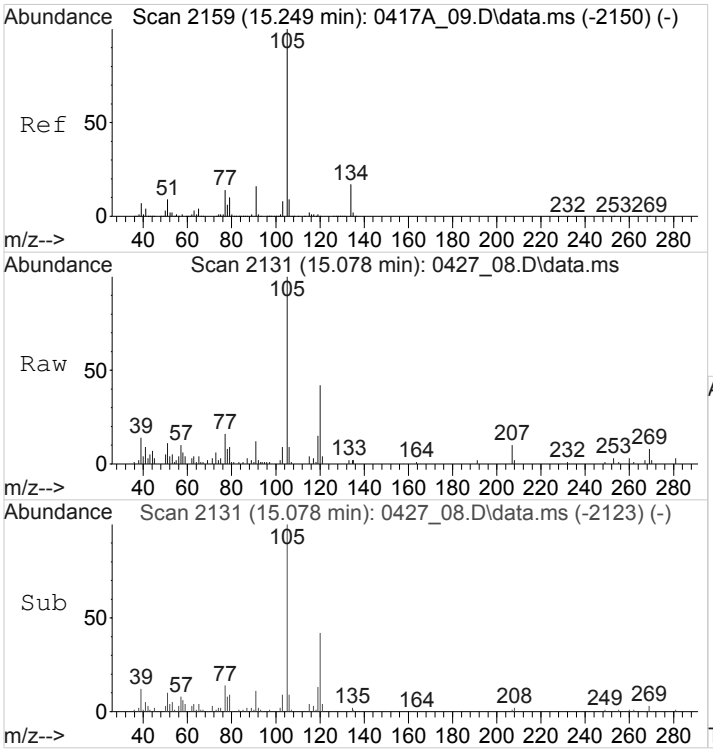


#72
1,2,4-Trimethylbenzene
Concen: 14.1894640 ppbv
RT: 15.080 min Scan# 2131
Delta R.T. 0.004 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 2:08 pm

Tgt Ion:105 Resp: 113178

Ion	Ratio	Lower	Upper
105	100		
120	45.4	35.6	53.4

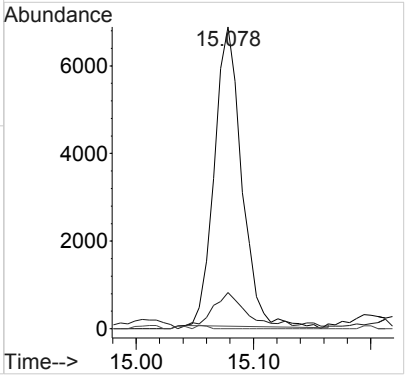


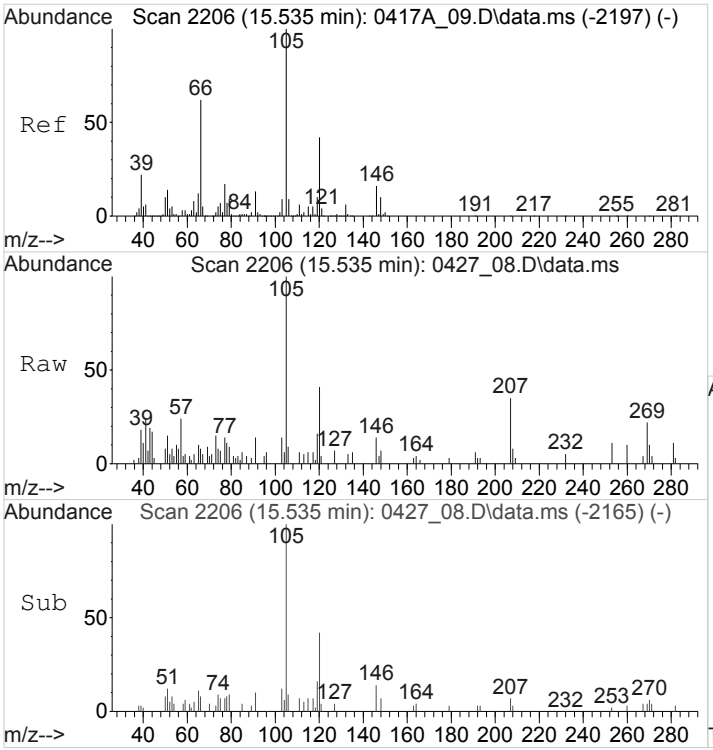


#73
sec-Butylbenzene
Concen: 9.1689700 ppbv
RT: 15.080 min Scan# 2131
Delta R.T. -0.166 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 2:08 pm

Tgt Ion:105 Resp: 110776

Ion	Ratio	Lower	Upper
105	100		
91	0.0	13.1	19.7#
134	0.0	13.5	20.3#

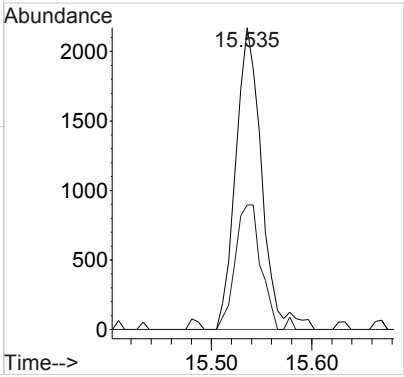


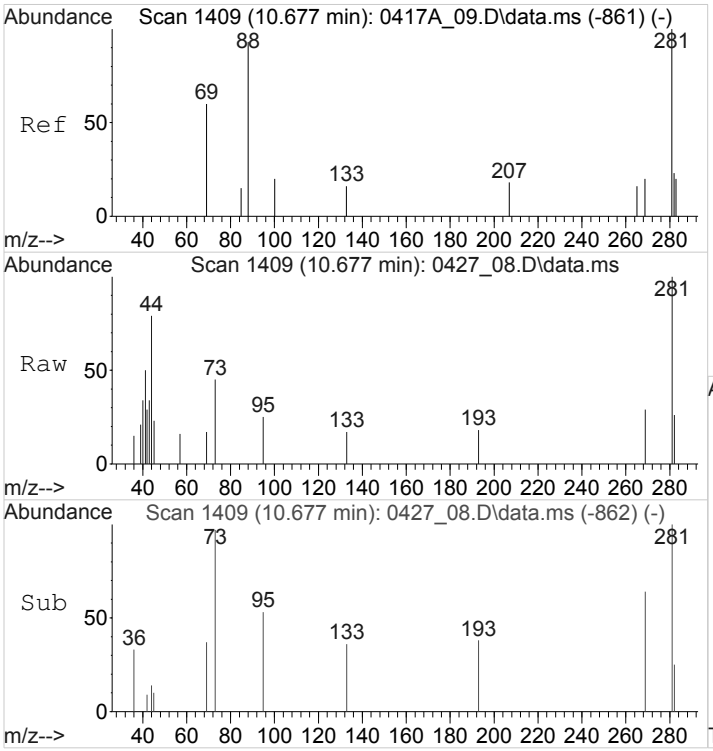


#76
1,2,3-TRIMETHYLBENZENE
Concen: 4.7544572 ppbv
RT: 15.538 min Scan# 2206
Delta R.T. 0.004 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 2:08 pm

Tgt Ion:105 Resp: 39299

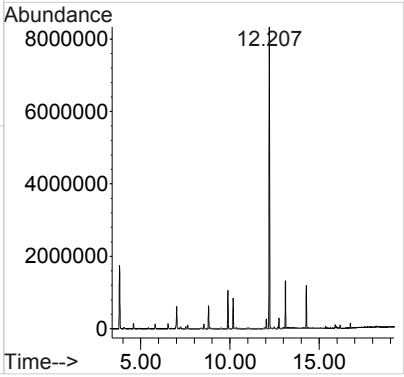
Ion	Ratio	Lower	Upper
105	100		
120	0.0	32.7	49.1#





#84
TPH (GC/MS) Low Fraction
Concen: 10018.6184150 ppbv m
RT: 10.675 min Scan# 1409
Delta R.T. 0.000 min
Lab File: 0427_08.D
Acq: 27 Apr 2018 2:08 pm

Tgt Ion:TIC Resp:198301178



1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS-5

ESC Sample ID:	L988471-05	**SDG:**	L988471
Client Sample ID:	SS-5	**Collected Date/Time:**	04/23/18 11:11
Lab File ID:	0426_16	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/26/18 18:37
Analytical Batch:	WG1103323	**Analysis Date/Time:**	04/26/18 18:37
Dilution Factor:	10	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	40 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	RT	Result	Qualifier	MDL	RDL
			ppbv		*ppbv*	*ppbv*
Acetone	67-64-1	0	ND		0.569	12.5
Allyl chloride	107-05-1	0	ND		0.546	2.00
Benzene	71-43-2	7.81	ND		0.460	2.00
Benzyl Chloride	100-44-7	0	ND		0.598	2.00
Bromodichloromethane	75-27-4	0	ND		0.436	2.00
Bromoform	75-25-2	0	ND		0.786	6.00
Bromomethane	74-83-9	0	ND		0.609	2.00
1,3-Butadiene	106-99-0	4.03	ND		0.563	20.0
Carbon disulfide	75-15-0	0	ND		0.544	2.00
Carbon tetrachloride	56-23-5	0	ND		0.585	2.00
Chlorobenzene	108-90-7	0	ND		0.601	2.00
Chloroethane	75-00-3	0	ND		0.489	2.00
Chloroform	67-66-3	7.27	ND		0.574	2.00
Chloromethane	74-87-3	0	ND		0.544	2.00
2-Chlorotoluene	95-49-8	0	ND		0.605	2.00
Cyclohexane	110-82-7	7.49	ND		0.534	2.00
Dibromochloromethane	124-48-1	0	ND		0.494	2.00
1,2-Dibromoethane	106-93-4	0	ND		0.185	2.00
1,2-Dichlorobenzene	95-50-1	0	ND		0.603	2.00
1,3-Dichlorobenzene	541-73-1	0	ND		0.597	2.00
1,4-Dichlorobenzene	106-46-7	0	ND		0.557	2.00
1,2-Dichloroethane	107-06-2	0	ND		0.616	2.00
1,1-Dichloroethane	75-34-3	6.50	2.86		0.514	2.00
1,1-Dichloroethene	75-35-4	5.41	ND		0.490	2.00
cis-1,2-Dichloroethene	156-59-2	7.02	150		0.389	2.00
trans-1,2-Dichloroethene	156-60-5	6.10	ND		0.464	2.00
1,2-Dichloropropane	78-87-5	8.66	ND		0.599	2.00
cis-1,3-Dichloropropene	10061-01-5	0	ND		0.588	2.00
trans-1,3-Dichloropropene	10061-02-6	0	ND		0.435	2.00
1,4-Dioxane	123-91-1	0	ND		0.554	2.00
Ethanol	64-17-5	0	ND		0.832	6.30
Ethylbenzene	100-41-4	0	ND		0.506	2.00
4-Ethyltoluene	622-96-8	0	ND		0.666	2.00
Trichlorofluoromethane	75-69-4	4.86	ND		0.673	2.00
Dichlorodifluoromethane	75-71-8	3.64	ND		0.601	2.00
1,1,2-Trichlorotrifluoroethane	76-13-1	4.86	ND		0.687	2.00
1,2-Dichlorotetrafluoroethane	76-14-2	0	ND		0.458	2.00
Heptane	142-82-5	7.67	ND		0.626	2.00
Hexachloro-1,3-butadiene	87-68-3	0	ND		0.656	6.30
n-Hexane	110-54-3	0	ND		0.457	2.00
Isopropylbenzene	98-82-8	0	ND		0.563	2.00
Methylene Chloride	75-09-2	5.88	ND		0.465	2.00
Methyl Butyl Ketone	591-78-6	10.21	ND		0.682	12.5

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS-5

ESC Sample ID:	L988471-05	**SDG:**	L988471
Client Sample ID:	SS-5	**Collected Date/Time:**	04/23/18 11:11
Lab File ID:	0426_16	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/26/18 18:37
Analytical Batch:	WG1103323	**Analysis Date/Time:**	04/26/18 18:37
Dilution Factor:	10	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	40 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	RT	Result	Qualifier	MDL	RDL
			ppbv		*ppbv*	*ppbv*
2-Butanone (MEK)	78-93-3	0	ND		0.493	12.5
4-Methyl-2-pentanone (MIBK)	108-10-1	0	ND		0.650	12.5
Methyl methacrylate	80-62-6	8.62	ND		0.773	2.00
MTBE	1634-04-4	0	ND		0.505	2.00
Naphthalene	91-20-3	15.84	ND		1.54	6.30
2-Propanol	67-63-0	0	ND		0.882	12.5
Propene	115-07-1	0	ND		0.932	4.00
Styrene	100-42-5	0	ND		0.465	2.00
1,1,2,2-Tetrachloroethane	79-34-5	12.64	ND		0.576	2.00
Tetrahydrofuran	109-99-9	7.48	ND		0.508	2.00
Toluene	108-88-3	9.67	ND		0.499	2.00
1,2,4-Trichlorobenzene	120-82-1	0	ND		1.48	6.30
1,1,1-Trichloroethane	71-55-6	0	ND		0.665	2.00
1,1,2-Trichloroethane	79-00-5	9.99	ND		0.287	2.00
1,2,4-Trimethylbenzene	95-63-6	0	ND		0.483	2.00
1,3,5-Trimethylbenzene	108-67-8	0	ND		0.631	2.00
2,2,4-Trimethylpentane	540-84-1	7.72	ND		0.456	2.00
Vinyl chloride	75-01-4	4.09	2.15		0.457	2.00
Vinyl Bromide	593-60-2	0	ND		0.727	2.00
Vinyl acetate	108-05-4	0	ND		0.639	2.00
m&p-Xylene	1330-20-7	11.41	ND		0.946	4.00
o-Xylene	95-47-6	0	ND		0.633	2.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_16.D
Acq On : 26 Apr 2018 6:37 pm
Operator : 564
Sample : L988471-05 10x WG1103323
Misc :
ALS Vial : 16 Sample Multiplier: 10
InstName : AIRMS5

Quant Time: Apr 27 08:50:48 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration

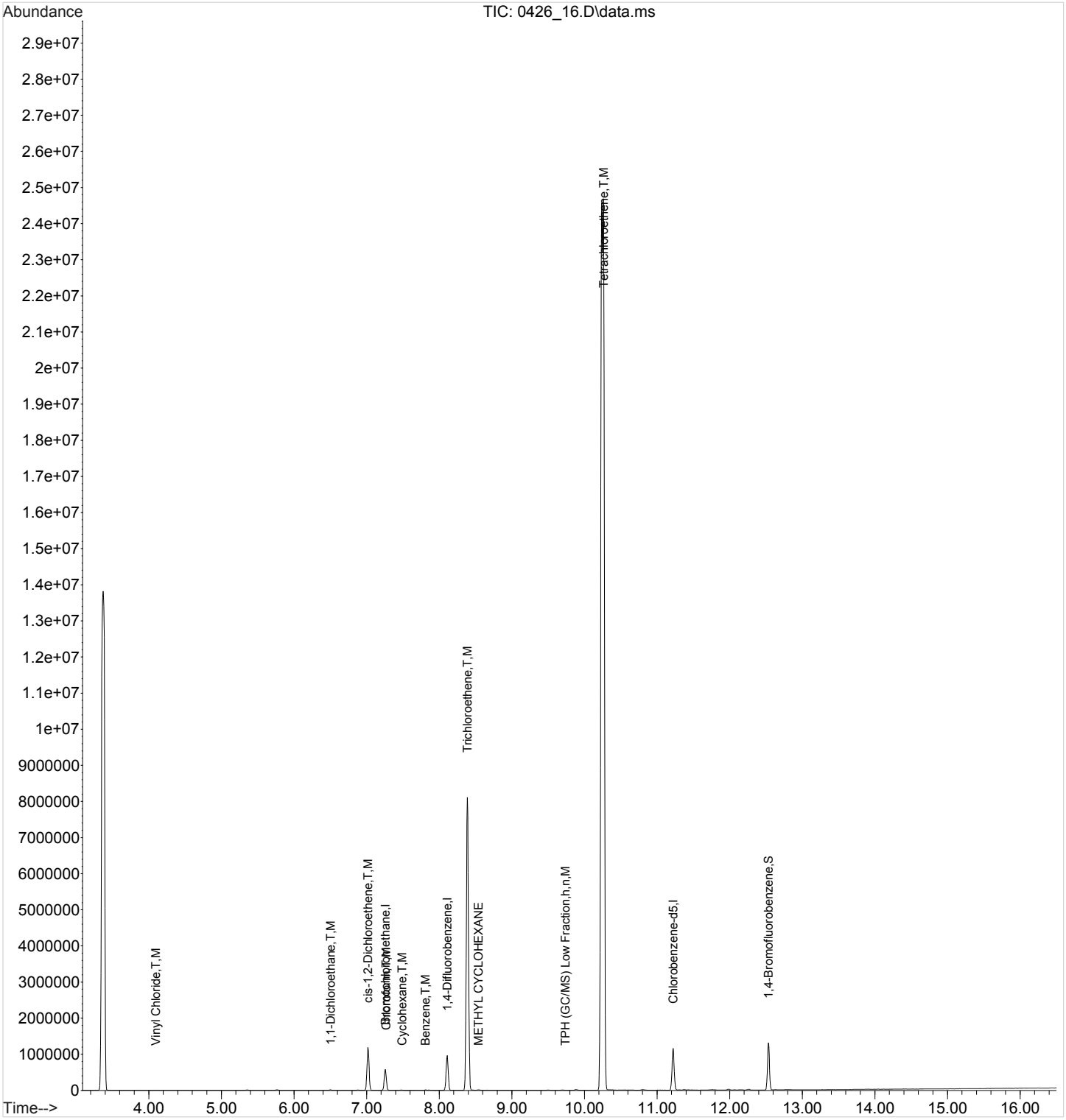
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.256	130	257461	4.0000000	ppbv	0.01
37) 1,4-Difluorobenzene	8.111	114	951887	4.0000000	ppbv	0.01
58) Chlorobenzene-d5	11.222	117	881487	4.0000000	ppbv	0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	12.534	95	511570	3.8688998	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 96.72%			
Target Compounds						Qvalue
3) 1,1-DIFLUOROETHANE	3.602	51	831	0.2054540	ppbv #	20
4) Dichlorodifluoromethane	3.636	85	974	0.1514958	ppbv #	42
5) CHLORODIFLUOROMETHANE	3.602	51	831	0.2146367	ppbv #	62
8) Vinyl Chloride	4.094	62	6806	2.1514062	ppbv	100
9) 1,3-Butadiene	4.032	39	1122	0.5605303	ppbv #	1
13) Trichlorofluoromethane	4.864	101	701	0.0975065	ppbv #	62
15) 1,1,2-Trichlorotrifluo...	4.864	101	701	0.1049953	ppbv #	16
16) 1,1-Dichloroethene	5.412	61	2438	0.4993242	ppbv #	80
21) Methylene Chloride	5.882	49	578	0.1618213	ppbv #	64
24) Trans-1,2-Dichloroethene	6.097	61	1503	0.3455901	ppbv #	1
26) 1,1-Dichloroethane	6.504	63	18014	2.8638187	ppbv	98
28) ETHYL ACETATE	6.889	43	1413	0.2056344	ppbv #	65
30) cis-1,2-Dichloroethene	7.019	96	613070	149.6170391	ppbv	96
31) Tetrahydrofuran	7.483	42	970	0.2390085	ppbv #	1
32) Chloroform	7.268	83	6620	0.8983032	ppbv	85
33) Cyclohexane	7.488	84	3643	0.6934830	ppbv #	79
36) 2,2,4-Trimethylpentane	7.720	57	1877	0.1044741	ppbv #	38
38) Benzene	7.811	78	12393	1.0384084	ppbv	96
40) Heptane	7.669	43	1026	0.1740675	ppbv #	1
41) Trichloroethene	8.388	95	3089357	593.9171505	ppbv	96
42) TERT-AMYL ETHYL ETHER	8.360	73	626	0.1655730	ppbv #	1
43) METHYL CYCLOHEXANE	8.541	83	5877	0.8220405	ppbv	92
44) 1,2-Dichloropropane	8.659	63	1855	0.4307270	ppbv #	69
45) Methyl Methacrylate	8.620	69	787	0.1836729	ppbv #	28
50) Toluene	9.666	91	897	0.0604454	ppbv #	21
52) 1,1,2-Trichloroethane	9.994	97	969	0.1874018	ppbv #	15
53) Tetrachloroethene	10.266	166	15363574m	1923.4917576	ppbv	
54) Methyl Butyl Ketone	10.209	43	549	0.0660123	ppbv #	1
60) M&P-Xylene	11.409	91	1269	0.0789048	ppbv #	26
65) 1,1,2,2-Tetrachloroethane	12.642	83	1256	0.1022897	ppbv #	18
83) Naphthalene	15.838	128	2559	0.0901193	ppbv #	80
84) TPH (GC/MS) Low Fraction	9.740	TIC	62870896m	2098.0430757	ppbv	

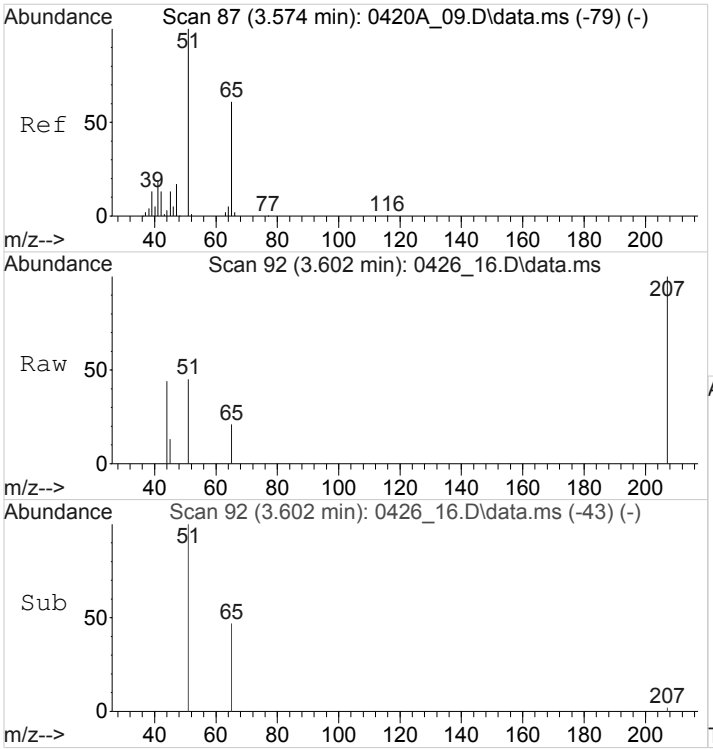
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_16.D
Acq On : 26 Apr 2018 6:37 pm
Operator : 564
Sample : L988471-05 10x WG1103323
Misc :
ALS Vial : 16 Sample Multiplier: 10
InstName : AIRMS5

Quant Time: Apr 27 08:50:48 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration

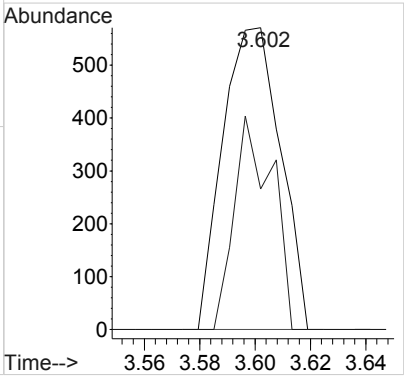


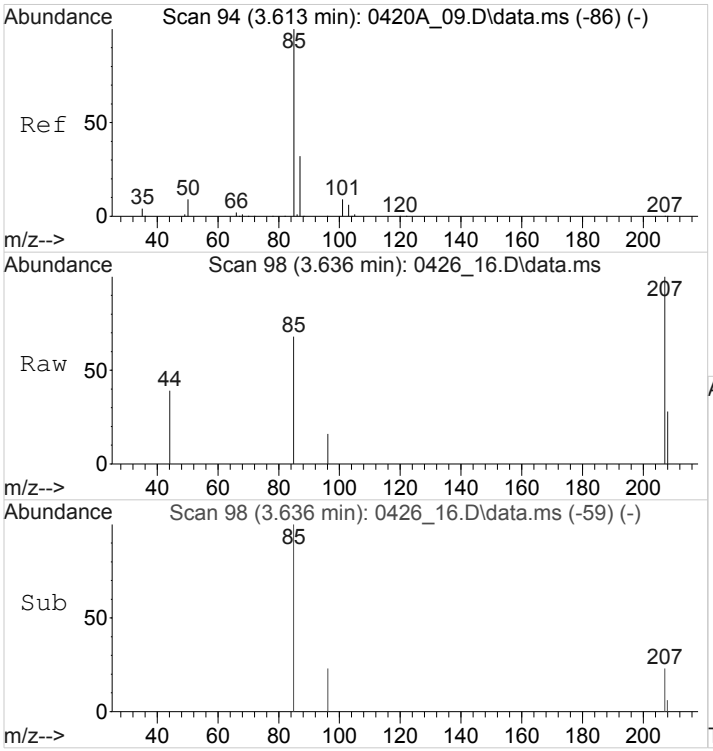


#3
1,1-DIFLUOROETHANE
Concen: 0.2054540 ppbv
RT: 3.602 min Scan# 92
Delta R.T. 0.028 min
Lab File: 0426_16.D
Acq: 26 Apr 2018 6:37 pm

Tgt Ion: 51 Resp: 831

Ion	Ratio	Lower	Upper
51	100		
65	0.0	49.4	74.2#

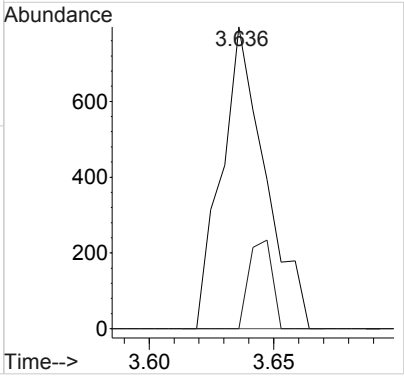


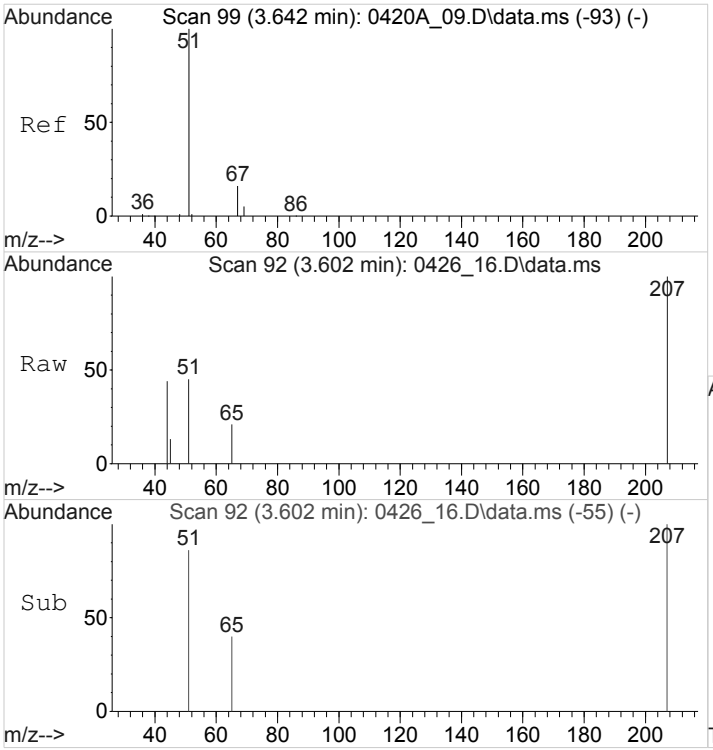


#4
Dichlorodifluoromethane
Concen: 0.1514958 ppbv
RT: 3.636 min Scan# 98
Delta R.T. 0.023 min
Lab File: 0426_16.D
Acq: 26 Apr 2018 6:37 pm

Tgt Ion: 85 Resp: 974

Ion	Ratio	Lower	Upper
85	100		
87	0.0	25.8	38.8#

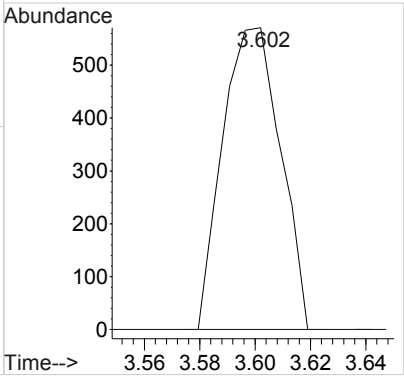


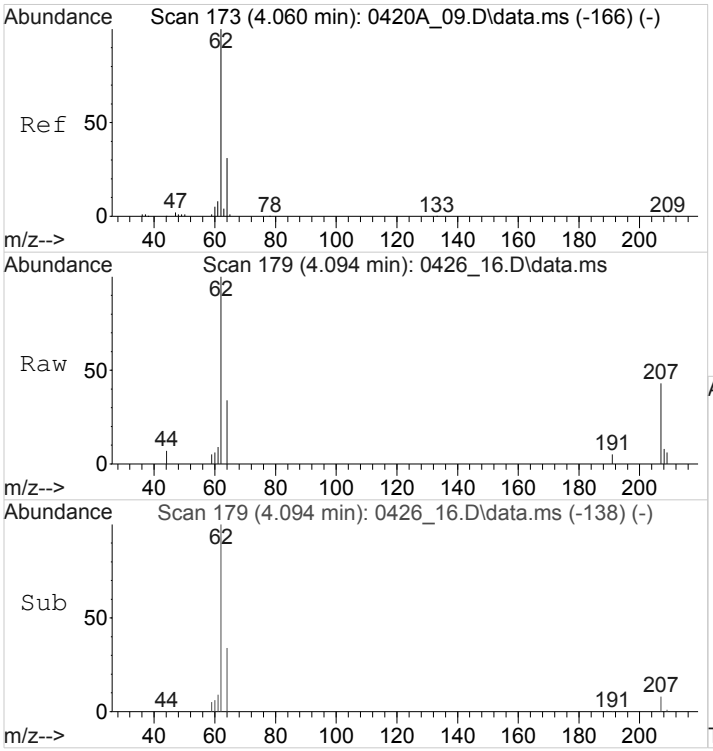


#5
CHLORODIFLUOROMETHANE
Concen: 0.2146367 ppbv
RT: 3.602 min Scan# 92
Delta R.T. -0.040 min
Lab File: 0426_16.D
Acq: 26 Apr 2018 6:37 pm

Tgt Ion: 51 Resp: 831

Ion	Ratio	Lower	Upper
51	100		
67	0.0	12.7	19.1#

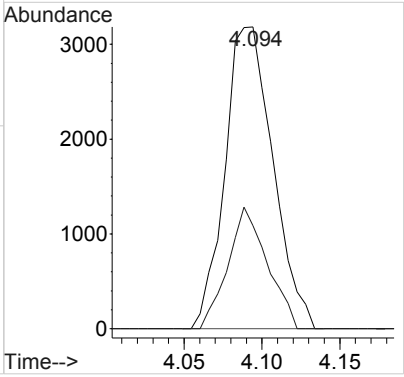


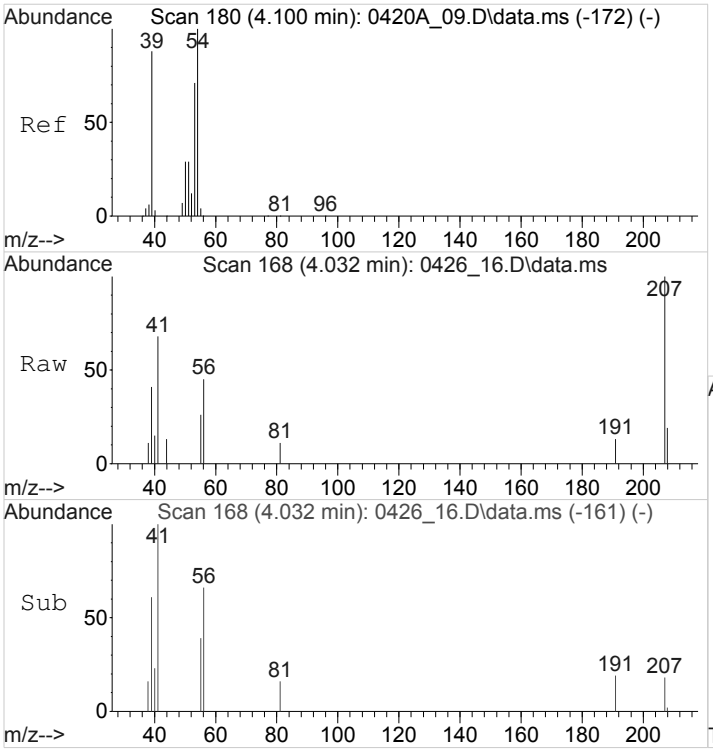


#8
Vinyl Chloride
Concen: 2.1514062 ppbv
RT: 4.094 min Scan# 179
Delta R.T. 0.034 min
Lab File: 0426_16.D
Acq: 26 Apr 2018 6:37 pm

Tgt Ion: 62 Resp: 6806

Ion	Ratio	Lower	Upper
62	100		
64	33.0	26.2	39.4

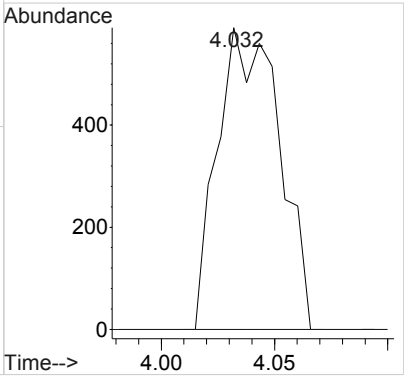


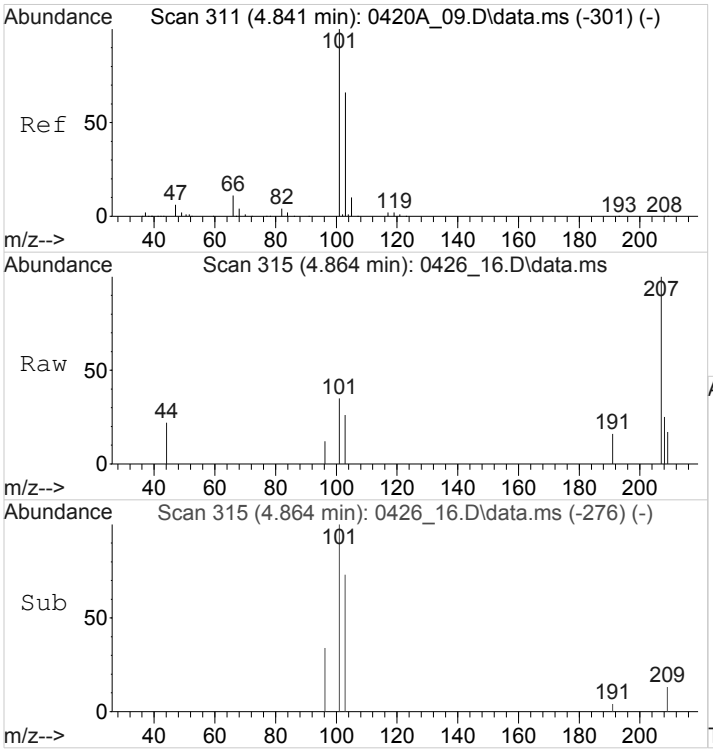


#9
1,3-Butadiene
Concen: 0.5605303 ppbv
RT: 4.032 min Scan# 168
Delta R.T. -0.068 min
Lab File: 0426_16.D
Acq: 26 Apr 2018 6:37 pm

Tgt Ion: 39 Resp: 1122

Ion	Ratio	Lower	Upper
39	100		
54	0.0	91.3	136.9#

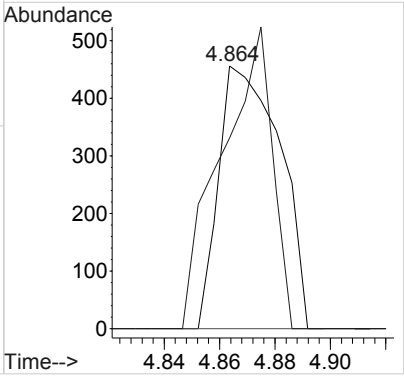


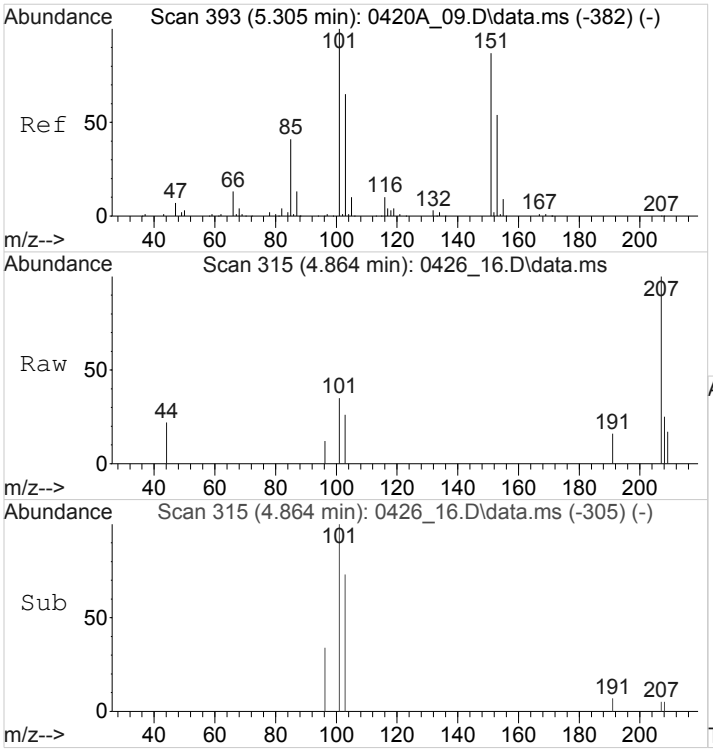


#13
Trichlorofluoromethane
Concen: 0.0975065 ppbv
RT: 4.864 min Scan# 315
Delta R.T. 0.023 min
Lab File: 0426_16.D
Acq: 26 Apr 2018 6:37 pm

Tgt Ion:101 Resp: 701

Ion	Ratio	Lower	Upper
101	100		
103	95.9	52.6	79.0#

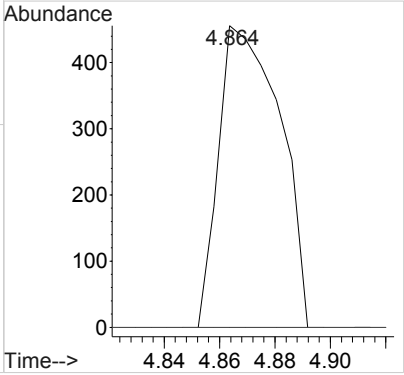


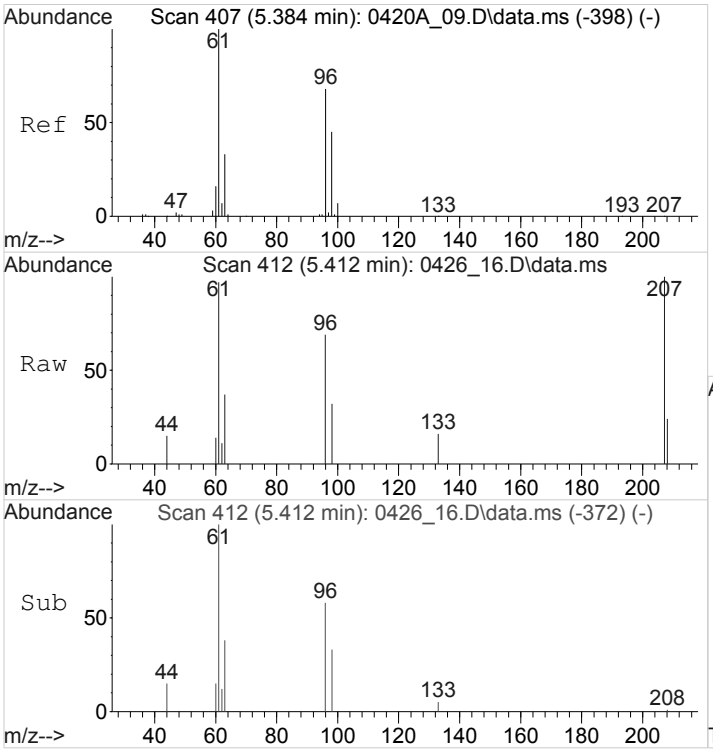


#15
1,1,2-Trichlorotrifluoroethane
Concen: 0.1049953 ppbv
RT: 4.864 min Scan# 315
Delta R.T. -0.441 min
Lab File: 0426_16.D
Acq: 26 Apr 2018 6:37 pm

Tgt Ion:101 Resp: 701

Ion	Ratio	Lower	Upper
101	100		
151	0.0	67.9	101.9#
85	0.0	32.4	48.6#

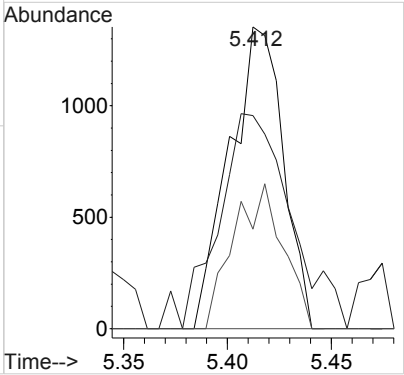


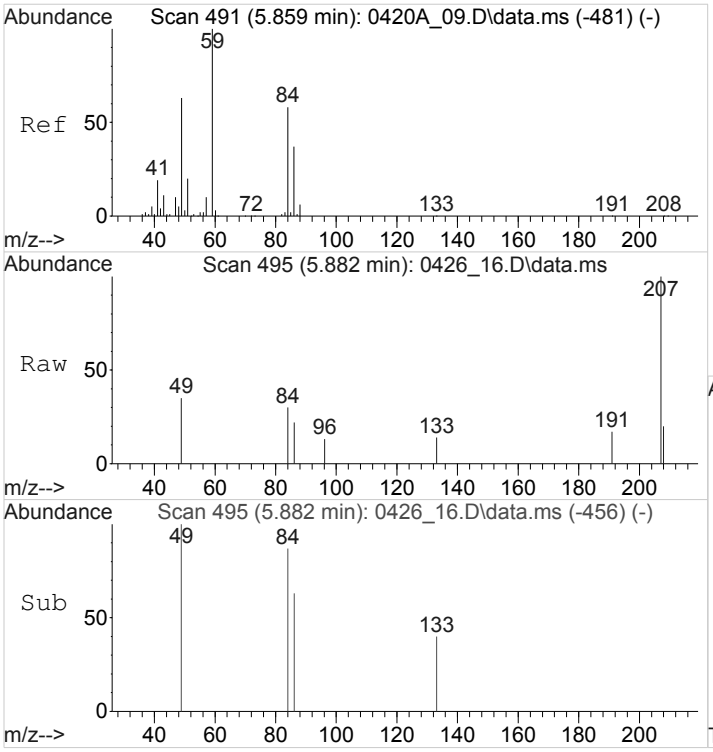


#16
1,1-Dichloroethene
Concen: 0.4993242 ppbv
RT: 5.412 min Scan# 412
Delta R.T. 0.028 min
Lab File: 0426_16.D
Acq: 26 Apr 2018 6:37 pm

Tgt Ion: 61 Resp: 2438

Ion	Ratio	Lower	Upper
61	100		
96	96.7	55.6	83.4#
98	44.4	35.4	53.0

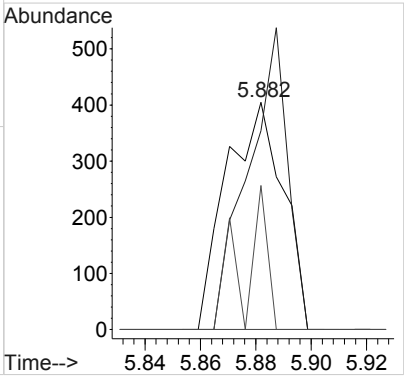


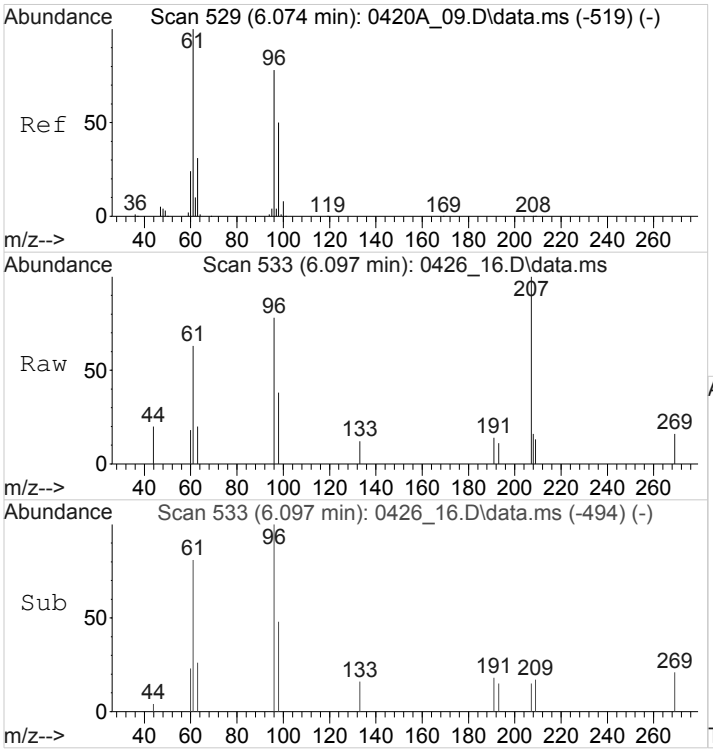


#21
Methylene Chloride
Concen: 0.1618213 ppbv
RT: 5.882 min Scan# 495
Delta R.T. 0.023 min
Lab File: 0426_16.D
Acq: 26 Apr 2018 6:37 pm

Tgt Ion: 49 Resp: 578

Ion	Ratio	Lower	Upper
49	100		
84	91.9	72.1	108.1
86	0.0	46.1	69.1#
51	0.0	25.9	38.9#

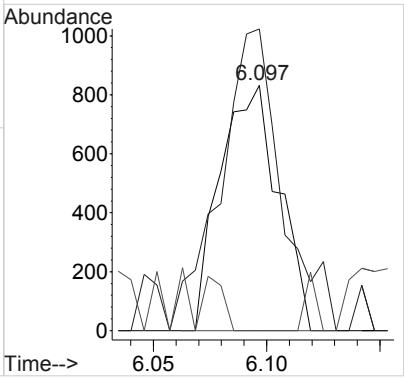


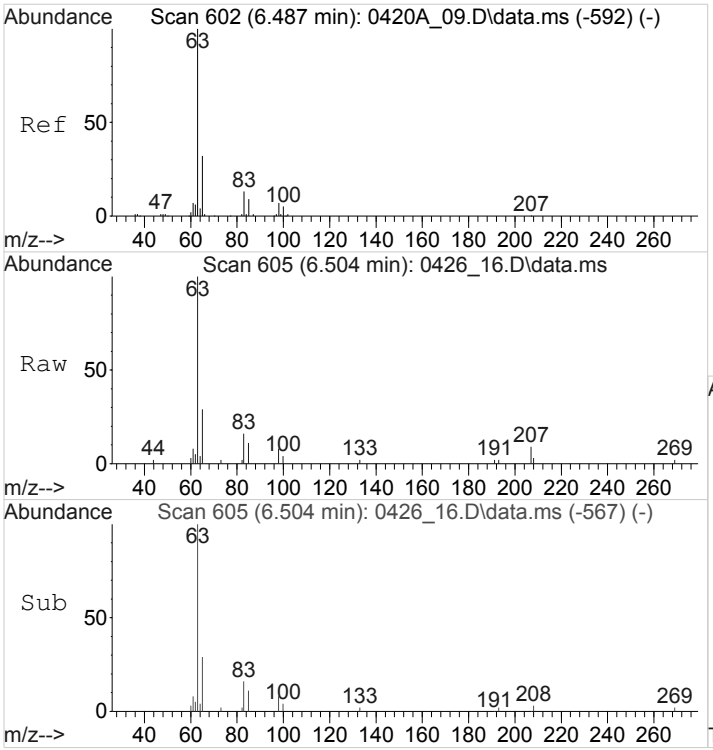


#24
Trans-1,2-Dichloroethene
Concen: 0.3455901 ppbv
RT: 6.097 min Scan# 533
Delta R.T. 0.023 min
Lab File: 0426_16.D
Acq: 26 Apr 2018 6:37 pm

Tgt Ion: 61 Resp: 1503

Ion	Ratio	Lower	Upper
61	100		
96	128.8	61.0	91.4#
73	0.0	184.6	276.8#

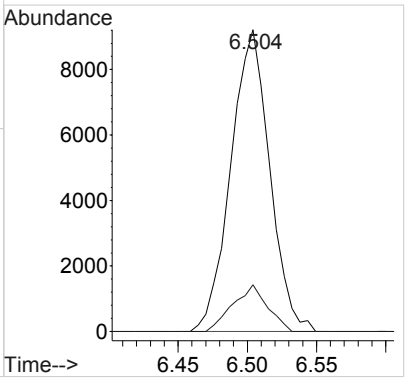


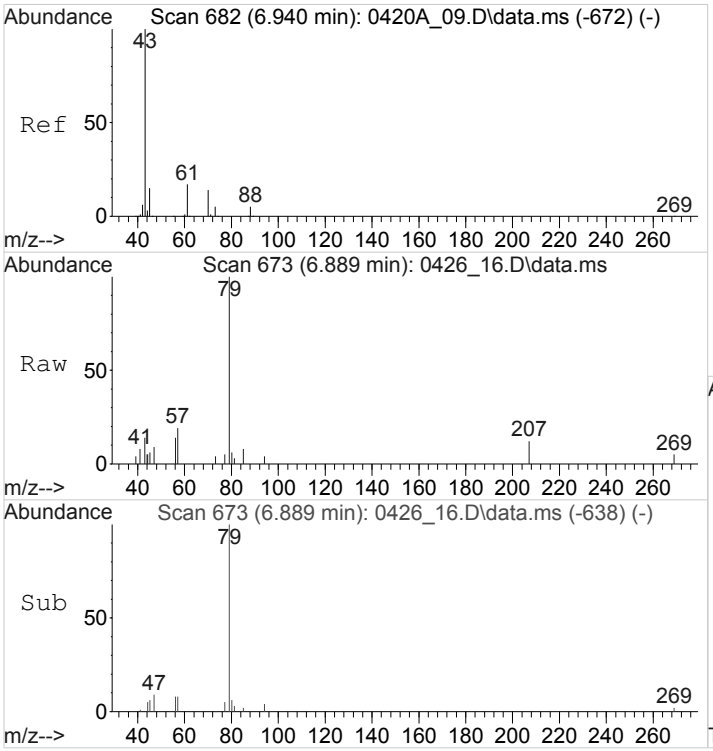


#26
1,1-Dichloroethane
Concen: 2.8638187 ppbv
RT: 6.504 min Scan# 605
Delta R.T. 0.017 min
Lab File: 0426_16.D
Acq: 26 Apr 2018 6:37 pm

Tgt Ion: 63 Resp: 18014

Ion	Ratio	Lower	Upper
63	100		
83	13.8	10.5	15.7

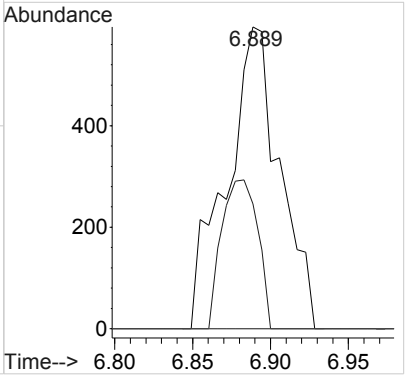


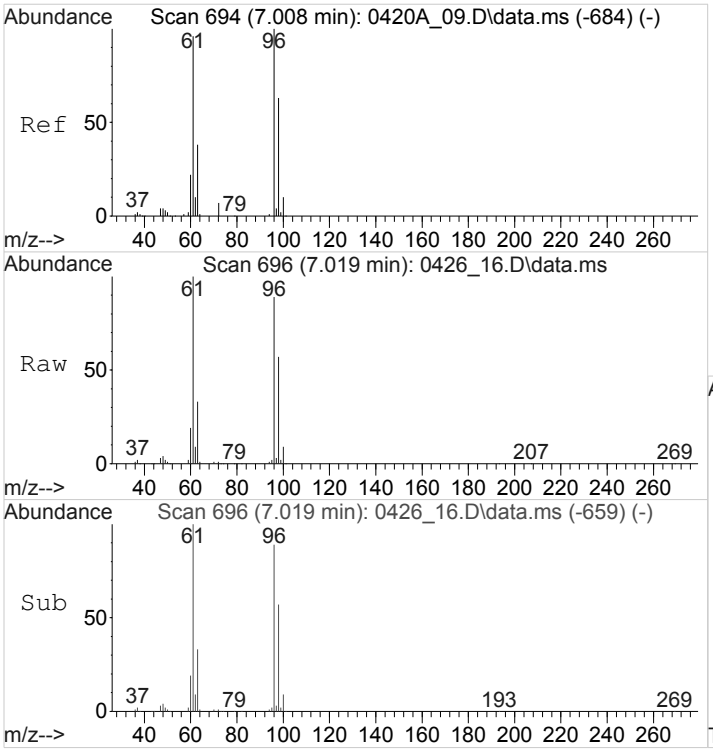


#28
ETHYL ACETATE
Concen: 0.2056344 ppbv
RT: 6.889 min Scan# 673
Delta R.T. -0.051 min
Lab File: 0426_16.D
Acq: 26 Apr 2018 6:37 pm

Tgt Ion: 43 Resp: 1413

Ion	Ratio	Lower	Upper
43	100		
45	0.0	12.0	18.0#
70	0.0	10.5	15.7#

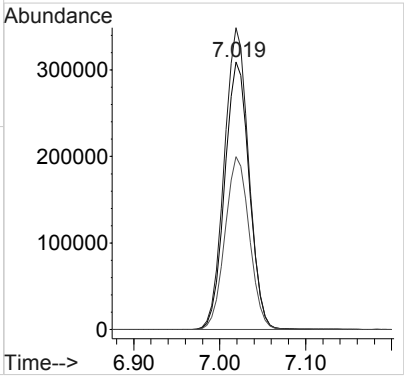


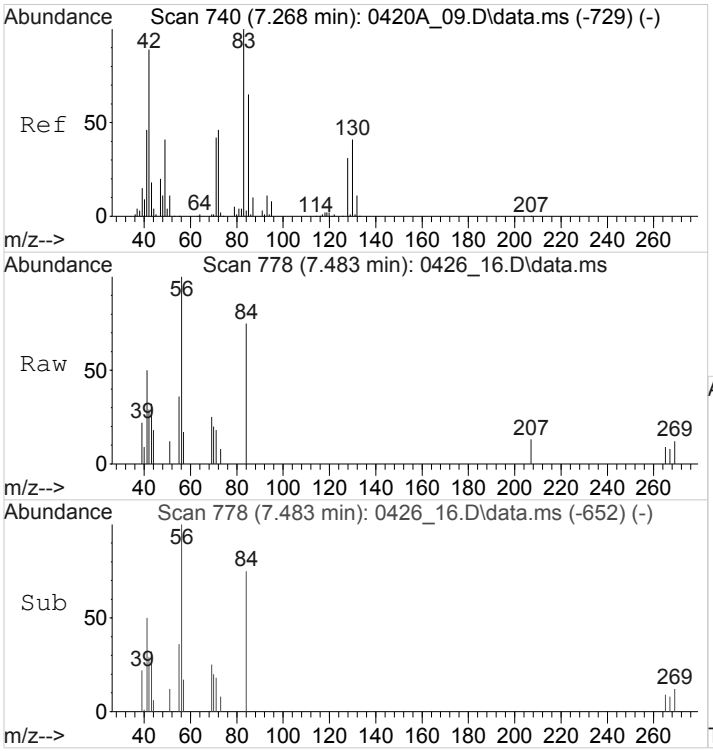


#30
cis-1,2-Dichloroethene
Concen: 149.6170391 ppbv
RT: 7.019 min Scan# 696
Delta R.T. 0.011 min
Lab File: 0426_16.D
Acq: 26 Apr 2018 6:37 pm

Tgt Ion: 96 Resp: 613070

Ion	Ratio	Lower	Upper
96	100		
61	112.1	94.1	141.1
98	64.4	50.6	76.0

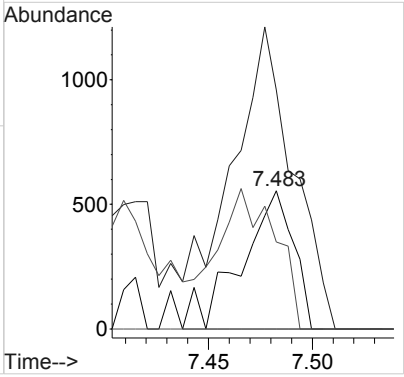


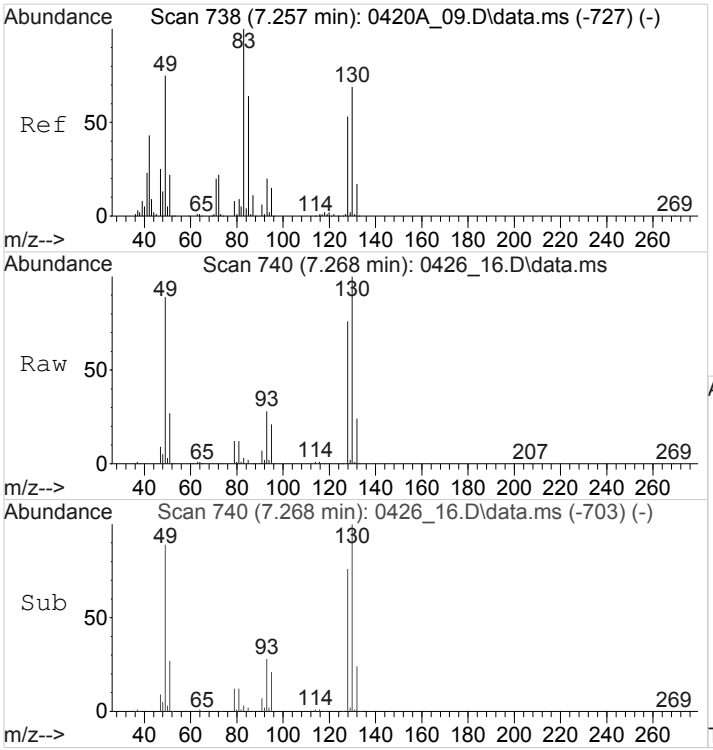


#31
Tetrahydrofuran
Concen: 0.2390085 ppbv
RT: 7.483 min Scan# 778
Delta R.T. 0.215 min
Lab File: 0426_16.D
Acq: 26 Apr 2018 6:37 pm

Tgt Ion: 42 Resp: 970

Ion	Ratio	Lower	Upper
42	100		
41	258.7	40.8	61.2#
72	0.0	40.7	61.1#
71	109.9	37.4	56.0#

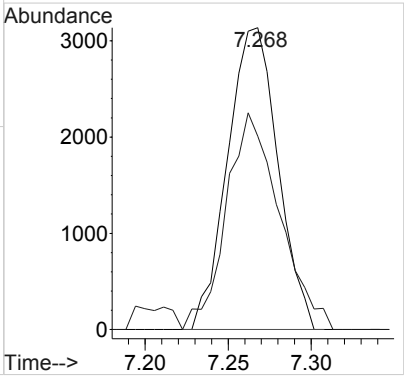


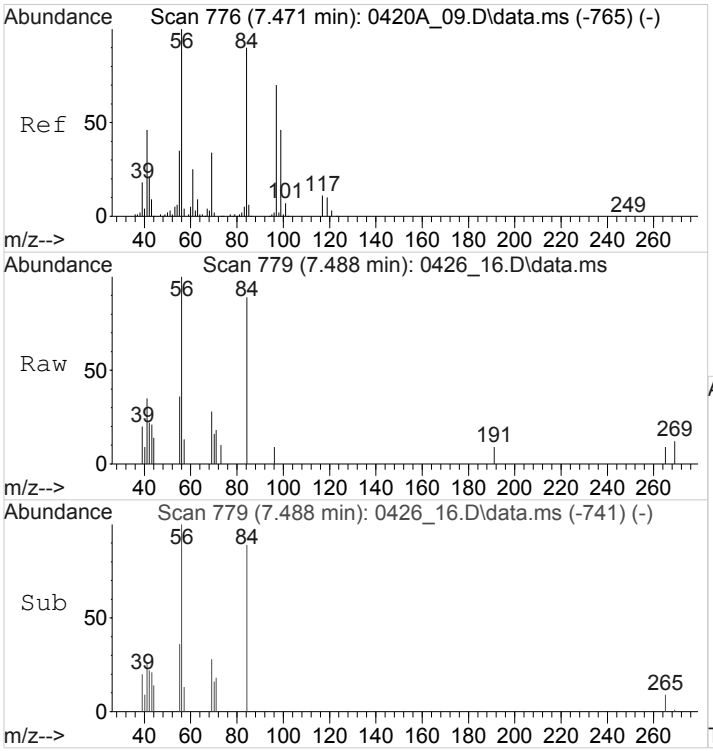


#32
Chloroform
Concen: 0.8983032 ppbv
RT: 7.268 min Scan# 740
Delta R.T. 0.011 min
Lab File: 0426_16.D
Acq: 26 Apr 2018 6:37 pm

Tgt Ion: 83 Resp: 6620

Ion	Ratio	Lower	Upper
83	100		
85	76.0	51.3	76.9

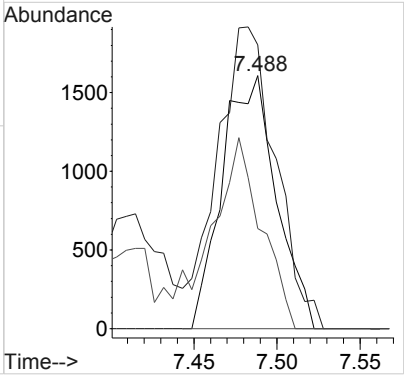


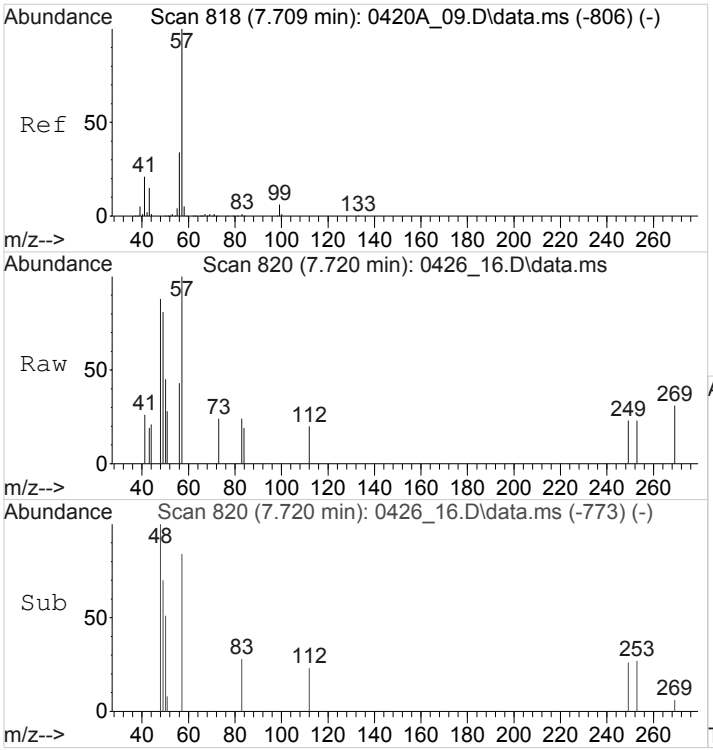


#33
Cyclohexane
Concen: 0.6934830 ppbv
RT: 7.488 min Scan# 779
Delta R.T. 0.017 min
Lab File: 0426_16.D
Acq: 26 Apr 2018 6:37 pm

Tgt Ion: 84 Resp: 3643

Ion	Ratio	Lower	Upper
84	100		
56	128.2	87.6	131.4
41	68.9	40.2	60.2#

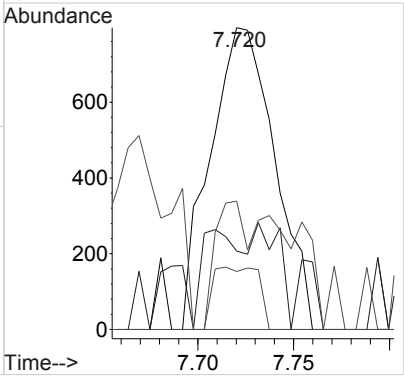


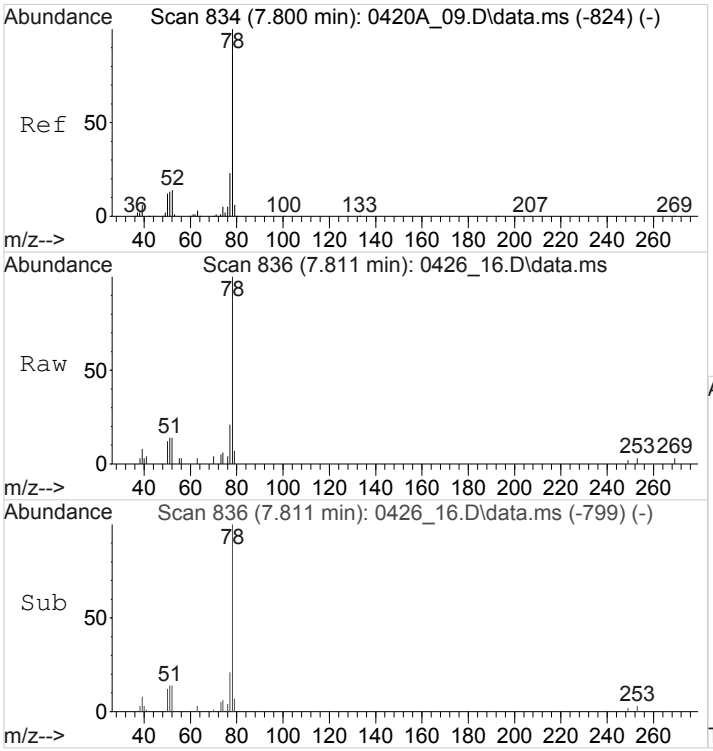


#36
2,2,4-Trimethylpentane
Concen: 0.1044741 ppbv
RT: 7.720 min Scan# 820
Delta R.T. 0.011 min
Lab File: 0426_16.D
Acq: 26 Apr 2018 6:37 pm

Tgt Ion: 57 Resp: 1877

Ion	Ratio	Lower	Upper
57	100		
41	0.0	16.6	25.0#
43	54.7	12.4	18.6#
56	0.0	26.6	39.8#

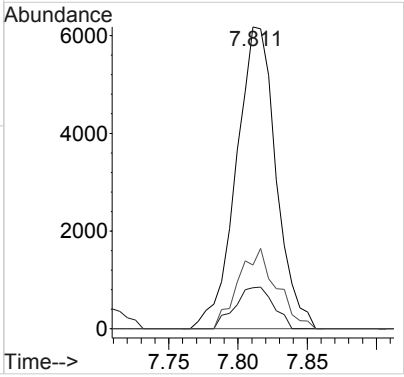


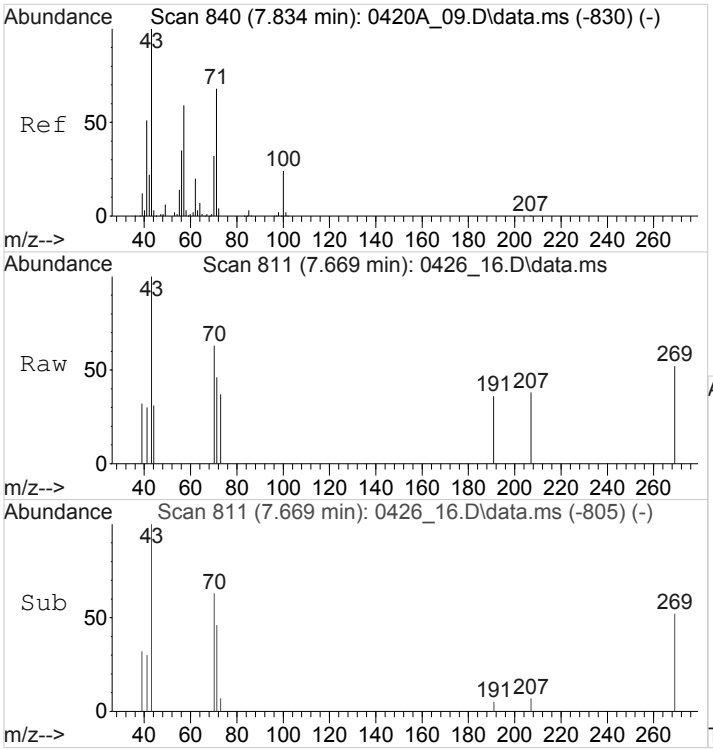


#38
Benzene
Concen: 1.0384084 ppbv
RT: 7.811 min Scan# 836
Delta R.T. 0.011 min
Lab File: 0426_16.D
Acq: 26 Apr 2018 6:37 pm

Tgt Ion: 78 Resp: 12393

Ion	Ratio	Lower	Upper
78	100		
51	13.4	11.3	16.9
77	25.7	18.6	28.0

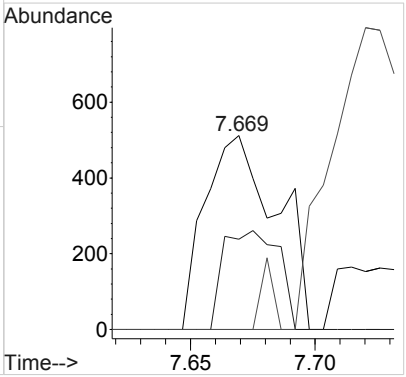


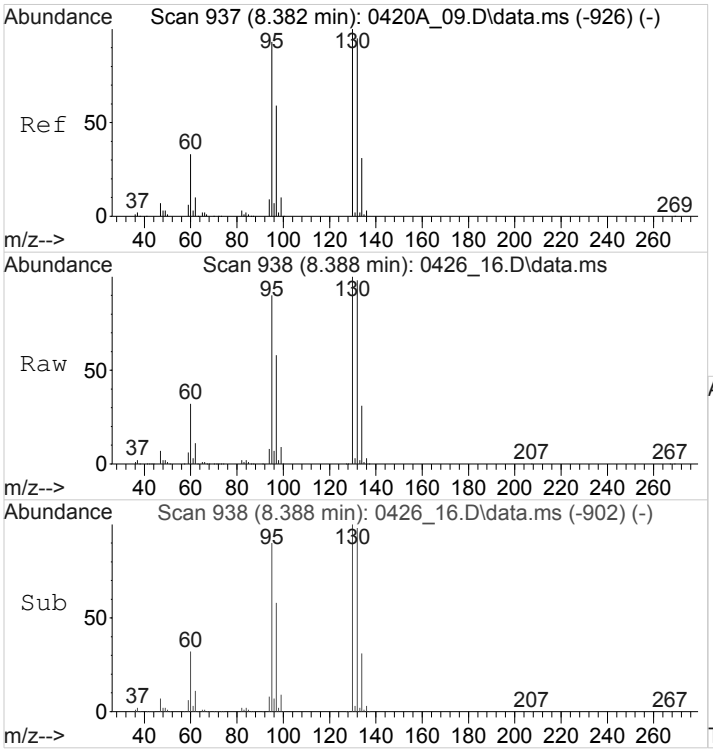


#40
Heptane
Concen: 0.1740675 ppbv
RT: 7.669 min Scan# 811
Delta R.T. -0.164 min
Lab File: 0426_16.D
Acq: 26 Apr 2018 6:37 pm

Tgt Ion: 43 Resp: 1026

Ion	Ratio	Lower	Upper
43	100		
71	0.0	56.1	84.1#
57	182.9	47.1	70.7#

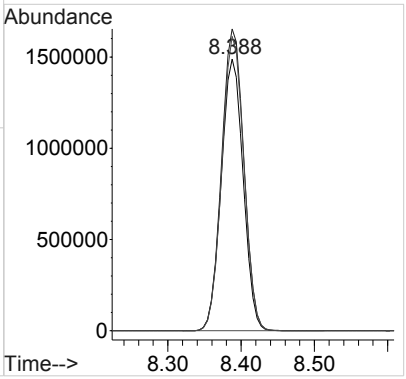


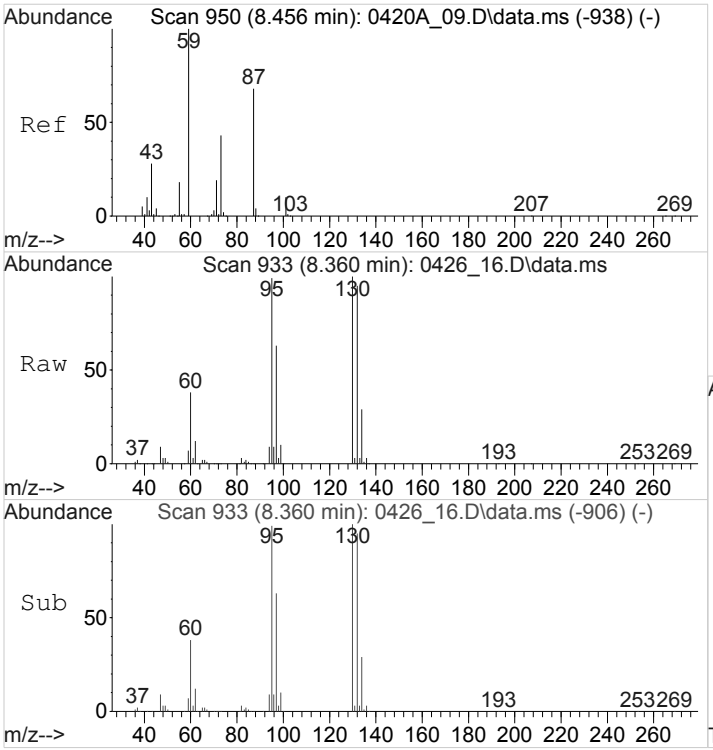


#41
Trichloroethene
Concen: 593.9171505 ppbv
RT: 8.388 min Scan# 938
Delta R.T. 0.006 min
Lab File: 0426_16.D
Acq: 26 Apr 2018 6:37 pm

Tgt Ion: 95 Resp: 3089357

Ion	Ratio	Lower	Upper
95	100		
130	112.6	86.4	129.6
132	108.7	83.6	125.4

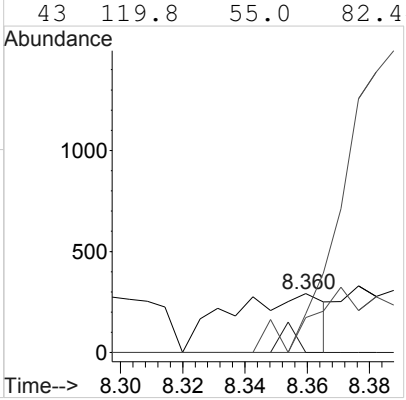


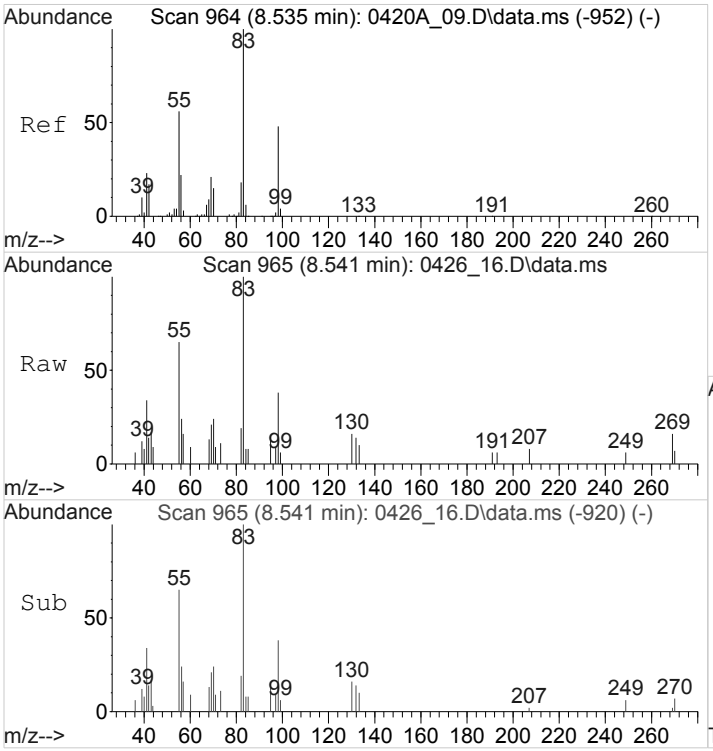


#42
TERT-AMYL ETHYL ETHER
Concen: 0.1655730 ppbv
RT: 8.360 min Scan# 933
Delta R.T. -0.096 min
Lab File: 0426_16.D
Acq: 26 Apr 2018 6:37 pm

Tgt Ion: 73 Resp: 626

Ion	Ratio	Lower	Upper
73	100		
55	0.0	35.8	53.8#
87	531.5	130.3	195.5#
43	119.8	55.0	82.4#

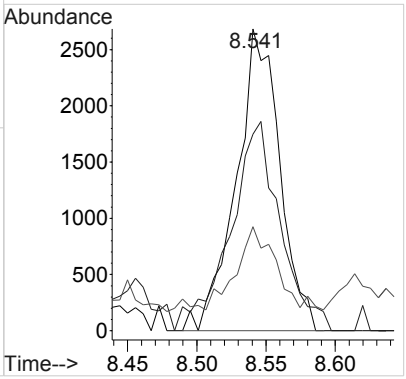


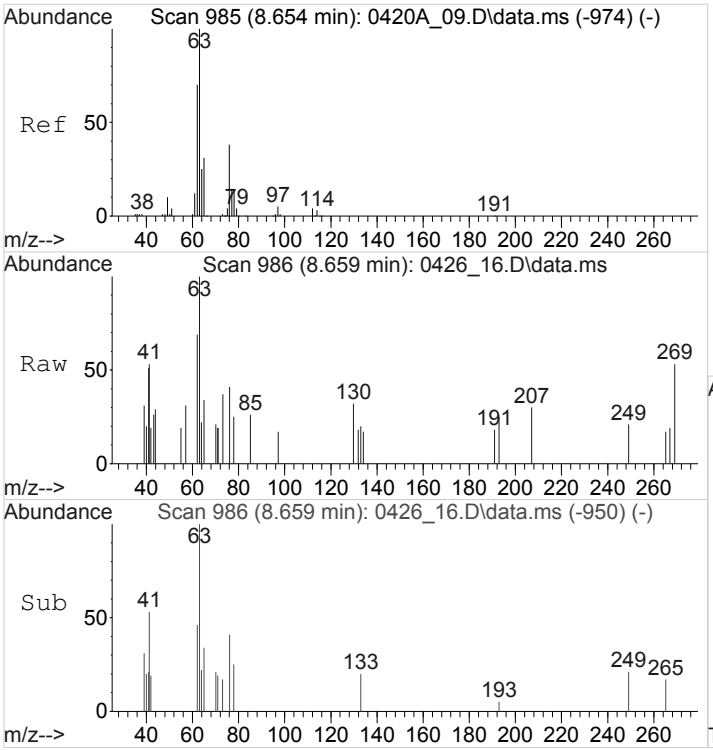


#43
METHYL CYCLOHEXANE
Concen: 0.8220405 ppbv
RT: 8.541 min Scan# 965
Delta R.T. 0.006 min
Lab File: 0426_16.D
Acq: 26 Apr 2018 6:37 pm

Tgt Ion: 83 Resp: 5877

Ion	Ratio	Lower	Upper
83	100		
55	79.4	58.5	87.7
41	27.5	25.8	38.6

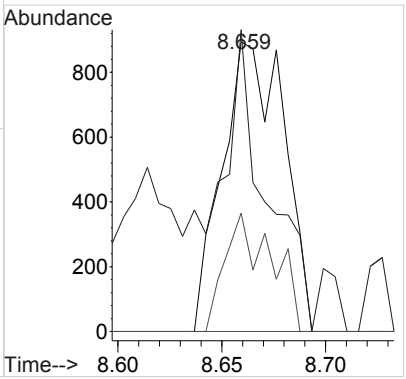


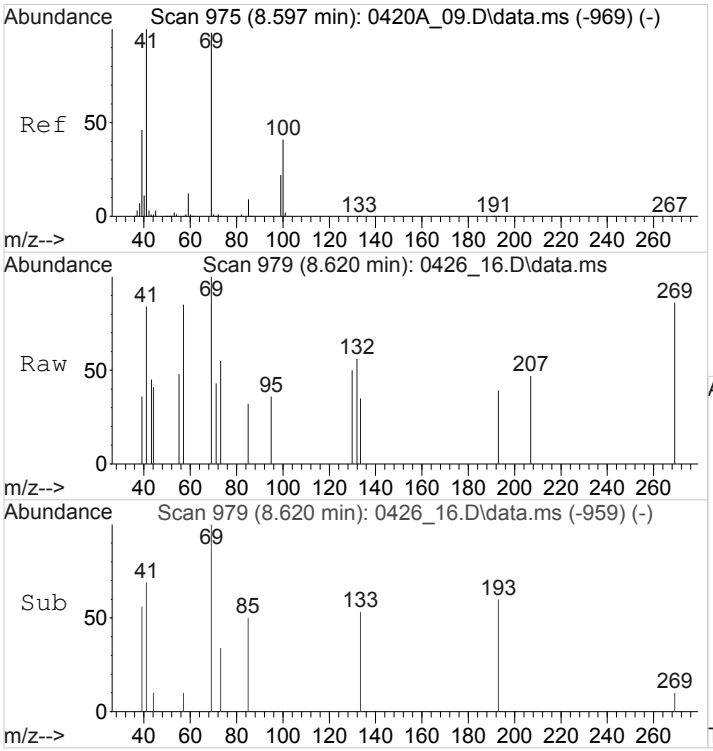


#44
1,2-Dichloropropane
Concen: 0.4307270 ppbv
RT: 8.659 min Scan# 986
Delta R.T. 0.006 min
Lab File: 0426_16.D
Acq: 26 Apr 2018 6:37 pm

Tgt Ion: 63 Resp: 1855

Ion	Ratio	Lower	Upper
63	100		
41	68.7	30.2	45.4#
76	31.1	29.8	44.6

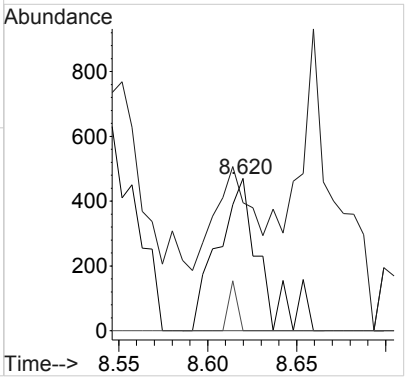


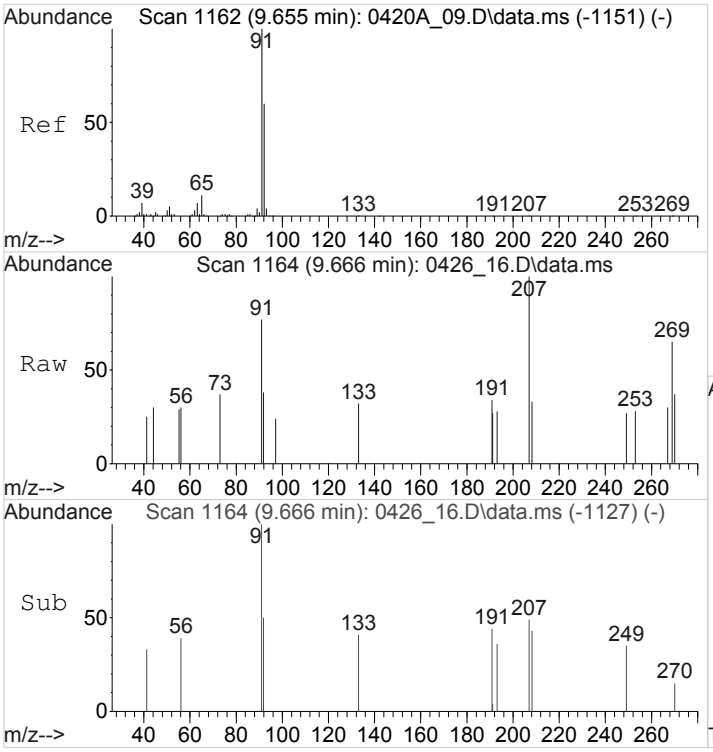


#45
Methyl Methacrylate
Concen: 0.1836729 ppbv
RT: 8.620 min Scan# 979
Delta R.T. 0.023 min
Lab File: 0426_16.D
Acq: 26 Apr 2018 6:37 pm

Tgt Ion: 69 Resp: 787

Ion	Ratio	Lower	Upper
69	100		
41	162.0	72.6	108.8#
100	0.0	32.2	48.2#

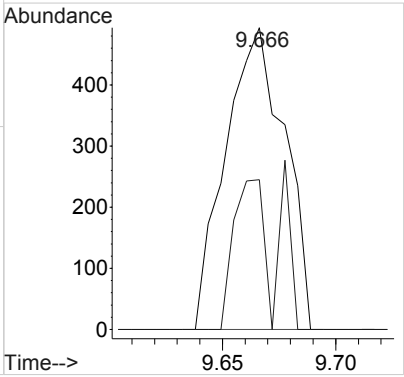


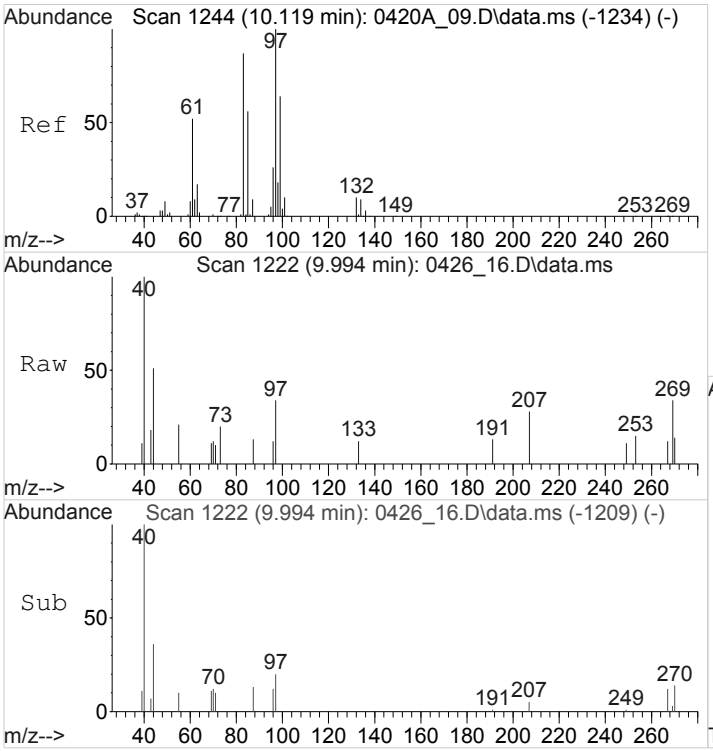


#50
Toluene
Concen: 0.0604454 ppbv
RT: 9.666 min Scan# 1164
Delta R.T. 0.011 min
Lab File: 0426_16.D
Acq: 26 Apr 2018 6:37 pm

Tgt Ion: 91 Resp: 897

Ion	Ratio	Lower	Upper
91	100		
92	0.0	48.0	72.0#

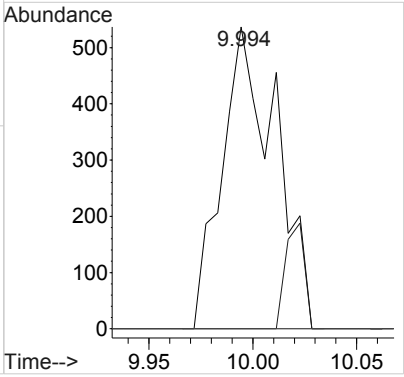


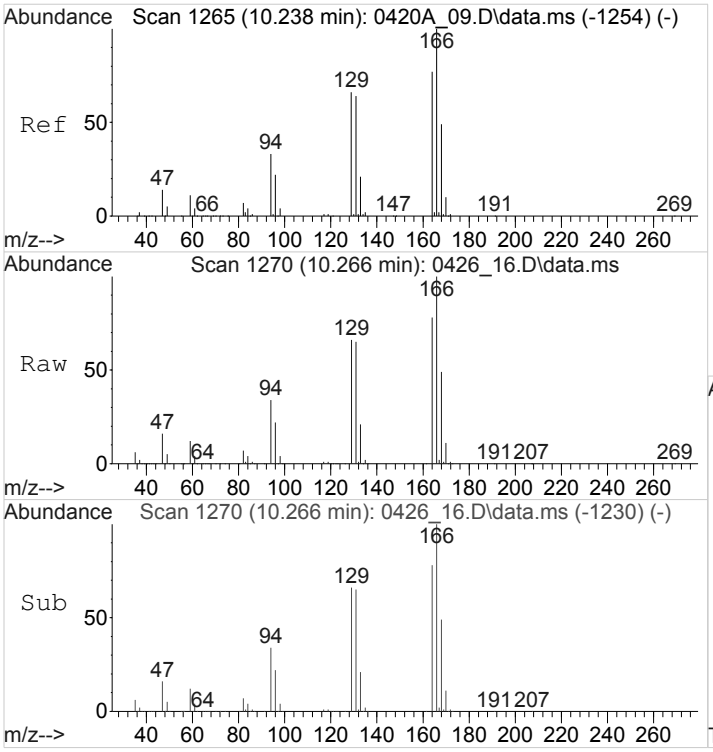


#52
1,1,2-Trichloroethane
Concen: 0.1874018 ppbv
RT: 9.994 min Scan# 1222
Delta R.T. -0.125 min
Lab File: 0426_16.D
Acq: 26 Apr 2018 6:37 pm

Tgt Ion: 97 Resp: 969

Ion	Ratio	Lower	Upper
97	100		
83	0.0	67.5	101.3#
61	0.0	40.8	61.2#

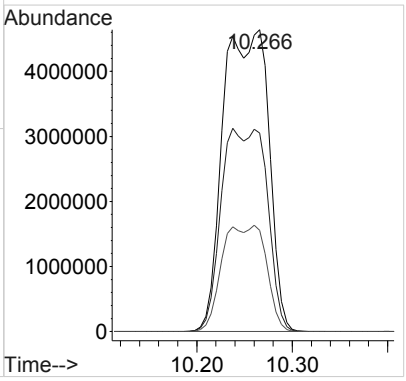


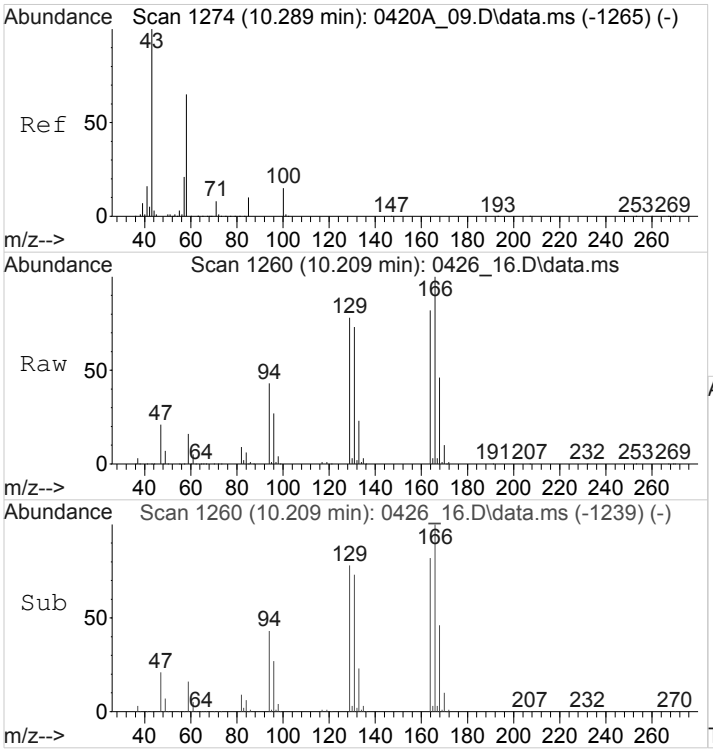


#53
Tetrachloroethene
Concen: 1923.4917576 ppbv m
RT: 10.266 min Scan# 1270
Delta R.T. 0.028 min
Lab File: 0426_16.D
Acq: 26 Apr 2018 6:37 pm

Tgt Ion:166 Resp:15363574

Ion	Ratio	Lower	Upper
166	100		
129	35.6	53.7	80.5#
94	18.5	27.2	40.8#

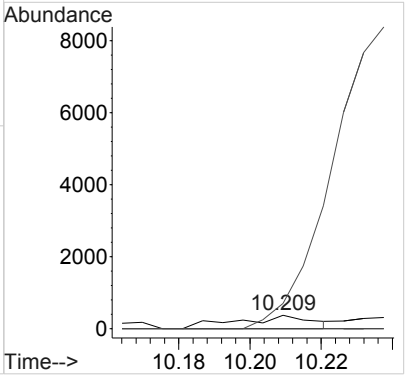


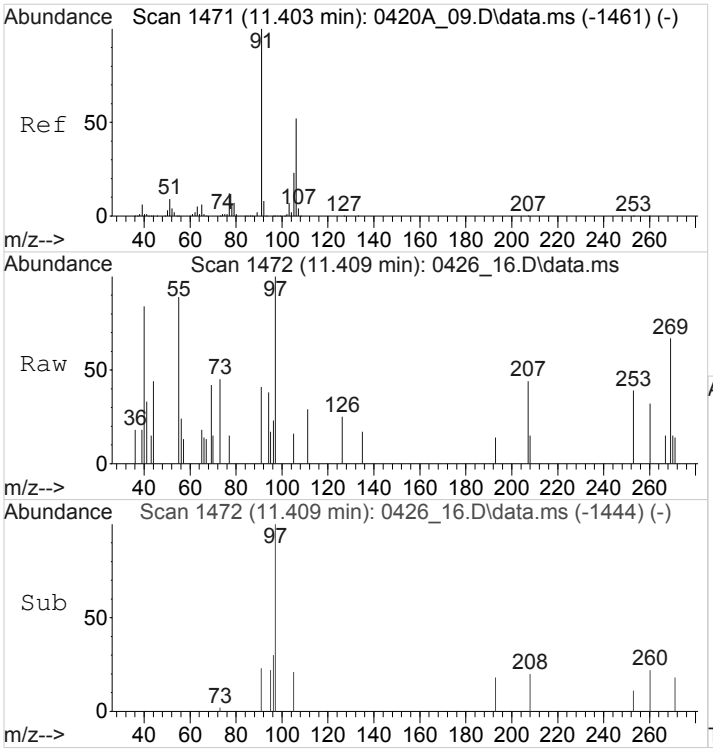


#54
Methyl Butyl Ketone
Concen: 0.0660123 ppbv
RT: 10.209 min Scan# 1260
Delta R.T. -0.079 min
Lab File: 0426_16.D
Acq: 26 Apr 2018 6:37 pm

Tgt Ion: 43 Resp: 549

Ion	Ratio	Lower	Upper
43	100		
58	0.0	51.6	77.4#
85	5105.1	8.6	13.0#
100	0.0	11.6	17.4#

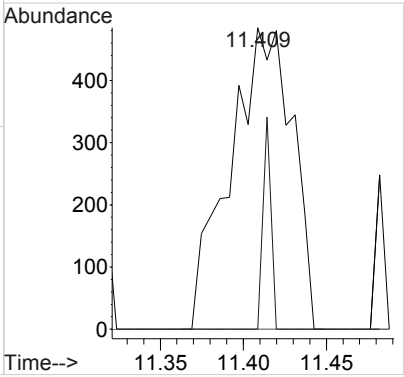


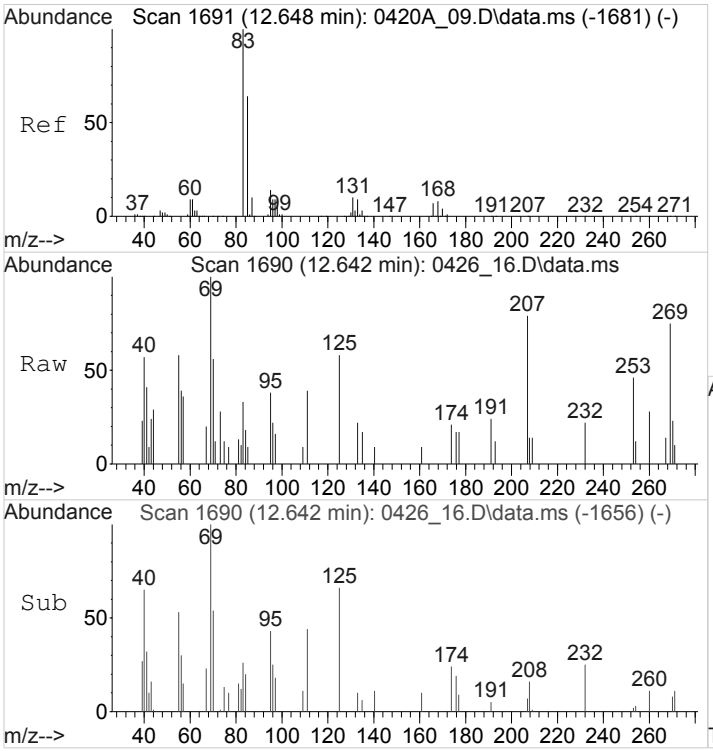


#60
M&P-Xylene
Concen: 0.0789048 ppbv
RT: 11.409 min Scan# 1472
Delta R.T. 0.006 min
Lab File: 0426_16.D
Acq: 26 Apr 2018 6:37 pm

Tgt Ion: 91 Resp: 1269

Ion	Ratio	Lower	Upper
91	100		
106	0.0	41.5	62.3#

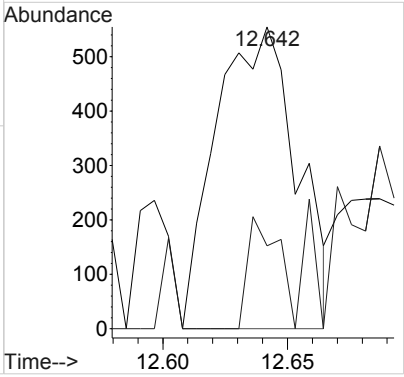


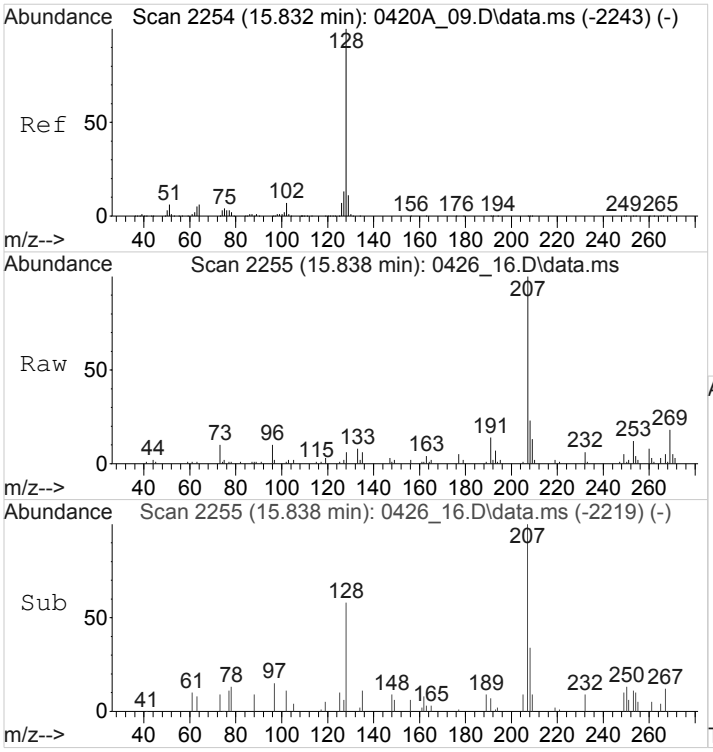


#65
1,1,2,2-Tetrachloroethane
Concen: 0.1022897 ppbv
RT: 12.642 min Scan# 1690
Delta R.T. -0.006 min
Lab File: 0426_16.D
Acq: 26 Apr 2018 6:37 pm

Tgt Ion: 83 Resp: 1256

Ion	Ratio	Lower	Upper
83	100		
85	0.0	51.2	76.8#

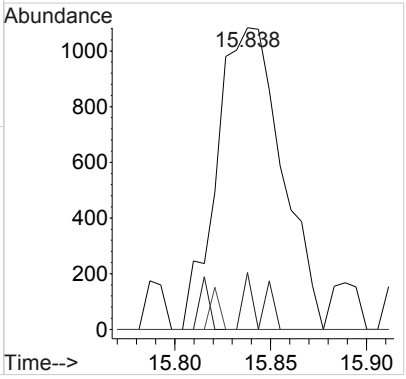


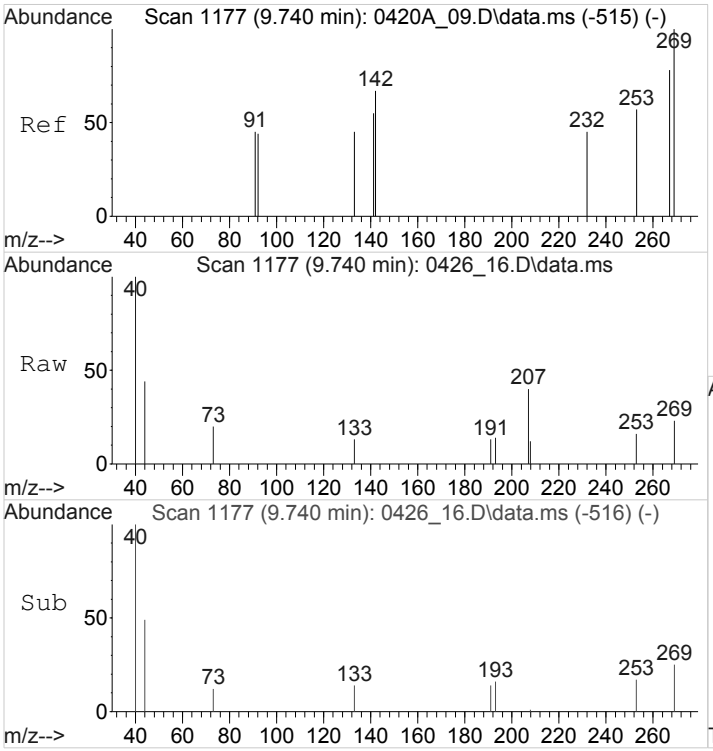


#83
Naphthalene
Concen: 0.0901193 ppbv
RT: 15.838 min Scan# 2255
Delta R.T. 0.006 min
Lab File: 0426_16.D
Acq: 26 Apr 2018 6:37 pm

Tgt Ion:128 Resp: 2559

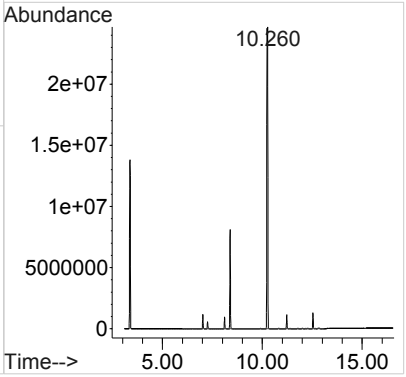
Ion	Ratio	Lower	Upper
128	100		
102	0.0	5.9	8.9#
51	0.0	4.6	7.0#





#84
TPH (GC/MS) Low Fraction
Concen: 2098.0430757 ppbv m
RT: 9.740 min Scan# 1177
Delta R.T. 0.000 min
Lab File: 0426_16.D
Acq: 26 Apr 2018 6:37 pm

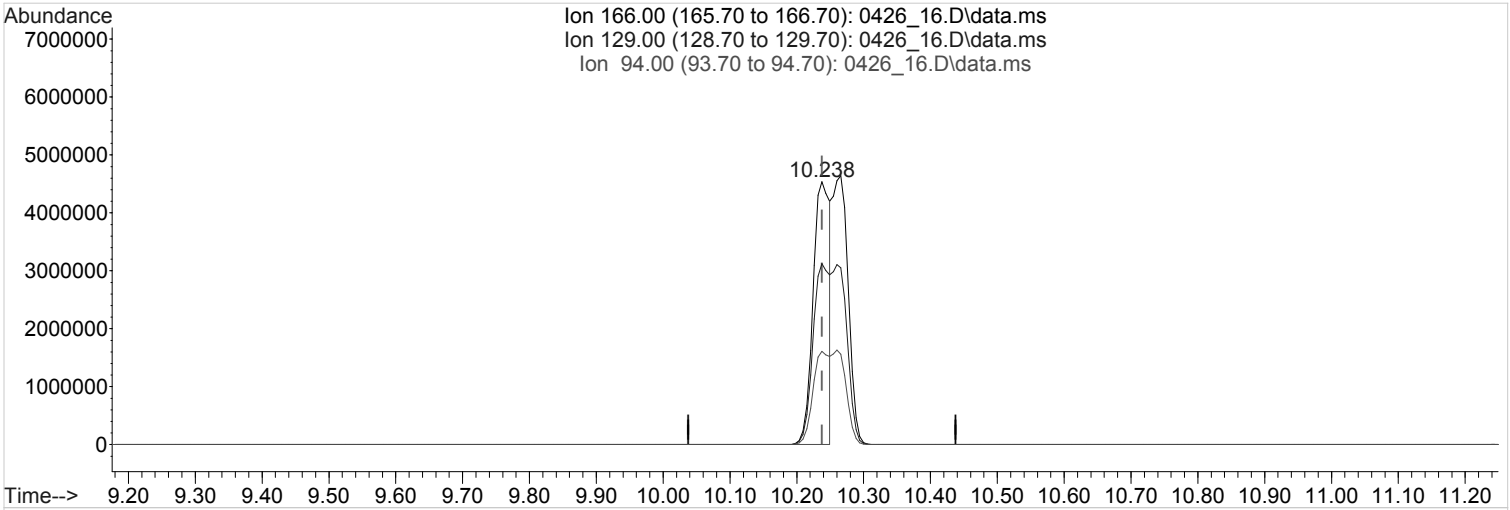
Tgt Ion:TIC Resp:62870896

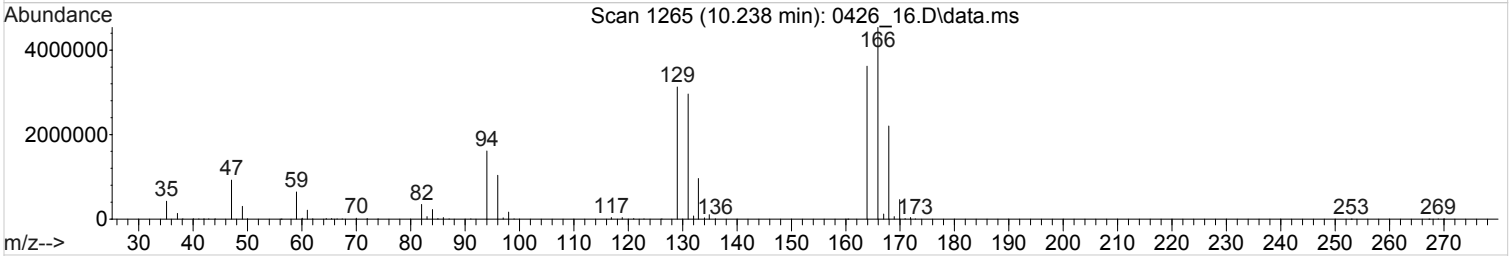


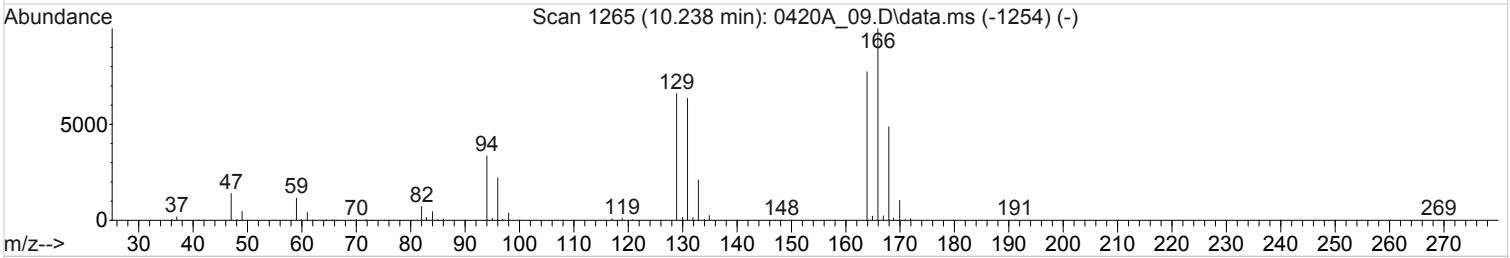
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_16.D
Acq On : 26 Apr 2018 6:37 pm
Operator : 564
Sample : L988471-05 10x WG1103323
Misc :
ALS Vial : 16 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 27 08:42:10 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration







TIC: 0426_16.D\data.ms

(53) Tetrachloroethene (T,M)

10.238min (-0.000) 98.2193248 ppbv E

Qvalue = 97

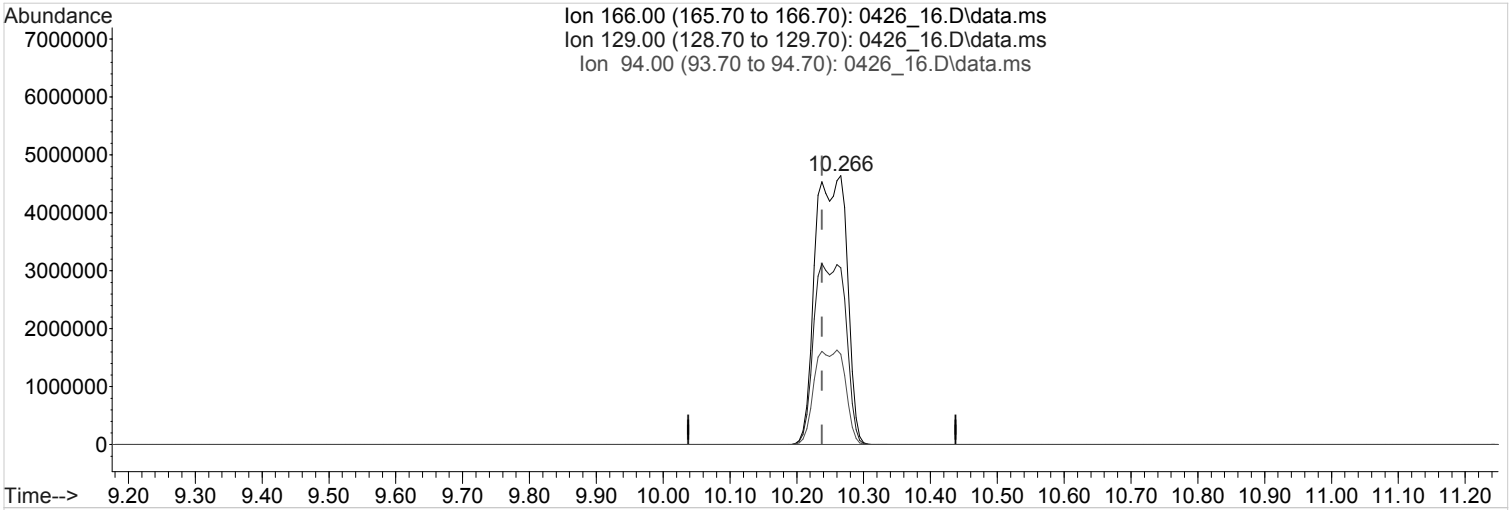
response 7845107 Limit = 2.0000000

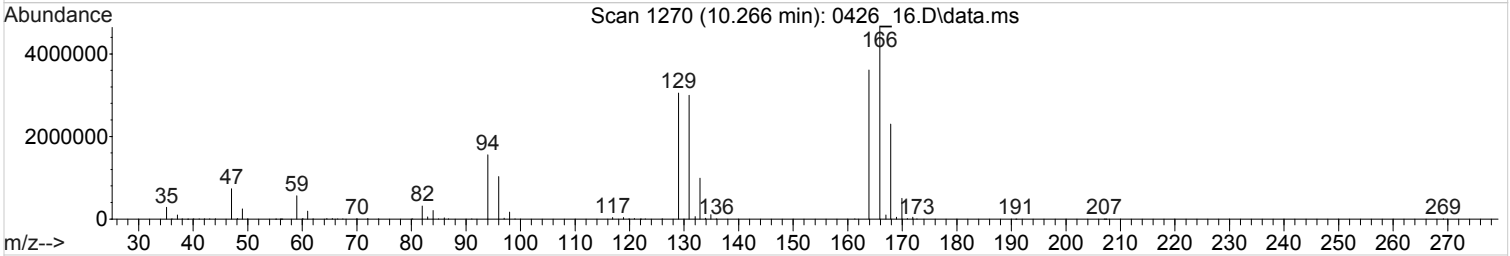
Ion	Exp%	Act%
166.00	100	100
129.00	67.10	69.73
94.00	34.00	36.15
0.00	0.00	0.00

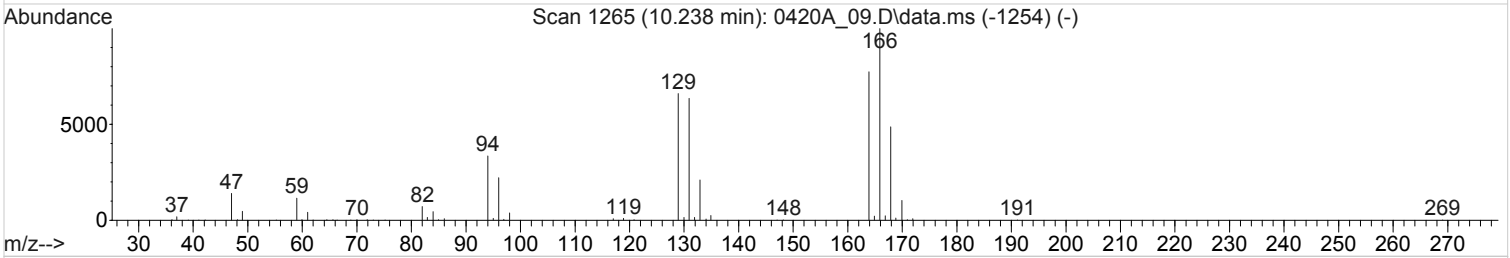
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_16.D
Acq On : 26 Apr 2018 6:37 pm
Operator : 564
Sample : L988471-05 10x WG1103323
Misc :
ALS Vial : 16 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 27 08:42:10 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration







TIC: 0426_16.D\data.ms

(53) Tetrachloroethene (T,M)

10.266min (+0.028) 192.3491758 ppbv m E

response 15363574 Limit = 2.0000000

Ion	Exp%	Act%
166.00	100	100
129.00	67.10	35.61#
94.00	34.00	18.46#
0.00	0.00	0.00

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS-6

ESC Sample ID:	L988471-06	**SDG:**	L988471
Client Sample ID:	SS-6	**Collected Date/Time:**	04/23/18 11:14
Lab File ID:	0427_09	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS2	**Preparation Date/Time:**	04/27/18 14:56
Analytical Batch:	WG1103956	**Analysis Date/Time:**	04/27/18 14:56
Dilution Factor:	80	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	5 mL
Matrix:	Air	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	

Analyte	CAS	RT	Result	Qualifier	MDL	RDL
			ppbv		*ppbv*	*ppbv*
Tetrachloroethylene	127-18-4	12.21	955		3.98	16.0

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_09.D
Acq On : 27 Apr 2018 2:56 pm
Operator : 564
Sample : L988471-06 80x WG1103956
Misc :
ALS Vial : 9 Sample Multiplier: 80
InstName : AIRMS2

Quant Time: Apr 28 07:50:22 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:08:22 2018
Response via : Initial Calibration

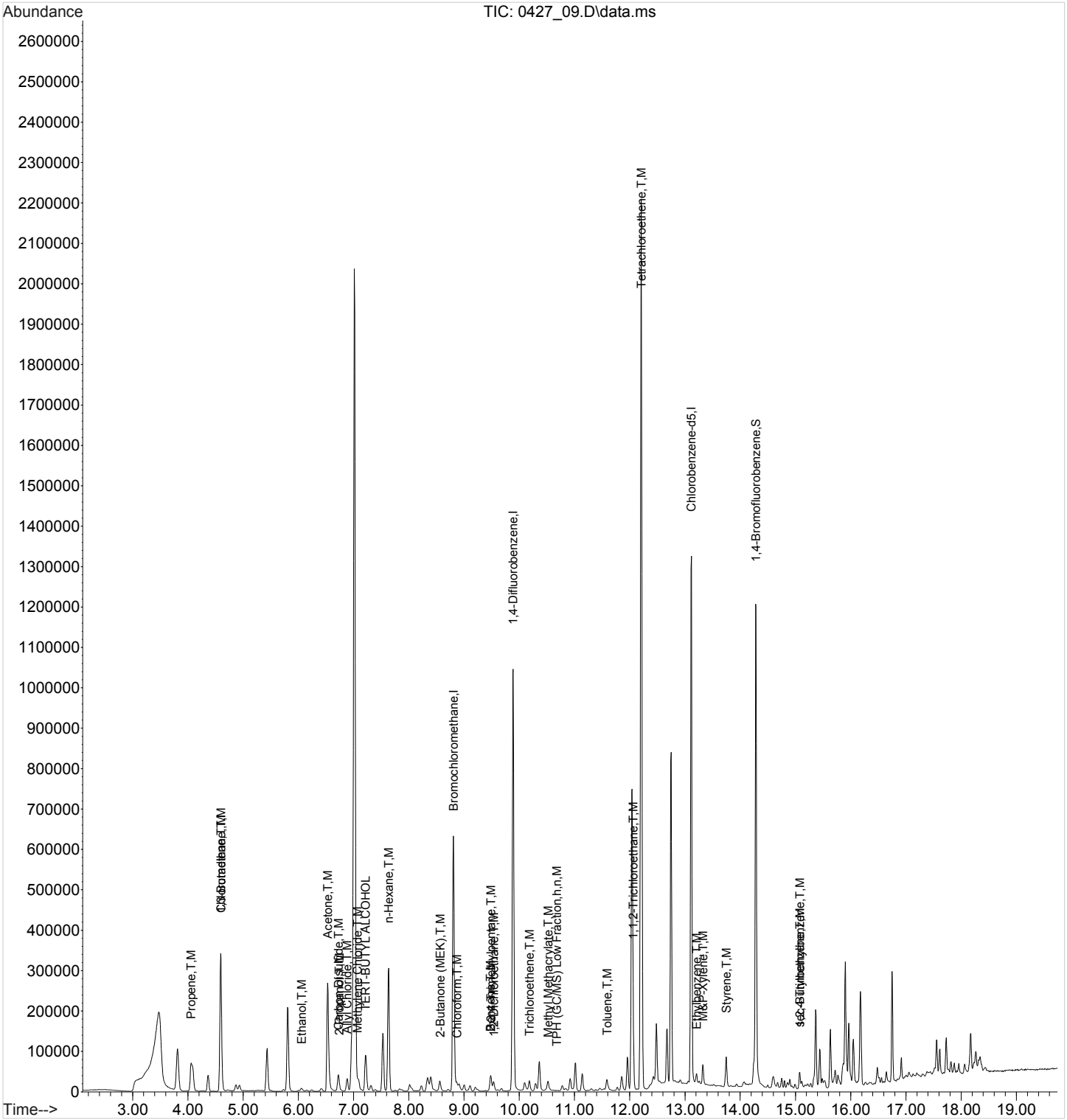
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.810	130	1768476	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	9.891	114	7532691	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	13.116	117	6478632	4.0000000	ppbv	# 0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	14.285	95	3782621	3.6952583	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 92.38%			
Target Compounds						Qvalue
2) Propene	4.058	41	279545	47.0939583	ppbv #	79
7) Chloromethane	4.598	50	149543	26.7568750	ppbv #	81
9) 1,3-Butadiene	4.597	39	1453843	244.6456356	ppbv #	16
14) Ethanol	6.061	45	130543	70.1612460	ppbv	96
17) Acetone	6.534	43	4100419	461.1496006	ppbv	100
18) 2-Propanol	6.738	45	127041	10.5934123	ppbv #	59
19) Carbon Disulfide	6.726	76	568016	64.8567101	ppbv #	85
20) Allyl Chloride	6.885	41	150855	15.5107283	ppbv #	54
21) Methylene Chloride	7.065	49	109604	14.8273842	ppbv #	1
22) TERT-BUTYL ALCOHOL	7.220	59	1221965	90.8947595	ppbv #	51
25) n-Hexane	7.636	57	1474928	161.1079589	ppbv	95
29) 2-Butanone (MEK)	8.565	72	59185	22.8929965	ppbv	88
31) Tetrahydrofuran	9.006	42	35981	3.8235185	ppbv #	31
32) Chloroform	8.870	83	111492	11.9506128	ppbv	99
36) 2,2,4-Trimethylpentane	9.487	57	220800	6.7191919	ppbv #	94
38) Benzene	9.478	78	102852	6.5016006	ppbv #	75
39) 1,2-Dichloroethane	9.535	62	176931	22.1998474	ppbv	98
41) Trichloroethene	10.184	95	81480	14.1554836	ppbv	94
45) Methyl Methacrylate	10.522	69	85302	14.4605084	ppbv	98
50) Toluene	11.589	91	190326	11.1507733	ppbv	98
52) 1,1,2-Trichloroethane	12.063	97	288367	54.5984241	ppbv	94
53) Tetrachloroethene	12.210	166	6161000	954.5696877	ppbv	96
59) Ethylbenzene	13.212	91	154011	6.2984992	ppbv #	46
60) M&P-Xylene	13.327	91	262550	13.9428497	ppbv	96
61) O-Xylene	13.731	91	72536	3.8515063	ppbv	96
62) Styrene	13.750	104	332787	23.7365964	ppbv #	77
64) Isopropylbenzene	14.078	105	38219	1.5449750	ppbv #	56
66) n-Propylbenzene	14.501	91	53027	1.6986919	ppbv #	1
67) 4-Ethyltoluene	14.616	105	64479	2.5621650	ppbv #	48
68) 2-Chlorotoluene	14.502	91	53053	2.4472192	ppbv #	51
70) 1,3,5-Trimethylbenzene	14.678	105	55240	2.6356753	ppbv	91
71) tert-Butylbenzene	15.080	119	28853	1.5363884	ppbv #	70
72) 1,2,4-Trimethylbenzene	15.079	105	202217	10.0152718	ppbv	96
73) sec-Butylbenzene	15.079	105	201161	6.5774902	ppbv #	74
76) 1,2,3-TRIMETHYLBENZENE	15.537	105	65141	3.1132661	ppbv	100
84) TPH (GC/MS) Low Fraction	10.675	TIC	105042371m	2096.4635514	ppbv	

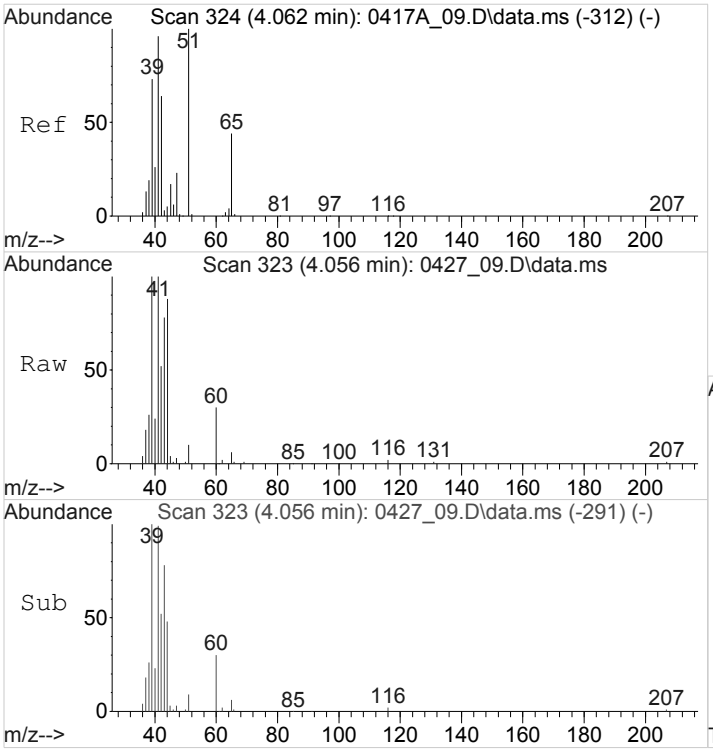
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_09.D
Acq On : 27 Apr 2018 2:56 pm
Operator : 564
Sample : L988471-06 80x WG1103956
Misc :
ALS Vial : 9 Sample Multiplier: 80
InstName : AIRMS2

Quant Time: Apr 28 07:50:22 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:08:22 2018
Response via : Initial Calibration

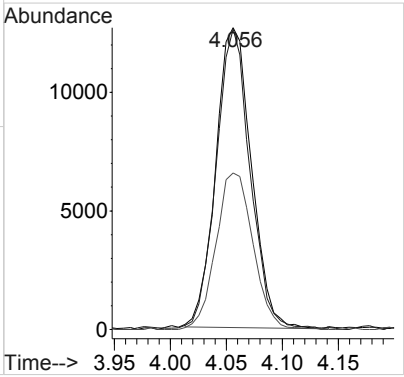


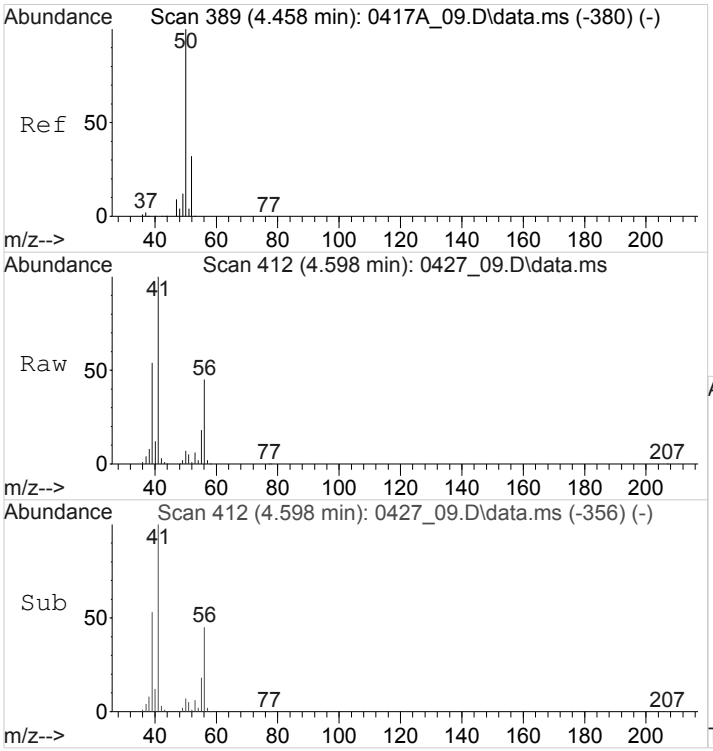


#2
Propene
Concen: 47.0939583 ppbv
RT: 4.058 min Scan# 323
Delta R.T. -0.004 min
Lab File: 0427_09.D
Acq: 27 Apr 2018 2:56 pm

Tgt Ion: 41 Resp: 279545

Ion	Ratio	Lower	Upper
41	100		
39	97.0	57.8	86.8#
42	54.5	50.5	75.7

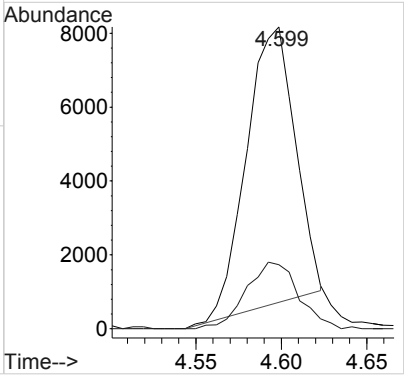


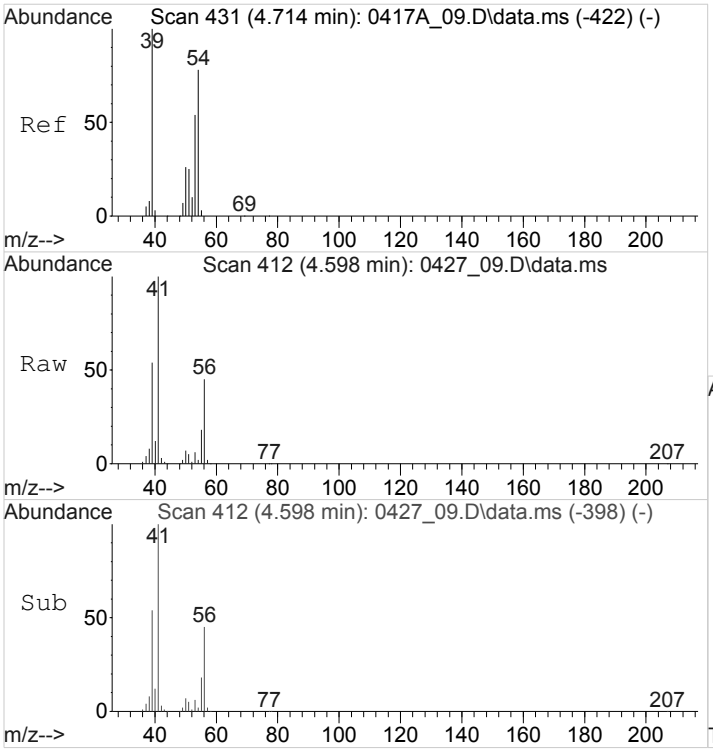


#7
Chloromethane
Concen: 26.7568750 ppbv
RT: 4.598 min Scan# 412
Delta R.T. 0.142 min
Lab File: 0427_09.D
Acq: 27 Apr 2018 2:56 pm

Tgt Ion: 50 Resp: 149543

Ion	Ratio	Lower	Upper
50	100		
52	21.6	25.5	38.3#

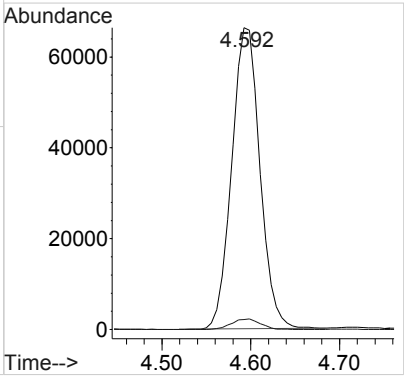


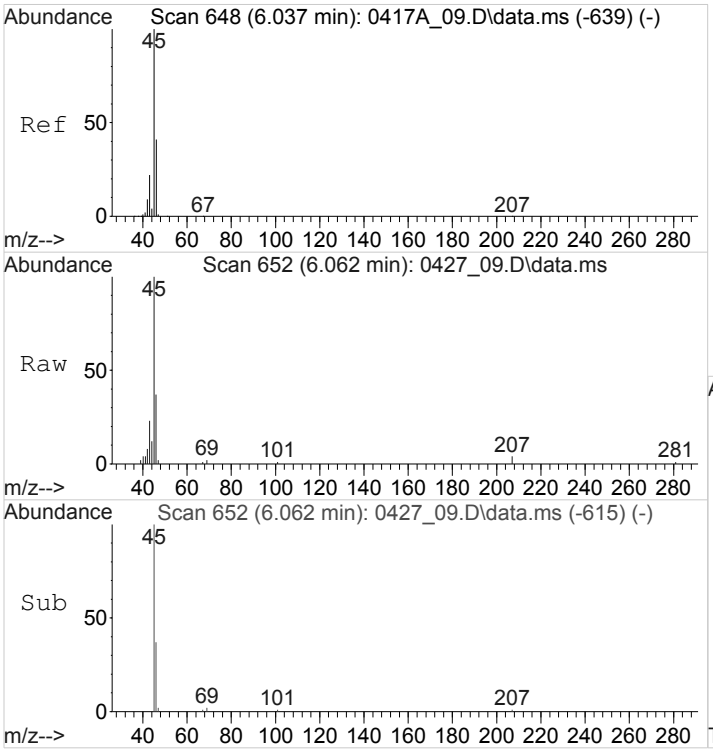


#9
1,3-Butadiene
Concen: 244.6456356 ppbv
RT: 4.597 min Scan# 412
Delta R.T. -0.115 min
Lab File: 0427_09.D
Acq: 27 Apr 2018 2:56 pm

Tgt Ion: 39 Resp: 1453843

Ion	Ratio	Lower	Upper
39	100		
54	3.7	60.6	91.0#

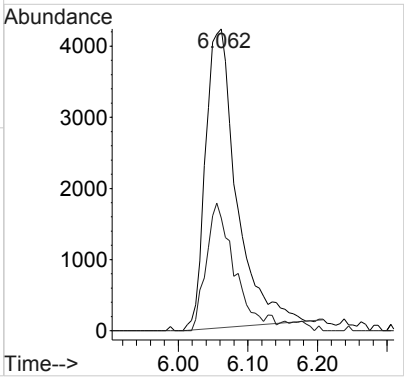


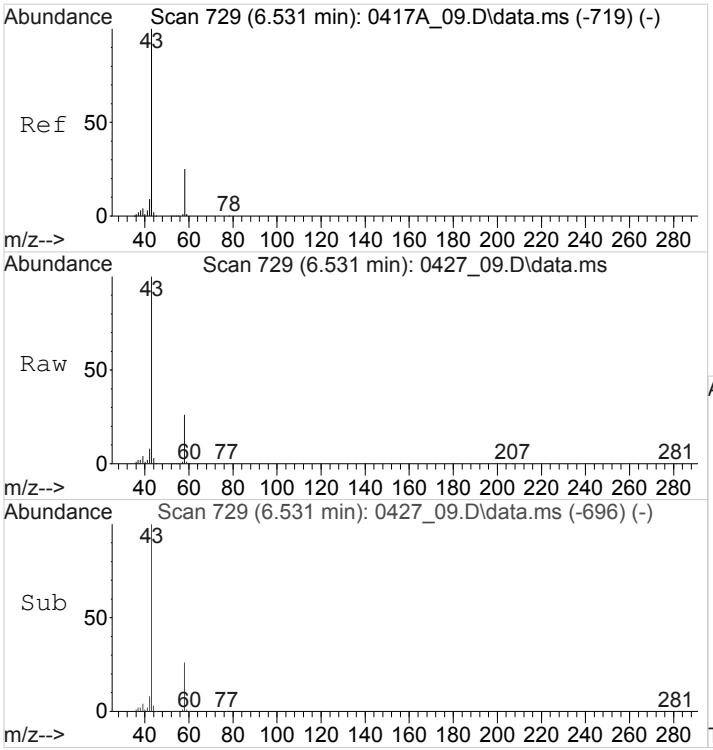


#14
Ethanol
Concen: 70.1612460 ppbv
RT: 6.061 min Scan# 652
Delta R.T. 0.023 min
Lab File: 0427_09.D
Acq: 27 Apr 2018 2:56 pm

Tgt Ion: 45 Resp: 130543

Ion	Ratio	Lower	Upper
45	100		
46	36.8	31.5	47.3

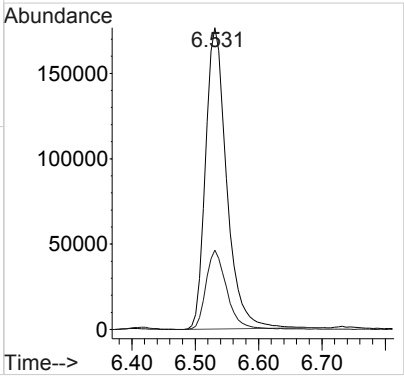


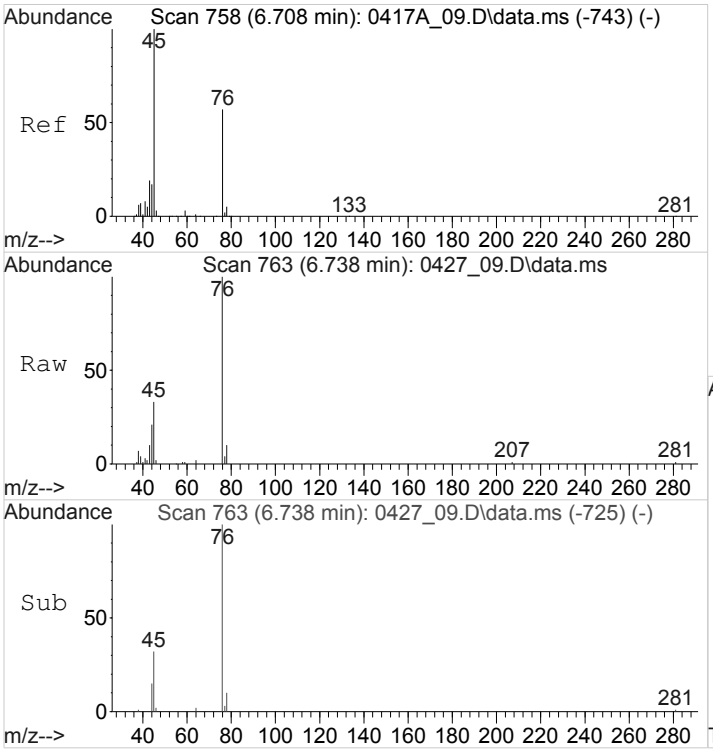


#17
Acetone
Concen: 461.1496006 ppbv
RT: 6.534 min Scan# 729
Delta R.T. 0.003 min
Lab File: 0427_09.D
Acq: 27 Apr 2018 2:56 pm

Tgt Ion: 43 Resp: 4100419

Ion	Ratio	Lower	Upper
43	100		
58	25.5	20.6	30.8

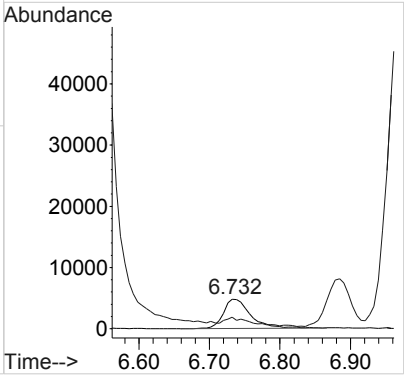


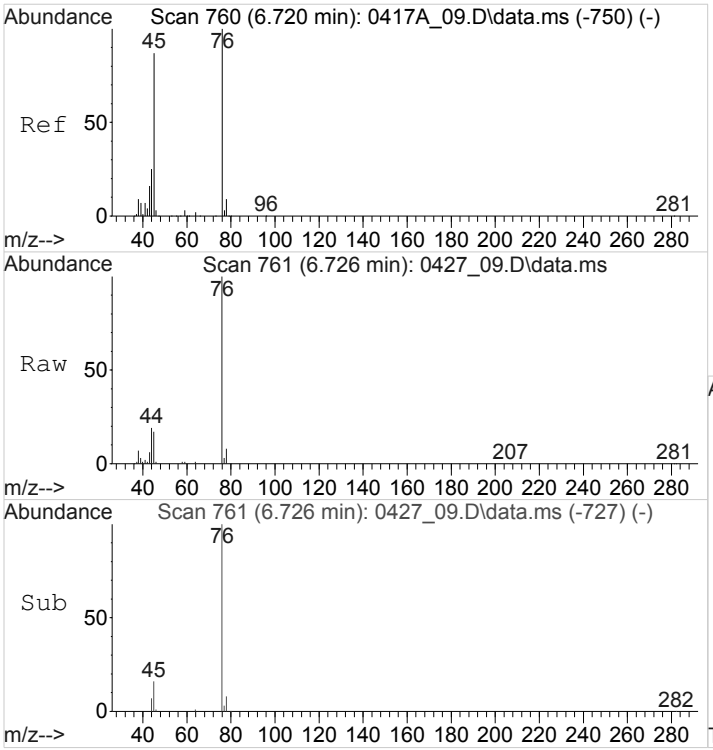


#18
2-Propanol
Concen: 10.5934123 ppbv
RT: 6.738 min Scan# 763
Delta R.T. 0.029 min
Lab File: 0427_09.D
Acq: 27 Apr 2018 2:56 pm

Tgt Ion: 45 Resp: 127041

Ion	Ratio	Lower	Upper
45	100		
43	0.0	14.4	21.6#

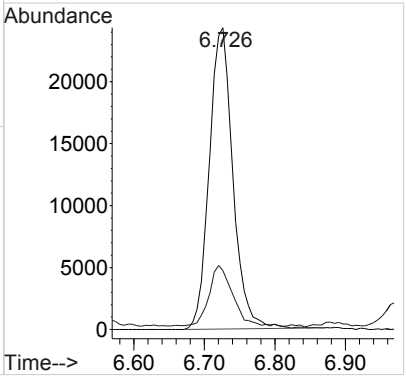


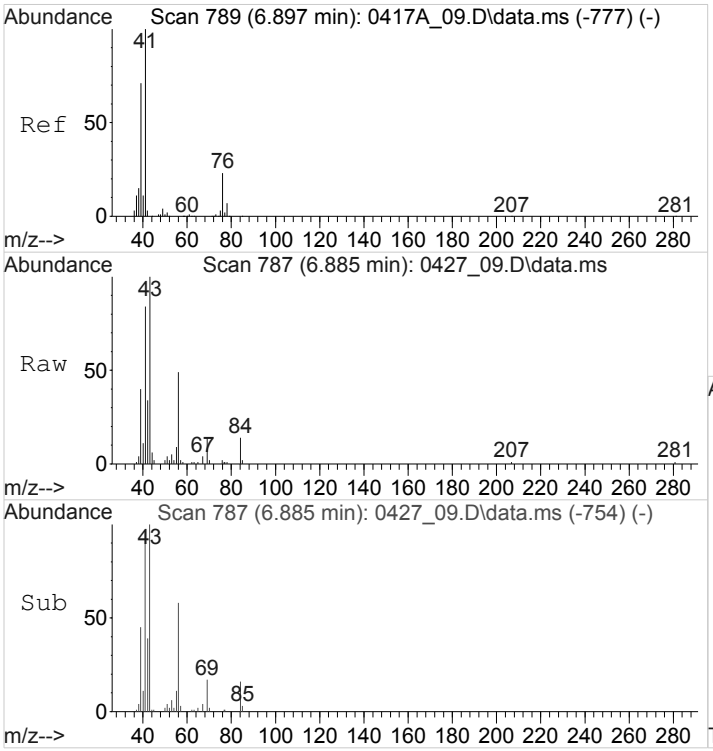


#19
Carbon Disulfide
Concen: 64.8567101 ppbv
RT: 6.726 min Scan# 761
Delta R.T. 0.005 min
Lab File: 0427_09.D
Acq: 27 Apr 2018 2:56 pm

Tgt Ion: 76 Resp: 568016

Ion	Ratio	Lower	Upper
76	100		
44	19.4	21.9	32.9#

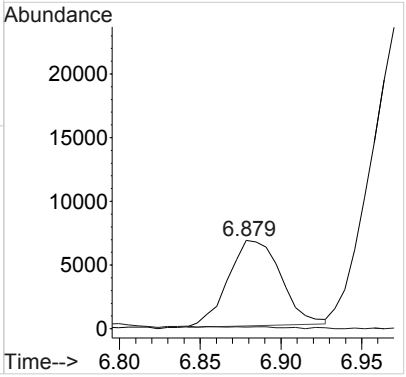


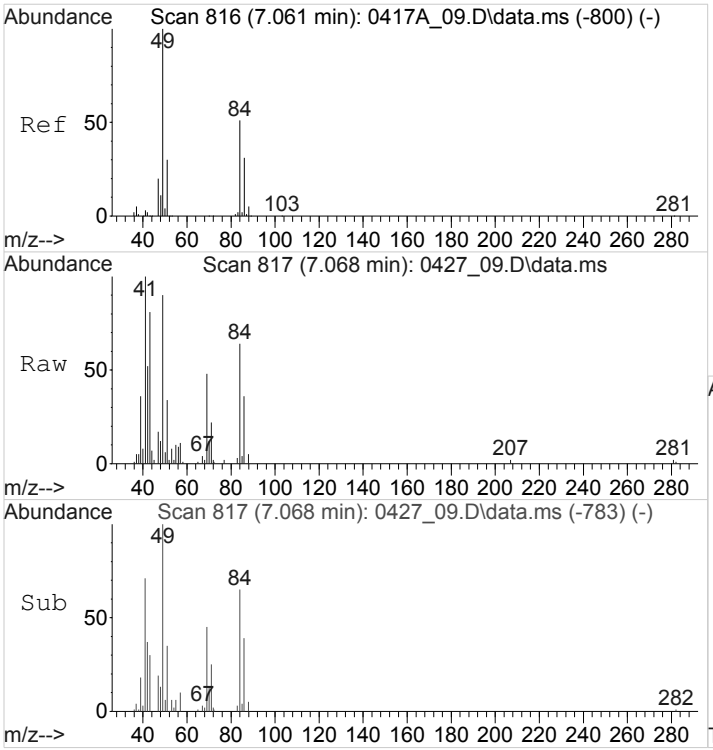


#20
Allyl Chloride
Concen: 15.5107283 ppbv
RT: 6.885 min Scan# 787
Delta R.T. -0.009 min
Lab File: 0427_09.D
Acq: 27 Apr 2018 2:56 pm

Tgt Ion: 41 Resp: 150855

Ion	Ratio	Lower	Upper
41	100		
76	0.0	17.4	26.2#

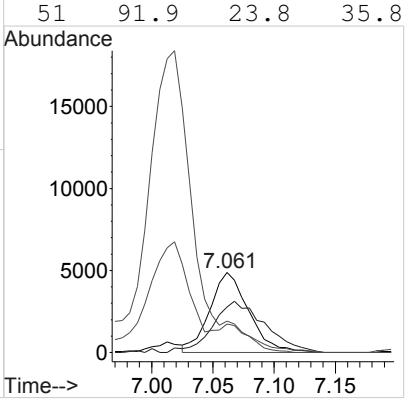


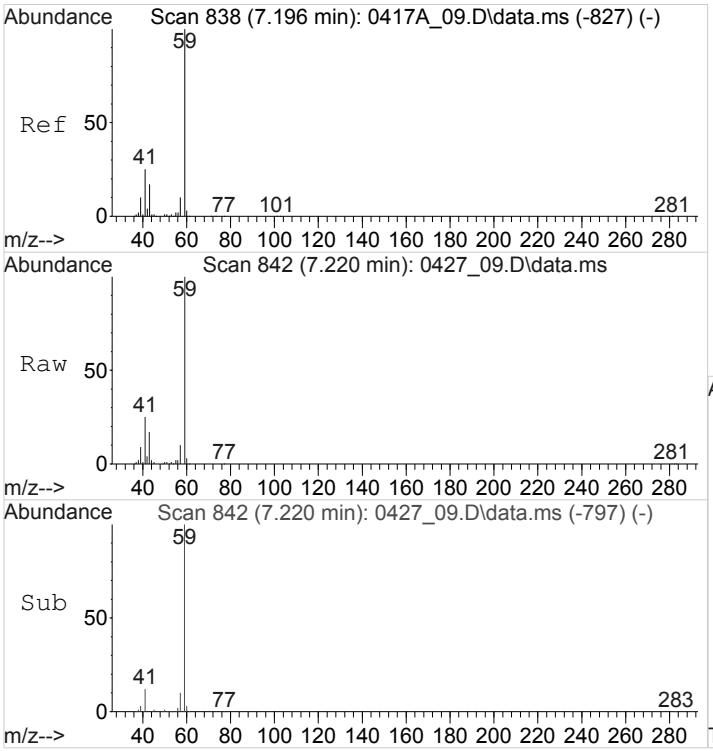


#21
Methylene Chloride
Concen: 14.8273842 ppbv
RT: 7.065 min Scan# 817
Delta R.T. 0.003 min
Lab File: 0427_09.D
Acq: 27 Apr 2018 2:56 pm

Tgt Ion: 49 Resp: 109604

Ion	Ratio	Lower	Upper
49	100		
84	85.8	39.4	59.2#
86	439.1	24.5	36.7#
51	91.9	23.8	35.8#

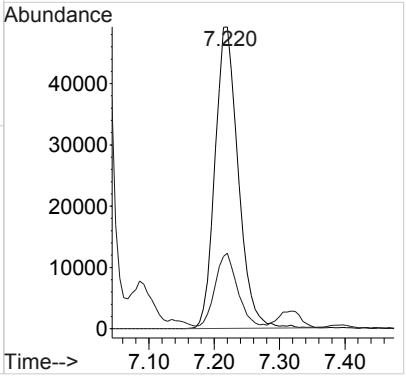


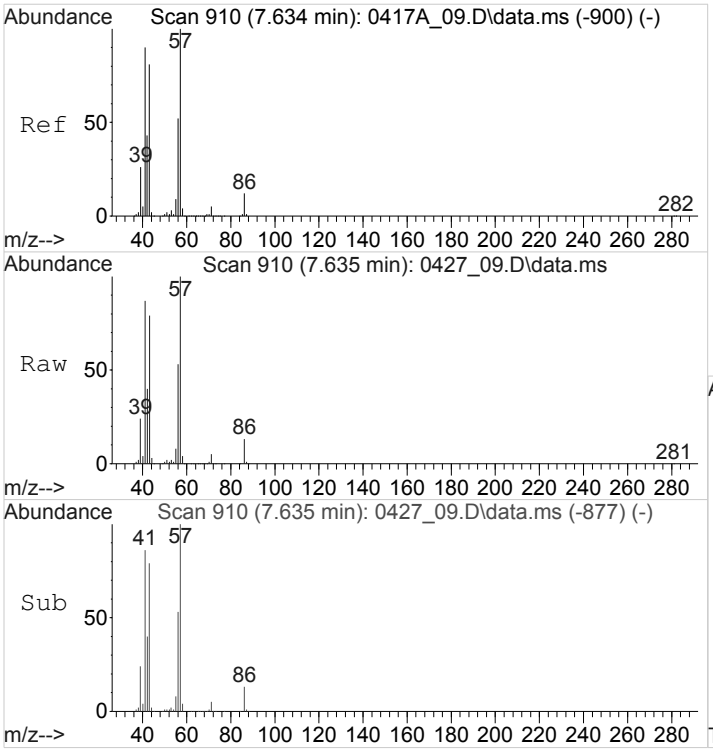


#22
TERT-BUTYL ALCOHOL
Concen: 90.8947595 ppbv
RT: 7.220 min Scan# 842
Delta R.T. 0.024 min
Lab File: 0427_09.D
Acq: 27 Apr 2018 2:56 pm

Tgt Ion: 59 Resp: 1221965

Ion	Ratio	Lower	Upper
59	100		
41	0.0	19.8	29.6#

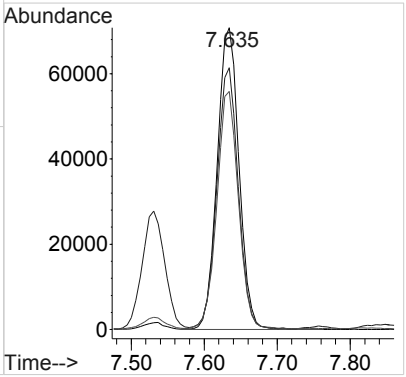


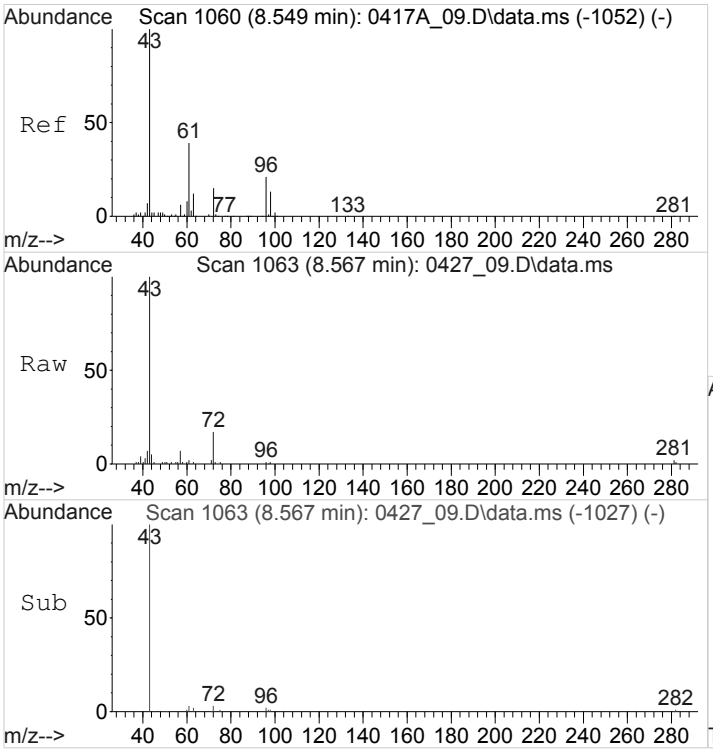


#25
n-Hexane
Concen: 161.1079589 ppbv
RT: 7.636 min Scan# 910
Delta R.T. 0.000 min
Lab File: 0427_09.D
Acq: 27 Apr 2018 2:56 pm

Tgt Ion: 57 Resp: 1474928

Ion	Ratio	Lower	Upper
57	100		
41	85.1	72.7	109.1
43	77.4	64.1	96.1

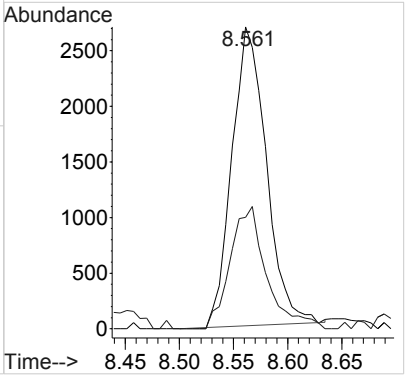


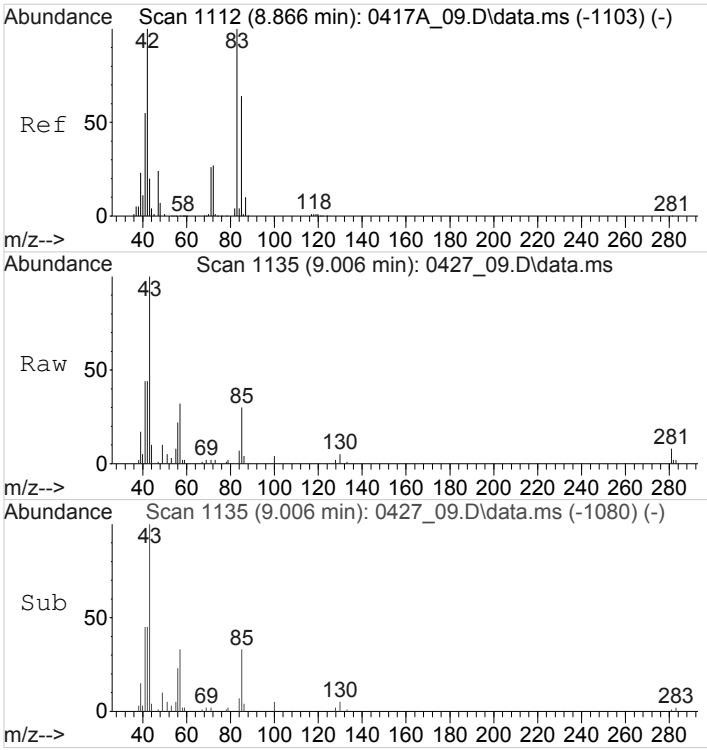


#29
2-Butanone (MEK)
Concen: 22.8929965 ppbv
RT: 8.565 min Scan# 1063
Delta R.T. 0.017 min
Lab File: 0427_09.D
Acq: 27 Apr 2018 2:56 pm

Tgt Ion: 72 Resp: 59185

Ion	Ratio	Lower	Upper
72	100		
57	43.3	29.0	43.4

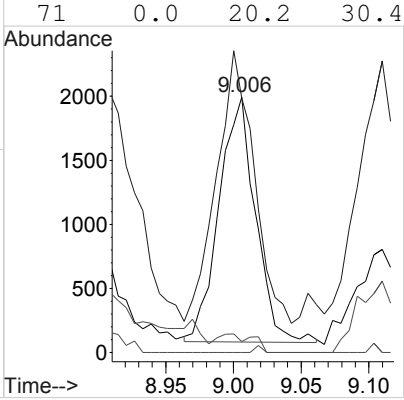


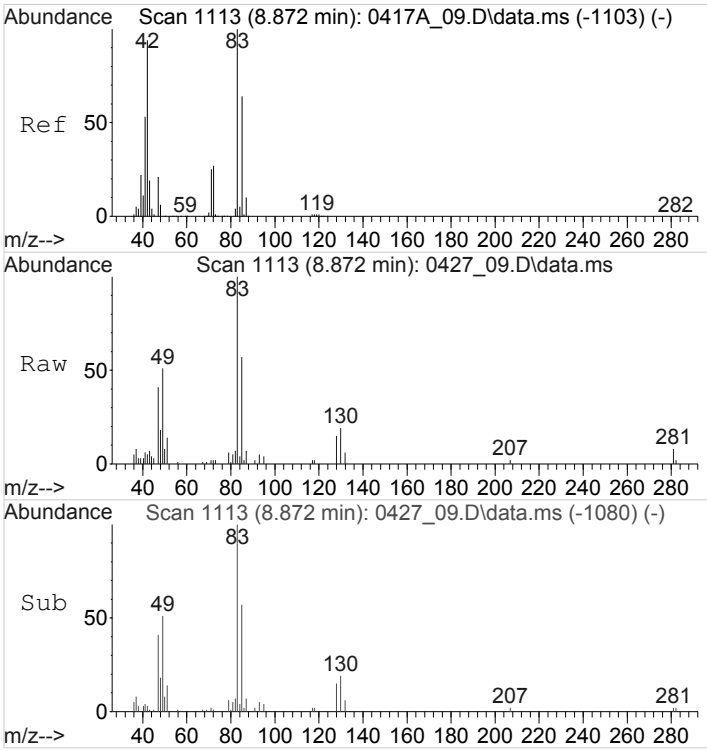


#31
Tetrahydrofuran
Concen: 3.8235185 ppbv
RT: 9.006 min Scan# 1135
Delta R.T. 0.138 min
Lab File: 0427_09.D
Acq: 27 Apr 2018 2:56 pm

Tgt Ion: 42 Resp: 35981

Ion	Ratio	Lower	Upper
42	100		
41	116.9	43.9	65.9#
72	0.0	21.9	32.9#
71	0.0	20.2	30.4#

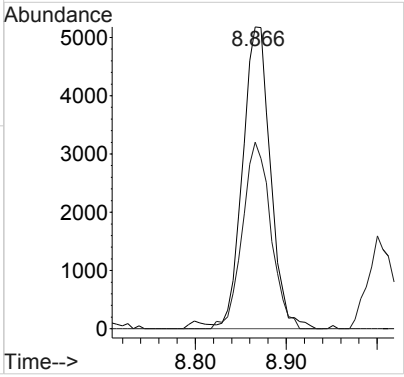


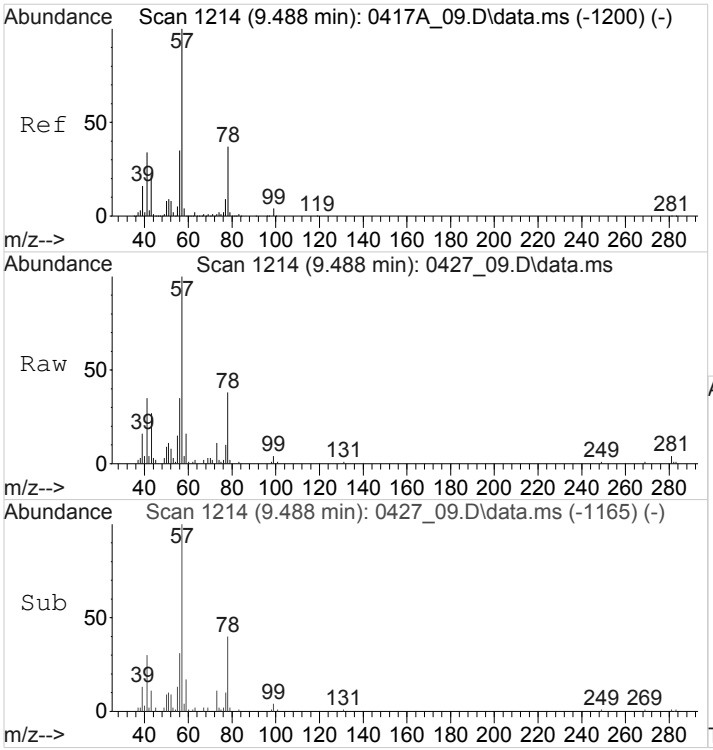


#32
Chloroform
Concen: 11.9506128 ppbv
RT: 8.870 min Scan# 1113
Delta R.T. 0.001 min
Lab File: 0427_09.D
Acq: 27 Apr 2018 2:56 pm

Tgt Ion: 83 Resp: 111492

Ion	Ratio	Lower	Upper
83	100		
85	62.3	50.4	75.6

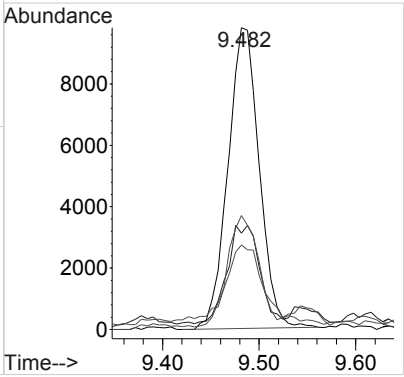


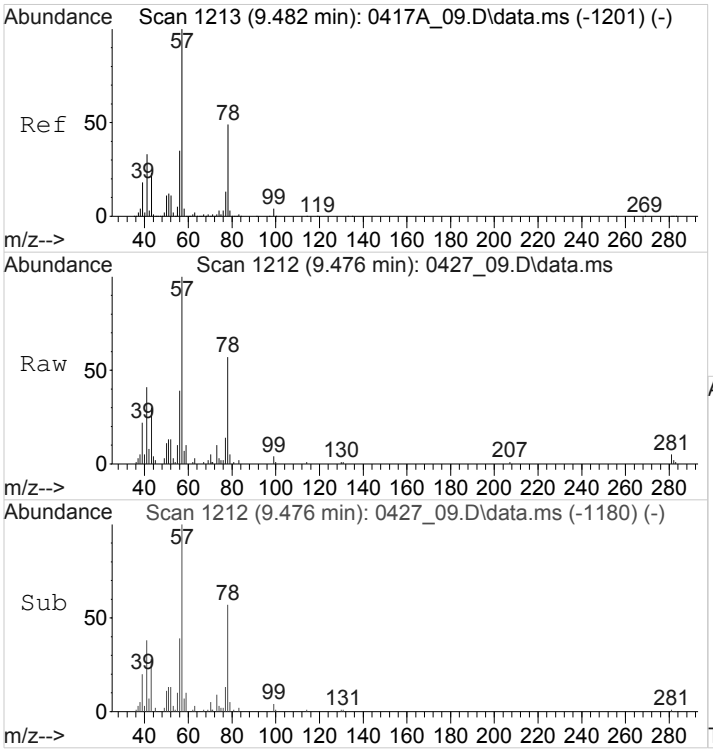


#36
2,2,4-Trimethylpentane
Concen: 6.7191919 ppbv
RT: 9.487 min Scan# 1214
Delta R.T. -0.001 min
Lab File: 0427_09.D
Acq: 27 Apr 2018 2:56 pm

Tgt Ion: 57 Resp: 220800

Ion	Ratio	Lower	Upper
57	100		
41	31.4	26.6	40.0
43	30.2	18.1	27.1#
56	32.6	27.7	41.5

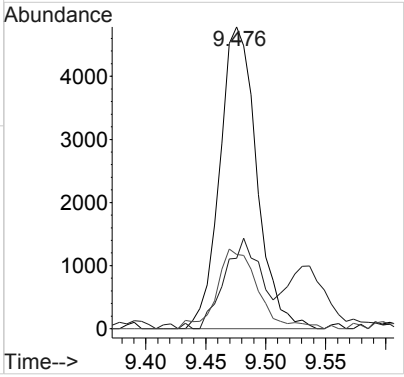


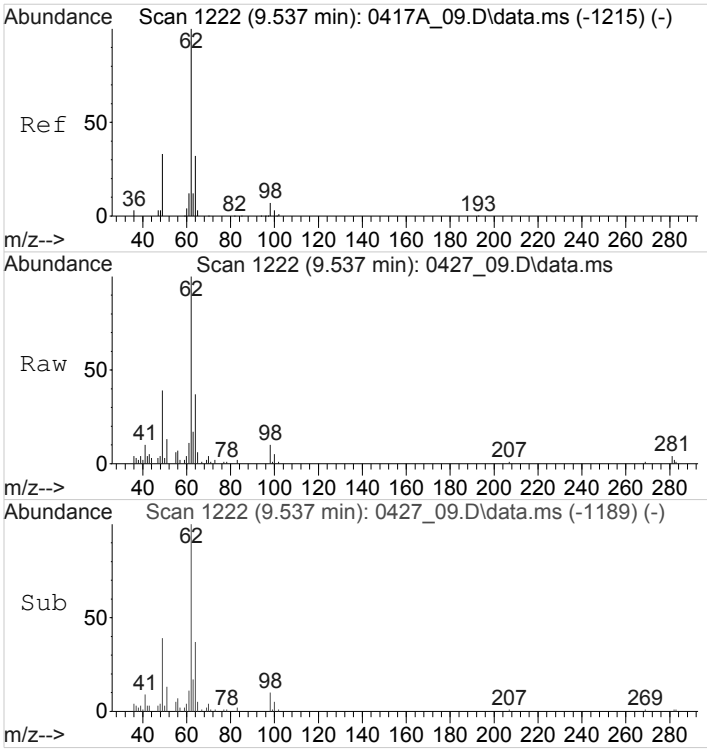


#38
Benzene
Concen: 6.5016006 ppbv
RT: 9.478 min Scan# 1212
Delta R.T. -0.001 min
Lab File: 0427_09.D
Acq: 27 Apr 2018 2:56 pm

Tgt Ion: 78 Resp: 102852

Ion	Ratio	Lower	Upper
78	100		
51	0.0	16.6	24.8#
77	29.2	19.9	29.9

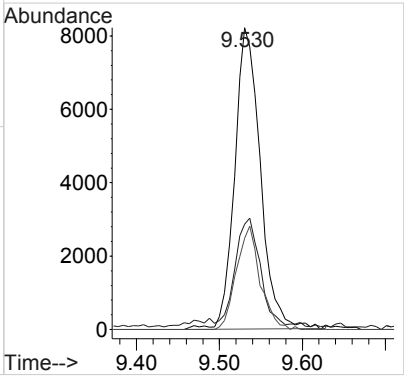


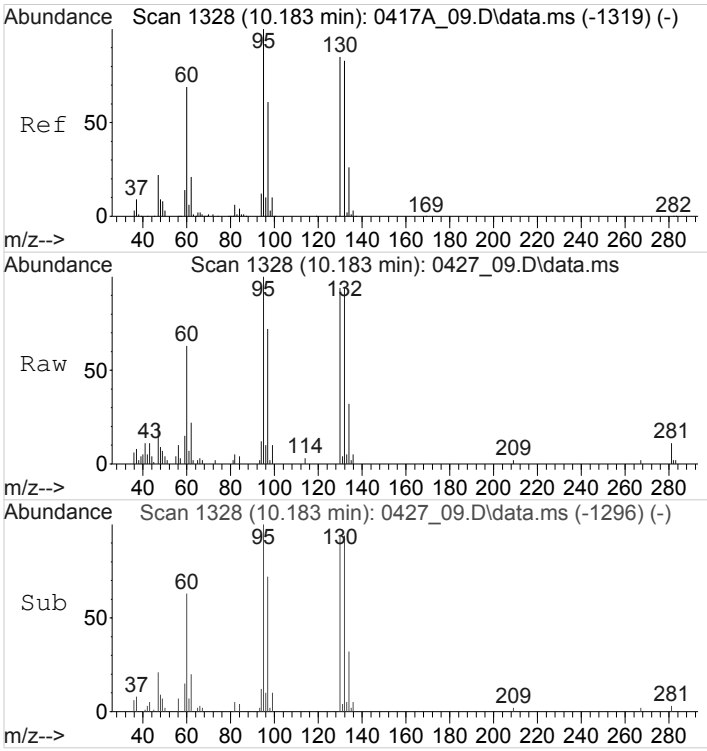


#39
1,2-Dichloroethane
Concen: 22.1998474 ppbv
RT: 9.535 min Scan# 1222
Delta R.T. 0.001 min
Lab File: 0427_09.D
Acq: 27 Apr 2018 2:56 pm

Tgt Ion: 62 Resp: 176931

Ion	Ratio	Lower	Upper
62	100		
49	37.7	28.8	43.2
64	31.7	25.4	38.2

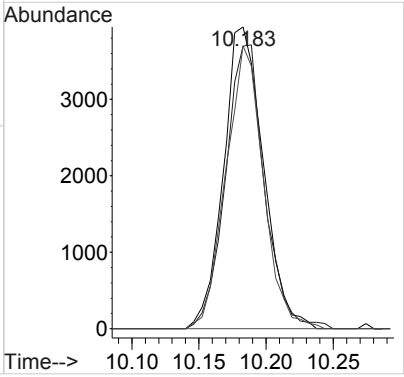


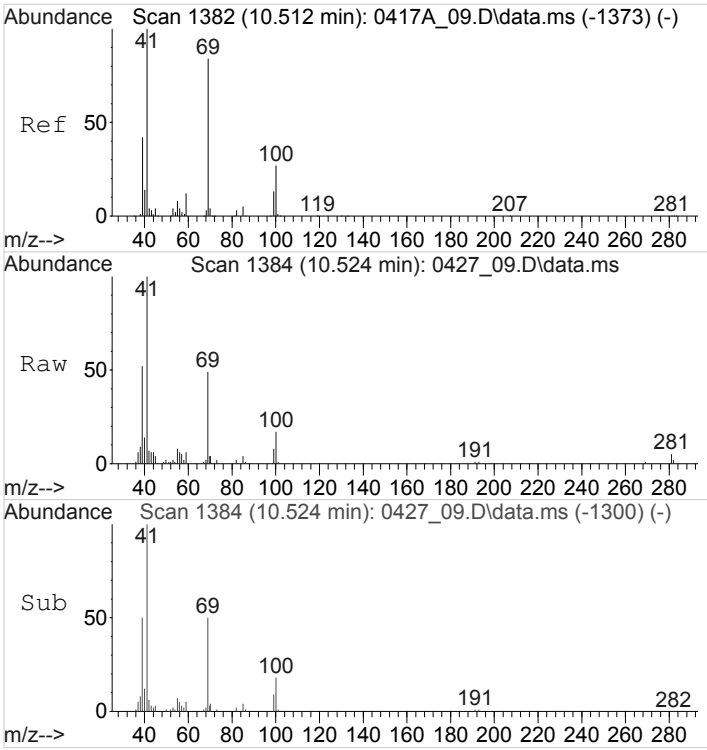


#41
Trichloroethene
Concen: 14.1554836 ppbv
RT: 10.184 min Scan# 1328
Delta R.T. -0.001 min
Lab File: 0427_09.D
Acq: 27 Apr 2018 2:56 pm

Tgt Ion: 95 Resp: 81480

Ion	Ratio	Lower	Upper
95	100		
130	92.1	69.2	103.8
132	88.1	66.3	99.5

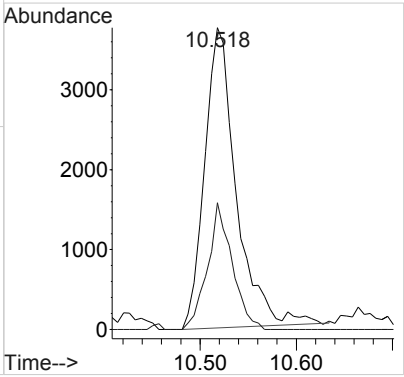


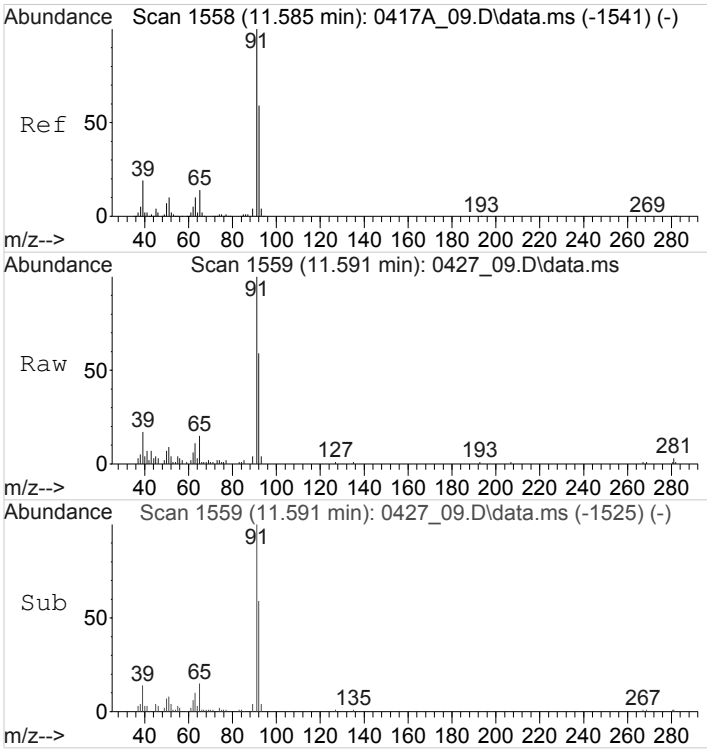


#45
Methyl Methacrylate
Concen: 14.4605084 ppbv
RT: 10.522 min Scan# 1384
Delta R.T. 0.012 min
Lab File: 0427_09.D
Acq: 27 Apr 2018 2:56 pm

Tgt Ion: 69 Resp: 85302

Ion	Ratio	Lower	Upper
69	100		
100	33.0	25.6	38.4

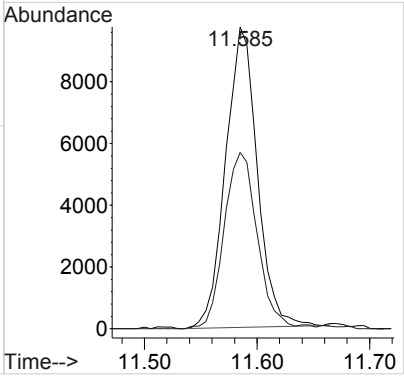


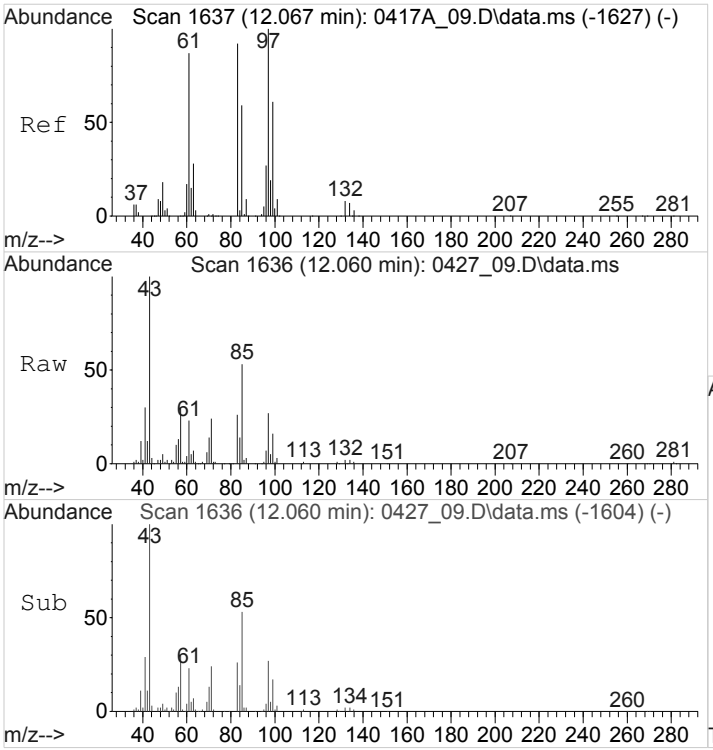


#50
Toluene
Concen: 11.1507733 ppbv
RT: 11.589 min Scan# 1559
Delta R.T. 0.004 min
Lab File: 0427_09.D
Acq: 27 Apr 2018 2:56 pm

Tgt Ion: 91 Resp: 190326

Ion	Ratio	Lower	Upper
91	100		
92	60.6	47.5	71.3

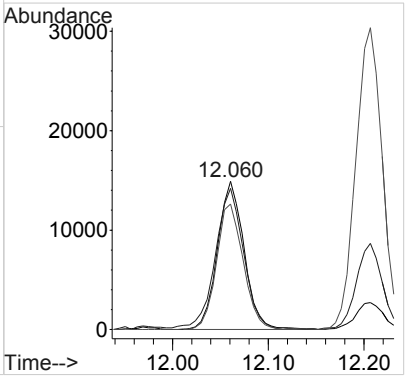


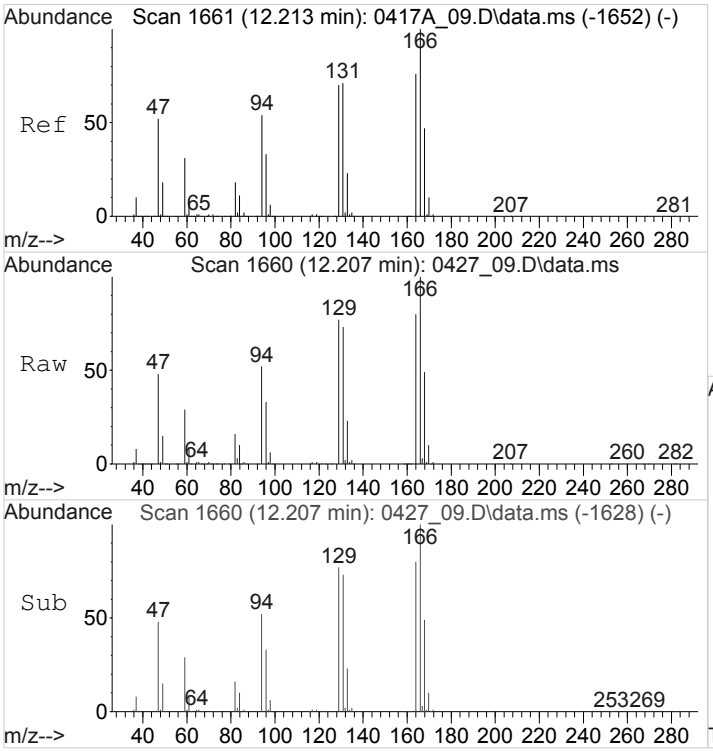


#52
1,1,2-Trichloroethane
Concen: 54.5984241 ppbv
RT: 12.063 min Scan# 1636
Delta R.T. -0.001 min
Lab File: 0427_09.D
Acq: 27 Apr 2018 2:56 pm

Tgt Ion: 97 Resp: 288367

Ion	Ratio	Lower	Upper
97	100		
83	98.9	75.2	112.8
61	83.7	71.4	107.2

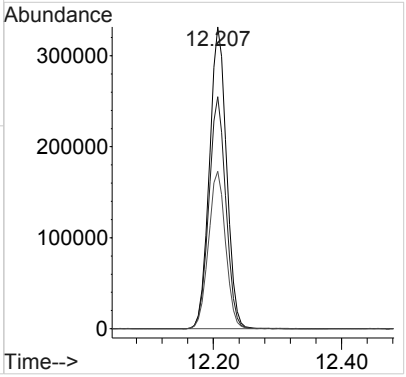


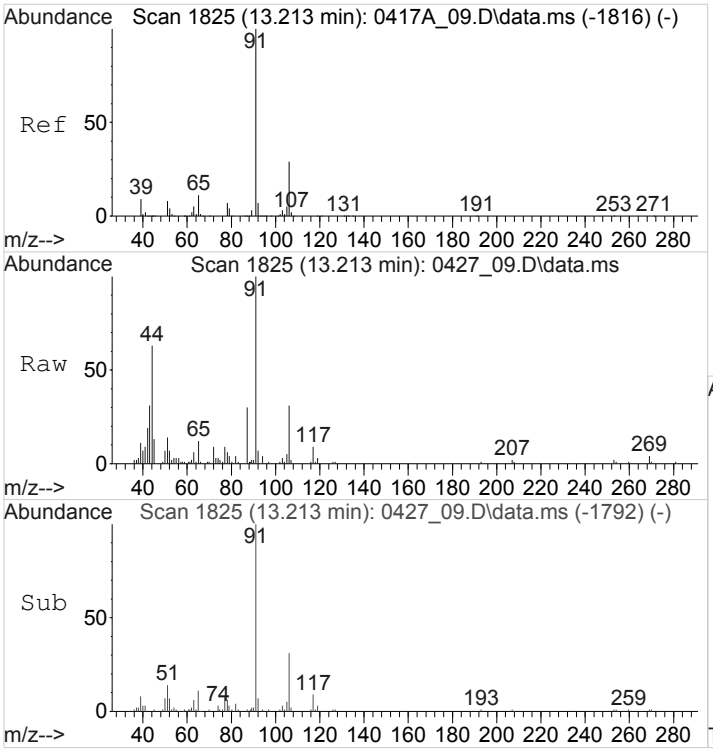


#53
Tetrachloroethene
Concen: 954.5696877 ppbv
RT: 12.210 min Scan# 1660
Delta R.T. -0.001 min
Lab File: 0427_09.D
Acq: 27 Apr 2018 2:56 pm

Tgt Ion:166 Resp: 6161000

Ion	Ratio	Lower	Upper
166	100		
129	75.9	59.6	89.4
94	52.0	45.2	67.8

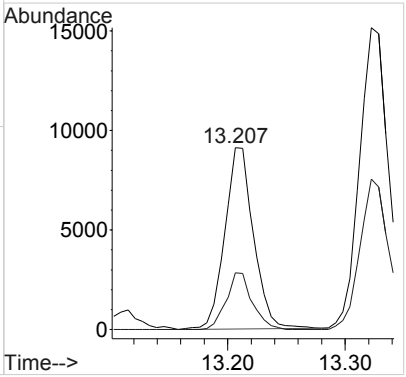


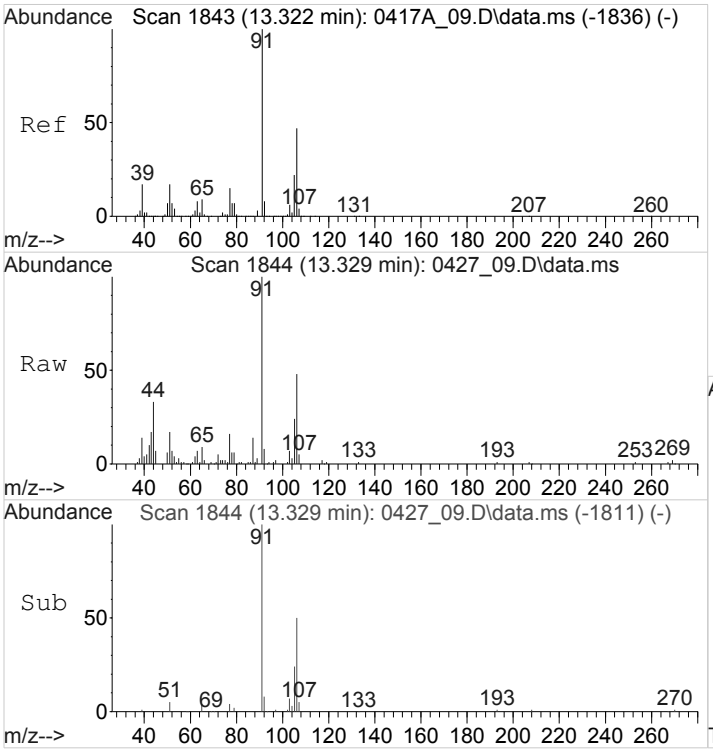


#59
Ethylbenzene
Concen: 6.2984992 ppbv
RT: 13.212 min Scan# 1825
Delta R.T. 0.002 min
Lab File: 0427_09.D
Acq: 27 Apr 2018 2:56 pm

Tgt Ion: 91 Resp: 154011

Ion	Ratio	Lower	Upper
91	100		
106	0.0	22.6	34.0#

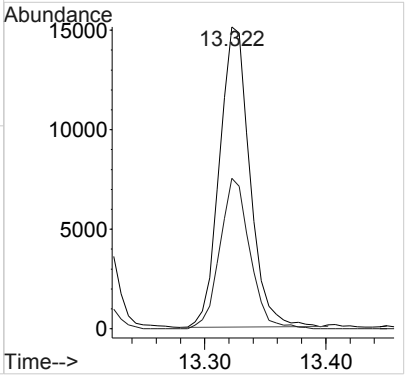


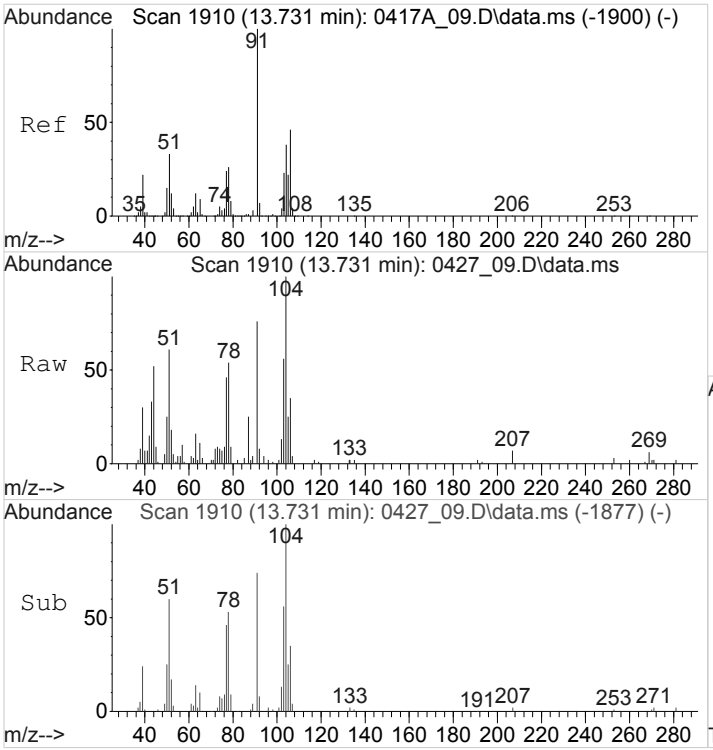


#60
M&P-Xylene
Concen: 13.9428497 ppbv
RT: 13.327 min Scan# 1844
Delta R.T. 0.003 min
Lab File: 0427_09.D
Acq: 27 Apr 2018 2:56 pm

Tgt Ion: 91 Resp: 262550

Ion	Ratio	Lower	Upper
91	100		
106	49.5	37.4	56.2

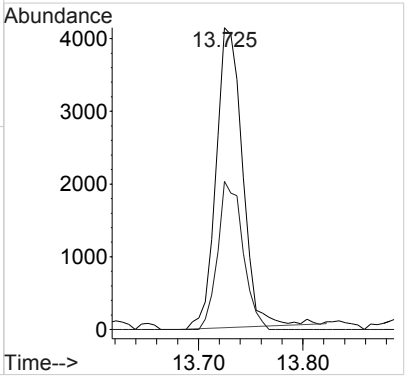


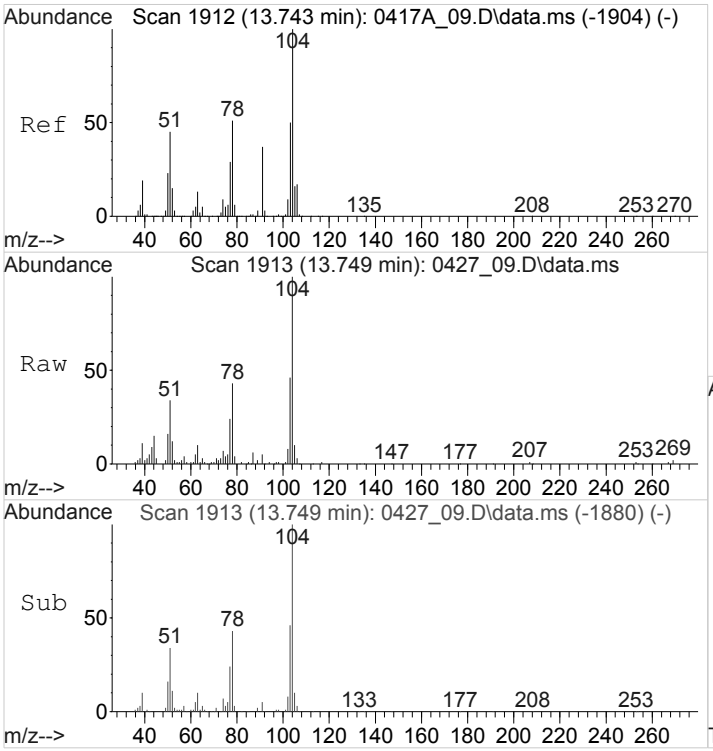


#61
O-Xylene
Concen: 3.8515063 ppbv
RT: 13.731 min Scan# 1910
Delta R.T. 0.002 min
Lab File: 0427_09.D
Acq: 27 Apr 2018 2:56 pm

Tgt Ion: 91 Resp: 72536

Ion	Ratio	Lower	Upper
91	100		
106	47.2	35.9	53.9

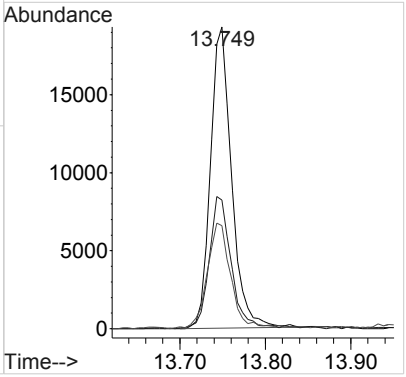




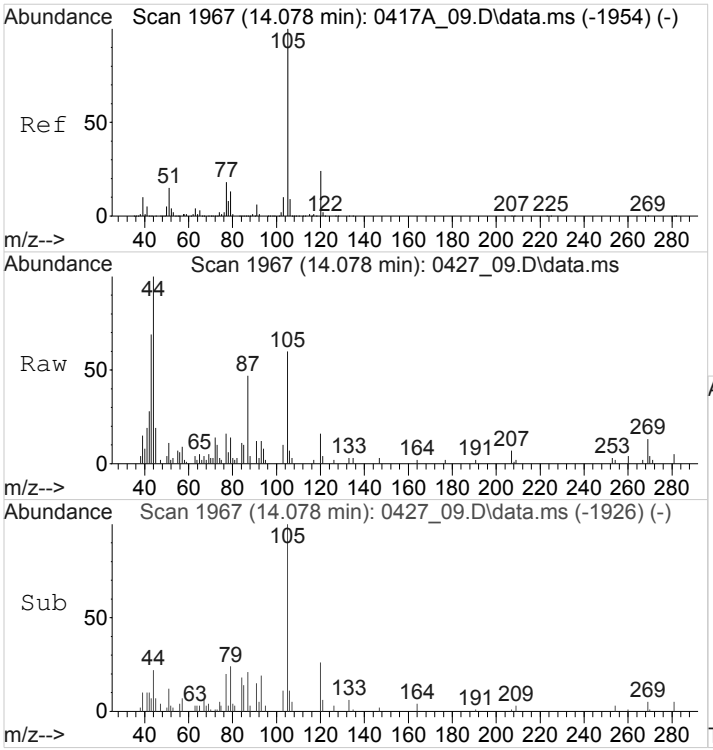
#62
Styrene
Concen: 23.7365964 ppbv
RT: 13.750 min Scan# 1913
Delta R.T. 0.004 min
Lab File: 0427_09.D
Acq: 27 Apr 2018 2:56 pm

Tgt Ion:104 Resp: 332787

Ion	Ratio	Lower	Upper
104	100		
78	46.4	45.6	68.4
51	38.6	49.6	74.4#



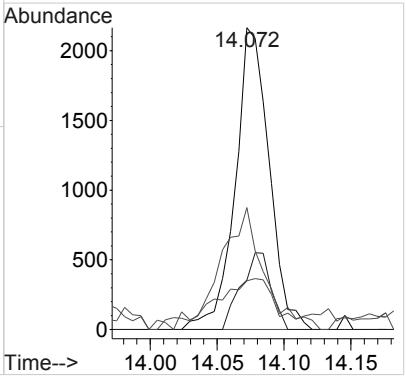
ACCOUNT:	PROJECT:	SDG:	DATE/TIME:	PAGE:
S&ME Inc. - Knoxville	4143-17-016	L988471	05/16/18 11:18	231 of 698

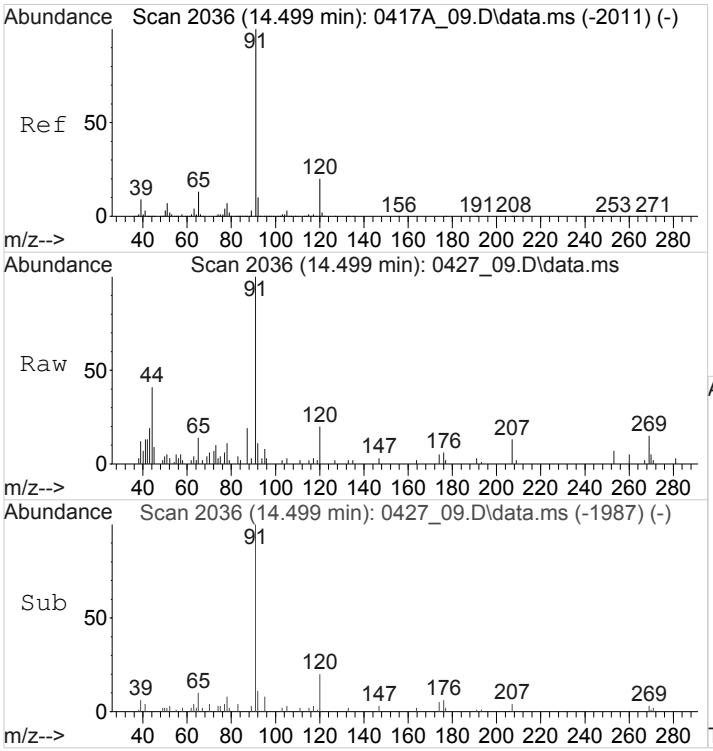


#64
Isopropylbenzene
Concen: 1.5449750 ppbv
RT: 14.078 min Scan# 1967
Delta R.T. -0.001 min
Lab File: 0427_09.D
Acq: 27 Apr 2018 2:56 pm

Tgt Ion:105 Resp: 38219

Ion	Ratio	Lower	Upper
105	100		
120	0.0	19.4	29.2#
77	0.0	15.0	22.4#
51	0.0	12.9	19.3#

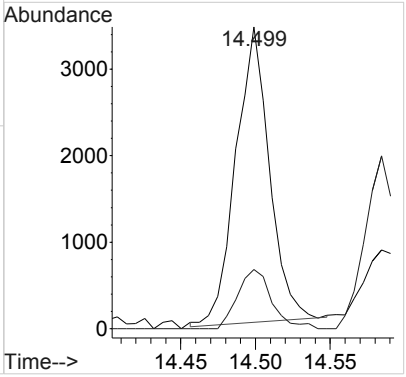


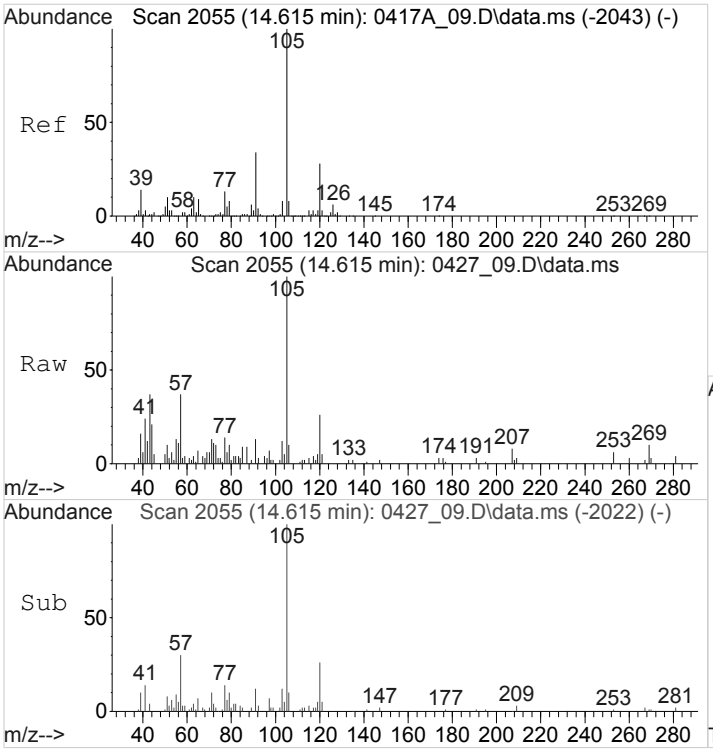


#66
n-Propylbenzene
Concen: 1.6986919 ppbv
RT: 14.501 min Scan# 2036
Delta R.T. 0.004 min
Lab File: 0427_09.D
Acq: 27 Apr 2018 2:56 pm

Tgt Ion: 91 Resp: 53027

Ion	Ratio	Lower	Upper
91	100		
120	87.3	15.3	22.9#

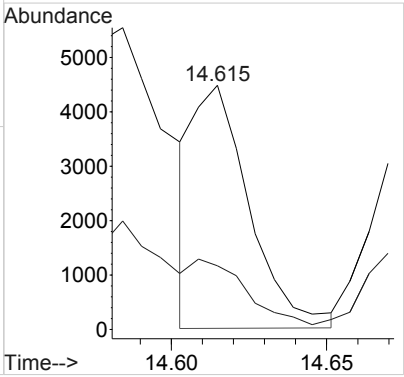


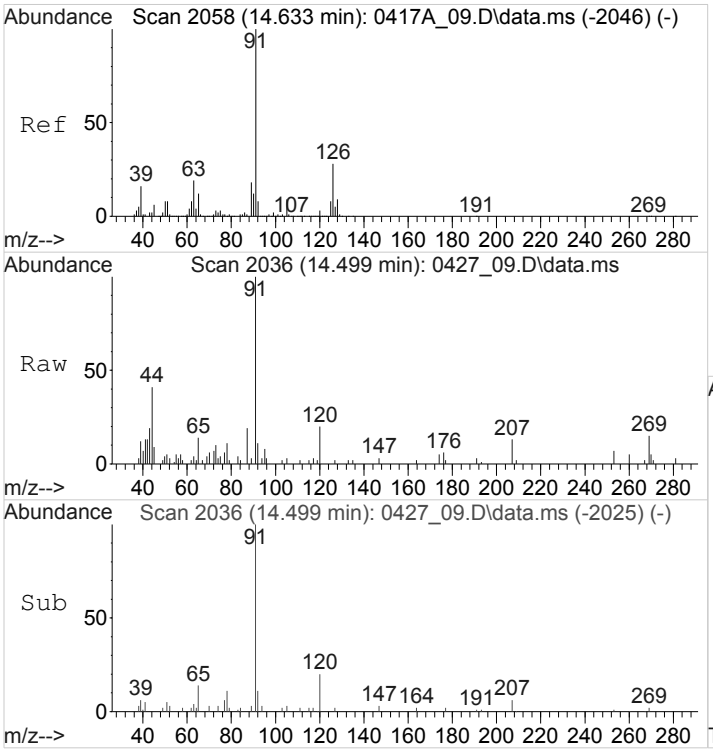


#67
4-Ethyltoluene
Concen: 2.5621650 ppbv
RT: 14.616 min Scan# 2055
Delta R.T. 0.003 min
Lab File: 0427_09.D
Acq: 27 Apr 2018 2:56 pm

Tgt Ion:105 Resp: 64479

Ion	Ratio	Lower	Upper
105	100		
120	0.0	21.8	32.6#

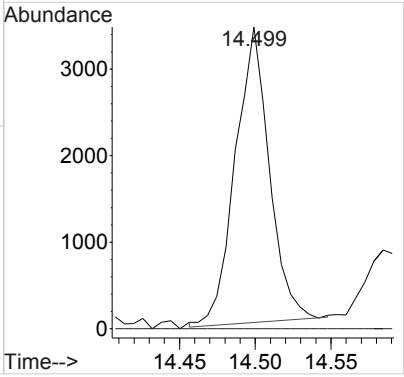


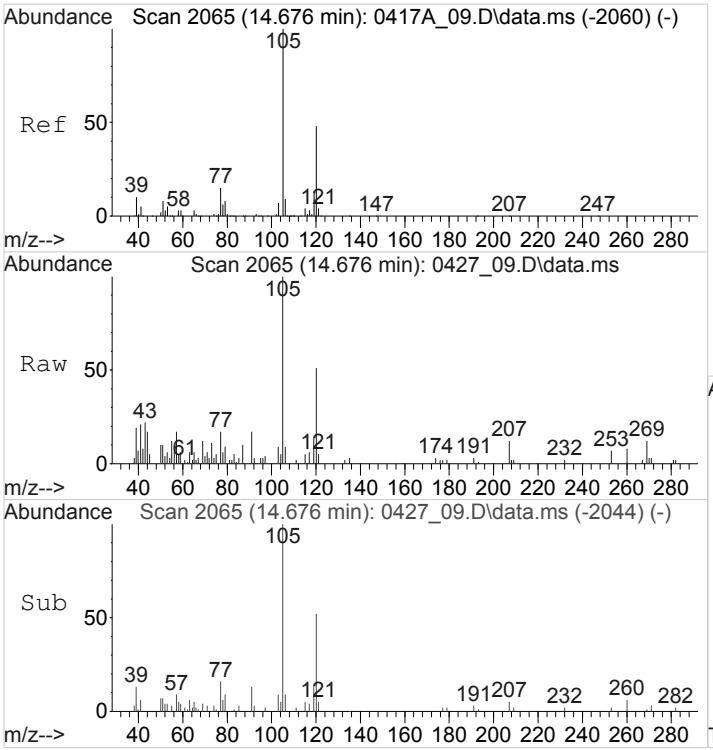


#68
2-Chlorotoluene
Concen: 2.4472192 ppbv
RT: 14.502 min Scan# 2036
Delta R.T. -0.132 min
Lab File: 0427_09.D
Acq: 27 Apr 2018 2:56 pm

Tgt Ion: 91 Resp: 53053

Ion	Ratio	Lower	Upper
91	100		
126	0.0	19.7	29.5#

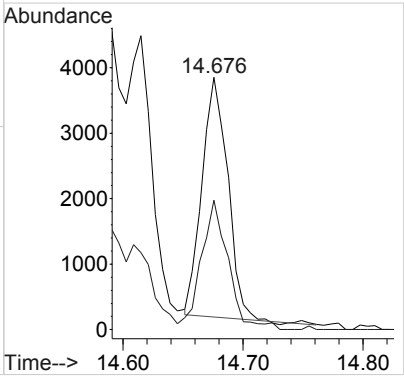


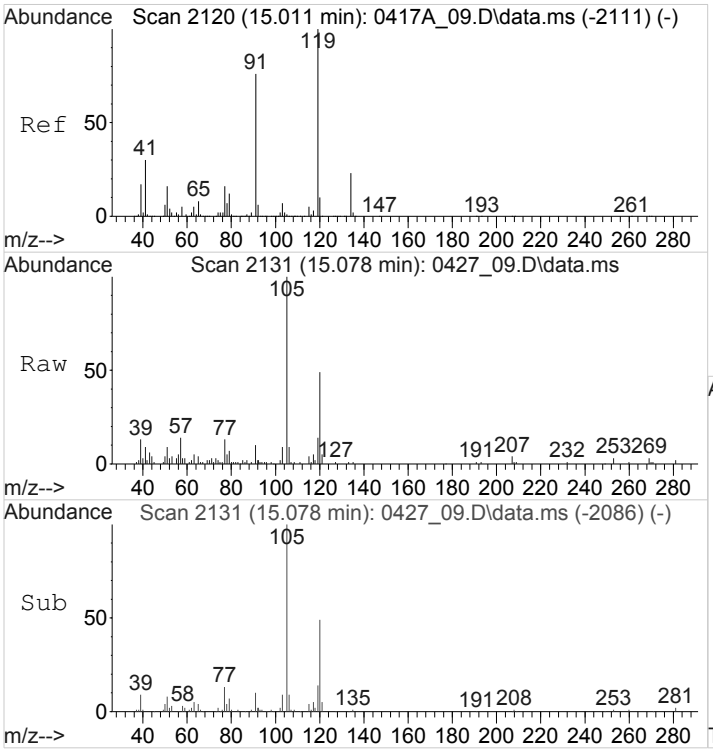


#70
1,3,5-Trimethylbenzene
Concen: 2.6356753 ppbv
RT: 14.678 min Scan# 2065
Delta R.T. 0.002 min
Lab File: 0427_09.D
Acq: 27 Apr 2018 2:56 pm

Tgt Ion:105 Resp: 55240

Ion	Ratio	Lower	Upper
105	100		
120	53.8	38.0	57.0

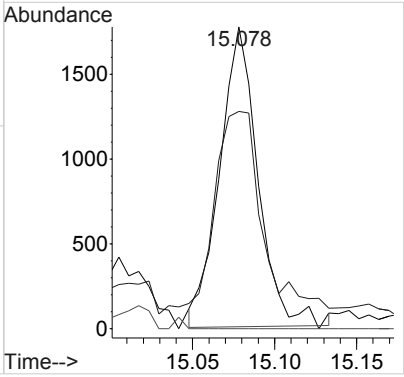


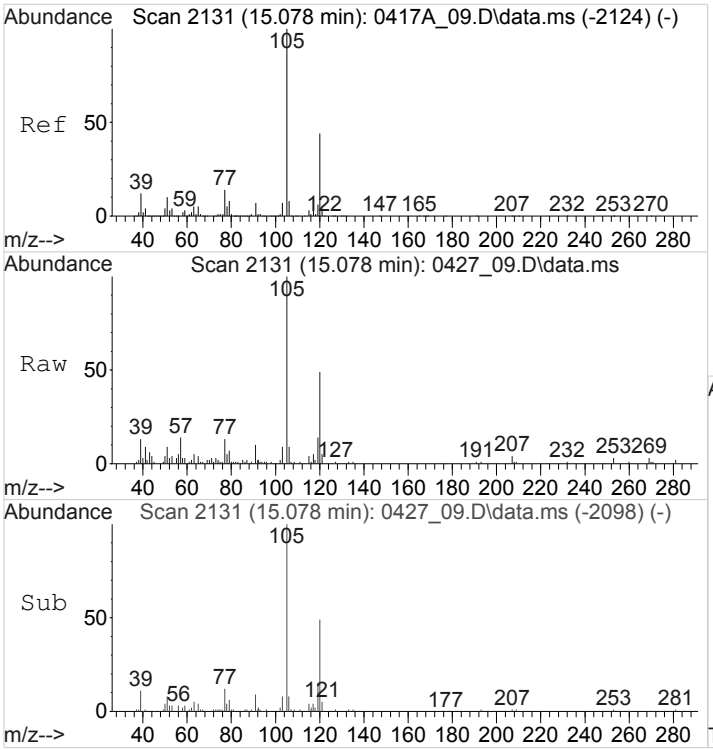


#71
tert-Butylbenzene
Concen: 1.5363884 ppbv
RT: 15.080 min Scan# 2131
Delta R.T. 0.067 min
Lab File: 0427_09.D
Acq: 27 Apr 2018 2:56 pm

Tgt Ion:119 Resp: 28853

Ion	Ratio	Lower	Upper
119	100		
91	96.3	60.2	90.2#
134	0.0	18.5	27.7#

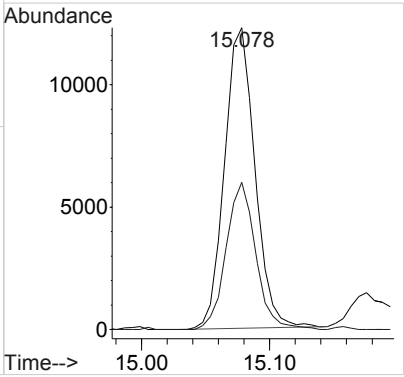


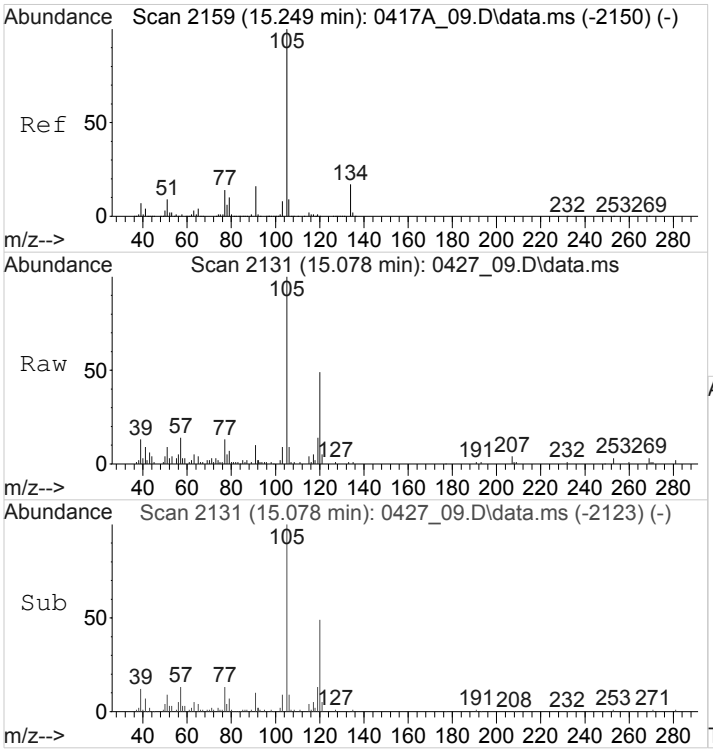


#72
1,2,4-Trimethylbenzene
Concen: 10.0152718 ppbv
RT: 15.079 min Scan# 2131
Delta R.T. 0.002 min
Lab File: 0427_09.D
Acq: 27 Apr 2018 2:56 pm

Tgt Ion:105 Resp: 202217

Ion	Ratio	Lower	Upper
105	100		
120	47.4	35.6	53.4

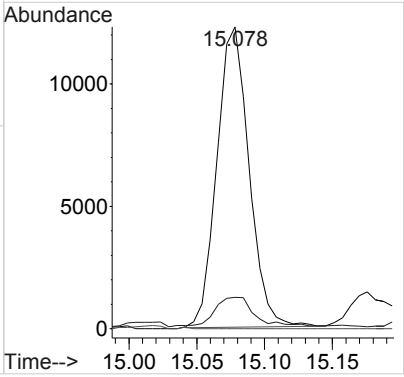


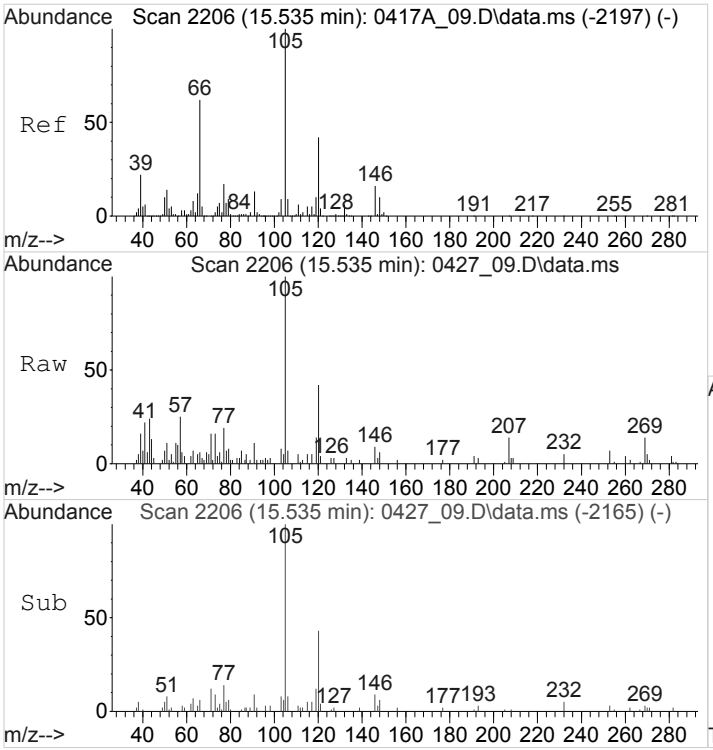


#73
sec-Butylbenzene
Concen: 6.5774902 ppbv
RT: 15.079 min Scan# 2131
Delta R.T. -0.168 min
Lab File: 0427_09.D
Acq: 27 Apr 2018 2:56 pm

Tgt Ion:105 Resp: 201161

Ion	Ratio	Lower	Upper
105	100		
91	10.8	13.1	19.7#
134	0.0	13.5	20.3#

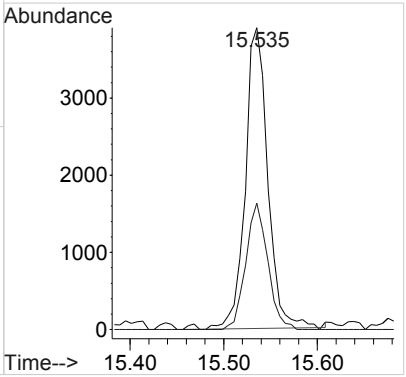


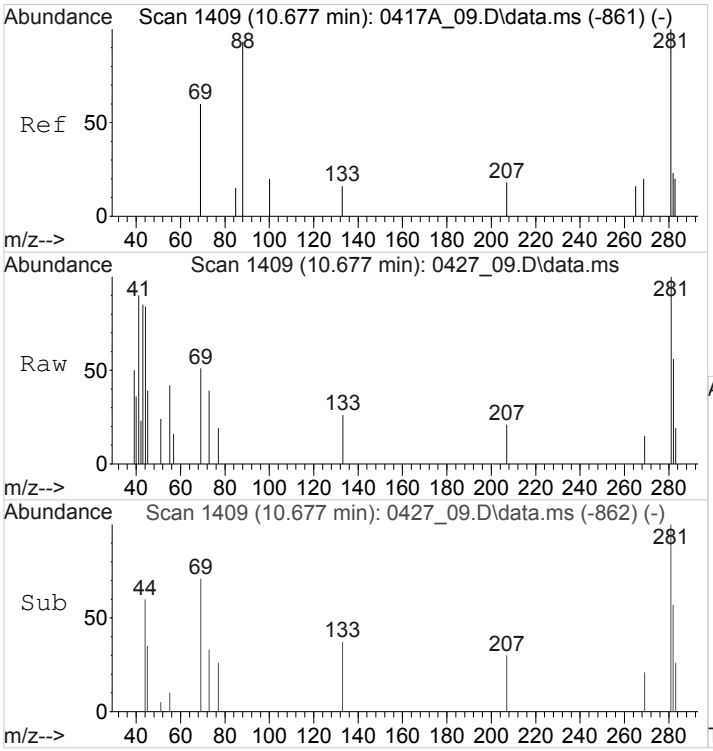


#76
1,2,3-TRIMETHYLBENZENE
Concen: 3.1132661 ppbv
RT: 15.537 min Scan# 2206
Delta R.T. 0.002 min
Lab File: 0427_09.D
Acq: 27 Apr 2018 2:56 pm

Tgt Ion:105 Resp: 65141

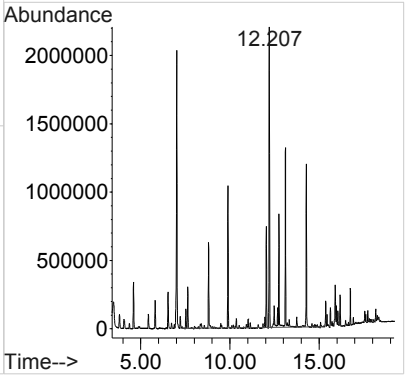
Ion	Ratio	Lower	Upper
105	100		
120	41.0	32.7	49.1





#84
TPH (GC/MS) Low Fraction
Concen: 2096.4635514 ppbv m
RT: 10.675 min Scan# 1409
Delta R.T. 0.000 min
Lab File: 0427_09.D
Acq: 27 Apr 2018 2:56 pm

Tgt Ion:TIC Resp:105042371



1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS-6

ESC Sample ID:	L988471-06	**SDG:**	L988471
Client Sample ID:	SS-6	**Collected Date/Time:**	04/23/18 11:14
Lab File ID:	0426_17	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/26/18 19:20
Analytical Batch:	WG1103323	**Analysis Date/Time:**	04/26/18 19:20
Dilution Factor:	1	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	RT	Result	Qualifier	MDL	RDL
			ppbv		*ppbv*	*ppbv*
Acetone	67-64-1	5.50	ND		0.0569	1.25
Allyl chloride	107-05-1	0	ND		0.0546	0.200
Benzene	71-43-2	7.81	0.591		0.0460	0.200
Benzyl Chloride	100-44-7	0	ND		0.0598	0.200
Bromodichloromethane	75-27-4	0	ND		0.0436	0.200
Bromoform	75-25-2	0	ND		0.0786	0.600
Bromomethane	74-83-9	0	ND		0.0609	0.200
1,3-Butadiene	106-99-0	0	ND		0.0563	2.00
Carbon disulfide	75-15-0	5.69	0.233		0.0544	0.200
Carbon tetrachloride	56-23-5	0	ND		0.0585	0.200
Chlorobenzene	108-90-7	0	ND		0.0601	0.200
Chloroethane	75-00-3	0	ND		0.0489	0.200
Chloroform	67-66-3	7.26	ND		0.0574	0.200
Chloromethane	74-87-3	3.94	ND		0.0544	0.200
2-Chlorotoluene	95-49-8	0	ND		0.0605	0.200
Cyclohexane	110-82-7	7.48	1.35		0.0534	0.200
Dibromochloromethane	124-48-1	0	ND		0.0494	0.200
1,2-Dibromoethane	106-93-4	0	ND		0.0185	0.200
1,2-Dichlorobenzene	95-50-1	0	ND		0.0603	0.200
1,3-Dichlorobenzene	541-73-1	0	ND		0.0597	0.200
1,4-Dichlorobenzene	106-46-7	0	ND		0.0557	0.200
1,2-Dichloroethane	107-06-2	0	ND		0.0616	0.200
1,1-Dichloroethane	75-34-3	0	ND		0.0514	0.200
1,1-Dichloroethene	75-35-4	0	ND		0.0490	0.200
cis-1,2-Dichloroethene	156-59-2	7.02	0.223		0.0389	0.200
trans-1,2-Dichloroethene	156-60-5	0	ND		0.0464	0.200
1,2-Dichloropropane	78-87-5	0	ND		0.0599	0.200
cis-1,3-Dichloropropene	10061-01-5	0	ND		0.0588	0.200
trans-1,3-Dichloropropene	10061-02-6	0	ND		0.0435	0.200
1,4-Dioxane	123-91-1	0	ND		0.0554	0.200
Ethanol	64-17-5	5.06	0.931		0.0832	0.630
Ethylbenzene	100-41-4	11.29	ND		0.0506	0.200
4-Ethyltoluene	622-96-8	12.79	ND		0.0666	0.200
Trichlorofluoromethane	75-69-4	4.86	0.493		0.0673	0.200
Dichlorodifluoromethane	75-71-8	3.63	0.333		0.0601	0.200
1,1,2-Trichlorotrifluoroethane	76-13-1	5.33	ND		0.0687	0.200
1,2-Dichlorotetrafluoroethane	76-14-2	0	ND		0.0458	0.200
Heptane	142-82-5	7.85	ND		0.0626	0.200
Hexachloro-1,3-butadiene	87-68-3	0	ND		0.0656	0.630
n-Hexane	110-54-3	6.22	0.417		0.0457	0.200
Isopropylbenzene	98-82-8	0	ND		0.0563	0.200
Methylene Chloride	75-09-2	0	ND		0.0465	0.200
Methyl Butyl Ketone	591-78-6	0	ND		0.0682	1.25

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS-6

ESC Sample ID:	L988471-06	**SDG:**	L988471
Client Sample ID:	SS-6	**Collected Date/Time:**	04/23/18 11:14
Lab File ID:	0426_17	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/26/18 19:20
Analytical Batch:	WG1103323	**Analysis Date/Time:**	04/26/18 19:20
Dilution Factor:	1	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	**CAS**	**RT**	**Result**	**Qualifier**	**MDL**	**RDL**
			ppbv		*ppbv*	*ppbv*
2-Butanone (MEK)	78-93-3	7.01	ND		0.0493	1.25
4-Methyl-2-pentanone (MIBK)	108-10-1	0	ND		0.0650	1.25
Methyl methacrylate	80-62-6	0	ND		0.0773	0.200
MTBE	1634-04-4	0	ND		0.0505	0.200
Naphthalene	91-20-3	0	ND		0.154	0.630
2-Propanol	67-63-0	5.53	2.30		0.0882	1.25
Propene	115-07-1	3.58	ND		0.0932	0.400
Styrene	100-42-5	0	ND		0.0465	0.200
1,1,2,2-Tetrachloroethane	79-34-5	0	ND		0.0576	0.200
Tetrahydrofuran	109-99-9	7.30	ND		0.0508	0.200
Toluene	108-88-3	9.66	2.47		0.0499	0.200
1,2,4-Trichlorobenzene	120-82-1	0	ND		0.148	0.630
1,1,1-Trichloroethane	71-55-6	7.47	0.465		0.0665	0.200
1,1,2-Trichloroethane	79-00-5	0	ND		0.0287	0.200
Trichloroethylene	79-01-6	8.39	2.08		0.0545	0.200
1,2,4-Trimethylbenzene	95-63-6	13.25	ND		0.0483	0.200
1,3,5-Trimethylbenzene	108-67-8	12.88	ND		0.0631	0.200
2,2,4-Trimethylpentane	540-84-1	0	ND		0.0456	0.200
Vinyl chloride	75-01-4	0	ND		0.0457	0.200
Vinyl Bromide	593-60-2	0	ND		0.0727	0.200
Vinyl acetate	108-05-4	0	ND		0.0639	0.200
m&p-Xylene	1330-20-7	11.41	0.997		0.0946	0.400
o-Xylene	95-47-6	11.90	0.498		0.0633	0.200

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_17.D
Acq On : 26 Apr 2018 7:20 pm
Operator : 564
Sample : L988471-06 1x WG1103323
Misc :
ALS Vial : 17 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 27 08:51:40 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration

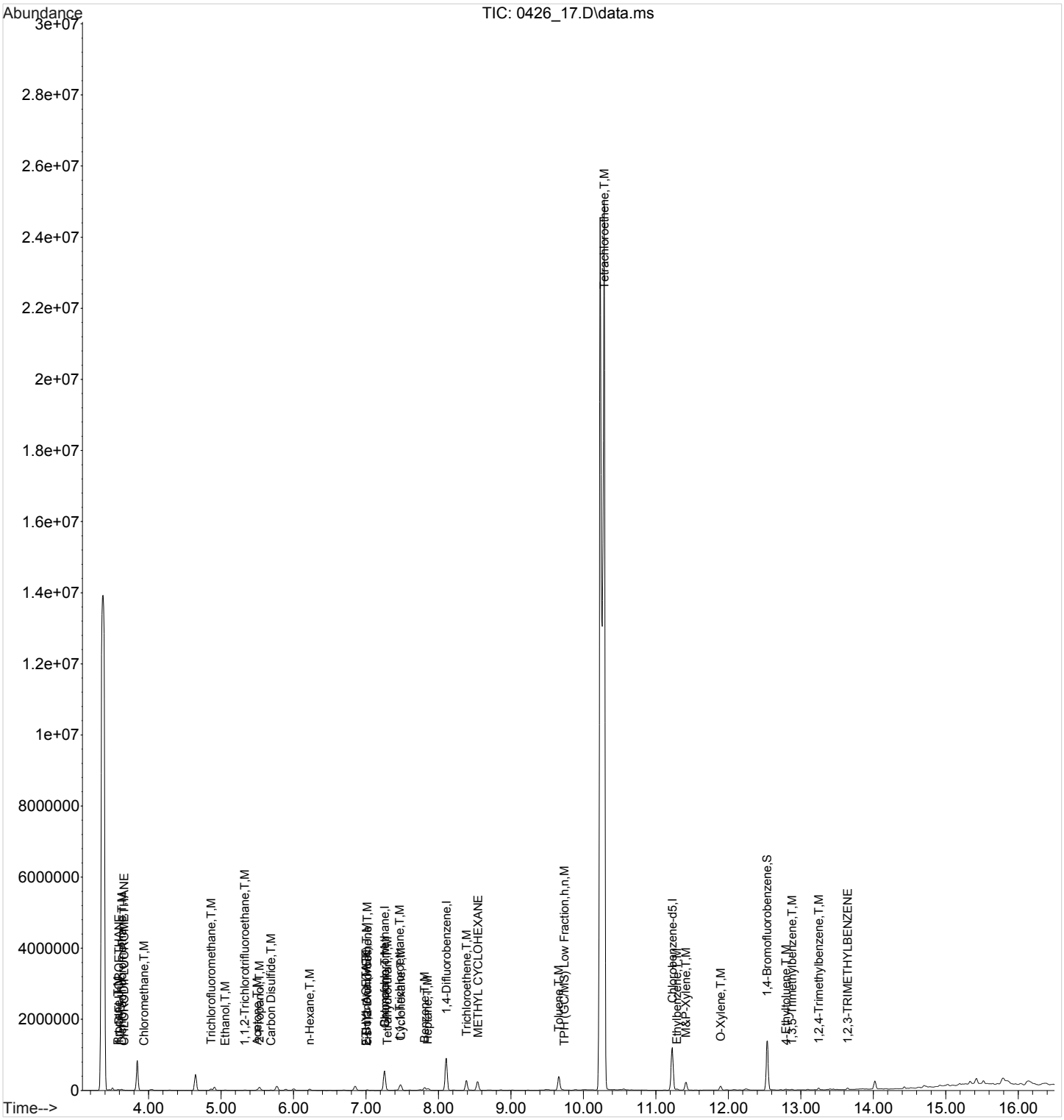
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.256	130	243867	4.0000000	ppbv	0.01
37) 1,4-Difluorobenzene	8.111	114	907244	4.0000000	ppbv	0.01
58) Chlorobenzene-d5	11.228	117	928928	4.0000000	ppbv	0.01
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	12.534	95	544531	3.9078590	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 97.70%			
Target Compounds						Qvalue
2) Propene	3.579	41	6715	0.3386694	ppbv	87
3) 1,1-DIFLUOROETHANE	3.591	51	6614	0.1726379	ppbv	97
4) Dichlorodifluoromethane	3.630	85	20292	0.3332152	ppbv	99
5) CHLORODIFLUOROMETHANE	3.664	51	8133	0.2217748	ppbv	99
7) Chloromethane	3.936	50	1608	0.0662177	ppbv #	42
13) Trichlorofluoromethane	4.864	101	33553	0.4927257	ppbv	99
14) Ethanol	5.056	45	10987	0.9305289	ppbv	98
15) 1,1,2-Trichlorotrifluo...	5.327	101	5266	0.0832705	ppbv	97
17) Acetone	5.497	58	7397	0.4932531	ppbv	76
18) 2-Propanol	5.531	45	133001	2.3010570	ppbv #	23
19) Carbon Disulfide	5.689	76	16032	0.2327062	ppbv #	83
25) n-Hexane	6.221	57	20054	0.4168215	ppbv	98
28) ETHYL ACETATE	7.002	43	3997	0.0614110	ppbv #	65
29) 2-Butanone (MEK)	7.008	72	1270	0.0653565	ppbv #	47
30) cis-1,2-Dichloroethene	7.019	96	8674	0.2234852	ppbv	94
31) Tetrahydrofuran	7.296	42	2476	0.0644096	ppbv #	34
32) Chloroform	7.262	83	11962	0.1713670	ppbv #	54
33) Cyclohexane	7.483	84	67390	1.3543488	ppbv	96
34) 1,1,1-Trichloroethane	7.466	97	32338	0.4649830	ppbv	98
38) Benzene	7.811	78	67225	0.5909950	ppbv	98
40) Heptane	7.850	43	8576	0.1526569	ppbv #	85
41) Trichloroethene	8.388	95	103153	2.0806591	ppbv	95
43) METHYL CYCLOHEXANE	8.546	83	134502	1.9739109	ppbv	94
50) Toluene	9.661	91	349696	2.4724224	ppbv	99
53) Tetrachloroethene	10.289	166	16595407m	217.9953711	ppbv	
59) Ethylbenzene	11.290	91	29365	0.1327325	ppbv	99
60) M&P-Xylene	11.414	91	168911	0.9966296	ppbv	99
61) O-Xylene	11.895	91	87220	0.4977247	ppbv	100
67) 4-Ethyltoluene	12.795	105	21117	0.0841871	ppbv	97
70) 1,3,5-Trimethylbenzene	12.879	105	11885	0.0600024	ppbv	98
72) 1,2,4-Trimethylbenzene	13.247	105	29979	0.1498694	ppbv	100
76) 1,2,3-TRIMETHYLBENZENE	13.649	105	12874	0.0673958	ppbv	99
84) TPH (GC/MS) Low Fraction	9.740	TIC	92078801m	291.5803599	ppbv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

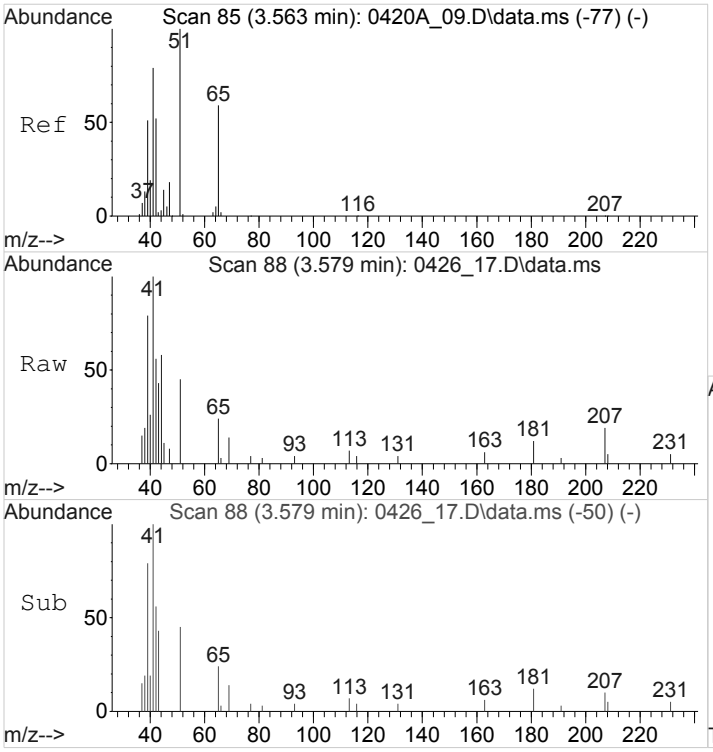
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_17.D
Acq On : 26 Apr 2018 7:20 pm
Operator : 564
Sample : L988471-06 1x WG1103323
Misc :
ALS Vial : 17 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 27 08:51:40 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration



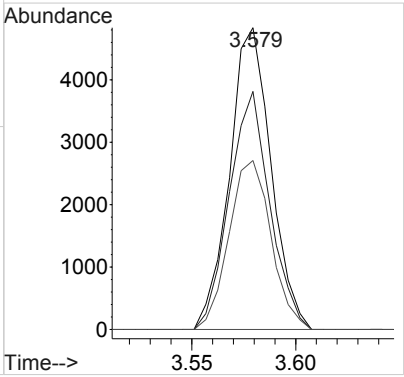
ACCOUNT:	PROJECT:	SDG:	DATE/TIME:	PAGE:
S&ME Inc. - Knoxville	4143-17-016	L988471	05/16/18 11:18	240 of 698

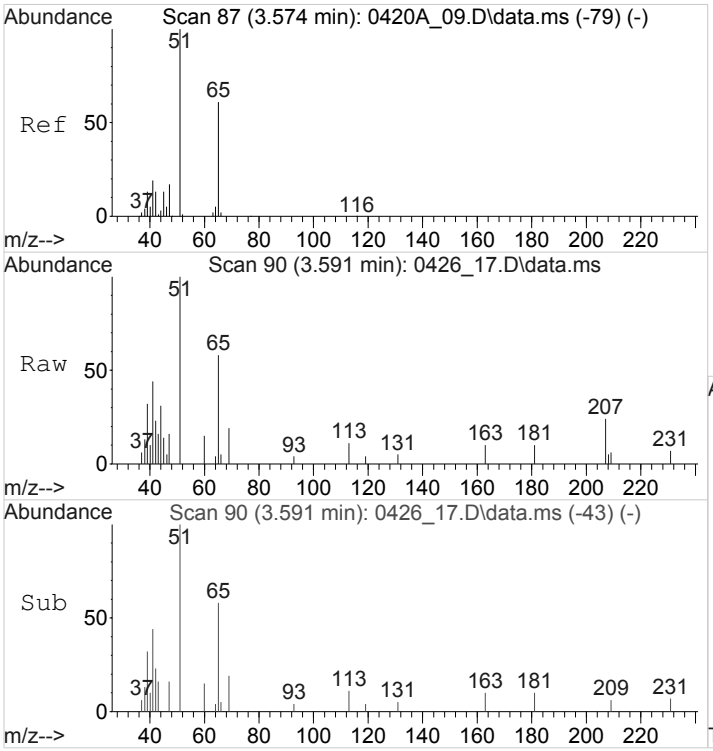


#2
Propene
Concen: 0.3386694 ppbv
RT: 3.579 min Scan# 88
Delta R.T. 0.017 min
Lab File: 0426_17.D
Acq: 26 Apr 2018 7:20 pm

Tgt Ion: 41 Resp: 6715

Ion	Ratio	Lower	Upper
41	100		
39	77.1	53.1	79.7
42	57.0	53.8	80.8

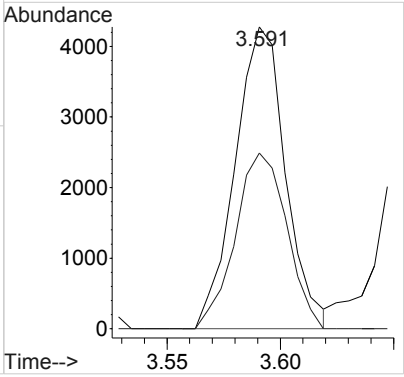


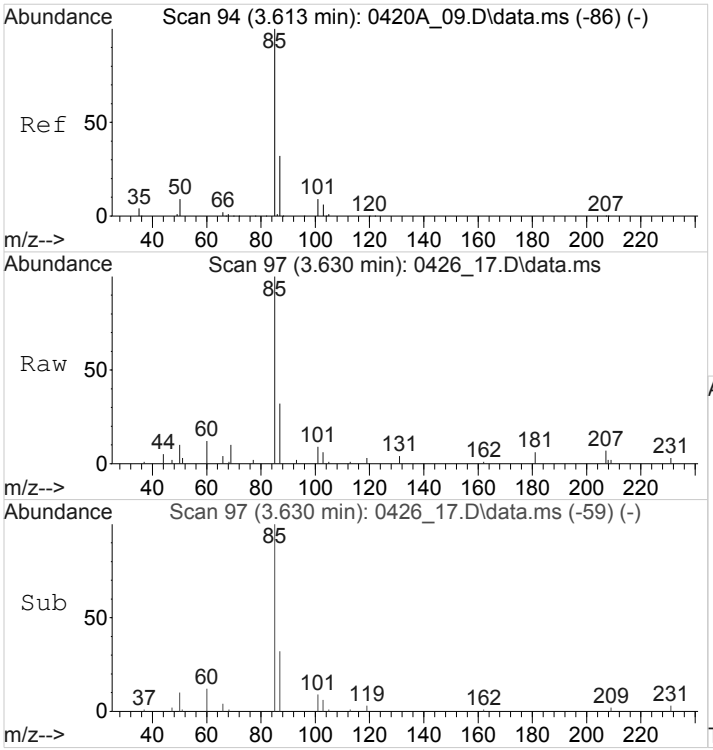


#3
1,1-DIFLUOROETHANE
Concen: 0.1726379 ppbv
RT: 3.591 min Scan# 90
Delta R.T. 0.017 min
Lab File: 0426_17.D
Acq: 26 Apr 2018 7:20 pm

Tgt Ion: 51 Resp: 6614

Ion	Ratio	Lower	Upper
51	100		
65	59.4	49.4	74.2

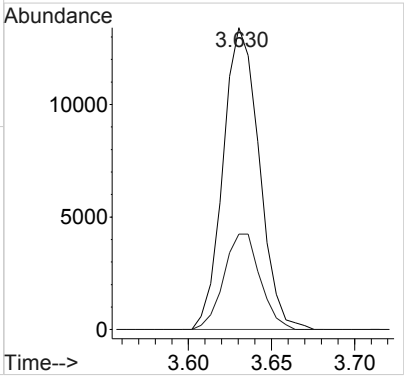


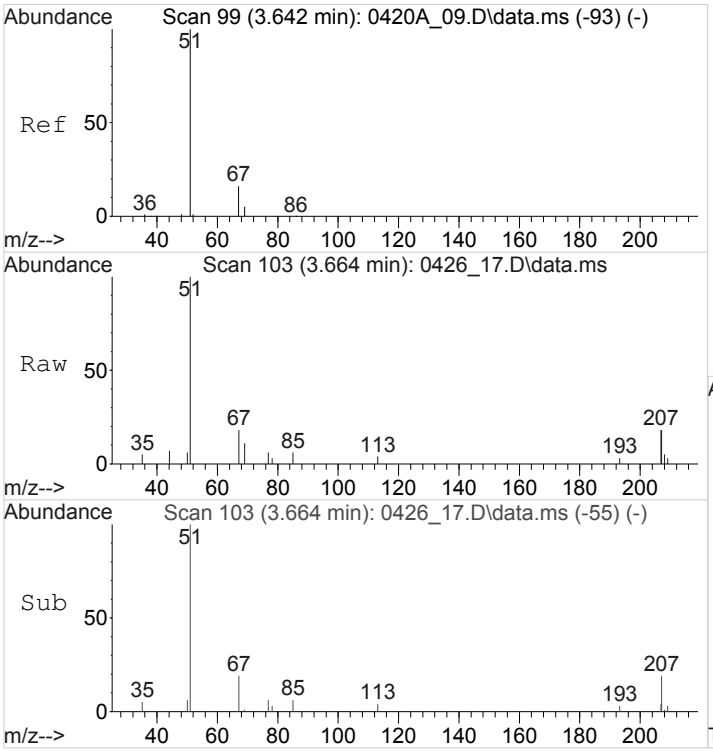


#4
Dichlorodifluoromethane
Concen: 0.3332152 ppbv
RT: 3.630 min Scan# 97
Delta R.T. 0.017 min
Lab File: 0426_17.D
Acq: 26 Apr 2018 7:20 pm

Tgt Ion: 85 Resp: 20292

Ion	Ratio	Lower	Upper
85	100		
87	31.9	25.8	38.8

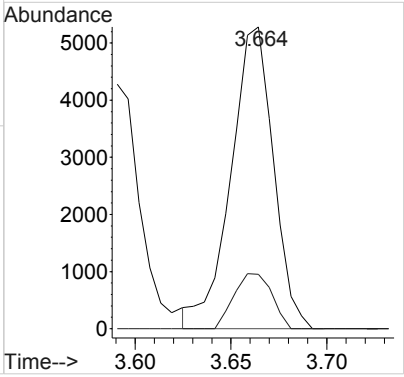


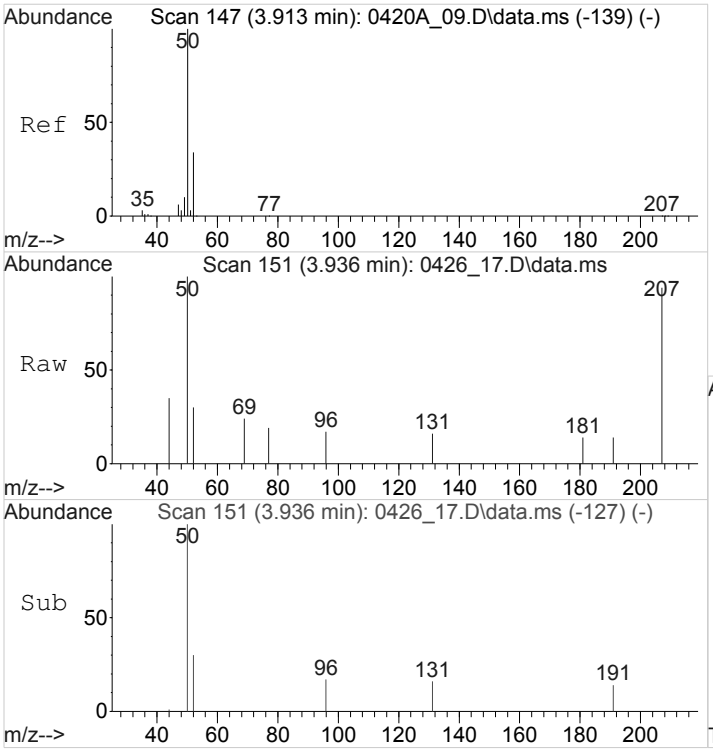


#5
CHLORODIFLUOROMETHANE
Concen: 0.2217748 ppbv
RT: 3.664 min Scan# 103
Delta R.T. 0.023 min
Lab File: 0426_17.D
Acq: 26 Apr 2018 7:20 pm

Tgt Ion: 51 Resp: 8133

Ion	Ratio	Lower	Upper
51	100		
67	16.3	12.7	19.1

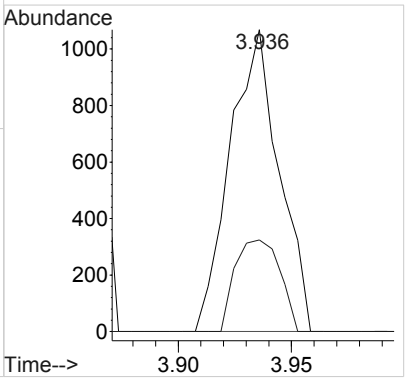


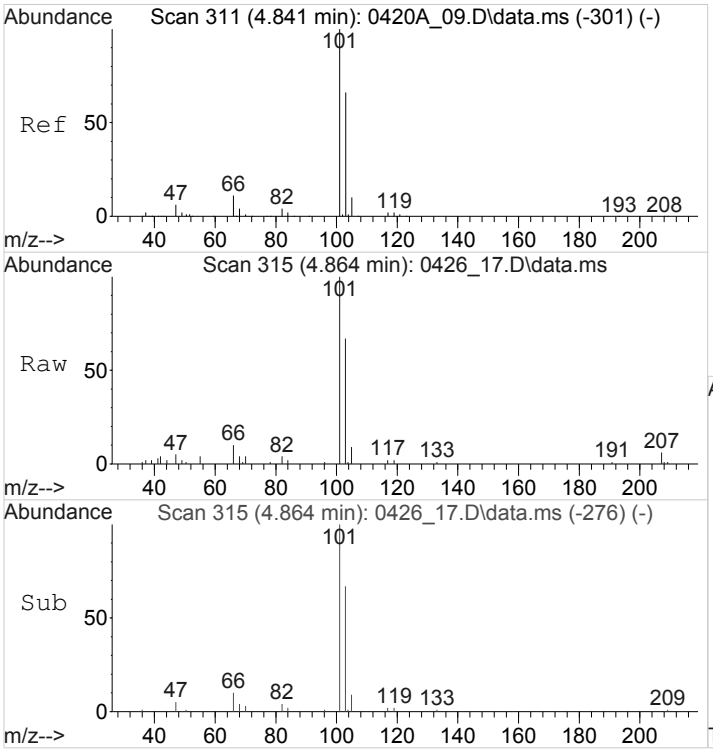


#7
Chloromethane
Concen: 0.0662177 ppbv
RT: 3.936 min Scan# 151
Delta R.T. 0.023 min
Lab File: 0426_17.D
Acq: 26 Apr 2018 7:20 pm

Tgt Ion: 50 Resp: 1608

Ion	Ratio	Lower	Upper
50	100		
52	0.0	26.5	39.7#

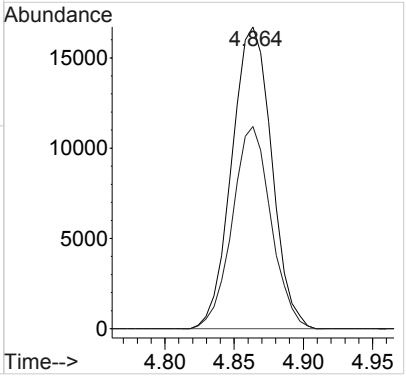


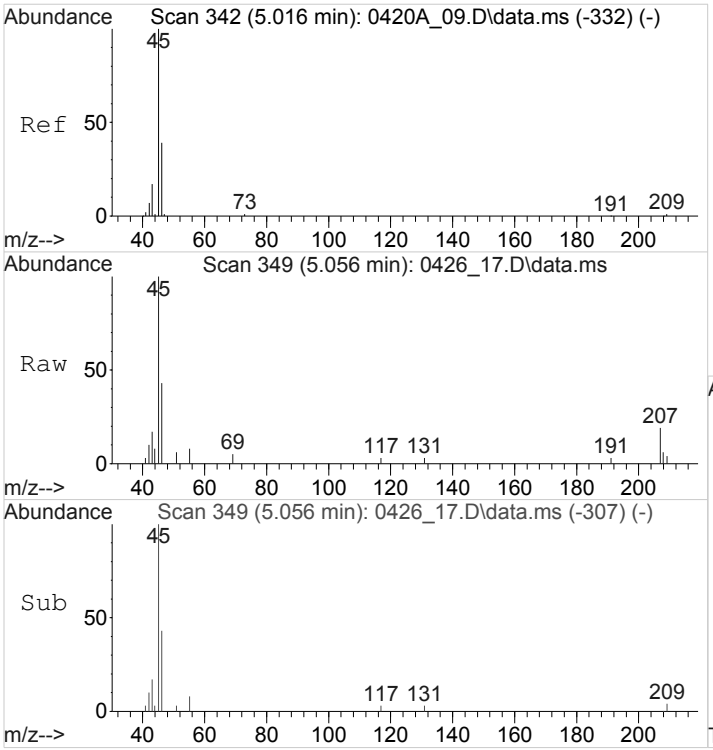


#13
Trichlorofluoromethane
Concen: 0.4927257 ppbv
RT: 4.864 min Scan# 315
Delta R.T. 0.023 min
Lab File: 0426_17.D
Acq: 26 Apr 2018 7:20 pm

Tgt Ion:101 Resp: 33553

Ion	Ratio	Lower	Upper
101	100		
103	65.2	52.6	79.0

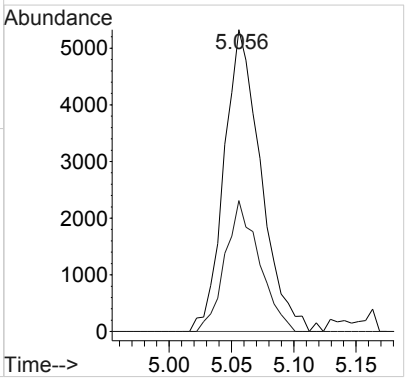


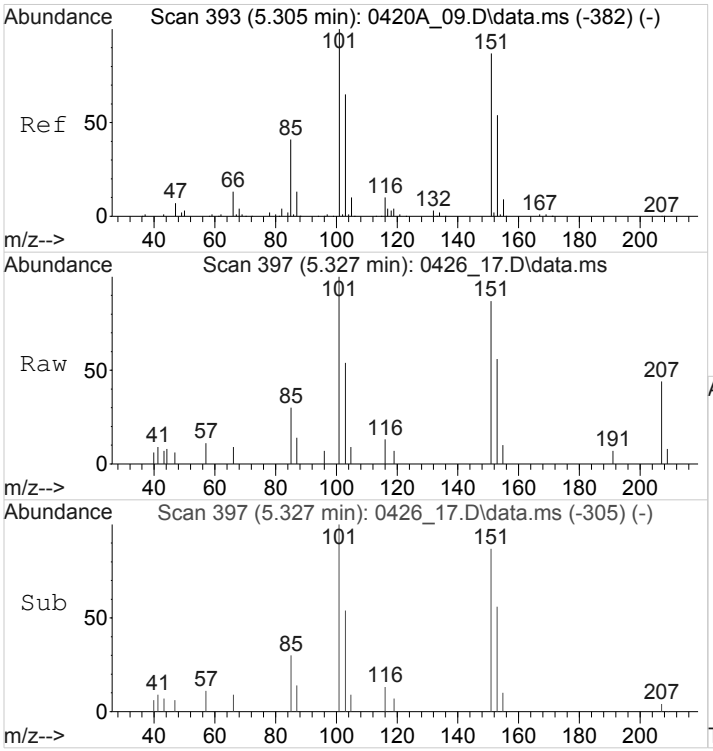


#14
Ethanol
Concen: 0.9305289 ppbv
RT: 5.056 min Scan# 349
Delta R.T. 0.039 min
Lab File: 0426_17.D
Acq: 26 Apr 2018 7:20 pm

Tgt Ion: 45 Resp: 10987

Ion	Ratio	Lower	Upper
45	100		
46	40.2	33.1	49.7

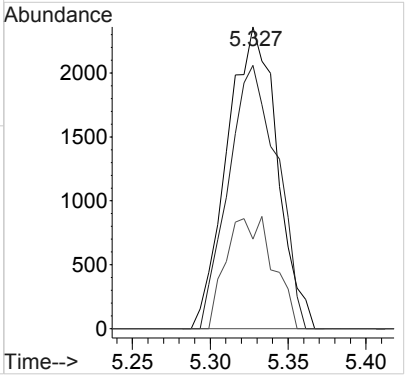


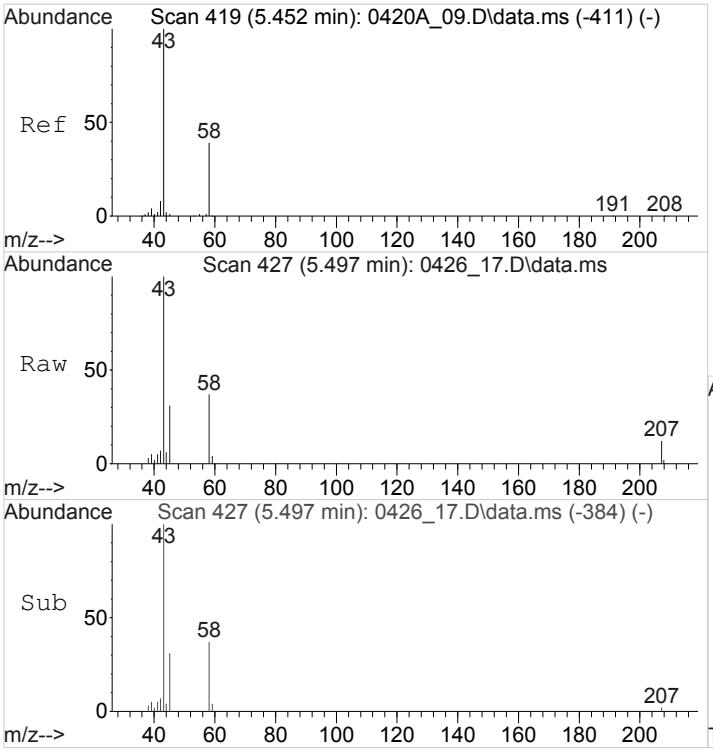


#15
1,1,2-Trichlorotrifluoroethane
Concen: 0.0832705 ppbv
RT: 5.327 min Scan# 397
Delta R.T. 0.023 min
Lab File: 0426_17.D
Acq: 26 Apr 2018 7:20 pm

Tgt Ion:101 Resp: 5266

Ion	Ratio	Lower	Upper
101	100		
151	85.1	67.9	101.9
85	34.8	32.4	48.6

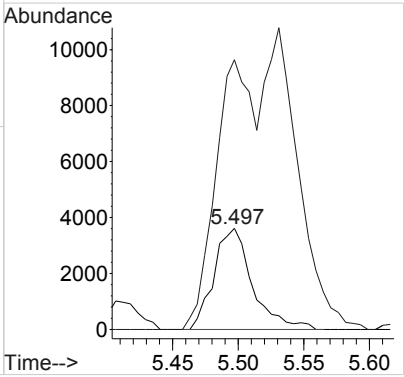


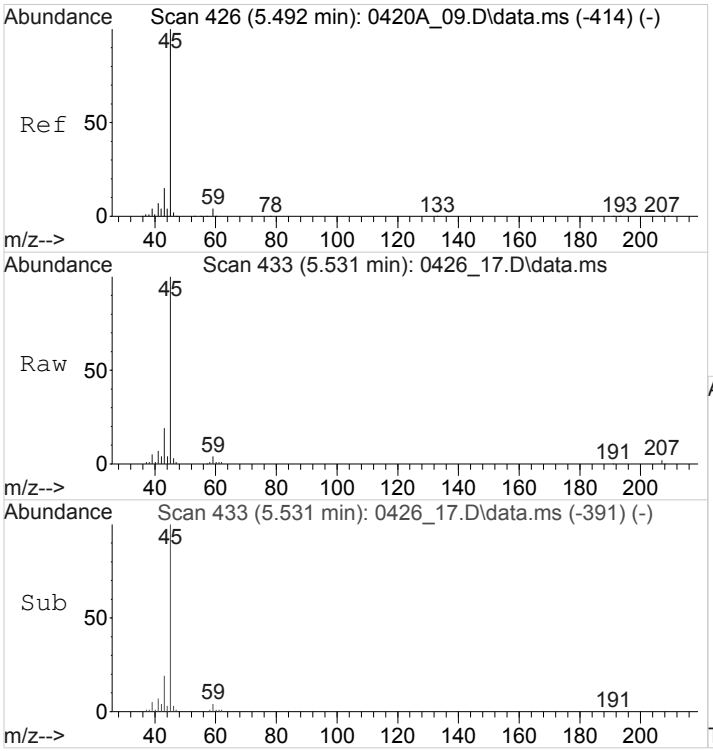


#17
Acetone
Concen: 0.4932531 ppbv
RT: 5.497 min Scan# 427
Delta R.T. 0.045 min
Lab File: 0426_17.D
Acq: 26 Apr 2018 7:20 pm

Tgt Ion: 58 Resp: 7397

Ion	Ratio	Lower	Upper
58	100		
43	267.9	252.6	379.0

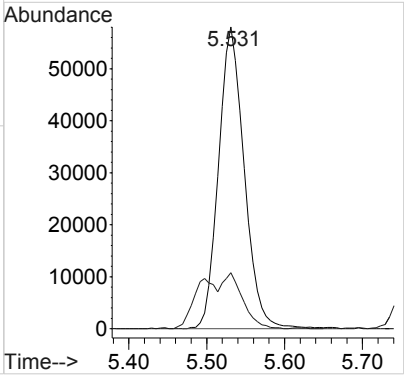


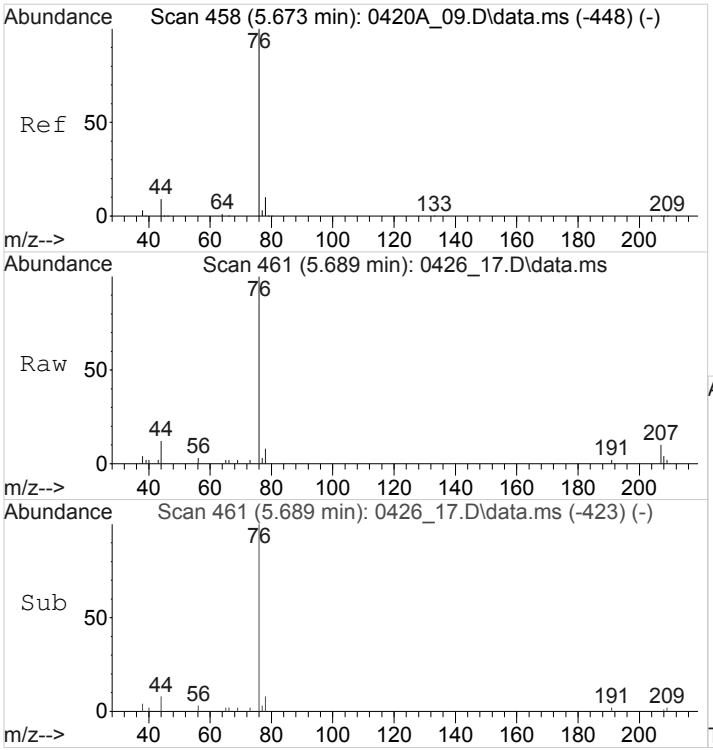


#18
2-Propanol
Concen: 2.3010570 ppbv
RT: 5.531 min Scan# 433
Delta R.T. 0.039 min
Lab File: 0426_17.D
Acq: 26 Apr 2018 7:20 pm

Tgt Ion: 45 Resp: 133001

Ion	Ratio	Lower	Upper
45	100		
43	15.1	67.9	101.9#

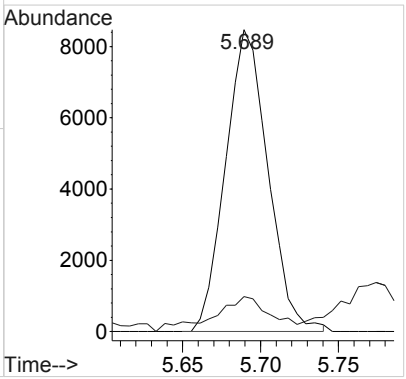


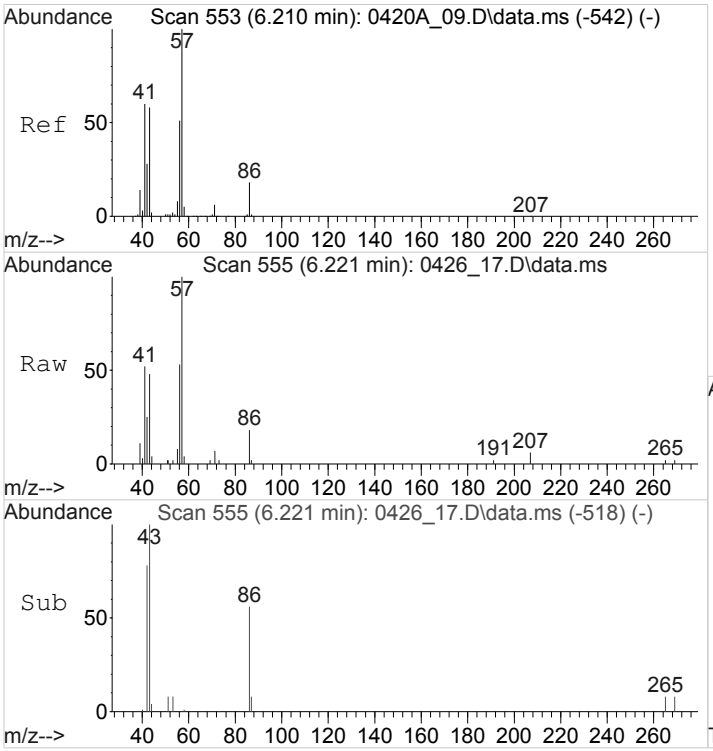


#19
Carbon Disulfide
Concen: 0.2327062 ppbv
RT: 5.689 min Scan# 461
Delta R.T. 0.017 min
Lab File: 0426_17.D
Acq: 26 Apr 2018 7:20 pm

Tgt Ion: 76 Resp: 16032

Ion	Ratio	Lower	Upper
76	100		
44	15.5	7.4	11.2#

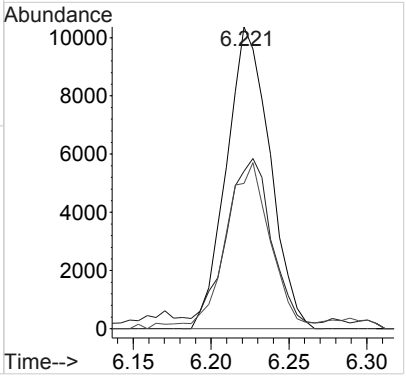


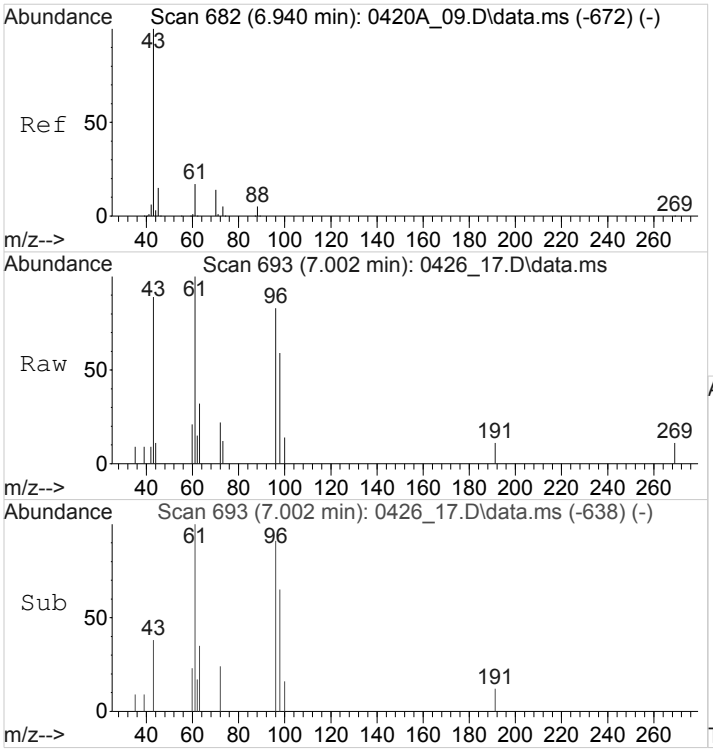


#25
n-Hexane
Concen: 0.4168215 ppbv
RT: 6.221 min Scan# 555
Delta R.T. 0.011 min
Lab File: 0426_17.D
Acq: 26 Apr 2018 7:20 pm

Tgt Ion: 57 Resp: 20054

Ion	Ratio	Lower	Upper
57	100		
41	56.3	47.6	71.4
43	57.5	46.1	69.1

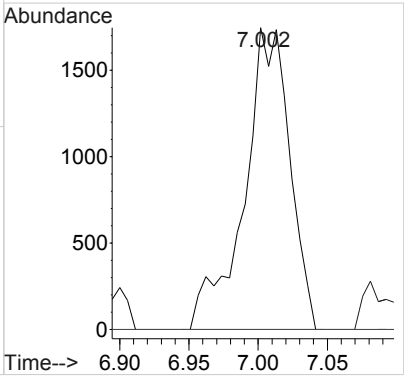


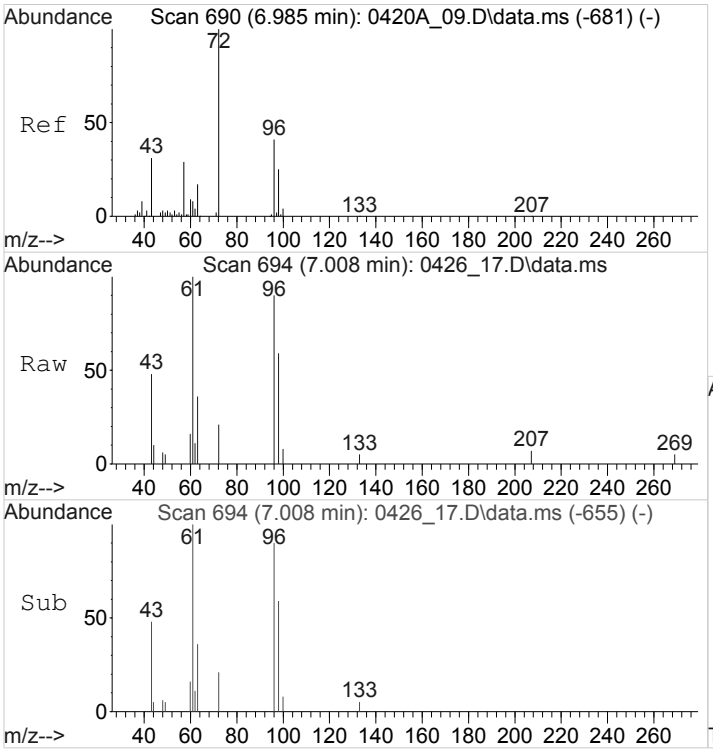


#28
ETHYL ACETATE
Concen: 0.0614110 ppbv
RT: 7.002 min Scan# 693
Delta R.T. 0.062 min
Lab File: 0426_17.D
Acq: 26 Apr 2018 7:20 pm

Tgt Ion: 43 Resp: 3997

Ion	Ratio	Lower	Upper
43	100		
45	0.0	12.0	18.0#
70	0.0	10.5	15.7#

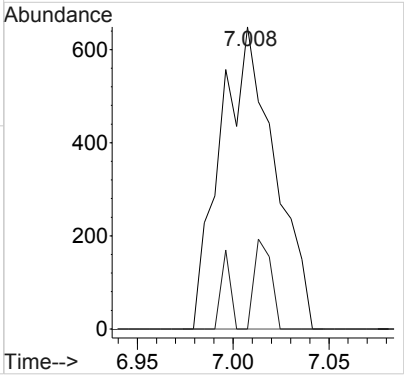


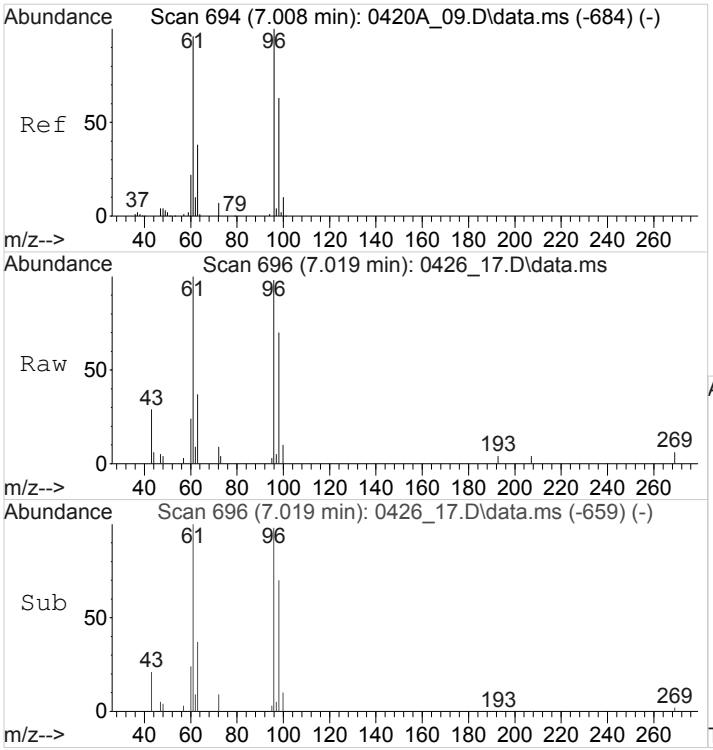


#29
2-Butanone (MEK)
Concen: 0.0653565 ppbv
RT: 7.008 min Scan# 694
Delta R.T. 0.023 min
Lab File: 0426_17.D
Acq: 26 Apr 2018 7:20 pm

Tgt Ion: 72 Resp: 1270

Ion	Ratio	Lower	Upper
72	100		
57	0.0	22.2	33.4#

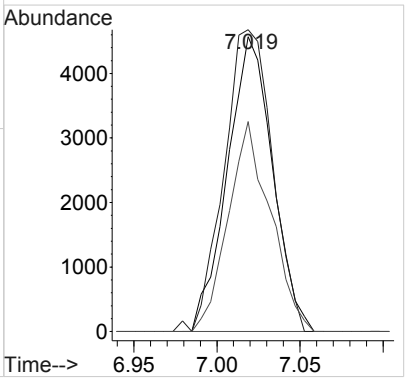


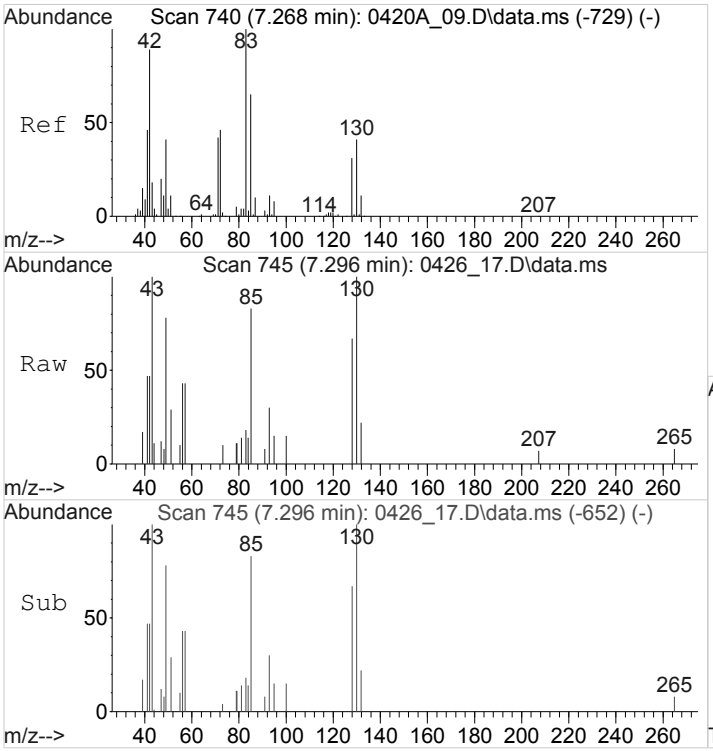


#30
cis-1,2-Dichloroethene
Concen: 0.2234852 ppbv
RT: 7.019 min Scan# 696
Delta R.T. 0.011 min
Lab File: 0426_17.D
Acq: 26 Apr 2018 7:20 pm

Tgt Ion: 96 Resp: 8674

Ion	Ratio	Lower	Upper
96	100		
61	109.4	94.1	141.1
98	66.5	50.6	76.0

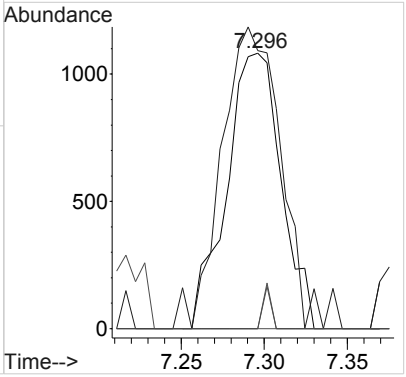


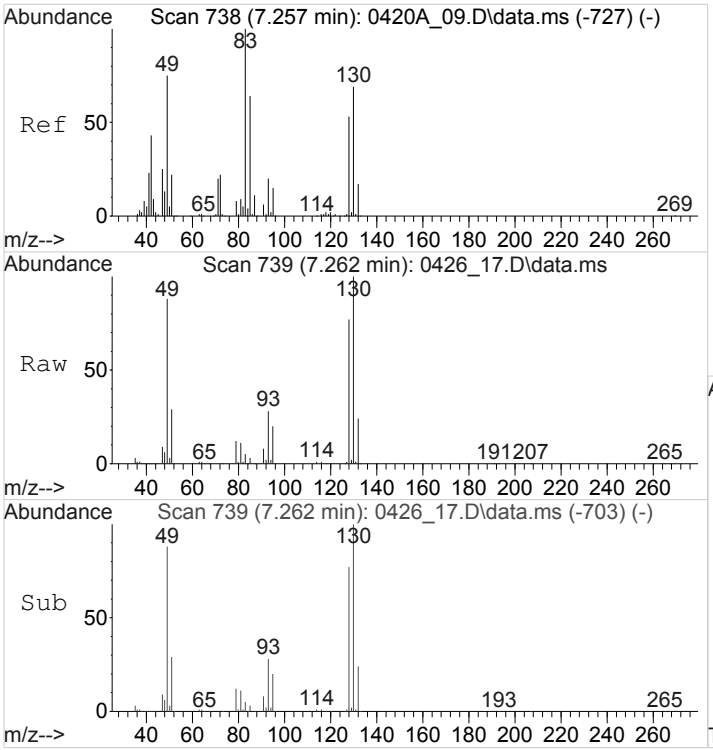


#31
Tetrahydrofuran
Concen: 0.0644096 ppbv
RT: 7.296 min Scan# 745
Delta R.T. 0.028 min
Lab File: 0426_17.D
Acq: 26 Apr 2018 7:20 pm

Tgt Ion: 42 Resp: 2476

Ion	Ratio	Lower	Upper
42	100		
41	120.5	40.8	61.2#
72	0.0	40.7	61.1#
71	31.6	37.4	56.0#

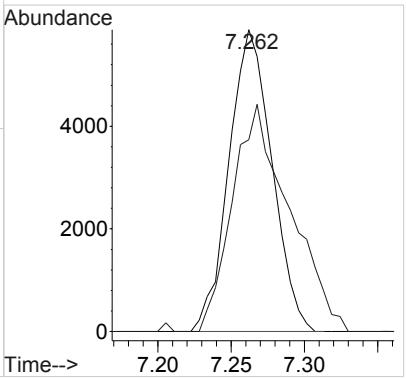


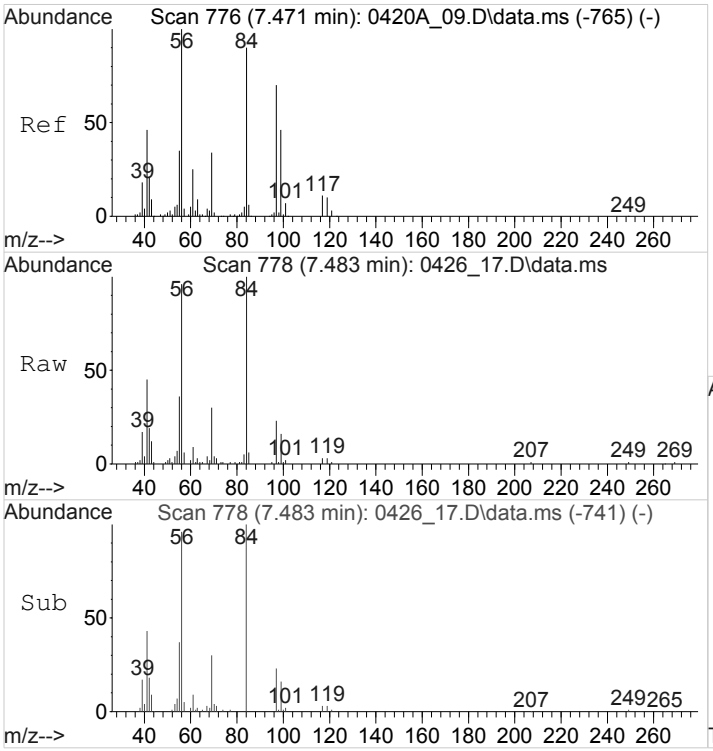


#32
Chloroform
Concen: 0.1713670 ppbv
RT: 7.262 min Scan# 739
Delta R.T. 0.006 min
Lab File: 0426_17.D
Acq: 26 Apr 2018 7:20 pm

Tgt Ion: 83 Resp: 11962

Ion	Ratio	Lower	Upper
83	100		
85	100.2	51.3	76.9#

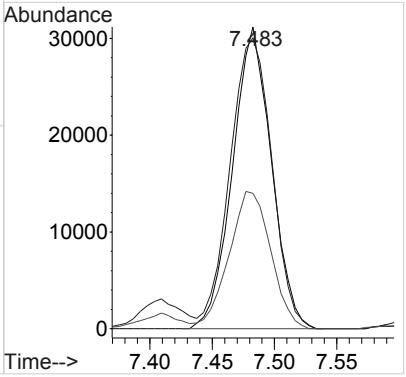


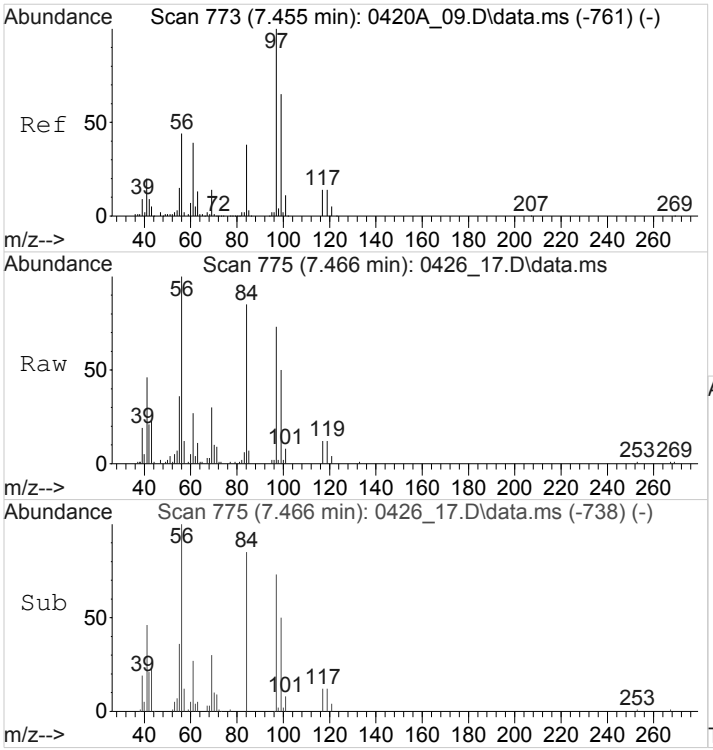


#33
Cyclohexane
Concen: 1.3543488 ppbv
RT: 7.483 min Scan# 778
Delta R.T. 0.011 min
Lab File: 0426_17.D
Acq: 26 Apr 2018 7:20 pm

Tgt Ion: 84 Resp: 67390

Ion	Ratio	Lower	Upper
84	100		
56	104.3	87.6	131.4
41	49.3	40.2	60.2

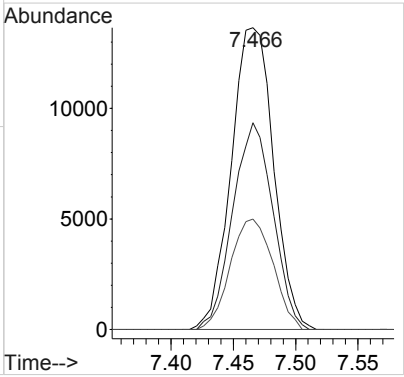


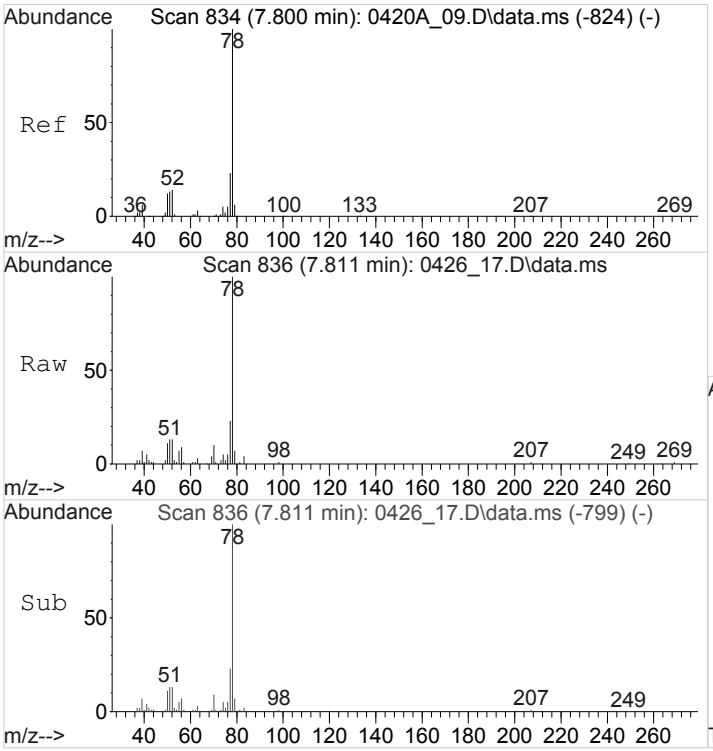


#34
1,1,1-Trichloroethane
Concen: 0.4649830 ppbv
RT: 7.466 min Scan# 775
Delta R.T. 0.011 min
Lab File: 0426_17.D
Acq: 26 Apr 2018 7:20 pm

Tgt Ion: 97 Resp: 32338

Ion	Ratio	Lower	Upper
97	100		
99	65.0	52.2	78.4
61	36.8	31.3	46.9

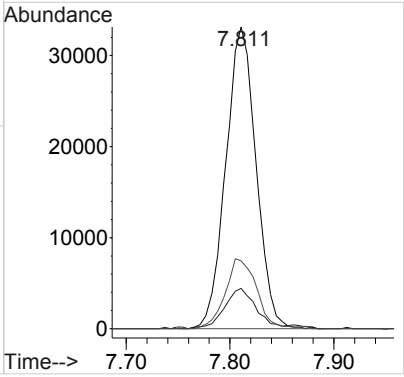


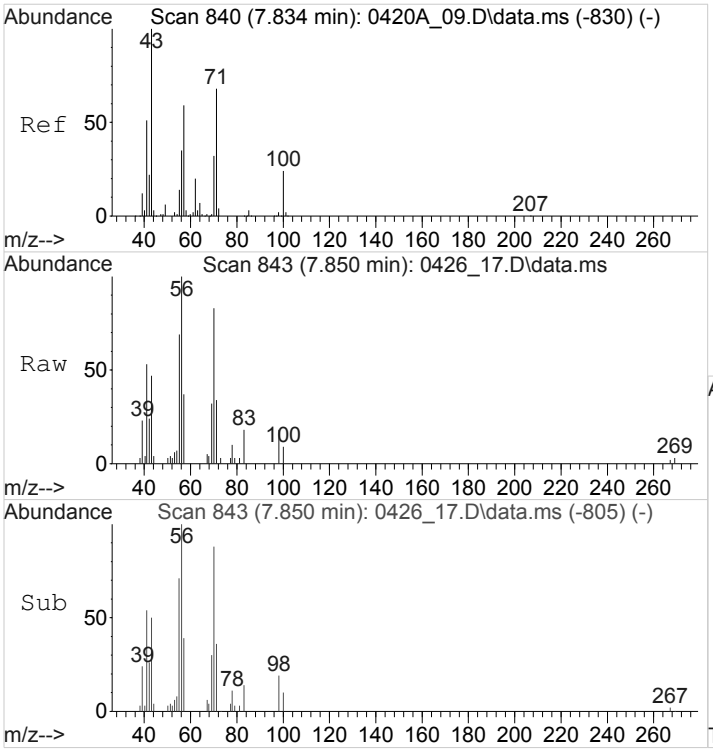


#38
Benzene
Concen: 0.5909950 ppbv
RT: 7.811 min Scan# 836
Delta R.T. 0.011 min
Lab File: 0426_17.D
Acq: 26 Apr 2018 7:20 pm

Tgt Ion: 78 Resp: 67225

Ion	Ratio	Lower	Upper
78	100		
51	14.7	11.3	16.9
77	24.2	18.6	28.0

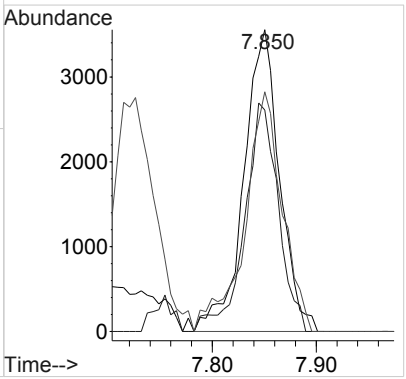


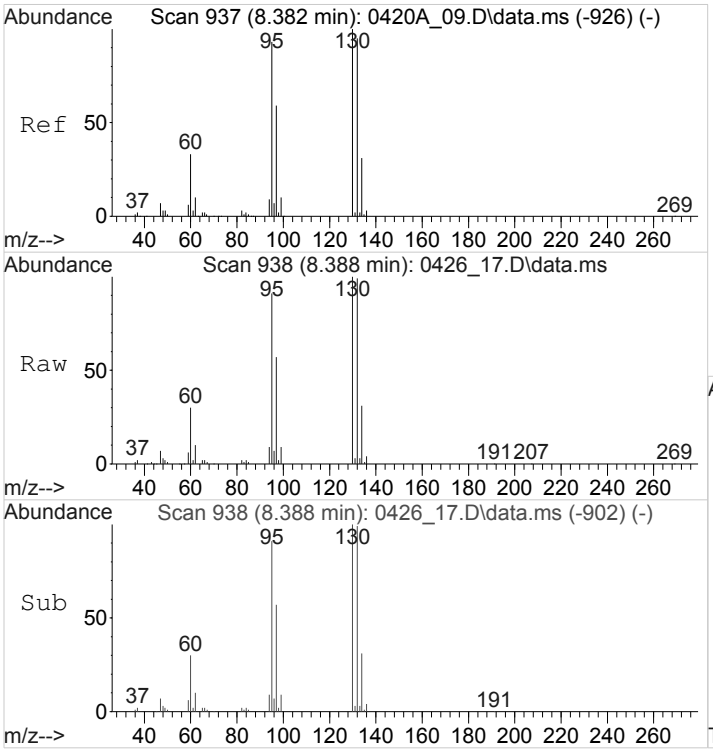


#40
Heptane
Concen: 0.1526569 ppbv
RT: 7.850 min Scan# 843
Delta R.T. 0.017 min
Lab File: 0426_17.D
Acq: 26 Apr 2018 7:20 pm

Tgt Ion: 43 Resp: 8576

Ion	Ratio	Lower	Upper
43	100		
71	70.9	56.1	84.1
57	82.0	47.1	70.7#

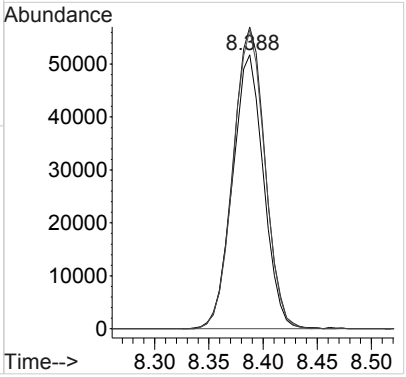


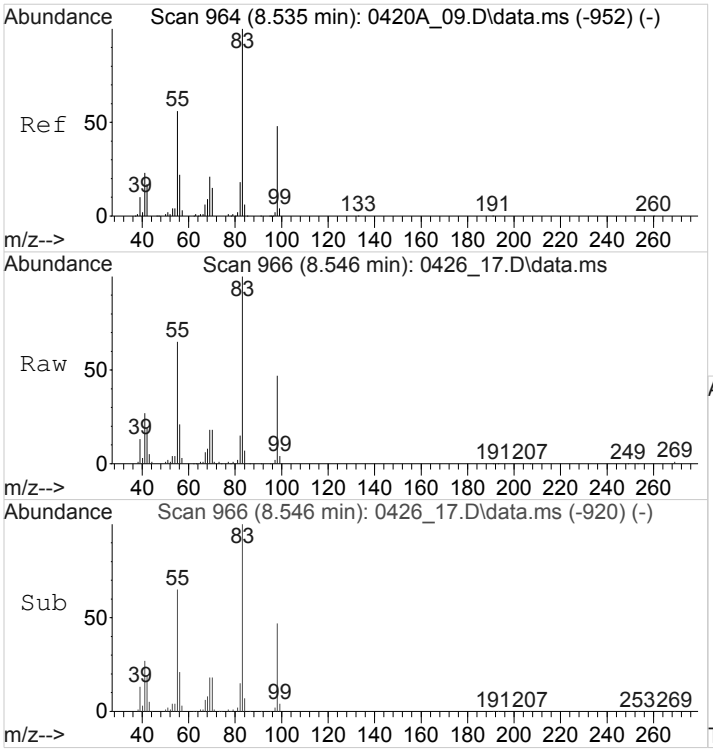


#41
Trichloroethene
Concen: 2.0806591 ppbv
RT: 8.388 min Scan# 938
Delta R.T. 0.006 min
Lab File: 0426_17.D
Acq: 26 Apr 2018 7:20 pm

Tgt Ion: 95 Resp: 103153

Ion	Ratio	Lower	Upper
95	100		
130	113.2	86.4	129.6
132	110.5	83.6	125.4

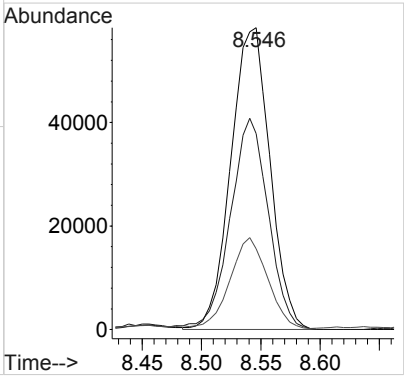


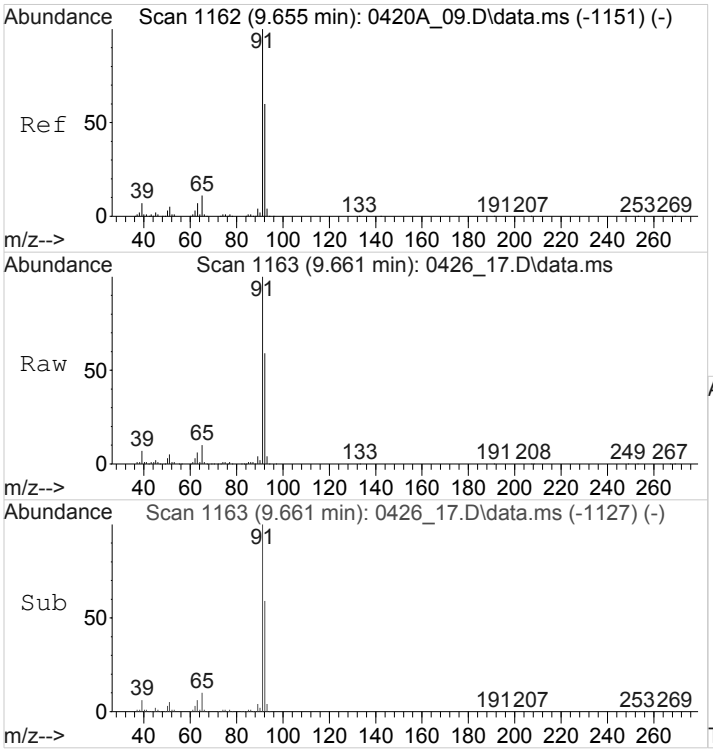


#43
METHYL CYCLOHEXANE
Concen: 1.9739109 ppbv
RT: 8.546 min Scan# 966
Delta R.T. 0.011 min
Lab File: 0426_17.D
Acq: 26 Apr 2018 7:20 pm

Tgt Ion: 83 Resp: 134502

Ion	Ratio	Lower	Upper
83	100		
55	68.2	58.5	87.7
41	29.3	25.8	38.6

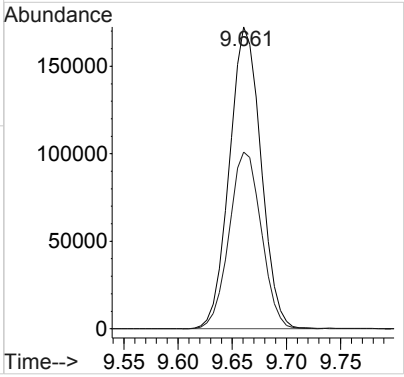


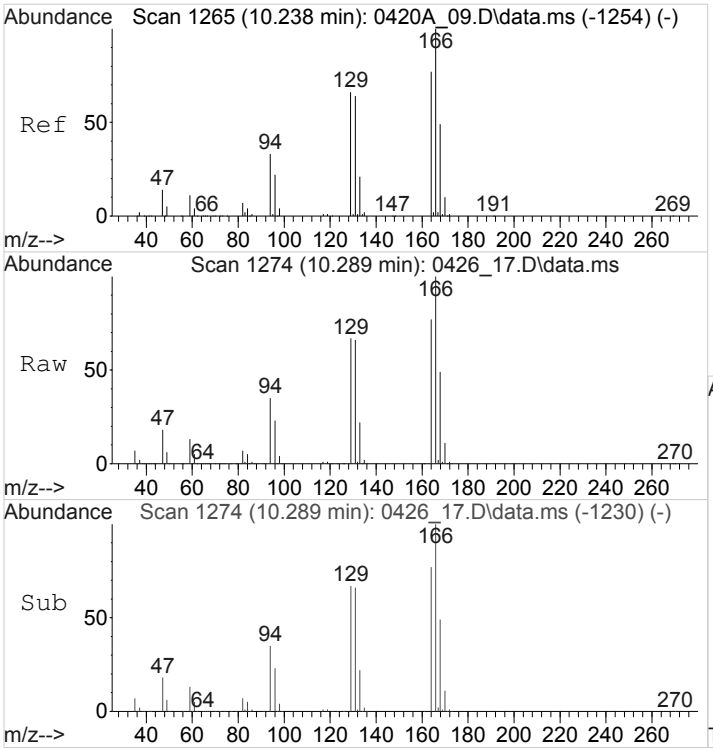


#50
Toluene
Concen: 2.4724224 ppbv
RT: 9.661 min Scan# 1163
Delta R.T. 0.006 min
Lab File: 0426_17.D
Acq: 26 Apr 2018 7:20 pm

Tgt Ion: 91 Resp: 349696

Ion	Ratio	Lower	Upper
91	100		
92	59.6	48.0	72.0

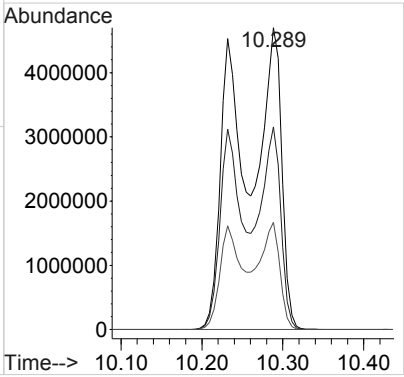


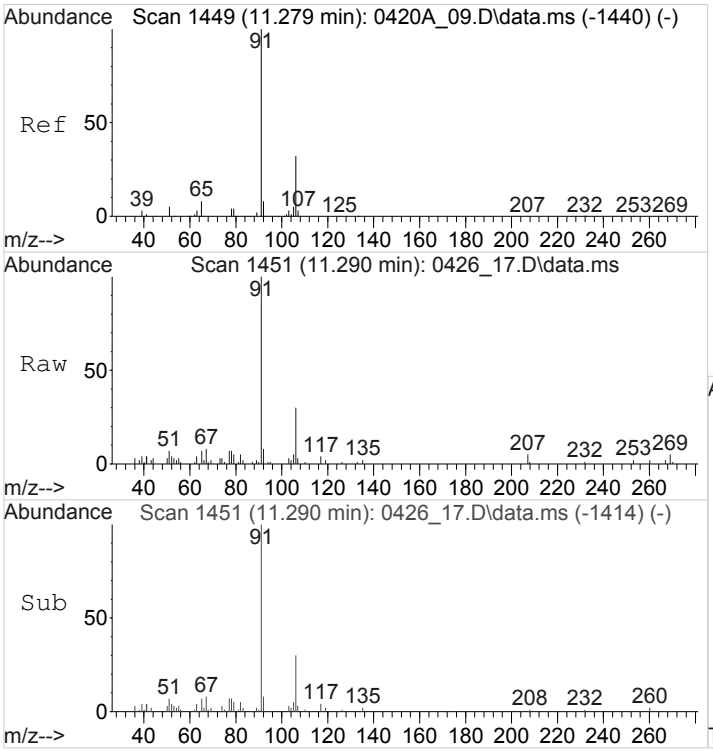


#53
Tetrachloroethene
Concen: 217.9953711 ppbv m
RT: 10.289 min Scan# 1274
Delta R.T. 0.051 min
Lab File: 0426_17.D
Acq: 26 Apr 2018 7:20 pm

Tgt Ion:166 Resp:16595407

Ion	Ratio	Lower	Upper
166	100		
129	35.6	53.7	80.5#
94	17.3	27.2	40.8#

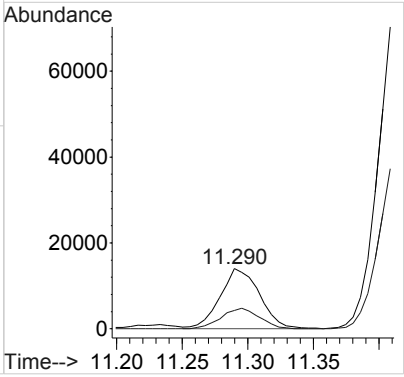


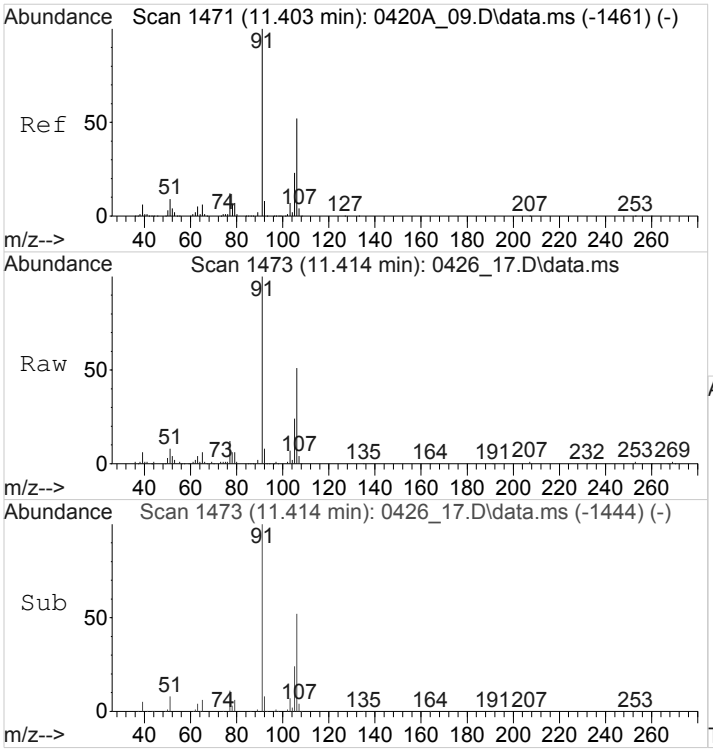


#59
Ethylbenzene
Concen: 0.1327325 ppbv
RT: 11.290 min Scan# 1451
Delta R.T. 0.011 min
Lab File: 0426_17.D
Acq: 26 Apr 2018 7:20 pm

Tgt Ion: 91 Resp: 29365

Ion	Ratio	Lower	Upper
91	100		
106	32.8	25.9	38.9

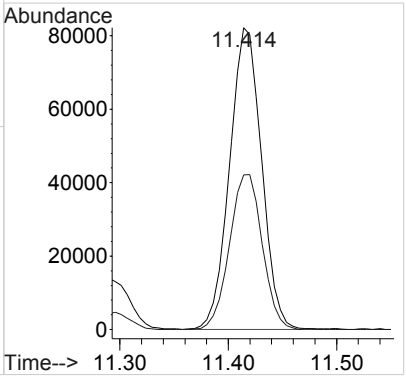


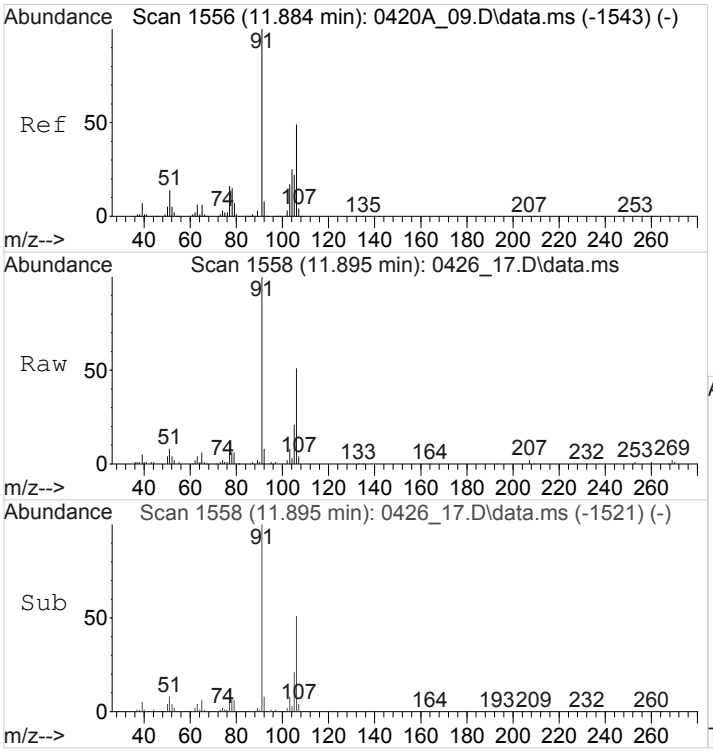


#60
M&P-Xylene
Concen: 0.9966296 ppbv
RT: 11.414 min Scan# 1473
Delta R.T. 0.011 min
Lab File: 0426_17.D
Acq: 26 Apr 2018 7:20 pm

Tgt Ion: 91 Resp: 168911

Ion	Ratio	Lower	Upper
91	100		
106	52.5	41.5	62.3

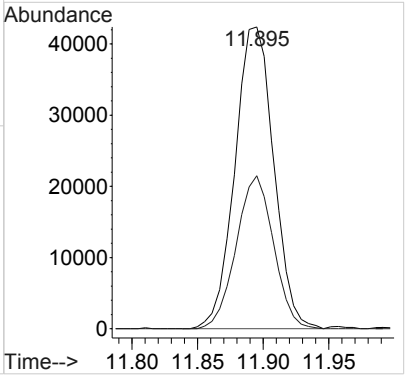


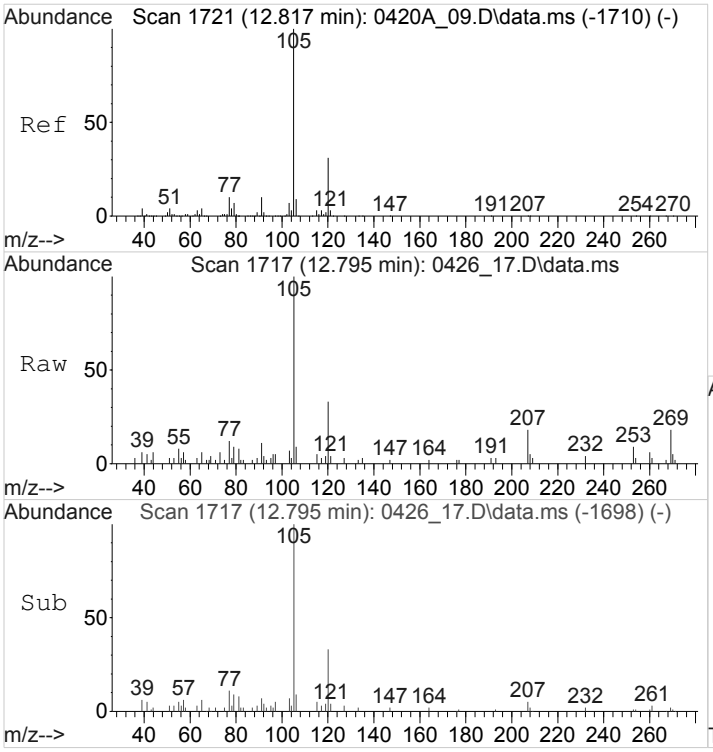


#61
O-Xylene
Concen: 0.4977247 ppbv
RT: 11.895 min Scan# 1558
Delta R.T. 0.011 min
Lab File: 0426_17.D
Acq: 26 Apr 2018 7:20 pm

Tgt Ion: 91 Resp: 87220

Ion	Ratio	Lower	Upper
91	100		
106	48.7	39.1	58.7

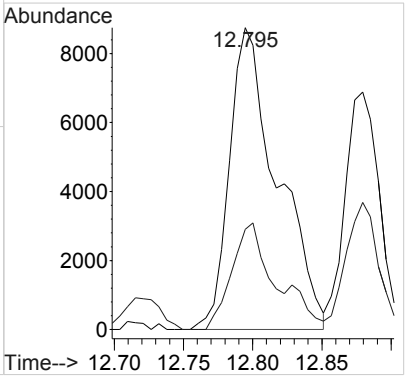


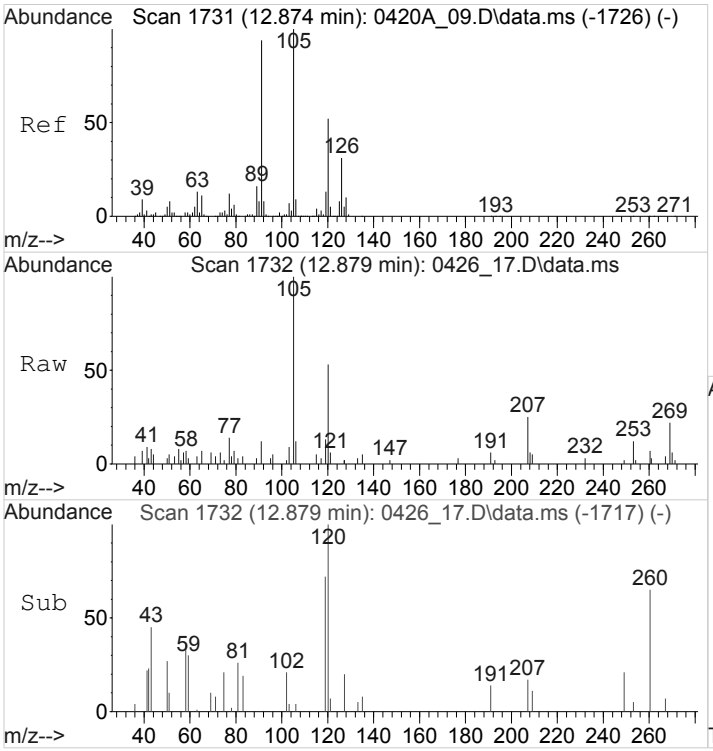


#67
4-Ethyltoluene
Concen: 0.0841871 ppbv
RT: 12.795 min Scan# 1717
Delta R.T. -0.023 min
Lab File: 0426_17.D
Acq: 26 Apr 2018 7:20 pm

Tgt Ion:105 Resp: 21117

Ion	Ratio	Lower	Upper
105	100		
120	32.5	24.8	37.2

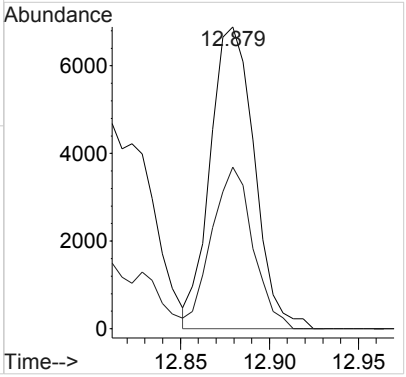


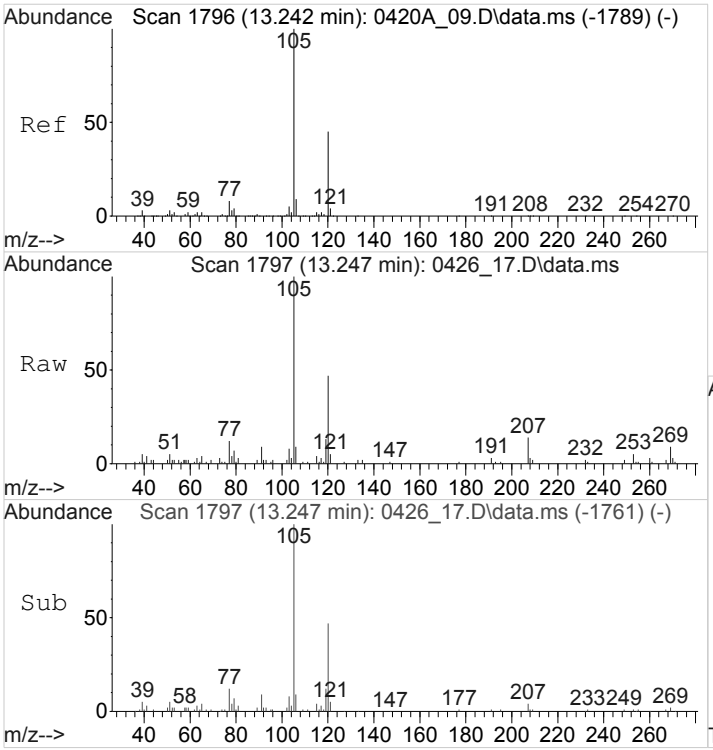


#70
1,3,5-Trimethylbenzene
Concen: 0.0600024 ppbv
RT: 12.879 min Scan# 1732
Delta R.T. 0.006 min
Lab File: 0426_17.D
Acq: 26 Apr 2018 7:20 pm

Tgt Ion:105 Resp: 11885

Ion	Ratio	Lower	Upper
105	100		
120	50.2	41.4	62.0

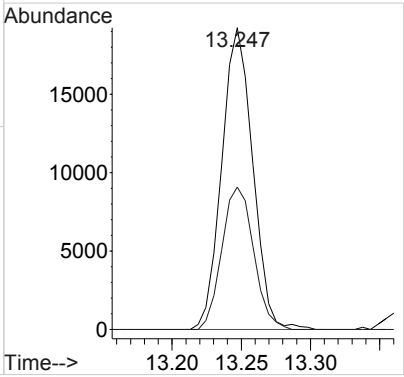


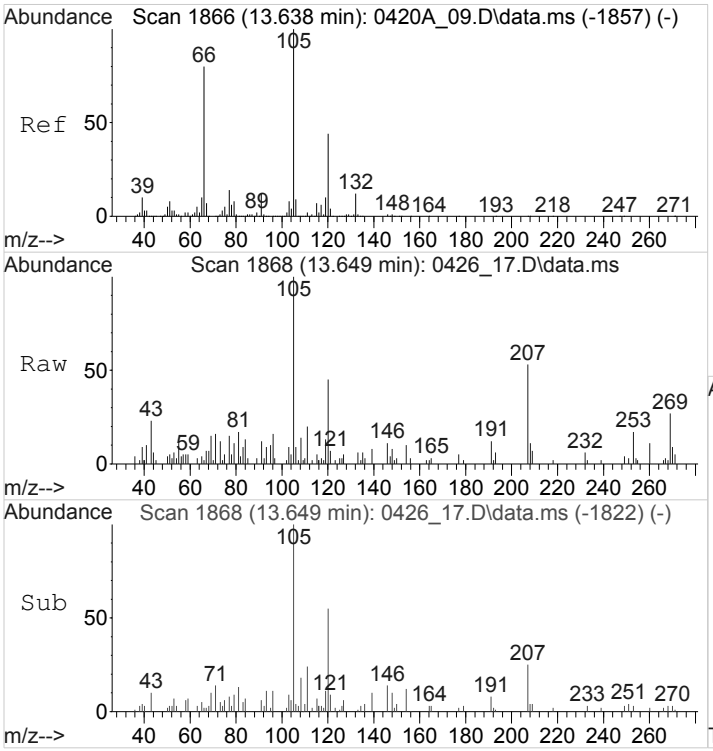


#72
1,2,4-Trimethylbenzene
Concen: 0.1498694 ppbv
RT: 13.247 min Scan# 1797
Delta R.T. 0.006 min
Lab File: 0426_17.D
Acq: 26 Apr 2018 7:20 pm

Tgt Ion:105 Resp: 29979

Ion	Ratio	Lower	Upper
105	100		
120	48.4	38.8	58.2

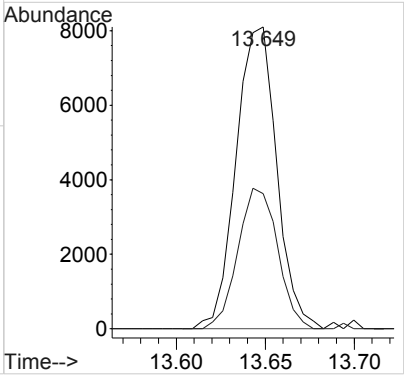


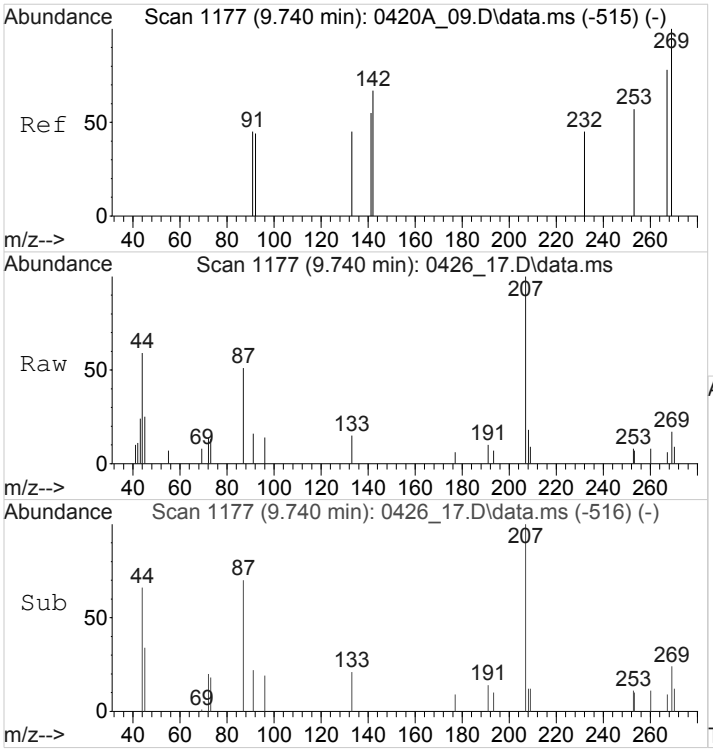


#76
1,2,3-TRIMETHYLBENZENE
Concen: 0.0673958 ppbv
RT: 13.649 min Scan# 1868
Delta R.T. 0.011 min
Lab File: 0426_17.D
Acq: 26 Apr 2018 7:20 pm

Tgt Ion:105 Resp: 12874

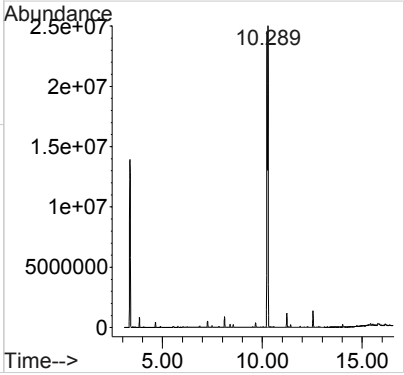
Ion	Ratio	Lower	Upper
105	100		
120	45.6	36.0	54.0





#84
TPH (GC/MS) Low Fraction
Concen: 291.5803599 ppbv m
RT: 9.740 min Scan# 1177
Delta R.T. 0.000 min
Lab File: 0426_17.D
Acq: 26 Apr 2018 7:20 pm

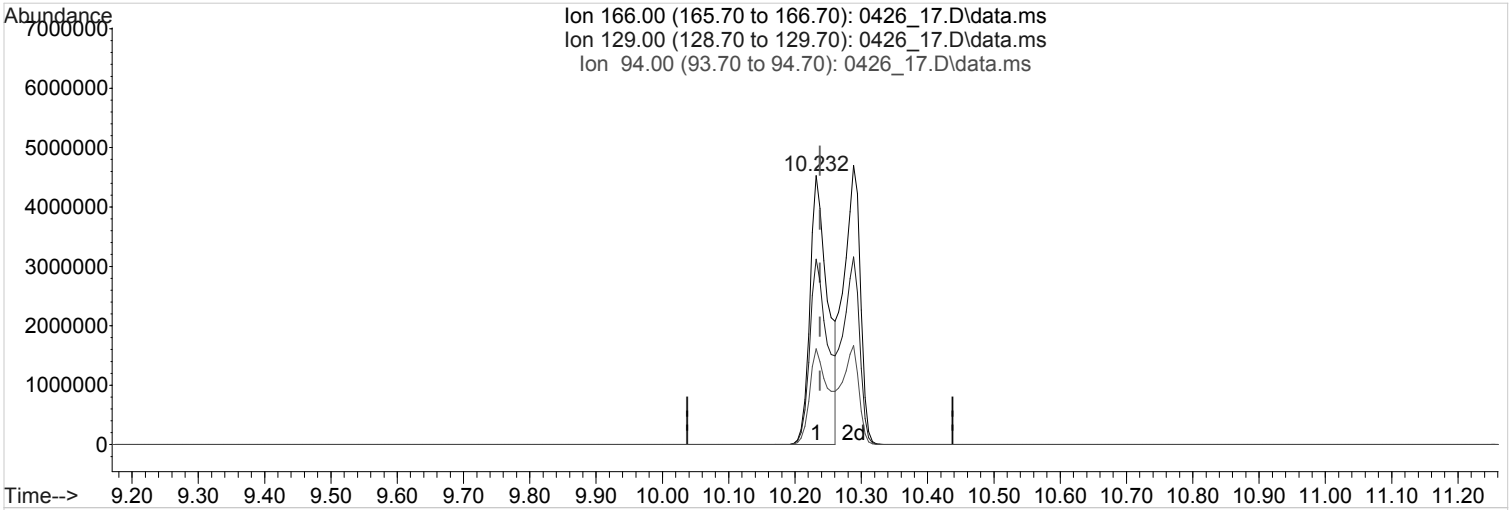
Tgt Ion:TIC Resp:92078801

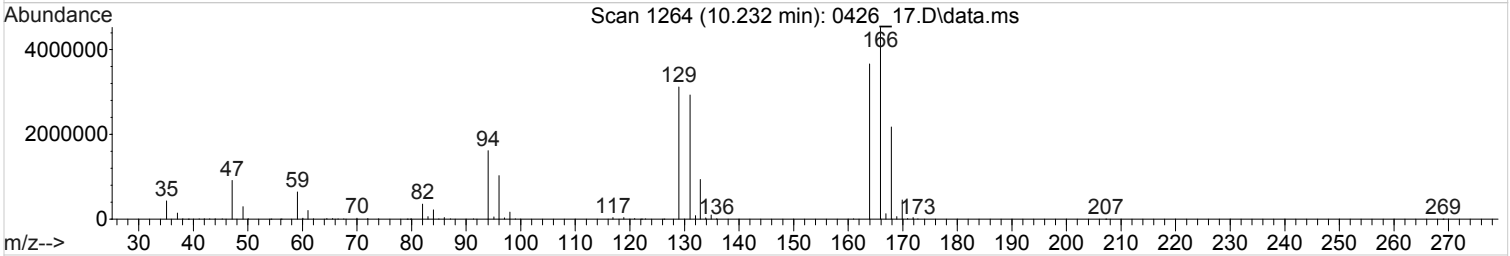


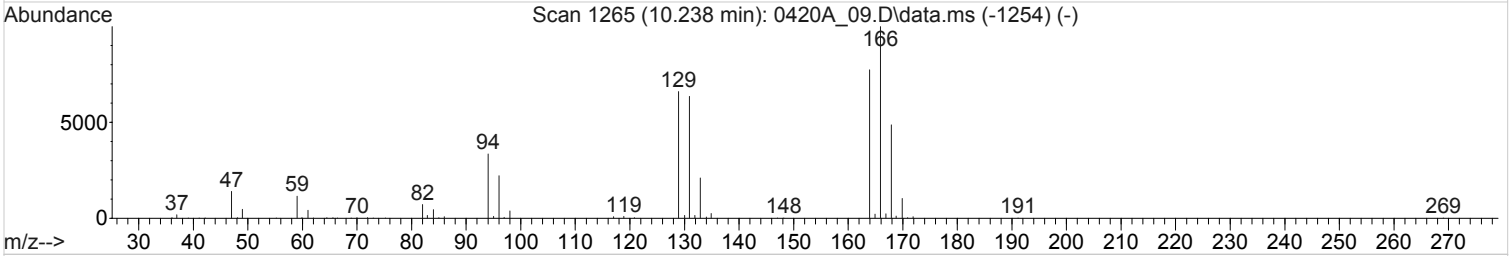
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_17.D
Acq On : 26 Apr 2018 7:20 pm
Operator : 564
Sample : L988471-06 1x WG1103323
Misc :
ALS Vial : 17 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 27 08:42:14 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration







TIC: 0426_17.D\data.ms

(53) Tetrachloroethene (T,M)

10.232min (-0.006) 110.4412997 ppbv E

Qvalue = 97

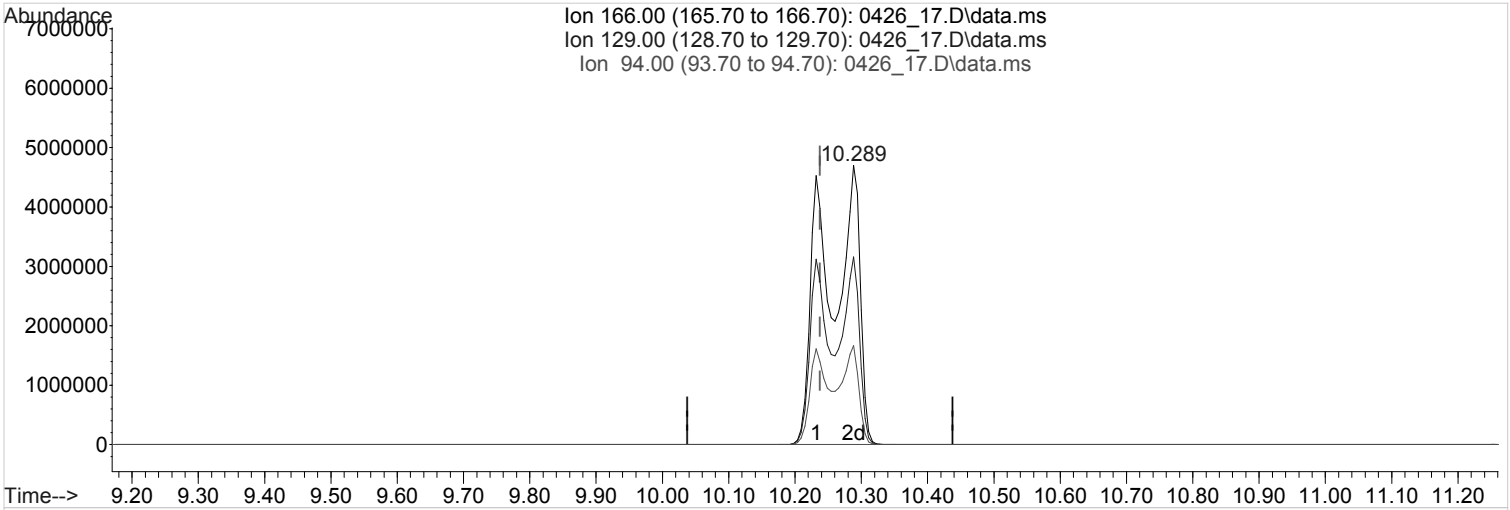
response 8407602 Limit = 0.2000000

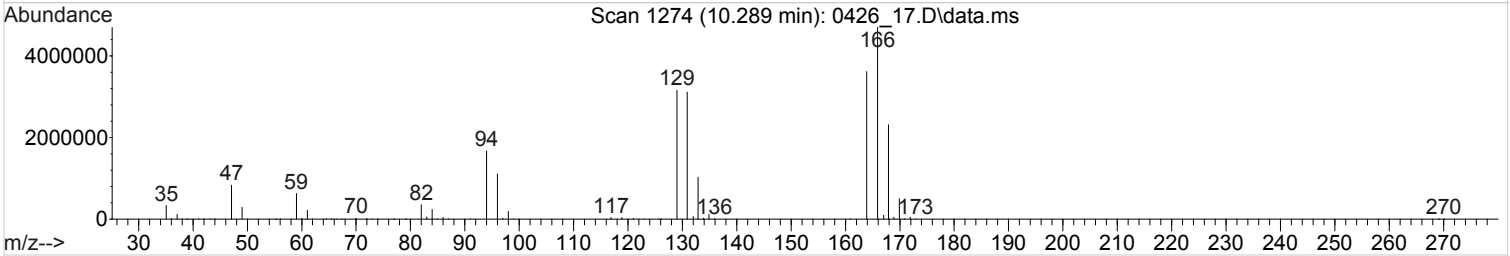
Ion	Exp%	Act%
166.00	100	100
129.00	67.10	70.25
94.00	34.00	34.20
0.00	0.00	0.00

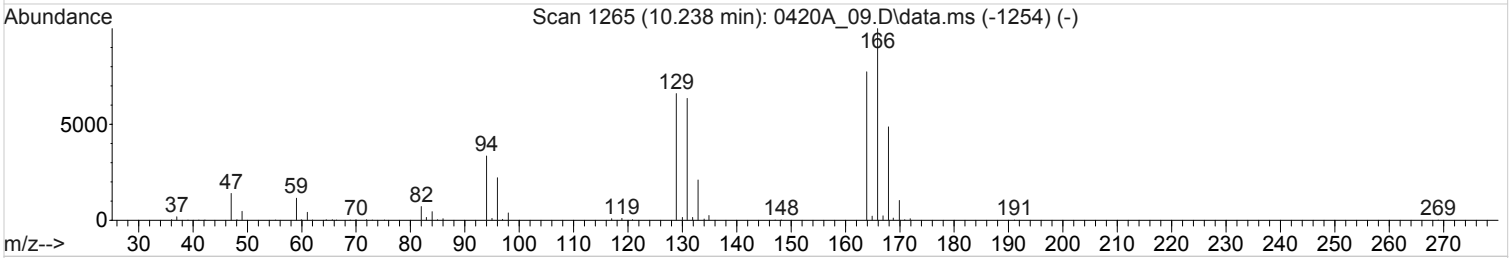
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_17.D
Acq On : 26 Apr 2018 7:20 pm
Operator : 564
Sample : L988471-06 1x WG1103323
Misc :
ALS Vial : 17 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 27 08:42:14 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration







TIC: 0426_17.D\data.ms

(53) Tetrachloroethene (T,M)

10.289min (+0.051) 217.9953711 ppbv m E

response 16595407 Limit = 0.2000000

Ion	Exp%	Act%
166.00	100	100
129.00	67.10	35.59#
94.00	34.00	17.33#
0.00	0.00	0.00

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS-7

ESC Sample ID:	L988471-07	**SDG:**	L988471
Client Sample ID:	SS-7	**Collected Date/Time:**	04/23/18 11:17
Lab File ID:	0426_18	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/26/18 20:03
Analytical Batch:	WG1103323	**Analysis Date/Time:**	04/26/18 20:03
Dilution Factor:	1	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	RT	Result	Qualifier	MDL	RDL
			ppbv		*ppbv*	*ppbv*
Acetone	67-64-1	5.45	48.4		0.0569	1.25
Allyl chloride	107-05-1	0	ND		0.0546	0.200
Benzene	71-43-2	7.81	1.44		0.0460	0.200
Benzyl Chloride	100-44-7	0	ND		0.0598	0.200
Bromodichloromethane	75-27-4	8.86	ND		0.0436	0.200
Bromoform	75-25-2	0	ND		0.0786	0.600
Bromomethane	74-83-9	0	ND		0.0609	0.200
1,3-Butadiene	106-99-0	0	ND		0.0563	2.00
Carbon disulfide	75-15-0	5.68	2.25		0.0544	0.200
Carbon tetrachloride	56-23-5	7.60	0.249		0.0585	0.200
Chlorobenzene	108-90-7	0	ND		0.0601	0.200
Chloroethane	75-00-3	0	ND		0.0489	0.200
Chloroform	67-66-3	7.26	ND		0.0574	0.200
Chloromethane	74-87-3	3.93	ND		0.0544	0.200
2-Chlorotoluene	95-49-8	0	ND		0.0605	0.200
Cyclohexane	110-82-7	7.48	14.1		0.0534	0.200
Dibromochloromethane	124-48-1	0	ND		0.0494	0.200
1,2-Dibromoethane	106-93-4	0	ND		0.0185	0.200
1,2-Dichlorobenzene	95-50-1	0	ND		0.0603	0.200
1,3-Dichlorobenzene	541-73-1	0	ND		0.0597	0.200
1,4-Dichlorobenzene	106-46-7	0	ND		0.0557	0.200
1,2-Dichloroethane	107-06-2	0	ND		0.0616	0.200
1,1-Dichloroethane	75-34-3	0	ND		0.0514	0.200
1,1-Dichloroethene	75-35-4	0	ND		0.0490	0.200
cis-1,2-Dichloroethene	156-59-2	0	ND		0.0389	0.200
trans-1,2-Dichloroethene	156-60-5	0	ND		0.0464	0.200
1,2-Dichloropropane	78-87-5	0	ND		0.0599	0.200
cis-1,3-Dichloropropene	10061-01-5	0	ND		0.0588	0.200
trans-1,3-Dichloropropene	10061-02-6	0	ND		0.0435	0.200
1,4-Dioxane	123-91-1	0	ND		0.0554	0.200
Ethanol	64-17-5	5.03	1.18		0.0832	0.630
Ethylbenzene	100-41-4	11.28	0.365		0.0506	0.200
4-Ethyltoluene	622-96-8	12.79	ND		0.0666	0.200
Trichlorofluoromethane	75-69-4	4.85	0.456		0.0673	0.200
Dichlorodifluoromethane	75-71-8	3.62	0.509		0.0601	0.200
1,1,2-Trichlorotrifluoroethane	76-13-1	5.32	ND		0.0687	0.200
1,2-Dichlorotetrafluoroethane	76-14-2	0	ND		0.0458	0.200
Heptane	142-82-5	7.84	2.76		0.0626	0.200
Hexachloro-1,3-butadiene	87-68-3	0	ND		0.0656	0.630
n-Hexane	110-54-3	6.22	3.69		0.0457	0.200
Isopropylbenzene	98-82-8	0	ND		0.0563	0.200
Methylene Chloride	75-09-2	0	ND		0.0465	0.200
Methyl Butyl Ketone	591-78-6	10.29	ND		0.0682	1.25

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS-7

ESC Sample ID:	L988471-07	**SDG:**	L988471
Client Sample ID:	SS-7	**Collected Date/Time:**	04/23/18 11:17
Lab File ID:	0426_18	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/26/18 20:03
Analytical Batch:	WG1103323	**Analysis Date/Time:**	04/26/18 20:03
Dilution Factor:	1	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	**CAS**	**RT**	**Result**	**Qualifier**	**MDL**	**RDL**
			ppbv		*ppbv*	*ppbv*
2-Butanone (MEK)	78-93-3	6.99	5.43		0.0493	1.25
4-Methyl-2-pentanone (MIBK)	108-10-1	9.42	ND		0.0650	1.25
Methyl methacrylate	80-62-6	0	ND		0.0773	0.200
MTBE	1634-04-4	0	ND		0.0505	0.200
Naphthalene	91-20-3	0	ND		0.154	0.630
2-Propanol	67-63-0	5.51	ND		0.0882	1.25
Propene	115-07-1	0	ND		0.0932	0.400
Styrene	100-42-5	0	ND		0.0465	0.200
1,1,2,2-Tetrachloroethane	79-34-5	12.63	ND		0.0576	0.200
Tetrachloroethylene	127-18-4	10.24	38.6		0.0497	0.200
Tetrahydrofuran	109-99-9	0	ND		0.0508	0.200
Toluene	108-88-3	9.66	8.65		0.0499	0.200
1,2,4-Trichlorobenzene	120-82-1	0	ND		0.148	0.630
1,1,1-Trichloroethane	71-55-6	7.46	0.227		0.0665	0.200
1,1,2-Trichloroethane	79-00-5	10.09	ND		0.0287	0.200
Trichloroethylene	79-01-6	0	ND		0.0545	0.200
1,2,4-Trimethylbenzene	95-63-6	13.24	0.430		0.0483	0.200
1,3,5-Trimethylbenzene	108-67-8	12.87	0.214		0.0631	0.200
2,2,4-Trimethylpentane	540-84-1	7.71	1.30		0.0456	0.200
Vinyl chloride	75-01-4	0	ND		0.0457	0.200
Vinyl Bromide	593-60-2	0	ND		0.0727	0.200
Vinyl acetate	108-05-4	0	ND		0.0639	0.200
m&p-Xylene	1330-20-7	11.41	2.46		0.0946	0.400
o-Xylene	95-47-6	11.88	1.43		0.0633	0.200

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_18.D
Acq On : 26 Apr 2018 8:03 pm
Operator : 564
Sample : L988471-07 1x WG1103323
Misc :
ALS Vial : 18 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 27 08:53:00 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration

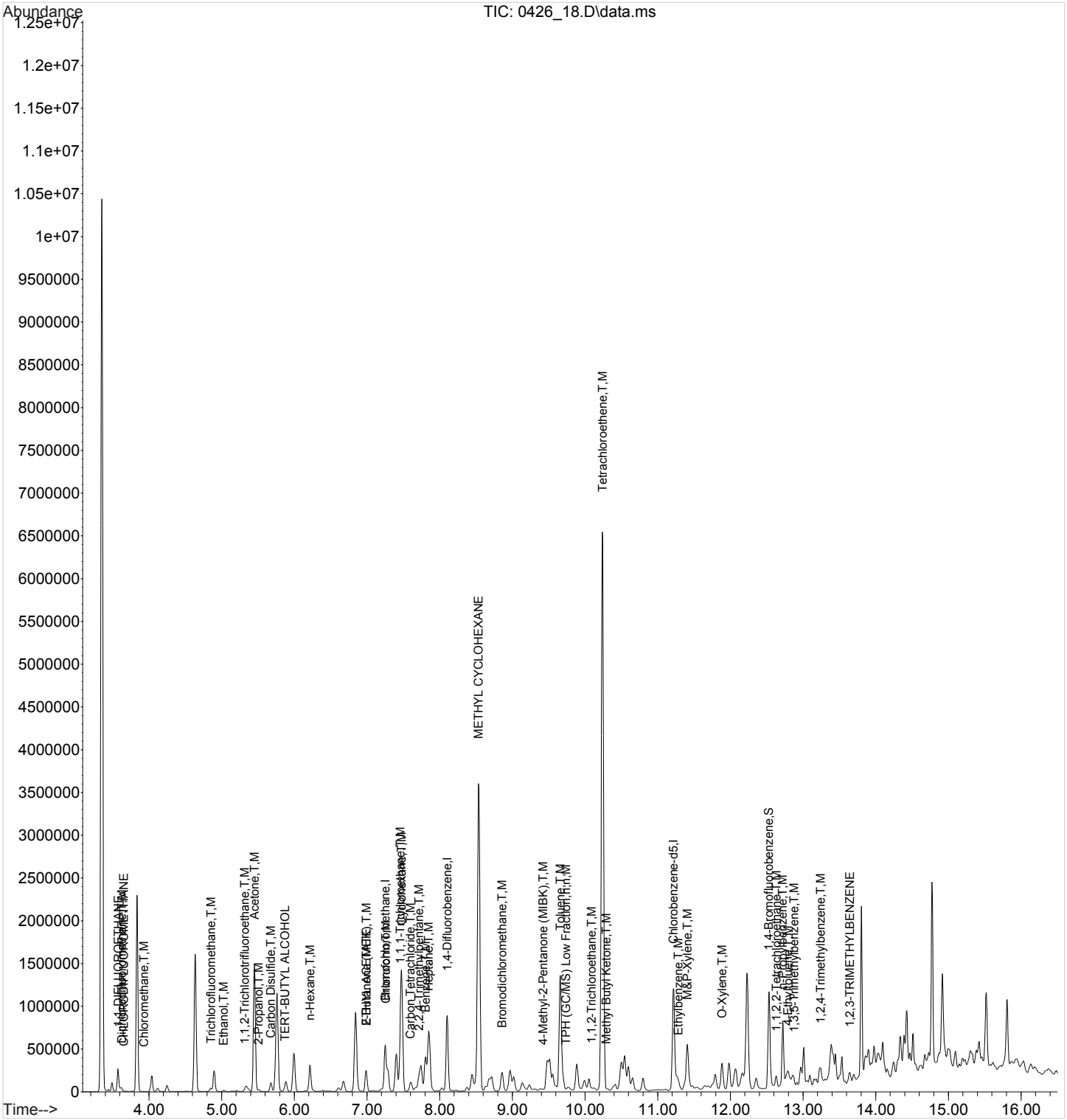
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.251	130	233286	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	8.105	114	859848	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	11.216	117	772626	4.0000000	ppbv	0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	12.529	95	453657	3.9143227	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 97.86%			
Target Compounds						Qvalue
3) 1,1-DIFLUOROETHANE	3.579	51	60422	1.6486615	ppbv	100
4) Dichlorodifluoromethane	3.625	85	29656	0.5090693	ppbv	99
5) CHLORODIFLUOROMETHANE	3.653	51	10388	0.2961131	ppbv	95
7) Chloromethane	3.930	50	2926	0.1259582	ppbv	96
13) Trichlorofluoromethane	4.852	101	29731	0.4564022	ppbv	99
14) Ethanol	5.028	45	13326	1.1798176	ppbv	99
15) 1,1,2-Trichlorotrifluo...	5.316	101	5171	0.0854769	ppbv	97
17) Acetone	5.452	58	694370	48.4026885	ppbv	69
18) 2-Propanol	5.508	45	25926	0.4688915	ppbv #	7
19) Carbon Disulfide	5.678	76	148229	2.2491463	ppbv	100
22) TERT-BUTYL ALCOHOL	5.871	59	20005	0.2667593	ppbv #	1
25) n-Hexane	6.216	57	169724	3.6877100	ppbv	93
28) ETHYL ACETATE	6.991	43	308647	4.9572230	ppbv #	66
29) 2-Butanone (MEK)	6.991	72	100901	5.4280623	ppbv	100
32) Chloroform	7.256	83	6003	0.0898993	ppbv #	1
33) Cyclohexane	7.477	84	670708	14.0907111	ppbv	96
34) 1,1,1-Trichloroethane	7.460	97	15085	0.2267428	ppbv	98
35) Carbon Tetrachloride	7.596	117	17254	0.2491095	ppbv	96
36) 2,2,4-Trimethylpentane	7.715	57	211059	1.2964954	ppbv #	48
38) Benzene	7.805	78	155560	1.4429570	ppbv	98
40) Heptane	7.845	43	147162	2.7639476	ppbv #	83
43) METHYL CYCLOHEXANE	8.535	83	1990232	30.8180330	ppbv	96
47) Bromodichloromethane	8.857	83	10815	0.1482440	ppbv #	40
49) 4-Methyl-2-Pentanone (...	9.423	43	11649	0.1493264	ppbv	97
50) Toluene	9.661	91	1159636	8.6507967	ppbv	99
52) 1,1,2-Trichloroethane	10.091	97	3415	0.0731147	ppbv #	47
53) Tetrachloroethene	10.243	166	2785765	38.6105743	ppbv	97
54) Methyl Butyl Ketone	10.294	43	8201	0.1091649	ppbv #	86
59) Ethylbenzene	11.284	91	67084	0.3645683	ppbv	97
60) M&P-Xylene	11.409	91	347031	2.4618232	ppbv	98
61) O-Xylene	11.884	91	208671	1.4316866	ppbv	98
65) 1,1,2,2-Tetrachloroethane	12.631	83	11618	0.1079494	ppbv #	40
66) n-Propylbenzene	12.715	91	17199	0.0721612	ppbv	96
67) 4-Ethyltoluene	12.789	105	40578	0.1944986	ppbv	94
70) 1,3,5-Trimethylbenzene	12.874	105	35301	0.2142737	ppbv	97
72) 1,2,4-Trimethylbenzene	13.241	105	71529	0.4299231	ppbv	99
76) 1,2,3-TRIMETHYLBENZENE	13.643	105	39491	0.2485593	ppbv	99
84) TPH (GC/MS) Low Fraction	9.740	TIC	58533243m	222.8506643	ppbv	

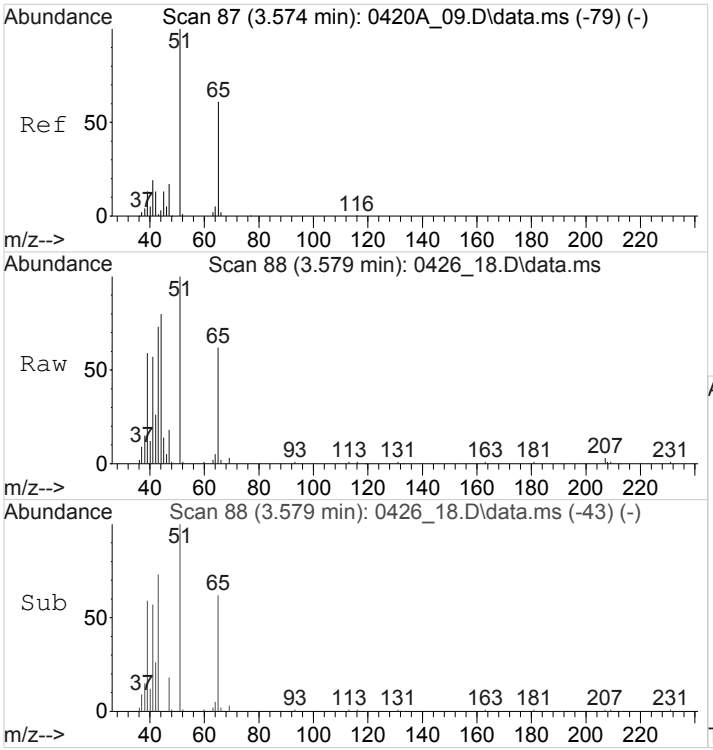
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_18.D
Acq On : 26 Apr 2018 8:03 pm
Operator : 564
Sample : L988471-07 1x WG1103323
Misc :
ALS Vial : 18 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 27 08:53:00 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration

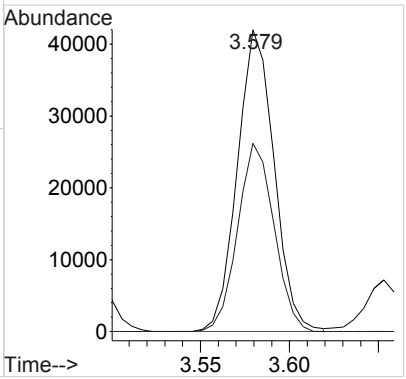


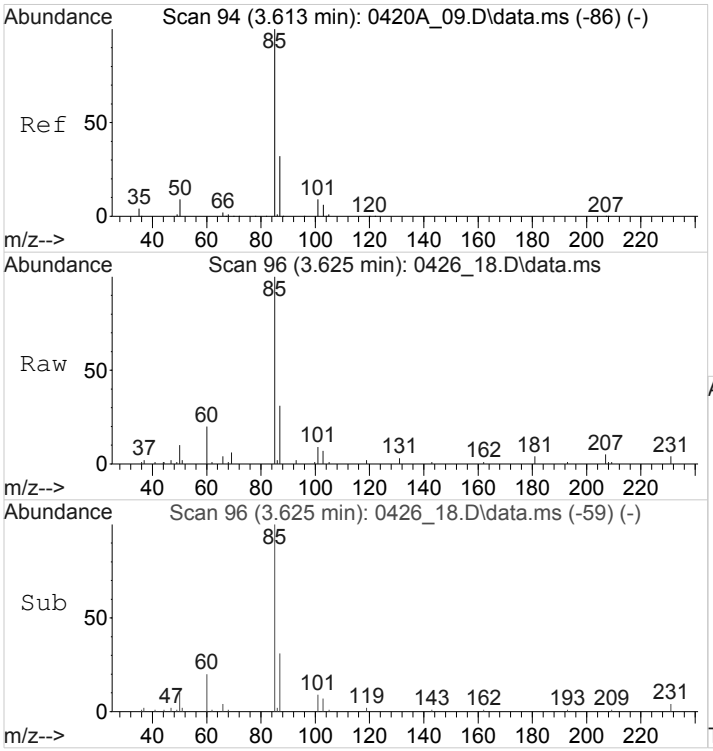


#3
1,1-DIFLUOROETHANE
Concen: 1.6486615 ppbv
RT: 3.579 min Scan# 88
Delta R.T. 0.006 min
Lab File: 0426_18.D
Acq: 26 Apr 2018 8:03 pm

Tgt Ion: 51 Resp: 60422

Ion	Ratio	Lower	Upper
51	100		
65	61.7	49.4	74.2

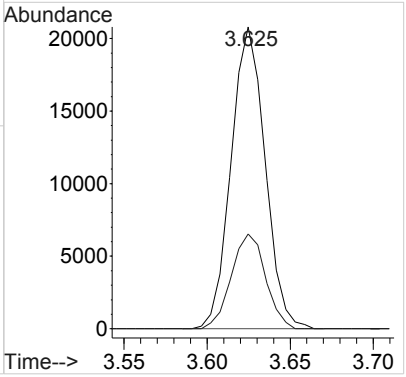


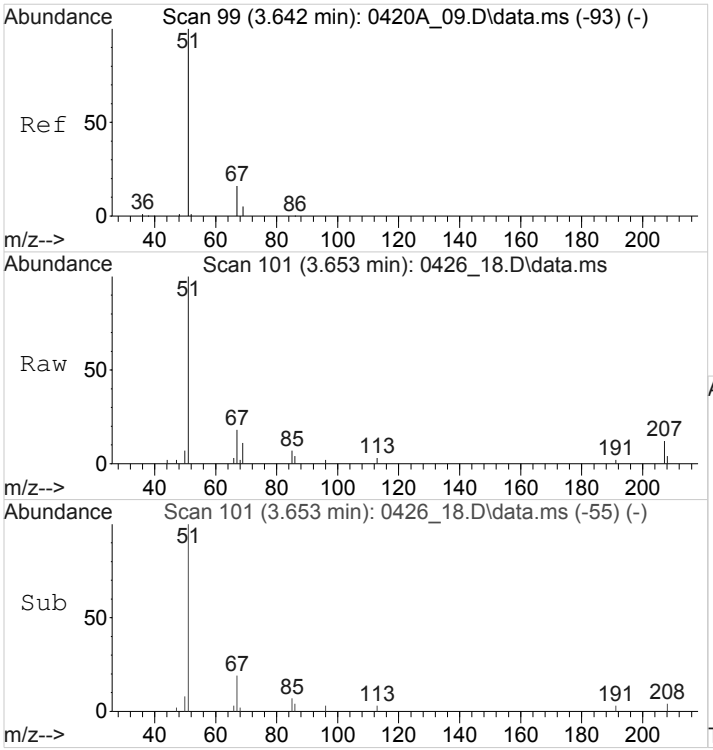


#4
Dichlorodifluoromethane
Concen: 0.5090693 ppbv
RT: 3.625 min Scan# 96
Delta R.T. 0.011 min
Lab File: 0426_18.D
Acq: 26 Apr 2018 8:03 pm

Tgt Ion: 85 Resp: 29656

Ion	Ratio	Lower	Upper
85	100		
87	31.6	25.8	38.8

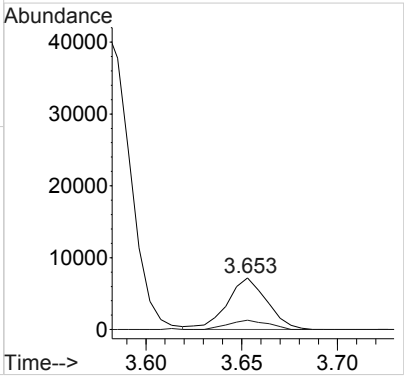


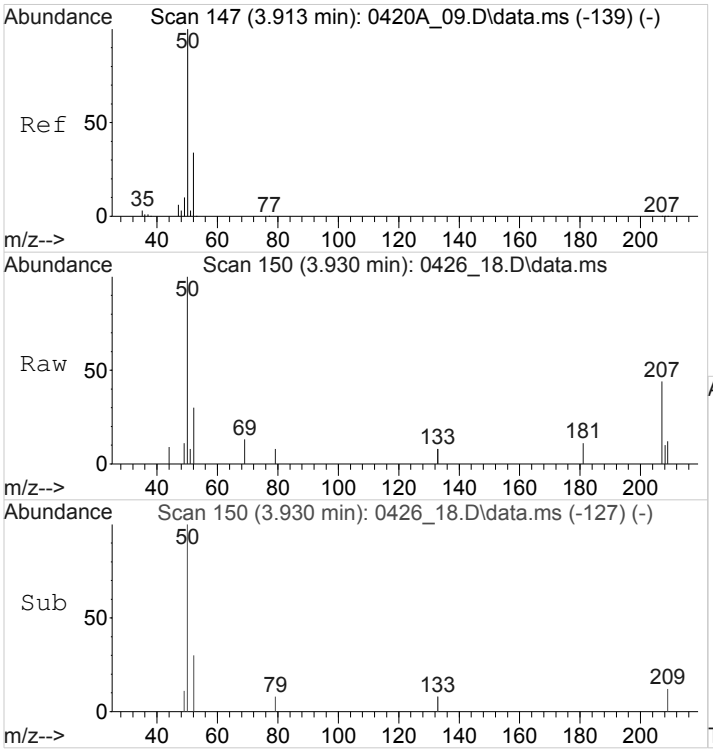


#5
CHLORODIFLUOROMETHANE
Concen: 0.2961131 ppbv
RT: 3.653 min Scan# 101
Delta R.T. 0.011 min
Lab File: 0426_18.D
Acq: 26 Apr 2018 8:03 pm

Tgt Ion: 51 Resp: 10388

Ion	Ratio	Lower	Upper
51	100		
67	17.9	12.7	19.1

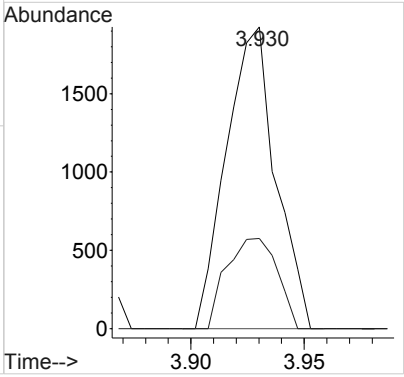


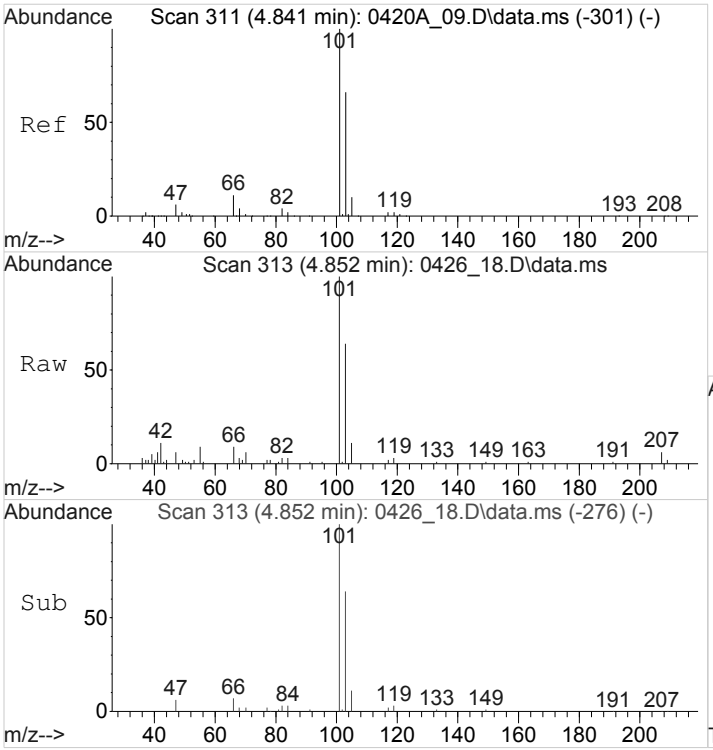


#7
Chloromethane
Concen: 0.1259582 ppbv
RT: 3.930 min Scan# 150
Delta R.T. 0.017 min
Lab File: 0426_18.D
Acq: 26 Apr 2018 8:03 pm

Tgt Ion: 50 Resp: 2926

Ion	Ratio	Lower	Upper
50	100		
52	30.8	26.5	39.7

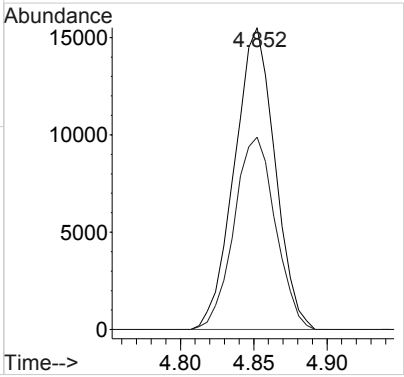


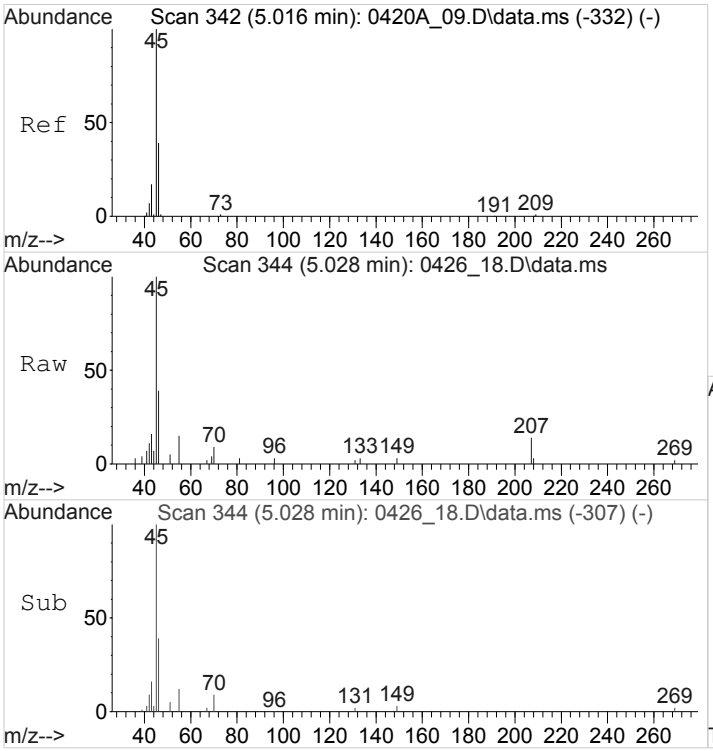


#13
Trichlorofluoromethane
Concen: 0.4564022 ppbv
RT: 4.852 min Scan# 313
Delta R.T. 0.011 min
Lab File: 0426_18.D
Acq: 26 Apr 2018 8:03 pm

Tgt Ion:101 Resp: 29731

Ion	Ratio	Lower	Upper
101	100		
103	65.2	52.6	79.0

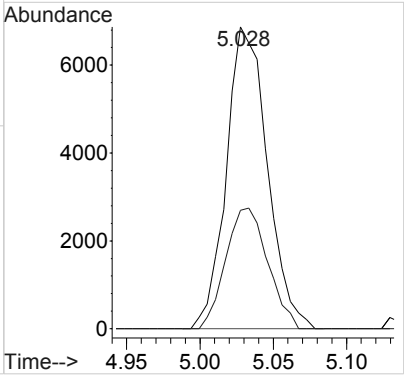


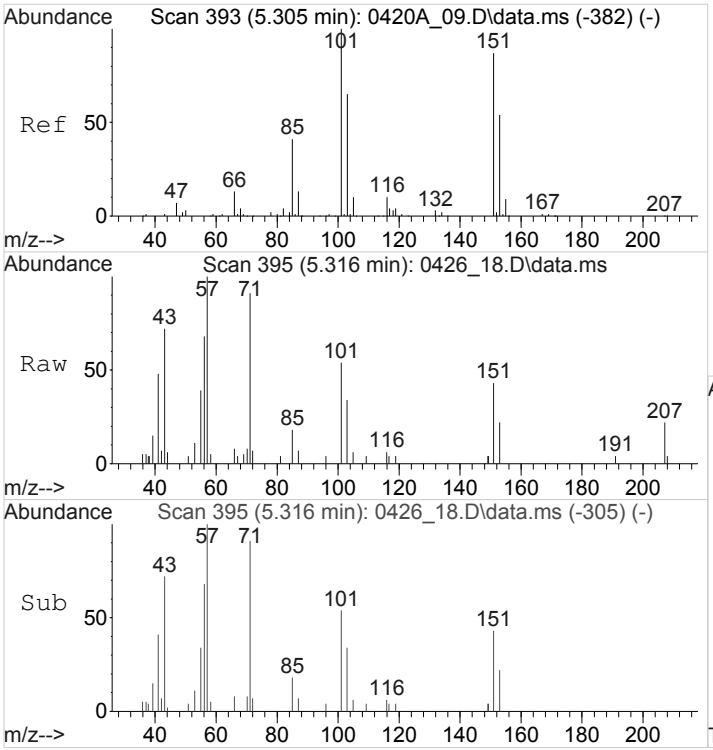


#14
Ethanol
Concen: 1.1798176 ppbv
RT: 5.028 min Scan# 344
Delta R.T. 0.011 min
Lab File: 0426_18.D
Acq: 26 Apr 2018 8:03 pm

Tgt Ion: 45 Resp: 13326

Ion	Ratio	Lower	Upper
45	100		
46	41.0	33.1	49.7

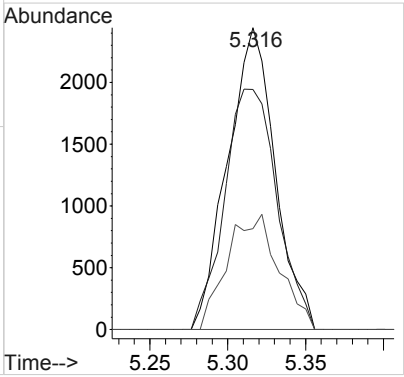


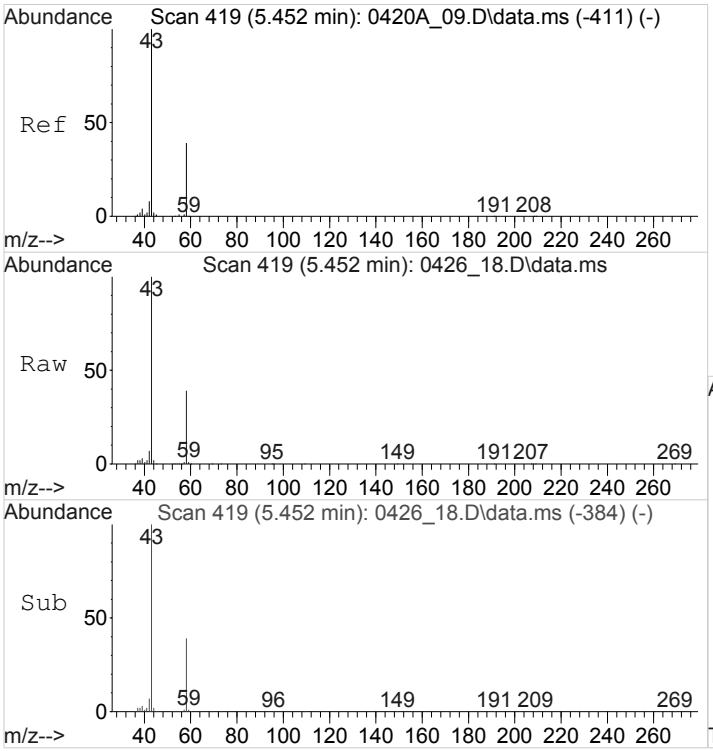


#15
1,1,2-Trichlorotrifluoroethane
Concen: 0.0854769 ppbv
RT: 5.316 min Scan# 395
Delta R.T. 0.011 min
Lab File: 0426_18.D
Acq: 26 Apr 2018 8:03 pm

