



Department of
Environmental
Conservation

2018 SOIL VAPOR INTRUSION SAMPLING SUMMARY

Former Ithaca Gun Factory – Off-site, C755019A

September 2018

NYSDEC, DIVISION OF ENVIRONMENTAL REMEDIATION, REGION 7

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1.0 Introduction

The New York State Department of Environmental Conservation has prepared this report to summarize the results of vapor intrusion investigation conducted in March 2018 for the Former Ithaca Gun Factory – Off-Site area. The “off-site area” encompasses the neighborhood to the west of the Brownfield Cleanup Program (BCP) site identified as the Former Ithaca Gun Factory (Site No.: C755019) located at 121-125 Lake Street in the City of Ithaca, Tompkins County, New York (site) (Attachment A).

Based on results of site characterization work conducted in the off-site area from June 2013 to November 2013, the New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) determined further investigation was necessary to evaluate if groundwater contaminated with volatile organic compounds (VOCs) is impacting indoor air quality through vapor intrusion. The vapor intrusion investigation in the off-site area was initiated in February 2014 and has included additional sampling events during the 2014-2015, 2015-2016, and 2016-2017 heating seasons. Each sampling event has been summarized in individual sampling reports.

The vapor intrusion investigation area is predominantly residential with a mix of commercial properties. The vapor intrusion investigation has been performed generally in the area from Lake Street west to North Tioga Street and East Falls Street south to Queen Street (Attachment A).

2.0 Project Background

The Ithaca Gun Company operated from approximately 1885 through 1986 at a property located to the east and uphill from this off-site neighborhood area. The main operations included manufacturing of firearms and munitions. Supporting manufacturing activities and site uses included: spray painting; oven drying of gun stocks; firing ranges; metal plating; machine shop, and; forging. Operations at the Ithaca Gun Company appear to have led to the contamination of both on-site and near off-site areas.

From 1995 to 1998, following discovery of lead shot in the Fall Creek gorge area, soil sampling was conducted in on-site and off-site areas. In 2000, leaking transformers and associated PCB-contaminated soils were removed from the site. From 2001 to 2004, the USEPA conducted a removal assessment, limited building demolition, and soil removal activities (mostly on adjacent off-site areas; however, some portions of the former Ithaca Gun Factory property were included). In 2001, an Environmental Site Assessment and a Site Investigation were completed on behalf of, and funded by, the property owner at the time. In 2002, the former Ithaca Gun Factory property entered the Voluntary Cleanup Program (VCP), with the site identification number of V00511. The original factory property has since been divided and is identified as two separate sites; the Ithaca Falls Overlook, Environmental Restoration Program (ERP) site which is owned by the City of

Ithaca, and the Former Ithaca Gun Factory, BCP site which is owned by IFR Development, LLC.

Laboratory analytical results of groundwater samples collected in 2012, as part of investigations for the ERP site, indicated presence of VOCs, specifically tetrachloroethene (PCE), trichloroethene (TCE), cis-1,2-dichloroethene, and vinyl chloride, at monitoring wells hydraulically down-gradient from the BCP site with concentrations exceeding respective NYSDEC groundwater standards. The ERP investigations were limited to areas east of Lake Street. As a result, in July 2013, the NYSDEC contracted Aztech Technologies, Inc. (Aztech) to conduct a subsurface investigation and characterization of an off-site area located topographically down-gradient from the former Ithaca Gun Factory site and in areas west of Lake Street. Investigation details and results are documented in the report titled "Site Characterization Report for Former Ithaca Gun Factory – Offsite", dated February 2014.

The site characterization work included collection of groundwater and soil vapor samples from temporary points installed using direct-push technology, installation of permanent groundwater monitoring wells, a professional survey, and groundwater sampling from the monitoring wells. The site characterization results have allowed for the general delineation of the area with presence of VOCs.

Laboratory analytical data indicated that VOCs were detected in groundwater; however, all compounds detected were below their respective NYSDEC groundwater standards. The only apparent site related VOC detected in groundwater was TCE with concentrations ranging from 0.82 to 4.8 micrograms per liter ($\mu\text{g/l}$); the groundwater standard for TCE is 5 $\mu\text{g/l}$. TCE was detected in five of the ten wells sampled. Soil vapor results indicated presence of more VOCs than those detected in groundwater; however, the primary contaminant of concern in soil vapor is TCE.

Additional groundwater sampling conducted in June 2014 and September/October 2015 indicated similar conditions to those reported for the site characterization. Detectable concentrations of TCE ranged from 1.3 to 3.8 $\mu\text{g/l}$ and detections occurred in the same five wells. Results for these groundwater sampling events are summarized in individual sampling reports.

Based on the results of previous investigations, the scope of work described in the following sections was completed.

3.0 Scope of Work

The overall purpose of this investigation is to evaluate whether or not the process of vapor intrusion is occurring at homes or businesses in the area where presence of VOCs is known to exist in either groundwater or soil vapor. Tasks performed during the investigation included:

- Collection of vapor intrusion samples (combined sample sets including sub-slab, indoor, and outside air) from three locations,
- Completion of Structural Sampling Questionnaires and Building Inventory Logs, and;
- Collection of Quality Assurance/Quality Control (QA/QC) duplicate samples.

4.0 Methodology

Owners of properties within the investigation area have been contacted a minimum of three times through previous offers to sample their home or business. Most owners have been contacted four times through previous efforts by the NYSDEC. Therefore, in March 2018, the NYSDEC focused on any new owners of properties where previous owners had been unresponsive. The NYSDEC also contacted the owners of homes to be monitored or that had been recently mitigated. Contact was made by a letter to the property owner and by telephone if numbers are available. The letter provided two methods for contacting the DEC project manager; the recipient could choose to use electronic mail or telephone. As a result, three owners accepted the sampling offer; all other owners did not respond. Two of the respondents were new owners of properties in the investigation area. The sampling locations are shown on Attachment A.

All sampling was conducted in accordance with the NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York, dated October 2006. During the sample collection, Structural Sampling Questionnaires and Building Inventory Logs were completed at each of the structures along with a photographic inventory of products stored in the basements. Generally, two (2) samples were collected at each location (one indoor basement air sample and one sub-slab soil vapor sample). In some cases, more than one indoor air sample was collected. This applied if there were areas of the basement that were disconnected from the main portion, or if it was decided that vapors could “pool” in an isolated location (i.e. crawlspace). In these cases, an additional sampling canister was placed in those areas. For basements with earthen floors, no sub-slab sample could be collected, and samples were limited to indoor basement air.

The samples were collected using six-liter batch certified summa canisters equipped with laboratory-calibrated flow controller valves to collect the samples over a 24-hour period. Outdoor ambient air samples were collected each day of sampling in order to obtain

background conditions. After collection, samples were submitted to the Test America's Knoxville, Tennessee laboratory where they were analyzed in accordance with analytical method TO-15 for the full list of VOCs.

5.0 Results

Laboratory analysis indicated that TCE concentrations in indoor air samples were all below laboratory detection limits of 0.19 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). The NYSDOH guideline for TCE in air is 2 $\mu\text{g}/\text{m}^3$. TCE concentrations in the sole sub-slab sample was 5.8 $\mu\text{g}/\text{m}^3$. It is typical that concentrations of VOCs in the indoor air will be lower than those found below concrete slabs (sub-slab). The table included as Attachment B provides a summary of TCE results. The full list of compounds and sampling results can be found in the laboratory analytical reports included as Attachment C.

A third-party data usability summary report (DUSR) was completed by ZDataReports, Data Management and Validation Services of Syracuse, New York. ZDataReports validated the analytical data package submitted to NYSDEC by Test America; reviewing it for completeness and compliance as defined by the requirements for NYSDEC Analytical Services Protocol Category B deliverables.

The DUSR executive summary indicated that the volatile organic analyses were determined to be usable for qualitative and quantitative purposes with minor qualification. Sample results for several compounds were qualified based on deviations from continuing calibration and field duplicate criteria. The DUSR is included as Attachment D.

6.0 Conclusions

The NYSDEC and NYSDOH have evaluated the data generated during the soil vapor intrusion investigation in conjunction with current understanding of the nature and extent of contamination.

Based on this evaluation, NYSDEC and NYSDOH have recommended no further actions for the homes that were sampled during this event. Letters transmitting sampling results and recommendations were sent to property owners and tenants at each sampling location by the NYSDOH.

At monitoring locations, the NYSDEC will offer resampling during the 2018-2019 heating season. Additionally, the NYSDEC will continue evaluation efforts at locations that previously declined or were unresponsive. New sample locations may be added as determined through review by the NYSDEC and NYSDOH.

NYSDOH fact sheets providing information on the health effects seen in humans exposed to TCE and information about the NYSDOH air guideline are available at the following webpage: <https://www.health.ny.gov/environmental/chemicals/trichloroethene/>.

Attachment A – Site Figure



- MW-7 Monitoring Well
- SB-1/VP-1 Soil Boring and/or Vapor Point Location
- Previously Sampled Structure
- New Structure Sampled in 2018

**Former Ithaca Gun Factory - Offsite
NYSDEC Site #C755019A
Ithaca, New York**

Figure 1

March 2018 Scale 1" = 100'

SITE MAP



Aztech Environmental
TECHNOLOGIES

Woman Owned Business
5 McCrea Hill Road, Ballston Spa, NY 12020
518.885-5383 | aztechenv.com

Attachment B – Laboratory Analytical
Results Summary Table - TCE only

Former Ithaca Gun Factory - Off-site
 Site Number: C755019A
 City of Ithaca, Tompkins County

2018 SVI Sampling Summary
 Attachment B

Field Sample ID	H41A-BA-2018	FD-2018	H41B-BA-2018	H41-OA-2018
Lab Sample ID	140-11145-7	140-11145-8	140-11145-5	140-11145-6
Sampling End Time	3/28/2018 11:39	3/28/2018 0:00	3/28/2018 11:35	3/28/2018 11:41
Matrix	Indoor Air	Indoor Air	Indoor Air	Ambient Air
TRICHLOROETHYLENE (TCE)	< 0.19 U	< 0.19 U	< 0.19 U	< 0.19 U

Field Sample ID	H45-BA-2018	H45-CS-2018	H46-BA-2018	H46-SS-2018
Lab Sample ID	140-11145-1	140-11145-2	140-11145-4	140-11145-3
Sampling End Time	3/28/2018 7:51	3/28/2018 7:52	3/28/2018 9:58	3/28/2018 9:57
Matrix	Indoor Air	Indoor Air	Indoor Air	Indoor Air
TRICHLOROETHYLENE (TCE)	< 0.19 U	< 0.19 U	< 0.19 U	5.8

Notes/Qualifiers:

Results in **bold** text = detected compounds

Results are in units of $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter of air

BA = Indoor basement air sample

SS = Sub-slab air sample

OA = Outdoor (ambient) air sample

CS = Crawlspace air sample

U = Analyzed for but, not detected at reported quantitation limit

Attachment C – Laboratory Analytical Reports

ANALYTICAL REPORT

Job Number: 140-11145-1

Job Description: Former Ithaca Gun Factory # C755019A

Contract Number: C008010

For:

New York State D.E.C.

1679 Rte. 11

Kirkwood, NY 13795

Attention: Gary Priscott



Approved for release.
Diana L. Lange
Project Management Assistant II
4/11/2018 3:42 PM

Designee for

Jamie A McKinney, Senior Project Manager
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04/11/2018

cc: Tom Giamichael

The test results in this report meet all 2003 NELAP and 2003 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

TestAmerica Laboratories, Inc.

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Definitions/Glossary

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory # C755019A

TestAmerica Job ID: 140-11145-1

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
E	Result exceeded calibration range.
D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.

Glossary

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

Job Narrative
140-11145-1

Comments

No additional comments.

Receipt

The samples were received on 4/2/2018 9:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice.

Receipt Exceptions

The Chain-of-Custody (COC) was incomplete as received and/or improperly completed. The asset numbers listed on the COC are switched.

Air - GC/MS VOA

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

Method(s) TO 15 LL, TO-15: The continuing calibration verification (CCV) associated with batch 140-19179 exhibited % difference of > 30% for the following analyte(s) 1,2-Dichloroethane and/or t-Butyl alcohol; however, the results were within the LCS acceptance limits. The EPA method requires that all target analytes in the continuing calibration verification standard be within 30% difference from the initial calibration. According to the laboratory standard operating procedure, the continuing calibration is acceptable if it meets the laboratory control sample acceptance criteria.

Method(s) TO 15 LL, TO-15: The following analyte(s) recovered outside control limits for the LCS associated with analytical batch 140-19179: 1,2-Dichloroethane. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

Method(s) TO 15 LL, TO-15: Although the BFB is flagged as outside control limits for TO-14A on batch 140-19179, the results are within limits for TO-15, which is required for this project.

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

Detection Summary

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory # C755019A

TestAmerica Job ID: 140-11145-1

Client Sample ID: H45-BA-2018

Lab Sample ID: 140-11145-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.16		0.080		ppb v/v	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.067		0.032		ppb v/v	1		TO 15 LL	Total/NA
Chloromethane	0.42		0.20		ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.18		0.080		ppb v/v	1		TO 15 LL	Total/NA
Ethanol	26		2.0		ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.31		0.20		ppb v/v	1		TO 15 LL	Total/NA
m-Xylene & p-Xylene	0.11		0.080		ppb v/v	1		TO 15 LL	Total/NA
Toluene	0.43		0.12		ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	3.6		0.080		ppb v/v	1		TO 15 LL	Total/NA
Trichlorofluoromethane	0.31		0.080		ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.50		0.26		ug/m3	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.42		0.20		ug/m3	1		TO 15 LL	Total/NA
Chloromethane	0.87		0.41		ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.91		0.40		ug/m3	1		TO 15 LL	Total/NA
Ethanol	49		3.8		ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	1.1		0.69		ug/m3	1		TO 15 LL	Total/NA
m-Xylene & p-Xylene	0.46		0.35		ug/m3	1		TO 15 LL	Total/NA
Toluene	1.6		0.45		ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	14		0.32		ug/m3	1		TO 15 LL	Total/NA
Trichlorofluoromethane	1.8		0.45		ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: H45-CS-2018

Lab Sample ID: 140-11145-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone	0.35		0.32		ppb v/v	1		TO 15 LL	Total/NA
Benzene	0.17		0.080		ppb v/v	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.073		0.032		ppb v/v	1		TO 15 LL	Total/NA
Chloromethane	0.50		0.20		ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.18		0.080		ppb v/v	1		TO 15 LL	Total/NA
Ethanol	27		2.0		ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.33		0.20		ppb v/v	1		TO 15 LL	Total/NA
m-Xylene & p-Xylene	0.13		0.080		ppb v/v	1		TO 15 LL	Total/NA
Toluene	0.47		0.12		ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	3.7		0.080		ppb v/v	1		TO 15 LL	Total/NA
Trichlorofluoromethane	0.30		0.080		ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone	1.0		0.94		ug/m3	1		TO 15 LL	Total/NA
Benzene	0.54		0.26		ug/m3	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.46		0.20		ug/m3	1		TO 15 LL	Total/NA
Chloromethane	1.0		0.41		ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.90		0.40		ug/m3	1		TO 15 LL	Total/NA
Ethanol	51		3.8		ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	1.2		0.69		ug/m3	1		TO 15 LL	Total/NA
m-Xylene & p-Xylene	0.57		0.35		ug/m3	1		TO 15 LL	Total/NA
Toluene	1.8		0.45		ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	15		0.32		ug/m3	1		TO 15 LL	Total/NA
Trichlorofluoromethane	1.7		0.45		ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Knoxville

Detection Summary

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory # C755019A

TestAmerica Job ID: 140-11145-1

Client Sample ID: H46-SS-2018

Lab Sample ID: 140-11145-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.90		0.080		ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.094		0.080		ppb v/v	1		TO 15 LL	Total/NA
2-Butanone	0.39		0.32		ppb v/v	1		TO 15 LL	Total/NA
Benzene	0.097		0.080		ppb v/v	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.12		0.032		ppb v/v	1		TO 15 LL	Total/NA
Chloroform	1.8		0.080		ppb v/v	1		TO 15 LL	Total/NA
Chloromethane	0.46		0.20		ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.19		0.080		ppb v/v	1		TO 15 LL	Total/NA
Ethanol	13		2.0		ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.10		0.080		ppb v/v	1		TO 15 LL	Total/NA
Hexane	0.54		0.20		ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	5.3		0.20		ppb v/v	1		TO 15 LL	Total/NA
m-Xylene & p-Xylene	0.39		0.080		ppb v/v	1		TO 15 LL	Total/NA
o-Xylene	0.12		0.080		ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.41		0.080		ppb v/v	1		TO 15 LL	Total/NA
Toluene	1.1		0.12		ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	1.1		0.036		ppb v/v	1		TO 15 LL	Total/NA
Trichlorofluoromethane	0.40		0.080		ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	4.9		0.44		ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.46		0.39		ug/m3	1		TO 15 LL	Total/NA
2-Butanone	1.2		0.94		ug/m3	1		TO 15 LL	Total/NA
Benzene	0.31		0.26		ug/m3	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.78		0.20		ug/m3	1		TO 15 LL	Total/NA
Chloroform	8.9		0.39		ug/m3	1		TO 15 LL	Total/NA
Chloromethane	0.94		0.41		ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.92		0.40		ug/m3	1		TO 15 LL	Total/NA
Ethanol	25		3.8		ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.44		0.35		ug/m3	1		TO 15 LL	Total/NA
Hexane	1.9		0.70		ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	19		0.69		ug/m3	1		TO 15 LL	Total/NA
m-Xylene & p-Xylene	1.7		0.35		ug/m3	1		TO 15 LL	Total/NA
o-Xylene	0.53		0.35		ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	2.8		0.54		ug/m3	1		TO 15 LL	Total/NA
Toluene	4.2		0.45		ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	5.8		0.19		ug/m3	1		TO 15 LL	Total/NA
Trichlorofluoromethane	2.3		0.45		ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: H46-BA-2018

Lab Sample ID: 140-11145-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	0.20		0.080		ppb v/v	1		TO 15 LL	Total/NA
Benzene	0.28		0.080		ppb v/v	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.077		0.032		ppb v/v	1		TO 15 LL	Total/NA
Chloromethane	0.68		0.20		ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.19		0.080		ppb v/v	1		TO 15 LL	Total/NA
Ethanol	53		2.0		ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.29		0.20		ppb v/v	1		TO 15 LL	Total/NA
m-Xylene & p-Xylene	0.16		0.080		ppb v/v	1		TO 15 LL	Total/NA
Toluene	0.39		0.12		ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Knoxville

Detection Summary

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory # C755019A

TestAmerica Job ID: 140-11145-1

Client Sample ID: H46-BA-2018 (Continued)

Lab Sample ID: 140-11145-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichlorofluoromethane	0.32		0.080		ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	0.97		0.39		ug/m3	1		TO 15 LL	Total/NA
Benzene	0.91		0.26		ug/m3	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.48		0.20		ug/m3	1		TO 15 LL	Total/NA
Chloromethane	1.4		0.41		ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.92		0.40		ug/m3	1		TO 15 LL	Total/NA
Ethanol	100		3.8		ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	1.0		0.69		ug/m3	1		TO 15 LL	Total/NA
m-Xylene & p-Xylene	0.68		0.35		ug/m3	1		TO 15 LL	Total/NA
Toluene	1.5		0.45		ug/m3	1		TO 15 LL	Total/NA
Trichlorofluoromethane	1.8		0.45		ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: H41B-BA-2018

Lab Sample ID: 140-11145-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.20		0.080		ppb v/v	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.070		0.032		ppb v/v	1		TO 15 LL	Total/NA
Chloromethane	0.85		0.20		ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.17		0.080		ppb v/v	1		TO 15 LL	Total/NA
Ethanol	50		2.0		ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.31		0.20		ppb v/v	1		TO 15 LL	Total/NA
m-Xylene & p-Xylene	0.13		0.080		ppb v/v	1		TO 15 LL	Total/NA
Toluene	0.26		0.12		ppb v/v	1		TO 15 LL	Total/NA
Trichlorofluoromethane	0.29		0.080		ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.65		0.26		ug/m3	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.44		0.20		ug/m3	1		TO 15 LL	Total/NA
Chloromethane	1.7		0.41		ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.86		0.40		ug/m3	1		TO 15 LL	Total/NA
Ethanol	94		3.8		ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	1.1		0.69		ug/m3	1		TO 15 LL	Total/NA
m-Xylene & p-Xylene	0.55		0.35		ug/m3	1		TO 15 LL	Total/NA
Toluene	0.98		0.45		ug/m3	1		TO 15 LL	Total/NA
Trichlorofluoromethane	1.6		0.45		ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: H41-OA-2018

Lab Sample ID: 140-11145-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.21		0.080		ppb v/v	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.067		0.032		ppb v/v	1		TO 15 LL	Total/NA
Chloromethane	0.73		0.20		ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.18		0.080		ppb v/v	1		TO 15 LL	Total/NA
Ethanol	8.0		2.0		ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.3		0.20		ppb v/v	1		TO 15 LL	Total/NA
m-Xylene & p-Xylene	0.25		0.080		ppb v/v	1		TO 15 LL	Total/NA
o-Xylene	0.085		0.080		ppb v/v	1		TO 15 LL	Total/NA
Toluene	0.54		0.12		ppb v/v	1		TO 15 LL	Total/NA
Trichlorofluoromethane	0.29		0.080		ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Knoxville

Detection Summary

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory # C755019A

TestAmerica Job ID: 140-11145-1

Client Sample ID: H41-OA-2018 (Continued)

Lab Sample ID: 140-11145-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.68		0.26		ug/m3	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.42		0.20		ug/m3	1		TO 15 LL	Total/NA
Chloromethane	1.5		0.41		ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.88		0.40		ug/m3	1		TO 15 LL	Total/NA
Ethanol	15		3.8		ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	4.7		0.69		ug/m3	1		TO 15 LL	Total/NA
m-Xylene & p-Xylene	1.1		0.35		ug/m3	1		TO 15 LL	Total/NA
o-Xylene	0.37		0.35		ug/m3	1		TO 15 LL	Total/NA
Toluene	2.0		0.45		ug/m3	1		TO 15 LL	Total/NA
Trichlorofluoromethane	1.6		0.45		ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: H41A-BA-2018

Lab Sample ID: 140-11145-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone	0.32		0.32		ppb v/v	1		TO 15 LL	Total/NA
Benzene	0.21		0.080		ppb v/v	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.071		0.032		ppb v/v	1		TO 15 LL	Total/NA
Chloromethane	0.88		0.20		ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.18		0.080		ppb v/v	1		TO 15 LL	Total/NA
Ethanol	150	E	2.0		ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.50		0.20		ppb v/v	1		TO 15 LL	Total/NA
m-Xylene & p-Xylene	0.22		0.080		ppb v/v	1		TO 15 LL	Total/NA
Toluene	0.31		0.12		ppb v/v	1		TO 15 LL	Total/NA
Trichlorofluoromethane	0.29		0.080		ppb v/v	1		TO 15 LL	Total/NA
Ethanol - DL	86	D	10		ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone	0.93		0.94		ug/m3	1		TO 15 LL	Total/NA
Benzene	0.68		0.26		ug/m3	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.45		0.20		ug/m3	1		TO 15 LL	Total/NA
Chloromethane	1.8		0.41		ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.90		0.40		ug/m3	1		TO 15 LL	Total/NA
Ethanol	280	E	3.8		ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	1.7		0.69		ug/m3	1		TO 15 LL	Total/NA
m-Xylene & p-Xylene	0.98		0.35		ug/m3	1		TO 15 LL	Total/NA
Toluene	1.2		0.45		ug/m3	1		TO 15 LL	Total/NA
Trichlorofluoromethane	1.7		0.45		ug/m3	1		TO 15 LL	Total/NA
Ethanol - DL	160	D	19		ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: FD-2018

Lab Sample ID: 140-11145-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichlorotrifluoroethane	0.080		0.080		ppb v/v	1		TO 15 LL	Total/NA
2-Butanone	0.69		0.32		ppb v/v	1		TO 15 LL	Total/NA
Benzene	0.21		0.080		ppb v/v	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.069		0.032		ppb v/v	1		TO 15 LL	Total/NA
Chloromethane	0.75		0.20		ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.18		0.080		ppb v/v	1		TO 15 LL	Total/NA
Ethanol	56		2.0		ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.31		0.20		ppb v/v	1		TO 15 LL	Total/NA
m-Xylene & p-Xylene	0.14		0.080		ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Knoxville

Detection Summary

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory # C755019A

TestAmerica Job ID: 140-11145-1

Client Sample ID: FD-2018 (Continued)

Lab Sample ID: 140-11145-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toluene	0.28		0.12		ppb v/v	1		TO 15 LL	Total/NA
Trichlorofluoromethane	0.28		0.080		ppb v/v	1		TO 15 LL	Total/NA
Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichlorotrifluoroethane	0.61		0.61		ug/m3	1		TO 15 LL	Total/NA
2-Butanone	2.0		0.94		ug/m3	1		TO 15 LL	Total/NA
Benzene	0.68		0.26		ug/m3	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.43		0.20		ug/m3	1		TO 15 LL	Total/NA
Chloromethane	1.5		0.41		ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.90		0.40		ug/m3	1		TO 15 LL	Total/NA
Ethanol	110		3.8		ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	1.1		0.69		ug/m3	1		TO 15 LL	Total/NA
m-Xylene & p-Xylene	0.59		0.35		ug/m3	1		TO 15 LL	Total/NA
Toluene	1.1		0.45		ug/m3	1		TO 15 LL	Total/NA
Trichlorofluoromethane	1.5		0.45		ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Knoxville

Client Sample Results

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory # C755019A

TestAmerica Job ID: 140-11145-1

Client Sample ID: H45-BA-2018

Lab Sample ID: 140-11145-1

Date Collected: 03/28/18 07:51

Matrix: Air

Date Received: 04/02/18 09:15

Sample Container: Summa Canister 6L

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.080		ppb v/v			04/03/18 19:02	1
1,1,2,2-Tetrachloroethane	ND		0.080		ppb v/v			04/03/18 19:02	1
1,1,2-Trichloroethane	ND		0.080		ppb v/v			04/03/18 19:02	1
1,1,2-Trichlorotrifluoroethane	ND		0.080		ppb v/v			04/03/18 19:02	1
1,1-Dichloroethane	ND		0.080		ppb v/v			04/03/18 19:02	1
1,1-Dichloroethene	ND		0.040		ppb v/v			04/03/18 19:02	1
1,2,4-Trichlorobenzene	ND		0.080		ppb v/v			04/03/18 19:02	1
1,2,4-Trimethylbenzene	ND		0.080		ppb v/v			04/03/18 19:02	1
1,2-Dibromoethane	ND		0.080		ppb v/v			04/03/18 19:02	1
1,2-Dichlorobenzene	ND		0.080		ppb v/v			04/03/18 19:02	1
1,2-Dichloroethane	ND	*	0.080		ppb v/v			04/03/18 19:02	1
1,2-Dichloropropane	ND		0.080		ppb v/v			04/03/18 19:02	1
1,2-Dichlorotetrafluoroethane	ND		0.080		ppb v/v			04/03/18 19:02	1
1,3,5-Trimethylbenzene	ND		0.080		ppb v/v			04/03/18 19:02	1
1,3-Dichlorobenzene	ND		0.080		ppb v/v			04/03/18 19:02	1
1,4-Dichlorobenzene	ND		0.080		ppb v/v			04/03/18 19:02	1
1,4-Dioxane	ND		0.20		ppb v/v			04/03/18 19:02	1
2,2,4-Trimethylpentane	ND		0.20		ppb v/v			04/03/18 19:02	1
2-Butanone	ND		0.32		ppb v/v			04/03/18 19:02	1
4-Methyl-2-pentanone (MIBK)	ND		0.20		ppb v/v			04/03/18 19:02	1
Benzene	0.16		0.080		ppb v/v			04/03/18 19:02	1
Benzyl chloride	ND		0.16		ppb v/v			04/03/18 19:02	1
Bromodichloromethane	ND		0.080		ppb v/v			04/03/18 19:02	1
Bromoform	ND		0.080		ppb v/v			04/03/18 19:02	1
Bromomethane	ND		0.080		ppb v/v			04/03/18 19:02	1
Carbon tetrachloride	0.067		0.032		ppb v/v			04/03/18 19:02	1
Chlorobenzene	ND		0.080		ppb v/v			04/03/18 19:02	1
Chloroethane	ND		0.080		ppb v/v			04/03/18 19:02	1
Chloroform	ND		0.080		ppb v/v			04/03/18 19:02	1
Chloromethane	0.42		0.20		ppb v/v			04/03/18 19:02	1
cis-1,2-Dichloroethene	ND		0.040		ppb v/v			04/03/18 19:02	1
cis-1,3-Dichloropropene	ND		0.080		ppb v/v			04/03/18 19:02	1
Cyclohexane	ND		0.20		ppb v/v			04/03/18 19:02	1
Dibromochloromethane	ND		0.080		ppb v/v			04/03/18 19:02	1
Dichlorodifluoromethane	0.18		0.080		ppb v/v			04/03/18 19:02	1
Ethanol	26		2.0		ppb v/v			04/03/18 19:02	1
Ethylbenzene	ND		0.080		ppb v/v			04/03/18 19:02	1
Hexachlorobutadiene	ND		0.080		ppb v/v			04/03/18 19:02	1
Hexane	ND		0.20		ppb v/v			04/03/18 19:02	1
Methyl tert-butyl ether	ND		0.16		ppb v/v			04/03/18 19:02	1
Methylene Chloride	0.31		0.20		ppb v/v			04/03/18 19:02	1
m-Xylene & p-Xylene	0.11		0.080		ppb v/v			04/03/18 19:02	1
o-Xylene	ND		0.080		ppb v/v			04/03/18 19:02	1
Styrene	ND		0.080		ppb v/v			04/03/18 19:02	1
t-Butyl alcohol	ND		0.32		ppb v/v			04/03/18 19:02	1
Tetrachloroethene	ND		0.080		ppb v/v			04/03/18 19:02	1
Toluene	0.43		0.12		ppb v/v			04/03/18 19:02	1
trans-1,2-Dichloroethene	3.6		0.080		ppb v/v			04/03/18 19:02	1

TestAmerica Knoxville

Client Sample Results

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory # C755019A

TestAmerica Job ID: 140-11145-1

Client Sample ID: H45-BA-2018

Lab Sample ID: 140-11145-1

Date Collected: 03/28/18 07:51

Matrix: Air

Date Received: 04/02/18 09:15

Sample Container: Summa Canister 6L

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		0.080		ppb v/v			04/03/18 19:02	1
Trichloroethene	ND		0.036		ppb v/v			04/03/18 19:02	1
Trichlorofluoromethane	0.31		0.080		ppb v/v			04/03/18 19:02	1
Vinyl chloride	ND		0.040		ppb v/v			04/03/18 19:02	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.44		ug/m3			04/03/18 19:02	1
1,1,2,2-Tetrachloroethane	ND		0.55		ug/m3			04/03/18 19:02	1
1,1,2-Trichloroethane	ND		0.44		ug/m3			04/03/18 19:02	1
1,1,2-Trichlorotrifluoroethane	ND		0.61		ug/m3			04/03/18 19:02	1
1,1-Dichloroethane	ND		0.32		ug/m3			04/03/18 19:02	1
1,1-Dichloroethene	ND		0.16		ug/m3			04/03/18 19:02	1
1,2,4-Trichlorobenzene	ND		0.59		ug/m3			04/03/18 19:02	1
1,2,4-Trimethylbenzene	ND		0.39		ug/m3			04/03/18 19:02	1
1,2-Dibromoethane	ND		0.61		ug/m3			04/03/18 19:02	1
1,2-Dichlorobenzene	ND		0.48		ug/m3			04/03/18 19:02	1
1,2-Dichloroethane	ND	*	0.32		ug/m3			04/03/18 19:02	1
1,2-Dichloropropane	ND		0.37		ug/m3			04/03/18 19:02	1
1,2-Dichlorotetrafluoroethane	ND		0.56		ug/m3			04/03/18 19:02	1
1,3,5-Trimethylbenzene	ND		0.39		ug/m3			04/03/18 19:02	1
1,3-Dichlorobenzene	ND		0.48		ug/m3			04/03/18 19:02	1
1,4-Dichlorobenzene	ND		0.48		ug/m3			04/03/18 19:02	1
1,4-Dioxane	ND		0.72		ug/m3			04/03/18 19:02	1
2,2,4-Trimethylpentane	ND		0.93		ug/m3			04/03/18 19:02	1
2-Butanone	ND		0.94		ug/m3			04/03/18 19:02	1
4-Methyl-2-pentanone (MIBK)	ND		0.82		ug/m3			04/03/18 19:02	1
Benzene	0.50		0.26		ug/m3			04/03/18 19:02	1
Benzyl chloride	ND		0.83		ug/m3			04/03/18 19:02	1
Bromodichloromethane	ND		0.54		ug/m3			04/03/18 19:02	1
Bromoform	ND		0.83		ug/m3			04/03/18 19:02	1
Bromomethane	ND		0.31		ug/m3			04/03/18 19:02	1
Carbon tetrachloride	0.42		0.20		ug/m3			04/03/18 19:02	1
Chlorobenzene	ND		0.37		ug/m3			04/03/18 19:02	1
Chloroethane	ND		0.21		ug/m3			04/03/18 19:02	1
Chloroform	ND		0.39		ug/m3			04/03/18 19:02	1
Chloromethane	0.87		0.41		ug/m3			04/03/18 19:02	1
cis-1,2-Dichloroethene	ND		0.16		ug/m3			04/03/18 19:02	1
cis-1,3-Dichloropropene	ND		0.36		ug/m3			04/03/18 19:02	1
Cyclohexane	ND		0.69		ug/m3			04/03/18 19:02	1
Dibromochloromethane	ND		0.68		ug/m3			04/03/18 19:02	1
Dichlorodifluoromethane	0.91		0.40		ug/m3			04/03/18 19:02	1
Ethanol	49		3.8		ug/m3			04/03/18 19:02	1
Ethylbenzene	ND		0.35		ug/m3			04/03/18 19:02	1
Hexachlorobutadiene	ND		0.85		ug/m3			04/03/18 19:02	1
Hexane	ND		0.70		ug/m3			04/03/18 19:02	1
Methyl tert-butyl ether	ND		0.58		ug/m3			04/03/18 19:02	1
Methylene Chloride	1.1		0.69		ug/m3			04/03/18 19:02	1
m-Xylene & p-Xylene	0.46		0.35		ug/m3			04/03/18 19:02	1
o-Xylene	ND		0.35		ug/m3			04/03/18 19:02	1

TestAmerica Knoxville

Client Sample Results

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory # C755019A

TestAmerica Job ID: 140-11145-1

Client Sample ID: H45-BA-2018

Lab Sample ID: 140-11145-1

Date Collected: 03/28/18 07:51

Matrix: Air

Date Received: 04/02/18 09:15

Sample Container: Summa Canister 6L

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		0.34		ug/m3			04/03/18 19:02	1
t-Butyl alcohol	ND		0.97		ug/m3			04/03/18 19:02	1
Tetrachloroethene	ND		0.54		ug/m3			04/03/18 19:02	1
Toluene	1.6		0.45		ug/m3			04/03/18 19:02	1
trans-1,2-Dichloroethene	14		0.32		ug/m3			04/03/18 19:02	1
trans-1,3-Dichloropropene	ND		0.36		ug/m3			04/03/18 19:02	1
Trichloroethene	ND		0.19		ug/m3			04/03/18 19:02	1
Trichlorofluoromethane	1.8		0.45		ug/m3			04/03/18 19:02	1
Vinyl chloride	ND		0.10		ug/m3			04/03/18 19:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		60 - 140					04/03/18 19:02	1

Client Sample ID: H45-CS-2018

Lab Sample ID: 140-11145-2

Date Collected: 03/28/18 07:52

Matrix: Air

Date Received: 04/02/18 09:15

Sample Container: Summa Canister 6L

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.080		ppb v/v			04/03/18 19:55	1
1,1,2,2-Tetrachloroethane	ND		0.080		ppb v/v			04/03/18 19:55	1
1,1,2-Trichloroethane	ND		0.080		ppb v/v			04/03/18 19:55	1
1,1,2-Trichlorotrifluoroethane	ND		0.080		ppb v/v			04/03/18 19:55	1
1,1-Dichloroethane	ND		0.080		ppb v/v			04/03/18 19:55	1
1,1-Dichloroethene	ND		0.040		ppb v/v			04/03/18 19:55	1
1,2,4-Trichlorobenzene	ND		0.080		ppb v/v			04/03/18 19:55	1
1,2,4-Trimethylbenzene	ND		0.080		ppb v/v			04/03/18 19:55	1
1,2-Dibromoethane	ND		0.080		ppb v/v			04/03/18 19:55	1
1,2-Dichlorobenzene	ND		0.080		ppb v/v			04/03/18 19:55	1
1,2-Dichloroethane	ND	*	0.080		ppb v/v			04/03/18 19:55	1
1,2-Dichloropropane	ND		0.080		ppb v/v			04/03/18 19:55	1
1,2-Dichlorotetrafluoroethane	ND		0.080		ppb v/v			04/03/18 19:55	1
1,3,5-Trimethylbenzene	ND		0.080		ppb v/v			04/03/18 19:55	1
1,3-Dichlorobenzene	ND		0.080		ppb v/v			04/03/18 19:55	1
1,4-Dichlorobenzene	ND		0.080		ppb v/v			04/03/18 19:55	1
1,4-Dioxane	ND		0.20		ppb v/v			04/03/18 19:55	1
2,2,4-Trimethylpentane	ND		0.20		ppb v/v			04/03/18 19:55	1
2-Butanone	0.35		0.32		ppb v/v			04/03/18 19:55	1
4-Methyl-2-pentanone (MIBK)	ND		0.20		ppb v/v			04/03/18 19:55	1
Benzene	0.17		0.080		ppb v/v			04/03/18 19:55	1
Benzyl chloride	ND		0.16		ppb v/v			04/03/18 19:55	1
Bromodichloromethane	ND		0.080		ppb v/v			04/03/18 19:55	1
Bromoform	ND		0.080		ppb v/v			04/03/18 19:55	1
Bromomethane	ND		0.080		ppb v/v			04/03/18 19:55	1
Carbon tetrachloride	0.073		0.032		ppb v/v			04/03/18 19:55	1
Chlorobenzene	ND		0.080		ppb v/v			04/03/18 19:55	1
Chloroethane	ND		0.080		ppb v/v			04/03/18 19:55	1
Chloroform	ND		0.080		ppb v/v			04/03/18 19:55	1

TestAmerica Knoxville

Client Sample Results

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory # C755019A

TestAmerica Job ID: 140-11145-1

Client Sample ID: H45-CS-2018

Lab Sample ID: 140-11145-2

Date Collected: 03/28/18 07:52

Matrix: Air

Date Received: 04/02/18 09:15

Sample Container: Summa Canister 6L

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	0.50		0.20		ppb v/v			04/03/18 19:55	1
cis-1,2-Dichloroethene	ND		0.040		ppb v/v			04/03/18 19:55	1
cis-1,3-Dichloropropene	ND		0.080		ppb v/v			04/03/18 19:55	1
Cyclohexane	ND		0.20		ppb v/v			04/03/18 19:55	1
Dibromochloromethane	ND		0.080		ppb v/v			04/03/18 19:55	1
Dichlorodifluoromethane	0.18		0.080		ppb v/v			04/03/18 19:55	1
Ethanol	27		2.0		ppb v/v			04/03/18 19:55	1
Ethylbenzene	ND		0.080		ppb v/v			04/03/18 19:55	1
Hexachlorobutadiene	ND		0.080		ppb v/v			04/03/18 19:55	1
Hexane	ND		0.20		ppb v/v			04/03/18 19:55	1
Methyl tert-butyl ether	ND		0.16		ppb v/v			04/03/18 19:55	1
Methylene Chloride	0.33		0.20		ppb v/v			04/03/18 19:55	1
m-Xylene & p-Xylene	0.13		0.080		ppb v/v			04/03/18 19:55	1
o-Xylene	ND		0.080		ppb v/v			04/03/18 19:55	1
Styrene	ND		0.080		ppb v/v			04/03/18 19:55	1
t-Butyl alcohol	ND		0.32		ppb v/v			04/03/18 19:55	1
Tetrachloroethene	ND		0.080		ppb v/v			04/03/18 19:55	1
Toluene	0.47		0.12		ppb v/v			04/03/18 19:55	1
trans-1,2-Dichloroethene	3.7		0.080		ppb v/v			04/03/18 19:55	1
trans-1,3-Dichloropropene	ND		0.080		ppb v/v			04/03/18 19:55	1
Trichloroethene	ND		0.036		ppb v/v			04/03/18 19:55	1
Trichlorofluoromethane	0.30		0.080		ppb v/v			04/03/18 19:55	1
Vinyl chloride	ND		0.040		ppb v/v			04/03/18 19:55	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.44		ug/m3			04/03/18 19:55	1
1,1,2,2-Tetrachloroethane	ND		0.55		ug/m3			04/03/18 19:55	1
1,1,2-Trichloroethane	ND		0.44		ug/m3			04/03/18 19:55	1
1,1,2-Trichlorotrifluoroethane	ND		0.61		ug/m3			04/03/18 19:55	1
1,1-Dichloroethane	ND		0.32		ug/m3			04/03/18 19:55	1
1,1-Dichloroethene	ND		0.16		ug/m3			04/03/18 19:55	1
1,2,4-Trichlorobenzene	ND		0.59		ug/m3			04/03/18 19:55	1
1,2,4-Trimethylbenzene	ND		0.39		ug/m3			04/03/18 19:55	1
1,2-Dibromoethane	ND		0.61		ug/m3			04/03/18 19:55	1
1,2-Dichlorobenzene	ND		0.48		ug/m3			04/03/18 19:55	1
1,2-Dichloroethane	ND	*	0.32		ug/m3			04/03/18 19:55	1
1,2-Dichloropropane	ND		0.37		ug/m3			04/03/18 19:55	1
1,2-Dichlorotetrafluoroethane	ND		0.56		ug/m3			04/03/18 19:55	1
1,3,5-Trimethylbenzene	ND		0.39		ug/m3			04/03/18 19:55	1
1,3-Dichlorobenzene	ND		0.48		ug/m3			04/03/18 19:55	1
1,4-Dichlorobenzene	ND		0.48		ug/m3			04/03/18 19:55	1
1,4-Dioxane	ND		0.72		ug/m3			04/03/18 19:55	1
2,2,4-Trimethylpentane	ND		0.93		ug/m3			04/03/18 19:55	1
2-Butanone	1.0		0.94		ug/m3			04/03/18 19:55	1
4-Methyl-2-pentanone (MIBK)	ND		0.82		ug/m3			04/03/18 19:55	1
Benzene	0.54		0.26		ug/m3			04/03/18 19:55	1
Benzyl chloride	ND		0.83		ug/m3			04/03/18 19:55	1
Bromodichloromethane	ND		0.54		ug/m3			04/03/18 19:55	1
Bromoform	ND		0.83		ug/m3			04/03/18 19:55	1

TestAmerica Knoxville

Client Sample Results

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory # C755019A

TestAmerica Job ID: 140-11145-1

Client Sample ID: H45-CS-2018

Lab Sample ID: 140-11145-2

Date Collected: 03/28/18 07:52

Matrix: Air

Date Received: 04/02/18 09:15

Sample Container: Summa Canister 6L

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromomethane	ND		0.31		ug/m3			04/03/18 19:55	1
Carbon tetrachloride	0.46		0.20		ug/m3			04/03/18 19:55	1
Chlorobenzene	ND		0.37		ug/m3			04/03/18 19:55	1
Chloroethane	ND		0.21		ug/m3			04/03/18 19:55	1
Chloroform	ND		0.39		ug/m3			04/03/18 19:55	1
Chloromethane	1.0		0.41		ug/m3			04/03/18 19:55	1
cis-1,2-Dichloroethene	ND		0.16		ug/m3			04/03/18 19:55	1
cis-1,3-Dichloropropene	ND		0.36		ug/m3			04/03/18 19:55	1
Cyclohexane	ND		0.69		ug/m3			04/03/18 19:55	1
Dibromochloromethane	ND		0.68		ug/m3			04/03/18 19:55	1
Dichlorodifluoromethane	0.90		0.40		ug/m3			04/03/18 19:55	1
Ethanol	51		3.8		ug/m3			04/03/18 19:55	1
Ethylbenzene	ND		0.35		ug/m3			04/03/18 19:55	1
Hexachlorobutadiene	ND		0.85		ug/m3			04/03/18 19:55	1
Hexane	ND		0.70		ug/m3			04/03/18 19:55	1
Methyl tert-butyl ether	ND		0.58		ug/m3			04/03/18 19:55	1
Methylene Chloride	1.2		0.69		ug/m3			04/03/18 19:55	1
m-Xylene & p-Xylene	0.57		0.35		ug/m3			04/03/18 19:55	1
o-Xylene	ND		0.35		ug/m3			04/03/18 19:55	1
Styrene	ND		0.34		ug/m3			04/03/18 19:55	1
t-Butyl alcohol	ND		0.97		ug/m3			04/03/18 19:55	1
Tetrachloroethene	ND		0.54		ug/m3			04/03/18 19:55	1
Toluene	1.8		0.45		ug/m3			04/03/18 19:55	1
trans-1,2-Dichloroethene	15		0.32		ug/m3			04/03/18 19:55	1
trans-1,3-Dichloropropene	ND		0.36		ug/m3			04/03/18 19:55	1
Trichloroethene	ND		0.19		ug/m3			04/03/18 19:55	1
Trichlorofluoromethane	1.7		0.45		ug/m3			04/03/18 19:55	1
Vinyl chloride	ND		0.10		ug/m3			04/03/18 19:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		60 - 140		04/03/18 19:55	1

Client Sample ID: H46-SS-2018

Lab Sample ID: 140-11145-3

Date Collected: 03/28/18 09:57

Matrix: Air

Date Received: 04/02/18 09:15

Sample Container: Summa Canister 6L

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.90		0.080		ppb v/v			04/03/18 20:48	1
1,1,2,2-Tetrachloroethane	ND		0.080		ppb v/v			04/03/18 20:48	1
1,1,2-Trichloroethane	ND		0.080		ppb v/v			04/03/18 20:48	1
1,1,2-Trichlorotrifluoroethane	ND		0.080		ppb v/v			04/03/18 20:48	1
1,1-Dichloroethane	ND		0.080		ppb v/v			04/03/18 20:48	1
1,1-Dichloroethene	ND		0.040		ppb v/v			04/03/18 20:48	1
1,2,4-Trichlorobenzene	ND		0.080		ppb v/v			04/03/18 20:48	1
1,2,4-Trimethylbenzene	0.094		0.080		ppb v/v			04/03/18 20:48	1
1,2-Dibromoethane	ND		0.080		ppb v/v			04/03/18 20:48	1
1,2-Dichlorobenzene	ND		0.080		ppb v/v			04/03/18 20:48	1

TestAmerica Knoxville

Client Sample Results

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory # C755019A

TestAmerica Job ID: 140-11145-1

Client Sample ID: H46-SS-2018

Lab Sample ID: 140-11145-3

Date Collected: 03/28/18 09:57

Matrix: Air

Date Received: 04/02/18 09:15

Sample Container: Summa Canister 6L

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	ND	*	0.080		ppb v/v			04/03/18 20:48	1
1,2-Dichloropropane	ND		0.080		ppb v/v			04/03/18 20:48	1
1,2-Dichlorotetrafluoroethane	ND		0.080		ppb v/v			04/03/18 20:48	1
1,3,5-Trimethylbenzene	ND		0.080		ppb v/v			04/03/18 20:48	1
1,3-Dichlorobenzene	ND		0.080		ppb v/v			04/03/18 20:48	1
1,4-Dichlorobenzene	ND		0.080		ppb v/v			04/03/18 20:48	1
1,4-Dioxane	ND		0.20		ppb v/v			04/03/18 20:48	1
2,2,4-Trimethylpentane	ND		0.20		ppb v/v			04/03/18 20:48	1
2-Butanone	0.39		0.32		ppb v/v			04/03/18 20:48	1
4-Methyl-2-pentanone (MIBK)	ND		0.20		ppb v/v			04/03/18 20:48	1
Benzene	0.097		0.080		ppb v/v			04/03/18 20:48	1
Benzyl chloride	ND		0.16		ppb v/v			04/03/18 20:48	1
Bromodichloromethane	ND		0.080		ppb v/v			04/03/18 20:48	1
Bromoform	ND		0.080		ppb v/v			04/03/18 20:48	1
Bromomethane	ND		0.080		ppb v/v			04/03/18 20:48	1
Carbon tetrachloride	0.12		0.032		ppb v/v			04/03/18 20:48	1
Chlorobenzene	ND		0.080		ppb v/v			04/03/18 20:48	1
Chloroethane	ND		0.080		ppb v/v			04/03/18 20:48	1
Chloroform	1.8		0.080		ppb v/v			04/03/18 20:48	1
Chloromethane	0.46		0.20		ppb v/v			04/03/18 20:48	1
cis-1,2-Dichloroethene	ND		0.040		ppb v/v			04/03/18 20:48	1
cis-1,3-Dichloropropene	ND		0.080		ppb v/v			04/03/18 20:48	1
Cyclohexane	ND		0.20		ppb v/v			04/03/18 20:48	1
Dibromochloromethane	ND		0.080		ppb v/v			04/03/18 20:48	1
Dichlorodifluoromethane	0.19		0.080		ppb v/v			04/03/18 20:48	1
Ethanol	13		2.0		ppb v/v			04/03/18 20:48	1
Ethylbenzene	0.10		0.080		ppb v/v			04/03/18 20:48	1
Hexachlorobutadiene	ND		0.080		ppb v/v			04/03/18 20:48	1
Hexane	0.54		0.20		ppb v/v			04/03/18 20:48	1
Methyl tert-butyl ether	ND		0.16		ppb v/v			04/03/18 20:48	1
Methylene Chloride	5.3		0.20		ppb v/v			04/03/18 20:48	1
m-Xylene & p-Xylene	0.39		0.080		ppb v/v			04/03/18 20:48	1
o-Xylene	0.12		0.080		ppb v/v			04/03/18 20:48	1
Styrene	ND		0.080		ppb v/v			04/03/18 20:48	1
t-Butyl alcohol	ND		0.32		ppb v/v			04/03/18 20:48	1
Tetrachloroethene	0.41		0.080		ppb v/v			04/03/18 20:48	1
Toluene	1.1		0.12		ppb v/v			04/03/18 20:48	1
trans-1,2-Dichloroethene	ND		0.080		ppb v/v			04/03/18 20:48	1
trans-1,3-Dichloropropene	ND		0.080		ppb v/v			04/03/18 20:48	1
Trichloroethene	1.1		0.036		ppb v/v			04/03/18 20:48	1
Trichlorofluoromethane	0.40		0.080		ppb v/v			04/03/18 20:48	1
Vinyl chloride	ND		0.040		ppb v/v			04/03/18 20:48	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	4.9		0.44		ug/m3			04/03/18 20:48	1
1,1,2,2-Tetrachloroethane	ND		0.55		ug/m3			04/03/18 20:48	1
1,1,2-Trichloroethane	ND		0.44		ug/m3			04/03/18 20:48	1
1,1,2-Trichlorotrifluoroethane	ND		0.61		ug/m3			04/03/18 20:48	1
1,1-Dichloroethane	ND		0.32		ug/m3			04/03/18 20:48	1

TestAmerica Knoxville

Client Sample Results

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory # C755019A

TestAmerica Job ID: 140-11145-1

Client Sample ID: H46-SS-2018

Lab Sample ID: 140-11145-3

Date Collected: 03/28/18 09:57

Matrix: Air

Date Received: 04/02/18 09:15

Sample Container: Summa Canister 6L

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		0.16		ug/m3			04/03/18 20:48	1
1,2,4-Trichlorobenzene	ND		0.59		ug/m3			04/03/18 20:48	1
1,2,4-Trimethylbenzene	0.46		0.39		ug/m3			04/03/18 20:48	1
1,2-Dibromoethane	ND		0.61		ug/m3			04/03/18 20:48	1
1,2-Dichlorobenzene	ND		0.48		ug/m3			04/03/18 20:48	1
1,2-Dichloroethane	ND	*	0.32		ug/m3			04/03/18 20:48	1
1,2-Dichloropropane	ND		0.37		ug/m3			04/03/18 20:48	1
1,2-Dichlorotetrafluoroethane	ND		0.56		ug/m3			04/03/18 20:48	1
1,3,5-Trimethylbenzene	ND		0.39		ug/m3			04/03/18 20:48	1
1,3-Dichlorobenzene	ND		0.48		ug/m3			04/03/18 20:48	1
1,4-Dichlorobenzene	ND		0.48		ug/m3			04/03/18 20:48	1
1,4-Dioxane	ND		0.72		ug/m3			04/03/18 20:48	1
2,2,4-Trimethylpentane	ND		0.93		ug/m3			04/03/18 20:48	1
2-Butanone	1.2		0.94		ug/m3			04/03/18 20:48	1
4-Methyl-2-pentanone (MIBK)	ND		0.82		ug/m3			04/03/18 20:48	1
Benzene	0.31		0.26		ug/m3			04/03/18 20:48	1
Benzyl chloride	ND		0.83		ug/m3			04/03/18 20:48	1
Bromodichloromethane	ND		0.54		ug/m3			04/03/18 20:48	1
Bromoform	ND		0.83		ug/m3			04/03/18 20:48	1
Bromomethane	ND		0.31		ug/m3			04/03/18 20:48	1
Carbon tetrachloride	0.78		0.20		ug/m3			04/03/18 20:48	1
Chlorobenzene	ND		0.37		ug/m3			04/03/18 20:48	1
Chloroethane	ND		0.21		ug/m3			04/03/18 20:48	1
Chloroform	8.9		0.39		ug/m3			04/03/18 20:48	1
Chloromethane	0.94		0.41		ug/m3			04/03/18 20:48	1
cis-1,2-Dichloroethene	ND		0.16		ug/m3			04/03/18 20:48	1
cis-1,3-Dichloropropene	ND		0.36		ug/m3			04/03/18 20:48	1
Cyclohexane	ND		0.69		ug/m3			04/03/18 20:48	1
Dibromochloromethane	ND		0.68		ug/m3			04/03/18 20:48	1
Dichlorodifluoromethane	0.92		0.40		ug/m3			04/03/18 20:48	1
Ethanol	25		3.8		ug/m3			04/03/18 20:48	1
Ethylbenzene	0.44		0.35		ug/m3			04/03/18 20:48	1
Hexachlorobutadiene	ND		0.85		ug/m3			04/03/18 20:48	1
Hexane	1.9		0.70		ug/m3			04/03/18 20:48	1
Methyl tert-butyl ether	ND		0.58		ug/m3			04/03/18 20:48	1
Methylene Chloride	19		0.69		ug/m3			04/03/18 20:48	1
m-Xylene & p-Xylene	1.7		0.35		ug/m3			04/03/18 20:48	1
o-Xylene	0.53		0.35		ug/m3			04/03/18 20:48	1
Styrene	ND		0.34		ug/m3			04/03/18 20:48	1
t-Butyl alcohol	ND		0.97		ug/m3			04/03/18 20:48	1
Tetrachloroethene	2.8		0.54		ug/m3			04/03/18 20:48	1
Toluene	4.2		0.45		ug/m3			04/03/18 20:48	1
trans-1,2-Dichloroethene	ND		0.32		ug/m3			04/03/18 20:48	1
trans-1,3-Dichloropropene	ND		0.36		ug/m3			04/03/18 20:48	1
Trichloroethene	5.8		0.19		ug/m3			04/03/18 20:48	1
Trichlorofluoromethane	2.3		0.45		ug/m3			04/03/18 20:48	1
Vinyl chloride	ND		0.10		ug/m3			04/03/18 20:48	1

TestAmerica Knoxville

Client Sample Results

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory # C755019A

TestAmerica Job ID: 140-11145-1

Client Sample ID: H46-SS-2018

Date Collected: 03/28/18 09:57

Date Received: 04/02/18 09:15

Sample Container: Summa Canister 6L

Lab Sample ID: 140-11145-3

Matrix: Air

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		60 - 140		04/03/18 20:48	1

Client Sample ID: H46-BA-2018

Date Collected: 03/28/18 09:58

Date Received: 04/02/18 09:15

Sample Container: Summa Canister 6L

Lab Sample ID: 140-11145-4

Matrix: Air

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.080		ppb v/v			04/03/18 21:40	1
1,1,2,2-Tetrachloroethane	ND		0.080		ppb v/v			04/03/18 21:40	1
1,1,2-Trichloroethane	ND		0.080		ppb v/v			04/03/18 21:40	1
1,1,2-Trichlorotrifluoroethane	ND		0.080		ppb v/v			04/03/18 21:40	1
1,1-Dichloroethane	ND		0.080		ppb v/v			04/03/18 21:40	1
1,1-Dichloroethene	ND		0.040		ppb v/v			04/03/18 21:40	1
1,2,4-Trichlorobenzene	ND		0.080		ppb v/v			04/03/18 21:40	1
1,2,4-Trimethylbenzene	0.20		0.080		ppb v/v			04/03/18 21:40	1
1,2-Dibromoethane	ND		0.080		ppb v/v			04/03/18 21:40	1
1,2-Dichlorobenzene	ND		0.080		ppb v/v			04/03/18 21:40	1
1,2-Dichloroethane	ND	*	0.080		ppb v/v			04/03/18 21:40	1
1,2-Dichloropropane	ND		0.080		ppb v/v			04/03/18 21:40	1
1,2-Dichlorotetrafluoroethane	ND		0.080		ppb v/v			04/03/18 21:40	1
1,3,5-Trimethylbenzene	ND		0.080		ppb v/v			04/03/18 21:40	1
1,3-Dichlorobenzene	ND		0.080		ppb v/v			04/03/18 21:40	1
1,4-Dichlorobenzene	ND		0.080		ppb v/v			04/03/18 21:40	1
1,4-Dioxane	ND		0.20		ppb v/v			04/03/18 21:40	1
2,2,4-Trimethylpentane	ND		0.20		ppb v/v			04/03/18 21:40	1
2-Butanone	ND		0.32		ppb v/v			04/03/18 21:40	1
4-Methyl-2-pentanone (MIBK)	ND		0.20		ppb v/v			04/03/18 21:40	1
Benzene	0.28		0.080		ppb v/v			04/03/18 21:40	1
Benzyl chloride	ND		0.16		ppb v/v			04/03/18 21:40	1
Bromodichloromethane	ND		0.080		ppb v/v			04/03/18 21:40	1
Bromoform	ND		0.080		ppb v/v			04/03/18 21:40	1
Bromomethane	ND		0.080		ppb v/v			04/03/18 21:40	1
Carbon tetrachloride	0.077		0.032		ppb v/v			04/03/18 21:40	1
Chlorobenzene	ND		0.080		ppb v/v			04/03/18 21:40	1
Chloroethane	ND		0.080		ppb v/v			04/03/18 21:40	1
Chloroform	ND		0.080		ppb v/v			04/03/18 21:40	1
Chloromethane	0.68		0.20		ppb v/v			04/03/18 21:40	1
cis-1,2-Dichloroethene	ND		0.040		ppb v/v			04/03/18 21:40	1
cis-1,3-Dichloropropene	ND		0.080		ppb v/v			04/03/18 21:40	1
Cyclohexane	ND		0.20		ppb v/v			04/03/18 21:40	1
Dibromochloromethane	ND		0.080		ppb v/v			04/03/18 21:40	1
Dichlorodifluoromethane	0.19		0.080		ppb v/v			04/03/18 21:40	1
Ethanol	53		2.0		ppb v/v			04/03/18 21:40	1
Ethylbenzene	ND		0.080		ppb v/v			04/03/18 21:40	1
Hexachlorobutadiene	ND		0.080		ppb v/v			04/03/18 21:40	1
Hexane	ND		0.20		ppb v/v			04/03/18 21:40	1
Methyl tert-butyl ether	ND		0.16		ppb v/v			04/03/18 21:40	1