Tgt Ion:101 Resp: 5171

Ion	Ratio	Lower	Upper
101	100		
151	88.1	67.9	101.9
85	41.5	32.4	48.6

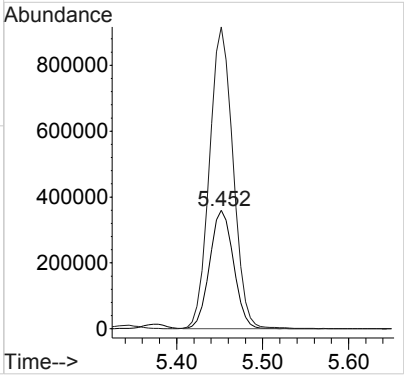


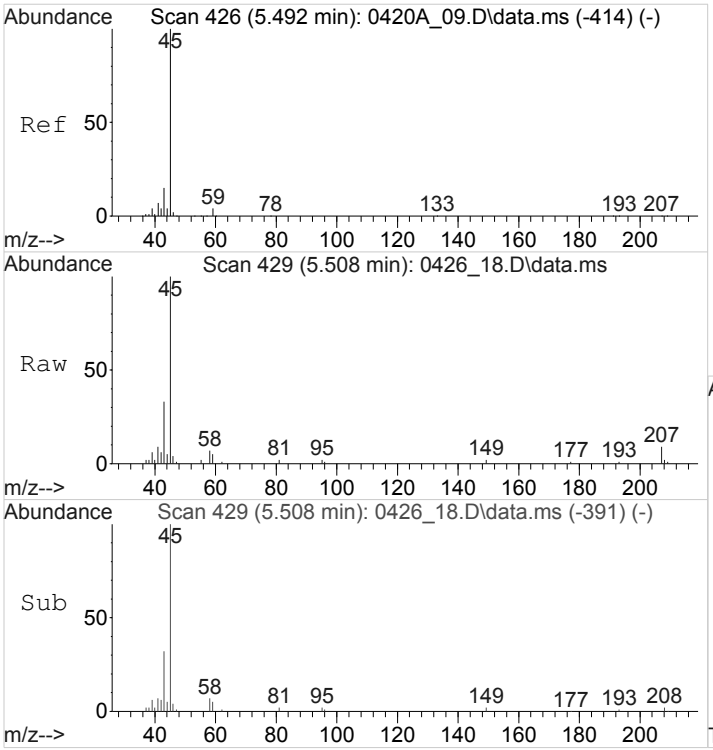


#17
Acetone
Concen: 48.4026885 ppbv
RT: 5.452 min Scan# 419
Delta R.T. -0.000 min
Lab File: 0426_18.D
Acq: 26 Apr 2018 8:03 pm

Tgt Ion: 58 Resp: 694370

Ion	Ratio	Lower	Upper
58	100		
43	252.8	252.6	379.0

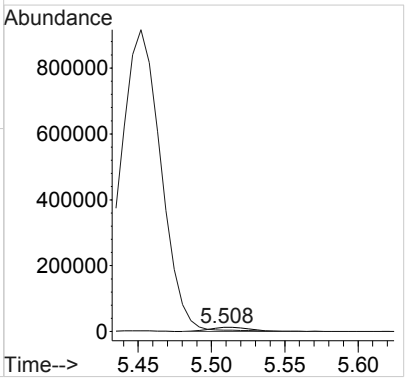


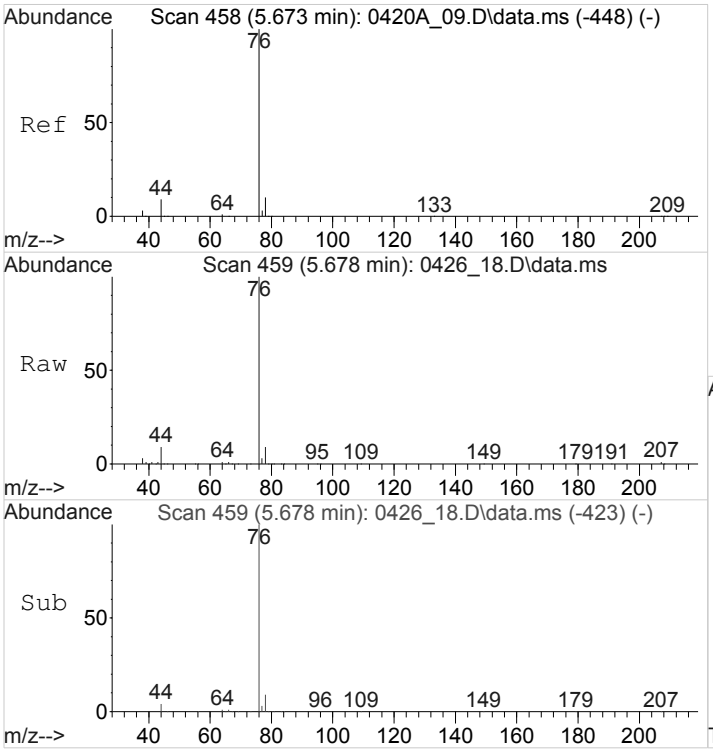


#18
2-Propanol
Concen: 0.4688915 ppbv
RT: 5.508 min Scan# 429
Delta R.T. 0.017 min
Lab File: 0426_18.D
Acq: 26 Apr 2018 8:03 pm

Tgt Ion: 45 Resp: 25926

Ion	Ratio	Lower	Upper
45	100		
43	0.0	67.9	101.9#

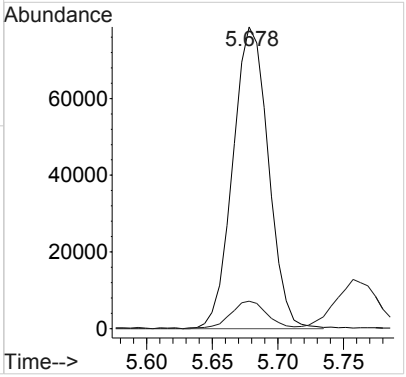


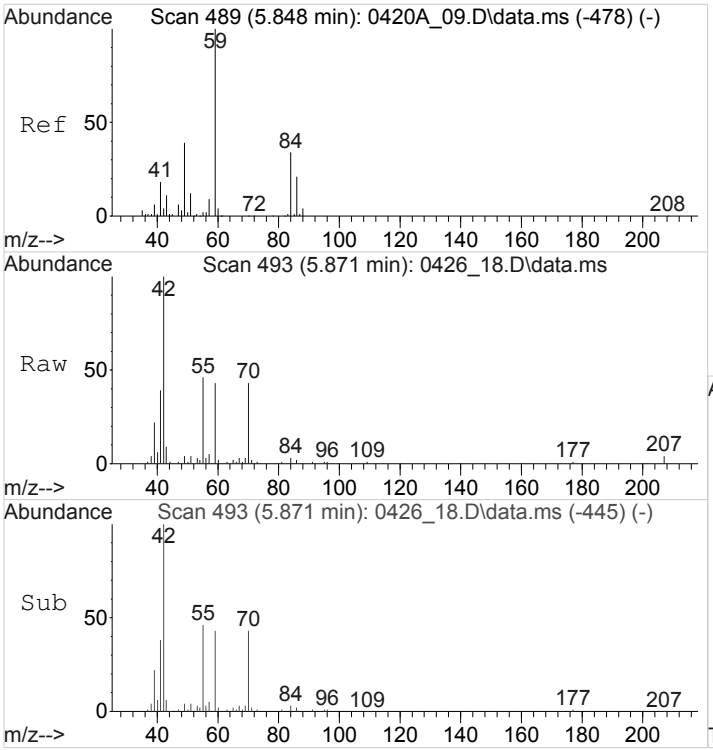


#19
Carbon Disulfide
Concen: 2.2491463 ppbv
RT: 5.678 min Scan# 459
Delta R.T. 0.006 min
Lab File: 0426_18.D
Acq: 26 Apr 2018 8:03 pm

Tgt Ion: 76 Resp: 148229

Ion	Ratio	Lower	Upper
76	100		
44	9.5	7.4	11.2

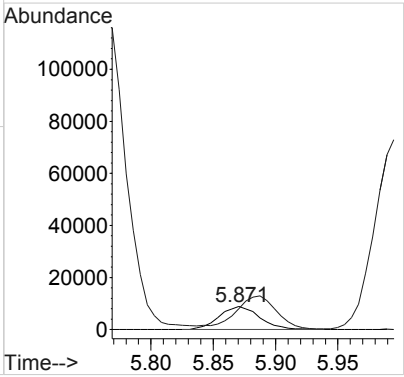


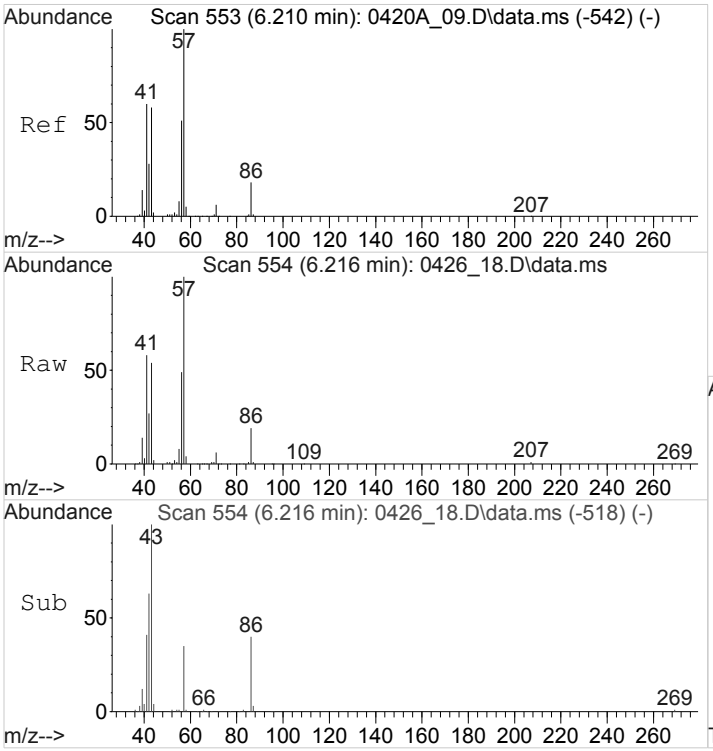


#22
TERT-BUTYL ALCOHOL
Concen: 0.2667593 ppbv
RT: 5.871 min Scan# 493
Delta R.T. 0.023 min
Lab File: 0426_18.D
Acq: 26 Apr 2018 8:03 pm

Tgt Ion: 59 Resp: 20005

Ion	Ratio	Lower	Upper
59	100		
41	142.6	14.6	22.0#

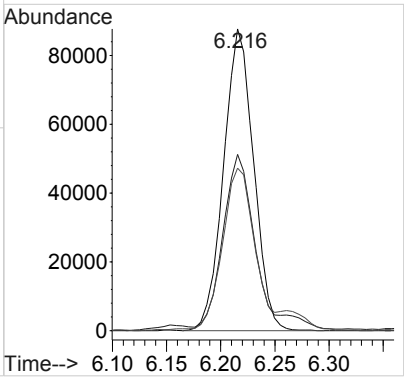


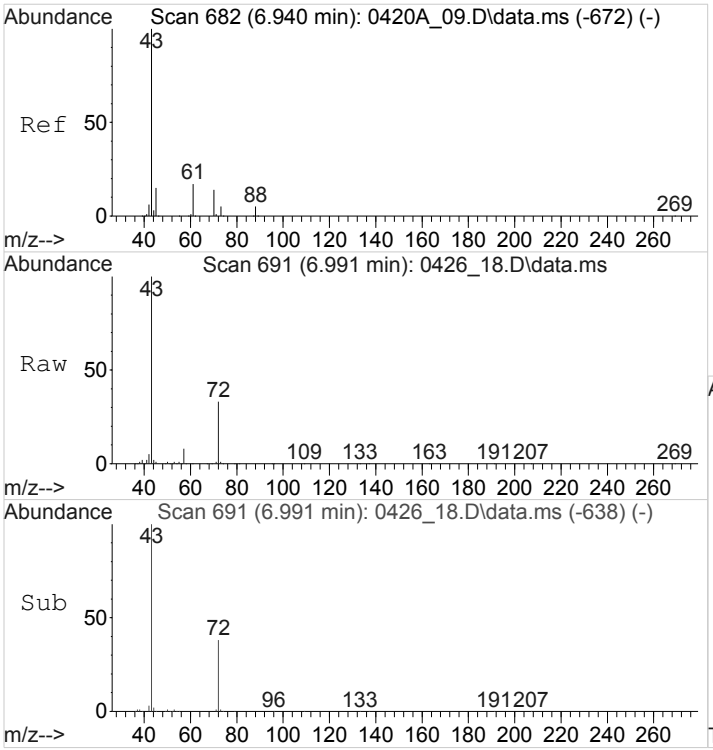


#25
n-Hexane
Concen: 3.6877100 ppbv
RT: 6.216 min Scan# 554
Delta R.T. 0.006 min
Lab File: 0426_18.D
Acq: 26 Apr 2018 8:03 pm

Tgt Ion: 57 Resp: 169724

Ion	Ratio	Lower	Upper
57	100		
41	63.0	47.6	71.4
43	64.0	46.1	69.1

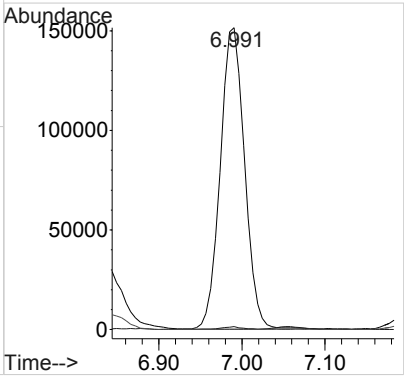


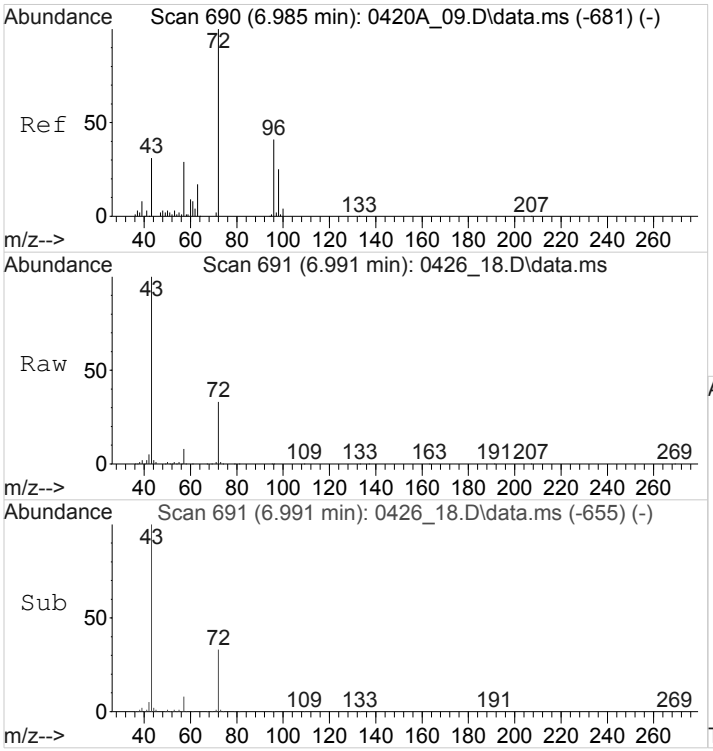


#28
ETHYL ACETATE
Concen: 4.9572230 ppbv
RT: 6.991 min Scan# 691
Delta R.T. 0.051 min
Lab File: 0426_18.D
Acq: 26 Apr 2018 8:03 pm

Tgt Ion: 43 Resp: 308647

Ion	Ratio	Lower	Upper
43	100		
45	0.8	12.0	18.0#
70	0.0	10.5	15.7#

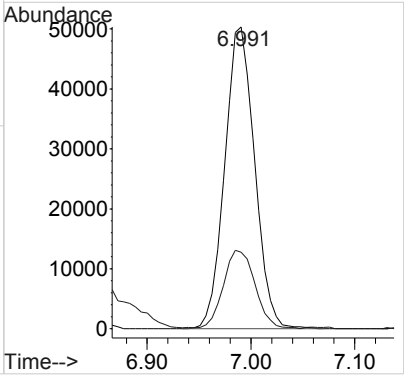


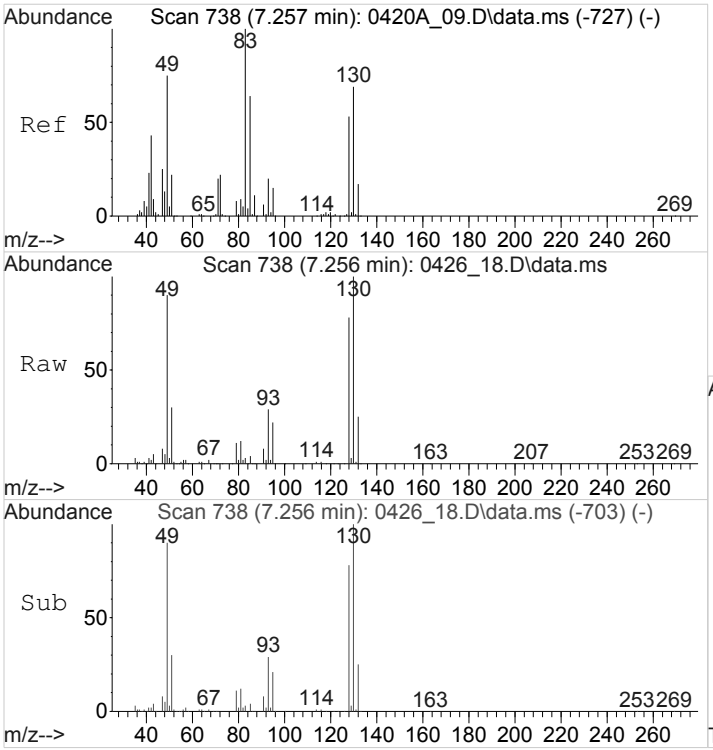


#29
2-Butanone (MEK)
Concen: 5.4280623 ppbv
RT: 6.991 min Scan# 691
Delta R.T. 0.006 min
Lab File: 0426_18.D
Acq: 26 Apr 2018 8:03 pm

Tgt Ion: 72 Resp: 100901

Ion	Ratio	Lower	Upper
72	100		
57	27.6	22.2	33.4

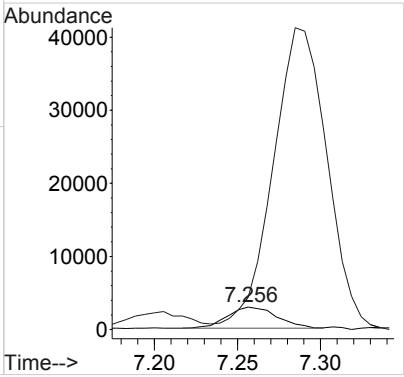


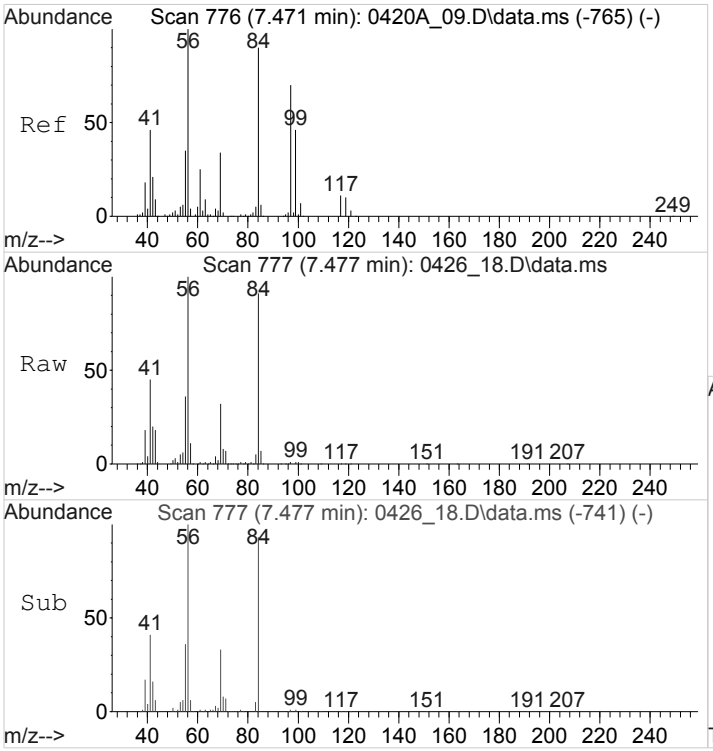


#32
Chloroform
Concen: 0.0898993 ppbv
RT: 7.256 min Scan# 738
Delta R.T. -0.000 min
Lab File: 0426_18.D
Acq: 26 Apr 2018 8:03 pm

Tgt Ion: 83 Resp: 6003

Ion	Ratio	Lower	Upper
83	100		
85	1561.0	51.3	76.9#

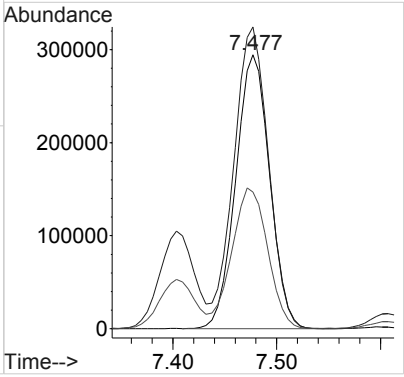


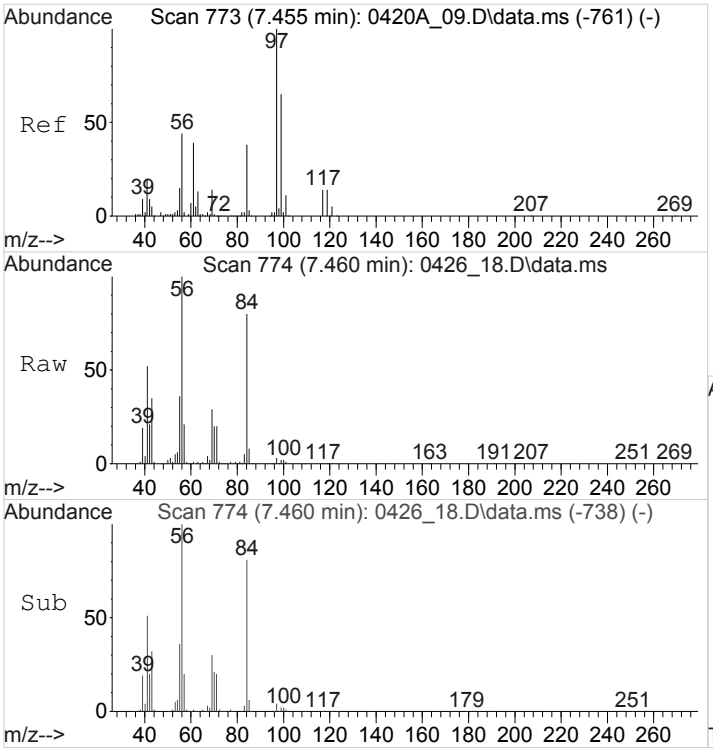


#33
Cyclohexane
Concen: 14.0907111 ppbv
RT: 7.477 min Scan# 777
Delta R.T. 0.006 min
Lab File: 0426_18.D
Acq: 26 Apr 2018 8:03 pm

Tgt Ion: 84 Resp: 670708

Ion	Ratio	Lower	Upper
84	100		
56	112.9	87.6	131.4
41	54.0	40.2	60.2

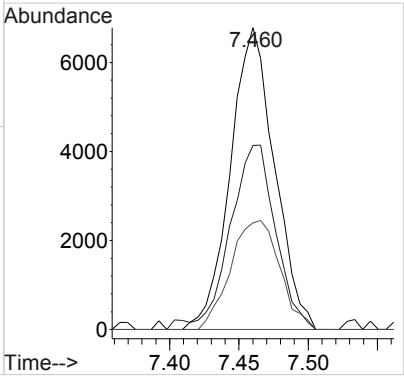


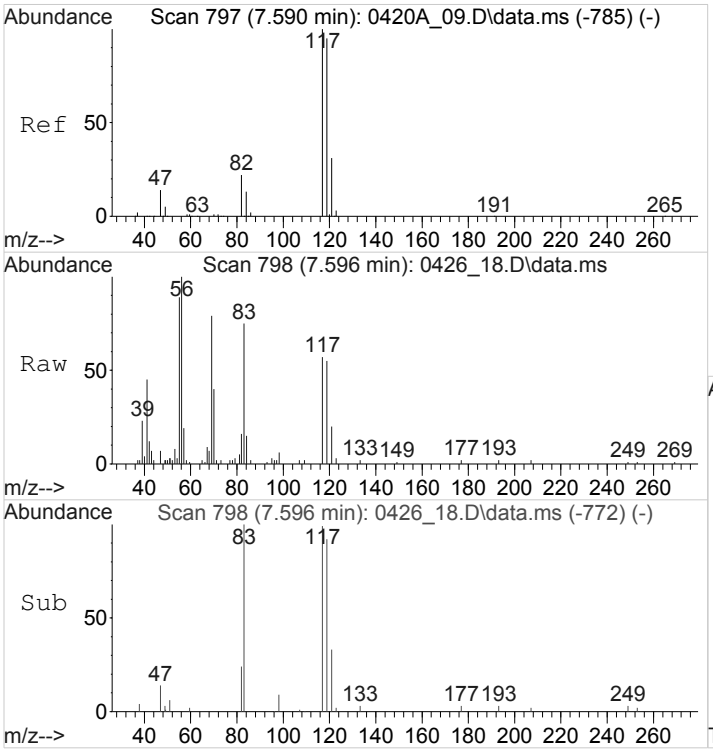


#34
1,1,1-Trichloroethane
Concen: 0.2267428 ppbv
RT: 7.460 min Scan# 774
Delta R.T. 0.006 min
Lab File: 0426_18.D
Acq: 26 Apr 2018 8:03 pm

Tgt Ion: 97 Resp: 15085

Ion	Ratio	Lower	Upper
97	100		
99	63.3	52.2	78.4
61	40.2	31.3	46.9

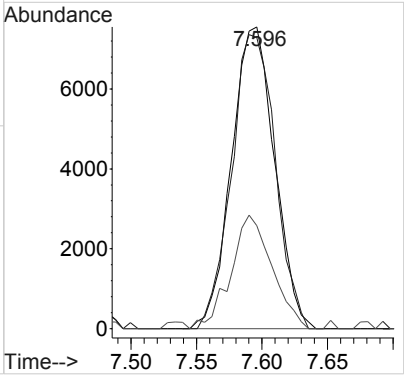


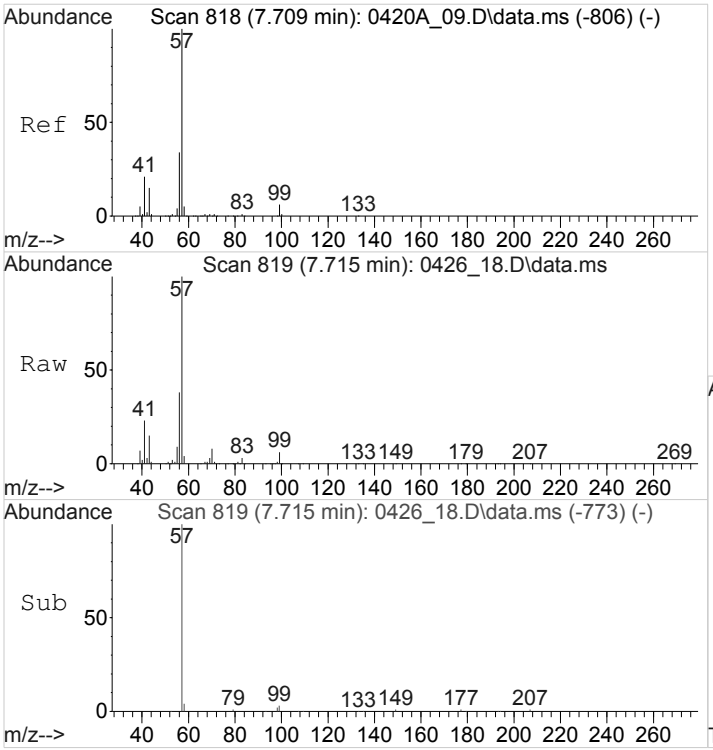


#35
Carbon Tetrachloride
Concen: 0.2491095 ppbv
RT: 7.596 min Scan# 798
Delta R.T. 0.006 min
Lab File: 0426_18.D
Acq: 26 Apr 2018 8:03 pm

Tgt Ion:117 Resp: 17254

Ion	Ratio	Lower	Upper
117	100		
119	98.7	77.1	115.7
121	36.0	24.8	37.2

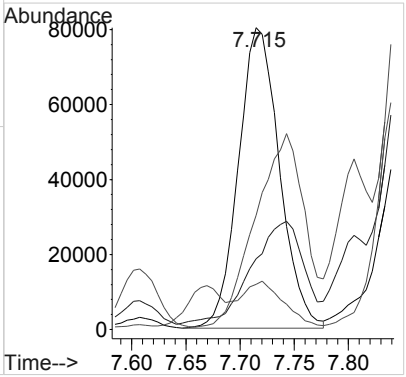


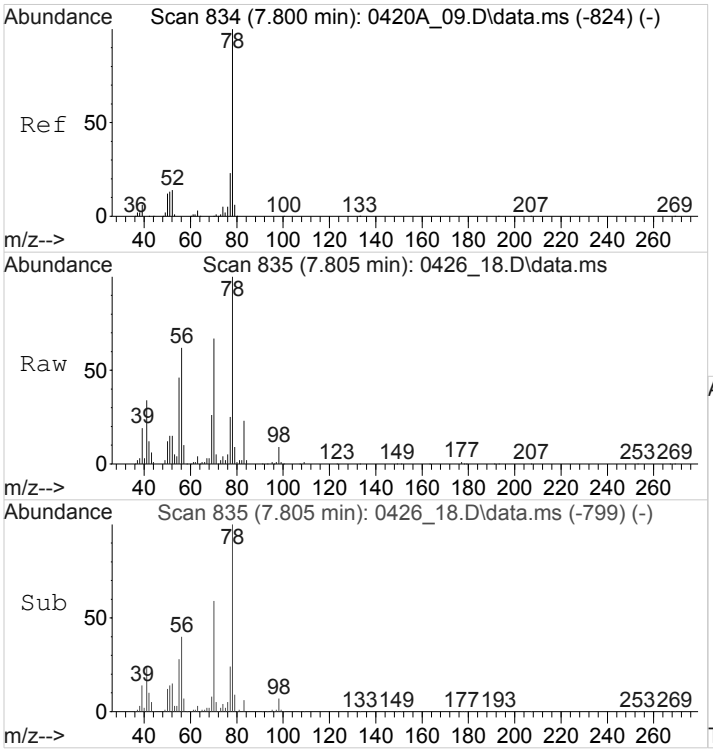


#36
2,2,4-Trimethylpentane
Concen: 1.2964954 ppbv
RT: 7.715 min Scan# 819
Delta R.T. 0.006 min
Lab File: 0426_18.D
Acq: 26 Apr 2018 8:03 pm

Tgt Ion: 57 Resp: 211059

Ion	Ratio	Lower	Upper
57	100		
41	42.8	16.6	25.0#
43	14.5	12.4	18.6
56	77.8	26.6	39.8#

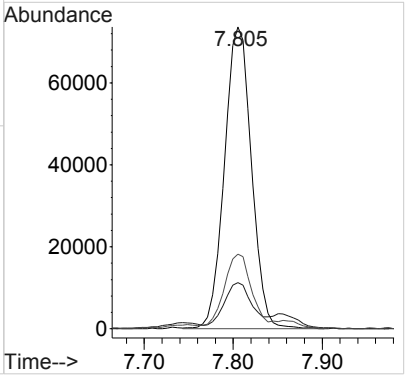


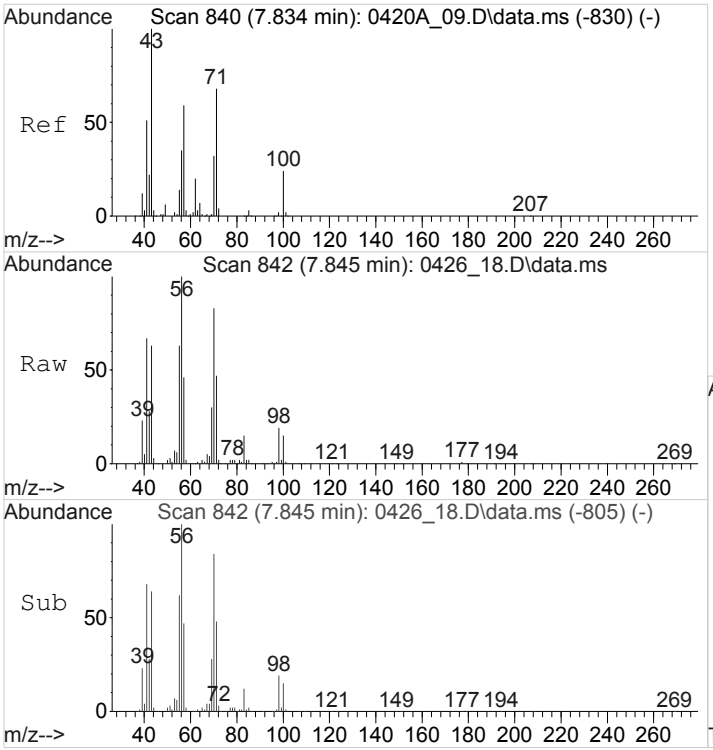


#38
Benzene
Concen: 1.4429570 ppbv
RT: 7.805 min Scan# 835
Delta R.T. 0.006 min
Lab File: 0426_18.D
Acq: 26 Apr 2018 8:03 pm

Tgt Ion: 78 Resp: 155560

Ion	Ratio	Lower	Upper
78	100		
51	16.4	11.3	16.9
77	23.2	18.6	28.0

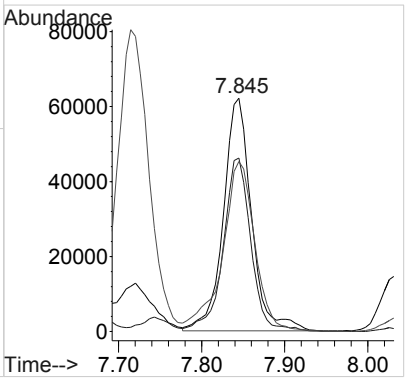


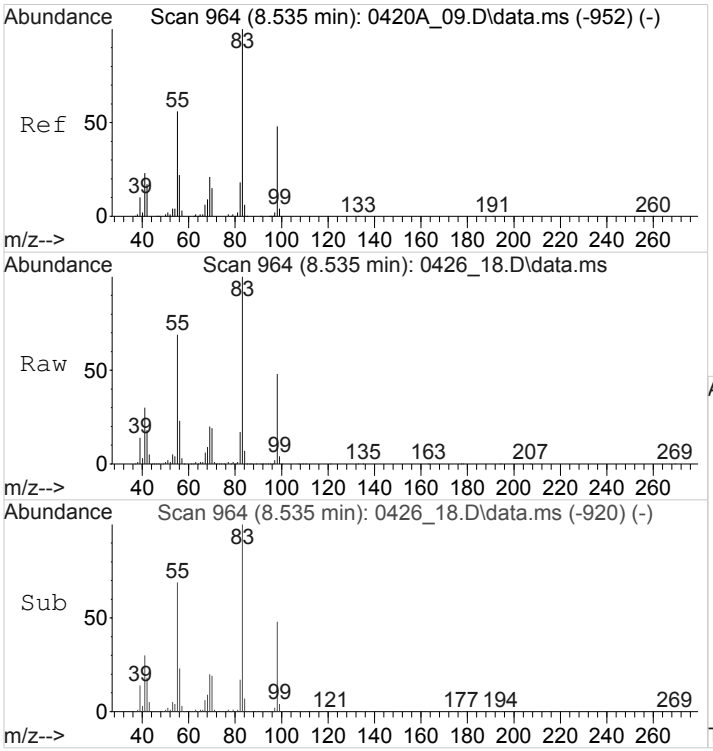


#40
Heptane
Concen: 2.7639476 ppbv
RT: 7.845 min Scan# 842
Delta R.T. 0.011 min
Lab File: 0426_18.D
Acq: 26 Apr 2018 8:03 pm

Tgt Ion: 43 Resp: 147162

Ion	Ratio	Lower	Upper
43	100		
71	72.9	56.1	84.1
57	83.8	47.1	70.7#

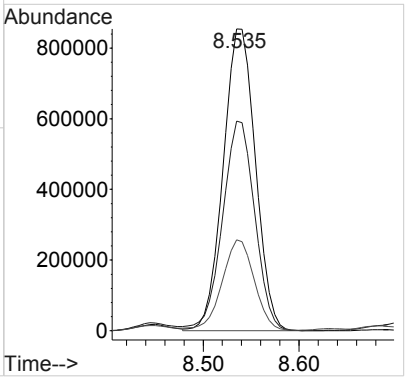


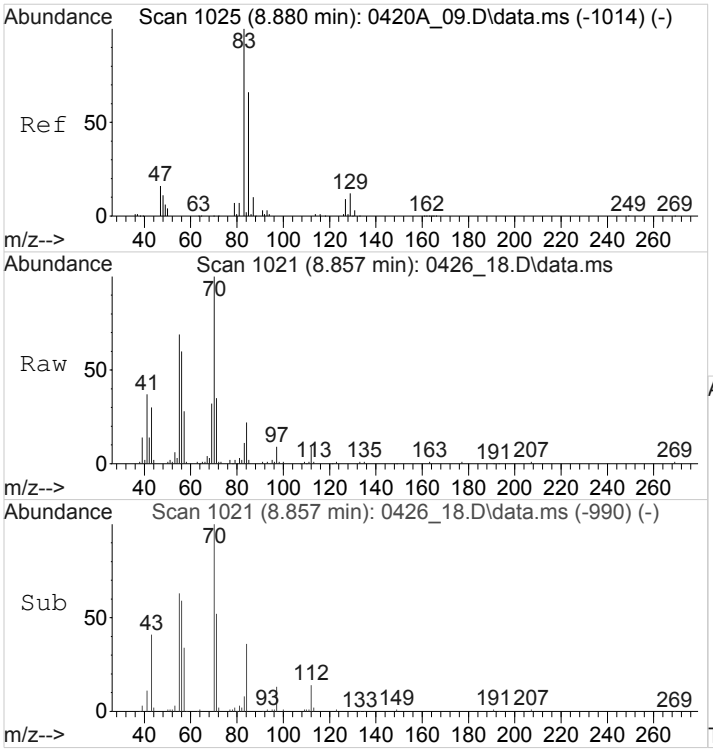


#43
METHYL CYCLOHEXANE
Concen: 30.8180330 ppbv
RT: 8.535 min Scan# 964
Delta R.T. -0.000 min
Lab File: 0426_18.D
Acq: 26 Apr 2018 8:03 pm

Tgt Ion: 83 Resp: 1990232

Ion	Ratio	Lower	Upper
83	100		
55	69.3	58.5	87.7
41	29.9	25.8	38.6

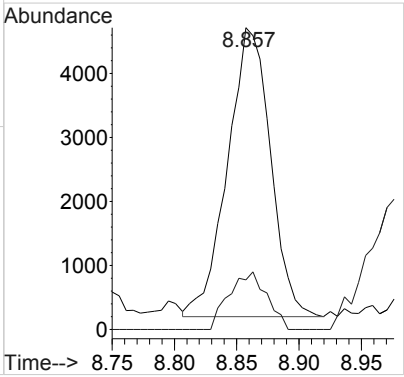


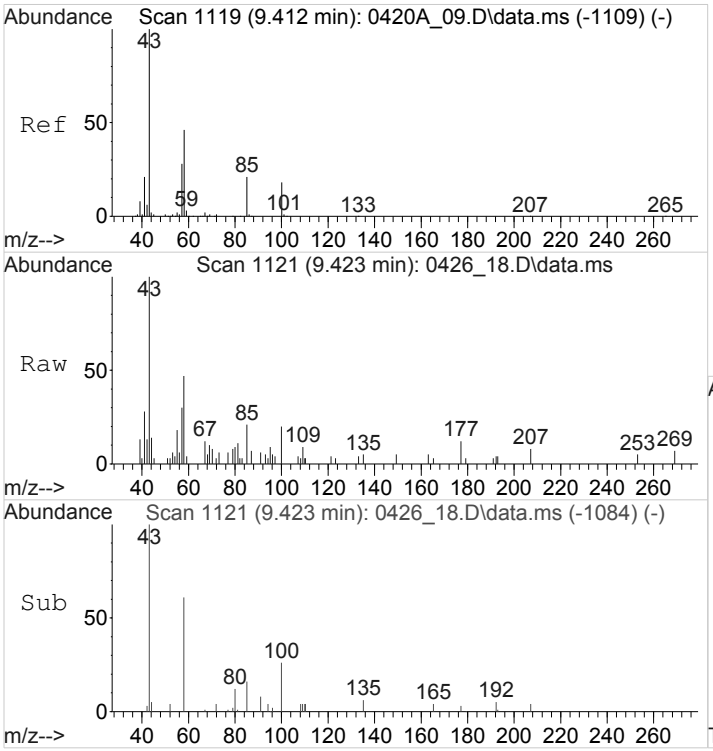


#47
Bromodichloromethane
Concen: 0.1482440 ppbv
RT: 8.857 min Scan# 1021
Delta R.T. -0.023 min
Lab File: 0426_18.D
Acq: 26 Apr 2018 8:03 pm

Tgt Ion: 83 Resp: 10815

Ion	Ratio	Lower	Upper
83	100		
85	17.5	51.8	77.8#

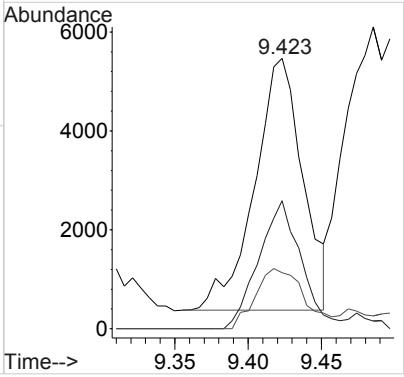


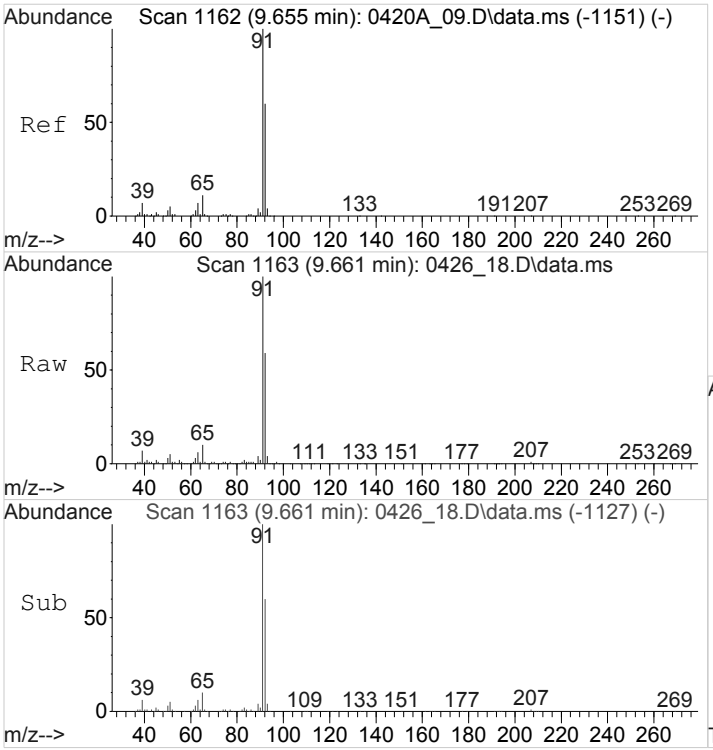


#49
4-Methyl-2-Pentanone (MIBK)
Concen: 0.1493264 ppbv
RT: 9.423 min Scan# 1121
Delta R.T. 0.011 min
Lab File: 0426_18.D
Acq: 26 Apr 2018 8:03 pm

Tgt Ion: 43 Resp: 11649

Ion	Ratio	Lower	Upper
43	100		
58	44.6	36.7	55.1
85	24.1	16.7	25.1

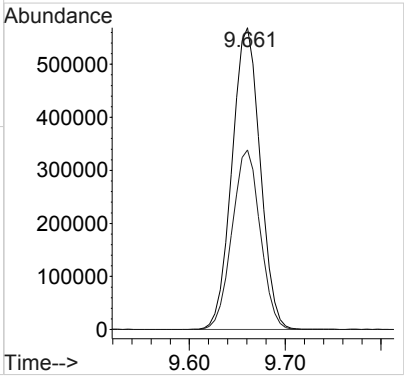


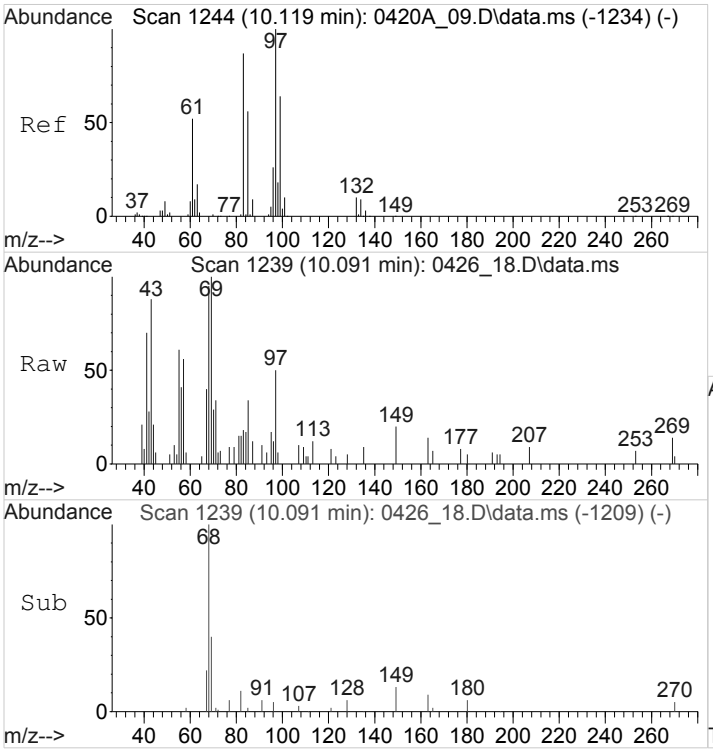


#50
Toluene
Concen: 8.6507967 ppbv
RT: 9.661 min Scan# 1163
Delta R.T. 0.006 min
Lab File: 0426_18.D
Acq: 26 Apr 2018 8:03 pm

Tgt Ion: 91 Resp: 1159636

Ion	Ratio	Lower	Upper
91	100		
92	59.5	48.0	72.0

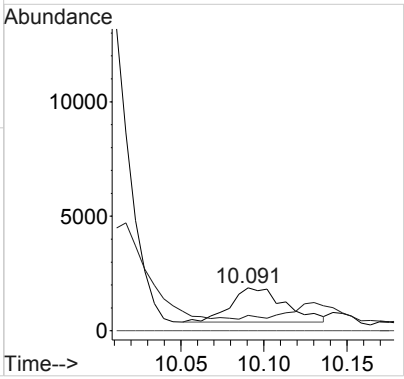


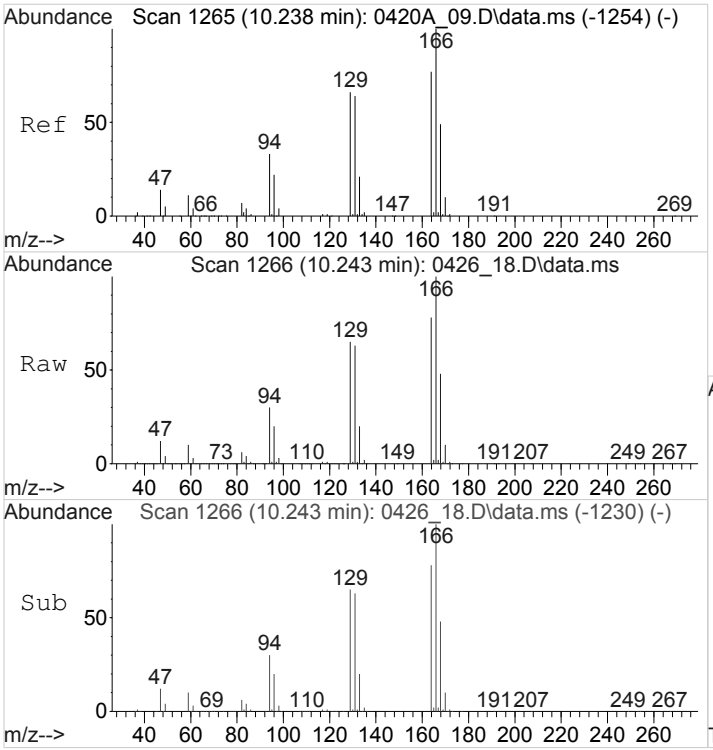


#52
1,1,2-Trichloroethane
Concen: 0.0731147 ppbv
RT: 10.091 min Scan# 1239
Delta R.T. -0.028 min
Lab File: 0426_18.D
Acq: 26 Apr 2018 8:03 pm

Tgt Ion: 97 Resp: 3415

Ion	Ratio	Lower	Upper
97	100		
83	47.1	67.5	101.3#
61	0.0	40.8	61.2#

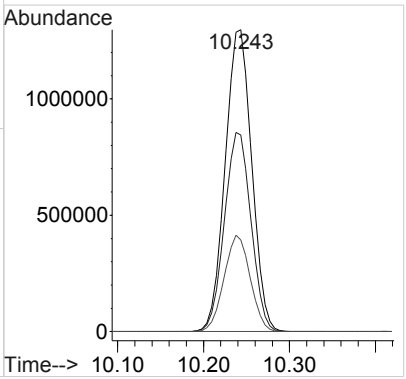


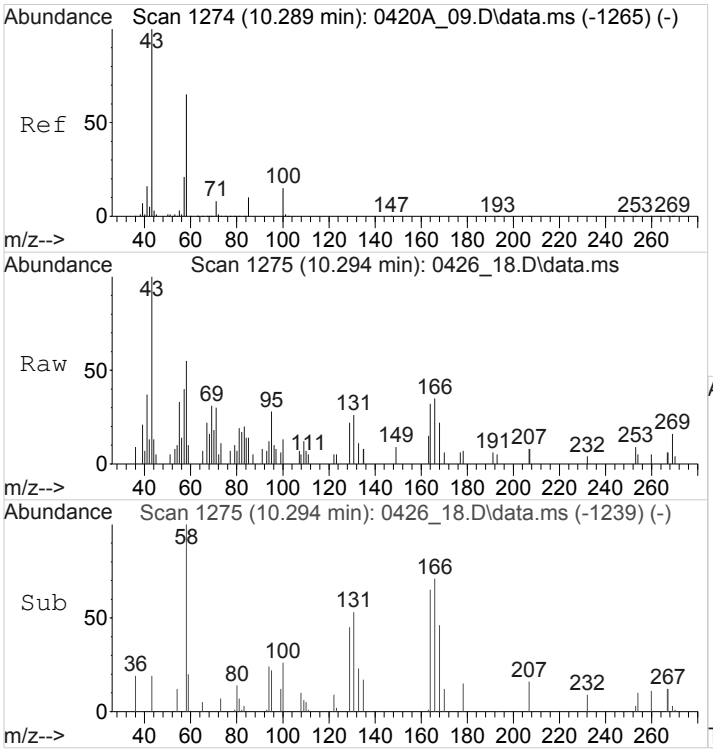


#53
Tetrachloroethene
Concen: 38.6105743 ppbv
RT: 10.243 min Scan# 1266
Delta R.T. 0.006 min
Lab File: 0426_18.D
Acq: 26 Apr 2018 8:03 pm

Tgt Ion:166 Resp: 2785765

Ion	Ratio	Lower	Upper
166	100		
129	65.9	53.7	80.5
94	31.4	27.2	40.8

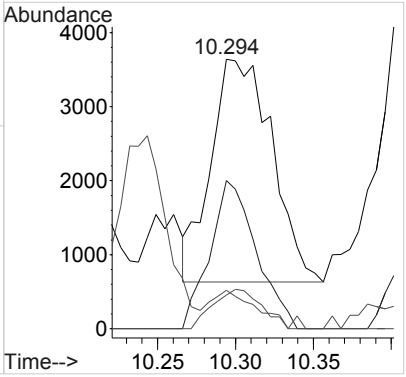


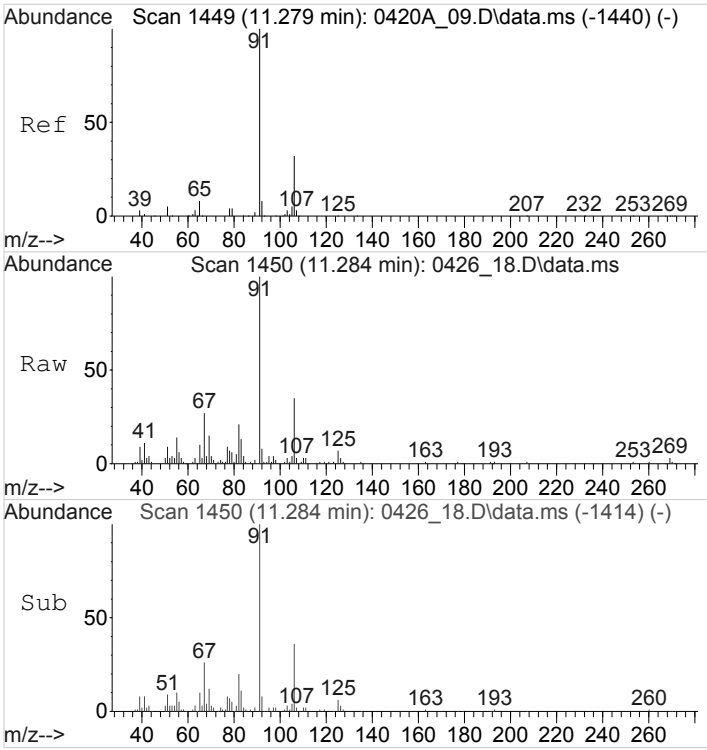


#54
Methyl Butyl Ketone
Concen: 0.1091649 ppbv
RT: 10.294 min Scan# 1275
Delta R.T. 0.006 min
Lab File: 0426_18.D
Acq: 26 Apr 2018 8:03 pm

Tgt Ion: 43 Resp: 8201

Ion	Ratio	Lower	Upper
43	100		
58	50.4	51.6	77.4#
85	13.4	8.6	13.0#
100	14.0	11.6	17.4

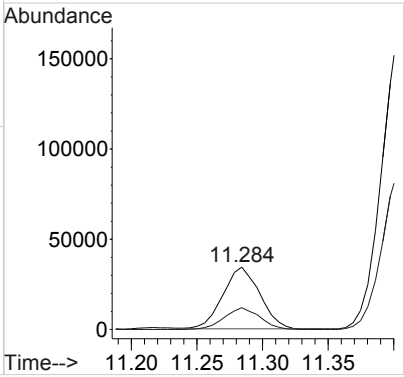


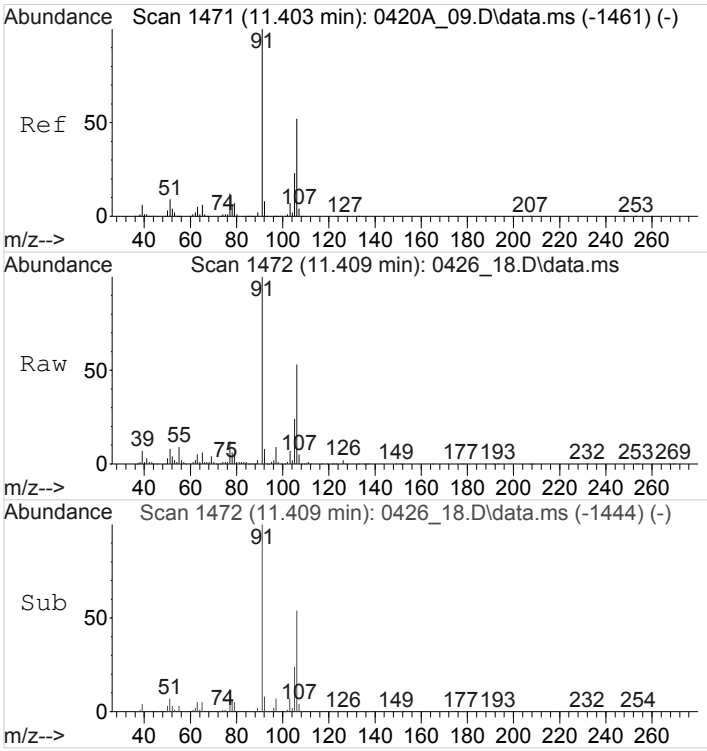


#59
Ethylbenzene
Concen: 0.3645683 ppbv
RT: 11.284 min Scan# 1450
Delta R.T. 0.006 min
Lab File: 0426_18.D
Acq: 26 Apr 2018 8:03 pm

Tgt Ion: 91 Resp: 67084

Ion	Ratio	Lower	Upper
91	100		
106	34.0	25.9	38.9

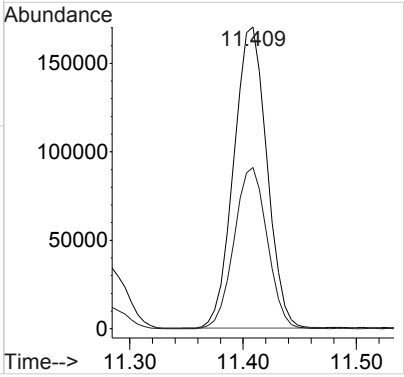


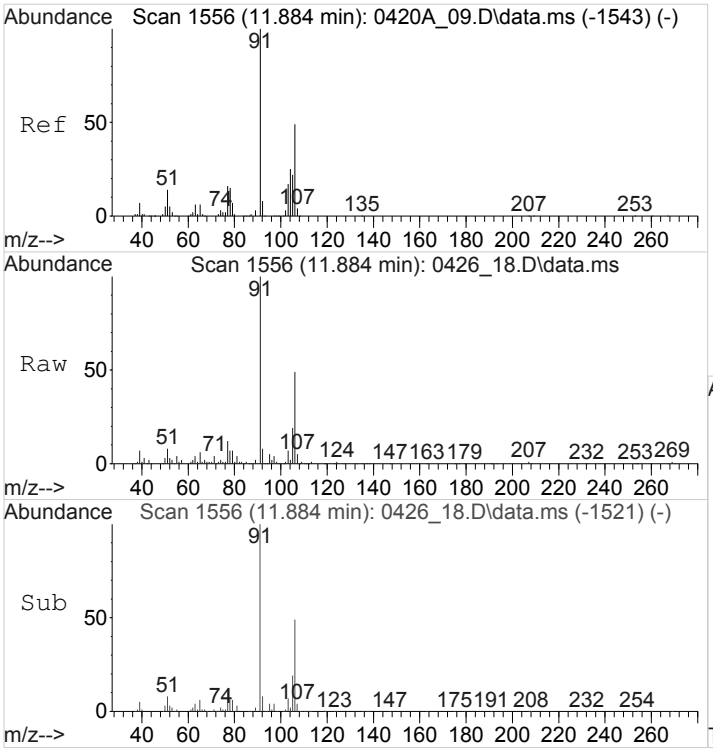


#60
M&P-Xylene
Concen: 2.4618232 ppbv
RT: 11.409 min Scan# 1472
Delta R.T. 0.006 min
Lab File: 0426_18.D
Acq: 26 Apr 2018 8:03 pm

Tgt Ion: 91 Resp: 347031

Ion	Ratio	Lower	Upper
91	100		
106	53.5	41.5	62.3

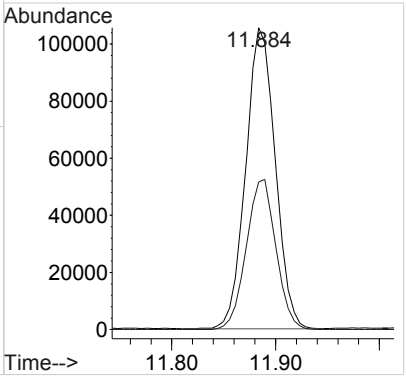


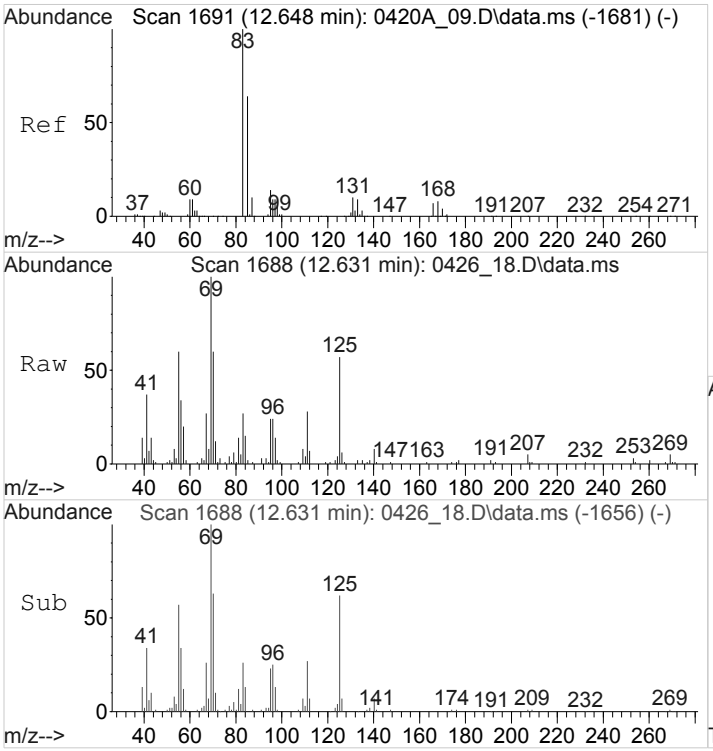


#61
O-Xylene
Concen: 1.4316866 ppbv
RT: 11.884 min Scan# 1556
Delta R.T. -0.000 min
Lab File: 0426_18.D
Acq: 26 Apr 2018 8:03 pm

Tgt Ion: 91 Resp: 208671

Ion	Ratio	Lower	Upper
91	100		
106	49.9	39.1	58.7

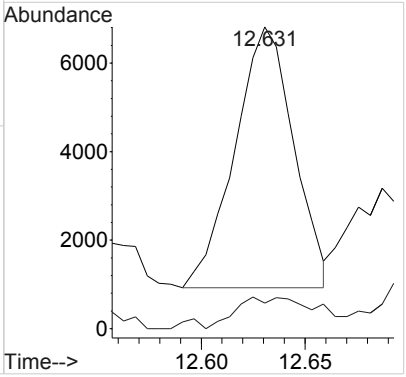


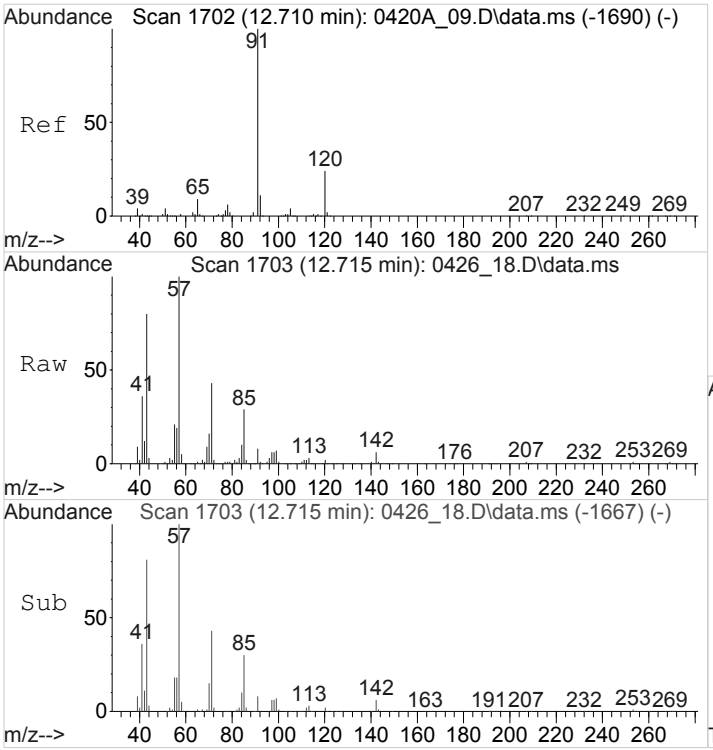


#65
1,1,2,2-Tetrachloroethane
Concen: 0.1079494 ppbv
RT: 12.631 min Scan# 1688
Delta R.T. -0.017 min
Lab File: 0426_18.D
Acq: 26 Apr 2018 8:03 pm

Tgt Ion: 83 Resp: 11618

Ion	Ratio	Lower	Upper
83	100		
85	16.8	51.2	76.8#

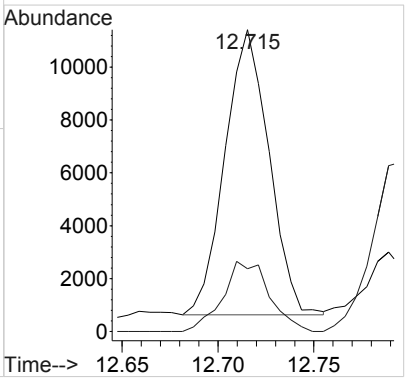


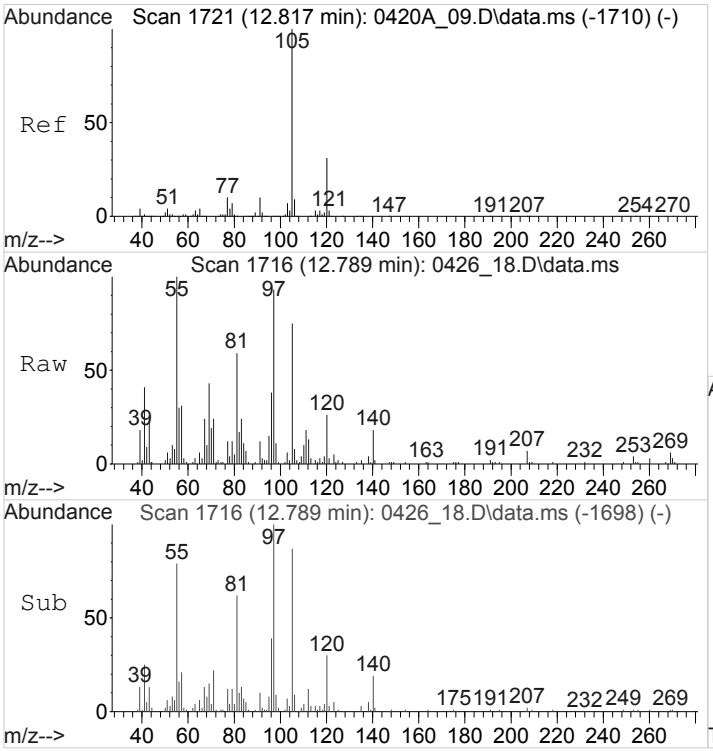


#66
n-Propylbenzene
Concen: 0.0721612 ppbv
RT: 12.715 min Scan# 1703
Delta R.T. 0.006 min
Lab File: 0426_18.D
Acq: 26 Apr 2018 8:03 pm

Tgt Ion: 91 Resp: 17199

Ion	Ratio	Lower	Upper
91	100		
120	26.0	19.4	29.0

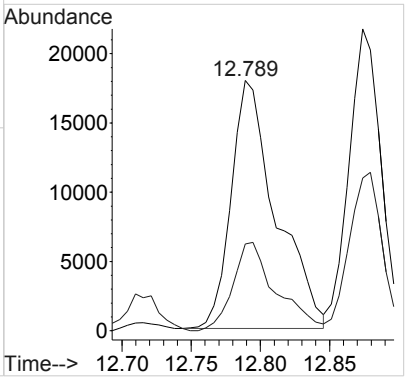


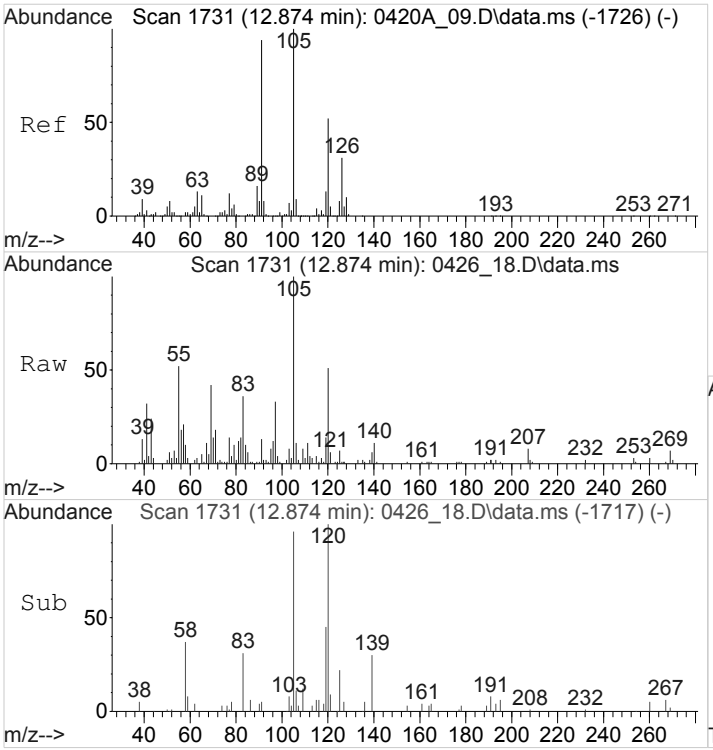


#67
4-Ethyltoluene
Concen: 0.1944986 ppbv
RT: 12.789 min Scan# 1716
Delta R.T. -0.028 min
Lab File: 0426_18.D
Acq: 26 Apr 2018 8:03 pm

Tgt Ion:105 Resp: 40578

Ion	Ratio	Lower	Upper
105	100		
120	34.3	24.8	37.2

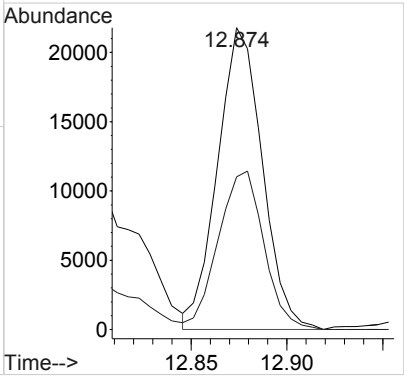


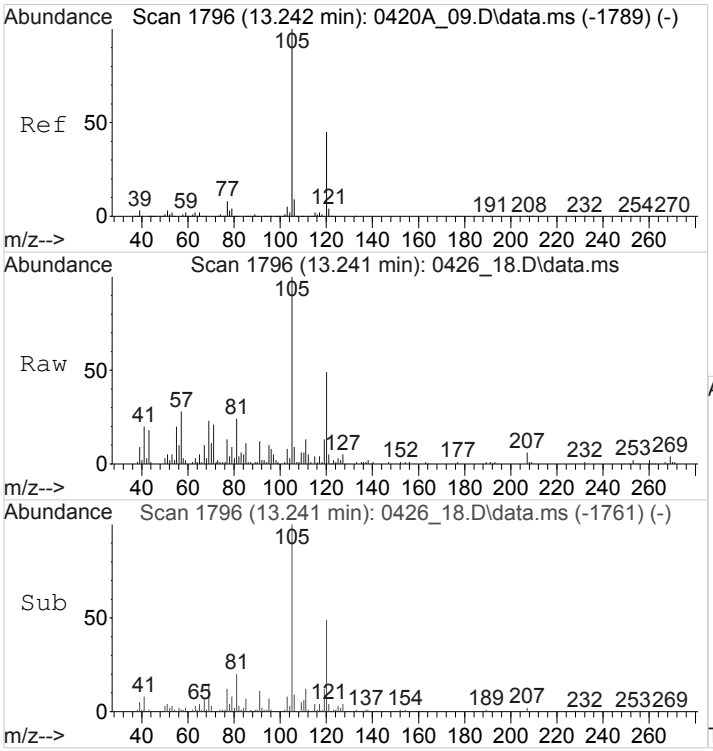


#70
1,3,5-Trimethylbenzene
Concen: 0.2142737 ppbv
RT: 12.874 min Scan# 1731
Delta R.T. -0.000 min
Lab File: 0426_18.D
Acq: 26 Apr 2018 8:03 pm

Tgt Ion:105 Resp: 35301

Ion	Ratio	Lower	Upper
105	100		
120	53.5	41.4	62.0

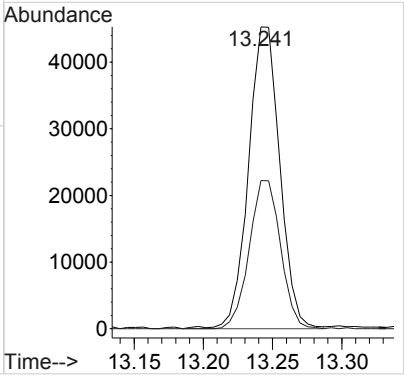


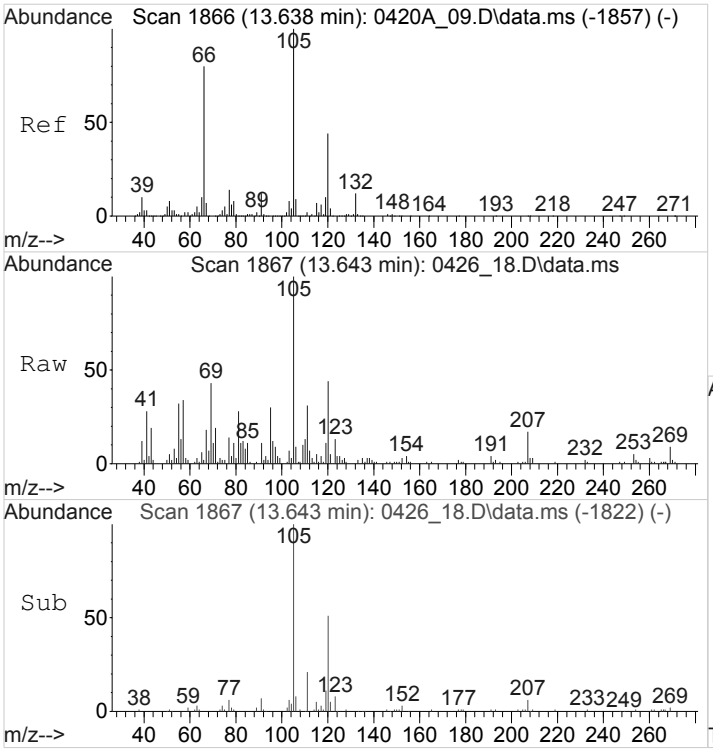


#72
1,2,4-Trimethylbenzene
Concen: 0.4299231 ppbv
RT: 13.241 min Scan# 1796
Delta R.T. -0.000 min
Lab File: 0426_18.D
Acq: 26 Apr 2018 8:03 pm

Tgt Ion:105 Resp: 71529

Ion	Ratio	Lower	Upper
105	100		
120	49.0	38.8	58.2

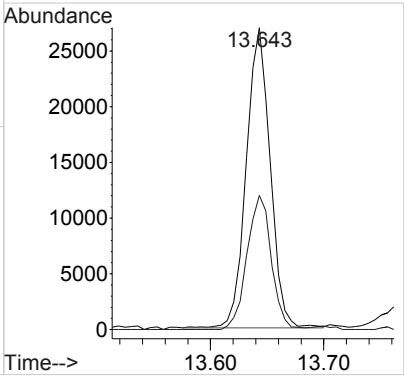


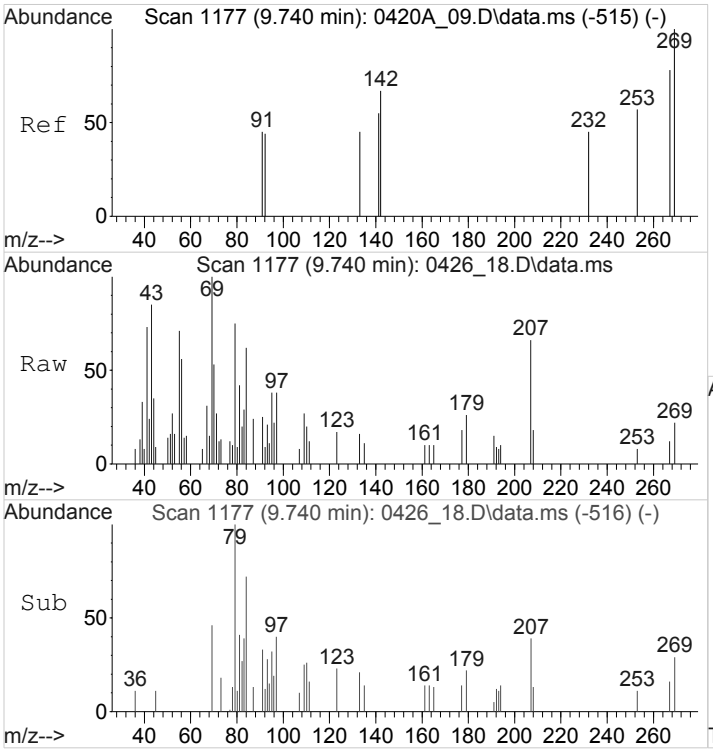


#76
1,2,3-TRIMETHYLBENZENE
Concen: 0.2485593 ppbv
RT: 13.643 min Scan# 1867
Delta R.T. 0.006 min
Lab File: 0426_18.D
Acq: 26 Apr 2018 8:03 pm

Tgt Ion:105 Resp: 39491

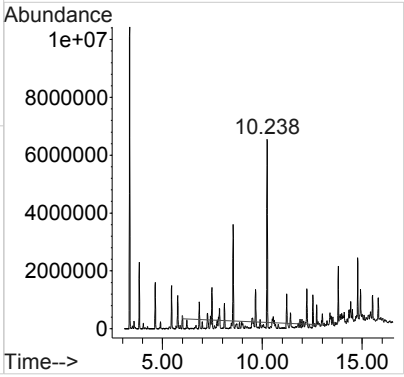
Ion	Ratio	Lower	Upper
105	100		
120	45.4	36.0	54.0





#84
TPH (GC/MS) Low Fraction
Concen: 222.8506643 ppbv m
RT: 9.740 min Scan# 1177
Delta R.T. 0.000 min
Lab File: 0426_18.D
Acq: 26 Apr 2018 8:03 pm

Tgt Ion:TIC Resp:58533243



1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS-8

ESC Sample ID:	L988471-08	**SDG:**	L988471
Client Sample ID:	SS-8	**Collected Date/Time:**	04/23/18 11:21
Lab File ID:	0426_19	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/26/18 20:47
Analytical Batch:	WG1103323	**Analysis Date/Time:**	04/26/18 20:47
Dilution Factor:	1	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	RT	Result	Qualifier	MDL	RDL
			ppbv		*ppbv*	*ppbv*
Acetone	67-64-1	5.49	4.25		0.0569	1.25
Allyl chloride	107-05-1	0	ND		0.0546	0.200
Benzene	71-43-2	7.81	ND		0.0460	0.200
Benzyl Chloride	100-44-7	0	ND		0.0598	0.200
Bromodichloromethane	75-27-4	8.89	0.243		0.0436	0.200
Bromoform	75-25-2	0	ND		0.0786	0.600
Bromomethane	74-83-9	0	ND		0.0609	0.200
1,3-Butadiene	106-99-0	0	ND		0.0563	2.00
Carbon disulfide	75-15-0	5.69	0.982		0.0544	0.200
Carbon tetrachloride	56-23-5	7.60	ND		0.0585	0.200
Chlorobenzene	108-90-7	0	ND		0.0601	0.200
Chloroethane	75-00-3	0	ND		0.0489	0.200
Chloroform	67-66-3	7.26	2.57		0.0574	0.200
Chloromethane	74-87-3	3.95	ND		0.0544	0.200
2-Chlorotoluene	95-49-8	0	ND		0.0605	0.200
Cyclohexane	110-82-7	7.48	1.23		0.0534	0.200
Dibromochloromethane	124-48-1	0	ND		0.0494	0.200
1,2-Dibromoethane	106-93-4	0	ND		0.0185	0.200
1,2-Dichlorobenzene	95-50-1	0	ND		0.0603	0.200
1,3-Dichlorobenzene	541-73-1	0	ND		0.0597	0.200
1,4-Dichlorobenzene	106-46-7	0	ND		0.0557	0.200
1,2-Dichloroethane	107-06-2	0	ND		0.0616	0.200
1,1-Dichloroethane	75-34-3	0	ND		0.0514	0.200
1,1-Dichloroethene	75-35-4	0	ND		0.0490	0.200
cis-1,2-Dichloroethene	156-59-2	0	ND		0.0389	0.200
trans-1,2-Dichloroethene	156-60-5	0	ND		0.0464	0.200
1,2-Dichloropropane	78-87-5	0	ND		0.0599	0.200
cis-1,3-Dichloropropene	10061-01-5	0	ND		0.0588	0.200
trans-1,3-Dichloropropene	10061-02-6	0	ND		0.0435	0.200
1,4-Dioxane	123-91-1	0	ND		0.0554	0.200
Ethanol	64-17-5	5.07	ND		0.0832	0.630
Ethylbenzene	100-41-4	11.28	ND		0.0506	0.200
4-Ethyltoluene	622-96-8	12.79	ND		0.0666	0.200
Trichlorofluoromethane	75-69-4	4.86	0.455		0.0673	0.200
Dichlorodifluoromethane	75-71-8	3.64	0.378		0.0601	0.200
1,1,2-Trichlorotrifluoroethane	76-13-1	5.33	ND		0.0687	0.200
1,2-Dichlorotetrafluoroethane	76-14-2	0	ND		0.0458	0.200
Heptane	142-82-5	7.84	0.231		0.0626	0.200
Hexachloro-1,3-butadiene	87-68-3	0	ND		0.0656	0.630
n-Hexane	110-54-3	6.23	0.458		0.0457	0.200
Isopropylbenzene	98-82-8	0	ND		0.0563	0.200
Methylene Chloride	75-09-2	0	ND		0.0465	0.200
Methyl Butyl Ketone	591-78-6	0	ND		0.0682	1.25

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS-8

ESC Sample ID:	L988471-08	**SDG:**	L988471
Client Sample ID:	SS-8	**Collected Date/Time:**	04/23/18 11:21
Lab File ID:	0426_19	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/26/18 20:47
Analytical Batch:	WG1103323	**Analysis Date/Time:**	04/26/18 20:47
Dilution Factor:	1	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	**CAS**	**RT**	**Result**	**Qualifier**	**MDL**	**RDL**
			ppbv		*ppbv*	*ppbv*
2-Butanone (MEK)	78-93-3	7.01	ND		0.0493	1.25
4-Methyl-2-pentanone (MIBK)	108-10-1	0	ND		0.0650	1.25
Methyl methacrylate	80-62-6	0	ND		0.0773	0.200
MTBE	1634-04-4	0	ND		0.0505	0.200
Naphthalene	91-20-3	0	ND		0.154	0.630
2-Propanol	67-63-0	5.55	ND		0.0882	1.25
Propene	115-07-1	0	ND		0.0932	0.400
Styrene	100-42-5	0	ND		0.0465	0.200
1,1,2,2-Tetrachloroethane	79-34-5	0	ND		0.0576	0.200
Tetrachloroethylene	127-18-4	10.24	7.70		0.0497	0.200
Tetrahydrofuran	109-99-9	7.29	ND		0.0508	0.200
Toluene	108-88-3	9.66	0.318		0.0499	0.200
1,2,4-Trichlorobenzene	120-82-1	0	ND		0.148	0.630
1,1,1-Trichloroethane	71-55-6	7.47	ND		0.0665	0.200
1,1,2-Trichloroethane	79-00-5	0	ND		0.0287	0.200
Trichloroethylene	79-01-6	0	ND		0.0545	0.200
1,2,4-Trimethylbenzene	95-63-6	13.25	ND		0.0483	0.200
1,3,5-Trimethylbenzene	108-67-8	0	ND		0.0631	0.200
2,2,4-Trimethylpentane	540-84-1	0	ND		0.0456	0.200
Vinyl chloride	75-01-4	0	ND		0.0457	0.200
Vinyl Bromide	593-60-2	0	ND		0.0727	0.200
Vinyl acetate	108-05-4	0	ND		0.0639	0.200
m&p-Xylene	1330-20-7	11.41	ND		0.0946	0.400
o-Xylene	95-47-6	11.89	ND		0.0633	0.200

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_19.D
Acq On : 26 Apr 2018 8:47 pm
Operator : 564
Sample : L988471-08 1x WG1103323
Misc :
ALS Vial : 19 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 27 08:53:58 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration

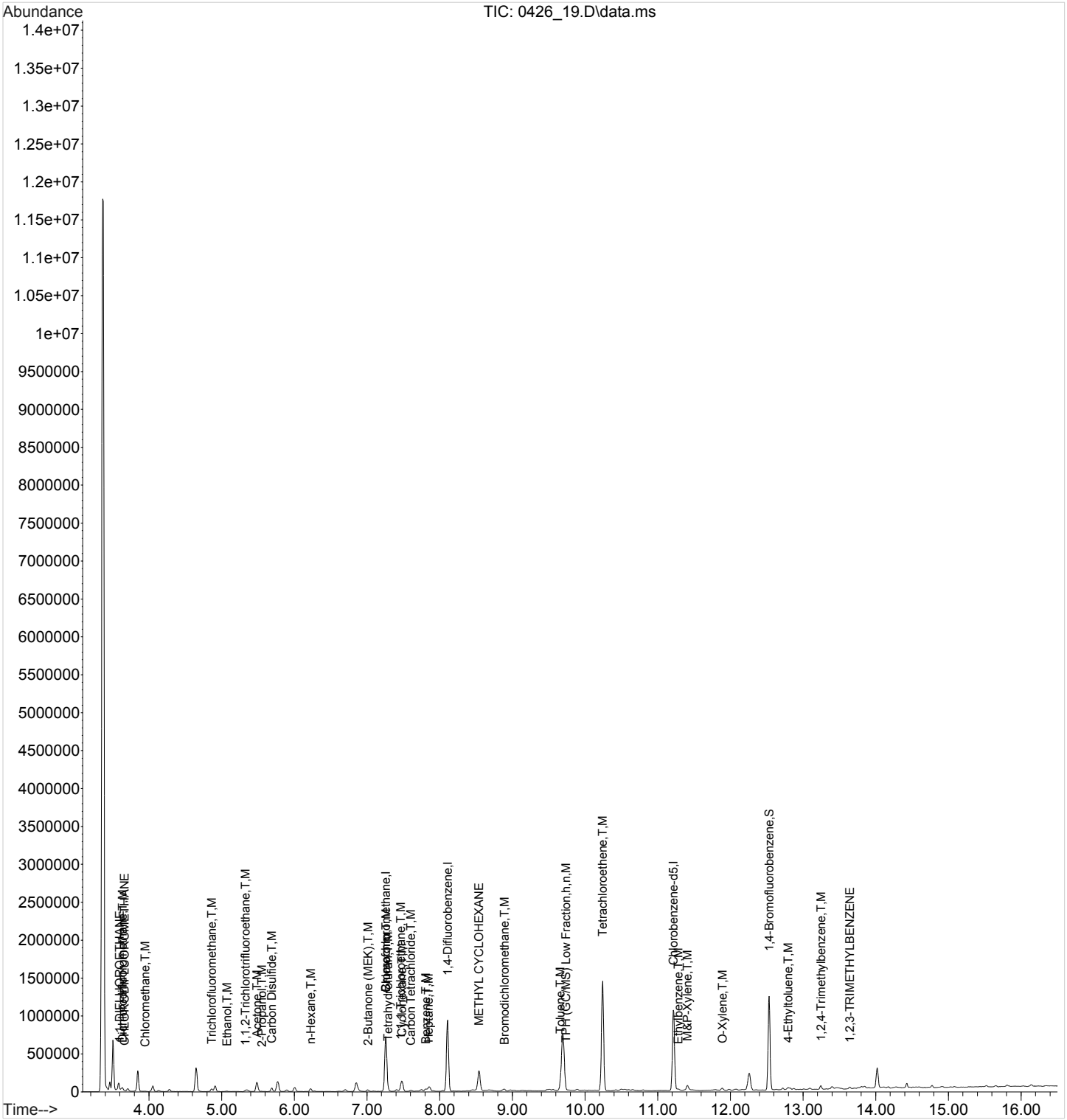
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.256	130	247682	4.0000000	ppbv	0.01
37) 1,4-Difluorobenzene	8.111	114	927273	4.0000000	ppbv	0.01
58) Chlorobenzene-d5	11.216	117	816783	4.0000000	ppbv	0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	12.534	95	478652	3.9067131	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 97.67%			
Target Compounds					Qvalue	
3) 1,1-DIFLUOROETHANE	3.596	51	3932	0.1010518	ppbv	93
4) Dichlorodifluoromethane	3.636	85	23409	0.3784787	ppbv	98
5) CHLORODIFLUOROMETHANE	3.664	51	10458	0.2807816	ppbv	96
7) Chloromethane	3.947	50	1924	0.0780102	ppbv	97
13) Trichlorofluoromethane	4.864	101	31491	0.4553222	ppbv	98
14) Ethanol	5.073	45	7045	0.5874762	ppbv	94
15) 1,1,2-Trichlorotrifluo...	5.327	101	5279	0.0821903	ppbv	93
17) Acetone	5.486	58	64788	4.2537047	ppbv #	68
18) 2-Propanol	5.554	45	5063	0.0862460	ppbv #	1
19) Carbon Disulfide	5.689	76	68695	0.9817567	ppbv	98
25) n-Hexane	6.227	57	22395	0.4583094	ppbv	92
29) 2-Butanone (MEK)	7.013	72	9012	0.4566303	ppbv #	80
31) Tetrahydrofuran	7.290	42	4012	0.1027589	ppbv #	37
32) Chloroform	7.262	83	182418	2.5730584	ppbv	94
33) Cyclohexane	7.483	84	62143	1.2296623	ppbv	98
34) 1,1,1-Trichloroethane	7.466	97	9030	0.1278410	ppbv	99
35) Carbon Tetrachloride	7.602	117	5862	0.0797151	ppbv	99
38) Benzene	7.811	78	10176	0.0875279	ppbv #	91
40) Heptane	7.845	43	13288	0.2314237	ppbv #	83
43) METHYL CYCLOHEXANE	8.541	83	143246	2.0568271	ppbv	96
47) Bromodichloromethane	8.891	83	19137	0.2432420	ppbv	94
50) Toluene	9.661	91	46028	0.3183982	ppbv	97
53) Tetrachloroethene	10.243	166	599263	7.7018192	ppbv	98
59) Ethylbenzene	11.284	91	12285	0.0631535	ppbv	96
60) M&P-Xylene	11.409	91	43927	0.2947696	ppbv	99
61) O-Xylene	11.889	91	20966	0.1360705	ppbv	98
67) 4-Ethyltoluene	12.795	105	16211	0.0735019	ppbv	98
72) 1,2,4-Trimethylbenzene	13.247	105	26535	0.1508656	ppbv	97
76) 1,2,3-TRIMETHYLBENZENE	13.643	105	11058	0.0658372	ppbv	98
84) TPH (GC/MS) Low Fraction	9.740	TIC	8660919m	31.1916228	ppbv	

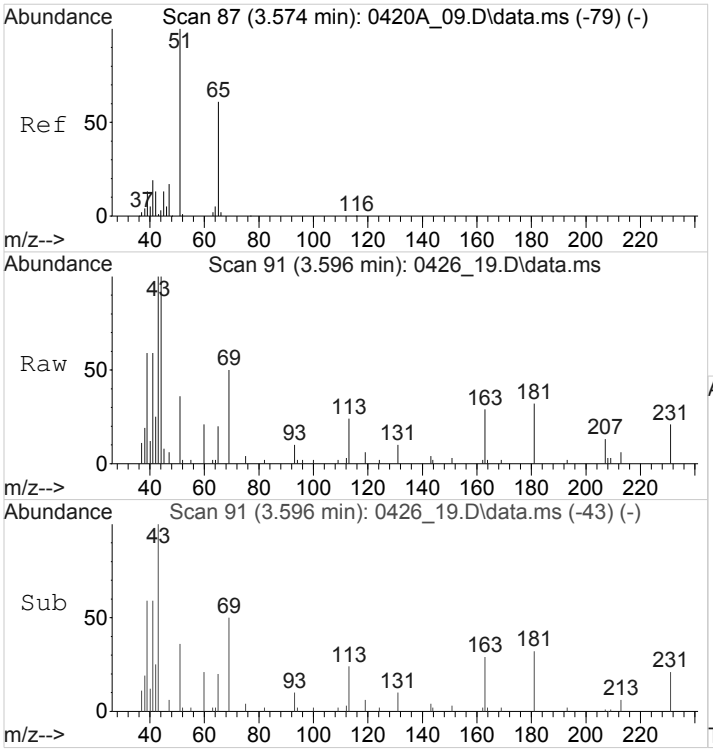
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_19.D
Acq On : 26 Apr 2018 8:47 pm
Operator : 564
Sample : L988471-08 1x WG1103323
Misc :
ALS Vial : 19 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 27 08:53:58 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration

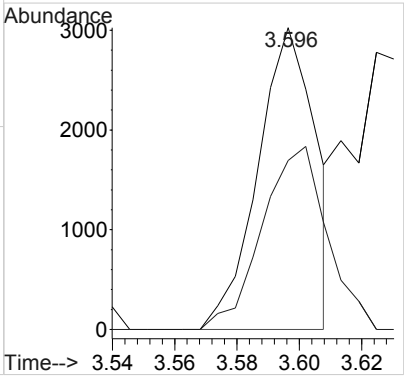


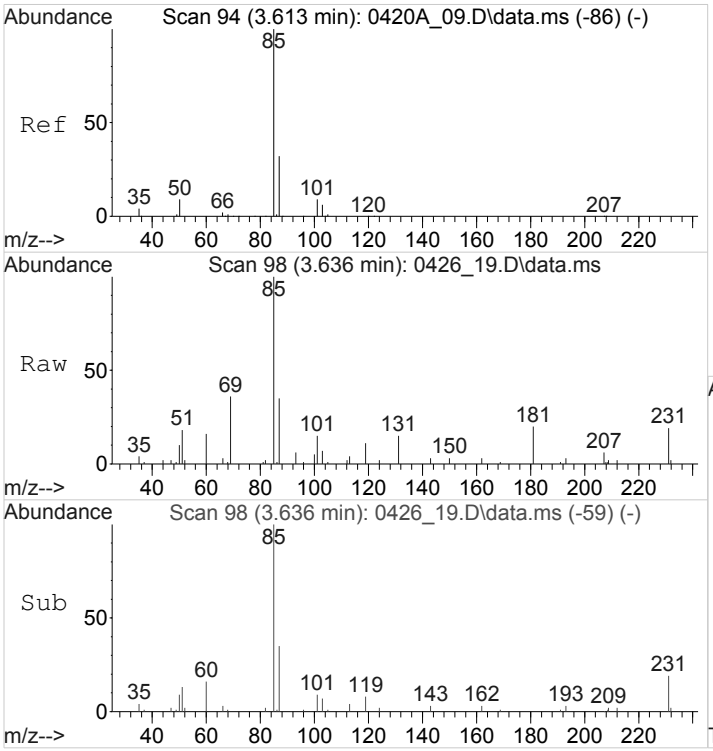


#3
1,1-DIFLUOROETHANE
Concen: 0.1010518 ppbv
RT: 3.596 min Scan# 91
Delta R.T. 0.023 min
Lab File: 0426_19.D
Acq: 26 Apr 2018 8:47 pm

Tgt Ion: 51 Resp: 3932

Ion	Ratio	Lower	Upper
51	100		
65	67.5	49.4	74.2

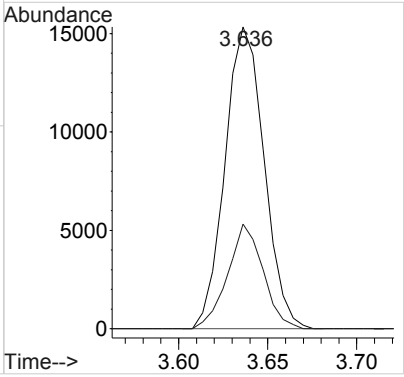


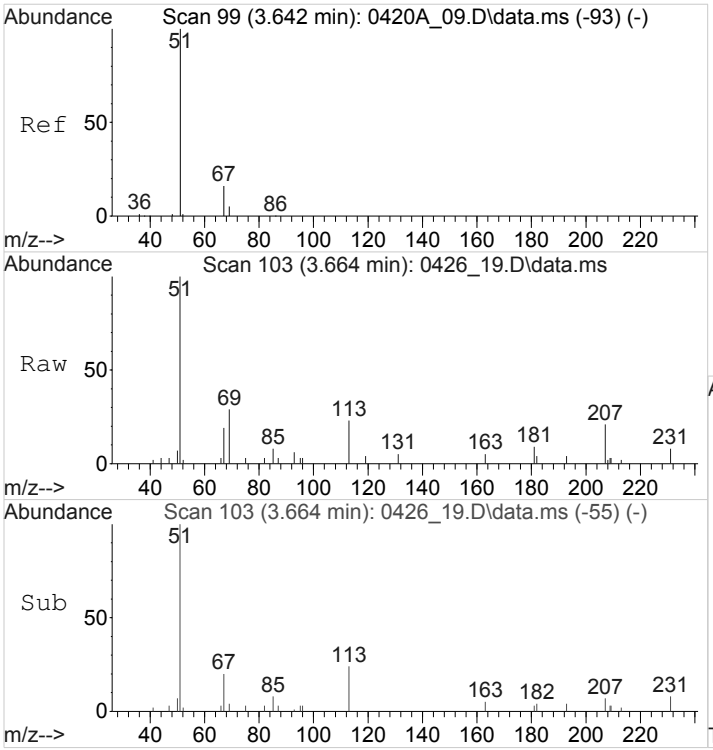


#4
Dichlorodifluoromethane
Concen: 0.3784787 ppbv
RT: 3.636 min Scan# 98
Delta R.T. 0.023 min
Lab File: 0426_19.D
Acq: 26 Apr 2018 8:47 pm

Tgt Ion: 85 Resp: 23409

Ion	Ratio	Lower	Upper
85	100		
87	31.4	25.8	38.8

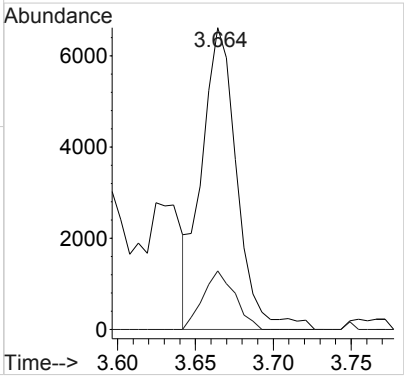


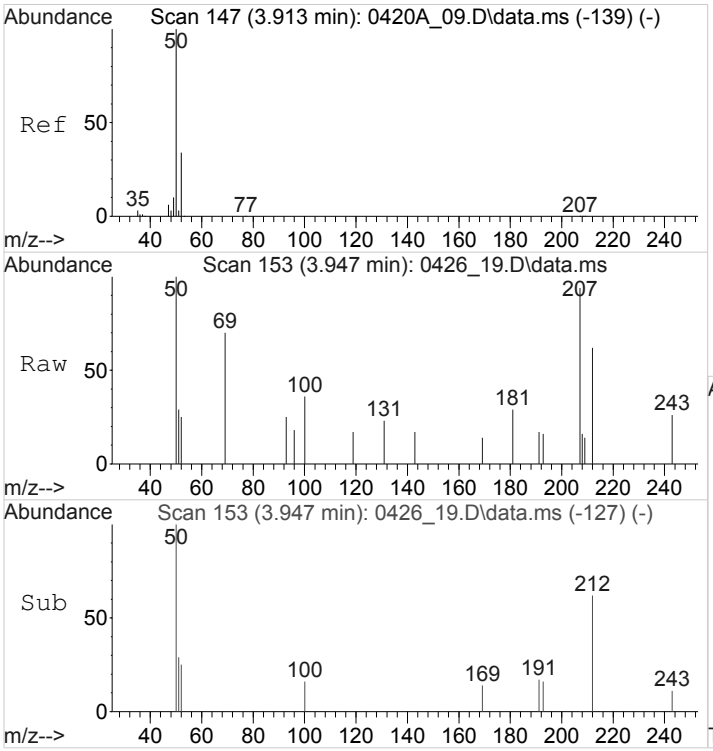


#5
CHLORODIFLUOROMETHANE
Concen: 0.2807816 ppbv
RT: 3.664 min Scan# 103
Delta R.T. 0.023 min
Lab File: 0426_19.D
Acq: 26 Apr 2018 8:47 pm

Tgt Ion: 51 Resp: 10458

Ion	Ratio	Lower	Upper
51	100		
67	17.6	12.7	19.1

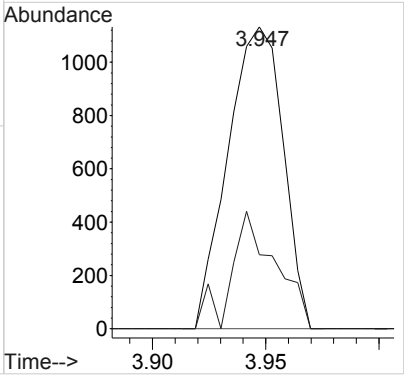


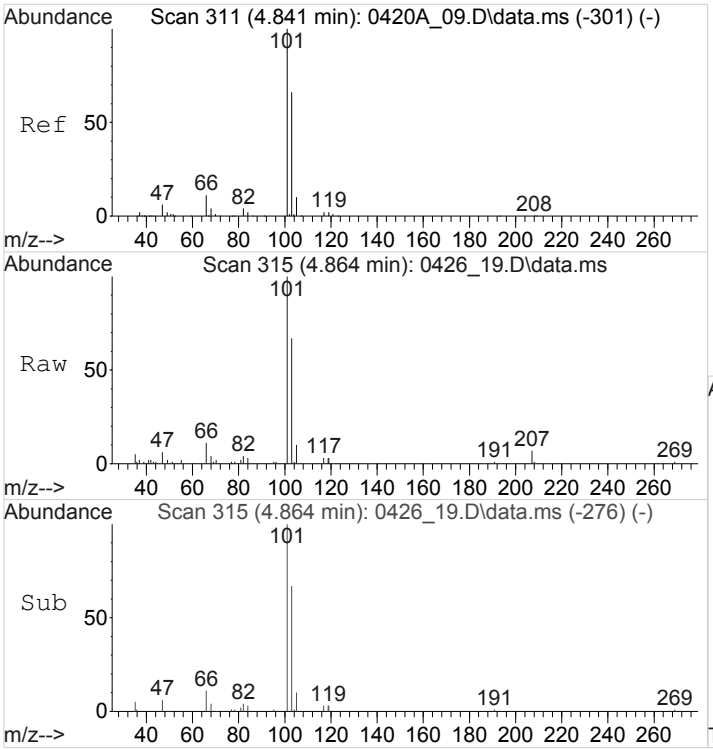


#7
Chloromethane
Concen: 0.0780102 ppbv
RT: 3.947 min Scan# 153
Delta R.T. 0.034 min
Lab File: 0426_19.D
Acq: 26 Apr 2018 8:47 pm

Tgt Ion: 50 Resp: 1924

Ion	Ratio	Lower	Upper
50	100		
52	31.2	26.5	39.7

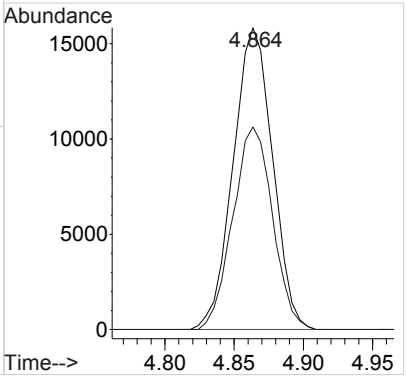


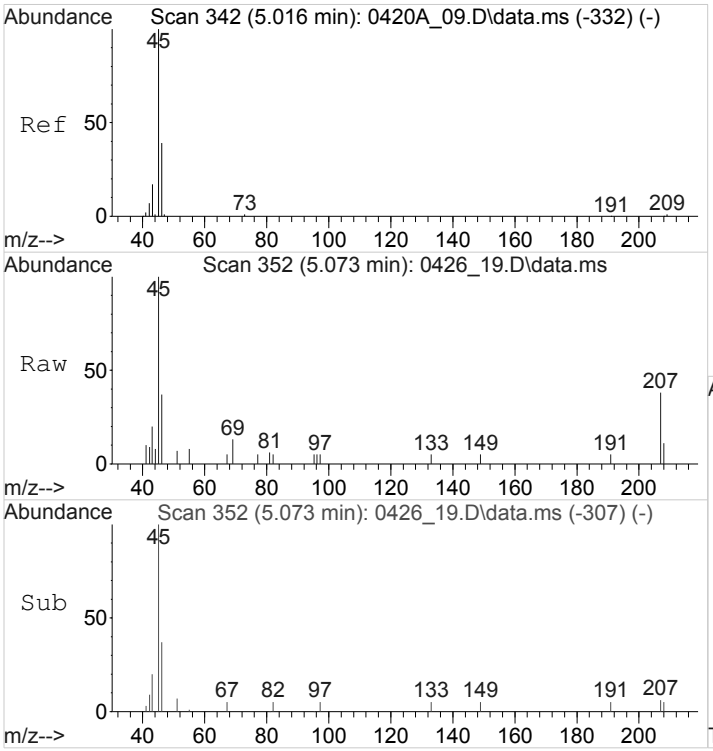


#13
Trichlorofluoromethane
Concen: 0.4553222 ppbv
RT: 4.864 min Scan# 315
Delta R.T. 0.023 min
Lab File: 0426_19.D
Acq: 26 Apr 2018 8:47 pm

Tgt Ion:101 Resp: 31491

Ion	Ratio	Lower	Upper
101	100		
103	67.5	52.6	79.0

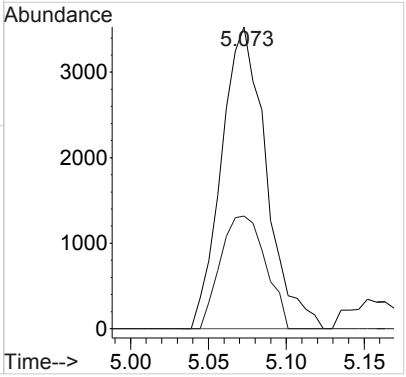


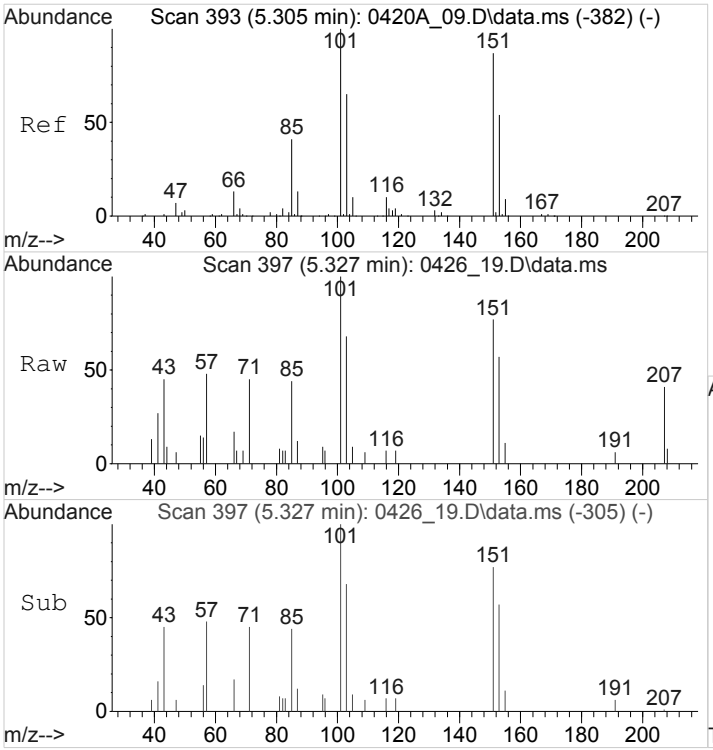


#14
Ethanol
Concen: 0.5874762 ppbv
RT: 5.073 min Scan# 352
Delta R.T. 0.056 min
Lab File: 0426_19.D
Acq: 26 Apr 2018 8:47 pm

Tgt Ion: 45 Resp: 7045

Ion	Ratio	Lower	Upper
45	100		
46	37.7	33.1	49.7

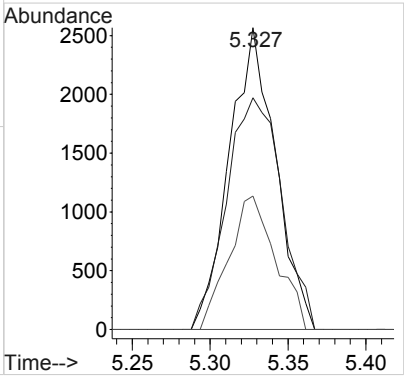


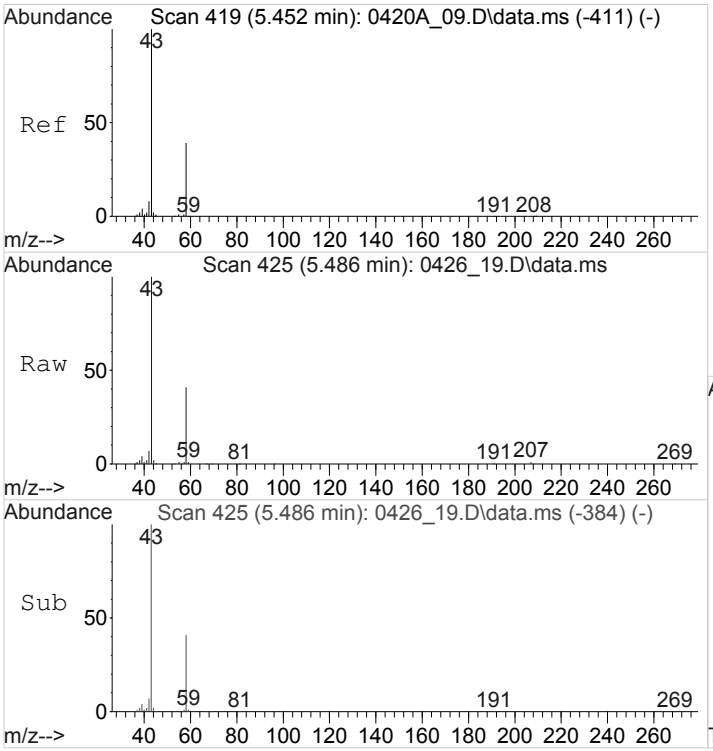


#15
1,1,2-Trichlorotrifluoroethane
Concen: 0.0821903 ppbv
RT: 5.327 min Scan# 397
Delta R.T. 0.023 min
Lab File: 0426_19.D
Acq: 26 Apr 2018 8:47 pm

Tgt Ion:101 Resp: 5279

Ion	Ratio	Lower	Upper
101	100		
151	91.5	67.9	101.9
85	44.9	32.4	48.6

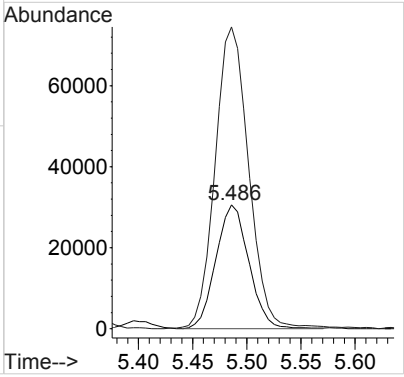


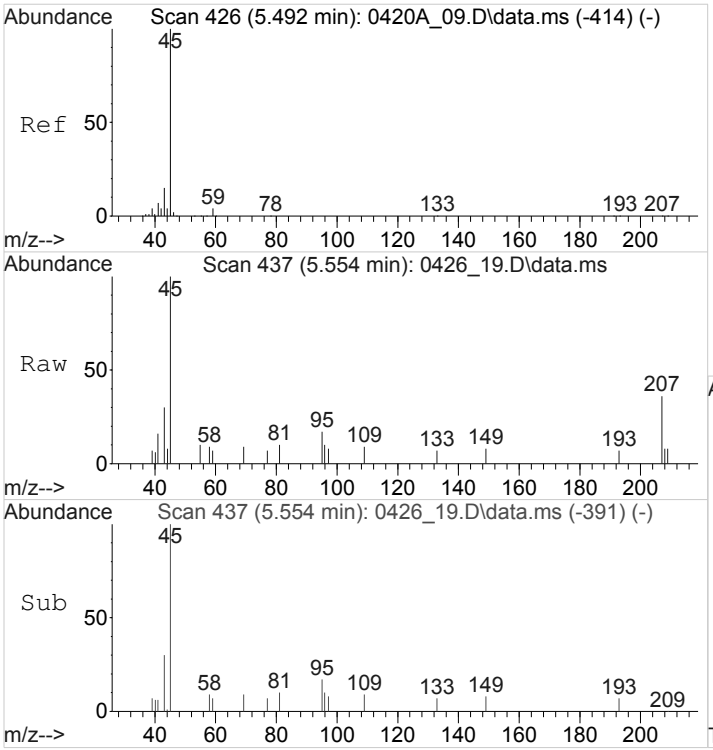


#17
Acetone
Concen: 4.2537047 ppbv
RT: 5.486 min Scan# 425
Delta R.T. 0.034 min
Lab File: 0426_19.D
Acq: 26 Apr 2018 8:47 pm

Tgt Ion: 58 Resp: 64788

Ion	Ratio	Lower	Upper
58	100		
43	250.0	252.6	379.0#

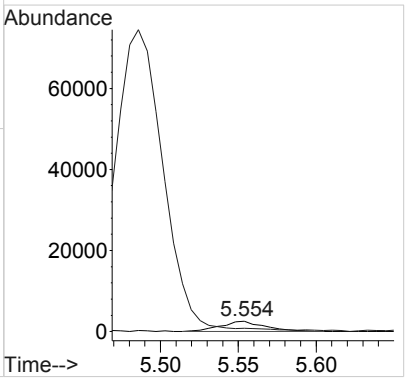


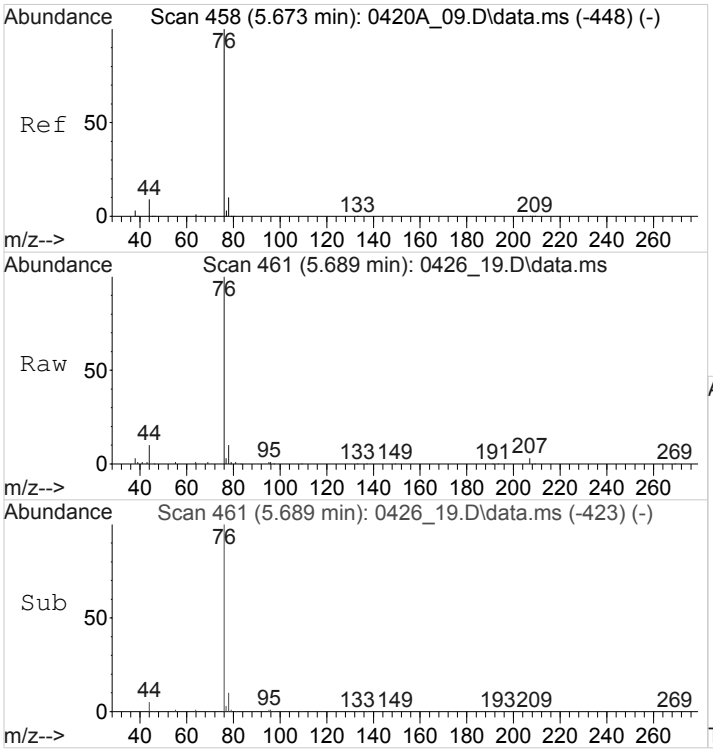


#18
2-Propanol
Concen: 0.0862460 ppbv
RT: 5.554 min Scan# 437
Delta R.T. 0.062 min
Lab File: 0426_19.D
Acq: 26 Apr 2018 8:47 pm

Tgt Ion: 45 Resp: 5063

Ion	Ratio	Lower	Upper
45	100		
43	3199.5	67.9	101.9#

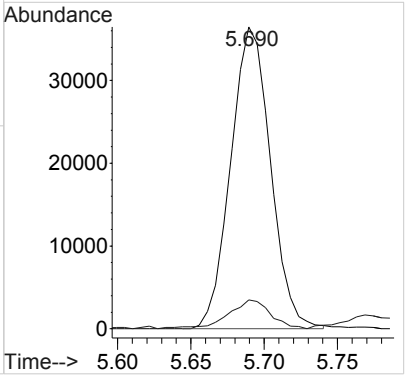


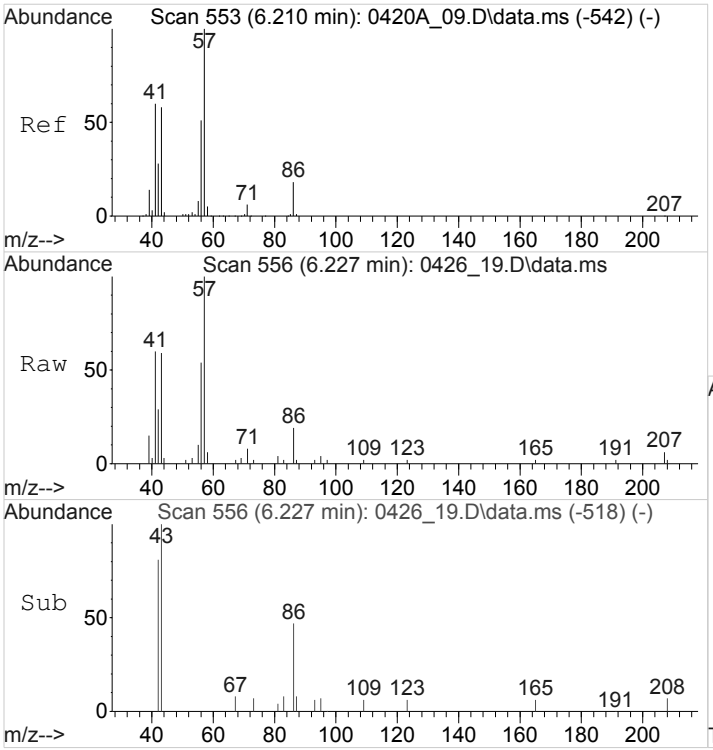


#19
Carbon Disulfide
Concen: 0.9817567 ppbv
RT: 5.689 min Scan# 461
Delta R.T. 0.017 min
Lab File: 0426_19.D
Acq: 26 Apr 2018 8:47 pm

Tgt Ion: 76 Resp: 68695

Ion	Ratio	Lower	Upper
76	100		
44	10.1	7.4	11.2

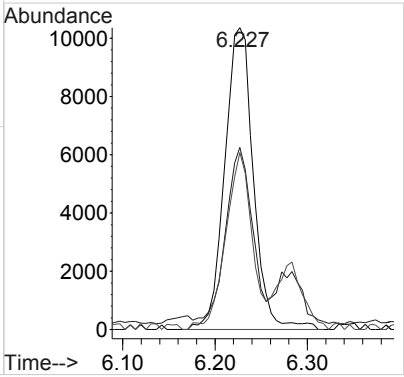


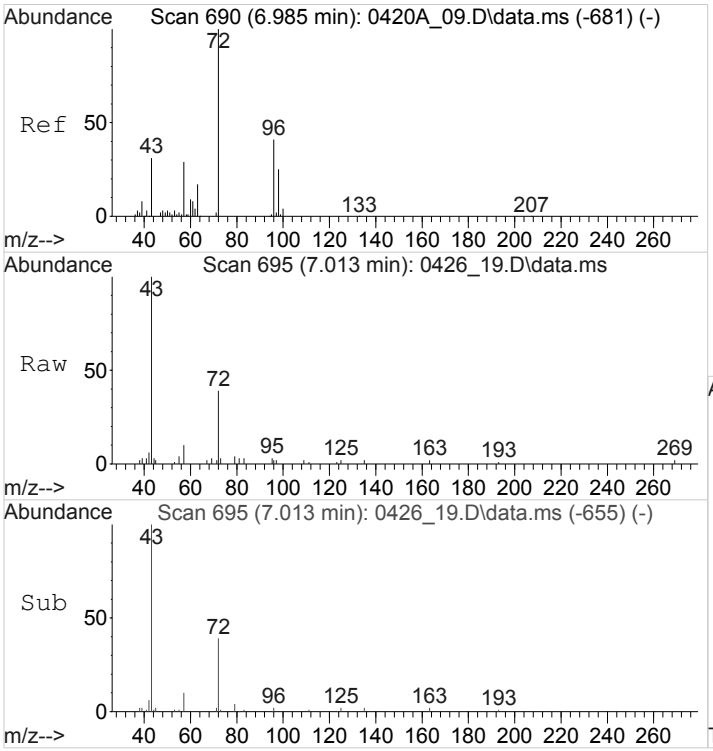


#25
n-Hexane
Concen: 0.4583094 ppbv
RT: 6.227 min Scan# 556
Delta R.T. 0.017 min
Lab File: 0426_19.D
Acq: 26 Apr 2018 8:47 pm

Tgt Ion: 57 Resp: 22395

Ion	Ratio	Lower	Upper
57	100		
41	51.8	47.6	71.4
43	53.8	46.1	69.1

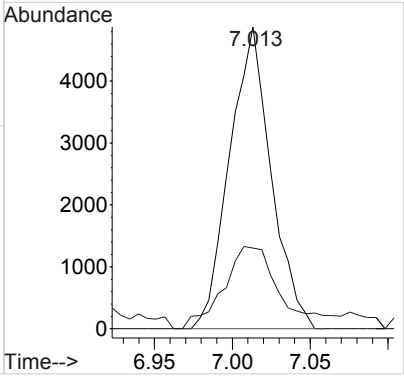


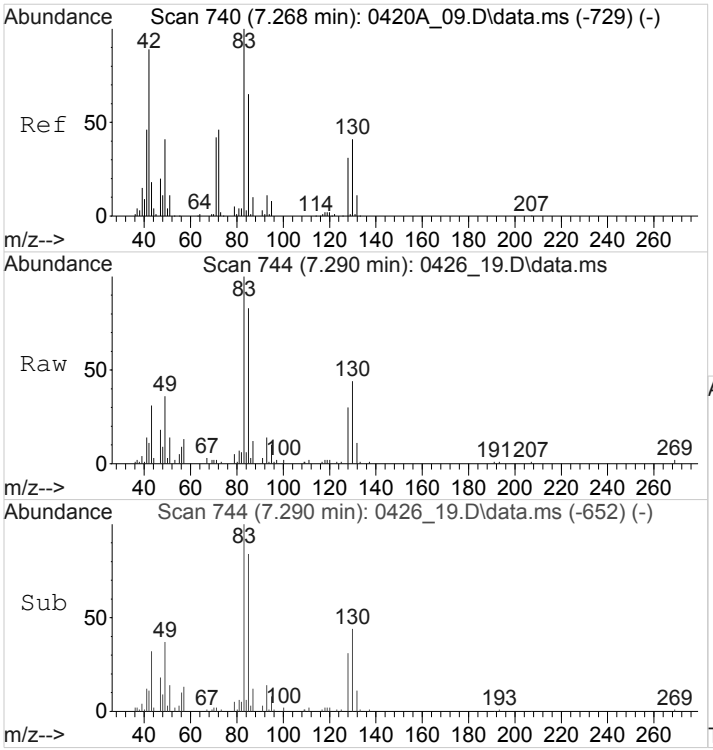


#29
2-Butanone (MEK)
Concen: 0.4566303 ppbv
RT: 7.013 min Scan# 695
Delta R.T. 0.028 min
Lab File: 0426_19.D
Acq: 26 Apr 2018 8:47 pm

Tgt Ion: 72 Resp: 9012

Ion	Ratio	Lower	Upper
72	100		
57	38.1	22.2	33.4#

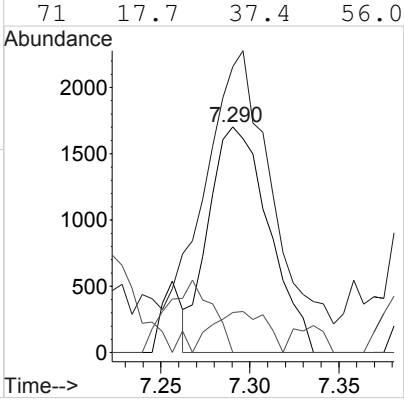


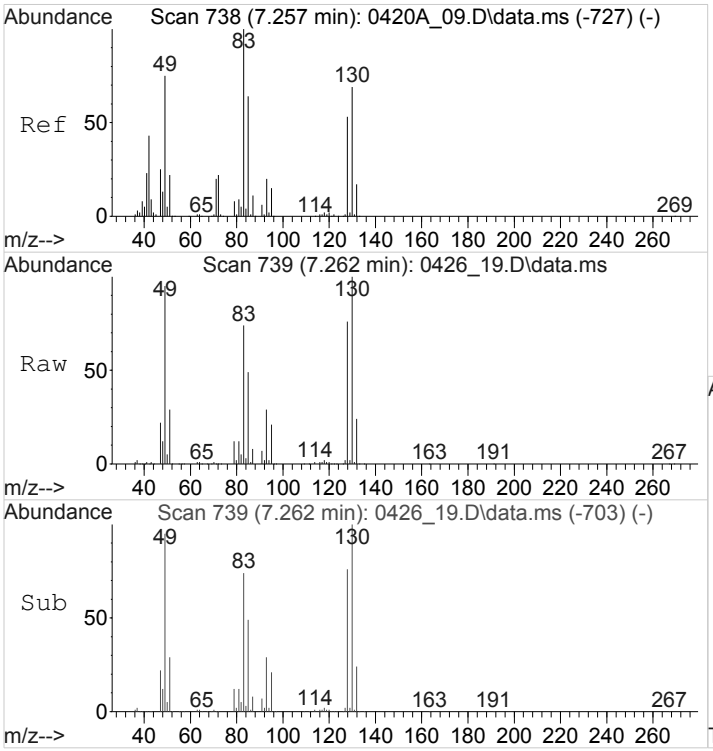


#31
Tetrahydrofuran
Concen: 0.1027589 ppbv
RT: 7.290 min Scan# 744
Delta R.T. 0.023 min
Lab File: 0426_19.D
Acq: 26 Apr 2018 8:47 pm

Tgt Ion: 42 Resp: 4012

Ion	Ratio	Lower	Upper
42	100		
41	124.7	40.8	61.2#
72	24.0	40.7	61.1#
71	17.7	37.4	56.0#

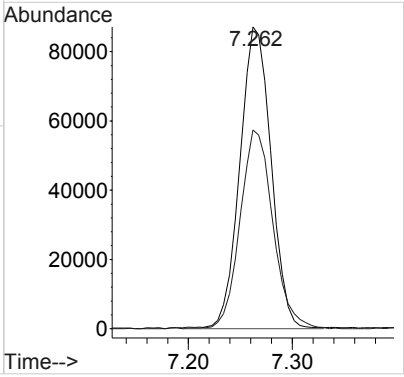


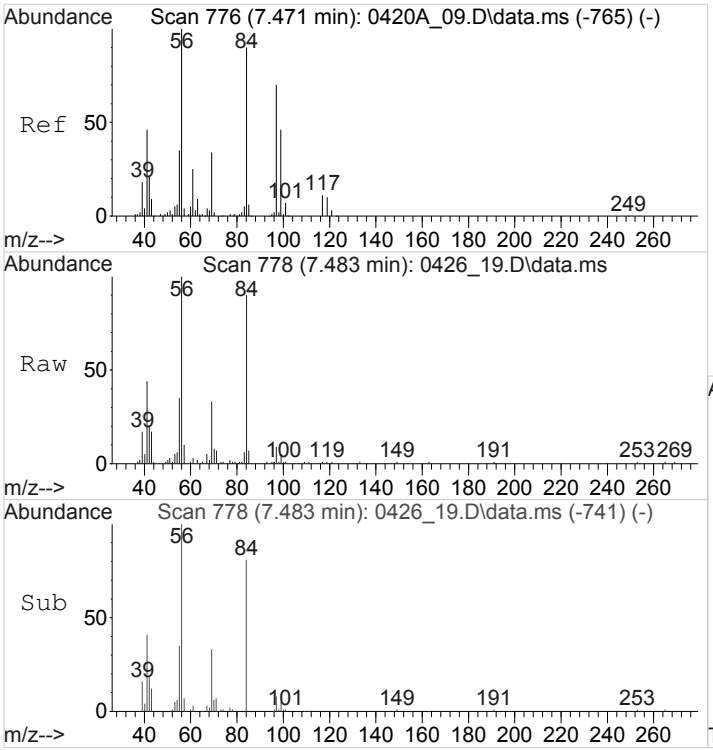


#32
Chloroform
Concen: 2.5730584 ppbv
RT: 7.262 min Scan# 739
Delta R.T. 0.006 min
Lab File: 0426_19.D
Acq: 26 Apr 2018 8:47 pm

Tgt Ion: 83 Resp: 182418

Ion	Ratio	Lower	Upper
83	100		
85	69.1	51.3	76.9

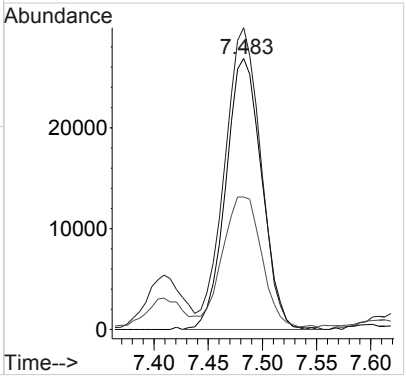


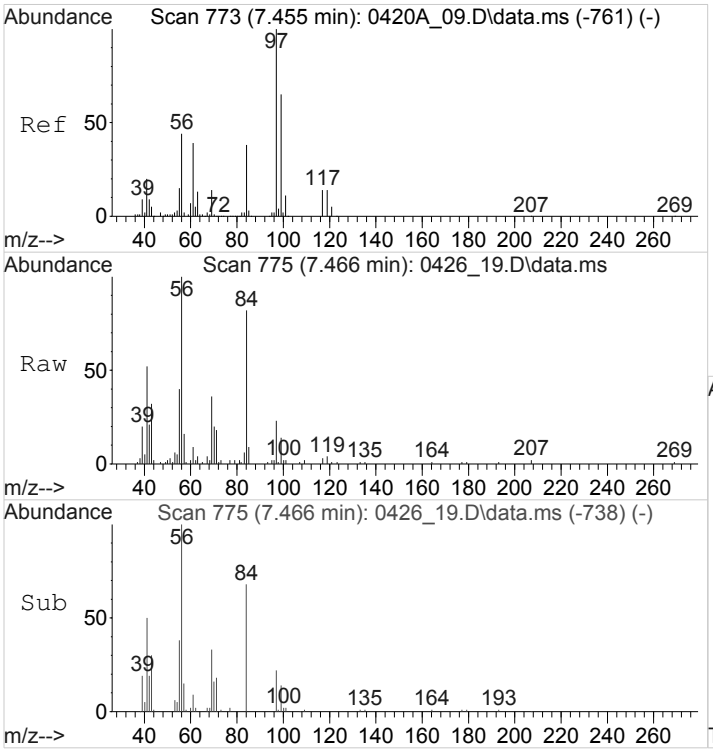


#33
Cyclohexane
Concen: 1.2296623 ppbv
RT: 7.483 min Scan# 778
Delta R.T. 0.011 min
Lab File: 0426_19.D
Acq: 26 Apr 2018 8:47 pm

Tgt Ion: 84 Resp: 62143

Ion	Ratio	Lower	Upper
84	100		
56	112.2	87.6	131.4
41	51.3	40.2	60.2

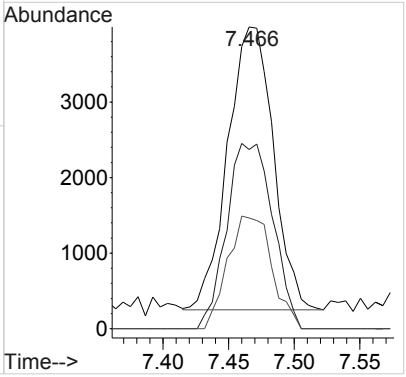


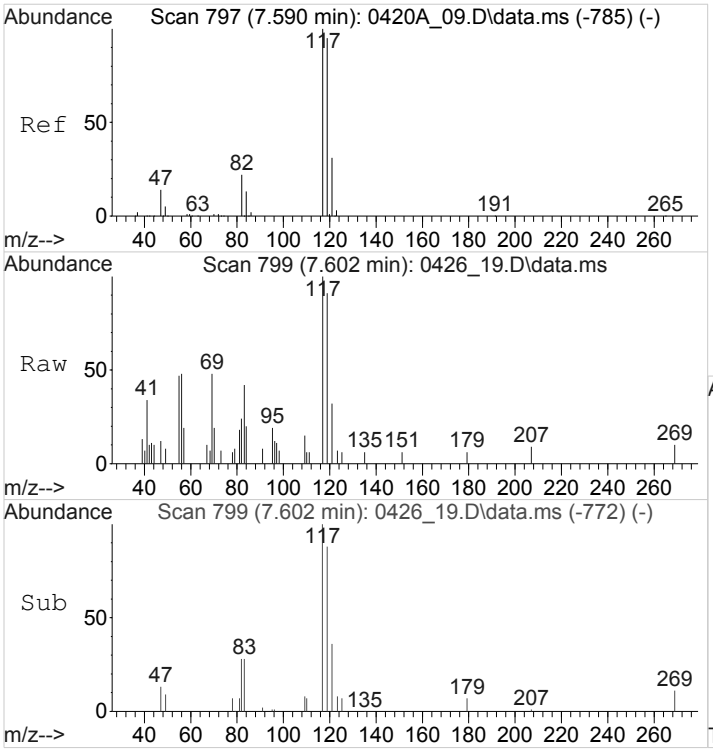


#34
1,1,1-Trichloroethane
Concen: 0.1278410 ppbv
RT: 7.466 min Scan# 775
Delta R.T. 0.011 min
Lab File: 0426_19.D
Acq: 26 Apr 2018 8:47 pm

Tgt Ion: 97 Resp: 9030

Ion	Ratio	Lower	Upper
97	100		
99	66.5	52.2	78.4
61	38.5	31.3	46.9

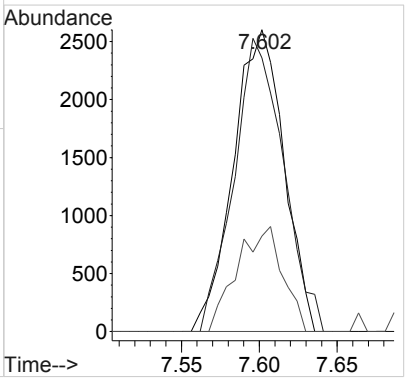


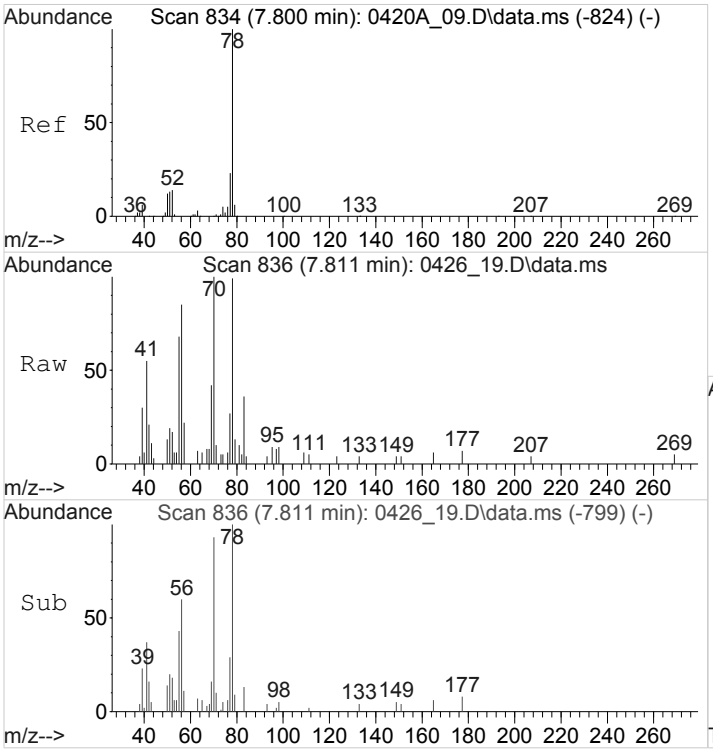


#35
Carbon Tetrachloride
Concen: 0.0797151 ppbv
RT: 7.602 min Scan# 799
Delta R.T. 0.011 min
Lab File: 0426_19.D
Acq: 26 Apr 2018 8:47 pm

Tgt Ion:117 Resp: 5862

Ion	Ratio	Lower	Upper
117	100		
119	95.3	77.1	115.7
121	31.5	24.8	37.2

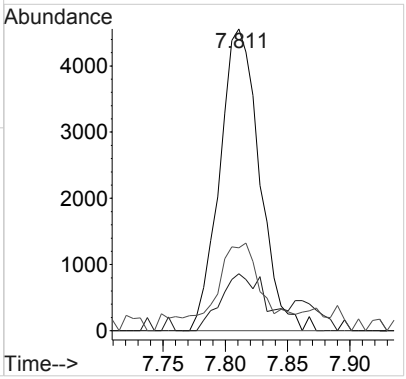


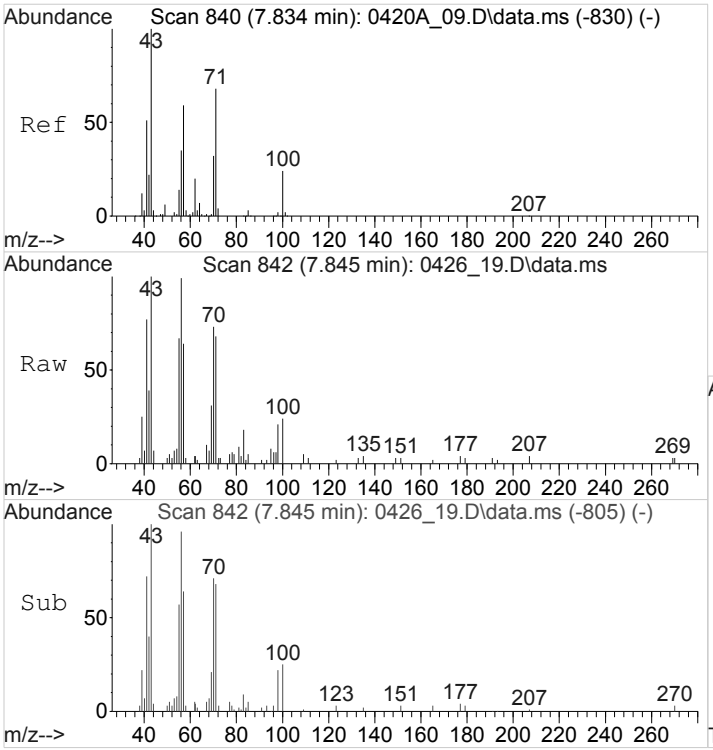


#38
Benzene
Concen: 0.0875279 ppbv
RT: 7.811 min Scan# 836
Delta R.T. 0.011 min
Lab File: 0426_19.D
Acq: 26 Apr 2018 8:47 pm

Tgt Ion: 78 Resp: 10176

Ion	Ratio	Lower	Upper
78	100		
51	19.6	11.3	16.9#
77	20.6	18.6	28.0

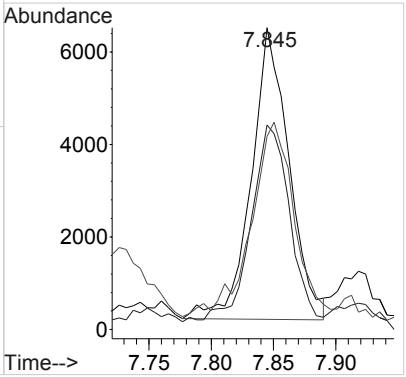


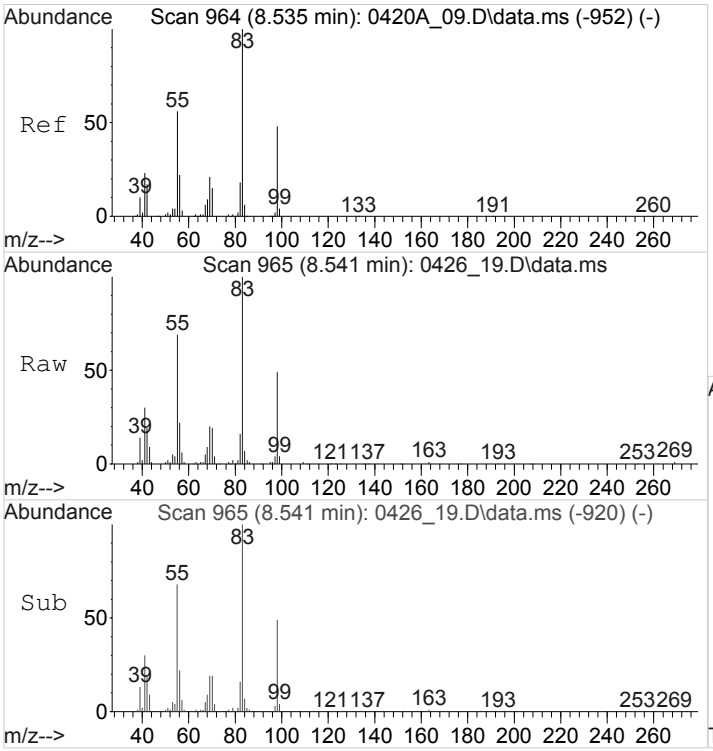


#40
Heptane
Concen: 0.2314237 ppbv
RT: 7.845 min Scan# 842
Delta R.T. 0.011 min
Lab File: 0426_19.D
Acq: 26 Apr 2018 8:47 pm

Tgt Ion: 43 Resp: 13288

Ion	Ratio	Lower	Upper
43	100		
71	76.2	56.1	84.1
57	80.6	47.1	70.7#

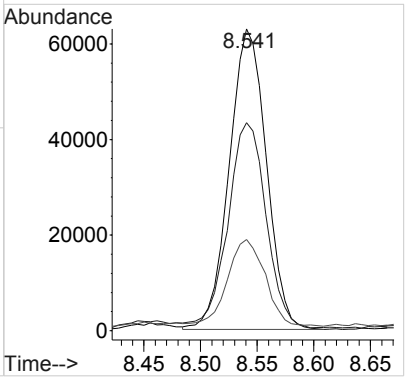


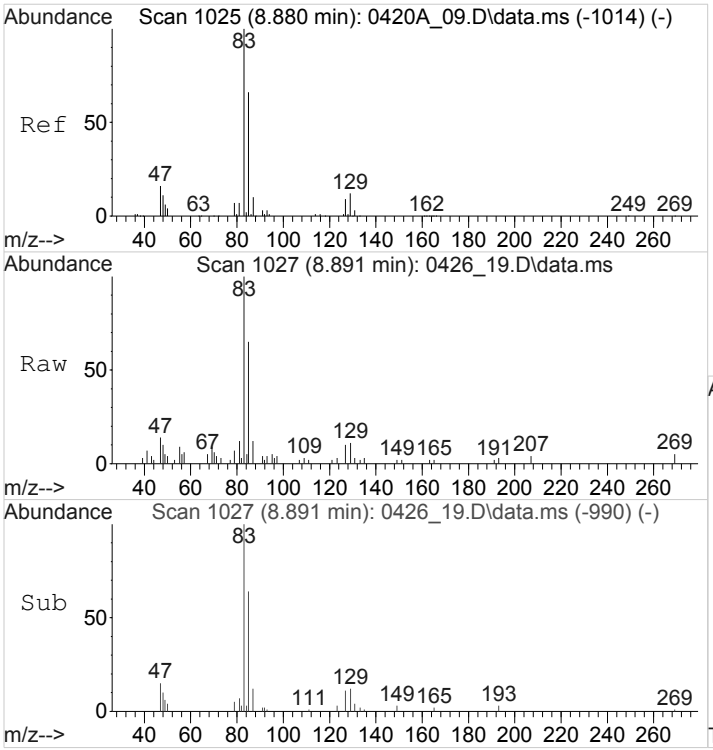


#43
METHYL CYCLOHEXANE
Concen: 2.0568271 ppbv
RT: 8.541 min Scan# 965
Delta R.T. 0.006 min
Lab File: 0426_19.D
Acq: 26 Apr 2018 8:47 pm

Tgt Ion: 83 Resp: 143246

Ion	Ratio	Lower	Upper
83	100		
55	70.0	58.5	87.7
41	30.2	25.8	38.6

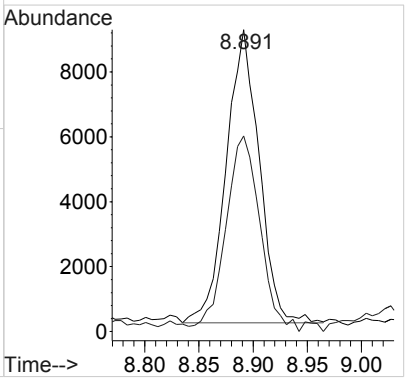


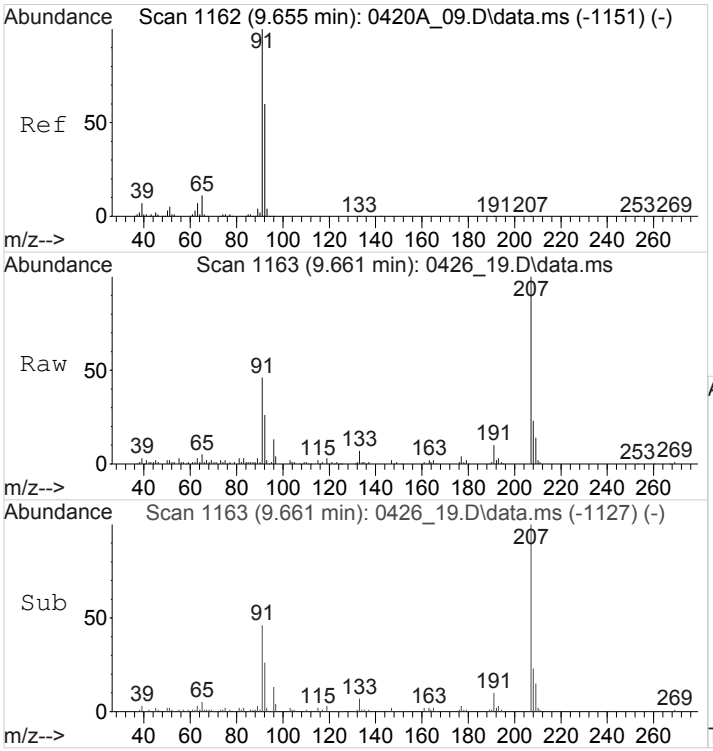


#47
Bromodichloromethane
Concen: 0.2432420 ppbv
RT: 8.891 min Scan# 1027
Delta R.T. 0.011 min
Lab File: 0426_19.D
Acq: 26 Apr 2018 8:47 pm

Tgt Ion: 83 Resp: 19137

Ion	Ratio	Lower	Upper
83	100		
85	69.3	51.8	77.8

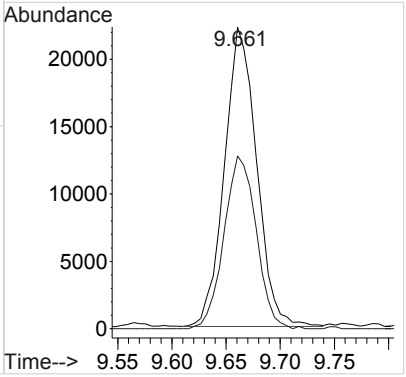


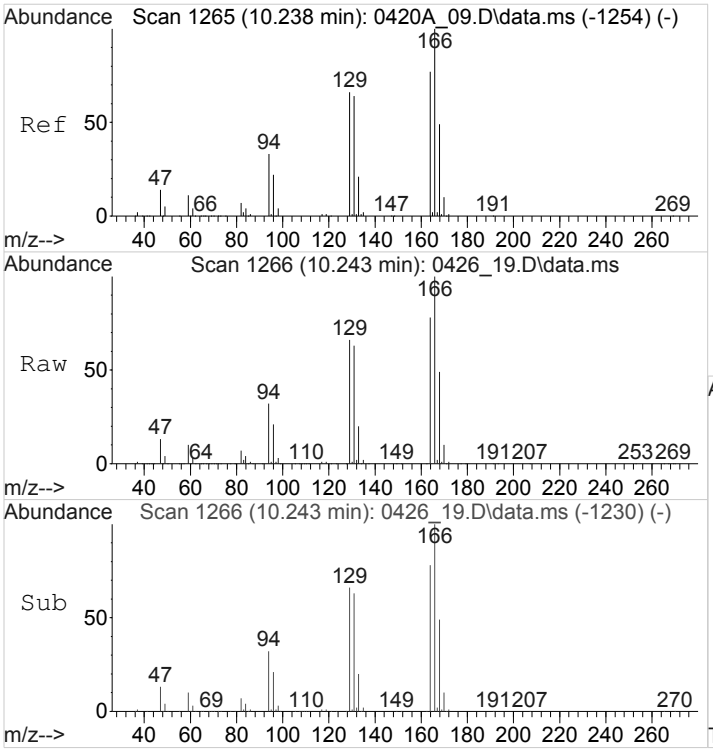


#50
Toluene
Concen: 0.3183982 ppbv
RT: 9.661 min Scan# 1163
Delta R.T. 0.006 min
Lab File: 0426_19.D
Acq: 26 Apr 2018 8:47 pm

Tgt Ion: 91 Resp: 46028

Ion	Ratio	Lower	Upper
91	100		
92	57.7	48.0	72.0

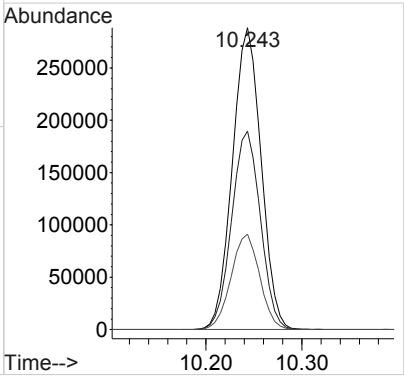


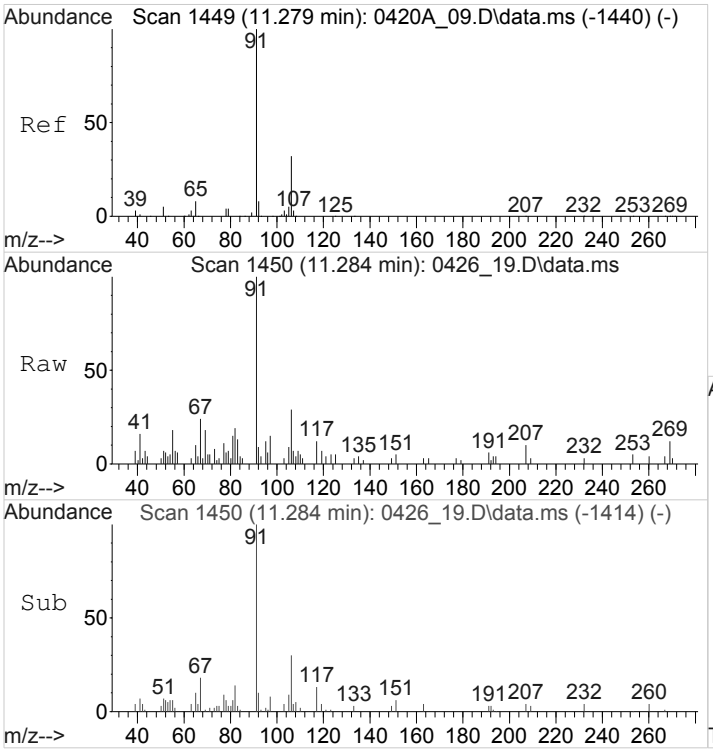


#53
Tetrachloroethene
Concen: 7.7018192 ppbv
RT: 10.243 min Scan# 1266
Delta R.T. 0.006 min
Lab File: 0426_19.D
Acq: 26 Apr 2018 8:47 pm

Tgt Ion:166 Resp: 599263

Ion	Ratio	Lower	Upper
166	100		
129	65.8	53.7	80.5
94	31.6	27.2	40.8

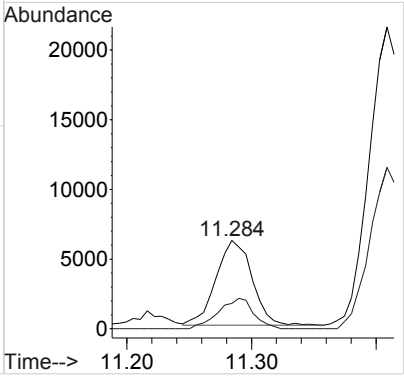


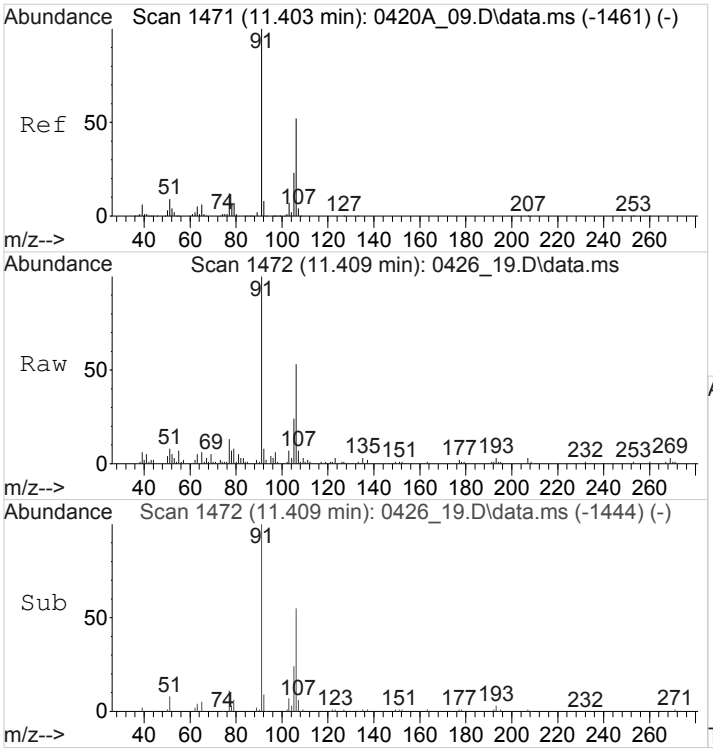


#59
Ethylbenzene
Concen: 0.0631535 ppbv
RT: 11.284 min Scan# 1450
Delta R.T. 0.006 min
Lab File: 0426_19.D
Acq: 26 Apr 2018 8:47 pm

Tgt Ion: 91 Resp: 12285

Ion	Ratio	Lower	Upper
91	100		
106	34.7	25.9	38.9

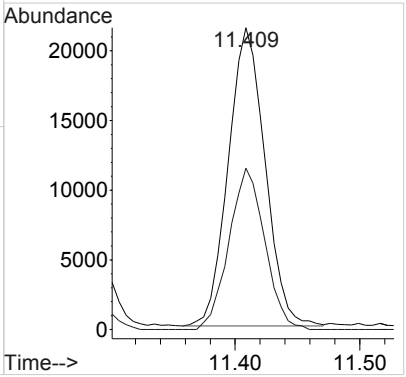


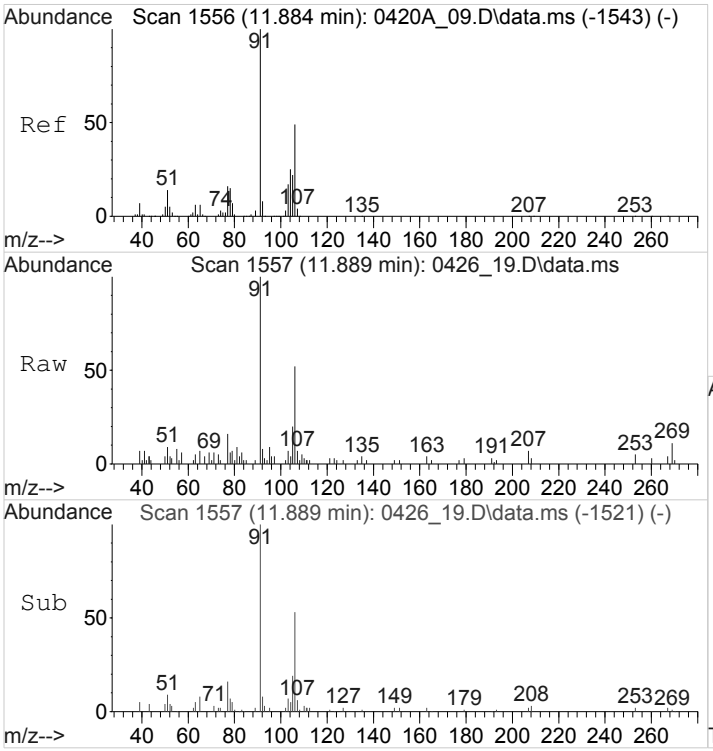


#60
M&P-Xylene
Concen: 0.2947696 ppbv
RT: 11.409 min Scan# 1472
Delta R.T. 0.006 min
Lab File: 0426_19.D
Acq: 26 Apr 2018 8:47 pm

Tgt Ion: 91 Resp: 43927

Ion	Ratio	Lower	Upper
91	100		
106	52.6	41.5	62.3

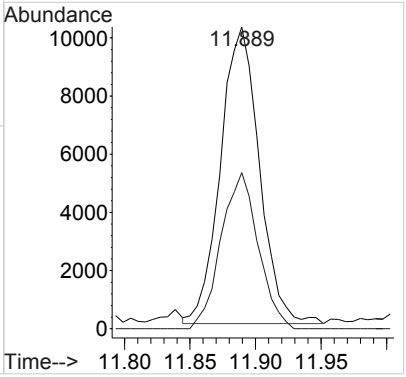


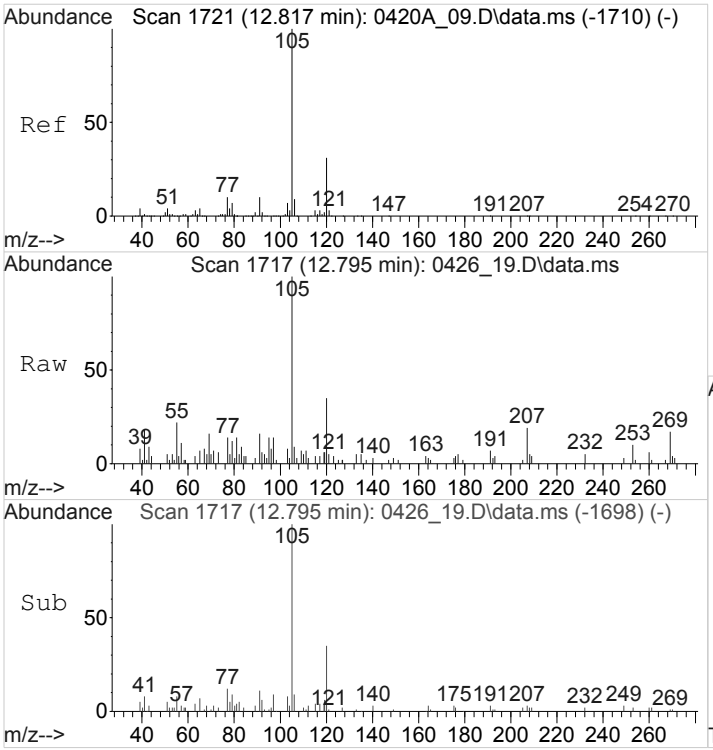


#61
O-Xylene
Concen: 0.1360705 ppbv
RT: 11.889 min Scan# 1557
Delta R.T. 0.006 min
Lab File: 0426_19.D
Acq: 26 Apr 2018 8:47 pm

Tgt Ion: 91 Resp: 20966

Ion	Ratio	Lower	Upper
91	100		
106	50.3	39.1	58.7

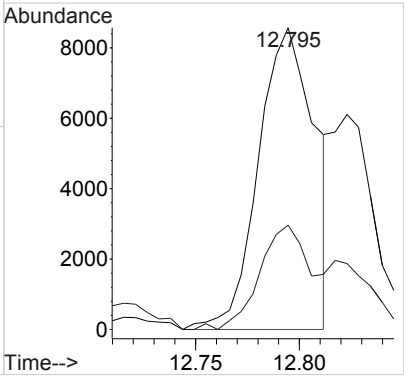


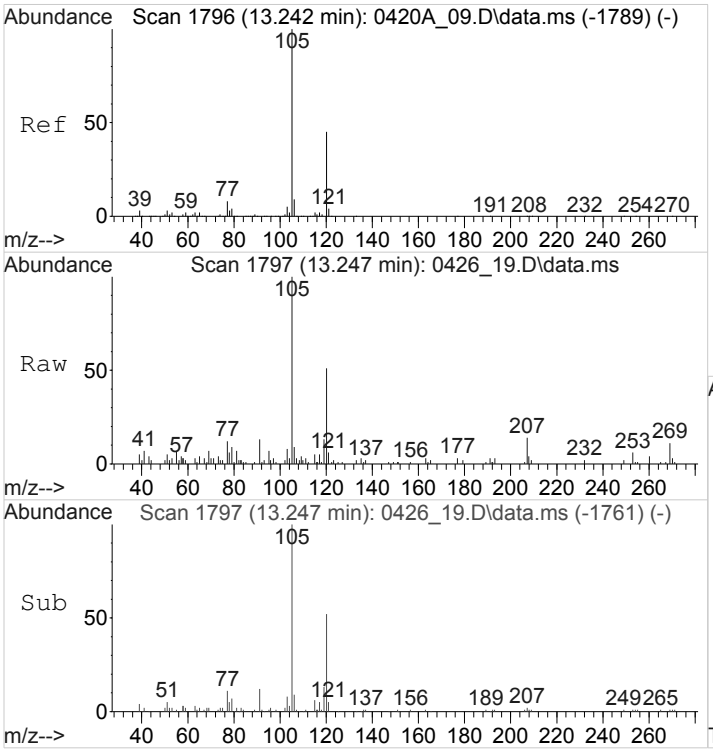


#67
4-Ethyltoluene
Concen: 0.0735019 ppbv
RT: 12.795 min Scan# 1717
Delta R.T. -0.023 min
Lab File: 0426_19.D
Acq: 26 Apr 2018 8:47 pm

Tgt Ion:105 Resp: 16211

Ion	Ratio	Lower	Upper
105	100		
120	31.9	24.8	37.2

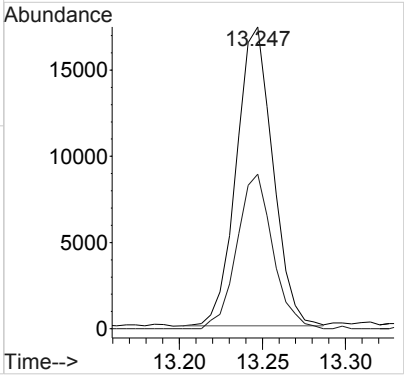


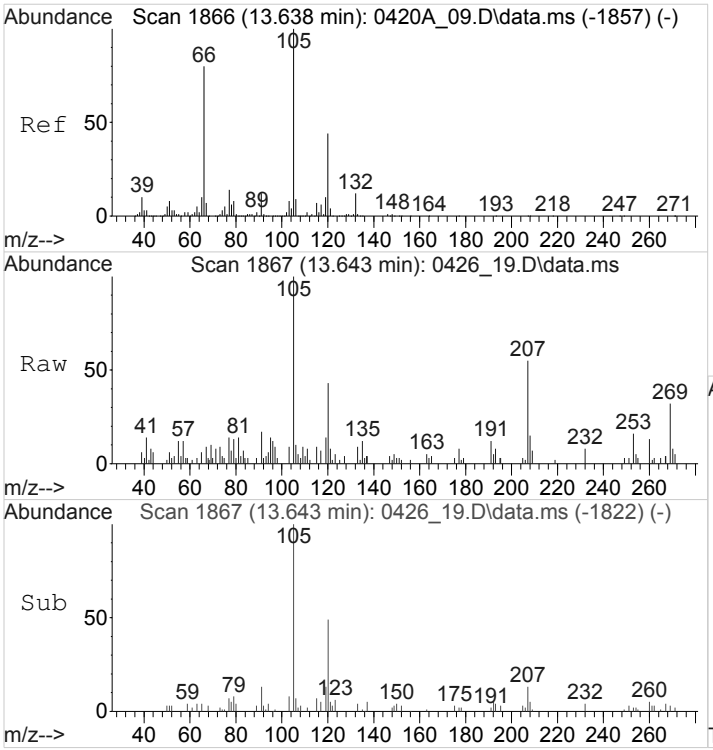


#72
1,2,4-Trimethylbenzene
Concen: 0.1508656 ppbv
RT: 13.247 min Scan# 1797
Delta R.T. 0.006 min
Lab File: 0426_19.D
Acq: 26 Apr 2018 8:47 pm

Tgt Ion:105 Resp: 26535

Ion	Ratio	Lower	Upper
105	100		
120	50.8	38.8	58.2

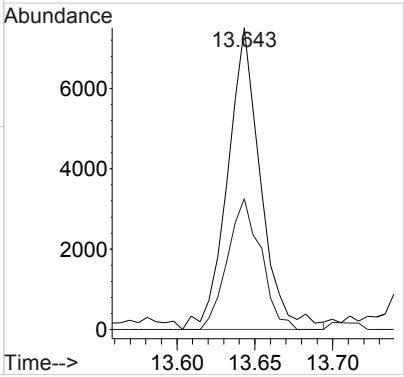


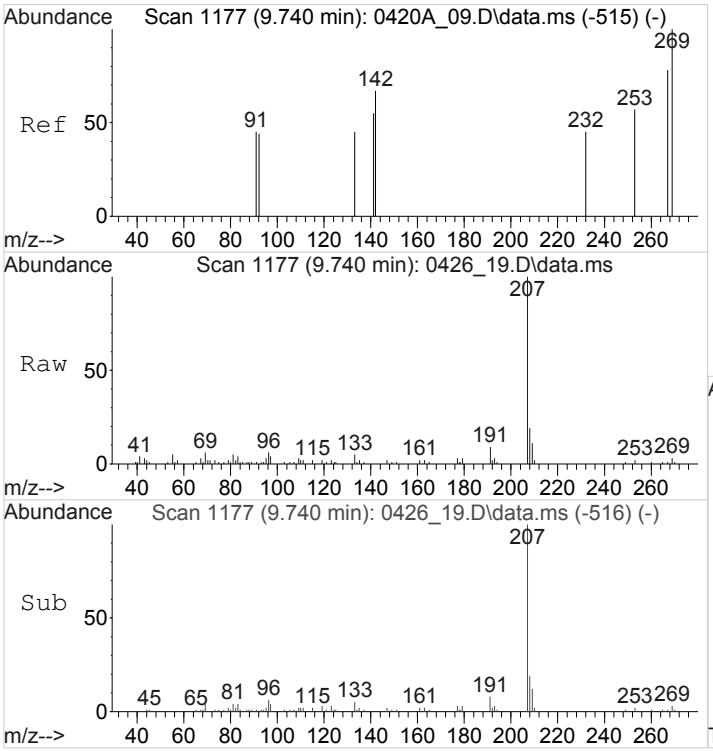


#76
1,2,3-TRIMETHYLBENZENE
Concen: 0.0658372 ppbv
RT: 13.643 min Scan# 1867
Delta R.T. 0.006 min
Lab File: 0426_19.D
Acq: 26 Apr 2018 8:47 pm

Tgt Ion:105 Resp: 11058

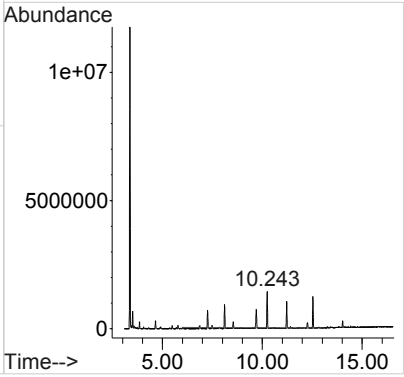
Ion	Ratio	Lower	Upper
105	100		
120	43.9	36.0	54.0





#84
TPH (GC/MS) Low Fraction
Concen: 31.1916228 ppbv m
RT: 9.740 min Scan# 1177
Delta R.T. 0.000 min
Lab File: 0426_19.D
Acq: 26 Apr 2018 8:47 pm

Tgt Ion:TIC Resp: 8660919



1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS-9

ESC Sample ID:	L988471-09	**SDG:**	L988471
Client Sample ID:	SS-9	**Collected Date/Time:**	04/23/18 11:27
Lab File ID:	0427_10	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS2	**Preparation Date/Time:**	04/27/18 15:44
Analytical Batch:	WG1103956	**Analysis Date/Time:**	04/27/18 15:44
Dilution Factor:	20	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	20 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	**CAS**	**RT**	**Result**	**Qualifier**	**MDL**	**RDL**
			ppbv		*ppbv*	*ppbv*
Tetrachloroethylene	127-18-4	12.21	70.1		0.994	4.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_10.D
Acq On : 27 Apr 2018 3:44 pm
Operator : 564
Sample : L988471-09 20x WG1103956
Misc :
ALS Vial : 10 Sample Multiplier: 20
InstName : AIRMS2

Quant Time: Apr 28 07:50:27 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:08:22 2018
Response via : Initial Calibration

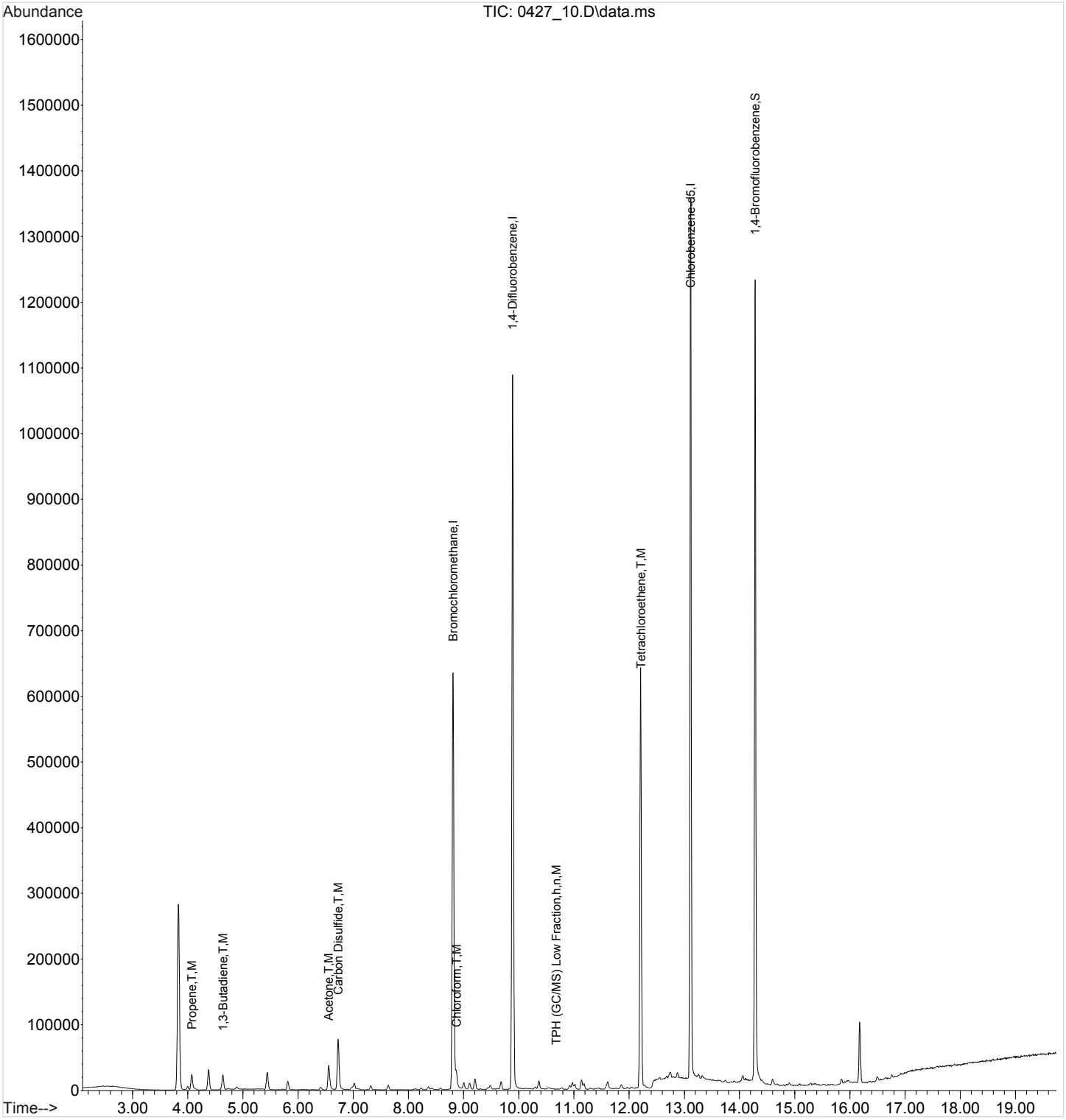
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.811	130	1810891	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	9.892	114	7701238	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	13.116	117	6659933	4.0000000	ppbv	# 0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	14.285	95	3857529	3.6658494	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 91.65%			
Target Compounds						Qvalue
2) Propene	4.075	41	69626	2.8637340	ppbv #	57
9) 1,3-Butadiene	4.641	39	42613	1.7506769	ppbv #	12
17) Acetone	6.558	43	600490	16.4879385	ppbv	99
19) Carbon Disulfide	6.729	76	1261446	35.1649861	ppbv #	84
25) n-Hexane	7.637	57	35331	0.9422132	ppbv #	81
32) Chloroform	8.870	83	148502	3.8861919	ppbv	96
40) Heptane	9.680	43	62110	0.9946963	ppbv #	34
53) Tetrachloroethene	12.210	166	1849877	70.0856217	ppbv	97
84) TPH (GC/MS) Low Fraction	10.675	TIC	26825211m	130.2025218	ppbv	

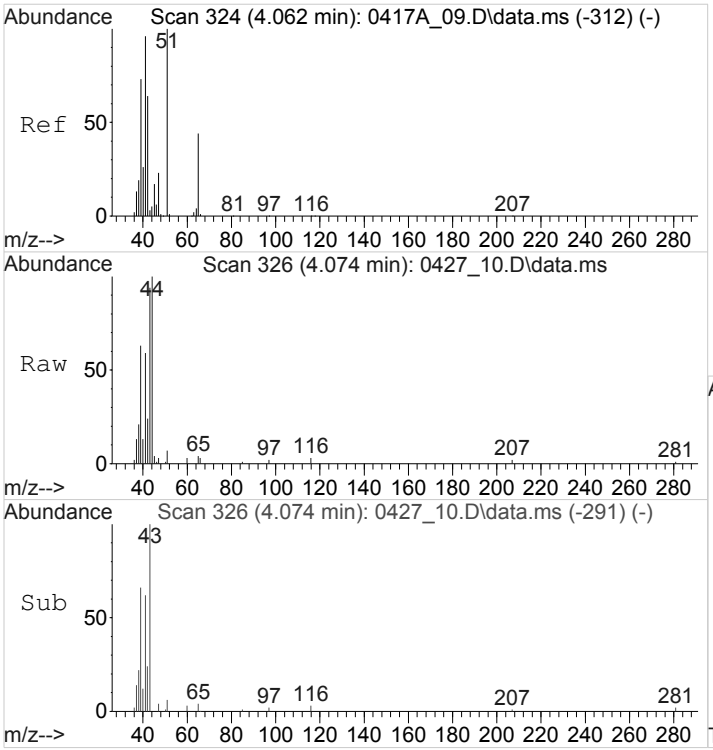
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_10.D
Acq On : 27 Apr 2018 3:44 pm
Operator : 564
Sample : L988471-09 20x WG1103956
Misc :
ALS Vial : 10 Sample Multiplier: 20
InstName : AIRMS2

Quant Time: Apr 28 07:50:27 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:08:22 2018
Response via : Initial Calibration

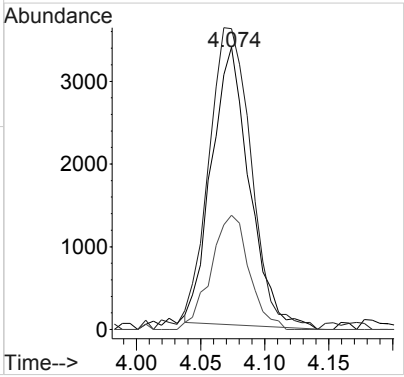


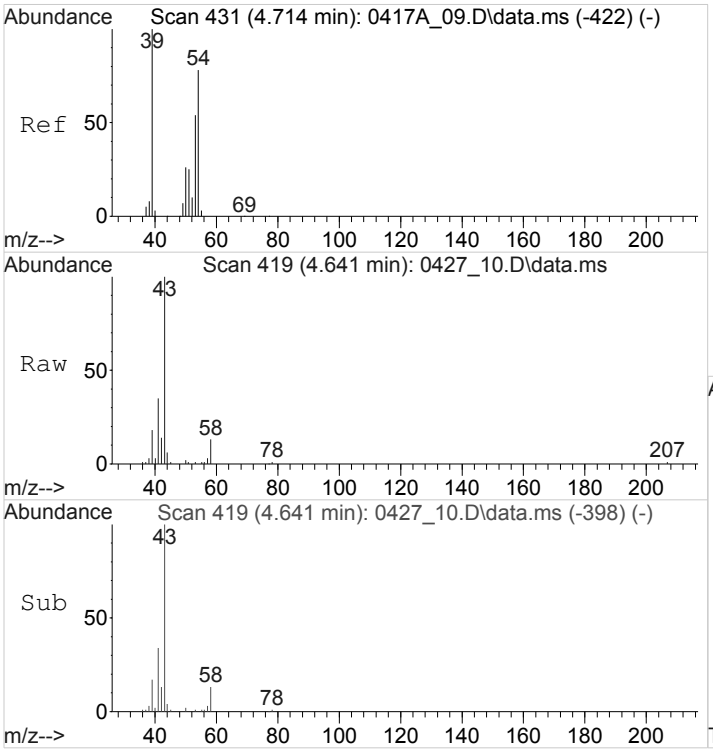


#2
Propene
Concen: 2.8637340 ppbv
RT: 4.075 min Scan# 326
Delta R.T. 0.013 min
Lab File: 0427_10.D
Acq: 27 Apr 2018 3:44 pm

Tgt Ion: 41 Resp: 69626

Ion	Ratio	Lower	Upper
41	100		
39	119.4	57.8	86.8#
42	41.2	50.5	75.7#

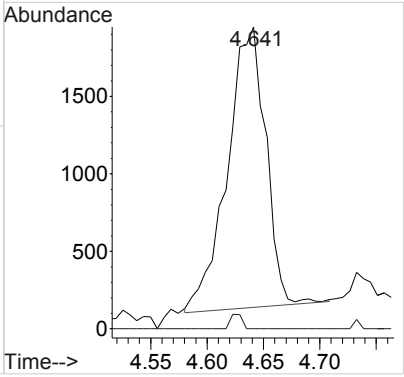


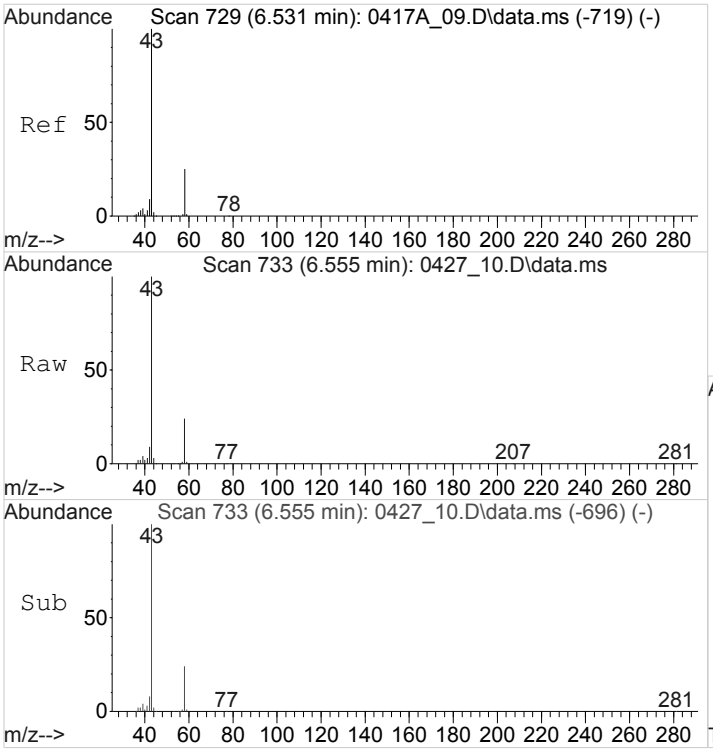


#9
1,3-Butadiene
Concen: 1.7506769 ppbv
RT: 4.641 min Scan# 419
Delta R.T. -0.071 min
Lab File: 0427_10.D
Acq: 27 Apr 2018 3:44 pm

Tgt Ion: 39 Resp: 42613

Ion	Ratio	Lower	Upper
39	100		
54	0.0	60.6	91.0#

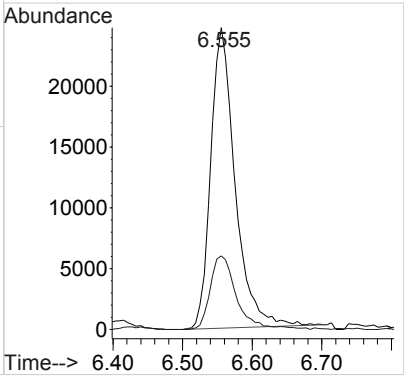


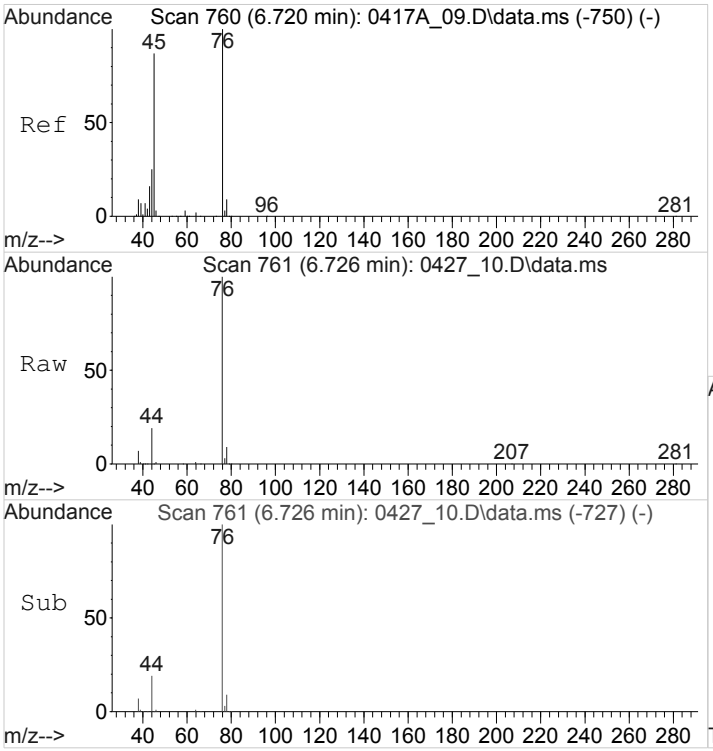


#17
Acetone
Concen: 16.4879385 ppbv
RT: 6.558 min Scan# 733
Delta R.T. 0.028 min
Lab File: 0427_10.D
Acq: 27 Apr 2018 3:44 pm

Tgt Ion: 43 Resp: 600490

Ion	Ratio	Lower	Upper
43	100		
58	26.3	20.6	30.8

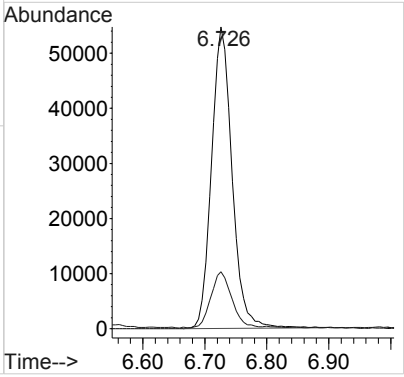


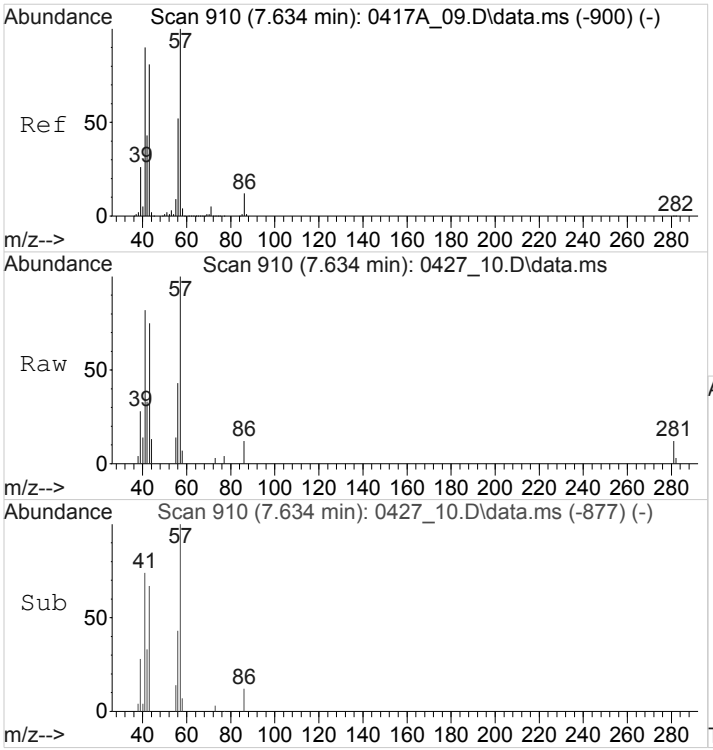


#19
Carbon Disulfide
Concen: 35.1649861 ppbv
RT: 6.729 min Scan# 761
Delta R.T. 0.008 min
Lab File: 0427_10.D
Acq: 27 Apr 2018 3:44 pm

Tgt Ion: 76 Resp: 1261446

Ion	Ratio	Lower	Upper
76	100		
44	18.9	21.9	32.9#

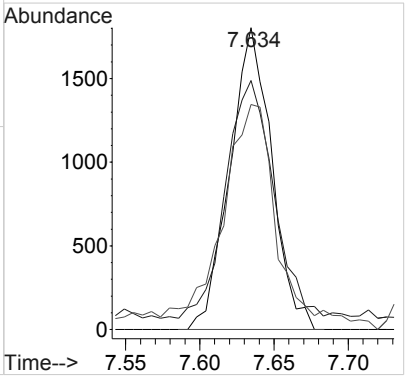


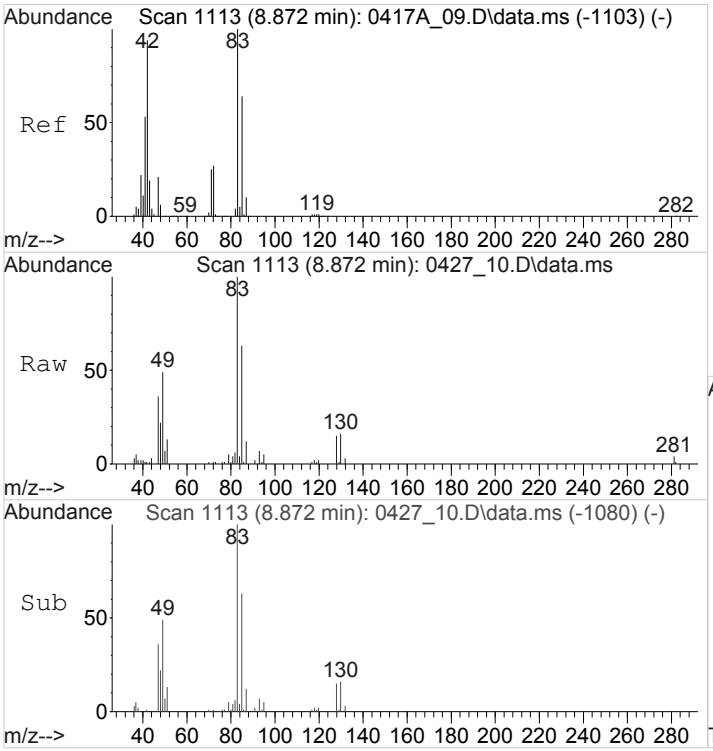


#25
n-Hexane
Concen: 0.9422132 ppbv
RT: 7.637 min Scan# 910
Delta R.T. 0.002 min
Lab File: 0427_10.D
Acq: 27 Apr 2018 3:44 pm

Tgt Ion: 57 Resp: 35331

Ion	Ratio	Lower	Upper
57	100		
41	102.9	72.7	109.1
43	103.2	64.1	96.1#

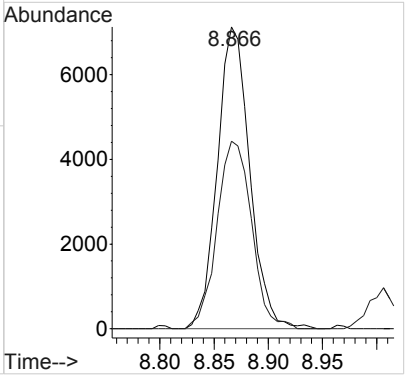


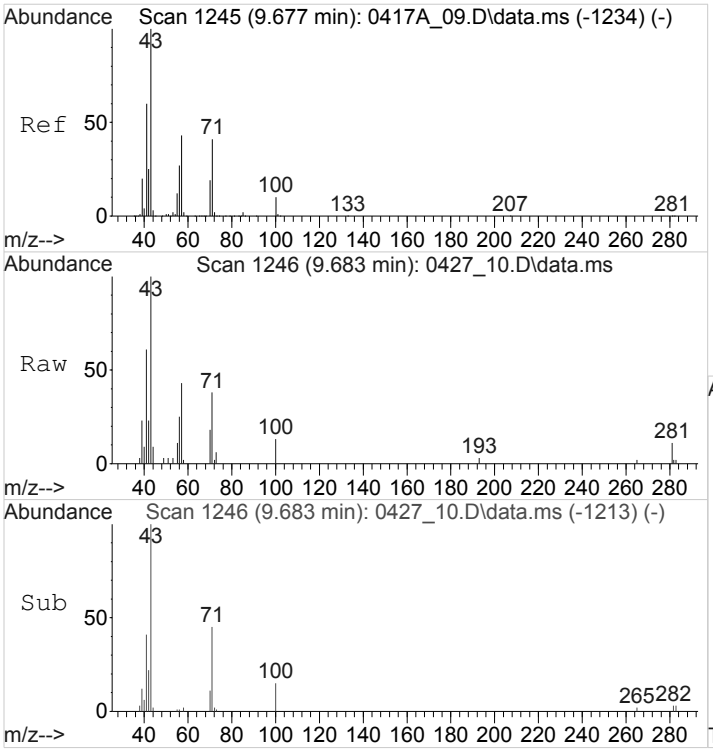


#32
Chloroform
Concen: 3.8861919 ppbv
RT: 8.870 min Scan# 1113
Delta R.T. 0.000 min
Lab File: 0427_10.D
Acq: 27 Apr 2018 3:44 pm

Tgt Ion: 83 Resp: 148502

Ion	Ratio	Lower	Upper
83	100		
85	66.3	50.4	75.6

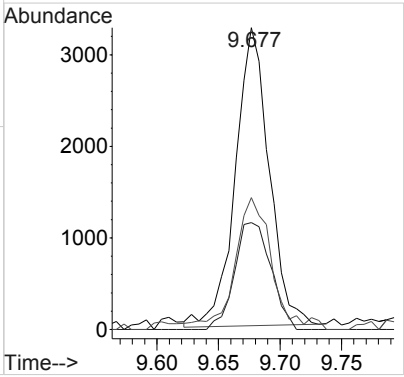


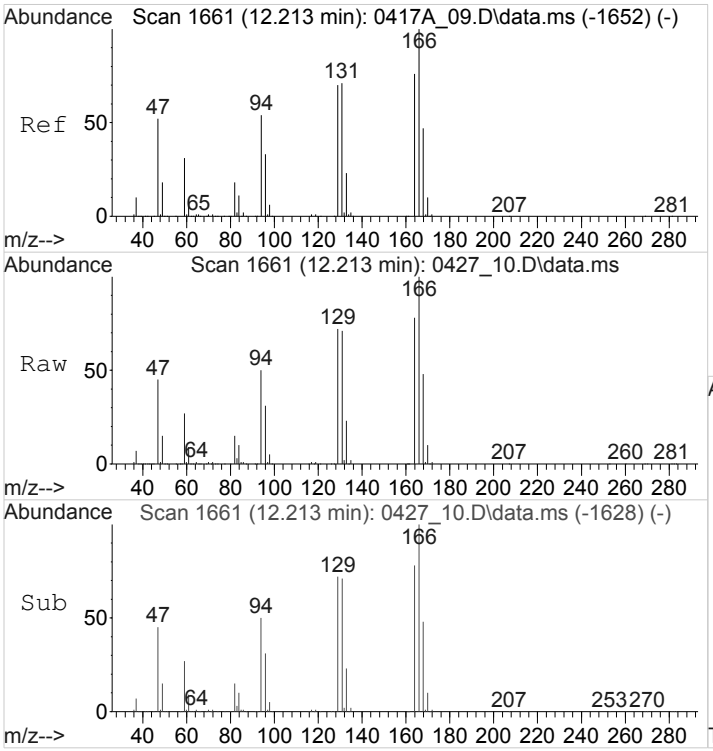


#40
Heptane
Concen: 0.9946963 ppbv
RT: 9.680 min Scan# 1246
Delta R.T. 0.001 min
Lab File: 0427_10.D
Acq: 27 Apr 2018 3:44 pm

Tgt Ion: 43 Resp: 62110

Ion	Ratio	Lower	Upper
43	100		
71	0.0	31.8	47.8#
57	0.0	34.2	51.4#

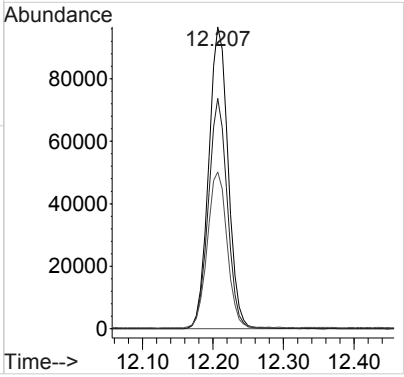


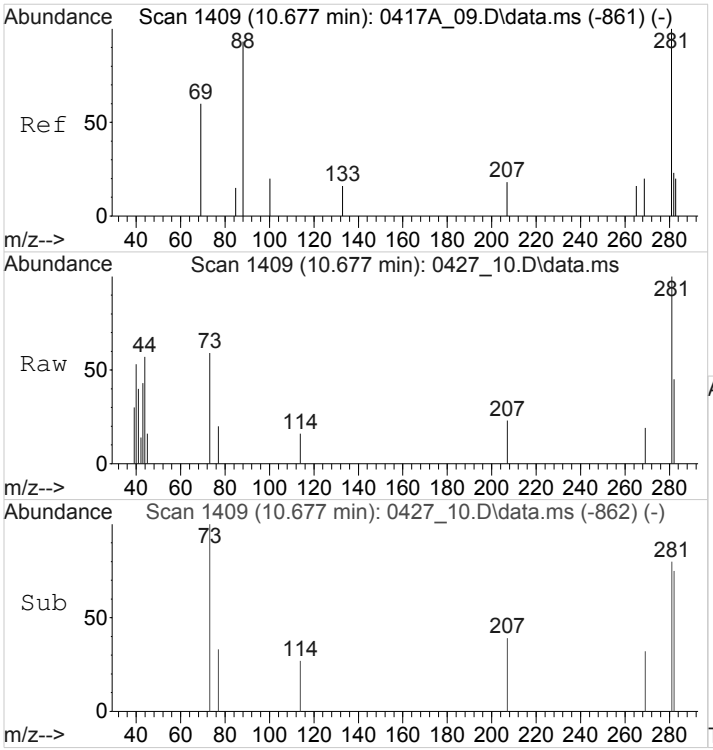


#53
Tetrachloroethene
Concen: 70.0856217 ppbv
RT: 12.210 min Scan# 1661
Delta R.T. -0.001 min
Lab File: 0427_10.D
Acq: 27 Apr 2018 3:44 pm

Tgt Ion:166 Resp: 1849877

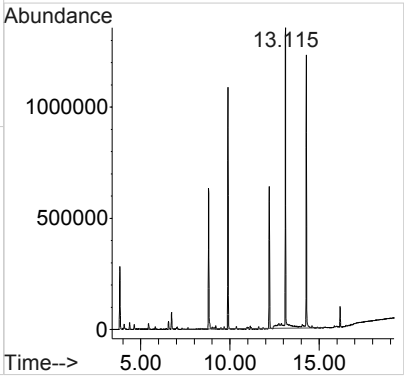
Ion	Ratio	Lower	Upper
166	100		
129	73.9	59.6	89.4
94	52.3	45.2	67.8





#84
TPH (GC/MS) Low Fraction
Concen: 130.2025218 ppbv m
RT: 10.675 min Scan# 1409
Delta R.T. 0.000 min
Lab File: 0427_10.D
Acq: 27 Apr 2018 3:44 pm

Tgt Ion:TIC Resp:26825211



1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS-9

ESC Sample ID:	L988471-09	**SDG:**	L988471
Client Sample ID:	SS-9	**Collected Date/Time:**	04/23/18 11:27
Lab File ID:	0426_20	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/26/18 21:30
Analytical Batch:	WG1103323	**Analysis Date/Time:**	04/26/18 21:30
Dilution Factor:	1	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	RT	Result	Qualifier	MDL	RDL
			ppbv		*ppbv*	*ppbv*
Acetone	67-64-1	5.46	17.0		0.0569	1.25
Allyl chloride	107-05-1	0	ND		0.0546	0.200
Benzene	71-43-2	7.81	0.218		0.0460	0.200
Benzyl Chloride	100-44-7	0	ND		0.0598	0.200
Bromodichloromethane	75-27-4	0	ND		0.0436	0.200
Bromoform	75-25-2	0	ND		0.0786	0.600
Bromomethane	74-83-9	0	ND		0.0609	0.200
1,3-Butadiene	106-99-0	0	ND		0.0563	2.00
Carbon disulfide	75-15-0	5.68	37.5		0.0544	0.200
Carbon tetrachloride	56-23-5	7.60	ND		0.0585	0.200
Chlorobenzene	108-90-7	0	ND		0.0601	0.200
Chloroethane	75-00-3	0	ND		0.0489	0.200
Chloroform	67-66-3	7.26	4.49		0.0574	0.200
Chloromethane	74-87-3	3.93	ND		0.0544	0.200
2-Chlorotoluene	95-49-8	0	ND		0.0605	0.200
Cyclohexane	110-82-7	7.48	0.571		0.0534	0.200
Dibromochloromethane	124-48-1	0	ND		0.0494	0.200
1,2-Dibromoethane	106-93-4	0	ND		0.0185	0.200
1,2-Dichlorobenzene	95-50-1	0	ND		0.0603	0.200
1,3-Dichlorobenzene	541-73-1	0	ND		0.0597	0.200
1,4-Dichlorobenzene	106-46-7	0	ND		0.0557	0.200
1,2-Dichloroethane	107-06-2	0	ND		0.0616	0.200
1,1-Dichloroethane	75-34-3	0	ND		0.0514	0.200
1,1-Dichloroethene	75-35-4	0	ND		0.0490	0.200
cis-1,2-Dichloroethene	156-59-2	0	ND		0.0389	0.200
trans-1,2-Dichloroethene	156-60-5	0	ND		0.0464	0.200
1,2-Dichloropropane	78-87-5	0	ND		0.0599	0.200
cis-1,3-Dichloropropene	10061-01-5	0	ND		0.0588	0.200
trans-1,3-Dichloropropene	10061-02-6	0	ND		0.0435	0.200
1,4-Dioxane	123-91-1	0	ND		0.0554	0.200
Ethanol	64-17-5	5.05	0.933		0.0832	0.630
Ethylbenzene	100-41-4	11.29	ND		0.0506	0.200
4-Ethyltoluene	622-96-8	12.79	ND		0.0666	0.200
Trichlorofluoromethane	75-69-4	4.86	0.380		0.0673	0.200
Dichlorodifluoromethane	75-71-8	3.62	0.418		0.0601	0.200
1,1,2-Trichlorotrifluoroethane	76-13-1	5.32	ND		0.0687	0.200
1,2-Dichlorotetrafluoroethane	76-14-2	0	ND		0.0458	0.200
Heptane	142-82-5	7.84	1.18		0.0626	0.200
Hexachloro-1,3-butadiene	87-68-3	0	ND		0.0656	0.630
n-Hexane	110-54-3	6.22	0.974		0.0457	0.200
Isopropylbenzene	98-82-8	0	ND		0.0563	0.200
Methylene Chloride	75-09-2	0	ND		0.0465	0.200
Methyl Butyl Ketone	591-78-6	0	ND		0.0682	1.25

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS-9

ESC Sample ID:	L988471-09	**SDG:**	L988471
Client Sample ID:	SS-9	**Collected Date/Time:**	04/23/18 11:27
Lab File ID:	0426_20	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/26/18 21:30
Analytical Batch:	WG1103323	**Analysis Date/Time:**	04/26/18 21:30
Dilution Factor:	1	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	**CAS**	**RT**	**Result**	**Qualifier**	**MDL**	**RDL**
			ppbv		*ppbv*	*ppbv*
2-Butanone (MEK)	78-93-3	7	ND		0.0493	1.25
4-Methyl-2-pentanone (MIBK)	108-10-1	0	ND		0.0650	1.25
Methyl methacrylate	80-62-6	0	ND		0.0773	0.200
MTBE	1634-04-4	0	ND		0.0505	0.200
Naphthalene	91-20-3	0	ND		0.154	0.630
2-Propanol	67-63-0	0	ND		0.0882	1.25
Propene	115-07-1	0	ND		0.0932	0.400
Styrene	100-42-5	0	ND		0.0465	0.200
1,1,2,2-Tetrachloroethane	79-34-5	0	ND		0.0576	0.200
Tetrahydrofuran	109-99-9	0	ND		0.0508	0.200
Toluene	108-88-3	9.66	0.494		0.0499	0.200
1,2,4-Trichlorobenzene	120-82-1	0	ND		0.148	0.630
1,1,1-Trichloroethane	71-55-6	7.46	ND		0.0665	0.200
1,1,2-Trichloroethane	79-00-5	0	ND		0.0287	0.200
Trichloroethylene	79-01-6	8.39	ND		0.0545	0.200
1,2,4-Trimethylbenzene	95-63-6	13.25	ND		0.0483	0.200
1,3,5-Trimethylbenzene	108-67-8	0	ND		0.0631	0.200
2,2,4-Trimethylpentane	540-84-1	7.72	0.285		0.0456	0.200
Vinyl chloride	75-01-4	0	ND		0.0457	0.200
Vinyl Bromide	593-60-2	0	ND		0.0727	0.200
Vinyl acetate	108-05-4	0	ND		0.0639	0.200
m&p-Xylene	1330-20-7	11.41	ND		0.0946	0.400
o-Xylene	95-47-6	11.88	ND		0.0633	0.200

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_20.D
Acq On : 26 Apr 2018 9:30 pm
Operator : 564
Sample : L988471-09 1x WG1103323
Misc :
ALS Vial : 20 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 27 08:54:54 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration

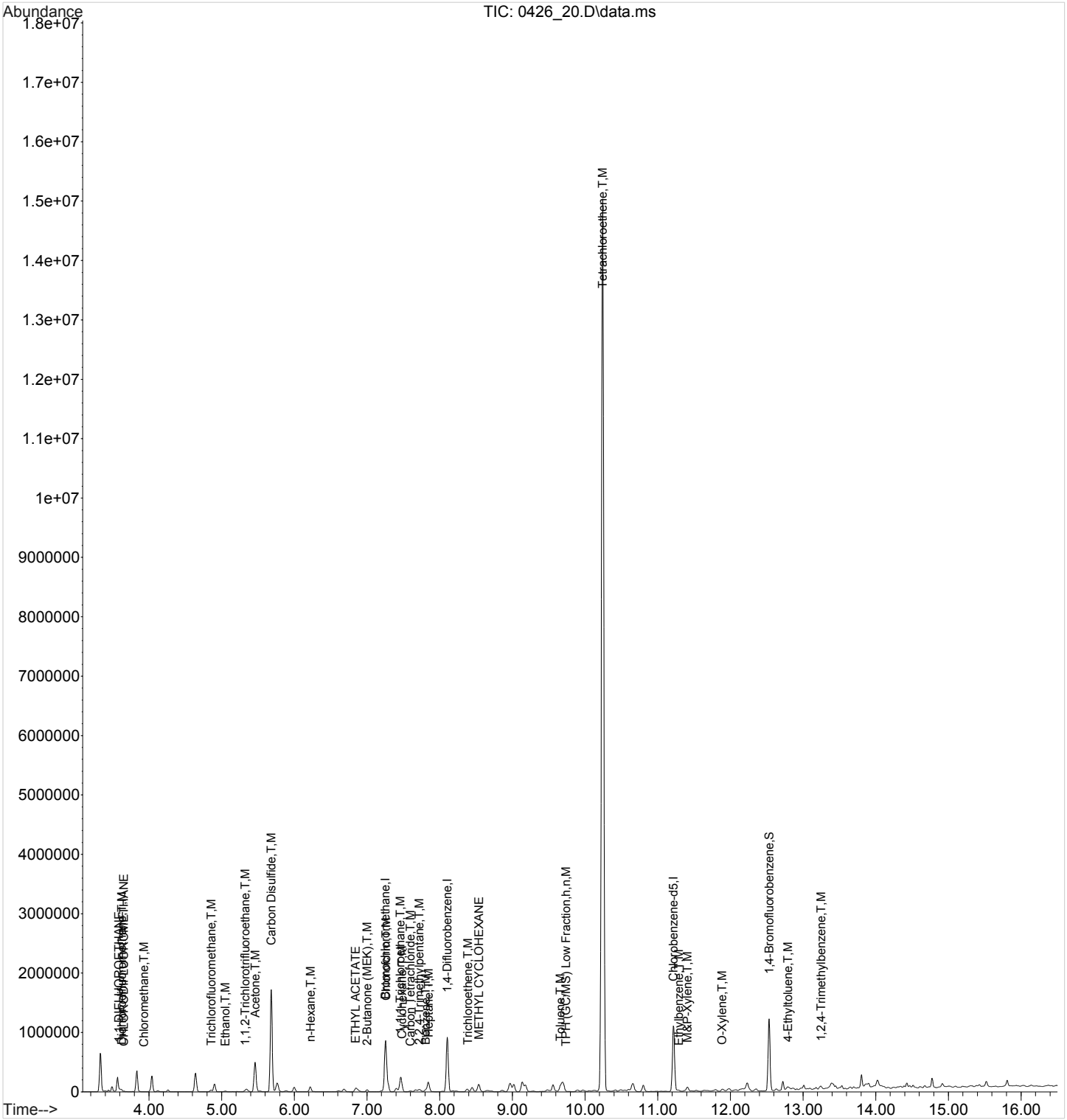
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.251	130	239906	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	8.105	114	900877	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	11.216	117	813429	4.0000000	ppbv	0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	12.534	95	472052	3.8687309	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 96.72%			
Target Compounds						Qvalue
3) 1,1-DIFLUOROETHANE	3.585	51	6029	0.1599666	ppbv	100
4) Dichlorodifluoromethane	3.625	85	25034	0.4178709	ppbv	98
5) CHLORODIFLUOROMETHANE	3.653	51	11045	0.3061533	ppbv	97
7) Chloromethane	3.930	50	1575	0.0659296	ppbv #	42
13) Trichlorofluoromethane	4.858	101	25445	0.3798291	ppbv	99
14) Ethanol	5.050	45	10833	0.9326343	ppbv	93
15) 1,1,2-Trichlorotrifluo...	5.322	101	5245	0.0843078	ppbv	96
17) Acetone	5.463	58	251484	17.0465487	ppbv	70
19) Carbon Disulfide	5.684	76	2544482	37.5432161	ppbv	99
25) n-Hexane	6.221	57	46096	0.9739223	ppbv	96
28) ETHYL ACETATE	6.843	43	13381	0.2089838	ppbv	99
29) 2-Butanone (MEK)	7.002	72	13449	0.7035370	ppbv	99
32) Chloroform	7.262	83	308261	4.4890442	ppbv #	82
33) Cyclohexane	7.483	84	27932	0.5706227	ppbv #	1
34) 1,1,1-Trichloroethane	7.460	97	10692	0.1562769	ppbv	99
35) Carbon Tetrachloride	7.596	117	6272	0.0880550	ppbv	98
36) 2,2,4-Trimethylpentane	7.720	57	47651	0.2846339	ppbv #	85
38) Benzene	7.805	78	24654	0.2182725	ppbv #	93
40) Heptane	7.845	43	66075	1.1844793	ppbv	94
41) Trichloroethene	8.388	95	4358	0.0885248	ppbv	97
43) METHYL CYCLOHEXANE	8.541	83	63210	0.9342072	ppbv	98
50) Toluene	9.661	91	69318	0.4935562	ppbv	99
53) Tetrachloroethene	10.243	166	6691755	88.5233828	ppbv	97
59) Ethylbenzene	11.290	91	15380	0.0793900	ppbv	98
60) M&P-Xylene	11.409	91	48205	0.3248107	ppbv	100
61) O-Xylene	11.884	91	20680	0.1347678	ppbv	98
67) 4-Ethyltoluene	12.789	105	18896	0.0860291	ppbv	93
72) 1,2,4-Trimethylbenzene	13.247	105	22972	0.1311466	ppbv	99
84) TPH (GC/MS) Low Fraction	9.740	TIC	42148360m	152.4199067	ppbv	

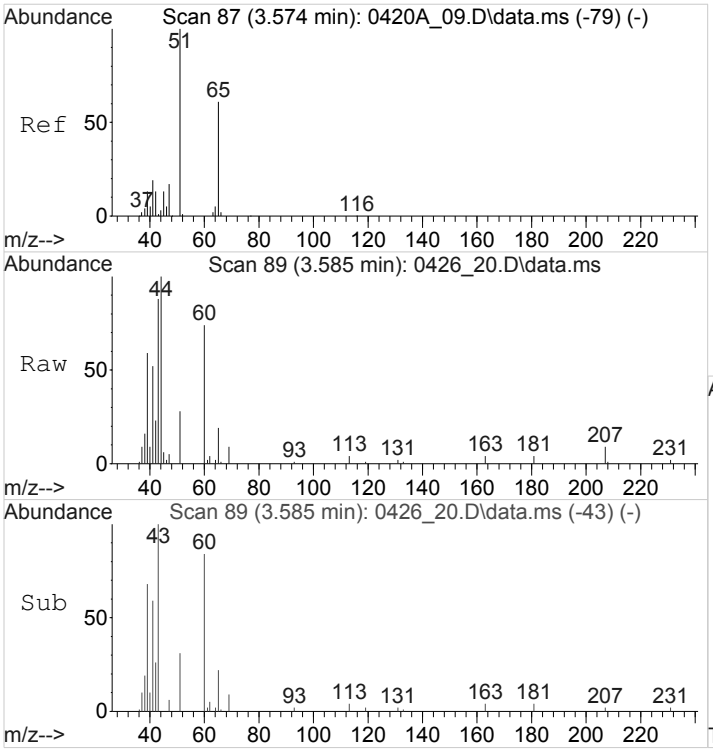
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_20.D
Acq On : 26 Apr 2018 9:30 pm
Operator : 564
Sample : L988471-09 1x WG1103323
Misc :
ALS Vial : 20 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 27 08:54:54 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration

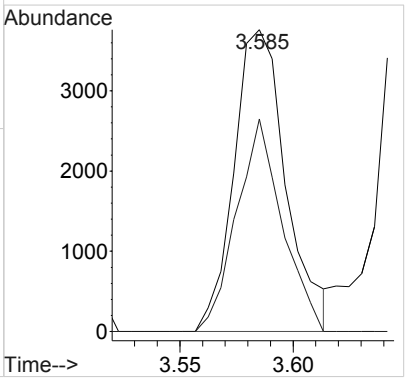


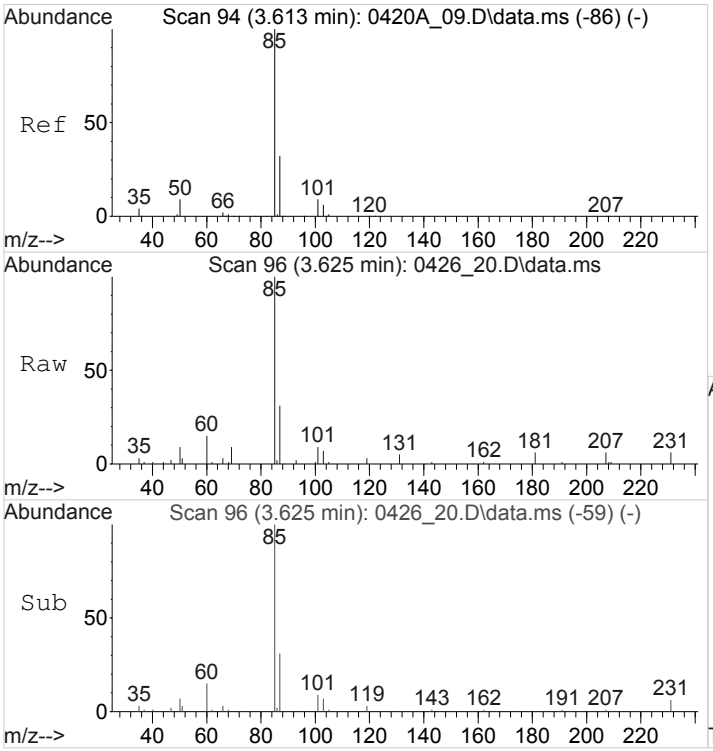


#3
1,1-DIFLUOROETHANE
Concen: 0.1599666 ppbv
RT: 3.585 min Scan# 89
Delta R.T. 0.011 min
Lab File: 0426_20.D
Acq: 26 Apr 2018 9:30 pm

Tgt Ion: 51 Resp: 6029

Ion	Ratio	Lower	Upper
51	100		
65	61.4	49.4	74.2

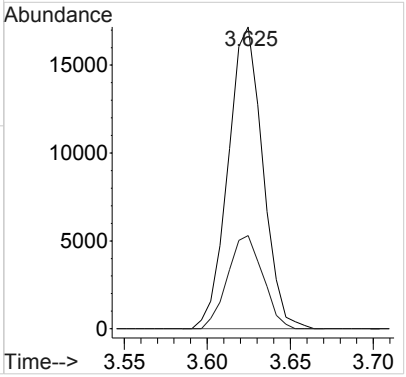


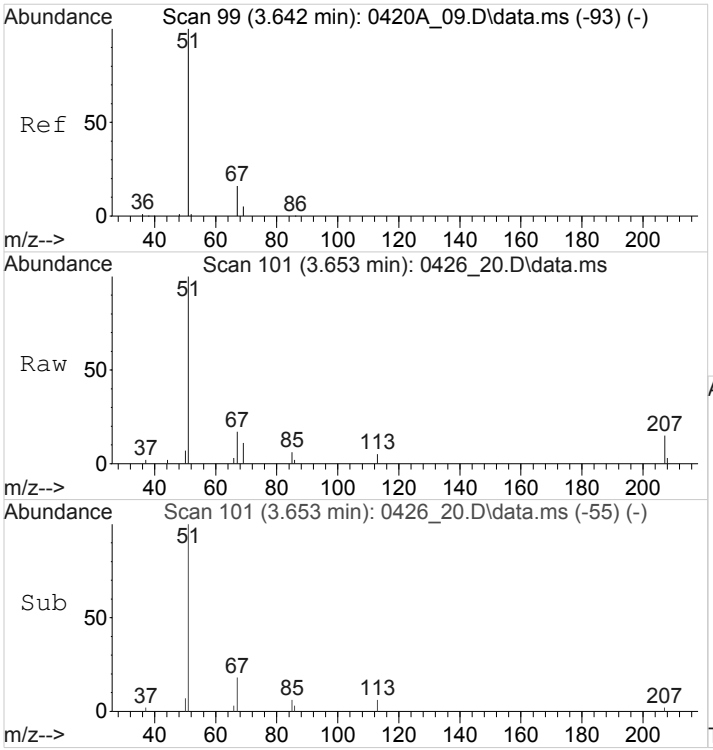


#4
Dichlorodifluoromethane
Concen: 0.4178709 ppbv
RT: 3.625 min Scan# 96
Delta R.T. 0.011 min
Lab File: 0426_20.D
Acq: 26 Apr 2018 9:30 pm

Tgt Ion: 85 Resp: 25034

Ion	Ratio	Lower	Upper
85	100		
87	31.3	25.8	38.8

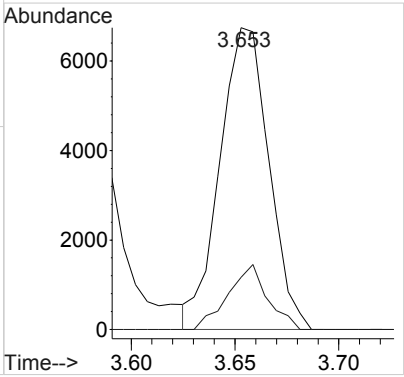


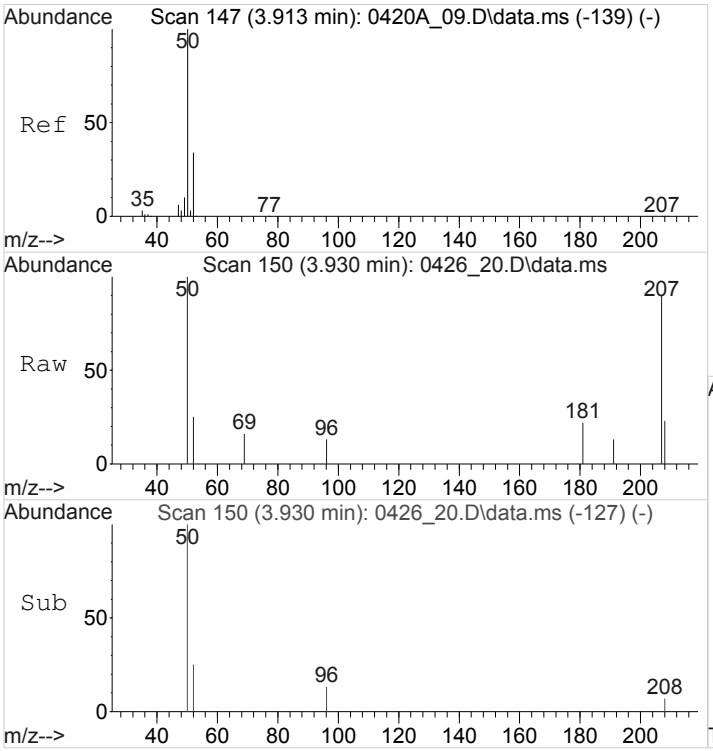


#5
CHLORODIFLUOROMETHANE
Concen: 0.3061533 ppbv
RT: 3.653 min Scan# 101
Delta R.T. 0.011 min
Lab File: 0426_20.D
Acq: 26 Apr 2018 9:30 pm

Tgt Ion: 51 Resp: 11045

Ion	Ratio	Lower	Upper
51	100		
67	17.4	12.7	19.1

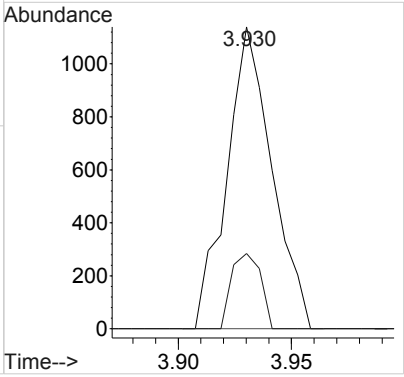


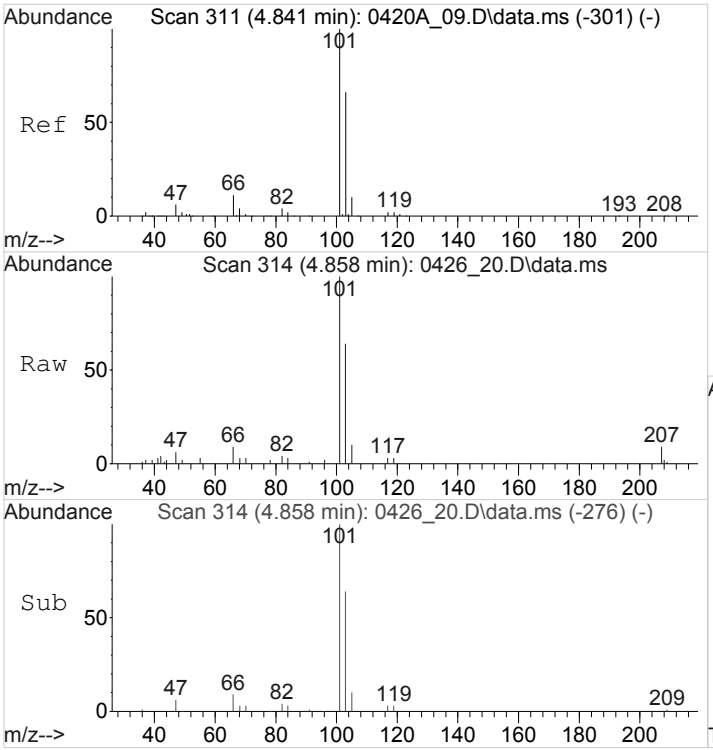


#7
Chloromethane
Concen: 0.0659296 ppbv
RT: 3.930 min Scan# 150
Delta R.T. 0.017 min
Lab File: 0426_20.D
Acq: 26 Apr 2018 9:30 pm

Tgt Ion: 50 Resp: 1575

Ion	Ratio	Lower	Upper
50	100		
52	0.0	26.5	39.7#

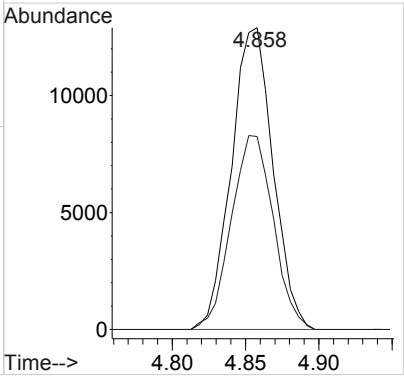


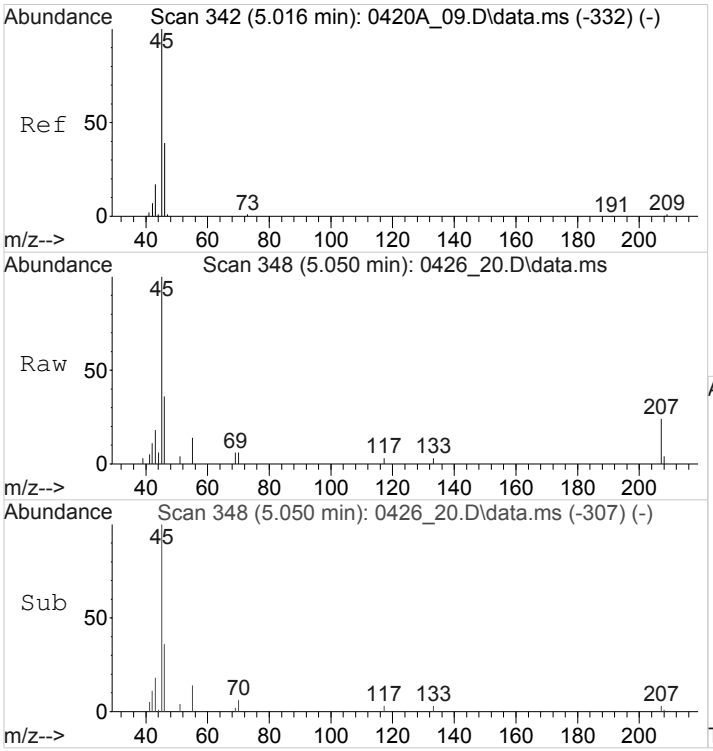


#13
Trichlorofluoromethane
Concen: 0.3798291 ppbv
RT: 4.858 min Scan# 314
Delta R.T. 0.017 min
Lab File: 0426_20.D
Acq: 26 Apr 2018 9:30 pm

Tgt Ion:101 Resp: 25445

Ion	Ratio	Lower	Upper
101	100		
103	65.0	52.6	79.0

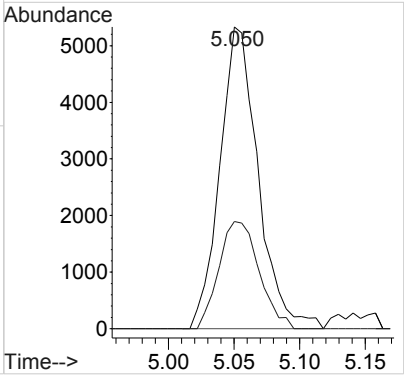


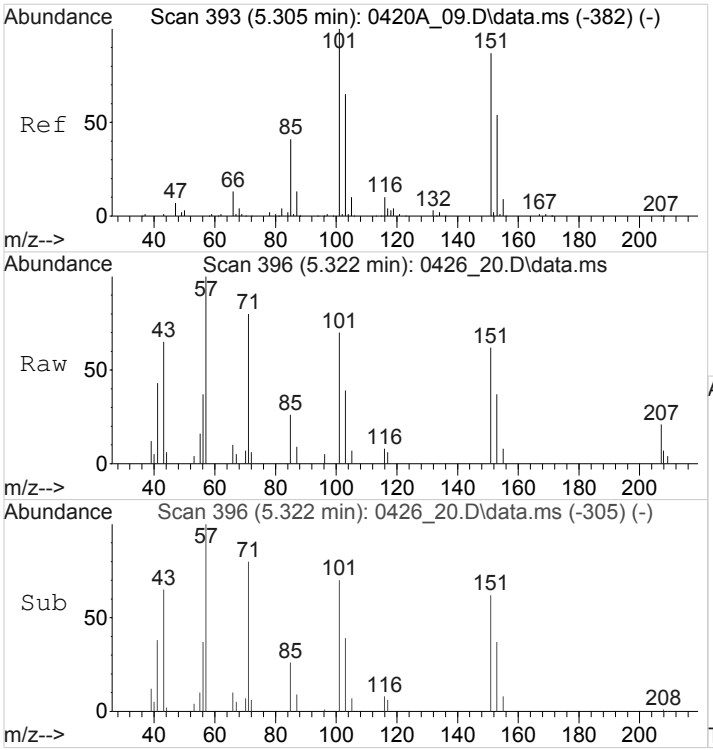


#14
Ethanol
Concen: 0.9326343 ppbv
RT: 5.050 min Scan# 348
Delta R.T. 0.034 min
Lab File: 0426_20.D
Acq: 26 Apr 2018 9:30 pm

Tgt Ion: 45 Resp: 10833

Ion	Ratio	Lower	Upper
45	100		
46	37.3	33.1	49.7

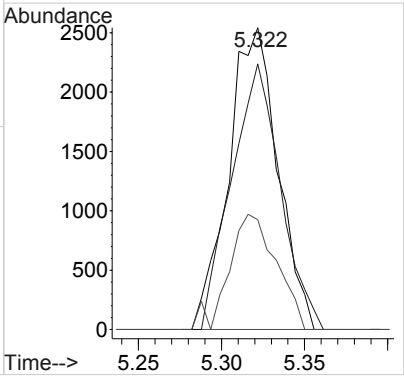


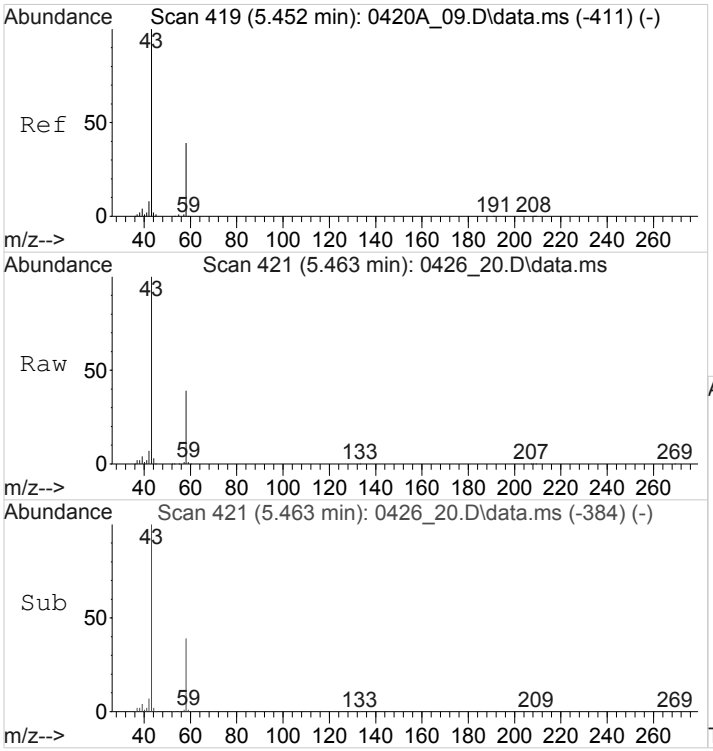


#15
1,1,2-Trichlorotrifluoroethane
Concen: 0.0843078 ppbv
RT: 5.322 min Scan# 396
Delta R.T. 0.017 min
Lab File: 0426_20.D
Acq: 26 Apr 2018 9:30 pm

Tgt Ion:101 Resp: 5245

Ion	Ratio	Lower	Upper
101	100		
151	87.2	67.9	101.9
85	36.7	32.4	48.6

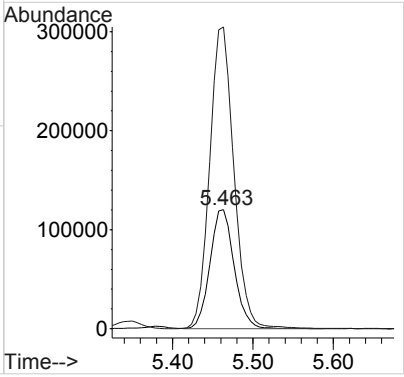


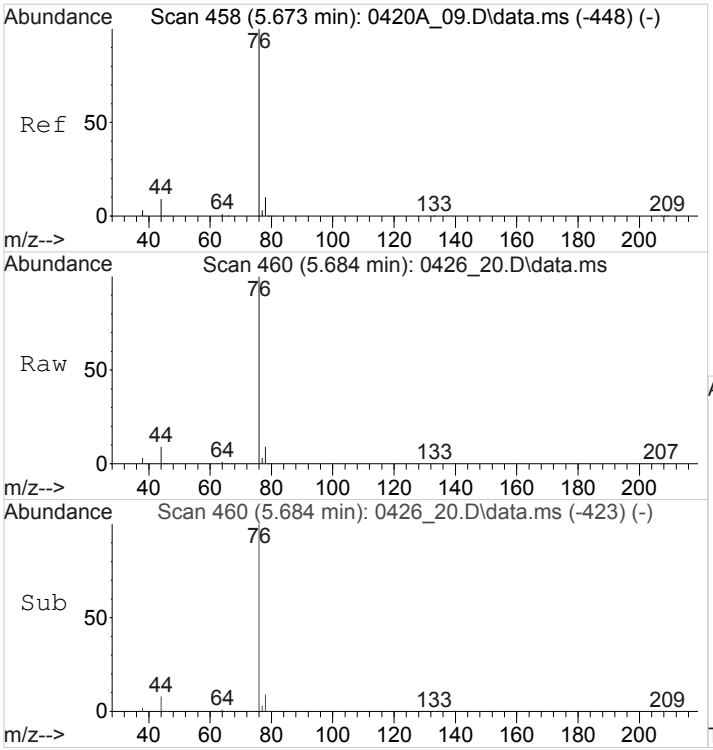


#17
Acetone
Concen: 17.0465487 ppbv
RT: 5.463 min Scan# 421
Delta R.T. 0.011 min
Lab File: 0426_20.D
Acq: 26 Apr 2018 9:30 pm

Tgt Ion: 58 Resp: 251484

Ion	Ratio	Lower	Upper
58	100		
43	254.5	252.6	379.0

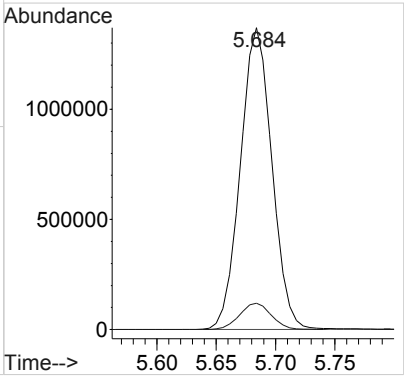


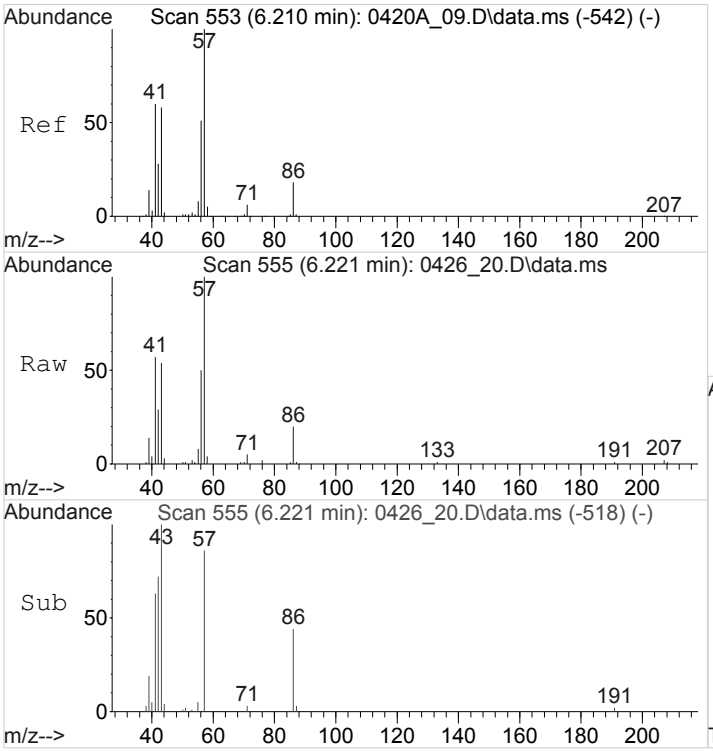


#19
Carbon Disulfide
Concen: 37.5432161 ppbv
RT: 5.684 min Scan# 460
Delta R.T. 0.011 min
Lab File: 0426_20.D
Acq: 26 Apr 2018 9:30 pm

Tgt Ion: 76 Resp: 2544482

Ion	Ratio	Lower	Upper
76	100		
44	8.9	7.4	11.2

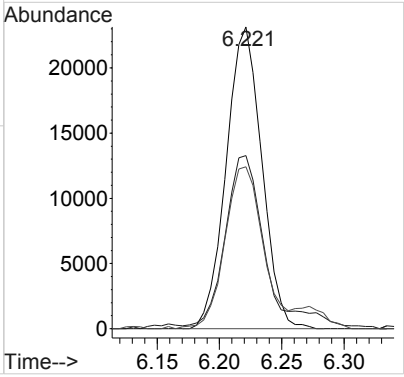


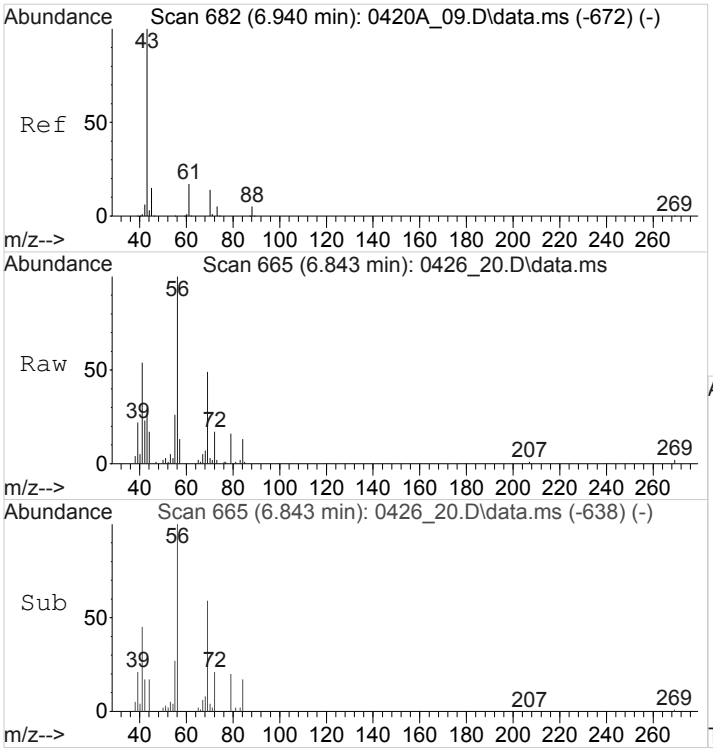


#25
n-Hexane
Concen: 0.9739223 ppbv
RT: 6.221 min Scan# 555
Delta R.T. 0.011 min
Lab File: 0426_20.D
Acq: 26 Apr 2018 9:30 pm

Tgt Ion: 57 Resp: 46096

Ion	Ratio	Lower	Upper
57	100		
41	65.4	47.6	71.4
43	57.2	46.1	69.1

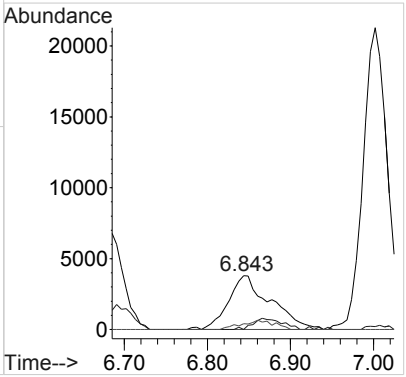


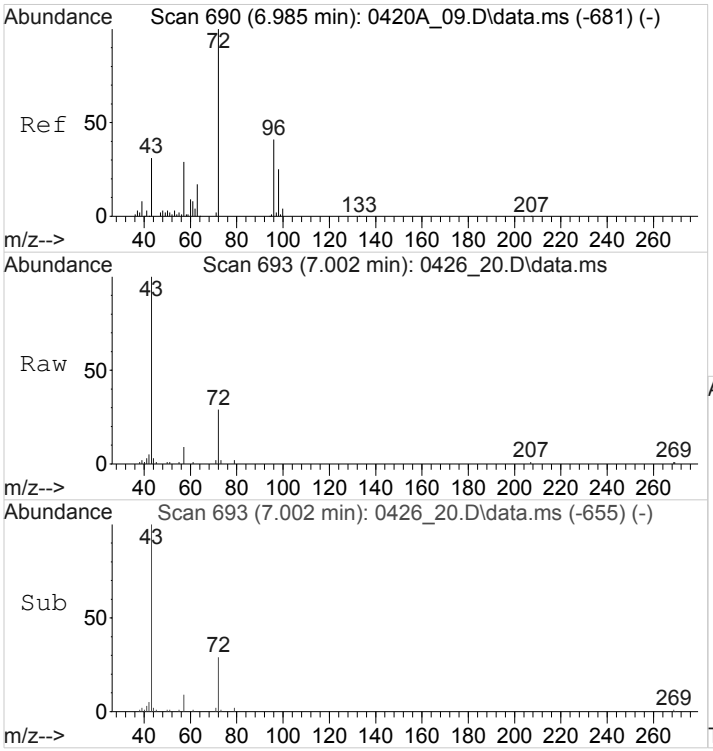


#28
ETHYL ACETATE
Concen: 0.2089838 ppbv
RT: 6.843 min Scan# 665
Delta R.T. -0.096 min
Lab File: 0426_20.D
Acq: 26 Apr 2018 9:30 pm

Tgt Ion: 43 Resp: 13381

Ion	Ratio	Lower	Upper
43	100		
45	14.3	12.0	18.0
70	13.4	10.5	15.7

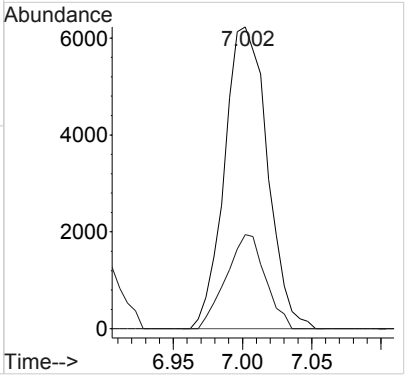


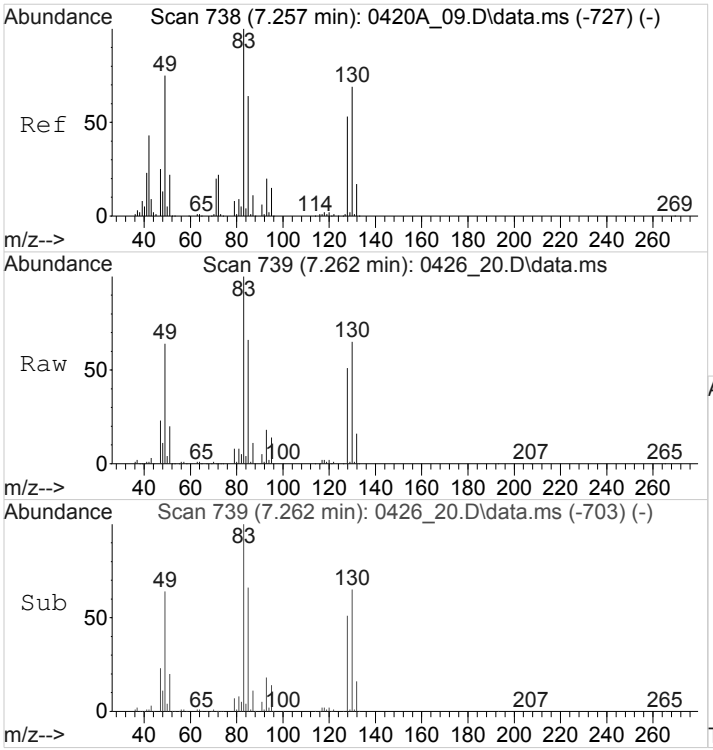


#29
2-Butanone (MEK)
Concen: 0.7035370 ppbv
RT: 7.002 min Scan# 693
Delta R.T. 0.017 min
Lab File: 0426_20.D
Acq: 26 Apr 2018 9:30 pm

Tgt Ion: 72 Resp: 13449

Ion	Ratio	Lower	Upper
72	100		
57	28.5	22.2	33.4

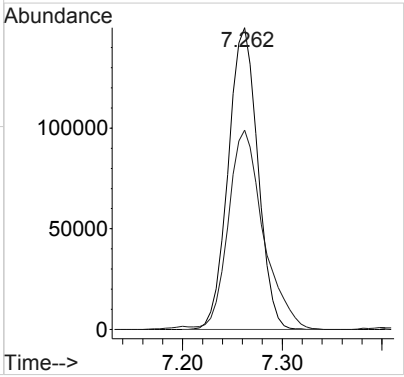


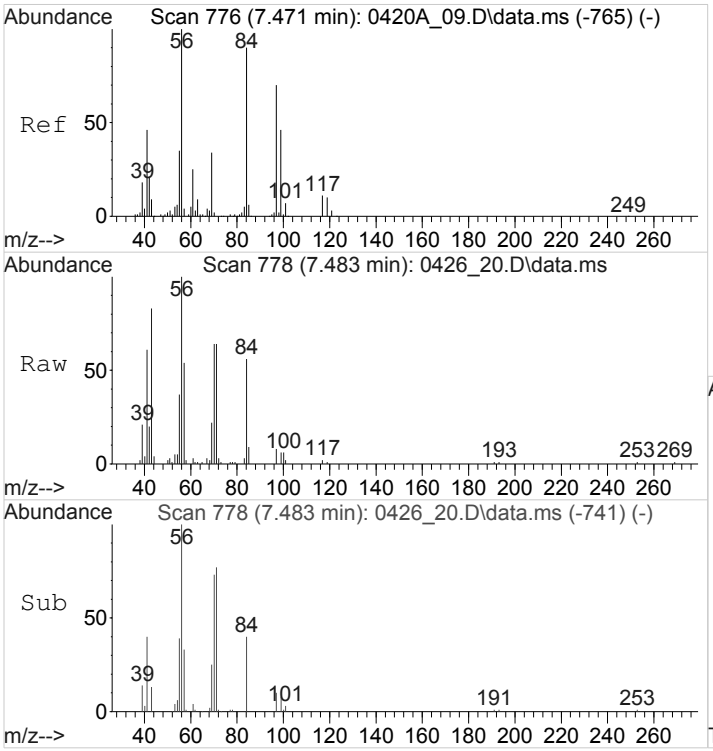


#32
Chloroform
Concen: 4.4890442 ppbv
RT: 7.262 min Scan# 739
Delta R.T. 0.006 min
Lab File: 0426_20.D
Acq: 26 Apr 2018 9:30 pm

Tgt Ion: 83 Resp: 308261

Ion	Ratio	Lower	Upper
83	100		
85	78.2	51.3	76.9#

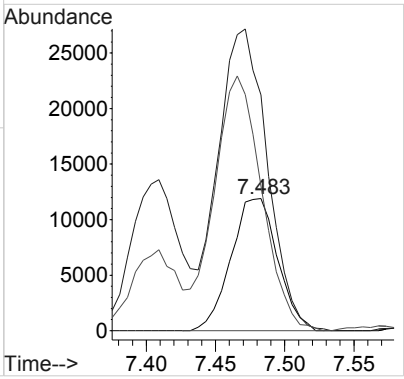


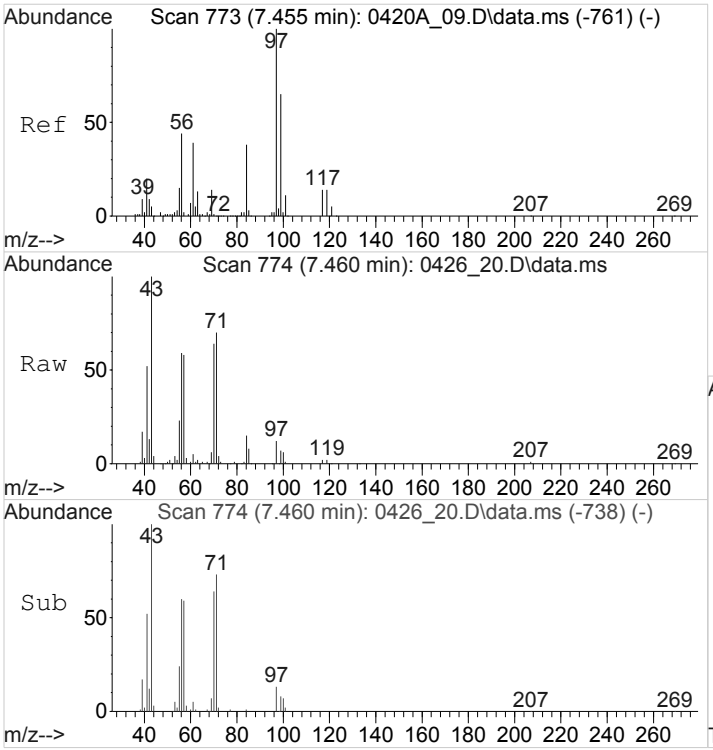


#33
Cyclohexane
Concen: 0.5706227 ppbv
RT: 7.483 min Scan# 778
Delta R.T. 0.011 min
Lab File: 0426_20.D
Acq: 26 Apr 2018 9:30 pm

Tgt Ion: 84 Resp: 27932

Ion	Ratio	Lower	Upper
84	100		
56	237.5	87.6	131.4#
41	198.2	40.2	60.2#

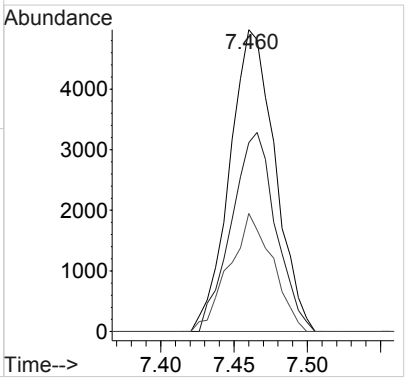


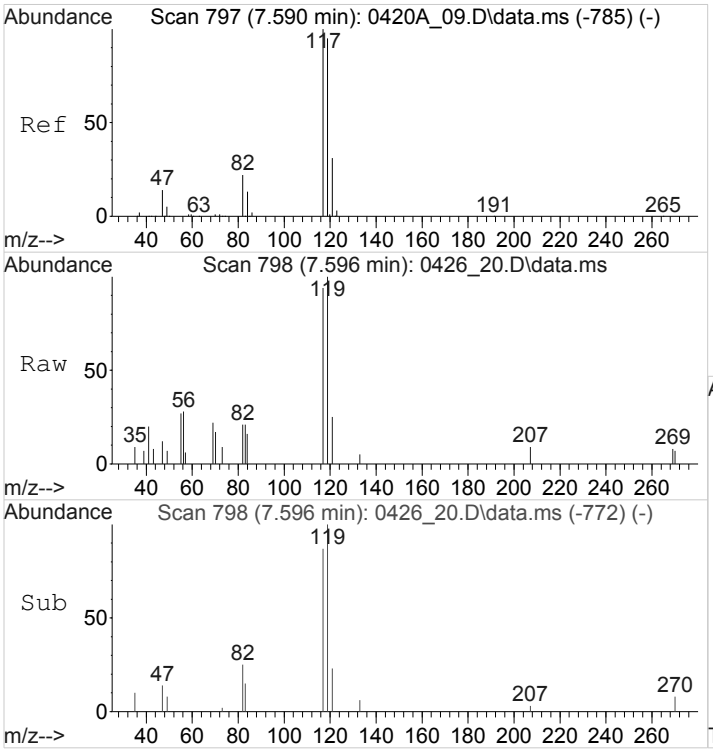


#34
1,1,1-Trichloroethane
Concen: 0.1562769 ppbv
RT: 7.460 min Scan# 774
Delta R.T. 0.006 min
Lab File: 0426_20.D
Acq: 26 Apr 2018 9:30 pm

Tgt Ion: 97 Resp: 10692

Ion	Ratio	Lower	Upper
97	100		
99	64.7	52.2	78.4
61	37.6	31.3	46.9

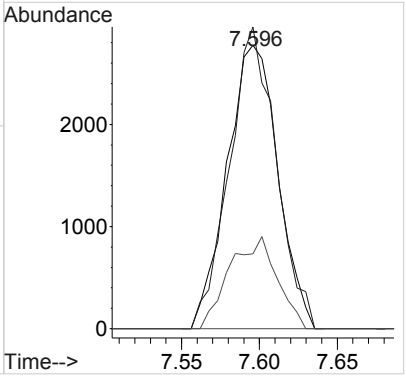


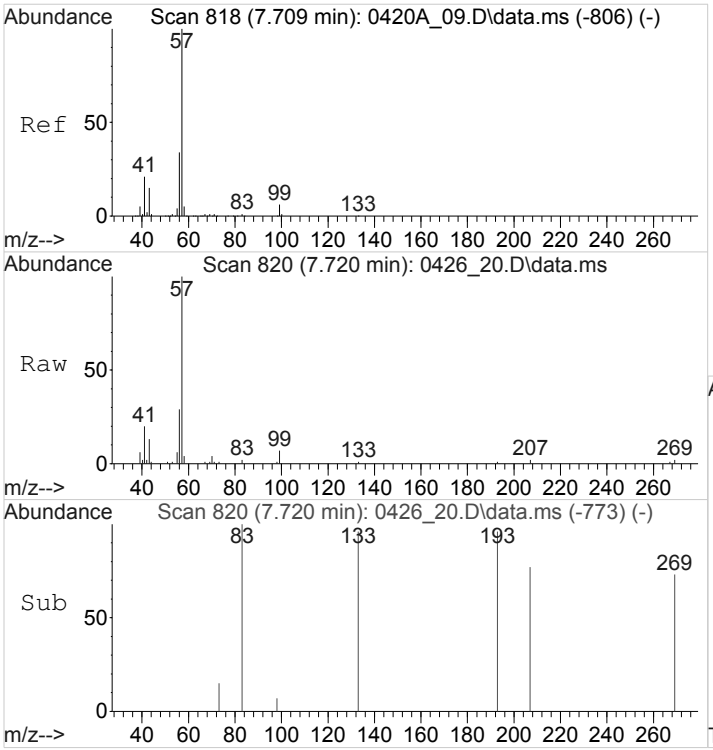


#35
Carbon Tetrachloride
Concen: 0.0880550 ppbv
RT: 7.596 min Scan# 798
Delta R.T. 0.006 min
Lab File: 0426_20.D
Acq: 26 Apr 2018 9:30 pm

Tgt Ion:117 Resp: 6272

Ion	Ratio	Lower	Upper
117	100		
119	98.3	77.1	115.7
121	30.4	24.8	37.2

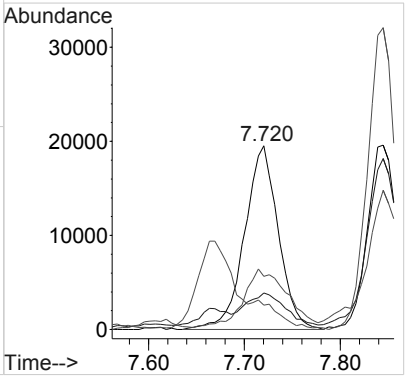


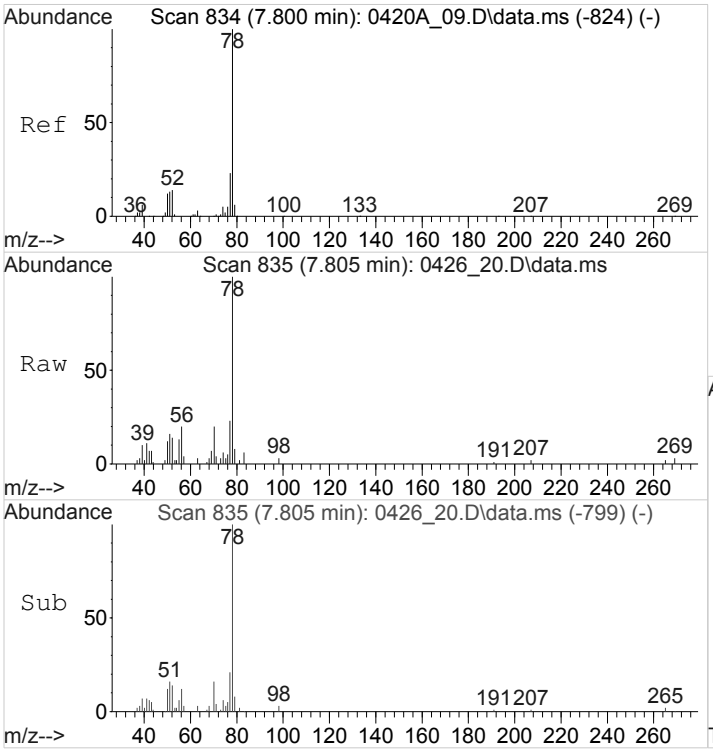


#36
2,2,4-Trimethylpentane
Concen: 0.2846339 ppbv
RT: 7.720 min Scan# 820
Delta R.T. 0.011 min
Lab File: 0426_20.D
Acq: 26 Apr 2018 9:30 pm

Tgt Ion: 57 Resp: 47651

Ion	Ratio	Lower	Upper
57	100		
41	20.9	16.6	25.0
43	0.0	12.4	18.6#
56	40.9	26.6	39.8#

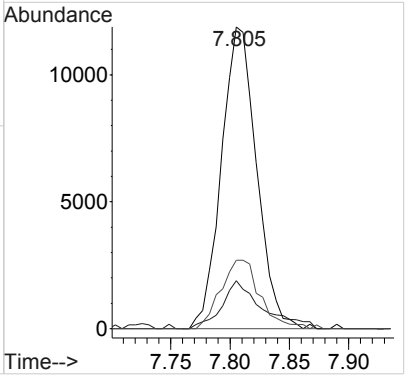


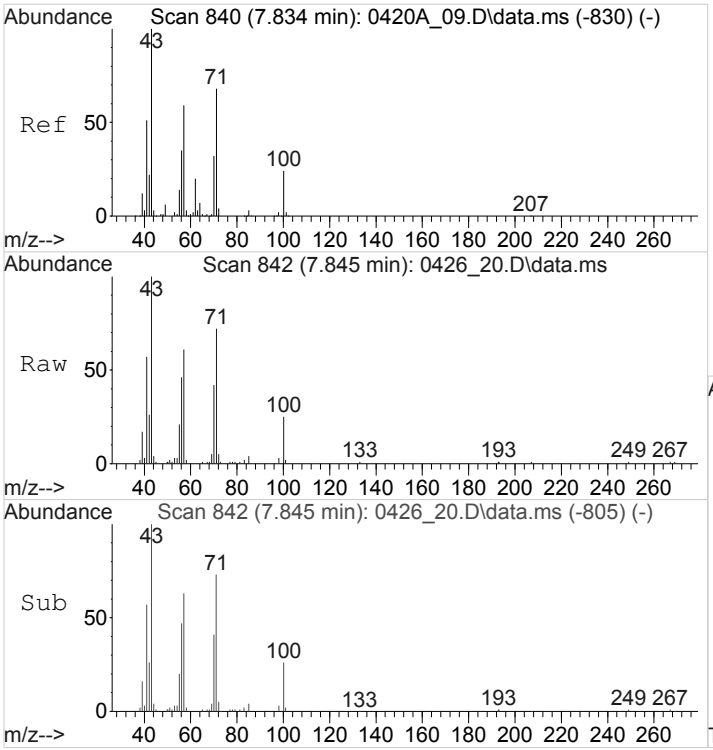


#38
Benzene
Concen: 0.2182725 ppbv
RT: 7.805 min Scan# 835
Delta R.T. 0.006 min
Lab File: 0426_20.D
Acq: 26 Apr 2018 9:30 pm

Tgt Ion: 78 Resp: 24654

Ion	Ratio	Lower	Upper
78	100		
51	18.3	11.3	16.9#
77	25.5	18.6	28.0

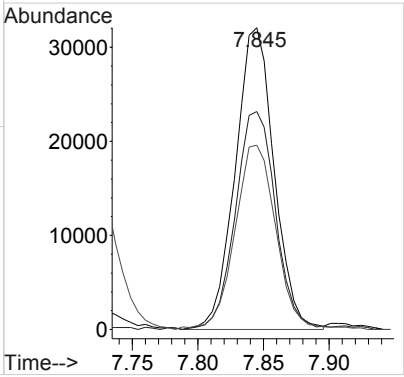


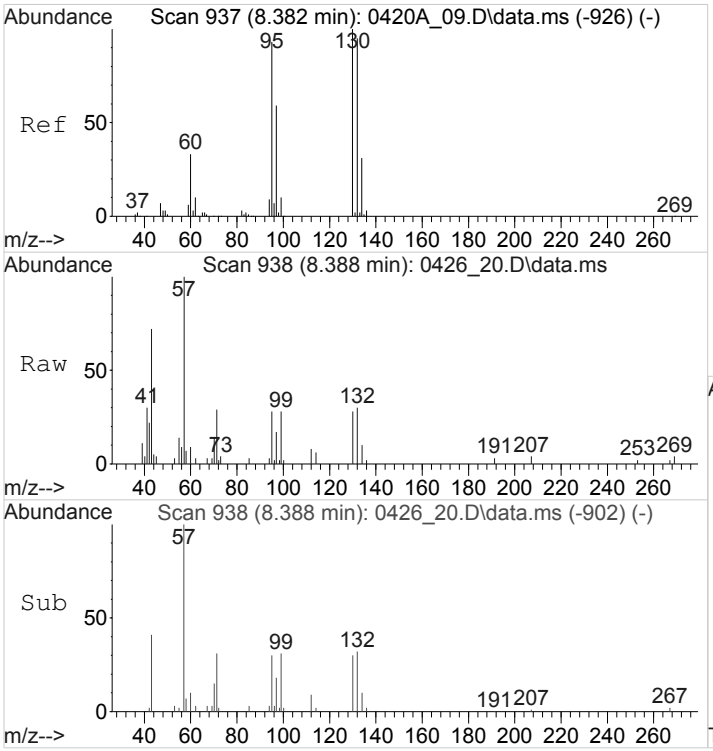


#40
Heptane
Concen: 1.1844793 ppbv
RT: 7.845 min Scan# 842
Delta R.T. 0.011 min
Lab File: 0426_20.D
Acq: 26 Apr 2018 9:30 pm

Tgt Ion: 43 Resp: 66075

Ion	Ratio	Lower	Upper
43	100		
71	74.6	56.1	84.1
57	64.6	47.1	70.7

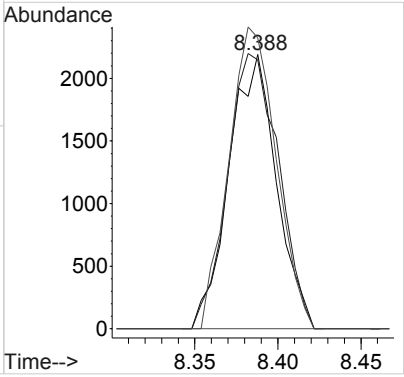


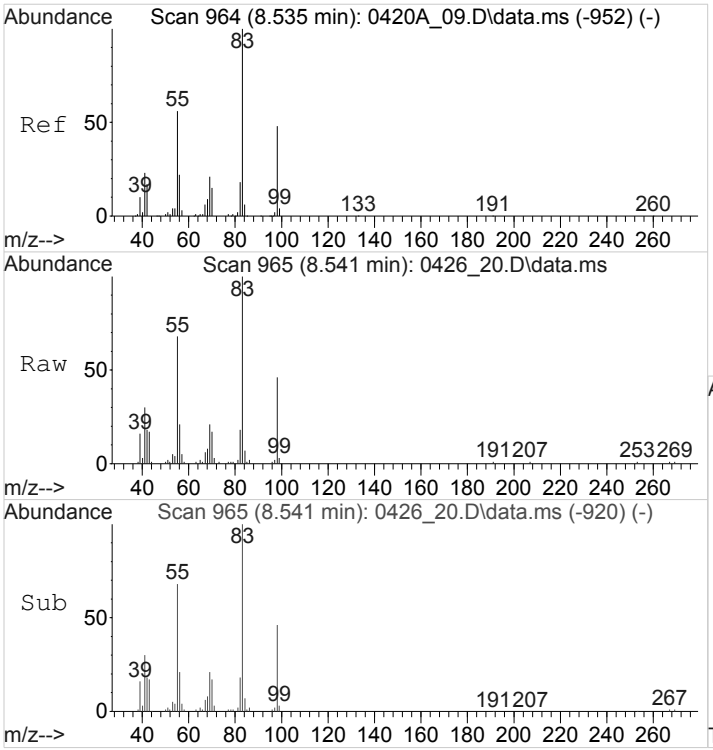


#41
Trichloroethene
Concen: 0.0885248 ppbv
RT: 8.388 min Scan# 938
Delta R.T. 0.006 min
Lab File: 0426_20.D
Acq: 26 Apr 2018 9:30 pm

Tgt Ion: 95 Resp: 4358

Ion	Ratio	Lower	Upper
95	100		
130	107.2	86.4	129.6
132	109.9	83.6	125.4

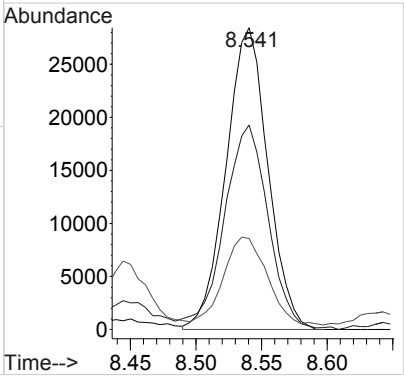


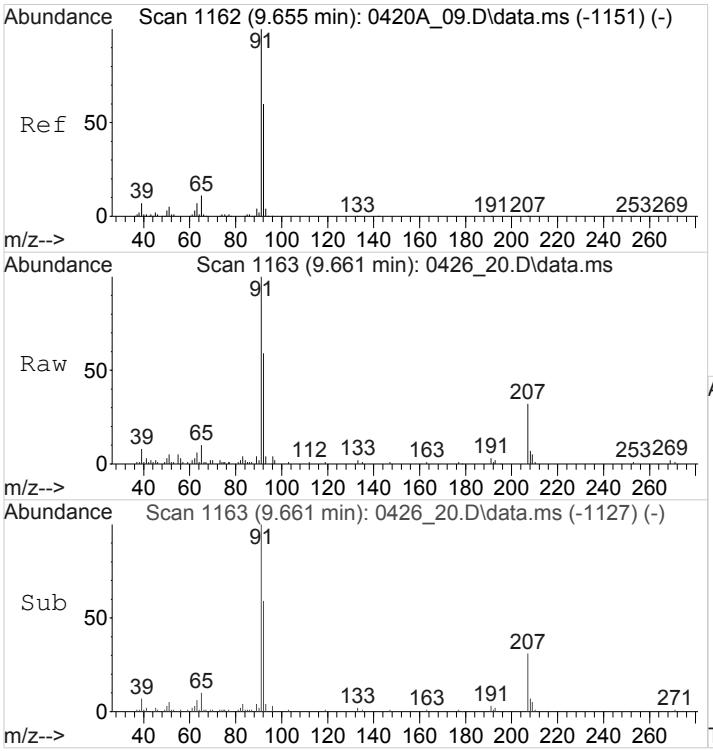


#43
METHYL CYCLOHEXANE
Concen: 0.9342072 ppbv
RT: 8.541 min Scan# 965
Delta R.T. 0.006 min
Lab File: 0426_20.D
Acq: 26 Apr 2018 9:30 pm

Tgt Ion: 83 Resp: 63210

Ion	Ratio	Lower	Upper
83	100		
55	71.4	58.5	87.7
41	33.8	25.8	38.6

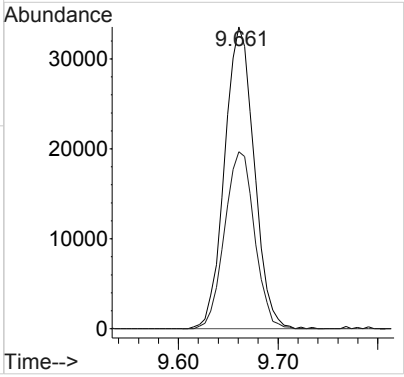


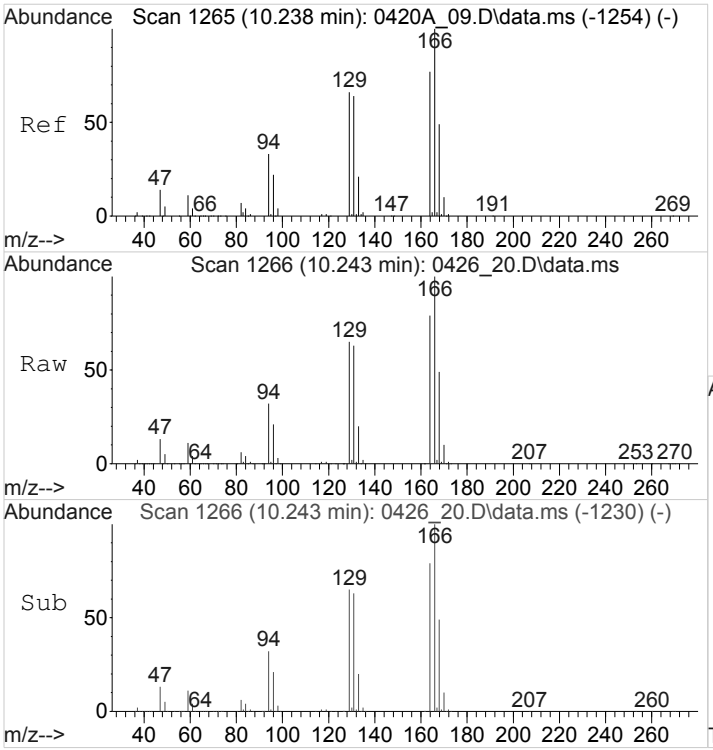


#50
Toluene
Concen: 0.4935562 ppbv
RT: 9.661 min Scan# 1163
Delta R.T. 0.006 min
Lab File: 0426_20.D
Acq: 26 Apr 2018 9:30 pm

Tgt Ion: 91 Resp: 69318

Ion	Ratio	Lower	Upper
91	100		
92	59.3	48.0	72.0

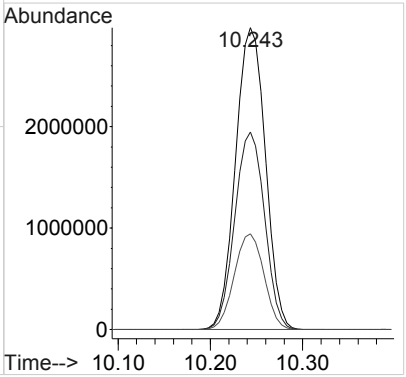


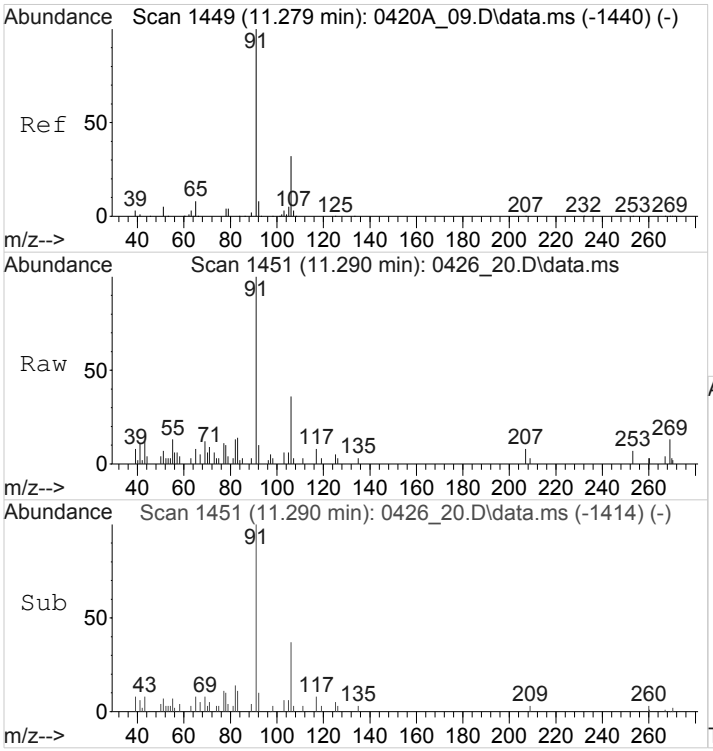


#53
Tetrachloroethene
Concen: 88.5233828 ppbv
RT: 10.243 min Scan# 1266
Delta R.T. 0.006 min
Lab File: 0426_20.D
Acq: 26 Apr 2018 9:30 pm

Tgt Ion:166 Resp: 6691755

Ion	Ratio	Lower	Upper
166	100		
129	65.3	53.7	80.5
94	31.6	27.2	40.8

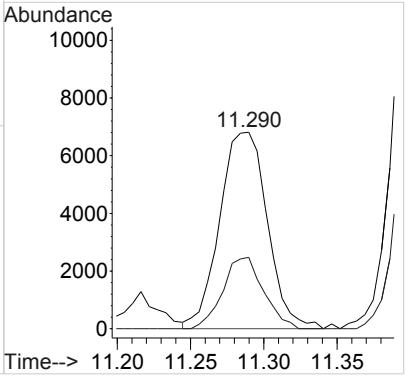


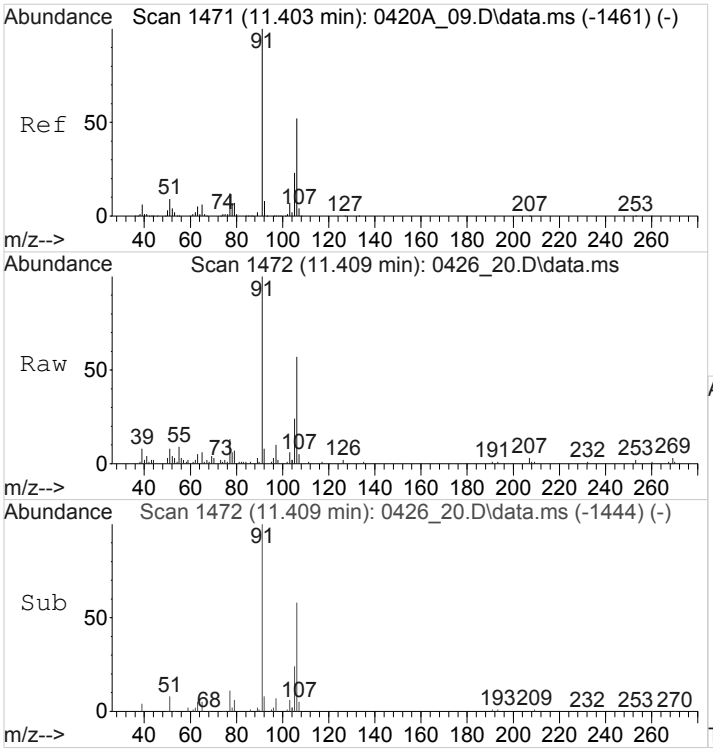


#59
Ethylbenzene
Concen: 0.0793900 ppbv
RT: 11.290 min Scan# 1451
Delta R.T. 0.011 min
Lab File: 0426_20.D
Acq: 26 Apr 2018 9:30 pm

Tgt Ion: 91 Resp: 15380

Ion	Ratio	Lower	Upper
91	100		
106	31.0	25.9	38.9

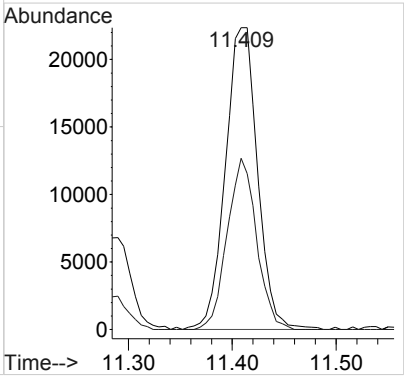


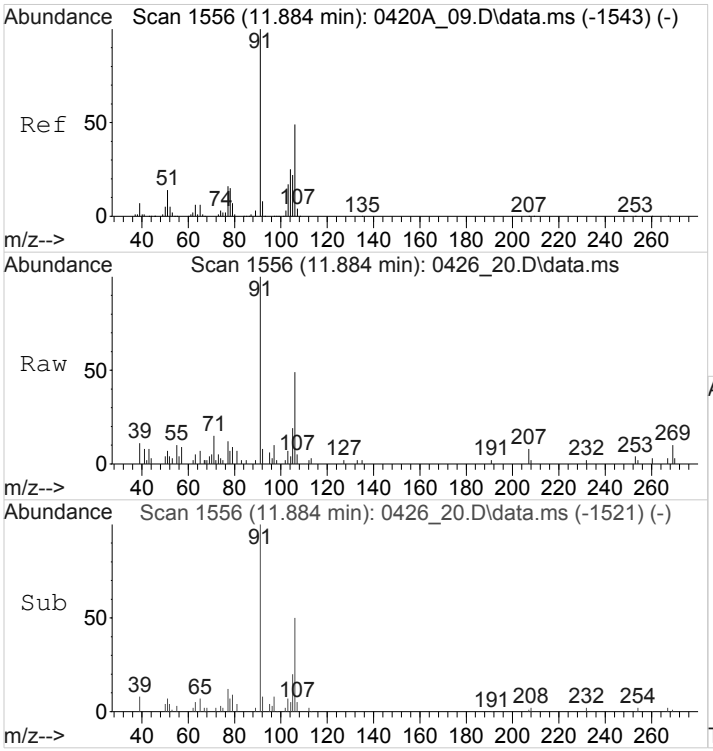


#60
M&P-Xylene
Concen: 0.3248107 ppbv
RT: 11.409 min Scan# 1472
Delta R.T. 0.006 min
Lab File: 0426_20.D
Acq: 26 Apr 2018 9:30 pm

Tgt Ion: 91 Resp: 48205

Ion	Ratio	Lower	Upper
91	100		
106	51.8	41.5	62.3

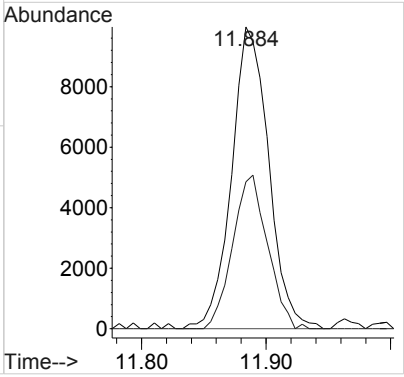


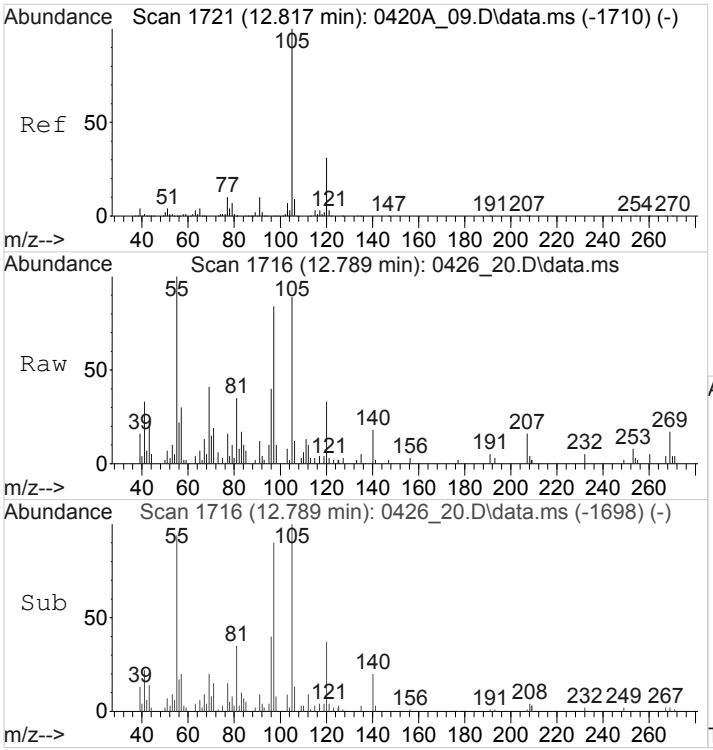


#61
O-Xylene
Concen: 0.1347678 ppbv
RT: 11.884 min Scan# 1556
Delta R.T. -0.000 min
Lab File: 0426_20.D
Acq: 26 Apr 2018 9:30 pm

Tgt Ion: 91 Resp: 20680

Ion	Ratio	Lower	Upper
91	100		
106	47.8	39.1	58.7

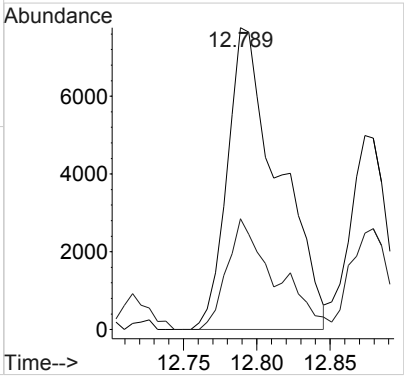


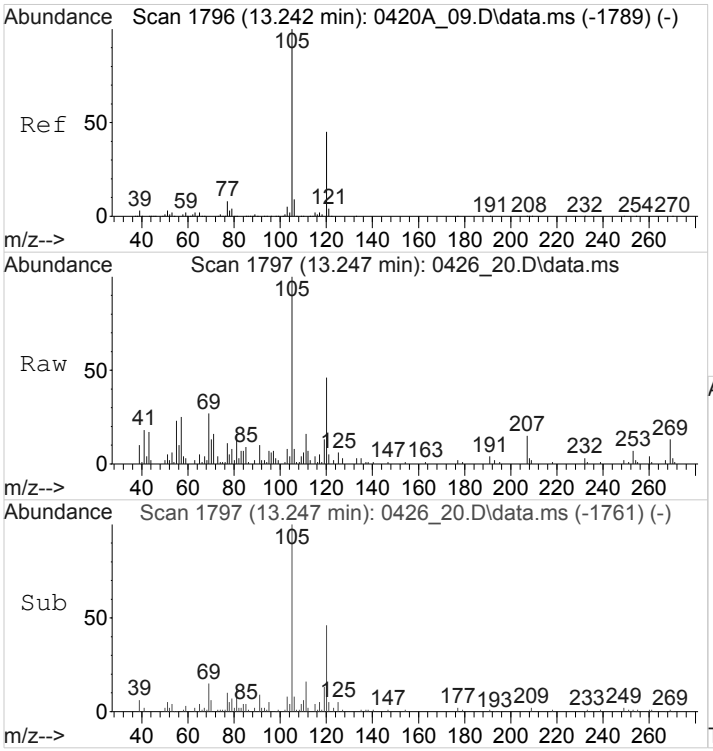


#67
4-Ethyltoluene
Concen: 0.0860291 ppbv
RT: 12.789 min Scan# 1716
Delta R.T. -0.028 min
Lab File: 0426_20.D
Acq: 26 Apr 2018 9:30 pm

Tgt Ion:105 Resp: 18896

Ion	Ratio	Lower	Upper
105	100		
120	34.6	24.8	37.2

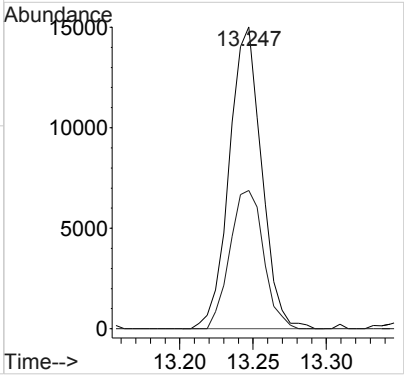


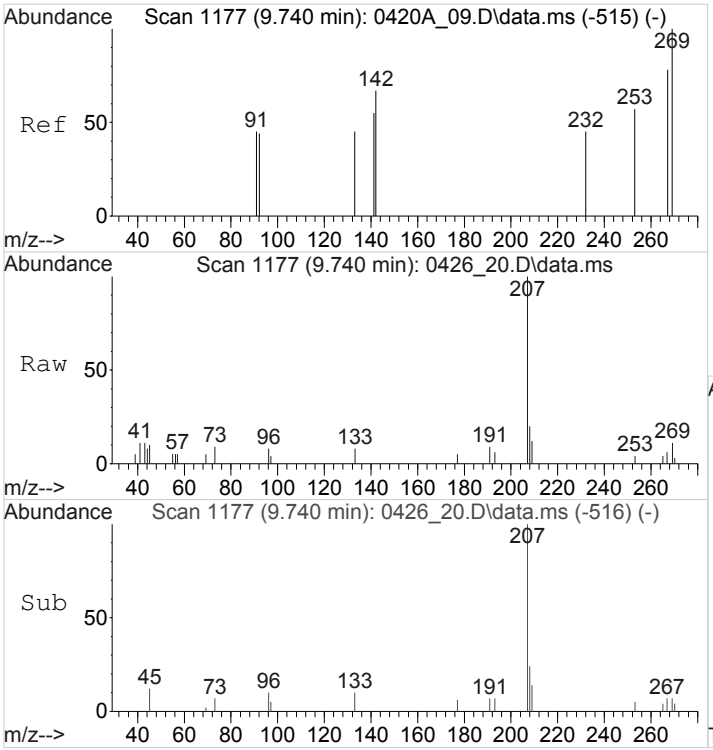


#72
1,2,4-Trimethylbenzene
Concen: 0.1311466 ppbv
RT: 13.247 min Scan# 1797
Delta R.T. 0.006 min
Lab File: 0426_20.D
Acq: 26 Apr 2018 9:30 pm

Tgt Ion:105 Resp: 22972

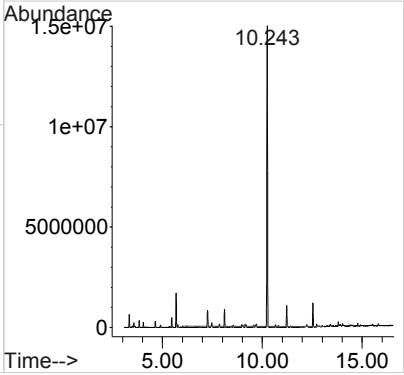
Ion	Ratio	Lower	Upper
105	100		
120	47.7	38.8	58.2





#84
TPH (GC/MS) Low Fraction
Concen: 152.4199067 ppbv m
RT: 9.740 min Scan# 1177
Delta R.T. 0.000 min
Lab File: 0426_20.D
Acq: 26 Apr 2018 9:30 pm

Tgt Ion:TIC Resp:42148360



1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS-10

ESC Sample ID:	L988471-10	**SDG:**	L988471
Client Sample ID:	SS-10	**Collected Date/Time:**	04/23/18 11:32
Lab File ID:	0427_11	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS2	**Preparation Date/Time:**	04/27/18 16:32
Analytical Batch:	WG1103956	**Analysis Date/Time:**	04/27/18 16:32
Dilution Factor:	20	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	20 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	**CAS**	**RT**	**Result**	**Qualifier**	**MDL**	**RDL**
			ppbv		*ppbv*	*ppbv*
Acetone	67-64-1	6.53	88.9		1.14	25.0

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_11.D
Acq On : 27 Apr 2018 4:32 pm
Operator : 564
Sample : L988471-10 20x WG1103956
Misc :
ALS Vial : 11 Sample Multiplier: 20
InstName : AIRMS2

Quant Time: Apr 28 07:50:32 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:08:22 2018
Response via : Initial Calibration

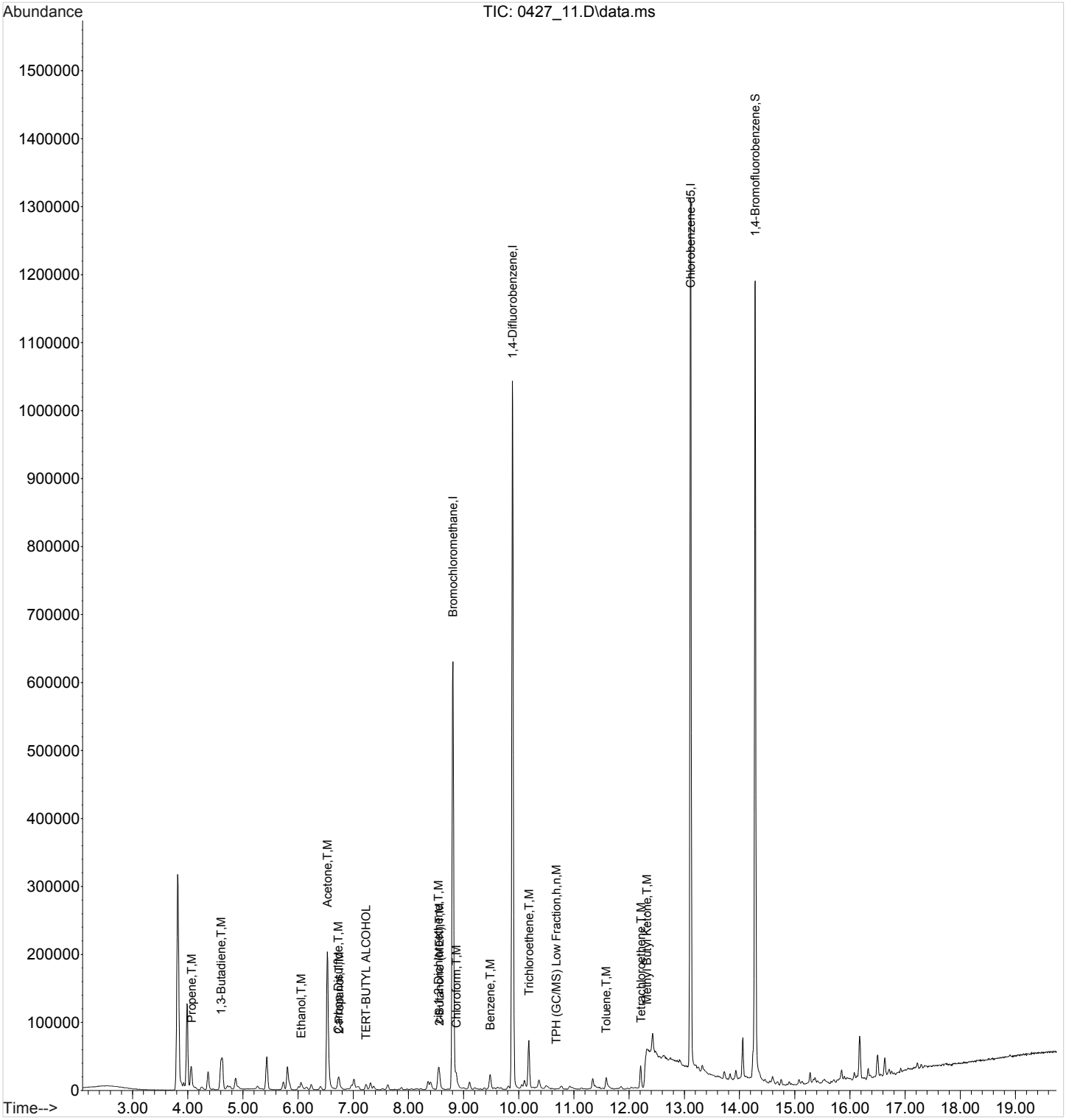
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.807	130	1762606	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	9.889	114	7463111	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	13.115	117	6483838	4.0000000	ppbv	# 0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	14.285	95	3752438	3.6628283	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 91.57%			
Target Compounds						Qvalue
2) Propene	4.066	41	210953	8.9141991	ppbv	97
9) 1,3-Butadiene	4.604	39	212149	8.9545653	ppbv #	12
14) Ethanol	6.053	45	165202	22.2711576	ppbv	96
17) Acetone	6.534	43	3151906	88.9141061	ppbv	100
18) 2-Propanol	6.745	45	232683	4.8667605	ppbv #	59
19) Carbon Disulfide	6.725	76	108243	3.1001325	ppbv	95
20) Allyl Chloride	7.017	41	44920	1.1584951	ppbv #	54
22) TERT-BUTYL ALCOHOL	7.232	59	106416	1.9854956	ppbv #	51
29) 2-Butanone (MEK)	8.563	72	53494	5.1901687	ppbv	94
30) cis-1,2-Dichloroethene	8.542	61	181702	4.8681956	ppbv #	81
32) Chloroform	8.868	83	127445	3.4265087	ppbv	99
36) 2,2,4-Trimethylpentane	9.485	57	112953	0.8621807	ppbv #	91
38) Benzene	9.479	78	75920	1.2109612	ppbv #	56
40) Heptane	9.814	43	61580	1.0176802	ppbv #	34
41) Trichloroethene	10.184	95	244920	10.7366357	ppbv	98
43) METHYL CYCLOHEXANE	10.360	83	43054	1.1740706	ppbv #	86
49) 4-Methyl-2-Pentanone (...	11.386	43	35868	0.4564970	ppbv #	51
50) Toluene	11.588	91	115527	1.7078909	ppbv	100
53) Tetrachloroethene	12.211	166	101652	3.9741350	ppbv	96
54) Methyl Butyl Ketone	12.324	43	263488	3.8606710	ppbv #	55
59) Ethylbenzene	13.328	91	47607	0.4863519	ppbv #	56
60) M&P-Xylene	13.328	91	52118	0.6913844	ppbv	100
72) 1,2,4-Trimethylbenzene	15.083	105	38844	0.4805733	ppbv	97
73) sec-Butylbenzene	15.082	105	38720	0.3162578	ppbv #	61
84) TPH (GC/MS) Low Fraction	10.675	TIC	30909952m	154.1034253	ppbv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

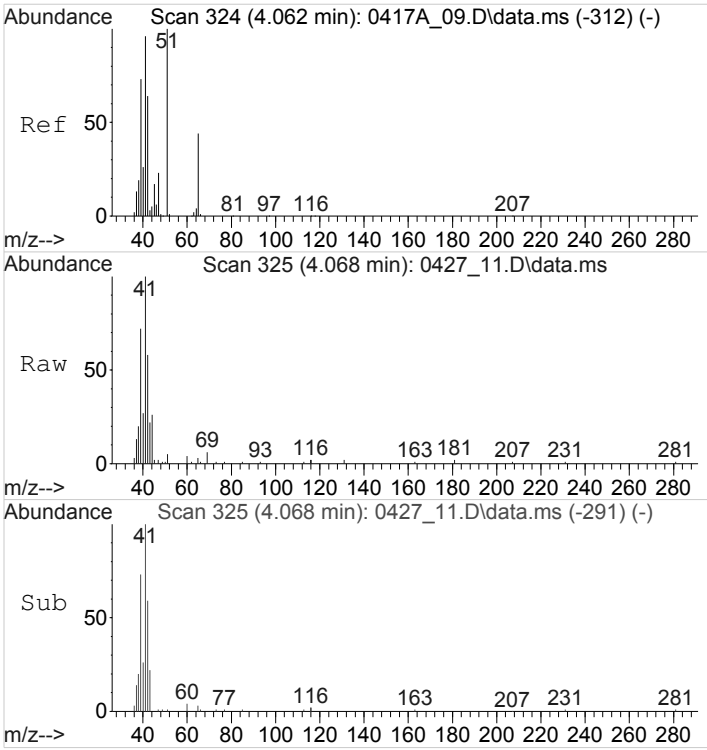
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_11.D
Acq On : 27 Apr 2018 4:32 pm
Operator : 564
Sample : L988471-10 20x WG1103956
Misc :
ALS Vial : 11 Sample Multiplier: 20
InstName : AIRMS2

Quant Time: Apr 28 07:50:32 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:08:22 2018
Response via : Initial Calibration



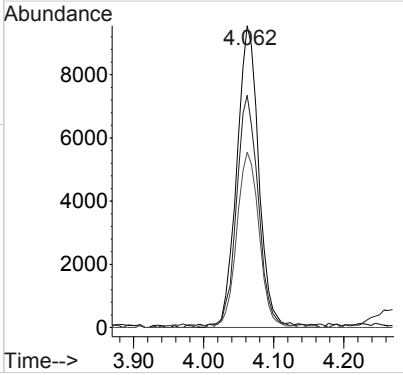
ACCOUNT:	PROJECT:	SDG:	DATE/TIME:	PAGE:
S&ME Inc. - Knoxville	4143-17-016	L988471	05/16/18 11:18	331 of 698

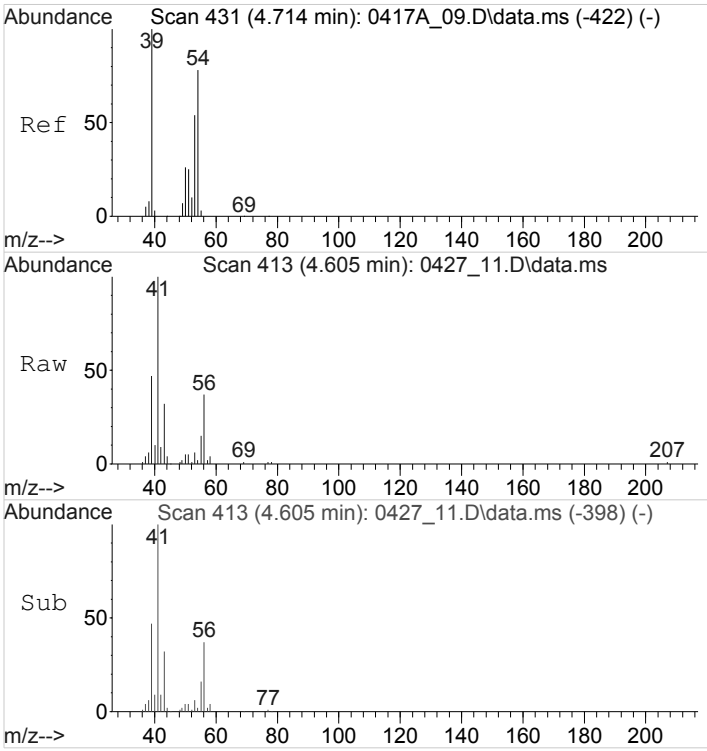


#2
Propene
Concen: 8.9141991 ppbv
RT: 4.066 min Scan# 325
Delta R.T. 0.003 min
Lab File: 0427_11.D
Acq: 27 Apr 2018 4:32 pm

Tgt Ion: 41 Resp: 210953

Ion	Ratio	Lower	Upper
41	100		
39	72.9	57.8	86.8
42	58.3	50.5	75.7

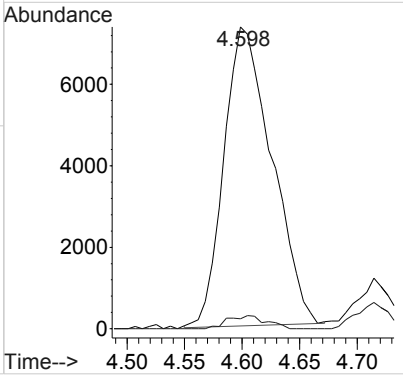


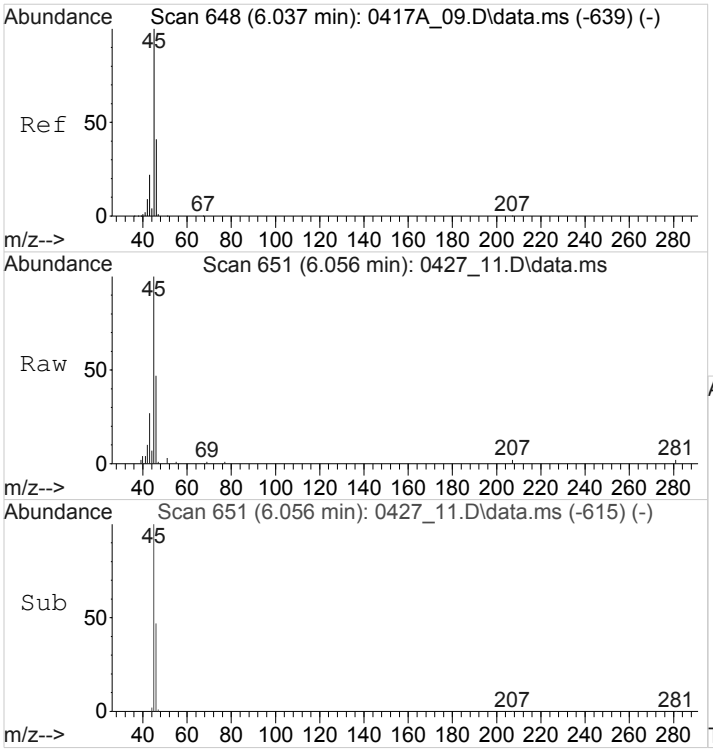


#9
1,3-Butadiene
Concen: 8.9545653 ppbv
RT: 4.604 min Scan# 413
Delta R.T. -0.109 min
Lab File: 0427_11.D
Acq: 27 Apr 2018 4:32 pm

Tgt Ion: 39 Resp: 212149

Ion	Ratio	Lower	Upper
39	100		
54	0.0	60.6	91.0#

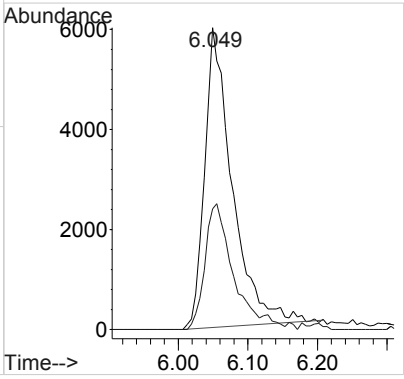


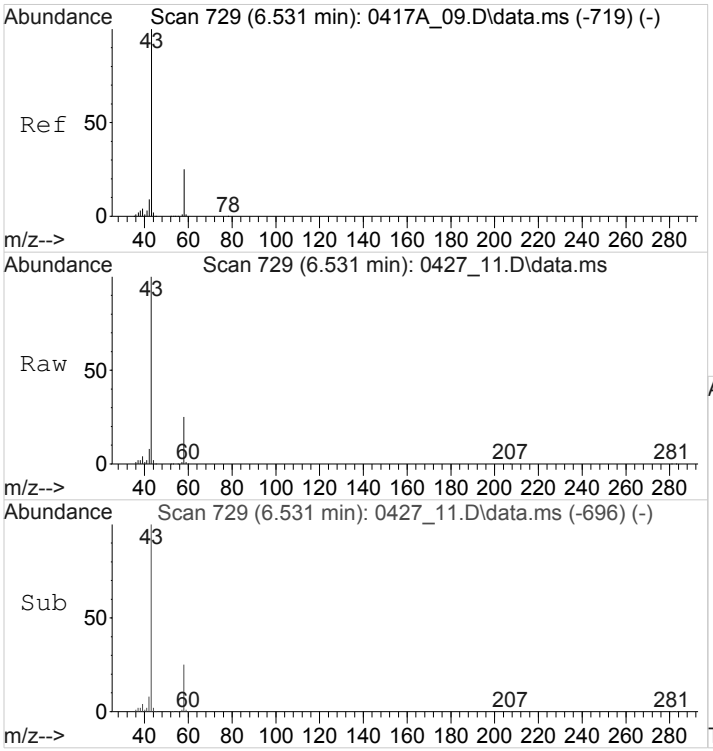


#14
Ethanol
Concen: 22.2711576 ppbv
RT: 6.053 min Scan# 651
Delta R.T. 0.015 min
Lab File: 0427_11.D
Acq: 27 Apr 2018 4:32 pm

Tgt Ion: 45 Resp: 165202

Ion	Ratio	Lower	Upper
45	100		
46	42.1	31.5	47.3

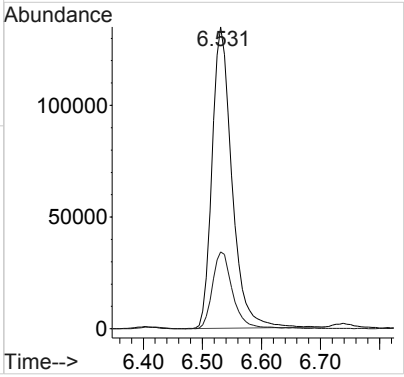


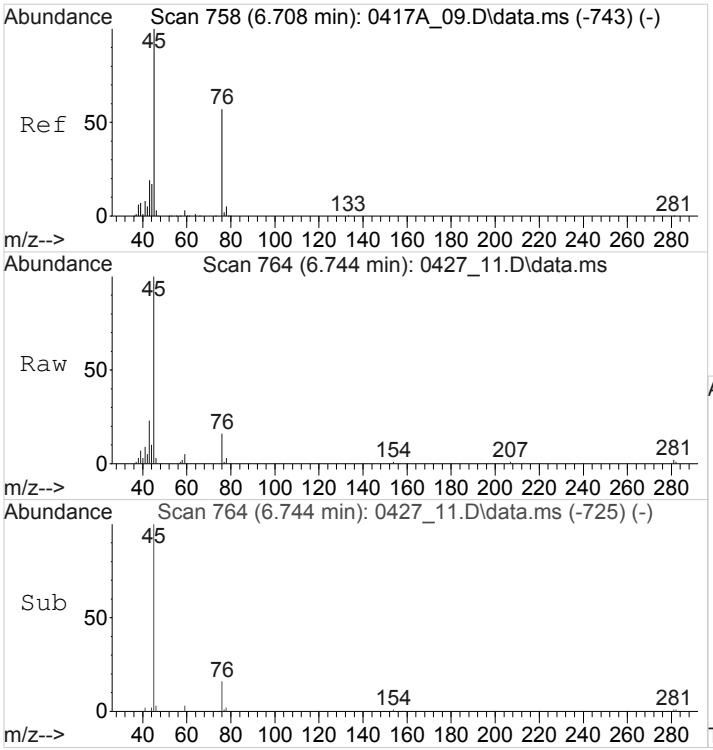


#17
Acetone
Concen: 88.9141061 ppbv
RT: 6.534 min Scan# 729
Delta R.T. 0.004 min
Lab File: 0427_11.D
Acq: 27 Apr 2018 4:32 pm

Tgt Ion: 43 Resp: 3151906

Ion	Ratio	Lower	Upper
43	100		
58	25.6	20.6	30.8

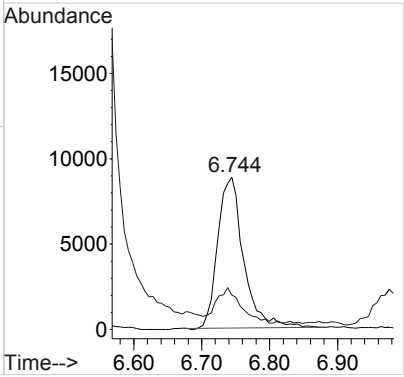


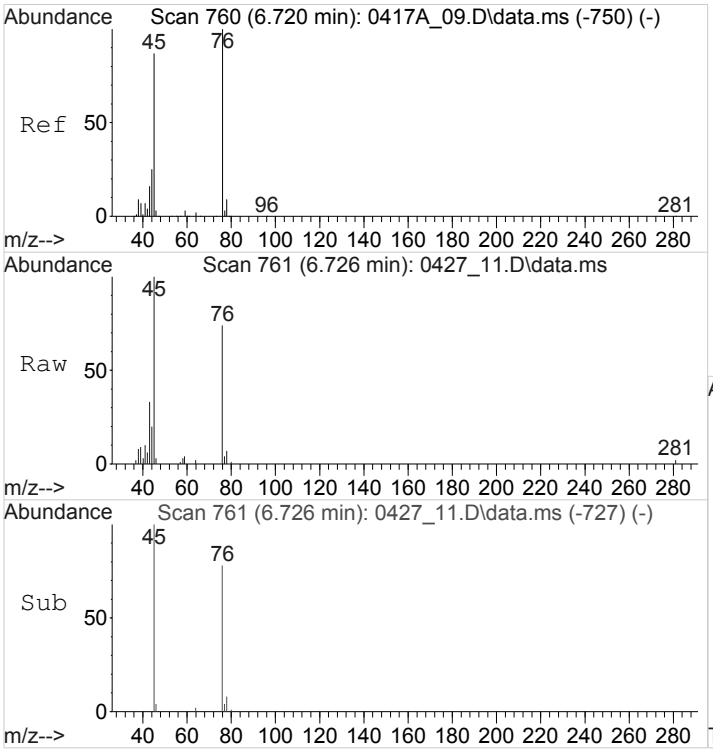


#18
2-Propanol
Concen: 4.8667605 ppbv
RT: 6.745 min Scan# 764
Delta R.T. 0.037 min
Lab File: 0427_11.D
Acq: 27 Apr 2018 4:32 pm

Tgt Ion: 45 Resp: 232683

Ion	Ratio	Lower	Upper
45	100		
43	0.0	14.4	21.6#

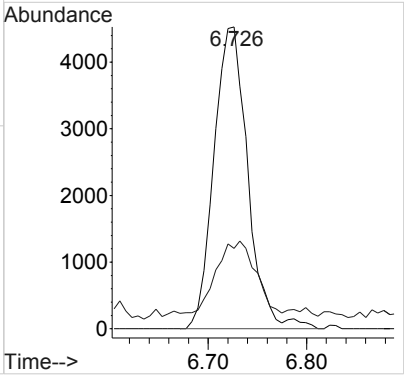


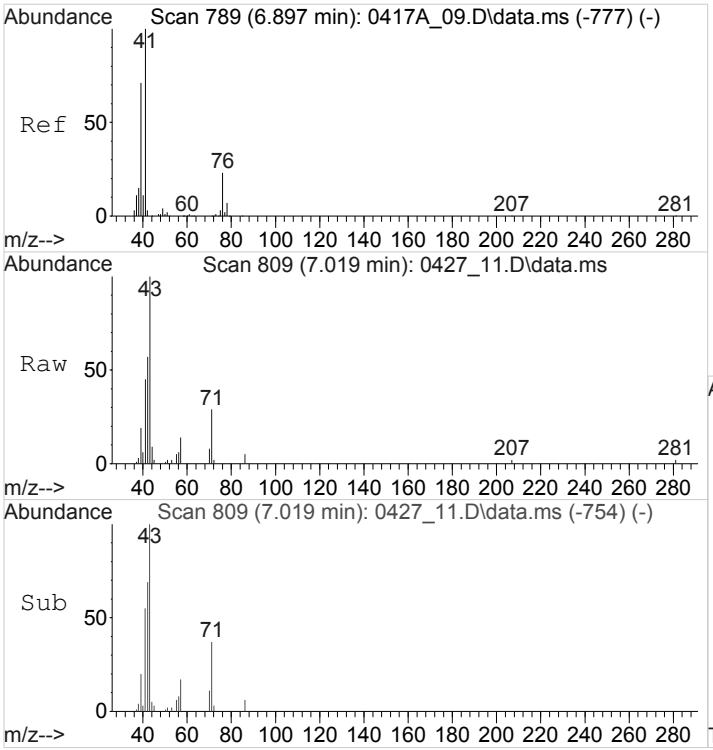


#19
Carbon Disulfide
Concen: 3.1001325 ppbv
RT: 6.725 min Scan# 761
Delta R.T. 0.004 min
Lab File: 0427_11.D
Acq: 27 Apr 2018 4:32 pm

Tgt Ion: 76 Resp: 108243

Ion	Ratio	Lower	Upper
76	100		
44	30.1	21.9	32.9

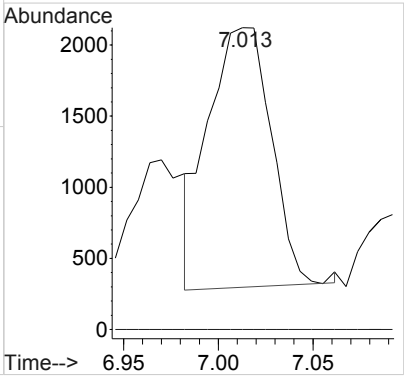


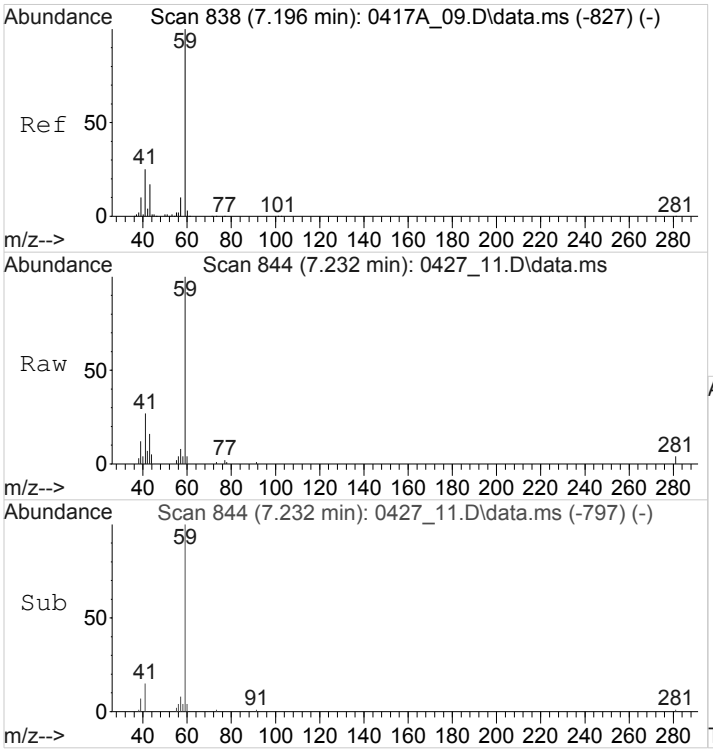


#20
Allyl Chloride
Concen: 1.1584951 ppbv
RT: 7.017 min Scan# 809
Delta R.T. 0.123 min
Lab File: 0427_11.D
Acq: 27 Apr 2018 4:32 pm

Tgt Ion: 41 Resp: 44920

Ion	Ratio	Lower	Upper
41	100		
76	0.0	17.4	26.2#

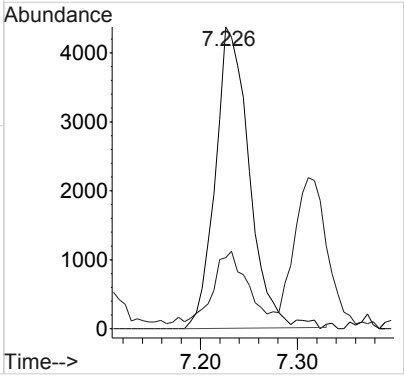


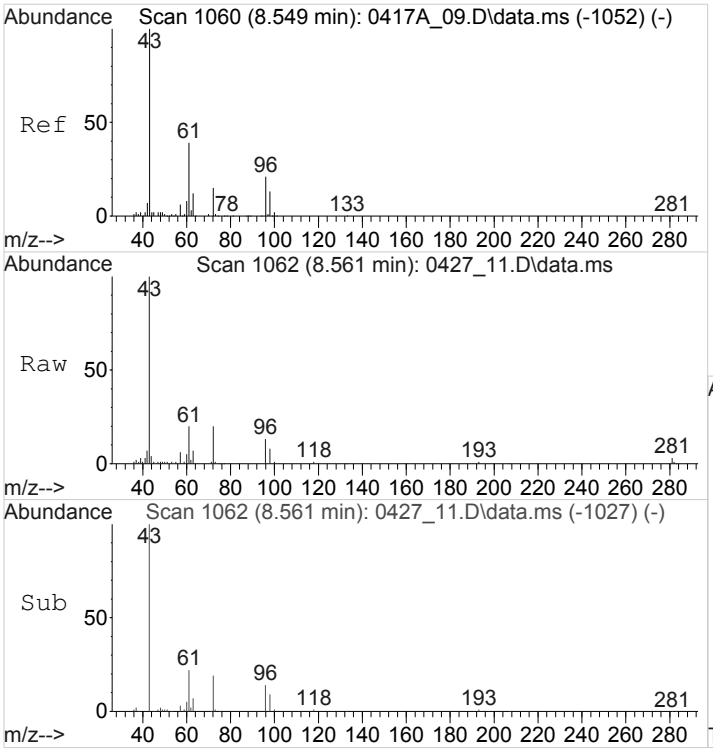


#22
TERT-BUTYL ALCOHOL
Concen: 1.9854956 ppbv
RT: 7.232 min Scan# 844
Delta R.T. 0.037 min
Lab File: 0427_11.D
Acq: 27 Apr 2018 4:32 pm

Tgt Ion: 59 Resp: 106416

Ion	Ratio	Lower	Upper
59	100		
41	49.1	19.8	29.6#

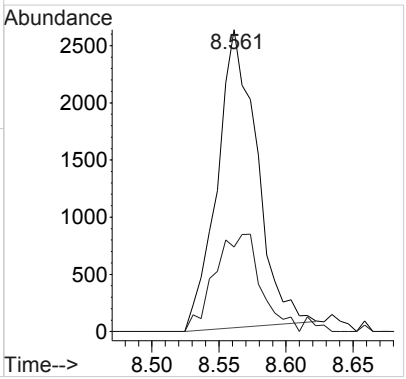


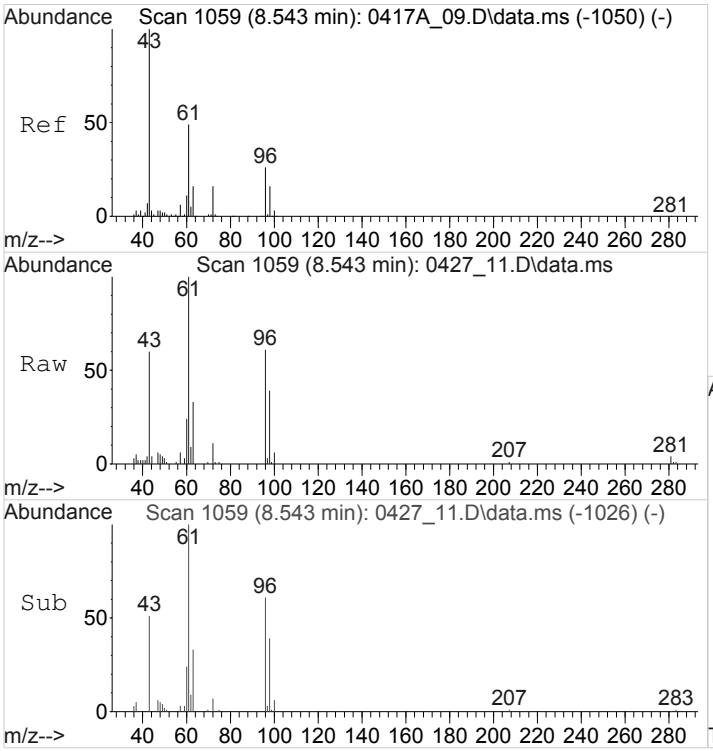


#29
2-Butanone (MEK)
Concen: 5.1901687 ppbv
RT: 8.563 min Scan# 1062
Delta R.T. 0.015 min
Lab File: 0427_11.D
Acq: 27 Apr 2018 4:32 pm

Tgt Ion: 72 Resp: 53494

Ion	Ratio	Lower	Upper
72	100		
57	39.7	29.0	43.4

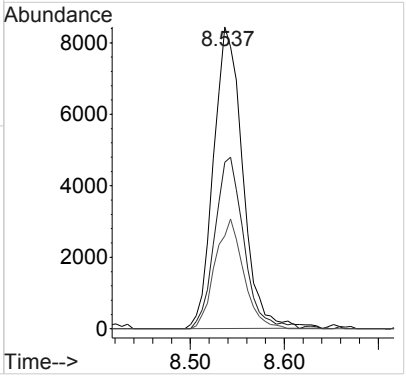


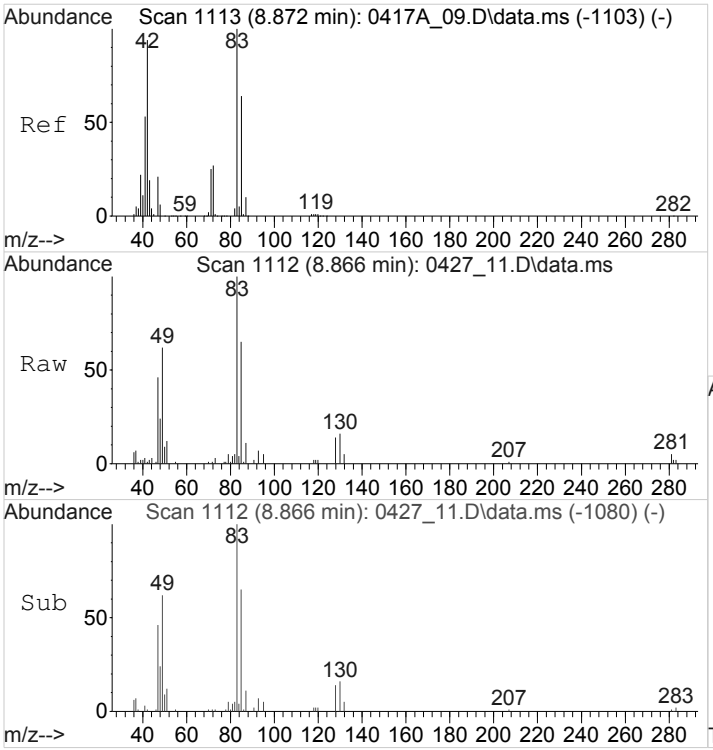


#30
cis-1,2-Dichloroethene
Concen: 4.8681956 ppbv
RT: 8.542 min Scan# 1059
Delta R.T. -0.001 min
Lab File: 0427_11.D
Acq: 27 Apr 2018 4:32 pm

Tgt Ion: 61 Resp: 181702

Ion	Ratio	Lower	Upper
61	100		
96	56.9	34.9	52.3#
98	35.5	21.8	32.6#

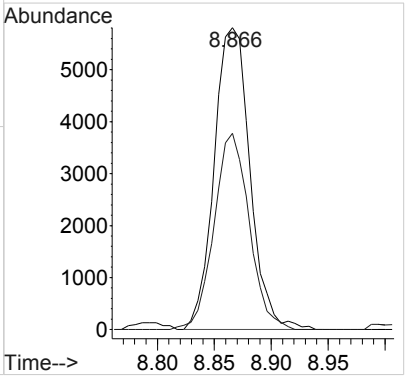


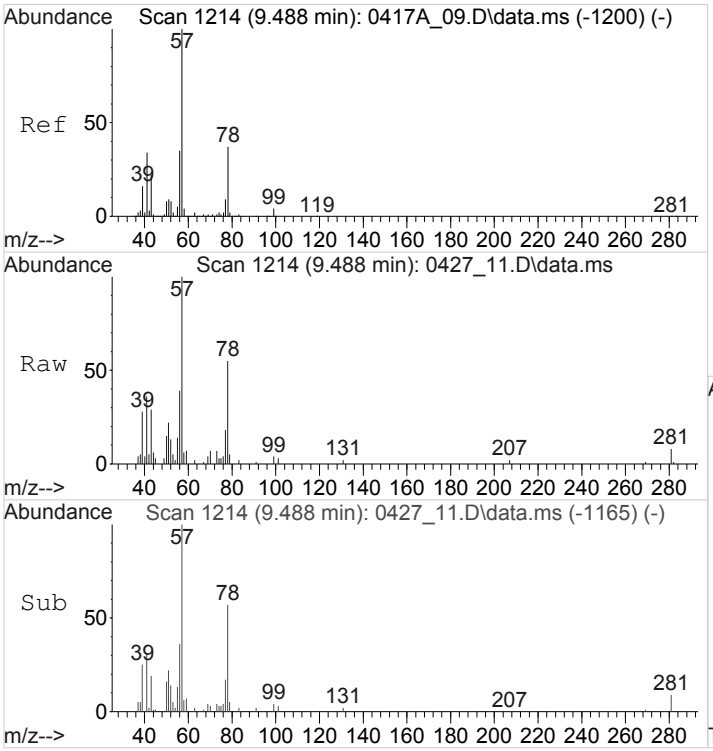


#32
Chloroform
Concen: 3.4265087 ppbv
RT: 8.868 min Scan# 1112
Delta R.T. -0.001 min
Lab File: 0427_11.D
Acq: 27 Apr 2018 4:32 pm

Tgt Ion: 83 Resp: 127445

Ion	Ratio	Lower	Upper
83	100		
85	63.7	50.4	75.6

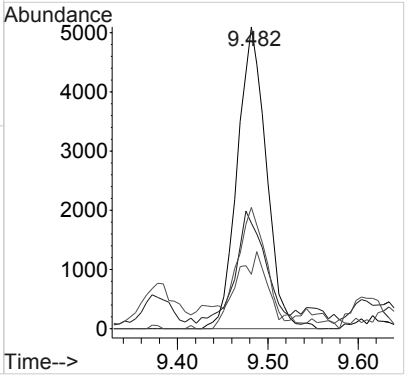


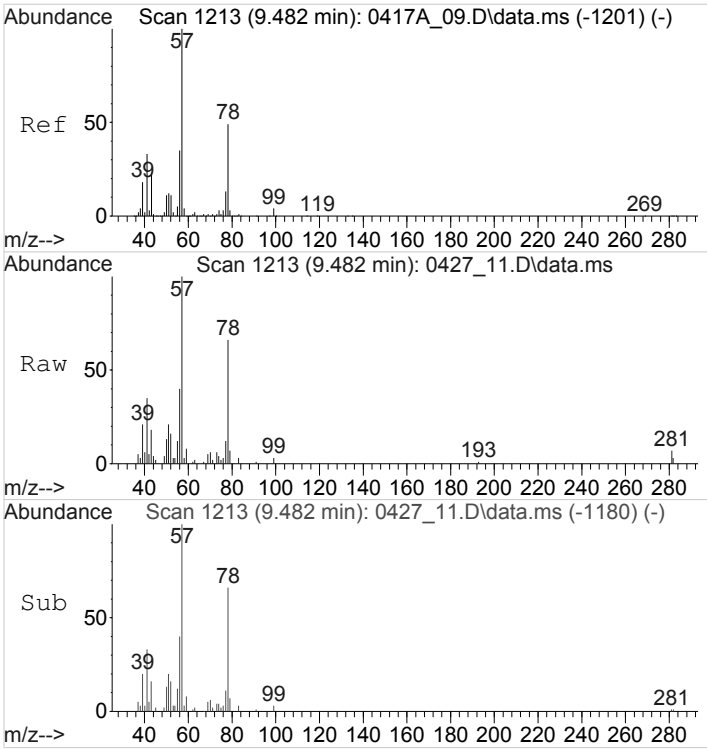


#36
2,2,4-Trimethylpentane
Concen: 0.8621807 ppbv
RT: 9.485 min Scan# 1214
Delta R.T. -0.003 min
Lab File: 0427_11.D
Acq: 27 Apr 2018 4:32 pm

Tgt Ion: 57 Resp: 112953

Ion	Ratio	Lower	Upper
57	100		
41	38.9	26.6	40.0
43	28.9	18.1	27.1#
56	37.1	27.7	41.5

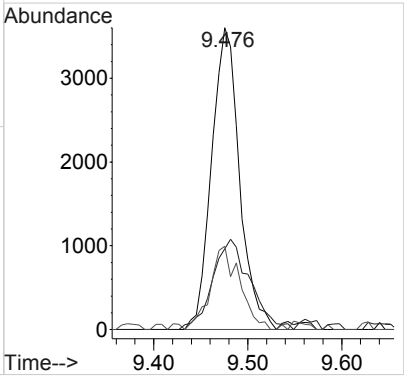


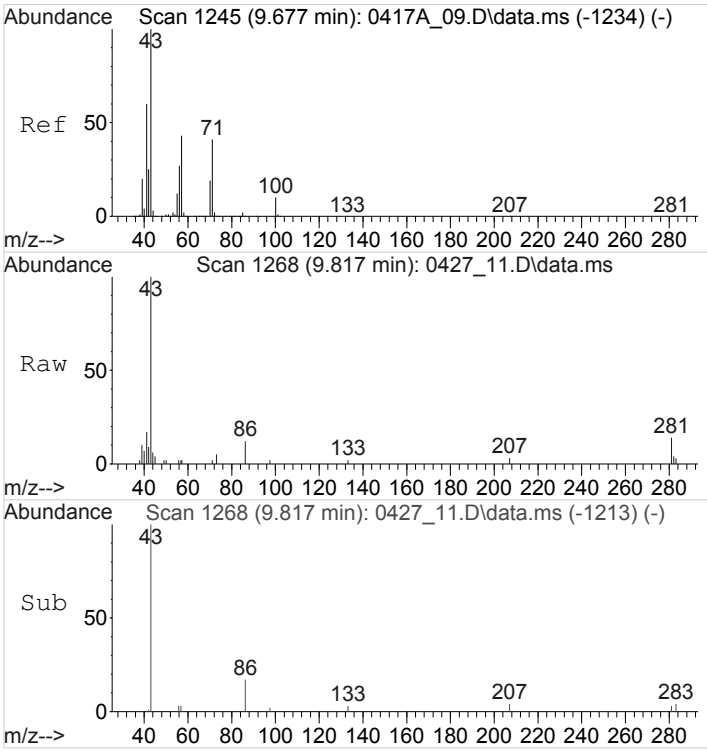


#38
Benzene
Concen: 1.2109612 ppbv
RT: 9.479 min Scan# 1213
Delta R.T. 0.001 min
Lab File: 0427_11.D
Acq: 27 Apr 2018 4:32 pm

Tgt Ion: 78 Resp: 75920

Ion	Ratio	Lower	Upper
78	100		
51	38.3	16.6	24.8#
77	0.0	19.9	29.9#

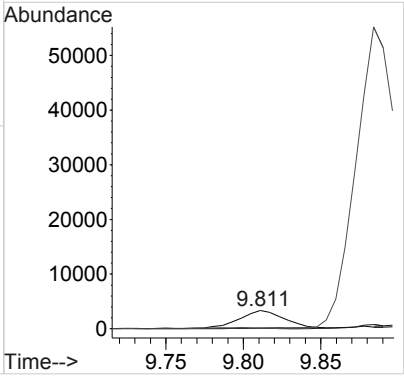


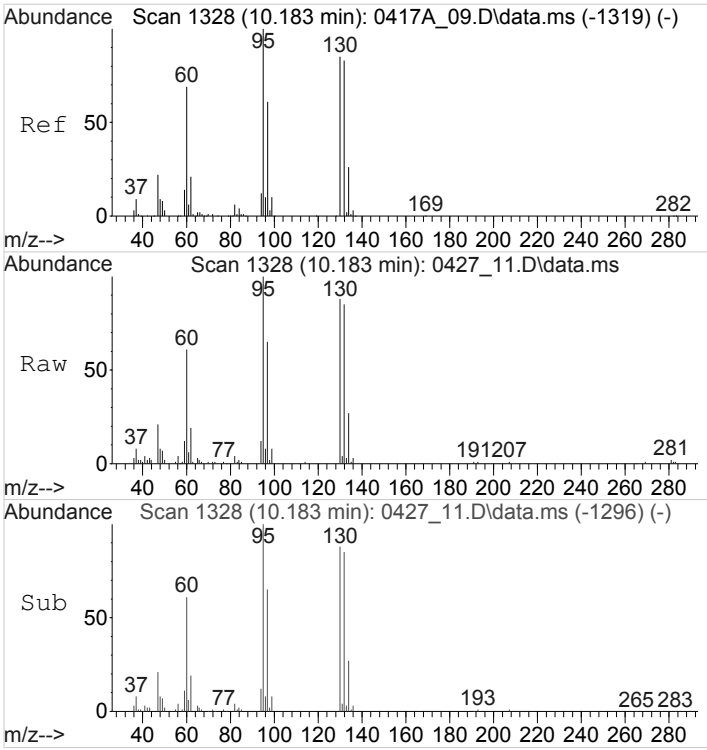


#40
Heptane
Concen: 1.0176802 ppbv
RT: 9.814 min Scan# 1268
Delta R.T. 0.135 min
Lab File: 0427_11.D
Acq: 27 Apr 2018 4:32 pm

Tgt Ion: 43 Resp: 61580

Ion	Ratio	Lower	Upper
43	100		
71	0.0	31.8	47.8#
57	0.0	34.2	51.4#

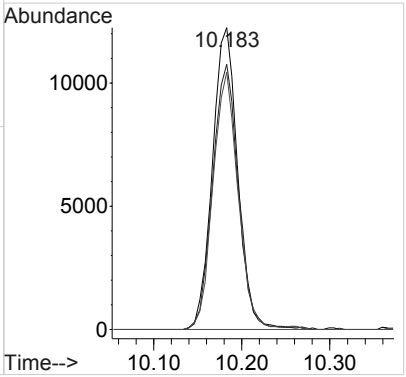


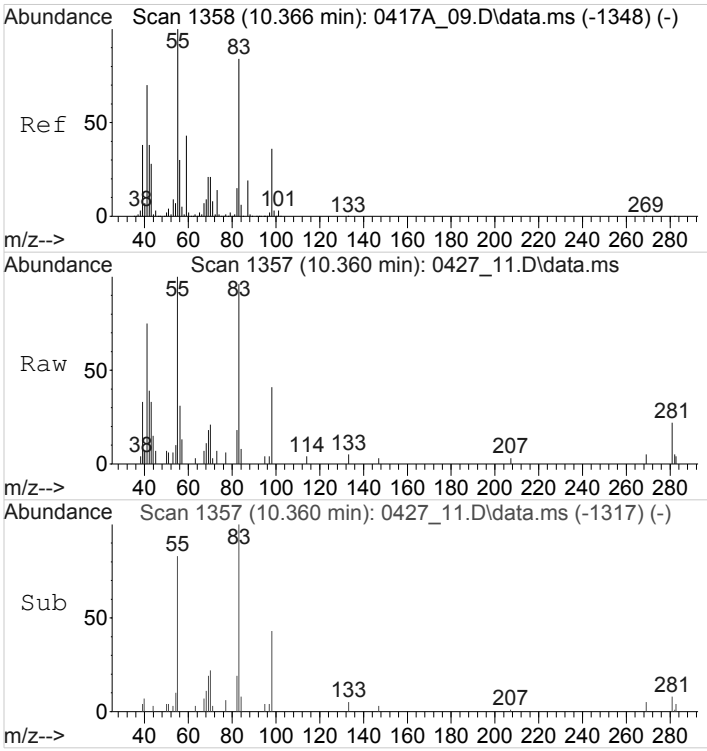


#41
Trichloroethene
Concen: 10.7366357 ppbv
RT: 10.184 min Scan# 1328
Delta R.T. -0.001 min
Lab File: 0427_11.D
Acq: 27 Apr 2018 4:32 pm

Tgt Ion: 95 Resp: 244920

Ion	Ratio	Lower	Upper
95	100		
130	88.6	69.2	103.8
132	85.0	66.3	99.5

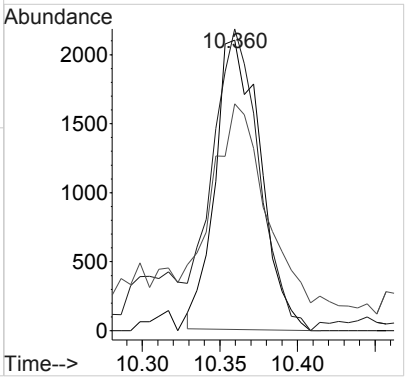


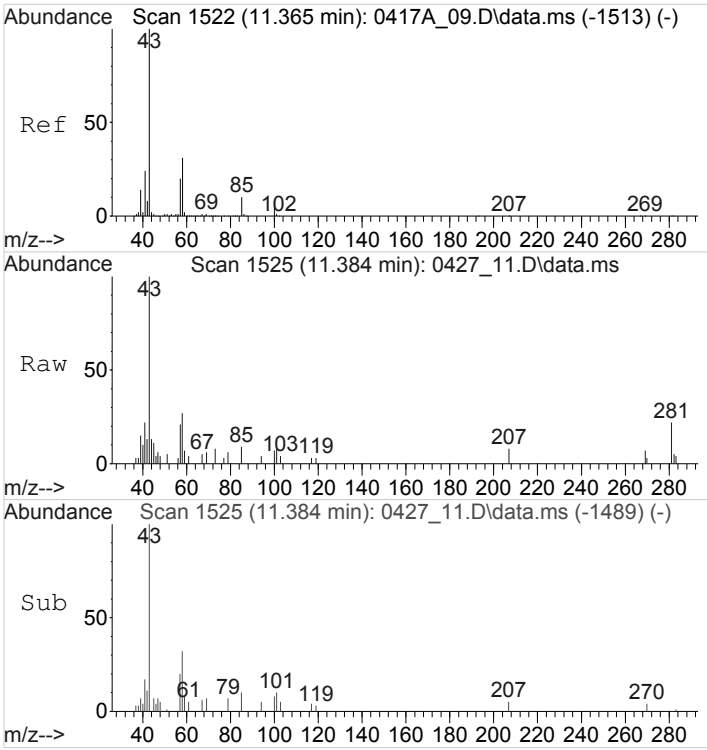


#43
METHYL CYCLOHEXANE
Concen: 1.1740706 ppbv
RT: 10.360 min Scan# 1357
Delta R.T. -0.007 min
Lab File: 0427_11.D
Acq: 27 Apr 2018 4:32 pm

Tgt Ion: 83 Resp: 43054

Ion	Ratio	Lower	Upper
83	100		
55	134.2	112.9	169.3
41	74.3	80.5	120.7#

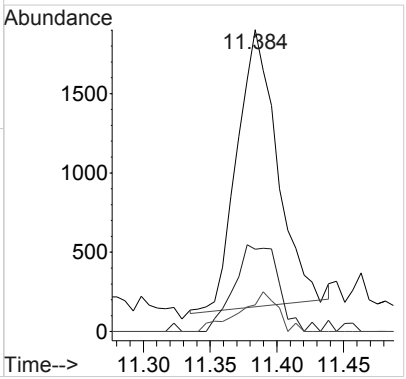


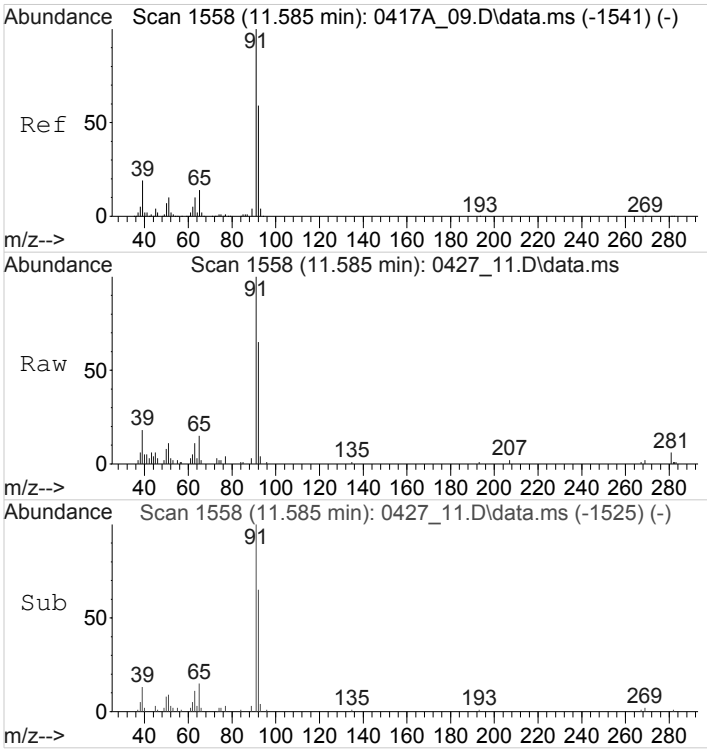


#49
4-Methyl-2-Pentanone (MIBK)
Concen: 0.4564970 ppbv
RT: 11.386 min Scan# 1525
Delta R.T. 0.021 min
Lab File: 0427_11.D
Acq: 27 Apr 2018 4:32 pm

Tgt Ion: 43 Resp: 35868

Ion	Ratio	Lower	Upper
43	100		
58	0.0	25.0	37.6#
85	0.0	8.2	12.2#

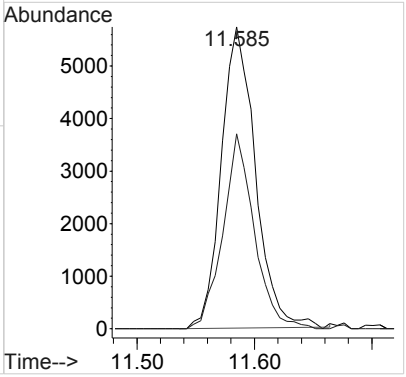


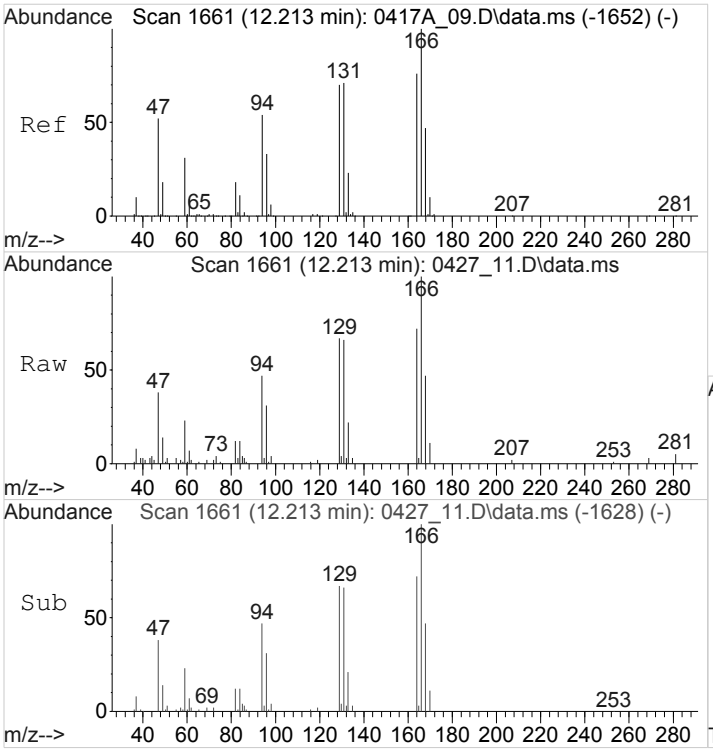


#50
Toluene
Concen: 1.7078909 ppbv
RT: 11.588 min Scan# 1558
Delta R.T. 0.003 min
Lab File: 0427_11.D
Acq: 27 Apr 2018 4:32 pm

Tgt Ion: 91 Resp: 115527

Ion	Ratio	Lower	Upper
91	100		
92	59.6	47.5	71.3

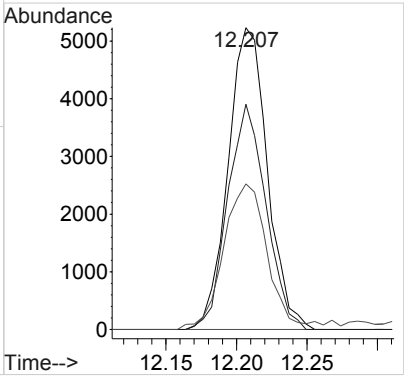


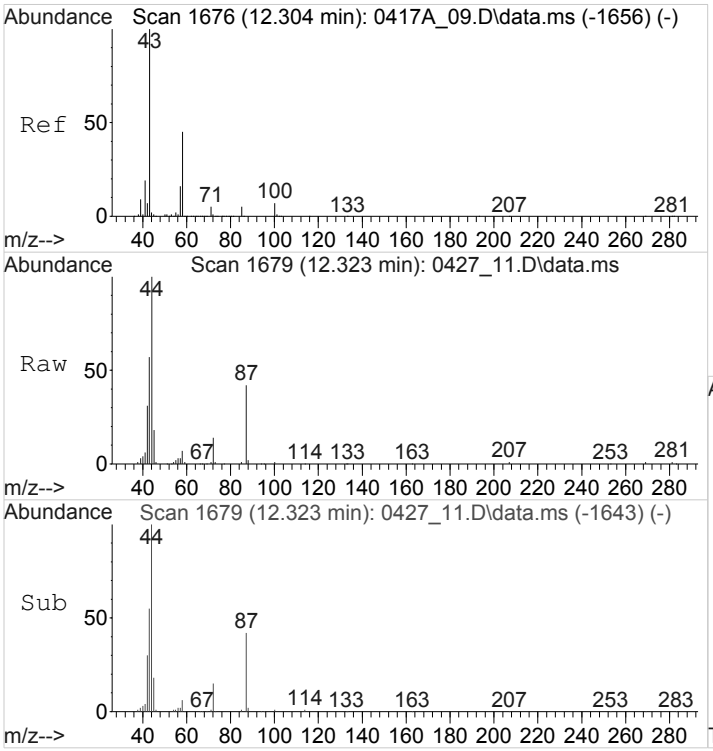


#53
Tetrachloroethene
Concen: 3.9741350 ppbv
RT: 12.211 min Scan# 1661
Delta R.T. -0.000 min
Lab File: 0427_11.D
Acq: 27 Apr 2018 4:32 pm

Tgt Ion:166 Resp: 101652

Ion	Ratio	Lower	Upper
166	100		
129	72.9	59.6	89.4
94	51.8	45.2	67.8

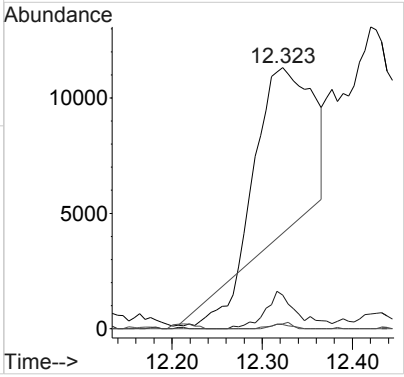


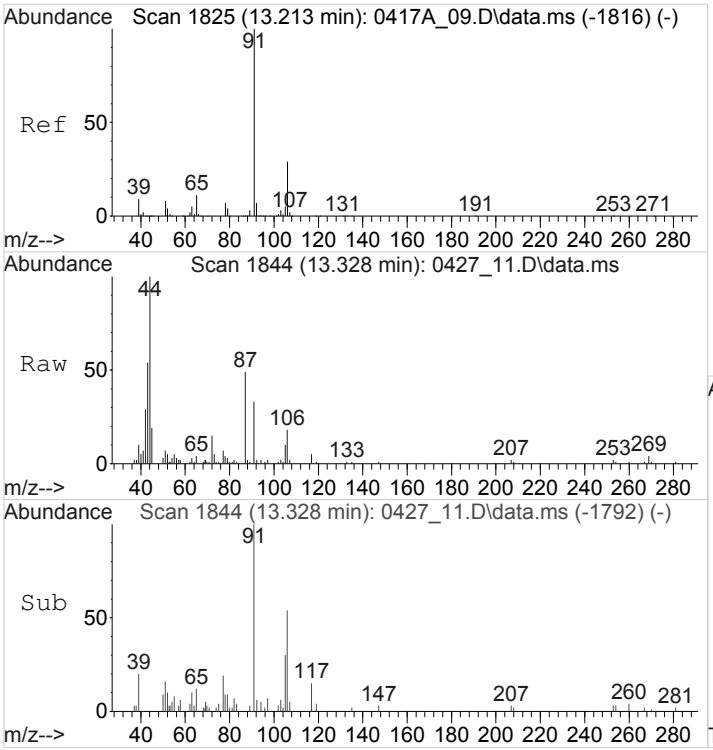


#54
Methyl Butyl Ketone
Concen: 3.8606710 ppbv
RT: 12.324 min Scan# 1679
Delta R.T. 0.022 min
Lab File: 0427_11.D
Acq: 27 Apr 2018 4:32 pm

Tgt Ion: 43 Resp: 263488

Ion	Ratio	Lower	Upper
43	100		
58	9.7	35.0	52.4#
85	0.0	3.9	5.9#
100	0.0	5.3	7.9#

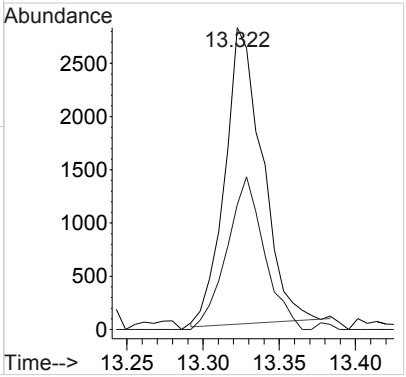


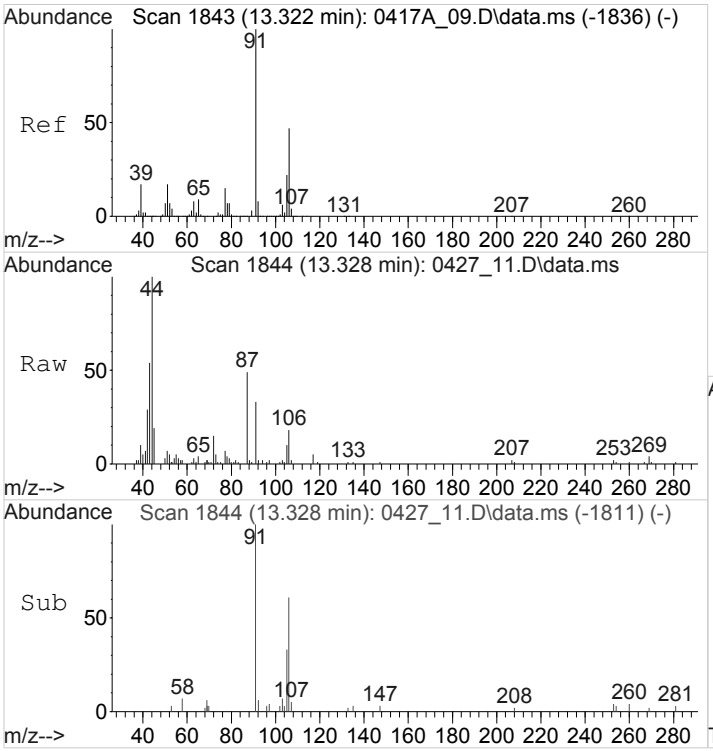


#59
Ethylbenzene
Concen: 0.4863519 ppbv
RT: 13.328 min Scan# 1844
Delta R.T. 0.118 min
Lab File: 0427_11.D
Acq: 27 Apr 2018 4:32 pm

Tgt Ion: 91 Resp: 47607

Ion	Ratio	Lower	Upper
91	100		
106	51.5	22.6	34.0#

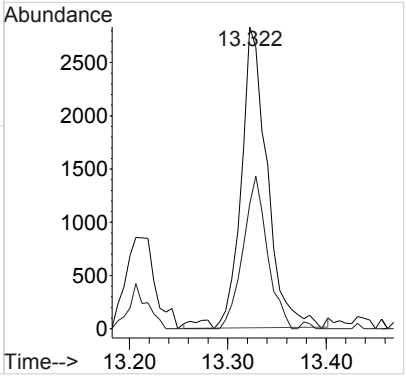


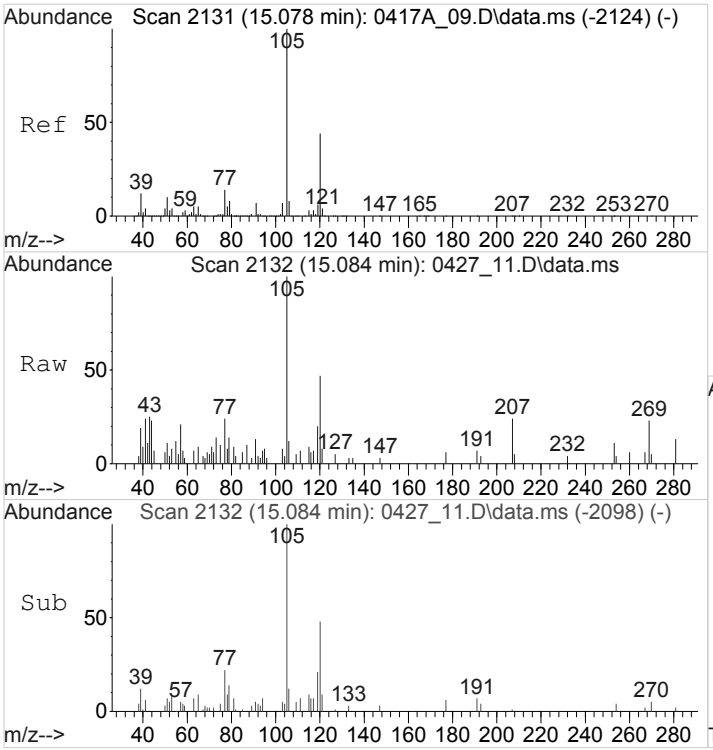


#60
M&P-Xylene
Concen: 0.6913844 ppbv
RT: 13.328 min Scan# 1844
Delta R.T. 0.003 min
Lab File: 0427_11.D
Acq: 27 Apr 2018 4:32 pm

Tgt Ion: 91 Resp: 52118

Ion	Ratio	Lower	Upper
91	100		
106	47.0	37.4	56.2

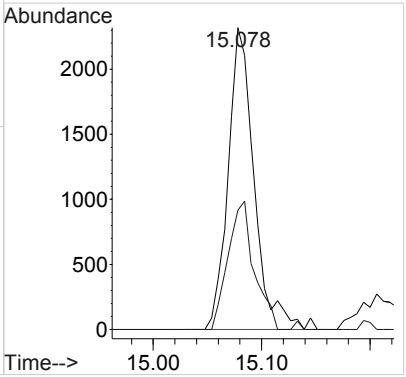


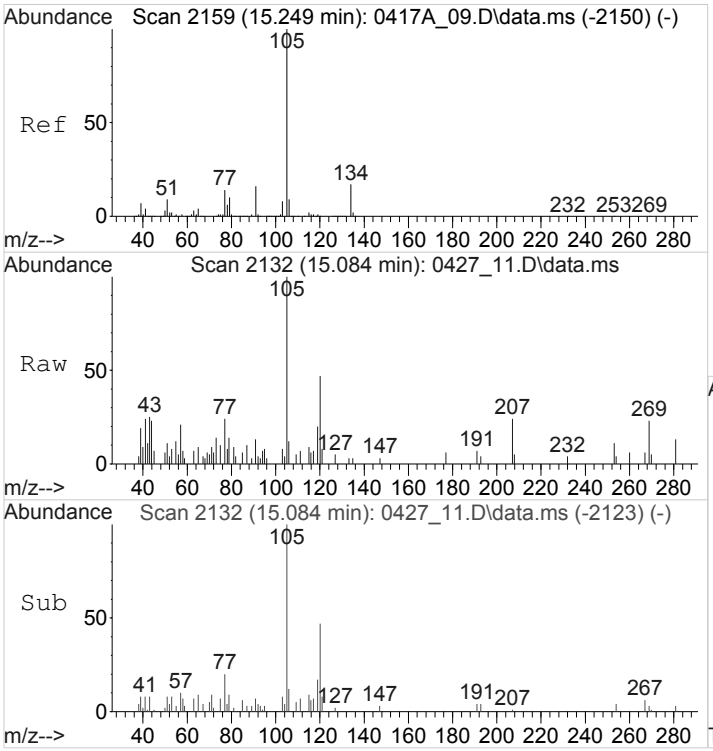


#72
1,2,4-Trimethylbenzene
Concen: 0.4805733 ppbv
RT: 15.083 min Scan# 2132
Delta R.T. 0.006 min
Lab File: 0427_11.D
Acq: 27 Apr 2018 4:32 pm

Tgt Ion:105 Resp: 38844

Ion	Ratio	Lower	Upper
105	100		
120	42.7	35.6	53.4

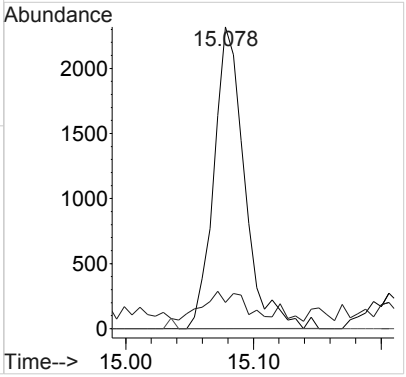


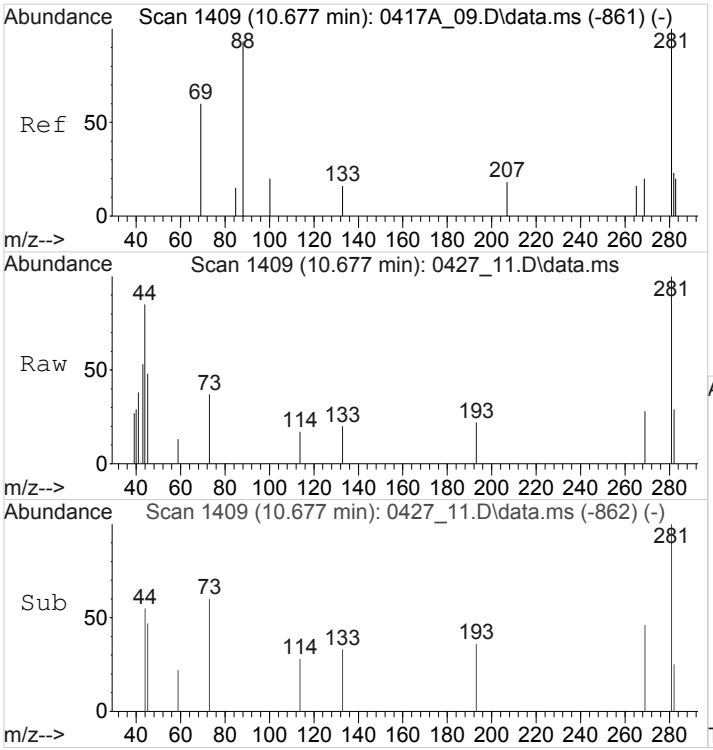


#73
sec-Butylbenzene
Concen: 0.3162578 ppbv
RT: 15.082 min Scan# 2132
Delta R.T. -0.164 min
Lab File: 0427_11.D
Acq: 27 Apr 2018 4:32 pm

Tgt Ion:105 Resp: 38720

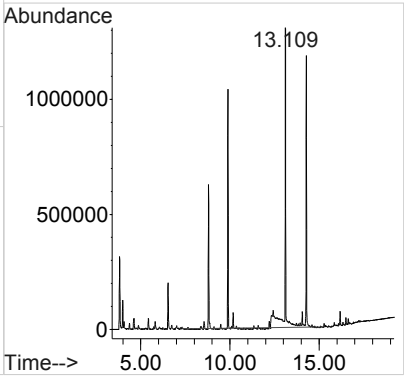
Ion	Ratio	Lower	Upper
105	100		
91	0.0	13.1	19.7#
134	0.0	13.5	20.3#





#84
TPH (GC/MS) Low Fraction
Concen: 154.1034253 ppbv m
RT: 10.675 min Scan# 1409
Delta R.T. 0.000 min
Lab File: 0427_11.D
Acq: 27 Apr 2018 4:32 pm

Tgt Ion:TIC Resp:30909952



1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS-10

ESC Sample ID:	L988471-10	**SDG:**	L988471
Client Sample ID:	SS-10	**Collected Date/Time:**	04/23/18 11:32
Lab File ID:	0426_21	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/26/18 22:13
Analytical Batch:	WG1103323	**Analysis Date/Time:**	04/26/18 22:13
Dilution Factor:	1	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	RT	Result	Qualifier	MDL	RDL
			ppbv		*ppbv*	*ppbv*
Allyl chloride	107-05-1	0	ND		0.0546	0.200
Benzene	71-43-2	7.81	1.32		0.0460	0.200
Benzyl Chloride	100-44-7	0	ND		0.0598	0.200
Bromodichloromethane	75-27-4	0	ND		0.0436	0.200
Bromoform	75-25-2	0	ND		0.0786	0.600
Bromomethane	74-83-9	0	ND		0.0609	0.200
1,3-Butadiene	106-99-0	4.12	ND		0.0563	2.00
Carbon disulfide	75-15-0	5.68	2.95		0.0544	0.200
Carbon tetrachloride	56-23-5	7.60	0.262		0.0585	0.200
Chlorobenzene	108-90-7	0	ND		0.0601	0.200
Chloroethane	75-00-3	4.62	ND		0.0489	0.200
Chloroform	67-66-3	7.27	3.84		0.0574	0.200
Chloromethane	74-87-3	3.93	0.895		0.0544	0.200
2-Chlorotoluene	95-49-8	0	ND		0.0605	0.200
Cyclohexane	110-82-7	7.48	0.799		0.0534	0.200
Dibromochloromethane	124-48-1	0	ND		0.0494	0.200
1,2-Dibromoethane	106-93-4	0	ND		0.0185	0.200
1,2-Dichlorobenzene	95-50-1	0	ND		0.0603	0.200
1,3-Dichlorobenzene	541-73-1	0	ND		0.0597	0.200
1,4-Dichlorobenzene	106-46-7	13.65	ND		0.0557	0.200
1,2-Dichloroethane	107-06-2	0	ND		0.0616	0.200
1,1-Dichloroethane	75-34-3	0	ND		0.0514	0.200
1,1-Dichloroethene	75-35-4	5.40	ND		0.0490	0.200
cis-1,2-Dichloroethene	156-59-2	7.02	6.54		0.0389	0.200
trans-1,2-Dichloroethene	156-60-5	6.09	1.49		0.0464	0.200
1,2-Dichloropropane	78-87-5	0	ND		0.0599	0.200
cis-1,3-Dichloropropene	10061-01-5	0	ND		0.0588	0.200
trans-1,3-Dichloropropene	10061-02-6	0	ND		0.0435	0.200
1,4-Dioxane	123-91-1	0	ND		0.0554	0.200
Ethanol	64-17-5	5.04	17.5		0.0832	0.630
Ethylbenzene	100-41-4	11.28	ND		0.0506	0.200
4-Ethyltoluene	622-96-8	12.79	0.399		0.0666	0.200
Trichlorofluoromethane	75-69-4	4.86	0.374		0.0673	0.200
Dichlorodifluoromethane	75-71-8	3.63	0.371		0.0601	0.200
1,1,2-Trichlorotrifluoroethane	76-13-1	5.32	ND		0.0687	0.200
1,2-Dichlorotetrafluoroethane	76-14-2	0	ND		0.0458	0.200
Heptane	142-82-5	7.84	0.221		0.0626	0.200
Hexachloro-1,3-butadiene	87-68-3	0	ND		0.0656	0.630
n-Hexane	110-54-3	6.22	0.922		0.0457	0.200
Isopropylbenzene	98-82-8	0	ND		0.0563	0.200
Methylene Chloride	75-09-2	5.88	0.397		0.0465	0.200
Methyl Butyl Ketone	591-78-6	10.29	ND		0.0682	1.25
2-Butanone (MEK)	78-93-3	7	5.98		0.0493	1.25