TestAmerica Knoxville

Client Sample Results

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory # C755019A

TestAmerica Job ID: 140-11145-1

Client Sample ID: H46-BA-2018

Lab Sample ID: 140-11145-4

Date Collected: 03/28/18 09:58

Matrix: Air

Date Received: 04/02/18 09:15

Sample Container: Summa Canister 6L

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	0.29		0.20		ppb v/v			04/03/18 21:40	1
m-Xylene & p-Xylene	0.16		0.080		ppb v/v			04/03/18 21:40	1
o-Xylene	ND		0.080		ppb v/v			04/03/18 21:40	1
Styrene	ND		0.080		ppb v/v			04/03/18 21:40	1
t-Butyl alcohol	ND		0.32		ppb v/v			04/03/18 21:40	1
Tetrachloroethene	ND		0.080		ppb v/v			04/03/18 21:40	1
Toluene	0.39		0.12		ppb v/v			04/03/18 21:40	1
trans-1,2-Dichloroethene	ND		0.080		ppb v/v			04/03/18 21:40	1
trans-1,3-Dichloropropene	ND		0.080		ppb v/v			04/03/18 21:40	1
Trichloroethene	ND		0.036		ppb v/v			04/03/18 21:40	1
Trichlorofluoromethane	0.32		0.080		ppb v/v			04/03/18 21:40	1
Vinyl chloride	ND		0.040		ppb v/v			04/03/18 21:40	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.44		ug/m3			04/03/18 21:40	1
1,1,2,2-Tetrachloroethane	ND		0.55		ug/m3			04/03/18 21:40	1
1,1,2-Trichloroethane	ND		0.44		ug/m3			04/03/18 21:40	1
1,1,2-Trichlorotrifluoroethane	ND		0.61		ug/m3			04/03/18 21:40	1
1,1-Dichloroethane	ND		0.32		ug/m3			04/03/18 21:40	1
1,1-Dichloroethene	ND		0.16		ug/m3			04/03/18 21:40	1
1,2,4-Trichlorobenzene	ND		0.59		ug/m3			04/03/18 21:40	1
1,2,4-Trimethylbenzene	0.97		0.39		ug/m3			04/03/18 21:40	1
1,2-Dibromoethane	ND		0.61		ug/m3			04/03/18 21:40	1
1,2-Dichlorobenzene	ND		0.48		ug/m3			04/03/18 21:40	1
1,2-Dichloroethane	ND	*	0.32		ug/m3			04/03/18 21:40	1
1,2-Dichloropropane	ND		0.37		ug/m3			04/03/18 21:40	1
1,2-Dichlorotetrafluoroethane	ND		0.56		ug/m3			04/03/18 21:40	1
1,3,5-Trimethylbenzene	ND		0.39		ug/m3			04/03/18 21:40	1
1,3-Dichlorobenzene	ND		0.48		ug/m3			04/03/18 21:40	1
1,4-Dichlorobenzene	ND		0.48		ug/m3			04/03/18 21:40	1
1,4-Dioxane	ND		0.72		ug/m3			04/03/18 21:40	1
2,2,4-Trimethylpentane	ND		0.93		ug/m3			04/03/18 21:40	1
2-Butanone	ND		0.94		ug/m3			04/03/18 21:40	1
4-Methyl-2-pentanone (MIBK)	ND		0.82		ug/m3			04/03/18 21:40	1
Benzene	0.91		0.26		ug/m3			04/03/18 21:40	1
Benzyl chloride	ND		0.83		ug/m3			04/03/18 21:40	1
Bromodichloromethane	ND		0.54		ug/m3			04/03/18 21:40	1
Bromoform	ND		0.83		ug/m3			04/03/18 21:40	1
Bromomethane	ND		0.31		ug/m3			04/03/18 21:40	1
Carbon tetrachloride	0.48		0.20		ug/m3			04/03/18 21:40	1
Chlorobenzene	ND		0.37		ug/m3			04/03/18 21:40	1
Chloroethane	ND		0.21		ug/m3			04/03/18 21:40	1
Chloroform	ND		0.39		ug/m3			04/03/18 21:40	1
Chloromethane	1.4		0.41		ug/m3			04/03/18 21:40	1
cis-1,2-Dichloroethene	ND		0.16		ug/m3			04/03/18 21:40	1
cis-1,3-Dichloropropene	ND		0.36		ug/m3			04/03/18 21:40	1
Cyclohexane	ND		0.69		ug/m3			04/03/18 21:40	1
Dibromochloromethane	ND		0.68		ug/m3			04/03/18 21:40	1
Dichlorodifluoromethane	0.92		0.40		ug/m3			04/03/18 21:40	1

TestAmerica Knoxville

Client Sample Results

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory # C755019A

TestAmerica Job ID: 140-11145-1

Client Sample ID: H46-BA-2018

Lab Sample ID: 140-11145-4

Date Collected: 03/28/18 09:58

Matrix: Air

Date Received: 04/02/18 09:15

Sample Container: Summa Canister 6L

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	100		3.8		ug/m3			04/03/18 21:40	1
Ethylbenzene	ND		0.35		ug/m3			04/03/18 21:40	1
Hexachlorobutadiene	ND		0.85		ug/m3			04/03/18 21:40	1
Hexane	ND		0.70		ug/m3			04/03/18 21:40	1
Methyl tert-butyl ether	ND		0.58		ug/m3			04/03/18 21:40	1
Methylene Chloride	1.0		0.69		ug/m3			04/03/18 21:40	1
m-Xylene & p-Xylene	0.68		0.35		ug/m3			04/03/18 21:40	1
o-Xylene	ND		0.35		ug/m3			04/03/18 21:40	1
Styrene	ND		0.34		ug/m3			04/03/18 21:40	1
t-Butyl alcohol	ND		0.97		ug/m3			04/03/18 21:40	1
Tetrachloroethene	ND		0.54		ug/m3			04/03/18 21:40	1
Toluene	1.5		0.45		ug/m3			04/03/18 21:40	1
trans-1,2-Dichloroethene	ND		0.32		ug/m3			04/03/18 21:40	1
trans-1,3-Dichloropropene	ND		0.36		ug/m3			04/03/18 21:40	1
Trichloroethene	ND		0.19		ug/m3			04/03/18 21:40	1
Trichlorofluoromethane	1.8		0.45		ug/m3			04/03/18 21:40	1
Vinyl chloride	ND		0.10		ug/m3			04/03/18 21:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		60 - 140					04/03/18 21:40	1

Client Sample ID: H41B-BA-2018

Lab Sample ID: 140-11145-5

Date Collected: 03/28/18 11:35

Matrix: Air

Date Received: 04/02/18 09:15

Sample Container: Summa Canister 6L

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.080		ppb v/v			04/03/18 22:33	1
1,1,2,2-Tetrachloroethane	ND		0.080		ppb v/v			04/03/18 22:33	1
1,1,2-Trichloroethane	ND		0.080		ppb v/v			04/03/18 22:33	1
1,1,2-Trichlorotrifluoroethane	ND		0.080		ppb v/v			04/03/18 22:33	1
1,1-Dichloroethane	ND		0.080		ppb v/v			04/03/18 22:33	1
1,1-Dichloroethene	ND		0.040		ppb v/v			04/03/18 22:33	1
1,2,4-Trichlorobenzene	ND		0.080		ppb v/v			04/03/18 22:33	1
1,2,4-Trimethylbenzene	ND		0.080		ppb v/v			04/03/18 22:33	1
1,2-Dibromoethane	ND		0.080		ppb v/v			04/03/18 22:33	1
1,2-Dichlorobenzene	ND		0.080		ppb v/v			04/03/18 22:33	1
1,2-Dichloroethane	ND	*	0.080		ppb v/v			04/03/18 22:33	1
1,2-Dichloropropane	ND		0.080		ppb v/v			04/03/18 22:33	1
1,2-Dichlorotetrafluoroethane	ND		0.080		ppb v/v			04/03/18 22:33	1
1,3,5-Trimethylbenzene	ND		0.080		ppb v/v			04/03/18 22:33	1
1,3-Dichlorobenzene	ND		0.080		ppb v/v			04/03/18 22:33	1
1,4-Dichlorobenzene	ND		0.080		ppb v/v			04/03/18 22:33	1
1,4-Dioxane	ND		0.20		ppb v/v			04/03/18 22:33	1
2,2,4-Trimethylpentane	ND		0.20		ppb v/v			04/03/18 22:33	1
2-Butanone	ND		0.32		ppb v/v			04/03/18 22:33	1
4-Methyl-2-pentanone (MIBK)	ND		0.20		ppb v/v			04/03/18 22:33	1
Benzene	0.20		0.080		ppb v/v			04/03/18 22:33	1

TestAmerica Knoxville

Client Sample Results

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory # C755019A

TestAmerica Job ID: 140-11145-1

Client Sample ID: H41B-BA-2018

Lab Sample ID: 140-11145-5

Date Collected: 03/28/18 11:35

Matrix: Air

Date Received: 04/02/18 09:15

Sample Container: Summa Canister 6L

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzyl chloride	ND		0.16		ppb v/v			04/03/18 22:33	1
Bromodichloromethane	ND		0.080		ppb v/v			04/03/18 22:33	1
Bromoform	ND		0.080		ppb v/v			04/03/18 22:33	1
Bromomethane	ND		0.080		ppb v/v			04/03/18 22:33	1
Carbon tetrachloride	0.070		0.032		ppb v/v			04/03/18 22:33	1
Chlorobenzene	ND		0.080		ppb v/v			04/03/18 22:33	1
Chloroethane	ND		0.080		ppb v/v			04/03/18 22:33	1
Chloroform	ND		0.080		ppb v/v			04/03/18 22:33	1
Chloromethane	0.85		0.20		ppb v/v			04/03/18 22:33	1
cis-1,2-Dichloroethene	ND		0.040		ppb v/v			04/03/18 22:33	1
cis-1,3-Dichloropropene	ND		0.080		ppb v/v			04/03/18 22:33	1
Cyclohexane	ND		0.20		ppb v/v			04/03/18 22:33	1
Dibromochloromethane	ND		0.080		ppb v/v			04/03/18 22:33	1
Dichlorodifluoromethane	0.17		0.080		ppb v/v			04/03/18 22:33	1
Ethanol	50		2.0		ppb v/v			04/03/18 22:33	1
Ethylbenzene	ND		0.080		ppb v/v			04/03/18 22:33	1
Hexachlorobutadiene	ND		0.080		ppb v/v			04/03/18 22:33	1
Hexane	ND		0.20		ppb v/v			04/03/18 22:33	1
Methyl tert-butyl ether	ND		0.16		ppb v/v			04/03/18 22:33	1
Methylene Chloride	0.31		0.20		ppb v/v			04/03/18 22:33	1
m-Xylene & p-Xylene	0.13		0.080		ppb v/v			04/03/18 22:33	1
o-Xylene	ND		0.080		ppb v/v			04/03/18 22:33	1
Styrene	ND		0.080		ppb v/v			04/03/18 22:33	1
t-Butyl alcohol	ND		0.32		ppb v/v			04/03/18 22:33	1
Tetrachloroethene	ND		0.080		ppb v/v			04/03/18 22:33	1
Toluene	0.26		0.12		ppb v/v			04/03/18 22:33	1
trans-1,2-Dichloroethene	ND		0.080		ppb v/v			04/03/18 22:33	1
trans-1,3-Dichloropropene	ND		0.080		ppb v/v			04/03/18 22:33	1
Trichloroethene	ND		0.036		ppb v/v			04/03/18 22:33	1
Trichlorofluoromethane	0.29		0.080		ppb v/v			04/03/18 22:33	1
Vinyl chloride	ND		0.040		ppb v/v			04/03/18 22:33	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.44		ug/m3			04/03/18 22:33	1
1,1,2,2-Tetrachloroethane	ND		0.55		ug/m3			04/03/18 22:33	1
1,1,2-Trichloroethane	ND		0.44		ug/m3			04/03/18 22:33	1
1,1,2-Trichlorotrifluoroethane	ND		0.61		ug/m3			04/03/18 22:33	1
1,1-Dichloroethane	ND		0.32		ug/m3			04/03/18 22:33	1
1,1-Dichloroethene	ND		0.16		ug/m3			04/03/18 22:33	1
1,2,4-Trichlorobenzene	ND		0.59		ug/m3			04/03/18 22:33	1
1,2,4-Trimethylbenzene	ND		0.39		ug/m3			04/03/18 22:33	1
1,2-Dibromoethane	ND		0.61		ug/m3			04/03/18 22:33	1
1,2-Dichlorobenzene	ND		0.48		ug/m3			04/03/18 22:33	1
1,2-Dichloroethane	ND	*	0.32		ug/m3			04/03/18 22:33	1
1,2-Dichloropropane	ND		0.37		ug/m3			04/03/18 22:33	1
1,2-Dichlorotetrafluoroethane	ND		0.56		ug/m3			04/03/18 22:33	1
1,3,5-Trimethylbenzene	ND		0.39		ug/m3			04/03/18 22:33	1
1,3-Dichlorobenzene	ND		0.48		ug/m3			04/03/18 22:33	1
1,4-Dichlorobenzene	ND		0.48		ug/m3			04/03/18 22:33	1

TestAmerica Knoxville

Client Sample Results

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory # C755019A

TestAmerica Job ID: 140-11145-1

Client Sample ID: H41B-BA-2018

Lab Sample ID: 140-11145-5

Date Collected: 03/28/18 11:35

Matrix: Air

Date Received: 04/02/18 09:15

Sample Container: Summa Canister 6L

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.72		ug/m3			04/03/18 22:33	1
2,2,4-Trimethylpentane	ND		0.93		ug/m3			04/03/18 22:33	1
2-Butanone	ND		0.94		ug/m3			04/03/18 22:33	1
4-Methyl-2-pentanone (MIBK)	ND		0.82		ug/m3			04/03/18 22:33	1
Benzene	0.65		0.26		ug/m3			04/03/18 22:33	1
Benzyl chloride	ND		0.83		ug/m3			04/03/18 22:33	1
Bromodichloromethane	ND		0.54		ug/m3			04/03/18 22:33	1
Bromoform	ND		0.83		ug/m3			04/03/18 22:33	1
Bromomethane	ND		0.31		ug/m3			04/03/18 22:33	1
Carbon tetrachloride	0.44		0.20		ug/m3			04/03/18 22:33	1
Chlorobenzene	ND		0.37		ug/m3			04/03/18 22:33	1
Chloroethane	ND		0.21		ug/m3			04/03/18 22:33	1
Chloroform	ND		0.39		ug/m3			04/03/18 22:33	1
Chloromethane	1.7		0.41		ug/m3			04/03/18 22:33	1
cis-1,2-Dichloroethene	ND		0.16		ug/m3			04/03/18 22:33	1
cis-1,3-Dichloropropene	ND		0.36		ug/m3			04/03/18 22:33	1
Cyclohexane	ND		0.69		ug/m3			04/03/18 22:33	1
Dibromochloromethane	ND		0.68		ug/m3			04/03/18 22:33	1
Dichlorodifluoromethane	0.86		0.40		ug/m3			04/03/18 22:33	1
Ethanol	94		3.8		ug/m3			04/03/18 22:33	1
Ethylbenzene	ND		0.35		ug/m3			04/03/18 22:33	1
Hexachlorobutadiene	ND		0.85		ug/m3			04/03/18 22:33	1
Hexane	ND		0.70		ug/m3			04/03/18 22:33	1
Methyl tert-butyl ether	ND		0.58		ug/m3			04/03/18 22:33	1
Methylene Chloride	1.1		0.69		ug/m3			04/03/18 22:33	1
m-Xylene & p-Xylene	0.55		0.35		ug/m3			04/03/18 22:33	1
o-Xylene	ND		0.35		ug/m3			04/03/18 22:33	1
Styrene	ND		0.34		ug/m3			04/03/18 22:33	1
t-Butyl alcohol	ND		0.97		ug/m3			04/03/18 22:33	1
Tetrachloroethene	ND		0.54		ug/m3			04/03/18 22:33	1
Toluene	0.98		0.45		ug/m3			04/03/18 22:33	1
trans-1,2-Dichloroethene	ND		0.32		ug/m3			04/03/18 22:33	1
trans-1,3-Dichloropropene	ND		0.36		ug/m3			04/03/18 22:33	1
Trichloroethene	ND		0.19		ug/m3			04/03/18 22:33	1
Trichlorofluoromethane	1.6		0.45		ug/m3			04/03/18 22:33	1
Vinyl chloride	ND		0.10		ug/m3			04/03/18 22:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		60 - 140		04/03/18 22:33	1

Client Sample ID: H41-OA-2018

Lab Sample ID: 140-11145-6

Date Collected: 03/28/18 11:41

Matrix: Air

Date Received: 04/02/18 09:15

Sample Container: Summa Canister 6L

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.080		ppb v/v			04/03/18 23:25	1
1,1,2,2-Tetrachloroethane	ND		0.080		ppb v/v			04/03/18 23:25	1

TestAmerica Knoxville

Client Sample Results

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory # C755019A

TestAmerica Job ID: 140-11145-1

Client Sample ID: H41-OA-2018

Lab Sample ID: 140-11145-6

Date Collected: 03/28/18 11:41

Matrix: Air

Date Received: 04/02/18 09:15

Sample Container: Summa Canister 6L

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	ND		0.080		ppb v/v			04/03/18 23:25	1
1,1,2-Trichlorotrifluoroethane	ND		0.080		ppb v/v			04/03/18 23:25	1
1,1-Dichloroethane	ND		0.080		ppb v/v			04/03/18 23:25	1
1,1-Dichloroethene	ND		0.040		ppb v/v			04/03/18 23:25	1
1,2,4-Trichlorobenzene	ND		0.080		ppb v/v			04/03/18 23:25	1
1,2,4-Trimethylbenzene	ND		0.080		ppb v/v			04/03/18 23:25	1
1,2-Dibromoethane	ND		0.080		ppb v/v			04/03/18 23:25	1
1,2-Dichlorobenzene	ND		0.080		ppb v/v			04/03/18 23:25	1
1,2-Dichloroethane	ND	*	0.080		ppb v/v			04/03/18 23:25	1
1,2-Dichloropropane	ND		0.080		ppb v/v			04/03/18 23:25	1
1,2-Dichlorotetrafluoroethane	ND		0.080		ppb v/v			04/03/18 23:25	1
1,3,5-Trimethylbenzene	ND		0.080		ppb v/v			04/03/18 23:25	1
1,3-Dichlorobenzene	ND		0.080		ppb v/v			04/03/18 23:25	1
1,4-Dichlorobenzene	ND		0.080		ppb v/v			04/03/18 23:25	1
1,4-Dioxane	ND		0.20		ppb v/v			04/03/18 23:25	1
2,2,4-Trimethylpentane	ND		0.20		ppb v/v			04/03/18 23:25	1
2-Butanone	ND		0.32		ppb v/v			04/03/18 23:25	1
4-Methyl-2-pentanone (MIBK)	ND		0.20		ppb v/v			04/03/18 23:25	1
Benzene	0.21		0.080		ppb v/v			04/03/18 23:25	1
Benzyl chloride	ND		0.16		ppb v/v			04/03/18 23:25	1
Bromodichloromethane	ND		0.080		ppb v/v			04/03/18 23:25	1
Bromoform	ND		0.080		ppb v/v			04/03/18 23:25	1
Bromomethane	ND		0.080		ppb v/v			04/03/18 23:25	1
Carbon tetrachloride	0.067		0.032		ppb v/v			04/03/18 23:25	1
Chlorobenzene	ND		0.080		ppb v/v			04/03/18 23:25	1
Chloroethane	ND		0.080		ppb v/v			04/03/18 23:25	1
Chloroform	ND		0.080		ppb v/v			04/03/18 23:25	1
Chloromethane	0.73		0.20		ppb v/v			04/03/18 23:25	1
cis-1,2-Dichloroethene	ND		0.040		ppb v/v			04/03/18 23:25	1
cis-1,3-Dichloropropene	ND		0.080		ppb v/v			04/03/18 23:25	1
Cyclohexane	ND		0.20		ppb v/v			04/03/18 23:25	1
Dibromochloromethane	ND		0.080		ppb v/v			04/03/18 23:25	1
Dichlorodifluoromethane	0.18		0.080		ppb v/v			04/03/18 23:25	1
Ethanol	8.0		2.0		ppb v/v			04/03/18 23:25	1
Ethylbenzene	ND		0.080		ppb v/v			04/03/18 23:25	1
Hexachlorobutadiene	ND		0.080		ppb v/v			04/03/18 23:25	1
Hexane	ND		0.20		ppb v/v			04/03/18 23:25	1
Methyl tert-butyl ether	ND		0.16		ppb v/v			04/03/18 23:25	1
Methylene Chloride	1.3		0.20		ppb v/v			04/03/18 23:25	1
m-Xylene & p-Xylene	0.25		0.080		ppb v/v			04/03/18 23:25	1
o-Xylene	0.085		0.080		ppb v/v			04/03/18 23:25	1
Styrene	ND		0.080		ppb v/v			04/03/18 23:25	1
t-Butyl alcohol	ND		0.32		ppb v/v			04/03/18 23:25	1
Tetrachloroethene	ND		0.080		ppb v/v			04/03/18 23:25	1
Toluene	0.54		0.12		ppb v/v			04/03/18 23:25	1
trans-1,2-Dichloroethene	ND		0.080		ppb v/v			04/03/18 23:25	1
trans-1,3-Dichloropropene	ND		0.080		ppb v/v			04/03/18 23:25	1
Trichloroethene	ND		0.036		ppb v/v			04/03/18 23:25	1

TestAmerica Knoxville

Client Sample Results

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory # C755019A

TestAmerica Job ID: 140-11145-1

Client Sample ID: H41-OA-2018

Lab Sample ID: 140-11145-6

Date Collected: 03/28/18 11:41

Matrix: Air

Date Received: 04/02/18 09:15

Sample Container: Summa Canister 6L

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	0.29		0.080		ppb v/v			04/03/18 23:25	1
Vinyl chloride	ND		0.040		ppb v/v			04/03/18 23:25	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.44		ug/m3			04/03/18 23:25	1
1,1,2,2-Tetrachloroethane	ND		0.55		ug/m3			04/03/18 23:25	1
1,1,2-Trichloroethane	ND		0.44		ug/m3			04/03/18 23:25	1
1,1,2-Trichlorotrifluoroethane	ND		0.61		ug/m3			04/03/18 23:25	1
1,1-Dichloroethane	ND		0.32		ug/m3			04/03/18 23:25	1
1,1-Dichloroethene	ND		0.16		ug/m3			04/03/18 23:25	1
1,2,4-Trichlorobenzene	ND		0.59		ug/m3			04/03/18 23:25	1
1,2,4-Trimethylbenzene	ND		0.39		ug/m3			04/03/18 23:25	1
1,2-Dibromoethane	ND		0.61		ug/m3			04/03/18 23:25	1
1,2-Dichlorobenzene	ND		0.48		ug/m3			04/03/18 23:25	1
1,2-Dichloroethane	ND	*	0.32		ug/m3			04/03/18 23:25	1
1,2-Dichloropropane	ND		0.37		ug/m3			04/03/18 23:25	1
1,2-Dichlorotetrafluoroethane	ND		0.56		ug/m3			04/03/18 23:25	1
1,3,5-Trimethylbenzene	ND		0.39		ug/m3			04/03/18 23:25	1
1,3-Dichlorobenzene	ND		0.48		ug/m3			04/03/18 23:25	1
1,4-Dichlorobenzene	ND		0.48		ug/m3			04/03/18 23:25	1
1,4-Dioxane	ND		0.72		ug/m3			04/03/18 23:25	1
2,2,4-Trimethylpentane	ND		0.93		ug/m3			04/03/18 23:25	1
2-Butanone	ND		0.94		ug/m3			04/03/18 23:25	1
4-Methyl-2-pentanone (MIBK)	ND		0.82		ug/m3			04/03/18 23:25	1
Benzene	0.68		0.26		ug/m3			04/03/18 23:25	1
Benzyl chloride	ND		0.83		ug/m3			04/03/18 23:25	1
Bromodichloromethane	ND		0.54		ug/m3			04/03/18 23:25	1
Bromoform	ND		0.83		ug/m3			04/03/18 23:25	1
Bromomethane	ND		0.31		ug/m3			04/03/18 23:25	1
Carbon tetrachloride	0.42		0.20		ug/m3			04/03/18 23:25	1
Chlorobenzene	ND		0.37		ug/m3			04/03/18 23:25	1
Chloroethane	ND		0.21		ug/m3			04/03/18 23:25	1
Chloroform	ND		0.39		ug/m3			04/03/18 23:25	1
Chloromethane	1.5		0.41		ug/m3			04/03/18 23:25	1
cis-1,2-Dichloroethene	ND		0.16		ug/m3			04/03/18 23:25	1
cis-1,3-Dichloropropene	ND		0.36		ug/m3			04/03/18 23:25	1
Cyclohexane	ND		0.69		ug/m3			04/03/18 23:25	1
Dibromochloromethane	ND		0.68		ug/m3			04/03/18 23:25	1
Dichlorodifluoromethane	0.88		0.40		ug/m3			04/03/18 23:25	1
Ethanol	15		3.8		ug/m3			04/03/18 23:25	1
Ethylbenzene	ND		0.35		ug/m3			04/03/18 23:25	1
Hexachlorobutadiene	ND		0.85		ug/m3			04/03/18 23:25	1
Hexane	ND		0.70		ug/m3			04/03/18 23:25	1
Methyl tert-butyl ether	ND		0.58		ug/m3			04/03/18 23:25	1
Methylene Chloride	4.7		0.69		ug/m3			04/03/18 23:25	1
m-Xylene & p-Xylene	1.1		0.35		ug/m3			04/03/18 23:25	1
o-Xylene	0.37		0.35		ug/m3			04/03/18 23:25	1
Styrene	ND		0.34		ug/m3			04/03/18 23:25	1
t-Butyl alcohol	ND		0.97		ug/m3			04/03/18 23:25	1

TestAmerica Knoxville

Client Sample Results

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory # C755019A

TestAmerica Job ID: 140-11145-1

Client Sample ID: H41-OA-2018

Lab Sample ID: 140-11145-6

Date Collected: 03/28/18 11:41

Matrix: Air

Date Received: 04/02/18 09:15

Sample Container: Summa Canister 6L

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		0.54		ug/m3			04/03/18 23:25	1
Toluene	2.0		0.45		ug/m3			04/03/18 23:25	1
trans-1,2-Dichloroethene	ND		0.32		ug/m3			04/03/18 23:25	1
trans-1,3-Dichloropropene	ND		0.36		ug/m3			04/03/18 23:25	1
Trichloroethene	ND		0.19		ug/m3			04/03/18 23:25	1
Trichlorofluoromethane	1.6		0.45		ug/m3			04/03/18 23:25	1
Vinyl chloride	ND		0.10		ug/m3			04/03/18 23:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		60 - 140					04/03/18 23:25	1

Client Sample ID: H41A-BA-2018

Lab Sample ID: 140-11145-7

Date Collected: 03/28/18 11:39

Matrix: Air

Date Received: 04/02/18 09:15

Sample Container: Summa Canister 6L

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.080		ppb v/v			04/04/18 00:19	1
1,1,2,2-Tetrachloroethane	ND		0.080		ppb v/v			04/04/18 00:19	1
1,1,2-Trichloroethane	ND		0.080		ppb v/v			04/04/18 00:19	1
1,1,2-Trichlorotrifluoroethane	ND		0.080		ppb v/v			04/04/18 00:19	1
1,1-Dichloroethane	ND		0.080		ppb v/v			04/04/18 00:19	1
1,1-Dichloroethene	ND		0.040		ppb v/v			04/04/18 00:19	1
1,2,4-Trichlorobenzene	ND		0.080		ppb v/v			04/04/18 00:19	1
1,2,4-Trimethylbenzene	ND		0.080		ppb v/v			04/04/18 00:19	1
1,2-Dibromoethane	ND		0.080		ppb v/v			04/04/18 00:19	1
1,2-Dichlorobenzene	ND		0.080		ppb v/v			04/04/18 00:19	1
1,2-Dichloroethane	ND	*	0.080		ppb v/v			04/04/18 00:19	1
1,2-Dichloropropane	ND		0.080		ppb v/v			04/04/18 00:19	1
1,2-Dichlorotetrafluoroethane	ND		0.080		ppb v/v			04/04/18 00:19	1
1,3,5-Trimethylbenzene	ND		0.080		ppb v/v			04/04/18 00:19	1
1,3-Dichlorobenzene	ND		0.080		ppb v/v			04/04/18 00:19	1
1,4-Dichlorobenzene	ND		0.080		ppb v/v			04/04/18 00:19	1
1,4-Dioxane	ND		0.20		ppb v/v			04/04/18 00:19	1
2,2,4-Trimethylpentane	ND		0.20		ppb v/v			04/04/18 00:19	1
2-Butanone	0.32		0.32		ppb v/v			04/04/18 00:19	1
4-Methyl-2-pentanone (MIBK)	ND		0.20		ppb v/v			04/04/18 00:19	1
Benzene	0.21		0.080		ppb v/v			04/04/18 00:19	1
Benzyl chloride	ND		0.16		ppb v/v			04/04/18 00:19	1
Bromodichloromethane	ND		0.080		ppb v/v			04/04/18 00:19	1
Bromoform	ND		0.080		ppb v/v			04/04/18 00:19	1
Bromomethane	ND		0.080		ppb v/v			04/04/18 00:19	1
Carbon tetrachloride	0.071		0.032		ppb v/v			04/04/18 00:19	1
Chlorobenzene	ND		0.080		ppb v/v			04/04/18 00:19	1
Chloroethane	ND		0.080		ppb v/v			04/04/18 00:19	1
Chloroform	ND		0.080		ppb v/v			04/04/18 00:19	1
Chloromethane	0.88		0.20		ppb v/v			04/04/18 00:19	1
cis-1,2-Dichloroethene	ND		0.040		ppb v/v			04/04/18 00:19	1

TestAmerica Knoxville

Client Sample Results

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory # C755019A

TestAmerica Job ID: 140-11145-1

Client Sample ID: H41A-BA-2018

Lab Sample ID: 140-11145-7

Date Collected: 03/28/18 11:39

Matrix: Air

Date Received: 04/02/18 09:15

Sample Container: Summa Canister 6L

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	ND		0.080		ppb v/v			04/04/18 00:19	1
Cyclohexane	ND		0.20		ppb v/v			04/04/18 00:19	1
Dibromochloromethane	ND		0.080		ppb v/v			04/04/18 00:19	1
Dichlorodifluoromethane	0.18		0.080		ppb v/v			04/04/18 00:19	1
Ethanol	150	E	2.0		ppb v/v			04/04/18 00:19	1
Ethylbenzene	ND		0.080		ppb v/v			04/04/18 00:19	1
Hexachlorobutadiene	ND		0.080		ppb v/v			04/04/18 00:19	1
Hexane	ND		0.20		ppb v/v			04/04/18 00:19	1
Methyl tert-butyl ether	ND		0.16		ppb v/v			04/04/18 00:19	1
Methylene Chloride	0.50		0.20		ppb v/v			04/04/18 00:19	1
m-Xylene & p-Xylene	0.22		0.080		ppb v/v			04/04/18 00:19	1
o-Xylene	ND		0.080		ppb v/v			04/04/18 00:19	1
Styrene	ND		0.080		ppb v/v			04/04/18 00:19	1
t-Butyl alcohol	ND		0.32		ppb v/v			04/04/18 00:19	1
Tetrachloroethene	ND		0.080		ppb v/v			04/04/18 00:19	1
Toluene	0.31		0.12		ppb v/v			04/04/18 00:19	1
trans-1,2-Dichloroethene	ND		0.080		ppb v/v			04/04/18 00:19	1
trans-1,3-Dichloropropene	ND		0.080		ppb v/v			04/04/18 00:19	1
Trichloroethene	ND		0.036		ppb v/v			04/04/18 00:19	1
Trichlorofluoromethane	0.29		0.080		ppb v/v			04/04/18 00:19	1
Vinyl chloride	ND		0.040		ppb v/v			04/04/18 00:19	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.44		ug/m3			04/04/18 00:19	1
1,1,2,2-Tetrachloroethane	ND		0.55		ug/m3			04/04/18 00:19	1
1,1,2-Trichloroethane	ND		0.44		ug/m3			04/04/18 00:19	1
1,1,2-Trichlorotrifluoroethane	ND		0.61		ug/m3			04/04/18 00:19	1
1,1-Dichloroethane	ND		0.32		ug/m3			04/04/18 00:19	1
1,1-Dichloroethene	ND		0.16		ug/m3			04/04/18 00:19	1
1,2,4-Trichlorobenzene	ND		0.59		ug/m3			04/04/18 00:19	1
1,2,4-Trimethylbenzene	ND		0.39		ug/m3			04/04/18 00:19	1
1,2-Dibromoethane	ND		0.61		ug/m3			04/04/18 00:19	1
1,2-Dichlorobenzene	ND		0.48		ug/m3			04/04/18 00:19	1
1,2-Dichloroethane	ND	*	0.32		ug/m3			04/04/18 00:19	1
1,2-Dichloropropane	ND		0.37		ug/m3			04/04/18 00:19	1
1,2-Dichlorotetrafluoroethane	ND		0.56		ug/m3			04/04/18 00:19	1
1,3,5-Trimethylbenzene	ND		0.39		ug/m3			04/04/18 00:19	1
1,3-Dichlorobenzene	ND		0.48		ug/m3			04/04/18 00:19	1
1,4-Dichlorobenzene	ND		0.48		ug/m3			04/04/18 00:19	1
1,4-Dioxane	ND		0.72		ug/m3			04/04/18 00:19	1
2,2,4-Trimethylpentane	ND		0.93		ug/m3			04/04/18 00:19	1
2-Butanone	0.93		0.94		ug/m3			04/04/18 00:19	1
4-Methyl-2-pentanone (MIBK)	ND		0.82		ug/m3			04/04/18 00:19	1
Benzene	0.68		0.26		ug/m3			04/04/18 00:19	1
Benzyl chloride	ND		0.83		ug/m3			04/04/18 00:19	1
Bromodichloromethane	ND		0.54		ug/m3			04/04/18 00:19	1
Bromoform	ND		0.83		ug/m3			04/04/18 00:19	1
Bromomethane	ND		0.31		ug/m3			04/04/18 00:19	1
Carbon tetrachloride	0.45		0.20		ug/m3			04/04/18 00:19	1

TestAmerica Knoxville

Client Sample Results

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory # C755019A

TestAmerica Job ID: 140-11145-1

Client Sample ID: H41A-BA-2018

Lab Sample ID: 140-11145-7

Date Collected: 03/28/18 11:39

Matrix: Air

Date Received: 04/02/18 09:15

Sample Container: Summa Canister 6L

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	ND		0.37		ug/m3			04/04/18 00:19	1
Chloroethane	ND		0.21		ug/m3			04/04/18 00:19	1
Chloroform	ND		0.39		ug/m3			04/04/18 00:19	1
Chloromethane	1.8		0.41		ug/m3			04/04/18 00:19	1
cis-1,2-Dichloroethene	ND		0.16		ug/m3			04/04/18 00:19	1
cis-1,3-Dichloropropene	ND		0.36		ug/m3			04/04/18 00:19	1
Cyclohexane	ND		0.69		ug/m3			04/04/18 00:19	1
Dibromochloromethane	ND		0.68		ug/m3			04/04/18 00:19	1
Dichlorodifluoromethane	0.90		0.40		ug/m3			04/04/18 00:19	1
Ethanol	280	E	3.8		ug/m3			04/04/18 00:19	1
Ethylbenzene	ND		0.35		ug/m3			04/04/18 00:19	1
Hexachlorobutadiene	ND		0.85		ug/m3			04/04/18 00:19	1
Hexane	ND		0.70		ug/m3			04/04/18 00:19	1
Methyl tert-butyl ether	ND		0.58		ug/m3			04/04/18 00:19	1
Methylene Chloride	1.7		0.69		ug/m3			04/04/18 00:19	1
m-Xylene & p-Xylene	0.98		0.35		ug/m3			04/04/18 00:19	1
o-Xylene	ND		0.35		ug/m3			04/04/18 00:19	1
Styrene	ND		0.34		ug/m3			04/04/18 00:19	1
t-Butyl alcohol	ND		0.97		ug/m3			04/04/18 00:19	1
Tetrachloroethene	ND		0.54		ug/m3			04/04/18 00:19	1
Toluene	1.2		0.45		ug/m3			04/04/18 00:19	1
trans-1,2-Dichloroethene	ND		0.32		ug/m3			04/04/18 00:19	1
trans-1,3-Dichloropropene	ND		0.36		ug/m3			04/04/18 00:19	1
Trichloroethene	ND		0.19		ug/m3			04/04/18 00:19	1
Trichlorofluoromethane	1.7		0.45		ug/m3			04/04/18 00:19	1
Vinyl chloride	ND		0.10		ug/m3			04/04/18 00:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		60 - 140		04/04/18 00:19	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	86	D	10		ppb v/v			04/04/18 22:35	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	160	D	19		ug/m3			04/04/18 22:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		60 - 140		04/04/18 22:35	1

Client Sample ID: FD-2018

Lab Sample ID: 140-11145-8

Date Collected: 03/28/18 00:00

Matrix: Air

Date Received: 04/02/18 09:15

Sample Container: Summa Canister 6L

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.080		ppb v/v			04/04/18 01:11	1
1,1,2,2-Tetrachloroethane	ND		0.080		ppb v/v			04/04/18 01:11	1
1,1,2-Trichloroethane	ND		0.080		ppb v/v			04/04/18 01:11	1

TestAmerica Knoxville

Client Sample Results

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory # C755019A

TestAmerica Job ID: 140-11145-1

Client Sample ID: FD-2018

Lab Sample ID: 140-11145-8

Date Collected: 03/28/18 00:00

Matrix: Air

Date Received: 04/02/18 09:15

Sample Container: Summa Canister 6L

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichlorotrifluoroethane	0.080		0.080		ppb v/v			04/04/18 01:11	1
1,1-Dichloroethane	ND		0.080		ppb v/v			04/04/18 01:11	1
1,1-Dichloroethene	ND		0.040		ppb v/v			04/04/18 01:11	1
1,2,4-Trichlorobenzene	ND		0.080		ppb v/v			04/04/18 01:11	1
1,2,4-Trimethylbenzene	ND		0.080		ppb v/v			04/04/18 01:11	1
1,2-Dibromoethane	ND		0.080		ppb v/v			04/04/18 01:11	1
1,2-Dichlorobenzene	ND		0.080		ppb v/v			04/04/18 01:11	1
1,2-Dichloroethane	ND *		0.080		ppb v/v			04/04/18 01:11	1
1,2-Dichloropropane	ND		0.080		ppb v/v			04/04/18 01:11	1
1,2-Dichlorotetrafluoroethane	ND		0.080		ppb v/v			04/04/18 01:11	1
1,3,5-Trimethylbenzene	ND		0.080		ppb v/v			04/04/18 01:11	1
1,3-Dichlorobenzene	ND		0.080		ppb v/v			04/04/18 01:11	1
1,4-Dichlorobenzene	ND		0.080		ppb v/v			04/04/18 01:11	1
1,4-Dioxane	ND		0.20		ppb v/v			04/04/18 01:11	1
2,2,4-Trimethylpentane	ND		0.20		ppb v/v			04/04/18 01:11	1
2-Butanone	0.69		0.32		ppb v/v			04/04/18 01:11	1
4-Methyl-2-pentanone (MIBK)	ND		0.20		ppb v/v			04/04/18 01:11	1
Benzene	0.21		0.080		ppb v/v			04/04/18 01:11	1
Benzyl chloride	ND		0.16		ppb v/v			04/04/18 01:11	1
Bromodichloromethane	ND		0.080		ppb v/v			04/04/18 01:11	1
Bromoform	ND		0.080		ppb v/v			04/04/18 01:11	1
Bromomethane	ND		0.080		ppb v/v			04/04/18 01:11	1
Carbon tetrachloride	0.069		0.032		ppb v/v			04/04/18 01:11	1
Chlorobenzene	ND		0.080		ppb v/v			04/04/18 01:11	1
Chloroethane	ND		0.080		ppb v/v			04/04/18 01:11	1
Chloroform	ND		0.080		ppb v/v			04/04/18 01:11	1
Chloromethane	0.75		0.20		ppb v/v			04/04/18 01:11	1
cis-1,2-Dichloroethene	ND		0.040		ppb v/v			04/04/18 01:11	1
cis-1,3-Dichloropropene	ND		0.080		ppb v/v			04/04/18 01:11	1
Cyclohexane	ND		0.20		ppb v/v			04/04/18 01:11	1
Dibromochloromethane	ND		0.080		ppb v/v			04/04/18 01:11	1
Dichlorodifluoromethane	0.18		0.080		ppb v/v			04/04/18 01:11	1
Ethanol	56		2.0		ppb v/v			04/04/18 01:11	1
Ethylbenzene	ND		0.080		ppb v/v			04/04/18 01:11	1
Hexachlorobutadiene	ND		0.080		ppb v/v			04/04/18 01:11	1
Hexane	ND		0.20		ppb v/v			04/04/18 01:11	1
Methyl tert-butyl ether	ND		0.16		ppb v/v			04/04/18 01:11	1
Methylene Chloride	0.31		0.20		ppb v/v			04/04/18 01:11	1
m-Xylene & p-Xylene	0.14		0.080		ppb v/v			04/04/18 01:11	1
o-Xylene	ND		0.080		ppb v/v			04/04/18 01:11	1
Styrene	ND		0.080		ppb v/v			04/04/18 01:11	1
t-Butyl alcohol	ND		0.32		ppb v/v			04/04/18 01:11	1
Tetrachloroethene	ND		0.080		ppb v/v			04/04/18 01:11	1
Toluene	0.28		0.12		ppb v/v			04/04/18 01:11	1
trans-1,2-Dichloroethene	ND		0.080		ppb v/v			04/04/18 01:11	1
trans-1,3-Dichloropropene	ND		0.080		ppb v/v			04/04/18 01:11	1
Trichloroethene	ND		0.036		ppb v/v			04/04/18 01:11	1
Trichlorofluoromethane	0.28		0.080		ppb v/v			04/04/18 01:11	1

TestAmerica Knoxville

Client Sample Results

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory # C755019A

TestAmerica Job ID: 140-11145-1

Client Sample ID: FD-2018

Lab Sample ID: 140-11145-8

Date Collected: 03/28/18 00:00

Matrix: Air

Date Received: 04/02/18 09:15

Sample Container: Summa Canister 6L

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.040		ppb v/v			04/04/18 01:11	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.44		ug/m3			04/04/18 01:11	1
1,1,2,2-Tetrachloroethane	ND		0.55		ug/m3			04/04/18 01:11	1
1,1,2-Trichloroethane	ND		0.44		ug/m3			04/04/18 01:11	1
1,1,2-Trichlorotrifluoroethane	0.61		0.61		ug/m3			04/04/18 01:11	1
1,1-Dichloroethane	ND		0.32		ug/m3			04/04/18 01:11	1
1,1-Dichloroethene	ND		0.16		ug/m3			04/04/18 01:11	1
1,2,4-Trichlorobenzene	ND		0.59		ug/m3			04/04/18 01:11	1
1,2,4-Trimethylbenzene	ND		0.39		ug/m3			04/04/18 01:11	1
1,2-Dibromoethane	ND		0.61		ug/m3			04/04/18 01:11	1
1,2-Dichlorobenzene	ND		0.48		ug/m3			04/04/18 01:11	1
1,2-Dichloroethane	ND	*	0.32		ug/m3			04/04/18 01:11	1
1,2-Dichloropropane	ND		0.37		ug/m3			04/04/18 01:11	1
1,2-Dichlorotetrafluoroethane	ND		0.56		ug/m3			04/04/18 01:11	1
1,3,5-Trimethylbenzene	ND		0.39		ug/m3			04/04/18 01:11	1
1,3-Dichlorobenzene	ND		0.48		ug/m3			04/04/18 01:11	1
1,4-Dichlorobenzene	ND		0.48		ug/m3			04/04/18 01:11	1
1,4-Dioxane	ND		0.72		ug/m3			04/04/18 01:11	1
2,2,4-Trimethylpentane	ND		0.93		ug/m3			04/04/18 01:11	1
2-Butanone	2.0		0.94		ug/m3			04/04/18 01:11	1
4-Methyl-2-pentanone (MIBK)	ND		0.82		ug/m3			04/04/18 01:11	1
Benzene	0.68		0.26		ug/m3			04/04/18 01:11	1
Benzyl chloride	ND		0.83		ug/m3			04/04/18 01:11	1
Bromodichloromethane	ND		0.54		ug/m3			04/04/18 01:11	1
Bromoform	ND		0.83		ug/m3			04/04/18 01:11	1
Bromomethane	ND		0.31		ug/m3			04/04/18 01:11	1
Carbon tetrachloride	0.43		0.20		ug/m3			04/04/18 01:11	1
Chlorobenzene	ND		0.37		ug/m3			04/04/18 01:11	1
Chloroethane	ND		0.21		ug/m3			04/04/18 01:11	1
Chloroform	ND		0.39		ug/m3			04/04/18 01:11	1
Chloromethane	1.5		0.41		ug/m3			04/04/18 01:11	1
cis-1,2-Dichloroethene	ND		0.16		ug/m3			04/04/18 01:11	1
cis-1,3-Dichloropropene	ND		0.36		ug/m3			04/04/18 01:11	1
Cyclohexane	ND		0.69		ug/m3			04/04/18 01:11	1
Dibromochloromethane	ND		0.68		ug/m3			04/04/18 01:11	1
Dichlorodifluoromethane	0.90		0.40		ug/m3			04/04/18 01:11	1
Ethanol	110		3.8		ug/m3			04/04/18 01:11	1
Ethylbenzene	ND		0.35		ug/m3			04/04/18 01:11	1
Hexachlorobutadiene	ND		0.85		ug/m3			04/04/18 01:11	1
Hexane	ND		0.70		ug/m3			04/04/18 01:11	1
Methyl tert-butyl ether	ND		0.58		ug/m3			04/04/18 01:11	1
Methylene Chloride	1.1		0.69		ug/m3			04/04/18 01:11	1
m-Xylene & p-Xylene	0.59		0.35		ug/m3			04/04/18 01:11	1
o-Xylene	ND		0.35		ug/m3			04/04/18 01:11	1
Styrene	ND		0.34		ug/m3			04/04/18 01:11	1
t-Butyl alcohol	ND		0.97		ug/m3			04/04/18 01:11	1
Tetrachloroethene	ND		0.54		ug/m3			04/04/18 01:11	1

TestAmerica Knoxville

Client Sample Results

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory # C755019A

TestAmerica Job ID: 140-11145-1

Client Sample ID: FD-2018

Lab Sample ID: 140-11145-8

Date Collected: 03/28/18 00:00

Matrix: Air

Date Received: 04/02/18 09:15

Sample Container: Summa Canister 6L

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	1.1		0.45		ug/m3			04/04/18 01:11	1
trans-1,2-Dichloroethene	ND		0.32		ug/m3			04/04/18 01:11	1
trans-1,3-Dichloropropene	ND		0.36		ug/m3			04/04/18 01:11	1
Trichloroethene	ND		0.19		ug/m3			04/04/18 01:11	1
Trichlorofluoromethane	1.5		0.45		ug/m3			04/04/18 01:11	1
Vinyl chloride	ND		0.10		ug/m3			04/04/18 01:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	88		60 - 140		04/04/18 01:11	1

Default Detection Limits

Client: New York State D.E.C.

TestAmerica Job ID: 140-11145-1

Project/Site: Former Ithaca Gun Factory # C755019A

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

Analyte	RL	MDL	Units	Method
1,1,1-Trichloroethane	0.080	0.012	ppb v/v	TO 15 LL
1,1,1-Trichloroethane	0.44	0.065	ug/m3	TO 15 LL
1,1,2,2-Tetrachloroethane	0.080	0.024	ppb v/v	TO 15 LL
1,1,2,2-Tetrachloroethane	0.55	0.16	ug/m3	TO 15 LL
1,1,2-Trichloroethane	0.080	0.021	ppb v/v	TO 15 LL
1,1,2-Trichloroethane	0.44	0.11	ug/m3	TO 15 LL
1,1,2-Trichlorotrifluoroethane	0.080	0.012	ppb v/v	TO 15 LL
1,1,2-Trichlorotrifluoroethane	0.61	0.092	ug/m3	TO 15 LL
1,1-Dichloroethane	0.080	0.010	ppb v/v	TO 15 LL
1,1-Dichloroethane	0.32	0.040	ug/m3	TO 15 LL
1,1-Dichloroethene	0.040	0.014	ppb v/v	TO 15 LL
1,1-Dichloroethene	0.16	0.056	ug/m3	TO 15 LL
1,2,4-Trichlorobenzene	0.080	0.039	ppb v/v	TO 15 LL
1,2,4-Trichlorobenzene	0.59	0.29	ug/m3	TO 15 LL
1,2,4-Trimethylbenzene	0.080	0.025	ppb v/v	TO 15 LL
1,2,4-Trimethylbenzene	0.39	0.12	ug/m3	TO 15 LL
1,2-Dibromoethane	0.080	0.018	ppb v/v	TO 15 LL
1,2-Dibromoethane	0.61	0.14	ug/m3	TO 15 LL
1,2-Dichlorobenzene	0.080	0.028	ppb v/v	TO 15 LL
1,2-Dichlorobenzene	0.48	0.17	ug/m3	TO 15 LL
1,2-Dichloroethane	0.080	0.019	ppb v/v	TO 15 LL
1,2-Dichloroethane	0.32	0.077	ug/m3	TO 15 LL
1,2-Dichloropropane	0.080	0.021	ppb v/v	TO 15 LL
1,2-Dichloropropane	0.37	0.097	ug/m3	TO 15 LL
1,2-Dichlorotetrafluoroethane	0.080	0.013	ppb v/v	TO 15 LL
1,2-Dichlorotetrafluoroethane	0.56	0.091	ug/m3	TO 15 LL
1,3,5-Trimethylbenzene	0.080	0.026	ppb v/v	TO 15 LL
1,3,5-Trimethylbenzene	0.39	0.13	ug/m3	TO 15 LL
1,3-Dichlorobenzene	0.080	0.026	ppb v/v	TO 15 LL
1,3-Dichlorobenzene	0.48	0.16	ug/m3	TO 15 LL
1,4-Dichlorobenzene	0.080	0.026	ppb v/v	TO 15 LL
1,4-Dichlorobenzene	0.48	0.16	ug/m3	TO 15 LL
1,4-Dioxane	0.20	0.032	ppb v/v	TO 15 LL
1,4-Dioxane	0.72	0.12	ug/m3	TO 15 LL
2,2,4-Trimethylpentane	0.20	0.016	ppb v/v	TO 15 LL
2,2,4-Trimethylpentane	0.93	0.075	ug/m3	TO 15 LL
2-Butanone	0.32	0.080	ppb v/v	TO 15 LL
2-Butanone	0.94	0.24	ug/m3	TO 15 LL
4-Methyl-2-pentanone (MIBK)	0.20	0.078	ppb v/v	TO 15 LL
4-Methyl-2-pentanone (MIBK)	0.82	0.32	ug/m3	TO 15 LL
Benzene	0.080	0.023	ppb v/v	TO 15 LL
Benzene	0.26	0.073	ug/m3	TO 15 LL
Benzyl chloride	0.16	0.031	ppb v/v	TO 15 LL
Benzyl chloride	0.83	0.16	ug/m3	TO 15 LL
Bromodichloromethane	0.080	0.018	ppb v/v	TO 15 LL
Bromodichloromethane	0.54	0.12	ug/m3	TO 15 LL
Bromoform	0.080	0.019	ppb v/v	TO 15 LL
Bromoform	0.83	0.20	ug/m3	TO 15 LL
Bromomethane	0.080	0.013	ppb v/v	TO 15 LL
Bromomethane	0.31	0.050	ug/m3	TO 15 LL
Carbon tetrachloride	0.032	0.015	ppb v/v	TO 15 LL
Carbon tetrachloride	0.20	0.094	ug/m3	TO 15 LL

TestAmerica Knoxville

Default Detection Limits

Client: New York State D.E.C.

TestAmerica Job ID: 140-11145-1

Project/Site: Former Ithaca Gun Factory # C755019A

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

Analyte	RL	MDL	Units	Method
Chlorobenzene	0.080	0.020	ppb v/v	TO 15 LL
Chlorobenzene	0.37	0.092	ug/m3	TO 15 LL
Chloroethane	0.080	0.014	ppb v/v	TO 15 LL
Chloroethane	0.21	0.037	ug/m3	TO 15 LL
Chloroform	0.080	0.015	ppb v/v	TO 15 LL
Chloroform	0.39	0.073	ug/m3	TO 15 LL
Chloromethane	0.20	0.064	ppb v/v	TO 15 LL
Chloromethane	0.41	0.13	ug/m3	TO 15 LL
cis-1,2-Dichloroethene	0.040	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.16	0.095	ug/m3	TO 15 LL
cis-1,3-Dichloropropene	0.080	0.029	ppb v/v	TO 15 LL
cis-1,3-Dichloropropene	0.36	0.13	ug/m3	TO 15 LL
Cyclohexane	0.20	0.016	ppb v/v	TO 15 LL
Cyclohexane	0.69	0.055	ug/m3	TO 15 LL
Dibromochloromethane	0.080	0.017	ppb v/v	TO 15 LL
Dibromochloromethane	0.68	0.14	ug/m3	TO 15 LL
Dichlorodifluoromethane	0.080	0.027	ppb v/v	TO 15 LL
Dichlorodifluoromethane	0.40	0.13	ug/m3	TO 15 LL
Ethanol	2.0	0.64	ppb v/v	TO 15 LL
Ethanol	3.8	1.2	ug/m3	TO 15 LL
Ethylbenzene	0.080	0.027	ppb v/v	TO 15 LL
Ethylbenzene	0.35	0.12	ug/m3	TO 15 LL
Hexachlorobutadiene	0.080	0.049	ppb v/v	TO 15 LL
Hexachlorobutadiene	0.85	0.52	ug/m3	TO 15 LL
Hexane	0.20	0.013	ppb v/v	TO 15 LL
Hexane	0.70	0.046	ug/m3	TO 15 LL
Methyl tert-butyl ether	0.16	0.068	ppb v/v	TO 15 LL
Methyl tert-butyl ether	0.58	0.25	ug/m3	TO 15 LL
Methylene Chloride	0.20	0.13	ppb v/v	TO 15 LL
Methylene Chloride	0.69	0.45	ug/m3	TO 15 LL
m-Xylene & p-Xylene	0.080	0.053	ppb v/v	TO 15 LL
m-Xylene & p-Xylene	0.35	0.23	ug/m3	TO 15 LL
o-Xylene	0.080	0.024	ppb v/v	TO 15 LL
o-Xylene	0.35	0.10	ug/m3	TO 15 LL
Styrene	0.080	0.023	ppb v/v	TO 15 LL
Styrene	0.34	0.098	ug/m3	TO 15 LL
t-Butyl alcohol	0.32	0.015	ppb v/v	TO 15 LL
t-Butyl alcohol	0.97	0.045	ug/m3	TO 15 LL
Tetrachloroethene	0.080	0.016	ppb v/v	TO 15 LL
Tetrachloroethene	0.54	0.11	ug/m3	TO 15 LL
Toluene	0.12	0.12	ppb v/v	TO 15 LL
Toluene	0.45	0.45	ug/m3	TO 15 LL
trans-1,2-Dichloroethene	0.080	0.020	ppb v/v	TO 15 LL
trans-1,2-Dichloroethene	0.32	0.079	ug/m3	TO 15 LL
trans-1,3-Dichloropropene	0.080	0.019	ppb v/v	TO 15 LL
trans-1,3-Dichloropropene	0.36	0.086	ug/m3	TO 15 LL
Trichloroethene	0.036	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.19	0.075	ug/m3	TO 15 LL
Trichlorofluoromethane	0.080	0.010	ppb v/v	TO 15 LL
Trichlorofluoromethane	0.45	0.056	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL

TestAmerica Knoxville

Surrogate Summary

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory # C755019A

TestAmerica Job ID: 140-11145-1

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

Matrix: Air

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (60-140)
140-11145-1	H45-BA-2018	90
140-11145-2	H45-CS-2018	89
140-11145-3	H46-SS-2018	87
140-11145-4	H46-BA-2018	87
140-11145-5	H41B-BA-2018	87
140-11145-6	H41-OA-2018	88
140-11145-7	H41A-BA-2018	88
140-11145-7 - DL	H41A-BA-2018	103
140-11145-8	FD-2018	88
LCS 140-19179/1002	Lab Control Sample	89
LCS 140-19215/1002	Lab Control Sample	103
MB 140-19179/4	Method Blank	87
MB 140-19215/5	Method Blank	101

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

QC Sample Results

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory # C755019A

TestAmerica Job ID: 140-11145-1

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

Lab Sample ID: MB 140-19179/4

Matrix: Air

Analysis Batch: 19179

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.080		ppb v/v			04/03/18 11:58	1
1,1,2,2-Tetrachloroethane	ND		0.080		ppb v/v			04/03/18 11:58	1
1,1,2-Trichloroethane	ND		0.080		ppb v/v			04/03/18 11:58	1
1,1,2-Trichlorotrifluoroethane	ND		0.080		ppb v/v			04/03/18 11:58	1
1,1-Dichloroethane	ND		0.080		ppb v/v			04/03/18 11:58	1
1,1-Dichloroethene	ND		0.040		ppb v/v			04/03/18 11:58	1
1,2,4-Trichlorobenzene	ND		0.080		ppb v/v			04/03/18 11:58	1
1,2,4-Trimethylbenzene	ND		0.080		ppb v/v			04/03/18 11:58	1
1,2-Dibromoethane	ND		0.080		ppb v/v			04/03/18 11:58	1
1,2-Dichlorobenzene	ND		0.080		ppb v/v			04/03/18 11:58	1
1,2-Dichloroethane	ND		0.080		ppb v/v			04/03/18 11:58	1
1,2-Dichloropropane	ND		0.080		ppb v/v			04/03/18 11:58	1
1,2-Dichlorotetrafluoroethane	ND		0.080		ppb v/v			04/03/18 11:58	1
1,3,5-Trimethylbenzene	ND		0.080		ppb v/v			04/03/18 11:58	1
1,3-Dichlorobenzene	ND		0.080		ppb v/v			04/03/18 11:58	1
1,4-Dichlorobenzene	ND		0.080		ppb v/v			04/03/18 11:58	1
1,4-Dioxane	ND		0.20		ppb v/v			04/03/18 11:58	1
2,2,4-Trimethylpentane	ND		0.20		ppb v/v			04/03/18 11:58	1
2-Butanone	ND		0.32		ppb v/v			04/03/18 11:58	1
4-Methyl-2-pentanone (MIBK)	ND		0.20		ppb v/v			04/03/18 11:58	1
Benzene	ND		0.080		ppb v/v			04/03/18 11:58	1
Benzyl chloride	ND		0.16		ppb v/v			04/03/18 11:58	1
Bromodichloromethane	ND		0.080		ppb v/v			04/03/18 11:58	1
Bromoform	ND		0.080		ppb v/v			04/03/18 11:58	1
Bromomethane	ND		0.080		ppb v/v			04/03/18 11:58	1
Carbon tetrachloride	ND		0.032		ppb v/v			04/03/18 11:58	1
Chlorobenzene	ND		0.080		ppb v/v			04/03/18 11:58	1
Chloroethane	ND		0.080		ppb v/v			04/03/18 11:58	1
Chloroform	ND		0.080		ppb v/v			04/03/18 11:58	1
Chloromethane	ND		0.20		ppb v/v			04/03/18 11:58	1
cis-1,2-Dichloroethene	ND		0.040		ppb v/v			04/03/18 11:58	1
cis-1,3-Dichloropropene	ND		0.080		ppb v/v			04/03/18 11:58	1
Cyclohexane	ND		0.20		ppb v/v			04/03/18 11:58	1
Dibromochloromethane	ND		0.080		ppb v/v			04/03/18 11:58	1
Dichlorodifluoromethane	ND		0.080		ppb v/v			04/03/18 11:58	1
Ethanol	ND		2.0		ppb v/v			04/03/18 11:58	1
Ethylbenzene	ND		0.080		ppb v/v			04/03/18 11:58	1
Hexachlorobutadiene	ND		0.080		ppb v/v			04/03/18 11:58	1
Hexane	ND		0.20		ppb v/v			04/03/18 11:58	1
Methyl tert-butyl ether	ND		0.16		ppb v/v			04/03/18 11:58	1
Methylene Chloride	ND		0.20		ppb v/v			04/03/18 11:58	1
m-Xylene & p-Xylene	ND		0.080		ppb v/v			04/03/18 11:58	1
o-Xylene	ND		0.080		ppb v/v			04/03/18 11:58	1
Styrene	ND		0.080		ppb v/v			04/03/18 11:58	1
t-Butyl alcohol	ND		0.32		ppb v/v			04/03/18 11:58	1
Tetrachloroethene	ND		0.080		ppb v/v			04/03/18 11:58	1
Toluene	ND		0.12		ppb v/v			04/03/18 11:58	1
trans-1,2-Dichloroethene	ND		0.080		ppb v/v			04/03/18 11:58	1

TestAmerica Knoxville

QC Sample Results

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory # C755019A

TestAmerica Job ID: 140-11145-1

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

Lab Sample ID: MB 140-19179/4

Matrix: Air

Analysis Batch: 19179

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		0.080		ppb v/v			04/03/18 11:58	1
Trichloroethene	ND		0.036		ppb v/v			04/03/18 11:58	1
Trichlorofluoromethane	ND		0.080		ppb v/v			04/03/18 11:58	1
Vinyl chloride	ND		0.040		ppb v/v			04/03/18 11:58	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.44		ug/m3			04/03/18 11:58	1
1,1,2,2-Tetrachloroethane	ND		0.55		ug/m3			04/03/18 11:58	1
1,1,2-Trichloroethane	ND		0.44		ug/m3			04/03/18 11:58	1
1,1,2-Trichlorotrifluoroethane	ND		0.61		ug/m3			04/03/18 11:58	1
1,1-Dichloroethane	ND		0.32		ug/m3			04/03/18 11:58	1
1,1-Dichloroethene	ND		0.16		ug/m3			04/03/18 11:58	1
1,2,4-Trichlorobenzene	ND		0.59		ug/m3			04/03/18 11:58	1
1,2,4-Trimethylbenzene	ND		0.39		ug/m3			04/03/18 11:58	1
1,2-Dibromoethane	ND		0.61		ug/m3			04/03/18 11:58	1
1,2-Dichlorobenzene	ND		0.48		ug/m3			04/03/18 11:58	1
1,2-Dichloroethane	ND		0.32		ug/m3			04/03/18 11:58	1
1,2-Dichloropropane	ND		0.37		ug/m3			04/03/18 11:58	1
1,2-Dichlorotetrafluoroethane	ND		0.56		ug/m3			04/03/18 11:58	1
1,3,5-Trimethylbenzene	ND		0.39		ug/m3			04/03/18 11:58	1
1,3-Dichlorobenzene	ND		0.48		ug/m3			04/03/18 11:58	1
1,4-Dichlorobenzene	ND		0.48		ug/m3			04/03/18 11:58	1
1,4-Dioxane	ND		0.72		ug/m3			04/03/18 11:58	1
2,2,4-Trimethylpentane	ND		0.93		ug/m3			04/03/18 11:58	1
2-Butanone	ND		0.94		ug/m3			04/03/18 11:58	1
4-Methyl-2-pentanone (MIBK)	ND		0.82		ug/m3			04/03/18 11:58	1
Benzene	ND		0.26		ug/m3			04/03/18 11:58	1
Benzyl chloride	ND		0.83		ug/m3			04/03/18 11:58	1
Bromodichloromethane	ND		0.54		ug/m3			04/03/18 11:58	1
Bromoform	ND		0.83		ug/m3			04/03/18 11:58	1
Bromomethane	ND		0.31		ug/m3			04/03/18 11:58	1
Carbon tetrachloride	ND		0.20		ug/m3			04/03/18 11:58	1
Chlorobenzene	ND		0.37		ug/m3			04/03/18 11:58	1
Chloroethane	ND		0.21		ug/m3			04/03/18 11:58	1
Chloroform	ND		0.39		ug/m3			04/03/18 11:58	1
Chloromethane	ND		0.41		ug/m3			04/03/18 11:58	1
cis-1,2-Dichloroethene	ND		0.16		ug/m3			04/03/18 11:58	1
cis-1,3-Dichloropropene	ND		0.36		ug/m3			04/03/18 11:58	1
Cyclohexane	ND		0.69		ug/m3			04/03/18 11:58	1
Dibromochloromethane	ND		0.68		ug/m3			04/03/18 11:58	1
Dichlorodifluoromethane	ND		0.40		ug/m3			04/03/18 11:58	1
Ethanol	ND		3.8		ug/m3			04/03/18 11:58	1
Ethylbenzene	ND		0.35		ug/m3			04/03/18 11:58	1
Hexachlorobutadiene	ND		0.85		ug/m3			04/03/18 11:58	1
Hexane	ND		0.70		ug/m3			04/03/18 11:58	1
Methyl tert-butyl ether	ND		0.58		ug/m3			04/03/18 11:58	1
Methylene Chloride	ND		0.69		ug/m3			04/03/18 11:58	1

TestAmerica Knoxville

QC Sample Results

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory # C755019A

TestAmerica Job ID: 140-11145-1

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

Lab Sample ID: MB 140-19179/4

Matrix: Air

Analysis Batch: 19179

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
m-Xylene & p-Xylene	ND		0.35		ug/m3			04/03/18 11:58	1
o-Xylene	ND		0.35		ug/m3			04/03/18 11:58	1
Styrene	ND		0.34		ug/m3			04/03/18 11:58	1
t-Butyl alcohol	ND		0.97		ug/m3			04/03/18 11:58	1
Tetrachloroethene	ND		0.54		ug/m3			04/03/18 11:58	1
Toluene	ND		0.45		ug/m3			04/03/18 11:58	1
trans-1,2-Dichloroethene	ND		0.32		ug/m3			04/03/18 11:58	1
trans-1,3-Dichloropropene	ND		0.36		ug/m3			04/03/18 11:58	1
Trichloroethene	ND		0.19		ug/m3			04/03/18 11:58	1
Trichlorofluoromethane	ND		0.45		ug/m3			04/03/18 11:58	1
Vinyl chloride	ND		0.10		ug/m3			04/03/18 11:58	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		60 - 140		04/03/18 11:58	1

Lab Sample ID: LCS 140-19179/1002

Matrix: Air

Analysis Batch: 19179

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	2.00	1.51		ppb v/v		76	70 - 130
1,1,2,2-Tetrachloroethane	2.00	2.16		ppb v/v		108	70 - 130
1,1,2-Trichloroethane	2.00	1.98		ppb v/v		99	70 - 130
1,1,2-Trichlorotrifluoroethane	2.00	1.99		ppb v/v		99	70 - 130
1,1-Dichloroethane	2.00	1.54		ppb v/v		77	70 - 130
1,1-Dichloroethene	2.00	1.86		ppb v/v		93	70 - 130
1,2,4-Trichlorobenzene	2.00	2.44		ppb v/v		122	60 - 140
1,2,4-Trimethylbenzene	2.00	1.96		ppb v/v		98	70 - 130
1,2-Dibromoethane	2.00	2.06		ppb v/v		103	70 - 130
1,2-Dichlorobenzene	2.00	2.20		ppb v/v		110	70 - 130
1,2-Dichloroethane	2.00	1.29	*	ppb v/v		64	70 - 130
1,2-Dichloropropane	2.00	1.73		ppb v/v		87	70 - 130
1,2-Dichlorotetrafluoroethane	2.00	2.46		ppb v/v		123	60 - 140
1,3,5-Trimethylbenzene	2.00	2.20		ppb v/v		110	70 - 130
1,3-Dichlorobenzene	2.00	2.18		ppb v/v		109	70 - 130
1,4-Dichlorobenzene	2.00	2.19		ppb v/v		110	70 - 130
1,4-Dioxane	2.00	1.70		ppb v/v		85	60 - 140
2,2,4-Trimethylpentane	2.00	1.68		ppb v/v		84	70 - 130
2-Butanone	2.00	1.57		ppb v/v		78	60 - 140
4-Methyl-2-pentanone (MIBK)	2.00	1.86		ppb v/v		93	60 - 140
Benzene	2.00	1.72		ppb v/v		86	70 - 130
Benzyl chloride	2.00	2.20		ppb v/v		110	70 - 130
Bromodichloromethane	2.00	1.75		ppb v/v		88	70 - 130
Bromoform	2.00	2.46		ppb v/v		123	60 - 140
Bromomethane	2.00	2.42		ppb v/v		121	70 - 130
Carbon tetrachloride	2.00	1.80		ppb v/v		90	70 - 130
Chlorobenzene	2.00	2.01		ppb v/v		101	70 - 130

TestAmerica Knoxville

QC Sample Results

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory # C755019A

TestAmerica Job ID: 140-11145-1

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

Lab Sample ID: LCS 140-19179/1002

Matrix: Air

Analysis Batch: 19179

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloroethane	2.00	2.08		ppb v/v		104	70 - 130
Chloroform	2.00	1.60		ppb v/v		80	70 - 130
Chloromethane	2.00	1.96		ppb v/v		98	60 - 140
cis-1,2-Dichloroethene	2.00	1.87		ppb v/v		94	70 - 130
cis-1,3-Dichloropropene	2.00	1.71		ppb v/v		85	70 - 130
Cyclohexane	2.00	1.70		ppb v/v		85	70 - 130
Dibromochloromethane	2.00	2.17		ppb v/v		109	70 - 130
Dichlorodifluoromethane	2.00	1.90		ppb v/v		95	60 - 140
Ethanol	10.0	11.7		ppb v/v		117	60 - 140
Ethylbenzene	2.00	1.85		ppb v/v		93	70 - 130
Hexachlorobutadiene	2.00	1.80		ppb v/v		90	60 - 140
Hexane	2.00	1.41		ppb v/v		71	70 - 130
Methyl tert-butyl ether	2.00	1.48		ppb v/v		74	60 - 140
Methylene Chloride	2.00	1.69		ppb v/v		85	70 - 130
m-Xylene & p-Xylene	4.00	3.77		ppb v/v		94	70 - 130
o-Xylene	2.00	1.81		ppb v/v		91	70 - 130
Styrene	2.00	2.12		ppb v/v		106	70 - 130
t-Butyl alcohol	2.00	1.30		ppb v/v		65	60 - 140
Tetrachloroethene	2.00	1.88		ppb v/v		94	70 - 130
Toluene	2.00	1.85		ppb v/v		92	70 - 130
trans-1,2-Dichloroethene	2.00	1.85		ppb v/v		92	70 - 130
trans-1,3-Dichloropropene	2.00	1.65		ppb v/v		82	70 - 130
Trichloroethene	2.00	1.90		ppb v/v		95	70 - 130
Trichlorofluoromethane	2.00	2.52		ppb v/v		126	60 - 140
Vinyl chloride	2.00	1.95		ppb v/v		98	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	11	8.26		ug/m3		76	70 - 130
1,1,1,2-Tetrachloroethane	14	14.8		ug/m3		108	70 - 130
1,1,2-Trichloroethane	11	10.8		ug/m3		99	70 - 130
1,1,2-Trichlorotrifluoroethane	15	15.2		ug/m3		99	70 - 130
1,1-Dichloroethane	8.1	6.22		ug/m3		77	70 - 130
1,1-Dichloroethene	7.9	7.36		ug/m3		93	70 - 130
1,2,4-Trichlorobenzene	15	18.1		ug/m3		122	60 - 140
1,2,4-Trimethylbenzene	9.8	9.64		ug/m3		98	70 - 130
1,2-Dibromoethane	15	15.8		ug/m3		103	70 - 130
1,2-Dichlorobenzene	12	13.2		ug/m3		110	70 - 130
1,2-Dichloroethane	8.1	5.20	*	ug/m3		64	70 - 130
1,2-Dichloropropane	9.2	8.00		ug/m3		87	70 - 130
1,2-Dichlorotetrafluoroethane	14	17.2		ug/m3		123	60 - 140
1,3,5-Trimethylbenzene	9.8	10.8		ug/m3		110	70 - 130
1,3-Dichlorobenzene	12	13.1		ug/m3		109	70 - 130
1,4-Dichlorobenzene	12	13.2		ug/m3		110	70 - 130
1,4-Dioxane	7.2	6.13		ug/m3		85	60 - 140
2,2,4-Trimethylpentane	9.3	7.85		ug/m3		84	70 - 130
2-Butanone	5.9	4.63		ug/m3		78	60 - 140
4-Methyl-2-pentanone (MIBK)	8.2	7.62		ug/m3		93	60 - 140

TestAmerica Knoxville

QC Sample Results

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory # C755019A

TestAmerica Job ID: 140-11145-1

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

Lab Sample ID: LCS 140-19179/1002
Matrix: Air
Analysis Batch: 19179

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	6.4	5.50		ug/m3		86	70 - 130
Benzyl chloride	10	11.4		ug/m3		110	70 - 130
Bromodichloromethane	13	11.7		ug/m3		88	70 - 130
Bromoform	21	25.4		ug/m3		123	60 - 140
Bromomethane	7.8	9.40		ug/m3		121	70 - 130
Carbon tetrachloride	13	11.3		ug/m3		90	70 - 130
Chlorobenzene	9.2	9.27		ug/m3		101	70 - 130
Chloroethane	5.3	5.49		ug/m3		104	70 - 130
Chloroform	9.8	7.80		ug/m3		80	70 - 130
Chloromethane	4.1	4.05		ug/m3		98	60 - 140
cis-1,2-Dichloroethene	7.9	7.41		ug/m3		94	70 - 130
cis-1,3-Dichloropropene	9.1	7.75		ug/m3		85	70 - 130
Cyclohexane	6.9	5.86		ug/m3		85	70 - 130
Dibromochloromethane	17	18.5		ug/m3		109	70 - 130
Dichlorodifluoromethane	9.9	9.38		ug/m3		95	60 - 140
Ethanol	19	22.1		ug/m3		117	60 - 140
Ethylbenzene	8.7	8.04		ug/m3		93	70 - 130
Hexachlorobutadiene	21	19.2		ug/m3		90	60 - 140
Hexane	7.0	4.98		ug/m3		71	70 - 130
Methyl tert-butyl ether	7.2	5.34		ug/m3		74	60 - 140
Methylene Chloride	6.9	5.87		ug/m3		85	70 - 130
m-Xylene & p-Xylene	17	16.4		ug/m3		94	70 - 130
o-Xylene	8.7	7.87		ug/m3		91	70 - 130
Styrene	8.5	9.04		ug/m3		106	70 - 130
t-Butyl alcohol	6.1	3.95		ug/m3		65	60 - 140
Tetrachloroethene	14	12.8		ug/m3		94	70 - 130
Toluene	7.5	6.97		ug/m3		92	70 - 130
trans-1,2-Dichloroethene	7.9	7.33		ug/m3		92	70 - 130
trans-1,3-Dichloropropene	9.1	7.47		ug/m3		82	70 - 130
Trichloroethene	11	10.2		ug/m3		95	70 - 130
Trichlorofluoromethane	11	14.1		ug/m3		126	60 - 140
Vinyl chloride	5.1	4.99		ug/m3		98	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	89		60 - 140

Lab Sample ID: MB 140-19215/5
Matrix: Air
Analysis Batch: 19215

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.080		ppb v/v			04/04/18 12:49	1
1,1,2,2-Tetrachloroethane	ND		0.080		ppb v/v			04/04/18 12:49	1
1,1,2-Trichloroethane	ND		0.080		ppb v/v			04/04/18 12:49	1
1,1,2-Trichlorotrifluoroethane	ND		0.080		ppb v/v			04/04/18 12:49	1
1,1-Dichloroethane	ND		0.080		ppb v/v			04/04/18 12:49	1
1,1-Dichloroethene	ND		0.040		ppb v/v			04/04/18 12:49	1

TestAmerica Knoxville

QC Sample Results

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory # C755019A

TestAmerica Job ID: 140-11145-1

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

Lab Sample ID: MB 140-19215/5
Matrix: Air
Analysis Batch: 19215

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.080		ppb v/v			04/04/18 12:49	1
1,2,4-Trimethylbenzene	ND		0.080		ppb v/v			04/04/18 12:49	1
1,2-Dibromoethane	ND		0.080		ppb v/v			04/04/18 12:49	1
1,2-Dichlorobenzene	ND		0.080		ppb v/v			04/04/18 12:49	1
1,2-Dichloroethane	ND		0.080		ppb v/v			04/04/18 12:49	1
1,2-Dichloropropane	ND		0.080		ppb v/v			04/04/18 12:49	1
1,2-Dichlorotetrafluoroethane	ND		0.080		ppb v/v			04/04/18 12:49	1
1,3,5-Trimethylbenzene	ND		0.080		ppb v/v			04/04/18 12:49	1
1,3-Dichlorobenzene	ND		0.080		ppb v/v			04/04/18 12:49	1
1,4-Dichlorobenzene	ND		0.080		ppb v/v			04/04/18 12:49	1
1,4-Dioxane	ND		0.20		ppb v/v			04/04/18 12:49	1
2,2,4-Trimethylpentane	ND		0.20		ppb v/v			04/04/18 12:49	1
2-Butanone	ND		0.32		ppb v/v			04/04/18 12:49	1
4-Methyl-2-pentanone (MIBK)	ND		0.20		ppb v/v			04/04/18 12:49	1
Benzene	ND		0.080		ppb v/v			04/04/18 12:49	1
Benzyl chloride	ND		0.16		ppb v/v			04/04/18 12:49	1
Bromodichloromethane	ND		0.080		ppb v/v			04/04/18 12:49	1
Bromoform	ND		0.080		ppb v/v			04/04/18 12:49	1
Bromomethane	ND		0.080		ppb v/v			04/04/18 12:49	1
Carbon tetrachloride	ND		0.032		ppb v/v			04/04/18 12:49	1
Chlorobenzene	ND		0.080		ppb v/v			04/04/18 12:49	1
Chloroethane	ND		0.080		ppb v/v			04/04/18 12:49	1
Chloroform	ND		0.080		ppb v/v			04/04/18 12:49	1
Chloromethane	ND		0.20		ppb v/v			04/04/18 12:49	1
cis-1,2-Dichloroethene	ND		0.040		ppb v/v			04/04/18 12:49	1
cis-1,3-Dichloropropene	ND		0.080		ppb v/v			04/04/18 12:49	1
Cyclohexane	ND		0.20		ppb v/v			04/04/18 12:49	1
Dibromochloromethane	ND		0.080		ppb v/v			04/04/18 12:49	1
Dichlorodifluoromethane	ND		0.080		ppb v/v			04/04/18 12:49	1
Ethanol	ND		2.0		ppb v/v			04/04/18 12:49	1
Ethylbenzene	ND		0.080		ppb v/v			04/04/18 12:49	1
Hexachlorobutadiene	ND		0.080		ppb v/v			04/04/18 12:49	1
Hexane	ND		0.20		ppb v/v			04/04/18 12:49	1
Methyl tert-butyl ether	ND		0.16		ppb v/v			04/04/18 12:49	1
Methylene Chloride	ND		0.20		ppb v/v			04/04/18 12:49	1
m-Xylene & p-Xylene	ND		0.080		ppb v/v			04/04/18 12:49	1
o-Xylene	ND		0.080		ppb v/v			04/04/18 12:49	1
Styrene	ND		0.080		ppb v/v			04/04/18 12:49	1
t-Butyl alcohol	ND		0.32		ppb v/v			04/04/18 12:49	1
Tetrachloroethene	ND		0.080		ppb v/v			04/04/18 12:49	1
Toluene	ND		0.12		ppb v/v			04/04/18 12:49	1
trans-1,2-Dichloroethene	ND		0.080		ppb v/v			04/04/18 12:49	1
trans-1,3-Dichloropropene	ND		0.080		ppb v/v			04/04/18 12:49	1
Trichloroethene	ND		0.036		ppb v/v			04/04/18 12:49	1
Trichlorofluoromethane	ND		0.080		ppb v/v			04/04/18 12:49	1
Vinyl chloride	ND		0.040		ppb v/v			04/04/18 12:49	1

TestAmerica Knoxville

QC Sample Results

Client: New York State D.E.C.

TestAmerica Job ID: 140-11145-1

Project/Site: Former Ithaca Gun Factory # C755019A

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,1-Trichloroethane	ND		0.44		ug/m3			04/04/18 12:49	1
1,1,2,2-Tetrachloroethane	ND		0.55		ug/m3			04/04/18 12:49	1
1,1,2-Trichloroethane	ND		0.44		ug/m3			04/04/18 12:49	1
1,1,2-Trichlorotrifluoroethane	ND		0.61		ug/m3			04/04/18 12:49	1
1,1-Dichloroethane	ND		0.32		ug/m3			04/04/18 12:49	1
1,1-Dichloroethene	ND		0.16		ug/m3			04/04/18 12:49	1
1,2,4-Trichlorobenzene	ND		0.59		ug/m3			04/04/18 12:49	1
1,2,4-Trimethylbenzene	ND		0.39		ug/m3			04/04/18 12:49	1
1,2-Dibromoethane	ND		0.61		ug/m3			04/04/18 12:49	1
1,2-Dichlorobenzene	ND		0.48		ug/m3			04/04/18 12:49	1
1,2-Dichloroethane	ND		0.32		ug/m3			04/04/18 12:49	1
1,2-Dichloropropane	ND		0.37		ug/m3			04/04/18 12:49	1
1,2-Dichlorotetrafluoroethane	ND		0.56		ug/m3			04/04/18 12:49	1
1,3,5-Trimethylbenzene	ND		0.39		ug/m3			04/04/18 12:49	1
1,3-Dichlorobenzene	ND		0.48		ug/m3			04/04/18 12:49	1
1,4-Dichlorobenzene	ND		0.48		ug/m3			04/04/18 12:49	1
1,4-Dioxane	ND		0.72		ug/m3			04/04/18 12:49	1
2,2,4-Trimethylpentane	ND		0.93		ug/m3			04/04/18 12:49	1
2-Butanone	ND		0.94		ug/m3			04/04/18 12:49	1
4-Methyl-2-pentanone (MIBK)	ND		0.82		ug/m3			04/04/18 12:49	1
Benzene	ND		0.26		ug/m3			04/04/18 12:49	1
Benzyl chloride	ND		0.83		ug/m3			04/04/18 12:49	1
Bromodichloromethane	ND		0.54		ug/m3			04/04/18 12:49	1
Bromoform	ND		0.83		ug/m3			04/04/18 12:49	1
Bromomethane	ND		0.31		ug/m3			04/04/18 12:49	1
Carbon tetrachloride	ND		0.20		ug/m3			04/04/18 12:49	1
Chlorobenzene	ND		0.37		ug/m3			04/04/18 12:49	1
Chloroethane	ND		0.21		ug/m3			04/04/18 12:49	1
Chloroform	ND		0.39		ug/m3			04/04/18 12:49	1
Chloromethane	ND		0.41		ug/m3			04/04/18 12:49	1
cis-1,2-Dichloroethene	ND		0.16		ug/m3			04/04/18 12:49	1
cis-1,3-Dichloropropene	ND		0.36		ug/m3			04/04/18 12:49	1
Cyclohexane	ND		0.69		ug/m3			04/04/18 12:49	1
Dibromochloromethane	ND		0.68		ug/m3			04/04/18 12:49	1
Dichlorodifluoromethane	ND		0.40		ug/m3			04/04/18 12:49	1
Ethanol	ND		3.8		ug/m3			04/04/18 12:49	1
Ethylbenzene	ND		0.35		ug/m3			04/04/18 12:49	1
Hexachlorobutadiene	ND		0.85		ug/m3			04/04/18 12:49	1
Hexane	ND		0.70		ug/m3			04/04/18 12:49	1
Methyl tert-butyl ether	ND		0.58		ug/m3			04/04/18 12:49	1
Methylene Chloride	ND		0.69		ug/m3			04/04/18 12:49	1
m-Xylene & p-Xylene	ND		0.35		ug/m3			04/04/18 12:49	1
o-Xylene	ND		0.35		ug/m3			04/04/18 12:49	1
Styrene	ND		0.34		ug/m3			04/04/18 12:49	1
t-Butyl alcohol	ND		0.97		ug/m3			04/04/18 12:49	1
Tetrachloroethene	ND		0.54		ug/m3			04/04/18 12:49	1
Toluene	ND		0.45		ug/m3			04/04/18 12:49	1
trans-1,2-Dichloroethene	ND		0.32		ug/m3			04/04/18 12:49	1
trans-1,3-Dichloropropene	ND		0.36		ug/m3			04/04/18 12:49	1
Trichloroethene	ND		0.19		ug/m3			04/04/18 12:49	1
Trichlorofluoromethane	ND		0.45		ug/m3			04/04/18 12:49	1
Vinyl chloride	ND		0.10		ug/m3			04/04/18 12:49	1

TestAmerica Knoxville

QC Sample Results

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory # C755019A

TestAmerica Job ID: 140-11145-1

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

Lab Sample ID: MB 140-19215/5
Matrix: Air
Analysis Batch: 19215

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

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		60 - 140		04/04/18 12:49	1

Lab Sample ID: LCS 140-19215/1002
Matrix: Air
Analysis Batch: 19215

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	2.00	2.09		ppb v/v		105	70 - 130
1,1,2,2-Tetrachloroethane	2.00	1.56		ppb v/v		78	70 - 130
1,1,2-Trichloroethane	2.00	1.75		ppb v/v		88	70 - 130
1,1,2-Trichlorotrifluoroethane	2.00	2.10		ppb v/v		105	70 - 130
1,1-Dichloroethane	2.00	1.98		ppb v/v		99	70 - 130
1,1-Dichloroethene	2.00	1.99		ppb v/v		100	70 - 130
1,2,4-Trichlorobenzene	2.00	1.49		ppb v/v		75	60 - 140
1,2,4-Trimethylbenzene	2.00	1.48		ppb v/v		74	70 - 130
1,2-Dibromoethane	2.00	1.97		ppb v/v		99	70 - 130
1,2-Dichlorobenzene	2.00	1.61		ppb v/v		80	70 - 130
1,2-Dichloroethane	2.00	2.22		ppb v/v		111	70 - 130
1,2-Dichloropropane	2.00	1.84		ppb v/v		92	70 - 130
1,2-Dichlorotetrafluoroethane	2.00	2.19		ppb v/v		110	60 - 140
1,3,5-Trimethylbenzene	2.00	1.47		ppb v/v		74	70 - 130
1,3-Dichlorobenzene	2.00	1.65		ppb v/v		82	70 - 130
1,4-Dichlorobenzene	2.00	1.64		ppb v/v		82	70 - 130
1,4-Dioxane	2.00	1.74		ppb v/v		87	60 - 140
2,2,4-Trimethylpentane	2.00	1.86		ppb v/v		93	70 - 130
2-Butanone	2.00	1.38		ppb v/v		69	60 - 140
4-Methyl-2-pentanone (MIBK)	2.00	1.64		ppb v/v		82	60 - 140
Benzene	2.00	1.76		ppb v/v		88	70 - 130
Benzyl chloride	2.00	1.59		ppb v/v		79	70 - 130
Bromodichloromethane	2.00	2.04		ppb v/v		102	70 - 130
Bromoform	2.00	2.12		ppb v/v		106	60 - 140
Bromomethane	2.00	2.02		ppb v/v		101	70 - 130
Carbon tetrachloride	2.00	2.33		ppb v/v		117	70 - 130
Chlorobenzene	2.00	1.92		ppb v/v		96	70 - 130
Chloroethane	2.00	1.96		ppb v/v		98	70 - 130
Chloroform	2.00	2.01		ppb v/v		101	70 - 130
Chloromethane	2.00	2.05		ppb v/v		102	60 - 140
cis-1,2-Dichloroethene	2.00	1.89		ppb v/v		94	70 - 130
cis-1,3-Dichloropropene	2.00	1.87		ppb v/v		94	70 - 130
Cyclohexane	2.00	1.86		ppb v/v		93	70 - 130
Dibromochloromethane	2.00	2.14		ppb v/v		107	70 - 130
Dichlorodifluoromethane	2.00	2.33		ppb v/v		117	60 - 140
Ethanol	10.0	9.26		ppb v/v		93	60 - 140
Ethylbenzene	2.00	1.58		ppb v/v		79	70 - 130
Hexachlorobutadiene	2.00	1.47		ppb v/v		73	60 - 140
Hexane	2.00	1.87		ppb v/v		94	70 - 130
Methyl tert-butyl ether	2.00	1.59		ppb v/v		79	60 - 140

TestAmerica Knoxville

QC Sample Results

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory # C755019A

TestAmerica Job ID: 140-11145-1

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

Lab Sample ID: LCS 140-19215/1002

Matrix: Air

Analysis Batch: 19215

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methylene Chloride	2.00	1.71		ppb v/v		86	70 - 130
m-Xylene & p-Xylene	4.00	3.16		ppb v/v		79	70 - 130
o-Xylene	2.00	1.56		ppb v/v		78	70 - 130
Styrene	2.00	1.51		ppb v/v		76	70 - 130
t-Butyl alcohol	2.00	2.41		ppb v/v		120	60 - 140
Tetrachloroethene	2.00	1.96		ppb v/v		98	70 - 130
Toluene	2.00	1.66		ppb v/v		83	70 - 130
trans-1,2-Dichloroethene	2.00	1.96		ppb v/v		98	70 - 130
trans-1,3-Dichloropropene	2.00	1.90		ppb v/v		95	70 - 130
Trichloroethene	2.00	1.89		ppb v/v		95	70 - 130
Trichlorofluoromethane	2.00	2.43		ppb v/v		122	60 - 140
Vinyl chloride	2.00	2.14		ppb v/v		107	70 - 130
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	11	11.4		ug/m3		105	70 - 130
1,1,2,2-Tetrachloroethane	14	10.7		ug/m3		78	70 - 130
1,1,2-Trichloroethane	11	9.57		ug/m3		88	70 - 130
1,1,2-Trichlorotrifluoroethane	15	16.1		ug/m3		105	70 - 130
1,1-Dichloroethane	8.1	8.00		ug/m3		99	70 - 130
1,1-Dichloroethene	7.9	7.89		ug/m3		100	70 - 130
1,2,4-Trichlorobenzene	15	11.1		ug/m3		75	60 - 140
1,2,4-Trimethylbenzene	9.8	7.27		ug/m3		74	70 - 130
1,2-Dibromoethane	15	15.1		ug/m3		99	70 - 130
1,2-Dichlorobenzene	12	9.67		ug/m3		80	70 - 130
1,2-Dichloroethane	8.1	8.99		ug/m3		111	70 - 130
1,2-Dichloropropane	9.2	8.48		ug/m3		92	70 - 130
1,2-Dichlorotetrafluoroethane	14	15.3		ug/m3		110	60 - 140
1,3,5-Trimethylbenzene	9.8	7.25		ug/m3		74	70 - 130
1,3-Dichlorobenzene	12	9.91		ug/m3		82	70 - 130
1,4-Dichlorobenzene	12	9.84		ug/m3		82	70 - 130
1,4-Dioxane	7.2	6.28		ug/m3		87	60 - 140
2,2,4-Trimethylpentane	9.3	8.67		ug/m3		93	70 - 130
2-Butanone	5.9	4.07		ug/m3		69	60 - 140
4-Methyl-2-pentanone (MIBK)	8.2	6.73		ug/m3		82	60 - 140
Benzene	6.4	5.63		ug/m3		88	70 - 130
Benzyl chloride	10	8.21		ug/m3		79	70 - 130
Bromodichloromethane	13	13.6		ug/m3		102	70 - 130
Bromoform	21	21.9		ug/m3		106	60 - 140
Bromomethane	7.8	7.86		ug/m3		101	70 - 130
Carbon tetrachloride	13	14.7		ug/m3		117	70 - 130
Chlorobenzene	9.2	8.82		ug/m3		96	70 - 130
Chloroethane	5.3	5.17		ug/m3		98	70 - 130
Chloroform	9.8	9.82		ug/m3		101	70 - 130
Chloromethane	4.1	4.23		ug/m3		102	60 - 140
cis-1,2-Dichloroethene	7.9	7.48		ug/m3		94	70 - 130
cis-1,3-Dichloropropene	9.1	8.49		ug/m3		94	70 - 130
Cyclohexane	6.9	6.41		ug/m3		93	70 - 130

TestAmerica Knoxville

QC Sample Results

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory # C755019A

TestAmerica Job ID: 140-11145-1

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

Lab Sample ID: LCS 140-19215/1002

Matrix: Air

Analysis Batch: 19215

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dibromochloromethane	17	18.2		ug/m3		107	70 - 130
Dichlorodifluoromethane	9.9	11.5		ug/m3		117	60 - 140
Ethanol	19	17.4		ug/m3		93	60 - 140
Ethylbenzene	8.7	6.86		ug/m3		79	70 - 130
Hexachlorobutadiene	21	15.7		ug/m3		73	60 - 140
Hexane	7.0	6.60		ug/m3		94	70 - 130
Methyl tert-butyl ether	7.2	5.73		ug/m3		79	60 - 140
Methylene Chloride	6.9	5.94		ug/m3		86	70 - 130
m-Xylene & p-Xylene	17	13.7		ug/m3		79	70 - 130
o-Xylene	8.7	6.78		ug/m3		78	70 - 130
Styrene	8.5	6.44		ug/m3		76	70 - 130
t-Butyl alcohol	6.1	7.30		ug/m3		120	60 - 140
Tetrachloroethene	14	13.3		ug/m3		98	70 - 130
Toluene	7.5	6.27		ug/m3		83	70 - 130
trans-1,2-Dichloroethene	7.9	7.79		ug/m3		98	70 - 130
trans-1,3-Dichloropropene	9.1	8.60		ug/m3		95	70 - 130
Trichloroethene	11	10.2		ug/m3		95	70 - 130
Trichlorofluoromethane	11	13.7		ug/m3		122	60 - 140
Vinyl chloride	5.1	5.47		ug/m3		107	70 - 130
Surrogate	LCS %Recovery		LCS Qualifier	Limits			
4-Bromofluorobenzene (Surr)	103			60 - 140			

QC Association Summary

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory # C755019A

TestAmerica Job ID: 140-11145-1

Air - GC/MS VOA

Analysis Batch: 19179

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-11145-1	H45-BA-2018	Total/NA	Air	TO 15 LL	
140-11145-2	H45-CS-2018	Total/NA	Air	TO 15 LL	
140-11145-3	H46-SS-2018	Total/NA	Air	TO 15 LL	
140-11145-4	H46-BA-2018	Total/NA	Air	TO 15 LL	
140-11145-5	H41B-BA-2018	Total/NA	Air	TO 15 LL	
140-11145-6	H41-OA-2018	Total/NA	Air	TO 15 LL	
140-11145-7	H41A-BA-2018	Total/NA	Air	TO 15 LL	
140-11145-8	FD-2018	Total/NA	Air	TO 15 LL	
MB 140-19179/4	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-19179/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Analysis Batch: 19215

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-11145-7 - DL	H41A-BA-2018	Total/NA	Air	TO 15 LL	
MB 140-19215/5	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-19215/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Lab Chronicle

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory # C755019A

TestAmerica Job ID: 140-11145-1

Client Sample ID: H45-BA-2018

Date Collected: 03/28/18 07:51

Date Received: 04/02/18 09:15

Lab Sample ID: 140-11145-1

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	19179	04/03/18 19:02	HMT	TAL KNX
Instrument ID: MR										

Client Sample ID: H45-CS-2018

Date Collected: 03/28/18 07:52

Date Received: 04/02/18 09:15

Lab Sample ID: 140-11145-2

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	19179	04/03/18 19:55	HMT	TAL KNX
Instrument ID: MR										

Client Sample ID: H46-SS-2018

Date Collected: 03/28/18 09:57

Date Received: 04/02/18 09:15

Lab Sample ID: 140-11145-3

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	19179	04/03/18 20:48	HMT	TAL KNX
Instrument ID: MR										

Client Sample ID: H46-BA-2018

Date Collected: 03/28/18 09:58

Date Received: 04/02/18 09:15

Lab Sample ID: 140-11145-4

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	19179	04/03/18 21:40	HMT	TAL KNX
Instrument ID: MR										

Client Sample ID: H41B-BA-2018

Date Collected: 03/28/18 11:35

Date Received: 04/02/18 09:15

Lab Sample ID: 140-11145-5

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	19179	04/03/18 22:33	HMT	TAL KNX
Instrument ID: MR										

Client Sample ID: H41-OA-2018

Date Collected: 03/28/18 11:41

Date Received: 04/02/18 09:15

Lab Sample ID: 140-11145-6

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	19179	04/03/18 23:25	HMT	TAL KNX
Instrument ID: MR										

Lab Chronicle

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory # C755019A

TestAmerica Job ID: 140-11145-1

Client Sample ID: H41A-BA-2018

Date Collected: 03/28/18 11:39

Date Received: 04/02/18 09:15

Lab Sample ID: 140-11145-7

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL	DL	1	100 mL	500 mL	19215	04/04/18 22:35	HMT	TAL KNX
Instrument ID: MJ										
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	19179	04/04/18 00:19	HMT	TAL KNX
Instrument ID: MR										

Client Sample ID: FD-2018

Date Collected: 03/28/18 00:00

Date Received: 04/02/18 09:15

Lab Sample ID: 140-11145-8

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	19179	04/04/18 01:11	HMT	TAL KNX
Instrument ID: MR										

Client Sample ID: Method Blank

Date Collected: N/A

Date Received: N/A

Lab Sample ID: MB 140-19179/4

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	19179	04/03/18 11:58	HMT	TAL KNX
Instrument ID: MR										

Client Sample ID: Method Blank

Date Collected: N/A

Date Received: N/A

Lab Sample ID: MB 140-19215/5

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	19215	04/04/18 12:49	HMT	TAL KNX
Instrument ID: MJ										

Client Sample ID: Lab Control Sample

Date Collected: N/A

Date Received: N/A

Lab Sample ID: LCS 140-19179/1002

Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	19179	04/03/18 10:10	HMT	TAL KNX
Instrument ID: MR										

Lab Chronicle

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory # C755019A

TestAmerica Job ID: 140-11145-1

Client Sample ID: Lab Control Sample
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCS 140-19215/1002
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	19215	04/04/18 10:21	HMT	TAL KNX
Instrument ID: MJ										

Laboratory References:
TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Accreditation/Certification Summary

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory # C755019A

TestAmerica Job ID: 140-11145-1

Laboratory: TestAmerica Knoxville

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

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	10781	03-31-19

The following analytes are included in this report, but are not accredited/certified under this accreditation/certification:

Analysis Method	Prep Method	Matrix	Analyte
TO 15 LL		Air	1,1,2-Trichlorotrifluoroethane
TO 15 LL		Air	1,2,4-Trimethylbenzene
TO 15 LL		Air	1,2-Dichlorotetrafluoroethane
TO 15 LL		Air	1,3,5-Trimethylbenzene
TO 15 LL		Air	Dichlorodifluoromethane
TO 15 LL		Air	o-Xylene
TO 15 LL		Air	Trichlorofluoromethane

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

Analysis Method	Prep Method	Matrix	Analyte
TO 15 LL		Air	Ethanol

Method Summary

Client: New York State D.E.C.

TestAmerica Job ID: 140-11145-1

Project/Site: Former Ithaca Gun Factory # C755019A

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: New York State D.E.C.

TestAmerica Job ID: 140-11145-1

Project/Site: Former Ithaca Gun Factory # C755019A

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-11145-1	H45-BA-2018	Air	03/28/18 07:51	04/02/18 09:15
140-11145-2	H45-CS-2018	Air	03/28/18 07:52	04/02/18 09:15
140-11145-3	H46-SS-2018	Air	03/28/18 09:57	04/02/18 09:15
140-11145-4	H46-BA-2018	Air	03/28/18 09:58	04/02/18 09:15
140-11145-5	H41B-BA-2018	Air	03/28/18 11:35	04/02/18 09:15
140-11145-6	H41-OA-2018	Air	03/28/18 11:41	04/02/18 09:15
140-11145-7	H41A-BA-2018	Air	03/28/18 11:39	04/02/18 09:15
140-11145-8	FD-2018	Air	03/28/18 00:00	04/02/18 09:15

Method T015 Low Level

Volatile Organic Compounds - Low
level (GC/MS) by Method TO 15

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville

Job No.: 140-11145-1

SDG No.: _____

Matrix: Air

Level: Low

GC Column (1): RTX-5 ID: 0.32 (mm)

Client Sample ID	Lab Sample ID	BFB #
H45-BA-2018	140-11145-1	90
H45-CS-2018	140-11145-2	89
H46-SS-2018	140-11145-3	87
H46-BA-2018	140-11145-4	87
H41B-BA-2018	140-11145-5	87
H41-OA-2018	140-11145-6	88
H41A-BA-2018	140-11145-7	88
H41A-BA-2018 DL	140-11145-7 DL	103
FD-2018	140-11145-8	88
	MB 140-19179/4	87
	MB 140-19215/5	101
	LCS 140-19179/1002	89
	LCS 140-19215/1002	103

BFB = 4-Bromofluorobenzene (Surr)

QC LIMITS
60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: RCCVD03-LCS.d
 Lab ID: LCS 140-19179/1002 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
1,1,1-Trichloroethane	2.00	1.51	76	70-130	
1,1,2,2-Tetrachloroethane	2.00	2.16	108	70-130	
1,1,2-Trichloroethane	2.00	1.98	99	70-130	
1,1,2-Trichlorotrifluoroethane	2.00	1.99	99	70-130	
1,1-Dichloroethane	2.00	1.54	77	70-130	
1,1-Dichloroethene	2.00	1.86	93	70-130	
1,2,4-Trichlorobenzene	2.00	2.44	122	60-140	
1,2,4-Trimethylbenzene	2.00	1.96	98	70-130	
1,2-Dibromoethane	2.00	2.06	103	70-130	
1,2-Dichlorobenzene	2.00	2.20	110	70-130	
1,2-Dichloroethane	2.00	1.29	64	70-130	*
1,2-Dichloropropane	2.00	1.73	87	70-130	
1,2-Dichlorotetrafluoroethane	2.00	2.46	123	60-140	
1,3,5-Trimethylbenzene	2.00	2.20	110	70-130	
1,3-Dichlorobenzene	2.00	2.18	109	70-130	
1,4-Dichlorobenzene	2.00	2.19	110	70-130	
1,4-Dioxane	2.00	1.70	85	60-140	
2,2,4-Trimethylpentane	2.00	1.68	84	70-130	
2-Butanone	2.00	1.57	78	60-140	
4-Methyl-2-pentanone (MIBK)	2.00	1.86	93	60-140	
Benzene	2.00	1.72	86	70-130	
Benzyl chloride	2.00	2.20	110	70-130	
Bromodichloromethane	2.00	1.75	88	70-130	
Bromoform	2.00	2.46	123	60-140	
Bromomethane	2.00	2.42	121	70-130	
Carbon tetrachloride	2.00	1.80	90	70-130	
Chlorobenzene	2.00	2.01	101	70-130	
Chloroethane	2.00	2.08	104	70-130	
Chloroform	2.00	1.60	80	70-130	
Chloromethane	2.00	1.96	98	60-140	
cis-1,2-Dichloroethene	2.00	1.87	94	70-130	
cis-1,3-Dichloropropene	2.00	1.71	85	70-130	
Cyclohexane	2.00	1.70	85	70-130	
Dibromochloromethane	2.00	2.17	109	70-130	
Dichlorodifluoromethane	2.00	1.90	95	60-140	
Ethanol	10.0	11.7	117	60-140	
Ethylbenzene	2.00	1.85	93	70-130	
Hexachlorobutadiene	2.00	1.80	90	60-140	
Hexane	2.00	1.41	71	70-130	
Methyl tert-butyl ether	2.00	1.48	74	60-140	
Methylene Chloride	2.00	1.69	85	70-130	
m-Xylene & p-Xylene	4.00	3.77	94	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: RCCVD03-LCS.d
 Lab ID: LCS 140-19179/1002 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
o-Xylene	2.00	1.81	91	70-130	
Styrene	2.00	2.12	106	70-130	
t-Butyl alcohol	2.00	1.30	65	60-140	
Tetrachloroethene	2.00	1.88	94	70-130	
Toluene	2.00	1.85	92	70-130	
trans-1,2-Dichloroethene	2.00	1.85	92	70-130	
trans-1,3-Dichloropropene	2.00	1.65	82	70-130	
Trichloroethene	2.00	1.90	95	70-130	
Trichlorofluoromethane	2.00	2.52	126	60-140	
Vinyl chloride	2.00	1.95	98	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: JCCVD04-LCS.d
 Lab ID: LCS 140-19215/1002 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
1,1,1-Trichloroethane	2.00	2.09	105	70-130	
1,1,2,2-Tetrachloroethane	2.00	1.56	78	70-130	
1,1,2-Trichloroethane	2.00	1.75	88	70-130	
1,1,2-Trichlorotrifluoroethane	2.00	2.10	105	70-130	
1,1-Dichloroethane	2.00	1.98	99	70-130	
1,1-Dichloroethene	2.00	1.99	100	70-130	
1,2,4-Trichlorobenzene	2.00	1.49	75	60-140	
1,2,4-Trimethylbenzene	2.00	1.48	74	70-130	
1,2-Dibromoethane	2.00	1.97	99	70-130	
1,2-Dichlorobenzene	2.00	1.61	80	70-130	
1,2-Dichloroethane	2.00	2.22	111	70-130	
1,2-Dichloropropane	2.00	1.84	92	70-130	
1,2-Dichlorotetrafluoroethane	2.00	2.19	110	60-140	
1,3,5-Trimethylbenzene	2.00	1.47	74	70-130	
1,3-Dichlorobenzene	2.00	1.65	82	70-130	
1,4-Dichlorobenzene	2.00	1.64	82	70-130	
1,4-Dioxane	2.00	1.74	87	60-140	
2,2,4-Trimethylpentane	2.00	1.86	93	70-130	
2-Butanone	2.00	1.38	69	60-140	
4-Methyl-2-pentanone (MIBK)	2.00	1.64	82	60-140	
Benzene	2.00	1.76	88	70-130	
Benzyl chloride	2.00	1.59	79	70-130	
Bromodichloromethane	2.00	2.04	102	70-130	
Bromoform	2.00	2.12	106	60-140	
Bromomethane	2.00	2.02	101	70-130	
Carbon tetrachloride	2.00	2.33	117	70-130	
Chlorobenzene	2.00	1.92	96	70-130	
Chloroethane	2.00	1.96	98	70-130	
Chloroform	2.00	2.01	101	70-130	
Chloromethane	2.00	2.05	102	60-140	
cis-1,2-Dichloroethene	2.00	1.89	94	70-130	
cis-1,3-Dichloropropene	2.00	1.87	94	70-130	
Cyclohexane	2.00	1.86	93	70-130	
Dibromochloromethane	2.00	2.14	107	70-130	
Dichlorodifluoromethane	2.00	2.33	117	60-140	
Ethanol	10.0	9.26	93	60-140	
Ethylbenzene	2.00	1.58	79	70-130	
Hexachlorobutadiene	2.00	1.47	73	60-140	
Hexane	2.00	1.87	94	70-130	
Methyl tert-butyl ether	2.00	1.59	79	60-140	
Methylene Chloride	2.00	1.71	86	70-130	
m-Xylene & p-Xylene	4.00	3.16	79	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Matrix: Air Level: Low Lab File ID: JCCVD04-LCS.d
 Lab ID: LCS 140-19215/1002 Client ID: _____

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
o-Xylene	2.00	1.56	78	70-130	
Styrene	2.00	1.51	76	70-130	
t-Butyl alcohol	2.00	2.41	120	60-140	
Tetrachloroethene	2.00	1.96	98	70-130	
Toluene	2.00	1.66	83	70-130	
trans-1,2-Dichloroethene	2.00	1.96	98	70-130	
trans-1,3-Dichloropropene	2.00	1.90	95	70-130	
Trichloroethene	2.00	1.89	95	70-130	
Trichlorofluoromethane	2.00	2.43	122	60-140	
Vinyl chloride	2.00	2.14	107	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
SDG No.: _____
Lab File ID: J500BD04.D Lab Sample ID: MB 140-19215/5
Matrix: Air Heated Purge: (Y/N) N
Instrument ID: MJ Date Analyzed: 04/04/2018 12:49
GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-19215/1002	JCCVD04-LCS .d	04/04/2018 10:21
H41A-BA-2018 DL	140-11145-7 DL	JD04P111.D	04/04/2018 22:35

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Lab File ID: R500BD03.D Lab Sample ID: MB 140-19179/4
 Matrix: Air Heated Purge: (Y/N) N
 Instrument ID: MR Date Analyzed: 04/03/2018 11:58
 GC Column: RTX-5 ID: 0.32 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-19179/1002	RCCVD03-LCS .d	04/03/2018 10:10
H45-BA-2018	140-11145-1	RD03P105.D	04/03/2018 19:02
H45-CS-2018	140-11145-2	RD03P106.D	04/03/2018 19:55
H46-SS-2018	140-11145-3	RD03P107.D	04/03/2018 20:48
H46-BA-2018	140-11145-4	RD03P108.D	04/03/2018 21:40
H41B-BA-2018	140-11145-5	RD03P109.D	04/03/2018 22:33
H41-OA-2018	140-11145-6	RD03P110.D	04/03/2018 23:25
H41A-BA-2018	140-11145-7	RD03P111.D	04/04/2018 00:19
FD-2018	140-11145-8	RD03P112.D	04/04/2018 01:11

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Lab File ID: JBFB15.D BFB Injection Date: 02/15/2018
 Instrument ID: MJ BFB Injection Time: 14:16
 Analysis Batch No.: 18185

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	19.2
75	30.0 - 60.0 % of mass 95	52.5
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.7
173	Less than 2.0 % of mass 174	0.0 (0.0) 1
174	50.0 - 120.00 % of mass 95	104.0
175	5.0 - 9.0 % of mass 174	7.7 (7.4) 1
176	95.0 - 101.0 % of mass 174	102.5 (98.5) 1
177	5.0 - 9.0 % of mass 176	6.9 (6.8) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-18185/3	JB15ICL01.D	02/15/2018	15:35
	IC 140-18185/4	JB15ICL02.D	02/15/2018	16:21
	IC 140-18185/5	JB15ICL03.D	02/15/2018	17:07
	IC 140-18185/6	JB15ICL04.D	02/15/2018	17:52
	IC 140-18185/7	JB15ICL05.D	02/15/2018	18:37
	IC 140-18185/8	JB15ICL06.D	02/15/2018	19:22
	ICIS 140-18185/9	JB15ICISL07.D	02/15/2018	20:08
	IC 140-18185/10	JB15ICL08.D	02/15/2018	20:53
	IC 140-18185/11	JB15ICL09.D	02/15/2018	21:39
	IC 140-18185/12	JB15ICL10.D	02/15/2018	22:24
	ICV 140-18185/15	JLCSB16.D	02/16/2018	00:43

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Lab File ID: JBFBD04.D BFB Injection Date: 04/04/2018
 Instrument ID: MJ BFB Injection Time: 09:53
 Analysis Batch No.: 19215

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.4	
75	30.0 - 60.0 % of mass 95	56.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.2	(0.2) 1
174	50.0 - 120.00 % of mass 95	105.5	
175	5.0 - 9.0 % of mass 174	7.6	(7.2) 1
176	95.0 - 101.0 % of mass 174	102.5	(97.1) 1
177	5.0 - 9.0 % of mass 176	6.7	(6.5) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-19215/2	JCCVD04.D	04/04/2018	10:21
	LCS 140-19215/1002	JCCVD04-LCS.d	04/04/2018	10:21
	MB 140-19215/5	J500BD04.D	04/04/2018	12:49
H41A-BA-2018 DL	140-11145-7 DL	JD04P111.D	04/04/2018	22:35

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Lab File ID: RBFBA30.D BFB Injection Date: 01/30/2018
 Instrument ID: MR BFB Injection Time: 11:12
 Analysis Batch No.: 17762

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	19.1
75	30.0 - 60.0 % of mass 95	54.8
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	7.0
173	Less than 2.0 % of mass 174	0.0 (0.0) 1
174	50.0 - 120.00 % of mass 95	78.1
175	5.0 - 9.0 % of mass 174	5.7 (7.3) 1
176	95.0 - 101.0 % of mass 174	76.6 (98.2) 1
177	5.0 - 9.0 % of mass 176	5.0 (6.5) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-17762/3	RA30IC01.D	01/30/2018	12:29
	IC 140-17762/4	RA30IC02.D	01/30/2018	13:16
	IC 140-17762/5	RA30IC03.D	01/30/2018	14:04
	IC 140-17762/6	RA30IC04.D	01/30/2018	14:50
	IC 140-17762/7	RA30IC05.D	01/30/2018	15:39
	IC 140-17762/8	RA30IC06.D	01/30/2018	16:27
	ICIS 140-17762/9	RA30IC07.D	01/30/2018	17:15
	IC 140-17762/10	RA30IC08.D	01/30/2018	18:03
	IC 140-17762/11	RA30IC09.D	01/30/2018	18:50
	IC 140-17762/12	RA30IC10.D	01/30/2018	19:38
	ICV 140-17762/14	RA30ICV.D	01/30/2018	21:11

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Lab File ID: RBFBD03.D BFB Injection Date: 04/03/2018
 Instrument ID: MR BFB Injection Time: 09:39
 Analysis Batch No.: 19179

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	18.0
75	30.0 - 60.0 % of mass 95	55.8
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.9
173	Less than 2.0 % of mass 174	0.6 (0.7) 1
174	50.0 - 120.00 % of mass 95	90.9
175	5.0 - 9.0 % of mass 174	6.3 (7.0) 1
176	95.0 - 101.0 % of mass 174	86.1 (94.7) 1 *
177	5.0 - 9.0 % of mass 176	5.5 (6.4) 2

1-Value is % mass 174

2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-19179/2	RCCVD03.D	04/03/2018	10:10
	LCS 140-19179/1002	RCCVD03-LCS.d	04/03/2018	10:10
	MB 140-19179/4	R500BD03.D	04/03/2018	11:58
H45-BA-2018	140-11145-1	RD03P105.D	04/03/2018	19:02
H45-CS-2018	140-11145-2	RD03P106.D	04/03/2018	19:55
H46-SS-2018	140-11145-3	RD03P107.D	04/03/2018	20:48
H46-BA-2018	140-11145-4	RD03P108.D	04/03/2018	21:40
H41B-BA-2018	140-11145-5	RD03P109.D	04/03/2018	22:33
H41-OA-2018	140-11145-6	RD03P110.D	04/03/2018	23:25
H41A-BA-2018	140-11145-7	RD03P111.D	04/04/2018	00:19
FD-2018	140-11145-8	RD03P112.D	04/04/2018	01:11

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Sample No.: ICIS 140-18185/9 Date Analyzed: 02/15/2018 20:08
 Instrument ID: MJ GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): JB15ICISL07.D Heated Purge: (Y/N) N
 Calibration ID: 1394

	CBM		DFBZ		CBZd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT	286873	9.69	1605094	11.79	1448317	16.39
UPPER LIMIT	401622	10.02	2247132	12.12	2027644	16.72
LOWER LIMIT	172124	9.36	963056	11.46	868990	16.06
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 140-18185/15		287782	9.69	1626462	11.79	1472970
						16.39

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = $\pm$ 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Sample No.: CCVIS 140-19215/2 Date Analyzed: 04/04/2018 10:21
 Instrument ID: MJ GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): JCCVD04.D Heated Purge: (Y/N) N
 Calibration ID: 1394

	CBM		DFBZ		CBZd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD	191585	9.67	1049636	11.77	911794	16.37
UPPER LIMIT	268219	10.00	1469490	12.10	1276512	16.70
LOWER LIMIT	114951	9.34	629782	11.44	547076	16.04
LAB SAMPLE ID	CLIENT SAMPLE ID					
LCS 140-19215/1002		191585	9.67	1049636	11.77	911794
MB 140-19215/5		187743	9.67	1038649	11.77	936503
140-11145-7 DL	H41A-BA-2018 DL	167920	9.66	950776	11.77	865302

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = $\pm$ 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Sample No.: ICIS 140-17762/9 Date Analyzed: 01/30/2018 17:15
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): RA30IC07.D Heated Purge: (Y/N) N
 Calibration ID: 1371

	CBM		DFBZ		CBZd5		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
INITIAL CALIBRATION MID-POINT	397524	7.71	2418900	9.85	2104378	14.86	
UPPER LIMIT	556534	8.04	3386460	10.18	2946129	15.19	
LOWER LIMIT	238514	7.38	1451340	9.52	1262627	14.53	
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-17762/14		374886	7.72	2292324	9.85	1999070	14.86

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = $\pm$ 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Sample No.: CCVIS 140-19179/2 Date Analyzed: 04/03/2018 10:10
 Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm)
 Lab File ID (Standard): RCCVD03.D Heated Purge: (Y/N) N
 Calibration ID: 1371

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		337085	7.67	1973372	9.81	1613919	14.83
UPPER LIMIT		471919	8.00	2762721	10.14	2259487	15.16
LOWER LIMIT		202251	7.34	1184023	9.48	968351	14.50
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-19179/1002		337085	7.67	1973372	9.81	1613919	14.83
MB 140-19179/4		344740	7.66	1998474	9.81	1608553	14.83
140-11145-1	H45-BA-2018	312685	7.65	1828692	9.80	1424481	14.83
140-11145-2	H45-CS-2018	307122	7.67	1770112	9.80	1393169	14.83
140-11145-3	H46-SS-2018	304217	7.64	1762486	9.80	1362167	14.83
140-11145-4	H46-BA-2018	304468	7.66	1778613	9.80	1397625	14.83
140-11145-5	H41B-BA-2018	324747	7.65	1900159	9.80	1466276	14.83
140-11145-6	H41-OA-2018	330382	7.67	1941090	9.81	1493646	14.83
140-11145-7	H41A-BA-2018	320887	7.66	1845270	9.80	1425206	14.83
140-11145-8	FD-2018	328805	7.66	1908310	9.81	1500606	14.83

CBM = Chlorobromomethane (IS)
 DFBZ = 1,4-Difluorobenzene
 CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
 RT Limit = $\pm$ 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: H45-BA-2018 Lab Sample ID: 140-11145-1
 Matrix: Air Lab File ID: RD03P105.D
 Analysis Method: TO 15 LL Date Collected: 03/28/2018 07:51
 Sample wt/vol: 500 (mL) Date Analyzed: 04/03/2018 19:02
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19179 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	167.85	ND		0.080	
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	187.38	ND		0.080	
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	
75-35-4	1,1-Dichloroethene	96.94	ND		0.040	
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	
106-93-4	1,2-Dibromoethane	187.87	ND		0.080	
95-50-1	1,2-Dichlorobenzene	147.00	ND		0.080	
107-06-2	1,2-Dichloroethane	98.96	ND	*	0.080	
78-87-5	1,2-Dichloropropane	112.99	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	170.92	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	
541-73-1	1,3-Dichlorobenzene	147.00	ND		0.080	
106-46-7	1,4-Dichlorobenzene	147.00	ND		0.080	
123-91-1	1,4-Dioxane	88.11	ND		0.20	
540-84-1	2,2,4-Trimethylpentane	114.23	ND		0.20	
78-93-3	2-Butanone	72.11	ND		0.32	
108-10-1	4-Methyl-2-pentanone (MIBK)	100.16	ND		0.20	
71-43-2	Benzene	78.11	0.16		0.080	
100-44-7	Benzyl chloride	126.58	ND		0.16	
75-27-4	Bromodichloromethane	163.83	ND		0.080	
75-25-2	Bromoform	252.75	ND		0.080	
74-83-9	Bromomethane	94.94	ND		0.080	
56-23-5	Carbon tetrachloride	153.81	0.067		0.032	
108-90-7	Chlorobenzene	112.56	ND		0.080	
75-00-3	Chloroethane	64.52	ND		0.080	
67-66-3	Chloroform	119.38	ND		0.080	
74-87-3	Chloromethane	50.49	0.42		0.20	
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.040	
10061-01-5	cis-1,3-Dichloropropene	110.97	ND		0.080	
110-82-7	Cyclohexane	84.16	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: H45-BA-2018 Lab Sample ID: 140-11145-1
 Matrix: Air Lab File ID: RD03P105.D
 Analysis Method: TO 15 LL Date Collected: 03/28/2018 07:51
 Sample wt/vol: 500 (mL) Date Analyzed: 04/03/2018 19:02
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19179 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
124-48-1	Dibromochloromethane	208.29	ND		0.080	
75-71-8	Dichlorodifluoromethane	120.91	0.18		0.080	
64-17-5	Ethanol	46.07	26		2.0	
100-41-4	Ethylbenzene	106.17	ND		0.080	
87-68-3	Hexachlorobutadiene	260.76	ND		0.080	
110-54-3	Hexane	86.17	ND		0.20	
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.16	
75-09-2	Methylene Chloride	84.93	0.31		0.20	
179601-23-1	m-Xylene & p-Xylene	106.17	0.11		0.080	
95-47-6	o-Xylene	106.17	ND		0.080	
100-42-5	Styrene	104.15	ND		0.080	
75-65-0	t-Butyl alcohol	74.12	ND		0.32	
127-18-4	Tetrachloroethene	165.83	ND		0.080	
108-88-3	Toluene	92.14	0.43		0.12	
156-60-5	trans-1,2-Dichloroethene	96.94	3.6		0.080	
10061-02-6	trans-1,3-Dichloropropene	110.97	ND		0.080	
79-01-6	Trichloroethene	131.39	ND		0.036	
75-69-4	Trichlorofluoromethane	137.37	0.31		0.080	
75-01-4	Vinyl chloride	62.50	ND		0.040	

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	90		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: H45-BA-2018 Lab Sample ID: 140-11145-1
 Matrix: Air Lab File ID: RD03P105.D
 Analysis Method: TO 15 LL Date Collected: 03/28/2018 07:51
 Sample wt/vol: 500 (mL) Date Analyzed: 04/03/2018 19:02
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19179 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	
79-34-5	1,1,2,2-Tetrachloroethane	167.85	ND		0.55	
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	
76-13-1	1,1,2-Trichlorotrifluoroethane	187.38	ND		0.61	
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	
75-35-4	1,1-Dichloroethene	96.94	ND		0.16	
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	
106-93-4	1,2-Dibromoethane	187.87	ND		0.61	
95-50-1	1,2-Dichlorobenzene	147.00	ND		0.48	
107-06-2	1,2-Dichloroethane	98.96	ND	*	0.32	
78-87-5	1,2-Dichloropropane	112.99	ND		0.37	
76-14-2	1,2-Dichlorotetrafluoroethane	170.92	ND		0.56	
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	
541-73-1	1,3-Dichlorobenzene	147.00	ND		0.48	
106-46-7	1,4-Dichlorobenzene	147.00	ND		0.48	
123-91-1	1,4-Dioxane	88.11	ND		0.72	
540-84-1	2,2,4-Trimethylpentane	114.23	ND		0.93	
78-93-3	2-Butanone	72.11	ND		0.94	
108-10-1	4-Methyl-2-pentanone (MIBK)	100.16	ND		0.82	
71-43-2	Benzene	78.11	0.50		0.26	
100-44-7	Benzyl chloride	126.58	ND		0.83	
75-27-4	Bromodichloromethane	163.83	ND		0.54	
75-25-2	Bromoform	252.75	ND		0.83	
74-83-9	Bromomethane	94.94	ND		0.31	
56-23-5	Carbon tetrachloride	153.81	0.42		0.20	
108-90-7	Chlorobenzene	112.56	ND		0.37	
75-00-3	Chloroethane	64.52	ND		0.21	
67-66-3	Chloroform	119.38	ND		0.39	
74-87-3	Chloromethane	50.49	0.87		0.41	
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.16	
10061-01-5	cis-1,3-Dichloropropene	110.97	ND		0.36	
110-82-7	Cyclohexane	84.16	ND		0.69	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: H45-BA-2018 Lab Sample ID: 140-11145-1
 Matrix: Air Lab File ID: RD03P105.D
 Analysis Method: TO 15 LL Date Collected: 03/28/2018 07:51
 Sample wt/vol: 500 (mL) Date Analyzed: 04/03/2018 19:02
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19179 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
124-48-1	Dibromochloromethane	208.29	ND		0.68	
75-71-8	Dichlorodifluoromethane	120.91	0.91		0.40	
64-17-5	Ethanol	46.07	49		3.8	
100-41-4	Ethylbenzene	106.17	ND		0.35	
87-68-3	Hexachlorobutadiene	260.76	ND		0.85	
110-54-3	Hexane	86.17	ND		0.70	
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.58	
75-09-2	Methylene Chloride	84.93	1.1		0.69	
179601-23-1	m-Xylene & p-Xylene	106.17	0.46		0.35	
95-47-6	o-Xylene	106.17	ND		0.35	
100-42-5	Styrene	104.15	ND		0.34	
75-65-0	t-Butyl alcohol	74.12	ND		0.97	
127-18-4	Tetrachloroethene	165.83	ND		0.54	
108-88-3	Toluene	92.14	1.6		0.45	
156-60-5	trans-1,2-Dichloroethene	96.94	14		0.32	
10061-02-6	trans-1,3-Dichloropropene	110.97	ND		0.36	
79-01-6	Trichloroethene	131.39	ND		0.19	
75-69-4	Trichlorofluoromethane	137.37	1.8		0.45	
75-01-4	Vinyl chloride	62.50	ND		0.10	