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS-10

ESC Sample ID:	L988471-10	**SDG:**	L988471
Client Sample ID:	SS-10	**Collected Date/Time:**	04/23/18 11:32
Lab File ID:	0426_21	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/26/18 22:13
Analytical Batch:	WG1103323	**Analysis Date/Time:**	04/26/18 22:13
Dilution Factor:	1	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	**CAS**	**RT**	**Result**	**Qualifier**	**MDL**	**RDL**
			ppbv		*ppbv*	*ppbv*
4-Methyl-2-pentanone (MIBK)	108-10-1	9.42	ND		0.0650	1.25
Methyl methacrylate	80-62-6	8.61	ND		0.0773	0.200
MTBE	1634-04-4	0	ND		0.0505	0.200
Naphthalene	91-20-3	15.84	0.756		0.154	0.630
2-Propanol	67-63-0	5.52	4.61		0.0882	1.25
Propene	115-07-1	0	ND		0.0932	0.400
Styrene	100-42-5	0	ND		0.0465	0.200
1,1,2,2-Tetrachloroethane	79-34-5	0	ND		0.0576	0.200
Tetrachloroethylene	127-18-4	10.24	4.70		0.0497	0.200
Tetrahydrofuran	109-99-9	7.28	0.315		0.0508	0.200
Toluene	108-88-3	9.66	2.07		0.0499	0.200
1,2,4-Trichlorobenzene	120-82-1	0	ND		0.148	0.630
1,1,1-Trichloroethane	71-55-6	0	ND		0.0665	0.200
1,1,2-Trichloroethane	79-00-5	0	ND		0.0287	0.200
Trichloroethylene	79-01-6	8.39	12.5		0.0545	0.200
1,2,4-Trimethylbenzene	95-63-6	13.25	0.634		0.0483	0.200
1,3,5-Trimethylbenzene	108-67-8	12.88	ND		0.0631	0.200
2,2,4-Trimethylpentane	540-84-1	7.72	0.918		0.0456	0.200
Vinyl chloride	75-01-4	0	ND		0.0457	0.200
Vinyl Bromide	593-60-2	0	ND		0.0727	0.200
Vinyl acetate	108-05-4	0	ND		0.0639	0.200
m&p-Xylene	1330-20-7	11.41	0.817		0.0946	0.400
o-Xylene	95-47-6	11.89	0.452		0.0633	0.200

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_21.D
Acq On : 26 Apr 2018 10:13 pm
Operator : 564
Sample : L988471-10 1x WG1103323
Misc :
ALS Vial : 21 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 27 08:56:13 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.256	130	247008	4.0000000	ppbv	0.01
37) 1,4-Difluorobenzene	8.111	114	922224	4.0000000	ppbv	0.01
58) Chlorobenzene-d5	11.216	117	816016	4.0000000	ppbv	0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	12.534	95	505416	4.1290357	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 103.23%			
Target Compounds						Qvalue
3) 1,1-DIFLUOROETHANE	3.591	51	6483	0.1670668	ppbv	89
4) Dichlorodifluoromethane	3.630	85	22914	0.3714864	ppbv	99
5) CHLORODIFLUOROMETHANE	3.659	51	10434	0.2809016	ppbv	96
7) Chloromethane	3.930	50	22006	0.8946868	ppbv	98
9) 1,3-Butadiene	4.117	39	18316	0.9537561	ppbv #	79
11) Chloroethane	4.620	64	1614	0.0992911	ppbv #	51
13) Trichlorofluoromethane	4.858	101	25822	0.3743740	ppbv	100
14) Ethanol	5.045	45	209810	17.5436083	ppbv	99
15) 1,1,2-Trichlorotrifluo...	5.322	101	5171	0.0807285	ppbv	92
16) 1,1-Dichloroethene	5.401	61	4067	0.0868208	ppbv #	84
17) Acetone	5.463	58	1272140	83.7512123	ppbv	71
18) 2-Propanol	5.520	45	269608	4.6051870	ppbv #	7
19) Carbon Disulfide	5.684	76	205554	2.9456973	ppbv	99
21) Methylene Chloride	5.876	49	13616	0.3973359	ppbv #	86
22) TERT-BUTYL ALCOHOL	5.876	59	159297	2.0061632	ppbv #	91
24) Trans-1,2-Dichloroethene	6.085	61	61966	1.4851018	ppbv #	1
25) n-Hexane	6.221	57	44909	0.9215620	ppbv	97
28) ETHYL ACETATE	6.996	43	364111	5.5231629	ppbv #	67
29) 2-Butanone (MEK)	6.996	72	117694	5.9797267	ppbv	99
30) cis-1,2-Dichloroethene	7.019	96	257084	6.5395290	ppbv	96
31) Tetrahydrofuran	7.285	42	12278	0.3153331	ppbv #	71
32) Chloroform	7.268	83	271156	3.8351699	ppbv	95
33) Cyclohexane	7.483	84	40251	0.7986450	ppbv	96
35) Carbon Tetrachloride	7.602	117	19237	0.2623104	ppbv	97
36) 2,2,4-Trimethylpentane	7.720	57	158292	0.9183405	ppbv	94
38) Benzene	7.811	78	152665	1.3203230	ppbv	98
40) Heptane	7.845	43	12611	0.2208355	ppbv #	78
41) Trichloroethene	8.388	95	630905	12.5190310	ppbv	97
43) METHYL CYCLOHEXANE	8.541	83	89632	1.2940456	ppbv	96
45) Methyl Methacrylate	8.608	69	3533	0.0851065	ppbv #	1
49) 4-Methyl-2-Pentanone (...	9.423	43	50230	0.6003388	ppbv	95
50) Toluene	9.661	91	297081	2.0663056	ppbv	98
53) Tetrachloroethene	10.243	166	363866	4.7020639	ppbv	97
54) Methyl Butyl Ketone	10.294	43	90766	1.1264830	ppbv	88
59) Ethylbenzene	11.284	91	35441	0.1823629	ppbv	99
60) M&P-Xylene	11.409	91	121584	0.8166494	ppbv	100
61) O-Xylene	11.889	91	69515	0.4515803	ppbv	100
66) n-Propylbenzene	12.715	91	20302	0.0806510	ppbv	96
67) 4-Ethyltoluene	12.789	105	87880	0.3988289	ppbv	96
70) 1,3,5-Trimethylbenzene	12.879	105	30100	0.1729892	ppbv	98
72) 1,2,4-Trimethylbenzene	13.247	105	111464	0.6343280	ppbv	98
75) 1,4-Dichlorobenzene	13.654	146	12495	0.1019552	ppbv #	1
76) 1,2,3-TRIMETHYLBENZENE	13.643	105	40470	0.2411770	ppbv	98
79) n-Butylbenzene	13.858	91	12022	0.0600105	ppbv #	73
83) Naphthalene	15.838	128	198609	0.7555510	ppbv	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_21.D
Acq On : 26 Apr 2018 10:13 pm
Operator : 564
Sample : L988471-10 1x WG1103323
Misc :
ALS Vial : 21 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 27 08:56:13 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration

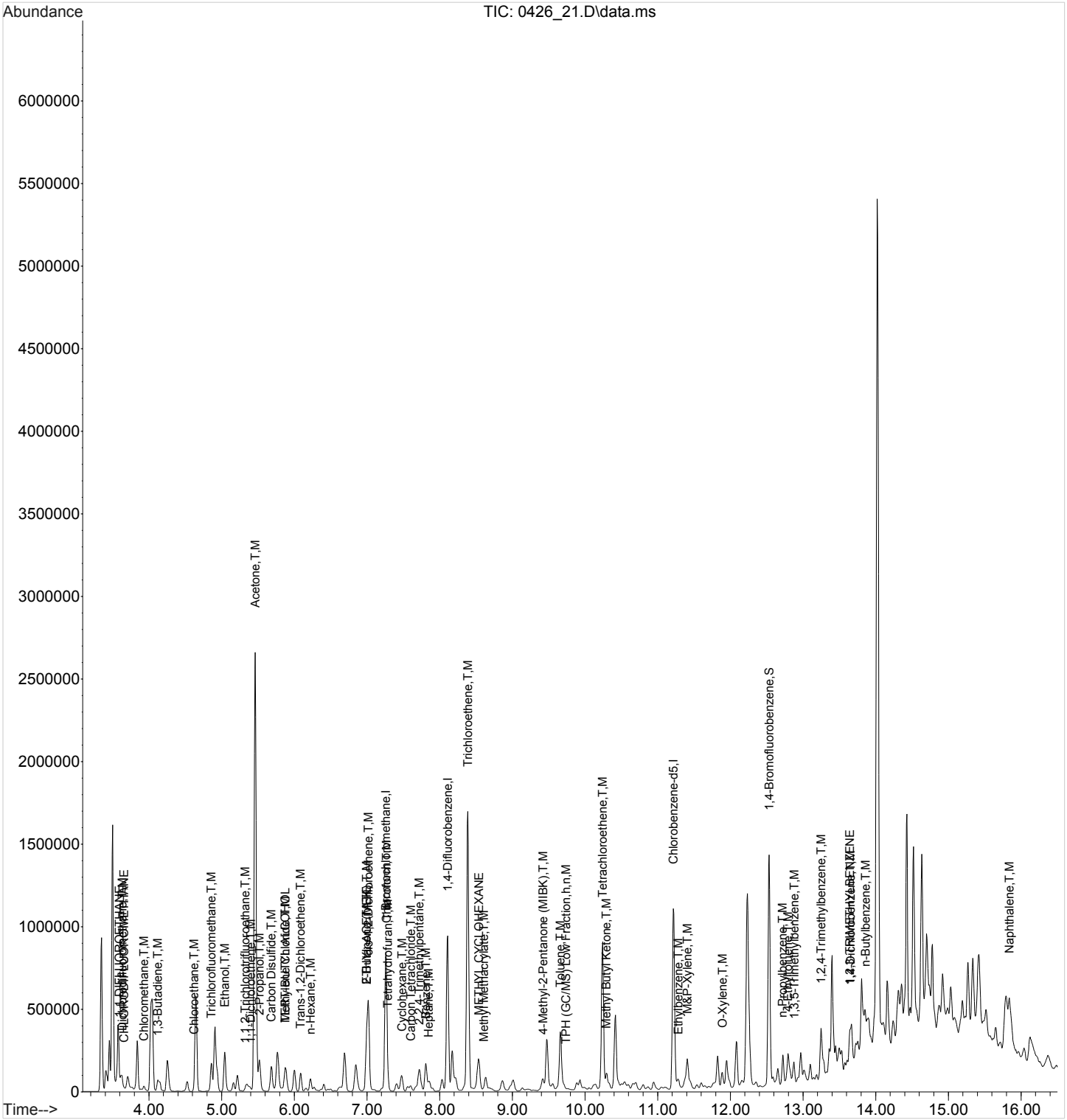
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
84) TPH (GC/MS) Low Fraction	9.740	TIC	22401048m	80.7514479 ppbv	

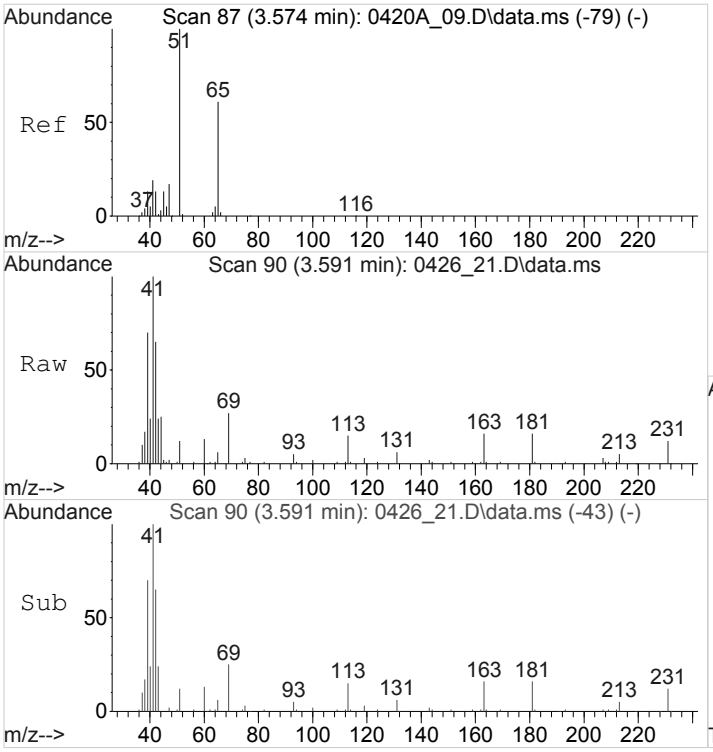
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_21.D
Acq On : 26 Apr 2018 10:13 pm
Operator : 564
Sample : L988471-10 1x WG1103323
Misc :
ALS Vial : 21 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 27 08:56:13 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration

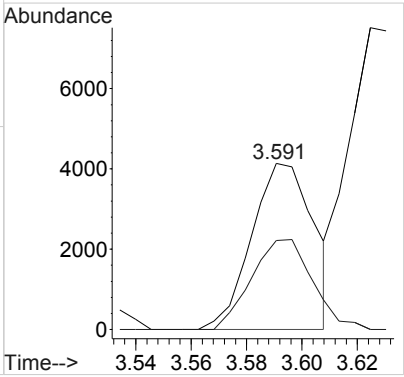


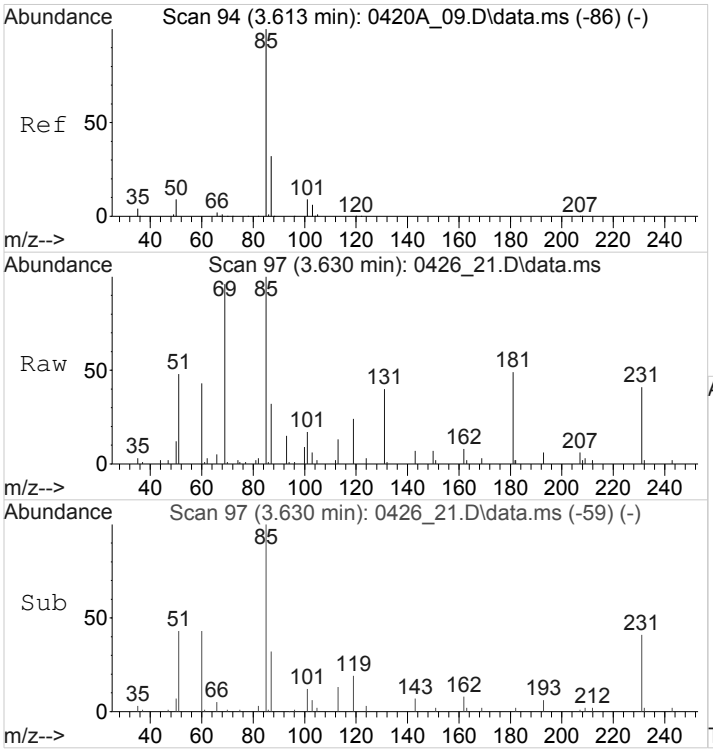


#3
1,1-DIFLUOROETHANE
Concen: 0.1670668 ppbv
RT: 3.591 min Scan# 90
Delta R.T. 0.017 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion: 51 Resp: 6483

Ion	Ratio	Lower	Upper
51	100		
65	53.2	49.4	74.2

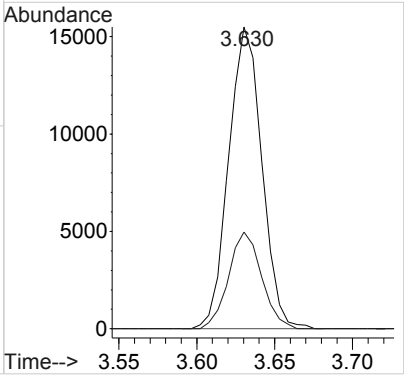


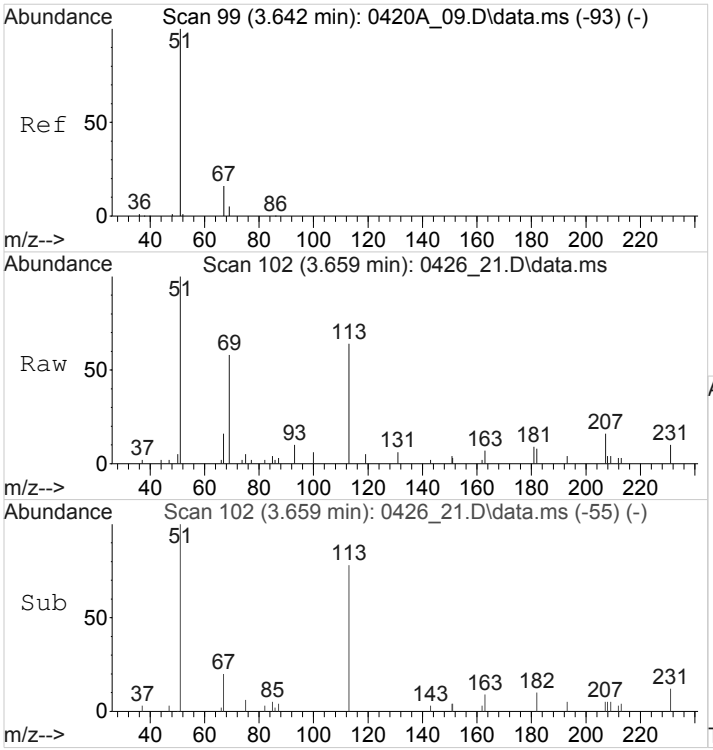


#4
Dichlorodifluoromethane
Concen: 0.3714864 ppbv
RT: 3.630 min Scan# 97
Delta R.T. 0.017 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion: 85 Resp: 22914

Ion	Ratio	Lower	Upper
85	100		
87	31.8	25.8	38.8

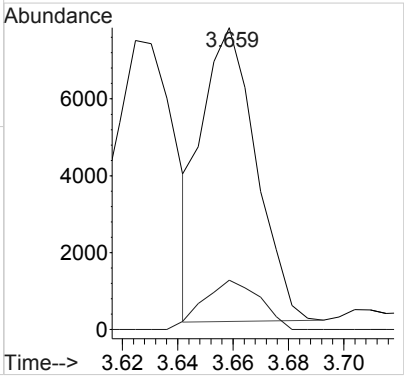


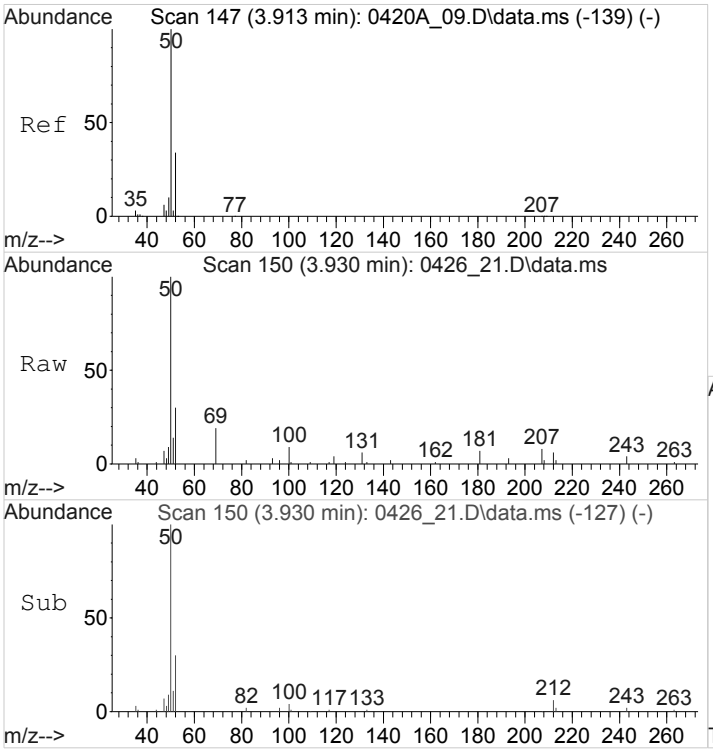


#5
CHLORODIFLUOROMETHANE
Concen: 0.2809016 ppbv
RT: 3.659 min Scan# 102
Delta R.T. 0.017 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion: 51 Resp: 10434

Ion	Ratio	Lower	Upper
51	100		
67	17.6	12.7	19.1

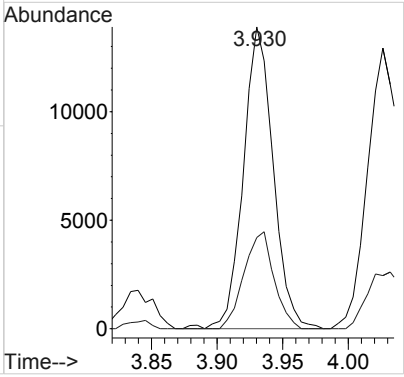


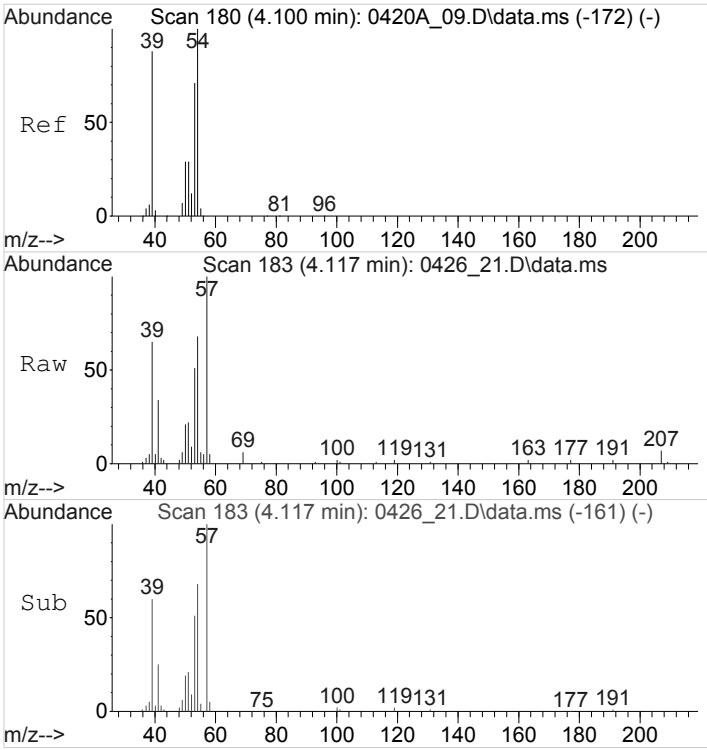


#7
Chloromethane
Concen: 0.8946868 ppbv
RT: 3.930 min Scan# 150
Delta R.T. 0.017 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion: 50 Resp: 22006

Ion	Ratio	Lower	Upper
50	100		
52	32.2	26.5	39.7

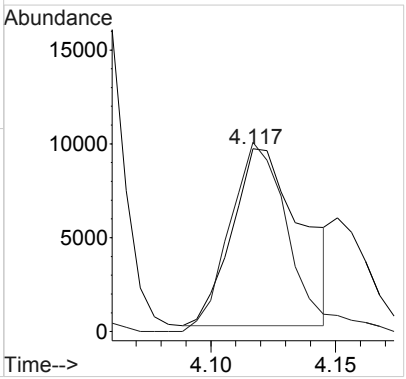


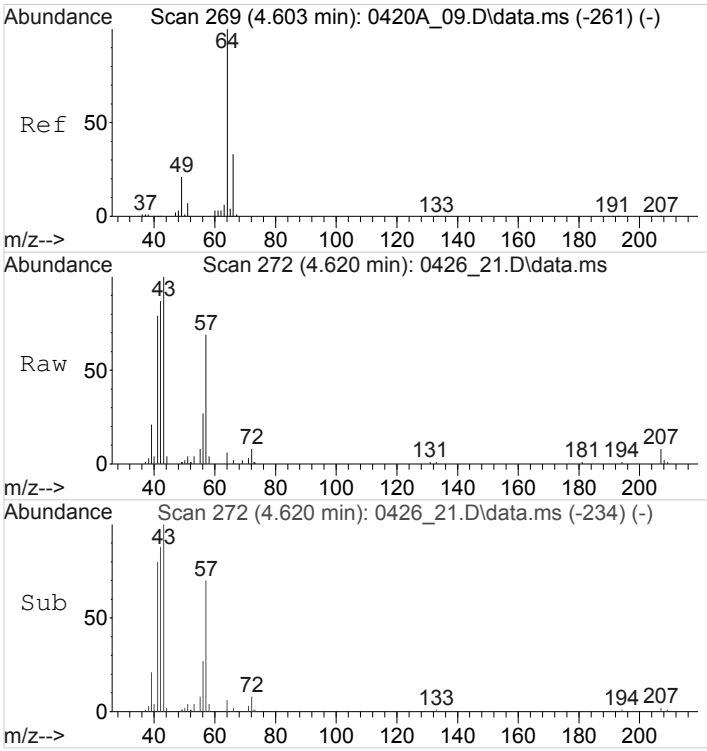


#9
1,3-Butadiene
Concen: 0.9537561 ppbv
RT: 4.117 min Scan# 183
Delta R.T. 0.017 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion: 39 Resp: 18316

Ion	Ratio	Lower	Upper
39	100		
54	91.3	91.3	136.9#

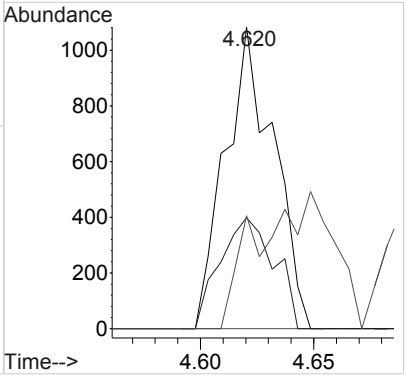


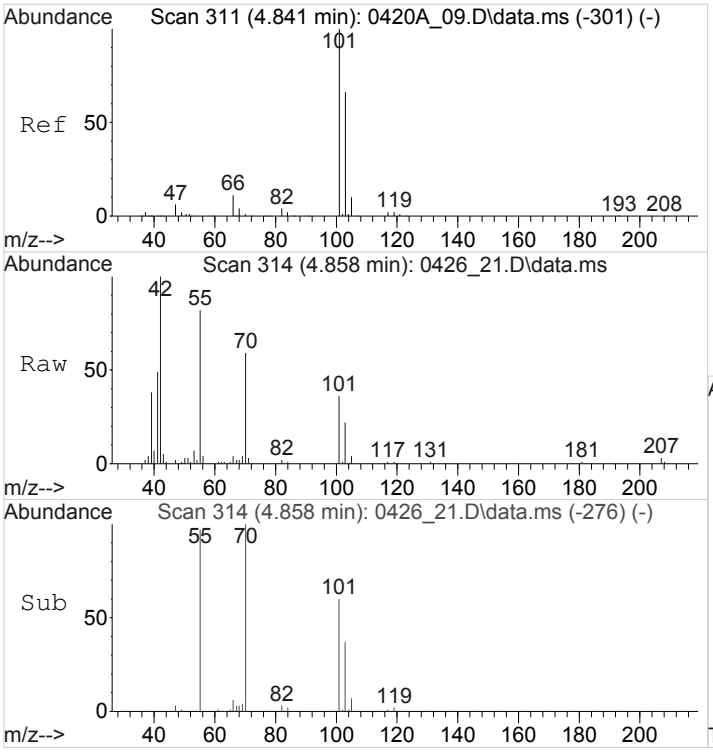


#11
Chloroethane
Concen: 0.0992911 ppbv
RT: 4.620 min Scan# 272
Delta R.T. 0.017 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion: 64 Resp: 1614

Ion	Ratio	Lower	Upper
64	100		
66	41.3	26.3	39.5#
49	70.4	17.8	26.6#

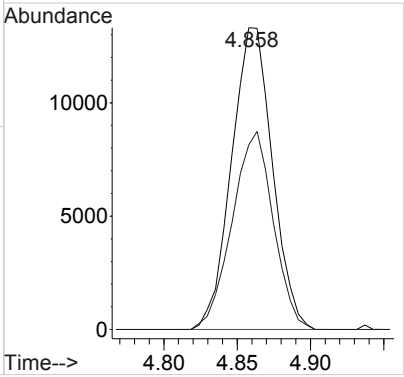


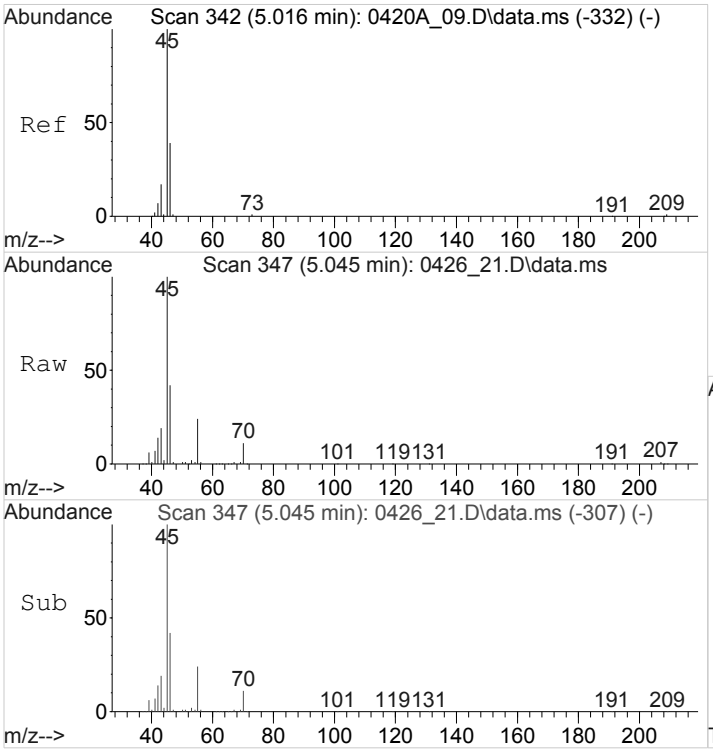


#13
Trichlorofluoromethane
Concen: 0.3743740 ppbv
RT: 4.858 min Scan# 314
Delta R.T. 0.017 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion:101 Resp: 25822

Ion	Ratio	Lower	Upper
101	100		
103	65.9	52.6	79.0

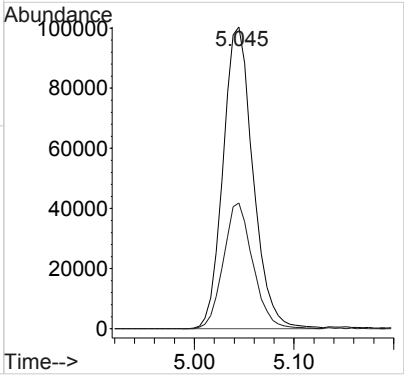


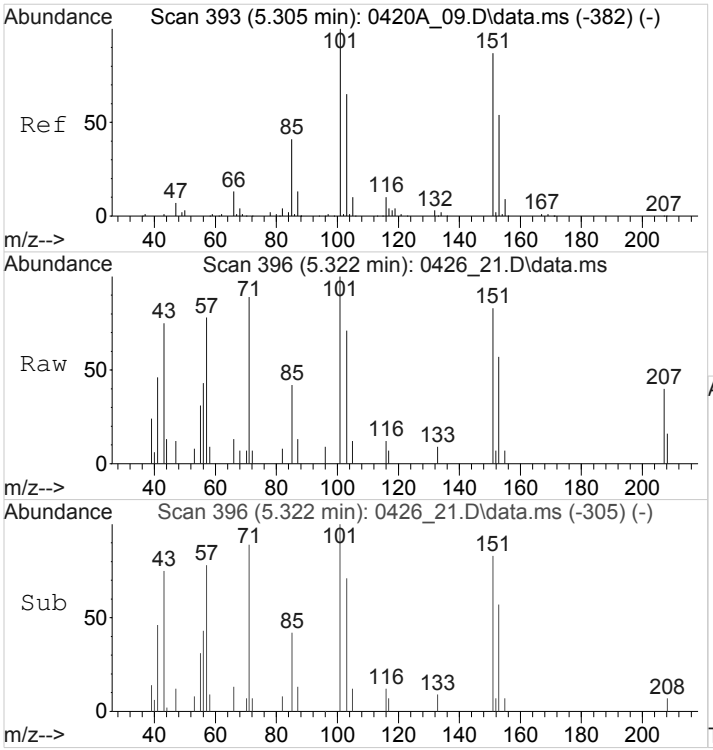


#14
Ethanol
Concen: 17.5436083 ppbv
RT: 5.045 min Scan# 347
Delta R.T. 0.028 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion: 45 Resp: 209810

Ion	Ratio	Lower	Upper
45	100		
46	40.9	33.1	49.7

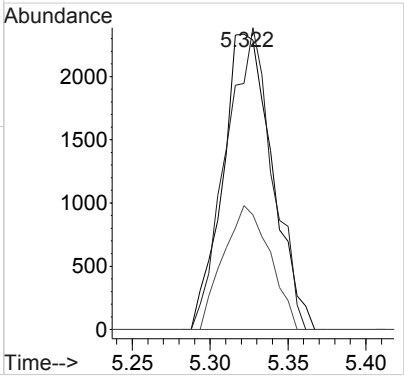


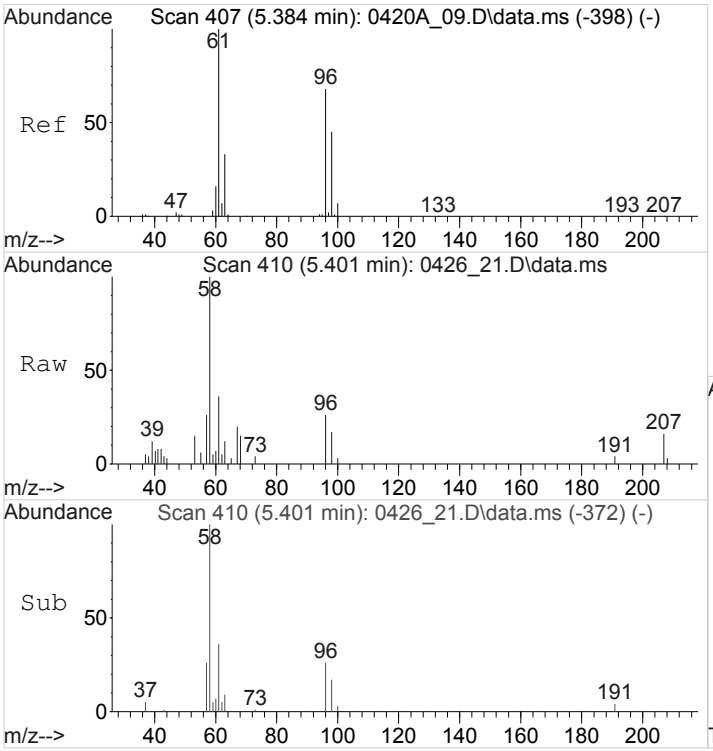


#15
1,1,2-Trichlorotrifluoroethane
Concen: 0.0807285 ppbv
RT: 5.322 min Scan# 396
Delta R.T. 0.017 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion:101 Resp: 5171

Ion	Ratio	Lower	Upper
101	100		
151	95.3	67.9	101.9
85	39.3	32.4	48.6

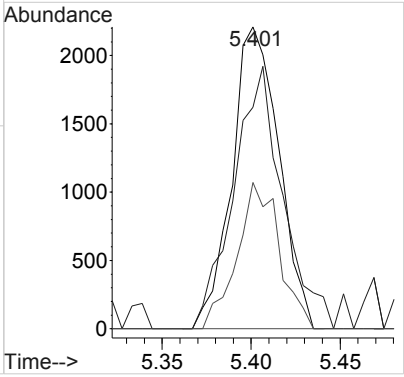


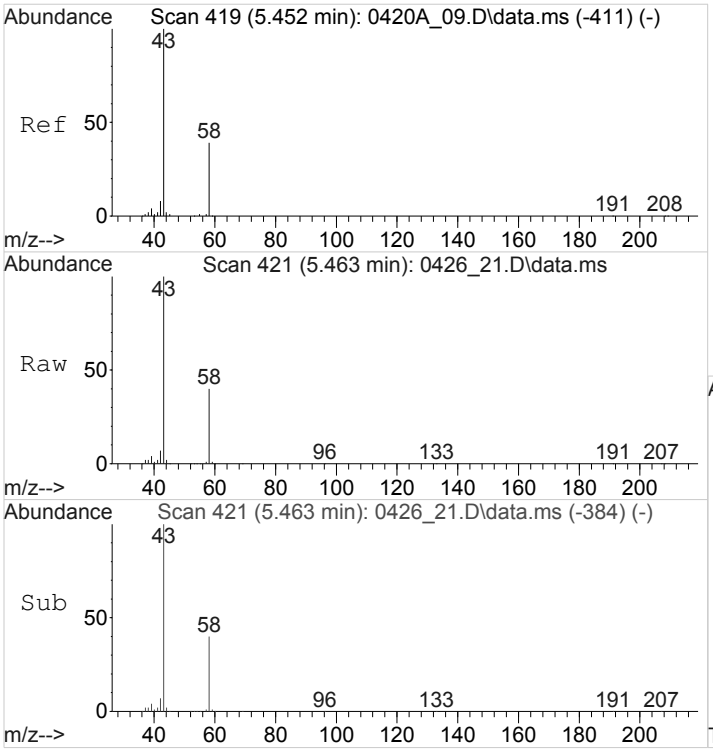


#16
1,1-Dichloroethene
Concen: 0.0868208 ppbv
RT: 5.401 min Scan# 410
Delta R.T. 0.017 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion: 61 Resp: 4067

Ion	Ratio	Lower	Upper
61	100		
96	90.6	55.6	83.4#
98	43.4	35.4	53.0

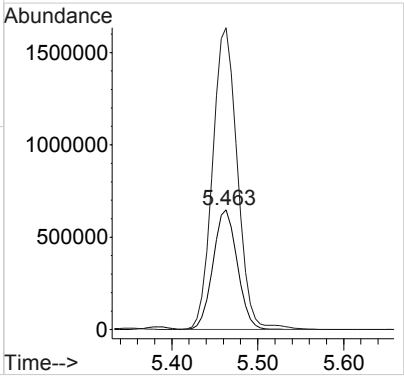


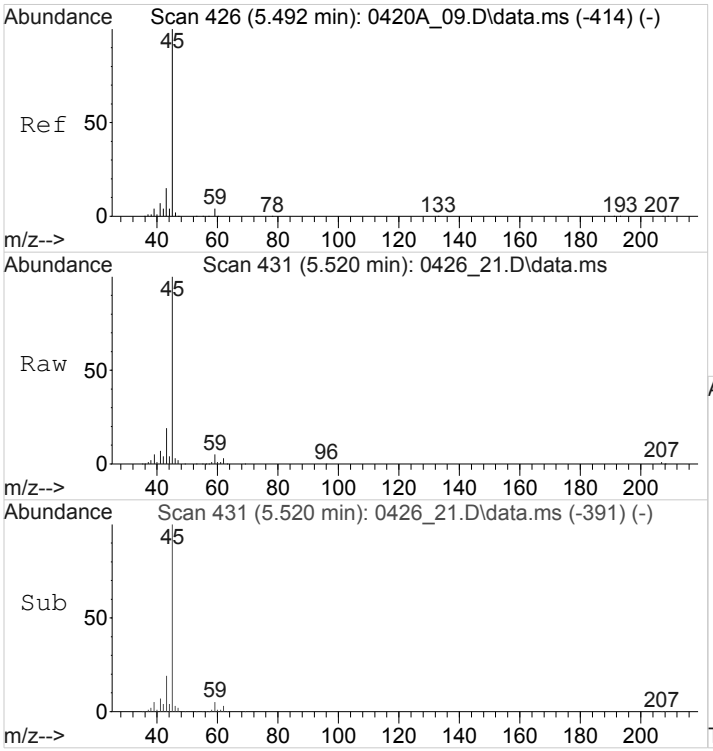


#17
Acetone
Concen: 83.7512123 ppbv
RT: 5.463 min Scan# 421
Delta R.T. 0.011 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion: 58 Resp: 1272140

Ion	Ratio	Lower	Upper
58	100		
43	257.6	252.6	379.0

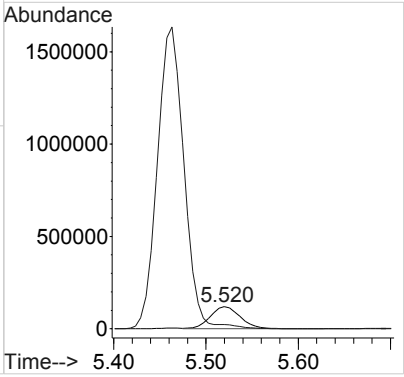


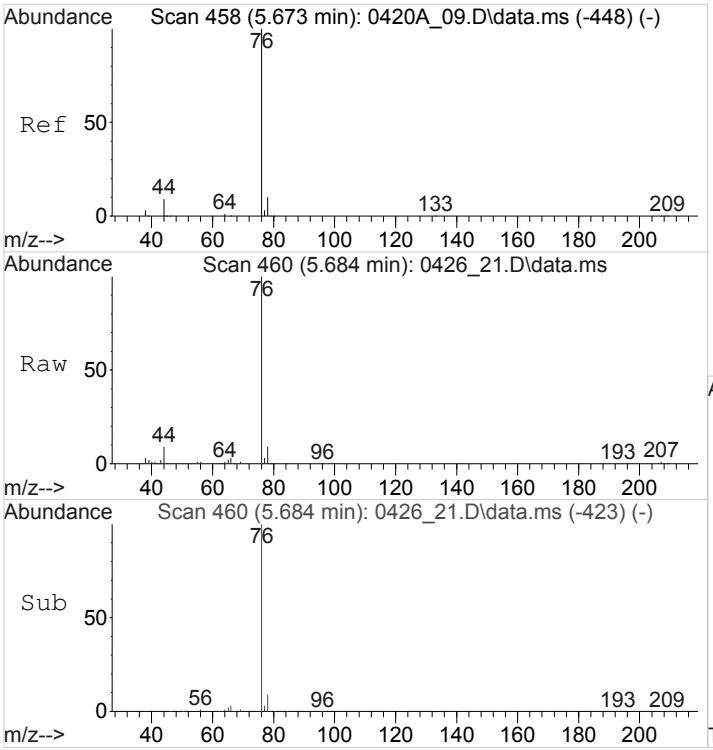


#18
2-Propanol
Concen: 4.6051870 ppbv
RT: 5.520 min Scan# 431
Delta R.T. 0.028 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion: 45 Resp: 269608

Ion	Ratio	Lower	Upper
45	100		
43	0.0	67.9	101.9#

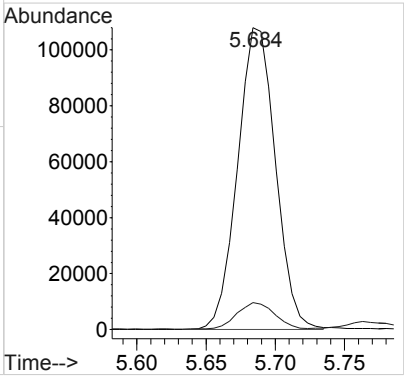


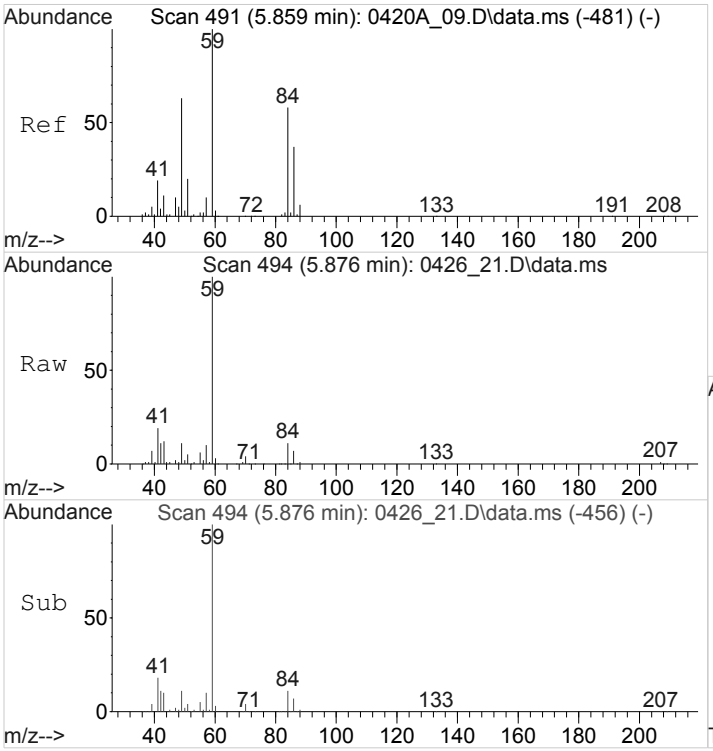


#19
Carbon Disulfide
Concen: 2.9456973 ppbv
RT: 5.684 min Scan# 460
Delta R.T. 0.011 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion: 76 Resp: 205554

Ion	Ratio	Lower	Upper
76	100		
44	8.8	7.4	11.2

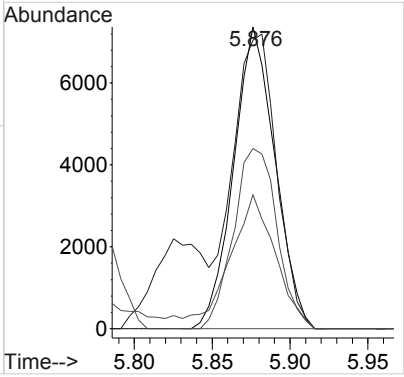


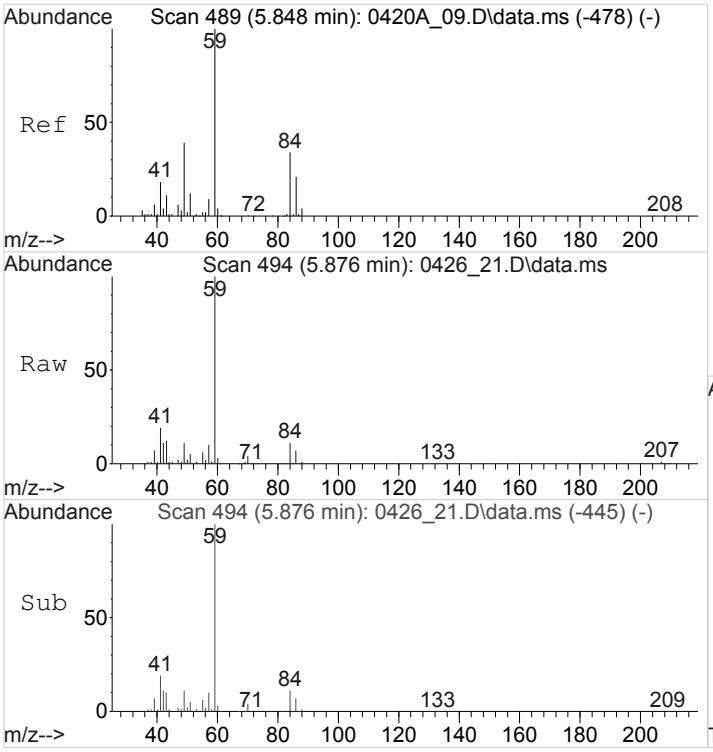


#21
Methylene Chloride
Concen: 0.3973359 ppbv
RT: 5.876 min Scan# 494
Delta R.T. 0.017 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion: 49 Resp: 13616

Ion	Ratio	Lower	Upper
49	100		
84	103.5	72.1	108.1
86	62.6	46.1	69.1
51	48.7	25.9	38.9#

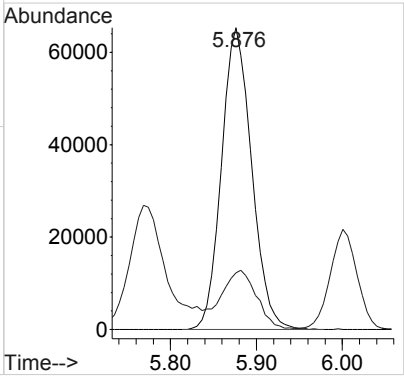


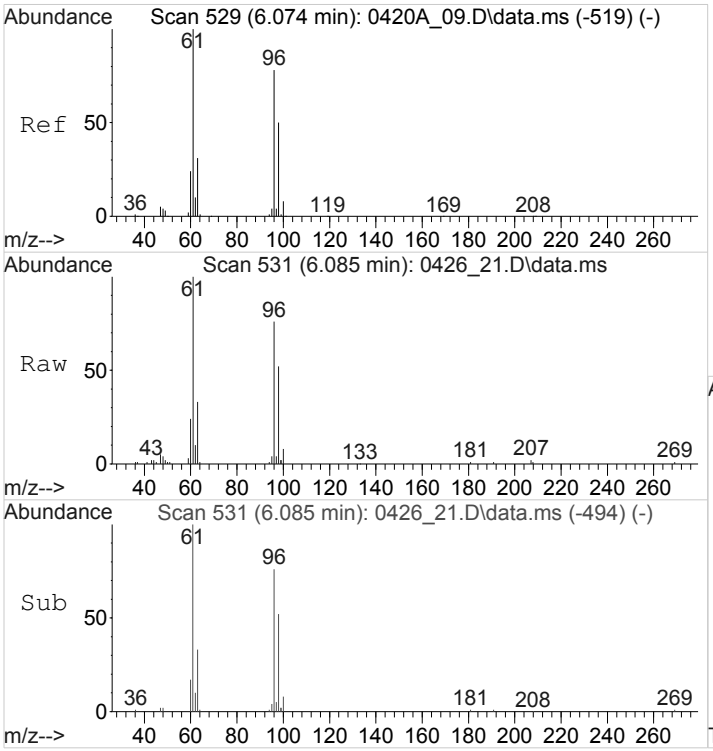


#22
TERT-BUTYL ALCOHOL
Concen: 2.0061632 ppbv
RT: 5.876 min Scan# 494
Delta R.T. 0.028 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion: 59 Resp: 159297

Ion	Ratio	Lower	Upper
59	100		
41	22.2	14.6	22.0#

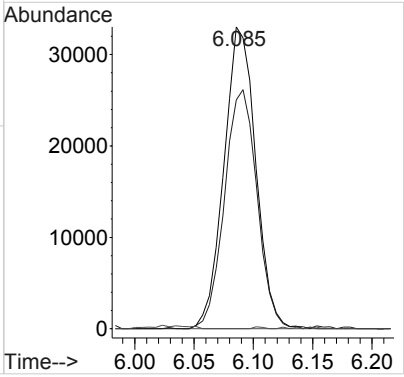


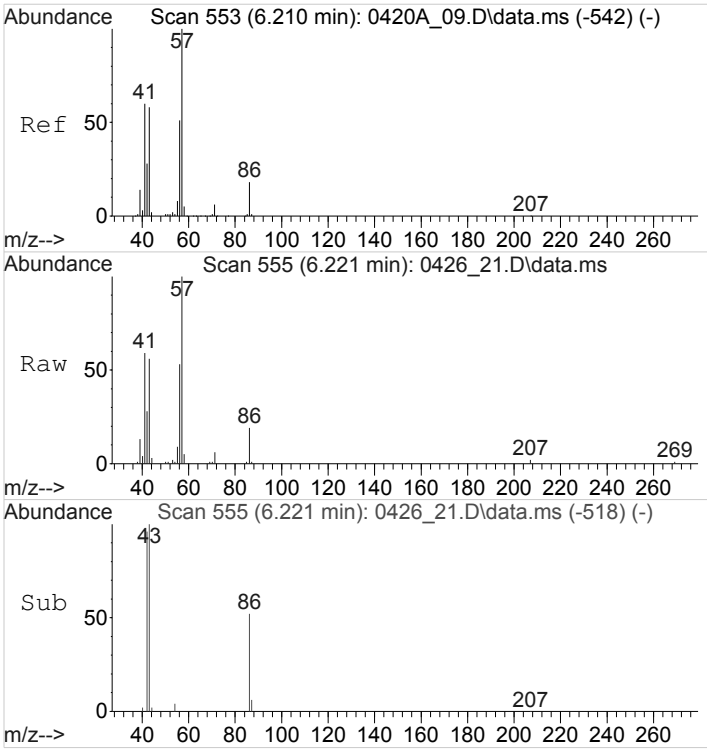


#24
Trans-1,2-Dichloroethene
Concen: 1.4851018 ppbv
RT: 6.085 min Scan# 531
Delta R.T. 0.011 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion: 61 Resp: 61966

Ion	Ratio	Lower	Upper
61	100		
96	81.1	61.0	91.4
73	1.3	184.6	276.8#

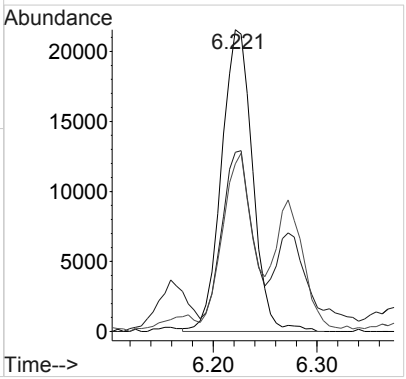


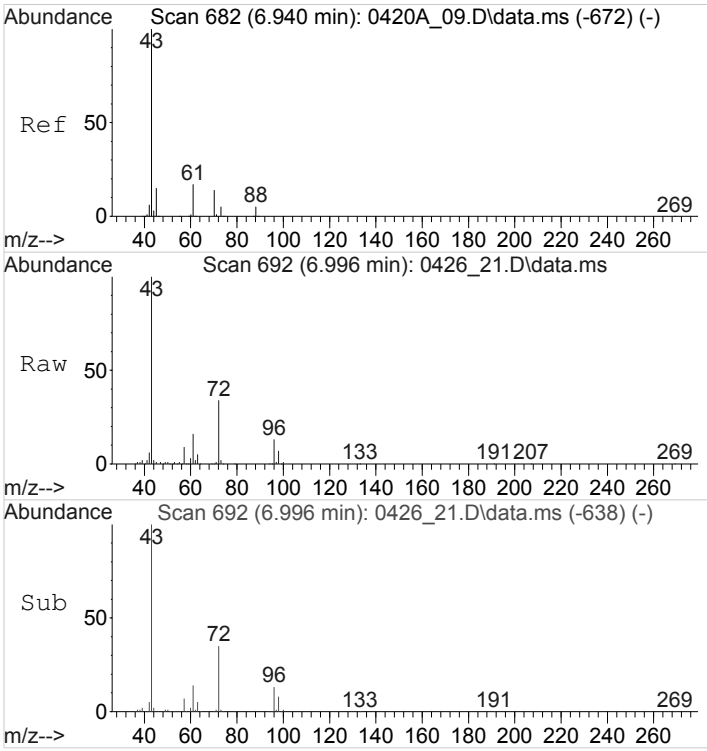


#25
n-Hexane
Concen: 0.9215620 ppbv
RT: 6.221 min Scan# 555
Delta R.T. 0.011 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion: 57 Resp: 44909

Ion	Ratio	Lower	Upper
57	100		
41	57.0	47.6	71.4
43	56.1	46.1	69.1

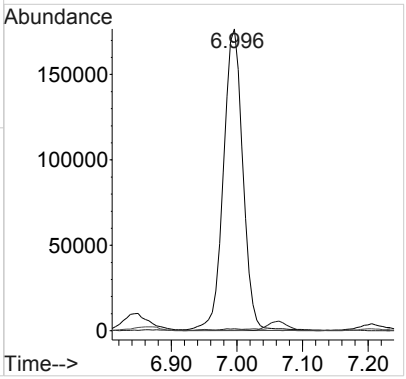


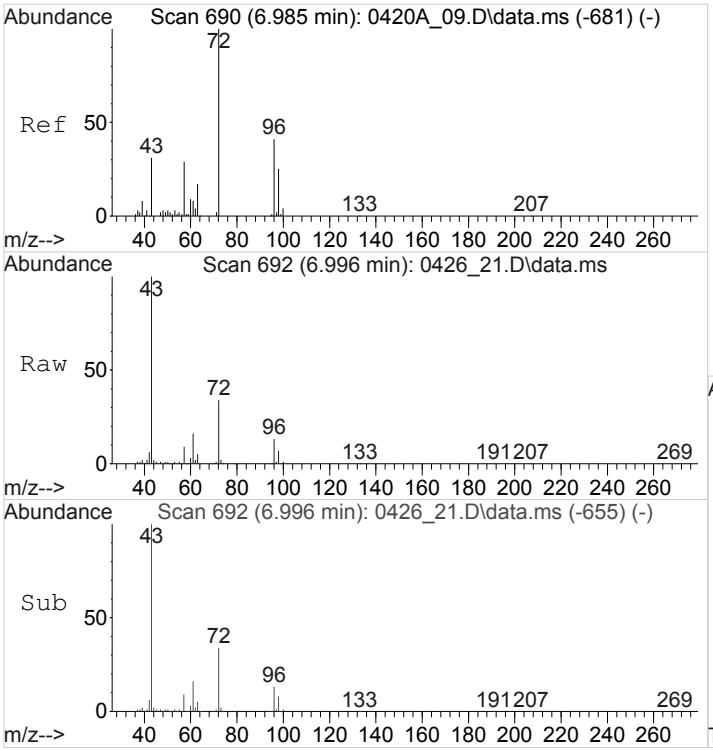


#28
ETHYL ACETATE
Concen: 5.5231629 ppbv
RT: 6.996 min Scan# 692
Delta R.T. 0.057 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion: 43 Resp: 364111

Ion	Ratio	Lower	Upper
43	100		
45	0.7	12.0	18.0#
70	0.7	10.5	15.7#

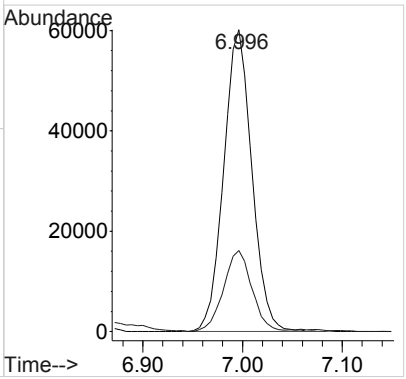


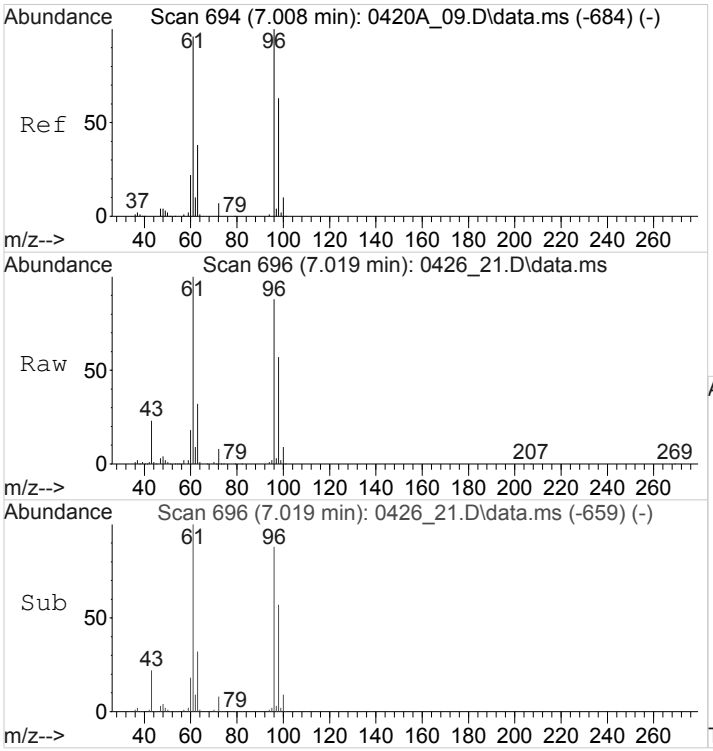


#29
2-Butanone (MEK)
Concen: 5.9797267 ppbv
RT: 6.996 min Scan# 692
Delta R.T. 0.011 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion: 72 Resp: 117694

Ion	Ratio	Lower	Upper
72	100		
57	27.0	22.2	33.4

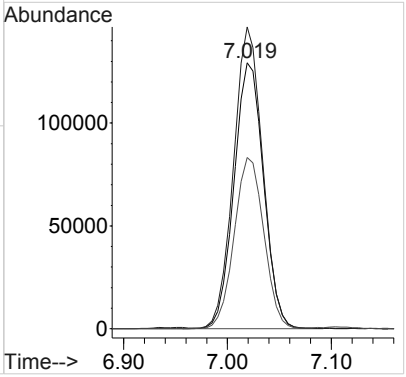


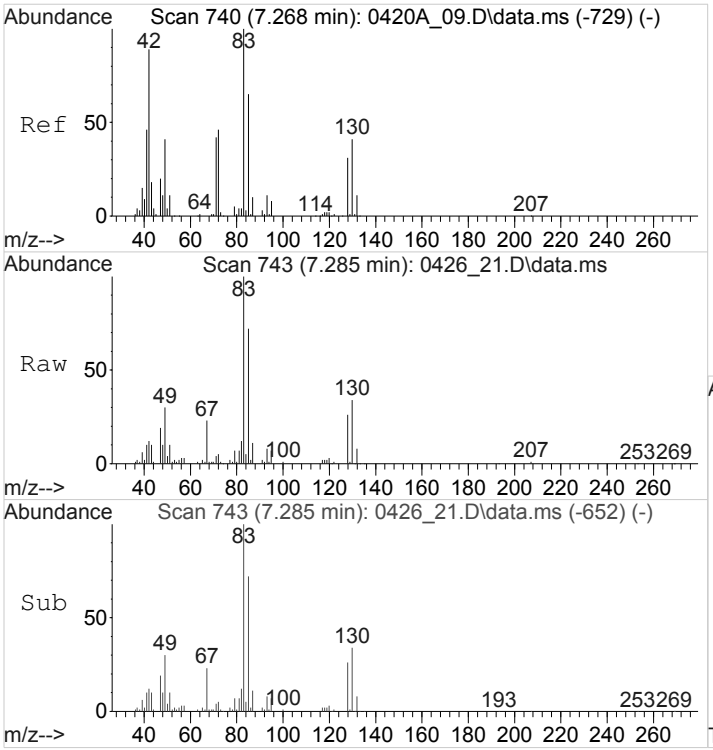


#30
cis-1,2-Dichloroethene
Concen: 6.5395290 ppbv
RT: 7.019 min Scan# 696
Delta R.T. 0.011 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion: 96 Resp: 257084

Ion	Ratio	Lower	Upper
96	100		
61	110.9	94.1	141.1
98	64.3	50.6	76.0

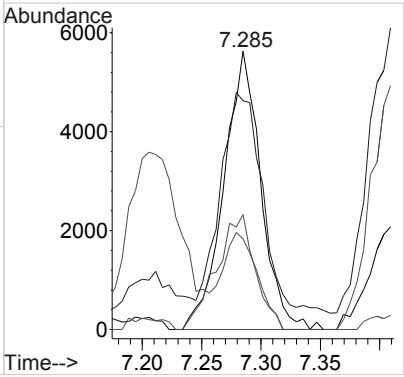


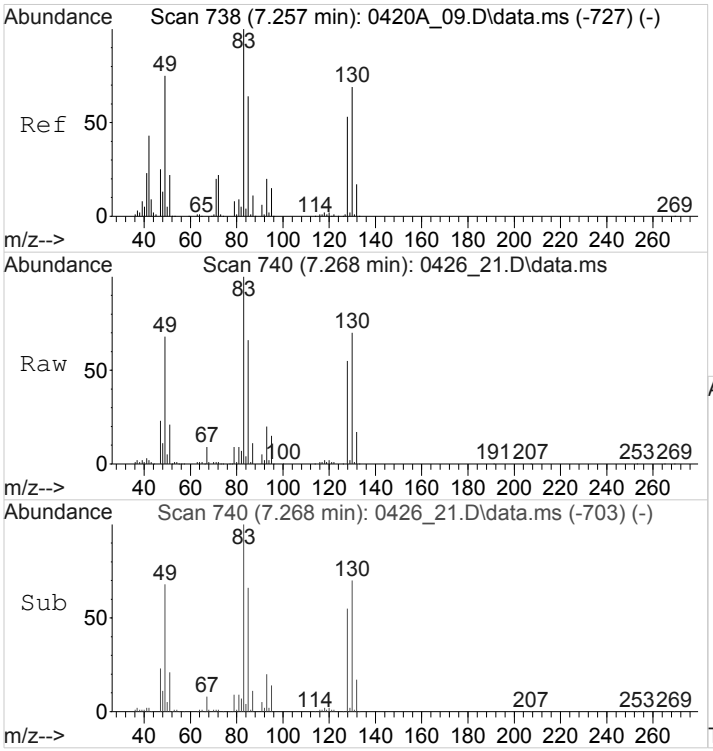


#31
Tetrahydrofuran
Concen: 0.3153331 ppbv
RT: 7.285 min Scan# 743
Delta R.T. 0.017 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion: 42 Resp: 12278

Ion	Ratio	Lower	Upper
42	100		
41	88.7	40.8	61.2#
72	43.0	40.7	61.1
71	32.9	37.4	56.0#

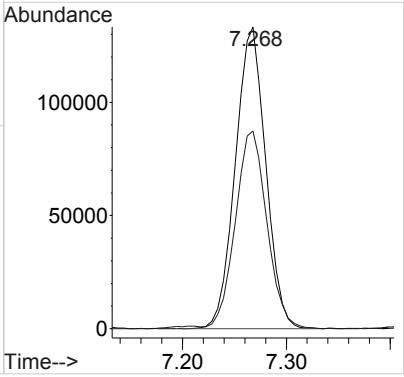


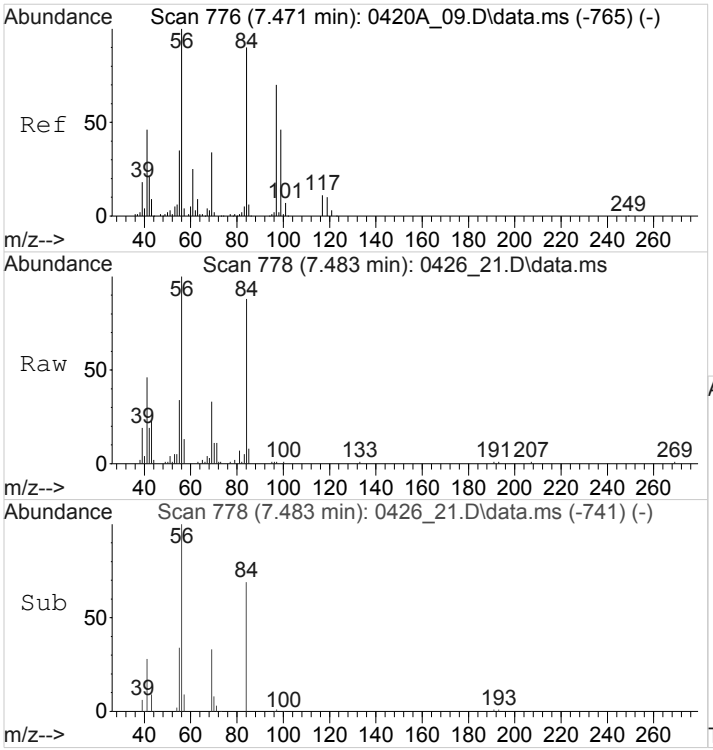


#32
Chloroform
Concen: 3.8351699 ppbv
RT: 7.268 min Scan# 740
Delta R.T. 0.011 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion: 83 Resp: 271156

Ion	Ratio	Lower	Upper
83	100		
85	68.1	51.3	76.9

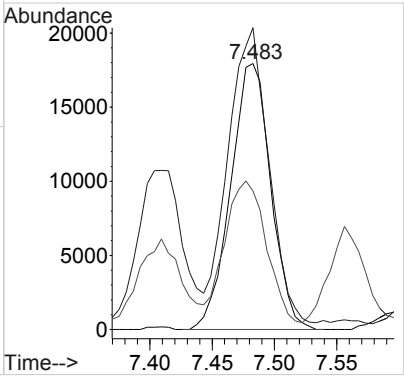


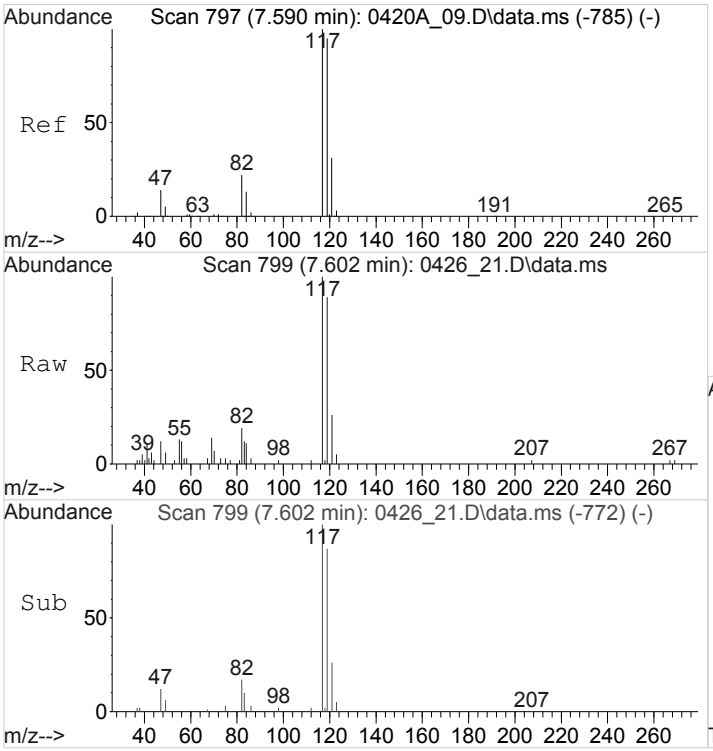


#33
Cyclohexane
Concen: 0.7986450 ppbv
RT: 7.483 min Scan# 778
Delta R.T. 0.011 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion: 84 Resp: 40251

Ion	Ratio	Lower	Upper
84	100		
56	112.7	87.6	131.4
41	54.5	40.2	60.2

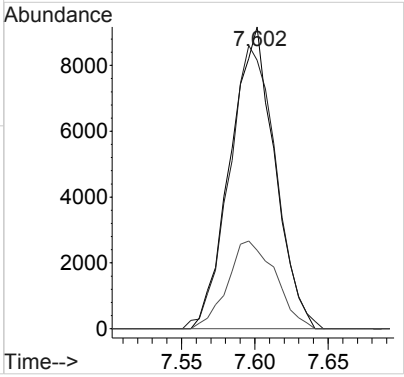


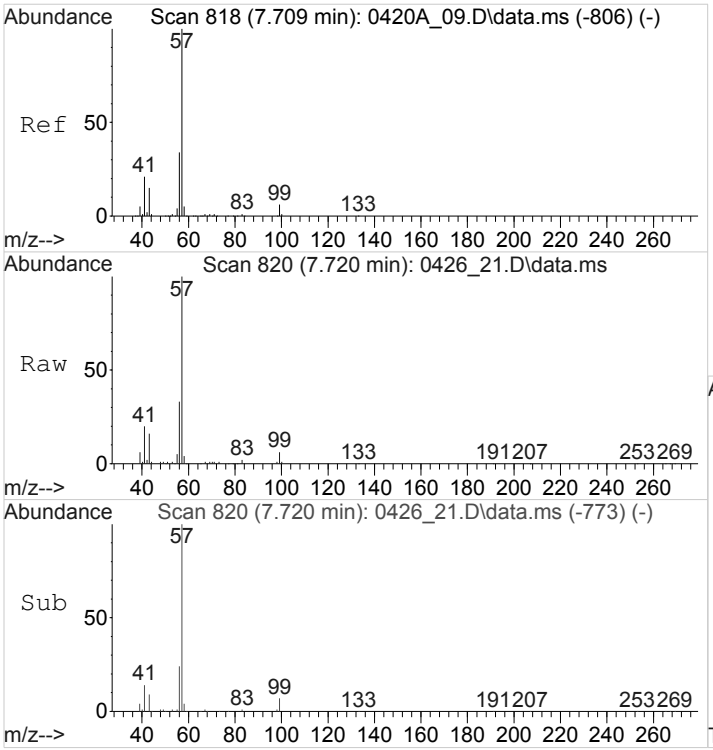


#35
Carbon Tetrachloride
Concen: 0.2623104 ppbv
RT: 7.602 min Scan# 799
Delta R.T. 0.011 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion:117 Resp: 19237

Ion	Ratio	Lower	Upper
117	100		
119	99.6	77.1	115.7
121	31.5	24.8	37.2

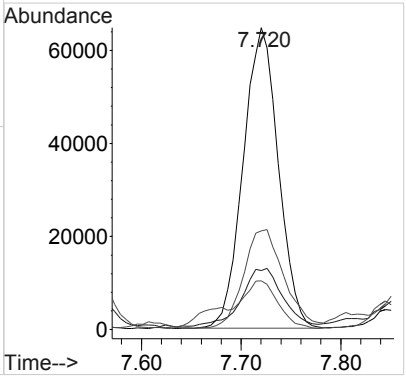


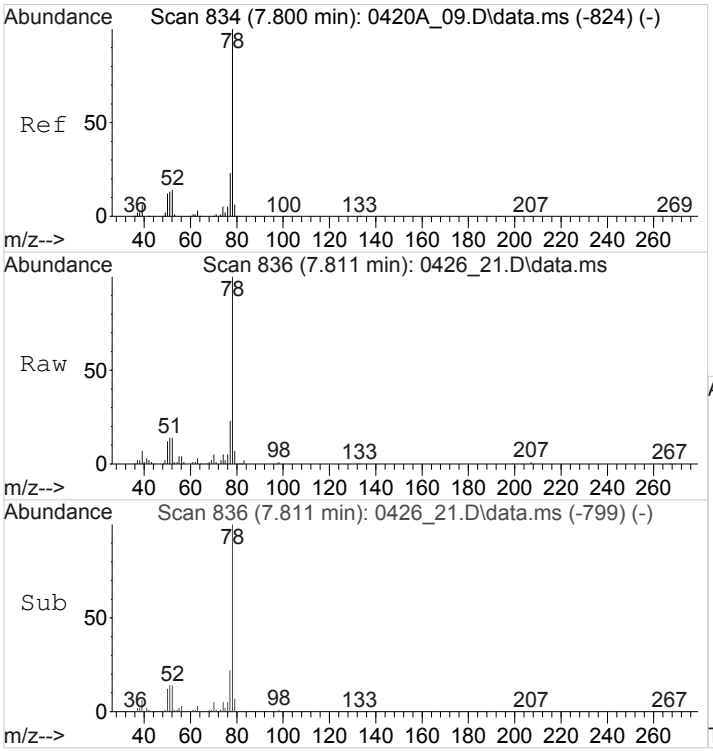


#36
2,2,4-Trimethylpentane
Concen: 0.9183405 ppbv
RT: 7.720 min Scan# 820
Delta R.T. 0.011 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion: 57 Resp: 158292

Ion	Ratio	Lower	Upper
57	100		
41	23.1	16.6	25.0
43	16.3	12.4	18.6
56	37.8	26.6	39.8

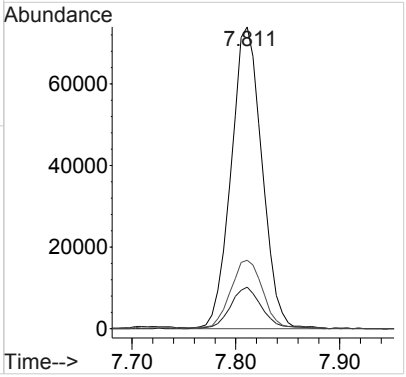


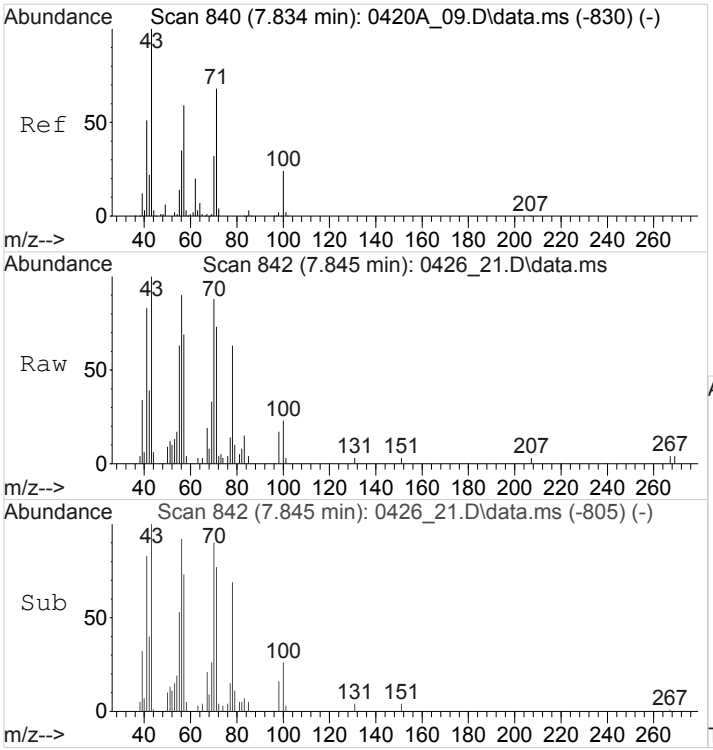


#38
Benzene
Concen: 1.3203230 ppbv
RT: 7.811 min Scan# 836
Delta R.T. 0.011 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion: 78 Resp: 152665

Ion	Ratio	Lower	Upper
78	100		
51	14.4	11.3	16.9
77	24.3	18.6	28.0

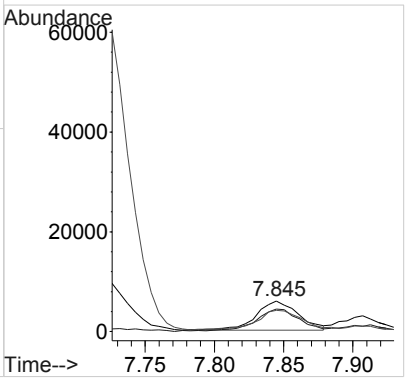


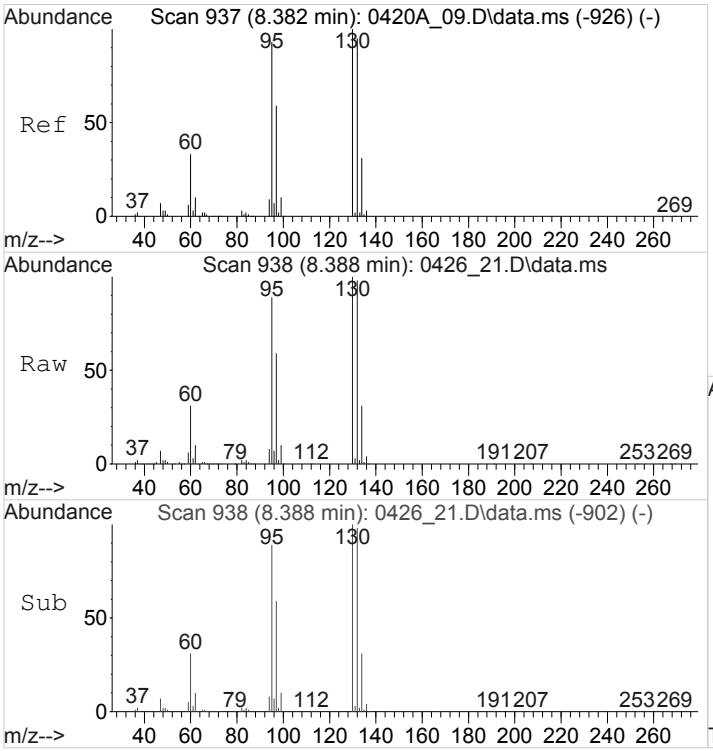


#40
Heptane
Concen: 0.2208355 ppbv
RT: 7.845 min Scan# 842
Delta R.T. 0.011 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion: 43 Resp: 12611

Ion	Ratio	Lower	Upper
43	100		
71	82.2	56.1	84.1
57	82.3	47.1	70.7#

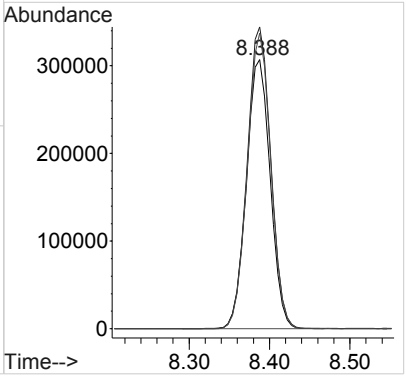


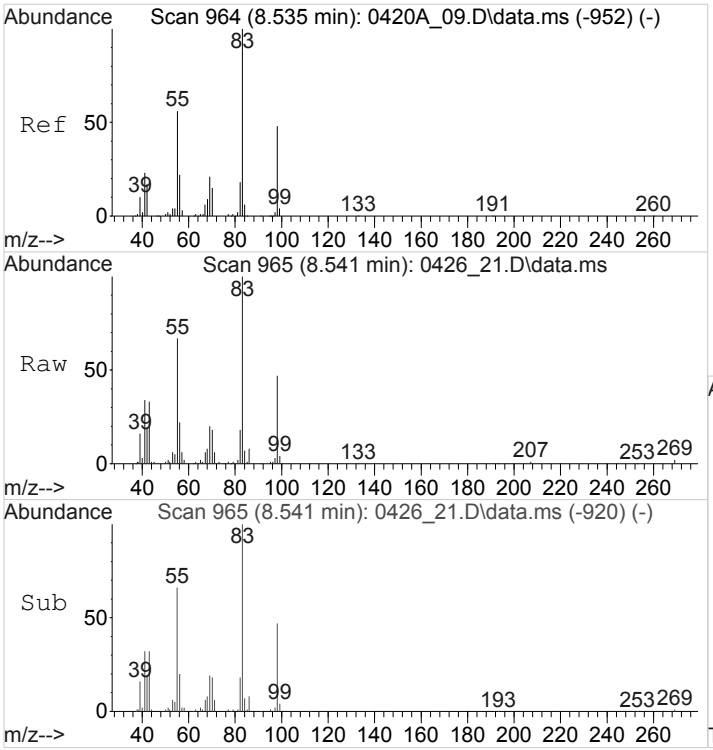


#41
Trichloroethene
Concen: 12.5190310 ppbv
RT: 8.388 min Scan# 938
Delta R.T. 0.006 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion: 95 Resp: 630905

Ion	Ratio	Lower	Upper
95	100		
130	111.5	86.4	129.6
132	108.1	83.6	125.4

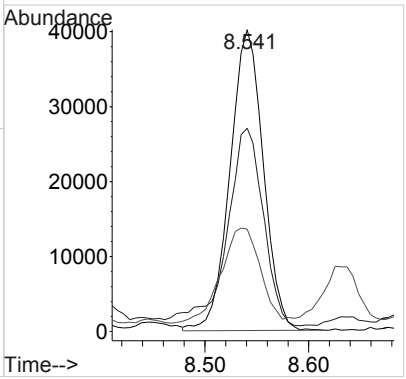


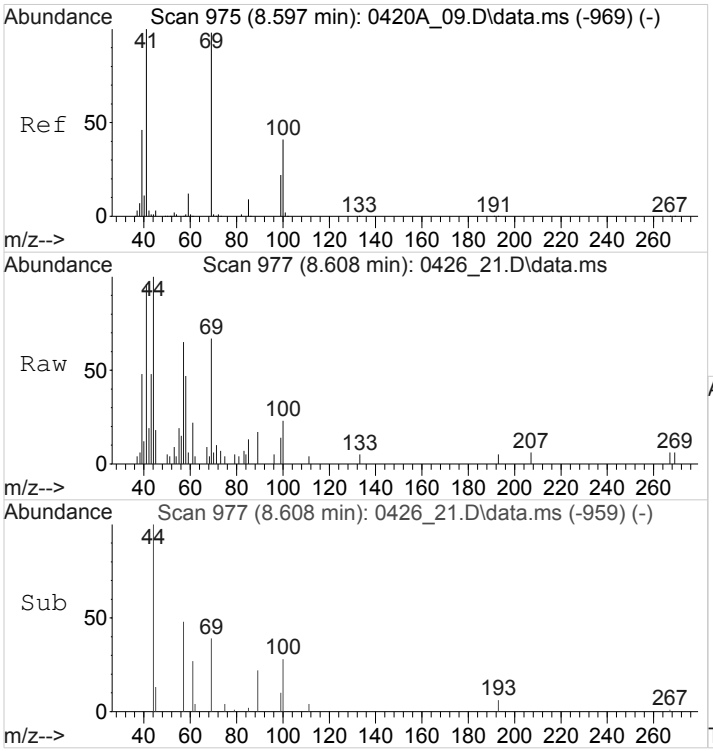


#43
METHYL CYCLOHEXANE
Concen: 1.2940456 ppbv
RT: 8.541 min Scan# 965
Delta R.T. 0.006 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion: 83 Resp: 89632

Ion	Ratio	Lower	Upper
83	100		
55	71.6	58.5	87.7
41	37.7	25.8	38.6

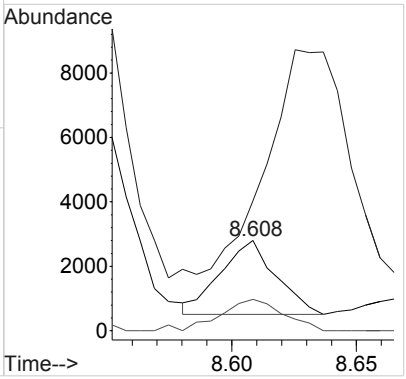


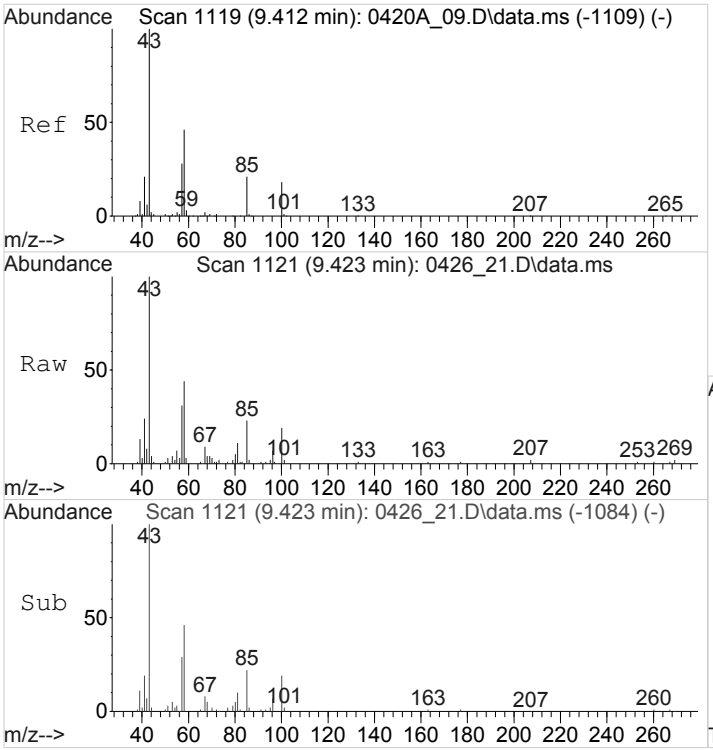


#45
Methyl Methacrylate
Concen: 0.0851065 ppbv
RT: 8.608 min Scan# 977
Delta R.T. 0.011 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion: 69 Resp: 3533

Ion	Ratio	Lower	Upper
69	100		
41	455.2	72.6	108.8#
100	49.0	32.2	48.2#

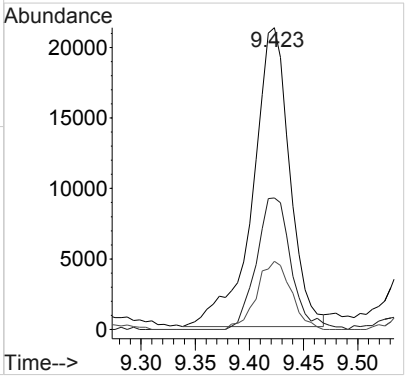


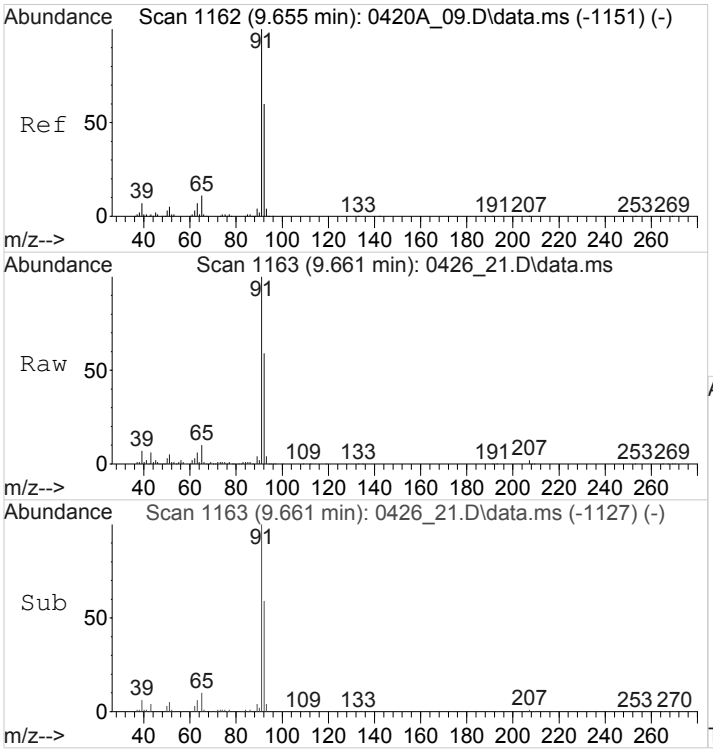


#49
4-Methyl-2-Pentanone (MIBK)
Concen: 0.6003388 ppbv
RT: 9.423 min Scan# 1121
Delta R.T. 0.011 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion: 43 Resp: 50230

Ion	Ratio	Lower	Upper
43	100		
58	41.3	36.7	55.1
85	21.3	16.7	25.1

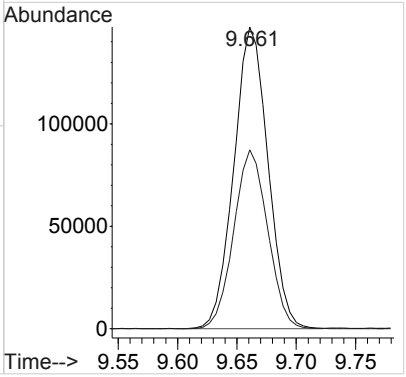


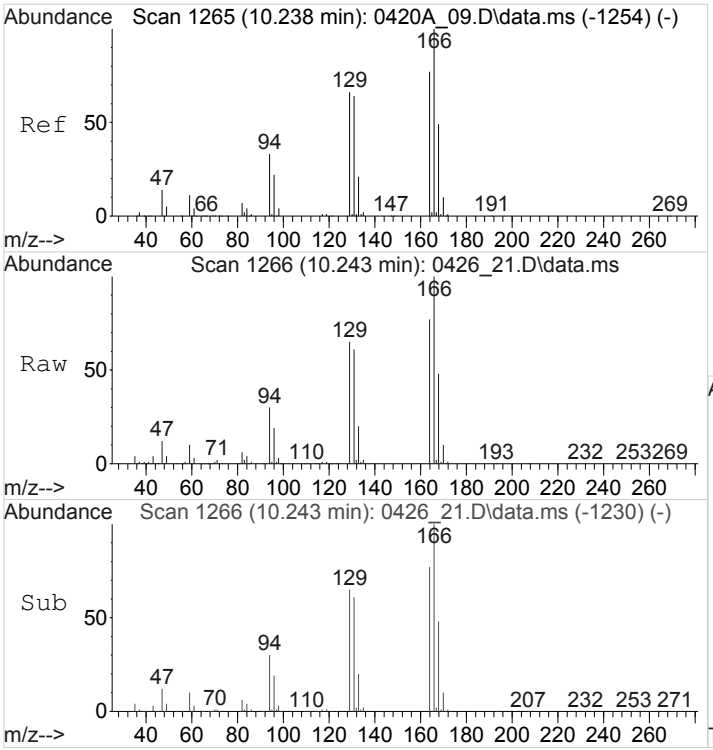


#50
Toluene
Concen: 2.0663056 ppbv
RT: 9.661 min Scan# 1163
Delta R.T. 0.006 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion: 91 Resp: 297081

Ion	Ratio	Lower	Upper
91	100		
92	58.8	48.0	72.0

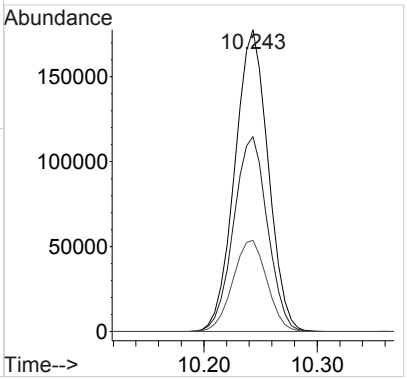


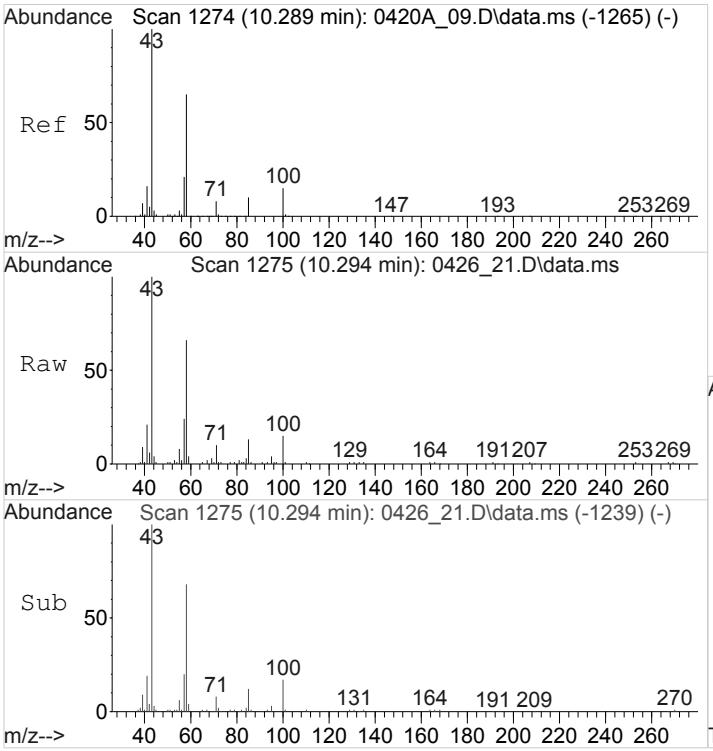


#53
Tetrachloroethene
Concen: 4.7020639 ppbv
RT: 10.243 min Scan# 1266
Delta R.T. 0.006 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion:166 Resp: 363866

Ion	Ratio	Lower	Upper
166	100		
129	65.5	53.7	80.5
94	31.0	27.2	40.8

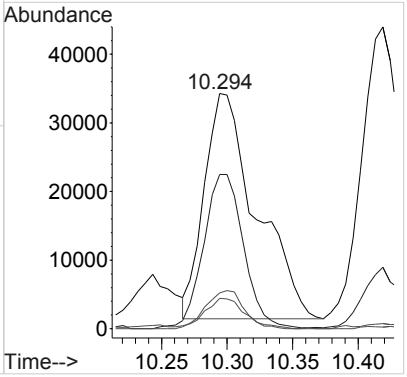


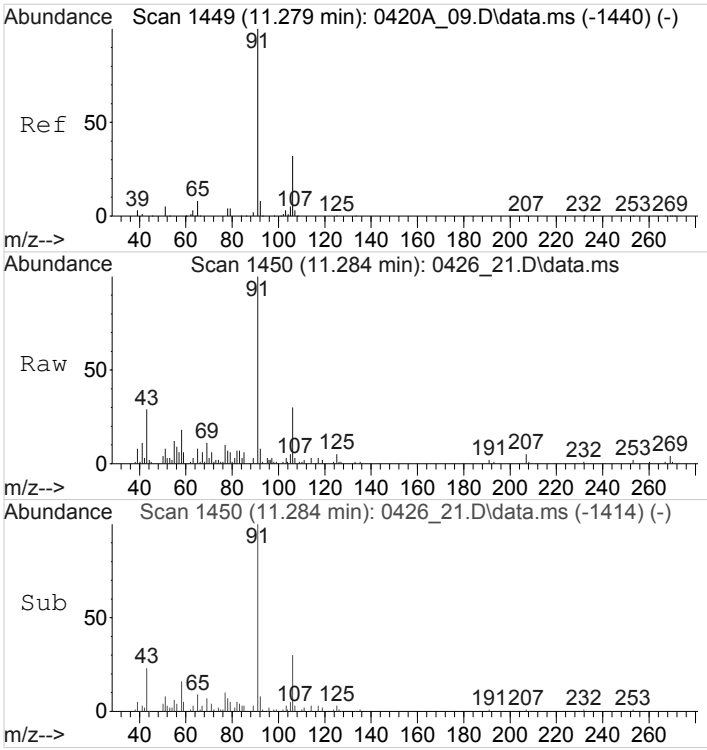


#54
Methyl Butyl Ketone
Concen: 1.1264830 ppbv
RT: 10.294 min Scan# 1275
Delta R.T. 0.006 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion: 43 Resp: 90766

Ion	Ratio	Lower	Upper
43	100		
58	52.8	51.6	77.4
85	10.5	8.6	13.0
100	12.5	11.6	17.4

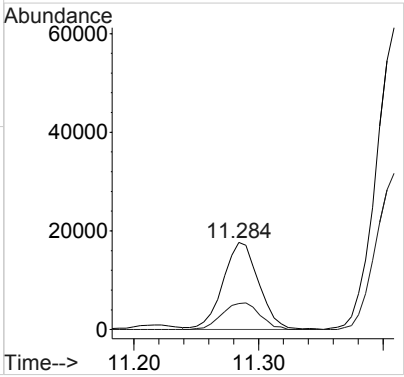


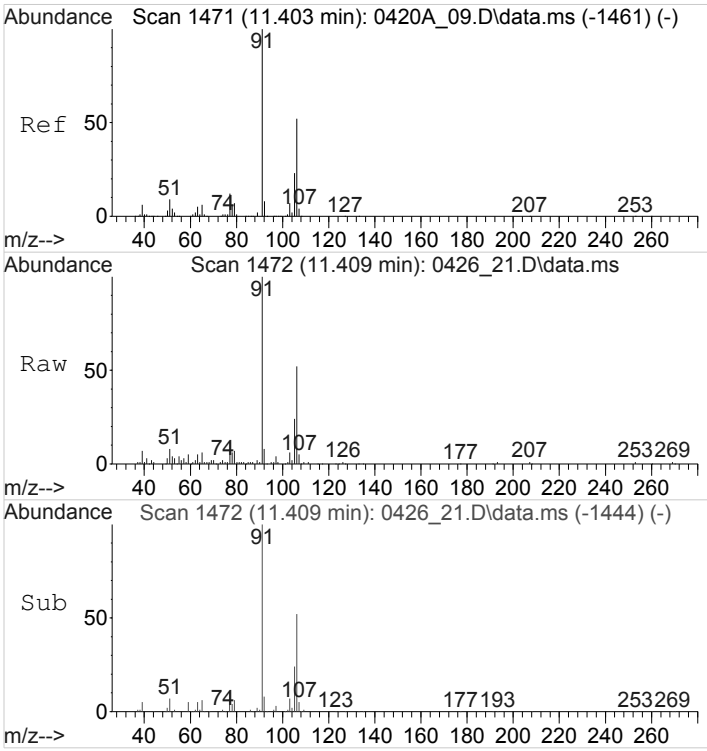


#59
Ethylbenzene
Concen: 0.1823629 ppbv
RT: 11.284 min Scan# 1450
Delta R.T. 0.006 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion: 91 Resp: 35441

Ion	Ratio	Lower	Upper
91	100		
106	32.1	25.9	38.9

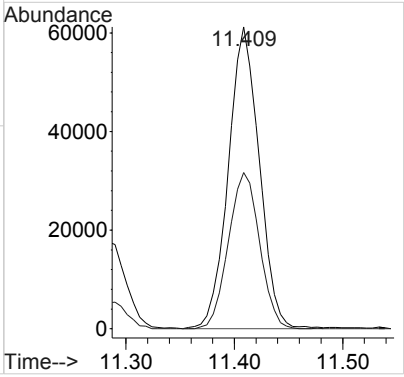


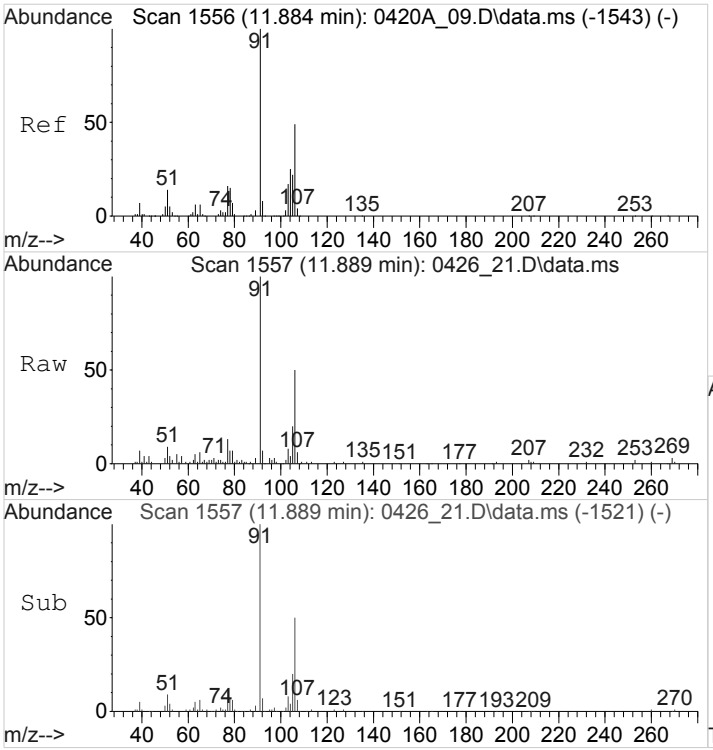


#60
M&P-Xylene
Concen: 0.8166494 ppbv
RT: 11.409 min Scan# 1472
Delta R.T. 0.006 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion: 91 Resp: 121584

Ion	Ratio	Lower	Upper
91	100		
106	52.0	41.5	62.3

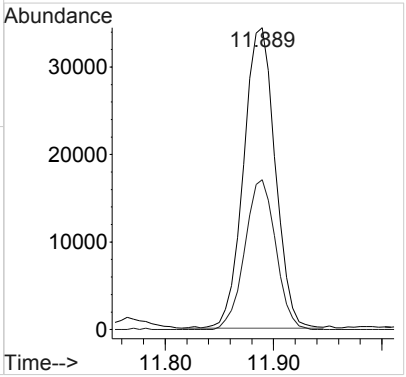


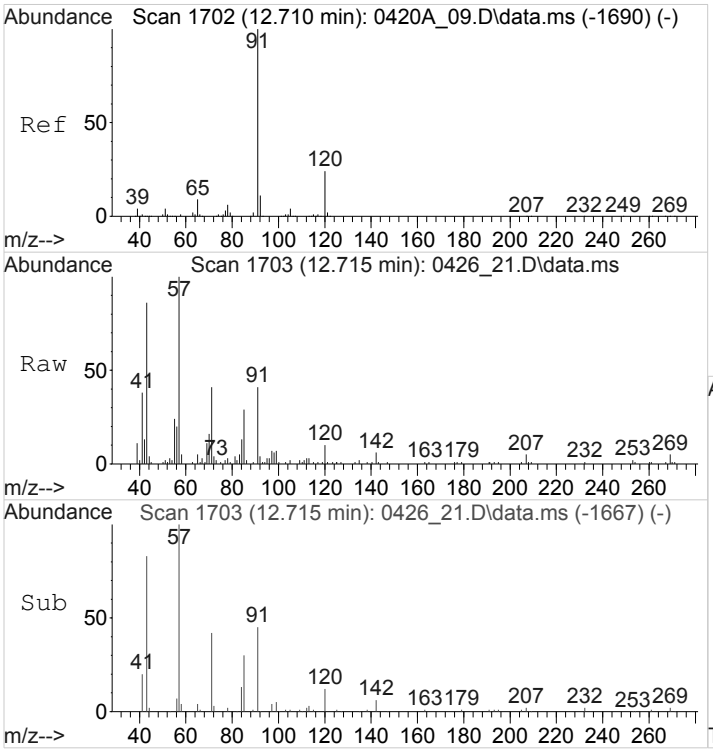


#61
O-Xylene
Concen: 0.4515803 ppbv
RT: 11.889 min Scan# 1557
Delta R.T. 0.006 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion: 91 Resp: 69515

Ion	Ratio	Lower	Upper
91	100		
106	48.7	39.1	58.7

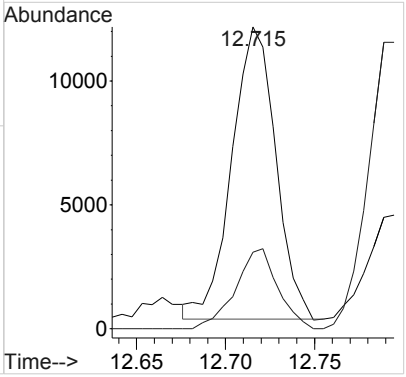


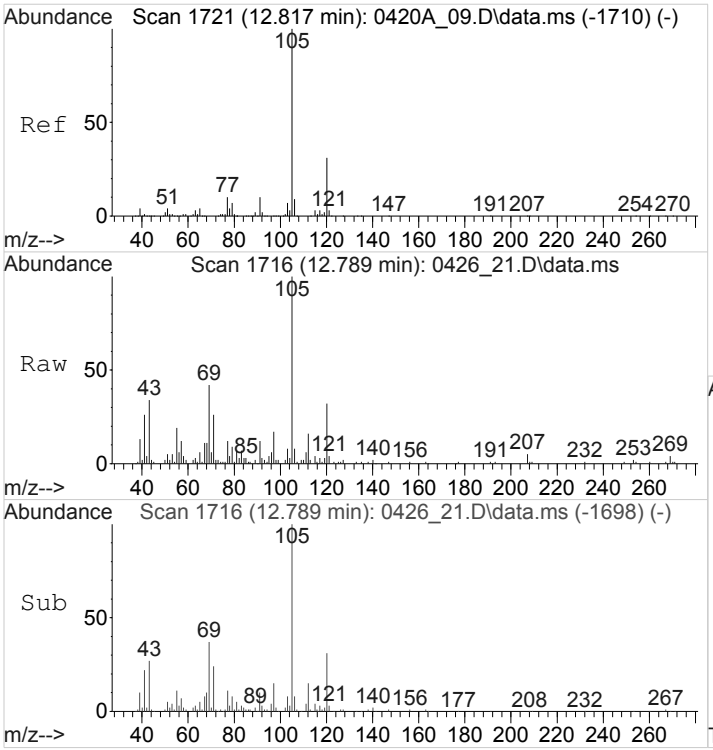


#66
n-Propylbenzene
Concen: 0.0806510 ppbv
RT: 12.715 min Scan# 1703
Delta R.T. 0.006 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion: 91 Resp: 20302

Ion	Ratio	Lower	Upper
91	100		
120	26.3	19.4	29.0

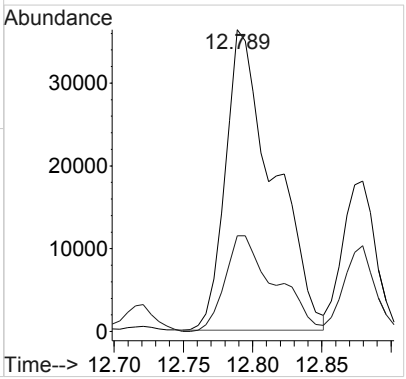


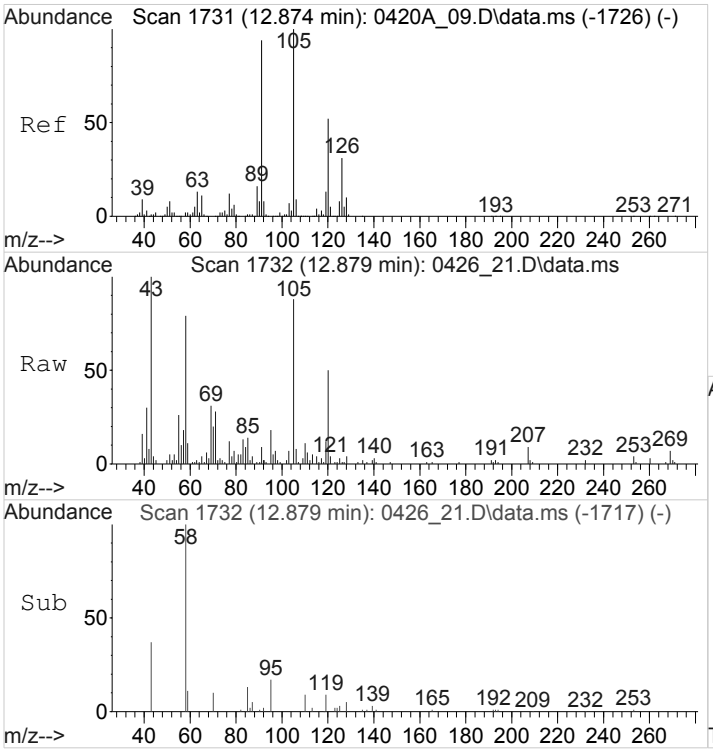


#67
4-Ethyltoluene
Concen: 0.3988289 ppbv
RT: 12.789 min Scan# 1716
Delta R.T. -0.028 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion:105 Resp: 87880

Ion	Ratio	Lower	Upper
105	100		
120	33.1	24.8	37.2

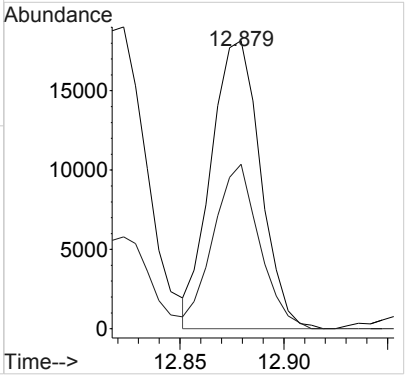


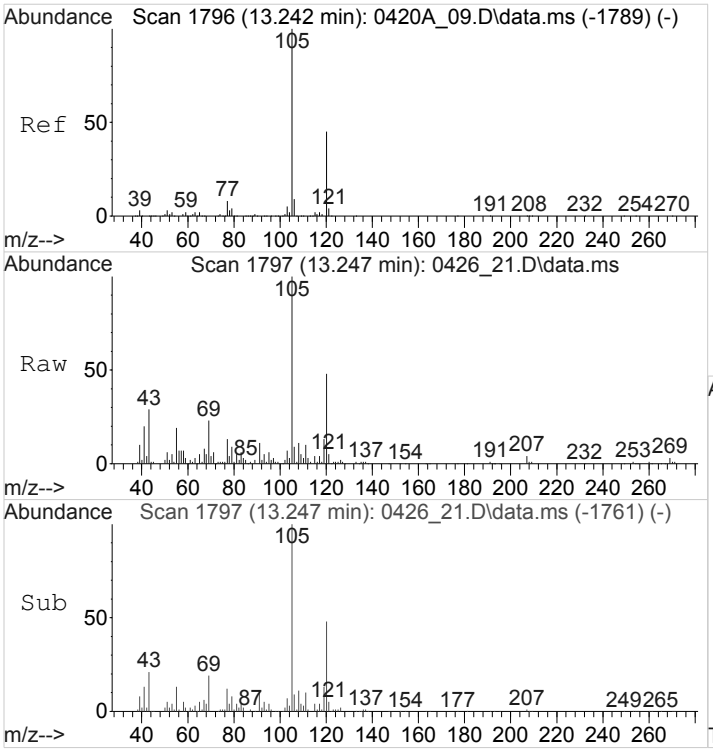


#70
1,3,5-Trimethylbenzene
Concen: 0.1729892 ppbv
RT: 12.879 min Scan# 1732
Delta R.T. 0.006 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion:105 Resp: 30100

Ion	Ratio	Lower	Upper
105	100		
120	53.1	41.4	62.0

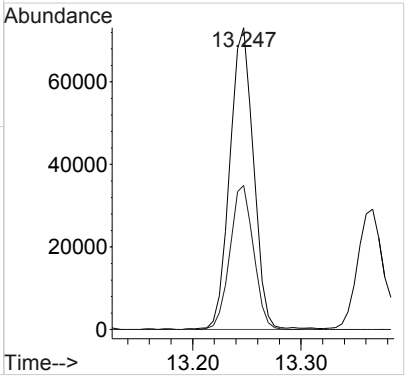


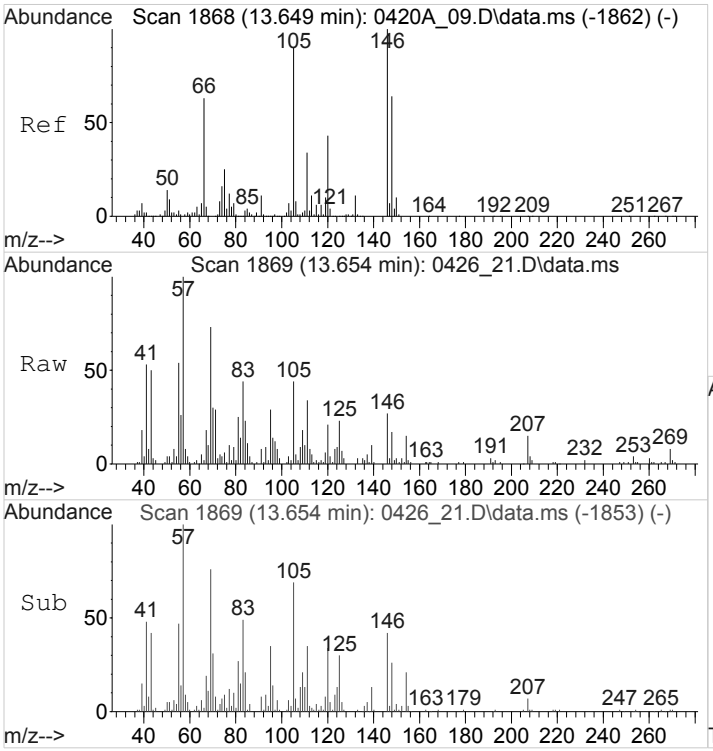


#72
1,2,4-Trimethylbenzene
Concen: 0.6343280 ppbv
RT: 13.247 min Scan# 1797
Delta R.T. 0.006 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion:105 Resp: 111464

Ion	Ratio	Lower	Upper
105	100		
120	47.3	38.8	58.2

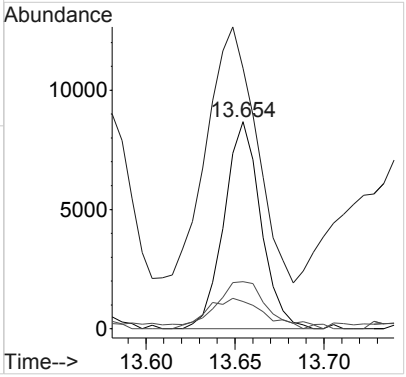


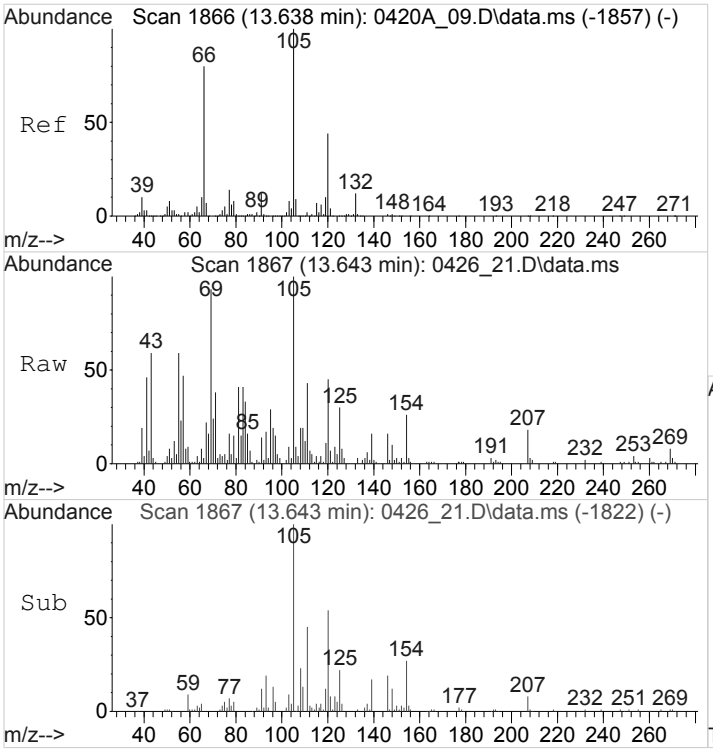


#75
1,4-Dichlorobenzene
Concen: 0.1019552 ppbv
RT: 13.654 min Scan# 1869
Delta R.T. 0.006 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion:146 Resp: 12495

Ion	Ratio	Lower	Upper
146	100		
111	164.7	27.2	40.8#
75	29.9	19.9	29.9#
50	24.1	12.6	19.0#

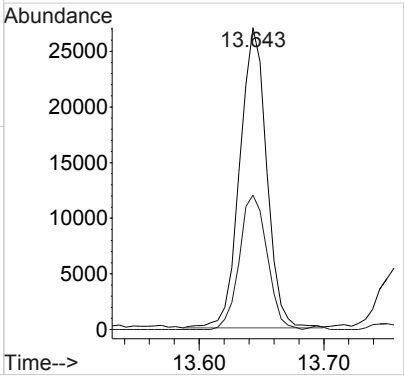


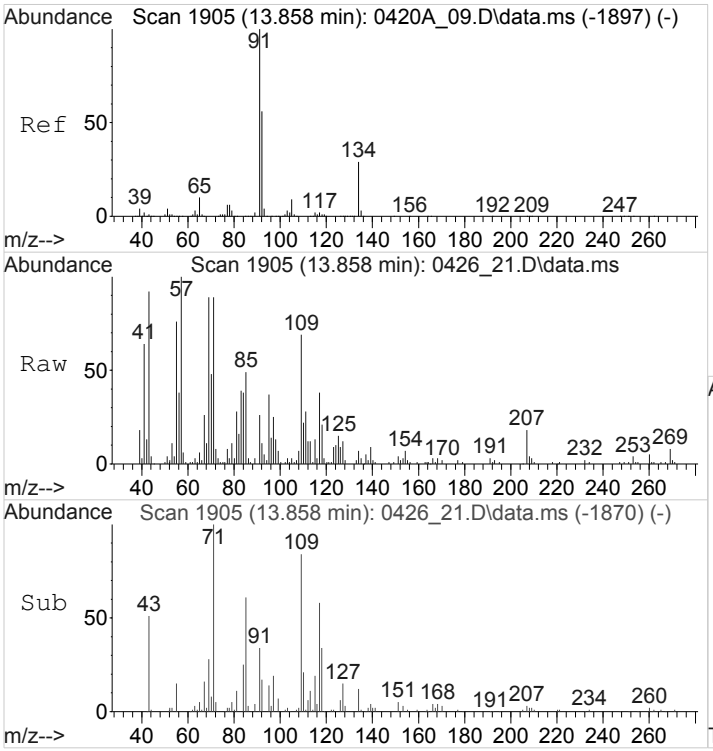


#76
1,2,3-TRIMETHYLBENZENE
Concen: 0.2411770 ppbv
RT: 13.643 min Scan# 1867
Delta R.T. 0.006 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion:105 Resp: 40470

Ion	Ratio	Lower	Upper
105	100		
120	46.1	36.0	54.0

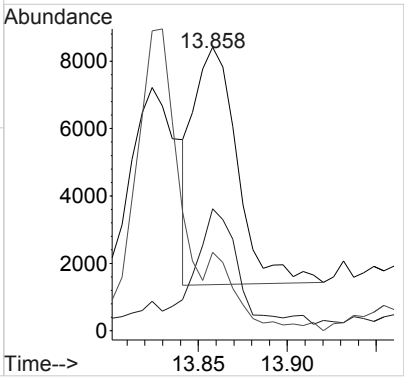


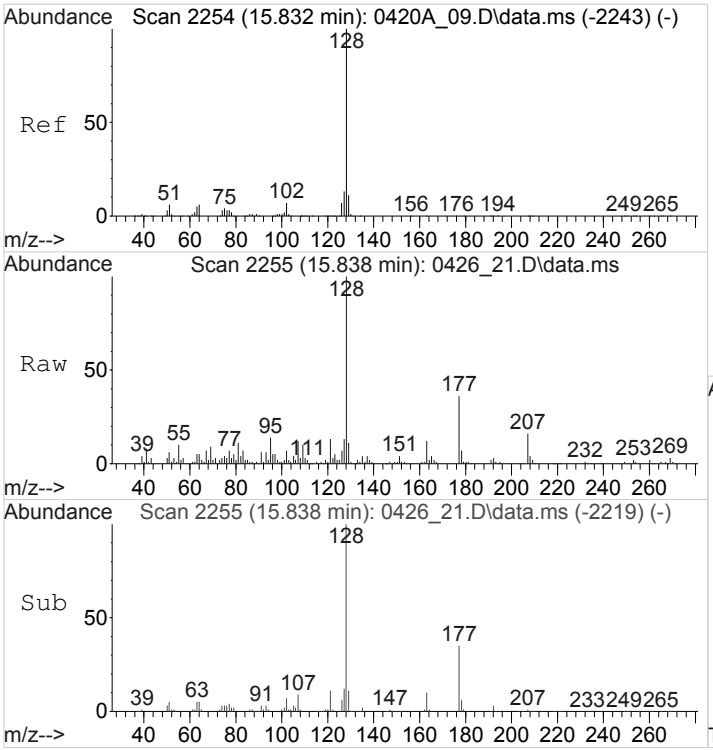


#79
n-Butylbenzene
Concen: 0.0600105 ppbv
RT: 13.858 min Scan# 1905
Delta R.T. -0.000 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion: 91 Resp: 12022

Ion	Ratio	Lower	Upper
91	100		
92	46.9	44.8	67.2
134	0.0	23.4	35.2#

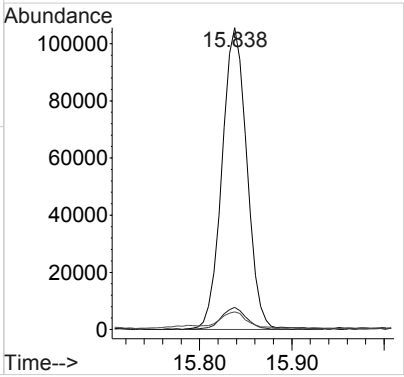


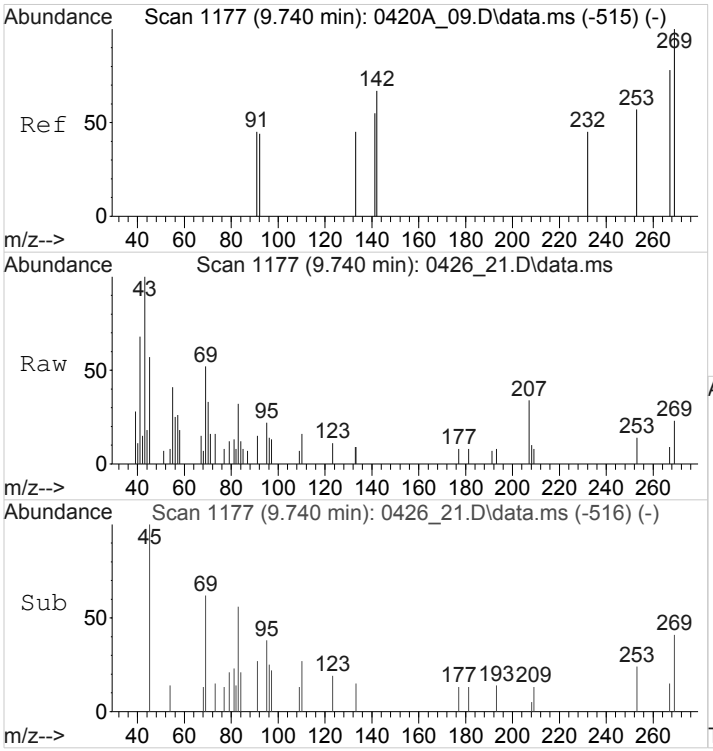


#83
Naphthalene
Concen: 0.7555510 ppbv
RT: 15.838 min Scan# 2255
Delta R.T. 0.006 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion:128 Resp: 198609

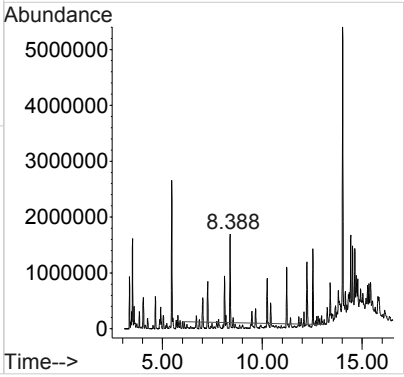
Ion	Ratio	Lower	Upper
128	100		
102	7.6	5.9	8.9
51	5.7	4.6	7.0





#84
TPH (GC/MS) Low Fraction
Concen: 80.7514479 ppbv m
RT: 9.740 min Scan# 1177
Delta R.T. 0.000 min
Lab File: 0426_21.D
Acq: 26 Apr 2018 10:13 pm

Tgt Ion:TIC Resp:22401048



1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS-11

ESC Sample ID:	L988471-11	**SDG:**	L988471
Client Sample ID:	SS-11	**Collected Date/Time:**	04/23/18 11:36
Lab File ID:	0427_12	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS2	**Preparation Date/Time:**	04/27/18 17:19
Analytical Batch:	WG1103956	**Analysis Date/Time:**	04/27/18 17:19
Dilution Factor:	80	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	5 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	**CAS**	**RT**	**Result**	**Qualifier**	**MDL**	**RDL**
			ppbv		*ppbv*	*ppbv*
Tetrachloroethylene	127-18-4	12.21	776		3.98	16.0

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_12.D
Acq On : 27 Apr 2018 5:19 pm
Operator : 564
Sample : L988471-11 80x WG1103956
Misc :
ALS Vial : 12 Sample Multiplier: 80
InstName : AIRMS2

Quant Time: Apr 28 07:50:37 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:08:22 2018
Response via : Initial Calibration

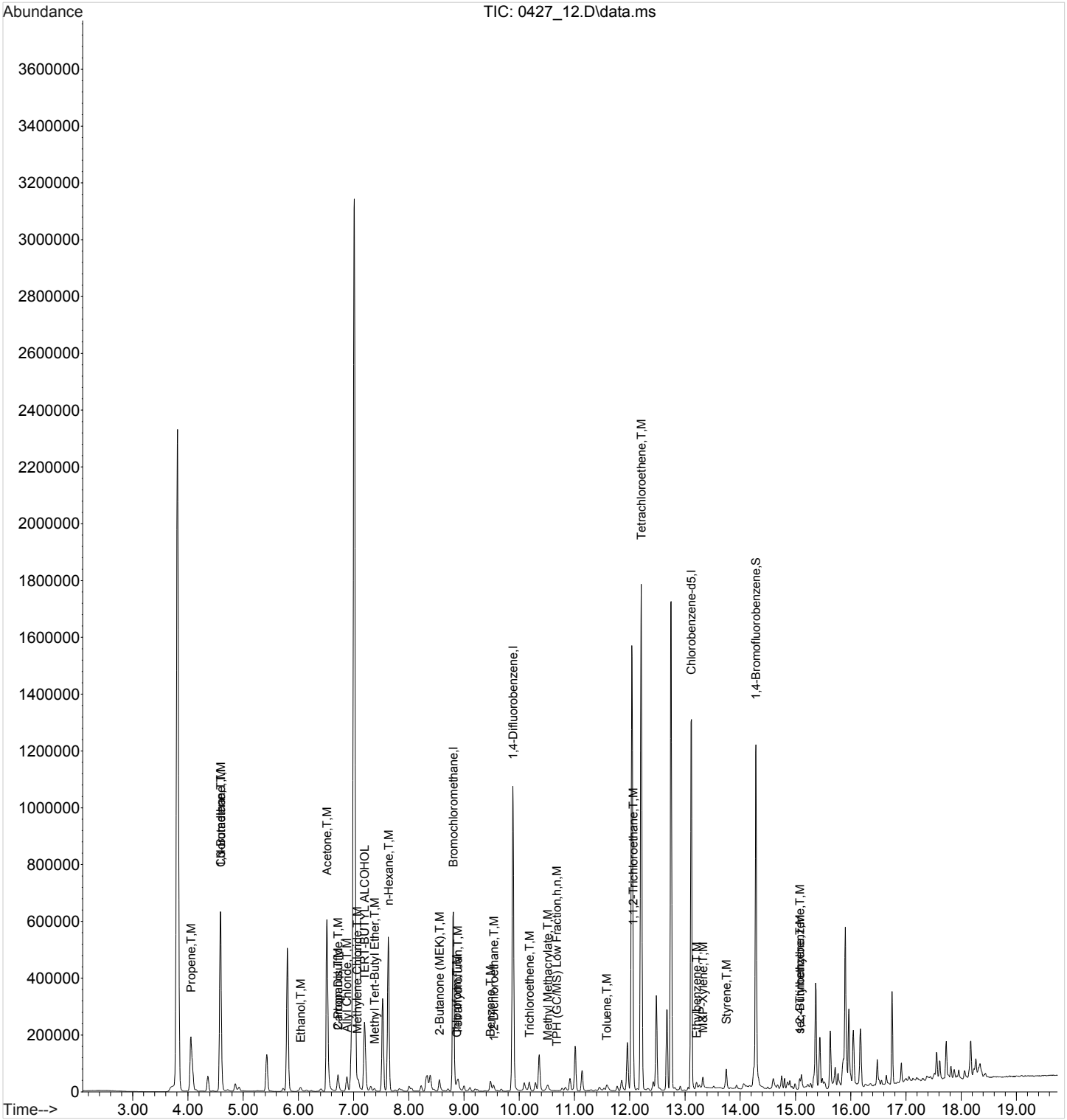
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.806	130	1772107	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	9.889	114	7592450	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	13.116	117	6579408	4.0000000	ppbv	# 0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	14.285	95	3824790	3.6792221	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 91.98%			
Target Compounds						Qvalue
2) Propene	4.055	41	812368	136.5765163	ppbv #	81
7) Chloromethane	4.592	50	304112	54.3016189	ppbv #	80
9) 1,3-Butadiene	4.591	39	2694882	452.5523797	ppbv #	16
14) Ethanol	6.043	45	222687	119.4393282	ppbv	100
17) Acetone	6.520	43	9084682	1019.6061962	ppbv	100
18) 2-Propanol	6.723	45	197609	16.4440132	ppbv #	59
19) Carbon Disulfide	6.721	76	736836	83.9604583	ppbv #	85
20) Allyl Chloride	6.880	41	240978	24.7263708	ppbv #	54
21) Methylene Chloride	7.061	49	118655	16.0189776	ppbv #	1
22) TERT-BUTYL ALCOHOL	7.200	59	3398671	252.2890230	ppbv #	51
23) Methyl Tert-Butyl Ether	7.379	73	84695	5.7906671	ppbv #	48
25) n-Hexane	7.632	57	2554952	278.5083258	ppbv	96
29) 2-Butanone (MEK)	8.558	72	106749	41.2066637	ppbv	97
31) Tetrahydrofuran	8.887	42	47739	5.0626373	ppbv #	1
32) Chloroform	8.867	83	110030	11.7697225	ppbv	97
36) 2,2,4-Trimethylpentane	9.484	57	111888	3.3979102	ppbv #	74
38) Benzene	9.477	78	79970	5.0153738	ppbv #	73
39) 1,2-Dichloroethane	9.534	62	156854	19.5258778	ppbv	95
40) Heptane	9.675	43	38966	2.5319562	ppbv #	34
41) Trichloroethene	10.182	95	106938	18.4320640	ppbv	99
45) Methyl Methacrylate	10.520	69	76815	12.9192111	ppbv	99
49) 4-Methyl-2-Pentanone (...	11.383	43	34466	1.7247320	ppbv #	51
50) Toluene	11.585	91	145568	8.4613371	ppbv	99
52) 1,1,2-Trichloroethane	12.063	97	289822	54.4420509	ppbv	91
53) Tetrachloroethene	12.209	166	5044967	775.5019938	ppbv	97
54) Methyl Butyl Ketone	12.320	43	39301	2.2641118	ppbv #	90
59) Ethylbenzene	13.212	91	133702	5.3841998	ppbv #	46
60) M&P-Xylene	13.327	91	203405	10.6364690	ppbv	96
61) O-Xylene	13.732	91	56916	2.9758485	ppbv	98
62) Styrene	13.750	104	311291	21.8632693	ppbv #	74
64) Isopropylbenzene	14.079	105	40382	1.6073954	ppbv #	56
66) n-Propylbenzene	14.500	91	52138	1.6446217	ppbv #	1
67) 4-Ethyltoluene	14.616	105	64052	2.5062016	ppbv #	48
68) 2-Chlorotoluene	14.499	91	49146	2.2322829	ppbv #	51
70) 1,3,5-Trimethylbenzene	14.680	105	51361	2.4130282	ppbv #	29
72) 1,2,4-Trimethylbenzene	15.080	105	161927	7.8969518	ppbv	94
73) sec-Butylbenzene	15.079	105	160337	5.1623424	ppbv #	77
76) 1,2,3-TRIMETHYLBENZENE	15.537	105	59871	2.8175800	ppbv	93
84) TPH (GC/MS) Low Fraction	10.675	TIC	134410532m	2641.5117944	ppbv	

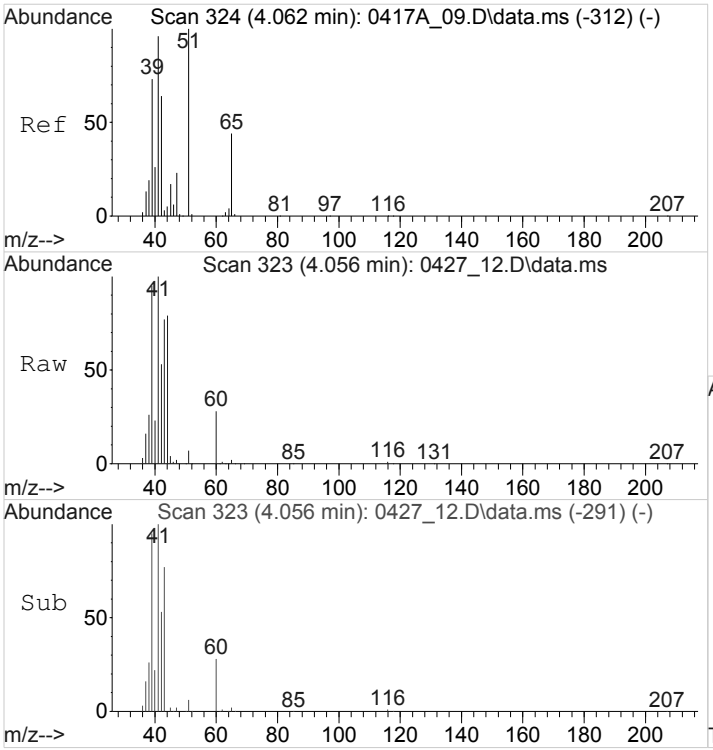
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_12.D
Acq On : 27 Apr 2018 5:19 pm
Operator : 564
Sample : L988471-11 80x WG1103956
Misc :
ALS Vial : 12 Sample Multiplier: 80
InstName : AIRMS2

Quant Time: Apr 28 07:50:37 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:08:22 2018
Response via : Initial Calibration

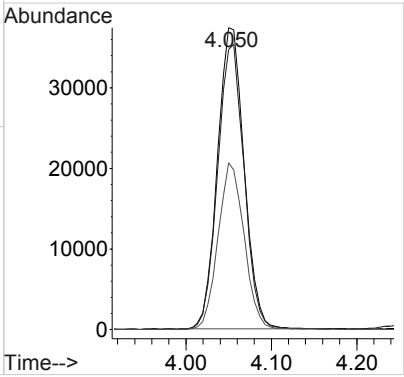


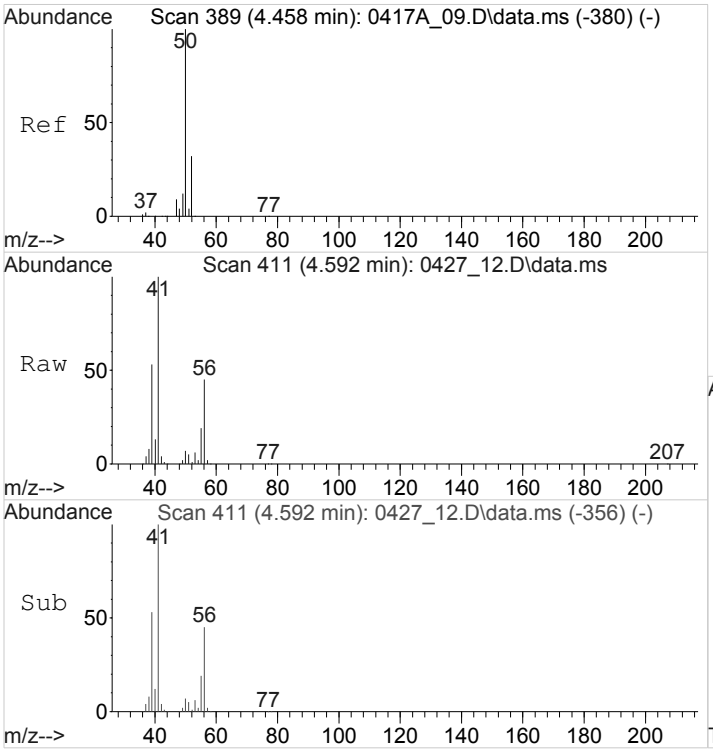


#2
Propene
Concen: 136.5765163 ppbv
RT: 4.055 min Scan# 323
Delta R.T. -0.008 min
Lab File: 0427_12.D
Acq: 27 Apr 2018 5:19 pm

Tgt Ion: 41 Resp: 812368

Ion	Ratio	Lower	Upper
41	100		
39	93.1	57.8	86.8#
42	53.9	50.5	75.7

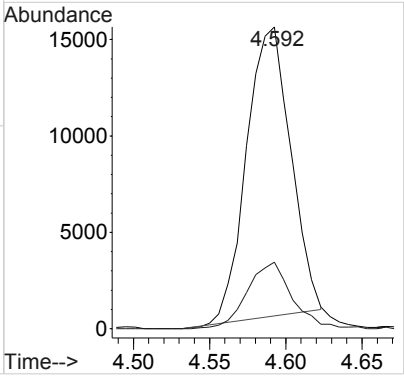


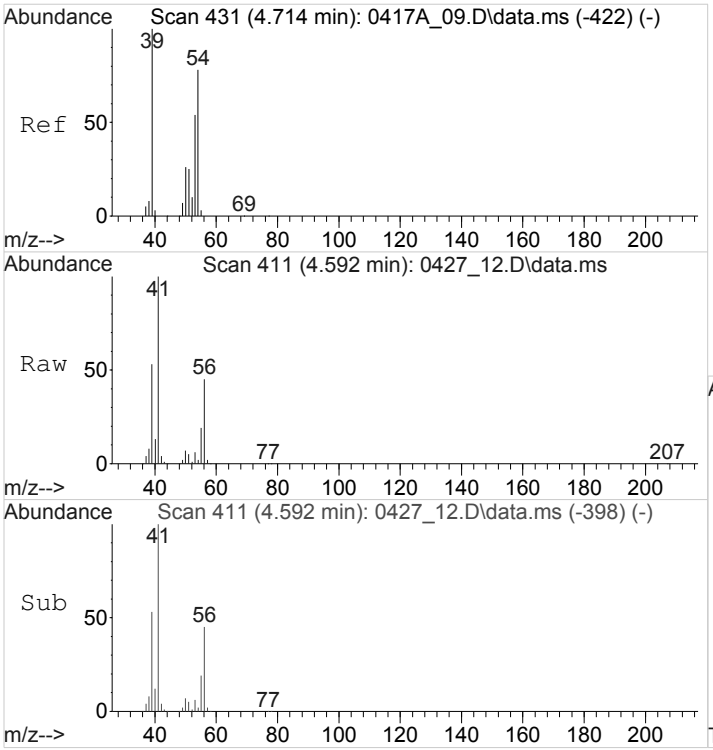


#7
Chloromethane
Concen: 54.3016189 ppbv
RT: 4.592 min Scan# 411
Delta R.T. 0.136 min
Lab File: 0427_12.D
Acq: 27 Apr 2018 5:19 pm

Tgt Ion: 50 Resp: 304112

Ion	Ratio	Lower	Upper
50	100		
52	20.7	25.5	38.3#

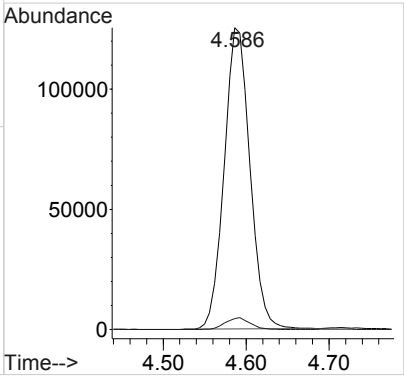


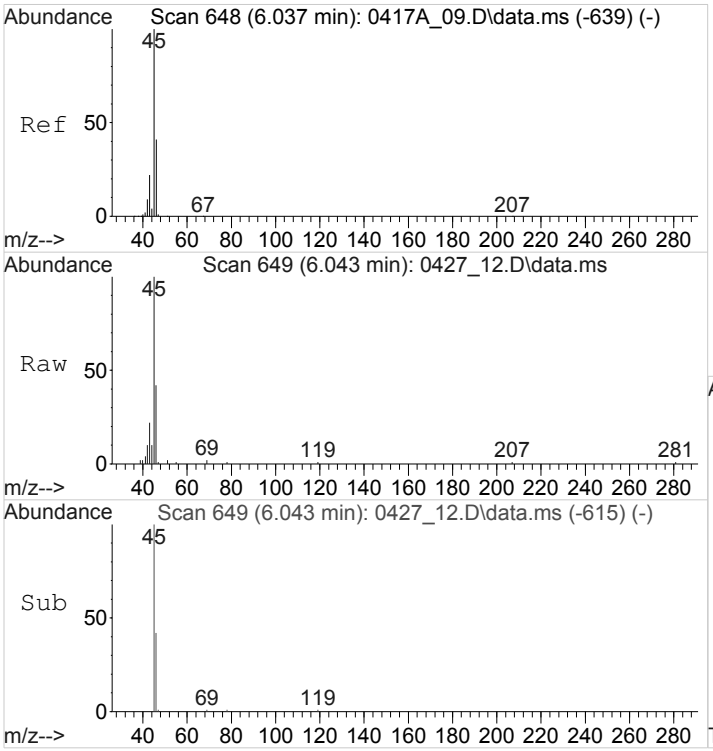


#9
1,3-Butadiene
Concen: 452.5523797 ppbv
RT: 4.591 min Scan# 411
Delta R.T. -0.121 min
Lab File: 0427_12.D
Acq: 27 Apr 2018 5:19 pm

Tgt Ion: 39 Resp: 2694882

Ion	Ratio	Lower	Upper
39	100		
54	3.8	60.6	91.0#

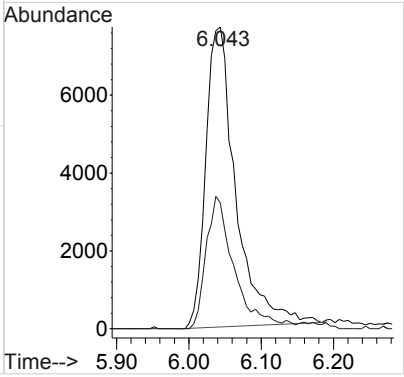


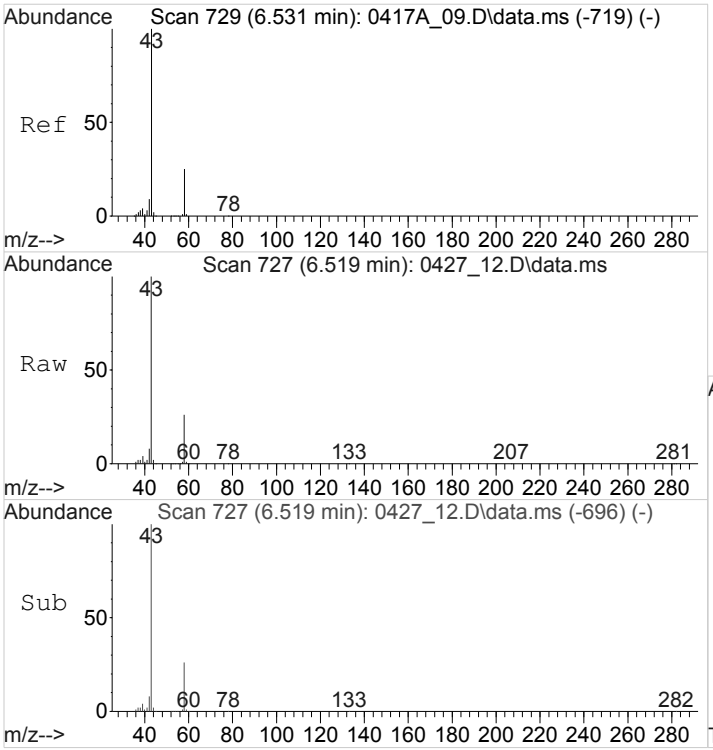


#14
Ethanol
Concen: 119.4393282 ppbv
RT: 6.043 min Scan# 649
Delta R.T. 0.006 min
Lab File: 0427_12.D
Acq: 27 Apr 2018 5:19 pm

Tgt Ion: 45 Resp: 222687

Ion	Ratio	Lower	Upper
45	100		
46	39.4	31.5	47.3

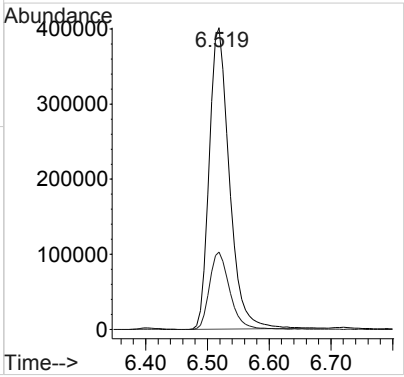


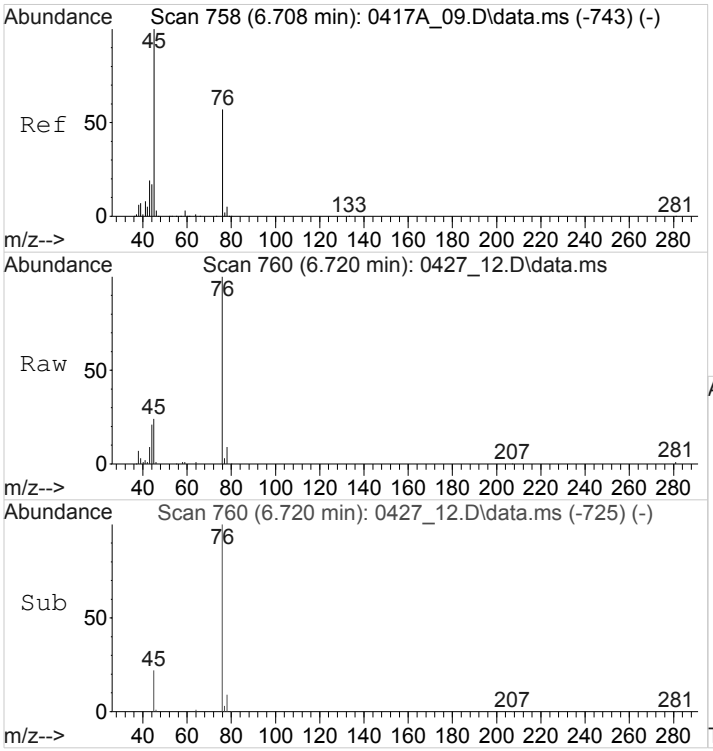


#17
Acetone
Concen: 1019.6061962 ppbv
RT: 6.520 min Scan# 727
Delta R.T. -0.011 min
Lab File: 0427_12.D
Acq: 27 Apr 2018 5:19 pm

Tgt Ion: 43 Resp: 9084682

Ion	Ratio	Lower	Upper
43	100		
58	25.7	20.6	30.8

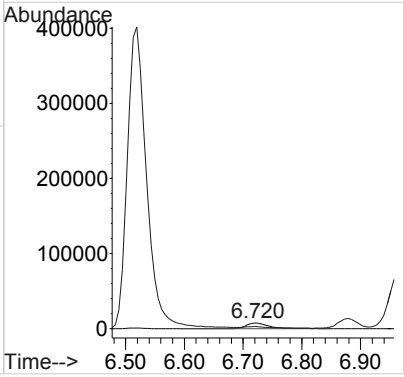


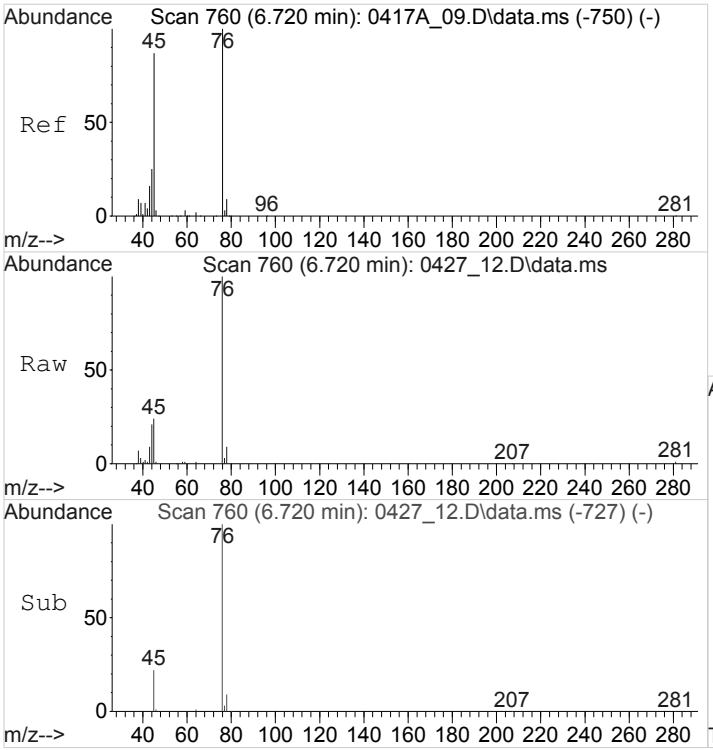


#18
2-Propanol
Concen: 16.4440132 ppbv
RT: 6.723 min Scan# 760
Delta R.T. 0.014 min
Lab File: 0427_12.D
Acq: 27 Apr 2018 5:19 pm

Tgt Ion: 45 Resp: 197609

Ion	Ratio	Lower	Upper
45	100		
43	0.0	14.4	21.6#

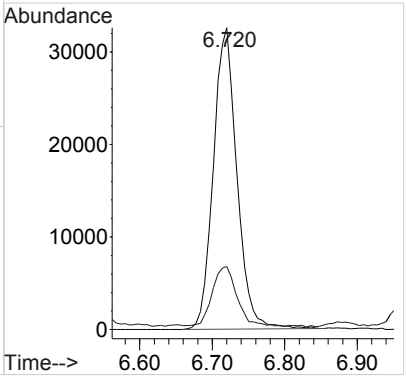


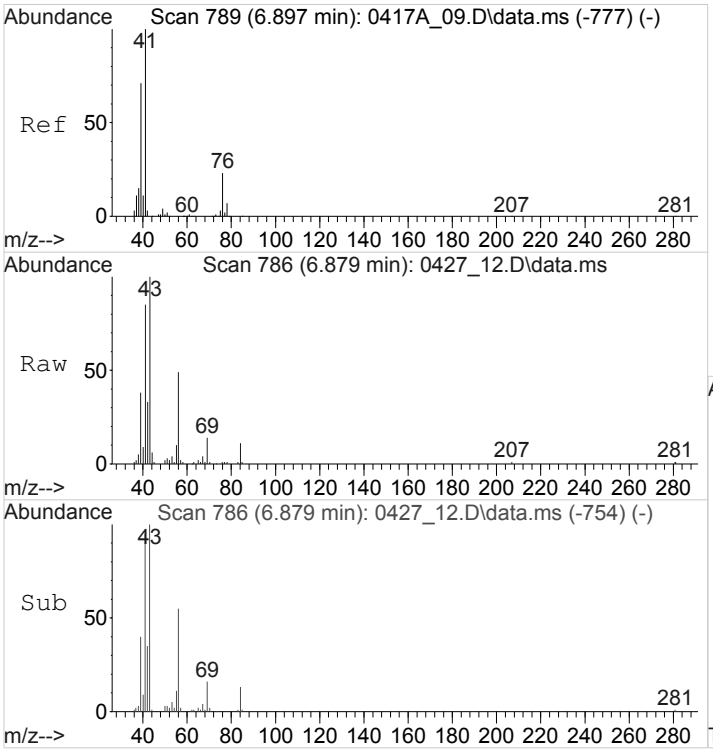


#19
Carbon Disulfide
Concen: 83.9604583 ppbv
RT: 6.721 min Scan# 760
Delta R.T. -0.001 min
Lab File: 0427_12.D
Acq: 27 Apr 2018 5:19 pm

Tgt Ion: 76 Resp: 736836

Ion	Ratio	Lower	Upper
76	100		
44	19.5	21.9	32.9#

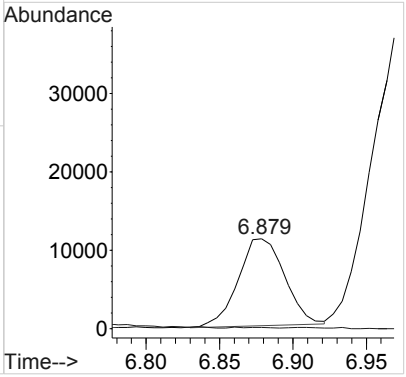


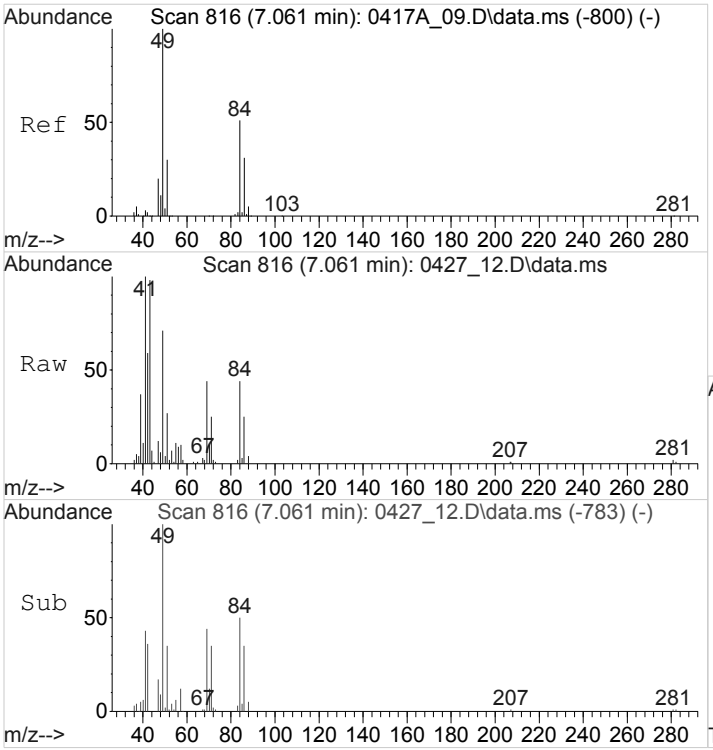


#20
Allyl Chloride
Concen: 24.7263708 ppbv
RT: 6.880 min Scan# 786
Delta R.T. -0.014 min
Lab File: 0427_12.D
Acq: 27 Apr 2018 5:19 pm

Tgt Ion: 41 Resp: 240978

Ion	Ratio	Lower	Upper
41	100		
76	0.0	17.4	26.2#

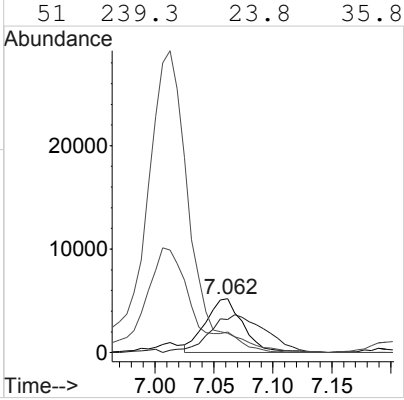


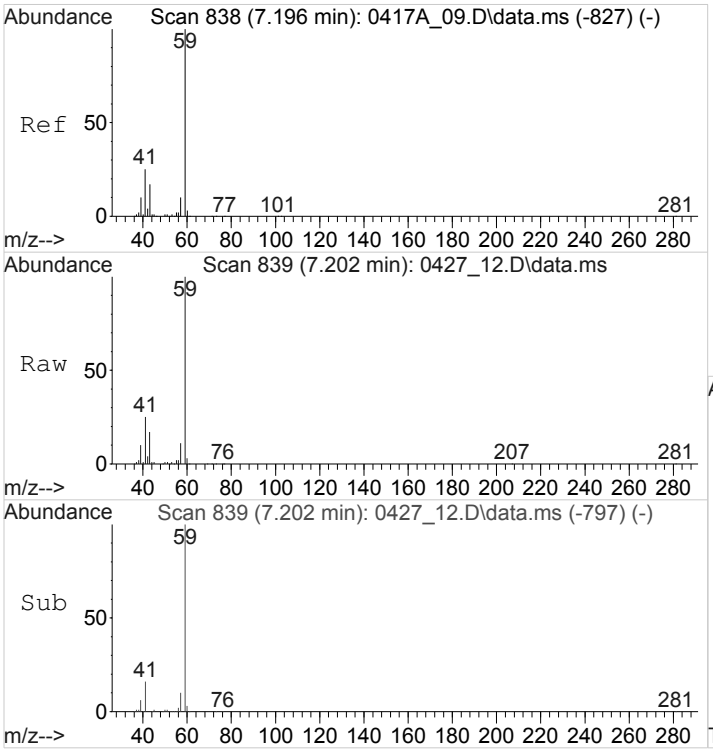


#21
Methylene Chloride
Concen: 16.0189776 ppbv
RT: 7.061 min Scan# 816
Delta R.T. -0.000 min
Lab File: 0427_12.D
Acq: 27 Apr 2018 5:19 pm

Tgt Ion: 49 Resp: 118655

Ion	Ratio	Lower	Upper
49	100		
84	98.8	39.4	59.2#
86	621.4	24.5	36.7#
51	239.3	23.8	35.8#

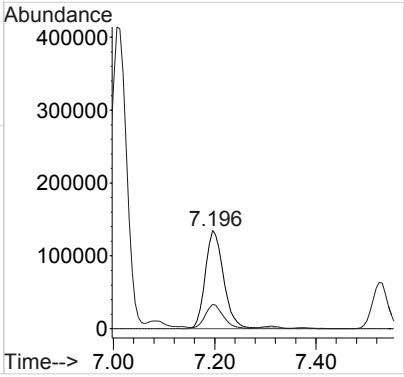


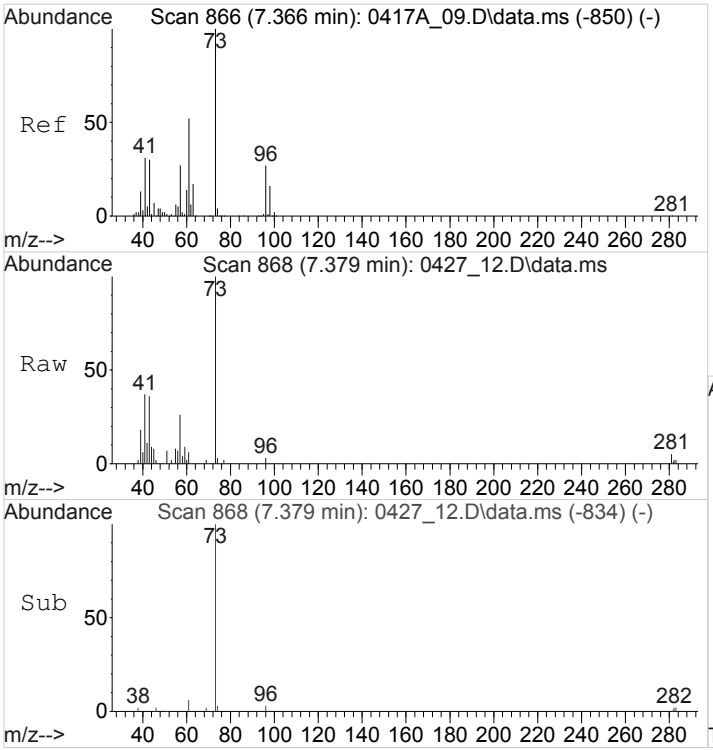


#22
TERT-BUTYL ALCOHOL
Concen: 252.2890230 ppbv
RT: 7.200 min Scan# 839
Delta R.T. 0.004 min
Lab File: 0427_12.D
Acq: 27 Apr 2018 5:19 pm

Tgt Ion: 59 Resp: 3398671

Ion	Ratio	Lower	Upper
59	100		
41	0.0	19.8	29.6#

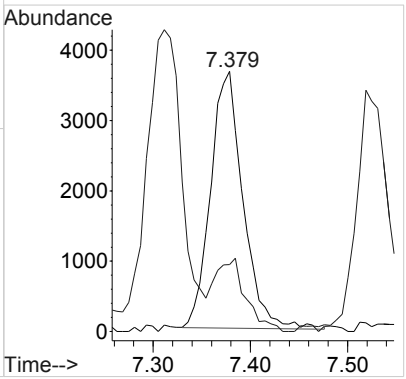


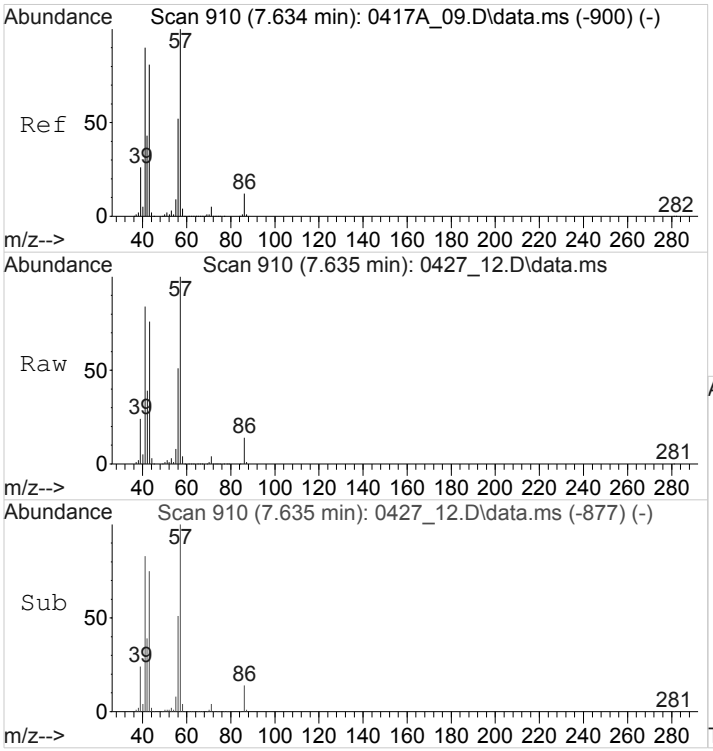


#23
Methyl Tert-Butyl Ether
Concen: 5.7906671 ppbv
RT: 7.379 min Scan# 868
Delta R.T. 0.010 min
Lab File: 0427_12.D
Acq: 27 Apr 2018 5:19 pm

Tgt Ion: 73 Resp: 84695

Ion	Ratio	Lower	Upper
73	100		
57	0.0	21.8	32.6#

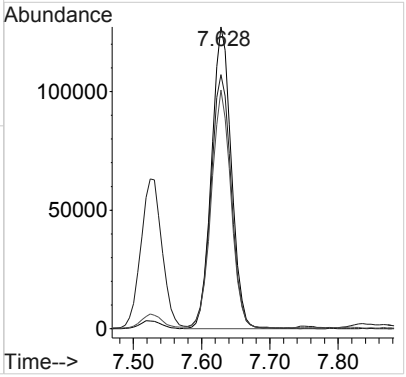


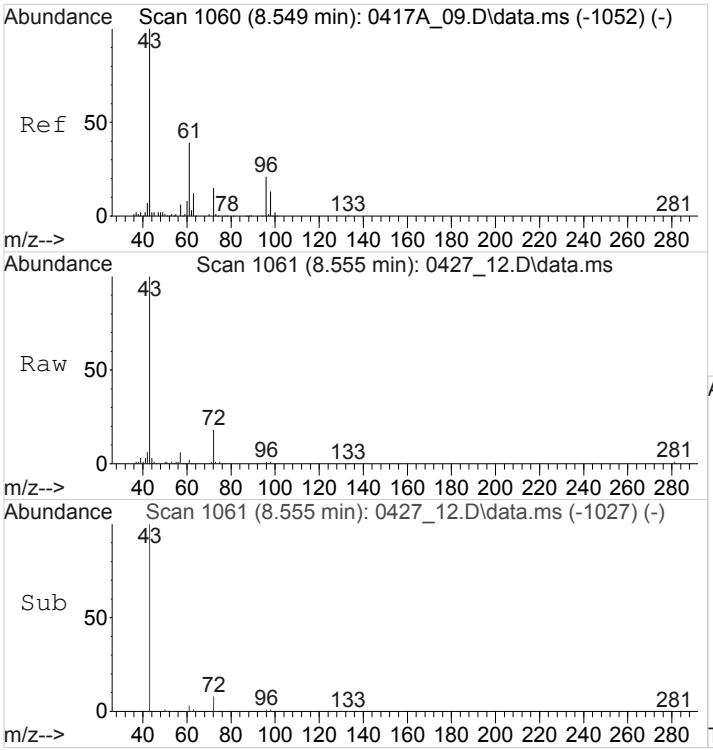


#25
n-Hexane
Concen: 278.5083258 ppbv
RT: 7.632 min Scan# 910
Delta R.T. -0.003 min
Lab File: 0427_12.D
Acq: 27 Apr 2018 5:19 pm

Tgt Ion: 57 Resp: 2554952

Ion	Ratio	Lower	Upper
57	100		
41	86.1	72.7	109.1
43	78.4	64.1	96.1

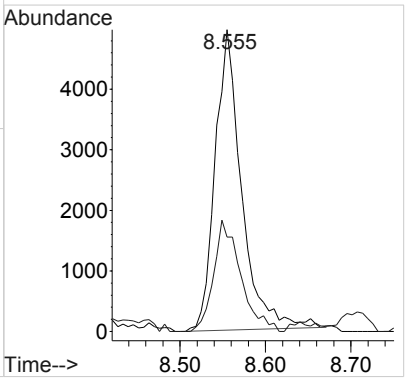


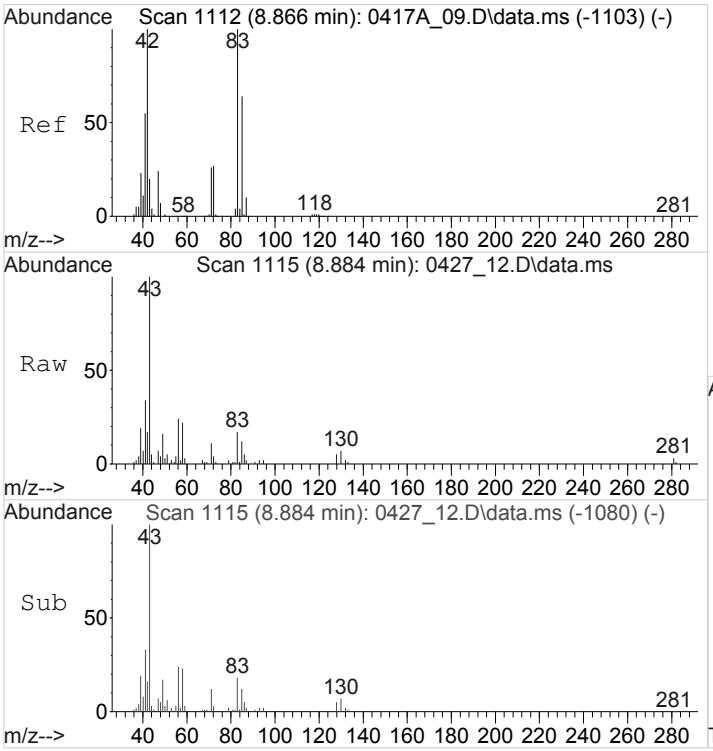


#29
2-Butanone (MEK)
Concen: 41.2066637 ppbv
RT: 8.558 min Scan# 1061
Delta R.T. 0.010 min
Lab File: 0427_12.D
Acq: 27 Apr 2018 5:19 pm

Tgt Ion: 72 Resp: 106749

Ion	Ratio	Lower	Upper
72	100		
57	37.9	29.0	43.4

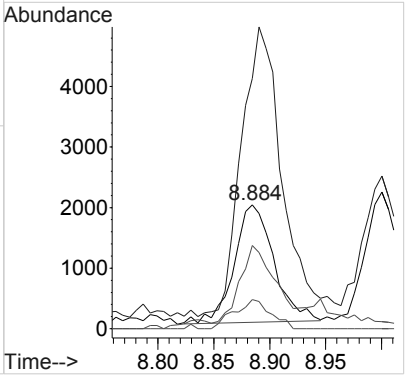


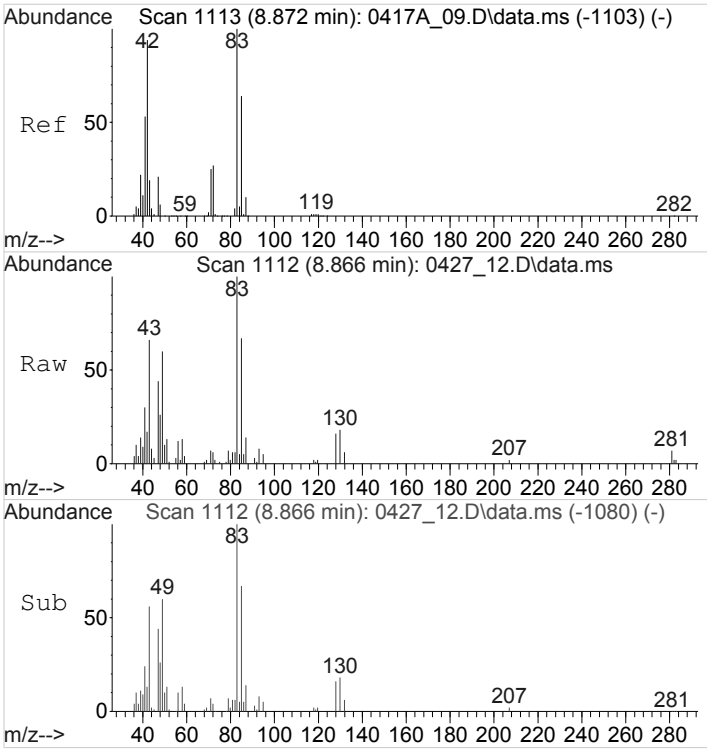


#31
Tetrahydrofuran
Concen: 5.0626373 ppbv
RT: 8.887 min Scan# 1115
Delta R.T. 0.018 min
Lab File: 0427_12.D
Acq: 27 Apr 2018 5:19 pm

Tgt Ion: 42 Resp: 47739

Ion	Ratio	Lower	Upper
42	100		
41	250.9	43.9	65.9#
72	0.0	21.9	32.9#
71	0.0	20.2	30.4#

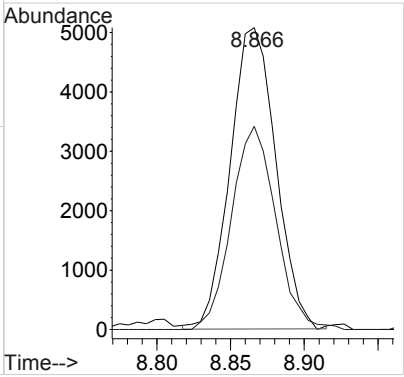


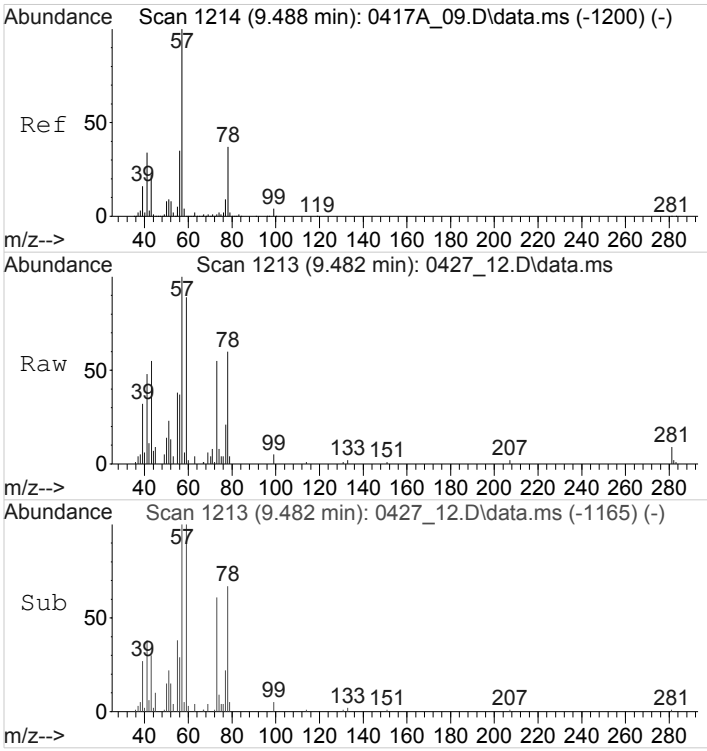


#32
Chloroform
Concen: 11.7697225 ppbv
RT: 8.867 min Scan# 1112
Delta R.T. -0.002 min
Lab File: 0427_12.D
Acq: 27 Apr 2018 5:19 pm

Tgt Ion: 83 Resp: 110030

Ion	Ratio	Lower	Upper
83	100		
85	65.2	50.4	75.6

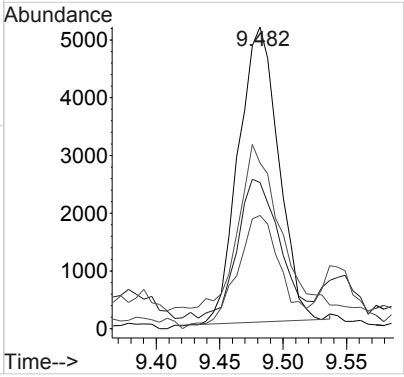


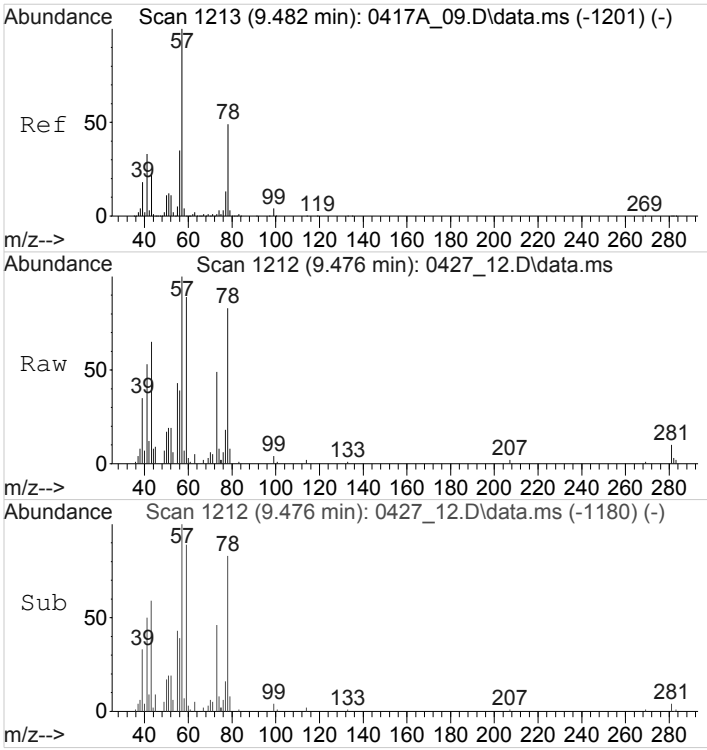


#36
2,2,4-Trimethylpentane
Concen: 3.3979102 ppbv
RT: 9.484 min Scan# 1213
Delta R.T. -0.004 min
Lab File: 0427_12.D
Acq: 27 Apr 2018 5:19 pm

Tgt Ion: 57 Resp: 111888

Ion	Ratio	Lower	Upper
57	100		
41	41.7	26.6	40.0#
43	59.9	18.1	27.1#
56	32.7	27.7	41.5

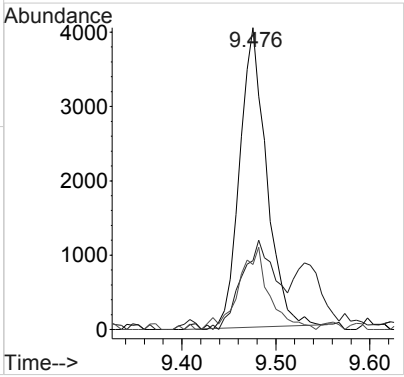


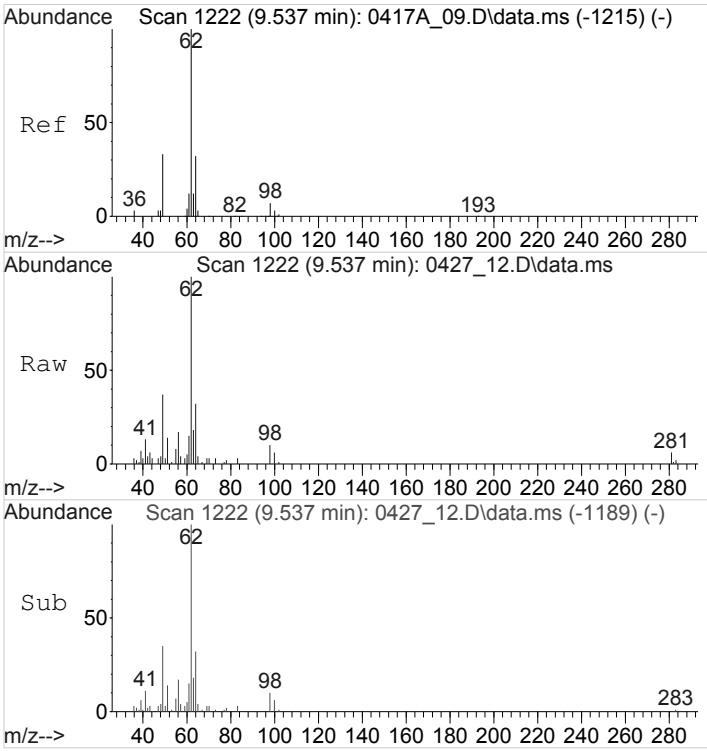


#38
Benzene
Concen: 5.0153738 ppbv
RT: 9.477 min Scan# 1212
Delta R.T. -0.002 min
Lab File: 0427_12.D
Acq: 27 Apr 2018 5:19 pm

Tgt Ion: 78 Resp: 79970

Ion	Ratio	Lower	Upper
78	100		
51	0.0	16.6	24.8#
77	30.7	19.9	29.9#

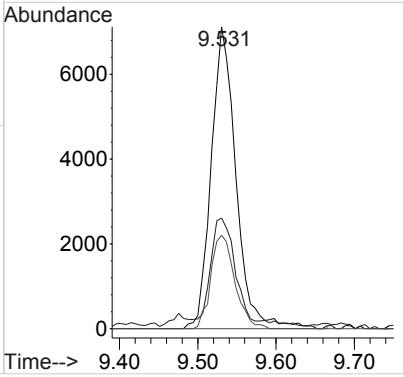


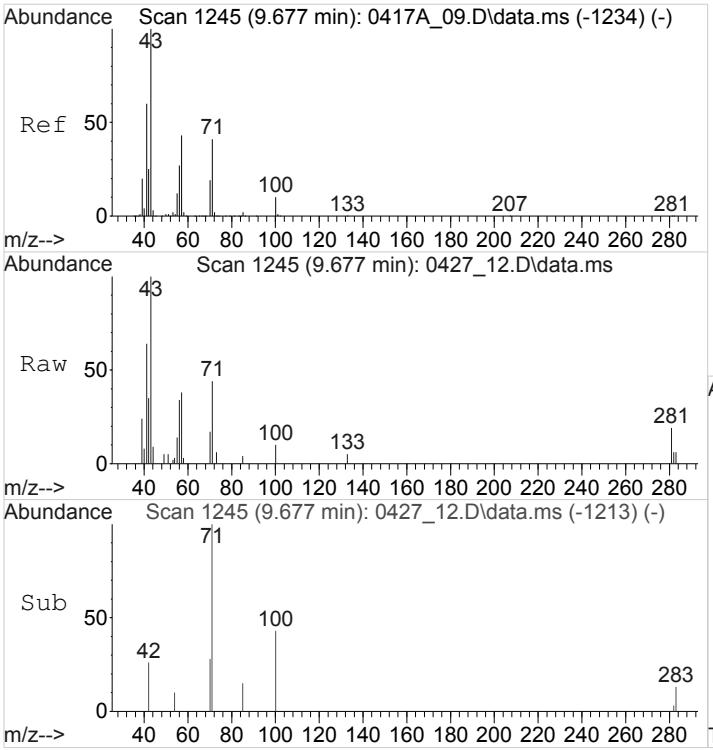


#39
1,2-Dichloroethane
Concen: 19.5258778 ppbv
RT: 9.534 min Scan# 1222
Delta R.T. 0.001 min
Lab File: 0427_12.D
Acq: 27 Apr 2018 5:19 pm

Tgt Ion: 62 Resp: 156854

Ion	Ratio	Lower	Upper
62	100		
49	32.6	28.8	43.2
64	30.1	25.4	38.2

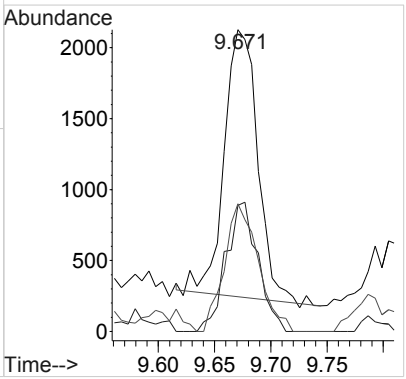


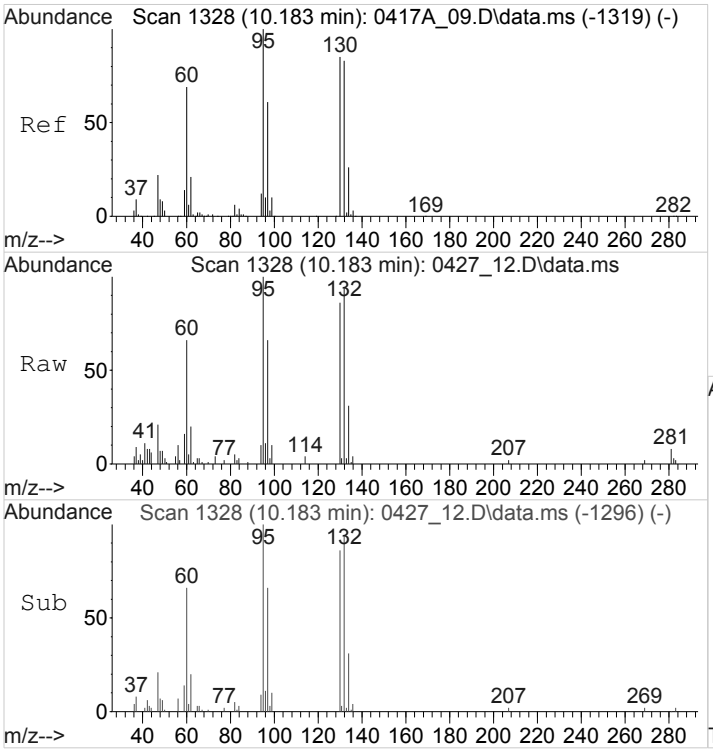


#40
Heptane
Concen: 2.5319562 ppbv
RT: 9.675 min Scan# 1245
Delta R.T. -0.004 min
Lab File: 0427_12.D
Acq: 27 Apr 2018 5:19 pm

Tgt Ion: 43 Resp: 38966

Ion	Ratio	Lower	Upper
43	100		
71	0.0	31.8	47.8#
57	0.0	34.2	51.4#

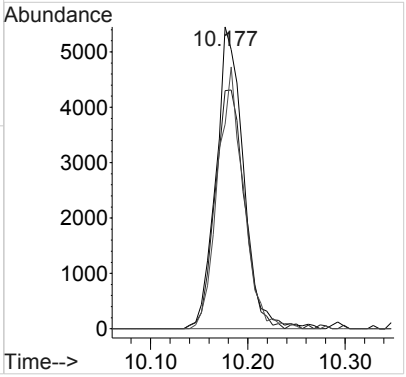


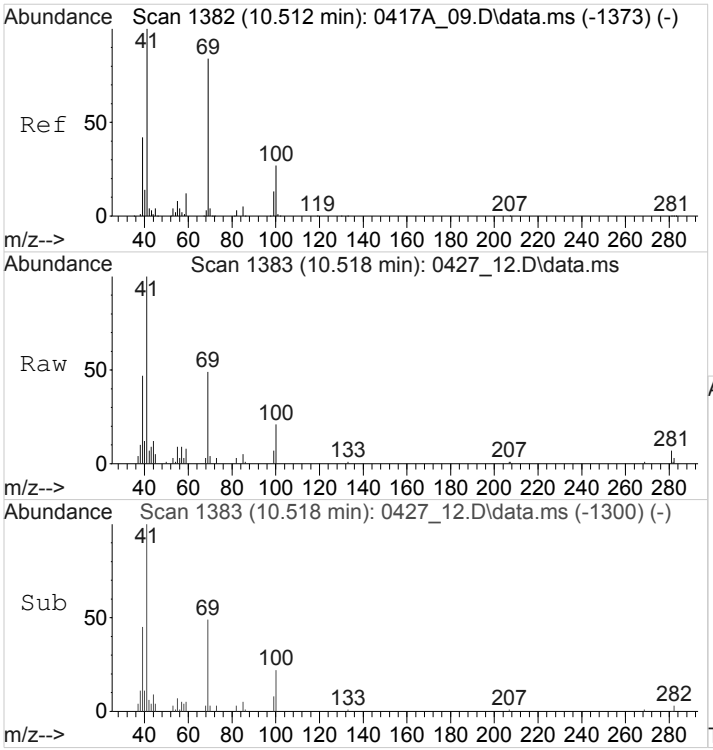


#41
Trichloroethene
Concen: 18.4320640 ppbv
RT: 10.182 min Scan# 1328
Delta R.T. -0.003 min
Lab File: 0427_12.D
Acq: 27 Apr 2018 5:19 pm

Tgt Ion: 95 Resp: 106938

Ion	Ratio	Lower	Upper
95	100		
130	85.6	69.2	103.8
132	82.0	66.3	99.5

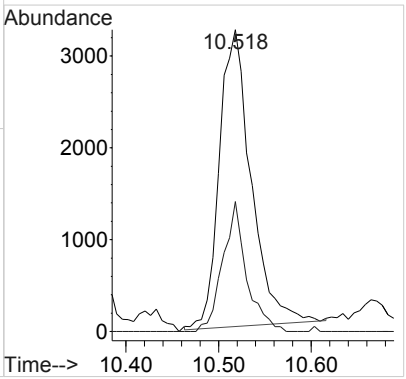


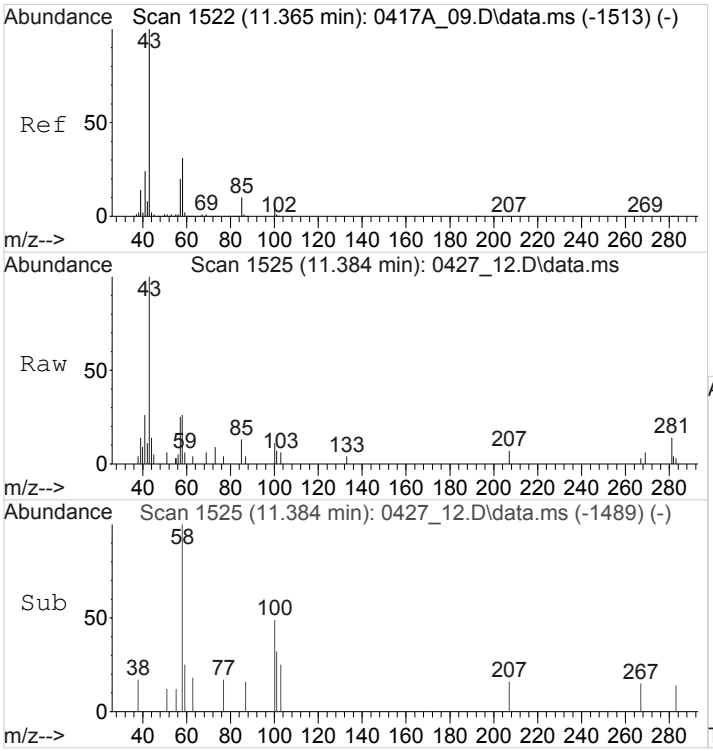


#45
Methyl Methacrylate
Concen: 12.9192111 ppbv
RT: 10.520 min Scan# 1383
Delta R.T. 0.010 min
Lab File: 0427_12.D
Acq: 27 Apr 2018 5:19 pm

Tgt Ion: 69 Resp: 76815

Ion	Ratio	Lower	Upper
69	100		
100	32.8	25.6	38.4

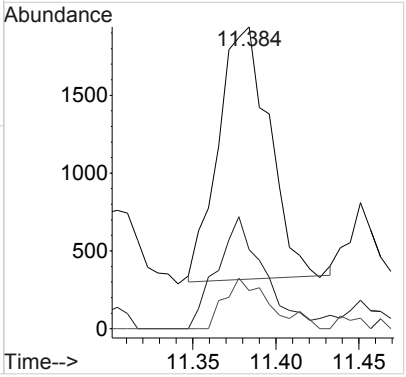


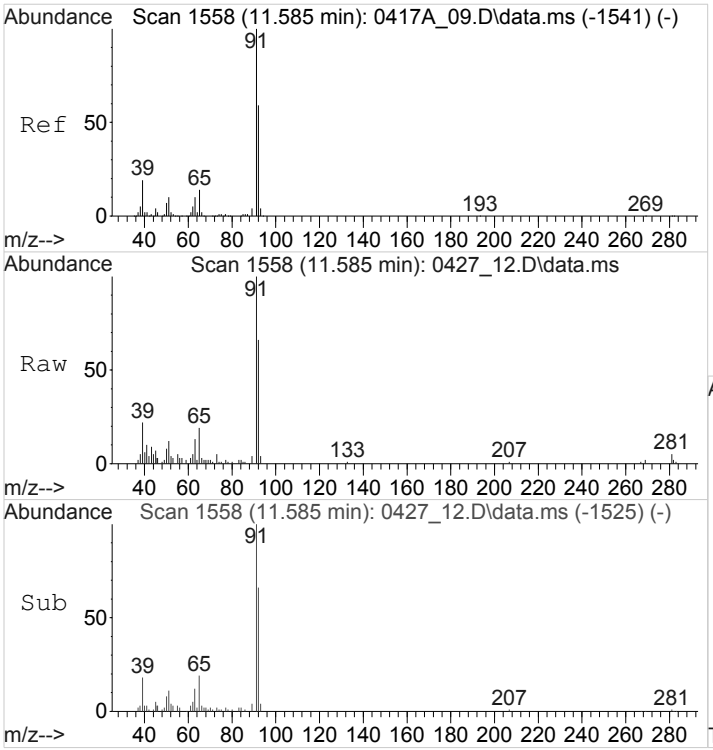


#49
4-Methyl-2-Pentanone (MIBK)
Concen: 1.7247320 ppbv
RT: 11.383 min Scan# 1525
Delta R.T. 0.017 min
Lab File: 0427_12.D
Acq: 27 Apr 2018 5:19 pm

Tgt Ion: 43 Resp: 34466

Ion	Ratio	Lower	Upper
43	100		
58	0.0	25.0	37.6#
85	0.0	8.2	12.2#

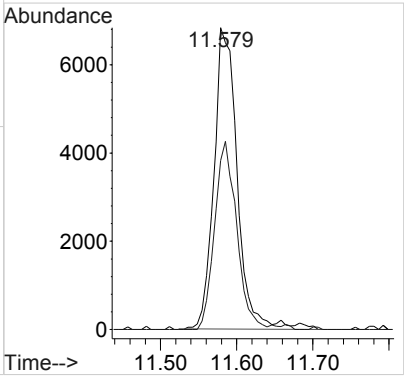


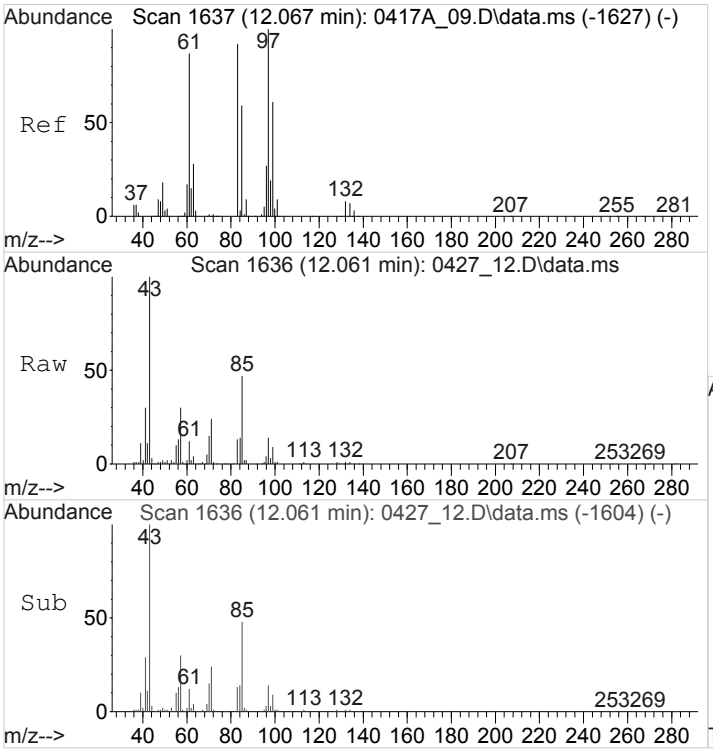


#50
Toluene
Concen: 8.4613371 ppbv
RT: 11.585 min Scan# 1558
Delta R.T. 0.000 min
Lab File: 0427_12.D
Acq: 27 Apr 2018 5:19 pm

Tgt Ion: 91 Resp: 145568

Ion	Ratio	Lower	Upper
91	100		
92	59.8	47.5	71.3

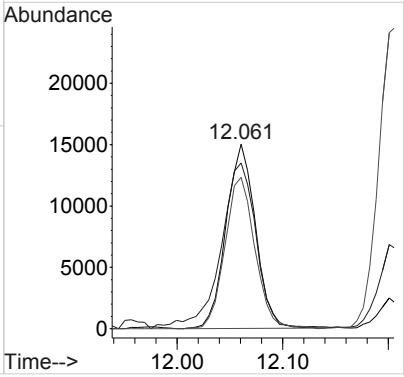


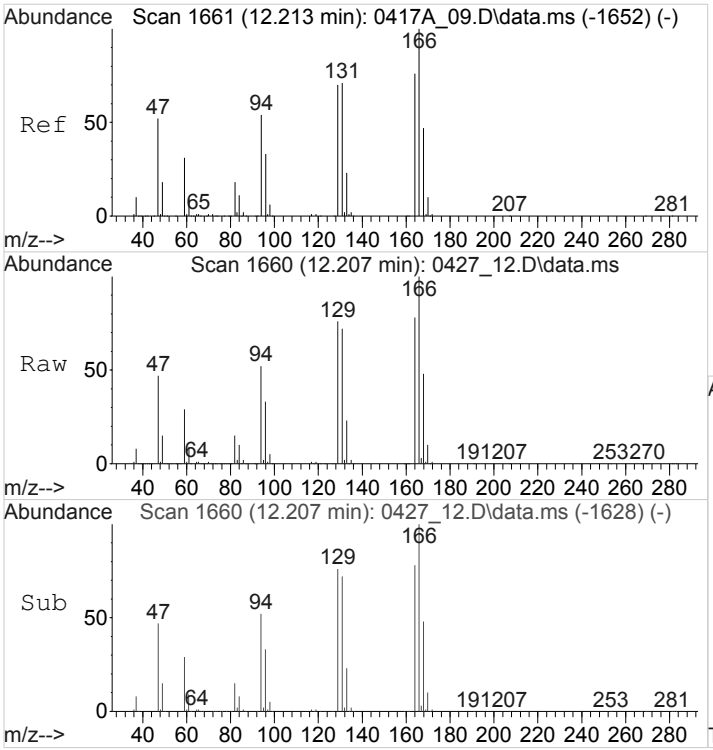


#52
1,1,2-Trichloroethane
Concen: 54.4420509 ppbv
RT: 12.063 min Scan# 1636
Delta R.T. -0.000 min
Lab File: 0427_12.D
Acq: 27 Apr 2018 5:19 pm

Tgt Ion: 97 Resp: 289822

Ion	Ratio	Lower	Upper
97	100		
83	105.8	75.2	112.8
61	83.8	71.4	107.2

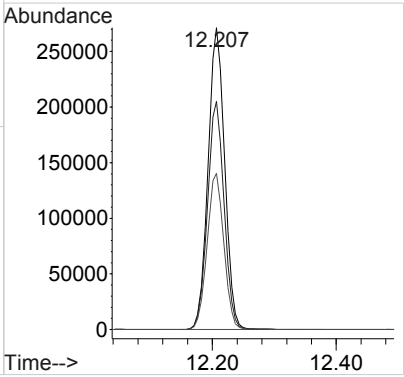


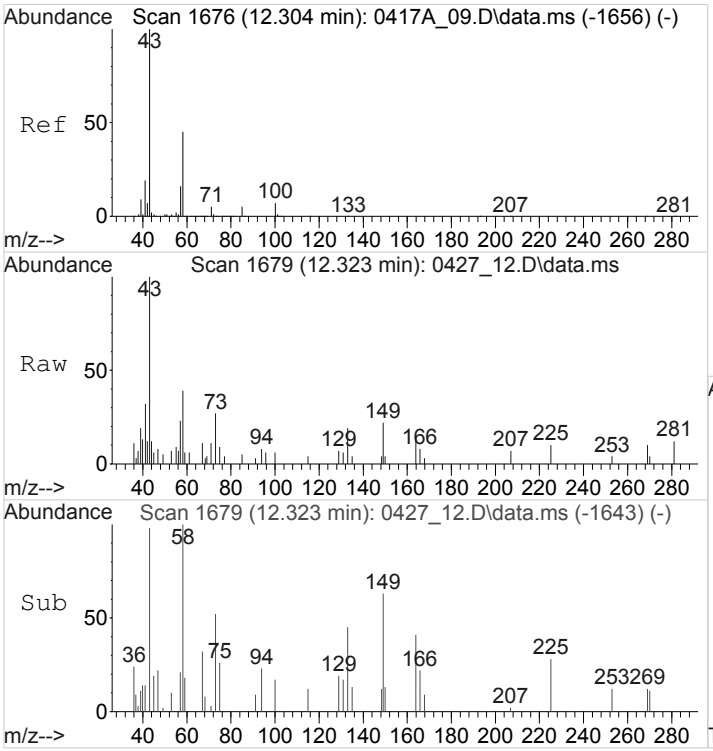


#53
Tetrachloroethene
Concen: 775.5019938 ppbv
RT: 12.209 min Scan# 1660
Delta R.T. -0.002 min
Lab File: 0427_12.D
Acq: 27 Apr 2018 5:19 pm

Tgt Ion:166 Resp: 5044967

Ion	Ratio	Lower	Upper
166	100		
129	75.2	59.6	89.4
94	52.0	45.2	67.8

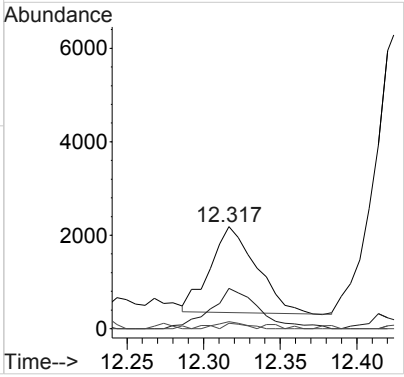


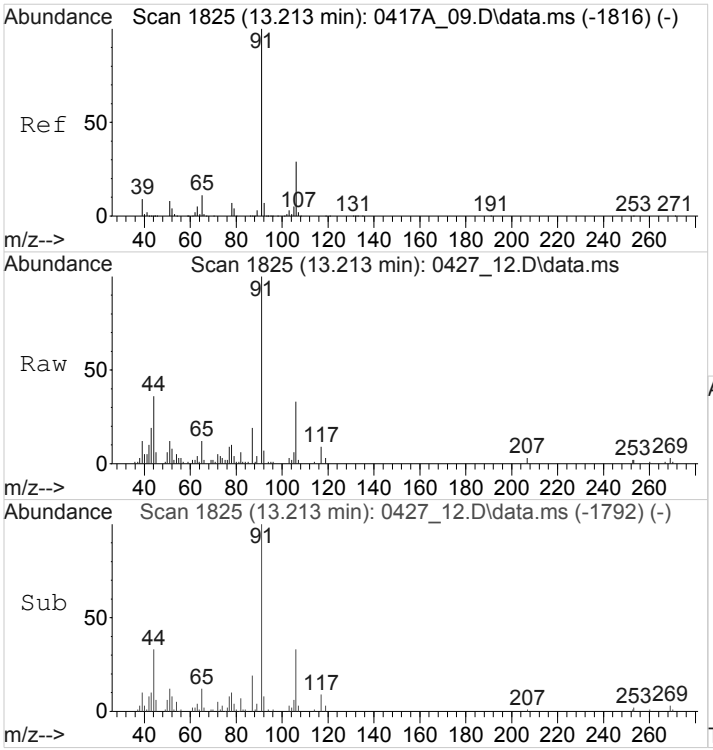


#54
Methyl Butyl Ketone
Concen: 2.2641118 ppbv
RT: 12.320 min Scan# 1679
Delta R.T. 0.018 min
Lab File: 0427_12.D
Acq: 27 Apr 2018 5:19 pm

Tgt Ion: 43 Resp: 39301

Ion	Ratio	Lower	Upper
43	100		
58	48.8	35.0	52.4
85	0.0	3.9	5.9#
100	0.0	5.3	7.9#

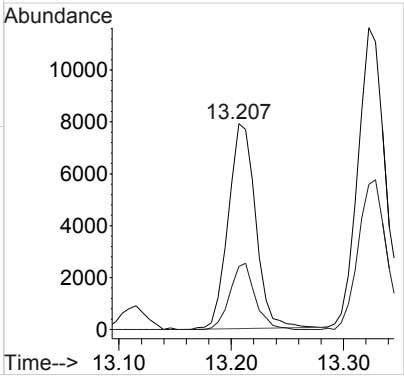


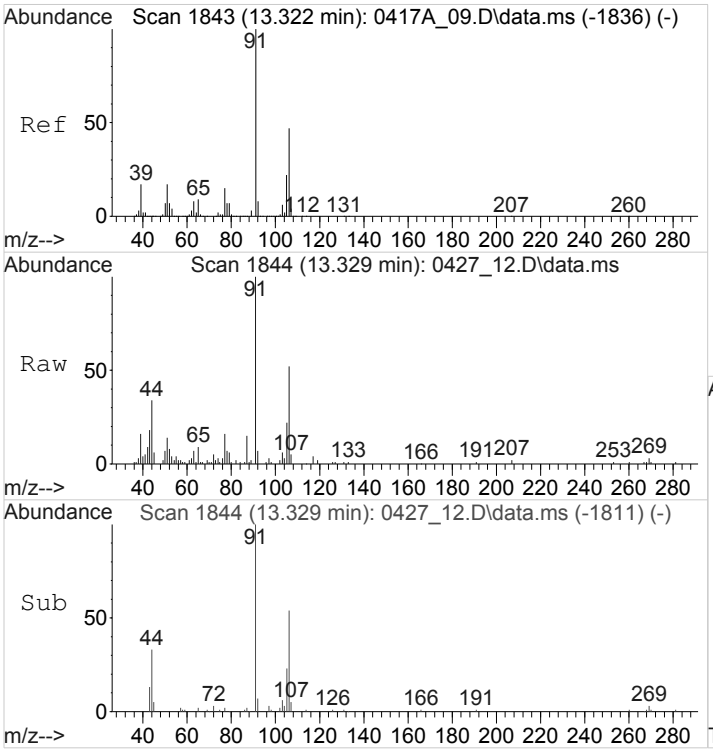


#59
Ethylbenzene
Concen: 5.3841998 ppbv
RT: 13.212 min Scan# 1825
Delta R.T. 0.002 min
Lab File: 0427_12.D
Acq: 27 Apr 2018 5:19 pm

Tgt Ion: 91 Resp: 133702

Ion	Ratio	Lower	Upper
91	100		
106	0.0	22.6	34.0#

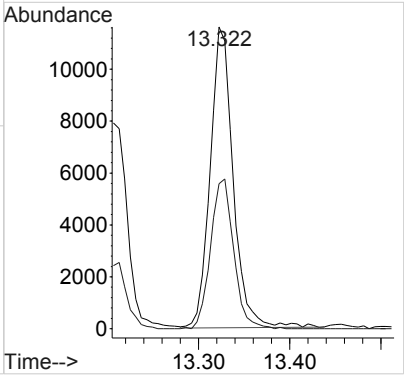


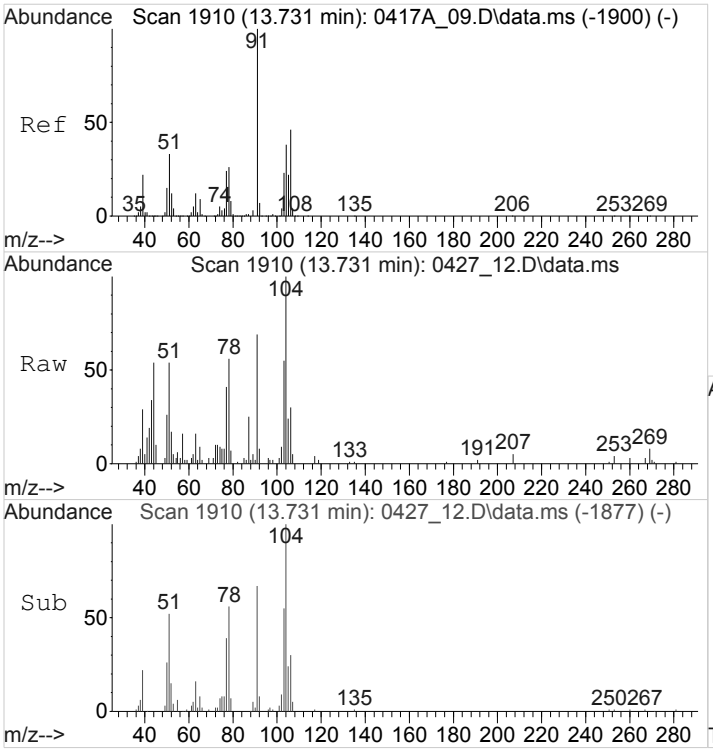


#60
M&P-Xylene
Concen: 10.6364690 ppbv
RT: 13.327 min Scan# 1844
Delta R.T. 0.003 min
Lab File: 0427_12.D
Acq: 27 Apr 2018 5:19 pm

Tgt Ion: 91 Resp: 203405

Ion	Ratio	Lower	Upper
91	100		
106	49.7	37.4	56.2

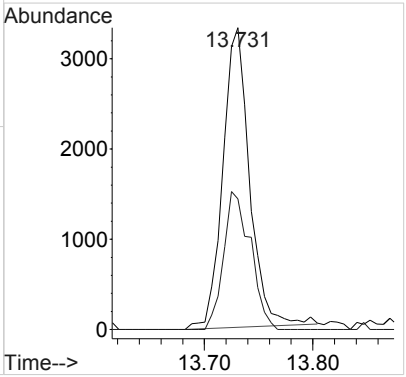


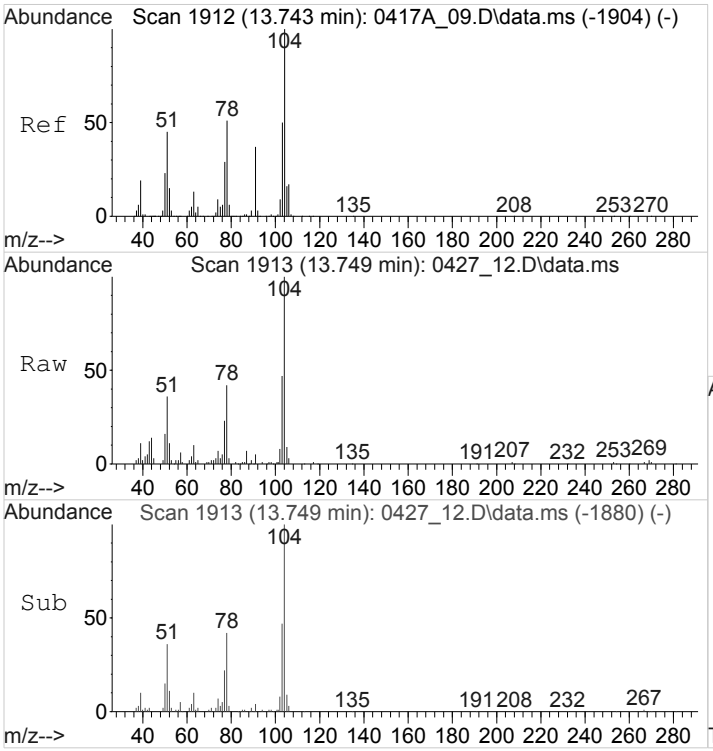


#61
O-Xylene
Concen: 2.9758485 ppbv
RT: 13.732 min Scan# 1910
Delta R.T. 0.002 min
Lab File: 0427_12.D
Acq: 27 Apr 2018 5:19 pm

Tgt Ion: 91 Resp: 56916

Ion	Ratio	Lower	Upper
91	100		
106	46.4	35.9	53.9

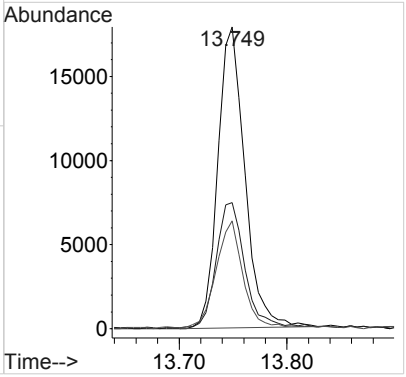


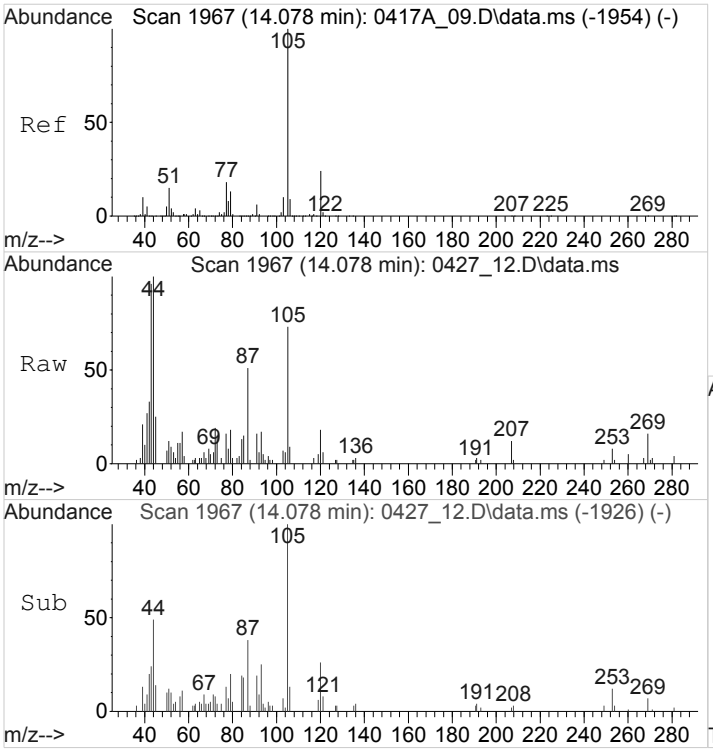


#62
Styrene
Concen: 21.8632693 ppbv
RT: 13.750 min Scan# 1913
Delta R.T. 0.005 min
Lab File: 0427_12.D
Acq: 27 Apr 2018 5:19 pm

Tgt Ion:104 Resp: 311291

Ion	Ratio	Lower	Upper
104	100		
78	45.0	45.6	68.4#
51	35.0	49.6	74.4#

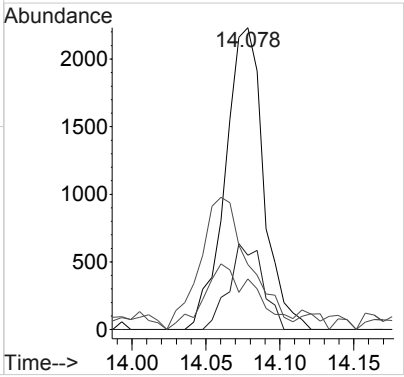


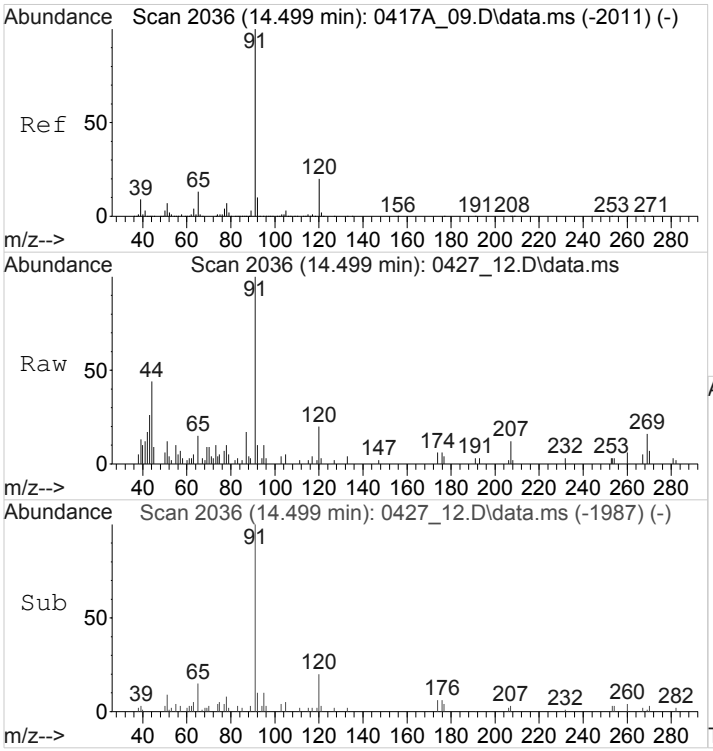


#64
Isopropylbenzene
Concen: 1.6073954 ppbv
RT: 14.079 min Scan# 1967
Delta R.T. 0.001 min
Lab File: 0427_12.D
Acq: 27 Apr 2018 5:19 pm

Tgt Ion:105 Resp: 40382

Ion	Ratio	Lower	Upper
105	100		
120	0.0	19.4	29.2#
77	0.0	15.0	22.4#
51	0.0	12.9	19.3#

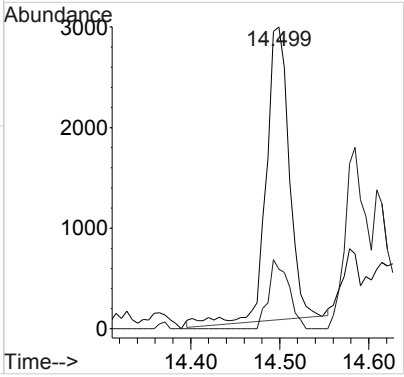


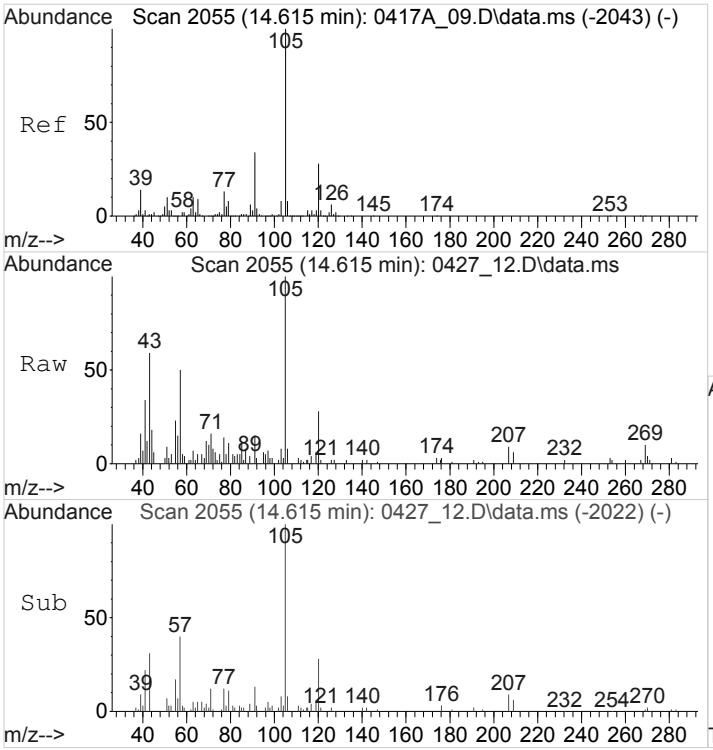


#66
n-Propylbenzene
Concen: 1.6446217 ppbv
RT: 14.500 min Scan# 2036
Delta R.T. 0.002 min
Lab File: 0427_12.D
Acq: 27 Apr 2018 5:19 pm

Tgt Ion: 91 Resp: 52138

Ion	Ratio	Lower	Upper
91	100		
120	78.6	15.3	22.9#

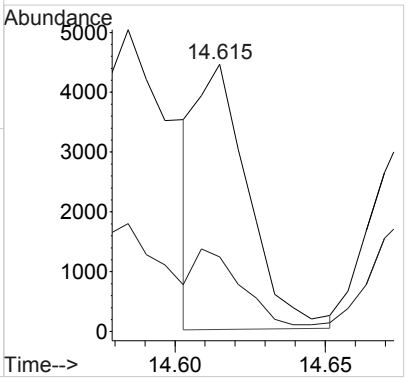


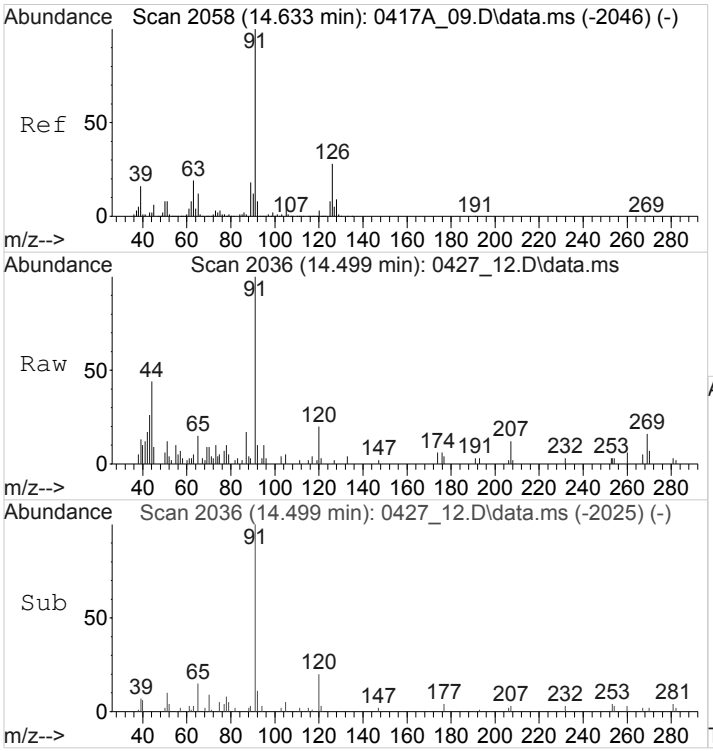


#67
4-Ethyltoluene
Concen: 2.5062016 ppbv
RT: 14.616 min Scan# 2055
Delta R.T. 0.003 min
Lab File: 0427_12.D
Acq: 27 Apr 2018 5:19 pm

Tgt Ion:105 Resp: 64052

Ion	Ratio	Lower	Upper
105	100		
120	0.0	21.8	32.6#

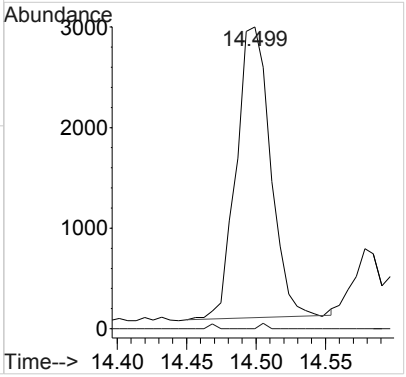


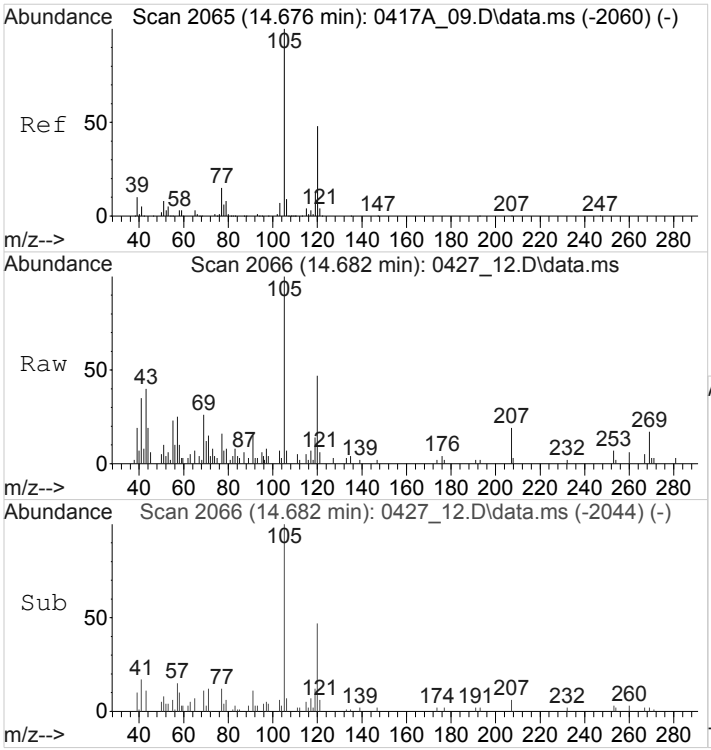


#68
2-Chlorotoluene
Concen: 2.2322829 ppbv
RT: 14.499 min Scan# 2036
Delta R.T. -0.134 min
Lab File: 0427_12.D
Acq: 27 Apr 2018 5:19 pm

Tgt Ion: 91 Resp: 49146

Ion	Ratio	Lower	Upper
91	100		
126	0.0	19.7	29.5#

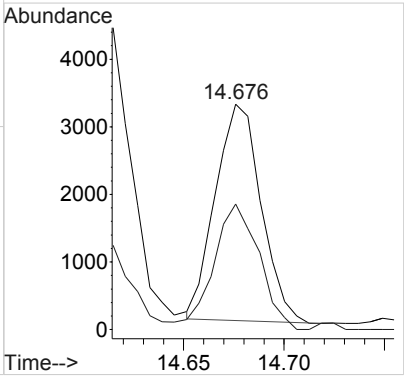


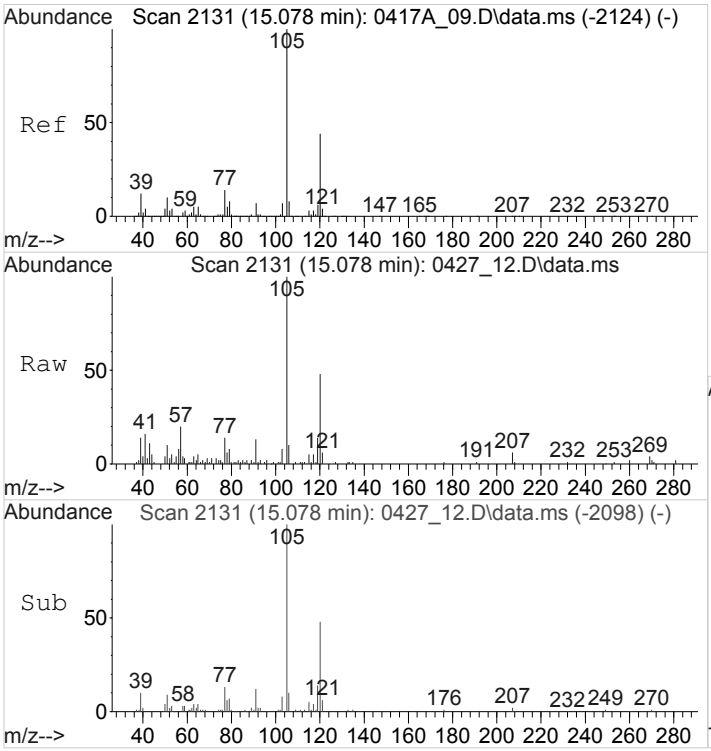


#70
1,3,5-Trimethylbenzene
Concen: 2.4130282 ppbv
RT: 14.680 min Scan# 2066
Delta R.T. 0.004 min
Lab File: 0427_12.D
Acq: 27 Apr 2018 5:19 pm

Tgt Ion:105 Resp: 51361

Ion	Ratio	Lower	Upper
105	100		
120	0.0	38.0	57.0#

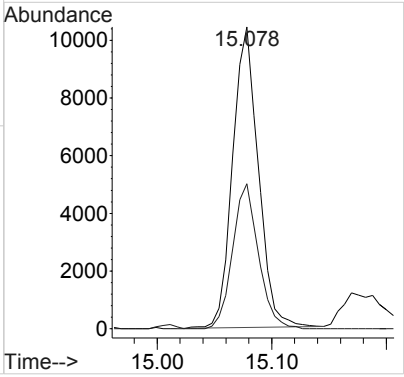


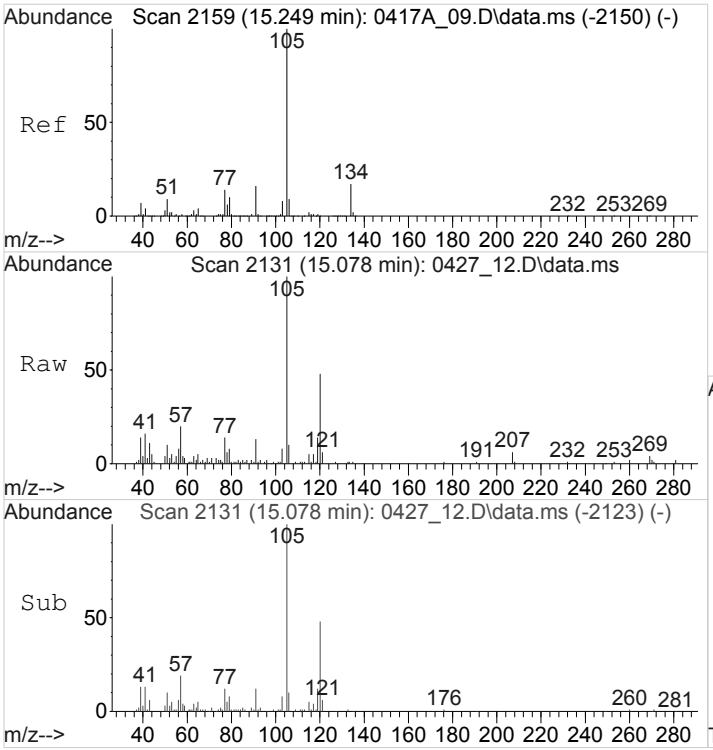


#72
1,2,4-Trimethylbenzene
Concen: 7.8969518 ppbv
RT: 15.080 min Scan# 2131
Delta R.T. 0.003 min
Lab File: 0427_12.D
Acq: 27 Apr 2018 5:19 pm

Tgt Ion:105 Resp: 161927

Ion	Ratio	Lower	Upper
105	100		
120	48.6	35.6	53.4

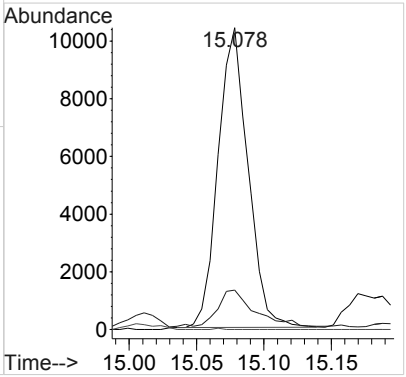


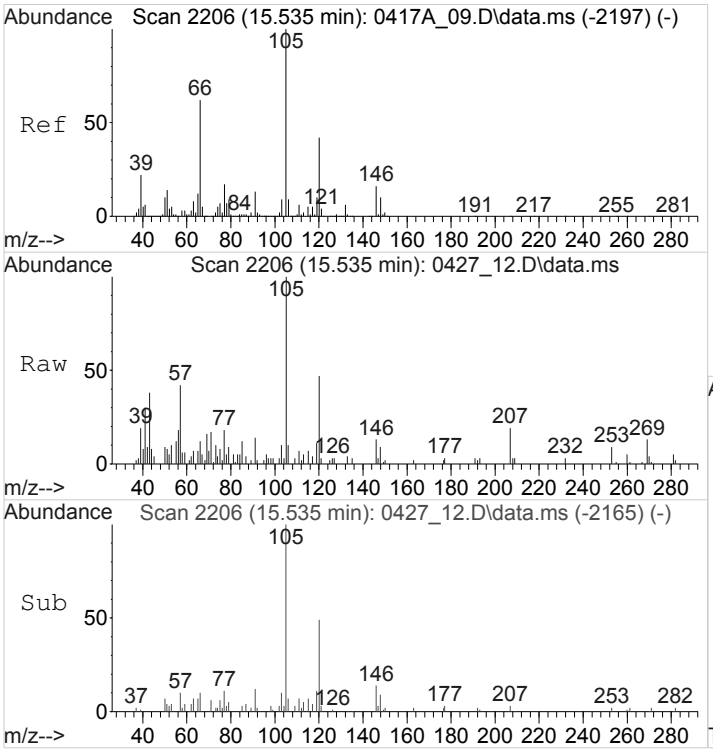


#73
sec-Butylbenzene
Concen: 5.1623424 ppbv
RT: 15.079 min Scan# 2131
Delta R.T. -0.167 min
Lab File: 0427_12.D
Acq: 27 Apr 2018 5:19 pm

Tgt Ion:105 Resp: 160337

Ion	Ratio	Lower	Upper
105	100		
91	14.1	13.1	19.7
134	0.0	13.5	20.3#

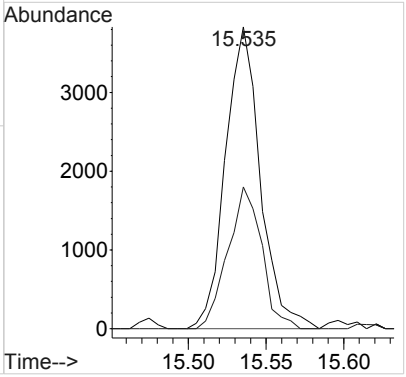


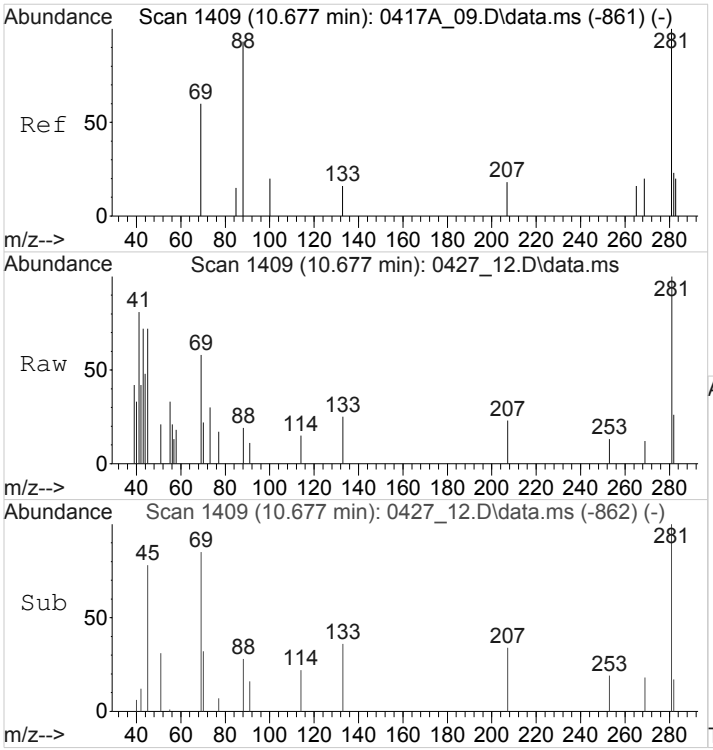


#76
1,2,3-TRIMETHYLBENZENE
Concen: 2.8175800 ppbv
RT: 15.537 min Scan# 2206
Delta R.T. 0.003 min
Lab File: 0427_12.D
Acq: 27 Apr 2018 5:19 pm

Tgt Ion:105 Resp: 59871

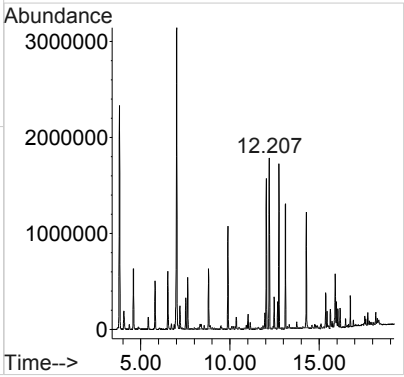
Ion	Ratio	Lower	Upper
105	100		
120	45.5	32.7	49.1





#84
TPH (GC/MS) Low Fraction
Concen: 2641.5117944 ppbv m
RT: 10.675 min Scan# 1409
Delta R.T. 0.000 min
Lab File: 0427_12.D
Acq: 27 Apr 2018 5:19 pm

Tgt Ion:TIC Resp:134410532



1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS-11

ESC Sample ID:	L988471-11	**SDG:**	L988471
Client Sample ID:	SS-11	**Collected Date/Time:**	04/23/18 11:36
Lab File ID:	0426_22	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/26/18 22:57
Analytical Batch:	WG1103323	**Analysis Date/Time:**	04/26/18 22:57
Dilution Factor:	1	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	RT	Result	Qualifier	MDL	RDL
			ppbv		*ppbv*	*ppbv*
Acetone	67-64-1	5.47	7.55		0.0569	1.25
Allyl chloride	107-05-1	0	ND		0.0546	0.200
Benzene	71-43-2	7.81	0.547		0.0460	0.200
Benzyl Chloride	100-44-7	0	ND		0.0598	0.200
Bromodichloromethane	75-27-4	0	ND		0.0436	0.200
Bromoform	75-25-2	0	ND		0.0786	0.600
Bromomethane	74-83-9	0	ND		0.0609	0.200
1,3-Butadiene	106-99-0	0	ND		0.0563	2.00
Carbon disulfide	75-15-0	5.68	0.316		0.0544	0.200
Carbon tetrachloride	56-23-5	0	ND		0.0585	0.200
Chlorobenzene	108-90-7	0	ND		0.0601	0.200
Chloroethane	75-00-3	0	ND		0.0489	0.200
Chloroform	67-66-3	7.26	0.305		0.0574	0.200
Chloromethane	74-87-3	3.92	1.69		0.0544	0.200
2-Chlorotoluene	95-49-8	0	ND		0.0605	0.200
Cyclohexane	110-82-7	7.48	0.668		0.0534	0.200
Dibromochloromethane	124-48-1	0	ND		0.0494	0.200
1,2-Dibromoethane	106-93-4	0	ND		0.0185	0.200
1,2-Dichlorobenzene	95-50-1	0	ND		0.0603	0.200
1,3-Dichlorobenzene	541-73-1	0	ND		0.0597	0.200
1,4-Dichlorobenzene	106-46-7	0	ND		0.0557	0.200
1,2-Dichloroethane	107-06-2	0	ND		0.0616	0.200
1,1-Dichloroethane	75-34-3	0	ND		0.0514	0.200
1,1-Dichloroethene	75-35-4	0	ND		0.0490	0.200
cis-1,2-Dichloroethene	156-59-2	7.02	ND		0.0389	0.200
trans-1,2-Dichloroethene	156-60-5	0	ND		0.0464	0.200
1,2-Dichloropropane	78-87-5	0	ND		0.0599	0.200
cis-1,3-Dichloropropene	10061-01-5	0	ND		0.0588	0.200
trans-1,3-Dichloropropene	10061-02-6	0	ND		0.0435	0.200
1,4-Dioxane	123-91-1	0	ND		0.0554	0.200
Ethanol	64-17-5	5.06	0.881		0.0832	0.630
Ethylbenzene	100-41-4	11.30	ND		0.0506	0.200
4-Ethyltoluene	622-96-8	12.79	ND		0.0666	0.200
Trichlorofluoromethane	75-69-4	4.86	0.306		0.0673	0.200
Dichlorodifluoromethane	75-71-8	3.62	0.292		0.0601	0.200
1,1,2-Trichlorotrifluoroethane	76-13-1	5.32	ND		0.0687	0.200
1,2-Dichlorotetrafluoroethane	76-14-2	0	ND		0.0458	0.200
Heptane	142-82-5	7.84	0.669		0.0626	0.200
Hexachloro-1,3-butadiene	87-68-3	0	ND		0.0656	0.630
n-Hexane	110-54-3	6.22	0.988		0.0457	0.200
Isopropylbenzene	98-82-8	0	ND		0.0563	0.200
Methylene Chloride	75-09-2	0	ND		0.0465	0.200
Methyl Butyl Ketone	591-78-6	0	ND		0.0682	1.25

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS-11

ESC Sample ID:	L988471-11	**SDG:**	L988471
Client Sample ID:	SS-11	**Collected Date/Time:**	04/23/18 11:36
Lab File ID:	0426_22	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/26/18 22:57
Analytical Batch:	WG1103323	**Analysis Date/Time:**	04/26/18 22:57
Dilution Factor:	1	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	**CAS**	**RT**	**Result**	**Qualifier**	**MDL**	**RDL**
			ppbv		*ppbv*	*ppbv*
2-Butanone (MEK)	78-93-3	7	ND		0.0493	1.25
4-Methyl-2-pentanone (MIBK)	108-10-1	0	ND		0.0650	1.25
Methyl methacrylate	80-62-6	0	ND		0.0773	0.200
MTBE	1634-04-4	0	ND		0.0505	0.200
Naphthalene	91-20-3	0	ND		0.154	0.630
2-Propanol	67-63-0	0	ND		0.0882	1.25
Propene	115-07-1	0	ND		0.0932	0.400
Styrene	100-42-5	0	ND		0.0465	0.200
1,1,2,2-Tetrachloroethane	79-34-5	0	ND		0.0576	0.200
Tetrahydrofuran	109-99-9	0	ND		0.0508	0.200
Toluene	108-88-3	9.66	0.665		0.0499	0.200
1,2,4-Trichlorobenzene	120-82-1	0	ND		0.148	0.630
1,1,1-Trichloroethane	71-55-6	7.46	0.205		0.0665	0.200
1,1,2-Trichloroethane	79-00-5	0	ND		0.0287	0.200
Trichloroethylene	79-01-6	8.38	18.0		0.0545	0.200
1,2,4-Trimethylbenzene	95-63-6	13.25	ND		0.0483	0.200
1,3,5-Trimethylbenzene	108-67-8	0	ND		0.0631	0.200
2,2,4-Trimethylpentane	540-84-1	7.72	ND		0.0456	0.200
Vinyl chloride	75-01-4	0	ND		0.0457	0.200
Vinyl Bromide	593-60-2	0	ND		0.0727	0.200
Vinyl acetate	108-05-4	0	ND		0.0639	0.200
m&p-Xylene	1330-20-7	11.41	ND		0.0946	0.400
o-Xylene	95-47-6	11.89	ND		0.0633	0.200

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_22.D
Acq On : 26 Apr 2018 10:57 pm
Operator : 564
Sample : L988471-11 1x WG1103323
Misc :
ALS Vial : 22 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 27 08:57:15 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration

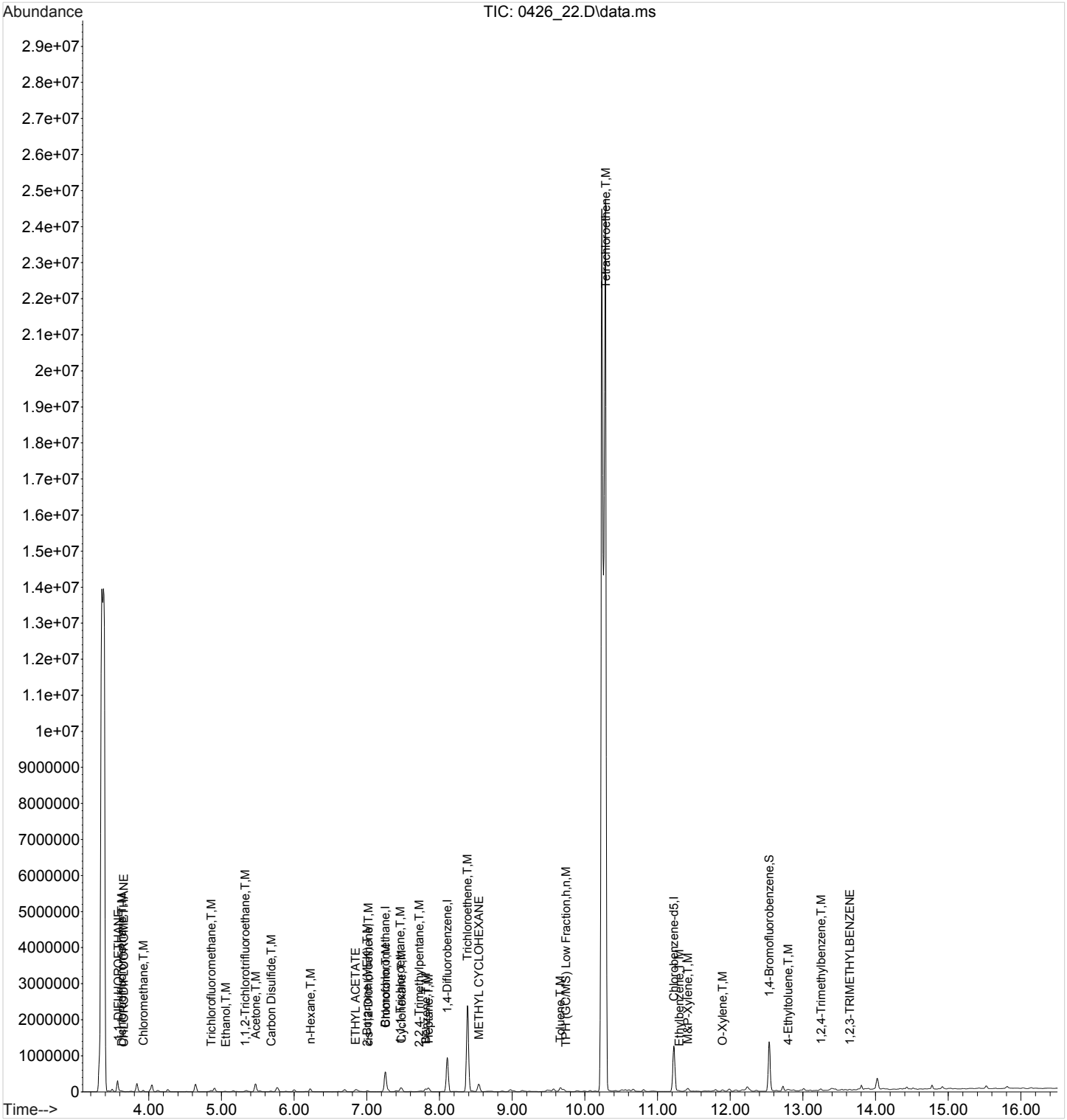
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.251	130	241592	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	8.105	114	918919	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	11.222	117	907162	4.0000000	ppbv	0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	12.535	95	538527	3.9575004	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 98.94%			
Target Compounds						Qvalue
3) 1,1-DIFLUOROETHANE	3.580	51	5384	0.1418560	ppbv	96
4) Dichlorodifluoromethane	3.625	85	17645	0.2924773	ppbv	99
5) CHLORODIFLUOROMETHANE	3.653	51	8993	0.2475349	ppbv	99
7) Chloromethane	3.925	50	40727	1.6929371	ppbv	99
13) Trichlorofluoromethane	4.858	101	20630	0.3058043	ppbv	99
14) Ethanol	5.056	45	10304	0.8809009	ppbv	95
15) 1,1,2-Trichlorotrifluo...	5.322	101	4470	0.0713490	ppbv	89
17) Acetone	5.469	58	112093	7.5450680	ppbv	69
19) Carbon Disulfide	5.684	76	21558	0.3158633	ppbv	96
25) n-Hexane	6.221	57	47069	0.9875398	ppbv	95
28) ETHYL ACETATE	6.844	43	13124	0.2035395	ppbv #	76
29) 2-Butanone (MEK)	7.002	72	8274	0.4298045	ppbv	94
30) cis-1,2-Dichloroethene	7.019	96	5417	0.1408830	ppbv	97
32) Chloroform	7.257	83	21091	0.3049938	ppbv #	1
33) Cyclohexane	7.477	84	32939	0.6682146	ppbv #	67
34) 1,1,1-Trichloroethane	7.460	97	14097	0.2046073	ppbv	98
36) 2,2,4-Trimethylpentane	7.721	57	14410	0.0854746	ppbv #	43
38) Benzene	7.811	78	62981	0.5466501	ppbv	95
40) Heptane	7.845	43	38073	0.6691072	ppbv	97
41) Trichloroethene	8.382	95	903839	17.9993578	ppbv	97
43) METHYL CYCLOHEXANE	8.541	83	114408	1.6576852	ppbv	95
50) Toluene	9.661	91	95277	0.6650694	ppbv	98
53) Tetrachloroethene	10.283	166	16393816m	212.6112759	ppbv	
59) Ethylbenzene	11.296	91	14796	0.0684839	ppbv	100
60) M&P-Xylene	11.414	91	54632	0.3300807	ppbv	97
61) O-Xylene	11.890	91	30427	0.1777991	ppbv	97
67) 4-Ethyltoluene	12.795	105	17824	0.0727638	ppbv	98
72) 1,2,4-Trimethylbenzene	13.247	105	23252	0.1190292	ppbv	100
76) 1,2,3-TRIMETHYLBENZENE	13.643	105	11241	0.0602589	ppbv	100
84) TPH (GC/MS) Low Fraction	9.740	TIC	95773149m	310.5557532	ppbv	

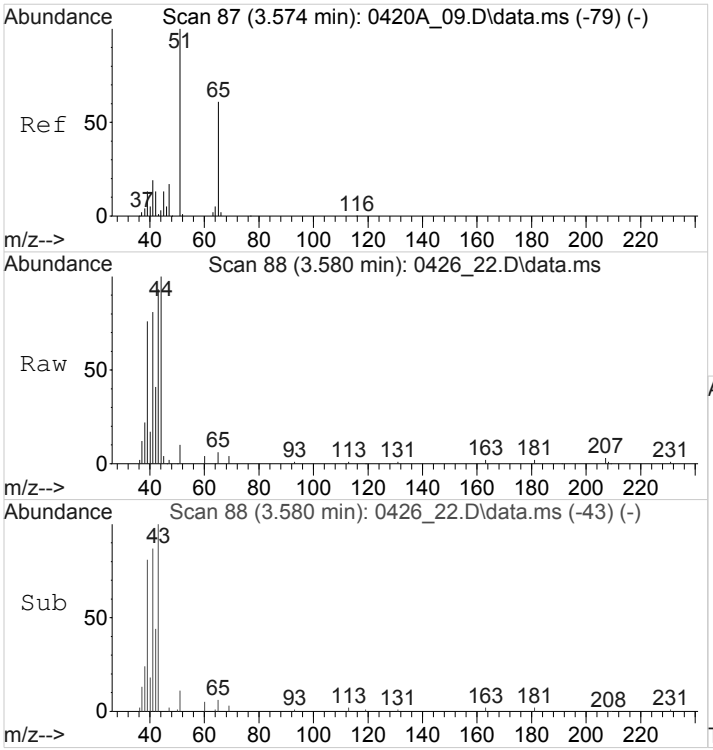
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_22.D
Acq On : 26 Apr 2018 10:57 pm
Operator : 564
Sample : L988471-11 1x WG1103323
Misc :
ALS Vial : 22 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 27 08:57:15 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration

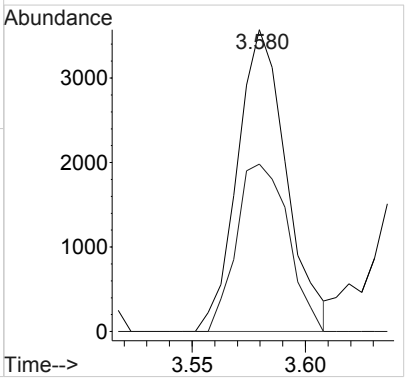


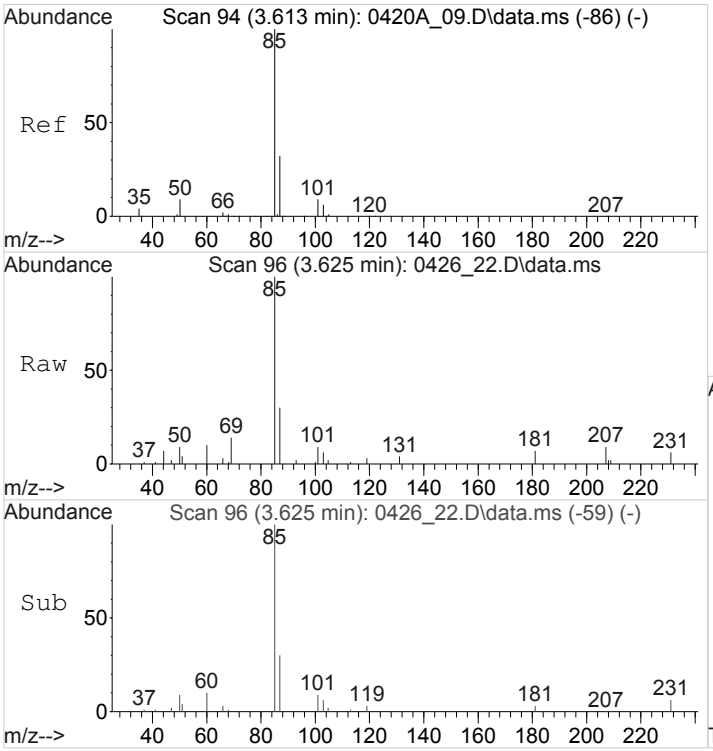


#3
1,1-DIFLUOROETHANE
Concen: 0.1418560 ppbv
RT: 3.580 min Scan# 88
Delta R.T. 0.006 min
Lab File: 0426_22.D
Acq: 26 Apr 2018 10:57 pm

Tgt Ion: 51 Resp: 5384

Ion	Ratio	Lower	Upper
51	100		
65	58.5	49.4	74.2

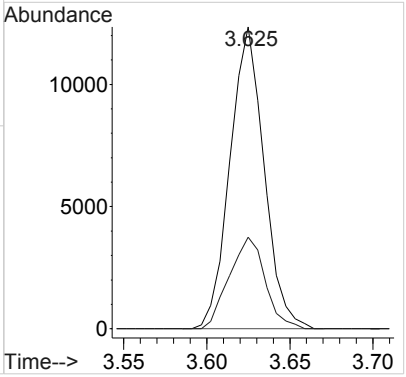


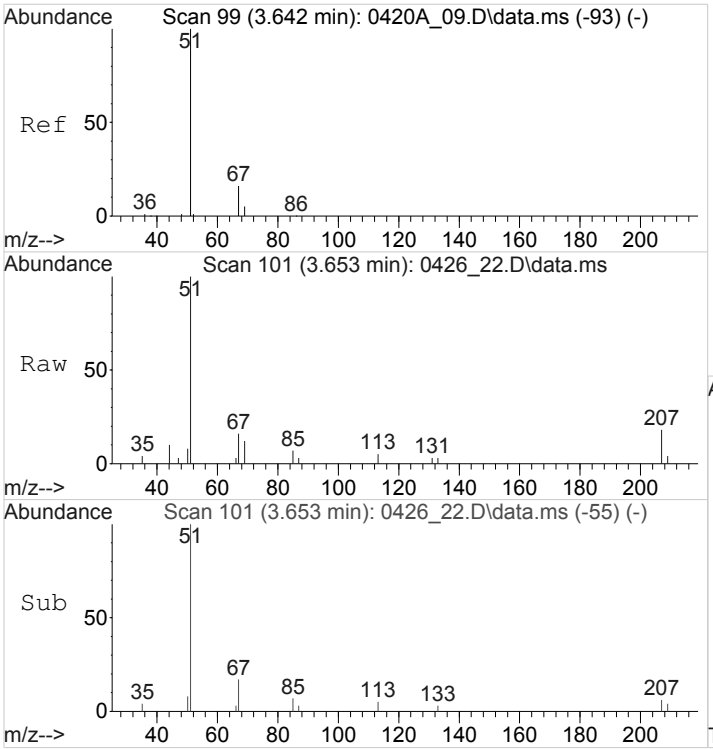


#4
Dichlorodifluoromethane
Concen: 0.2924773 ppbv
RT: 3.625 min Scan# 96
Delta R.T. 0.011 min
Lab File: 0426_22.D
Acq: 26 Apr 2018 10:57 pm

Tgt Ion: 85 Resp: 17645

Ion	Ratio	Lower	Upper
85	100		
87	31.9	25.8	38.8

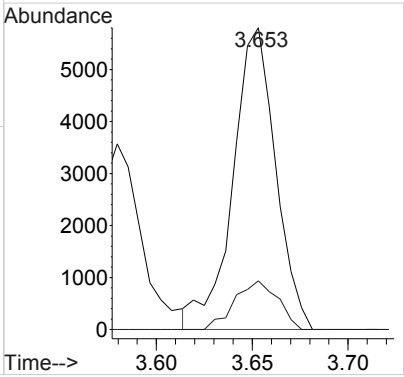


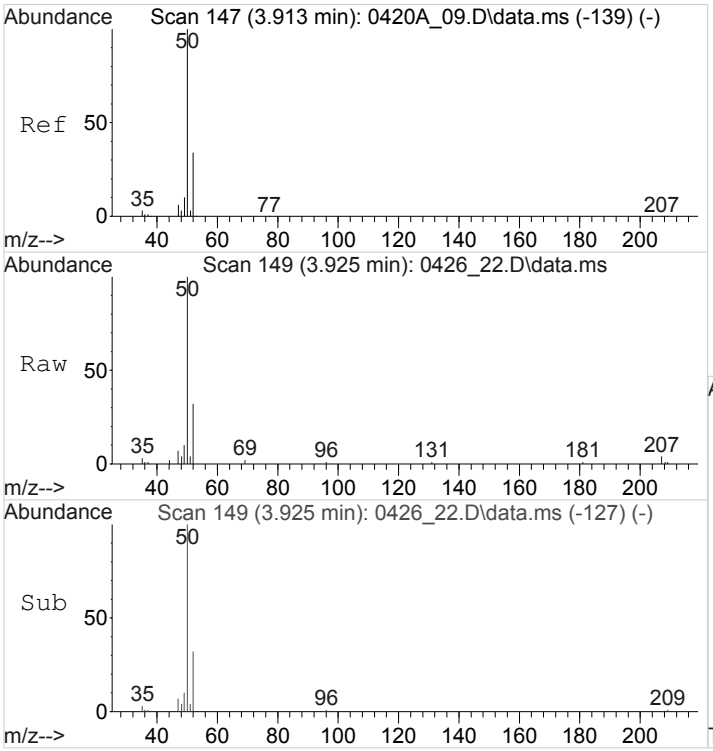


#5
CHLORODIFLUOROMETHANE
Concen: 0.2475349 ppbv
RT: 3.653 min Scan# 101
Delta R.T. 0.011 min
Lab File: 0426_22.D
Acq: 26 Apr 2018 10:57 pm

Tgt Ion: 51 Resp: 8993

Ion	Ratio	Lower	Upper
51	100		
67	16.3	12.7	19.1

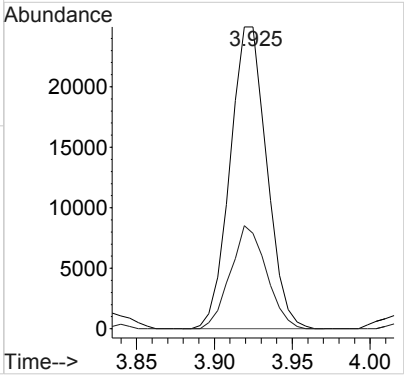


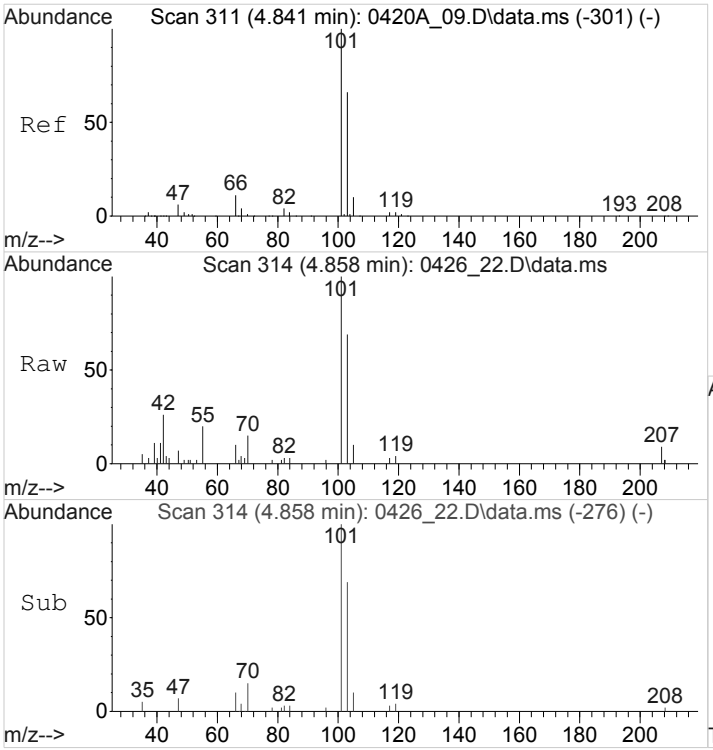


#7
Chloromethane
Concen: 1.6929371 ppbv
RT: 3.925 min Scan# 149
Delta R.T. 0.011 min
Lab File: 0426_22.D
Acq: 26 Apr 2018 10:57 pm

Tgt Ion: 50 Resp: 40727

Ion	Ratio	Lower	Upper
50	100		
52	33.6	26.5	39.7

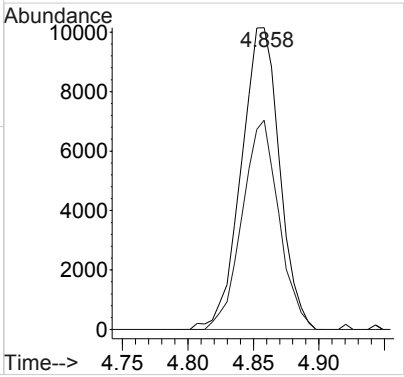


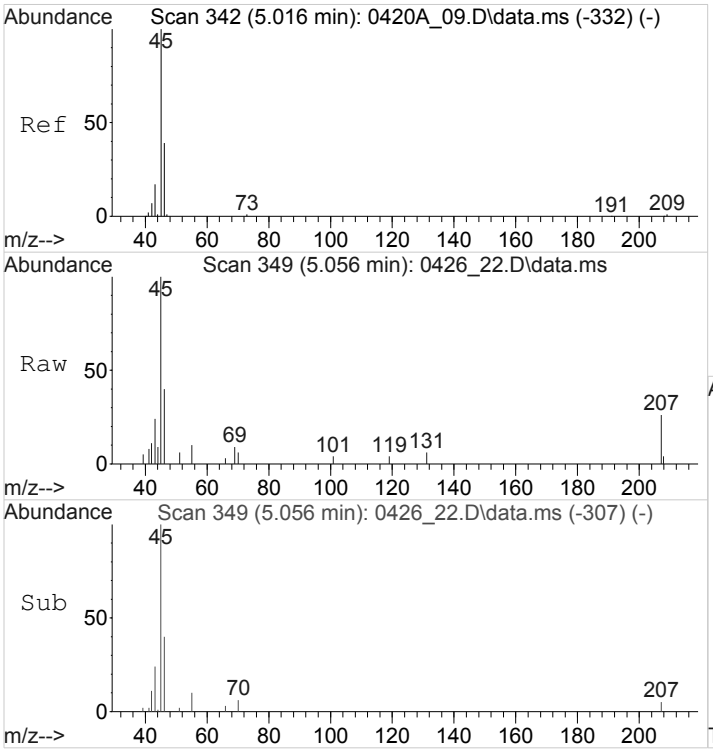


#13
Trichlorofluoromethane
Concen: 0.3058043 ppbv
RT: 4.858 min Scan# 314
Delta R.T. 0.017 min
Lab File: 0426_22.D
Acq: 26 Apr 2018 10:57 pm

Tgt Ion:101 Resp: 20630

Ion	Ratio	Lower	Upper
101	100		
103	66.5	52.6	79.0

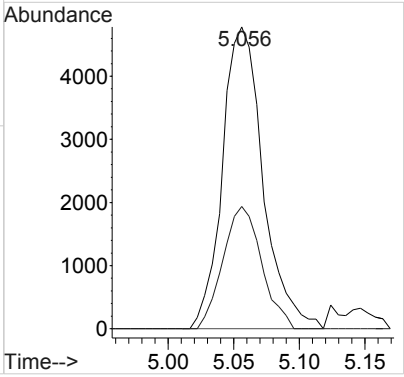


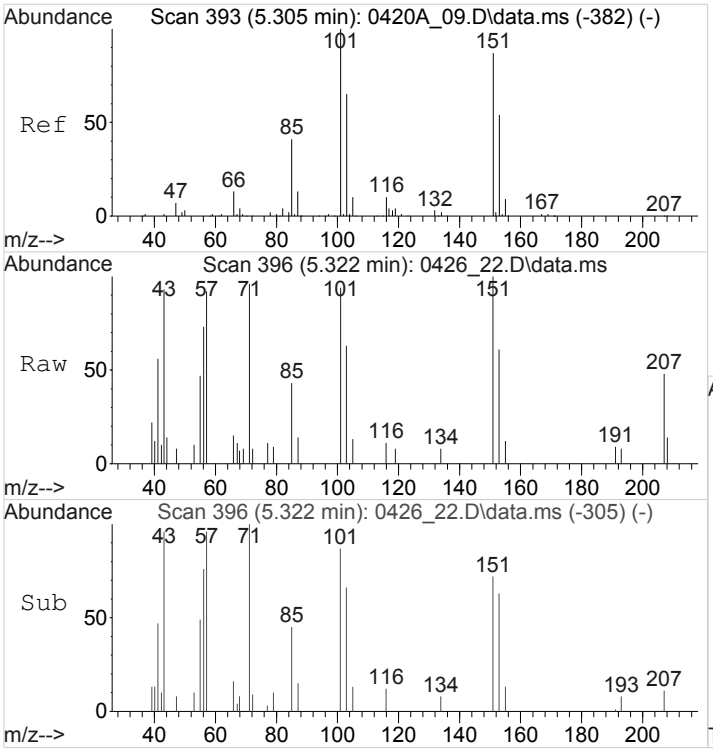


#14
Ethanol
Concen: 0.8809009 ppbv
RT: 5.056 min Scan# 349
Delta R.T. 0.040 min
Lab File: 0426_22.D
Acq: 26 Apr 2018 10:57 pm

Tgt Ion: 45 Resp: 10304

Ion	Ratio	Lower	Upper
45	100		
46	38.5	33.1	49.7

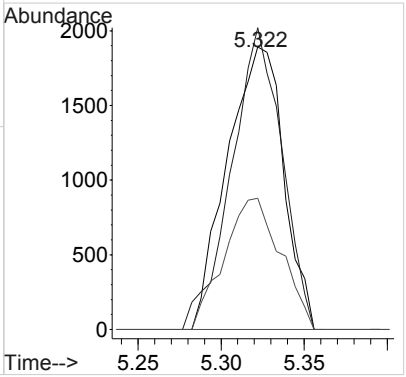


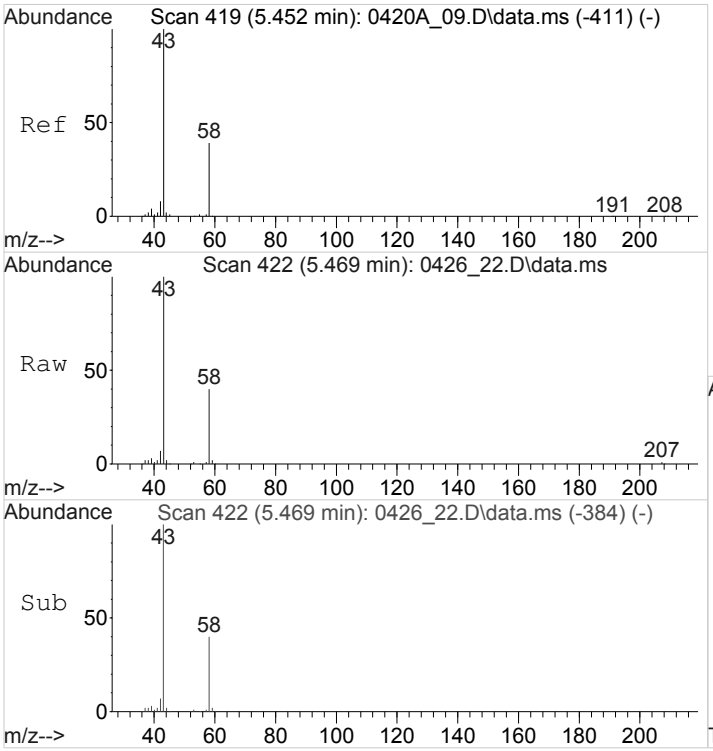


#15
1,1,2-Trichlorotrifluoroethane
Concen: 0.0713490 ppbv
RT: 5.322 min Scan# 396
Delta R.T. 0.017 min
Lab File: 0426_22.D
Acq: 26 Apr 2018 10:57 pm

Tgt Ion:101 Resp: 4470

Ion	Ratio	Lower	Upper
101	100		
151	95.2	67.9	101.9
85	46.5	32.4	48.6

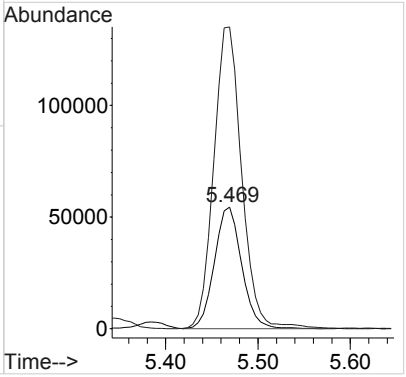


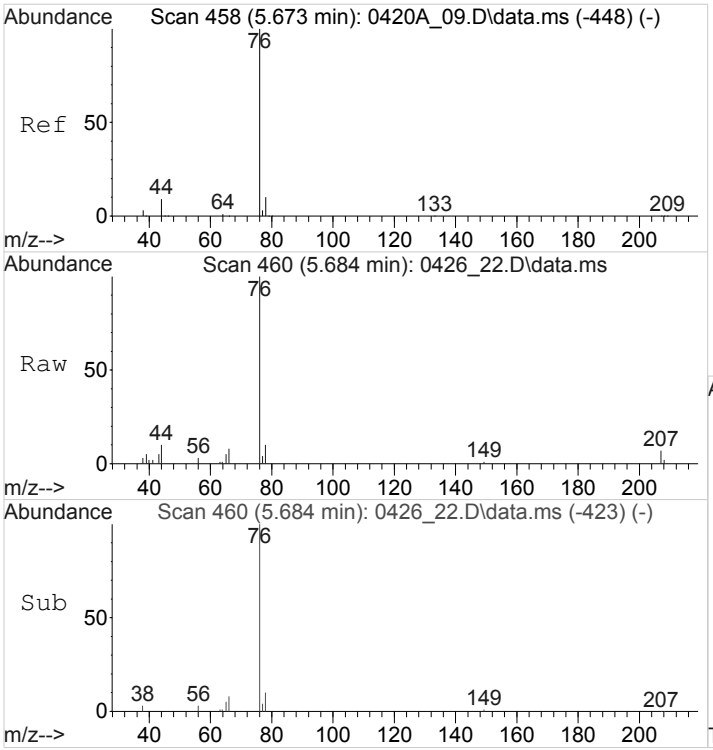


#17
Acetone
Concen: 7.5450680 ppbv
RT: 5.469 min Scan# 422
Delta R.T. 0.017 min
Lab File: 0426_22.D
Acq: 26 Apr 2018 10:57 pm

Tgt Ion: 58 Resp: 112093

Ion	Ratio	Lower	Upper
58	100		
43	253.8	252.6	379.0

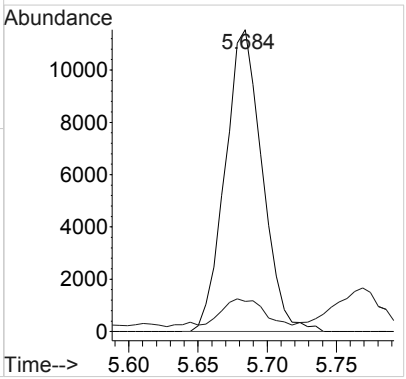


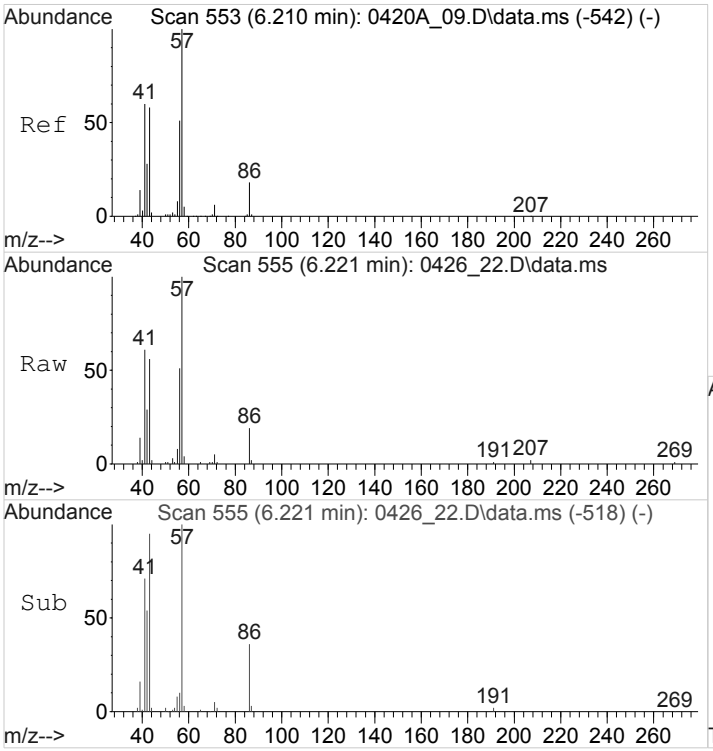


#19
Carbon Disulfide
Concen: 0.3158633 ppbv
RT: 5.684 min Scan# 460
Delta R.T. 0.011 min
Lab File: 0426_22.D
Acq: 26 Apr 2018 10:57 pm

Tgt Ion: 76 Resp: 21558

Ion	Ratio	Lower	Upper
76	100		
44	10.9	7.4	11.2

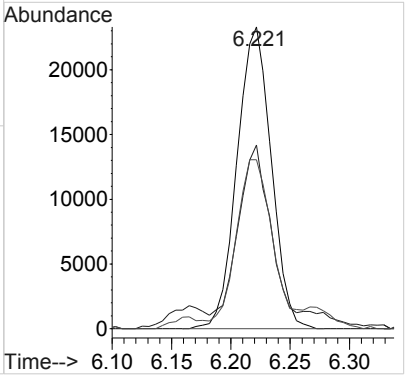


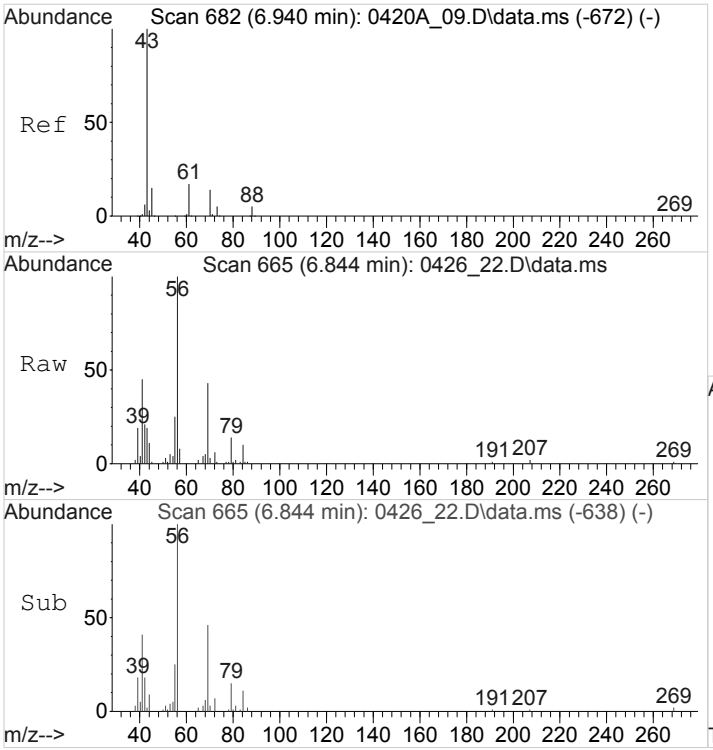


#25
n-Hexane
Concen: 0.9875398 ppbv
RT: 6.221 min Scan# 555
Delta R.T. 0.011 min
Lab File: 0426_22.D
Acq: 26 Apr 2018 10:57 pm

Tgt Ion: 57 Resp: 47069

Ion	Ratio	Lower	Upper
57	100		
41	62.7	47.6	71.4
43	54.1	46.1	69.1

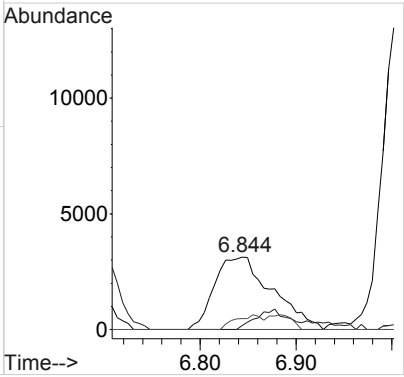


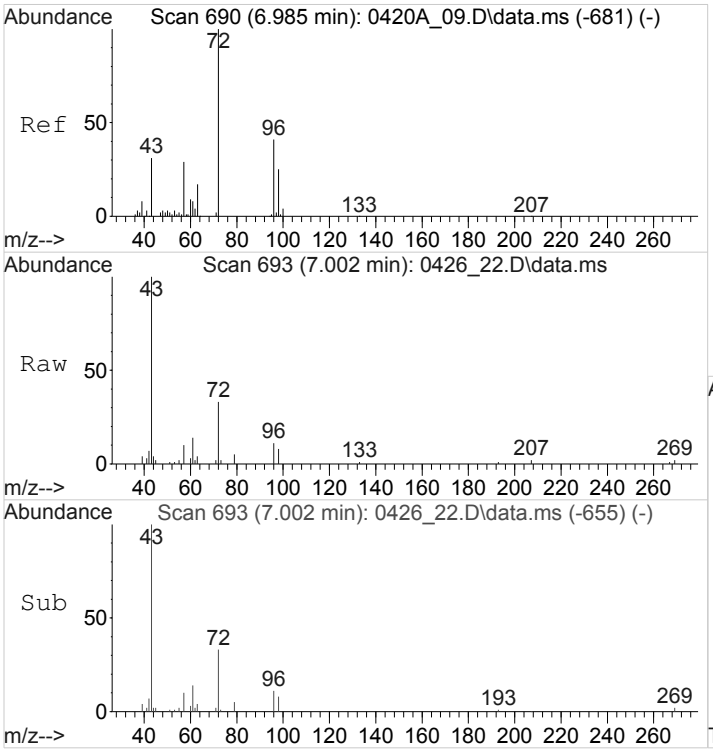


#28
ETHYL ACETATE
Concen: 0.2035395 ppbv
RT: 6.844 min Scan# 665
Delta R.T. -0.096 min
Lab File: 0426_22.D
Acq: 26 Apr 2018 10:57 pm

Tgt Ion: 43 Resp: 13124

Ion	Ratio	Lower	Upper
43	100		
45	0.0	12.0	18.0#
70	9.4	10.5	15.7#

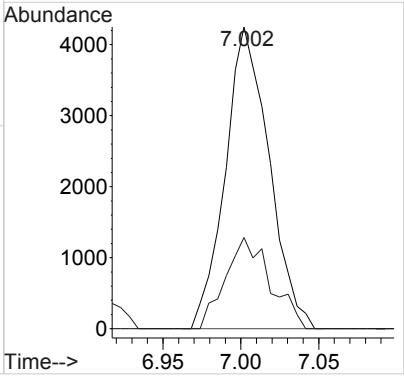


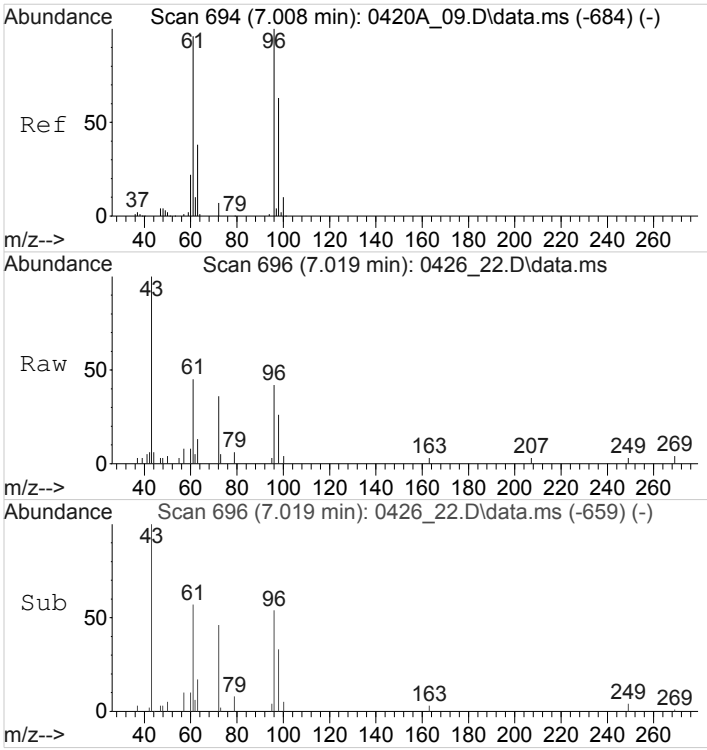


#29
2-Butanone (MEK)
Concen: 0.4298045 ppbv
RT: 7.002 min Scan# 693
Delta R.T. 0.017 min
Lab File: 0426_22.D
Acq: 26 Apr 2018 10:57 pm

Tgt Ion: 72 Resp: 8274

Ion	Ratio	Lower	Upper
72	100		
57	31.2	22.2	33.4

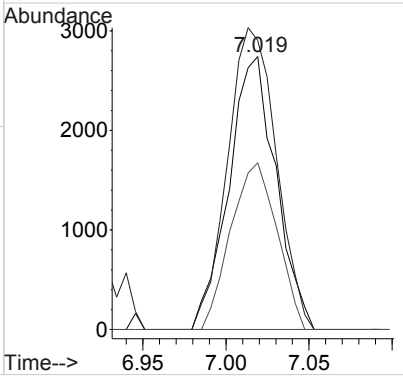


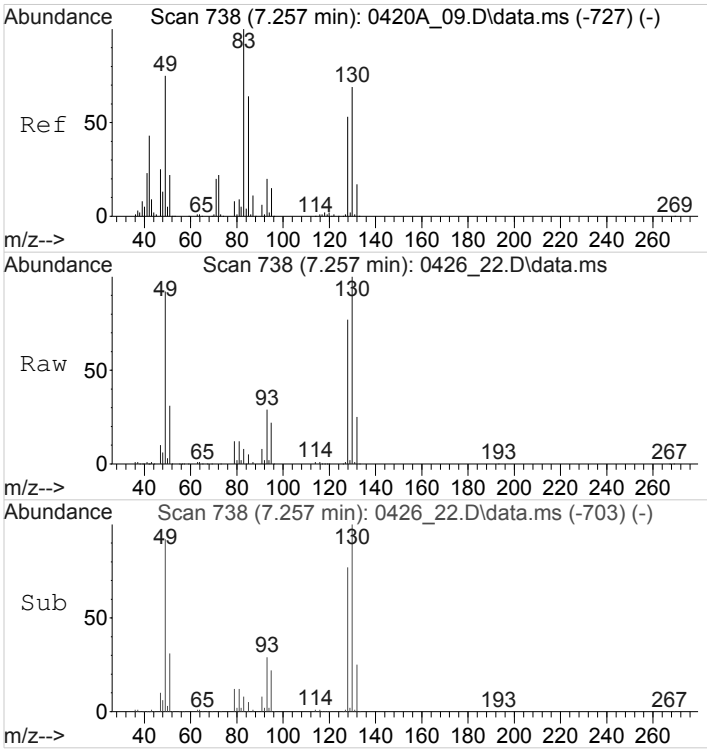


#30
cis-1,2-Dichloroethene
Concen: 0.1408830 ppbv
RT: 7.019 min Scan# 696
Delta R.T. 0.011 min
Lab File: 0426_22.D
Acq: 26 Apr 2018 10:57 pm

Tgt Ion: 96 Resp: 5417

Ion	Ratio	Lower	Upper
96	100		
61	114.7	94.1	141.1
98	60.0	50.6	76.0

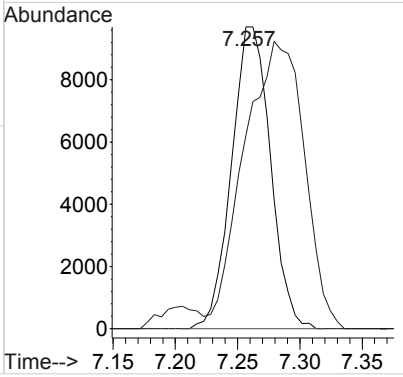


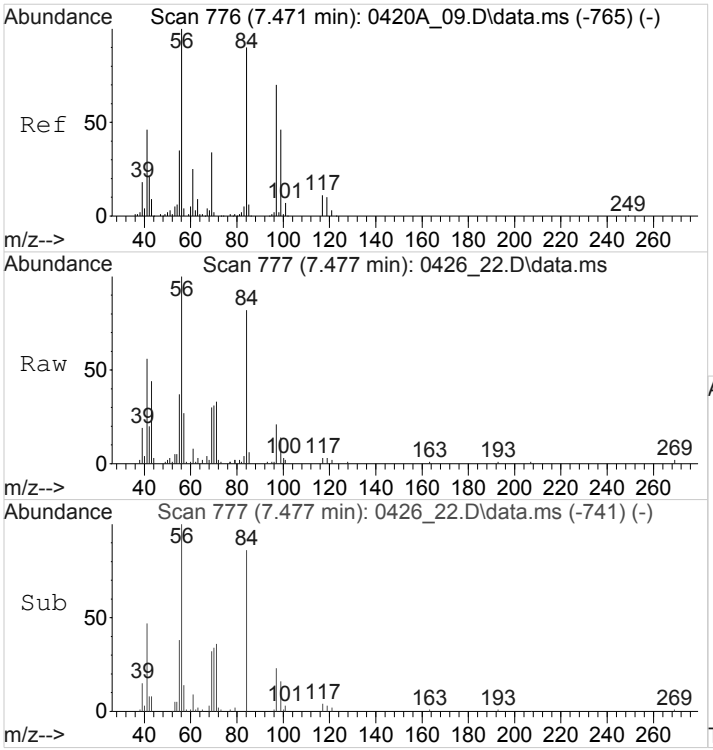


#32
Chloroform
Concen: 0.3049938 ppbv
RT: 7.257 min Scan# 738
Delta R.T. 0.000 min
Lab File: 0426_22.D
Acq: 26 Apr 2018 10:57 pm

Tgt Ion: 83 Resp: 21091

Ion	Ratio	Lower	Upper
83	100		
85	146.8	51.3	76.9#

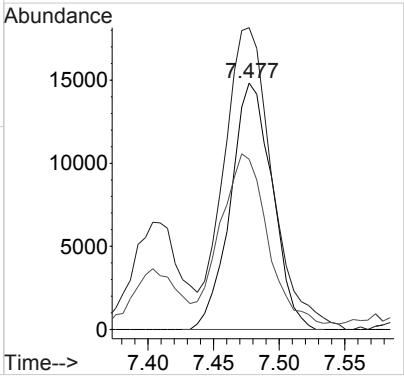


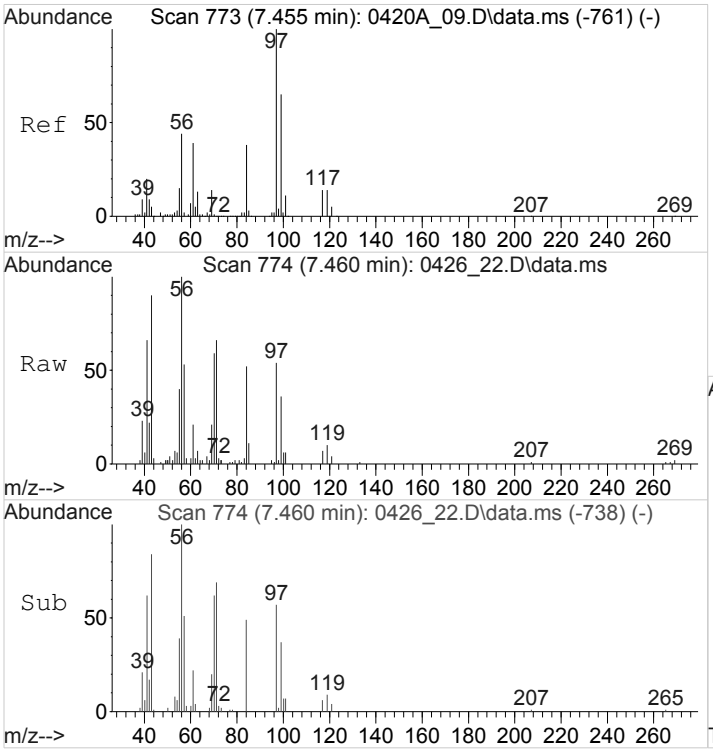


#33
Cyclohexane
Concen: 0.6682146 ppbv
RT: 7.477 min Scan# 777
Delta R.T. 0.006 min
Lab File: 0426_22.D
Acq: 26 Apr 2018 10:57 pm

Tgt Ion: 84 Resp: 32939

Ion	Ratio	Lower	Upper
84	100		
56	140.7	87.6	131.4#
41	77.7	40.2	60.2#

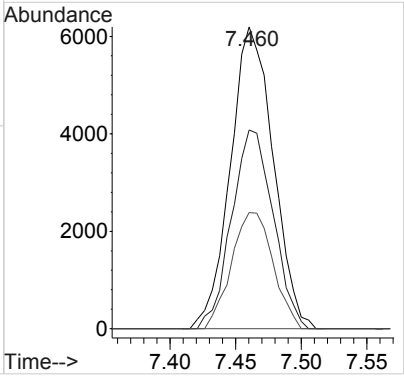


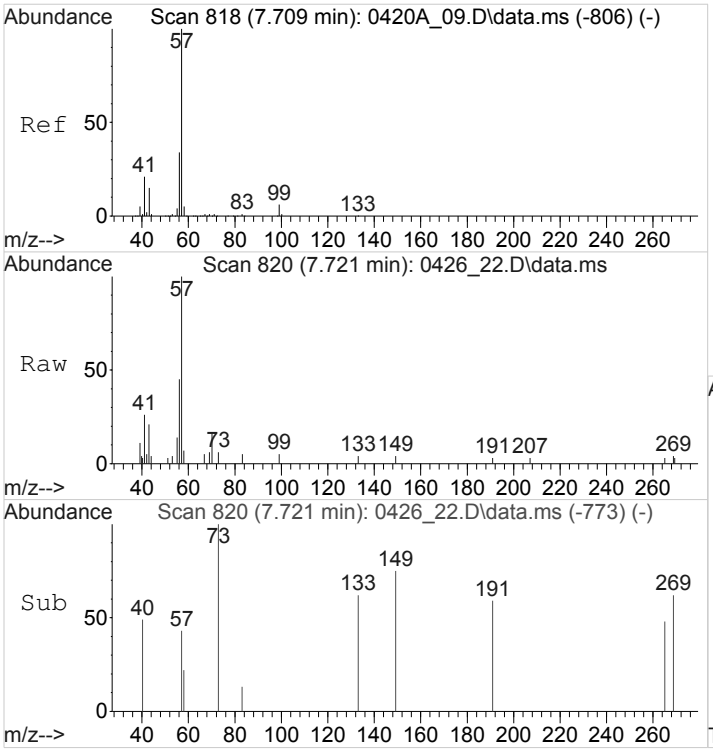


#34
1,1,1-Trichloroethane
Concen: 0.2046073 ppbv
RT: 7.460 min Scan# 774
Delta R.T. 0.006 min
Lab File: 0426_22.D
Acq: 26 Apr 2018 10:57 pm

Tgt Ion: 97 Resp: 14097

Ion	Ratio	Lower	Upper
97	100		
99	63.8	52.2	78.4
61	37.3	31.3	46.9

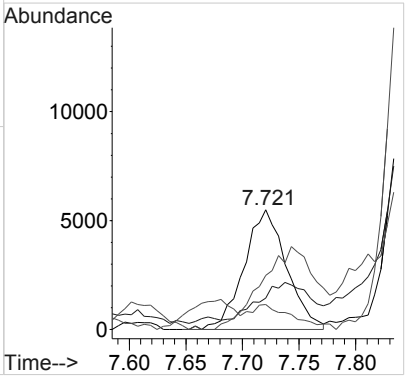


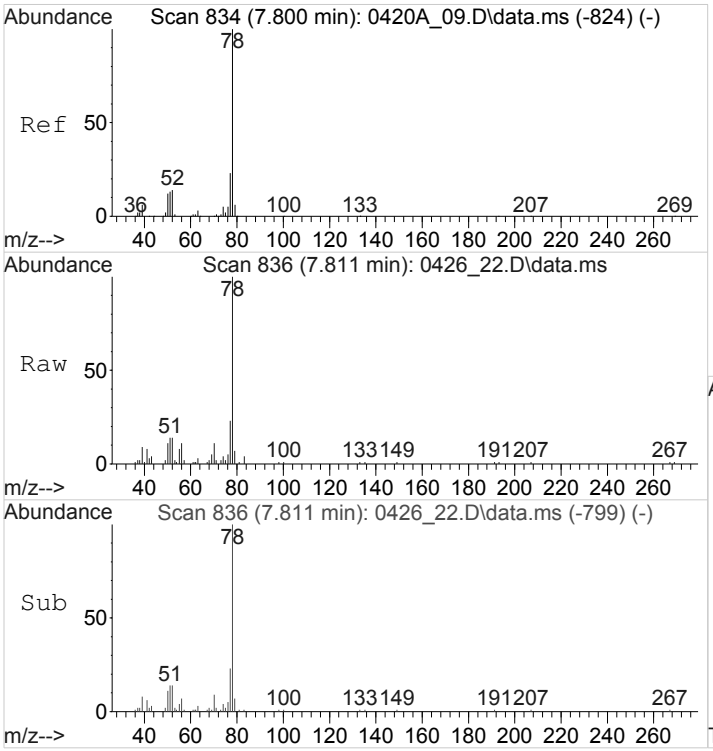


#36
2,2,4-Trimethylpentane
Concen: 0.0854746 ppbv
RT: 7.721 min Scan# 820
Delta R.T. 0.011 min
Lab File: 0426_22.D
Acq: 26 Apr 2018 10:57 pm

Tgt Ion: 57 Resp: 14410

Ion	Ratio	Lower	Upper
57	100		
41	36.3	16.6	25.0#
43	17.5	12.4	18.6
56	88.2	26.6	39.8#

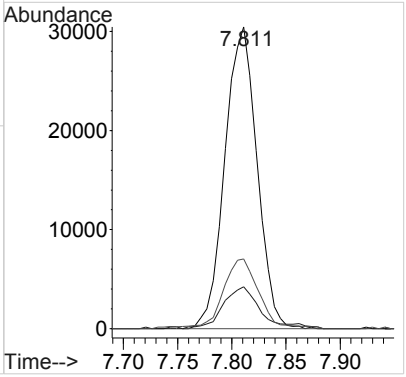


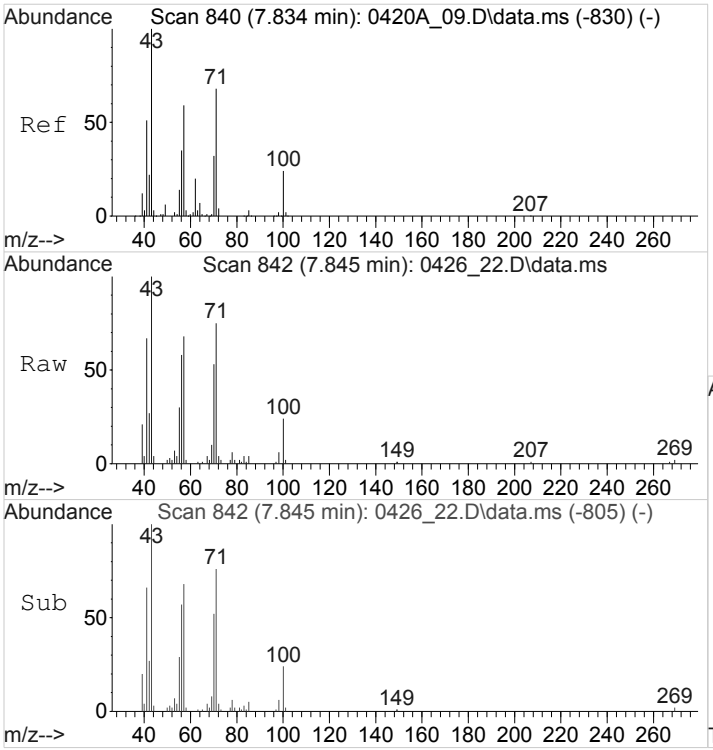


#38
Benzene
Concen: 0.5466501 ppbv
RT: 7.811 min Scan# 836
Delta R.T. 0.011 min
Lab File: 0426_22.D
Acq: 26 Apr 2018 10:57 pm

Tgt Ion: 78 Resp: 62981

Ion	Ratio	Lower	Upper
78	100		
51	16.2	11.3	16.9
77	26.0	18.6	28.0

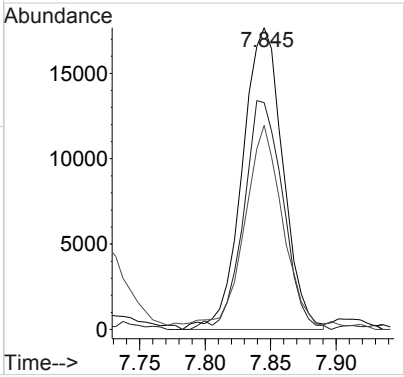


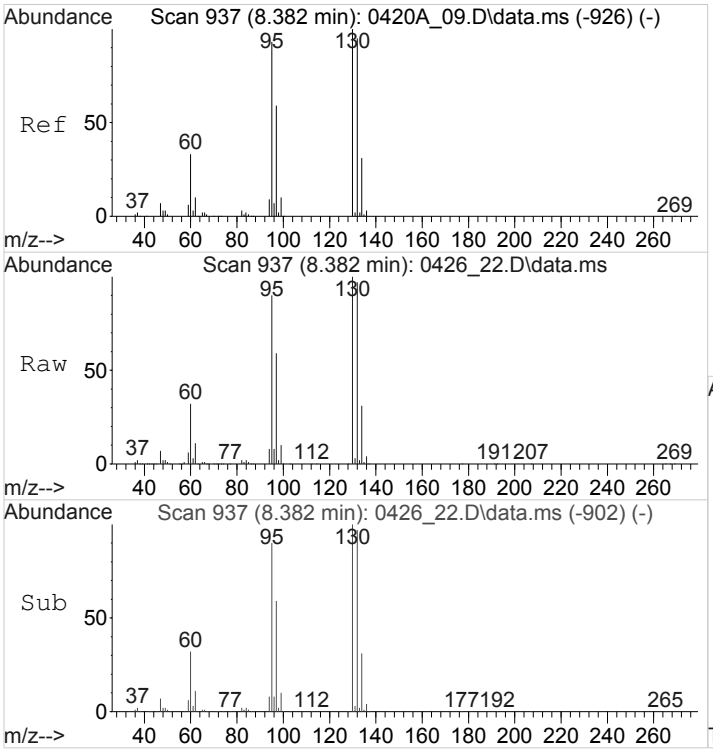


#40
Heptane
Concen: 0.6691072 ppbv
RT: 7.845 min Scan# 842
Delta R.T. 0.011 min
Lab File: 0426_22.D
Acq: 26 Apr 2018 10:57 pm

Tgt Ion: 43 Resp: 38073

Ion	Ratio	Lower	Upper
43	100		
71	73.0	56.1	84.1
57	60.9	47.1	70.7

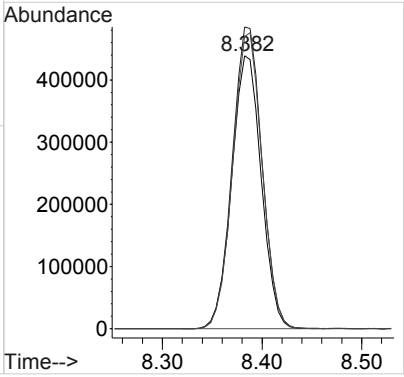


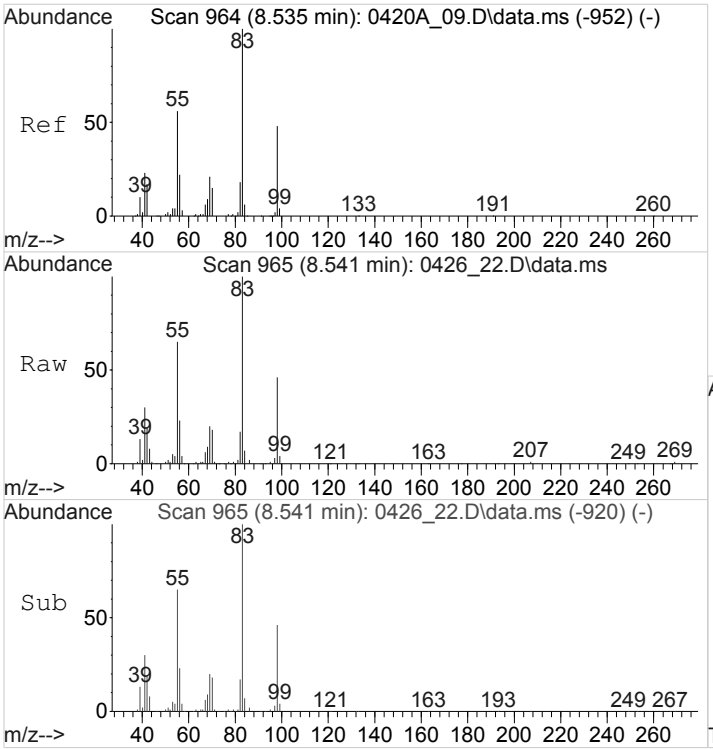


#41
Trichloroethene
Concen: 17.9993578 ppbv
RT: 8.382 min Scan# 937
Delta R.T. 0.000 min
Lab File: 0426_22.D
Acq: 26 Apr 2018 10:57 pm

Tgt Ion: 95 Resp: 903839

Ion	Ratio	Lower	Upper
95	100		
130	111.5	86.4	129.6
132	107.9	83.6	125.4

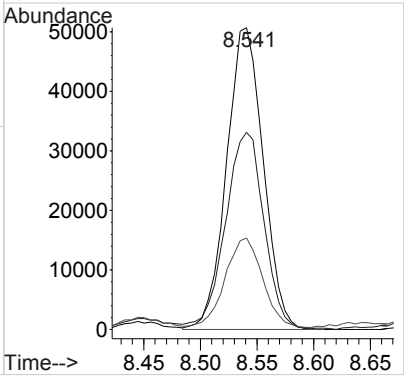


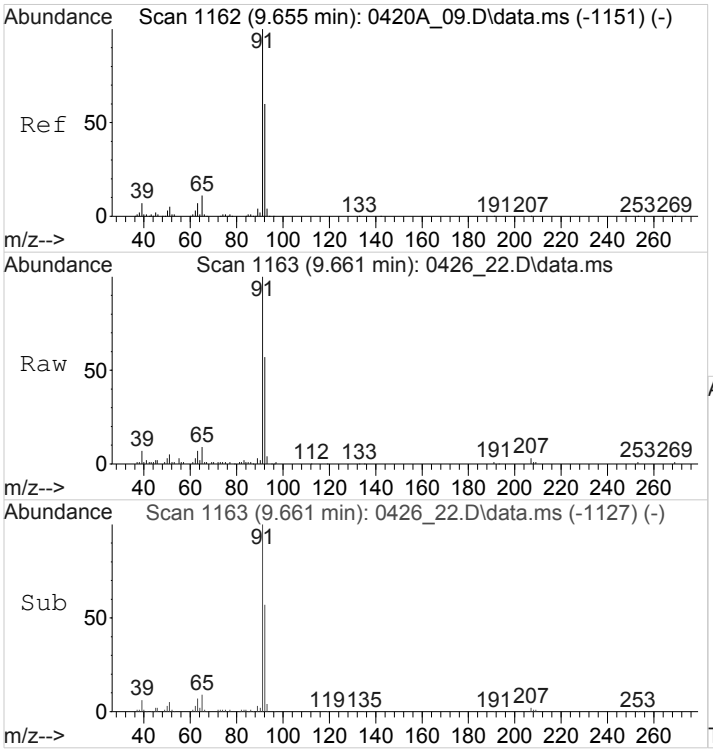


#43
METHYL CYCLOHEXANE
Concen: 1.6576852 ppbv
RT: 8.541 min Scan# 965
Delta R.T. 0.006 min
Lab File: 0426_22.D
Acq: 26 Apr 2018 10:57 pm

Tgt Ion: 83 Resp: 114408

Ion	Ratio	Lower	Upper
83	100		
55	68.8	58.5	87.7
41	30.1	25.8	38.6

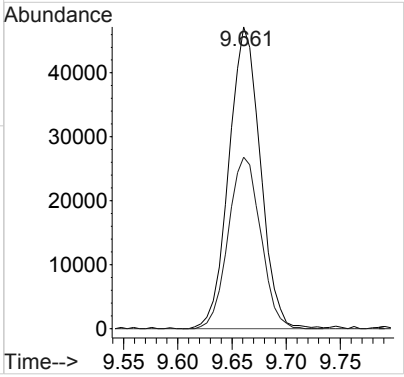


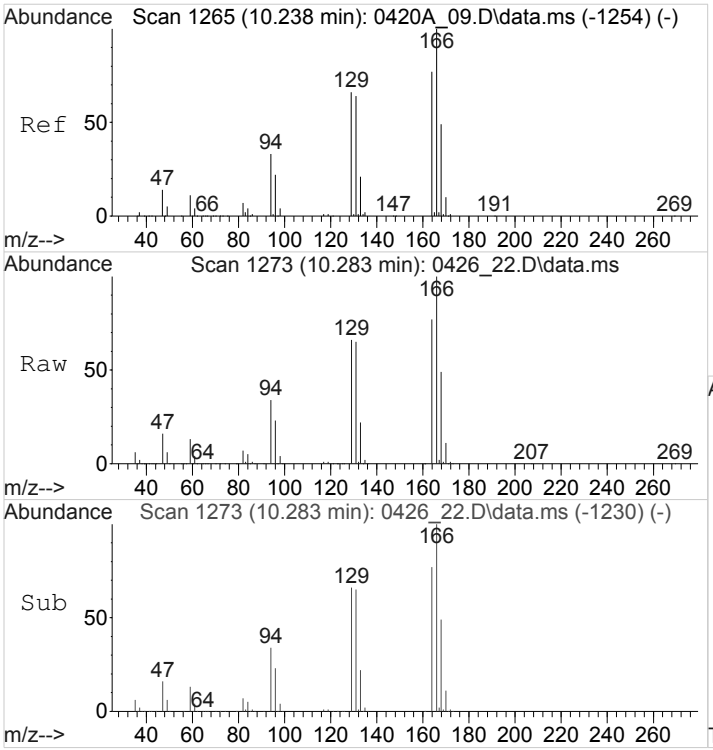


#50
Toluene
Concen: 0.6650694 ppbv
RT: 9.661 min Scan# 1163
Delta R.T. 0.006 min
Lab File: 0426_22.D
Acq: 26 Apr 2018 10:57 pm

Tgt Ion: 91 Resp: 95277

Ion	Ratio	Lower	Upper
91	100		
92	58.6	48.0	72.0

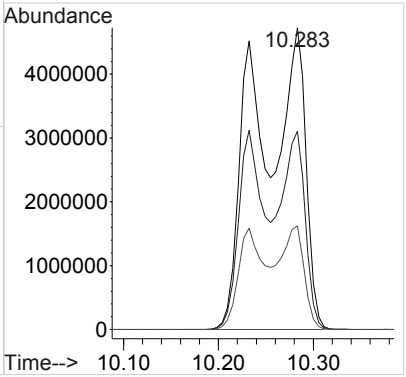


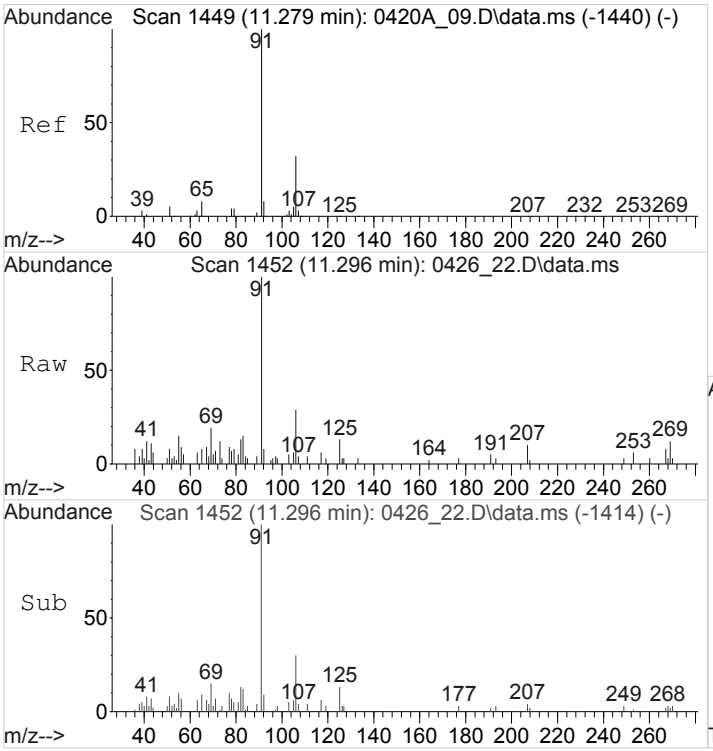


#53
Tetrachloroethene
Concen: 212.6112759 ppbv m
RT: 10.283 min Scan# 1273
Delta R.T. 0.045 min
Lab File: 0426_22.D
Acq: 26 Apr 2018 10:57 pm

Tgt Ion:166 Resp:16393816

Ion	Ratio	Lower	Upper
166	100		
129	34.7	53.7	80.5#
94	18.4	27.2	40.8#

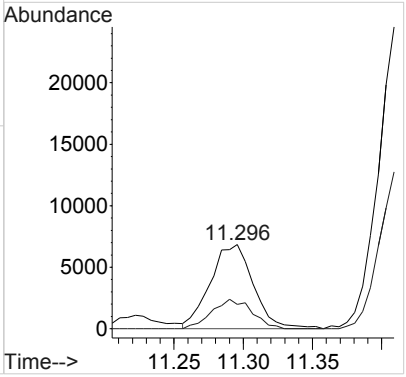


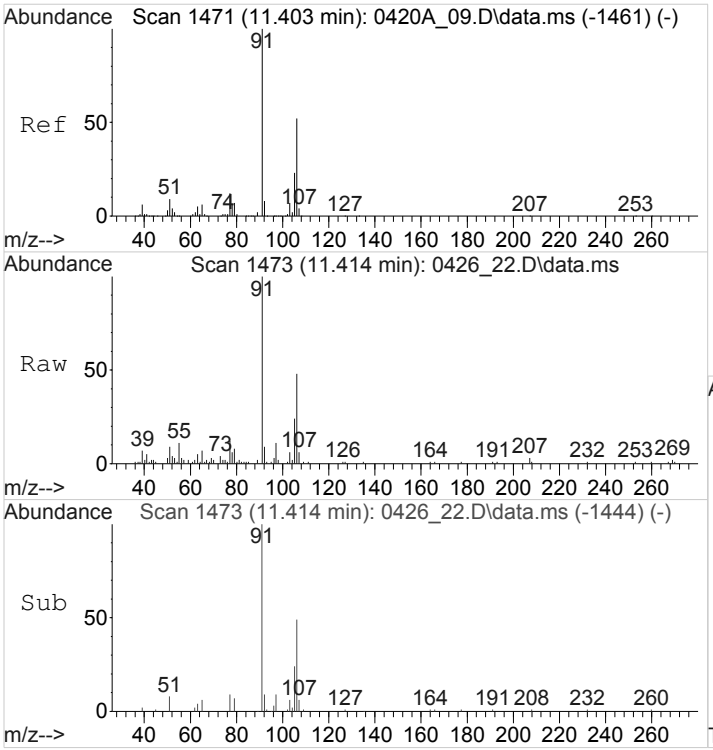


#59
Ethylbenzene
Concen: 0.0684839 ppbv
RT: 11.296 min Scan# 1452
Delta R.T. 0.017 min
Lab File: 0426_22.D
Acq: 26 Apr 2018 10:57 pm

Tgt Ion: 91 Resp: 14796

Ion	Ratio	Lower	Upper
91	100		
106	32.5	25.9	38.9

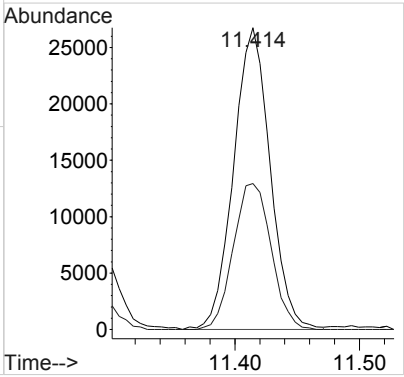


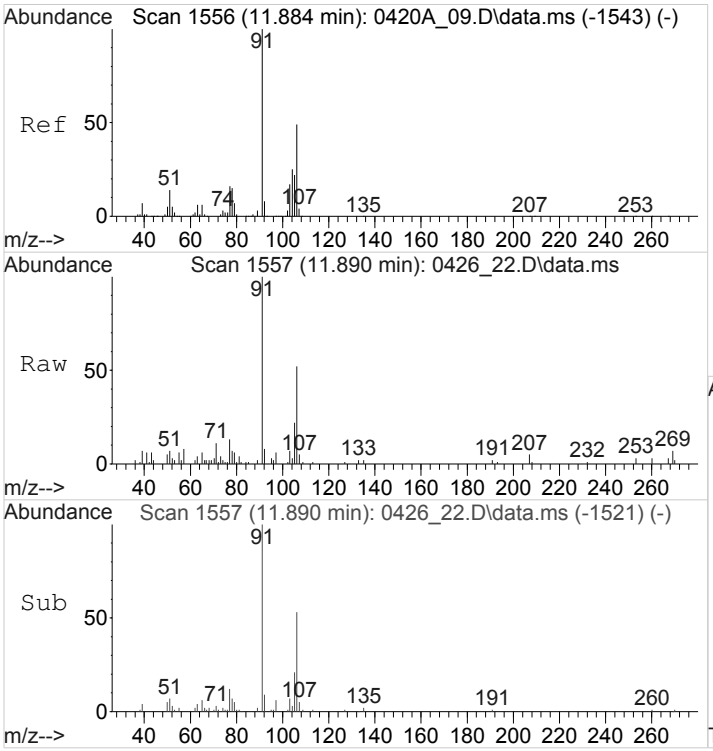


#60
M&P-Xylene
Concen: 0.3300807 ppbv
RT: 11.414 min Scan# 1473
Delta R.T. 0.011 min
Lab File: 0426_22.D
Acq: 26 Apr 2018 10:57 pm

Tgt Ion: 91 Resp: 54632

Ion	Ratio	Lower	Upper
91	100		
106	49.9	41.5	62.3

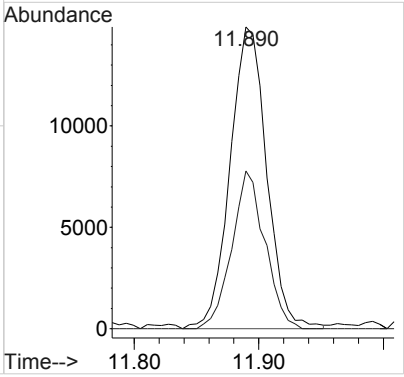


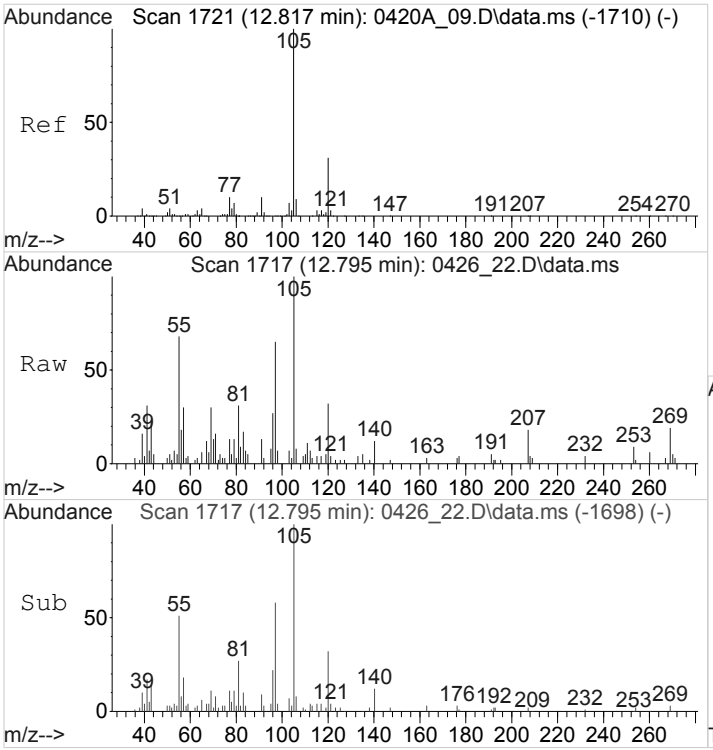


#61
O-Xylene
Concen: 0.1777991 ppbv
RT: 11.890 min Scan# 1557
Delta R.T. 0.006 min
Lab File: 0426_22.D
Acq: 26 Apr 2018 10:57 pm

Tgt Ion: 91 Resp: 30427

Ion	Ratio	Lower	Upper
91	100		
106	47.2	39.1	58.7

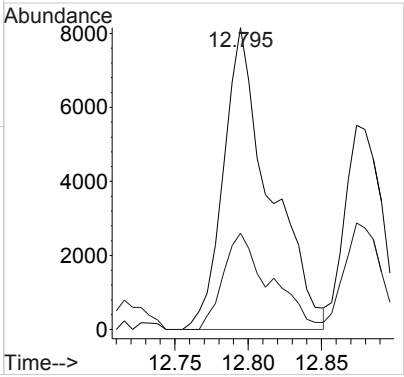


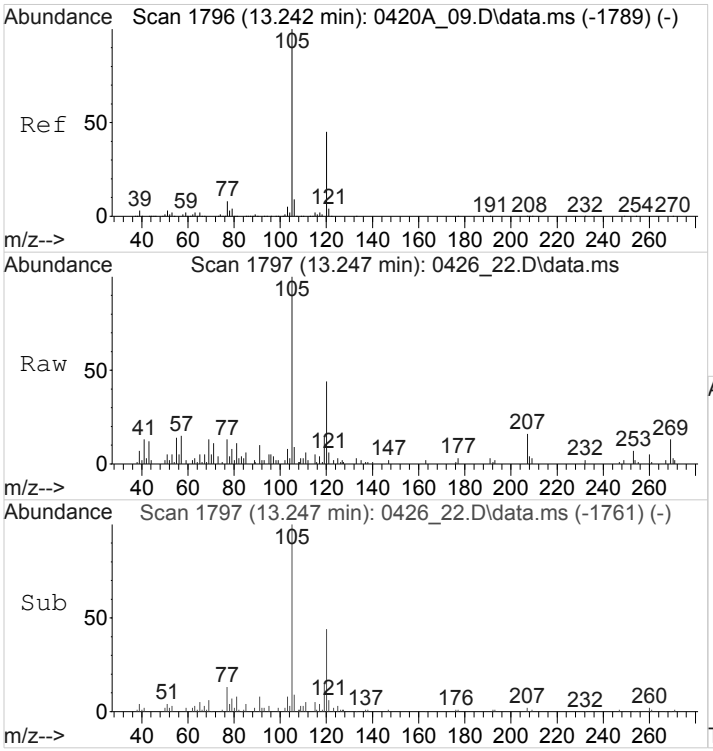


#67
4-Ethyltoluene
Concen: 0.0727638 ppbv
RT: 12.795 min Scan# 1717
Delta R.T. -0.023 min
Lab File: 0426_22.D
Acq: 26 Apr 2018 10:57 pm

Tgt Ion:105 Resp: 17824

Ion	Ratio	Lower	Upper
105	100		
120	32.3	24.8	37.2

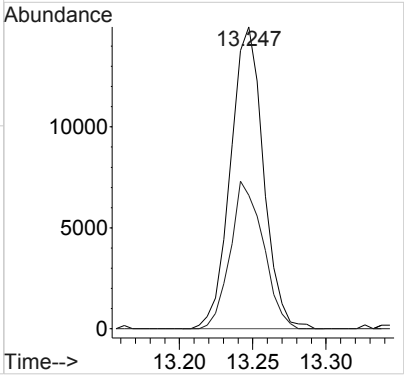


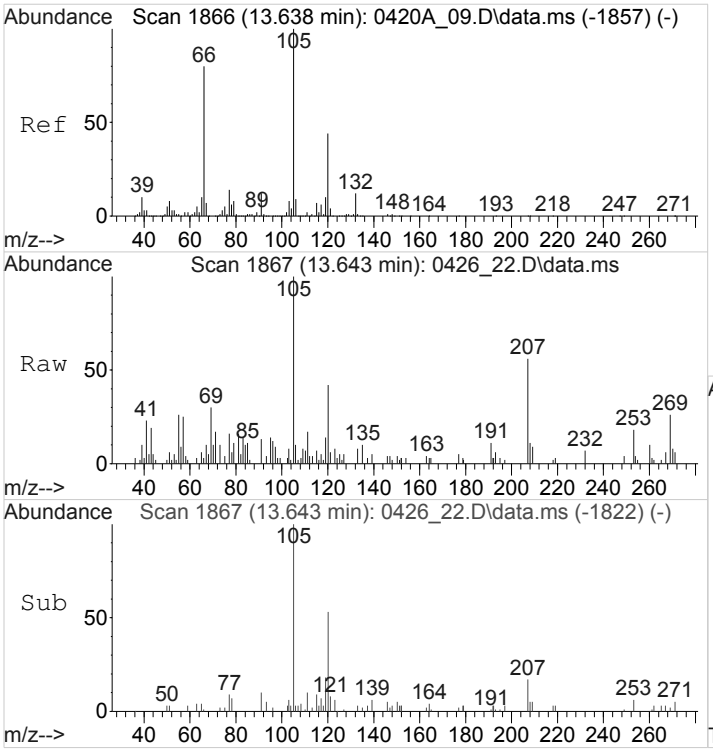


#72
1,2,4-Trimethylbenzene
Concen: 0.1190292 ppbv
RT: 13.247 min Scan# 1797
Delta R.T. 0.006 min
Lab File: 0426_22.D
Acq: 26 Apr 2018 10:57 pm

Tgt Ion:105 Resp: 23252

Ion	Ratio	Lower	Upper
105	100		
120	48.8	38.8	58.2

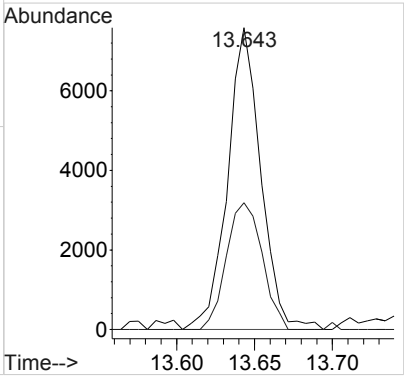


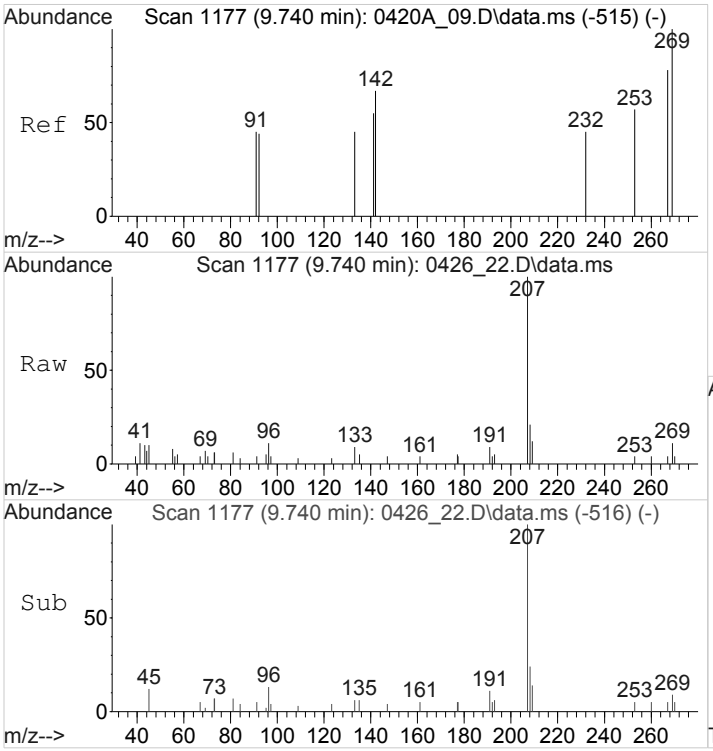


#76
1,2,3-TRIMETHYLBENZENE
Concen: 0.0602589 ppbv
RT: 13.643 min Scan# 1867
Delta R.T. 0.006 min
Lab File: 0426_22.D
Acq: 26 Apr 2018 10:57 pm

Tgt Ion:105 Resp: 11241

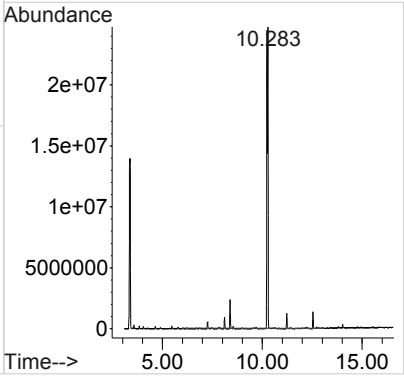
Ion	Ratio	Lower	Upper
105	100		
120	45.2	36.0	54.0





#84
TPH (GC/MS) Low Fraction
Concen: 310.5557532 ppbv m
RT: 9.740 min Scan# 1177
Delta R.T. 0.000 min
Lab File: 0426_22.D
Acq: 26 Apr 2018 10:57 pm

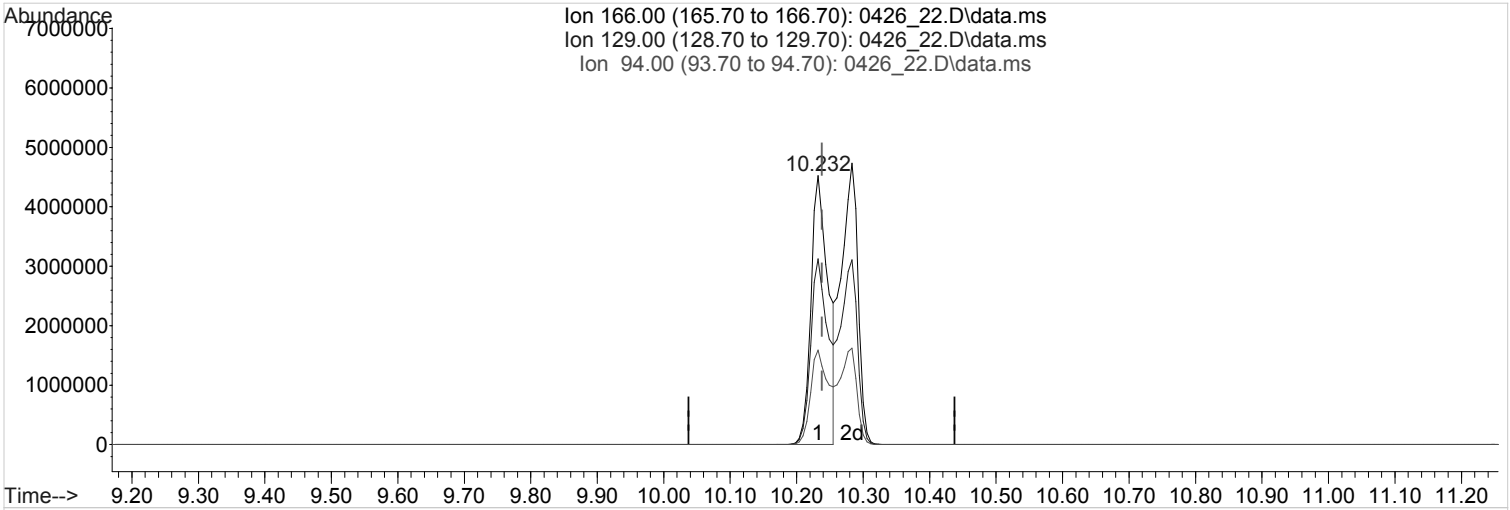
Tgt Ion:TIC Resp:95773149

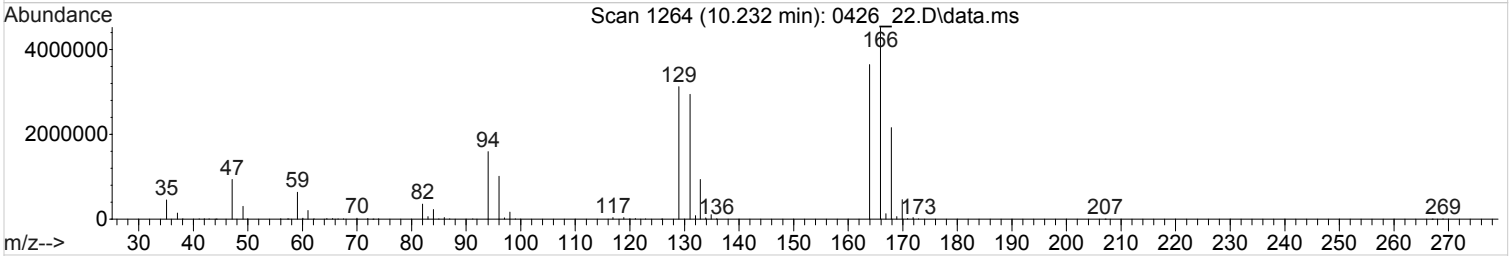


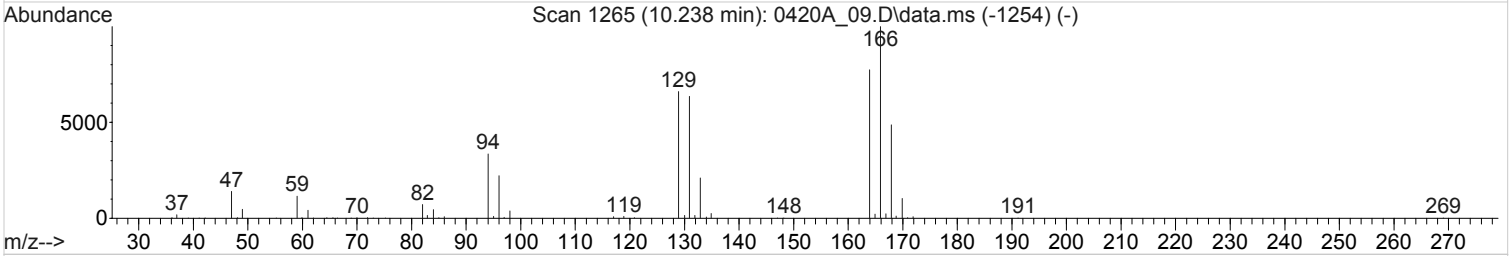
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_22.D
Acq On : 26 Apr 2018 10:57 pm
Operator : 564
Sample : L988471-11 1x WG1103323
Misc :
ALS Vial : 22 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 27 08:42:34 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration







TIC: 0426_22.D\data.ms

(53) Tetrachloroethene (T,M)

10.232min (-0.006) 105.1486482 ppbv E

Qvalue = 96

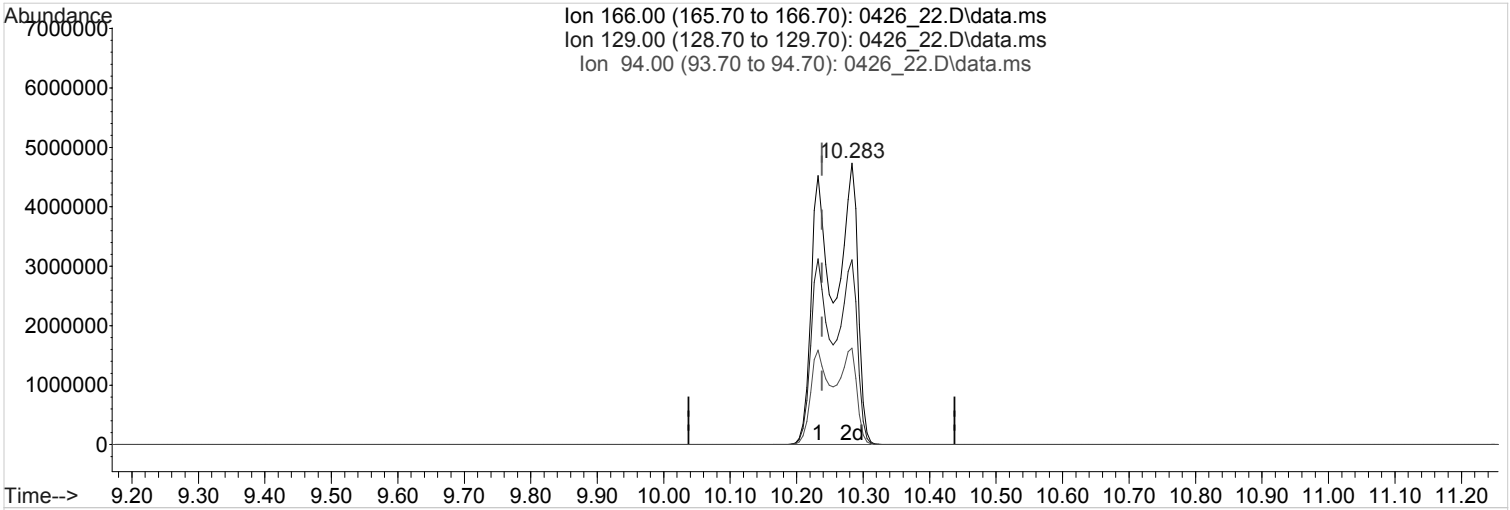
response 8107696 Limit = 0.2000000

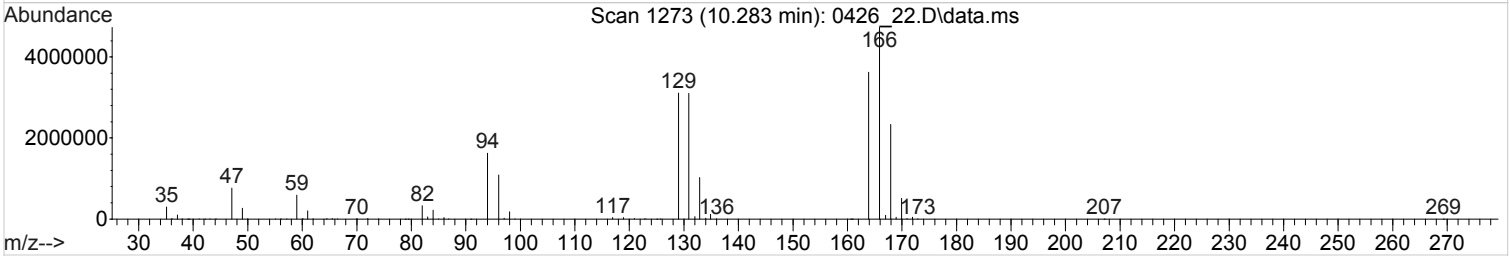
Ion	Exp%	Act%
166.00	100	100
129.00	67.10	70.20
94.00	34.00	37.25
0.00	0.00	0.00

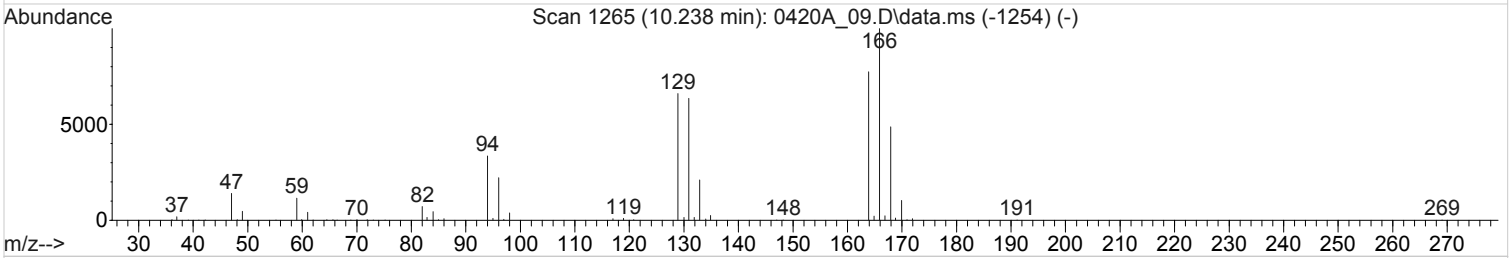
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_22.D
Acq On : 26 Apr 2018 10:57 pm
Operator : 564
Sample : L988471-11 1x WG1103323
Misc :
ALS Vial : 22 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 27 08:42:34 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration







TIC: 0426_22.D\data.ms

(53) Tetrachloroethene (T,M)

10.283min (+0.045) 212.6112759 ppbv m E

response 16393816 Limit = 0.2000000

Ion	Exp%	Act%
166.00	100	100
129.00	67.10	34.72#
94.00	34.00	18.42#
0.00	0.00	0.00

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS-12

ESC Sample ID:	L988471-12	**SDG:**	L988471
Client Sample ID:	SS-12	**Collected Date/Time:**	04/23/18 11:42
Lab File ID:	0427_13	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS2	**Preparation Date/Time:**	04/27/18 18:07
Analytical Batch:	WG1103956	**Analysis Date/Time:**	04/27/18 18:07
Dilution Factor:	25	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	16 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	**CAS**	**RT**	**Result**	**Qualifier**	**MDL**	**RDL**
			ppbv		*ppbv*	*ppbv*
Tetrachloroethylene	127-18-4	12.21	570		1.24	5.00
Trichloroethylene	79-01-6	10.18	58.0		1.36	5.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_13.D
Acq On : 27 Apr 2018 6:07 pm
Operator : 564
Sample : L988471-12 25x WG1103956
Misc :
ALS Vial : 13 Sample Multiplier: 25
InstName : AIRMS2

Quant Time: Apr 28 07:50:42 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:08:22 2018
Response via : Initial Calibration

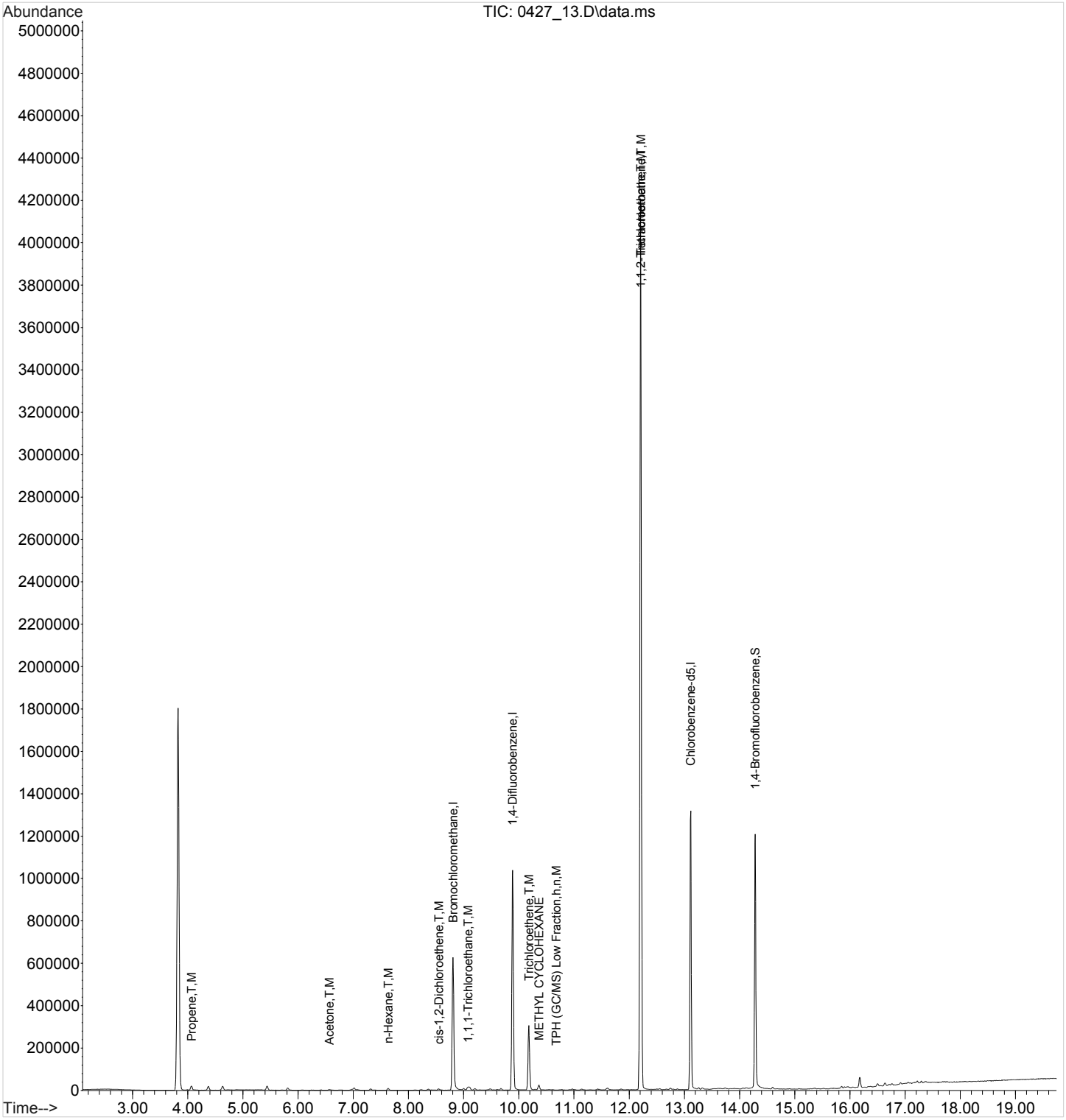
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.810	130	1734917	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	9.891	114	7493060	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	13.116	117	6474693	4.0000000	ppbv	# 0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	14.286	95	3832130	3.7459012	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 93.65%			
Target Compounds						Qvalue
2) Propene	4.068	41	62130	3.3341363	ppbv #	55
17) Acetone	6.570	43	56604	2.0278283	ppbv #	49
25) n-Hexane	7.636	57	45353	1.5780401	ppbv	94
30) cis-1,2-Dichloroethene	8.547	61	51555	1.7541483	ppbv #	86
34) 1,1,1-Trichloroethane	9.081	97	79905	2.9473702	ppbv	99
40) Heptane	9.679	43	40570	0.8347309	ppbv #	64
41) Trichloroethene	10.183	95	1063408	58.0382595	ppbv	98
43) METHYL CYCLOHEXANE	10.366	83	79800	2.7092919	ppbv #	72
50) Toluene	11.593	91	41976	0.7725887	ppbv	100
52) 1,1,2-Trichloroethane	12.209	97	87126	5.1822847	ppbv #	1
53) Tetrachloroethene	12.210	166	11718551	570.3891573	ppbv	97
59) Ethylbenzene	13.334	91	29531	0.3776332	ppbv #	63
84) TPH (GC/MS) Low Fraction	10.675	TIC	88513001m	552.3877209	ppbv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

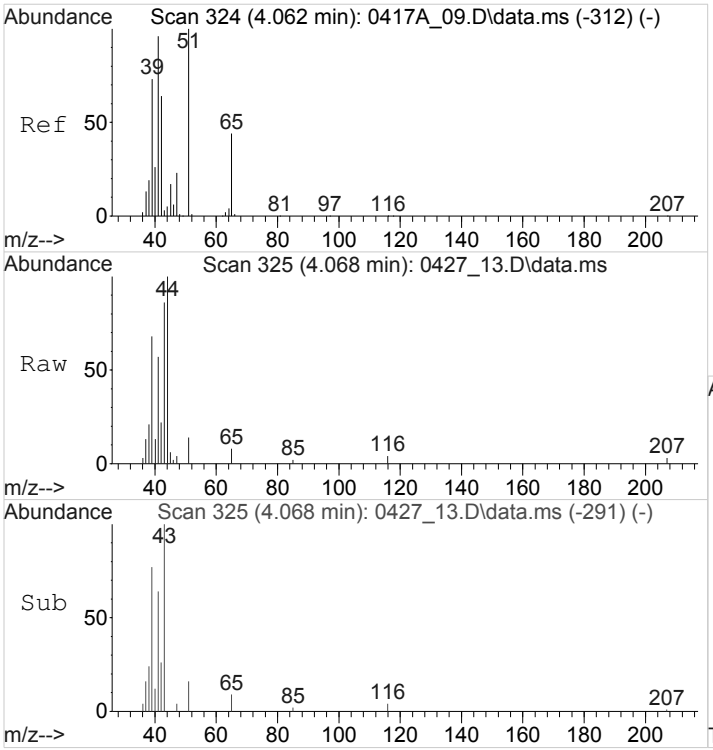
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_13.D
Acq On : 27 Apr 2018 6:07 pm
Operator : 564
Sample : L988471-12 25x WG1103956
Misc :
ALS Vial : 13 Sample Multiplier: 25
InstName : AIRMS2

Quant Time: Apr 28 07:50:42 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:08:22 2018
Response via : Initial Calibration



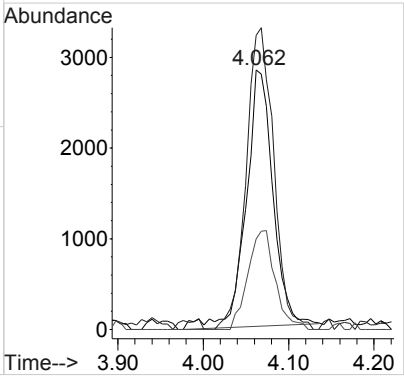
ACCOUNT:	PROJECT:	SDG:	DATE/TIME:	PAGE:
S&ME Inc. - Knoxville	4143-17-016	L988471	05/16/18 11:18	419 of 698

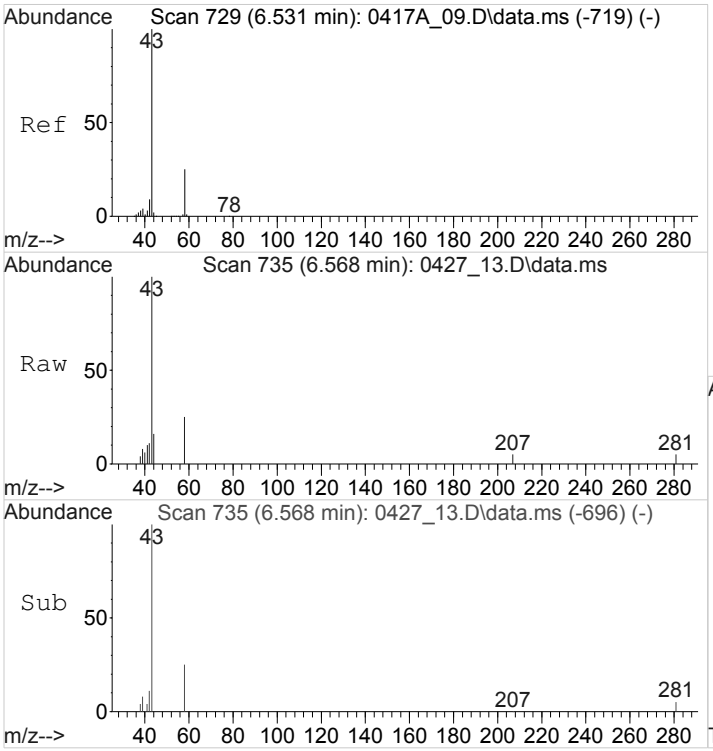


#2
Propene
Concen: 3.3341363 ppbv
RT: 4.068 min Scan# 325
Delta R.T. 0.005 min
Lab File: 0427_13.D
Acq: 27 Apr 2018 6:07 pm

Tgt Ion: 41 Resp: 62130

Ion	Ratio	Lower	Upper
41	100		
39	120.4	57.8	86.8#
42	39.1	50.5	75.7#

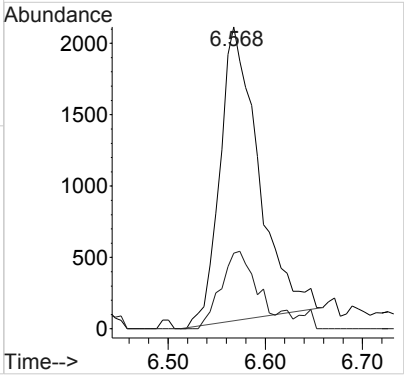


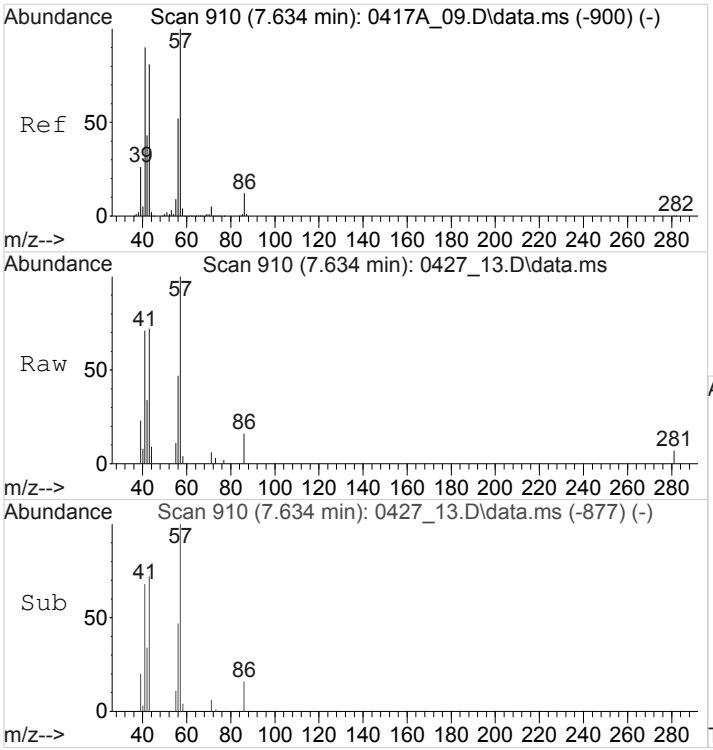


#17
Acetone
Concen: 2.0278283 ppbv
RT: 6.570 min Scan# 735
Delta R.T. 0.040 min
Lab File: 0427_13.D
Acq: 27 Apr 2018 6:07 pm

Tgt Ion: 43 Resp: 56604

Ion	Ratio	Lower	Upper
43	100		
58	0.0	20.6	30.8#

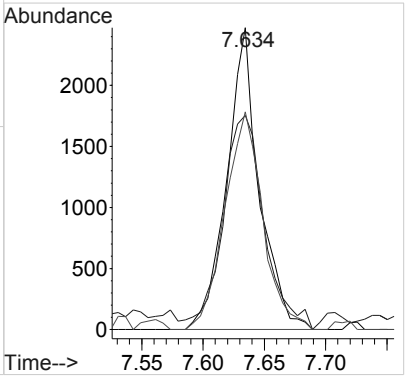


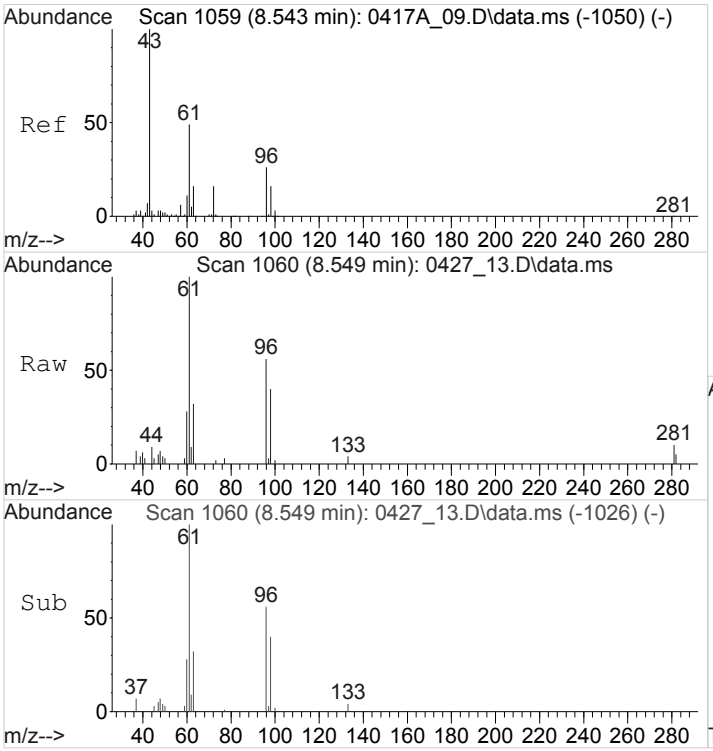


#25
n-Hexane
Concen: 1.5780401 ppbv
RT: 7.636 min Scan# 910
Delta R.T. 0.001 min
Lab File: 0427_13.D
Acq: 27 Apr 2018 6:07 pm

Tgt Ion: 57 Resp: 45353

Ion	Ratio	Lower	Upper
57	100		
41	84.5	72.7	109.1
43	84.5	64.1	96.1

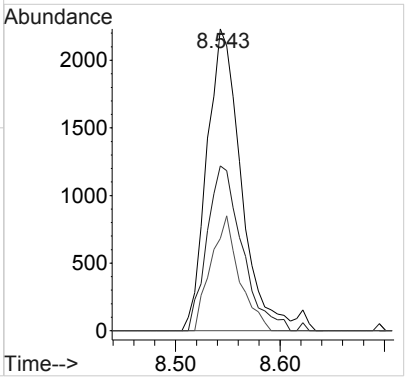


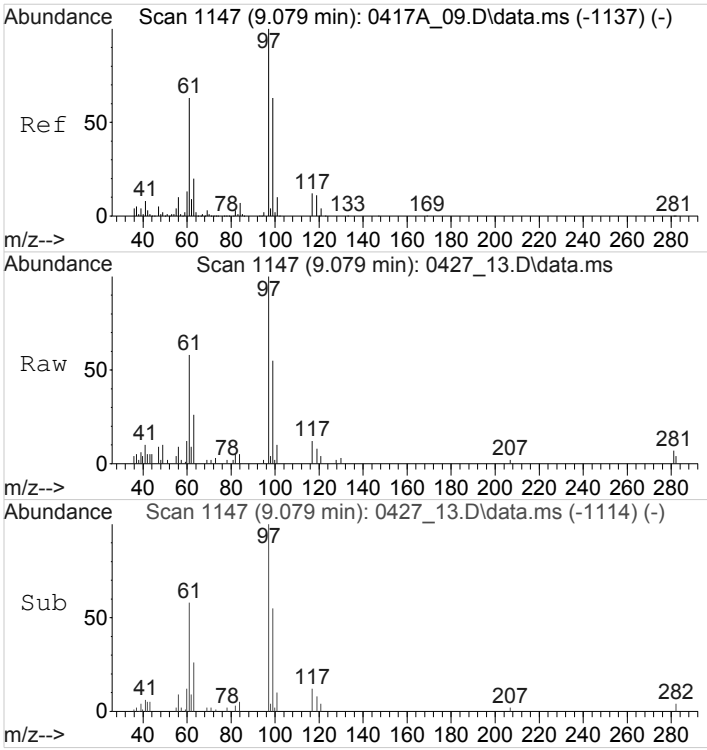


#30
cis-1,2-Dichloroethene
Concen: 1.7541483 ppbv
RT: 8.547 min Scan# 1060
Delta R.T. 0.005 min
Lab File: 0427_13.D
Acq: 27 Apr 2018 6:07 pm

Tgt Ion: 61 Resp: 51555

Ion	Ratio	Lower	Upper
61	100		
96	55.1	34.9	52.3#
98	31.1	21.8	32.6

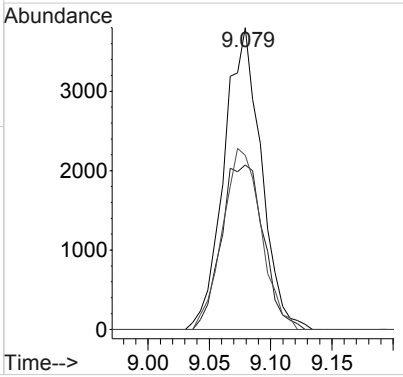


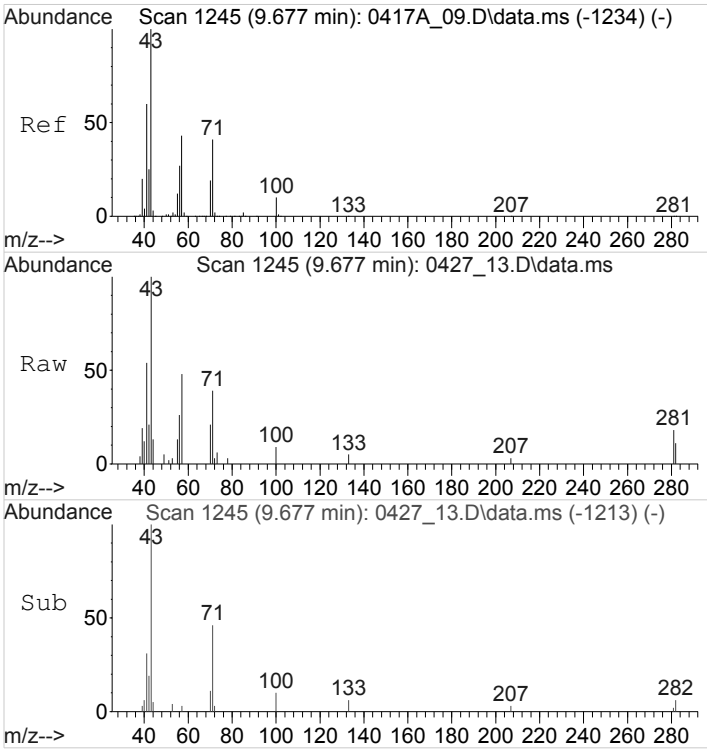


#34
1,1,1-Trichloroethane
Concen: 2.9473702 ppbv
RT: 9.081 min Scan# 1147
Delta R.T. 0.001 min
Lab File: 0427_13.D
Acq: 27 Apr 2018 6:07 pm

Tgt Ion: 97 Resp: 79905

Ion	Ratio	Lower	Upper
97	100		
99	62.2	50.0	75.0
61	62.5	50.6	76.0

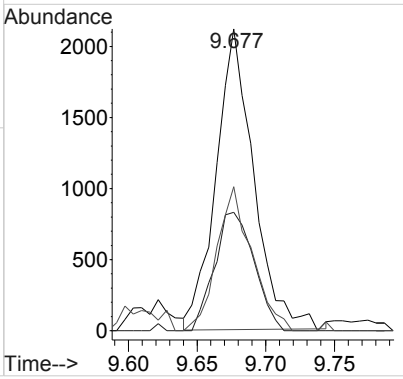


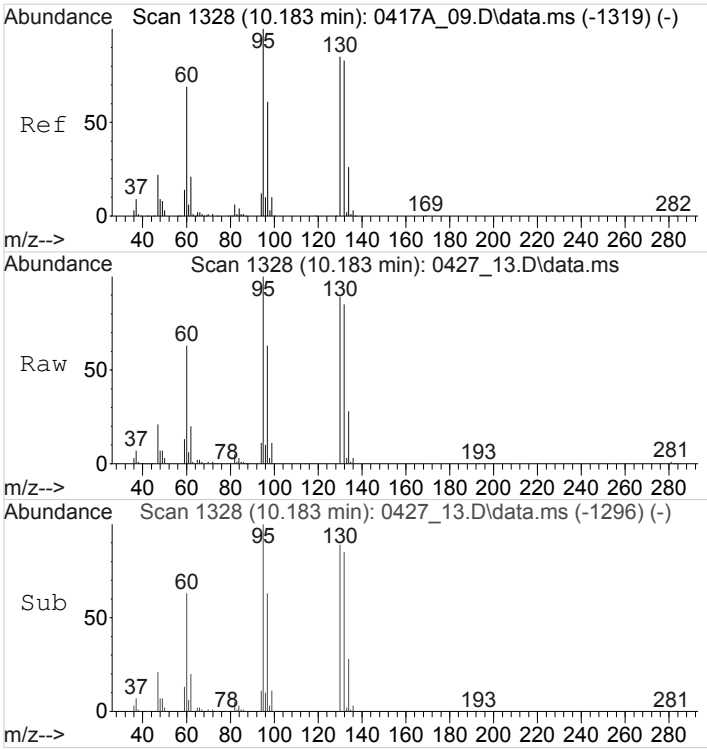


#40
Heptane
Concen: 0.8347309 ppbv
RT: 9.679 min Scan# 1245
Delta R.T. -0.000 min
Lab File: 0427_13.D
Acq: 27 Apr 2018 6:07 pm