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	90		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P105.D
 Lims ID: 140-11145-A-1
 Client ID: H45-BA-2018
 Sample Type: Client
 Inject. Date: 03-Apr-2018 19:02:30 ALS Bottle#: 5 Worklist Smp#: 11
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0007767-011
 Misc. Info.: 140-11145-a-1
 Operator ID: Instrument ID: MR
 Method: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 04-Apr-2018 09:59:00 Calib Date: 30-Jan-2018 19:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK025

First Level Reviewer: tajh

Date: 04-Apr-2018 09:47:03

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.654	7.670	-0.016	78	312685	4.00	
* 2 1,4-Difluorobenzene	114	9.800	9.806	-0.006	93	1828692	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.826	14.826	0.000	85	1424481	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.541	16.541	0.000	94	967528	3.58	
8 Dichlorodifluoromethane	85	3.497	3.507	-0.010	96	53854	0.1834	
9 Chloromethane	52	3.626	3.642	-0.016	100	11226	0.4198	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.648	3.664	-0.016	91	2947	0.0148	
17 Ethanol	31	4.289	4.295	-0.006	97	610141	26.0	
21 Trichlorofluoromethane	101	4.624	4.640	-0.016	98	87594	0.3141	
29 2-Methyl-2-propanol	59	5.303	5.287	0.016	88	4930	0.0209	
30 1,1,2-Trichloro-1,2,2-trif	101	5.352	5.362	-0.010	98	18435	0.0728	
31 Methylene Chloride	84	5.449	5.465	-0.016	87	37410	0.3060	
34 trans-1,2-Dichloroethene	96	6.144	6.160	-0.016	92	430963	3.59	
39 2-Butanone (MEK)	72	6.996	6.986	0.010	96	4590	0.0809	
40 Hexane	56	7.072	7.083	-0.011	88	7613	0.0830	
43 Chloroform	83	7.697	7.703	-0.006	87	12339	0.0426	
47 Benzene	78	9.223	9.229	-0.006	94	55122	0.1578	
49 Cyclohexane	69	9.245	9.256	-0.011	67	1501	0.0268	
50 Carbon tetrachloride	117	9.261	9.272	-0.011	94	18874	0.0670	
53 Isooctane	57	10.097	10.102	-0.005	96	27010	0.0533	
56 Trichloroethene	130	10.561	10.561	0.000	57	2866	0.0174	
65 Toluene	91	12.755	12.761	-0.006	93	167718	0.4275	
73 Tetrachloroethene	129	13.969	13.974	-0.005	96	5055	0.0346	
76 Ethylbenzene	91	15.203	15.209	-0.006	97	16413	0.0320	
77 m-Xylene & p-Xylene	91	15.381	15.381	0.000	97	42341	0.1063	
82 o-Xylene	91	15.915	15.915	0.000	98	18348	0.0436	
93 1,2,4-Trimethylbenzene	105	17.862	17.857	0.005	97	12594	0.0256	

Reagents:

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P105.D

Injection Date: 03-Apr-2018 19:02:30

Instrument ID: MR

Operator ID:

Lims ID: 140-11145-A-1

Lab Sample ID: 140-11145-1

Worklist Smp#: 11

Client ID: H45-BA-2018

Purge Vol: 500.000 mL

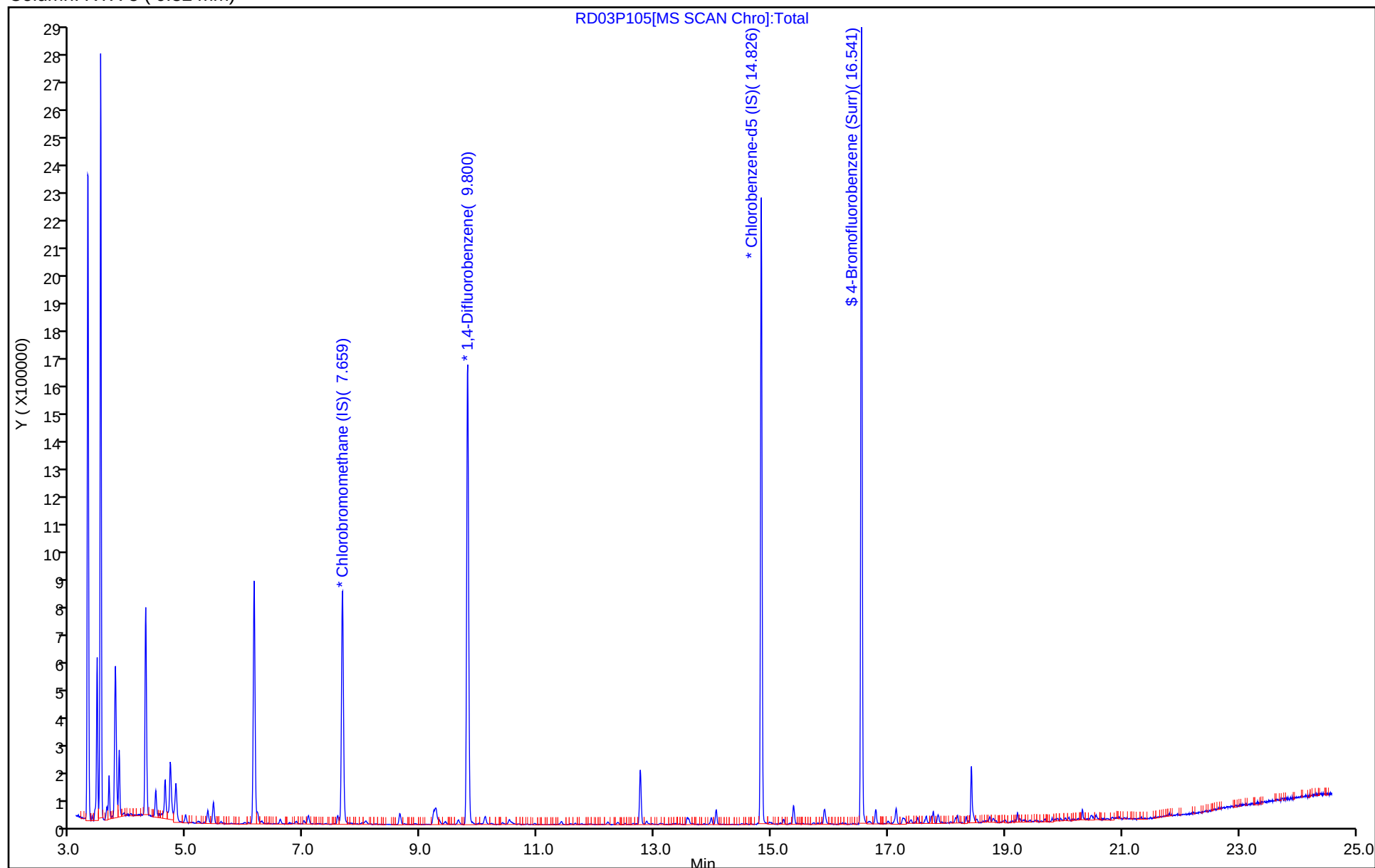
Dil. Factor: 1.0000

ALS Bottle#: 5

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P105.D
Lims ID: 140-11145-A-1
Client ID: H45-BA-2018
Sample Type: Client
Inject. Date: 03-Apr-2018 19:02:30 ALS Bottle#: 5 Worklist Smp#: 11
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007767-011
Misc. Info.: 140-11145-a-1
Operator ID: Instrument ID: MR
Method: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 04-Apr-2018 09:59:00 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D
Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: tajh

Date: 04-Apr-2018 09:47:03

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.58	89.56

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P105.D

Injection Date: 03-Apr-2018 19:02:30

Instrument ID: MR

Lims ID: 140-11145-A-1

Lab Sample ID: 140-11145-1

Client ID: H45-BA-2018

Operator ID:

ALS Bottle#:

5

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

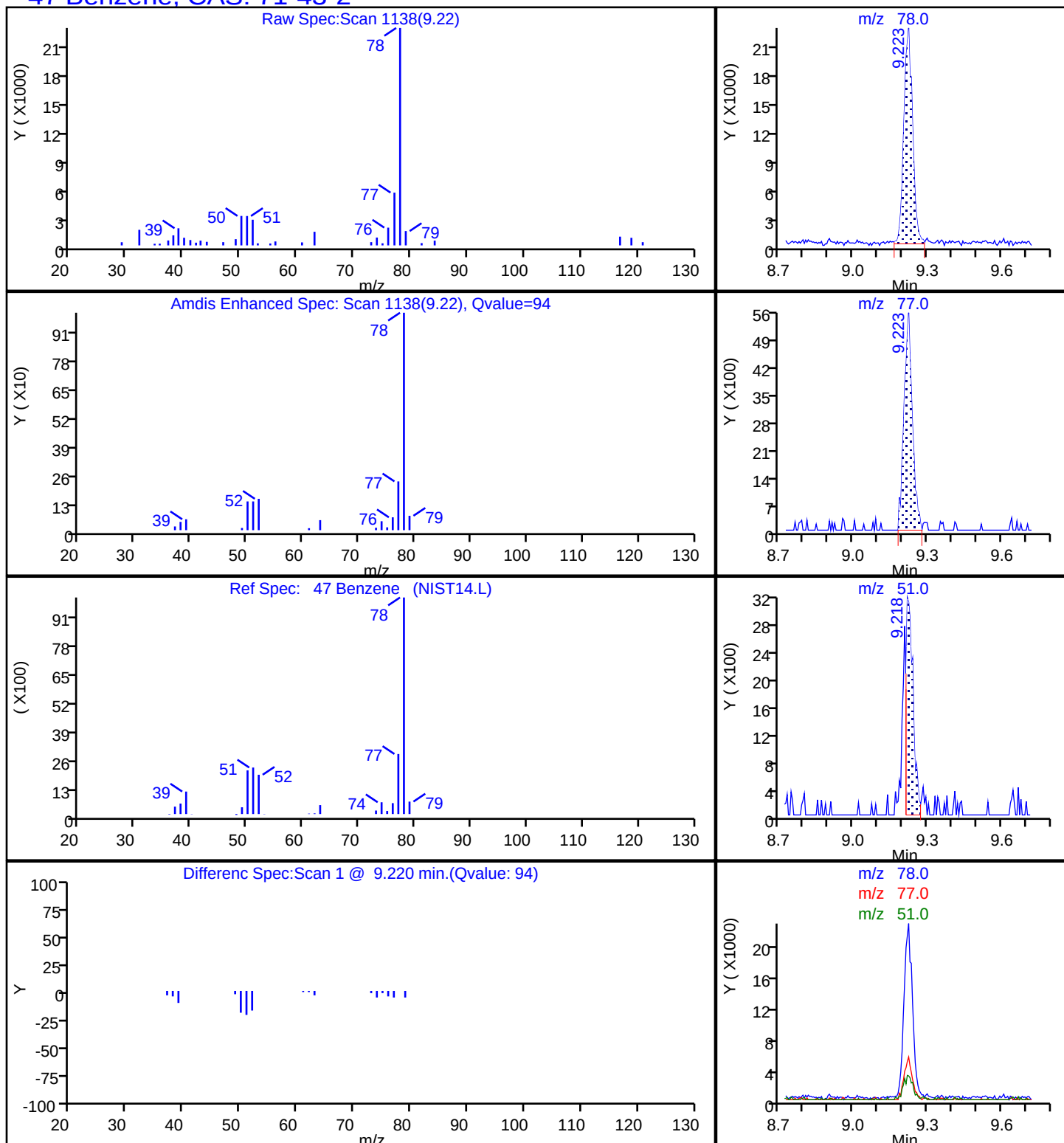
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P105.D

Injection Date: 03-Apr-2018 19:02:30

Instrument ID: MR

Lims ID: 140-11145-A-1

Lab Sample ID: 140-11145-1

Client ID: H45-BA-2018

Operator ID:

ALS Bottle#:

5

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

Limit Group:

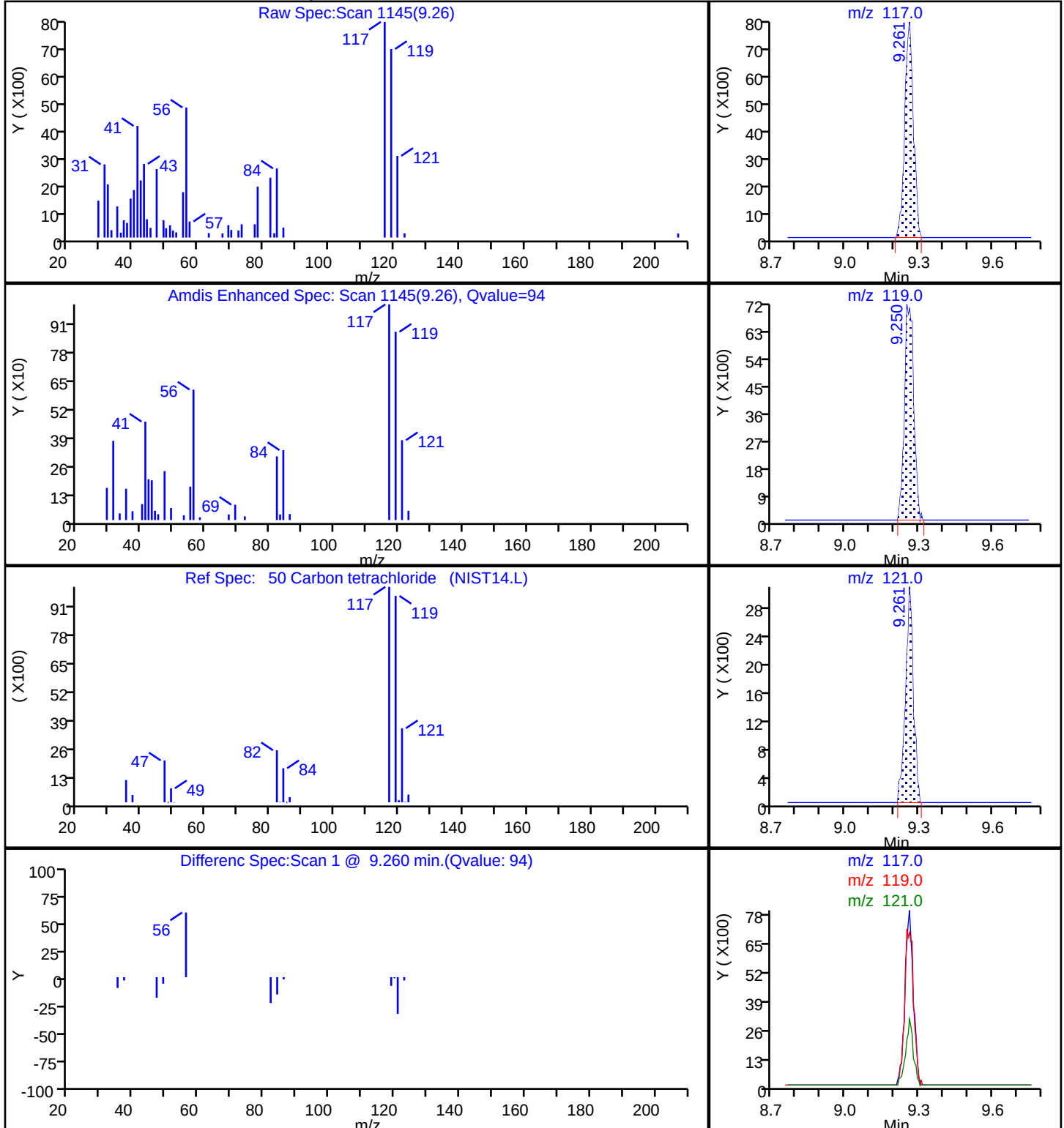
MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

50 Carbon tetrachloride, CAS: 56-23-5



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P105.D

Injection Date: 03-Apr-2018 19:02:30

Instrument ID: MR

Lims ID: 140-11145-A-1

Lab Sample ID: 140-11145-1

Client ID: H45-BA-2018

Operator ID:

ALS Bottle#:

5

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

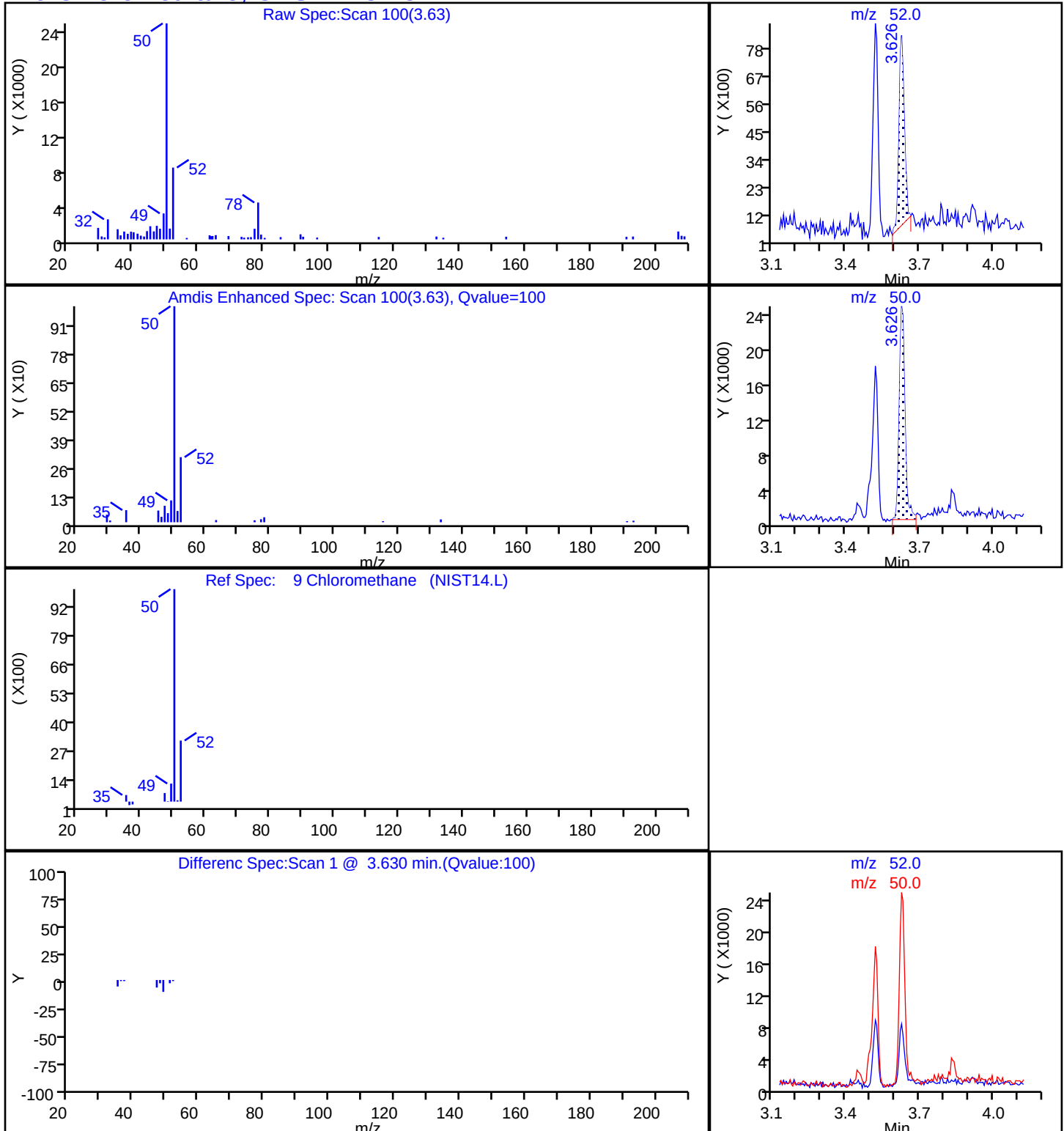
Limit Group:

MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

9 Chloromethane, CAS: 74-87-3

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P105.D

Injection Date: 03-Apr-2018 19:02:30

Instrument ID: MR

Lims ID: 140-11145-A-1

Lab Sample ID: 140-11145-1

Client ID: H45-BA-2018

Operator ID:

ALS Bottle#:

5

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

Limit Group:

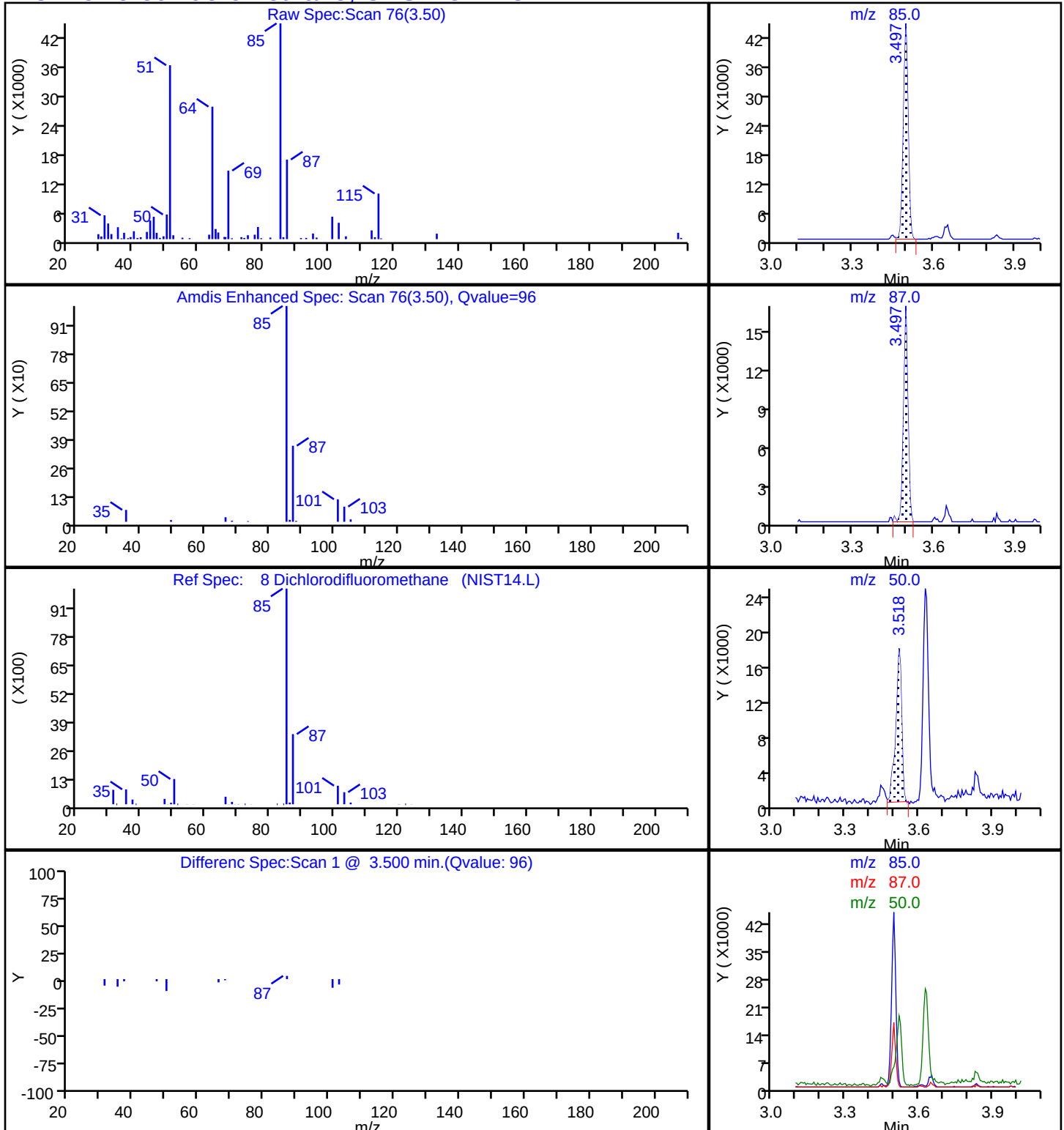
MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P105.D

Injection Date: 03-Apr-2018 19:02:30

Instrument ID: MR

Lims ID: 140-11145-A-1

Lab Sample ID: 140-11145-1

Client ID: H45-BA-2018

Operator ID:

ALS Bottle#:

5

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

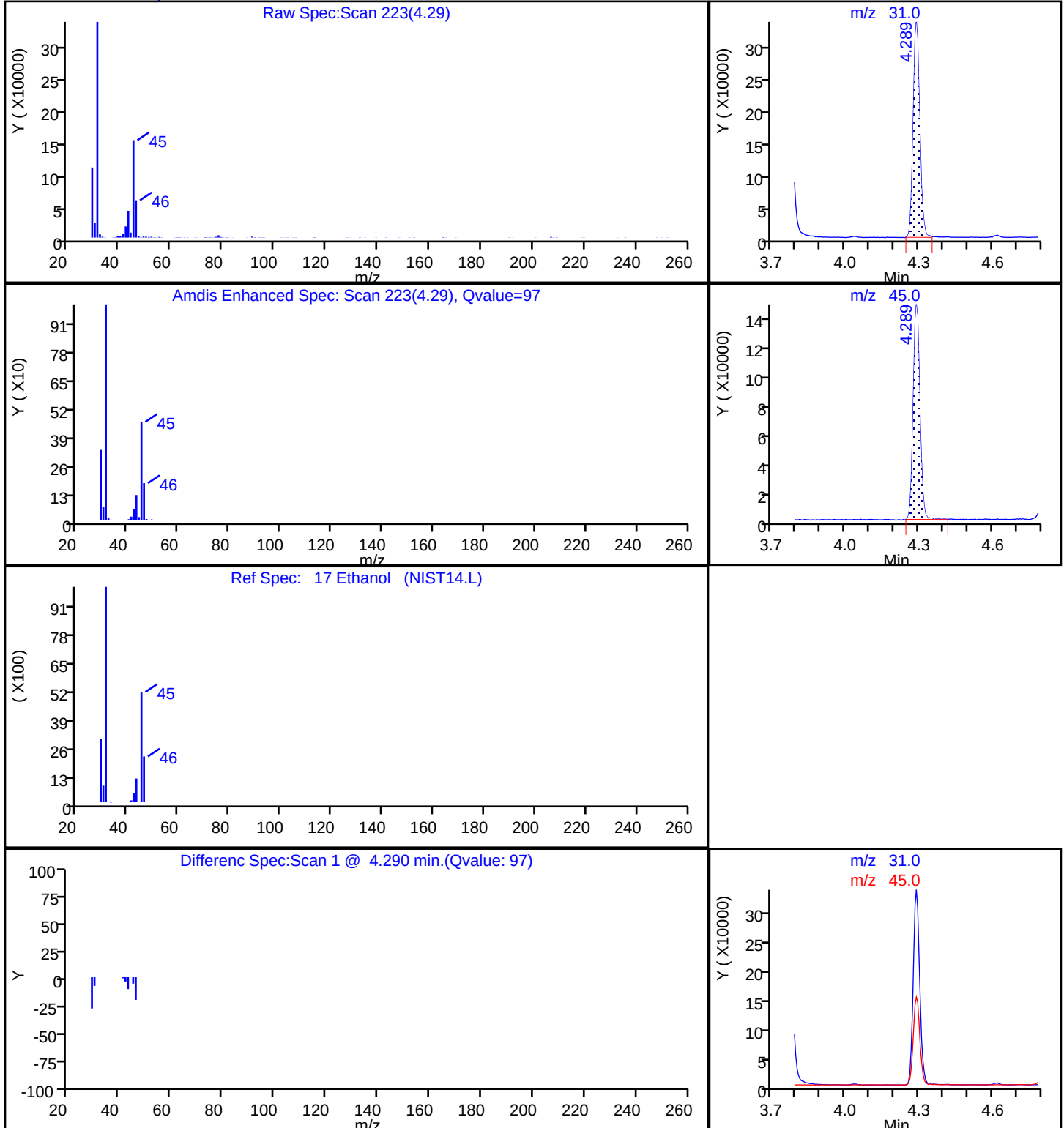
Limit Group:

MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

17 Ethanol, CAS: 64-17-5

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P105.D

Injection Date: 03-Apr-2018 19:02:30

Instrument ID: MR

Lims ID: 140-11145-A-1

Lab Sample ID: 140-11145-1

Client ID: H45-BA-2018

Operator ID:

ALS Bottle#:

Worklist Smp#: 11

Purge Vol: 500.000 mL

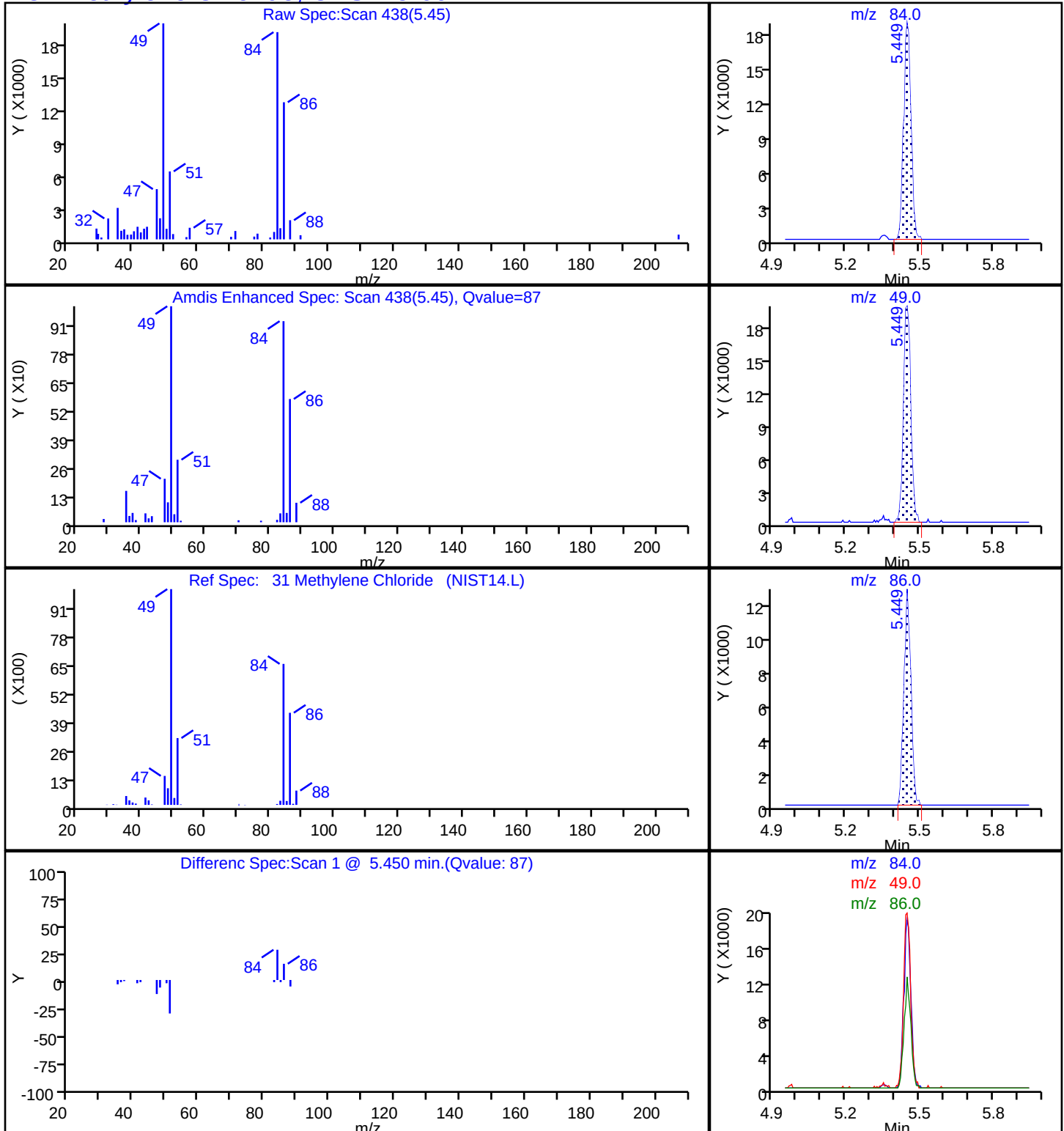
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P105.D

Injection Date: 03-Apr-2018 19:02:30

Instrument ID: MR

Lims ID: 140-11145-A-1

Lab Sample ID: 140-11145-1

Client ID: H45-BA-2018

Operator ID:

ALS Bottle#:

5

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

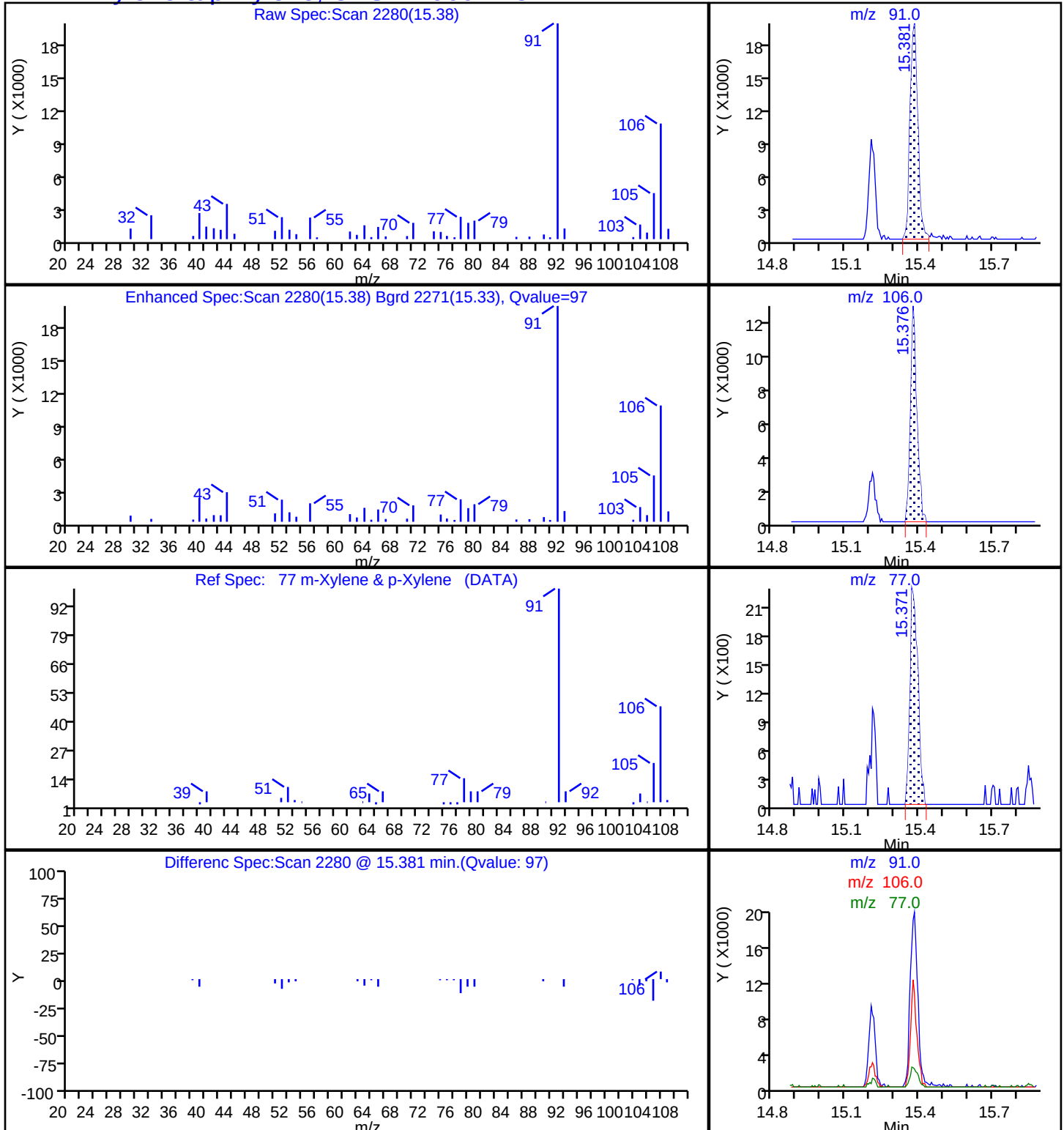
Limit Group:

MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

77 m-Xylene & p-Xylene, CAS: 179601-23-1

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P105.D

Injection Date: 03-Apr-2018 19:02:30

Instrument ID: MR

Lims ID: 140-11145-A-1

Lab Sample ID: 140-11145-1

Client ID: H45-BA-2018

Operator ID:

ALS Bottle#:

5

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

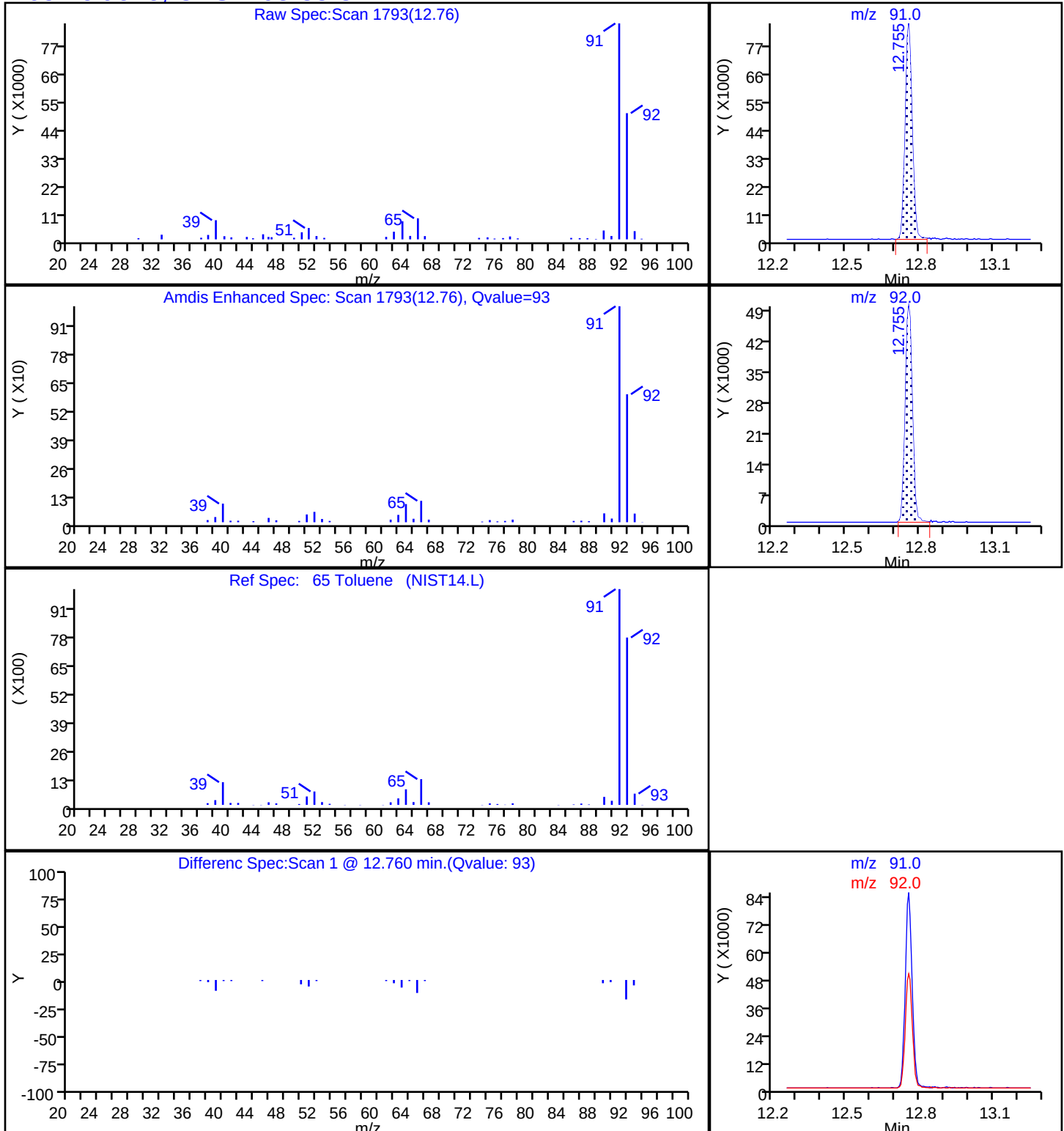
Limit Group:

MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

65 Toluene, CAS: 108-88-3

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P105.D

Injection Date: 03-Apr-2018 19:02:30

Instrument ID: MR

Lims ID: 140-11145-A-1

Lab Sample ID: 140-11145-1

Client ID: H45-BA-2018

Operator ID:

ALS Bottle#:

5

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

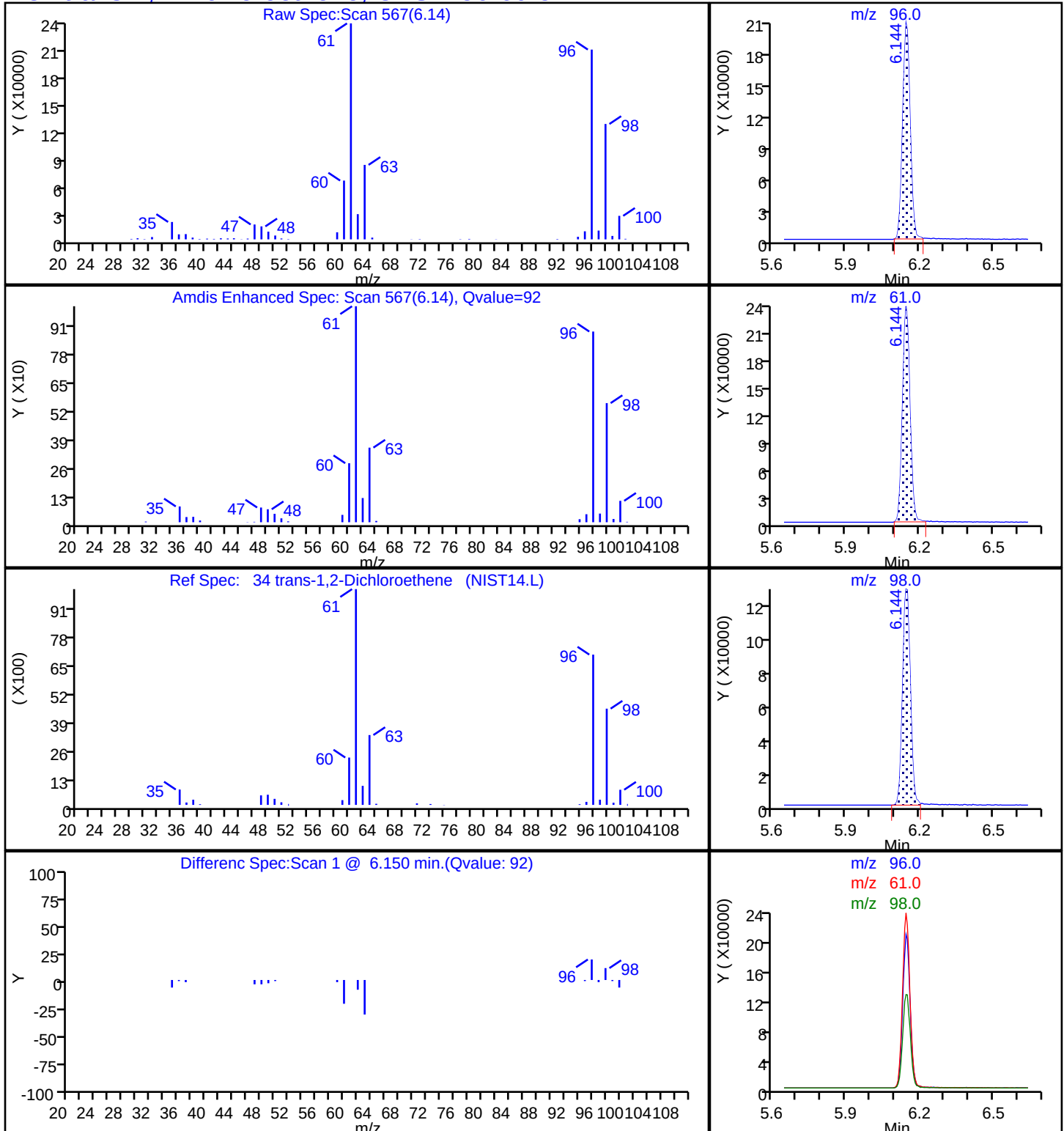
Limit Group:

MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

34 trans-1,2-Dichloroethene, CAS: 156-60-5

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P105.D

Injection Date: 03-Apr-2018 19:02:30

Instrument ID: MR

Lims ID: 140-11145-A-1

Lab Sample ID: 140-11145-1

Client ID: H45-BA-2018

Operator ID:

ALS Bottle#:

5

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

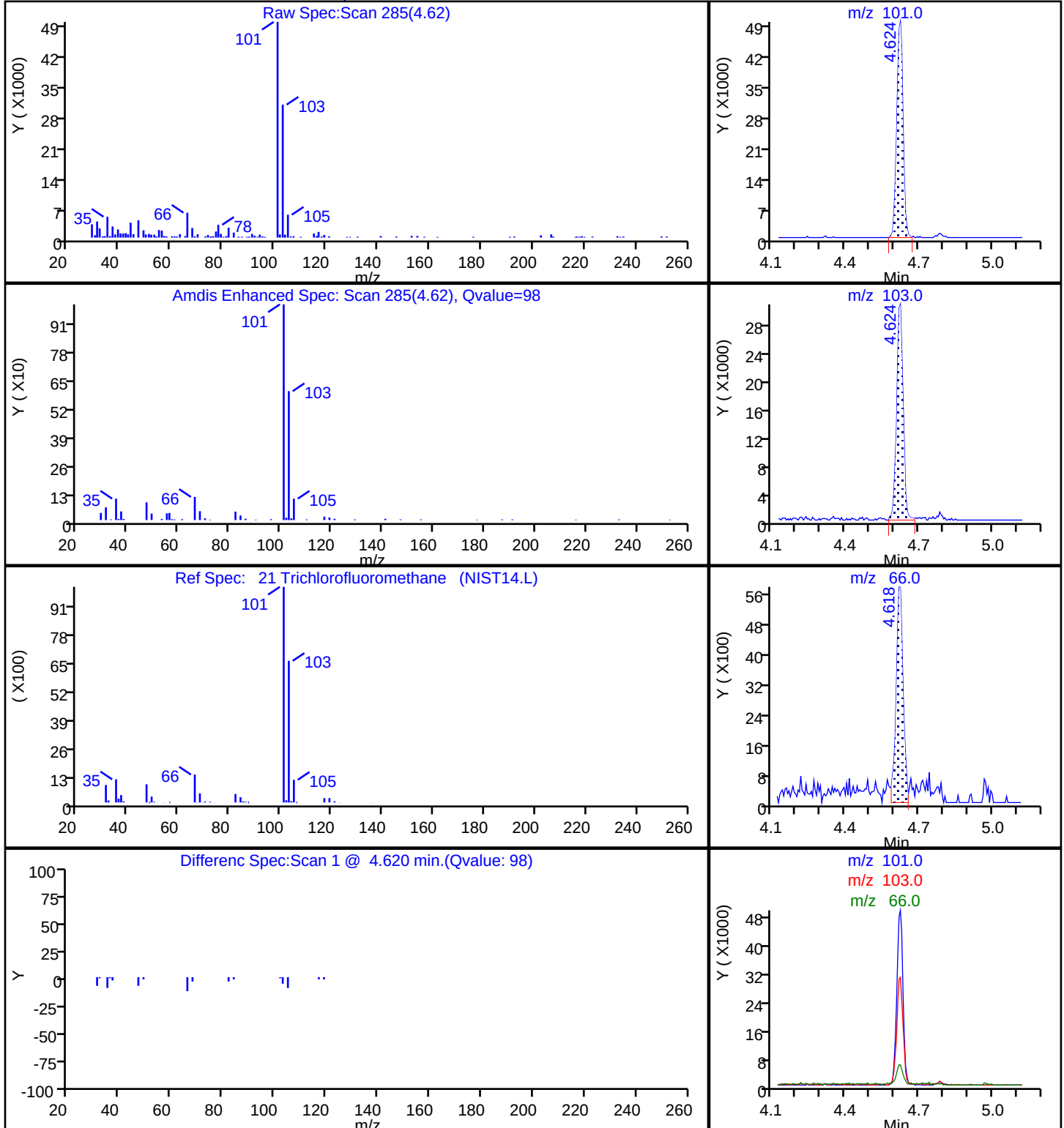
Limit Group:

MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

21 Trichlorofluoromethane, CAS: 75-69-4

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P105.D

Injection Date: 03-Apr-2018 19:02:30

Instrument ID: MR

Lims ID: 140-11145-A-1

Lab Sample ID: 140-11145-1

Client ID: H45-BA-2018

Operator ID:

ALS Bottle#:

5

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

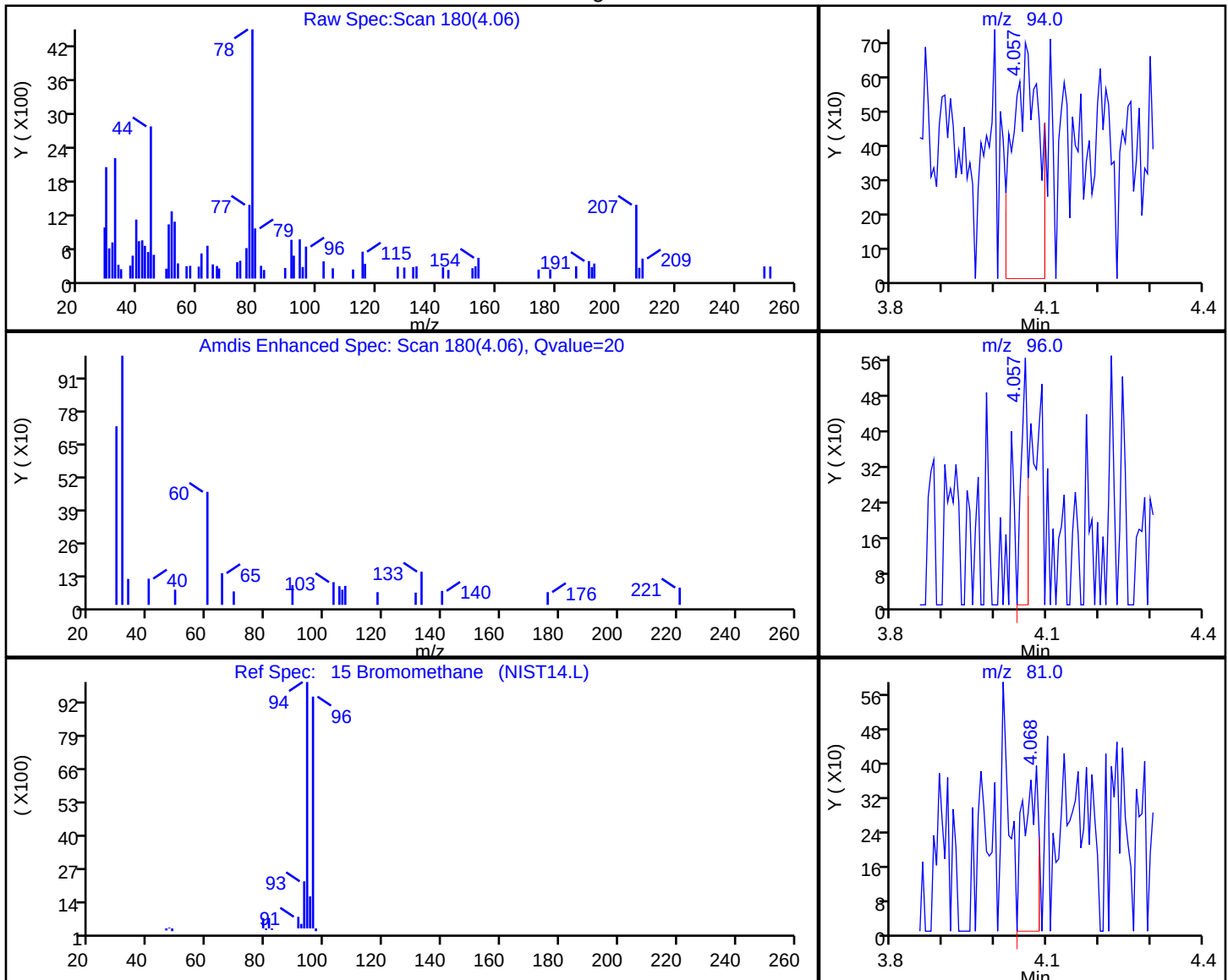
Column: RTX-5 (0.32 mm)

Detector

MS SCAN

15 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
4.06	94.00	2324	0.030632
4.06	96.00	485	
4.07	81.00	750	

Reviewer: tajh, 04-Apr-2018 09:47:03

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: H45-CS-2018 Lab Sample ID: 140-11145-2
 Matrix: Air Lab File ID: RD03P106.D
 Analysis Method: TO 15 LL Date Collected: 03/28/2018 07:52
 Sample wt/vol: 500 (mL) Date Analyzed: 04/03/2018 19:55
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19179 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	167.85	ND		0.080	
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	187.38	ND		0.080	
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	
75-35-4	1,1-Dichloroethene	96.94	ND		0.040	
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	
106-93-4	1,2-Dibromoethane	187.87	ND		0.080	
95-50-1	1,2-Dichlorobenzene	147.00	ND		0.080	
107-06-2	1,2-Dichloroethane	98.96	ND	*	0.080	
78-87-5	1,2-Dichloropropane	112.99	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	170.92	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	
541-73-1	1,3-Dichlorobenzene	147.00	ND		0.080	
106-46-7	1,4-Dichlorobenzene	147.00	ND		0.080	
123-91-1	1,4-Dioxane	88.11	ND		0.20	
540-84-1	2,2,4-Trimethylpentane	114.23	ND		0.20	
78-93-3	2-Butanone	72.11	0.35		0.32	
108-10-1	4-Methyl-2-pentanone (MIBK)	100.16	ND		0.20	
71-43-2	Benzene	78.11	0.17		0.080	
100-44-7	Benzyl chloride	126.58	ND		0.16	
75-27-4	Bromodichloromethane	163.83	ND		0.080	
75-25-2	Bromoform	252.75	ND		0.080	
74-83-9	Bromomethane	94.94	ND		0.080	
56-23-5	Carbon tetrachloride	153.81	0.073		0.032	
108-90-7	Chlorobenzene	112.56	ND		0.080	
75-00-3	Chloroethane	64.52	ND		0.080	
67-66-3	Chloroform	119.38	ND		0.080	
74-87-3	Chloromethane	50.49	0.50		0.20	
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.040	
10061-01-5	cis-1,3-Dichloropropene	110.97	ND		0.080	
110-82-7	Cyclohexane	84.16	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: H45-CS-2018 Lab Sample ID: 140-11145-2
 Matrix: Air Lab File ID: RD03P106.D
 Analysis Method: TO 15 LL Date Collected: 03/28/2018 07:52
 Sample wt/vol: 500 (mL) Date Analyzed: 04/03/2018 19:55
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19179 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
124-48-1	Dibromochloromethane	208.29	ND		0.080	
75-71-8	Dichlorodifluoromethane	120.91	0.18		0.080	
64-17-5	Ethanol	46.07	27		2.0	
100-41-4	Ethylbenzene	106.17	ND		0.080	
87-68-3	Hexachlorobutadiene	260.76	ND		0.080	
110-54-3	Hexane	86.17	ND		0.20	
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.16	
75-09-2	Methylene Chloride	84.93	0.33		0.20	
179601-23-1	m-Xylene & p-Xylene	106.17	0.13		0.080	
95-47-6	o-Xylene	106.17	ND		0.080	
100-42-5	Styrene	104.15	ND		0.080	
75-65-0	t-Butyl alcohol	74.12	ND		0.32	
127-18-4	Tetrachloroethene	165.83	ND		0.080	
108-88-3	Toluene	92.14	0.47		0.12	
156-60-5	trans-1,2-Dichloroethene	96.94	3.7		0.080	
10061-02-6	trans-1,3-Dichloropropene	110.97	ND		0.080	
79-01-6	Trichloroethene	131.39	ND		0.036	
75-69-4	Trichlorofluoromethane	137.37	0.30		0.080	
75-01-4	Vinyl chloride	62.50	ND		0.040	

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	89		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: H45-CS-2018 Lab Sample ID: 140-11145-2
 Matrix: Air Lab File ID: RD03P106.D
 Analysis Method: TO 15 LL Date Collected: 03/28/2018 07:52
 Sample wt/vol: 500 (mL) Date Analyzed: 04/03/2018 19:55
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19179 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	
79-34-5	1,1,2,2-Tetrachloroethane	167.85	ND		0.55	
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	
76-13-1	1,1,2-Trichlorotrifluoroethane	187.38	ND		0.61	
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	
75-35-4	1,1-Dichloroethene	96.94	ND		0.16	
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	
106-93-4	1,2-Dibromoethane	187.87	ND		0.61	
95-50-1	1,2-Dichlorobenzene	147.00	ND		0.48	
107-06-2	1,2-Dichloroethane	98.96	ND	*	0.32	
78-87-5	1,2-Dichloropropane	112.99	ND		0.37	
76-14-2	1,2-Dichlorotetrafluoroethane	170.92	ND		0.56	
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	
541-73-1	1,3-Dichlorobenzene	147.00	ND		0.48	
106-46-7	1,4-Dichlorobenzene	147.00	ND		0.48	
123-91-1	1,4-Dioxane	88.11	ND		0.72	
540-84-1	2,2,4-Trimethylpentane	114.23	ND		0.93	
78-93-3	2-Butanone	72.11	1.0		0.94	
108-10-1	4-Methyl-2-pentanone (MIBK)	100.16	ND		0.82	
71-43-2	Benzene	78.11	0.54		0.26	
100-44-7	Benzyl chloride	126.58	ND		0.83	
75-27-4	Bromodichloromethane	163.83	ND		0.54	
75-25-2	Bromoform	252.75	ND		0.83	
74-83-9	Bromomethane	94.94	ND		0.31	
56-23-5	Carbon tetrachloride	153.81	0.46		0.20	
108-90-7	Chlorobenzene	112.56	ND		0.37	
75-00-3	Chloroethane	64.52	ND		0.21	
67-66-3	Chloroform	119.38	ND		0.39	
74-87-3	Chloromethane	50.49	1.0		0.41	
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.16	
10061-01-5	cis-1,3-Dichloropropene	110.97	ND		0.36	
110-82-7	Cyclohexane	84.16	ND		0.69	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: H45-CS-2018 Lab Sample ID: 140-11145-2
 Matrix: Air Lab File ID: RD03P106.D
 Analysis Method: TO 15 LL Date Collected: 03/28/2018 07:52
 Sample wt/vol: 500 (mL) Date Analyzed: 04/03/2018 19:55
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19179 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
124-48-1	Dibromochloromethane	208.29	ND		0.68	
75-71-8	Dichlorodifluoromethane	120.91	0.90		0.40	
64-17-5	Ethanol	46.07	51		3.8	
100-41-4	Ethylbenzene	106.17	ND		0.35	
87-68-3	Hexachlorobutadiene	260.76	ND		0.85	
110-54-3	Hexane	86.17	ND		0.70	
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.58	
75-09-2	Methylene Chloride	84.93	1.2		0.69	
179601-23-1	m-Xylene & p-Xylene	106.17	0.57		0.35	
95-47-6	o-Xylene	106.17	ND		0.35	
100-42-5	Styrene	104.15	ND		0.34	
75-65-0	t-Butyl alcohol	74.12	ND		0.97	
127-18-4	Tetrachloroethene	165.83	ND		0.54	
108-88-3	Toluene	92.14	1.8		0.45	
156-60-5	trans-1,2-Dichloroethene	96.94	15		0.32	
10061-02-6	trans-1,3-Dichloropropene	110.97	ND		0.36	
79-01-6	Trichloroethene	131.39	ND		0.19	
75-69-4	Trichlorofluoromethane	137.37	1.7		0.45	
75-01-4	Vinyl chloride	62.50	ND		0.10	

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	89		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P106.D
 Lims ID: 140-11145-A-2
 Client ID: H45-CS-2018
 Sample Type: Client
 Inject. Date: 03-Apr-2018 19:55:30 ALS Bottle#: 6 Worklist Smp#: 12
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0007767-012
 Misc. Info.: 140-11145-a-2
 Operator ID: Instrument ID: MR
 Method: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 04-Apr-2018 09:59:00 Calib Date: 30-Jan-2018 19:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK025