Tgt Ion: 43 Resp: 40570

Ion	Ratio	Lower	Upper
43	100		
71	41.2	31.8	47.8
57	0.0	34.2	51.4#

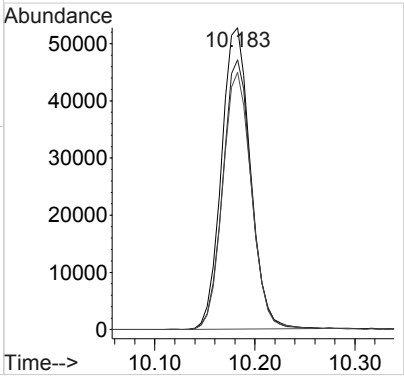


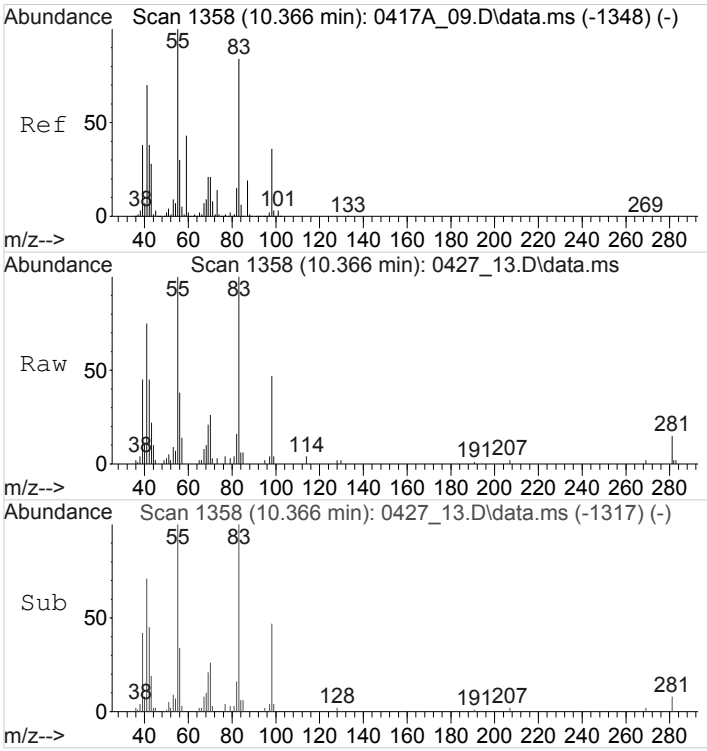


#41
Trichloroethene
Concen: 58.0382595 ppbv
RT: 10.183 min Scan# 1328
Delta R.T. -0.002 min
Lab File: 0427_13.D
Acq: 27 Apr 2018 6:07 pm

Tgt Ion: 95 Resp: 1063408

Ion	Ratio	Lower	Upper
95	100		
130	87.7	69.2	103.8
132	84.6	66.3	99.5

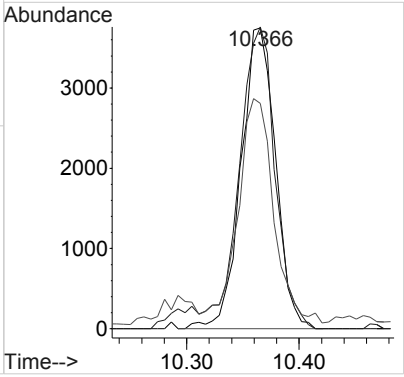


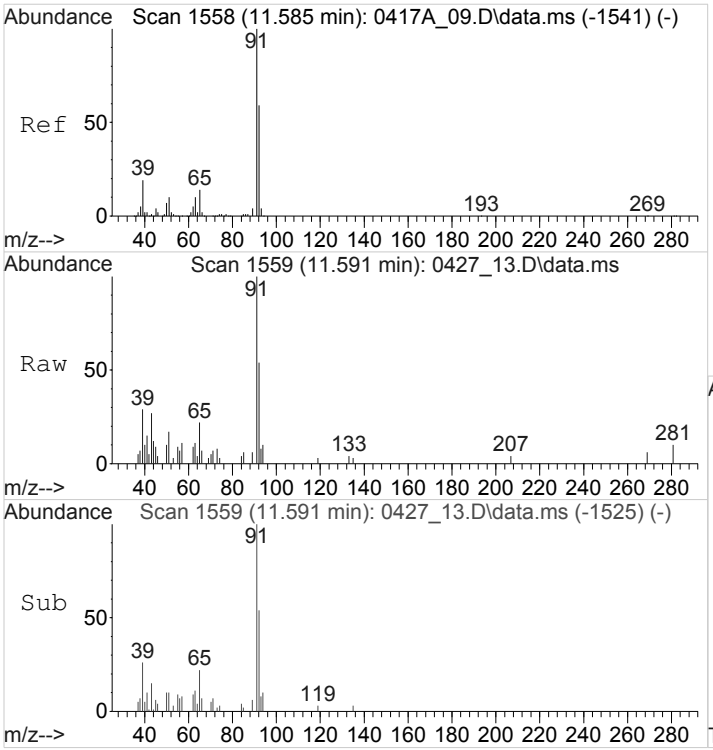


#43
METHYL CYCLOHEXANE
Concen: 2.7092919 ppbv
RT: 10.366 min Scan# 1358
Delta R.T. -0.001 min
Lab File: 0427_13.D
Acq: 27 Apr 2018 6:07 pm

Tgt Ion: 83 Resp: 79800

Ion	Ratio	Lower	Upper
83	100		
55	110.3	112.9	169.3#
41	68.7	80.5	120.7#

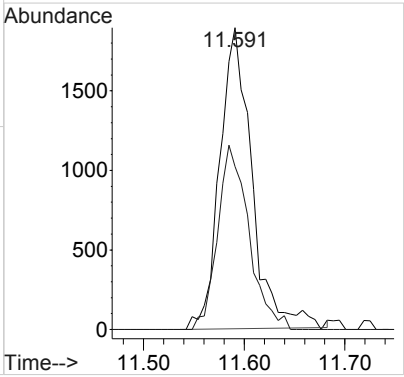


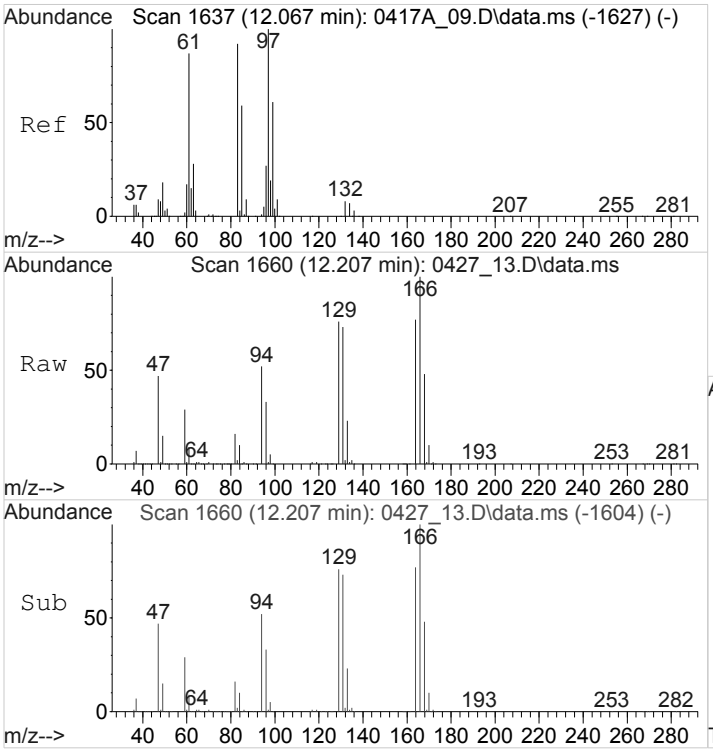


#50
Toluene
Concen: 0.7725887 ppbv
RT: 11.593 min Scan# 1559
Delta R.T. 0.008 min
Lab File: 0427_13.D
Acq: 27 Apr 2018 6:07 pm

Tgt Ion: 91 Resp: 41976

Ion	Ratio	Lower	Upper
91	100		
92	59.5	47.5	71.3

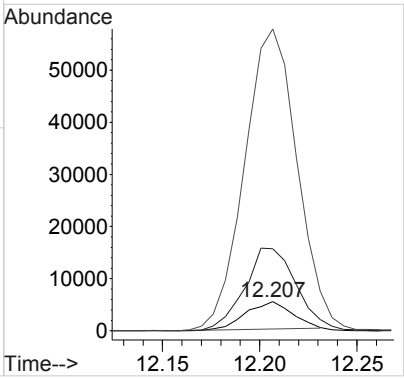


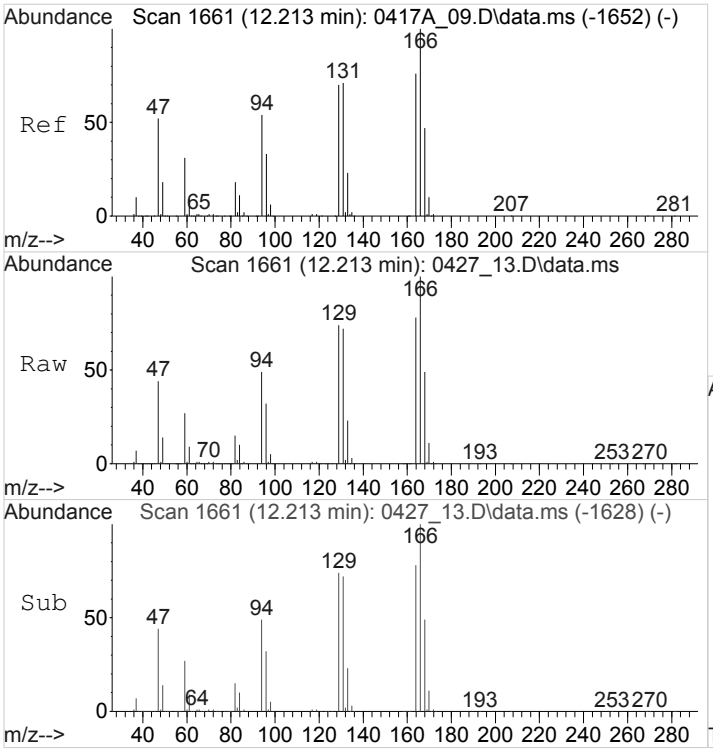


#52
1,1,2-Trichloroethane
Concen: 5.1822847 ppbv
RT: 12.209 min Scan# 1660
Delta R.T. 0.145 min
Lab File: 0427_13.D
Acq: 27 Apr 2018 6:07 pm

Tgt Ion: 97 Resp: 87126

Ion	Ratio	Lower	Upper
97	100		
83	286.2	75.2	112.8#
61	1077.7	71.4	107.2#

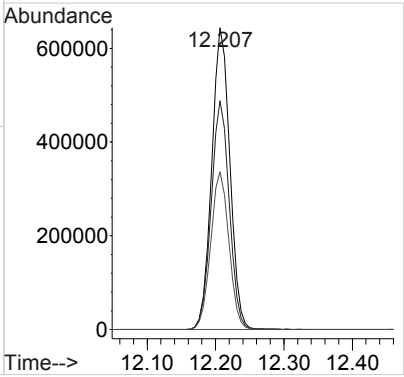


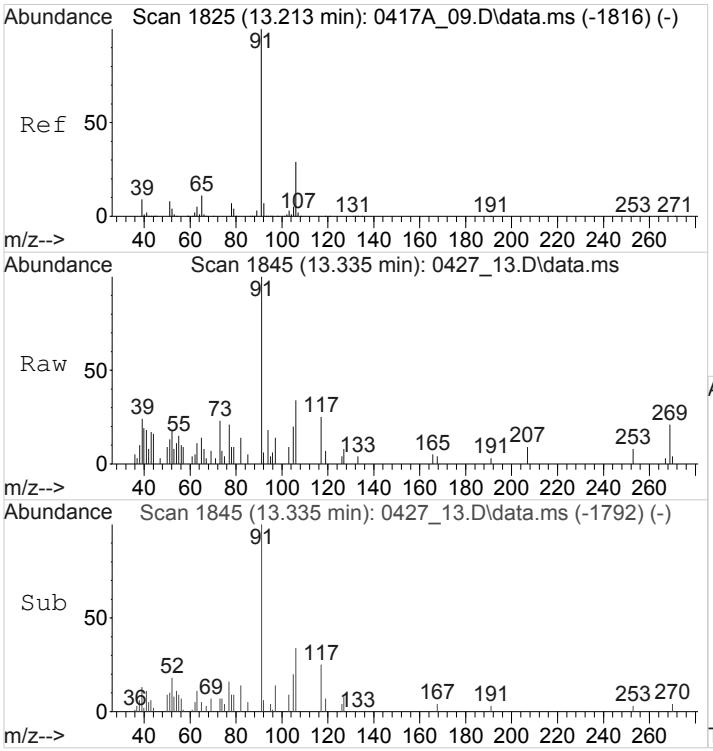


#53
Tetrachloroethene
Concen: 570.3891573 ppbv
RT: 12.210 min Scan# 1661
Delta R.T. -0.001 min
Lab File: 0427_13.D
Acq: 27 Apr 2018 6:07 pm

Tgt Ion:166 Resp:11718551

Ion	Ratio	Lower	Upper
166	100		
129	75.5	59.6	89.4
94	52.3	45.2	67.8

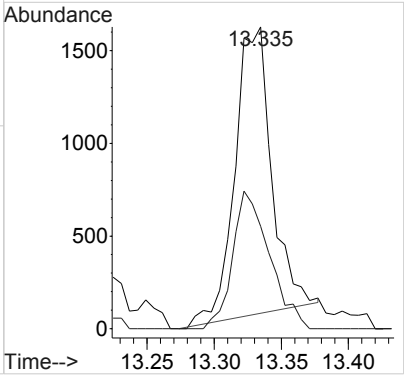




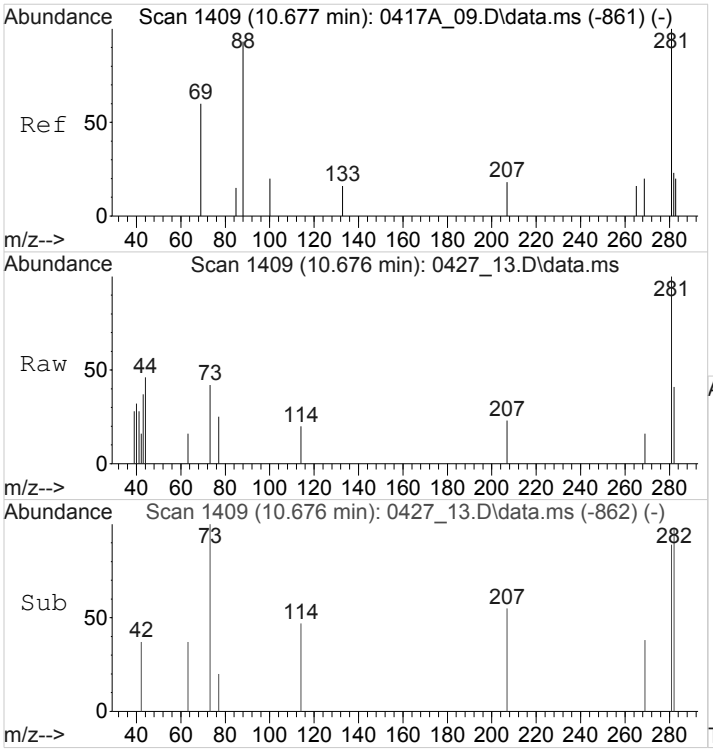
#59
Ethylbenzene
Concen: 0.3776332 ppbv
RT: 13.334 min Scan# 1845
Delta R.T. 0.125 min
Lab File: 0427_13.D
Acq: 27 Apr 2018 6:07 pm

Tgt Ion: 91 Resp: 29531

Ion	Ratio	Lower	Upper
91	100		
106	47.8	22.6	34.0#

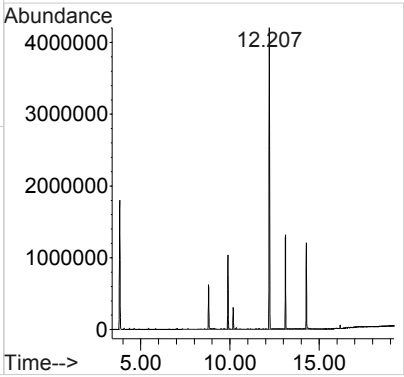


ACCOUNT:	PROJECT:	SDG:	DATE/TIME:	PAGE:
S&ME Inc. - Knoxville	4143-17-016	L988471	05/16/18 11:18	425 of 698



#84
TPH (GC/MS) Low Fraction
Concen: 552.3877209 ppbv m
RT: 10.675 min Scan# 1409
Delta R.T. 0.000 min
Lab File: 0427_13.D
Acq: 27 Apr 2018 6:07 pm

Tgt Ion:TIC Resp:88513001



1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS-12

ESC Sample ID:	L988471-12	**SDG:**	L988471
Client Sample ID:	SS-12	**Collected Date/Time:**	04/23/18 11:42
Lab File ID:	0426_23	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/26/18 23:42
Analytical Batch:	WG1103323	**Analysis Date/Time:**	04/26/18 23:42
Dilution Factor:	1	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	RT	Result	Qualifier	MDL	RDL
			ppbv		*ppbv*	*ppbv*
Acetone	67-64-1	5.47	1.86		0.0569	1.25
Allyl chloride	107-05-1	0	ND		0.0546	0.200
Benzene	71-43-2	7.81	0.507		0.0460	0.200
Benzyl Chloride	100-44-7	0	ND		0.0598	0.200
Bromodichloromethane	75-27-4	8.89	0.206		0.0436	0.200
Bromoform	75-25-2	0	ND		0.0786	0.600
Bromomethane	74-83-9	0	ND		0.0609	0.200
1,3-Butadiene	106-99-0	0	ND		0.0563	2.00
Carbon disulfide	75-15-0	5.68	ND		0.0544	0.200
Carbon tetrachloride	56-23-5	7.59	ND		0.0585	0.200
Chlorobenzene	108-90-7	0	ND		0.0601	0.200
Chloroethane	75-00-3	0	ND		0.0489	0.200
Chloroform	67-66-3	7.26	0.945		0.0574	0.200
Chloromethane	74-87-3	0	ND		0.0544	0.200
2-Chlorotoluene	95-49-8	0	ND		0.0605	0.200
Cyclohexane	110-82-7	7.47	1.62		0.0534	0.200
Dibromochloromethane	124-48-1	0	ND		0.0494	0.200
1,2-Dibromoethane	106-93-4	0	ND		0.0185	0.200
1,2-Dichlorobenzene	95-50-1	0	ND		0.0603	0.200
1,3-Dichlorobenzene	541-73-1	0	ND		0.0597	0.200
1,4-Dichlorobenzene	106-46-7	0	ND		0.0557	0.200
1,2-Dichloroethane	107-06-2	0	ND		0.0616	0.200
1,1-Dichloroethane	75-34-3	0	ND		0.0514	0.200
1,1-Dichloroethene	75-35-4	0	ND		0.0490	0.200
cis-1,2-Dichloroethene	156-59-2	7.01	2.67		0.0389	0.200
trans-1,2-Dichloroethene	156-60-5	6.07	0.540		0.0464	0.200
1,2-Dichloropropane	78-87-5	0	ND		0.0599	0.200
cis-1,3-Dichloropropene	10061-01-5	0	ND		0.0588	0.200
trans-1,3-Dichloropropene	10061-02-6	0	ND		0.0435	0.200
1,4-Dioxane	123-91-1	0	ND		0.0554	0.200
Ethanol	64-17-5	5.03	0.962		0.0832	0.630
Ethylbenzene	100-41-4	11.29	ND		0.0506	0.200
4-Ethyltoluene	622-96-8	12.79	ND		0.0666	0.200
Trichlorofluoromethane	75-69-4	4.85	0.277		0.0673	0.200
Dichlorodifluoromethane	75-71-8	3.62	0.403		0.0601	0.200
1,1,2-Trichlorotrifluoroethane	76-13-1	5.32	ND		0.0687	0.200
1,2-Dichlorotetrafluoroethane	76-14-2	0	ND		0.0458	0.200
Heptane	142-82-5	7.84	1.08		0.0626	0.200
Hexachloro-1,3-butadiene	87-68-3	0	ND		0.0656	0.630
n-Hexane	110-54-3	6.22	1.83		0.0457	0.200
Isopropylbenzene	98-82-8	0	ND		0.0563	0.200
Methylene Chloride	75-09-2	5.87	0.210		0.0465	0.200
Methyl Butyl Ketone	591-78-6	10.30	ND		0.0682	1.25

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS-12

ESC Sample ID:	L988471-12	**SDG:**	L988471
Client Sample ID:	SS-12	**Collected Date/Time:**	04/23/18 11:42
Lab File ID:	0426_23	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/26/18 23:42
Analytical Batch:	WG1103323	**Analysis Date/Time:**	04/26/18 23:42
Dilution Factor:	1	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	**CAS**	**RT**	**Result**	**Qualifier**	**MDL**	**RDL**
			ppbv		*ppbv*	*ppbv*
2-Butanone (MEK)	78-93-3	7	ND		0.0493	1.25
4-Methyl-2-pentanone (MIBK)	108-10-1	0	ND		0.0650	1.25
Methyl methacrylate	80-62-6	0	ND		0.0773	0.200
MTBE	1634-04-4	0	ND		0.0505	0.200
Naphthalene	91-20-3	0	ND		0.154	0.630
2-Propanol	67-63-0	5.51	ND		0.0882	1.25
Propene	115-07-1	0	ND		0.0932	0.400
Styrene	100-42-5	0	ND		0.0465	0.200
1,1,2,2-Tetrachloroethane	79-34-5	0	ND		0.0576	0.200
Tetrahydrofuran	109-99-9	0	ND		0.0508	0.200
Toluene	108-88-3	9.66	0.987		0.0499	0.200
1,2,4-Trichlorobenzene	120-82-1	0	ND		0.148	0.630
1,1,1-Trichloroethane	71-55-6	7.46	3.96		0.0665	0.200
1,1,2-Trichloroethane	79-00-5	0	ND		0.0287	0.200
1,2,4-Trimethylbenzene	95-63-6	13.24	ND		0.0483	0.200
1,3,5-Trimethylbenzene	108-67-8	12.87	ND		0.0631	0.200
2,2,4-Trimethylpentane	540-84-1	7.71	0.295		0.0456	0.200
Vinyl chloride	75-01-4	0	ND		0.0457	0.200
Vinyl Bromide	593-60-2	0	ND		0.0727	0.200
Vinyl acetate	108-05-4	0	ND		0.0639	0.200
m&p-Xylene	1330-20-7	11.41	0.667		0.0946	0.400
o-Xylene	95-47-6	11.89	0.288		0.0633	0.200

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_23.D
Acq On : 26 Apr 2018 11:42 pm
Operator : 564
Sample : L988471-12 1x WG1103323
Misc :
ALS Vial : 23 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 27 08:58:29 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration

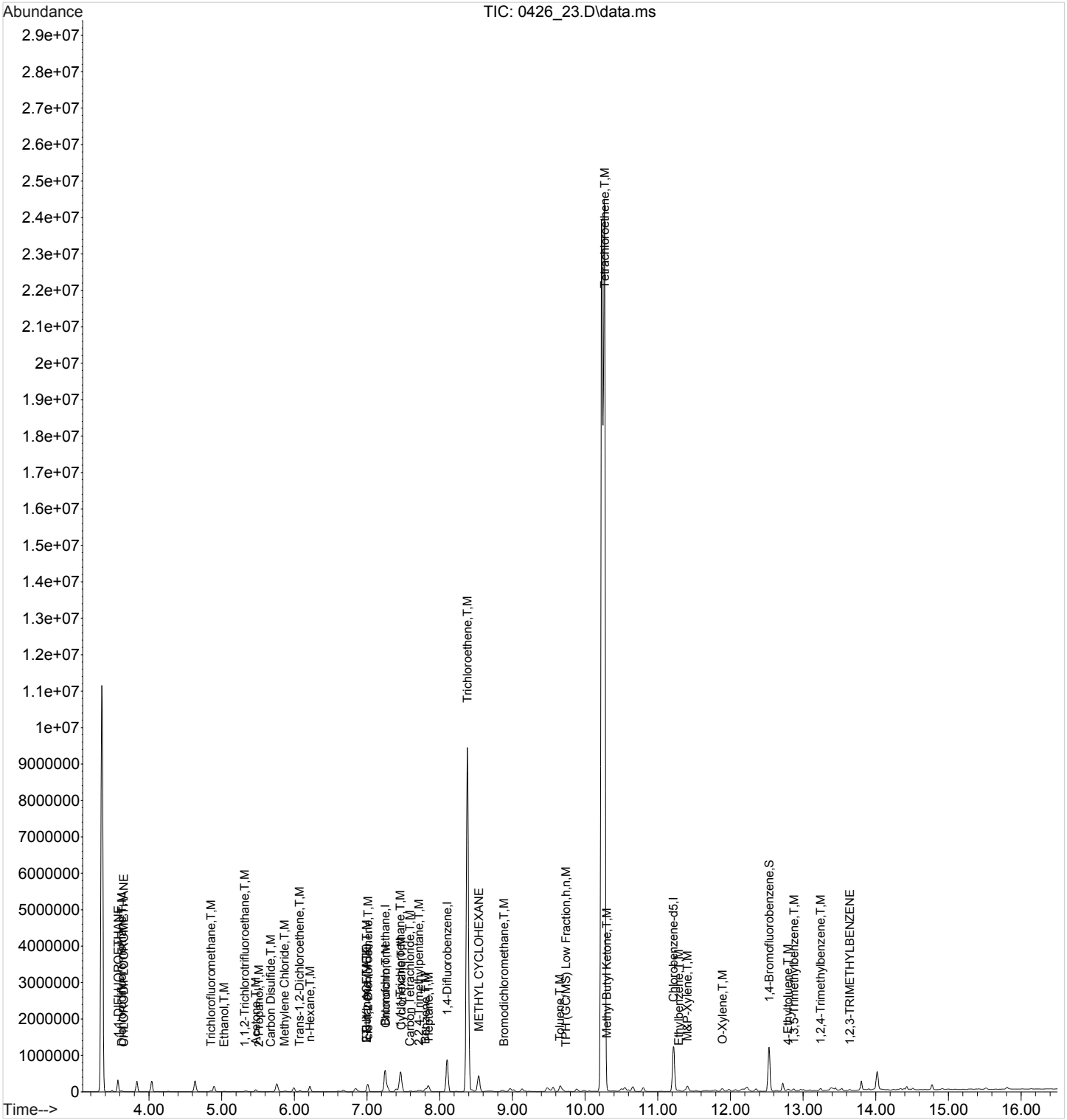
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.251	130	232416	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	8.105	114	878996	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	11.216	117	833450	4.0000000	ppbv	0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	12.535	95	480938	3.8468732	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 96.17%			
Target Compounds						Qvalue
3) 1,1-DIFLUOROETHANE	3.580	51	25660	0.7027740	ppbv	100
4) Dichlorodifluoromethane	3.625	85	23405	0.4032697	ppbv	99
5) CHLORODIFLUOROMETHANE	3.653	51	11288	0.3229724	ppbv	100
13) Trichlorofluoromethane	4.852	101	17959	0.2767216	ppbv	99
14) Ethanol	5.033	45	10826	0.9620680	ppbv	97
15) 1,1,2-Trichlorotrifluo...	5.316	101	5106	0.0847184	ppbv	99
17) Acetone	5.469	58	26572	1.8591971	ppbv	74
18) 2-Propanol	5.514	45	7277	0.1321028	ppbv #	1
19) Carbon Disulfide	5.678	76	7505	0.1143031	ppbv #	67
21) Methylene Chloride	5.865	49	6763	0.2097455	ppbv	91
24) Trans-1,2-Dichloroethene	6.074	61	21199	0.5399619	ppbv #	1
25) n-Hexane	6.216	57	83880	1.8293406	ppbv	99
28) ETHYL ACETATE	6.996	43	26644	0.4295349	ppbv #	76
29) 2-Butanone (MEK)	6.996	72	9025	0.4873256	ppbv	100
30) cis-1,2-Dichloroethene	7.013	96	98820	2.6715375	ppbv	96
32) Chloroform	7.257	83	62854	0.9448074	ppbv #	21
33) Cyclohexane	7.472	84	76931	1.6222712	ppbv #	73
34) 1,1,1-Trichloroethane	7.460	97	262715	3.9636546	ppbv	98
35) Carbon Tetrachloride	7.590	117	6392	0.0926318	ppbv	97
36) 2,2,4-Trimethylpentane	7.715	57	47776	0.2945775	ppbv #	73
38) Benzene	7.805	78	55877	0.5070179	ppbv	97
40) Heptane	7.845	43	58698	1.0784306	ppbv	90
41) Trichloroethene	8.382	95	3638381	75.7468263	ppbv	97
43) METHYL CYCLOHEXANE	8.541	83	235061	3.5605458	ppbv	97
47) Bromodichloromethane	8.886	83	15393	0.2063995	ppbv	93
50) Toluene	9.655	91	135199	0.9866036	ppbv	99
53) Tetrachloroethene	10.272	166	16085292m	218.0848612	ppbv	
54) Methyl Butyl Ketone	10.300	43	10705	0.1393919	ppbv #	71
59) Ethylbenzene	11.290	91	20675	0.1041586	ppbv	99
60) M&P-Xylene	11.409	91	101357	0.6665490	ppbv	98
61) O-Xylene	11.890	91	45214	0.2875733	ppbv	97
67) 4-Ethyltoluene	12.789	105	27762	0.1233578	ppbv	98
70) 1,3,5-Trimethylbenzene	12.874	105	19098	0.1074631	ppbv	98
72) 1,2,4-Trimethylbenzene	13.242	105	33439	0.1863166	ppbv	98
76) 1,2,3-TRIMETHYLBENZENE	13.643	105	12599	0.0735119	ppbv	97
84) TPH (GC/MS) Low Fraction	9.740	TIC	110830118m	391.1640279	ppbv	

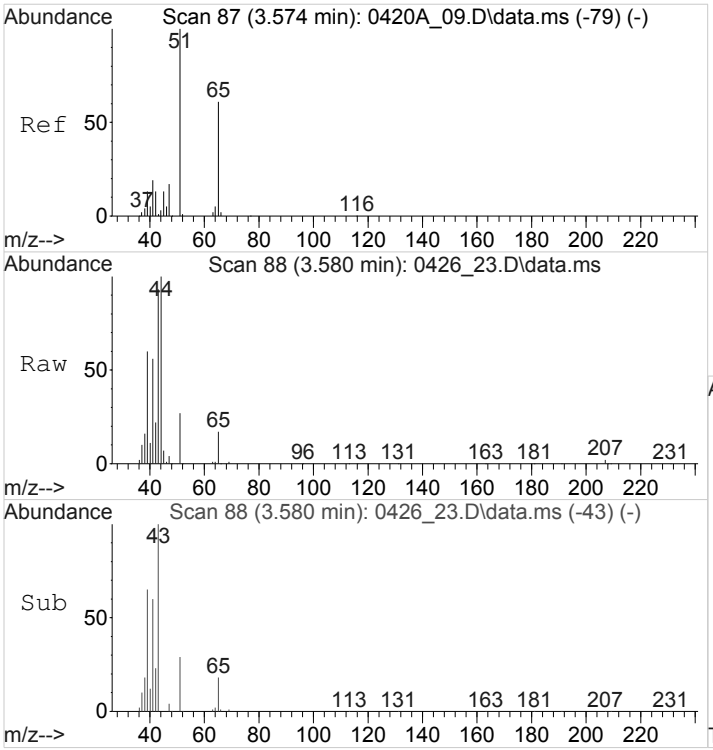
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_23.D
Acq On : 26 Apr 2018 11:42 pm
Operator : 564
Sample : L988471-12 1x WG1103323
Misc :
ALS Vial : 23 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 27 08:58:29 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration

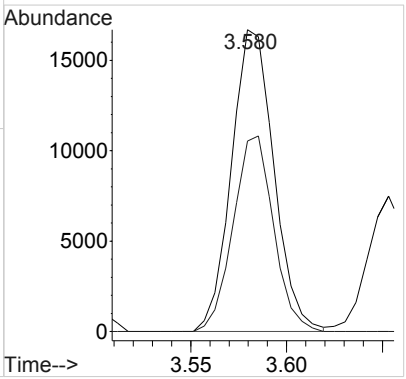


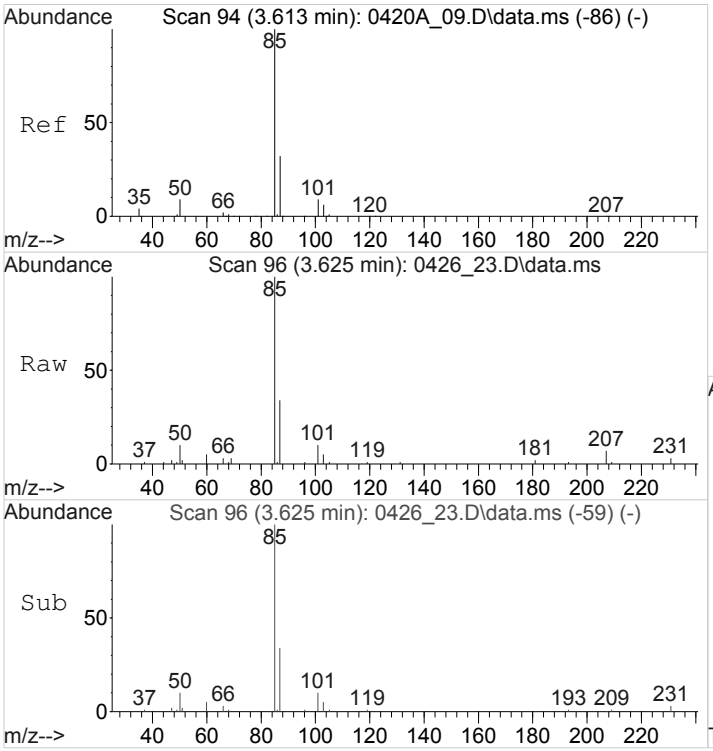


#3
1,1-DIFLUOROETHANE
Concen: 0.7027740 ppbv
RT: 3.580 min Scan# 88
Delta R.T. 0.006 min
Lab File: 0426_23.D
Acq: 26 Apr 2018 11:42 pm

Tgt Ion: 51 Resp: 25660

Ion	Ratio	Lower	Upper
51	100		
65	61.6	49.4	74.2

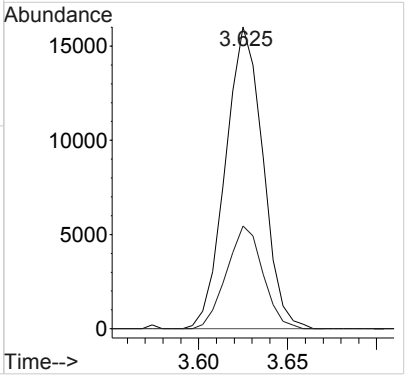


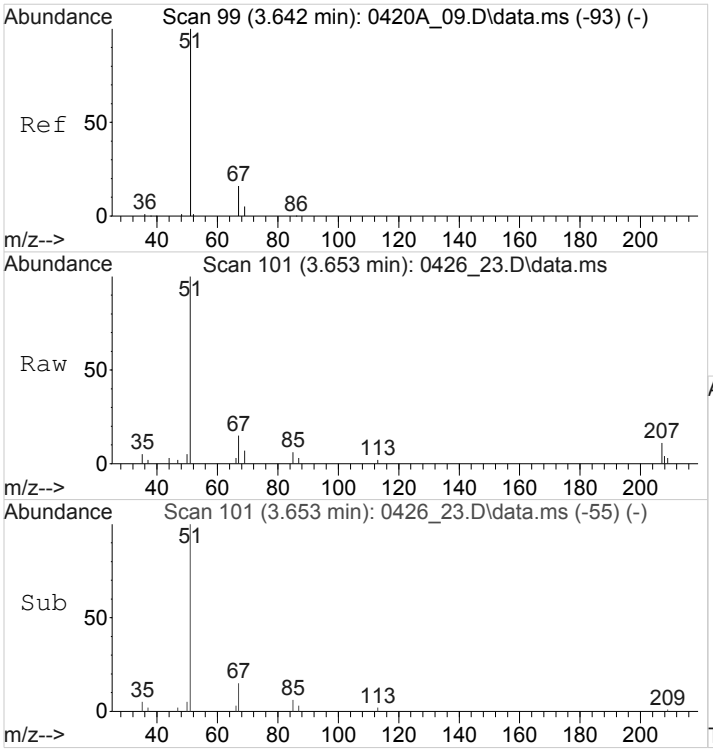


#4
Dichlorodifluoromethane
Concen: 0.4032697 ppbv
RT: 3.625 min Scan# 96
Delta R.T. 0.011 min
Lab File: 0426_23.D
Acq: 26 Apr 2018 11:42 pm

Tgt Ion: 85 Resp: 23405

Ion	Ratio	Lower	Upper
85	100		
87	33.1	25.8	38.8

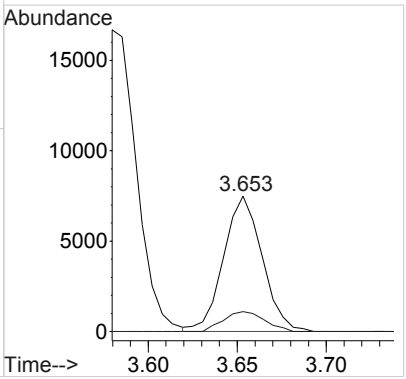


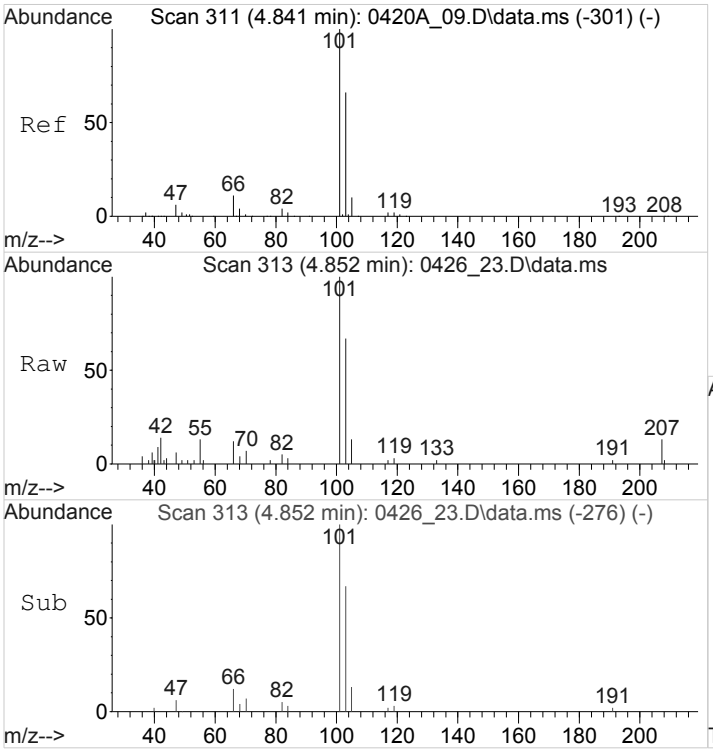


#5
CHLORODIFLUOROMETHANE
Concen: 0.3229724 ppbv
RT: 3.653 min Scan# 101
Delta R.T. 0.011 min
Lab File: 0426_23.D
Acq: 26 Apr 2018 11:42 pm

Tgt Ion: 51 Resp: 11288

Ion	Ratio	Lower	Upper
51	100		
67	15.7	12.7	19.1

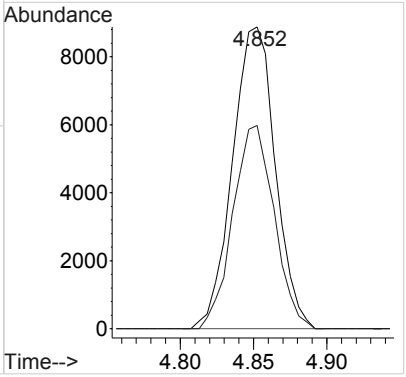


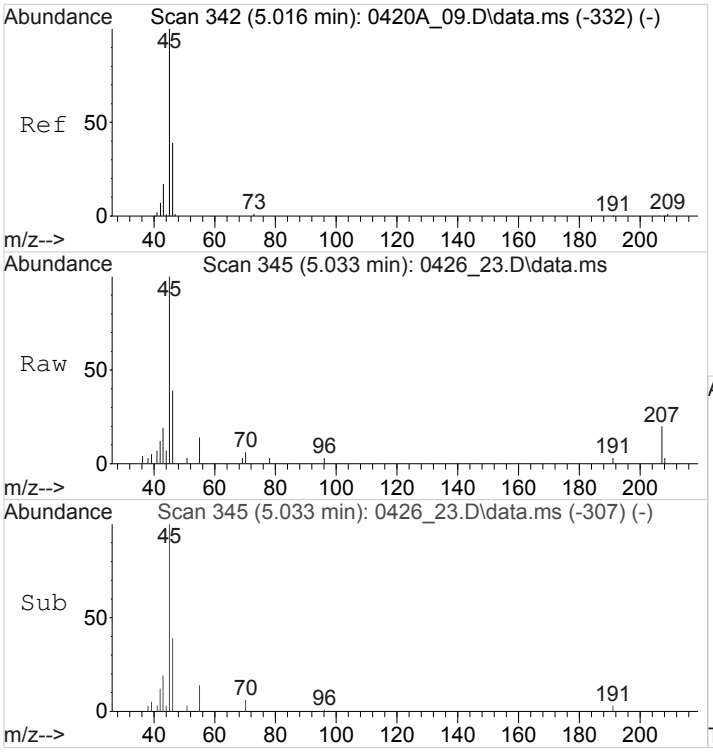


#13
Trichlorofluoromethane
Concen: 0.2767216 ppbv
RT: 4.852 min Scan# 313
Delta R.T. 0.011 min
Lab File: 0426_23.D
Acq: 26 Apr 2018 11:42 pm

Tgt Ion:101 Resp: 17959

Ion	Ratio	Lower	Upper
101	100		
103	65.0	52.6	79.0

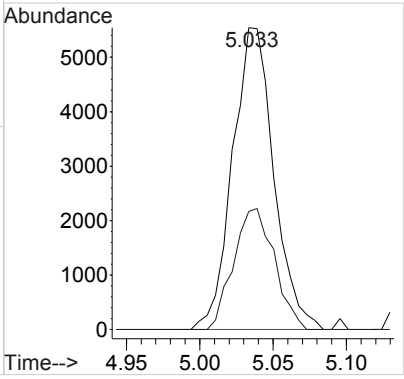


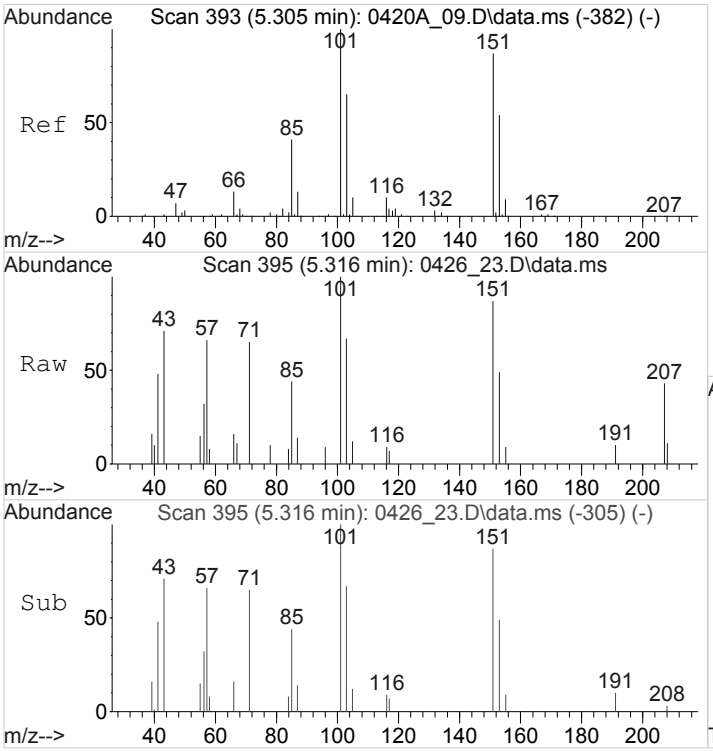


#14
Ethanol
Concen: 0.9620680 ppbv
RT: 5.033 min Scan# 345
Delta R.T. 0.017 min
Lab File: 0426_23.D
Acq: 26 Apr 2018 11:42 pm

Tgt Ion: 45 Resp: 10826

Ion	Ratio	Lower	Upper
45	100		
46	39.6	33.1	49.7

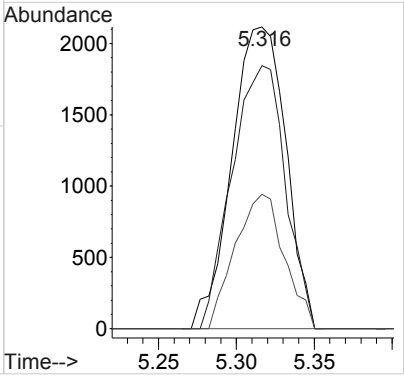


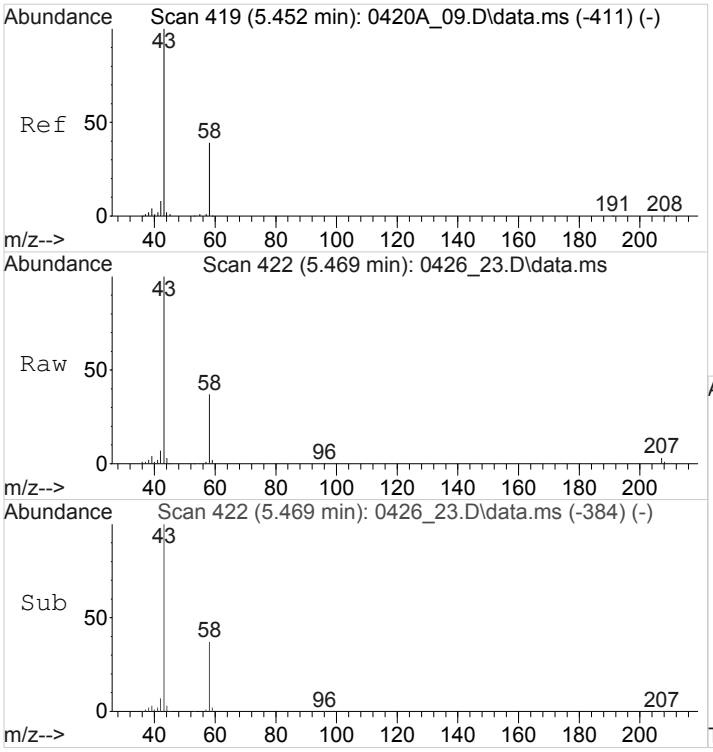


#15
1,1,2-Trichlorotrifluoroethane
Concen: 0.0847184 ppbv
RT: 5.316 min Scan# 395
Delta R.T. 0.011 min
Lab File: 0426_23.D
Acq: 26 Apr 2018 11:42 pm

Tgt Ion:101 Resp: 5106

Ion	Ratio	Lower	Upper
101	100		
151	86.0	67.9	101.9
85	40.4	32.4	48.6

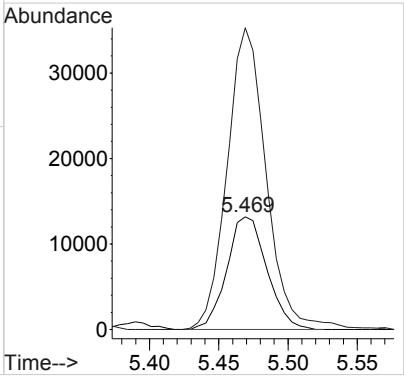


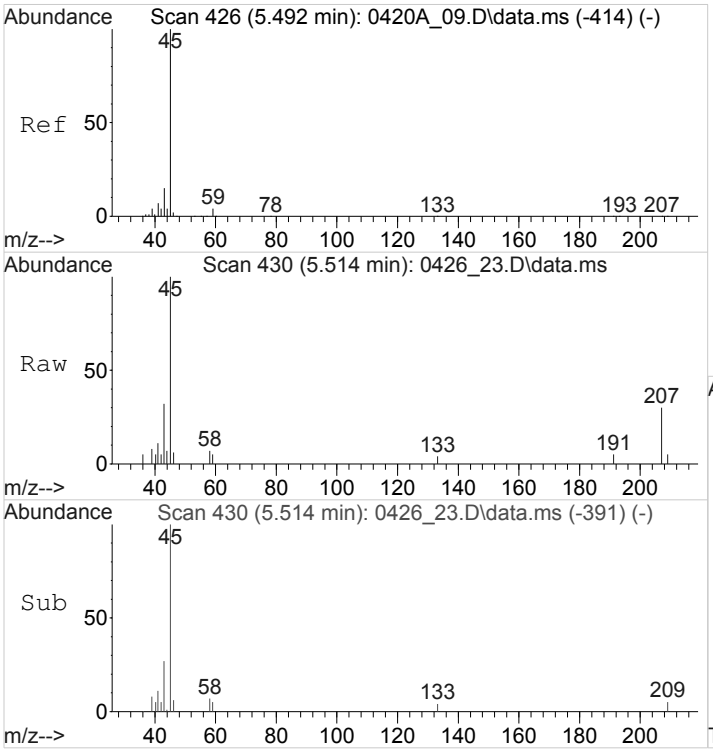


#17
Acetone
Concen: 1.8591971 ppbv
RT: 5.469 min Scan# 422
Delta R.T. 0.017 min
Lab File: 0426_23.D
Acq: 26 Apr 2018 11:42 pm

Tgt Ion: 58 Resp: 26572

Ion	Ratio	Lower	Upper
58	100		
43	262.7	252.6	379.0

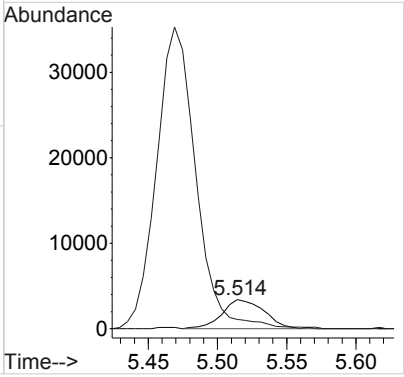


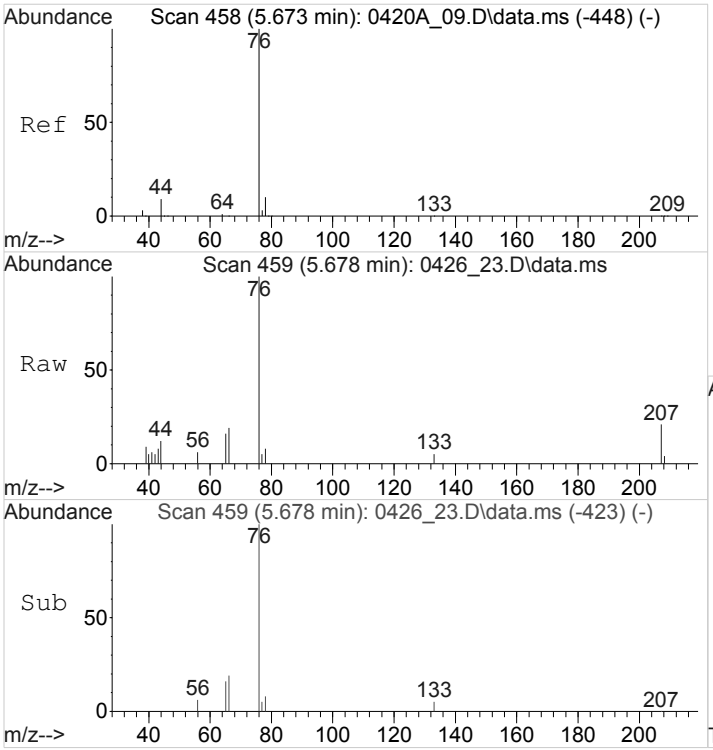


#18
2-Propanol
Concen: 0.1321028 ppbv
RT: 5.514 min Scan# 430
Delta R.T. 0.023 min
Lab File: 0426_23.D
Acq: 26 Apr 2018 11:42 pm

Tgt Ion: 45 Resp: 7277

Ion	Ratio	Lower	Upper
45	100		
43	959.1	67.9	101.9#

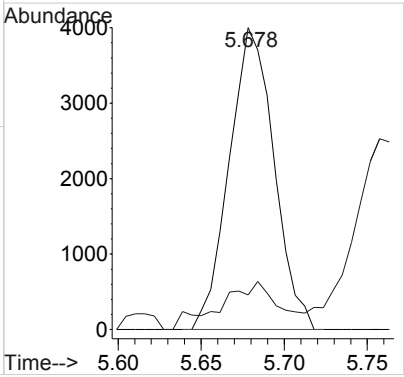


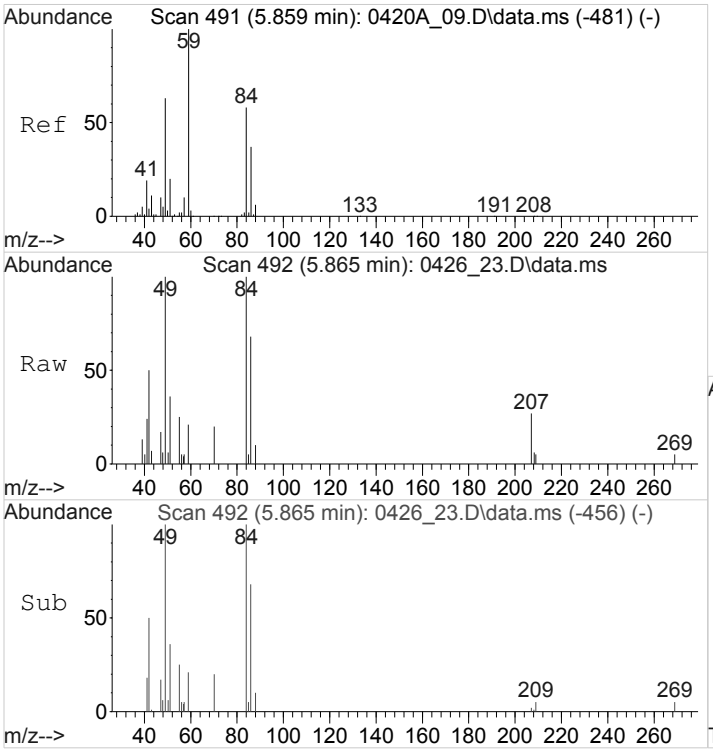


#19
Carbon Disulfide
Concen: 0.1143031 ppbv
RT: 5.678 min Scan# 459
Delta R.T. 0.006 min
Lab File: 0426_23.D
Acq: 26 Apr 2018 11:42 pm

Tgt Ion: 76 Resp: 7505

Ion	Ratio	Lower	Upper
76	100		
44	21.2	7.4	11.2#

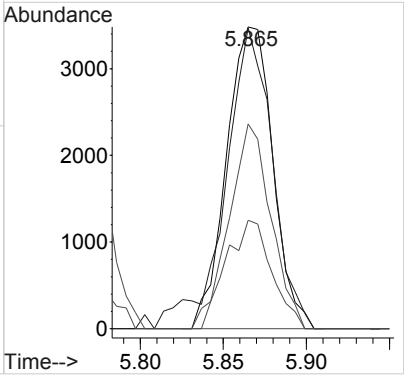


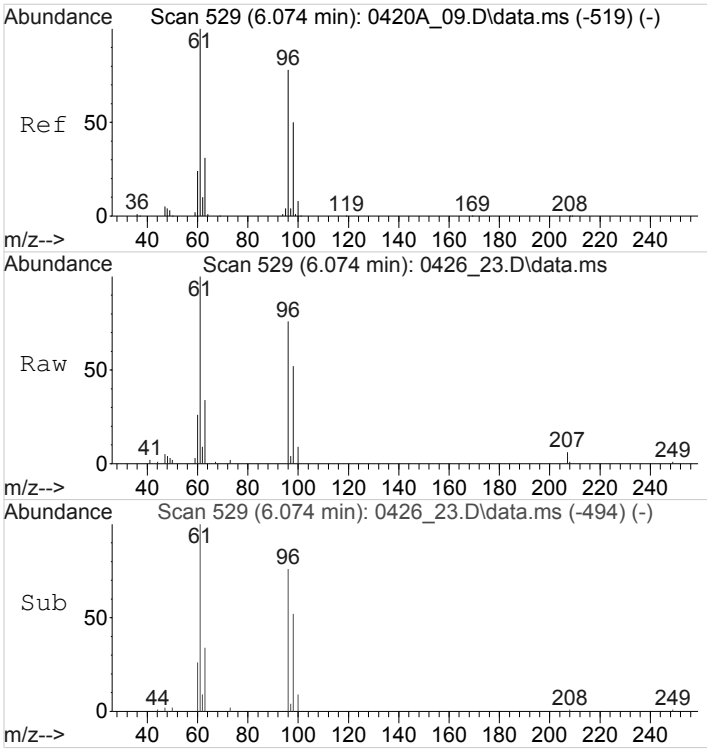


#21
Methylene Chloride
Concen: 0.2097455 ppbv
RT: 5.865 min Scan# 492
Delta R.T. 0.006 min
Lab File: 0426_23.D
Acq: 26 Apr 2018 11:42 pm

Tgt Ion: 49 Resp: 6763

Ion	Ratio	Lower	Upper
49	100		
84	101.8	72.1	108.1
86	60.4	46.1	69.1
51	36.5	25.9	38.9

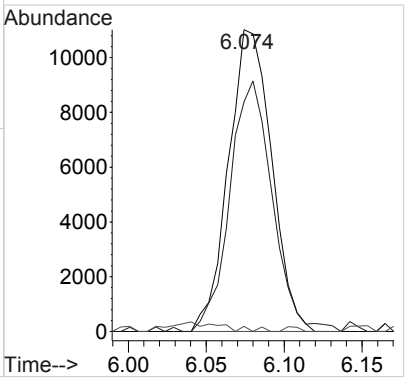


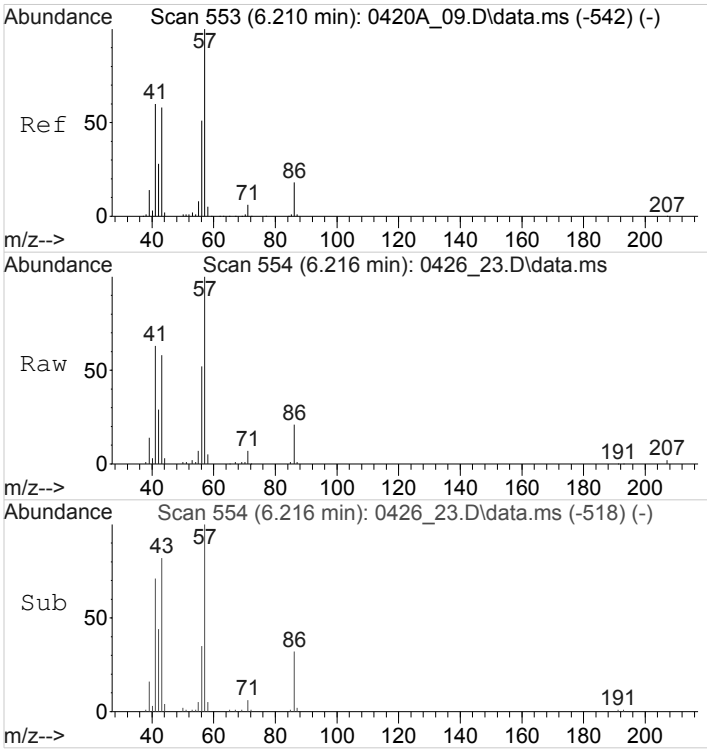


#24
Trans-1,2-Dichloroethene
Concen: 0.5399619 ppbv
RT: 6.074 min Scan# 529
Delta R.T. 0.000 min
Lab File: 0426_23.D
Acq: 26 Apr 2018 11:42 pm

Tgt Ion: 61 Resp: 21199

Ion	Ratio	Lower	Upper
61	100		
96	81.7	61.0	91.4
73	3.4	184.6	276.8#

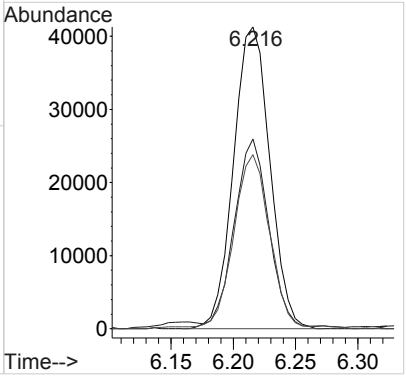


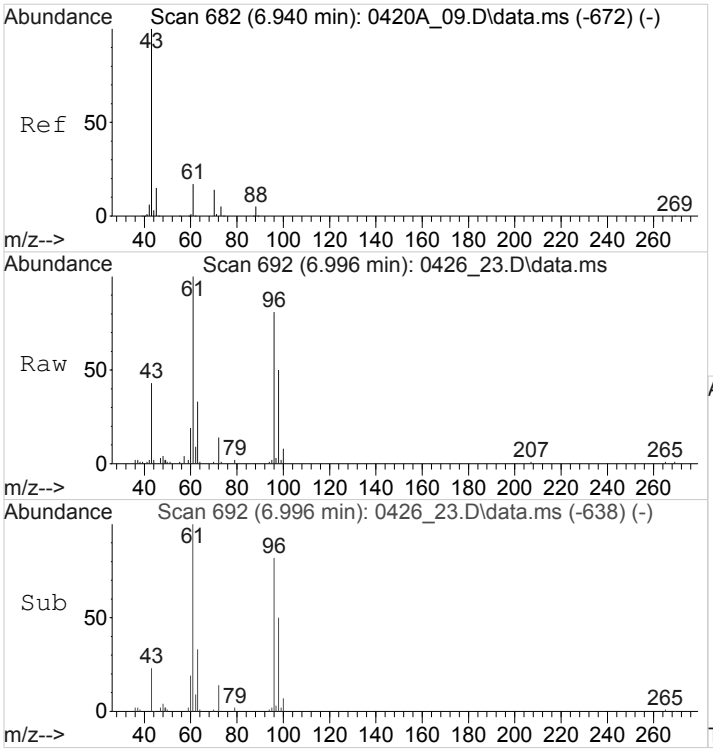


#25
n-Hexane
Concen: 1.8293406 ppbv
RT: 6.216 min Scan# 554
Delta R.T. 0.006 min
Lab File: 0426_23.D
Acq: 26 Apr 2018 11:42 pm

Tgt Ion: 57 Resp: 83880

Ion	Ratio	Lower	Upper
57	100		
41	60.3	47.6	71.4
43	57.5	46.1	69.1

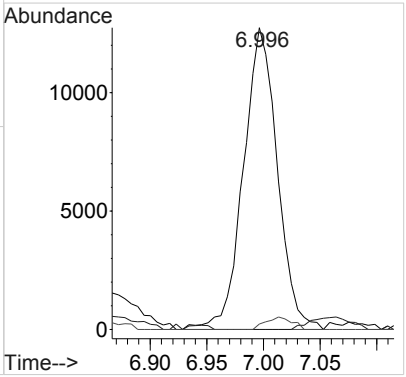


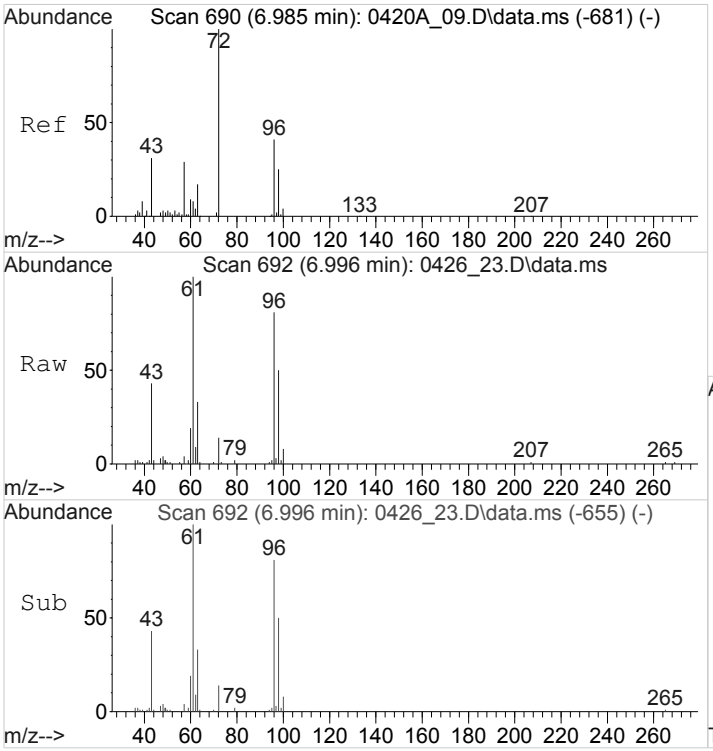


#28
ETHYL ACETATE
Concen: 0.4295349 ppbv
RT: 6.996 min Scan# 692
Delta R.T. 0.057 min
Lab File: 0426_23.D
Acq: 26 Apr 2018 11:42 pm

Tgt Ion: 43 Resp: 26644

Ion	Ratio	Lower	Upper
43	100		
45	5.0	12.0	18.0#
70	3.2	10.5	15.7#

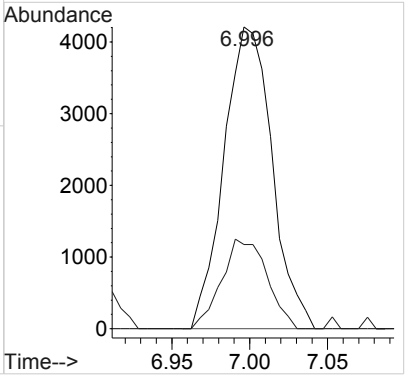


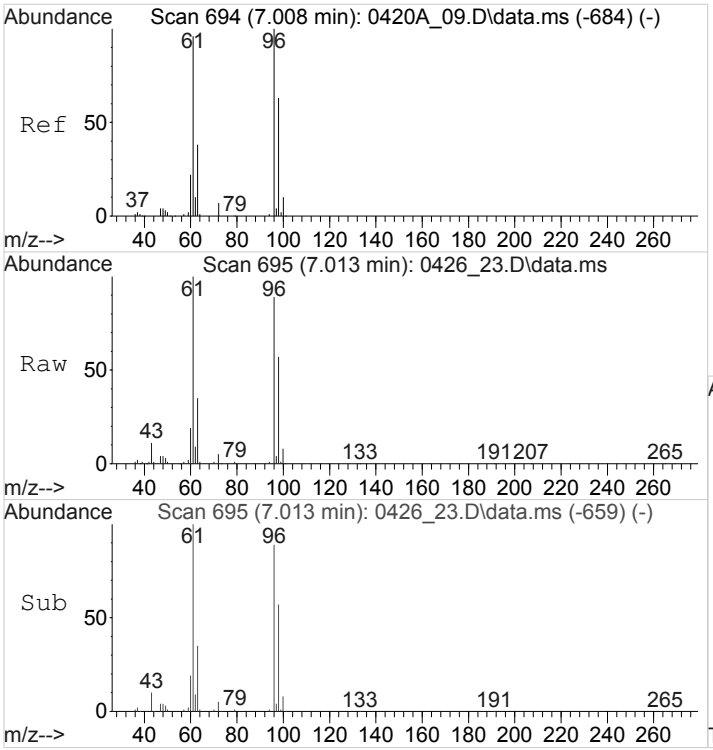


#29
2-Butanone (MEK)
Concen: 0.4873256 ppbv
RT: 6.996 min Scan# 692
Delta R.T. 0.011 min
Lab File: 0426_23.D
Acq: 26 Apr 2018 11:42 pm

Tgt Ion: 72 Resp: 9025

Ion	Ratio	Lower	Upper
72	100		
57	28.0	22.2	33.4

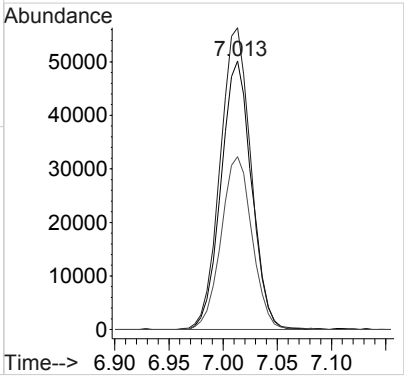


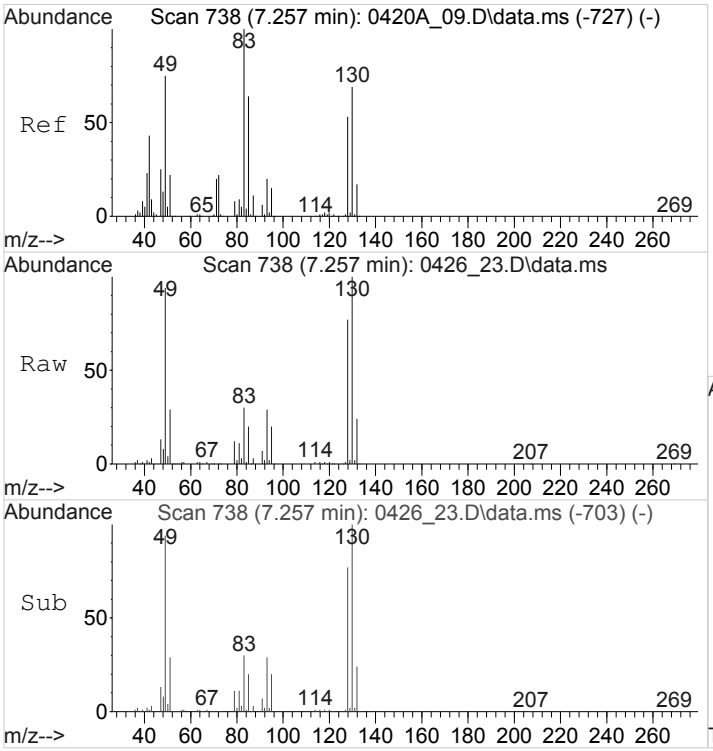


#30
cis-1,2-Dichloroethene
Concen: 2.6715375 ppbv
RT: 7.013 min Scan# 695
Delta R.T. 0.006 min
Lab File: 0426_23.D
Acq: 26 Apr 2018 11:42 pm

Tgt Ion: 96 Resp: 98820

Ion	Ratio	Lower	Upper
96	100		
61	112.9	94.1	141.1
98	64.9	50.6	76.0

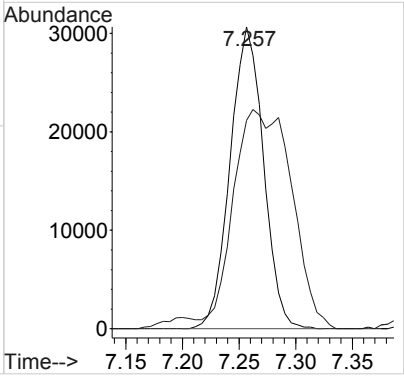


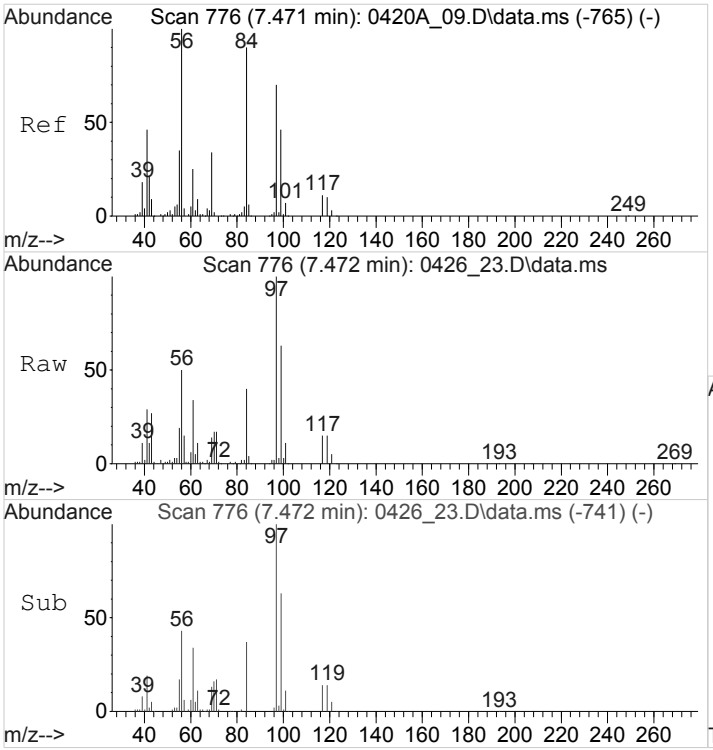


#32
Chloroform
Concen: 0.9448074 ppbv
RT: 7.257 min Scan# 738
Delta R.T. 0.000 min
Lab File: 0426_23.D
Acq: 26 Apr 2018 11:42 pm

Tgt Ion: 83 Resp: 62854

Ion	Ratio	Lower	Upper
83	100		
85	126.2	51.3	76.9#

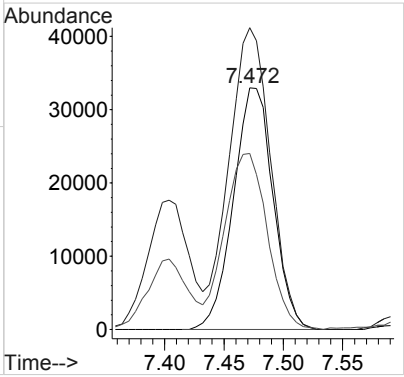


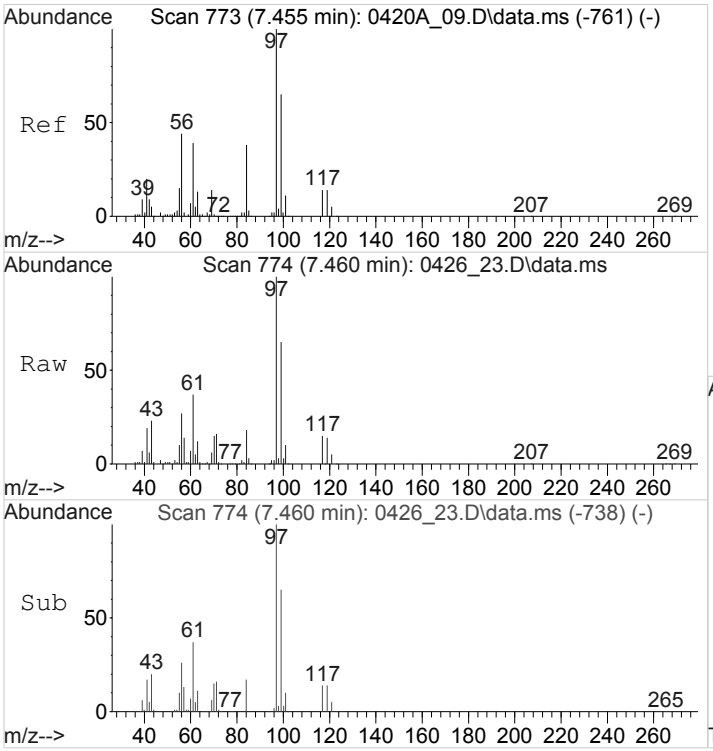


#33
Cyclohexane
Concen: 1.6222712 ppbv
RT: 7.472 min Scan# 776
Delta R.T. 0.000 min
Lab File: 0426_23.D
Acq: 26 Apr 2018 11:42 pm

Tgt Ion: 84 Resp: 76931

Ion	Ratio	Lower	Upper
84	100		
56	131.5	87.6	131.4#
41	78.3	40.2	60.2#

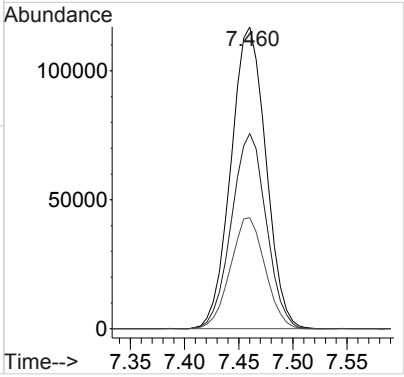


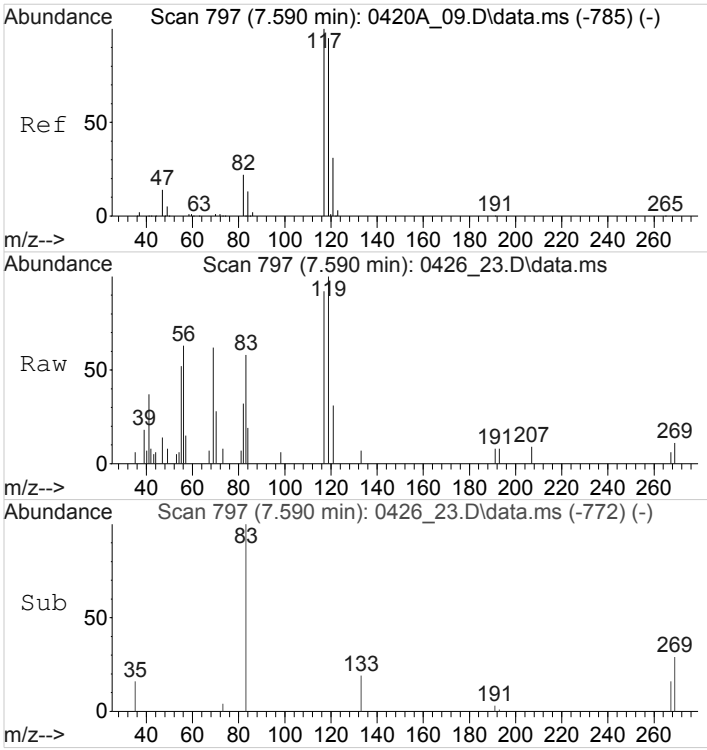


#34
1,1,1-Trichloroethane
Concen: 3.9636546 ppbv
RT: 7.460 min Scan# 774
Delta R.T. 0.006 min
Lab File: 0426_23.D
Acq: 26 Apr 2018 11:42 pm

Tgt Ion: 97 Resp: 262715

Ion	Ratio	Lower	Upper
97	100		
99	64.2	52.2	78.4
61	36.5	31.3	46.9

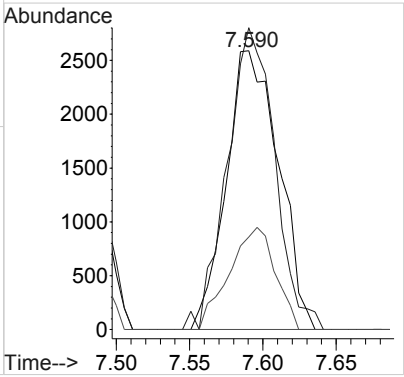


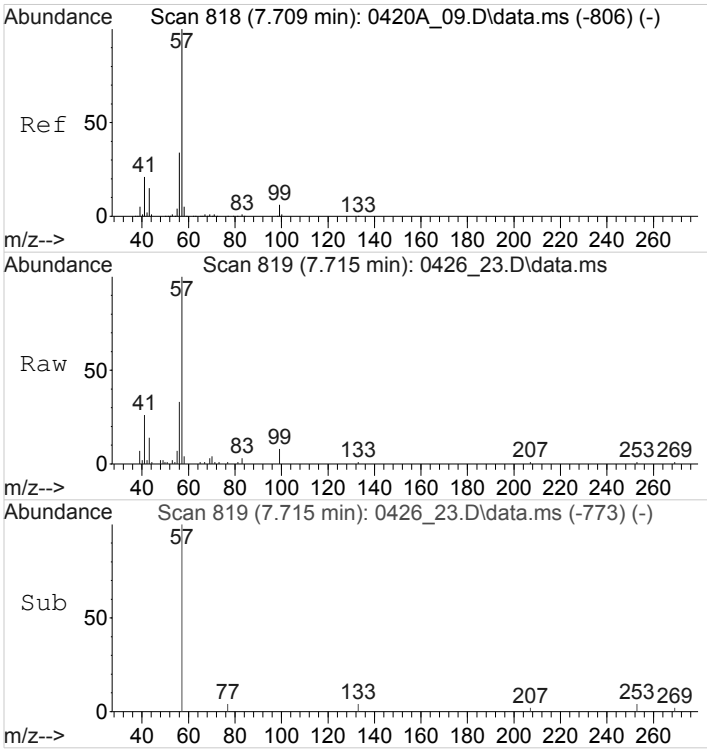


#35
Carbon Tetrachloride
Concen: 0.0926318 ppbv
RT: 7.590 min Scan# 797
Delta R.T. 0.000 min
Lab File: 0426_23.D
Acq: 26 Apr 2018 11:42 pm

Tgt Ion:117 Resp: 6392

Ion	Ratio	Lower	Upper
117	100		
119	98.9	77.1	115.7
121	32.5	24.8	37.2

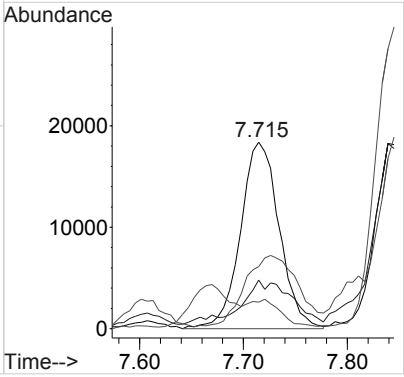


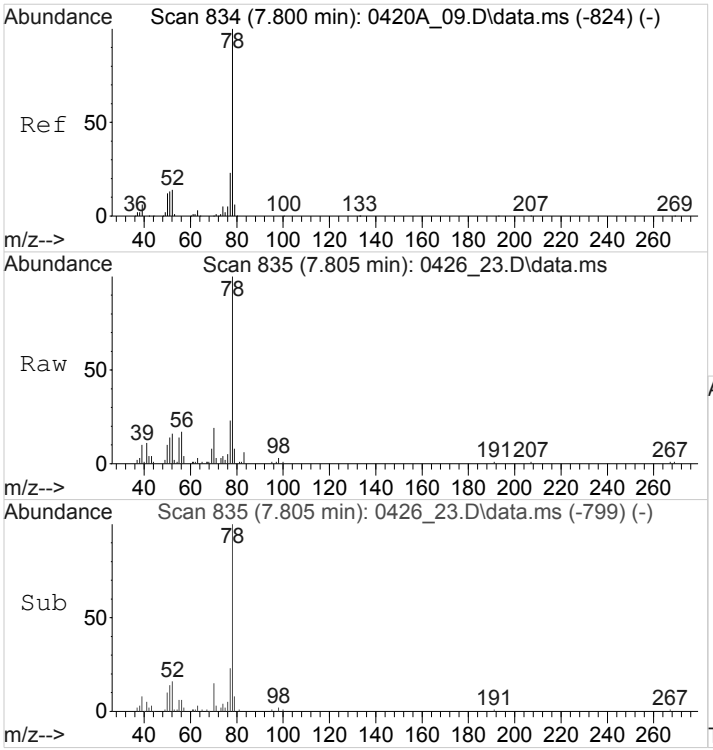


#36
2,2,4-Trimethylpentane
Concen: 0.2945775 ppbv
RT: 7.715 min Scan# 819
Delta R.T. 0.006 min
Lab File: 0426_23.D
Acq: 26 Apr 2018 11:42 pm

Tgt Ion: 57 Resp: 47776

Ion	Ratio	Lower	Upper
57	100		
41	32.1	16.6	25.0#
43	23.1	12.4	18.6#
56	52.1	26.6	39.8#

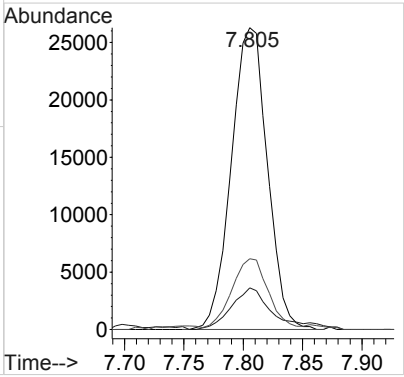


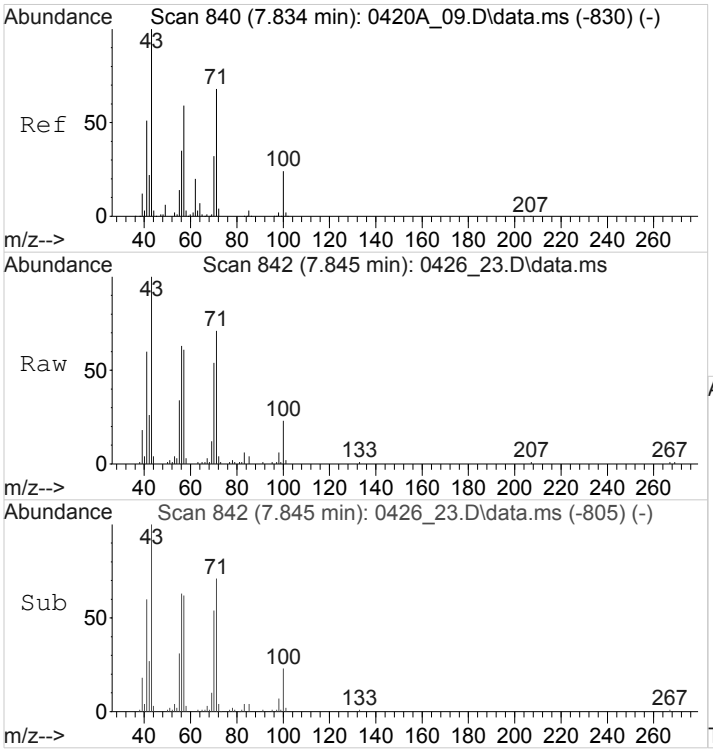


#38
Benzene
Concen: 0.5070179 ppbv
RT: 7.805 min Scan# 835
Delta R.T. 0.006 min
Lab File: 0426_23.D
Acq: 26 Apr 2018 11:42 pm

Tgt Ion: 78 Resp: 55877

Ion	Ratio	Lower	Upper
78	100		
51	16.1	11.3	16.9
77	22.7	18.6	28.0

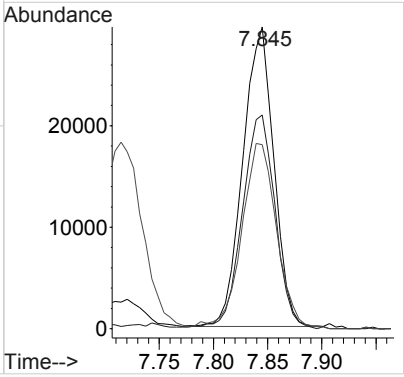


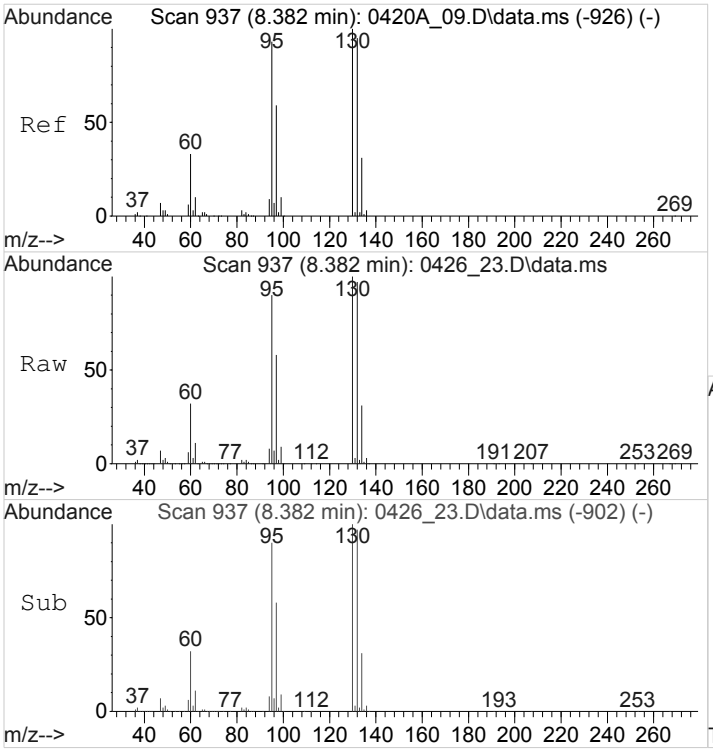


#40
Heptane
Concen: 1.0784306 ppbv
RT: 7.845 min Scan# 842
Delta R.T. 0.011 min
Lab File: 0426_23.D
Acq: 26 Apr 2018 11:42 pm

Tgt Ion: 43 Resp: 58698

Ion	Ratio	Lower	Upper
43	100		
71	75.6	56.1	84.1
57	69.6	47.1	70.7

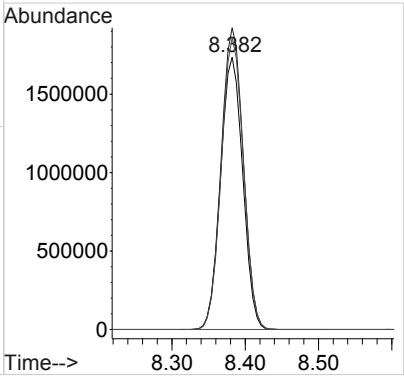


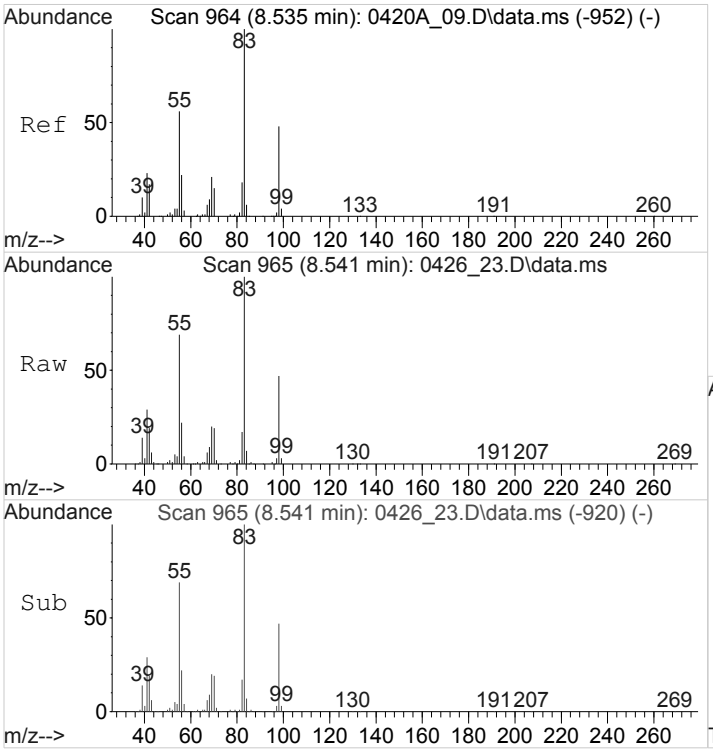


#41
Trichloroethene
Concen: 75.7468263 ppbv
RT: 8.382 min Scan# 937
Delta R.T. 0.000 min
Lab File: 0426_23.D
Acq: 26 Apr 2018 11:42 pm

Tgt Ion: 95 Resp: 3638381

Ion	Ratio	Lower	Upper
95	100		
130	111.2	86.4	129.6
132	107.2	83.6	125.4

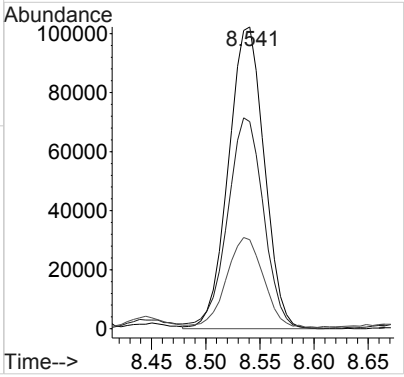


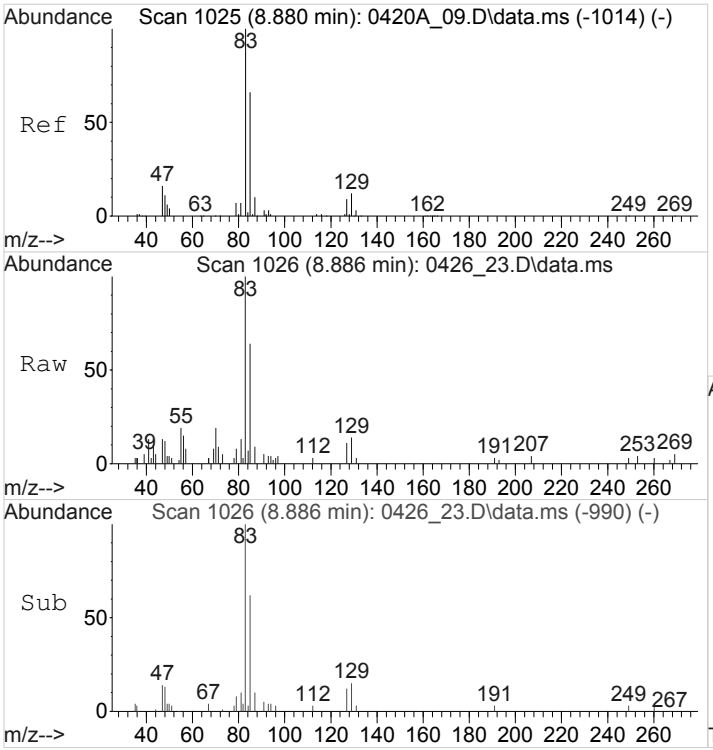


#43
METHYL CYCLOHEXANE
Concen: 3.5605458 ppbv
RT: 8.541 min Scan# 965
Delta R.T. 0.006 min
Lab File: 0426_23.D
Acq: 26 Apr 2018 11:42 pm

Tgt Ion: 83 Resp: 235061

Ion	Ratio	Lower	Upper
83	100		
55	70.3	58.5	87.7
41	30.7	25.8	38.6

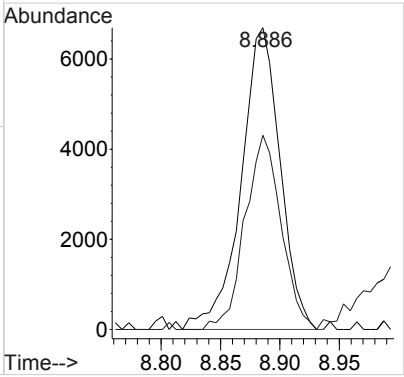


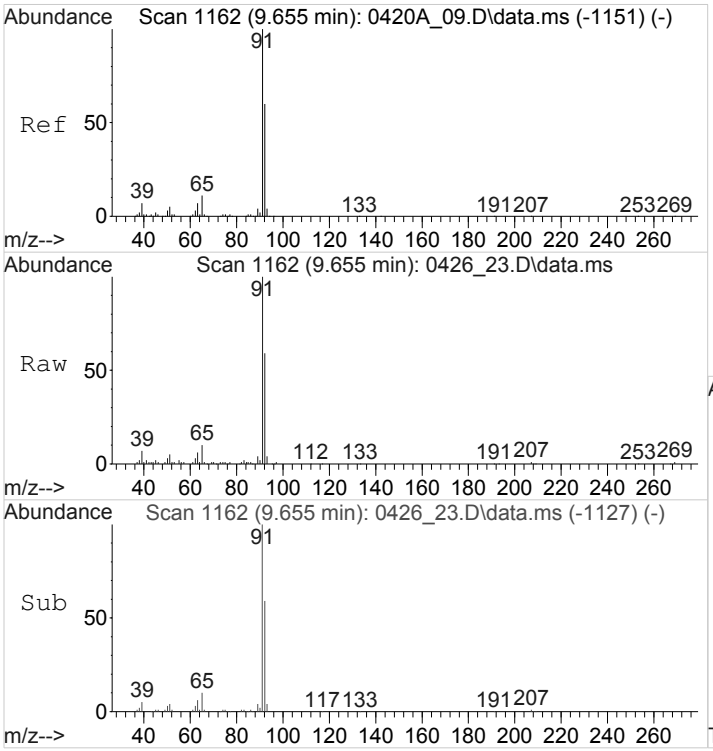


#47
Bromodichloromethane
Concen: 0.2063995 ppbv
RT: 8.886 min Scan# 1026
Delta R.T. 0.006 min
Lab File: 0426_23.D
Acq: 26 Apr 2018 11:42 pm

Tgt Ion: 83 Resp: 15393

Ion	Ratio	Lower	Upper
83	100		
85	59.6	51.8	77.8

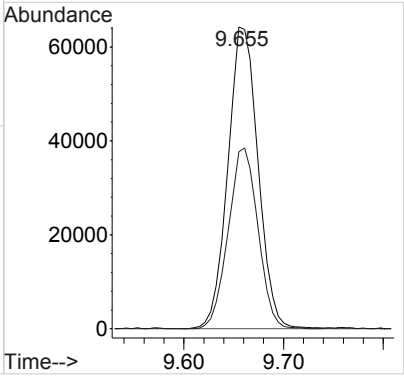


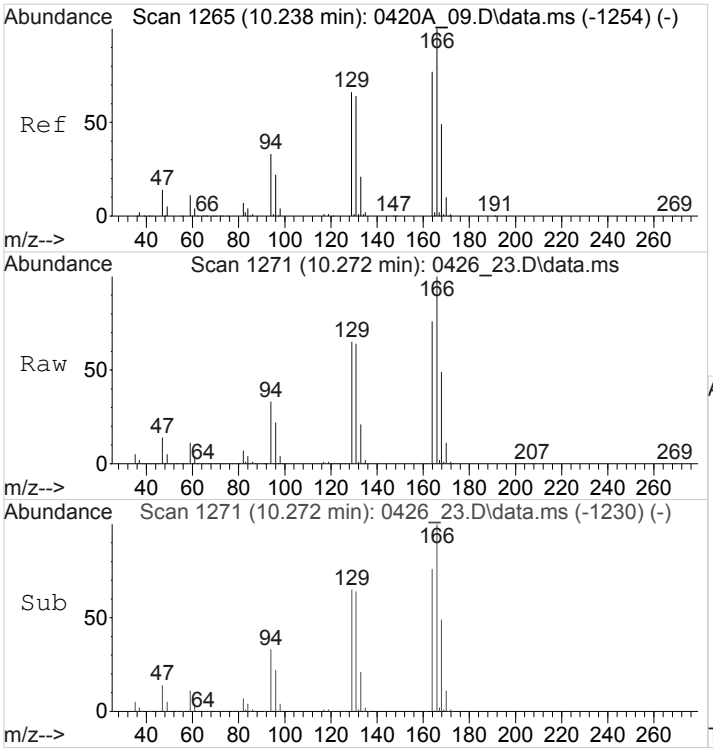


#50
Toluene
Concen: 0.9866036 ppbv
RT: 9.655 min Scan# 1162
Delta R.T. 0.000 min
Lab File: 0426_23.D
Acq: 26 Apr 2018 11:42 pm

Tgt Ion: 91 Resp: 135199

Ion	Ratio	Lower	Upper
91	100		
92	58.9	48.0	72.0

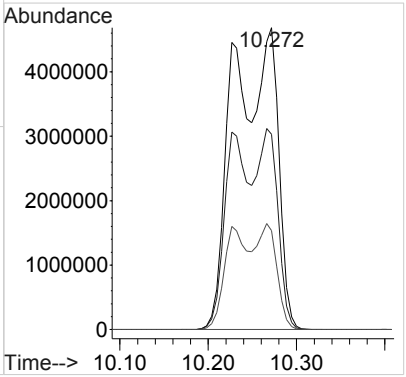


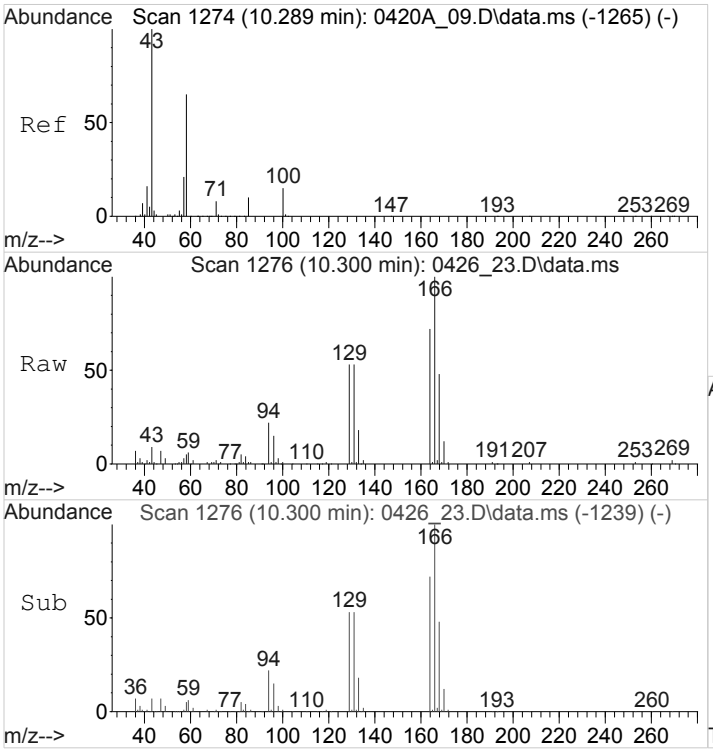


#53
Tetrachloroethene
Concen: 218.0848612 ppbv m
RT: 10.272 min Scan# 1271
Delta R.T. 0.034 min
Lab File: 0426_23.D
Acq: 26 Apr 2018 11:42 pm

Tgt Ion:166 Resp:16085292

Ion	Ratio	Lower	Upper
166	100		
129	36.7	53.7	80.5#
94	19.2	27.2	40.8#

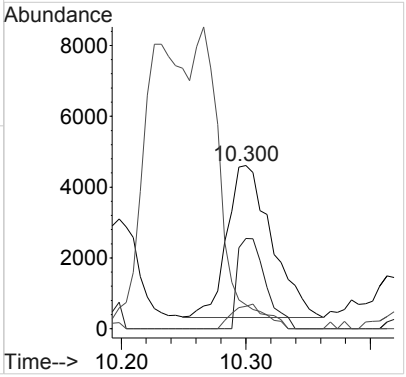


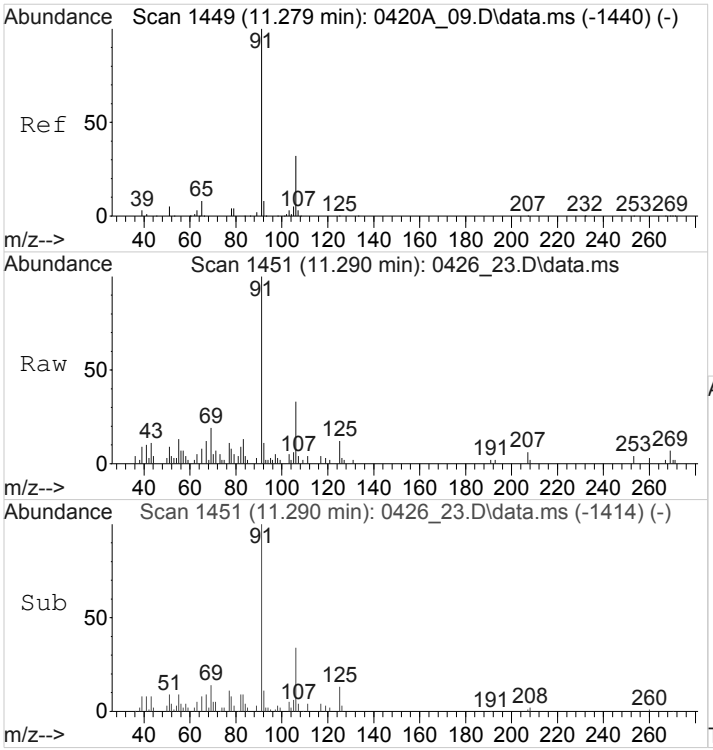


#54
Methyl Butyl Ketone
Concen: 0.1393919 ppbv
RT: 10.300 min Scan# 1276
Delta R.T. 0.011 min
Lab File: 0426_23.D
Acq: 26 Apr 2018 11:42 pm

Tgt Ion: 43 Resp: 10705

Ion	Ratio	Lower	Upper
43	100		
58	37.6	51.6	77.4#
85	0.0	8.6	13.0#
100	12.2	11.6	17.4

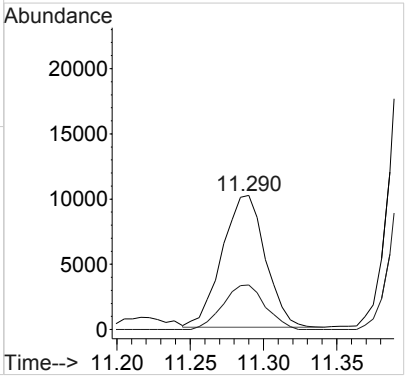


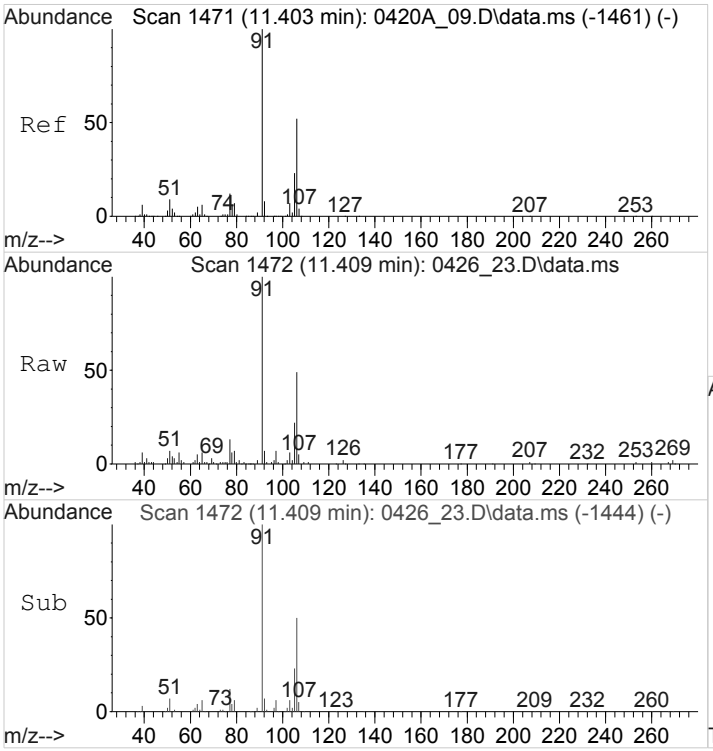


#59
Ethylbenzene
Concen: 0.1041586 ppbv
RT: 11.290 min Scan# 1451
Delta R.T. 0.011 min
Lab File: 0426_23.D
Acq: 26 Apr 2018 11:42 pm

Tgt Ion: 91 Resp: 20675

Ion	Ratio	Lower	Upper
91	100		
106	33.2	25.9	38.9

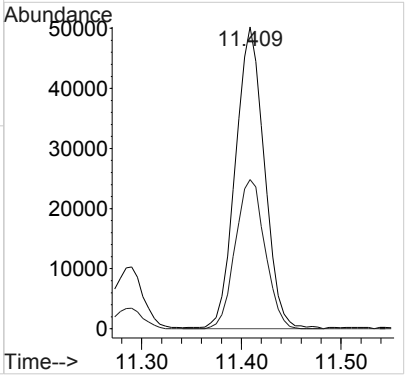


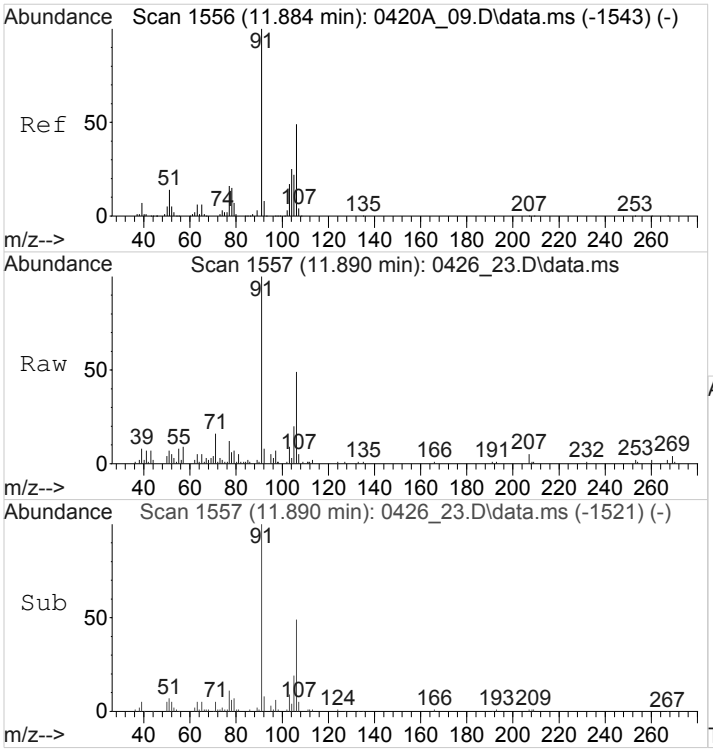


#60
M&P-Xylene
Concen: 0.6665490 ppbv
RT: 11.409 min Scan# 1472
Delta R.T. 0.006 min
Lab File: 0426_23.D
Acq: 26 Apr 2018 11:42 pm

Tgt Ion: 91 Resp: 101357

Ion	Ratio	Lower	Upper
91	100		
106	50.7	41.5	62.3

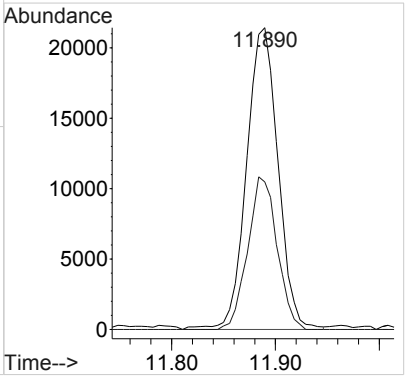


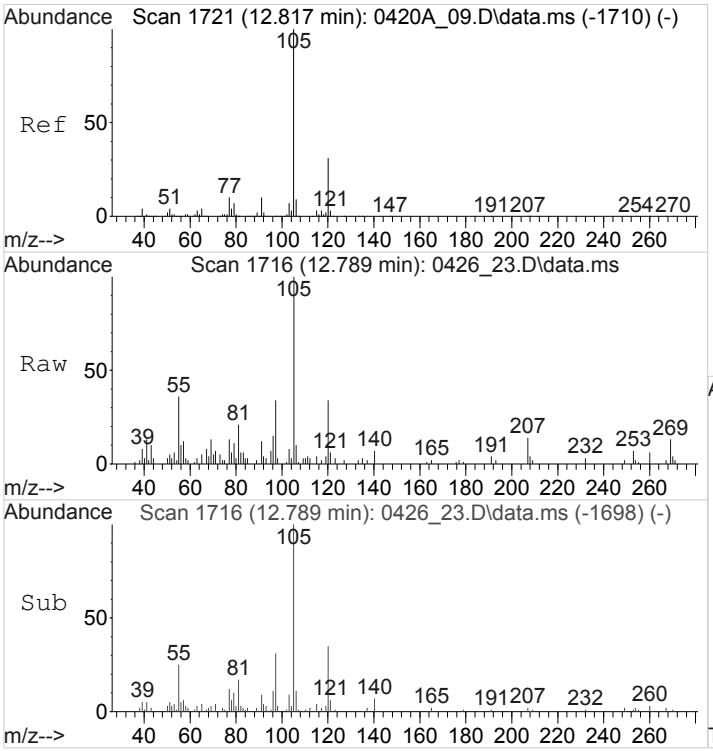


#61
O-Xylene
Concen: 0.2875733 ppbv
RT: 11.890 min Scan# 1557
Delta R.T. 0.006 min
Lab File: 0426_23.D
Acq: 26 Apr 2018 11:42 pm

Tgt Ion: 91 Resp: 45214

Ion	Ratio	Lower	Upper
91	100		
106	47.0	39.1	58.7

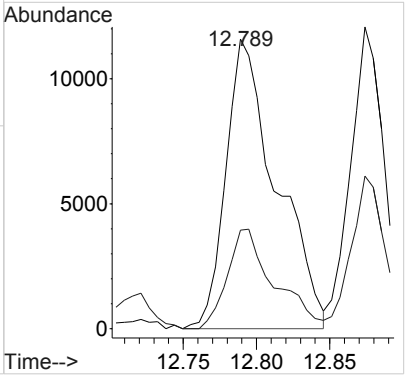


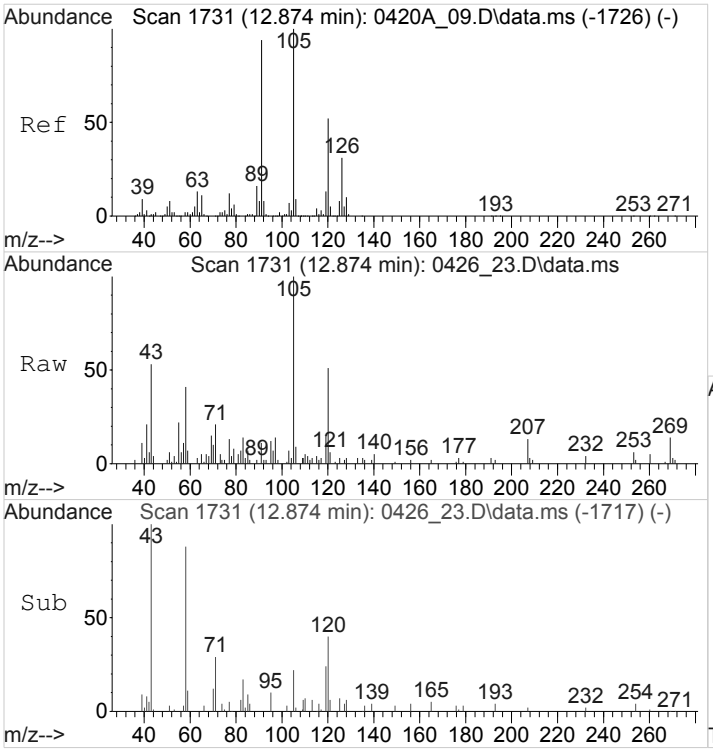


#67
4-Ethyltoluene
Concen: 0.1233578 ppbv
RT: 12.789 min Scan# 1716
Delta R.T. -0.028 min
Lab File: 0426_23.D
Acq: 26 Apr 2018 11:42 pm

Tgt Ion:105 Resp: 27762

Ion	Ratio	Lower	Upper
105	100		
120	31.9	24.8	37.2

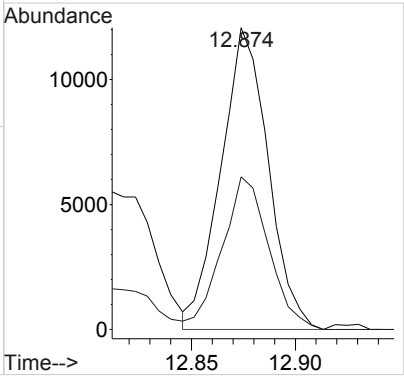


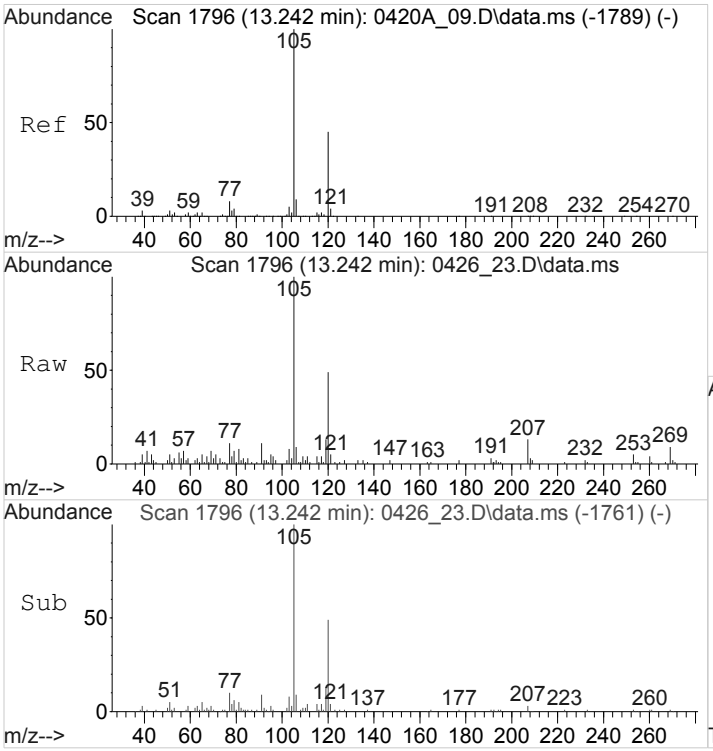


#70
1,3,5-Trimethylbenzene
Concen: 0.1074631 ppbv
RT: 12.874 min Scan# 1731
Delta R.T. 0.000 min
Lab File: 0426_23.D
Acq: 26 Apr 2018 11:42 pm

Tgt Ion:105 Resp: 19098

Ion	Ratio	Lower	Upper
105	100		
120	50.0	41.4	62.0

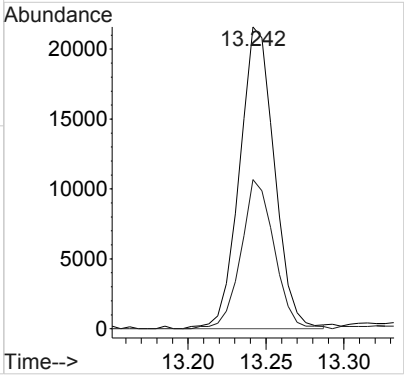


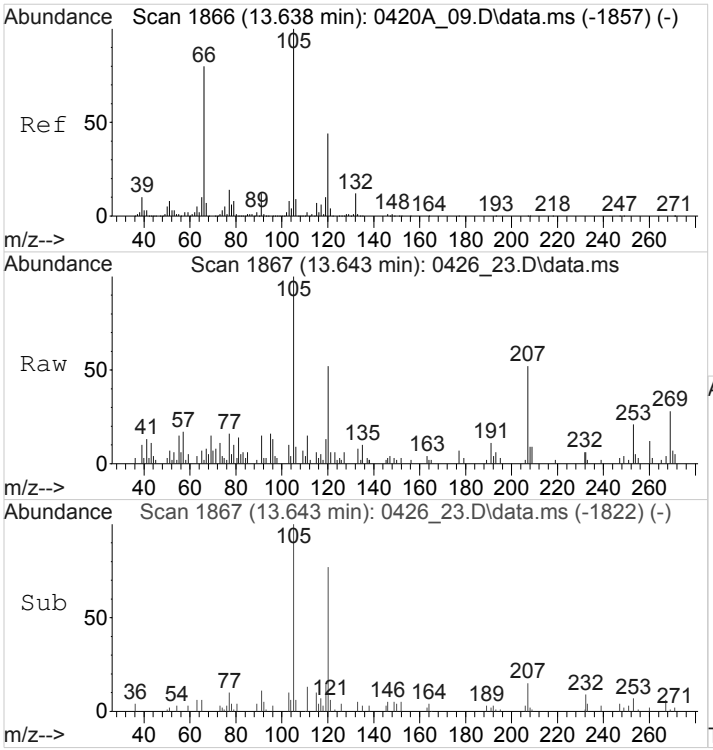


#72
1,2,4-Trimethylbenzene
Concen: 0.1863166 ppbv
RT: 13.242 min Scan# 1796
Delta R.T. 0.000 min
Lab File: 0426_23.D
Acq: 26 Apr 2018 11:42 pm

Tgt Ion:105 Resp: 33439

Ion	Ratio	Lower	Upper
105	100		
120	47.0	38.8	58.2

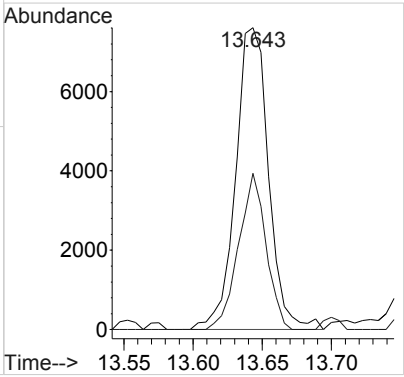


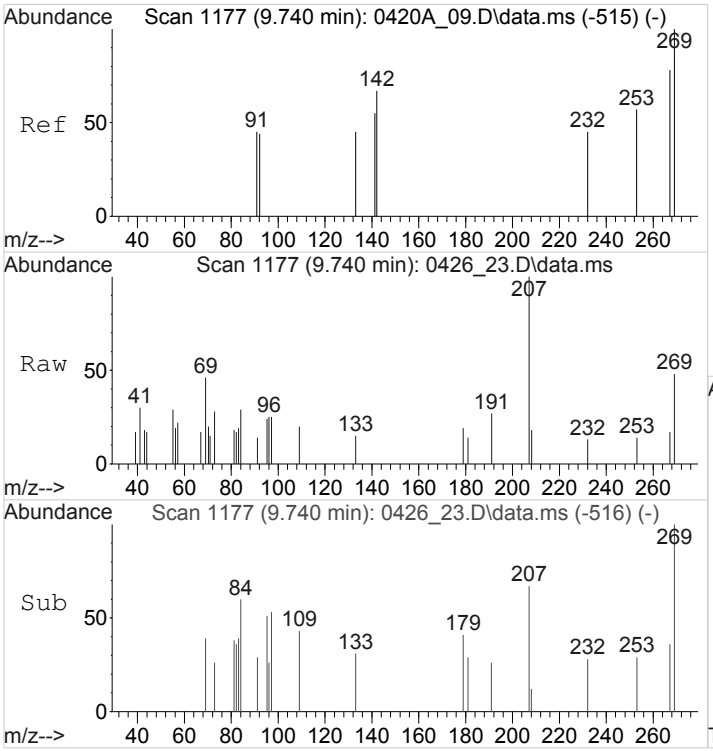


#76
1,2,3-TRIMETHYLBENZENE
Concen: 0.0735119 ppbv
RT: 13.643 min Scan# 1867
Delta R.T. 0.006 min
Lab File: 0426_23.D
Acq: 26 Apr 2018 11:42 pm

Tgt Ion:105 Resp: 12599

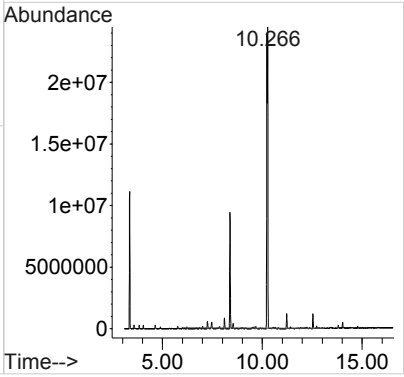
Ion	Ratio	Lower	Upper
105	100		
120	43.1	36.0	54.0





#84
TPH (GC/MS) Low Fraction
Concen: 391.1640279 ppbv m
RT: 9.740 min Scan# 1177
Delta R.T. 0.000 min
Lab File: 0426_23.D
Acq: 26 Apr 2018 11:42 pm

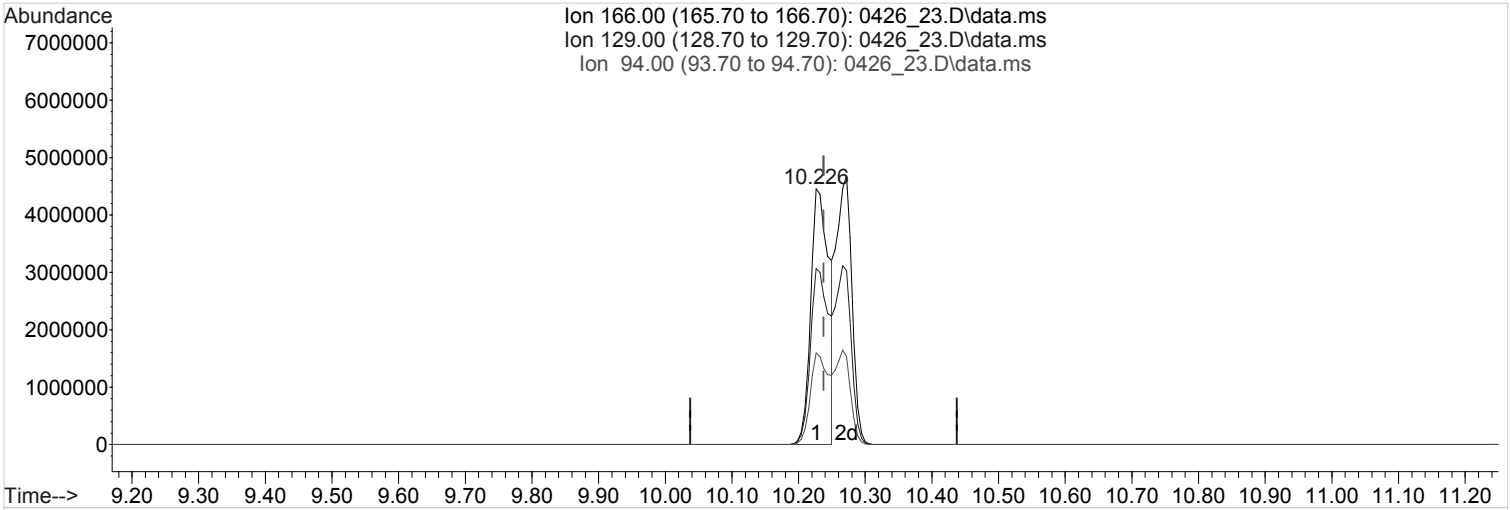
Tgt Ion:TIC Resp:110830118

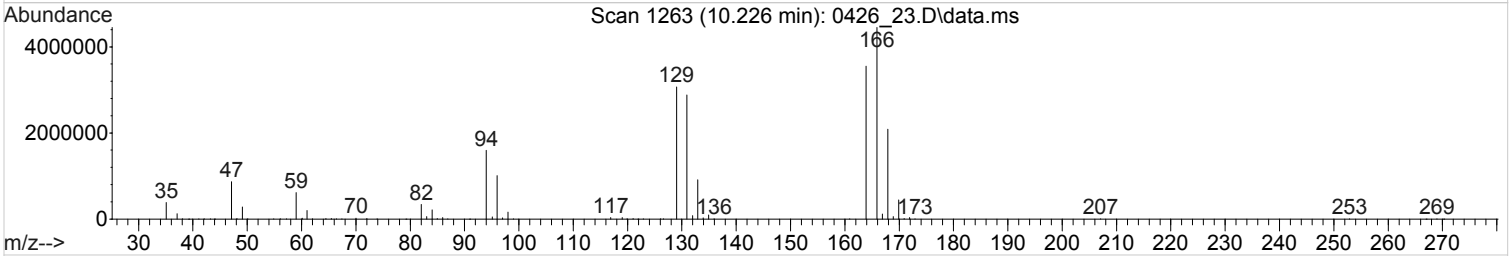


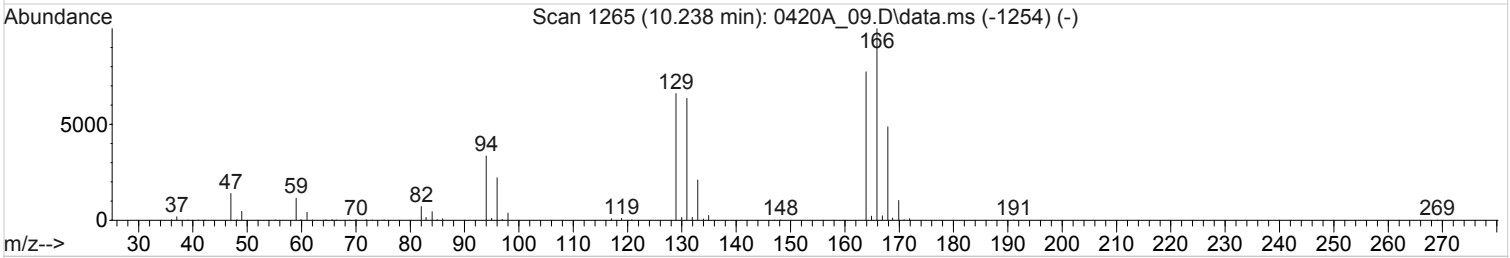
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_23.D
Acq On : 26 Apr 2018 11:42 pm
Operator : 564
Sample : L988471-12 1x WG1103323
Misc :
ALS Vial : 23 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 27 08:42:38 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration







TIC: 0426_23.D\data.ms

(53) Tetrachloroethene (T,M)

10.226min (-0.011) 113.6666677 ppbv E

Qvalue = 96

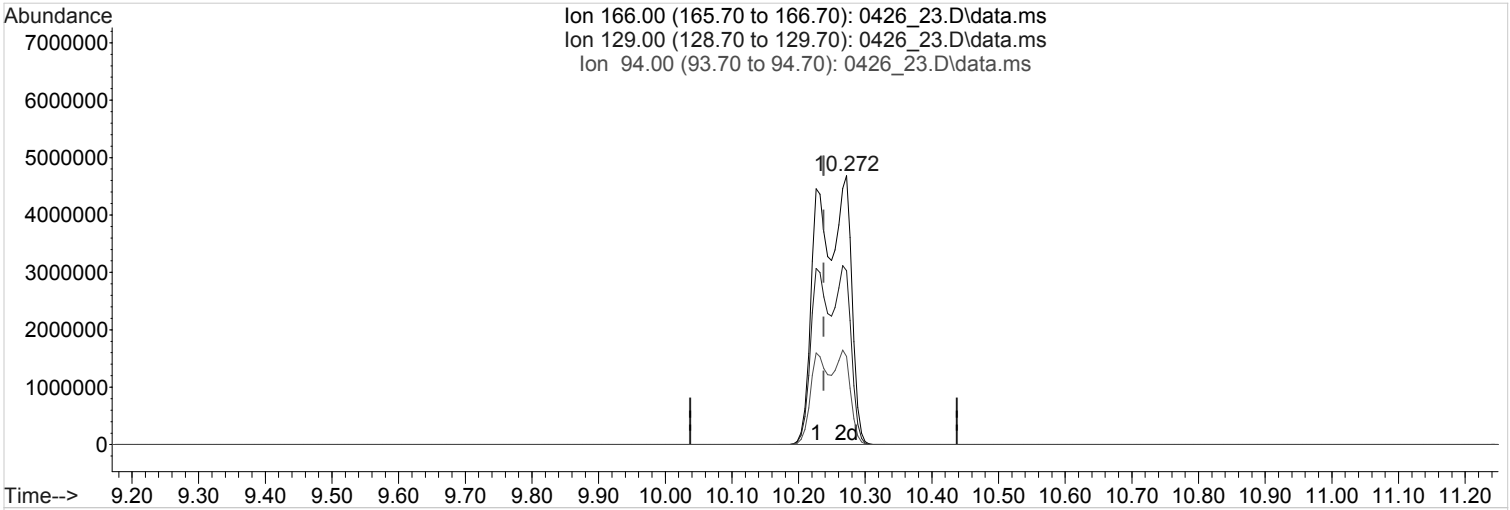
response 8383716 Limit = 0.2000000

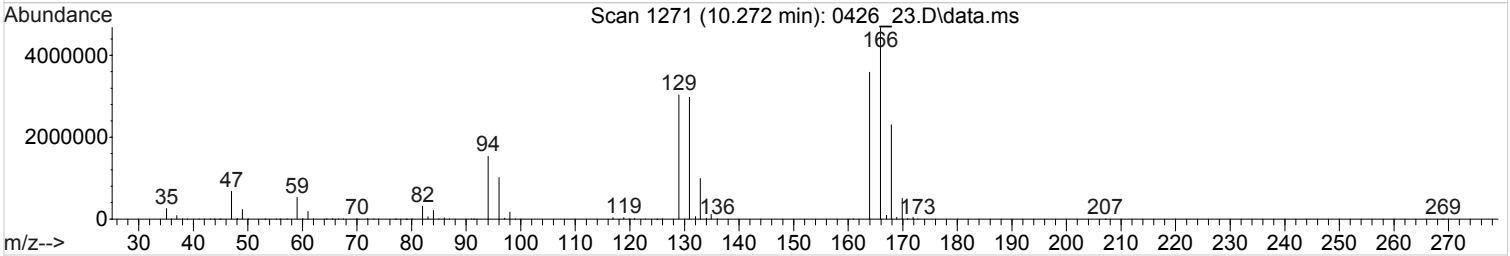
Ion	Exp%	Act%
166.00	100	100
129.00	67.10	70.35
94.00	34.00	36.90
0.00	0.00	0.00

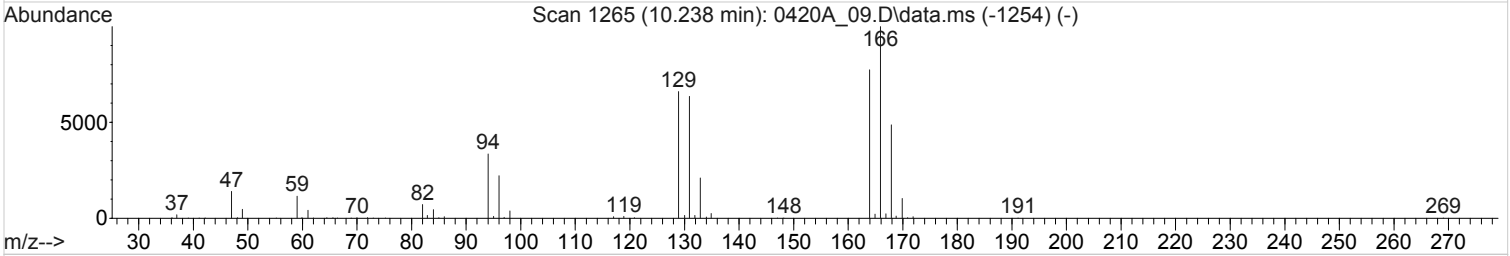
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_23.D
Acq On : 26 Apr 2018 11:42 pm
Operator : 564
Sample : L988471-12 1x WG1103323
Misc :
ALS Vial : 23 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 27 08:42:38 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration







TIC: 0426_23.D\data.ms

(53) Tetrachloroethene (T,M)

10.272min (+0.034) 218.0848612 ppbv m E

response 16085292 Limit = 0.2000000

Ion	Exp%	Act%
166.00	100	100
129.00	67.10	36.67#
94.00	34.00	19.23#
0.00	0.00	0.00

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
DUP

ESC Sample ID:	L988471-13	**SDG:**	L988471
Client Sample ID:	DUP	**Collected Date/Time:**	04/23/18 00:00
Lab File ID:	0427_14	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS2	**Preparation Date/Time:**	04/27/18 18:55
Analytical Batch:	WG1103956	**Analysis Date/Time:**	04/27/18 18:55
Dilution Factor:	25	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	16 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	**CAS**	**RT**	**Result**	**Qualifier**	**MDL**	**RDL**
			ppbv		*ppbv*	*ppbv*
Tetrachloroethylene	127-18-4	12.21	543		1.24	5.00
Trichloroethylene	79-01-6	10.18	55.9		1.36	5.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_14.D
Acq On : 27 Apr 2018 6:55 pm
Operator : 564
Sample : L988471-13 25x WG1103956
Misc :
ALS Vial : 14 Sample Multiplier: 25
InstName : AIRMS2

Quant Time: Apr 28 07:50:47 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:08:22 2018
Response via : Initial Calibration

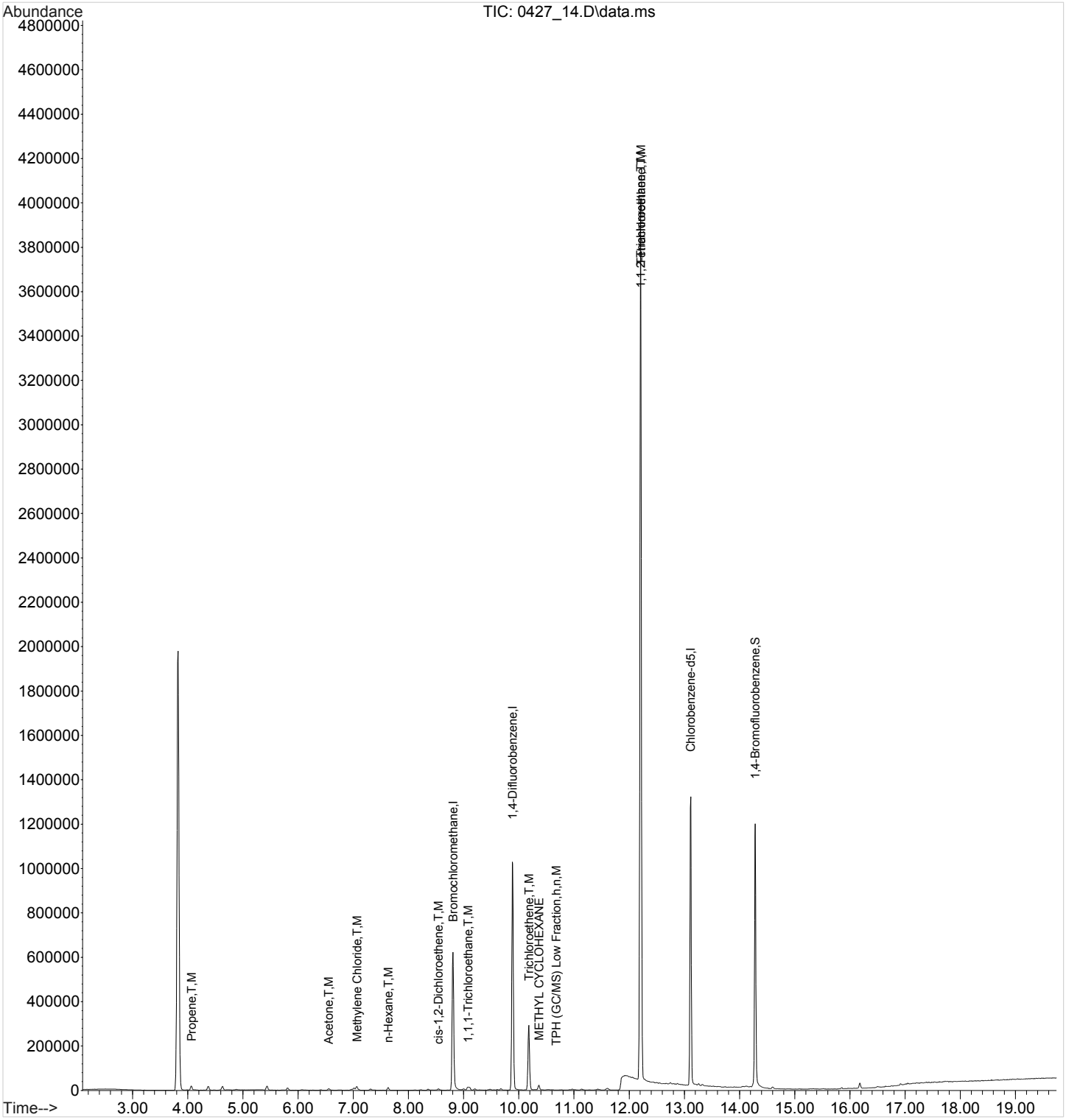
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.808	130	1718305	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	9.890	114	7411308	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	13.116	117	6412745	4.0000000	ppbv	# 0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	14.286	95	3736151	3.6873609	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 92.18%			
Target Compounds						Qvalue
2) Propene	4.066	41	57942	3.1394695	ppbv #	51
17) Acetone	6.558	43	119183	4.3109705	ppbv	93
21) Methylene Chloride	7.066	49	148268	6.4510961	ppbv	98
25) n-Hexane	7.634	57	58586	2.0581900	ppbv	94
30) cis-1,2-Dichloroethene	8.543	61	47255	1.6233688	ppbv #	82
34) 1,1,1-Trichloroethane	9.082	97	74654	2.7802856	ppbv	98
40) Heptane	9.678	43	35717	0.7429889	ppbv #	34
41) Trichloroethene	10.182	95	1012433	55.8657233	ppbv	97
43) METHYL CYCLOHEXANE	10.366	83	70297	2.4129952	ppbv #	81
50) Toluene	11.593	91	40715	0.7576363	ppbv	99
52) 1,1,2-Trichloroethane	12.208	97	78424	4.7161698	ppbv #	1
53) Tetrachloroethene	12.210	166	11042663	543.4199095	ppbv	97
59) Ethylbenzene	13.330	91	29294	0.3782212	ppbv #	46
60) M&P-Xylene	13.330	91	32156	0.5391315	ppbv #	30
84) TPH (GC/MS) Low Fraction	10.675	TIC	118096621m	744.1313605	ppbv	

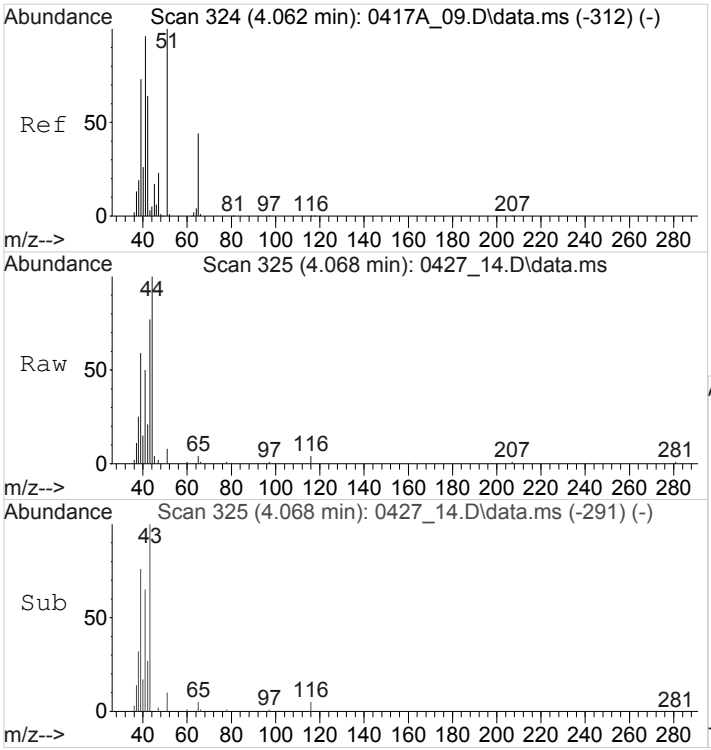
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_14.D
Acq On : 27 Apr 2018 6:55 pm
Operator : 564
Sample : L988471-13 25x WG1103956
Misc :
ALS Vial : 14 Sample Multiplier: 25
InstName : AIRMS2

Quant Time: Apr 28 07:50:47 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:08:22 2018
Response via : Initial Calibration

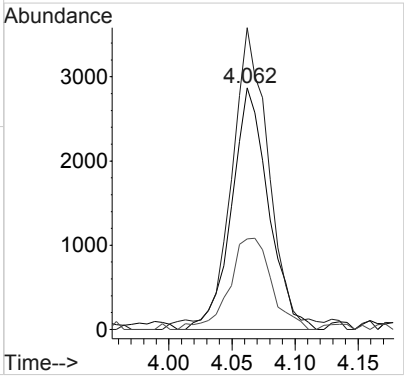


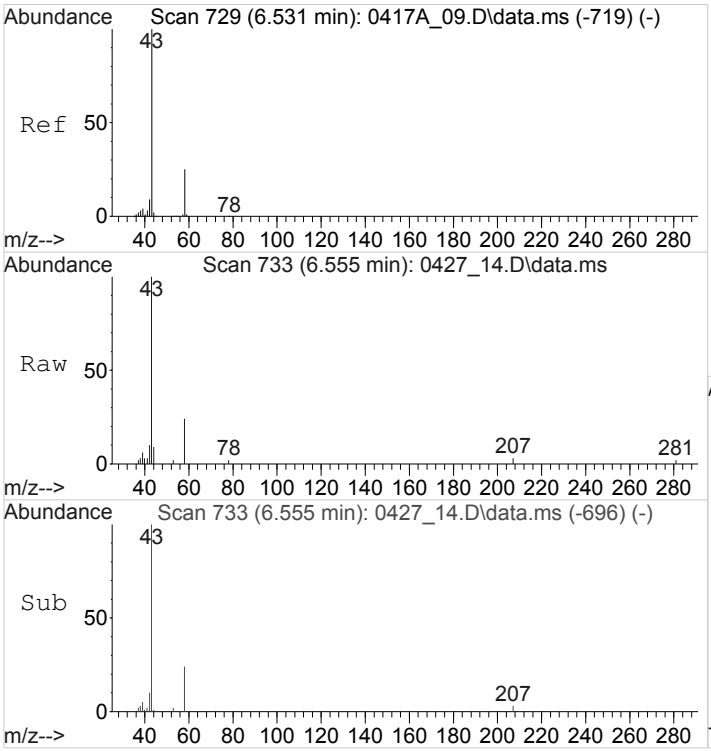


#2
Propene
Concen: 3.1394695 ppbv
RT: 4.066 min Scan# 325
Delta R.T. 0.003 min
Lab File: 0427_14.D
Acq: 27 Apr 2018 6:55 pm

Tgt Ion: 41 Resp: 57942

Ion	Ratio	Lower	Upper
41	100		
39	129.6	57.8	86.8#
42	43.2	50.5	75.7#

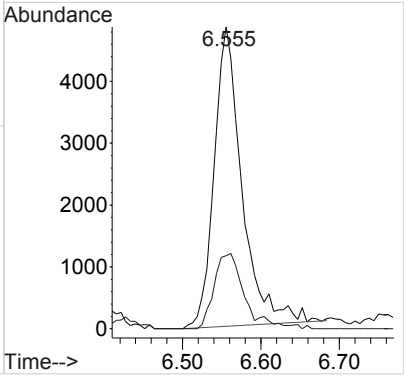


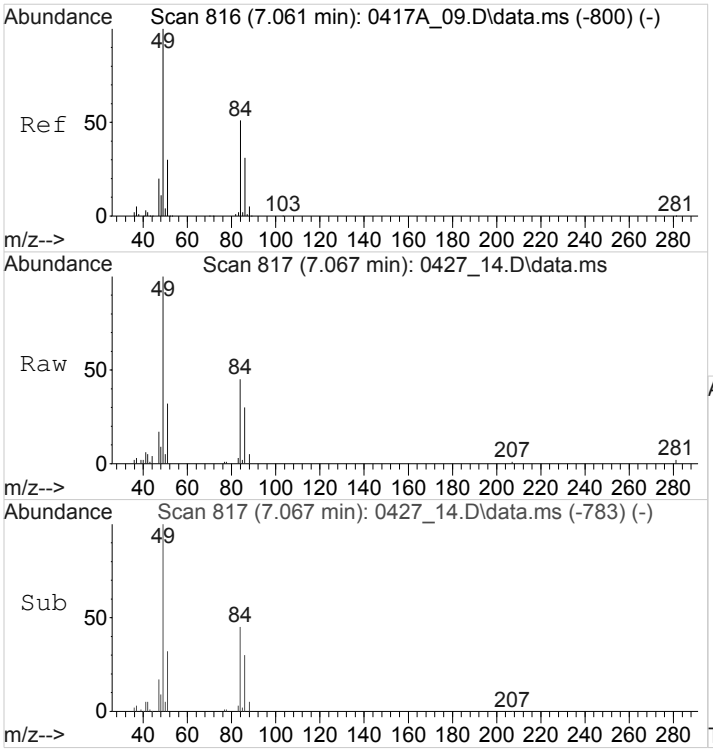


#17
Acetone
Concen: 4.3109705 ppbv
RT: 6.558 min Scan# 733
Delta R.T. 0.028 min
Lab File: 0427_14.D
Acq: 27 Apr 2018 6:55 pm

Tgt Ion: 43 Resp: 119183

Ion	Ratio	Lower	Upper
43	100		
58	21.9	20.6	30.8

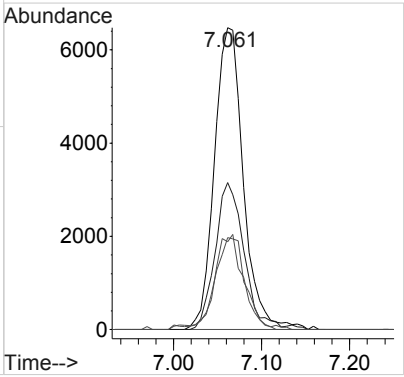


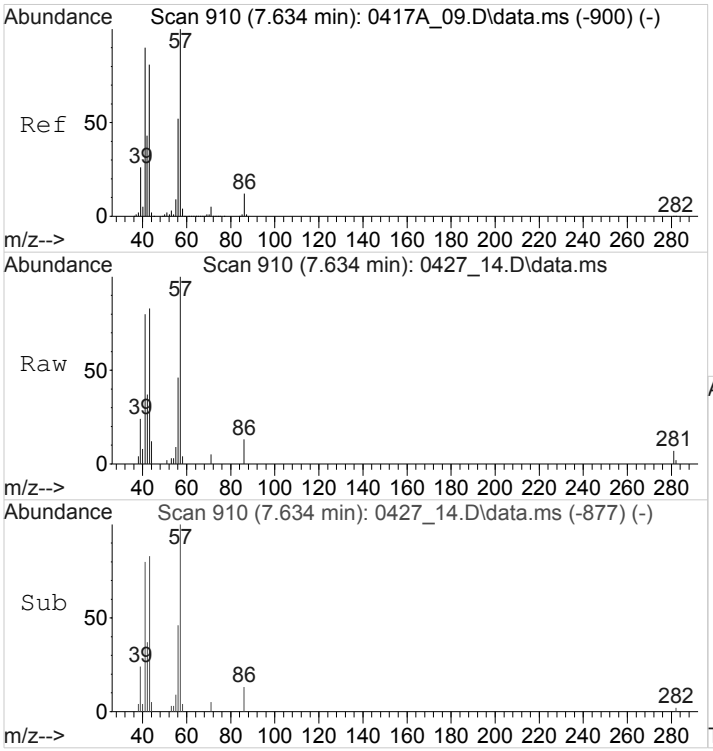


#21
Methylene Chloride
Concen: 6.4510961 ppbv
RT: 7.066 min Scan# 817
Delta R.T. 0.004 min
Lab File: 0427_14.D
Acq: 27 Apr 2018 6:55 pm

Tgt Ion: 49 Resp: 148268

Ion	Ratio	Lower	Upper
49	100		
84	48.9	39.4	59.2
86	32.4	24.5	36.7
51	31.6	23.8	35.8

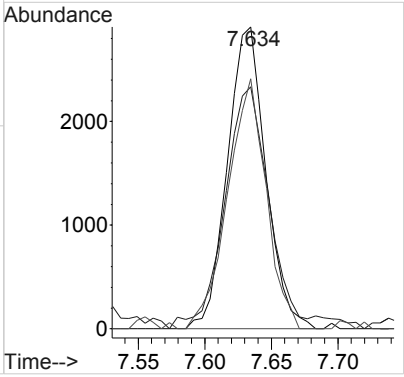


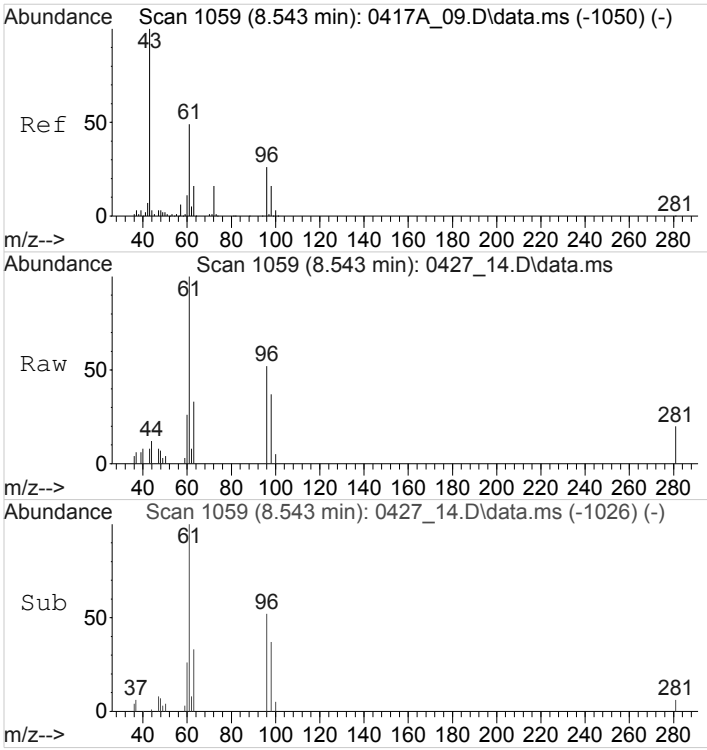


#25
n-Hexane
Concen: 2.0581900 ppbv
RT: 7.634 min Scan# 910
Delta R.T. -0.001 min
Lab File: 0427_14.D
Acq: 27 Apr 2018 6:55 pm

Tgt Ion: 57 Resp: 58586

Ion	Ratio	Lower	Upper
57	100		
41	86.1	72.7	109.1
43	86.0	64.1	96.1

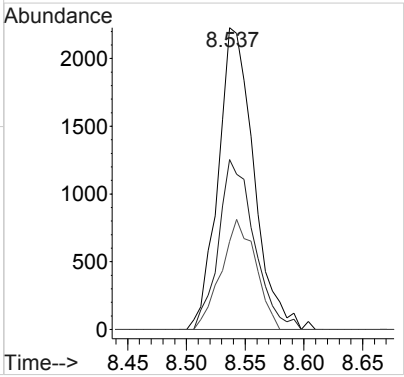


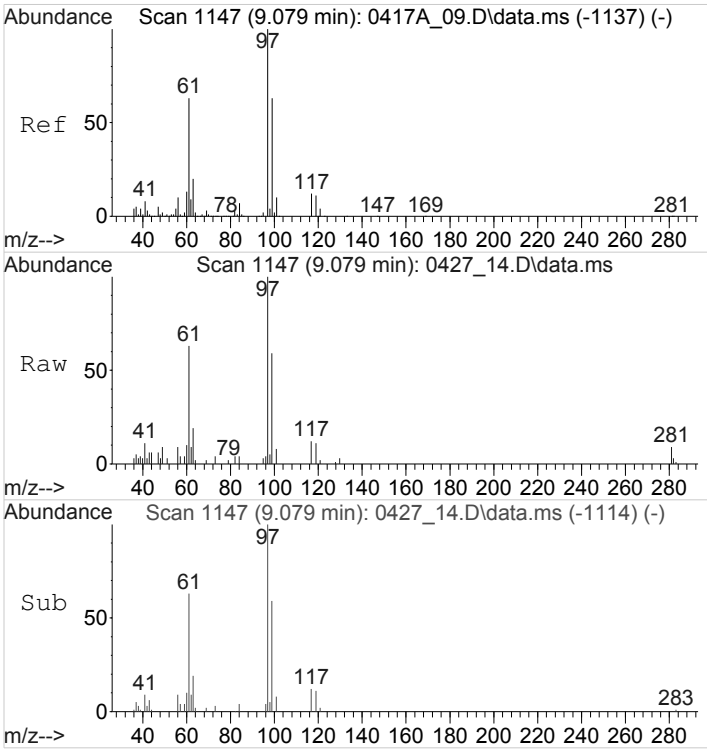


#30
cis-1,2-Dichloroethene
Concen: 1.6233688 ppbv
RT: 8.543 min Scan# 1059
Delta R.T. 0.000 min
Lab File: 0427_14.D
Acq: 27 Apr 2018 6:55 pm

Tgt Ion: 61 Resp: 47255

Ion	Ratio	Lower	Upper
61	100		
96	56.0	34.9	52.3#
98	35.1	21.8	32.6#

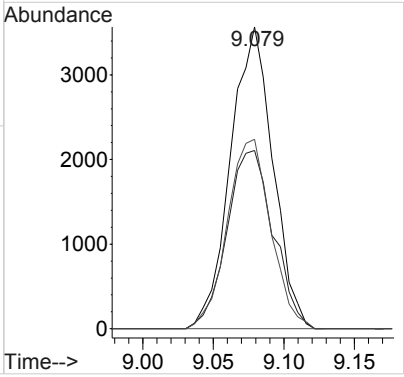


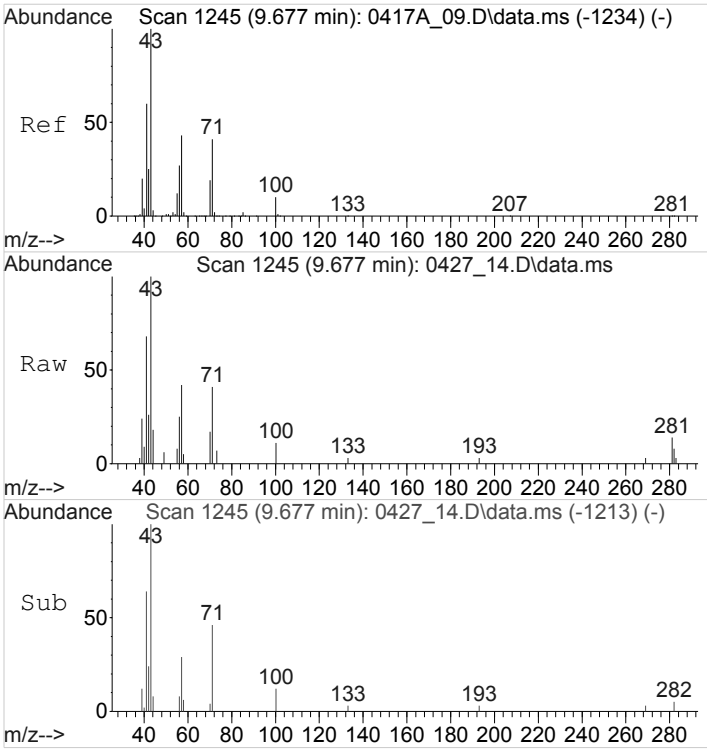


#34
1,1,1-Trichloroethane
Concen: 2.7802856 ppbv
RT: 9.082 min Scan# 1147
Delta R.T. 0.001 min
Lab File: 0427_14.D
Acq: 27 Apr 2018 6:55 pm

Tgt Ion: 97 Resp: 74654

Ion	Ratio	Lower	Upper
97	100		
99	64.6	50.0	75.0
61	64.3	50.6	76.0

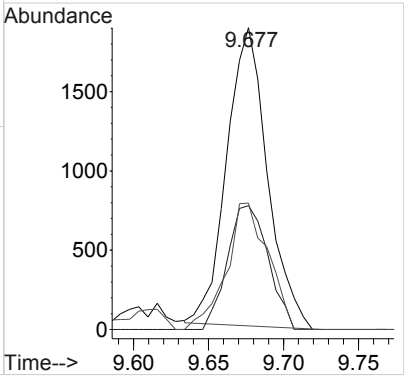


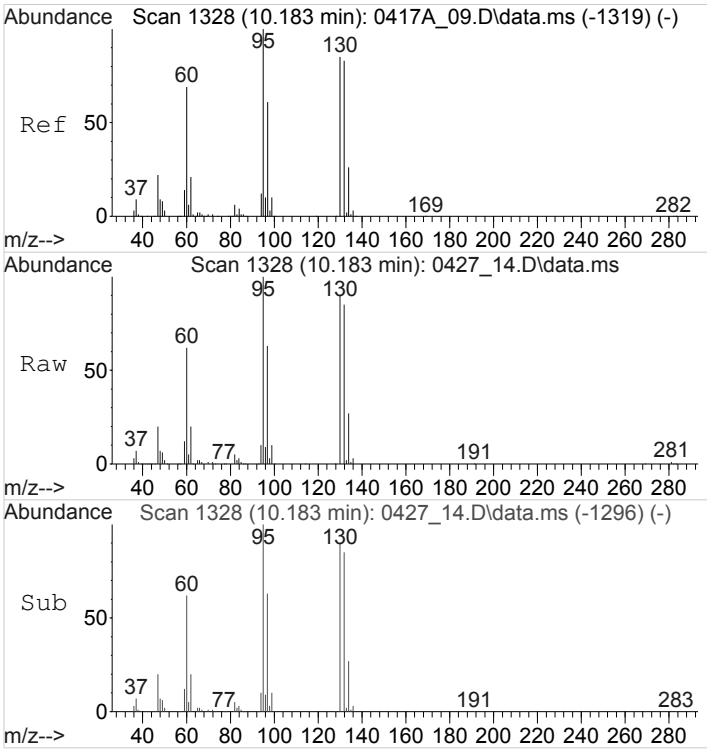


#40
Heptane
Concen: 0.7429889 ppbv
RT: 9.678 min Scan# 1245
Delta R.T. -0.001 min
Lab File: 0427_14.D
Acq: 27 Apr 2018 6:55 pm

Tgt Ion: 43 Resp: 35717

Ion	Ratio	Lower	Upper
43	100		
71	0.0	31.8	47.8#
57	0.0	34.2	51.4#

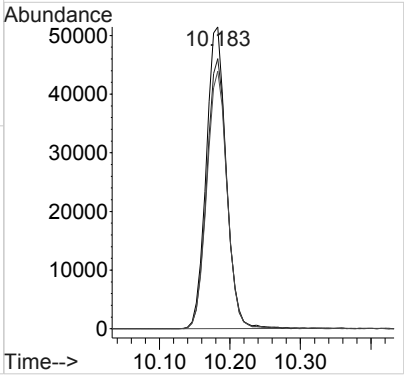


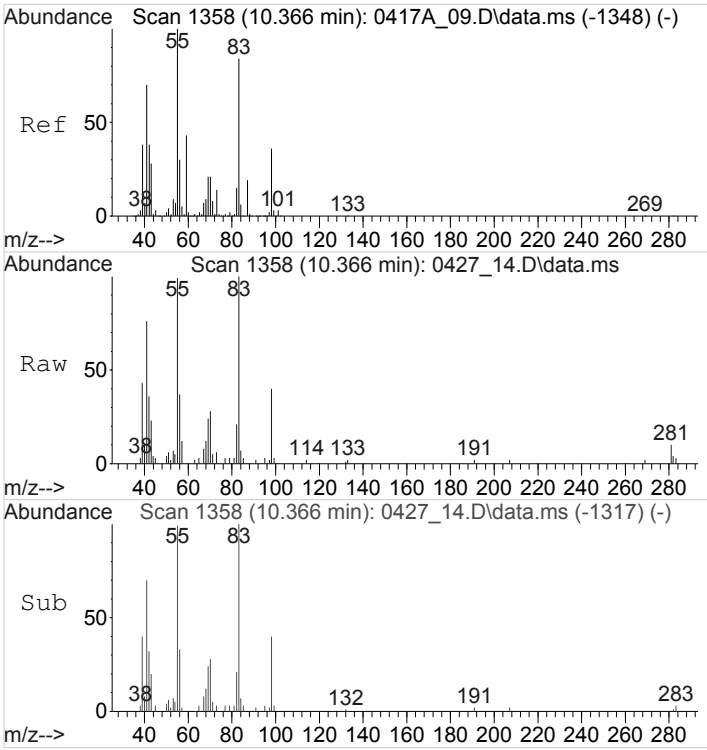


#41
Trichloroethene
Concen: 55.8657233 ppbv
RT: 10.182 min Scan# 1328
Delta R.T. -0.002 min
Lab File: 0427_14.D
Acq: 27 Apr 2018 6:55 pm

Tgt Ion: 95 Resp: 1012433

Ion	Ratio	Lower	Upper
95	100		
130	89.2	69.2	103.8
132	86.2	66.3	99.5

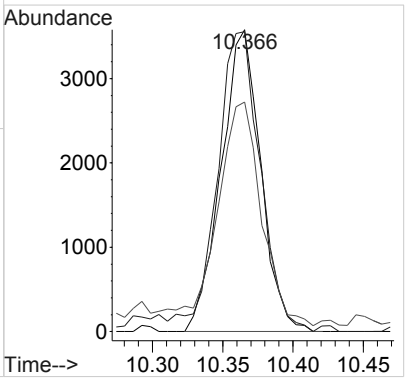


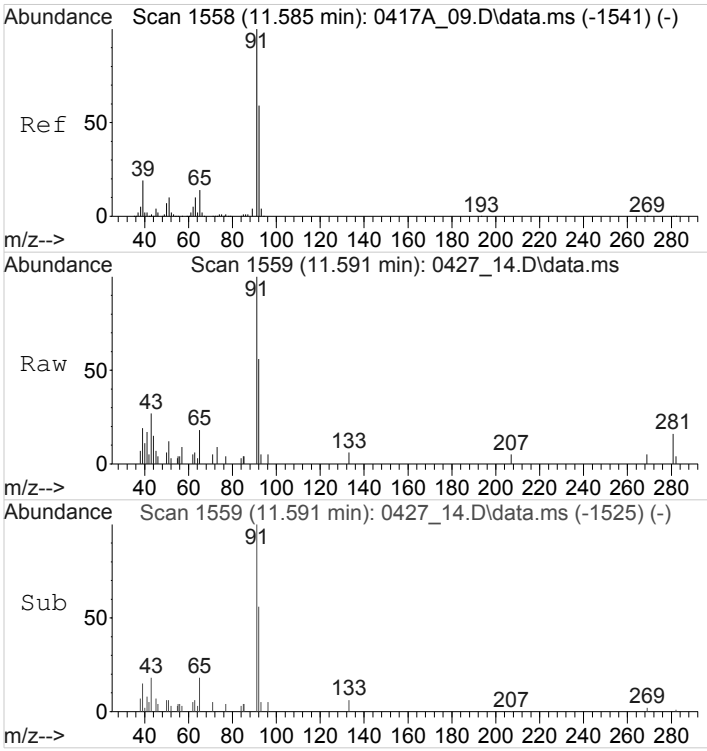


#43
METHYL CYCLOHEXANE
Concen: 2.4129952 ppbv
RT: 10.366 min Scan# 1358
Delta R.T. -0.001 min
Lab File: 0427_14.D
Acq: 27 Apr 2018 6:55 pm

Tgt Ion: 83 Resp: 70297

Ion	Ratio	Lower	Upper
83	100		
55	112.1	112.9	169.3#
41	88.1	80.5	120.7

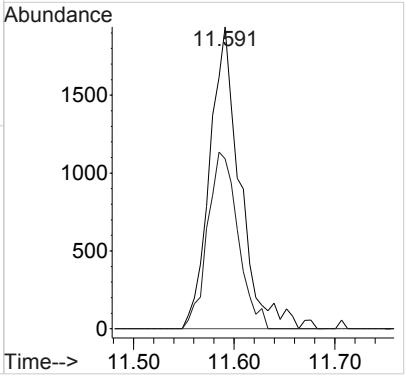


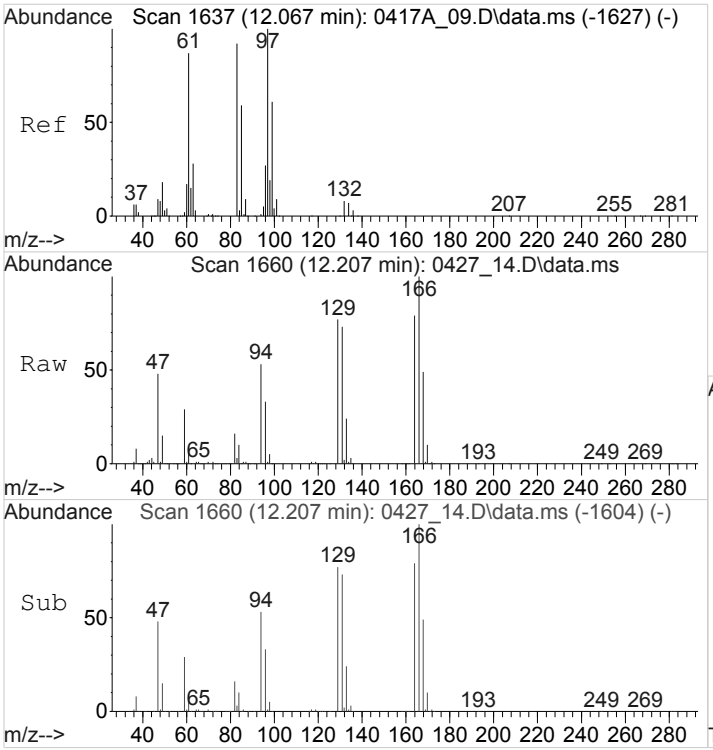


#50
Toluene
Concen: 0.7576363 ppbv
RT: 11.593 min Scan# 1559
Delta R.T. 0.008 min
Lab File: 0427_14.D
Acq: 27 Apr 2018 6:55 pm

Tgt Ion: 91 Resp: 40715

Ion	Ratio	Lower	Upper
91	100		
92	58.6	47.5	71.3

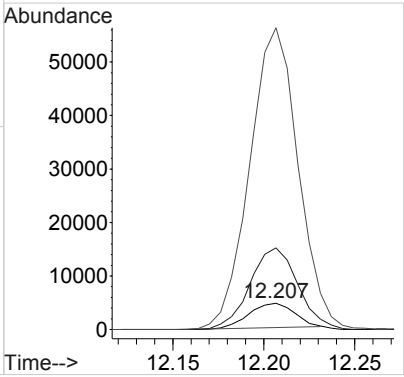


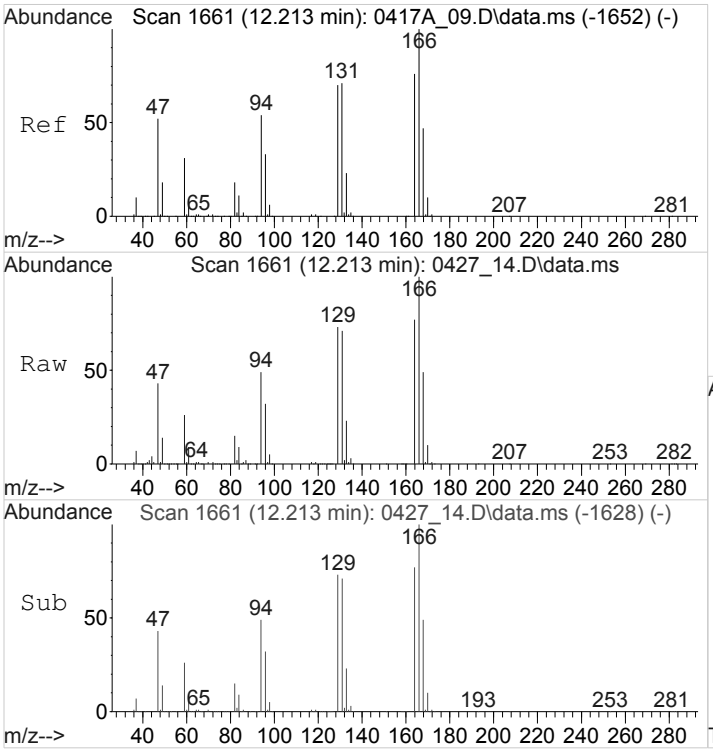


#52
1,1,2-Trichloroethane
Concen: 4.7161698 ppbv
RT: 12.208 min Scan# 1660
Delta R.T. 0.144 min
Lab File: 0427_14.D
Acq: 27 Apr 2018 6:55 pm

Tgt Ion: 97 Resp: 78424

Ion	Ratio	Lower	Upper
97	100		
83	308.8	75.2	112.8#
61	1143.7	71.4	107.2#

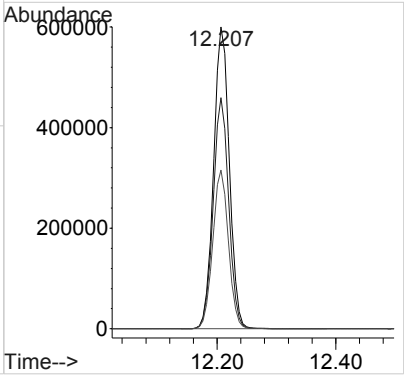


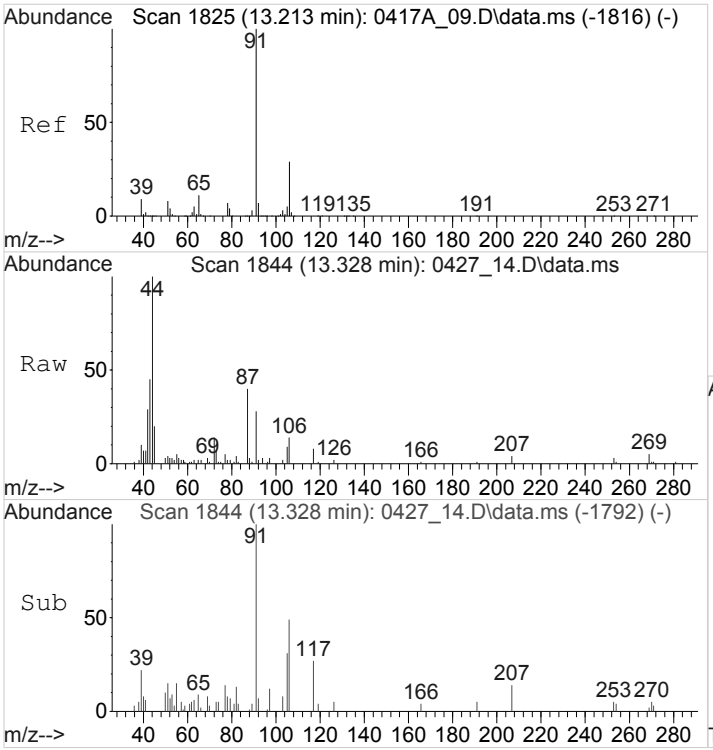


#53
Tetrachloroethene
Concen: 543.4199095 ppbv
RT: 12.210 min Scan# 1661
Delta R.T. -0.001 min
Lab File: 0427_14.D
Acq: 27 Apr 2018 6:55 pm

Tgt Ion:166 Resp:11042663

Ion	Ratio	Lower	Upper
166	100		
129	75.3	59.6	89.4
94	52.3	45.2	67.8

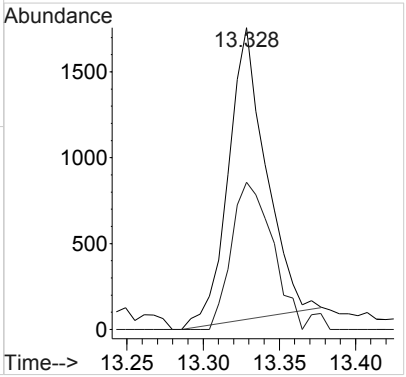


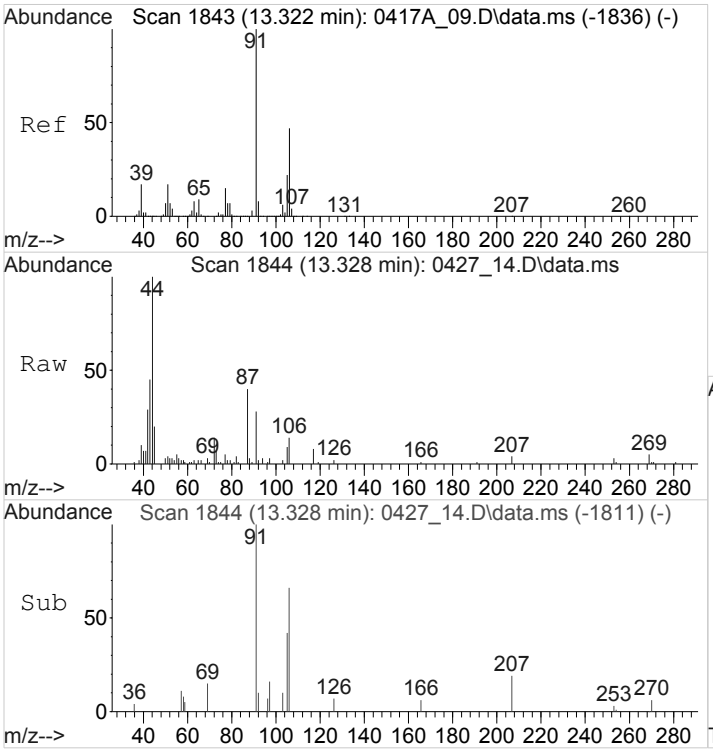


#59
Ethylbenzene
Concen: 0.3782212 ppbv
RT: 13.330 min Scan# 1844
Delta R.T. 0.121 min
Lab File: 0427_14.D
Acq: 27 Apr 2018 6:55 pm

Tgt Ion: 91 Resp: 29294

Ion	Ratio	Lower	Upper
91	100		
106	0.0	22.6	34.0#

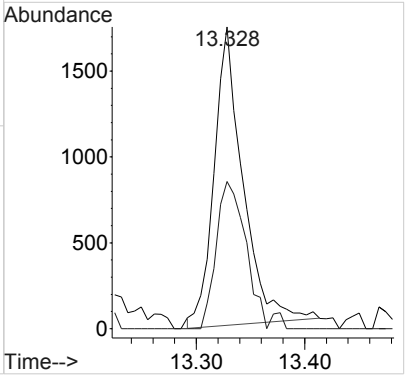


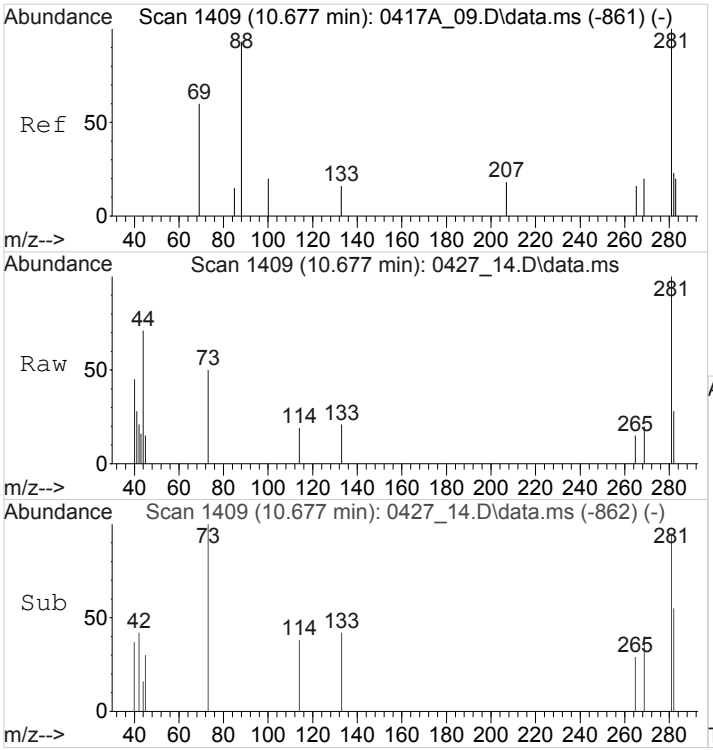


#60
M&P-Xylene
Concen: 0.5391315 ppbv
RT: 13.330 min Scan# 1844
Delta R.T. 0.006 min
Lab File: 0427_14.D
Acq: 27 Apr 2018 6:55 pm

Tgt Ion: 91 Resp: 32156

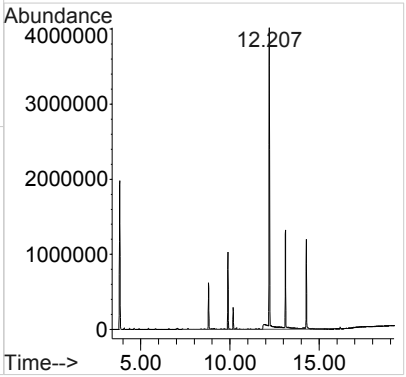
Ion	Ratio	Lower	Upper
91	100		
106	0.0	37.4	56.2#





#84
TPH (GC/MS) Low Fraction
Concen: 744.1313605 ppbv m
RT: 10.675 min Scan# 1409
Delta R.T. 0.000 min
Lab File: 0427_14.D
Acq: 27 Apr 2018 6:55 pm

Tgt Ion:TIC Resp:118096621



1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
DUP

ESC Sample ID:	L988471-13	**SDG:**	L988471
Client Sample ID:	DUP	**Collected Date/Time:**	04/23/18 00:00
Lab File ID:	0426_24	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/27/18 00:25
Analytical Batch:	WG1103323	**Analysis Date/Time:**	04/27/18 00:25
Dilution Factor:	1	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	RT	Result	Qualifier	MDL	RDL
			ppbv		*ppbv*	*ppbv*
Acetone	67-64-1	5.47	1.91		0.0569	1.25
Allyl chloride	107-05-1	0	ND		0.0546	0.200
Benzene	71-43-2	7.81	0.454		0.0460	0.200
Benzyl Chloride	100-44-7	0	ND		0.0598	0.200
Bromodichloromethane	75-27-4	8.89	ND		0.0436	0.200
Bromoform	75-25-2	0	ND		0.0786	0.600
Bromomethane	74-83-9	0	ND		0.0609	0.200
1,3-Butadiene	106-99-0	0	ND		0.0563	2.00
Carbon disulfide	75-15-0	5.68	ND		0.0544	0.200
Carbon tetrachloride	56-23-5	7.59	ND		0.0585	0.200
Chlorobenzene	108-90-7	0	ND		0.0601	0.200
Chloroethane	75-00-3	0	ND		0.0489	0.200
Chloroform	67-66-3	7.26	0.937		0.0574	0.200
Chloromethane	74-87-3	0	ND		0.0544	0.200
2-Chlorotoluene	95-49-8	0	ND		0.0605	0.200
Cyclohexane	110-82-7	7.47	1.58		0.0534	0.200
Dibromochloromethane	124-48-1	0	ND		0.0494	0.200
1,2-Dibromoethane	106-93-4	0	ND		0.0185	0.200
1,2-Dichlorobenzene	95-50-1	0	ND		0.0603	0.200
1,3-Dichlorobenzene	541-73-1	0	ND		0.0597	0.200
1,4-Dichlorobenzene	106-46-7	0	ND		0.0557	0.200
1,2-Dichloroethane	107-06-2	0	ND		0.0616	0.200
1,1-Dichloroethane	75-34-3	0	ND		0.0514	0.200
1,1-Dichloroethene	75-35-4	0	ND		0.0490	0.200
cis-1,2-Dichloroethene	156-59-2	7.01	2.64		0.0389	0.200
trans-1,2-Dichloroethene	156-60-5	6.07	0.520		0.0464	0.200
1,2-Dichloropropane	78-87-5	0	ND		0.0599	0.200
cis-1,3-Dichloropropene	10061-01-5	0	ND		0.0588	0.200
trans-1,3-Dichloropropene	10061-02-6	0	ND		0.0435	0.200
1,4-Dioxane	123-91-1	0	ND		0.0554	0.200
Ethanol	64-17-5	5.03	ND		0.0832	0.630
Ethylbenzene	100-41-4	11.28	ND		0.0506	0.200
4-Ethyltoluene	622-96-8	12.79	ND		0.0666	0.200
Trichlorofluoromethane	75-69-4	4.85	0.254		0.0673	0.200
Dichlorodifluoromethane	75-71-8	3.62	0.401		0.0601	0.200
1,1,2-Trichlorotrifluoroethane	76-13-1	5.31	ND		0.0687	0.200
1,2-Dichlorotetrafluoroethane	76-14-2	0	ND		0.0458	0.200
Heptane	142-82-5	7.84	1.05		0.0626	0.200
Hexachloro-1,3-butadiene	87-68-3	0	ND		0.0656	0.630
n-Hexane	110-54-3	6.22	1.66		0.0457	0.200
Isopropylbenzene	98-82-8	0	ND		0.0563	0.200
Methylene Chloride	75-09-2	0	ND		0.0465	0.200
Methyl Butyl Ketone	591-78-6	0	ND		0.0682	1.25

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
DUP

ESC Sample ID:	L988471-13	**SDG:**	L988471
Client Sample ID:	DUP	**Collected Date/Time:**	04/23/18 00:00
Lab File ID:	0426_24	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/27/18 00:25
Analytical Batch:	WG1103323	**Analysis Date/Time:**	04/27/18 00:25
Dilution Factor:	1	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	**CAS**	**RT**	**Result**	**Qualifier**	**MDL**	**RDL**
			ppbv		*ppbv*	*ppbv*
2-Butanone (MEK)	78-93-3	7	ND		0.0493	1.25
4-Methyl-2-pentanone (MIBK)	108-10-1	0	ND		0.0650	1.25
Methyl methacrylate	80-62-6	0	ND		0.0773	0.200
MTBE	1634-04-4	0	ND		0.0505	0.200
Naphthalene	91-20-3	0	ND		0.154	0.630
2-Propanol	67-63-0	5.51	ND		0.0882	1.25
Propene	115-07-1	0	ND		0.0932	0.400
Styrene	100-42-5	0	ND		0.0465	0.200
1,1,2,2-Tetrachloroethane	79-34-5	0	ND		0.0576	0.200
Tetrahydrofuran	109-99-9	0	ND		0.0508	0.200
Toluene	108-88-3	9.66	0.972		0.0499	0.200
1,2,4-Trichlorobenzene	120-82-1	0	ND		0.148	0.630
1,1,1-Trichloroethane	71-55-6	7.46	3.90		0.0665	0.200
1,1,2-Trichloroethane	79-00-5	0	ND		0.0287	0.200
1,2,4-Trimethylbenzene	95-63-6	13.24	ND		0.0483	0.200
1,3,5-Trimethylbenzene	108-67-8	12.87	ND		0.0631	0.200
2,2,4-Trimethylpentane	540-84-1	0	ND		0.0456	0.200
Vinyl chloride	75-01-4	0	ND		0.0457	0.200
Vinyl Bromide	593-60-2	0	ND		0.0727	0.200
Vinyl acetate	108-05-4	0	ND		0.0639	0.200
m&p-Xylene	1330-20-7	11.41	0.668		0.0946	0.400
o-Xylene	95-47-6	11.89	0.290		0.0633	0.200

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_24.D
Acq On : 27 Apr 2018 12:25 am
Operator : 564
Sample : L988471-13 1x WG1103323
Misc :
ALS Vial : 24 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 27 08:59:45 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration

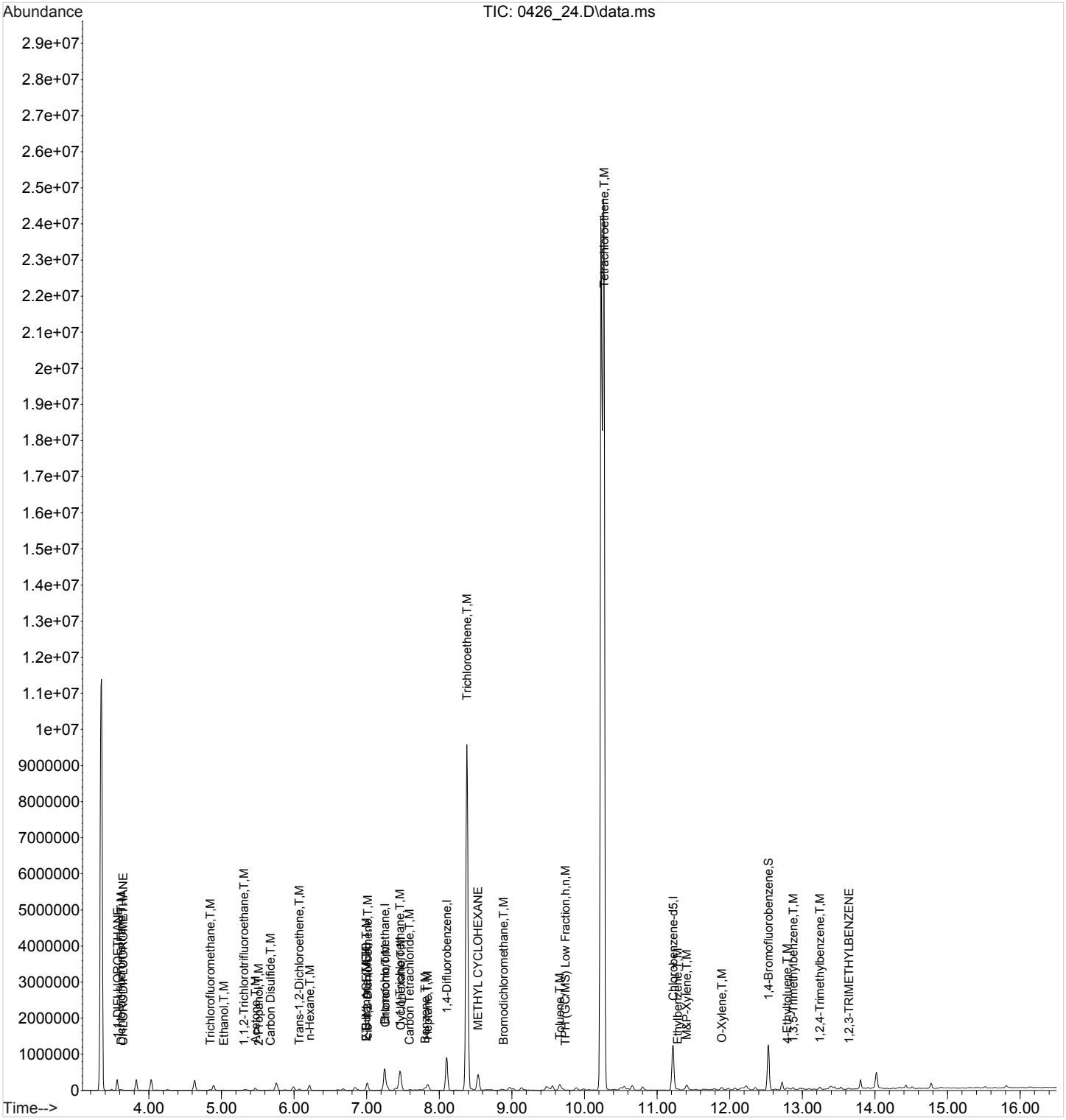
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.251	130	237099	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	8.105	114	896348	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	11.222	117	844343	4.0000000	ppbv	0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	12.534	95	495215	3.9099681	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 97.75%			
Target Compounds						Qvalue
3) 1,1-DIFLUOROETHANE	3.574	51	6905	0.1853784	ppbv	96
4) Dichlorodifluoromethane	3.619	85	23725	0.4007094	ppbv	100
5) CHLORODIFLUOROMETHANE	3.647	51	11071	0.3105071	ppbv	100
13) Trichlorofluoromethane	4.847	101	16848	0.2544752	ppbv	97
14) Ethanol	5.033	45	5559	0.4842512	ppbv	94
15) 1,1,2-Trichlorotrifluo...	5.311	101	4967	0.0807844	ppbv	97
17) Acetone	5.469	58	27827	1.9085515	ppbv	74
18) 2-Propanol	5.514	45	6026	0.1072321	ppbv #	1
19) Carbon Disulfide	5.678	76	7703	0.1150015	ppbv	98
24) Trans-1,2-Dichloroethene	6.074	61	20825	0.5199590	ppbv #	1
25) n-Hexane	6.216	57	77635	1.6597016	ppbv	98
28) ETHYL ACETATE	6.996	43	25953	0.4101313	ppbv #	78
29) 2-Butanone (MEK)	6.996	72	8582	0.4542520	ppbv	98
30) cis-1,2-Dichloroethene	7.013	96	99516	2.6372156	ppbv	96
32) Chloroform	7.257	83	63570	0.9366965	ppbv #	31
33) Cyclohexane	7.472	84	76382	1.5788810	ppbv #	79
34) 1,1,1-Trichloroethane	7.460	97	263384	3.8952615	ppbv	98
35) Carbon Tetrachloride	7.590	117	6138	0.0871939	ppbv	94
38) Benzene	7.805	78	51050	0.4542514	ppbv	98
40) Heptane	7.839	43	58370	1.0516442	ppbv	95
41) Trichloroethene	8.382	95	3697415	75.4857040	ppbv	98
43) METHYL CYCLOHEXANE	8.535	83	230725	3.4272114	ppbv	97
47) Bromodichloromethane	8.886	83	14958	0.1966841	ppbv	97
50) Toluene	9.661	91	135809	0.9718696	ppbv	98
53) Tetrachloroethene	10.272	166	16078297m	213.7700514	ppbv	
59) Ethylbenzene	11.284	91	21199	0.1054207	ppbv	100
60) M&P-Xylene	11.409	91	102944	0.6682516	ppbv	99
61) O-Xylene	11.890	91	46170	0.2898652	ppbv	97
67) 4-Ethyltoluene	12.789	105	29775	0.1305955	ppbv	96
70) 1,3,5-Trimethylbenzene	12.874	105	18344	0.1018888	ppbv	98
72) 1,2,4-Trimethylbenzene	13.242	105	33063	0.1818450	ppbv	99
76) 1,2,3-TRIMETHYLBENZENE	13.643	105	12242	0.0705074	ppbv	99
84) TPH (GC/MS) Low Fraction	9.740	TIC	110610598m	385.3527793	ppbv	

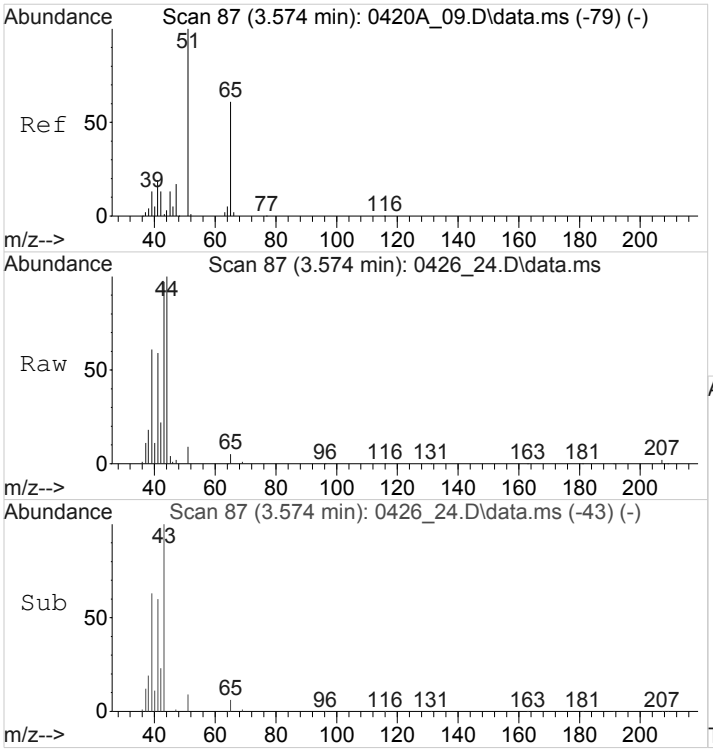
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_24.D
Acq On : 27 Apr 2018 12:25 am
Operator : 564
Sample : L988471-13 1x WG1103323
Misc :
ALS Vial : 24 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 27 08:59:45 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration

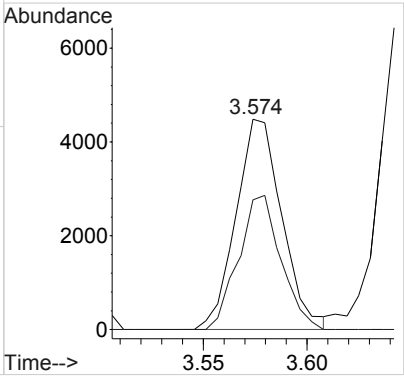


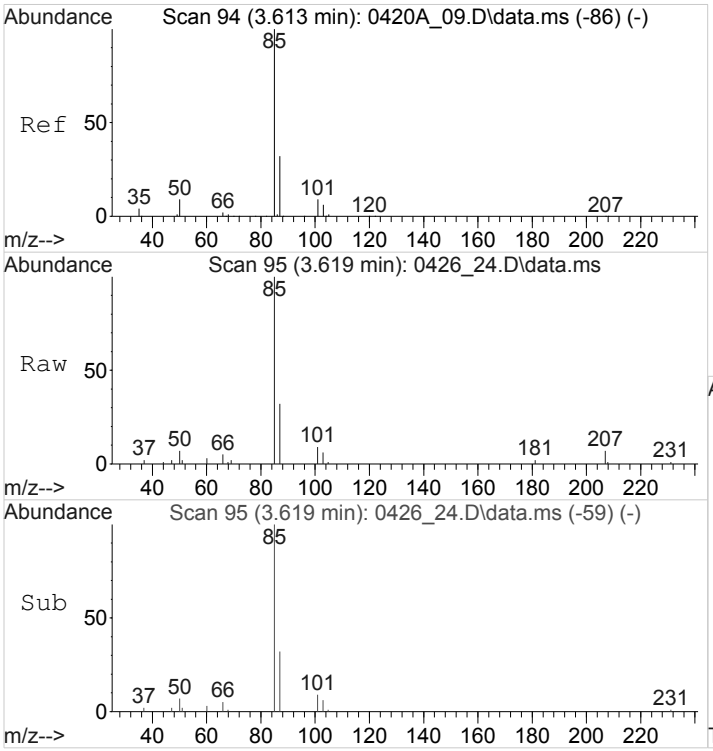


#3
1,1-DIFLUOROETHANE
Concen: 0.1853784 ppbv
RT: 3.574 min Scan# 87
Delta R.T. 0.000 min
Lab File: 0426_24.D
Acq: 27 Apr 2018 12:25 am

Tgt Ion: 51 Resp: 6905

Ion	Ratio	Lower	Upper
51	100		
65	58.7	49.4	74.2

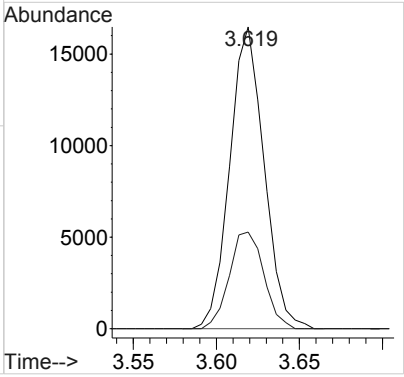


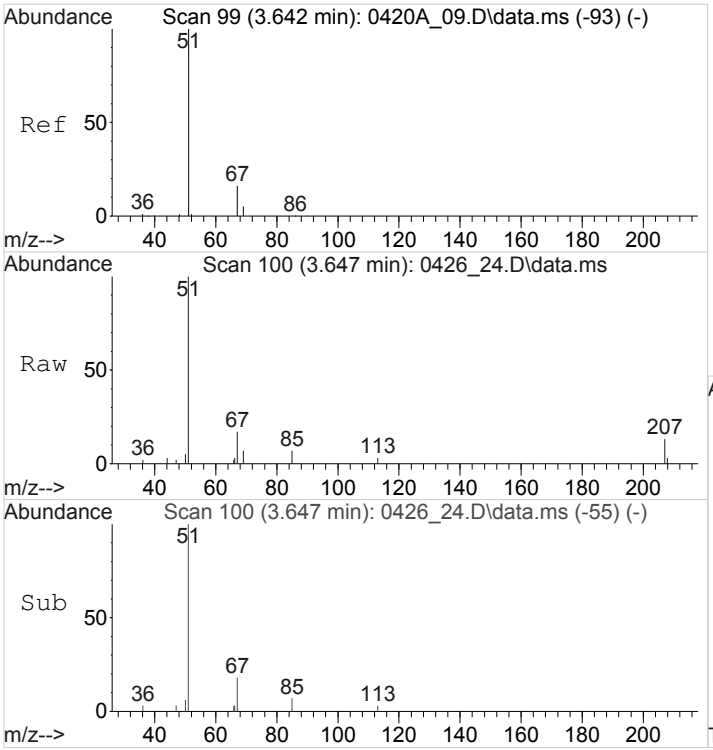


#4
Dichlorodifluoromethane
Concen: 0.4007094 ppbv
RT: 3.619 min Scan# 95
Delta R.T. 0.006 min
Lab File: 0426_24.D
Acq: 27 Apr 2018 12:25 am

Tgt Ion: 85 Resp: 23725

Ion	Ratio	Lower	Upper
85	100		
87	32.3	25.8	38.8

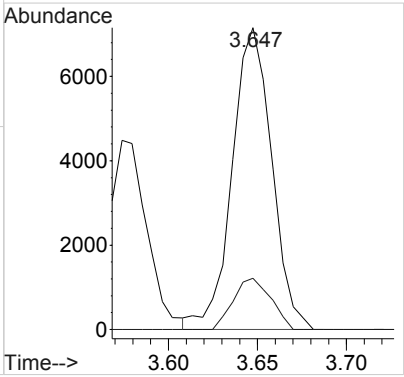


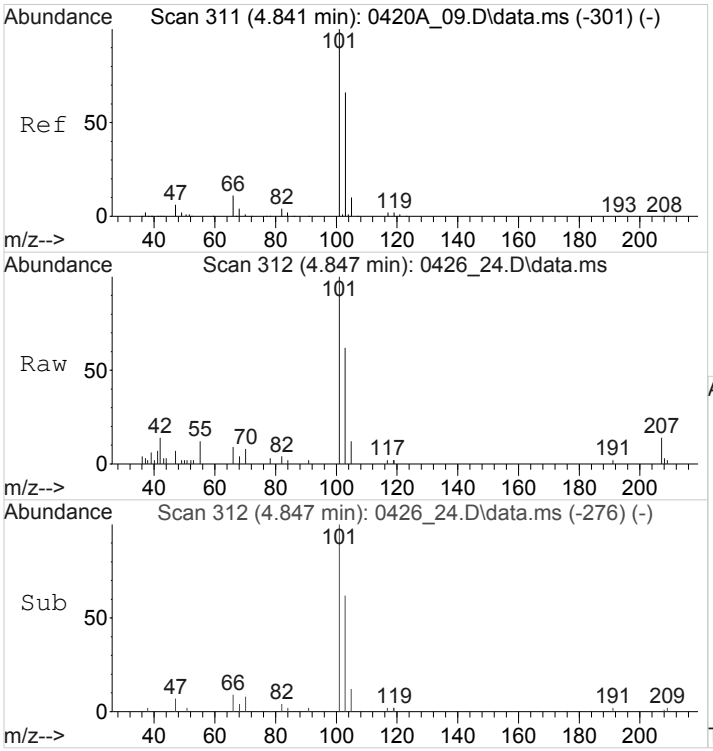


#5
CHLORODIFLUOROMETHANE
Concen: 0.3105071 ppbv
RT: 3.647 min Scan# 100
Delta R.T. 0.006 min
Lab File: 0426_24.D
Acq: 27 Apr 2018 12:25 am

Tgt Ion: 51 Resp: 11071

Ion	Ratio	Lower	Upper
51	100		
67	16.1	12.7	19.1

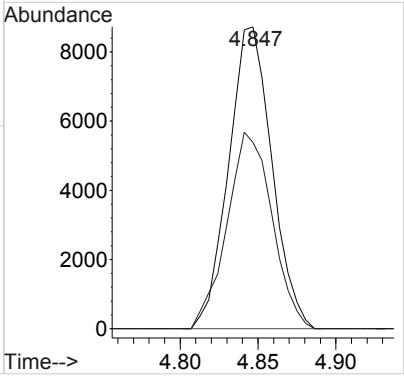


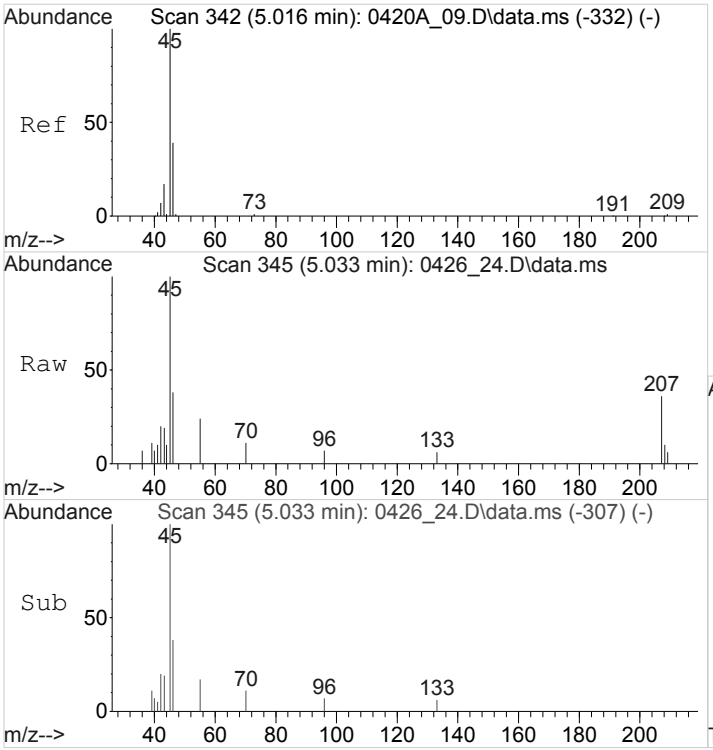


#13
Trichlorofluoromethane
Concen: 0.2544752 ppbv
RT: 4.847 min Scan# 312
Delta R.T. 0.006 min
Lab File: 0426_24.D
Acq: 27 Apr 2018 12:25 am

Tgt Ion:101 Resp: 16848

Ion	Ratio	Lower	Upper
101	100		
103	67.9	52.6	79.0

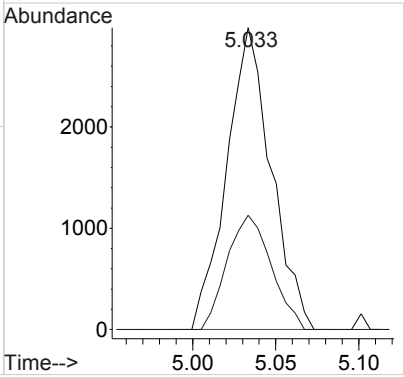


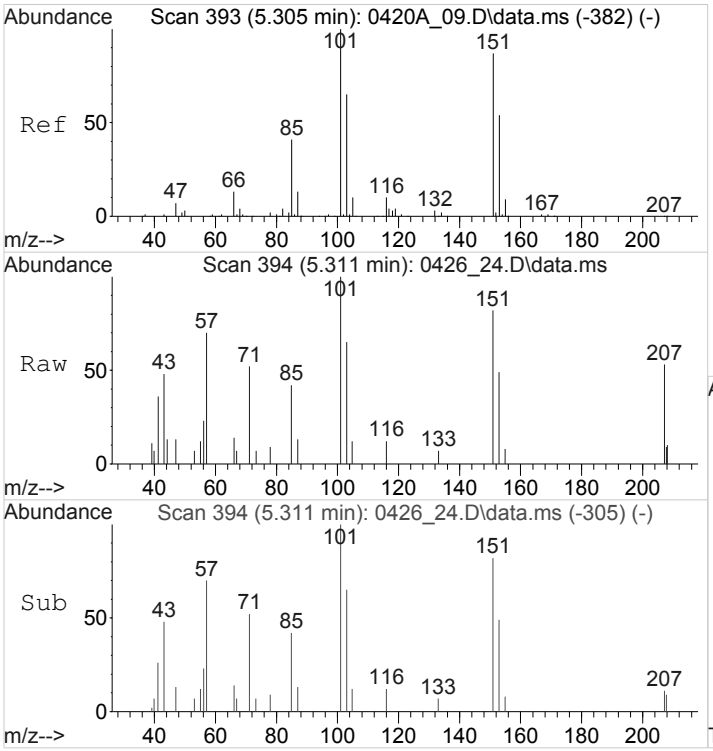


#14
Ethanol
Concen: 0.4842512 ppbv
RT: 5.033 min Scan# 345
Delta R.T. 0.017 min
Lab File: 0426_24.D
Acq: 27 Apr 2018 12:25 am

Tgt Ion: 45 Resp: 5559

Ion	Ratio	Lower	Upper
45	100		
46	37.6	33.1	49.7

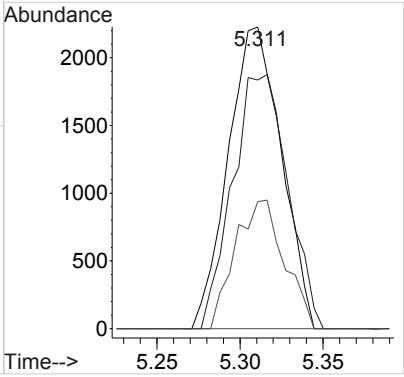


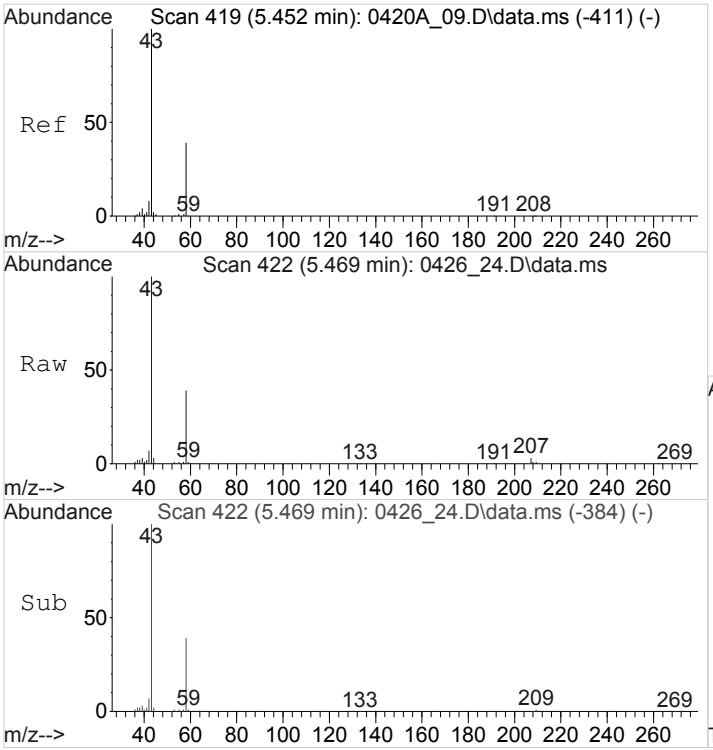


#15
1,1,2-Trichlorotrifluoroethane
Concen: 0.0807844 ppbv
RT: 5.311 min Scan# 394
Delta R.T. 0.006 min
Lab File: 0426_24.D
Acq: 27 Apr 2018 12:25 am

Tgt Ion:101 Resp: 4967

Ion	Ratio	Lower	Upper
101	100		
151	87.4	67.9	101.9
85	39.3	32.4	48.6

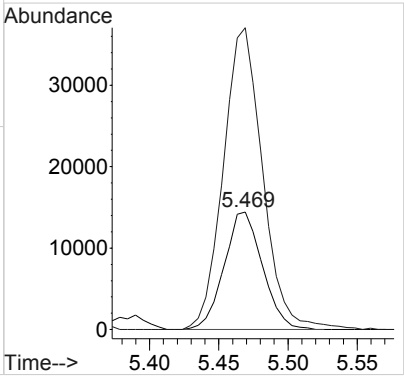


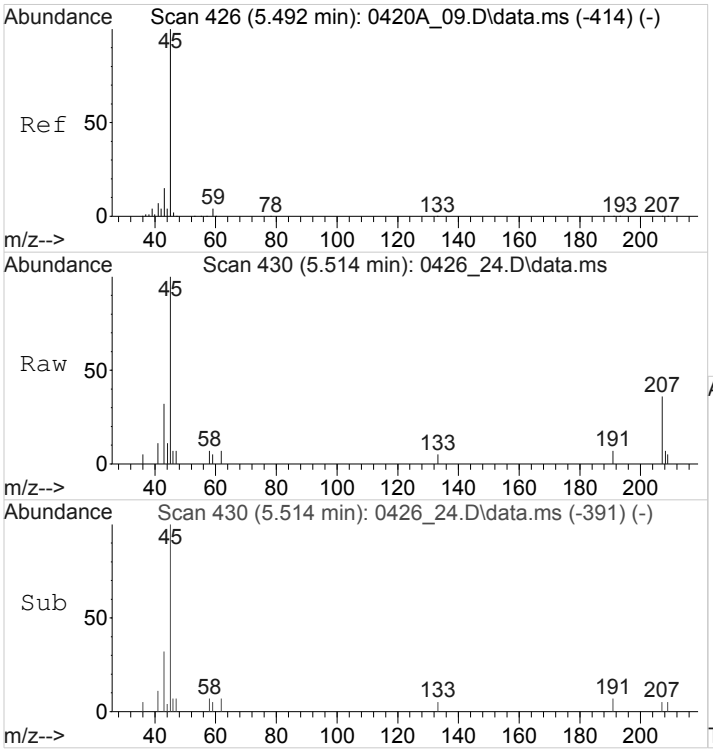


#17
Acetone
Concen: 1.9085515 ppbv
RT: 5.469 min Scan# 422
Delta R.T. 0.017 min
Lab File: 0426_24.D
Acq: 27 Apr 2018 12:25 am

Tgt Ion: 58 Resp: 27827

Ion	Ratio	Lower	Upper
58	100		
43	263.7	252.6	379.0

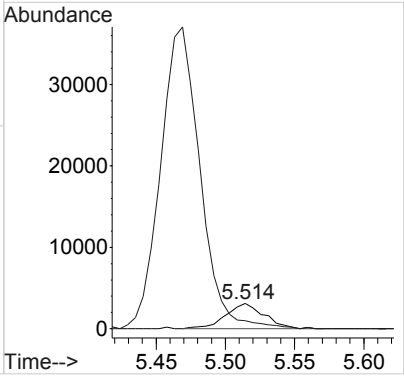


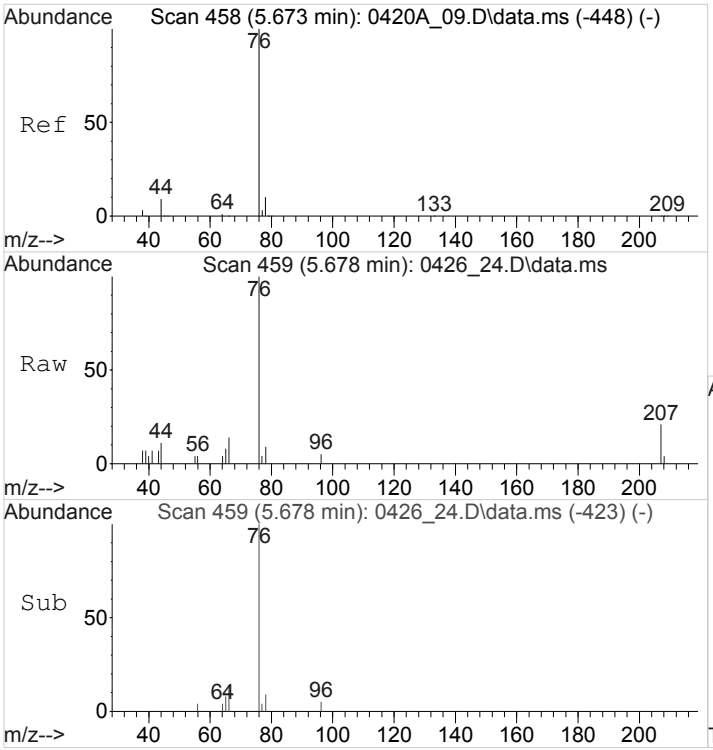


#18
2-Propanol
Concen: 0.1072321 ppbv
RT: 5.514 min Scan# 430
Delta R.T. 0.023 min
Lab File: 0426_24.D
Acq: 27 Apr 2018 12:25 am

Tgt Ion: 45 Resp: 6026

Ion	Ratio	Lower	Upper
45	100		
43	1217.8	67.9	101.9#

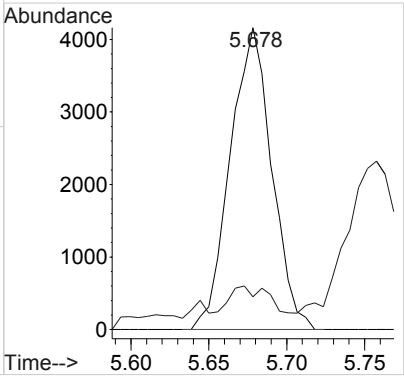


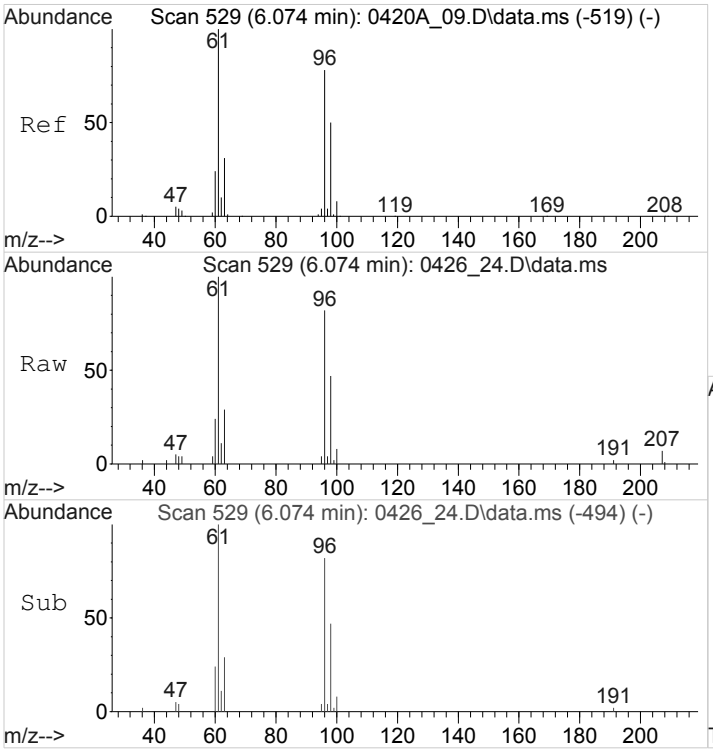


#19
Carbon Disulfide
Concen: 0.1150015 ppbv
RT: 5.678 min Scan# 459
Delta R.T. 0.006 min
Lab File: 0426_24.D
Acq: 27 Apr 2018 12:25 am

Tgt Ion: 76 Resp: 7703

Ion	Ratio	Lower	Upper
76	100		
44	10.1	7.4	11.2

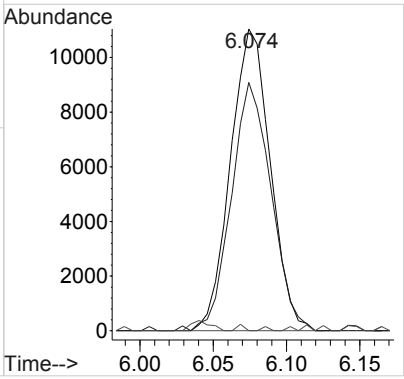


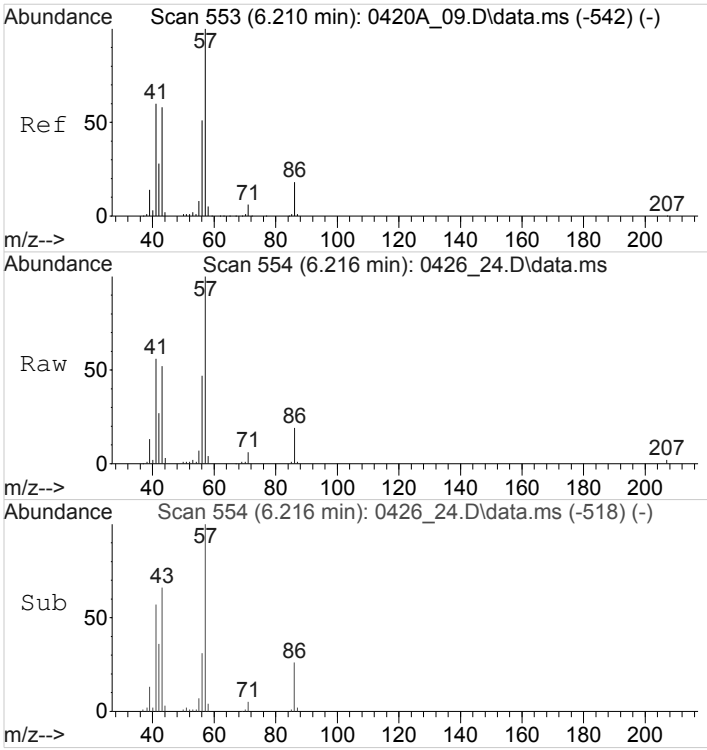


#24
Trans-1,2-Dichloroethene
Concen: 0.5199590 ppbv
RT: 6.074 min Scan# 529
Delta R.T. 0.000 min
Lab File: 0426_24.D
Acq: 27 Apr 2018 12:25 am

Tgt Ion: 61 Resp: 20825

Ion	Ratio	Lower	Upper
61	100		
96	82.3	61.0	91.4
73	0.0	184.6	276.8#

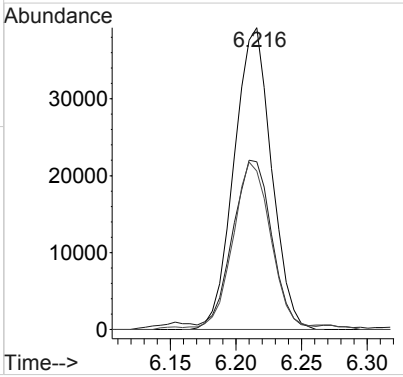


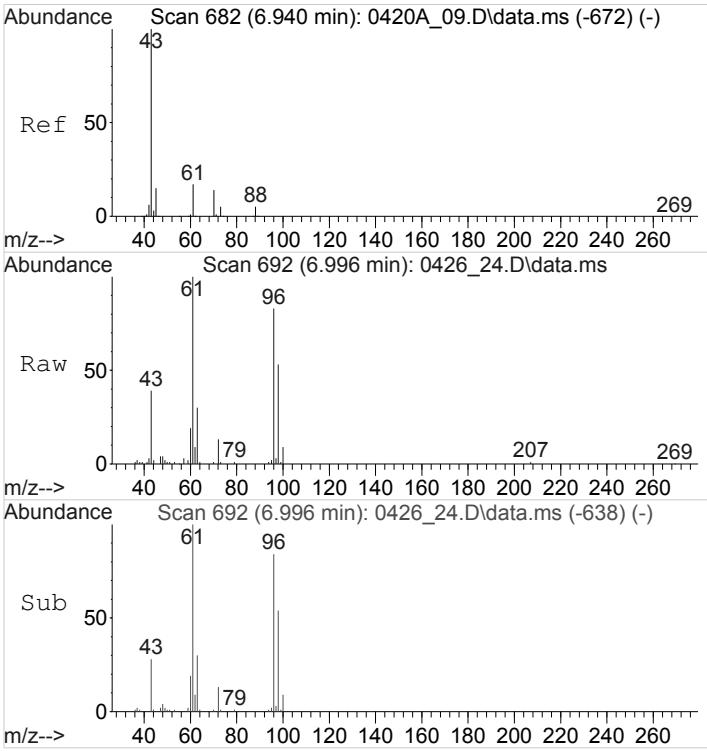


#25
n-Hexane
Concen: 1.6597016 ppbv
RT: 6.216 min Scan# 554
Delta R.T. 0.006 min
Lab File: 0426_24.D
Acq: 27 Apr 2018 12:25 am

Tgt Ion: 57 Resp: 77635

Ion	Ratio	Lower	Upper
57	100		
41	57.3	47.6	71.4
43	57.7	46.1	69.1

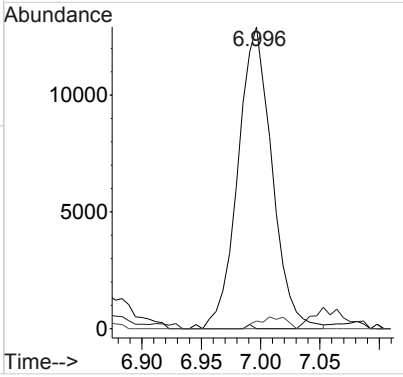


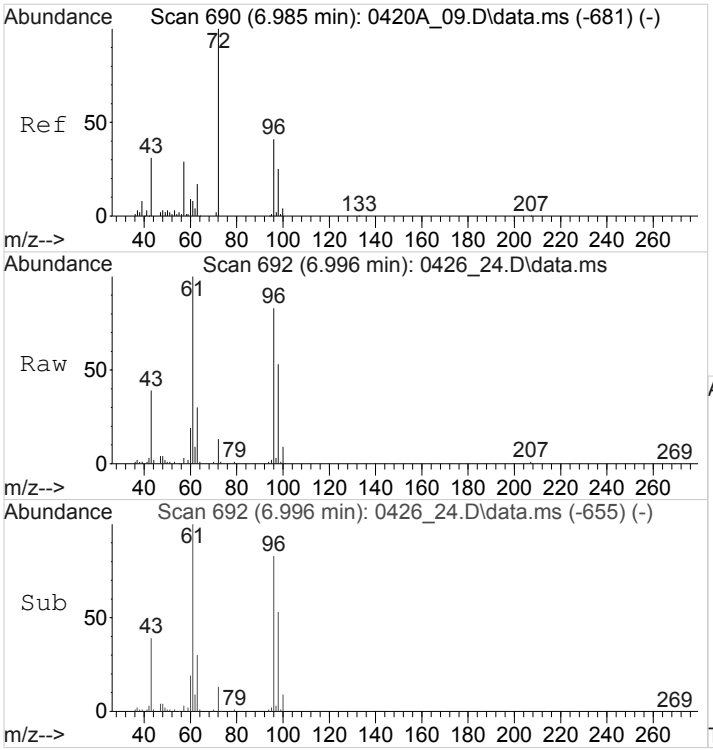


#28
ETHYL ACETATE
Concen: 0.4101313 ppbv
RT: 6.996 min Scan# 692
Delta R.T. 0.057 min
Lab File: 0426_24.D
Acq: 27 Apr 2018 12:25 am

Tgt Ion: 43 Resp: 25953

Ion	Ratio	Lower	Upper
43	100		
45	6.6	12.0	18.0#
70	3.2	10.5	15.7#

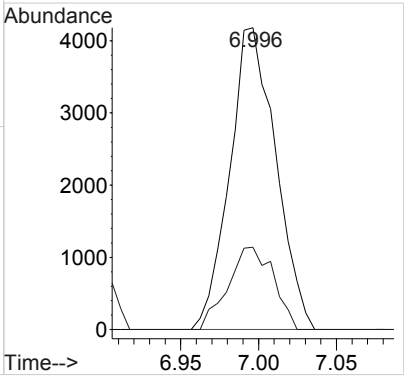


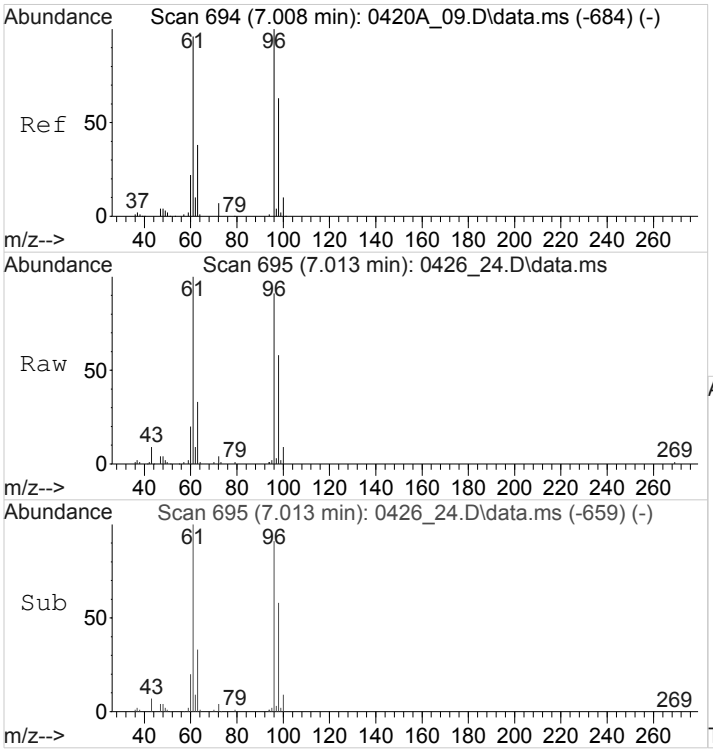


#29
2-Butanone (MEK)
Concen: 0.4542520 ppbv
RT: 6.996 min Scan# 692
Delta R.T. 0.011 min
Lab File: 0426_24.D
Acq: 27 Apr 2018 12:25 am

Tgt Ion: 72 Resp: 8582

Ion	Ratio	Lower	Upper
72	100		
57	27.0	22.2	33.4

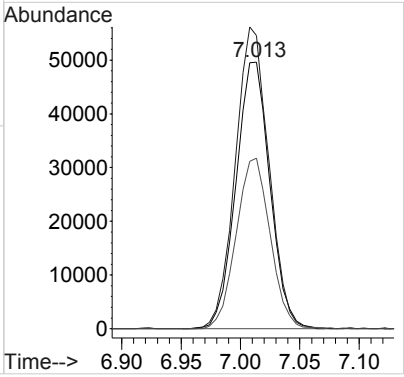


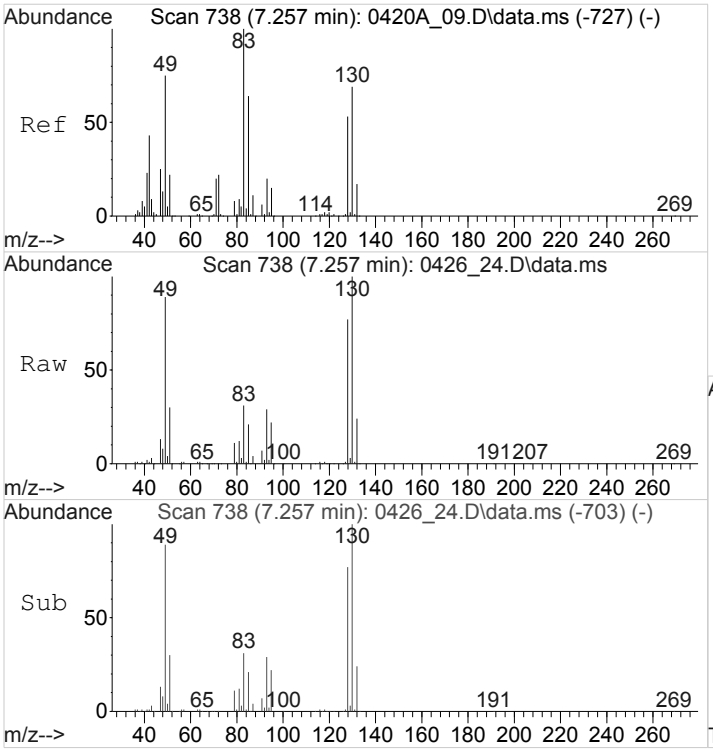


#30
cis-1,2-Dichloroethene
Concen: 2.6372156 ppbv
RT: 7.013 min Scan# 695
Delta R.T. 0.006 min
Lab File: 0426_24.D
Acq: 27 Apr 2018 12:25 am

Tgt Ion: 96 Resp: 99516

Ion	Ratio	Lower	Upper
96	100		
61	111.7	94.1	141.1
98	63.9	50.6	76.0

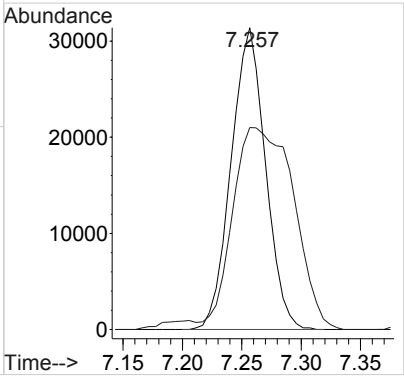


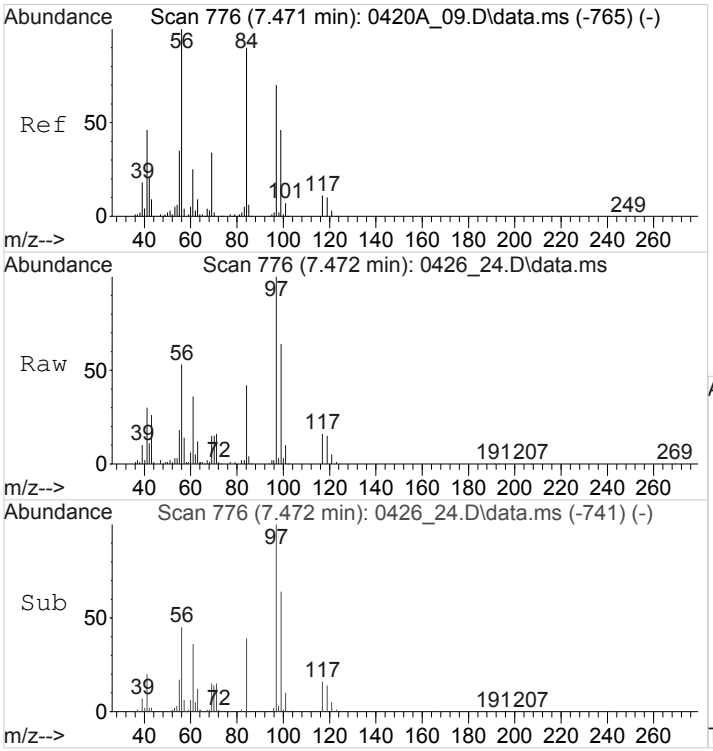


#32
Chloroform
Concen: 0.9366965 ppbv
RT: 7.257 min Scan# 738
Delta R.T. 0.000 min
Lab File: 0426_24.D
Acq: 27 Apr 2018 12:25 am

Tgt Ion: 83 Resp: 63570

Ion	Ratio	Lower	Upper
83	100		
85	118.3	51.3	76.9#

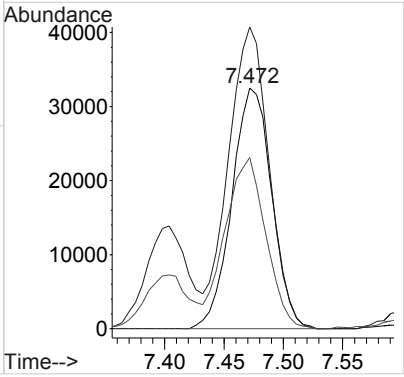


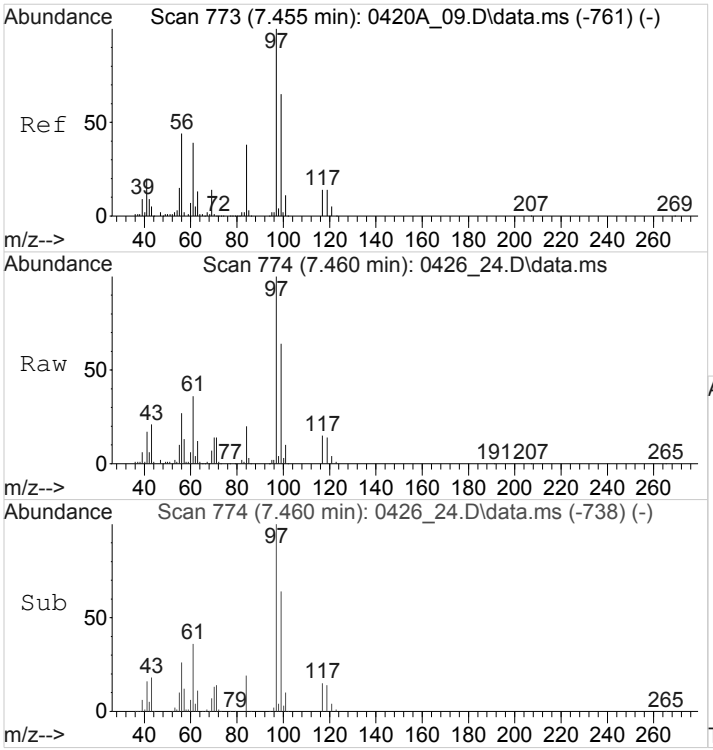


#33
Cyclohexane
Concen: 1.5788810 ppbv
RT: 7.472 min Scan# 776
Delta R.T. 0.000 min
Lab File: 0426_24.D
Acq: 27 Apr 2018 12:25 am

Tgt Ion: 84 Resp: 76382

Ion	Ratio	Lower	Upper
84	100		
56	126.9	87.6	131.4
41	72.2	40.2	60.2#

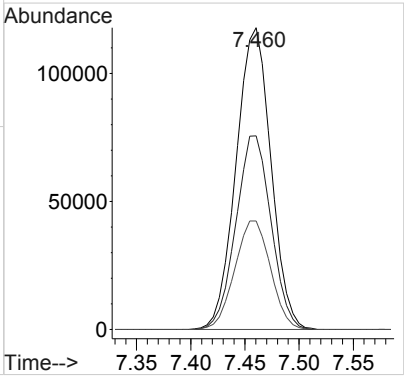


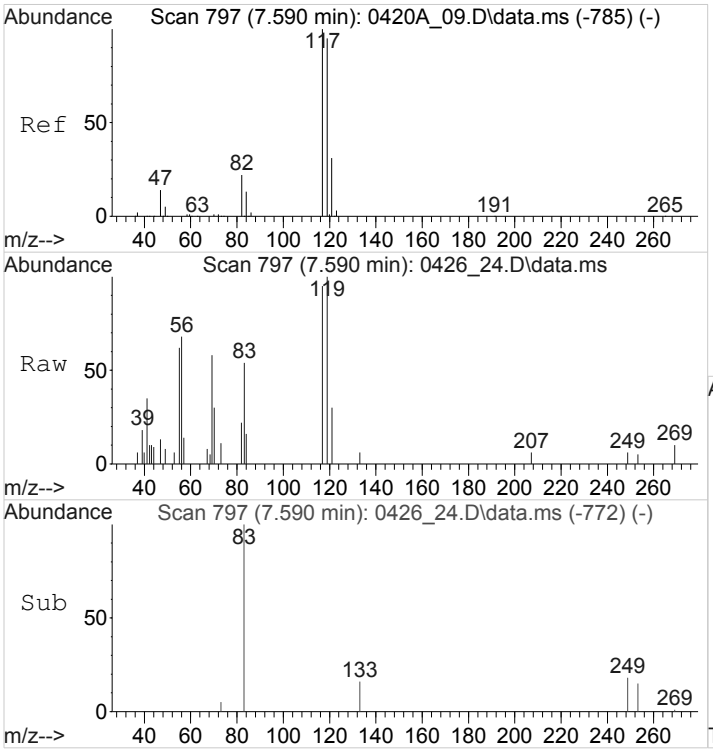


#34
1,1,1-Trichloroethane
Concen: 3.8952615 ppbv
RT: 7.460 min Scan# 774
Delta R.T. 0.006 min
Lab File: 0426_24.D
Acq: 27 Apr 2018 12:25 am

Tgt Ion: 97 Resp: 263384

Ion	Ratio	Lower	Upper
97	100		
99	64.8	52.2	78.4
61	36.9	31.3	46.9

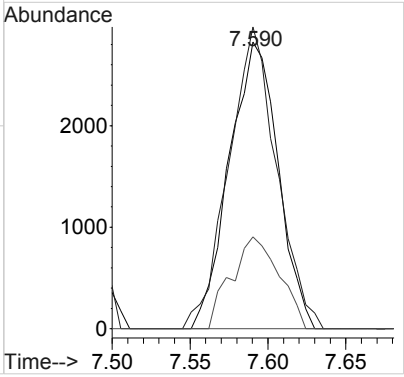


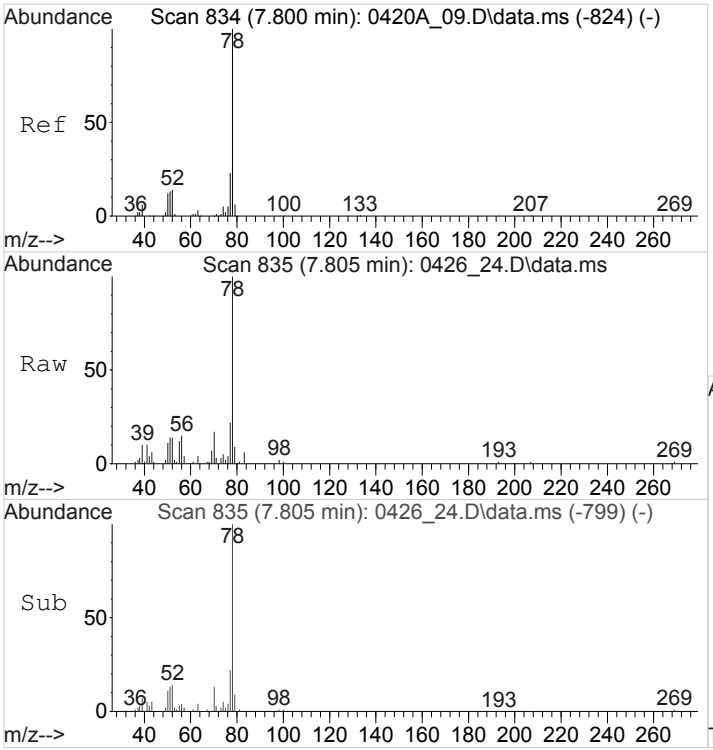


#35
Carbon Tetrachloride
Concen: 0.0871939 ppbv
RT: 7.590 min Scan# 797
Delta R.T. 0.000 min
Lab File: 0426_24.D
Acq: 27 Apr 2018 12:25 am

Tgt Ion:117 Resp: 6138

Ion	Ratio	Lower	Upper
117	100		
119	103.6	77.1	115.7
121	31.6	24.8	37.2

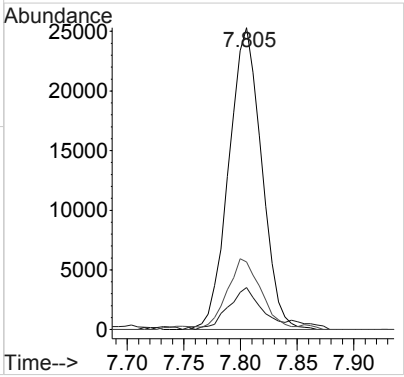


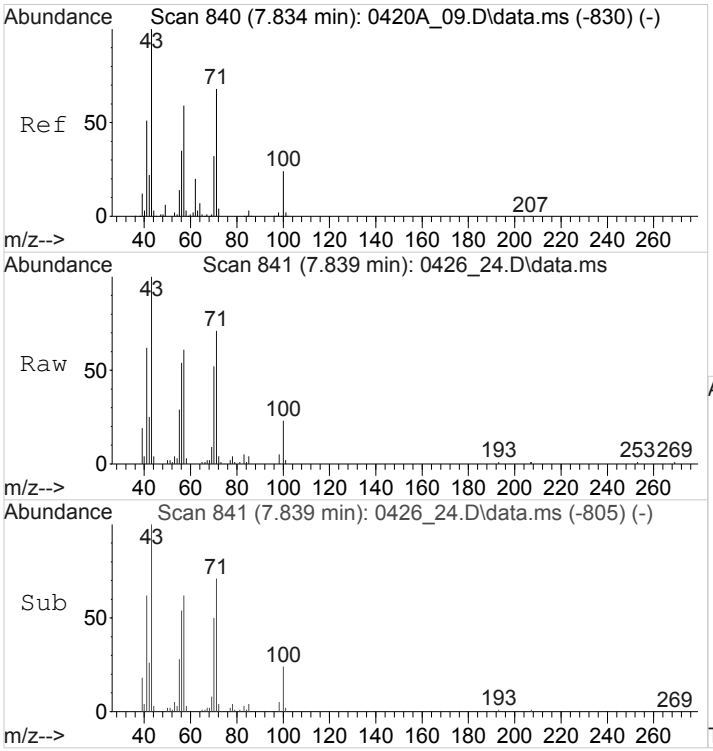


#38
Benzene
Concen: 0.4542514 ppbv
RT: 7.805 min Scan# 835
Delta R.T. 0.006 min
Lab File: 0426_24.D
Acq: 27 Apr 2018 12:25 am

Tgt Ion: 78 Resp: 51050

Ion	Ratio	Lower	Upper
78	100		
51	14.3	11.3	16.9
77	22.1	18.6	28.0

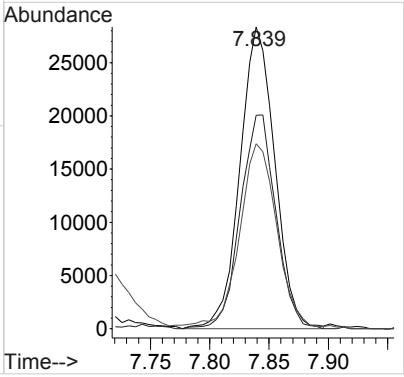


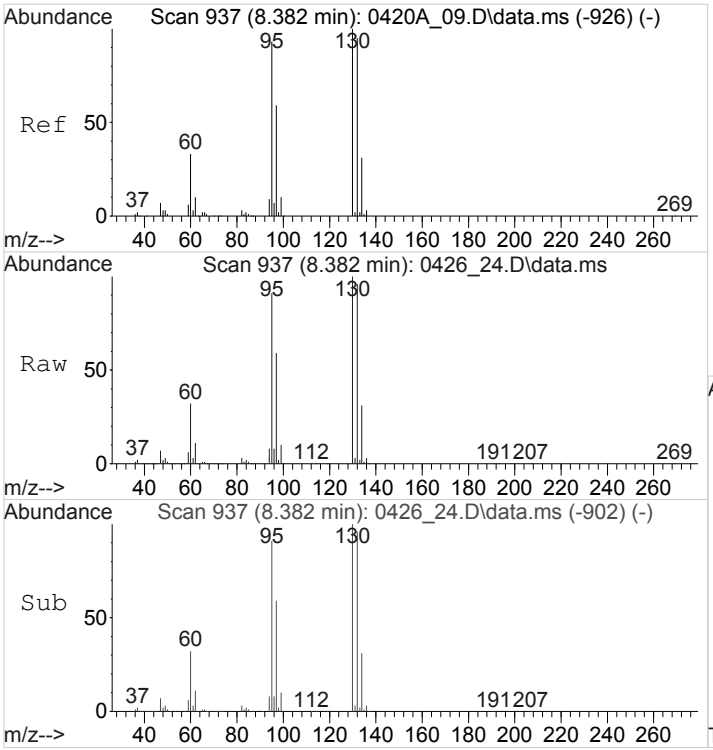


#40
Heptane
Concen: 1.0516442 ppbv
RT: 7.839 min Scan# 841
Delta R.T. 0.006 min
Lab File: 0426_24.D
Acq: 27 Apr 2018 12:25 am

Tgt Ion: 43 Resp: 58370

Ion	Ratio	Lower	Upper
43	100		
71	72.2	56.1	84.1
57	64.1	47.1	70.7

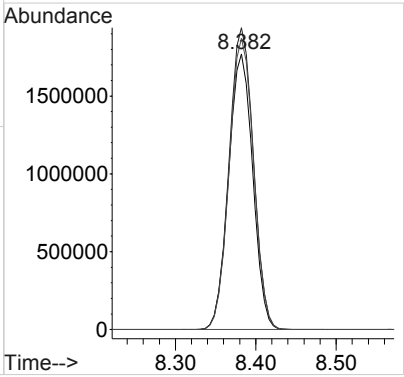


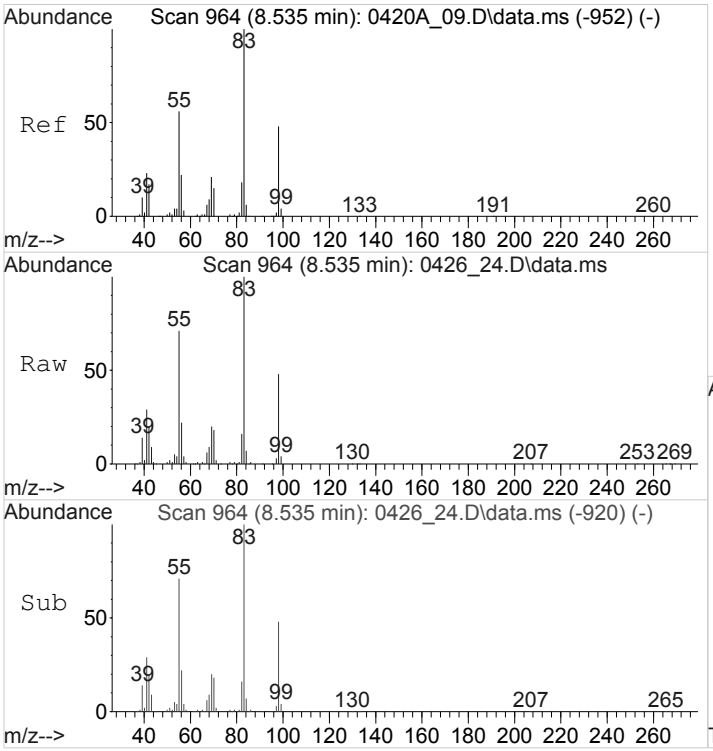


#41
Trichloroethene
Concen: 75.4857040 ppbv
RT: 8.382 min Scan# 937
Delta R.T. 0.000 min
Lab File: 0426_24.D
Acq: 27 Apr 2018 12:25 am

Tgt Ion: 95 Resp: 3697415

Ion	Ratio	Lower	Upper
95	100		
130	110.3	86.4	129.6
132	106.6	83.6	125.4

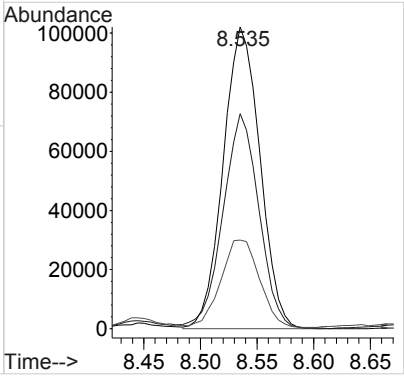


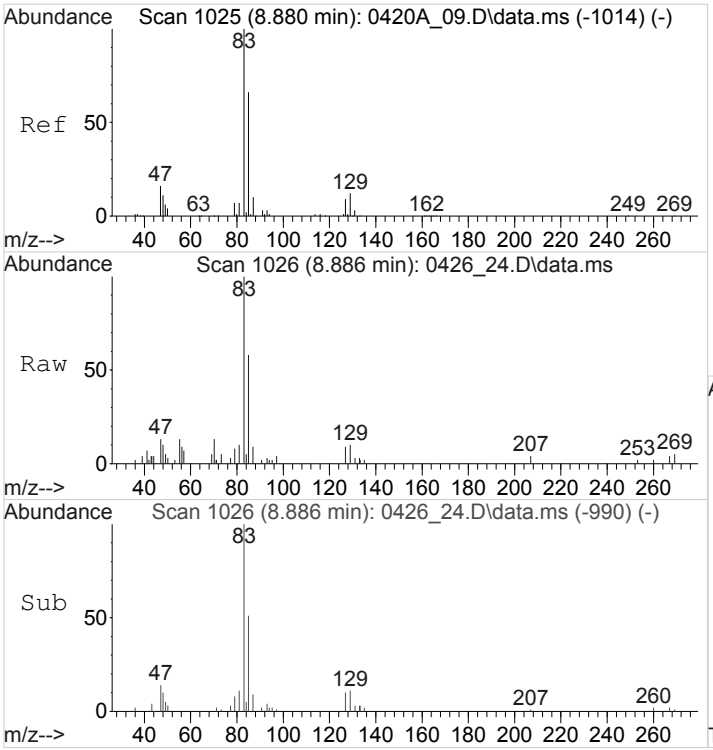


#43
METHYL CYCLOHEXANE
Concen: 3.4272114 ppbv
RT: 8.535 min Scan# 964
Delta R.T. 0.000 min
Lab File: 0426_24.D
Acq: 27 Apr 2018 12:25 am

Tgt Ion: 83 Resp: 230725

Ion	Ratio	Lower	Upper
83	100		
55	70.2	58.5	87.7
41	31.6	25.8	38.6

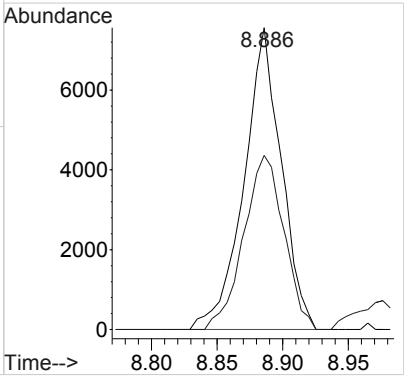


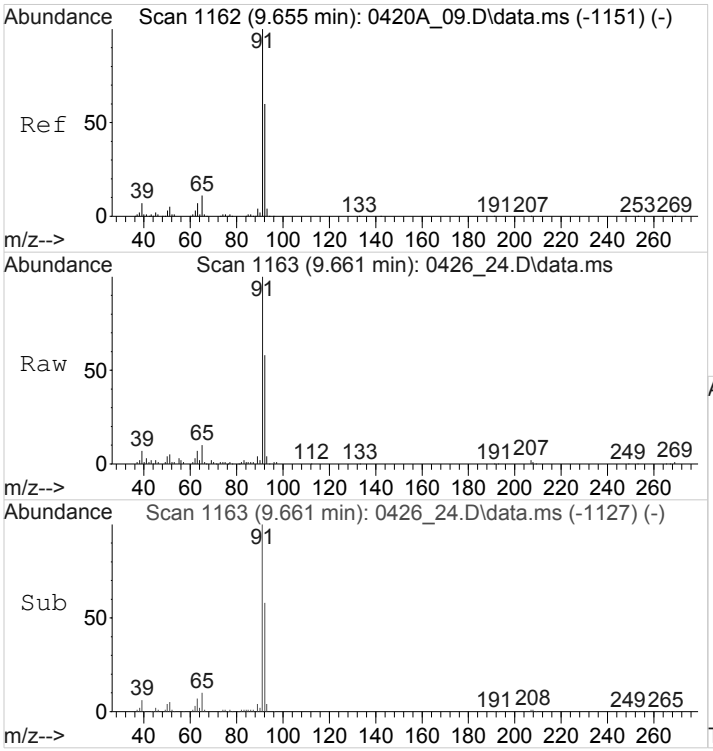


#47
Bromodichloromethane
Concen: 0.1966841 ppbv
RT: 8.886 min Scan# 1026
Delta R.T. 0.006 min
Lab File: 0426_24.D
Acq: 27 Apr 2018 12:25 am

Tgt Ion: 83 Resp: 14958

Ion	Ratio	Lower	Upper
83	100		
85	62.2	51.8	77.8

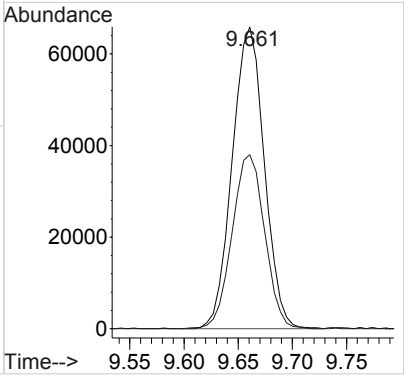


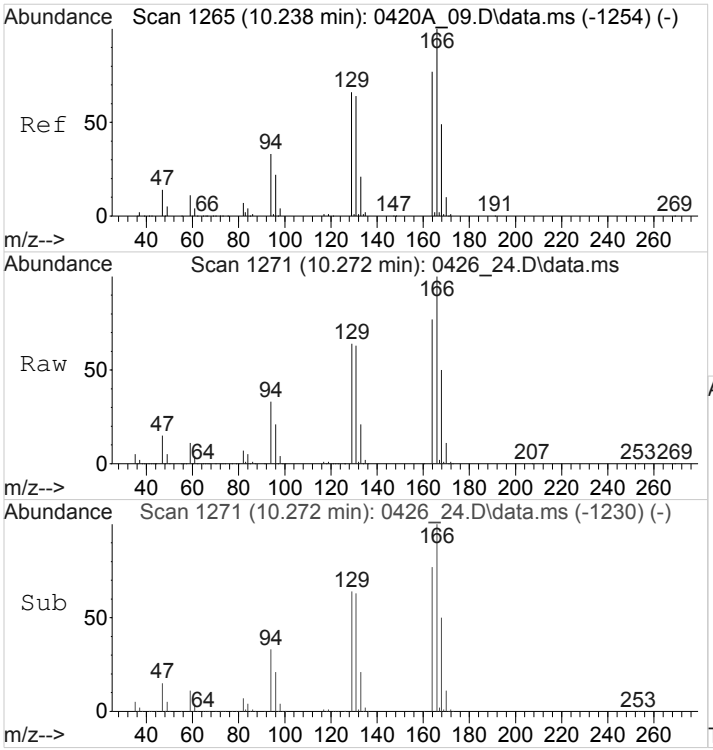


#50
Toluene
Concen: 0.9718696 ppbv
RT: 9.661 min Scan# 1163
Delta R.T. 0.006 min
Lab File: 0426_24.D
Acq: 27 Apr 2018 12:25 am

Tgt Ion: 91 Resp: 135809

Ion	Ratio	Lower	Upper
91	100		
92	58.3	48.0	72.0

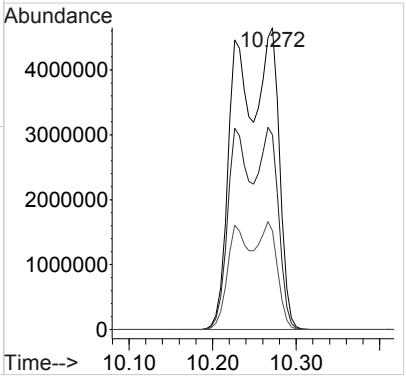


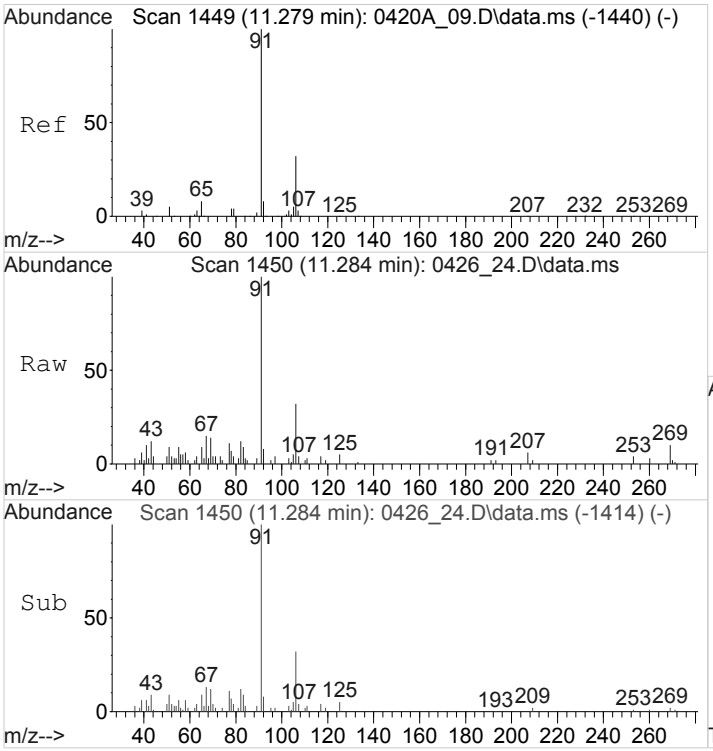


#53
Tetrachloroethene
Concen: 213.7700514 ppbv m
RT: 10.272 min Scan# 1271
Delta R.T. 0.034 min
Lab File: 0426_24.D
Acq: 27 Apr 2018 12:25 am

Tgt Ion:166 Resp:16078297

Ion	Ratio	Lower	Upper
166	100		
129	36.8	53.7	80.5#
94	16.7	27.2	40.8#

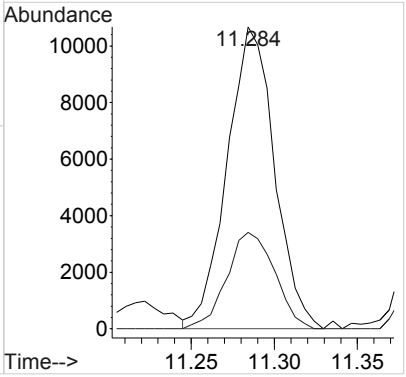


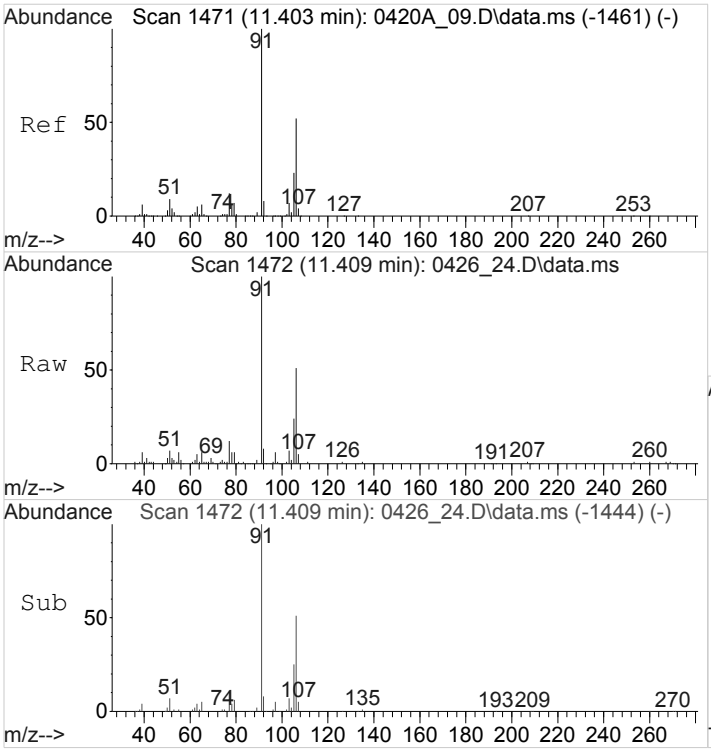


#59
Ethylbenzene
Concen: 0.1054207 ppbv
RT: 11.284 min Scan# 1450
Delta R.T. 0.006 min
Lab File: 0426_24.D
Acq: 27 Apr 2018 12:25 am

Tgt Ion: 91 Resp: 21199

Ion	Ratio	Lower	Upper
91	100		
106	32.2	25.9	38.9

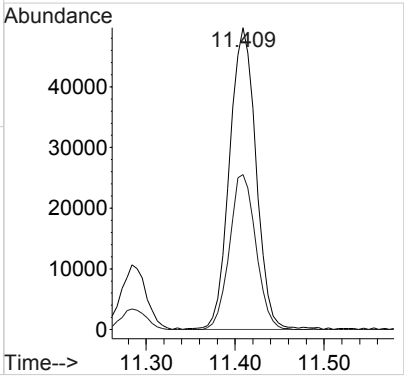


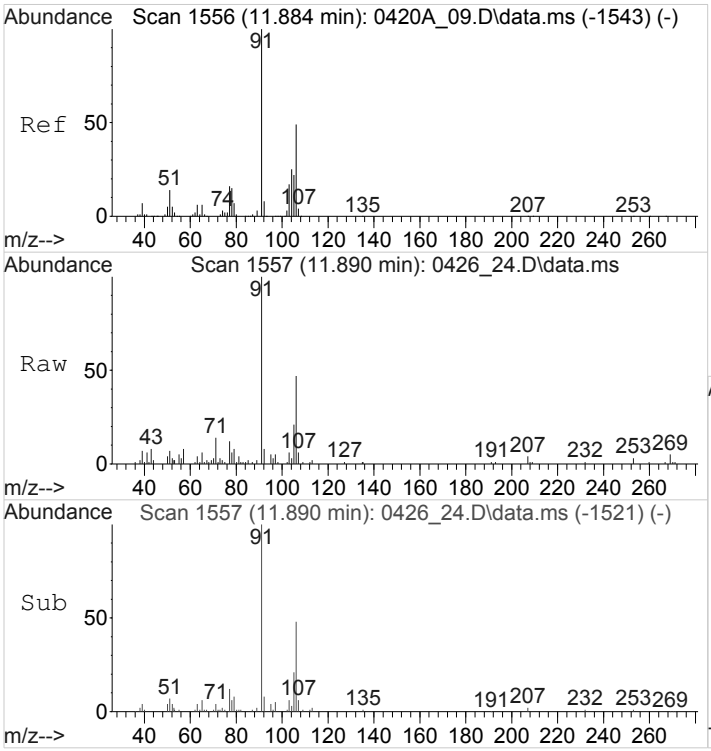


#60
M&P-Xylene
Concen: 0.6682516 ppbv
RT: 11.409 min Scan# 1472
Delta R.T. 0.006 min
Lab File: 0426_24.D
Acq: 27 Apr 2018 12:25 am

Tgt Ion: 91 Resp: 102944

Ion	Ratio	Lower	Upper
91	100		
106	51.0	41.5	62.3

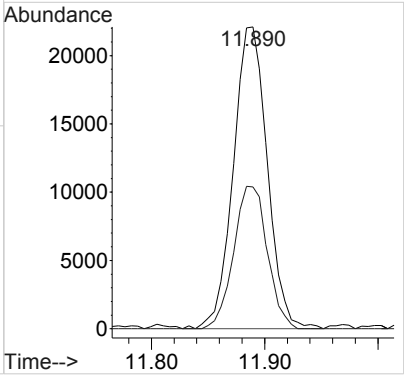


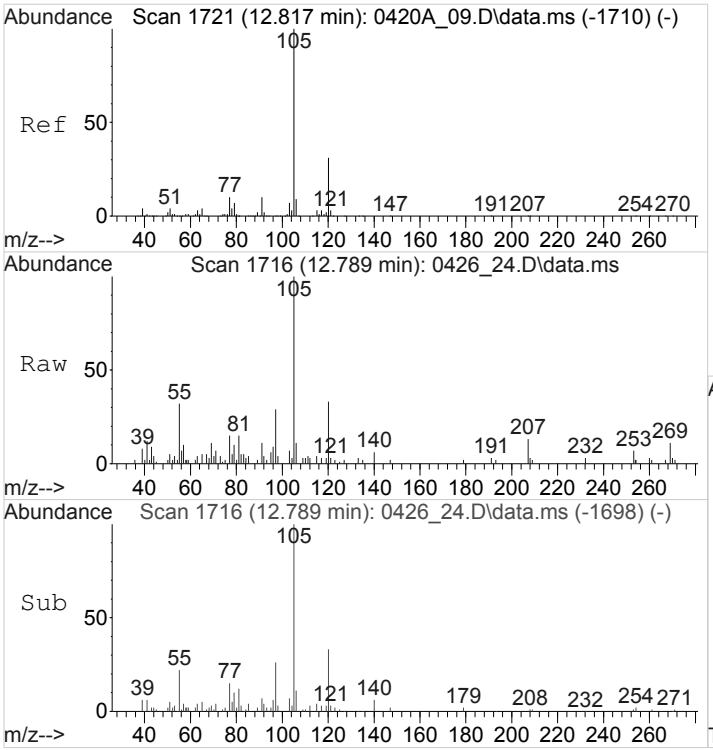


#61
O-Xylene
Concen: 0.2898652 ppbv
RT: 11.890 min Scan# 1557
Delta R.T. 0.006 min
Lab File: 0426_24.D
Acq: 27 Apr 2018 12:25 am

Tgt Ion: 91 Resp: 46170

Ion	Ratio	Lower	Upper
91	100		
106	46.7	39.1	58.7

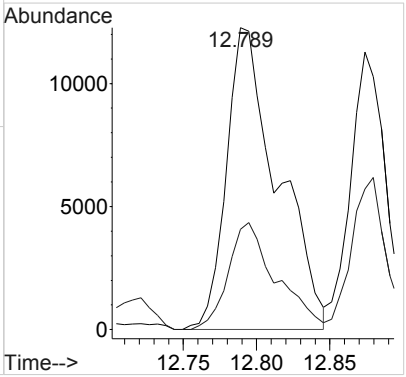


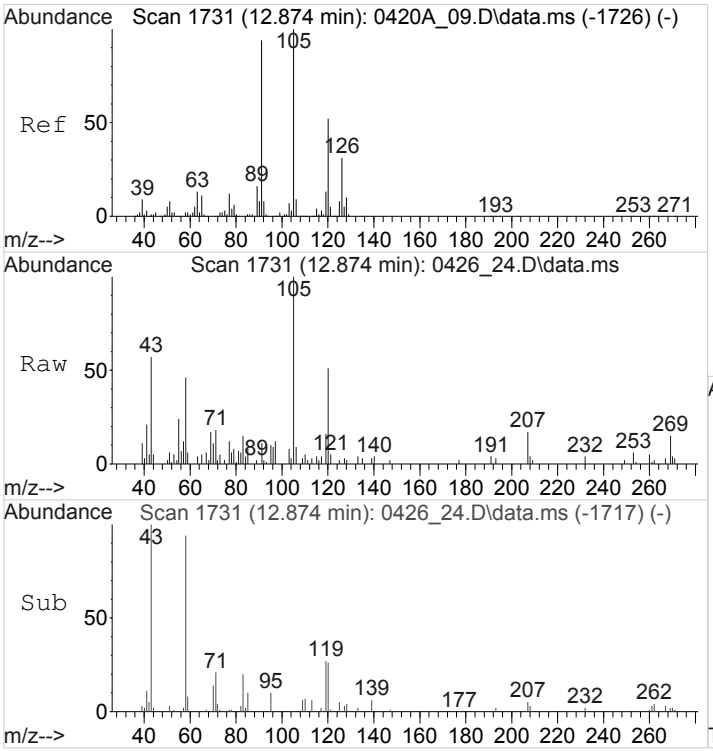


#67
4-Ethyltoluene
Concen: 0.1305955 ppbv
RT: 12.789 min Scan# 1716
Delta R.T. -0.028 min
Lab File: 0426_24.D
Acq: 27 Apr 2018 12:25 am

Tgt Ion:105 Resp: 29775

Ion	Ratio	Lower	Upper
105	100		
120	33.2	24.8	37.2

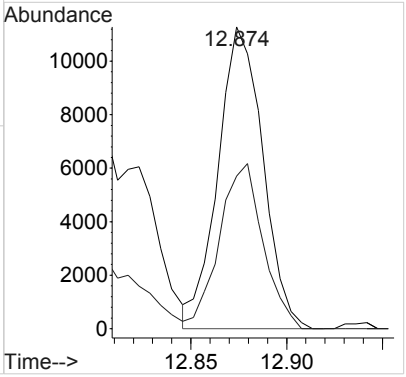


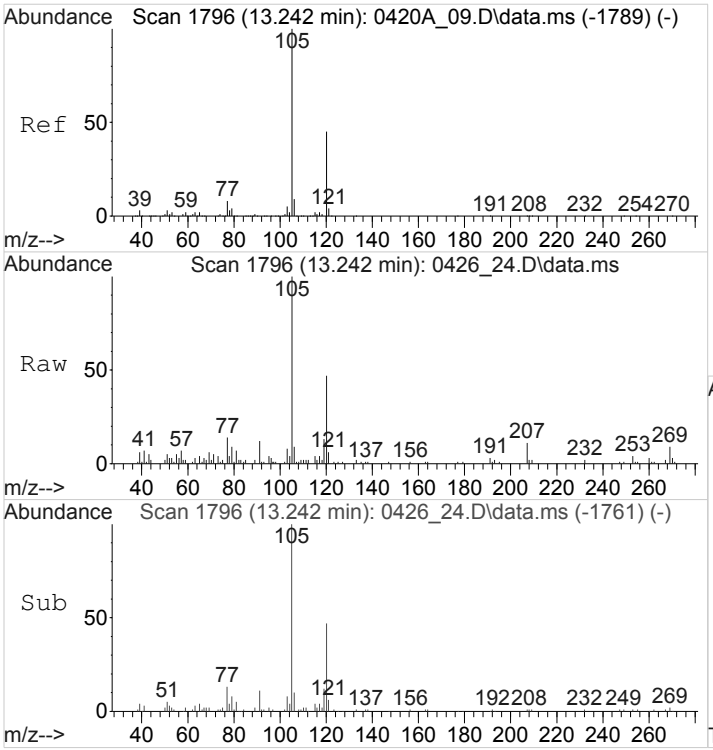


#70
1,3,5-Trimethylbenzene
Concen: 0.1018888 ppbv
RT: 12.874 min Scan# 1731
Delta R.T. 0.000 min
Lab File: 0426_24.D
Acq: 27 Apr 2018 12:25 am

Tgt Ion:105 Resp: 18344

Ion	Ratio	Lower	Upper
105	100		
120	53.2	41.4	62.0

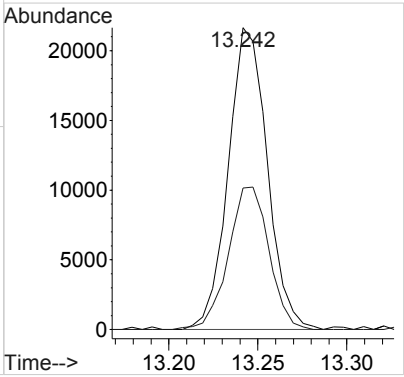


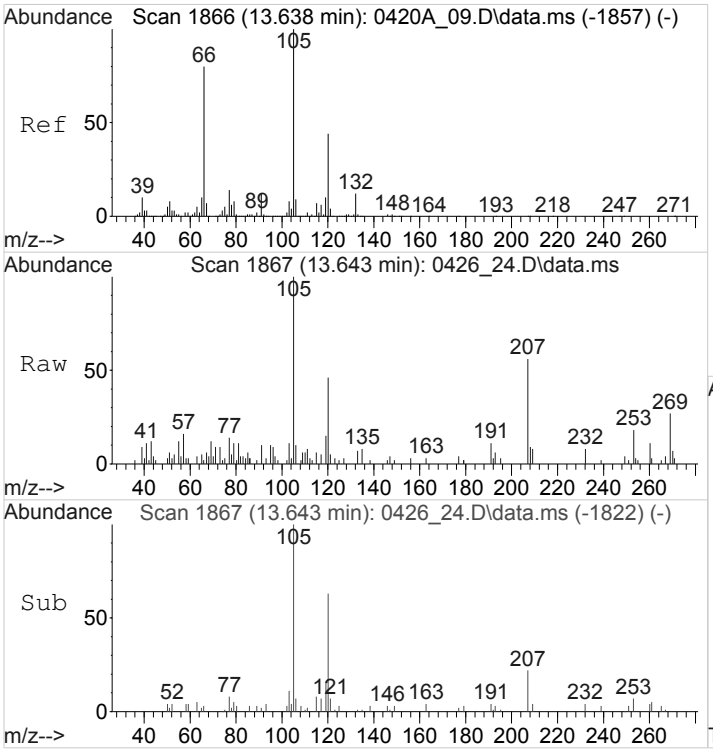


#72
1,2,4-Trimethylbenzene
Concen: 0.1818450 ppbv
RT: 13.242 min Scan# 1796
Delta R.T. 0.000 min
Lab File: 0426_24.D
Acq: 27 Apr 2018 12:25 am

Tgt Ion:105 Resp: 33063

Ion	Ratio	Lower	Upper
105	100		
120	49.2	38.8	58.2

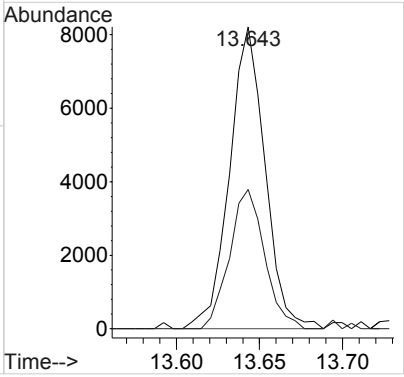


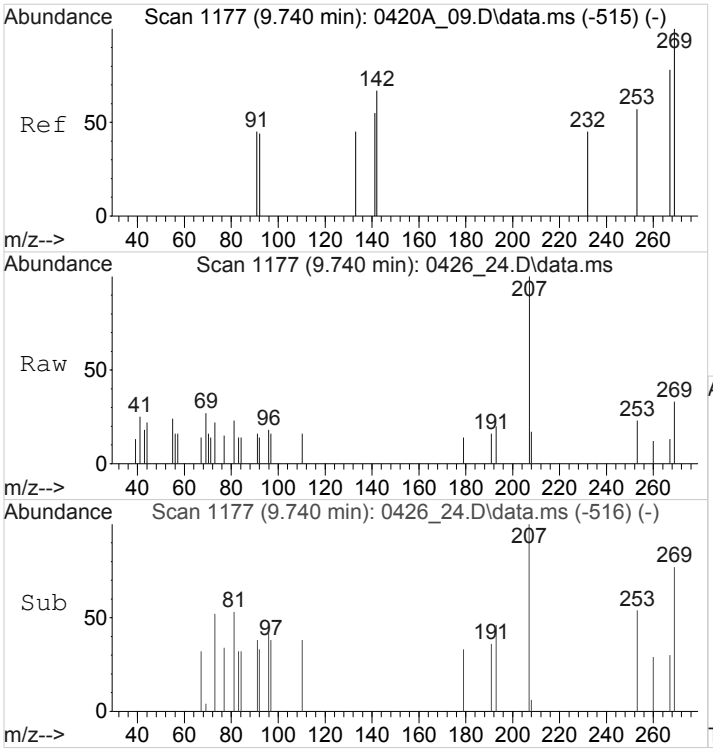


#76
1,2,3-TRIMETHYLBENZENE
Concen: 0.0705074 ppbv
RT: 13.643 min Scan# 1867
Delta R.T. 0.006 min
Lab File: 0426_24.D
Acq: 27 Apr 2018 12:25 am

Tgt Ion:105 Resp: 12242

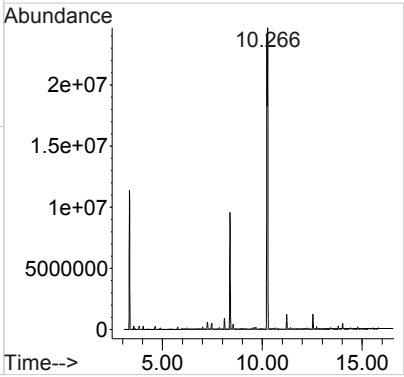
Ion	Ratio	Lower	Upper
105	100		
120	45.6	36.0	54.0





#84
TPH (GC/MS) Low Fraction
Concen: 385.3527793 ppbv m
RT: 9.740 min Scan# 1177
Delta R.T. 0.000 min
Lab File: 0426_24.D
Acq: 27 Apr 2018 12:25 am

Tgt Ion:TIC Resp:110610598

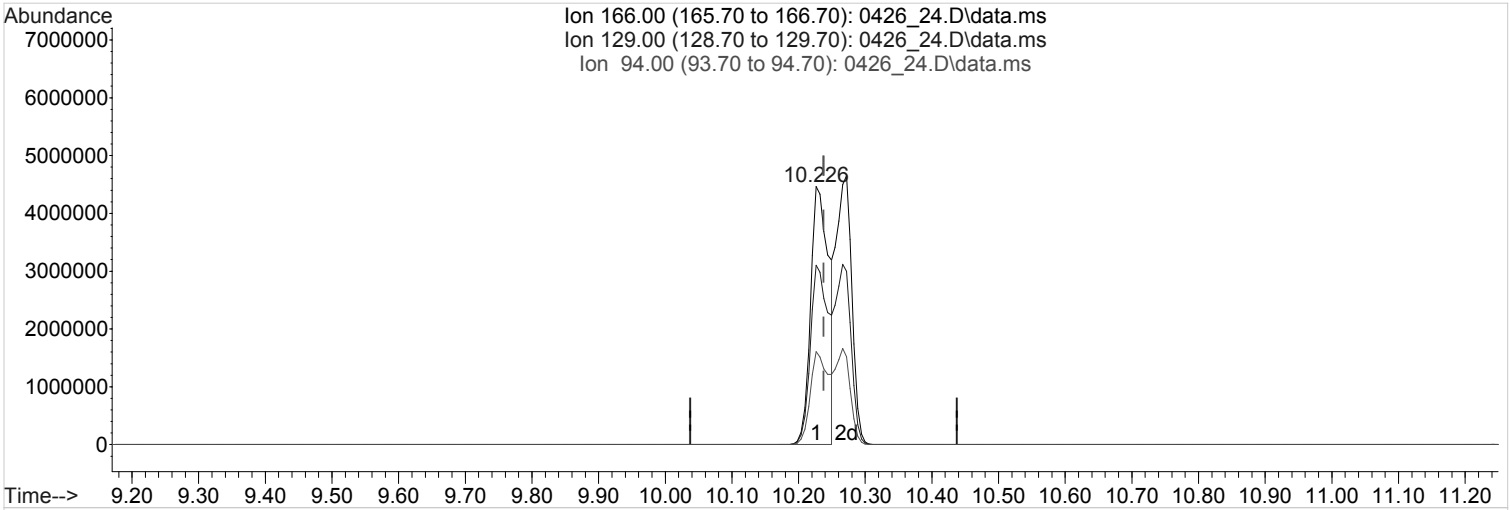


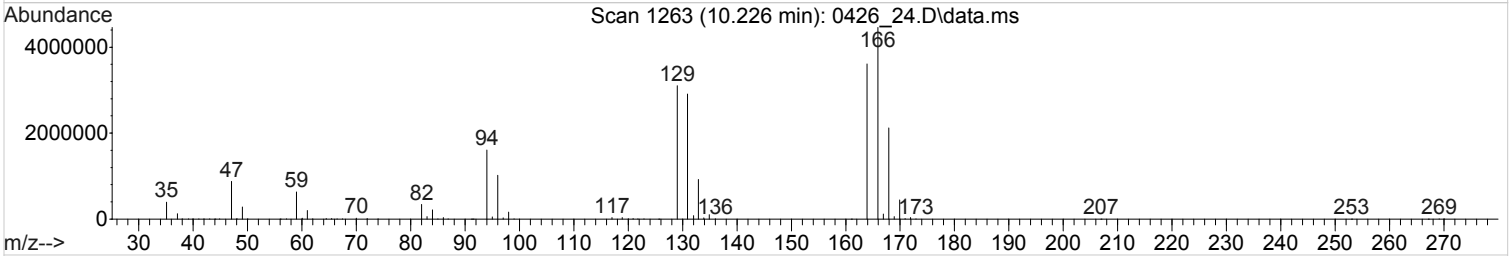
ACCOUNT:	PROJECT:	SDG:	DATE/TIME:	PAGE:
S&ME Inc. - Knoxville	4143-17-016	L988471	05/16/18 11:18	482 of 698

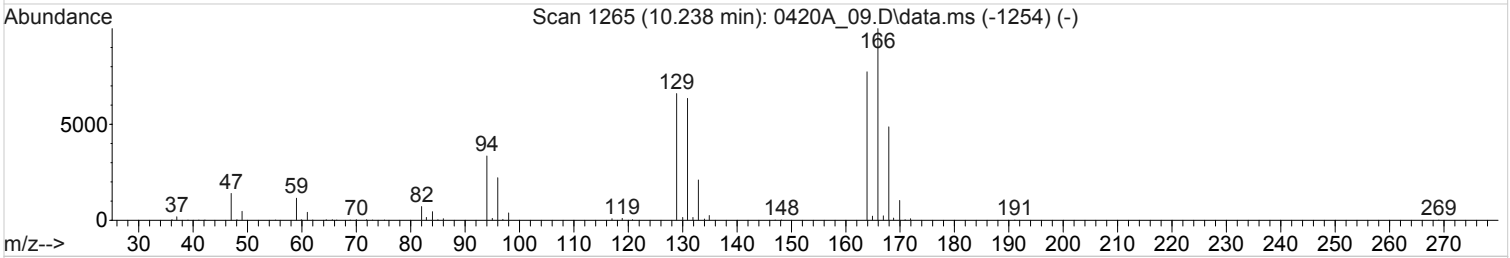
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_24.D
Acq On : 27 Apr 2018 12:25 am
Operator : 564
Sample : L988471-13 1x WG1103323
Misc :
ALS Vial : 24 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 27 08:42:42 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration







TIC: 0426_24.D\data.ms

(53) Tetrachloroethene (T,M)

10.226min (-0.011) 111.8448101 ppbv E

Qvalue = 96

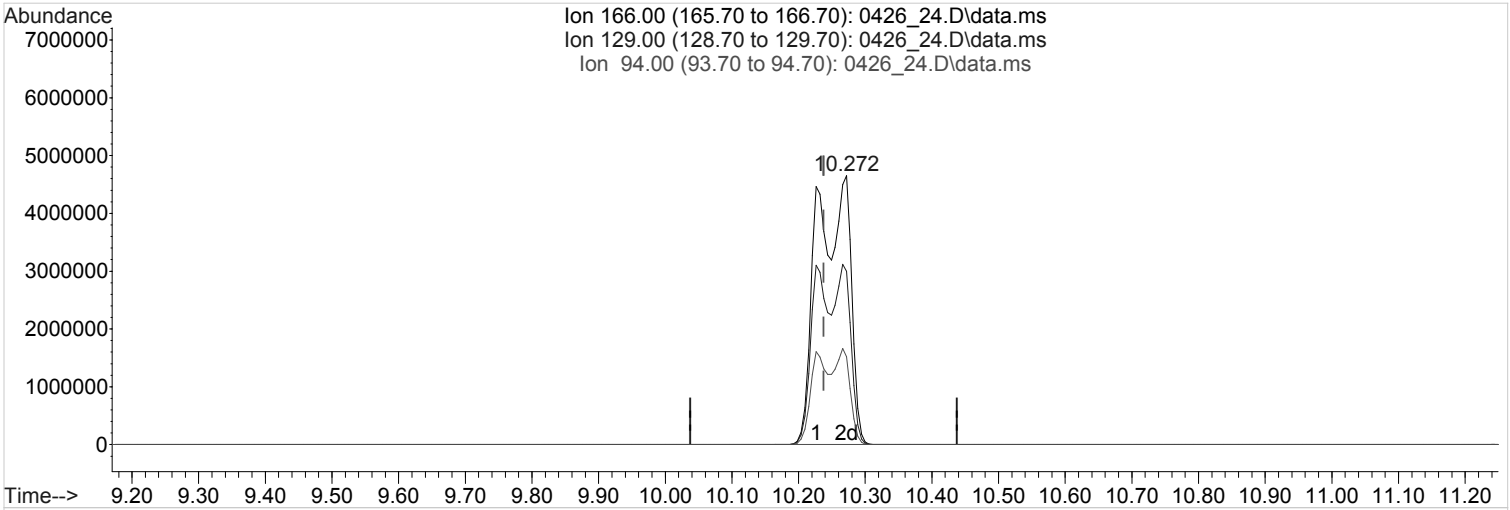
response 8412189 Limit = 0.2000000

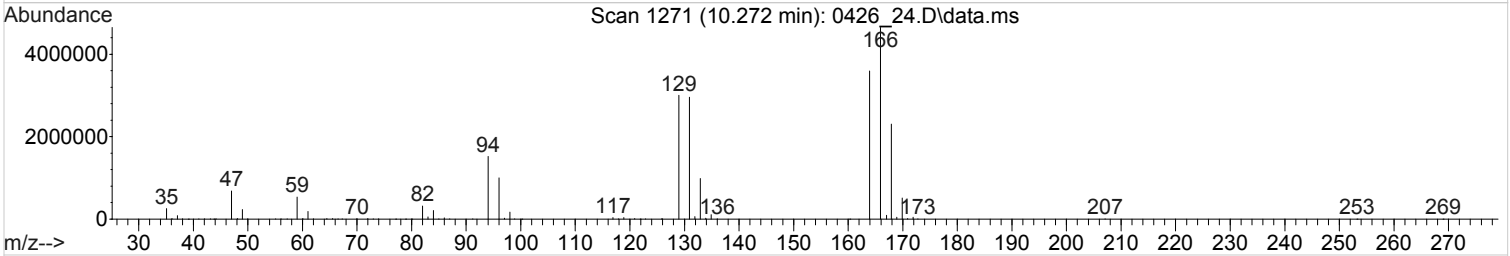
Ion	Exp%	Act%
166.00	100	100
129.00	67.10	70.29
94.00	34.00	31.94
0.00	0.00	0.00

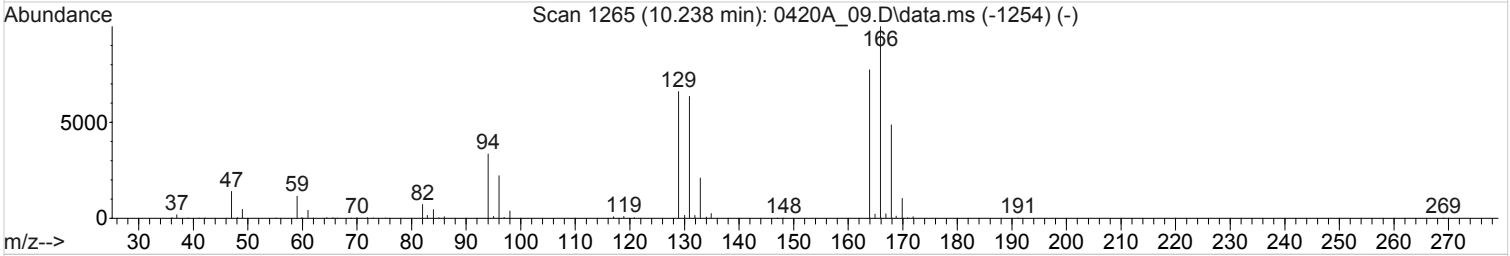
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_24.D
Acq On : 27 Apr 2018 12:25 am
Operator : 564
Sample : L988471-13 1x WG1103323
Misc :
ALS Vial : 24 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 27 08:42:42 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration







TIC: 0426_24.D\data.ms

(53) Tetrachloroethene (T,M)

10.272min (+0.034) 213.7700514 ppbv m E

response 16078297 Limit = 0.2000000

Ion	Exp%	Act%
166.00	100	100
129.00	67.10	36.78#
94.00	34.00	16.71#
0.00	0.00	0.00

6A-OR

GC/MS INITIAL CALIBRATION DATA

SDG: L988471 **Analytical Method:** TO-15

Instrument ID: AIRMS2

Analyte	**RRF: 0.19**	**RRF: 0.31**	**RRF: 0.63**	**RRF: 1.25**	**RRF: 2.5**	**RRF: 3.75**	**RRF: 5**	**RRF: 10**	**RRF: 25**	**RRF: 50**
Analysis date/time	04/17/18 14:39	04/17/18 15:26	04/17/18 16:12	04/17/18 16:59	04/17/18 17:47	04/17/18 18:36	04/17/18 19:26	04/17/18 20:20	04/17/18 21:10	04/17/18 22:05
ACETONE	1.1760	1.3380	1.4790	1.5530	1.5910	1.6510	1.6910	1.7550	1.8920	1.9630
TRICHLOROETHENE	0.1980	0.2140	0.2280	0.2370	0.2380	0.24	0.2440	0.2550	0.2820	0.31
TETRACHLOROETHENE	0.2650	0.2640	0.2680	0.2610	0.2620	0.2630	0.2610	0.2690	0.2980	0.3320
1,4-BROMOFLUOROBENZENE	0.6060	0.6120	0.6180	0.62	0.6410	0.6490	0.6390	0.6410	0.6430	0.6520
File ID:	0417A_04	0417A_05	0417A_06	0417A_07	0417A_08	0417A_09	0417A_10	0417A_11	0417A_12	0417A_13

6A-OR

GC/MS INITIAL CALIBRATION DATA

SDG: L988471 **Analytical Method:** TO-15
Instrument ID: AIRMS2

Analyte Analysis date/time	**RRF. Avg**	**%RSD**	**COD**
ACETONE	1.60893	14.88	
TRICHLOROETHENE	0.244527	13.19	
TETRACHLOROETHENE	0.274185	8.38	
1,4-BROMOFLUOROBENZENE	0.632011	2.6	

Response Factor Report AIRMS2

Method Path : C:\msdchem\1\methods\
Method File : TOAIRMS2D17R.M
Title :
Last Update : Wed Apr 18 09:08:22 2018
Response Via : Initial Calibration

Calibration Files
0.19=0417A_04.D 0.31=0417A_05.D 0.63=0417A_06.D 1.25=0417A_07.D 2.5 =0417A_08.D 3.75=0417A_09.D 5 =0417A_10.D
10 =0417A_11.D 25 =0417A_12.D 50 =0417A_13.D

		Compound	0.19	0.31	0.63	1.25	2.5	3.75	5	10	25	50	Avg	%RSD
1)	I	Bromochloromethane	----------ISTD----------											
2)	T,M	Propene	0.886	0.962	1.042	1.065	1.084	1.088	1.107	1.118	1.183	1.205	1.074	8.85
3)		1,1-DIFLUOROET...	0.513	0.536	0.566	0.566	0.581	0.582	0.584	0.593	0.625	0.635	0.578	6.32
4)	T,M	Dichlorodifluo...	1.396	1.658	1.862	1.848	1.792	1.654	1.567	1.298	1.495	1.156	1.573	15.10
5)		CHLORODIFLUORO...	0.199	0.212	0.225	0.241	0.240	0.240	0.244	0.245	0.265	0.273	0.238	9.21
6)	T,M	1,2-Dichlorote...	1.448	1.684	1.882	1.946	2.000	1.993	1.948	1.477	2.019	1.282	1.768	15.48
7)	T,M	Chloromethane	0.839	0.897	0.997	0.993	1.029	1.037	1.035	1.049	1.114	1.124	1.011	8.69
8)	T,M	Vinyl Chloride	0.767	0.900	1.004	1.014	1.027	1.045	1.049	1.065	1.136	1.147	1.015	10.96
9)	T,M	1,3-Butadiene	0.756	0.941	1.014	1.070	1.077	1.113	1.126	1.154	1.231	1.271	1.075	13.73
10)	T,M	Bromomethane	0.483	0.561	0.584	0.624	0.627	0.630	0.633	0.645	0.692	0.711	0.619	10.48
11)	T,M	Chloroethane	0.377	0.459	0.501	0.520	0.518	0.527	0.530	0.544	0.575	0.579	0.513	11.48
12)	T,M	Vinyl Bromide	0.457	0.516	0.557	0.566	0.576	0.577	0.564	0.595	0.643	0.665	0.572	10.23
13)	T,M	Trichlorofluor...	1.196	1.339	1.496	1.546	1.548	1.589	1.581	1.594	1.744	1.770	1.540	11.08
14)	T,M	Ethanol	0.329	0.338	0.289	0.292	0.302	0.312	0.324	0.333	0.419	0.429	0.337	14.52
15)	T,M	1,1,2-Trichlor...	1.001	1.136	1.256	1.269	1.275	1.286	1.297	1.333	1.475	1.551	1.288	11.95
16)	T,M	1,1-Dichloroet...	1.162	1.283	1.465	1.509	1.535	1.561	1.577	1.656	1.868	2.043	1.566	16.27
17)	T,M	Acetone	1.176	1.338	1.479	1.553	1.591	1.651	1.691	1.755	1.892	1.963	1.609	14.88
18)	T,M	2-Propanol	1.832	1.865	1.963	1.999	2.121	2.192	2.227	2.284	2.561	2.656	2.170	12.74
19)	T,M	Carbon Disulfide	1.219	1.400	1.521	1.591	1.593	1.622	1.628	1.670	1.780	1.822	1.585	11.07
20)	T,M	Allyl Chloride	1.327	1.494	1.650	1.729	1.786	1.820	1.850	1.884	2.009	2.050	1.760	12.63
21)	T,M	Methylene Chlo...	1.170	1.219	1.320	1.302	1.339	1.340	1.366	1.385	1.453	1.482	1.338	7.08
22)		TERT-BUTYL ALC...	2.194	2.213	2.305	2.376	2.457	2.481	2.526	2.577	2.600	2.597	2.433	6.31
23)	T,M	Methyl Tert-Bu...	2.354	2.348	2.558	2.556	2.585	2.647	2.657	2.746	2.927	3.033	2.641	8.29
24)	T,M	Trans-1,2-Dich...	0.480	0.545	0.581	0.616	0.609	0.622	0.629	0.646	0.712	0.760	0.620	12.71
25)	T,M	n-Hexane	1.299	1.486	1.610	1.651	1.668	1.682	1.717	1.746	1.832	1.874	1.657	10.05
26)	T,M	1,1-Dichloroet...	1.479	1.639	1.774	1.796	1.844	1.847	1.879	1.905	2.015	2.058	1.823	9.29
27)	T,M	Vinyl Acetate	1.722	2.231	2.680	2.999	3.224	3.373	3.504	3.729	4.162	4.386	3.201	25.86
28)		ETHYL ACETATE	0.148	0.165	0.196	0.192	0.197	0.210	0.207	0.214	0.235	0.248	0.201	14.71
29)	T,M	2-Butanone (MEK)	0.368	0.379	0.425	0.447	0.461	0.469	0.483	0.503	0.551	0.591	0.468	14.92
30)	T,M	cis-1,2-Dichlo...	1.321	1.207	1.653	1.687	1.716	1.743	1.768	1.815	1.964	2.068	1.694	15.42
31)	T,M	Tetrahydrofuran	1.334	1.421	1.588	1.604	1.679	1.727	1.752	1.830	1.992	2.102	1.703	13.85
32)	T,M	Chloroform	1.356	1.453	1.660	1.646	1.693	1.706	1.717	1.765	1.900	1.984	1.688	10.95
33)	T,M	Cyclohexane	0.955	1.094	1.161	1.179	1.185	1.201	1.213	1.224	1.335	1.343	1.189	9.37
34)	T,M	1,1,1-Trichlor...	1.210	1.365	1.500	1.558	1.581	1.610	1.622	1.638	1.768	1.776	1.563	11.02
35)	T,M	Carbon Tetrach...	1.088	1.217	1.365	1.375	1.388	1.426	1.434	1.438	1.566	1.547	1.384	10.29
36)	T,M	2,2,4-Trimethy...	4.199	5.033	5.640	5.864	5.945	6.043	6.157	6.391	6.984	7.206	5.946	14.73
37)	I	1,4-Difluorobenzene	----------ISTD----------											
38)	T,M	Benzene	0.492	0.577	0.631	0.652	0.666	0.670	0.678	0.709	0.795	0.850	0.672	15.03
39)	T,M	1,2-Dichloroet...	0.262	0.282	0.307	0.336	0.331	0.338	0.339	0.362	0.398	0.430	0.339	14.81

Response Factor Report AIRMS2

Method Path : C:\msdchem\1\methods\
Method File : TOAIRMS2D17R.M
Title :

40)	T,M	Heptane	0.460	0.527	0.599	0.633	0.647	0.657	0.660	0.700	0.776	0.828	0.649	16.62
41)	T,M	Trichloroethene	0.198	0.214	0.228	0.237	0.238	0.240	0.244	0.255	0.282	0.310	0.245	13.19
42)		TERT-AMYL ETHY...	0.196	0.212	0.218	0.225	0.219	0.225	0.230	0.245	0.271	0.300	0.234	13.10
43)		METHYL CYCLOHE...	0.290	0.338	0.376	0.388	0.389	0.397	0.396	0.413	0.458	0.485	0.393	13.94
44)	T,M	1,2-Dichloropr...	0.216	0.244	0.275	0.283	0.288	0.296	0.296	0.304	0.334	0.358	0.289	13.98
45)	T,M	Methyl Methacr...	0.180	0.209	0.223	0.239	0.239	0.250	0.257	0.275	0.304	0.329	0.251	17.54
46)	T,M	1,4-Dioxane	0.122	0.116	0.121	0.117	0.114	0.117	0.116	0.115	0.130	0.129	0.120	4.74
47)	T,M	Bromodichlorom...	0.321	0.371	0.406	0.428	0.439	0.449	0.452	0.473	0.521	0.562	0.442	15.65
48)	T,M	cis-1,3-Dichlo...	0.325	0.339	0.404	0.411	0.420	0.434	0.433	0.453	0.487	0.516	0.422	13.86
49)	T,M	4-Methyl-2-Pen...	0.683	0.730	0.791	0.812	0.837	0.859	0.868	0.913	0.942	0.987	0.842	11.08
50)	T,M	Toluene	0.528	0.613	0.693	0.720	0.729	0.744	0.745	0.769	0.838	0.873	0.725	13.77
51)	T,M	trans-1,3-Dich...	0.249	0.302	0.326	0.348	0.362	0.369	0.373	0.391	0.427	0.455	0.360	16.43
52)	T,M	1,1,2-Trichlor...	0.166	0.192	0.213	0.224	0.225	0.230	0.228	0.234	0.257	0.275	0.224	13.58
53)	T,M	Tetrachloroethene	0.265	0.264	0.268	0.261	0.262	0.263	0.261	0.269	0.298	0.332	0.274	8.38
54)	T,M	Methyl Butyl K...	0.517	0.605	0.663	0.683	0.725	0.760	0.768	0.831	0.846	0.918	0.732	16.36
55)	T,M	Chlorodibromom...	0.236	0.275	0.315	0.330	0.344	0.355	0.357	0.369	0.416	0.453	0.345	18.20
56)	T,M	1,2-Dibromoethane	0.233	0.271	0.296	0.314	0.322	0.328	0.326	0.335	0.360	0.390	0.318	13.84
57)	T,M	Chlorobenzene	0.386	0.445	0.495	0.505	0.515	0.519	0.518	0.516	0.551	0.577	0.503	10.63
58)	I	Chlorobenzene-d5	----------ISTD----------											
59)	T,M	Ethylbenzene	0.839	0.981	1.147	1.177	1.217	1.234	1.242	1.299	1.425	1.516	1.208	16.21
60)	T,M	M&P-Xylene	0.797	0.751	0.871	0.895	0.928	0.959	0.966	1.028	1.176		0.930	13.51
61)	T,M	O-Xylene	0.632	0.753	0.879	0.915	0.921	0.949	0.954	0.985	1.111	1.203	0.930	17.34
62)	T,M	Styrene	0.434	0.513	0.599	0.629	0.677	0.700	0.705	0.758	0.891	1.020	0.692	24.69
63)	T,M	Bromoform	0.244	0.289	0.339	0.352	0.379	0.396	0.396	0.410	0.482	0.564	0.385	23.66
64)	T,M	Isopropylbenzene	0.939	1.064	1.172	1.203	1.223	1.246	1.236	1.254	1.392	1.489	1.222	12.51
65)	T,M	1,1,2,2-Tetrac...	0.591	0.635	0.660	0.669	0.684	0.703	0.695	0.700	0.764	0.813	0.691	9.03
66)	T,M	n-Propylbenzene	1.237	1.364	1.457	1.501	1.530	1.573	1.567	1.587	1.751	1.851	1.542	11.37
67)	T,M	4-Ethyltoluene	0.968	1.066	1.168	1.181	1.216	1.247	1.244	1.274	1.444	1.622	1.243	14.74
68)	T,M	2-Chlorotoluene	0.804	0.884	0.986	1.005	1.046	1.074	1.075	1.100	1.292	1.442	1.071	17.22
69)	S	1,4-Bromofluor...	0.606	0.612	0.618	0.620	0.641	0.649	0.639	0.641	0.643	0.652	0.632	2.60
70)	T,M	1,3,5-Trimethy...	0.863	0.907	0.973	0.993	1.001	1.018	1.022	1.044	1.197	1.334	1.035	13.23
71)	T,M	tert-Butylbenzene	0.824	0.851	0.905	0.910	0.901	0.912	0.903	0.908	1.018	1.143	0.928	9.77
72)	T,M	1,2,4-Trimethy...	0.869	0.909	0.958	0.956	0.970	0.986	0.981	0.984	1.120	1.239	0.997	10.70
73)	T,M	sec-Butylbenzene	1.326	1.416	1.490	1.481	1.488	1.499	1.482	1.477	1.651	1.796	1.511	8.49
74)	T,M	1,3-Dichlorobe...	0.431	0.456	0.482	0.492	0.506	0.514	0.505	0.506	0.566	0.643	0.510	11.58
75)	T,M	1,4-Dichlorobe...	0.434	0.442	0.477	0.491	0.513	0.524	0.522	0.543	0.680	0.862	0.549	23.60
76)		1,2,3-TRIMETHY...	0.889	0.935	0.969	0.959	0.962	0.983	0.981	0.990	1.234	1.433	1.033	16.20
77)		DICYCLOPENTADIENE	1.581	1.685	1.810	1.837	1.906	1.977	1.984	2.057	2.464		1.923	13.15
78)	T,M	Benzyl Chloride	0.575	0.646	0.726	0.784	0.833	0.862	0.857	0.874	0.976	1.082	0.822	18.11
79)	T,M	n-Butylbenzene	1.014	1.066	1.161	1.214	1.232	1.236	1.202	1.178	1.281	1.396	1.198	8.89
80)	T,M	1,2-Dichlorobe...	0.450	0.467	0.458	0.470	0.462	0.461	0.451	0.430	0.485	0.542	0.468	6.36
81)	T,M	1,2,4-Trichlor...	0.123	0.120	0.130	0.157	0.203	0.218	0.211	0.207	0.206	0.207	0.178	22.81
82)	T,M	Hexachloro-1,3...	0.346	0.346	0.338	0.331	0.332	0.327	0.305	0.281	0.281	0.306	0.319	7.67
83)	T,M	Naphthalene	0.351	0.343	0.374	0.419	0.525	0.554	0.517	0.466	0.469	0.506	0.452	16.91
84)	h,n,MTPH (GC/MS) Lo...				2.318	2.308	2.304	2.336	2.337	2.468	2.742	2.985	2.475	10.26

(#) = Out of Range

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_04.D
Acq On : 17 Apr 2018 2:39 pm
Operator : 564
Sample : STD AMS 0.19 ppbv 18D17266
Misc : 18D17267
ALS Vial : 4 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 08:57:36 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 08:55:50 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.809	130	1762274	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	9.890	114	7579495	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	13.116	117	5985834	4.0000000	ppbv	0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	14.286	95	3625667	3.7308558	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery	= 93.27%		
Target Compounds						Qvalue
2) Propene	4.067	41	74169	0.1543782	ppbv	99
3) 1,1-DIFLUOROETHANE	4.071	65	42969	0.1676164	ppbv	91
4) Dichlorodifluoromethane	4.123	85	116856	0.1603471	ppbv	98
5) CHLORODIFLUOROMETHANE	4.153	67	16684m	0.1577052	ppbv	
6) 1,2-Dichlorotetrafluor...	4.354	85	121218	0.1380537	ppbv #	88
7) Chloromethane	4.459	50	70194	0.1537142	ppbv	100
8) Vinyl Chloride	4.655	62	64238	0.1395785	ppbv	100
9) 1,3-Butadiene	4.717	39	63310	0.1291305	ppbv	89
10) Bromomethane	5.199	94	40457	0.1465148	ppbv	100
11) Chloroethane	5.354	64	31593m	0.1360257	ppbv	
12) Vinyl Bromide	5.632	106	38279	0.1506172	ppbv	95
13) Trichlorofluoromethane	5.708	101	100133	0.1430398	ppbv	98
14) Ethanol	6.074	45	27537m	0.1988935	ppbv	
15) 1,1,2-Trichlorotrifluo...	6.402	101	83773	0.1479052	ppbv	99
16) 1,1-Dichloroethene	6.430	61	97293	0.1414393	ppbv	96
17) Acetone	6.564	43	98467	0.1352928	ppbv	97
18) 2-Propanol	6.746	45	153314	0.1583209	ppbv #	59
19) Carbon Disulfide	6.726	76	102017	0.1427288	ppbv	100
20) Allyl Chloride	6.897	41	111095	0.1385697	ppbv #	54
21) Methylene Chloride	7.064	49	97968	0.1659845	ppbv	98
22) TERT-BUTYL ALCOHOL	7.236	59	183650	0.1678861	ppbv	93
23) Methyl Tert-Butyl Ether	7.395	73	197075	0.1690064	ppbv	96
24) Trans-1,2-Dichloroethene	7.375	96	40139	0.1463910	ppbv	82
25) n-Hexane	7.634	57	108710	0.1466988	ppbv	98
26) 1,1-Dichloroethane	7.882	63	123801	0.1521663	ppbv #	72
27) Vinyl Acetate	7.936	43	144143	0.0969264	ppbv #	83
28) ETHYL ACETATE	8.598	70	12400m	0.1348214	ppbv	
29) 2-Butanone (MEK)	8.573	72	30778m	0.1489031	ppbv	
30) cis-1,2-Dichloroethene	8.547	61	110589	0.1440112	ppbv	95
31) Tetrahydrofuran	8.899	42	111692	0.1467877	ppbv	97
32) Chloroform	8.868	83	113532	0.1510588	ppbv	99
33) Cyclohexane	9.110	84	79925	0.1511099	ppbv	98
34) 1,1,1-Trichloroethane	9.079	97	101298	0.1428487	ppbv	96
35) Carbon Tetrachloride	9.248	117	91085	0.1450222	ppbv	96
36) 2,2,4-Trimethylpentane	9.485	57	351464	0.1320163	ppbv #	87
38) Benzene	9.480	78	177205	0.1395344	ppbv	98
39) 1,2-Dichloroethane	9.543	62	94346	0.1473856	ppbv	97
40) Heptane	9.678	43	165445	0.1328835	ppbv #	65
41) Trichloroethene	10.186	95	71108	0.1561396	ppbv	98
42) TERT-AMYL ETHYL ETHER	10.405	73	70737	0.1660319	ppbv	90
43) METHYL CYCLOHEXANE	10.364	83	104432	0.1387178	ppbv	94
44) 1,2-Dichloropropane	10.453	63	77696	0.1385527	ppbv #	35
45) Methyl Methacrylate	10.529	69	64735	0.1364708	ppbv	92
46) 1,4-Dioxane	10.628	88	44045m	0.1995094	ppbv	
47) Bromodichloromethane	10.732	83	115655	0.1358820	ppbv	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_04.D
Acq On : 17 Apr 2018 2:39 pm
Operator : 564
Sample : STD AMS 0.19 ppbv 18D17266
Misc : 18D17267
ALS Vial : 4 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 08:57:36 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 08:55:50 2018
Response via : Initial Calibration

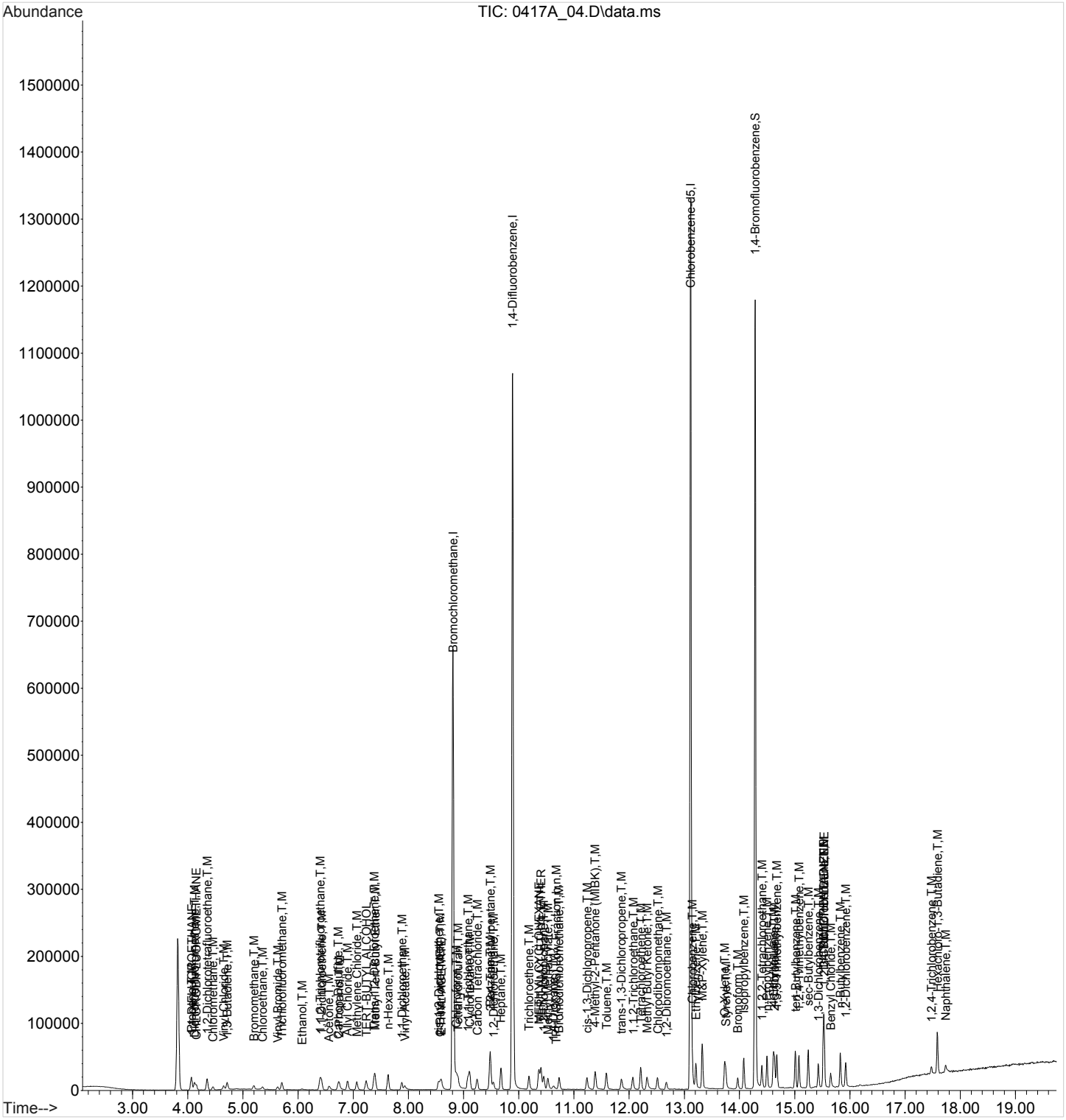
	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
48)	cis-1,3-Dichloropropene	11.237	75	117041	0.1422270 ppbv	92
49)	4-Methyl-2-Pentanone (...	11.386	43	246012	0.1511281 ppbv	98
50)	Toluene	11.590	91	190070	0.1348056 ppbv	99
51)	trans-1,3-Dichloropropene	11.862	75	89810	0.1283295 ppbv #	92
52)	1,1,2-Trichloroethane	12.070	97	59889	0.1376269 ppbv	96
53)	Tetrachloroethene	12.214	166	95289	0.1910205 ppbv	99
54)	Methyl Butyl Ketone	12.327	43	186093	0.1292359 ppbv #	93
55)	Chlorodibromomethane	12.515	129	84926	0.1262067 ppbv	96
56)	1,2-Dibromoethane	12.677	107	83763	0.1348480 ppbv	98
57)	Chlorobenzene	13.147	112	138801	0.1411673 ppbv #	90
59)	Ethylbenzene	13.213	91	238506	0.1291645 ppbv	99
60)	M&P-Xylene	13.328	91	369735	0.2576377 ppbv	99
61)	O-Xylene	13.732	91	179691	0.1265911 ppbv	97
62)	Styrene	13.754	104	123313	0.1177554 ppbv	97
63)	Bromoform	13.969	173	69308	0.1169991 ppbv	99
64)	Isopropylbenzene	14.079	105	266883	0.1430883 ppbv #	88
65)	1,1,2,2-Tetrachloroethane	14.408	83	168170	0.1598259 ppbv	99
66)	n-Propylbenzene	14.500	91	351674	0.1493826 ppbv	99
67)	4-Ethyltoluene	14.616	105	275334	0.1474904 ppbv	95
68)	2-Chlorotoluene	14.636	91	228496	0.1421898 ppbv	98
70)	1,3,5-Trimethylbenzene	14.678	105	245317	0.1609644 ppbv	97
71)	tert-Butylbenzene	15.015	119	234332	0.1717866 ppbv	95
72)	1,2,4-Trimethylbenzene	15.080	105	247025	0.1673672 ppbv	100
73)	sec-Butylbenzene	15.247	105	376958	0.1680429 ppbv	97
74)	1,3-Dichlorobenzene	15.430	146	122481	0.1591205 ppbv	99
75)	1,4-Dichlorobenzene	15.528	146	123501	0.1574393 ppbv	98
76)	1,2,3-TRIMETHYLBENZENE	15.537	105	252658	0.1718412 ppbv	97
77)	DICYCLOPENTADIENE	15.522	66	449658	0.1520159 ppbv	99
78)	Benzyl Chloride	15.654	91	163461	0.1267502 ppbv	98
79)	n-Butylbenzene	15.829	91	288409	0.1559437 ppbv	98
80)	1,2-Dichlorobenzene	15.928	146	127847	0.1851553 ppbv	98
81)	1,2,4-Trichlorobenzene	17.482	180	35043	0.1075692 ppbv #	78
82)	Hexachloro-1,3-Butadiene	17.589	225	98264	0.2009689 ppbv	99
83)	Naphthalene	17.738	128	99719	0.1202842 ppbv #	69
84)	TPH (GC/MS) Low Fraction	10.675	TIC	32239537m	9.2216178 ppbv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_04.D
Acq On : 17 Apr 2018 2:39 pm
Operator : 564
Sample : STD AMS 0.19 ppbv 18D17266
Misc : 18D17267
ALS Vial : 4 Sample Multiplier: 1
InstName : AIRMS2

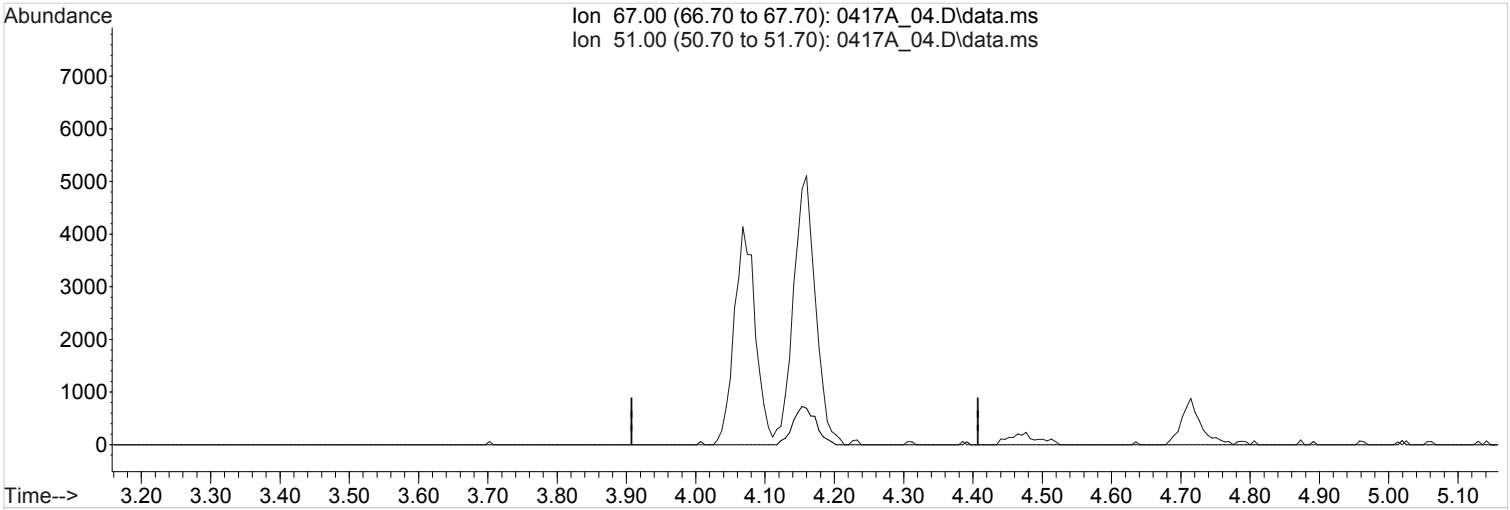
Quant Time: Apr 18 08:57:36 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 08:55:50 2018
Response via : Initial Calibration

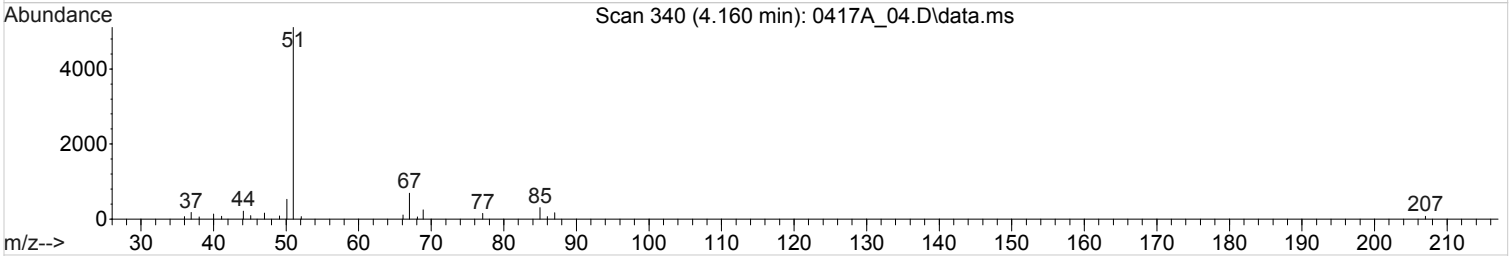


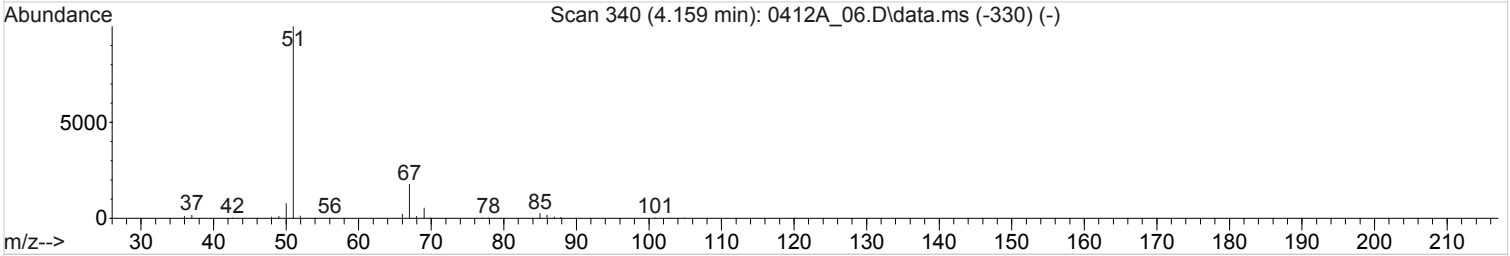
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_04.D
Acq On : 17 Apr 2018 2:39 pm
Operator : 564
Sample : STD AMS 0.19 ppbv 18D17266
Misc : 18D17267
ALS Vial : 4 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 08:55:58 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 08:55:50 2018
Response via : Initial Calibration







TIC: 0417A_04.D\data.ms

(5) CHLORODIFLUOROMETHANE

4.157min (-4.157) 0.0000000 ppbv

Qvalue = 0

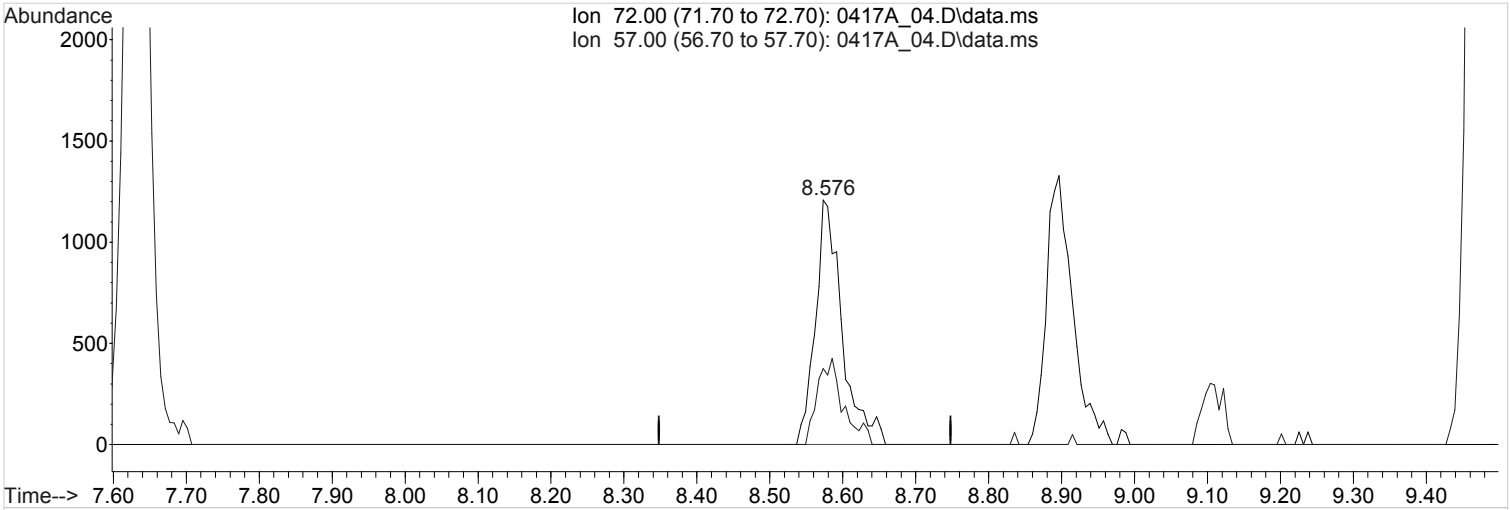
response 0

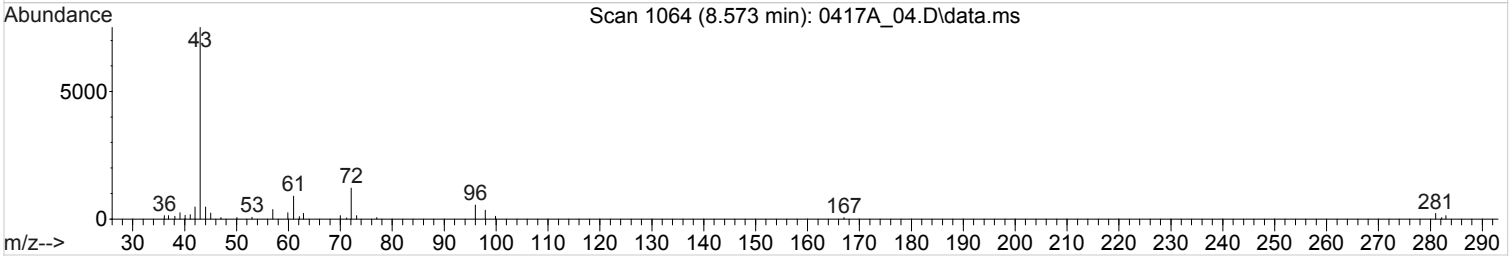
Ion	Exp%	Act%
67.00	100	0.00
51.00	722.40	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

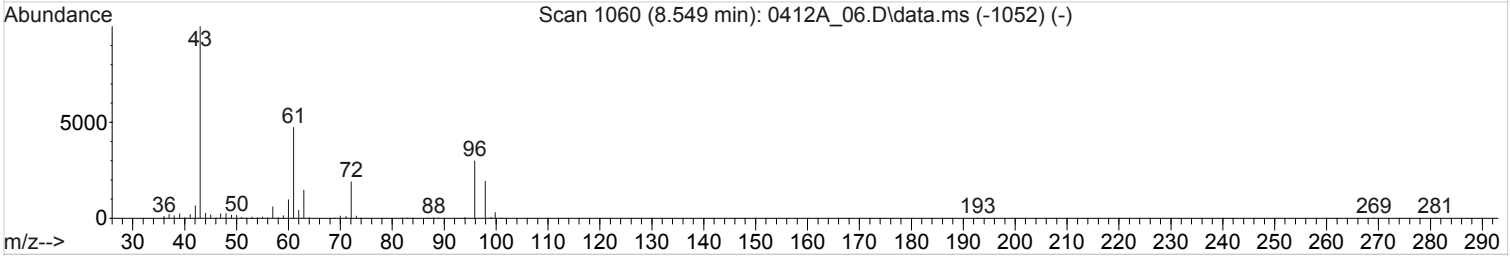
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_04.D
Acq On : 17 Apr 2018 2:39 pm
Operator : 564
Sample : STD AMS 0.19 ppbv 18D17266
Misc : 18D17267
ALS Vial : 4 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 08:55:58 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 08:55:50 2018
Response via : Initial Calibration







TIC: 0417A_04.D\data.ms

(29) 2-Butanone (MEK) (T,M)

8.573min (+0.025) 0.1489031 ppbv m

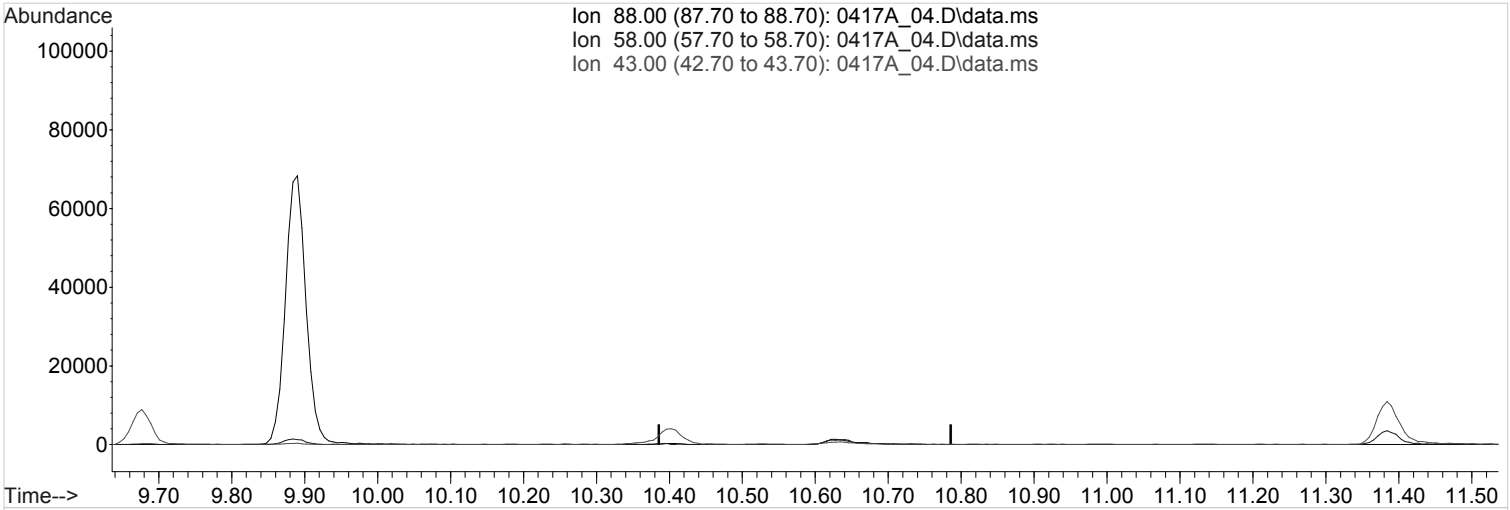
response 30778

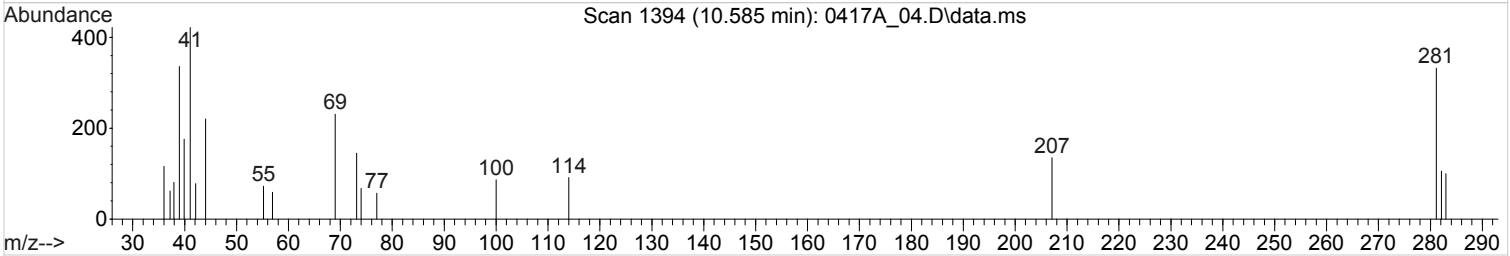
Ion	Exp%	Act%
72.00	100	100
57.00	36.20	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

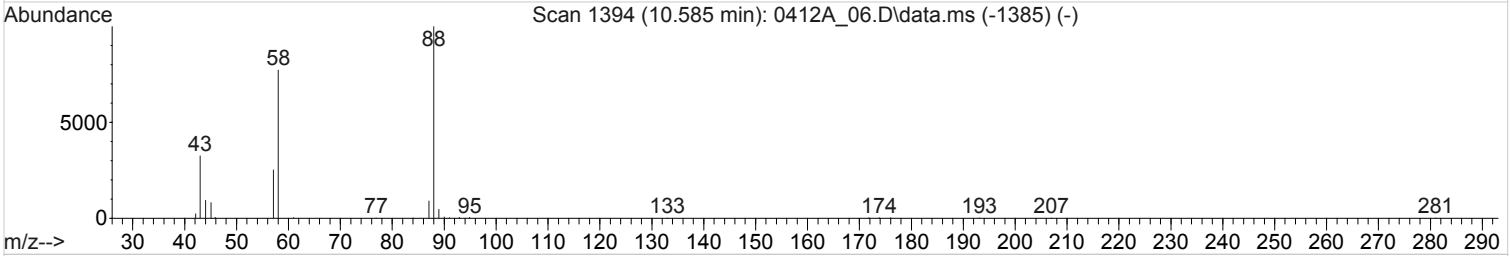
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_04.D
Acq On : 17 Apr 2018 2:39 pm
Operator : 564
Sample : STD AMS 0.19 ppbv 18D17266
Misc : 18D17267
ALS Vial : 4 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 08:55:58 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 08:55:50 2018
Response via : Initial Calibration







TIC: 0417A_04.D\data.ms

(46) 1,4-Dioxane (T,M)

10.586min (-10.586) 0.0000000 ppbv

Qvalue = 0

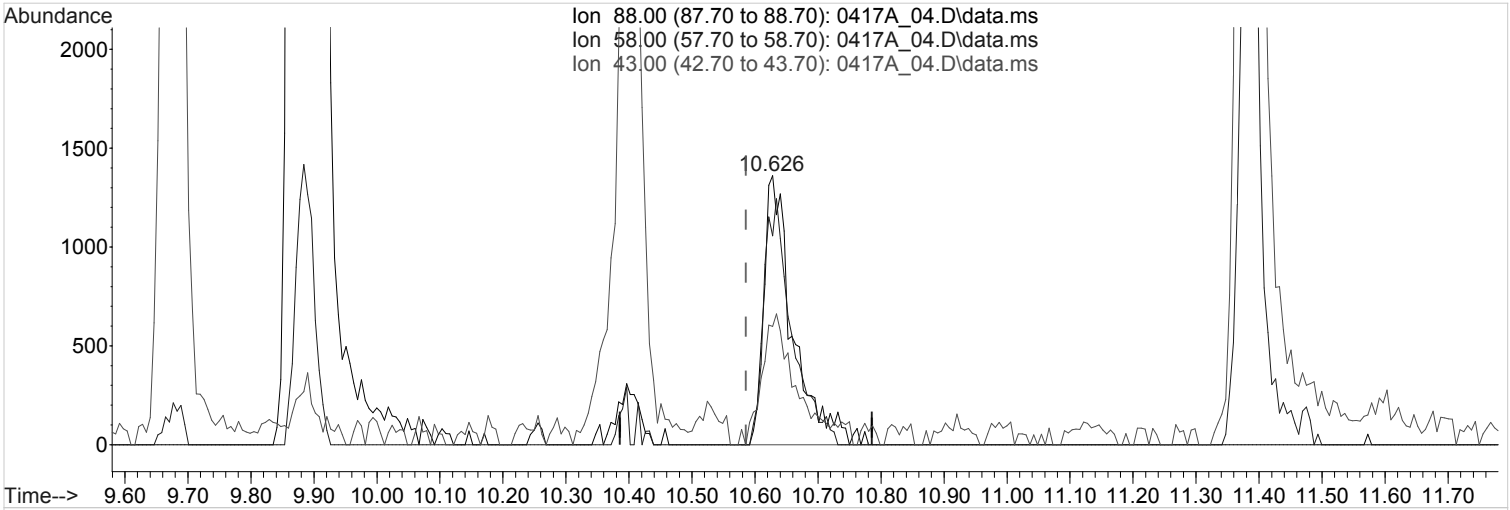
response 0

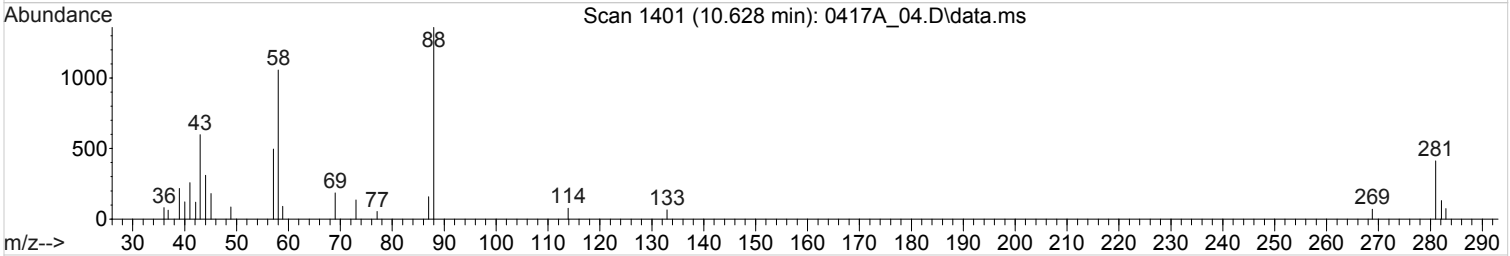
Ion	Exp%	Act%
88.00	100	0.00
58.00	91.90	0.00#
43.00	45.60	0.00#
0.00	0.00	0.00

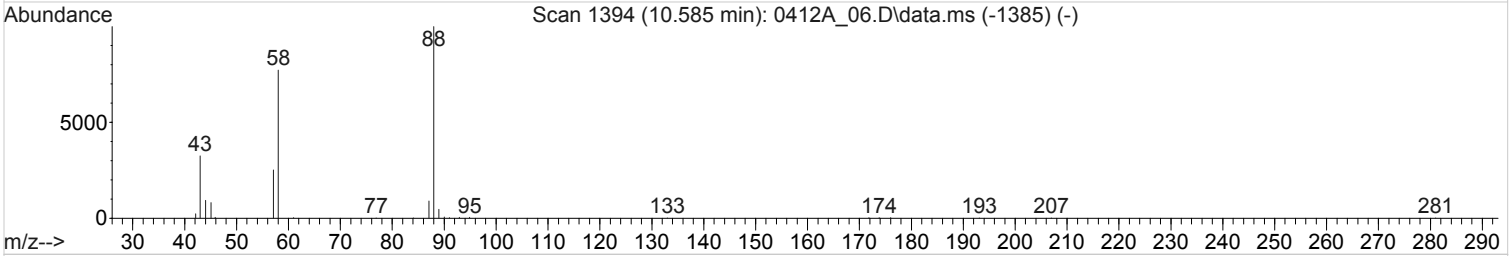
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_04.D
Acq On : 17 Apr 2018 2:39 pm
Operator : 564
Sample : STD AMS 0.19 ppbv 18D17266
Misc : 18D17267
ALS Vial : 4 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 08:55:58 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 08:55:50 2018
Response via : Initial Calibration







TIC: 0417A_04.D\data.ms

(46) 1,4-Dioxane (T,M)

10.628min (+0.042) 0.1995094 ppbv m

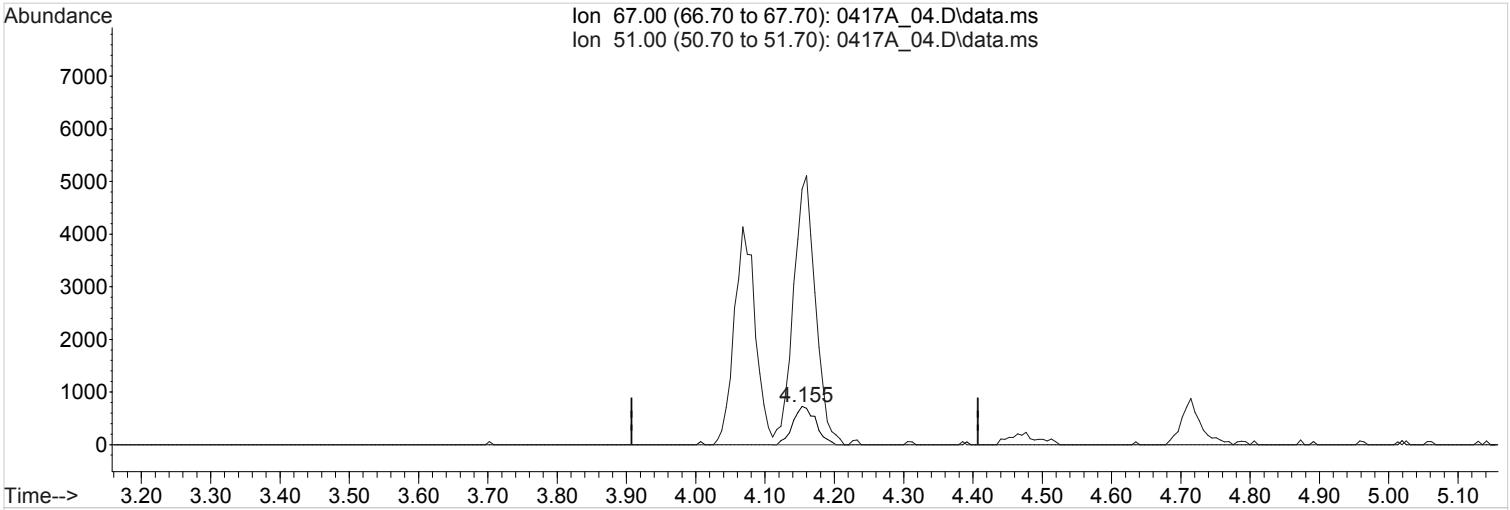
response 44045

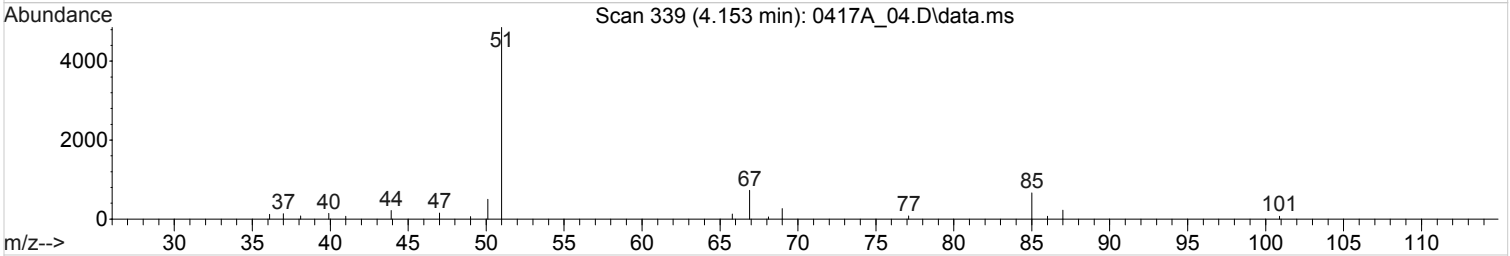
Ion	Exp%	Act%
88.00	100	100
58.00	91.90	0.00#
43.00	45.60	0.00#
0.00	0.00	0.00

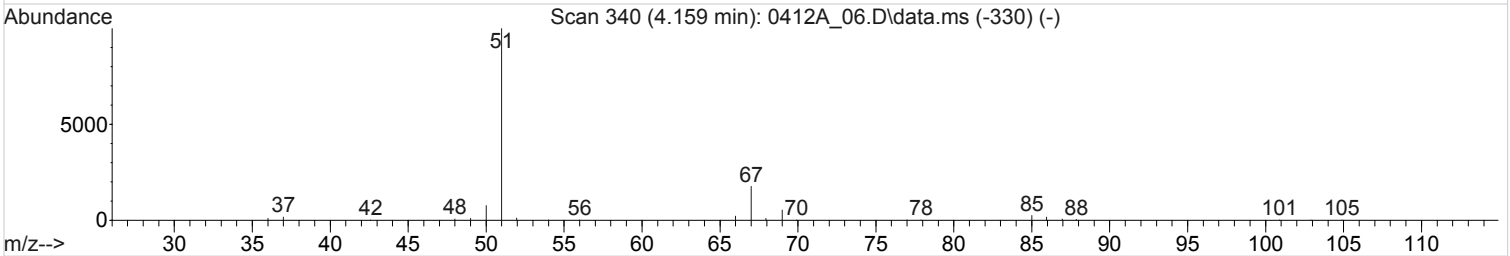
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_04.D
Acq On : 17 Apr 2018 2:39 pm
Operator : 564
Sample : STD AMS 0.19 ppbv 18D17266
Misc : 18D17267
ALS Vial : 4 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 08:55:58 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 08:55:50 2018
Response via : Initial Calibration







TIC: 0417A_04.D\data.ms

(5) CHLORODIFLUOROMETHANE

4.153min (-0.004) 0.1577052 ppbv m

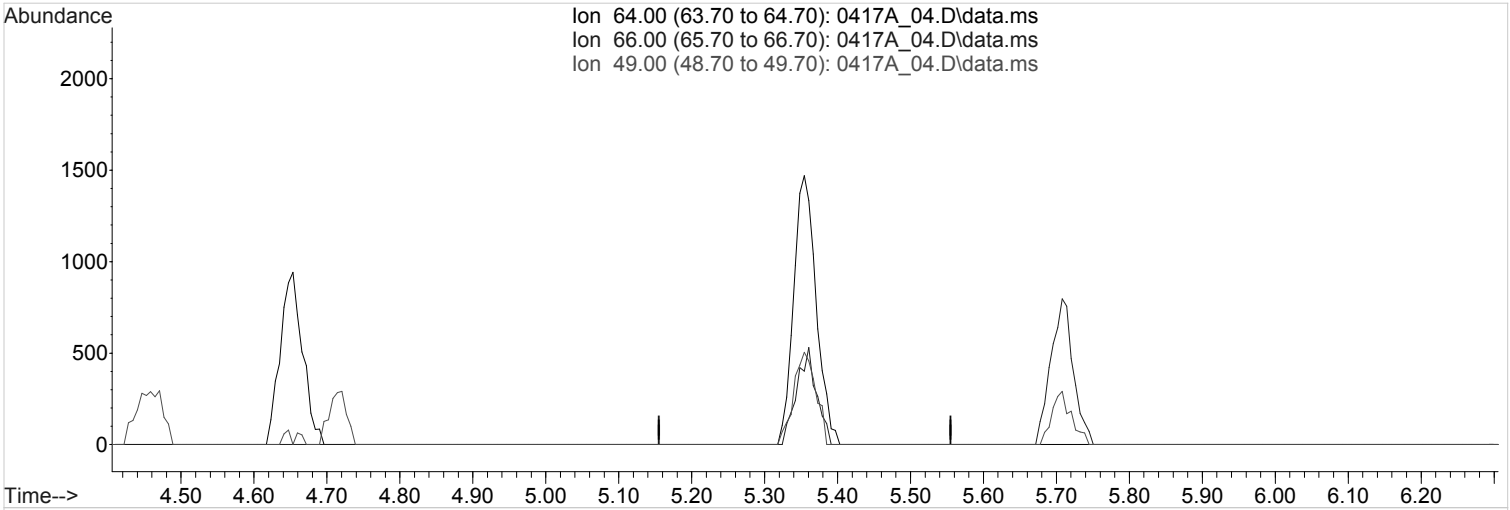
response 16684

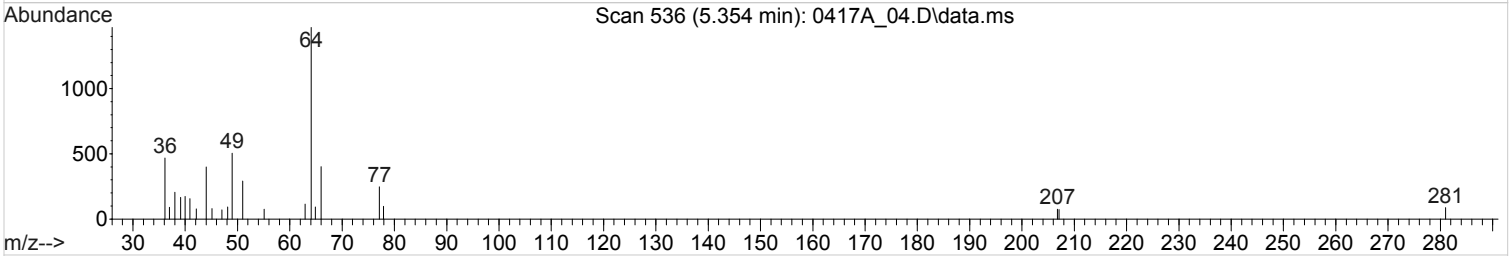
Ion	Exp%	Act%
67.00	100	100
51.00	722.40	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

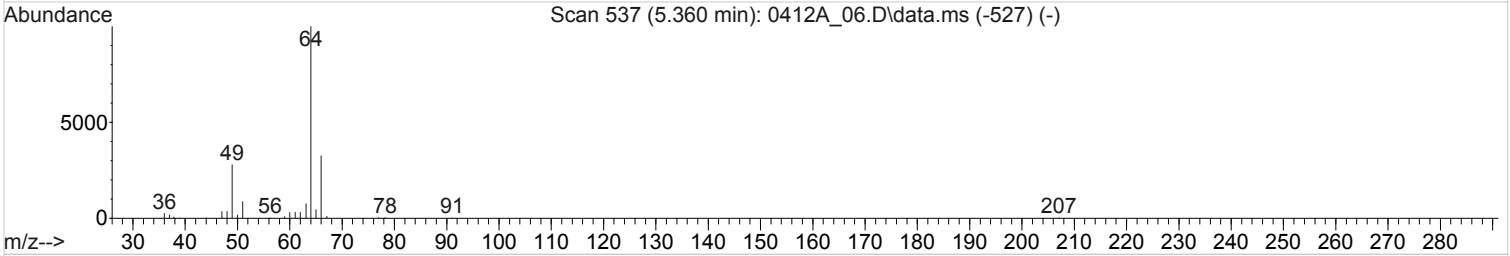
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_04.D
Acq On : 17 Apr 2018 2:39 pm
Operator : 564
Sample : STD AMS 0.19 ppbv 18D17266
Misc : 18D17267
ALS Vial : 4 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 08:55:58 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 08:55:50 2018
Response via : Initial Calibration







TIC: 0417A_04.D\data.ms

(11) Chloroethane (T,M)

5.355min (-5.355) 0.0000000 ppbv

Qvalue = 0

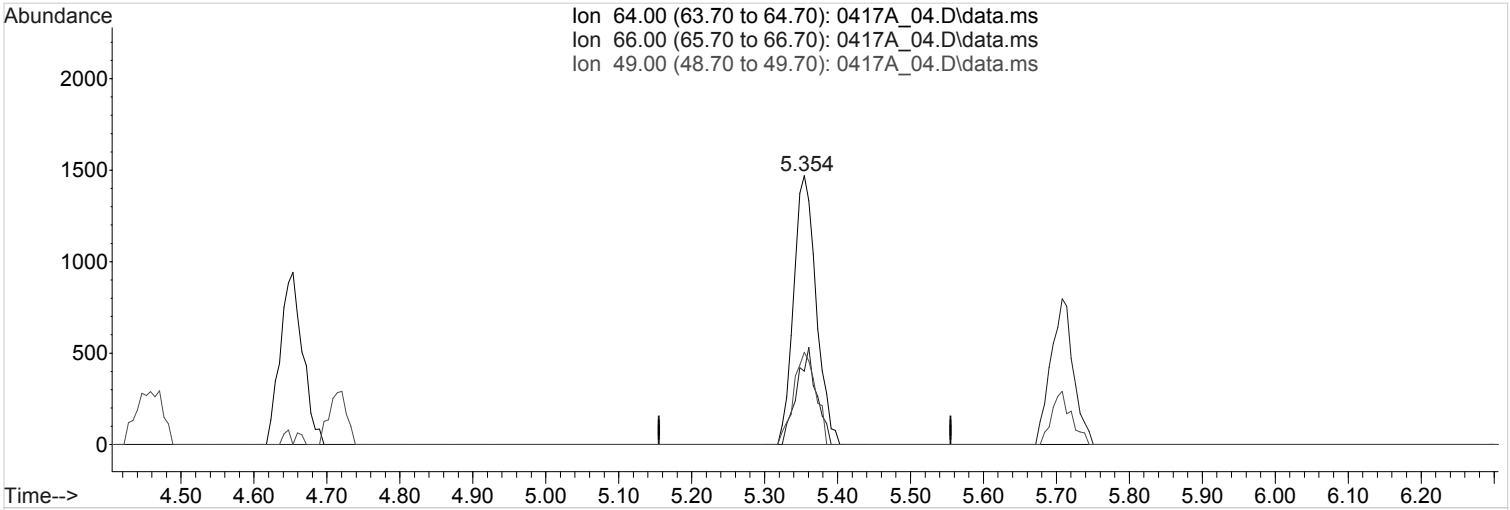
response 0

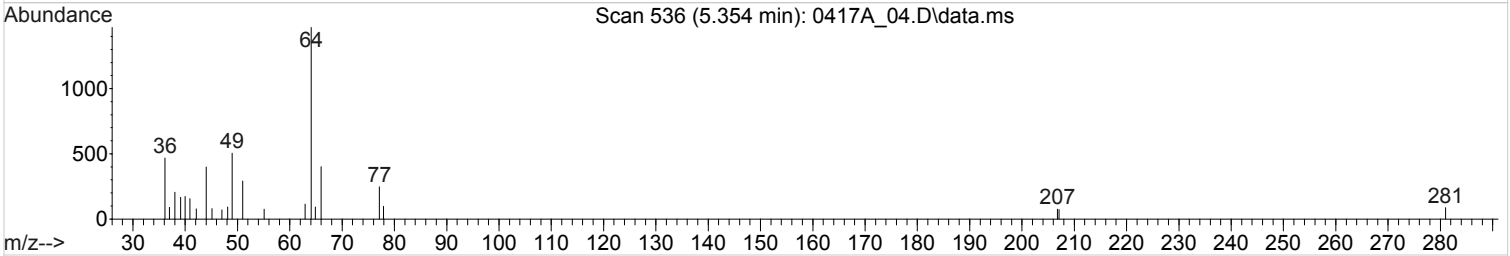
Ion	Exp%	Act%
64.00	100	0.00
66.00	31.10	0.00#
49.00	31.50	0.00#
0.00	0.00	0.00

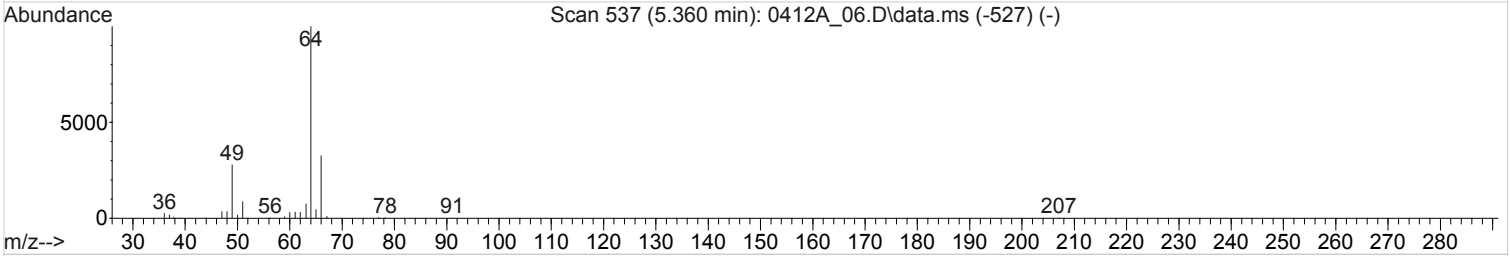
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_04.D
Acq On : 17 Apr 2018 2:39 pm
Operator : 564
Sample : STD AMS 0.19 ppbv 18D17266
Misc : 18D17267
ALS Vial : 4 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 08:55:58 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 08:55:50 2018
Response via : Initial Calibration







TIC: 0417A_04.D\data.ms

(11) Chloroethane (T,M)

5.354min (-0.001) 0.1360257 ppbv m

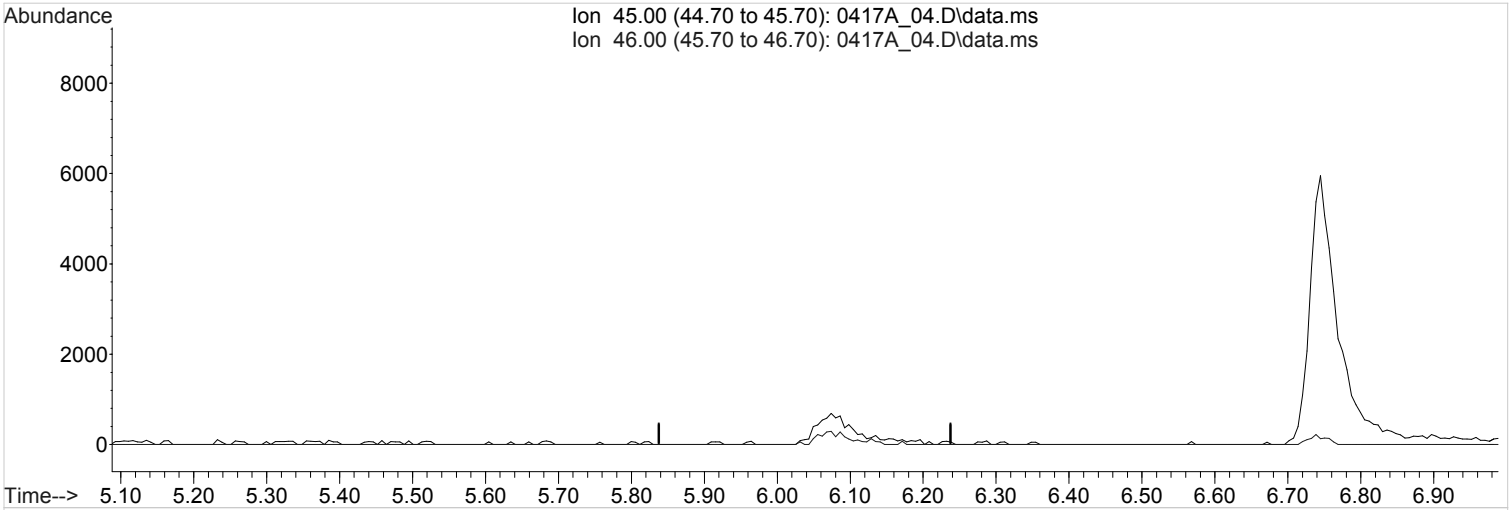
response 31593

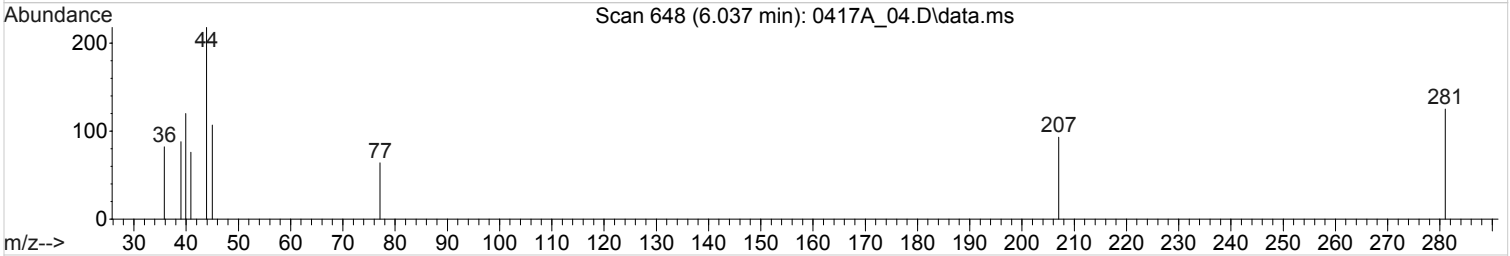
Ion	Exp%	Act%
64.00	100	100
66.00	31.10	0.00#
49.00	31.50	0.00#
0.00	0.00	0.00

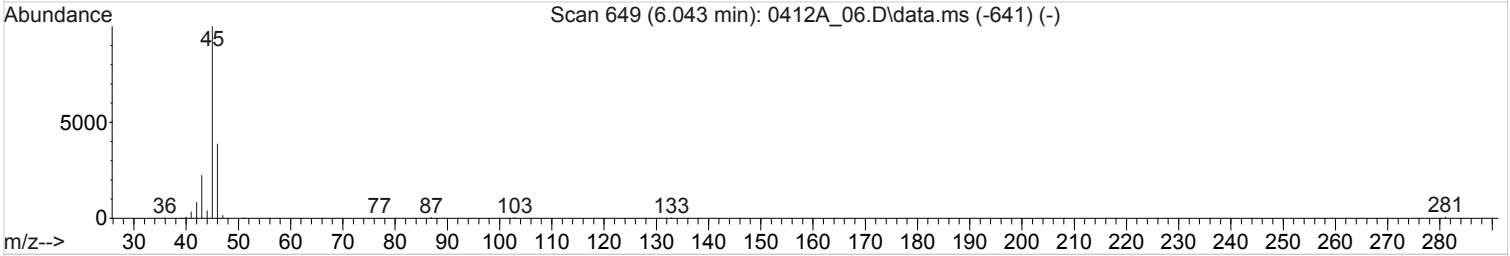
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_04.D
Acq On : 17 Apr 2018 2:39 pm
Operator : 564
Sample : STD AMS 0.19 ppbv 18D17266
Misc : 18D17267
ALS Vial : 4 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 08:55:58 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 08:55:50 2018
Response via : Initial Calibration







TIC: 0417A_04.D\data.ms

(14) Ethanol (T,M)

6.038min (-6.038) 0.0000000 ppbv

Qvalue = 0

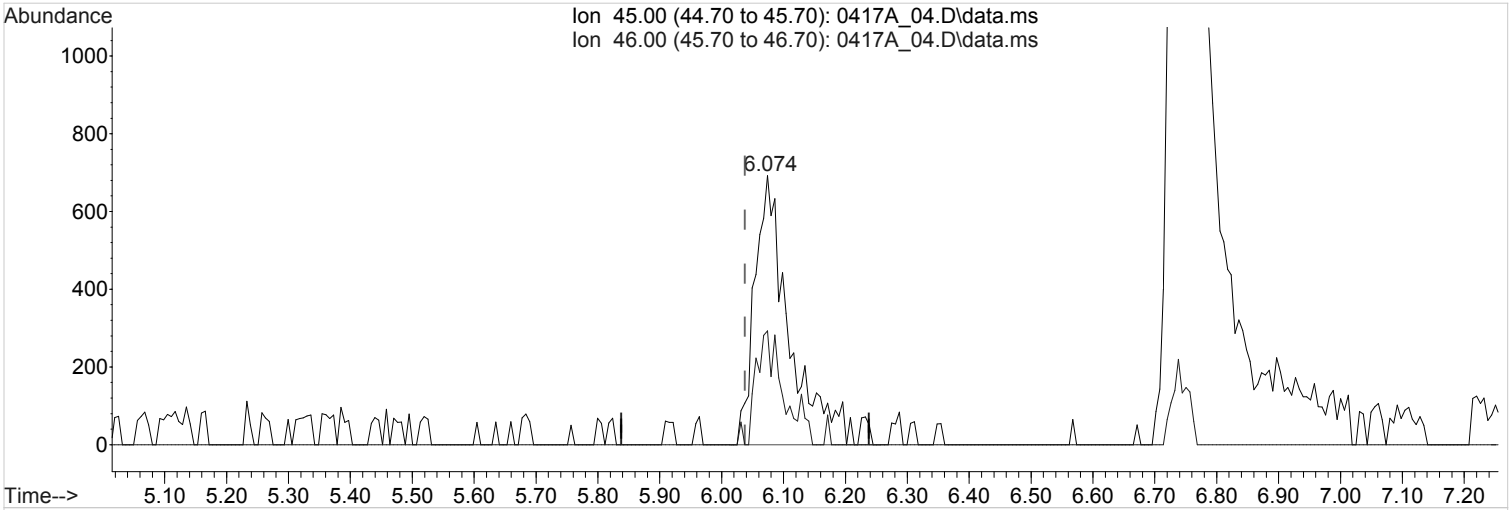
response 0

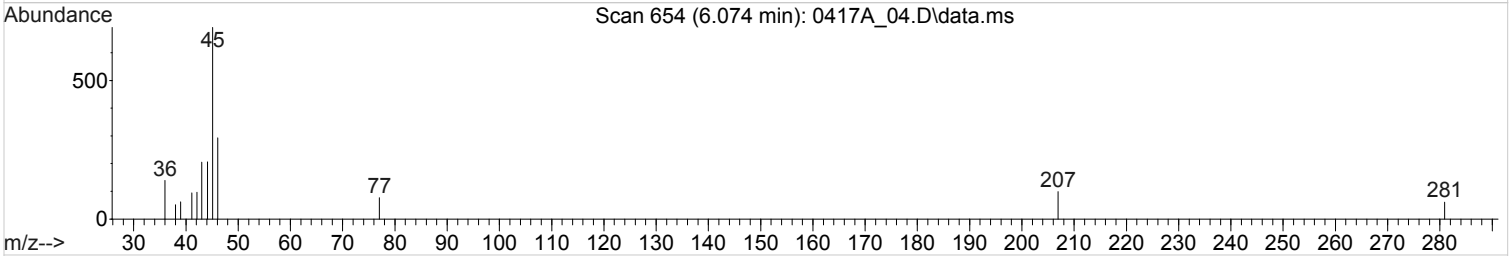
Ion	Exp%	Act%
45.00	100	0.00
46.00	39.40	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

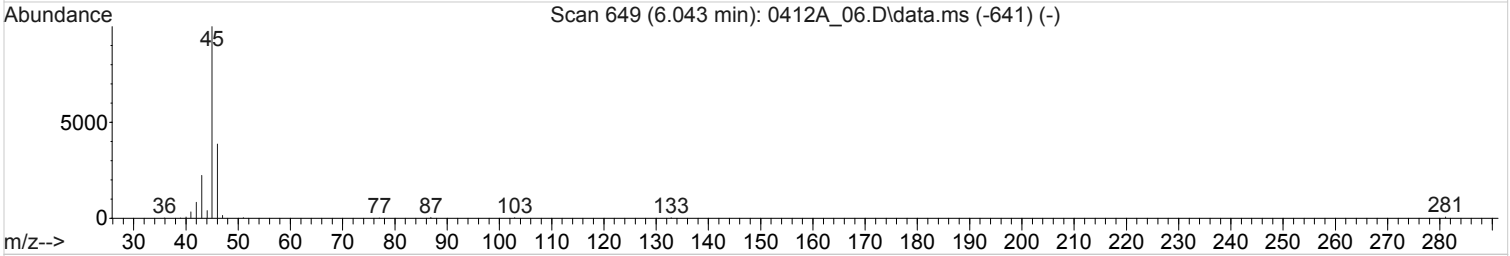
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_04.D
Acq On : 17 Apr 2018 2:39 pm
Operator : 564
Sample : STD AMS 0.19 ppbv 18D17266
Misc : 18D17267
ALS Vial : 4 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 08:55:58 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 08:55:50 2018
Response via : Initial Calibration







TIC: 0417A_04.D\data.ms

(14) Ethanol (T,M)

6.074min (+0.036) 0.1988935 ppbv m

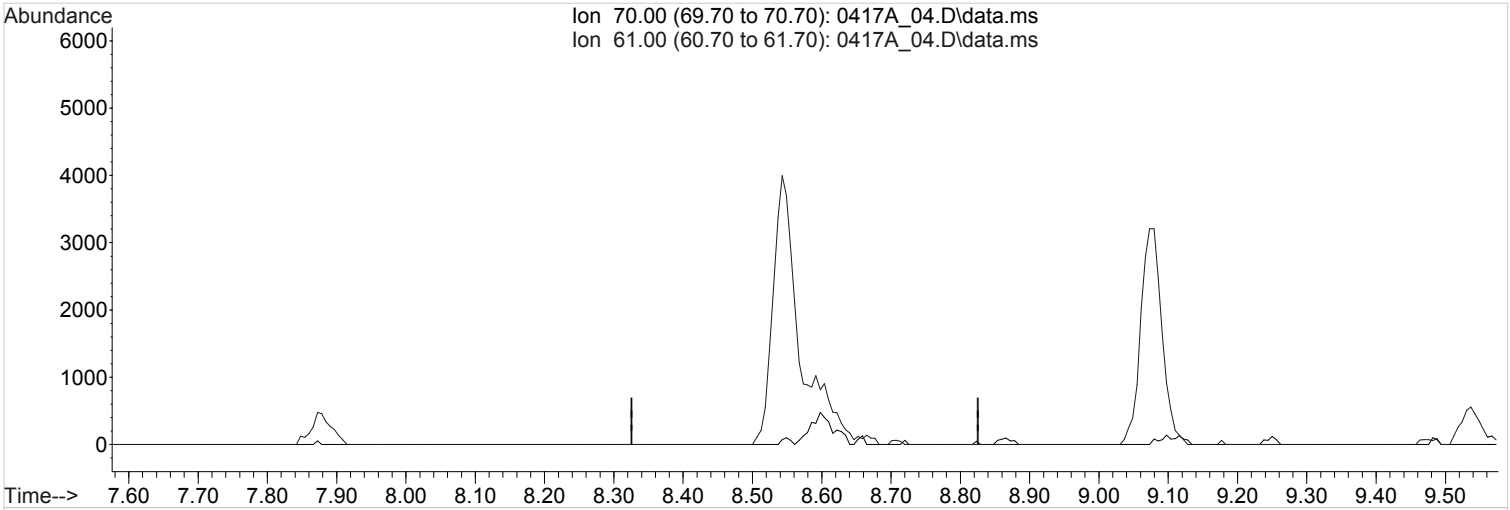
response 27537

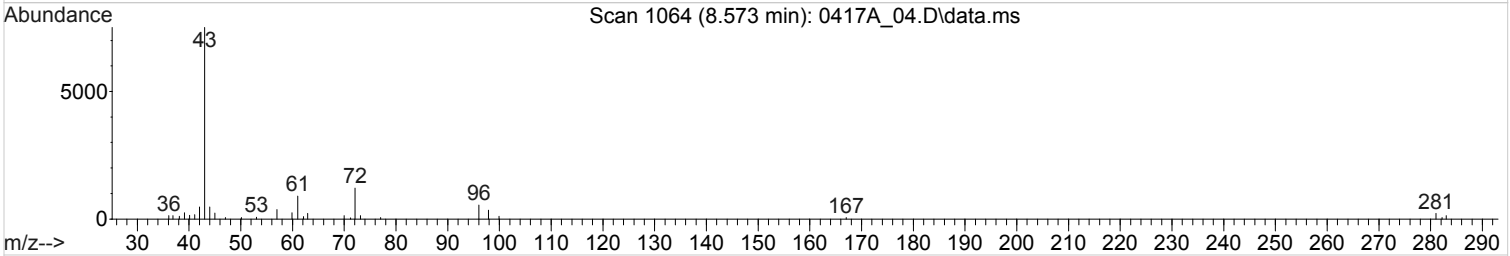
Ion	Exp%	Act%
45.00	100	100
46.00	39.40	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

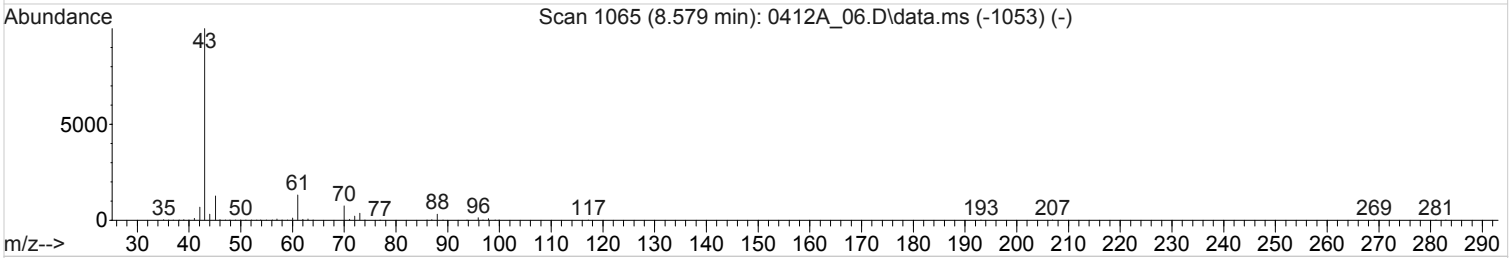
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_04.D
Acq On : 17 Apr 2018 2:39 pm
Operator : 564
Sample : STD AMS 0.19 ppbv 18D17266
Misc : 18D17267
ALS Vial : 4 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 08:55:58 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 08:55:50 2018
Response via : Initial Calibration







TIC: 0417A_04.D\data.ms

(28) ETHYL ACETATE

8.576min (-8.576) 0.0000000 ppbv

Qvalue = 0

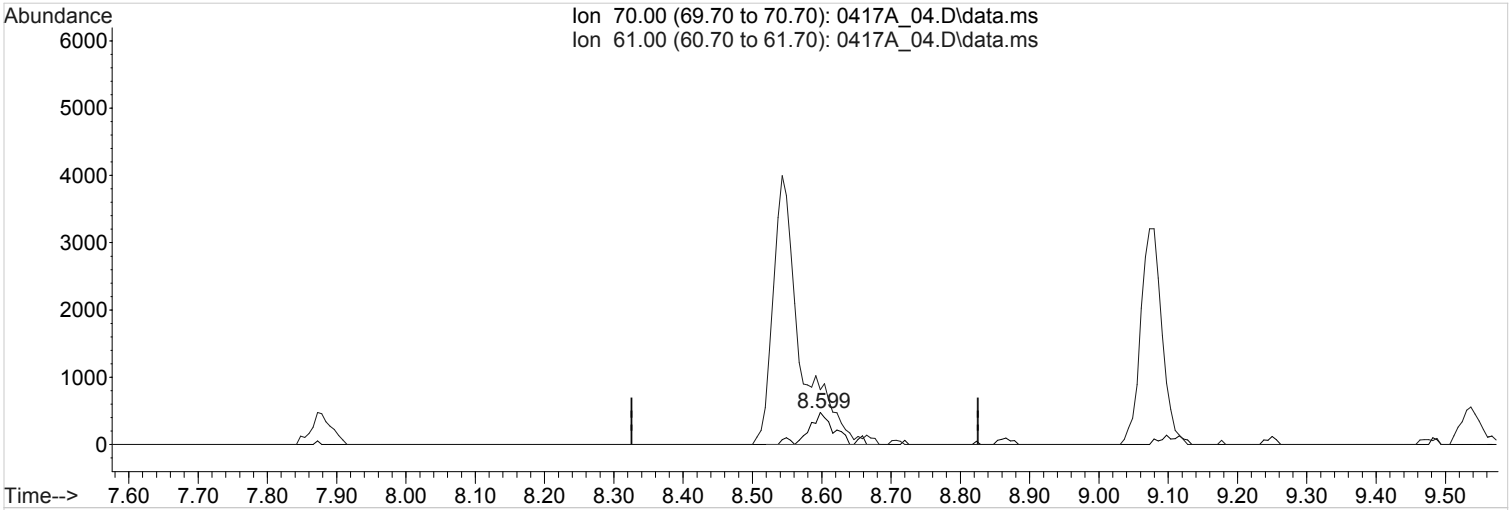
response 0

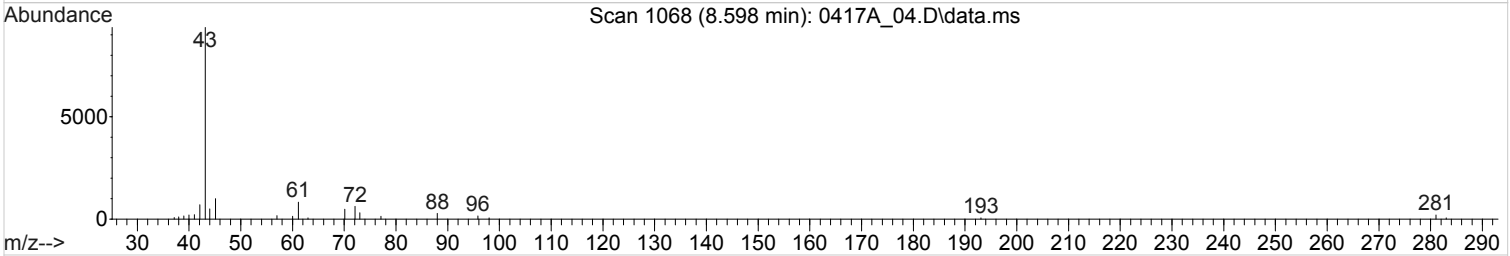
Ion	Exp%	Act%
70.00	100	0.00
61.00	831.70	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

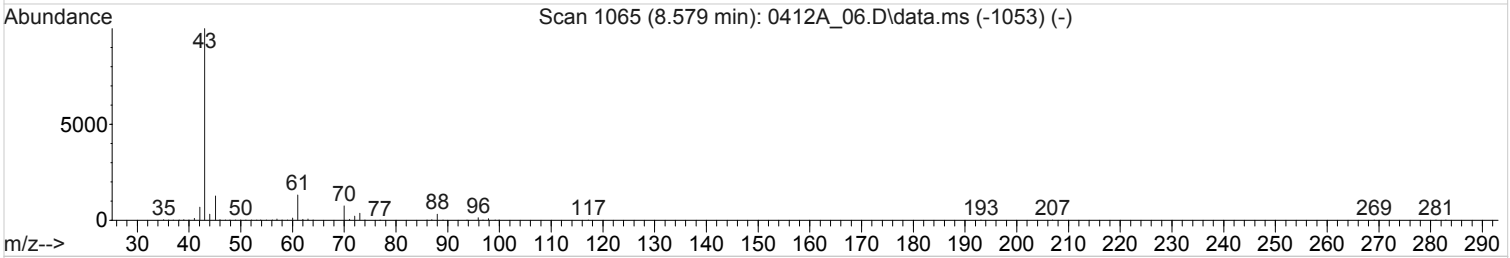
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_04.D
Acq On : 17 Apr 2018 2:39 pm
Operator : 564
Sample : STD AMS 0.19 ppbv 18D17266
Misc : 18D17267
ALS Vial : 4 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 08:55:58 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 08:55:50 2018
Response via : Initial Calibration







TIC: 0417A_04.D\data.ms

(28) ETHYL ACETATE

8.598min (+0.022) 0.1348214 ppbv m

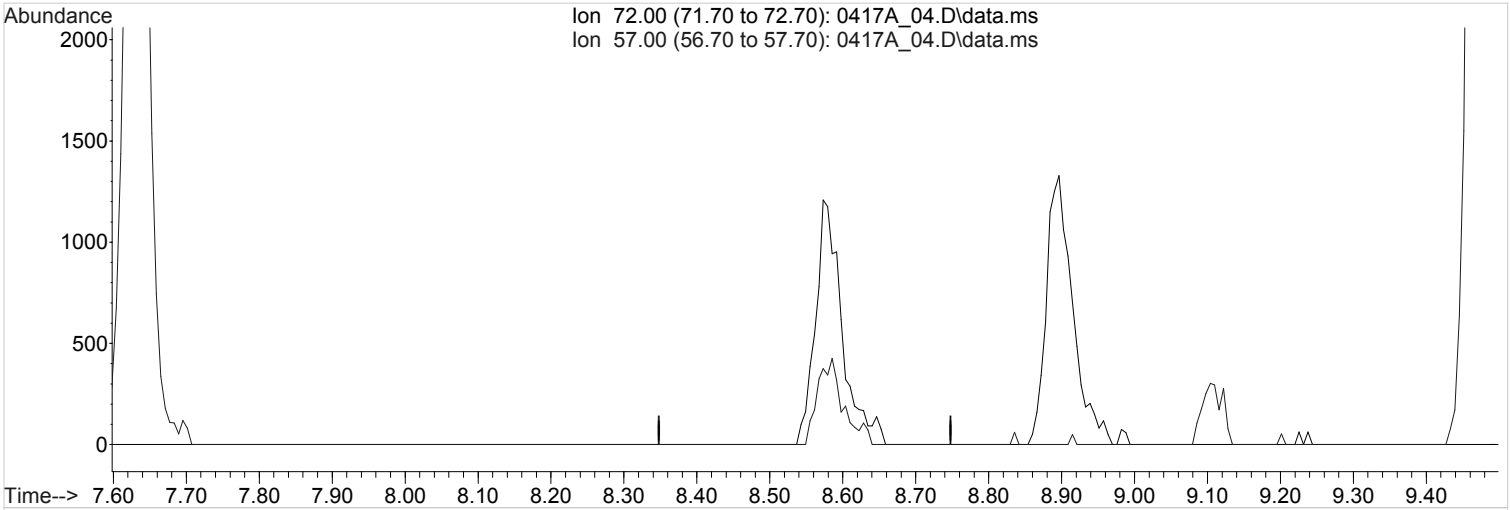
response 12400

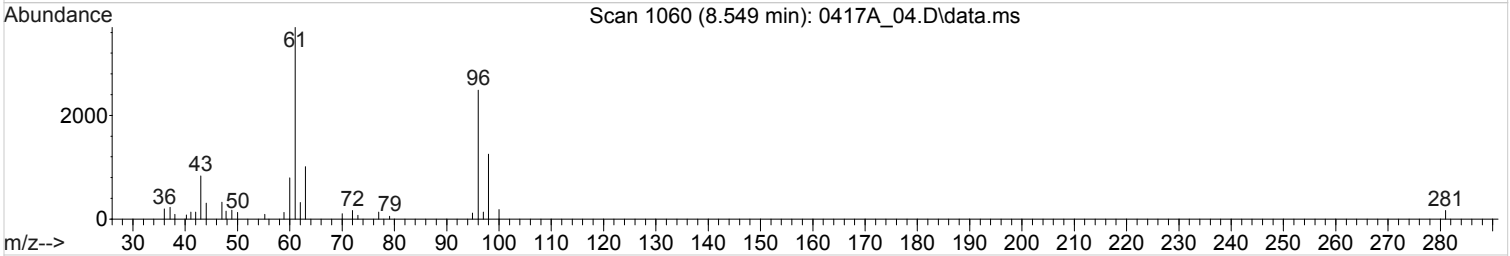
Ion	Exp%	Act%
70.00	100	100
61.00	831.70	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

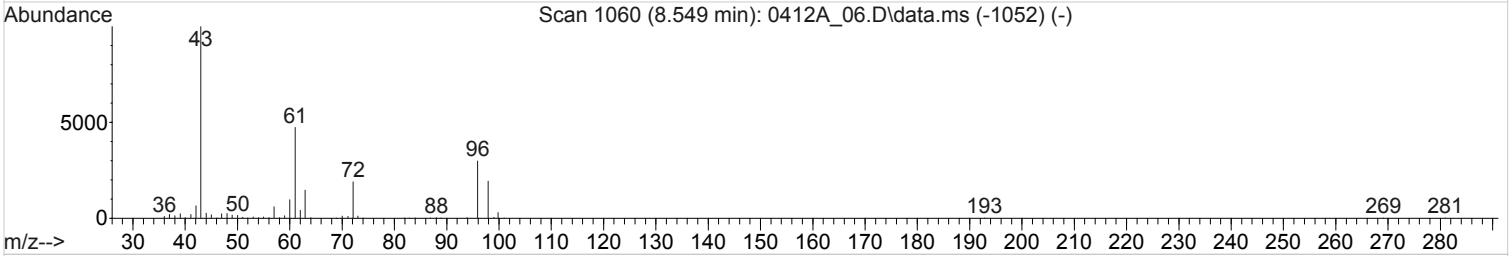
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_04.D
Acq On : 17 Apr 2018 2:39 pm
Operator : 564
Sample : STD AMS 0.19 ppbv 18D17266
Misc : 18D17267
ALS Vial : 4 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 08:55:58 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 08:55:50 2018
Response via : Initial Calibration







TIC: 0417A_04.D\data.ms

(29) 2-Butanone (MEK) (T,M)

8.548min (-8.548) 0.0000000 ppbv

Qvalue = 0

response 0

Ion	Exp%	Act%
72.00	100	0.00
57.00	36.20	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_05.D
Acq On : 17 Apr 2018 3:26 pm
Operator : 564
Sample : STD AMS 0.31 ppbv 18D17266
Misc : 18D17267
ALS Vial : 5 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 08:59:20 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 08:57:43 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Bromochloromethane	8.809	130	1740212	4.0000000	ppbv		0.00
37) 1,4-Difluorobenzene	9.891	114	7456630	4.0000000	ppbv		0.00
58) Chlorobenzene-d5	13.116	117	5905979	4.0000000	ppbv		0.00
System Monitoring Compounds							
69) 1,4-Bromofluorobenzene	14.285	95	3613649	3.8999735	ppbv		0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 97.50%				
Target Compounds							Qvalue
2) Propene	4.062	41	129803	0.3019021	ppbv		99
3) 1,1-DIFLUOROETHANE	4.074	65	72261	0.3033198	ppbv		94
4) Dichlorodifluoromethane	4.125	85	223667	0.3371068	ppbv		99
5) CHLORODIFLUOROMETHANE	4.154	67	28656m	0.2997789	ppbv		
6) 1,2-Dichlorotetrafluor...	4.352	85	227111	0.3034088	ppbv		98
7) Chloromethane	4.457	50	121040	0.2967555	ppbv		100
8) Vinyl Chloride	4.654	62	121363	0.3079013	ppbv		99
9) 1,3-Butadiene	4.714	39	126872	0.3120377	ppbv		99
10) Bromomethane	5.199	94	75626	0.3131933	ppbv		95
11) Chloroethane	5.357	64	61860	0.3143672	ppbv		100
12) Vinyl Bromide	5.632	106	69597	0.3093864	ppbv		96
13) Trichlorofluoromethane	5.711	101	180568	0.2980444	ppbv		98
14) Ethanol	6.074	45	45567m	0.3256710	ppbv		
15) 1,1,2-Trichlorotrifluo...	6.400	101	153168	0.3079679	ppbv		97
16) 1,1-Dichloroethene	6.430	61	173099	0.2921676	ppbv		97
17) Acetone	6.557	43	180474	0.2933450	ppbv		94
18) 2-Propanol	6.739	45	251508	0.2869357	ppbv	#	59
19) Carbon Disulfide	6.725	76	188859	0.3055924	ppbv		98
20) Allyl Chloride	6.897	41	201534	0.2944079	ppbv	#	54
21) Methylene Chloride	7.064	49	164468	0.3012239	ppbv		98
22) TERT-BUTYL ALCOHOL	7.229	59	298506	0.2934187	ppbv		96
23) Methyl Tert-Butyl Ether	7.389	73	316732	0.2911503	ppbv		100
24) Trans-1,2-Dichloroethene	7.374	96	73471	0.3065264	ppbv		96
25) n-Hexane	7.634	57	200477	0.3091976	ppbv		96
26) 1,1-Dichloroethane	7.883	63	221057	0.3055734	ppbv	#	72
27) Vinyl Acetate	7.927	43	300885	0.2713530	ppbv	#	83
28) ETHYL ACETATE	8.592	70	22297m	0.2872158	ppbv		
29) 2-Butanone (MEK)	8.570	72	51178	0.2811409	ppbv		99
30) cis-1,2-Dichloroethene	8.543	61	162717m	0.2441245	ppbv		
31) Tetrahydrofuran	8.892	42	191660	0.2878063	ppbv		95
32) Chloroform	8.870	83	196017	0.2942710	ppbv		100
33) Cyclohexane	9.112	84	147587	0.3147896	ppbv		93
34) 1,1,1-Trichloroethane	9.080	97	184060	0.3000846	ppbv		99
35) Carbon Tetrachloride	9.247	117	164168	0.3002332	ppbv		100
36) 2,2,4-Trimethylpentane	9.486	57	678731	0.3046645	ppbv		98
38) Benzene	9.480	78	333179	0.3075124	ppbv		98
39) 1,2-Dichloroethane	9.539	62	163079	0.2916657	ppbv		97
40) Heptane	9.679	43	304308	0.2923916	ppbv	#	64
41) Trichloroethene	10.187	95	123629	0.3029328	ppbv		99
42) TERT-AMYL ETHYL ETHER	10.400	73	122361	0.3115854	ppbv		90
43) METHYL CYCLOHEXANE	10.365	83	195519	0.3051729	ppbv		97
44) 1,2-Dichloropropane	10.452	63	140984	0.2955705	ppbv		94
45) Methyl Methacrylate	10.525	69	121017	0.3018453	ppbv		97
46) 1,4-Dioxane	10.624	88	67246	0.3020629	ppbv	#	76
47) Bromodichloromethane	10.732	83	214191	0.2982783	ppbv		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_05.D
Acq On : 17 Apr 2018 3:26 pm
Operator : 564
Sample : STD AMS 0.31 ppbv 18D17266
Misc : 18D17267
ALS Vial : 5 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 08:59:20 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 08:57:43 2018
Response via : Initial Calibration

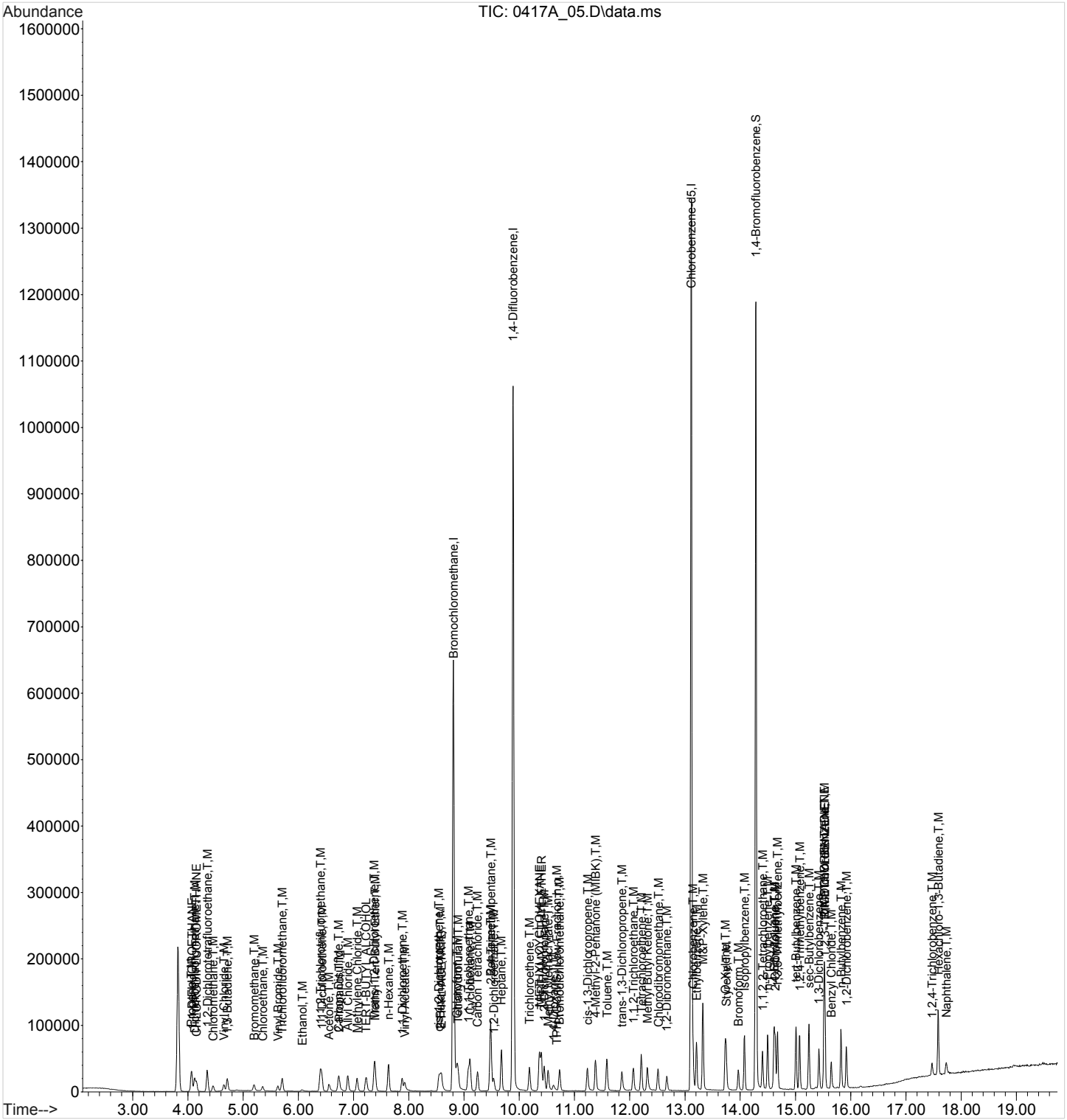
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
48)	cis-1,3-Dichloropropene	11.235	75	196191	0.2771860	ppbv		98
49)	4-Methyl-2-Pentanone (...	11.381	43	421689	0.2933225	ppbv		99
50)	Toluene	11.588	91	354266	0.2988010	ppbv		98
51)	trans-1,3-Dichloropropene	11.861	75	174552	0.3026433	ppbv		92
52)	1,1,2-Trichloroethane	12.065	97	110727	0.2999933	ppbv		98
53)	Tetrachloroethene	12.212	166	152580	0.3100757	ppbv		97
54)	Methyl Butyl Ketone	12.321	43	349696	0.2938410	ppbv	#	97
55)	Chlorodibromomethane	12.515	129	158854	0.2883718	ppbv		99
56)	1,2-Dibromoethane	12.673	107	156630	0.2998241	ppbv		100
57)	Chlorobenzene	13.147	112	257390	0.3053276	ppbv	#	80
59)	Ethylbenzene	13.212	91	449051	0.2934547	ppbv		99
60)	M&P-Xylene	13.327	91	698987	0.5391889	ppbv		99
61)	O-Xylene	13.731	91	344666	0.2953884	ppbv		99
62)	Styrene	13.751	104	234993	0.2808260	ppbv		98
63)	Bromoform	13.967	173	132287	0.2801542	ppbv		99
64)	Isopropylbenzene	14.079	105	486855	0.3018144	ppbv	#	89
65)	1,1,2,2-Tetrachloroethane	14.406	83	290516	0.3039721	ppbv		99
66)	n-Propylbenzene	14.499	91	624137	0.3008611	ppbv		99
67)	4-Ethyltoluene	14.614	105	487871	0.2982382	ppbv		100
68)	2-Chlorotoluene	14.635	91	404794	0.2920481	ppbv		100
70)	1,3,5-Trimethylbenzene	14.677	105	415096	0.2988847	ppbv		98
71)	tert-Butylbenzene	15.013	119	389642	0.3040795	ppbv		98
72)	1,2,4-Trimethylbenzene	15.079	105	415913	0.3036931	ppbv		98
73)	sec-Butylbenzene	15.246	105	647918	0.3106906	ppbv		99
74)	1,3-Dichlorobenzene	15.428	146	208510	0.2988298	ppbv		97
75)	1,4-Dichlorobenzene	15.525	146	202373	0.2859776	ppbv		99
76)	1,2,3-TRIMETHYLBENZENE	15.535	105	427872	0.3097460	ppbv		97
77)	DICYCLOPENTADIENE	15.521	66	771119	0.2935610	ppbv		99
78)	Benzyl Chloride	15.652	91	295742	0.2788359	ppbv		98
79)	n-Butylbenzene	15.827	91	487707	0.2935819	ppbv		99
80)	1,2-Dichlorobenzene	15.925	146	213844	0.3179410	ppbv		98
81)	1,2,4-Trichlorobenzene	17.475	180	54761	0.2175645	ppbv	#	77
82)	Hexachloro-1,3-Butadiene	17.588	225	158225	0.3187744	ppbv		100
83)	Naphthalene	17.732	128	157070	0.2351697	ppbv	#	78
84)	TPH (GC/MS) Low Fraction	10.675	TIC	49704695m	14.1779880	ppbv		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_05.D
Acq On : 17 Apr 2018 3:26 pm
Operator : 564
Sample : STD AMS 0.31 ppbv 18D17266
Misc : 18D17267
ALS Vial : 5 Sample Multiplier: 1
InstName : AIRMS2

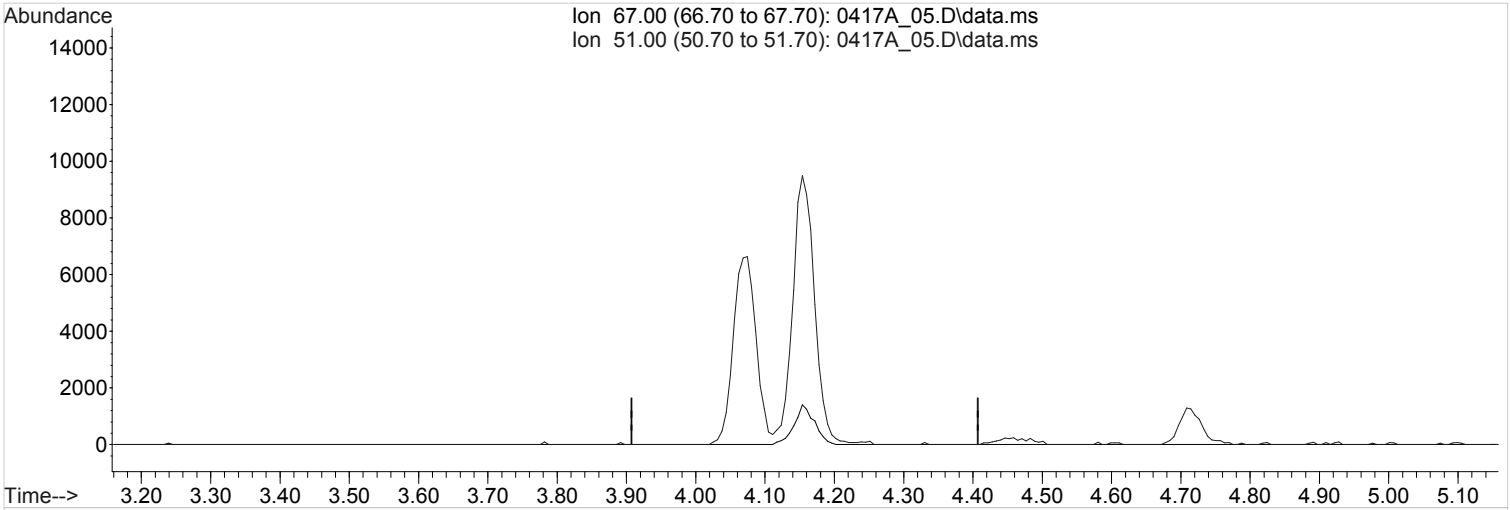
Quant Time: Apr 18 08:59:20 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 08:57:43 2018
Response via : Initial Calibration

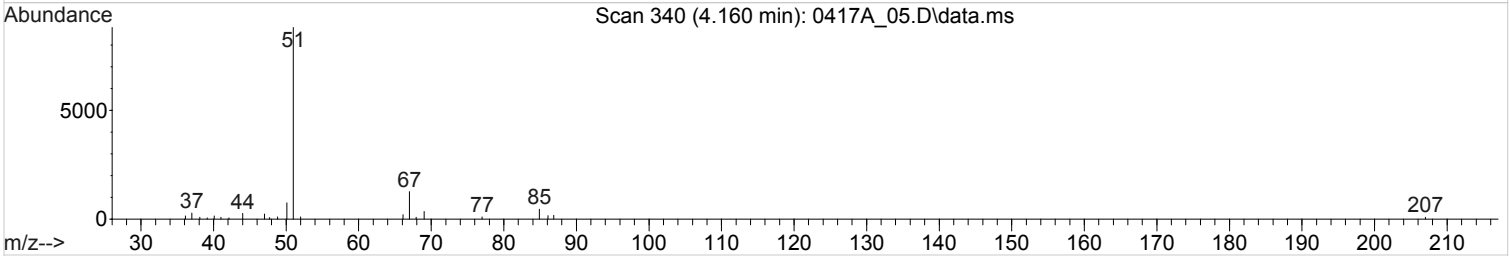


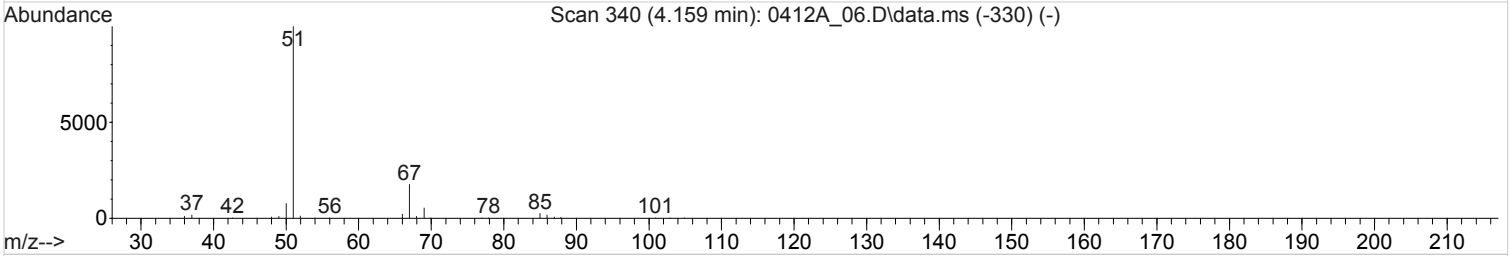
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_05.D
Acq On : 17 Apr 2018 3:26 pm
Operator : 564
Sample : STD AMS 0.31 ppbv 18D17266
Misc : 18D17267
ALS Vial : 5 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 08:57:48 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 08:57:43 2018
Response via : Initial Calibration







TIC: 0417A_05.D\data.ms

(5) CHLORODIFLUOROMETHANE

4.157min (-4.157) 0.0000000 ppbv

Qvalue = 0

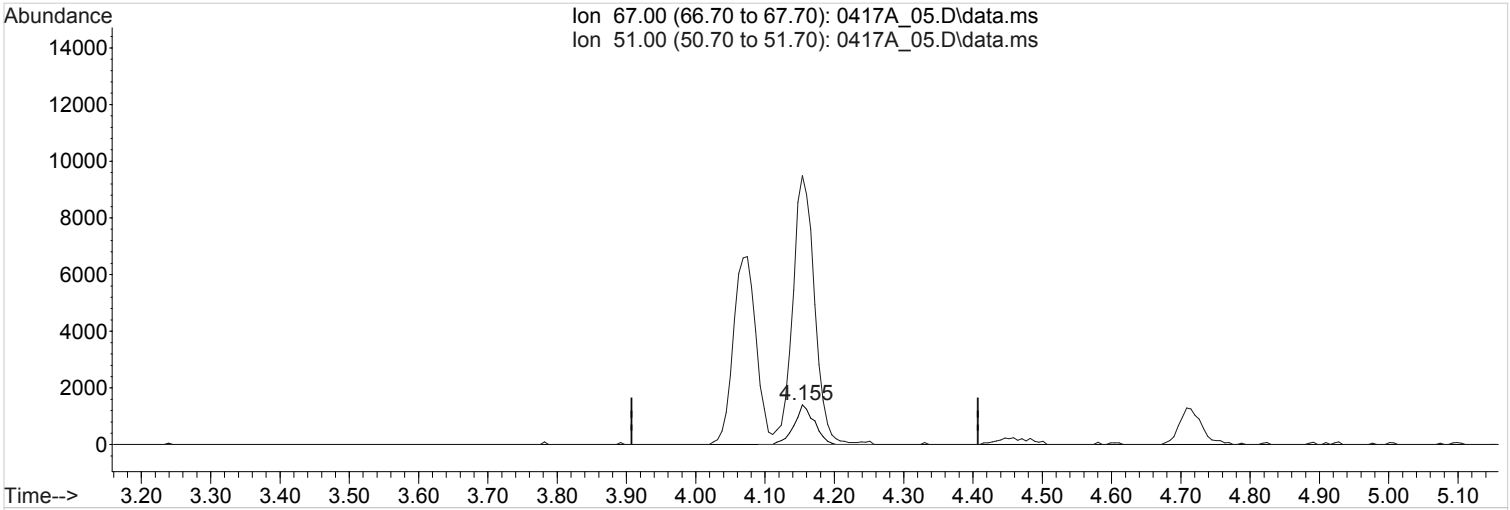
response 0

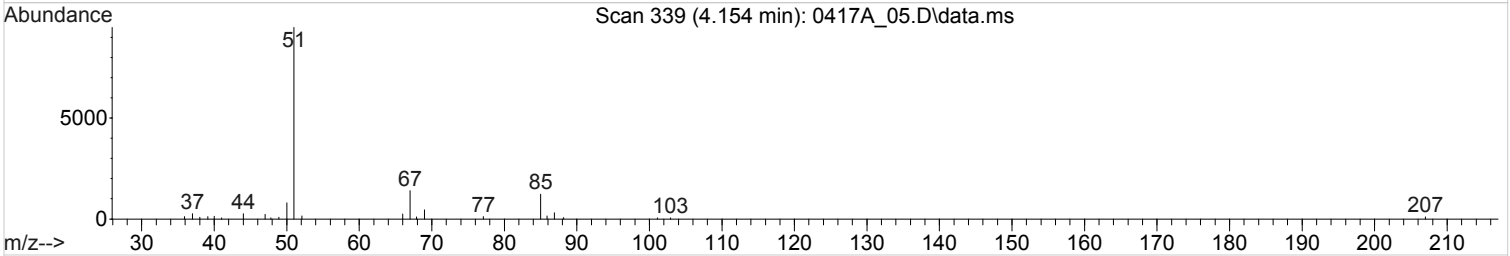
Ion	Exp%	Act%
67.00	100	0.00
51.00	722.40	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

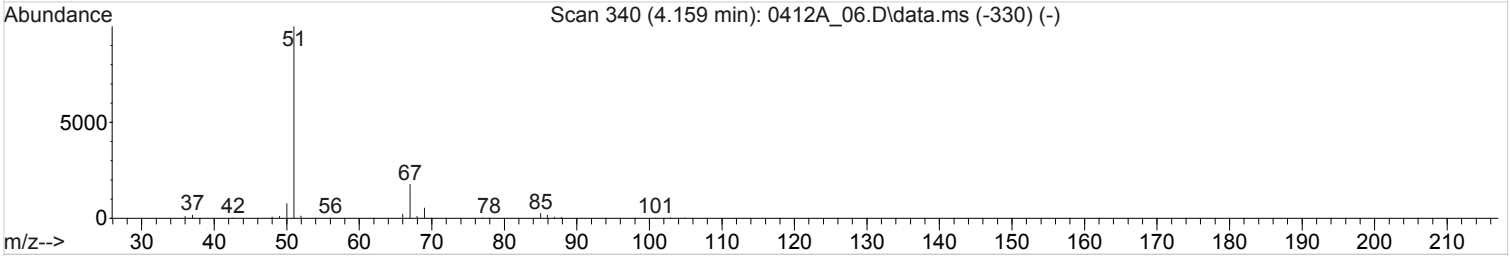
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_05.D
Acq On : 17 Apr 2018 3:26 pm
Operator : 564
Sample : STD AMS 0.31 ppbv 18D17266
Misc : 18D17267
ALS Vial : 5 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 08:57:48 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 08:57:43 2018
Response via : Initial Calibration







TIC: 0417A_05.D\data.ms

(5) CHLORODIFLUOROMETHANE

4.154min (-0.004) 0.2997789 ppbv m

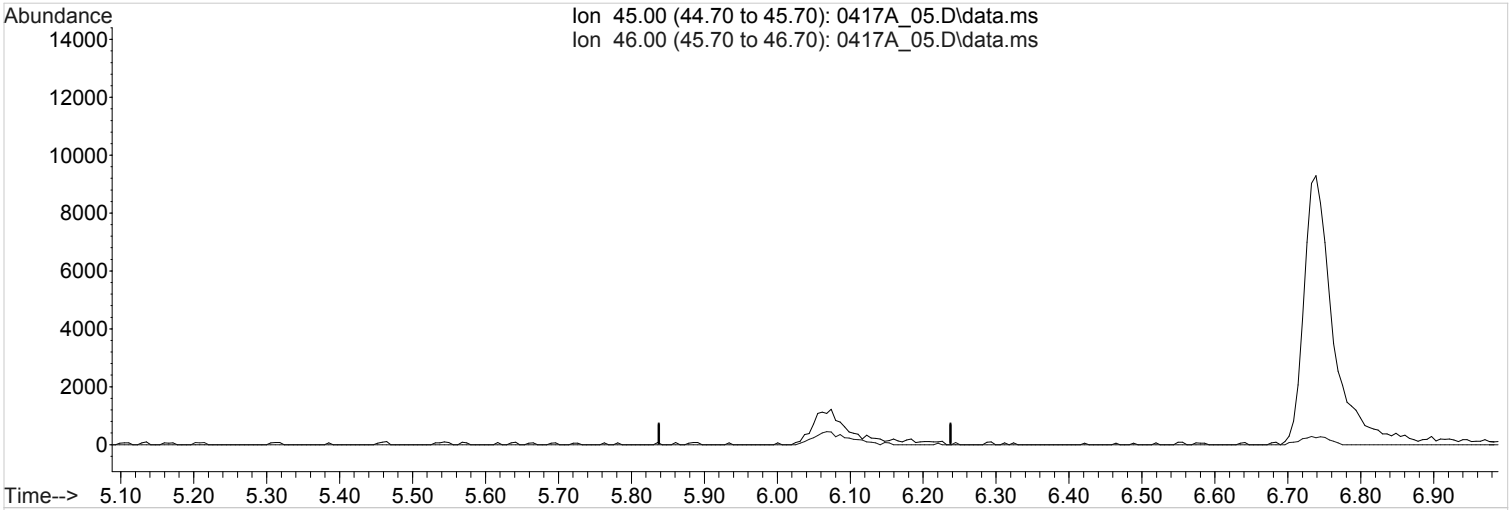
response 28656

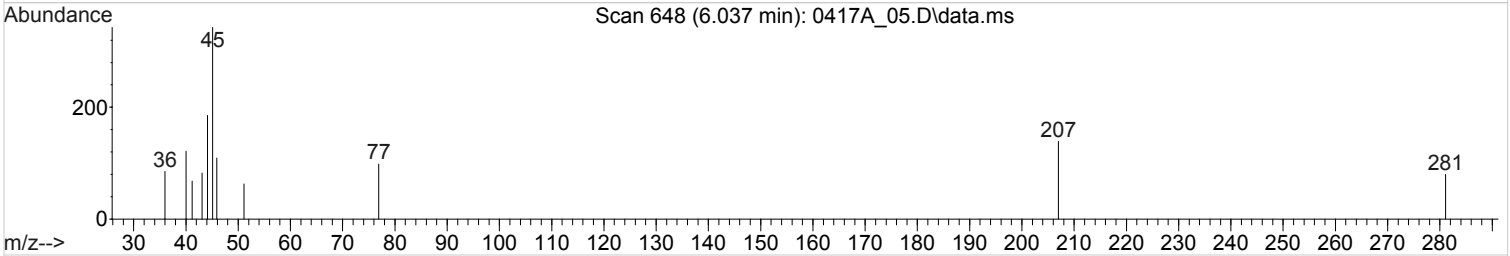
Ion	Exp%	Act%
67.00	100	100
51.00	722.40	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

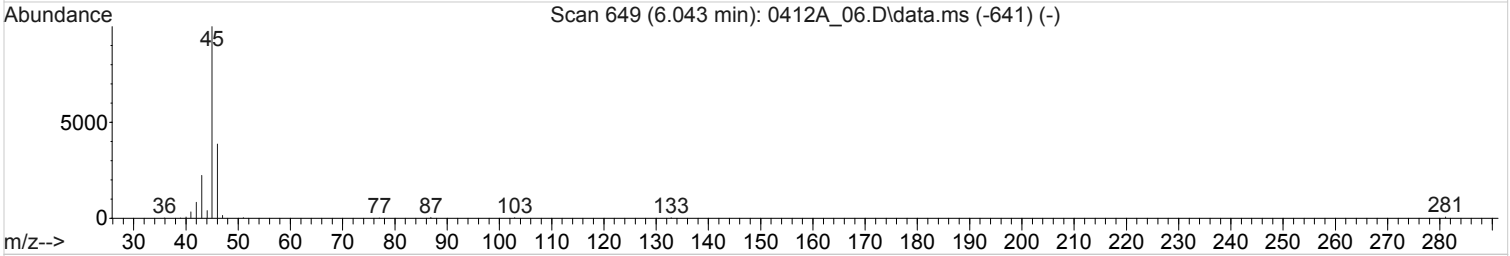
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_05.D
Acq On : 17 Apr 2018 3:26 pm
Operator : 564
Sample : STD AMS 0.31 ppbv 18D17266
Misc : 18D17267
ALS Vial : 5 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 08:57:48 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 08:57:43 2018
Response via : Initial Calibration







TIC: 0417A_05.D\data.ms

(14) Ethanol (T,M)

6.038min (-6.038) 0.0000000 ppbv

Qvalue = 0

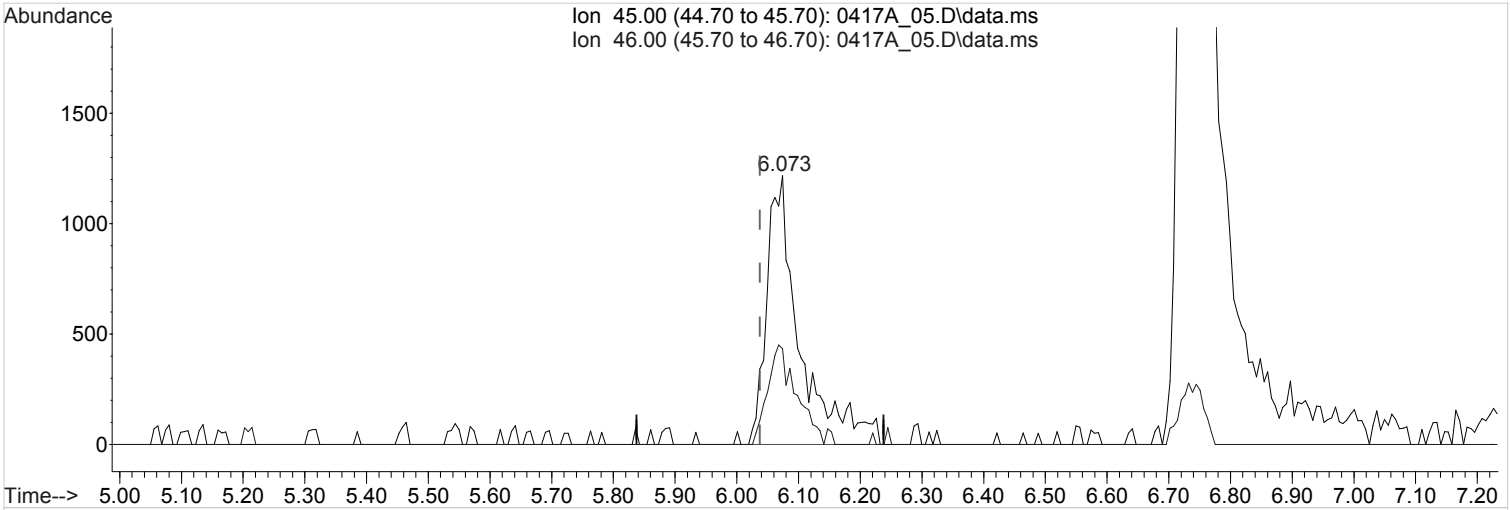
response 0

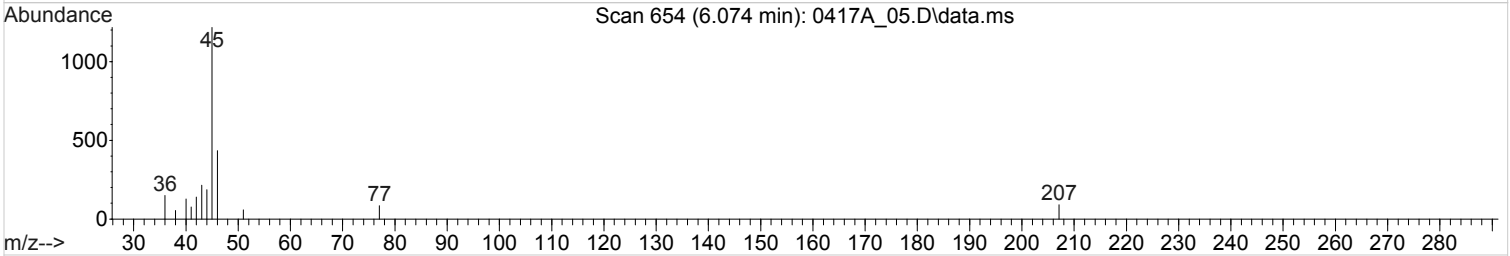
Ion	Exp%	Act%
45.00	100	0.00
46.00	39.40	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

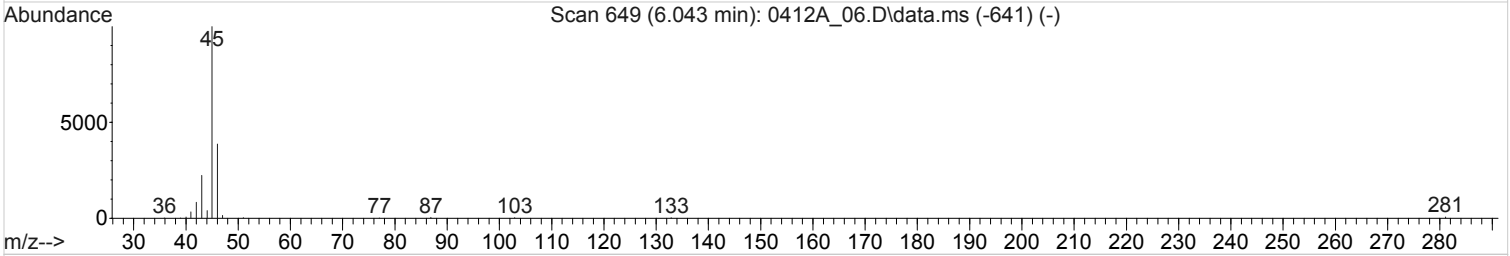
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_05.D
Acq On : 17 Apr 2018 3:26 pm
Operator : 564
Sample : STD AMS 0.31 ppbv 18D17266
Misc : 18D17267
ALS Vial : 5 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 08:57:48 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 08:57:43 2018
Response via : Initial Calibration







TIC: 0417A_05.D\data.ms

(14) Ethanol (T,M)

6.074min (+0.036) 0.3256710 ppbv m

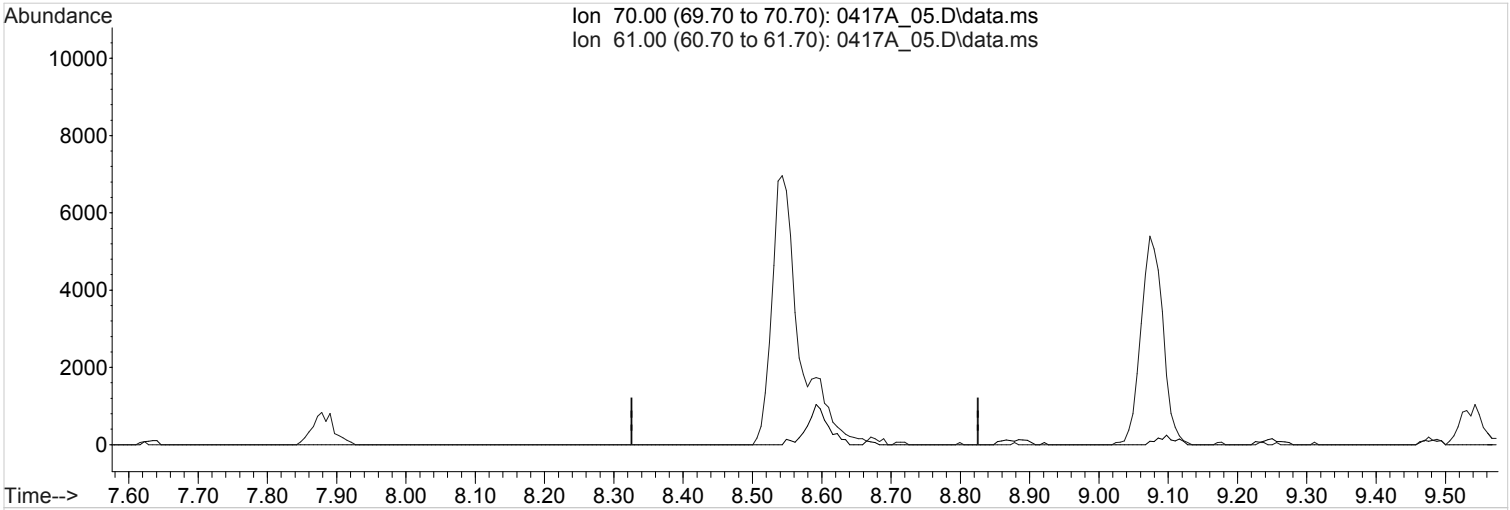
response 45567

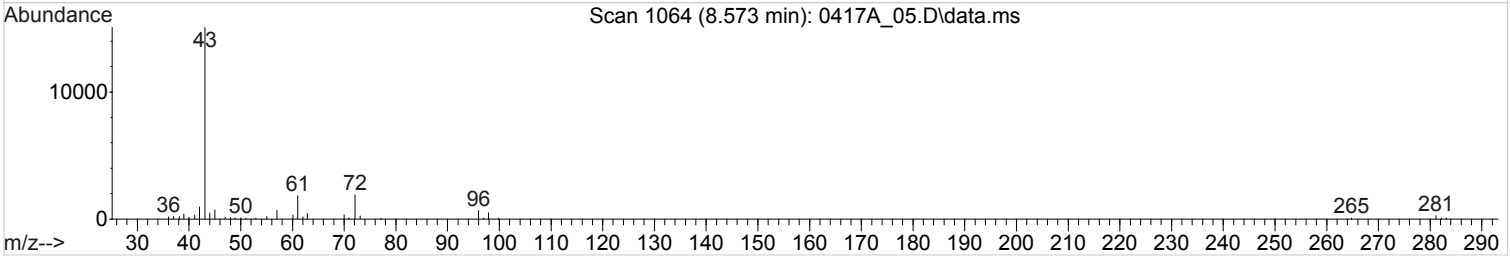
Ion	Exp%	Act%
45.00	100	100
46.00	39.40	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

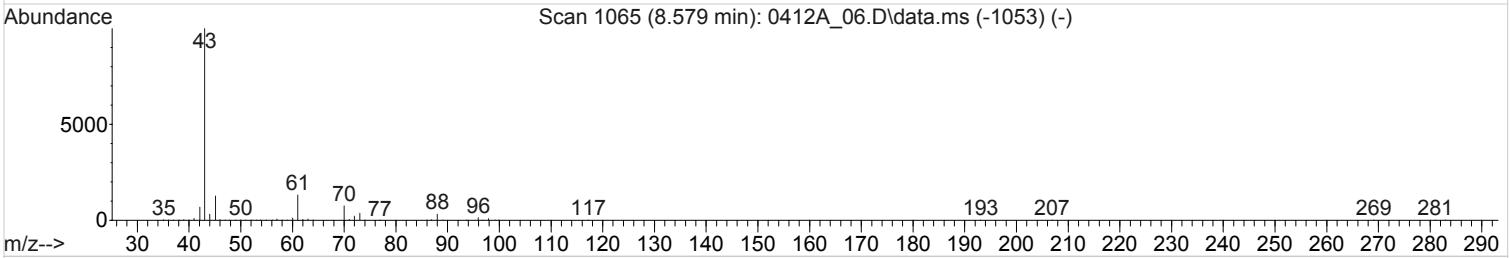
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_05.D
Acq On : 17 Apr 2018 3:26 pm
Operator : 564
Sample : STD AMS 0.31 ppbv 18D17266
Misc : 18D17267
ALS Vial : 5 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 08:57:48 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 08:57:43 2018
Response via : Initial Calibration







TIC: 0417A_05.D\data.ms

(28) ETHYL ACETATE

8.576min (-8.576) 0.0000000 ppbv

Qvalue = 0

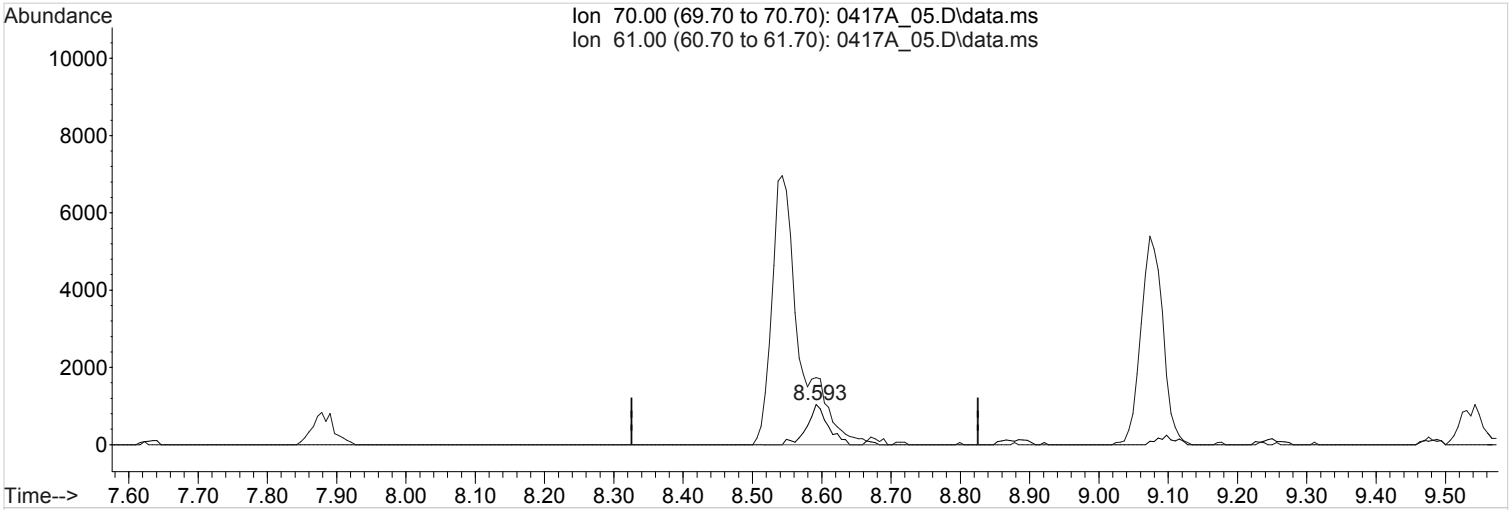
response 0

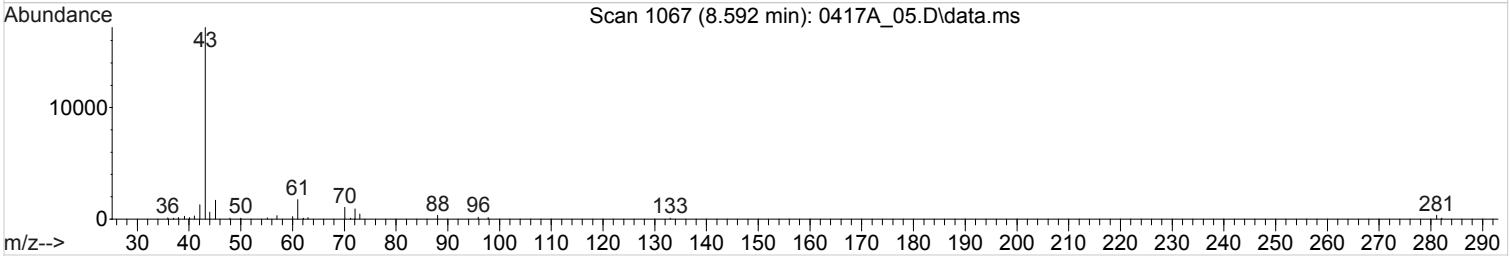
Ion	Exp%	Act%
70.00	100	0.00
61.00	831.70	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

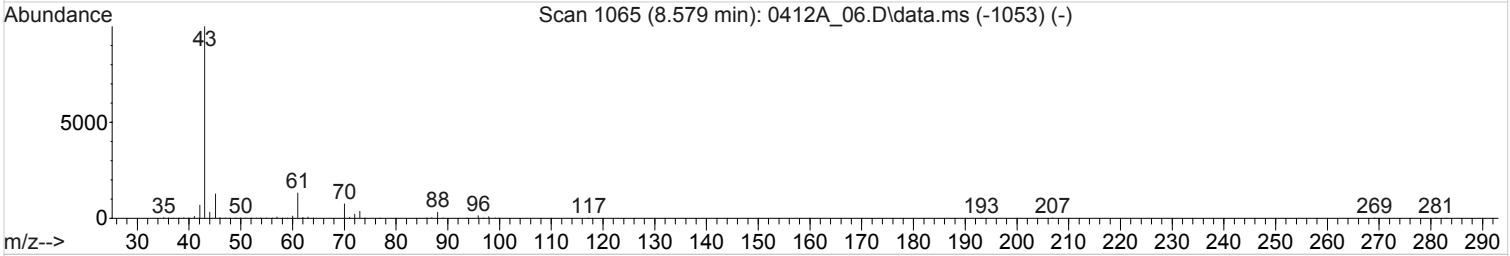
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_05.D
Acq On : 17 Apr 2018 3:26 pm
Operator : 564
Sample : STD AMS 0.31 ppbv 18D17266
Misc : 18D17267
ALS Vial : 5 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 08:57:48 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 08:57:43 2018
Response via : Initial Calibration







TIC: 0417A_05.D\data.ms

(28) ETHYL ACETATE

8.592min (+0.016) 0.2872158 ppbv m

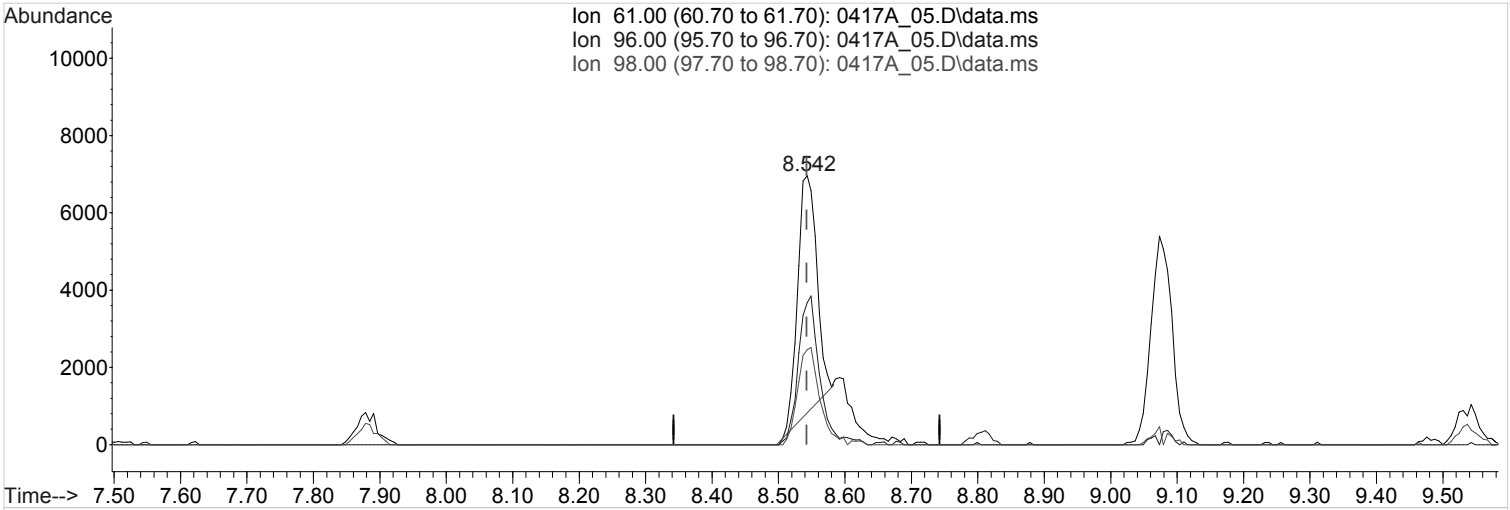
response 22297

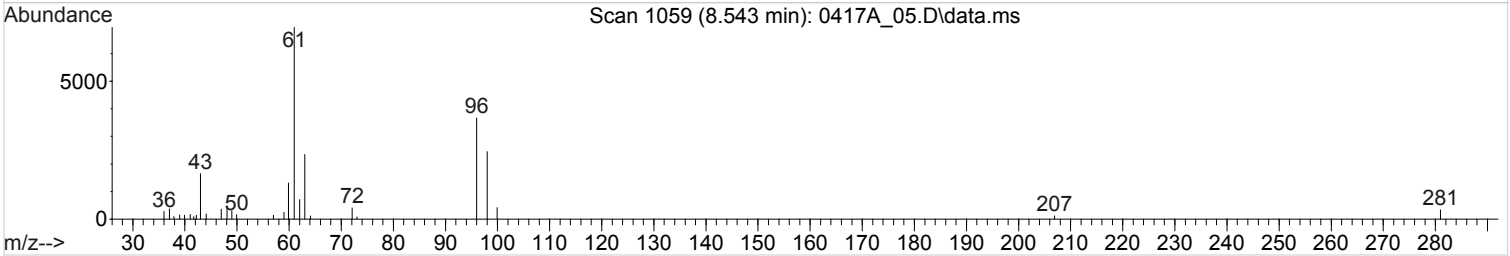
Ion	Exp%	Act%
70.00	100	100
61.00	831.70	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

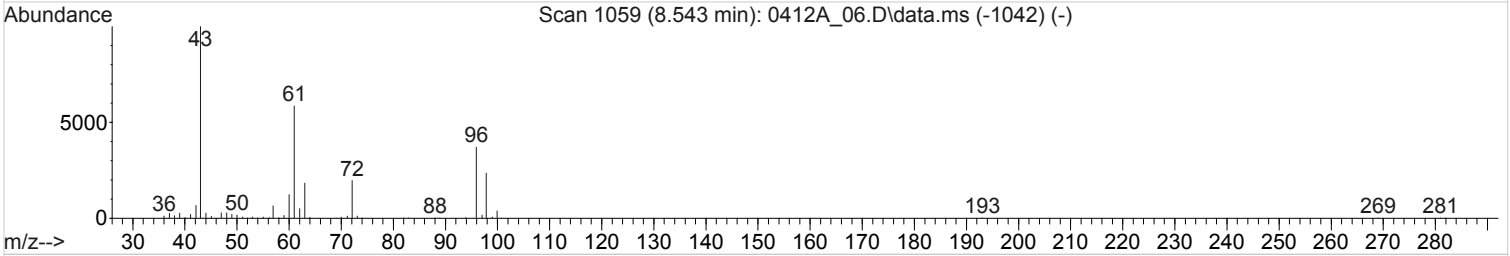
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_05.D
Acq On : 17 Apr 2018 3:26 pm
Operator : 564
Sample : STD AMS 0.31 ppbv 18D17266
Misc : 18D17267
ALS Vial : 5 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 08:57:48 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 08:57:43 2018
Response via : Initial Calibration







TIC: 0417A_05.D\data.ms

(30) cis-1,2-Dichloroethene (T,M)

8.544min (+0.002) 0.1790644 ppbv

Qvalue = 57

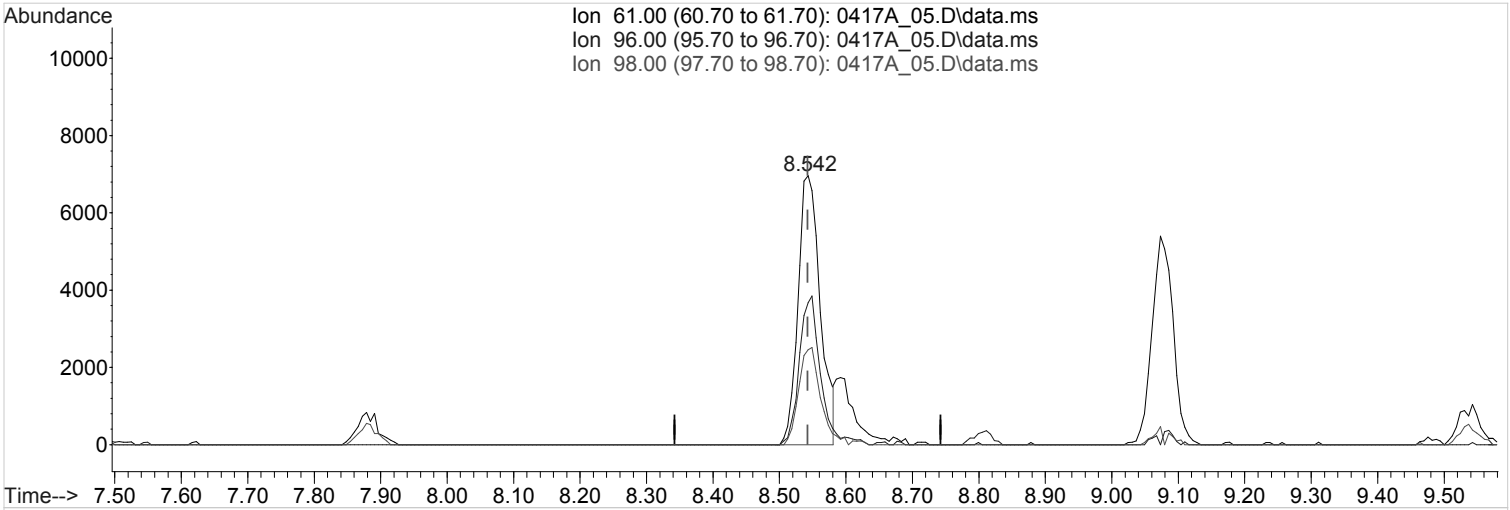
response 119352

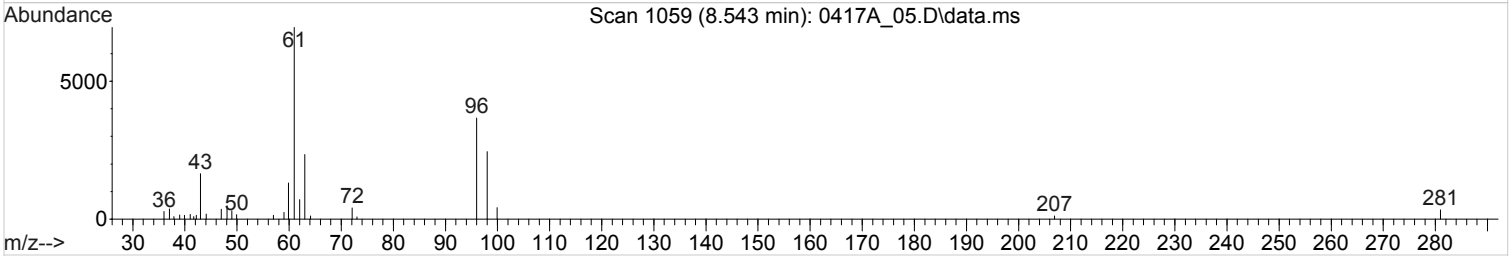
Ion	Exp%	Act%
61.00	100	100
96.00	43.60	71.87#
98.00	27.20	49.24#
0.00	0.00	0.00

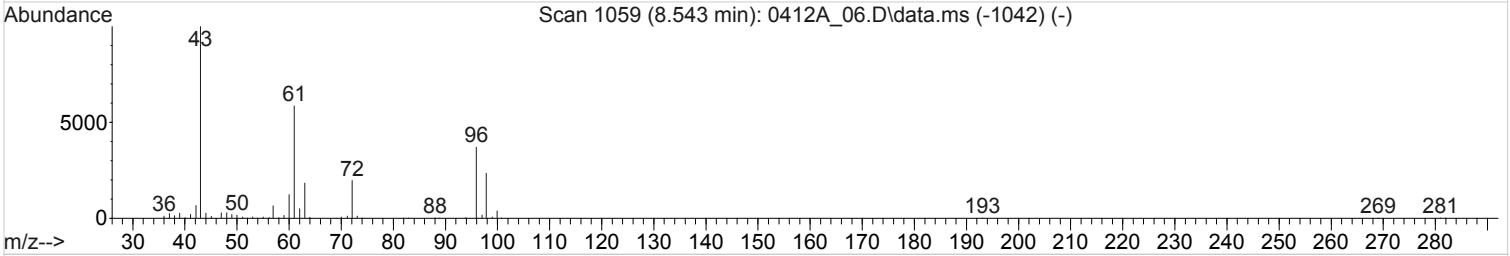
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_05.D
Acq On : 17 Apr 2018 3:26 pm
Operator : 564
Sample : STD AMS 0.31 ppbv 18D17266
Misc : 18D17267
ALS Vial : 5 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 08:57:48 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 08:57:43 2018
Response via : Initial Calibration







TIC: 0417A_05.D\data.ms

(30) cis-1,2-Dichloroethene (T,M)

8.543min (+0.001) 0.2441245 ppbv m

response 162717

Ion	Exp%	Act%
61.00	100	100
96.00	43.60	52.72#
98.00	27.20	36.12#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_06.D
Acq On : 17 Apr 2018 4:12 pm
Operator : 564
Sample : STD AMS 0.63 ppbv 18D17266
Misc : 18D17267
ALS Vial : 6 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 09:00:26 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 08:59:26 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.809	130	1735074	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	9.892	114	7460255	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	13.117	117	5895937	4.0000000	ppbv	0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	14.286	95	3645458	3.9741305	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery	= 99.35%		
Target Compounds						Qvalue
2) Propene	4.063	41	284735	0.6700472	ppbv	98
3) 1,1-DIFLUOROETHANE	4.074	65	154613	0.6556281	ppbv	100
4) Dichlorodifluoromethane	4.125	85	508815	0.7473654	ppbv	98
5) CHLORODIFLUOROMETHANE	4.160	67	61541	0.6528872	ppbv	97
6) 1,2-Dichlorotetrafluor...	4.353	85	514229	0.6939369	ppbv	99
7) Chloromethane	4.458	50	272475	0.6796901	ppbv	99
8) Vinyl Chloride	4.653	62	274331	0.6996250	ppbv	98
9) 1,3-Butadiene	4.714	39	277098	0.6820353	ppbv	96
10) Bromomethane	5.199	94	159668	0.6609307	ppbv	98
11) Chloroethane	5.355	64	136800	0.6940051	ppbv	97
12) Vinyl Bromide	5.632	106	152240	0.6792140	ppbv	100
13) Trichlorofluoromethane	5.709	101	408782	0.6855440	ppbv	100
14) Ethanol	6.056	45	79094m	0.5575751	ppbv	
15) 1,1,2-Trichlorotrifluo...	6.402	101	343260	0.6937356	ppbv	99
16) 1,1-Dichloroethene	6.429	61	400338	0.6909677	ppbv	99
17) Acetone	6.550	43	404172	0.6709069	ppbv	95
18) 2-Propanol	6.730	45	536513	0.6295124	ppbv #	59
19) Carbon Disulfide	6.725	76	415717	0.6778771	ppbv	99
20) Allyl Chloride	6.896	41	450847	0.6718266	ppbv	100
21) Methylene Chloride	7.065	49	360659	0.6688137	ppbv	99
22) TERT-BUTYL ALCOHOL	7.218	59	629860	0.6322301	ppbv	98
23) Methyl Tert-Butyl Ether	7.382	73	699168	0.6579362	ppbv	98
24) Trans-1,2-Dichloroethene	7.373	96	158642	0.6663146	ppbv	96
25) n-Hexane	7.635	57	440012	0.6812326	ppbv	98
26) 1,1-Dichloroethane	7.881	63	484677	0.6751817	ppbv	100
27) Vinyl Acetate	7.918	43	732440	0.6912308	ppbv	100
28) ETHYL ACETATE	8.590	70	53451	0.7078972	ppbv #	12
29) 2-Butanone (MEK)	8.563	72	116213	0.6608013	ppbv	98
30) cis-1,2-Dichloroethene	8.545	61	451648	0.7314232	ppbv	99
31) Tetrahydrofuran	8.884	42	433861	0.6694110	ppbv	99
32) Chloroform	8.869	83	453684	0.6948628	ppbv	97
33) Cyclohexane	9.112	84	317354	0.6754139	ppbv	98
34) 1,1,1-Trichloroethane	9.080	97	409823	0.6773586	ppbv	97
35) Carbon Tetrachloride	9.248	117	373134	0.6916802	ppbv	98
36) 2,2,4-Trimethylpentane	9.487	57	1541162	0.6978383	ppbv	99
38) Benzene	9.480	78	741608	0.6859808	ppbv	99
39) 1,2-Dichloroethane	9.537	62	360254	0.6569517	ppbv	98
40) Heptane	9.679	43	703581	0.6887422	ppbv	98
41) Trichloroethene	10.187	95	268058	0.6615420	ppbv	97
42) TERT-AMYL ETHYL ETHER	10.398	73	256356	0.6513686	ppbv	95
43) METHYL CYCLOHEXANE	10.367	83	441519	0.6923968	ppbv	97
44) 1,2-Dichloropropane	10.454	63	323586	0.6887513	ppbv	98
45) Methyl Methacrylate	10.519	69	262231	0.6595346	ppbv	100
46) 1,4-Dioxane	10.611	88	142521	0.6453891	ppbv #	72
47) Bromodichloromethane	10.732	83	476671	0.6719491	ppbv	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_06.D
Acq On : 17 Apr 2018 4:12 pm
Operator : 564
Sample : STD AMS 0.63 ppbv 18D17266
Misc : 18D17267
ALS Vial : 6 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 09:00:26 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 08:59:26 2018
Response via : Initial Calibration

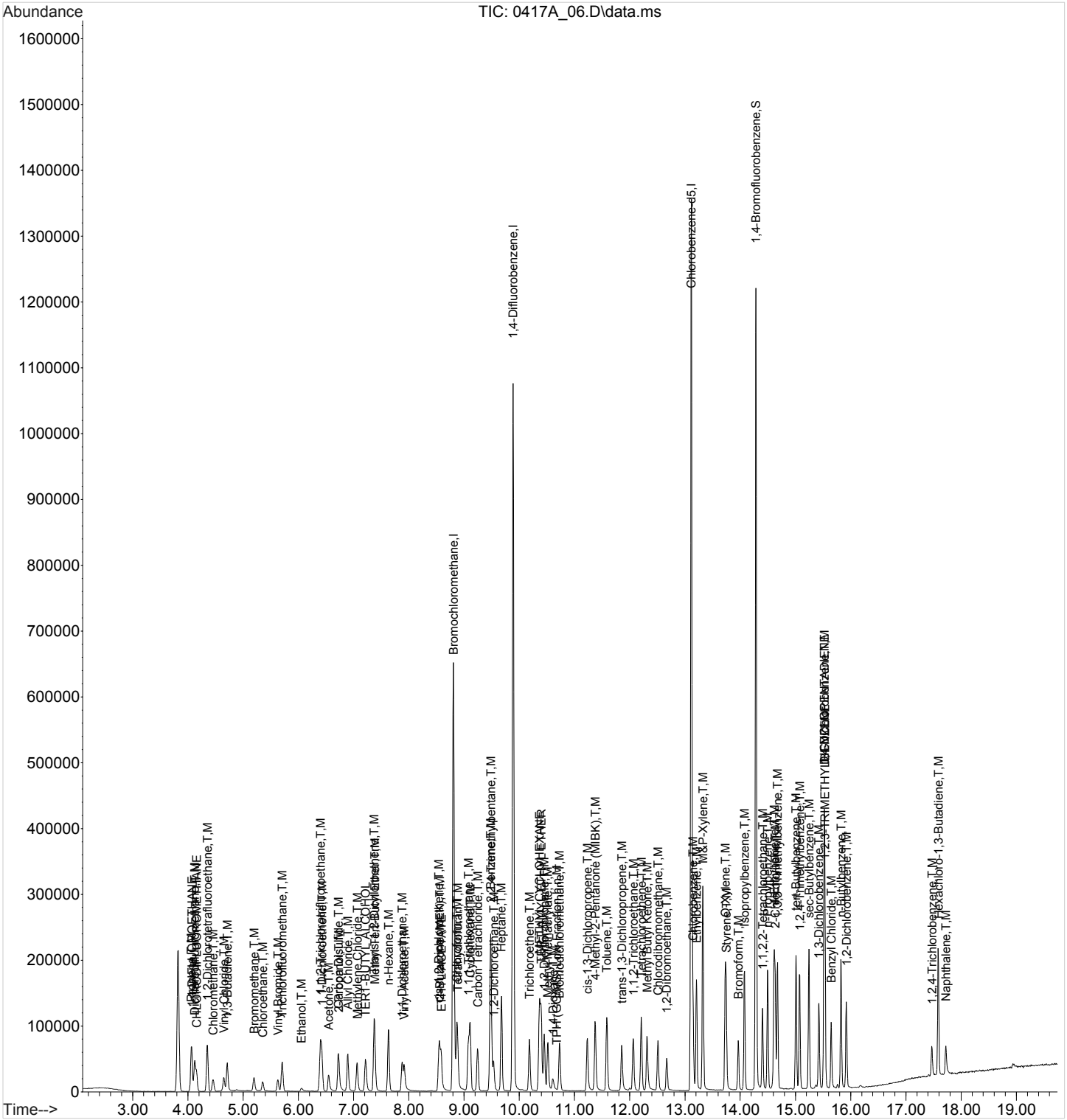
	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
48)	cis-1,3-Dichloropropene	11.233	75	474289	0.6942637 ppbv	96
49)	4-Methyl-2-Pentanone (...	11.376	43	928953	0.6576492 ppbv	99
50)	Toluene	11.587	91	813966	0.6945602 ppbv	99
51)	trans-1,3-Dichloropropene	11.857	75	383525	0.6699424 ppbv	97
52)	1,1,2-Trichloroethane	12.066	97	250010	0.6843896 ppbv	99
53)	Tetrachloroethene	12.212	166	314352	0.6384691 ppbv	98
54)	Methyl Butyl Ketone	12.315	43	779017	0.6658402 ppbv	99
55)	Chlorodibromomethane	12.513	129	370362	0.6880004 ppbv	99
56)	1,2-Dibromoethane	12.672	107	347944	0.6730816 ppbv	97
57)	Chlorobenzene	13.146	112	581719	0.6932098 ppbv #	89
59)	Ethylbenzene	13.211	91	1065372	0.7100379 ppbv	100
60)	M&P-Xylene	13.326	91	1604322	1.3022297 ppbv	100
61)	O-Xylene	13.730	91	816524	0.7121654 ppbv	100
62)	Styrene	13.749	104	556114	0.6872697 ppbv	99
63)	Bromoform	13.968	173	314451	0.6891914 ppbv	99
64)	Isopropylbenzene	14.079	105	1088177	0.6817384 ppbv	100
65)	1,1,2,2-Tetrachloroethane	14.406	83	612535	0.6461871 ppbv	99
66)	n-Propylbenzene	14.498	91	1353264	0.6599276 ppbv	99
67)	4-Ethyltoluene	14.614	105	1084156	0.6723831 ppbv	100
68)	2-Chlorotoluene	14.634	91	915396	0.6745809 ppbv	97
70)	1,3,5-Trimethylbenzene	14.677	105	903231	0.6593478 ppbv	100
71)	tert-Butylbenzene	15.014	119	840825	0.6615160 ppbv	96
72)	1,2,4-Trimethylbenzene	15.078	105	889182	0.6548125 ppbv	99
73)	sec-Butylbenzene	15.246	105	1383846	0.6642212 ppbv	99
74)	1,3-Dichlorobenzene	15.426	146	447217	0.6498339 ppbv	98
75)	1,4-Dichlorobenzene	15.524	146	442995	0.6436987 ppbv	98
76)	1,2,3-TRIMETHYLBENZENE	15.535	105	900098	0.6528893 ppbv	99
77)	DICYCLOPENTADIENE	15.521	66	1680792	0.6524923 ppbv	99
78)	Benzyl Chloride	15.650	91	674332	0.6589475 ppbv	99
79)	n-Butylbenzene	15.828	91	1078136	0.6617877 ppbv	99
80)	1,2-Dichlorobenzene	15.924	146	425336	0.6280992 ppbv	99
81)	1,2,4-Trichlorobenzene	17.473	180	120974	0.5345786 ppbv	97
82)	Hexachloro-1,3-Butadiene	17.589	225	314009	0.6277864 ppbv	98
83)	Naphthalene	17.725	128	346859	0.5657343 ppbv	98
84)	TPH (GC/MS) Low Fraction	10.675	TIC	101175115m	29.1704088 ppbv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_06.D
Acq On : 17 Apr 2018 4:12 pm
Operator : 564
Sample : STD AMS 0.63 ppbv 18D17266
Misc : 18D17267
ALS Vial : 6 Sample Multiplier: 1
InstName : AIRMS2

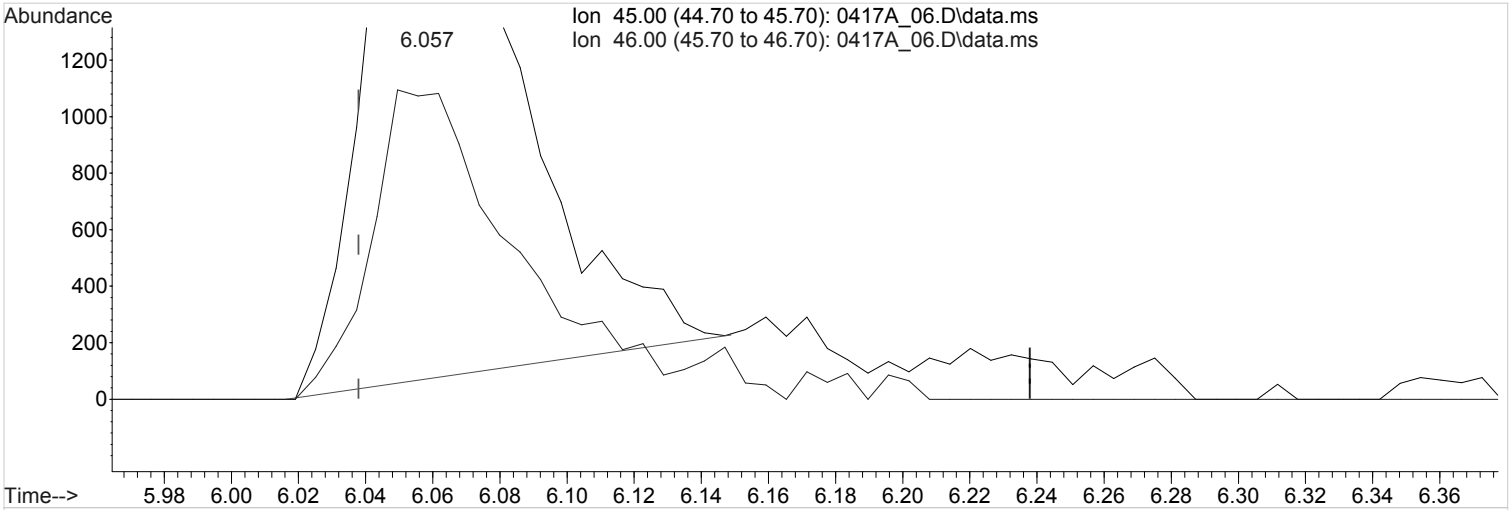
Quant Time: Apr 18 09:00:26 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 08:59:26 2018
Response via : Initial Calibration

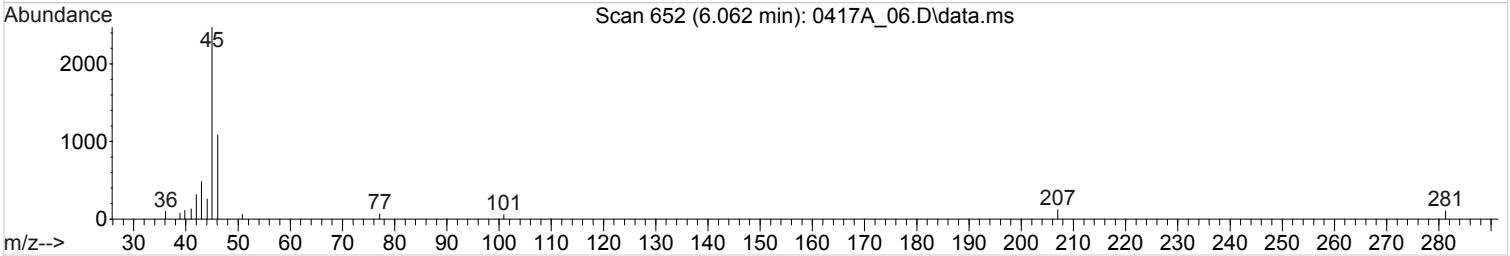


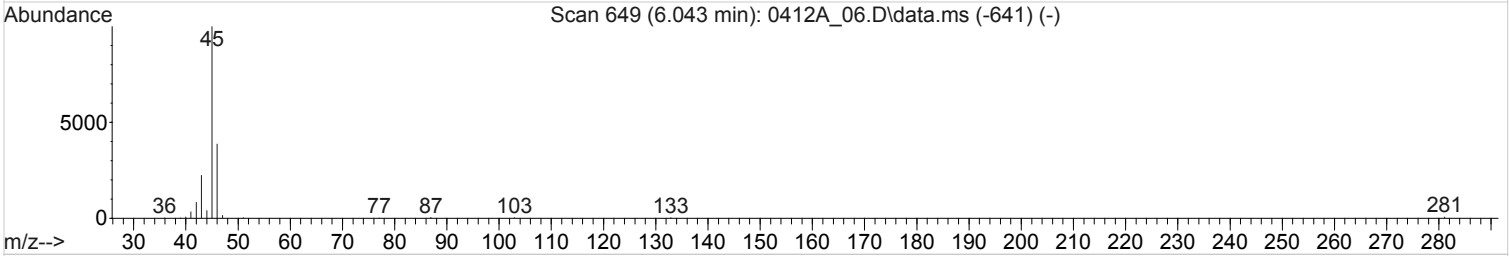
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_06.D
Acq On : 17 Apr 2018 4:12 pm
Operator : 564
Sample : STD AMS 0.63 ppbv 18D17266
Misc : 18D17267
ALS Vial : 6 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 08:59:31 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 08:59:26 2018
Response via : Initial Calibration







TIC: 0417A_06.D\data.ms

(14) Ethanol (T,M)

6.060min (+0.022) 0.4849217 ppbv

Qvalue = 95

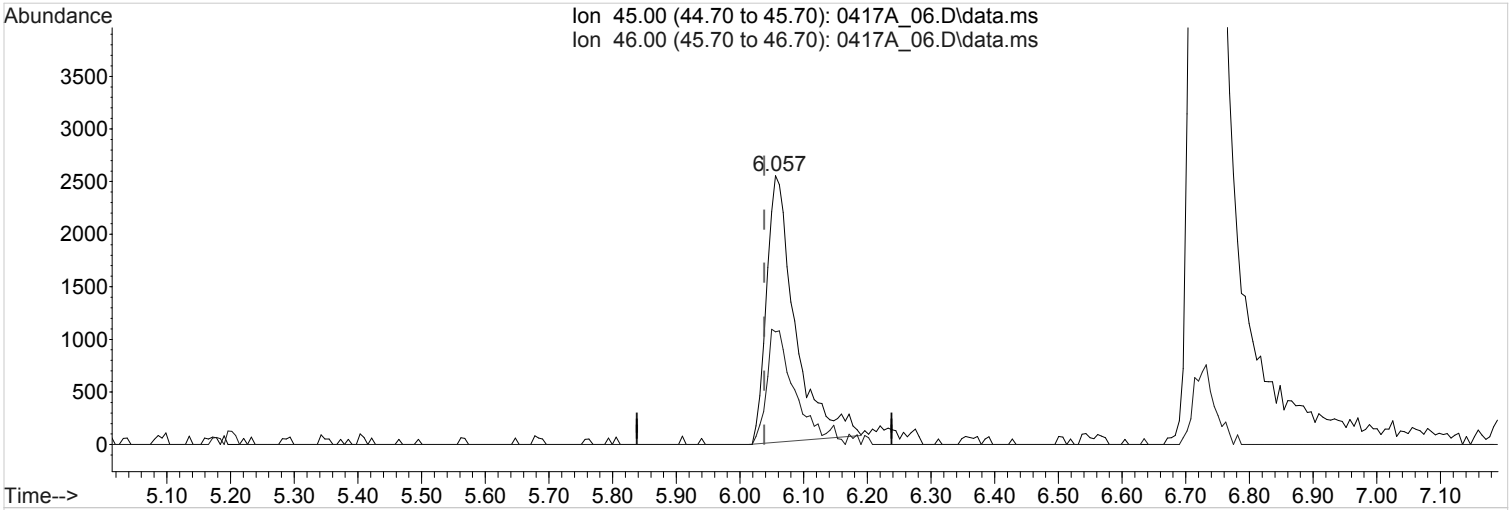
response 68788

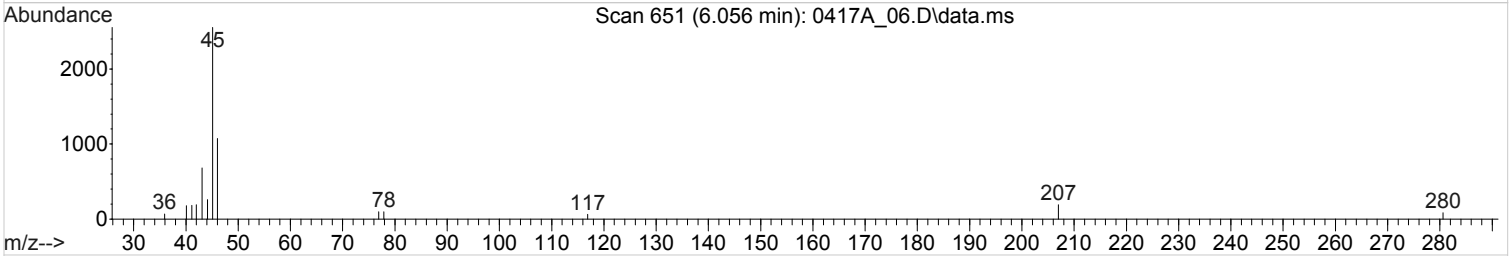
Ion	Exp%	Act%
45.00	100	100
46.00	39.40	42.70
0.00	0.00	0.00
0.00	0.00	0.00

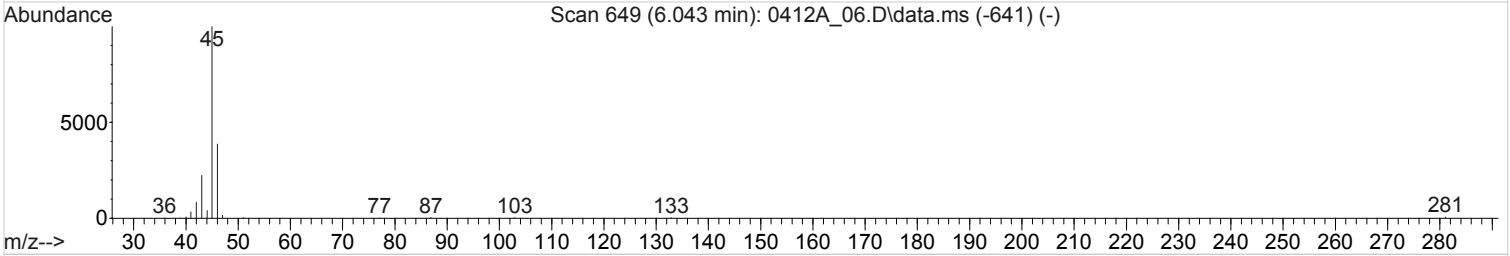
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_06.D
Acq On : 17 Apr 2018 4:12 pm
Operator : 564
Sample : STD AMS 0.63 ppbv 18D17266
Misc : 18D17267
ALS Vial : 6 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 08:59:31 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 08:59:26 2018
Response via : Initial Calibration







TIC: 0417A_06.D\data.ms

(14) Ethanol (T,M)

6.056min (+0.018) 0.5575751 ppbv m

response 79094

Ion	Exp%	Act%
45.00	100	100
46.00	39.40	37.13
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_07.D
Acq On : 17 Apr 2018 4:59 pm
Operator : 564
Sample : STD AMS 1.25 ppbv 18D17266
Misc : 18D17267
ALS Vial : 7 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 09:01:21 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:00:36 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.810	130	1711208	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	9.893	114	7317441	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	13.116	117	5829368	4.0000000	ppbv	0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	14.286	95	3615525	3.9929654	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery	= 99.82%		
Target Compounds						Qvalue
2) Propene	4.069	41	569315	1.3371662	ppbv	98
3) 1,1-DIFLUOROETHANE	4.076	65	302624	1.2880577	ppbv	99
4) Dichlorodifluoromethane	4.130	85	988075	1.4060757	ppbv	98
5) CHLORODIFLUOROMETHANE	4.164	67	128644	1.3713669	ppbv	94
6) 1,2-Dichlorotetrafluor...	4.357	85	1040786	1.3888622	ppbv	100
7) Chloromethane	4.462	50	531094	1.3173201	ppbv	98
8) Vinyl Chloride	4.656	62	541974	1.3637944	ppbv	100
9) 1,3-Butadiene	4.718	39	572377	1.3995714	ppbv	99
10) Bromomethane	5.203	94	333533	1.3829131	ppbv	98
11) Chloroethane	5.360	64	277932	1.3942406	ppbv	98
12) Vinyl Bromide	5.635	106	302862	1.3438150	ppbv	99
13) Trichlorofluoromethane	5.713	101	826872	1.3757179	ppbv	100
14) Ethanol	6.053	45	156137	1.1490679	ppbv	100
15) 1,1,2-Trichlorotrifluo...	6.405	101	678864	1.3568190	ppbv	99
16) 1,1-Dichloroethene	6.431	61	806753	1.3784946	ppbv	99
17) Acetone	6.545	43	830269	1.3751094	ppbv	97
18) 2-Propanol	6.723	45	1069197	1.2722757	ppbv	99
19) Carbon Disulfide	6.727	76	851057	1.3808712	ppbv	100
20) Allyl Chloride	6.898	41	924394	1.3738890	ppbv	99
21) Methylene Chloride	7.065	49	695996	1.2888219	ppbv	98
22) TERT-BUTYL ALCOHOL	7.211	59	1270599	1.2920251	ppbv	99
23) Methyl Tert-Butyl Ether	7.379	73	1366710	1.2897517	ppbv	100
24) Trans-1,2-Dichloroethene	7.374	96	329142	1.3818073	ppbv	96
25) n-Hexane	7.636	57	882840	1.3582760	ppbv	98
26) 1,1-Dichloroethane	7.882	63	960517	1.3328185	ppbv	99
27) Vinyl Acetate	7.914	43	1603862	1.4983281	ppbv	100
28) ETHYL ACETATE	8.585	70	102771	1.3386951	ppbv	88
29) 2-Butanone (MEK)	8.558	72	238914	1.3608148	ppbv	97
30) cis-1,2-Dichloroethene	8.545	61	901887	1.4236383	ppbv	99
31) Tetrahydrofuran	8.878	42	857545	1.3209149	ppbv	98
32) Chloroform	8.870	83	880009	1.3323278	ppbv	99
33) Cyclohexane	9.114	84	630257	1.3359881	ppbv	99
34) 1,1,1-Trichloroethane	9.081	97	833034	1.3702980	ppbv	99
35) Carbon Tetrachloride	9.249	117	735491	1.3493702	ppbv	98
36) 2,2,4-Trimethylpentane	9.488	57	3135906	1.4020014	ppbv	100
38) Benzene	9.479	78	1490674	1.3752221	ppbv	99
39) 1,2-Dichloroethane	9.536	62	769396	1.4153016	ppbv	98
40) Heptane	9.679	43	1447112	1.4113410	ppbv	100
41) Trichloroethene	10.186	95	541283	1.3450727	ppbv	99
42) TERT-AMYL ETHYL ETHER	10.393	73	514836	1.3224522	ppbv	95
43) METHYL CYCLOHEXANE	10.367	83	888100	1.3856065	ppbv	98
44) 1,2-Dichloropropane	10.453	63	647655	1.3734166	ppbv	100
45) Methyl Methacrylate	10.516	69	545963	1.3837270	ppbv	98
46) 1,4-Dioxane	10.599	88	267787	1.2288079	ppbv #	76
47) Bromodichloromethane	10.732	83	977609	1.3819980	ppbv	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_07.D
Acq On : 17 Apr 2018 4:59 pm
Operator : 564
Sample : STD AMS 1.25 ppbv 18D17266
Misc : 18D17267
ALS Vial : 7 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 09:01:21 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:00:36 2018
Response via : Initial Calibration

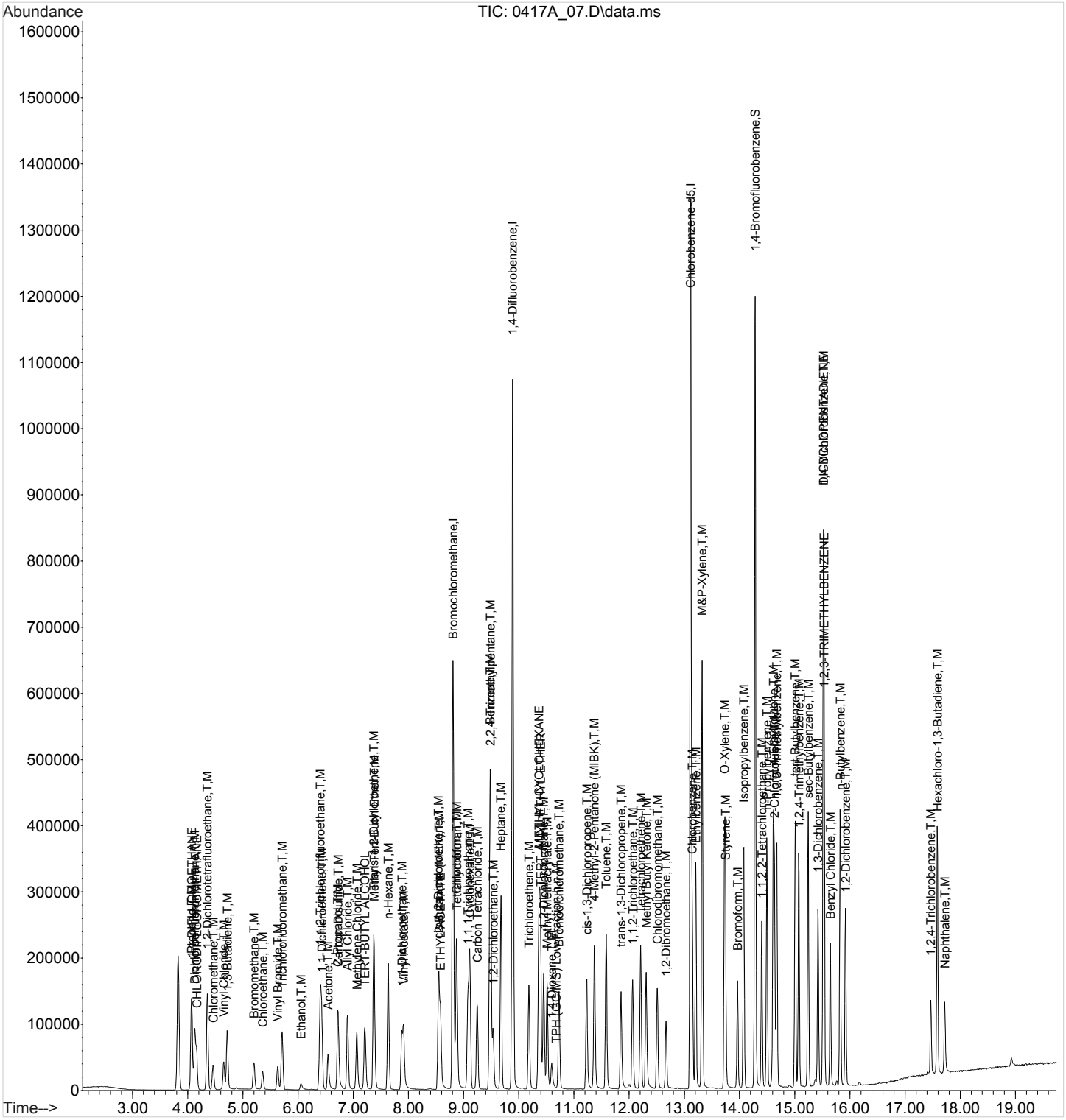
	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
48)	cis-1,3-Dichloropropene	11.232	75	939073	1.3665934 ppbv	97
49)	4-Methyl-2-Pentanone (...	11.372	43	1857809	1.3263459 ppbv	99
50)	Toluene	11.586	91	1645844	1.3960489 ppbv	99
51)	trans-1,3-Dichloropropene	11.855	75	795333	1.3943061 ppbv	98
52)	1,1,2-Trichloroethane	12.064	97	511116	1.3963214 ppbv	98
53)	Tetrachloroethene	12.211	166	597318	1.2327266 ppbv	98
54)	Methyl Butyl Ketone	12.310	43	1562120	1.3421423 ppbv	98
55)	Chlorodibromomethane	12.512	129	754109	1.3960743 ppbv	99
56)	1,2-Dibromoethane	12.670	107	718686	1.3935743 ppbv	99
57)	Chlorobenzene	13.147	112	1154138	1.3678700 ppbv	96
59)	Ethylbenzene	13.210	91	2144531	1.4010854 ppbv	99
60)	M&P-Xylene	13.325	91	3261917	2.6502520 ppbv	99
61)	O-Xylene	13.730	91	1667507	1.4245461 ppbv	98
62)	Styrene	13.747	104	1145673	1.4002199 ppbv	100
63)	Bromoform	13.967	173	641443	1.3892909 ppbv	99
64)	Isopropylbenzene	14.078	105	2192187	1.3611345 ppbv	99
65)	1,1,2,2-Tetrachloroethane	14.405	83	1219338	1.2927134 ppbv	99
66)	n-Propylbenzene	14.498	91	2734782	1.3330319 ppbv	100
67)	4-Ethyltoluene	14.613	105	2151753	1.3274110 ppbv	100
68)	2-Chlorotoluene	14.633	91	1830541	1.3406635 ppbv	99
70)	1,3,5-Trimethylbenzene	14.676	105	1809822	1.3208533 ppbv	100
71)	tert-Butylbenzene	15.013	119	1658027	1.3030462 ppbv	97
72)	1,2,4-Trimethylbenzene	15.077	105	1742337	1.2850930 ppbv	100
73)	sec-Butylbenzene	15.246	105	2698536	1.2924888 ppbv	100
74)	1,3-Dichlorobenzene	15.425	146	895828	1.3062764 ppbv	98
75)	1,4-Dichlorobenzene	15.523	146	895085	1.3083530 ppbv	98
76)	1,2,3-TRIMETHYLBENZENE	15.535	105	1747542	1.2705211 ppbv	99
77)	DICYCLOPENTADIENE	15.521	66	3347215	1.3026181 ppbv	100
78)	Benzyl Chloride	15.648	91	1428927	1.3962335 ppbv	99
79)	n-Butylbenzene	15.826	91	2211388	1.3558053 ppbv	99
80)	1,2-Dichlorobenzene	15.923	146	856078	1.2795838 ppbv	98
81)	1,2,4-Trichlorobenzene	17.470	180	286383	1.3303365 ppbv	99
82)	Hexachloro-1,3-Butadiene	17.588	225	602888	1.2201685 ppbv	99
83)	Naphthalene	17.721	128	763956	1.2932363 ppbv	99
84)	TPH (GC/MS) Low Fraction	10.675	TIC	197641957m	57.8487792 ppbv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_07.D
Acq On : 17 Apr 2018 4:59 pm
Operator : 564
Sample : STD AMS 1.25 ppbv 18D17266
Misc : 18D17267
ALS Vial : 7 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 09:01:21 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:00:36 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_08.D
Acq On : 17 Apr 2018 5:47 pm
Operator : 564
Sample : STD AMS 2.5 ppbv 18D17266
Misc : 18D17267
ALS Vial : 8 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 09:02:12 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:01:27 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.812	130	1692162	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	9.893	114	7250460	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	13.117	117	5750239	4.0000000	ppbv	0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	14.286	95	3685380	4.1275729	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery	= 103.19%		
Target Compounds						Qvalue
2) Propene	4.067	41	1146458	2.6855731	ppbv	99
3) 1,1-DIFLUOROETHANE	4.077	65	614019	2.6268664	ppbv	99
4) Dichlorodifluoromethane	4.130	85	1895145	2.6607850	ppbv	99
5) CHLORODIFLUOROMETHANE	4.163	67	254213	2.6882388	ppbv	97
6) 1,2-Dichlorotetrafluor...	4.356	85	2114895	2.7919261	ppbv	99
7) Chloromethane	4.462	50	1087799	2.6994573	ppbv	99
8) Vinyl Chloride	4.655	62	1086603	2.7155991	ppbv	100
9) 1,3-Butadiene	4.717	39	1139219	2.7511243	ppbv	98
10) Bromomethane	5.203	94	662862	2.7214577	ppbv	98
11) Chloroethane	5.359	64	547972	2.7171236	ppbv	98
12) Vinyl Bromide	5.633	106	608752	2.6910695	ppbv	99
13) Trichlorofluoromethane	5.713	101	1637459	2.7006790	ppbv	98
14) Ethanol	6.045	45	319450	2.4164323	ppbv	99
15) 1,1,2-Trichlorotrifluo...	6.404	101	1348561	2.6798499	ppbv	100
16) 1,1-Dichloroethene	6.431	61	1623632	2.7489977	ppbv	100
17) Acetone	6.537	43	1683053	2.7635616	ppbv	99
18) 2-Propanol	6.715	45	2242700	2.6891188	ppbv	100
19) Carbon Disulfide	6.725	76	1685252	2.7084469	ppbv	99
20) Allyl Chloride	6.897	41	1889024	2.7839946	ppbv	99
21) Methylene Chloride	7.064	49	1415619	2.6345352	ppbv	100
22) TERT-BUTYL ALCOHOL	7.202	59	2598592	2.6543050	ppbv	99
23) Methyl Tert-Butyl Ether	7.374	73	2733740	2.5923532	ppbv	100
24) Trans-1,2-Dichloroethene	7.371	96	643767	2.6766401	ppbv	99
25) n-Hexane	7.637	57	1764111	2.6979454	ppbv	100
26) 1,1-Dichloroethane	7.882	63	1949898	2.7003589	ppbv	100
27) Vinyl Acetate	7.910	43	3410051	3.0984164	ppbv	100
28) ETHYL ACETATE	8.580	70	208537	2.7085343	ppbv	91
29) 2-Butanone (MEK)	8.552	72	487056	2.7565374	ppbv	98
30) cis-1,2-Dichloroethene	8.544	61	1814730	2.8185083	ppbv	100
31) Tetrahydrofuran	8.873	42	1775439	2.7345395	ppbv	100
32) Chloroform	8.871	83	1790730	2.7060227	ppbv	99
33) Cyclohexane	9.115	84	1253286	2.6500969	ppbv	99
34) 1,1,1-Trichloroethane	9.082	97	1671707	2.7283070	ppbv	99
35) Carbon Tetrachloride	9.250	117	1467908	2.6807897	ppbv	98
36) 2,2,4-Trimethylpentane	9.488	57	6287531	2.7751752	ppbv	100
38) Benzene	9.480	78	3019709	2.7563452	ppbv	100
39) 1,2-Dichloroethane	9.536	62	1500972	2.7147407	ppbv	100
40) Heptane	9.680	43	2932859	2.8141412	ppbv	100
41) Trichloroethene	10.186	95	1079337	2.6663423	ppbv	100
42) TERT-AMYL ETHYL ETHER	10.391	73	990300	2.5378504	ppbv	99
43) METHYL CYCLOHEXANE	10.368	83	1763578	2.7179659	ppbv	100
44) 1,2-Dichloropropane	10.453	63	1303360	2.7354210	ppbv	99
45) Methyl Methacrylate	10.512	69	1082721	2.7114582	ppbv	100
46) 1,4-Dioxane	10.590	88	517309	2.4038821	ppbv #	76
47) Bromodichloromethane	10.732	83	1989225	2.7793508	ppbv	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_08.D
Acq On : 17 Apr 2018 5:47 pm
Operator : 564
Sample : STD AMS 2.5 ppbv 18D17266
Misc : 18D17267
ALS Vial : 8 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 09:02:12 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:01:27 2018
Response via : Initial Calibration

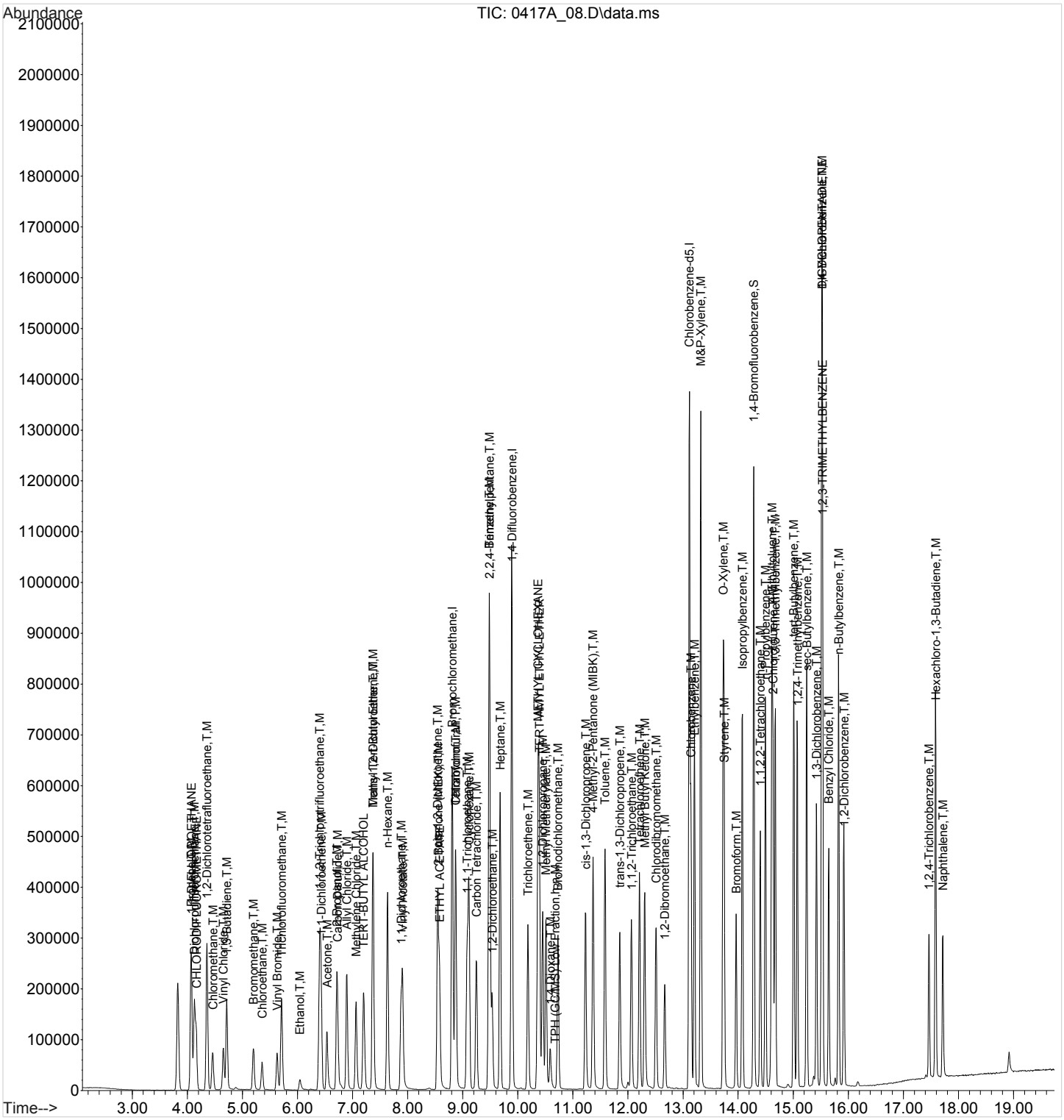
	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
48)	cis-1,3-Dichloropropene	11.231	75	1904923	2.7465261 ppbv	99
49)	4-Methyl-2-Pentanone (...	11.368	43	3794458	2.7010105 ppbv	99
50)	Toluene	11.586	91	3302981	2.7629936 ppbv	100
51)	trans-1,3-Dichloropropene	11.854	75	1642281	2.8401214 ppbv	98
52)	1,1,2-Trichloroethane	12.064	97	1020516	2.7493446 ppbv	99
53)	Tetrachloroethene	12.211	166	1185962	2.4770070 ppbv	99
54)	Methyl Butyl Ketone	12.305	43	3286544	2.8084148 ppbv	99
55)	Chlorodibromomethane	12.512	129	1559467	2.8471542 ppbv	100
56)	1,2-Dibromoethane	12.670	107	1459856	2.7927450 ppbv	100
57)	Chlorobenzene	13.146	112	2334951	2.7412224 ppbv	99
59)	Ethylbenzene	13.210	91	4372511	2.8276467 ppbv	100
60)	M&P-Xylene	13.325	91	6670096	5.4286604 ppbv	100
61)	O-Xylene	13.729	91	3310520	2.7891910 ppbv	100
62)	Styrene	13.746	104	2433097	2.9438502 ppbv	99
63)	Bromoform	13.966	173	1362282	2.9259374 ppbv	100
64)	Isopropylbenzene	14.078	105	4397056	2.7193590 ppbv	100
65)	1,1,2,2-Tetrachloroethane	14.404	83	2458505	2.6243807 ppbv	99
66)	n-Propylbenzene	14.497	91	5499492	2.6819106 ppbv	99
67)	4-Ethyltoluene	14.613	105	4368688	2.6986937 ppbv	99
68)	2-Chlorotoluene	14.633	91	3759847	2.7516392 ppbv	100
70)	1,3,5-Trimethylbenzene	14.676	105	3598557	2.6326127 ppbv	100
71)	tert-Butylbenzene	15.013	119	3238267	2.5582671 ppbv	99
72)	1,2,4-Trimethylbenzene	15.077	105	3487246	2.5929186 ppbv	100
73)	sec-Butylbenzene	15.246	105	5347412	2.5789047 ppbv	100
74)	1,3-Dichlorobenzene	15.425	146	1817654	2.6629564 ppbv	99
75)	1,4-Dichlorobenzene	15.522	146	1844712	2.7082513 ppbv	99
76)	1,2,3-TRIMETHYLBENZENE	15.534	105	3456319	2.5391004 ppbv	100
77)	DICYCLOPENTADIENE	15.521	66	6851427	2.6804592 ppbv	100
78)	Benzyl Chloride	15.647	91	2995231	2.8991429 ppbv	99
79)	n-Butylbenzene	15.826	91	4427830	2.7062528 ppbv	100
80)	1,2-Dichlorobenzene	15.923	146	1660807	2.5047212 ppbv	98
81)	1,2,4-Trichlorobenzene	17.468	180	729800	3.3931815 ppbv	98
82)	Hexachloro-1,3-Butadiene	17.588	225	1194028	2.4615656 ppbv	100
83)	Naphthalene	17.718	128	1885950	3.2142629 ppbv	100
84)	TPH (GC/MS) Low Fraction	10.675	TIC	389150256m	115.8250258 ppbv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_08.D
Acq On : 17 Apr 2018 5:47 pm
Operator : 564
Sample : STD AMS 2.5 ppbv 18D17266
Misc : 18D17267
ALS Vial : 8 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 09:02:12 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:01:27 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_09.D
Acq On : 17 Apr 2018 6:36 pm
Operator : 564
Sample : MSTD AMS 3.75 ppbv 18D17266
Misc : 18D17267
ALS Vial : 9 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 09:03:04 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:02:19 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.810	130	1692621	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	9.893	114	7203163	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	13.116	117	5689217	4.0000000	ppbv	0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	14.286	95	3694599	4.1601673	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 104.00%			
Target Compounds						Qvalue
2) Propene	4.063	41	1726370	3.9935127	ppbv	100
3) 1,1-DIFLUOROETHANE	4.072	65	923334	3.9159729	ppbv	100
4) Dichlorodifluoromethane	4.125	85	2624868	3.6452447	ppbv	100
5) CHLORODIFLUOROMETHANE	4.157	67	381040	3.9783952	ppbv	100
6) 1,2-Dichlorotetrafluor...	4.353	85	3162545	4.0941438	ppbv	100
7) Chloromethane	4.456	50	1644763	4.0269559	ppbv	100
8) Vinyl Chloride	4.651	62	1657630	4.0828827	ppbv	100
9) 1,3-Butadiene	4.712	39	1765890	4.1931277	ppbv	100
10) Bromomethane	5.198	94	999492	4.0427334	ppbv	99
11) Chloroethane	5.355	64	836553	4.0877593	ppbv	100
12) Vinyl Bromide	5.629	106	915373	3.9945481	ppbv	100
13) Trichlorofluoromethane	5.710	101	2521364	4.1025011	ppbv	100
14) Ethanol	6.038	45	495140	3.7653765	ppbv	100
15) 1,1,2-Trichlorotrifluo...	6.400	101	2040047	4.0048511	ppbv	100
16) 1,1-Dichloroethene	6.427	61	2477593	4.1252379	ppbv	100
17) Acetone	6.530	43	2620585	4.2275353	ppbv	100
18) 2-Propanol	6.708	45	3478283	4.1176053	ppbv	92
19) Carbon Disulfide	6.721	76	2574627	4.0799847	ppbv	100
20) Allyl Chloride	6.894	41	2887643	4.1755251	ppbv	100
21) Methylene Chloride	7.061	49	2125857	3.9200922	ppbv	100
22) TERT-BUTYL ALCOHOL	7.196	59	3936375	3.9787516	ppbv	100
23) Methyl Tert-Butyl Ether	7.368	73	4199957	3.9572955	ppbv	100
24) Trans-1,2-Dichloroethene	7.369	96	987585	4.0572688	ppbv	100
25) n-Hexane	7.635	57	2669060	4.0276745	ppbv	100
26) 1,1-Dichloroethane	7.880	63	2930375	4.0036172	ppbv	100
27) Vinyl Acetate	7.906	43	5352233	4.6752730	ppbv	100
28) ETHYL ACETATE	8.576	70	332965	4.2641744	ppbv	99
29) 2-Butanone (MEK)	8.548	72	744480	4.1414837	ppbv	100
30) cis-1,2-Dichloroethene	8.542	61	2765879	4.2053062	ppbv	100
31) Tetrahydrofuran	8.868	42	2740616	4.1549984	ppbv	100
32) Chloroform	8.870	83	2707009	4.0341207	ppbv	100
33) Cyclohexane	9.114	84	1905042	3.9872574	ppbv	100
34) 1,1,1-Trichloroethane	9.081	97	2554124	4.1048477	ppbv	100
35) Carbon Tetrachloride	9.249	117	2262182	4.0810386	ppbv	100
36) 2,2,4-Trimethylpentane	9.488	57	9588945	4.1549759	ppbv	100
38) Benzene	9.479	78	4525942	4.0884681	ppbv	100
39) 1,2-Dichloroethane	9.534	62	2281289	4.0945394	ppbv	100
40) Heptane	9.679	43	4437082	4.1975225	ppbv	100
41) Trichloroethene	10.185	95	1622993	3.9914258	ppbv	100
42) TERT-AMYL ETHYL ETHER	10.389	73	1518351	3.9067809	ppbv	100
43) METHYL CYCLOHEXANE	10.367	83	2682968	4.1024358	ppbv	100
44) 1,2-Dichloropropane	10.452	63	1998470	4.1565838	ppbv	100
45) Methyl Methacrylate	10.510	69	1690488	4.2020496	ppbv	100
46) 1,4-Dioxane	10.586	88	786781	3.7038310	ppbv #	77
47) Bromodichloromethane	10.731	83	3033296	4.1879631	ppbv	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_09.D
Acq On : 17 Apr 2018 6:36 pm
Operator : 564
Sample : MSTD AMS 3.75 ppbv 18D17266
Misc : 18D17267
ALS Vial : 9 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 09:03:04 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:02:19 2018
Response via : Initial Calibration

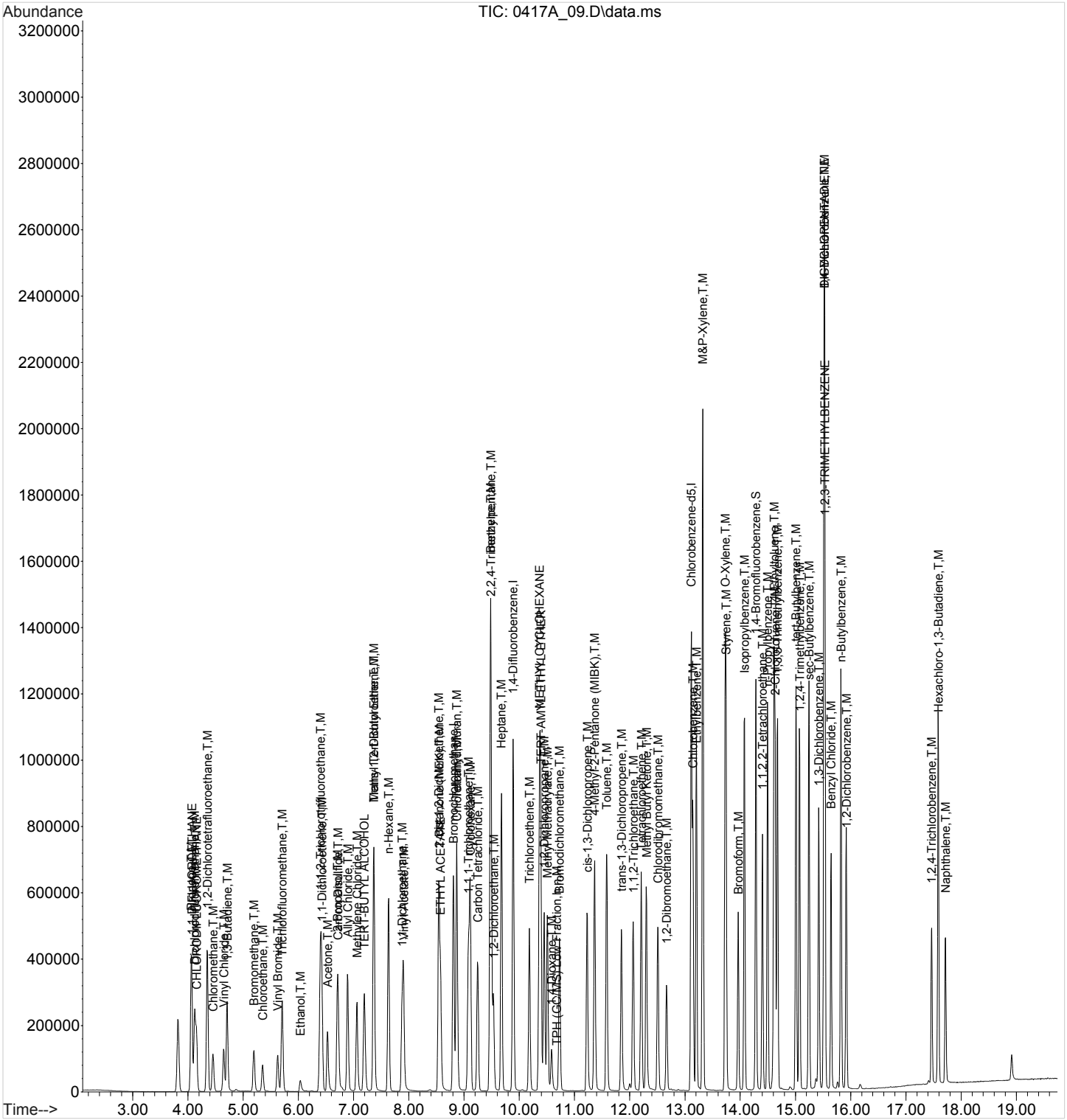
	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
48)	cis-1,3-Dichloropropene	11.230	75	2932704	4.1873314 ppbv	100
49)	4-Methyl-2-Pentanone (...	11.366	43	5801301	4.1016918 ppbv	100
50)	Toluene	11.585	91	5024801	4.1580198 ppbv	100
51)	trans-1,3-Dichloropropene	11.852	75	2494091	4.2452813 ppbv	100
52)	1,1,2-Trichloroethane	12.064	97	1550808	4.1366591 ppbv	100
53)	Tetrachloroethene	12.211	166	1777776	3.7431935 ppbv	100
54)	Methyl Butyl Ketone	12.302	43	5131711	4.3250124 ppbv	100
55)	Chlorodibromomethane	12.512	129	2398115	4.3073546 ppbv	100
56)	1,2-Dibromoethane	12.669	107	2213726	4.1811242 ppbv	100
57)	Chlorobenzene	13.146	112	3504070	4.0752385 ppbv	100
59)	Ethylbenzene	13.210	91	6581362	4.2097781 ppbv	100
60)	M&P-Xylene	13.325	91	10229879	8.2966531 ppbv	100
61)	O-Xylene	13.729	91	5059195	4.2267217 ppbv	100
62)	Styrene	13.745	104	3732393	4.4331530 ppbv	100
63)	Bromoform	13.966	173	2111333	4.4568472 ppbv	100
64)	Isopropylbenzene	14.078	105	6647773	4.0955197 ppbv	100
65)	1,1,2,2-Tetrachloroethane	14.404	83	3750240	4.0129333 ppbv	100
66)	n-Propylbenzene	14.497	91	8390736	4.0862038 ppbv	100
67)	4-Ethyltoluene	14.613	105	6653196	4.0996927 ppbv	100
68)	2-Chlorotoluene	14.633	91	5727546	4.1667553 ppbv	100
70)	1,3,5-Trimethylbenzene	14.677	105	5431972	3.9813182 ppbv	100
71)	tert-Butylbenzene	15.013	119	4861846	3.8670881 ppbv	100
72)	1,2,4-Trimethylbenzene	15.077	105	5260520	3.9290401 ppbv	100
73)	sec-Butylbenzene	15.247	105	7995250	3.8768459 ppbv	100
74)	1,3-Dichlorobenzene	15.425	146	2743490	4.0188056 ppbv	100
75)	1,4-Dichlorobenzene	15.522	146	2795872	4.0918807 ppbv	100
76)	1,2,3-TRIMETHYLBENZENE	15.534	105	5240412	3.8809167 ppbv	100
77)	DICYCLOPENTADIENE	15.521	66	10542711	4.1192696 ppbv	100
78)	Benzyl Chloride	15.647	91	4596349	4.3800635 ppbv	100
79)	n-Butylbenzene	15.826	91	6591730	4.0167922 ppbv	100
80)	1,2-Dichlorobenzene	15.923	146	2461016	3.7501734 ppbv	100
81)	1,2,4-Trichlorobenzene	17.469	180	1161108	5.1497900 ppbv	100
82)	Hexachloro-1,3-Butadiene	17.589	225	1742704	3.6405595 ppbv	100
83)	Naphthalene	17.718	128	2954788	4.8585676 ppbv	100
84)	TPH (GC/MS) Low Fraction	10.675	TIC	585650645m	176.5997813 ppbv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_09.D
Acq On : 17 Apr 2018 6:36 pm
Operator : 564
Sample : MSTD AMS 3.75 ppbv 18D17266
Misc : 18D17267
ALS Vial : 9 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 09:03:04 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:02:19 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_10.D
Acq On : 17 Apr 2018 7:26 pm
Operator : 564
Sample : STD AMS 5.0 ppbv 18D17266
Misc : 18D17267
ALS Vial : 10 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 09:04:13 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:03:15 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.810	130	1685145	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	9.893	114	7268792	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	13.117	117	5746962	4.0000000	ppbv	0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	14.286	95	3669749	4.0906662	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 102.27%			
Target Compounds						Qvalue
2) Propene	4.064	41	2332543	5.4219363	ppbv	99
3) 1,1-DIFLUOROETHANE	4.073	65	1231180	5.2447518	ppbv	100
4) Dichlorodifluoromethane	4.126	85	3299742	4.6027952	ppbv	100
5) CHLORODIFLUOROMETHANE	4.159	67	513816	5.3884902	ppbv	99
6) 1,2-Dichlorotetrafluor...	4.354	85	4102956	5.3351387	ppbv	100
7) Chloromethane	4.457	50	2180045	5.3611928	ppbv	99
8) Vinyl Chloride	4.651	62	2210403	5.4685647	ppbv	100
9) 1,3-Butadiene	4.713	39	2372343	5.6581493	ppbv	99
10) Bromomethane	5.198	94	1334156	5.4155014	ppbv	99
11) Chloroethane	5.355	64	1117236	5.4835175	ppbv	100
12) Vinyl Bromide	5.629	106	1188111	5.2077409	ppbv	98
13) Trichlorofluoromethane	5.711	101	3330008	5.4422804	ppbv	99
14) Ethanol	6.036	45	682947	5.2228435	ppbv	100
15) 1,1,2-Trichlorotrifluo...	6.402	101	2731809	5.3866508	ppbv	100
16) 1,1-Dichloroethene	6.428	61	3322620	5.5567668	ppbv	100
17) Acetone	6.529	43	3561346	5.7710000	ppbv	98
18) 2-Propanol	6.708	45	4691515	5.5812869	ppbv	100
19) Carbon Disulfide	6.722	76	3428631	5.4573328	ppbv	99
20) Allyl Chloride	6.894	41	3897662	5.6610139	ppbv	99
21) Methylene Chloride	7.062	49	2877008	5.3287546	ppbv	100
22) TERT-BUTYL ALCOHOL	7.194	59	5321085	5.4031034	ppbv	100
23) Methyl Tert-Butyl Ether	7.367	73	5597553	5.2975413	ppbv	99
24) Trans-1,2-Dichloroethene	7.369	96	1324892	5.4671639	ppbv	99
25) n-Hexane	7.636	57	3616737	5.4819538	ppbv	100
26) 1,1-Dichloroethane	7.881	63	3957505	5.4309189	ppbv	100
27) Vinyl Acetate	7.905	43	7381015	6.4770881	ppbv	100
28) ETHYL ACETATE	8.575	70	435649	5.5985330	ppbv	95
29) 2-Butanone (MEK)	8.547	72	1017617	5.6860347	ppbv	99
30) cis-1,2-Dichloroethene	8.543	61	3723501	5.6864120	ppbv	100
31) Tetrahydrofuran	8.867	42	3689449	5.6183229	ppbv	99
32) Chloroform	8.870	83	3617042	5.4142116	ppbv	100
33) Cyclohexane	9.114	84	2555846	5.3731236	ppbv	99
34) 1,1,1-Trichloroethane	9.082	97	3417368	5.5165733	ppbv	99
35) Carbon Tetrachloride	9.249	117	3020946	5.4740489	ppbv	100
36) 2,2,4-Trimethylpentane	9.488	57	12969233	5.6446160	ppbv	100
38) Benzene	9.479	78	6161122	5.5153423	ppbv #	95
39) 1,2-Dichloroethane	9.534	62	3079952	5.4780979	ppbv	100
40) Heptane	9.680	43	5998497	5.6234010	ppbv	100
41) Trichloroethene	10.185	95	2213366	5.3941833	ppbv	99
42) TERT-AMYL ETHYL ETHER	10.388	73	2088804	5.3260566	ppbv	98
43) METHYL CYCLOHEXANE	10.368	83	3599393	5.4540191	ppbv	99
44) 1,2-Dichloropropane	10.452	63	2685332	5.5347479	ppbv	99
45) Methyl Methacrylate	10.510	69	2338924	5.7613764	ppbv	98
46) 1,4-Dioxane	10.584	88	1052414	4.9095705	ppbv	100
47) Bromodichloromethane	10.731	83	4103879	5.6149216	ppbv	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_10.D
Acq On : 17 Apr 2018 7:26 pm
Operator : 564
Sample : STD AMS 5.0 ppbv 18D17266
Misc : 18D17267
ALS Vial : 10 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 09:04:13 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:03:15 2018
Response via : Initial Calibration

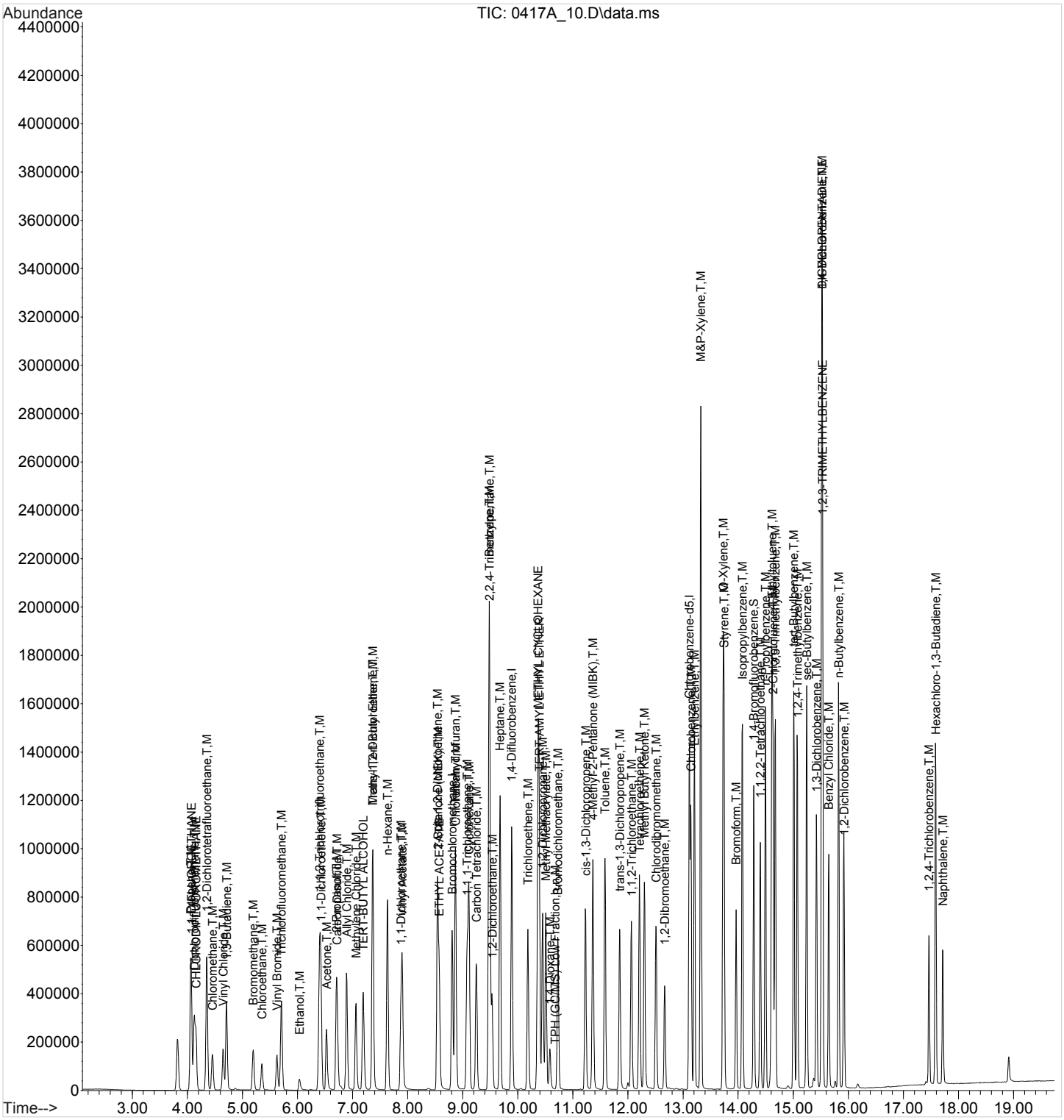
	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
48)	cis-1,3-Dichloropropene	11.230	75	3936474	5.5697730 ppbv	98
49)	4-Methyl-2-Pentanone (...	11.365	43	7886080	5.5253501 ppbv	100
50)	Toluene	11.585	91	6770929	5.5523518 ppbv	100
51)	trans-1,3-Dichloropropene	11.852	75	3386533	5.7122928 ppbv	100
52)	1,1,2-Trichloroethane	12.064	97	2075951	5.4874405 ppbv	100
53)	Tetrachloroethene	12.211	166	2369808	4.9446930 ppbv	99
54)	Methyl Butyl Ketone	12.301	43	6978291	5.8282111 ppbv	99
55)	Chlorodibromomethane	12.512	129	3241874	5.7702902 ppbv	100
56)	1,2-Dibromoethane	12.669	107	2961196	5.5423945 ppbv	99
57)	Chlorobenzene	13.146	112	4707234	5.4250908 ppbv	100
59)	Ethylbenzene	13.210	91	8923766	5.6507459 ppbv	100
60)	M&P-Xylene	13.325	91	13874711	11.1396251 ppbv	100
61)	O-Xylene	13.729	91	6854964	5.6694594 ppbv	99
62)	Styrene	13.746	104	5062553	5.9526326 ppbv	100
63)	Bromoform	13.966	173	2844221	5.9435861 ppbv	100
64)	Isopropylbenzene	14.079	105	8878962	5.4151340 ppbv	100
65)	1,1,2,2-Tetrachloroethane	14.405	83	4993693	5.2897960 ppbv	99
66)	n-Propylbenzene	14.498	91	11259018	5.4279356 ppbv	100
67)	4-Ethyltoluene	14.613	105	8939389	5.4531516 ppbv	100
68)	2-Chlorotoluene	14.634	91	7725379	5.5636957 ppbv	100
70)	1,3,5-Trimethylbenzene	14.677	105	7340920	5.3264032 ppbv	99
71)	tert-Butylbenzene	15.014	119	6488493	5.1090593 ppbv	100
72)	1,2,4-Trimethylbenzene	15.077	105	7050058	5.2127227 ppbv	99
73)	sec-Butylbenzene	15.247	105	10646031	5.1103234 ppbv	100
74)	1,3-Dichlorobenzene	15.425	146	3625659	5.2576878 ppbv	99
75)	1,4-Dichlorobenzene	15.522	146	3748756	5.4313423 ppbv	99
76)	1,2,3-TRIMETHYLBENZENE	15.535	105	7050068	5.1686416 ppbv	100
77)	DICYCLOPENTADIENE	15.522	66	14253070	5.5130323 ppbv	100
78)	Benzyl Chloride	15.647	91	6159131	5.8103591 ppbv	100
79)	n-Butylbenzene	15.826	91	8633249	5.2079686 ppbv	100
80)	1,2-Dichlorobenzene	15.923	146	3238792	4.8857832 ppbv	99
81)	1,2,4-Trichlorobenzene	17.469	180	1512718	6.6418484 ppbv	100
82)	Hexachloro-1,3-Butadiene	17.589	225	2191449	4.5320030 ppbv	99
83)	Naphthalene	17.718	128	3711165	6.0409662 ppbv	100
84)	TPH (GC/MS) Low Fraction	10.675	TIC	789015705m	235.5327849 ppbv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_10.D
Acq On : 17 Apr 2018 7:26 pm
Operator : 564
Sample : STD AMS 5.0 ppbv 18D17266
Misc : 18D17267
ALS Vial : 10 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 09:04:13 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:03:15 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_11.D
Acq On : 17 Apr 2018 8:20 pm
Operator : 564
Sample : STD AMS 10.0 ppbv 18D17266
Misc : 18D17267
ALS Vial : 11 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 09:05:17 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:04:20 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.811	130	1690181	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	9.894	114	7111223	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	13.117	117	5455390	4.0000000	ppbv	0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	14.287	95	3494887	4.0907172	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 102.27%			
Target Compounds						Qvalue
2) Propene	4.063	41	4725619	10.8213937	ppbv	99
3) 1,1-DIFLUOROETHANE	4.071	65	2504654	10.5640050	ppbv	99
4) Dichlorodifluoromethane	4.125	85	5484733	7.7153922	ppbv	100
5) CHLORODIFLUOROMETHANE	4.157	67	1033444	10.6870169	ppbv	99
6) 1,2-Dichlorotetrafluor...	4.353	85	6242537	8.0163225	ppbv	99
7) Chloromethane	4.456	50	4432170	10.7561640	ppbv	99
8) Vinyl Chloride	4.650	62	4499292	10.9515195	ppbv	100
9) 1,3-Butadiene	4.712	39	4874364	11.3770108	ppbv	99
10) Bromomethane	5.198	94	2726546	10.9049454	ppbv	99
11) Chloroethane	5.355	64	2300215	11.1026852	ppbv	100
12) Vinyl Bromide	5.629	106	2513560	10.9198137	ppbv	99
13) Trichlorofluoromethane	5.711	101	6737300	10.8410638	ppbv	100
14) Ethanol	6.032	45	1405510	10.6488279	ppbv	100
15) 1,1,2-Trichlorotrifluo...	6.403	101	5633539	10.9542431	ppbv	99
16) 1,1-Dichloroethene	6.428	61	6998591	11.4868737	ppbv	100
17) Acetone	6.524	43	7414707	11.7211925	ppbv	98
18) 2-Propanol	6.706	45	9652878	11.2623341	ppbv	98
19) Carbon Disulfide	6.722	76	7054964	11.0514796	ppbv	99
20) Allyl Chloride	6.895	41	7960739	11.3141444	ppbv	99
21) Methylene Chloride	7.062	49	5854234	10.7102184	ppbv	99
22) TERT-BUTYL ALCOHOL	7.192	59	10888853	10.8982265	ppbv	100
23) Methyl Tert-Butyl Ether	7.365	73	11602812	10.8559263	ppbv	99
24) Trans-1,2-Dichloroethene	7.369	96	2730189	11.0845937	ppbv	99
25) n-Hexane	7.636	57	7379558	11.0005204	ppbv	100
26) 1,1-Dichloroethane	7.882	63	8048505	10.8781904	ppbv	100
27) Vinyl Acetate	7.903	43	15757327	13.2281188	ppbv	99
28) ETHYL ACETATE	8.574	70	905369	11.4052128	ppbv	97
29) 2-Butanone (MEK)	8.545	72	2126909	11.6211211	ppbv	99
30) cis-1,2-Dichloroethene	8.543	61	7668710	11.4519189	ppbv	100
31) Tetrahydrofuran	8.865	42	7732549	11.5362961	ppbv	100
32) Chloroform	8.871	83	7458729	11.0012225	ppbv	100
33) Cyclohexane	9.115	84	5173905	10.7302334	ppbv	98
34) 1,1,1-Trichloroethane	9.083	97	6920650	10.9765388	ppbv	99
35) Carbon Tetrachloride	9.250	117	6075496	10.8295076	ppbv	99
36) 2,2,4-Trimethylpentane	9.489	57	27005925	11.5068706	ppbv	100
38) Benzene	9.480	78	12605492	11.3669099	ppbv #	95
39) 1,2-Dichloroethane	9.534	62	6436608	11.5443254	ppbv	100
40) Heptane	9.681	43	12452001	11.7232035	ppbv	99
41) Trichloroethene	10.186	95	4524828	11.1462468	ppbv	98
42) TERT-AMYL ETHYL ETHER	10.388	73	4355720	11.2475725	ppbv	98
43) METHYL CYCLOHEXANE	10.369	83	7335327	11.2157239	ppbv	97
44) 1,2-Dichloropropane	10.453	63	5411607	11.2294603	ppbv	98
45) Methyl Methacrylate	10.510	69	4894073	12.0601406	ppbv	98
46) 1,4-Dioxane	10.583	88	2036884	9.7378813	ppbv #	77
47) Bromodichloromethane	10.732	83	8402445	11.5480534	ppbv	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_11.D
Acq On : 17 Apr 2018 8:20 pm
Operator : 564
Sample : STD AMS 10.0 ppbv 18D17266
Misc : 18D17267
ALS Vial : 11 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 09:05:17 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:04:20 2018
Response via : Initial Calibration

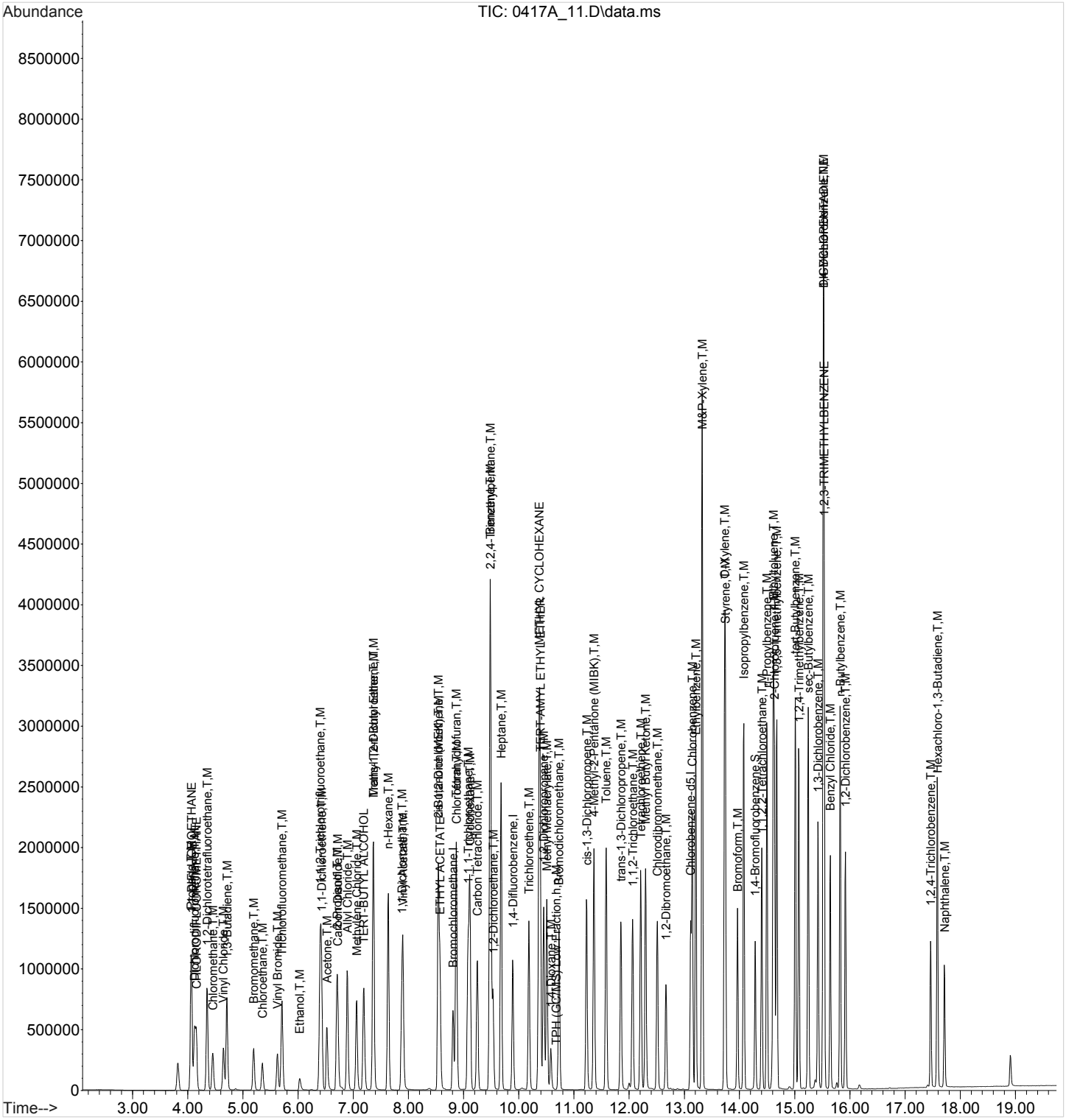
	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
48)	cis-1,3-Dichloropropene	11.230	75	8050165	11.4561771 ppbv	97
49)	4-Methyl-2-Pentanone (...	11.364	43	16224804	11.4478963 ppbv	99
50)	Toluene	11.586	91	13670100	11.2802327 ppbv	99
51)	trans-1,3-Dichloropropene	11.852	75	6947061	11.7388214 ppbv	99
52)	1,1,2-Trichloroethane	12.064	97	4162351	11.0918176 ppbv	98
53)	Tetrachloroethene	12.212	166	4779140	10.2089392 ppbv	98
54)	Methyl Butyl Ketone	12.300	43	14777461	12.3238624 ppbv	99
55)	Chlorodibromomethane	12.513	129	6565620	11.6880175 ppbv	99
56)	1,2-Dibromoethane	12.670	107	5957761	11.2241291 ppbv	98
57)	Chlorobenzene	13.147	112	9176903	10.6810110 ppbv	100
59)	Ethylbenzene	13.210	91	17717204	11.6028527 ppbv	100
60)	M&P-Xylene	13.326	91	28043306	23.3386039 ppbv	100
61)	O-Xylene	13.730	91	13430232	11.4816430 ppbv	99
62)	Styrene	13.746	104	10335263	12.4626659 ppbv	100
63)	Bromoform	13.966	173	5594817	11.9930696 ppbv	99
64)	Isopropylbenzene	14.079	105	17103499	10.8598468 ppbv	99
65)	1,1,2,2-Tetrachloroethane	14.405	83	9545847	10.5648416 ppbv	99
66)	n-Propylbenzene	14.498	91	21649898	10.8623746 ppbv	100
67)	4-Ethyltoluene	14.614	105	17368912	11.0188972 ppbv	100
68)	2-Chlorotoluene	14.634	91	14997340	11.1977704 ppbv	99
70)	1,3,5-Trimethylbenzene	14.677	105	14234263	10.7795267 ppbv	100
71)	tert-Butylbenzene	15.014	119	12387212	10.2431153 ppbv	100
72)	1,2,4-Trimethylbenzene	15.077	105	13421158	10.3906549 ppbv	100
73)	sec-Butylbenzene	15.247	105	20150624	10.1576897 ppbv	100
74)	1,3-Dichlorobenzene	15.425	146	6898717	10.4617158 ppbv	98
75)	1,4-Dichlorobenzene	15.523	146	7407608	11.1683993 ppbv	99
76)	1,2,3-TRIMETHYLBENZENE	15.535	105	13504616	10.3798325 ppbv	100
77)	DICYCLOPENTADIENE	15.523	66	28060729	11.2687024 ppbv	100
78)	Benzyl Chloride	15.647	91	11921879	11.5797767 ppbv	100
79)	n-Butylbenzene	15.826	91	16067503	10.1503764 ppbv	100
80)	1,2-Dichlorobenzene	15.922	146	5866398	9.3530841 ppbv	99
81)	1,2,4-Trichlorobenzene	17.468	180	2823221	12.4732380 ppbv	100
82)	Hexachloro-1,3-Butadiene	17.589	225	3830504	8.4581130 ppbv	99
83)	Naphthalene	17.716	128	6357438	10.5867445 ppbv	99
84)	TPH (GC/MS) Low Fraction	10.675	TIC	1582033102m	497.3397926 ppbv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_11.D
Acq On : 17 Apr 2018 8:20 pm
Operator : 564
Sample : STD AMS 10.0 ppbv 18D17266
Misc : 18D17267
ALS Vial : 11 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 09:05:17 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:04:20 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_12.D
Acq On : 17 Apr 2018 9:10 pm
Operator : 564
Sample : STD AMS 25.0 ppbv 18C29708
Misc : 18D17267
ALS Vial : 12 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 09:06:45 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:05:26 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.814	130	1614050	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	9.897	114	6626057	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	13.119	117	5060073	4.0000000	ppbv	# 0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	14.288	95	3251416	4.0914609	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery	= 102.29%		
Target Compounds						Qvalue
2) Propene	4.064	41	11934190	28.3267988	ppbv	99
3) 1,1-DIFLUOROETHANE	4.073	65	6303171	27.6442785	ppbv	98
4) Dichlorodifluoromethane	4.127	85	15078416	22.8642825	ppbv	99
5) CHLORODIFLUOROMETHANE	4.158	67	2674963	28.7203630	ppbv	99
6) 1,2-Dichlorotetrafluor...	4.354	85	20362900	28.0785492	ppbv	100
7) Chloromethane	4.456	50	11240953	28.2992483	ppbv	99
8) Vinyl Chloride	4.651	62	11458652	28.8632442	ppbv	100
9) 1,3-Butadiene	4.713	39	12419946	29.8424577	ppbv	98
10) Bromomethane	5.199	94	6982199	28.9157394	ppbv	99
11) Chloroethane	5.357	64	5795484	28.8948558	ppbv	100
12) Vinyl Bromide	5.631	106	6484956	29.1665209	ppbv	99
13) Trichlorofluoromethane	5.714	101	17589192	29.3296125	ppbv	100
14) Ethanol	6.032	45	4223222	33.2368661	ppbv	98
15) 1,1,2-Trichlorotrifluo...	6.406	101	14876499	29.9342651	ppbv	99
16) 1,1-Dichloroethene	6.431	61	18840051	31.7901138	ppbv	100
17) Acetone	6.523	43	19089533	30.9346228	ppbv	97
18) 2-Propanol	6.708	45	25832631	31.0711513	ppbv	98
19) Carbon Disulfide	6.723	76	17955350	29.0713335	ppbv	98
20) Allyl Chloride	6.897	41	20265399	29.6731603	ppbv	98
21) Methylene Chloride	7.063	49	14656758	27.8319781	ppbv	99
22) TERT-BUTYL ALCOHOL	7.195	59	26231118	27.1867887	ppbv	100
23) Methyl Tert-Butyl Ether	7.366	73	29524760	28.6209850	ppbv	99
24) Trans-1,2-Dichloroethene	7.371	96	7180723	30.1205775	ppbv	96
25) n-Hexane	7.639	57	18478064	28.4877384	ppbv	99
26) 1,1-Dichloroethane	7.885	63	20327740	28.4580758	ppbv	100
27) Vinyl Acetate	7.905	43	41986362	35.4780805	ppbv	99
28) ETHYL ACETATE	8.576	70	2371370	30.7419424	ppbv	99
29) 2-Butanone (MEK)	8.547	72	5560994	31.1856907	ppbv	99
30) cis-1,2-Dichloroethene	8.545	61	19808742	30.4241138	ppbv	99
31) Tetrahydrofuran	8.866	42	20093058	30.7996069	ppbv	99
32) Chloroform	8.874	83	19166562	29.2371602	ppbv	100
33) Cyclohexane	9.118	84	13464320	28.9764631	ppbv	97
34) 1,1,1-Trichloroethane	9.086	97	17836725	29.2671796	ppbv	98
35) Carbon Tetrachloride	9.254	117	15794801	29.1794822	ppbv	99
36) 2,2,4-Trimethylpentane	9.492	57	70450922	30.8529743	ppbv	99
38) Benzene	9.484	78	32904191	31.3087080	ppbv #	95
39) 1,2-Dichloroethane	9.537	62	16477004	31.1153824	ppbv	99
40) Heptane	9.684	43	32129754	31.7795937	ppbv	99
41) Trichloroethene	10.188	95	11688562	30.4648053	ppbv	97
42) TERT-AMYL ETHYL ETHER	10.389	73	11226333	30.6341251	ppbv	98
43) METHYL CYCLOHEXANE	10.373	83	18987792	30.6917264	ppbv	96
44) 1,2-Dichloropropane	10.455	63	13851099	30.3796258	ppbv	96
45) Methyl Methacrylate	10.512	69	12573202	32.4171418	ppbv	98
46) 1,4-Dioxane	10.582	88	5373310	27.6601480	ppbv #	76
47) Bromodichloromethane	10.735	83	21590094	31.2408748	ppbv	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_12.D
Acq On : 17 Apr 2018 9:10 pm
Operator : 564
Sample : STD AMS 25.0 ppbv 18C29708
Misc : 18D17267
ALS Vial : 12 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 09:06:45 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:05:26 2018
Response via : Initial Calibration

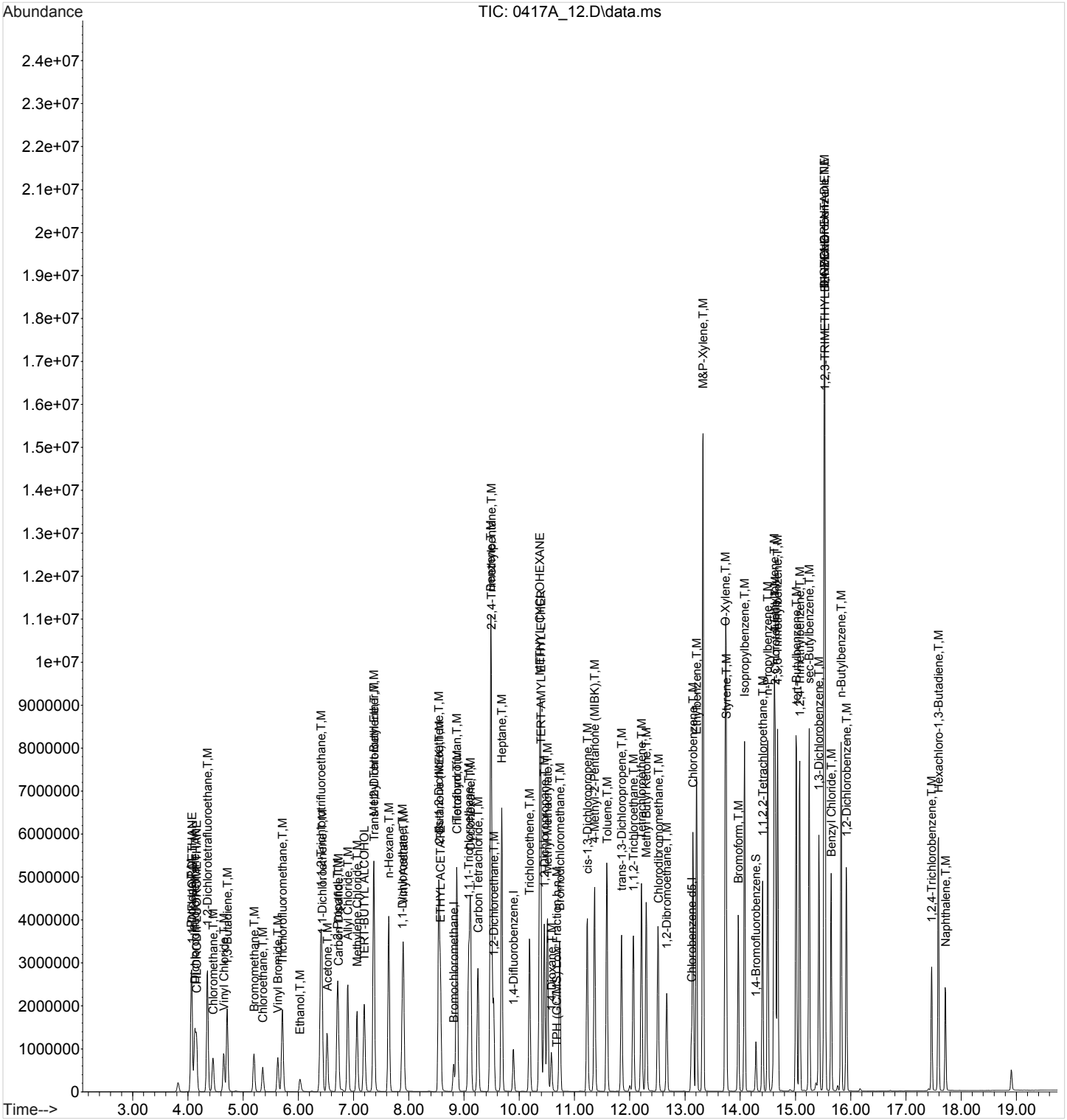
	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
48)	cis-1,3-Dichloropropene	11.232	75	20148209	30.2222293 ppbv	94
49)	4-Methyl-2-Pentanone (...	11.365	43	39022209	29.0240057 ppbv	99
50)	Toluene	11.588	91	34693818	30.2407571 ppbv	100
51)	trans-1,3-Dichloropropene	11.853	75	17682854	31.3853173 ppbv	96
52)	1,1,2-Trichloroethane	12.066	97	10635334	30.0066321 ppbv	97
53)	Tetrachloroethene	12.215	166	12352048	28.2440032 ppbv	96
54)	Methyl Butyl Ketone	12.300	43	35023538	30.4621428 ppbv	99
55)	Chlorodibromomethane	12.515	129	17233201	32.2442173 ppbv	99
56)	1,2-Dibromoethane	12.672	107	14924798	29.7215970 ppbv	97
57)	Chlorobenzene	13.148	112	22800322	28.2400201 ppbv	98
59)	Ethylbenzene	13.212	91	45065381	31.1936583 ppbv	100
60)	M&P-Xylene	13.328	91	74355769	65.3522422 ppbv	98
61)	O-Xylene	13.733	91	35137341	31.7971830 ppbv	99
62)	Styrene	13.747	104	28168254	35.5263842 ppbv	100
63)	Bromoform	13.967	173	15251286	34.3900512 ppbv	99
64)	Isopropylbenzene	14.081	105	44023615	29.8160792 ppbv	99
65)	1,1,2,2-Tetrachloroethane	14.407	83	24166956	28.6341258 ppbv	99
66)	n-Propylbenzene	14.501	91	55372754	29.6331329 ppbv	100
67)	4-Ethyltoluene	14.617	105	45674452	30.8469010 ppbv	99
68)	2-Chlorotoluene	14.636	91	40856684	32.4037548 ppbv	99
70)	1,3,5-Trimethylbenzene	14.676	105	37862073m	30.6144746 ppbv	
71)	tert-Butylbenzene	15.017	119	32182809	28.6044545 ppbv	99
72)	1,2,4-Trimethylbenzene	15.080	105	35432896	29.4315422 ppbv	100
73)	sec-Butylbenzene	15.250	105	52215337	28.3216370 ppbv	99
74)	1,3-Dichlorobenzene	15.428	146	17901973	29.1008202 ppbv	96
75)	1,4-Dichlorobenzene	15.525	146	21520510	34.4776395 ppbv	99
76)	1,2,3-TRIMETHYLBENZENE	15.537	105	39029760	32.1896233 ppbv	99
77)	DICYCLOPENTADIENE	15.526	66	77936169	33.2161808 ppbv	99
78)	Benzyl Chloride	15.649	91	30851370	31.6815501 ppbv	99
79)	n-Butylbenzene	15.829	91	40514959	27.5424517 ppbv	99
80)	1,2-Dichlorobenzene	15.925	146	15353572	26.6065118 ppbv	99
81)	1,2,4-Trichlorobenzene	17.470	180	6516732	30.1099578 ppbv	99
82)	Hexachloro-1,3-Butadiene	17.591	225	8900897	21.6059098 ppbv	97
83)	Naphthalene	17.718	128	14836558	26.4428884 ppbv	98
84)	TPH (GC/MS) Low Fraction	10.675	TIC	4075329144m	1371.2698562 ppbv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_12.D
Acq On : 17 Apr 2018 9:10 pm
Operator : 564
Sample : STD AMS 25.0 ppbv 18C29708
Misc : 18D17267
ALS Vial : 12 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 09:06:45 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:05:26 2018
Response via : Initial Calibration



ACCOUNT:	PROJECT:	SDG:	DATE/TIME:	PAGE:
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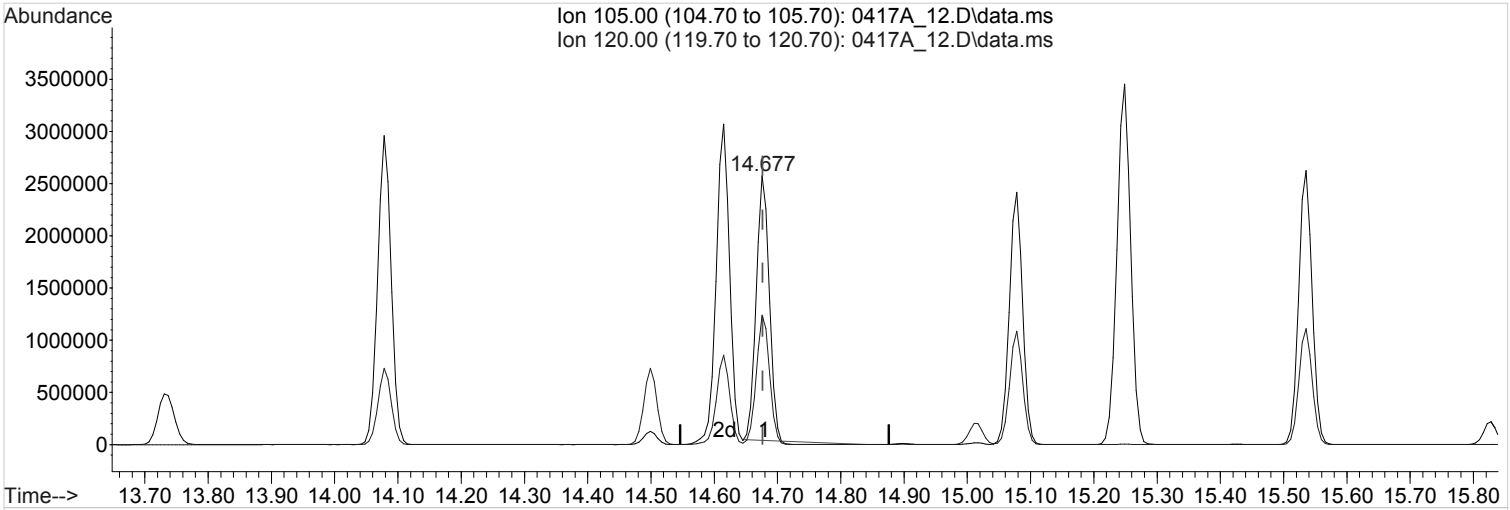
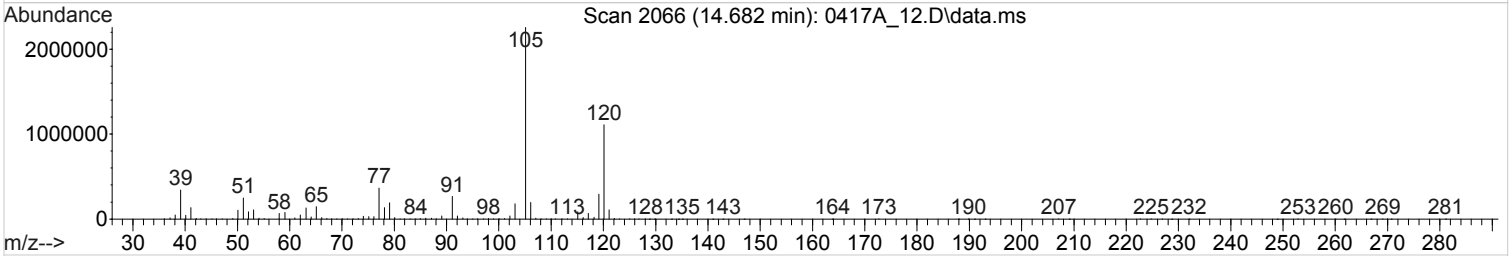
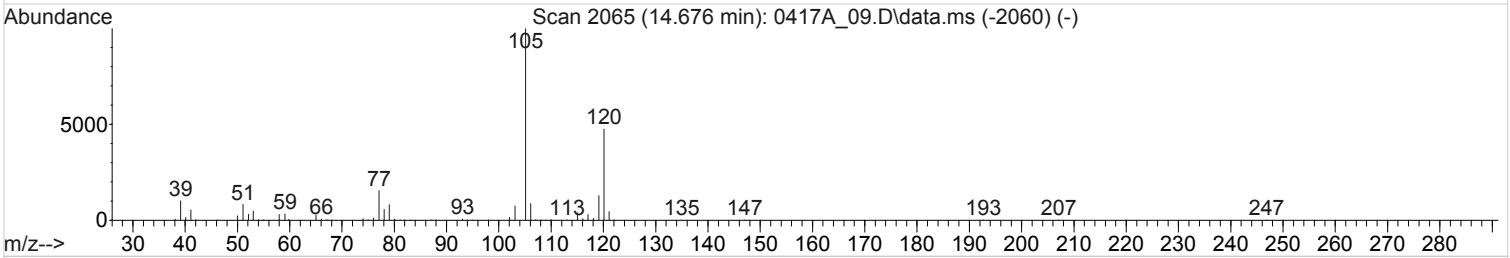
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_12.D
Acq On : 17 Apr 2018 9:10 pm
Operator : 564
Sample : STD AMS 25.0 ppbv 18C29708
Misc : 18D17267
ALS Vial : 12 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 09:05:31 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:05:26 2018
Response via : Initial Calibration







TIC: 0417A_12.D\data.ms

(70) 1,3,5-Trimethylbenzene (T,M)

14.679min (+0.003) 28.5485169 ppbv

Qvalue = 95

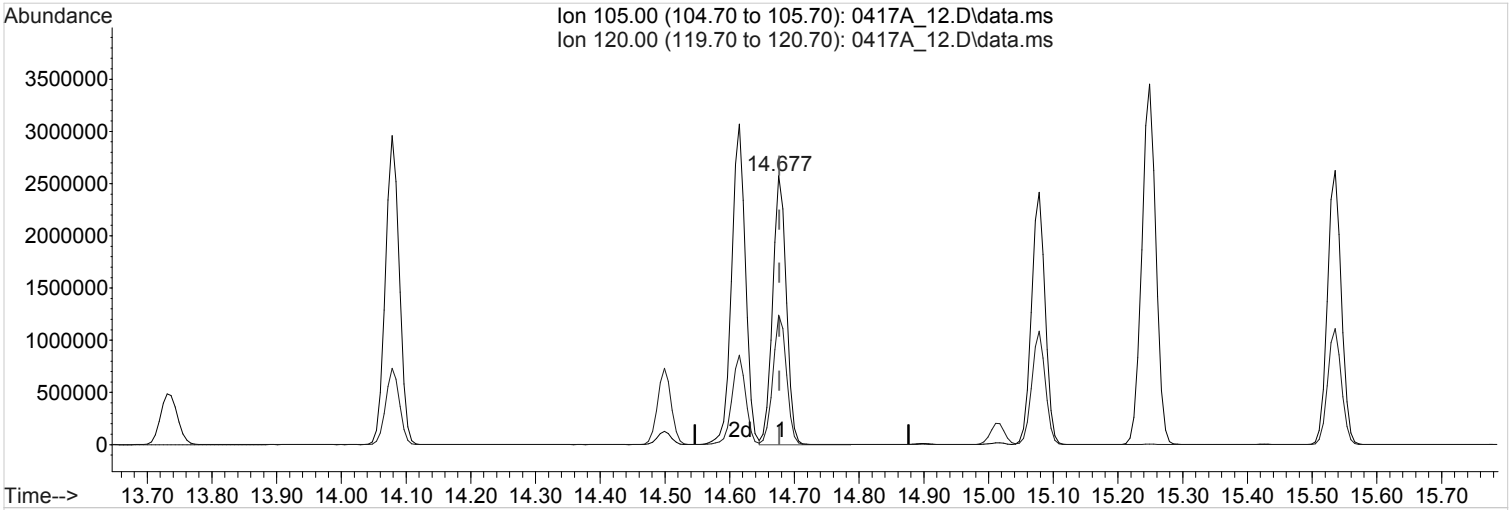
response 35307026

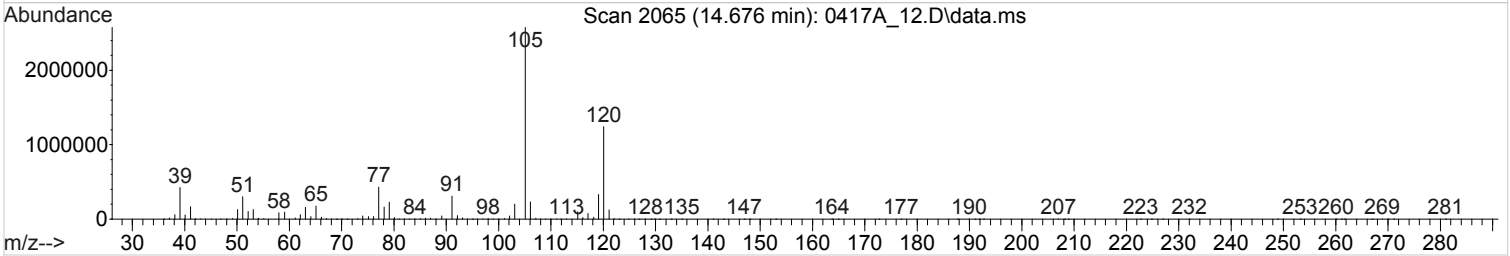
Ion	Exp%	Act%
105.00	100	100
120.00	47.50	51.11
0.00	0.00	0.00
0.00	0.00	0.00

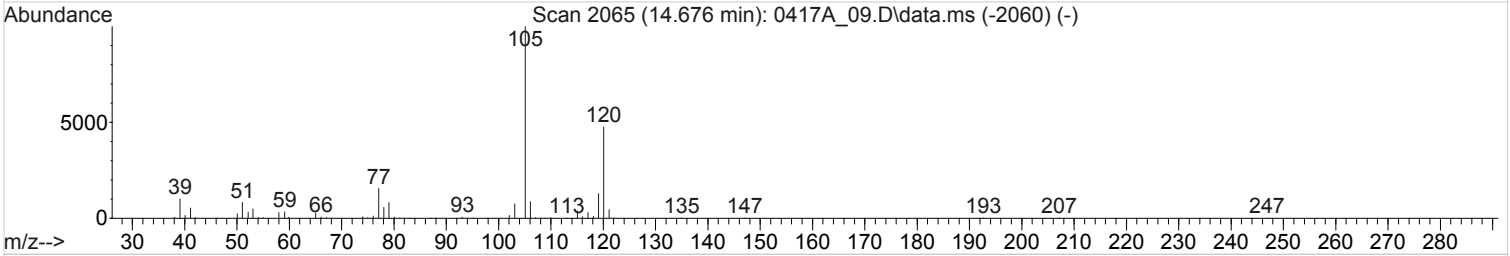
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_12.D
Acq On : 17 Apr 2018 9:10 pm
Operator : 564
Sample : STD AMS 25.0 ppbv 18C29708
Misc : 18D17267
ALS Vial : 12 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 09:05:31 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:05:26 2018
Response via : Initial Calibration







TIC: 0417A_12.D\data.ms

(70) 1,3,5-Trimethylbenzene (T,M)

14.676min (-0.001) 30.6144746 ppbv m

response 37862073

Ion	Exp%	Act%
105.00	100	100
120.00	47.50	47.66
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_13.D
Acq On : 17 Apr 2018 10:05 pm
Operator : 564
Sample : STD AMS 50.0 ppbv 18C29708
Misc : 18D17267
ALS Vial : 13 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 09:08:15 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:06:53 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.818	130	1659002	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	9.900	114	6667704	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	13.120	117	5050710	4.0000000	ppbv	0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	14.289	95	3292834	4.1407408	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 103.52%			
Target Compounds						Qvalue
2) Propene	4.066	41	24989709	56.8671293	ppbv	98
3) 1,1-DIFLUOROETHANE	4.074	65	13175659	55.5666537	ppbv	97
4) Dichlorodifluoromethane	4.128	85	23981174	35.7177628	ppbv	99
5) CHLORODIFLUOROMETHANE	4.159	67	5653705	58.0968918	ppbv	100
6) 1,2-Dichlorotetrafluor...	4.355	85	26587302	35.1865995	ppbv	100
7) Chloromethane	4.458	50	23299046	56.2416240	ppbv	100
8) Vinyl Chloride	4.652	62	23791853	57.3213306	ppbv	100
9) 1,3-Butadiene	4.715	39	26349665	60.2992843	ppbv	98
10) Bromomethane	5.201	94	14736736	58.3606580	ppbv	99
11) Chloroethane	5.360	64	12012736	57.2781723	ppbv	100
12) Vinyl Bromide	5.633	106	13781022	59.2052569	ppbv	100
13) Trichlorofluoromethane	5.717	101	36705634	58.4232151	ppbv	100
14) Ethanol	6.037	45	8894561	65.6985745	ppbv	99
15) 1,1,2-Trichlorotrifluo...	6.410	101	32155613	61.5989652	ppbv	98
16) 1,1-Dichloroethene	6.433	61	42376791	67.5298233	ppbv	100
17) Acetone	6.525	43	40698279	62.5156808	ppbv	98
18) 2-Propanol	6.716	45	55076186	62.7565811	ppbv	98
19) Carbon Disulfide	6.725	76	37790686	58.4706008	ppbv	97
20) Allyl Chloride	6.900	41	42501615	59.3138722	ppbv	98
21) Methylene Chloride	7.066	49	30733352	56.0730080	ppbv	99
22) TERT-BUTYL ALCOHOL	7.201	59	53849964	53.7769163	ppbv	99
23) Methyl Tert-Butyl Ether	7.369	73	62889323	58.3729261	ppbv	98
24) Trans-1,2-Dichloroethene	7.374	96	15757641	62.8757709	ppbv	92
25) n-Hexane	7.642	57	38863253	57.4024198	ppbv	97
26) 1,1-Dichloroethane	7.888	63	42669289	57.2371195	ppbv	100
27) Vinyl Acetate	7.908	43	90949853	71.4423654	ppbv	99
28) ETHYL ACETATE	8.579	70	5152386	63.3674657	ppbv	100
29) 2-Butanone (MEK)	8.550	72	12263513	65.1192387	ppbv	100
30) cis-1,2-Dichloroethene	8.548	61	42894798	62.5878724	ppbv	99
31) Tetrahydrofuran	8.868	42	43590062	63.3729621	ppbv	99
32) Chloroform	8.878	83	41149426	59.9407499	ppbv	99
33) Cyclohexane	9.122	84	27857515	57.3145561	ppbv	95
34) 1,1,1-Trichloroethane	9.090	97	36819888	57.6844508	ppbv	97
35) Carbon Tetrachloride	9.257	117	32080235	56.6079818	ppbv	98
36) 2,2,4-Trimethylpentane	9.497	57	149434128	62.0550483	ppbv	97
38) Benzene	9.487	78	70869832	65.1845542	ppbv #	95
39) 1,2-Dichloroethane	9.540	62	35878402	65.5484573	ppbv	99
40) Heptane	9.688	43	68997386	65.8354376	ppbv	99
41) Trichloroethene	10.191	95	25845514	65.3550648	ppbv	95
42) TERT-AMYL ETHYL ETHER	10.392	73	25026383	66.2069253	ppbv	96
43) METHYL CYCLOHEXANE	10.376	83	40386967	63.2728552	ppbv	94
44) 1,2-Dichloropropane	10.458	63	29818425	63.4746288	ppbv	95
45) Methyl Methacrylate	10.516	69	27441103	68.0649593	ppbv	98
46) 1,4-Dioxane	10.586	88	10717328	54.1843055	ppbv #	75
47) Bromodichloromethane	10.738	83	46865972	65.5726937	ppbv	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_13.D
Acq On : 17 Apr 2018 10:05 pm
Operator : 564
Sample : STD AMS 50.0 ppbv 18C29708
Misc : 18D17267
ALS Vial : 13 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 09:08:15 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:06:53 2018
Response via : Initial Calibration

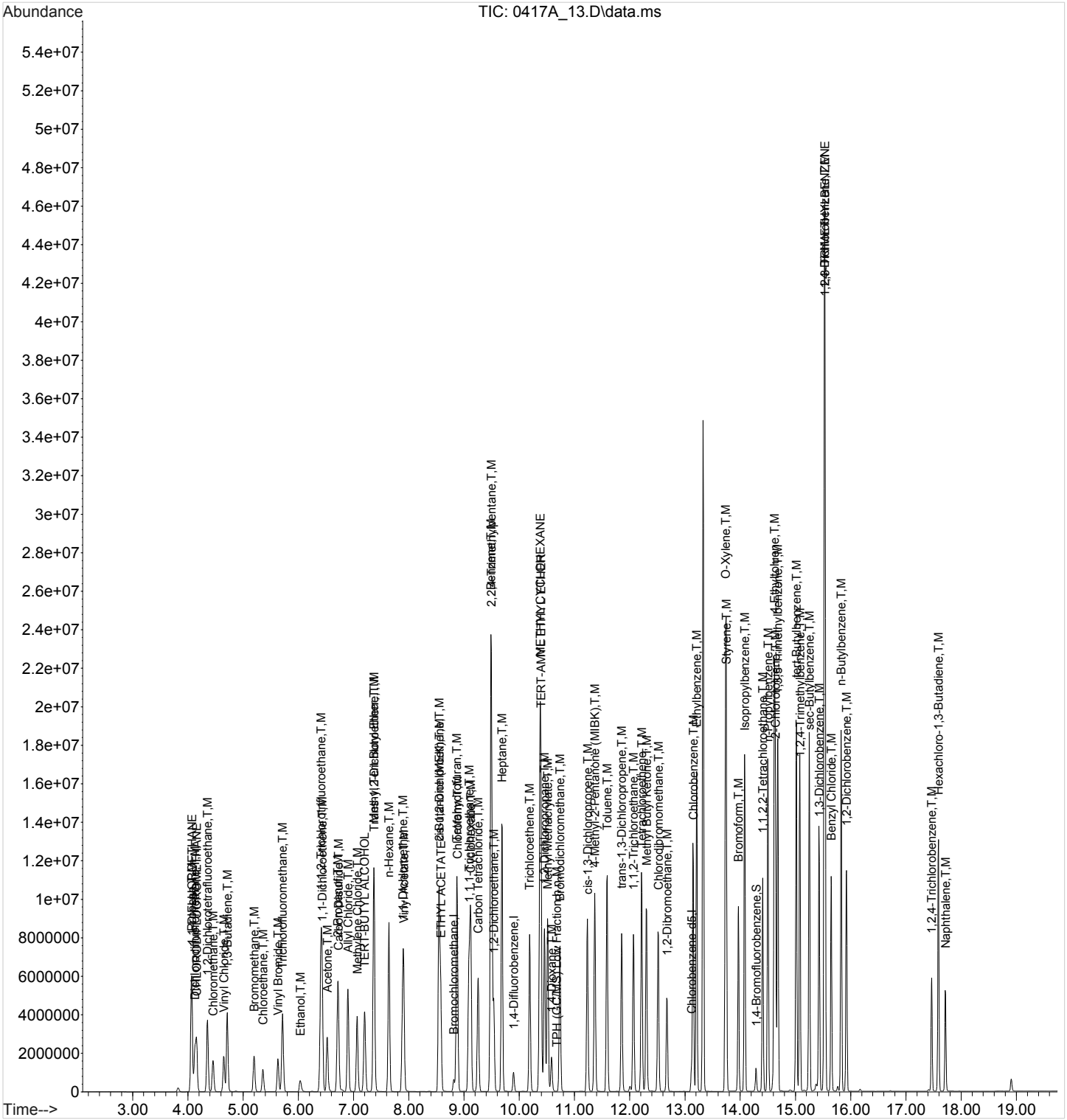
	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
48)	cis-1,3-Dichloropropene	11.235	75	42972306	62.6026624 ppbv	91
49)	4-Methyl-2-Pentanone (...	11.369	43	82266646	59.7378568 ppbv	100
50)	Toluene	11.592	91	72728287	61.5634671 ppbv	98
51)	trans-1,3-Dichloropropene	11.856	75	37905547	65.0133397 ppbv	94
52)	1,1,2-Trichloroethane	12.070	97	22935789	62.9072620 ppbv	96
53)	Tetrachloroethene	12.218	166	27630631	61.8927908 ppbv	94
54)	Methyl Butyl Ketone	12.304	43	76480773	64.5378447 ppbv	99
55)	Chlorodibromomethane	12.517	129	37750977	68.0033832 ppbv	98
56)	1,2-Dibromoethane	12.676	107	32473050	62.9428333 ppbv	97
57)	Chlorobenzene	13.151	112	48077934	58.3363671 ppbv	97
59)	Ethylbenzene	13.215	91	95733598	64.6098196 ppbv	98
61)	O-Xylene	13.735	91	75940219	66.8298134 ppbv	98
62)	Styrene	13.749	104	64398352	77.7343675 ppbv	98
63)	Bromoform	13.969	173	35592302	77.1844931 ppbv	98
64)	Isopropylbenzene	14.083	105	94028798	62.4643333 ppbv	97
65)	1,1,2,2-Tetrachloroethane	14.409	83	51339734	59.9737686 ppbv	97
66)	n-Propylbenzene	14.503	91	116844803	61.3822906 ppbv	97
67)	4-Ethyltoluene	14.619	105	102406956	67.5352336 ppbv	96
68)	2-Chlorotoluene	14.638	91	91051992	70.0430957 ppbv	99
70)	1,3,5-Trimethylbenzene	14.682	105	84207650	66.5540066 ppbv	97
71)	tert-Butylbenzene	15.019	119	72179050	63.2590977 ppbv	99
72)	1,2,4-Trimethylbenzene	15.082	105	78221605	63.8361629 ppbv	98
73)	sec-Butylbenzene	15.253	105	113367900	60.7085830 ppbv	97
74)	1,3-Dichlorobenzene	15.430	146	40618280	64.9659811 ppbv	97
75)	1,4-Dichlorobenzene	15.527	146	54435999	83.8410162 ppbv #	91
76)	1,2,3-TRIMETHYLBENZENE	15.538	105	90460299	72.4305895 ppbv	95
78)	Benzyl Chloride	15.650	91	68295981	68.2374004 ppbv	100
79)	n-Butylbenzene	15.830	91	88152059	59.3668515 ppbv	97
80)	1,2-Dichlorobenzene	15.926	146	34191204	58.9396171 ppbv	98
81)	1,2,4-Trichlorobenzene	17.470	180	13098048	59.2841006 ppbv	98
82)	Hexachloro-1,3-Butadiene	17.592	225	19294197	47.6399099 ppbv	98
83)	Naphthalene	17.718	128	31977004	56.7337661 ppbv	97
84)	TPH (GC/MS) Low Fraction	10.675	TIC	8858120797m	2931.7004208 ppbv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\041718A\
Data File : 0417A_13.D
Acq On : 17 Apr 2018 10:05 pm
Operator : 564
Sample : STD AMS 50.0 ppbv 18C29708
Misc : 18D17267
ALS Vial : 13 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 18 09:08:15 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:06:53 2018
Response via : Initial Calibration



ACCOUNT:	PROJECT:	SDG:	DATE/TIME:	PAGE:
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6A-OR

GC/MS INITIAL CALIBRATION DATA

SDG: L988471 **Analytical Method:** TO-15

Instrument ID: AIRMS4

Analyte	**RRF: 0.19**	**RRF: 0.31**	**RRF: 0.63**	**RRF: 1.25**	**RRF: 2.5**	**RRF: 3.75**	**RRF: 5.0**	**RRF: 50**
Analysis date/time	04/24/18 11:33	04/24/18 12:15	04/24/18 12:56	04/24/18 13:37	04/24/18 14:19	04/24/18 15:03	04/24/18 15:49	04/24/18 18:13
DICHLORODIFLUOROMETHANE	1.0710	0.9550	0.8280	0.8270	0.7150	0.6480	0.5980	0.5130
1,2-DICHLOROTETRAFLUOROETHANE	0.3690	0.3460	0.3240	0.2970	0.2880	0.2770	0.2670	0.2170
CHLOROMETHANE	0.6190	0.6110	0.5750	0.5310	0.5110	0.5120	0.4940	0.4280
VINYL CHLORIDE	0.7580	0.6970	0.6790	0.6330	0.62	0.6310	0.6080	0.5450
1,3-BUTADIENE	0.4710	0.4220	0.37	0.3640	0.3530	0.3580	0.3540	0.3110
BROMOMETHANE	0.8290	0.7790	0.7390	0.6970	0.6710	0.6750	0.6570	0.6050
CHLOROETHANE	0.37	0.3590	0.3410	0.3130	0.3030	0.3140	0.3020	0.2630
VINYL BROMIDE	0.8180	0.7990	0.76	0.7050	0.6880	0.6960	0.6740	0.6310
TRICHLOROFLUOROMETHANE	1.84	1.7190	1.6250	1.4980	1.4820	1.4940	1.4510	1.3140
ETHANOL	0.2270	0.1790	0.1460	0.1390	0.1430	0.1490	0.1490	0.1570
1,1,2-TRICHLOROTRIFLUOROETHANE	1.6740	1.5840	1.4920	1.40	1.3560	1.3690	1.3250	1.2080
1,1-DICHLOROETHENE	1.0370	0.9660	0.9610	0.9090	0.8650	0.8860	0.8570	0.7650
ACETONE	0.5250	0.5910	0.5640	0.5360	0.5690	0.5780	0.5620	0.5420
2-PROPANOL	0.9030	0.8690	0.8970	0.8440	0.8470	0.8790	0.8540	0.7940
CARBON DISULFIDE	1.7780	1.7020	1.5440	1.4150	1.3510	1.3420	1.31	1.2040
ALLYL CHLORIDE	0.8080	0.7750	0.7220	0.6990	0.6730	0.6890	0.66	0.5690
METHYLENE CHLORIDE	0.8770	0.7550	0.6970	0.66	0.64	0.6380	0.6090	0.5990
METHYL TERT-BUTYL ETHER	1.9280	1.9020	1.76	1.6420	1.5910	1.6180	1.5610	1.3930
TRANS-1,2-DICHLOROETHENE	0.8120	0.7870	0.7560	0.7250	0.7250	0.7240	0.7050	0.6560
N-HEXANE	0.9920	0.9710	0.9290	0.8660	0.8530	0.8520	0.8120	0.7220
1,1-DICHLOROETHANE	1.3850	1.2720	1.2490	1.1710	1.1270	1.1350	1.0970	0.9320
VINYL ACETATE	1.1330	1.1220	1.0150	1.0640	1.1610	1.2080	1.21	1.1110
2-BUTANONE (MEK)	0.2830	0.2560	0.3080	0.2760	0.2930	0.2960	0.2970	0.2690
CIS-1,2-DICHLOROETHENE	1.0770	1.0910	0.9940	0.9850	0.97	0.9890	0.9690	0.8290
TETRAHYDROFURAN	0.6230	0.7020	0.6740	0.6390	0.6190	0.6260	0.60	0.4840
CHLOROFORM	1.6490	1.5590	1.5140	1.3910	1.3480	1.3680	1.3270	1.1830
CYCLOHEXANE	1.0380	0.9860	0.9550	0.8550	0.8480	0.8550	0.8310	0.71
1,1,1-TRICHLOROETHANE	1.6310	1.5570	1.4550	1.3740	1.3340	1.3480	1.3040	1.1430
CARBON TETRACHLORIDE	1.7130	1.6620	1.56	1.4530	1.4290	1.4420	1.4060	1.2890
2,2,4-TRIMETHYLPENTANE	3.6340	3.4480	3.3010	3.0970	3.0230	2.9880	2.9240	2.3950
BENZENE	0.6660	0.6450	0.6250	0.5960	0.5780	0.5820	0.5650	0.5250
1,2-DICHLOROETHANE	0.2110	0.2140	0.1880	0.1960	0.1860	0.1930	0.19	0.1680
HEPTANE	0.3350	0.3210	0.3090	0.2940	0.2840	0.2850	0.2740	0.2110
TRICHLOROETHENE	0.3180	0.2950	0.2830	0.2710	0.2610	0.2630	0.2650	0.25
1,2-DICHLOROPROPANE	0.2560	0.2310	0.2250	0.2170	0.2120	0.2130	0.2070	0.1710
METHYL METHACRYLATE	0.2620	0.26	0.2820	0.2740	0.27	0.2720	0.2660	0.2090
1,4-DIOXANE	0.1330	0.1320	0.1320	0.1250	0.1250	0.1260	0.1250	0.1170
BROMODICHLOROMETHANE	0.4680	0.4390	0.44	0.4210	0.4170	0.4120	0.4120	0.3740
CIS-1,3-DICHLOROPROPENE	0.3520	0.3540	0.3570	0.3530	0.3460	0.3510	0.35	0.3330
4-METHYL-2-PENTANONE (MIBK)	0.4050	0.3980	0.39	0.3750	0.3750	0.3790	0.3690	0.2980
TOLUENE	0.78	0.7520	0.7240	0.6960	0.68	0.6890	0.6770	0.5840
TRANS-1,3-DICHLOROPROPENE	0.2590	0.2510	0.2340	0.25	0.2440	0.2610	0.2540	0.2390
1,1,2-TRICHLOROETHANE	0.2730	0.2550	0.2490	0.2410	0.2210	0.23	0.2310	0.1970
TETRACHLOROETHENE	0.4680	0.4240	0.4070	0.39	0.3760	0.3790	0.3770	0.3120
METHYL BUTYL KETONE	0.2780	0.2640	0.2760	0.2680	0.2690	0.2810	0.2830	0.2230
CHLORODIBROMOMETHANE	0.4930	0.4860	0.4740	0.4610	0.4590	0.4660	0.4690	0.3840
1,2-DIBROMOETHANE	0.3780	0.3780	0.37	0.3630	0.3560	0.3630	0.3720	0.3130
CHLOROBENZENE	0.5830	0.5540	0.5270	0.4970	0.4770	0.4960	0.4910	0.4120
ETHYLBENZENE	1.2860	1.2310	1.1830	1.1170	1.0980	1.0760	1.08	0.8290
M&P-XYLENE	1.0220	1.0030	0.9420	0.8730	0.8450	0.83	0.8390	0.5330

6A-OR

GC/MS INITIAL CALIBRATION DATA

SDG: L988471 **Analytical Method:** TO-15

Instrument ID: AIRMS4

Analyte	**RRF: 0.19**	**RRF: 0.31**	**RRF: 0.63**	**RRF: 1.25**	**RRF: 2.5**	**RRF: 3.75**	**RRF: 5.0**	**RRF: 50**
Analysis date/time	04/24/18 11:33	04/24/18 12:15	04/24/18 12:56	04/24/18 13:37	04/24/18 14:19	04/24/18 15:03	04/24/18 15:49	04/24/18 18:13
O-XYLENE	1.0440	1.0160	0.9570	0.8940	0.8670	0.8490	0.8480	0.6450
STYRENE	0.7420	0.7060	0.6880	0.6770	0.6850	0.6830	0.6880	0.5210
BROMOFORM	0.7840	0.7640	0.7640	0.7450	0.7590	0.7560	0.7650	0.6260
ISOPROPYLBENZENE	1.4960	1.4270	1.3450	1.2670	1.2480	1.2080	1.2090	0.9130
1,1,2,2-TETRACHLOROETHANE	0.8360	0.8160	0.7890	0.7630	0.7420	0.7330	0.7260	0.5570
4-ETHYLTOLUENE	1.3780	1.3550	1.3120	1.27	1.2570	1.2260	1.2540	0.9450
2-CHLOROTOLUENE	0.4260	0.3750	0.3850	0.3510	0.3410	0.3410	0.3390	0.2170
1,3,5-TRIMETHYLBENZENE	1.2910	1.2030	1.1410	1.0710	1.0220	1.0330	1.0190	0.6410
1,2,4-TRIMETHYLBENZENE	1.1710	1.1260	1.0760	1.0520	1.0380	0.9980	1.0070	0.7540
1,3-DICHLOROBENZENE	0.8010	0.7820	0.7830	0.7730	0.7790	0.7780	0.79	0.6470
1,4-DICHLOROBENZENE	0.7740	0.7560	0.7780	0.7510	0.7680	0.7590	0.7720	0.4940
BENZYL CHLORIDE	0.6090	0.6540	0.7270	0.8030	0.83	0.83	0.8390	0.7540
1,2-DICHLOROBENZENE	0.8540	0.8620	0.80	0.7830	0.7920	0.7680	0.7690	0.6320
1,2,4-TRICHLOROBENZENE	0.3680	0.4050	0.4340	0.5010	0.5810	0.6110	0.6380	0.4990
HEXACHLORO-1,3-BUTADIENE	0.8590	0.8140	0.7730	0.7290	0.6980	0.6960	0.6990	0.4540
NAPHTHALENE	1.0440	1.0580	1.0790	1.1710	1.2470	1.2860	1.3070	0.9280
1,4-BROMOFLUOROBENZENE	0.5040	0.5170	0.5180	0.5230	0.5230	0.5340	0.5340	0.5550
PROPENE		0.3660	0.2580	0.3050	0.2650	0.2260	0.2390	0.2280
File ID:	0424A_02	0424A_03	0424A_04	0424A_05	0424A_06	0424A_07	0424A_08	0424A_11

6A-OR

GC/MS INITIAL CALIBRATION DATA

SDG: L988471 **Analytical Method:** TO-15
Instrument ID: AIRMS4

Analyte Analysis date/time	RRF. Avg	%RSD	COD
DICHLORODIFLUOROMETHANE	0.76938	24.32	
1,2-DICHLOROTETRAFLUOROETHANE	0.298013	16.03	
CHLOROMETHANE	0.534908	11.97	
VINYL CHLORIDE	0.646514	9.95	
1,3-BUTADIENE	0.375346	13.09	
BROMOMETHANE	0.706528	10.2	
CHLOROETHANE	0.320595	10.89	
VINYL BROMIDE	0.721414	8.95	
TRICHLOROFLUOROMETHANE	1.552894	10.73	
ETHANOL	0.161123	18.18	
1,1,2-TRICHLOROTRIFLUOROETHANE	1.425922	10.52	
1,1-DICHLOROETHENE	0.905653	9.16	
ACETONE	0.558395	3.99	
2-PROPANOL	0.860839	4.03	
CARBON DISULFIDE	1.455702	13.79	
ALLYL CHLORIDE	0.699366	10.43	
METHYLENE CHLORIDE	0.684414	13.52	
METHYL TERT-BUTYL ETHER	1.674238	10.74	
TRANS-1,2-DICHLOROETHENE	0.736201	6.59	
N-HEXANE	0.874541	10.04	
1,1-DICHLOROETHANE	1.171152	11.55	
VINYL ACETATE	1.128073	5.95	
2-BUTANONE (MEK)	0.284804	6.02	
CIS-1,2-DICHLOROETHENE	0.987847	8.07	
TETRAHYDROFURAN	0.620829	10.36	
CHLOROFORM	1.417428	10.46	
CYCLOHEXANE	0.884545	11.75	
1,1,1-TRICHLOROETHANE	1.393206	10.98	
CARBON TETRACHLORIDE	1.494089	9.43	
2,2,4-TRIMETHYLPENTANE	3.101355	12.15	
BENZENE	0.597842	7.65	
1,2-DICHLOROETHANE	0.193304	7.47	
HEPTANE	0.289323	13.06	
TRICHLOROETHENE	0.27579	7.95	
1,2-DICHLOROPROPANE	0.216465	10.99	
METHYL METHACRYLATE	0.261968	8.63	
1,4-DIOXANE	0.126767	4.18	
BROMODICHLOROMETHANE	0.422749	6.5	
CIS-1,3-DICHLOROPROPENE	0.349469	2.09	
4-METHYL-2-PENTANONE (MIBK)	0.373482	8.84	
TOLUENE	0.697762	8.43	
TRANS-1,3-DICHLOROPROPENE	0.248892	3.73	
1,1,2-TRICHLOROETHANE	0.23702	9.7	
TETRACHLOROETHENE	0.391583	11.46	
METHYL BUTYL KETONE	0.267715	7.23	
CHLORODIBROMOMETHANE	0.461373	7.29	
1,2-DIBROMOETHANE	0.361635	5.85	
CHLOROBENZENE	0.504606	10.2	
ETHYLBENZENE	1.112488	12.36	
M&P-XYLENE	0.861038	17.67	
O-XYLENE	0.889791	13.98	

6A-OR

GC/MS INITIAL CALIBRATION DATA

SDG: L988471 **Analytical Method:** TO-15
Instrument ID: AIRMS4

Analyte Analysis date/time	RRF. Avg	%RSD	COD
STYRENE	0.673659	9.68	
BROMOFORM	0.745463	6.64	
ISOPROPYLBENZENE	1.264192	13.91	
1,1,2,2-TETRACHLOROETHANE	0.745534	11.5	
4-ETHYLTOLUENE	1.249615	10.7	
2-CHLOROTOLUENE	0.346801	17.35	
1,3,5-TRIMETHYLBENZENE	1.052496	18.3	
1,2,4-TRIMETHYLBENZENE	1.027682	12.18	
1,3-DICHLOROBENZENE	0.766694	6.39	
1,4-DICHLOROBENZENE	0.731525	13.16	
BENZYL CHLORIDE	0.755689	11.5	
1,2-DICHLOROBENZENE	0.782465	9.04	
1,2,4-TRICHLOROBENZENE	0.504536	19.64	
HEXACHLORO-1,3-BUTADIENE	0.71532	16.94	
NAPHTHALENE	1.139922	11.78	
1,4-BROMOFLUOROBENZENE	0.525949	2.88	
PROPENE	0.269541	18.73	

Response Factor Report AIRMS4

Method Path : C:\msdchem\1\methods\
Method File : TOAIRMS4D24R.m
Title : AIRMS4
Last Update : Wed Apr 25 09:45:42 2018
Response Via : Initial Calibration

Calibration Files
0.19=0424A_02.D 0.31=0424A_03.D 0.63=0424A_04.D 1.25=0424A_05.D 2.5 =0424A_06.D 3.75=0424A_07.D 5.0 =0424A_08.D
50 =0424A_11.D

		Compound	0.19	0.31	0.63	1.25	2.5	3.75	5.0	50	Avg	%RSD
1)	I	Bromochloromethane	----------ISTD----------									
2)	T,M	Propene		0.366	0.258	0.305	0.265	0.226	0.239	0.228	0.270	18.73
3)		1,1-DIFLUOROET...	0.398	0.307	0.220	0.300	0.249	0.222	0.235	0.240	0.271	22.49
4)	T,M	Dichlorodifluo...	1.071	0.955	0.828	0.827	0.715	0.648	0.598	0.513	0.769	24.32
5)		CHLORODIFLUORO...	0.399	0.277	0.193	0.298	0.243	0.216	0.230	0.246	0.263	24.39
6)	T,M	1,2-Dichlorote...	0.369	0.346	0.324	0.297	0.288	0.277	0.267	0.217	0.298	16.03
7)	T,M	Chloromethane	0.619	0.611	0.575	0.531	0.511	0.512	0.494	0.428	0.535	11.97
8)	T,M	Vinyl Chloride	0.758	0.697	0.679	0.633	0.620	0.631	0.608	0.545	0.647	9.95
9)	T,M	1,3-Butadiene	0.471	0.422	0.370	0.364	0.353	0.358	0.354	0.311	0.375	13.09
10)	T,M	Bromomethane	0.829	0.779	0.739	0.697	0.671	0.675	0.657	0.605	0.707	10.20
11)	T,M	Chloroethane	0.370	0.359	0.341	0.313	0.303	0.314	0.302	0.263	0.321	10.89
12)	T,M	Vinyl Bromide	0.818	0.799	0.760	0.705	0.688	0.696	0.674	0.631	0.721	8.95
13)	T,M	Trichlorofluor...	1.840	1.719	1.625	1.498	1.482	1.494	1.451	1.314	1.553	10.73
14)	T,M	Ethanol	0.227	0.179	0.146	0.139	0.143	0.149	0.149	0.157	0.161	18.18
15)	T,M	1,1,2-Trichlor...	1.674	1.584	1.492	1.400	1.356	1.369	1.325	1.208	1.426	10.52
16)	T,M	1,1-Dichloroet...	1.037	0.966	0.961	0.909	0.865	0.886	0.857	0.765	0.906	9.16
17)	T,M	Acetone	0.525	0.591	0.564	0.536	0.569	0.578	0.562	0.542	0.558	3.99
18)	T,M	2-Propanol	0.903	0.869	0.897	0.844	0.847	0.879	0.854	0.794	0.861	4.03
19)	T,M	Carbon Disulfide	1.778	1.702	1.544	1.415	1.351	1.342	1.310	1.204	1.456	13.79
20)	T,M	Allyl Chloride	0.808	0.775	0.722	0.699	0.673	0.689	0.660	0.569	0.699	10.43
21)	T,M	Methylene Chlo...	0.877	0.755	0.697	0.660	0.640	0.638	0.609	0.599	0.684	13.52
22)		TERT-BUTYL ALC...	1.367	1.289	1.279	1.233	1.225	1.237	1.205	1.064	1.237	7.00
23)	T,M	Methyl Tert-Bu...	1.928	1.902	1.760	1.642	1.591	1.618	1.561	1.393	1.674	10.74
24)	T,M	Trans-1,2-Dich...	0.812	0.787	0.756	0.725	0.725	0.724	0.705	0.656	0.736	6.59
25)	T,M	n-Hexane	0.992	0.971	0.929	0.866	0.853	0.852	0.812	0.722	0.875	10.04
26)	T,M	1,1-Dichloroet...	1.385	1.272	1.249	1.171	1.127	1.135	1.097	0.932	1.171	11.55
27)	T,M	Vinyl Acetate	1.133	1.122	1.015	1.064	1.161	1.208	1.210	1.111	1.128	5.95
28)		ETHYL ACETATE	0.181	0.147	0.173	0.164	0.155	0.166	0.158	0.130	0.159	9.88
29)	T,M	2-Butanone (MEK)	0.283	0.256	0.308	0.276	0.293	0.296	0.297	0.269	0.285	6.02
30)	T,M	cis-1,2-Dichlo...	1.077	1.091	0.994	0.985	0.970	0.989	0.969	0.829	0.988	8.07
31)	T,M	Tetrahydrofuran	0.623	0.702	0.674	0.639	0.619	0.626	0.600	0.484	0.621	10.36
32)	T,M	Chloroform	1.649	1.559	1.514	1.391	1.348	1.368	1.327	1.183	1.417	10.46
33)	T,M	Cyclohexane	1.038	0.986	0.955	0.855	0.848	0.855	0.831	0.710	0.885	11.75
34)	T,M	1,1,1-Trichlor...	1.631	1.557	1.455	1.374	1.334	1.348	1.304	1.143	1.393	10.98
35)	T,M	Carbon Tetrach...	1.713	1.662	1.560	1.453	1.429	1.442	1.406	1.289	1.494	9.43
36)	T,M	2,2,4-Trimethy...	3.634	3.448	3.301	3.097	3.023	2.988	2.924	2.395	3.101	12.15
37)	I	1,4-Difluorobenzene	----------ISTD----------									
38)	T,M	Benzene	0.666	0.645	0.625	0.596	0.578	0.582	0.565	0.525	0.598	7.65
39)	T,M	1,2-Dichloroet...	0.211	0.214	0.188	0.196	0.186	0.193	0.190	0.168	0.193	7.47

Response Factor Report AIRMS4

Method Path : C:\msdchem\1\methods\
Method File : TOAIRMS4D24R.m
Title : AIRMS4

40)	T,M	Heptane	0.335	0.321	0.309	0.294	0.284	0.285	0.274	0.211	0.289	13.06
41)	T,M	Trichloroethene	0.318	0.295	0.283	0.271	0.261	0.263	0.265	0.250	0.276	7.95
42)		TERT-AMYL ETHY...	0.193	0.182	0.173	0.170	0.165	0.164	0.164	0.139	0.169	9.24
43)		METHYL CYCLOHE...	0.400	0.385	0.368	0.347	0.339	0.340	0.334	0.279	0.349	10.63
44)	T,M	1,2-Dichloropr...	0.256	0.231	0.225	0.217	0.212	0.213	0.207	0.171	0.216	10.99
45)	T,M	Methyl Methacr...	0.262	0.260	0.282	0.274	0.270	0.272	0.266	0.209	0.262	8.63
46)	T,M	1,4-Dioxane	0.133	0.132	0.132	0.125	0.125	0.126	0.125	0.117	0.127	4.18
47)	T,M	Bromodichlorom...	0.468	0.439	0.440	0.421	0.417	0.412	0.412	0.374	0.423	6.50
48)	T,M	cis-1,3-Dichlo...	0.352	0.354	0.357	0.353	0.346	0.351	0.350	0.333	0.349	2.09
49)	T,M	4-Methyl-2-Pen...	0.405	0.398	0.390	0.375	0.375	0.379	0.369	0.298	0.373	8.84
50)	T,M	Toluene	0.780	0.752	0.724	0.696	0.680	0.689	0.677	0.584	0.698	8.43
51)	T,M	trans-1,3-Dich...	0.259	0.251	0.234	0.250	0.244	0.261	0.254	0.239	0.249	3.73
52)	T,M	1,1,2-Trichlor...	0.273	0.255	0.249	0.241	0.221	0.230	0.231	0.197	0.237	9.70
53)	T,M	Tetrachloroethene	0.468	0.424	0.407	0.390	0.376	0.379	0.377	0.312	0.392	11.46
54)	T,M	Methyl Butyl K...	0.278	0.264	0.276	0.268	0.269	0.281	0.283	0.223	0.268	7.23
55)	T,M	Chlorodibromom...	0.493	0.486	0.474	0.461	0.459	0.466	0.469	0.384	0.461	7.29
56)	T,M	1,2-Dibromoethane	0.378	0.378	0.370	0.363	0.356	0.363	0.372	0.313	0.362	5.85
57)	T,M	Chlorobenzene	0.583	0.554	0.527	0.497	0.477	0.496	0.491	0.412	0.505	10.20
58)	I	Chlorobenzene-d5	----------ISTD----------									
59)	T,M	Ethylbenzene	1.286	1.231	1.183	1.117	1.098	1.076	1.080	0.829	1.112	12.36
60)	T,M	M&P-Xylene	1.022	1.003	0.942	0.873	0.845	0.830	0.839	0.533	0.861	17.67
61)	T,M	O-Xylene	1.044	1.016	0.957	0.894	0.867	0.849	0.848	0.645	0.890	13.98
62)	T,M	Styrene	0.742	0.706	0.688	0.677	0.685	0.683	0.688	0.521	0.674	9.68
63)	T,M	Bromoform	0.784	0.764	0.764	0.745	0.759	0.756	0.765	0.626	0.745	6.64
64)	T,M	Isopropylbenzene	1.496	1.427	1.345	1.267	1.248	1.208	1.209	0.913	1.264	13.91
65)	T,M	1,1,2,2-Tetrac...	0.836	0.816	0.789	0.763	0.742	0.733	0.726	0.557	0.746	11.50
66)	T,M	n-Propylbenzene	1.636	1.571	1.504	1.447	1.446	1.451	1.422	1.062	1.443	11.80
67)	T,M	4-Ethyltoluene	1.378	1.355	1.312	1.270	1.257	1.226	1.254	0.945	1.250	10.70
68)	T,M	2-Chlorotoluene	0.426	0.375	0.385	0.351	0.341	0.341	0.339	0.217	0.347	17.35
69)	S	1,4-Bromofluor...	0.504	0.517	0.518	0.523	0.523	0.534	0.534	0.555	0.526	2.88
70)	T,M	1,3,5-Trimethy...	1.291	1.203	1.141	1.071	1.022	1.033	1.019	0.641	1.052	18.30
71)	T,M	Tert-Butylbenzene	1.174	1.121	1.073	1.022	0.992	0.958	0.966	0.724	1.004	13.57
72)	T,M	1,2,4-Trimethy...	1.171	1.126	1.076	1.052	1.038	0.998	1.007	0.754	1.028	12.18
73)	T,M	sec-Butylbenzene	0.336	0.323	0.314	0.292	0.275	0.279	0.281	0.216	0.289	12.78
74)	T,M	1,3-Dichlorobe...	0.801	0.782	0.783	0.773	0.779	0.778	0.790	0.647	0.767	6.39
75)	T,M	1,4-Dichlorobe...	0.774	0.756	0.778	0.751	0.768	0.759	0.772	0.494	0.732	13.16
76)		1,2,3-TRIMETHY...	1.199	1.140	1.120	1.062	1.015	0.990	0.984	0.545	1.007	20.02
77)		DICYCLOPENTADIENE	1.409	1.347	1.293	1.218	1.162	1.119	1.105	0.603	1.157	21.50
78)	T,M	Benzyl Chloride	0.609	0.654	0.727	0.803	0.830	0.830	0.839	0.754	0.756	11.50
79)	T,M	n-Butylbenzene	1.255	1.282	1.215	1.177	1.152	1.160	1.138	0.803	1.148	12.92
80)	T,M	1,2-Dichlorobe...	0.854	0.862	0.800	0.783	0.792	0.768	0.769	0.632	0.782	9.04
81)	T,M	1,2,4-Trichlor...	0.368	0.405	0.434	0.501	0.581	0.611	0.638	0.499	0.505	19.64
82)	T,M	Hexachloro-1,3...	0.859	0.814	0.773	0.729	0.698	0.696	0.699	0.454	0.715	16.94
83)	T,M	Naphthalene	1.044	1.058	1.079	1.171	1.247	1.286	1.307	0.928	1.140	11.78
84)	h,n,MTPH (GC/MS) Lo...				2.146	1.966	1.872	1.830	1.812	1.729	1.893	7.74

(#) = Out of Range

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042418A\
Data File : 0424A_02.D
Acq On : 24 Apr 2018 11:33 am
Operator : 564
Sample : STD AMS 0.19 ppbv 18D19497
Misc : 18D19496
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 25 09:36:53 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:34:47 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	9.824	130	1400595	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	10.898	114	5095128	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	14.038	117	3391040	4.0000000	ppbv	0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	15.239	95	1709490	3.7423144	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 93.56%			
Target Compounds						Qvalue
2) Propene	4.157	41	33051	0.4233358	ppbv #	15
3) 1,1-DIFLUOROETHANE	4.183	51	26503	0.3418575	ppbv #	20
4) Dichlorodifluoromethane	4.241	85	71265	0.3189056	ppbv #	42
5) CHLORODIFLUOROMETHANE	4.308	51	26528	0.3561211	ppbv #	63
6) 1,2-Dichlorotetrafluor...	4.553	85	24530	0.2548872	ppbv #	23
7) Chloromethane	4.726	50	41186	0.2339884	ppbv #	41
8) Vinyl Chloride	4.984	62	50442	0.2321948	ppbv #	43
9) 1,3-Butadiene	5.057	39	31365	0.2540331	ppbv	93
10) Bromomethane	5.716	94	55183	0.2368993	ppbv	96
11) Chloroethane	5.910	64	24624	0.2275488	ppbv #	46
12) Vinyl Bromide	6.247	106	54405	0.2264594	ppbv	95
13) Trichlorofluoromethane	6.308	101	122436	0.2372603	ppbv	99
14) Ethanol	6.847	45	15100m	0.2976555	ppbv	
15) 1,1,2-Trichlorotrifluo...	7.107	101	111346	0.2354458	ppbv	99
16) 1,1-Dichloroethene	7.188	61	68976	0.2277275	ppbv	95
17) Acetone	7.394	43	34914	0.1750599	ppbv #	37
18) 2-Propanol	7.586	45	60045	0.1940676	ppbv #	67
19) Carbon Disulfide	7.540	76	118274	0.2551754	ppbv #	71
20) Allyl Chloride	7.741	41	53747	0.2264130	ppbv #	33
21) Methylene Chloride	7.947	49	58340	0.2644368	ppbv	97
22) TERT-BUTYL ALCOHOL	8.089	59	90921	0.2124472	ppbv #	62
23) Methyl Tert-Butyl Ether	8.209	73	128237	0.2298112	ppbv	96
24) Trans-1,2-Dichloroethene	8.254	61	54018	0.2147309	ppbv	92
25) n-Hexane	8.457	57	65972	0.2246074	ppbv	97
26) 1,1-Dichloroethane	8.824	63	92172	0.2354005	ppbv #	65
27) Vinyl Acetate	8.873	43	75382m	0.1791240	ppbv	
28) ETHYL ACETATE	9.536	45	12039m	0.2128181	ppbv	
29) 2-Butanone (MEK)	9.563	72	18860	0.1849806	ppbv #	48
30) cis-1,2-Dichloroethene	9.543	61	71628	0.2099054	ppbv	91
31) Tetrahydrofuran	9.875	42	41426	0.1898979	ppbv #	69
32) Chloroform	9.865	83	109674	0.2324611	ppbv	100
33) Cyclohexane	10.059	84	69080	0.2343075	ppbv	99
34) 1,1,1-Trichloroethane	10.064	97	108501	0.2332300	ppbv	97
35) Carbon Tetrachloride	10.222	117	113990	0.2295177	ppbv	98
36) 2,2,4-Trimethylpentane	10.401	57	241786	0.2345688	ppbv #	91
38) Benzene	10.496	78	161253	0.2174766	ppbv #	89
39) 1,2-Dichloroethane	10.591	62	51169	0.2091943	ppbv	95
40) Heptane	10.584	43	81169	0.2231439	ppbv	99
41) Trichloroethene	11.205	95	77019	0.2298491	ppbv	99
42) TERT-AMYL ETHYL ETHER	11.331	73	46682	0.2228536	ppbv	96
43) METHYL CYCLOHEXANE	11.347	83	96887	0.2240649	ppbv #	77
44) 1,2-Dichloropropane	11.514	63	61859	0.2285341	ppbv	85
45) Methyl Methacrylate	11.522	41	63291	0.1827412	ppbv	98
46) 1,4-Dioxane	11.652	88	32128	0.1999972	ppbv #	87
47) Bromodichloromethane	11.797	83	113363	0.2162449	ppbv	100
48) cis-1,3-Dichloropropene	12.303	75	85109	0.1899832	ppbv	94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042418A\
Data File : 0424A_02.D
Acq On : 24 Apr 2018 11:33 am
Operator : 564
Sample : STD AMS 0.19 ppbv 18D19497
Misc : 18D19496
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 25 09:36:53 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:34:47 2018
Response via : Initial Calibration

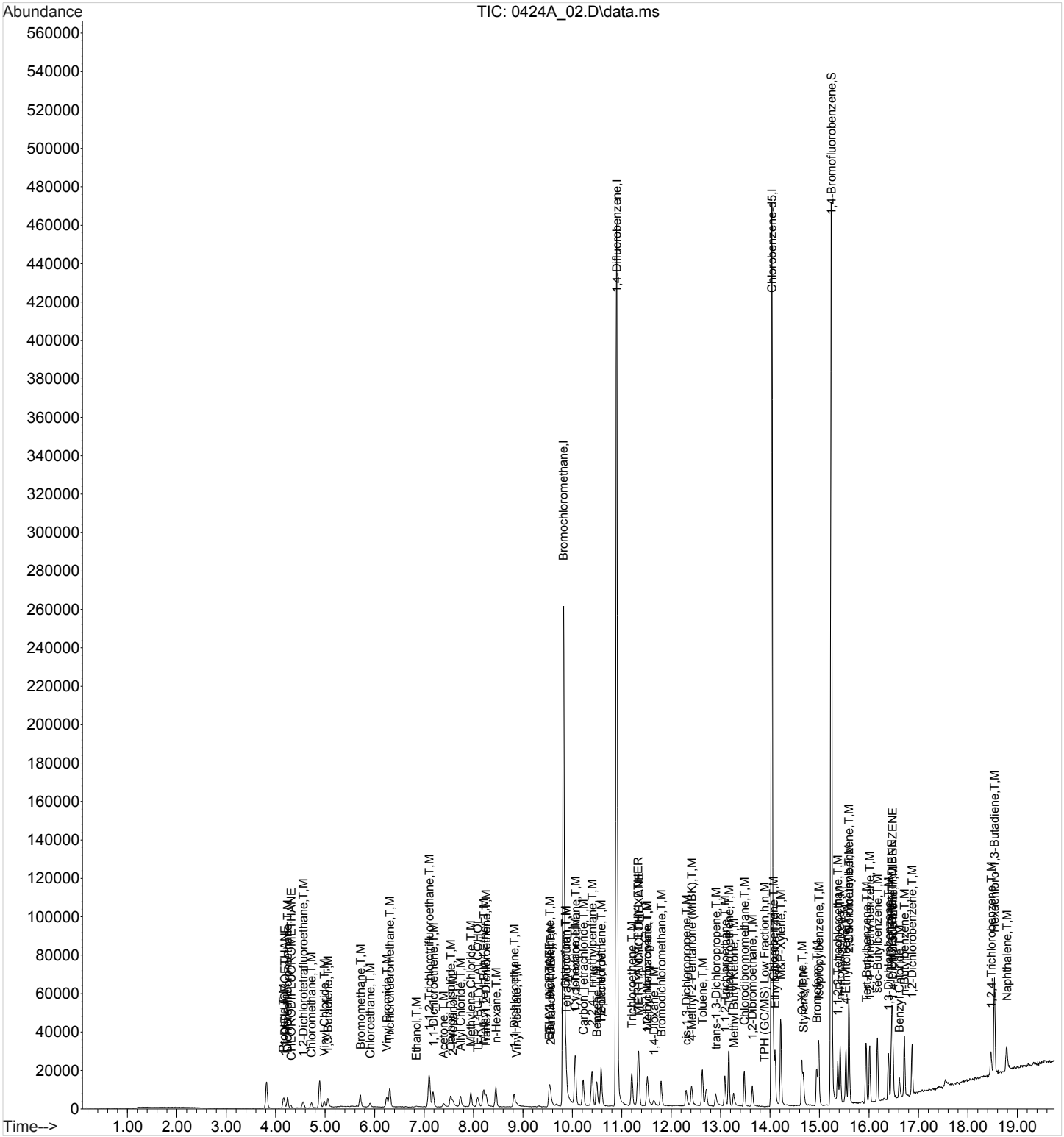
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
49) 4-Methyl-2-Pentanone (...	12.415	43	97988	0.2027581 ppbv	98
50) Toluene	12.632	91	188799	0.2153202 ppbv	99
51) trans-1,3-Dichloropropene	12.903	75	62575	0.1900786 ppbv #	67
52) 1,1,2-Trichloroethane	13.088	97	65993	0.2254553 ppbv	94
53) Tetrachloroethene	13.168	166	113375	0.2349588 ppbv	98
54) Methyl Butyl Ketone	13.265	43	67311	0.1885521 ppbv #	91
55) Chlorodibromomethane	13.480	129	119418	0.2013675 ppbv	93
56) 1,2-Dibromoethane	13.643	107	91366	0.1975160 ppbv	99
57) Chlorobenzene	14.069	112	141004	0.2234109 ppbv #	79
59) Ethylbenzene	14.104	91	207208	0.2258826 ppbv #	42
60) M&P-Xylene	14.218	91	329281	0.4654951 ppbv	99
61) O-Xylene	14.644	91	168153	0.2320623 ppbv	99
62) Styrene	14.674	104	119484	0.2071977 ppbv #	93
63) Bromoform	14.946	173	126306	0.1959056 ppbv	99
64) Isopropylbenzene	14.985	105	241041	0.2336187 ppbv #	96
65) 1,1,2,2-Tetrachloroethane	15.373	83	134727	0.2155455 ppbv	100
66) n-Propylbenzene	15.421	91	263500	0.2131927 ppbv	99
67) 4-Ethyltoluene	15.536	105	222036	0.2125461 ppbv	97
68) 2-Chlorotoluene	15.598	126	68549	0.2355069 ppbv	93
70) 1,3,5-Trimethylbenzene	15.597	105	207932	0.2362078 ppbv	97
71) Tert-Butylbenzene	15.945	119	189065	0.2313997 ppbv	99
72) 1,2,4-Trimethylbenzene	16.017	105	188611	0.2216901 ppbv	97
73) sec-Butylbenzene	16.173	134	54053	0.2274969 ppbv #	100
74) 1,3-Dichlorobenzene	16.396	146	129003	0.1945606 ppbv #	95
75) 1,4-Dichlorobenzene	16.489	146	124615	0.1915650 ppbv #	90
76) 1,2,3-TRIMETHYLBENZENE	16.471	105	193099	0.2291617 ppbv	100
77) DICYCLOPENTADIENE	16.457	66	227019	0.2379052 ppbv	100
78) Benzyl Chloride	16.617	91	98074	0.1384828 ppbv	96
79) n-Butylbenzene	16.719	91	202158	0.2052760 ppbv	97
80) 1,2-Dichlorobenzene	16.874	146	137597	0.2100619 ppbv	98
81) 1,2,4-Trichlorobenzene	18.472	180	59264	0.1138732 ppbv #	85
82) Hexachloro-1,3-Butadiene	18.542	225	138333	0.2330644 ppbv	97
83) Naphthalene	18.786	128	168089	0.1533701 ppbv #	82
84) TPH (GC/MS) Low Fraction	13.890	TIC	20616341m	13.2170924 ppbv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042418A\
Data File : 0424A_02.D
Acq On : 24 Apr 2018 11:33 am
Operator : 564
Sample : STD AMS 0.19 ppbv 18D19497
Misc : 18D19496
ALS Vial : 2 Sample Multiplier: 1

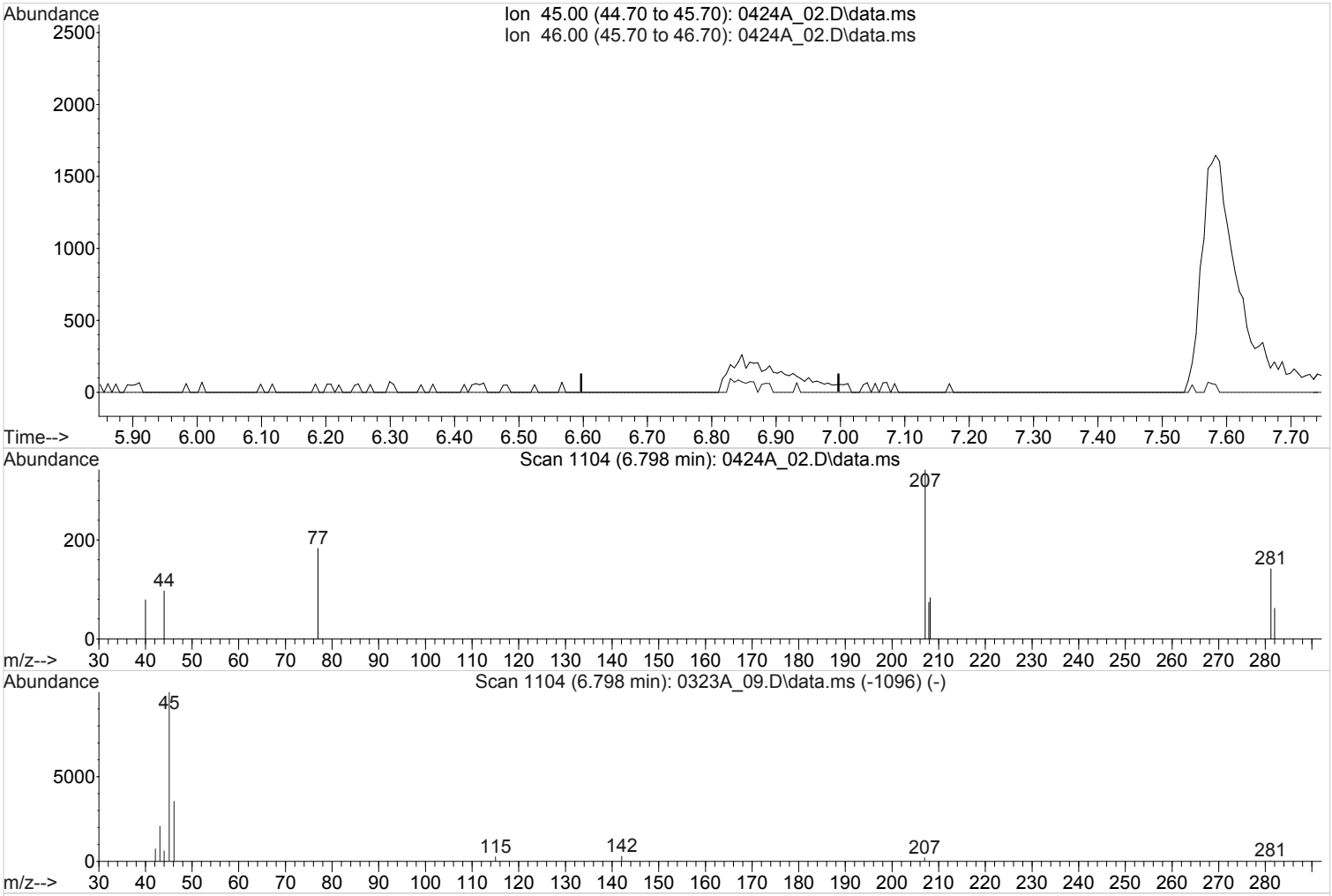
Quant Time: Apr 25 09:36:53 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:34:47 2018
Response via : Initial Calibration



Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042418A\
Data File : 0424A_02.D
Acq On : 24 Apr 2018 11:33 am
Operator : 564
Sample : STD AMS 0.19 ppbv 18D19497
Misc : 18D19496
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 25 09:35:30 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:34:47 2018
Response via : Initial Calibration



TIC: 0424A_02.D\data.ms

(14) Ethanol (T,M)

6.797min (-6.797) 0.0000000 ppbv

Qvalue = 0

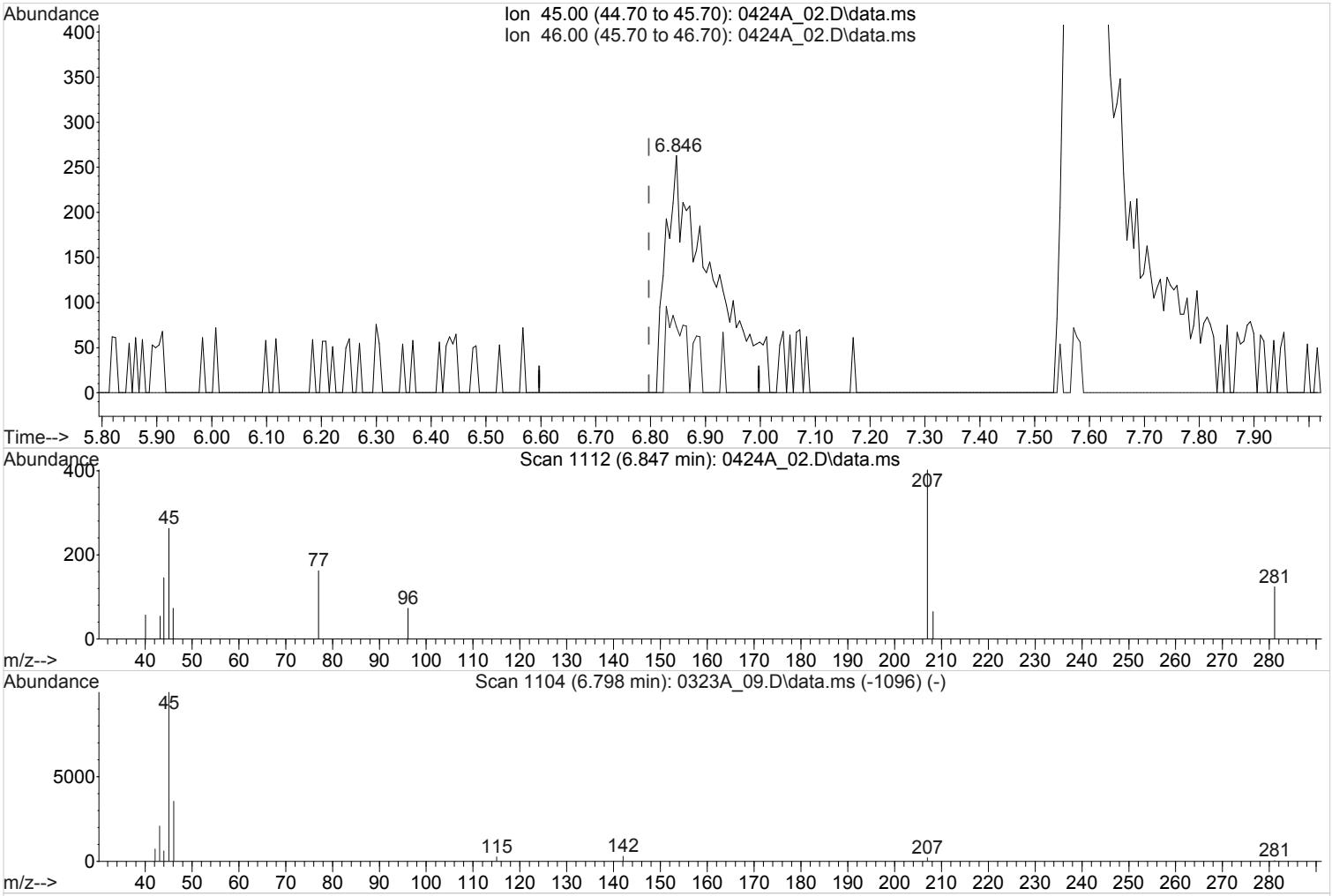
response 0

Ion	Exp%	Act%
45.00	100	0.00
46.00	36.90	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042418A\
Data File : 0424A_02.D
Acq On : 24 Apr 2018 11:33 am
Operator : 564
Sample : STD AMS 0.19 ppbv 18D19497
Misc : 18D19496
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 25 09:35:30 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:34:47 2018
Response via : Initial Calibration



(14) Ethanol (T,M)

6.847min (+0.050) 0.2976555 ppbv m

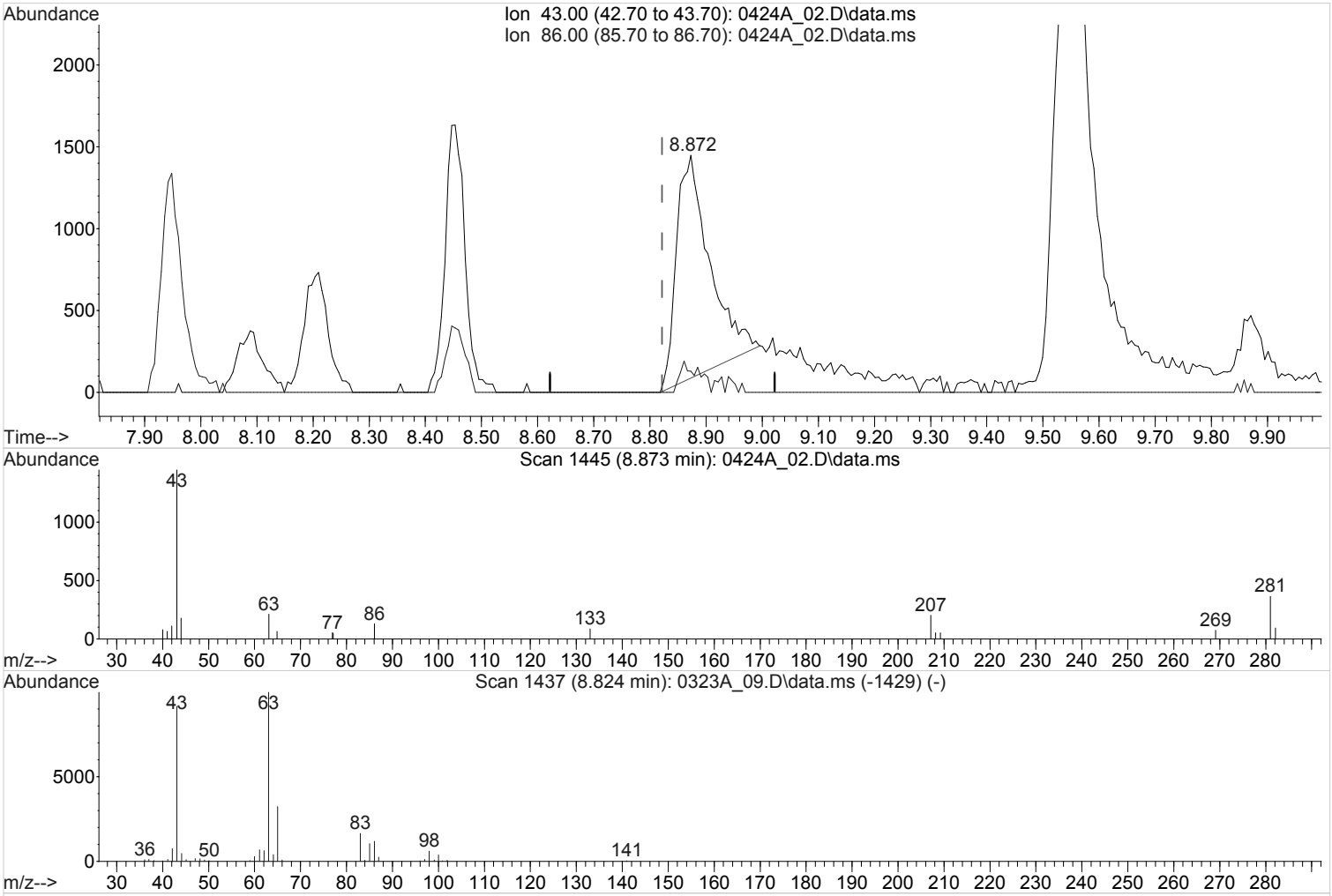
response 15100

Ion	Exp%	Act%
45.00	100	100
46.00	36.90	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042418A\
Data File : 0424A_02.D
Acq On : 24 Apr 2018 11:33 am
Operator : 564
Sample : STD AMS 0.19 ppbv 18D19497
Misc : 18D19496
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 25 09:35:30 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:34:47 2018
Response via : Initial Calibration



TIC: 0424A_02.D\data.ms

(27) Vinyl Acetate (T,M)

8.874min (+0.052) 0.1336431 ppbv

Qvalue = 74

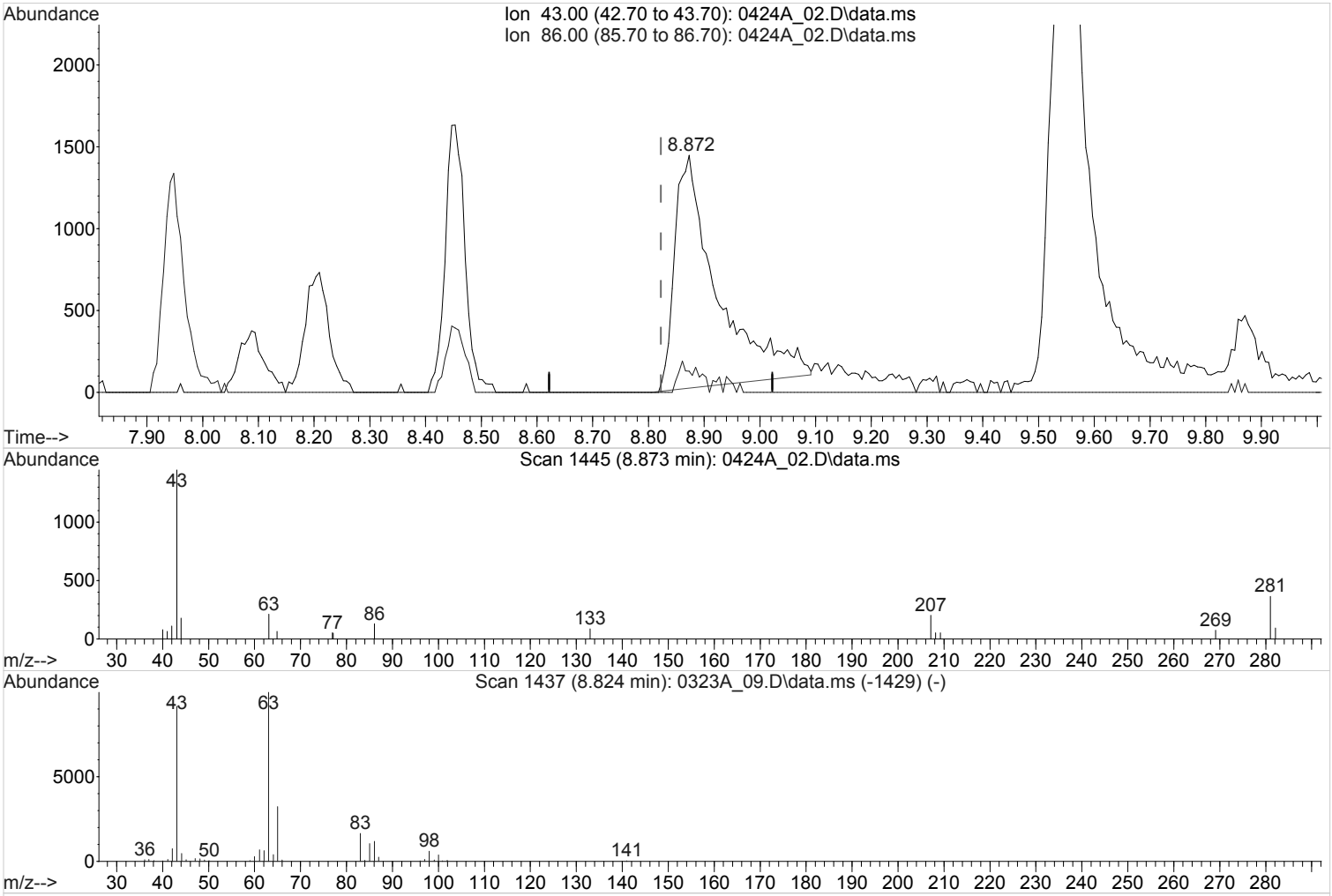
response 56242

Ion	Exp%	Act%
43.00	100	100
86.00	9.50	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042418A\
Data File : 0424A_02.D
Acq On : 24 Apr 2018 11:33 am
Operator : 564
Sample : STD AMS 0.19 ppbv 18D19497
Misc : 18D19496
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 25 09:35:30 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:34:47 2018
Response via : Initial Calibration



(27) Vinyl Acetate (T,M)

8.873min (+0.050) 0.1791240 ppbv m

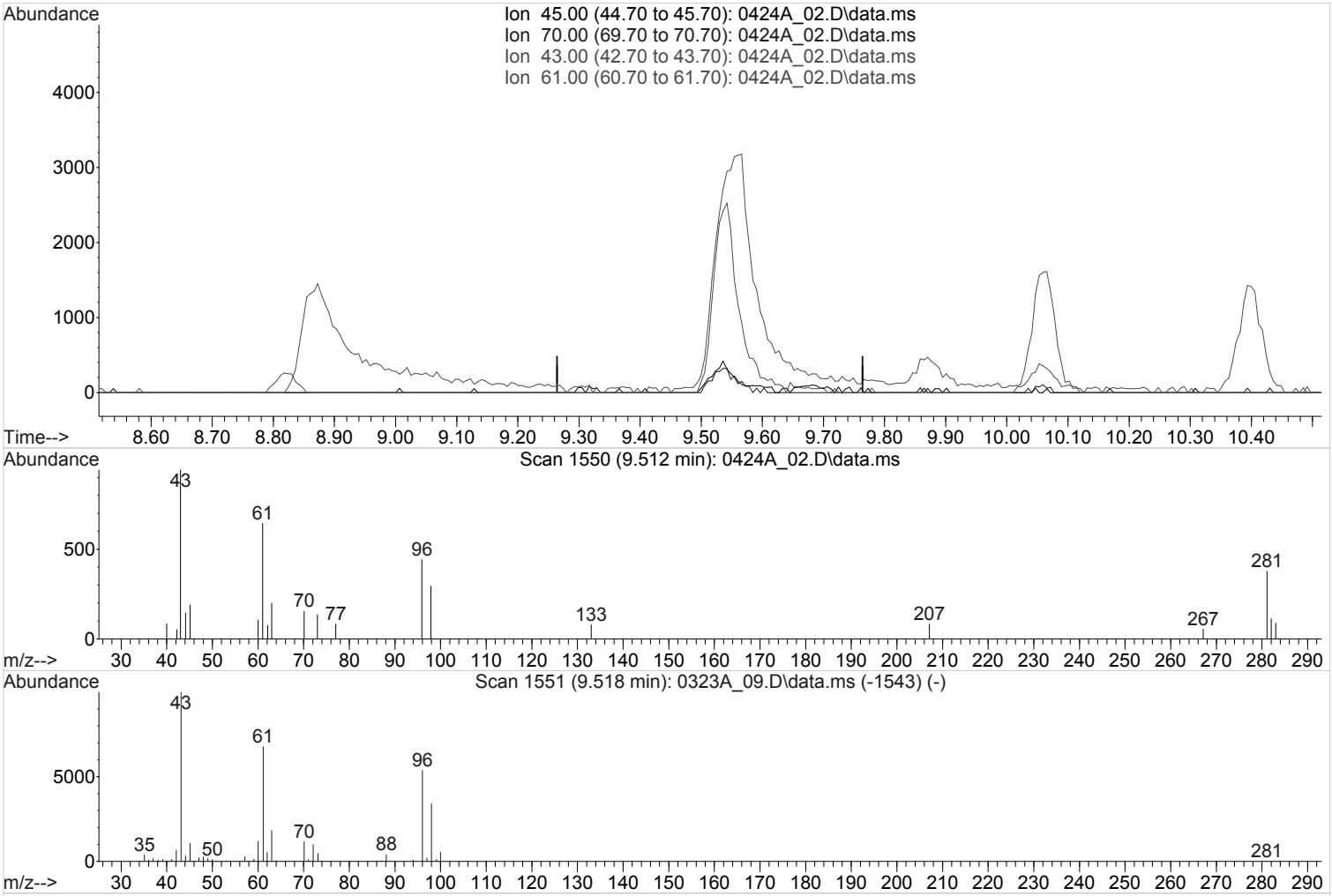
response 75382

Ion	Exp%	Act%
43.00	100	100
86.00	9.50	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042418A\
Data File : 0424A_02.D
Acq On : 24 Apr 2018 11:33 am
Operator : 564
Sample : STD AMS 0.19 ppbv 18D19497
Misc : 18D19496
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 25 09:35:30 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:34:47 2018
Response via : Initial Calibration



(28) ETHYL ACETATE

9.514min (-9.514) 0.0000000 ppbv

Qvalue = 0

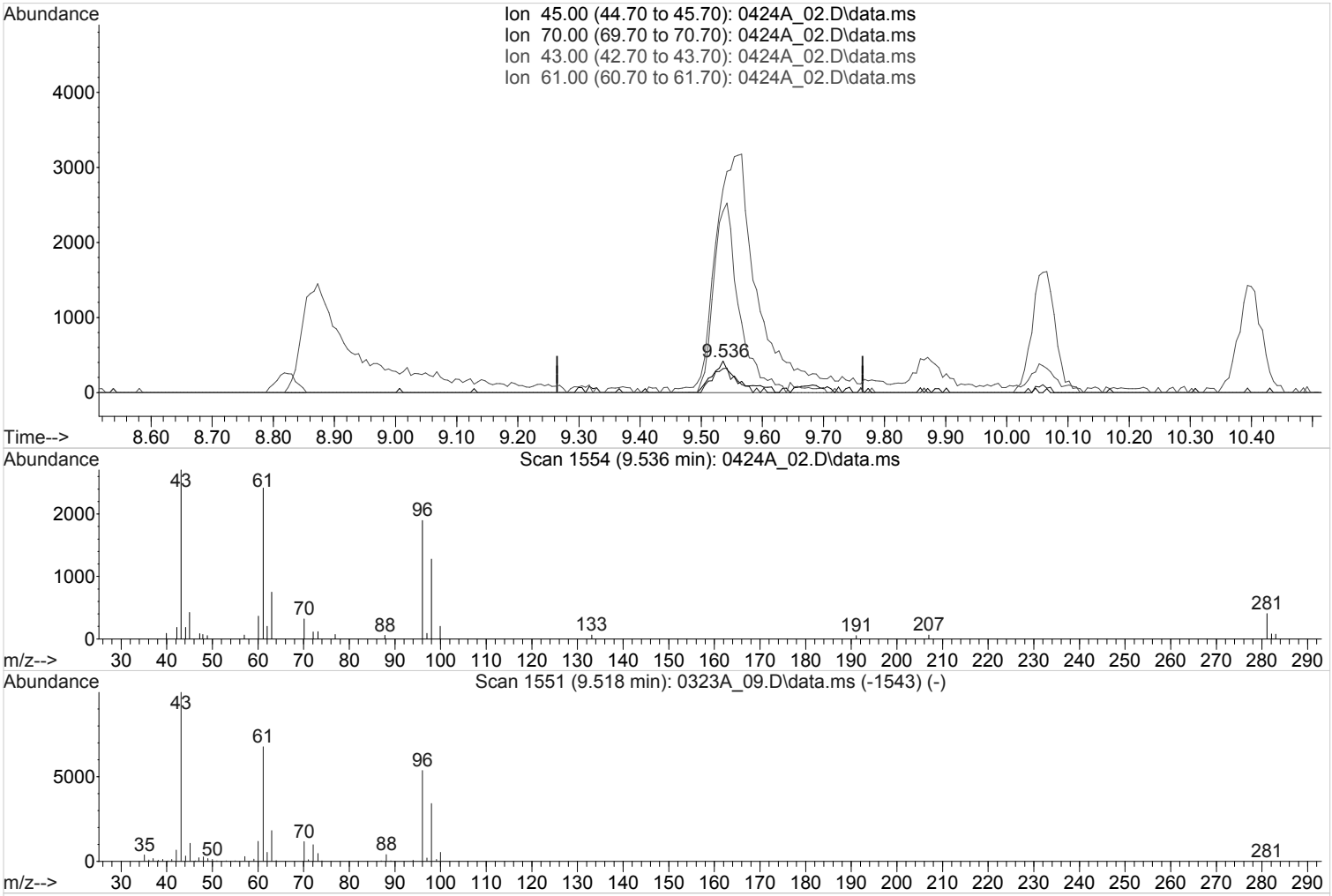
response 0

Ion	Exp%	Act%
45.00	100	0.00
70.00	87.00	0.00#
43.00	1263.00	0.00#
61.00	597.50	0.00#

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042418A\
Data File : 0424A_02.D
Acq On : 24 Apr 2018 11:33 am
Operator : 564
Sample : STD AMS 0.19 ppbv 18D19497
Misc : 18D19496
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 25 09:35:30 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:34:47 2018
Response via : Initial Calibration



TIC: 0424A_02.D\data.ms

(28) ETHYL ACETATE

9.536min (+0.021) 0.2128181 ppbv m

response 12039

Ion	Exp%	Act%
45.00	100	100
70.00	87.00	0.00#
43.00	1263.00	0.00#
61.00	597.50	0.00#

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042418A\
Data File : 0424A_03.D
Acq On : 24 Apr 2018 12:15 pm
Operator : 564
Sample : STD AMS 0.31 ppbv 18D19497
Misc : 18D19496
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 25 09:38:24 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:37:00 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	9.824	130	1380217	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	10.898	114	5054239	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	14.039	117	3296690	4.0000000	ppbv	0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	15.239	95	1703086	3.9626352	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 99.07%			
Target Compounds						Qvalue
2) Propene	4.158	41	39159	0.3153425	ppbv	98
3) 1,1-DIFLUOROETHANE	4.184	51	32881	0.3074986	ppbv #	20
4) Dichlorodifluoromethane	4.240	85	102203	0.3465445	ppbv	100
5) CHLORODIFLUOROMETHANE	4.307	51	29585	0.2804376	ppbv #	63
6) 1,2-Dichlorotetrafluor...	4.552	85	36998	0.3332197	ppbv #	85
7) Chloromethane	4.725	50	65325	0.3375392	ppbv	97
8) Vinyl Chloride	4.985	62	74556	0.3134576	ppbv	100
9) 1,3-Butadiene	5.057	39	45094	0.3171715	ppbv	94
10) Bromomethane	5.712	94	83298	0.3230091	ppbv	96
11) Chloroethane	5.907	64	38454	0.3281701	ppbv #	46
12) Vinyl Bromide	6.249	106	85486	0.3294719	ppbv	98
13) Trichlorofluoromethane	6.310	101	183831	0.3215074	ppbv	98
14) Ethanol	6.841	45	19122m	0.2980561	ppbv	
15) 1,1,2-Trichlorotrifluo...	7.107	101	169466	0.3247905	ppbv	100
16) 1,1-Dichloroethene	7.185	61	103301	0.3148313	ppbv	94
17) Acetone	7.395	43	63217m	0.3348179	ppbv	
18) 2-Propanol	7.580	45	92994	0.3017674	ppbv #	67
19) Carbon Disulfide	7.539	76	182012	0.3401477	ppbv #	71
20) Allyl Chloride	7.738	41	82860	0.3232346	ppbv #	33
21) Methylene Chloride	7.949	49	80754	0.3105984	ppbv	94
22) TERT-BUTYL ALCOHOL	8.087	59	137896	0.3087305	ppbv #	62
23) Methyl Tert-Butyl Ether	8.209	73	203406	0.3348240	ppbv	98
24) Trans-1,2-Dichloroethene	8.258	61	84178	0.3188129	ppbv	93
25) n-Hexane	8.456	57	103823	0.3287540	ppbv	99
26) 1,1-Dichloroethane	8.822	63	136109	0.3150974	ppbv #	65
27) Vinyl Acetate	8.855	43	120056m	0.2980194	ppbv	
28) ETHYL ACETATE	9.534	45	15725	0.2661110	ppbv #	62
29) 2-Butanone (MEK)	9.562	72	27375	0.2761156	ppbv #	48
30) cis-1,2-Dichloroethene	9.536	61	116649	0.3296215	ppbv	95
31) Tetrahydrofuran	9.870	42	75043	0.3491756	ppbv #	75
32) Chloroform	9.863	83	166803	0.3227103	ppbv	99
33) Cyclohexane	10.060	84	105494	0.3251853	ppbv	99
34) 1,1,1-Trichloroethane	10.063	97	166569	0.3262250	ppbv	99
35) Carbon Tetrachloride	10.221	117	177731	0.3289363	ppbv	100
36) 2,2,4-Trimethylpentane	10.400	57	368845	0.3250001	ppbv	99
38) Benzene	10.495	78	252617	0.3202945	ppbv	99
39) 1,2-Dichloroethane	10.590	62	83674	0.3282698	ppbv	98
40) Heptane	10.584	43	125865	0.3208354	ppbv	98
41) Trichloroethene	11.203	95	115416	0.3142689	ppbv	98
42) TERT-AMYL ETHYL ETHER	11.327	73	71327	0.3159459	ppbv	96
43) METHYL CYCLOHEXANE	11.348	83	150980	0.3230285	ppbv	99
44) 1,2-Dichloropropane	11.515	63	90593	0.3063346	ppbv	94
45) Methyl Methacrylate	11.517	41	102020	0.3027287	ppbv	96
46) 1,4-Dioxane	11.648	88	51727	0.3162815	ppbv #	88
47) Bromodichloromethane	11.797	83	171894	0.3091944	ppbv	98
48) cis-1,3-Dichloropropene	12.301	75	138511	0.3117029	ppbv	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042418A\
Data File : 0424A_03.D
Acq On : 24 Apr 2018 12:15 pm
Operator : 564
Sample : STD AMS 0.31 ppbv 18D19497
Misc : 18D19496
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 25 09:38:24 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:37:00 2018
Response via : Initial Calibration

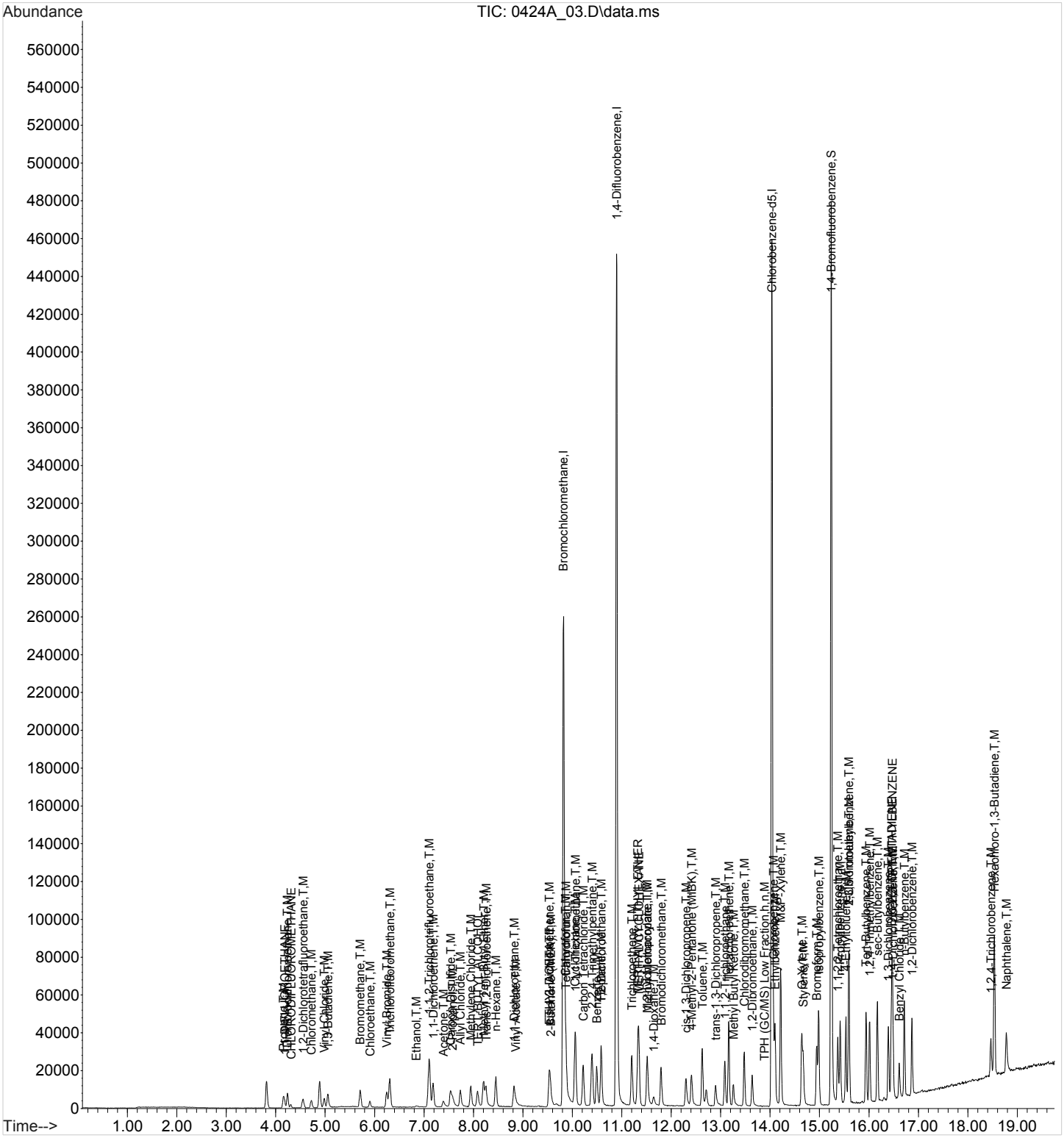
	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
49)	4-Methyl-2-Pentanone (...	12.413	43	155870	0.3145742 ppbv	99
50)	Toluene	12.630	91	294649	0.3175960 ppbv	99
51)	trans-1,3-Dichloropropene	12.900	75	98289m	0.3009171 ppbv	
52)	1,1,2-Trichloroethane	13.087	97	99903	0.3147046 ppbv	94
53)	Tetrachloroethene	13.167	166	165902	0.3099294 ppbv	99
54)	Methyl Butyl Ketone	13.258	43	103424	0.2931739 ppbv #	94
55)	Chlorodibromomethane	13.479	129	190296	0.3140852 ppbv	99
56)	1,2-Dibromoethane	13.640	107	148212	0.3167342 ppbv	97
57)	Chlorobenzene	14.070	112	216898	0.3184421 ppbv #	85
59)	Ethylbenzene	14.103	91	314548	0.3222777 ppbv	99
60)	M&P-Xylene	14.216	91	512668	0.6701030 ppbv	99
61)	O-Xylene	14.643	91	259566	0.3317486 ppbv	100
62)	Styrene	14.673	104	180377	0.3078144 ppbv	97
63)	Bromoform	14.945	173	195165	0.3066070 ppbv	99
64)	Isopropylbenzene	14.984	105	364600	0.3260589 ppbv #	96
65)	1,1,2,2-Tetrachloroethane	15.372	83	208589	0.3216424 ppbv	100
66)	n-Propylbenzene	15.421	91	401454	0.3148853 ppbv	99
67)	4-Ethyltoluene	15.536	105	346210	0.3218043 ppbv	100
68)	2-Chlorotoluene	15.597	126	95872	0.3025694 ppbv	99
70)	1,3,5-Trimethylbenzene	15.596	105	307265	0.3201126 ppbv	97
71)	Tert-Butylbenzene	15.945	119	286393	0.3251314 ppbv	99
72)	1,2,4-Trimethylbenzene	16.015	105	287675	0.3210317 ppbv	100
73)	sec-Butylbenzene	16.173	134	82404	0.3247080 ppbv #	98
74)	1,3-Dichlorobenzene	16.394	146	199839	0.3063431 ppbv #	96
75)	1,4-Dichlorobenzene	16.488	146	193038	0.3039894 ppbv	98
76)	1,2,3-TRIMETHYLBENZENE	16.470	105	291267	0.3223368 ppbv	99
77)	DICYCLOPENTADIENE	16.457	66	344164	0.3294565 ppbv	99
78)	Benzyl Chloride	16.615	91	167088	0.2807448 ppbv	97
79)	n-Butylbenzene	16.718	91	327448	0.3287958 ppbv	98
80)	1,2-Dichlorobenzene	16.873	146	220187	0.3284293 ppbv	99
81)	1,2,4-Trichlorobenzene	18.468	180	103464	0.2557227 ppbv #	86
82)	Hexachloro-1,3-Butadiene	18.541	225	207946	0.3236924 ppbv	99
83)	Naphthalene	18.781	128	270220	0.2806685 ppbv	98
84)	TPH (GC/MS) Low Fraction	13.890	TIC	29739043m	15.8150565 ppbv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042418A\
Data File : 0424A_03.D
Acq On : 24 Apr 2018 12:15 pm
Operator : 564
Sample : STD AMS 0.31 ppbv 18D19497
Misc : 18D19496
ALS Vial : 3 Sample Multiplier: 1

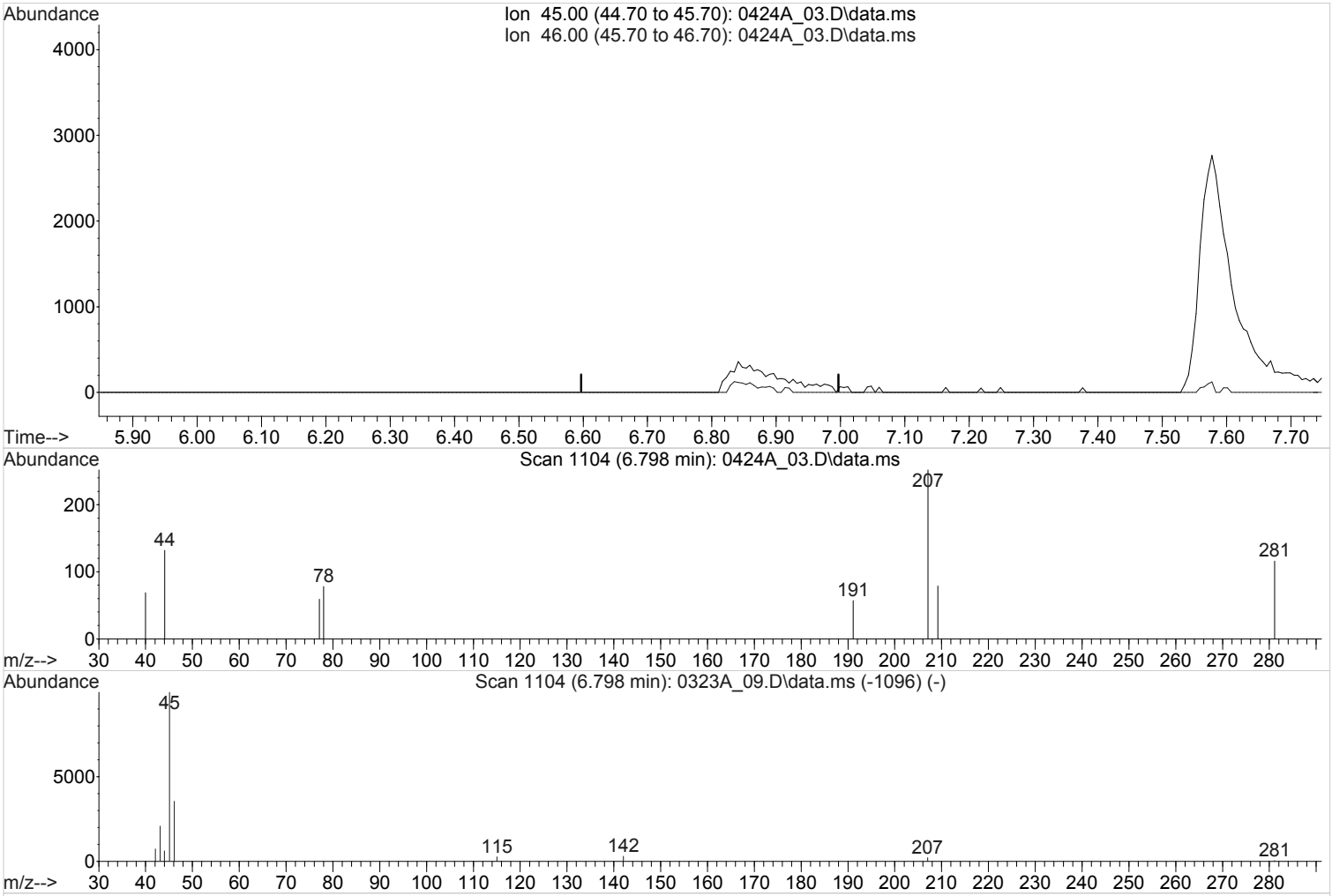
Quant Time: Apr 25 09:38:24 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:37:00 2018
Response via : Initial Calibration


Abundance
TIC: 0424A_03.D\data.ms
Time-->
1,4-Difluorobenzene,I
Chlorobenzene-d5,I
1,4-Bromofluorobenzene,S
Bromochloromethane,I
Ethanol,T,M
Bromomethane,T,M
Chloroethane,T,M
Naphthalene,T,M
Hexachloro-1,3-Butadiene,T,M
1,2,4-Trichlorobenzene,T,M
Benzyl Chloride,T,M
1,2-Dichlorobenzene,T,M
Toluene,T,M
Styrene,T,M
Bromobenzene,T,M
TPH (GC/MS) Low Fraction,n,n,M
1,2-Dibromomethane,T,M
Chlorodibromomethane,T,M
Methyl Butyl Ketone,T,M
trans-1,3-Dichloropropene,T,M
cis-1,3-Dichloropropene,T,M
1,4-Dichlorobutane,T,M
Bromodichloromethane,T,M
Carbon Tetrachloride,T,M
Acetone,T,M
Allyl Chloride,T,M
Methylene Chloride,T,M
n-Hexane,T,M
Vinyl Acetate,T,M
Vinyl Bromide,T,M
Vinyl Chloride,T,M
1,2-Dichlorotetrafluoroethane,T,M
Chloromethane,T,M
1,1-Dichloroethane,T,M
Trichloroethene,T,M
Tetrachloroethene,T,M
Chlorobenzene,T,M
Ethylbenzene,T,M
M&P-Xylene,T,M
O-Xylene,T,M
1,1,2,2-Tetrachloroethane,T,M
1,3-Dichlorobenzene,T,M
1,4-Dichlorobenzene,T,M
sec-Butylbenzene,T,M
1,2,4-Trimethylbenzene,T,M
1,3,5-Trimethylbenzene,T,M
Tert-Butylbenzene,T,M
1,2-Dibromo-3-Chloropropane,T,M
1,2,3-Trichlorobenzene,T,M
Isopropylbenzene,T,M
Propylbenzene,T,M
Bromoform,T,M
Chloroform,T,M
Methylene Chloride,T,M
Carbon Tetrachloride,T,M
Benzene,T,M
Trichloroethene,T,M
Tetrachloroethene,T,M
Chlorobenzene,T,M
Ethylbenzene,T,M
Toluene,T,M
Styrene,T,M
Bromobenzene,T,M
Naphthalene,T,M
Hexachloro-1,3-Butadiene,T,M
1,2,4-Trichlorobenzene,T,M
Benzyl Chloride,T,M
1,2-Dichlorobenzene

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042418A\
Data File : 0424A_03.D
Acq On : 24 Apr 2018 12:15 pm
Operator : 564
Sample : STD AMS 0.31 ppbv 18D19497
Misc : 18D19496
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 25 09:37:04 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:37:00 2018
Response via : Initial Calibration



(14) Ethanol (T,M)

6.797min (-6.797) 0.0000000 ppbv

Qvalue = 0

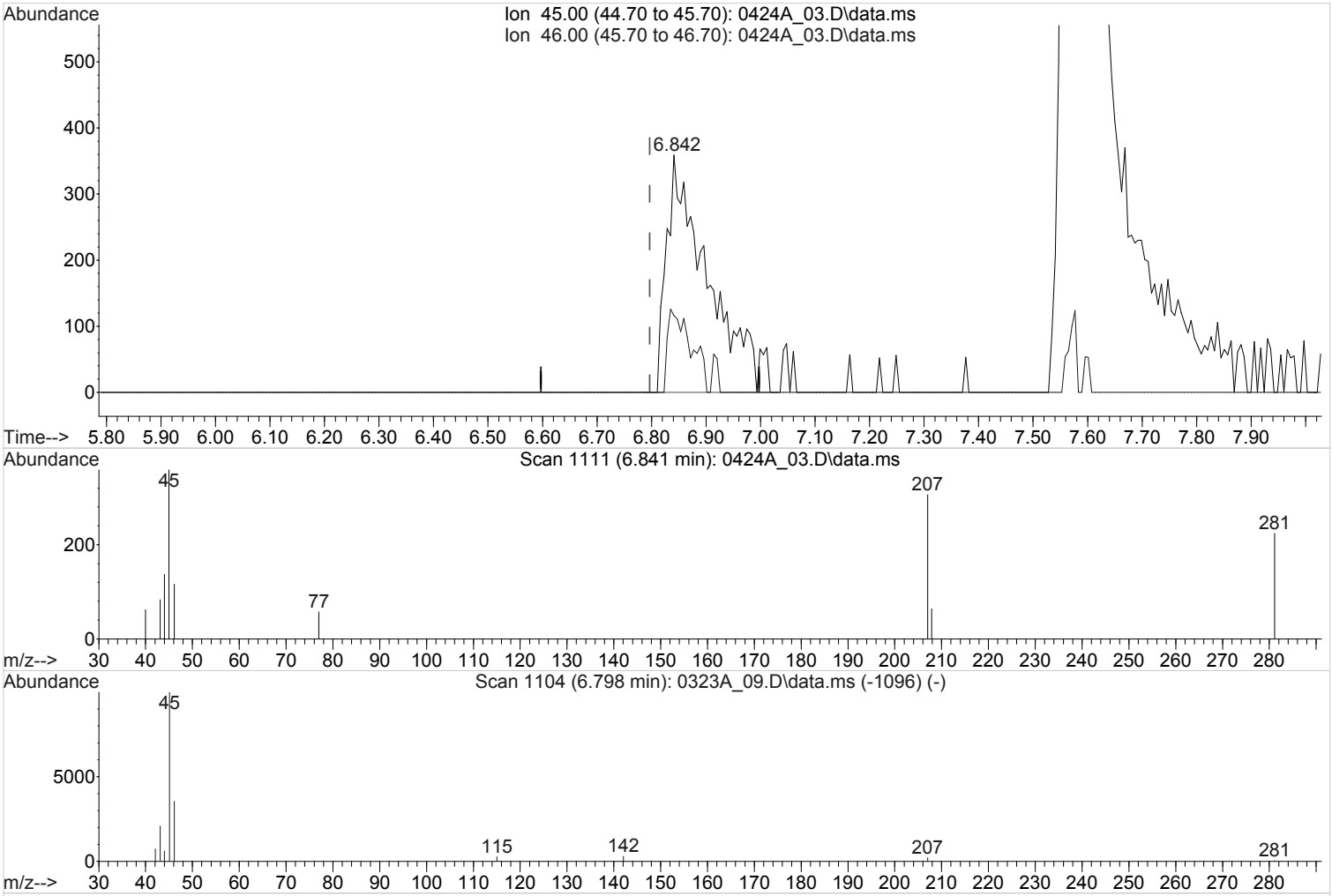
response 0

Ion	Exp%	Act%
45.00	100	0.00
46.00	36.90	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042418A\
Data File : 0424A_03.D
Acq On : 24 Apr 2018 12:15 pm
Operator : 564
Sample : STD AMS 0.31 ppbv 18D19497
Misc : 18D19496
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 25 09:37:04 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:37:00 2018
Response via : Initial Calibration



(14) Ethanol (T,M)

6.841min (+0.044) 0.2980561 ppbv m

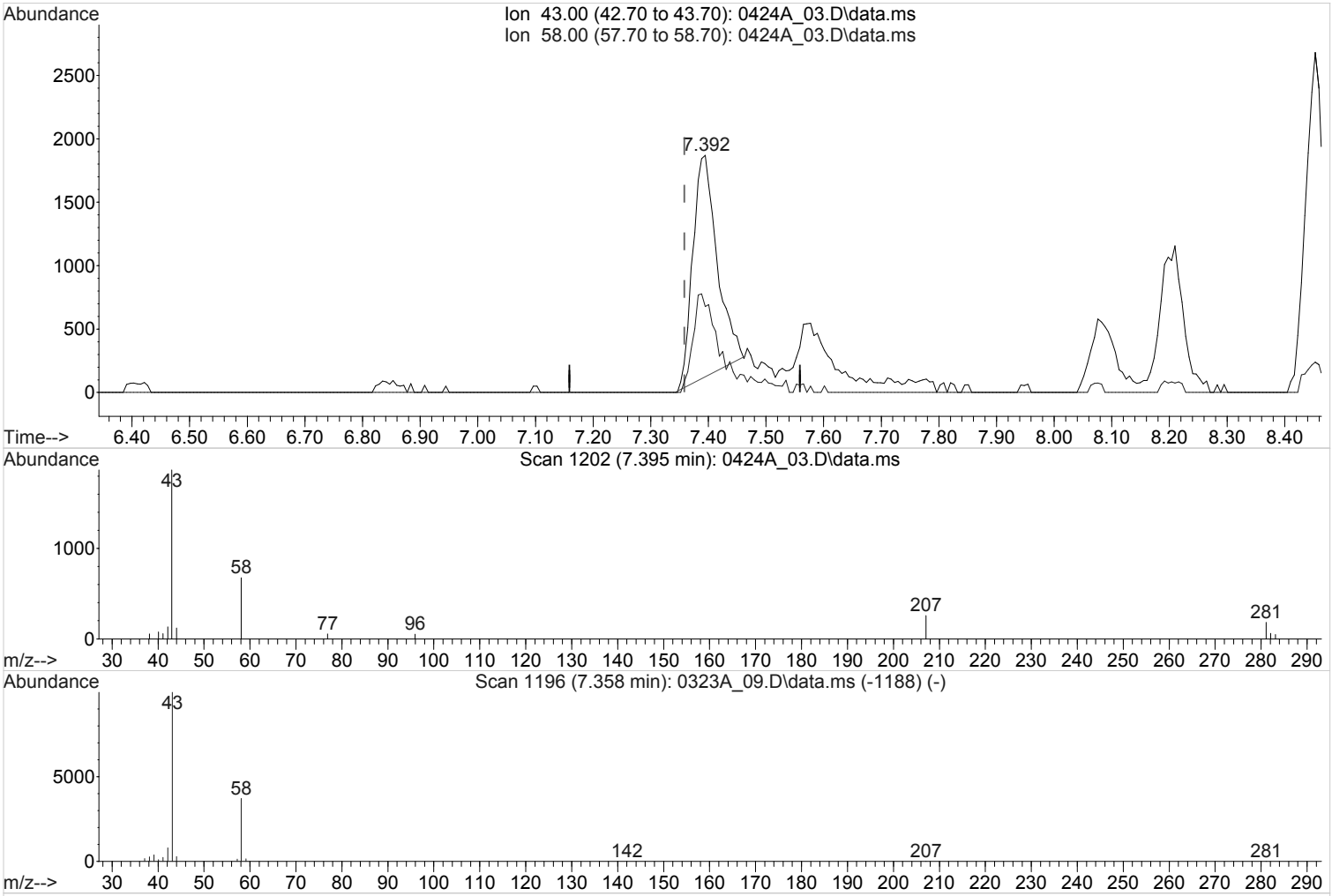
response 19122

Ion	Exp%	Act%
45.00	100	100
46.00	36.90	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042418A\
Data File : 0424A_03.D
Acq On : 24 Apr 2018 12:15 pm
Operator : 564
Sample : STD AMS 0.31 ppbv 18D19497
Misc : 18D19496
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 25 09:37:04 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:37:00 2018
Response via : Initial Calibration



(17) Acetone (T,M)

7.395min (+0.035) 0.2696748 ppbv

Qvalue = 90

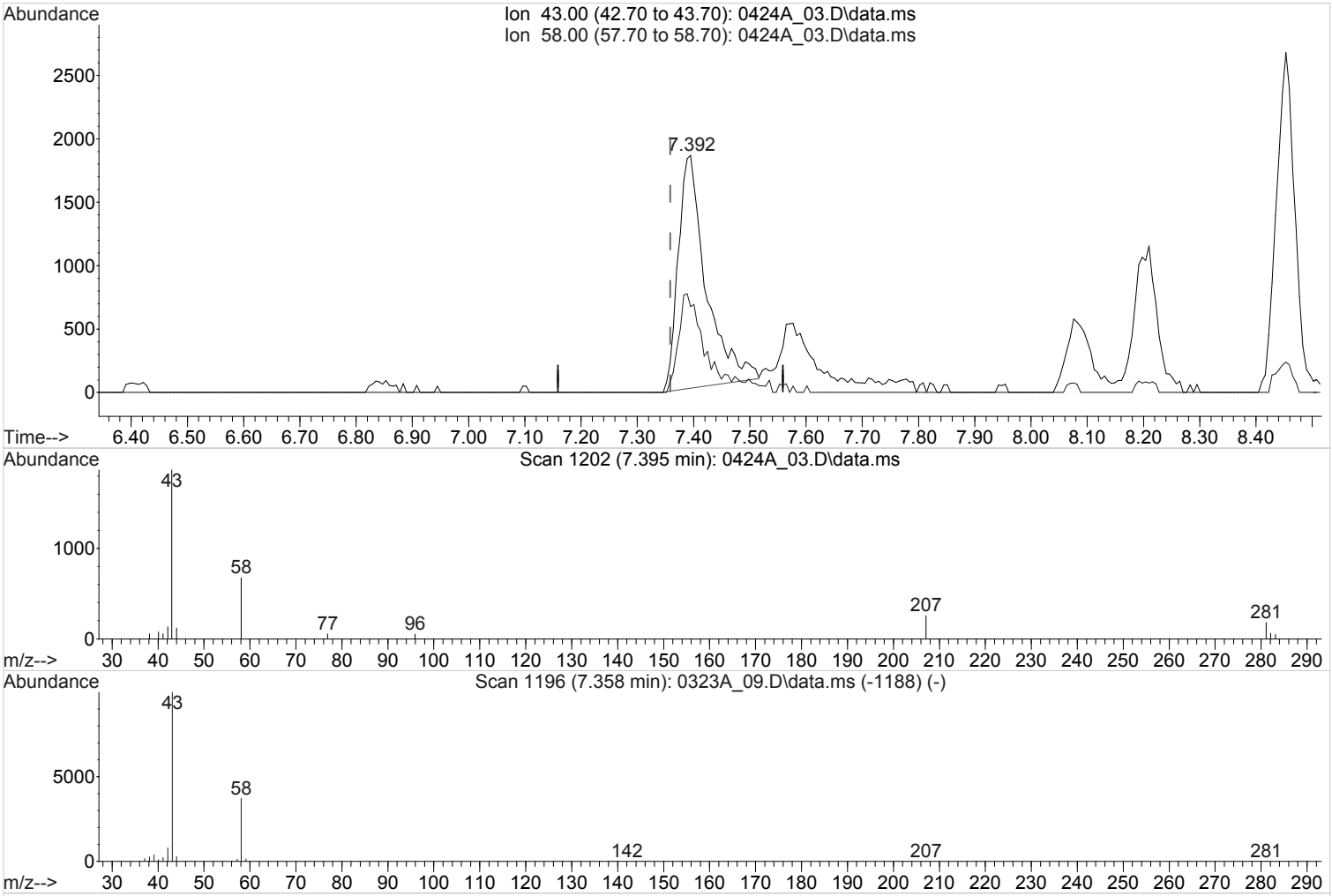
response 50917

Ion	Exp%	Act%
43.00	100	100
58.00	37.80	43.72
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042418A\
Data File : 0424A_03.D
Acq On : 24 Apr 2018 12:15 pm
Operator : 564
Sample : STD AMS 0.31 ppbv 18D19497
Misc : 18D19496
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 25 09:37:04 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:37:00 2018
Response via : Initial Calibration



(17) Acetone (T,M)

7.395min (+0.035) 0.3348179 ppbv m

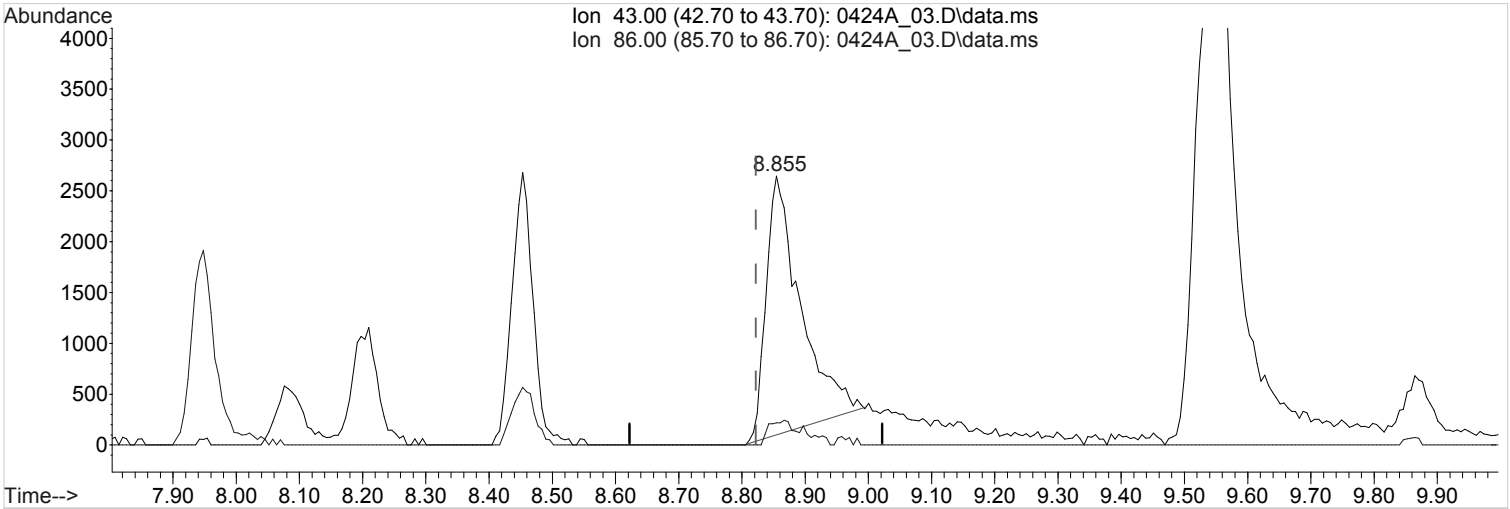
response 63217

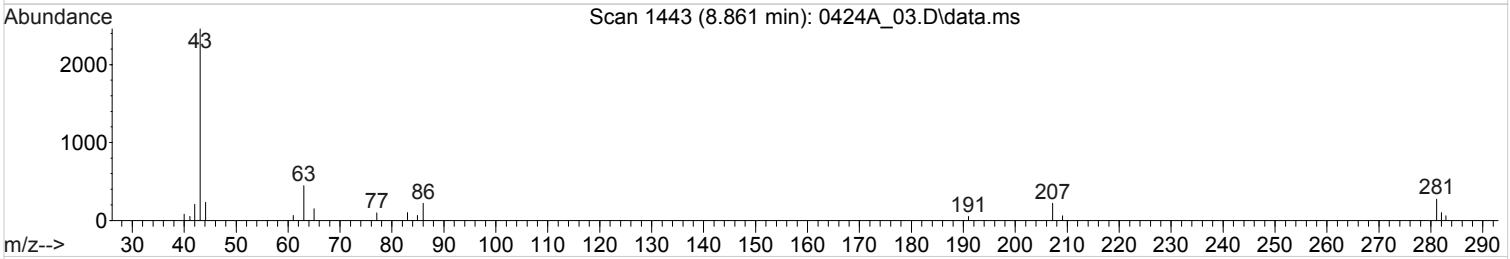
Ion	Exp%	Act%
43.00	100	100
58.00	37.80	35.21
0.00	0.00	0.00
0.00	0.00	0.00

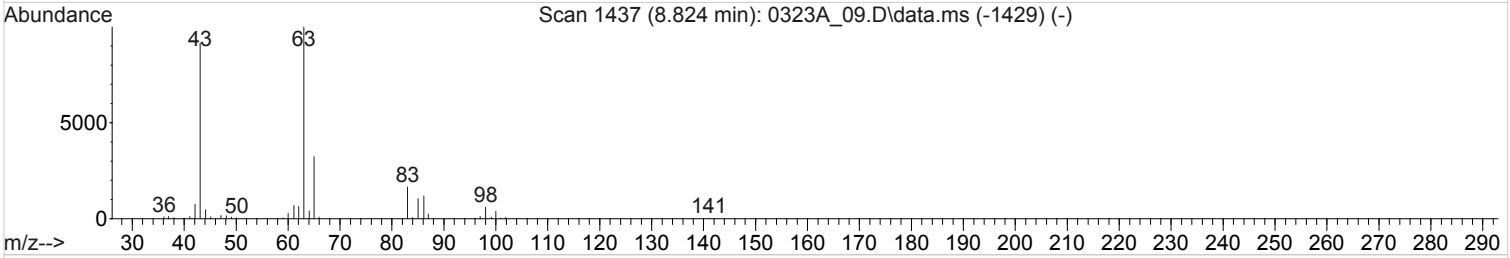
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042418A\
Data File : 0424A_03.D
Acq On : 24 Apr 2018 12:15 pm
Operator : 564
Sample : STD AMS 0.31 ppbv 18D19497
Misc : 18D19496
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 25 09:37:04 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:37:00 2018
Response via : Initial Calibration







TIC: 0424A_03.D\data.ms

(27) Vinyl Acetate (T,M)

8.858min (+0.036) 0.2405006 ppbv

Qvalue = 74

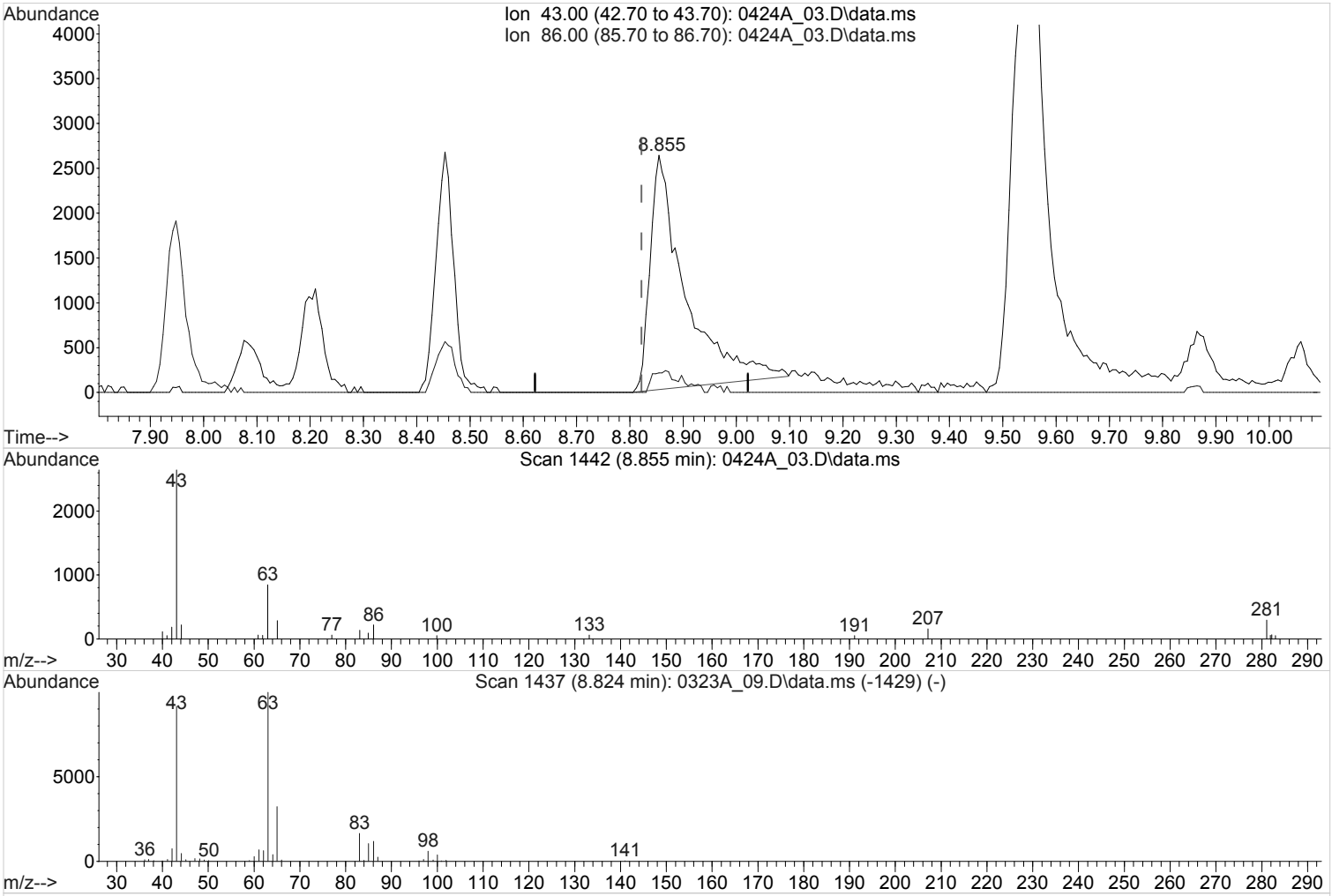
response 96885

Ion	Exp%	Act%
43.00	100	100
86.00	9.50	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042418A\
Data File : 0424A_03.D
Acq On : 24 Apr 2018 12:15 pm
Operator : 564
Sample : STD AMS 0.31 ppbv 18D19497
Misc : 18D19496
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 25 09:37:04 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:37:00 2018
Response via : Initial Calibration



TIC: 0424A_03.D\data.ms

(27) Vinyl Acetate (T,M)

8.855min (+0.032) 0.2980194 ppbv m

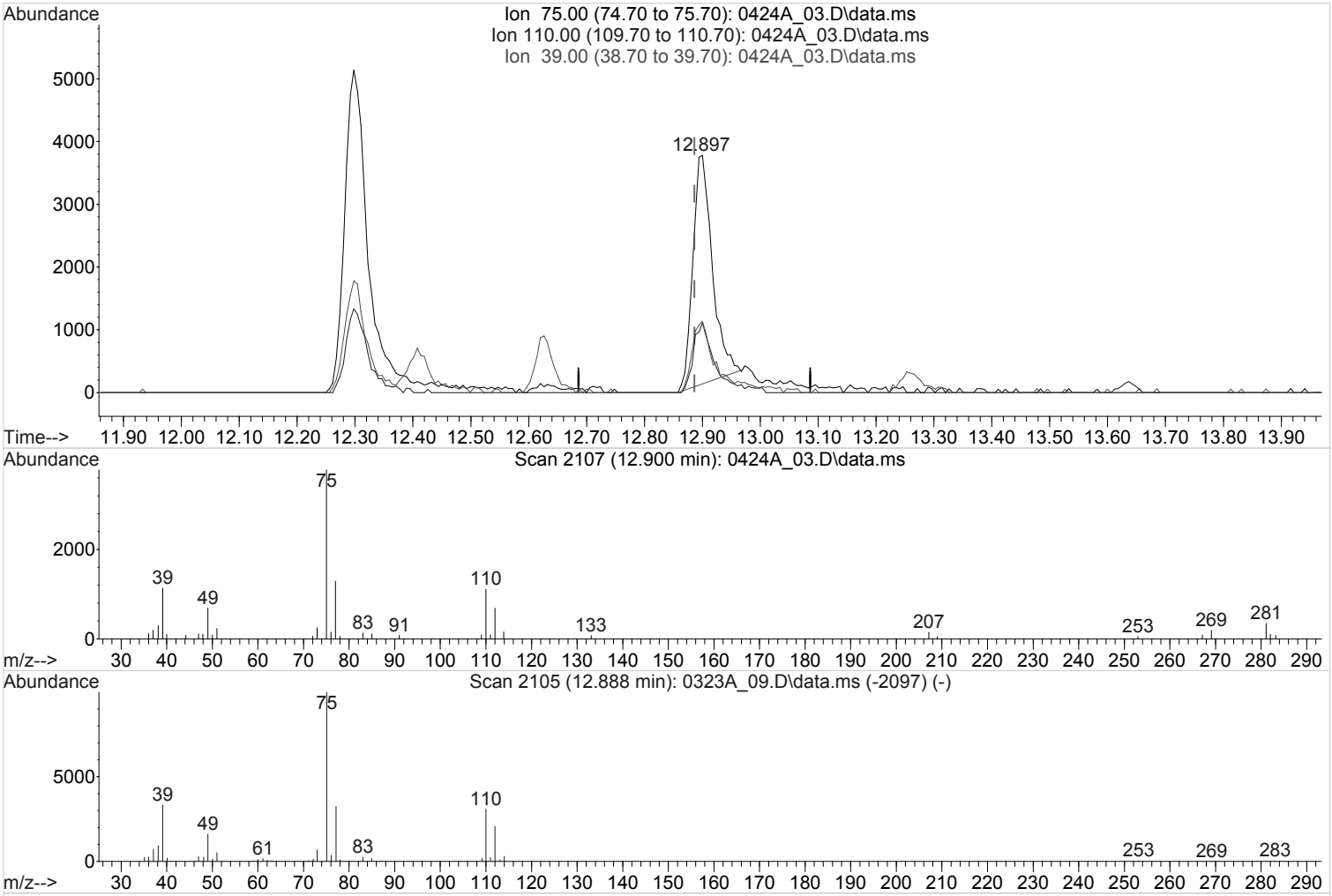
response 120056

Ion	Exp%	Act%
43.00	100	100
86.00	9.50	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042418A\
Data File : 0424A_03.D
Acq On : 24 Apr 2018 12:15 pm
Operator : 564
Sample : STD AMS 0.31 ppbv 18D19497
Misc : 18D19496
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 25 09:37:04 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:37:00 2018
Response via : Initial Calibration



TIC: 0424A_03.D\data.ms

(51) trans-1,3-Dichloropropene (T,M)

12.900min (+0.014) 0.2589903 ppbv

Qvalue = 88

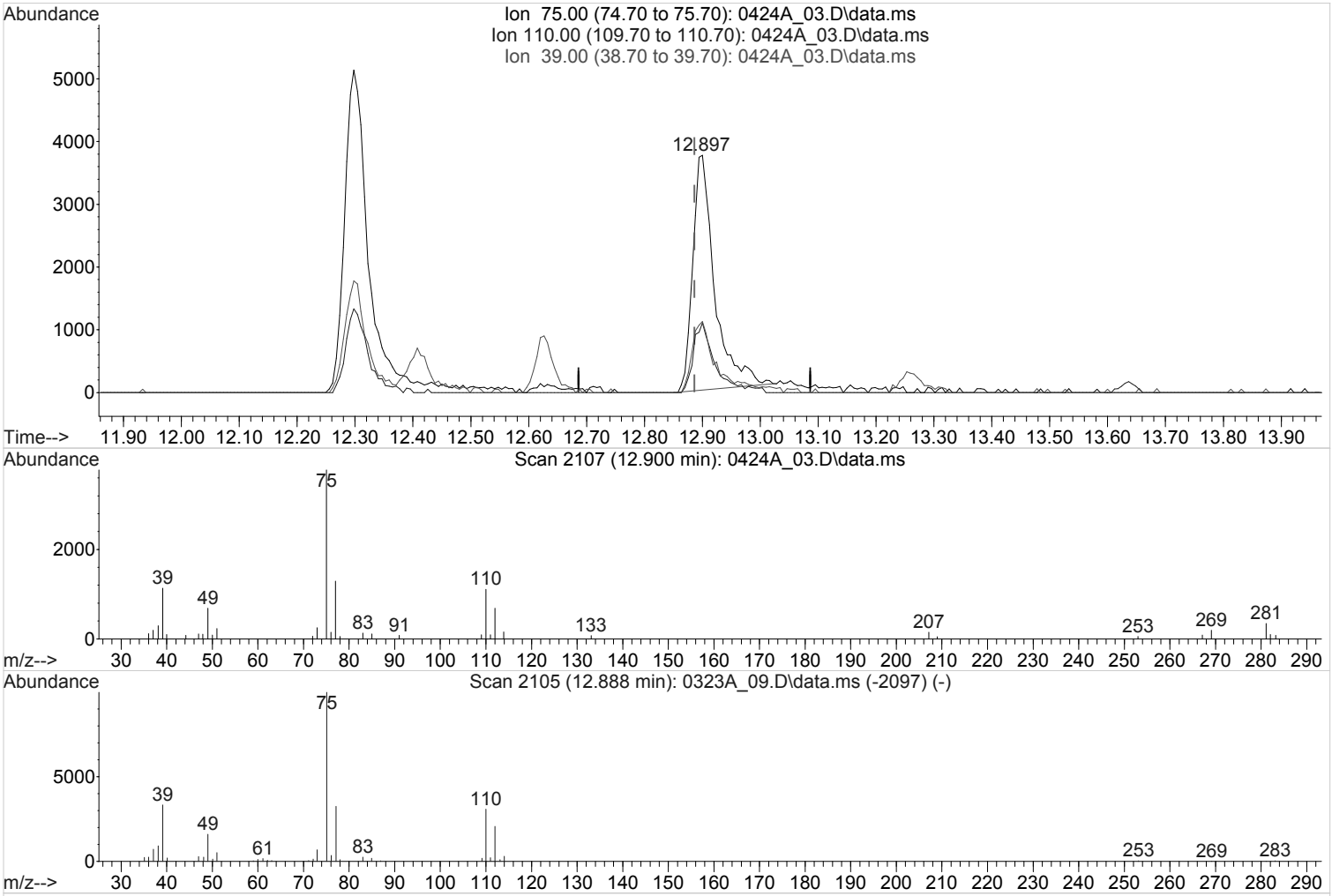
response 84595

Ion	Exp%	Act%
75.00	100	100
110.00	27.80	34.28#
39.00	29.60	35.87#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042418A\
Data File : 0424A_03.D
Acq On : 24 Apr 2018 12:15 pm
Operator : 564
Sample : STD AMS 0.31 ppbv 18D19497
Misc : 18D19496
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 25 09:37:04 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:37:00 2018
Response via : Initial Calibration



TIC: 0424A_03.D\data.ms

(51) trans-1,3-Dichloropropene (T,M)

12.900min (+0.014) 0.3009171 ppbv m

response 98289

Ion	Exp%	Act%
75.00	100	100
110.00	27.80	29.51
39.00	29.60	30.88
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042418A\
Data File : 0424A_04.D
Acq On : 24 Apr 2018 12:56 pm
Operator : 564
Sample : STD AMS 0.63 ppbv 18D19497
Misc : 18D19496
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 25 09:39:26 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:38:30 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	9.825	130	1339715	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	10.898	114	4907918	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	14.038	117	3271540	4.0000000	ppbv	0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	15.239	95	1695701	3.9882021	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 99.71%			
Target Compounds						Qvalue
2) Propene	4.157	41	54419	0.4488951	ppbv	97
3) 1,1-DIFLUOROETHANE	4.179	51	46517	0.4493797	ppbv	96
4) Dichlorodifluoromethane	4.240	85	174671	0.5871015	ppbv	99
5) CHLORODIFLUOROMETHANE	4.305	51	40775	0.4112603	ppbv #	63
6) 1,2-Dichlorotetrafluor...	4.550	85	68372	0.6189540	ppbv #	87
7) Chloromethane	4.721	50	121232	0.6267927	ppbv	98
8) Vinyl Chloride	4.981	62	143298	0.6183861	ppbv	98
9) 1,3-Butadiene	5.054	39	78022	0.5610377	ppbv	97
10) Bromomethane	5.711	94	155855	0.6140487	ppbv	98
11) Chloroethane	5.909	64	71994	0.6208484	ppbv #	46
12) Vinyl Bromide	6.246	106	160300	0.6234404	ppbv	97
13) Trichlorofluoromethane	6.309	101	342968	0.6104070	ppbv	99
14) Ethanol	6.835	45	30706m	0.4995071	ppbv	
15) 1,1,2-Trichlorotrifluo...	7.108	101	314811	0.6118620	ppbv	98
16) 1,1-Dichloroethene	7.183	61	202775	0.6333910	ppbv	100
17) Acetone	7.383	43	119039	0.6326462	ppbv	100
18) 2-Propanol	7.566	45	189233	0.6382804	ppbv #	67
19) Carbon Disulfide	7.537	76	325813	0.6075979	ppbv	100
20) Allyl Chloride	7.735	41	152245	0.6032736	ppbv #	33
21) Methylene Chloride	7.947	49	147164	0.5827617	ppbv	97
22) TERT-BUTYL ALCOHOL	8.079	59	269927	0.6234527	ppbv	97
23) Methyl Tert-Butyl Ether	8.203	73	371280	0.6132657	ppbv	97
24) Trans-1,2-Dichloroethene	8.250	61	159600	0.6168924	ppbv	94
25) n-Hexane	8.456	57	196004	0.6267694	ppbv	99
26) 1,1-Dichloroethane	8.822	63	263606	0.6252818	ppbv	99
27) Vinyl Acetate	8.844	43	214089	0.5546536	ppbv #	74
28) ETHYL ACETATE	9.526	45	36591	0.6695413	ppbv	91
29) 2-Butanone (MEK)	9.554	72	65038	0.7013834	ppbv #	48
30) cis-1,2-Dichloroethene	9.534	61	209765	0.5980475	ppbv	95
31) Tetrahydrofuran	9.865	42	142136	0.6538130	ppbv	98
32) Chloroform	9.864	83	319502	0.6282339	ppbv	100
33) Cyclohexane	10.062	84	201429	0.6294022	ppbv	98
34) 1,1,1-Trichloroethane	10.064	97	307028	0.6088705	ppbv	97
35) Carbon Tetrachloride	10.222	117	329104	0.6149842	ppbv	98
36) 2,2,4-Trimethylpentane	10.402	57	696509	0.6222326	ppbv	100
38) Benzene	10.494	78	482914	0.6236396	ppbv	97
39) 1,2-Dichloroethane	10.587	62	145305	0.5757446	ppbv	97
40) Heptane	10.585	43	239012	0.6201902	ppbv	99
41) Trichloroethene	11.204	95	218634	0.6102699	ppbv	99
42) TERT-AMYL ETHYL ETHER	11.327	73	133904	0.6069371	ppbv	96
43) METHYL CYCLOHEXANE	11.347	83	284353	0.6178682	ppbv	100
44) 1,2-Dichloropropane	11.512	63	173737	0.6073931	ppbv	96
45) Methyl Methacrylate	11.514	41	217963	0.6713014	ppbv	97
46) 1,4-Dioxane	11.641	88	101684	0.6359837	ppbv #	97
47) Bromodichloromethane	11.795	83	339941	0.6302447	ppbv	98
48) cis-1,3-Dichloropropene	12.296	75	276176	0.6388631	ppbv	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042418A\
Data File : 0424A_04.D
Acq On : 24 Apr 2018 12:56 pm
Operator : 564
Sample : STD AMS 0.63 ppbv 18D19497
Misc : 18D19496
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 25 09:39:26 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:38:30 2018
Response via : Initial Calibration

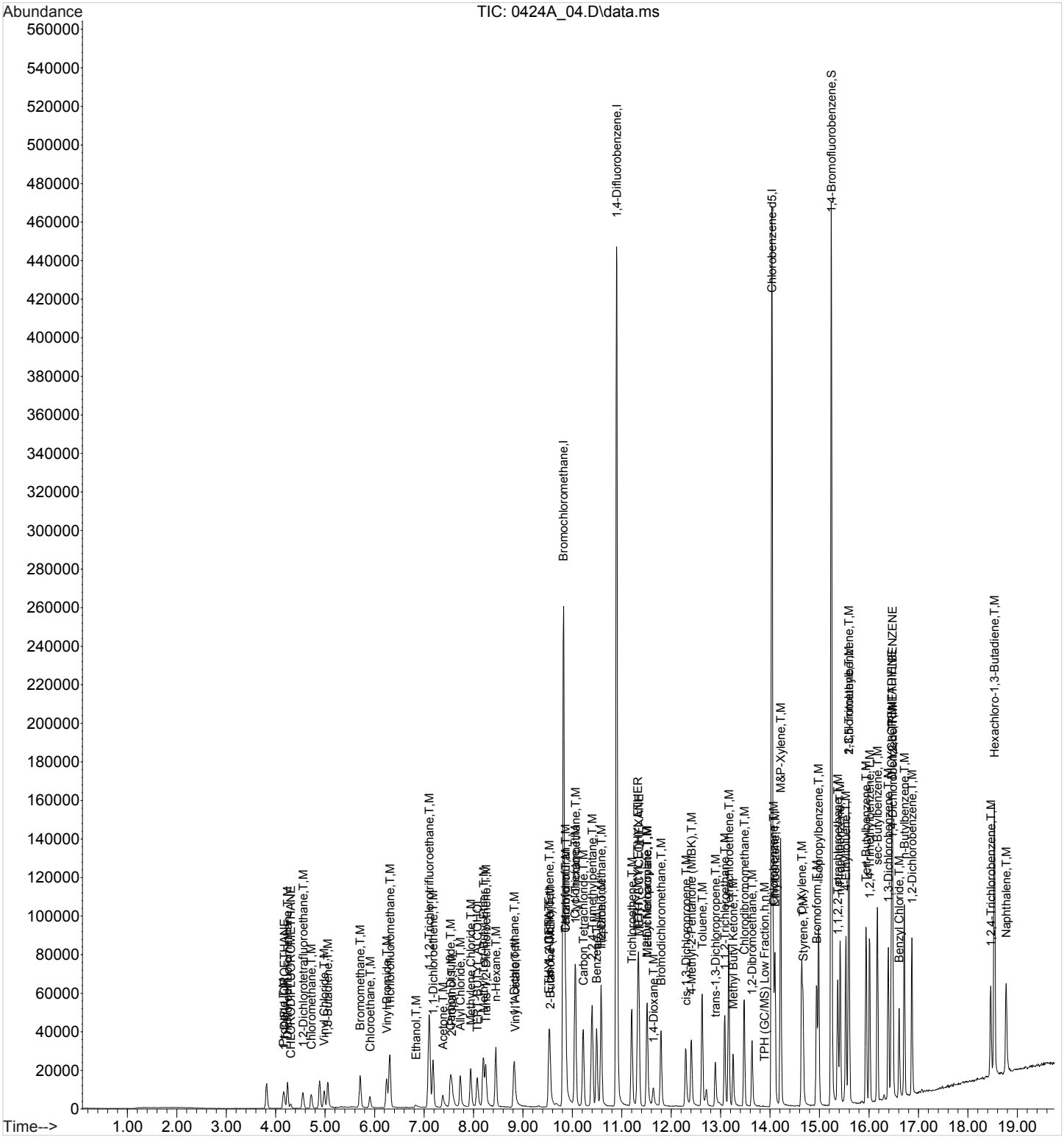
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49)	4-Methyl-2-Pentanone (...	12.408	43	301195	0.6229265	ppbv		99
50)	Toluene	12.628	91	559629	0.6161628	ppbv		100
51)	trans-1,3-Dichloropropene	12.895	75	181010	0.5763215	ppbv		94
52)	1,1,2-Trichloroethane	13.085	97	192512	0.6213671	ppbv		96
53)	Tetrachloroethene	13.167	166	314327	0.6047626	ppbv		100
54)	Methyl Butyl Ketone	13.255	43	213610	0.6350585	ppbv	#	99
55)	Chlorodibromomethane	13.478	129	366246	0.6197917	ppbv		100
56)	1,2-Dibromoethane	13.638	107	286032	0.6249565	ppbv		100
57)	Chlorobenzene	14.070	112	407255	0.6102037	ppbv		94
59)	Ethylbenzene	14.101	91	609340	0.6209163	ppbv		100
60)	M&P-Xylene	14.215	91	963040	1.2351846	ppbv		100
61)	O-Xylene	14.642	91	492994	0.6204243	ppbv		99
62)	Styrene	14.669	104	354666	0.6113274	ppbv		98
63)	Bromoform	14.944	173	393850	0.6257834	ppbv		99
64)	Isopropylbenzene	14.984	105	692930	0.6138463	ppbv		100
65)	1,1,2,2-Tetrachloroethane	15.371	83	406529	0.6238740	ppbv		99
66)	n-Propylbenzene	15.420	91	775174	0.6094901	ppbv		100
67)	4-Ethyltoluene	15.535	105	675793	0.6250481	ppbv		100
68)	2-Chlorotoluene	15.596	126	198186	0.6353515	ppbv		96
70)	1,3,5-Trimethylbenzene	15.595	105	588098	0.6107563	ppbv		100
71)	Tert-Butylbenzene	15.944	119	553046	0.6225511	ppbv		99
72)	1,2,4-Trimethylbenzene	16.014	105	554299	0.6160203	ppbv		99
73)	sec-Butylbenzene	16.173	134	161614	0.6317342	ppbv	#	98
74)	1,3-Dichlorobenzene	16.394	146	403619	0.6259455	ppbv		99
75)	1,4-Dichlorobenzene	16.485	146	400817	0.6401820	ppbv		99
76)	1,2,3-TRIMETHYLBENZENE	16.469	105	577135	0.6351822	ppbv		100
77)	DICYCLOPENTADIENE	16.457	66	666182	0.6294476	ppbv		99
78)	Benzyl Chloride	16.612	91	374535	0.6547347	ppbv		97
79)	n-Butylbenzene	16.717	91	625980	0.6208415	ppbv		99
80)	1,2-Dichlorobenzene	16.872	146	412313	0.6076885	ppbv		98
81)	1,2,4-Trichlorobenzene	18.465	180	223387	0.5908544	ppbv		98
82)	Hexachloro-1,3-Butadiene	18.540	225	398174	0.6155078	ppbv		98
83)	Naphthalene	18.776	128	556006	0.6008968	ppbv		99
84)	TPH (GC/MS) Low Fraction	13.890	TIC	51977882m	27.0826140	ppbv		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042418A\
Data File : 0424A_04.D
Acq On : 24 Apr 2018 12:56 pm
Operator : 564
Sample : STD AMS 0.63 ppbv 18D19497
Misc : 18D19496
ALS Vial : 4 Sample Multiplier: 1

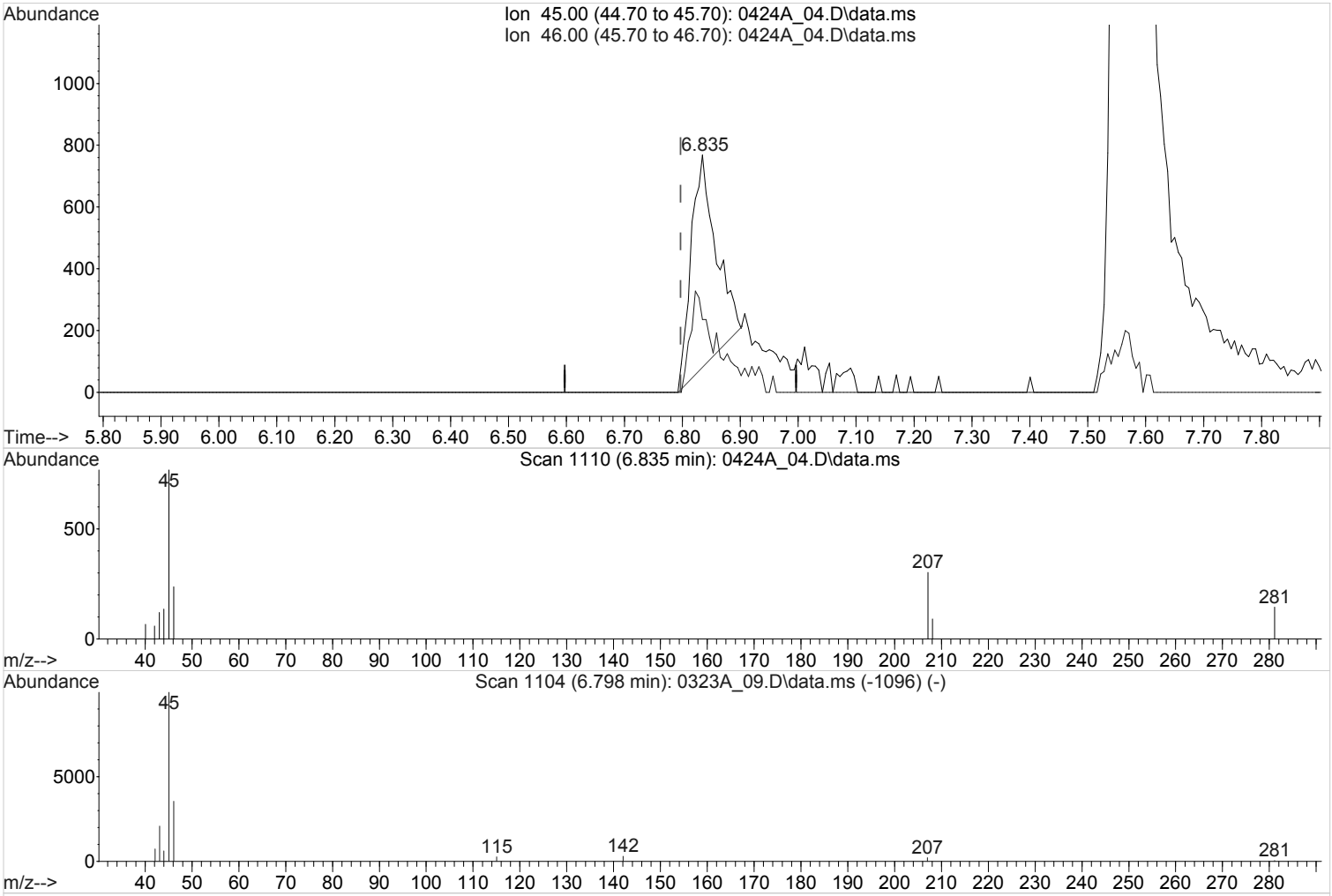
Quant Time: Apr 25 09:39:26 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:38:30 2018
Response via : Initial Calibration



Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042418A\
Data File : 0424A_04.D
Acq On : 24 Apr 2018 12:56 pm
Operator : 564
Sample : STD AMS 0.63 ppbv 18D19497
Misc : 18D19496
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 25 09:38:35 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:38:30 2018
Response via : Initial Calibration



(14) Ethanol (T,M)

6.837min (+0.040) 0.3243587 ppbv

Qvalue = 38

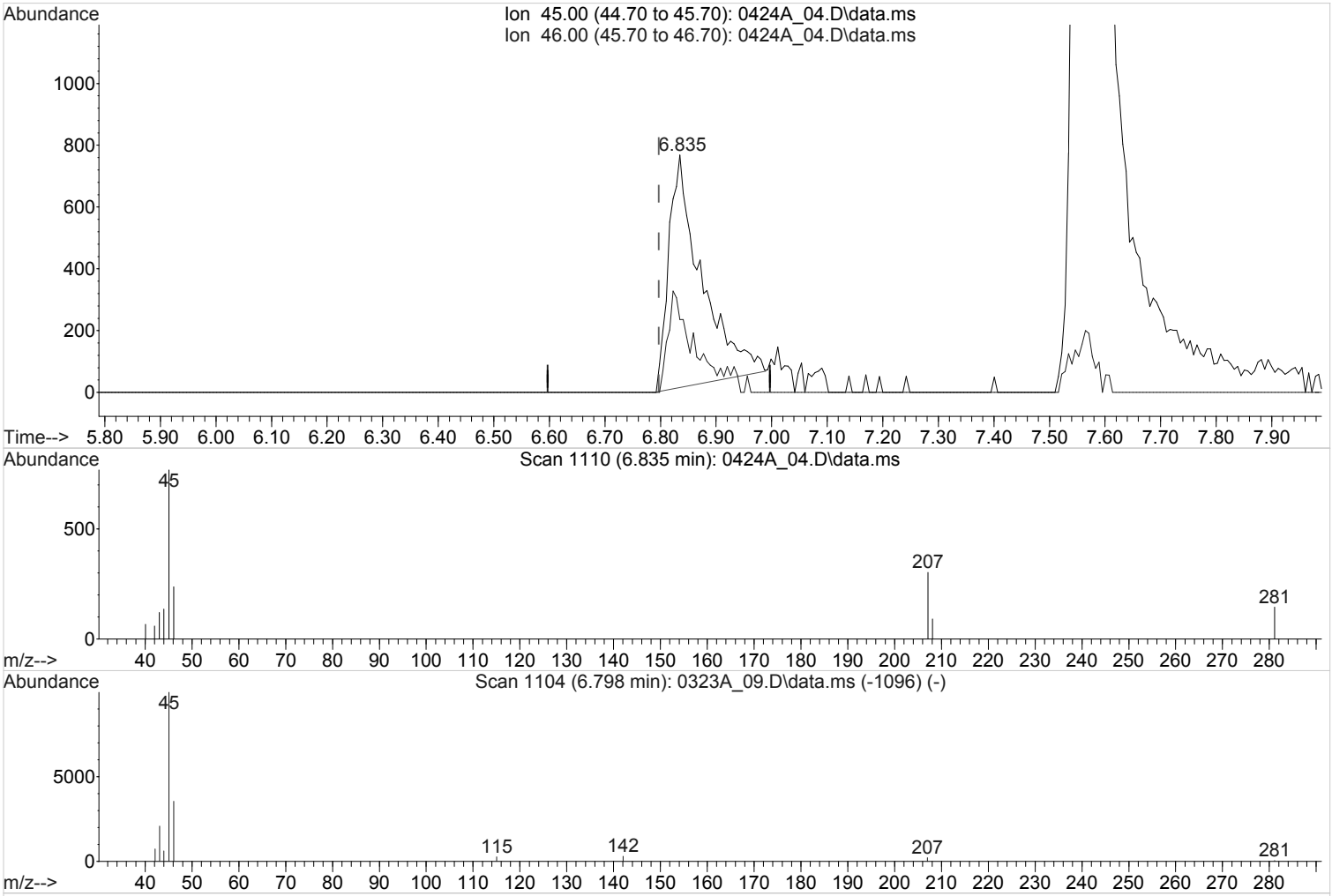
response 19939

Ion	Exp%	Act%
45.00	100	100
46.00	36.90	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042418A\
Data File : 0424A_04.D
Acq On : 24 Apr 2018 12:56 pm
Operator : 564
Sample : STD AMS 0.63 ppbv 18D19497
Misc : 18D19496
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 25 09:38:35 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:38:30 2018
Response via : Initial Calibration



(14) Ethanol (T,M)

6.835min (+0.038) 0.4995071 ppbv m

response 30706

Ion	Exp%	Act%
45.00	100	100
46.00	36.90	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042418A\
Data File : 0424A_05.D
Acq On : 24 Apr 2018 1:37 pm
Operator : 564
Sample : STD AMS 1.25 ppbv 18D19497
Misc : 18D19496
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 25 09:40:28 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:39:32 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	9.823	130	1340604	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	10.898	114	4802205	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	14.038	117	3213368	4.0000000	ppbv	0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	15.239	95	1681316	4.0289272	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 100.72%			
Target Compounds						Qvalue
2) Propene	4.155	41	127725	1.1344286	ppbv	99
3) 1,1-DIFLUOROETHANE	4.179	51	125526	1.3054099	ppbv	99
4) Dichlorodifluoromethane	4.238	85	346395	1.1836785	ppbv	99
5) CHLORODIFLUOROMETHANE	4.302	51	124949	1.3791205	ppbv #	63
6) 1,2-Dichlorotetrafluor...	4.548	85	124224	1.1287776	ppbv	99
7) Chloromethane	4.717	50	222357	1.1503280	ppbv	100
8) Vinyl Chloride	4.978	62	265228	1.1490973	ppbv	99
9) 1,3-Butadiene	5.053	39	152552	1.1270874	ppbv	97
10) Bromomethane	5.708	94	291804	1.1562270	ppbv	99
11) Chloroethane	5.905	64	131312	1.1357528	ppbv	99
12) Vinyl Bromide	6.242	106	295260	1.1505600	ppbv	98
13) Trichlorofluoromethane	6.307	101	627474	1.1247706	ppbv	98
14) Ethanol	6.810	45	58405m	1.0013199	ppbv	
15) 1,1,2-Trichlorotrifluo...	7.105	101	586446	1.1473105	ppbv	100
16) 1,1-Dichloroethene	7.181	61	381008	1.1877342	ppbv	98
17) Acetone	7.371	43	224721	1.1922654	ppbv	100
18) 2-Propanol	7.554	45	353695	1.1883100	ppbv	96
19) Carbon Disulfide	7.534	76	592758	1.1145890	ppbv	100
20) Allyl Chloride	7.733	41	293011	1.1727249	ppbv	97
21) Methylene Chloride	7.942	49	276539	1.1152598	ppbv	99
22) TERT-BUTYL ALCOHOL	8.071	59	516437	1.1951320	ppbv	99
23) Methyl Tert-Butyl Ether	8.198	73	688086	1.1433925	ppbv	98
24) Trans-1,2-Dichloroethene	8.246	61	303745	1.1794063	ppbv	97
25) n-Hexane	8.454	57	362835	1.1609719	ppbv	99
26) 1,1-Dichloroethane	8.821	63	490683	1.1653242	ppbv	99
27) Vinyl Acetate	8.833	43	445757	1.1896550	ppbv	98
28) ETHYL ACETATE	9.517	45	68497	1.2331671	ppbv	97
29) 2-Butanone (MEK)	9.544	72	115753	1.2131153	ppbv	95
30) cis-1,2-Dichloroethene	9.530	61	412663	1.1908352	ppbv	99
31) Tetrahydrofuran	9.856	42	267649	1.2188255	ppbv	99
32) Chloroform	9.863	83	582708	1.1458181	ppbv	100
33) Cyclohexane	10.062	84	358014	1.1182040	ppbv	98
34) 1,1,1-Trichloroethane	10.063	97	575538	1.1502420	ppbv	99
35) Carbon Tetrachloride	10.221	117	608675	1.1434660	ppbv	99
36) 2,2,4-Trimethylpentane	10.401	57	1297629	1.1620601	ppbv	100
38) Benzene	10.492	78	894354	1.1833893	ppbv	99
39) 1,2-Dichloroethane	10.583	62	293524	1.2147923	ppbv	99
40) Heptane	10.584	43	441945	1.1765881	ppbv	99
41) Trichloroethene	11.201	95	406645	1.1692032	ppbv	99
42) TERT-AMYL ETHYL ETHER	11.326	73	255704	1.1954648	ppbv	99
43) METHYL CYCLOHEXANE	11.347	83	521383	1.1634486	ppbv	98
44) 1,2-Dichloropropane	11.511	63	325287	1.1727749	ppbv	98
45) Methyl Methacrylate	11.511	41	411914	1.2756685	ppbv	95
46) 1,4-Dioxane	11.634	88	187104	1.1931764	ppbv	100
47) Bromodichloromethane	11.794	83	631156	1.1957961	ppbv	100
48) cis-1,3-Dichloropropene	12.293	75	530476	1.2497393	ppbv	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042418A\
Data File : 0424A_05.D
Acq On : 24 Apr 2018 1:37 pm
Operator : 564
Sample : STD AMS 1.25 ppbv 18D19497
Misc : 18D19496
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 25 09:40:28 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:39:32 2018
Response via : Initial Calibration

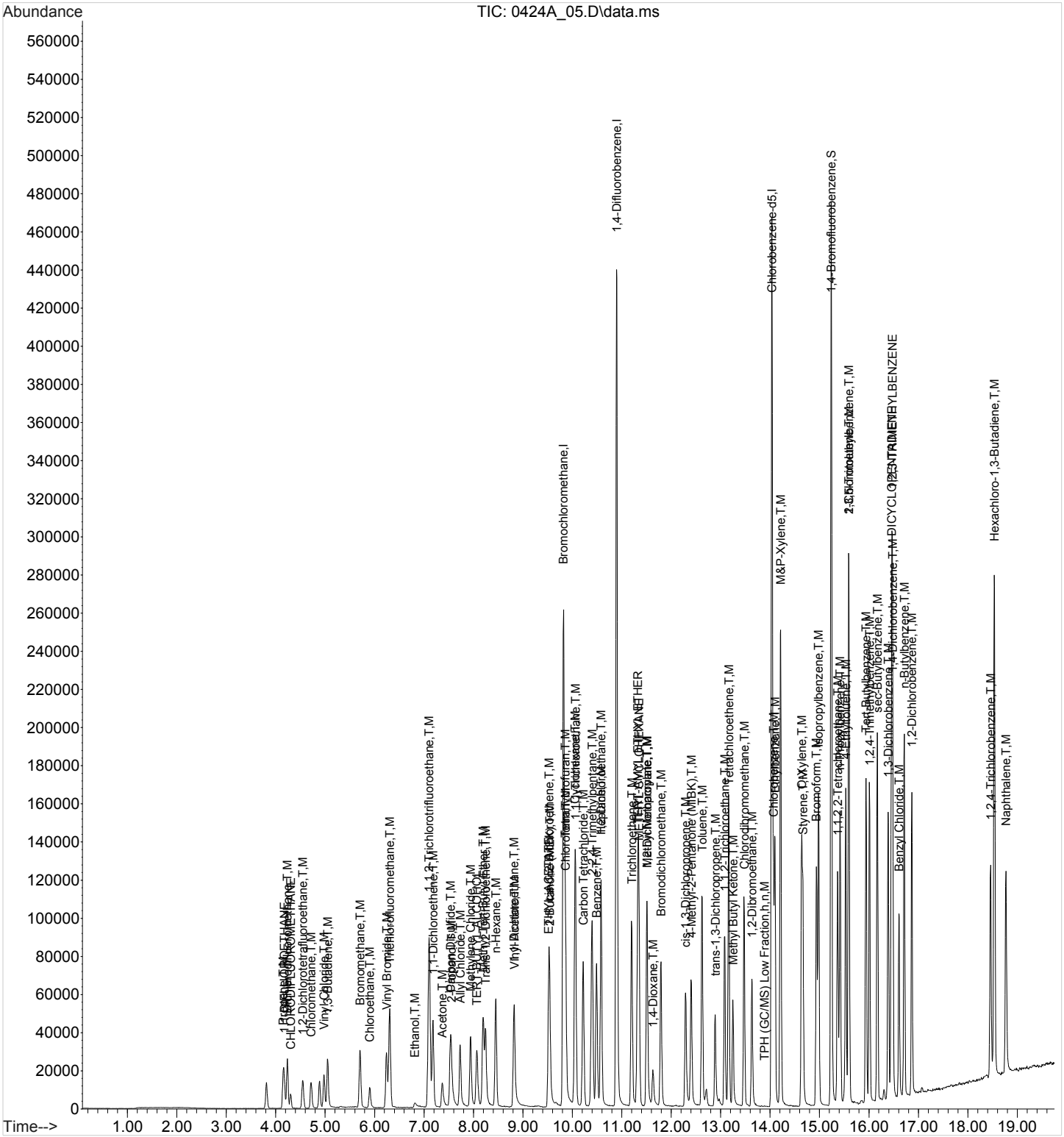
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) 4-Methyl-2-Pentanone (...	12.406	43	562203	1.1916821	ppbv	99
50) Toluene	12.626	91	1045103	1.1825024	ppbv	99
51) trans-1,3-Dichloropropene	12.891	75	374526	1.2452328	ppbv	96
52) 1,1,2-Trichloroethane	13.083	97	361258	1.1957922	ppbv	97
53) Tetrachloroethene	13.165	166	585455	1.1628536	ppbv	99
54) Methyl Butyl Ketone	13.251	43	401899	1.2186957	ppbv #	98
55) Chlorodibromomethane	13.476	129	691505	1.2008462	ppbv	99
56) 1,2-Dibromoethane	13.635	107	544653	1.2186587	ppbv	100
57) Chlorobenzene	14.069	112	745366	1.1504278	ppbv	97
59) Ethylbenzene	14.100	91	1121964	1.1681862	ppbv	99
60) M&P-Xylene	14.214	91	1754112	2.2973402	ppbv	99
61) O-Xylene	14.641	91	897684	1.1545587	ppbv	99
62) Styrene	14.667	104	679413	1.2011862	ppbv	99
63) Bromoform	14.941	173	748025	1.2120731	ppbv	99
64) Isopropylbenzene	14.983	105	1272111	1.1547285	ppbv	100
65) 1,1,2,2-Tetrachloroethane	15.369	83	766467	1.2004613	ppbv	99
66) n-Propylbenzene	15.418	91	1452900	1.1725837	ppbv	99
67) 4-Ethyltoluene	15.533	105	1274955	1.2029320	ppbv	100
68) 2-Chlorotoluene	15.594	126	352038	1.1465700	ppbv	100
70) 1,3,5-Trimethylbenzene	15.595	105	1075494	1.1459017	ppbv	100
71) Tert-Butylbenzene	15.944	119	1026564	1.1799858	ppbv	100
72) 1,2,4-Trimethylbenzene	16.013	105	1056181	1.2017037	ppbv	100
73) sec-Butylbenzene	16.172	134	292921	1.1649282	ppbv #	100
74) 1,3-Dichlorobenzene	16.391	146	776639	1.2282153	ppbv	100
75) 1,4-Dichlorobenzene	16.483	146	753933	1.2210398	ppbv	99
76) 1,2,3-TRIMETHYLBENZENE	16.468	105	1065942	1.1919391	ppbv	100
77) DICYCLOPENTADIENE	16.457	66	1222609	1.1763627	ppbv	99
78) Benzyl Chloride	16.610	91	806627	1.4216603	ppbv	100
79) n-Butylbenzene	16.716	91	1182091	1.1979655	ppbv	100
80) 1,2-Dichlorobenzene	16.869	146	785908	1.1898157	ppbv	100
81) 1,2,4-Trichlorobenzene	18.462	180	502932	1.3756956	ppbv	98
82) Hexachloro-1,3-Butadiene	18.539	225	732388	1.1593088	ppbv	99
83) Naphthalene	18.773	128	1175853	1.3089109	ppbv	99
84) TPH (GC/MS) Low Fraction	13.890	TIC	92809660m	50.3065650	ppbv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042418A\
Data File : 0424A_05.D
Acq On : 24 Apr 2018 1:37 pm
Operator : 564
Sample : STD AMS 1.25 ppbv 18D19497
Misc : 18D19496
ALS Vial : 5 Sample Multiplier: 1

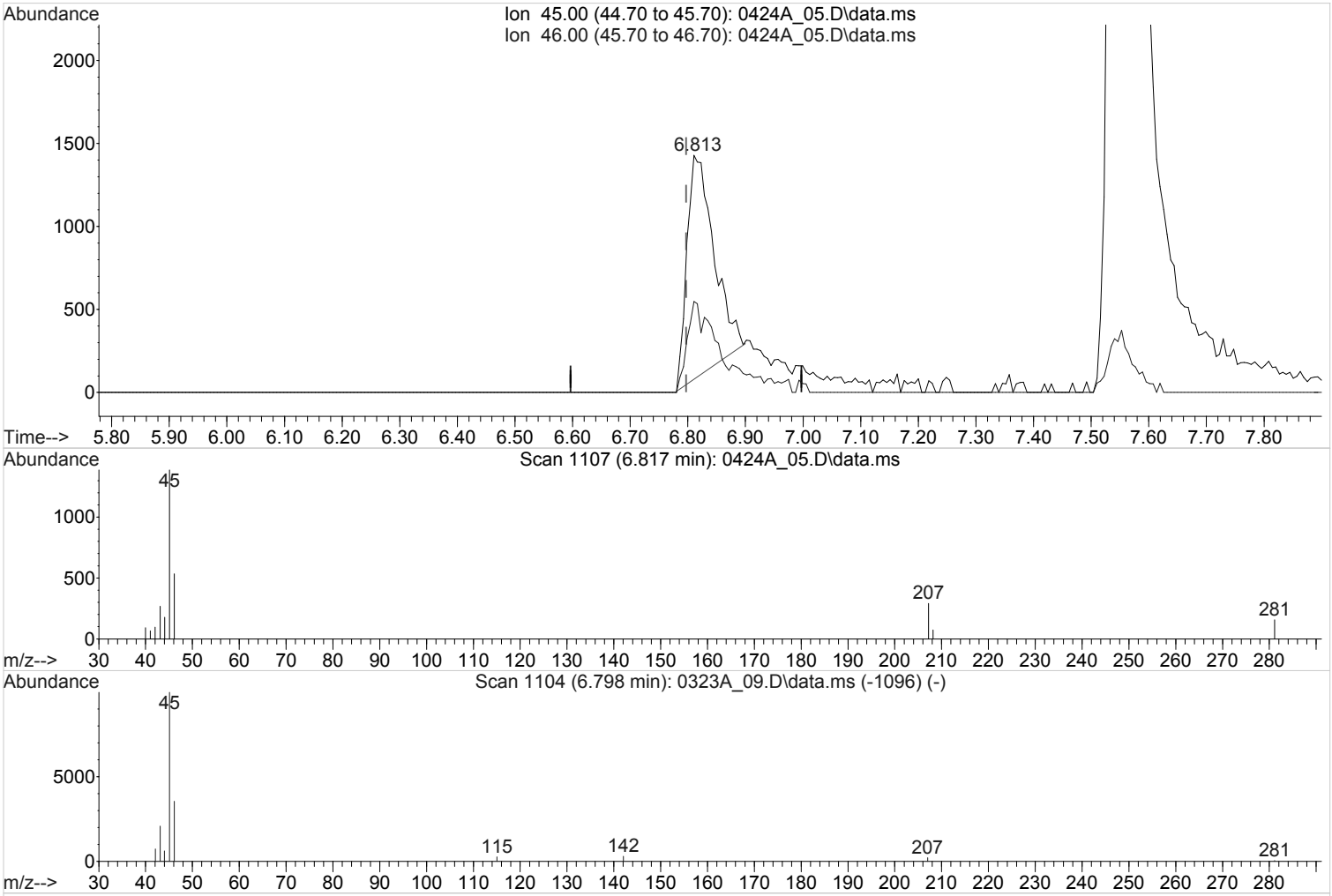
Quant Time: Apr 25 09:40:28 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:39:32 2018
Response via : Initial Calibration



Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042418A\
Data File : 0424A_05.D
Acq On : 24 Apr 2018 1:37 pm
Operator : 564
Sample : STD AMS 1.25 ppbv 18D19497
Misc : 18D19496
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 25 09:39:36 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:39:32 2018
Response via : Initial Calibration



(14) Ethanol (T,M)

6.818min (+0.020) 0.7353476 ppbv

Qvalue = 38

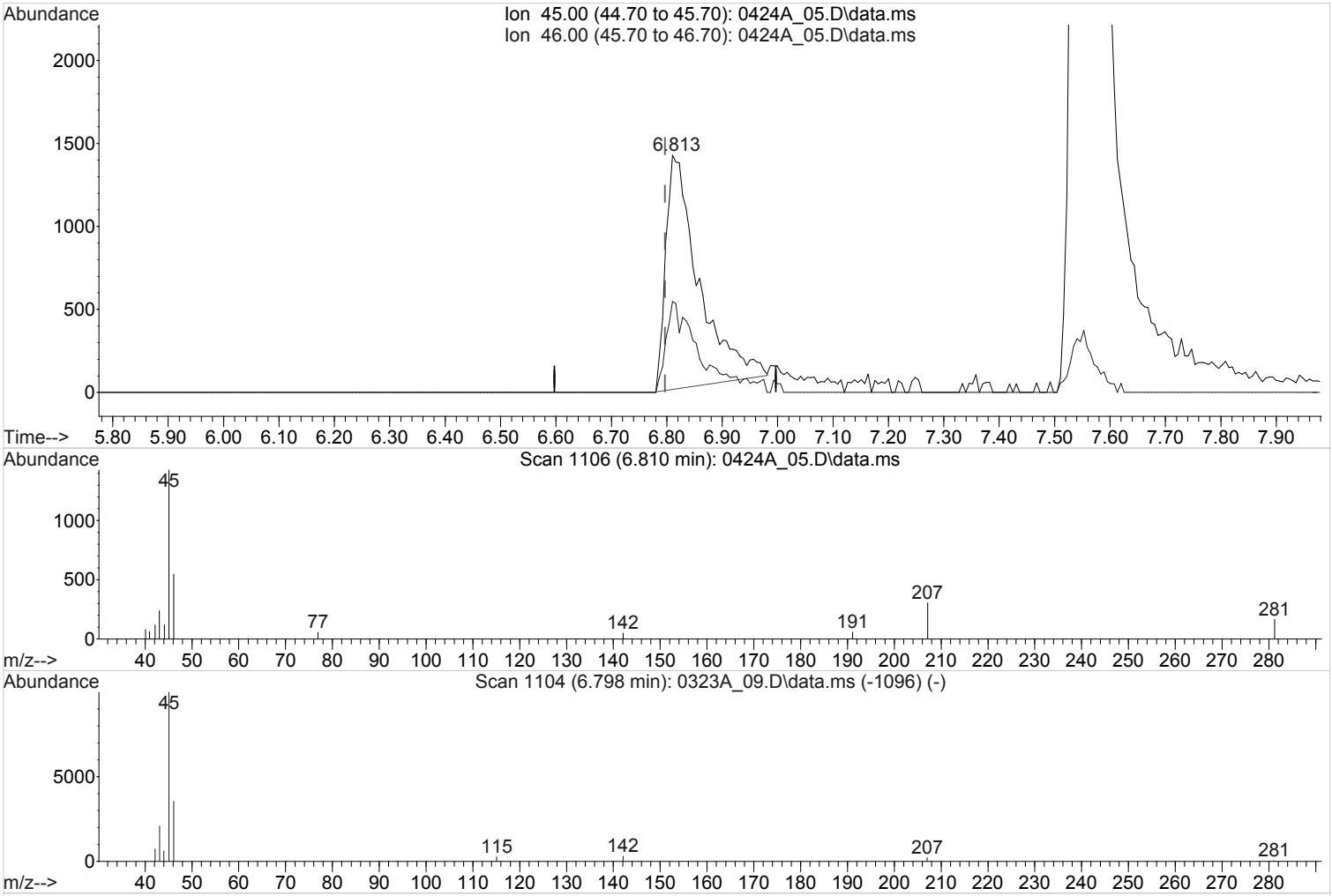
response 42891

Ion	Exp%	Act%
45.00	100	100
46.00	36.90	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042418A\
Data File : 0424A_05.D
Acq On : 24 Apr 2018 1:37 pm
Operator : 564
Sample : STD AMS 1.25 ppbv 18D19497
Misc : 18D19496
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Apr 25 09:39:36 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:39:32 2018
Response via : Initial Calibration



(14) Ethanol (T,M)

6.810min (+0.013) 1.0013199 ppbv m

response 58405

Ion	Exp%	Act%
45.00	100	100
46.00	36.90	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042418A\
Data File : 0424A_06.D
Acq On : 24 Apr 2018 2:19 pm
Operator : 564
Sample : STD AMS 2.5 ppbv 18D19497
Misc : 18D19496
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 25 09:41:18 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:40:34 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	9.824	130	1337434	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	10.899	114	4808530	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	14.039	117	3216313	4.0000000	ppbv	0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	15.240	95	1680956	4.0185627	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 100.46%			
Target Compounds						Qvalue
2) Propene	4.153	41	221664	2.0106165	ppbv	98
3) 1,1-DIFLUOROETHANE	4.178	51	208161	2.1508372	ppbv	98
4) Dichlorodifluoromethane	4.239	85	597463	2.0684022	ppbv	100
5) CHLORODIFLUOROMETHANE	4.303	51	202959	2.2000150	ppbv	99
6) 1,2-Dichlorotetrafluor...	4.548	85	240423	2.2331269	ppbv	99
7) Chloromethane	4.717	50	426917	2.2497005	ppbv	100
8) Vinyl Chloride	4.978	62	518171	2.2872179	ppbv	100
9) 1,3-Butadiene	5.050	39	295051	2.2289052	ppbv	99
10) Bromomethane	5.707	94	561031	2.2622094	ppbv	100
11) Chloroethane	5.905	64	252966	2.2340029	ppbv	99
12) Vinyl Bromide	6.243	106	575293	2.2834314	ppbv	99
13) Trichlorofluoromethane	6.308	101	1238687	2.2711618	ppbv	100
14) Ethanol	6.805	45	119269	2.1345790	ppbv	99
15) 1,1,2-Trichlorotrifluo...	7.106	101	1133482	2.2599070	ppbv	100
16) 1,1-Dichloroethene	7.182	61	723298	2.2828633	ppbv	100
17) Acetone	7.363	43	475710	2.5534646	ppbv	99
18) 2-Propanol	7.548	45	708206	2.4087783	ppbv	94
19) Carbon Disulfide	7.533	76	1129673	2.1763629	ppbv	99
20) Allyl Chloride	7.731	41	562187	2.2836285	ppbv	100
21) Methylene Chloride	7.941	49	534960	2.2102177	ppbv	99
22) TERT-BUTYL ALCOHOL	8.066	59	1023605	2.3954578	ppbv	99
23) Methyl Tert-Butyl Ether	8.196	73	1329587	2.2530437	ppbv	98
24) Trans-1,2-Dichloroethene	8.244	61	605620	2.3840523	ppbv	98
25) n-Hexane	8.454	57	713340	2.3209635	ppbv	99
26) 1,1-Dichloroethane	8.820	63	941997	2.2732541	ppbv	99
27) Vinyl Acetate	8.826	43	970889	2.6226123	ppbv	100
28) ETHYL ACETATE	9.516	45	129695	2.3467945	ppbv	91
29) 2-Butanone (MEK)	9.539	72	244509	2.5838318	ppbv	100
30) cis-1,2-Dichloroethene	9.528	61	810467	2.3667385	ppbv	99
31) Tetrahydrofuran	9.853	42	517782	2.3753186	ppbv	99
32) Chloroform	9.863	83	1127054	2.2591138	ppbv	100
33) Cyclohexane	10.062	84	708597	2.2662340	ppbv	100
34) 1,1,1-Trichloroethane	10.063	97	1115397	2.2707057	ppbv	100
35) Carbon Tetrachloride	10.222	117	1194234	2.2878233	ppbv	99
36) 2,2,4-Trimethylpentane	10.401	57	2526735	2.3004898	ppbv	100
38) Benzene	10.491	78	1737518	2.3207533	ppbv	99
39) 1,2-Dichloroethane	10.581	62	559731	2.3265858	ppbv	98
40) Heptane	10.583	43	853232	2.2955333	ppbv	99
41) Trichloroethene	11.200	95	784739	2.2828575	ppbv	100
42) TERT-AMYL ETHYL ETHER	11.326	73	496491	2.3385455	ppbv	99
43) METHYL CYCLOHEXANE	11.348	83	1019266	2.3033622	ppbv	100
44) 1,2-Dichloropropane	11.510	63	636614	2.3208727	ppbv	97
45) Methyl Methacrylate	11.509	41	812396	2.5023445	ppbv	99
46) 1,4-Dioxane	11.630	88	377139	2.4239140	ppbv	99
47) Bromodichloromethane	11.793	83	1252994	2.3915575	ppbv	99
48) cis-1,3-Dichloropropene	12.291	75	1038548	2.4435810	ppbv	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042418A\
Data File : 0424A_06.D
Acq On : 24 Apr 2018 2:19 pm
Operator : 564
Sample : STD AMS 2.5 ppbv 18D19497
Misc : 18D19496
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 25 09:41:18 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:40:34 2018
Response via : Initial Calibration