First Level Reviewer: tajh

Date: 04-Apr-2018 09:47:37

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.665	7.670	-0.005	77	307122	4.00	
* 2 1,4-Difluorobenzene	114	9.800	9.806	-0.006	93	1770112	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.826	14.826	0.000	85	1393169	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.541	16.541	0.000	95	938538	3.55	
8 Dichlorodifluoromethane	85	3.508	3.507	0.001	97	52558	0.1823	
9 Chloromethane	52	3.637	3.642	-0.005	99	13163	0.5012	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.659	3.664	-0.005	87	2637	0.0135	
17 Ethanol	31	4.289	4.295	-0.006	97	619265	26.9	
21 Trichlorofluoromethane	101	4.629	4.640	-0.011	100	83347	0.3043	
29 2-Methyl-2-propanol	59	5.298	5.287	0.011	95	11118	0.0480	
30 1,1,2-Trichloro-1,2,2-trif	101	5.357	5.362	-0.005	97	18504	0.0744	
31 Methylene Chloride	84	5.460	5.465	-0.005	84	40021	0.3332	
34 trans-1,2-Dichloroethene	96	6.150	6.160	-0.010	91	438609	3.72	
39 2-Butanone (MEK)	72	6.986	6.986	0.000	99	19663	0.3530	
40 Hexane	56	7.067	7.083	-0.016	90	7198	0.0799	
43 Chloroform	83	7.697	7.703	-0.006	90	11352	0.0399	
47 Benzene	78	9.223	9.229	-0.006	96	57663	0.1705	
49 Cyclohexane	69	9.256	9.256	0.000	51	1327	0.0244	
50 Carbon tetrachloride	117	9.261	9.272	-0.011	96	19921	0.0731	
53 Isooctane	57	10.097	10.102	-0.005	94	27939	0.0570	
56 Trichloroethene	130	10.566	10.561	0.005	84	2306	0.0144	
62 4-Methyl-2-pentanone (MIBK	43	11.833	11.828	0.005	96	18011	0.0950	
65 Toluene	91	12.755	12.761	-0.006	93	179395	0.4675	
73 Tetrachloroethene	129	13.963	13.974	-0.011	93	2714	0.0190	
76 Ethylbenzene	91	15.204	15.209	-0.005	98	18655	0.0371	
77 m-Xylene & p-Xylene	91	15.376	15.381	-0.005	99	51034	0.1311	
82 o-Xylene	91	15.921	15.915	0.006	98	22433	0.0546	
93 1,2,4-Trimethylbenzene	105	17.857	17.857	0.000	96	14702	0.0306	

Reagents:

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P106.D

Injection Date: 03-Apr-2018 19:55:30

Instrument ID: MR

Operator ID:

Lims ID: 140-11145-A-2

Lab Sample ID: 140-11145-2

Worklist Smp#: 12

Client ID: H45-CS-2018

Purge Vol: 500.000 mL

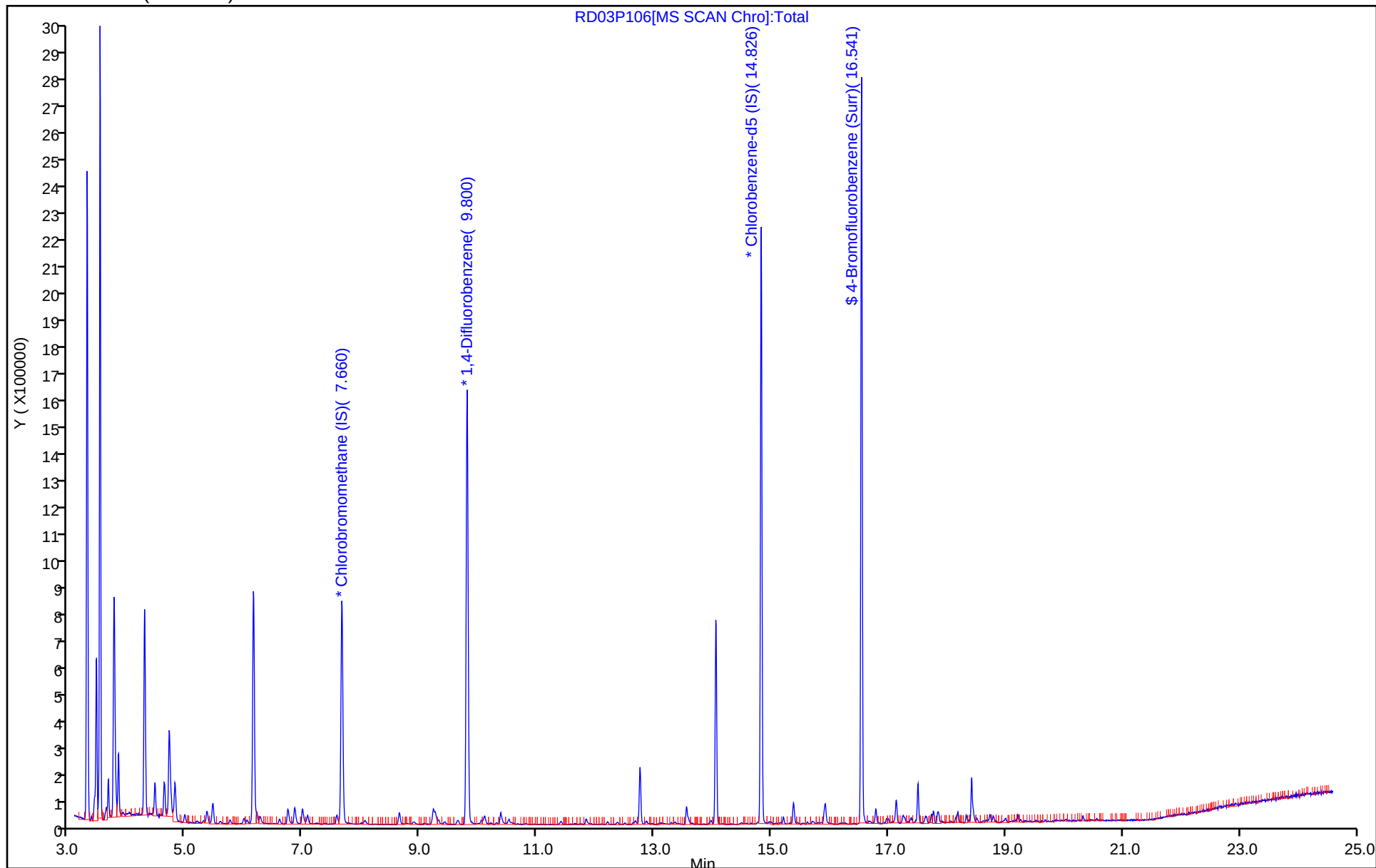
Dil. Factor: 1.0000

ALS Bottle#: 6

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P106.D
Lims ID: 140-11145-A-2
Client ID: H45-CS-2018
Sample Type: Client
Inject. Date: 03-Apr-2018 19:55:30 ALS Bottle#: 6 Worklist Smp#: 12
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007767-012
Misc. Info.: 140-11145-a-2
Operator ID: Instrument ID: MR
Method: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 04-Apr-2018 09:59:00 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D
Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: tajh

Date: 04-Apr-2018 09:47:37

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.55	88.83

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P106.D

Injection Date: 03-Apr-2018 19:55:30

Instrument ID: MR

Lims ID: 140-11145-A-2

Lab Sample ID: 140-11145-2

Client ID: H45-CS-2018

Operator ID:

ALS Bottle#: 6

Worklist Smp#: 12

Purge Vol: 500.000 mL

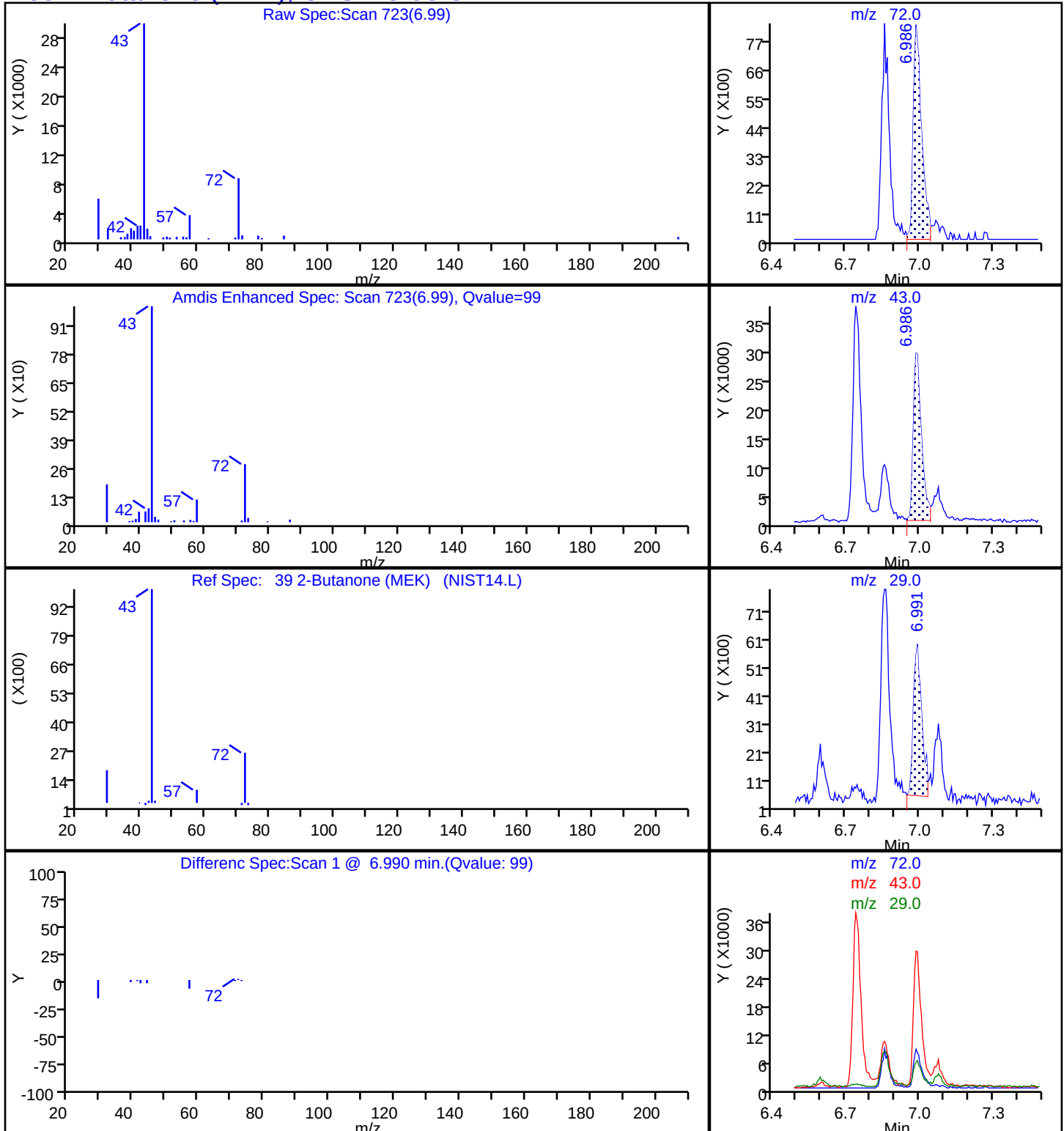
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

39 2-Butanone (MEK), CAS: 78-93-3

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P106.D

Injection Date: 03-Apr-2018 19:55:30

Instrument ID: MR

Lims ID: 140-11145-A-2

Lab Sample ID: 140-11145-2

Client ID: H45-CS-2018

Operator ID:

ALS Bottle#: 6

Worklist Smp#: 12

Purge Vol: 500.000 mL

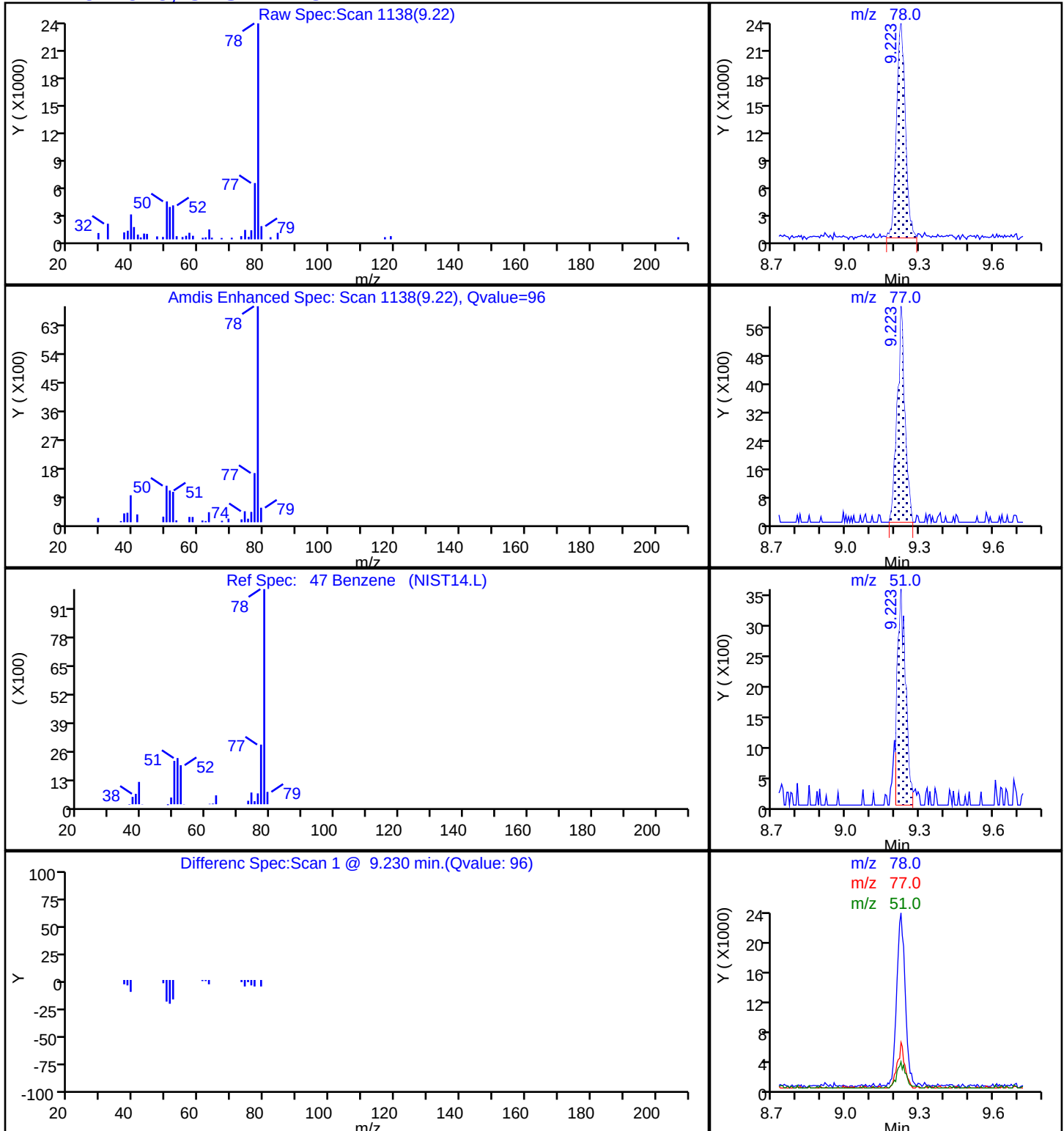
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P106.D

Injection Date: 03-Apr-2018 19:55:30

Instrument ID: MR

Lims ID: 140-11145-A-2

Lab Sample ID: 140-11145-2

Client ID: H45-CS-2018

Operator ID:

ALS Bottle#: 6

Worklist Smp#: 12

Purge Vol: 500.000 mL

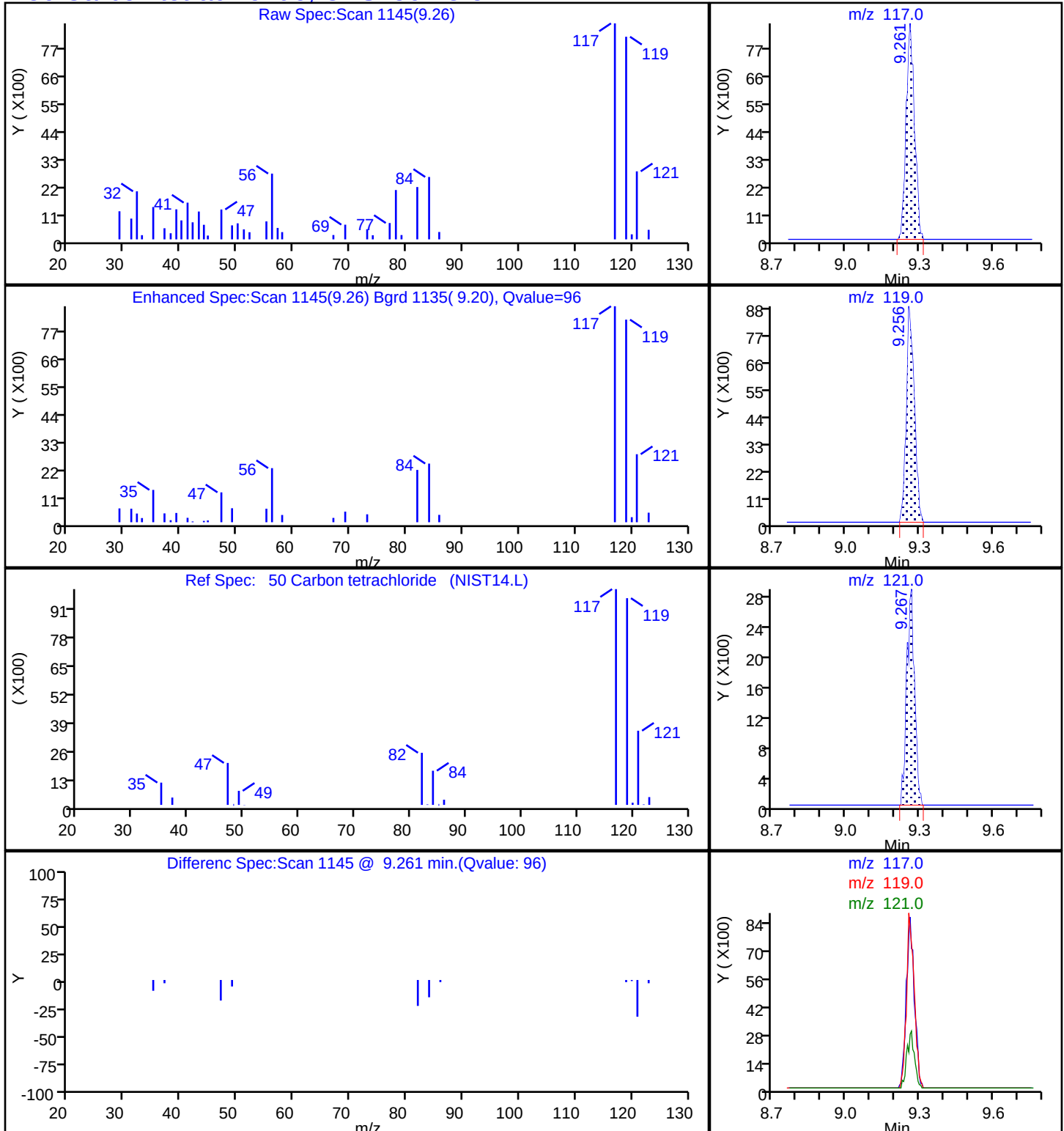
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

50 Carbon tetrachloride, CAS: 56-23-5

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P106.D

Injection Date: 03-Apr-2018 19:55:30

Instrument ID: MR

Lims ID: 140-11145-A-2

Lab Sample ID: 140-11145-2

Client ID: H45-CS-2018

Operator ID:

ALS Bottle#:

6

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

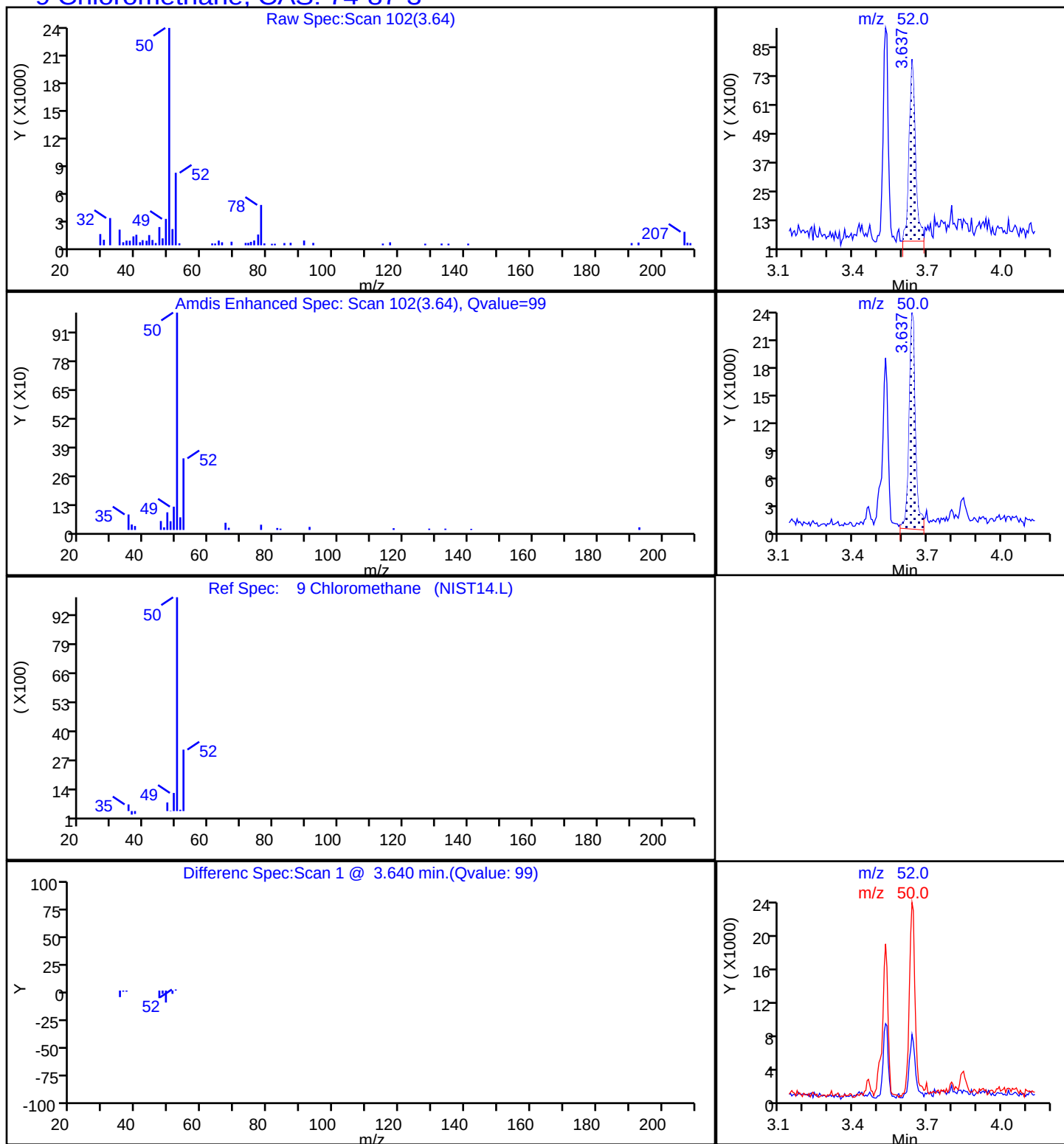
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

9 Chloromethane, CAS: 74-87-3



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P106.D

Injection Date: 03-Apr-2018 19:55:30

Instrument ID: MR

Lims ID: 140-11145-A-2

Lab Sample ID: 140-11145-2

Client ID: H45-CS-2018

Operator ID:

ALS Bottle#: 6

Worklist Smp#: 12

Purge Vol: 500.000 mL

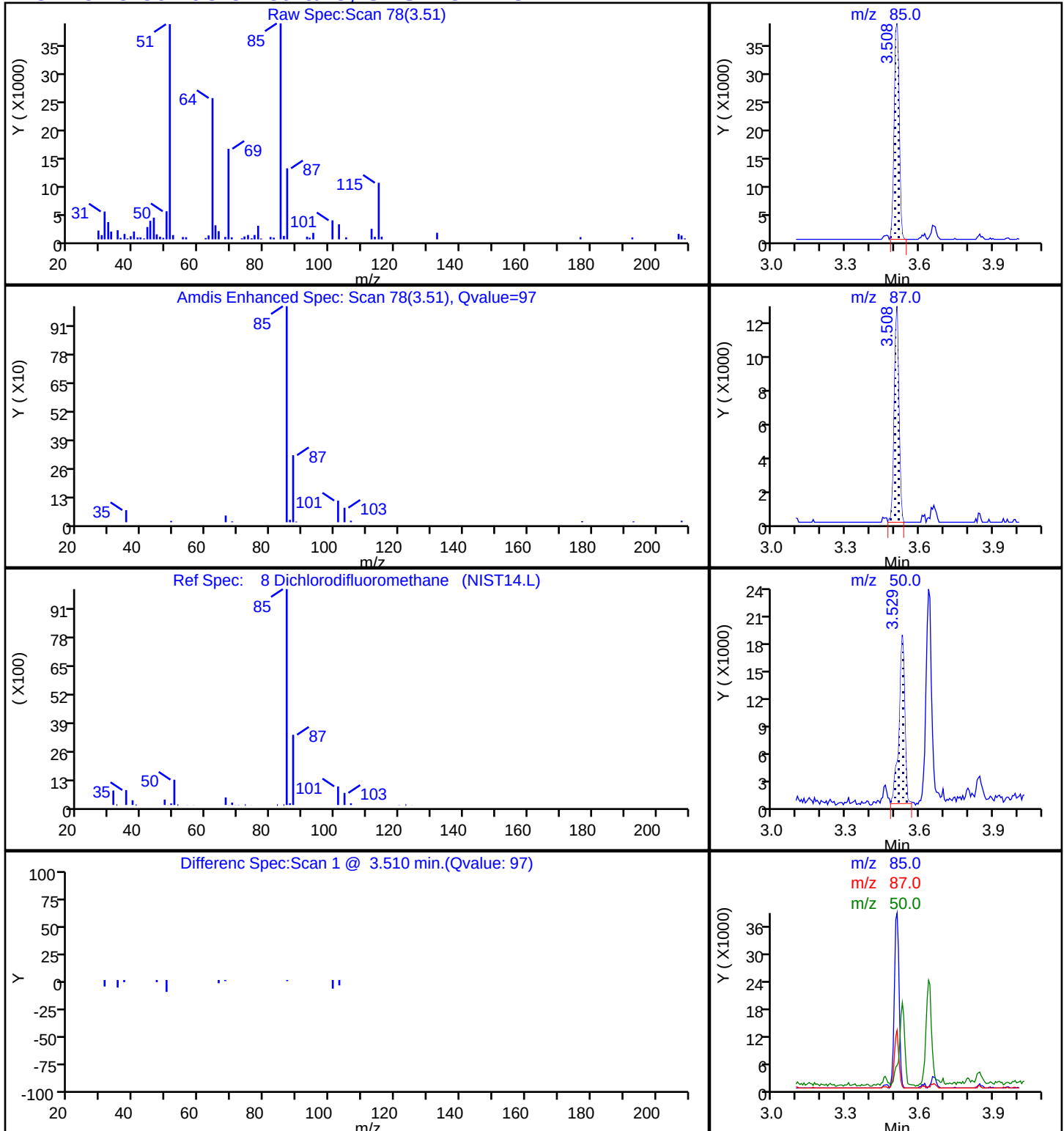
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P106.D

Injection Date: 03-Apr-2018 19:55:30

Instrument ID: MR

Lims ID: 140-11145-A-2

Lab Sample ID: 140-11145-2

Client ID: H45-CS-2018

Operator ID:

ALS Bottle#: 6

Worklist Smp#: 12

Purge Vol: 500.000 mL

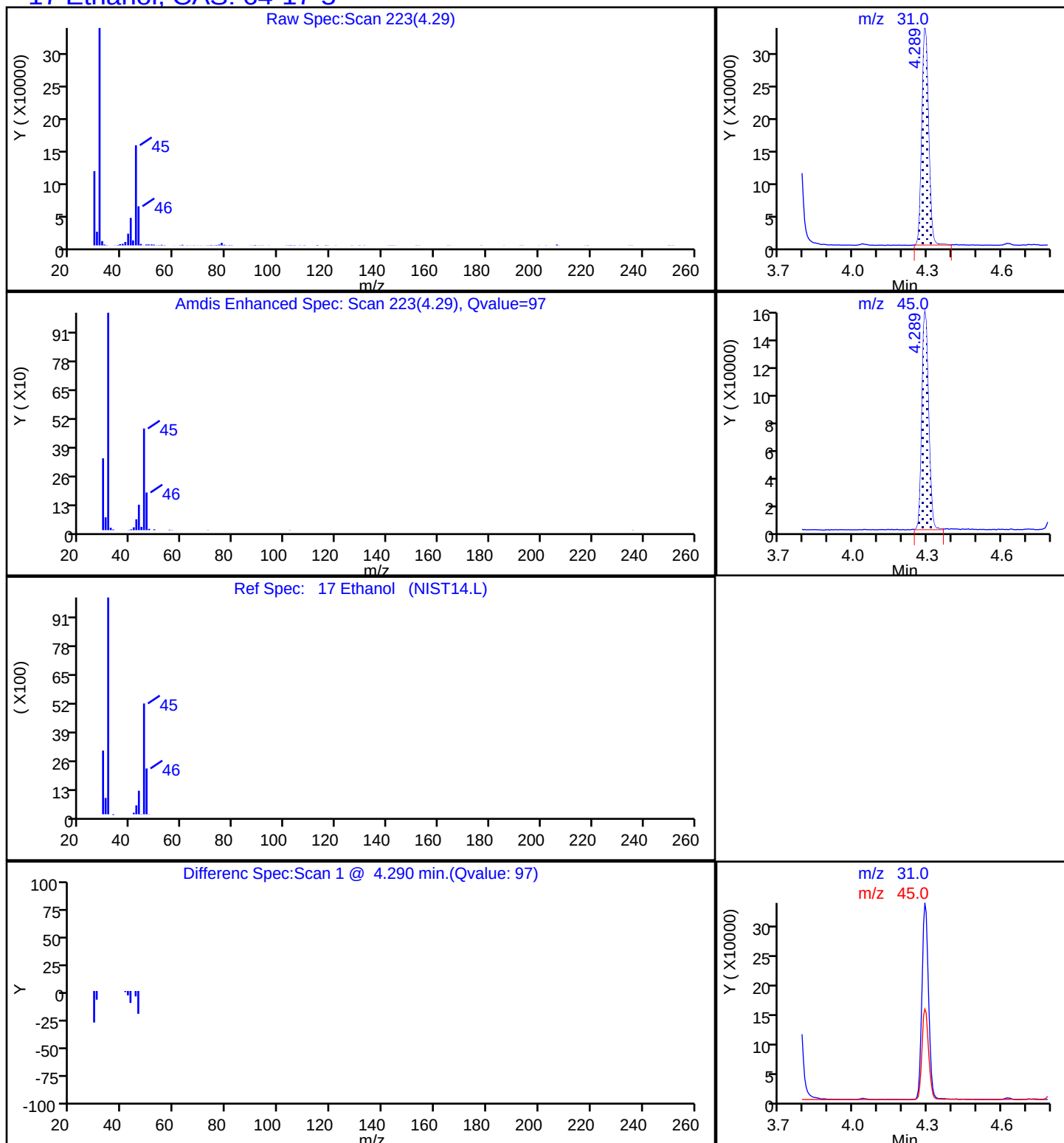
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

17 Ethanol, CAS: 64-17-5

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P106.D

Injection Date: 03-Apr-2018 19:55:30

Instrument ID: MR

Lims ID: 140-11145-A-2

Lab Sample ID: 140-11145-2

Client ID: H45-CS-2018

Operator ID:

ALS Bottle#: 6

Worklist Smp#: 12

Purge Vol: 500.000 mL

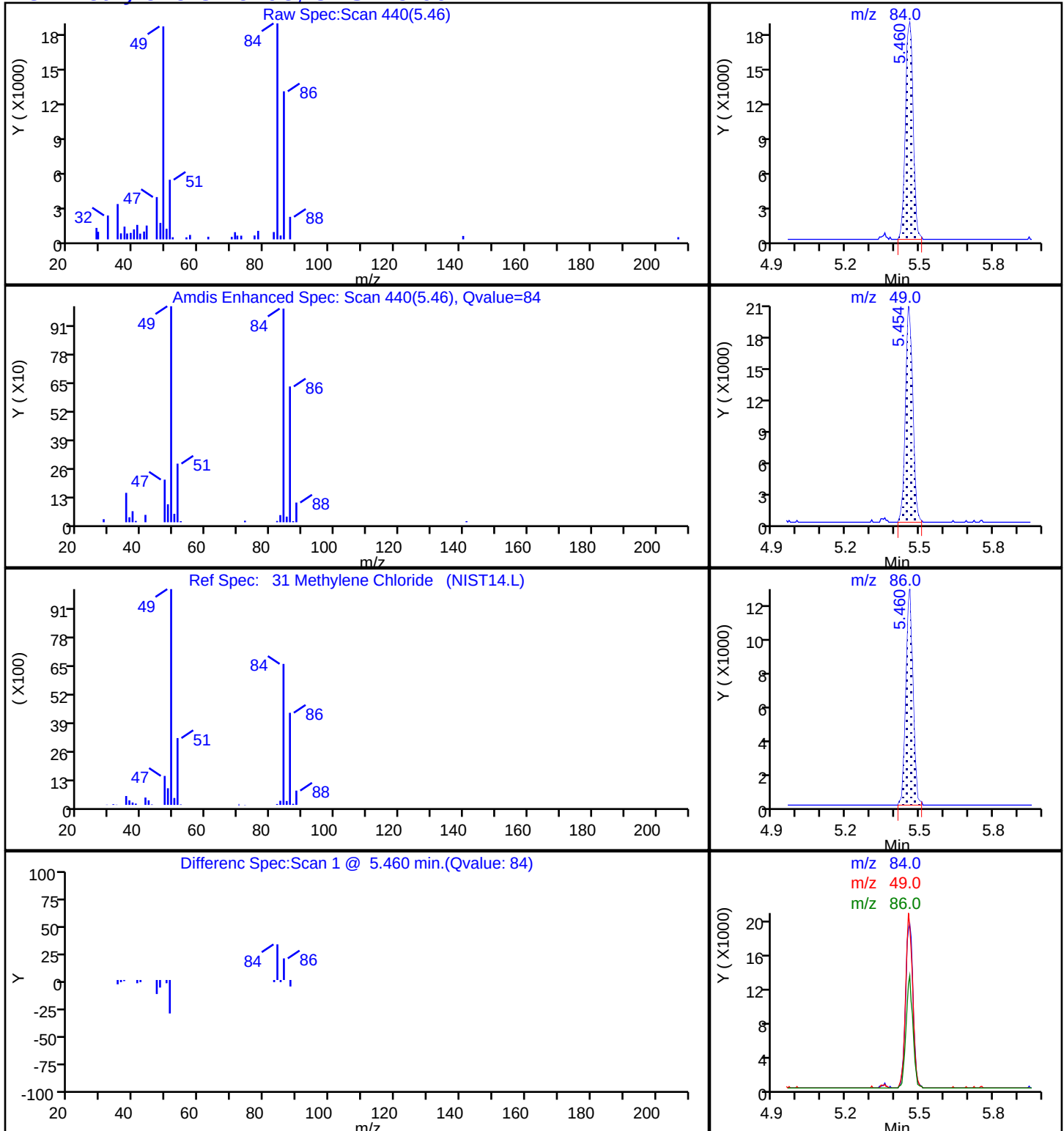
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P106.D

Injection Date: 03-Apr-2018 19:55:30

Instrument ID: MR

Lims ID: 140-11145-A-2

Lab Sample ID: 140-11145-2

Client ID: H45-CS-2018

Operator ID:

ALS Bottle#:

6

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

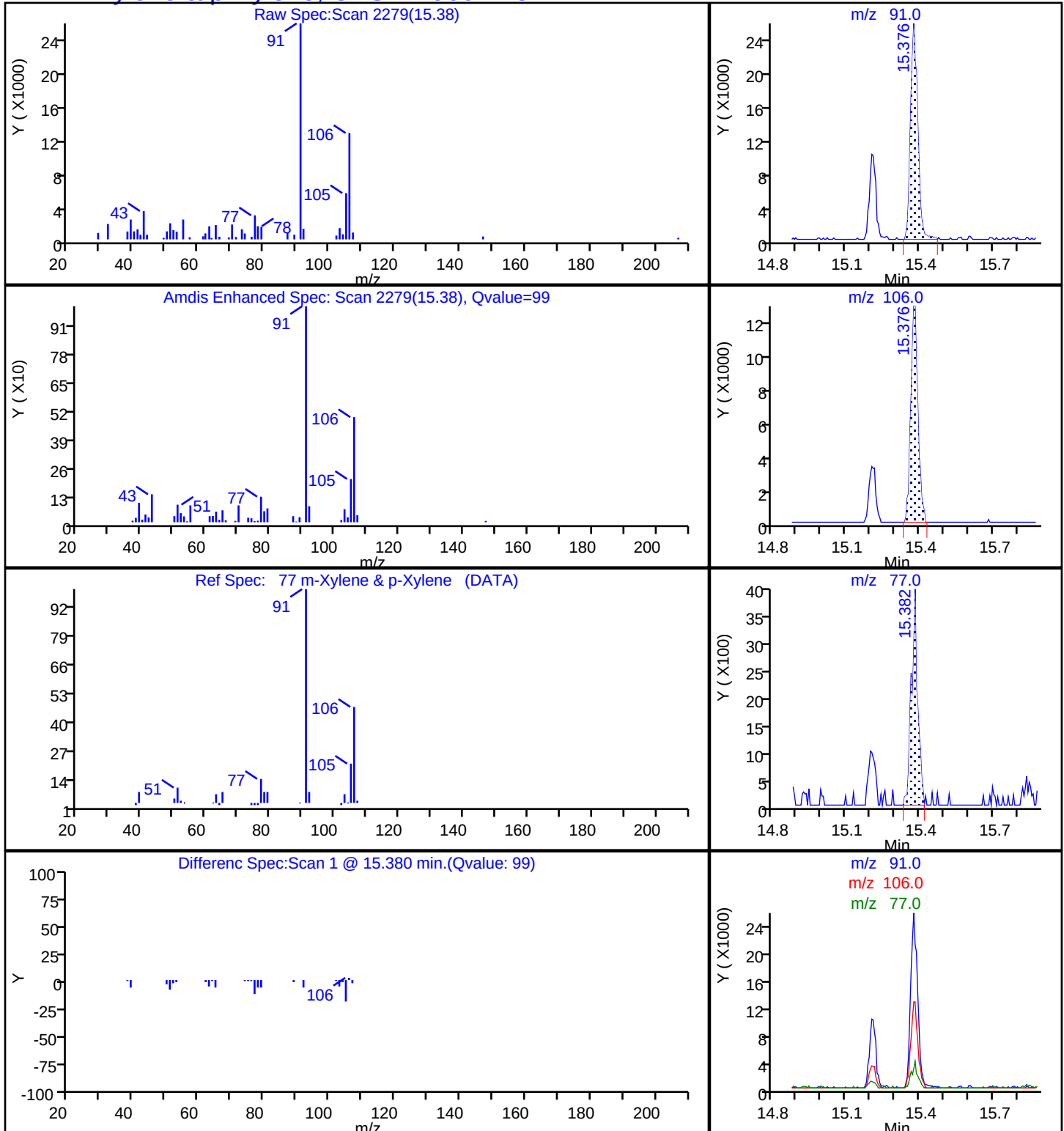
Limit Group:

MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

77 m-Xylene & p-Xylene, CAS: 179601-23-1

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P106.D

Injection Date: 03-Apr-2018 19:55:30

Instrument ID: MR

Lims ID: 140-11145-A-2

Lab Sample ID: 140-11145-2

Client ID: H45-CS-2018

Operator ID:

ALS Bottle#: 6

Worklist Smp#: 12

Purge Vol: 500.000 mL

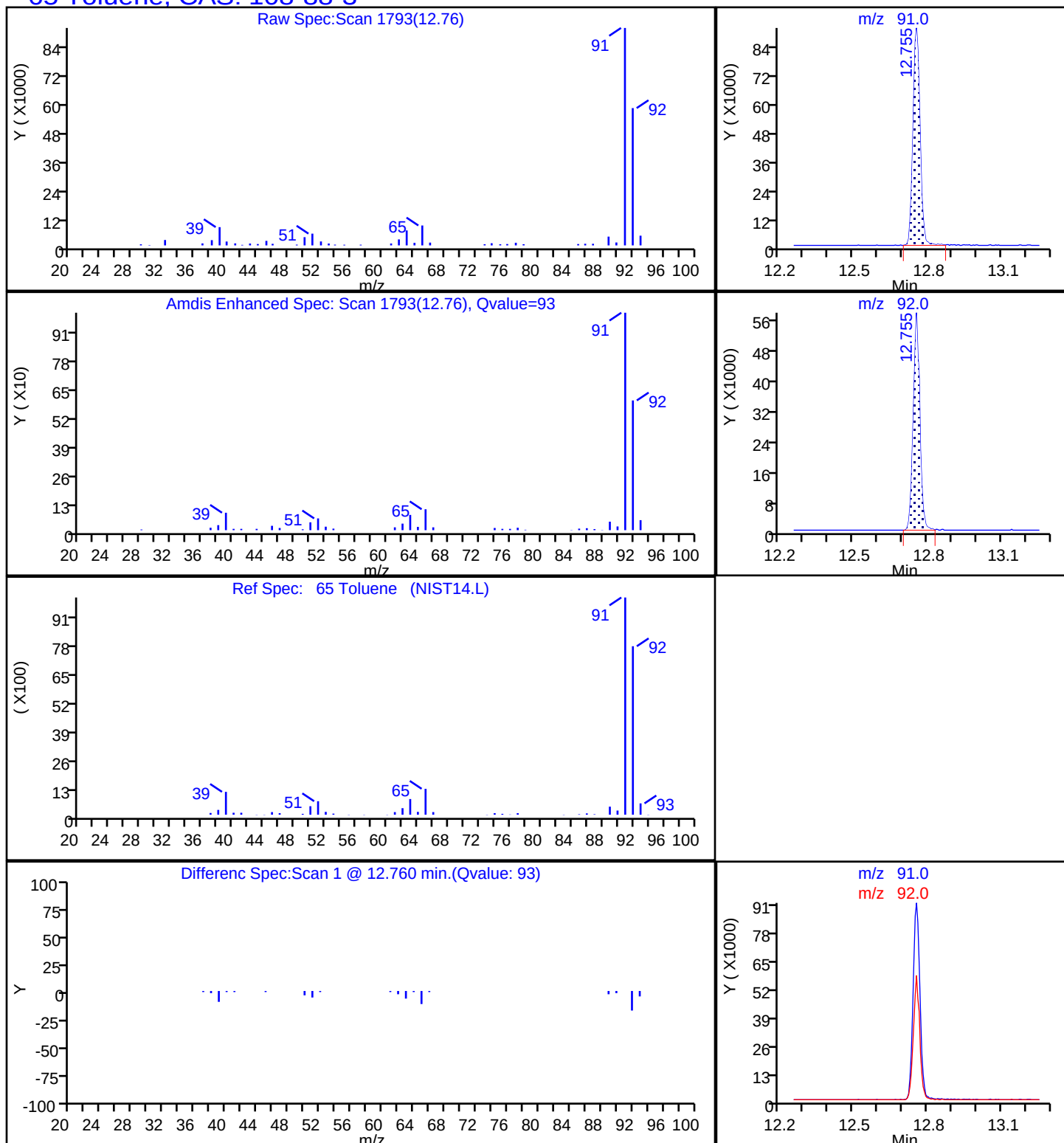
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

65 Toluene, CAS: 108-88-3

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P106.D

Injection Date: 03-Apr-2018 19:55:30

Instrument ID: MR

Lims ID: 140-11145-A-2

Lab Sample ID: 140-11145-2

Client ID: H45-CS-2018

Operator ID:

ALS Bottle#: 6

Worklist Smp#: 12

Purge Vol: 500.000 mL

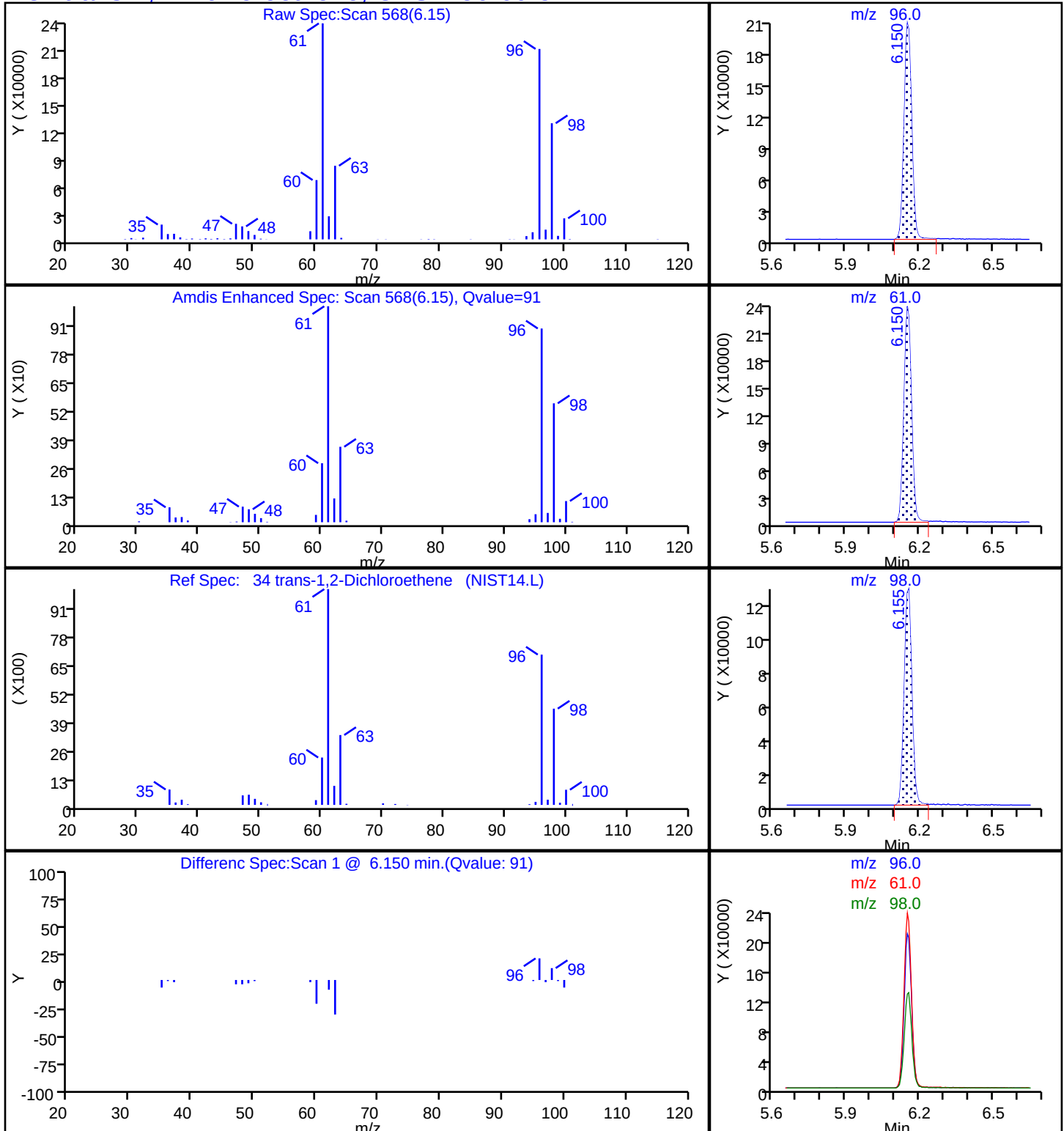
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

34 trans-1,2-Dichloroethene, CAS: 156-60-5

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P106.D

Injection Date: 03-Apr-2018 19:55:30

Instrument ID: MR

Lims ID: 140-11145-A-2

Lab Sample ID: 140-11145-2

Client ID: H45-CS-2018

Operator ID:

ALS Bottle#:

6

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

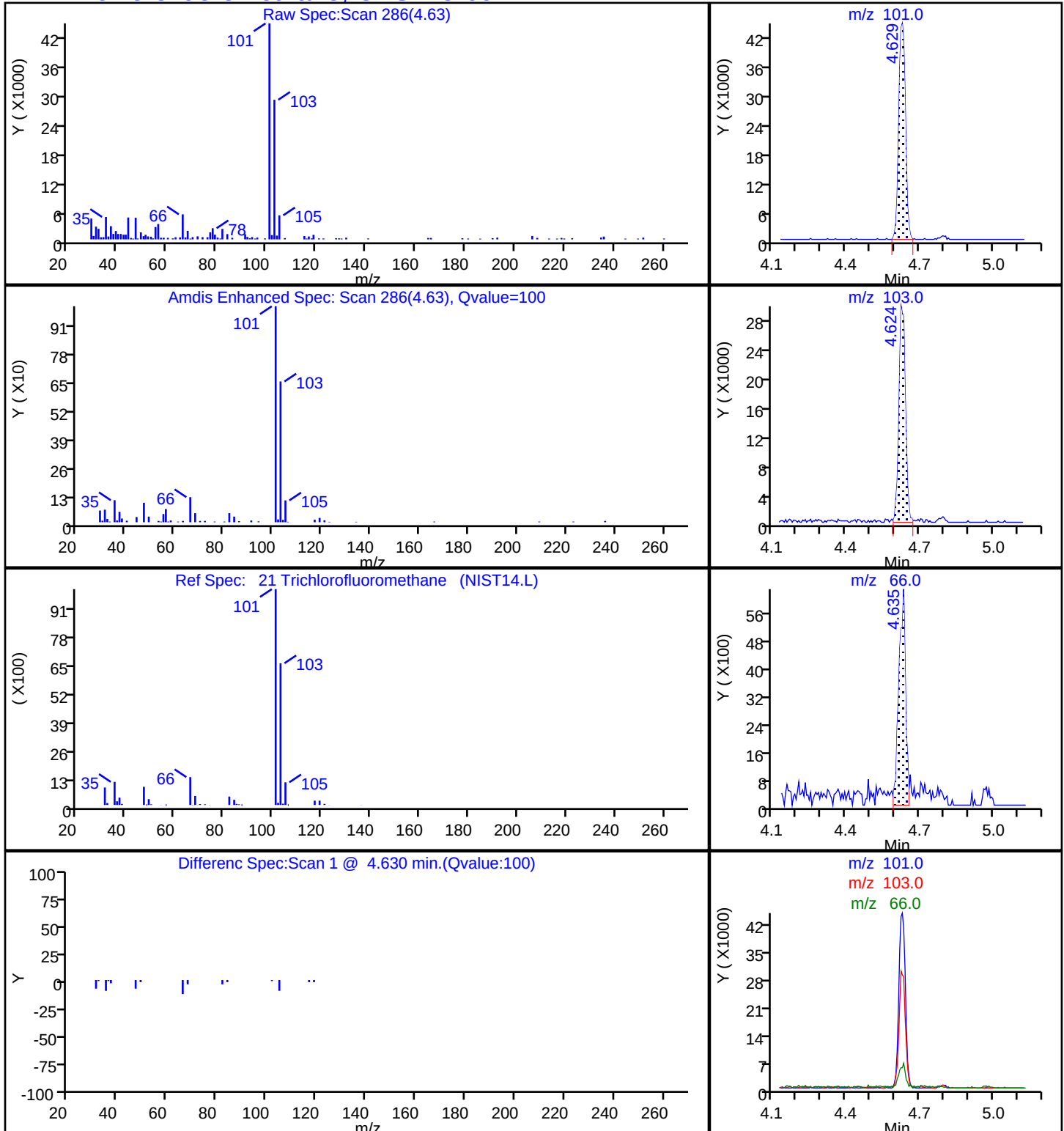
Limit Group:

MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

21 Trichlorofluoromethane, CAS: 75-69-4

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: H46-SS-2018 Lab Sample ID: 140-11145-3
 Matrix: Air Lab File ID: RD03P107.D
 Analysis Method: TO 15 LL Date Collected: 03/28/2018 09:57
 Sample wt/vol: 500 (mL) Date Analyzed: 04/03/2018 20:48
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19179 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	133.41	0.90		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	167.85	ND		0.080	
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	187.38	ND		0.080	
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	
75-35-4	1,1-Dichloroethene	96.94	ND		0.040	
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	120.20	0.094		0.080	
106-93-4	1,2-Dibromoethane	187.87	ND		0.080	
95-50-1	1,2-Dichlorobenzene	147.00	ND		0.080	
107-06-2	1,2-Dichloroethane	98.96	ND	*	0.080	
78-87-5	1,2-Dichloropropane	112.99	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	170.92	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	
541-73-1	1,3-Dichlorobenzene	147.00	ND		0.080	
106-46-7	1,4-Dichlorobenzene	147.00	ND		0.080	
123-91-1	1,4-Dioxane	88.11	ND		0.20	
540-84-1	2,2,4-Trimethylpentane	114.23	ND		0.20	
78-93-3	2-Butanone	72.11	0.39		0.32	
108-10-1	4-Methyl-2-pentanone (MIBK)	100.16	ND		0.20	
71-43-2	Benzene	78.11	0.097		0.080	
100-44-7	Benzyl chloride	126.58	ND		0.16	
75-27-4	Bromodichloromethane	163.83	ND		0.080	
75-25-2	Bromoform	252.75	ND		0.080	
74-83-9	Bromomethane	94.94	ND		0.080	
56-23-5	Carbon tetrachloride	153.81	0.12		0.032	
108-90-7	Chlorobenzene	112.56	ND		0.080	
75-00-3	Chloroethane	64.52	ND		0.080	
67-66-3	Chloroform	119.38	1.8		0.080	
74-87-3	Chloromethane	50.49	0.46		0.20	
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.040	
10061-01-5	cis-1,3-Dichloropropene	110.97	ND		0.080	
110-82-7	Cyclohexane	84.16	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: H46-SS-2018 Lab Sample ID: 140-11145-3
 Matrix: Air Lab File ID: RD03P107.D
 Analysis Method: TO 15 LL Date Collected: 03/28/2018 09:57
 Sample wt/vol: 500 (mL) Date Analyzed: 04/03/2018 20:48
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19179 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
124-48-1	Dibromochloromethane	208.29	ND		0.080	
75-71-8	Dichlorodifluoromethane	120.91	0.19		0.080	
64-17-5	Ethanol	46.07	13		2.0	
100-41-4	Ethylbenzene	106.17	0.10		0.080	
87-68-3	Hexachlorobutadiene	260.76	ND		0.080	
110-54-3	Hexane	86.17	0.54		0.20	
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.16	
75-09-2	Methylene Chloride	84.93	5.3		0.20	
179601-23-1	m-Xylene & p-Xylene	106.17	0.39		0.080	
95-47-6	o-Xylene	106.17	0.12		0.080	
100-42-5	Styrene	104.15	ND		0.080	
75-65-0	t-Butyl alcohol	74.12	ND		0.32	
127-18-4	Tetrachloroethene	165.83	0.41		0.080	
108-88-3	Toluene	92.14	1.1		0.12	
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	110.97	ND		0.080	
79-01-6	Trichloroethene	131.39	1.1		0.036	
75-69-4	Trichlorofluoromethane	137.37	0.40		0.080	
75-01-4	Vinyl chloride	62.50	ND		0.040	

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	87		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: H46-SS-2018 Lab Sample ID: 140-11145-3
 Matrix: Air Lab File ID: RD03P107.D
 Analysis Method: TO 15 LL Date Collected: 03/28/2018 09:57
 Sample wt/vol: 500 (mL) Date Analyzed: 04/03/2018 20:48
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19179 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	133.41	4.9		0.44	
79-34-5	1,1,2,2-Tetrachloroethane	167.85	ND		0.55	
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	
76-13-1	1,1,2-Trichlorotrifluoroethane	187.38	ND		0.61	
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	
75-35-4	1,1-Dichloroethene	96.94	ND		0.16	
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	
95-63-6	1,2,4-Trimethylbenzene	120.20	0.46		0.39	
106-93-4	1,2-Dibromoethane	187.87	ND		0.61	
95-50-1	1,2-Dichlorobenzene	147.00	ND		0.48	
107-06-2	1,2-Dichloroethane	98.96	ND	*	0.32	
78-87-5	1,2-Dichloropropane	112.99	ND		0.37	
76-14-2	1,2-Dichlorotetrafluoroethane	170.92	ND		0.56	
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	
541-73-1	1,3-Dichlorobenzene	147.00	ND		0.48	
106-46-7	1,4-Dichlorobenzene	147.00	ND		0.48	
123-91-1	1,4-Dioxane	88.11	ND		0.72	
540-84-1	2,2,4-Trimethylpentane	114.23	ND		0.93	
78-93-3	2-Butanone	72.11	1.2		0.94	
108-10-1	4-Methyl-2-pentanone (MIBK)	100.16	ND		0.82	
71-43-2	Benzene	78.11	0.31		0.26	
100-44-7	Benzyl chloride	126.58	ND		0.83	
75-27-4	Bromodichloromethane	163.83	ND		0.54	
75-25-2	Bromoform	252.75	ND		0.83	
74-83-9	Bromomethane	94.94	ND		0.31	
56-23-5	Carbon tetrachloride	153.81	0.78		0.20	
108-90-7	Chlorobenzene	112.56	ND		0.37	
75-00-3	Chloroethane	64.52	ND		0.21	
67-66-3	Chloroform	119.38	8.9		0.39	
74-87-3	Chloromethane	50.49	0.94		0.41	
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.16	
10061-01-5	cis-1,3-Dichloropropene	110.97	ND		0.36	
110-82-7	Cyclohexane	84.16	ND		0.69	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: H46-SS-2018 Lab Sample ID: 140-11145-3
 Matrix: Air Lab File ID: RD03P107.D
 Analysis Method: TO 15 LL Date Collected: 03/28/2018 09:57
 Sample wt/vol: 500 (mL) Date Analyzed: 04/03/2018 20:48
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19179 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
124-48-1	Dibromochloromethane	208.29	ND		0.68	
75-71-8	Dichlorodifluoromethane	120.91	0.92		0.40	
64-17-5	Ethanol	46.07	25		3.8	
100-41-4	Ethylbenzene	106.17	0.44		0.35	
87-68-3	Hexachlorobutadiene	260.76	ND		0.85	
110-54-3	Hexane	86.17	1.9		0.70	
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.58	
75-09-2	Methylene Chloride	84.93	19		0.69	
179601-23-1	m-Xylene & p-Xylene	106.17	1.7		0.35	
95-47-6	o-Xylene	106.17	0.53		0.35	
100-42-5	Styrene	104.15	ND		0.34	
75-65-0	t-Butyl alcohol	74.12	ND		0.97	
127-18-4	Tetrachloroethene	165.83	2.8		0.54	
108-88-3	Toluene	92.14	4.2		0.45	
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	
10061-02-6	trans-1,3-Dichloropropene	110.97	ND		0.36	
79-01-6	Trichloroethene	131.39	5.8		0.19	
75-69-4	Trichlorofluoromethane	137.37	2.3		0.45	
75-01-4	Vinyl chloride	62.50	ND		0.10	

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	87		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P107.D
 Lims ID: 140-11145-A-3
 Client ID: H46-SS-2018
 Sample Type: Client
 Inject. Date: 03-Apr-2018 20:48:30 ALS Bottle#: 7 Worklist Smp#: 13
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0007767-013
 Misc. Info.: 140-11145-a-3
 Operator ID: Instrument ID: MR
 Method: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 04-Apr-2018 09:59:00 Calib Date: 30-Jan-2018 19:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK025

First Level Reviewer: tajh

Date: 04-Apr-2018 09:48:20

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.643	7.670	-0.027	79	304217	4.00	
* 2 1,4-Difluorobenzene	114	9.795	9.806	-0.011	93	1762486	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.826	14.826	0.000	85	1362167	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.541	16.541	0.000	94	901345	3.49	
8 Dichlorodifluoromethane	85	3.481	3.507	-0.026	99	53402	0.1870	
9 Chloromethane	52	3.615	3.642	-0.027	99	11861	0.4559	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.626	3.664	-0.038	45	2755	0.0142	
17 Ethanol	31	4.273	4.295	-0.022	97	300486	13.2	
21 Trichlorofluoromethane	101	4.602	4.640	-0.038	100	109136	0.4023	
29 2-Methyl-2-propanol	59	5.292	5.287	0.005	93	14693	0.0641	
30 1,1,2-Trichloro-1,2,2-trif	101	5.325	5.362	-0.037	97	19155	0.0778	
31 Methylene Chloride	84	5.427	5.465	-0.038	85	634353	5.33	
39 2-Butanone (MEK)	72	6.975	6.986	-0.011	98	21703	0.3933	
40 Hexane	56	7.056	7.083	-0.027	89	48525	0.5439	
43 Chloroform	83	7.676	7.703	-0.027	96	512463	1.82	
45 1,1,1-Trichloroethane	97	8.641	8.657	-0.016	94	265642	0.8983	
47 Benzene	78	9.213	9.229	-0.016	94	32563	0.0967	
49 Cyclohexane	69	9.234	9.256	-0.022	74	5088	0.0941	
50 Carbon tetrachloride	117	9.250	9.272	-0.022	96	33639	0.1239	
53 Isooctane	57	10.097	10.102	-0.005	94	23368	0.0479	
56 Trichloroethene	130	10.550	10.561	-0.011	97	172428	1.08	
62 4-Methyl-2-pentanone (MIBK	43	11.833	11.828	0.005	96	20494	0.1086	
65 Toluene	91	12.750	12.761	-0.011	94	422232	1.13	
73 Tetrachloroethene	129	13.969	13.974	-0.005	96	56894	0.4069	
76 Ethylbenzene	91	15.204	15.209	-0.005	97	49664	0.1011	
77 m-Xylene & p-Xylene	91	15.376	15.381	-0.005	99	146613	0.3851	
80 Styrene	104	15.851	15.856	-0.005	97	13815	0.0569	
82 o-Xylene	91	15.915	15.915	0.000	98	49110	0.1222	
89 1,3,5-Trimethylbenzene	120	17.371	17.371	0.000	90	6856	0.0304	
93 1,2,4-Trimethylbenzene	105	17.857	17.857	0.000	98	44367	0.0945	

Reagents:

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P107.D

Injection Date: 03-Apr-2018 20:48:30

Instrument ID: MR

Operator ID:

Lims ID: 140-11145-A-3

Lab Sample ID: 140-11145-3

Worklist Smp#: 13

Client ID: H46-SS-2018

Purge Vol: 500.000 mL

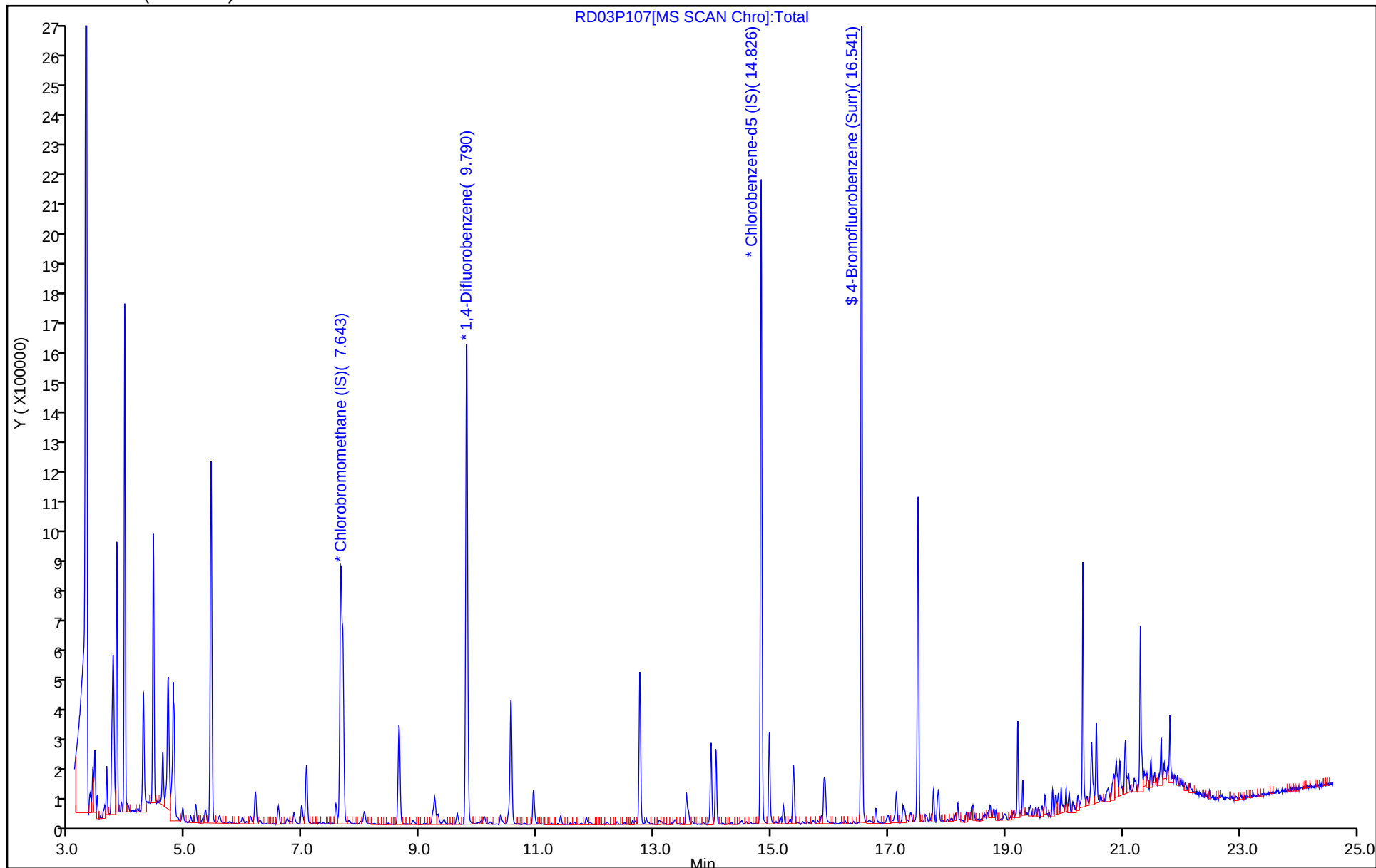
Dil. Factor: 1.0000

ALS Bottle#: 7

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P107.D
Lims ID: 140-11145-A-3
Client ID: H46-SS-2018
Sample Type: Client
Inject. Date: 03-Apr-2018 20:48:30 ALS Bottle#: 7 Worklist Smp#: 13
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007767-013
Misc. Info.: 140-11145-a-3
Operator ID: Instrument ID: MR
Method: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 04-Apr-2018 09:59:00 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D
Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: tajh

Date: 04-Apr-2018 09:48:20

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.49	87.25

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P107.D

Injection Date: 03-Apr-2018 20:48:30

Instrument ID: MR

Lims ID: 140-11145-A-3

Lab Sample ID: 140-11145-3

Client ID: H46-SS-2018

Operator ID:

ALS Bottle#:

7

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

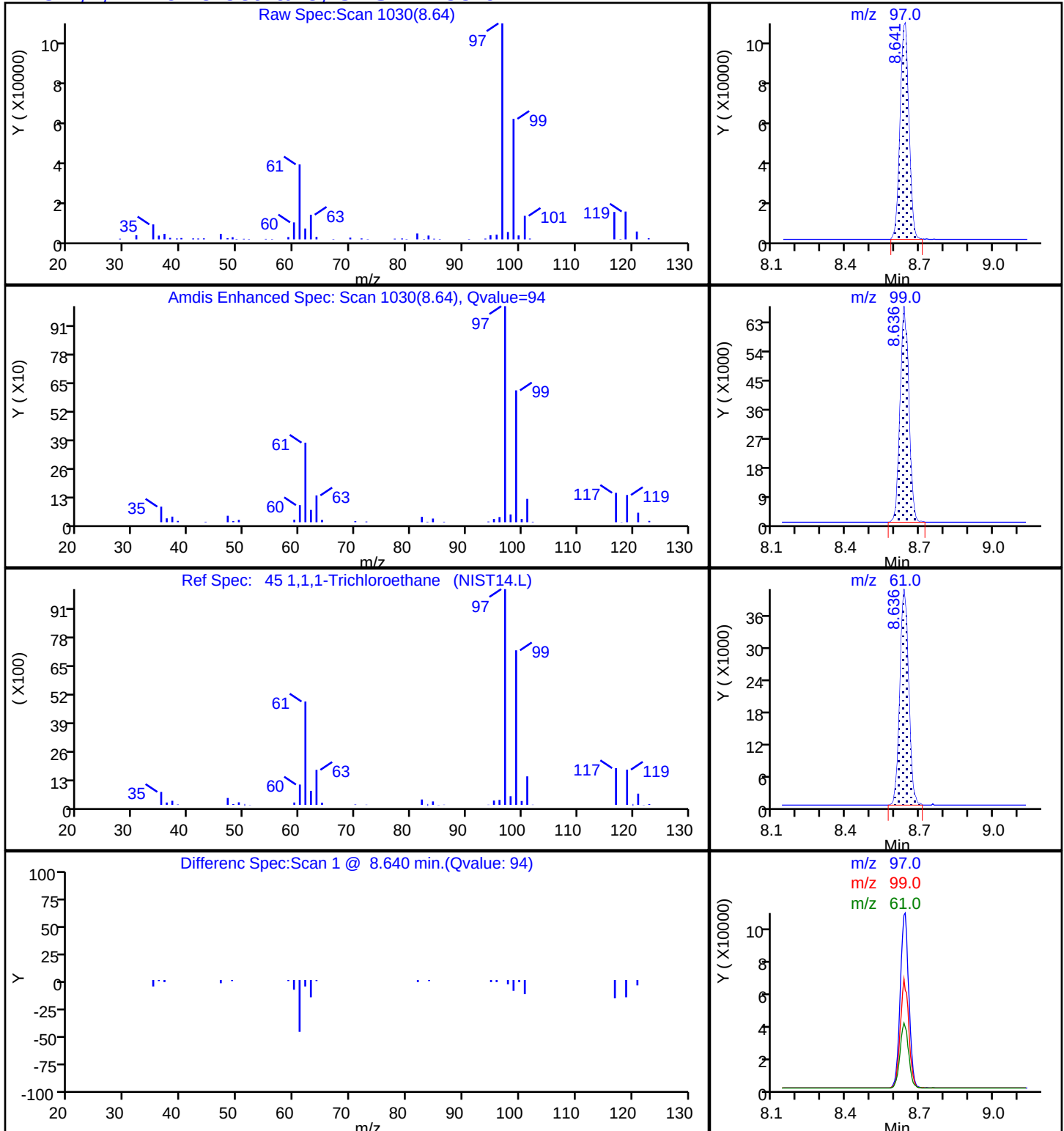
Limit Group:

MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

45 1,1,1-Trichloroethane, CAS: 71-55-6

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P107.D

Injection Date: 03-Apr-2018 20:48:30

Instrument ID: MR

Lims ID: 140-11145-A-3

Lab Sample ID: 140-11145-3

Client ID: H46-SS-2018

Operator ID:

ALS Bottle#: 7

Worklist Smp#: 13

Purge Vol: 500.000 mL

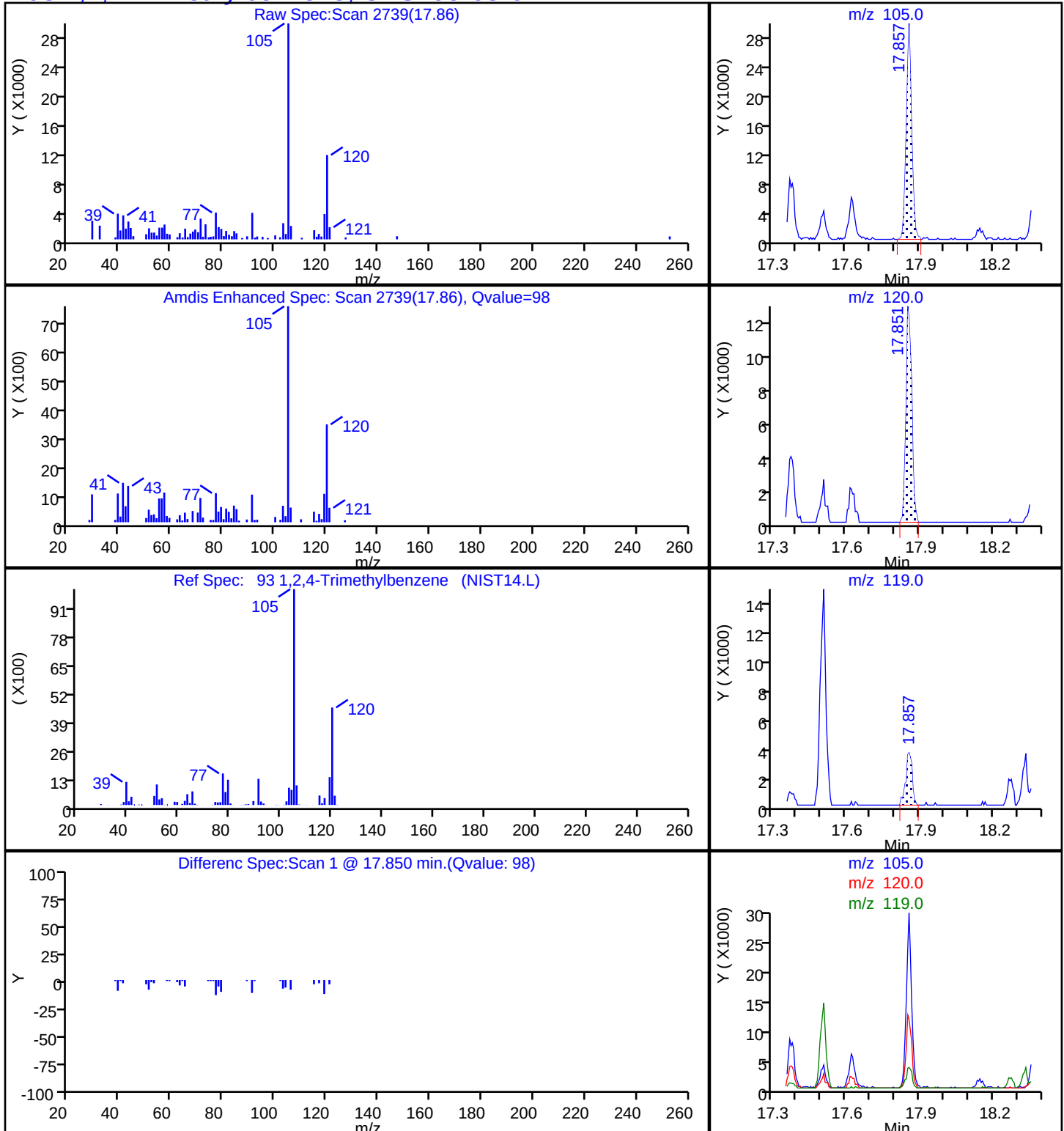
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

93 1,2,4-Trimethylbenzene, CAS: 95-63-6

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P107.D

Injection Date: 03-Apr-2018 20:48:30

Instrument ID: MR

Lims ID: 140-11145-A-3

Lab Sample ID: 140-11145-3

Client ID: H46-SS-2018

Operator ID:

ALS Bottle#:

7

Worklist Smp#:

13

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

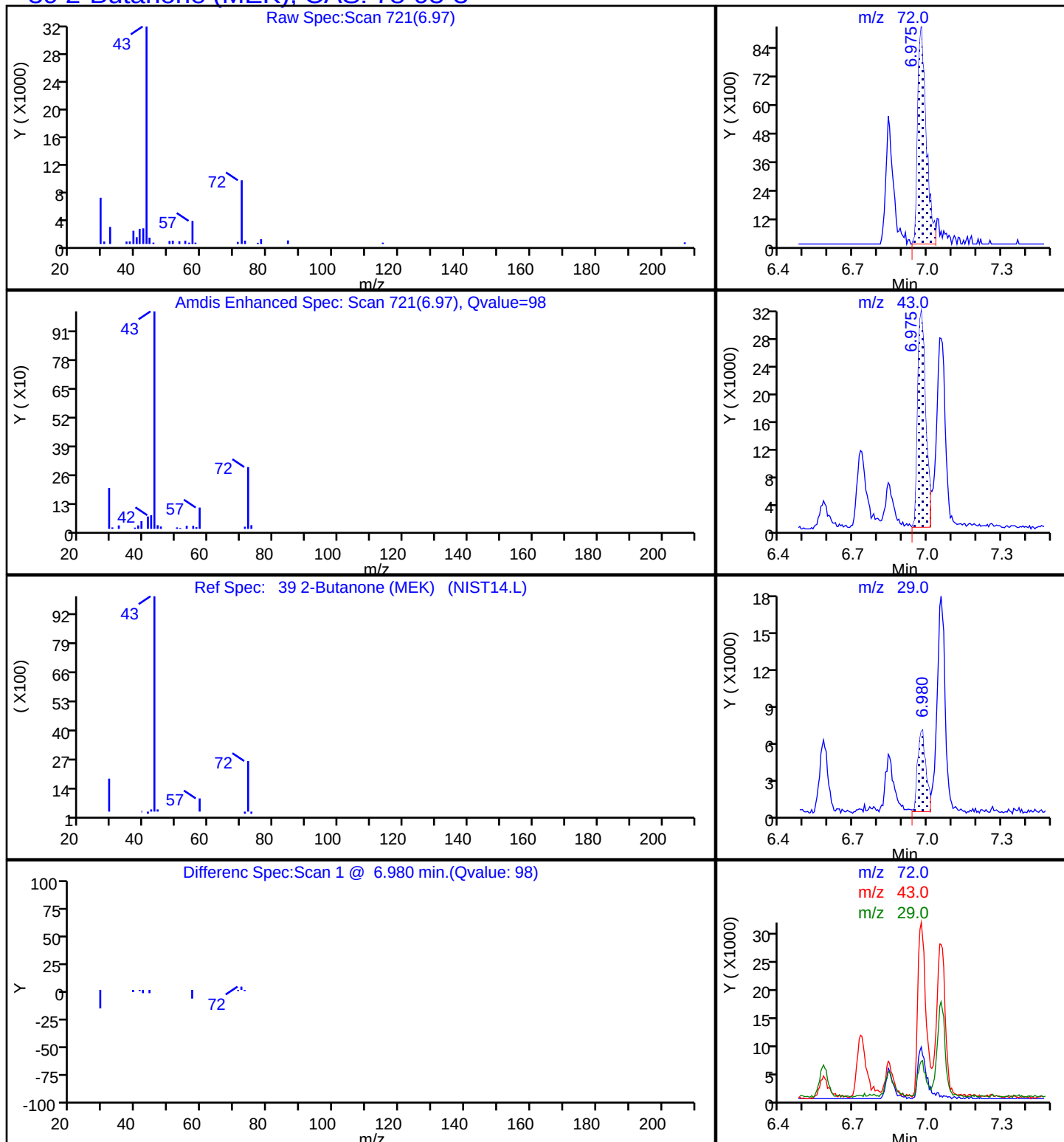
Limit Group:

MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

39 2-Butanone (MEK), CAS: 78-93-3

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P107.D

Injection Date: 03-Apr-2018 20:48:30

Instrument ID: MR

Lims ID: 140-11145-A-3

Lab Sample ID: 140-11145-3

Client ID: H46-SS-2018

Operator ID:

ALS Bottle#: 7

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

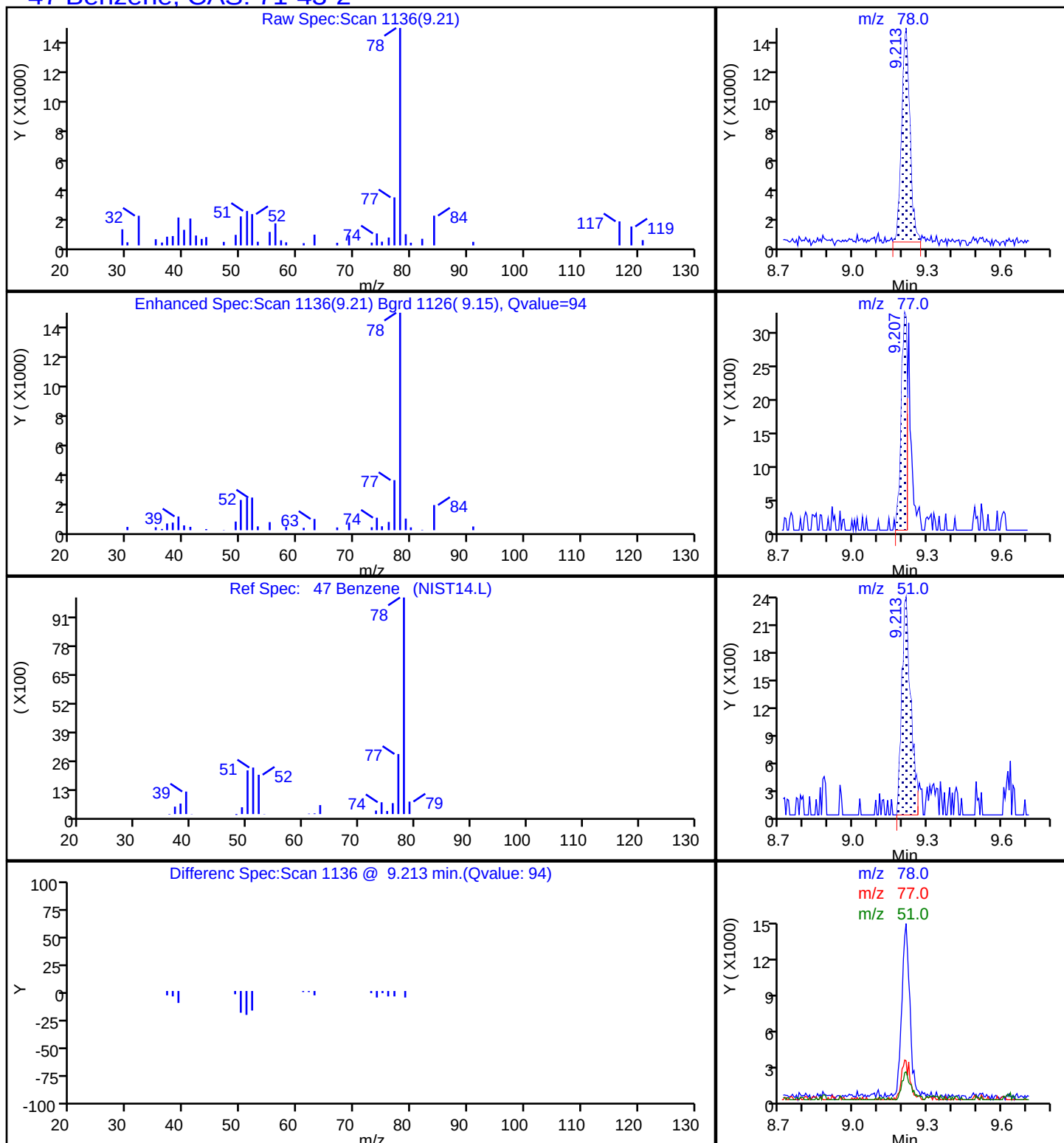
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P107.D

Injection Date: 03-Apr-2018 20:48:30

Instrument ID: MR

Lims ID: 140-11145-A-3

Lab Sample ID: 140-11145-3

Client ID: H46-SS-2018

Operator ID:

ALS Bottle#:

7

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

Limit Group:

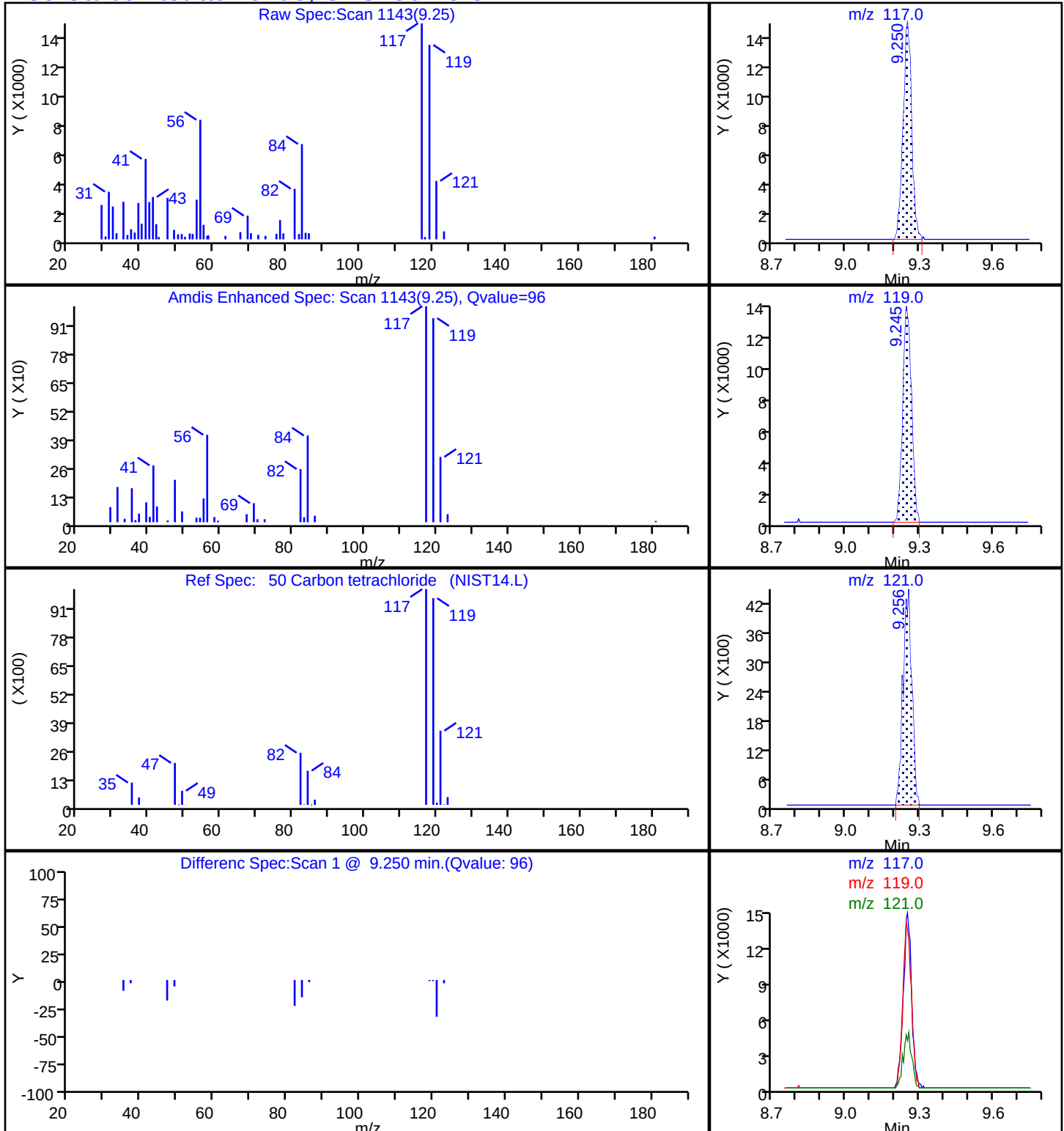
MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

50 Carbon tetrachloride, CAS: 56-23-5



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P107.D

Injection Date: 03-Apr-2018 20:48:30

Instrument ID: MR

Lims ID: 140-11145-A-3

Lab Sample ID: 140-11145-3

Client ID: H46-SS-2018

Operator ID:

ALS Bottle#: 7

Worklist Smp#: 13

Purge Vol: 500.000 mL

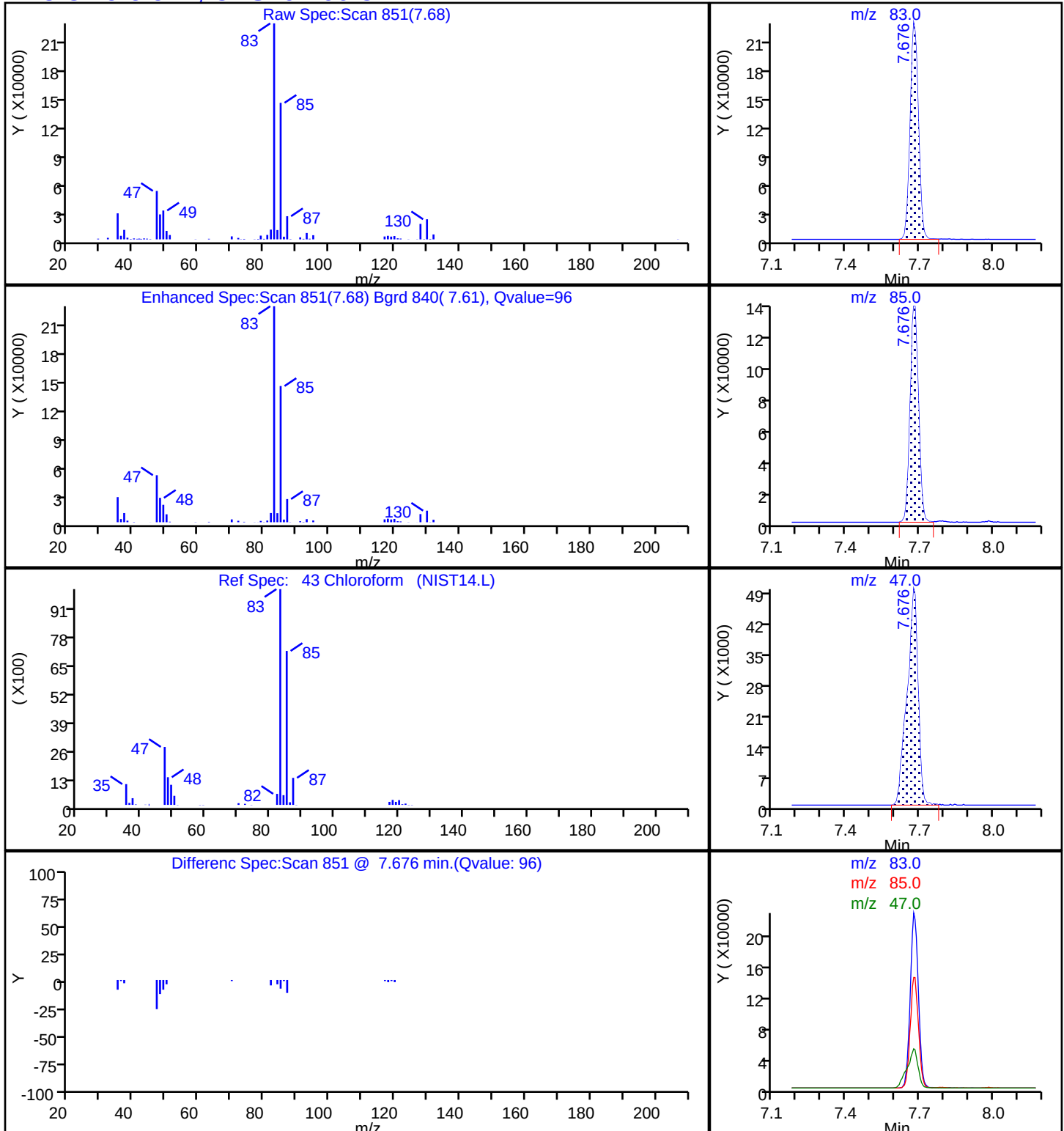
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

43 Chloroform, CAS: 67-66-3

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P107.D

Injection Date: 03-Apr-2018 20:48:30

Instrument ID: MR

Lims ID: 140-11145-A-3

Lab Sample ID: 140-11145-3

Client ID: H46-SS-2018

Operator ID:

ALS Bottle#:

7

Worklist Smp#:

13

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

Limit Group:

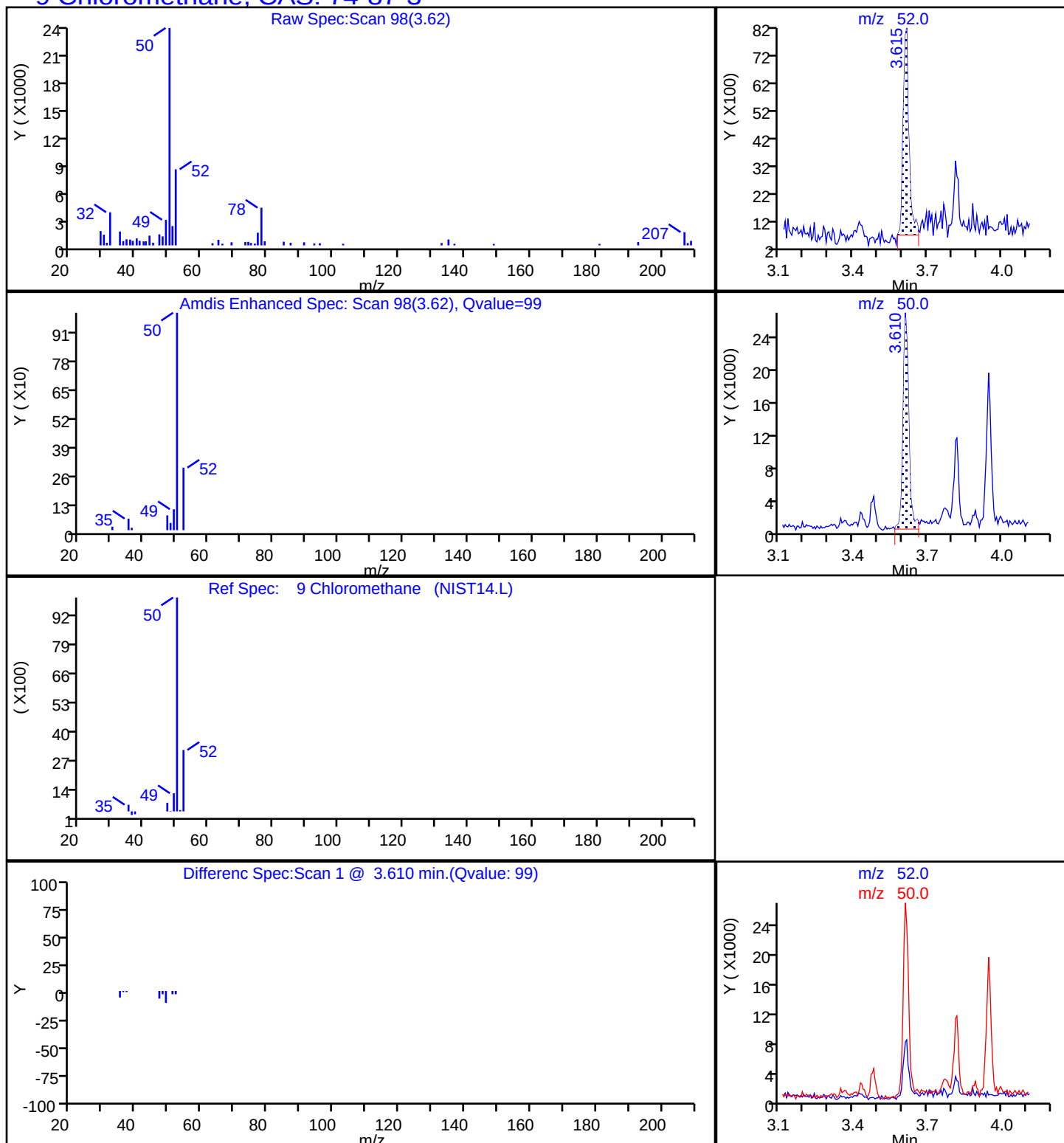
MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

9 Chloromethane, CAS: 74-87-3



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P107.D

Injection Date: 03-Apr-2018 20:48:30

Instrument ID: MR

Lims ID: 140-11145-A-3

Lab Sample ID: 140-11145-3

Client ID: H46-SS-2018

Operator ID:

ALS Bottle#:

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

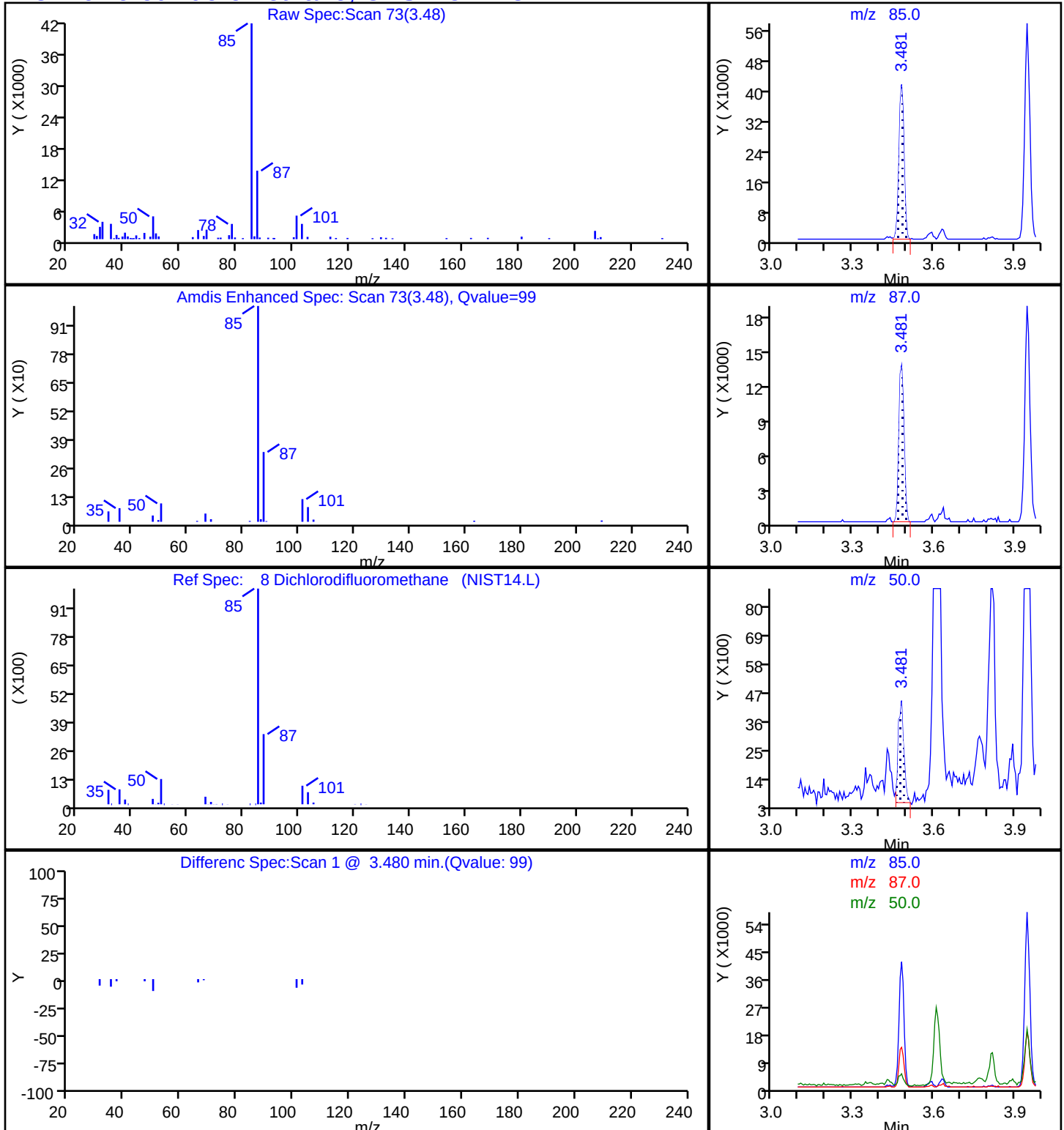
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P107.D

Injection Date: 03-Apr-2018 20:48:30

Instrument ID: MR

Lims ID: 140-11145-A-3

Lab Sample ID: 140-11145-3

Client ID: H46-SS-2018

Operator ID:

ALS Bottle#: 7

Worklist Smp#: 13

Purge Vol: 500.000 mL

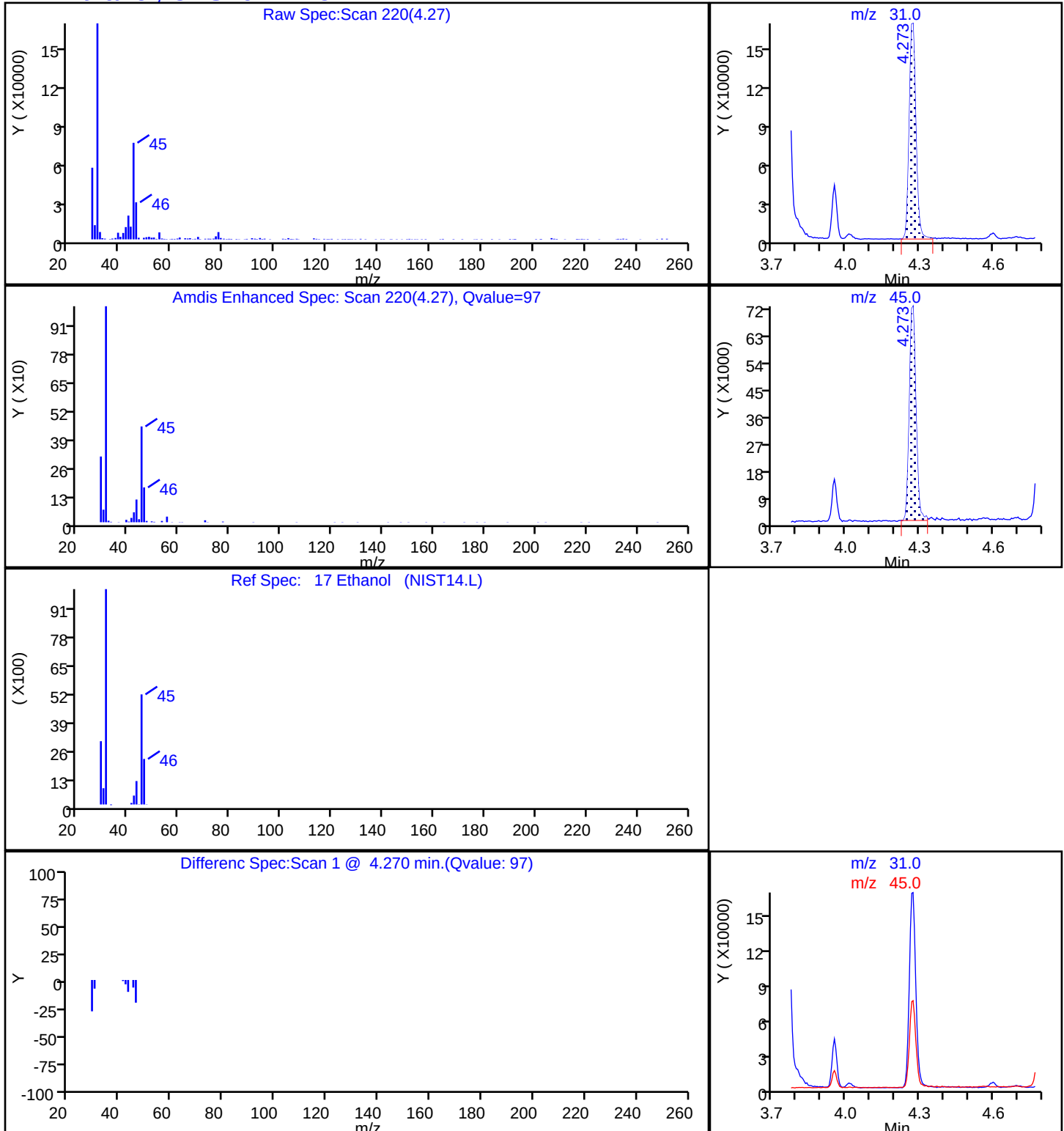
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

17 Ethanol, CAS: 64-17-5

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P107.D

Injection Date: 03-Apr-2018 20:48:30

Instrument ID: MR

Lims ID: 140-11145-A-3

Lab Sample ID: 140-11145-3

Client ID: H46-SS-2018

Operator ID:

ALS Bottle#:

7

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

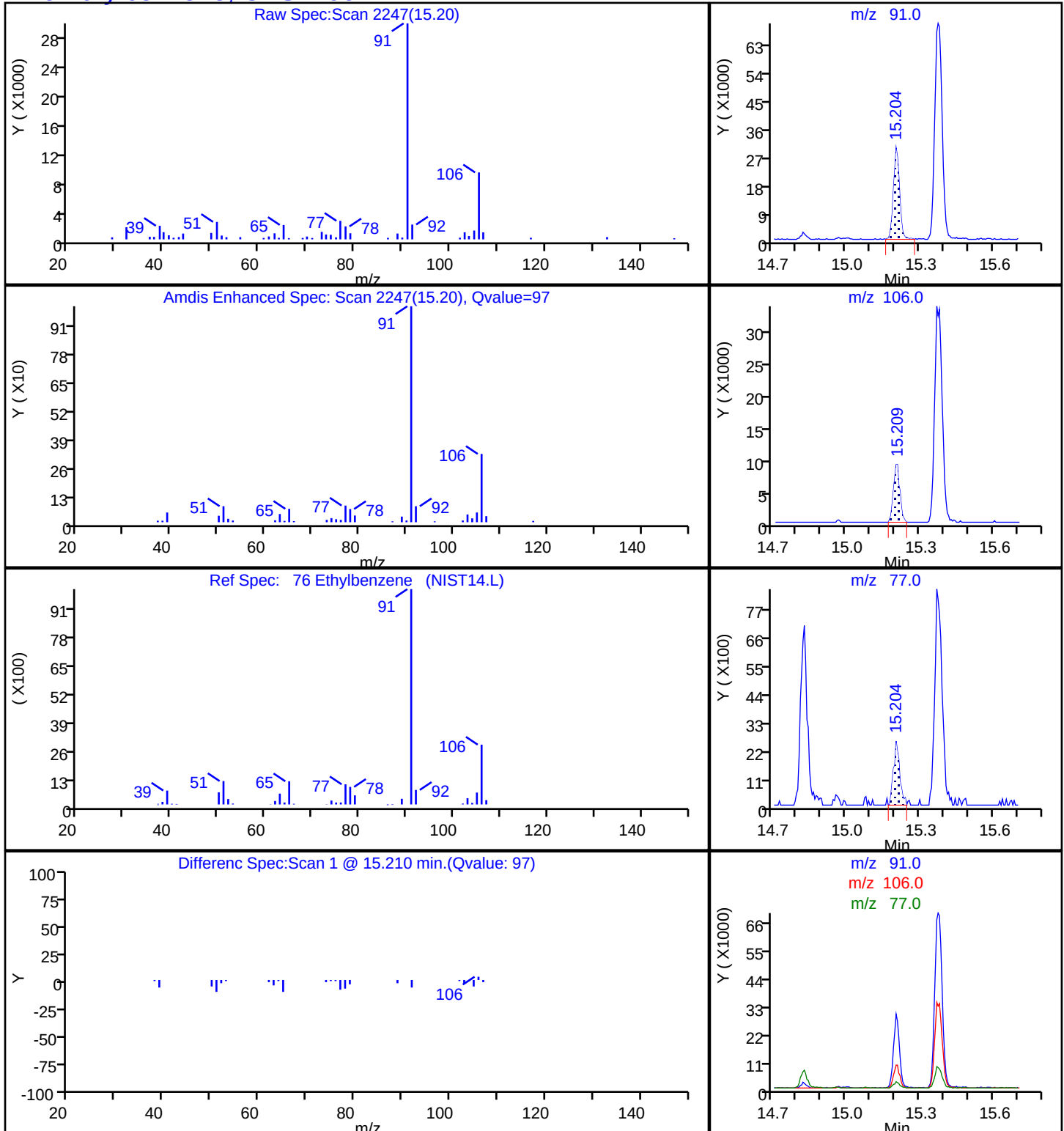
Limit Group:

MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

76 Ethylbenzene, CAS: 100-41-4

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P107.D

Injection Date: 03-Apr-2018 20:48:30

Instrument ID: MR

Lims ID: 140-11145-A-3

Lab Sample ID: 140-11145-3

Client ID: H46-SS-2018

Operator ID:

ALS Bottle#: 7

Worklist Smp#: 13

Purge Vol: 500.000 mL

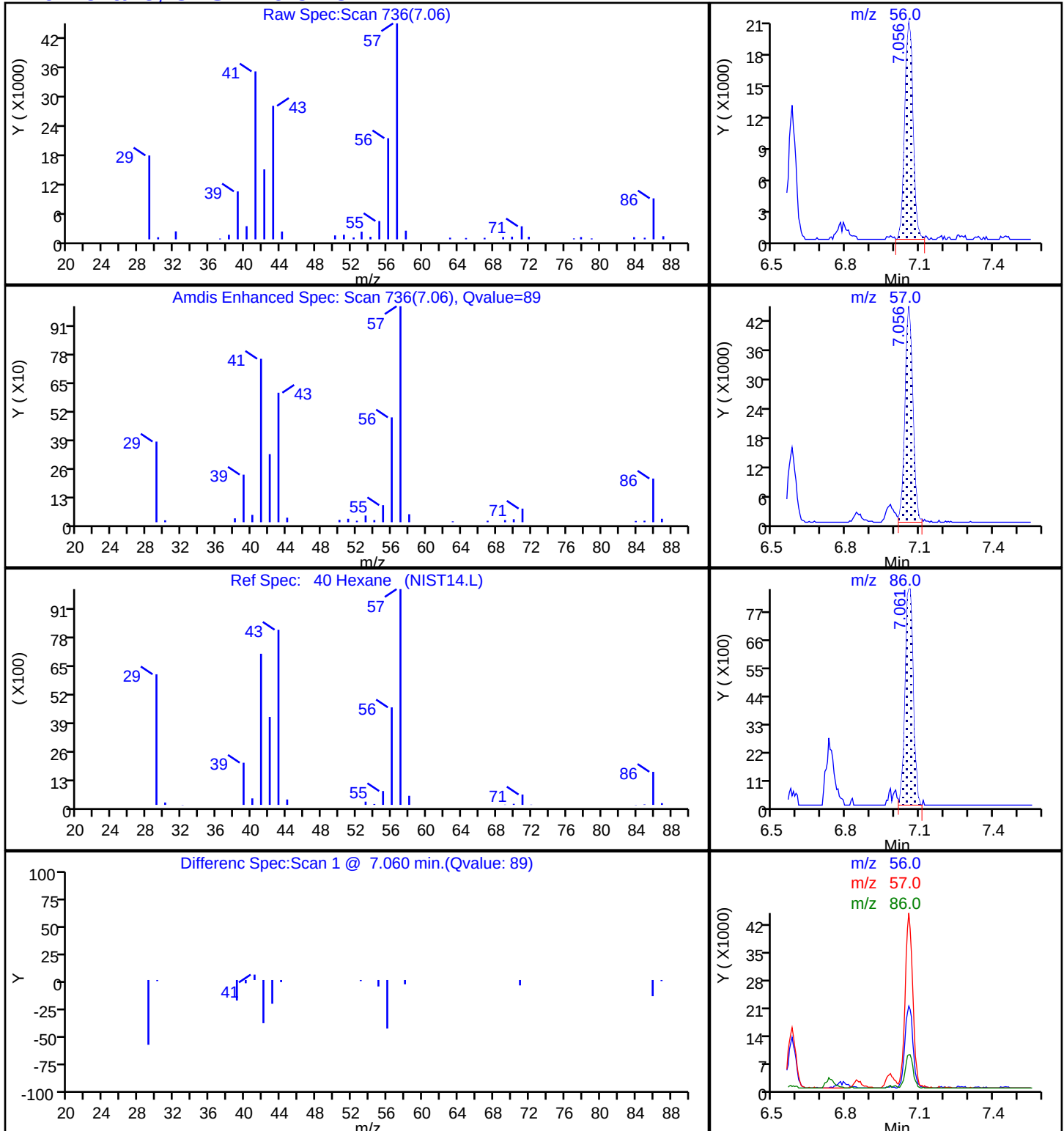
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

40 Hexane, CAS: 110-54-3

Detector MS SCAN

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P107.D

Injection Date: 03-Apr-2018 20:48:30

Instrument ID: MR

Lims ID: 140-11145-A-3

Lab Sample ID: 140-11145-3

Client ID: H46-SS-2018

Operator ID:

ALS Bottle#:

7

Worklist Smp#:

13

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

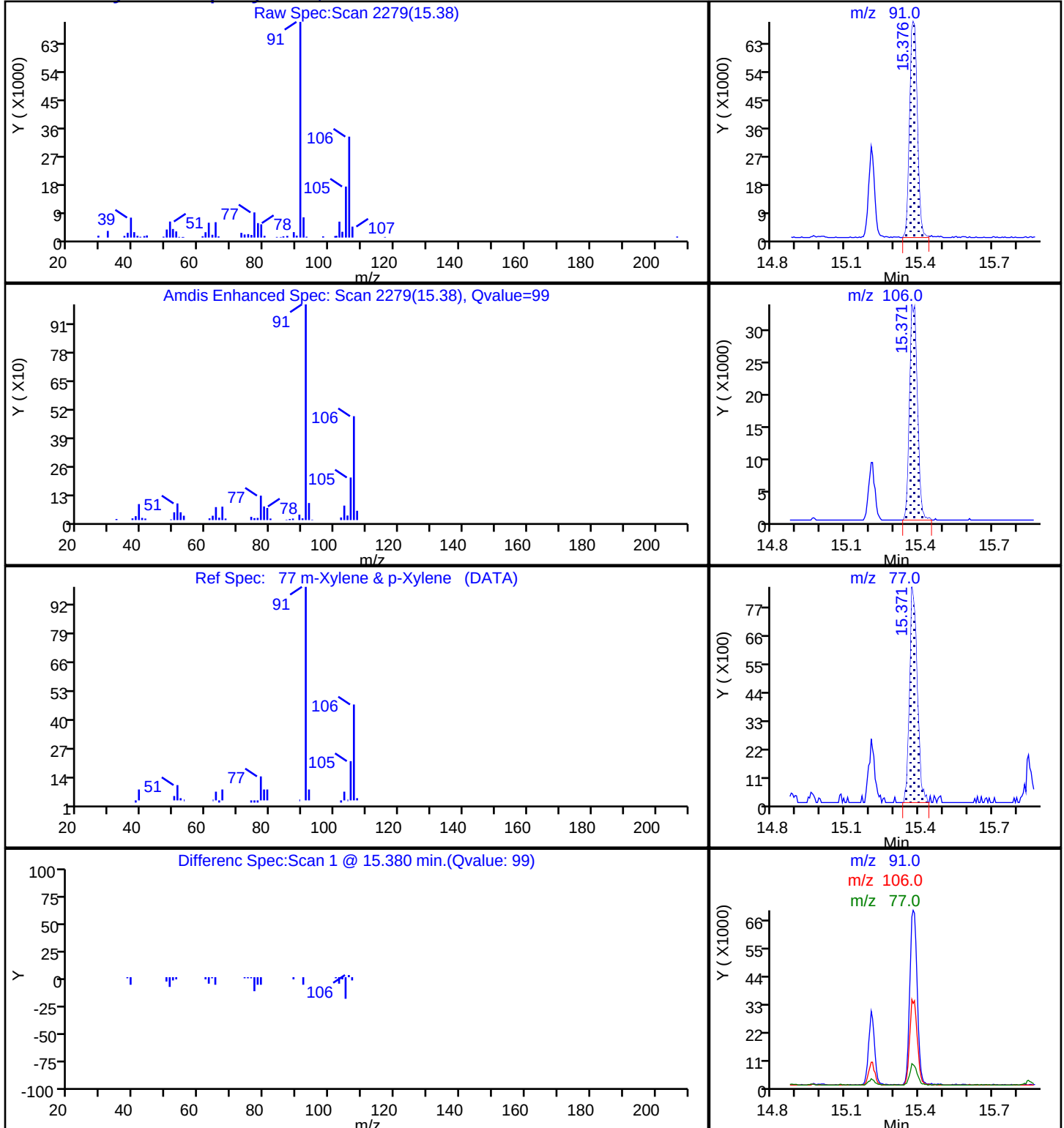
Limit Group:

MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

77 m-Xylene & p-Xylene, CAS: 179601-23-1

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P107.D

Injection Date: 03-Apr-2018 20:48:30

Instrument ID: MR

Lims ID: 140-11145-A-3

Lab Sample ID: 140-11145-3

Client ID: H46-SS-2018

Operator ID:

ALS Bottle#: 7

Worklist Smp#: 13

Purge Vol: 500.000 mL

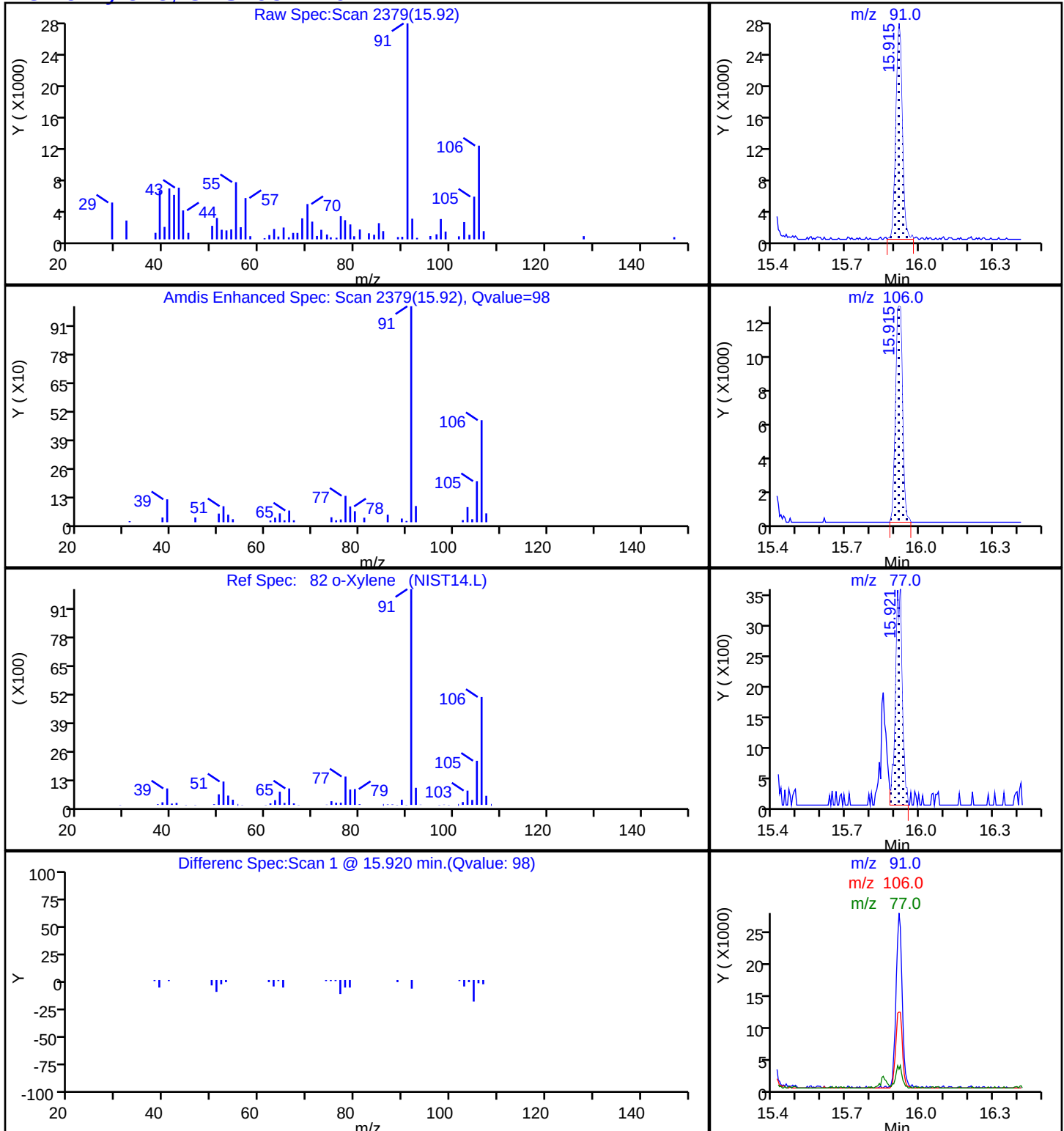
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

82 o-Xylene, CAS: 95-47-6

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P107.D

Injection Date: 03-Apr-2018 20:48:30

Instrument ID: MR

Lims ID: 140-11145-A-3

Lab Sample ID: 140-11145-3

Client ID: H46-SS-2018

Operator ID:

ALS Bottle#: 7

Worklist Smp#: 13

Purge Vol: 500.000 mL

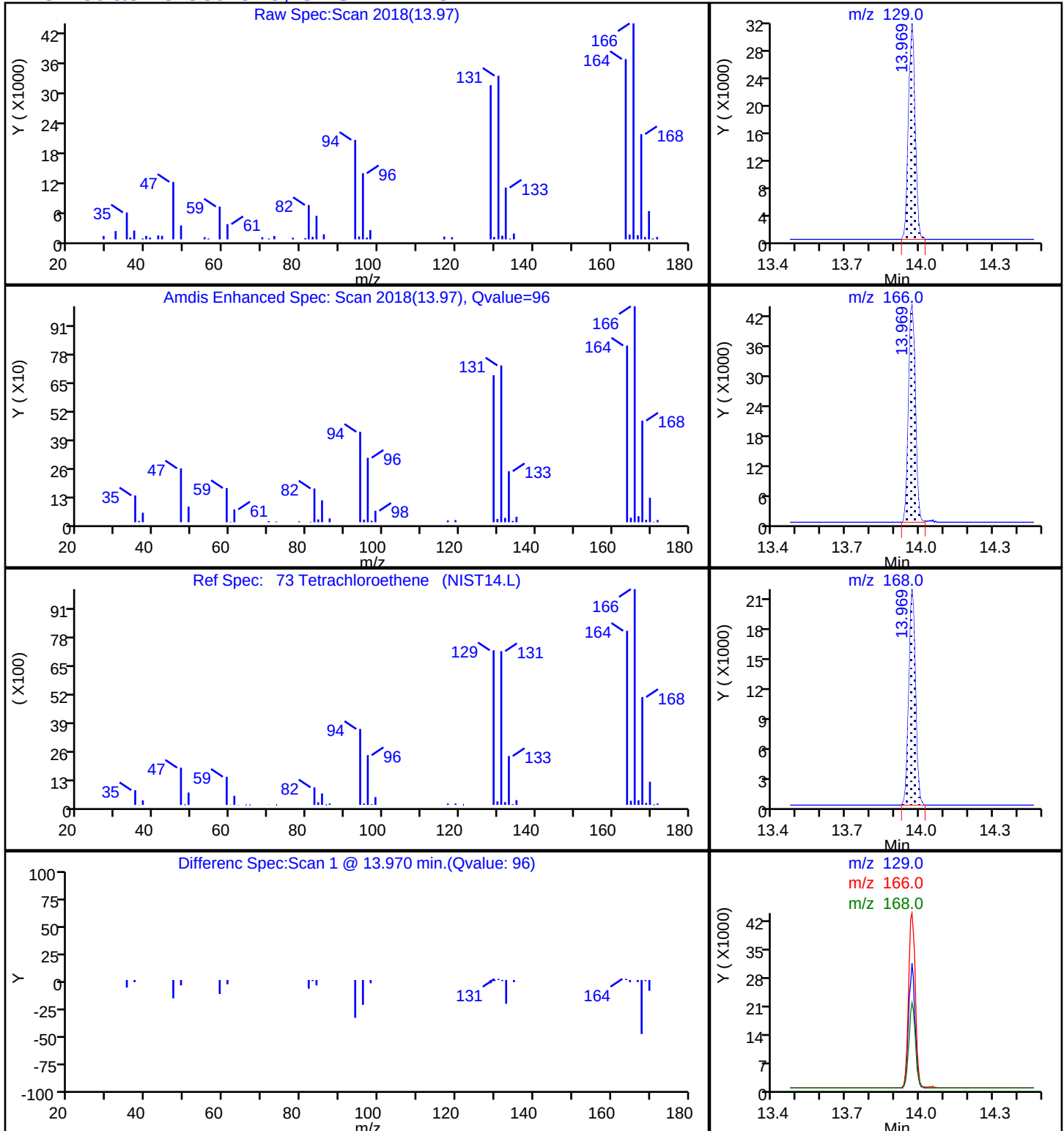
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