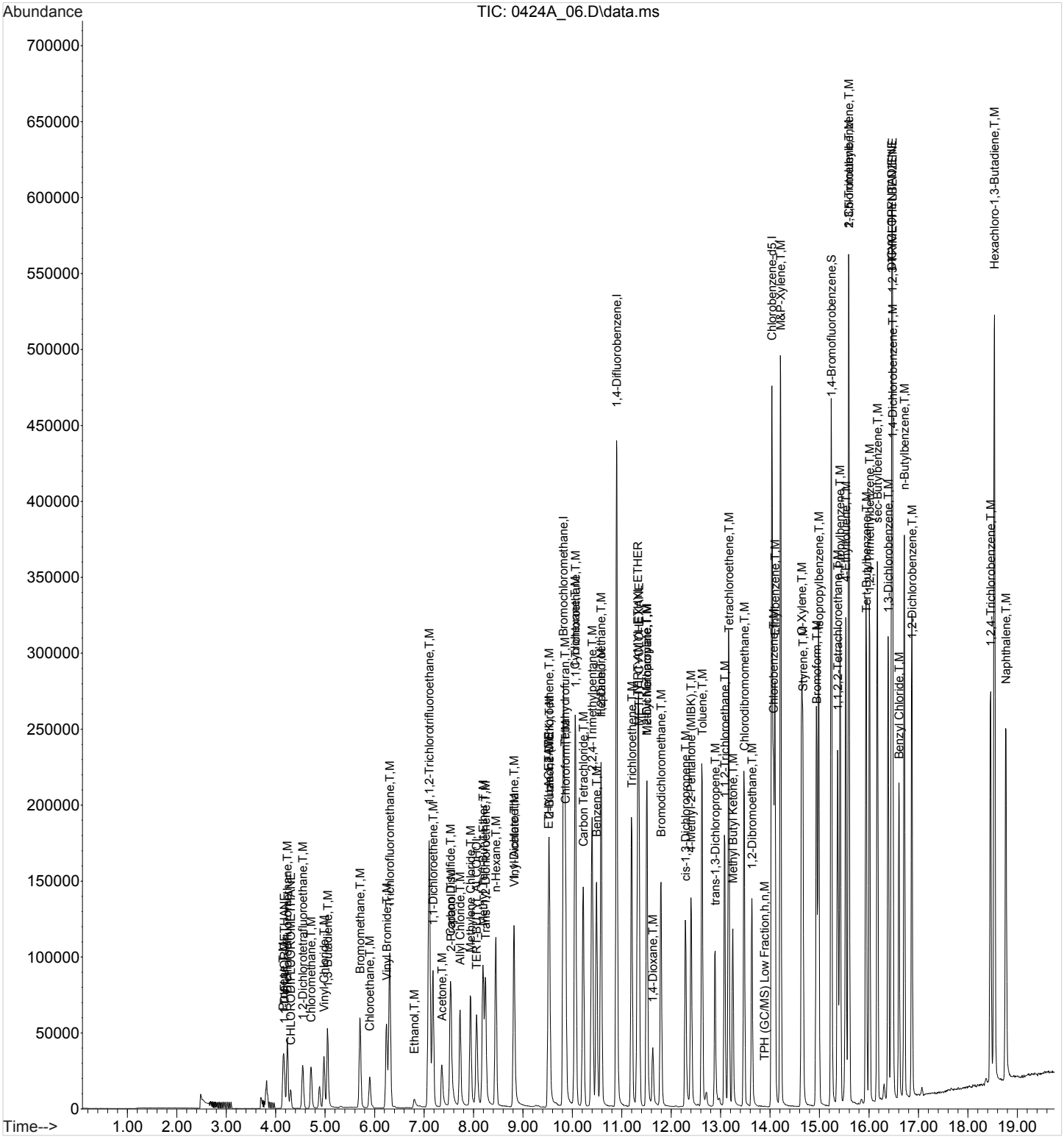
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49)	4-Methyl-2-Pentanone (...	12.404	43	1127691	2.4096663	ppbv		99
50)	Toluene	12.625	91	2042162	2.3327995	ppbv		100
51)	trans-1,3-Dichloropropene	12.888	75	732426	2.4338419	ppbv		97
52)	1,1,2-Trichloroethane	13.082	97	663870	2.2137736	ppbv		97
53)	Tetrachloroethene	13.165	166	1130383	2.2739664	ppbv		99
54)	Methyl Butyl Ketone	13.248	43	809785	2.4646636	ppbv	#	99
55)	Chlorodibromomethane	13.476	129	1378254	2.4092328	ppbv		100
56)	1,2-Dibromoethane	13.634	107	1070690	2.4045715	ppbv		100
57)	Chlorobenzene	14.069	112	1434789	2.2474032	ppbv		99
59)	Ethylbenzene	14.100	91	2206568	2.3258148	ppbv		100
60)	M&P-Xylene	14.213	91	3398552	4.5202526	ppbv		100
61)	O-Xylene	14.641	91	1741920	2.2730331	ppbv		100
62)	Styrene	14.666	104	1376845	2.4511424	ppbv		100
63)	Bromoform	14.941	173	1525237	2.4842506	ppbv		99
64)	Isopropylbenzene	14.984	105	2507929	2.3096338	ppbv		100
65)	1,1,2,2-Tetrachloroethane	15.369	83	1492372	2.3539106	ppbv		100
66)	n-Propylbenzene	15.419	91	2907433	2.3737393	ppbv		100
67)	4-Ethyltoluene	15.534	105	2526531	2.3996939	ppbv		100
68)	2-Chlorotoluene	15.595	126	684910	2.2661794	ppbv		99
70)	1,3,5-Trimethylbenzene	15.594	105	2054263	2.2237803	ppbv		100
71)	Tert-Butylbenzene	15.945	119	1993505	2.3152769	ppbv		100
72)	1,2,4-Trimethylbenzene	16.013	105	2086836	2.3906626	ppbv		100
73)	sec-Butylbenzene	16.173	134	552662	2.2261938	ppbv	#	99
74)	1,3-Dichlorobenzene	16.391	146	1565122	2.4815460	ppbv		99
75)	1,4-Dichlorobenzene	16.483	146	1544654	2.5110054	ppbv		99
76)	1,2,3-TRIMETHYLBENZENE	16.469	105	2039407	2.2997449	ppbv		100
77)	DICYCLOPENTADIENE	16.458	66	2335559	2.2719246	ppbv		99
78)	Benzyl Chloride	16.610	91	1668818	2.8600049	ppbv		100
79)	n-Butylbenzene	16.717	91	2315593	2.3642233	ppbv		100
80)	1,2-Dichlorobenzene	16.870	146	1592011	2.4314095	ppbv		99
81)	1,2,4-Trichlorobenzene	18.461	180	1167964	3.1289413	ppbv		99
82)	Hexachloro-1,3-Butadiene	18.541	225	1403358	2.2520417	ppbv		100
83)	Naphthalene	18.771	128	2507327	2.7624586	ppbv		100
84)	TPH (GC/MS) Low Fraction	13.890	TIC	176868020m	98.6163630	ppbv		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042418A\
Data File : 0424A_06.D
Acq On : 24 Apr 2018 2:19 pm
Operator : 564
Sample : STD AMS 2.5 ppbv 18D19497
Misc : 18D19496
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 25 09:41:18 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:40:34 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042418A\
Data File : 0424A_07.D
Acq On : 24 Apr 2018 3:03 pm
Operator : 564
Sample : MSTD AMS 3.75 ppbv 18D19497
Misc : 18D19496
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 25 09:42:07 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:41:24 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	9.824	130	1334800	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	10.899	114	4834654	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	14.038	117	3310218	4.0000000	ppbv	0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	15.239	95	1768758	4.1053375	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 102.63%			
Target Compounds						Qvalue
2) Propene	4.155	41	283188	2.6605466	ppbv	100
3) 1,1-DIFLUOROETHANE	4.178	51	277990	2.9466096	ppbv	99
4) Dichlorodifluoromethane	4.239	85	810638	2.8952468	ppbv	100
5) CHLORODIFLUOROMETHANE	4.305	51	270217	2.9947343	ppbv	100
6) 1,2-Dichlorotetrafluor...	4.547	85	346287	3.2811517	ppbv	99
7) Chloromethane	4.718	50	640285	3.4381019	ppbv	100
8) Vinyl Chloride	4.978	62	790217	3.5452086	ppbv	100
9) 1,3-Butadiene	5.051	39	447603	3.4503548	ppbv	100
10) Bromomethane	5.707	94	844918	3.4686133	ppbv	100
11) Chloroethane	5.904	64	392553	3.5362776	ppbv	100
12) Vinyl Bromide	6.242	106	871423	3.5164109	ppbv	100
13) Trichlorofluoromethane	6.308	101	1869315	3.4873989	ppbv	100
14) Ethanol	6.798	45	186562	3.4290690	ppbv	98
15) 1,1,2-Trichlorotrifluo...	7.107	101	1712651	3.4770296	ppbv	100
16) 1,1-Dichloroethene	7.181	61	1108126	3.5558233	ppbv	99
17) Acetone	7.359	43	723224	3.8758893	ppbv	100
18) 2-Propanol	7.545	45	1100002	3.7716896	ppbv	100
19) Carbon Disulfide	7.532	76	1678920	3.3123590	ppbv	100
20) Allyl Chloride	7.730	41	862708	3.5626577	ppbv	100
21) Methylene Chloride	7.940	49	798134	3.3691298	ppbv	100
22) TERT-BUTYL ALCOHOL	8.065	59	1547945	3.6551497	ppbv	100
23) Methyl Tert-Butyl Ether	8.195	73	2025000	3.4957756	ppbv	99
24) Trans-1,2-Dichloroethene	8.243	61	905510	3.5994398	ppbv	99
25) n-Hexane	8.455	57	1065656	3.5160866	ppbv	100
26) 1,1-Dichloroethane	8.820	63	1420427	3.4872931	ppbv	100
27) Vinyl Acetate	8.822	43	1512183	4.0596555	ppbv	100
28) ETHYL ACETATE	9.514	45	207172	3.7948680	ppbv	98
29) 2-Butanone (MEK)	9.537	72	370385	3.8999416	ppbv	100
30) cis-1,2-Dichloroethene	9.526	61	1237497	3.6533425	ppbv	100
31) Tetrahydrofuran	9.850	42	783987	3.6338309	ppbv	99
32) Chloroform	9.863	83	1711408	3.4932832	ppbv	100
33) Cyclohexane	10.061	84	1069479	3.4814101	ppbv	100
34) 1,1,1-Trichloroethane	10.063	97	1686256	3.4930185	ppbv	100
35) Carbon Tetrachloride	10.222	117	1803903	3.5122805	ppbv	100
36) 2,2,4-Trimethylpentane	10.402	57	3738833	3.4567490	ppbv	100
38) Benzene	10.491	78	2639801	3.5492690	ppbv	100
39) 1,2-Dichloroethane	10.580	62	876996	3.6680463	ppbv	100
40) Heptane	10.584	43	1292858	3.5073133	ppbv	100
41) Trichloroethene	11.199	95	1192799	3.5018763	ppbv	100
42) TERT-AMYL ETHYL ETHER	11.325	73	744580	3.5260853	ppbv	100
43) METHYL CYCLOHEXANE	11.348	83	1539441	3.5060306	ppbv	100
44) 1,2-Dichloropropane	11.510	63	964211	3.5384397	ppbv	100
45) Methyl Methacrylate	11.507	41	1232400	3.7749436	ppbv	99
46) 1,4-Dioxane	11.628	88	571963	3.6748457	ppbv	100
47) Bromodichloromethane	11.792	83	1865706	3.5675763	ppbv	100
48) cis-1,3-Dichloropropene	12.289	75	1591156	3.7376331	ppbv	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042418A\
Data File : 0424A_07.D
Acq On : 24 Apr 2018 3:03 pm
Operator : 564
Sample : MSTD AMS 3.75 ppbv 18D19497
Misc : 18D19496
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 25 09:42:07 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:41:24 2018
Response via : Initial Calibration

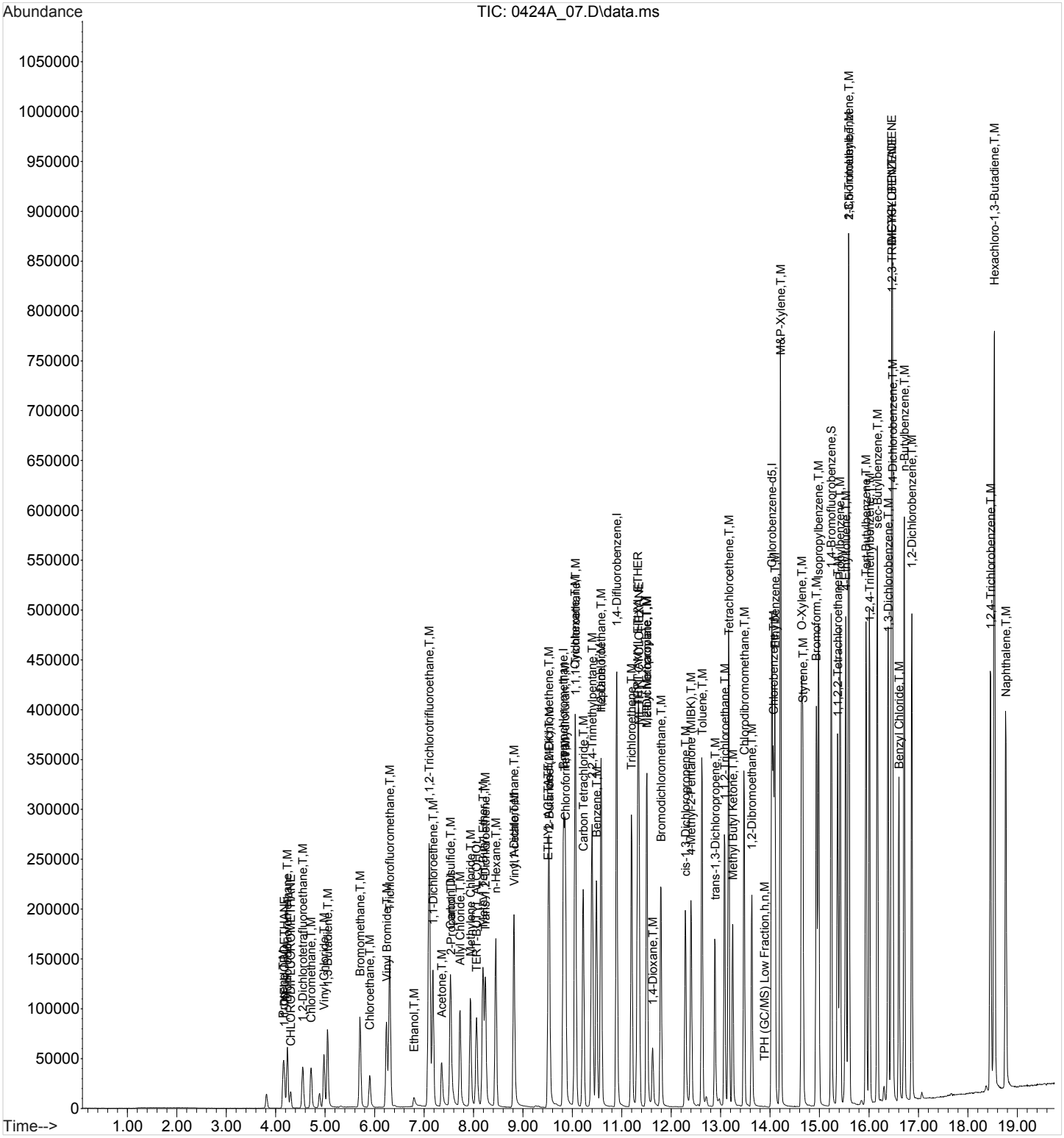
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) 4-Methyl-2-Pentanone (...	12.403	43	1715561	3.6681167	ppbv	100
50) Toluene	12.624	91	3121341	3.5862745	ppbv	100
51) trans-1,3-Dichloropropene	12.887	75	1180995	3.9205150	ppbv	100
52) 1,1,2-Trichloroethane	13.081	97	1042779	3.5257910	ppbv	100
53) Tetrachloroethene	13.165	166	1717883	3.4897389	ppbv	100
54) Methyl Butyl Ketone	13.246	43	1271497	3.8581078	ppbv #	100
55) Chlorodibromomethane	13.475	129	2111302	3.6930295	ppbv	100
56) 1,2-Dibromoethane	13.633	107	1646844	3.7020748	ppbv	100
57) Chlorobenzene	14.068	112	2246893	3.5603931	ppbv	100
59) Ethylbenzene	14.099	91	3338750	3.4595211	ppbv	100
60) M&P-Xylene	14.212	91	5150398	6.7641390	ppbv	100
61) O-Xylene	14.640	91	2634169	3.3911303	ppbv	100
62) Styrene	14.665	104	2119374	3.6779831	ppbv	100
63) Bromoform	14.940	173	2346857	3.7179428	ppbv	100
64) Isopropylbenzene	14.983	105	3749571	3.3982716	ppbv	100
65) 1,1,2,2-Tetrachloroethane	15.368	83	2275382	3.5214320	ppbv	100
66) n-Propylbenzene	15.418	91	4503131	3.6025563	ppbv	100
67) 4-Ethyltoluene	15.533	105	3803993	3.5341619	ppbv	100
68) 2-Chlorotoluene	15.594	126	1059593	3.4603877	ppbv	100
70) 1,3,5-Trimethylbenzene	15.594	105	3204543	3.4338048	ppbv	100
71) Tert-Butylbenzene	15.945	119	2973963	3.3978503	ppbv	99
72) 1,2,4-Trimethylbenzene	16.012	105	3097134	3.4727133	ppbv	100
73) sec-Butylbenzene	16.172	134	864908	3.4480646	ppbv #	100
74) 1,3-Dichlorobenzene	16.390	146	2413708	3.7230169	ppbv	100
75) 1,4-Dichlorobenzene	16.482	146	2356848	3.7198992	ppbv	99
76) 1,2,3-TRIMETHYLBENZENE	16.468	105	3072430	3.4119009	ppbv	100
77) DICYCLOPENTADIENE	16.457	66	3473733	3.3339215	ppbv	100
78) Benzyl Chloride	16.609	91	2574498	4.1865087	ppbv	100
79) n-Butylbenzene	16.716	91	3598616	3.6025710	ppbv	100
80) 1,2-Dichlorobenzene	16.869	146	2384584	3.5548137	ppbv	100
81) 1,2,4-Trichlorobenzene	18.460	180	1895393	4.7351159	ppbv	100
82) Hexachloro-1,3-Butadiene	18.540	225	2160666	3.4255980	ppbv	100
83) Naphthalene	18.769	128	3989678	4.1975043	ppbv	100
84) TPH (GC/MS) Low Fraction	13.890	TIC	266960728m	148.6072776	ppbv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042418A\
Data File : 0424A_07.D
Acq On : 24 Apr 2018 3:03 pm
Operator : 564
Sample : MSTD AMS 3.75 ppbv 18D19497
Misc : 18D19496
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Apr 25 09:42:07 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:41:24 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042418A\
Data File : 0424A_08.D
Acq On : 24 Apr 2018 3:49 pm
Operator : 564
Sample : STD AMS 5.0 ppbv 18D19497
Misc : 18D19496
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 25 09:43:04 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:42:14 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	9.825	130	1384747	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	10.900	114	4984459	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	14.038	117	3402196	4.0000000	ppbv	0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	15.240	95	1815273	4.1053075	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 102.63%			
Target Compounds						Qvalue
2) Propene	4.153	41	413090	3.7344831	ppbv	99
3) 1,1-DIFLUOROETHANE	4.177	51	406426	4.1508138	ppbv	99
4) Dichlorodifluoromethane	4.238	85	1034819	3.5558413	ppbv	100
5) CHLORODIFLUOROMETHANE	4.302	51	397584	4.2390313	ppbv	99
6) 1,2-Dichlorotetrafluor...	4.548	85	462543	4.2204378	ppbv	99
7) Chloromethane	4.717	50	855272	4.4150174	ppbv	98
8) Vinyl Chloride	4.977	62	1052658	4.5397475	ppbv	100
9) 1,3-Butadiene	5.049	39	612259	4.5395021	ppbv	97
10) Bromomethane	5.707	94	1137680	4.4918316	ppbv	100
11) Chloroethane	5.905	64	521968	4.5219721	ppbv	99
12) Vinyl Bromide	6.243	106	1166421	4.5266112	ppbv	100
13) Trichlorofluoromethane	6.308	101	2511956	4.5079100	ppbv	100
14) Ethanol	6.794	45	258096	4.5532029	ppbv	97
15) 1,1,2-Trichlorotrifluo...	7.107	101	2293956	4.4801086	ppbv	100
16) 1,1-Dichloroethene	7.181	61	1482932	4.5701704	ppbv	100
17) Acetone	7.357	43	972158	5.0095680	ppbv	99
18) 2-Propanol	7.543	45	1477591	4.8879133	ppbv	97
19) Carbon Disulfide	7.532	76	2267902	4.3045100	ppbv	100
20) Allyl Chloride	7.731	41	1143119	4.5384409	ppbv	99
21) Methylene Chloride	7.940	49	1053758	4.2799679	ppbv	98
22) TERT-BUTYL ALCOHOL	8.063	59	2086609	4.7401933	ppbv	100
23) Methyl Tert-Butyl Ether	8.195	73	2702092	4.4858082	ppbv	99
24) Trans-1,2-Dichloroethene	8.242	61	1219954	4.6691183	ppbv	100
25) n-Hexane	8.456	57	1404917	4.4578401	ppbv	99
26) 1,1-Dichloroethane	8.820	63	1897974	4.4813418	ppbv	99
27) Vinyl Acetate	8.821	43	2094052	5.4137073	ppbv	100
28) ETHYL ACETATE	9.512	45	273365	4.8071540	ppbv	96
29) 2-Butanone (MEK)	9.535	72	514582	5.2081564	ppbv	100
30) cis-1,2-Dichloroethene	9.526	61	1677450	4.7623250	ppbv	100
31) Tetrahydrofuran	9.850	42	1039382	4.6396669	ppbv	98
32) Chloroform	9.863	83	2297498	4.5100982	ppbv	99
33) Cyclohexane	10.062	84	1437772	4.5011703	ppbv	99
34) 1,1,1-Trichloroethane	10.063	97	2256515	4.4958943	ppbv	100
35) Carbon Tetrachloride	10.222	117	2434045	4.5568350	ppbv	100
36) 2,2,4-Trimethylpentane	10.402	57	5061345	4.5005186	ppbv	100
38) Benzene	10.490	78	3523207	4.5942657	ppbv	100
39) 1,2-Dichloroethane	10.580	62	1182016	4.7893063	ppbv	99
40) Heptane	10.585	43	1708235	4.4956851	ppbv	99
41) Trichloroethene	11.199	95	1650680	4.7002102	ppbv	99
42) TERT-AMYL ETHYL ETHER	11.324	73	1019415	4.6832936	ppbv	98
43) METHYL CYCLOHEXANE	11.349	83	2081750	4.5982539	ppbv	99
44) 1,2-Dichloropropane	11.509	63	1291658	4.5968346	ppbv	99
45) Methyl Methacrylate	11.506	41	1659396	4.9300996	ppbv	99
46) 1,4-Dioxane	11.627	88	776373	4.8377776	ppbv	100
47) Bromodichloromethane	11.793	83	2565573	4.7582740	ppbv	100
48) cis-1,3-Dichloropropene	12.289	75	2178339	4.9646415	ppbv	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042418A\
Data File : 0424A_08.D
Acq On : 24 Apr 2018 3:49 pm
Operator : 564
Sample : STD AMS 5.0 ppbv 18D19497
Misc : 18D19496
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 25 09:43:04 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:42:14 2018
Response via : Initial Calibration

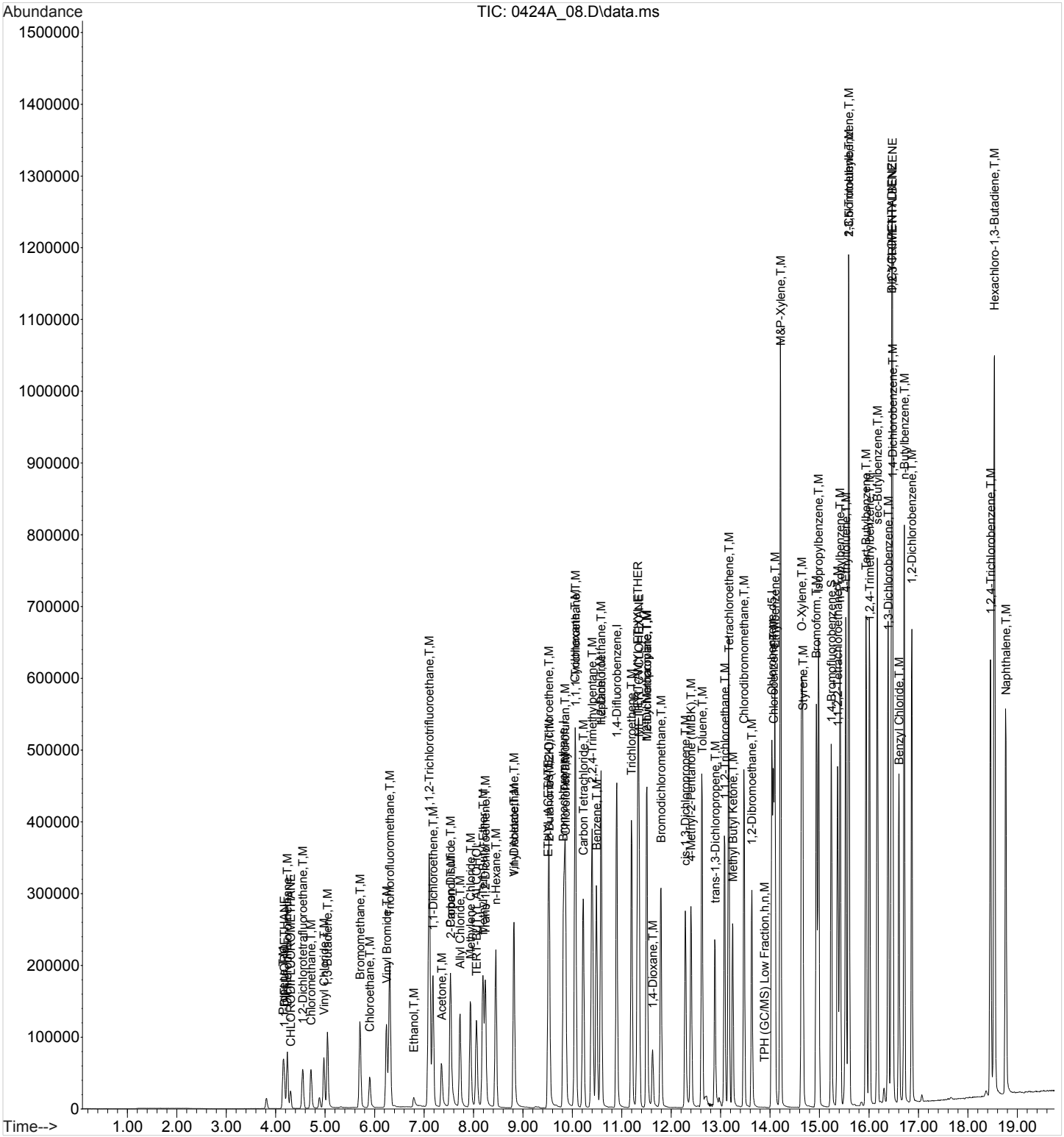
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49)	4-Methyl-2-Pentanone (...	12.402	43	2300850	4.7735460	ppbv		99
50)	Toluene	12.624	91	4219650	4.7021516	ppbv		100
51)	trans-1,3-Dichloropropene	12.886	75	1585363	5.0975070	ppbv		100
52)	1,1,2-Trichloroethane	13.081	97	1436995	4.7117901	ppbv		100
53)	Tetrachloroethene	13.165	166	2346507	4.6231002	ppbv		100
54)	Methyl Butyl Ketone	13.246	43	1761919	5.1846575	ppbv	#	100
55)	Chlorodibromomethane	13.475	129	2923431	4.9594696	ppbv		100
56)	1,2-Dibromoethane	13.633	107	2317036	5.0516723	ppbv		99
57)	Chlorobenzene	14.069	112	3061938	4.7057141	ppbv		99
59)	Ethylbenzene	14.099	91	4593967	4.6355620	ppbv		100
60)	M&P-Xylene	14.212	91	7135798	9.1258410	ppbv		99
61)	O-Xylene	14.640	91	3604817	4.5199885	ppbv		100
62)	Styrene	14.664	104	2926402	4.9380073	ppbv		99
63)	Bromoform	14.941	173	3255084	5.0220490	ppbv		99
64)	Isopropylbenzene	14.984	105	5142161	4.5393995	ppbv		100
65)	1,1,2,2-Tetrachloroethane	15.369	83	3089166	4.6556786	ppbv		100
66)	n-Propylbenzene	15.419	91	6047118	4.7105429	ppbv		100
67)	4-Ethyltoluene	15.534	105	5333781	4.8254683	ppbv		100
68)	2-Chlorotoluene	15.594	126	1441089	4.5829650	ppbv		99
70)	1,3,5-Trimethylbenzene	15.594	105	4332850	4.5211651	ppbv		100
71)	Tert-Butylbenzene	15.945	119	4107736	4.5702751	ppbv		99
72)	1,2,4-Trimethylbenzene	16.013	105	4283854	4.6775140	ppbv		100
73)	sec-Butylbenzene	16.173	134	1193696	4.6341439	ppbv	#	99
74)	1,3-Dichlorobenzene	16.390	146	3359860	5.0469616	ppbv		100
75)	1,4-Dichlorobenzene	16.482	146	3283103	5.0504067	ppbv		99
76)	1,2,3-TRIMETHYLBENZENE	16.469	105	4184604	4.5240387	ppbv		100
77)	DICYCLOPENTADIENE	16.457	66	4701400	4.3938247	ppbv		100
78)	Benzyl Chloride	16.609	91	3566546	5.6502701	ppbv		99
79)	n-Butylbenzene	16.716	91	4838203	4.7139218	ppbv		100
80)	1,2-Dichlorobenzene	16.869	146	3269927	4.7470158	ppbv		100
81)	1,2,4-Trichlorobenzene	18.461	180	2714757	6.6058491	ppbv		99
82)	Hexachloro-1,3-Butadiene	18.540	225	2972342	4.5889568	ppbv		100
83)	Naphthalene	18.769	128	5558670	5.6960507	ppbv		100
84)	TPH (GC/MS) Low Fraction	13.890	TIC	362131090m	196.2805973	ppbv		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042418A\
Data File : 0424A_08.D
Acq On : 24 Apr 2018 3:49 pm
Operator : 564
Sample : STD AMS 5.0 ppbv 18D19497
Misc : 18D19496
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Apr 25 09:43:04 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:42:14 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042418A\
Data File : 0424A_11.D
Acq On : 24 Apr 2018 6:13 pm
Operator : 564
Sample : STD AMS 50.0 ppbv 18D24885
Misc : 18D19496
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 25 09:44:27 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:43:10 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	9.828	130	1584956	4.0000000	ppbv	# 0.00
37) 1,4-Difluorobenzene	10.904	114	5560398	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	14.040	117	3811263	4.0000000	ppbv	# 0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	15.241	95	2114481	4.2527281	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 106.32%			
Target Compounds						Qvalue
2) Propene	4.151	41	4512877	36.9816979	ppbv	99
3) 1,1-DIFLUOROETHANE	4.178	51	4749120	43.4295451	ppbv	99
4) Dichlorodifluoromethane	4.238	85	10170474	31.8473042	ppbv	100
5) CHLORODIFLUOROMETHANE	4.300	51	4876132	46.4315177	ppbv	99
6) 1,2-Dichlorotetrafluor...	4.549	85	4307038	35.1172054	ppbv	98
7) Chloromethane	4.716	50	8473249	38.8643634	ppbv	99
8) Vinyl Chloride	4.977	62	10800936	41.2390090	ppbv	99
9) 1,3-Butadiene	5.050	39	6170688	40.5053242	ppbv	98
10) Bromomethane	5.710	94	11990909	41.9721104	ppbv	100
11) Chloroethane	5.908	64	5203052	39.9271459	ppbv	100
12) Vinyl Bromide	6.244	106	12509389	42.9953605	ppbv	99
13) Trichlorofluoromethane	6.313	101	26035908	41.4036670	ppbv	99
14) Ethanol	6.782	45	3119133	48.6970565	ppbv	97
15) 1,1,2-Trichlorotrifluo...	7.112	101	23927642	41.4434800	ppbv	98
16) 1,1-Dichloroethene	7.185	61	15150299	41.3002017	ppbv	96
17) Acetone	7.348	43	10740633	48.3423855	ppbv	99
18) 2-Propanol	7.546	45	15726589	45.5984748	ppbv	94
19) Carbon Disulfide	7.533	76	23851785	40.3543611	ppbv	99
20) Allyl Chloride	7.732	41	11275171	39.6330190	ppbv	96
21) Methylene Chloride	7.940	49	11874330	43.0219131	ppbv	93
22) TERT-BUTYL ALCOHOL	8.072	59	21076253	42.1441862	ppbv	98
23) Methyl Tert-Butyl Ether	8.197	73	27595140	40.6213399	ppbv	99
24) Trans-1,2-Dichloroethene	8.242	61	13003897	43.8978892	ppbv	95
25) n-Hexane	8.460	57	14313762	40.3052021	ppbv	96
26) 1,1-Dichloroethane	8.824	63	18469792	38.6738143	ppbv	99
27) Vinyl Acetate	8.817	43	22007260	49.1273381	ppbv	96
28) ETHYL ACETATE	9.511	45	2582321	39.8940767	ppbv	95
29) 2-Butanone (MEK)	9.535	72	5323991	46.7999210	ppbv	99
30) cis-1,2-Dichloroethene	9.525	61	16421711	41.0110103	ppbv	95
31) Tetrahydrofuran	9.848	42	9579091	37.7471061	ppbv	91
32) Chloroform	9.867	83	23440275	40.7726472	ppbv	99
33) Cyclohexane	10.066	84	14058729	39.0093969	ppbv	91
34) 1,1,1-Trichloroethane	10.069	97	22647784	39.9997785	ppbv	98
35) Carbon Tetrachloride	10.227	117	25532490	42.2975664	ppbv	100
36) 2,2,4-Trimethylpentane	10.408	57	47456251	37.4012284	ppbv	99
38) Benzene	10.493	78	36477055	43.1393648	ppbv	99
39) 1,2-Dichloroethane	10.579	62	11702708	42.7631917	ppbv	97
40) Heptane	10.591	43	14656217	35.0821088	ppbv #	1
41) Trichloroethene	11.201	95	17404689	44.8093644	ppbv	98
42) TERT-AMYL ETHYL ETHER	11.328	73	9688327	40.2632779	ppbv	93
43) METHYL CYCLOHEXANE	11.354	83	19388596	38.8362085	ppbv	94
44) 1,2-Dichloropropane	11.513	63	11917194	38.4617770	ppbv	96
45) Methyl Methacrylate	11.508	41	14510513	38.7229816	ppbv #	87
46) 1,4-Dioxane	11.627	88	8119136	45.5632852	ppbv	96
47) Bromodichloromethane	11.795	83	26000278	43.5276325	ppbv	99
48) cis-1,3-Dichloropropene	12.289	75	23177282	47.3997570	ppbv	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042418A\
Data File : 0424A_11.D
Acq On : 24 Apr 2018 6:13 pm
Operator : 564
Sample : STD AMS 50.0 ppbv 18D24885
Misc : 18D19496
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 25 09:44:27 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:43:10 2018
Response via : Initial Calibration

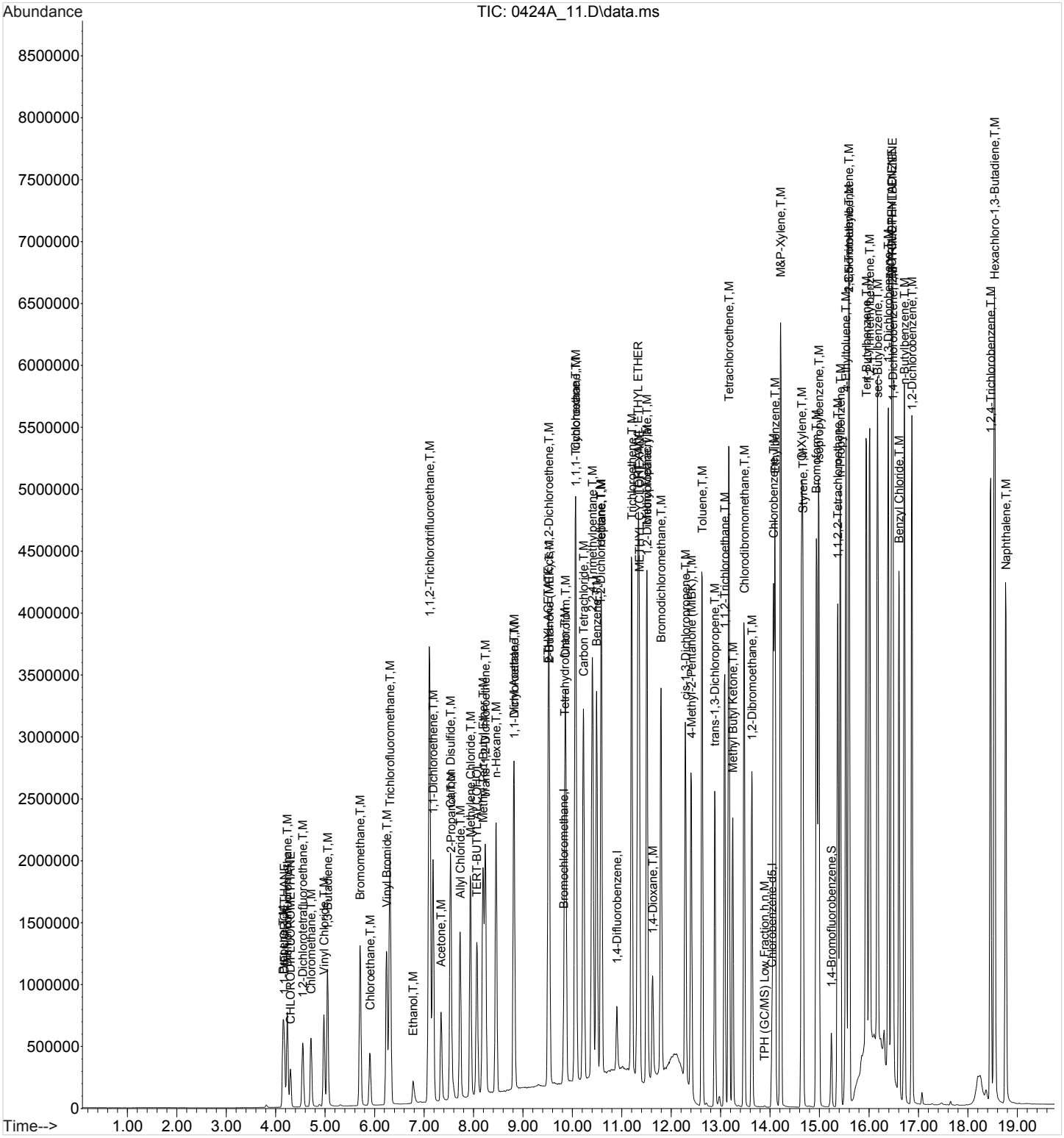
	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
49)	4-Methyl-2-Pentanone (...	12.405	43	20695535	38.7400891 ppbv	94
50)	Toluene	12.626	91	40587818	40.8921294 ppbv	98
51)	trans-1,3-Dichloropropene	12.885	75	16625577	47.7869908 ppbv	98
52)	1,1,2-Trichloroethane	13.083	97	13696637	40.5926847 ppbv	99
53)	Tetrachloroethene	13.168	166	21696939	38.7368369 ppbv	99
54)	Methyl Butyl Ketone	13.247	43	15475071	40.6063196 ppbv #	97
55)	Chlorodibromomethane	13.477	129	26656958	40.5852646 ppbv	98
56)	1,2-Dibromoethane	13.635	107	21736377	42.4190594 ppbv	100
57)	Chlorobenzene	14.070	112	28662973	39.8225975 ppbv	99
59)	Ethylbenzene	14.101	91	39479791	35.9356538 ppbv	98
60)	M&P-Xylene	14.216	91	50821028	58.7518892 ppbv	100
61)	O-Xylene	14.641	91	30714482	34.8566048 ppbv	100
62)	Styrene	14.666	104	24801513	37.4245245 ppbv	96
63)	Bromoform	14.941	173	29823867	41.0487198 ppbv	97
64)	Isopropylbenzene	14.985	105	43516527	34.7496683 ppbv	98
65)	1,1,2,2-Tetrachloroethane	15.371	83	26544559	36.0662726 ppbv	99
66)	n-Propylbenzene	15.422	91	50604919	35.4823439 ppbv	95
67)	4-Ethyltoluene	15.537	105	45037848	36.5547184 ppbv	97
68)	2-Chlorotoluene	15.596	126	10355544	29.7526037 ppbv	98
70)	1,3,5-Trimethylbenzene	15.597	105	30522732	28.8252564 ppbv	99
71)	Tert-Butylbenzene	15.948	119	34479582	34.6702858 ppbv	97
72)	1,2,4-Trimethylbenzene	16.016	105	35900295	35.3174175 ppbv	99
73)	sec-Butylbenzene	16.176	134	10305033	36.0893657 ppbv #	98
74)	1,3-Dichlorobenzene	16.393	146	30840162	41.2984333 ppbv	98
75)	1,4-Dichlorobenzene	16.488	146	23556278	32.3008467 ppbv	97
76)	1,2,3-TRIMETHYLBENZENE	16.470	105	25977609	25.4160459 ppbv	100
77)	DICYCLOPENTADIENE	16.456	66	28717283	24.3801770 ppbv	94
78)	Benzyl Chloride	16.610	91	35925741	49.8795789 ppbv	97
79)	n-Butylbenzene	16.719	91	38252702	33.5440297 ppbv	96
80)	1,2-Dichlorobenzene	16.871	146	30088691	39.2759621 ppbv	98
81)	1,2,4-Trichlorobenzene	18.462	180	23767826	49.3622635 ppbv	99
82)	Hexachloro-1,3-Butadiene	18.543	225	21651466	30.1941950 ppbv	99
83)	Naphthalene	18.769	128	44218859	39.6596423 ppbv	98
84)	TPH (GC/MS) Low Fraction	13.890	TIC	3871976296m	1918.5766964 ppbv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042418A\
Data File : 0424A_11.D
Acq On : 24 Apr 2018 6:13 pm
Operator : 564
Sample : STD AMS 50.0 ppbv 18D24885
Misc : 18D19496
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 25 09:44:27 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:43:10 2018
Response via : Initial Calibration



6A-OR

GC/MS INITIAL CALIBRATION DATA

SDG: L988471 **Analytical Method:** TO-15

Instrument ID: AIRMS5

Analyte	**RRF: 0.19**	**RRF: 0.31**	**RRF: 0.63**	**RRF: 1.25**	**RRF: 2.5**	**RRF: 3.75**	**RRF: 5**	**RRF: 10**	**RRF: 25**	**RRF: 50**
Analysis date/time	04/20/18 14:18	04/20/18 14:56	04/20/18 15:34	04/20/18 16:12	04/20/18 16:52	04/20/18 17:32	04/20/18 18:14	04/20/18 19:00	04/20/18 19:42	04/20/18 20:29
PROPENE	0.33	0.3230	0.3420	0.3380	0.3240	0.33	0.3170	0.3170	0.3260	0.3070
DICHLORODIFLUOROMETHANE	1.0540	1.0230	1.1220	1.1320	1.1010	1.09	0.9910	0.8690	0.9290	0.6770
1,2-DICHLOROTETRAFLUOROETHANE	1.1360	1.1510	1.2570	1.25	1.23	1.2570	1.2140	1.22	1.2670	1.1260
CHLOROMETHANE	0.3550	0.3690	0.4140	0.4110	0.4070	0.4080	0.4020	0.3980	0.4170	0.4030
VINYL CHLORIDE	0.4830	0.4730	0.5020	0.4890	0.4930	0.5010	0.5040	0.4940	0.4980	0.4780
1,3-BUTADIENE	0.3450	0.31	0.31	0.3090	0.3140	0.3140	0.3070	0.3110	0.3010	0.2880
BROMOMETHANE	0.4330	0.4320	0.4550	0.4610	0.4570	0.45	0.4830	0.4590	0.46	0.4520
CHLOROETHANE	0.2640	0.2570	0.2530	0.2870	0.2620	0.2590	0.2730	0.2620	0.2580	0.2570
VINYL BROMIDE	0.47	0.4580	0.4960	0.5050	0.4790	0.47	0.5040	0.4750	0.4780	0.4640
TRICHLOROFLUOROMETHANE	1.0770	1.03	1.1420	1.1760	1.1290	1.1080	1.1740	1.1140	1.1270	1.0930
ETHANOL	0.1970	0.1930	0.1990	0.1970	0.1850	0.1970	0.1930	0.1920	0.1890	0.1950
1,1,2-TRICHLOROTRIFLUOROETHANE	0.9640	0.9730	1.0460	1.0530	1.0460	1.0640	1.0520	1.0420	1.09	1.0420
1,1-DICHLOROETHENE	0.7390	0.7460	0.77	0.76	0.7610	0.7690	0.7470	0.7460	0.79	0.7590
ACETONE	0.2370	0.25	0.2530	0.2450	0.2460	0.25	0.2450	0.2410	0.2490	0.2430
2-PROPANOL	0.89	0.9280	0.9580	0.9330	0.9270	0.9310	0.9620	0.9380	1.0120	1.0020
CARBON DISULFIDE	1.0480	1.10	1.14	1.1370	1.1320	1.16	1.1030	1.1210	1.1980	1.1620
ALLYL CHLORIDE	0.6210	0.6080	0.63	0.6250	0.6260	0.6330	0.6180	0.6160	0.6540	0.6350
METHYLENE CHLORIDE	0.5920	0.5530	0.5770	0.5630	0.5590	0.5590	0.5410	0.5350	0.5520	0.5170
METHYL TERT-BUTYL ETHER	1.4810	1.59	1.6090	1.5940	1.5840	1.5870	1.5770	1.5530	1.6080	1.57
TRANS-1,2-DICHLOROETHENE	0.62	0.67	0.6950	0.6810	0.6760	0.6880	0.67	0.6730	0.7030	0.6810
N-HEXANE	0.6570	0.7350	0.7980	0.81	0.81	0.8210	0.8140	0.8060	0.8390	0.8020
1,1-DICHLOROETHANE	0.9180	0.9320	1.0070	0.9920	0.9780	0.99	0.9850	0.9780	1.0140	0.9770
VINYL ACETATE	1.13	1.1810	1.3070	1.3320	1.3430	1.3660	1.3640	1.3560	1.4150	1.3830
2-BUTANONE (MEK)	0.2740	0.30	0.3260	0.3210	0.3230	0.3260	0.3320	0.3240	0.3350	0.3260
CIS-1,2-DICHLOROETHENE	0.6030	0.6010	0.6580	0.6460	0.6340	0.6460	0.6440	0.6350	0.6630	0.6370
TETRAHYDROFURAN	0.6290	0.6210	0.6530	0.6490	0.6350	0.6250	0.6440	0.6190	0.6320	0.5970
CHLOROFORM	1.0620	1.0580	1.1580	1.1580	1.1480	1.1710	1.1650	1.1510	1.2150	1.1650
CYCLOHEXANE	0.7140	0.7640	0.8390	0.8260	0.83	0.84	0.84	0.8240	0.8660	0.8180
1,1,1-TRICHLOROETHANE	1.0120	1.0150	1.1280	1.1650	1.1560	1.1650	1.1820	1.1680	1.2330	1.1830
CARBON TETRACHLORIDE	1.0530	1.0820	1.1650	1.1890	1.1840	1.2130	1.2180	1.21	1.2970	1.2670
2,2,4-TRIMETHYLPENTANE	1.91	2.3340	2.7790	2.92	2.9220	2.97	3.0080	2.9710	3.1120	2.9870
BENZENE	0.4450	0.4580	0.5010	0.5130	0.5130	0.5170	0.51	0.5090	0.54	0.5080
1,2-DICHLOROETHANE	0.1610	0.17	0.1790	0.1830	0.1820	0.1810	0.1810	0.1810	0.1910	0.1810
HEPTANE	0.1760	0.2110	0.2560	0.2630	0.2660	0.2640	0.2620	0.2620	0.2710	0.2450
TRICHLOROETHENE	0.1940	0.2050	0.2180	0.2180	0.2210	0.2210	0.2230	0.2230	0.2370	0.2250
1,2-DICHLOROPROPANE	0.1510	0.1680	0.1830	0.1860	0.1860	0.1850	0.1860	0.1850	0.1950	0.1830
METHYL METHACRYLATE	0.1530	0.1610	0.1710	0.1770	0.1840	0.1850	0.19	0.1870	0.2010	0.1910
1,4-DIOXANE	0.1240	0.1260	0.14	0.14	0.1370	0.1350	0.1420	0.1350	0.1330	0.1280
BROMODICHLOROMETHANE	0.2910	0.2970	0.3290	0.3380	0.3470	0.3460	0.3530	0.3520	0.38	0.36
CIS-1,3-DICHLOROPROPENE	0.2640	0.2940	0.3150	0.3260	0.3310	0.3270	0.3360	0.3320	0.3550	0.3330
4-METHYL-2-PENTANONE (MIBK)	0.3160	0.3540	0.3560	0.3730	0.3720	0.3740	0.3870	0.3710	0.3730	0.3530
TOLUENE	0.4580	0.5320	0.6210	0.6450	0.6540	0.6520	0.6670	0.6580	0.6980	0.6510
TRANS-1,3-DICHLOROPROPENE	0.2140	0.24	0.2730	0.2780	0.2810	0.2850	0.2940	0.2910	0.3090	0.2960
1,1,2-TRICHLOROETHANE	0.1750	0.1840	0.2110	0.2210	0.2250	0.2240	0.2330	0.2280	0.2430	0.2290
TETRACHLOROETHENE	0.2550	0.2970	0.3340	0.3410	0.3430	0.3470	0.3570	0.35	0.3750	0.3570
METHYL BUTYL KETONE	0.29	0.3160	0.3390	0.3530	0.3670	0.3650	0.39	0.37	0.3590	0.3450
CHLORODIBROMOMETHANE	0.30	0.33	0.3670	0.39	0.4030	0.4160	0.4320	0.4280	0.4620	0.4350
1,2-DIBROMOETHANE	0.2610	0.2950	0.3330	0.3480	0.3590	0.3610	0.3750	0.3660	0.3940	0.3720
CHLOROBENZENE	0.3530	0.4420	0.5120	0.5370	0.55	0.5520	0.5790	0.5580	0.5960	0.5510
ETHYLBENZENE	0.6210	0.79	0.9370	0.98	1.0080	1.0230	1.0380	1.0270	1.08	1.0220

6A-OR

GC/MS INITIAL CALIBRATION DATA

SDG: L988471 **Analytical Method:** TO-15

Instrument ID: AIRMS5

Analyte	**RRF: 0.19**	**RRF: 0.31**	**RRF: 0.63**	**RRF: 1.25**	**RRF: 2.5**	**RRF: 3.75**	**RRF: 5**	**RRF: 10**	**RRF: 25**	**RRF: 50**
Analysis date/time	04/20/18 14:18	04/20/18 14:56	04/20/18 15:34	04/20/18 16:12	04/20/18 16:52	04/20/18 17:32	04/20/18 18:14	04/20/18 19:00	04/20/18 19:42	04/20/18 20:29
M&P-XYLENE	0.4770	0.60	0.7310	0.7730	0.7820	0.7970	0.8070	0.7960	0.8120	0.7230
O-XYLENE	0.4850	0.6250	0.7360	0.79	0.80	0.8180	0.8390	0.8150	0.8490	0.7880
STYRENE	0.3510	0.4430	0.5590	0.61	0.6370	0.6580	0.6830	0.6710	0.7070	0.6540
BROMOFORM	0.3240	0.3680	0.4430	0.4840	0.4990	0.5250	0.5540	0.5530	0.5950	0.5750
ISOPROPYLBENZENE	0.7490	0.90	1.0690	1.1380	1.1650	1.1860	1.2340	1.20	1.2770	1.20
1,1,2,2-TETRACHLOROETHANE	0.4170	0.4860	0.5330	0.5650	0.5750	0.5850	0.6180	0.5910	0.6230	0.5770
4-ETHYLTOLUENE	0.7340	0.8940	1.0430	1.11	1.1280	1.1530	1.2160	1.1670	1.2330	1.1210
2-CHLOROTOLUENE	0.1670	0.2050	0.2580	0.2690	0.2730	0.2770	0.2880	0.2760	0.2770	0.2320
1,3,5-TRIMETHYLBENZENE	0.6150	0.7430	0.8350	0.8930	0.9120	0.9260	0.9650	0.9350	0.92	0.7860
1,2,4-TRIMETHYLBENZENE	0.6160	0.7430	0.8250	0.88	0.9040	0.9110	0.96	0.9270	0.9650	0.8830
1,3-DICHLOROBENZENE	0.4190	0.5080	0.5920	0.63	0.6520	0.6660	0.7030	0.6920	0.7280	0.6830
1,4-DICHLOROBENZENE	0.4260	0.5060	0.5840	0.6310	0.6520	0.6610	0.6940	0.6730	0.6590	0.5210
BENZYL CHLORIDE	0.4760	0.5920	0.7160	0.7710	0.8090	0.83	0.88	0.8770	0.93	0.90
1,2-DICHLOROBENZENE	0.4440	0.5270	0.5880	0.6240	0.6390	0.6490	0.6840	0.6710	0.7110	0.6670
1,2,4-TRICHLOROBENZENE	0.3820	0.4290	0.53	0.5750	0.6130	0.6290	0.6230	0.6590	0.6850	0.6450
HEXACHLORO-1,3-BUTADIENE	0.4910	0.53	0.6110	0.63	0.6360	0.6370	0.62	0.6440	0.6450	0.5430
NAPHTHALENE	0.9590	1.0410	1.2470	1.3350	1.38	1.3920	1.3630	1.4010	1.4060	1.3630
1,4-BROMOFLUOROBENZENE	0.58	0.5860	0.5890	0.5950	0.5910	0.5960	0.6170	0.6080	0.6220	0.6170
File ID:	0420A_04	0420A_05	0420A_06	0420A_07	0420A_08	0420A_09	0420A_10	0420A_11	0420A_12	0420A_13

6A-OR

GC/MS INITIAL CALIBRATION DATA

SDG: L988471 **Analytical Method:** TO-15
Instrument ID: AIRMS5

Analyte Analysis date/time	RRF. Avg	%RSD	COD
PROPENE	0.32522	3.18	
DICHLORODIFLUOROMETHANE	0.998865	14.19	
1,2-DICHLOROTETRAFLUOROETHANE	1.210815	4.42	
CHLOROMETHANE	0.398308	5.07	
VINYL CHLORIDE	0.491494	2.14	
1,3-BUTADIENE	0.310987	4.61	
BROMOMETHANE	0.454119	3.2	
CHLOROETHANE	0.263234	3.79	
VINYL BROMIDE	0.479795	3.45	
TRICHLOROFLUOROMETHANE	1.116948	3.94	
ETHANOL	0.193667	2.18	
1,1,2-TRICHLOROTRIFLUOROETHANE	1.037282	3.73	
1,1-DICHLOROETHENE	0.758577	1.99	
ACETONE	0.245976	1.99	
2-PROPANOL	0.948057	3.87	
CARBON DISULFIDE	1.130022	3.62	
ALLYL CHLORIDE	0.626535	2.01	
METHYLENE CHLORIDE	0.554933	3.8	
METHYL TERT-BUTYL ETHER	1.575269	2.36	
TRANS-1,2-DICHLOROETHENE	0.675688	3.33	
N-HEXANE	0.789147	6.81	
1,1-DICHLOROETHANE	0.977267	3.1	
VINYL ACETATE	1.317609	6.9	
2-BUTANONE (MEK)	0.318729	5.65	
CIS-1,2-DICHLOROETHENE	0.636616	3.23	
TETRAHYDROFURAN	0.630532	2.59	
CHLOROFORM	1.144942	4.25	
CYCLOHEXANE	0.816154	5.44	
1,1,1-TRICHLOROETHANE	1.14073	6.32	
CARBON TETRACHLORIDE	1.187602	6.29	
2,2,4-TRIMETHYLPENTANE	2.791285	13.47	
BENZENE	0.501514	5.68	
1,2-DICHLOROETHANE	0.178901	4.43	
HEPTANE	0.247688	12.38	
TRICHLOROETHENE	0.218583	5.29	
1,2-DICHLOROPROPANE	0.180974	6.86	
METHYL METHACRYLATE	0.180055	8.24	
1,4-DIOXANE	0.13404	4.58	
BROMODICHLOROMETHANE	0.339381	8.06	
CIS-1,3-DICHLOROPROPENE	0.321425	7.91	
4-METHYL-2-PENTANONE (MIBK)	0.362903	5.39	
TOLUENE	0.623597	11.64	
TRANS-1,3-DICHLOROPROPENE	0.276034	10.37	
1,1,2-TRICHLOROETHANE	0.217282	10.02	
TETRACHLOROETHENE	0.335642	10.37	
METHYL BUTYL KETONE	0.34948	8.34	
CHLORODIBROMOMETHANE	0.396283	12.8	
1,2-DIBROMOETHANE	0.346566	11.69	
CHLOROBENZENE	0.523088	13.95	
ETHYLBENZENE	0.952644	14.81	
M&P-XYLENE	0.729797	14.94	

6A-OR

GC/MS INITIAL CALIBRATION DATA

SDG: L988471 **Analytical Method:** TO-15
Instrument ID: AIRMS5

Analyte Analysis date/time	RRF. Avg	%RSD	COD
O-XYLENE	0.754579	15.19	
STYRENE	0.597297	19.28	
BROMOFORM	0.492168	18.24	
ISOPROPYLBENZENE	1.11195	14.84	
1,1,2,2-TETRACHLOROETHANE	0.557188	11.33	
4-ETHYLTOLUENE	1.080102	14.32	
2-CHLOROTOLUENE	0.252158	15.47	
1,3,5-TRIMETHYLBENZENE	0.852921	12.83	
1,2,4-TRIMETHYLBENZENE	0.861355	12.58	
1,3-DICHLOROBENZENE	0.627434	15.41	
1,4-DICHLOROBENZENE	0.600743	14.76	
BENZYL CHLORIDE	0.778027	18.74	
1,2-DICHLOROBENZENE	0.620479	13.05	
1,2,4-TRICHLOROBENZENE	0.576928	17.45	
HEXACHLORO-1,3-BUTADIENE	0.598676	9.34	
NAPHTHALENE	1.288536	12.42	
1,4-BROMOFLUOROBENZENE	0.600014	2.47	

Response Factor Report AIRMS5

Method Path : C:\msdchem\1\methods\
Method File : TOAIRMS5D20R.M
Title : AIRMS5
Last Update : Sat Apr 21 09:56:22 2018
Response Via : Initial Calibration

Calibration Files
0.19=0420A_04.D 0.31=0420A_05.D 0.63=0420A_06.D 1.25=0420A_07.D 2.5 =0420A_08.D 3.75=0420A_09.D 5 =0420A_10.D
10 =0420A_11.D 25 =0420A_12.D 50 =0420A_13.D

		Compound	0.19	0.31	0.63	1.25	2.5	3.75	5	10	25	50	Avg	%RSD
1)	I	Bromochloromethane	----------ISTD----------											
2)	T,M	Propene	0.330	0.323	0.342	0.338	0.324	0.330	0.317	0.317	0.326	0.307	0.325	3.18
3)		1,1-DIFLUOROET...	0.664	0.644	0.695	0.689	0.688	0.679	0.660	0.660	0.465	0.439	0.628	15.04
4)	T,M	Dichlorodifluo...	1.054	1.023	1.122	1.132	1.101	1.090	0.991	0.869	0.929	0.677	0.999	14.19
5)		CHLORODIFLUORO...	0.543	0.557	0.630	0.618	0.620	0.624	0.602	0.601	0.626	0.594	0.602	4.97
6)	T,M	1,2-Dichlorote...	1.136	1.151	1.257	1.250	1.230	1.257	1.214	1.220	1.267	1.126	1.211	4.42
7)	T,M	Chloromethane	0.355	0.369	0.414	0.411	0.407	0.408	0.402	0.398	0.417	0.403	0.398	5.07
8)	T,M	Vinyl Chloride	0.483	0.473	0.502	0.489	0.493	0.501	0.504	0.494	0.498	0.478	0.491	2.14
9)	T,M	1,3-Butadiene	0.345	0.310	0.310	0.309	0.314	0.314	0.307	0.311	0.301	0.288	0.311	4.61
10)	T,M	Bromomethane	0.433	0.432	0.455	0.461	0.457	0.450	0.483	0.459	0.460	0.452	0.454	3.20
11)	T,M	Chloroethane	0.264	0.257	0.253	0.287	0.262	0.259	0.273	0.262	0.258	0.257	0.263	3.79
12)	T,M	Vinyl Bromide	0.470	0.458	0.496	0.505	0.479	0.470	0.504	0.475	0.478	0.464	0.480	3.45
13)	T,M	Trichlorofluor...	1.077	1.030	1.142	1.176	1.129	1.108	1.174	1.114	1.127	1.093	1.117	3.94
14)	T,M	Ethanol	0.197	0.193	0.199	0.197	0.185	0.197	0.193	0.192	0.189	0.195	0.194	2.18
15)	T,M	1,1,2-Trichlor...	0.964	0.973	1.046	1.053	1.046	1.064	1.052	1.042	1.090	1.042	1.037	3.73
16)	T,M	1,1-Dichloroet...	0.739	0.746	0.770	0.760	0.761	0.769	0.747	0.746	0.790	0.759	0.759	1.99
17)	T,M	Acetone	0.237	0.250	0.253	0.245	0.246	0.250	0.245	0.241	0.249	0.243	0.246	1.99
18)	T,M	2-Propanol	0.890	0.928	0.958	0.933	0.927	0.931	0.962	0.938	1.012	1.002	0.948	3.87
19)	T,M	Carbon Disulfide	1.048	1.100	1.140	1.137	1.132	1.160	1.103	1.121	1.198	1.162	1.130	3.62
20)	T,M	Allyl Chloride	0.621	0.608	0.630	0.625	0.626	0.633	0.618	0.616	0.654	0.635	0.627	2.01
21)	T,M	Methylene Chlo...	0.592	0.553	0.577	0.563	0.559	0.559	0.541	0.535	0.552	0.517	0.555	3.80
22)		TERT-BUTYL ALC...	1.226	1.268	1.285	1.296	1.275	1.286	1.339	1.280	1.314	1.289	1.286	2.28
23)	T,M	Methyl Tert-Bu...	1.481	1.590	1.609	1.594	1.584	1.587	1.577	1.553	1.608	1.570	1.575	2.36
24)	T,M	Trans-1,2-Dich...	0.620	0.670	0.695	0.681	0.676	0.688	0.670	0.673	0.703	0.681	0.676	3.33
25)	T,M	n-Hexane	0.657	0.735	0.798	0.810	0.810	0.821	0.814	0.806	0.839	0.802	0.789	6.81
26)	T,M	1,1-Dichloroet...	0.918	0.932	1.007	0.992	0.978	0.990	0.985	0.978	1.014	0.977	0.977	3.10
27)	T,M	Vinyl Acetate	1.130	1.181	1.307	1.332	1.343	1.366	1.364	1.356	1.415	1.383	1.318	6.90
28)		ETHYL ACETATE	0.937	1.049	1.084	1.062	1.074	1.109	1.064	1.080	1.103	1.113	1.068	4.72
29)	T,M	2-Butanone (MEK)	0.274	0.300	0.326	0.321	0.323	0.326	0.332	0.324	0.335	0.326	0.319	5.65
30)	T,M	cis-1,2-Dichlo...	0.603	0.601	0.658	0.646	0.634	0.646	0.644	0.635	0.663	0.637	0.637	3.23
31)	T,M	Tetrahydrofuran	0.629	0.621	0.653	0.649	0.635	0.625	0.644	0.619	0.632	0.597	0.631	2.59
32)	T,M	Chloroform	1.062	1.058	1.158	1.158	1.148	1.171	1.165	1.151	1.215	1.165	1.145	4.25
33)	T,M	Cyclohexane	0.714	0.764	0.839	0.826	0.830	0.840	0.840	0.824	0.866	0.818	0.816	5.44
34)	T,M	1,1,1-Trichlor...	1.012	1.015	1.128	1.165	1.156	1.165	1.182	1.168	1.233	1.183	1.141	6.32
35)	T,M	Carbon Tetrach...	1.053	1.082	1.165	1.189	1.184	1.213	1.218	1.210	1.297	1.267	1.188	6.29
36)	T,M	2,2,4-Trimethy...	1.910	2.334	2.779	2.920	2.922	2.970	3.008	2.971	3.112	2.987	2.791	13.47
37)	I	1,4-Difluorobenzene	----------ISTD----------											
38)	T,M	Benzene	0.445	0.458	0.501	0.513	0.513	0.517	0.510	0.509	0.540	0.508	0.502	5.68
39)	T,M	1,2-Dichloroet...	0.161	0.170	0.179	0.183	0.182	0.181	0.181	0.181	0.191	0.181	0.179	4.43

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Response Factor Report AIRMS5

Method Path : C:\msdchem\1\methods\
Method File : TOAIRMS5D20R.M
Title : AIRMS5

40)	T,M	Heptane	0.176	0.211	0.256	0.263	0.266	0.264	0.262	0.262	0.271	0.245	0.248	12.38
41)	T,M	Trichloroethene	0.194	0.205	0.218	0.218	0.221	0.221	0.223	0.223	0.237	0.225	0.219	5.29
42)		TERT-AMYL ETHY...	0.139	0.154	0.159	0.161	0.163	0.161	0.163	0.162	0.168	0.159	0.159	4.93
43)		METHYL CYCLOHE...	0.227	0.261	0.297	0.312	0.314	0.315	0.314	0.317	0.334	0.314	0.300	10.68
44)	T,M	1,2-Dichloropr...	0.151	0.168	0.183	0.186	0.186	0.185	0.186	0.185	0.195	0.183	0.181	6.86
45)	T,M	Methyl Methacr...	0.153	0.161	0.171	0.177	0.184	0.185	0.190	0.187	0.201	0.191	0.180	8.24
46)	T,M	1,4-Dioxane	0.124	0.126	0.140	0.140	0.137	0.135	0.142	0.135	0.133	0.128	0.134	4.58
47)	T,M	Bromodichlorom...	0.291	0.297	0.329	0.338	0.347	0.346	0.353	0.352	0.380	0.360	0.339	8.06
48)	T,M	cis-1,3-Dichlo...	0.264	0.294	0.315	0.326	0.331	0.327	0.336	0.332	0.355	0.333	0.321	7.91
49)	T,M	4-Methyl-2-Pen...	0.316	0.354	0.356	0.373	0.372	0.374	0.387	0.371	0.373	0.353	0.363	5.39
50)	T,M	Toluene	0.458	0.532	0.621	0.645	0.654	0.652	0.667	0.658	0.698	0.651	0.624	11.64
51)	T,M	trans-1,3-Dich...	0.214	0.240	0.273	0.278	0.281	0.285	0.294	0.291	0.309	0.296	0.276	10.37
52)	T,M	1,1,2-Trichlor...	0.175	0.184	0.211	0.221	0.225	0.224	0.233	0.228	0.243	0.229	0.217	10.02
53)	T,M	Tetrachloroethene	0.255	0.297	0.334	0.341	0.343	0.347	0.357	0.350	0.375	0.357	0.336	10.37
54)	T,M	Methyl Butyl K...	0.290	0.316	0.339	0.353	0.367	0.365	0.390	0.370	0.359	0.345	0.349	8.34
55)	T,M	Chlorodibromom...	0.300	0.330	0.367	0.390	0.403	0.416	0.432	0.428	0.462	0.435	0.396	12.80
56)	T,M	1,2-Dibromoethane	0.261	0.295	0.333	0.348	0.359	0.361	0.375	0.366	0.394	0.372	0.347	11.69
57)	T,M	Chlorobenzene	0.353	0.442	0.512	0.537	0.550	0.552	0.579	0.558	0.596	0.551	0.523	13.95
58)	I	Chlorobenzene-d5	----------ISTD----------											
59)	T,M	Ethylbenzene	0.621	0.790	0.937	0.980	1.008	1.023	1.038	1.027	1.080	1.022	0.953	14.81
60)	T,M	M&P-Xylene	0.477	0.600	0.731	0.773	0.782	0.797	0.807	0.796	0.812	0.723	0.730	14.94
61)	T,M	O-Xylene	0.485	0.625	0.736	0.790	0.800	0.818	0.839	0.815	0.849	0.788	0.755	15.19
62)	T,M	Styrene	0.351	0.443	0.559	0.610	0.637	0.658	0.683	0.671	0.707	0.654	0.597	19.28
63)	T,M	Bromoform	0.324	0.368	0.443	0.484	0.499	0.525	0.554	0.553	0.595	0.575	0.492	18.24
64)	T,M	Isopropylbenzene	0.749	0.900	1.069	1.138	1.165	1.186	1.234	1.200	1.277	1.200	1.112	14.84
65)	T,M	1,1,2,2-Tetrac...	0.417	0.486	0.533	0.565	0.575	0.585	0.618	0.591	0.623	0.577	0.557	11.33
66)	T,M	n-Propylbenzene	0.833	1.013	1.211	1.267	1.293	1.328	1.382	1.339	1.397	1.276	1.234	14.42
67)	T,M	4-Ethyltoluene	0.734	0.894	1.043	1.110	1.128	1.153	1.216	1.167	1.233	1.121	1.080	14.32
68)	T,M	2-Chlorotoluene	0.167	0.205	0.258	0.269	0.273	0.277	0.288	0.276	0.277	0.232	0.252	15.47
69)	S	1,4-Bromofluor...	0.580	0.586	0.589	0.595	0.591	0.596	0.617	0.608	0.622	0.617	0.600	2.47
70)	T,M	1,3,5-Trimethy...	0.615	0.743	0.835	0.893	0.912	0.926	0.965	0.935	0.920	0.786	0.853	12.83
71)	T,M	Tert-Butylbenzene	0.615	0.715	0.800	0.852	0.874	0.879	0.926	0.894	0.931	0.846	0.833	11.93
72)	T,M	1,2,4-Trimethy...	0.616	0.743	0.825	0.880	0.904	0.911	0.960	0.927	0.965	0.883	0.861	12.58
73)	T,M	sec-Butylbenzene	0.198	0.239	0.258	0.277	0.278	0.280	0.295	0.287	0.300	0.274	0.269	11.38
74)	T,M	1,3-Dichlorobe...	0.419	0.508	0.592	0.630	0.652	0.666	0.703	0.692	0.728	0.683	0.627	15.41
75)	T,M	1,4-Dichlorobe...	0.426	0.506	0.584	0.631	0.652	0.661	0.694	0.673	0.659	0.521	0.601	14.76
76)		1,2,3-TRIMETHY...	0.615	0.762	0.830	0.879	0.895	0.898	0.934	0.890	0.853	0.669	0.823	12.96
77)		DICYCLOPENTADIENE	0.620	0.690	0.817	0.816	0.820	0.834	0.845	0.792	0.748	0.612	0.759	11.62
78)	T,M	Benzyl Chloride	0.476	0.592	0.716	0.771	0.809	0.830	0.880	0.877	0.930	0.900	0.778	18.74
79)	T,M	n-Butylbenzene	0.720	0.860	0.968	1.027	1.048	1.044	1.074	1.052	1.067	0.962	0.982	11.52
80)	T,M	1,2-Dichlorobe...	0.444	0.527	0.588	0.624	0.639	0.649	0.684	0.671	0.711	0.667	0.620	13.05
81)	T,M	1,2,4-Trichlor...	0.382	0.429	0.530	0.575	0.613	0.629	0.623	0.659	0.685	0.645	0.577	17.45
82)	T,M	Hexachloro-1,3...	0.491	0.530	0.611	0.630	0.636	0.637	0.620	0.644	0.645	0.543	0.599	9.34
83)	T,M	Naphthalene	0.959	1.041	1.247	1.335	1.380	1.392	1.363	1.401	1.406	1.363	1.289	12.42
84)	h,n,MTPH (GC/MS) Lo...				1.372	1.367	1.347	1.371	1.364	1.351	1.388	1.319	1.360	1.53

(#) = Out of Range

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042018A\
Data File : 0420A_04.D
Acq On : 20 Apr 2018 2:18 pm
Operator : 564
Sample : STD AMS 0.19 ppbv 18D20628
Misc : 18D20624
ALS Vial : 4 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 21 09:47:05 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:46:10 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.257	130	304195	4.0000000	ppbv	0.01
37) 1,4-Difluorobenzene	8.105	114	1163470	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	11.217	117	1010059	4.0000000	ppbv	0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	12.529	95	585731	3.8946389	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 97.37%			
Target Compounds						Qvalue
2) Propene	3.602	41	4768	0.1898549	ppbv	97
3) 1,1-DIFLUOROETHANE	3.614	51	9594	0.1858633	ppbv	98
4) Dichlorodifluoromethane	3.648	85	15232	0.1836841	ppbv	98
5) CHLORODIFLUOROMETHANE	3.682	51	7845	0.1652250	ppbv	98
6) 1,2-Dichlorotetrafluor...	3.829	85	16416	0.1717205	ppbv	98
7) Chloromethane	3.959	50	5129	0.1653403	ppbv	97
8) Vinyl Chloride	4.100	62	6975	0.1830115	ppbv	93
9) 1,3-Butadiene	4.140	39	4989	0.2085984	ppbv	88
10) Bromomethane	4.541	94	6256	0.1827181	ppbv	88
11) Chloroethane	4.638	64	3810	0.1931750	ppbv	96
12) Vinyl Bromide	4.847	106	6786	0.1899620	ppbv	97
13) Trichlorofluoromethane	4.869	101	15562	0.1846893	ppbv	100
14) Ethanol	5.073	45	2845	0.1895427	ppbv	99
15) 1,1,2-Trichlorotrifluo...	5.333	101	13935	0.1722482	ppbv	98
16) 1,1-Dichloroethene	5.407	61	10680	0.1826379	ppbv	95
17) Acetone	5.503	58	3419	0.1797451	ppbv	92
18) 2-Propanol	5.548	45	12864	0.1817360	ppbv	96
19) Carbon Disulfide	5.695	76	15144	0.1716664	ppbv	97
20) Allyl Chloride	5.746	41	8980	0.1864849	ppbv	99
21) Methylene Chloride	5.882	49	8558	0.2013282	ppbv	97
22) TERT-BUTYL ALCOHOL	5.899	59	17718	0.1811648	ppbv	99
23) Methyl Tert-Butyl Ether	6.069	73	21400	0.1772907	ppbv	98
24) Trans-1,2-Dichloroethene	6.091	61	8955	0.1711247	ppbv	95
25) n-Hexane	6.227	57	9488	0.1519857	ppbv	96
26) 1,1-Dichloroethane	6.499	63	13263	0.1762093	ppbv	96
27) Vinyl Acetate	6.459	43	16324	0.1571843	ppbv	98
28) ETHYL ACETATE	6.968	43	13541	0.1605273	ppbv	100
29) 2-Butanone (MEK)	7.013	72	3966	0.1598657	ppbv	98
30) cis-1,2-Dichloroethene	7.019	96	8712	0.1772984	ppbv	98
31) Tetrahydrofuran	7.308	42	9082	0.1909288	ppbv	96
32) Chloroform	7.262	83	15342	0.1722467	ppbv	100
33) Cyclohexane	7.483	84	10310	0.1613975	ppbv	98
34) 1,1,1-Trichloroethane	7.466	97	14620	0.1649767	ppbv	97
35) Carbon Tetrachloride	7.596	117	15210	0.1649255	ppbv	97
36) 2,2,4-Trimethylpentane	7.715	57	27591	0.1221759	ppbv	98
38) Benzene	7.811	78	24585	0.1635336	ppbv	97
39) 1,2-Dichloroethane	7.862	62	8918	0.1691353	ppbv	97
40) Heptane	7.845	43	9703	0.1262187	ppbv	98
41) Trichloroethene	8.388	95	10746	0.1670140	ppbv	98
42) TERT-AMYL ETHYL ETHER	8.467	73	7678	0.1637902	ppbv	97
43) METHYL CYCLOHEXANE	8.541	83	12534	0.1369418	ppbv	98
44) 1,2-Dichloropropane	8.660	63	8348	0.1548733	ppbv	97
45) Methyl Methacrylate	8.614	69	8441	0.1568952	ppbv	92
46) 1,4-Dioxane	8.761	88	6877	0.1755364	ppbv	98
47) Bromodichloromethane	8.886	83	16080	0.1597554	ppbv	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042018A\
Data File : 0420A_04.D
Acq On : 20 Apr 2018 2:18 pm
Operator : 564
Sample : STD AMS 0.19 ppbv 18D20628
Misc : 18D20624
ALS Vial : 4 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 21 09:47:05 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:46:10 2018
Response via : Initial Calibration

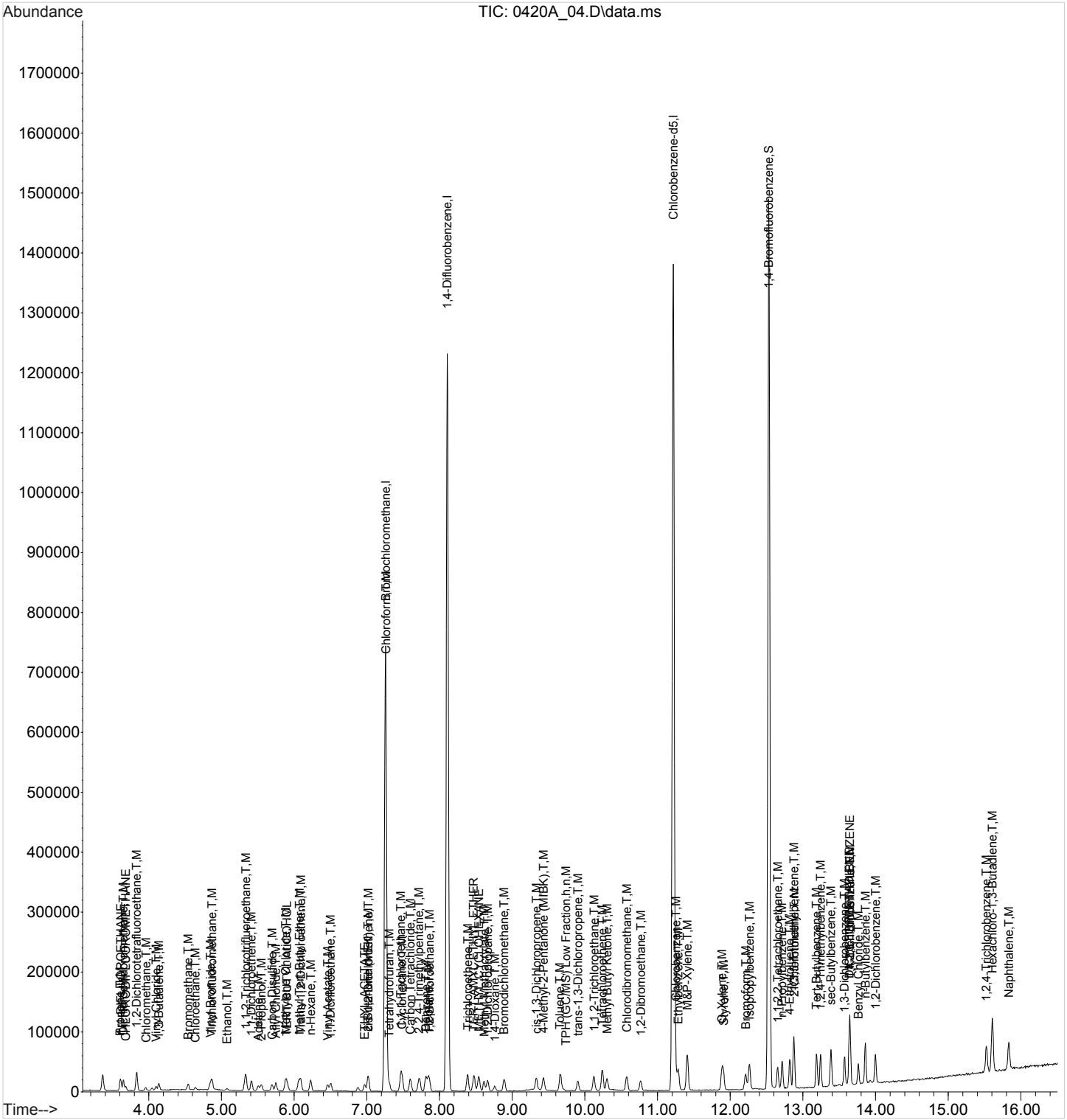
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
48)	cis-1,3-Dichloropropene	9.333	75	14592	0.1532364	ppbv		94
49)	4-Methyl-2-Pentanone (...	9.429	43	17490	0.1606957	ppbv		96
50)	Toluene	9.655	91	25289	0.1333121	ppbv		98
51)	trans-1,3-Dichloropropene	9.904	75	11807	0.1425788	ppbv		99
52)	1,1,2-Trichloroethane	10.125	97	9672	0.1481737	ppbv		96
53)	Tetrachloroethene	10.238	166	14084	0.1397341	ppbv		98
54)	Methyl Butyl Ketone	10.306	43	16002	0.1506537	ppbv		93
55)	Chlorodibromomethane	10.577	129	16564	0.1369202	ppbv		99
56)	1,2-Dibromoethane	10.770	107	14418	0.1371346	ppbv		100
57)	Chlorobenzene	11.250	112	19490	0.1213462	ppbv	#	59
59)	Ethylbenzene	11.284	91	29818	0.1154632	ppbv		100
60)	M&P-Xylene	11.409	91	45779	0.2273335	ppbv		96
61)	O-Xylene	11.884	91	23251	0.1125212	ppbv		98
62)	Styrene	11.907	104	16830	0.1012803	ppbv		95
63)	Bromoform	12.212	173	15543	0.1171562	ppbv		98
64)	Isopropylbenzene	12.263	105	35938	0.1199700	ppbv		99
65)	1,1,2,2-Tetrachloroethane	12.653	83	20029	0.1355095	ppbv		98
66)	n-Propylbenzene	12.710	91	39959	0.1191652	ppbv		99
67)	4-Ethyltoluene	12.817	105	35238	0.1209851	ppbv		99
68)	2-Chlorotoluene	12.880	126	8024	0.1147766	ppbv		91
70)	1,3,5-Trimethylbenzene	12.874	105	29486	0.1260422	ppbv		98
71)	Tert-Butylbenzene	13.185	119	29489	0.1328775	ppbv		99
72)	1,2,4-Trimethylbenzene	13.242	105	29531	0.1283454	ppbv		100
73)	sec-Butylbenzene	13.383	134	9478	0.1338715	ppbv	#	89
74)	1,3-Dichlorobenzene	13.570	146	20125	0.1196339	ppbv		96
75)	1,4-Dichlorobenzene	13.649	146	20423	0.1222763	ppbv		98
76)	1,2,3-TRIMETHYLBENZENE	13.643	105	29505	0.1301655	ppbv		98
77)	DICYCLOPENTADIENE	13.638	66	29742	0.1411567	ppbv		97
78)	Benzyl Chloride	13.762	91	22848	0.1090614	ppbv		98
79)	n-Butylbenzene	13.858	91	34522	0.1310008	ppbv		98
80)	1,2-Dichlorobenzene	14.000	146	21290	0.1298269	ppbv		99
81)	1,2,4-Trichlorobenzene	15.521	180	18347	0.1155848	ppbv		98
82)	Hexachloro-1,3-Butadiene	15.606	225	23564	0.1464838	ppbv		96
83)	Naphthalene	15.833	128	45993	0.1308204	ppbv		99
84)	TPH (GC/MS) Low Fraction	9.740	TIC	2989562m	8.6354531	ppbv		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042018A\
Data File : 0420A_04.D
Acq On : 20 Apr 2018 2:18 pm
Operator : 564
Sample : STD AMS 0.19 ppbv 18D20628
Misc : 18D20624
ALS Vial : 4 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 21 09:47:05 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:46:10 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042018A\
Data File : 0420A_05.D
Acq On : 20 Apr 2018 2:56 pm
Operator : 564
Sample : STD AMS 0.31 ppbv 18D20628
Misc : 18D20624
ALS Vial : 5 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 21 09:48:05 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:47:16 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.251	130	288264	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	8.105	114	1106828	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	11.216	117	974257	4.0000000	ppbv	0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	12.529	95	570458	3.9849565	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 99.62%			
Target Compounds						Qvalue
2) Propene	3.574	41	7214	0.3032419	ppbv	98
3) 1,1-DIFLUOROETHANE	3.585	51	14391	0.2974406	ppbv	99
4) Dichlorodifluoromethane	3.625	85	22850	0.2956933	ppbv	99
5) CHLORODIFLUOROMETHANE	3.653	51	12449	0.2959777	ppbv	99
6) 1,2-Dichlorotetrafluor...	3.806	85	25717	0.2982272	ppbv	98
7) Chloromethane	3.930	50	8244	0.2999058	ppbv	98
8) Vinyl Chloride	4.077	62	10574	0.2982611	ppbv	100
9) 1,3-Butadiene	4.117	39	6926	0.2913330	ppbv	99
10) Bromomethane	4.519	94	9649	0.3032019	ppbv	96
11) Chloroethane	4.620	64	5749	0.3050467	ppbv	96
12) Vinyl Bromide	4.824	106	10225	0.3020795	ppbv	98
13) Trichlorofluoromethane	4.852	101	23010	0.2922583	ppbv	96
14) Ethanol	5.050	45	4322	0.3042245	ppbv	92
15) 1,1,2-Trichlorotrifluo...	5.316	101	21746	0.2975542	ppbv	99
16) 1,1-Dichloroethene	5.396	61	16668	0.3067336	ppbv	96
17) Acetone	5.480	58	5587	0.3185514	ppbv	97
18) 2-Propanol	5.526	45	20738	0.3160402	ppbv	98
19) Carbon Disulfide	5.678	76	24578	0.3089074	ppbv	98
20) Allyl Chloride	5.729	41	13573	0.3002209	ppbv	97
21) Methylene Chloride	5.865	49	12365	0.2980785	ppbv	98
22) TERT-BUTYL ALCOHOL	5.876	59	28330	0.3129566	ppbv	98
23) Methyl Tert-Butyl Ether	6.046	73	35520	0.3212777	ppbv	98
24) Trans-1,2-Dichloroethene	6.080	61	14958	0.3174013	ppbv	96
25) n-Hexane	6.216	57	16419	0.3083984	ppbv	99
26) 1,1-Dichloroethane	6.493	63	20831	0.3030492	ppbv	99
27) Vinyl Acetate	6.448	43	26391	0.2935105	ppbv	99
28) ETHYL ACETATE	6.957	43	23443	0.3179324	ppbv	98
29) 2-Butanone (MEK)	7.002	72	6712	0.3100976	ppbv	95
30) cis-1,2-Dichloroethene	7.013	96	13420	0.2981712	ppbv	99
31) Tetrahydrofuran	7.285	42	13883	0.3072378	ppbv	96
32) Chloroform	7.257	83	23630	0.2936794	ppbv	97
33) Cyclohexane	7.472	84	17078	0.3050857	ppbv	98
34) 1,1,1-Trichloroethane	7.460	97	22678	0.2890849	ppbv	97
35) Carbon Tetrachloride	7.596	117	24163	0.2960176	ppbv	100
36) 2,2,4-Trimethylpentane	7.715	57	52145	0.2966037	ppbv	99
38) Benzene	7.805	78	39294	0.2953187	ppbv	98
39) 1,2-Dichloroethane	7.856	62	14580	0.3075565	ppbv	98
40) Heptane	7.839	43	18104	0.2974838	ppbv	99
41) Trichloroethene	8.382	95	17569	0.3055108	ppbv	98
42) TERT-AMYL ETHYL ETHER	8.462	73	13205	0.3180468	ppbv	97
43) METHYL CYCLOHEXANE	8.535	83	22376	0.2986874	ppbv	99
44) 1,2-Dichloropropane	8.660	63	14431	0.3100913	ppbv	99
45) Methyl Methacrylate	8.609	69	13770	0.2947203	ppbv	91
46) 1,4-Dioxane	8.756	88	10798	0.3011893	ppbv	97
47) Bromodichloromethane	8.886	83	25512	0.2894731	ppbv	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042018A\
Data File : 0420A_05.D
Acq On : 20 Apr 2018 2:56 pm
Operator : 564
Sample : STD AMS 0.31 ppbv 18D20628
Misc : 18D20624
ALS Vial : 5 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 21 09:48:05 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:47:16 2018
Response via : Initial Calibration

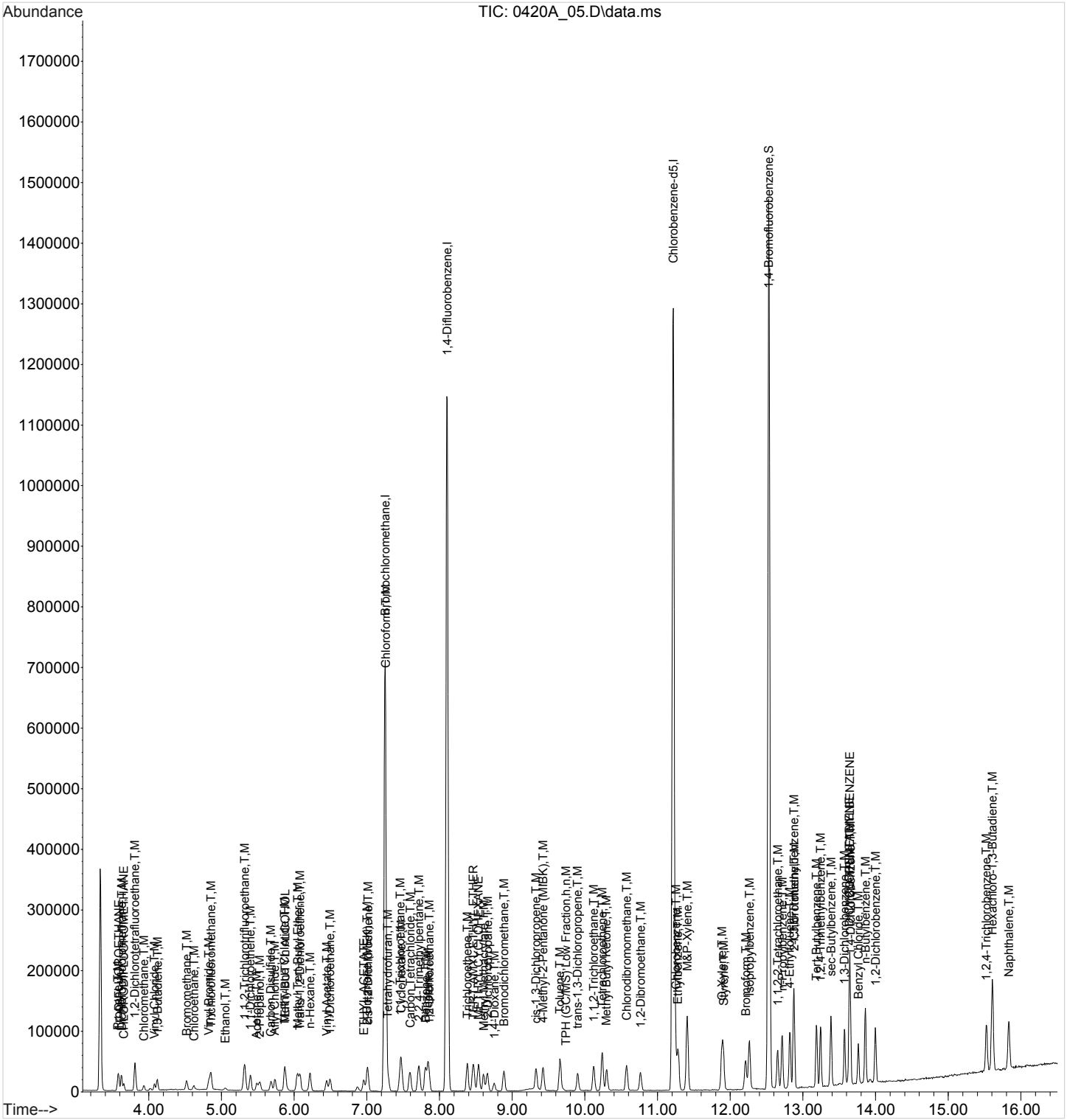
	Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
48)	cis-1,3-Dichloropropene	9.327	75	25233	0.3083765 ppbv		98
49)	4-Methyl-2-Pentanone (...	9.423	43	30328	0.3173850 ppbv		97
50)	Toluene	9.655	91	45664	0.2974051 ppbv		100
51)	trans-1,3-Dichloropropene	9.898	75	20553	0.2980950 ppbv		98
52)	1,1,2-Trichloroethane	10.119	97	15749	0.2849880 ppbv		98
53)	Tetrachloroethene	10.238	166	25478	0.3062221 ppbv		99
54)	Methyl Butyl Ketone	10.294	43	27065	0.2987853 ppbv		97
55)	Chlorodibromomethane	10.572	129	28325	0.2860811 ppbv		97
56)	1,2-Dibromoethane	10.764	107	25265	0.2934226 ppbv		99
57)	Chlorobenzene	11.250	112	37940	0.3030586 ppbv	#	80
59)	Ethylbenzene	11.279	91	59614	0.2977223 ppbv		99
60)	M&P-Xylene	11.409	91	90593	0.5836484 ppbv		99
61)	O-Xylene	11.884	91	47190	0.2974018 ppbv		100
62)	Styrene	11.907	104	33471	0.2724301 ppbv		96
63)	Bromoform	12.212	173	27778	0.2685523 ppbv		99
64)	Isopropylbenzene	12.263	105	67991	0.2884744 ppbv		99
65)	1,1,2,2-Tetrachloroethane	12.653	83	36724	0.3007140 ppbv		100
66)	n-Propylbenzene	12.716	91	76513	0.2907611 ppbv		98
67)	4-Ethyltoluene	12.817	105	67479	0.2934990 ppbv		100
68)	2-Chlorotoluene	12.880	126	15472	0.2860778 ppbv		92
70)	1,3,5-Trimethylbenzene	12.874	105	56098	0.2989229 ppbv		99
71)	Tert-Butylbenzene	13.185	119	53999	0.2968903 ppbv		99
72)	1,2,4-Trimethylbenzene	13.242	105	56090	0.3016795 ppbv		98
73)	sec-Butylbenzene	13.389	134	18016	0.3095380 ppbv		98
74)	1,3-Dichlorobenzene	13.570	146	38342	0.2900022 ppbv		98
75)	1,4-Dichlorobenzene	13.655	146	38221	0.2886972 ppbv		98
76)	1,2,3-TRIMETHYLBENZENE	13.643	105	57553	0.3124284 ppbv		98
77)	DICYCLOPENTADIENE	13.638	66	52118	0.2942675 ppbv		99
78)	Benzyl Chloride	13.762	91	44706	0.2811157 ppbv		100
79)	n-Butylbenzene	13.858	91	64912	0.3023108 ppbv		99
80)	1,2-Dichlorobenzene	14.000	146	39826	0.2991558 ppbv		99
81)	1,2,4-Trichlorobenzene	15.521	180	32374	0.2629402 ppbv		99
82)	Hexachloro-1,3-Butadiene	15.606	225	39993	0.2910832 ppbv		97
83)	Naphthalene	15.833	128	78623	0.2746175 ppbv		99
84)	TPH (GC/MS) Low Fraction	9.740	TIC	4735503m	14.4191284 ppbv		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042018A\
Data File : 0420A_05.D
Acq On : 20 Apr 2018 2:56 pm
Operator : 564
Sample : STD AMS 0.31 ppbv 18D20628
Misc : 18D20624
ALS Vial : 5 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 21 09:48:05 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:47:16 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042018A\
Data File : 0420A_06.D
Acq On : 20 Apr 2018 3:34 pm
Operator : 564
Sample : STD AMS 0.63 ppbv 18D20628
Misc : 18D20624
ALS Vial : 6 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 21 09:49:03 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:48:11 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.245	130	281431	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	8.099	114	1078520	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	11.211	117	932782	4.0000000	ppbv	0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	12.529	95	549592	4.0149346	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 100.37%			
Target Compounds						Qvalue
2) Propene	3.562	41	15143	0.6567664	ppbv	100
3) 1,1-DIFLUOROETHANE	3.574	51	30805	0.6610799	ppbv	96
4) Dichlorodifluoromethane	3.613	85	49718	0.6692992	ppbv	99
5) CHLORODIFLUOROMETHANE	3.647	51	27928	0.6905274	ppbv	98
6) 1,2-Dichlorotetrafluor...	3.800	85	55723	0.6703671	ppbv	99
7) Chloromethane	3.919	50	18334	0.6906566	ppbv	99
8) Vinyl Chloride	4.066	62	22230	0.6504770	ppbv	98
9) 1,3-Butadiene	4.106	39	13730	0.6036734	ppbv	97
10) Bromomethane	4.507	94	20149	0.6532927	ppbv	95
11) Chloroethane	4.609	64	11228	0.6134994	ppbv	99
12) Vinyl Bromide	4.813	106	21997	0.6713584	ppbv	99
13) Trichlorofluoromethane	4.847	101	50605	0.6711619	ppbv	100
14) Ethanol	5.028	45	8809	0.6390870	ppbv	95
15) 1,1,2-Trichlorotrifluo...	5.305	101	46374	0.6587657	ppbv	99
16) 1,1-Dichloroethene	5.390	61	34129	0.6455769	ppbv	98
17) Acetone	5.463	58	11226	0.6496347	ppbv	99
18) 2-Propanol	5.497	45	42443	0.6582464	ppbv	99
19) Carbon Disulfide	5.673	76	50519	0.6511268	ppbv	98
20) Allyl Chloride	5.729	41	27904	0.6389117	ppbv	95
21) Methylene Chloride	5.859	49	25565	0.6394461	ppbv	99
22) TERT-BUTYL ALCOHOL	5.859	59	56965	0.6425185	ppbv	100
23) Methyl Tert-Butyl Ether	6.023	73	71336	0.6529802	ppbv	99
24) Trans-1,2-Dichloroethene	6.074	61	30798	0.6641001	ppbv	99
25) n-Hexane	6.210	57	35379	0.6818329	ppbv	99
26) 1,1-Dichloroethane	6.487	63	44634	0.6701089	ppbv	99
27) Vinyl Acetate	6.431	43	57951	0.6720732	ppbv	99
28) ETHYL ACETATE	6.945	43	48033	0.6615935	ppbv	100
29) 2-Butanone (MEK)	6.985	72	14428	0.6826930	ppbv	98
30) cis-1,2-Dichloroethene	7.008	96	29168	0.6723533	ppbv	96
31) Tetrahydrofuran	7.273	42	28954	0.6582793	ppbv	97
32) Chloroform	7.256	83	51308	0.6648175	ppbv	99
33) Cyclohexane	7.471	84	37197	0.6842458	ppbv	98
34) 1,1,1-Trichloroethane	7.454	97	50020	0.6681306	ppbv	99
35) Carbon Tetrachloride	7.590	117	51624	0.6576820	ppbv	99
36) 2,2,4-Trimethylpentane	7.709	57	123168	0.7280842	ppbv	99
38) Benzene	7.800	78	85073	0.6666825	ppbv	98
39) 1,2-Dichloroethane	7.856	62	30449	0.6608988	ppbv	98
40) Heptane	7.839	43	43566	0.7446855	ppbv	96
41) Trichloroethene	8.377	95	37043	0.6642615	ppbv	98
42) TERT-AMYL ETHYL ETHER	8.456	73	27022	0.6621868	ppbv	97
43) METHYL CYCLOHEXANE	8.529	83	50490	0.7001756	ppbv	99
44) 1,2-Dichloropropane	8.654	63	31096	0.6856571	ppbv	98
45) Methyl Methacrylate	8.597	69	29123	0.6503674	ppbv	94
46) 1,4-Dioxane	8.733	88	23810	0.6880842	ppbv	99
47) Bromodichloromethane	8.880	83	55893	0.6655277	ppbv	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042018A\
Data File : 0420A_06.D
Acq On : 20 Apr 2018 3:34 pm
Operator : 564
Sample : STD AMS 0.63 ppbv 18D20628
Misc : 18D20624
ALS Vial : 6 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 21 09:49:03 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:48:11 2018
Response via : Initial Calibration

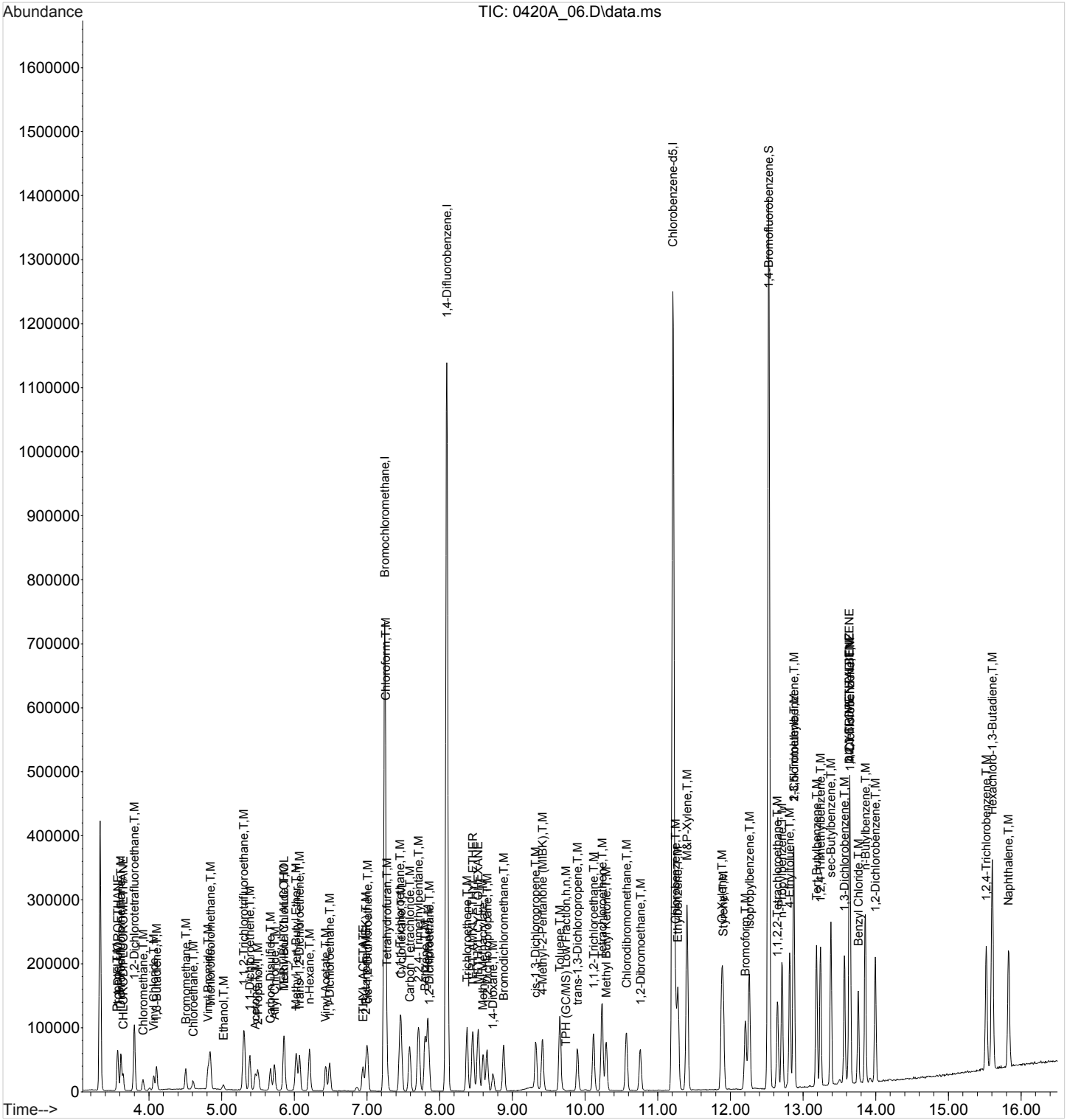
	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
48)	cis-1,3-Dichloropropene	9.321	75	53505	0.6722294 ppbv	98
49)	4-Methyl-2-Pentanone (...	9.417	43	60504	0.6446791 ppbv	99
50)	Toluene	9.655	91	105448	0.7144743 ppbv	99
51)	trans-1,3-Dichloropropene	9.898	75	46414	0.6998028 ppbv	99
52)	1,1,2-Trichloroethane	10.119	97	35802	0.6832395 ppbv	100
53)	Tetrachloroethene	10.238	166	56800	0.7034597 ppbv	99
54)	Methyl Butyl Ketone	10.294	43	57628	0.6608540 ppbv	99
55)	Chlorodibromomethane	10.571	129	62346	0.6632781 ppbv	99
56)	1,2-Dibromoethane	10.764	107	56585	0.6866552 ppbv	100
57)	Chlorobenzene	11.245	112	87016	0.7186775 ppbv	93
59)	Ethylbenzene	11.278	91	137698	0.7278732 ppbv	99
60)	M&P-Xylene	11.403	91	213138	1.4627926 ppbv	100
61)	O-Xylene	11.884	91	108066	0.7211065 ppbv	98
62)	Styrene	11.901	104	82168	0.7279328 ppbv	98
63)	Bromoform	12.206	173	65031	0.6872926 ppbv	99
64)	Isopropylbenzene	12.263	105	157094	0.7126546 ppbv	100
65)	1,1,2,2-Tetrachloroethane	12.647	83	78331	0.6766887 ppbv	99
66)	n-Propylbenzene	12.710	91	176553	0.7155632 ppbv	99
67)	4-Ethyltoluene	12.817	105	153301	0.7090081 ppbv	100
68)	2-Chlorotoluene	12.874	126	37921	0.7516719 ppbv	100
70)	1,3,5-Trimethylbenzene	12.874	105	122699	0.6911147 ppbv	99
71)	Tert-Butylbenzene	13.185	119	117463	0.6841800 ppbv	100
72)	1,2,4-Trimethylbenzene	13.241	105	121207	0.6870439 ppbv	100
73)	sec-Butylbenzene	13.383	134	37912	0.6806776 ppbv	99
74)	1,3-Dichlorobenzene	13.570	146	86944	0.7019401 ppbv	100
75)	1,4-Dichlorobenzene	13.649	146	85778	0.6925858 ppbv	97
76)	1,2,3-TRIMETHYLBENZENE	13.637	105	121995	0.6898988 ppbv	99
77)	DICYCLOPENTADIENE	13.637	66	119983	0.7197428 ppbv	98
78)	Benzyl Chloride	13.762	91	105144	0.7126882 ppbv	99
79)	n-Butylbenzene	13.858	91	142232	0.6976297 ppbv	100
80)	1,2-Dichlorobenzene	13.994	146	86408	0.6859175 ppbv	99
81)	1,2,4-Trichlorobenzene	15.521	180	77816	0.6953038 ppbv	99
82)	Hexachloro-1,3-Butadiene	15.606	225	89786	0.6967229 ppbv	99
83)	Naphthalene	15.827	128	183136	0.6945304 ppbv	99
84)	TPH (GC/MS) Low Fraction	9.740	TIC	9471018m	30.2248759 ppbv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042018A\
Data File : 0420A_06.D
Acq On : 20 Apr 2018 3:34 pm
Operator : 564
Sample : STD AMS 0.63 ppbv 18D20628
Misc : 18D20624
ALS Vial : 6 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 21 09:49:03 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:48:11 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042018A\
Data File : 0420A_07.D
Acq On : 20 Apr 2018 4:12 pm
Operator : 564
Sample : STD AMS 1.25 ppbv 18D20628
Misc : 18D20624
ALS Vial : 7 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 21 09:50:04 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:49:08 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.245	130	279533	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	8.099	114	1063287	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	11.211	117	927161	4.0000000	ppbv	0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	12.529	95	551475	4.0493351	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 101.23%			
Target Compounds						Qvalue
2) Propene	3.557	41	29496	1.2744195	ppbv	98
3) 1,1-DIFLUOROETHANE	3.563	51	60195	1.2847200	ppbv	97
4) Dichlorodifluoromethane	3.608	85	98886	1.3196532	ppbv	99
5) CHLORODIFLUOROMETHANE	3.636	51	54001	1.3127251	ppbv	99
6) 1,2-Dichlorotetrafluor...	3.795	85	109193	1.3016978	ppbv	98
7) Chloromethane	3.908	50	35864	1.3282286	ppbv	99
8) Vinyl Chloride	4.060	62	42741	1.2489967	ppbv	98
9) 1,3-Butadiene	4.100	39	27029	1.2090974	ppbv	99
10) Bromomethane	4.502	94	40230	1.3012100	ppbv	98
11) Chloroethane	4.603	64	25114	1.3906555	ppbv	97
12) Vinyl Bromide	4.813	106	44143	1.3345101	ppbv	99
13) Trichlorofluoromethane	4.841	101	102744	1.3498723	ppbv	99
14) Ethanol	5.016	45	17178	1.2502060	ppbv	97
15) 1,1,2-Trichlorotrifluo...	5.305	101	92001	1.3009435	ppbv	100
16) 1,1-Dichloroethene	5.384	61	66379	1.2563704	ppbv	99
17) Acetone	5.458	58	21433	1.2390684	ppbv	96
18) 2-Propanol	5.492	45	81480	1.2581471	ppbv	100
19) Carbon Disulfide	5.673	76	99343	1.2783834	ppbv	98
20) Allyl Chloride	5.724	41	54608	1.2544010	ppbv	93
21) Methylene Chloride	5.859	49	49181	1.2338701	ppbv	99
22) TERT-BUTYL ALCOHOL	5.854	59	113217	1.2793105	ppbv	99
23) Methyl Tert-Butyl Ether	6.018	73	139237	1.2715760	ppbv	99
24) Trans-1,2-Dichloroethene	6.074	61	59475	1.2739340	ppbv	98
25) n-Hexane	6.210	57	70759	1.3452740	ppbv	98
26) 1,1-Dichloroethane	6.487	63	86689	1.2898064	ppbv	99
27) Vinyl Acetate	6.431	43	116367	1.3363904	ppbv	99
28) ETHYL ACETATE	6.940	43	92757	1.2703579	ppbv	99
29) 2-Butanone (MEK)	6.985	72	28075	1.3100580	ppbv	98
30) cis-1,2-Dichloroethene	7.008	96	56419	1.2877058	ppbv	99
31) Tetrahydrofuran	7.268	42	56730	1.2841235	ppbv	99
32) Chloroform	7.251	83	101175	1.3018773	ppbv	98
33) Cyclohexane	7.472	84	72198	1.3089371	ppbv	99
34) 1,1,1-Trichloroethane	7.455	97	101766	1.3481464	ppbv	100
35) Carbon Tetrachloride	7.585	117	103888	1.3180256	ppbv	99
36) 2,2,4-Trimethylpentane	7.709	57	255040	1.4609919	ppbv	99
38) Benzene	7.800	78	170616	1.3367447	ppbv	99
39) 1,2-Dichloroethane	7.851	62	60753	1.3213402	ppbv	99
40) Heptane	7.834	43	87469	1.4505371	ppbv	98
41) Trichloroethene	8.377	95	72585	1.3025448	ppbv	99
42) TERT-AMYL ETHYL ETHER	8.456	73	53383	1.3101825	ppbv	99
43) METHYL CYCLOHEXANE	8.535	83	103746	1.4197830	ppbv	99
44) 1,2-Dichloropropane	8.654	63	61774	1.3517562	ppbv	97
45) Methyl Methacrylate	8.597	69	58838	1.3220937	ppbv	97
46) 1,4-Dioxane	8.733	88	46597	1.3351230	ppbv	99
47) Bromodichloromethane	8.880	83	112408	1.3387626	ppbv	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042018A\
Data File : 0420A_07.D
Acq On : 20 Apr 2018 4:12 pm
Operator : 564
Sample : STD AMS 1.25 ppbv 18D20628
Misc : 18D20624
ALS Vial : 7 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 21 09:50:04 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:49:08 2018
Response via : Initial Calibration

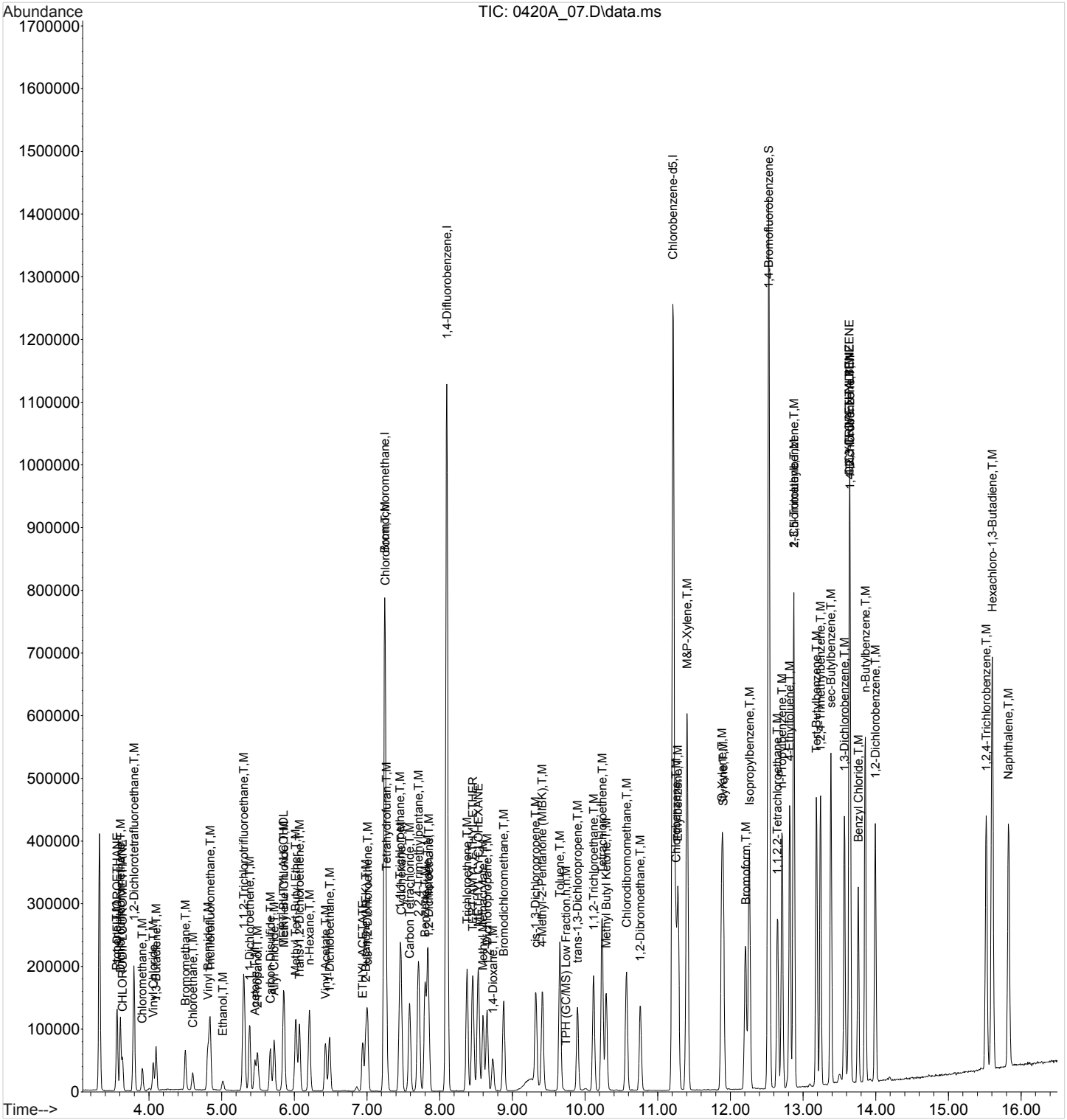
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
48)	cis-1,3-Dichloropropene	9.321	75	108470	1.3595432	ppbv		98
49)	4-Methyl-2-Pentanone (...	9.412	43	124013	1.3325452	ppbv		98
50)	Toluene	9.655	91	214196	1.4243534	ppbv		99
51)	trans-1,3-Dichloropropene	9.898	75	92483	1.3762589	ppbv		99
52)	1,1,2-Trichloroethane	10.119	97	73292	1.3893776	ppbv		99
53)	Tetrachloroethene	10.238	166	113426	1.3845296	ppbv		99
54)	Methyl Butyl Ketone	10.294	43	117321	1.3481568	ppbv		99
55)	Chlorodibromomethane	10.572	129	129613	1.3804344	ppbv		99
56)	1,2-Dibromoethane	10.758	107	115678	1.3925478	ppbv		99
57)	Chlorobenzene	11.250	112	178367	1.4434684	ppbv	#	92
59)	Ethylbenzene	11.279	91	284001	1.4538677	ppbv		99
60)	M&P-Xylene	11.403	91	447714	2.9651530	ppbv		99
61)	O-Xylene	11.884	91	229018	1.4838190	ppbv		100
62)	Styrene	11.901	104	176650	1.5155464	ppbv		98
63)	Bromoform	12.212	173	140353	1.4591662	ppbv		99
64)	Isopropylbenzene	12.263	105	329756	1.4572069	ppbv		99
65)	1,1,2,2-Tetrachloroethane	12.648	83	163767	1.3974426	ppbv		99
66)	n-Propylbenzene	12.710	91	366989	1.4440983	ppbv		100
67)	4-Ethyltoluene	12.817	105	321671	1.4512293	ppbv		99
68)	2-Chlorotoluene	12.874	126	77824	1.4805012	ppbv		98
70)	1,3,5-Trimethylbenzene	12.874	105	258717	1.4313713	ppbv		100
71)	Tert-Butylbenzene	13.185	119	246896	1.4163480	ppbv		99
72)	1,2,4-Trimethylbenzene	13.242	105	255095	1.4225334	ppbv		99
73)	sec-Butylbenzene	13.383	134	80311	1.4220594	ppbv		99
74)	1,3-Dichlorobenzene	13.570	146	182615	1.4421069	ppbv		99
75)	1,4-Dichlorobenzene	13.649	146	182799	1.4489129	ppbv		99
76)	1,2,3-TRIMETHYLBENZENE	13.638	105	254658	1.4152188	ppbv		100
77)	DICYCLOPENTADIENE	13.638	66	236413	1.3777067	ppbv		100
78)	Benzyl Chloride	13.762	91	223358	1.4747554	ppbv		99
79)	n-Butylbenzene	13.858	91	297463	1.4294996	ppbv		99
80)	1,2-Dichlorobenzene	13.994	146	180833	1.4128278	ppbv		100
81)	1,2,4-Trichlorobenzene	15.521	180	166642	1.4601723	ppbv		100
82)	Hexachloro-1,3-Butadiene	15.606	225	182645	1.3891044	ppbv		100
83)	Naphthalene	15.827	128	386669	1.4384699	ppbv		100
84)	TPH (GC/MS) Low Fraction	9.740	TIC	18617964m	59.4670325	ppbv		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042018A\
Data File : 0420A_07.D
Acq On : 20 Apr 2018 4:12 pm
Operator : 564
Sample : STD AMS 1.25 ppbv 18D20628
Misc : 18D20624
ALS Vial : 7 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 21 09:50:04 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:49:08 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042018A\
Data File : 0420A_08.D
Acq On : 20 Apr 2018 4:52 pm
Operator : 564
Sample : STD AMS 2.5 ppbv 18D20628
Misc : 18D20624
ALS Vial : 8 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 21 09:51:32 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:50:29 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.251	130	293708	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	8.105	114	1110091	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	11.216	117	977332	4.0000000	ppbv	0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	12.529	95	578001	4.0163314	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 100.41%			
Target Compounds						Qvalue
2) Propene	3.580	41	59467	2.4358419	ppbv	98
3) 1,1-DIFLUOROETHANE	3.585	51	126384	2.5530044	ppbv	100
4) Dichlorodifluoromethane	3.631	85	202123	2.5388954	ppbv	98
5) CHLORODIFLUOROMETHANE	3.659	51	113877	2.6084857	ppbv	99
6) 1,2-Dichlorotetrafluor...	3.812	85	225812	2.5409852	ppbv	100
7) Chloromethane	3.930	50	74680	2.5997620	ppbv	99
8) Vinyl Chloride	4.077	62	90508	2.5176225	ppbv	99
9) 1,3-Butadiene	4.117	39	57599	2.4683976	ppbv	100
10) Bromomethane	4.519	94	83934	2.5627642	ppbv	100
11) Chloroethane	4.620	64	48080	2.4781069	ppbv	100
12) Vinyl Bromide	4.824	106	87910	2.4956438	ppbv	100
13) Trichlorofluoromethane	4.852	101	207270	2.5509679	ppbv	99
14) Ethanol	5.028	45	33972	2.3530606	ppbv	99
15) 1,1,2-Trichlorotrifluo...	5.316	101	192043	2.5636345	ppbv	100
16) 1,1-Dichloroethene	5.395	61	139623	2.5125739	ppbv	100
17) Acetone	5.469	58	45157	2.4889432	ppbv	98
18) 2-Propanol	5.503	45	170086	2.4963215	ppbv	100
19) Carbon Disulfide	5.684	76	207720	2.5325129	ppbv	100
20) Allyl Chloride	5.735	41	114969	2.5117273	ppbv	98
21) Methylene Chloride	5.865	49	102651	2.4573943	ppbv	99
22) TERT-BUTYL ALCOHOL	5.859	59	234087	2.5056879	ppbv	99
23) Methyl Tert-Butyl Ether	6.029	73	290741	2.5183412	ppbv	100
24) Trans-1,2-Dichloroethene	6.080	61	124054	2.5193044	ppbv	98
25) n-Hexane	6.216	57	148731	2.6508032	ppbv	99
26) 1,1-Dichloroethane	6.493	63	179577	2.5268025	ppbv	100
27) Vinyl Acetate	6.436	43	246484	2.6573431	ppbv	100
28) ETHYL ACETATE	6.945	43	197183	2.5618510	ppbv	99
29) 2-Butanone (MEK)	6.991	72	59261	2.6067760	ppbv	100
30) cis-1,2-Dichloroethene	7.013	96	116338	2.5119904	ppbv	99
31) Tetrahydrofuran	7.274	42	116581	2.4978962	ppbv	99
32) Chloroform	7.257	83	210654	2.5585502	ppbv	98
33) Cyclohexane	7.477	84	152410	2.6052428	ppbv	99
34) 1,1,1-Trichloroethane	7.460	97	212119	2.6330815	ppbv	99
35) Carbon Tetrachloride	7.590	117	217339	2.5960441	ppbv	99
36) 2,2,4-Trimethylpentane	7.715	57	536432	2.8291262	ppbv	100
38) Benzene	7.805	78	355910	2.6343571	ppbv	99
39) 1,2-Dichloroethane	7.856	62	126126	2.5978515	ppbv	99
40) Heptane	7.839	43	184725	2.8429971	ppbv	99
41) Trichloroethene	8.382	95	153395	2.6146466	ppbv	100
42) TERT-AMYL ETHYL ETHER	8.462	73	113057	2.6324267	ppbv	99
43) METHYL CYCLOHEXANE	8.535	83	217734	2.7786156	ppbv	99
44) 1,2-Dichloropropane	8.654	63	129344	2.6675775	ppbv	99
45) Methyl Methacrylate	8.603	69	127743	2.7180189	ppbv	99
46) 1,4-Dioxane	8.733	88	95334	2.5812379	ppbv	99
47) Bromodichloromethane	8.886	83	240585	2.7060907	ppbv	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042018A\
Data File : 0420A_08.D
Acq On : 20 Apr 2018 4:52 pm
Operator : 564
Sample : STD AMS 2.5 ppbv 18D20628
Misc : 18D20624
ALS Vial : 8 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 21 09:51:32 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:50:29 2018
Response via : Initial Calibration

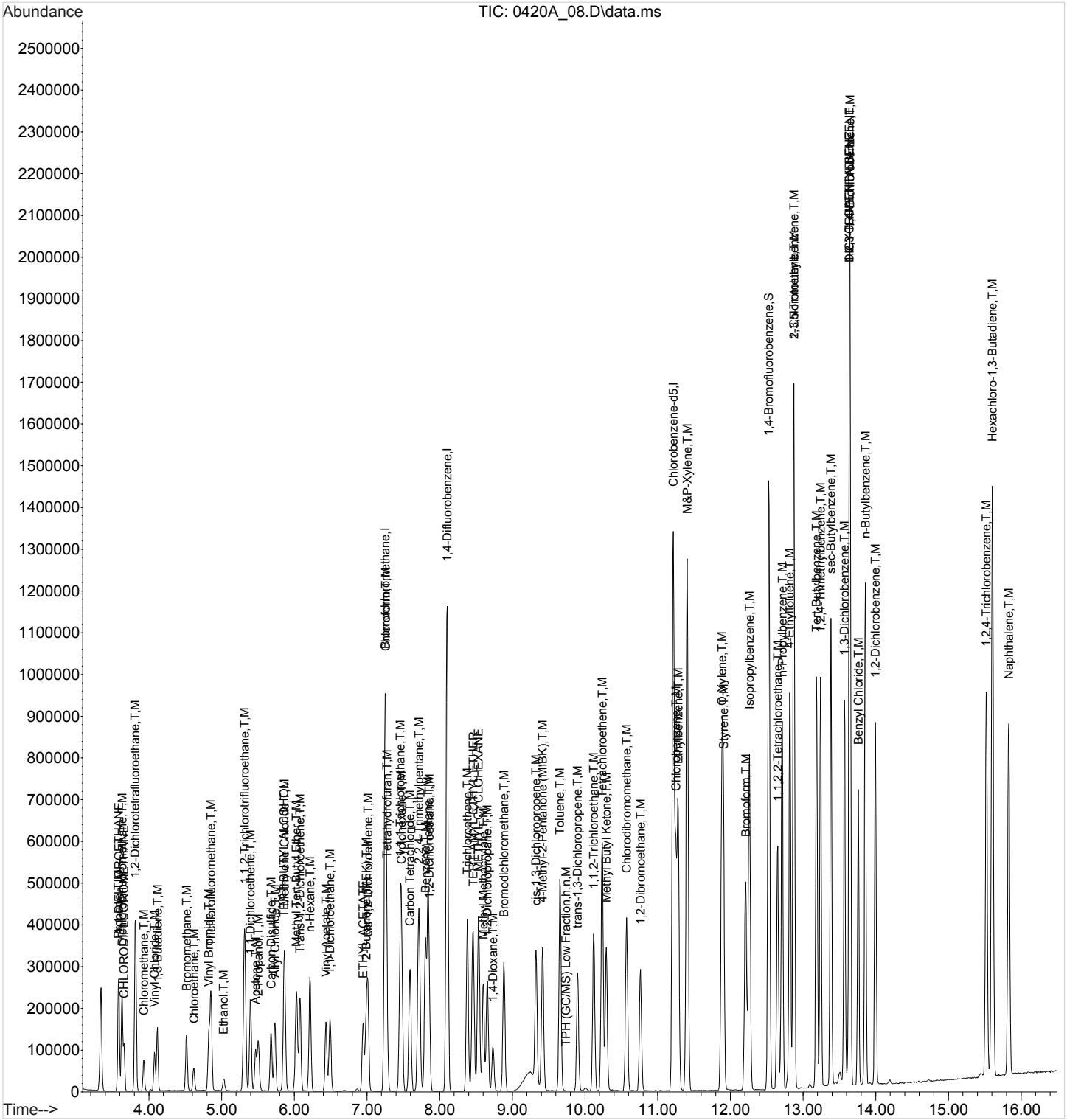
	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
48)	cis-1,3-Dichloropropene	9.327	75	229707	2.7102142 ppbv	99
49)	4-Methyl-2-Pentanone (...	9.418	43	258019	2.6209581 ppbv	100
50)	Toluene	9.655	91	453976	2.8130783 ppbv	99
51)	trans-1,3-Dichloropropene	9.898	75	194766	2.7211806 ppbv	98
52)	1,1,2-Trichloroethane	10.119	97	155924	2.7694279 ppbv	100
53)	Tetrachloroethene	10.238	166	238252	2.7269001 ppbv	100
54)	Methyl Butyl Ketone	10.294	43	254679	2.7598283 ppbv	99
55)	Chlorodibromomethane	10.572	129	279354	2.7915396 ppbv	98
56)	1,2-Dibromoethane	10.764	107	249212	2.8094819 ppbv	99
57)	Chlorobenzene	11.250	112	381323	2.8670681 ppbv	100
59)	Ethylbenzene	11.284	91	615924	2.8967109 ppbv	100
60)	M&P-Xylene	11.409	91	955291	5.7866541 ppbv	100
61)	O-Xylene	11.884	91	488756	2.8957801 ppbv	99
62)	Styrene	11.907	104	388957	3.0366826 ppbv	100
63)	Bromoform	12.212	173	305043	2.9111240 ppbv	99
64)	Isopropylbenzene	12.263	105	711925	2.8887576 ppbv	100
65)	1,1,2,2-Tetrachloroethane	12.653	83	351354	2.7786839 ppbv	99
66)	n-Propylbenzene	12.716	91	789888	2.8598294 ppbv	99
67)	4-Ethyltoluene	12.817	105	689191	2.8576846 ppbv	100
68)	2-Chlorotoluene	12.874	126	166623	2.9001110 ppbv	100
70)	1,3,5-Trimethylbenzene	12.874	105	556915	2.8405715 ppbv	100
71)	Tert-Butylbenzene	13.185	119	533844	2.8299282 ppbv	99
72)	1,2,4-Trimethylbenzene	13.242	105	551958	2.8415364 ppbv	99
73)	sec-Butylbenzene	13.383	134	169914	2.7777336 ppbv	99
74)	1,3-Dichlorobenzene	13.570	146	398467	2.8961330 ppbv	99
75)	1,4-Dichlorobenzene	13.649	146	398328	2.9027915 ppbv	99
76)	1,2,3-TRIMETHYLBENZENE	13.638	105	546449	2.8067095 ppbv	100
77)	DICYCLOPENTADIENE	13.638	66	500712	2.7127010 ppbv	99
78)	Benzyl Chloride	13.762	91	494020	2.9869827 ppbv	100
79)	n-Butylbenzene	13.858	91	639929	2.8359512 ppbv	99
80)	1,2-Dichlorobenzene	13.994	146	390405	2.8201381 ppbv	100
81)	1,2,4-Trichlorobenzene	15.521	180	374247	3.0097257 ppbv	100
82)	Hexachloro-1,3-Butadiene	15.606	225	388408	2.7413743 ppbv	100
83)	Naphthalene	15.832	128	842662	2.8868566 ppbv	100
84)	TPH (GC/MS) Low Fraction	9.740	TIC	38676118m	116.9071793 ppbv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042018A\
Data File : 0420A_08.D
Acq On : 20 Apr 2018 4:52 pm
Operator : 564
Sample : STD AMS 2.5 ppbv 18D20628
Misc : 18D20624
ALS Vial : 8 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 21 09:51:32 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:50:29 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042018A\
Data File : 0420A_09.D
Acq On : 20 Apr 2018 5:32 pm
Operator : 564
Sample : MSTD AMS 3.75 ppbv 18D20628
Misc : 18D20624
ALS Vial : 9 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 21 09:52:27 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:51:38 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.245	130	283238	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	8.099	114	1087238	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	11.216	117	945654	4.0000000	ppbv	0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	12.529	95	563218	4.0419590	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 101.05%			
Target Compounds						Qvalue
2) Propene	3.563	41	87689	3.7406234	ppbv	100
3) 1,1-DIFLUOROETHANE	3.574	51	180234	3.7620843	ppbv	100
4) Dichlorodifluoromethane	3.613	85	289545	3.7617049	ppbv	100
5) CHLORODIFLUOROMETHANE	3.642	51	165786	3.9096229	ppbv	100
6) 1,2-Dichlorotetrafluor...	3.800	85	333792	3.8842777	ppbv	100
7) Chloromethane	3.913	50	108314	3.8841794	ppbv	100
8) Vinyl Chloride	4.060	62	133075	3.8340207	ppbv	100
9) 1,3-Butadiene	4.100	39	83509	3.7188928	ppbv	100
10) Bromomethane	4.502	94	119549	3.7693592	ppbv	100
11) Chloroethane	4.603	64	68866	3.6860314	ppbv	100
12) Vinyl Bromide	4.813	106	124732	3.6729296	ppbv	100
13) Trichlorofluoromethane	4.841	101	294208	3.7420890	ppbv	100
14) Ethanol	5.016	45	52409	3.8015213	ppbv	100
15) 1,1,2-Trichlorotrifluo...	5.305	101	282477	3.8937356	ppbv	100
16) 1,1-Dichloroethene	5.384	61	204179	3.8069161	ppbv	100
17) Acetone	5.452	58	66416	3.7988060	ppbv	100
18) 2-Propanol	5.492	45	247153	3.7624316	ppbv	100
19) Carbon Disulfide	5.673	76	308025	3.8858251	ppbv	100
20) Allyl Chloride	5.723	41	168137	3.8060972	ppbv	100
21) Methylene Chloride	5.859	49	148422	3.6949581	ppbv	100
22) TERT-BUTYL ALCOHOL	5.848	59	341485	3.7889678	ppbv	100
23) Methyl Tert-Butyl Ether	6.018	73	421462	3.7809442	ppbv	100
24) Trans-1,2-Dichloroethene	6.074	61	182719	3.8429017	ppbv	100
25) n-Hexane	6.210	57	217973	3.9883986	ppbv	100
26) 1,1-Dichloroethane	6.487	63	262811	3.8278337	ppbv	100
27) Vinyl Acetate	6.431	43	362617	4.0118020	ppbv	100
28) ETHYL ACETATE	6.940	43	294532	3.9517918	ppbv	100
29) 2-Butanone (MEK)	6.985	72	86622	3.9232562	ppbv	100
30) cis-1,2-Dichloroethene	7.008	96	171571	3.8384643	ppbv	100
31) Tetrahydrofuran	7.268	42	166089	3.6907332	ppbv	100
32) Chloroform	7.257	83	311001	3.9017404	ppbv	100
33) Cyclohexane	7.471	84	223045	3.9260429	ppbv	100
34) 1,1,1-Trichloroethane	7.455	97	309425	3.9479194	ppbv	100
35) Carbon Tetrachloride	7.590	117	322012	3.9631346	ppbv	100
36) 2,2,4-Trimethylpentane	7.709	57	788520	4.2197670	ppbv	100
38) Benzene	7.800	78	526822	3.9460229	ppbv	100
39) 1,2-Dichloroethane	7.856	62	184771	3.8605890	ppbv	100
40) Heptane	7.834	43	269391	4.1385561	ppbv	100
41) Trichloroethene	8.382	95	225473	3.8942475	ppbv	100
42) TERT-AMYL ETHYL ETHER	8.456	73	164271	3.8711176	ppbv	100
43) METHYL CYCLOHEXANE	8.535	83	320741	4.1029659	ppbv	100
44) 1,2-Dichloropropane	8.654	63	188889	3.9335659	ppbv	100
45) Methyl Methacrylate	8.597	69	188532	4.0370816	ppbv	98
46) 1,4-Dioxane	8.727	88	137288	3.7748615	ppbv	100
47) Bromodichloromethane	8.880	83	352721	3.9958830	ppbv	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042018A\
Data File : 0420A_09.D
Acq On : 20 Apr 2018 5:32 pm
Operator : 564
Sample : MSTD AMS 3.75 ppbv 18D20628
Misc : 18D20624
ALS Vial : 9 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 21 09:52:27 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:51:38 2018
Response via : Initial Calibration

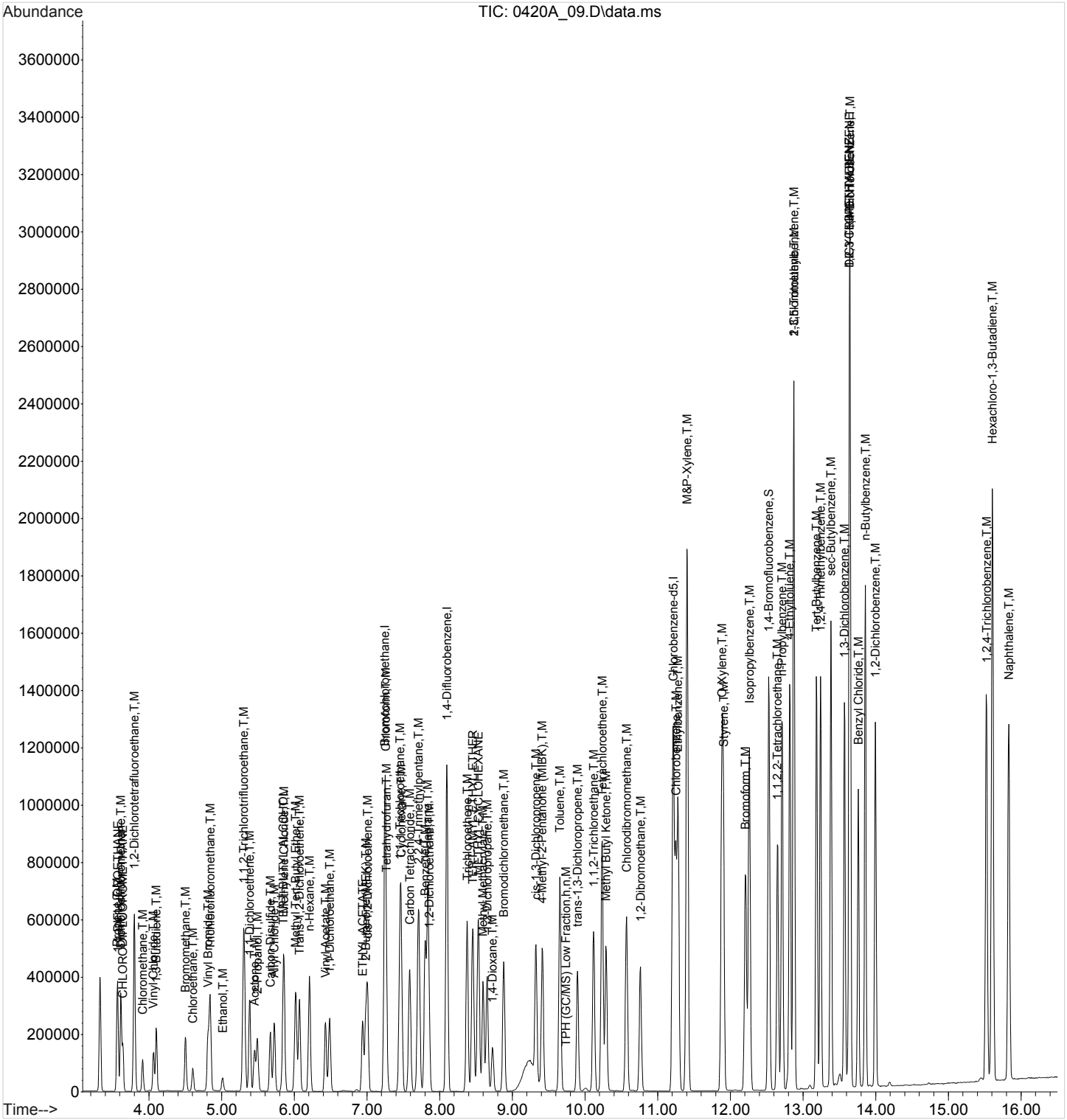
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
48)	cis-1,3-Dichloropropene	9.327	75	333698	3.9643582	ppbv	100
49)	4-Methyl-2-Pentanone (...	9.412	43	381405	3.9241055	ppbv	100
50)	Toluene	9.655	91	664757	4.1197851	ppbv	100
51)	trans-1,3-Dichloropropene	9.898	75	290192	4.0794963	ppbv	100
52)	1,1,2-Trichloroethane	10.119	97	228742	4.0749798	ppbv	100
53)	Tetrachloroethene	10.238	166	353203	4.0660318	ppbv	100
54)	Methyl Butyl Ketone	10.289	43	372216	4.0481774	ppbv	100
55)	Chlorodibromomethane	10.571	129	423934	4.2428839	ppbv	100
56)	1,2-Dibromoethane	10.764	107	368433	4.1550910	ppbv	100
57)	Chlorobenzene	11.250	112	562842	4.2176031	ppbv	100
59)	Ethylbenzene	11.279	91	906675	4.2934145	ppbv	100
60)	M&P-Xylene	11.403	91	1414001	8.6260142	ppbv	100
61)	O-Xylene	11.884	91	725478	4.3280985	ppbv	100
62)	Styrene	11.906	104	583413	4.5448205	ppbv	100
63)	Bromoform	12.206	173	465786	4.4714963	ppbv	100
64)	Isopropylbenzene	12.263	105	1051715	4.2990498	ppbv	100
65)	1,1,2,2-Tetrachloroethane	12.648	83	518927	4.1640475	ppbv	100
66)	n-Propylbenzene	12.710	91	1177286	4.3020089	ppbv	100
67)	4-Ethyltoluene	12.817	105	1022577	4.2800228	ppbv	100
68)	2-Chlorotoluene	12.874	126	245445	4.3004225	ppbv	100
70)	1,3,5-Trimethylbenzene	12.874	105	821328	4.2334362	ppbv	100
71)	Tert-Butylbenzene	13.185	119	779158	4.1768375	ppbv	100
72)	1,2,4-Trimethylbenzene	13.242	105	807820	4.2023678	ppbv	100
73)	sec-Butylbenzene	13.383	134	248568	4.1233370	ppbv	100
74)	1,3-Dichlorobenzene	13.570	146	590607	4.3222929	ppbv	100
75)	1,4-Dichlorobenzene	13.649	146	586400	4.3010120	ppbv	100
76)	1,2,3-TRIMETHYLBENZENE	13.638	105	795823	4.1398404	ppbv	100
77)	DICYCLOPENTADIENE	13.638	66	739751	4.0840804	ppbv	100
78)	Benzyl Chloride	13.762	91	735519	4.4516024	ppbv	100
79)	n-Butylbenzene	13.858	91	925207	4.1447302	ppbv	100
80)	1,2-Dichlorobenzene	13.994	146	575742	4.2084421	ppbv	100
81)	1,2,4-Trichlorobenzene	15.527	180	557290	4.4796784	ppbv	100
82)	Hexachloro-1,3-Butadiene	15.606	225	564776	4.0544635	ppbv	100
83)	Naphthalene	15.832	128	1234335	4.2604557	ppbv	100
84)	TPH (GC/MS) Low Fraction	9.740	TIC	57126432m	178.6119866	ppbv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042018A\
Data File : 0420A_09.D
Acq On : 20 Apr 2018 5:32 pm
Operator : 564
Sample : MSTD AMS 3.75 ppbv 18D20628
Misc : 18D20624
ALS Vial : 9 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 21 09:52:27 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:51:38 2018
Response via : Initial Calibration



ACCOUNT:	PROJECT:	SDG:	DATE/TIME:	PAGE:
S&ME Inc. - Knoxville	4143-17-016	L988471	05/16/18 11:18	624 of 698

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042018A\
Data File : 0420A_10.D
Acq On : 20 Apr 2018 6:14 pm
Operator : 564
Sample : STD AMS 5.0 ppbv 18D20628
Misc : 18D20624
ALS Vial : 10 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 21 09:53:41 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:52:34 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.262	130	310982	4.0000000	ppbv	0.02
37) 1,4-Difluorobenzene	8.111	114	1204927	4.0000000	ppbv	0.01
58) Chlorobenzene-d5	11.222	117	1093737	4.0000000	ppbv	0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	12.534	95	675065	4.1887103	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 104.72%			
Target Compounds						Qvalue
2) Propene	3.580	41	123140	4.7842546	ppbv	99
3) 1,1-DIFLUOROETHANE	3.597	51	256735	4.8808240	ppbv	98
4) Dichlorodifluoromethane	3.636	85	385399	4.5603219	ppbv	100
5) CHLORODIFLUOROMETHANE	3.670	51	233856	5.0228685	ppbv	100
6) 1,2-Dichlorotetrafluor...	3.828	85	471789	5.0003272	ppbv	100
7) Chloromethane	3.936	50	156320	5.1055849	ppbv	100
8) Vinyl Chloride	4.089	62	195840	5.1389649	ppbv	99
9) 1,3-Butadiene	4.128	39	119191	4.8343724	ppbv	97
10) Bromomethane	4.530	94	187735	5.3911707	ppbv	98
11) Chloroethane	4.632	64	105959	5.1654515	ppbv	99
12) Vinyl Bromide	4.841	106	195762	5.2502427	ppbv	99
13) Trichlorofluoromethane	4.869	101	456250	5.2854111	ppbv	98
14) Ethanol	5.062	45	74845	4.9445937	ppbv	99
15) 1,1,2-Trichlorotrifluo...	5.333	101	408753	5.1316920	ppbv	100
16) 1,1-Dichloroethene	5.412	61	290226	4.9285006	ppbv	99
17) Acetone	5.486	58	95223	4.9605808	ppbv	74
18) 2-Propanol	5.531	45	374032	5.1859431	ppbv #	23
19) Carbon Disulfide	5.695	76	428717	4.9258849	ppbv	99
20) Allyl Chloride	5.746	41	240194	4.9521638	ppbv	100
21) Methylene Chloride	5.876	49	210276	4.7677910	ppbv	100
22) TERT-BUTYL ALCOHOL	5.888	59	520341	5.2583998	ppbv	97
23) Methyl Tert-Butyl Ether	6.046	73	613031	5.0088791	ppbv	100
24) Trans-1,2-Dichloroethene	6.091	61	260465	4.9893182	ppbv	98
25) n-Hexane	6.233	57	316468	5.2740218	ppbv	100
26) 1,1-Dichloroethane	6.504	63	383020	5.0809771	ppbv	100
27) Vinyl Acetate	6.448	43	530194	5.3424739	ppbv	100
28) ETHYL ACETATE	6.962	43	413638	5.0547335	ppbv	98
29) 2-Butanone (MEK)	7.002	72	128899	5.3172157	ppbv	99
30) cis-1,2-Dichloroethene	7.025	96	250215	5.0985094	ppbv	99
31) Tetrahydrofuran	7.285	42	250148	5.0627337	ppbv	99
32) Chloroform	7.268	83	452844	5.1744176	ppbv	99
33) Cyclohexane	7.488	84	326569	5.2354471	ppbv	99
34) 1,1,1-Trichloroethane	7.471	97	459302	5.3373721	ppbv	99
35) Carbon Tetrachloride	7.602	117	473358	5.3060673	ppbv	99
36) 2,2,4-Trimethylpentane	7.726	57	1169428	5.6998774	ppbv	99
38) Benzene	7.817	78	768638	5.1949507	ppbv	100
39) 1,2-Dichloroethane	7.867	62	271905	5.1262626	ppbv	99
40) Heptane	7.851	43	395280	5.4794187	ppbv	100
41) Trichloroethene	8.388	95	335681	5.2314208	ppbv	99
42) TERT-AMYL ETHYL ETHER	8.467	73	245347	5.2169912	ppbv	99
43) METHYL CYCLOHEXANE	8.546	83	473475	5.4651787	ppbv	100
44) 1,2-Dichloropropane	8.665	63	279929	5.2600702	ppbv	100
45) Methyl Methacrylate	8.614	69	285942	5.5248983	ppbv	97
46) 1,4-Dioxane	8.750	88	213171	5.2888402	ppbv	100
47) Bromodichloromethane	8.891	83	531438	5.4324775	ppbv	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042018A\
Data File : 0420A_10.D
Acq On : 20 Apr 2018 6:14 pm
Operator : 564
Sample : STD AMS 5.0 ppbv 18D20628
Misc : 18D20624
ALS Vial : 10 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 21 09:53:41 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:52:34 2018
Response via : Initial Calibration

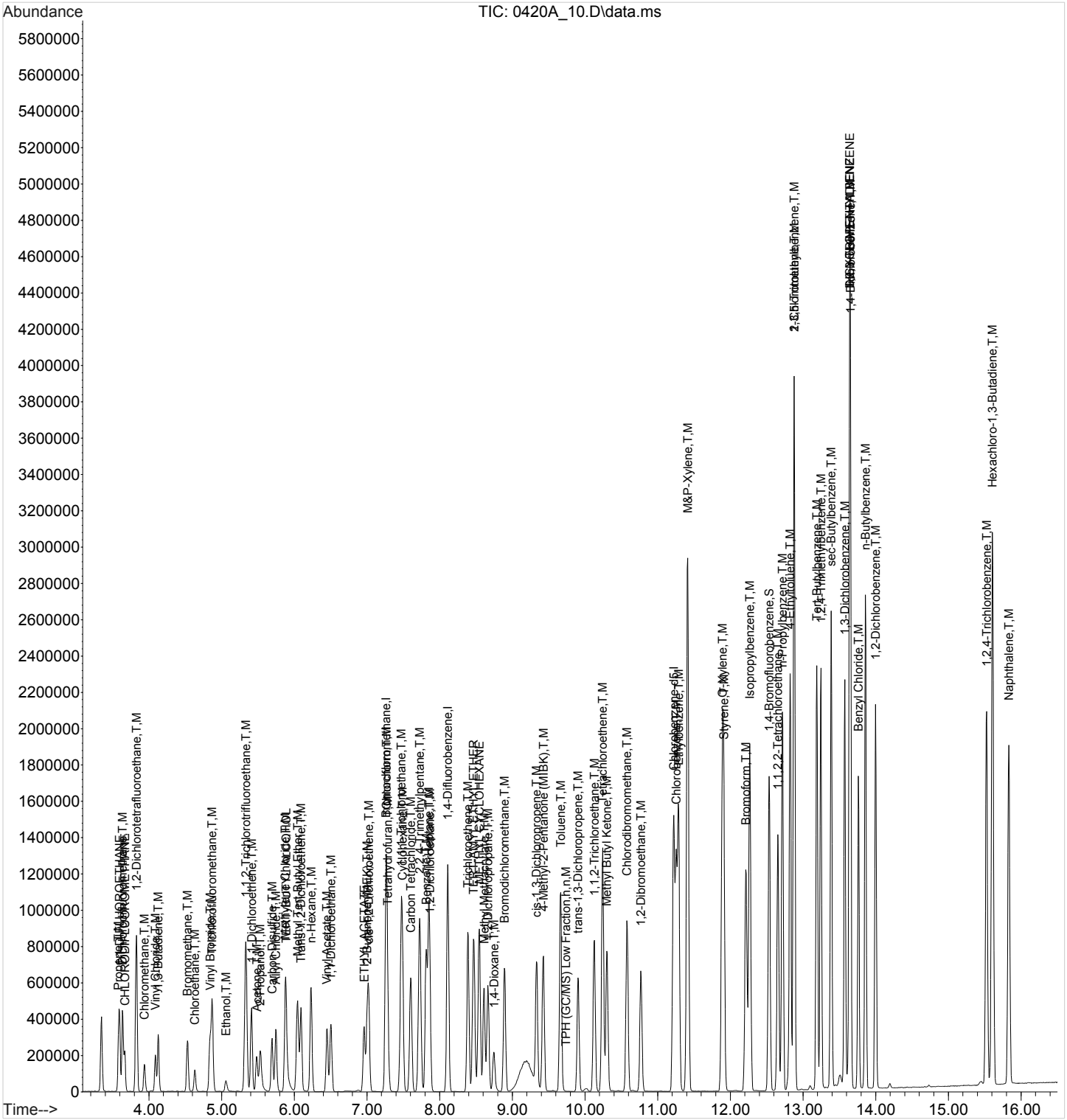
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
48)	cis-1,3-Dichloropropene	9.333	75	506158	5.4258686	ppbv	99
49)	4-Methyl-2-Pentanone (...	9.429	43	582428	5.4070505	ppbv	100
50)	Toluene	9.666	91	1004721	5.6185080	ppbv	99
51)	trans-1,3-Dichloropropene	9.904	75	442982	5.6191558	ppbv	100
52)	1,1,2-Trichloroethane	10.130	97	350488	5.6339967	ppbv	99
53)	Tetrachloroethene	10.243	166	537419	5.5824300	ppbv	100
54)	Methyl Butyl Ketone	10.300	43	588042	5.7708095	ppbv	100
55)	Chlorodibromomethane	10.577	129	650821	5.8774419	ppbv	99
56)	1,2-Dibromoethane	10.769	107	565499	5.7546345	ppbv	100
57)	Chlorobenzene	11.256	112	872677	5.9006062	ppbv	99
59)	Ethylbenzene	11.290	91	1418884	5.8092148	ppbv	99
60)	M&P-Xylene	11.414	91	2205270	11.6316568	ppbv	100
61)	O-Xylene	11.890	91	1147579	5.9193612	ppbv	100
62)	Styrene	11.912	104	933339	6.2863623	ppbv	100
63)	Bromoform	12.212	173	757691	6.2889470	ppbv	100
64)	Isopropylbenzene	12.269	105	1686805	5.9615426	ppbv	100
65)	1,1,2,2-Tetrachloroethane	12.653	83	844719	5.8605858	ppbv	99
66)	n-Propylbenzene	12.715	91	1889735	5.9704848	ppbv	99
67)	4-Ethyltoluene	12.823	105	1662642	6.0168360	ppbv	100
68)	2-Chlorotoluene	12.880	126	393607	5.9626471	ppbv	99
70)	1,3,5-Trimethylbenzene	12.880	105	1319326	5.8796012	ppbv	100
71)	Tert-Butylbenzene	13.191	119	1265637	5.8661149	ppbv	99
72)	1,2,4-Trimethylbenzene	13.247	105	1311865	5.9004884	ppbv	100
73)	sec-Butylbenzene	13.389	134	403416	5.7859688	ppbv	100
74)	1,3-Dichlorobenzene	13.575	146	961037	6.0810010	ppbv	100
75)	1,4-Dichlorobenzene	13.655	146	948457	6.0146962	ppbv	100
76)	1,2,3-TRIMETHYLBENZENE	13.643	105	1277582	5.7461274	ppbv	99
77)	DICYCLOPENTADIENE	13.643	66	1154766	5.5121632	ppbv	99
78)	Benzyl Chloride	13.762	91	1202542	6.2927733	ppbv	100
79)	n-Butylbenzene	13.858	91	1467678	5.6846993	ppbv	100
80)	1,2-Dichlorobenzene	14.000	146	935621	5.9130665	ppbv	100
81)	1,2,4-Trichlorobenzene	15.527	180	851403	5.9172528	ppbv	100
82)	Hexachloro-1,3-Butadiene	15.606	225	847344	5.2594009	ppbv	99
83)	Naphthalene	15.832	128	1862942	5.5595764	ppbv	100
84)	TPH (GC/MS) Low Fraction	9.740	TIC	87634086m	236.9004708	ppbv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042018A\
Data File : 0420A_10.D
Acq On : 20 Apr 2018 6:14 pm
Operator : 564
Sample : STD AMS 5.0 ppbv 18D20628
Misc : 18D20624
ALS Vial : 10 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 21 09:53:41 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:52:34 2018
Response via : Initial Calibration



ACCOUNT:	PROJECT:	SDG:	DATE/TIME:	PAGE:
S&ME Inc. - Knoxville	4143-17-016	L988471	05/16/18 11:18	627 of 698

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042018A\
Data File : 0420A_11.D
Acq On : 20 Apr 2018 7:00 pm
Operator : 564
Sample : STD AMS 10.0 ppbv 18D20628
Misc : 18D20624
ALS Vial : 11 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 21 09:54:33 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:53:47 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.251	130	298396	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	8.105	114	1144171	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	11.216	117	1006947	4.0000000	ppbv	0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	12.529	95	611847	4.0960636	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 102.40%			
Target Compounds					Qvalue	
2) Propene	3.579	41	236324	9.6283211	ppbv	100
3) 1,1-DIFLUOROETHANE	3.591	51	492407	9.7893949	ppbv	99
4) Dichlorodifluoromethane	3.630	85	647981	8.0924442	ppbv	100
5) CHLORODIFLUOROMETHANE	3.659	51	448090	10.0236784	ppbv	99
6) 1,2-Dichlorotetrafluor...	3.811	85	910460	10.0565653	ppbv	99
7) Chloromethane	3.930	50	296831	10.0733587	ppbv	100
8) Vinyl Chloride	4.077	62	368763	10.0448377	ppbv	99
9) 1,3-Butadiene	4.117	39	232263	9.8645887	ppbv	98
10) Bromomethane	4.519	94	342444	10.1354438	ppbv	99
11) Chloroethane	4.620	64	195465	9.8840183	ppbv	99
12) Vinyl Bromide	4.824	106	354349	9.8340042	ppbv	100
13) Trichlorofluoromethane	4.852	101	831355	9.9558313	ppbv	99
14) Ethanol	5.028	45	143417	9.8900561	ppbv	99
15) 1,1,2-Trichlorotrifluo...	5.316	101	777659	10.1367811	ppbv	100
16) 1,1-Dichloroethene	5.395	61	556421	9.8676189	ppbv	99
17) Acetone	5.463	58	180008	9.7839480	ppbv	73
18) 2-Propanol	5.508	45	699853	10.0592806	ppbv #	80
19) Carbon Disulfide	5.684	76	836351	10.0361008	ppbv	100
20) Allyl Chloride	5.735	41	459537	9.8875698	ppbv	96
21) Methylene Chloride	5.865	49	399380	9.5005121	ppbv	100
22) TERT-BUTYL ALCOHOL	5.865	59	954813	9.9823221	ppbv	98
23) Methyl Tert-Butyl Ether	6.029	73	1158316	9.8609160	ppbv	99
24) Trans-1,2-Dichloroethene	6.080	61	502230	10.0292695	ppbv	100
25) n-Hexane	6.216	57	601269	10.3618250	ppbv	100
26) 1,1-Dichloroethane	6.493	63	729556	10.0628973	ppbv	100
27) Vinyl Acetate	6.436	43	1011279	10.5170017	ppbv	100
28) ETHYL ACETATE	6.945	43	806033	10.2493019	ppbv	99
29) 2-Butanone (MEK)	6.991	72	241864	10.3045683	ppbv	100
30) cis-1,2-Dichloroethene	7.013	96	473465	10.0262699	ppbv	100
31) Tetrahydrofuran	7.268	42	462007	9.7274976	ppbv	100
32) Chloroform	7.262	83	858369	10.1711548	ppbv	99
33) Cyclohexane	7.477	84	614374	10.1962896	ppbv	100
34) 1,1,1-Trichloroethane	7.460	97	871308	10.4514584	ppbv	98
35) Carbon Tetrachloride	7.596	117	902496	10.4517563	ppbv	99
36) 2,2,4-Trimethylpentane	7.715	57	2216535	11.0385033	ppbv	100
38) Benzene	7.805	78	1456336	10.3081007	ppbv	100
39) 1,2-Dichloroethane	7.862	62	516439	10.2166516	ppbv	99
40) Heptane	7.839	43	748520	10.7793954	ppbv	99
41) Trichloroethene	8.382	95	638220	10.4056926	ppbv	100
42) TERT-AMYL ETHYL ETHER	8.461	73	464367	10.3344245	ppbv	99
43) METHYL CYCLOHEXANE	8.535	83	905685	10.8647611	ppbv	99
44) 1,2-Dichloropropane	8.659	63	530056	10.4116623	ppbv	99
45) Methyl Methacrylate	8.603	69	535571	10.7366401	ppbv	98
46) 1,4-Dioxane	8.733	88	385166	9.9811533	ppbv	99
47) Bromodichloromethane	8.886	83	1007694	10.7154479	ppbv	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042018A\
Data File : 0420A_11.D
Acq On : 20 Apr 2018 7:00 pm
Operator : 564
Sample : STD AMS 10.0 ppbv 18D20628
Misc : 18D20624
ALS Vial : 11 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 21 09:54:33 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:53:47 2018
Response via : Initial Calibration

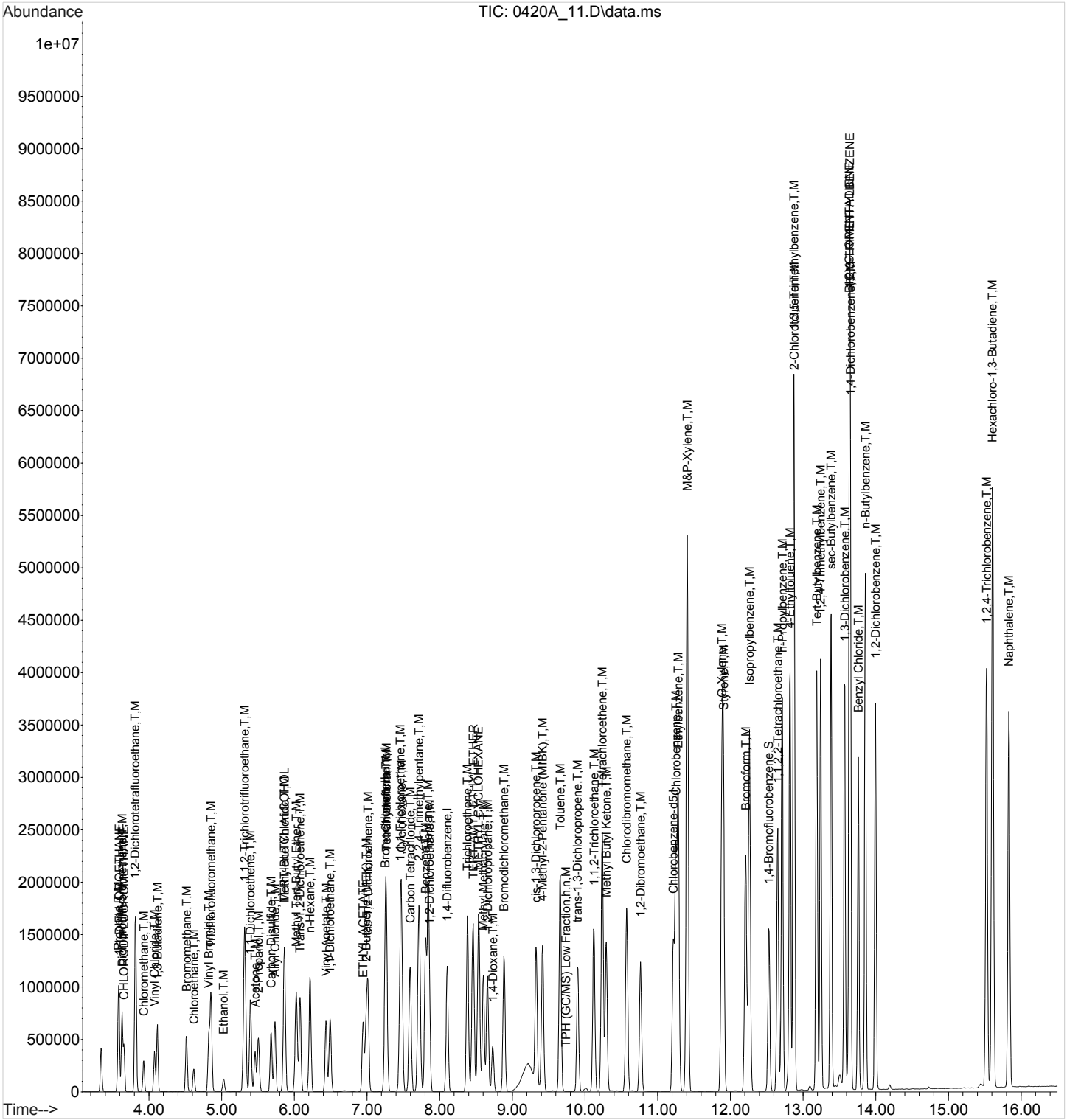
	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
48)	cis-1,3-Dichloropropene	9.327	75	950029	10.5958882 ppbv	99
49)	4-Methyl-2-Pentanone (...	9.417	43	1061680	10.2602965 ppbv	100
50)	Toluene	9.661	91	1881848	10.8898573 ppbv	99
51)	trans-1,3-Dichloropropene	9.898	75	831643	10.9163173 ppbv	100
52)	1,1,2-Trichloroethane	10.124	97	653261	10.8618419 ppbv	99
53)	Tetrachloroethene	10.238	166	1002448	10.7863465 ppbv	100
54)	Methyl Butyl Ketone	10.294	43	1059243	10.7110752 ppbv	100
55)	Chlorodibromomethane	10.571	129	1224433	11.3599962 ppbv	99
56)	1,2-Dibromoethane	10.764	107	1047819	10.9920241 ppbv	100
57)	Chlorobenzene	11.250	112	1597375	11.0888382 ppbv	98
59)	Ethylbenzene	11.284	91	2584331	11.2330636 ppbv	100
60)	M&P-Xylene	11.409	91	4008788	22.4435853 ppbv	100
61)	O-Xylene	11.884	91	2052661	11.2061185 ppbv	100
62)	Styrene	11.906	104	1689681	11.9232765 ppbv	100
63)	Bromoform	12.212	173	1392936	12.1120300 ppbv	100
64)	Isopropylbenzene	12.263	105	3019931	11.2830579 ppbv	100
65)	1,1,2,2-Tetrachloroethane	12.653	83	1488481	10.9478545 ppbv	99
66)	n-Propylbenzene	12.715	91	3370464	11.2545058 ppbv	99
67)	4-Ethyltoluene	12.823	105	2938729	11.2252944 ppbv	100
68)	2-Chlorotoluene	12.879	126	695795	11.1424394 ppbv	98
70)	1,3,5-Trimethylbenzene	12.874	105	2352511	11.1084672 ppbv	100
71)	Tert-Butylbenzene	13.191	119	2250782	11.0577009 ppbv	99
72)	1,2,4-Trimethylbenzene	13.241	105	2333467	11.1141040 ppbv	100
73)	sec-Butylbenzene	13.389	134	723243	11.0196745 ppbv	99
74)	1,3-Dichlorobenzene	13.575	146	1742031	11.6141278 ppbv	99
75)	1,4-Dichlorobenzene	13.654	146	1694982	11.3463381 ppbv	99
76)	1,2,3-TRIMETHYLBENZENE	13.643	105	2239262	10.7111651 ppbv	100
77)	DICYCLOPENTADIENE	13.637	66	1994045	10.1896728 ppbv	98
78)	Benzyl Chloride	13.762	91	2208248	12.1044165 ppbv	100
79)	n-Butylbenzene	13.858	91	2649084	10.9311219 ppbv	100
80)	1,2-Dichlorobenzene	13.999	146	1689061	11.3000401 ppbv	100
81)	1,2,4-Trichlorobenzene	15.527	180	1658384	12.1994786 ppbv	100
82)	Hexachloro-1,3-Butadiene	15.606	225	1620729	10.8464179 ppbv	99
83)	Naphthalene	15.832	128	3526892	11.2525846 ppbv	100
84)	TPH (GC/MS) Low Fraction	9.740	TIC	159854557m	468.8379123 ppbv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042018A\
Data File : 0420A_11.D
Acq On : 20 Apr 2018 7:00 pm
Operator : 564
Sample : STD AMS 10.0 ppbv 18D20628
Misc : 18D20624
ALS Vial : 11 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 21 09:54:33 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:53:47 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042018A\
Data File : 0420A_12.D
Acq On : 20 Apr 2018 7:42 pm
Operator : 564
Sample : STD AMS 25.0 ppbv 18C29708
Misc : 18D20624
ALS Vial : 12 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 21 09:55:24 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:54:39 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.251	130	268765	4.0000000	ppbv	# 0.00
37) 1,4-Difluorobenzene	8.105	114	1021568	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	11.216	117	914573	4.0000000	ppbv	0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	12.529	95	568469	4.1775060	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 104.44%			
Target Compounds						Qvalue
2) Propene	3.557	41	546882	24.8530148	ppbv	99
3) 1,1-DIFLUOROETHANE	3.574	51	780466	17.2723217	ppbv	100
4) Dichlorodifluoromethane	3.613	85	1561254	22.1764620	ppbv	100
5) CHLORODIFLUOROMETHANE	3.636	51	1051855	26.1161715	ppbv	99
6) 1,2-Dichlorotetrafluor...	3.795	85	2127902	26.0767672	ppbv	99
7) Chloromethane	3.908	50	700270	26.3604483	ppbv	100
8) Vinyl Chloride	4.060	62	836486	25.2831513	ppbv	99
9) 1,3-Butadiene	4.100	39	506338	23.9163822	ppbv	97
10) Bromomethane	4.502	94	772450	25.3401518	ppbv	99
11) Chloroethane	4.603	64	432666	24.3258305	ppbv	99
12) Vinyl Bromide	4.813	106	803284	24.8022256	ppbv	100
13) Trichlorofluoromethane	4.841	101	1892894	25.1812589	ppbv	99
14) Ethanol	5.016	45	317259	24.3236990	ppbv	98
15) 1,1,2-Trichlorotrifluo...	5.305	101	1830138	26.4407081	ppbv	99
16) 1,1-Dichloroethene	5.390	61	1326544	26.1619463	ppbv	100
17) Acetone	5.452	58	418273	25.3091121	ppbv	75
18) 2-Propanol	5.497	45	1699273	27.0970392	ppbv #	20
19) Carbon Disulfide	5.673	76	2012206	26.7962008	ppbv	100
20) Allyl Chloride	5.723	41	1097846	26.2628324	ppbv	100
21) Methylene Chloride	5.859	49	927836	24.6588187	ppbv	99
22) TERT-BUTYL ALCOHOL	5.854	59	2207569	25.6297166	ppbv	98
23) Methyl Tert-Butyl Ether	6.018	73	2700772	25.5713768	ppbv	100
24) Trans-1,2-Dichloroethene	6.074	61	1181541	26.1864645	ppbv	99
25) n-Hexane	6.210	57	1409020	26.8376868	ppbv	100
26) 1,1-Dichloroethane	6.487	63	1704026	26.0747164	ppbv	99
27) Vinyl Acetate	6.431	43	2376390	27.2622282	ppbv	100
28) ETHYL ACETATE	6.940	43	1853147	26.0807660	ppbv	99
29) 2-Butanone (MEK)	6.985	72	562376	26.5005794	ppbv	100
30) cis-1,2-Dichloroethene	7.008	96	1113546	26.1720278	ppbv	99
31) Tetrahydrofuran	7.262	42	1061322	24.8944126	ppbv	100
32) Chloroform	7.257	83	2040480	26.7867927	ppbv	99
33) Cyclohexane	7.471	84	1454429	26.7336252	ppbv	99
34) 1,1,1-Trichloroethane	7.460	97	2071824	27.4368600	ppbv	99
35) Carbon Tetrachloride	7.590	117	2178087	27.8479964	ppbv	100
36) 2,2,4-Trimethylpentane	7.715	57	5227594	28.5335830	ppbv	99
38) Benzene	7.805	78	3450597	27.2499427	ppbv	99
39) 1,2-Dichloroethane	7.856	62	1218019	26.9148974	ppbv	99
40) Heptane	7.839	43	1731624	27.6603477	ppbv	100
41) Trichloroethene	8.382	95	1513563	27.4996985	ppbv	100
42) TERT-AMYL ETHYL ETHER	8.456	73	1070337	26.5679131	ppbv	99
43) METHYL CYCLOHEXANE	8.535	83	2130129	28.3141315	ppbv	100
44) 1,2-Dichloropropane	8.659	63	1246895	27.2912108	ppbv	99
45) Methyl Methacrylate	8.603	69	1286245	28.6165986	ppbv	99
46) 1,4-Dioxane	8.727	88	851334	24.7148935	ppbv	99
47) Bromodichloromethane	8.886	83	2424893	28.6240589	ppbv	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042018A\
Data File : 0420A_12.D
Acq On : 20 Apr 2018 7:42 pm
Operator : 564
Sample : STD AMS 25.0 ppbv 18C29708
Misc : 18D20624
ALS Vial : 12 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 21 09:55:24 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:54:39 2018
Response via : Initial Calibration

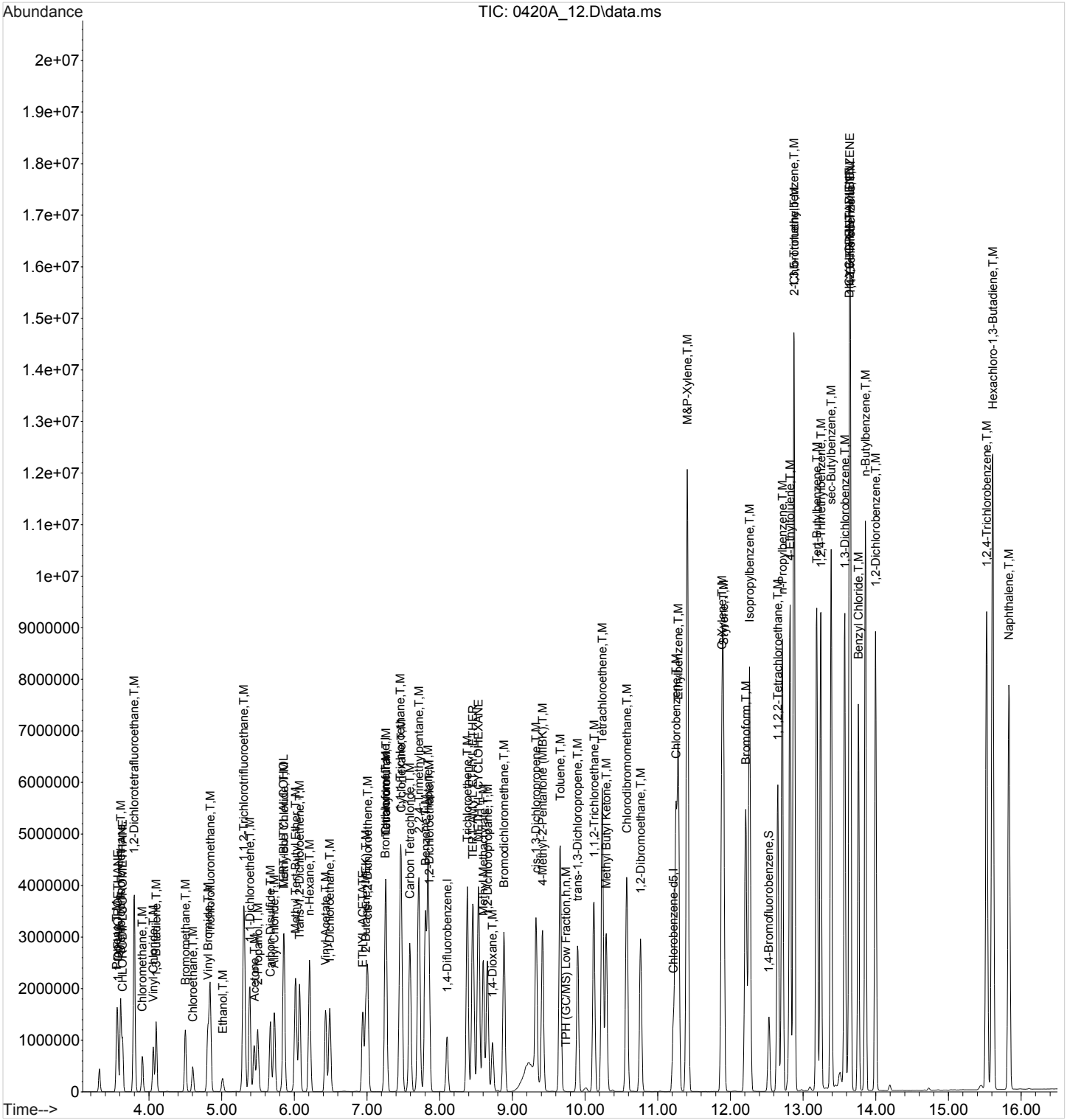
	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
48)	cis-1,3-Dichloropropene	9.327	75	2265685	28.0931728 ppbv	99
49)	4-Methyl-2-Pentanone (...	9.417	43	2381850	25.6976591 ppbv	100
50)	Toluene	9.661	91	4456029	28.5630926 ppbv	99
51)	trans-1,3-Dichloropropene	9.898	75	1975368	28.7120870 ppbv	99
52)	1,1,2-Trichloroethane	10.125	97	1554432	28.6390419 ppbv	99
53)	Tetrachloroethene	10.238	166	2394829	28.5800310 ppbv	99
54)	Methyl Butyl Ketone	10.294	43	2294784	25.7608263 ppbv	100
55)	Chlorodibromomethane	10.577	129	2952723	30.1695331 ppbv	99
56)	1,2-Dibromoethane	10.764	107	2518538	29.2288212 ppbv	100
57)	Chlorobenzene	11.250	112	3803919	29.1785018 ppbv #	94
59)	Ethylbenzene	11.284	91	6176154	29.1080819 ppbv	100
60)	M&P-Xylene	11.409	91	9285382	56.3747429 ppbv	100
61)	O-Xylene	11.884	91	4850109	28.7196371 ppbv	100
62)	Styrene	11.906	104	4039468	30.6468595 ppbv	99
63)	Bromoform	12.212	173	3402951	31.7404372 ppbv	100
64)	Isopropylbenzene	12.263	105	7299724	29.5538746 ppbv	100
65)	1,1,2,2-Tetrachloroethane	12.653	83	3560121	28.4920279 ppbv	100
66)	n-Propylbenzene	12.715	91	7986863	28.9097103 ppbv	99
67)	4-Ethyltoluene	12.823	105	7048463	29.1957446 ppbv	99
68)	2-Chlorotoluene	12.880	126	1583832	27.5320313 ppbv	97
70)	1,3,5-Trimethylbenzene	12.874	105	5257781	26.9610621 ppbv	98
71)	Tert-Butylbenzene	13.191	119	5321596	28.4090851 ppbv	99
72)	1,2,4-Trimethylbenzene	13.247	105	5518498	28.5414170 ppbv	100
73)	sec-Butylbenzene	13.389	134	1713123	28.3766291 ppbv	99
74)	1,3-Dichlorobenzene	13.575	146	4163113	29.9544811 ppbv	99
75)	1,4-Dichlorobenzene	13.654	146	3766388	27.2995761 ppbv	100
76)	1,2,3-TRIMETHYLBENZENE	13.643	105	4878155	25.4643155 ppbv	100
77)	DICYCLOPENTADIENE	13.638	66	4274193	23.9904943 ppbv	97
78)	Benzyl Chloride	13.762	91	5316383	31.2625196 ppbv	99
79)	n-Butylbenzene	13.858	91	6100867	27.3982755 ppbv	99
80)	1,2-Dichlorobenzene	14.000	146	4061329	29.4367789 ppbv	100
81)	1,2,4-Trichlorobenzene	15.527	180	3917626	30.8807831 ppbv	100
82)	Hexachloro-1,3-Butadiene	15.612	225	3687860	26.8885755 ppbv	99
83)	Naphthalene	15.832	128	8036326	27.7944902 ppbv	100
84)	TPH (GC/MS) Low Fraction	9.740	TIC	372821214m	1204.2615004 ppbv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042018A\
Data File : 0420A_12.D
Acq On : 20 Apr 2018 7:42 pm
Operator : 564
Sample : STD AMS 25.0 ppbv 18C29708
Misc : 18D20624
ALS Vial : 12 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 21 09:55:24 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:54:39 2018
Response via : Initial Calibration



ACCOUNT:	PROJECT:	SDG:	DATE/TIME:	PAGE:
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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042018A\
Data File : 0420A_13.D
Acq On : 20 Apr 2018 8:29 pm
Operator : 564
Sample : STD AMS 50.0 ppbv 18C29708
Misc : 18D20624
ALS Vial : 13 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 21 09:56:16 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:55:30 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.256	130	287170	4.0000000	ppbv	# 0.01
37) 1,4-Difluorobenzene	8.111	114	1123328	4.0000000	ppbv	0.01
58) Chlorobenzene-d5	11.216	117	977680	4.0000000	ppbv	0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	12.534	95	603544	4.1286185	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 103.22%			
Target Compounds						Qvalue
2) Propene	3.574	41	1100896	46.8542715	ppbv	100
3) 1,1-DIFLUOROETHANE	3.591	51	1577209	33.8296679	ppbv	100
4) Dichlorodifluoromethane	3.630	85	2430195	32.7173360	ppbv	100
5) CHLORODIFLUOROMETHANE	3.653	51	2130679	49.2670093	ppbv	99
6) 1,2-Dichlorotetrafluor...	3.811	85	4040687	46.1230019	ppbv	98
7) Chloromethane	3.925	50	1447572	50.6924243	ppbv	100
8) Vinyl Chloride	4.077	62	1715105	48.4563491	ppbv	99
9) 1,3-Butadiene	4.117	39	1032853	45.8800382	ppbv	97
10) Bromomethane	4.513	94	1622185	49.7298095	ppbv	99
11) Chloroethane	4.615	64	922815	48.7042019	ppbv	98
12) Vinyl Bromide	4.824	106	1664078	48.1294358	ppbv	100
13) Trichlorofluoromethane	4.852	101	3921851	48.7894759	ppbv	99
14) Ethanol	5.033	45	699398	50.3362734	ppbv	100
15) 1,1,2-Trichlorotrifluo...	5.316	101	3740953	50.2612347	ppbv	98
16) 1,1-Dichloroethene	5.395	61	2724344	50.0272884	ppbv	100
17) Acetone	5.463	58	872458	49.3399850	ppbv	71
18) 2-Propanol	5.514	45	3598387	53.2073026	ppbv #	23
19) Carbon Disulfide	5.684	76	4169412	51.5532420	ppbv	99
20) Allyl Chloride	5.735	41	2278249	50.7229226	ppbv	100
21) Methylene Chloride	5.865	49	1855818	46.2305566	ppbv	98
22) TERT-BUTYL ALCOHOL	5.870	59	4627078	50.1367528	ppbv	97
23) Methyl Tert-Butyl Ether	6.029	73	5634951	49.8067844	ppbv	99
24) Trans-1,2-Dichloroethene	6.080	61	2445709	50.4640849	ppbv	100
25) n-Hexane	6.221	57	2877655	50.8824014	ppbv	99
26) 1,1-Dichloroethane	6.498	63	3508007	49.9997686	ppbv	99
27) Vinyl Acetate	6.442	43	4964125	52.7685600	ppbv	100
28) ETHYL ACETATE	6.951	43	3993554	52.3507103	ppbv	99
29) 2-Butanone (MEK)	6.996	72	1169610	51.2408716	ppbv	100
30) cis-1,2-Dichloroethene	7.019	96	2288201	50.0726587	ppbv	99
31) Tetrahydrofuran	7.273	42	2144749	47.1051821	ppbv	99
32) Chloroform	7.268	83	4182190	50.9789089	ppbv	99
33) Cyclohexane	7.483	84	2936759	50.1341745	ppbv	98
34) 1,1,1-Trichloroethane	7.466	97	4247135	52.0754371	ppbv	99
35) Carbon Tetrachloride	7.596	117	4548179	53.7436586	ppbv	100
36) 2,2,4-Trimethylpentane	7.720	57	10723685	53.9342496	ppbv	99
38) Benzene	7.811	78	7135419	50.7376404	ppbv	99
39) 1,2-Dichloroethane	7.862	62	2536997	50.5520562	ppbv	98
40) Heptane	7.845	43	3435423	49.3219317	ppbv	100
41) Trichloroethene	8.388	95	3155197	51.5604025	ppbv	100
42) TERT-AMYL ETHYL ETHER	8.461	73	2234928	50.1008680	ppbv	99
43) METHYL CYCLOHEXANE	8.541	83	4409552	52.5293745	ppbv	100
44) 1,2-Dichloropropane	8.665	63	2573606	50.7102268	ppbv	98
45) Methyl Methacrylate	8.608	69	2683884	53.4433298	ppbv	99
46) 1,4-Dioxane	8.733	88	1798068	47.5309215	ppbv	100
47) Bromodichloromethane	8.891	83	5060124	53.4590307	ppbv	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042018A\
Data File : 0420A_13.D
Acq On : 20 Apr 2018 8:29 pm
Operator : 564
Sample : STD AMS 50.0 ppbv 18C29708
Misc : 18D20624
ALS Vial : 13 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 21 09:56:16 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:55:30 2018
Response via : Initial Calibration

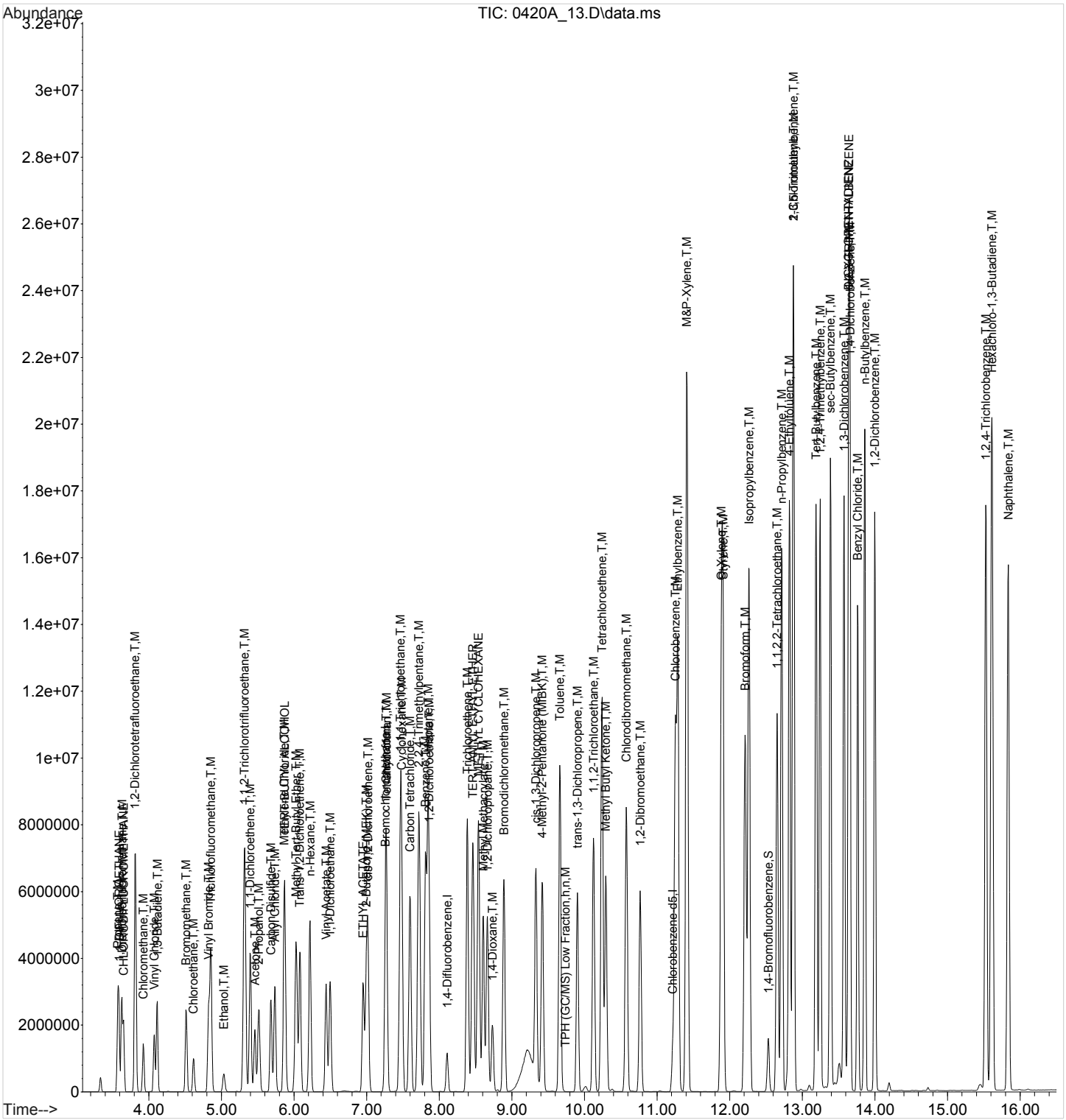
	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
48)	cis-1,3-Dichloropropene	9.333	75	4677487	52.0289160 ppbv	100
49)	4-Methyl-2-Pentanone (...	9.417	43	4951076	48.4278188 ppbv	99
50)	Toluene	9.661	91	9144533	52.4754125 ppbv	99
51)	trans-1,3-Dichloropropene	9.904	75	4154395	54.0229918 ppbv	99
52)	1,1,2-Trichloroethane	10.124	97	3218075	53.0610380 ppbv	99
53)	Tetrachloroethene	10.243	166	5006521	53.4846498 ppbv	99
54)	Methyl Butyl Ketone	10.294	43	4844297	49.2882463 ppbv	100
55)	Chlorodibromomethane	10.577	129	6102716	55.4324941 ppbv	99
56)	1,2-Dibromoethane	10.769	107	5224793	54.1259928 ppbv	100
57)	Chlorobenzene	11.250	112	7742997	53.0285995 ppbv	99
59)	Ethylbenzene	11.284	91	12489683	54.0767572 ppbv	99
60)	M&P-Xylene	11.409	91	17666156	98.9325988 ppbv	100
61)	O-Xylene	11.884	91	9635320	52.5042310 ppbv	100
62)	Styrene	11.912	104	7998559	55.3770957 ppbv	98
63)	Bromoform	12.212	173	7028506	59.5418837 ppbv	100
64)	Isopropylbenzene	12.268	105	14668397	54.4515412 ppbv	99
65)	1,1,2,2-Tetrachloroethane	12.653	83	7053093	51.9961663 ppbv	100
66)	n-Propylbenzene	12.715	91	15589687	51.8853616 ppbv	97
67)	4-Ethyltoluene	12.823	105	13697885	52.1046233 ppbv	98
68)	2-Chlorotoluene	12.879	126	2831446	45.5301461 ppbv	100
70)	1,3,5-Trimethylbenzene	12.879	105	9606262	45.6816455 ppbv	99
71)	Tert-Butylbenzene	13.191	119	10334285	50.8377792 ppbv	99
72)	1,2,4-Trimethylbenzene	13.247	105	10790794	51.3981267 ppbv	100
73)	sec-Butylbenzene	13.389	134	3347808	51.1075786 ppbv	99
74)	1,3-Dichlorobenzene	13.575	146	8349515	54.9879003 ppbv	99
75)	1,4-Dichlorobenzene	13.660	146	6370241	42.7555252 ppbv	97
76)	1,2,3-TRIMETHYLBENZENE	13.643	105	8178775	39.8557531 ppbv	99
77)	DICYCLOPENTADIENE	13.637	66	7483589	39.4702221 ppbv	99
78)	Benzyl Chloride	13.762	91	11000137	58.8714484 ppbv	99
79)	n-Butylbenzene	13.864	91	11751116	48.8458623 ppbv	99
80)	1,2-Dichlorobenzene	13.999	146	8150514	54.1936294 ppbv	100
81)	1,2,4-Trichlorobenzene	15.527	180	7883868	56.6527574 ppbv	100
82)	Hexachloro-1,3-Butadiene	15.612	225	6632699	44.8616449 ppbv	100
83)	Naphthalene	15.838	128	16656475	53.2286205 ppbv	99
84)	TPH (GC/MS) Low Fraction	9.740	TIC	757562263m	2282.7592479 ppbv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042018A\
Data File : 0420A_13.D
Acq On : 20 Apr 2018 8:29 pm
Operator : 564
Sample : STD AMS 50.0 ppbv 18C29708
Misc : 18D20624
ALS Vial : 13 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 21 09:56:16 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:55:30 2018
Response via : Initial Calibration



7A-OR

GC/MS CONTINUING CALIBRATION VERIFICATION

SDG:	L988471	**Calibration (begin) date/time:**	04/17/18 14:39
Instrument ID:	AIRMS2	**Calibration (end) date/time:**	04/17/18 22:05
Lab File ID:	0427_01	**Analysis date/time:**	04/27/18 08:29
Analytical Method:	TO-15	**Sample ID:**	ICV

Analyte	Avg. RRF	RRF	Min. RRF	Diff.	Max Diff.	True Value	Result	Result	Limits
				%	%	mg/l	mg/l	% Rec.	%
1,1,1-TRICHLOROETHANE	1.562646	1.853482		18.60		3.75	4.44794	119	70 - 130
1,1,2,2-TETRACHLOROETHANE	0.691477	0.806419		16.60		3.75	4.373351	117	70 - 130
1,1,2-TRICHLOROETHANE	0.224370	0.27208890		21.30		3.75	4.54754	121	70 - 130
1,1,2-TRICHLOROTRIFLUOROETHANE	1.287823	1.625371		26.20		3.75	4.732903	126	70 - 130
1,1-DICHLOROETHANE	1.823441	2.217421		21.60		3.75	4.560241	122	70 - 130
1,1-DICHLOROETHENE	1.566069	1.845189		17.80		3.75	4.418361	118	70 - 130
1,2,4-TRICHLOROBENZENE	0.178224	0.24568450		37.90		3.75	5.169436	138	70 - 130
1,2,4-TRIMETHYLBENZENE	0.997292	1.123547		12.70		3.75	4.224743	113	70 - 130
1,2-DIBROMOETHANE	0.317511	0.40720810		28.30		3.75	4.80937	128	70 - 130
1,2-DICHLOROBENZENE	0.467639	0.55307570		18.30		3.75	4.435115	118	70 - 130
1,2-DICHLOROETHANE	0.338574	0.38738040		14.40		3.75	4.290571	114	70 - 130
1,2-DICHLOROPROPANE	0.289412	0.35397570		22.30		3.75	4.586563	122	70 - 130
1,2-DICHLOROTETRAFLUOROETHANE	1.767864	2.370538		34.10		3.75	5.028395	134	70 - 130
1,3,5-TRIMETHYLBENZENE	1.035215	1.172475		13.30		3.75	4.247214	113	70 - 130
1,3-BUTADIENE	1.075303	1.270050		18.10		3.75	4.429158	118	70 - 130
1,3-DICHLOROBENZENE	0.509978	0.60339250		18.30		3.75	4.436899	118	70 - 130
1,4-DICHLOROBENZENE	0.549009	0.61739720		12.50		3.75	4.217128	112	70 - 130
1,4-DIOXANE	0.119651	0.141030		17.90		3.75	4.420046	118	70 - 130
2,2,4-TRIMETHYLPENTANE	5.946102	7.236777		21.70		3.75	4.563984	122	70 - 130
2-BUTANONE (MEK)	0.467796	0.57569530		23.10		3.75	4.614958	123	70 - 130
2-CHLOROTOLUENE	1.070782	1.188605		11		3.75	4.16263	111	70 - 130
2-PROPANOL	2.169996	2.547938		17.40		3.75	4.403129	117	70 - 130
4-ETHYLTOLUENE	1.243015	1.446083		16.30		3.75	4.362626	116	70 - 130
4-METHYL-2-PENTANONE (MIBK)	0.842238	0.99225090		17.80		3.75	4.417922	118	70 - 130
ACETONE	1.608930	1.975416		22.80		3.75	4.604182	123	70 - 130
ALLYL CHLORIDE	1.759858	2.113997		20.10		3.75	4.504619	120	70 - 130
BENZENE	0.672037	0.81495870		21.30		3.75	4.54751	121	70 - 130
BENZYL CHLORIDE	0.821559	0.95366310		16.10		3.75	4.352986	116	70 - 130
BROMODICHLOROMETHANE	0.442118	0.515946		16.70		3.75	4.376202	117	70 - 130
BROMOFORM	0.385058	0.48985220		27.20		3.75	4.770568	127	70 - 130
BROMOMETHANE	0.619008	0.70706540		14.20		3.75	4.283459	114	70 - 130
CARBON DISULFIDE	1.584733	2.000441		26.20		3.75	4.733703	126	70 - 130
CARBON TETRACHLORIDE	1.384442	1.672914		20.80		3.75	4.531373	121	70 - 130
CHLOROBENZENE	0.502656	0.68231150		35.70		3.75	5.090292	136	70 - 130
CHLORODIBROMOMETHANE	0.345020	0.42228730		22.40		3.75	4.589816	122	70 - 130
CHLOROETHANE	0.513029	0.597250		16.40		3.75	4.365615	116	70 - 130
CHLOROFORM	1.688124	1.986426		17.70		3.75	4.412648	118	70 - 130
CHLOROMETHANE	1.011303	1.252223		23.80		3.75	4.643354	124	70 - 130
CIS-1,2-DICHLOROETHENE	1.694048	2.076325		22.60		3.75	4.596221	123	70 - 130
CIS-1,3-DICHLOROPROPENE	0.422173	0.52071420		23.30		3.75	4.625305	123	70 - 130
CYCLOHEXANE	1.189044	1.479617		24.40		3.75	4.66641	124	70 - 130
DICHLORODIFLUOROMETHANE	1.572582	1.768558		12.50		3.75	4.217329	112	70 - 130
ETHANOL	0.336672	0.35798680		6.33		3.75	3.987412	106	70 - 130
ETHYLBENZENE	1.207762	1.436374		18.90		3.75	4.459821	119	70 - 130
HEPTANE	0.648631	0.76499210		17.90		3.75	4.42273	118	70 - 130
HEXACHLORO-1,3-BUTADIENE	0.319234	0.39959320		25.20		3.75	4.693976	125	70 - 130
ISOPROPYLBENZENE	1.221884	1.459480		19.40		3.75	4.479189	119	70 - 130
M&P-XYLENE	0.930094	1.087360		16.90		7.50	8.768146	117	70 - 130

7A-OR

GC/MS CONTINUING CALIBRATION VERIFICATION

SDG:	L988471	**Calibration (begin) date/time:**	04/17/18 14:39
Instrument ID:	AIRMS2	**Calibration (end) date/time:**	04/17/18 22:05
Lab File ID:	0427_01	**Analysis date/time:**	04/27/18 08:29
Analytical Method:	TO-15	**Sample ID:**	ICV

Analyte	Avg. RRF	RRF	Min. RRF	Diff.	Max Diff.	True Value	Result	Result	Limits
				%	%	mg/l	mg/l	% Rec.	%
METHYL BUTYL KETONE	0.731592	0.88964750		21.60		3.75	4.560163	122	70 - 130
METHYL METHACRYLATE	0.250597	0.30476160		21.60		3.75	4.560534	122	70 - 130
METHYL TERT-BUTYL ETHER	2.641137	3.153517		19.40		3.75	4.477499	119	70 - 130
METHYLENE CHLORIDE	1.337557	1.589052		18.80		3.75	4.455096	119	70 - 130
N-HEXANE	1.656550	2.016522		21.70		3.75	4.564884	122	70 - 130
NAPHTHALENE	0.452391	0.60016840		32.70		3.75	4.974974	133	70 - 130
O-XYLENE	0.930222	1.075135		15.60		3.75	4.334187	116	70 - 130
PROPENE	1.074081	1.269547		18.20		3.75	4.432442	118	70 - 130
STYRENE	0.692492	0.81755130		18.10		3.75	4.427226	118	70 - 130
TETRACHLOROETHENE	0.274185	0.31043910		13.20		3.75	4.245845	113	70 - 130
TETRAHYDROFURAN	1.702784	1.971901		15.80		3.75	4.342671	116	70 - 130
TOLUENE	0.725093	0.89111050		22.90		3.75	4.608603	123	70 - 130
TRANS-1,2-DICHLOROETHENE	0.619816	0.77895270		25.70		3.75	4.712804	126	70 - 130
TRANS-1,3-DICHLOROPROPENE	0.360274	0.44381570		23.20		3.75	4.619569	123	70 - 130
TRICHLOROETHENE	0.244527	0.28745840		17.60		3.75	4.408391	118	70 - 130
TRICHLOROFLUOROMETHANE	1.540337	1.863770		21		3.75	4.537407	121	70 - 130
VINYL ACETATE	3.201072	4.065223		27		3.75	4.762337	127	70 - 130
VINYL BROMIDE	0.571554	0.73360970		28.40		3.75	4.813259	128	70 - 130
VINYL CHLORIDE	1.015402	1.290531		27.10		3.75	4.766082	127	70 - 130
1,4-BROMOFLUOROBENZENE	0.632011	0.59771110		5.43		4	3.782915	94.60	60 - 140

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_01.D
Acq On : 27 Apr 2018 8:29 am
Operator : 564
Sample : ICV AMS 3.75 ppbv 18D17266
Misc :
ALS Vial : 1 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 27 10:38:07 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:08:22 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.809	130	1894893	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	9.891	114	8072465	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	13.115	117	6944703	4.0000000	ppbv	# 0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	14.285	95	4150926	3.7829150	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 94.57%			
Target Compounds						Qvalue
2) Propene	4.064	41	2255303	4.4324421	ppbv	98
3) 1,1-DIFLUOROETHANE	4.072	65	1304063	4.7620538	ppbv	94
4) Dichlorodifluoromethane	4.127	85	3141777	4.2173289	ppbv	100
5) CHLORODIFLUOROMETHANE	4.158	67	490887	4.3459764	ppbv	93
6) 1,2-Dichlorotetrafluor...	4.354	85	4211171	5.0283954	ppbv	98
7) Chloromethane	4.457	50	2224527	4.6433540	ppbv	99
8) Vinyl Chloride	4.651	62	2292579	4.7660816	ppbv	99
9) 1,3-Butadiene	4.713	39	2256196	4.4291580	ppbv	93
10) Bromomethane	5.199	94	1256075	4.2834591	ppbv	98
11) Chloroethane	5.356	64	1060992	4.3656152	ppbv	100
12) Vinyl Bromide	5.629	106	1303230	4.8132588	ppbv	100
13) Trichlorofluoromethane	5.710	101	3310916	4.5374070	ppbv	100
14) Ethanol	6.036	45	635950	3.9874117	ppbv	95
15) 1,1,2-Trichlorotrifluo...	6.401	101	2887410	4.7329037	ppbv	97
16) 1,1-Dichloroethene	6.427	61	3277908	4.4183612	ppbv	96
17) Acetone	6.528	43	3509251	4.6041817	ppbv	100
18) 2-Propanol	6.708	45	4526316	4.4031286	ppbv	100
19) Carbon Disulfide	6.721	76	3553708	4.7337027	ppbv	95
20) Allyl Chloride	6.893	41	3755436	4.5046188	ppbv	97
21) Methylene Chloride	7.061	49	2822890	4.4550957	ppbv	98
22) TERT-BUTYL ALCOHOL	7.194	59	5129612	4.4513218	ppbv	98
23) Methyl Tert-Butyl Ether	7.367	73	5602103	4.4774987	ppbv	100
24) Trans-1,2-Dichloroethene	7.368	96	1383780	4.7128041	ppbv	92
25) n-Hexane	7.634	57	3582275	4.5648836	ppbv	95
26) 1,1-Dichloroethane	7.880	63	3939165	4.5602410	ppbv	100
27) Vinyl Acetate	7.904	43	7221715	4.7623371	ppbv	99
28) ETHYL ACETATE	8.575	70	447202	4.6899267	ppbv	98
29) 2-Butanone (MEK)	8.546	72	1022701	4.6149577	ppbv	99
30) cis-1,2-Dichloroethene	8.541	61	3688513	4.5962210	ppbv	99
31) Tetrahydrofuran	8.866	42	3503008	4.3426707	ppbv	98
32) Chloroform	8.868	83	3528810	4.4126475	ppbv	99
33) Cyclohexane	9.113	84	2628484	4.6664102	ppbv	93
34) 1,1,1-Trichloroethane	9.080	97	3292640	4.4479399	ppbv	99
35) Carbon Tetrachloride	9.248	117	2971868	4.5313732	ppbv	99
36) 2,2,4-Trimethylpentane	9.486	57	12855860	4.5639838	ppbv	97
38) Benzene	9.477	78	6167555	4.5475096	ppbv	96
39) 1,2-Dichloroethane	9.533	62	2931670	4.2905713	ppbv	99
40) Heptane	9.678	43	5789411	4.4227299	ppbv	97
41) Trichloroethene	10.183	95	2175467	4.4083914	ppbv	97
42) TERT-AMYL ETHYL ETHER	10.388	73	2057448	4.3546234	ppbv	94
43) METHYL CYCLOHEXANE	10.366	83	3663002	4.6174818	ppbv	93
44) 1,2-Dichloropropane	10.450	63	2678865	4.5865633	ppbv	94
45) Methyl Methacrylate	10.509	69	2306416	4.5605335	ppbv	100
46) 1,4-Dioxane	10.585	88	1067306	4.4200465	ppbv	98
47) Bromodichloromethane	10.729	83	3904646	4.3762016	ppbv	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_01.D
Acq On : 27 Apr 2018 8:29 am
Operator : 564
Sample : ICV AMS 3.75 ppbv 18D17266
Misc :
ALS Vial : 1 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 27 10:38:07 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:08:22 2018
Response via : Initial Calibration

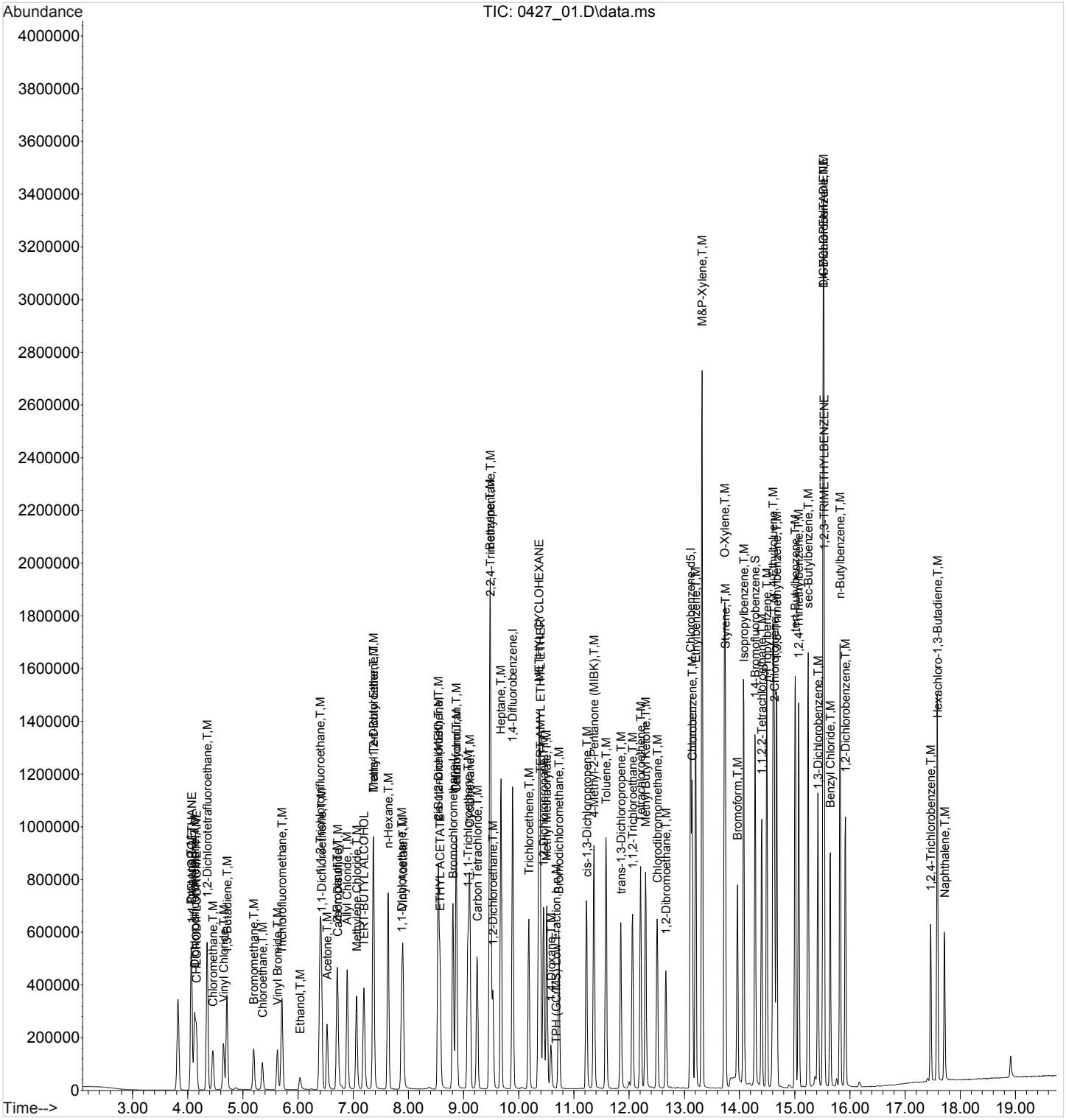
	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
48)	cis-1,3-Dichloropropene	11.228	75	3940732	4.6253047 ppbv	94
49)	4-Methyl-2-Pentanone (...	11.363	43	7509291	4.4179218 ppbv	98
50)	Toluene	11.584	91	6743867	4.6086029 ppbv	100
51)	trans-1,3-Dichloropropene	11.851	75	3358769	4.6195690 ppbv	93
52)	1,1,2-Trichloroethane	12.062	97	2059151	4.5475395 ppbv	98
53)	Tetrachloroethene	12.209	166	2349383	4.2458448 ppbv	98
54)	Methyl Butyl Ketone	12.300	43	6732795	4.5601635 ppbv	99
55)	Chlorodibromomethane	12.510	129	3195843	4.5898162 ppbv	99
56)	1,2-Dibromoethane	12.668	107	3081725	4.8093699 ppbv	98
57)	Chlorobenzene	13.145	112	5163690	5.0902916 ppbv #	91
59)	Ethylbenzene	13.208	91	9351742	4.4598206 ppbv	99
60)	M&P-Xylene	13.324	91	14158856	8.7681454 ppbv	96
61)	O-Xylene	13.728	91	6999839	4.3341872 ppbv	97
62)	Styrene	13.744	104	5322798	4.4272257 ppbv	90
63)	Bromoform	13.964	173	3189261	4.7705684 ppbv	100
64)	Isopropylbenzene	14.077	105	9502175	4.4791888 ppbv	97
65)	1,1,2,2-Tetrachloroethane	14.403	83	5250319	4.3733508 ppbv	98
66)	n-Propylbenzene	14.496	91	11688359	4.3662675 ppbv	98
67)	4-Ethyltoluene	14.612	105	9414953	4.3626257 ppbv	98
68)	2-Chlorotoluene	14.632	91	7738601	4.1626295 ppbv	95
70)	1,3,5-Trimethylbenzene	14.675	105	7633583	4.2472139 ppbv	97
71)	tert-Butylbenzene	15.012	119	7042760	4.3730739 ppbv	93
72)	1,2,4-Trimethylbenzene	15.075	105	7315030	4.2247428 ppbv	97
73)	sec-Butylbenzene	15.245	105	11227213	4.2808260 ppbv	98
74)	1,3-Dichlorobenzene	15.423	146	3928483	4.4368993 ppbv #	93
75)	1,4-Dichlorobenzene	15.521	146	4019663	4.2171279 ppbv #	90
76)	1,2,3-TRIMETHYLBENZENE	15.533	105	7241121	4.0356173 ppbv	97
77)	DICYCLOPENTADIENE	15.520	66	13640279	4.0865873 ppbv	97
78)	Benzyl Chloride	15.645	91	6208975	4.3529860 ppbv	96
79)	n-Butylbenzene	15.825	91	8882675	4.2706448 ppbv	98
80)	1,2-Dichlorobenzene	15.921	146	3600887	4.4351151 ppbv	98
81)	1,2,4-Trichlorobenzene	17.467	180	1599568	5.1694356 ppbv	98
82)	Hexachloro-1,3-Butadiene	17.587	225	2601615	4.6939757 ppbv	92
83)	Naphthalene	17.717	128	3907492	4.9749742 ppbv	97
84)	TPH (GC/MS) Low Fraction	10.675	TIC	778619947m	181.2124150 ppbv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_01.D
Acq On : 27 Apr 2018 8:29 am
Operator : 564
Sample : ICV AMS 3.75 ppbv 18D17266
Misc :
ALS Vial : 1 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 27 10:38:07 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:08:22 2018
Response via : Initial Calibration



7A-OR

GC/MS CONTINUING CALIBRATION VERIFICATION

SDG:	L988471	**Calibration (begin) date/time:**	04/24/18 11:33
Instrument ID:	AIRMS4	**Calibration (end) date/time:**	04/24/18 18:13
Lab File ID:	0427_01	**Analysis date/time:**	04/27/18 08:29
Analytical Method:	TO-15	**Sample ID:**	ICV

Analyte	Avg. RRF	RRF	Min. RRF	Diff.	Max Diff.	True Value	Result	Result	Limits
				%	%	mg/l	mg/l	% Rec.	%
1,1,1-TRICHLOROETHANE	1.393206	1.306702		6.21		3.75	3.517163	93.80	70 - 130
1,1,2,2-TETRACHLOROETHANE	0.745534	0.72826810		2.32		3.75	3.663156	97.70	70 - 130
1,1,2-TRICHLOROETHANE	0.237020	0.21598270		8.88		3.75	3.417163	91.10	70 - 130
1,1,2-TRICHLOROTRIFLUOROETHANE	1.425922	1.3514		5.23		3.75	3.554016	94.80	70 - 130
1,1-DICHLOROETHANE	1.171152	1.040344		11.20		3.75	3.331155	88.80	70 - 130
1,1-DICHLOROETHENE	0.905653	0.80990590		10.60		3.75	3.353542	89.40	70 - 130
1,2,4-TRICHLOROBENZENE	0.504536	0.68021710		34.80		3.75	5.055759	135	70 - 130
1,2,4-TRIMETHYLBENZENE	1.027682	1.057942		2.94		3.75	3.860418	103	70 - 130
1,2-DIBROMOETHANE	0.361635	0.344787		4.66		3.75	3.575293	95.30	70 - 130
1,2-DICHLOROBENZENE	0.782465	0.844207		7.89		3.75	4.0459	108	70 - 130
1,2-DICHLOROETHANE	0.193304	0.176877		8.50		3.75	3.431322	91.50	70 - 130
1,2-DICHLOROPROPANE	0.216465	0.19716430		8.92		3.75	3.415642	91.10	70 - 130
1,2-DICHLOROTETRAFLUOROETHANE	0.298013	0.23532560		21		3.75	2.961191	79	70 - 130
1,3,5-TRIMETHYLBENZENE	1.052496	1.059662		0.6810		3.75	3.775535	101	70 - 130
1,3-BUTADIENE	0.375346	0.32012150		14.70		3.75	3.198267	85.30	70 - 130
1,3-DICHLOROBENZENE	0.766694	0.83242380		8.57		3.75	4.071492	109	70 - 130
1,4-DICHLOROBENZENE	0.731525	0.80595060		10.20		3.75	4.131527	110	70 - 130
1,4-DIOXANE	0.126767	0.12661230		0.1220		3.75	3.745431	99.90	70 - 130
2,2,4-TRIMETHYLPENTANE	3.101355	2.782745		10.30		3.75	3.364753	89.70	70 - 130
2-BUTANONE (MEK)	0.284804	0.29602120		3.94		3.75	3.89769	104	70 - 130
2-CHLOROTOLUENE	0.346801	0.35571890		2.57		3.75	3.846435	103	70 - 130
2-PROPANOL	0.860839	0.79306250		7.87		3.75	3.454751	92.10	70 - 130
4-ETHYLTOLUENE	1.249615	1.288174		3.09		3.75	3.865713	103	70 - 130
4-METHYL-2-PENTANONE (MIBK)	0.373482	0.33214510		11.10		3.75	3.334953	88.90	70 - 130
ACETONE	0.558395	0.515017		7.77		3.75	3.458689	92.20	70 - 130
ALLYL CHLORIDE	0.699366	0.59912930		14.30		3.75	3.21253	85.70	70 - 130
BENZENE	0.597842	0.57213910		4.30		3.75	3.588775	95.70	70 - 130
BENZYL CHLORIDE	0.755689	0.88384960		17		3.75	4.385977	117	70 - 130
BROMODICHLOROMETHANE	0.422749	0.396644		6.18		3.75	3.518438	93.80	70 - 130
BROMOFORM	0.745463	0.80758630		8.33		3.75	4.062506	108	70 - 130
BROMOMETHANE	0.706528	0.67055650		5.09		3.75	3.559075	94.90	70 - 130
CARBON DISULFIDE	1.455702	1.342093		7.80		3.75	3.457335	92.20	70 - 130
CARBON TETRACHLORIDE	1.494089	1.417637		5.12		3.75	3.558115	94.90	70 - 130
CHLOROBENZENE	0.504606	0.46636340		7.58		3.75	3.465796	92.40	70 - 130
CHLORODIBROMOMETHANE	0.461373	0.43046480		6.70		3.75	3.498781	93.30	70 - 130
CHLOROETHANE	0.320595	0.29281590		8.66		3.75	3.425073	91.30	70 - 130
CHLOROFORM	1.417428	1.305449		7.90		3.75	3.453745	92.10	70 - 130
CHLOROMETHANE	0.534908	0.46635260		12.80		3.75	3.269385	87.20	70 - 130
CIS-1,2-DICHLOROETHENE	0.987847	0.92909280		5.95		3.75	3.526959	94.10	70 - 130
CIS-1,3-DICHLOROPROPENE	0.349469	0.33877350		3.06		3.75	3.635235	96.90	70 - 130
CYCLOHEXANE	0.884545	0.83980890		5.06		3.75	3.560343	94.90	70 - 130
DICHLORODIFLUOROMETHANE	0.769380	0.66207280		13.90		3.75	3.226977	86.10	70 - 130
ETHANOL	0.161123	0.14527890		9.83		3.75	3.381241	90.20	70 - 130
ETHYLBENZENE	1.112488	1.122159		0.8690		3.75	3.782598	101	70 - 130
HEPTANE	0.289323	0.24604450		15		3.75	3.189049	85	70 - 130
HEXACHLORO-1,3-BUTADIENE	0.715320	0.79268140		10.80		3.75	4.155559	111	70 - 130
ISOPROPYLBENZENE	1.264192	1.268217		0.3180		3.75	3.76194	100	70 - 130
M&P-XYLENE	0.861038	0.85798950		0.3540		7.50	7.473444	99.60	70 - 130

7A-OR

GC/MS CONTINUING CALIBRATION VERIFICATION

SDG:	L988471	**Calibration (begin) date/time:**	04/24/18 11:33
Instrument ID:	AIRMS4	**Calibration (end) date/time:**	04/24/18 18:13
Lab File ID:	0427_01	**Analysis date/time:**	04/27/18 08:29
Analytical Method:	TO-15	**Sample ID:**	ICV

Analyte	Avg. RRF	RRF	Min. RRF	Diff.	Max Diff.	True Value	Result	Result	Limits
				%	%	mg/l	mg/l	% Rec.	%
METHYL BUTYL KETONE	0.267715	0.23452410		12.40		3.75	3.285083	87.60	70 - 130
METHYL METHACRYLATE	0.261968	0.23199880		11.40		3.75	3.320997	88.60	70 - 130
METHYL TERT-BUTYL ETHER	1.674238	1.579604		5.65		3.75	3.538035	94.30	70 - 130
METHYLENE CHLORIDE	0.684414	0.57832360		15.50		3.75	3.168713	84.50	70 - 130
N-HEXANE	0.874541	0.80201440		8.29		3.75	3.439011	91.70	70 - 130
NAPHTHALENE	1.139922	1.386603		21.60		3.75	4.561504	122	70 - 130
O-XYLENE	0.889791	0.87789330		1.34		3.75	3.699856	98.70	70 - 130
PROPENE	0.269541	0.33770890		25.30		3.75	4.698392	125	70 - 130
STYRENE	0.673659	0.71110490		5.56		3.75	3.958448	106	70 - 130
TETRACHLOROETHENE	0.391583	0.36760210		6.12		3.75	3.520343	93.90	70 - 130
TETRAHYDROFURAN	0.620829	0.53753130		13.40		3.75	3.246855	86.60	70 - 130
TOLUENE	0.697762	0.66381020		4.87		3.75	3.567533	95.10	70 - 130
TRANS-1,2-DICHLOROETHENE	0.736201	0.68052890		7.56		3.75	3.466422	92.40	70 - 130
TRANS-1,3-DICHLOROPROPENE	0.248892	0.23712530		4.73		3.75	3.572705	95.30	70 - 130
TRICHLOROETHENE	0.275790	0.26593360		3.57		3.75	3.615974	96.40	70 - 130
TRICHLOROFLUOROMETHANE	1.552894	1.466407		5.57		3.75	3.541149	94.40	70 - 130
VINYL ACETATE	1.128073	1.092352		3.17		3.75	3.631255	96.80	70 - 130
VINYL BROMIDE	0.721414	0.697458		3.32		3.75	3.625471	96.70	70 - 130
VINYL CHLORIDE	0.646514	0.57834170		10.50		3.75	3.354573	89.50	70 - 130
1,4-BROMOFLUOROBENZENE	0.525949	0.52051690		1.03		4	3.958687	99	60 - 140

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_01.D
Acq On : 27 Apr 2018 8:29 am
Operator : 564
Sample : ICV AMS 3.75 ppbv
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 27 10:36:09 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:45:42 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	9.838	130	1480878	4.0000000	ppbv	0.01
37) 1,4-Difluorobenzene	10.908	114	5305546	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	14.042	117	3258075	4.0000000	ppbv	0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	15.242	95	1695883	3.9586873	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 98.97%			
Target Compounds						Qvalue
2) Propene	4.175	41	468849	4.6983921	ppbv	99
3) 1,1-DIFLUOROETHANE	4.204	51	567694	5.6490712	ppbv	96
4) Dichlorodifluoromethane	4.262	85	919171	3.2269767	ppbv	98
5) CHLORODIFLUOROMETHANE	4.329	51	729681	7.5034393	ppbv	100
6) 1,2-Dichlorotetrafluor...	4.583	85	326708	2.9611913	ppbv	96
7) Chloromethane	4.743	50	647448	3.2693846	ppbv	98
8) Vinyl Chloride	5.006	62	802925	3.3545732	ppbv	99
9) 1,3-Butadiene	5.081	39	444432	3.1982668	ppbv	97
10) Bromomethane	5.739	94	930949	3.5590747	ppbv	99
11) Chloroethane	5.937	64	406523	3.4250731	ppbv	98
12) Vinyl Bromide	6.272	106	968297	3.6254708	ppbv	98
13) Trichlorofluoromethane	6.339	101	2035847	3.5411487	ppbv	100
14) Ethanol	6.828	45	201694	3.3812405	ppbv	99
15) 1,1,2-Trichlorotrifluo...	7.136	101	1876180	3.5540164	ppbv	96
16) 1,1-Dichloroethene	7.209	61	1124411	3.3535418	ppbv	92
17) Acetone	7.386	43	715010	3.4586887	ppbv	97
18) 2-Propanol	7.569	45	1101027	3.4547509	ppbv #	93
19) Carbon Disulfide	7.557	76	1863258	3.4573347	ppbv	97
20) Allyl Chloride	7.754	41	831785	3.2125299	ppbv	93
21) Methylene Chloride	7.963	49	802900	3.1687133	ppbv	91
22) TERT-BUTYL ALCOHOL	8.087	59	1595445	3.4828757	ppbv	99
23) Methyl Tert-Butyl Ether	8.217	73	2193000	3.5380348	ppbv	100
24) Trans-1,2-Dichloroethene	8.263	61	944794	3.4664221	ppbv	93
25) n-Hexane	8.474	57	1113455	3.4390108	ppbv	94
26) 1,1-Dichloroethane	8.838	63	1444333	3.3311545	ppbv	99
27) Vinyl Acetate	8.839	43	1516538	3.6312549	ppbv	97
28) ETHYL ACETATE	9.528	45	200048	3.3934633	ppbv	94
29) 2-Butanone (MEK)	9.550	72	410973	3.8976900	ppbv	98
30) cis-1,2-Dichloroethene	9.541	61	1289881	3.5269591	ppbv	94
31) Tetrahydrofuran	9.864	42	746267	3.2468545	ppbv	94
32) Chloroform	9.876	83	1812385	3.4537450	ppbv	99
33) Cyclohexane	10.077	84	1165926	3.5603430	ppbv	93
34) 1,1,1-Trichloroethane	10.077	97	1814125	3.5171632	ppbv	98
35) Carbon Tetrachloride	10.235	117	1968138	3.5581145	ppbv	99
36) 2,2,4-Trimethylpentane	10.413	57	3863349	3.3647525	ppbv	98
38) Benzene	10.502	78	2845791	3.5887749	ppbv	99
39) 1,2-Dichloroethane	10.590	62	879777	3.4313218	ppbv	97
40) Heptane	10.595	43	1223813	3.1890495	ppbv	92
41) Trichloroethene	11.208	95	1322740	3.6159741	ppbv	97
42) TERT-AMYL ETHYL ETHER	11.333	73	800708	3.5744764	ppbv	94
43) METHYL CYCLOHEXANE	11.358	83	1671128	3.6088534	ppbv	93
44) 1,2-Dichloropropane	11.518	63	980685	3.4156420	ppbv	94
45) Methyl Methacrylate	11.515	41	1153950	3.3209966	ppbv	89
46) 1,4-Dioxane	11.636	88	629763	3.7454314	ppbv	96
47) Bromodichloromethane	11.800	83	1972887	3.5184376	ppbv	99
48) cis-1,3-Dichloropropene	12.296	75	1685042	3.6352350	ppbv	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_01.D
Acq On : 27 Apr 2018 8:29 am
Operator : 564
Sample : ICV AMS 3.75 ppbv
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 27 10:36:09 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:45:42 2018
Response via : Initial Calibration

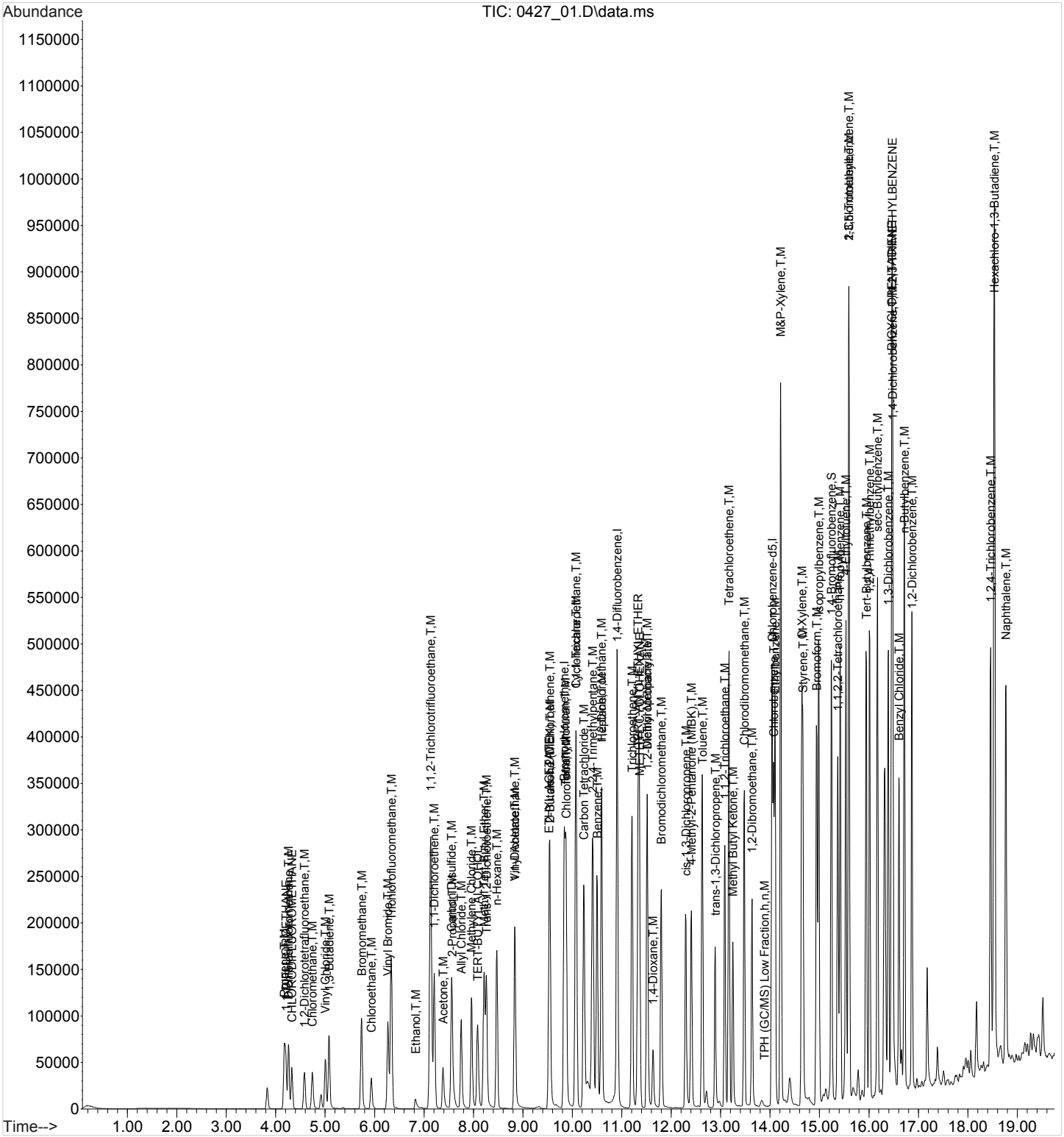
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
49) 4-Methyl-2-Pentanone (...	12.409	43	1652073	3.3349527 ppbv	94
50) Toluene	12.630	91	3301758	3.5675336 ppbv	100
51) trans-1,3-Dichloropropene	12.892	75	1179449	3.5727049 ppbv	96
52) 1,1,2-Trichloroethane	13.086	97	1074287	3.4171633 ppbv	98
53) Tetrachloroethene	13.170	166	1828434	3.5203429 ppbv	98
54) Methyl Butyl Ketone	13.250	43	1166511	3.2850827 ppbv #	96
55) Chlorodibromomethane	13.479	129	2141110	3.4987813 ppbv	100
56) 1,2-Dibromoethane	13.637	107	1714953	3.5752934 ppbv	100
57) Chlorobenzene	14.072	112	2319668	3.4657961 ppbv	98
59) Ethylbenzene	14.103	91	3427572	3.7825985 ppbv	99
60) M&P-Xylene	14.215	91	5241364	7.4734438 ppbv	98
61) O-Xylene	14.644	91	2681477	3.6998560 ppbv	99
62) Styrene	14.667	104	2172031	3.9584479 ppbv	97
63) Bromoform	14.943	173	2466728	4.0625055 ppbv	99
64) Isopropylbenzene	14.986	105	3873699	3.7619403 ppbv	99
65) 1,1,2,2-Tetrachloroethane	15.371	83	2224455	3.6631555 ppbv	100
66) n-Propylbenzene	15.421	91	4499102	3.8292063 ppbv	98
67) 4-Ethyltoluene	15.536	105	3934658	3.8657133 ppbv	99
68) 2-Chlorotoluene	15.596	126	1086524	3.8464352 ppbv	96
70) 1,3,5-Trimethylbenzene	15.597	105	3236680	3.7755349 ppbv	99
71) Tert-Butylbenzene	15.947	119	3092940	3.7830854 ppbv	99
72) 1,2,4-Trimethylbenzene	16.015	105	3231426	3.8604181 ppbv	99
73) sec-Butylbenzene	16.174	134	914804	3.8827365 ppbv #	95
74) 1,3-Dichlorobenzene	16.393	146	2542593	4.0714915 ppbv	98
75) 1,4-Dichlorobenzene	16.484	146	2461732	4.1315269 ppbv	99
76) 1,2,3-TRIMETHYLBENZENE	16.471	105	3173387	3.8697851 ppbv	100
77) DICYCLOPENTADIENE	16.459	66	3310995	3.5132340 ppbv	97
78) Benzyl Chloride	16.610	91	2699670	4.3859775 ppbv	97
79) n-Butylbenzene	16.718	91	3579266	3.8291264 ppbv	99
80) 1,2-Dichlorobenzene	16.871	146	2578584	4.0459000 ppbv	99
81) 1,2,4-Trichlorobenzene	18.463	180	2077686	5.0557594 ppbv	99
82) Hexachloro-1,3-Butadiene	18.543	225	2421202	4.1555591 ppbv	98
83) Naphthalene	18.771	128	4235303	4.5615046 ppbv	99
84) TPH (GC/MS) Low Fraction	13.890	TIC	287860445m	186.7257265 ppbv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_01.D
Acq On : 27 Apr 2018 8:29 am
Operator : 564
Sample : ICV AMS 3.75 ppbv
Misc :
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 27 10:36:09 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:45:42 2018
Response via : Initial Calibration



7A-OR

GC/MS CONTINUING CALIBRATION VERIFICATION

SDG:	L988471	**Calibration (begin) date/time:**	04/20/18 14:18
Instrument ID:	AIRMS5	**Calibration (end) date/time:**	04/20/18 20:29
Lab File ID:	0426_01	**Analysis date/time:**	04/26/18 07:13
Analytical Method:	TO-15	**Sample ID:**	ICV

Analyte	Avg. RRF	RRF	Min. RRF	Diff.	Max Diff.	True Value	Result	Result	Limits
				%	%	mg/l	mg/l	% Rec.	%
1,1,1-TRICHLOROETHANE	1.140730	1.289276		13		3.75	4.238325	113	70 - 130
1,1,2,2-TETRACHLOROETHANE	0.557188	0.66203290		18.80		3.75	4.455628	119	70 - 130
1,1,2-TRICHLOROETHANE	0.217282	0.25343890		16.60		3.75	4.374013	117	70 - 130
1,1,2-TRICHLOROTRIFLUOROETHANE	1.037282	1.172821		13.10		3.75	4.240004	113	70 - 130
1,1-DICHLOROETHANE	0.977267	1.043364		6.76		3.75	4.003631	107	70 - 130
1,1-DICHLOROETHENE	0.758577	0.78341090		3.27		3.75	3.872766	103	70 - 130
1,2,4-TRICHLOROBENZENE	0.576928	0.73299820		27.10		3.75	4.764444	127	70 - 130
1,2,4-TRIMETHYLBENZENE	0.861355	1.060169		23.10		3.75	4.615559	123	70 - 130
1,2-DIBROMOETHANE	0.346566	0.40607810		17.20		3.75	4.39395	117	70 - 130
1,2-DICHLOROBENZENE	0.620479	0.75790240		22.10		3.75	4.580545	122	70 - 130
1,2-DICHLOROETHANE	0.178901	0.19588580		9.49		3.75	4.106014	109	70 - 130
1,2-DICHLOROPROPANE	0.180974	0.19679920		8.74		3.75	4.077915	109	70 - 130
1,2-DICHLOROTETRAFLUOROETHANE	1.210815	1.379291		13.90		3.75	4.271783	114	70 - 130
1,3,5-TRIMETHYLBENZENE	0.852921	1.065585		24.90		3.75	4.68501	125	70 - 130
1,3-BUTADIENE	0.310987	0.30594340		1.62		3.75	3.689182	98.40	70 - 130
1,3-DICHLOROBENZENE	0.627434	0.77475580		23.50		3.75	4.630499	123	70 - 130
1,4-DICHLOROBENZENE	0.600743	0.76411090		27.20		3.75	4.769791	127	70 - 130
1,4-DIOXANE	0.134040	0.14993770		11.90		3.75	4.194777	112	70 - 130
2,2,4-TRIMETHYLPENTANE	2.791285	3.056655		9.51		3.75	4.106516	110	70 - 130
2-BUTANONE (MEK)	0.318729	0.34623920		8.63		3.75	4.073667	109	70 - 130
2-CHLOROTOLUENE	0.252158	0.32226420		27.80		3.75	4.792596	128	70 - 130
2-PROPANOL	0.948057	0.93034270		1.87		3.75	3.679931	98.10	70 - 130
4-ETHYLTOLUENE	1.080102	1.353068		25.30		3.75	4.69771	125	70 - 130
4-METHYL-2-PENTANONE (MIBK)	0.362903	0.378046		4.17		3.75	3.90648	104	70 - 130
ACETONE	0.245976	0.24738020		0.5710		3.75	3.771406	101	70 - 130
ALLYL CHLORIDE	0.626535	0.62432650		0.3520		3.75	3.736782	99.60	70 - 130
BENZENE	0.501514	0.56023960		11.70		3.75	4.189114	112	70 - 130
BENZYL CHLORIDE	0.778027	0.93308210		19.90		3.75	4.497347	120	70 - 130
BROMODICHLOROMETHANE	0.339381	0.388586		14.50		3.75	4.293691	114	70 - 130
BROMOFORM	0.492168	0.61719750		25.40		3.75	4.702641	125	70 - 130
BROMOMETHANE	0.454119	0.516352		13.70		3.75	4.263904	114	70 - 130
CARBON DISULFIDE	1.130022	1.196419		5.88		3.75	3.97034	106	70 - 130
CARBON TETRACHLORIDE	1.187602	1.343755		13.10		3.75	4.243073	113	70 - 130
CHLOROBENZENE	0.523088	0.63125040		20.70		3.75	4.52541	121	70 - 130
CHLORODIBROMOMETHANE	0.396283	0.47295130		19.30		3.75	4.475508	119	70 - 130
CHLOROETHANE	0.263234	0.28294840		7.49		3.75	4.030847	107	70 - 130
CHLOROFORM	1.144942	1.248685		9.06		3.75	4.089787	109	70 - 130
CHLOROMETHANE	0.398308	0.41659920		4.59		3.75	3.922208	105	70 - 130
CIS-1,2-DICHLOROETHENE	0.636616	0.71043440		11.60		3.75	4.184829	112	70 - 130
CIS-1,3-DICHLOROPROPENE	0.321425	0.35810530		11.40		3.75	4.177939	111	70 - 130
CYCLOHEXANE	0.816154	0.90355030		10.70		3.75	4.151564	111	70 - 130
DICHLORODIFLUOROMETHANE	0.998865	1.100439		10.20		3.75	4.131334	110	70 - 130
ETHANOL	0.193667	0.19024050		1.77		3.75	3.683647	98.20	70 - 130
ETHYLBENZENE	0.952644	1.140161		19.70		3.75	4.488143	120	70 - 130
HEPTANE	0.247688	0.26797140		8.19		3.75	4.057098	108	70 - 130
HEXACHLORO-1,3-BUTADIENE	0.598676	0.765723		27.90		3.75	4.79635	128	70 - 130
ISOPROPYLBENZENE	1.111950	1.358960		22.20		3.75	4.583031	122	70 - 130
M&P-XYLENE	0.729797	0.89014620		22		7.50	9.147881	122	70 - 130

7A-OR

GC/MS CONTINUING CALIBRATION VERIFICATION

SDG:	L988471	**Calibration (begin) date/time:**	04/20/18 14:18
Instrument ID:	AIRMS5	**Calibration (end) date/time:**	04/20/18 20:29
Lab File ID:	0426_01	**Analysis date/time:**	04/26/18 07:13
Analytical Method:	TO-15	**Sample ID:**	ICV

Analyte	Avg. RRF	RRF	Min. RRF	Diff.	Max Diff.	True Value	Result	Result	Limits
				%	%	mg/l	mg/l	% Rec.	%
METHYL BUTYL KETONE	0.349480	0.37457530		7.18		3.75	4.01928	107	70 - 130
METHYL METHACRYLATE	0.180055	0.19614720		8.94		3.75	4.085161	109	70 - 130
METHYL TERT-BUTYL ETHER	1.575269	1.681069		6.72		3.75	4.001862	107	70 - 130
METHYLENE CHLORIDE	0.554933	0.55910660		0.7520		3.75	3.778203	101	70 - 130
N-HEXANE	0.789147	0.84048590		6.51		3.75	3.993962	107	70 - 130
NAPHTHALENE	1.288536	1.573225		22.10		3.75	4.578525	122	70 - 130
O-XYLENE	0.754579	0.91456860		21.20		3.75	4.545093	121	70 - 130
PROPENE	0.325220	0.31898570		1.92		3.75	3.678116	98.10	70 - 130
STYRENE	0.597297	0.74177630		24.20		3.75	4.657081	124	70 - 130
TETRACHLOROETHENE	0.335642	0.41700650		24.20		3.75	4.659052	124	70 - 130
TETRAHYDROFURAN	0.630532	0.62267250		1.25		3.75	3.703258	98.80	70 - 130
TOLUENE	0.623597	0.732345		17.40		3.75	4.403957	117	70 - 130
TRANS-1,2-DICHLOROETHENE	0.675688	0.70167480		3.85		3.75	3.894224	104	70 - 130
TRANS-1,3-DICHLOROPROPENE	0.276034	0.30798190		11.60		3.75	4.184018	112	70 - 130
TRICHLOROETHENE	0.218583	0.24835670		13.60		3.75	4.260791	114	70 - 130
TRICHLOROFLUOROMETHANE	1.116948	1.265877		13.30		3.75	4.250007	113	70 - 130
VINYL ACETATE	1.317609	1.361331		3.32		3.75	3.874436	103	70 - 130
VINYL BROMIDE	0.479795	0.55921180		16.60		3.75	4.370706	117	70 - 130
VINYL CHLORIDE	0.491494	0.52000390		5.80		3.75	3.967526	106	70 - 130
1,4-BROMOFLUOROBENZENE	0.600014	0.59053010		1.58		4	3.936773	98.40	60 - 140

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_01.D
Acq On : 26 Apr 2018 7:13 am
Operator : 564
Sample : ICV AMS 3.75 ppbv
Misc :
ALS Vial : 1 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 26 09:22:45 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.251	130	263756	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	8.105	114	991473	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	11.216	117	866767	4.0000000	ppbv	0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	12.534	95	511852	3.9367729	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 98.42%			
Target Compounds						Qvalue
2) Propene	3.568	41	78876	3.6781164	ppbv	100
3) 1,1-DIFLUOROETHANE	3.579	51	169157	4.0823731	ppbv	99
4) Dichlorodifluoromethane	3.625	85	272107	4.1313344	ppbv	100
5) CHLORODIFLUOROMETHANE	3.647	51	160113	4.0368129	ppbv	97
6) 1,2-Dichlorotetrafluor...	3.806	85	341059	4.2717835	ppbv	97
7) Chloromethane	3.919	50	103013	3.9222080	ppbv	98
8) Vinyl Chloride	4.072	62	128582	3.9675257	ppbv	100
9) 1,3-Butadiene	4.111	39	75651	3.6891815	ppbv	95
10) Bromomethane	4.513	94	127679	4.2639034	ppbv	99
11) Chloroethane	4.615	64	69965	4.0308471	ppbv	98
12) Vinyl Bromide	4.818	106	138277	4.3707056	ppbv	99
13) Trichlorofluoromethane	4.847	101	313015	4.2500071	ppbv	100
14) Ethanol	5.022	45	47041	3.6836466	ppbv	100
15) 1,1,2-Trichlorotrifluo...	5.316	101	290005	4.2400039	ppbv	96
16) 1,1-Dichloroethene	5.395	61	193715	3.8727663	ppbv	95
17) Acetone	5.463	58	61170	3.7714065	ppbv	99
18) 2-Propanol	5.497	45	230047	3.6799315	ppbv	99
19) Carbon Disulfide	5.678	76	295840	3.9703404	ppbv	100
20) Allyl Chloride	5.729	41	154378	3.7367818	ppbv	96
21) Methylene Chloride	5.865	49	138251	3.7782026	ppbv	95
22) TERT-BUTYL ALCOHOL	5.859	59	334482	3.9449371	ppbv	98
23) Methyl Tert-Butyl Ether	6.029	73	415680	4.0018616	ppbv	99
24) Trans-1,2-Dichloroethene	6.080	61	173504	3.8942239	ppbv	95
25) n-Hexane	6.216	57	207828	3.9939616	ppbv	98
26) 1,1-Dichloroethane	6.493	63	257994	4.0036312	ppbv	98
27) Vinyl Acetate	6.436	43	336618	3.8744359	ppbv	97
28) ETHYL ACETATE	6.945	43	279120	3.9650957	ppbv	99
29) 2-Butanone (MEK)	6.985	72	85615	4.0736672	ppbv	97
30) cis-1,2-Dichloroethene	7.013	96	175670	4.1848288	ppbv	96
31) Tetrahydrofuran	7.268	42	153969	3.7032577	ppbv	97
32) Chloroform	7.256	83	308764	4.0897873	ppbv	99
33) Cyclohexane	7.477	84	223422	4.1515635	ppbv	95
34) 1,1,1-Trichloroethane	7.460	97	318801	4.2383253	ppbv	98
35) Carbon Tetrachloride	7.590	117	332272	4.2430735	ppbv	99
36) 2,2,4-Trimethylpentane	7.715	57	755823	4.1065162	ppbv	99
38) Benzene	7.805	78	520746	4.1891141	ppbv	100
39) 1,2-Dichloroethane	7.856	62	182077	4.1060138	ppbv	98
40) Heptane	7.839	43	249081	4.0570981	ppbv	97
41) Trichloroethene	8.382	95	230849	4.2607914	ppbv	95
42) TERT-AMYL ETHYL ETHER	8.461	73	163293	4.1465544	ppbv	97
43) METHYL CYCLOHEXANE	8.535	83	322775	4.3345288	ppbv	96
44) 1,2-Dichloropropane	8.659	63	182926	4.0779150	ppbv	99
45) Methyl Methacrylate	8.603	69	182320	4.0851611	ppbv	96
46) 1,4-Dioxane	8.733	88	139368	4.1947763	ppbv	95
47) Bromodichloromethane	8.886	83	361193	4.2936912	ppbv	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_01.D
Acq On : 26 Apr 2018 7:13 am
Operator : 564
Sample : ICV AMS 3.75 ppbv
Misc :
ALS Vial : 1 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 26 09:22:45 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration

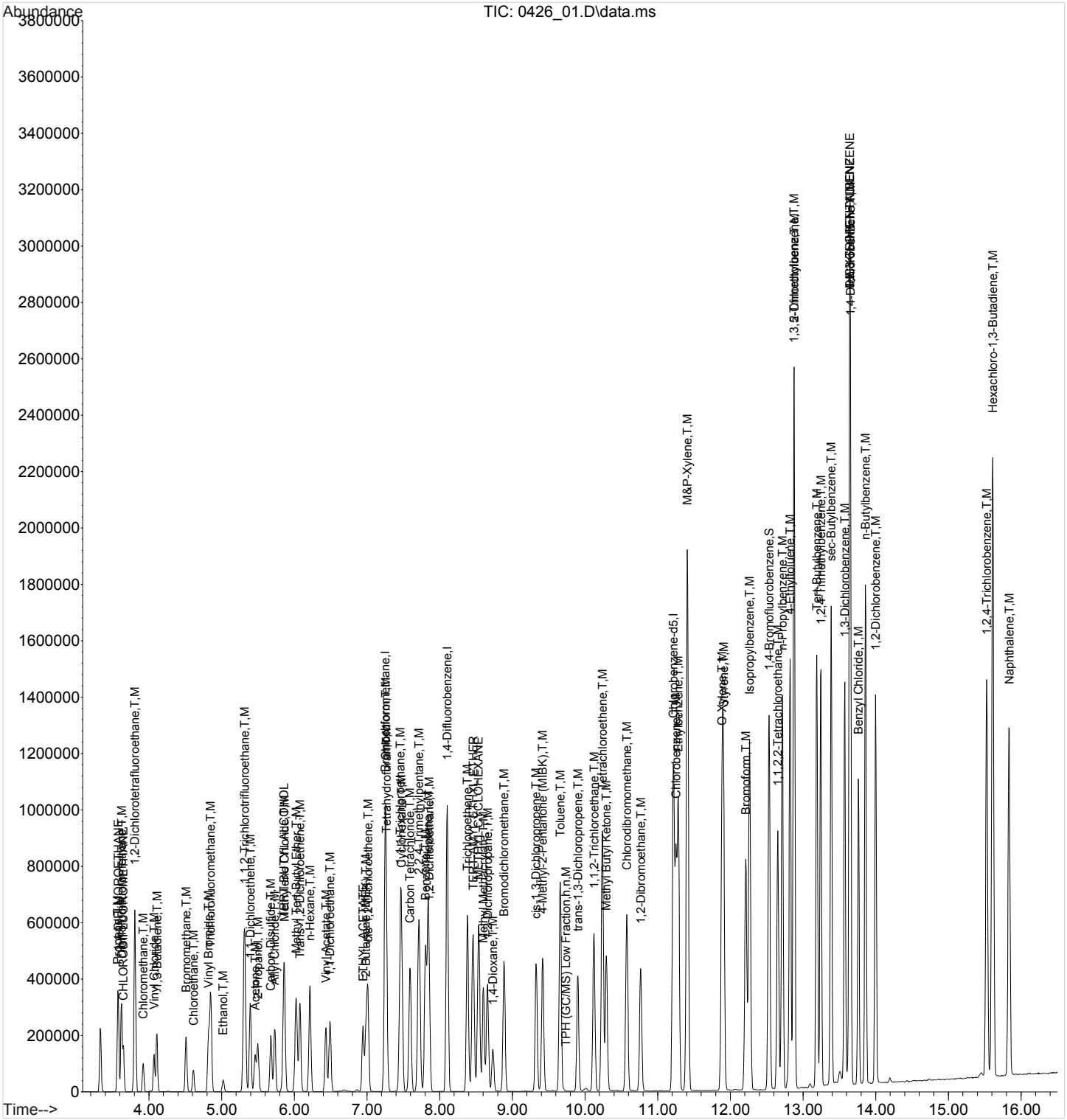
	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
48)	cis-1,3-Dichloropropene	9.327	75	332861	4.1779387 ppbv	98
49)	4-Methyl-2-Pentanone (...	9.417	43	351396	3.9064795 ppbv	97
50)	Toluene	9.661	91	680719	4.4039571 ppbv	100
51)	trans-1,3-Dichloropropene	9.904	75	286271	4.1840180 ppbv	97
52)	1,1,2-Trichloroethane	10.124	97	235573	4.3740134 ppbv	96
53)	Tetrachloroethene	10.243	166	387610	4.6590519 ppbv	97
54)	Methyl Butyl Ketone	10.294	43	348170	4.0192804 ppbv	98
55)	Chlorodibromomethane	10.577	129	439611	4.4755081 ppbv	99
56)	1,2-Dibromoethane	10.769	107	377452	4.3939501 ppbv	100
57)	Chlorobenzene	11.250	112	586751	4.5254099 ppbv	97
59)	Ethylbenzene	11.284	91	926488	4.4881433 ppbv	99
60)	M&P-Xylene	11.409	91	1446655	9.1478810 ppbv	99
61)	O-Xylene	11.884	91	743173	4.5450925 ppbv	98
62)	Styrene	11.906	104	602763	4.6570813 ppbv	98
63)	Bromoform	12.212	173	501531	4.7026408 ppbv	100
64)	Isopropylbenzene	12.263	105	1104283	4.5830313 ppbv	99
65)	1,1,2,2-Tetrachloroethane	12.653	83	537964	4.4556277 ppbv	99
66)	n-Propylbenzene	12.715	91	1235898	4.6222126 ppbv	98
67)	4-Ethyltoluene	12.823	105	1099495	4.6977094 ppbv	99
68)	2-Chlorotoluene	12.879	126	261870	4.7925957 ppbv	97
70)	1,3,5-Trimethylbenzene	12.874	105	865888	4.6850104 ppbv	99
71)	Tert-Butylbenzene	13.191	119	844959	4.6806812 ppbv	98
72)	1,2,4-Trimethylbenzene	13.247	105	861487	4.6155587 ppbv	100
73)	sec-Butylbenzene	13.389	134	267437	4.5949379 ppbv	96
74)	1,3-Dichlorobenzene	13.575	146	629562	4.6304989 ppbv	98
75)	1,4-Dichlorobenzene	13.654	146	620912	4.7697905 ppbv	98
76)	1,2,3-TRIMETHYLBENZENE	13.643	105	836881	4.6952922 ppbv	99
77)	DICYCLOPENTADIENE	13.643	66	726497	4.4150087 ppbv	97
78)	Benzyl Chloride	13.762	91	758217	4.4973473 ppbv	99
79)	n-Butylbenzene	13.858	91	957260	4.4985916 ppbv	99
80)	1,2-Dichlorobenzene	13.999	146	615867	4.5805453 ppbv	99
81)	1,2,4-Trichlorobenzene	15.527	180	595630	4.7644440 ppbv	99
82)	Hexachloro-1,3-Butadiene	15.612	225	622222	4.7963497 ppbv	98
83)	Naphthalene	15.838	128	1278393	4.5785244 ppbv	99
84)	TPH (GC/MS) Low Fraction	9.740	TIC	56912029m	193.1445095 ppbv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_01.D
Acq On : 26 Apr 2018 7:13 am
Operator : 564
Sample : ICV AMS 3.75 ppbv
Misc :
ALS Vial : 1 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 26 09:22:45 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration



1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
R3305208-3

ESC Sample ID:	R3305208-3	**SDG:**	L988471
Client Sample ID:	BLANK	**Collected Date/Time:**	
Lab File ID:	0426_04	**Received Date/Time:**	
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/26/18 09:15
Analytical Batch:	WG1103323	**Analysis Date/Time:**	04/26/18 09:15
Dilution Factor:	1	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	

Analyte	CAS	RT	Result	Qualifier	MDL	RDL
			ppbv		*ppbv*	*ppbv*
Acetone	67-64-1	0	U		0.0569	1.25
Allyl Chloride	107-05-1	0	U		0.0546	0.200
Benzene	71-43-2	0	U		0.0460	0.200
Benzyl Chloride	100-44-7	0	U		0.0598	0.200
Bromodichloromethane	75-27-4	0	U		0.0436	0.200
Bromoform	75-25-2	0	U		0.0786	0.600
Bromomethane	74-83-9	0	U		0.0609	0.200
1,3-Butadiene	106-99-0	0	U		0.0563	2.00
Carbon disulfide	75-15-0	0	U		0.0544	0.200
Carbon tetrachloride	56-23-5	0	U		0.0585	0.200
Chlorobenzene	108-90-7	0	U		0.0601	0.200
Chloroethane	75-00-3	0	U		0.0489	0.200
Chloroform	67-66-3	0	U		0.0574	0.200
Chloromethane	74-87-3	0	U		0.0544	0.200
2-Chlorotoluene	95-49-8	0	U		0.0605	0.200
Cyclohexane	110-82-7	0	U		0.0534	0.200
Dibromochloromethane	124-48-1	0	U		0.0494	0.200
1,2-Dibromoethane	106-93-4	0	U		0.0185	0.200
1,2-Dichlorobenzene	95-50-1	0	U		0.0603	0.200
1,3-Dichlorobenzene	541-73-1	0	U		0.0597	0.200
1,4-Dichlorobenzene	106-46-7	0	U		0.0557	0.200
1,2-Dichloroethane	107-06-2	0	U		0.0616	0.200
1,1-Dichloroethane	75-34-3	0	U		0.0514	0.200
1,1-Dichloroethene	75-35-4	0	U		0.0490	0.200
cis-1,2-Dichloroethene	156-59-2	0	U		0.0389	0.200
trans-1,2-Dichloroethene	156-60-5	0	U		0.0464	0.200
1,2-Dichloropropane	78-87-5	0	U		0.0599	0.200
cis-1,3-Dichloropropene	10061-01-5	0	U		0.0588	0.200
trans-1,3-Dichloropropene	10061-02-6	0	U		0.0435	0.200
1,4-Dioxane	123-91-1	0	U		0.0554	0.200
Ethylbenzene	100-41-4	0	U		0.0506	0.200
4-Ethyltoluene	622-96-8	0	U		0.0666	0.200
Trichlorofluoromethane	75-69-4	0	U		0.0673	0.200
Dichlorodifluoromethane	75-71-8	0	U		0.0601	0.200
1,1,2-Trichlorotrifluoroethane	76-13-1	0	U		0.0687	0.200
1,2-Dichlorotetrafluoroethane	76-14-2	0	U		0.0458	0.200
Heptane	142-82-5	0	U		0.0626	0.200
Hexachloro-1,3-butadiene	87-68-3	0	U		0.0656	0.630
n-Hexane	110-54-3	0	U		0.0457	0.200
Isopropylbenzene	98-82-8	0	U		0.0563	0.200
Methylene Chloride	75-09-2	0	U		0.0465	0.200
Methyl Butyl Ketone	591-78-6	0	U		0.0682	1.25
2-Butanone (MEK)	78-93-3	0	U		0.0493	1.25

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
R3305208-3

ESC Sample ID:	R3305208-3	**SDG:**	L988471
Client Sample ID:	BLANK	**Collected Date/Time:**	
Lab File ID:	0426_04	**Received Date/Time:**	
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/26/18 09:15
Analytical Batch:	WG1103323	**Analysis Date/Time:**	04/26/18 09:15
Dilution Factor:	1	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	

Analyte	CAS	RT	Result	Qualifier	MDL	RDL
			ppbv		*ppbv*	*ppbv*
4-Methyl-2-pentanone (MIBK)	108-10-1	0	U		0.0650	1.25
Methyl Methacrylate	80-62-6	0	U		0.0773	0.200
MTBE	1634-04-4	0	U		0.0505	0.200
Naphthalene	91-20-3	15.82	U		0.154	0.630
2-Propanol	67-63-0	5.51	U		0.0882	1.25
Propene	115-07-1	0	U		0.0932	0.400
Styrene	100-42-5	0	U		0.0465	0.200
1,1,2,2-Tetrachloroethane	79-34-5	0	U		0.0576	0.200
Tetrachloroethylene	127-18-4	0	U		0.0497	0.200
Tetrahydrofuran	109-99-9	0	U		0.0508	0.200
Toluene	108-88-3	0	U		0.0499	0.200
1,2,4-Trichlorobenzene	120-82-1	0	U		0.148	0.630
1,1,1-Trichloroethane	71-55-6	0	U		0.0665	0.200
1,1,2-Trichloroethane	79-00-5	0	U		0.0287	0.200
Trichloroethylene	79-01-6	0	U		0.0545	0.200
1,2,4-Trimethylbenzene	95-63-6	0	U		0.0483	0.200
1,3,5-Trimethylbenzene	108-67-8	0	U		0.0631	0.200
2,2,4-Trimethylpentane	540-84-1	0	U		0.0456	0.200
Vinyl chloride	75-01-4	0	U		0.0457	0.200
Vinyl Bromide	593-60-2	0	U		0.0727	0.200
Vinyl acetate	108-05-4	0	U		0.0639	0.200
m&p-Xylene	1330-20-7	0	U		0.0946	0.400
o-Xylene	95-47-6	0	U		0.0633	0.200
Ethanol	64-17-5	0	U		0.0832	0.630

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_04.D
Acq On : 26 Apr 2018 9:15 am
Operator : 564
Sample : BLANK 1x WG1103323
Misc :
ALS Vial : 4 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 26 09:36:39 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration

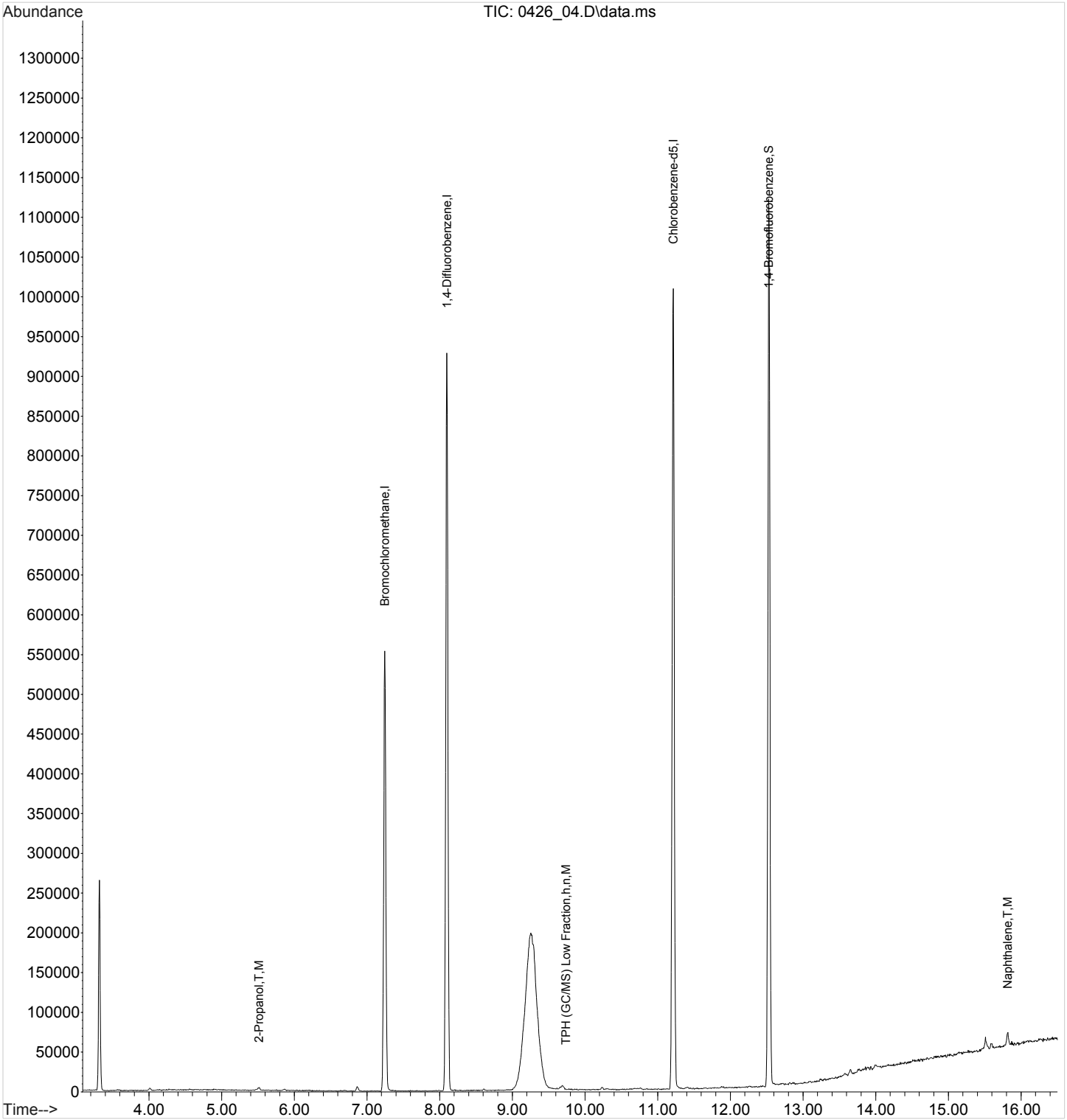
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.245	130	244851	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	8.099	114	907918	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	11.216	117	775453	4.0000000	ppbv	0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	12.529	95	439340	3.7769705	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 94.42%			
Target Compounds						Qvalue
18) 2-Propanol	5.514	45	5109	0.0880358	ppbv #	20
83) Naphthalene	15.815	128	16307	0.0652803	ppbv #	95
84) TPH (GC/MS) Low Fraction	9.740	TIC	3568476m	13.5365475	ppbv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_04.D
Acq On : 26 Apr 2018 9:15 am
Operator : 564
Sample : BLANK 1x WG1103323
Misc :
ALS Vial : 4 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 26 09:36:39 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration



1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
R3305477-3

ESC Sample ID:	R3305477-3	**SDG:**	L988471
Client Sample ID:	BLANK	**Collected Date/Time:**	
Lab File ID:	0427_04	**Received Date/Time:**	
Instrument ID:	AIRMS2	**Preparation Date/Time:**	04/27/18 10:59
Analytical Batch:	WG1103956	**Analysis Date/Time:**	04/27/18 10:59
Dilution Factor:	1	**Prep Method:**	M18-Mod/TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	

Analyte	CAS	RT	Result	Qualifier	MDL	RDL
			ppbv		*ppbv*	*ppbv*
Acetone	67-64-1	0	U		0.0569	1.25
Tetrachloroethylene	127-18-4	0	U		0.0497	0.200
Trichloroethylene	79-01-6	0	U		0.0545	0.200

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_04.D
Acq On : 27 Apr 2018 10:59 am
Operator : 564
Sample : BLANK 1x WG1103956
Misc :
ALS Vial : 4 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 27 11:56:47 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:08:22 2018
Response via : Initial Calibration

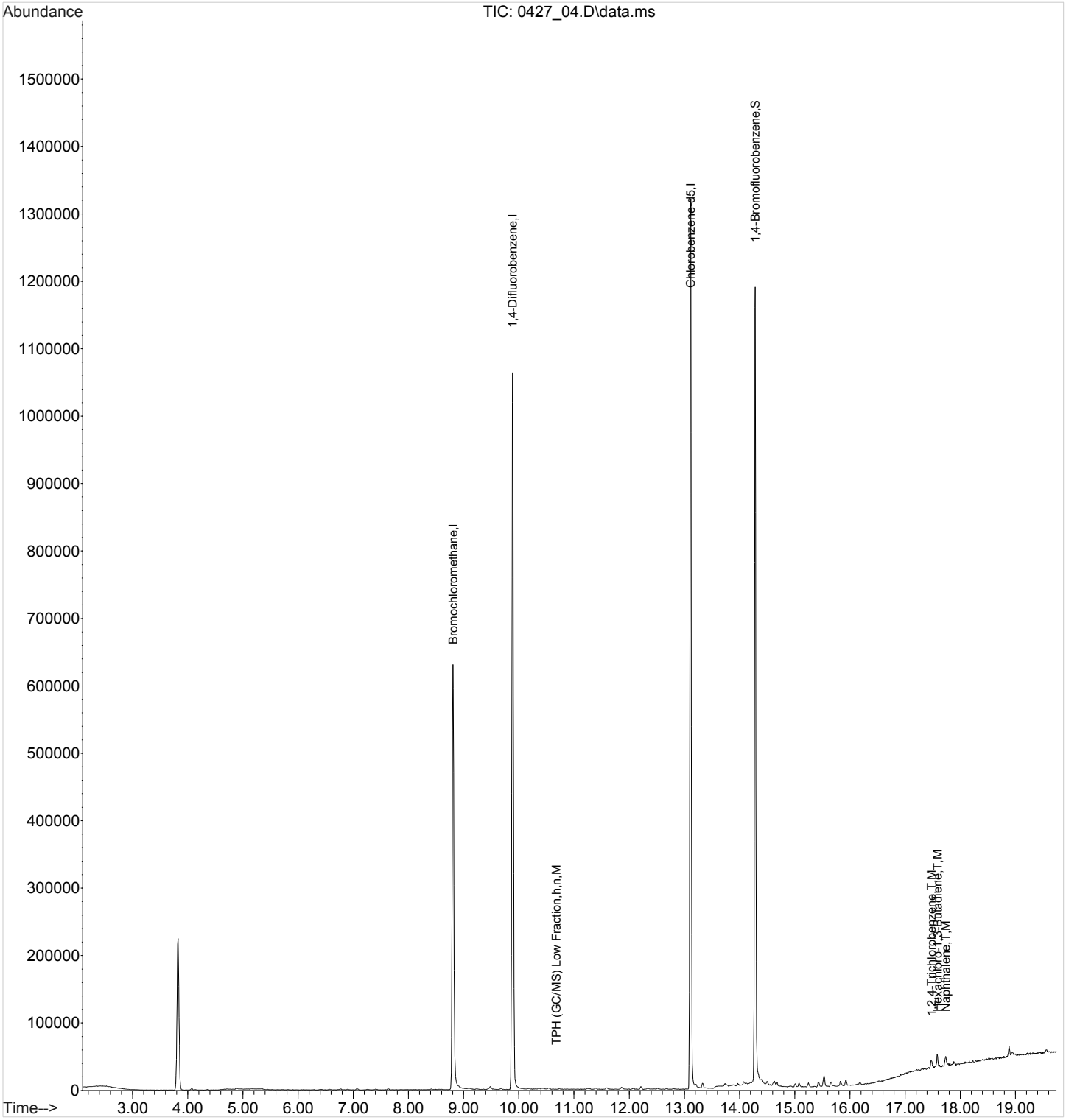
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.810	130	1743367	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	9.891	114	7626363	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	13.116	117	6578594	4.0000000	ppbv	# 0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	14.285	95	3786270	3.6426187	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 91.07%			
Target Compounds						Qvalue
81) 1,2,4-Trichlorobenzene	17.479	180	35567	0.1213396	ppbv #	70
82) Hexachloro-1,3-Butadiene	17.588	225	33592	0.0639806	ppbv #	31
83) Naphthalene	17.734	128	126635	0.1702023	ppbv #	69
84) TPH (GC/MS) Low Fraction	10.675	TIC	14924950m	3.6668731	ppbv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_04.D
Acq On : 27 Apr 2018 10:59 am
Operator : 564
Sample : BLANK 1x WG1103956
Misc :
ALS Vial : 4 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 27 11:56:47 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:08:22 2018
Response via : Initial Calibration



1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
R3305484-3

ESC Sample ID:	R3305484-3	**SDG:**	L988471
Client Sample ID:	BLANK	**Collected Date/Time:**	
Lab File ID:	0427_04	**Received Date/Time:**	
Instrument ID:	AIRMS4	**Preparation Date/Time:**	04/27/18 10:43
Analytical Batch:	WG1103966	**Analysis Date/Time:**	04/27/18 10:43
Dilution Factor:	1	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	

Analyte	CAS	RT	Result	Qualifier	MDL	RDL
			ppbv		*ppbv*	*ppbv*
Acetone	67-64-1	0	U		0.0569	1.25
Allyl Chloride	107-05-1	0	U		0.0546	0.200
Benzene	71-43-2	0	U		0.0460	0.200
Benzyl Chloride	100-44-7	0	U		0.0598	0.200
Bromodichloromethane	75-27-4	0	U		0.0436	0.200
Bromoform	75-25-2	0	U		0.0786	0.600
Bromomethane	74-83-9	0	U		0.0609	0.200
1,3-Butadiene	106-99-0	4.89	0.426	J	0.0563	2.00
Carbon disulfide	75-15-0	0	U		0.0544	0.200
Carbon tetrachloride	56-23-5	0	U		0.0585	0.200
Chlorobenzene	108-90-7	0	U		0.0601	0.200
Chloroethane	75-00-3	0	U		0.0489	0.200
Chloroform	67-66-3	0	U		0.0574	0.200
Chloromethane	74-87-3	0	U		0.0544	0.200
2-Chlorotoluene	95-49-8	0	U		0.0605	0.200
Cyclohexane	110-82-7	0	U		0.0534	0.200
Dibromochloromethane	124-48-1	0	U		0.0494	0.200
1,2-Dibromoethane	106-93-4	0	U		0.0185	0.200
1,2-Dichlorobenzene	95-50-1	0	U		0.0603	0.200
1,3-Dichlorobenzene	541-73-1	0	U		0.0597	0.200
1,4-Dichlorobenzene	106-46-7	0	U		0.0557	0.200
1,2-Dichloroethane	107-06-2	0	U		0.0616	0.200
1,1-Dichloroethane	75-34-3	0	U		0.0514	0.200
1,1-Dichloroethene	75-35-4	0	U		0.0490	0.200
cis-1,2-Dichloroethene	156-59-2	0	U		0.0389	0.200
trans-1,2-Dichloroethene	156-60-5	0	U		0.0464	0.200
1,2-Dichloropropane	78-87-5	0	U		0.0599	0.200
cis-1,3-Dichloropropene	10061-01-5	0	U		0.0588	0.200
trans-1,3-Dichloropropene	10061-02-6	0	U		0.0435	0.200
1,4-Dioxane	123-91-1	0	U		0.0554	0.200
Ethylbenzene	100-41-4	0	U		0.0506	0.200
4-Ethyltoluene	622-96-8	0	U		0.0666	0.200
Trichlorofluoromethane	75-69-4	0	U		0.0673	0.200
Dichlorodifluoromethane	75-71-8	0	U		0.0601	0.200
1,1,2-Trichlorotrifluoroethane	76-13-1	0	U		0.0687	0.200
1,2-Dichlorotetrafluoroethane	76-14-2	0	U		0.0458	0.200
Heptane	142-82-5	0	U		0.0626	0.200
Hexachloro-1,3-butadiene	87-68-3	0	U		0.0656	0.630
n-Hexane	110-54-3	0	U		0.0457	0.200
Isopropylbenzene	98-82-8	0	U		0.0563	0.200
Methylene Chloride	75-09-2	0	U		0.0465	0.200
Methyl Butyl Ketone	591-78-6	0	U		0.0682	1.25
2-Butanone (MEK)	78-93-3	0	U		0.0493	1.25

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
R3305484-3

ESC Sample ID:	R3305484-3	**SDG:**	L988471
Client Sample ID:	BLANK	**Collected Date/Time:**	
Lab File ID:	0427_04	**Received Date/Time:**	
Instrument ID:	AIRMS4	**Preparation Date/Time:**	04/27/18 10:43
Analytical Batch:	WG1103966	**Analysis Date/Time:**	04/27/18 10:43
Dilution Factor:	1	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	

Analyte	CAS	RT	Result	Qualifier	MDL	RDL
			ppbv		*ppbv*	*ppbv*
4-Methyl-2-pentanone (MIBK)	108-10-1	0	U		0.0650	1.25
Methyl Methacrylate	80-62-6	0	U		0.0773	0.200
MTBE	1634-04-4	0	U		0.0505	0.200
Naphthalene	91-20-3	18.79	U		0.154	0.630
2-Propanol	67-63-0	0	U		0.0882	1.25
Propene	115-07-1	4.16	0.125	J	0.0932	0.400
Styrene	100-42-5	0	U		0.0465	0.200
1,1,2,2-Tetrachloroethane	79-34-5	0	U		0.0576	0.200
Tetrachloroethylene	127-18-4	0	U		0.0497	0.200
Tetrahydrofuran	109-99-9	0	U		0.0508	0.200
Toluene	108-88-3	0	U		0.0499	0.200
1,2,4-Trichlorobenzene	120-82-1	18.47	U		0.148	0.630
1,1,1-Trichloroethane	71-55-6	0	U		0.0665	0.200
1,1,2-Trichloroethane	79-00-5	0	U		0.0287	0.200
Trichloroethylene	79-01-6	0	U		0.0545	0.200
1,2,4-Trimethylbenzene	95-63-6	0	U		0.0483	0.200
1,3,5-Trimethylbenzene	108-67-8	0	U		0.0631	0.200
2,2,4-Trimethylpentane	540-84-1	0	U		0.0456	0.200
Vinyl chloride	75-01-4	0	U		0.0457	0.200
Vinyl Bromide	593-60-2	0	U		0.0727	0.200
Vinyl acetate	108-05-4	0	U		0.0639	0.200
m&p-Xylene	1330-20-7	0	U		0.0946	0.400
o-Xylene	95-47-6	0	U		0.0633	0.200
Ethanol	64-17-5	0	U		0.0832	0.630

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_04.D
Acq On : 27 Apr 2018 10:43 am
Operator : 564
Sample : BLANK 1x WG1103966
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 27 11:55:43 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:45:42 2018
Response via : Initial Calibration

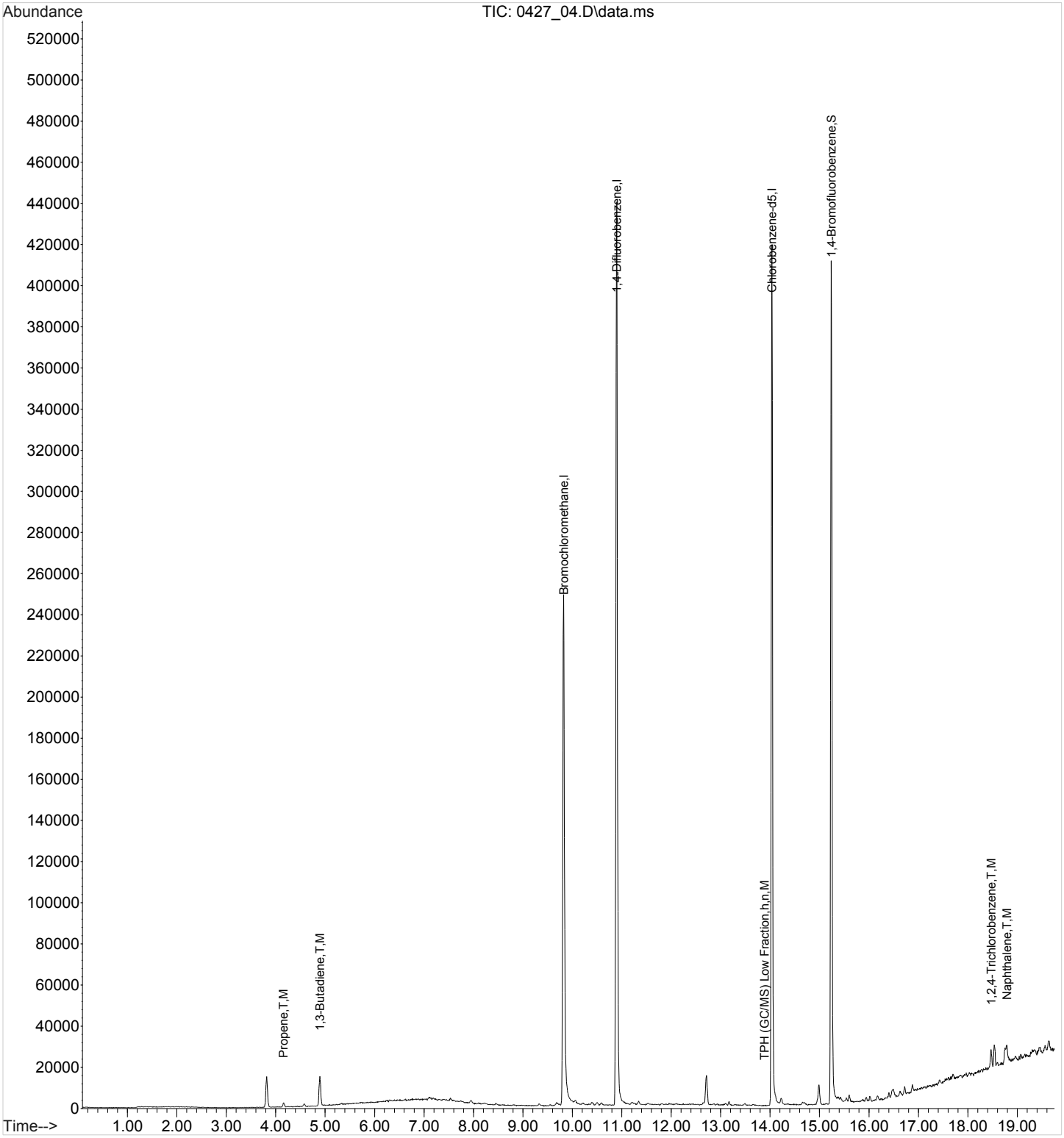
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	9.825	130	1396475	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	10.900	114	5052171	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	14.039	117	3112461	4.0000000	ppbv	0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	15.240	95	1517973	3.7091663	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 92.73%			
Target Compounds						Qvalue
2) Propene	4.161	41	11804	0.1254334	ppbv #	15
9) 1,3-Butadiene	4.893	39	55763	0.4255432	ppbv #	1
81) 1,2,4-Trichlorobenzene	18.473	180	38969	0.0992607	ppbv #	81
83) Naphthalene	18.788	128	120965	0.1363762	ppbv #	82
84) TPH (GC/MS) Low Fraction	13.890	TIC	6306923m	4.2824947	ppbv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_04.D
Acq On : 27 Apr 2018 10:43 am
Operator : 564
Sample : BLANK 1x WG1103966
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 27 11:55:43 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:45:42 2018
Response via : Initial Calibration



1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
R3305208-1

ESC Sample ID:	R3305208-1	**SDG:**	L988471
Client Sample ID:	LCS	**Collected Date/Time:**	
Lab File ID:	0426_02	**Received Date/Time:**	
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/26/18 07:53
Analytical Batch:	WG1103323	**Analysis Date/Time:**	04/26/18 07:53
Dilution Factor:	1	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	

Analyte	CAS	RT	Result	Qualifier	MDL	RDL
			ppbv		*ppbv*	*ppbv*
Ethanol	64-17-5	5.07	3.71		0.0832	0.630
Propene	115-07-1	3.59	3.55		0.0932	0.400
Dichlorodifluoromethane	75-71-8	3.65	4.18		0.0601	0.200
1,2-Dichlorotetrafluoroethane	76-14-2	3.84	4.11		0.0458	0.200
Chloromethane	74-87-3	3.95	3.83		0.0544	0.200
Vinyl chloride	75-01-4	4.10	3.94		0.0457	0.200
1,3-Butadiene	106-99-0	4.14	3.65		0.0563	2.00
Bromomethane	74-83-9	4.54	4.26		0.0609	0.200
Chloroethane	75-00-3	4.64	4.02		0.0489	0.200
Trichlorofluoromethane	75-69-4	4.87	4.10		0.0673	0.200
1,1,2-Trichlorotrifluoroethane	76-13-1	5.34	4.13		0.0687	0.200
1,1-Dichloroethene	75-35-4	5.42	3.87		0.0490	0.200
1,1-Dichloroethane	75-34-3	6.51	3.84		0.0514	0.200
Acetone	67-64-1	5.50	3.86		0.0569	1.25
2-Propanol	67-63-0	5.54	3.89		0.0882	1.25
Carbon disulfide	75-15-0	5.70	3.96		0.0544	0.200
Methylene Chloride	75-09-2	5.89	3.67		0.0465	0.200
MTBE	1634-04-4	6.06	4.09		0.0505	0.200
trans-1,2-Dichloroethene	156-60-5	6.10	3.87		0.0464	0.200
n-Hexane	110-54-3	6.24	3.98		0.0457	0.200
Vinyl acetate	108-05-4	6.46	3.76		0.0639	0.200
Methyl Ethyl Ketone	78-93-3	7.01	4.05		0.0493	1.25
cis-1,2-Dichloroethene	156-59-2	7.03	4.05		0.0389	0.200
Chloroform	67-66-3	7.27	4.03		0.0574	0.200
Cyclohexane	110-82-7	7.49	4.11		0.0534	0.200
1,1,1-Trichloroethane	71-55-6	7.48	4.17		0.0665	0.200
Carbon tetrachloride	56-23-5	7.61	4.25		0.0585	0.200
Benzene	71-43-2	7.82	4.11		0.0460	0.200
1,2-Dichloroethane	107-06-2	7.87	4.00		0.0616	0.200
Heptane	142-82-5	7.86	4.03		0.0626	0.200
Trichloroethylene	79-01-6	8.39	4.22		0.0545	0.200
1,2-Dichloropropane	78-87-5	8.67	4.00		0.0599	0.200
1,4-Dioxane	123-91-1	8.75	4.32		0.0554	0.200
Bromodichloromethane	75-27-4	8.90	4.28		0.0436	0.200
cis-1,3-Dichloropropene	10061-01-5	9.34	4.33		0.0588	0.200
4-Methyl-2-pentanone (MIBK)	108-10-1	9.43	4.12		0.0650	1.25
Toluene	108-88-3	9.67	4.42		0.0499	0.200
trans-1,3-Dichloropropene	10061-02-6	9.91	4.23		0.0435	0.200
1,1,2-Trichloroethane	79-00-5	10.13	4.37		0.0287	0.200
Tetrachloroethylene	127-18-4	10.25	4.63		0.0497	0.200
Methyl Butyl Ketone	591-78-6	10.31	4.09		0.0682	1.25
Dibromochloromethane	124-48-1	10.58	4.50		0.0494	0.200
1,2-Dibromoethane	106-93-4	10.77	4.41		0.0185	0.200

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
R3305208-1

ESC Sample ID:	R3305208-1	**SDG:**	L988471
Client Sample ID:	LCS	**Collected Date/Time:**	
Lab File ID:	0426_02	**Received Date/Time:**	
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/26/18 07:53
Analytical Batch:	WG1103323	**Analysis Date/Time:**	04/26/18 07:53
Dilution Factor:	1	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	

Analyte	CAS	RT	Result	Qualifier	MDL	RDL
			ppbv		*ppbv*	*ppbv*
Chlorobenzene	108-90-7	11.26	4.59		0.0601	0.200
Ethylbenzene	100-41-4	11.29	4.44		0.0506	0.200
m&p-Xylene	1330-20-7	11.41	9.07		0.0946	0.400
o-Xylene	95-47-6	11.89	4.50		0.0633	0.200
Styrene	100-42-5	11.91	4.64		0.0465	0.200
Bromoform	75-25-2	12.22	4.72		0.0786	0.600
1,1,2,2-Tetrachloroethane	79-34-5	12.65	4.28		0.0576	0.200
4-Ethyltoluene	622-96-8	12.82	4.56		0.0666	0.200
1,3,5-Trimethylbenzene	108-67-8	12.88	4.61		0.0631	0.200
1,2,4-Trimethylbenzene	95-63-6	13.25	4.55		0.0483	0.200
1,3-Dichlorobenzene	541-73-1	13.58	4.68		0.0597	0.200
1,4-Dichlorobenzene	106-46-7	13.65	4.80		0.0557	0.200
Benzyl Chloride	100-44-7	13.76	4.52		0.0598	0.200
1,2-Dichlorobenzene	95-50-1	14	4.65		0.0603	0.200
1,2,4-Trichlorobenzene	120-82-1	15.53	4.87		0.148	0.630
Hexachloro-1,3-butadiene	87-68-3	15.61	4.72		0.0656	0.630
Naphthalene	91-20-3	15.84	4.68		0.154	0.630
Allyl Chloride	107-05-1	5.75	3.67		0.0546	0.200
2-Chlorotoluene	95-49-8	12.88	4.73		0.0605	0.200
Methyl Methacrylate	80-62-6	8.61	4.15		0.0773	0.200
Tetrahydrofuran	109-99-9	7.29	3.70		0.0508	0.200
2,2,4-Trimethylpentane	540-84-1	7.73	4.07		0.0456	0.200
Vinyl Bromide	593-60-2	4.85	4.22		0.0727	0.200
Isopropylbenzene	98-82-8	12.27	4.53		0.0563	0.200

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_02.D
Acq On : 26 Apr 2018 7:53 am
Operator : 564
Sample : LCS 1x WG1103323
Misc :
ALS Vial : 2 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 26 09:23:00 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.268	130	287577	4.0000000	ppbv	0.02
37) 1,4-Difluorobenzene	8.116	114	1085206	4.0000000	ppbv	0.02
58) Chlorobenzene-d5	11.222	117	969335	4.0000000	ppbv	0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	12.534	95	573593	3.9448299	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 98.62%			
Target Compounds						Qvalue
2) Propene	3.591	41	82933	3.5469590	ppbv	99
3) 1,1-DIFLUOROETHANE	3.608	51	180714	4.0000251	ppbv	99
4) Dichlorodifluoromethane	3.647	85	300129	4.1793313	ppbv	100
5) CHLORODIFLUOROMETHANE	3.676	51	165591	3.8291022	ppbv	97
6) 1,2-Dichlorotetrafluor...	3.840	85	357794	4.1101812	ppbv	96
7) Chloromethane	3.947	50	109576	3.8265045	ppbv	100
8) Vinyl Chloride	4.100	62	139221	3.9399664	ppbv	99
9) 1,3-Butadiene	4.140	39	81520	3.6460929	ppbv	95
10) Bromomethane	4.541	94	138926	4.2551964	ppbv	99
11) Chloroethane	4.643	64	76143	4.0234042	ppbv	99
12) Vinyl Bromide	4.847	106	145527	4.2188432	ppbv	99
13) Trichlorofluoromethane	4.875	101	329371	4.1016449	ppbv	100
14) Ethanol	5.067	45	51664	3.7105444	ppbv	98
15) 1,1,2-Trichlorotrifluo...	5.339	101	307924	4.1290725	ppbv	96
16) 1,1-Dichloroethene	5.418	61	210804	3.8653167	ppbv	96
17) Acetone	5.497	58	68308	3.8626436	ppbv	77
18) 2-Propanol	5.542	45	265072	3.8889756	ppbv	83
19) Carbon Disulfide	5.701	76	321557	3.9580112	ppbv	99
20) Allyl Chloride	5.752	41	165455	3.6731649	ppbv	95
21) Methylene Chloride	5.888	49	146561	3.6735299	ppbv	95
22) TERT-BUTYL ALCOHOL	5.893	59	372188	4.0260383	ppbv	98
23) Methyl Tert-Butyl Ether	6.057	73	462884	4.0871757	ppbv	98
24) Trans-1,2-Dichloroethene	6.097	61	187849	3.8669496	ppbv	91
25) n-Hexane	6.238	57	225905	3.9817489	ppbv	98
26) 1,1-Dichloroethane	6.510	63	269480	3.8354754	ppbv	99
27) Vinyl Acetate	6.459	43	355943	3.7575070	ppbv	97
28) ETHYL ACETATE	6.968	43	280970	3.6607568	ppbv	97
29) 2-Butanone (MEK)	7.008	72	92830	4.0510932	ppbv	98
30) cis-1,2-Dichloroethene	7.030	96	185347	4.0496161	ppbv	96
31) Tetrahydrofuran	7.290	42	167923	3.7043246	ppbv	97
32) Chloroform	7.273	83	331497	4.0271876	ppbv	98
33) Cyclohexane	7.488	84	241331	4.1128897	ppbv	94
34) 1,1,1-Trichloroethane	7.477	97	342031	4.1705015	ppbv	98
35) Carbon Tetrachloride	7.607	117	362653	4.2474305	ppbv	100
36) 2,2,4-Trimethylpentane	7.732	57	816544	4.0689395	ppbv	99
38) Benzene	7.817	78	559826	4.1145090	ppbv	99
39) 1,2-Dichloroethane	7.873	62	194371	4.0046586	ppbv	99
40) Heptane	7.856	43	270967	4.0323667	ppbv	96
41) Trichloroethene	8.394	95	250139	4.2180565	ppbv	95
42) TERT-AMYL ETHYL ETHER	8.473	73	180494	4.1874658	ppbv	97
43) METHYL CYCLOHEXANE	8.546	83	352427	4.3239422	ppbv	94
44) 1,2-Dichloropropane	8.671	63	196449	4.0011170	ppbv	97
45) Methyl Methacrylate	8.614	69	202559	4.1466285	ppbv	98
46) 1,4-Dioxane	8.750	88	157171	4.3220209	ppbv	96
47) Bromodichloromethane	8.897	83	394504	4.2846130	ppbv	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_02.D
Acq On : 26 Apr 2018 7:53 am
Operator : 564
Sample : LCS 1x WG1103323
Misc :
ALS Vial : 2 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 26 09:23:00 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration

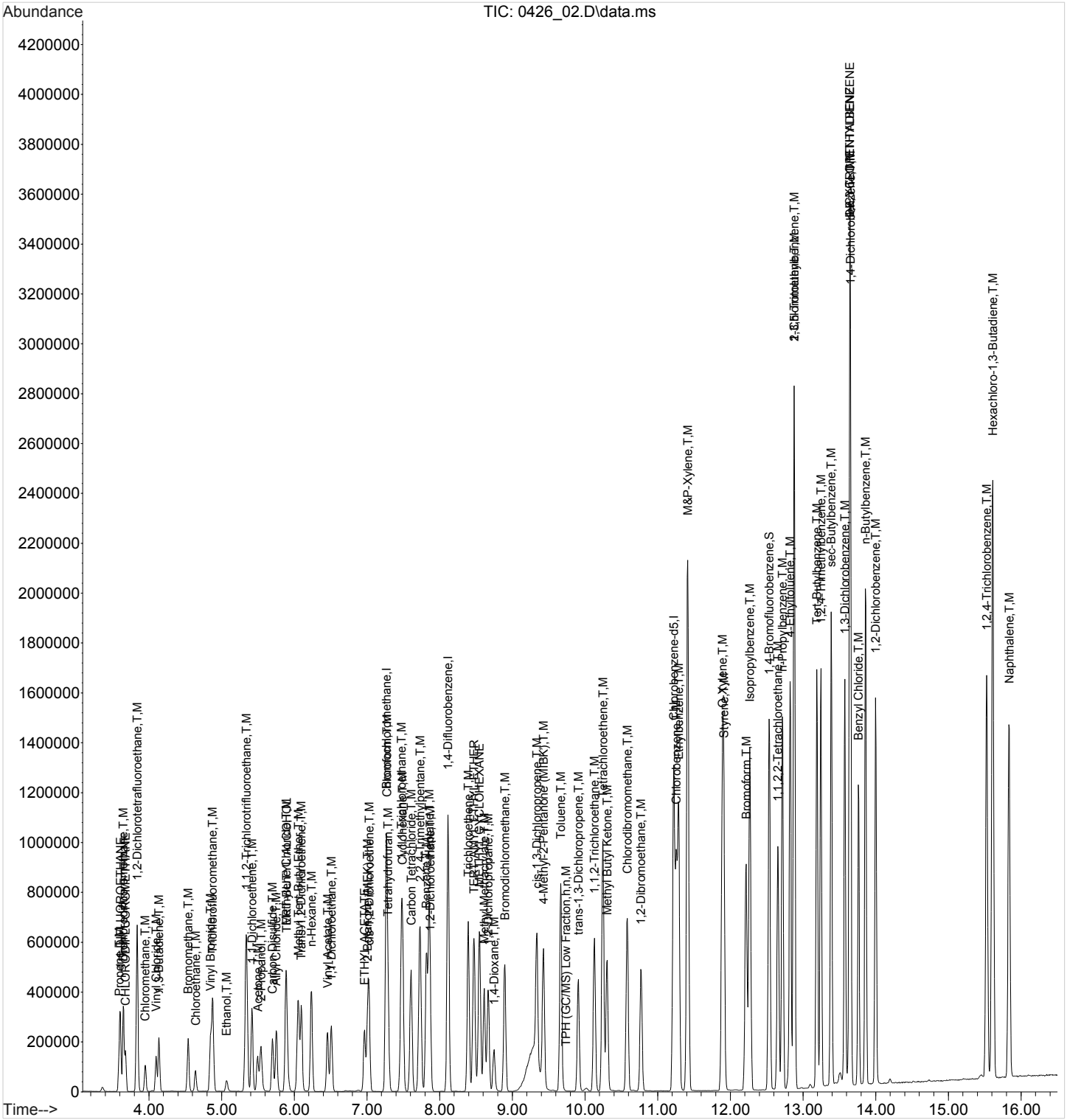
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
48)	cis-1,3-Dichloropropene	9.338	75	377239	4.3259794	ppbv		97
49)	4-Methyl-2-Pentanone (...	9.429	43	405940	4.1230566	ppbv		97
50)	Toluene	9.666	91	747425	4.4178558	ppbv		100
51)	trans-1,3-Dichloropropene	9.910	75	316827	4.2306499	ppbv		97
52)	1,1,2-Trichloroethane	10.130	97	257553	4.3690792	ppbv		97
53)	Tetrachloroethene	10.249	166	422008	4.6343835	ppbv		98
54)	Methyl Butyl Ketone	10.306	43	388089	4.0931438	ppbv		97
55)	Chlorodibromomethane	10.583	129	484043	4.5022172	ppbv		99
56)	1,2-Dibromoethane	10.769	107	414306	4.4063939	ppbv		99
57)	Chlorobenzene	11.256	112	652048	4.5946492	ppbv	#	93
59)	Ethylbenzene	11.290	91	1024546	4.4379955	ppbv		98
60)	M&P-Xylene	11.414	91	1604312	9.0713691	ppbv		99
61)	O-Xylene	11.890	91	823575	4.5038553	ppbv		99
62)	Styrene	11.912	104	671806	4.6412994	ppbv		97
63)	Bromoform	12.218	173	562664	4.7176056	ppbv		100
64)	Isopropylbenzene	12.269	105	1221340	4.5324966	ppbv		99
65)	1,1,2,2-Tetrachloroethane	12.653	83	578518	4.2845087	ppbv		99
66)	n-Propylbenzene	12.715	91	1340123	4.4816757	ppbv		98
67)	4-Ethyltoluene	12.823	105	1193440	4.5595497	ppbv		99
68)	2-Chlorotoluene	12.879	126	289200	4.7327309	ppbv		94
70)	1,3,5-Trimethylbenzene	12.879	105	953099	4.6112145	ppbv		99
71)	Tert-Butylbenzene	13.191	119	923391	4.5739091	ppbv		98
72)	1,2,4-Trimethylbenzene	13.247	105	950026	4.5513425	ppbv		100
73)	sec-Butylbenzene	13.389	134	297885	4.5765190	ppbv		96
74)	1,3-Dichlorobenzene	13.575	146	712243	4.6843134	ppbv		98
75)	1,4-Dichlorobenzene	13.654	146	699454	4.8045960	ppbv		98
76)	1,2,3-TRIMETHYLBENZENE	13.643	105	931530	4.6733062	ppbv		99
77)	DICYCLOPENTADIENE	13.643	66	799264	4.3432663	ppbv		97
78)	Benzyl Chloride	13.762	91	851890	4.5182983	ppbv		98
79)	n-Butylbenzene	13.858	91	1091781	4.5878654	ppbv		99
80)	1,2-Dichlorobenzene	14.000	146	698895	4.6480486	ppbv		99
81)	1,2,4-Trichlorobenzene	15.527	180	680749	4.8691275	ppbv		99
82)	Hexachloro-1,3-Butadiene	15.612	225	684327	4.7169104	ppbv		98
83)	Naphthalene	15.838	128	1460190	4.6762637	ppbv		99
84)	TPH (GC/MS) Low Fraction	9.740	TIC	64123656m	194.5920286	ppbv		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_02.D
Acq On : 26 Apr 2018 7:53 am
Operator : 564
Sample : LCS 1x WG1103323
Misc :
ALS Vial : 2 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 26 09:23:00 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration



1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
R3305477-1

ESC Sample ID:	R3305477-1	**SDG:**	L988471
Client Sample ID:	LCS	**Collected Date/Time:**	
Lab File ID:	0427_02	**Received Date/Time:**	
Instrument ID:	AIRMS2	**Preparation Date/Time:**	04/27/18 09:19
Analytical Batch:	WG1103956	**Analysis Date/Time:**	04/27/18 09:19
Dilution Factor:	1	**Prep Method:**	M18-Mod/TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	

Analyte	CAS	RT	Result	Qualifier	MDL	RDL
			ppbv		*ppbv*	*ppbv*
Acetone	67-64-1	6.53	4.46		0.0569	1.25
Trichloroethylene	79-01-6	10.18	4.37		0.0545	0.200
Tetrachloroethylene	127-18-4	12.21	4.21		0.0497	0.200

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_02.D
Acq On : 27 Apr 2018 9:19 am
Operator : 564
Sample : LCS 1x WG1103956
Misc :
ALS Vial : 2 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 27 10:38:26 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:08:22 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.810	130	1845594	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	9.892	114	7809608	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	13.116	117	6691912	4.0000000	ppbv	# 0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	14.286	95	3999019	3.7821477	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 94.55%			
Target Compounds						Qvalue
2) Propene	4.067	41	2181431	4.4017784	ppbv	99
3) 1,1-DIFLUOROETHANE	4.076	65	1259187	4.7210049	ppbv	94
4) Dichlorodifluoromethane	4.129	85	2987007	4.1166778	ppbv	100
5) CHLORODIFLUOROMETHANE	4.161	67	476065	4.3273292	ppbv	95
6) 1,2-Dichlorotetrafluor...	4.356	85	4008082	4.9137334	ppbv	99
7) Chloromethane	4.460	50	2139077	4.5842576	ppbv	100
8) Vinyl Chloride	4.653	62	2194739	4.6845571	ppbv	99
9) 1,3-Butadiene	4.715	39	2140224	4.3137216	ppbv	93
10) Bromomethane	5.200	94	1165161	4.0795634	ppbv	99
11) Chloroethane	5.358	64	994385	4.2008406	ppbv	99
12) Vinyl Bromide	5.631	106	1246079	4.7251154	ppbv	98
13) Trichlorofluoromethane	5.712	101	3146808	4.4277023	ppbv	99
14) Ethanol	6.039	45	633382	4.0773862	ppbv	98
15) 1,1,2-Trichlorotrifluo...	6.403	101	2745941	4.6212440	ppbv	97
16) 1,1-Dichloroethene	6.429	61	3149875	4.3591952	ppbv	97
17) Acetone	6.531	43	3308879	4.4572552	ppbv	100
18) 2-Propanol	6.710	45	4367700	4.3623229	ppbv #	91
19) Carbon Disulfide	6.723	76	3391694	4.6385735	ppbv	95
20) Allyl Chloride	6.895	41	3626234	4.4658273	ppbv	98
21) Methylene Chloride	7.062	49	2707854	4.3876991	ppbv	98
22) TERT-BUTYL ALCOHOL	7.196	59	4962279	4.4211393	ppbv	98
23) Methyl Tert-Butyl Ether	7.369	73	5356599	4.3956399	ppbv	99
24) Trans-1,2-Dichloroethene	7.370	96	1287181	4.5009121	ppbv	97
25) n-Hexane	7.636	57	3460398	4.5273640	ppbv	95
26) 1,1-Dichloroethane	7.881	63	3811890	4.5307753	ppbv	100
27) Vinyl Acetate	7.905	43	6891528	4.6659907	ppbv	99
28) ETHYL ACETATE	8.576	70	420266	4.5251717	ppbv	98
29) 2-Butanone (MEK)	8.547	72	980507	4.5427406	ppbv	97
30) cis-1,2-Dichloroethene	8.543	61	3523673	4.5081011	ppbv	99
31) Tetrahydrofuran	8.868	42	3415924	4.3478297	ppbv	98
32) Chloroform	8.869	83	3408390	4.3759142	ppbv	99
33) Cyclohexane	9.114	84	2518523	4.5906268	ppbv	94
34) 1,1,1-Trichloroethane	9.080	97	3149858	4.3687198	ppbv	99
35) Carbon Tetrachloride	9.249	117	2813026	4.4037500	ppbv	99
36) 2,2,4-Trimethylpentane	9.488	57	12379801	4.5123746	ppbv	98
38) Benzene	9.478	78	5886156	4.4861040	ppbv	97
39) 1,2-Dichloroethane	9.533	62	2810403	4.2515332	ppbv	99
40) Heptane	9.679	43	5591115	4.4150075	ppbv	98
41) Trichloroethene	10.184	95	2088308	4.3742048	ppbv	97
42) TERT-AMYL ETHYL ETHER	10.388	73	1949227	4.2644295	ppbv	95
43) METHYL CYCLOHEXANE	10.367	83	3501054	4.5618800	ppbv	94
44) 1,2-Dichloropropane	10.451	63	2578599	4.5634936	ppbv	94
45) Methyl Methacrylate	10.510	69	2238755	4.5757424	ppbv	100
46) 1,4-Dioxane	10.586	88	1051004	4.4990306	ppbv	98
47) Bromodichloromethane	10.730	83	3735840	4.3279365	ppbv	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_02.D
Acq On : 27 Apr 2018 9:19 am
Operator : 564
Sample : LCS 1x WG1103956
Misc :
ALS Vial : 2 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 27 10:38:26 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:08:22 2018
Response via : Initial Calibration

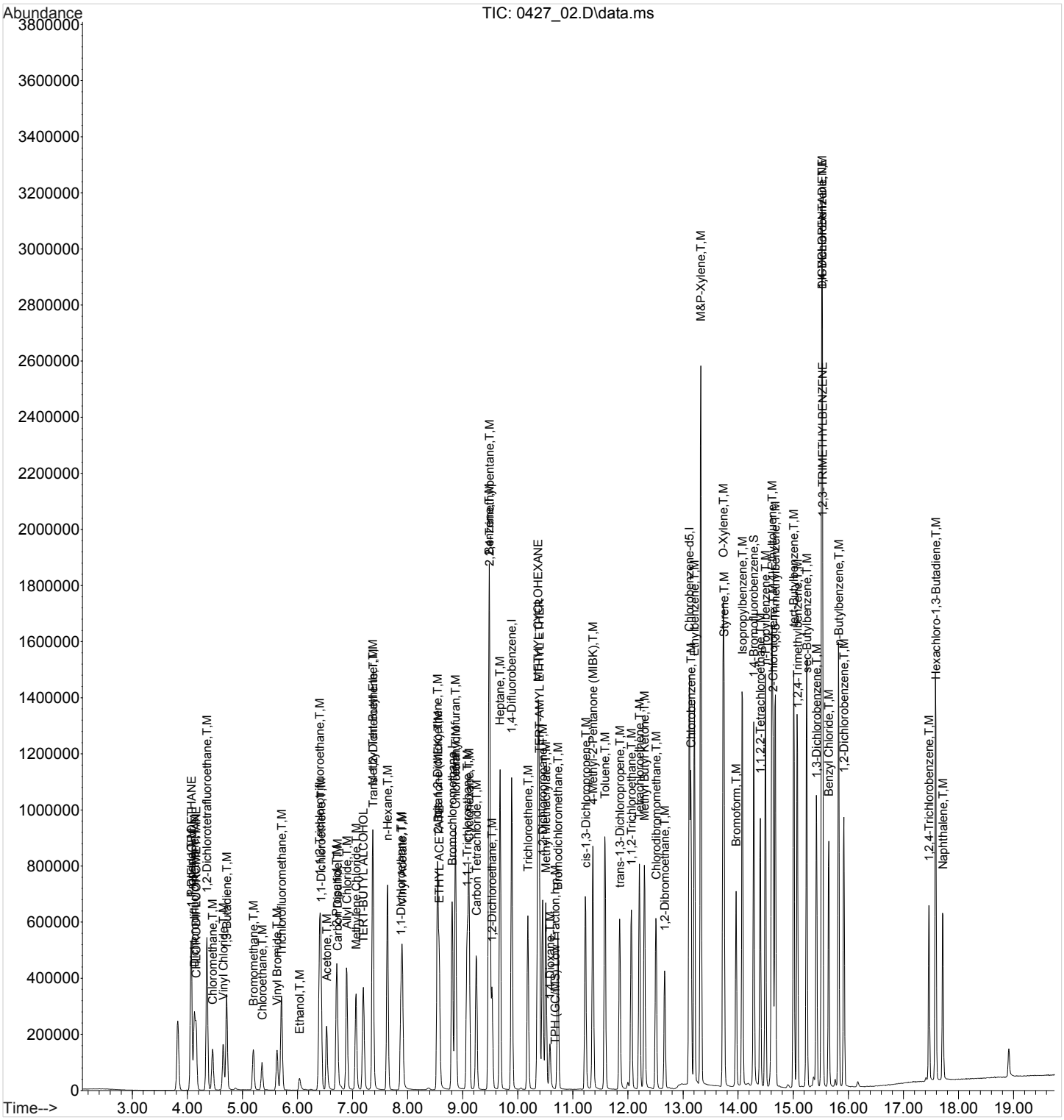
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
48)	cis-1,3-Dichloropropene	11.229	75	3787680	4.5952986	ppbv		94
49)	4-Methyl-2-Pentanone (...	11.365	43	7261319	4.4158224	ppbv		99
50)	Toluene	11.584	91	6417536	4.5332075	ppbv		100
51)	trans-1,3-Dichloropropene	11.851	75	3214685	4.5702160	ppbv		94
52)	1,1,2-Trichloroethane	12.063	97	1974789	4.5080216	ppbv		98
53)	Tetrachloroethene	12.210	166	2252028	4.2068905	ppbv		97
54)	Methyl Butyl Ketone	12.301	43	6501555	4.5517588	ppbv		99
55)	Chlorodibromomethane	12.511	129	3026072	4.4922726	ppbv		99
56)	1,2-Dibromoethane	12.669	107	2964005	4.7813465	ppbv		99
57)	Chlorobenzene	13.145	112	4868753	4.9610917	ppbv		92
59)	Ethylbenzene	13.209	91	8807393	4.3588875	ppbv		98
60)	M&P-Xylene	13.324	91	13366713	8.5902865	ppbv		96
61)	O-Xylene	13.729	91	6584731	4.2311759	ppbv		98
62)	Styrene	13.745	104	5043948	4.3537728	ppbv		90
63)	Bromoform	13.965	173	2963106	4.5997133	ppbv		100
64)	Isopropylbenzene	14.078	105	8851577	4.3301250	ppbv		97
65)	1,1,2,2-Tetrachloroethane	14.404	83	4920833	4.2537381	ppbv		98
66)	n-Propylbenzene	14.497	91	10902789	4.2266652	ppbv		97
67)	4-Ethyltoluene	14.613	105	8774302	4.2193528	ppbv		98
68)	2-Chlorotoluene	14.633	91	7171665	4.0033982	ppbv		96
70)	1,3,5-Trimethylbenzene	14.676	105	7048894	4.0700538	ppbv		96
71)	tert-Butylbenzene	15.013	119	6508499	4.1939981	ppbv		93
72)	1,2,4-Trimethylbenzene	15.076	105	6741375	4.0405089	ppbv		97
73)	sec-Butylbenzene	15.246	105	10335739	4.0897860	ppbv		98
74)	1,3-Dichlorobenzene	15.424	146	3743336	4.3874980	ppbv	#	92
75)	1,4-Dichlorobenzene	15.522	146	3831760	4.1718517	ppbv	#	89
76)	1,2,3-TRIMETHYLBENZENE	15.535	105	6600947	3.8178061	ppbv		97
77)	DICYCLOPENTADIENE	15.521	66	12497895	3.8857769	ppbv		97
78)	Benzyl Chloride	15.647	91	5938297	4.3204869	ppbv		96
79)	n-Butylbenzene	15.826	91	8448616	4.2153988	ppbv		99
80)	1,2-Dichlorobenzene	15.922	146	3317816	4.2408329	ppbv		98
81)	1,2,4-Trichlorobenzene	17.468	180	1732252	5.8097150	ppbv		98
82)	Hexachloro-1,3-Butadiene	17.589	225	2494881	4.6714433	ppbv		92
83)	Naphthalene	17.718	128	4216277	5.5709002	ppbv		97
84)	TPH (GC/MS) Low Fraction	10.675	TIC	745856251m	180.1444962	ppbv		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_02.D
Acq On : 27 Apr 2018 9:19 am
Operator : 564
Sample : LCS 1x WG1103956
Misc :
ALS Vial : 2 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 27 10:38:26 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:08:22 2018
Response via : Initial Calibration



1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
R3305484-1

ESC Sample ID:	R3305484-1	**SDG:**	L988471
Client Sample ID:	LCS	**Collected Date/Time:**	
Lab File ID:	0427_02	**Received Date/Time:**	
Instrument ID:	AIRMS4	**Preparation Date/Time:**	04/27/18 09:13
Analytical Batch:	WG1103966	**Analysis Date/Time:**	04/27/18 09:13
Dilution Factor:	1	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	

Analyte	CAS	RT	Result	Qualifier	MDL	RDL
			ppbv		*ppbv*	*ppbv*
Ethanol	64-17-5	6.81	3.17		0.0832	0.630
Propene	115-07-1	4.16	4.35		0.0932	0.400
Dichlorodifluoromethane	75-71-8	4.24	3.47		0.0601	0.200
1,2-Dichlorotetrafluoroethane	76-14-2	4.55	3.72		0.0458	0.200
Chloromethane	74-87-3	4.72	3.33		0.0544	0.200
Vinyl chloride	75-01-4	4.98	3.46		0.0457	0.200
1,3-Butadiene	106-99-0	5.06	3.27		0.0563	2.00
Bromomethane	74-83-9	5.71	3.68		0.0609	0.200
Chloroethane	75-00-3	5.91	3.51		0.0489	0.200
Trichlorofluoromethane	75-69-4	6.31	3.63		0.0673	0.200
1,1,2-Trichlorotrifluoroethane	76-13-1	7.11	3.70		0.0687	0.200
1,1-Dichloroethene	75-35-4	7.19	3.45		0.0490	0.200
1,1-Dichloroethane	75-34-3	8.82	3.36		0.0514	0.200
Acetone	67-64-1	7.37	3.50		0.0569	1.25
2-Propanol	67-63-0	7.55	3.53		0.0882	1.25
Carbon disulfide	75-15-0	7.54	3.49		0.0544	0.200
Methylene Chloride	75-09-2	7.94	3.12		0.0465	0.200
MTBE	1634-04-4	8.20	3.63		0.0505	0.200
trans-1,2-Dichloroethene	156-60-5	8.25	3.52		0.0464	0.200
n-Hexane	110-54-3	8.46	3.46		0.0457	0.200
Vinyl acetate	108-05-4	8.83	3.65		0.0639	0.200
Methyl Ethyl Ketone	78-93-3	9.54	3.97		0.0493	1.25
cis-1,2-Dichloroethene	156-59-2	9.53	3.59		0.0389	0.200
Chloroform	67-66-3	9.87	3.61		0.0574	0.200
Cyclohexane	110-82-7	10.07	3.72		0.0534	0.200
1,1,1-Trichloroethane	71-55-6	10.07	3.62		0.0665	0.200
Carbon tetrachloride	56-23-5	10.23	3.72		0.0585	0.200
Benzene	71-43-2	10.49	3.71		0.0460	0.200
1,2-Dichloroethane	107-06-2	10.58	3.48		0.0616	0.200
Heptane	142-82-5	10.59	3.34		0.0626	0.200
Trichloroethylene	79-01-6	11.20	3.70		0.0545	0.200
1,2-Dichloropropane	78-87-5	11.51	3.53		0.0599	0.200
1,4-Dioxane	123-91-1	11.63	3.87		0.0554	0.200
Bromodichloromethane	75-27-4	11.79	3.61		0.0436	0.200
cis-1,3-Dichloropropene	10061-01-5	12.29	3.78		0.0588	0.200
4-Methyl-2-pentanone (MIBK)	108-10-1	12.41	3.38		0.0650	1.25
Toluene	108-88-3	12.63	3.70		0.0499	0.200
trans-1,3-Dichloropropene	10061-02-6	12.89	3.67		0.0435	0.200
1,1,2-Trichloroethane	79-00-5	13.08	3.53		0.0287	0.200
Tetrachloroethylene	127-18-4	13.17	3.74		0.0497	0.200
Methyl Butyl Ketone	591-78-6	13.25	3.40		0.0682	1.25
Dibromochloromethane	124-48-1	13.48	3.62		0.0494	0.200
1,2-Dibromoethane	106-93-4	13.64	3.72		0.0185	0.200

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
R3305484-1

ESC Sample ID:	R3305484-1	**SDG:**	L988471
Client Sample ID:	LCS	**Collected Date/Time:**	
Lab File ID:	0427_02	**Received Date/Time:**	
Instrument ID:	AIRMS4	**Preparation Date/Time:**	04/27/18 09:13
Analytical Batch:	WG1103966	**Analysis Date/Time:**	04/27/18 09:13
Dilution Factor:	1	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	

Analyte	CAS	RT	Result	Qualifier	MDL	RDL
			ppbv		*ppbv*	*ppbv*
Chlorobenzene	108-90-7	14.07	3.65		0.0601	0.200
Ethylbenzene	100-41-4	14.10	3.92		0.0506	0.200
m&p-Xylene	1330-20-7	14.21	7.64		0.0946	0.400
o-Xylene	95-47-6	14.64	3.79		0.0633	0.200
Styrene	100-42-5	14.67	4.11		0.0465	0.200
Bromoform	75-25-2	14.94	4.18		0.0786	0.600
1,1,2,2-Tetrachloroethane	79-34-5	15.37	3.69		0.0576	0.200
4-Ethyltoluene	622-96-8	15.53	3.99		0.0666	0.200
1,3,5-Trimethylbenzene	108-67-8	15.60	3.92		0.0631	0.200
1,2,4-Trimethylbenzene	95-63-6	16.01	4.01		0.0483	0.200
1,3-Dichlorobenzene	541-73-1	16.39	4.26		0.0597	0.200
1,4-Dichlorobenzene	106-46-7	16.48	4.37		0.0557	0.200
Benzyl Chloride	100-44-7	16.61	4.56		0.0598	0.200
1,2-Dichlorobenzene	95-50-1	16.87	4.14		0.0603	0.200
1,2,4-Trichlorobenzene	120-82-1	18.46	5.47		0.148	0.630
Hexachloro-1,3-butadiene	87-68-3	18.54	4.37		0.0656	0.630
Naphthalene	91-20-3	18.77	4.98		0.154	0.630
Allyl Chloride	107-05-1	7.73	3.28		0.0546	0.200
2-Chlorotoluene	95-49-8	15.60	3.98		0.0605	0.200
Methyl Methacrylate	80-62-6	11.51	3.49		0.0773	0.200
Tetrahydrofuran	109-99-9	9.86	3.40		0.0508	0.200
2,2,4-Trimethylpentane	540-84-1	10.41	3.49		0.0456	0.200
Vinyl Bromide	593-60-2	6.25	3.71		0.0727	0.200
Isopropylbenzene	98-82-8	14.99	3.84		0.0563	0.200

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_02.D
Acq On : 27 Apr 2018 9:13 am
Operator : 564
Sample : LCS 1x WG1103966
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 27 10:36:25 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:45:42 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	9.828	130	1406816	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	10.902	114	5097600	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	14.040	117	3166669	4.0000000	ppbv	0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	15.241	95	1641157	3.9415211	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 98.54%			
Target Compounds						Qvalue
2) Propene	4.158	41	412706	4.3535017	ppbv	98
3) 1,1-DIFLUOROETHANE	4.182	51	486470	5.0956707	ppbv	97
4) Dichlorodifluoromethane	4.243	85	938593	3.4686373	ppbv	99
5) CHLORODIFLUOROMETHANE	4.307	51	568362	6.1522486	ppbv	99
6) 1,2-Dichlorotetrafluor...	4.553	85	390174	3.7226009	ppbv	94
7) Chloromethane	4.722	50	627198	3.3338643	ppbv	98
8) Vinyl Chloride	4.983	62	787135	3.4617350	ppbv	100
9) 1,3-Butadiene	5.057	39	431208	3.2664636	ppbv	96
10) Bromomethane	5.714	94	913791	3.6773931	ppbv	99
11) Chloroethane	5.911	64	395793	3.5102220	ppbv	98
12) Vinyl Bromide	6.248	106	941535	3.7108579	ppbv	97
13) Trichlorofluoromethane	6.314	101	1980567	3.6263569	ppbv	99
14) Ethanol	6.811	45	179876	3.1742404	ppbv	99
15) 1,1,2-Trichlorotrifluo...	7.113	101	1854753	3.6983930	ppbv	96
16) 1,1-Dichloroethene	7.186	61	1098716	3.4494192	ppbv	92
17) Acetone	7.366	43	686966	3.4979768	ppbv	95
18) 2-Propanol	7.555	45	1068373	3.5287731	ppbv	96
19) Carbon Disulfide	7.537	76	1788446	3.4932215	ppbv	97
20) Allyl Chloride	7.735	41	806562	3.2791098	ppbv	92
21) Methylene Chloride	7.945	49	751216	3.1208203	ppbv	89
22) TERT-BUTYL ALCOHOL	8.073	59	1574423	3.6179273	ppbv	97
23) Methyl Tert-Butyl Ether	8.202	73	2136481	3.6283109	ppbv	99
24) Trans-1,2-Dichloroethene	8.247	61	912011	3.5222989	ppbv	92
25) n-Hexane	8.460	57	1065639	3.4645975	ppbv	95
26) 1,1-Dichloroethane	8.824	63	1385972	3.3648359	ppbv	99
27) Vinyl Acetate	8.826	43	1449348	3.6530719	ppbv	96
28) ETHYL ACETATE	9.519	45	192022	3.4287967	ppbv	90
29) 2-Butanone (MEK)	9.541	72	397446	3.9678373	ppbv	99
30) cis-1,2-Dichloroethene	9.530	61	1248739	3.5942186	ppbv	93
31) Tetrahydrofuran	9.856	42	741853	3.3975701	ppbv	94
32) Chloroform	9.867	83	1797885	3.6064816	ppbv	99
33) Cyclohexane	10.065	84	1156665	3.7180097	ppbv	92
34) 1,1,1-Trichloroethane	10.067	97	1774119	3.6206790	ppbv	98
35) Carbon Tetrachloride	10.226	117	1953483	3.7175433	ppbv	99
36) 2,2,4-Trimethylpentane	10.406	57	3807713	3.4908846	ppbv	98
38) Benzene	10.493	78	2827153	3.7107088	ppbv	99
39) 1,2-Dichloroethane	10.583	62	858442	3.4846895	ppbv	99
40) Heptane	10.588	43	1230046	3.3360461	ppbv	88
41) Trichloroethene	11.202	95	1299578	3.6975788	ppbv	96
42) TERT-AMYL ETHYL ETHER	11.329	73	790963	3.6750135	ppbv	94
43) METHYL CYCLOHEXANE	11.351	83	1638704	3.6831916	ppbv	93
44) 1,2-Dichloropropane	11.512	63	972529	3.5254098	ppbv	95
45) Methyl Methacrylate	11.510	41	1165334	3.4905700	ppbv	89
46) 1,4-Dioxane	11.632	88	625341	3.8708472	ppbv	96
47) Bromodichloromethane	11.795	83	1942582	3.6057143	ppbv	99
48) cis-1,3-Dichloropropene	12.291	75	1684012	3.7812149	ppbv	94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_02.D
Acq On : 27 Apr 2018 9:13 am
Operator : 564
Sample : LCS 1x WG1103966
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 27 10:36:25 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:45:42 2018
Response via : Initial Calibration

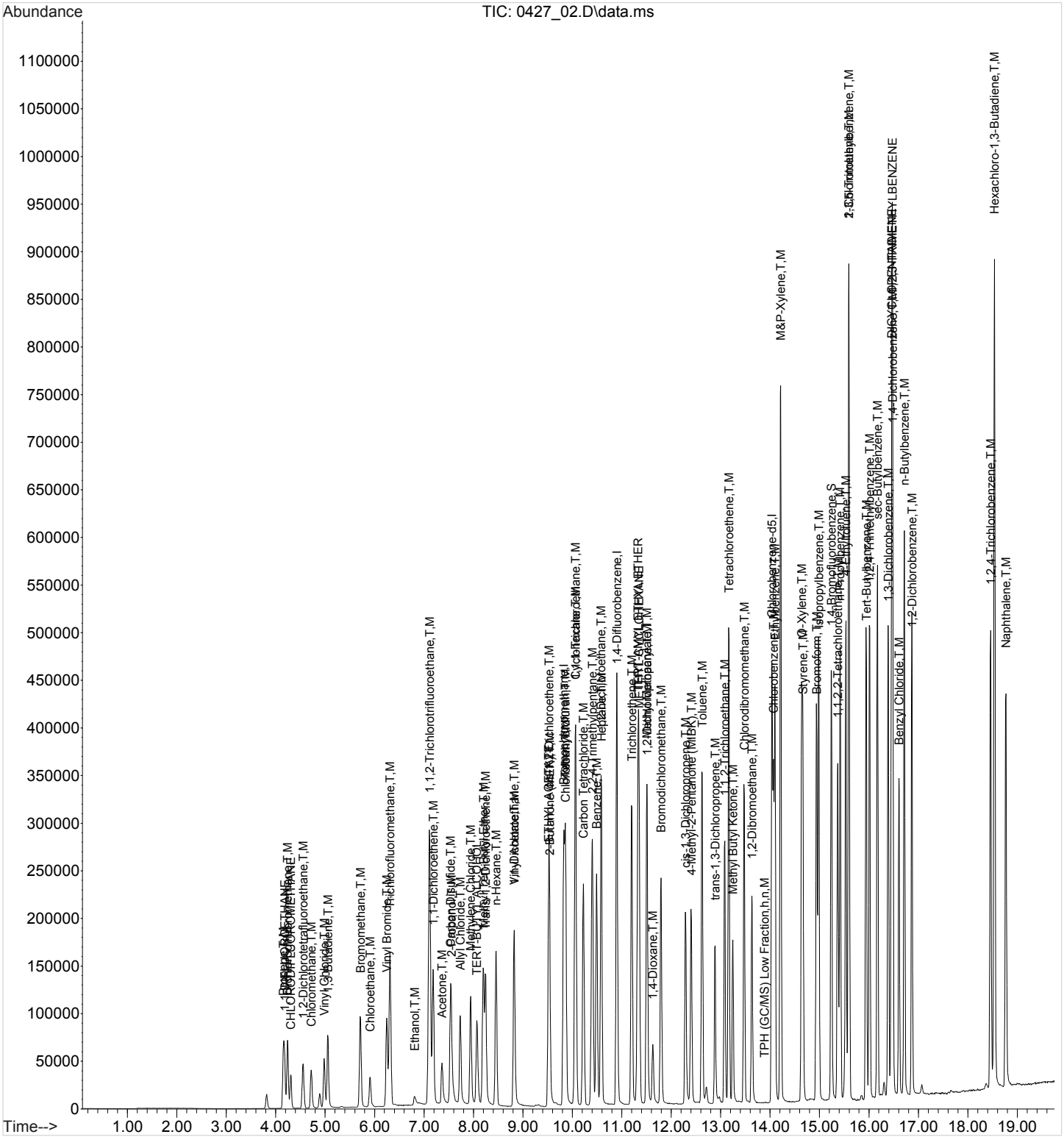
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49)	4-Methyl-2-Pentanone (...	12.405	43	1609848	3.3822799	ppbv		95
50)	Toluene	12.626	91	3287994	3.6975859	ppbv		99
51)	trans-1,3-Dichloropropene	12.888	75	1163070	3.6668108	ppbv		98
52)	1,1,2-Trichloroethane	13.083	97	1067757	3.5349430	ppbv		98
53)	Tetrachloroethene	13.167	166	1865198	3.7376193	ppbv		97
54)	Methyl Butyl Ketone	13.248	43	1161402	3.4041159	ppbv	#	97
55)	Chlorodibromomethane	13.477	129	2126982	3.6174783	ppbv		99
56)	1,2-Dibromoethane	13.635	107	1714248	3.7196107	ppbv		99
57)	Chlorobenzene	14.071	112	2344268	3.6454294	ppbv		97
59)	Ethylbenzene	14.101	91	3452239	3.9197902	ppbv		99
60)	M&P-Xylene	14.214	91	5210500	7.6438860	ppbv		99
61)	O-Xylene	14.642	91	2668679	3.7884841	ppbv		99
62)	Styrene	14.666	104	2193342	4.1126666	ppbv		96
63)	Bromoform	14.942	173	2465277	4.1773109	ppbv		99
64)	Isopropylbenzene	14.985	105	3840858	3.8377148	ppbv		99
65)	1,1,2,2-Tetrachloroethane	15.370	83	2178849	3.6916215	ppbv		99
66)	n-Propylbenzene	15.420	91	4411370	3.8629116	ppbv		98
67)	4-Ethyltoluene	15.535	105	3949498	3.9922980	ppbv		99
68)	2-Chlorotoluene	15.596	126	1092567	3.9794747	ppbv		95
70)	1,3,5-Trimethylbenzene	15.596	105	3265967	3.9196642	ppbv		99
71)	Tert-Butylbenzene	15.946	119	3127125	3.9353038	ppbv		99
72)	1,2,4-Trimethylbenzene	16.015	105	3262940	4.0105835	ppbv		99
73)	sec-Butylbenzene	16.174	134	918860	4.0125244	ppbv	#	95
74)	1,3-Dichlorobenzene	16.392	146	2583719	4.2567719	ppbv		98
75)	1,4-Dichlorobenzene	16.484	146	2530132	4.3688922	ppbv		98
76)	1,2,3-TRIMETHYLBENZENE	16.470	105	3163781	3.9694344	ppbv		99
77)	DICYCLOPENTADIENE	16.459	66	3291537	3.5934000	ppbv		96
78)	Benzyl Chloride	16.610	91	2725782	4.5562257	ppbv		98
79)	n-Butylbenzene	16.717	91	3588022	3.9492918	ppbv		99
80)	1,2-Dichlorobenzene	16.871	146	2561758	4.1355211	ppbv		99
81)	1,2,4-Trichlorobenzene	18.462	180	2183348	5.4662270	ppbv		99
82)	Hexachloro-1,3-Butadiene	18.542	225	2473968	4.3686867	ppbv		97
83)	Naphthalene	18.771	128	4489872	4.9752622	ppbv		99
84)	TPH (GC/MS) Low Fraction	13.890	TIC	282957002m	188.8430405	ppbv		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_02.D
Acq On : 27 Apr 2018 9:13 am
Operator : 564
Sample : LCS 1x WG1103966
Misc :
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 27 10:36:25 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:45:42 2018
Response via : Initial Calibration



1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
R3305208-2

ESC Sample ID:	R3305208-2	**SDG:**	L988471
Client Sample ID:	LCSD	**Collected Date/Time:**	
Lab File ID:	0426_03	**Received Date/Time:**	
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/26/18 08:33
Analytical Batch:	WG1103323	**Analysis Date/Time:**	04/26/18 08:33
Dilution Factor:	1	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	

Analyte	CAS	RT	Result	Qualifier	MDL	RDL
			ppbv		*ppbv*	*ppbv*
Ethanol	64-17-5	5.04	3.67		0.0832	0.630
Propene	115-07-1	3.57	3.62		0.0932	0.400
Dichlorodifluoromethane	75-71-8	3.62	4.26		0.0601	0.200
1,2-Dichlorotetrafluoroethane	76-14-2	3.82	4.18		0.0458	0.200
Chloromethane	74-87-3	3.93	3.84		0.0544	0.200
Vinyl chloride	75-01-4	4.08	3.97		0.0457	0.200
1,3-Butadiene	106-99-0	4.12	3.74		0.0563	2.00
Bromomethane	74-83-9	4.52	4.27		0.0609	0.200
Chloroethane	75-00-3	4.62	3.95		0.0489	0.200
Trichlorofluoromethane	75-69-4	4.86	4.08		0.0673	0.200
1,1,2-Trichlorotrifluoroethane	76-13-1	5.32	4.24		0.0687	0.200
1,1-Dichloroethene	75-35-4	5.40	3.97		0.0490	0.200
1,1-Dichloroethane	75-34-3	6.50	3.95		0.0514	0.200
Acetone	67-64-1	5.47	3.88		0.0569	1.25
2-Propanol	67-63-0	5.52	3.90		0.0882	1.25
Carbon disulfide	75-15-0	5.68	4.03		0.0544	0.200
Methylene Chloride	75-09-2	5.87	3.77		0.0465	0.200
MTBE	1634-04-4	6.03	4.12		0.0505	0.200
trans-1,2-Dichloroethene	156-60-5	6.09	3.95		0.0464	0.200
n-Hexane	110-54-3	6.22	4.00		0.0457	0.200
Vinyl acetate	108-05-4	6.44	3.89		0.0639	0.200
Methyl Ethyl Ketone	78-93-3	7	4.09		0.0493	1.25
cis-1,2-Dichloroethene	156-59-2	7.02	4.12		0.0389	0.200
Chloroform	67-66-3	7.26	4.09		0.0574	0.200
Cyclohexane	110-82-7	7.48	4.17		0.0534	0.200
1,1,1-Trichloroethane	71-55-6	7.47	4.26		0.0665	0.200
Carbon tetrachloride	56-23-5	7.60	4.27		0.0585	0.200
Benzene	71-43-2	7.81	4.11		0.0460	0.200
1,2-Dichloroethane	107-06-2	7.86	4.02		0.0616	0.200
Heptane	142-82-5	7.84	4.03		0.0626	0.200
Trichloroethylene	79-01-6	8.39	4.24		0.0545	0.200
1,2-Dichloropropane	78-87-5	8.66	4.01		0.0599	0.200
1,4-Dioxane	123-91-1	8.74	4.30		0.0554	0.200
Bromodichloromethane	75-27-4	8.89	4.15		0.0436	0.200
cis-1,3-Dichloropropene	10061-01-5	9.33	4.14		0.0588	0.200
4-Methyl-2-pentanone (MIBK)	108-10-1	9.42	3.93		0.0650	1.25
Toluene	108-88-3	9.66	4.43		0.0499	0.200
trans-1,3-Dichloropropene	10061-02-6	9.90	4.31		0.0435	0.200
1,1,2-Trichloroethane	79-00-5	10.12	4.44		0.0287	0.200
Tetrachloroethylene	127-18-4	10.24	4.71		0.0497	0.200
Methyl Butyl Ketone	591-78-6	10.30	4.16		0.0682	1.25
Dibromochloromethane	124-48-1	10.58	4.60		0.0494	0.200
1,2-Dibromoethane	106-93-4	10.77	4.54		0.0185	0.200

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
R3305208-2

ESC Sample ID:	R3305208-2	**SDG:**	L988471
Client Sample ID:	LCSD	**Collected Date/Time:**	
Lab File ID:	0426_03	**Received Date/Time:**	
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/26/18 08:33
Analytical Batch:	WG1103323	**Analysis Date/Time:**	04/26/18 08:33
Dilution Factor:	1	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	

Analyte	CAS	RT	Result	Qualifier	MDL	RDL
			ppbv		*ppbv*	*ppbv*
Chlorobenzene	108-90-7	11.25	4.66		0.0601	0.200
Ethylbenzene	100-41-4	11.28	4.43		0.0506	0.200
m&p-Xylene	1330-20-7	11.41	9.04		0.0946	0.400
o-Xylene	95-47-6	11.89	4.48		0.0633	0.200
Styrene	100-42-5	11.91	4.59		0.0465	0.200
Bromoform	75-25-2	12.21	4.66		0.0786	0.600
1,1,2,2-Tetrachloroethane	79-34-5	12.65	4.30		0.0576	0.200
4-Ethyltoluene	622-96-8	12.82	4.59		0.0666	0.200
1,3,5-Trimethylbenzene	108-67-8	12.88	4.61		0.0631	0.200
1,2,4-Trimethylbenzene	95-63-6	13.25	4.56		0.0483	0.200
1,3-Dichlorobenzene	541-73-1	13.58	4.70		0.0597	0.200
1,4-Dichlorobenzene	106-46-7	13.65	4.84		0.0557	0.200
Benzyl Chloride	100-44-7	13.76	4.55		0.0598	0.200
1,2-Dichlorobenzene	95-50-1	14	4.64		0.0603	0.200
1,2,4-Trichlorobenzene	120-82-1	15.53	4.92		0.148	0.630
Hexachloro-1,3-butadiene	87-68-3	15.61	4.75		0.0656	0.630
Naphthalene	91-20-3	15.84	4.74		0.154	0.630
Allyl Chloride	107-05-1	5.74	3.78		0.0546	0.200
2-Chlorotoluene	95-49-8	12.88	4.74		0.0605	0.200
Methyl Methacrylate	80-62-6	8.61	4.13		0.0773	0.200
Tetrahydrofuran	109-99-9	7.28	3.69		0.0508	0.200
2,2,4-Trimethylpentane	540-84-1	7.72	4.13		0.0456	0.200
Vinyl Bromide	593-60-2	4.83	4.18		0.0727	0.200
Isopropylbenzene	98-82-8	12.27	4.49		0.0563	0.200

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_03.D
Acq On : 26 Apr 2018 8:33 am
Operator : 564
Sample : LCSD 1x WG1103323
Misc :
ALS Vial : 3 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 26 09:23:20 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.256	130	267567	4.0000000	ppbv	0.01
37) 1,4-Difluorobenzene	8.111	114	1018797	4.0000000	ppbv	0.01
58) Chlorobenzene-d5	11.216	117	927298	4.0000000	ppbv	0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	12.534	95	552626	3.9729246	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 99.32%			
Target Compounds						Qvalue
2) Propene	3.568	41	78795	3.6220050	ppbv	99
3) 1,1-DIFLUOROETHANE	3.585	51	172782	4.1104655	ppbv	100
4) Dichlorodifluoromethane	3.625	85	284755	4.2617876	ppbv	99
5) CHLORODIFLUOROMETHANE	3.653	51	158630	3.9424587	ppbv	97
6) 1,2-Dichlorotetrafluor...	3.817	85	338256	4.1763321	ppbv	96
7) Chloromethane	3.930	50	102428	3.8443868	ppbv	100
8) Vinyl Chloride	4.077	62	130535	3.9704190	ppbv	99
9) 1,3-Butadiene	4.117	39	77762	3.7381143	ppbv	95
10) Bromomethane	4.518	94	129617	4.2669706	ppbv	100
11) Chloroethane	4.620	64	69616	3.9536147	ppbv	98
12) Vinyl Bromide	4.830	106	134230	4.1823560	ppbv	99
13) Trichlorofluoromethane	4.858	101	304639	4.0773670	ppbv	100
14) Ethanol	5.045	45	47559	3.6711651	ppbv	99
15) 1,1,2-Trichlorotrifluo...	5.322	101	294194	4.2399856	ppbv	97
16) 1,1-Dichloroethene	5.401	61	201592	3.9728405	ppbv	97
17) Acetone	5.474	58	63788	3.8768023	ppbv	98
18) 2-Propanol	5.520	45	247475	3.9023327	ppbv	97
19) Carbon Disulfide	5.684	76	304376	4.0267165	ppbv	99
20) Allyl Chloride	5.740	41	158454	3.7808142	ppbv	92
21) Methylene Chloride	5.870	49	140087	3.7738497	ppbv	95
22) TERT-BUTYL ALCOHOL	5.870	59	350050	4.0697452	ppbv	98
23) Methyl Tert-Butyl Ether	6.035	73	434049	4.1191869	ppbv	99
24) Trans-1,2-Dichloroethene	6.085	61	178587	3.9512187	ppbv	93
25) n-Hexane	6.221	57	211083	3.9987374	ppbv	98
26) 1,1-Dichloroethane	6.498	63	258178	3.9494216	ppbv	98
27) Vinyl Acetate	6.442	43	342557	3.8866353	ppbv	98
28) ETHYL ACETATE	6.957	43	269305	3.7711772	ppbv	98
29) 2-Butanone (MEK)	6.996	72	87255	4.0925671	ppbv	99
30) cis-1,2-Dichloroethene	7.019	96	175484	4.1208558	ppbv	96
31) Tetrahydrofuran	7.279	42	155725	3.6921453	ppbv	96
32) Chloroform	7.262	83	313145	4.0887385	ppbv	99
33) Cyclohexane	7.483	84	227450	4.1662132	ppbv	95
34) 1,1,1-Trichloroethane	7.466	97	325026	4.2595381	ppbv	97
35) Carbon Tetrachloride	7.601	117	339316	4.2713086	ppbv	99
36) 2,2,4-Trimethylpentane	7.720	57	771167	4.1302057	ppbv	99
38) Benzene	7.811	78	525374	4.1129938	ppbv	100
39) 1,2-Dichloroethane	7.862	62	183365	4.0241577	ppbv	99
40) Heptane	7.845	43	254317	4.0312853	ppbv	97
41) Trichloroethene	8.388	95	235942	4.2379982	ppbv	95
42) TERT-AMYL ETHYL ETHER	8.467	73	169525	4.1893514	ppbv	97
43) METHYL CYCLOHEXANE	8.541	83	332161	4.3409410	ppbv	95
44) 1,2-Dichloropropane	8.659	63	184692	4.0068589	ppbv	99
45) Methyl Methacrylate	8.608	69	189489	4.1319220	ppbv	96
46) 1,4-Dioxane	8.739	88	146861	4.3017529	ppbv	96
47) Bromodichloromethane	8.891	83	358629	4.1488728	ppbv	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_03.D
Acq On : 26 Apr 2018 8:33 am
Operator : 564
Sample : LCSD 1x WG1103323
Misc :
ALS Vial : 3 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 26 09:23:20 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration

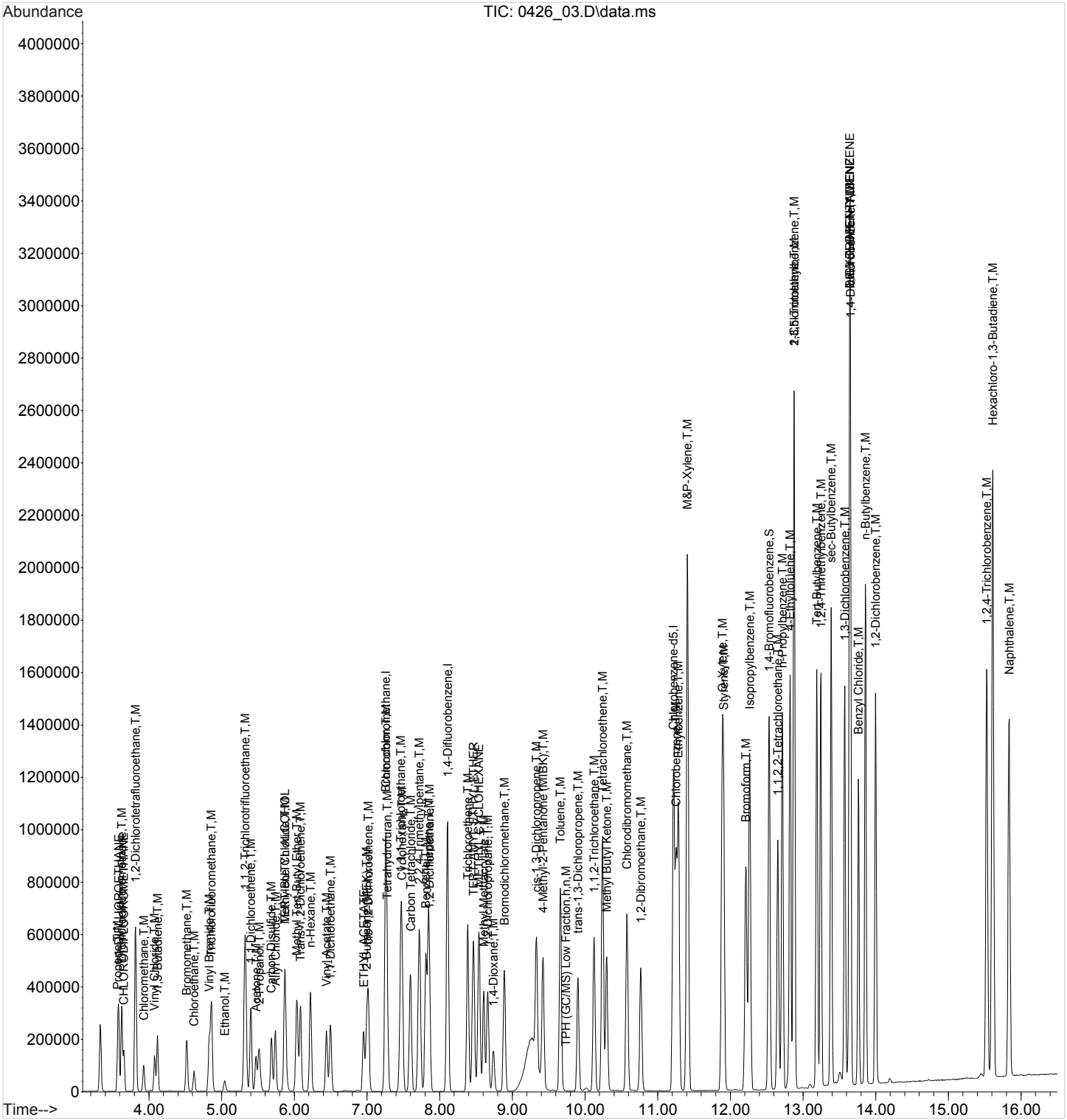
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
48)	cis-1,3-Dichloropropene	9.333	75	338956	4.1403372	ppbv	97
49)	4-Methyl-2-Pentanone (...	9.423	43	362831	3.9254221	ppbv	96
50)	Toluene	9.661	91	702943	4.4257671	ppbv	99
51)	trans-1,3-Dichloropropene	9.904	75	303061	4.3106174	ppbv	97
52)	1,1,2-Trichloroethane	10.124	97	245676	4.4392598	ppbv	97
53)	Tetrachloroethene	10.243	166	402294	4.7058639	ppbv	98
54)	Methyl Butyl Ketone	10.300	43	369850	4.1550458	ppbv	98
55)	Chlorodibromomethane	10.577	129	464681	4.6038583	ppbv	100
56)	1,2-Dibromoethane	10.769	107	401053	4.5434777	ppbv	100
57)	Chlorobenzene	11.250	112	621408	4.6641677	ppbv	96
59)	Ethylbenzene	11.284	91	978890	4.4324501	ppbv	98
60)	M&P-Xylene	11.409	91	1530127	9.0441146	ppbv	99
61)	O-Xylene	11.889	91	783104	4.4766722	ppbv	98
62)	Styrene	11.906	104	635776	4.5914981	ppbv	97
63)	Bromoform	12.212	173	531296	4.6565430	ppbv	100
64)	Isopropylbenzene	12.268	105	1158046	4.4924297	ppbv	99
65)	1,1,2,2-Tetrachloroethane	12.653	83	555599	4.3013044	ppbv	100
66)	n-Propylbenzene	12.715	91	1273495	4.4519223	ppbv	97
67)	4-Ethyltoluene	12.823	105	1148671	4.5874526	ppbv	99
68)	2-Chlorotoluene	12.879	126	276991	4.7384222	ppbv	94
70)	1,3,5-Trimethylbenzene	12.879	105	910690	4.6057722	ppbv	99
71)	Tert-Butylbenzene	13.191	119	885785	4.5865358	ppbv	99
72)	1,2,4-Trimethylbenzene	13.247	105	909780	4.5561182	ppbv	100
73)	sec-Butylbenzene	13.389	134	287376	4.6152125	ppbv	96
74)	1,3-Dichlorobenzene	13.575	146	683945	4.7021178	ppbv	98
75)	1,4-Dichlorobenzene	13.654	146	674103	4.8403699	ppbv	98
76)	1,2,3-TRIMETHYLBENZENE	13.643	105	895489	4.6961527	ppbv	99
77)	DICYCLOPENTADIENE	13.643	66	766643	4.3548576	ppbv	96
78)	Benzyl Chloride	13.762	91	820067	4.5466894	ppbv	98
79)	n-Butylbenzene	13.858	91	1027595	4.5138974	ppbv	99
80)	1,2-Dichlorobenzene	13.999	146	667605	4.6412277	ppbv	99
81)	1,2,4-Trichlorobenzene	15.527	180	658359	4.9224520	ppbv	99
82)	Hexachloro-1,3-Butadiene	15.612	225	658850	4.7471731	ppbv	98
83)	Naphthalene	15.838	128	1416794	4.7429757	ppbv	99
84)	TPH (GC/MS) Low Fraction	9.740	TIC	61318714m	194.5155724	ppbv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042618\
Data File : 0426_03.D
Acq On : 26 Apr 2018 8:33 am
Operator : 564
Sample : LCSD 1x WG1103323
Misc :
ALS Vial : 3 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 26 09:23:20 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS5D20R.M
Quant Title : AIRMS5
QLast Update : Sat Apr 21 09:56:22 2018
Response via : Initial Calibration



1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
R3305477-2

ESC Sample ID:	R3305477-2	**SDG:**	L988471
Client Sample ID:	LCSD	**Collected Date/Time:**	
Lab File ID:	0427_03	**Received Date/Time:**	
Instrument ID:	AIRMS2	**Preparation Date/Time:**	04/27/18 10:08
Analytical Batch:	WG1103956	**Analysis Date/Time:**	04/27/18 10:08
Dilution Factor:	1	**Prep Method:**	M18-Mod/TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	

Analyte	CAS	RT	Result	Qualifier	MDL	RDL
			ppbv		*ppbv*	*ppbv*
Acetone	67-64-1	6.53	4.47		0.0569	1.25
Trichloroethylene	79-01-6	10.18	4.38		0.0545	0.200
Tetrachloroethylene	127-18-4	12.21	4.26		0.0497	0.200

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_03.D
Acq On : 27 Apr 2018 10:08 am
Operator : 564
Sample : LCSD 1x WG1103956
Misc :
ALS Vial : 3 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 27 10:38:42 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:08:22 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.810	130	1816808	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	9.892	114	7742865	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	13.116	117	6756127	4.0000000	ppbv	# 0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	14.286	95	4095209	3.8363084	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 95.91%			
Target Compounds						Qvalue
2) Propene	4.065	41	2159047	4.4256394	ppbv	98
3) 1,1-DIFLUOROETHANE	4.074	65	1246468	4.7473630	ppbv	94
4) Dichlorodifluoromethane	4.127	85	2962512	4.1476089	ppbv	99
5) CHLORODIFLUOROMETHANE	4.158	67	460163	4.2490571	ppbv	90
6) 1,2-Dichlorotetrafluor...	4.354	85	3994770	4.9750089	ppbv	99
7) Chloromethane	4.458	50	2138207	4.6549977	ppbv	100
8) Vinyl Chloride	4.652	62	2071841	4.4923042	ppbv	100
9) 1,3-Butadiene	4.713	39	2096921	4.2934062	ppbv	98
10) Bromomethane	5.199	94	1134884	4.0365118	ppbv	99
11) Chloroethane	5.356	64	983804	4.2219906	ppbv	99
12) Vinyl Bromide	5.630	106	1218951	4.6954819	ppbv	100
13) Trichlorofluoromethane	5.710	101	3114370	4.4514902	ppbv	99
14) Ethanol	6.038	45	634185	4.1472389	ppbv	97
15) 1,1,2-Trichlorotrifluo...	6.401	101	2695571	4.6083520	ppbv	97
16) 1,1-Dichloroethene	6.427	61	3108685	4.3703554	ppbv	97
17) Acetone	6.529	43	3266486	4.4698655	ppbv	99
18) 2-Propanol	6.709	45	4300457	4.3632156	ppbv	100
19) Carbon Disulfide	6.722	76	3324754	4.6190672	ppbv	95
20) Allyl Chloride	6.894	41	3565207	4.4602370	ppbv	97
21) Methylene Chloride	7.061	49	2699097	4.4428030	ppbv	97
22) TERT-BUTYL ALCOHOL	7.195	59	4911842	4.4455389	ppbv	97
23) Methyl Tert-Butyl Ether	7.368	73	5304076	4.4215008	ppbv	100
24) Trans-1,2-Dichloroethene	7.369	96	1278182	4.5402576	ppbv	96
25) n-Hexane	7.635	57	3407571	4.5288843	ppbv	96
26) 1,1-Dichloroethane	7.880	63	3774801	4.5577783	ppbv	100
27) Vinyl Acetate	7.905	43	6775711	4.6602610	ppbv	99
28) ETHYL ACETATE	8.577	70	416692	4.5577758	ppbv	98
29) 2-Butanone (MEK)	8.546	72	951748	4.4793640	ppbv	99
30) cis-1,2-Dichloroethene	8.542	61	3497819	4.5459264	ppbv	98
31) Tetrahydrofuran	8.867	42	3380084	4.3703768	ppbv	98
32) Chloroform	8.869	83	3383518	4.4128075	ppbv	100
33) Cyclohexane	9.113	84	2501301	4.6314723	ppbv	94
34) 1,1,1-Trichloroethane	9.080	97	3139661	4.4235707	ppbv	99
35) Carbon Tetrachloride	9.248	117	2814078	4.4751962	ppbv	99
36) 2,2,4-Trimethylpentane	9.487	57	12232640	4.5293796	ppbv	97
38) Benzene	9.478	78	5927986	4.5569289	ppbv	97
39) 1,2-Dichloroethane	9.533	62	2844168	4.3397014	ppbv	100
40) Heptane	9.679	43	5523211	4.3989817	ppbv	97
41) Trichloroethene	10.184	95	2070948	4.3752347	ppbv	97
42) TERT-AMYL ETHYL ETHER	10.388	73	1921650	4.2403377	ppbv	96
43) METHYL CYCLOHEXANE	10.366	83	3472712	4.5639550	ppbv	94
44) 1,2-Dichloropropane	10.451	63	2560264	4.5701013	ppbv	95
45) Methyl Methacrylate	10.510	69	2201995	4.5394037	ppbv	100
46) 1,4-Dioxane	10.586	88	1052830	4.5456975	ppbv	96
47) Bromodichloromethane	10.730	83	3766246	4.4007710	ppbv	100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_03.D
Acq On : 27 Apr 2018 10:08 am
Operator : 564
Sample : LCSD 1x WG1103956
Misc :
ALS Vial : 3 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 27 10:38:42 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:08:22 2018
Response via : Initial Calibration

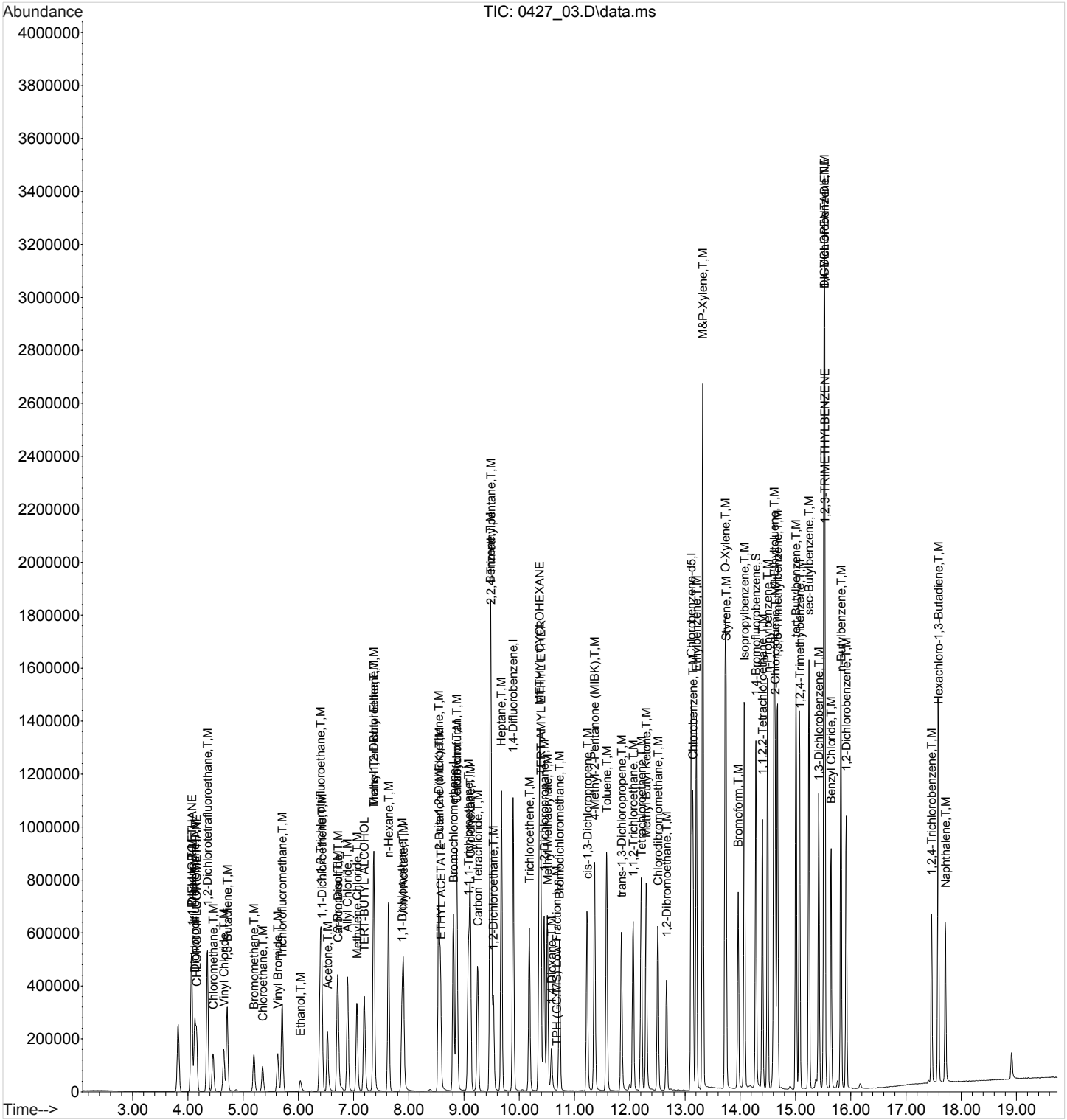
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
48)	cis-1,3-Dichloropropene	11.229	75	3781295	4.6270955	ppbv		94
49)	4-Methyl-2-Pentanone (...	11.364	43	7205781	4.4198207	ppbv		99
50)	Toluene	11.584	91	6463422	4.6049754	ppbv		100
51)	trans-1,3-Dichloropropene	11.852	75	3178361	4.5575259	ppbv		94
52)	1,1,2-Trichloroethane	12.063	97	1993373	4.5896705	ppbv		97
53)	Tetrachloroethene	12.210	166	2259961	4.2580993	ppbv		97
54)	Methyl Butyl Ketone	12.301	43	6437049	4.5454440	ppbv		99
55)	Chlorodibromomethane	12.511	129	3097253	4.6375753	ppbv		100
56)	1,2-Dibromoethane	12.669	107	2998725	4.8790528	ppbv		98
57)	Chlorobenzene	13.146	112	5030797	5.1703960	ppbv	#	92
59)	Ethylbenzene	13.209	91	9039954	4.4314612	ppbv		98
60)	M&P-Xylene	13.324	91	13796111	8.7819731	ppbv		96
61)	O-Xylene	13.729	91	6840009	4.3534359	ppbv		97
62)	Styrene	13.745	104	5207619	4.4523241	ppbv		90
63)	Bromoform	13.965	173	3160945	4.8601869	ppbv		100
64)	Isopropylbenzene	14.078	105	9225506	4.4701531	ppbv		97
65)	1,1,2,2-Tetrachloroethane	14.403	83	5195522	4.4485008	ppbv		98
66)	n-Propylbenzene	14.497	91	11448574	4.3960644	ppbv		97
67)	4-Ethyltoluene	14.612	105	9233572	4.3980020	ppbv		98
68)	2-Chlorotoluene	14.632	91	7670163	4.2409754	ppbv		96
70)	1,3,5-Trimethylbenzene	14.676	105	7475751	4.2754946	ppbv		97
71)	tert-Butylbenzene	15.013	119	6822049	4.3542631	ppbv		93
72)	1,2,4-Trimethylbenzene	15.076	105	7173360	4.2585587	ppbv		97
73)	sec-Butylbenzene	15.246	105	10992125	4.3081728	ppbv		98
74)	1,3-Dichlorobenzene	15.424	146	3964440	4.6024855	ppbv	#	91
75)	1,4-Dichlorobenzene	15.521	146	4035540	4.3519579	ppbv	#	89
76)	1,2,3-TRIMETHYLBENZENE	15.534	105	7100146	4.0674976	ppbv		97
77)	DICYCLOPENTADIENE	15.521	66	13326285	4.1039539	ppbv		97
78)	Benzyl Chloride	15.646	91	6205840	4.4722261	ppbv		96
79)	n-Butylbenzene	15.825	91	8641275	4.2705452	ppbv		98
80)	1,2-Dichlorobenzene	15.922	146	3589053	4.5439252	ppbv		98
81)	1,2,4-Trichlorobenzene	17.468	180	1725175	5.7309861	ppbv		97
82)	Hexachloro-1,3-Butadiene	17.588	225	2547364	4.7243780	ppbv		92
83)	Naphthalene	17.717	128	4192537	5.4868811	ppbv		96
84)	TPH (GC/MS) Low Fraction	10.675	TIC	750966440m	179.6547933	ppbv		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_03.D
Acq On : 27 Apr 2018 10:08 am
Operator : 564
Sample : LCSD 1x WG1103956
Misc :
ALS Vial : 3 Sample Multiplier: 1
InstName : AIRMS2

Quant Time: Apr 27 10:38:42 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS2D17R.M
Quant Title :
QLast Update : Wed Apr 18 09:08:22 2018
Response via : Initial Calibration



1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
R3305484-2

ESC Sample ID:	R3305484-2	**SDG:**	L988471
Client Sample ID:	LCSD	**Collected Date/Time:**	
Lab File ID:	0427_03	**Received Date/Time:**	
Instrument ID:	AIRMS4	**Preparation Date/Time:**	04/27/18 09:57
Analytical Batch:	WG1103966	**Analysis Date/Time:**	04/27/18 09:57
Dilution Factor:	1	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	

Analyte	CAS	RT	Result	Qualifier	MDL	RDL
			ppbv		*ppbv*	*ppbv*
Ethanol	64-17-5	6.80	2.89		0.0832	0.630
Propene	115-07-1	4.15	3.89		0.0932	0.400
Dichlorodifluoromethane	75-71-8	4.24	3.30		0.0601	0.200
1,2-Dichlorotetrafluoroethane	76-14-2	4.55	3.63		0.0458	0.200
Chloromethane	74-87-3	4.72	3.35		0.0544	0.200
Vinyl chloride	75-01-4	4.98	3.50		0.0457	0.200
1,3-Butadiene	106-99-0	5.05	3.24		0.0563	2.00
Bromomethane	74-83-9	5.71	3.71		0.0609	0.200
Chloroethane	75-00-3	5.91	3.55		0.0489	0.200
Trichlorofluoromethane	75-69-4	6.31	3.66		0.0673	0.200
1,1,2-Trichlorotrifluoroethane	76-13-1	7.11	3.70		0.0687	0.200
1,1-Dichloroethene	75-35-4	7.18	3.49		0.0490	0.200
1,1-Dichloroethane	75-34-3	8.82	3.50		0.0514	0.200
Acetone	67-64-1	7.36	3.49		0.0569	1.25
2-Propanol	67-63-0	7.54	3.54		0.0882	1.25
Carbon disulfide	75-15-0	7.53	3.50		0.0544	0.200
Methylene Chloride	75-09-2	7.94	3.19		0.0465	0.200
MTBE	1634-04-4	8.20	3.61		0.0505	0.200
trans-1,2-Dichloroethene	156-60-5	8.24	3.52		0.0464	0.200
n-Hexane	110-54-3	8.46	3.51		0.0457	0.200
Vinyl acetate	108-05-4	8.82	3.67		0.0639	0.200
Methyl Ethyl Ketone	78-93-3	9.54	3.98		0.0493	1.25
cis-1,2-Dichloroethene	156-59-2	9.53	3.62		0.0389	0.200
Chloroform	67-66-3	9.86	3.58		0.0574	0.200
Cyclohexane	110-82-7	10.06	3.68		0.0534	0.200
1,1,1-Trichloroethane	71-55-6	10.06	3.62		0.0665	0.200
Carbon tetrachloride	56-23-5	10.22	3.69		0.0585	0.200
Benzene	71-43-2	10.49	3.69		0.0460	0.200
1,2-Dichloroethane	107-06-2	10.58	3.45		0.0616	0.200
Heptane	142-82-5	10.59	3.31		0.0626	0.200
Trichloroethylene	79-01-6	11.20	3.74		0.0545	0.200
1,2-Dichloropropane	78-87-5	11.51	3.57		0.0599	0.200
1,4-Dioxane	123-91-1	11.63	3.95		0.0554	0.200
Bromodichloromethane	75-27-4	11.79	3.67		0.0436	0.200
cis-1,3-Dichloropropene	10061-01-5	12.29	3.78		0.0588	0.200
4-Methyl-2-pentanone (MIBK)	108-10-1	12.40	3.43		0.0650	1.25
Toluene	108-88-3	12.62	3.72		0.0499	0.200
trans-1,3-Dichloropropene	10061-02-6	12.89	3.57		0.0435	0.200
1,1,2-Trichloroethane	79-00-5	13.08	3.47		0.0287	0.200
Tetrachloroethylene	127-18-4	13.17	3.70		0.0497	0.200
Methyl Butyl Ketone	591-78-6	13.25	3.40		0.0682	1.25
Dibromochloromethane	124-48-1	13.48	3.70		0.0494	0.200
1,2-Dibromoethane	106-93-4	13.63	3.68		0.0185	0.200

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
R3305484-2

ESC Sample ID:	R3305484-2	**SDG:**	L988471
Client Sample ID:	LCSD	**Collected Date/Time:**	
Lab File ID:	0427_03	**Received Date/Time:**	
Instrument ID:	AIRMS4	**Preparation Date/Time:**	04/27/18 09:57
Analytical Batch:	WG1103966	**Analysis Date/Time:**	04/27/18 09:57
Dilution Factor:	1	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	

Analyte	CAS	RT	Result	Qualifier	MDL	RDL
			ppbv		*ppbv*	*ppbv*
Chlorobenzene	108-90-7	14.07	3.61		0.0601	0.200
Ethylbenzene	100-41-4	14.10	3.88		0.0506	0.200
m&p-Xylene	1330-20-7	14.21	7.68		0.0946	0.400
o-Xylene	95-47-6	14.64	3.77		0.0633	0.200
Styrene	100-42-5	14.66	3.93		0.0465	0.200
Bromoform	75-25-2	14.94	4.19		0.0786	0.600
1,1,2,2-Tetrachloroethane	79-34-5	15.37	3.74		0.0576	0.200
4-Ethyltoluene	622-96-8	15.53	3.96		0.0666	0.200
1,3,5-Trimethylbenzene	108-67-8	15.59	3.88		0.0631	0.200
1,2,4-Trimethylbenzene	95-63-6	16.01	4.02		0.0483	0.200
1,3-Dichlorobenzene	541-73-1	16.39	4.23		0.0597	0.200
1,4-Dichlorobenzene	106-46-7	16.48	4.33		0.0557	0.200
Benzyl Chloride	100-44-7	16.61	4.42		0.0598	0.200
1,2-Dichlorobenzene	95-50-1	16.87	4.16		0.0603	0.200
1,2,4-Trichlorobenzene	120-82-1	18.46	5.38		0.148	0.630
Hexachloro-1,3-butadiene	87-68-3	18.54	4.24		0.0656	0.630
Naphthalene	91-20-3	18.77	4.91		0.154	0.630
Allyl Chloride	107-05-1	7.73	3.30		0.0546	0.200
2-Chlorotoluene	95-49-8	15.59	3.95		0.0605	0.200
Methyl Methacrylate	80-62-6	11.51	3.47		0.0773	0.200
Tetrahydrofuran	109-99-9	9.85	3.38		0.0508	0.200
2,2,4-Trimethylpentane	540-84-1	10.40	3.52		0.0456	0.200
Vinyl Bromide	593-60-2	6.24	3.77		0.0727	0.200
Isopropylbenzene	98-82-8	14.98	3.84		0.0563	0.200

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_03.D
Acq On : 27 Apr 2018 9:57 am
Operator : 564
Sample : LCSD 1x WG1103966
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 27 10:36:43 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:45:42 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	9.824	130	1399755	4.0000000	ppbv	0.00
37) 1,4-Difluorobenzene	10.900	114	5044409	4.0000000	ppbv	0.00
58) Chlorobenzene-d5	14.039	117	3164082	4.0000000	ppbv	0.00
System Monitoring Compounds						
69) 1,4-Bromofluorobenzene	15.240	95	1640459	3.9430634	ppbv	0.00
Spiked Amount 4.000	Range 60 - 140		Recovery = 98.58%			
Target Compounds						Qvalue
2) Propene	4.153	41	367294	3.8940131	ppbv	98
3) 1,1-DIFLUOROETHANE	4.177	51	396747	4.1768007	ppbv	96
4) Dichlorodifluoromethane	4.238	85	888759	3.3010394	ppbv	100
5) CHLORODIFLUOROMETHANE	4.302	51	426167	4.6363250	ppbv	99
6) 1,2-Dichlorotetrafluor...	4.548	85	378851	3.6327970	ppbv	95
7) Chloromethane	4.717	50	627019	3.3497223	ppbv	99
8) Vinyl Chloride	4.978	62	791343	3.4977945	ppbv	100
9) 1,3-Butadiene	5.050	39	425354	3.2383755	ppbv	93
10) Bromomethane	5.709	94	916344	3.7062686	ppbv	99
11) Chloroethane	5.905	64	398474	3.5518207	ppbv	98
12) Vinyl Bromide	6.243	106	951161	3.7677065	ppbv	99
13) Trichlorofluoromethane	6.309	101	1987046	3.6565704	ppbv	100
14) Ethanol	6.799	45	162745	2.8864107	ppbv	93
15) 1,1,2-Trichlorotrifluo...	7.107	101	1843896	3.6952901	ppbv	95
16) 1,1-Dichloroethene	7.182	61	1105620	3.4886047	ppbv	93
17) Acetone	7.359	43	682803	3.4943164	ppbv	96
18) 2-Propanol	7.543	45	1067359	3.5432086	ppbv	100
19) Carbon Disulfide	7.534	76	1783783	3.5016891	ppbv	97
20) Allyl Chloride	7.731	41	807040	3.2976030	ppbv	93
21) Methylene Chloride	7.940	49	763724	3.1887840	ppbv	91
22) TERT-BUTYL ALCOHOL	8.064	59	1565538	3.6156557	ppbv	98
23) Methyl Tert-Butyl Ether	8.195	73	2116664	3.6127887	ppbv	100
24) Trans-1,2-Dichloroethene	8.243	61	906655	3.5192755	ppbv	93
25) n-Hexane	8.456	57	1074983	3.5126048	ppbv	95
26) 1,1-Dichloroethane	8.820	63	1434029	3.4990694	ppbv	100
27) Vinyl Acetate	8.822	43	1448777	3.6700529	ppbv	96
28) ETHYL ACETATE	9.514	45	194558	3.4916052	ppbv	95
29) 2-Butanone (MEK)	9.536	72	396515	3.9785078	ppbv	97
30) cis-1,2-Dichloroethene	9.527	61	1250923	3.6186660	ppbv	95
31) Tetrahydrofuran	9.851	42	734447	3.3806170	ppbv	94
32) Chloroform	9.863	83	1775995	3.5805404	ppbv	99
33) Cyclohexane	10.062	84	1139649	3.6817908	ppbv	92
34) 1,1,1-Trichloroethane	10.064	97	1764206	3.6186100	ppbv	98
35) Carbon Tetrachloride	10.223	117	1926708	3.6850842	ppbv	99
36) 2,2,4-Trimethylpentane	10.402	57	3818783	3.5186925	ppbv	98
38) Benzene	10.491	78	2784610	3.6934081	ppbv	99
39) 1,2-Dichloroethane	10.580	62	841875	3.4534719	ppbv	98
40) Heptane	10.585	43	1206999	3.3080563	ppbv	92
41) Trichloroethene	11.200	95	1300884	3.7403236	ppbv	98
42) TERT-AMYL ETHYL ETHER	11.326	73	785706	3.6890826	ppbv	94
43) METHYL CYCLOHEXANE	11.348	83	1646840	3.7405095	ppbv	93
44) 1,2-Dichloropropane	11.510	63	975306	3.5727574	ppbv	93
45) Methyl Methacrylate	11.507	41	1145497	3.4673301	ppbv #	90
46) 1,4-Dioxane	11.628	88	631260	3.9486876	ppbv	94
47) Bromodichloromethane	11.793	83	1957783	3.6722482	ppbv	100
48) cis-1,3-Dichloropropene	12.290	75	1666850	3.7821438	ppbv	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_03.D
Acq On : 27 Apr 2018 9:57 am
Operator : 564
Sample : LCSD 1x WG1103966
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 27 10:36:43 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:45:42 2018
Response via : Initial Calibration

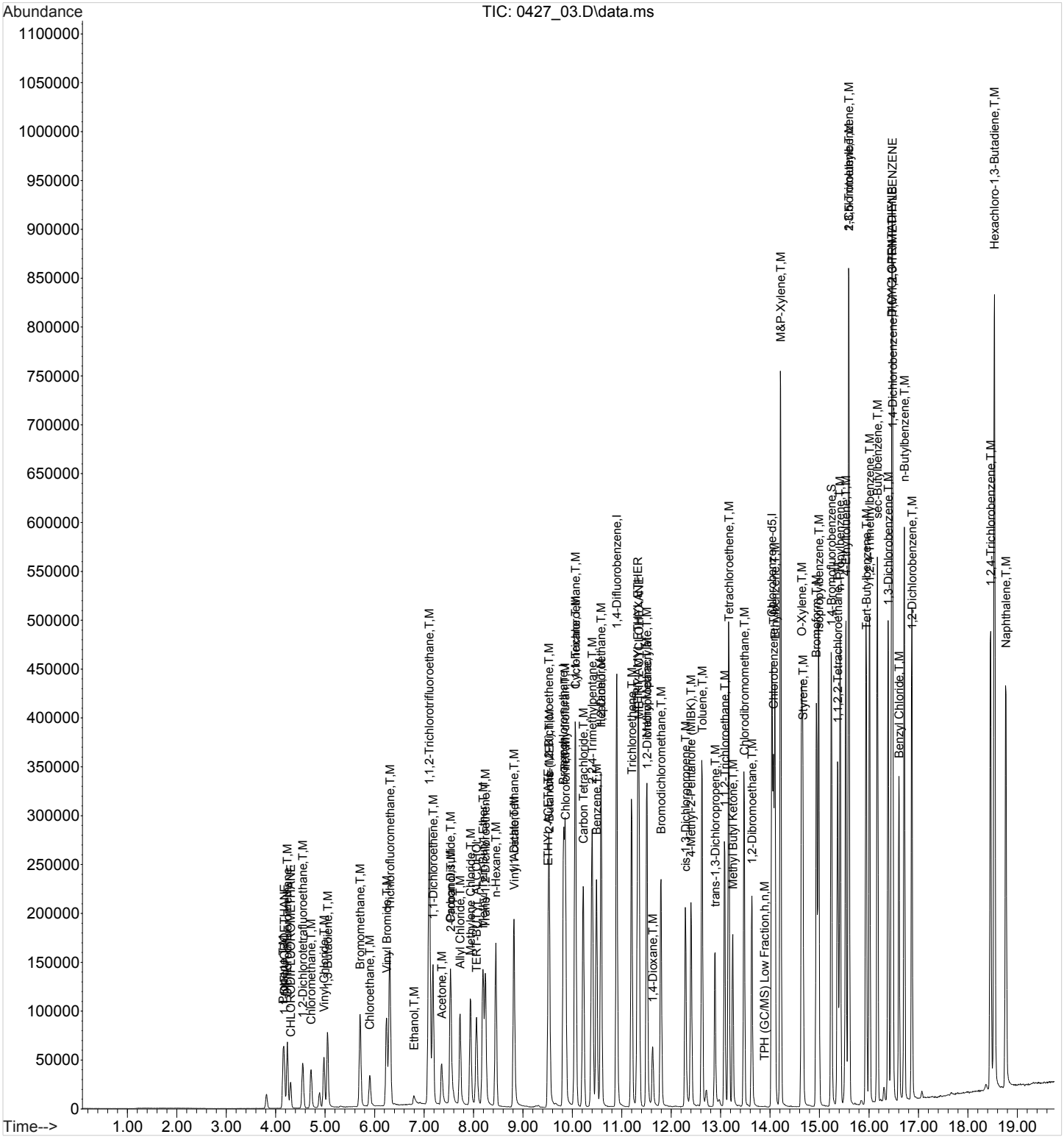
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) 4-Methyl-2-Pentanone (...	12.403	43	1614890	3.4286504	ppbv	94
50) Toluene	12.625	91	3269450	3.7155003	ppbv	100
51) trans-1,3-Dichloropropene	12.888	75	1120809	3.5708338	ppbv	97
52) 1,1,2-Trichloroethane	13.082	97	1038527	3.4744265	ppbv	98
53) Tetrachloroethene	13.166	166	1829223	3.7041809	ppbv	97
54) Methyl Butyl Ketone	13.247	43	1148774	3.4026059	ppbv #	95
55) Chlorodibromomethane	13.476	129	2155006	3.7037868	ppbv	99
56) 1,2-Dibromoethane	13.634	107	1677010	3.6771802	ppbv	100
57) Chlorobenzene	14.070	112	2300080	3.6144300	ppbv	97
59) Ethylbenzene	14.100	91	3414610	3.8802352	ppbv	99
60) M&P-Xylene	14.213	91	5227799	7.6755339	ppbv	99
61) O-Xylene	14.641	91	2651963	3.7678310	ppbv	99
62) Styrene	14.665	104	2093517	3.9286979	ppbv	97
63) Bromoform	14.941	173	2469759	4.1883252	ppbv	100
64) Isopropylbenzene	14.984	105	3843076	3.8430700	ppbv	99
65) 1,1,2,2-Tetrachloroethane	15.369	83	2205241	3.7393919	ppbv	100
66) n-Propylbenzene	15.419	91	4458224	3.9071318	ppbv	98
67) 4-Ethyltoluene	15.534	105	3916769	3.9624509	ppbv	99
68) 2-Chlorotoluene	15.595	126	1084352	3.9527798	ppbv	94
70) 1,3,5-Trimethylbenzene	15.595	105	3231047	3.8809250	ppbv	99
71) Tert-Butylbenzene	15.945	119	3109659	3.9165227	ppbv	98
72) 1,2,4-Trimethylbenzene	16.014	105	3271912	4.0248993	ppbv	99
73) sec-Butylbenzene	16.173	134	925908	4.0466049	ppbv #	94
74) 1,3-Dichlorobenzene	16.391	146	2567803	4.2340067	ppbv	98
75) 1,4-Dichlorobenzene	16.483	146	2506608	4.3318116	ppbv	98
76) 1,2,3-TRIMETHYLBENZENE	16.469	105	3114126	3.9103284	ppbv	99
77) DICYCLOPENTADIENE	16.458	66	3285007	3.5892033	ppbv	97
78) Benzyl Chloride	16.609	91	2641929	4.4196728	ppbv	98
79) n-Butylbenzene	16.717	91	3521001	3.8786905	ppbv	99
80) 1,2-Dichlorobenzene	16.870	146	2577509	4.1643505	ppbv	99
81) 1,2,4-Trichlorobenzene	18.461	180	2146102	5.3773724	ppbv	99
82) Hexachloro-1,3-Butadiene	18.541	225	2400482	4.2423865	ppbv	97
83) Naphthalene	18.770	128	4427721	4.9104035	ppbv	99
84) TPH (GC/MS) Low Fraction	13.890	TIC	269088881m	179.7343825	ppbv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718\
Data File : 0427_03.D
Acq On : 27 Apr 2018 9:57 am
Operator : 564
Sample : LCSD 1x WG1103966
Misc :
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 27 10:36:43 2018
Quant Method : C:\msdchem\1\methods\TOAIRMS4D24R.m
Quant Title : AIRMS4
QLast Update : Wed Apr 25 09:45:42 2018
Response via : Initial Calibration



TO-15 Air VOCs Benchsheet

Batch: WG1103323

Analyst: MEL607 **SOP:** 330367 **Method:** EPA TO-15

ICV, LCS/D Std: 18D20628 Amt. Used: 300 cc Exp. Date:10/20/18 **Internal Standard/Surrogate:** 18D20624 Amt. Used: 50 cc Exp. Date:09/13/18
High Standard: 18C29708 Amt. Used: 800 cc Exp. Date:09/29/18

Sample Number	Reference Volume (mL)	Dilution Factor	Sample Vol. Used (mL)	Review Analyst	Review Date	Sample Comments
BLANK	400	1	400	MEL607	04/26/18 14:44:16	
LCS	400	1	400	MEL607	04/26/18 14:44:16	
LCSD	400	1	400	MEL607	04/26/18 14:44:16	
1. L988053-01	400	80	5	MEL607	04/26/18 14:44:16	
2. L988053-02	400	80	5	MEL607	04/26/18 14:44:16	
3. L988404-02	400	1	400	MEL607	04/26/18 14:44:16	
4. L988404-03	400	1	400	MEL607	04/26/18 14:44:16	
5. L988404-04	400	1	400	MEL607	04/26/18 14:44:16	
6. L988404-05	400	1	400	MEL607	04/26/18 14:44:16	
7. L988471-01	400	5	80	MEL607	04/26/18 14:44:16	
8. L988471-02	400	1	400	MEL607	04/26/18 14:44:16	
9. L988471-03	400	25	16	MEL607	04/26/18 14:44:16	
10. L988471-04	400	100	4	MEL607	04/26/18 14:44:16	
11. L988471-05	400	10	40	MEL607	04/26/18 14:44:16	
12. L988471-06	400	1	400	MEL607	04/26/18 14:44:16	
13. L988471-07	400	1	400	MEL607	04/26/18 14:44:16	
14. L988471-08	400	1	400	MEL607	04/26/18 14:44:16	
15. L988471-09	400	1	400	MEL607	04/26/18 14:44:16	
16. L988471-10	400	1	400	MEL607	04/26/18 14:44:16	
17. L988471-11	400	1	400	MEL607	04/26/18 14:44:16	
18. L988471-12	400	1	400	MEL607	04/26/18 14:44:16	
19. L988471-13	400	1	400	MEL607	04/26/18 14:44:16	
20. L988795-01	400	1	400	MEL607	04/26/18 14:44:16	

Comments:
L988053-01 Time Added: 04/26/18 12:44:24
L988795-01 Time Added: 04/26/18 12:44:24
L988471-01 Time Added: 04/26/18 12:44:24
L988471-02 Time Added: 04/26/18 12:44:24
L988471-03 Time Added: 04/26/18 12:44:24
L988471-04 Time Added: 04/26/18 12:44:24
L988471-05 Time Added: 04/26/18 12:44:24
L988471-06 Time Added: 04/26/18 12:44:24
L988471-07 Time Added: 04/26/18 12:44:24
L988471-08 Time Added: 04/26/18 12:44:24
L988471-09 Time Added: 04/26/18 12:44:24
L988471-10 Time Added: 04/26/18 12:44:24
L988471-11 Time Added: 04/26/18 12:44:24
L988471-12 Time Added: 04/26/18 12:44:24
L988471-13 Time Added: 04/26/18 12:44:24
L988053-02 Time Added: 04/26/18 12:44:24

Reviewed By:MEL607 on 04/26/18 14:44:16

TO-15 Air VOCs Benchsheet

Batch: WG1103956

Analyst: AMC729 **SOP:** 330367 **Method:** EPA TO-15

ICV, LCS/D Std: 18D17266 Amt. Used: 300 cc Exp. Date:10/17/18 **Internal Standard/Surrogate:** 18D17267 Amt. Used: 50 cc Exp. Date:09/13/18
High Standard: 18C29708 Amt. Used: 800 cc Exp. Date:09/29/18

Sample Number	Reference Volume (mL)	Dilution Factor	Sample Vol. Used (mL)	Review Analyst	Review Date	Sample Comments
BLANK	400	1	400	AMC729	04/27/18 13:11:54	
LCS	400	1	400	AMC729	04/27/18 13:11:54	
LCSD	400	1	400	AMC729	04/27/18 13:11:54	
1. L988053-02	400	25	16	AMC729	04/27/18 13:11:54	
2. L988398-03	400	80	5	AMC729	04/27/18 13:11:54	
3. L988469-01	400	25	16	AMC729	04/27/18 13:11:54	
4. L988469-02	400	25	16	AMC729	04/27/18 13:11:54	
5. L988471-02	400	20	20	AMC729	04/27/18 13:11:54	
6. L988471-04	400	4000	0.1	AMC729	04/27/18 13:11:54	
7. L988471-05	400	200	2	AMC729	04/27/18 13:11:54	
8. L988471-06	400	80	5	AMC729	04/27/18 13:11:54	
9. L988471-09	400	20	20	AMC729	04/27/18 13:11:54	
10. L988471-10	400	20	20	AMC729	04/27/18 13:11:54	
11. L988471-11	400	80	5	AMC729	04/27/18 13:11:54	
12. L988471-12	400	25	16	AMC729	04/27/18 13:11:54	
13. L988471-13	400	25	16	AMC729	04/27/18 13:11:54	
14. L988726-01	400	100	4	AMC729	04/27/18 13:11:54	
15. L988738-01	400	4000	0.1	AMC729	04/27/18 13:11:54	
16. L988740-01	400	200	2	AMC729	04/27/18 13:11:54	
17. L988855-01	400	25	16	AMC729	04/27/18 13:11:54	
18. L989085-01	400	80	5	AMC729	04/27/18 13:11:54	
19. L989088-01	400	2	200	AMC729	04/27/18 13:11:54	

Comments:

Reviewed By:AMC729 on 04/27/18 13:11:54

TO-15 Air VOCs Benchsheet

Batch: WG1103966

Analyst: AMC729 **SOP:** 330367 **Method:** EPA TO-15

ICV, LCS/D Std: 18D19497 Amt. Used: 300 cc Exp. Date:10/19/18 **Internal Standard/Surrogate:** 18D19496 Amt. Used: 50 cc Exp. Date:09/13/18
High Standard: 18D24885 Amt. Used: 800 cc Exp. Date:10/23/18

Sample Number	Reference Volume (mL)	Dilution Factor	Sample Vol. Used (mL)	Review Analyst	Review Date	Sample Comments
BLANK	400	1	400	AMC729	04/27/18 13:24:47	
LCS	400	1	400	AMC729	04/27/18 13:24:47	
LCSD	400	1	400	AMC729	04/27/18 13:24:47	
1. L988471-03	400	100	4	AMC729	04/27/18 13:24:47	
2. L988726-02	400	25	16	AMC729	04/27/18 13:24:47	
3. L989013-01	400	2	200	AMC729	04/27/18 14:36:14	
4. L989014-07	400	8	50	AMC729	04/27/18 13:24:47	TO-15BTEXMGRO: possible high 2-propanol.
5. L989087-01	400	2	200	AMC729	04/27/18 13:24:47	
6. L989089-01	400	2000	0.2	AMC729	04/27/18 13:24:47	
7. L989095-01	400	2	200	AMC729	04/27/18 13:24:47	
8. L989101-01	400	8	50	AMC729	04/27/18 13:24:47	
9. L989230-01	400	2	200	AMC729	04/27/18 14:36:14	
10. L989230-02	400	2	200	AMC729	04/27/18 14:36:14	
11. L989231-01	400	2	200	AMC729	04/27/18 14:36:14	
12. L989231-02	400	2	200	AMC729	04/27/18 14:36:14	
13. L989246-01	400	2	200	AMC729	04/27/18 14:36:14	
14. L989246-02	400	2	200	AMC729	04/27/18 14:36:14	
15. L989246-03	400	2	200	AMC729	04/27/18 14:36:14	
16. L989246-04	400	2	200	AMC729	04/27/18 14:36:14	
17. L989246-05	400	2	200	AMC729	04/27/18 14:36:14	

Comments:
L989230-02 Time Added: 04/27/18 13:54:15
L989230-01 Time Added: 04/27/18 13:54:15
L989013-01 Time Added: 04/27/18 13:54:15
L989246-02 Time Added: 04/27/18 13:54:16
L989246-03 Time Added: 04/27/18 13:54:16
L989246-04 Time Added: 04/27/18 13:54:16
L989246-01 Time Added: 04/27/18 13:54:16
L989246-05 Time Added: 04/27/18 13:54:16
L989231-01 Time Added: 04/27/18 13:54:16
L989231-02 Time Added: 04/27/18 13:54:16

Reviewed By:AMC729 on 04/27/18 14:36:14

1 Cp
2 Tc
3 Ss
4 Cn
5 Su
6 Gl
7 Al
8 Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

COD	Coefficient of Determination.
Mass	Mass of parameter.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
RRF	Relative Response Factor.
RT	Retention Time.
SDG	Sample Delivery Group.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

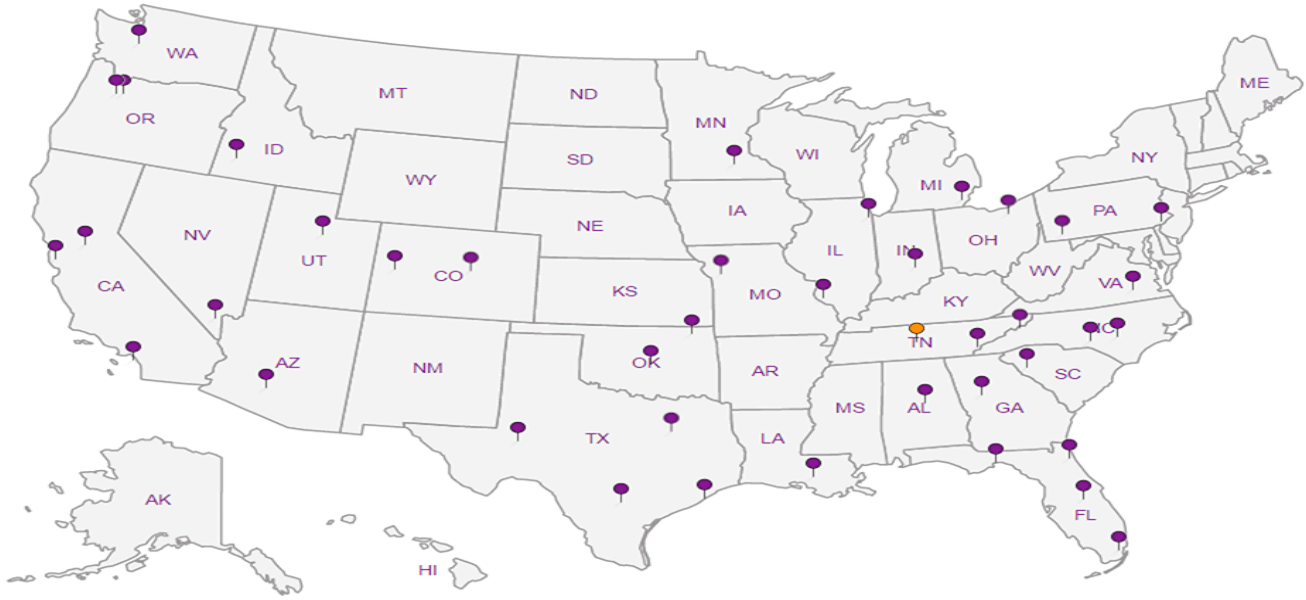
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. ESC Lab Sciences performs all testing at our central laboratory.



S&ME

Billing Information:

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 1 of 2

ESC LAB SCIENCES

YOUR LAB OF CHOICE

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

Report to: Liz Porter and Nate Peterson

Email To: Liz P and Nate P (e-mail on file)

Project Description: Former Sanitary Laundry

City/State Collected: TN

Phone: 865-970-0003
Fax:

Client Project # 4143-17-016

Lab Project # SME-4143-17-016

L# L988471

Collected by (print): N Peterson

Site/Facility ID #

P.O. #

Tal M200

Collected by (signature):

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Immediately Packed on Ice N ___ Y ___

Acctnum: SME
Template:
Prelogin:
TSR:
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	TO-15 + QC4										Remarks	Sample # (lab only)
SS-1		AIR		4/23/18	1053	1	X											-01
SS-2		AIR			1058	1	X						X					02
SS-3		AIR			1102	1	X											03
SS-4		AIR			1106	1	X											04
SS-5		AIR			1111	1	X											05
SS-6		AIR			1114	1	X											06
SS-7		AIR			1117	1	X											07
SS-8		AIR			1121	1	X											08
SS-9		AIR			1127	1	X											09
SS-10		AIR			1132	1	X											10

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: ECKN

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: __ UPS __ FedEx __ Courier __ _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: NP __Y __N
COC Signed/Accurate: __Y __N
Bottles arrive intact: __Y __N
Correct bottles used: __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
	4/24/18	1400			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	If preservation required by Login: Date/Time
	4-24-18	1700		AmB 13	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold:
				4/25/18 1015	

Condition: NCF / OK

S&ME

Billing Information:

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 2 of 2

ESC LAB SCIENCES

YOUR LAB OF CHOICE

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

Report to: **Liz Porter and Nate Peterson**

Email To: **Liz P and Nate P (e-mail on file)**

Project Description: **Former Sanitary Laundry**

City/State Collected: **TN**

Phone:
Fax:

Client Project #

Lab Project # **SME-4143-17-016**

L# L988471

Collected by (print):

Site/Facility ID #

P.O. #

Table #

Collected by (signature):

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Acctnum: **SME**

Template:

Prelogin:

TSR:

PB:

Shipped Via:

Immediately Packed on Ice N ___ Y ___

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	TO-15 + QC4	Remarks	Sample # (lab only)
SS-11	G	AIR	—	4/23/18	1136	1	X		-11
SS-12	G	AIR	—	↓	1142	1	X		12
DUP	G	AIR	—	↓	—		X		13
							X		
							X		
							X		
							X		
							X		
							X		

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: ESCKN

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: NP __Y __N
COC Signed/Accurate: A __N
Bottles arrive intact: A __N
Correct bottles used: A __N
Sufficient volume sent: A __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
	4/24/18	1400			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	If preservation required by Login: Date/Time
	4-24-18	1700		AmB 13	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: Condition: NCF / OK
				4/25/18 1015	

ANALYTICAL REPORT

April 30, 2018

S&ME Inc. - Knoxville

Sample Delivery Group:	L988669
Samples Received:	04/25/2018
Project Number:	4143-17-016
Description:	Former Sanitary Laundry
Report To:	Nate Peterson / Liz Porter 1413 Topside Rd Louisville, TN 37777

Entire Report Reviewed By:

Tom Mellette
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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ONE LAB. NATIONWIDE.

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FC-1 L988669-01 Air

Collected by	Collected date/time	Received date/time
N. Peterson	04/24/18 09:38	04/25/18 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1104091	1	04/27/18 23:33	04/27/18 23:33	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1104397	200	04/28/18 10:57	04/28/18 10:57	AMC

FC-2 L988669-02 Air

Collected by	Collected date/time	Received date/time
N. Peterson	04/24/18 10:34	04/25/18 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1104091	1	04/28/18 00:16	04/28/18 00:16	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1104397	80	04/28/18 11:35	04/28/18 11:35	AMC

FC-3 L988669-03 Air

Collected by	Collected date/time	Received date/time
N. Peterson	04/24/18 11:37	04/25/18 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1104091	1	04/28/18 01:00	04/28/18 01:00	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1104397	80	04/28/18 12:13	04/28/18 12:13	AMC

FC-4 L988669-04 Air

Collected by	Collected date/time	Received date/time
N. Peterson	04/24/18 12:34	04/25/18 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1104091	1	04/28/18 01:43	04/28/18 01:43	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1104397	25	04/28/18 12:51	04/28/18 12:51	AMC

FC-5 L988669-05 Air

Collected by	Collected date/time	Received date/time
N. Peterson	04/24/18 13:30	04/25/18 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1104091	1	04/28/18 02:32	04/28/18 02:32	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1104397	8	04/28/18 13:30	04/28/18 13:30	AMC

FC-6 L988669-06 Air

Collected by	Collected date/time	Received date/time
N. Peterson	04/24/18 14:20	04/25/18 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1104091	1	04/28/18 03:23	04/28/18 03:23	AMC

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Tom Mellette
Technical Service Representative

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	0.0200	0.0639	1.07	3.43		1	WG1104091
Carbon tetrachloride	56-23-5	154	0.0200	0.126	0.0848	0.534		1	WG1104091
Chloroethane	75-00-3	64.50	0.0400	0.106	ND	ND		1	WG1104091
Chloroform	67-66-3	119	0.0200	0.0973	1.10	5.38		1	WG1104091
Chloromethane	74-87-3	50.50	0.0300	0.0620	0.430	0.888		1	WG1104091
1,2-Dibromoethane	106-93-4	188	0.0200	0.154	ND	ND		1	WG1104091
1,4-Dichlorobenzene	106-46-7	147	0.0200	0.120	ND	ND		1	WG1104091
1,1-Dichloroethane	75-34-3	98	0.0200	0.0802	0.491	1.97		1	WG1104091
1,2-Dichloroethane	107-06-2	99	0.0200	0.0810	ND	ND		1	WG1104091
1,1-Dichloroethene	75-35-4	96.90	0.0200	0.0793	0.0280	0.111		1	WG1104091
cis-1,2-Dichloroethene	156-59-2	96.90	4.00	15.9	119	470		200	WG1104397
trans-1,2-Dichloroethene	156-60-5	96.90	4.00	15.9	21.8	86.2		200	WG1104397
1,2-Dichloropropane	78-87-5	113	0.0300	0.139	0.143	0.660		1	WG1104091
cis-1,3-Dichloropropene	10061-01-5	111	0.0200	0.0908	ND	ND		1	WG1104091
trans-1,3-Dichloropropene	10061-02-6	111	0.0300	0.136	ND	ND		1	WG1104091
Ethylbenzene	100-41-4	106	0.0300	0.130	0.416	1.80		1	WG1104091
1,1,2,2-Tetrachloroethane	79-34-5	168	0.0200	0.137	0.293	2.01		1	WG1104091
Tetrachloroethylene	127-18-4	166	4.00	27.2	1770	12000		200	WG1104397
1,1,1-Trichloroethane	71-55-6	133	0.0200	0.109	ND	ND		1	WG1104091
1,1,2-Trichloroethane	79-00-5	133	0.0300	0.163	ND	ND		1	WG1104091
Trichloroethylene	79-01-6	131	4.00	21.4	399	2140		200	WG1104397
Vinyl chloride	75-01-4	62.50	0.0200	0.0511	0.184	0.469		1	WG1104091
Vinyl acetate	108-05-4	86.10	0.0200	0.0704	ND	ND		1	WG1104091
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*137*				WG1104091
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*101*				WG1104397

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	0.0200	0.0639	2.26	7.23		1	WG1104091
Carbon tetrachloride	56-23-5	154	0.0200	0.126	0.0808	0.509		1	WG1104091
Chloroethane	75-00-3	64.50	0.0400	0.106	0.0456	0.120		1	WG1104091
Chloroform	67-66-3	119	0.0200	0.0973	0.453	2.21		1	WG1104091
Chloromethane	74-87-3	50.50	0.0300	0.0620	0.218	0.449		1	WG1104091
1,2-Dibromoethane	106-93-4	188	0.0200	0.154	ND	ND		1	WG1104091
1,4-Dichlorobenzene	106-46-7	147	0.0200	0.120	ND	ND		1	WG1104091
1,1-Dichloroethane	75-34-3	98	0.0200	0.0802	0.892	3.58		1	WG1104091
1,2-Dichloroethane	107-06-2	99	0.0200	0.0810	ND	ND		1	WG1104091
1,1-Dichloroethene	75-35-4	96.90	0.0200	0.0793	0.317	1.26		1	WG1104091
cis-1,2-Dichloroethene	156-59-2	96.90	1.60	6.34	44.3	176		80	WG1104397
trans-1,2-Dichloroethene	156-60-5	96.90	0.0200	0.0793	0.470	1.86		1	WG1104091
1,2-Dichloropropane	78-87-5	113	0.0300	0.139	0.0984	0.455		1	WG1104091
cis-1,3-Dichloropropene	10061-01-5	111	0.0200	0.0908	ND	ND		1	WG1104091
trans-1,3-Dichloropropene	10061-02-6	111	0.0300	0.136	ND	ND		1	WG1104091
Ethylbenzene	100-41-4	106	0.0300	0.130	0.654	2.83		1	WG1104091
1,1,2,2-Tetrachloroethane	79-34-5	168	0.0200	0.137	ND	ND		1	WG1104091
Tetrachloroethylene	127-18-4	166	1.60	10.9	431	2930		80	WG1104397
1,1,1-Trichloroethane	71-55-6	133	0.0200	0.109	ND	ND		1	WG1104091
1,1,2-Trichloroethane	79-00-5	133	0.0300	0.163	ND	ND		1	WG1104091
Trichloroethylene	79-01-6	131	1.60	8.57	124	662		80	WG1104397
Vinyl chloride	75-01-4	62.50	0.0200	0.0511	2.36	6.04		1	WG1104091
Vinyl acetate	108-05-4	86.10	0.0200	0.0704	ND	ND		1	WG1104091
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*110*				WG1104091
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*99.5*				WG1104397

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	0.0200	0.0639	3.13	10.0		1	WG1104091
Carbon tetrachloride	56-23-5	154	0.0200	0.126	0.0786	0.495		1	WG1104091
Chloroethane	75-00-3	64.50	0.0400	0.106	ND	ND		1	WG1104091
Chloroform	67-66-3	119	0.0200	0.0973	0.0585	0.285		1	WG1104091
Chloromethane	74-87-3	50.50	0.0300	0.0620	0.449	0.928		1	WG1104091
1,2-Dibromoethane	106-93-4	188	0.0200	0.154	ND	ND		1	WG1104091
1,4-Dichlorobenzene	106-46-7	147	0.0200	0.120	ND	ND		1	WG1104091
1,1-Dichloroethane	75-34-3	98	0.0200	0.0802	ND	ND		1	WG1104091
1,2-Dichloroethane	107-06-2	99	0.0200	0.0810	ND	ND		1	WG1104091
1,1-Dichloroethene	75-35-4	96.90	0.0200	0.0793	ND	ND		1	WG1104091
cis-1,2-Dichloroethene	156-59-2	96.90	0.0200	0.0793	1.69	6.70		1	WG1104091
trans-1,2-Dichloroethene	156-60-5	96.90	0.0200	0.0793	0.0680	0.269		1	WG1104091
1,2-Dichloropropane	78-87-5	113	0.0300	0.139	ND	ND		1	WG1104091
cis-1,3-Dichloropropene	10061-01-5	111	0.0200	0.0908	ND	ND		1	WG1104091
trans-1,3-Dichloropropene	10061-02-6	111	0.0300	0.136	ND	ND		1	WG1104091
Ethylbenzene	100-41-4	106	0.0300	0.130	1.19	5.15		1	WG1104091
1,1,2,2-Tetrachloroethane	79-34-5	168	0.0200	0.137	ND	ND		1	WG1104091
Tetrachloroethylene	127-18-4	166	1.60	10.9	97.0	658		80	WG1104397
1,1,1-Trichloroethane	71-55-6	133	0.0200	0.109	ND	ND		1	WG1104091
1,1,2-Trichloroethane	79-00-5	133	0.0300	0.163	ND	ND		1	WG1104091
Trichloroethylene	79-01-6	131	0.0200	0.107	8.75	46.9		1	WG1104091
Vinyl chloride	75-01-4	62.50	0.0200	0.0511	ND	ND		1	WG1104091
Vinyl acetate	108-05-4	86.10	0.0200	0.0704	ND	ND		1	WG1104091
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*103*				WG1104091
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*102*				WG1104397

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	0.0200	0.0639	4.23	13.5		1	WG1104091
Carbon tetrachloride	56-23-5	154	0.0200	0.126	0.0854	0.538		1	WG1104091
Chloroethane	75-00-3	64.50	0.0400	0.106	ND	ND		1	WG1104091
Chloroform	67-66-3	119	0.0200	0.0973	ND	ND		1	WG1104091
Chloromethane	74-87-3	50.50	0.0300	0.0620	0.465	0.961		1	WG1104091
1,2-Dibromoethane	106-93-4	188	0.0200	0.154	ND	ND		1	WG1104091
1,4-Dichlorobenzene	106-46-7	147	0.0200	0.120	ND	ND		1	WG1104091
1,1-Dichloroethane	75-34-3	98	0.0200	0.0802	ND	ND		1	WG1104091
1,2-Dichloroethane	107-06-2	99	0.0200	0.0810	ND	ND		1	WG1104091
1,1-Dichloroethene	75-35-4	96.90	0.0200	0.0793	ND	ND		1	WG1104091
cis-1,2-Dichloroethene	156-59-2	96.90	0.0200	0.0793	0.413	1.64		1	WG1104091
trans-1,2-Dichloroethene	156-60-5	96.90	0.0200	0.0793	0.0327	0.129		1	WG1104091
1,2-Dichloropropane	78-87-5	113	0.0300	0.139	ND	ND		1	WG1104091
cis-1,3-Dichloropropene	10061-01-5	111	0.0200	0.0908	ND	ND		1	WG1104091
trans-1,3-Dichloropropene	10061-02-6	111	0.0300	0.136	ND	ND		1	WG1104091
Ethylbenzene	100-41-4	106	0.0300	0.130	1.94	8.41		1	WG1104091
1,1,2,2-Tetrachloroethane	79-34-5	168	0.0200	0.137	ND	ND		1	WG1104091
Tetrachloroethylene	127-18-4	166	0.500	3.39	38.0	258		25	WG1104397
1,1,1-Trichloroethane	71-55-6	133	0.0200	0.109	0.0240	0.130		1	WG1104091
1,1,2-Trichloroethane	79-00-5	133	0.0300	0.163	ND	ND		1	WG1104091
Trichloroethylene	79-01-6	131	0.0200	0.107	2.40	12.8		1	WG1104091
Vinyl chloride	75-01-4	62.50	0.0200	0.0511	ND	ND		1	WG1104091
Vinyl acetate	108-05-4	86.10	0.0200	0.0704	ND	ND		1	WG1104091
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*101*				WG1104091
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*98.7*				WG1104397

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	0.0200	0.0639	2.57	8.22		1	WG1104091
Carbon tetrachloride	56-23-5	154	0.0200	0.126	0.0789	0.497		1	WG1104091
Chloroethane	75-00-3	64.50	0.0400	0.106	ND	ND		1	WG1104091
Chloroform	67-66-3	119	0.0200	0.0973	0.0536	0.261		1	WG1104091
Chloromethane	74-87-3	50.50	0.0300	0.0620	0.447	0.924		1	WG1104091
1,2-Dibromoethane	106-93-4	188	0.0200	0.154	ND	ND		1	WG1104091
1,4-Dichlorobenzene	106-46-7	147	0.0200	0.120	ND	ND		1	WG1104091
1,1-Dichloroethane	75-34-3	98	0.0200	0.0802	ND	ND		1	WG1104091
1,2-Dichloroethane	107-06-2	99	0.0200	0.0810	0.0302	0.122		1	WG1104091
1,1-Dichloroethene	75-35-4	96.90	0.0200	0.0793	ND	ND		1	WG1104091
cis-1,2-Dichloroethene	156-59-2	96.90	0.0200	0.0793	0.243	0.964		1	WG1104091
trans-1,2-Dichloroethene	156-60-5	96.90	0.0200	0.0793	0.0228	0.0903		1	WG1104091
1,2-Dichloropropane	78-87-5	113	0.0300	0.139	ND	ND		1	WG1104091
cis-1,3-Dichloropropene	10061-01-5	111	0.0200	0.0908	ND	ND		1	WG1104091
trans-1,3-Dichloropropene	10061-02-6	111	0.0300	0.136	ND	ND		1	WG1104091
Ethylbenzene	100-41-4	106	0.0300	0.130	0.930	4.03		1	WG1104091
1,1,2,2-Tetrachloroethane	79-34-5	168	0.0200	0.137	ND	ND		1	WG1104091
Tetrachloroethylene	127-18-4	166	0.160	1.09	12.3	83.5		8	WG1104397
1,1,1-Trichloroethane	71-55-6	133	0.0200	0.109	ND	ND		1	WG1104091
1,1,2-Trichloroethane	79-00-5	133	0.0300	0.163	ND	ND		1	WG1104091
Trichloroethylene	79-01-6	131	0.0200	0.107	1.23	6.61		1	WG1104091
Vinyl chloride	75-01-4	62.50	0.0200	0.0511	ND	ND		1	WG1104091
Vinyl acetate	108-05-4	86.10	0.0200	0.0704	ND	ND		1	WG1104091
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*105*				WG1104091
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*100*				WG1104397

Volatile Organic Compounds (MS) by Method TO-15

Analyte	CAS #	Mol. Wt.	RDL1 ppbv	RDL2 ug/m3	Result ppbv	Result ug/m3	Qualifier	Dilution	Batch
Benzene	71-43-2	78.10	0.0200	0.0639	2.91	9.31		1	WG1104091
Carbon tetrachloride	56-23-5	154	0.0200	0.126	0.0795	0.501		1	WG1104091
Chloroethane	75-00-3	64.50	0.0400	0.106	ND	ND		1	WG1104091
Chloroform	67-66-3	119	0.0200	0.0973	0.0502	0.245		1	WG1104091
Chloromethane	74-87-3	50.50	0.0300	0.0620	0.428	0.885		1	WG1104091
1,2-Dibromoethane	106-93-4	188	0.0200	0.154	ND	ND		1	WG1104091
1,4-Dichlorobenzene	106-46-7	147	0.0200	0.120	ND	ND		1	WG1104091
1,1-Dichloroethane	75-34-3	98	0.0200	0.0802	ND	ND		1	WG1104091
1,2-Dichloroethane	107-06-2	99	0.0200	0.0810	ND	ND		1	WG1104091
1,1-Dichloroethene	75-35-4	96.90	0.0200	0.0793	ND	ND		1	WG1104091
cis-1,2-Dichloroethene	156-59-2	96.90	0.0200	0.0793	0.143	0.565		1	WG1104091
trans-1,2-Dichloroethene	156-60-5	96.90	0.0200	0.0793	ND	ND		1	WG1104091
1,2-Dichloropropane	78-87-5	113	0.0300	0.139	ND	ND		1	WG1104091
cis-1,3-Dichloropropene	10061-01-5	111	0.0200	0.0908	ND	ND		1	WG1104091
trans-1,3-Dichloropropene	10061-02-6	111	0.0300	0.136	ND	ND		1	WG1104091
Ethylbenzene	100-41-4	106	0.0300	0.130	1.17	5.07		1	WG1104091
1,1,2,2-Tetrachloroethane	79-34-5	168	0.0200	0.137	ND	ND		1	WG1104091
Tetrachloroethylene	127-18-4	166	0.0200	0.136	6.83	46.4		1	WG1104091
1,1,1-Trichloroethane	71-55-6	133	0.0200	0.109	0.0409	0.222		1	WG1104091
1,1,2-Trichloroethane	79-00-5	133	0.0300	0.163	ND	ND		1	WG1104091
Trichloroethylene	79-01-6	131	0.0200	0.107	0.835	4.47		1	WG1104091
Vinyl chloride	75-01-4	62.50	0.0200	0.0511	ND	ND		1	WG1104091
Vinyl acetate	108-05-4	86.10	0.0200	0.0704	ND	ND		1	WG1104091
(S) 1,4-Bromofluorobenzene	*460-00-4*	*175*	*60.0-140*		*104*				WG1104091

Method Blank (MB)

(MB) R3305497-3 04/27/18 22:08

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
Benzene	U		0.00541	0.0200
Carbon tetrachloride	U		0.00575	0.0200
Chloroethane	U		0.0159	0.0400
Chloroform	U		0.00464	0.0200
Chloromethane	U		0.00972	0.0300
1,2-Dibromoethane	U		0.0185	0.0200
1,4-Dichlorobenzene	U		0.00691	0.0200
1,1-Dichloroethane	U		0.00505	0.0200
1,2-Dichloroethane	U		0.000471	0.0200
1,1-Dichloroethene	U		0.00521	0.0200
cis-1,2-Dichloroethene	U		0.00770	0.0200
trans-1,2-Dichloroethene	U		0.00499	0.0200
1,2-Dichloropropane	U		0.00840	0.0300
cis-1,3-Dichloropropene	U		0.00556	0.0200
trans-1,3-Dichloropropene	U		0.00853	0.0300
Ethylbenzene	U		0.00904	0.0300
1,1,2,2-Tetrachloroethane	U		0.00481	0.0200
Tetrachloroethylene	U		0.00457	0.0200
1,1,1-Trichloroethane	U		0.00552	0.0200
1,1,2-Trichloroethane	U		0.0287	0.0300
Trichloroethylene	U		0.00736	0.0200
Vinyl chloride	U		0.00765	0.0200
Vinyl acetate	U		0.00430	0.0200
(S) 1,4-Bromofluorobenzene	*98.3*			*60.0-140*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3305497-1 04/27/18 20:45 • (LCSD) R3305497-2 04/27/18 21:27

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.500	0.517	0.520	103	104	70.0-130			0.630	25
Carbon tetrachloride	0.500	0.529	0.530	106	106	70.0-130			0.249	25
Chloroethane	0.500	0.517	0.512	103	102	70.0-130			0.808	25
Chloroform	0.500	0.523	0.525	105	105	70.0-130			0.376	25
Chloromethane	0.500	0.530	0.533	106	107	70.0-130			0.544	25
1,2-Dibromoethane	0.500	0.499	0.501	99.8	100	70.0-130			0.382	25
1,4-Dichlorobenzene	0.500	0.522	0.513	104	103	70.0-130			1.83	25
1,1-Dichloroethane	0.500	0.527	0.529	105	106	70.0-130			0.453	25
1,2-Dichloroethane	0.500	0.532	0.535	106	107	70.0-130			0.617	25

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3305497-1 04/27/18 20:45 • (LCSD) R3305497-2 04/27/18 21:27

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
1,1-Dichloroethene	0.500	0.530	0.538	106	108	70.0-130			1.51	25
cis-1,2-Dichloroethene	0.500	0.519	0.525	104	105	70.0-130			1.01	25
trans-1,2-Dichloroethene	0.500	0.526	0.529	105	106	70.0-130			0.465	25
1,2-Dichloropropane	0.500	0.509	0.513	102	103	70.0-130			0.920	25
cis-1,3-Dichloropropene	0.500	0.498	0.504	99.6	101	70.0-130			1.14	25
trans-1,3-Dichloropropene	0.500	0.489	0.494	97.8	98.7	70.0-130			0.942	25
Ethylbenzene	0.500	0.531	0.532	106	106	70.0-130			0.190	25
1,1,2,2-Tetrachloroethane	0.500	0.508	0.507	102	101	70.0-130			0.344	25
Tetrachloroethylene	0.500	0.498	0.499	99.6	99.7	70.0-130			0.158	25
1,1,1-Trichloroethane	0.500	0.526	0.531	105	106	70.0-130			0.896	25
1,1,2-Trichloroethane	0.500	0.504	0.508	101	102	70.0-130			0.736	25
Trichloroethylene	0.500	0.512	0.514	102	103	70.0-130			0.371	25
Vinyl chloride	0.500	0.533	0.526	107	105	70.0-130			1.36	25
Vinyl acetate	0.500	0.506	0.514	101	103	70.0-130			1.51	25
(S) 1,4-Bromofluorobenzene				*101*	*100*	*60.0-140*				

Method Blank (MB)

(MB) R3305551-3 04/28/18 10:20

Analyte	MB Result ppbv	MB Qualifier	MB MDL ppbv	MB RDL ppbv
cis-1,2-Dichloroethene	U		0.00770	0.0200
trans-1,2-Dichloroethene	U		0.00499	0.0200
Tetrachloroethylene	U		0.00457	0.0200
Trichloroethylene	U		0.00736	0.0200
(S) 1,4-Bromofluorobenzene	*98.8*			*60.0-140*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3305551-1 04/28/18 08:56 • (LCSD) R3305551-2 04/28/18 09:38

Analyte	Spike Amount ppbv	LCS Result ppbv	LCSD Result ppbv	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
cis-1,2-Dichloroethene	0.500	0.514	0.523	103	105	70.0-130			1.71	25
trans-1,2-Dichloroethene	0.500	0.525	0.525	105	105	70.0-130			0.0330	25
Tetrachloroethylene	0.500	0.501	0.506	100	101	70.0-130			0.851	25
Trichloroethylene	0.500	0.520	0.517	104	103	70.0-130			0.541	25
(S) 1,4-Bromofluorobenzene				*100*	*102*	*60.0-140*				

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

ACCREDITATIONS & LOCATIONS

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

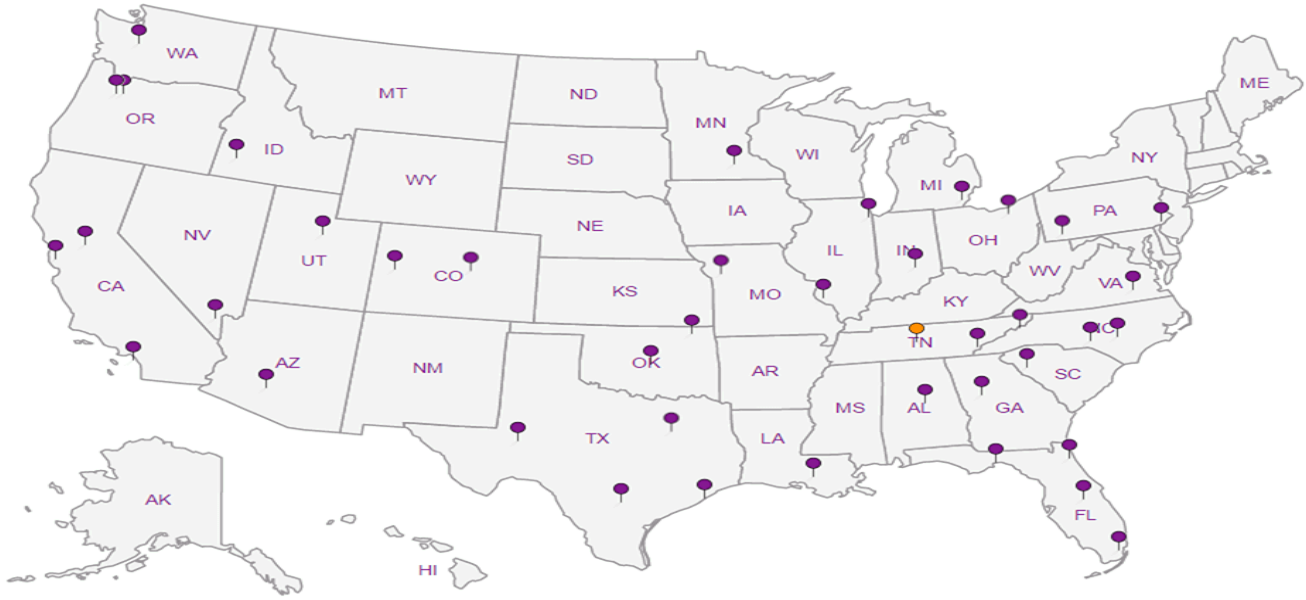
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. ESC Lab Sciences performs all testing at our central laboratory.



S&ME

Billing Information:

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

ESC LAB SCIENCES

YOUR LAB OF CHOICE

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

Report to: **Liz Porter and Nate Peterson**

Email To: **Liz P and Nate P (e-mail on file)**

Project Description: **Former Sanitary Laundry**

City/State Collected: **TN**

Phone: 865-970-0003
Fax:

Client Project # 4143-17-016

Lab Project # **SME-4143-17-016**

L# L988669

M199

Collected by (print): N. Peterson

Site/Facility ID #

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Immediately Packed on Ice N ___ Y ___

Acctnum: **SME**

Template:

Prelogin:

TSR:

PB: BF 4/20/18

Shipped Via: Ground

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	TO-15SIM + QC4	Remarks	Sample # (lab only)
FC-1		AIR		4/24/18	0938	1	X		-01
FC-2		AIR		↓	1034	1	X		02
FC-3		AIR			1137	1	X		03
FC-4		AIR			1234	1	X		04
FC-5		AIR			1330	1	X		05
FC-6		AIR			1420	1	X		06
							X		
							X		
							X		

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: ESCKN

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: NP __Y __N
COC Signed/Accurate: ✓ __N
Bottles arrive intact: ✓ __N
Correct bottles used: ✓ __N
Sufficient volume sent: ✓ __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
	4/24/18	1530			
Relinquished by : (Signature)	Date: 4-24-18	Time: 1700	Received by: (Signature)	Temp: AMB °C Bottles Received: 5	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) SKO	Date: 4/25/18 Time: 1015	Hold: / Condition: NCF / OK

ANALYTICAL REPORT

May 16, 2018

S&ME Inc. - Knoxville

Sample Delivery Group:	L988669
Samples Received:	04/25/2018
Project Number:	4143-17-016
Description:	Former Sanitary Laundry
Report To:	Nate Peterson / Liz Porter 1413 Topside Rd Louisville, TN 37777

Entire Report Reviewed By:

Tom Mellette
Technical Service Representative

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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WG1104397 LCS(R3305551-1) LCSD(R3305551-2) 10

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WG1104397 R3305551-3 AIRMS5 04/28/18 10:20 12

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AIRMS5 042718A 04/27/18 12:51 13

0427A_03T 14

AIRMS5 042818 04/28/18 08:14 15

0428_01T 16

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AIRMS5 04/27/18 16:47 17

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Raw Data - 0427A_18 20

1_Tetrachloroethene 22

2_Tetrachloroethene 23

L988669-01 04/28/18 10:57 AIRMS5 24

Raw Data - 0428_05 25

L988669-02 04/28/18 00:16 AIRMS5 39

Raw Data - 0427A_19 40

1_Tetrachloroethene 42

2_Tetrachloroethene 43

L988669-02 04/28/18 11:35 AIRMS5 44

Raw Data - 0428_06 45

L988669-03 04/28/18 01:00 AIRMS5 59

Raw Data - 0427A_20 60

L988669-03 04/28/18 12:13 AIRMS5 62

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L988669-04 04/28/18 12:51 AIRMS5 80
Raw Data - 0428_08 81
L988669-05 04/28/18 02:32 AIRMS5 95
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2_Chlorobenzene-d5 99
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LCS(R3305497-1) WG1104091 04/27/18 20:45 AIRMS5 167
Raw Data - 0427A_14 168
LCS(R3305551-1) WG1104397 04/28/18 08:56 AIRMS5 170
Raw Data - 0428_02 171

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2 Tc
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6 Gl
7 Al
8 Sc

FC-1 L988669-01 Air

Collected by: N. Peterson | Collected date/time: 04/24/18 09:38 | Received date/time: 04/25/18 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1104091	1	04/27/18 23:33	04/27/18 23:33	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1104397	200	04/28/18 10:57	04/28/18 10:57	AMC

FC-2 L988669-02 Air

Collected by: N. Peterson | Collected date/time: 04/24/18 10:34 | Received date/time: 04/25/18 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1104091	1	04/28/18 00:16	04/28/18 00:16	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1104397	80	04/28/18 11:35	04/28/18 11:35	AMC

FC-3 L988669-03 Air

Collected by: N. Peterson | Collected date/time: 04/24/18 11:37 | Received date/time: 04/25/18 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1104091	1	04/28/18 01:00	04/28/18 01:00	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1104397	80	04/28/18 12:13	04/28/18 12:13	AMC

FC-4 L988669-04 Air

Collected by: N. Peterson | Collected date/time: 04/24/18 12:34 | Received date/time: 04/25/18 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1104091	1	04/28/18 01:43	04/28/18 01:43	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1104397	25	04/28/18 12:51	04/28/18 12:51	AMC

FC-5 L988669-05 Air

Collected by: N. Peterson | Collected date/time: 04/24/18 13:30 | Received date/time: 04/25/18 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1104091	1	04/28/18 02:32	04/28/18 02:32	AMC
Volatile Organic Compounds (MS) by Method TO-15	WG1104397	8	04/28/18 13:30	04/28/18 13:30	AMC

FC-6 L988669-06 Air

Collected by: N. Peterson | Collected date/time: 04/24/18 14:20 | Received date/time: 04/25/18 10:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (MS) by Method TO-15	WG1104091	1	04/28/18 03:23	04/28/18 03:23	AMC

1 Cp
2 Tc
3 Ss
4 Cn
5 Su
6 Gl
7 Al
8 Sc

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Tom Mellette
Technical Service Representative

TO-15 Volatile Organic Compounds (MS)

2A-OR

SURROGATE RECOVERY

Analytical Method: TO-15 **SDG:** L988669
Matrix: Air

Sample ID	ESC Sample ID	Instrument	File ID	DMC-1 % Rec.	TOT Out
FC-1	L988669-01	AIRMS5	0427A_18	137	0
FC-1	L988669-01	AIRMS5	0428_05	101	0
FC-2	L988669-02	AIRMS5	0427A_19	110	0
FC-2	L988669-02	AIRMS5	0428_06	99.5	0
FC-3	L988669-03	AIRMS5	0427A_20	103	0
FC-3	L988669-03	AIRMS5	0428_07	102	0
FC-4	L988669-04	AIRMS5	0427A_21	101	0
FC-4	L988669-04	AIRMS5	0428_08	98.7	0
FC-5	L988669-05	AIRMS5	0427A_22	105	0
FC-5	L988669-05	AIRMS5	0428_09	100	0
FC-6	L988669-06	AIRMS5	0427A_23	104	0
BLANK	R3305497-3	AIRMS5	0427A_16	98.3	0
BLANK	R3305551-3	AIRMS5	0428_04	98.8	0
LCS	R3305497-1	AIRMS5	0427A_14	101	0
LCS	R3305551-1	AIRMS5	0428_02	100	0
LCSD	R3305497-2	AIRMS5	0427A_15	100	0
LCSD	R3305551-2	AIRMS5	0428_03	102	0

Parm Abbreviation	Parameter	QC LIMITS
DMC-1	1,4-Bromofluorobenzene	60.0 - 140

*: Value outside the established quality control limits.
D: Surrogate recovery cannot be used for control limit evaluation due to dilution.

3B-OR

LABORATORY CONTROL SAMPLE
LABORATORY CONTROL SAMPLE DUPLICATE
RECOVERY

L988669-01,02,03,04,05,06

SAMPLE NO.:
R3305497-1
R3305497-2

LCS Sample / File ID:	R3305497-1 / 0427A_14	**SDG:**	L988669
LCSD Sample / File ID:	R3305497-2 / 0427A_15	**Analytical Batch:**	WG1104091
Instrument ID:	AIRMS5	**Dilution Factor:**	1
Analytical Method:	TO-15	**Matrix:**	Air

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	RPD	RPD Limit
	ppbv	*ppbv*	*ppbv*	*%*	*%*	*%*	*%*	*%*
Benzene	0.500	0.517	0.520	103	104	70.0 - 130	0.630	25
Carbon tetrachloride	0.500	0.529	0.530	106	106	70.0 - 130	0.249	25
Chloroethane	0.500	0.517	0.512	103	102	70.0 - 130	0.808	25
Chloroform	0.500	0.523	0.525	105	105	70.0 - 130	0.376	25
Chloromethane	0.500	0.530	0.533	106	107	70.0 - 130	0.544	25
1,2-Dibromoethane	0.500	0.499	0.501	99.8	100	70.0 - 130	0.382	25
1,4-Dichlorobenzene	0.500	0.522	0.513	104	103	70.0 - 130	1.83	25
1,1-Dichloroethane	0.500	0.527	0.529	105	106	70.0 - 130	0.453	25
1,2-Dichloroethane	0.500	0.532	0.535	106	107	70.0 - 130	0.617	25
1,1-Dichloroethene	0.500	0.530	0.538	106	108	70.0 - 130	1.51	25
cis-1,2-Dichloroethene	0.500	0.519	0.525	104	105	70.0 - 130	1.01	25
trans-1,2-Dichloroethene	0.500	0.526	0.529	105	106	70.0 - 130	0.465	25
1,2-Dichloropropane	0.500	0.509	0.513	102	103	70.0 - 130	0.920	25
cis-1,3-Dichloropropene	0.500	0.498	0.504	99.6	101	70.0 - 130	1.14	25
trans-1,3-Dichloropropene	0.500	0.489	0.494	97.8	98.7	70.0 - 130	0.942	25
Ethylbenzene	0.500	0.531	0.532	106	106	70.0 - 130	0.190	25
1,1,2,2-Tetrachloroethane	0.500	0.508	0.507	102	101	70.0 - 130	0.344	25
Tetrachloroethylene	0.500	0.498	0.499	99.6	99.7	70.0 - 130	0.158	25
1,1,1-Trichloroethane	0.500	0.526	0.531	105	106	70.0 - 130	0.896	25
1,1,2-Trichloroethane	0.500	0.504	0.508	101	102	70.0 - 130	0.736	25
Trichloroethylene	0.500	0.512	0.514	102	103	70.0 - 130	0.371	25
Vinyl chloride	0.500	0.533	0.526	107	105	70.0 - 130	1.36	25
Vinyl acetate	0.500	0.506	0.514	101	103	70.0 - 130	1.51	25

*: Value outside the established quality control limits.

D: Surrogate recovery cannot be used for control limit evaluation due to dilution.

3B-OR

LABORATORY CONTROL SAMPLE
LABORATORY CONTROL SAMPLE DUPLICATE
RECOVERY

L988669-01,02,03,04,05

SAMPLE NO.:
R3305551-1
R3305551-2

LCS Sample / File ID:	R3305551-1 / 0428_02	**SDG:**	L988669
LCSD Sample / File ID:	R3305551-2 / 0428_03	**Analytical Batch:**	WG1104397
Instrument ID:	AIRMS5	**Dilution Factor:**	1
Analytical Method:	TO-15	**Matrix:**	Air

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	RPD	RPD Limit
	ppbv	*ppbv*	*ppbv*	*%*	*%*	*%*	*%*	*%*
cis-1,2-Dichloroethene	0.500	0.514	0.523	103	105	70.0 - 130	1.71	25
trans-1,2-Dichloroethene	0.500	0.525	0.525	105	105	70.0 - 130	0.0330	25
Tetrachloroethylene	0.500	0.501	0.506	100	101	70.0 - 130	0.851	25
Trichloroethylene	0.500	0.520	0.517	104	103	70.0 - 130	0.541	25

*: Value outside the established quality control limits.

D: Surrogate recovery cannot be used for control limit evaluation due to dilution.

4A-OR

METHOD BLANK

SAMPLE NO.:
R3305497-3

ESC Sample ID:	R3305497-3	**SDG:**	L988669
Lab File ID:	0427A_16	**Preparation Date/Time:**	04/27/18 22:08
Instrument ID:	AIRMS5	**Analysis Date/Time:**	04/27/18 22:08
Analytical Batch:	WG1104091	**Dilution Factor:**	1
Analytical Method:	TO-15	**Matrix:**	Air

Sample ID	ESC Sample ID	Instrument	File ID	Analysis *date/time*
LCS	R3305497-1	AIRMS5	0427A_14	04/27/18 20:45
LCSD	R3305497-2	AIRMS5	0427A_15	04/27/18 21:27
FC-1	L988669-01	AIRMS5	0427A_18	04/27/18 23:33
FC-2	L988669-02	AIRMS5	0427A_19	04/28/18 00:16
FC-3	L988669-03	AIRMS5	0427A_20	04/28/18 01:00
FC-4	L988669-04	AIRMS5	0427A_21	04/28/18 01:43
FC-5	L988669-05	AIRMS5	0427A_22	04/28/18 02:32
FC-6	L988669-06	AIRMS5	0427A_23	04/28/18 03:23

4A-OR

METHOD BLANK

SAMPLE NO.:
R3305551-3

ESC Sample ID:	R3305551-3	**SDG:**	L988669
Lab File ID:	0428_04	**Preparation Date/Time:**	04/28/18 10:20
Instrument ID:	AIRMS5	**Analysis Date/Time:**	04/28/18 10:20
Analytical Batch:	WG1104397	**Dilution Factor:**	1
Analytical Method:	TO-15	**Matrix:**	Air

Sample ID	**ESC Sample ID**	**Instrument**	**File ID**	**Analysis** *date/time*
LCS	R3305551-1	AIRMS5	0428_02	04/28/18 08:56
LCSD	R3305551-2	AIRMS5	0428_03	04/28/18 09:38
FC-1	L988669-01	AIRMS5	0428_05	04/28/18 10:57
FC-2	L988669-02	AIRMS5	0428_06	04/28/18 11:35
FC-3	L988669-03	AIRMS5	0428_07	04/28/18 12:13
FC-4	L988669-04	AIRMS5	0428_08	04/28/18 12:51
FC-5	L988669-05	AIRMS5	0428_09	04/28/18 13:30

5A-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

Lab File ID:	0427A_03T	**SDG:**	L988669
Instrument ID:	AIRMS5	**Analytical Method:**	TO-15
Analysis Date/Time:	04/27/18 12:51		

Target Mass (m/e)	Relative Mass	Low Limit	High Limit	% Relative Abundance
50	95	8	40	12
75	95	30	66	39
95	95	100	100	100
96	95	5	9	7
173	174	0	2	0
174	95	50	120	105
175	174	4	9	7
176	174	93	101	97
177	176	5	9	6

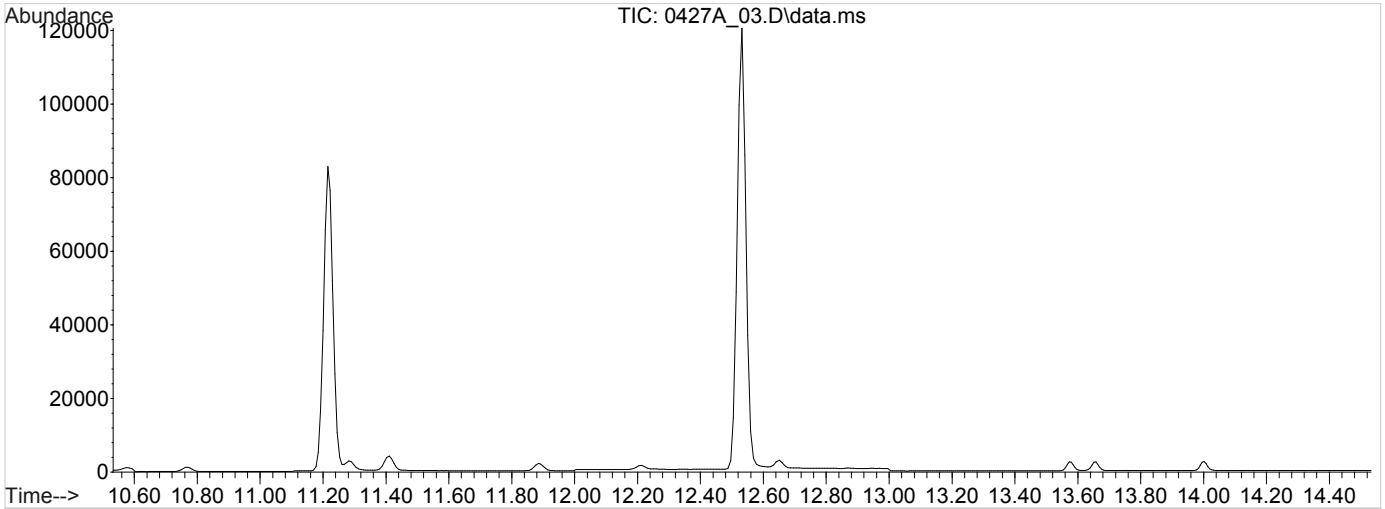
Sample ID	ESC Sample ID	File ID	Analysis date/time
STD-0.02	0.02	0427A_03	04/27/18 12:51
STD-0.03	0.03	0427A_04	04/27/18 13:30
STD-0.06	0.06	0427A_05	04/27/18 14:08
STD-0.13	0.13	0427A_06	04/27/18 14:46
STD-0.25	0.25	0427A_07	04/27/18 15:25
STD-0.38	0.38	0427A_08	04/27/18 16:05
STD-0.50	0.50	0427A_09	04/27/18 16:47
ICV	AIRMS5042718A0427A_09448236	0427A_09	04/27/18 16:47
STD-1.00	1.00	0427A_10	04/27/18 17:25
STD-5.00	5.00	0427A_11	04/27/18 18:07
STD-10.0	10.0	0427A_12	04/27/18 18:53
LCS	R3305497-1	0427A_14	04/27/18 20:45
LCSD	R3305497-2	0427A_15	04/27/18 21:27
BLANK	R3305497-3	0427A_16	04/27/18 22:08
FC-1	L988669-01	0427A_18	04/27/18 23:33
FC-2	L988669-02	0427A_19	04/28/18 00:16
FC-3	L988669-03	0427A_20	04/28/18 01:00
FC-4	L988669-04	0427A_21	04/28/18 01:43
FC-5	L988669-05	0427A_22	04/28/18 02:32
FC-6	L988669-06	0427A_23	04/28/18 03:23

BFB

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_03.D
Acq On : 27 Apr 2018 12:51 pm
Operator : 564
Sample : STD AMS 0.019 ppbv 18C26425
Misc : 18C26426
ALS Vial : 3 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Title : AIRMS5
Last Update : Sat Apr 28 09:57:33 2018



AutoFind: Scans 1393, 1394, 1395; Background Corrected with Scan 1386

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	12.1	3232	PASS
75	95	30	66	39.2	10485	PASS
95	95	100	100	100.0	26750	PASS
96	95	5	9	7.1	1886	PASS
173	174	0.00	2	0.5	152	PASS
174	95	50	120	104.6	27969	PASS
175	174	4	9	7.1	1980	PASS
176	174	93	101	97.2	27194	PASS
177	176	5	9	6.5	1772	PASS

5A-OR

GC/MS INSTRUMENT PERFORMANCE CHECK

Lab File ID:	0428_01T	**SDG:**	L988669
Instrument ID:	AIRMS5	**Analytical Method:**	TO-15
Analysis Date/Time:	04/28/18 08:14		

Target Mass (m/e)	Relative Mass	Low Limit	High Limit	% Relative Abundance
50	95	8	40	12
75	95	30	66	39
95	95	100	100	100
96	95	5	9	7
173	174	0	2	1
174	95	50	120	104
175	174	4	9	7
176	174	93	101	98
177	176	5	9	6

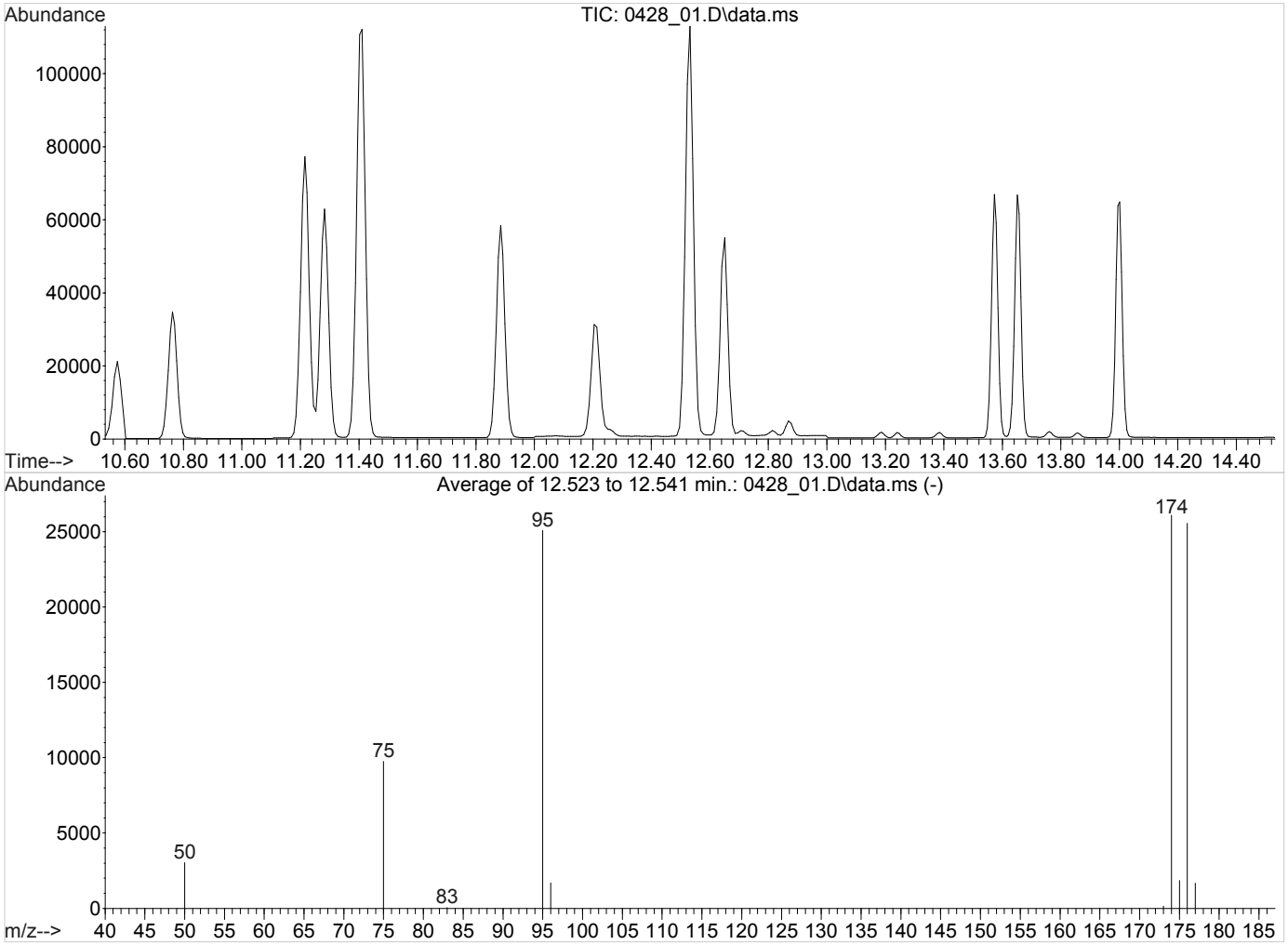
Sample ID	ESC Sample ID	File ID	Analysis date/time
ICV	AIRMS50428180428_01448236	0428_01	04/28/18 08:14
LCS	R3305551-1	0428_02	04/28/18 08:56
LCSD	R3305551-2	0428_03	04/28/18 09:38
BLANK	R3305551-3	0428_04	04/28/18 10:20
FC-1	L988669-01	0428_05	04/28/18 10:57
FC-2	L988669-02	0428_06	04/28/18 11:35
FC-3	L988669-03	0428_07	04/28/18 12:13
FC-4	L988669-04	0428_08	04/28/18 12:51
FC-5	L988669-05	0428_09	04/28/18 13:30

BFB

Data Path : C:\msdchem\1\data\042818\
Data File : 0428_01.D
Acq On : 28 Apr 2018 8:14 am
Operator : 564
Sample : ICV AMS 0.50 ppbv 18C26425
Misc : 18C26426
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Title : AIRMS5
Last Update : Sat Apr 28 09:57:33 2018



AutoFind: Scans 1393, 1394, 1395; Background Corrected with Scan 1386

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	12.1	3037	PASS
75	95	30	66	38.9	9758	PASS
95	95	100	100	100.0	25082	PASS
96	95	5	9	6.8	1699	PASS
173	174	0.00	2	0.6	144	PASS
174	95	50	120	104.1	26100	PASS
175	174	4	9	7.0	1839	PASS
176	174	93	101	97.9	25558	PASS
177	176	5	9	6.5	1669	PASS

8A-OR

INTERNAL STANDARD AND RETENTION TIME

SDG:	L988669	**Analytical Method:**	TO-15
Instrument ID:	AIRMS5	**Calibration Start Date:**	04/27/18 12:51
Std File:	0427A_09	**Calibration End Date:**	04/27/18 18:53
		Std Analysis Date:	04/27/18 16:47

Sample ID	File ID	DFB		BCM		CB	
		Response	*RT*	*Response*	*RT*	*Response*	*RT*
STANDARD		123611	8.11	34395	7.26	103365	11.22
UPPER LIMIT		176260		48789		148752	
LOWER LIMIT		75540		20910		63751	
LCS R3305497-1 WG1104091 1x	0427A_14	117643	8.10	32072	7.25	97972	11.22
LCSD R3305497-2 WG1104091 1x	0427A_15	118548	8.10	32261	7.25	97813	11.21
BLANK R3305497-3 WG1104091 1x	0427A_16	118122	8.10	32937	7.25	98299	11.22
L988669-01 WG1104091 1x	0427A_18	119494	8.11	32547	7.26	114500	11.23
L988669-02 WG1104091 1x	0427A_19	117842	8.11	31993	7.26	109155	11.22
L988669-03 WG1104091 1x	0427A_20	108615	8.11	29771	7.25	94798	11.22
L988669-04 WG1104091 1x	0427A_21	110282	8.11	30129	7.26	93561	11.22
L988669-05 WG1104091 1x	0427A_22	103674	8.10	28958	7.25	86395	11.21
L988669-06 WG1104091 1x	0427A_23	106017	8.11	29714	7.26	88682	11.22

DFB - 1,4-DIFLUOROBENZENE BCM - BROMOCHLOROMETHANE
CB - CHLOROBENZENE-D5

*: Value outside the established quality control limits.
D: Surrogate recovery cannot be used for control limit evaluation due to dilution.

8A-OR

INTERNAL STANDARD AND RETENTION TIME

SDG:	L988669	**Analytical Method:**	TO-15
Instrument ID:	AIRMS5	**Calibration Start Date:**	04/27/18 12:51
Std File:	0428_01	**Calibration End Date:**	04/27/18 18:53
		Std Analysis Date:	04/28/18 08:14

Sample ID	File ID	DFB		BCM		CB	
		Response	*RT*	*Response*	*RT*	*Response*	*RT*
STANDARD		118312	8.10	32369	7.25	97604	11.21
UPPER LIMIT		176260		48789		148752	
LOWER LIMIT		75540		20910		63751	
LCS R3305551-1 WG1104397 1x	0428_02	118808	8.10	32780	7.25	99134	11.22
LCSD R3305551-2 WG1104397 1x	0428_03	118613	8.10	32681	7.25	99293	11.22
BLANK R3305551-3 WG1104397 1x	0428_04	114349	8.10	31536	7.25	94594	11.21
L988669-01 WG1104397 200x	0428_05	105852	8.10	29278	7.25	88816	11.22
L988669-02 WG1104397 80x	0428_06	105387	8.10	28808	7.25	88408	11.22
L988669-03 WG1104397 80x	0428_07	103658	8.10	28235	7.25	86504	11.21
L988669-04 WG1104397 25x	0428_08	105078	8.10	29192	7.25	87655	11.21
L988669-05 WG1104397 8x	0428_09	94235	8.10	26199	7.25	76207	11.21

DFB - 1,4-DIFLUOROBENZENE BCM - BROMOCHLOROMETHANE
CB - CHLOROBENZENE-D5

*: Value outside the established quality control limits.
D: Surrogate recovery cannot be used for control limit evaluation due to dilution.

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
FC-1

ESC Sample ID:	L988669-01	**SDG:**	L988669
Client Sample ID:	FC-1	**Collected Date/Time:**	04/24/18 09:38
Lab File ID:	0427A_18	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/27/18 23:33
Analytical Batch:	WG1104091	**Analysis Date/Time:**	04/27/18 23:33
Dilution Factor:	1	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	**CAS**	**RT**	**Result** *ppbv*	**Qualifier**	**MDL** *ppbv*	**RDL** *ppbv*
Benzene	71-43-2	7.82	1.07		0.00541	0.0200
Carbon tetrachloride	56-23-5	7.60	0.0848		0.00575	0.0200
Chloroethane	75-00-3	4.62	ND		0.0159	0.0400
Chloroform	67-66-3	7.26	1.10		0.00464	0.0200
Chloromethane	74-87-3	3.93	0.430		0.00972	0.0300
1,2-Dibromoethane	106-93-4	0	ND		0.0185	0.0200
1,4-Dichlorobenzene	106-46-7	0	ND		0.00691	0.0200
1,1-Dichloroethane	75-34-3	6.50	0.491		0.00505	0.0200
1,2-Dichloroethane	107-06-2	0	ND		0.000471	0.0200
1,1-Dichloroethene	75-35-4	5.40	0.0280		0.00521	0.0200
1,2-Dichloropropane	78-87-5	8.67	0.143		0.00840	0.0300
cis-1,3-Dichloropropene	10061-01-5	0	ND		0.00556	0.0200
trans-1,3-Dichloropropene	10061-02-6	0	ND		0.00853	0.0300
Ethylbenzene	100-41-4	11.30	0.416		0.00904	0.0300
1,1,2,2-Tetrachloroethane	79-34-5	12.63	0.293		0.00481	0.0200
1,1,1-Trichloroethane	71-55-6	7.46	ND		0.00552	0.0200
1,1,2-Trichloroethane	79-00-5	0	ND		0.0287	0.0300
Vinyl chloride	75-01-4	4.08	0.184		0.00765	0.0200
Vinyl acetate	108-05-4	0	ND		0.00430	0.0200

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_18.D
Acq On : 27 Apr 2018 11:33 pm
Operator : 564
Sample : L988669-01 1x WG1104091
Misc : 18C26426
ALS Vial : 18 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 10:03:54 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:33 2018
Response via : Initial Calibration

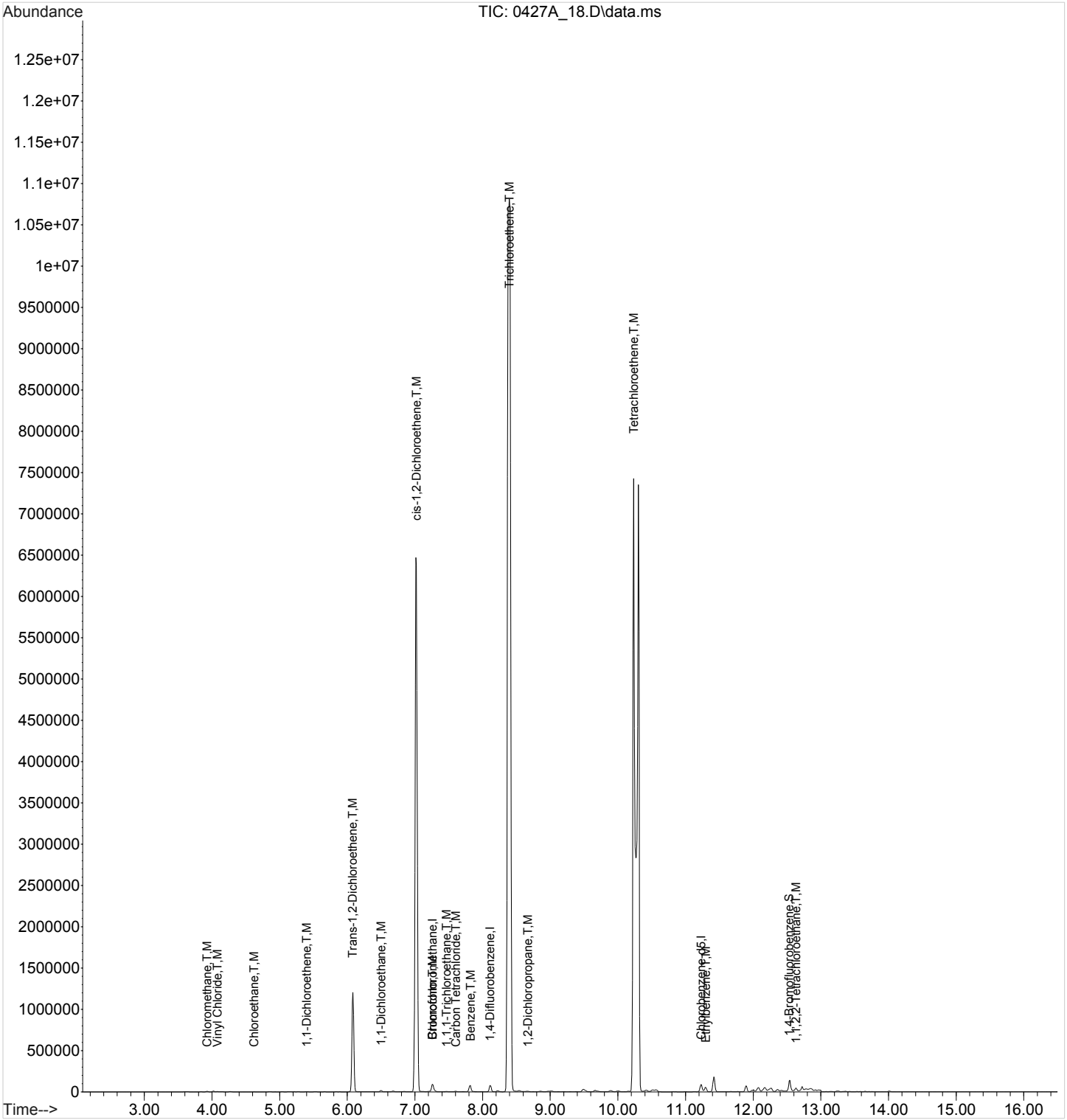
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.259	130	32547	1.2500000	ppbv	0.00
13) 1,4-Difluorobenzene	8.110	114	119494	1.2500000	ppbv	0.00
23) Chlorobenzene-d5	11.230	117	114500	1.2500000	ppbv	# 0.01
System Monitoring Compounds						
26) 1,4-Bromofluorobenzene	12.532	95	90983	1.7151026	ppbv	0.00
Spiked Amount 1.250	Range 60 - 140		Recovery = 137.21%			
Target Compounds						Qvalue
2) Chloromethane	3.928	50	9123	0.4301597	ppbv	100
3) Vinyl Chloride	4.079	62	4911	0.1836510	ppbv	100
4) Chloroethane	4.620	64	493	0.0345398	ppbv #	74
5) 1,1-Dichloroethene	5.400	61	1103	0.0280343	ppbv	97
6) Trans-1,2-Dichloroethene	6.077	61	853693	24.2742991	ppbv #	1
7) 1,1-Dichloroethane	6.499	63	25326	0.4913756	ppbv	97
8) Vinyl Acetate	0.000		0	N.D. d		
9) cis-1,2-Dichloroethene	7.022	96	4483938	124.2169120	ppbv	99
10) Chloroform	7.259	83	69100	1.1045071	ppbv #	54
11) 1,1,1-Trichloroethane	7.463	97	1290	0.0199444	ppbv #	89
12) Carbon Tetrachloride	7.602	117	5693	0.0848150	ppbv	98
14) Benzene	7.818	78	119187	1.0724269	ppbv	99
15) 1,2-Dichloroethane	0.000		0	N.D. d		
16) Trichloroethene	8.396	95	10897632	223.5901635	ppbv	99
17) 1,2-Dichloropropane	8.666	63	5346	0.1427292	ppbv #	1
18) cis-1,3-Dichloropropene	9.331	75	154	N.D.		
19) trans-1,3-Dichloropropene	0.000		0	N.D.		
20) 1,1,2-Trichloroethane	0.000		0	N.D. d		
21) Tetrachloroethene	10.234	166	13118253m	164.5522234	ppbv	
22) 1,2-Dibromoethane	10.806	107	214	N.D.		
24) Ethylbenzene	11.298	91	84101	0.4156180	ppbv	98
25) 1,1,2,2-Tetrachloroethane	12.632	83	35443	0.2928973	ppbv #	36
27) 1,4-Dichlorobenzene	0.000		0	N.D. d		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_18.D
Acq On : 27 Apr 2018 11:33 pm
Operator : 564
Sample : L988669-01 1x WG1104091
Misc : 18C26426
ALS Vial : 18 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 10:03:54 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:33 2018
Response via : Initial Calibration

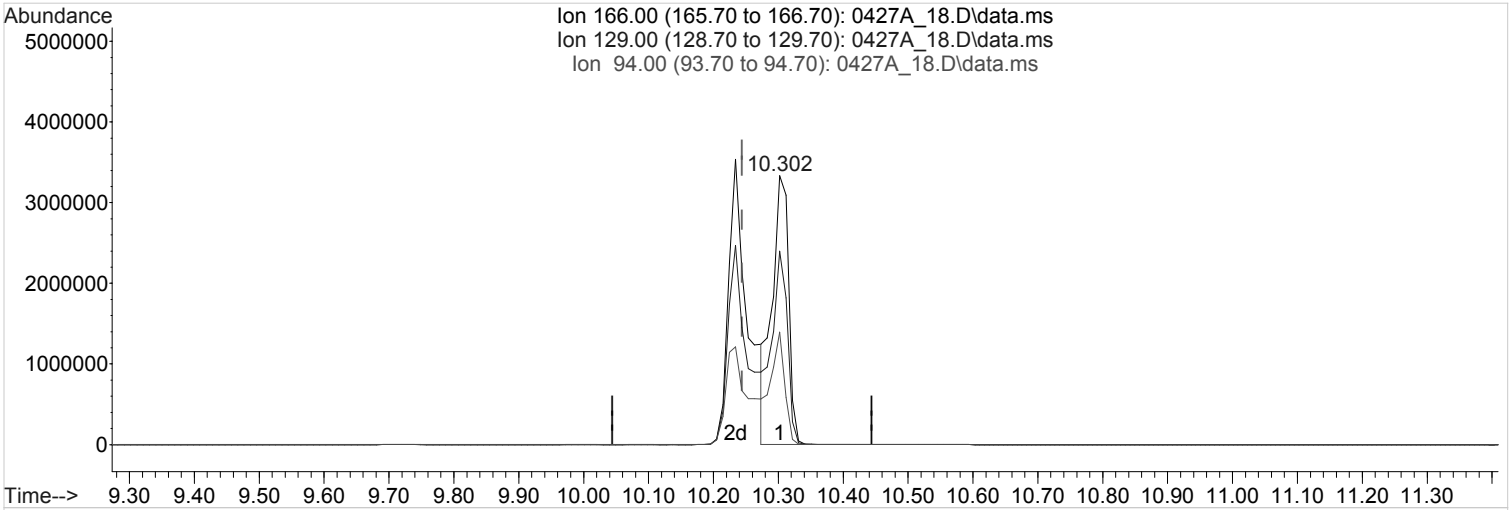


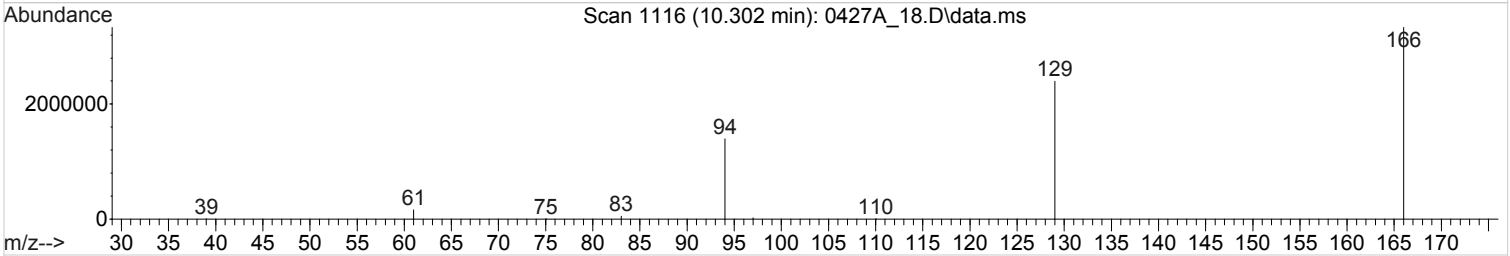
ACCOUNT:	PROJECT:	SDG:	DATE/TIME:	PAGE:
S&ME Inc. - Knoxville	4143-17-016	L988669	05/16/18 08:03	21 of 183

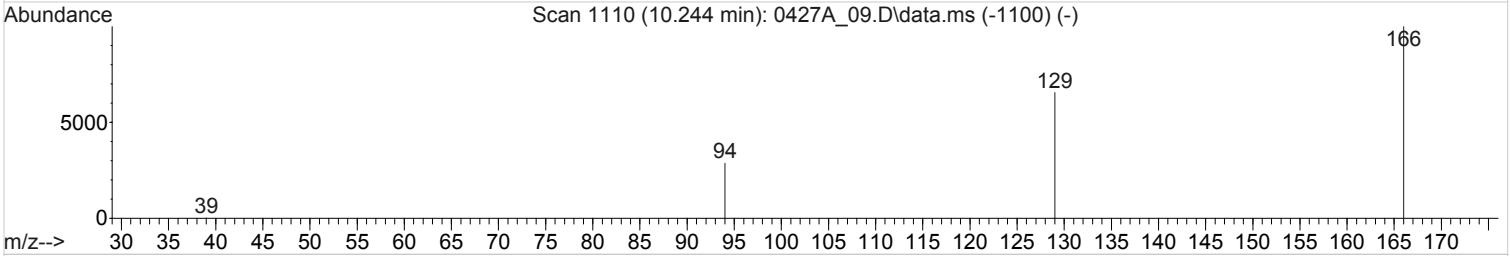
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_18.D
Acq On : 27 Apr 2018 11:33 pm
Operator : 564
Sample : L988669-01 1x WG1104091
Misc : 18C26426
ALS Vial : 18 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 10:02:11 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:33 2018
Response via : Initial Calibration







TIC: 0427A_18.D\data.ms

(21) Tetrachloroethene (T,M)

10.302min (+0.058) 74.4777374 ppbv E

Qvalue = 98

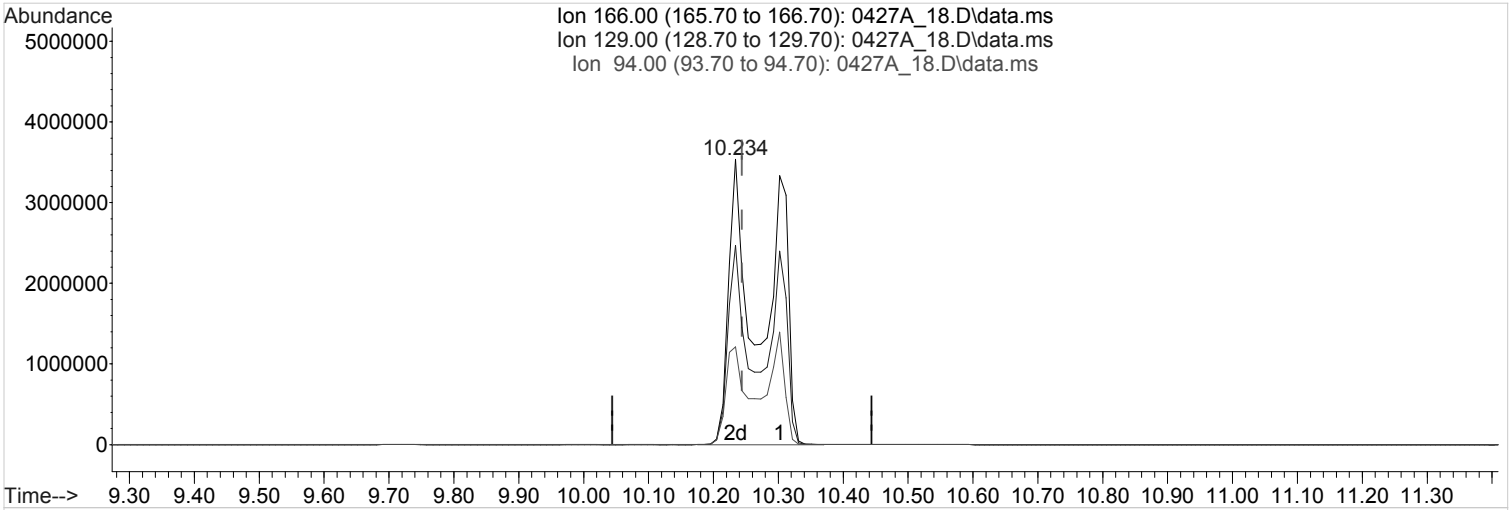
response 5937433 Limit = 0.0200000

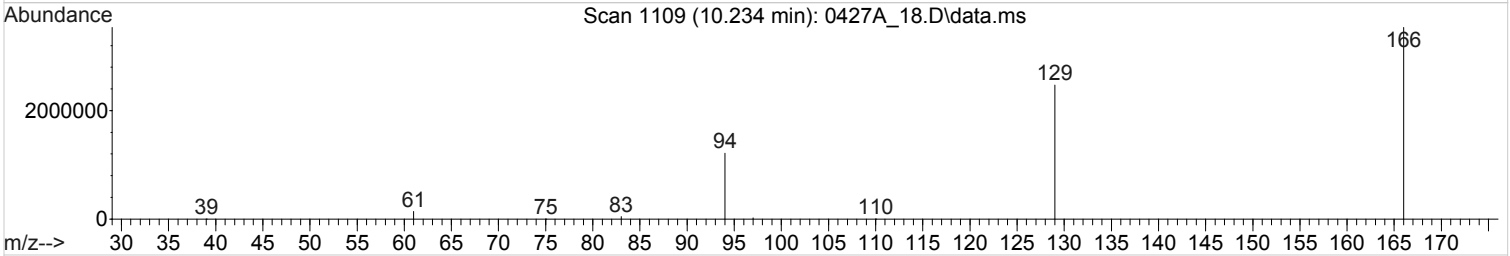
Ion	Exp%	Act%
166.00	100	100
129.00	66.90	67.72
94.00	32.70	35.66
0.00	0.00	0.00

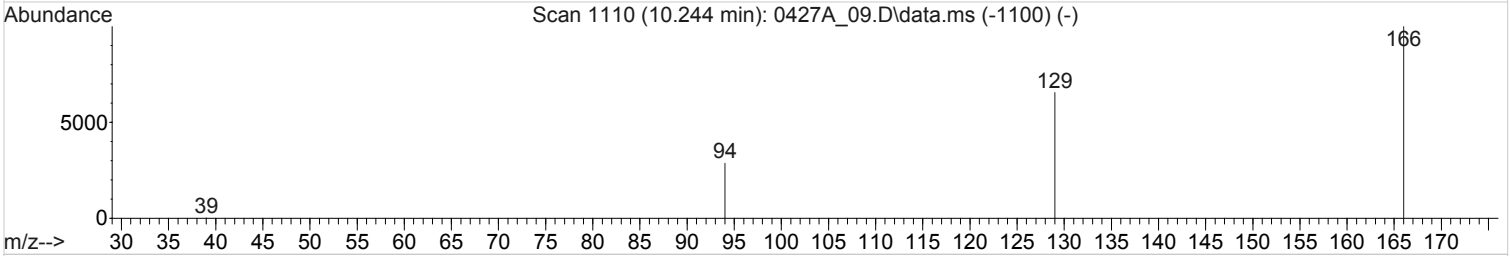
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_18.D
Acq On : 27 Apr 2018 11:33 pm
Operator : 564
Sample : L988669-01 1x WG1104091
Misc : 18C26426
ALS Vial : 18 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 10:02:11 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:33 2018
Response via : Initial Calibration







TIC: 0427A_18.D\data.ms

(21) Tetrachloroethene (T,M)

10.234min (-0.010) 164.5522234 ppbv m E

response 13118253 Limit = 0.0200000

Ion	Exp%	Act%
166.00	100	100
129.00	66.90	30.65#
94.00	32.70	16.14#
0.00	0.00	0.00

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
FC-1

ESC Sample ID:	L988669-01	**SDG:**	L988669
Client Sample ID:	FC-1	**Collected Date/Time:**	04/24/18 09:38
Lab File ID:	0428_05	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/28/18 10:57
Analytical Batch:	WG1104397	**Analysis Date/Time:**	04/28/18 10:57
Dilution Factor:	200	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	2 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	RT	Result	Qualifier	MDL	RDL
			ppbv		*ppbv*	*ppbv*
cis-1,2-Dichloroethene	156-59-2	7.01	119		1.54	4.00
trans-1,2-Dichloroethene	156-60-5	6.08	21.8		0.998	4.00
Tetrachloroethylene	127-18-4	10.23	1770		0.914	4.00
Trichloroethylene	79-01-6	8.38	399		1.47	4.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042818\
Data File : 0428_05.D
Acq On : 28 Apr 2018 10:57 am
Operator : 564
Sample : L988669-01 200x WG1104397
Misc : 18C26426
ALS Vial : 5 Sample Multiplier: 200
InstName : AIRMS5

Quant Time: Apr 28 14:06:46 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:33 2018
Response via : Initial Calibration

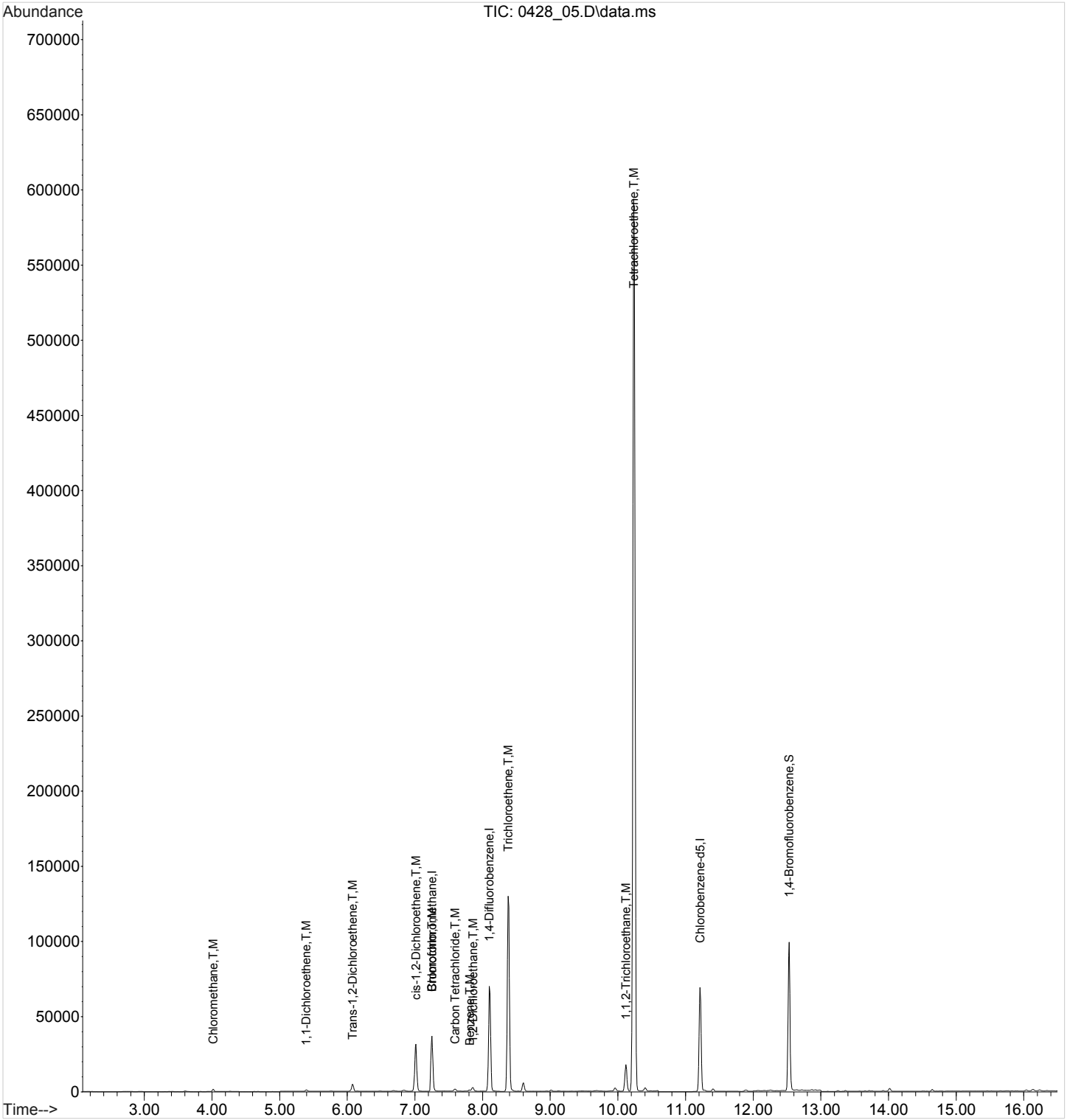
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.251	130	29278	1.2500000	ppbv	0.00
13) 1,4-Difluorobenzene	8.100	114	105852	1.2500000	ppbv	0.00
23) Chlorobenzene-d5	11.215	117	88816	1.2500000	ppbv	0.00
System Monitoring Compounds						
26) 1,4-Bromofluorobenzene	12.532	95	51771	1.2581450	ppbv	0.00
Spiked Amount 1.250	Range 60 - 140		Recovery = 100.65%			
Target Compounds						Qvalue
2) Chloromethane	4.019	50	2327	24.3942801	ppbv #	80
3) Vinyl Chloride	0.000		0	N.D.		
4) Chloroethane	0.000		0	N.D.		
5) 1,1-Dichloroethene	5.392	61	816	4.6110905	ppbv	98
6) Trans-1,2-Dichloroethene	6.077	61	3441	21.7535031	ppbv #	11
7) 1,1-Dichloroethane	6.492	63	184	0.7937146	ppbv #	66
8) Vinyl Acetate	6.469	43	264	0.9628329	ppbv #	67
9) cis-1,2-Dichloroethene	7.014	96	19248	118.5512924	ppbv	99
10) Chloroform	7.251	83	5732	20.3702433	ppbv	84
11) 1,1,1-Trichloroethane	0.000		0	N.D.		
12) Carbon Tetrachloride	7.594	117	1348	4.4649953	ppbv	100
14) Benzene	7.809	78	1147	2.3301253	ppbv #	1
15) 1,2-Dichloroethane	7.857	64	1940	36.2960920	ppbv #	94
16) Trichloroethene	8.378	95	86072	398.7121559	ppbv	99
17) 1,2-Dichloropropane	0.000		0	N.D.		
18) cis-1,3-Dichloropropene	0.000		0	N.D.		
19) trans-1,3-Dichloropropene	0.000		0	N.D.		
20) 1,1,2-Trichloroethane	10.118	97	16014	75.3818143	ppbv	100
21) Tetrachloroethene	10.234	166	626178	1773.3831768	ppbv	99
22) 1,2-Dibromoethane	0.000		0	N.D.		
24) Ethylbenzene	11.283	91	957	1.2194090	ppbv	100
25) 1,1,2,2-Tetrachloroethane	12.651	83	594	1.2656557	ppbv #	83
27) 1,4-Dichlorobenzene	13.658	146	273	0.5245002	ppbv #	57

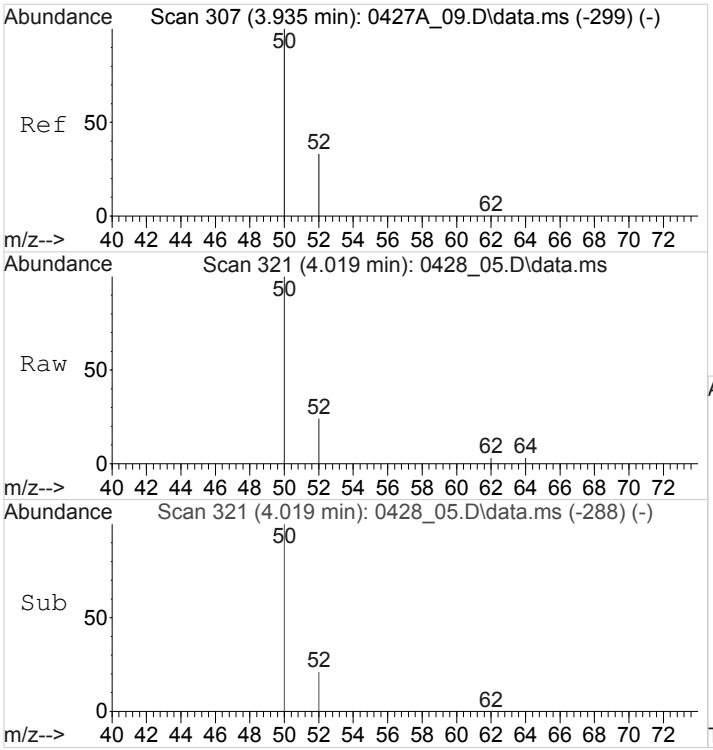
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042818\
Data File : 0428_05.D
Acq On : 28 Apr 2018 10:57 am
Operator : 564
Sample : L988669-01 200x WG1104397
Misc : 18C26426
ALS Vial : 5 Sample Multiplier: 200
InstName : AIRMS5

Quant Time: Apr 28 14:06:46 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:33 2018
Response via : Initial Calibration

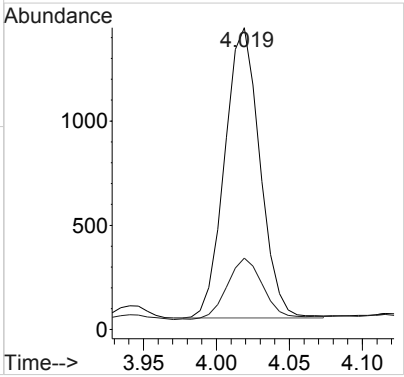


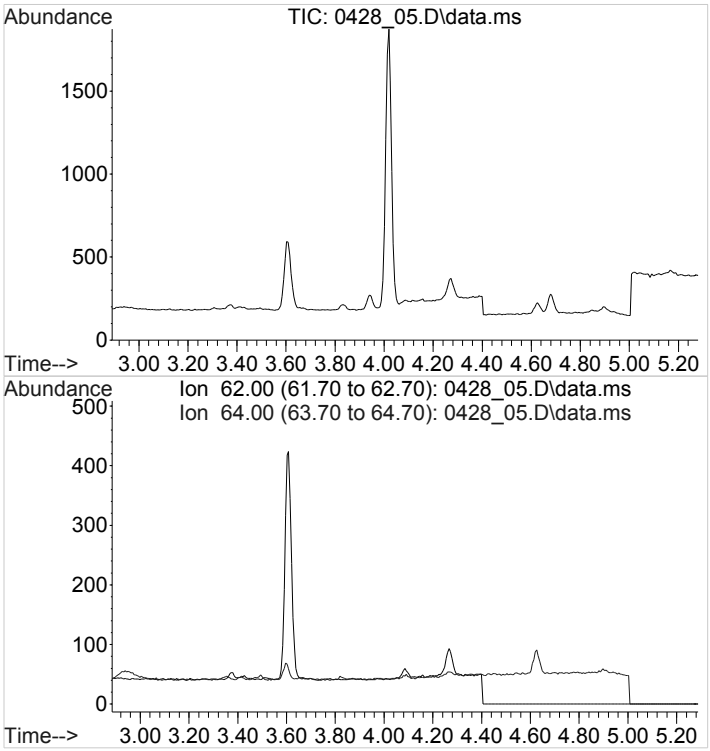


#2
Chloromethane
Concen: 24.3942801 ppbv
RT: 4.019 min Scan# 321
Delta R.T. 0.084 min
Lab File: 0428_05.D
Acq: 28 Apr 2018 10:57 am

Tgt Ion: 50 Resp: 2327

Ion	Ratio	Lower	Upper
50	100		
52	21.8	26.6	40.0#



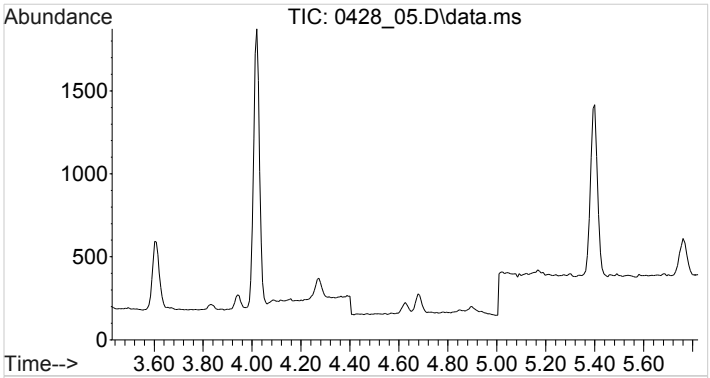


#3
Vinyl Chloride
Concen: N.D.
Expected RT: 4.09 min

Lab File: 0428_05.D
Acq: 28 Apr 2018 10:57 am

Tgt Ion: 62

Sig	Exp Ratio
62	100
64	32.6

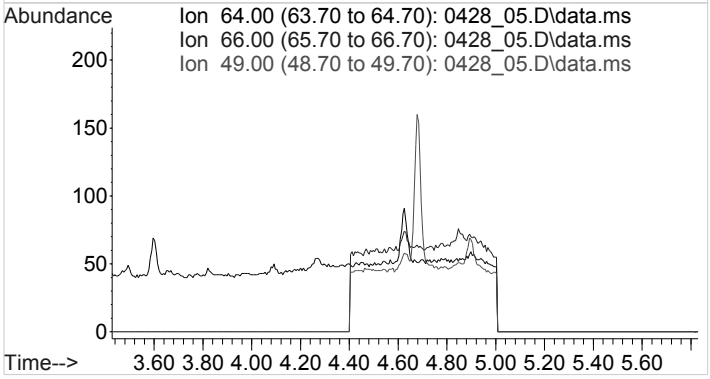


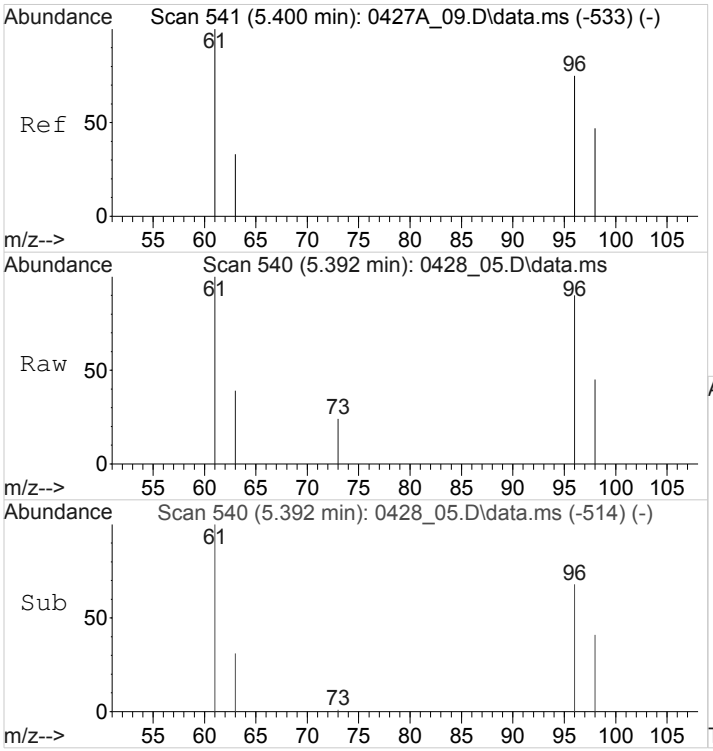
#4
Chloroethane
Concen: N.D.
Expected RT: 4.63 min

Lab File: 0428_05.D
Acq: 28 Apr 2018 10:57 am

Tgt Ion: 64

Sig	Exp Ratio
64	100
66	32.2
49	21.6

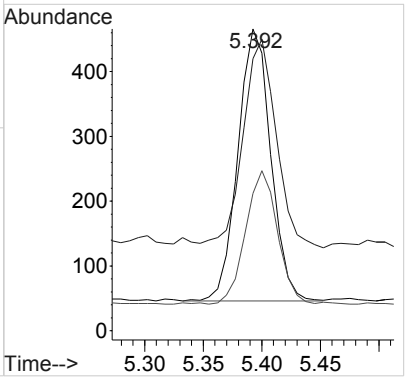


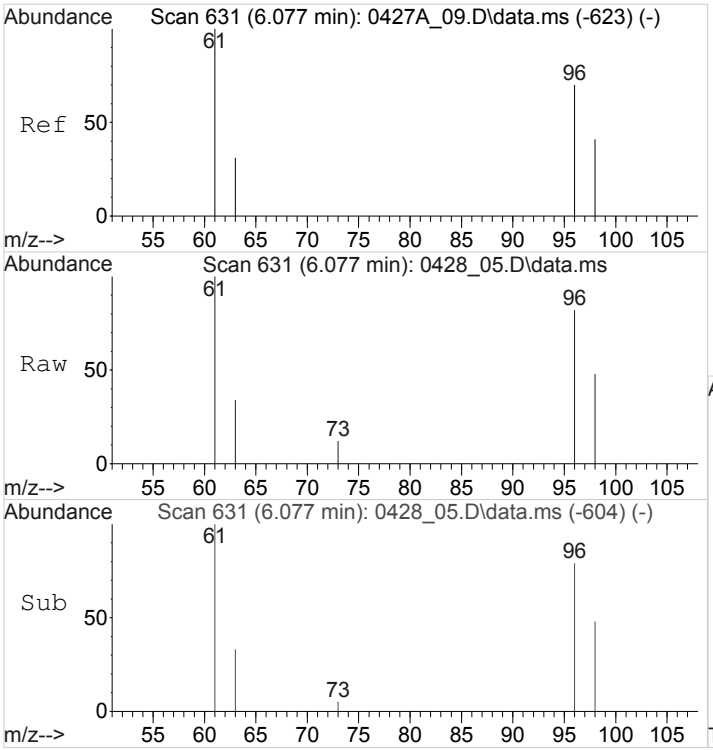


#5
1,1-Dichloroethene
Concen: 4.6110905 ppbv
RT: 5.392 min Scan# 540
Delta R.T. -0.008 min
Lab File: 0428_05.D
Acq: 28 Apr 2018 10:57 am

Tgt Ion: 61 Resp: 816

Ion	Ratio	Lower	Upper
61	100		
96	77.9	59.8	89.6
98	48.0	38.3	57.5

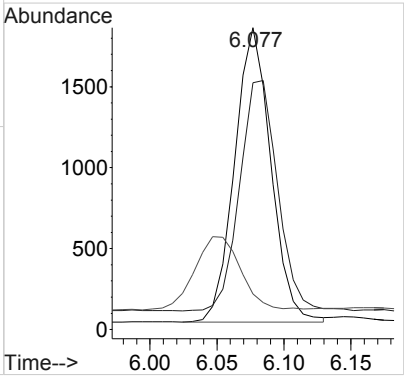


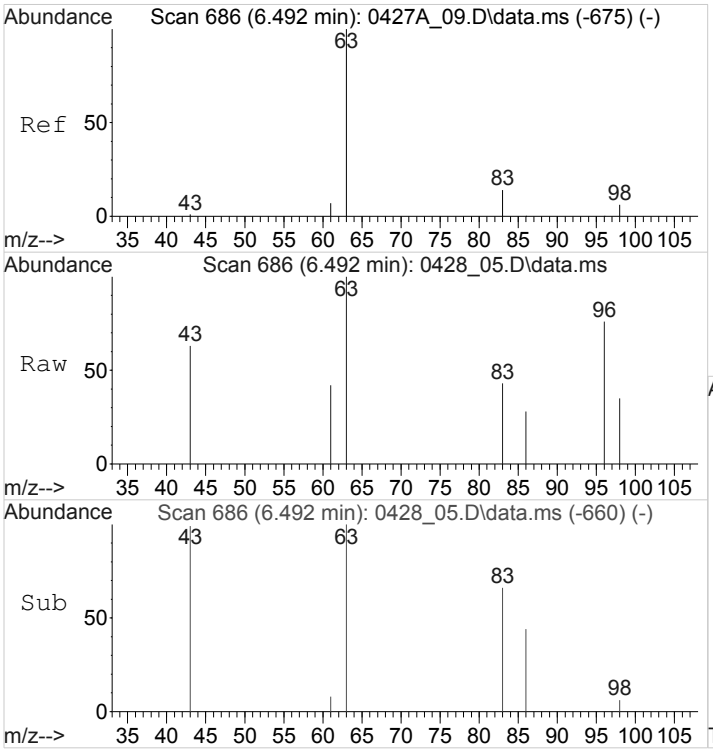


#6
Trans-1,2-Dichloroethene
Concen: 21.7535031 ppbv
RT: 6.077 min Scan# 631
Delta R.T. -0.000 min
Lab File: 0428_05.D
Acq: 28 Apr 2018 10:57 am

Tgt Ion: 61 Resp: 3441

Ion	Ratio	Lower	Upper
61	100		
96	81.6	66.0	99.0
73	31.5	184.9	277.3#

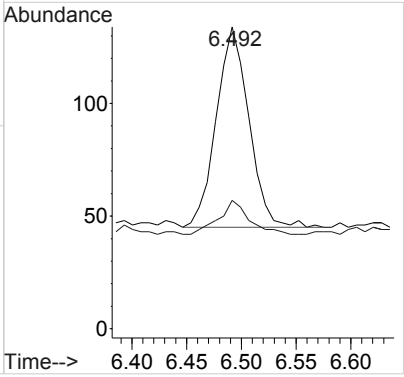


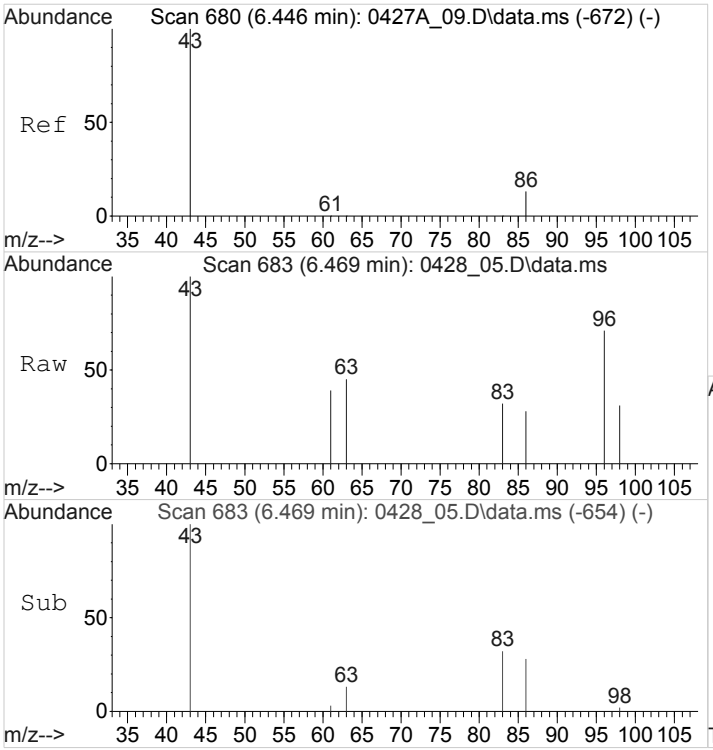


#7
1,1-Dichloroethane
Concen: 0.7937146 ppbv
RT: 6.492 min Scan# 686
Delta R.T. -0.000 min
Lab File: 0428_05.D
Acq: 28 Apr 2018 10:57 am

Tgt Ion: 63 Resp: 184

Ion	Ratio	Lower	Upper
63	100		
83	0.0	11.2	16.8#

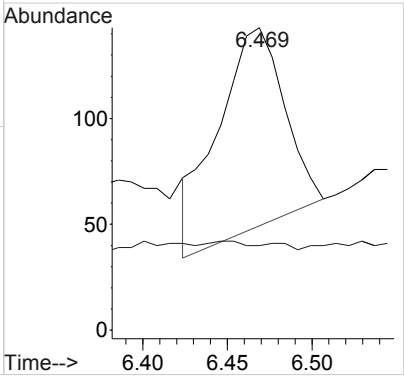


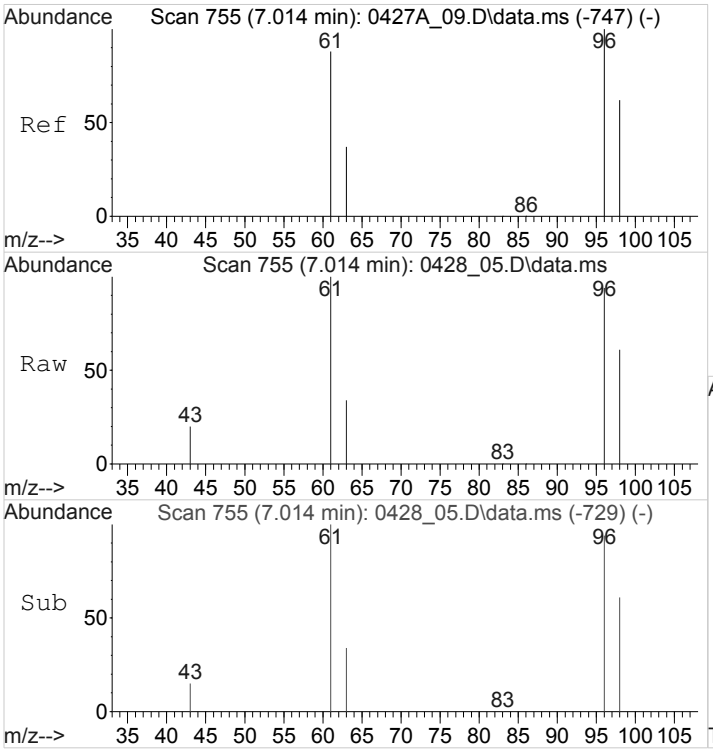


#8
Vinyl Acetate
Concen: 0.9628329 ppbv
RT: 6.469 min Scan# 683
Delta R.T. 0.023 min
Lab File: 0428_05.D
Acq: 28 Apr 2018 10:57 am

Tgt Ion: 43 Resp: 264

Ion	Ratio	Lower	Upper
43	100		
86	0.0	10.7	16.1#

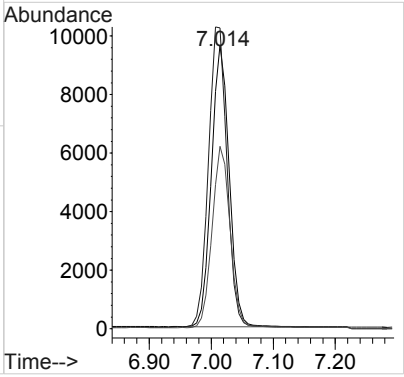


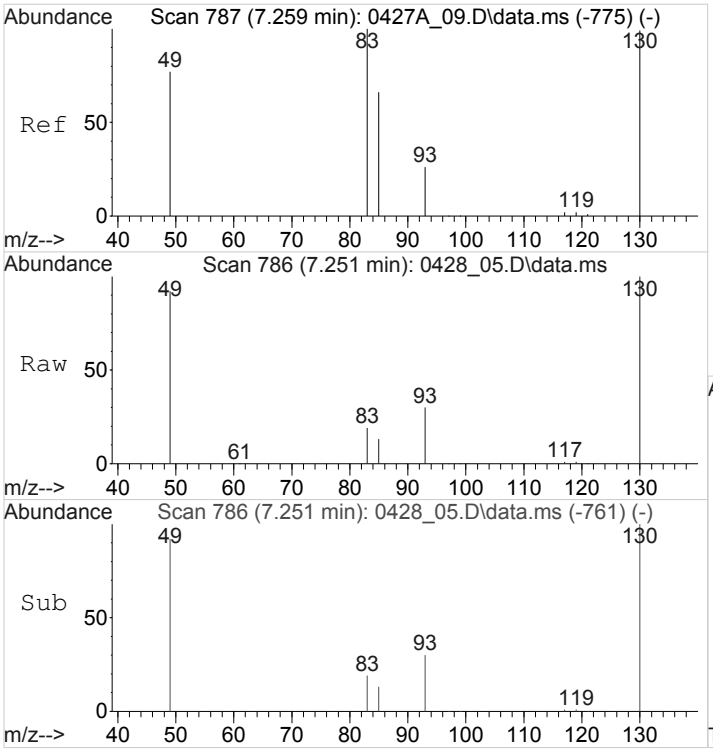


#9
cis-1,2-Dichloroethene
Concen: 118.5512924 ppbv
RT: 7.014 min Scan# 755
Delta R.T. -0.000 min
Lab File: 0428_05.D
Acq: 28 Apr 2018 10:57 am

Tgt Ion: 96 Resp: 19248

Ion	Ratio	Lower	Upper
96	100		
61	110.8	87.5	131.3
98	65.0	51.4	77.2

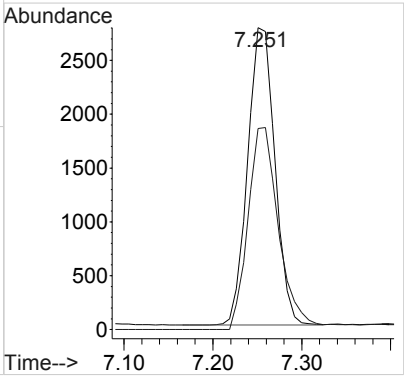


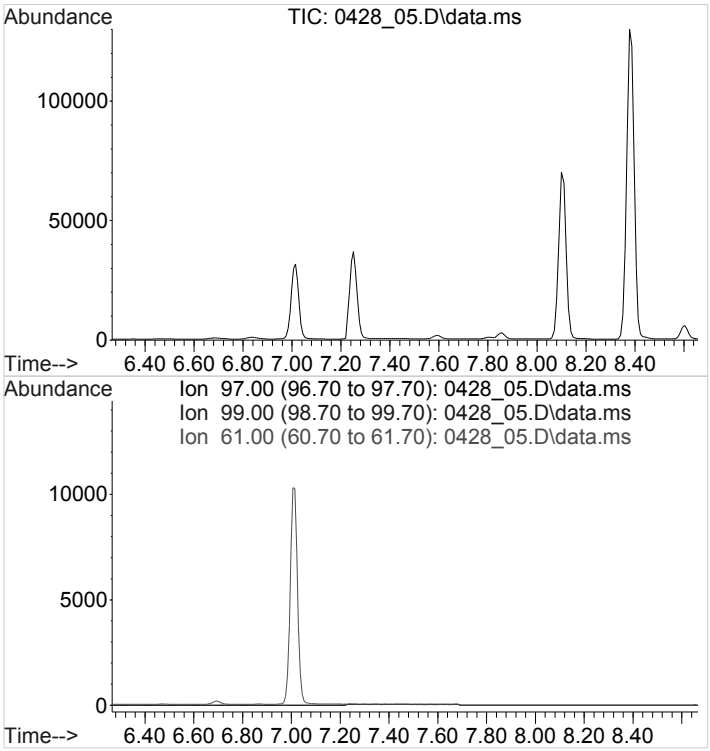


#10
Chloroform
Concen: 20.3702433 ppbv
RT: 7.251 min Scan# 786
Delta R.T. -0.008 min
Lab File: 0428_05.D
Acq: 28 Apr 2018 10:57 am

Tgt Ion: 83 Resp: 5732

Ion	Ratio	Lower	Upper
83	100		
85	80.1	54.0	81.0



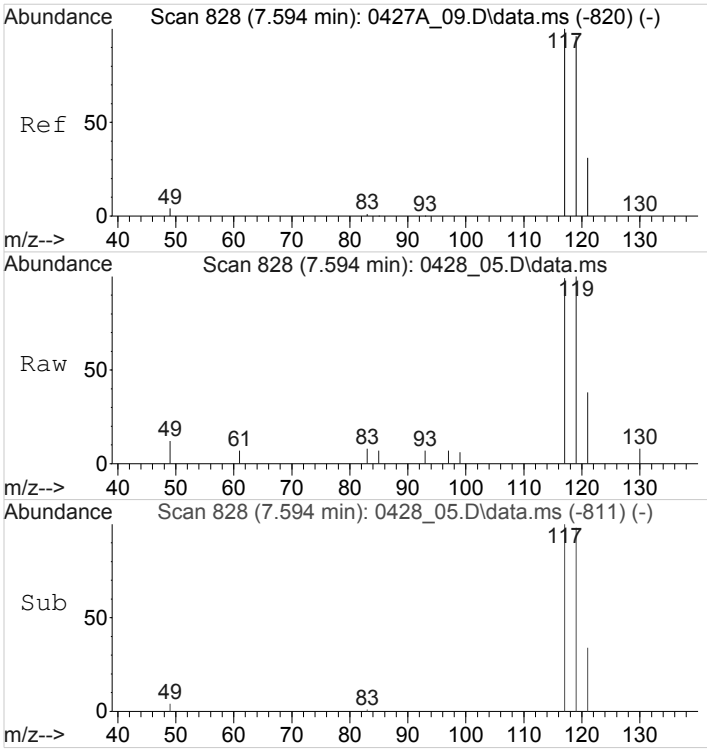


#11
1,1,1-Trichloroethane
Concen: N.D.
Expected RT: 7.46 min

Lab File: 0428_05.D
Acq: 28 Apr 2018 10:57 am

Tgt Ion: 97

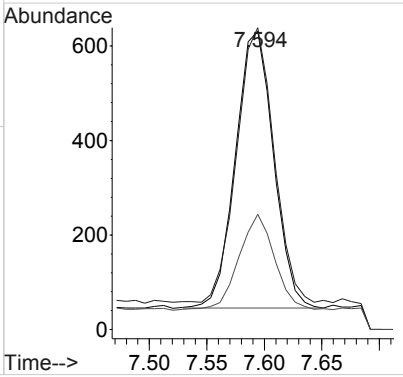
Sig	Exp Ratio
97	100
99	64.8
61	35.9

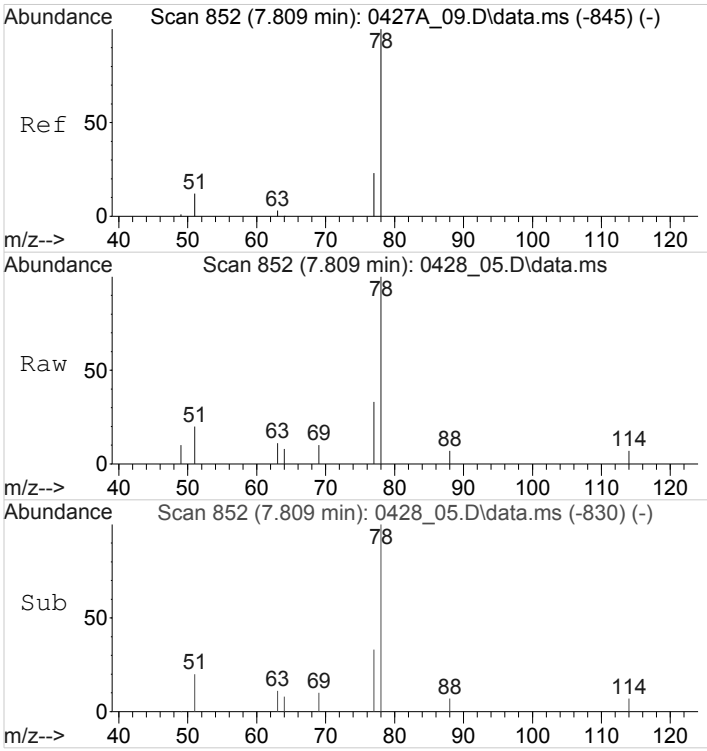


#12
Carbon Tetrachloride
Concen: 4.4649953 ppbv
RT: 7.594 min Scan# 828
Delta R.T. -0.000 min
Lab File: 0428_05.D
Acq: 28 Apr 2018 10:57 am

Tgt Ion:117 Resp: 1348

Ion	Ratio	Lower	Upper
117	100		
119	97.0	77.9	116.9
121	32.0	25.4	38.0

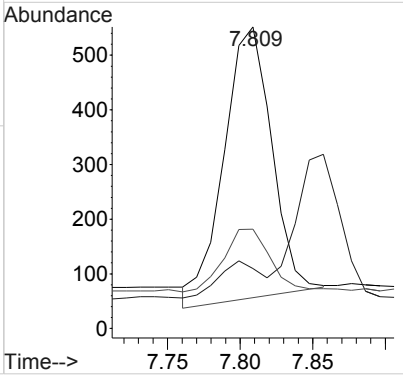


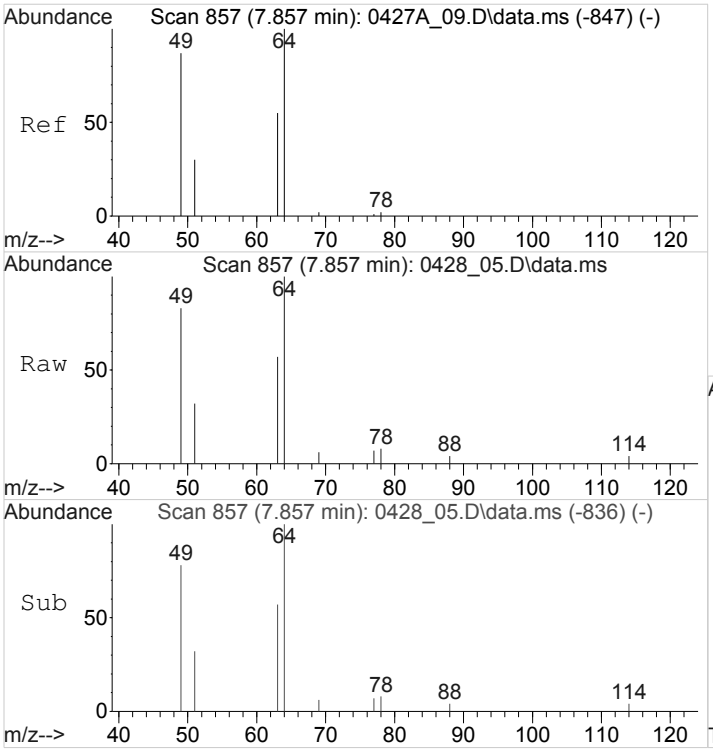


#14
Benzene
Concen: 2.3301253 ppbv
RT: 7.809 min Scan# 852
Delta R.T. -0.000 min
Lab File: 0428_05.D
Acq: 28 Apr 2018 10:57 am

Tgt Ion: 78 Resp: 1147

Ion	Ratio	Lower	Upper
78	100		
51	51.4	10.9	16.3#
77	90.2	18.8	28.2#

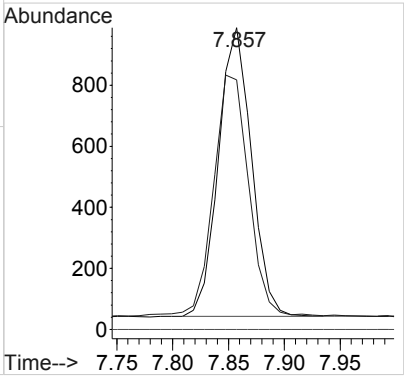


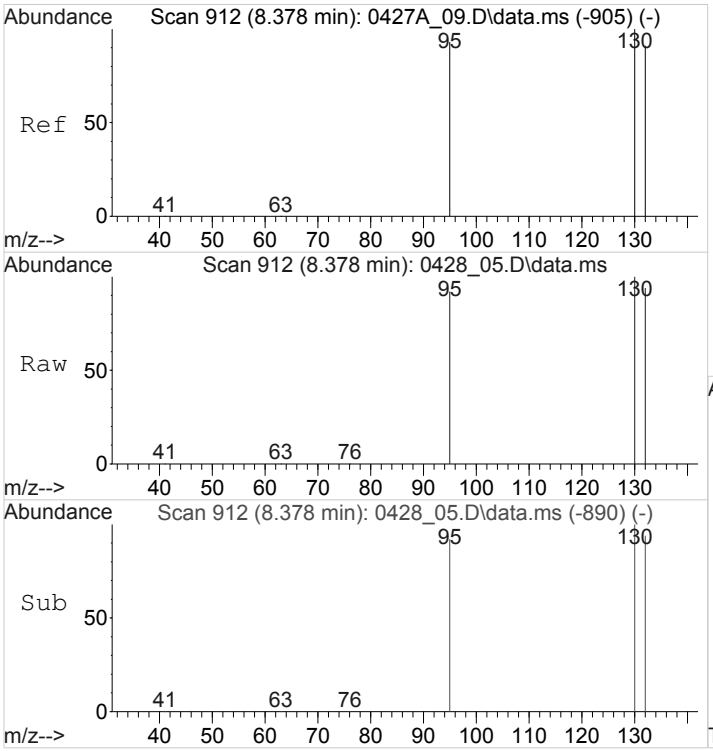


#15
1,2-Dichloroethane
Concen: 36.2960920 ppbv
RT: 7.857 min Scan# 857
Delta R.T. -0.000 min
Lab File: 0428_05.D
Acq: 28 Apr 2018 10:57 am

Tgt Ion: 64 Resp: 1940

Ion	Ratio	Lower	Upper
64	100		
49	89.6	67.0	100.6
62	0.0	0.0	0.0

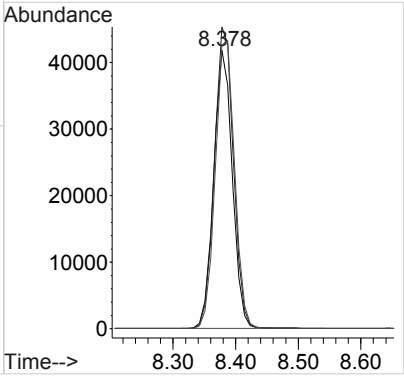


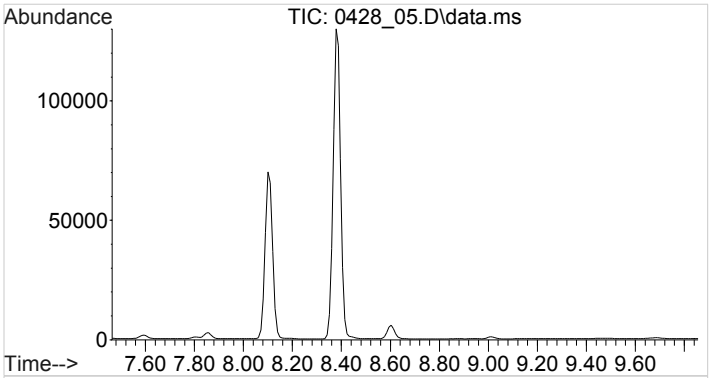


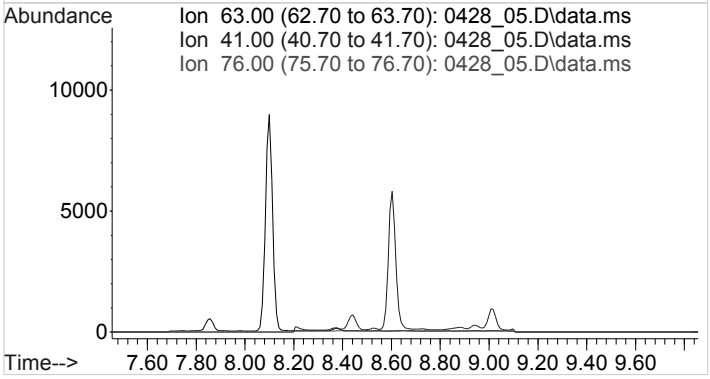
#16
Trichloroethene
Concen: 398.7121559 ppbv
RT: 8.378 min Scan# 912
Delta R.T. -0.000 min
Lab File: 0428_05.D
Acq: 28 Apr 2018 10:57 am

Tgt Ion: 95 Resp: 86072

Ion	Ratio	Lower	Upper
95	100		
130	110.8	89.5	134.3
132	108.0	86.7	130.1





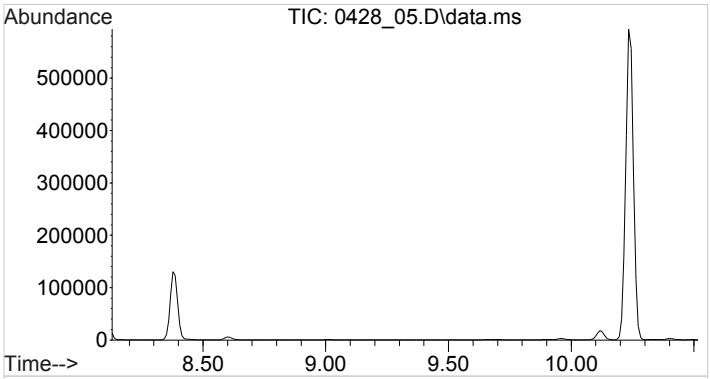


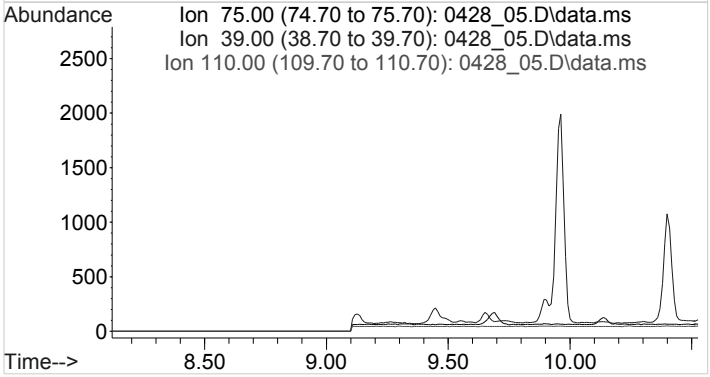
#17
1,2-Dichloropropane
Concen: N.D.
Expected RT: 8.66 min

Lab File: 0428_05.D
Acq: 28 Apr 2018 10:57 am

Tgt Ion: 63

Sig	Exp Ratio
63	100
41	27.9
76	38.3



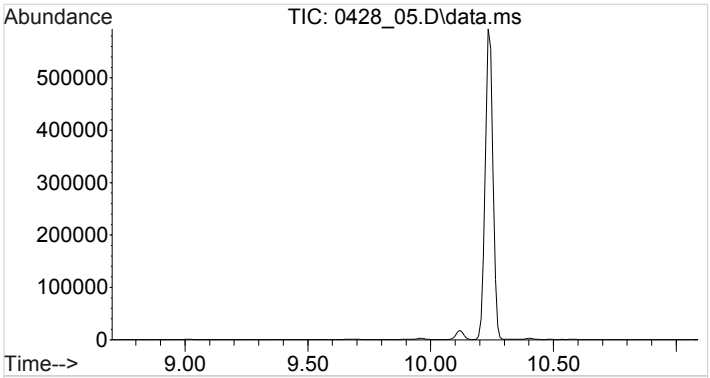


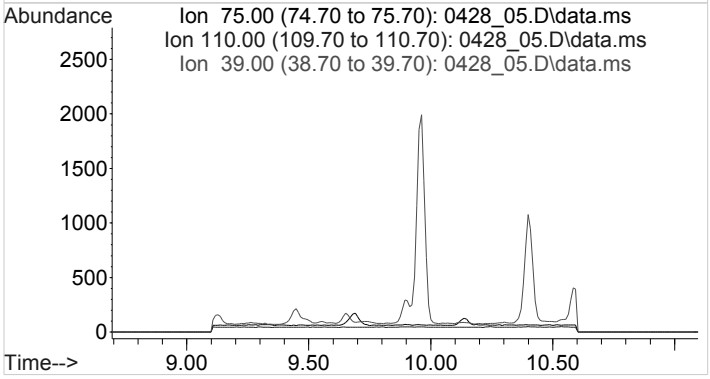
#18
cis-1,3-Dichloropropene
Concen: N.D.
Expected RT: 9.32 min

Lab File: 0428_05.D
Acq: 28 Apr 2018 10:57 am

Tgt Ion: 75

Sig	Exp Ratio
75	100
39	30.7
110	26.0



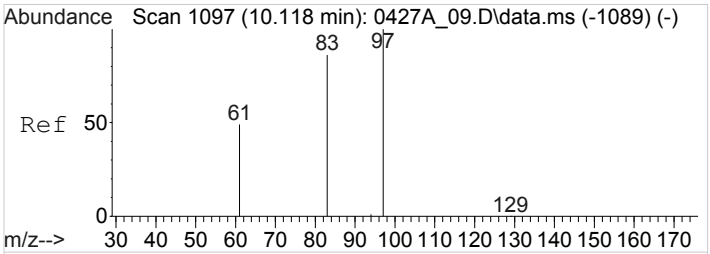


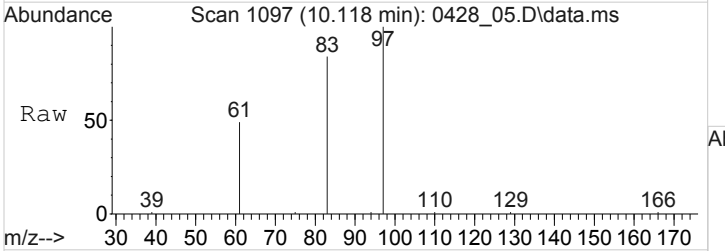
#19
trans-1,3-Dichloropropene
Concen: N.D.
Expected RT: 9.89 min

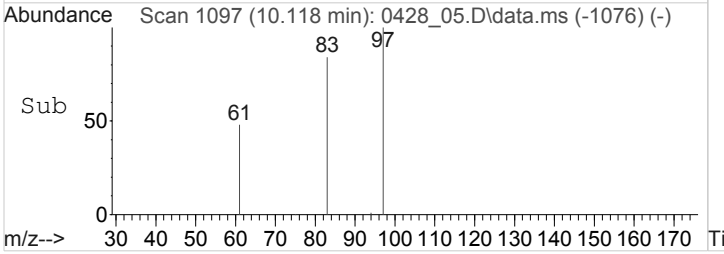
Lab File: 0428_05.D
Acq: 28 Apr 2018 10:57 am

Tgt Ion: 75

Sig	Exp Ratio
75	100
110	29.4
39	30.7



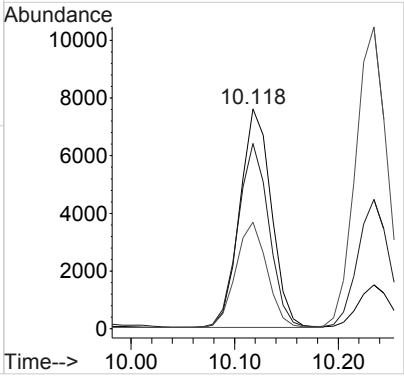


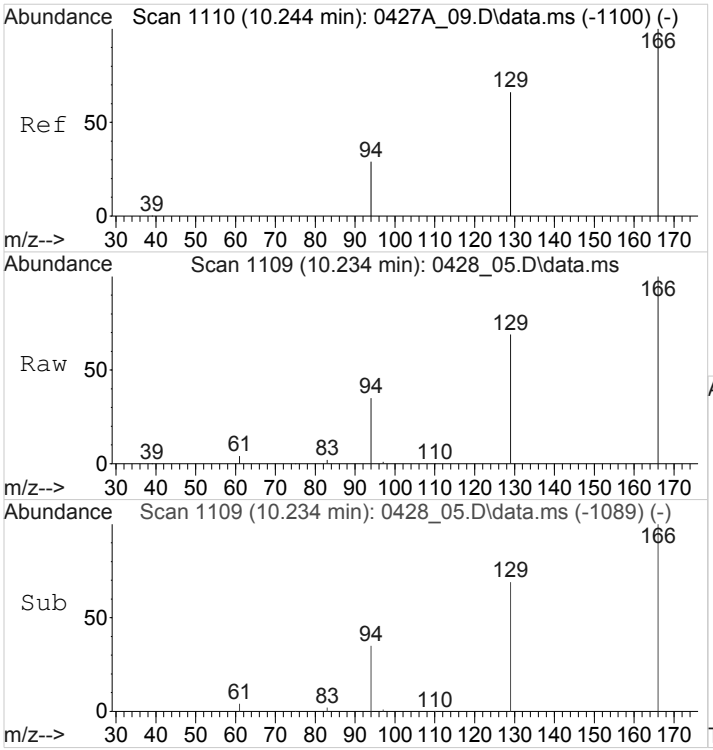


#20
1,1,2-Trichloroethane
Concen: 75.3818143 ppbv
RT: 10.118 min Scan# 1097
Delta R.T. -0.000 min
Lab File: 0428_05.D
Acq: 28 Apr 2018 10:57 am

Tgt Ion: 97 Resp: 16014

Ion	Ratio	Lower	Upper
97	100		
83	82.8	66.2	99.4
61	47.8	38.0	57.0

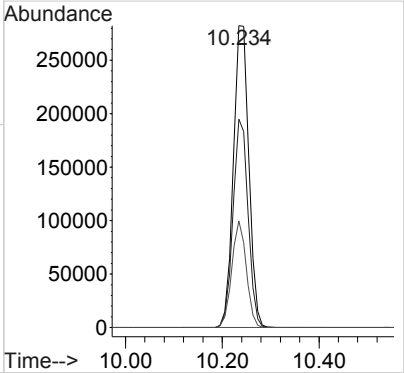


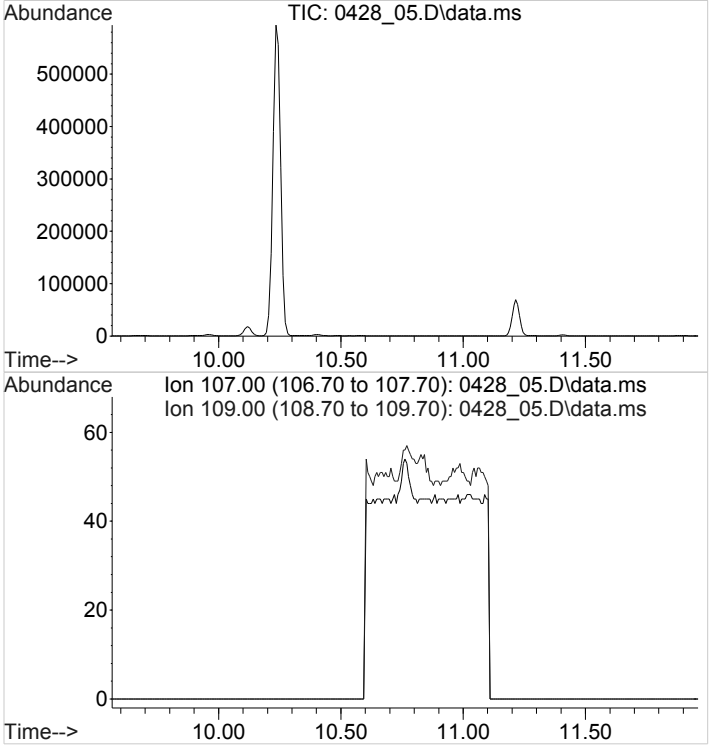


#21
Tetrachloroethene
Concen: 1773.3831768 ppbv
RT: 10.234 min Scan# 1109
Delta R.T. -0.010 min
Lab File: 0428_05.D
Acq: 28 Apr 2018 10:57 am

Tgt Ion:166 Resp: 626178

Ion	Ratio	Lower	Upper
166	100		
129	67.2	53.5	80.3
94	33.2	26.2	39.2



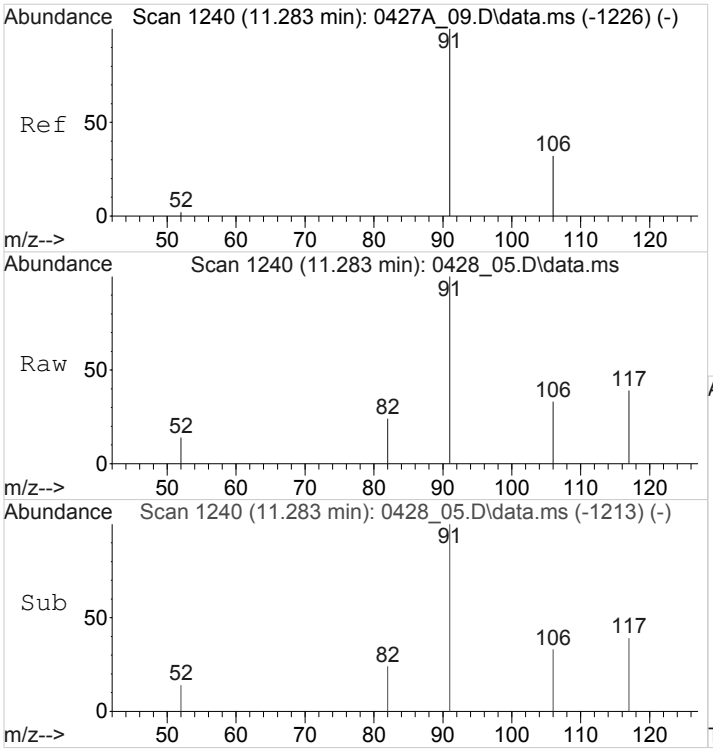


#22
1,2-Dibromoethane
Concen: N.D.
Expected RT: 10.76 min

Lab File: 0428_05.D
Acq: 28 Apr 2018 10:57 am

Tgt Ion: 107

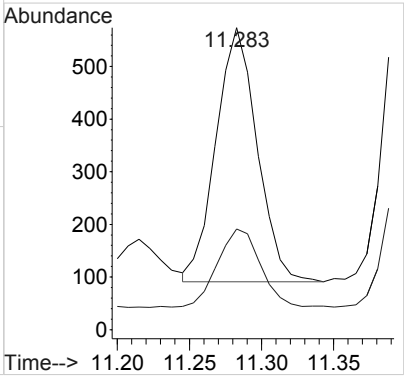
Sig	Exp Ratio
107	100
109	94.9

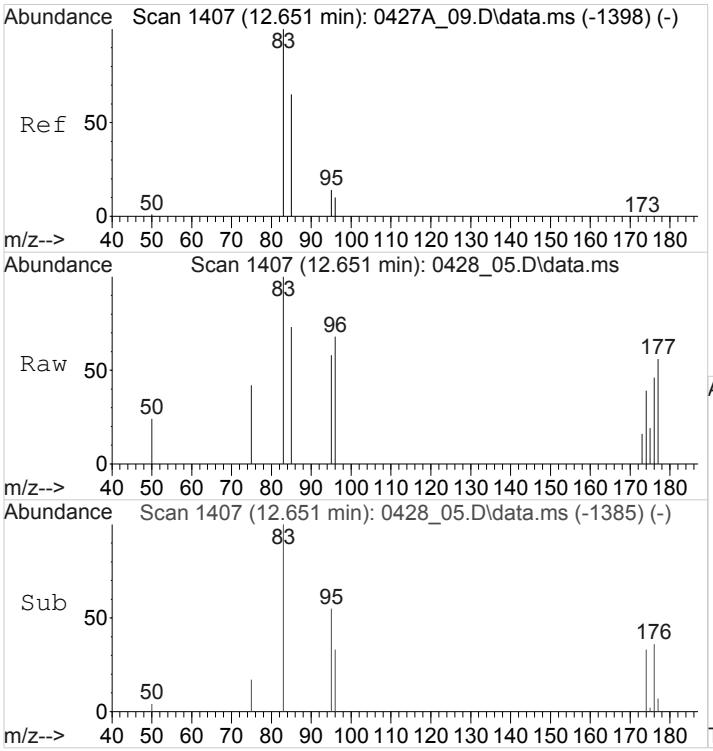


#24
Ethylbenzene
Concen: 1.2194090 ppbv
RT: 11.283 min Scan# 1240
Delta R.T. -0.000 min
Lab File: 0428_05.D
Acq: 28 Apr 2018 10:57 am

Tgt Ion: 91 Resp: 957

Ion	Ratio	Lower	Upper
91	100		
106	32.0	25.4	38.2

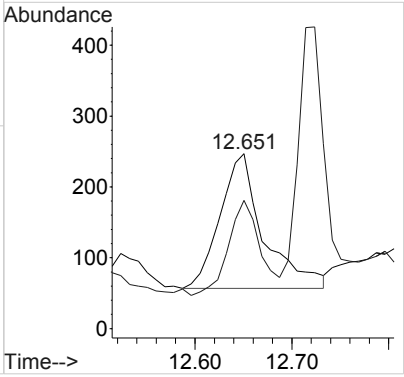


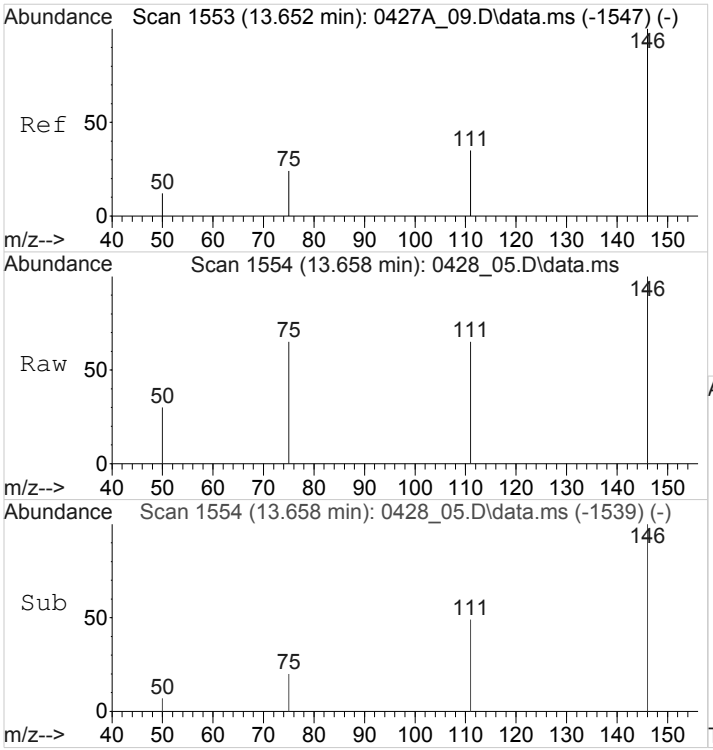


#25
1,1,2,2-Tetrachloroethane
Concen: 1.2656557 ppbv
RT: 12.651 min Scan# 1407
Delta R.T. -0.000 min
Lab File: 0428_05.D
Acq: 28 Apr 2018 10:57 am

Tgt Ion: 83 Resp: 594

Ion	Ratio	Lower	Upper
83	100		
85	51.5	51.6	77.4#

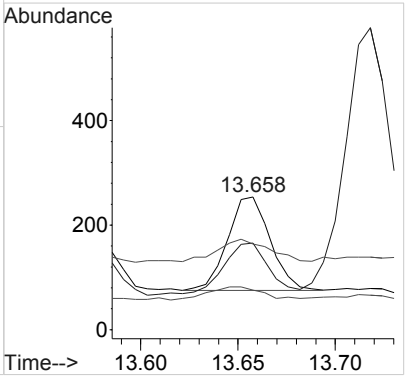




#27
1,4-Dichlorobenzene
Concen: 0.5245002 ppbv
RT: 13.658 min Scan# 1554
Delta R.T. 0.006 min
Lab File: 0428_05.D
Acq: 28 Apr 2018 10:57 am

Tgt Ion:146 Resp: 273

Ion	Ratio	Lower	Upper
146	100		
111	57.9	27.0	40.4#
75	0.0	18.8	28.2#
50	0.0	11.4	17.2#



1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
FC-2

ESC Sample ID:	L988669-02	**SDG:**	L988669
Client Sample ID:	FC-2	**Collected Date/Time:**	04/24/18 10:34
Lab File ID:	0427A_19	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/28/18 00:16
Analytical Batch:	WG1104091	**Analysis Date/Time:**	04/28/18 00:16
Dilution Factor:	1	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	**CAS**	**RT**	**Result**	**Qualifier**	**MDL**	**RDL**
			ppbv		*ppbv*	*ppbv*
Benzene	71-43-2	7.81	2.26		0.00541	0.0200
Carbon tetrachloride	56-23-5	7.60	0.0808		0.00575	0.0200
Chloroethane	75-00-3	4.63	0.0456		0.0159	0.0400
Chloroform	67-66-3	7.26	0.453		0.00464	0.0200
Chloromethane	74-87-3	3.93	0.218		0.00972	0.0300
1,2-Dibromoethane	106-93-4	0	ND		0.0185	0.0200
1,4-Dichlorobenzene	106-46-7	0	ND		0.00691	0.0200
1,1-Dichloroethane	75-34-3	6.50	0.892		0.00505	0.0200
1,2-Dichloroethane	107-06-2	0	ND		0.000471	0.0200
1,1-Dichloroethene	75-35-4	5.40	0.317		0.00521	0.0200
trans-1,2-Dichloroethene	156-60-5	6.08	0.470		0.00499	0.0200
1,2-Dichloropropane	78-87-5	8.67	0.0984		0.00840	0.0300
cis-1,3-Dichloropropene	10061-01-5	0	ND		0.00556	0.0200
trans-1,3-Dichloropropene	10061-02-6	0	ND		0.00853	0.0300
Ethylbenzene	100-41-4	11.29	0.654		0.00904	0.0300
1,1,2,2-Tetrachloroethane	79-34-5	12.63	ND		0.00481	0.0200
1,1,1-Trichloroethane	71-55-6	0	ND		0.00552	0.0200
1,1,2-Trichloroethane	79-00-5	0	ND		0.0287	0.0300
Vinyl chloride	75-01-4	4.08	2.36		0.00765	0.0200
Vinyl acetate	108-05-4	0	ND		0.00430	0.0200

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_19.D
Acq On : 28 Apr 2018 12:16 am
Operator : 564
Sample : L988669-02 1x WG1104091
Misc : 18C26426
ALS Vial : 19 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 10:04:40 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:33 2018
Response via : Initial Calibration

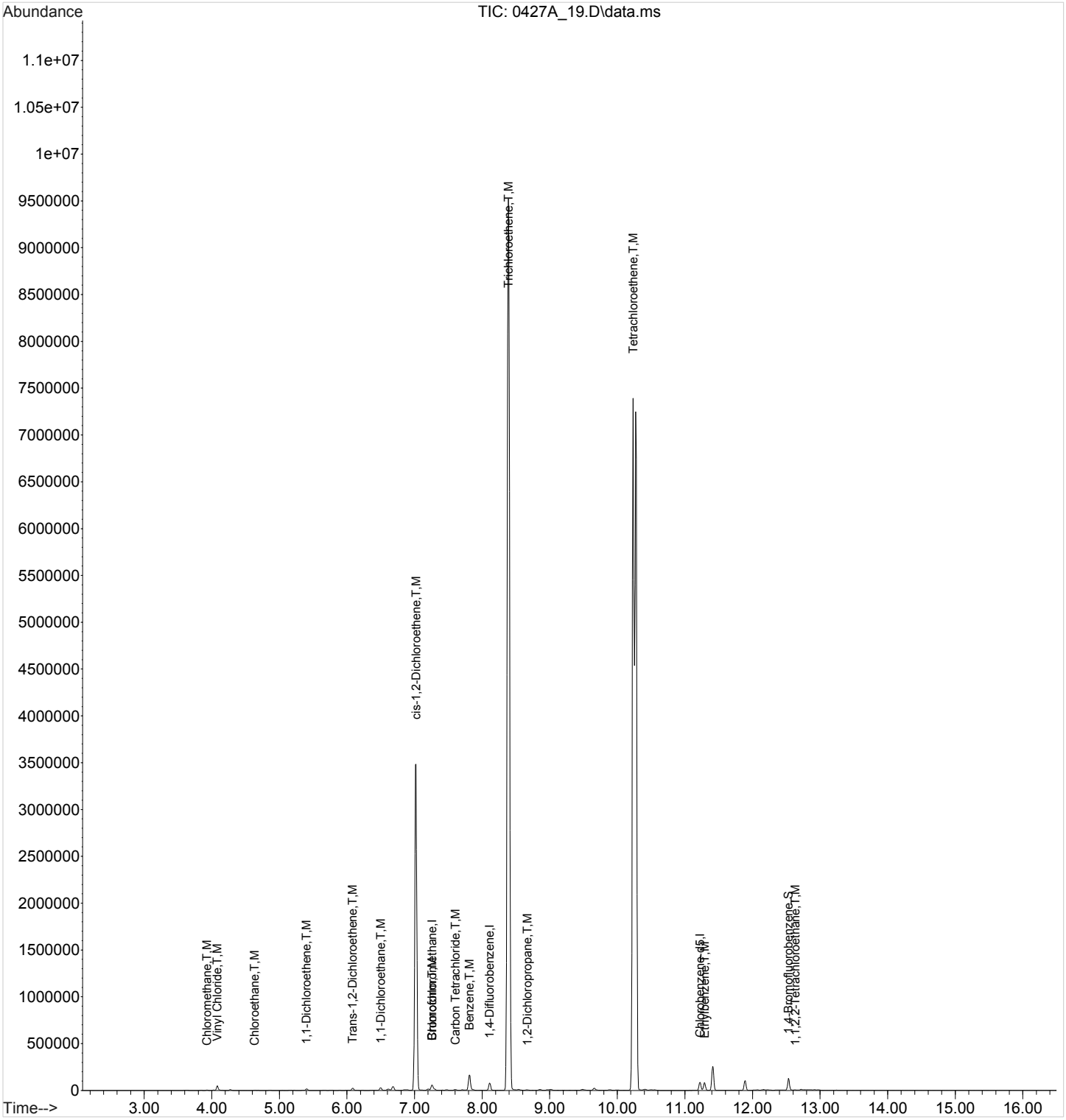
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.259	130	31993	1.2500000	ppbv	0.00
13) 1,4-Difluorobenzene	8.110	114	117842	1.2500000	ppbv	0.00
23) Chlorobenzene-d5	11.222	117	109155	1.2500000	ppbv	0.00
System Monitoring Compounds						
26) 1,4-Bromofluorobenzene	12.532	95	69554	1.3753519	ppbv	0.00
Spiked Amount 1.250	Range 60 - 140		Recovery = 110.03%			
Target Compounds						Qvalue
2) Chloromethane	3.928	50	4535	0.2175331	ppbv	100
3) Vinyl Chloride	4.079	62	62115	2.3630660	ppbv	100
4) Chloroethane	4.631	64	640	0.0456151	ppbv #	1
5) 1,1-Dichloroethene	5.400	61	12252	0.3167940	ppbv	99
6) Trans-1,2-Dichloroethene	6.084	61	16254	0.4701768	ppbv #	3
7) 1,1-Dichloroethane	6.499	63	45194	0.8920388	ppbv	100
8) Vinyl Acetate	0.000		0	N.D. d		
9) cis-1,2-Dichloroethene	7.022	96	2341131	65.9785616	ppbv	99
10) Chloroform	7.259	83	27884	0.4534209	ppbv #	1
11) 1,1,1-Trichloroethane	7.463	97	468	N.D.		
12) Carbon Tetrachloride	7.602	117	5329	0.0807669	ppbv	95
14) Benzene	7.809	78	248146	2.2640817	ppbv	99
15) 1,2-Dichloroethane	0.000		0	N.D. d		
16) Trichloroethene	8.387	95	7180978	149.3998447	ppbv	100
17) 1,2-Dichloropropane	8.666	63	3635	0.0984089	ppbv #	4
18) cis-1,3-Dichloropropene	9.331	75	150	N.D.		
19) trans-1,3-Dichloropropene	9.904	75	174	N.D.		
20) 1,1,2-Trichloroethane	0.000		0	N.D. d		
21) Tetrachloroethene	10.234	166	12596926m	160.2279680	ppbv	
22) 1,2-Dibromoethane	0.000		0	N.D. d		
24) Ethylbenzene	11.290	91	126123	0.6538066	ppbv	100
25) 1,1,2,2-Tetrachloroethane	12.632	83	1423	0.0123354	ppbv #	18
27) 1,4-Dichlorobenzene	0.000		0	N.D. d		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_19.D
Acq On : 28 Apr 2018 12:16 am
Operator : 564
Sample : L988669-02 1x WG1104091
Misc : 18C26426
ALS Vial : 19 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 10:04:40 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:33 2018
Response via : Initial Calibration

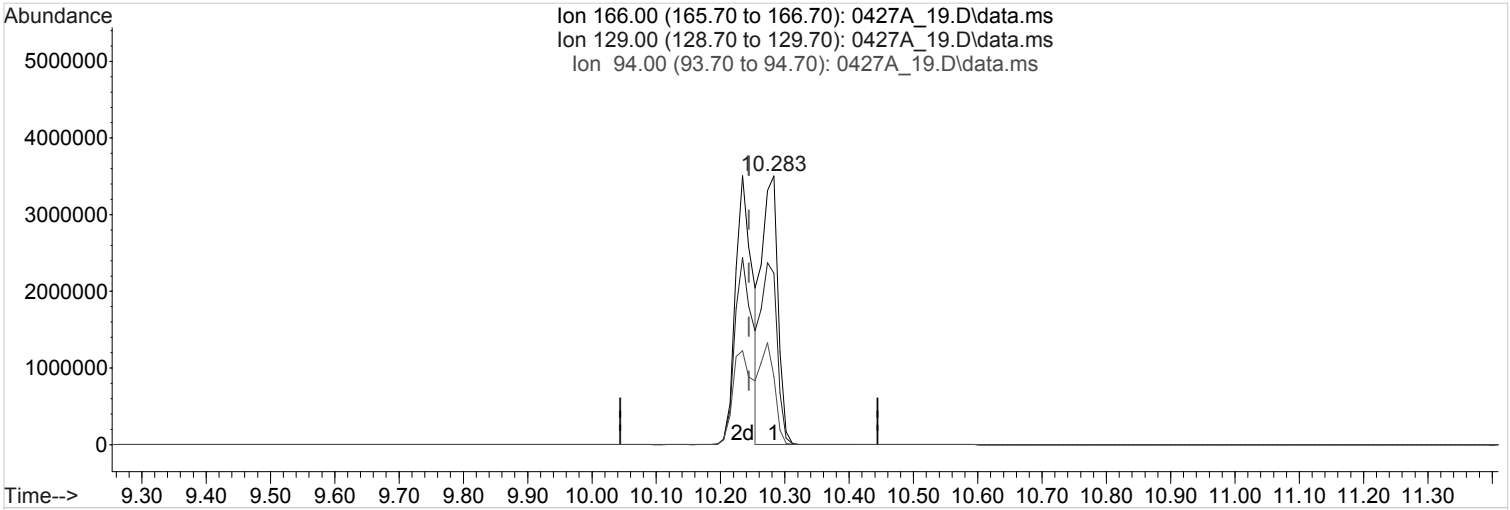


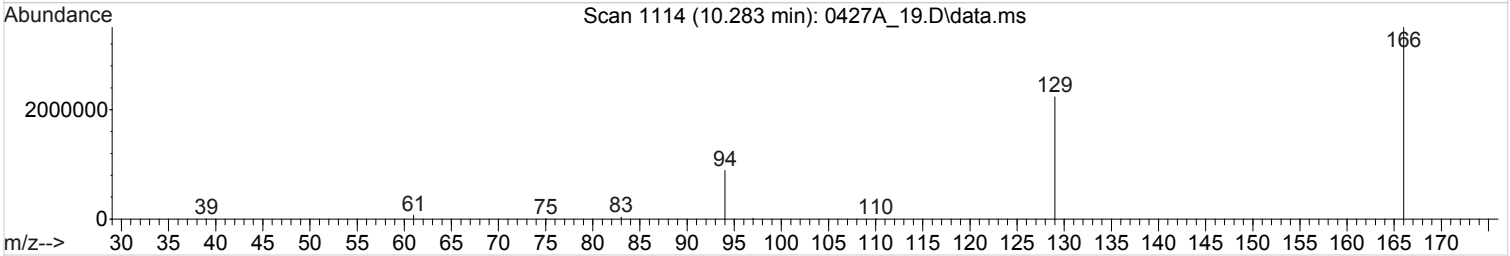
ACCOUNT:	PROJECT:	SDG:	DATE/TIME:	PAGE:
S&ME Inc. - Knoxville	4143-17-016	L988669	05/16/18 08:03	41 of 183

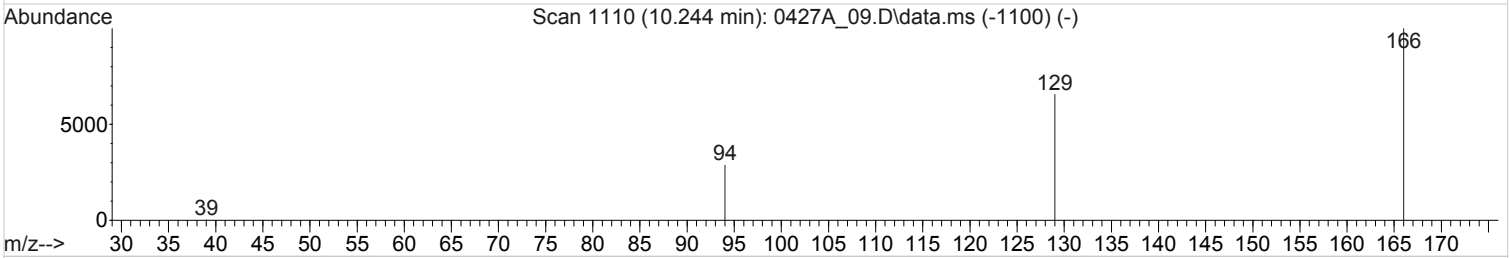
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_19.D
Acq On : 28 Apr 2018 12:16 am
Operator : 564
Sample : L988669-02 1x WG1104091
Misc : 18C26426
ALS Vial : 19 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 10:02:15 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:33 2018
Response via : Initial Calibration







TIC: 0427A_19.D\data.ms

(21) Tetrachloroethene (T,M)

10.283min (+0.039) 78.2640187 ppbv E

Qvalue = 99

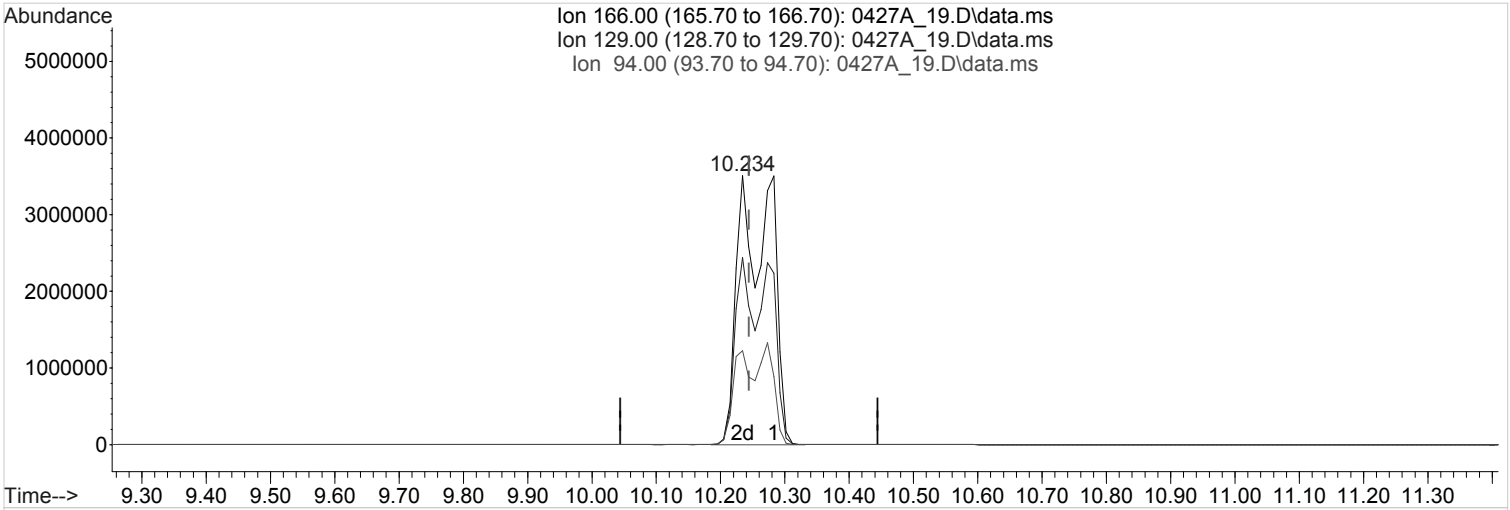
response 6153021 Limit = 0.0200000

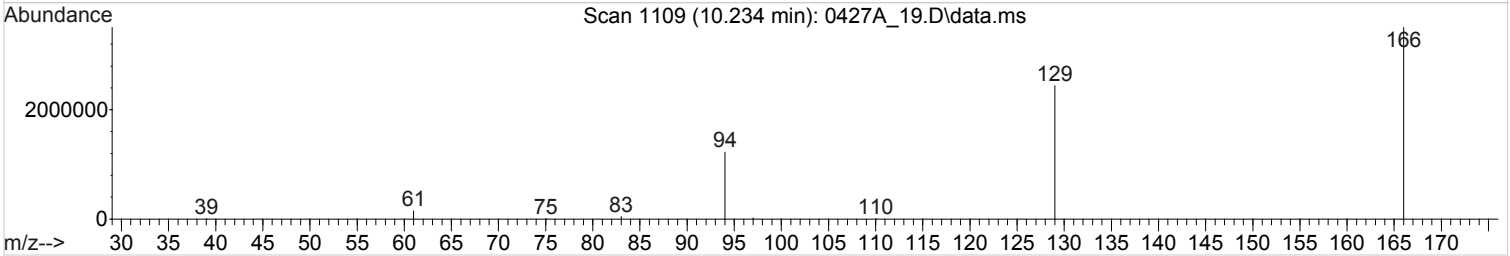
Ion	Exp%	Act%
166.00	100	100
129.00	66.90	67.67
94.00	32.70	33.12
0.00	0.00	0.00

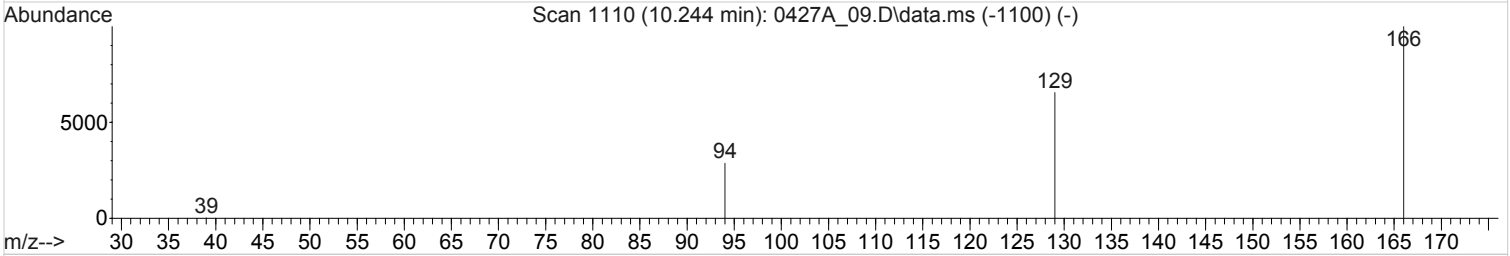
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_19.D
Acq On : 28 Apr 2018 12:16 am
Operator : 564
Sample : L988669-02 1x WG1104091
Misc : 18C26426
ALS Vial : 19 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 10:02:15 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:33 2018
Response via : Initial Calibration







TIC: 0427A_19.D\data.ms

(21) Tetrachloroethene (T,M)

10.234min (-0.010) 160.2279680 ppbv m E

response 12596926 Limit = 0.0200000

Ion	Exp%	Act%
166.00	100	100
129.00	66.90	33.05#
94.00	32.70	16.18#
0.00	0.00	0.00

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
FC-2

ESC Sample ID:	L988669-02	**SDG:**	L988669
Client Sample ID:	FC-2	**Collected Date/Time:**	04/24/18 10:34
Lab File ID:	0428_06	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/28/18 11:35
Analytical Batch:	WG1104397	**Analysis Date/Time:**	04/28/18 11:35
Dilution Factor:	80	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	5 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	**CAS**	**RT**	**Result**	**Qualifier**	**MDL**	**RDL**
			ppbv		*ppbv*	*ppbv*
cis-1,2-Dichloroethene	156-59-2	7.01	44.3		0.616	1.60
Tetrachloroethylene	127-18-4	10.23	431		0.366	1.60
Trichloroethylene	79-01-6	8.38	124		0.589	1.60

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042818\
Data File : 0428_06.D
Acq On : 28 Apr 2018 11:35 am
Operator : 564
Sample : L988669-02 80x WG1104397
Misc : 18C26426
ALS Vial : 6 Sample Multiplier: 80
InstName : AIRMS5

Quant Time: Apr 28 14:06:08 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:33 2018
Response via : Initial Calibration

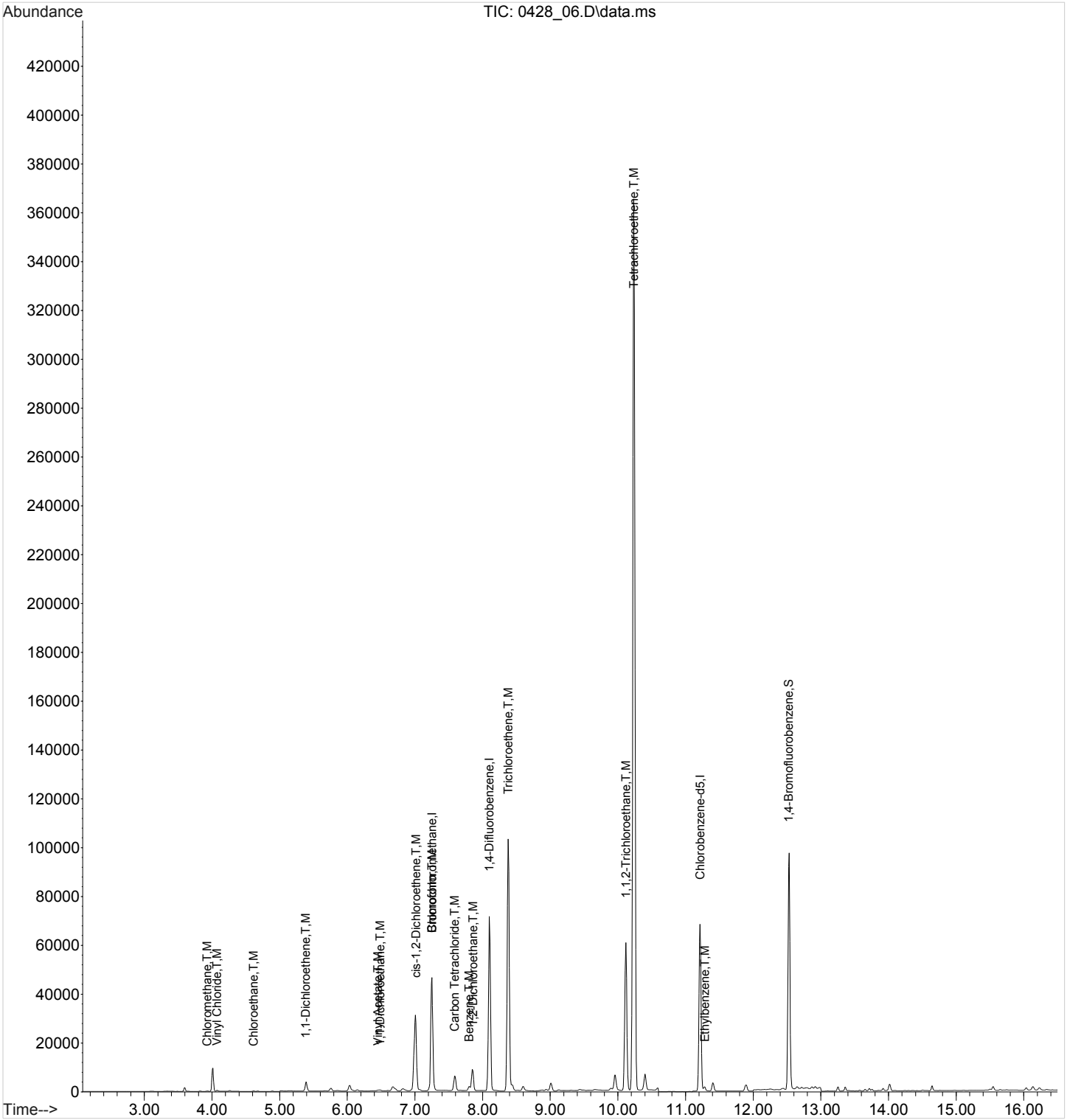
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.251	130	28808	1.2500000	ppbv	0.00
13) 1,4-Difluorobenzene	8.100	114	105387	1.2500000	ppbv	0.00
23) Chlorobenzene-d5	11.215	117	88408	1.2500000	ppbv	0.00
System Monitoring Compounds						
26) 1,4-Bromofluorobenzene	12.523	95	50965	1.2442734	ppbv	0.00
Spiked Amount 1.250	Range 60 - 140		Recovery = 99.54%			
Target Compounds						Qvalue
2) Chloromethane	3.928	50	217	0.9247826	ppbv #	41
3) Vinyl Chloride	4.073	62	509	1.7203982	ppbv	99
4) Chloroethane	4.614	64	294	1.8616923	ppbv #	1
5) 1,1-Dichloroethene	5.385	61	2830	6.5011204	ppbv	100
6) Trans-1,2-Dichloroethene	6.069	61	217	0.5576896	ppbv #	1
7) 1,1-Dichloroethane	6.484	63	595	1.0434023	ppbv #	66
8) Vinyl Acetate	6.454	43	729	1.0808435	ppbv #	67
9) cis-1,2-Dichloroethene	7.014	96	17696	44.3081974	ppbv	98
10) Chloroform	7.251	83	18659	26.9566977	ppbv	90
11) 1,1,1-Trichloroethane	0.000		0	N.D.		
12) Carbon Tetrachloride	7.586	117	6262	8.4320363	ppbv	97
14) Benzene	7.799	78	2743	2.2387916	ppbv #	21
15) 1,2-Dichloroethane	7.857	64	6795	51.0763219	ppbv #	98
16) Trichloroethene	8.378	95	66388	123.5546757	ppbv	99
17) 1,2-Dichloropropane	0.000		0	N.D.		
18) cis-1,3-Dichloropropene	0.000		0	N.D.		
19) trans-1,3-Dichloropropene	0.000		0	N.D.		
20) 1,1,2-Trichloroethane	10.118	97	54946	103.9141911	ppbv	100
21) Tetrachloroethene	10.234	166	378956	431.1869261	ppbv	100
22) 1,2-Dibromoethane	0.000		0	N.D.		
24) Ethylbenzene	11.283	91	2330	1.1930345	ppbv	100
25) 1,1,2,2-Tetrachloroethane	12.523	83	243	0.2080631	ppbv	97
27) 1,4-Dichlorobenzene	13.652	146	518	0.3999193	ppbv #	57

(#) = qualifier out of range (m) = manual integration (+) = signals summed

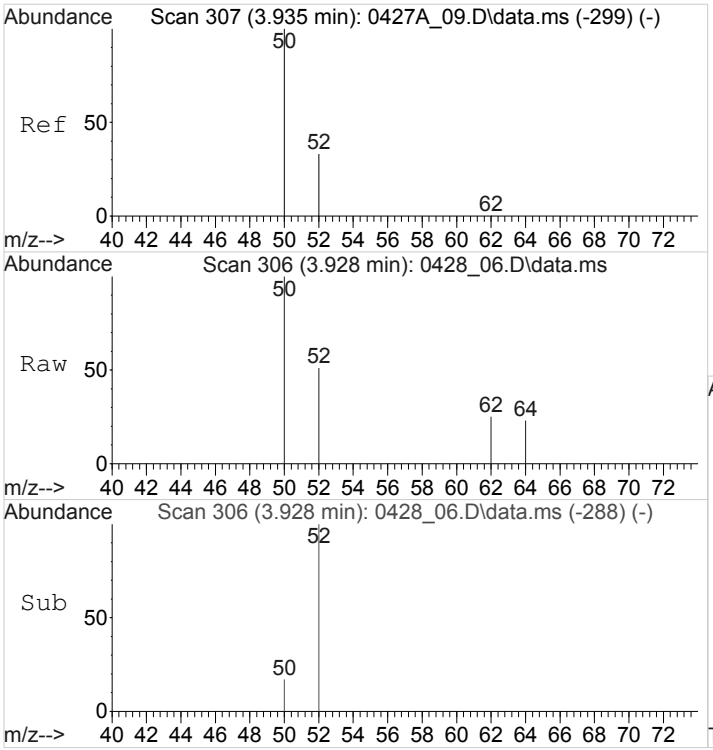
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042818\
Data File : 0428_06.D
Acq On : 28 Apr 2018 11:35 am
Operator : 564
Sample : L988669-02 80x WG1104397
Misc : 18C26426
ALS Vial : 6 Sample Multiplier: 80
InstName : AIRMS5

Quant Time: Apr 28 14:06:08 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:33 2018
Response via : Initial Calibration



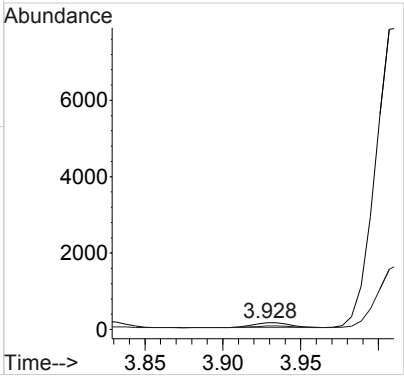
ACCOUNT:	PROJECT:	SDG:	DATE/TIME:	PAGE:
S&ME Inc. - Knoxville	4143-17-016	L988669	05/16/18 08:03	46 of 183

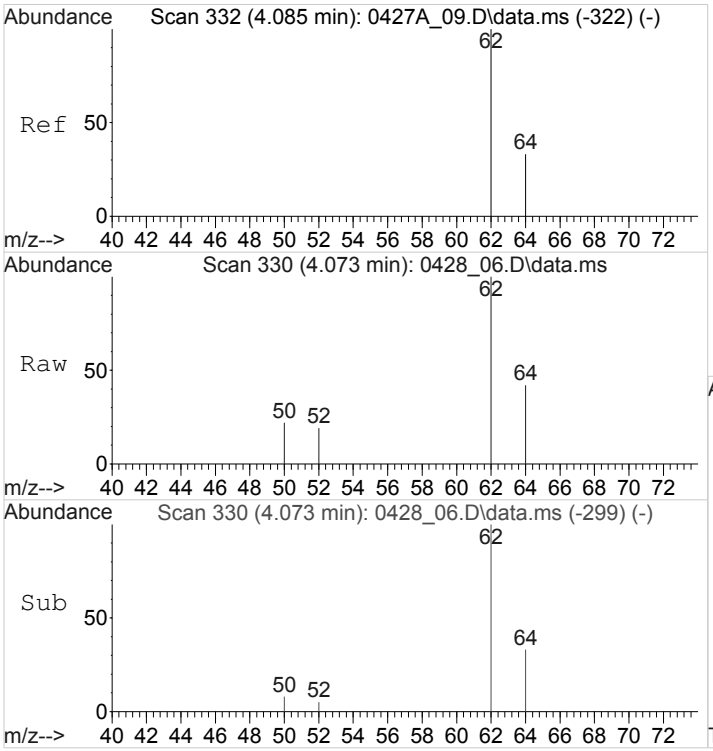


#2
Chloromethane
Concen: 0.9247826 ppbv
RT: 3.928 min Scan# 306
Delta R.T. -0.006 min
Lab File: 0428_06.D
Acq: 28 Apr 2018 11:35 am

Tgt Ion: 50 Resp: 217

Ion	Ratio	Lower	Upper
50	100		
52	0.0	26.6	40.0#

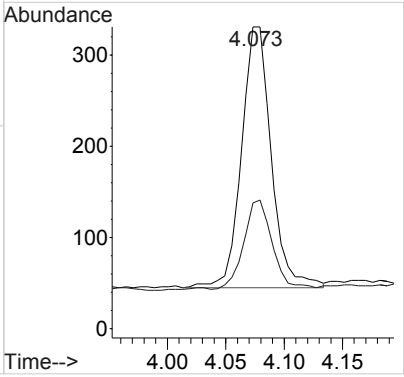


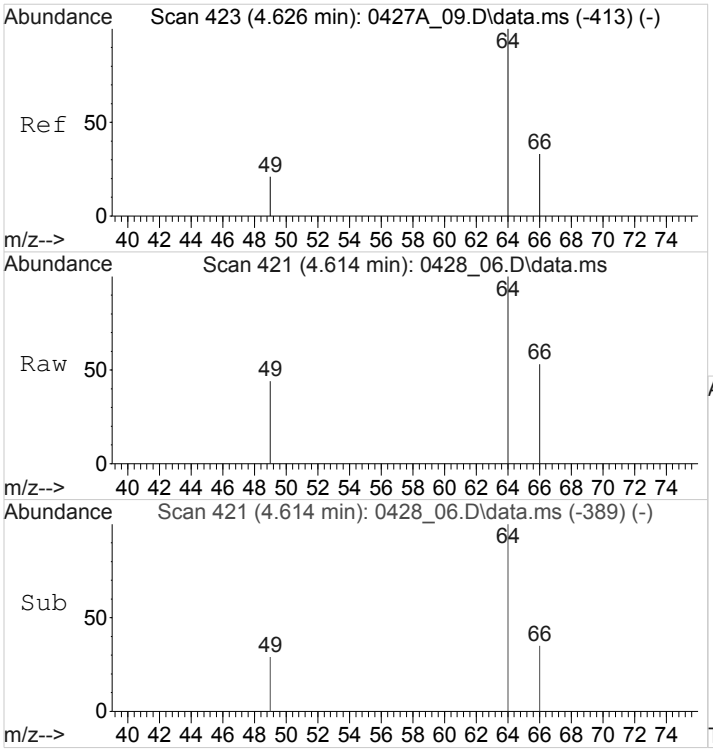


#3
Vinyl Chloride
Concen: 1.7203982 ppbv
RT: 4.073 min Scan# 330
Delta R.T. -0.012 min
Lab File: 0428_06.D
Acq: 28 Apr 2018 11:35 am

Tgt Ion: 62 Resp: 509

Ion	Ratio	Lower	Upper
62	100		
64	33.0	26.1	39.1

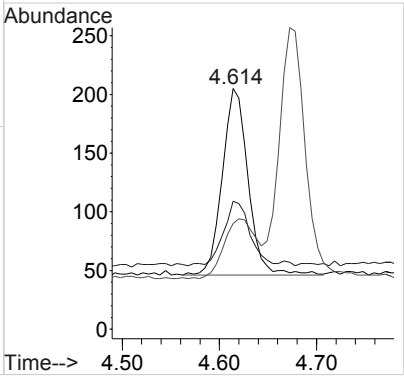


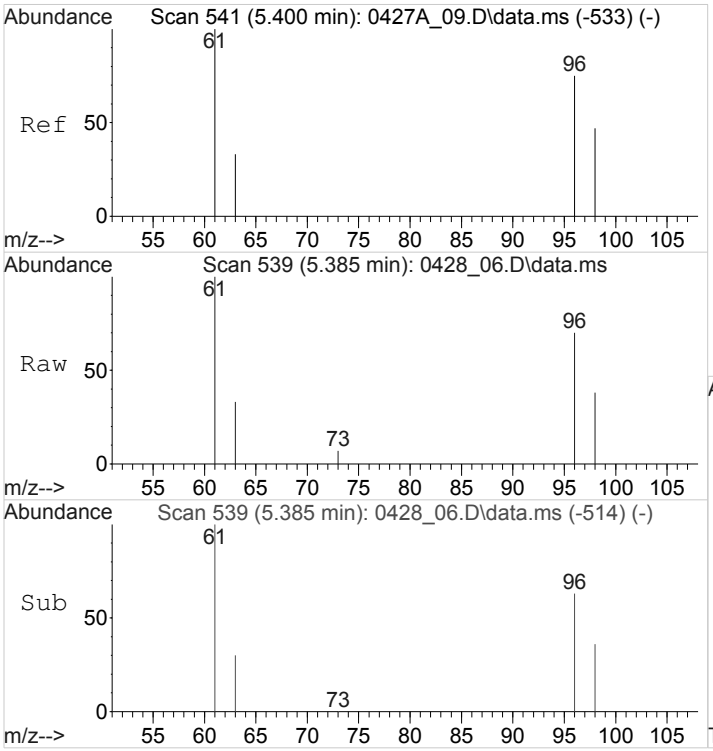


#4
Chloroethane
Concen: 1.8616923 ppbv
RT: 4.614 min Scan# 421
Delta R.T. -0.012 min
Lab File: 0428_06.D
Acq: 28 Apr 2018 11:35 am

Tgt Ion: 64 Resp: 294

Ion	Ratio	Lower	Upper
64	100		
66	0.0	25.8	38.6#
49	133.3	17.3	25.9#

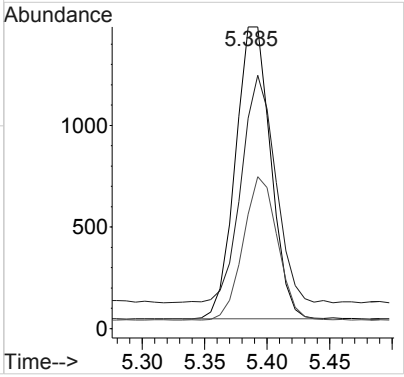


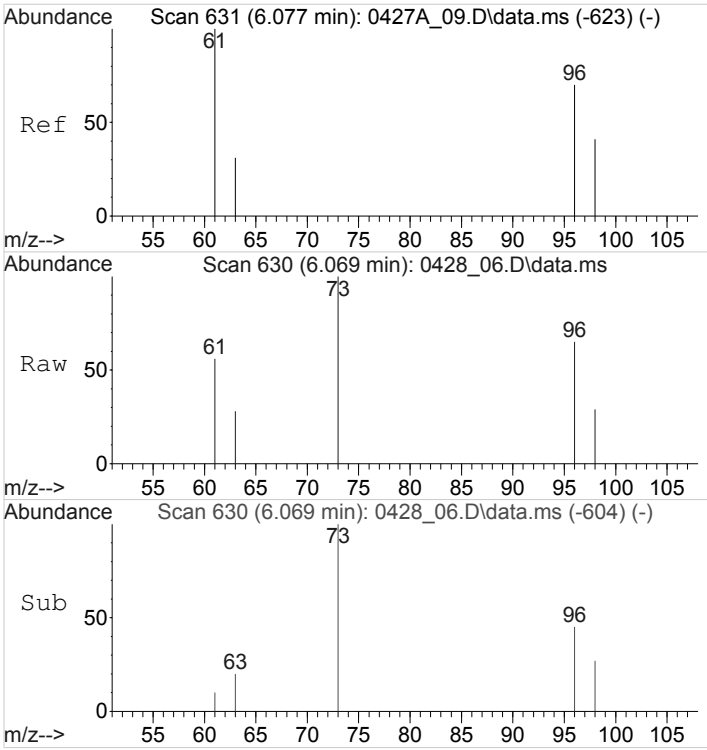


#5
1,1-Dichloroethene
Concen: 6.5011204 ppbv
RT: 5.385 min Scan# 539
Delta R.T. -0.015 min
Lab File: 0428_06.D
Acq: 28 Apr 2018 11:35 am

Tgt Ion: 61 Resp: 2830

Ion	Ratio	Lower	Upper
61	100		
96	75.4	59.8	89.6
98	47.9	38.3	57.5

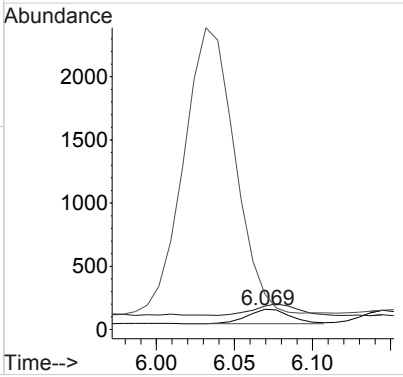


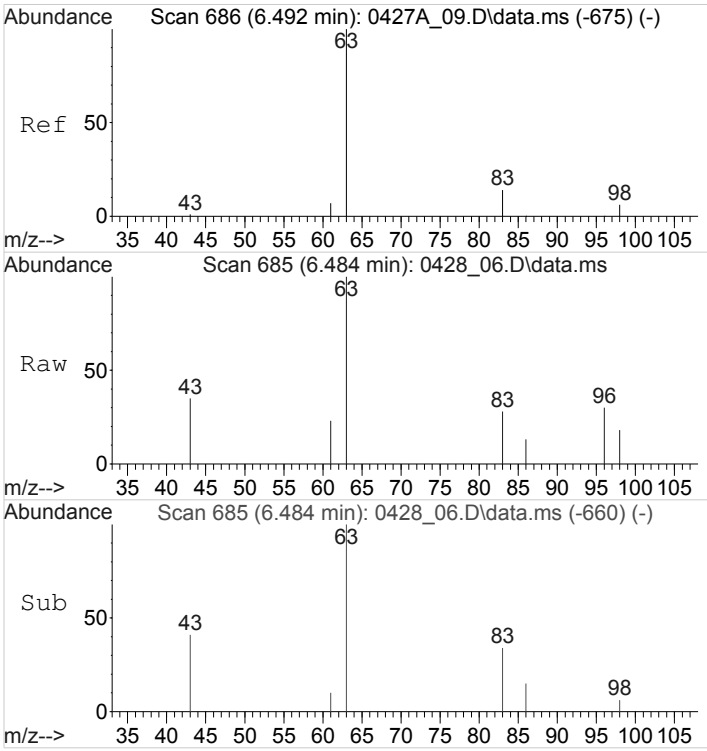


#6
Trans-1,2-Dichloroethene
Concen: 0.5576896 ppbv
RT: 6.069 min Scan# 630
Delta R.T. -0.008 min
Lab File: 0428_06.D
Acq: 28 Apr 2018 11:35 am

Tgt Ion: 61 Resp: 217

Ion	Ratio	Lower	Upper
61	100		
96	77.0	66.0	99.0
73	2379.7	184.9	277.3#

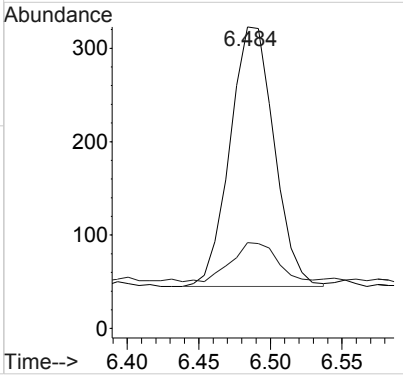


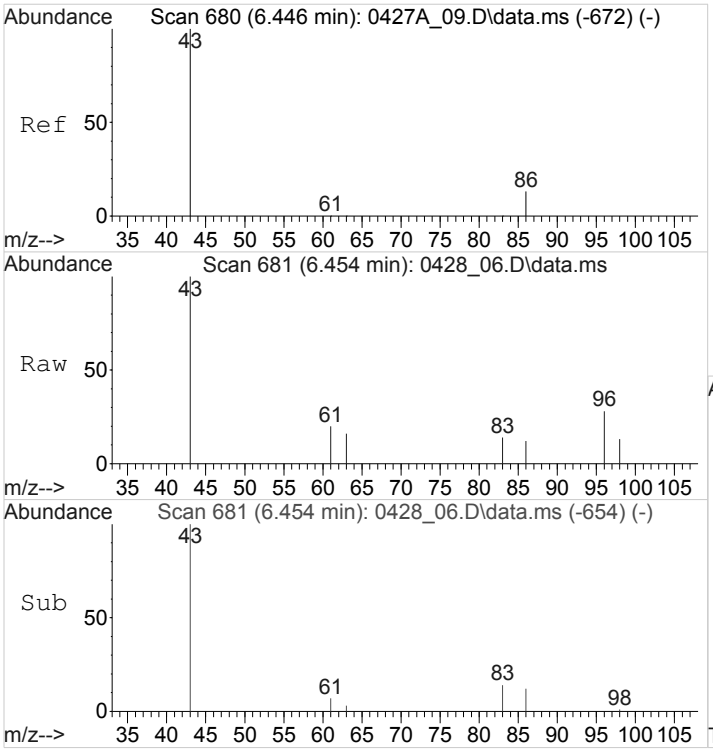


#7
1,1-Dichloroethane
Concen: 1.0434023 ppbv
RT: 6.484 min Scan# 685
Delta R.T. -0.008 min
Lab File: 0428_06.D
Acq: 28 Apr 2018 11:35 am

Tgt Ion: 63 Resp: 595

Ion	Ratio	Lower	Upper
63	100		
83	0.0	11.2	16.8#

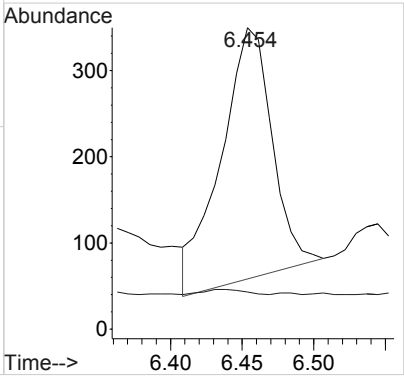


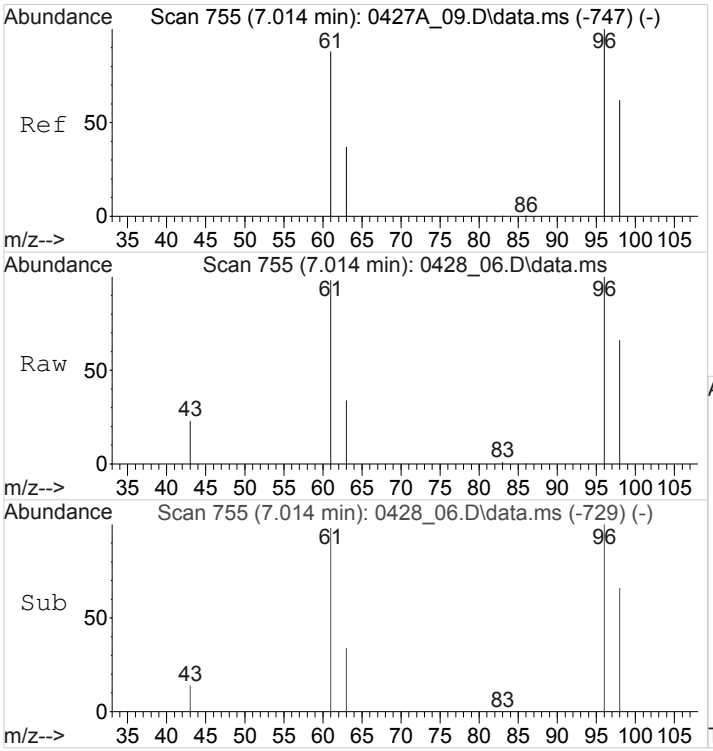


#8
Vinyl Acetate
Concen: 1.0808435 ppbv
RT: 6.454 min Scan# 681
Delta R.T. 0.007 min
Lab File: 0428_06.D
Acq: 28 Apr 2018 11:35 am

Tgt Ion: 43 Resp: 729

Ion	Ratio	Lower	Upper
43	100		
86	0.0	10.7	16.1#

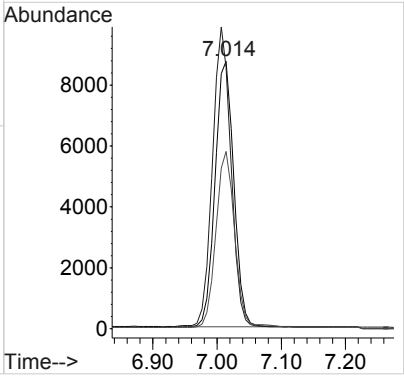


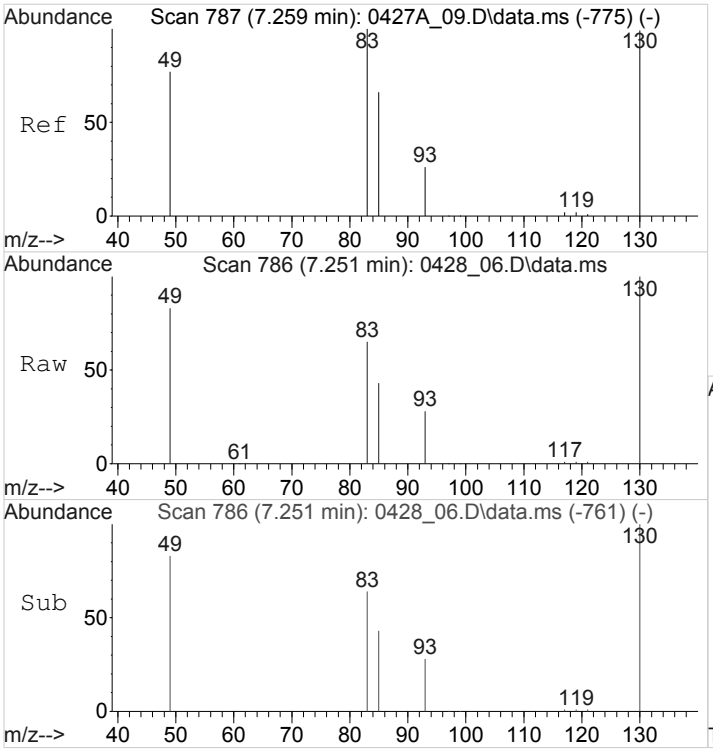


#9
cis-1,2-Dichloroethene
Concen: 44.3081974 ppbv
RT: 7.014 min Scan# 755
Delta R.T. -0.000 min
Lab File: 0428_06.D
Acq: 28 Apr 2018 11:35 am

Tgt Ion: 96 Resp: 17696

Ion	Ratio	Lower	Upper
96	100		
61	111.9	87.5	131.3
98	66.3	51.4	77.2

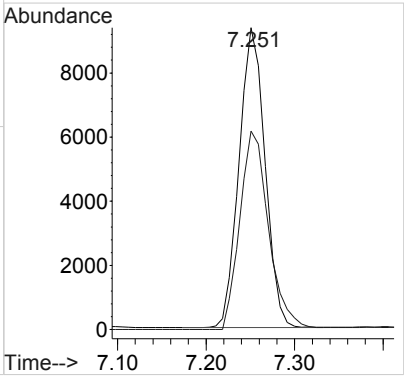


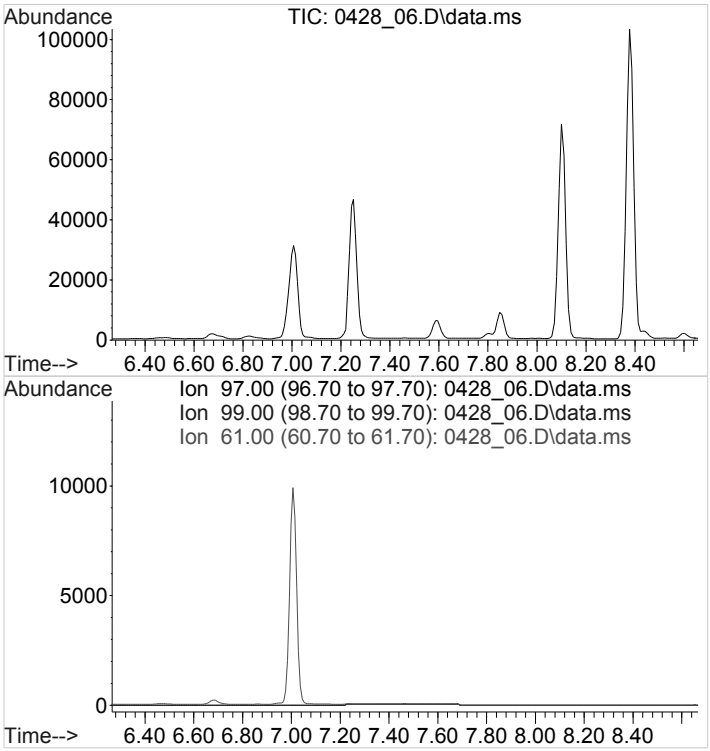


#10
Chloroform
Concen: 26.9566977 ppbv
RT: 7.251 min Scan# 786
Delta R.T. -0.008 min
Lab File: 0428_06.D
Acq: 28 Apr 2018 11:35 am

Tgt Ion: 83 Resp: 18659

Ion	Ratio	Lower	Upper
83	100		
85	75.3	54.0	81.0



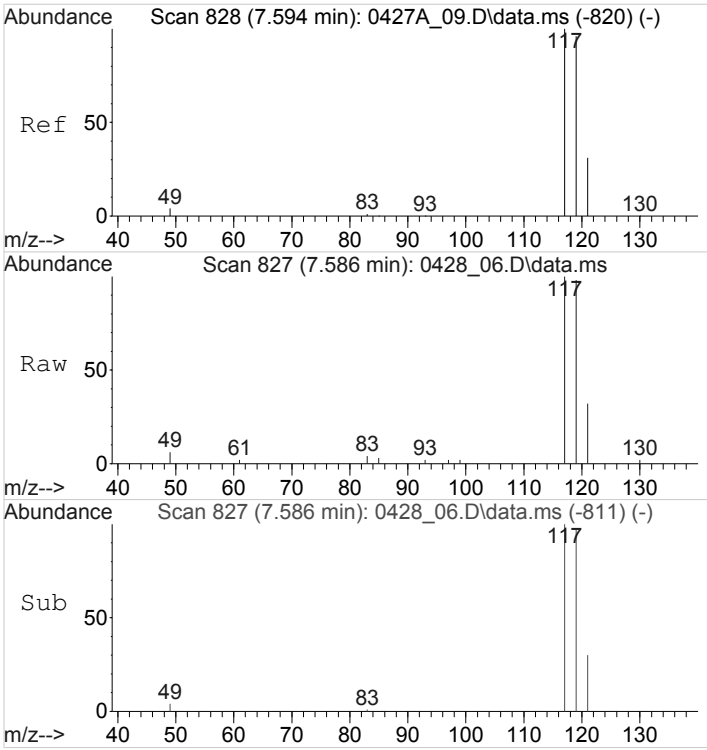


#11
1,1,1-Trichloroethane
Concen: N.D.
Expected RT: 7.46 min

Lab File: 0428_06.D
Acq: 28 Apr 2018 11:35 am

Tgt Ion: 97

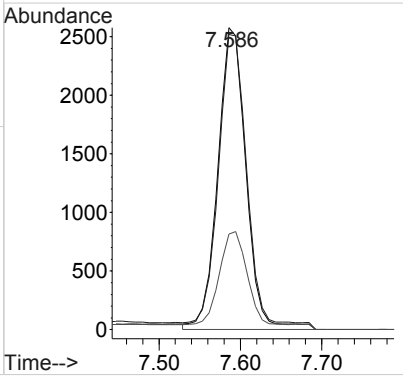
Sig	Exp Ratio
97	100
99	64.8
61	35.9

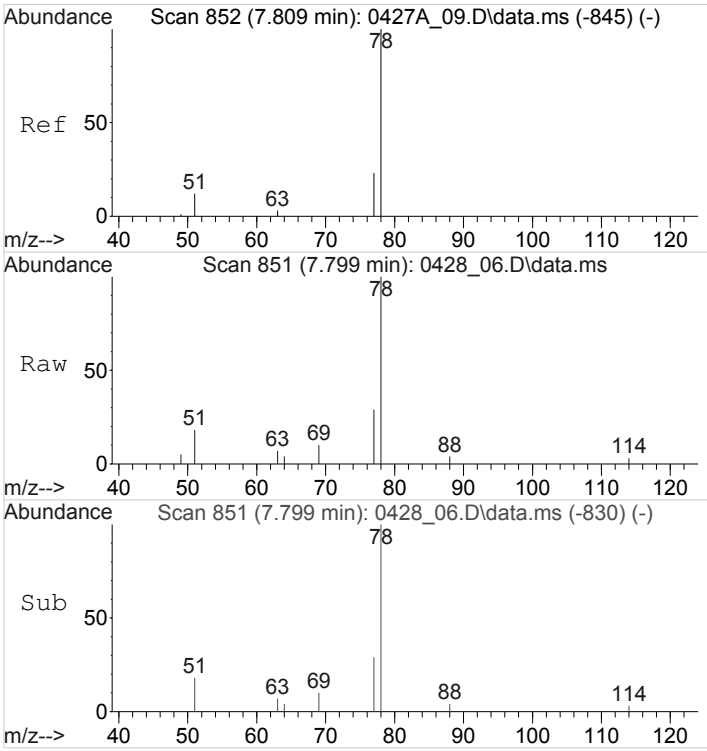


#12
Carbon Tetrachloride
Concen: 8.4320363 ppbv
RT: 7.586 min Scan# 827
Delta R.T. -0.008 min
Lab File: 0428_06.D
Acq: 28 Apr 2018 11:35 am

Tgt Ion:117 Resp: 6262

Ion	Ratio	Lower	Upper
117	100		
119	100.4	77.9	116.9
121	29.3	25.4	38.0

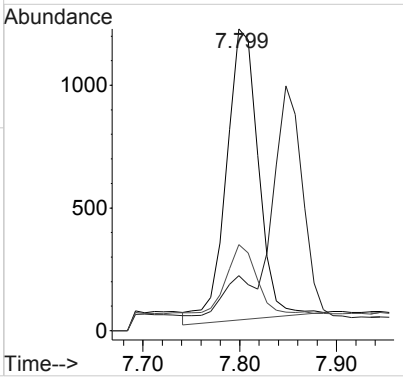


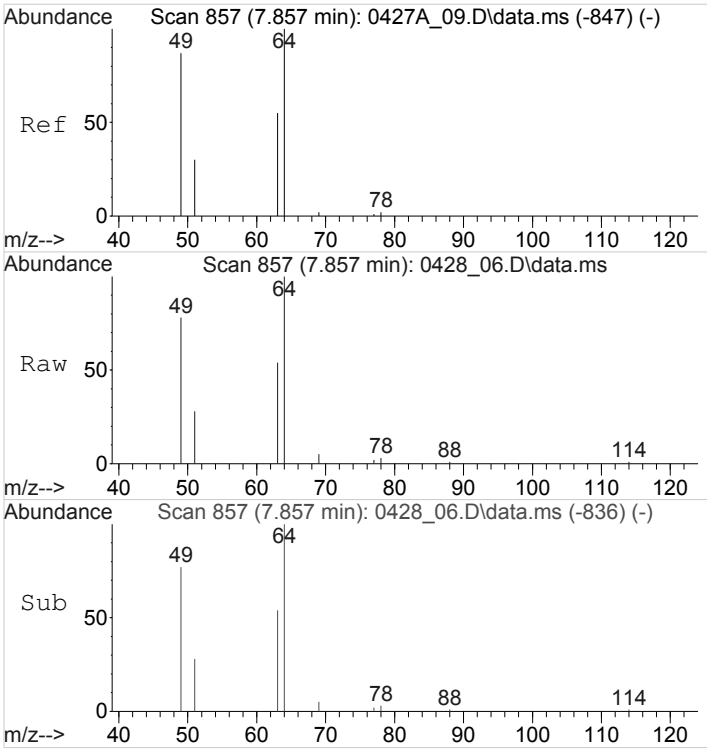


#14
Benzene
Concen: 2.2387916 ppbv
RT: 7.799 min Scan# 851
Delta R.T. -0.010 min
Lab File: 0428_06.D
Acq: 28 Apr 2018 11:35 am

Tgt Ion: 78 Resp: 2743

Ion	Ratio	Lower	Upper
78	100		
51	91.5	10.9	16.3#
77	29.9	18.8	28.2#

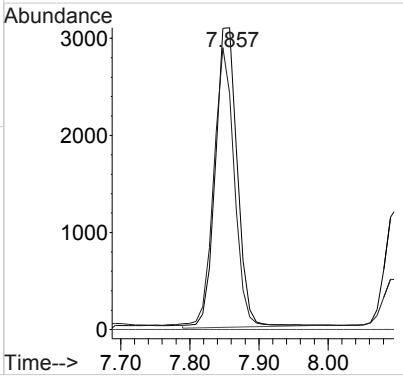


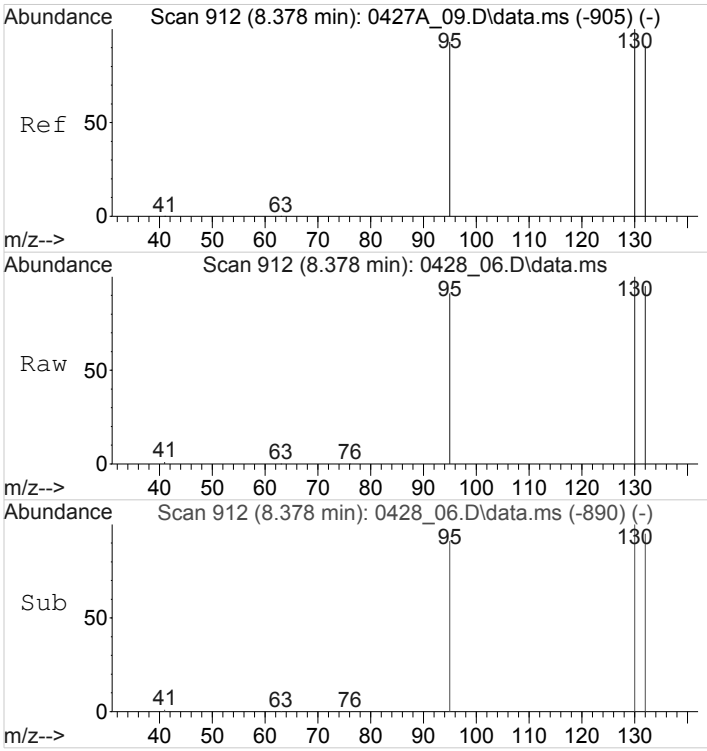


#15
1,2-Dichloroethane
Concen: 51.0763219 ppbv
RT: 7.857 min Scan# 857
Delta R.T. -0.000 min
Lab File: 0428_06.D
Acq: 28 Apr 2018 11:35 am

Tgt Ion: 64 Resp: 6795

Ion	Ratio	Lower	Upper
64	100		
49	85.8	67.0	100.6
62	0.0	0.0	0.0

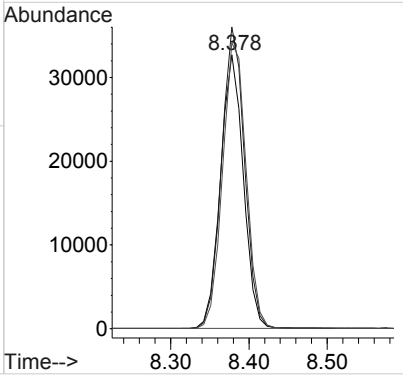


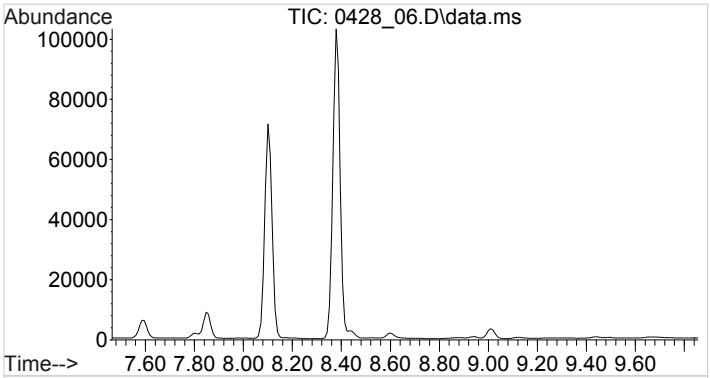


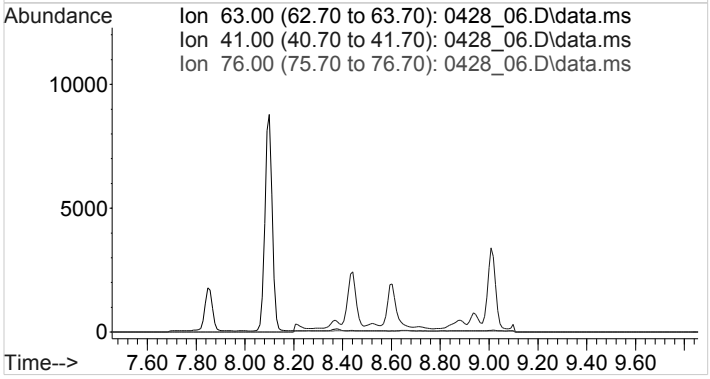
#16
Trichloroethene
Concen: 123.5546757 ppbv
RT: 8.378 min Scan# 912
Delta R.T. -0.000 min
Lab File: 0428_06.D
Acq: 28 Apr 2018 11:35 am

Tgt Ion: 95 Resp: 66388

Ion	Ratio	Lower	Upper
95	100		
130	111.0	89.5	134.3
132	108.0	86.7	130.1





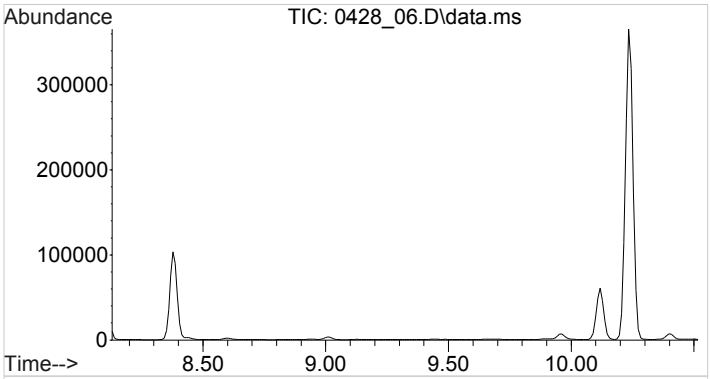


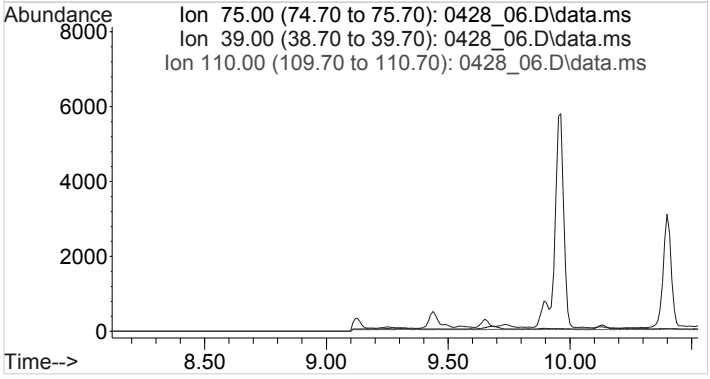
#17
1,2-Dichloropropane
Concen: N.D.
Expected RT: 8.66 min

Lab File: 0428_06.D
Acq: 28 Apr 2018 11:35 am

Tgt Ion: 63

Sig	Exp Ratio
63	100
41	27.9
76	38.3



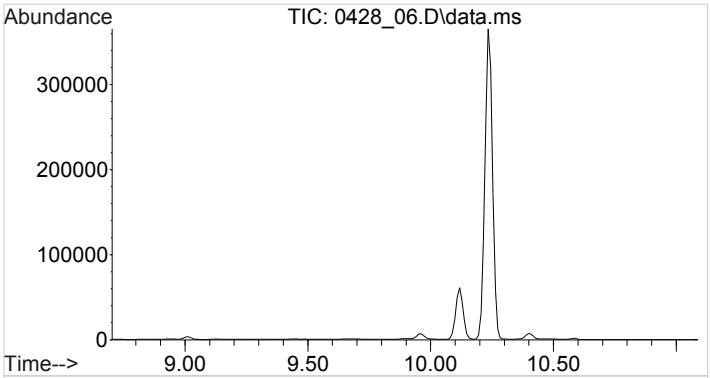


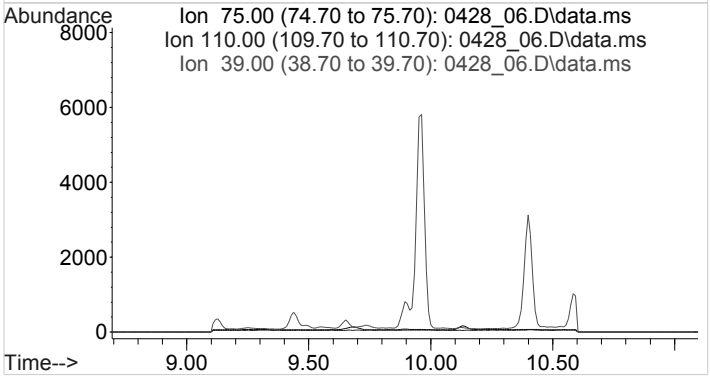
#18
cis-1,3-Dichloropropene
Concen: N.D.
Expected RT: 9.32 min

Lab File: 0428_06.D
Acq: 28 Apr 2018 11:35 am

Tgt Ion: 75

Sig	Exp Ratio
75	100
39	30.7
110	26.0



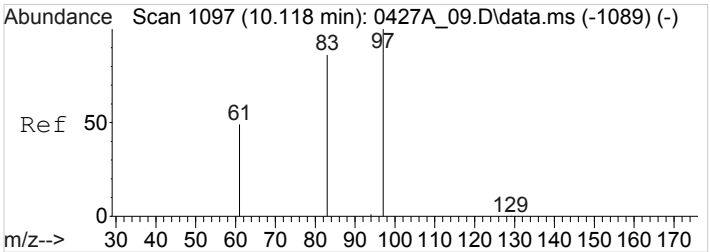


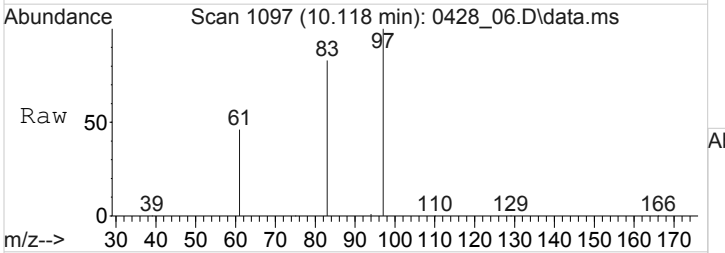
#19
trans-1,3-Dichloropropene
Concen: N.D.
Expected RT: 9.89 min

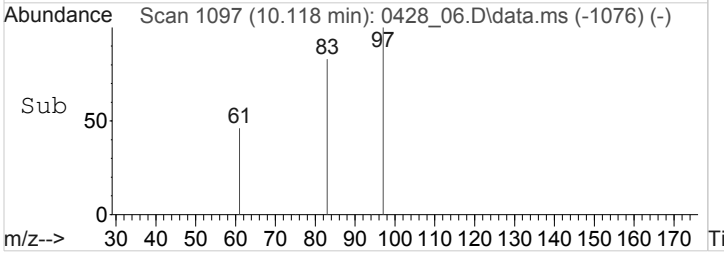
Lab File: 0428_06.D
Acq: 28 Apr 2018 11:35 am

Tgt Ion: 75

Sig	Exp Ratio
75	100
110	29.4
39	30.7



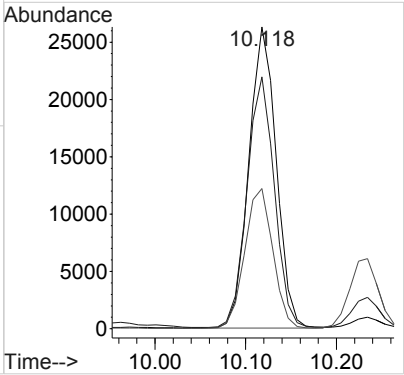


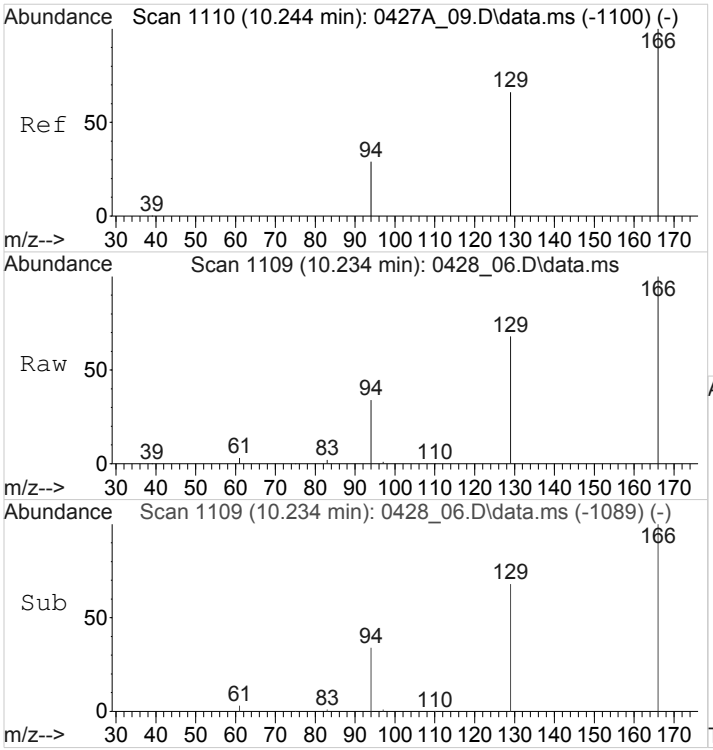


#20
1,1,2-Trichloroethane
Concen: 103.9141911 ppbv
RT: 10.118 min Scan# 1097
Delta R.T. -0.000 min
Lab File: 0428_06.D
Acq: 28 Apr 2018 11:35 am

Tgt Ion: 97 Resp: 54946

Ion	Ratio	Lower	Upper
97	100		
83	83.1	66.2	99.4
61	47.6	38.0	57.0

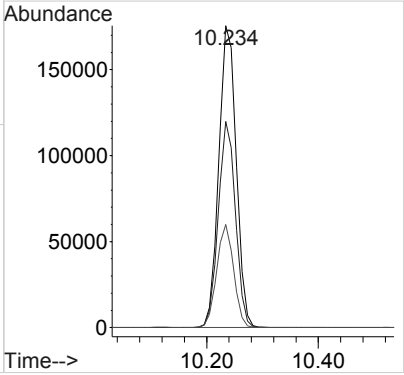


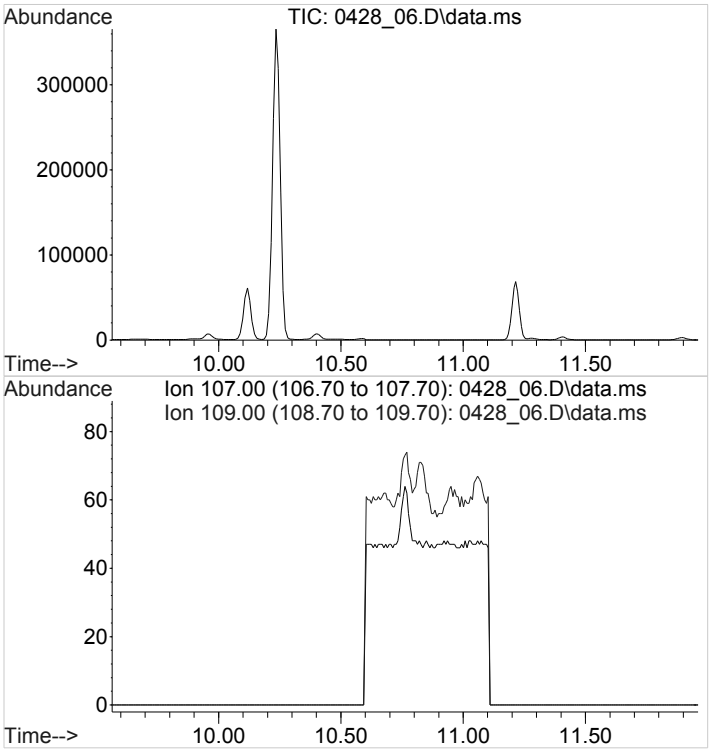


#21
Tetrachloroethene
Concen: 431.1869261 ppbv
RT: 10.234 min Scan# 1109
Delta R.T. -0.010 min
Lab File: 0428_06.D
Acq: 28 Apr 2018 11:35 am

Tgt Ion:166 Resp: 378956

Ion	Ratio	Lower	Upper
166	100		
129	67.2	53.5	80.3
94	33.2	26.2	39.2



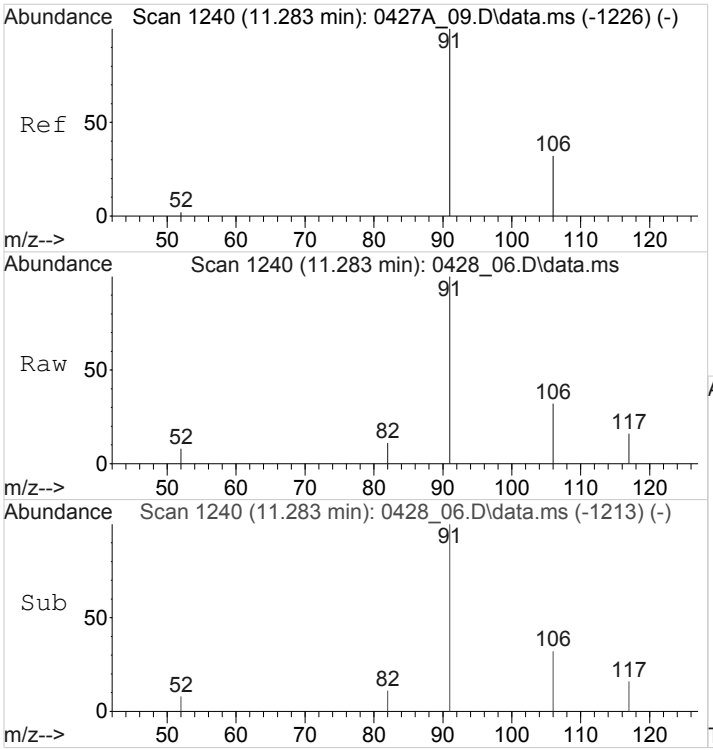


#22
1,2-Dibromoethane
Concen: N.D.
Expected RT: 10.76 min

Lab File: 0428_06.D
Acq: 28 Apr 2018 11:35 am

Tgt Ion: 107

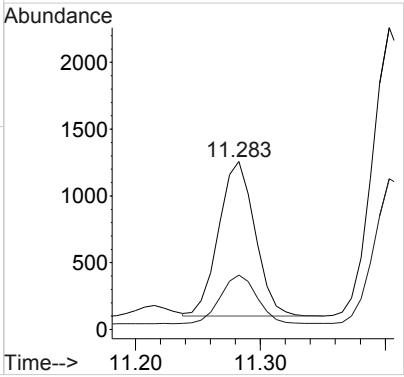
Sig	Exp Ratio
107	100
109	94.9

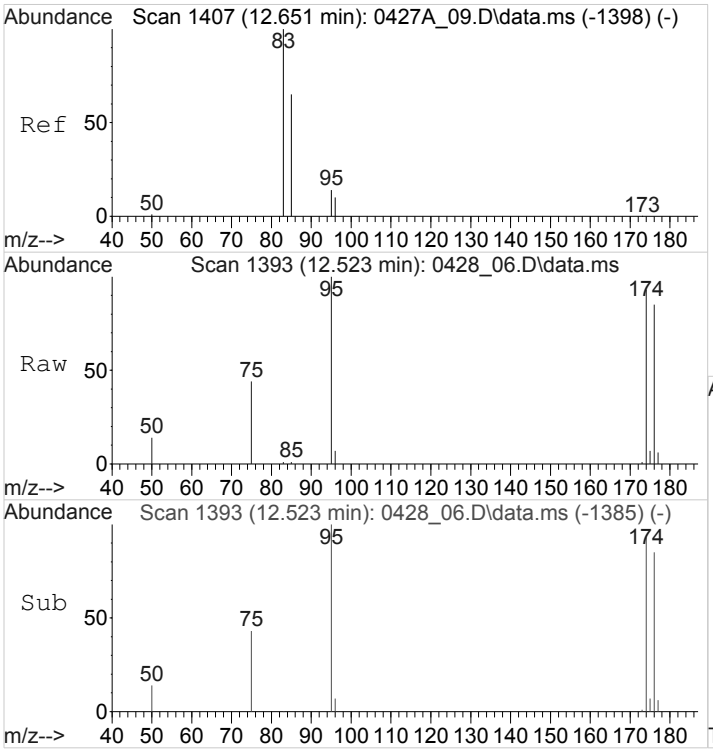


#24
Ethylbenzene
Concen: 1.1930345 ppbv
RT: 11.283 min Scan# 1240
Delta R.T. -0.000 min
Lab File: 0428_06.D
Acq: 28 Apr 2018 11:35 am

Tgt Ion: 91 Resp: 2330

Ion	Ratio	Lower	Upper
91	100		
106	31.8	25.4	38.2

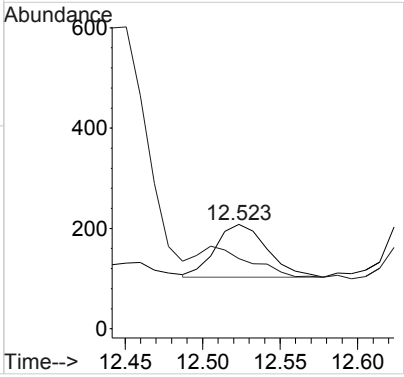


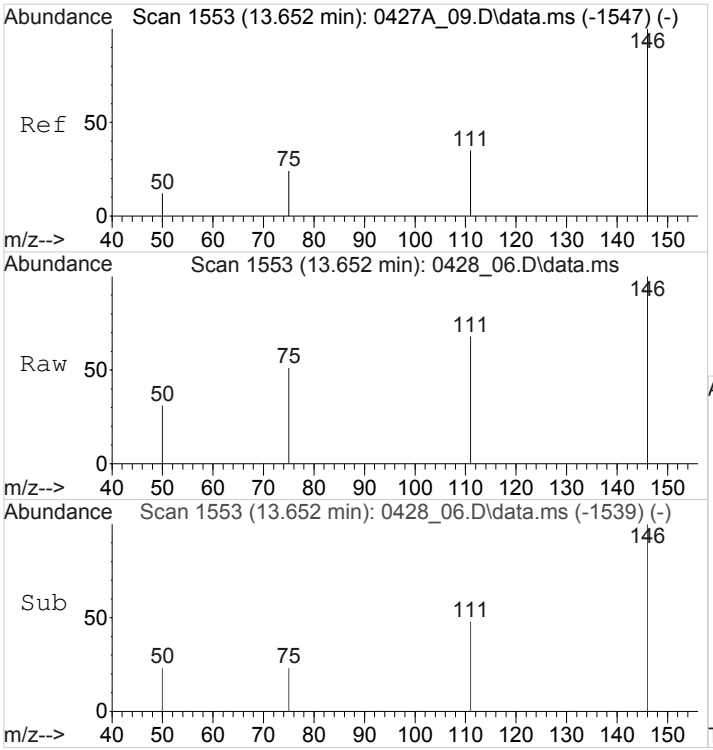


#25
1,1,2,2-Tetrachloroethane
Concen: 0.2080631 ppbv
RT: 12.523 min Scan# 1393
Delta R.T. -0.127 min
Lab File: 0428_06.D
Acq: 28 Apr 2018 11:35 am

Tgt Ion: 83 Resp: 243

Ion	Ratio	Lower	Upper
83	100		
85	67.1	51.6	77.4

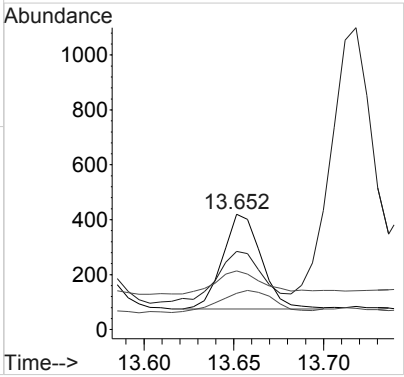




#27
1,4-Dichlorobenzene
Concen: 0.3999193 ppbv
RT: 13.652 min Scan# 1553
Delta R.T. -0.000 min
Lab File: 0428_06.D
Acq: 28 Apr 2018 11:35 am

Tgt Ion:146 Resp: 518

Ion	Ratio	Lower	Upper
146	100		
111	66.0	27.0	40.4#
75	33.6	18.8	28.2#
50	34.0	11.4	17.2#



1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
FC-3

ESC Sample ID:	L988669-03	**SDG:**	L988669
Client Sample ID:	FC-3	**Collected Date/Time:**	04/24/18 11:37
Lab File ID:	0427A_20	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/28/18 01:00
Analytical Batch:	WG1104091	**Analysis Date/Time:**	04/28/18 01:00
Dilution Factor:	1	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	**CAS**	**RT**	**Result**	**Qualifier**	**MDL**	**RDL**
			ppbv		*ppbv*	*ppbv*
Benzene	71-43-2	7.81	3.13		0.00541	0.0200
Carbon tetrachloride	56-23-5	7.59	0.0786		0.00575	0.0200
Chloroethane	75-00-3	0	ND		0.0159	0.0400
Chloroform	67-66-3	7.26	0.0585		0.00464	0.0200
Chloromethane	74-87-3	3.92	0.449		0.00972	0.0300
1,2-Dibromoethane	106-93-4	0	ND		0.0185	0.0200
1,4-Dichlorobenzene	106-46-7	0	ND		0.00691	0.0200
1,1-Dichloroethane	75-34-3	6.49	ND		0.00505	0.0200
1,2-Dichloroethane	107-06-2	0	ND		0.000471	0.0200
1,1-Dichloroethene	75-35-4	0	ND		0.00521	0.0200
cis-1,2-Dichloroethene	156-59-2	7.01	1.69		0.00770	0.0200
trans-1,2-Dichloroethene	156-60-5	6.08	0.0680		0.00499	0.0200
1,2-Dichloropropane	78-87-5	0	ND		0.00840	0.0300
cis-1,3-Dichloropropene	10061-01-5	0	ND		0.00556	0.0200
trans-1,3-Dichloropropene	10061-02-6	0	ND		0.00853	0.0300
Ethylbenzene	100-41-4	11.28	1.19		0.00904	0.0300
1,1,2,2-Tetrachloroethane	79-34-5	12.62	ND		0.00481	0.0200
1,1,1-Trichloroethane	71-55-6	7.46	ND		0.00552	0.0200
1,1,2-Trichloroethane	79-00-5	10.10	ND		0.0287	0.0300
Trichloroethylene	79-01-6	8.38	8.75		0.00736	0.0200
Vinyl chloride	75-01-4	4.08	ND		0.00765	0.0200
Vinyl acetate	108-05-4	0	ND		0.00430	0.0200

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_20.D
Acq On : 28 Apr 2018 1:00 am
Operator : 564
Sample : L988669-03 1x WG1104091
Misc : 18C26426
ALS Vial : 20 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 10:05:13 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:33 2018
Response via : Initial Calibration

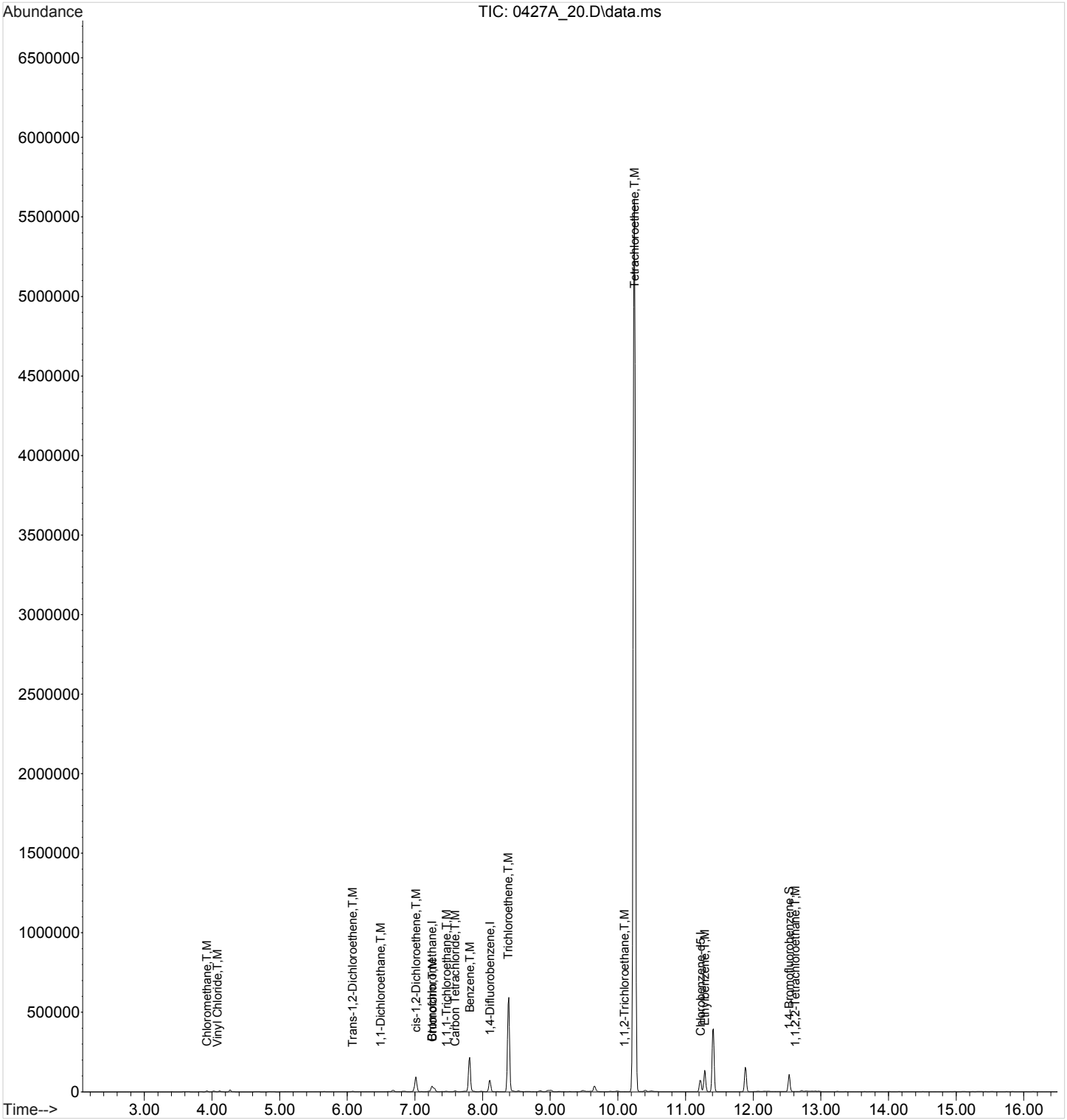
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.251	130	29771	1.2500000	ppbv	0.00
13) 1,4-Difluorobenzene	8.110	114	108615	1.2500000	ppbv	0.00
23) Chlorobenzene-d5	11.222	117	94798	1.2500000	ppbv	0.00
System Monitoring Compounds						
26) 1,4-Bromofluorobenzene	12.532	95	56458	1.2854692	ppbv	0.00
Spiked Amount 1.250	Range 60 - 140		Recovery = 102.84%			
Target Compounds						Qvalue
2) Chloromethane	3.922	50	8714	0.4491870	ppbv	100
3) Vinyl Chloride	4.079	62	382	0.0156172	ppbv #	42
4) Chloroethane	0.000		0	N.D.		
5) 1,1-Dichloroethene	5.400	61	192	N.D.		
6) Trans-1,2-Dichloroethene	6.077	61	2186	0.0679536	ppbv #	40
7) 1,1-Dichloroethane	6.491	63	537	0.0113904	ppbv #	1
8) Vinyl Acetate	0.000		0	N.D. d		
9) cis-1,2-Dichloroethene	7.014	96	55795	1.6897947	ppbv	96
10) Chloroform	7.259	83	3350	0.0585400	ppbv #	1
11) 1,1,1-Trichloroethane	7.463	97	632	0.0106824	ppbv #	82
12) Carbon Tetrachloride	7.594	117	4823	0.0785536	ppbv #	86
14) Benzene	7.809	78	316597	3.1340211	ppbv	99
15) 1,2-Dichloroethane	0.000		0	N.D. d		
16) Trichloroethene	8.378	95	387720	8.7517530	ppbv	99
17) 1,2-Dichloropropane	0.000		0	N.D. d		
18) cis-1,3-Dichloropropene	9.331	75	174	N.D.		
19) trans-1,3-Dichloropropene	9.904	75	164	N.D.		
20) 1,1,2-Trichloroethane	10.098	97	816	0.0187170	ppbv #	16
21) Tetrachloroethene	10.244	166	6269333	86.5177832	ppbv	99
22) 1,2-Dibromoethane	0.000		0	N.D. d		
24) Ethylbenzene	11.283	91	199181	1.1889056	ppbv	100
25) 1,1,2,2-Tetrachloroethane	12.623	83	1069	0.0106701	ppbv #	60
27) 1,4-Dichlorobenzene	13.657	146	1022	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_20.D
Acq On : 28 Apr 2018 1:00 am
Operator : 564
Sample : L988669-03 1x WG1104091
Misc : 18C26426
ALS Vial : 20 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 10:05:13 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:33 2018
Response via : Initial Calibration



1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
FC-3

ESC Sample ID:	L988669-03	**SDG:**	L988669
Client Sample ID:	FC-3	**Collected Date/Time:**	04/24/18 11:37
Lab File ID:	0428_07	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/28/18 12:13
Analytical Batch:	WG1104397	**Analysis Date/Time:**	04/28/18 12:13
Dilution Factor:	80	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	5 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	**CAS**	**RT**	**Result**	**Qualifier**	**MDL**	**RDL**
			ppbv		*ppbv*	*ppbv*
Tetrachloroethylene	127-18-4	10.23	97.0		0.366	1.60

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042818\
Data File : 0428_07.D
Acq On : 28 Apr 2018 12:13 pm
Operator : 564
Sample : L988669-03 80x WG1104397
Misc : 18C26426
ALS Vial : 7 Sample Multiplier: 80
InstName : AIRMS5

Quant Time: Apr 28 14:06:12 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:33 2018
Response via : Initial Calibration

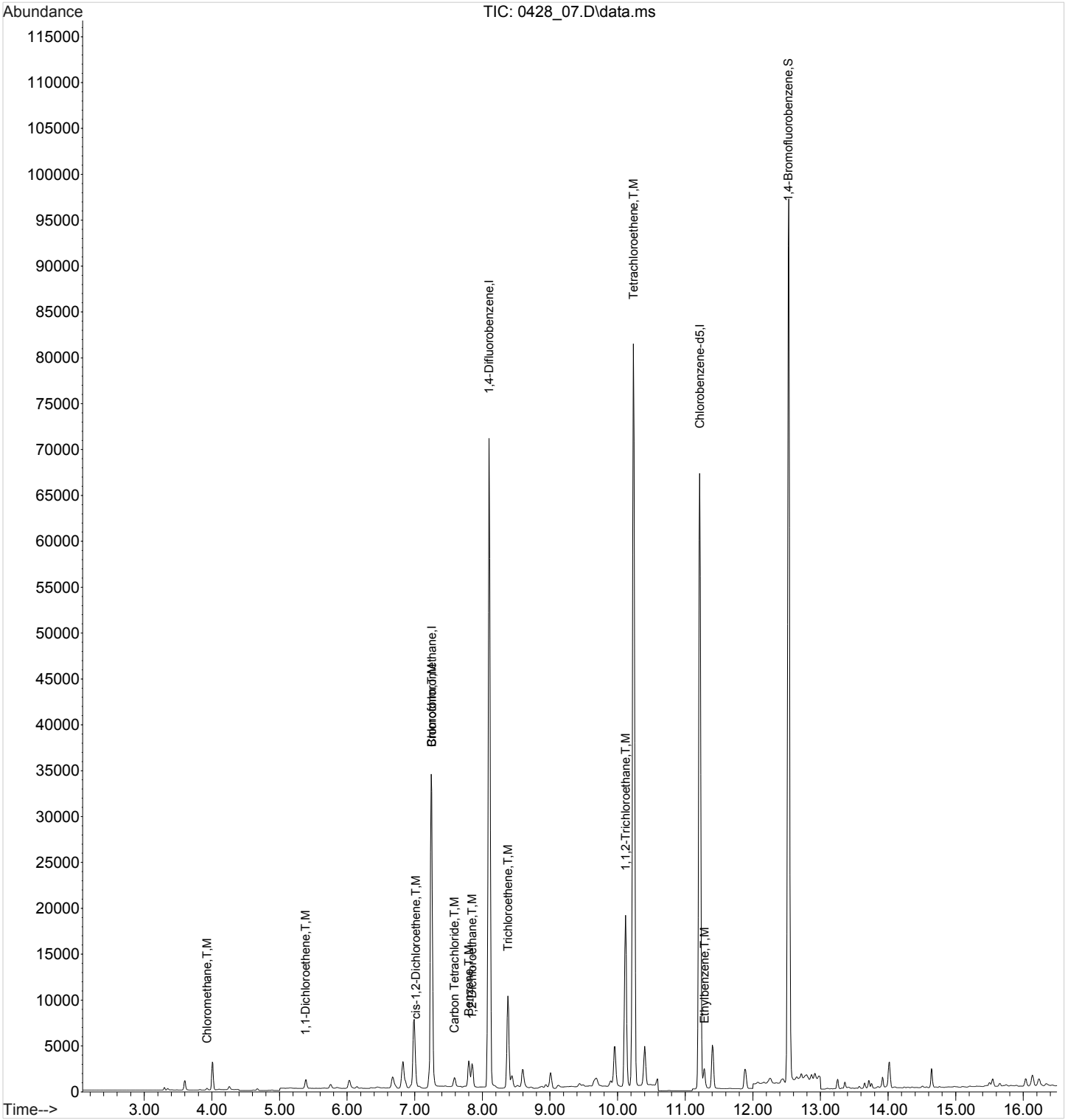
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.251	130	28235	1.2500000	ppbv	0.00
13) 1,4-Difluorobenzene	8.100	114	103658	1.2500000	ppbv	0.00
23) Chlorobenzene-d5	11.215	117	86504	1.2500000	ppbv	0.00
System Monitoring Compounds						
26) 1,4-Bromofluorobenzene	12.523	95	50943	1.2711116	ppbv	0.00
Spiked Amount 1.250	Range 60 - 140		Recovery = 101.69%			
Target Compounds						Qvalue
2) Chloromethane	3.928	50	283	1.2305285	ppbv #	41
3) Vinyl Chloride	4.254	62	150	0.5172825	ppbv #	42
4) Chloroethane	0.000		0	N.D.		
5) 1,1-Dichloroethene	5.385	61	766	1.7953778	ppbv	99
6) Trans-1,2-Dichloroethene	0.000		0	N.D.		
7) 1,1-Dichloroethane	0.000		0	N.D.		
8) Vinyl Acetate	6.446	43	381	0.5763490	ppbv #	67
9) cis-1,2-Dichloroethene	7.014	96	1188	3.0349443	ppbv	89
10) Chloroform	7.251	83	4494	6.6242499	ppbv #	66
11) 1,1,1-Trichloroethane	0.000		0	N.D.		
12) Carbon Tetrachloride	7.586	117	1367	1.8780763	ppbv #	73
14) Benzene	7.799	78	4189	3.4760214	ppbv #	63
15) 1,2-Dichloroethane	7.848	64	2051	15.6740068	ppbv #	99
16) Trichloroethene	8.378	95	6398	12.1059270	ppbv	99
17) 1,2-Dichloropropane	0.000		0	N.D.		
18) cis-1,3-Dichloropropene	0.000		0	N.D.		
19) trans-1,3-Dichloropropene	0.000		0	N.D.		
20) 1,1,2-Trichloroethane	10.118	97	17058	32.7982828	ppbv	100
21) Tetrachloroethene	10.234	166	83831	96.9763111	ppbv	100
22) 1,2-Dibromoethane	0.000		0	N.D.		
24) Ethylbenzene	11.283	91	3028	1.5845587	ppbv	100
25) 1,1,2,2-Tetrachloroethane	12.523	83	231	0.2021418	ppbv	96
27) 1,4-Dichlorobenzene	13.658	146	485	0.3826835	ppbv #	56

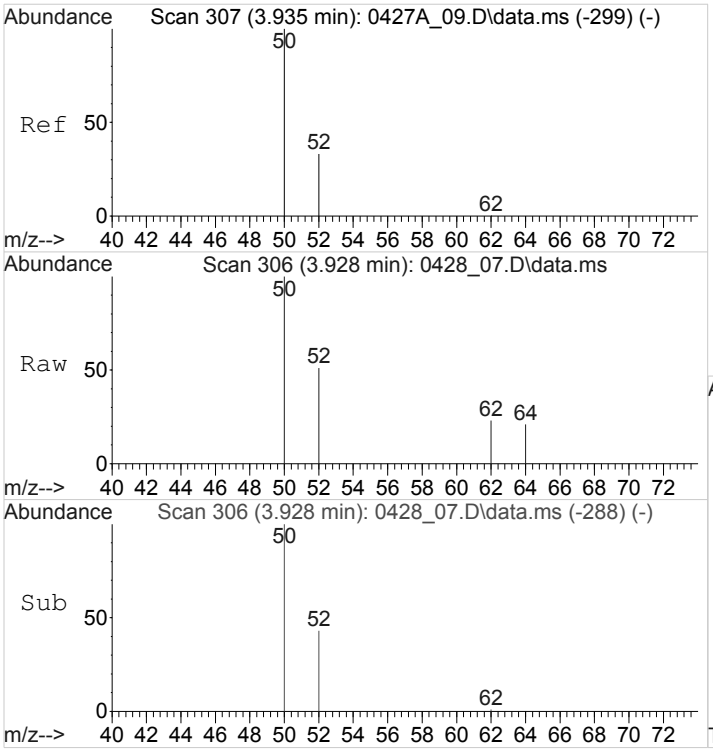
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042818\
Data File : 0428_07.D
Acq On : 28 Apr 2018 12:13 pm
Operator : 564
Sample : L988669-03 80x WG1104397
Misc : 18C26426
ALS Vial : 7 Sample Multiplier: 80
InstName : AIRMS5

Quant Time: Apr 28 14:06:12 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:33 2018
Response via : Initial Calibration

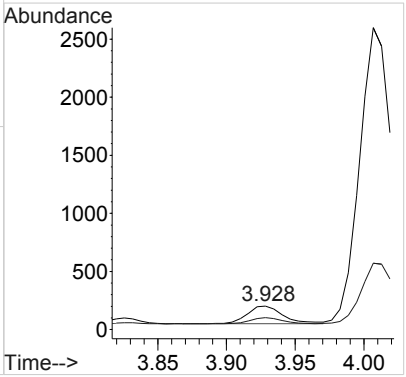


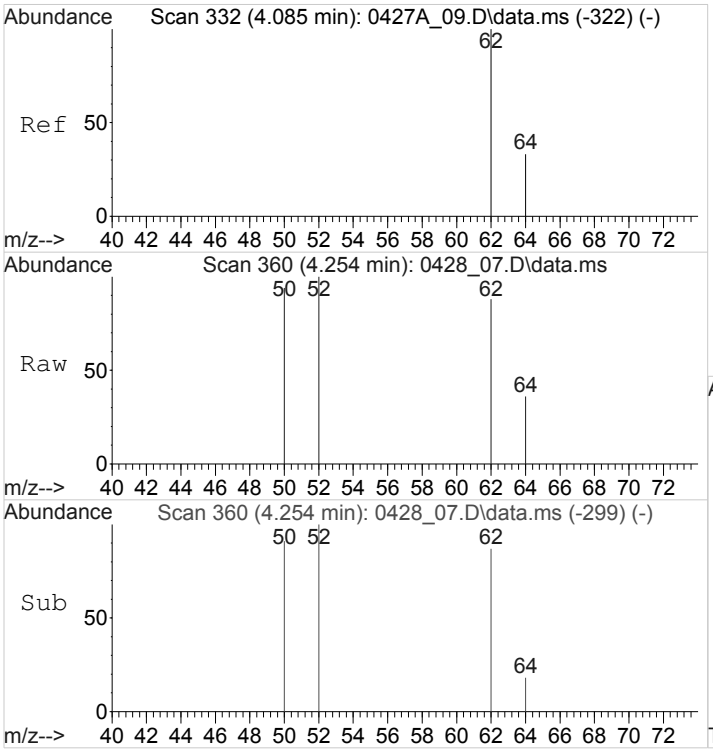


#2
Chloromethane
Concen: 1.2305285 ppbv
RT: 3.928 min Scan# 306
Delta R.T. -0.006 min
Lab File: 0428_07.D
Acq: 28 Apr 2018 12:13 pm

Tgt Ion: 50 Resp: 283

Ion	Ratio	Lower	Upper
50	100		
52	0.0	26.6	40.0#

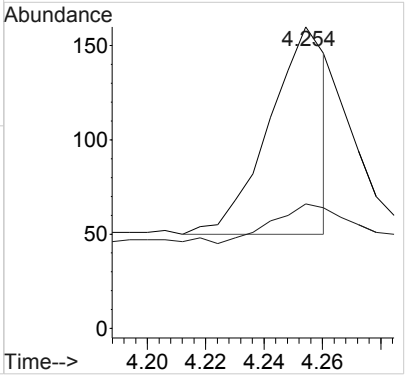


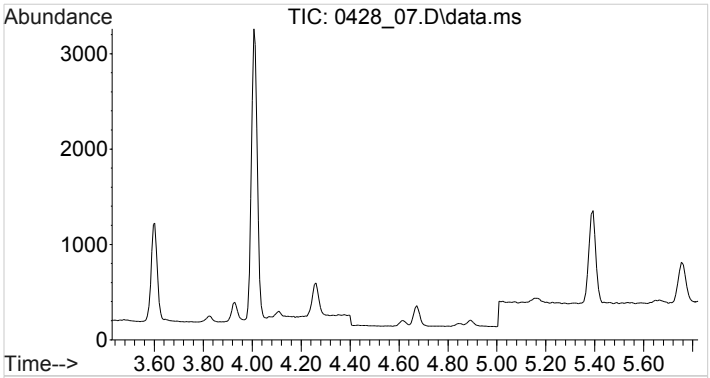


#3
Vinyl Chloride
Concen: 0.5172825 ppbv
RT: 4.254 min Scan# 360
Delta R.T. 0.169 min
Lab File: 0428_07.D
Acq: 28 Apr 2018 12:13 pm

Tgt Ion: 62 Resp: 150

Ion	Ratio	Lower	Upper
62	100		
64	0.0	26.1	39.1#



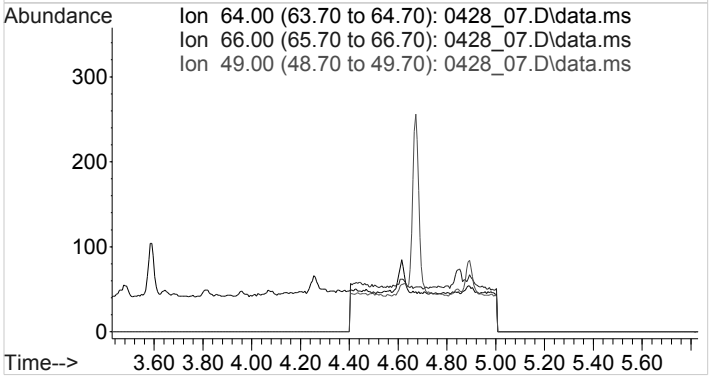


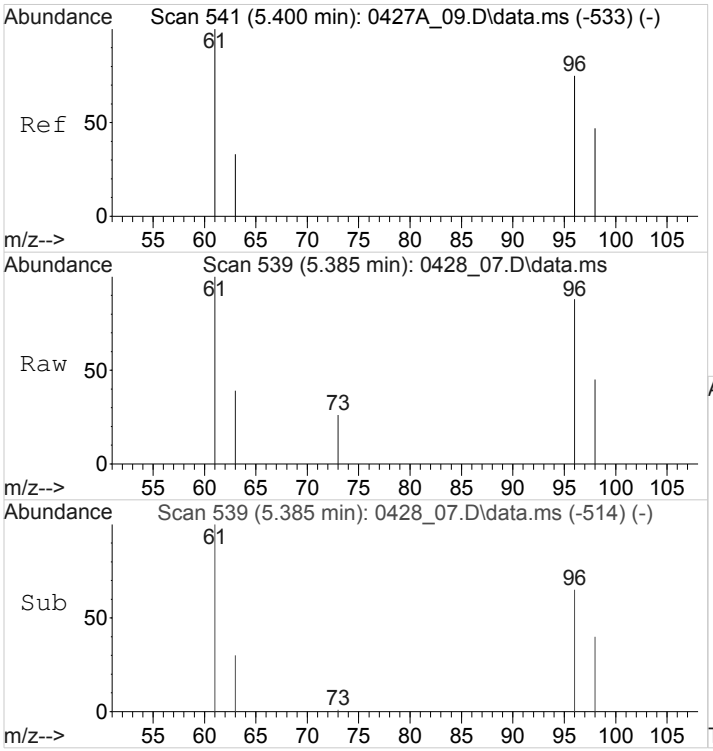
#4
Chloroethane
Concen: N.D.
Expected RT: 4.63 min

Lab File: 0428_07.D
Acq: 28 Apr 2018 12:13 pm

Tgt Ion: 64

Sig	Exp Ratio
64	100
66	32.2
49	21.6

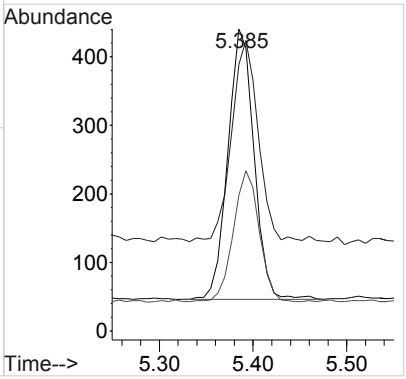


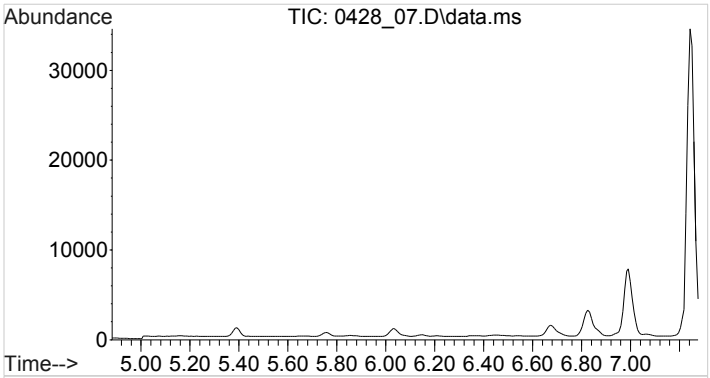


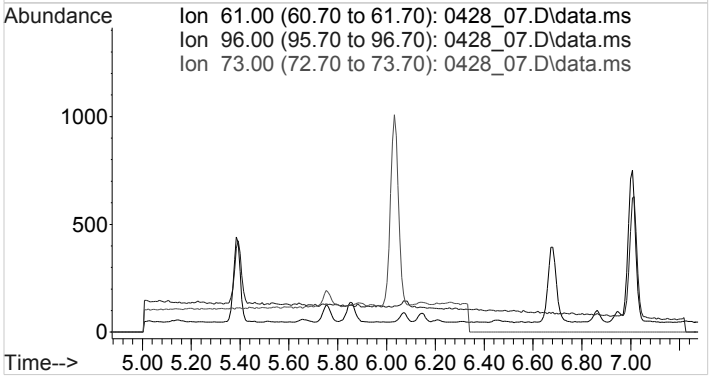
#5
1,1-Dichloroethene
Concen: 1.7953778 ppbv
RT: 5.385 min Scan# 539
Delta R.T. -0.015 min
Lab File: 0428_07.D
Acq: 28 Apr 2018 12:13 pm

Tgt Ion: 61 Resp: 766

Ion	Ratio	Lower	Upper
61	100		
96	76.0	59.8	89.6
98	47.7	38.3	57.5





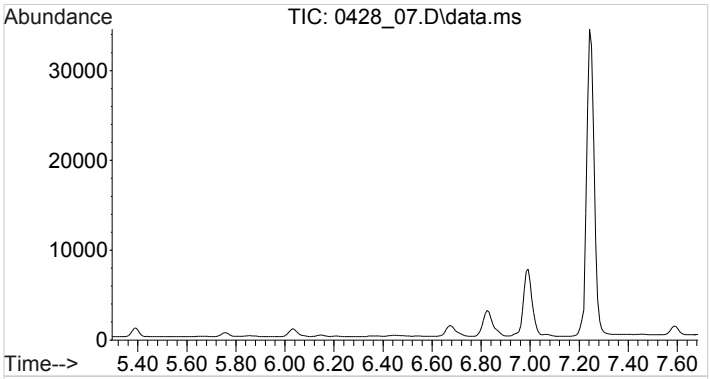


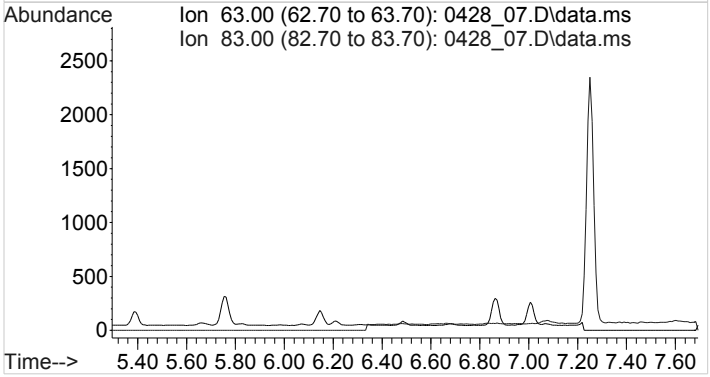
#6
Trans-1,2-Dichloroethene
Concen: N.D.
Expected RT: 6.08 min

Lab File: 0428_07.D
Acq: 28 Apr 2018 12:13 pm

Tgt Ion: 61

Sig	Exp Ratio
61	100
96	82.5
73	231.1



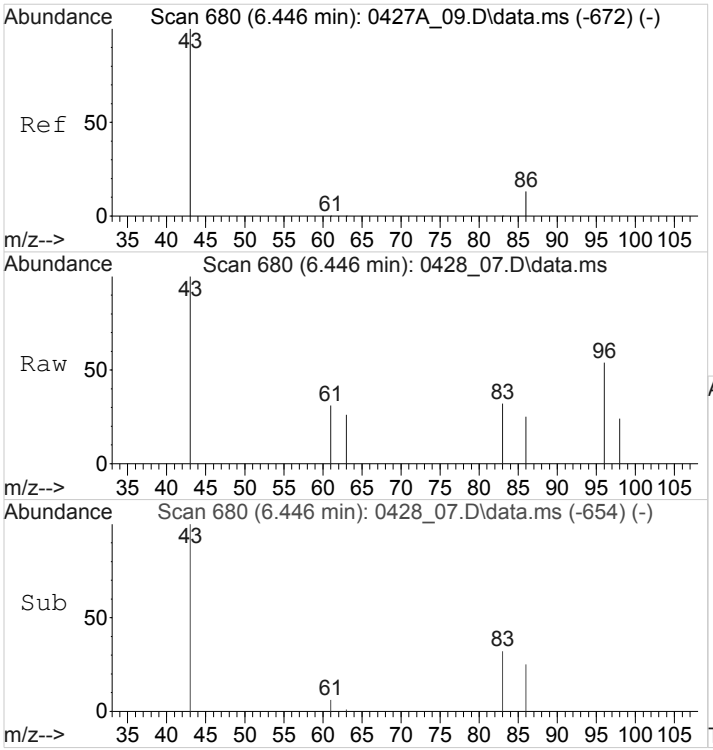


#7
1,1-Dichloroethane
Concen: N.D.
Expected RT: 6.49 min

Lab File: 0428_07.D
Acq: 28 Apr 2018 12:13 pm

Tgt Ion: 63

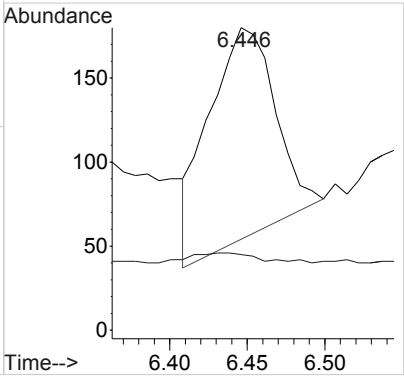
Sig	Exp Ratio
63	100
83	14.0

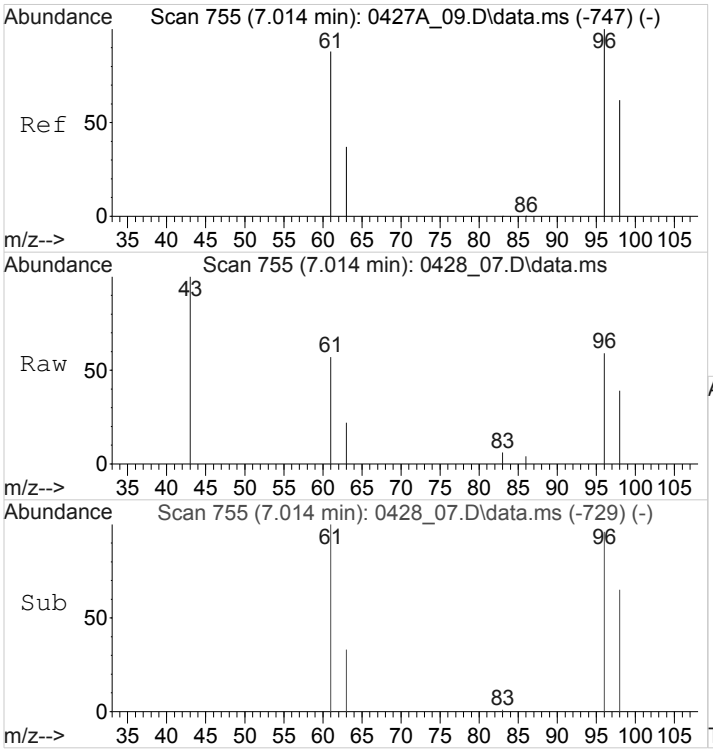


#8
Vinyl Acetate
Concen: 0.5763490 ppbv
RT: 6.446 min Scan# 680
Delta R.T. -0.000 min
Lab File: 0428_07.D
Acq: 28 Apr 2018 12:13 pm

Tgt Ion: 43 Resp: 381

Ion	Ratio	Lower	Upper
43	100		
86	0.0	10.7	16.1#

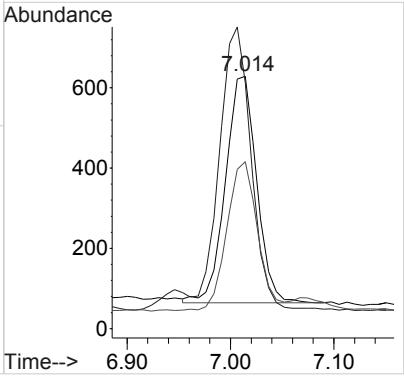


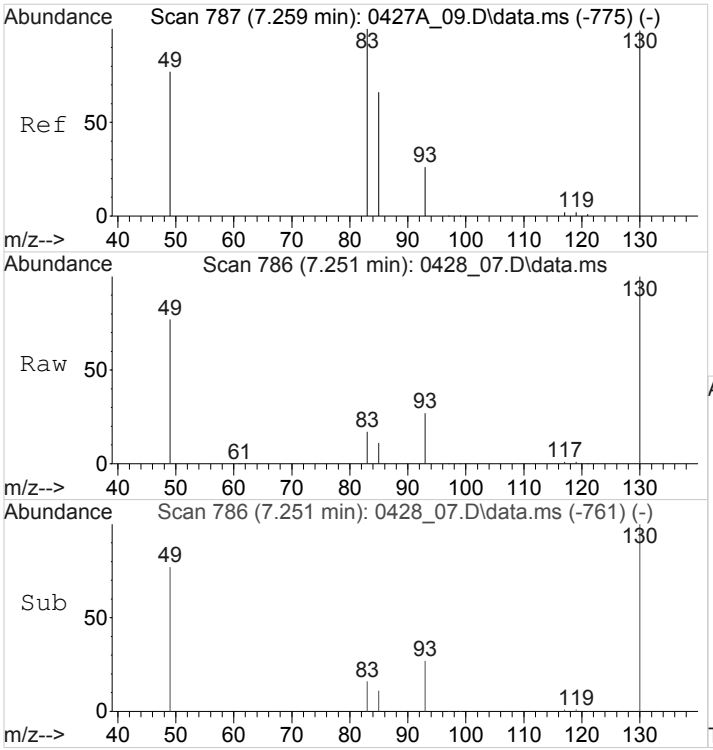


#9
cis-1,2-Dichloroethene
Concen: 3.0349443 ppbv
RT: 7.014 min Scan# 755
Delta R.T. -0.000 min
Lab File: 0428_07.D
Acq: 28 Apr 2018 12:13 pm

Tgt Ion: 96 Resp: 1188

Ion	Ratio	Lower	Upper
96	100		
61	128.2	87.5	131.3
98	64.6	51.4	77.2

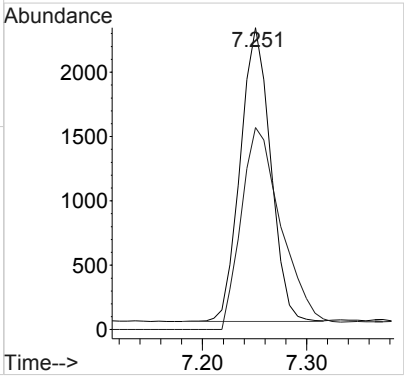


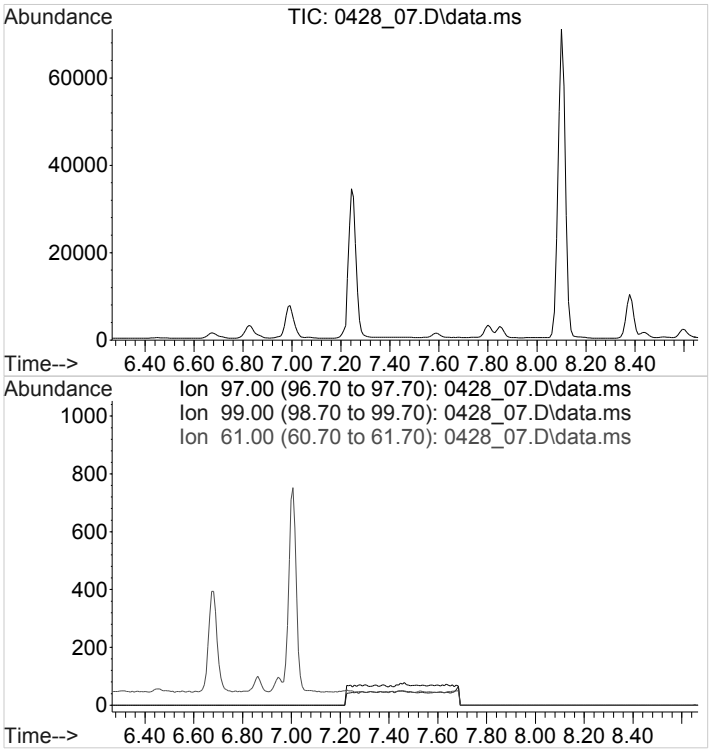


#10
Chloroform
Concen: 6.6242499 ppbv
RT: 7.251 min Scan# 786
Delta R.T. -0.008 min
Lab File: 0428_07.D
Acq: 28 Apr 2018 12:13 pm

Tgt Ion: 83 Resp: 4494

Ion	Ratio	Lower	Upper
83	100		
85	95.1	54.0	81.0#



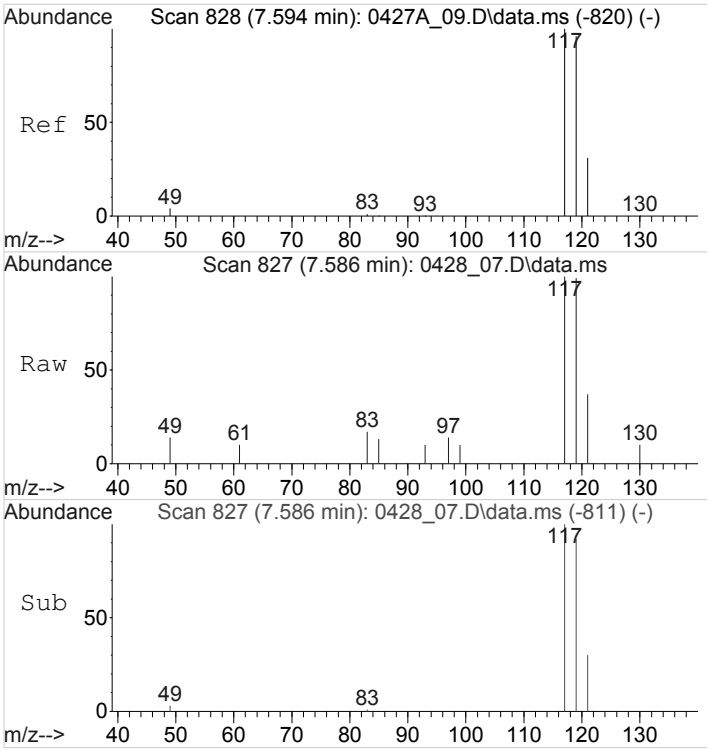


#11
1,1,1-Trichloroethane
Concen: N.D.
Expected RT: 7.46 min

Lab File: 0428_07.D
Acq: 28 Apr 2018 12:13 pm

Tgt Ion: 97

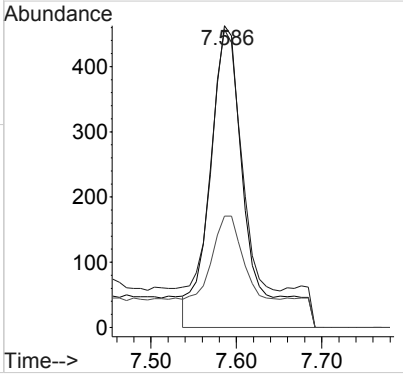
Sig	Exp Ratio
97	100
99	64.8
61	35.9

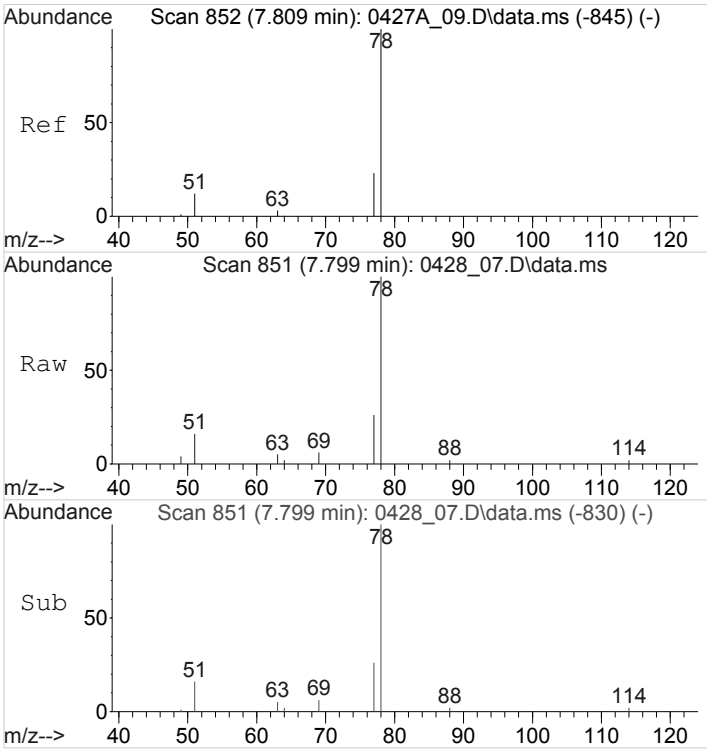


#12
Carbon Tetrachloride
Concen: 1.8780763 ppbv
RT: 7.586 min Scan# 827
Delta R.T. -0.008 min
Lab File: 0428_07.D
Acq: 28 Apr 2018 12:13 pm

Tgt Ion:117 Resp: 1367

Ion	Ratio	Lower	Upper
117	100		
119	67.4	77.9	116.9#
121	22.1	25.4	38.0#

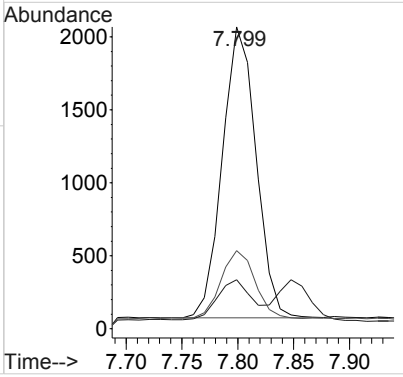


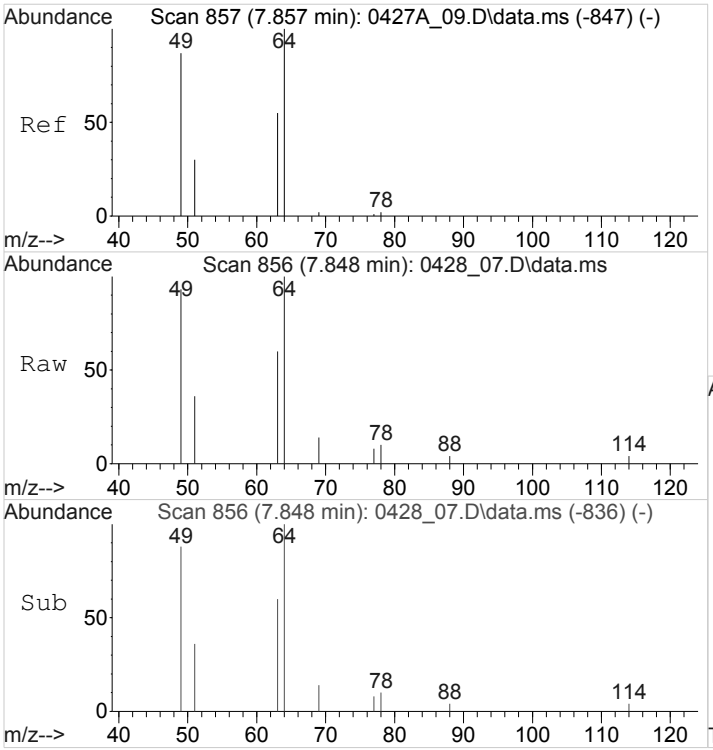


#14
Benzene
Concen: 3.4760214 ppbv
RT: 7.799 min Scan# 851
Delta R.T. -0.010 min
Lab File: 0428_07.D
Acq: 28 Apr 2018 12:13 pm

Tgt Ion: 78 Resp: 4189

Ion	Ratio	Lower	Upper
78	100		
51	17.1	10.9	16.3#
77	49.5	18.8	28.2#

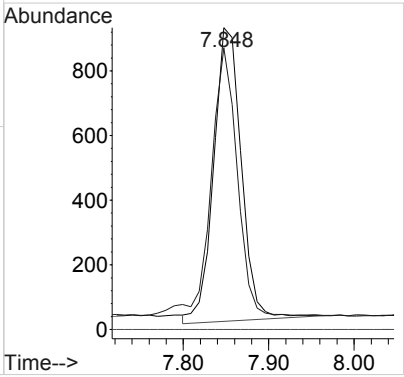


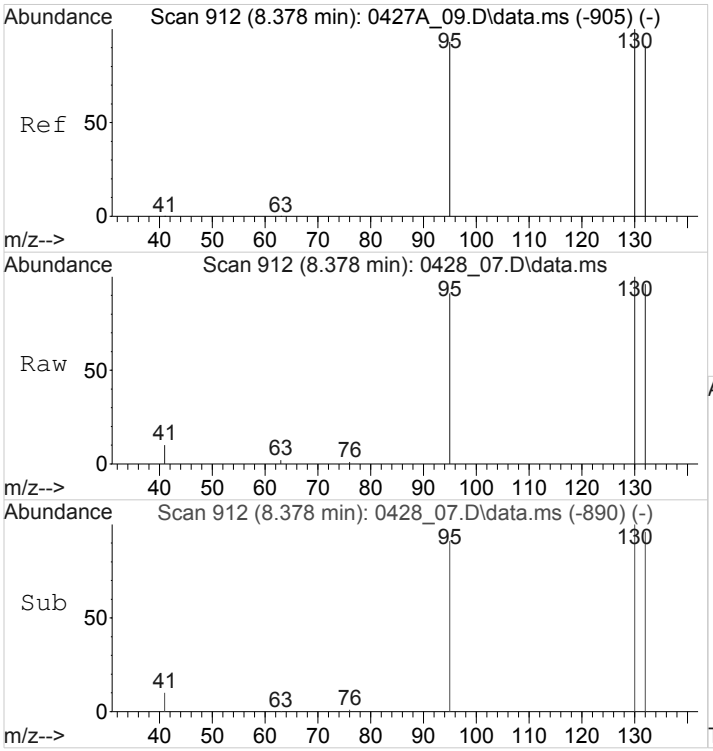


#15
1,2-Dichloroethane
Concen: 15.6740068 ppbv
RT: 7.848 min Scan# 856
Delta R.T. -0.010 min
Lab File: 0428_07.D
Acq: 28 Apr 2018 12:13 pm

Tgt Ion: 64 Resp: 2051

Ion	Ratio	Lower	Upper
64	100		
49	85.0	67.0	100.6
62	0.0	0.0	0.0

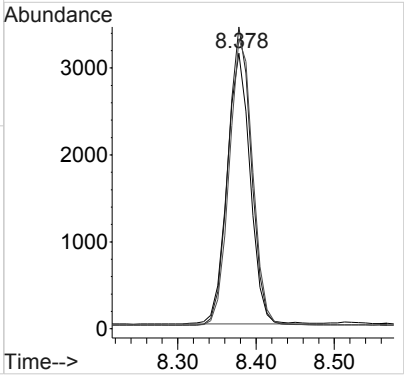


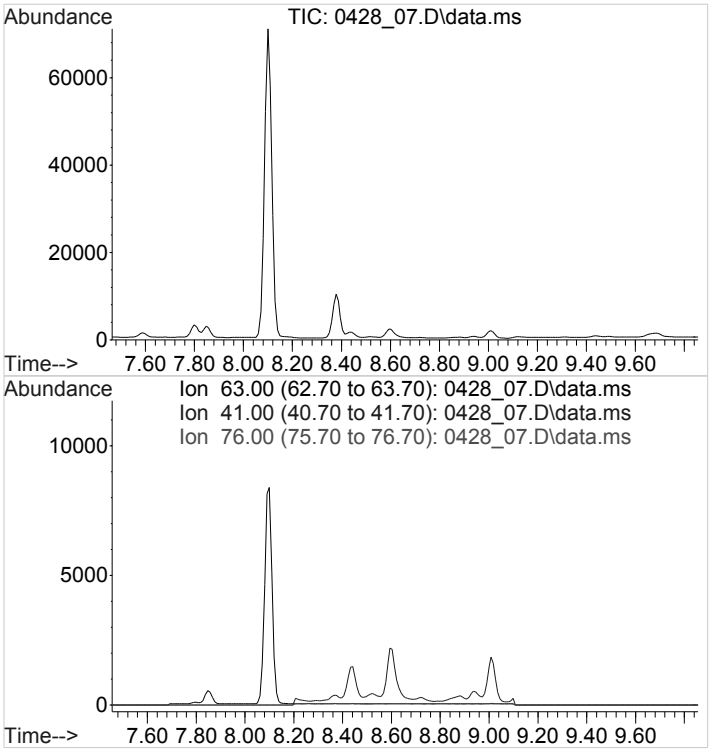


#16
Trichloroethene
Concen: 12.1059270 ppbv
RT: 8.378 min Scan# 912
Delta R.T. -0.000 min
Lab File: 0428_07.D
Acq: 28 Apr 2018 12:13 pm

Tgt Ion: 95 Resp: 6398

Ion	Ratio	Lower	Upper
95	100		
130	110.2	89.5	134.3
132	109.2	86.7	130.1



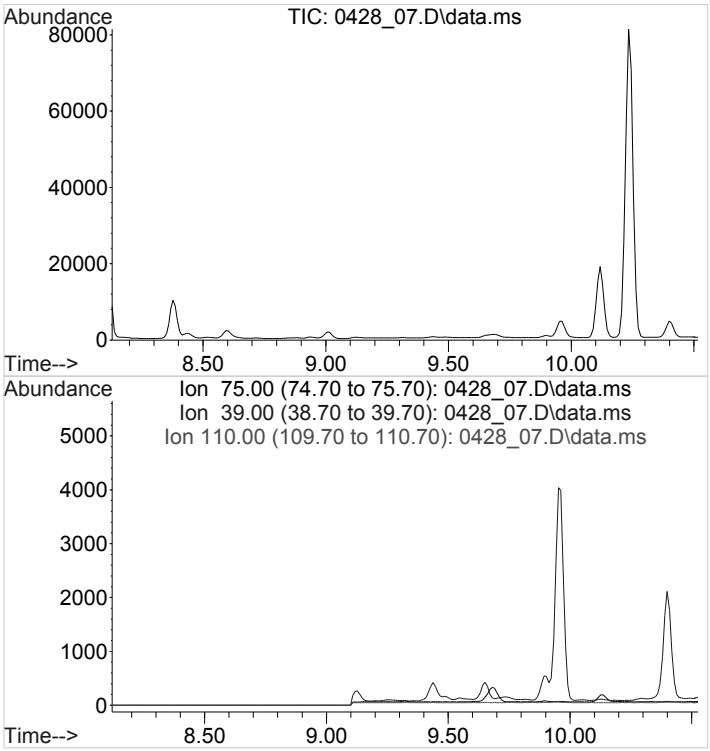


#17
1,2-Dichloropropane
Concen: N.D.
Expected RT: 8.66 min

Lab File: 0428_07.D
Acq: 28 Apr 2018 12:13 pm

Tgt Ion: 63

Sig	Exp Ratio
63	100
41	27.9
76	38.3

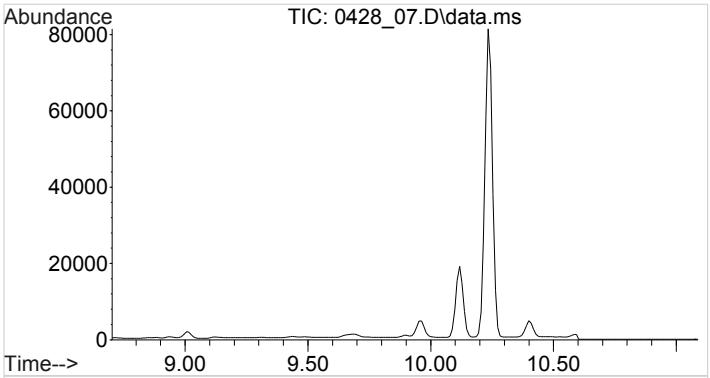


#18
cis-1,3-Dichloropropene
Concen: N.D.
Expected RT: 9.32 min

Lab File: 0428_07.D
Acq: 28 Apr 2018 12:13 pm

Tgt Ion: 75

Sig	Exp Ratio
75	100
39	30.7
110	26.0

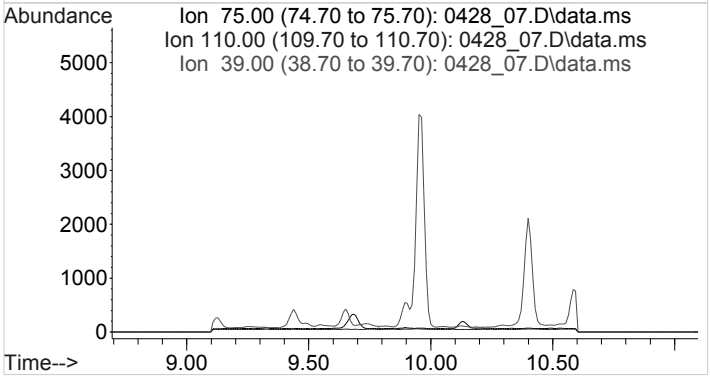


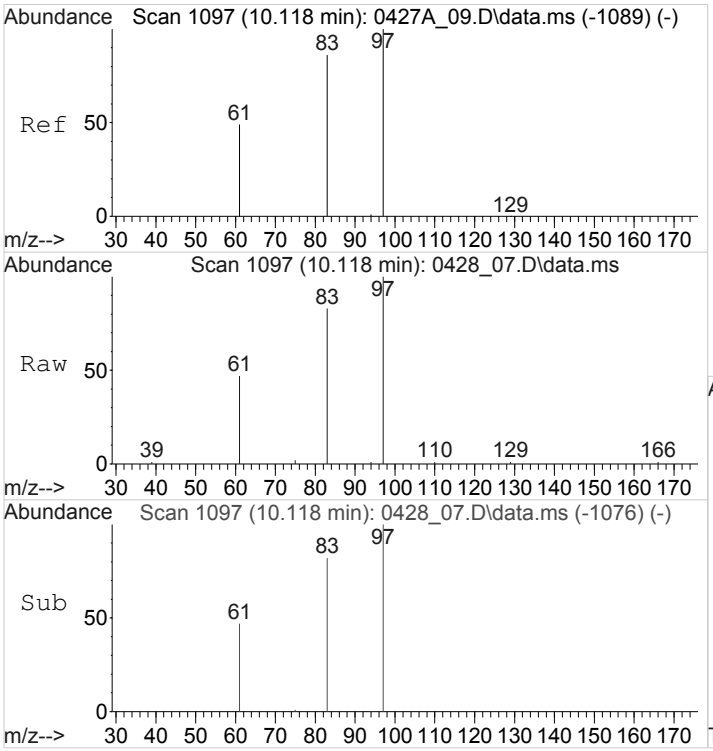
#19
trans-1,3-Dichloropropene
Concen: N.D.
Expected RT: 9.89 min

Lab File: 0428_07.D
Acq: 28 Apr 2018 12:13 pm

Tgt Ion: 75

Sig	Exp Ratio
75	100
110	29.4
39	30.7

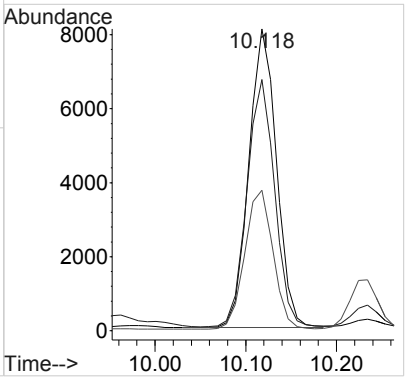


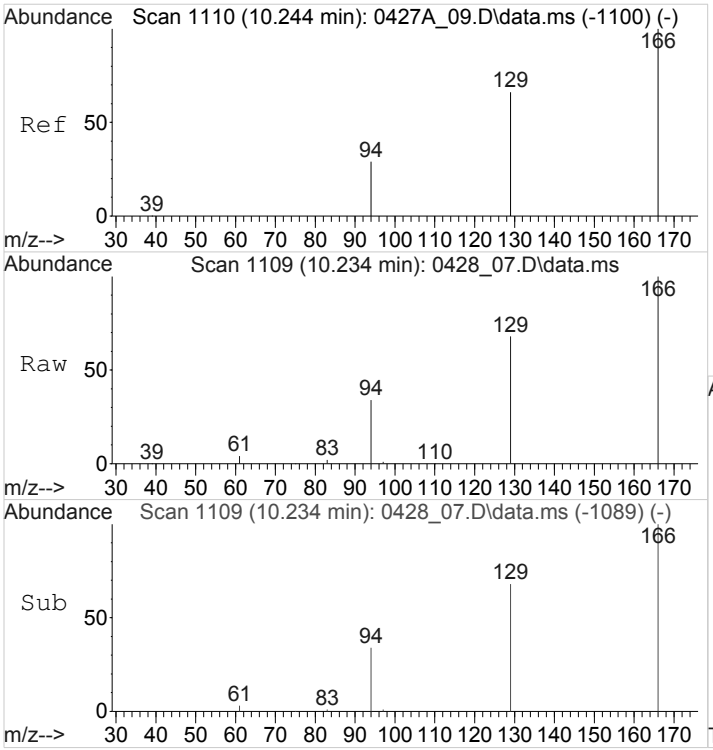


#20
1,1,2-Trichloroethane
Concen: 32.7982828 ppbv
RT: 10.118 min Scan# 1097
Delta R.T. -0.000 min
Lab File: 0428_07.D
Acq: 28 Apr 2018 12:13 pm

Tgt Ion: 97 Resp: 17058

Ion	Ratio	Lower	Upper
97	100		
83	82.7	66.2	99.4
61	47.4	38.0	57.0

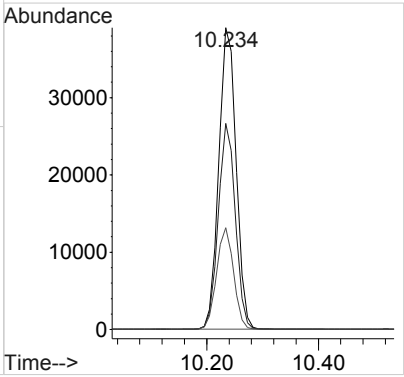


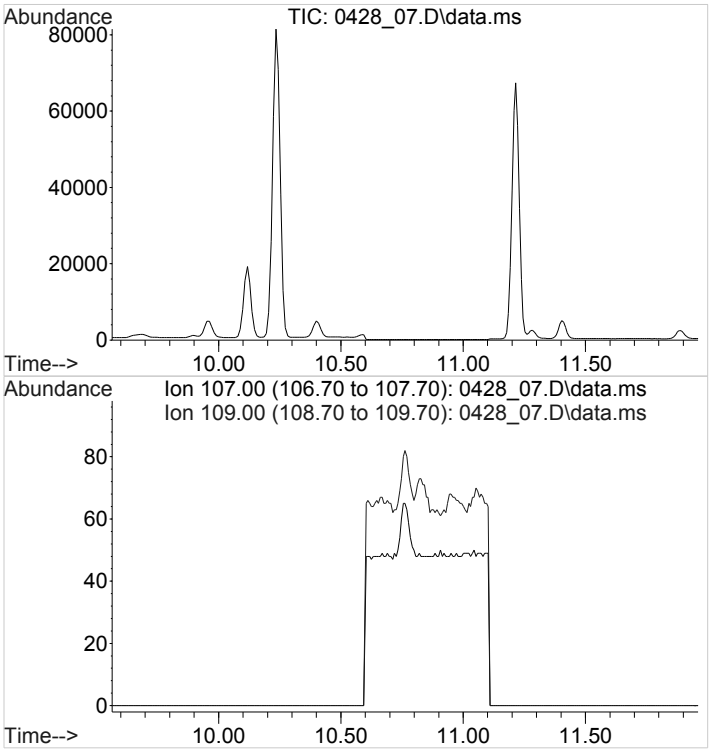


#21
Tetrachloroethene
Concen: 96.9763111 ppbv
RT: 10.234 min Scan# 1109
Delta R.T. -0.010 min
Lab File: 0428_07.D
Acq: 28 Apr 2018 12:13 pm

Tgt Ion:166 Resp: 83831

Ion	Ratio	Lower	Upper
166	100		
129	67.0	53.5	80.3
94	33.0	26.2	39.2



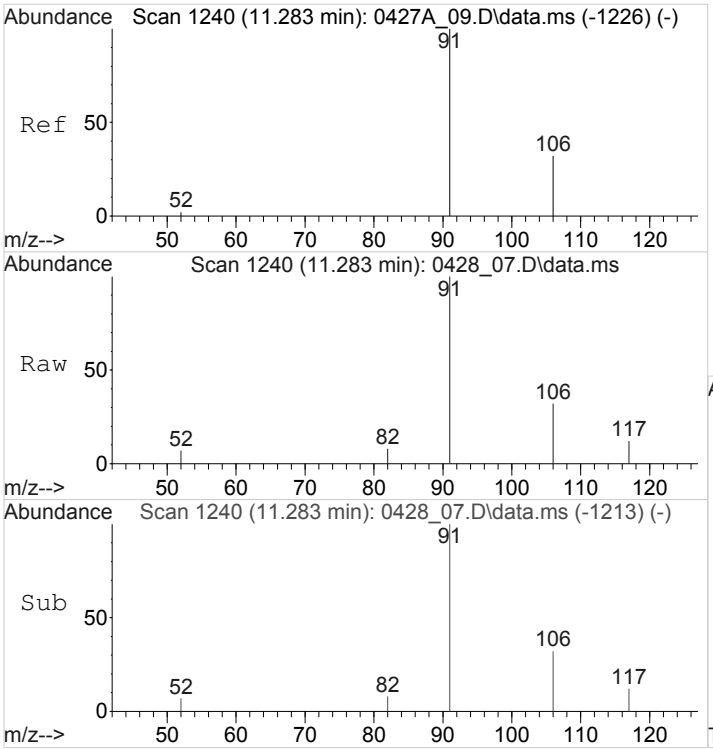


#22
1,2-Dibromoethane
Concen: N.D.
Expected RT: 10.76 min

Lab File: 0428_07.D
Acq: 28 Apr 2018 12:13 pm

Tgt Ion: 107

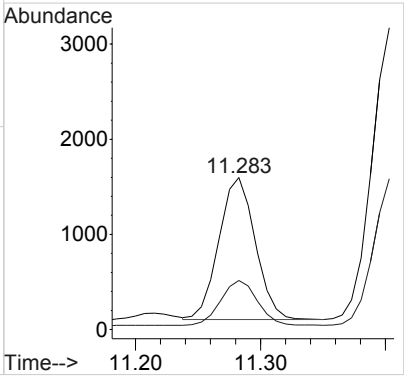
Sig	Exp Ratio
107	100
109	94.9

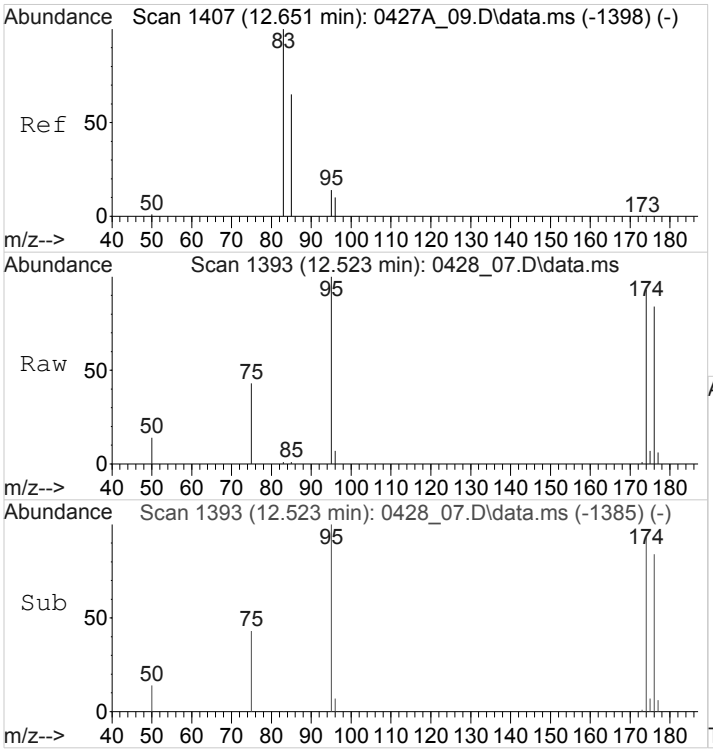


#24
Ethylbenzene
Concen: 1.5845587 ppbv
RT: 11.283 min Scan# 1240
Delta R.T. -0.000 min
Lab File: 0428_07.D
Acq: 28 Apr 2018 12:13 pm

Tgt Ion: 91 Resp: 3028

Ion	Ratio	Lower	Upper
91	100		
106	32.0	25.4	38.2

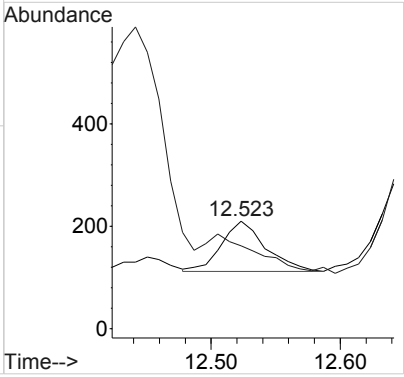


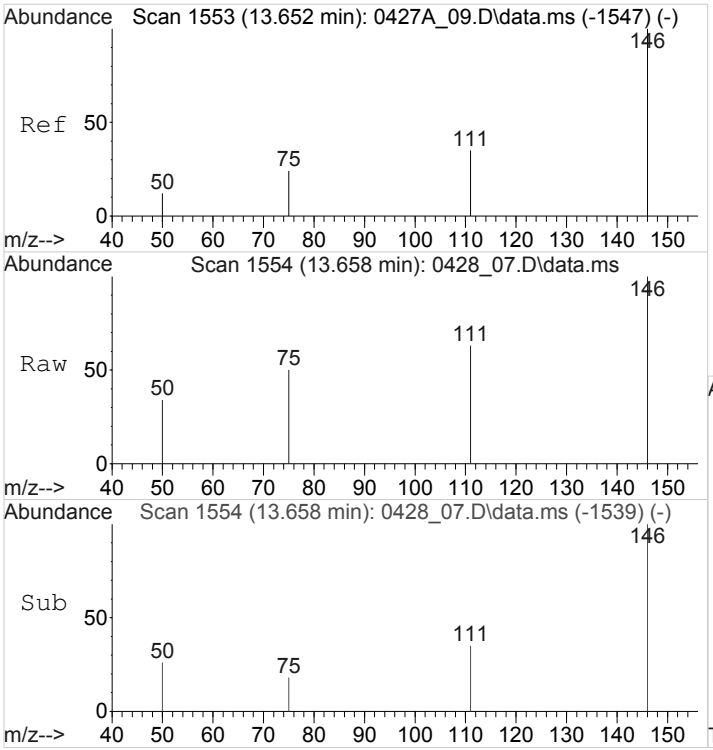


#25
1,1,2,2-Tetrachloroethane
Concen: 0.2021418 ppbv
RT: 12.523 min Scan# 1393
Delta R.T. -0.127 min
Lab File: 0428_07.D
Acq: 28 Apr 2018 12:13 pm

Tgt Ion: 83 Resp: 231

Ion	Ratio	Lower	Upper
83	100		
85	67.5	51.6	77.4

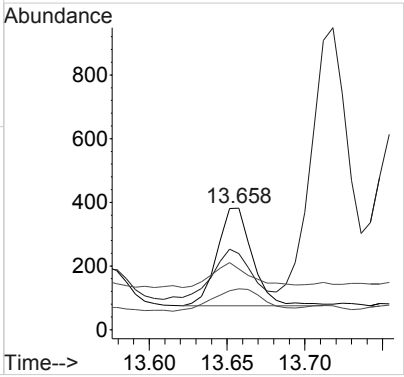




#27
1,4-Dichlorobenzene
Concen: 0.3826835 ppbv
RT: 13.658 min Scan# 1554
Delta R.T. 0.006 min
Lab File: 0428_07.D
Acq: 28 Apr 2018 12:13 pm

Tgt Ion:146 Resp: 485

Ion	Ratio	Lower	Upper
146	100		
111	56.5	27.0	40.4#
75	0.0	18.8	28.2#
50	33.0	11.4	17.2#



ACCOUNT:	PROJECT:	SDG:	DATE/TIME:	PAGE:
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1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
FC-4

ESC Sample ID:	L988669-04	**SDG:**	L988669
Client Sample ID:	FC-4	**Collected Date/Time:**	04/24/18 12:34
Lab File ID:	0427A_21	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/28/18 01:43
Analytical Batch:	WG1104091	**Analysis Date/Time:**	04/28/18 01:43
Dilution Factor:	1	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	**CAS**	**RT**	**Result**	**Qualifier**	**MDL**	**RDL**
			ppbv		*ppbv*	*ppbv*
Benzene	71-43-2	7.81	4.23		0.00541	0.0200
Carbon tetrachloride	56-23-5	7.59	0.0854		0.00575	0.0200
Chloroethane	75-00-3	0	ND		0.0159	0.0400
Chloroform	67-66-3	0	ND		0.00464	0.0200
Chloromethane	74-87-3	3.93	0.465		0.00972	0.0300
1,2-Dibromoethane	106-93-4	0	ND		0.0185	0.0200
1,4-Dichlorobenzene	106-46-7	0	ND		0.00691	0.0200
1,1-Dichloroethane	75-34-3	0	ND		0.00505	0.0200
1,2-Dichloroethane	107-06-2	0	ND		0.000471	0.0200
1,1-Dichloroethene	75-35-4	0	ND		0.00521	0.0200
cis-1,2-Dichloroethene	156-59-2	7.02	0.413		0.00770	0.0200
trans-1,2-Dichloroethene	156-60-5	6.08	0.0327		0.00499	0.0200
1,2-Dichloropropane	78-87-5	8.66	ND		0.00840	0.0300
cis-1,3-Dichloropropene	10061-01-5	0	ND		0.00556	0.0200
trans-1,3-Dichloropropene	10061-02-6	0	ND		0.00853	0.0300
Ethylbenzene	100-41-4	11.28	1.94		0.00904	0.0300
1,1,2,2-Tetrachloroethane	79-34-5	0	ND		0.00481	0.0200
1,1,1-Trichloroethane	71-55-6	7.46	0.0240		0.00552	0.0200
1,1,2-Trichloroethane	79-00-5	10.10	ND		0.0287	0.0300
Trichloroethylene	79-01-6	8.39	2.40		0.00736	0.0200
Vinyl chloride	75-01-4	0	ND		0.00765	0.0200
Vinyl acetate	108-05-4	0	ND		0.00430	0.0200

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_21.D
Acq On : 28 Apr 2018 1:43 am
Operator : 564
Sample : L988669-04 1x WG1104091
Misc : 18C26426
ALS Vial : 21 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 10:05:46 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:33 2018
Response via : Initial Calibration

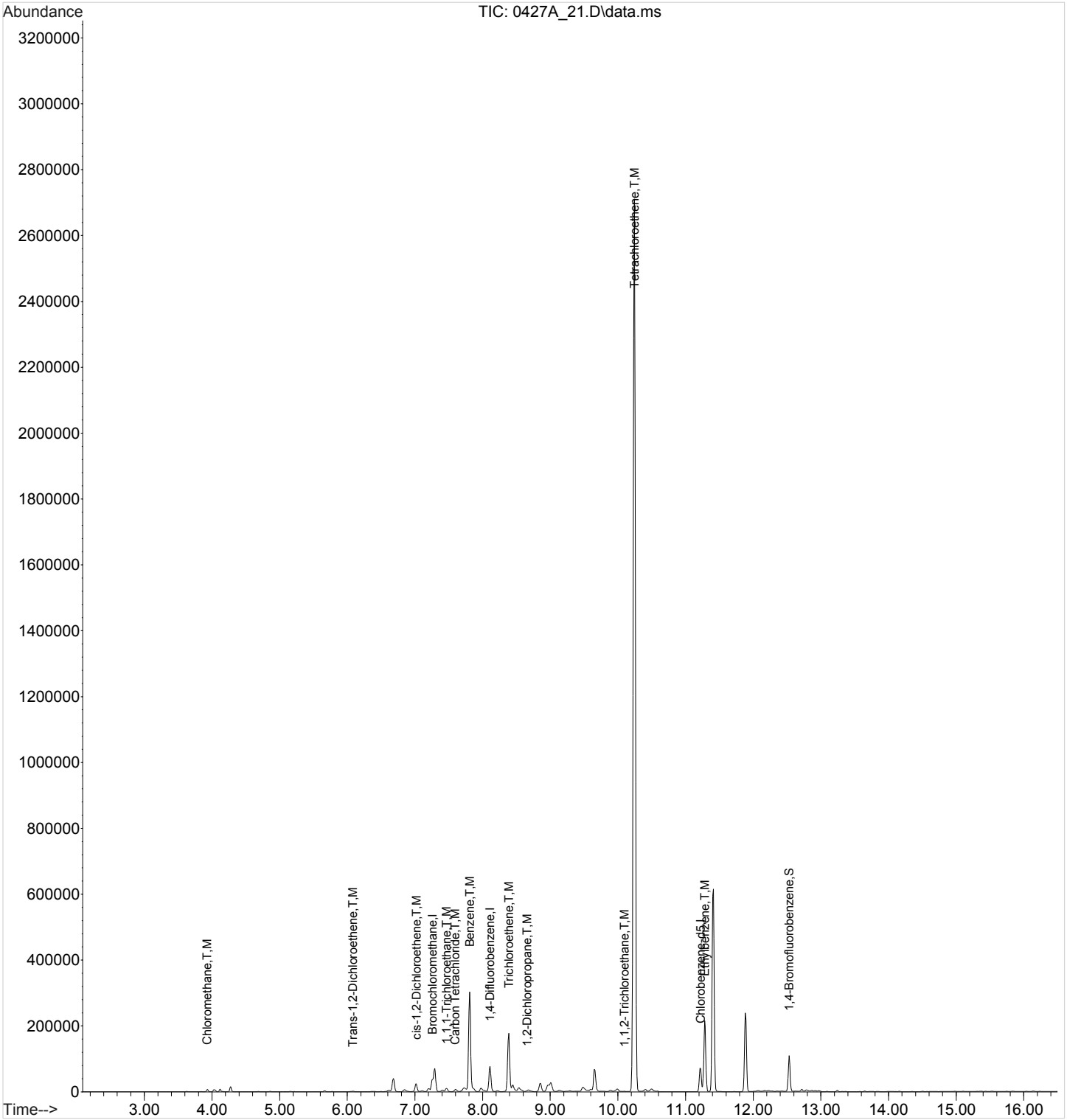
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.259	130	30129	1.2500000	ppbv	0.00
13) 1,4-Difluorobenzene	8.110	114	110282	1.2500000	ppbv	0.00
23) Chlorobenzene-d5	11.222	117	93561	1.2500000	ppbv	0.00
System Monitoring Compounds						
26) 1,4-Bromofluorobenzene	12.532	95	54978	1.2683217	ppbv	0.00
Spiked Amount 1.250	Range 60 - 140		Recovery = 101.47%			
Target Compounds						Qvalue
2) Chloromethane	3.928	50	9139	0.4654971	ppbv	100
3) Vinyl Chloride	4.085	62	158	N.D.		
4) Chloroethane	0.000		0	N.D. d		
5) 1,1-Dichloroethene	5.407	61	153	N.D.		
6) Trans-1,2-Dichloroethene	6.084	61	1063	0.0326516	ppbv	80
7) 1,1-Dichloroethane	6.499	63	260	N.D.		
8) Vinyl Acetate	6.499	43	464	N.D.		
9) cis-1,2-Dichloroethene	7.022	96	13801	0.4130075	ppbv #	85
10) Chloroform	0.000		0	N.D. d		
11) 1,1,1-Trichloroethane	7.463	97	1436	0.0239835	ppbv #	81
12) Carbon Tetrachloride	7.594	117	5307	0.0854096	ppbv	97
14) Benzene	7.809	78	434356	4.2347338	ppbv	99
15) 1,2-Dichloroethane	0.000		0	N.D. d		
16) Trichloroethene	8.387	95	107807	2.3966741	ppbv	99
17) 1,2-Dichloropropane	8.657	63	525	0.0151874	ppbv #	1
18) cis-1,3-Dichloropropene	9.331	75	224	N.D.		
19) trans-1,3-Dichloropropene	9.894	75	237	N.D.		
20) 1,1,2-Trichloroethane	10.098	97	1185	0.0267701	ppbv #	33
21) Tetrachloroethene	10.244	166	2812720	38.2292448	ppbv	99
22) 1,2-Dibromoethane	0.000		0	N.D. d		
24) Ethylbenzene	11.283	91	320934	1.9409732	ppbv	100
25) 1,1,2,2-Tetrachloroethane	12.623	83	626	N.D.		
27) 1,4-Dichlorobenzene	13.657	146	975	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_21.D
Acq On : 28 Apr 2018 1:43 am
Operator : 564
Sample : L988669-04 1x WG1104091
Misc : 18C26426
ALS Vial : 21 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 10:05:46 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:33 2018
Response via : Initial Calibration



ACCOUNT:	PROJECT:	SDG:	DATE/TIME:	PAGE:
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1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
FC-4

ESC Sample ID:	L988669-04	**SDG:**	L988669
Client Sample ID:	FC-4	**Collected Date/Time:**	04/24/18 12:34
Lab File ID:	0428_08	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/28/18 12:51
Analytical Batch:	WG1104397	**Analysis Date/Time:**	04/28/18 12:51
Dilution Factor:	25	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	16 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	**CAS**	**RT**	**Result**	**Qualifier**	**MDL**	**RDL**
			ppbv		*ppbv*	*ppbv*
Tetrachloroethylene	127-18-4	10.23	38.0		0.114	0.500

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042818\
Data File : 0428_08.D
Acq On : 28 Apr 2018 12:51 pm
Operator : 564
Sample : L988669-04 25x WG1104397
Misc : 18C26426
ALS Vial : 8 Sample Multiplier: 25
InstName : AIRMS5

Quant Time: Apr 28 14:06:16 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:33 2018
Response via : Initial Calibration

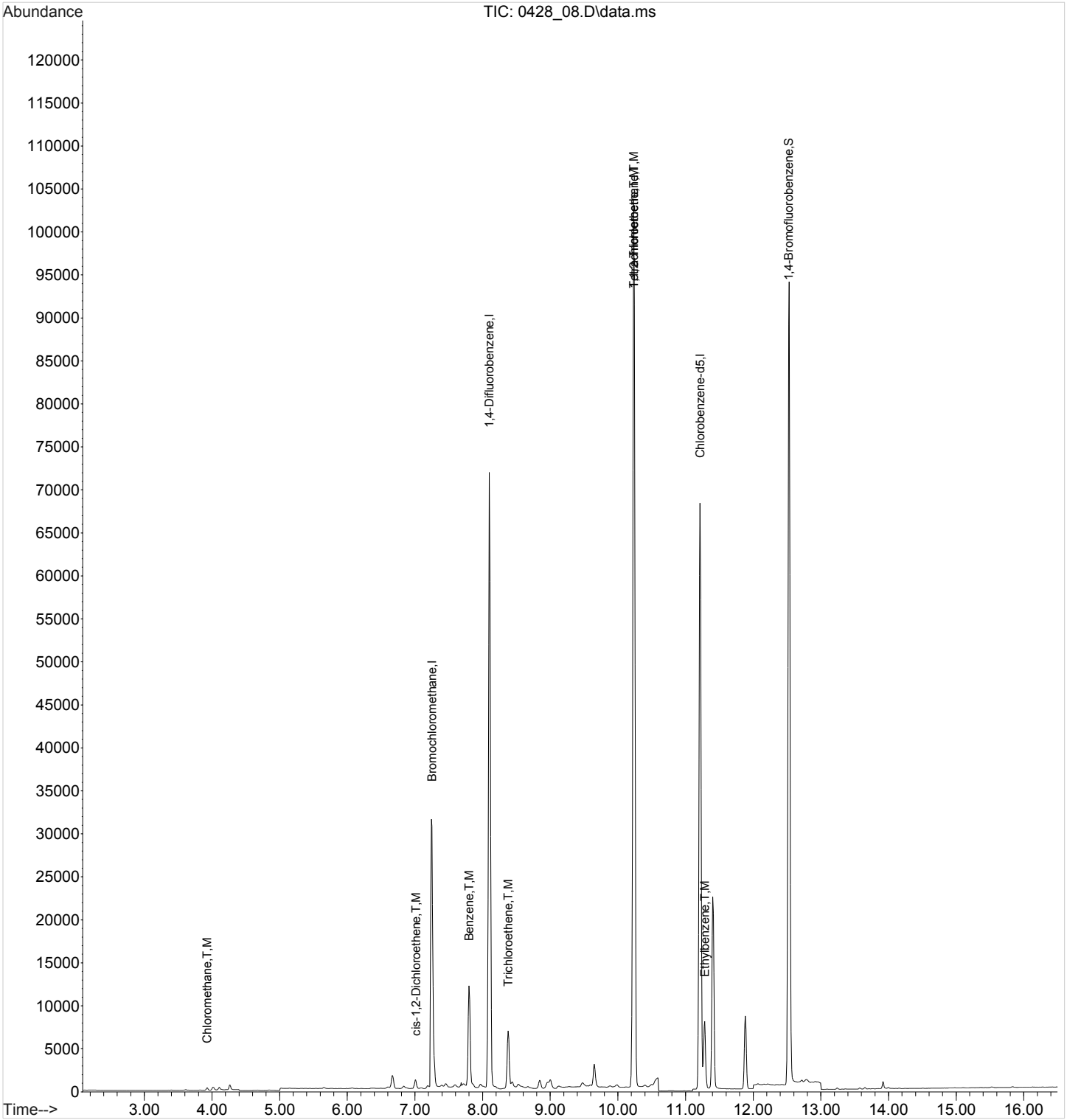
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.251	130	29192	1.2500000	ppbv	0.00
13) 1,4-Difluorobenzene	8.100	114	105078	1.2500000	ppbv	0.00
23) Chlorobenzene-d5	11.215	117	87655	1.2500000	ppbv	0.00
System Monitoring Compounds						
26) 1,4-Bromofluorobenzene	12.523	95	50118	1.2341058	ppbv	0.00
Spiked Amount 1.250	Range 60 - 140		Recovery = 98.73%			
Target Compounds						Qvalue
2) Chloromethane	3.928	50	393	0.5165017	ppbv #	41
3) Vinyl Chloride	0.000		0	N.D.		
4) Chloroethane	0.000		0	N.D.		
5) 1,1-Dichloroethene	0.000		0	N.D.		
6) Trans-1,2-Dichloroethene	0.000		0	N.D.		
7) 1,1-Dichloroethane	0.000		0	N.D.		
8) Vinyl Acetate	6.355	43	247	0.1129358	ppbv #	67
9) cis-1,2-Dichloroethene	7.014	96	586	0.4524868	ppbv	90
10) Chloroform	7.251	83	159	0.0708394	ppbv #	1
11) 1,1,1-Trichloroethane	0.000		0	N.D.		
12) Carbon Tetrachloride	7.586	117	194	0.0805602	ppbv #	84
14) Benzene	7.799	78	18262	4.6715551	ppbv	98
15) 1,2-Dichloroethane	0.000		0	N.D.		
16) Trichloroethene	8.378	95	4036	2.3542145	ppbv	99
17) 1,2-Dichloropropane	0.000		0	N.D.		
18) cis-1,3-Dichloropropene	0.000		0	N.D.		
19) trans-1,3-Dichloropropene	0.000		0	N.D.		
20) 1,1,2-Trichloroethane	10.234	97	575	0.3408254	ppbv #	1
21) Tetrachloroethene	10.234	166	106605	38.0171570	ppbv	99
22) 1,2-Dibromoethane	10.603	107	170	0.0645742	ppbv	94
24) Ethylbenzene	11.283	91	11409	1.8412364	ppbv	99
25) 1,1,2,2-Tetrachloroethane	12.787	83	920	0.2482799	ppbv #	6
27) 1,4-Dichlorobenzene	13.651	146	155	0.0377172	ppbv #	49

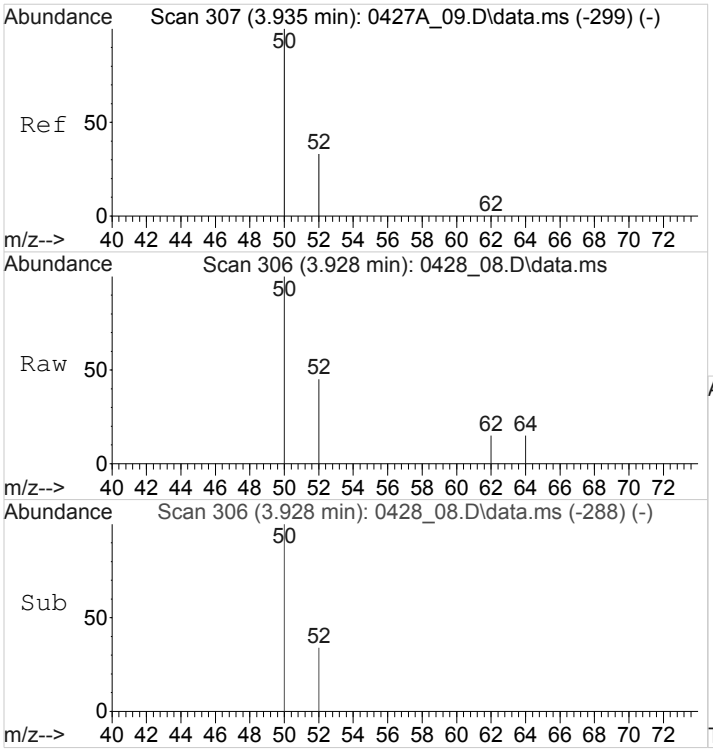
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042818\
Data File : 0428_08.D
Acq On : 28 Apr 2018 12:51 pm
Operator : 564
Sample : L988669-04 25x WG1104397
Misc : 18C26426
ALS Vial : 8 Sample Multiplier: 25
InstName : AIRMS5

Quant Time: Apr 28 14:06:16 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:33 2018
Response via : Initial Calibration

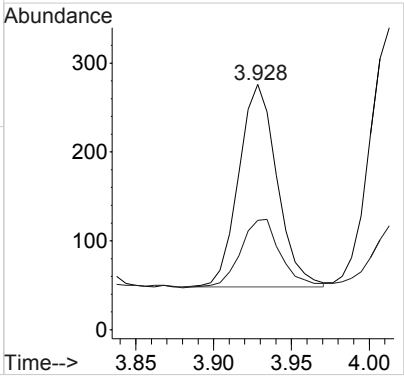


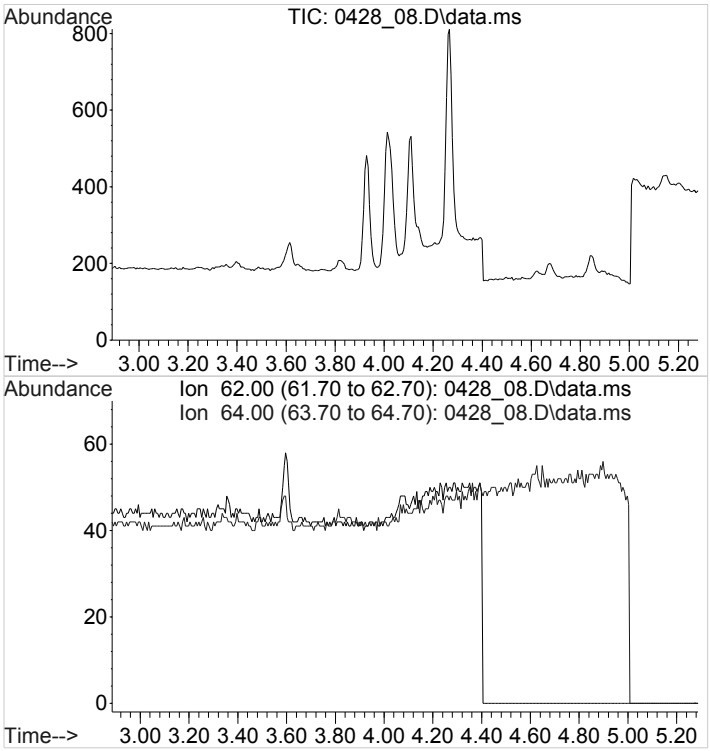


#2
Chloromethane
Concen: 0.5165017 ppbv
RT: 3.928 min Scan# 306
Delta R.T. -0.006 min
Lab File: 0428_08.D
Acq: 28 Apr 2018 12:51 pm

Tgt Ion: 50 Resp: 393

Ion	Ratio	Lower	Upper
50	100		
52	0.0	26.6	40.0#



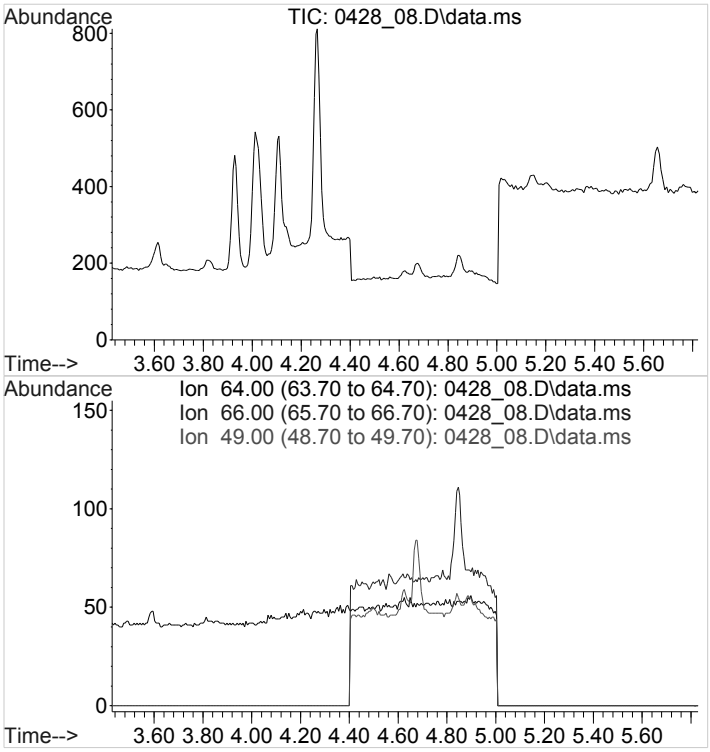


#3
Vinyl Chloride
Concen: N.D.
Expected RT: 4.09 min

Lab File: 0428_08.D
Acq: 28 Apr 2018 12:51 pm

Tgt Ion: 62

Sig	Exp Ratio
62	100
64	32.6

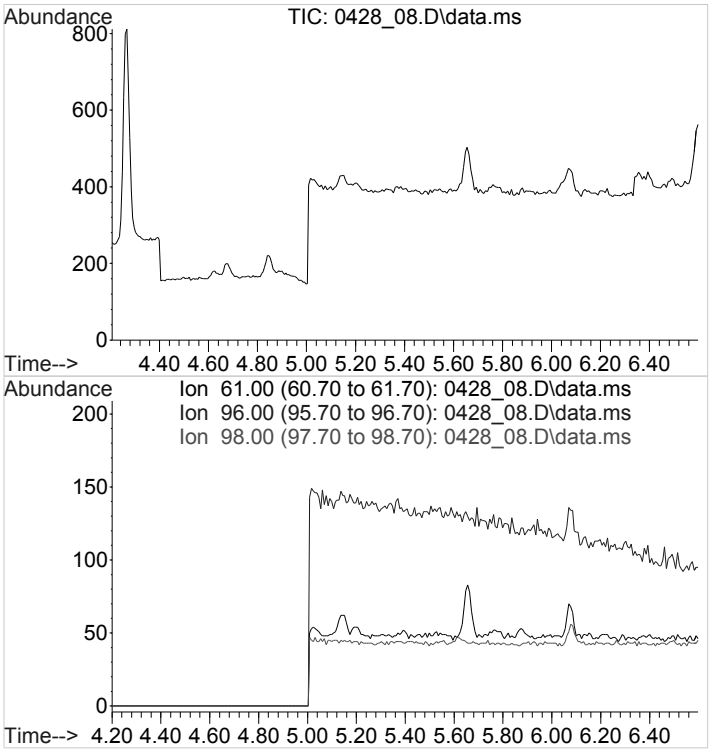


#4
Chloroethane
Concen: N.D.
Expected RT: 4.63 min

Lab File: 0428_08.D
Acq: 28 Apr 2018 12:51 pm

Tgt Ion: 64

Sig	Exp Ratio
64	100
66	32.2
49	21.6

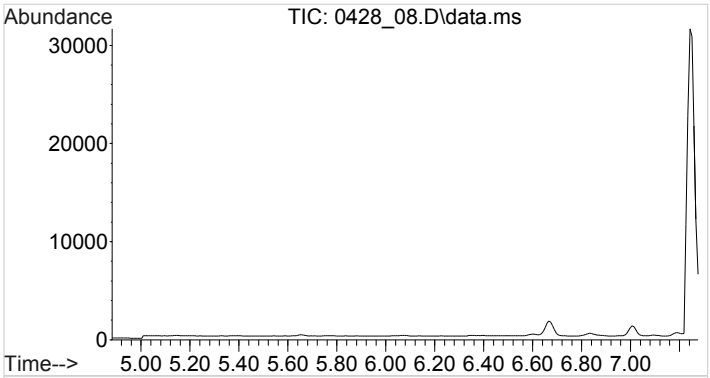


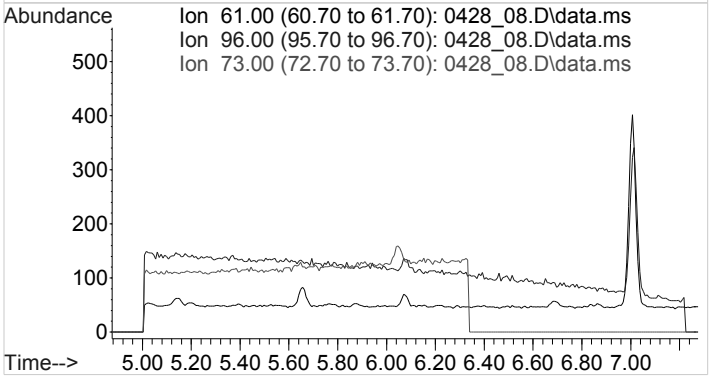
#5
1,1-Dichloroethene
Concen: N.D.
Expected RT: 5.40 min

Lab File: 0428_08.D
Acq: 28 Apr 2018 12:51 pm

Tgt Ion: 61

Sig	Exp Ratio
61	100
96	74.7
98	47.9



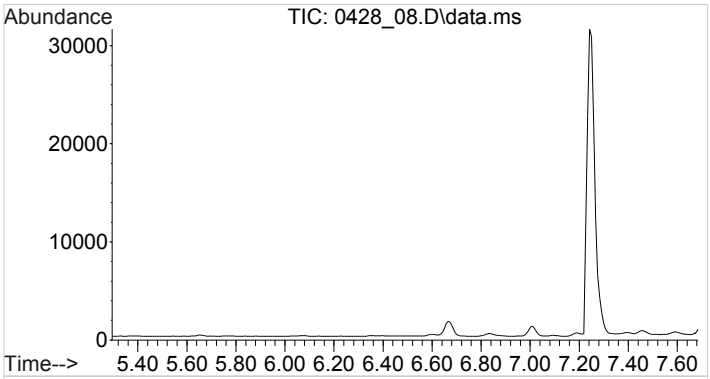


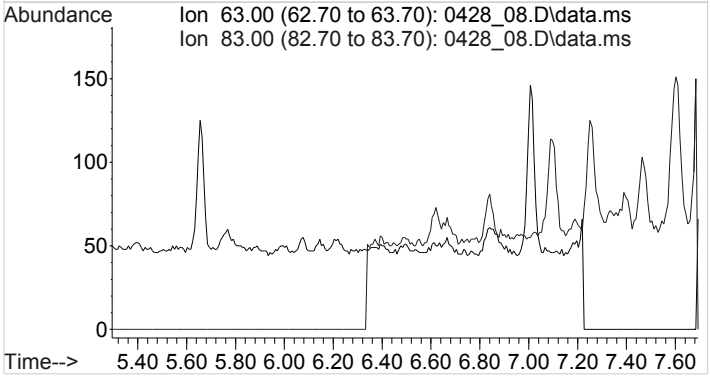
#6
Trans-1,2-Dichloroethene
Concen: N.D.
Expected RT: 6.08 min

Lab File: 0428_08.D
Acq: 28 Apr 2018 12:51 pm

Tgt Ion: 61

Sig	Exp Ratio
61	100
96	82.5
73	231.1



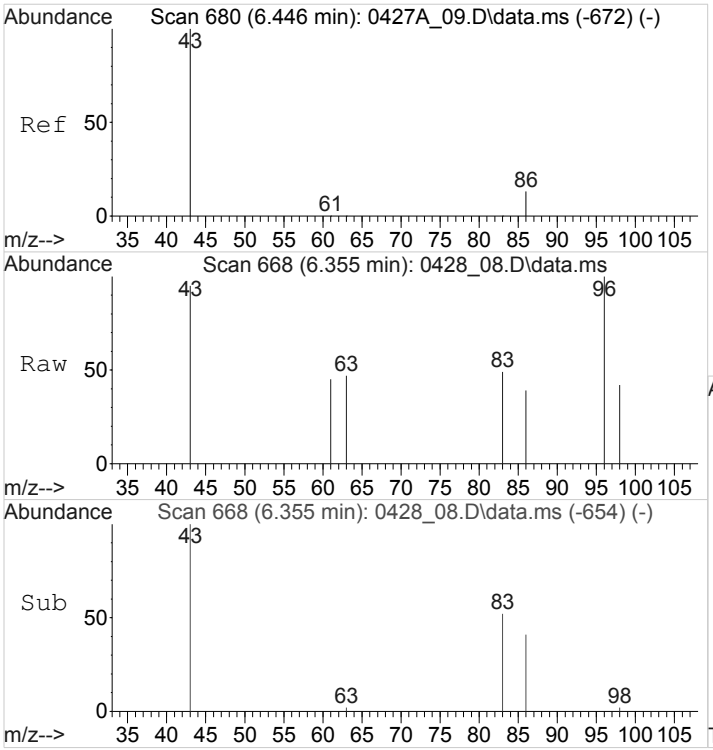


#7
1,1-Dichloroethane
Concen: N.D.
Expected RT: 6.49 min

Lab File: 0428_08.D
Acq: 28 Apr 2018 12:51 pm

Tgt Ion: 63

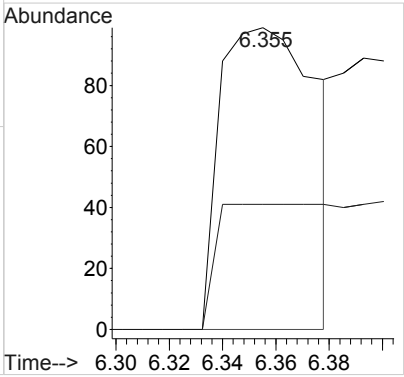
Sig	Exp Ratio
63	100
83	14.0

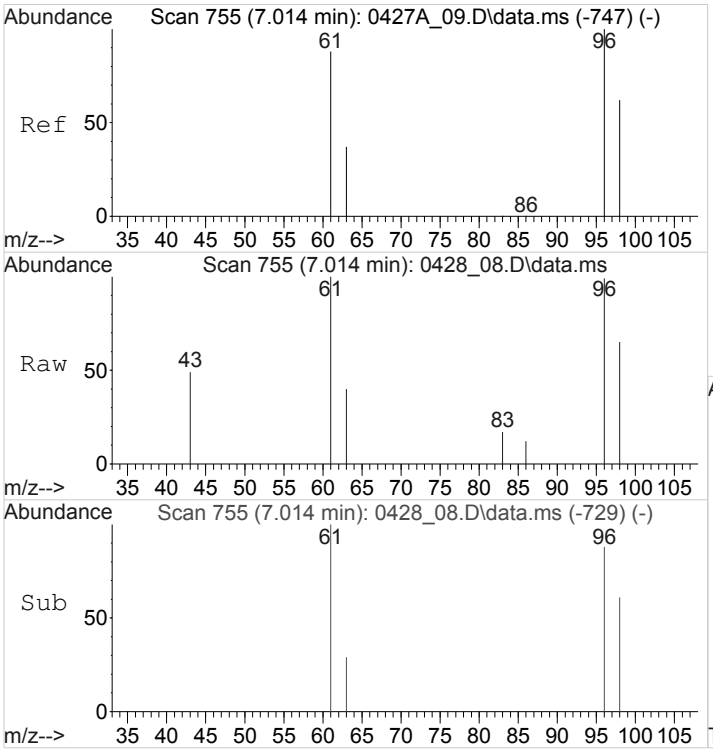


#8
Vinyl Acetate
Concen: 0.1129358 ppbv
RT: 6.355 min Scan# 668
Delta R.T. -0.091 min
Lab File: 0428_08.D
Acq: 28 Apr 2018 12:51 pm

Tgt Ion: 43 Resp: 247

Ion	Ratio	Lower	Upper
43	100		
86	0.0	10.7	16.1#

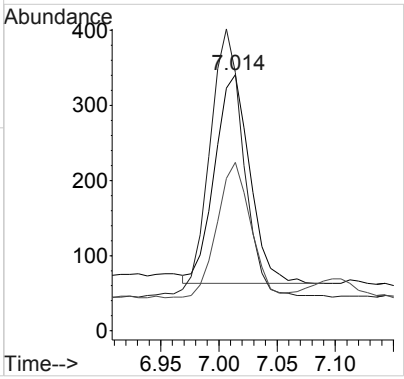


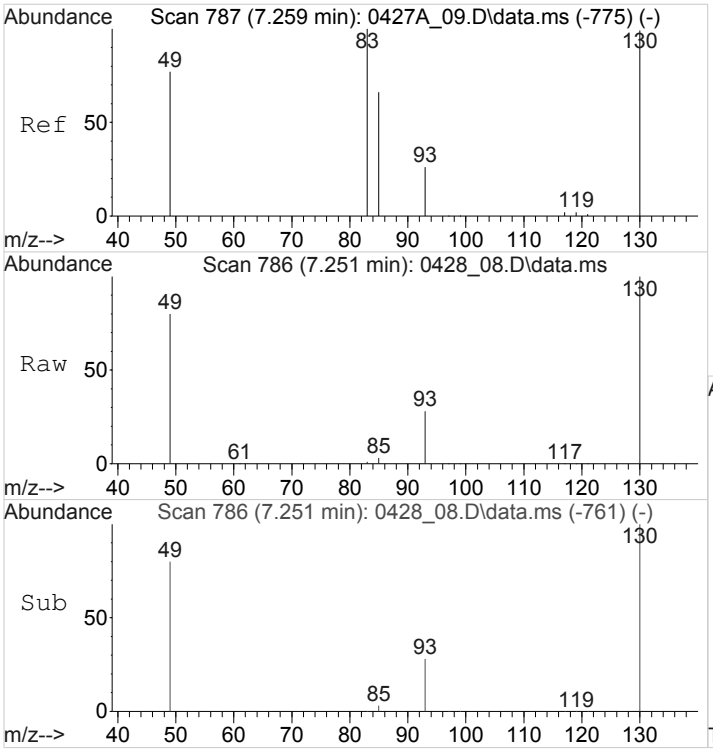


#9
cis-1,2-Dichloroethene
Concen: 0.4524868 ppbv
RT: 7.014 min Scan# 755
Delta R.T. -0.000 min
Lab File: 0428_08.D
Acq: 28 Apr 2018 12:51 pm

Tgt Ion: 96 Resp: 586

Ion	Ratio	Lower	Upper
96	100		
61	124.2	87.5	131.3
98	61.8	51.4	77.2

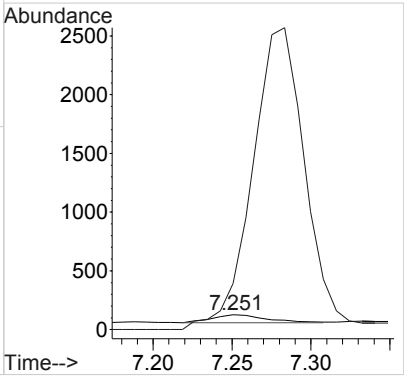


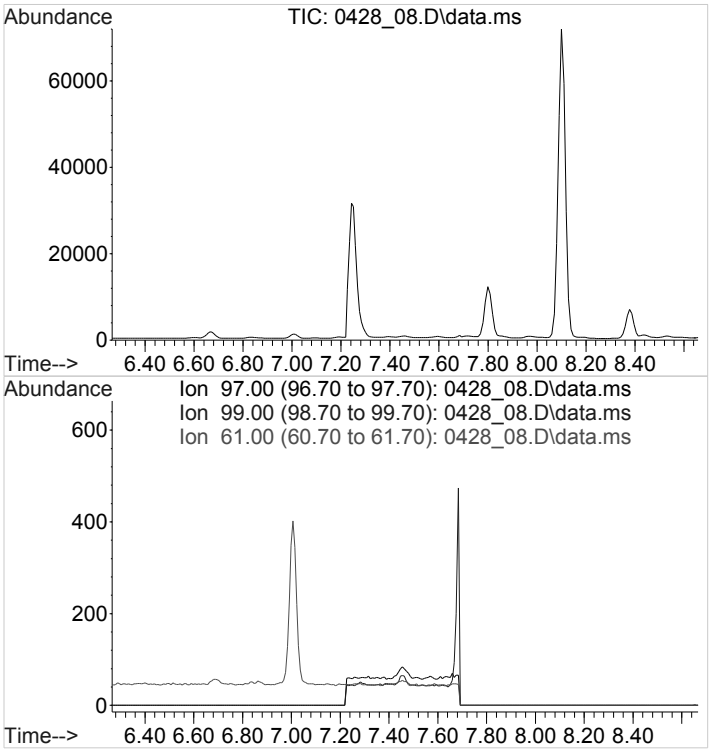


#10
Chloroform
Concen: 0.0708394 ppbv
RT: 7.251 min Scan# 786
Delta R.T. -0.008 min
Lab File: 0428_08.D
Acq: 28 Apr 2018 12:51 pm

Tgt Ion: 83 Resp: 159

Ion	Ratio	Lower	Upper
83	100		
85	3731.4	54.0	81.0#



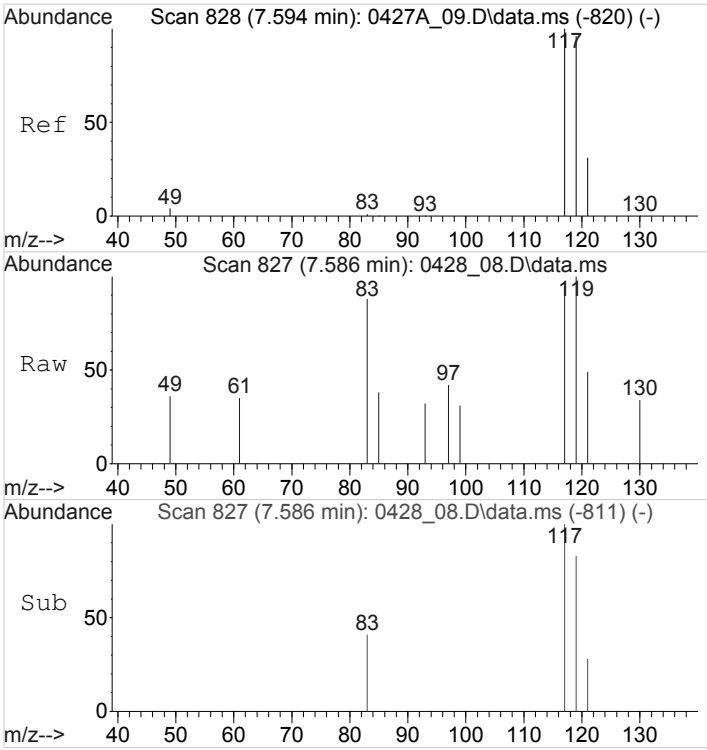


#11
1,1,1-Trichloroethane
Concen: N.D.
Expected RT: 7.46 min

Lab File: 0428_08.D
Acq: 28 Apr 2018 12:51 pm

Tgt Ion: 97

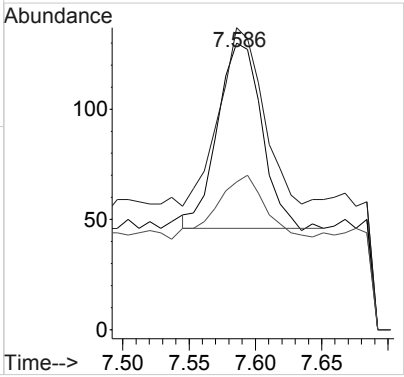
Sig	Exp Ratio
97	100
99	64.8
61	35.9

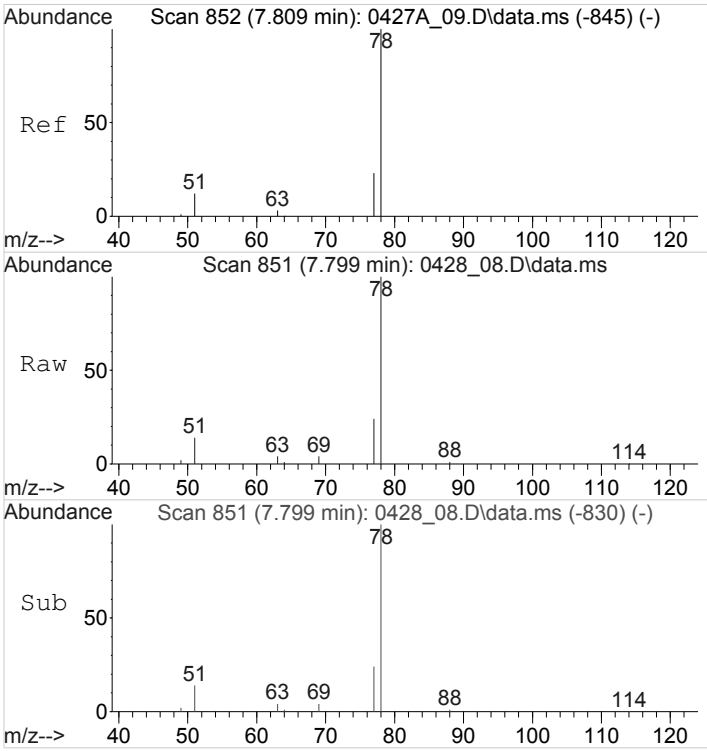


#12
Carbon Tetrachloride
Concen: 0.0805602 ppbv
RT: 7.586 min Scan# 827
Delta R.T. -0.008 min
Lab File: 0428_08.D
Acq: 28 Apr 2018 12:51 pm

Tgt Ion:117 Resp: 194

Ion	Ratio	Lower	Upper
117	100		
119	95.4	77.9	116.9
121	0.0	25.4	38.0#

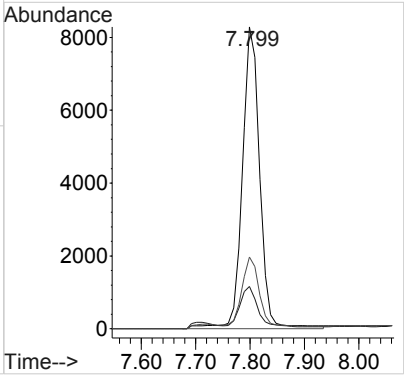


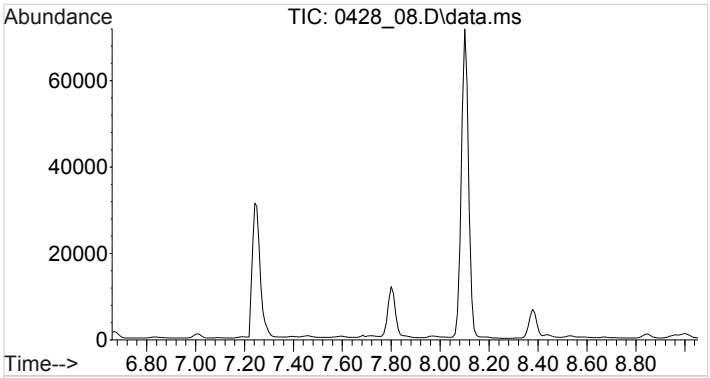


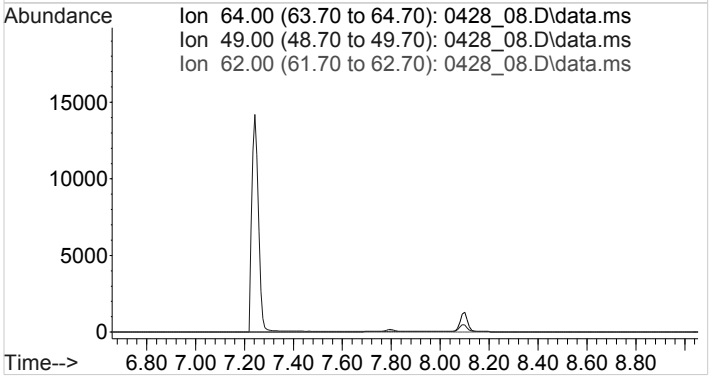
#14
Benzene
Concen: 4.6715551 ppbv
RT: 7.799 min Scan# 851
Delta R.T. -0.010 min
Lab File: 0428_08.D
Acq: 28 Apr 2018 12:51 pm

Tgt Ion: 78 Resp: 18262

Ion	Ratio	Lower	Upper
78	100		
51	14.6	10.9	16.3
77	24.0	18.8	28.2





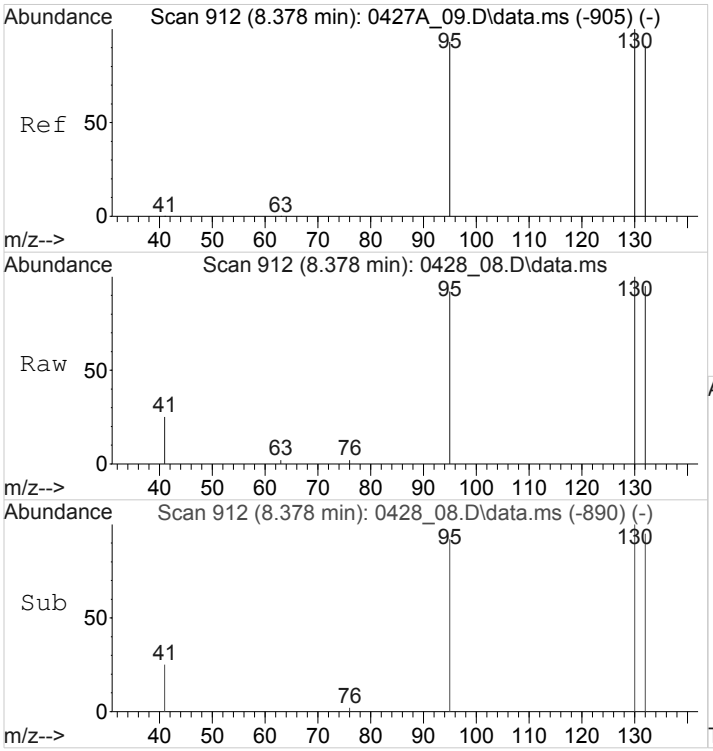


#15
1,2-Dichloroethane
Concen: N.D.
Expected RT: 7.86 min

Lab File: 0428_08.D
Acq: 28 Apr 2018 12:51 pm

Tgt Ion: 64

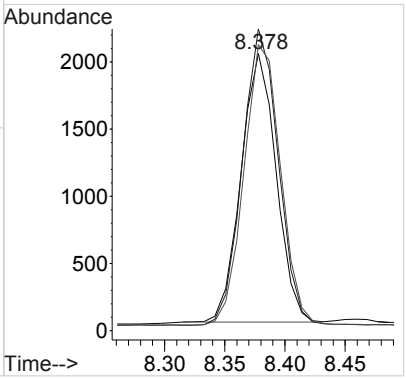
Sig	Exp Ratio
64	100
49	83.8
62	0.0

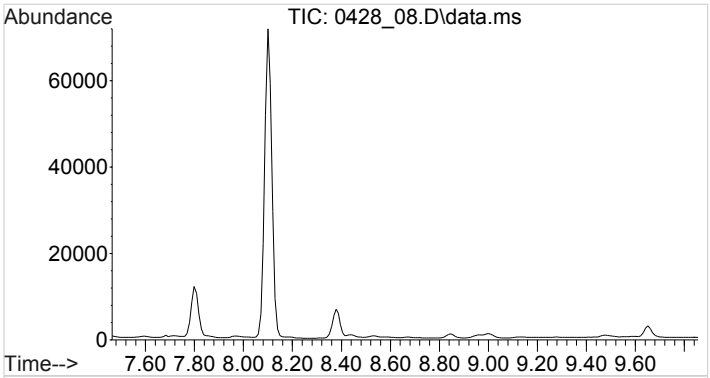


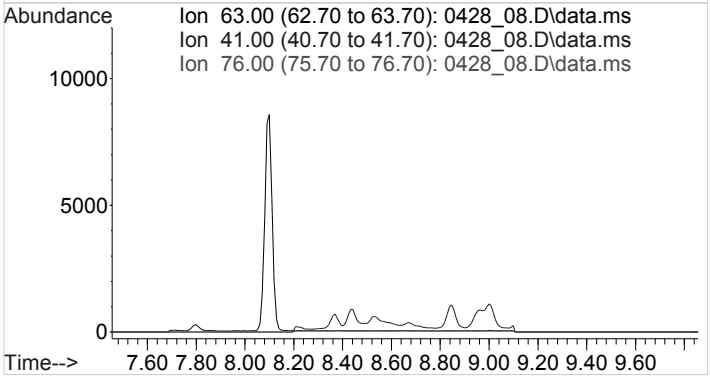
#16
Trichloroethene
Concen: 2.3542145 ppbv
RT: 8.378 min Scan# 912
Delta R.T. -0.000 min
Lab File: 0428_08.D
Acq: 28 Apr 2018 12:51 pm

Tgt Ion: 95 Resp: 4036

Ion	Ratio	Lower	Upper
95	100		
130	113.3	89.5	134.3
132	109.5	86.7	130.1





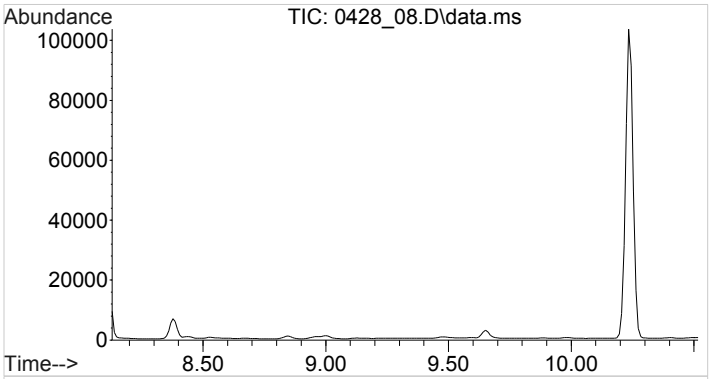


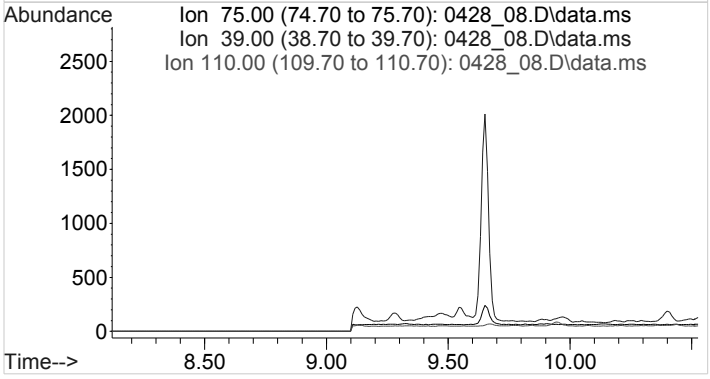
#17
1,2-Dichloropropane
Concen: N.D.
Expected RT: 8.66 min

Lab File: 0428_08.D
Acq: 28 Apr 2018 12:51 pm

Tgt Ion: 63

Sig	Exp Ratio
63	100
41	27.9
76	38.3



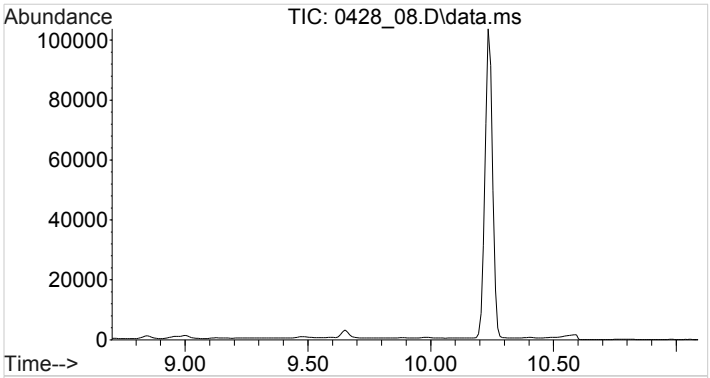


#18
cis-1,3-Dichloropropene
Concen: N.D.
Expected RT: 9.32 min

Lab File: 0428_08.D
Acq: 28 Apr 2018 12:51 pm

Tgt Ion: 75

Sig	Exp Ratio
75	100
39	30.7
110	26.0

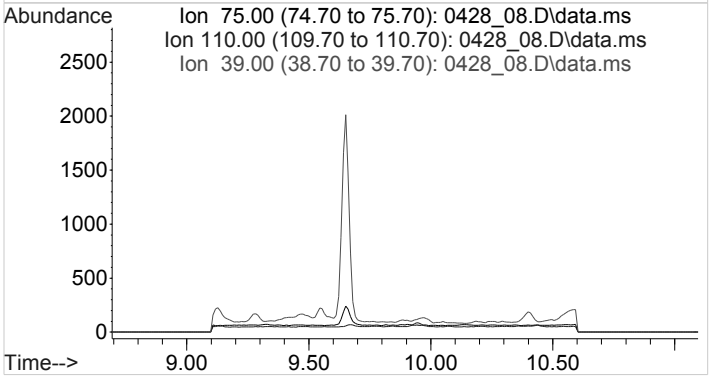


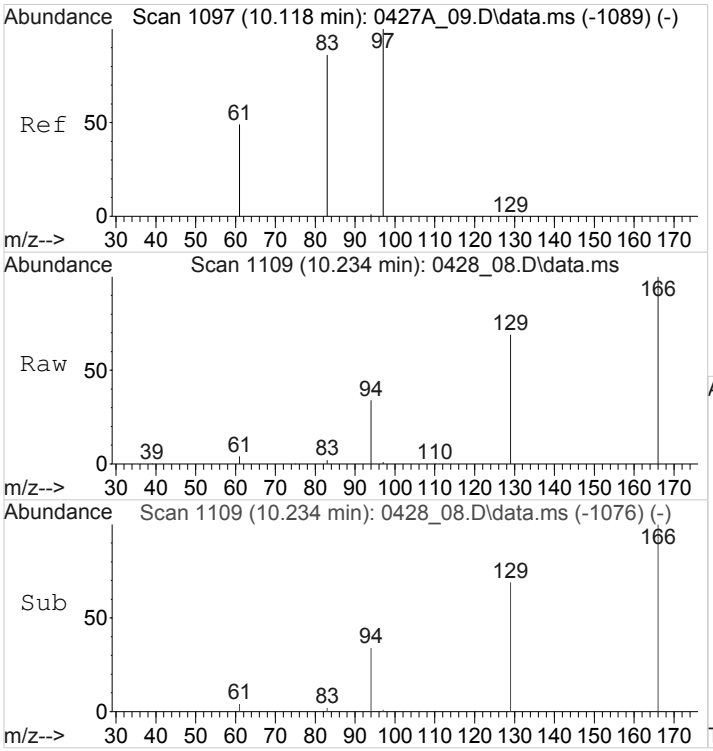
#19
trans-1,3-Dichloropropene
Concen: N.D.
Expected RT: 9.89 min

Lab File: 0428_08.D
Acq: 28 Apr 2018 12:51 pm

Tgt Ion: 75

Sig	Exp Ratio
75	100
110	29.4
39	30.7

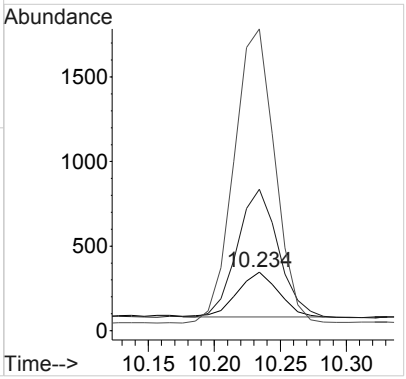


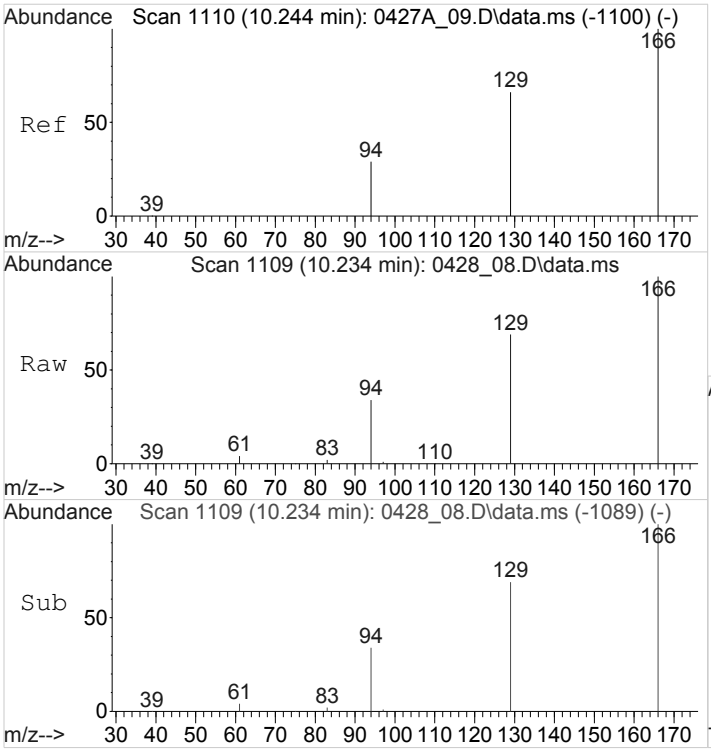


#20
1,1,2-Trichloroethane
Concen: 0.3408254 ppbv
RT: 10.234 min Scan# 1109
Delta R.T. 0.116 min
Lab File: 0428_08.D
Acq: 28 Apr 2018 12:51 pm

Tgt Ion: 97 Resp: 575

Ion	Ratio	Lower	Upper
97	100		
83	288.3	66.2	99.4#
61	651.1	38.0	57.0#

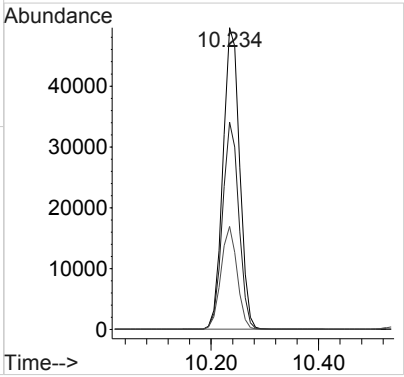


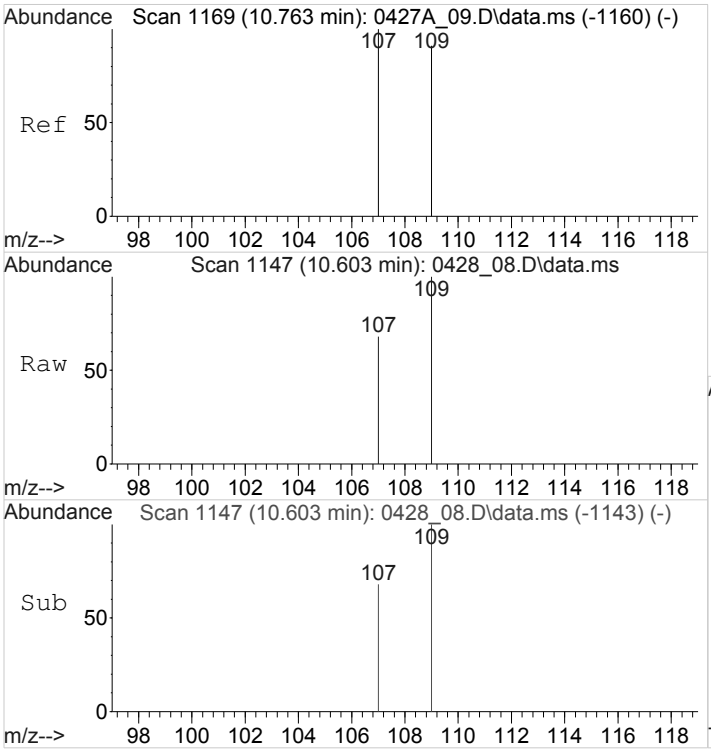


#21
Tetrachloroethene
Concen: 38.0171570 ppbv
RT: 10.234 min Scan# 1109
Delta R.T. -0.010 min
Lab File: 0428_08.D
Acq: 28 Apr 2018 12:51 pm

Tgt Ion:166 Resp: 106605

Ion	Ratio	Lower	Upper
166	100		
129	67.3	53.5	80.3
94	33.1	26.2	39.2

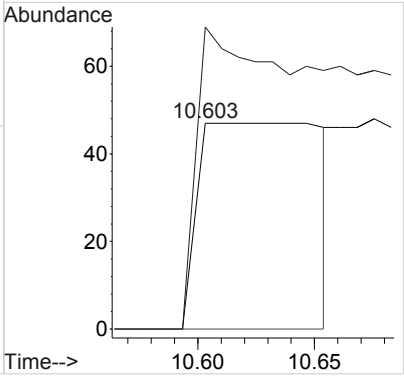


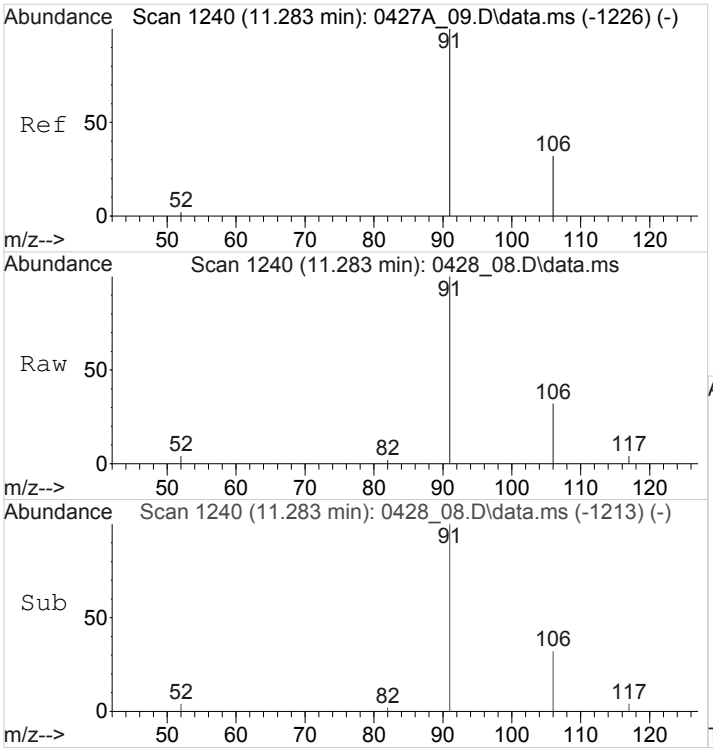


#22
1,2-Dibromoethane
Concen: 0.0645742 ppbv
RT: 10.603 min Scan# 1147
Delta R.T. -0.159 min
Lab File: 0428_08.D
Acq: 28 Apr 2018 12:51 pm

Tgt Ion:107 Resp: 170

Ion	Ratio	Lower	Upper
107	100		
109	101.2	75.9	113.9

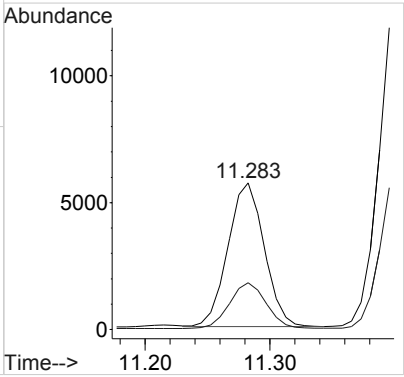


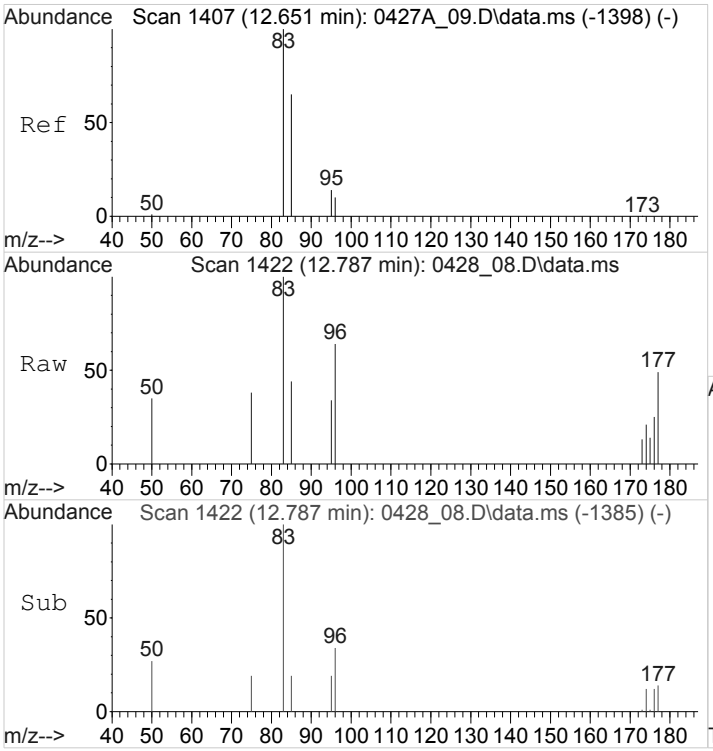


#24
Ethylbenzene
Concen: 1.8412364 ppbv
RT: 11.283 min Scan# 1240
Delta R.T. -0.000 min
Lab File: 0428_08.D
Acq: 28 Apr 2018 12:51 pm

Tgt Ion: 91 Resp: 11409

Ion	Ratio	Lower	Upper
91	100		
106	32.1	25.4	38.2

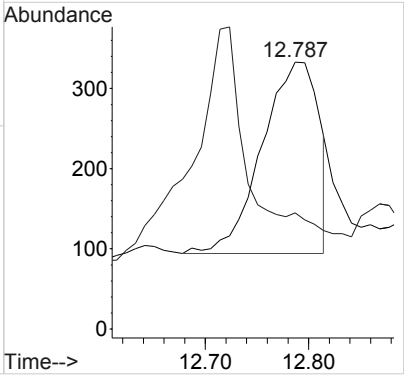


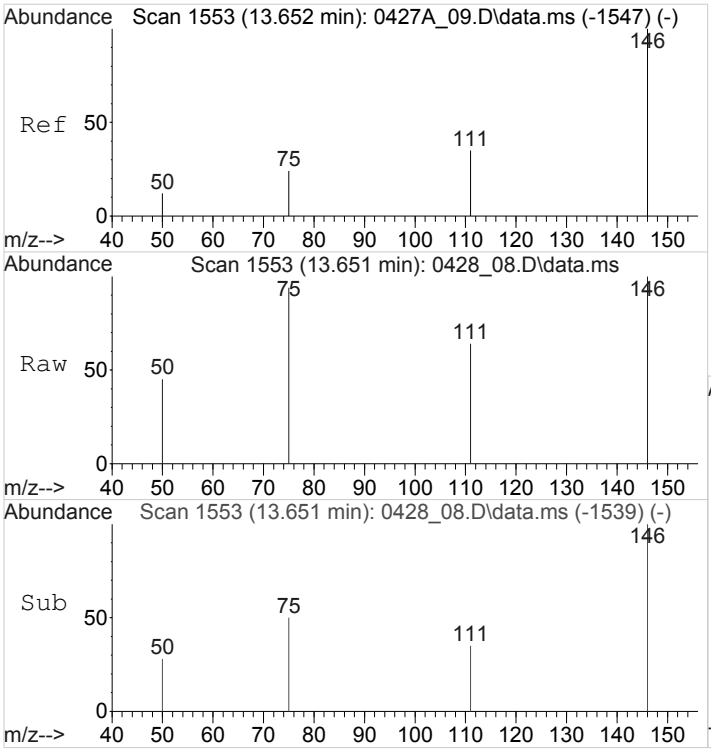


#25
1,1,2,2-Tetrachloroethane
Concen: 0.2482799 ppbv
RT: 12.787 min Scan# 1422
Delta R.T. 0.136 min
Lab File: 0428_08.D
Acq: 28 Apr 2018 12:51 pm

Tgt Ion: 83 Resp: 920

Ion	Ratio	Lower	Upper
83	100		
85	138.4	51.6	77.4#

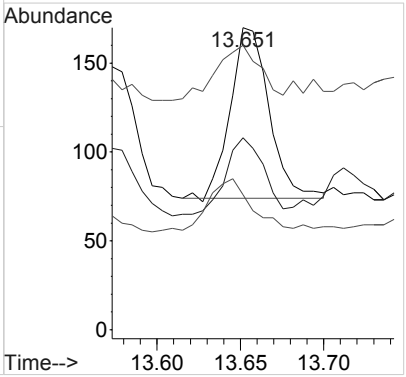




#27
1,4-Dichlorobenzene
Concen: 0.0377172 ppbv
RT: 13.651 min Scan# 1553
Delta R.T. -0.000 min
Lab File: 0428_08.D
Acq: 28 Apr 2018 12:51 pm

Tgt Ion:146 Resp: 155

Ion	Ratio	Lower	Upper
146	100		
111	0.0	27.0	40.4#
75	0.0	18.8	28.2#
50	0.0	11.4	17.2#



ACCOUNT:	PROJECT:	SDG:	DATE/TIME:	PAGE:
S&ME Inc. - Knoxville	4143-17-016	L988669	05/16/18 08:03	94 of 183

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
FC-5

ESC Sample ID:	L988669-05	**SDG:**	L988669
Client Sample ID:	FC-5	**Collected Date/Time:**	04/24/18 13:30
Lab File ID:	0427A_22	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/28/18 02:32
Analytical Batch:	WG1104091	**Analysis Date/Time:**	04/28/18 02:32
Dilution Factor:	1	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	**CAS**	**RT**	**Result** *ppbv*	**Qualifier**	**MDL** *ppbv*	**RDL** *ppbv*
Benzene	71-43-2	7.81	2.57		0.00541	0.0200
Carbon tetrachloride	56-23-5	7.59	0.0789		0.00575	0.0200
Chloroethane	75-00-3	4.62	ND		0.0159	0.0400
Chloroform	67-66-3	7.25	0.0536		0.00464	0.0200
Chloromethane	74-87-3	3.92	0.447		0.00972	0.0300
1,2-Dibromoethane	106-93-4	0	ND		0.0185	0.0200
1,4-Dichlorobenzene	106-46-7	0	ND		0.00691	0.0200
1,1-Dichloroethane	75-34-3	0	ND		0.00505	0.0200
1,2-Dichloroethane	107-06-2	7.86	0.0302		0.000471	0.0200
1,1-Dichloroethene	75-35-4	0	ND		0.00521	0.0200
cis-1,2-Dichloroethene	156-59-2	7.01	0.243		0.00770	0.0200
trans-1,2-Dichloroethene	156-60-5	6.08	0.0228		0.00499	0.0200
1,2-Dichloropropane	78-87-5	8.66	ND		0.00840	0.0300
cis-1,3-Dichloropropene	10061-01-5	0	ND		0.00556	0.0200
trans-1,3-Dichloropropene	10061-02-6	0	ND		0.00853	0.0300
Ethylbenzene	100-41-4	11.28	0.930		0.00904	0.0300
1,1,2,2-Tetrachloroethane	79-34-5	12.62	ND		0.00481	0.0200
1,1,1-Trichloroethane	71-55-6	0	ND		0.00552	0.0200
1,1,2-Trichloroethane	79-00-5	10.10	ND		0.0287	0.0300
Trichloroethylene	79-01-6	8.38	1.23		0.00736	0.0200
Vinyl chloride	75-01-4	4.07	ND		0.00765	0.0200
Vinyl acetate	108-05-4	0	ND		0.00430	0.0200

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_22.D
Acq On : 28 Apr 2018 2:32 am
Operator : 564
Sample : L988669-05 1x WG1104091
Misc : 18C26426
ALS Vial : 22 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 10:06:19 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:33 2018
Response via : Initial Calibration

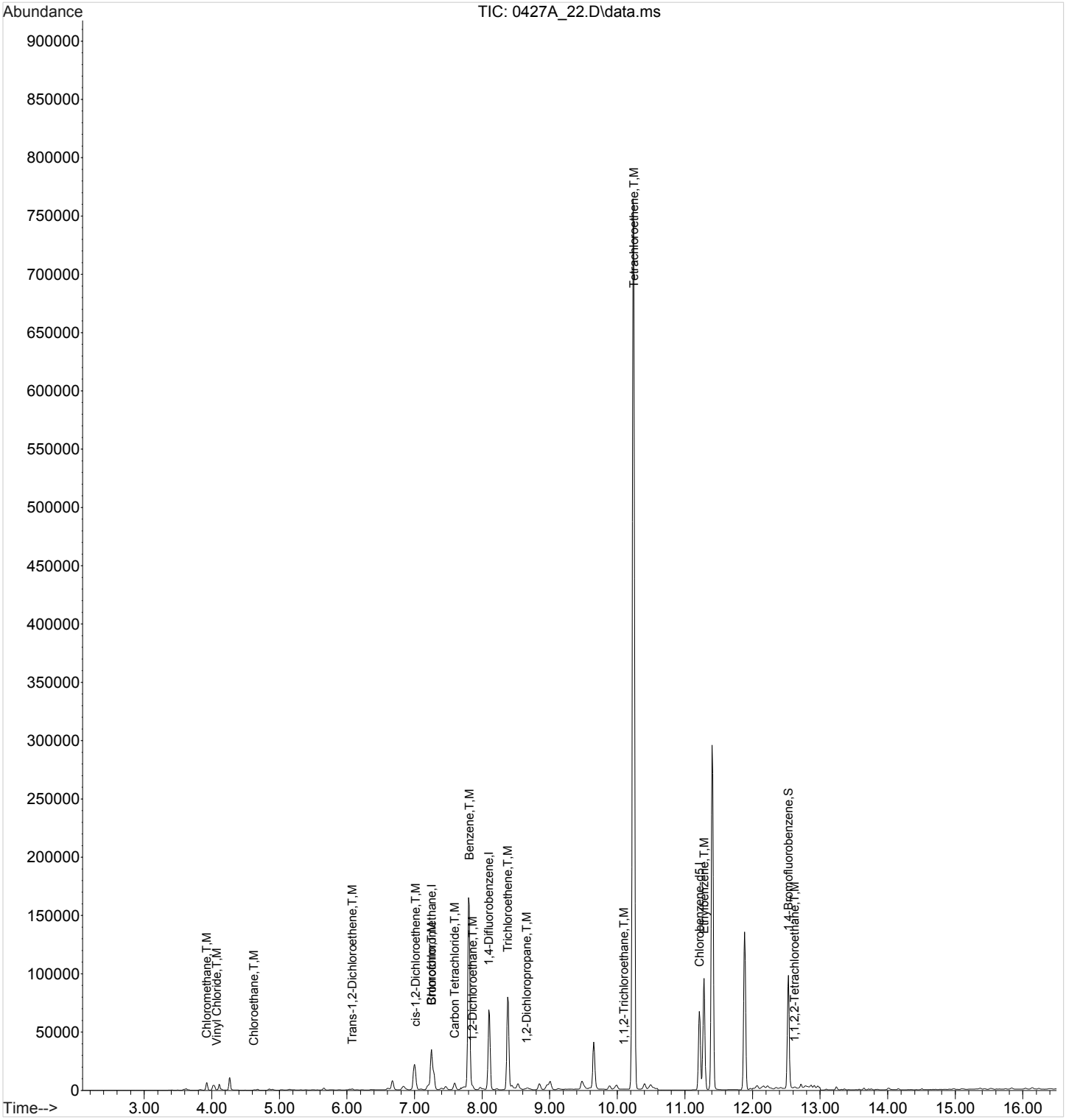
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.251	130	28958	1.2500000	ppbv	0.00
13) 1,4-Difluorobenzene	8.100	114	103674	1.2500000	ppbv	0.00
23) Chlorobenzene-d5	11.215	117	86395m	1.2500000	ppbv	0.00
System Monitoring Compounds						
26) 1,4-Bromofluorobenzene	12.532	95	52447	1.3102899	ppbv	0.00
Spiked Amount 1.250	Range 60 - 140		Recovery = 104.82%			
Target Compounds						Qvalue
2) Chloromethane	3.922	50	8440	0.4472774	ppbv	100
3) Vinyl Chloride	4.073	62	296	0.0124411	ppbv #	42
4) Chloroethane	4.620	64	150	0.0118115	ppbv #	1
5) 1,1-Dichloroethene	5.520	61	196	N.D.		
6) Trans-1,2-Dichloroethene	6.077	61	713	0.0227865	ppbv	95
7) 1,1-Dichloroethane	6.491	63	173	N.D.		
8) Vinyl Acetate	0.000		0	N.D. d		
9) cis-1,2-Dichloroethene	7.014	96	7810	0.2431726	ppbv #	83
10) Chloroform	7.251	83	2984	0.0536083	ppbv #	1
11) 1,1,1-Trichloroethane	7.455	97	367	N.D.		
12) Carbon Tetrachloride	7.594	117	4714	0.0789339	ppbv	100
14) Benzene	7.809	78	248109	2.5731055	ppbv	99
15) 1,2-Dichloroethane	7.857	64	316	0.0301818	ppbv #	7
16) Trichloroethene	8.378	95	52146	1.2331554	ppbv	98
17) 1,2-Dichloropropane	8.657	63	517	0.0159093	ppbv #	1
18) cis-1,3-Dichloropropene	9.331	75	220	N.D.		
19) trans-1,3-Dichloropropene	9.894	75	250	N.D.		
20) 1,1,2-Trichloroethane	10.098	97	901	0.0216516	ppbv #	16
21) Tetrachloroethene	10.244	166	813239	11.7576951	ppbv	99
22) 1,2-Dibromoethane	0.000		0	N.D. d		
24) Ethylbenzene	11.283	91	142033	0.9302492	ppbv	100
25) 1,1,2,2-Tetrachloroethane	12.623	83	1337	0.0146431	ppbv #	77
27) 1,4-Dichlorobenzene	13.658	146	816	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_22.D
Acq On : 28 Apr 2018 2:32 am
Operator : 564
Sample : L988669-05 1x WG1104091
Misc : 18C26426
ALS Vial : 22 Sample Multiplier: 1
InstName : AIRMS5

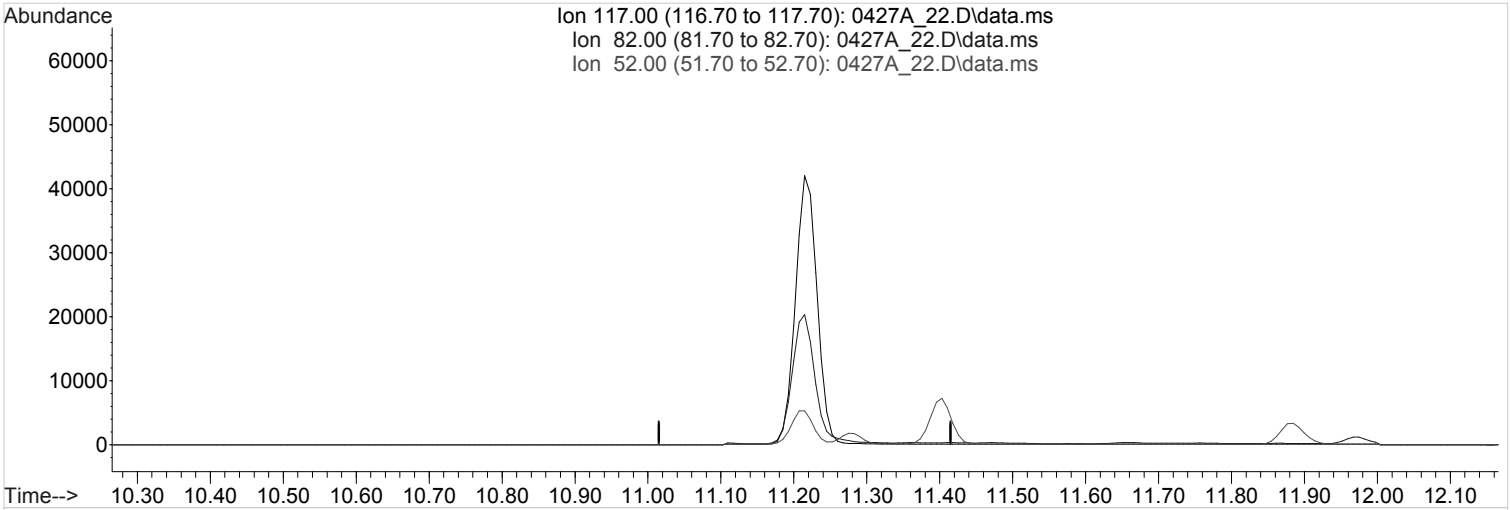
Quant Time: Apr 28 10:06:19 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:33 2018
Response via : Initial Calibration

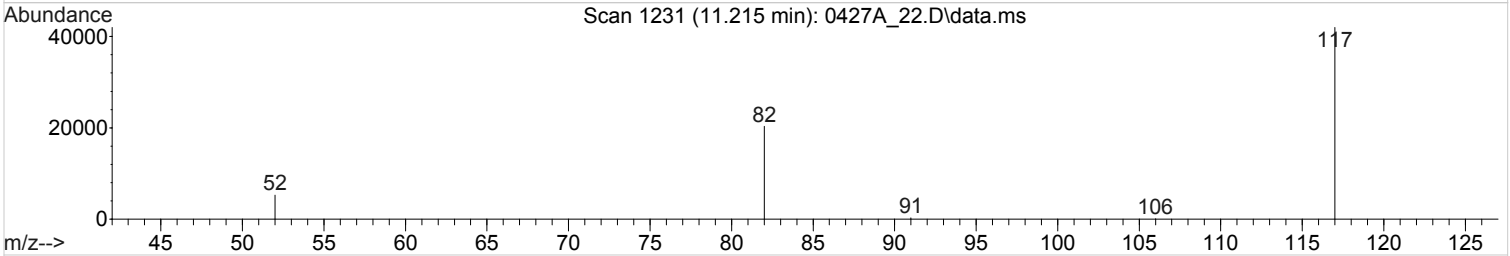


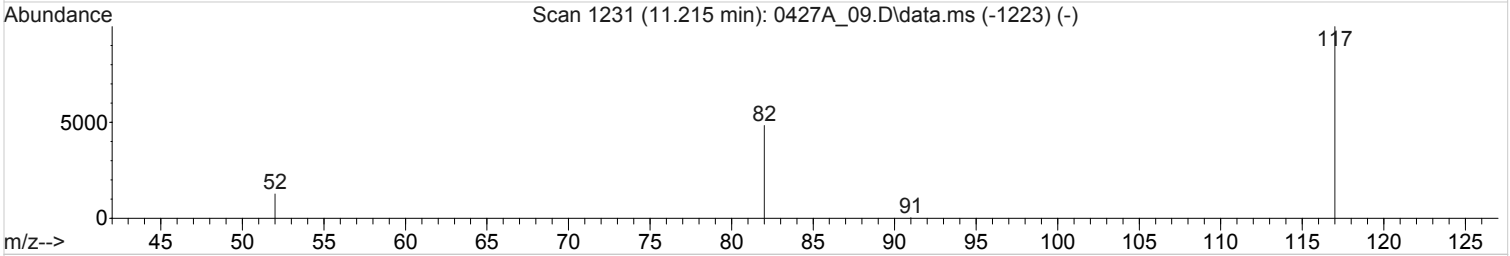
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_22.D
Acq On : 28 Apr 2018 2:32 am
Operator : 564
Sample : L988669-05 1x WG1104091
Misc : 18C26426
ALS Vial : 22 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 10:02:27 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:33 2018
Response via : Initial Calibration







TIC: 0427A_22.D\data.ms

(23) Chlorobenzene-d5 (I)

11.215min 0.0000000 ppbv d

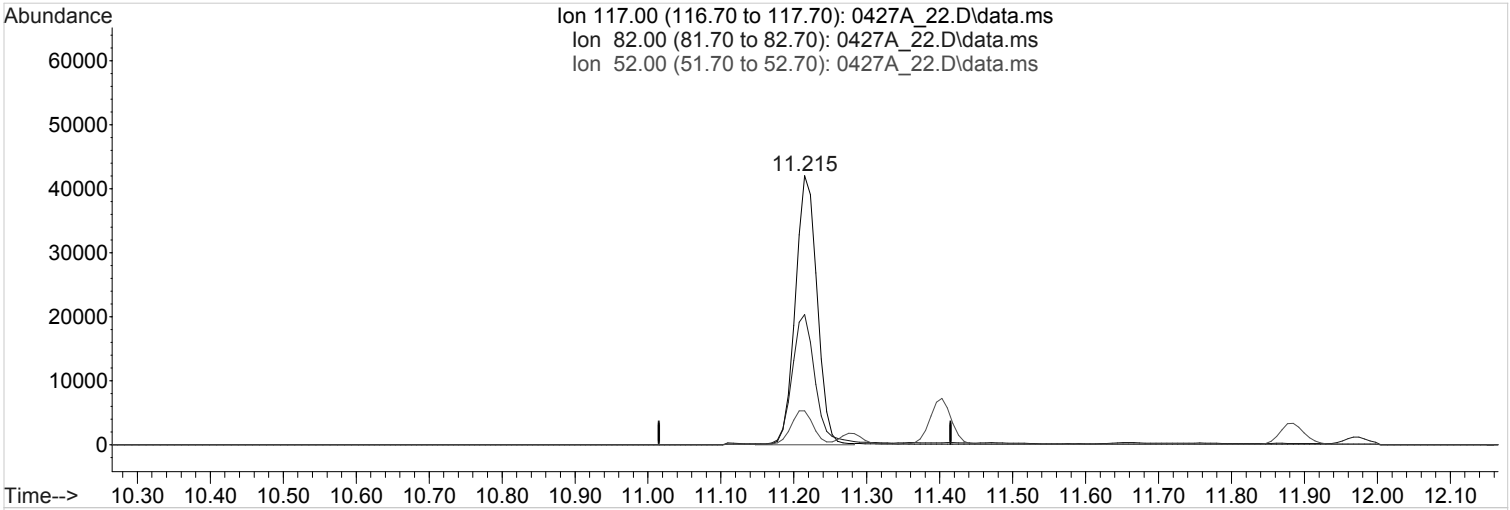
response 0

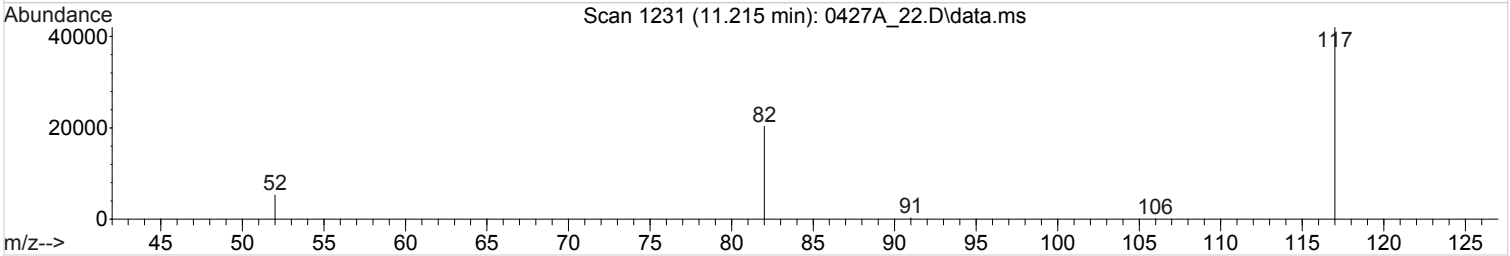
Ion	Exp%	Act%
117.00	100	0.00
82.00	48.10	0.00
52.00	13.20	0.00
0.00	0.00	0.00

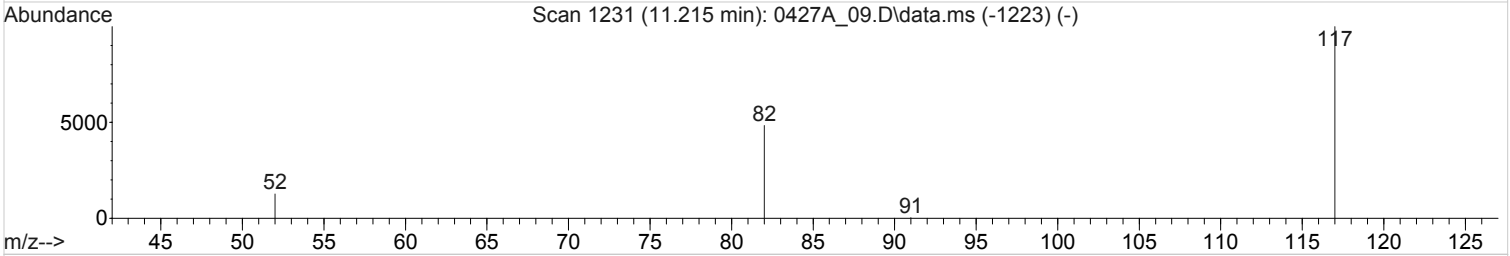
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_22.D
Acq On : 28 Apr 2018 2:32 am
Operator : 564
Sample : L988669-05 1x WG1104091
Misc : 18C26426
ALS Vial : 22 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 10:02:27 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:33 2018
Response via : Initial Calibration







TIC: 0427A_22.D\data.ms

(23) Chlorobenzene-d5 (I)

11.215min (-0.000) 1.2500000 ppbv m

response 86395

Ion	Exp%	Act%
117.00	100	100
82.00	48.10	0.00#
52.00	13.20	0.00#
0.00	0.00	0.00

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
FC-5

ESC Sample ID:	L988669-05	**SDG:**	L988669
Client Sample ID:	FC-5	**Collected Date/Time:**	04/24/18 13:30
Lab File ID:	0428_09	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/28/18 13:30
Analytical Batch:	WG1104397	**Analysis Date/Time:**	04/28/18 13:30
Dilution Factor:	8	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	50 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	**CAS**	**RT**	**Result**	**Qualifier**	**MDL**	**RDL**
			ppbv		*ppbv*	*ppbv*
Tetrachloroethylene	127-18-4	10.23	12.3		0.0366	0.160

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042818\
Data File : 0428_09.D
Acq On : 28 Apr 2018 1:30 pm
Operator : 564
Sample : L988669-05 8x WG1104397
Misc : 18C26426
ALS Vial : 9 Sample Multiplier: 8
InstName : AIRMS5

Quant Time: Apr 28 14:06:20 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:33 2018
Response via : Initial Calibration

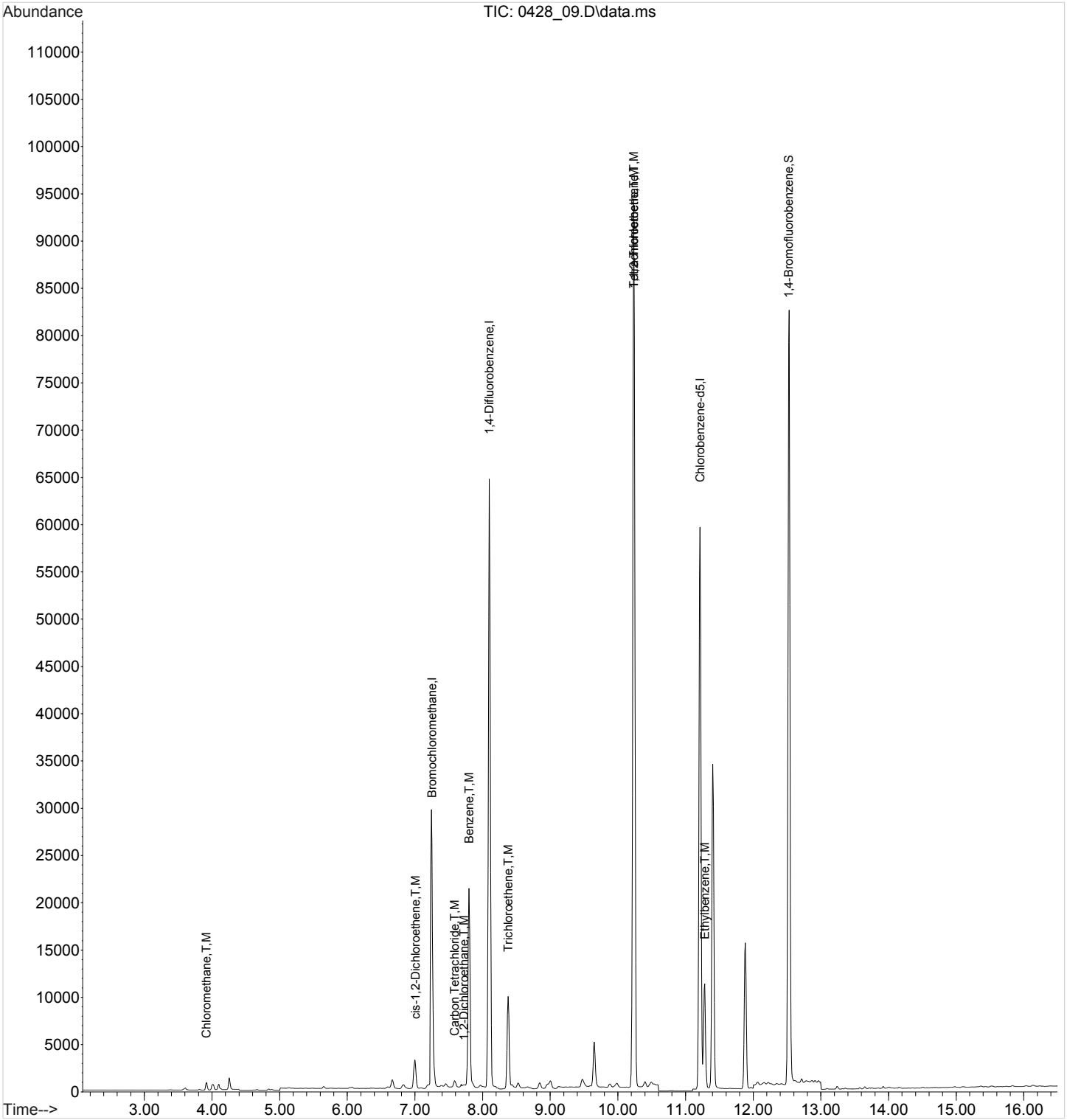
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.251	130	26199	1.2500000	ppbv	0.00
13) 1,4-Difluorobenzene	8.100	114	94235	1.2500000	ppbv	-0.01
23) Chlorobenzene-d5	11.215	117	76207	1.2500000	ppbv	0.00
System Monitoring Compounds						
26) 1,4-Bromofluorobenzene	12.523	95	44198	1.2518235	ppbv	0.00
Spiked Amount 1.250	Range 60 - 140		Recovery = 100.15%			
Target Compounds						Qvalue
2) Chloromethane	3.916	50	1060	0.4967229	ppbv	99
3) Vinyl Chloride	0.000		0	N.D.		
4) Chloroethane	0.000		0	N.D.		
5) 1,1-Dichloroethene	0.000		0	N.D.		
6) Trans-1,2-Dichloroethene	0.000		0	N.D.		
7) 1,1-Dichloroethane	0.000		0	N.D.		
8) Vinyl Acetate	6.347	43	228	0.0371705	ppbv #	67
9) cis-1,2-Dichloroethene	7.006	96	968	0.2665095	ppbv #	84
10) Chloroform	7.251	83	394	0.0625897	ppbv #	1
11) 1,1,1-Trichloroethane	0.000		0	N.D.		
12) Carbon Tetrachloride	7.586	117	986	0.1459905	ppbv #	63
14) Benzene	7.799	78	30486	2.7826791	ppbv	95
15) 1,2-Dichloroethane	7.721	64	175	0.1471103	ppbv #	1
16) Trichloroethene	8.378	95	6202	1.2908512	ppbv	99
17) 1,2-Dichloropropane	0.000		0	N.D.		
18) cis-1,3-Dichloropropene	0.000		0	N.D.		
19) trans-1,3-Dichloropropene	0.000		0	N.D.		
20) 1,1,2-Trichloroethane	10.234	97	533	0.1127303	ppbv #	1
21) Tetrachloroethene	10.234	166	96704	12.3054087	ppbv	100
22) 1,2-Dibromoethane	10.603	107	282	0.0382216	ppbv	90
24) Ethylbenzene	11.283	91	16339	0.9705530	ppbv	99
25) 1,1,2,2-Tetrachloroethane	12.623	83	177	0.0175816	ppbv #	1
27) 1,4-Dichlorobenzene	0.000		0	N.D.		

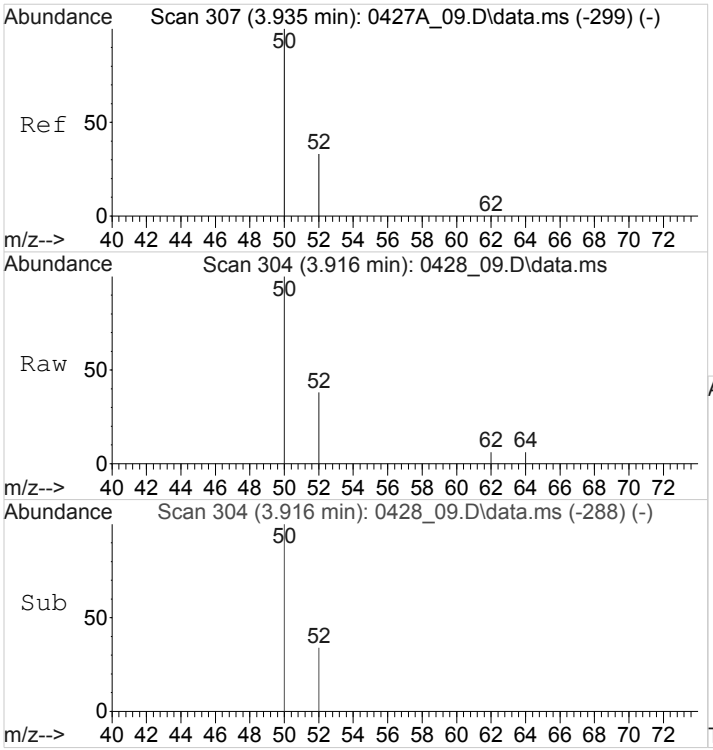
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042818\
Data File : 0428_09.D
Acq On : 28 Apr 2018 1:30 pm
Operator : 564
Sample : L988669-05 8x WG1104397
Misc : 18C26426
ALS Vial : 9 Sample Multiplier: 8
InstName : AIRMS5

Quant Time: Apr 28 14:06:20 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:33 2018
Response via : Initial Calibration

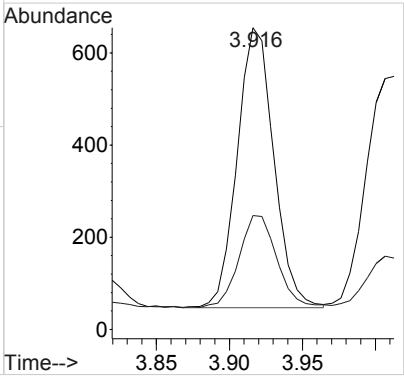


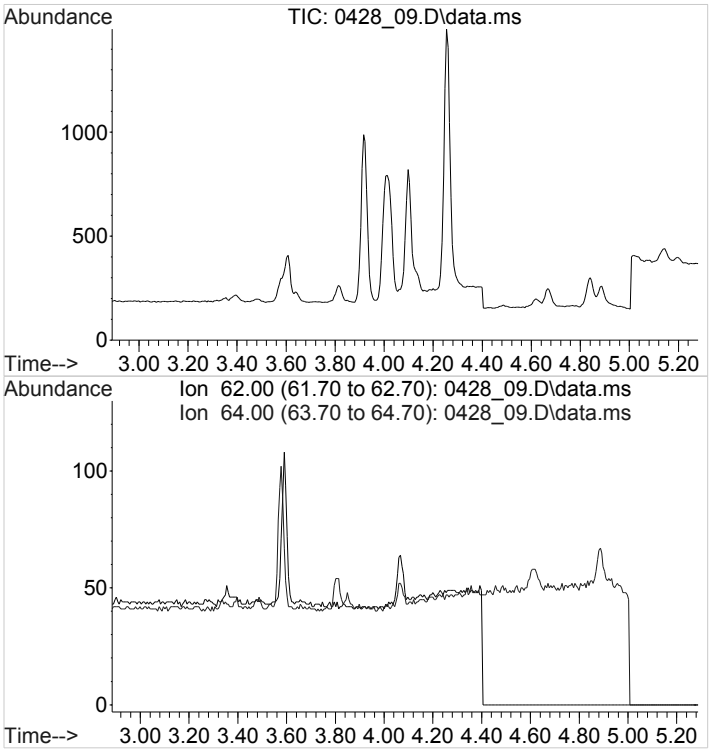


#2
Chloromethane
Concen: 0.4967229 ppbv
RT: 3.916 min Scan# 304
Delta R.T. -0.018 min
Lab File: 0428_09.D
Acq: 28 Apr 2018 1:30 pm

Tgt Ion: 50 Resp: 1060

Ion	Ratio	Lower	Upper
50	100		
52	33.9	26.6	40.0



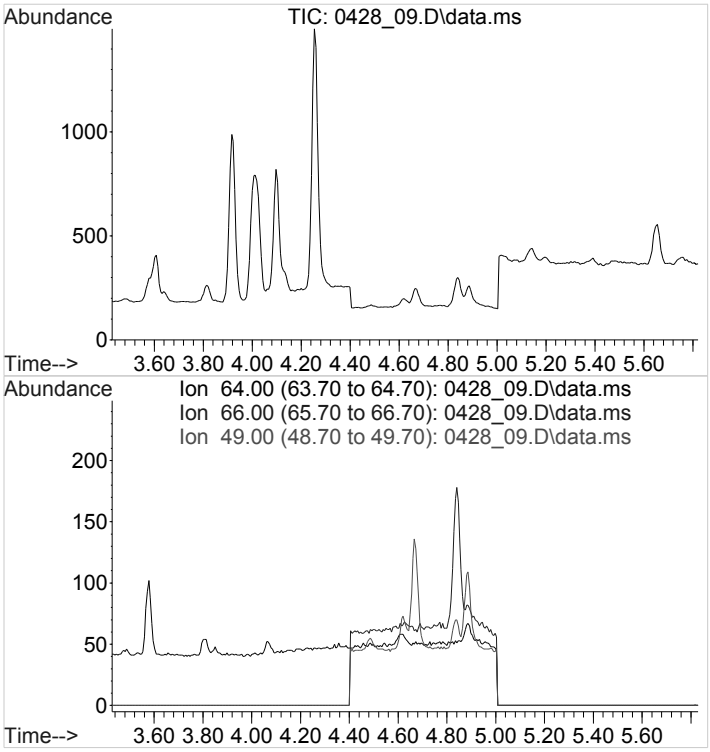


#3
Vinyl Chloride
Concen: N.D.
Expected RT: 4.09 min

Lab File: 0428_09.D
Acq: 28 Apr 2018 1:30 pm

Tgt Ion: 62

Sig	Exp Ratio
62	100
64	32.6

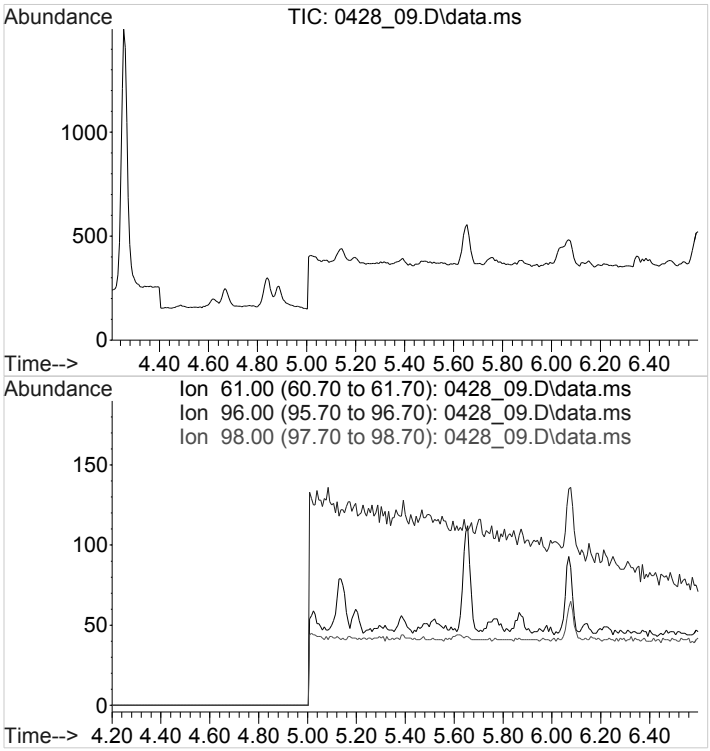


#4
Chloroethane
Concen: N.D.
Expected RT: 4.63 min

Lab File: 0428_09.D
Acq: 28 Apr 2018 1:30 pm

Tgt Ion: 64

Sig	Exp Ratio
64	100
66	32.2
49	21.6

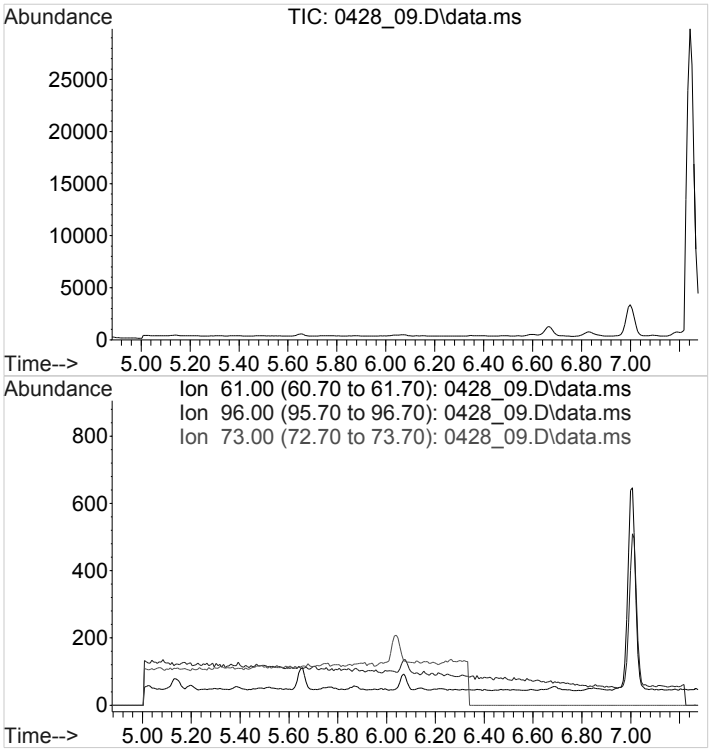


#5
1,1-Dichloroethene
Concen: N.D.
Expected RT: 5.40 min

Lab File: 0428_09.D
Acq: 28 Apr 2018 1:30 pm

Tgt Ion: 61

Sig	Exp Ratio
61	100
96	74.7
98	47.9

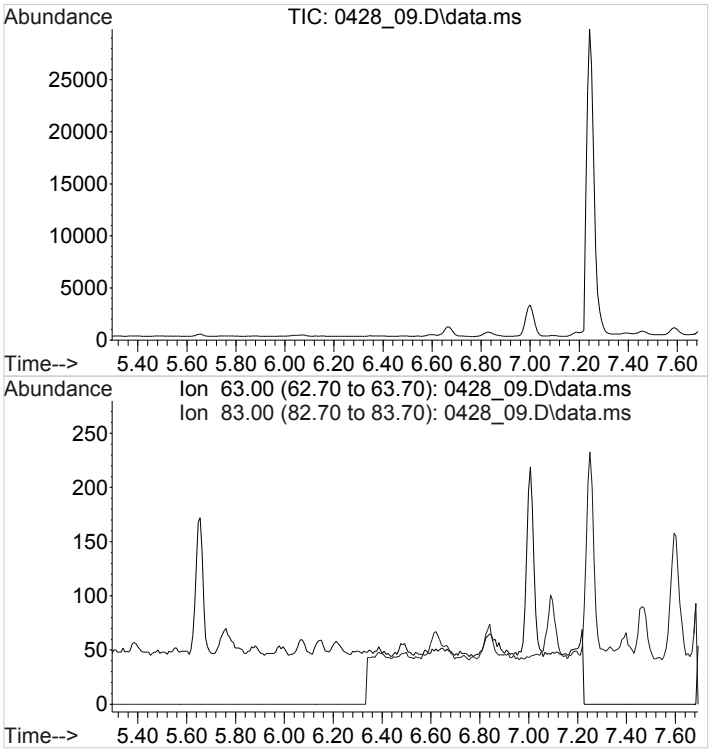


#6
Trans-1,2-Dichloroethene
Concen: N.D.
Expected RT: 6.08 min

Lab File: 0428_09.D
Acq: 28 Apr 2018 1:30 pm

Tgt Ion: 61

Sig	Exp Ratio
61	100
96	82.5
73	231.1

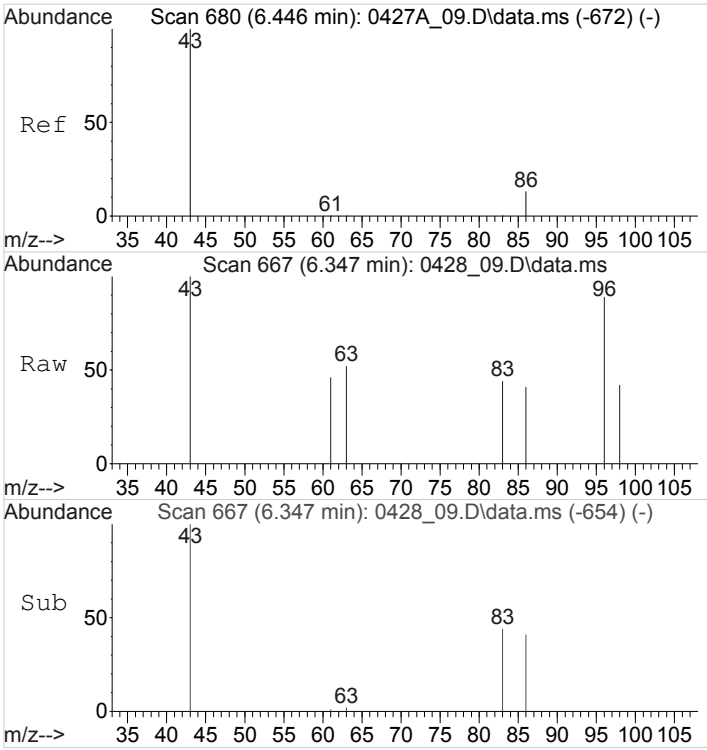


#7
1,1-Dichloroethane
Concen: N.D.
Expected RT: 6.49 min

Lab File: 0428_09.D
Acq: 28 Apr 2018 1:30 pm

Tgt Ion: 63

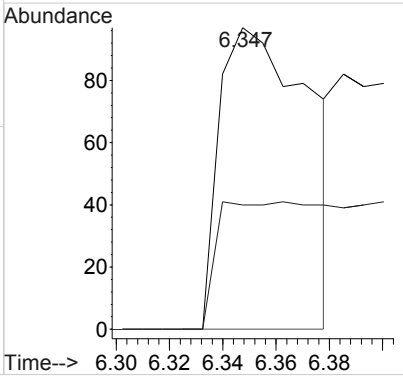
Sig	Exp Ratio
63	100
83	14.0

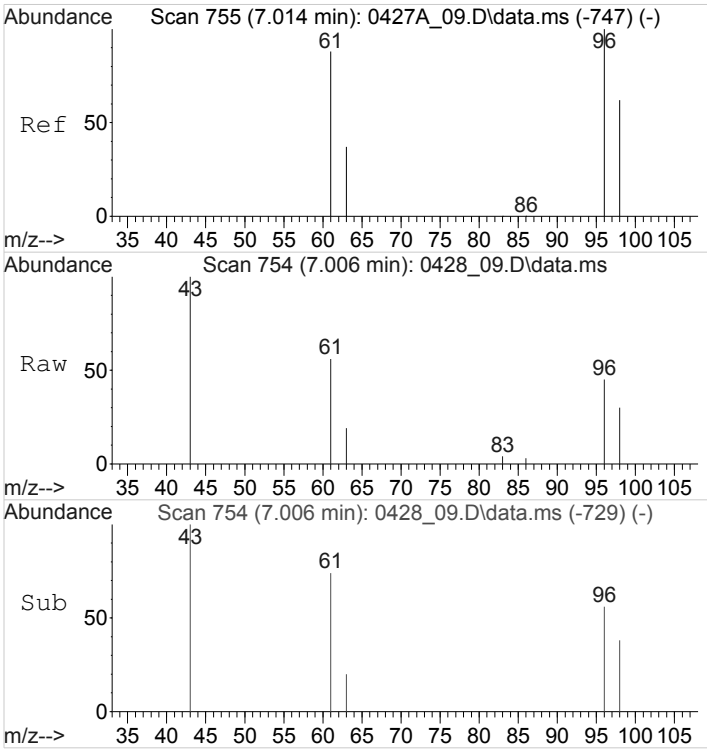


#8
Vinyl Acetate
Concen: 0.0371705 ppbv
RT: 6.347 min Scan# 667
Delta R.T. -0.099 min
Lab File: 0428_09.D
Acq: 28 Apr 2018 1:30 pm

Tgt Ion: 43 Resp: 228

Ion	Ratio	Lower	Upper
43	100		
86	0.0	10.7	16.1#

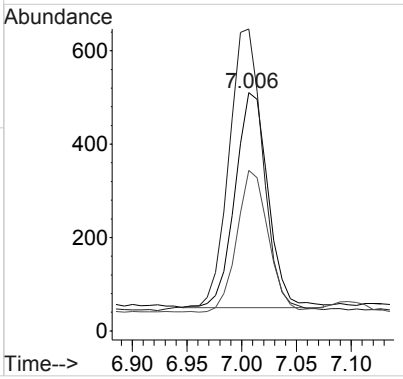


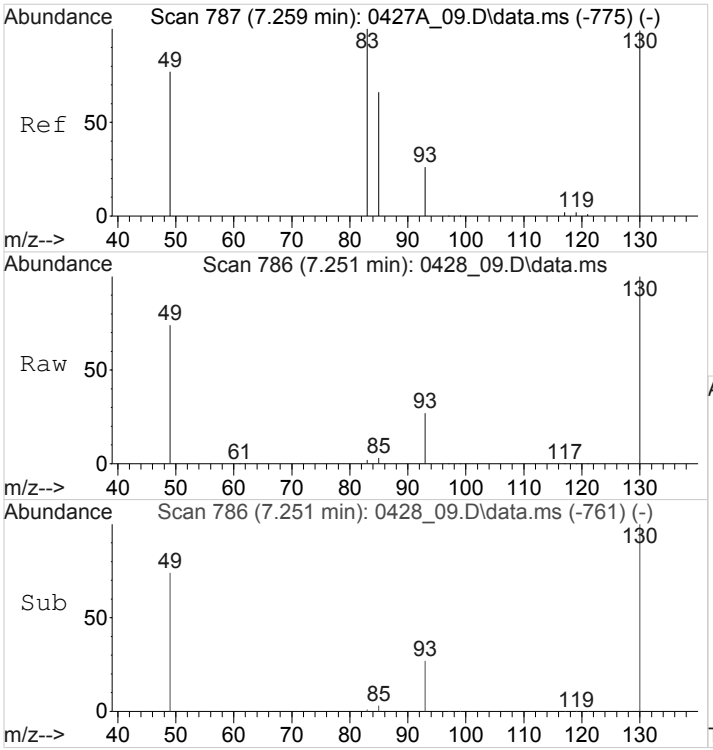


#9
cis-1,2-Dichloroethene
Concen: 0.2665095 ppbv
RT: 7.006 min Scan# 754
Delta R.T. -0.008 min
Lab File: 0428_09.D
Acq: 28 Apr 2018 1:30 pm

Tgt Ion: 96 Resp: 968

Ion	Ratio	Lower	Upper
96	100		
61	134.4	87.5	131.3#
98	62.8	51.4	77.2

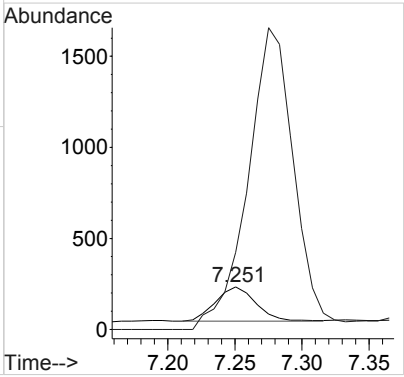


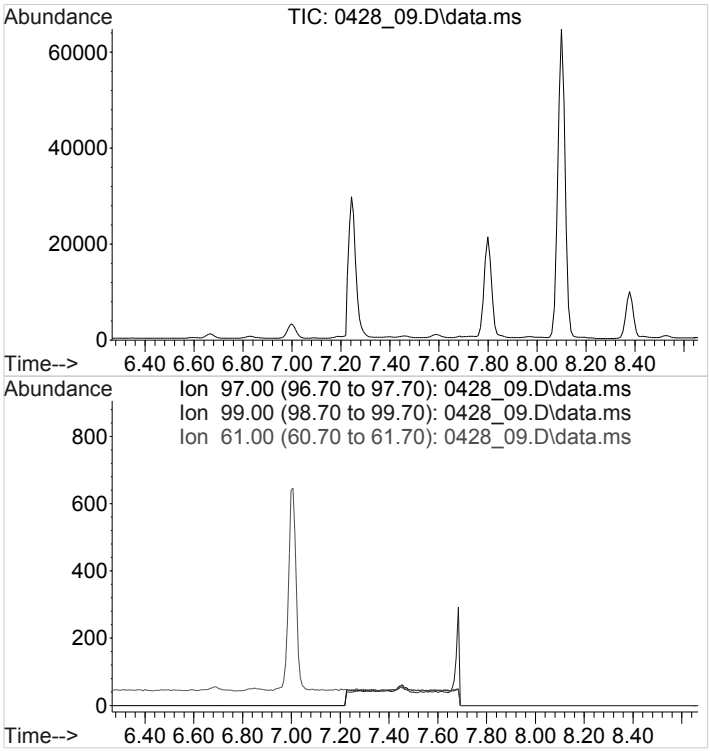


#10
Chloroform
Concen: 0.0625897 ppbv
RT: 7.251 min Scan# 786
Delta R.T. -0.008 min
Lab File: 0428_09.D
Acq: 28 Apr 2018 1:30 pm

Tgt Ion: 83 Resp: 394

Ion	Ratio	Lower	Upper
83	100		
85	1003.6	54.0	81.0#



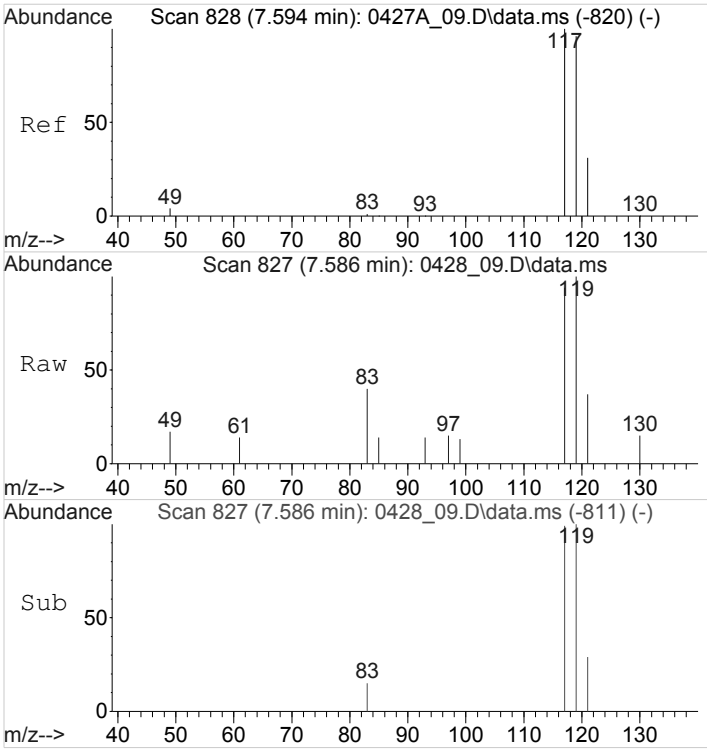


#11
1,1,1-Trichloroethane
Concen: N.D.
Expected RT: 7.46 min

Lab File: 0428_09.D
Acq: 28 Apr 2018 1:30 pm

Tgt Ion: 97

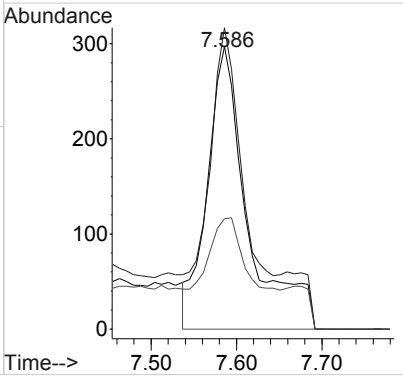
Sig	Exp Ratio
97	100
99	64.8
61	35.9

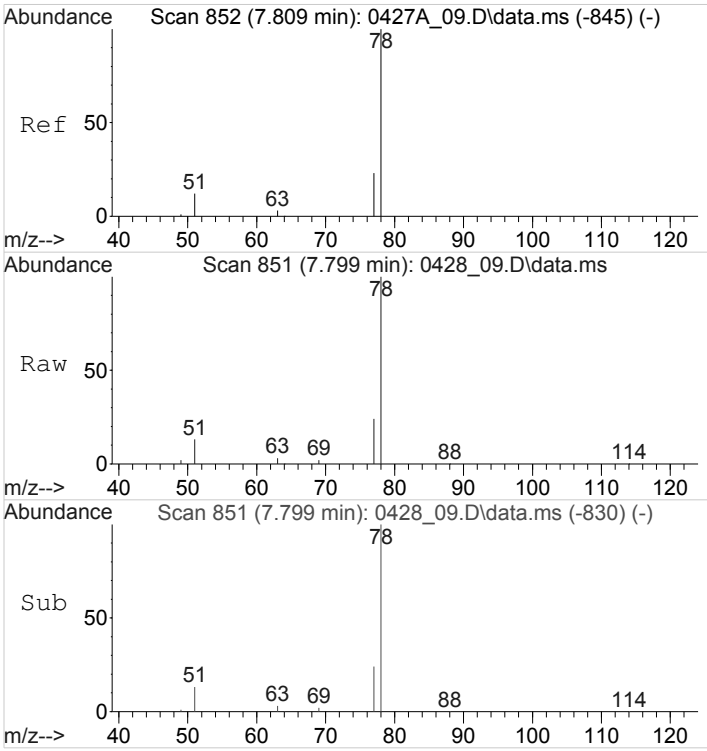


#12
Carbon Tetrachloride
Concen: 0.1459905 ppbv
RT: 7.586 min Scan# 827
Delta R.T. -0.008 min
Lab File: 0428_09.D
Acq: 28 Apr 2018 1:30 pm

Tgt Ion:117 Resp: 986

Ion	Ratio	Lower	Upper
117	100		
119	56.7	77.9	116.9#
121	18.6	25.4	38.0#

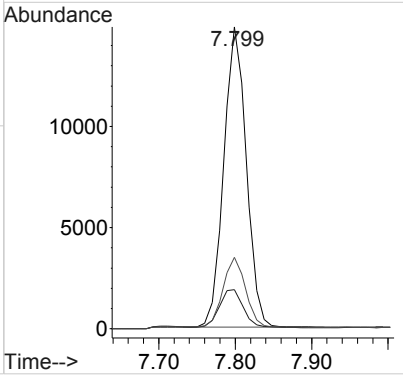


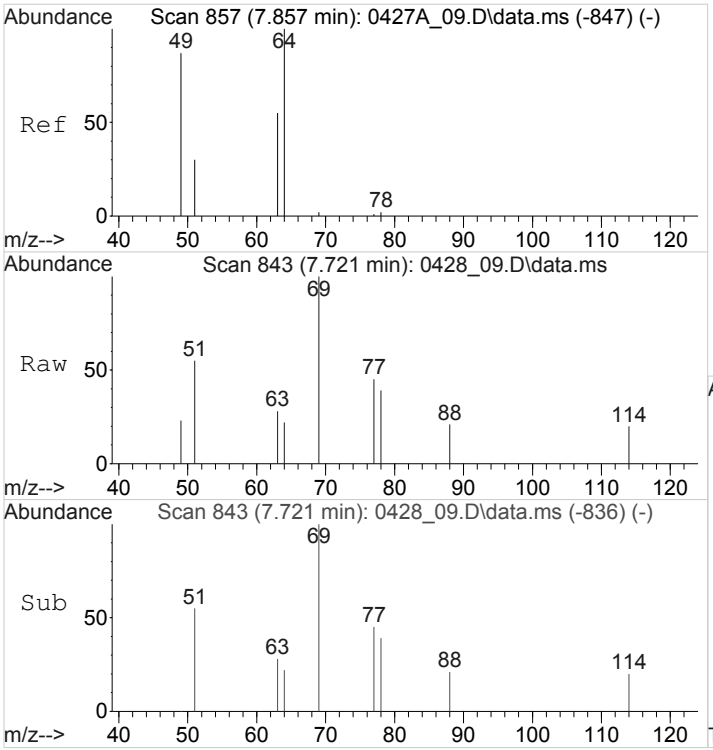


#14
Benzene
Concen: 2.7826791 ppbv
RT: 7.799 min Scan# 851
Delta R.T. -0.010 min
Lab File: 0428_09.D
Acq: 28 Apr 2018 1:30 pm

Tgt Ion: 78 Resp: 30486

Ion	Ratio	Lower	Upper
78	100		
51	14.2	10.9	16.3
77	26.9	18.8	28.2

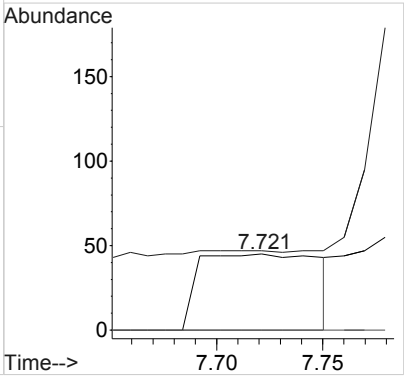


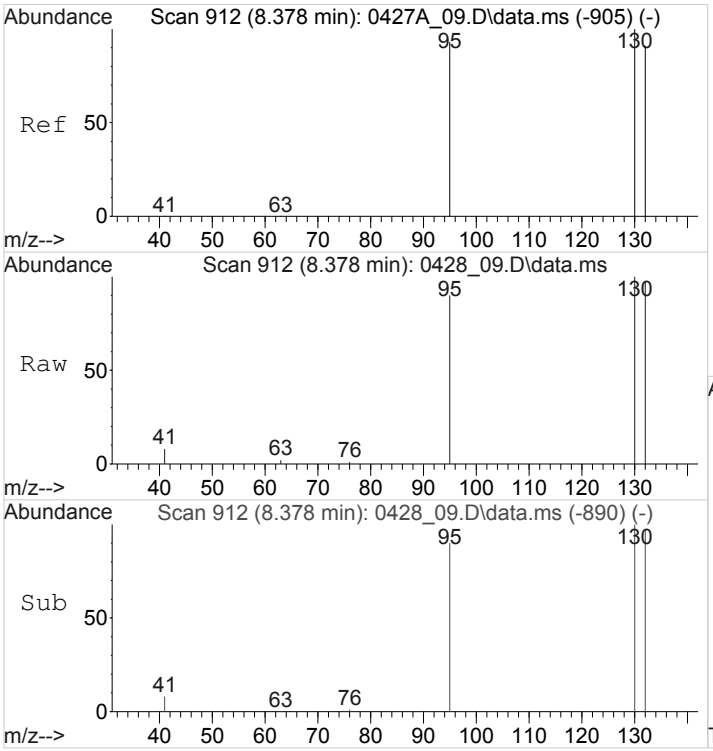


#15
1,2-Dichloroethane
Concen: 0.1471103 ppbv
RT: 7.721 min Scan# 843
Delta R.T. -0.136 min
Lab File: 0428_09.D
Acq: 28 Apr 2018 1:30 pm

Tgt Ion: 64 Resp: 175

Ion	Ratio	Lower	Upper
64	100		
49	303.4	67.0	100.6#
62	0.0	0.0	0.0

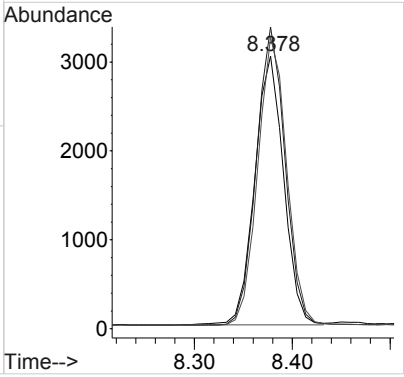


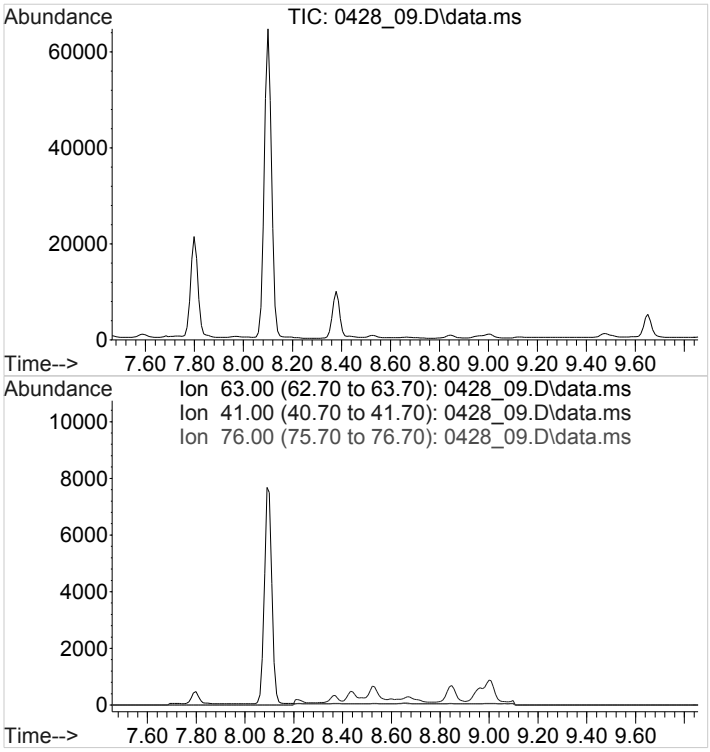


#16
Trichloroethene
Concen: 1.2908512 ppbv
RT: 8.378 min Scan# 912
Delta R.T. -0.000 min
Lab File: 0428_09.D
Acq: 28 Apr 2018 1:30 pm

Tgt Ion: 95 Resp: 6202

Ion	Ratio	Lower	Upper
95	100		
130	110.2	89.5	134.3
132	107.2	86.7	130.1



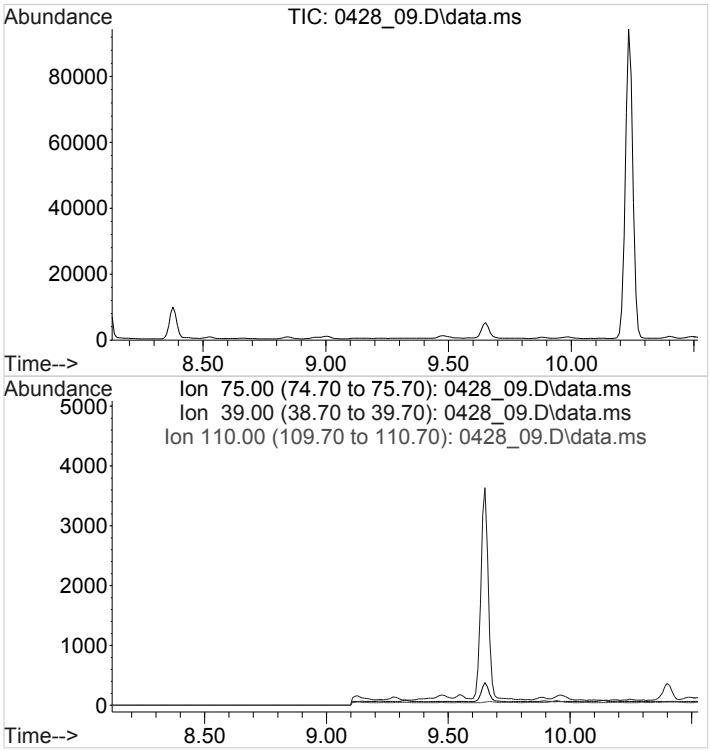


#17
1,2-Dichloropropane
Concen: N.D.
Expected RT: 8.66 min

Lab File: 0428_09.D
Acq: 28 Apr 2018 1:30 pm

Tgt Ion: 63

Sig	Exp Ratio
63	100
41	27.9
76	38.3

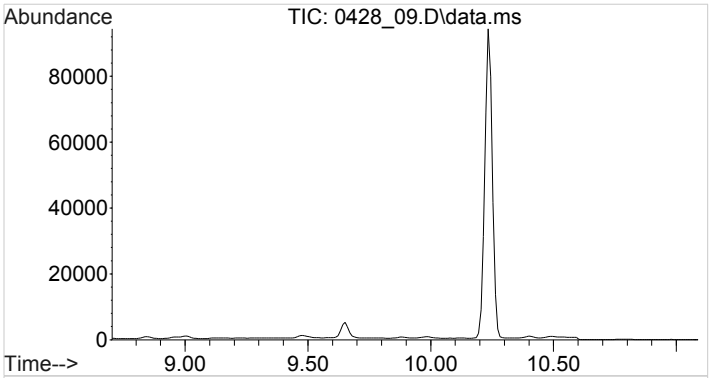


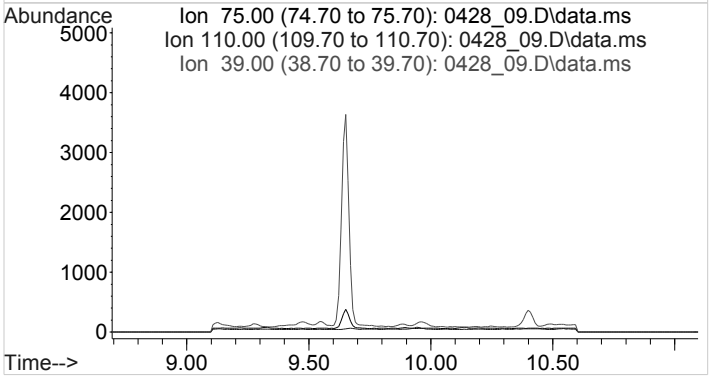
#18
cis-1,3-Dichloropropene
Concen: N.D.
Expected RT: 9.32 min

Lab File: 0428_09.D
Acq: 28 Apr 2018 1:30 pm

Tgt Ion: 75

Sig	Exp Ratio
75	100
39	30.7
110	26.0



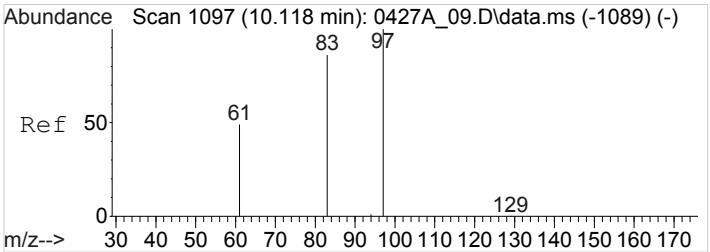


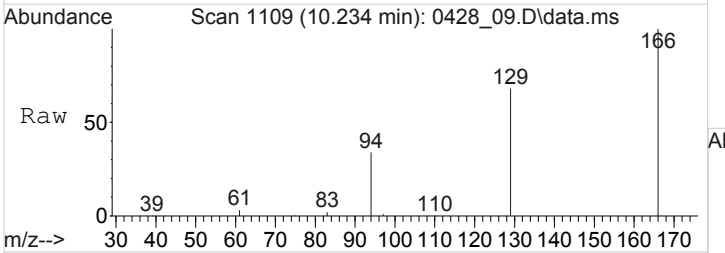
#19
trans-1,3-Dichloropropene
Concen: N.D.
Expected RT: 9.89 min

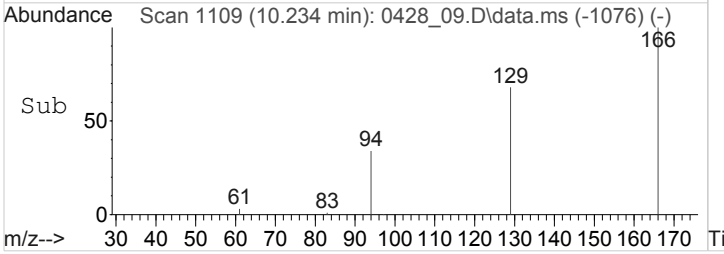
Lab File: 0428_09.D
Acq: 28 Apr 2018 1:30 pm

Tgt Ion: 75

Sig	Exp Ratio
75	100
110	29.4
39	30.7



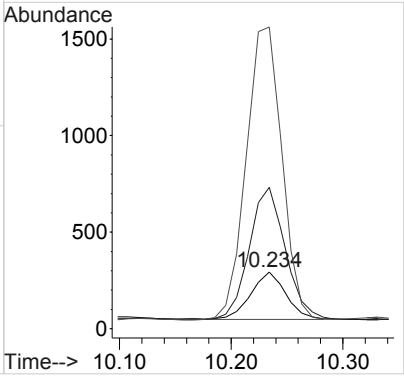


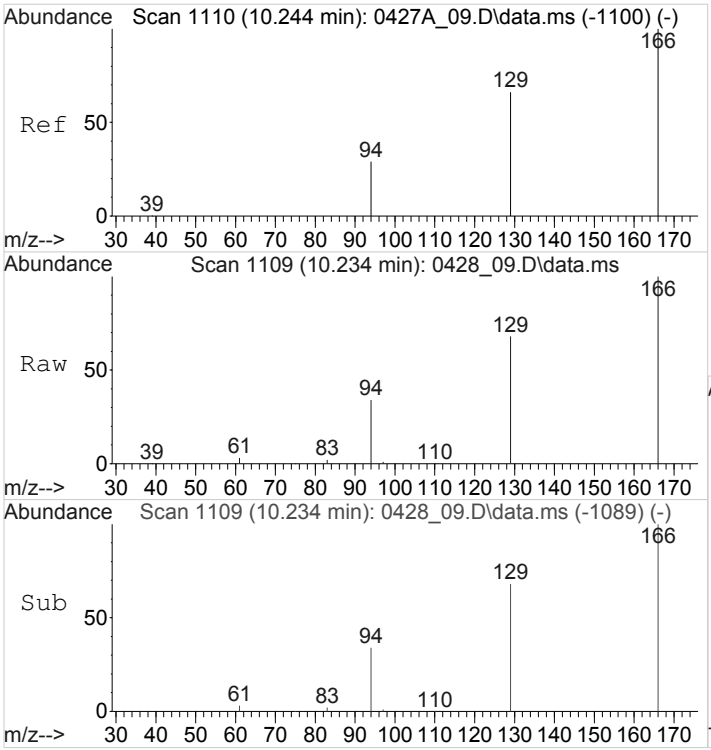


#20
1,1,2-Trichloroethane
Concen: 0.1127303 ppbv
RT: 10.234 min Scan# 1109
Delta R.T. 0.116 min
Lab File: 0428_09.D
Acq: 28 Apr 2018 1:30 pm

Tgt Ion: 97 Resp: 533

Ion	Ratio	Lower	Upper
97	100		
83	287.1	66.2	99.4#
61	633.4	38.0	57.0#

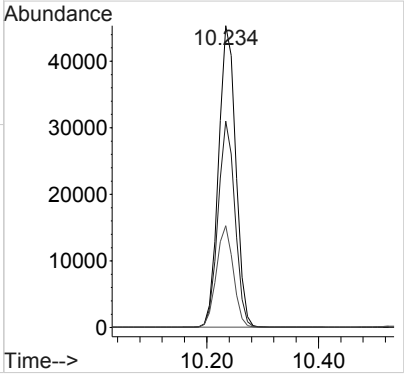


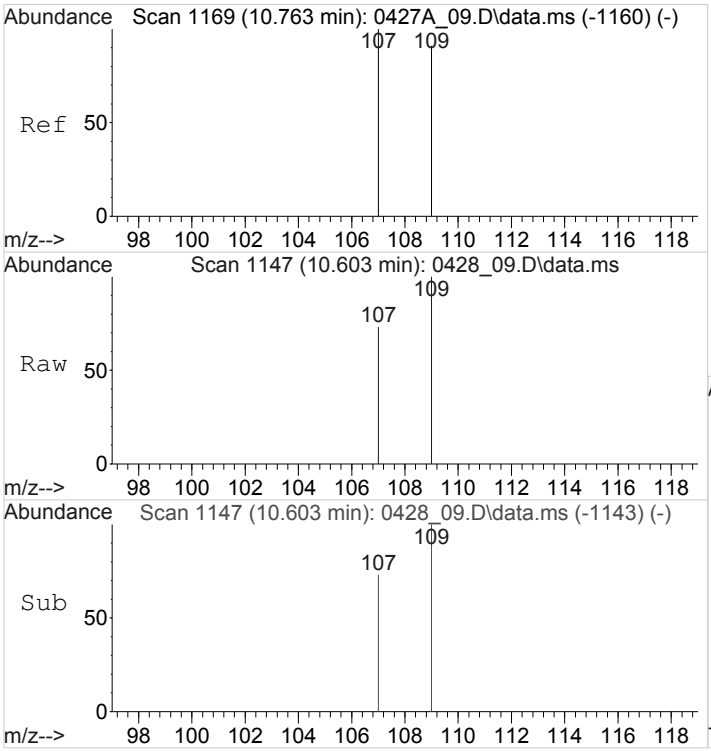


#21
Tetrachloroethene
Concen: 12.3054087 ppbv
RT: 10.234 min Scan# 1109
Delta R.T. -0.010 min
Lab File: 0428_09.D
Acq: 28 Apr 2018 1:30 pm

Tgt Ion:166 Resp: 96704

Ion	Ratio	Lower	Upper
166	100		
129	67.1	53.5	80.3
94	33.1	26.2	39.2

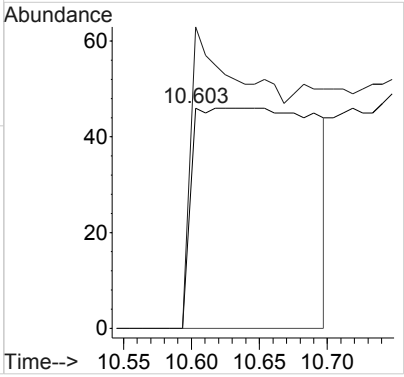


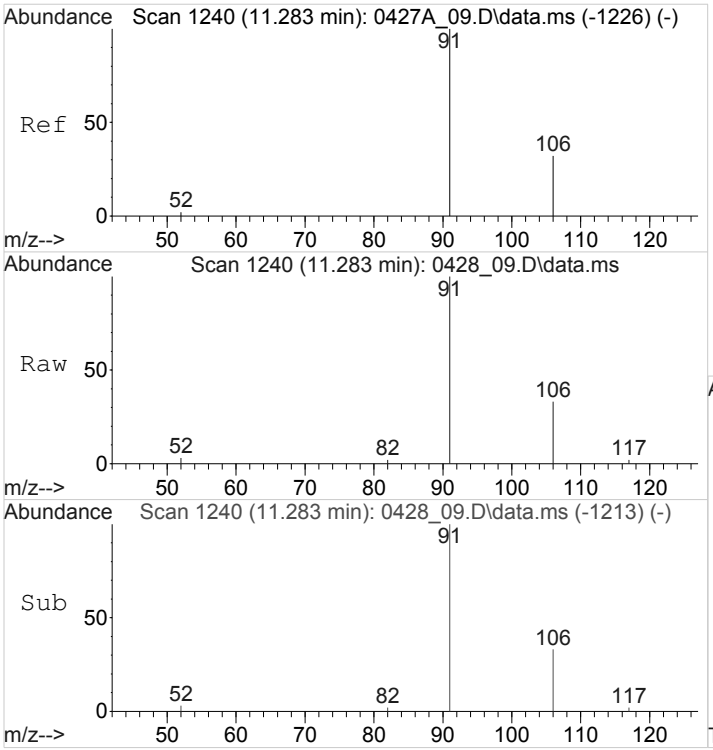


#22
1,2-Dibromoethane
Concen: 0.0382216 ppbv
RT: 10.603 min Scan# 1147
Delta R.T. -0.159 min
Lab File: 0428_09.D
Acq: 28 Apr 2018 1:30 pm

Tgt Ion:107 Resp: 282

Ion	Ratio	Lower	Upper
107	100		
109	84.8	75.9	113.9

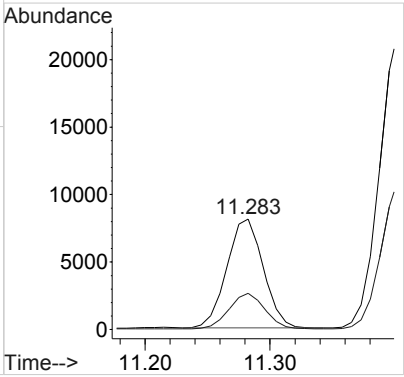


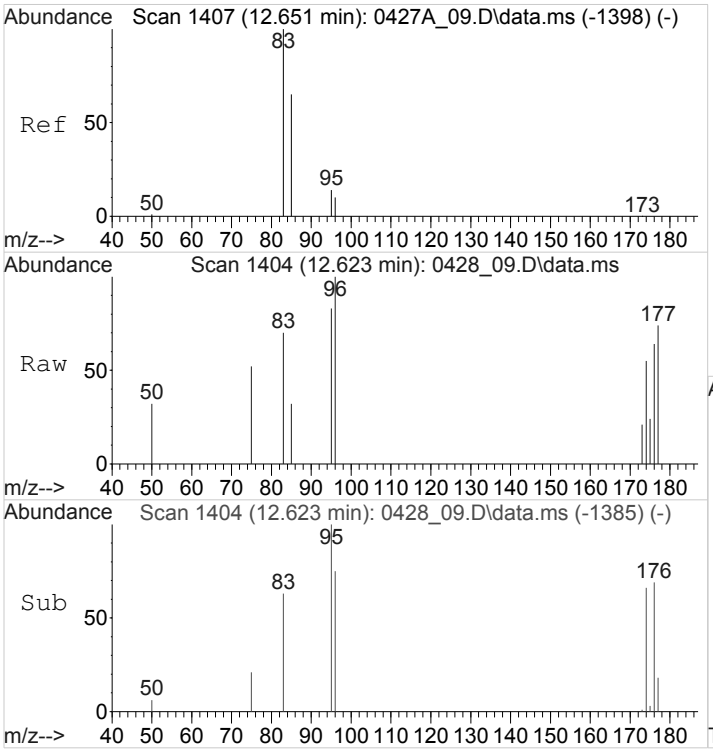


#24
Ethylbenzene
Concen: 0.9705530 ppbv
RT: 11.283 min Scan# 1240
Delta R.T. -0.000 min
Lab File: 0428_09.D
Acq: 28 Apr 2018 1:30 pm

Tgt Ion: 91 Resp: 16339

Ion	Ratio	Lower	Upper
91	100		
106	32.3	25.4	38.2

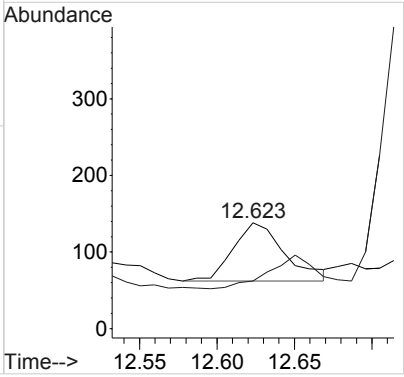


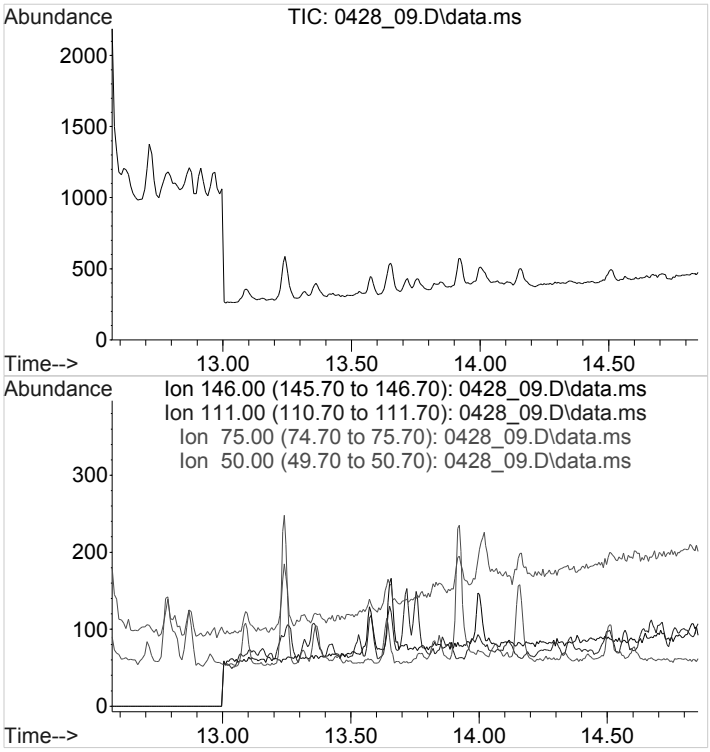


#25
1,1,2,2-Tetrachloroethane
Concen: 0.0175816 ppbv
RT: 12.623 min Scan# 1404
Delta R.T. -0.028 min
Lab File: 0428_09.D
Acq: 28 Apr 2018 1:30 pm

Tgt Ion: 83 Resp: 177

Ion	Ratio	Lower	Upper
83	100		
85	346.3	51.6	77.4#





#27
1,4-Dichlorobenzene
Concen: N.D.
Expected RT: 13.65 min

Lab File: 0428_09.D
Acq: 28 Apr 2018 1:30 pm

Tgt Ion: 146

Sig	Exp Ratio
146	100
111	33.7
75	23.5
50	14.3

ACCOUNT:	PROJECT:	SDG:	DATE/TIME:	PAGE:
S&ME Inc. - Knoxville	4143-17-016	L988669	05/16/18 08:03	114 of 183

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
FC-6

ESC Sample ID:	L988669-06	**SDG:**	L988669
Client Sample ID:	FC-6	**Collected Date/Time:**	04/24/18 14:20
Lab File ID:	0427A_23	**Received Date/Time:**	04/25/18 10:15
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/28/18 03:23
Analytical Batch:	WG1104091	**Analysis Date/Time:**	04/28/18 03:23
Dilution Factor:	1	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	**CAS**	**RT**	**Result**	**Qualifier**	**MDL**	**RDL**
			ppbv		*ppbv*	*ppbv*
Benzene	71-43-2	7.81	2.91		0.00541	0.0200
Carbon tetrachloride	56-23-5	7.59	0.0795		0.00575	0.0200
Chloroethane	75-00-3	4.63	ND		0.0159	0.0400
Chloroform	67-66-3	7.26	0.0502		0.00464	0.0200
Chloromethane	74-87-3	3.93	0.428		0.00972	0.0300
1,2-Dibromoethane	106-93-4	0	ND		0.0185	0.0200
1,4-Dichlorobenzene	106-46-7	0	ND		0.00691	0.0200
1,1-Dichloroethane	75-34-3	0	ND		0.00505	0.0200
1,2-Dichloroethane	107-06-2	0	ND		0.000471	0.0200
1,1-Dichloroethene	75-35-4	0	ND		0.00521	0.0200
cis-1,2-Dichloroethene	156-59-2	7.01	0.143		0.00770	0.0200
trans-1,2-Dichloroethene	156-60-5	6.08	ND		0.00499	0.0200
1,2-Dichloropropane	78-87-5	8.66	ND		0.00840	0.0300
cis-1,3-Dichloropropene	10061-01-5	0	ND		0.00556	0.0200
trans-1,3-Dichloropropene	10061-02-6	0	ND		0.00853	0.0300
Ethylbenzene	100-41-4	11.28	1.17		0.00904	0.0300
1,1,2,2-Tetrachloroethane	79-34-5	0	ND		0.00481	0.0200
Tetrachloroethylene	127-18-4	10.24	6.83		0.00457	0.0200
1,1,1-Trichloroethane	71-55-6	7.46	0.0409		0.00552	0.0200
1,1,2-Trichloroethane	79-00-5	0	ND		0.0287	0.0300
Trichloroethylene	79-01-6	8.38	0.835		0.00736	0.0200
Vinyl chloride	75-01-4	0	ND		0.00765	0.0200
Vinyl acetate	108-05-4	0	ND		0.00430	0.0200

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_23.D
Acq On : 28 Apr 2018 3:23 am
Operator : 564
Sample : L988669-06 1x WG1104091
Misc : 18C26426
ALS Vial : 23 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 10:07:06 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:33 2018
Response via : Initial Calibration

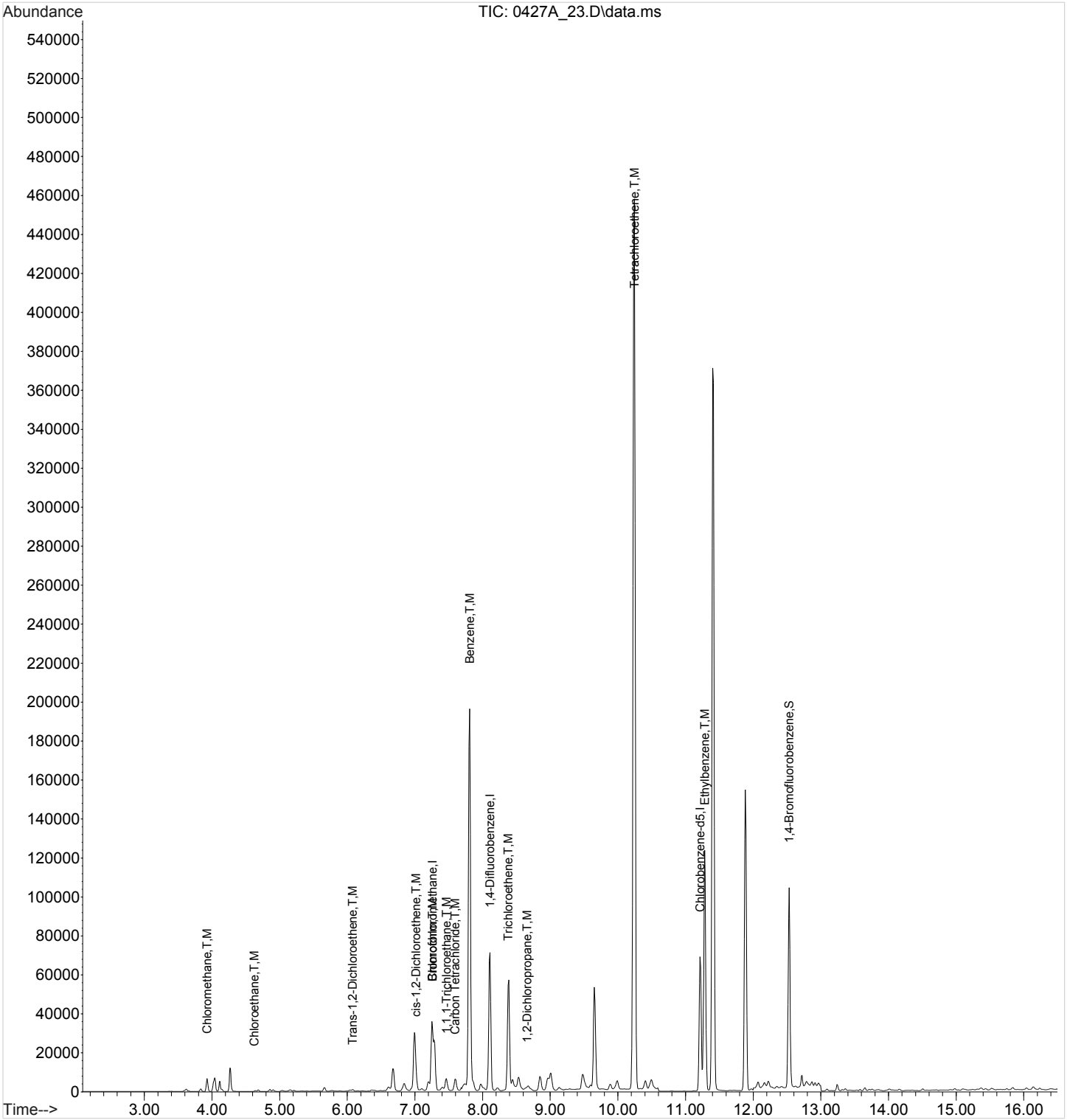
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.259	130	29714	1.2500000	ppbv	0.00
13) 1,4-Difluorobenzene	8.110	114	106017	1.2500000	ppbv	0.00
23) Chlorobenzene-d5	11.215	117	88682	1.2500000	ppbv	0.00
System Monitoring Compounds						
26) 1,4-Bromofluorobenzene	12.532	95	53397	1.2996210	ppbv	0.00
Spiked Amount 1.250	Range 60 - 140		Recovery = 103.97%			
Target Compounds						Qvalue
2) Chloromethane	3.928	50	8296	0.4284604	ppbv	100
3) Vinyl Chloride	0.000		0	N.D.		
4) Chloroethane	4.626	64	152	0.0116645	ppbv #	1
5) 1,1-Dichloroethene	0.000		0	N.D. d		
6) Trans-1,2-Dichloroethene	6.077	61	602	0.0187496	ppbv	93
7) 1,1-Dichloroethane	6.492	63	152	N.D.		
8) Vinyl Acetate	6.492	43	227	N.D.		
9) cis-1,2-Dichloroethene	7.014	96	4699	0.1425858	ppbv #	65
10) Chloroform	7.259	83	2870	0.0502484	ppbv #	1
11) 1,1,1-Trichloroethane	7.463	97	2413	0.0408639	ppbv	92
12) Carbon Tetrachloride	7.594	117	4871m	0.0794876	ppbv	
14) Benzene	7.809	78	287234	2.9130320	ppbv	99
15) 1,2-Dichloroethane	0.000		0	N.D. d		
16) Trichloroethene	8.378	95	36098	0.8347843	ppbv	98
17) 1,2-Dichloropropane	8.657	63	619	0.0186271	ppbv #	1
18) cis-1,3-Dichloropropene	9.331	75	203	N.D.		
19) trans-1,3-Dichloropropene	9.904	75	219	N.D.		
20) 1,1,2-Trichloroethane	0.000		0	N.D. d		
21) Tetrachloroethene	10.244	166	483380	6.8341895	ppbv	100
22) 1,2-Dibromoethane	0.000		0	N.D. d		
24) Ethylbenzene	11.283	91	183249	1.1692430	ppbv	100
25) 1,1,2,2-Tetrachloroethane	12.623	83	821	N.D.		
27) 1,4-Dichlorobenzene	13.658	146	858	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_23.D
Acq On : 28 Apr 2018 3:23 am
Operator : 564
Sample : L988669-06 1x WG1104091
Misc : 18C26426
ALS Vial : 23 Sample Multiplier: 1
InstName : AIRMS5

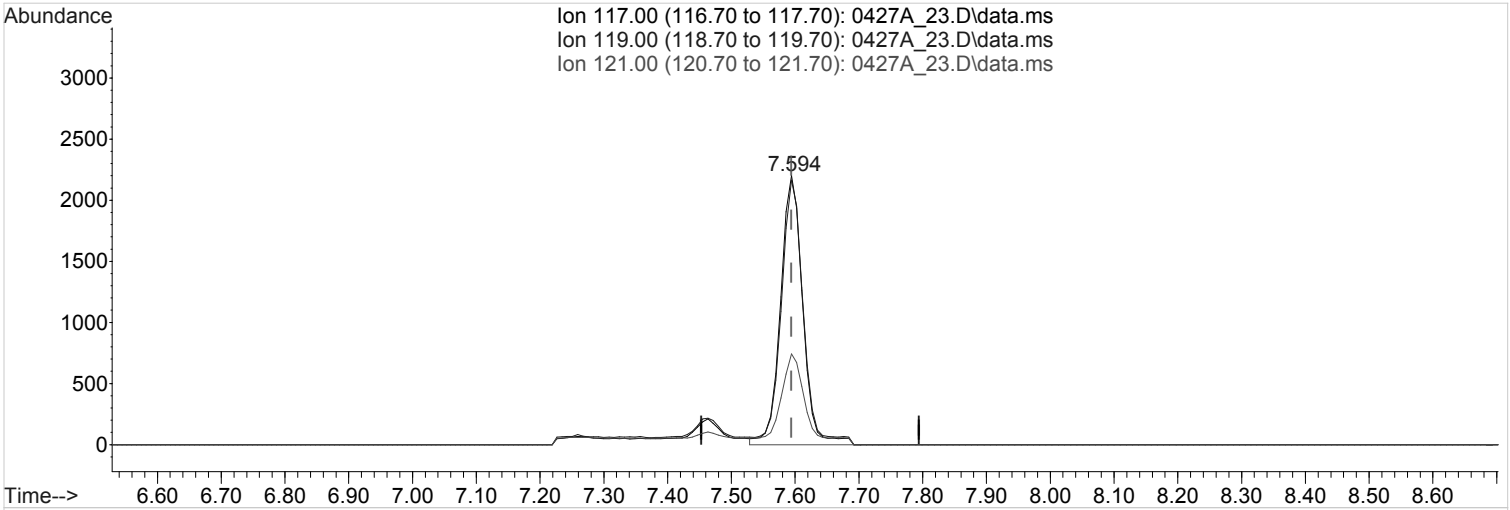
Quant Time: Apr 28 10:07:06 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:33 2018
Response via : Initial Calibration

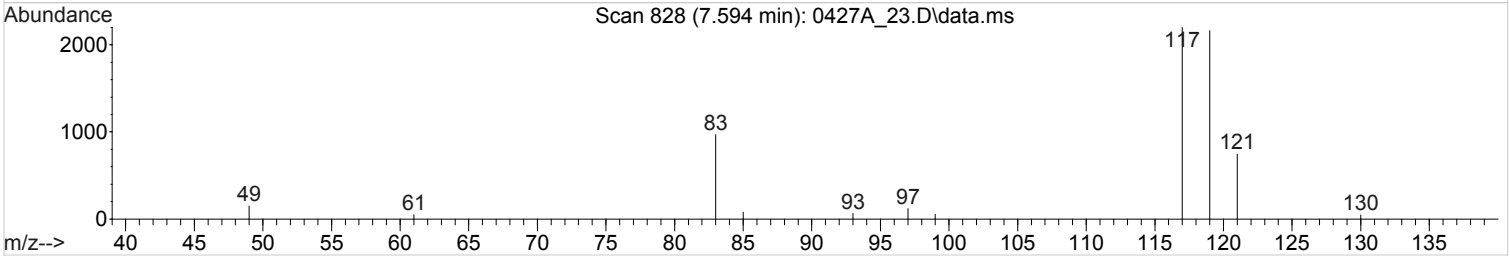


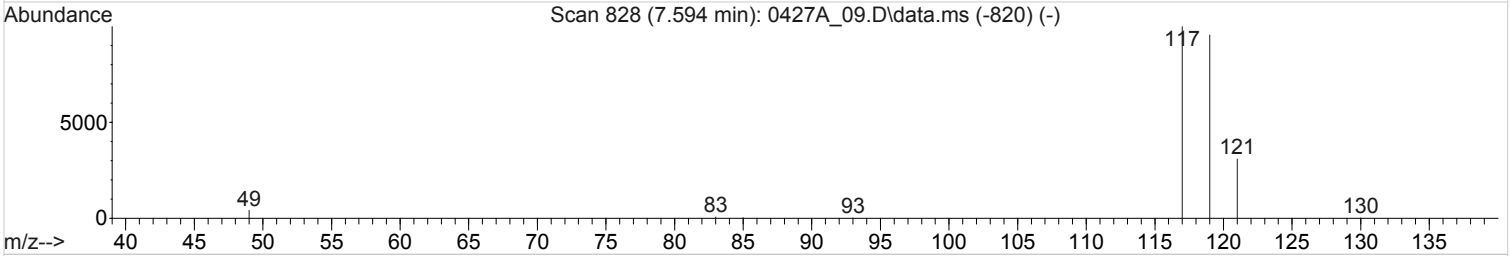
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_23.D
Acq On : 28 Apr 2018 3:23 am
Operator : 564
Sample : L988669-06 1x WG1104091
Misc : 18C26426
ALS Vial : 23 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 10:02:31 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:33 2018
Response via : Initial Calibration







TIC: 0427A_23.D\data.ms

(12) Carbon Tetrachloride (T,M)

7.594min (-0.000) 0.0873368 ppbv

Qvalue = 97

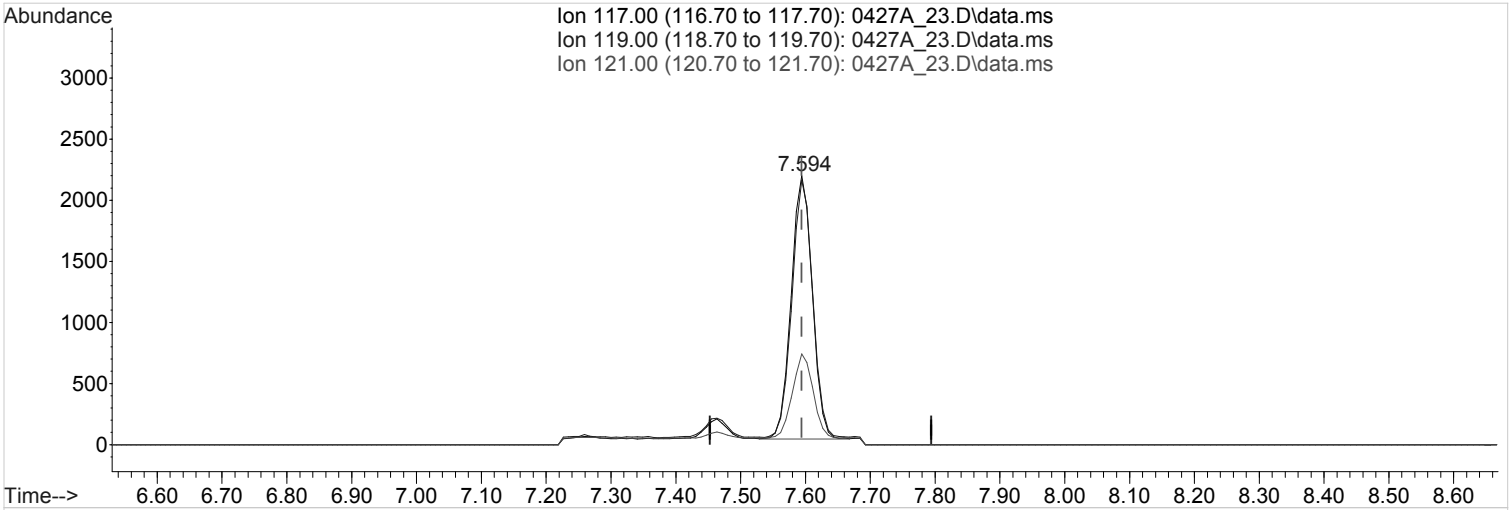
response 5352 Limit = 0.0200000

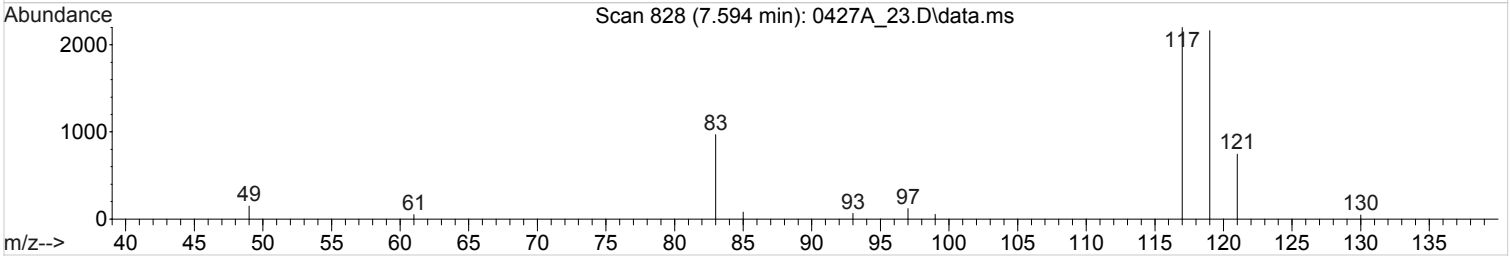
Ion	Exp%	Act%
117.00	100	100
119.00	97.40	98.32
121.00	31.70	37.82
0.00	0.00	0.00

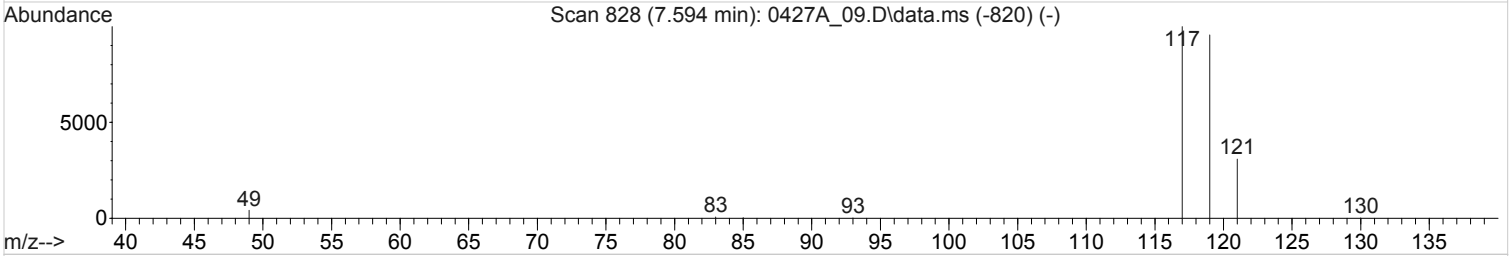
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_23.D
Acq On : 28 Apr 2018 3:23 am
Operator : 564
Sample : L988669-06 1x WG1104091
Misc : 18C26426
ALS Vial : 23 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 10:02:31 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:33 2018
Response via : Initial Calibration







TIC: 0427A_23.D\data.ms

(12) Carbon Tetrachloride (T,M)

7.594min (-0.000) 0.0794876 ppbv m

response 4871 Limit = 0.0200000

Ion	Exp%	Act%
117.00	100	100
119.00	97.40	108.03
121.00	31.70	41.55#
0.00	0.00	0.00

6A-OR

GC/MS INITIAL CALIBRATION DATA

SDG: L988669 **Analytical Method:** TO-15

Instrument ID: AIRMS5

Analyte	**RRF: 0.02**	**RRF: 0.03**	**RRF: 0.06**	**RRF: 0.13**	**RRF: 0.25**	**RRF: 0.38**	**RRF: 0.50**	**RRF: 1.00**	**RRF: 5.00**	**RRF: 10.0**
Analysis date/time	04/27/18 12:51	04/27/18 13:30	04/27/18 14:08	04/27/18 14:46	04/27/18 15:25	04/27/18 16:05	04/27/18 16:47	04/27/18 17:25	04/27/18 18:07	04/27/18 18:53
CHLOROMETHANE	0.7440	0.8380	0.8160	0.8680	0.8360	0.8580	0.8390	0.8020	0.7510	0.7950
VINYL CHLORIDE	0.9420	1.0370	1.04	1.0650	1.0640	1.0530	1.0570	1.0250	0.9740	1.0140
CHLOROETHANE	0.5130	0.5430	0.5710	0.5570	0.5730	0.5470	0.5650	0.5580	0.5380	0.5180
1,1-DICHLOROETHENE	1.4040	1.5280	1.4960	1.5840	1.5430	1.5560	1.5540	1.4920	1.4420	1.5110
TRANS-1,2-DICHLOROETHENE	1.2860	1.3490	1.33	1.3930	1.3790	1.39	1.3830	1.3410	1.3020	1.3530
1,1-DICHLOROETHANE	1.8390	1.9760	1.9760	2.0470	2.0220	2.0420	2.05	1.9770	1.9020	1.9640
VINYL ACETATE	2.1130	2.2970	2.2430	2.3610	2.4110	2.3960	2.38	2.3540	2.3790	2.4790
CIS-1,2-DICHLOROETHENE	1.3640	1.3850	1.4010	1.4020	1.3980	1.4050	1.4080	1.3730	1.3580	1.3710
CHLOROFORM	2.1890	2.3570	2.3930	2.4840	2.4690	2.4480	2.4620	2.4060	2.4160	2.4020
1,1,1-TRICHLOROETHANE	2.2930	2.4420	2.4690	2.5520	2.5350	2.5360	2.55	2.49	2.4810	2.4940
CARBON TETRACHLORIDE	2.2540	2.4050	2.49	2.7250	2.67	2.6590	2.6530	2.6260	2.6380	2.66
BENZENE	1.1590	1.19	1.2280	1.2250	1.2160	1.2010	1.1970	1.0880	1.0590	1.0630
1,2-DICHLOROETHANE	0.1160	0.1250	0.1240	0.1290	0.1310	0.1290	0.13	0.1290	0.1250	0.1250
TRICHLOROETHENE	0.4890	0.5010	0.5140	0.5210	0.5250	0.5210	0.5210	0.5060	0.5010	0.4990
1,2-DICHLOROPROPANE	0.3650	0.3880	0.3890	0.3980	0.4030	0.4010	0.4010	0.3930	0.3910	0.39
CIS-1,3-DICHLOROPROPENE	0.6460	0.6740	0.6670	0.6840	0.6920	0.6880	0.6890	0.7070	0.7110	0.7120
TRANS-1,3-DICHLOROPROPENE	0.5750	0.5750	0.5630	0.5780	0.5680	0.5670	0.57	0.5970	0.6190	0.6160
1,1,2-TRICHLOROETHANE	0.4680	0.4920	0.4950	0.5030	0.5110	0.5060	0.5070	0.5130	0.5150	0.5070
TETRACHLOROETHENE	0.85	0.8380	0.8410	0.84	0.8480	0.8340	0.8340	0.83	0.8190	0.8060
1,2-DIBROMOETHANE	0.72	0.7350	0.7770	0.7670	0.7810	0.7830	0.7850	0.8110	0.8390	0.8320
ETHYLBENZENE	1.9590	2.0680	2.17	2.2540	2.2820	2.2870	2.3280	2.2570	2.2630	2.2240
1,1,2,2-TETRACHLOROETHANE	1.2190	1.2710	1.2840	1.3030	1.3310	1.32	1.34	1.38	1.41	1.3520
1,4-DICHLOROBENZENE	1.3140	1.2980	1.3850	1.44	1.4820	1.4730	1.4990	1.5880	1.6220	1.5510
1,4-BROMOFLUOROBENZENE	0.5670	0.5630	0.57	0.5710	0.5750	0.5760	0.5780	0.5850	0.6110	0.5940
File ID:	0427A_03	0427A_04	0427A_05	0427A_06	0427A_07	0427A_08	0427A_09	0427A_10	0427A_11	0427A_12

6A-OR

GC/MS INITIAL CALIBRATION DATA

SDG: L988669 **Analytical Method:** TO-15
Instrument ID: AIRMS5

Analyte Analysis date/time	RRF. Avg	%RSD	COD
CHLOROMETHANE	0.81453	5.16	
VINYL CHLORIDE	1.027012	3.96	
CHLOROETHANE	0.548184	3.81	
1,1-DICHLOROETHENE	1.511072	3.64	
TRANS-1,2-DICHLOROETHENE	1.350685	2.74	
1,1-DICHLOROETHANE	1.979484	3.42	
VINYL ACETATE	2.341271	4.37	
CIS-1,2-DICHLOROETHENE	1.386366	1.35	
CHLOROFORM	2.40275	3.53	
1,1,1-TRICHLOROETHANE	2.484087	3.09	
CARBON TETRACHLORIDE	2.577908	5.75	
BENZENE	1.162586	5.78	
1,2-DICHLOROETHANE	0.126236	3.47	
TRICHLOROETHENE	0.509851	2.42	
1,2-DICHLOROPROPANE	0.391814	2.8	
CIS-1,3-DICHLOROPROPENE	0.687052	3.01	
TRANS-1,3-DICHLOROPROPENE	0.58263	3.49	
1,1,2-TRICHLOROETHANE	0.501735	2.77	
TETRACHLOROETHENE	0.833943	1.61	
1,2-DIBROMOETHANE	0.782939	4.83	
ETHYLBENZENE	2.20908	5.15	
1,1,2,2-TETRACHLOROETHANE	1.321051	4.19	
1,4-DICHLOROBENZENE	1.465095	7.42	
1,4-BROMOFLUOROBENZENE	0.579128	2.44	

Response Factor Report AIRMS5

Method Path : C:\msdchem\1\methods\
Method File : TOSIMMS5D27R.m
Title : AIRMS5
Last Update : Sat Apr 28 09:57:33 2018
Response Via : Initial Calibration

Calibration Files
0.02=0427A_03.D 0.03=0427A_04.D 0.13=0427A_06.D 0.38=0427A_08.D 0.50=0427A_09.D 1.00=0427A_10.D 5.00=0427A_11.D
10.0=0427A_12.D 0.06=0427A_05.D 0.25=0427A_07.D

		Compound	0.02	0.03	0.13	0.38	0.50	1.00	5.00	10.0	0.06	0.25	Avg	%RSD
1)	I	Bromochloromethane	----------ISTD----------											
2)	T,M	Chloromethane	0.744	0.838	0.868	0.858	0.839	0.802	0.751	0.795	0.816	0.836	0.815	5.16
3)	T,M	Vinyl Chloride	0.942	1.037	1.065	1.053	1.057	1.025	0.974	1.014	1.040	1.064	1.027	3.96
4)	T,M	Chloroethane	0.513	0.543	0.557	0.547	0.565	0.558	0.538	0.518	0.571	0.573	0.548	3.81
5)	T,M	1,1-Dichloroet...	1.404	1.528	1.584	1.556	1.554	1.492	1.442	1.511	1.496	1.543	1.511	3.64
6)	T,M	Trans-1,2-Dich...	1.286	1.349	1.393	1.390	1.383	1.341	1.302	1.353	1.330	1.379	1.351	2.74
7)	T,M	1,1-Dichloroet...	1.839	1.976	2.047	2.042	2.050	1.977	1.902	1.964	1.976	2.022	1.979	3.42
8)	T,M	Vinyl Acetate	2.113	2.297	2.361	2.396	2.380	2.354	2.379	2.479	2.243	2.411	2.341	4.37
9)	T,M	cis-1,2-Dichlo...	1.364	1.385	1.402	1.405	1.408	1.373	1.358	1.371	1.401	1.398	1.386	1.35
10)	T,M	Chloroform	2.189	2.357	2.484	2.448	2.462	2.406	2.416	2.402	2.393	2.469	2.403	3.53
11)	T,M	1,1,1-Trichlor...	2.293	2.442	2.552	2.536	2.550	2.490	2.481	2.494	2.469	2.535	2.484	3.09
12)	T,M	Carbon Tetrach...	2.254	2.405	2.725	2.659	2.653	2.626	2.638	2.660	2.490	2.670	2.578	5.75
13)	I	1,4-Difluorobenzene	----------ISTD----------											
14)	T,M	Benzene	1.159	1.190	1.225	1.201	1.197	1.088	1.059	1.063	1.228	1.216	1.163	5.78
15)	T,M	1,2-Dichloroet...	0.116	0.125	0.129	0.129	0.130	0.129	0.125	0.125	0.124	0.131	0.126	3.47
16)	T,M	Trichloroethene	0.489	0.501	0.521	0.521	0.521	0.506	0.501	0.499	0.514	0.525	0.510	2.42
17)	T,M	1,2-Dichloropr...	0.365	0.388	0.398	0.401	0.401	0.393	0.391	0.390	0.389	0.403	0.392	2.80
18)	T,M	cis-1,3-Dichlo...	0.646	0.674	0.684	0.688	0.689	0.707	0.711	0.712	0.667	0.692	0.687	3.01
19)	T,M	trans-1,3-Dich...	0.575	0.575	0.578	0.567	0.570	0.597	0.619	0.616	0.563	0.568	0.583	3.49
20)	T,M	1,1,2-Trichlor...	0.468	0.492	0.503	0.506	0.507	0.513	0.515	0.507	0.495	0.511	0.502	2.77
21)	T,M	Tetrachloroethene	0.850	0.838	0.840	0.834	0.834	0.830	0.819	0.806	0.841	0.848	0.834	1.61
22)	T,M	1,2-Dibromoethane	0.720	0.735	0.767	0.783	0.785	0.811	0.839	0.832	0.777	0.781	0.783	4.83
23)	I	Chlorobenzene-d5	----------ISTD----------											
24)	T,M	Ethylbenzene	1.959	2.068	2.254	2.287	2.328	2.257	2.263	2.224	2.170	2.282	2.209	5.15
25)	T,M	1,1,2,2-Tetrac...	1.219	1.271	1.303	1.320	1.340	1.380	1.410	1.352	1.284	1.331	1.321	4.19
26)	S	1,4-Bromofluor...	0.567	0.563	0.571	0.576	0.578	0.585	0.611	0.594	0.570	0.575	0.579	2.44
27)	T,M	1,4-Dichlorobe...	1.314	1.298	1.440	1.473	1.499	1.588	1.622	1.551	1.385	1.482	1.465	7.42

(#) = Out of Range

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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_03.D
Acq On : 27 Apr 2018 12:51 pm
Operator : 564
Sample : STD AMS 0.019 ppbv 18C26425
Misc : 18C26426
ALS Vial : 3 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 09:51:40 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:51:12 2018
Response via : Initial Calibration

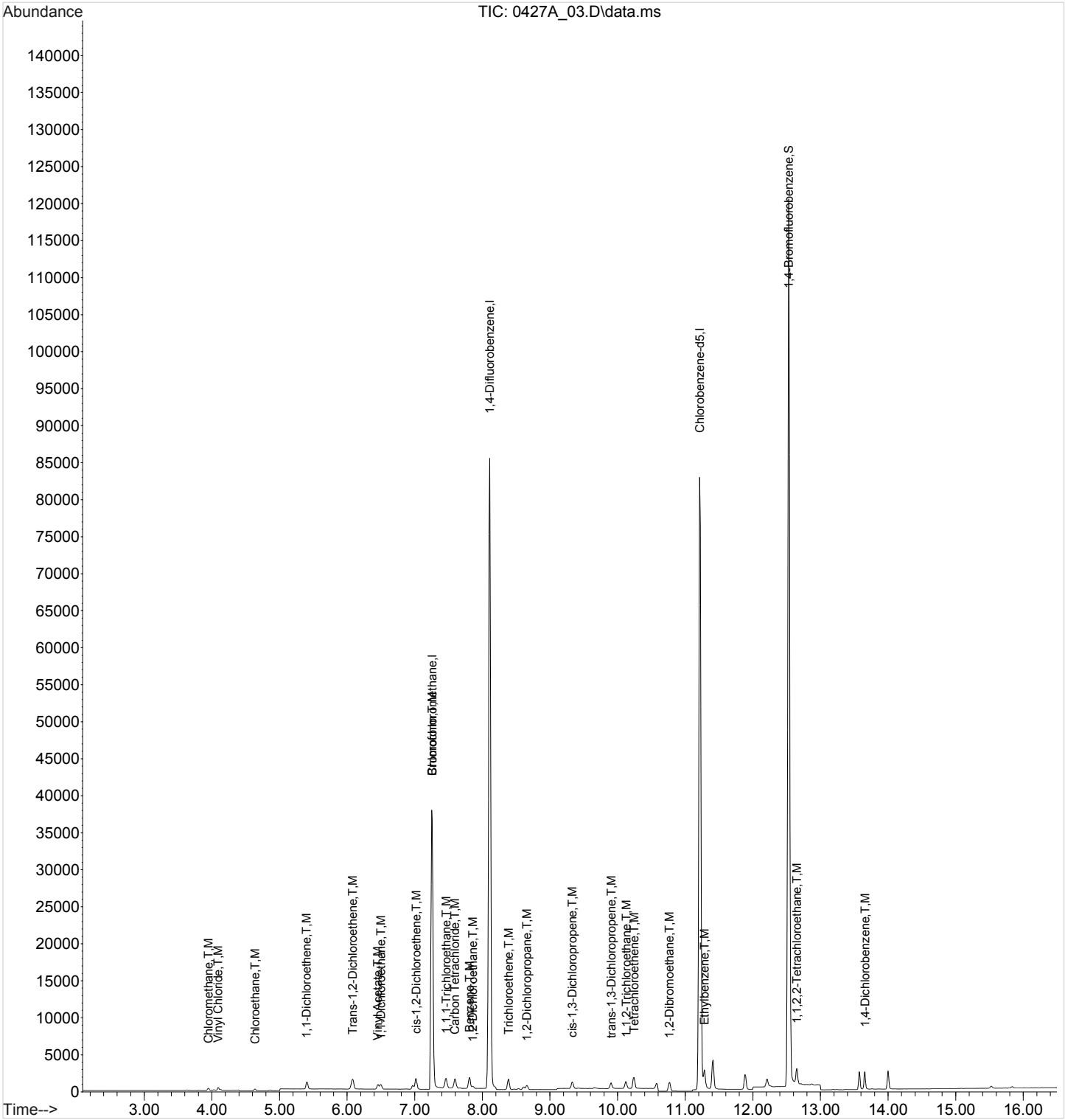
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.259	130	35555	1.2500000	ppbv	0.00
13) 1,4-Difluorobenzene	8.110	114	128455	1.2500000	ppbv	0.00
23) Chlorobenzene-d5	11.215	117	107714	1.2500000	ppbv	0.00
System Monitoring Compounds						
26) 1,4-Bromofluorobenzene	12.532	95	61090	1.2261245	ppbv	0.00
Spiked Amount 1.250	Range 60 - 140		Recovery = 98.09%			
Target Compounds						Qvalue
2) Chloromethane	3.946	50	402	0.0168279	ppbv #	41
3) Vinyl Chloride	4.091	62	509	0.0169183	ppbv	98
4) Chloroethane	4.637	64	277	0.0172199	ppbv #	47
5) 1,1-Dichloroethene	5.400	61	759	0.0171489	ppbv	95
6) Trans-1,2-Dichloroethene	6.084	61	695	0.0176426	ppbv	91
7) 1,1-Dichloroethane	6.499	63	994	0.0170261	ppbv #	66
8) Vinyl Acetate	6.454	43	1142m	0.0168750	ppbv	
9) cis-1,2-Dichloroethene	7.022	96	737	0.0183785	ppbv	88
10) Chloroform	7.259	83	1183	0.0168764	ppbv #	71
11) 1,1,1-Trichloroethane	7.463	97	1239	0.0170622	ppbv	99
12) Carbon Tetrachloride	7.594	117	1218m	0.0161210	ppbv	
14) Benzene	7.809	78	2263	0.0184086	ppbv #	89
15) 1,2-Dichloroethane	7.857	64	226	0.0165685	ppbv #	99
16) Trichloroethene	8.387	95	954	0.0178119	ppbv	96
17) 1,2-Dichloropropane	8.657	63	713	0.0172851	ppbv #	1
18) cis-1,3-Dichloropropene	9.331	75	1262	0.0178113	ppbv	98
19) trans-1,3-Dichloropropene	9.904	75	1122	0.0191570	ppbv	98
20) 1,1,2-Trichloroethane	10.127	97	914	0.0175443	ppbv	99
21) Tetrachloroethene	10.244	166	1660	0.0193690	ppbv	99
22) 1,2-Dibromoethane	10.762	107	1406	0.0174227	ppbv	99
24) Ethylbenzene	11.283	91	3208	0.0159942	ppbv	99
25) 1,1,2,2-Tetrachloroethane	12.651	83	1996	0.0172893	ppbv	100
27) 1,4-Dichlorobenzene	13.658	146	2264	0.0175028	ppbv	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_03.D
Acq On : 27 Apr 2018 12:51 pm
Operator : 564
Sample : STD AMS 0.019 ppbv 18C26425
Misc : 18C26426
ALS Vial : 3 Sample Multiplier: 1
InstName : AIRMS5

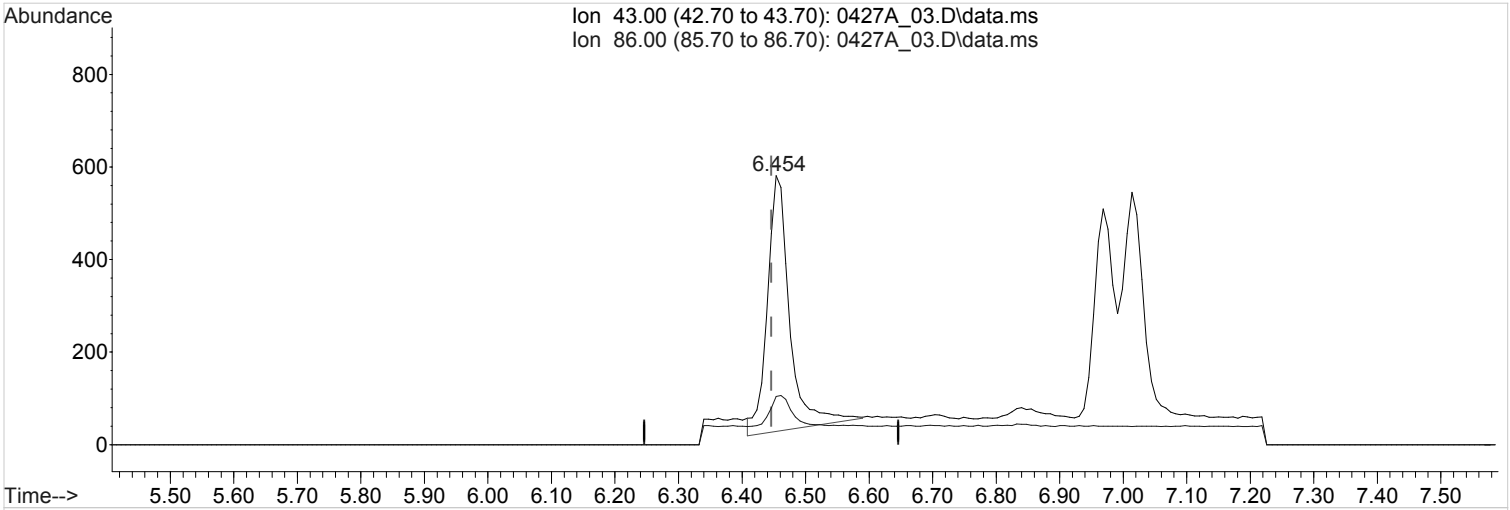
Quant Time: Apr 28 09:51:40 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:51:12 2018
Response via : Initial Calibration

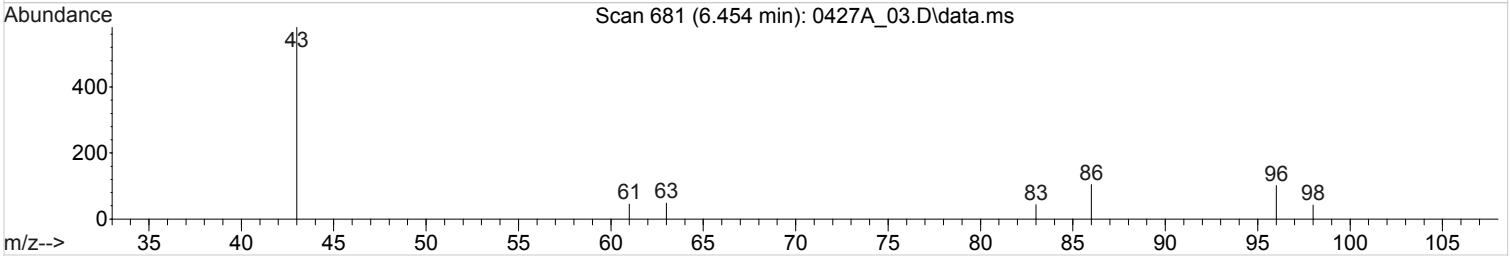


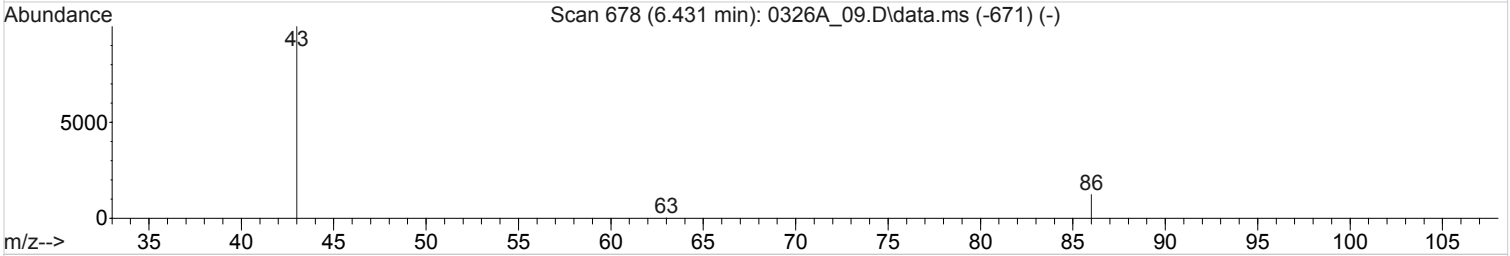
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_03.D
Acq On : 27 Apr 2018 12:51 pm
Operator : 564
Sample : STD AMS 0.019 ppbv 18C26425
Misc : 18C26426
ALS Vial : 3 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 09:51:18 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:51:12 2018
Response via : Initial Calibration







TIC: 0427A_03.D\data.ms

(8) Vinyl Acetate (T,M)

6.454min (+0.007) 0.0199485 ppbv

Qvalue = 95

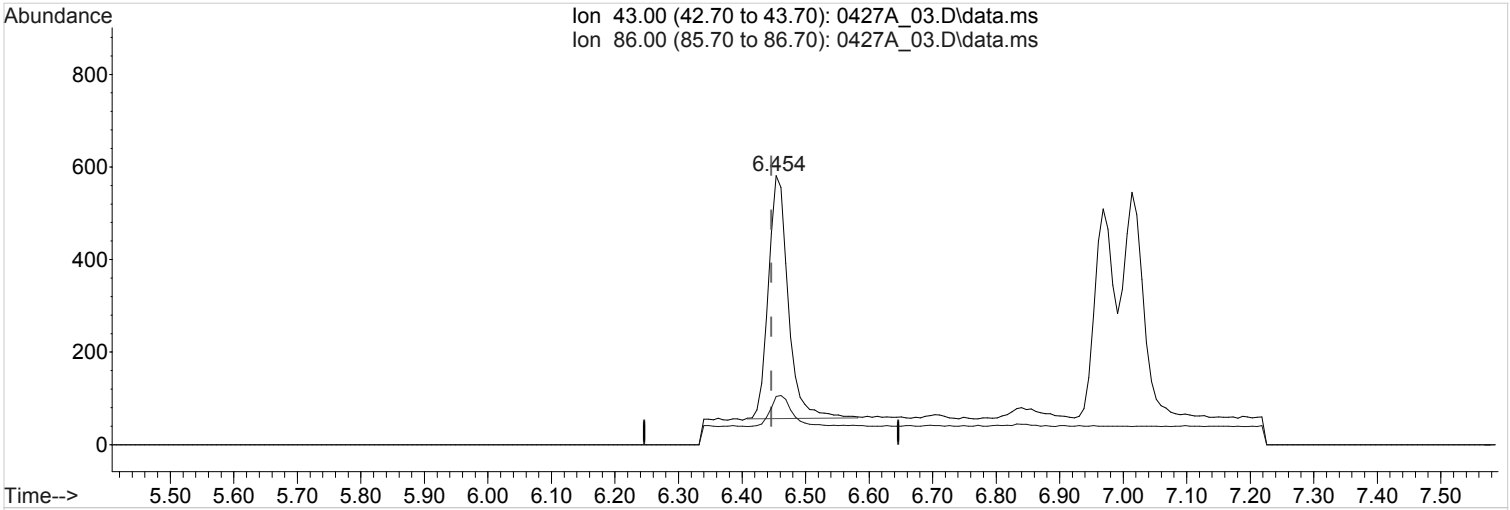
response 1350

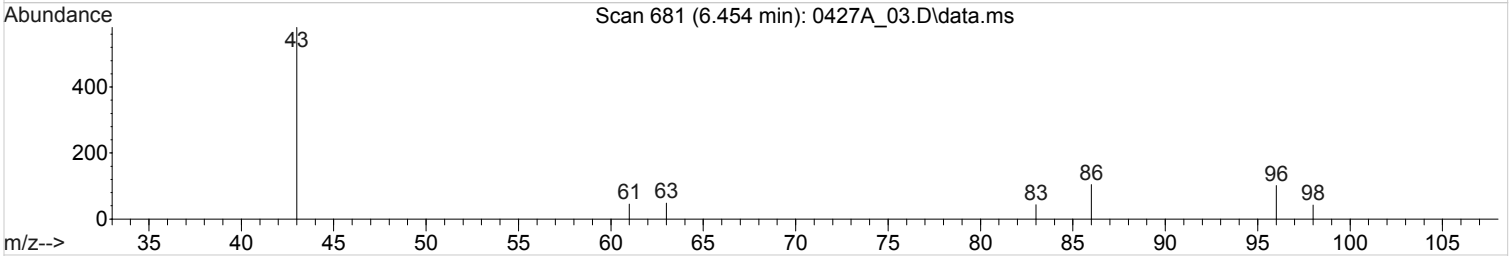
Ion	Exp%	Act%
43.00	100	100
86.00	13.40	11.41
0.00	0.00	0.00
0.00	0.00	0.00

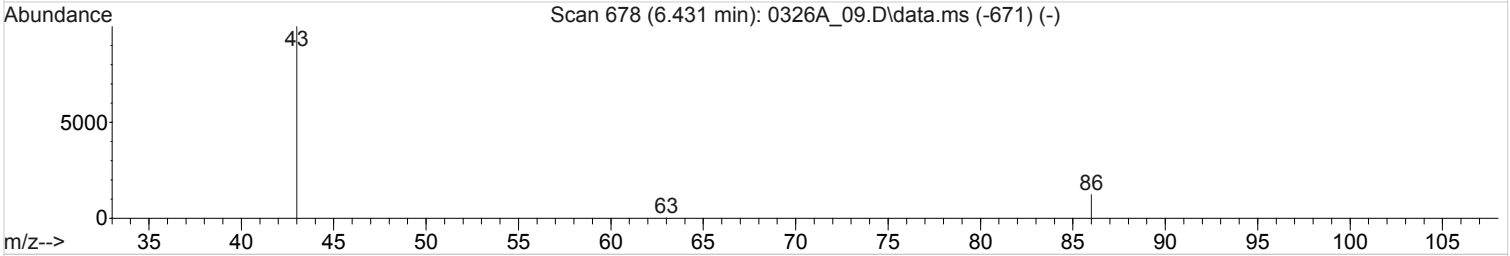
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_03.D
Acq On : 27 Apr 2018 12:51 pm
Operator : 564
Sample : STD AMS 0.019 ppbv 18C26425
Misc : 18C26426
ALS Vial : 3 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 09:51:18 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:51:12 2018
Response via : Initial Calibration







TIC: 0427A_03.D\data.ms

(8) Vinyl Acetate (T,M)

6.454min (+0.007) 0.0168750 ppbv m

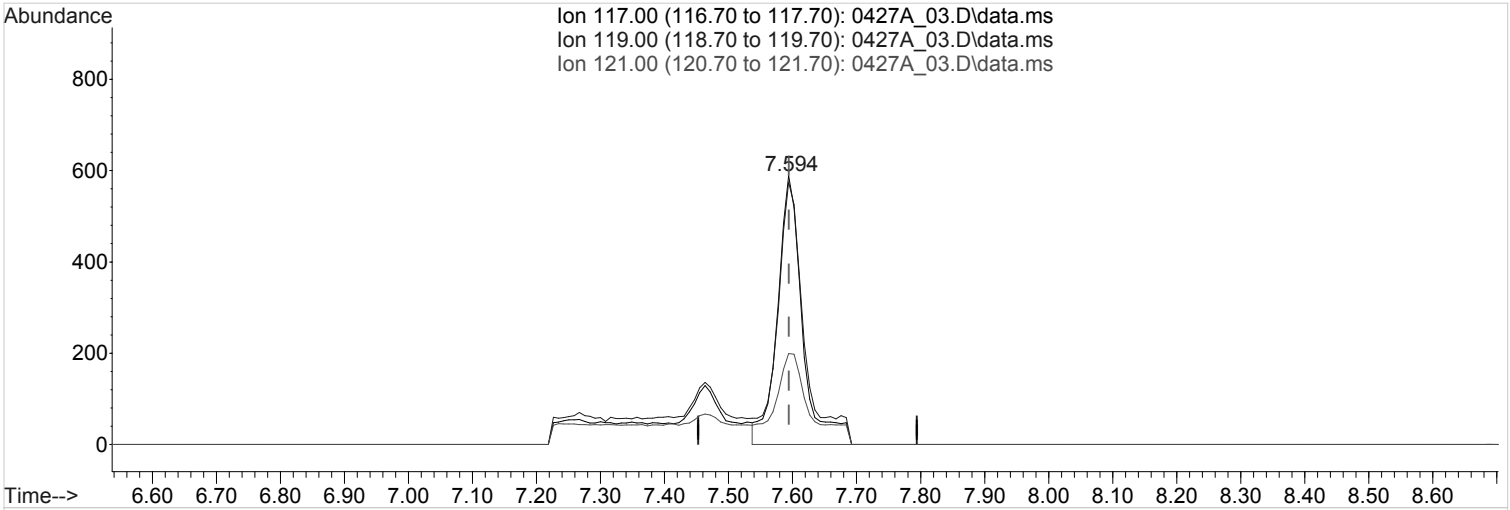
response 1142

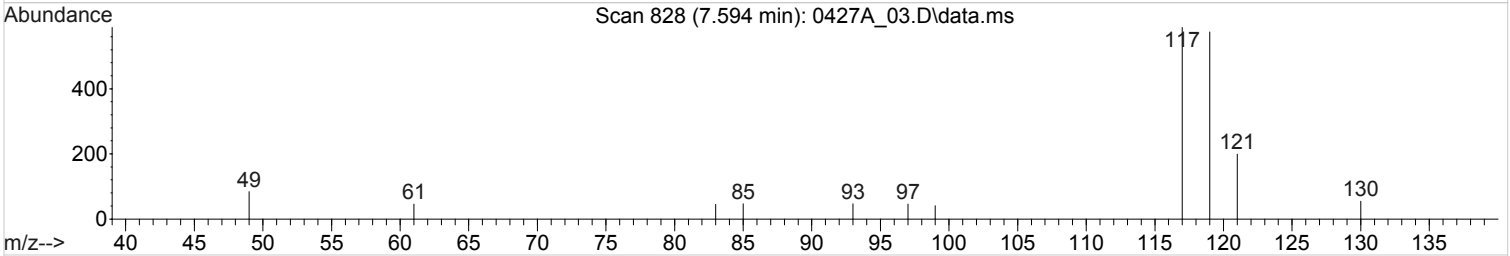
Ion	Exp%	Act%
43.00	100	100
86.00	13.40	13.49
0.00	0.00	0.00
0.00	0.00	0.00

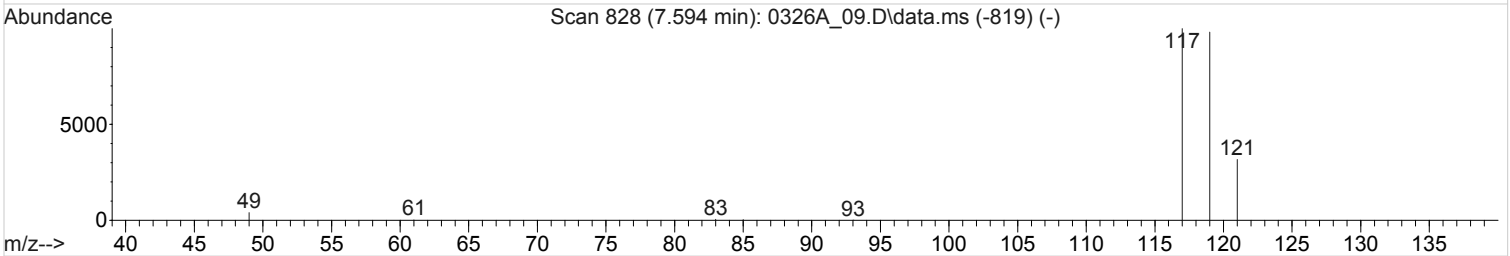
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_03.D
Acq On : 27 Apr 2018 12:51 pm
Operator : 564
Sample : STD AMS 0.019 ppbv 18C26425
Misc : 18C26426
ALS Vial : 3 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 09:51:18 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:51:12 2018
Response via : Initial Calibration







TIC: 0427A_03.D\data.ms

(12) Carbon Tetrachloride (T,M)

7.594min (-0.000) 0.0214285 ppbv

Qvalue = 74

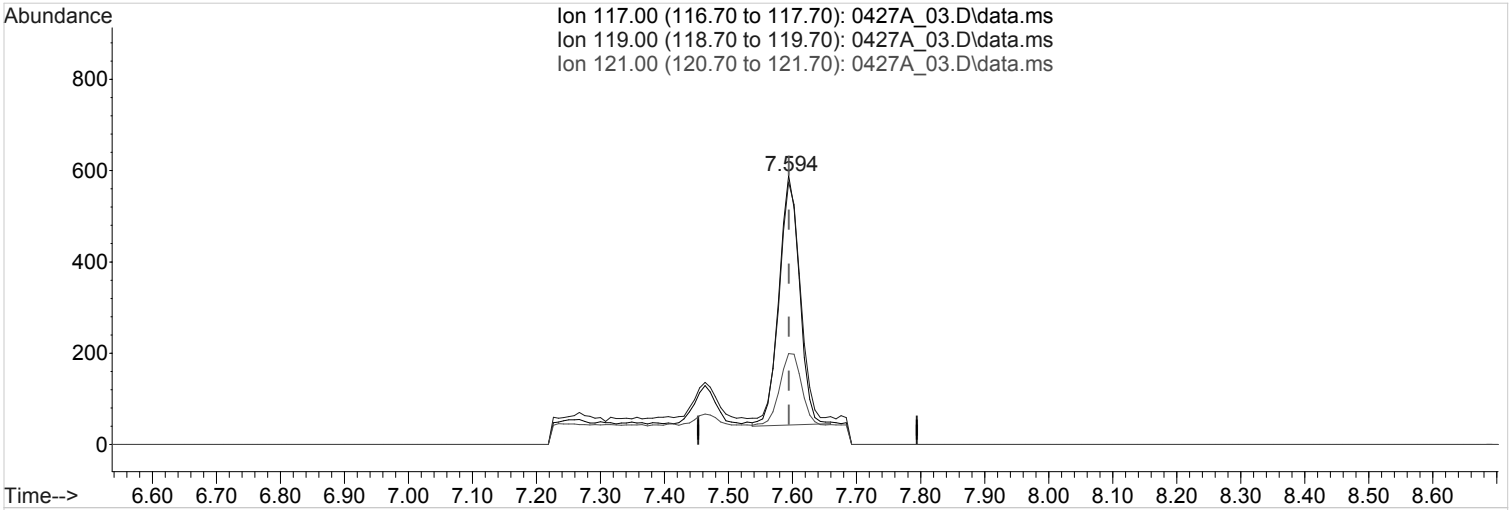
response 1619

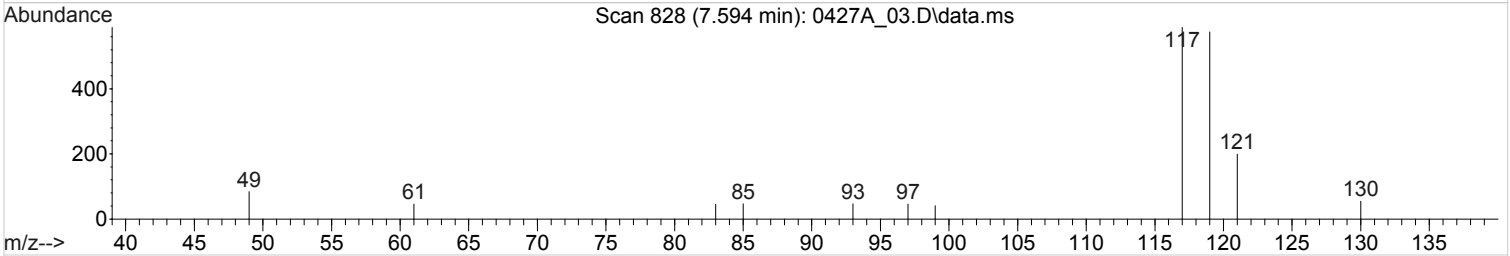
Ion	Exp%	Act%
117.00	100	100
119.00	97.40	71.16#
121.00	31.70	45.21#
0.00	0.00	0.00

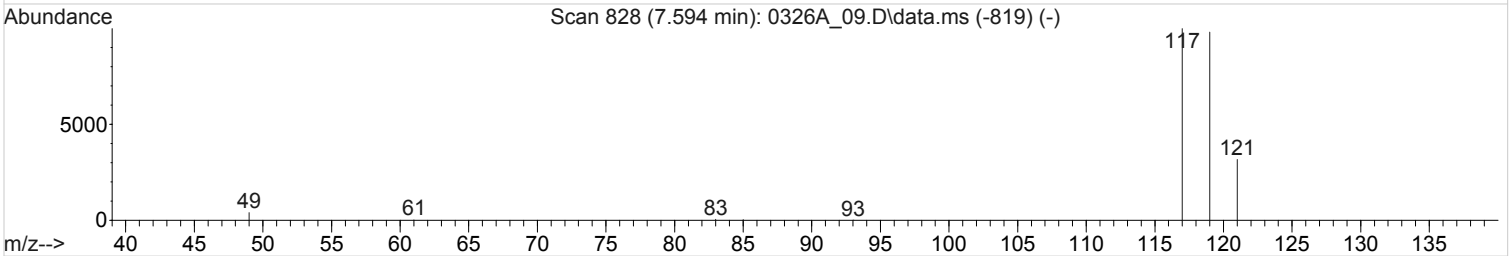
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_03.D
Acq On : 27 Apr 2018 12:51 pm
Operator : 564
Sample : STD AMS 0.019 ppbv 18C26425
Misc : 18C26426
ALS Vial : 3 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 09:51:18 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:51:12 2018
Response via : Initial Calibration







TIC: 0427A_03.D\data.ms

(12) Carbon Tetrachloride (T,M)

7.594min (-0.000) 0.0161210 ppbv m

response 1218

Ion	Exp%	Act%
117.00	100	100
119.00	97.40	94.58
121.00	31.70	60.10#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_04.D
Acq On : 27 Apr 2018 1:30 pm
Operator : 564
Sample : STD AMS 0.031 ppbv 18C26425
Misc : 18C26426
ALS Vial : 4 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 09:52:25 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:52:02 2018
Response via : Initial Calibration

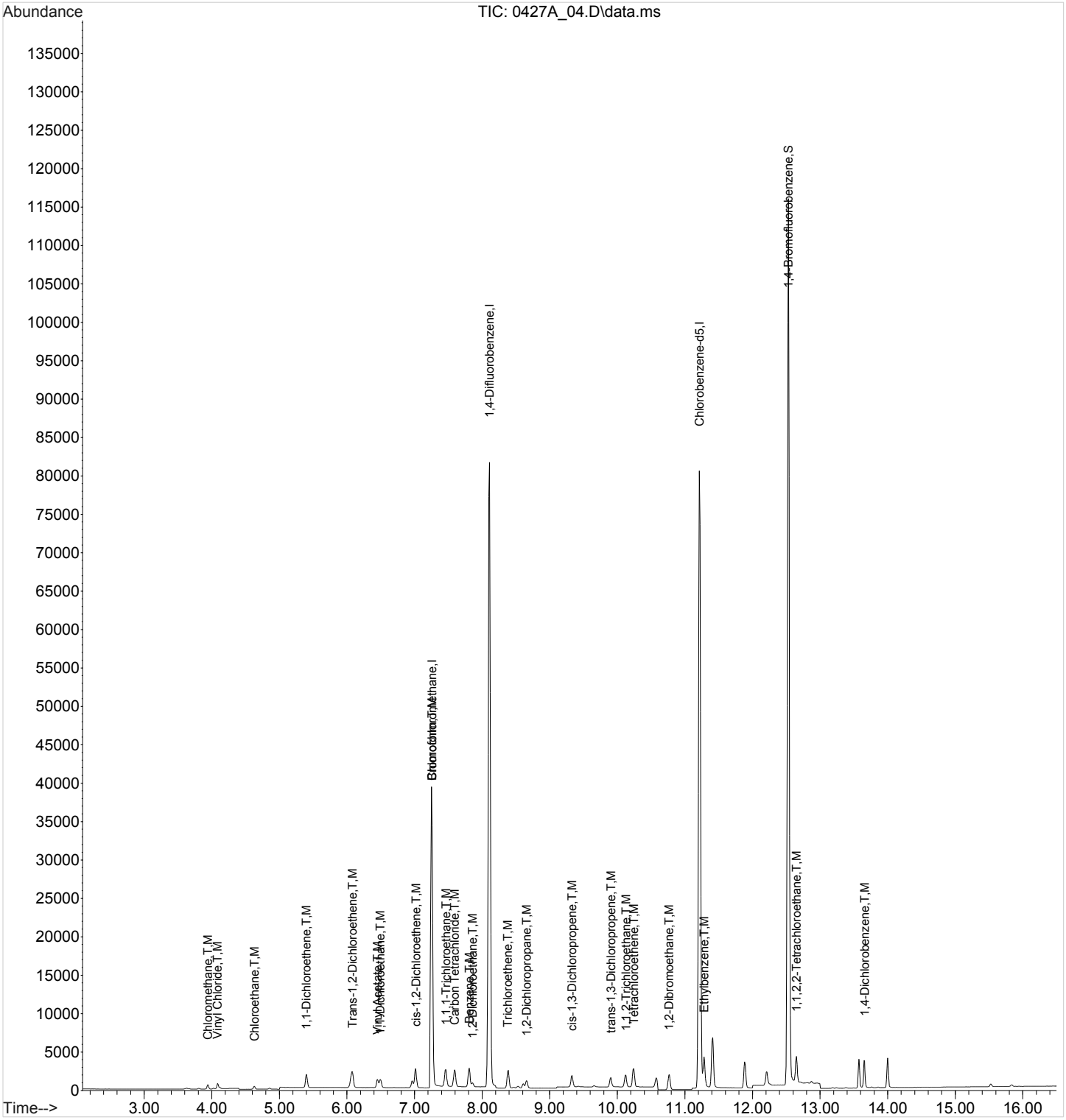
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.259	130	34841	1.2500000	ppbv	0.00
13) 1,4-Difluorobenzene	8.110	114	124822	1.2500000	ppbv	0.00
23) Chlorobenzene-d5	11.215	117	104581	1.2500000	ppbv	0.00
System Monitoring Compounds						
26) 1,4-Bromofluorobenzene	12.532	95	58930	1.2299509	ppbv	0.00
Spiked Amount 1.250	Range 60 - 140		Recovery = 98.40%			
Target Compounds						Qvalue
2) Chloromethane	3.940	50	724	0.0328031	ppbv	99
3) Vinyl Chloride	4.085	62	896	0.0321533	ppbv	98
4) Chloroethane	4.632	64	469	0.0312155	ppbv #	75
5) 1,1-Dichloroethene	5.400	61	1320	0.0319939	ppbv	98
6) Trans-1,2-Dichloroethene	6.084	61	1166	0.0313245	ppbv	92
7) 1,1-Dichloroethane	6.492	63	1707	0.0314730	ppbv	100
8) Vinyl Acetate	6.454	43	1985m	0.0317059	ppbv	
9) cis-1,2-Dichloroethene	7.022	96	1197	0.0309677	ppbv	97
10) Chloroform	7.259	83	2037	0.0314102	ppbv	84
11) 1,1,1-Trichloroethane	7.463	97	2110	0.0312455	ppbv	100
12) Carbon Tetrachloride	7.594	117	2078	0.0303680	ppbv #	92
14) Benzene	7.809	78	3684	0.0313276	ppbv	95
15) 1,2-Dichloroethane	7.857	64	387	0.0311934	ppbv #	94
16) Trichloroethene	8.378	95	1550	0.0307432	ppbv	99
17) 1,2-Dichloropropane	8.657	63	1200	0.0313529	ppbv #	43
18) cis-1,3-Dichloropropene	9.331	75	2086	0.0312761	ppbv	99
19) trans-1,3-Dichloropropene	9.904	75	1780	0.0311476	ppbv	98
20) 1,1,2-Trichloroethane	10.127	97	1523	0.0312834	ppbv	100
21) Tetrachloroethene	10.244	166	2593	0.0308365	ppbv	99
22) 1,2-Dibromoethane	10.762	107	2274	0.0302547	ppbv	99
24) Ethylbenzene	11.283	91	5363	0.0299050	ppbv	98
25) 1,1,2,2-Tetrachloroethane	12.651	83	3296	0.0307913	ppbv	99
27) 1,4-Dichlorobenzene	13.658	146	3366	0.0285865	ppbv	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_04.D
Acq On : 27 Apr 2018 1:30 pm
Operator : 564
Sample : STD AMS 0.031 ppbv 18C26425
Misc : 18C26426
ALS Vial : 4 Sample Multiplier: 1
InstName : AIRMS5

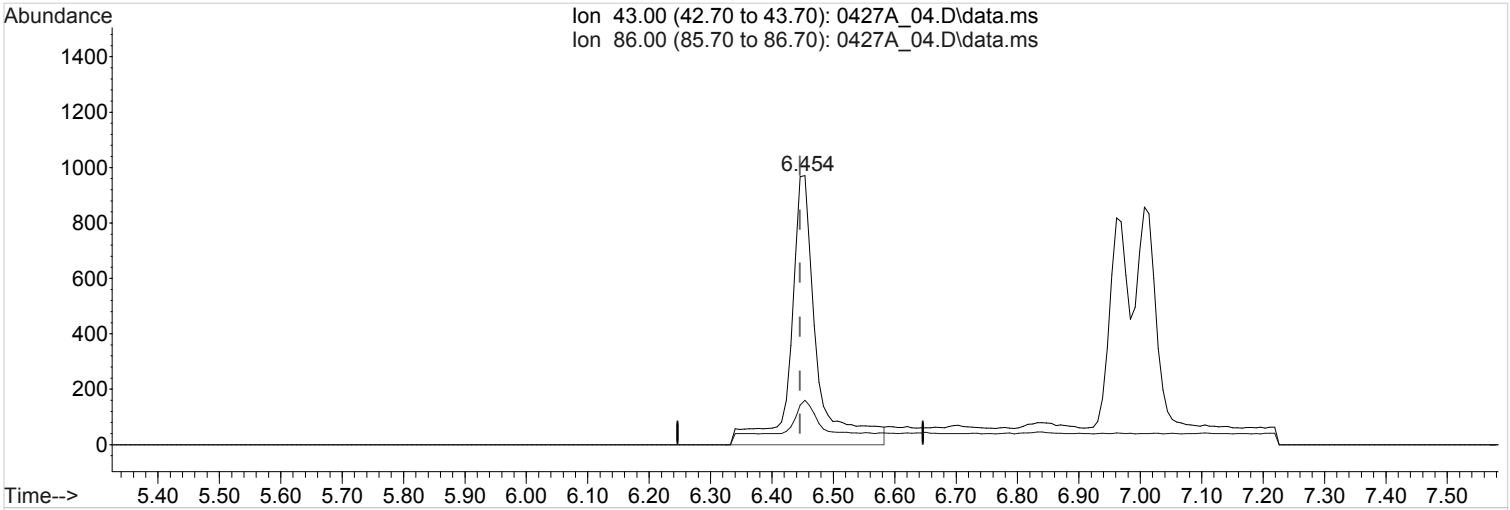
Quant Time: Apr 28 09:52:25 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:52:02 2018
Response via : Initial Calibration

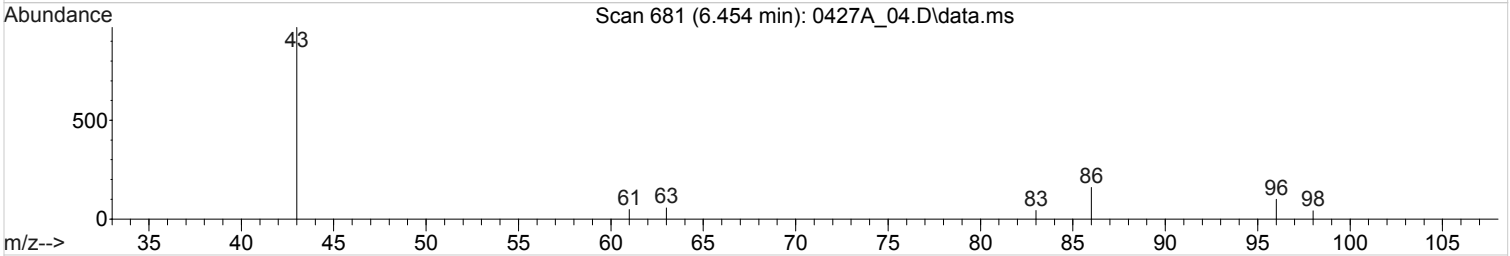


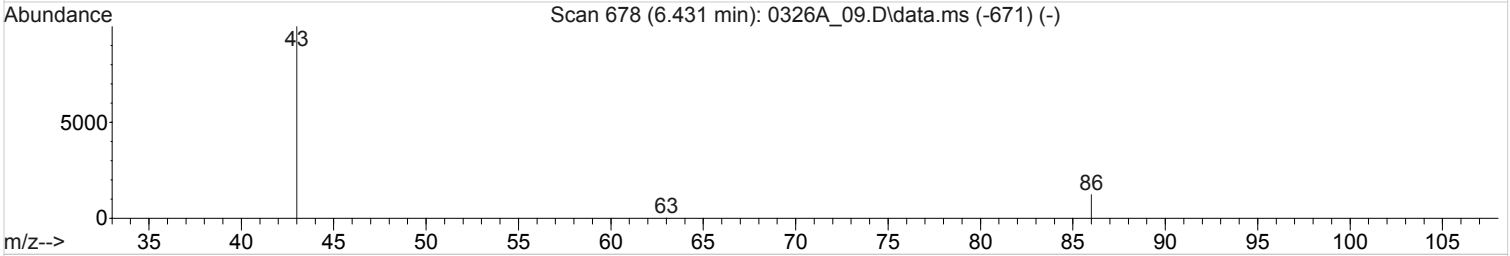
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_04.D
Acq On : 27 Apr 2018 1:30 pm
Operator : 564
Sample : STD AMS 0.031 ppbv 18C26425
Misc : 18C26426
ALS Vial : 4 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 09:52:11 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:52:02 2018
Response via : Initial Calibration







TIC: 0427A_04.D\data.ms

(8) Vinyl Acetate (T,M)

6.454min (+0.007) 0.0455223 ppbv

Qvalue = 89

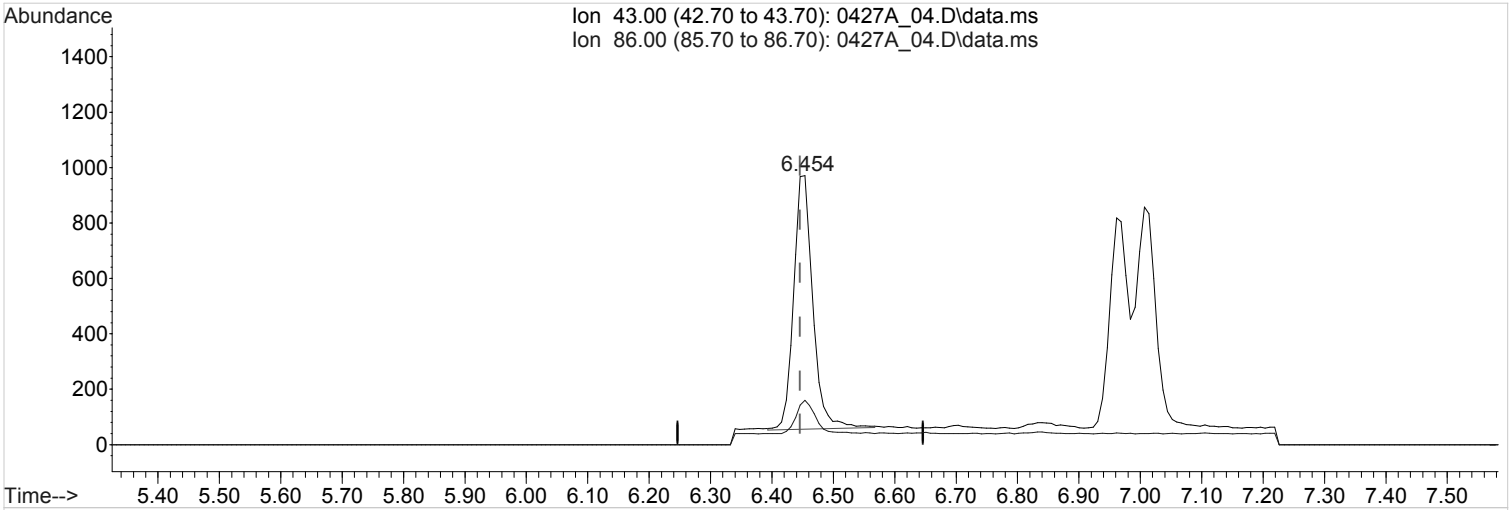
response 2850

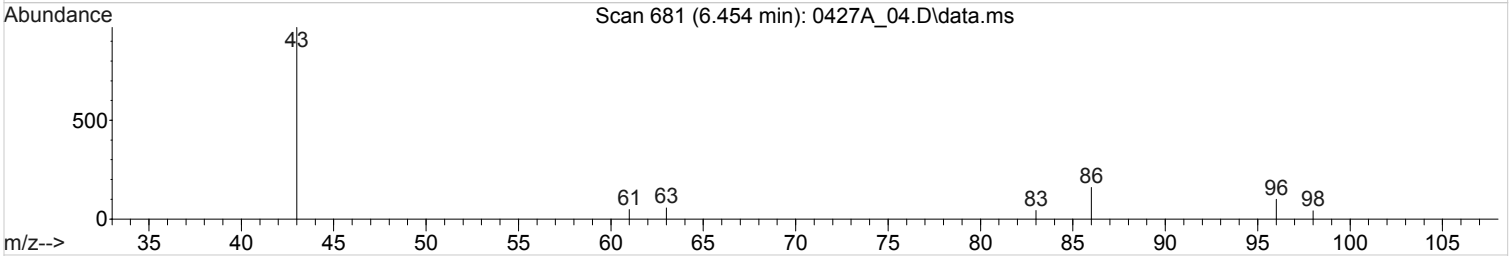
Ion	Exp%	Act%
43.00	100	100
86.00	13.40	9.09#
0.00	0.00	0.00
0.00	0.00	0.00

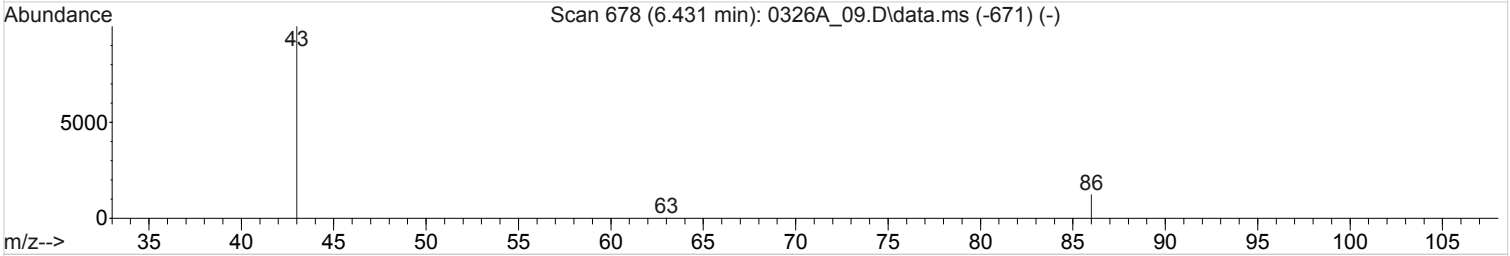
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_04.D
Acq On : 27 Apr 2018 1:30 pm
Operator : 564
Sample : STD AMS 0.031 ppbv 18C26425
Misc : 18C26426
ALS Vial : 4 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 09:52:11 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:52:02 2018
Response via : Initial Calibration







TIC: 0427A_04.D\data.ms

(8) Vinyl Acetate (T,M)

6.454min (+0.007) 0.0317059 ppbv m

response 1985

Ion	Exp%	Act%
43.00	100	100
86.00	13.40	13.05
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_05.D
Acq On : 27 Apr 2018 2:08 pm
Operator : 564
Sample : STD AMS 0.063 ppbv 18C26425
Misc : 18C26426
ALS Vial : 5 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 09:53:09 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:52:41 2018
Response via : Initial Calibration

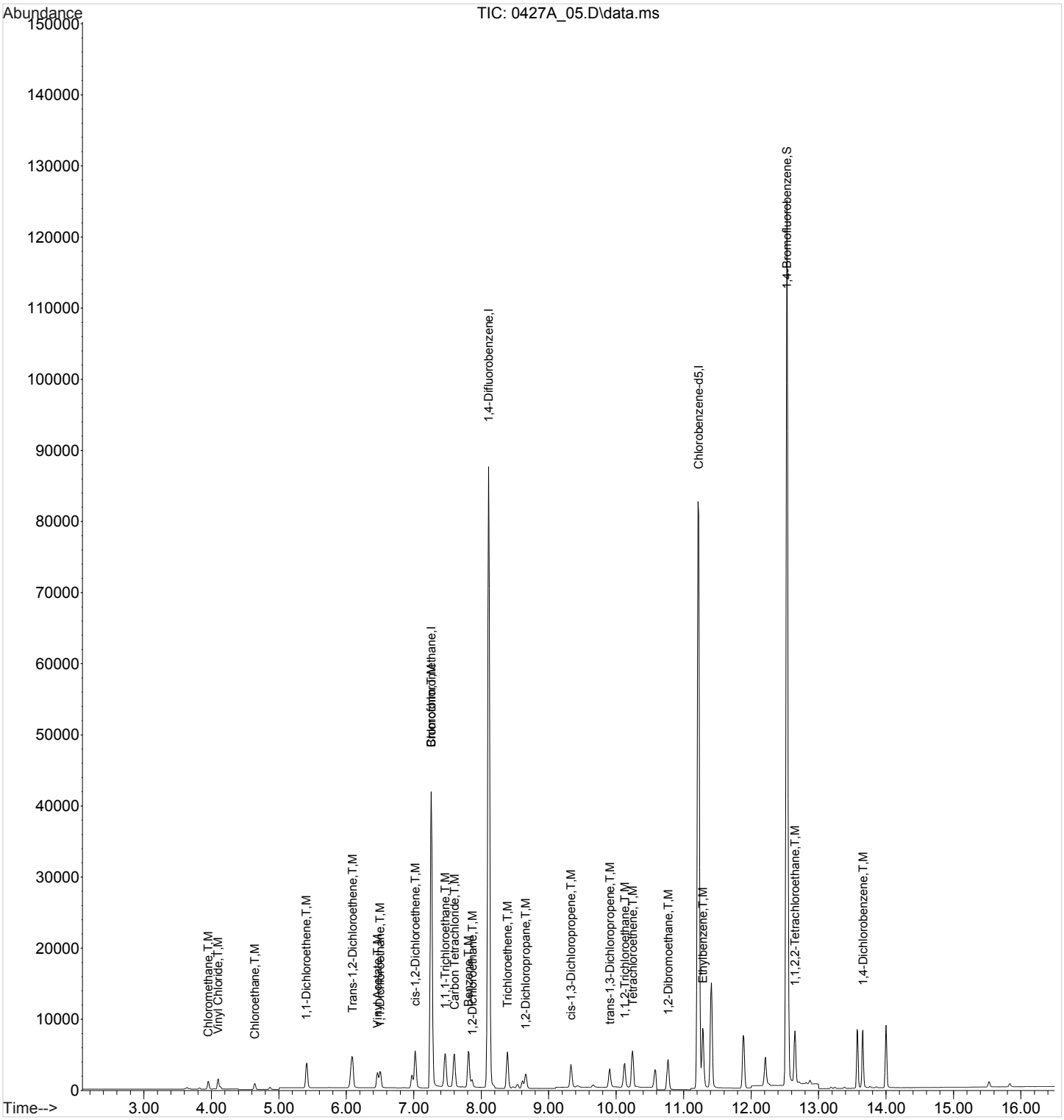
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.259	130	35948	1.2500000	ppbv	0.00
13) 1,4-Difluorobenzene	8.110	114	129238	1.2500000	ppbv	0.00
23) Chlorobenzene-d5	11.222	117	109904	1.2500000	ppbv	0.00
System Monitoring Compounds						
26) 1,4-Bromofluorobenzene	12.532	95	62668	1.2513091	ppbv	0.00
Spiked Amount 1.250	Range 60 - 140		Recovery = 100.10%			
Target Compounds						Qvalue
2) Chloromethane	3.952	50	1479	0.0637119	ppbv	99
3) Vinyl Chloride	4.097	62	1885	0.0647578	ppbv	99
4) Chloroethane	4.643	64	1034	0.0665471	ppbv	99
5) 1,1-Dichloroethene	5.407	61	2711	0.0630118	ppbv	99
6) Trans-1,2-Dichloroethene	6.092	61	2410	0.0625324	ppbv	94
7) 1,1-Dichloroethane	6.499	63	3580	0.0636503	ppbv	100
8) Vinyl Acetate	6.461	43	4063	0.0624249	ppbv	99
9) cis-1,2-Dichloroethene	7.022	96	2538	0.0636609	ppbv	87
10) Chloroform	7.259	83	4336	0.0645169	ppbv	93
11) 1,1,1-Trichloroethane	7.463	97	4474	0.0640430	ppbv	99
12) Carbon Tetrachloride	7.602	117	4512m	0.0643454	ppbv	
14) Benzene	7.809	78	7998	0.0654581	ppbv	98
15) 1,2-Dichloroethane	7.867	64	807	0.0626937	ppbv #	94
16) Trichloroethene	8.387	95	3350	0.0643522	ppbv	99
17) 1,2-Dichloropropane	8.657	63	2532	0.0636527	ppbv #	48
18) cis-1,3-Dichloropropene	9.331	75	4346	0.0627483	ppbv	100
19) trans-1,3-Dichloropropene	9.904	75	3665	0.0618430	ppbv	98
20) 1,1,2-Trichloroethane	10.127	97	3224	0.0637659	ppbv	99
21) Tetrachloroethene	10.244	166	5479	0.0630418	ppbv	100
22) 1,2-Dibromoethane	10.770	107	5063	0.0655851	ppbv	97
24) Ethylbenzene	11.283	91	12021	0.0645445	ppbv	99
25) 1,1,2,2-Tetrachloroethane	12.651	83	7112	0.0633647	ppbv	100
27) 1,4-Dichlorobenzene	13.658	146	7673	0.0636606	ppbv	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_05.D
Acq On : 27 Apr 2018 2:08 pm
Operator : 564
Sample : STD AMS 0.063 ppbv 18C26425
Misc : 18C26426
ALS Vial : 5 Sample Multiplier: 1
InstName : AIRMS5

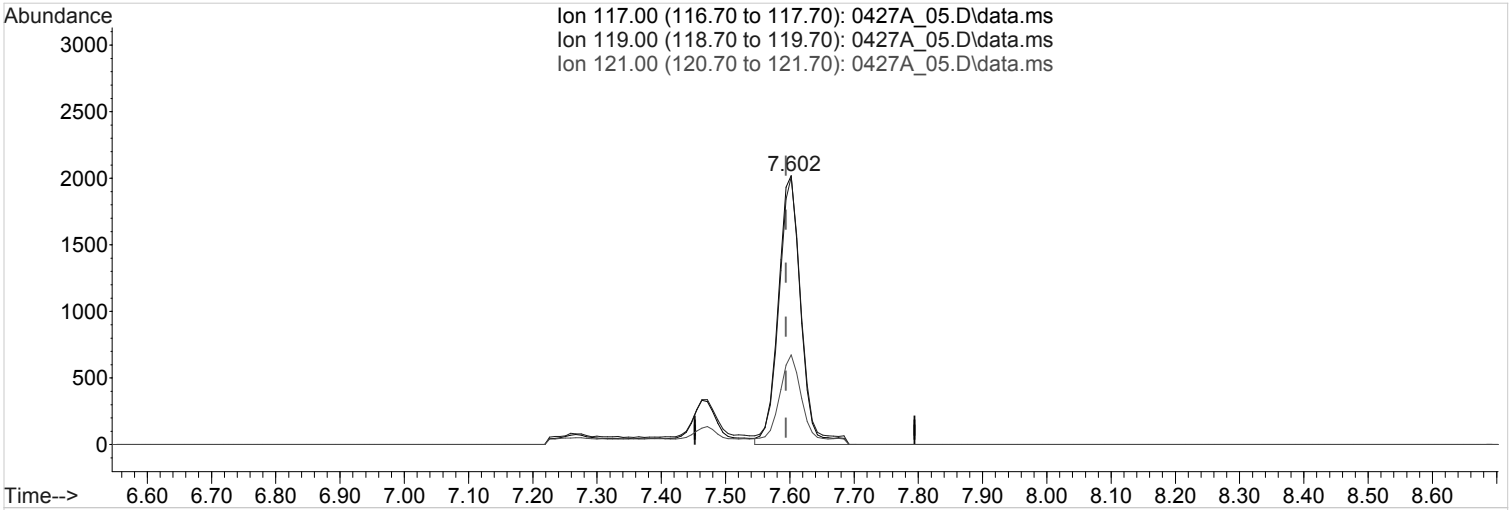
Quant Time: Apr 28 09:53:09 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:52:41 2018
Response via : Initial Calibration

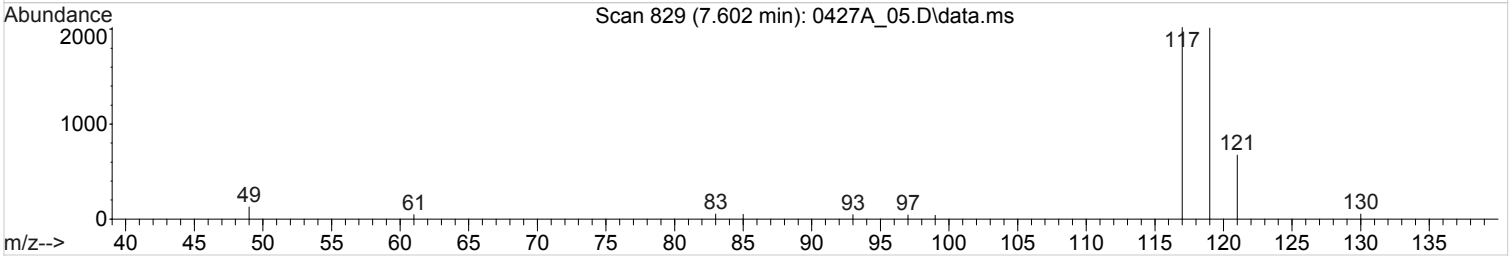


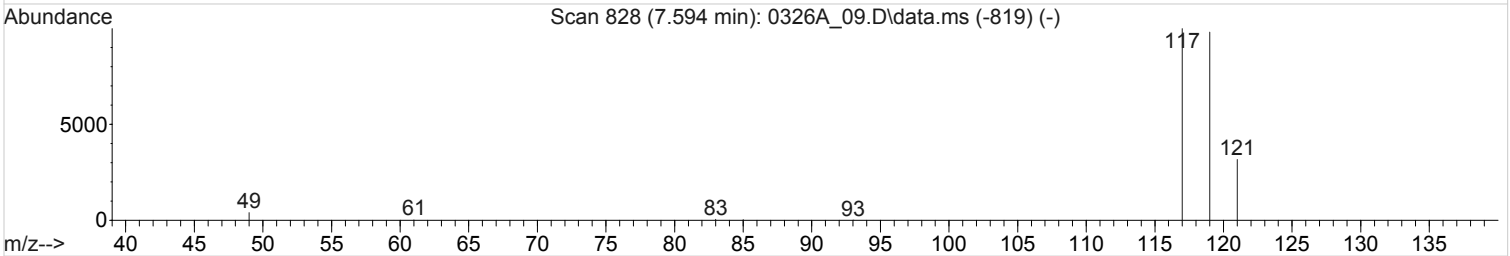
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_05.D
Acq On : 27 Apr 2018 2:08 pm
Operator : 564
Sample : STD AMS 0.063 ppbv 18C26425
Misc : 18C26426
ALS Vial : 5 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 09:52:47 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:52:41 2018
Response via : Initial Calibration







TIC: 0427A_05.D\data.ms

(12) Carbon Tetrachloride (T,M)

7.602min (+0.008) 0.0703920 ppbv

Qvalue = 96

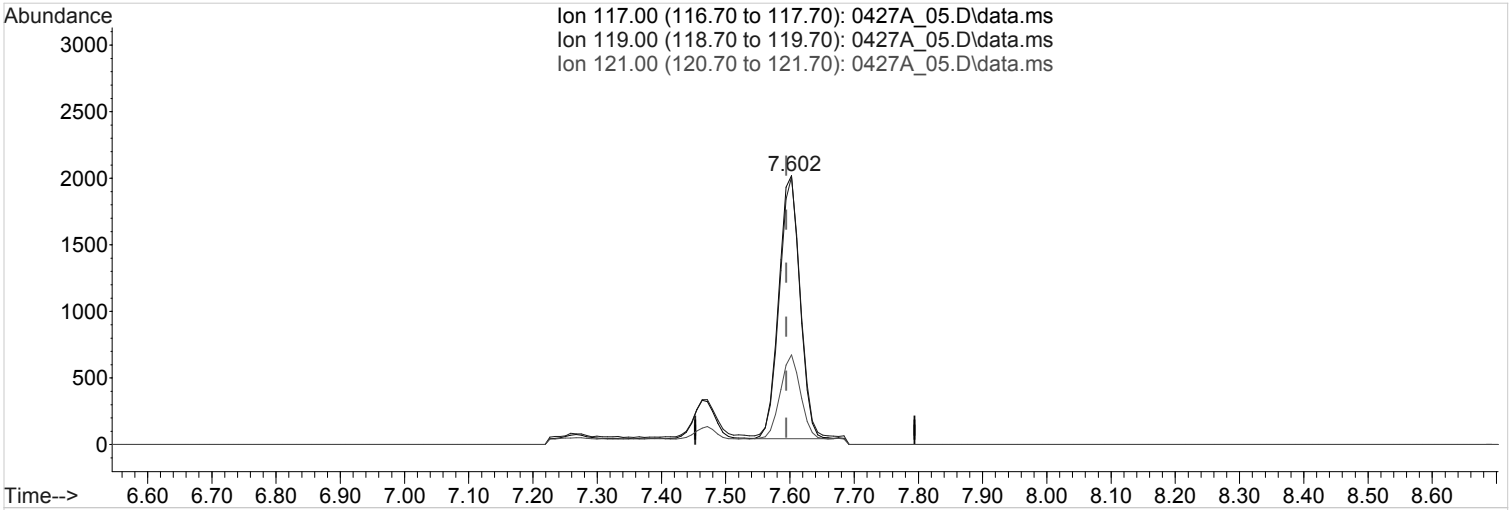
response 4936

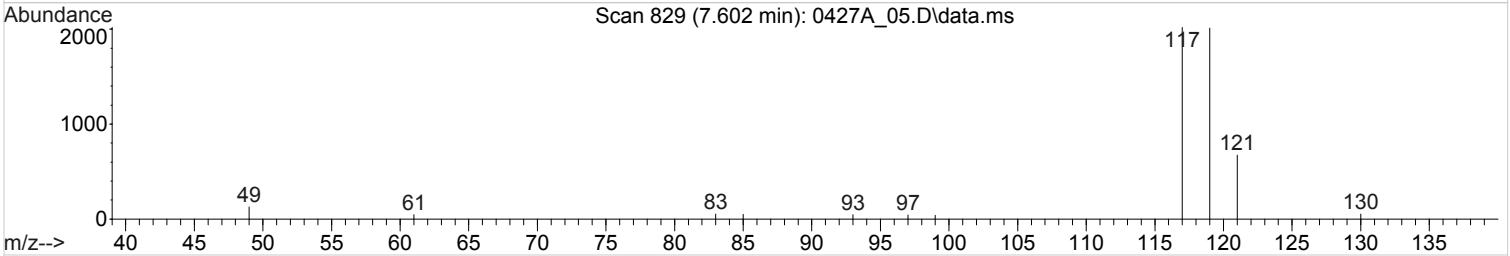
Ion	Exp%	Act%
117.00	100	100
119.00	97.40	100.26
121.00	31.70	35.70
0.00	0.00	0.00

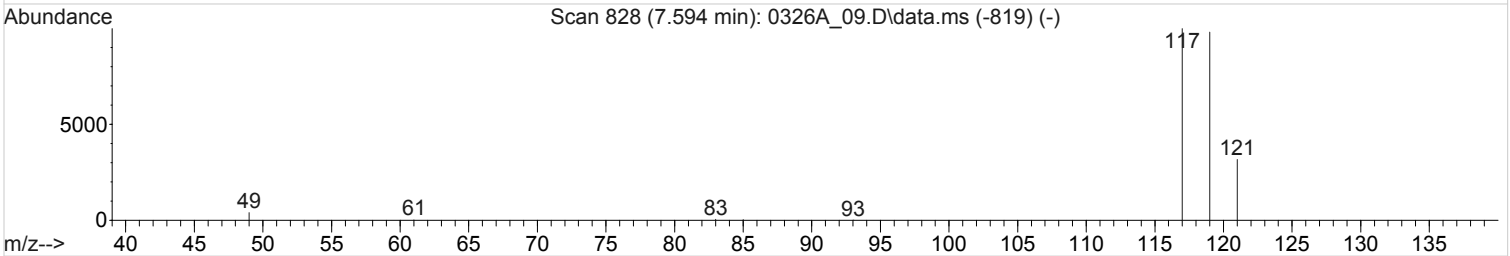
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_05.D
Acq On : 27 Apr 2018 2:08 pm
Operator : 564
Sample : STD AMS 0.063 ppbv 18C26425
Misc : 18C26426
ALS Vial : 5 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 09:52:47 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:52:41 2018
Response via : Initial Calibration







TIC: 0427A_05.D\data.ms

(12) Carbon Tetrachloride (T,M)

7.602min (+0.008) 0.0643454 ppbv m

response 4512

Ion	Exp%	Act%
117.00	100	100
119.00	97.40	109.69
121.00	31.70	39.05#
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_06.D
Acq On : 27 Apr 2018 2:46 pm
Operator : 564
Sample : STD AMS 0.125 ppbv 18C26425
Misc : 18C26426
ALS Vial : 6 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 09:53:29 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:53:26 2018
Response via : Initial Calibration

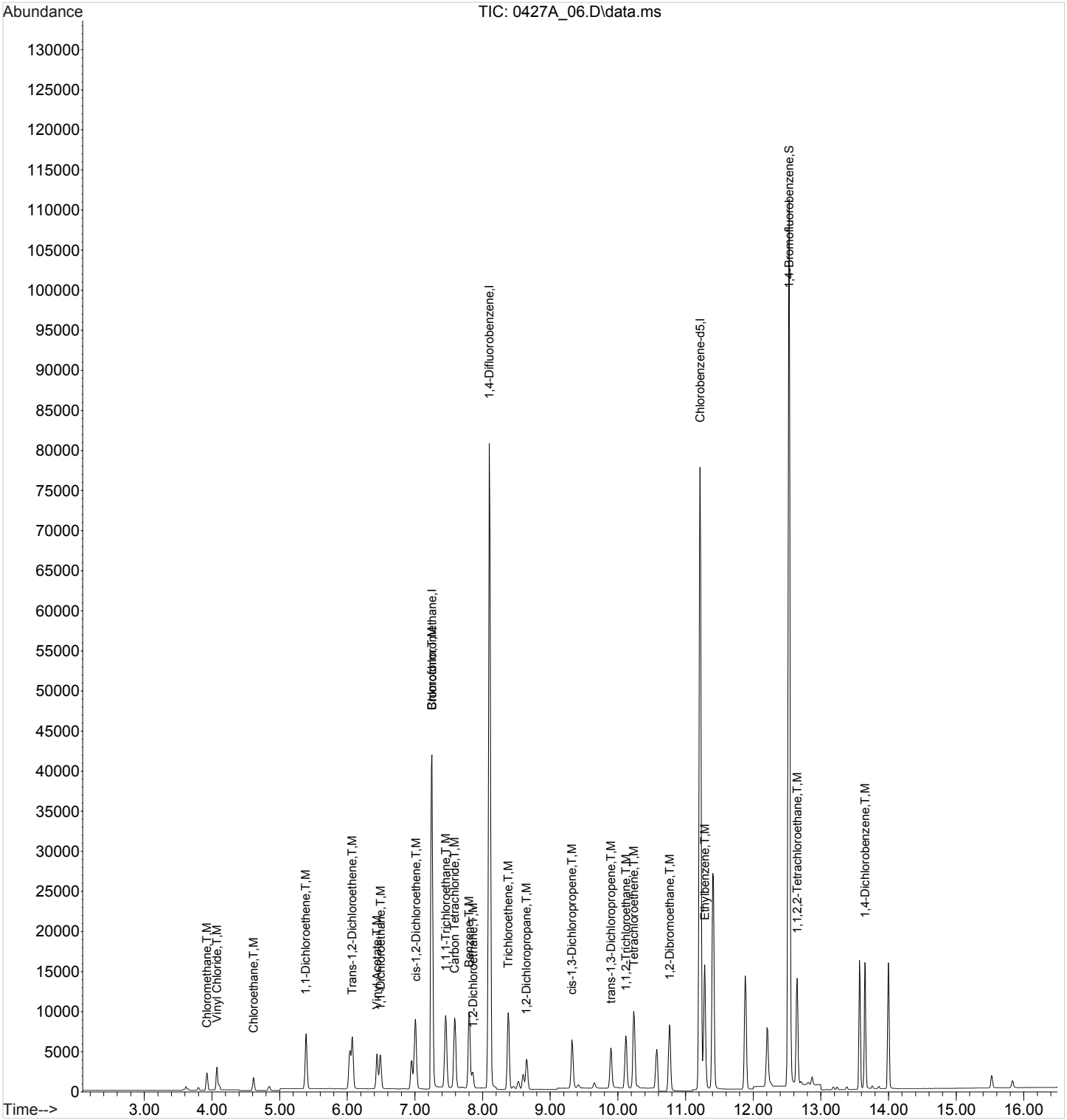
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.251	130	33227	1.2500000	ppbv	0.00
13) 1,4-Difluorobenzene	8.100	114	119789	1.2500000	ppbv	0.00
23) Chlorobenzene-d5	11.215	117	99492	1.2500000	ppbv	0.00
System Monitoring Compounds						
26) 1,4-Bromofluorobenzene	12.532	95	56827	1.2530983	ppbv	0.00
Spiked Amount 1.250	Range 60 - 140		Recovery = 100.25%			
Target Compounds						Qvalue
2) Chloromethane	3.922	50	2883	0.1339848	ppbv	100
3) Vinyl Chloride	4.073	62	3538	0.1305880	ppbv	99
4) Chloroethane	4.614	64	1851	0.1270949	ppbv	99
5) 1,1-Dichloroethene	5.385	61	5264	0.1323646	ppbv	100
6) Trans-1,2-Dichloroethene	6.069	61	4628	0.1301583	ppbv	99
7) 1,1-Dichloroethane	6.492	63	6802	0.1305023	ppbv	100
8) Vinyl Acetate	6.439	43	7846	0.1307179	ppbv	100
9) cis-1,2-Dichloroethene	7.014	96	4657	0.1260473	ppbv	99
10) Chloroform	7.251	83	8255	0.1320926	ppbv	100
11) 1,1,1-Trichloroethane	7.455	97	8478	0.1307552	ppbv	100
12) Carbon Tetrachloride	7.586	117	9053	0.1389351	ppbv	98
14) Benzene	7.799	78	14672	0.1283006	ppbv	100
15) 1,2-Dichloroethane	7.857	64	1540	0.1292328	ppbv #	100
16) Trichloroethene	8.378	95	6241	0.1286537	ppbv	99
17) 1,2-Dichloropropane	8.648	63	4762	0.1288226	ppbv	96
18) cis-1,3-Dichloropropene	9.321	75	8198	0.1278284	ppbv	99
19) trans-1,3-Dichloropropene	9.894	75	6928	0.1267057	ppbv	98
20) 1,1,2-Trichloroethane	10.118	97	6026	0.1281971	ppbv	100
21) Tetrachloroethene	10.234	166	10066	0.1249354	ppbv	100
22) 1,2-Dibromoethane	10.762	107	9183	0.1270348	ppbv	100
24) Ethylbenzene	11.283	91	22421	0.1321738	ppbv	99
25) 1,1,2,2-Tetrachloroethane	12.651	83	12968	0.1274460	ppbv	100
27) 1,4-Dichlorobenzene	13.652	146	14325	0.1309449	ppbv	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_06.D
Acq On : 27 Apr 2018 2:46 pm
Operator : 564
Sample : STD AMS 0.125 ppbv 18C26425
Misc : 18C26426
ALS Vial : 6 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 09:53:29 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:53:26 2018
Response via : Initial Calibration



ACCOUNT:	PROJECT:	SDG:	DATE/TIME:	PAGE:
S&ME Inc. - Knoxville	4143-17-016	L988669	05/16/18 08:03	138 of 183

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_07.D
Acq On : 27 Apr 2018 3:25 pm
Operator : 564
Sample : STD AMS 0.25 ppbv 18C26425
Misc : 18C26426
ALS Vial : 7 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 09:54:28 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:54:02 2018
Response via : Initial Calibration

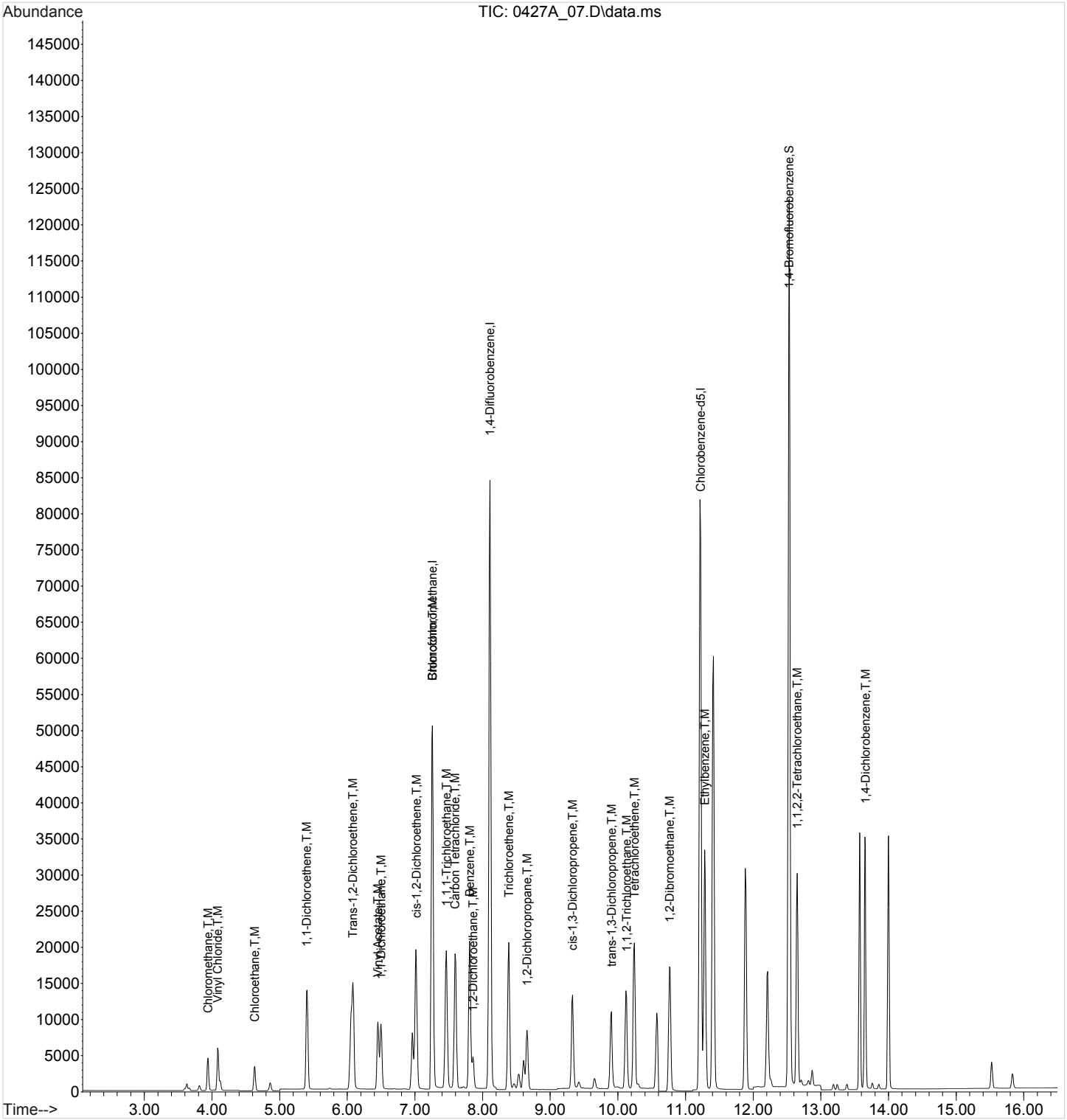
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.259	130	34954	1.2500000	ppbv	0.00
13) 1,4-Difluorobenzene	8.110	114	125630	1.2500000	ppbv	0.00
23) Chlorobenzene-d5	11.222	117	106409	1.2500000	ppbv	0.00
System Monitoring Compounds						
26) 1,4-Bromofluorobenzene	12.532	95	61225	1.2616932	ppbv	0.00
Spiked Amount 1.250	Range 60 - 140		Recovery = 100.94%			
Target Compounds						Qvalue
2) Chloromethane	3.940	50	5843	0.2544733	ppbv	100
3) Vinyl Chloride	4.085	62	7441	0.2587648	ppbv	100
4) Chloroethane	4.632	64	4009	0.2607946	ppbv	100
5) 1,1-Dichloroethene	5.400	61	10787	0.2548375	ppbv	99
6) Trans-1,2-Dichloroethene	6.084	61	9643	0.2556909	ppbv	98
7) 1,1-Dichloroethane	6.499	63	14133	0.2555074	ppbv	100
8) Vinyl Acetate	6.454	43	16852	0.2644706	ppbv	99
9) cis-1,2-Dichloroethene	7.022	96	9770	0.2509511	ppbv	100
10) Chloroform	7.259	83	17261	0.2596098	ppbv	100
11) 1,1,1-Trichloroethane	7.463	97	17723	0.2574639	ppbv	100
12) Carbon Tetrachloride	7.594	117	18663	0.2663290	ppbv	100
14) Benzene	7.809	78	30556	0.2534381	ppbv	100
15) 1,2-Dichloroethane	7.857	64	3282m	0.2608452	ppbv	
16) Trichloroethene	8.387	95	13201	0.2579687	ppbv	100
17) 1,2-Dichloropropane	8.657	63	10122	0.2595043	ppbv	98
18) cis-1,3-Dichloropropene	9.331	75	17387	0.2573396	ppbv	99
19) trans-1,3-Dichloropropene	9.904	75	14264	0.2480674	ppbv	99
20) 1,1,2-Trichloroethane	10.127	97	12828	0.2588902	ppbv	100
21) Tetrachloroethene	10.244	166	21311	0.2522325	ppbv	100
22) 1,2-Dibromoethane	10.762	107	19611	0.2578398	ppbv	99
24) Ethylbenzene	11.283	91	48560	0.2646199	ppbv	99
25) 1,1,2,2-Tetrachloroethane	12.651	83	28319	0.2592057	ppbv	100
27) 1,4-Dichlorobenzene	13.658	146	31538	0.2670094	ppbv	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_07.D
Acq On : 27 Apr 2018 3:25 pm
Operator : 564
Sample : STD AMS 0.25 ppbv 18C26425
Misc : 18C26426
ALS Vial : 7 Sample Multiplier: 1
InstName : AIRMS5

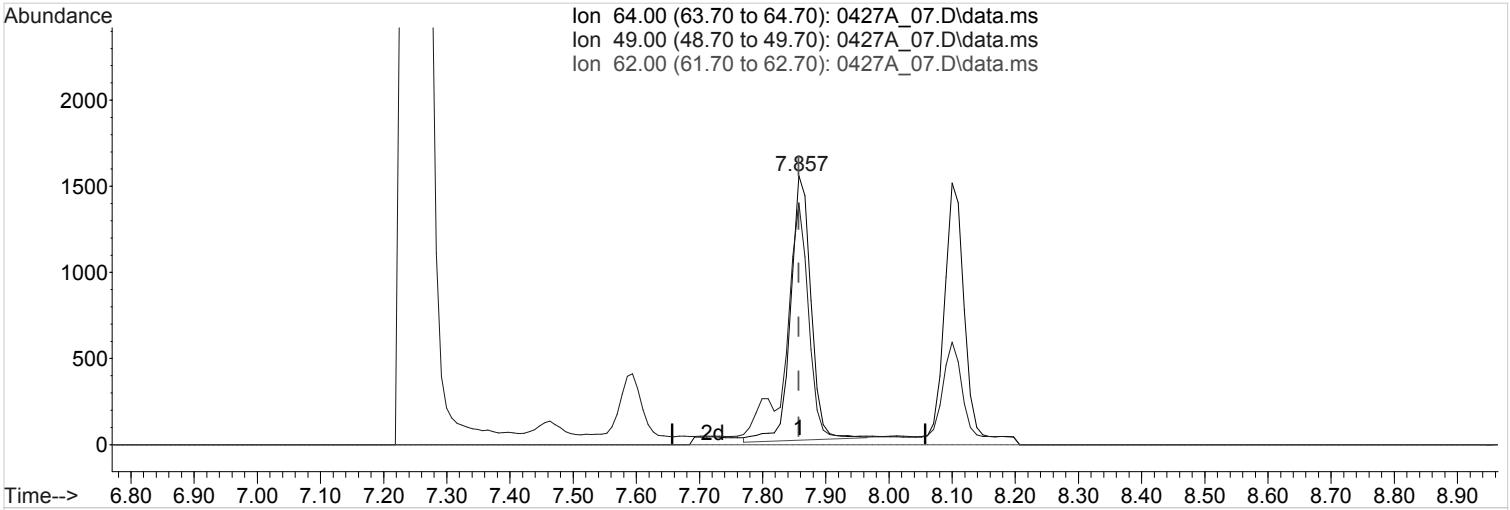
Quant Time: Apr 28 09:54:28 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:54:02 2018
Response via : Initial Calibration

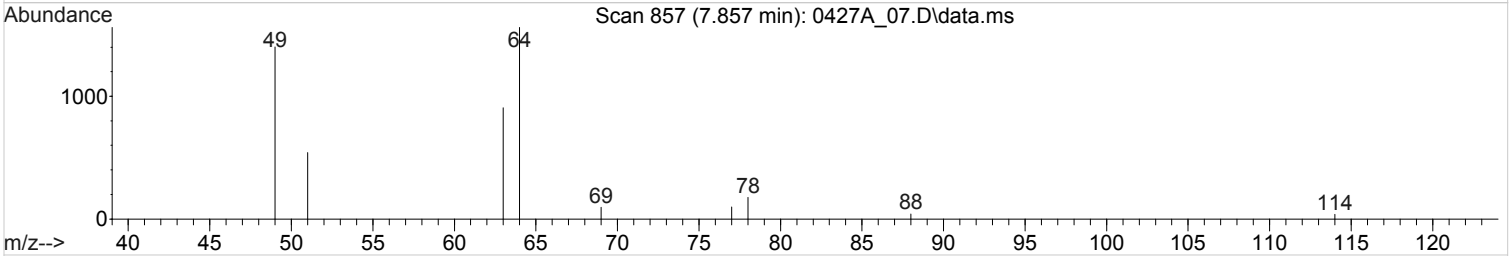


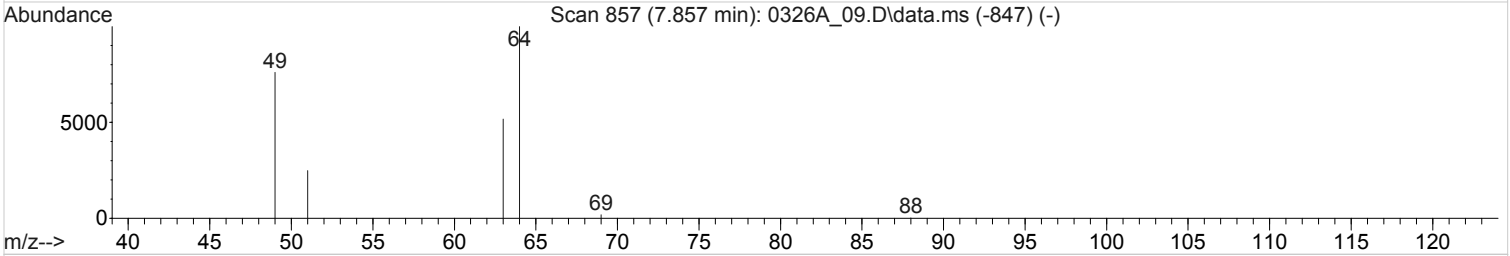
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_07.D
Acq On : 27 Apr 2018 3:25 pm
Operator : 564
Sample : STD AMS 0.25 ppbv 18C26425
Misc : 18C26426
ALS Vial : 7 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 09:54:08 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:54:02 2018
Response via : Initial Calibration







TIC: 0427A_07.D\data.ms

(15) 1,2-Dichloroethane (T,M)

7.857min (-0.000) 0.2738001 ppbv

Qvalue = 97

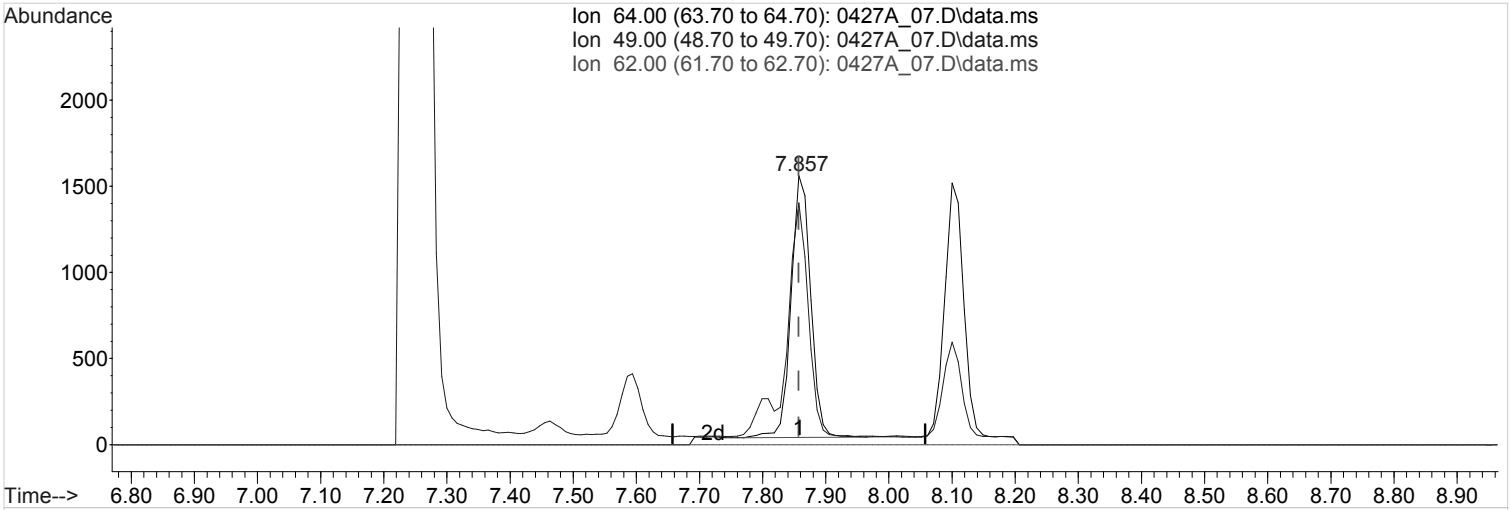
response 3445

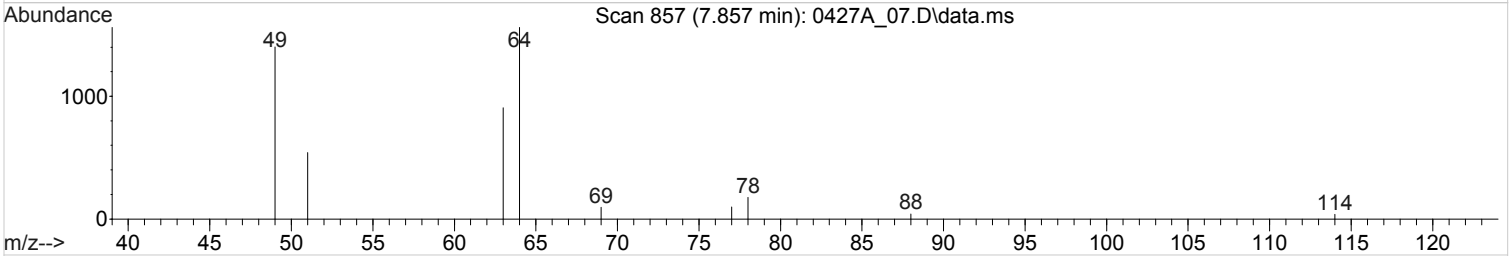
Ion	Exp%	Act%
64.00	100	100
49.00	83.80	81.45
62.00	0.00	0.00
0.00	0.00	0.00

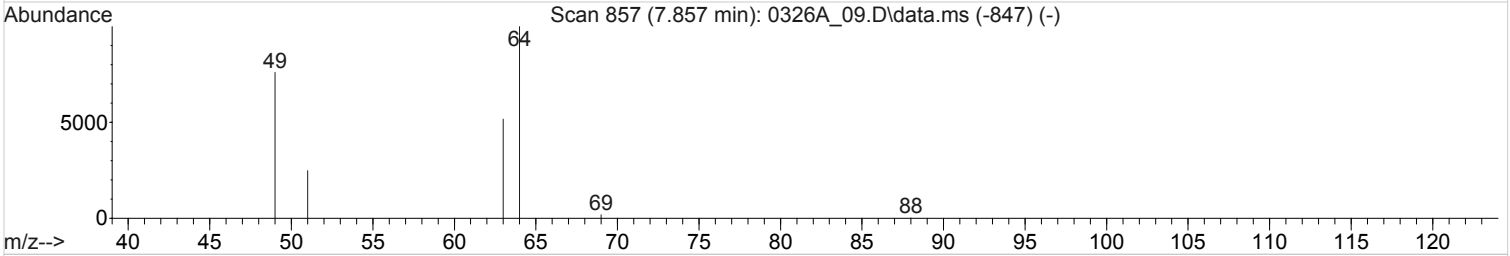
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_07.D
Acq On : 27 Apr 2018 3:25 pm
Operator : 564
Sample : STD AMS 0.25 ppbv 18C26425
Misc : 18C26426
ALS Vial : 7 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 09:54:08 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:54:02 2018
Response via : Initial Calibration







TIC: 0427A_07.D\data.ms

(15) 1,2-Dichloroethane (T,M)

7.857min (-0.000) 0.2608452 ppbv m

response 3282

Ion	Exp%	Act%
64.00	100	100
49.00	83.80	85.50
62.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_08.D
Acq On : 27 Apr 2018 4:05 pm
Operator : 564
Sample : STD AMS 0.375 ppbv 18C26425
Misc : 18C26426
ALS Vial : 8 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 09:55:11 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:54:45 2018
Response via : Initial Calibration

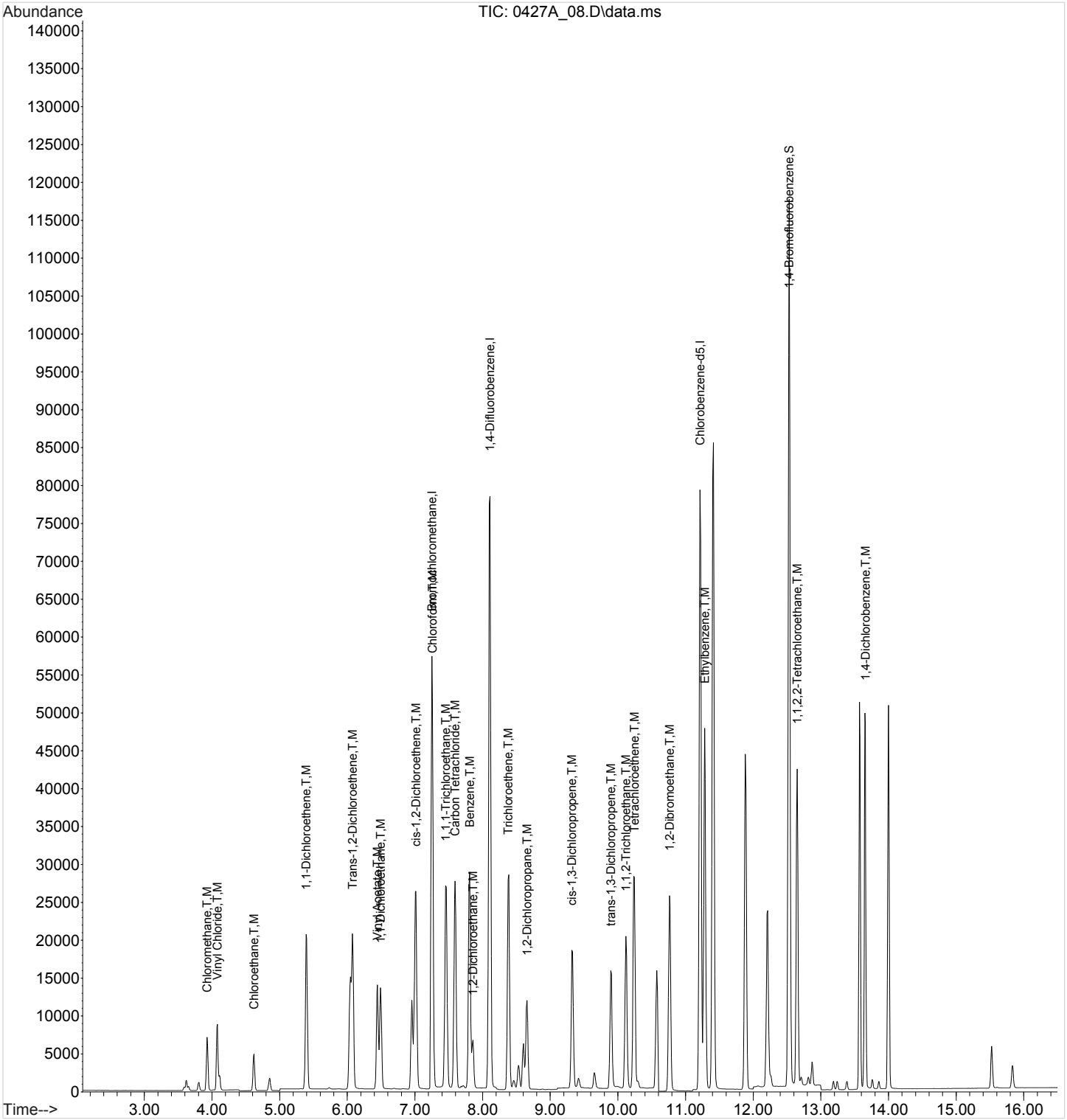
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.251	130	34043	1.2500000	ppbv	0.00
13) 1,4-Difluorobenzene	8.110	114	121864	1.2500000	ppbv	0.00
23) Chlorobenzene-d5	11.215	117	101983	1.2500000	ppbv	0.00
System Monitoring Compounds						
26) 1,4-Bromofluorobenzene	12.532	95	58756	1.2613953	ppbv	0.00
Spiked Amount 1.250	Range 60 - 140		Recovery = 100.91%			
Target Compounds						Qvalue
2) Chloromethane	3.928	50	8759	0.3905140	ppbv	100
3) Vinyl Chloride	4.079	62	10750	0.3816113	ppbv	100
4) Chloroethane	4.620	64	5584	0.3703078	ppbv	100
5) 1,1-Dichloroethene	5.392	61	15891	0.3842241	ppbv	100
6) Trans-1,2-Dichloroethene	6.077	61	14193	0.3849477	ppbv	100
7) 1,1-Dichloroethane	6.492	63	20853	0.3856694	ppbv	100
8) Vinyl Acetate	6.446	43	24473	0.3905824	ppbv	100
9) cis-1,2-Dichloroethene	7.014	96	14350	0.3782162	ppbv	100
10) Chloroform	7.259	83	25005	0.3836874	ppbv	100
11) 1,1,1-Trichloroethane	7.455	97	25896	0.3843484	ppbv	100
12) Carbon Tetrachloride	7.594	117	27152	0.3935552	ppbv	97
14) Benzene	7.809	78	43892	0.3744419	ppbv	100
15) 1,2-Dichloroethane	7.857	64	4725m	0.3843575	ppbv	
16) Trichloroethene	8.378	95	19038	0.3815033	ppbv	99
17) 1,2-Dichloropropane	8.657	63	14673	0.3853647	ppbv	99
18) cis-1,3-Dichloropropene	9.321	75	25136	0.3816596	ppbv	100
19) trans-1,3-Dichloropropene	9.894	75	20741	0.3723367	ppbv	100
20) 1,1,2-Trichloroethane	10.118	97	18487	0.3823620	ppbv	100
21) Tetrachloroethene	10.244	166	30483	0.3713872	ppbv	100
22) 1,2-Dibromoethane	10.762	107	28641	0.3861823	ppbv	100
24) Ethylbenzene	11.283	91	69973	0.3940147	ppbv	99
25) 1,1,2,2-Tetrachloroethane	12.651	83	40371	0.3832036	ppbv	100
27) 1,4-Dichlorobenzene	13.658	146	45056	0.3935488	ppbv	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_08.D
Acq On : 27 Apr 2018 4:05 pm
Operator : 564
Sample : STD AMS 0.375 ppbv 18C26425
Misc : 18C26426
ALS Vial : 8 Sample Multiplier: 1
InstName : AIRMS5

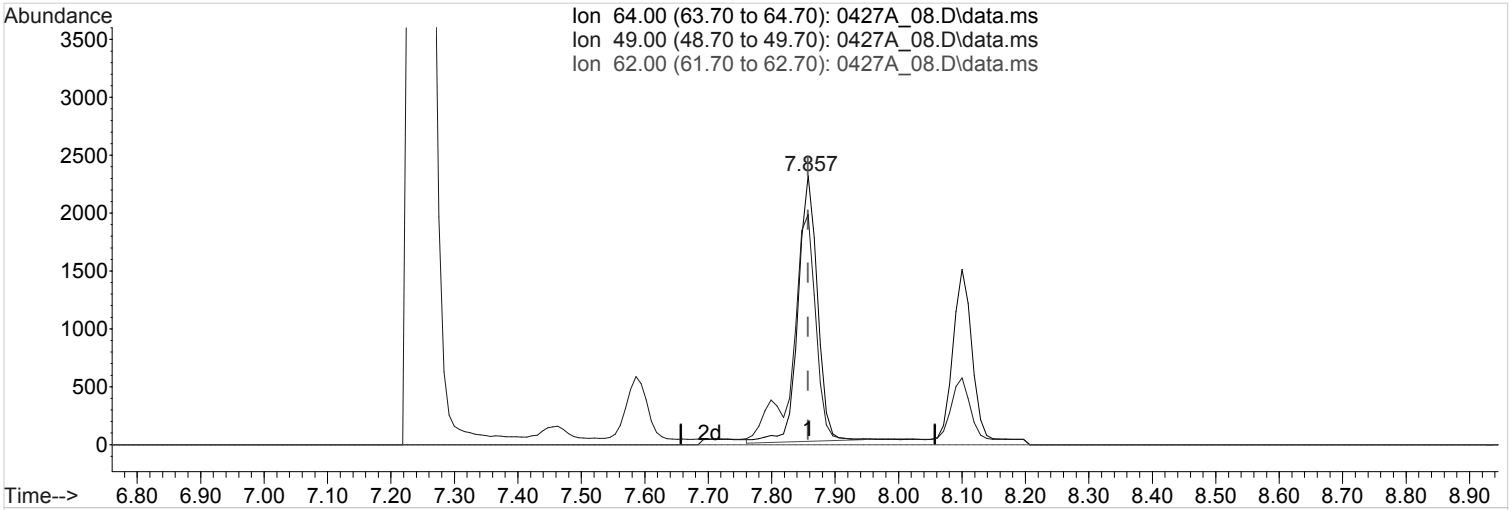
Quant Time: Apr 28 09:55:11 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:54:45 2018
Response via : Initial Calibration

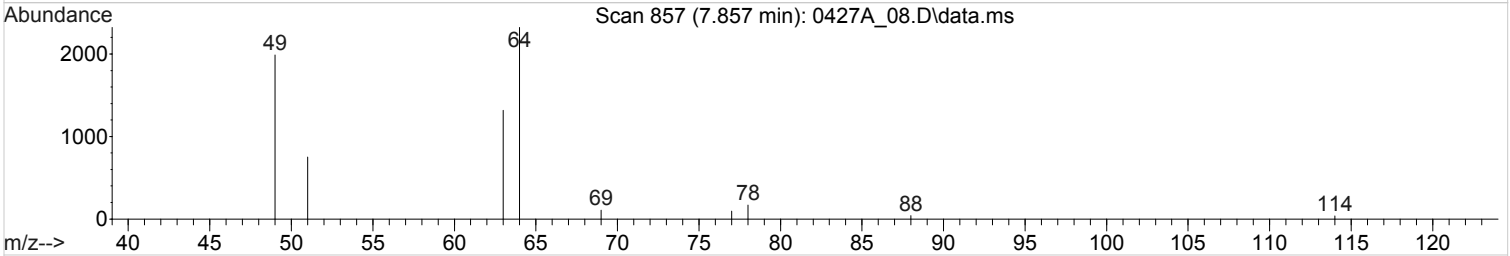


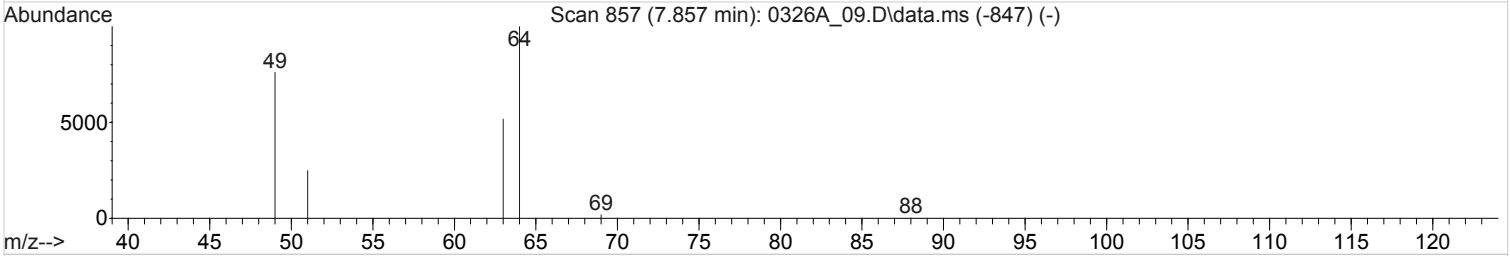
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_08.D
Acq On : 27 Apr 2018 4:05 pm
Operator : 564
Sample : STD AMS 0.375 ppbv 18C26425
Misc : 18C26426
ALS Vial : 8 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 09:54:50 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:54:45 2018
Response via : Initial Calibration







TIC: 0427A_08.D\data.ms

(15) 1,2-Dichloroethane (T,M)

7.857min (-0.000) 0.3960712 ppbv

Qvalue = 99

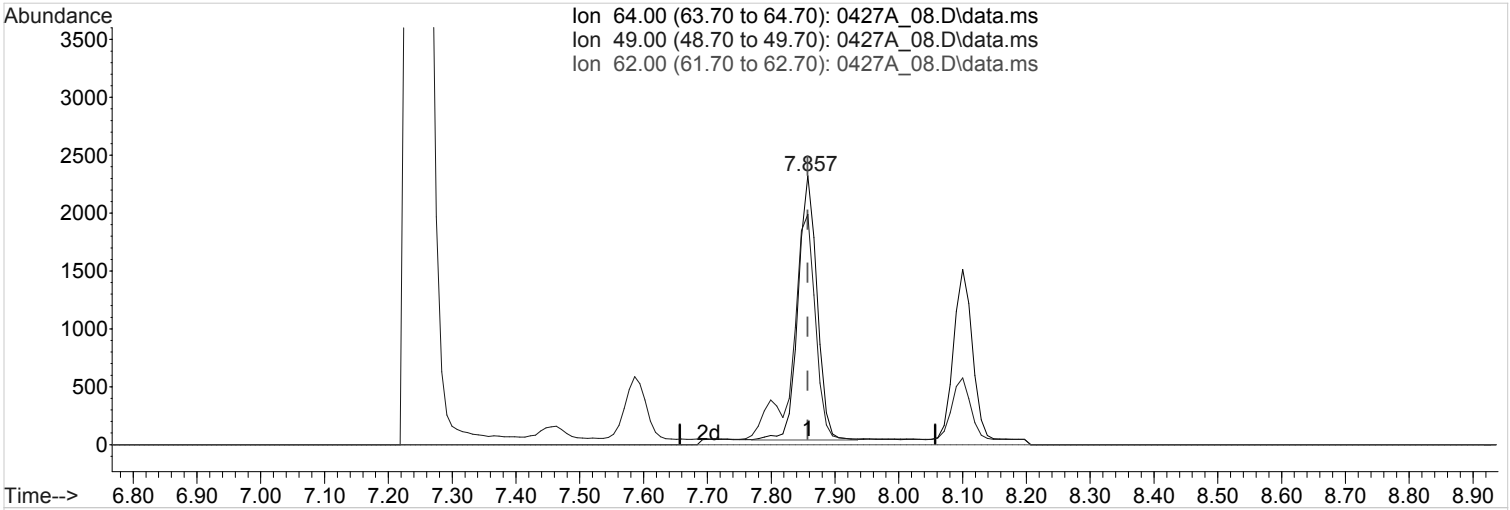
response 4869

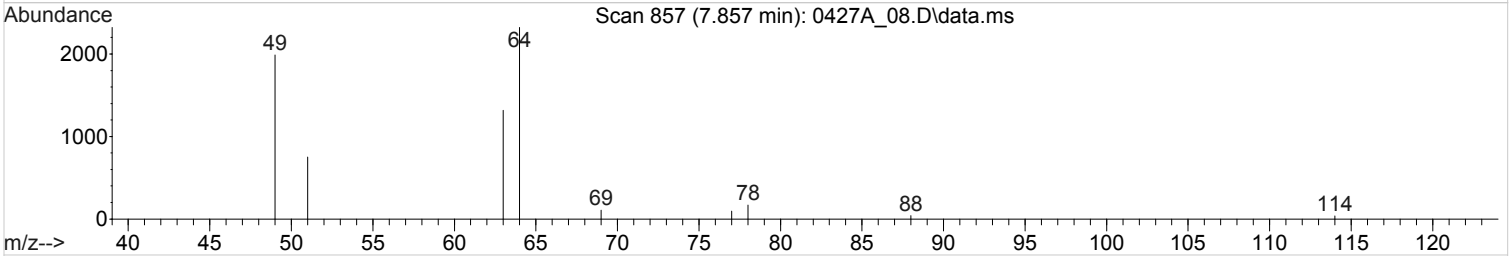
Ion	Exp%	Act%
64.00	100	100
49.00	83.80	83.22
62.00	0.00	0.00
0.00	0.00	0.00

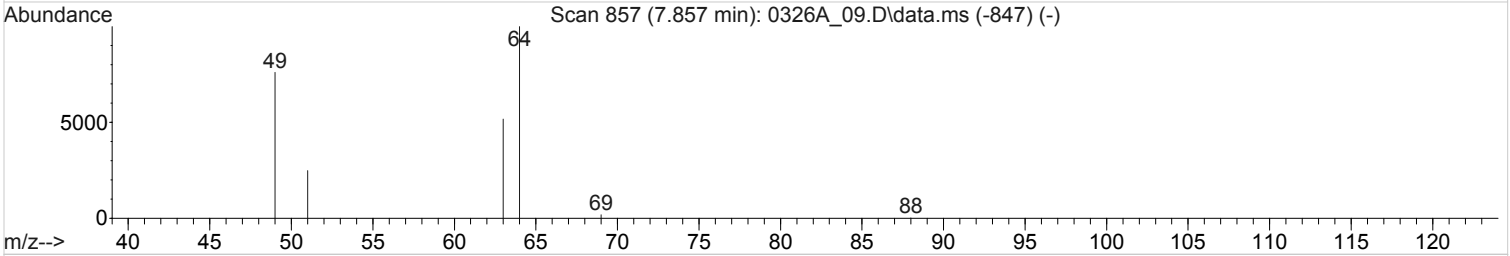
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_08.D
Acq On : 27 Apr 2018 4:05 pm
Operator : 564
Sample : STD AMS 0.375 ppbv 18C26425
Misc : 18C26426
ALS Vial : 8 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 09:54:50 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:54:45 2018
Response via : Initial Calibration







TIC: 0427A_08.D\data.ms

(15) 1,2-Dichloroethane (T,M)

7.857min (-0.000) 0.3843575 ppbv m

response 4725

Ion	Exp%	Act%
64.00	100	100
49.00	83.80	85.76
62.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_09.D
Acq On : 27 Apr 2018 4:47 pm
Operator : 564
Sample : MSTD AMS 0.50 ppbv 18C26425
Misc : 18C26426
ALS Vial : 9 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 09:55:44 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:55:24 2018
Response via : Initial Calibration

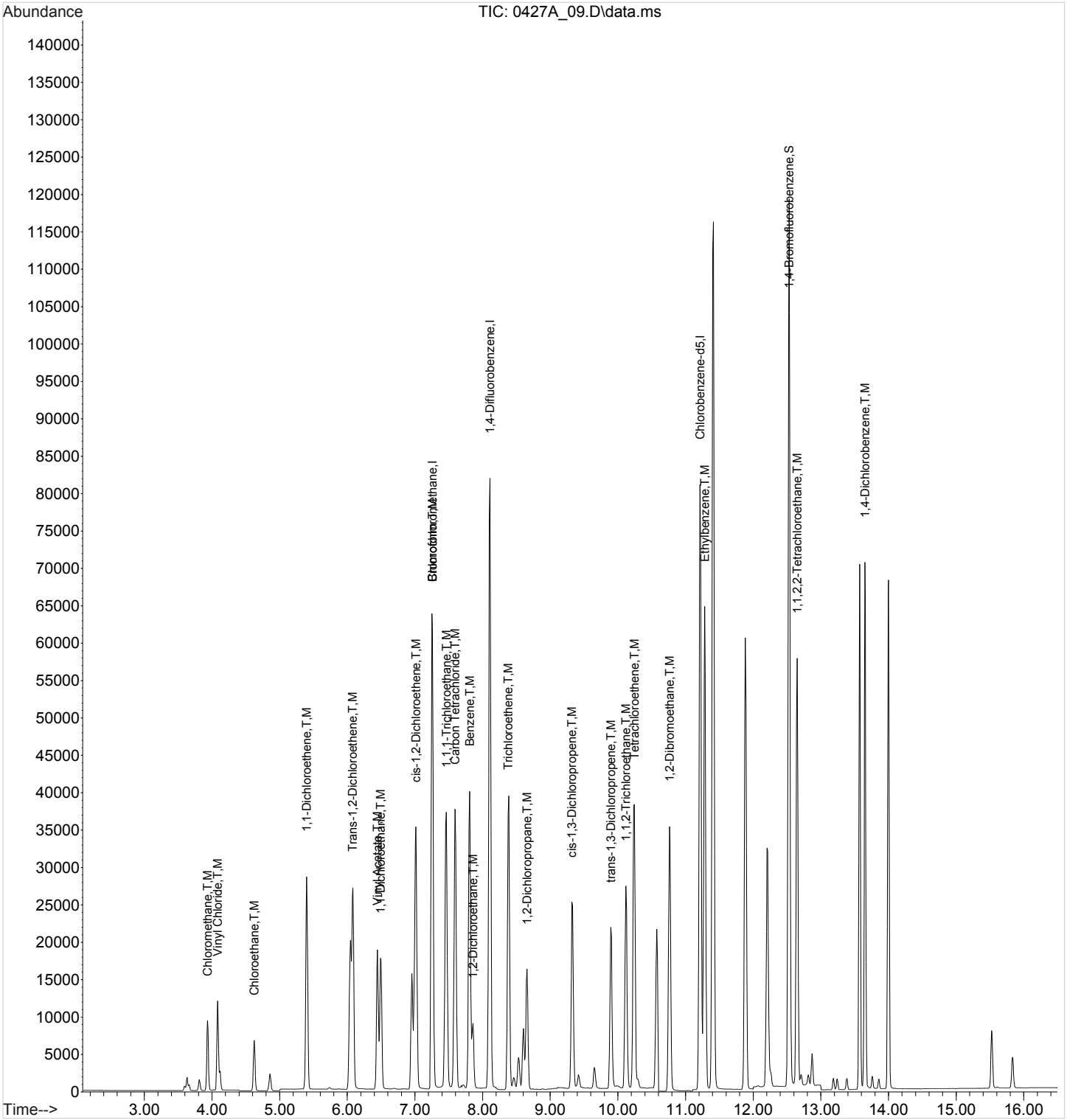
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.259	130	34395	1.2500000	ppbv	0.00
13) 1,4-Difluorobenzene	8.110	114	123611	1.2500000	ppbv	0.00
23) Chlorobenzene-d5	11.215	117	103365	1.2500000	ppbv	0.00
System Monitoring Compounds						
26) 1,4-Bromofluorobenzene	12.533	95	59765	1.2642558	ppbv	0.00
Spiked Amount 1.250	Range 60 - 140		Recovery = 101.14%			
Target Compounds						Qvalue
2) Chloromethane	3.935	50	11542	0.5063333	ppbv	100
3) Vinyl Chloride	4.085	62	14536	0.5094455	ppbv	100
4) Chloroethane	4.626	64	7772	0.5110458	ppbv	100
5) 1,1-Dichloroethene	5.400	61	21384	0.5099544	ppbv	100
6) Trans-1,2-Dichloroethene	6.077	61	19033	0.5090080	ppbv	100
7) 1,1-Dichloroethane	6.492	63	28207	0.5142501	ppbv	100
8) Vinyl Acetate	6.446	43	32741	0.5141377	ppbv	100
9) cis-1,2-Dichloroethene	7.014	96	19375	0.5048132	ppbv	100
10) Chloroform	7.259	83	33868	0.5126699	ppbv	100
11) 1,1,1-Trichloroethane	7.463	97	35085	0.5135734	ppbv	100
12) Carbon Tetrachloride	7.594	117	36504	0.5200172	ppbv	100
14) Benzene	7.809	78	59206	0.4980529	ppbv	100
15) 1,2-Dichloroethane	7.857	64	6416m	0.5127088	ppbv	
16) Trichloroethene	8.378	95	25770	0.5078496	ppbv	100
17) 1,2-Dichloropropane	8.657	63	19847	0.5118643	ppbv	100
18) cis-1,3-Dichloropropene	9.321	75	34091	0.5090234	ppbv	100
19) trans-1,3-Dichloropropene	9.894	75	28180	0.4992364	ppbv	100
20) 1,1,2-Trichloroethane	10.118	97	25066	0.5096773	ppbv	100
21) Tetrachloroethene	10.244	166	41236	0.4959777	ppbv	100
22) 1,2-Dibromoethane	10.763	107	38828	0.5139506	ppbv	100
24) Ethylbenzene	11.283	91	96237	0.5308157	ppbv	100
25) 1,1,2,2-Tetrachloroethane	12.651	83	55393	0.5171471	ppbv	100
27) 1,4-Dichlorobenzene	13.652	146	61998	0.5305422	ppbv	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_09.D
Acq On : 27 Apr 2018 4:47 pm
Operator : 564
Sample : MSTD AMS 0.50 ppbv 18C26425
Misc : 18C26426
ALS Vial : 9 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 09:55:44 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:55:24 2018
Response via : Initial Calibration

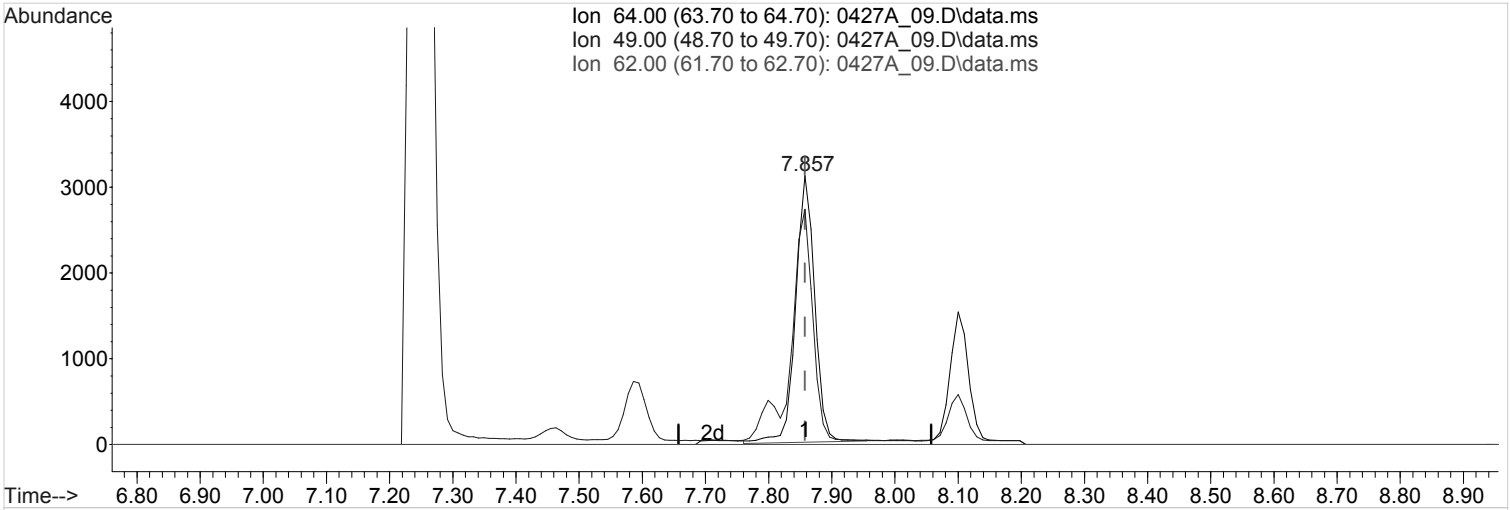


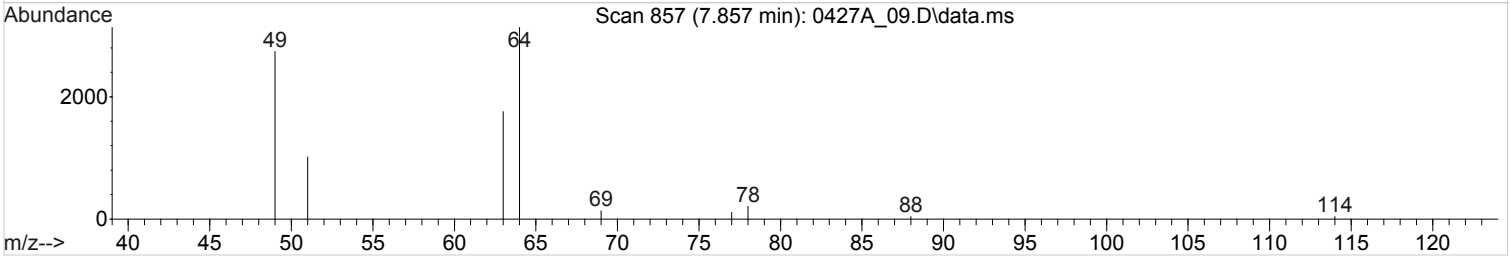
ACCOUNT:	PROJECT:	SDG:	DATE/TIME:	PAGE:
S&ME Inc. - Knoxville	4143-17-016	L988669	05/16/18 08:03	148 of 183

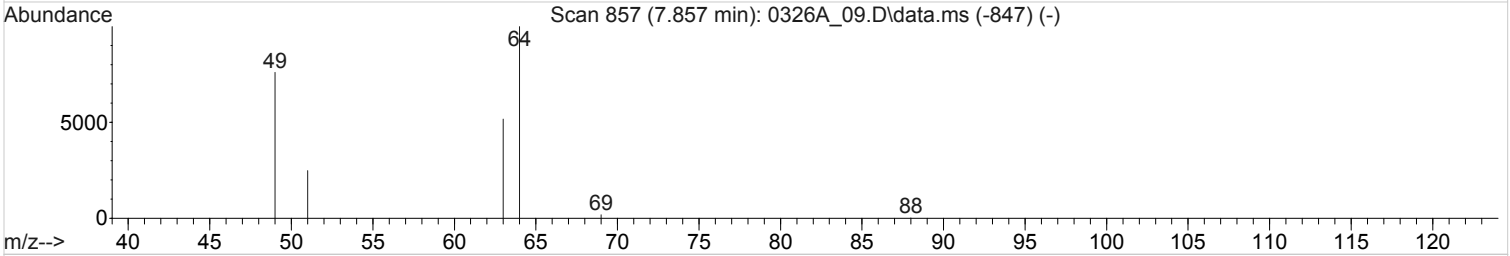
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_09.D
Acq On : 27 Apr 2018 4:47 pm
Operator : 564
Sample : MSTD AMS 0.50 ppbv 18C26425
Misc : 18C26426
ALS Vial : 9 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 09:55:27 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:55:24 2018
Response via : Initial Calibration







TIC: 0427A_09.D\data.ms

(15) 1,2-Dichloroethane (T,M)

7.857min (0.000) 0.5244557 ppbv

Qvalue = 100

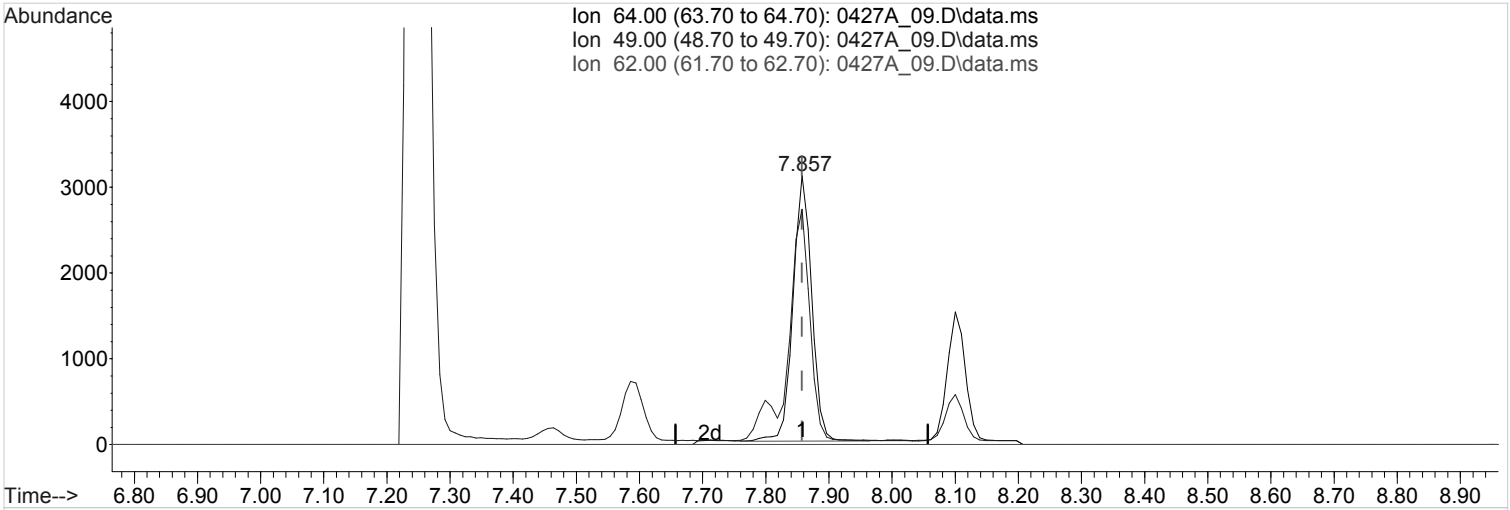
response 6563

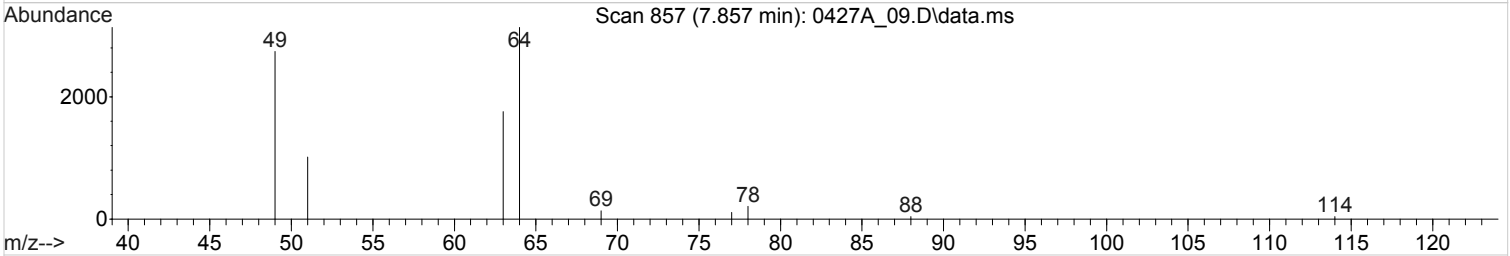
Ion	Exp%	Act%
64.00	100	100
49.00	83.80	83.82
62.00	0.00	0.00
0.00	0.00	0.00

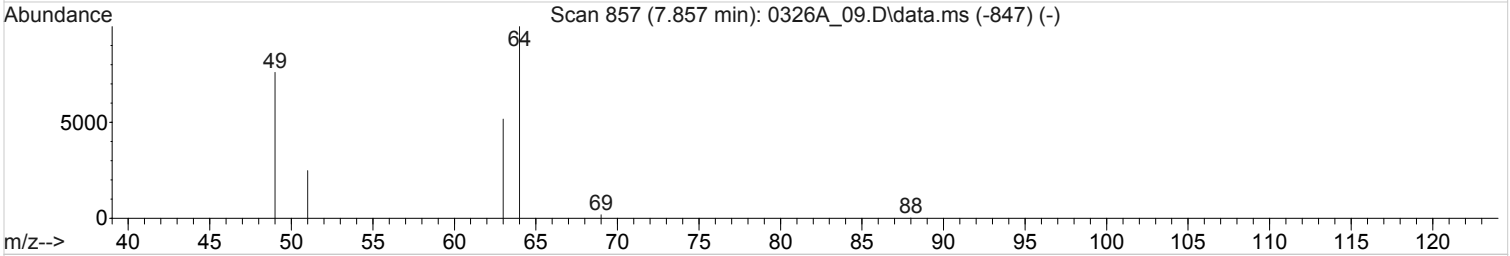
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_09.D
Acq On : 27 Apr 2018 4:47 pm
Operator : 564
Sample : MSTD AMS 0.50 ppbv 18C26425
Misc : 18C26426
ALS Vial : 9 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 09:55:27 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:55:24 2018
Response via : Initial Calibration







TIC: 0427A_09.D\data.ms

(15) 1,2-Dichloroethane (T,M)

7.857min (0.000) 0.5127088 ppbv m

response 6416

Ion	Exp%	Act%
64.00	100	100
49.00	83.80	85.74
62.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_10.D
Acq On : 27 Apr 2018 5:25 pm
Operator : 564
Sample : STD AMS 1.0 ppbv 18D20628
Misc : 18C26426
ALS Vial : 10 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 09:56:13 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:55:58 2018
Response via : Initial Calibration

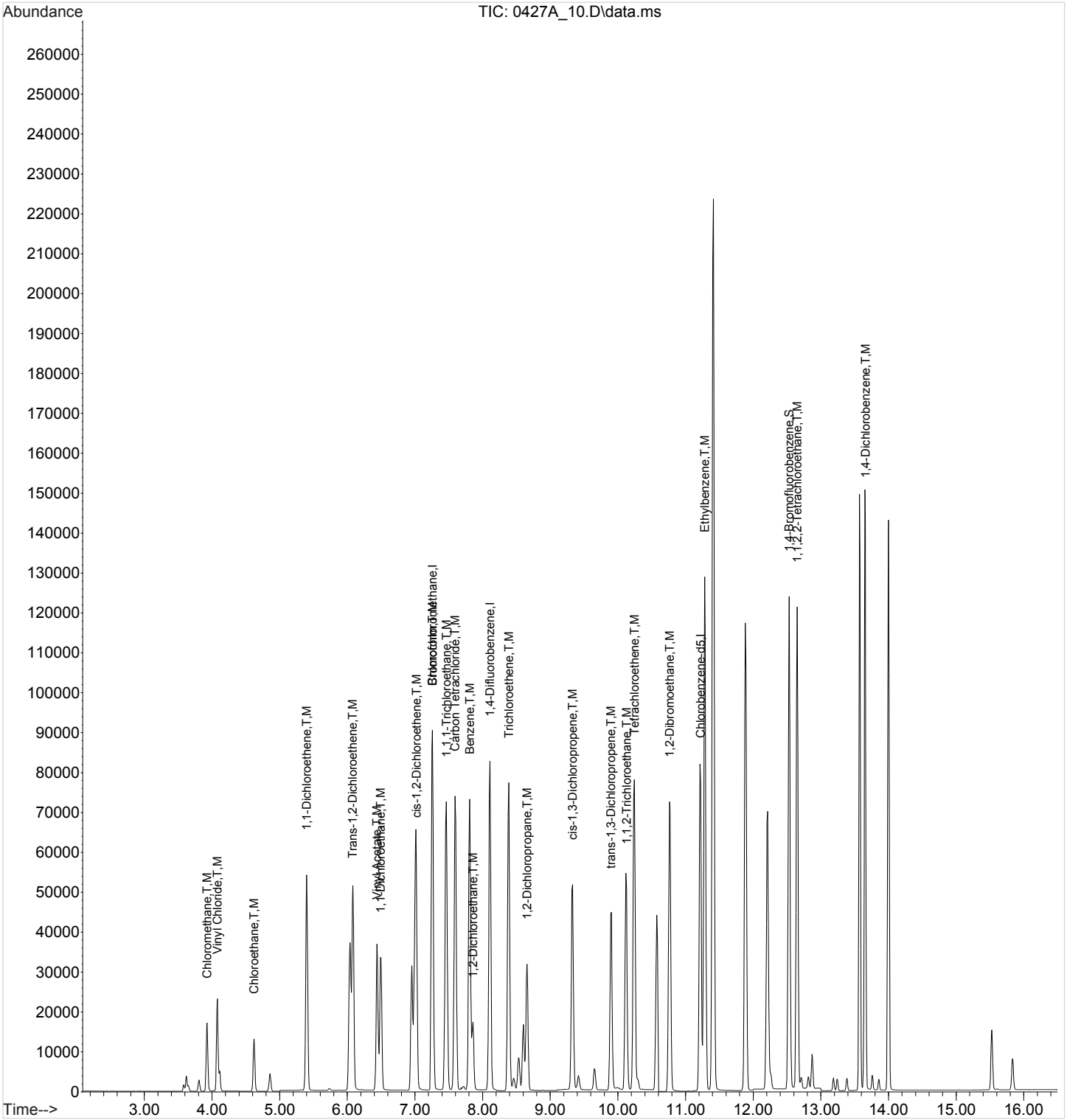
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.259	130	34220	1.2500000	ppbv	0.00
13) 1,4-Difluorobenzene	8.110	114	123835	1.2500000	ppbv	0.00
23) Chlorobenzene-d5	11.223	117	105254	1.2500000	ppbv	0.00
System Monitoring Compounds						
26) 1,4-Bromofluorobenzene	12.533	95	61560	1.2788557	ppbv	0.00
Spiked Amount 1.250	Range 60 - 140		Recovery = 102.31%			
Target Compounds						Qvalue
2) Chloromethane	3.928	50	21945	0.9677782	ppbv	100
3) Vinyl Chloride	4.079	62	28060	0.9886116	ppbv	100
4) Chloroethane	4.620	64	15273	1.0095708	ppbv	100
5) 1,1-Dichloroethene	5.400	61	40850	0.9793091	ppbv	100
6) Trans-1,2-Dichloroethene	6.077	61	36698	0.9866087	ppbv	99
7) 1,1-Dichloroethane	6.492	63	54125	0.9919763	ppbv	100
8) Vinyl Acetate	6.439	43	64440	1.0170519	ppbv	100
9) cis-1,2-Dichloroethene	7.022	96	37575	0.9841756	ppbv	100
10) Chloroform	7.259	83	65872	1.0023855	ppbv	99
11) 1,1,1-Trichloroethane	7.463	97	68160	1.0029896	ppbv	100
12) Carbon Tetrachloride	7.594	117	71885	1.0294428	ppbv	100
14) Benzene	7.809	78	107757	0.9047079	ppbv	100
15) 1,2-Dichloroethane	7.857	64	12782	1.0230080	ppbv #	100
16) Trichloroethene	8.387	95	50121	0.9859483	ppbv	100
17) 1,2-Dichloropropane	8.657	63	38915	1.0018223	ppbv #	95
18) cis-1,3-Dichloropropene	9.331	75	70008	1.0434205	ppbv	100
19) trans-1,3-Dichloropropene	9.894	75	59096	1.0450501	ppbv	100
20) 1,1,2-Trichloroethane	10.127	97	50870	1.0324896	ppbv	100
21) Tetrachloroethene	10.244	166	82194	0.9868235	ppbv	100
22) 1,2-Dibromoethane	10.763	107	80327	1.0613329	ppbv	100
24) Ethylbenzene	11.283	91	190042	1.0294048	ppbv	100
25) 1,1,2,2-Tetrachloroethane	12.651	83	116242	1.0657544	ppbv	100
27) 1,4-Dichlorobenzene	13.658	146	133683	1.1236302	ppbv	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_10.D
Acq On : 27 Apr 2018 5:25 pm
Operator : 564
Sample : STD AMS 1.0 ppbv 18D20628
Misc : 18C26426
ALS Vial : 10 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 09:56:13 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:55:58 2018
Response via : Initial Calibration



ACCOUNT:	PROJECT:	SDG:	DATE/TIME:	PAGE:
S&ME Inc. - Knoxville	4143-17-016	L988669	05/16/18 08:03	152 of 183

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_11.D
Acq On : 27 Apr 2018 6:07 pm
Operator : 564
Sample : STD AMS 5.0 ppbv 18D20628
Misc : 18C26426
ALS Vial : 11 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 09:56:43 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:56:40 2018
Response via : Initial Calibration

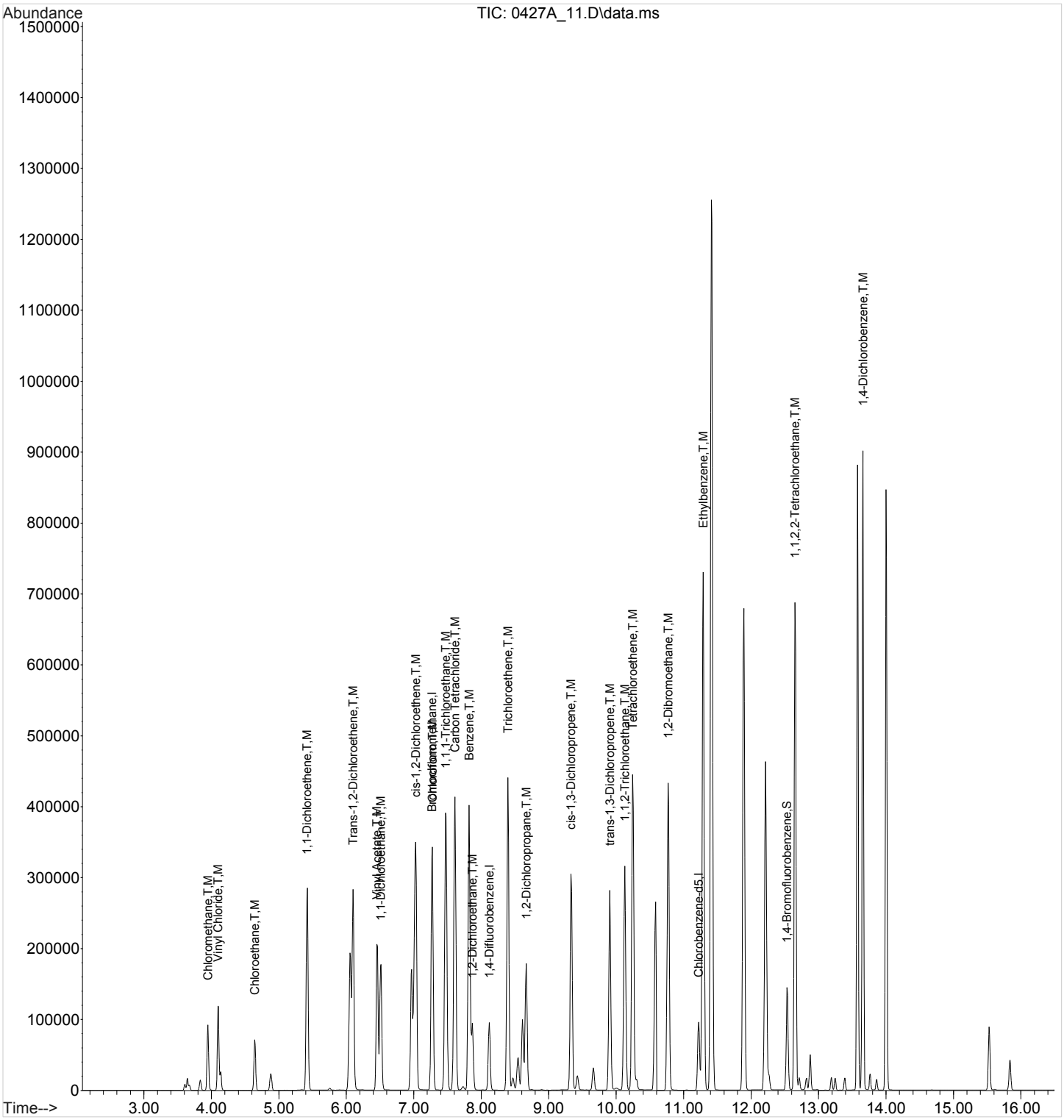
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.267	130	38060	1.2500000	ppbv	# 0.00
13) 1,4-Difluorobenzene	8.120	114	139934	1.2500000	ppbv	0.00
23) Chlorobenzene-d5	11.223	117	120796	1.2500000	ppbv	0.00
System Monitoring Compounds						
26) 1,4-Bromofluorobenzene	12.532	95	73751	1.3311455	ppbv	0.00
Spiked Amount 1.250	Range 60 - 140		Recovery = 106.49%			
Target Compounds						Qvalue
2) Chloromethane	3.947	50	114260	4.5488168	ppbv	100
3) Vinyl Chloride	4.097	62	148206	4.7014705	ppbv	100
4) Chloroethane	4.643	64	81894	4.8613456	ppbv	100
5) 1,1-Dichloroethene	5.415	61	219483	4.7431247	ppbv	100
6) Trans-1,2-Dichloroethene	6.099	61	198199	4.7989123	ppbv	98
7) 1,1-Dichloroethane	6.507	63	289586	4.7767001	ppbv	100
8) Vinyl Acetate	6.454	43	362127	5.1278462	ppbv	100
9) cis-1,2-Dichloroethene	7.029	96	206718	4.8777892	ppbv	100
10) Chloroform	7.275	83	367849	5.0313585	ppbv	98
11) 1,1,1-Trichloroethane	7.472	97	377673	4.9949568	ppbv	100
12) Carbon Tetrachloride	7.611	117	401582	5.1517407	ppbv	99
14) Benzene	7.819	78	592752	4.4571808	ppbv	100
15) 1,2-Dichloroethane	7.867	64	70068	4.9484918	ppbv #	83
16) Trichloroethene	8.396	95	280606	4.8934484	ppbv	99
17) 1,2-Dichloropropane	8.666	63	218580	4.9785780	ppbv	99
18) cis-1,3-Dichloropropene	9.331	75	397741	5.2177278	ppbv	100
19) trans-1,3-Dichloropropene	9.904	75	346207	5.3876112	ppbv	100
20) 1,1,2-Trichloroethane	10.127	97	288359	5.1584288	ppbv	100
21) Tetrachloroethene	10.244	166	458253	4.8768651	ppbv	100
22) 1,2-Dibromoethane	10.770	107	469358	5.4462501	ppbv	100
24) Ethylbenzene	11.290	91	1093385	5.1416486	ppbv	99
25) 1,1,2,2-Tetrachloroethane	12.651	83	681426	5.3993790	ppbv	100
27) 1,4-Dichlorobenzene	13.658	146	783665	5.6520183	ppbv	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_11.D
Acq On : 27 Apr 2018 6:07 pm
Operator : 564
Sample : STD AMS 5.0 ppbv 18D20628
Misc : 18C26426
ALS Vial : 11 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 09:56:43 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:56:40 2018
Response via : Initial Calibration



ACCOUNT:	PROJECT:	SDG:	DATE/TIME:	PAGE:
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Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_12.D
Acq On : 27 Apr 2018 6:53 pm
Operator : 564
Sample : STD AMS 10.0 ppbv 18D20628
Misc : 18C26426
ALS Vial : 12 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 09:57:11 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:08 2018
Response via : Initial Calibration

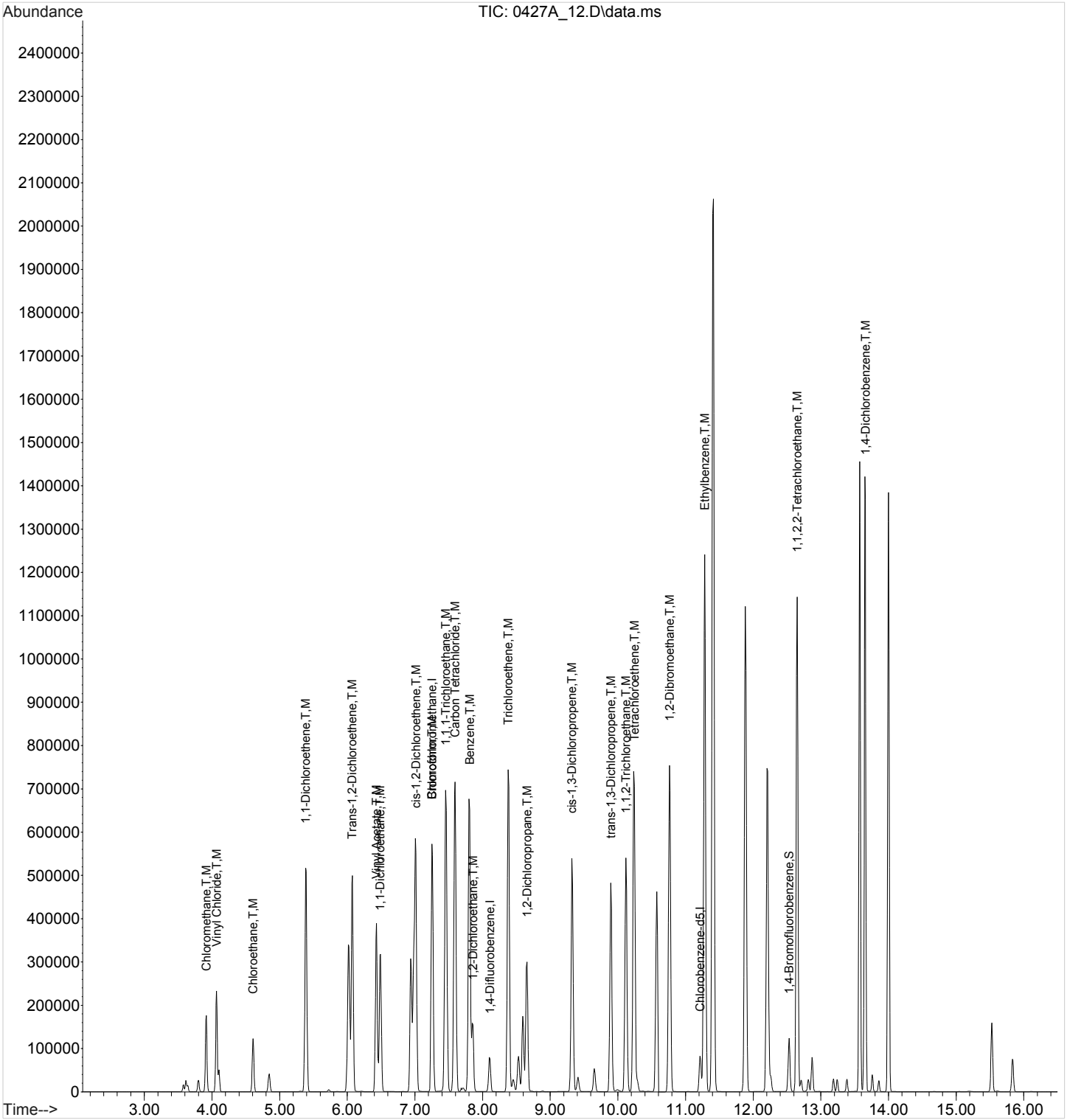
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.251	130	33250	1.2500000	ppbv	# 0.00
13) 1,4-Difluorobenzene	8.110	114	121820	1.2500000	ppbv	0.00
23) Chlorobenzene-d5	11.215	117	103016	1.2500000	ppbv	0.00
System Monitoring Compounds						
26) 1,4-Bromofluorobenzene	12.532	95	61207	1.2861312	ppbv	0.00
Spiked Amount 1.250	Range 60 - 140		Recovery = 102.89%			
Target Compounds						Qvalue
2) Chloromethane	3.916	50	211478	9.7347072	ppbv	100
3) Vinyl Chloride	4.067	62	269747	9.8603514	ppbv	100
4) Chloroethane	4.608	64	137723	9.3870307	ppbv	100
5) 1,1-Dichloroethene	5.385	61	401893	9.9985594	ppbv	100
6) Trans-1,2-Dichloroethene	6.069	61	360021	10.0228531	ppbv	95
7) 1,1-Dichloroethane	6.484	63	522413	9.9129279	ppbv	100
8) Vinyl Acetate	6.431	43	659470	10.6589437	ppbv	100
9) cis-1,2-Dichloroethene	7.014	96	364663	9.8763080	ppbv	100
10) Chloroform	7.251	83	638873	9.9955067	ppbv	98
11) 1,1,1-Trichloroethane	7.455	97	663369	10.0437704	ppbv	100
12) Carbon Tetrachloride	7.594	117	707626	10.3561585	ppbv	99
14) Benzene	7.809	78	1036196	9.0595032	ppbv	99
15) 1,2-Dichloroethane	7.857	64	122123	9.9186518	ppbv #	99
16) Trichloroethene	8.378	95	486615	9.7709716	ppbv	99
17) 1,2-Dichloropropane	8.657	63	380224	9.9528135	ppbv	97
18) cis-1,3-Dichloropropene	9.321	75	694325	10.4124348	ppbv	100
19) trans-1,3-Dichloropropene	9.894	75	599966	10.6332711	ppbv	99
20) 1,1,2-Trichloroethane	10.118	97	494490	10.1255771	ppbv	100
21) Tetrachloroethene	10.244	166	785304	9.6264883	ppbv	100
22) 1,2-Dibromoethane	10.762	107	811063	10.7045166	ppbv	100
24) Ethylbenzene	11.283	91	1832568	10.0733135	ppbv	99
25) 1,1,2,2-Tetrachloroethane	12.651	83	1114625	10.2651280	ppbv	100
27) 1,4-Dichlorobenzene	13.658	146	1278106	10.6546793	ppbv	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_12.D
Acq On : 27 Apr 2018 6:53 pm
Operator : 564
Sample : STD AMS 10.0 ppbv 18D20628
Misc : 18C26426
ALS Vial : 12 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 09:57:11 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:08 2018
Response via : Initial Calibration



7A-OR

GC/MS CONTINUING CALIBRATION VERIFICATION

SDG:	L988669	**Calibration (begin) date/time:**	04/27/18 12:51
Instrument ID:	AIRMS5	**Calibration (end) date/time:**	04/27/18 18:53
Lab File ID:	0427A_09	**Analysis date/time:**	04/27/18 16:47
Analytical Method:	TO-15	**Sample ID:**	ICV

Analyte	Avg. RRF	RRF	Min. RRF	Diff.	Max Diff.	True Value	Result	Result	Limits
				%	%	mg/l	mg/l	% Rec.	%
1,1,1-TRICHLOROETHANE	2.484087	2.550153		2.66		0.50	0.5135734	103	70 - 130
1,1,2,2-TETRACHLOROETHANE	1.321051	1.339743		1.41		0.50	0.5171471	103	70 - 130
1,1,2-TRICHLOROETHANE	0.501735	0.50695320		1.04		0.50	0.5096773	102	70 - 130
1,1-DICHLOROETHANE	1.979484	2.050225		3.57		0.50	0.5142501	103	70 - 130
1,1-DICHLOROETHENE	1.511072	1.554296		2.86		0.50	0.5099544	102	70 - 130
1,2-DIBROMOETHANE	0.782939	0.78528610		0.30		0.50	0.5139506	103	70 - 130
1,2-DICHLOROETHANE	0.126236	0.12976190		2.79		0.50	0.5127088	103	70 - 130
1,2-DICHLOROPROPANE	0.391814	0.40140040		2.45		0.50	0.5118643	102	70 - 130
1,4-DICHLOROBENZENE	1.465095	1.499492		2.35		0.50	0.5305422	106	70 - 130
BENZENE	1.162586	1.197426		3		0.50	0.4980529	99.60	70 - 130
CARBON TETRACHLORIDE	2.577908	2.653293		2.92		0.50	0.5200172	104	70 - 130
CHLOROETHANE	0.548184	0.56490770		3.05		0.50	0.5110458	102	70 - 130
CHLOROFORM	2.402750	2.461695		2.45		0.50	0.5126699	103	70 - 130
CHLOROMETHANE	0.814530	0.83893010		3		0.50	0.5063333	101	70 - 130
CIS-1,2-DICHLOROETHENE	1.386366	1.408272		1.58		0.50	0.5048132	101	70 - 130
CIS-1,3-DICHLOROPROPENE	0.687052	0.68948150		0.3540		0.50	0.5090234	102	70 - 130
ETHYLBENZENE	2.209080	2.327601		5.37		0.50	0.5308157	106	70 - 130
TETRACHLOROETHENE	0.833943	0.83398730		0.005310		0.50	0.4959777	99.20	70 - 130
TRANS-1,2-DICHLOROETHENE	1.350685	1.383413		2.42		0.50	0.509008	102	70 - 130
TRANS-1,3-DICHLOROPROPENE	0.582630	0.56993310		2.18		0.50	0.4992364	99.80	70 - 130
TRICHLOROETHENE	0.509851	0.52119150		2.22		0.50	0.5078496	102	70 - 130
VINYL ACETATE	2.341271	2.379779		1.64		0.50	0.5141377	103	70 - 130
VINYL CHLORIDE	1.027012	1.056549		2.88		0.50	0.5094455	102	70 - 130
1,4-BROMOFLUOROBENZENE	0.579128	0.57819380		0.1610		1.25	1.264256	101	60 - 140

7A-OR

GC/MS CONTINUING CALIBRATION VERIFICATION

SDG:	L988669	**Calibration (begin) date/time:**	04/27/18 12:51
Instrument ID:	AIRMS5	**Calibration (end) date/time:**	04/27/18 18:53
Lab File ID:	0428_01	**Analysis date/time:**	04/28/18 08:14
Analytical Method:	TO-15	**Sample ID:**	ICV

Analyte	Avg. RRF	RRF	Min. RRF	Diff.	Max Diff.	True Value	Result	Result	Limits
				%	%	mg/l	mg/l	% Rec.	%
1,1,1-TRICHLOROETHANE	2.484087	2.641416		6.33		0.50	0.5316674	106	70 - 130
1,1,2,2-TETRACHLOROETHANE	1.321051	1.356194		2.66		0.50	0.5133012	103	70 - 130
1,1,2-TRICHLOROETHANE	0.501735	0.50985950		1.62		0.50	0.5080967	102	70 - 130
1,1-DICHLOROETHANE	1.979484	2.120470		7.12		0.50	0.5356118	107	70 - 130
1,1-DICHLOROETHENE	1.511072	1.652198		9.34		0.50	0.5466974	109	70 - 130
1,2-DIBROMOETHANE	0.782939	0.79085390		1.01		0.50	0.5050546	101	70 - 130
1,2-DICHLOROETHANE	0.126236	0.137074		8.59		0.50	0.5429281	109	70 - 130
1,2-DICHLOROPROPANE	0.391814	0.40638310		3.72		0.50	0.5185917	104	70 - 130
1,4-DICHLOROBENZENE	1.465095	1.493176		1.92		0.50	0.5095835	102	70 - 130
BENZENE	1.162586	1.210444		4.12		0.50	0.5205824	104	70 - 130
CARBON TETRACHLORIDE	2.577908	2.751244		6.72		0.50	0.5336193	107	70 - 130
CHLOROETHANE	0.548184	0.57215240		4.37		0.50	0.5218617	104	70 - 130
CHLOROFORM	2.402750	2.515061		4.67		0.50	0.5233713	105	70 - 130
CHLOROMETHANE	0.814530	0.87313480		7.19		0.50	0.5359747	107	70 - 130
CIS-1,2-DICHLOROETHENE	1.386366	1.447759		4.43		0.50	0.5221416	104	70 - 130
CIS-1,3-DICHLOROPROPENE	0.687052	0.70409170		2.48		0.50	0.5124008	102	70 - 130
ETHYLBENZENE	2.209080	2.374134		7.47		0.50	0.5373582	107	70 - 130
TETRACHLOROETHENE	0.833943	0.84758940		1.64		0.50	0.5081821	102	70 - 130
TRANS-1,2-DICHLOROETHENE	1.350685	1.457336		7.90		0.50	0.5394802	108	70 - 130
TRANS-1,3-DICHLOROPROPENE	0.582630	0.58516890		0.4360		0.50	0.5021789	100	70 - 130
TRICHLOROETHENE	0.509851	0.53606140		5.14		0.50	0.5257039	105	70 - 130
VINYL ACETATE	2.341271	2.566576		9.62		0.50	0.5481161	110	70 - 130
VINYL CHLORIDE	1.027012	1.092789		6.40		0.50	0.5320235	106	70 - 130
1,4-BROMOFLUOROBENZENE	0.579128	0.58249660		0.5820		1.25	1.257271	101	60 - 140

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042818\
Data File : 0428_01.D
Acq On : 28 Apr 2018 8:14 am
Operator : 564
Sample : ICV AMS 0.50 ppbv 18C26425
Misc : 18C26426
ALS Vial : 1 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 10:11:41 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:33 2018
Response via : Initial Calibration

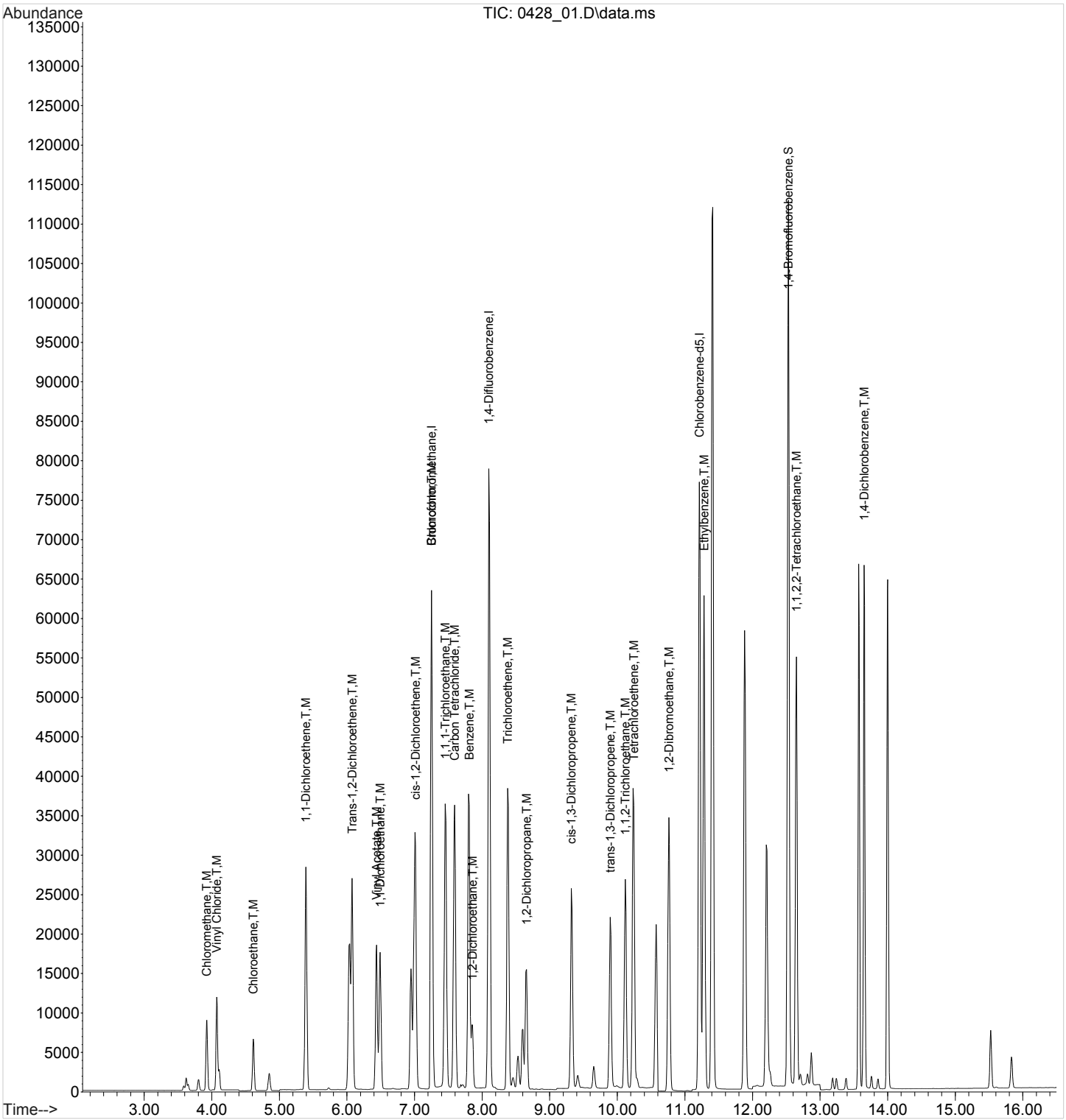
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.251	130	32369	1.2500000	ppbv	0.00
13) 1,4-Difluorobenzene	8.100	114	118312	1.2500000	ppbv	0.00
23) Chlorobenzene-d5	11.215	117	97604	1.2500000	ppbv	0.00
System Monitoring Compounds						
26) 1,4-Bromofluorobenzene	12.532	95	56854	1.2572706	ppbv	0.00
Spiked Amount 1.250	Range 60 - 140		Recovery = 100.58%			
Target Compounds						Qvalue
2) Chloromethane	3.922	50	11305	0.5359747	ppbv	100
3) Vinyl Chloride	4.073	62	14149	0.5320235	ppbv	100
4) Chloroethane	4.614	64	7408	0.5218617	ppbv	100
5) 1,1-Dichloroethene	5.392	61	21392	0.5466974	ppbv	99
6) Trans-1,2-Dichloroethene	6.077	61	18869	0.5394802	ppbv	97
7) 1,1-Dichloroethane	6.491	63	27455	0.5356118	ppbv	100
8) Vinyl Acetate	6.438	43	33231	0.5481161	ppbv	99
9) cis-1,2-Dichloroethene	7.014	96	18745	0.5221416	ppbv	100
10) Chloroform	7.251	83	32564	0.5233713	ppbv	100
11) 1,1,1-Trichloroethane	7.455	97	34200	0.5316674	ppbv	100
12) Carbon Tetrachloride	7.594	117	35622	0.5336193	ppbv	100
14) Benzene	7.809	78	57284	0.5205824	ppbv	99
15) 1,2-Dichloroethane	7.857	64	6487	0.5429281	ppbv #	98
16) Trichloroethene	8.378	95	25369	0.5257039	ppbv	99
17) 1,2-Dichloropropane	8.657	63	19232	0.5185917	ppbv	96
18) cis-1,3-Dichloropropene	9.321	75	33321	0.5124008	ppbv	99
19) trans-1,3-Dichloropropene	9.894	75	27693	0.5021789	ppbv	99
20) 1,1,2-Trichloroethane	10.118	97	24129	0.5080967	ppbv	100
21) Tetrachloroethene	10.244	166	40112	0.5081821	ppbv	99
22) 1,2-Dibromoethane	10.762	107	37427	0.5050546	ppbv	100
24) Ethylbenzene	11.283	91	92690	0.5373582	ppbv	100
25) 1,1,2,2-Tetrachloroethane	12.651	83	52948	0.5133012	ppbv	100
27) 1,4-Dichlorobenzene	13.651	146	58296	0.5095835	ppbv	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042818\
Data File : 0428_01.D
Acq On : 28 Apr 2018 8:14 am
Operator : 564
Sample : ICV AMS 0.50 ppbv 18C26425
Misc : 18C26426
ALS Vial : 1 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 10:11:41 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:33 2018
Response via : Initial Calibration



ACCOUNT:	PROJECT:	SDG:	DATE/TIME:	PAGE:
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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
R3305497-3

ESC Sample ID:	R3305497-3	**SDG:**	L988669
Client Sample ID:	BLANK	**Collected Date/Time:**	
Lab File ID:	0427A_16	**Received Date/Time:**	
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/27/18 22:08
Analytical Batch:	WG1104091	**Analysis Date/Time:**	04/27/18 22:08
Dilution Factor:	1	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	

Analyte	CAS	RT	Result	Qualifier	MDL	RDL
			ppbv		*ppbv*	*ppbv*
Benzene	71-43-2	0	U		0.00541	0.0200
Carbon tetrachloride	56-23-5	0	U		0.00575	0.0200
Chloroethane	75-00-3	0	U		0.0159	0.0400
Chloroform	67-66-3	0	U		0.00464	0.0200
Chloromethane	74-87-3	0	U		0.00972	0.0300
1,2-Dibromoethane	106-93-4	0	U		0.0185	0.0200
1,4-Dichlorobenzene	106-46-7	0	U		0.00691	0.0200
1,1-Dichloroethane	75-34-3	0	U		0.00505	0.0200
1,2-Dichloroethane	107-06-2	0	U		0.000471	0.0200
1,1-Dichloroethene	75-35-4	0	U		0.00521	0.0200
cis-1,2-Dichloroethene	156-59-2	0	U		0.00770	0.0200
trans-1,2-Dichloroethene	156-60-5	0	U		0.00499	0.0200
1,2-Dichloropropane	78-87-5	0	U		0.00840	0.0300
cis-1,3-Dichloropropene	10061-01-5	0	U		0.00556	0.0200
trans-1,3-Dichloropropene	10061-02-6	0	U		0.00853	0.0300
Ethylbenzene	100-41-4	0	U		0.00904	0.0300
1,1,2,2-Tetrachloroethane	79-34-5	0	U		0.00481	0.0200
Tetrachloroethylene	127-18-4	0	U		0.00457	0.0200
1,1,1-Trichloroethane	71-55-6	0	U		0.00552	0.0200
1,1,2-Trichloroethane	79-00-5	0	U		0.0287	0.0300
Trichloroethylene	79-01-6	0	U		0.00736	0.0200
Vinyl chloride	75-01-4	0	U		0.00765	0.0200
Vinyl acetate	108-05-4	0	U		0.00430	0.0200

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_16.D
Acq On : 27 Apr 2018 10:08 pm
Operator : 564
Sample : BLANK 1x WG1104091
Misc : 18C26426
ALS Vial : 16 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 10:01:09 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:33 2018
Response via : Initial Calibration

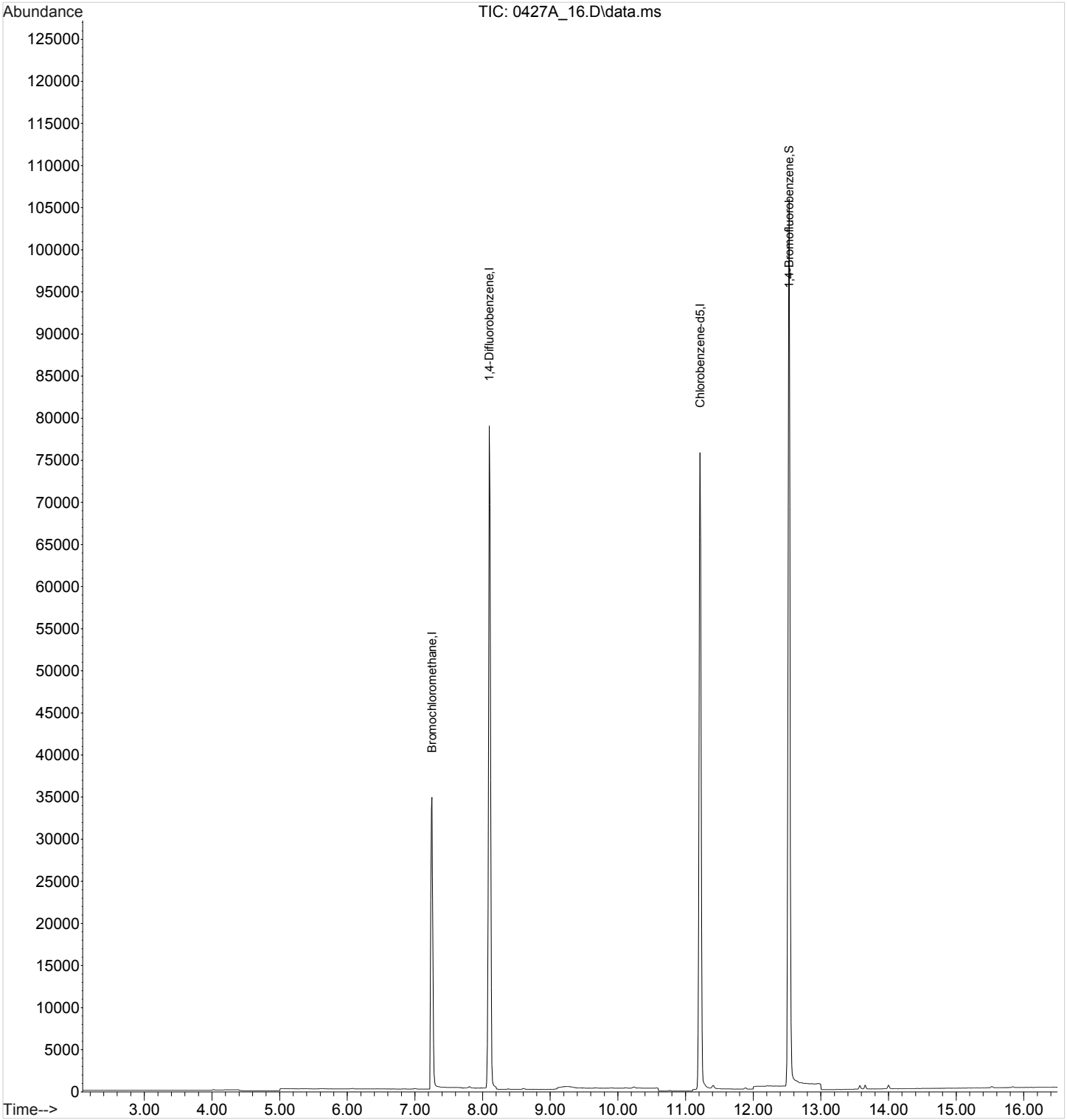
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.251	130	32937	1.2500000	ppbv	0.00
13) 1,4-Difluorobenzene	8.100	114	118122	1.2500000	ppbv	0.00
23) Chlorobenzene-d5	11.215	117	98299	1.2500000	ppbv	0.00
System Monitoring Compounds						
26) 1,4-Bromofluorobenzene	12.532	95	55976	1.2291025	ppbv	0.00
Spiked Amount 1.250	Range 60 - 140		Recovery = 98.33%			
Target Compounds						Qvalue
2) Chloromethane	0.000		0	N.D.		
3) Vinyl Chloride	0.000		0	N.D.		
4) Chloroethane	0.000		0	N.D.		
5) 1,1-Dichloroethene	0.000		0	N.D.		
6) Trans-1,2-Dichloroethene	0.000		0	N.D.		
7) 1,1-Dichloroethane	0.000		0	N.D.		
8) Vinyl Acetate	6.348	43	193	N.D.		
9) cis-1,2-Dichloroethene	0.000		0	N.D.		
10) Chloroform	0.000		0	N.D.		
11) 1,1,1-Trichloroethane	0.000		0	N.D.		
12) Carbon Tetrachloride	0.000		0	N.D.		
14) Benzene	7.809	78	362	N.D.		
15) 1,2-Dichloroethane	0.000		0	N.D.		
16) Trichloroethene	8.207	95	167	N.D.		
17) 1,2-Dichloropropane	0.000		0	N.D.		
18) cis-1,3-Dichloropropene	0.000		0	N.D.	d	
19) trans-1,3-Dichloropropene	0.000		0	N.D.		
20) 1,1,2-Trichloroethane	0.000		0	N.D.		
21) Tetrachloroethene	10.234	166	188	N.D.		
22) 1,2-Dibromoethane	0.000		0	N.D.		
24) Ethylbenzene	11.283	91	196	N.D.		
25) 1,1,2,2-Tetrachloroethane	0.000		0	N.D.		
27) 1,4-Dichlorobenzene	13.658	146	483	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_16.D
Acq On : 27 Apr 2018 10:08 pm
Operator : 564
Sample : BLANK 1x WG1104091
Misc : 18C26426
ALS Vial : 16 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 10:01:09 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:33 2018
Response via : Initial Calibration



1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
R3305551-3

ESC Sample ID:	R3305551-3	**SDG:**	L988669
Client Sample ID:	BLANK	**Collected Date/Time:**	
Lab File ID:	0428_04	**Received Date/Time:**	
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/28/18 10:20
Analytical Batch:	WG1104397	**Analysis Date/Time:**	04/28/18 10:20
Dilution Factor:	1	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	

Analyte	CAS	RT	Result	Qualifier	MDL	RDL
			ppbv		*ppbv*	*ppbv*
cis-1,2-Dichloroethene	156-59-2	0	U		0.00770	0.0200
trans-1,2-Dichloroethene	156-60-5	0	U		0.00499	0.0200
Tetrachloroethylene	127-18-4	0	U		0.00457	0.0200
Trichloroethylene	79-01-6	0	U		0.00736	0.0200

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042818\
Data File : 0428_04.D
Acq On : 28 Apr 2018 10:20 am
Operator : 564
Sample : BLANK 1x WG1104397
Misc : 18C26426
ALS Vial : 4 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 12:17:00 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:33 2018
Response via : Initial Calibration

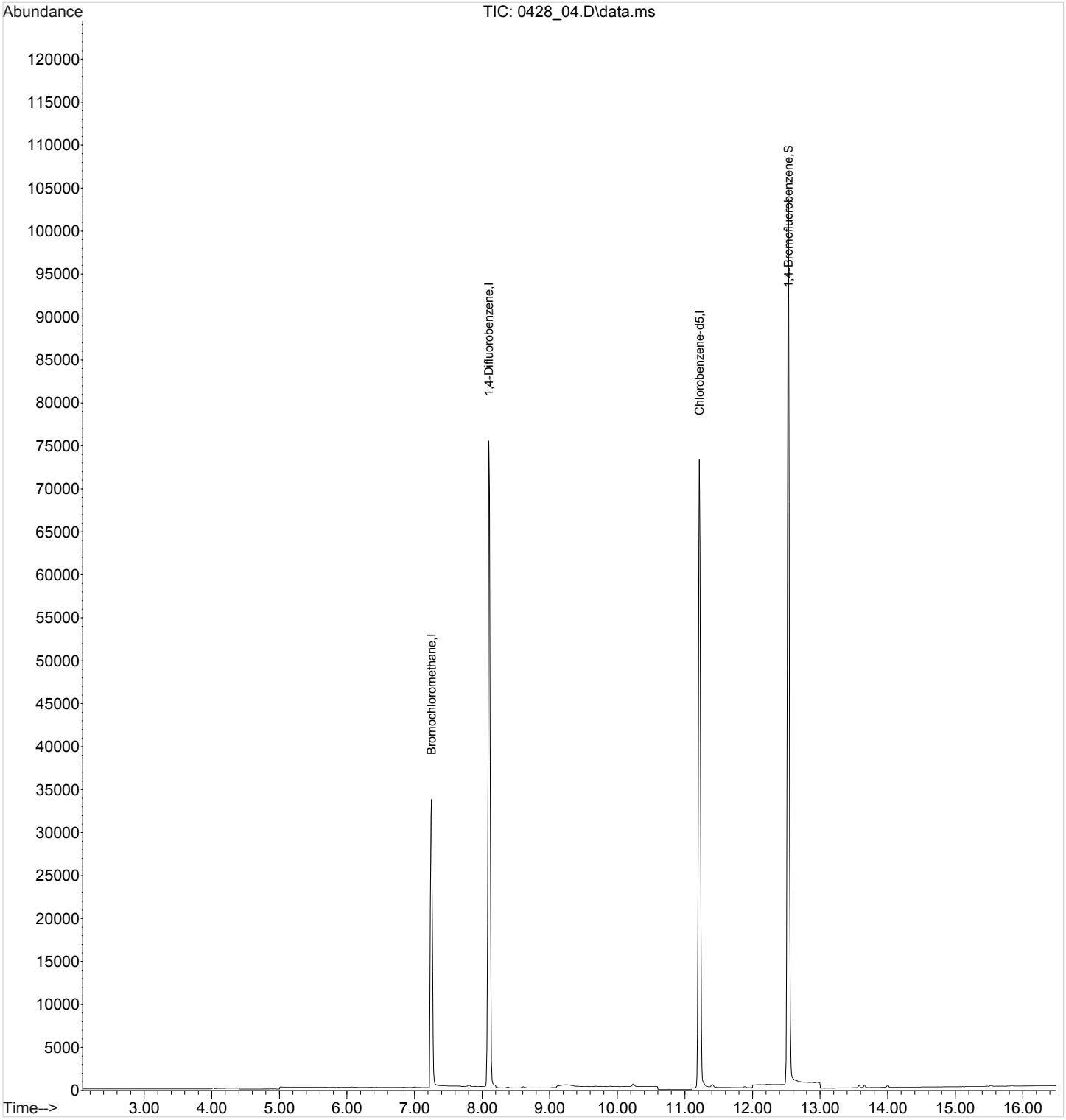
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.251	130	31536	1.2500000	ppbv	0.00
13) 1,4-Difluorobenzene	8.100	114	114349	1.2500000	ppbv	-0.01
23) Chlorobenzene-d5	11.215	117	94594	1.2500000	ppbv	0.00
System Monitoring Compounds						
26) 1,4-Bromofluorobenzene	12.532	95	54110	1.2346654	ppbv	0.00
Spiked Amount 1.250	Range 60 - 140		Recovery = 98.77%			
Target Compounds						Qvalue
2) Chloromethane	4.019	50	156	N.D.		
3) Vinyl Chloride	0.000		0	N.D.		
4) Chloroethane	0.000		0	N.D.		
5) 1,1-Dichloroethene	0.000		0	N.D.		
6) Trans-1,2-Dichloroethene	0.000		0	N.D.		
7) 1,1-Dichloroethane	0.000		0	N.D.		
8) Vinyl Acetate	0.000		0	N.D.		
9) cis-1,2-Dichloroethene	0.000		0	N.D.		
10) Chloroform	0.000		0	N.D.		
11) 1,1,1-Trichloroethane	0.000		0	N.D.		
12) Carbon Tetrachloride	0.000		0	N.D.		
14) Benzene	7.799	78	361	N.D.		
15) 1,2-Dichloroethane	0.000		0	N.D.	d	
16) Trichloroethene	8.207	95	238	N.D.		
17) 1,2-Dichloropropane	0.000		0	N.D.		
18) cis-1,3-Dichloropropene	9.214	75	178	N.D.		
19) trans-1,3-Dichloropropene	0.000		0	N.D.		
20) 1,1,2-Trichloroethane	0.000		0	N.D.		
21) Tetrachloroethene	10.244	166	337	N.D.		
22) 1,2-Dibromoethane	0.000		0	N.D.		
24) Ethylbenzene	11.283	91	195	N.D.		
25) 1,1,2,2-Tetrachloroethane	0.000		0	N.D.		
27) 1,4-Dichlorobenzene	13.657	146	301	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042818\
Data File : 0428_04.D
Acq On : 28 Apr 2018 10:20 am
Operator : 564
Sample : BLANK 1x WG1104397
Misc : 18C26426
ALS Vial : 4 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 12:17:00 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:33 2018
Response via : Initial Calibration



1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
R3305497-1

ESC Sample ID:	R3305497-1	**SDG:**	L988669
Client Sample ID:	LCS	**Collected Date/Time:**	
Lab File ID:	0427A_14	**Received Date/Time:**	
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/27/18 20:45
Analytical Batch:	WG1104091	**Analysis Date/Time:**	04/27/18 20:45
Dilution Factor:	1	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	

Analyte	CAS	RT	Result	Qualifier	MDL	RDL
			ppbv		*ppbv*	*ppbv*
Benzene	71-43-2	7.80	0.517		0.00541	0.0200
Carbon tetrachloride	56-23-5	7.59	0.529		0.00575	0.0200
Chloroethane	75-00-3	4.61	0.517		0.0159	0.0400
Chloroform	67-66-3	7.25	0.523		0.00500	0.0200
Chloromethane	74-87-3	3.91	0.530		0.00972	0.0300
1,2-Dibromoethane	106-93-4	10.76	0.499		0.0185	0.0200
1,4-Dichlorobenzene	106-46-7	13.65	0.522		0.00691	0.0200
1,1-Dichloroethane	75-34-3	6.48	0.527		0.00505	0.0200
1,2-Dichloroethane	107-06-2	7.85	0.532		0.000471	0.0200
1,1-Dichloroethene	75-35-4	5.38	0.530		0.00521	0.0200
cis-1,2-Dichloroethene	156-59-2	7.01	0.519		0.00770	0.0200
trans-1,2-Dichloroethene	156-60-5	6.07	0.526		0.00499	0.0200
1,2-Dichloropropane	78-87-5	8.65	0.509		0.00840	0.0300
cis-1,3-Dichloropropene	10061-01-5	9.32	0.498		0.00556	0.0200
trans-1,3-Dichloropropene	10061-02-6	9.89	0.489		0.00853	0.0300
Ethylbenzene	100-41-4	11.28	0.531		0.00904	0.0300
1,1,2,2-Tetrachloroethane	79-34-5	12.65	0.508		0.00481	0.0200
Tetrachloroethylene	127-18-4	10.23	0.498		0.00500	0.0200
1,1,1-Trichloroethane	71-55-6	7.46	0.526		0.00552	0.0200
1,1,2-Trichloroethane	79-00-5	10.12	0.504		0.0287	0.0300
Trichloroethylene	79-01-6	8.38	0.512		0.00736	0.0200
Vinyl chloride	75-01-4	4.06	0.533		0.00765	0.0200
Vinyl acetate	108-05-4	6.43	0.506		0.00500	0.0200

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_14.D
Acq On : 27 Apr 2018 8:45 pm
Operator : 564
Sample : LCS 1x WG1104091
Misc : 18C26426
ALS Vial : 14 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 09:59:49 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:33 2018
Response via : Initial Calibration

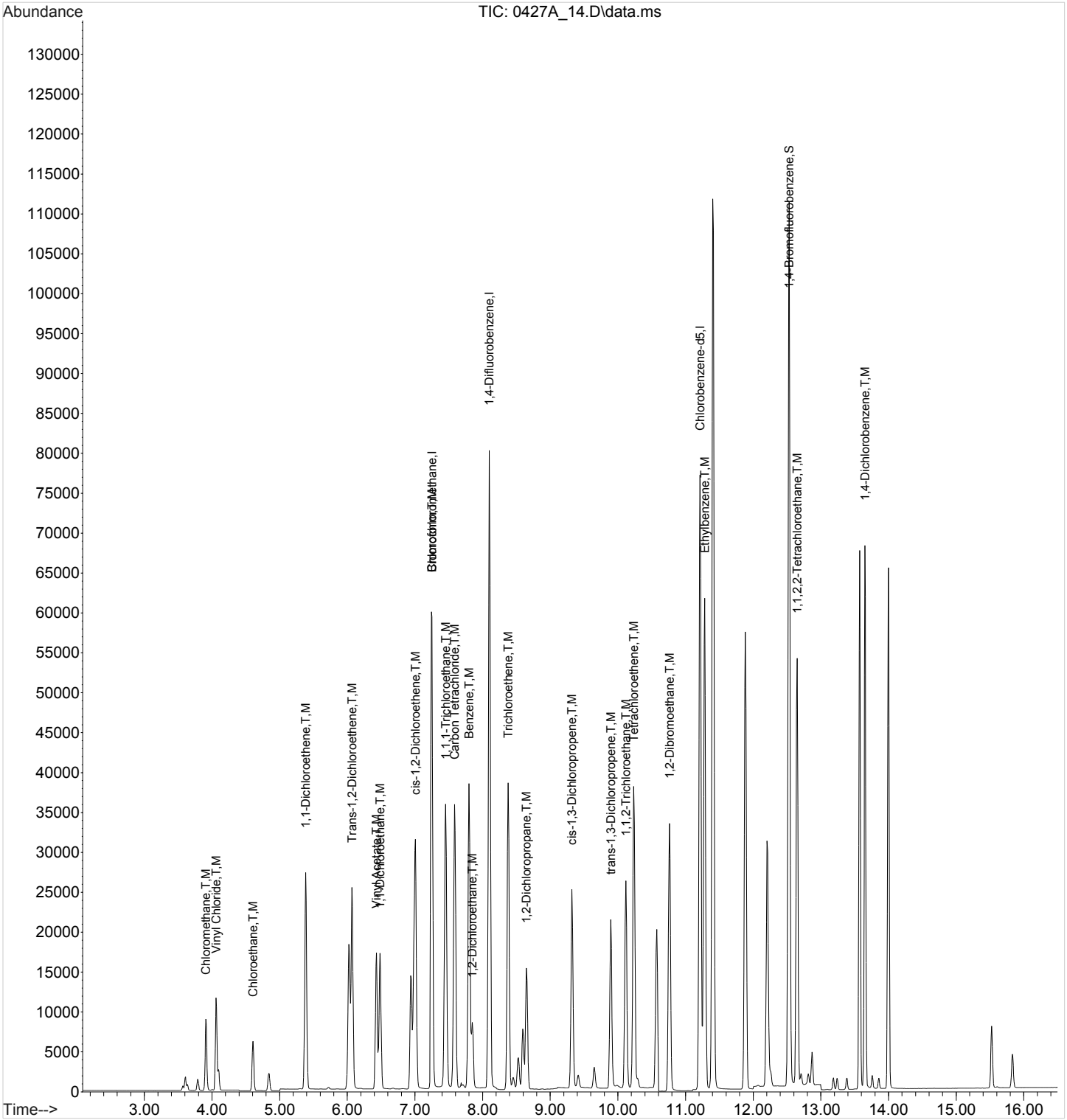
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.251	130	32072	1.2500000	ppbv	0.00
13) 1,4-Difluorobenzene	8.100	114	117643	1.2500000	ppbv	0.00
23) Chlorobenzene-d5	11.215	117	97972	1.2500000	ppbv	0.00
System Monitoring Compounds						
26) 1,4-Bromofluorobenzene	12.532	95	57096	1.2578796	ppbv	0.00
Spiked Amount 1.250	Range 60 - 140		Recovery = 100.63%			
Target Compounds						Qvalue
2) Chloromethane	3.910	50	11074	0.5298849	ppbv	100
3) Vinyl Chloride	4.061	62	14038	0.5327378	ppbv	100
4) Chloroethane	4.608	64	7266	0.5165984	ppbv	99
5) 1,1-Dichloroethene	5.385	61	20531	0.5295524	ppbv	100
6) Trans-1,2-Dichloroethene	6.069	61	18232	0.5260950	ppbv	98
7) 1,1-Dichloroethane	6.484	63	26767	0.5270255	ppbv	100
8) Vinyl Acetate	6.431	43	30415	0.5063143	ppbv	100
9) cis-1,2-Dichloroethene	7.007	96	18472	0.5193020	ppbv	100
10) Chloroform	7.251	83	32230	0.5228002	ppbv	99
11) 1,1,1-Trichloroethane	7.455	97	33530	0.5260787	ppbv	100
12) Carbon Tetrachloride	7.586	117	34981	0.5288697	ppbv	99
14) Benzene	7.799	78	56546	0.5167979	ppbv	100
15) 1,2-Dichloroethane	7.848	64	6319	0.5318749	ppbv #	85
16) Trichloroethene	8.378	95	24573	0.5121047	ppbv	100
17) 1,2-Dichloropropane	8.648	63	18761	0.5087680	ppbv	98
18) cis-1,3-Dichloropropene	9.321	75	32195	0.4979009	ppbv	100
19) trans-1,3-Dichloropropene	9.894	75	26814	0.4890044	ppbv	100
20) 1,1,2-Trichloroethane	10.118	97	23789	0.5037858	ppbv	100
21) Tetrachloroethene	10.234	166	39069	0.4977830	ppbv	100
22) 1,2-Dibromoethane	10.762	107	36787	0.4992412	ppbv	100
24) Ethylbenzene	11.283	91	91944	0.5310312	ppbv	100
25) 1,1,2,2-Tetrachloroethane	12.651	83	52649	0.5084854	ppbv	100
27) 1,4-Dichlorobenzene	13.652	146	59979	0.5223258	ppbv	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_14.D
Acq On : 27 Apr 2018 8:45 pm
Operator : 564
Sample : LCS 1x WG1104091
Misc : 18C26426
ALS Vial : 14 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 09:59:49 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:33 2018
Response via : Initial Calibration



1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
R3305551-1

ESC Sample ID:	R3305551-1	**SDG:**	L988669
Client Sample ID:	LCS	**Collected Date/Time:**	
Lab File ID:	0428_02	**Received Date/Time:**	
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/28/18 08:56
Analytical Batch:	WG1104397	**Analysis Date/Time:**	04/28/18 08:56
Dilution Factor:	1	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	

Analyte	CAS	RT	Result	Qualifier	MDL	RDL
			ppbv		*ppbv*	*ppbv*
cis-1,2-Dichloroethene	156-59-2	7.02	0.514		0.00770	0.0200
trans-1,2-Dichloroethene	156-60-5	6.08	0.525		0.00499	0.0200
Tetrachloroethylene	127-18-4	10.24	0.501		0.00500	0.0200
Trichloroethylene	79-01-6	8.38	0.520		0.00736	0.0200

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042818\
Data File : 0428_02.D
Acq On : 28 Apr 2018 8:56 am
Operator : 564
Sample : LCS 1x WG1104397
Misc : 18C26426
ALS Vial : 2 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 10:11:51 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:33 2018
Response via : Initial Calibration

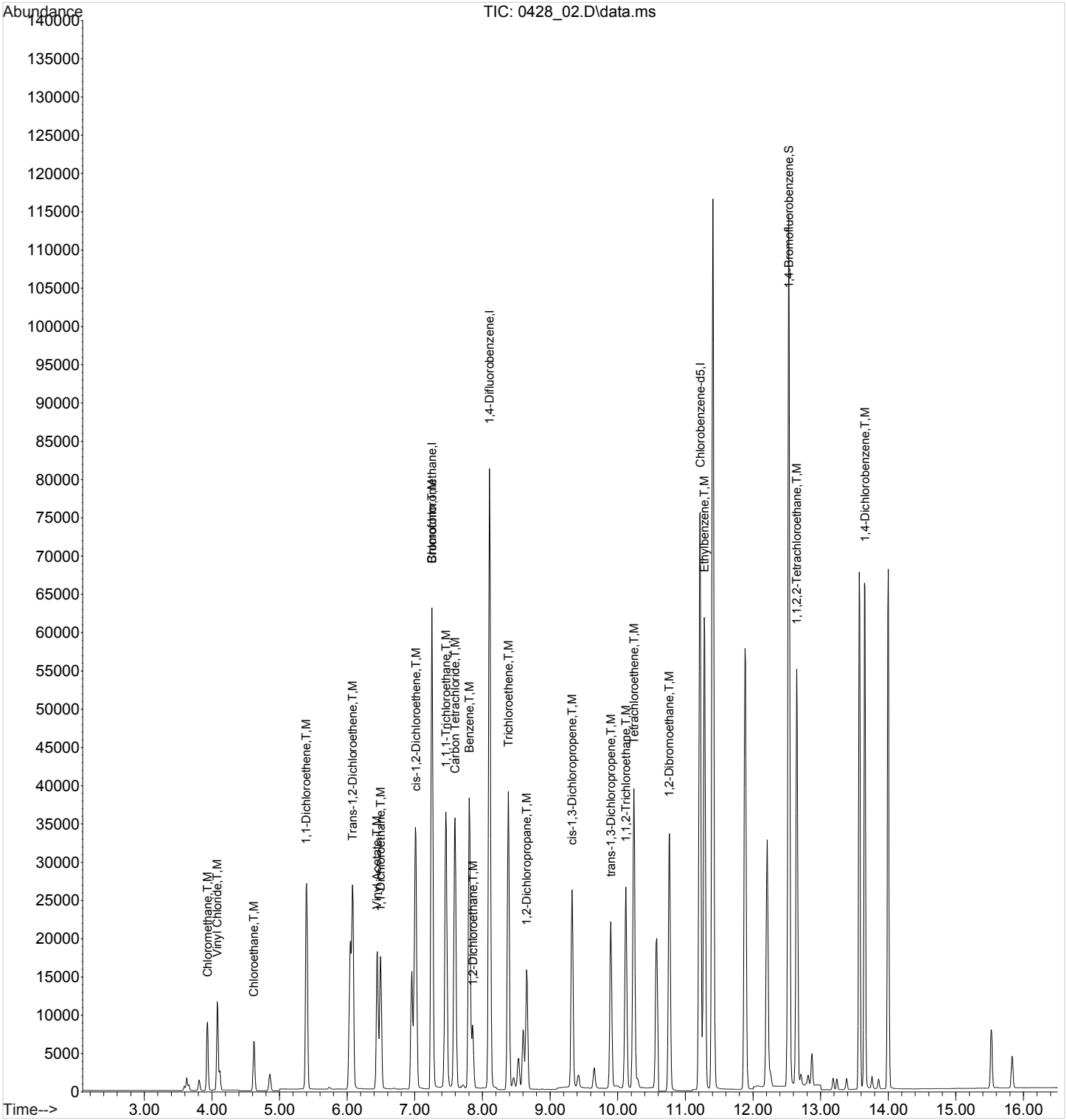
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.253	130	32780	1.2500000	ppbv	0.00
13) 1,4-Difluorobenzene	8.104	114	118808	1.2500000	ppbv	0.00
23) Chlorobenzene-d5	11.219	117	99134	1.2500000	ppbv	0.00
System Monitoring Compounds						
26) 1,4-Bromofluorobenzene	12.528	95	57660	1.2554151	ppbv	0.00
Spiked Amount 1.250	Range 60 - 140		Recovery = 100.43%			
Target Compounds						Qvalue
2) Chloromethane	3.935	50	11176	0.5232154	ppbv	100
3) Vinyl Chloride	4.080	62	14093	0.5232736	ppbv	100
4) Chloroethane	4.620	64	7489	0.5209530	ppbv	100
5) 1,1-Dichloroethene	5.394	61	21039	0.5309346	ppbv	99
6) Trans-1,2-Dichloroethene	6.079	61	18580	0.5245570	ppbv	100
7) 1,1-Dichloroethane	6.494	63	27186	0.5237141	ppbv	100
8) Vinyl Acetate	6.441	43	32498	0.5293051	ppbv	99
9) cis-1,2-Dichloroethene	7.016	96	18676	0.5136970	ppbv	100
10) Chloroform	7.253	83	32665	0.5184121	ppbv	100
11) 1,1,1-Trichloroethane	7.458	97	34056	0.5227907	ppbv	99
12) Carbon Tetrachloride	7.597	117	35217	0.5209379	ppbv	99
14) Benzene	7.803	78	57004	0.5158751	ppbv	99
15) 1,2-Dichloroethane	7.861	64	6477	0.5398280	ppbv #	96
16) Trichloroethene	8.382	95	25176	0.5195265	ppbv	99
17) 1,2-Dichloropropane	8.652	63	19228	0.5163193	ppbv	97
18) cis-1,3-Dichloropropene	9.325	75	33259	0.5093122	ppbv	99
19) trans-1,3-Dichloropropene	9.898	75	27348	0.4938524	ppbv	100
20) 1,1,2-Trichloroethane	10.122	97	24040	0.5041092	ppbv	99
21) Tetrachloroethene	10.238	166	39747	0.5014556	ppbv	99
22) 1,2-Dibromoethane	10.759	107	37523	0.5042362	ppbv	100
24) Ethylbenzene	11.280	91	93619	0.5343675	ppbv	100
25) 1,1,2,2-Tetrachloroethane	12.646	83	53428	0.5099606	ppbv	100
27) 1,4-Dichlorobenzene	13.656	146	60309	0.5190435	ppbv	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042818\
Data File : 0428_02.D
Acq On : 28 Apr 2018 8:56 am
Operator : 564
Sample : LCS 1x WG1104397
Misc : 18C26426
ALS Vial : 2 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 10:11:51 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:33 2018
Response via : Initial Calibration



1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
R3305497-2

ESC Sample ID:	R3305497-2	**SDG:**	L988669
Client Sample ID:	LCSD	**Collected Date/Time:**	
Lab File ID:	0427A_15	**Received Date/Time:**	
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/27/18 21:27
Analytical Batch:	WG1104091	**Analysis Date/Time:**	04/27/18 21:27
Dilution Factor:	1	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	

Analyte	CAS	RT	Result	Qualifier	MDL	RDL
			ppbv		*ppbv*	*ppbv*
Benzene	71-43-2	7.80	0.520		0.00541	0.0200
Carbon tetrachloride	56-23-5	7.59	0.530		0.00575	0.0200
Chloroethane	75-00-3	4.61	0.512		0.0159	0.0400
Chloroform	67-66-3	7.25	0.525		0.00500	0.0200
Chloromethane	74-87-3	3.92	0.533		0.00972	0.0300
1,2-Dibromoethane	106-93-4	10.76	0.501		0.0185	0.0200
1,4-Dichlorobenzene	106-46-7	13.65	0.513		0.00691	0.0200
1,1-Dichloroethane	75-34-3	6.48	0.529		0.00505	0.0200
1,2-Dichloroethane	107-06-2	7.85	0.535		0.000471	0.0200
1,1-Dichloroethene	75-35-4	5.38	0.538		0.00521	0.0200
cis-1,2-Dichloroethene	156-59-2	7.01	0.525		0.00770	0.0200
trans-1,2-Dichloroethene	156-60-5	6.07	0.529		0.00499	0.0200
1,2-Dichloropropane	78-87-5	8.65	0.513		0.00840	0.0300
cis-1,3-Dichloropropene	10061-01-5	9.32	0.504		0.00556	0.0200
trans-1,3-Dichloropropene	10061-02-6	9.89	0.494		0.00853	0.0300
Ethylbenzene	100-41-4	11.28	0.532		0.00904	0.0300
1,1,2,2-Tetrachloroethane	79-34-5	12.65	0.507		0.00481	0.0200
Tetrachloroethylene	127-18-4	10.23	0.499		0.00500	0.0200
1,1,1-Trichloroethane	71-55-6	7.46	0.531		0.00552	0.0200
1,1,2-Trichloroethane	79-00-5	10.12	0.508		0.0287	0.0300
Trichloroethylene	79-01-6	8.38	0.514		0.00736	0.0200
Vinyl chloride	75-01-4	4.06	0.526		0.00765	0.0200
Vinyl acetate	108-05-4	6.43	0.514		0.00500	0.0200

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_15.D
Acq On : 27 Apr 2018 9:27 pm
Operator : 564
Sample : LCSD 1x WG1104091
Misc : 18C26426
ALS Vial : 15 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 09:59:59 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:33 2018
Response via : Initial Calibration

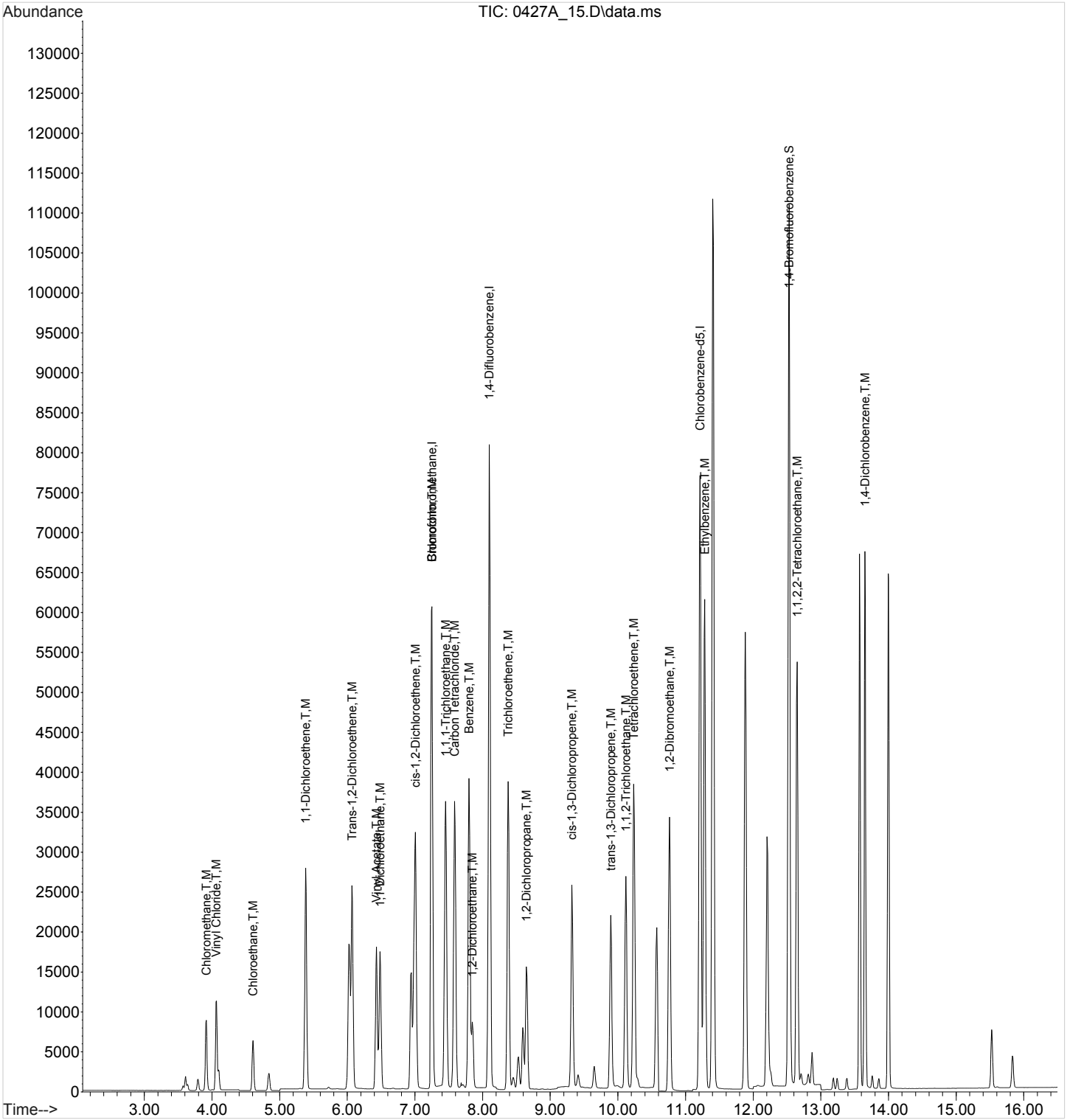
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.251	130	32261	1.2500000	ppbv	0.00
13) 1,4-Difluorobenzene	8.100	114	118548	1.2500000	ppbv	0.00
23) Chlorobenzene-d5	11.215	117	97813	1.2500000	ppbv	0.00
System Monitoring Compounds						
26) 1,4-Bromofluorobenzene	12.532	95	56836	1.2541869	ppbv	0.00
Spiked Amount 1.250	Range 60 - 140		Recovery = 100.33%			
Target Compounds						Qvalue
2) Chloromethane	3.916	50	11200	0.5327743	ppbv	100
3) Vinyl Chloride	4.061	62	13930	0.5255422	ppbv	100
4) Chloroethane	4.608	64	7250	0.5124410	ppbv	100
5) 1,1-Dichloroethene	5.385	61	20966	0.5376042	ppbv	100
6) Trans-1,2-Dichloroethene	6.069	61	18425	0.5285494	ppbv	99
7) 1,1-Dichloroethane	6.484	63	27047	0.5294186	ppbv	99
8) Vinyl Acetate	6.431	43	31059	0.5140058	ppbv	100
9) cis-1,2-Dichloroethene	7.007	96	18769	0.5245603	ppbv	100
10) Chloroform	7.251	83	32542	0.5247686	ppbv	99
11) 1,1,1-Trichloroethane	7.455	97	34031	0.5308112	ppbv	100
12) Carbon Tetrachloride	7.586	117	35275	0.5301902	ppbv	98
14) Benzene	7.799	78	57341	0.5200630	ppbv	100
15) 1,2-Dichloroethane	7.848	64	6407	0.5351650	ppbv #	100
16) Trichloroethene	8.378	95	24854	0.5140066	ppbv	100
17) 1,2-Dichloropropane	8.648	63	19080	0.5134688	ppbv	98
18) cis-1,3-Dichloropropene	9.321	75	32816	0.5036305	ppbv	100
19) trans-1,3-Dichloropropene	9.894	75	27276	0.4936324	ppbv	100
20) 1,1,2-Trichloroethane	10.118	97	24149	0.5075055	ppbv	100
21) Tetrachloroethene	10.234	166	39432	0.4985726	ppbv	100
22) 1,2-Dibromoethane	10.762	107	37212	0.5011537	ppbv	100
24) Ethylbenzene	11.283	91	91969	0.5320391	ppbv	100
25) 1,1,2,2-Tetrachloroethane	12.651	83	52383	0.5067388	ppbv	100
27) 1,4-Dichlorobenzene	13.651	146	58793	0.5128298	ppbv	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042718A\
Data File : 0427A_15.D
Acq On : 27 Apr 2018 9:27 pm
Operator : 564
Sample : LCSD 1x WG1104091
Misc : 18C26426
ALS Vial : 15 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 09:59:59 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:33 2018
Response via : Initial Calibration



ACCOUNT:	PROJECT:	SDG:	DATE/TIME:	PAGE:
S&ME Inc. - Knoxville	4143-17-016	L988669	05/16/18 08:03	175 of 183

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
R3305551-2

ESC Sample ID:	R3305551-2	**SDG:**	L988669
Client Sample ID:	LCSD	**Collected Date/Time:**	
Lab File ID:	0428_03	**Received Date/Time:**	
Instrument ID:	AIRMS5	**Preparation Date/Time:**	04/28/18 09:38
Analytical Batch:	WG1104397	**Analysis Date/Time:**	04/28/18 09:38
Dilution Factor:	1	**Prep Method:**	TO-15
Analytical Method:	TO-15	**Sample Vol Used:**	400 mL
Matrix:	Air	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	

Analyte	CAS	RT	Result	Qualifier	MDL	RDL
			ppbv		*ppbv*	*ppbv*
cis-1,2-Dichloroethene	156-59-2	7.02	0.523		0.00770	0.0200
trans-1,2-Dichloroethene	156-60-5	6.08	0.525		0.00499	0.0200
Tetrachloroethylene	127-18-4	10.24	0.506		0.00500	0.0200
Trichloroethylene	79-01-6	8.38	0.517		0.00736	0.0200

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042818\
Data File : 0428_03.D
Acq On : 28 Apr 2018 9:38 am
Operator : 564
Sample : LCSD 1x WG1104397
Misc : 18C26426
ALS Vial : 3 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 10:12:01 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:33 2018
Response via : Initial Calibration

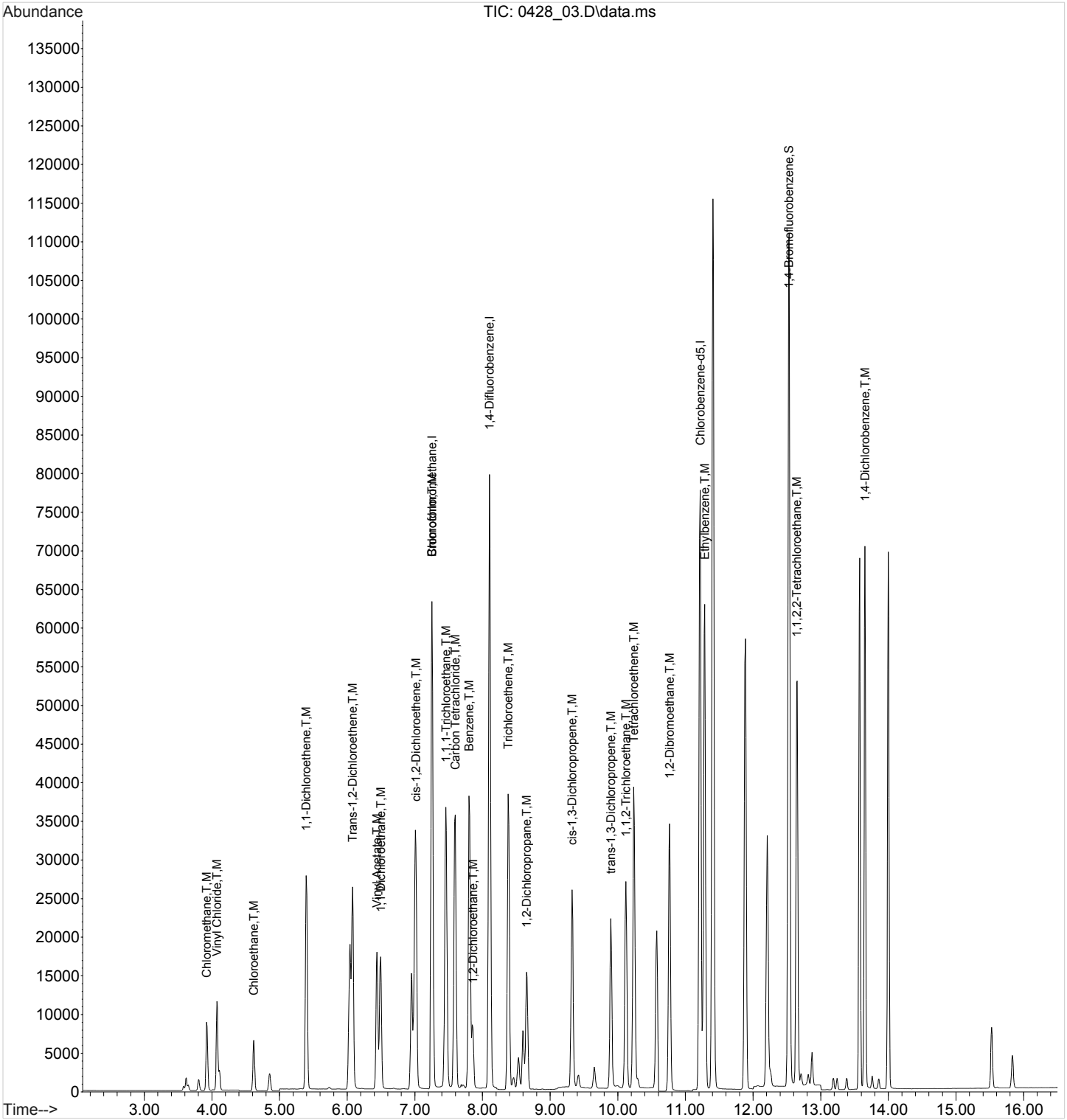
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	7.253	130	32681	1.2500000	ppbv	0.00
13) 1,4-Difluorobenzene	8.102	114	118613	1.2500000	ppbv	0.00
23) Chlorobenzene-d5	11.217	117	99293	1.2500000	ppbv	0.00
System Monitoring Compounds						
26) 1,4-Bromofluorobenzene	12.525	95	58504	1.2717516	ppbv	0.00
Spiked Amount 1.250	Range 60 - 140		Recovery = 101.74%			
Target Compounds						Qvalue
2) Chloromethane	3.923	50	11226	0.5271482	ppbv	100
3) Vinyl Chloride	4.074	62	14196	0.5286947	ppbv	100
4) Chloroethane	4.620	64	7645	0.5334158	ppbv	100
5) 1,1-Dichloroethene	5.394	61	21120	0.5345933	ppbv	99
6) Trans-1,2-Dichloroethene	6.079	61	18530	0.5247302	ppbv	99
7) 1,1-Dichloroethane	6.494	63	27100	0.5236389	ppbv	100
8) Vinyl Acetate	6.441	43	31743	0.5185744	ppbv	100
9) cis-1,2-Dichloroethene	7.016	96	18941	0.5225642	ppbv	99
10) Chloroform	7.253	83	33179	0.5281647	ppbv	99
11) 1,1,1-Trichloroethane	7.457	97	34295	0.5280544	ppbv	100
12) Carbon Tetrachloride	7.596	117	35509	0.5268484	ppbv	99
14) Benzene	7.801	78	57872	0.5245913	ppbv	99
15) 1,2-Dichloroethane	7.859	64	6425	0.5363744	ppbv #	98
16) Trichloroethene	8.380	95	24999	0.5167221	ppbv	99
17) 1,2-Dichloropropane	8.650	63	19183	0.5159578	ppbv	97
18) cis-1,3-Dichloropropene	9.323	75	33310	0.5109318	ppbv	100
19) trans-1,3-Dichloropropene	9.896	75	27560	0.4984989	ppbv	100
20) 1,1,2-Trichloroethane	10.120	97	24334	0.5111131	ppbv	100
21) Tetrachloroethene	10.236	166	40021	0.5057426	ppbv	100
22) 1,2-Dibromoethane	10.765	107	37701	0.5074610	ppbv	100
24) Ethylbenzene	11.285	91	94221	0.5369424	ppbv	100
25) 1,1,2,2-Tetrachloroethane	12.644	83	54007	0.5146616	ppbv	100
27) 1,4-Dichlorobenzene	13.654	146	60746	0.5219673	ppbv	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\042818\
Data File : 0428_03.D
Acq On : 28 Apr 2018 9:38 am
Operator : 564
Sample : LCSD 1x WG1104397
Misc : 18C26426
ALS Vial : 3 Sample Multiplier: 1
InstName : AIRMS5

Quant Time: Apr 28 10:12:01 2018
Quant Method : C:\msdchem\1\methods\TOSIMMS5D27R.m
Quant Title : AIRMS5
QLast Update : Sat Apr 28 09:57:33 2018
Response via : Initial Calibration



TO-15 SIM Air VOCs Benchsheet

Batch: WG1104091

Analyst: AMC729 **SOP:** 330367 **Method:** EPA TO-15

ICV, LCS/D Std: 18C26425 Amt. Used: 400 cc Exp. Date:09/26/18 **Internal Standard/Surrogate:** 18C26426 Amt. Used: 50 cc Exp. Date:09/13/18
High Standard: 18D20628 Amt. Used: 800 cc Exp. Date:10/20/18

Sample Number	Initial Sample Vol. (mL)	Dilution Factor	Sample Vol. Used (mL)	Review Analyst	Review Date	Sample Comments
BLANK	400	1	400	AMC729	04/27/18 13:49:04	
LCS	400	1	400	AMC729	04/27/18 13:49:04	
LCSD	400	1	400	AMC729	04/27/18 13:49:04	
1. L988669-01	400	1	400	AMC729	04/27/18 13:49:04	
2. L988669-02	400	1	400	AMC729	04/27/18 13:49:04	
3. L988669-03	400	1	400	AMC729	04/27/18 13:49:04	
4. L988669-04	400	1	400	AMC729	04/27/18 13:49:04	
5. L988669-05	400	1	400	AMC729	04/27/18 13:49:04	
6. L988669-06	400	1	400	AMC729	04/27/18 13:49:04	

Comments:

Reviewed By:AMC729 on 04/27/18 13:49:04

TO-15 SIM Air VOCs Benchsheet

Batch: WG1104397

Analyst: AMC729 **SOP:** 330367 **Method:** EPA TO-15

ICV, LCS/D Std: 18C26425 Amt. Used: 400 cc Exp. Date:09/26/18 **Internal Standard/Surrogate:** 18C26426 Amt. Used: 50 cc Exp. Date:09/13/18
High Standard: 18D20628 Amt. Used: 800 cc Exp. Date:10/20/18

Sample Number	Initial Sample Vol. (mL)	Dilution Factor	Sample Vol. Used (mL)	Review Analyst	Review Date	Sample Comments
BLANK	400	1	400	AMC729	04/28/18 12:33:08	
LCS	400	1	400	AMC729	04/28/18 12:33:08	
LCSD	400	1	400	AMC729	04/28/18 12:33:08	
1. L988669-01	400	200	2	AMC729	04/28/18 12:33:08	
2. L988669-02	400	80	5	AMC729	04/28/18 12:33:08	
3. L988669-03	400	80	5	AMC729	04/28/18 12:33:08	
4. L988669-04	400	25	16	AMC729	04/28/18 12:33:08	
5. L988669-05	400	8	50	AMC729	04/28/18 12:33:08	
6. L989544-01	400	1	400	AMC729	04/28/18 12:33:08	
7. L989544-02	400	1	400	AMC729	04/28/18 12:33:08	
8. L989544-03	400	1	400	AMC729	04/28/18 12:33:08	
9. L989544-04	400	2	200	AMC729	04/28/18 12:33:08	
10. L989544-05	400	1	400	AMC729	04/28/18 12:33:08	
11. L989580-01	400	1	400	AMC729	04/28/18 15:48:52	
12. L989580-02	400	1	400	AMC729	04/28/18 15:48:52	
13. L989580-03	400	1	400	AMC729	04/28/18 15:48:52	
14. L989580-04	400	1	400	AMC729	04/28/18 15:48:52	
15. L989580-05	400	1	400	AMC729	04/28/18 15:48:52	
16. L989580-06	400	1	400	AMC729	04/28/18 15:48:52	
17. L989582-01	400	1	400	AMC729	04/28/18 15:48:52	
18. L989582-02	400	1	400	AMC729	04/28/18 15:48:52	
19. L989582-03	400	1	400	AMC729	04/28/18 15:48:52	
20. L989582-04	400	1	400	AMC729	04/28/18 15:48:52	

Comments:
L989544-02 Time Added: 04/28/18 11:02:44
L989544-01 Time Added: 04/28/18 11:02:44
L989544-03 Time Added: 04/28/18 11:02:44
L989544-04 Time Added: 04/28/18 11:02:44
L989544-05 Time Added: 04/28/18 11:02:44
L989580-02 Time Added: 04/28/18 15:48:28
L989580-01 Time Added: 04/28/18 15:48:28
L989580-03 Time Added: 04/28/18 15:48:28
L989582-02 Time Added: 04/28/18 15:48:28
L989580-04 Time Added: 04/28/18 15:48:28
L989580-05 Time Added: 04/28/18 15:48:28
L989580-06 Time Added: 04/28/18 15:48:28
L989582-01 Time Added: 04/28/18 15:48:28
L989582-03 Time Added: 04/28/18 15:48:28
L989582-04 Time Added: 04/28/18 15:48:29

Reviewed By:AMC729 on 04/28/18 15:48:52

1 Cp
2 Tc
3 Ss
4 Cn
5 Su
6 Gl
7 Al
8 Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

COD	Coefficient of Determination.
Mass	Mass of parameter.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
RRF	Relative Response Factor.
RT	Retention Time.
SDG	Sample Delivery Group.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

ACCREDITATIONS & LOCATIONS

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

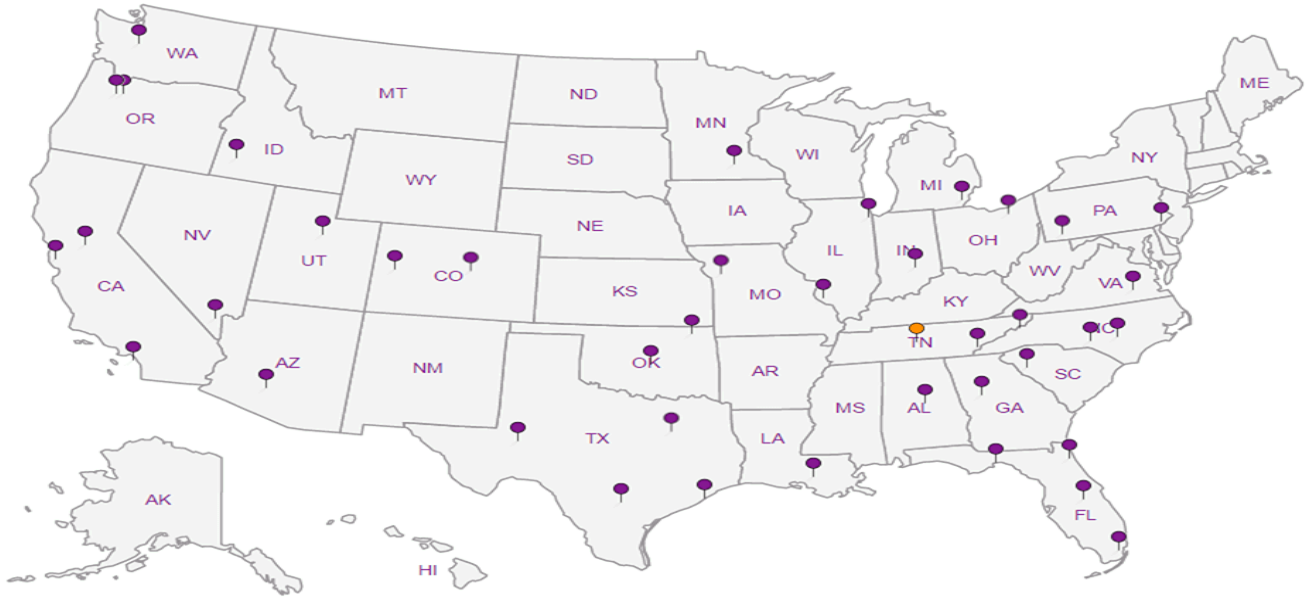
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. ESC Lab Sciences performs all testing at our central laboratory.



S&ME

Billing Information:

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 1 of 1

ESC LAB SCIENCES

YOUR LAB OF CHOICE

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

Report to: **Liz Porter and Nate Peterson**

Email To: **Liz P and Nate P (e-mail on file)**

Project Description: **Former Sanitary Laundry**

City/State Collected: **TN**

Phone: 865-970-0003
Fax:

Client Project # 4143-17-016

Lab Project # **SME-4143-17-016**

L# L988669

M199

Collected by (print): N. Peterson

Site/Facility ID #

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Immediately Packed on Ice N ___ Y ___

Acctnum: **SME**

Template:

Prelogin:

TSR:

PB: BF 4/20/18

Shipped Via: Ground

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	TO-15SIM + QC4	Remarks	Sample # (lab only)
FC-1		AIR		4/24/18	0938	1	X		-01
FC-2		AIR		↓	1034	1	X		02
FC-3		AIR			1137	1	X		03
FC-4		AIR			1234	1	X		04
FC-5		AIR			1330	1	X		05
FC-6		AIR			1420	1	X		06
							X		
							X		
							X		

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: ESCKN

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: NP __Y __N
COC Signed/Accurate: ✓ __N
Bottles arrive intact: ✓ __N
Correct bottles used: ✓ __N
Sufficient volume sent: ✓ __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
	4/24/18	1530			
Relinquished by : (Signature)	Date: 4-24-18	Time: 1700	Received by: (Signature)	Temp: AMB °C Bottles Received: 5	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) SKO	Date: 4/25/18 Time: 1015	Hold: / Condition: NCF / OK