73 Tetrachloroethene, CAS: 127-18-4

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P107.D

Injection Date: 03-Apr-2018 20:48:30

Instrument ID: MR

Lims ID: 140-11145-A-3

Lab Sample ID: 140-11145-3

Client ID: H46-SS-2018

Operator ID:

ALS Bottle#:

7

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

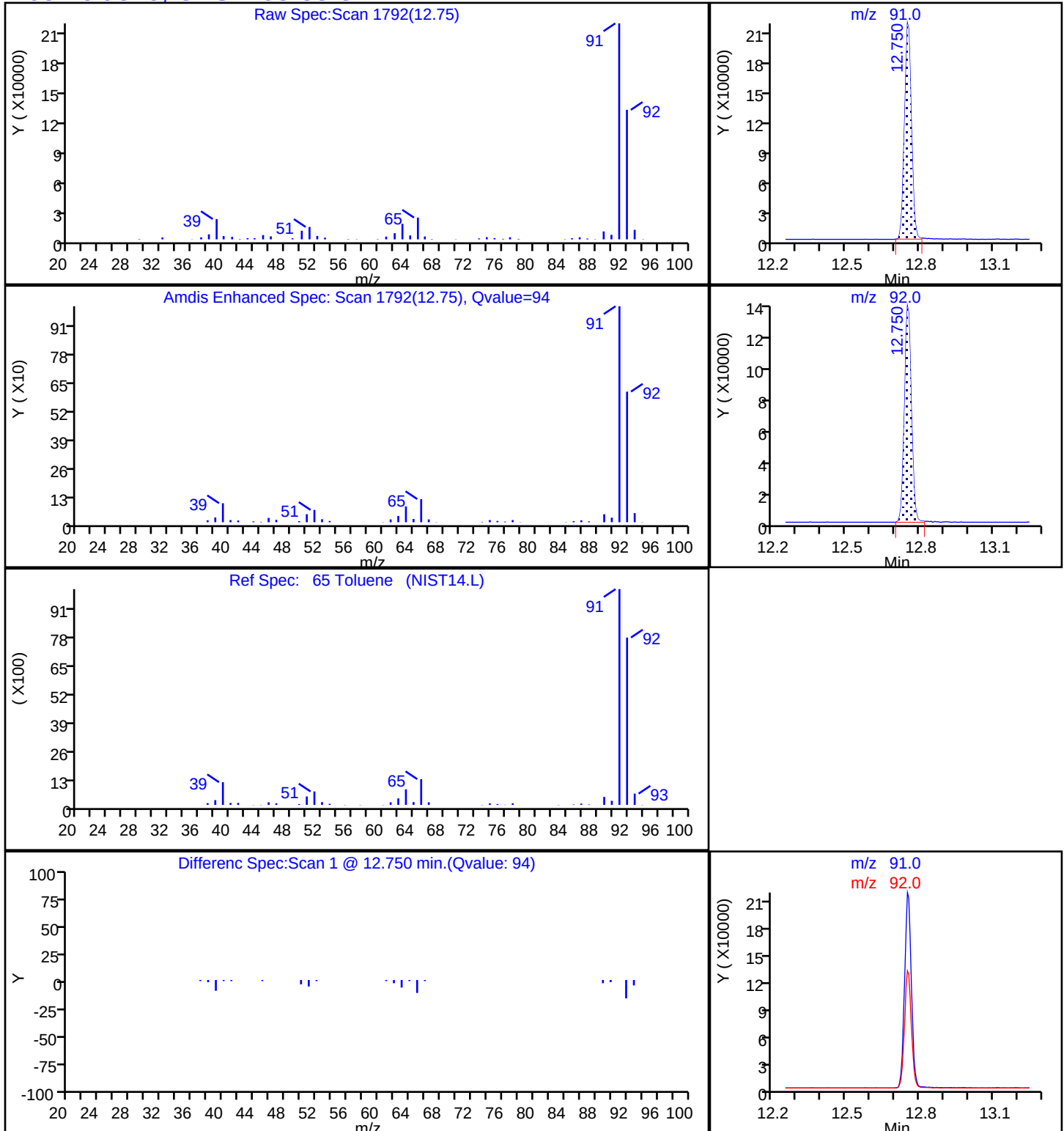
Limit Group:

MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

65 Toluene, CAS: 108-88-3

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P107.D

Injection Date: 03-Apr-2018 20:48:30

Instrument ID: MR

Lims ID: 140-11145-A-3

Lab Sample ID: 140-11145-3

Client ID: H46-SS-2018

Operator ID:

ALS Bottle#:

Worklist Smp#: 13

Purge Vol: 500.000 mL

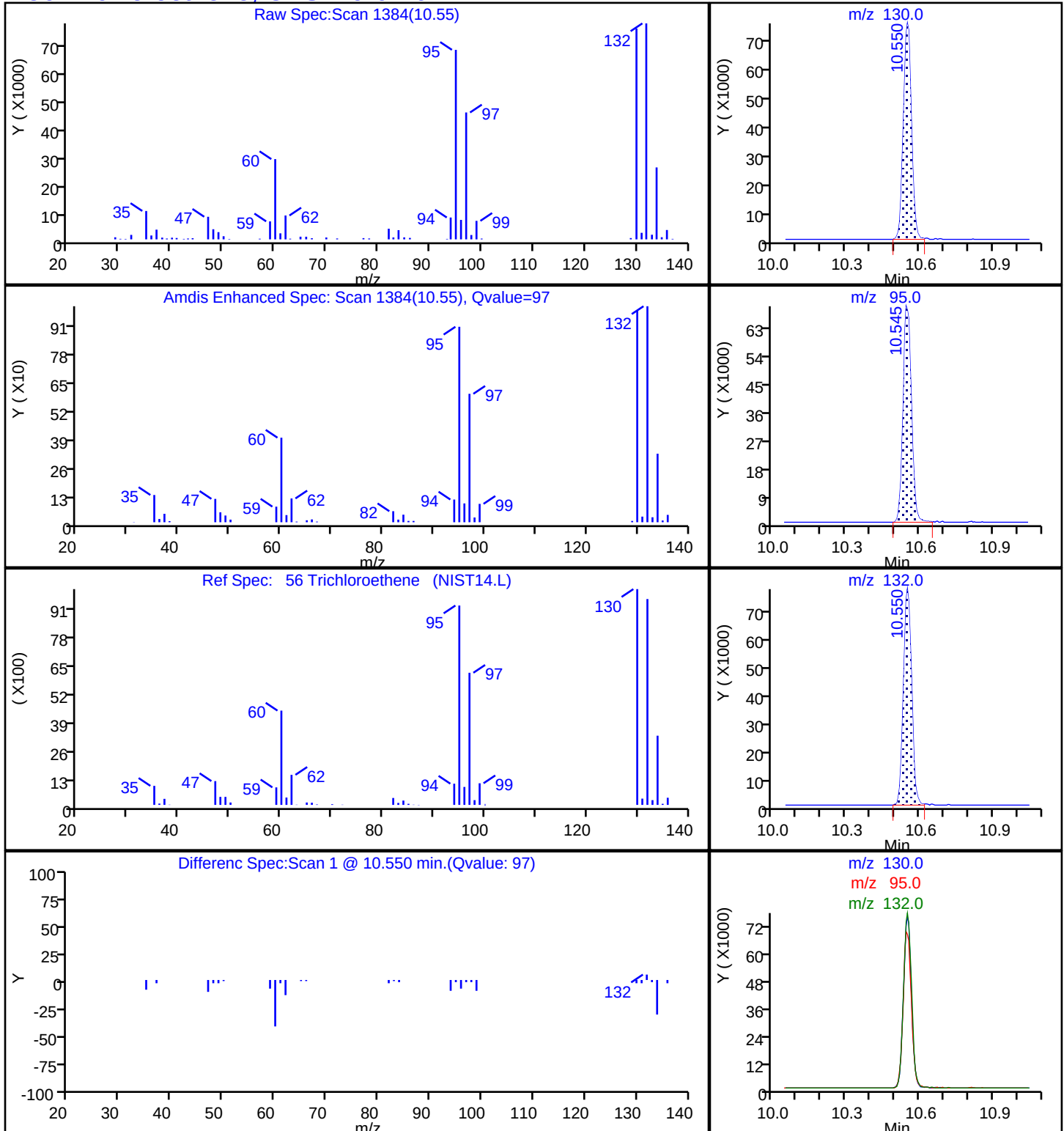
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

56 Trichloroethene, CAS: 79-01-6

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P107.D

Injection Date: 03-Apr-2018 20:48:30

Instrument ID: MR

Lims ID: 140-11145-A-3

Lab Sample ID: 140-11145-3

Client ID: H46-SS-2018

Operator ID:

ALS Bottle#: 7

Worklist Smp#: 13

Purge Vol: 500.000 mL

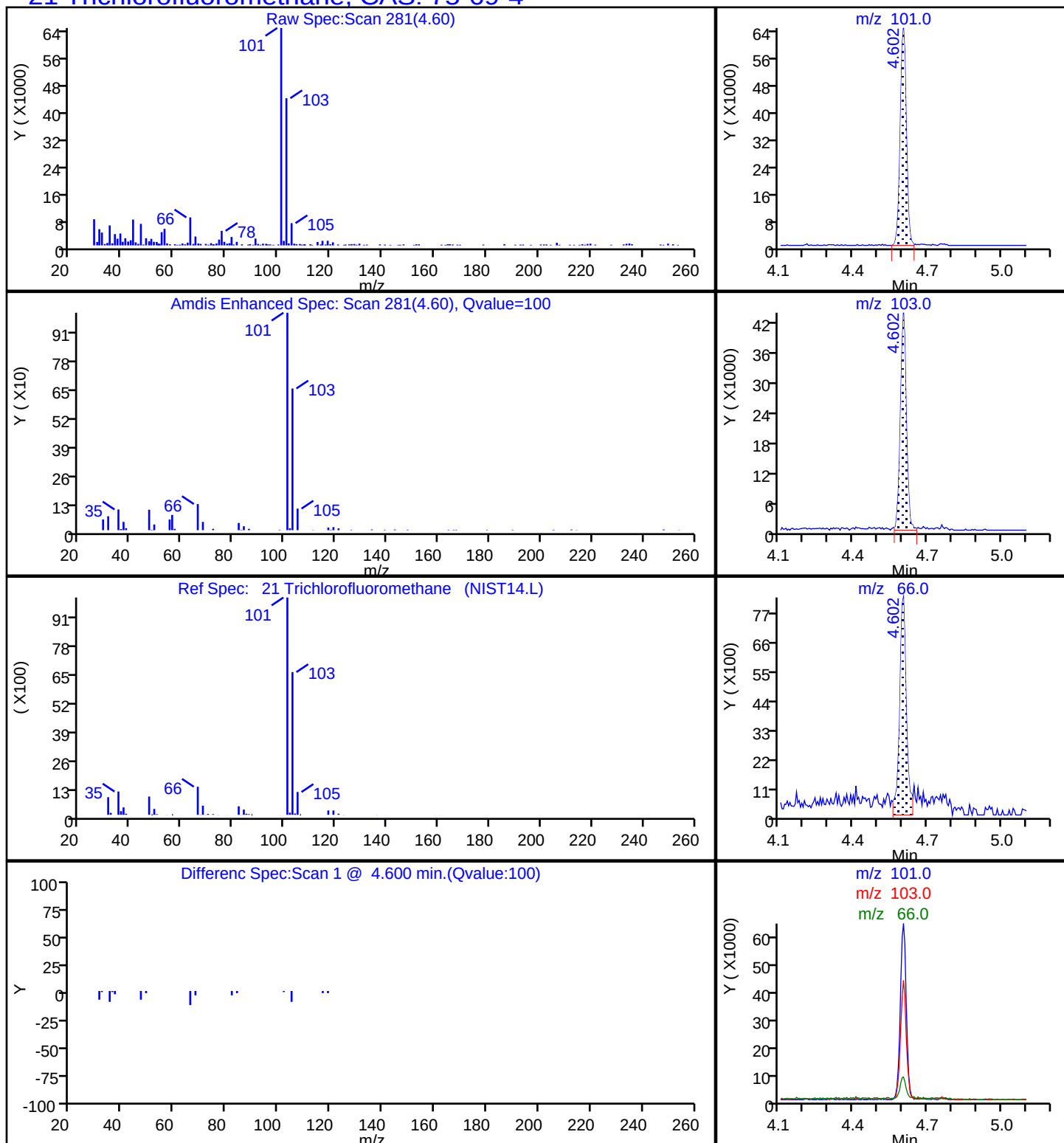
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

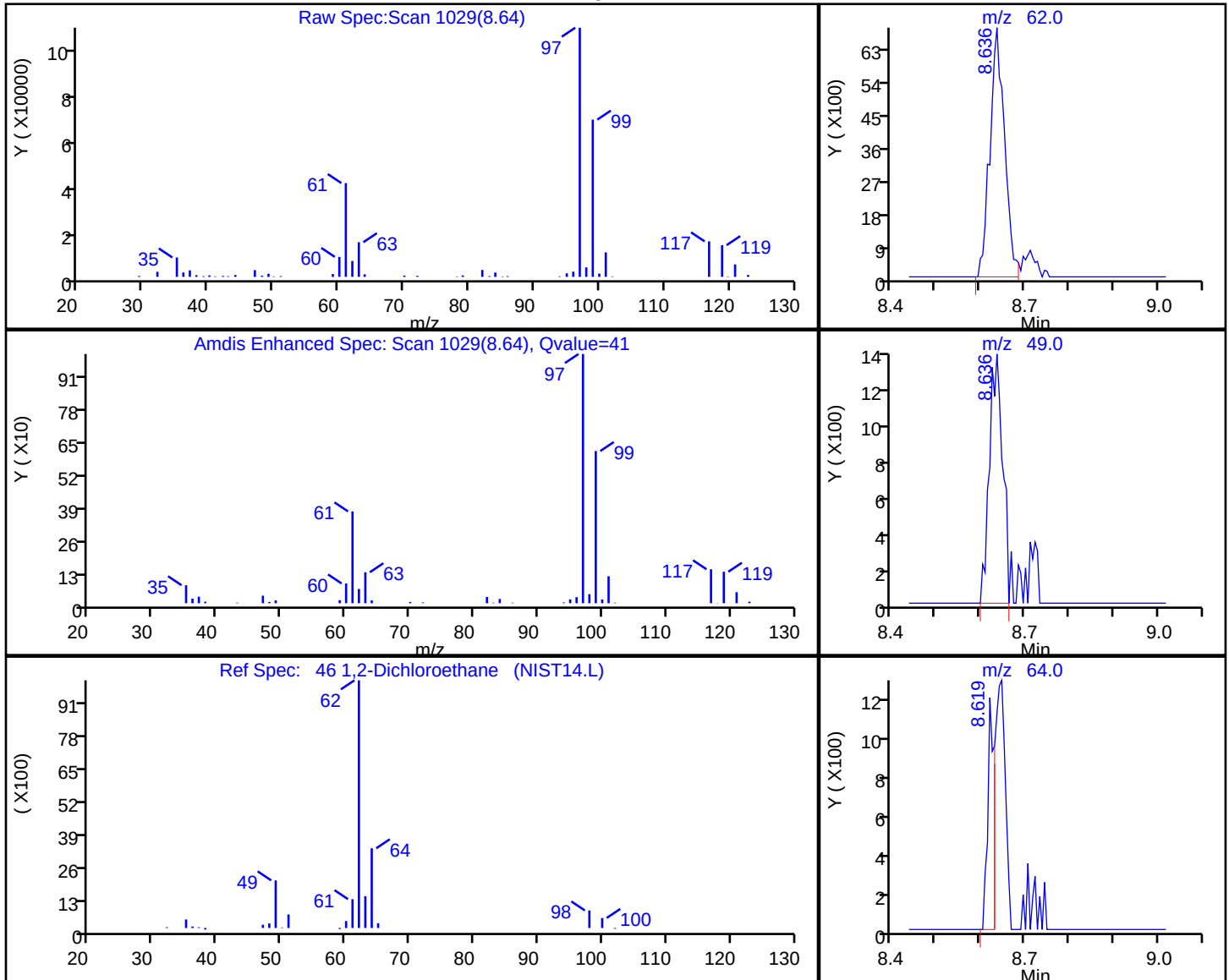
21 Trichlorofluoromethane, CAS: 75-69-4

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P107.D
Injection Date: 03-Apr-2018 20:48:30 Instrument ID: MR
Lims ID: 140-11145-A-3 Lab Sample ID: 140-11145-3
Client ID: H46-SS-2018
Operator ID: ALS Bottle#: 7 Worklist Smp#: 13
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

46 1,2-Dichloroethane, CAS: 107-06-2

Processing Results



RT	Mass	Response	Amount
8.64	62.00	15772	0.084603
8.64	49.00	2763	
8.62	64.00	1203	

Reviewer: tajh, 04-Apr-2018 09:48:20

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P107.D

Injection Date: 03-Apr-2018 20:48:30

Instrument ID: MR

Lims ID: 140-11145-A-3

Lab Sample ID: 140-11145-3

Client ID: H46-SS-2018

Operator ID:

ALS Bottle#:

7

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

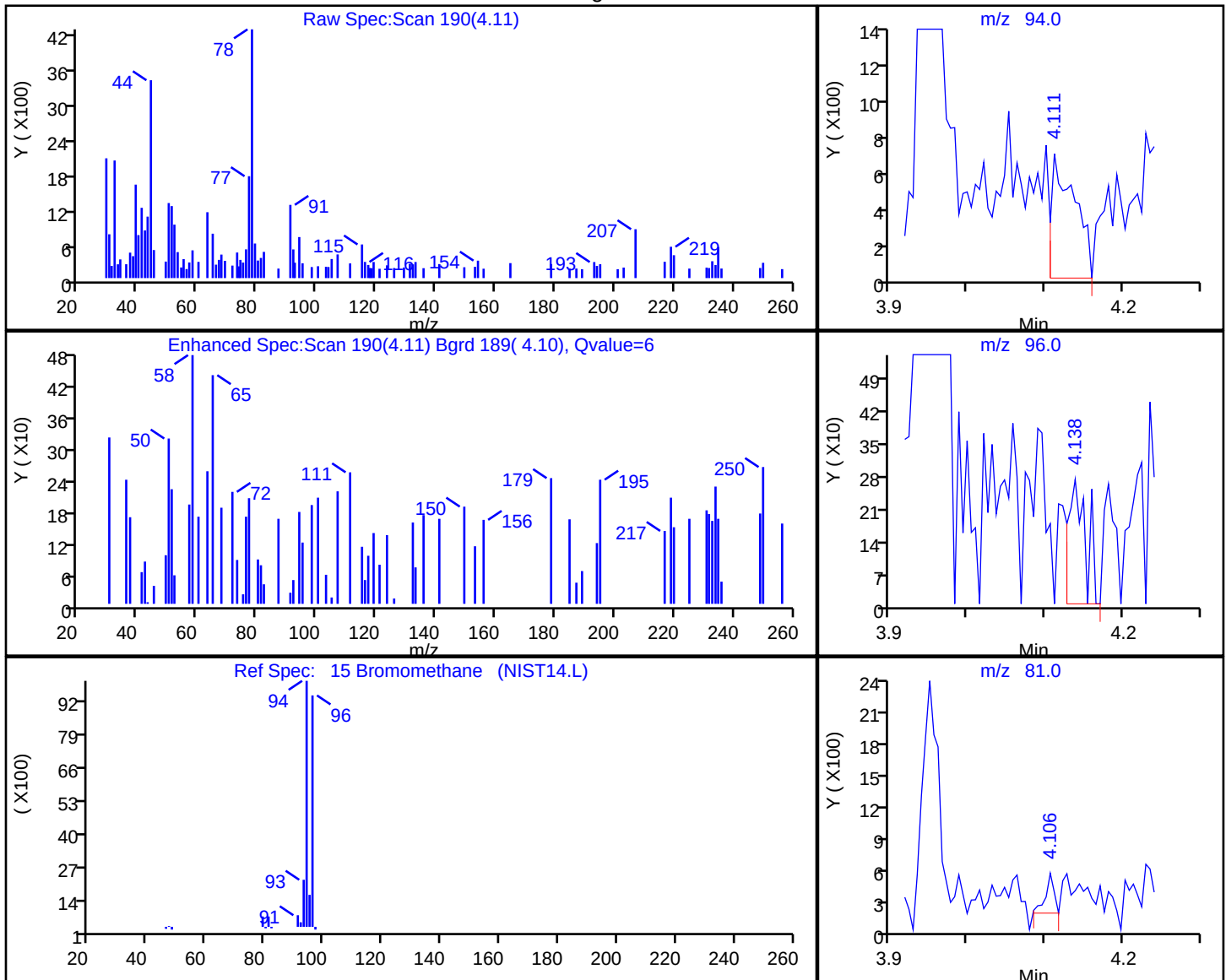
Column: RTX-5 (0.32 mm)

Detector

MS SCAN

15 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
4.11	94.00	1447	0.019604
4.14	96.00	423	
4.11	81.00	285	

Reviewer: tajh, 04-Apr-2018 09:48:20

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P107.D

Injection Date: 03-Apr-2018 20:48:30

Instrument ID: MR

Lims ID: 140-11145-A-3

Lab Sample ID: 140-11145-3

Client ID: H46-SS-2018

Operator ID:

ALS Bottle#:

7

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

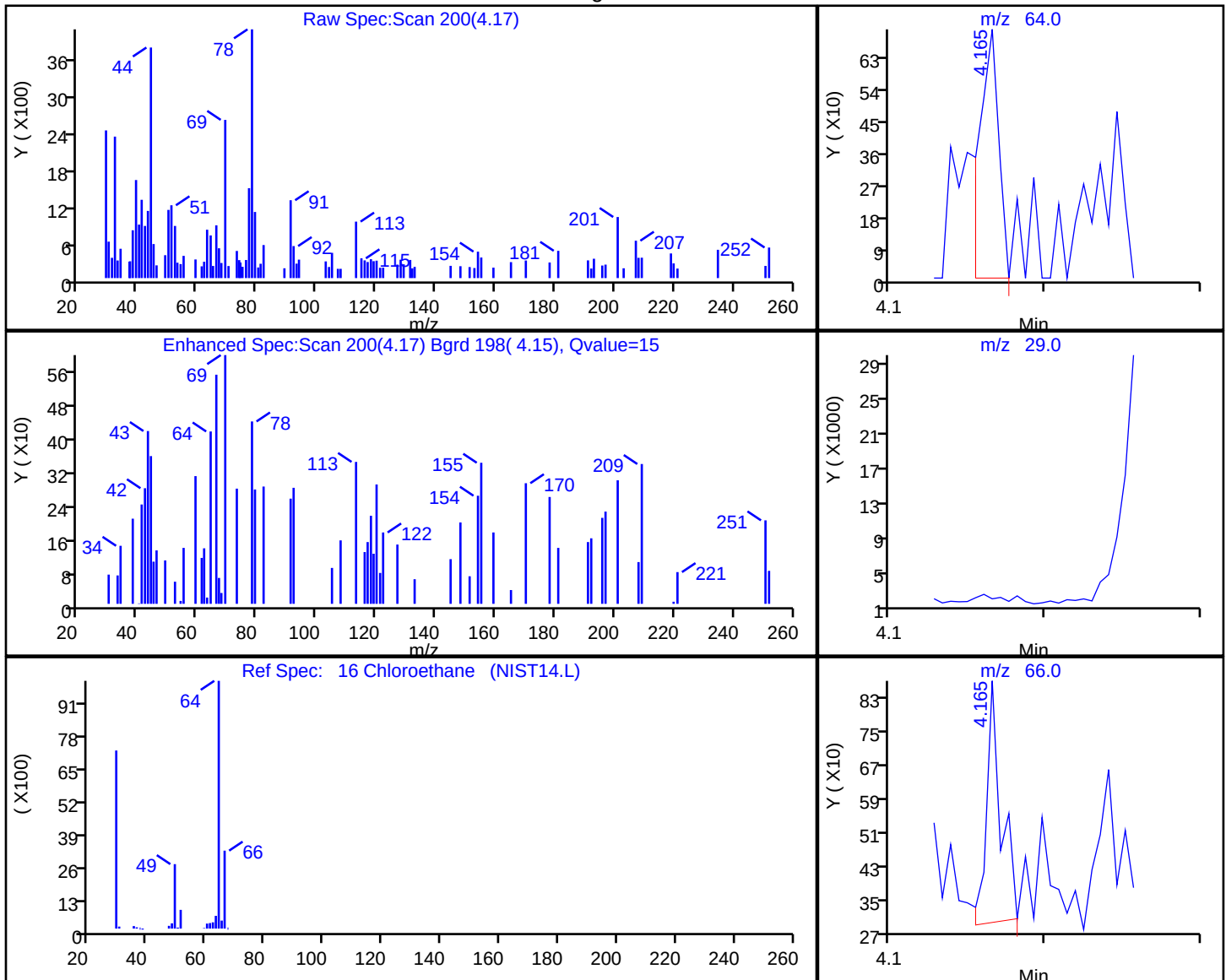
Column: RTX-5 (0.32 mm)

Detector

MS SCAN

16 Chloroethane, CAS: 75-00-3

Processing Results



RT	Mass	Response	Amount
4.17	64.00	604	0.016707
4.17	66.00	377	
4.19	29.00	0	

Reviewer: tajh, 04-Apr-2018 09:48:20

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P107.D

Injection Date: 03-Apr-2018 20:48:30

Instrument ID: MR

Lims ID: 140-11145-A-3

Lab Sample ID: 140-11145-3

Client ID: H46-SS-2018

Operator ID:

ALS Bottle#:

7

Worklist Smp#: 13

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: MR_TO15

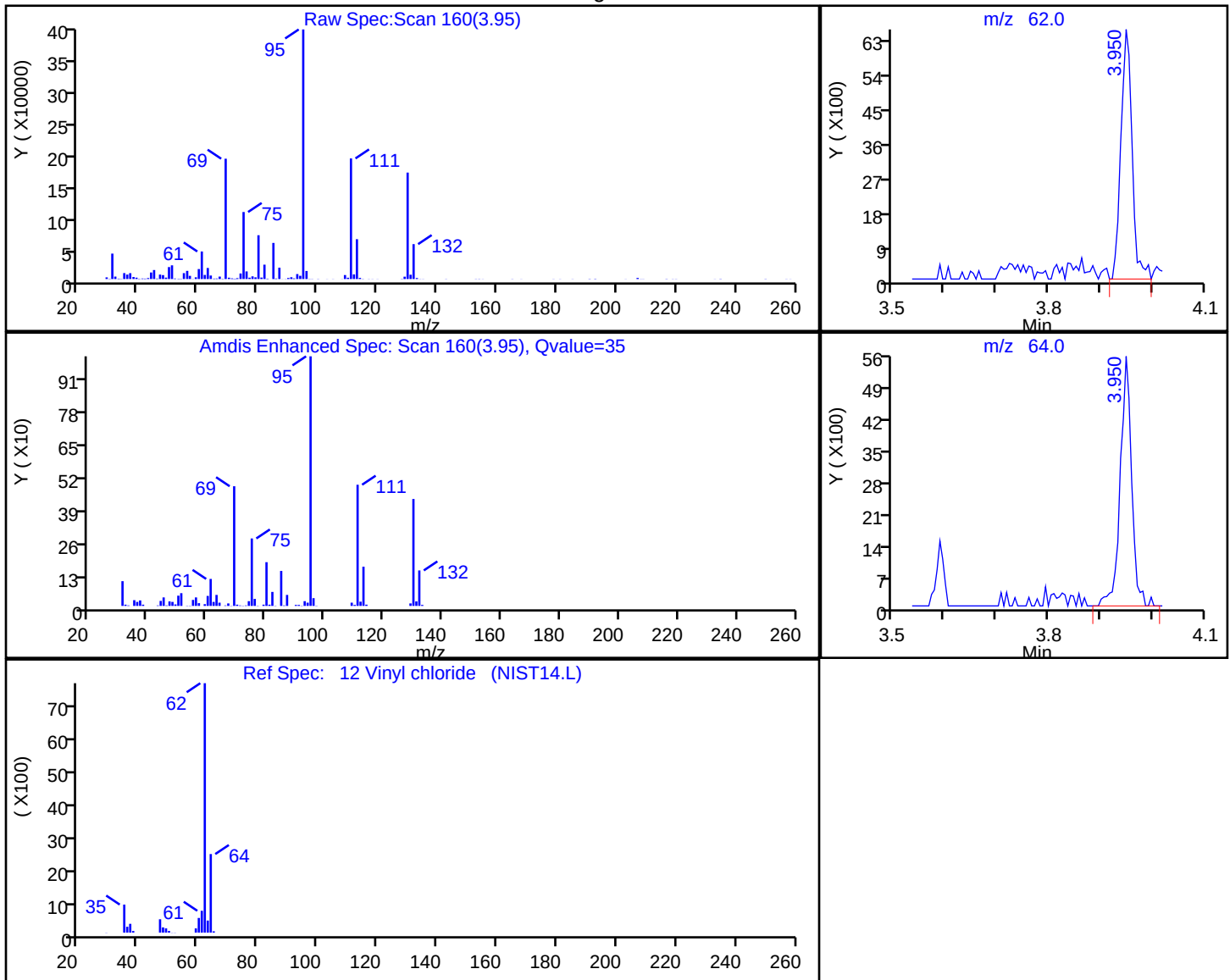
Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

12 Vinyl chloride, CAS: 75-01-4

Processing Results



RT	Mass	Response	Amount
3.95	62.00	9808	0.122941
3.95	64.00	8569	

Reviewer: tajh, 04-Apr-2018 09:48:20

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: H46-BA-2018 Lab Sample ID: 140-11145-4
 Matrix: Air Lab File ID: RD03P108.D
 Analysis Method: TO 15 LL Date Collected: 03/28/2018 09:58
 Sample wt/vol: 500 (mL) Date Analyzed: 04/03/2018 21:40
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19179 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	167.85	ND		0.080	
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	187.38	ND		0.080	
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	
75-35-4	1,1-Dichloroethene	96.94	ND		0.040	
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	120.20	0.20		0.080	
106-93-4	1,2-Dibromoethane	187.87	ND		0.080	
95-50-1	1,2-Dichlorobenzene	147.00	ND		0.080	
107-06-2	1,2-Dichloroethane	98.96	ND	*	0.080	
78-87-5	1,2-Dichloropropane	112.99	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	170.92	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	
541-73-1	1,3-Dichlorobenzene	147.00	ND		0.080	
106-46-7	1,4-Dichlorobenzene	147.00	ND		0.080	
123-91-1	1,4-Dioxane	88.11	ND		0.20	
540-84-1	2,2,4-Trimethylpentane	114.23	ND		0.20	
78-93-3	2-Butanone	72.11	ND		0.32	
108-10-1	4-Methyl-2-pentanone (MIBK)	100.16	ND		0.20	
71-43-2	Benzene	78.11	0.28		0.080	
100-44-7	Benzyl chloride	126.58	ND		0.16	
75-27-4	Bromodichloromethane	163.83	ND		0.080	
75-25-2	Bromoform	252.75	ND		0.080	
74-83-9	Bromomethane	94.94	ND		0.080	
56-23-5	Carbon tetrachloride	153.81	0.077		0.032	
108-90-7	Chlorobenzene	112.56	ND		0.080	
75-00-3	Chloroethane	64.52	ND		0.080	
67-66-3	Chloroform	119.38	ND		0.080	
74-87-3	Chloromethane	50.49	0.68		0.20	
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.040	
10061-01-5	cis-1,3-Dichloropropene	110.97	ND		0.080	
110-82-7	Cyclohexane	84.16	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: H46-BA-2018 Lab Sample ID: 140-11145-4
 Matrix: Air Lab File ID: RD03P108.D
 Analysis Method: TO 15 LL Date Collected: 03/28/2018 09:58
 Sample wt/vol: 500 (mL) Date Analyzed: 04/03/2018 21:40
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19179 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
124-48-1	Dibromochloromethane	208.29	ND		0.080	
75-71-8	Dichlorodifluoromethane	120.91	0.19		0.080	
64-17-5	Ethanol	46.07	53		2.0	
100-41-4	Ethylbenzene	106.17	ND		0.080	
87-68-3	Hexachlorobutadiene	260.76	ND		0.080	
110-54-3	Hexane	86.17	ND		0.20	
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.16	
75-09-2	Methylene Chloride	84.93	0.29		0.20	
179601-23-1	m-Xylene & p-Xylene	106.17	0.16		0.080	
95-47-6	o-Xylene	106.17	ND		0.080	
100-42-5	Styrene	104.15	ND		0.080	
75-65-0	t-Butyl alcohol	74.12	ND		0.32	
127-18-4	Tetrachloroethene	165.83	ND		0.080	
108-88-3	Toluene	92.14	0.39		0.12	
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	110.97	ND		0.080	
79-01-6	Trichloroethene	131.39	ND		0.036	
75-69-4	Trichlorofluoromethane	137.37	0.32		0.080	
75-01-4	Vinyl chloride	62.50	ND		0.040	

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	87		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: H46-BA-2018 Lab Sample ID: 140-11145-4
 Matrix: Air Lab File ID: RD03P108.D
 Analysis Method: TO 15 LL Date Collected: 03/28/2018 09:58
 Sample wt/vol: 500 (mL) Date Analyzed: 04/03/2018 21:40
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19179 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	
79-34-5	1,1,2,2-Tetrachloroethane	167.85	ND		0.55	
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	
76-13-1	1,1,2-Trichlorotrifluoroethane	187.38	ND		0.61	
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	
75-35-4	1,1-Dichloroethene	96.94	ND		0.16	
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	
95-63-6	1,2,4-Trimethylbenzene	120.20	0.97		0.39	
106-93-4	1,2-Dibromoethane	187.87	ND		0.61	
95-50-1	1,2-Dichlorobenzene	147.00	ND		0.48	
107-06-2	1,2-Dichloroethane	98.96	ND	*	0.32	
78-87-5	1,2-Dichloropropane	112.99	ND		0.37	
76-14-2	1,2-Dichlorotetrafluoroethane	170.92	ND		0.56	
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	
541-73-1	1,3-Dichlorobenzene	147.00	ND		0.48	
106-46-7	1,4-Dichlorobenzene	147.00	ND		0.48	
123-91-1	1,4-Dioxane	88.11	ND		0.72	
540-84-1	2,2,4-Trimethylpentane	114.23	ND		0.93	
78-93-3	2-Butanone	72.11	ND		0.94	
108-10-1	4-Methyl-2-pentanone (MIBK)	100.16	ND		0.82	
71-43-2	Benzene	78.11	0.91		0.26	
100-44-7	Benzyl chloride	126.58	ND		0.83	
75-27-4	Bromodichloromethane	163.83	ND		0.54	
75-25-2	Bromoform	252.75	ND		0.83	
74-83-9	Bromomethane	94.94	ND		0.31	
56-23-5	Carbon tetrachloride	153.81	0.48		0.20	
108-90-7	Chlorobenzene	112.56	ND		0.37	
75-00-3	Chloroethane	64.52	ND		0.21	
67-66-3	Chloroform	119.38	ND		0.39	
74-87-3	Chloromethane	50.49	1.4		0.41	
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.16	
10061-01-5	cis-1,3-Dichloropropene	110.97	ND		0.36	
110-82-7	Cyclohexane	84.16	ND		0.69	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: H46-BA-2018 Lab Sample ID: 140-11145-4
 Matrix: Air Lab File ID: RD03P108.D
 Analysis Method: TO 15 LL Date Collected: 03/28/2018 09:58
 Sample wt/vol: 500 (mL) Date Analyzed: 04/03/2018 21:40
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19179 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
124-48-1	Dibromochloromethane	208.29	ND		0.68	
75-71-8	Dichlorodifluoromethane	120.91	0.92		0.40	
64-17-5	Ethanol	46.07	100		3.8	
100-41-4	Ethylbenzene	106.17	ND		0.35	
87-68-3	Hexachlorobutadiene	260.76	ND		0.85	
110-54-3	Hexane	86.17	ND		0.70	
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.58	
75-09-2	Methylene Chloride	84.93	1.0		0.69	
179601-23-1	m-Xylene & p-Xylene	106.17	0.68		0.35	
95-47-6	o-Xylene	106.17	ND		0.35	
100-42-5	Styrene	104.15	ND		0.34	
75-65-0	t-Butyl alcohol	74.12	ND		0.97	
127-18-4	Tetrachloroethene	165.83	ND		0.54	
108-88-3	Toluene	92.14	1.5		0.45	
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	
10061-02-6	trans-1,3-Dichloropropene	110.97	ND		0.36	
79-01-6	Trichloroethene	131.39	ND		0.19	
75-69-4	Trichlorofluoromethane	137.37	1.8		0.45	
75-01-4	Vinyl chloride	62.50	ND		0.10	

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	87		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P108.D
 Lims ID: 140-11145-A-4
 Client ID: H46-BA-2018
 Sample Type: Client
 Inject. Date: 03-Apr-2018 21:40:30 ALS Bottle#: 8 Worklist Smp#: 14
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0007767-014
 Misc. Info.: 140-11145-a-4
 Operator ID: Instrument ID: MR
 Method: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 04-Apr-2018 09:59:00 Calib Date: 30-Jan-2018 19:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK025

First Level Reviewer: tajh

Date: 04-Apr-2018 09:49:45

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.660	7.670	-0.010	78	304468	4.00	
* 2 1,4-Difluorobenzene	114	9.800	9.806	-0.006	93	1778613	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.826	14.826	0.000	86	1397625	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.541	16.541	0.000	94	924863	3.49	
8 Dichlorodifluoromethane	85	3.502	3.507	-0.005	99	53161	0.1860	
9 Chloromethane	52	3.637	3.642	-0.005	99	17761	0.6822	M
10 1,2-Dichloro-1,1,2,2-tetra	135	3.658	3.664	-0.006	91	3084	0.0159	
17 Ethanol	31	4.295	4.295	0.000	96	1217842	53.4	
21 Trichlorofluoromethane	101	4.629	4.640	-0.011	99	86751	0.3195	
29 2-Methyl-2-propanol	59	5.292	5.287	0.005	97	39747	0.1732	
30 1,1,2-Trichloro-1,2,2-trif	101	5.362	5.362	0.000	78	17640	0.0716	Ma
31 Methylene Chloride	84	5.459	5.465	-0.006	88	34598	0.2906	
39 2-Butanone (MEK)	72	6.991	6.986	0.005	98	15328	0.2776	
40 Hexane	56	7.077	7.083	-0.006	89	11956	0.1339	
43 Chloroform	83	7.697	7.703	-0.006	48	14321	0.0508	
47 Benzene	78	9.223	9.229	-0.006	95	96618	0.2843	
49 Cyclohexane	69	9.245	9.256	-0.011	68	2626	0.0481	
50 Carbon tetrachloride	117	9.266	9.272	-0.006	95	21019	0.0767	
53 Isooctane	57	10.092	10.102	-0.010	85	25708	0.0522	M
56 Trichloroethene	130	10.566	10.561	0.005	52	2835	0.0177	
59 1,4-Dioxane	88	10.809	10.793	0.016	92	5977	0.1193	
65 Toluene	91	12.755	12.761	-0.006	93	151533	0.3937	
73 Tetrachloroethene	129	13.974	13.974	0.000	93	2629	0.0183	
76 Ethylbenzene	91	15.203	15.209	-0.006	99	26460	0.0525	
77 m-Xylene & p-Xylene	91	15.376	15.381	-0.005	99	61065	0.1563	
80 Styrene	104	15.861	15.856	0.005	95	8429	0.0338	
82 o-Xylene	91	15.915	15.915	0.000	96	32363	0.0785	
89 1,3,5-Trimethylbenzene	120	17.377	17.371	0.006	92	11810	0.0511	
93 1,2,4-Trimethylbenzene	105	17.857	17.857	0.000	97	94765	0.1966	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P108.D

Injection Date: 03-Apr-2018 21:40:30

Instrument ID: MR

Operator ID:

Lims ID: 140-11145-A-4

Lab Sample ID: 140-11145-4

Worklist Smp#: 14

Client ID: H46-BA-2018

Purge Vol: 500.000 mL

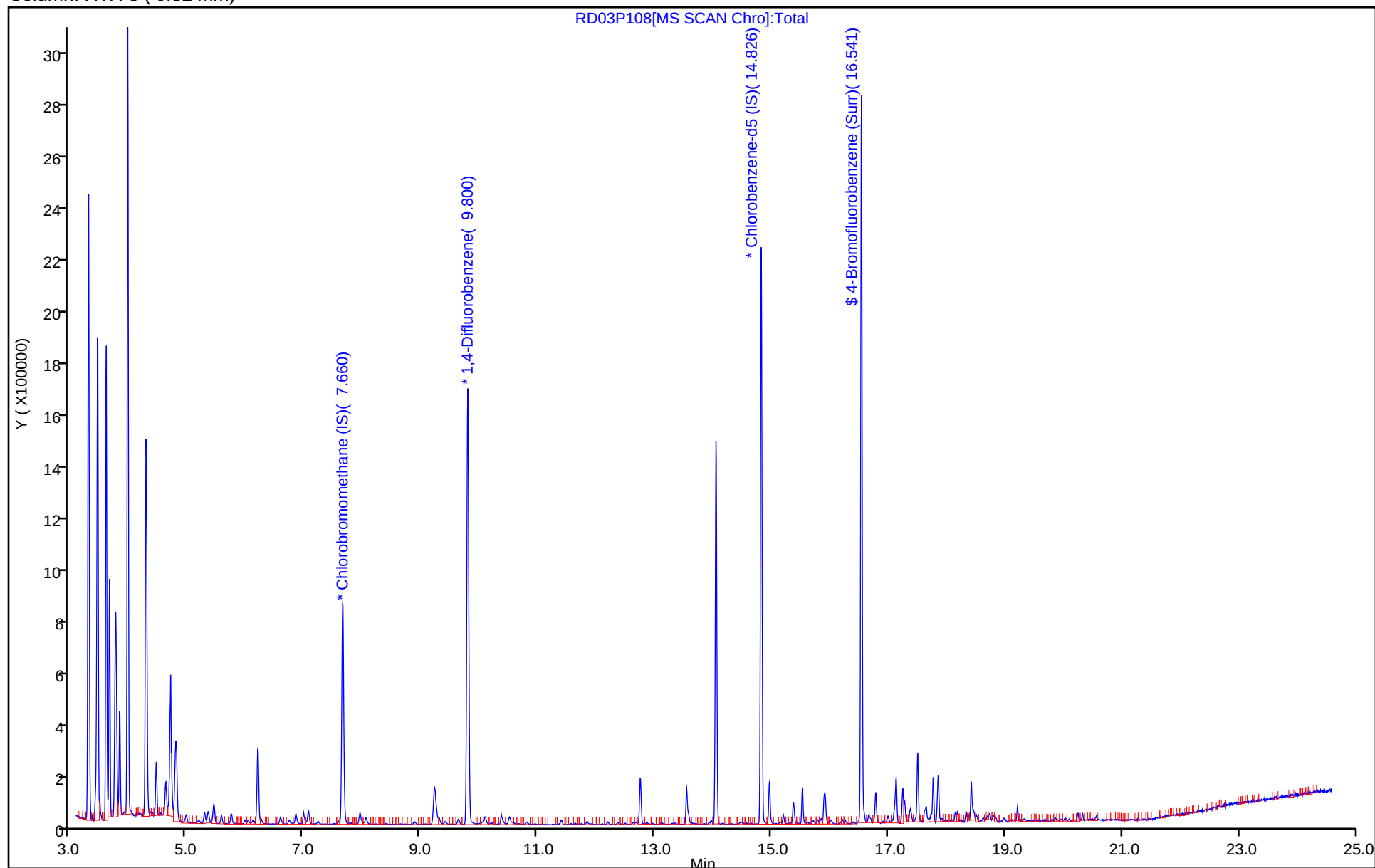
Dil. Factor: 1.0000

ALS Bottle#: 8

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P108.D
Lims ID: 140-11145-A-4
Client ID: H46-BA-2018
Sample Type: Client
Inject. Date: 03-Apr-2018 21:40:30 ALS Bottle#: 8 Worklist Smp#: 14
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007767-014
Misc. Info.: 140-11145-a-4
Operator ID: Instrument ID: MR
Method: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 04-Apr-2018 09:59:00 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D
Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: tajh

Date: 04-Apr-2018 09:49:45

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.49	87.26

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P108.D

Injection Date: 03-Apr-2018 21:40:30

Instrument ID: MR

Lims ID: 140-11145-A-4

Lab Sample ID: 140-11145-4

Client ID: H46-BA-2018

Operator ID:

ALS Bottle#:

8

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

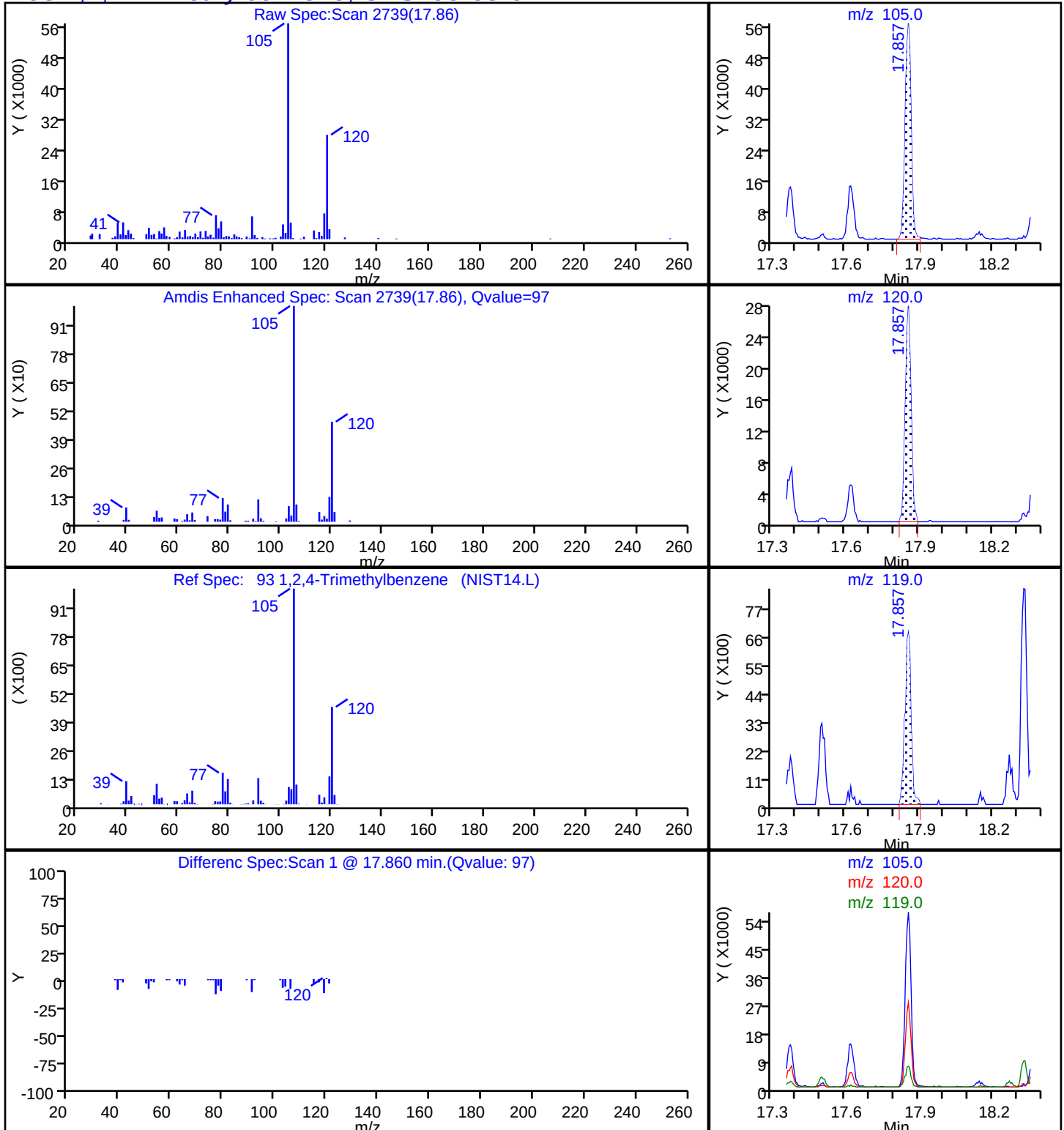
Limit Group:

MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

93 1,2,4-Trimethylbenzene, CAS: 95-63-6

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P108.D

Injection Date: 03-Apr-2018 21:40:30

Instrument ID: MR

Lims ID: 140-11145-A-4

Lab Sample ID: 140-11145-4

Client ID: H46-BA-2018

Operator ID:

ALS Bottle#: 8

Worklist Smp#: 14

Purge Vol: 500.000 mL

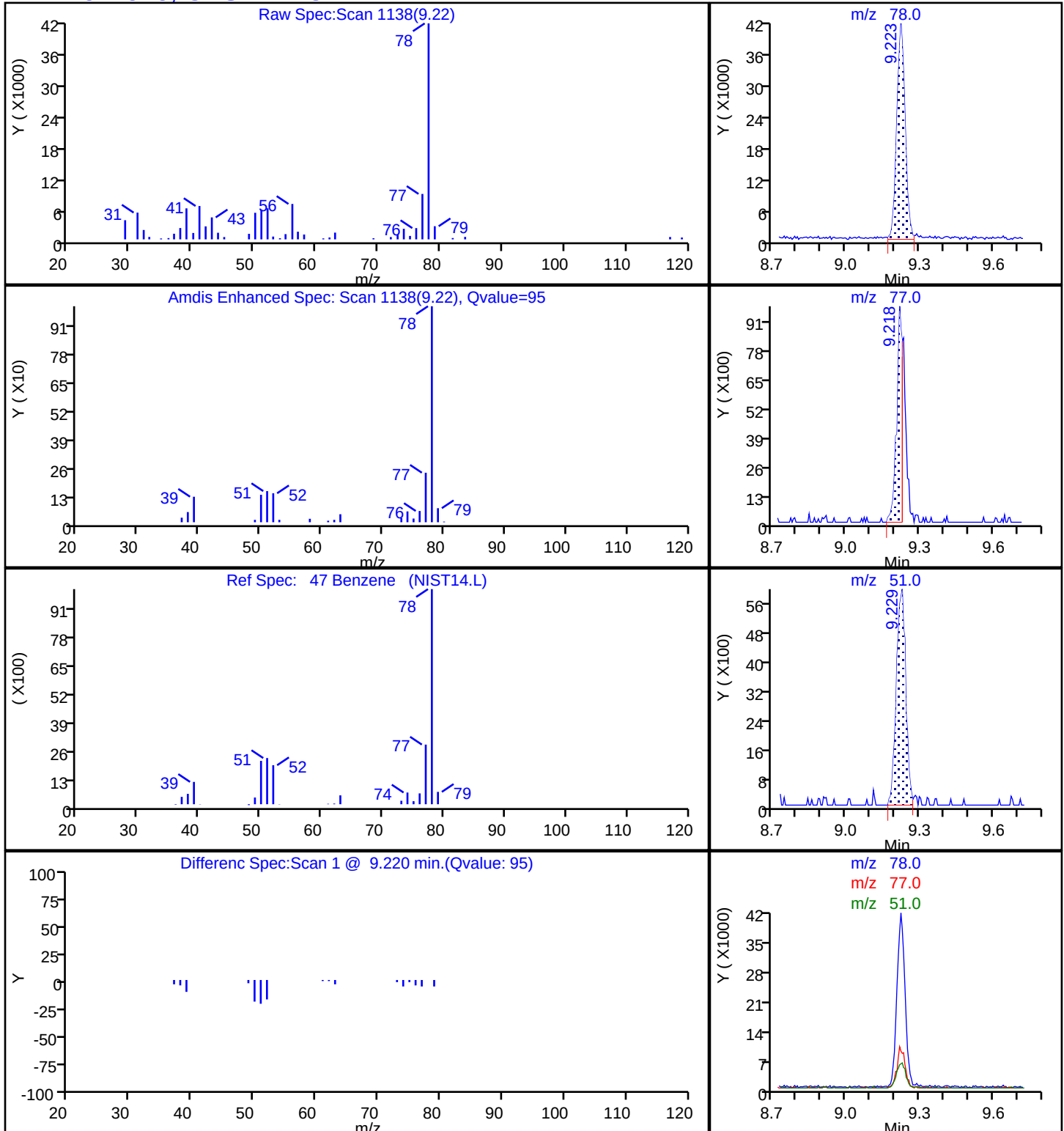
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P108.D

Injection Date: 03-Apr-2018 21:40:30

Instrument ID: MR

Lims ID: 140-11145-A-4

Lab Sample ID: 140-11145-4

Client ID: H46-BA-2018

Operator ID:

ALS Bottle#: 8

Worklist Smp#: 14

Purge Vol: 500.000 mL

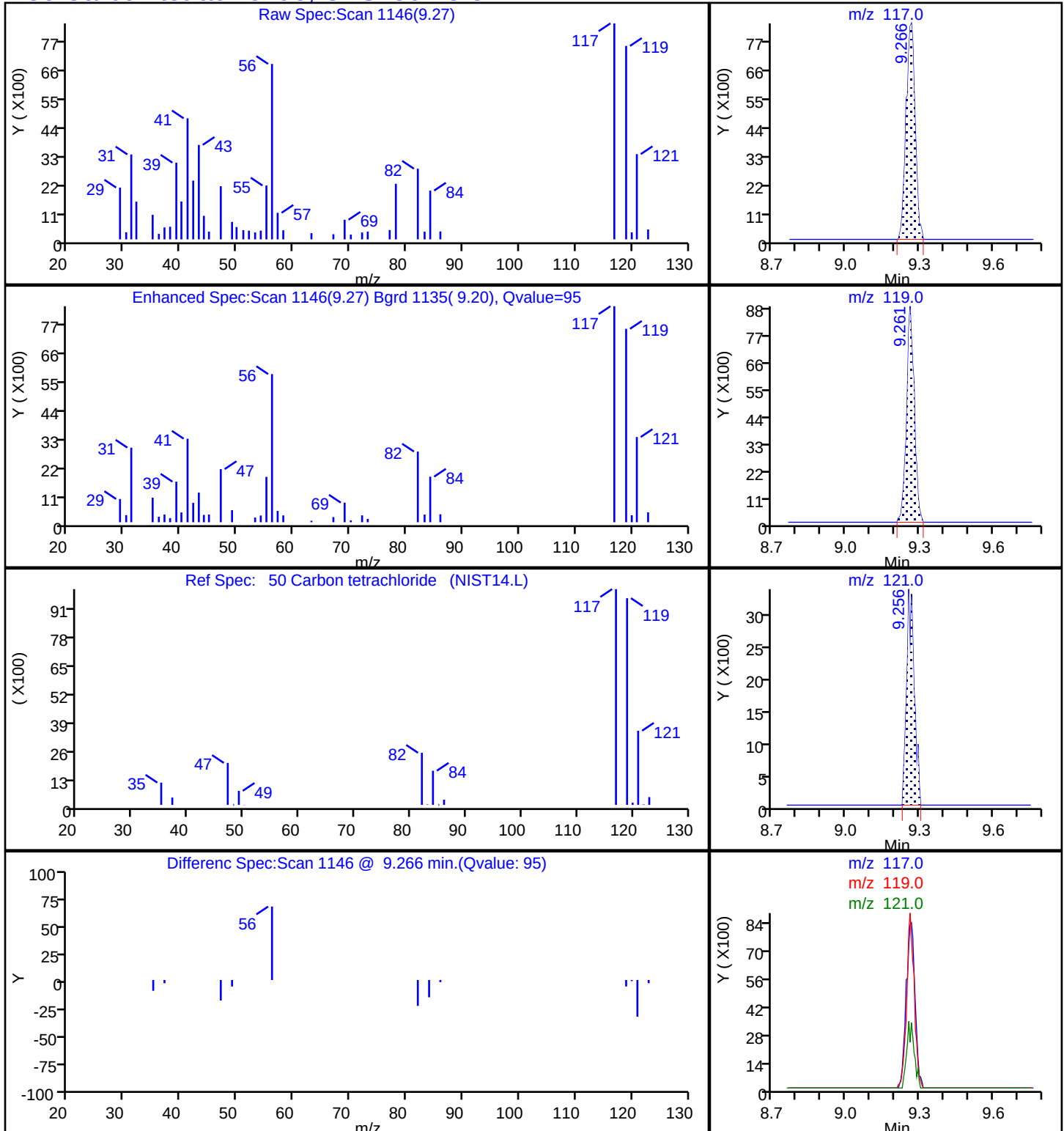
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

50 Carbon tetrachloride, CAS: 56-23-5

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P108.D

Injection Date: 03-Apr-2018 21:40:30

Instrument ID: MR

Lims ID: 140-11145-A-4

Lab Sample ID: 140-11145-4

Client ID: H46-BA-2018

Operator ID:

ALS Bottle#:

8

Worklist Smp#: 14

Purge Vol: 500.000 mL

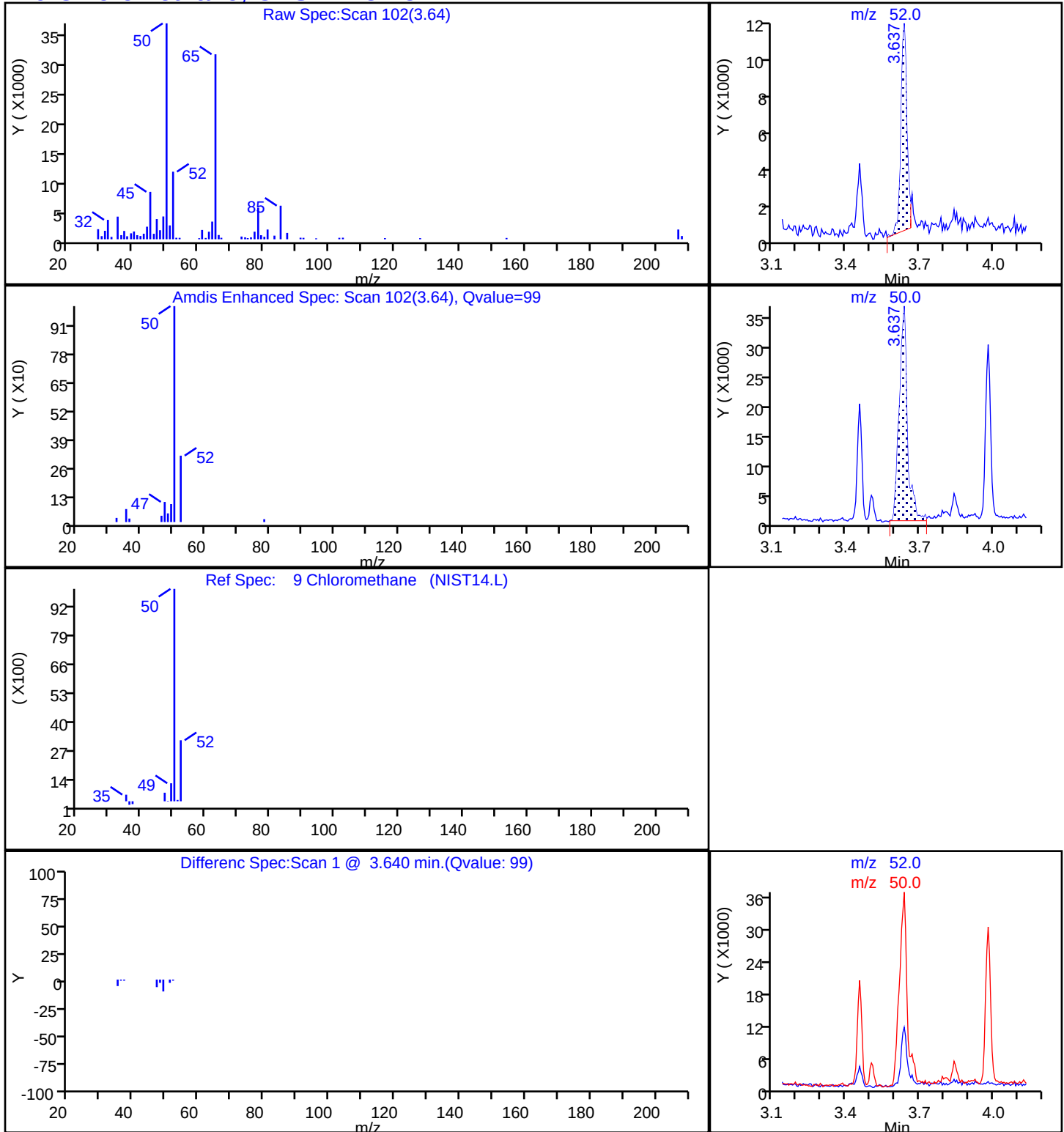
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

9 Chloromethane, CAS: 74-87-3

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P108.D

Injection Date: 03-Apr-2018 21:40:30

Instrument ID: MR

Lims ID: 140-11145-A-4

Lab Sample ID: 140-11145-4

Client ID: H46-BA-2018

Operator ID:

ALS Bottle#:

8

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

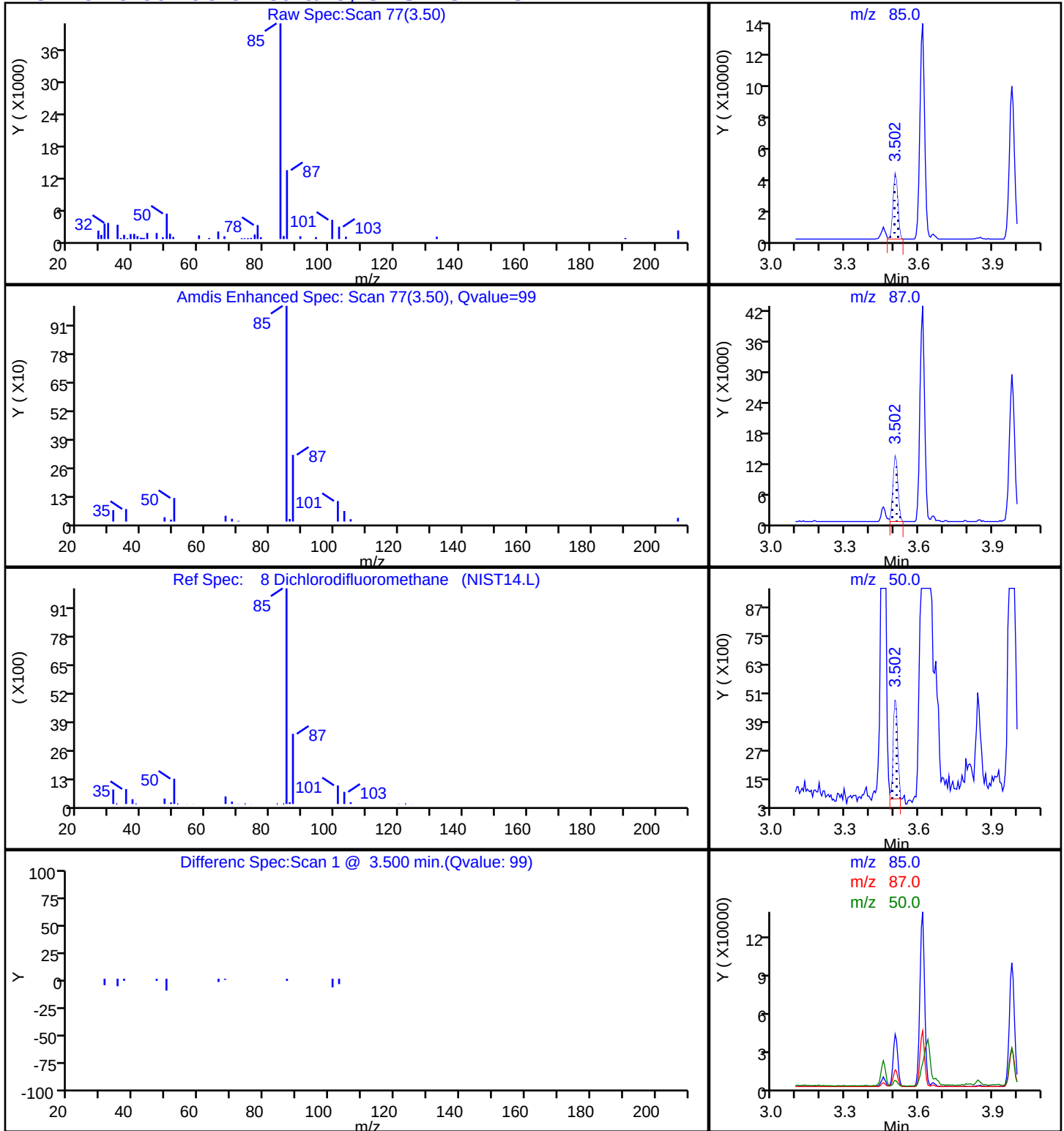
Limit Group:

MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P108.D

Injection Date: 03-Apr-2018 21:40:30

Instrument ID: MR

Lims ID: 140-11145-A-4

Lab Sample ID: 140-11145-4

Client ID: H46-BA-2018

Operator ID:

ALS Bottle#:

8

Worklist Smp#:

14

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

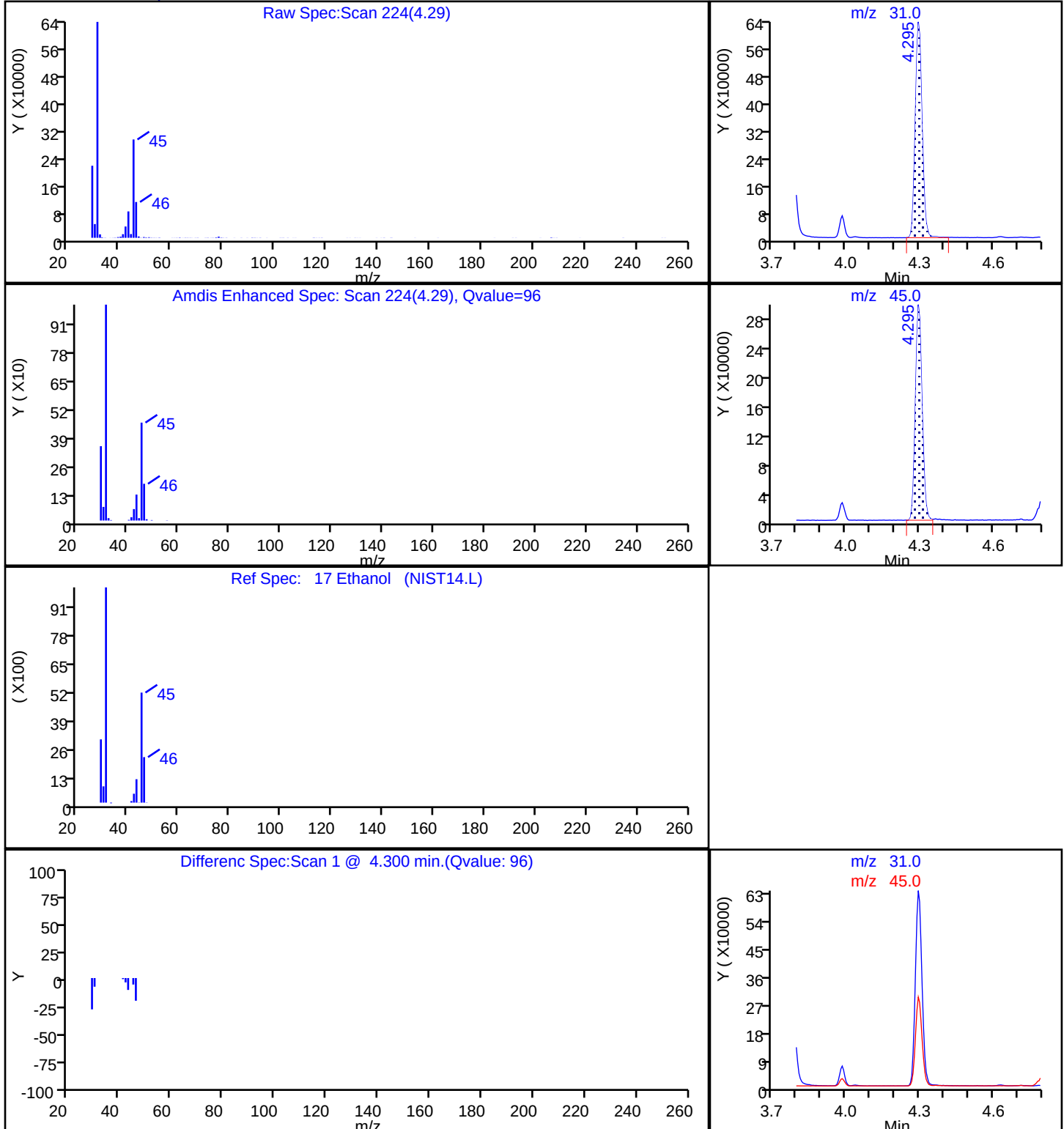
Limit Group:

MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

17 Ethanol, CAS: 64-17-5

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P108.D

Injection Date: 03-Apr-2018 21:40:30

Instrument ID: MR

Lims ID: 140-11145-A-4

Lab Sample ID: 140-11145-4

Client ID: H46-BA-2018

Operator ID:

ALS Bottle#:

8

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

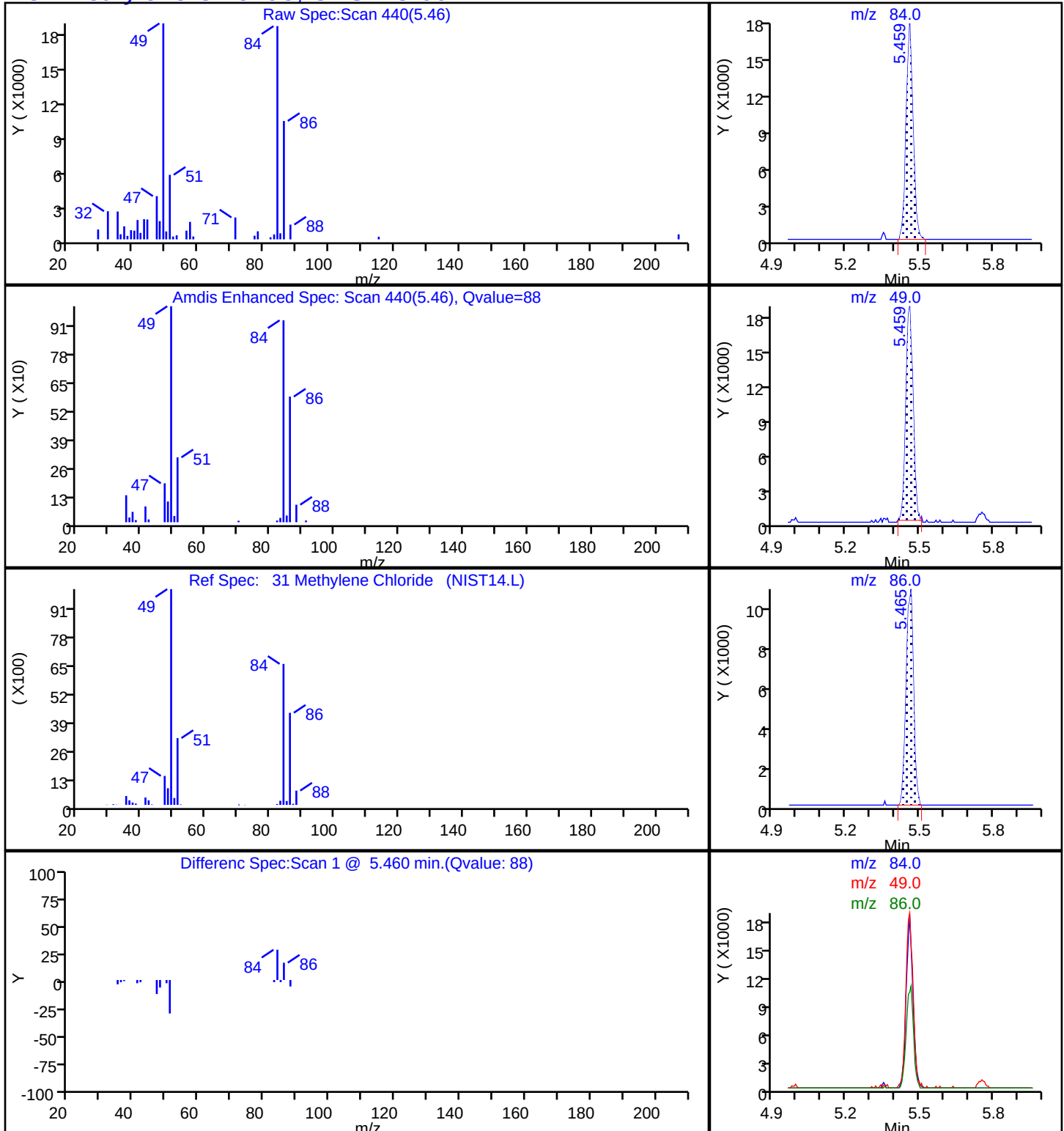
Limit Group:

MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

31 Methylene Chloride, CAS: 75-09-2

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P108.D

Injection Date: 03-Apr-2018 21:40:30

Instrument ID: MR

Lims ID: 140-11145-A-4

Lab Sample ID: 140-11145-4

Client ID: H46-BA-2018

Operator ID:

ALS Bottle#:

8

Worklist Smp#:

14

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

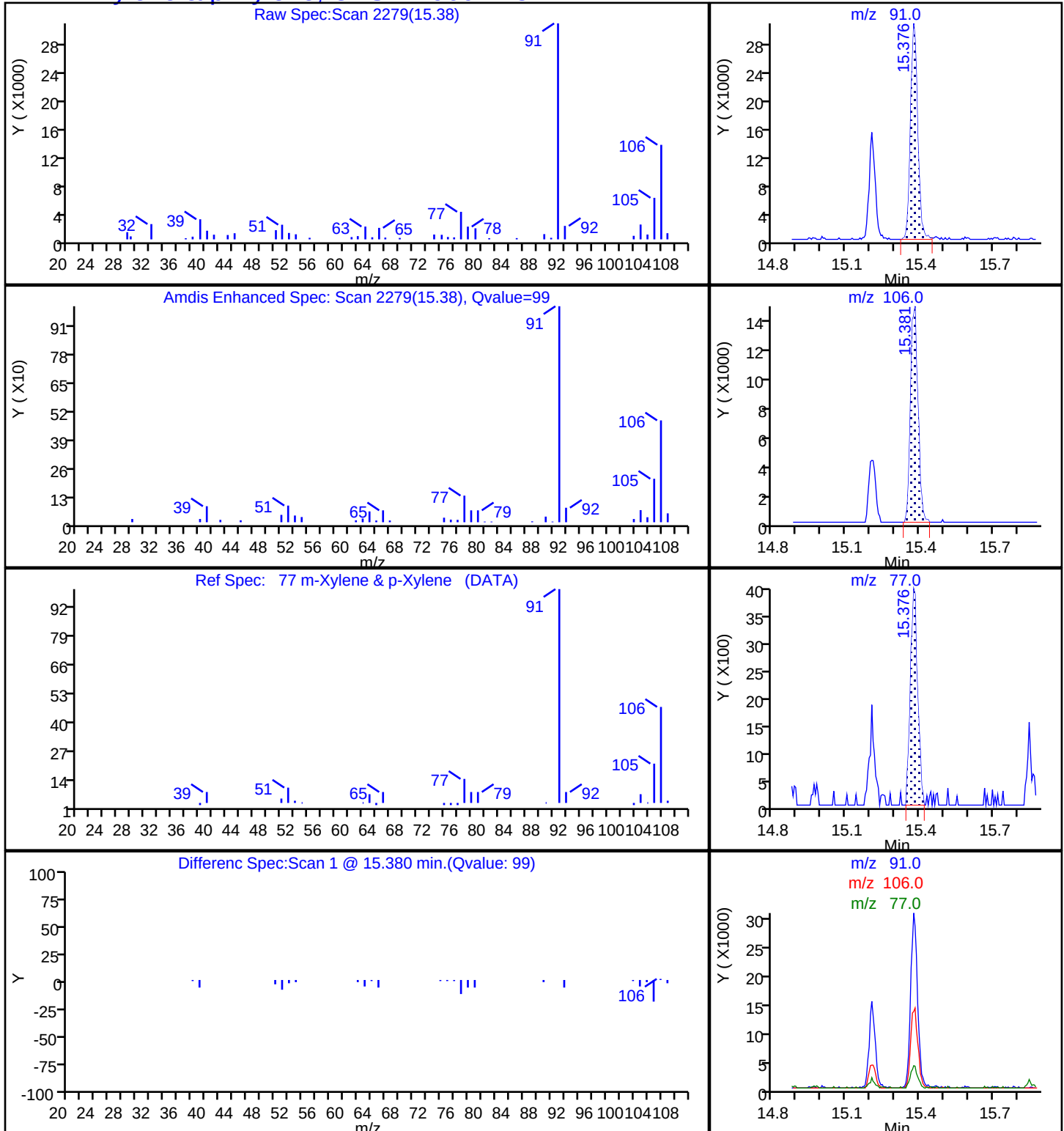
Limit Group:

MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

77 m-Xylene & p-Xylene, CAS: 179601-23-1

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P108.D

Injection Date: 03-Apr-2018 21:40:30

Instrument ID: MR

Lims ID: 140-11145-A-4

Lab Sample ID: 140-11145-4

Client ID: H46-BA-2018

Operator ID:

ALS Bottle#: 8

Worklist Smp#: 14

Purge Vol: 500.000 mL

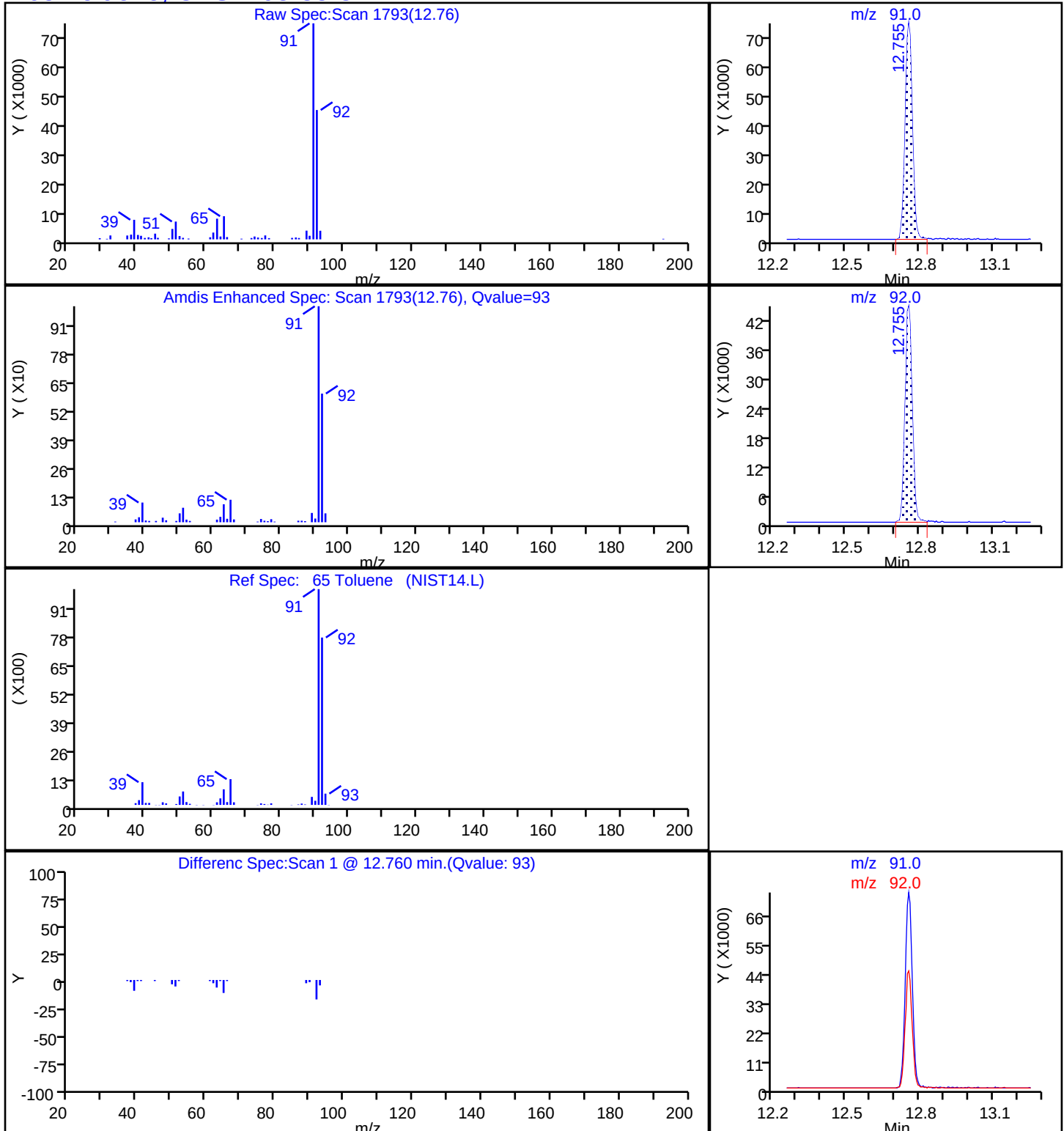
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

65 Toluene, CAS: 108-88-3

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P108.D

Injection Date: 03-Apr-2018 21:40:30

Instrument ID: MR

Lims ID: 140-11145-A-4

Lab Sample ID: 140-11145-4

Client ID: H46-BA-2018

Operator ID:

ALS Bottle#:

8

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

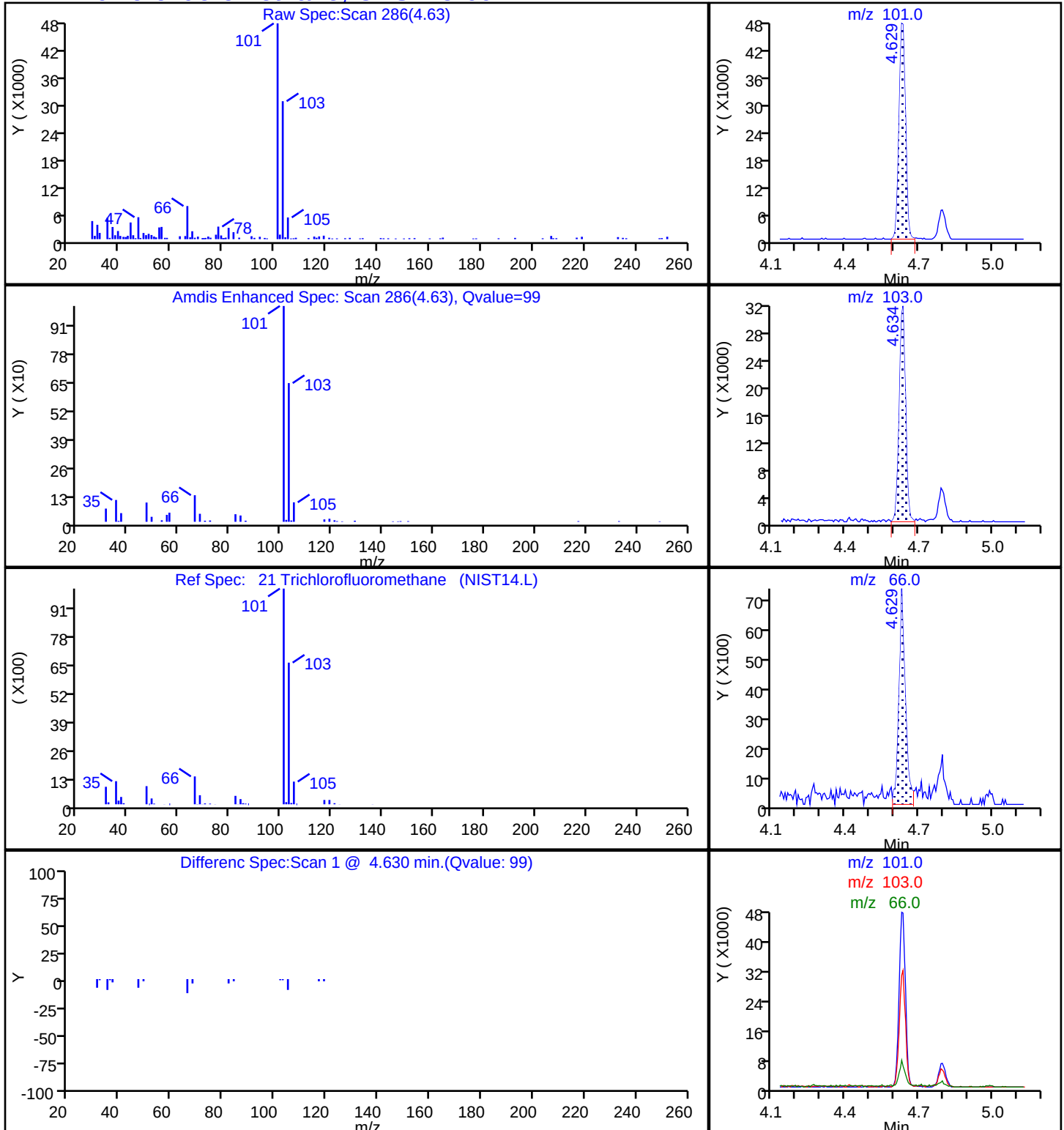
Limit Group:

MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

21 Trichlorofluoromethane, CAS: 75-69-4

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P108.D

Injection Date: 03-Apr-2018 21:40:30

Instrument ID: MR

Lims ID: 140-11145-A-4

Lab Sample ID: 140-11145-4

Client ID: H46-BA-2018

Operator ID:

ALS Bottle#:

8

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

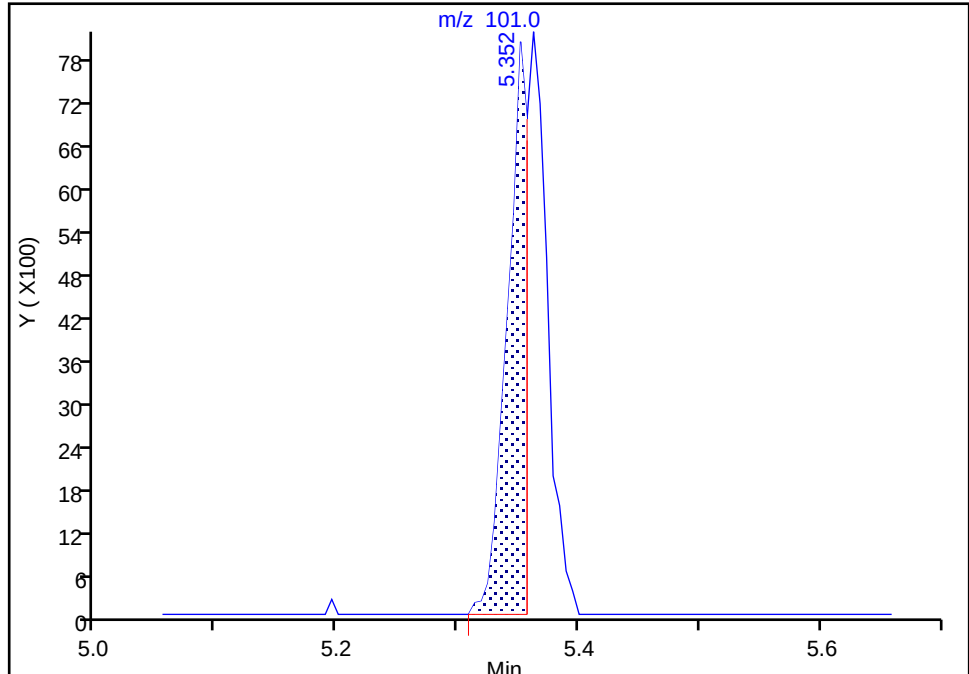
Detector: MS SCAN

30 1,1,2-Trichloro-1,2,2-trifluoroethane, CAS: 76-13-1

Signal: 1

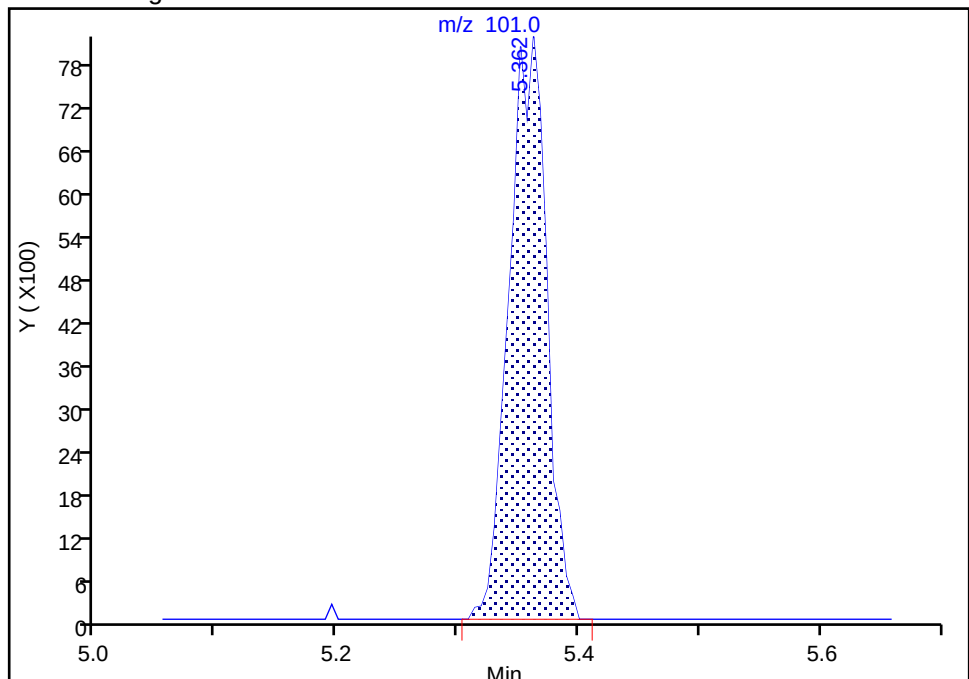
RT: 5.35
Area: 9626
Amount: 0.039047
Amount Units: ppb v/v

Processing Integration Results



RT: 5.36
Area: 17640
Amount: 0.071556
Amount Units: ppb v/v

Manual Integration Results



Reviewer: tajh, 04-Apr-2018 09:49:06

Audit Action: Manually Integrated

Audit Reason: Baseline

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P108.D

Injection Date: 03-Apr-2018 21:40:30

Instrument ID: MR

Lims ID: 140-11145-A-4

Lab Sample ID: 140-11145-4

Client ID: H46-BA-2018

Operator ID:

ALS Bottle#:

8

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

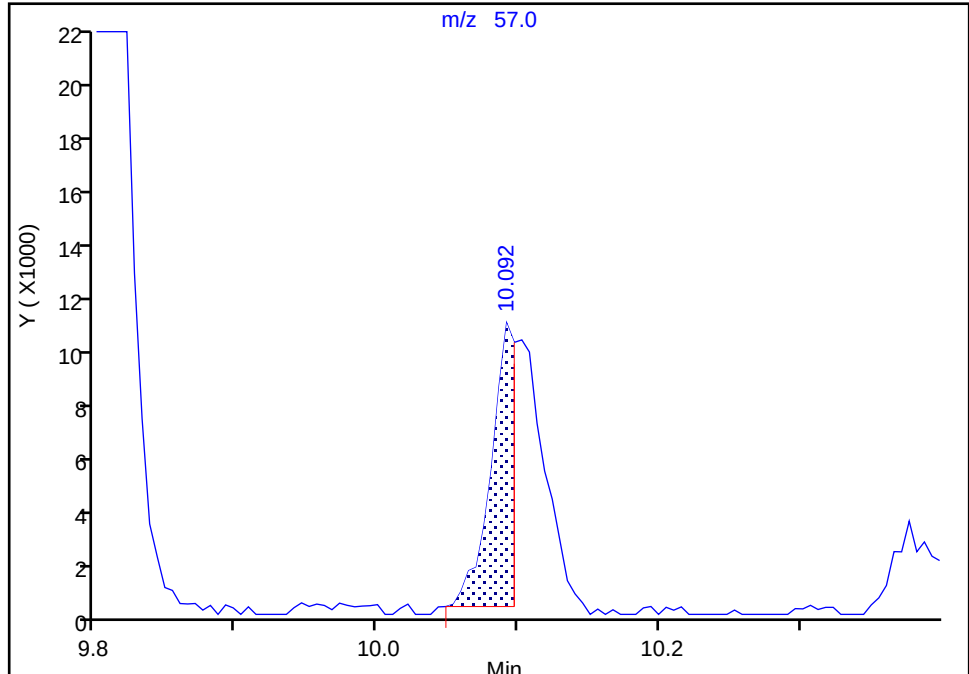
Detector: MS SCAN

53 Isooctane, CAS: 540-84-1

Signal: 1

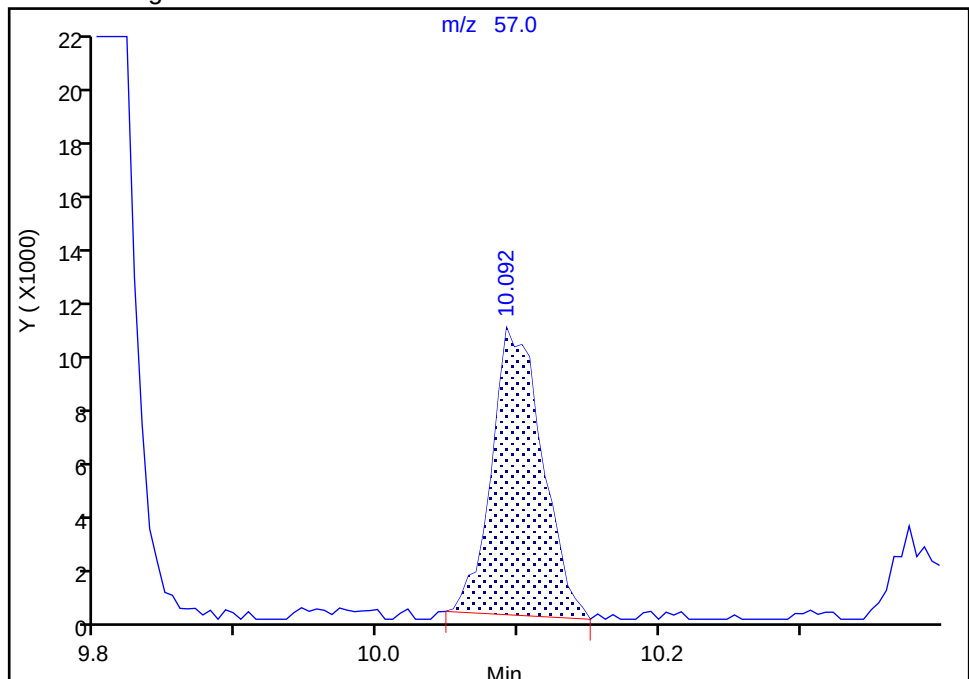
RT: 10.09
Area: 12565
Amount: 0.025500
Amount Units: ppb v/v

Processing Integration Results



RT: 10.09
Area: 25708
Amount: 0.052174
Amount Units: ppb v/v

Manual Integration Results



Reviewer: tajh, 04-Apr-2018 09:49:22

Audit Action: Manually Integrated

Audit Reason: Baseline

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P108.D

Injection Date: 03-Apr-2018 21:40:30

Instrument ID: MR

Lims ID: 140-11145-A-4

Lab Sample ID: 140-11145-4

Client ID: H46-BA-2018

Operator ID:

ALS Bottle#:

8

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

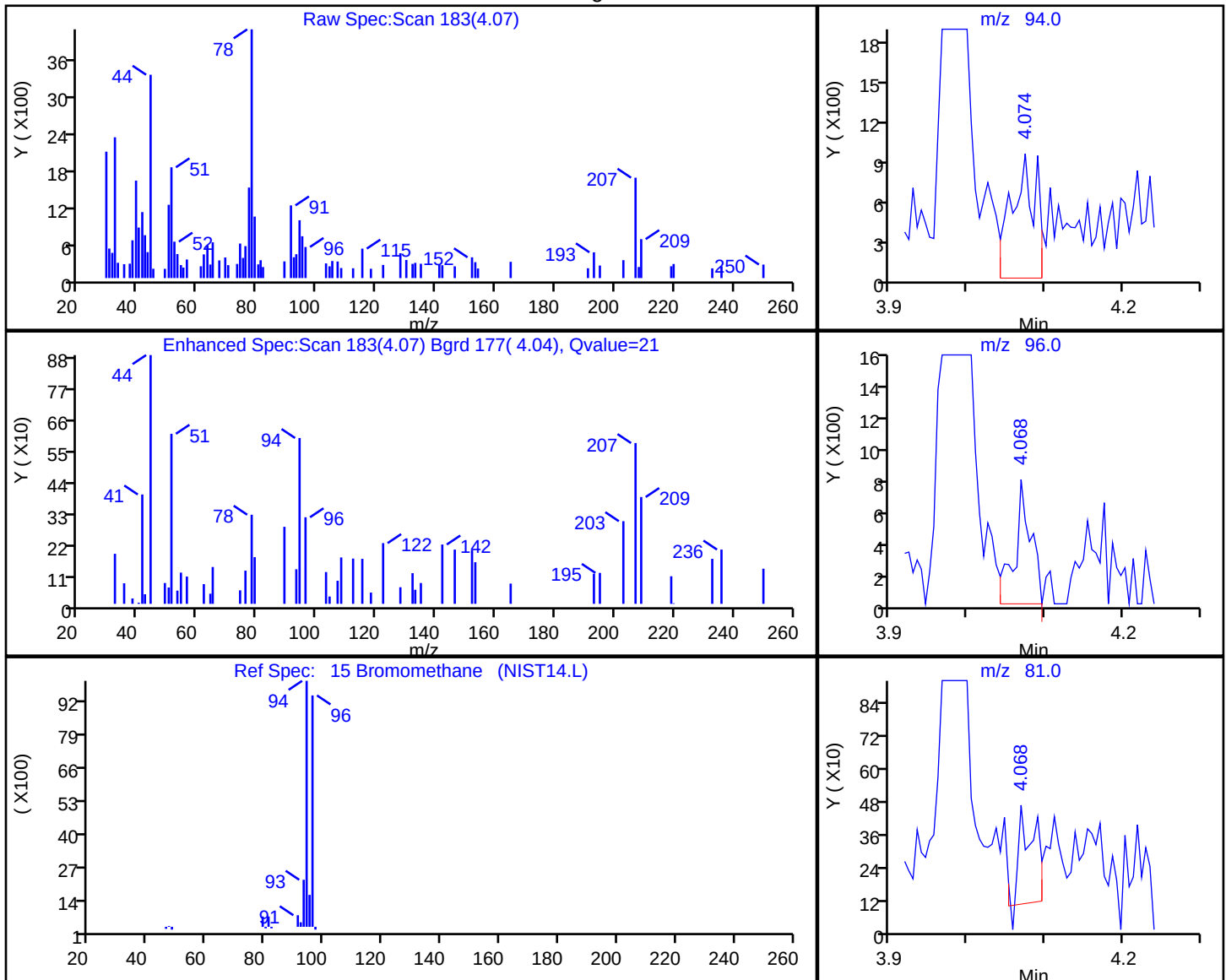
Column: RTX-5 (0.32 mm)

Detector

MS SCAN

15 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
4.07	94.00	2038	0.027588
4.07	96.00	1127	
4.07	81.00	510	

Reviewer: tajh, 04-Apr-2018 09:49:45

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P108.D

Injection Date: 03-Apr-2018 21:40:30

Instrument ID: MR

Lims ID: 140-11145-A-4

Lab Sample ID: 140-11145-4

Client ID: H46-BA-2018

Operator ID:

ALS Bottle#:

8

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

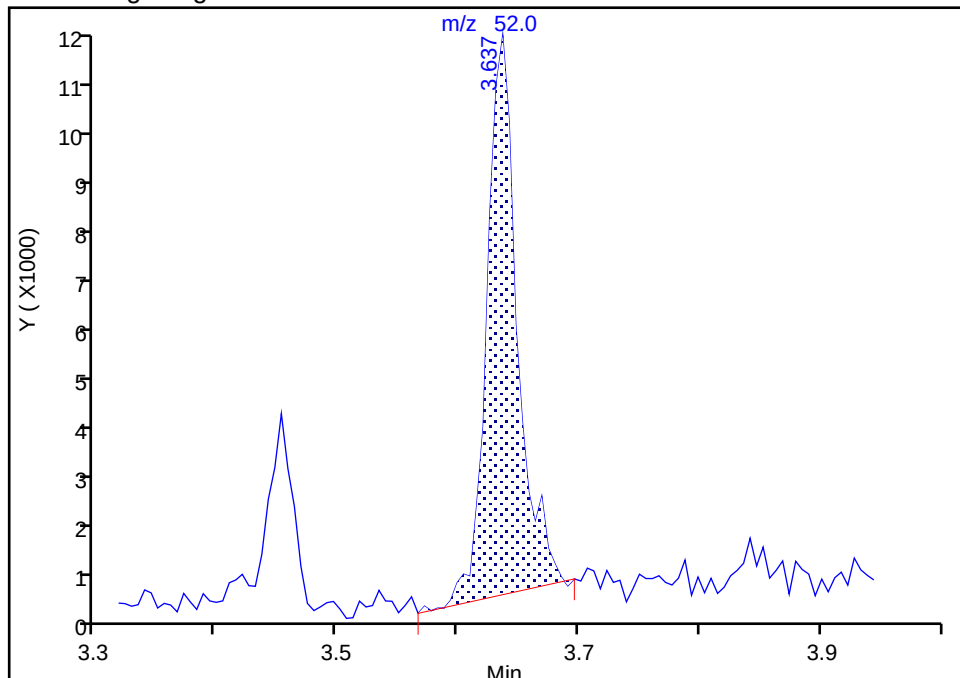
Detector: MS SCAN

9 Chloromethane, CAS: 74-87-3

Signal: 1

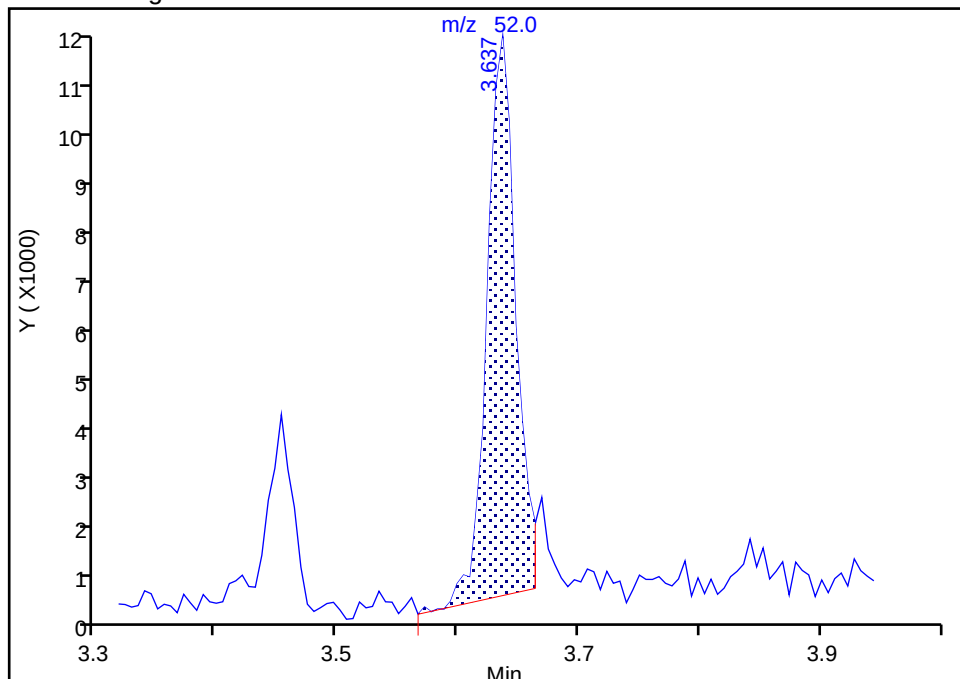
RT: 3.64
Area: 18657
Amount: 0.716587
Amount Units: ppb v/v

Processing Integration Results



RT: 3.64
Area: 17761
Amount: 0.682173
Amount Units: ppb v/v

Manual Integration Results



Reviewer: tajh, 04-Apr-2018 09:48:35

Audit Action: Split an Integrated Peak

Audit Reason: Split Peak

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P108.D

Injection Date: 03-Apr-2018 21:40:30

Instrument ID: MR

Lims ID: 140-11145-A-4

Lab Sample ID: 140-11145-4

Client ID: H46-BA-2018

Operator ID:

ALS Bottle#:

8

Worklist Smp#: 14

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: MR_TO15

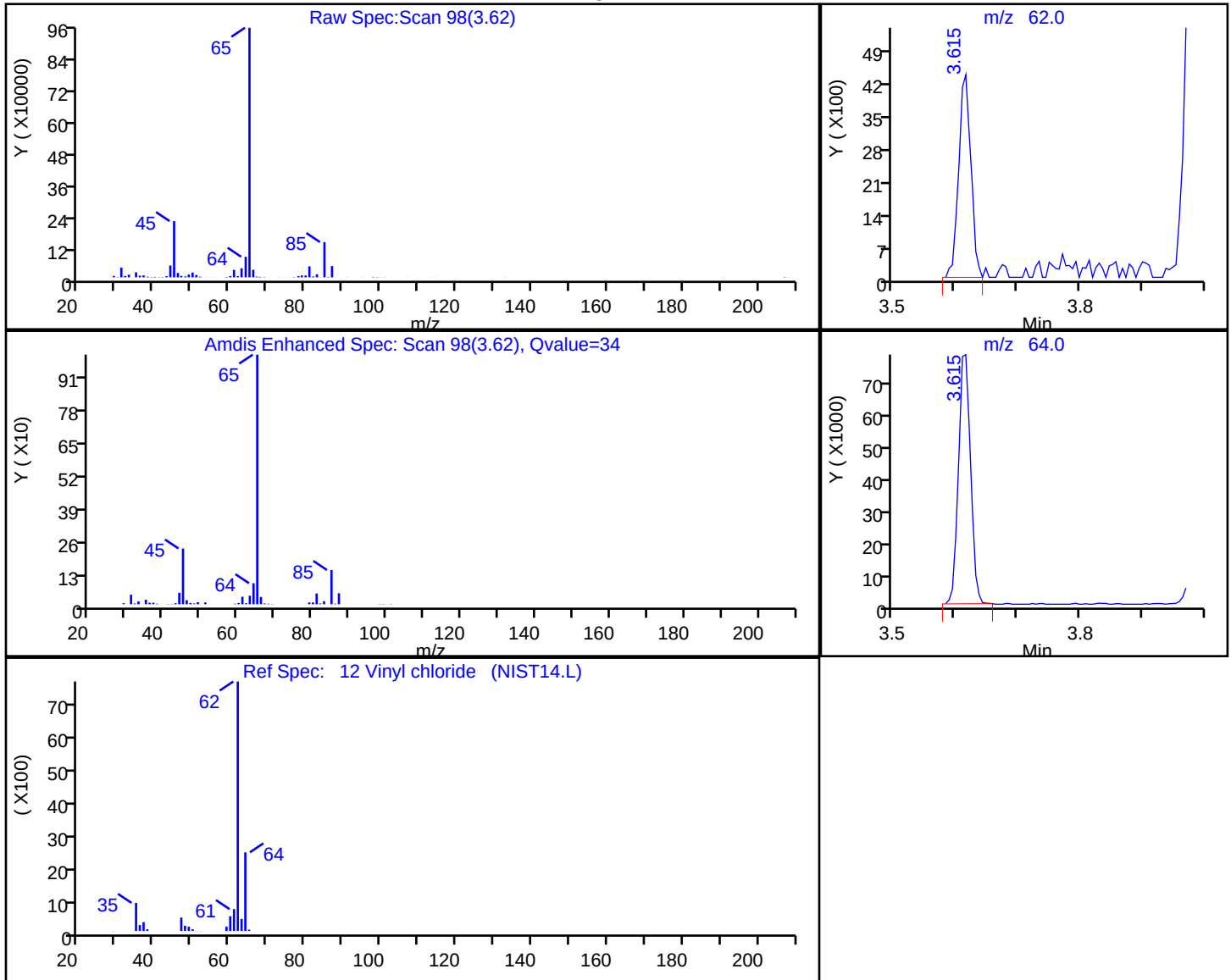
Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

12 Vinyl chloride, CAS: 75-01-4

Processing Results



RT	Mass	Response	Amount
3.62	62.00	5886	0.073719
3.62	64.00	106135	

Reviewer: tajh, 04-Apr-2018 09:49:45

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: H41B-BA-2018 Lab Sample ID: 140-11145-5
 Matrix: Air Lab File ID: RD03P109.D
 Analysis Method: TO 15 LL Date Collected: 03/28/2018 11:35
 Sample wt/vol: 500 (mL) Date Analyzed: 04/03/2018 22:33
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19179 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	167.85	ND		0.080	
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	187.38	ND		0.080	
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	
75-35-4	1,1-Dichloroethene	96.94	ND		0.040	
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	
106-93-4	1,2-Dibromoethane	187.87	ND		0.080	
95-50-1	1,2-Dichlorobenzene	147.00	ND		0.080	
107-06-2	1,2-Dichloroethane	98.96	ND	*	0.080	
78-87-5	1,2-Dichloropropane	112.99	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	170.92	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	
541-73-1	1,3-Dichlorobenzene	147.00	ND		0.080	
106-46-7	1,4-Dichlorobenzene	147.00	ND		0.080	
123-91-1	1,4-Dioxane	88.11	ND		0.20	
540-84-1	2,2,4-Trimethylpentane	114.23	ND		0.20	
78-93-3	2-Butanone	72.11	ND		0.32	
108-10-1	4-Methyl-2-pentanone (MIBK)	100.16	ND		0.20	
71-43-2	Benzene	78.11	0.20		0.080	
100-44-7	Benzyl chloride	126.58	ND		0.16	
75-27-4	Bromodichloromethane	163.83	ND		0.080	
75-25-2	Bromoform	252.75	ND		0.080	
74-83-9	Bromomethane	94.94	ND		0.080	
56-23-5	Carbon tetrachloride	153.81	0.070		0.032	
108-90-7	Chlorobenzene	112.56	ND		0.080	
75-00-3	Chloroethane	64.52	ND		0.080	
67-66-3	Chloroform	119.38	ND		0.080	
74-87-3	Chloromethane	50.49	0.85		0.20	
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.040	
10061-01-5	cis-1,3-Dichloropropene	110.97	ND		0.080	
110-82-7	Cyclohexane	84.16	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: H41B-BA-2018 Lab Sample ID: 140-11145-5
 Matrix: Air Lab File ID: RD03P109.D
 Analysis Method: TO 15 LL Date Collected: 03/28/2018 11:35
 Sample wt/vol: 500 (mL) Date Analyzed: 04/03/2018 22:33
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19179 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
124-48-1	Dibromochloromethane	208.29	ND		0.080	
75-71-8	Dichlorodifluoromethane	120.91	0.17		0.080	
64-17-5	Ethanol	46.07	50		2.0	
100-41-4	Ethylbenzene	106.17	ND		0.080	
87-68-3	Hexachlorobutadiene	260.76	ND		0.080	
110-54-3	Hexane	86.17	ND		0.20	
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.16	
75-09-2	Methylene Chloride	84.93	0.31		0.20	
179601-23-1	m-Xylene & p-Xylene	106.17	0.13		0.080	
95-47-6	o-Xylene	106.17	ND		0.080	
100-42-5	Styrene	104.15	ND		0.080	
75-65-0	t-Butyl alcohol	74.12	ND		0.32	
127-18-4	Tetrachloroethene	165.83	ND		0.080	
108-88-3	Toluene	92.14	0.26		0.12	
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	110.97	ND		0.080	
79-01-6	Trichloroethene	131.39	ND		0.036	
75-69-4	Trichlorofluoromethane	137.37	0.29		0.080	
75-01-4	Vinyl chloride	62.50	ND		0.040	

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	87		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: H41B-BA-2018 Lab Sample ID: 140-11145-5
 Matrix: Air Lab File ID: RD03P109.D
 Analysis Method: TO 15 LL Date Collected: 03/28/2018 11:35
 Sample wt/vol: 500 (mL) Date Analyzed: 04/03/2018 22:33
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19179 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	
79-34-5	1,1,2,2-Tetrachloroethane	167.85	ND		0.55	
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	
76-13-1	1,1,2-Trichlorotrifluoroethane	187.38	ND		0.61	
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	
75-35-4	1,1-Dichloroethene	96.94	ND		0.16	
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	
106-93-4	1,2-Dibromoethane	187.87	ND		0.61	
95-50-1	1,2-Dichlorobenzene	147.00	ND		0.48	
107-06-2	1,2-Dichloroethane	98.96	ND	*	0.32	
78-87-5	1,2-Dichloropropane	112.99	ND		0.37	
76-14-2	1,2-Dichlorotetrafluoroethane	170.92	ND		0.56	
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	
541-73-1	1,3-Dichlorobenzene	147.00	ND		0.48	
106-46-7	1,4-Dichlorobenzene	147.00	ND		0.48	
123-91-1	1,4-Dioxane	88.11	ND		0.72	
540-84-1	2,2,4-Trimethylpentane	114.23	ND		0.93	
78-93-3	2-Butanone	72.11	ND		0.94	
108-10-1	4-Methyl-2-pentanone (MIBK)	100.16	ND		0.82	
71-43-2	Benzene	78.11	0.65		0.26	
100-44-7	Benzyl chloride	126.58	ND		0.83	
75-27-4	Bromodichloromethane	163.83	ND		0.54	
75-25-2	Bromoform	252.75	ND		0.83	
74-83-9	Bromomethane	94.94	ND		0.31	
56-23-5	Carbon tetrachloride	153.81	0.44		0.20	
108-90-7	Chlorobenzene	112.56	ND		0.37	
75-00-3	Chloroethane	64.52	ND		0.21	
67-66-3	Chloroform	119.38	ND		0.39	
74-87-3	Chloromethane	50.49	1.7		0.41	
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.16	
10061-01-5	cis-1,3-Dichloropropene	110.97	ND		0.36	
110-82-7	Cyclohexane	84.16	ND		0.69	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: H41B-BA-2018 Lab Sample ID: 140-11145-5
 Matrix: Air Lab File ID: RD03P109.D
 Analysis Method: TO 15 LL Date Collected: 03/28/2018 11:35
 Sample wt/vol: 500 (mL) Date Analyzed: 04/03/2018 22:33
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19179 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
124-48-1	Dibromochloromethane	208.29	ND		0.68	
75-71-8	Dichlorodifluoromethane	120.91	0.86		0.40	
64-17-5	Ethanol	46.07	94		3.8	
100-41-4	Ethylbenzene	106.17	ND		0.35	
87-68-3	Hexachlorobutadiene	260.76	ND		0.85	
110-54-3	Hexane	86.17	ND		0.70	
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.58	
75-09-2	Methylene Chloride	84.93	1.1		0.69	
179601-23-1	m-Xylene & p-Xylene	106.17	0.55		0.35	
95-47-6	o-Xylene	106.17	ND		0.35	
100-42-5	Styrene	104.15	ND		0.34	
75-65-0	t-Butyl alcohol	74.12	ND		0.97	
127-18-4	Tetrachloroethene	165.83	ND		0.54	
108-88-3	Toluene	92.14	0.98		0.45	
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	
10061-02-6	trans-1,3-Dichloropropene	110.97	ND		0.36	
79-01-6	Trichloroethene	131.39	ND		0.19	
75-69-4	Trichlorofluoromethane	137.37	1.6		0.45	
75-01-4	Vinyl chloride	62.50	ND		0.10	

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	87		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P109.D
 Lims ID: 140-11145-A-5
 Client ID: H41B-BA-2018
 Sample Type: Client
 Inject. Date: 03-Apr-2018 22:33:30 ALS Bottle#: 9 Worklist Smp#: 15
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0007767-015
 Misc. Info.: 140-11145-a-5
 Operator ID: Instrument ID: MR
 Method: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 04-Apr-2018 09:59:00 Calib Date: 30-Jan-2018 19:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK025

First Level Reviewer: tajh

Date: 04-Apr-2018 09:50:16

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.654	7.670	-0.016	78	324747	4.00	
* 2 1,4-Difluorobenzene	114	9.800	9.806	-0.006	93	1900159	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.826	14.826	0.000	92	1466276	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.541	16.541	0.000	94	971176	3.49	
8 Dichlorodifluoromethane	85	3.491	3.507	-0.016	99	53321	0.1749	
9 Chloromethane	52	3.621	3.642	-0.021	100	23487	0.8458	
17 Ethanol	31	4.289	4.295	-0.006	96	1216387	50.0	
21 Trichlorofluoromethane	101	4.624	4.640	-0.016	99	83633	0.2888	
29 2-Methyl-2-propanol	59	5.298	5.287	0.011	86	6789	0.0277	
30 1,1,2-Trichloro-1,2,2-trif	101	5.352	5.362	-0.010	96	20035	0.0762	
31 Methylene Chloride	84	5.443	5.465	-0.022	88	38923	0.3065	
39 2-Butanone (MEK)	72	6.980	6.986	-0.006	100	11092	0.1883	
40 Hexane	56	7.077	7.083	-0.006	91	9041	0.0949	
43 Chloroform	83	7.692	7.703	-0.011	90	11987	0.0399	
47 Benzene	78	9.218	9.229	-0.011	96	74247	0.2045	
49 Cyclohexane	69	9.256	9.256	0.000	87	3024	0.0519	
50 Carbon tetrachloride	117	9.256	9.272	-0.016	95	20447	0.0699	
53 Isooctane	57	10.097	10.102	-0.005	95	26558	0.0505	
65 Toluene	91	12.755	12.761	-0.006	93	105259	0.2606	
76 Ethylbenzene	91	15.209	15.209	0.000	97	20634	0.0390	
77 m-Xylene & p-Xylene	91	15.376	15.381	-0.005	97	52138	0.1272	
82 o-Xylene	91	15.915	15.915	0.000	96	21735	0.0502	
93 1,2,4-Trimethylbenzene	105	17.856	17.857	-0.001	97	19235	0.0380	

Reagents:

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P109.D

Injection Date: 03-Apr-2018 22:33:30

Instrument ID: MR

Operator ID:

Lims ID: 140-11145-A-5

Lab Sample ID: 140-11145-5

Worklist Smp#: 15

Client ID: H41B-BA-2018

Purge Vol: 500.000 mL

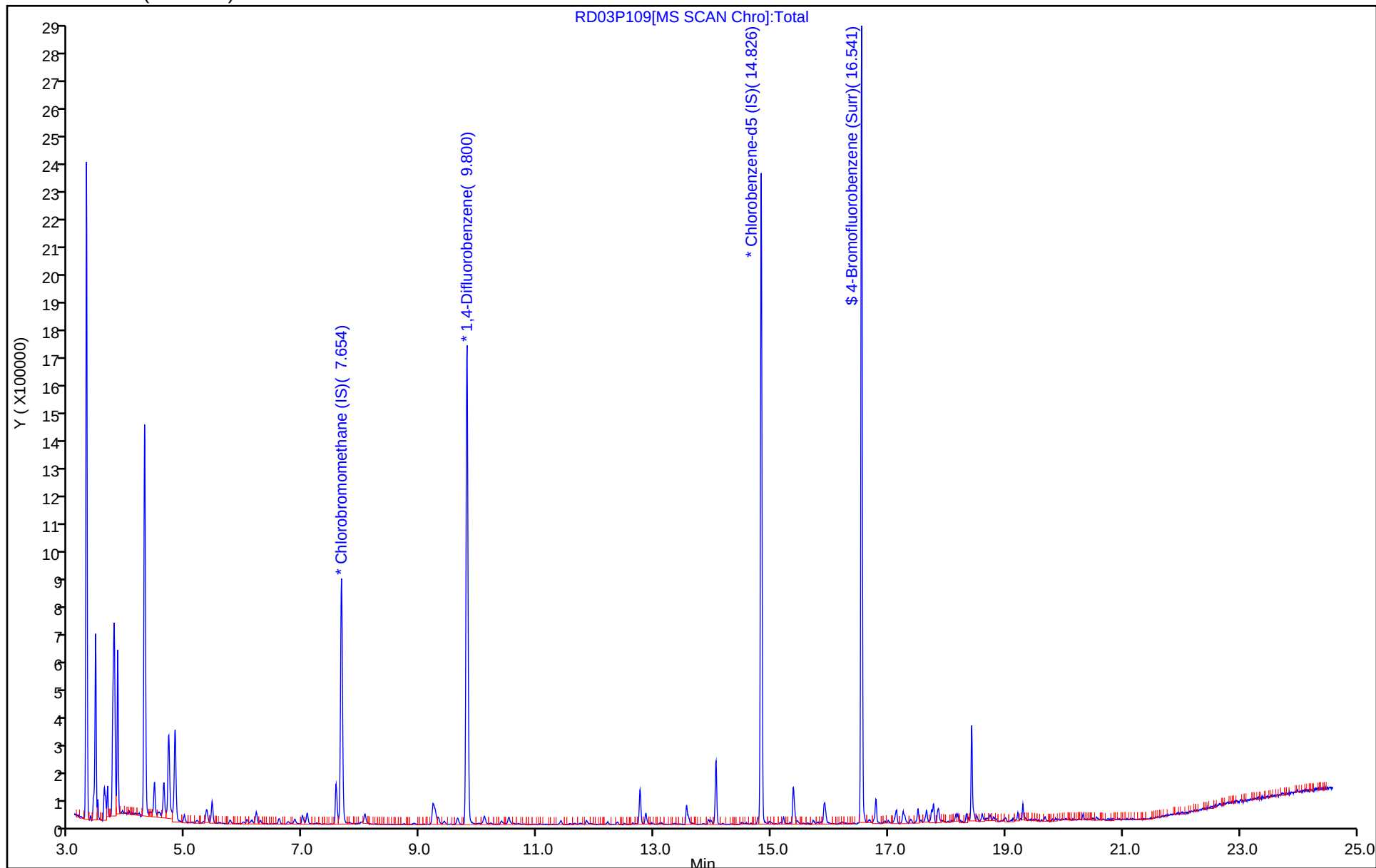
Dil. Factor: 1.0000

ALS Bottle#: 9

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P109.D
Lims ID: 140-11145-A-5
Client ID: H41B-BA-2018
Sample Type: Client
Inject. Date: 03-Apr-2018 22:33:30 ALS Bottle#: 9 Worklist Smp#: 15
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007767-015
Misc. Info.: 140-11145-a-5
Operator ID: Instrument ID: MR
Method: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 04-Apr-2018 09:59:00 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D
Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: tajh

Date: 04-Apr-2018 09:50:16

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.49	87.34

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P109.D

Injection Date: 03-Apr-2018 22:33:30

Instrument ID: MR

Lims ID: 140-11145-A-5

Lab Sample ID: 140-11145-5

Client ID: H41B-BA-2018

Operator ID:

ALS Bottle#: 9

Worklist Smp#: 15

Purge Vol: 500.000 mL

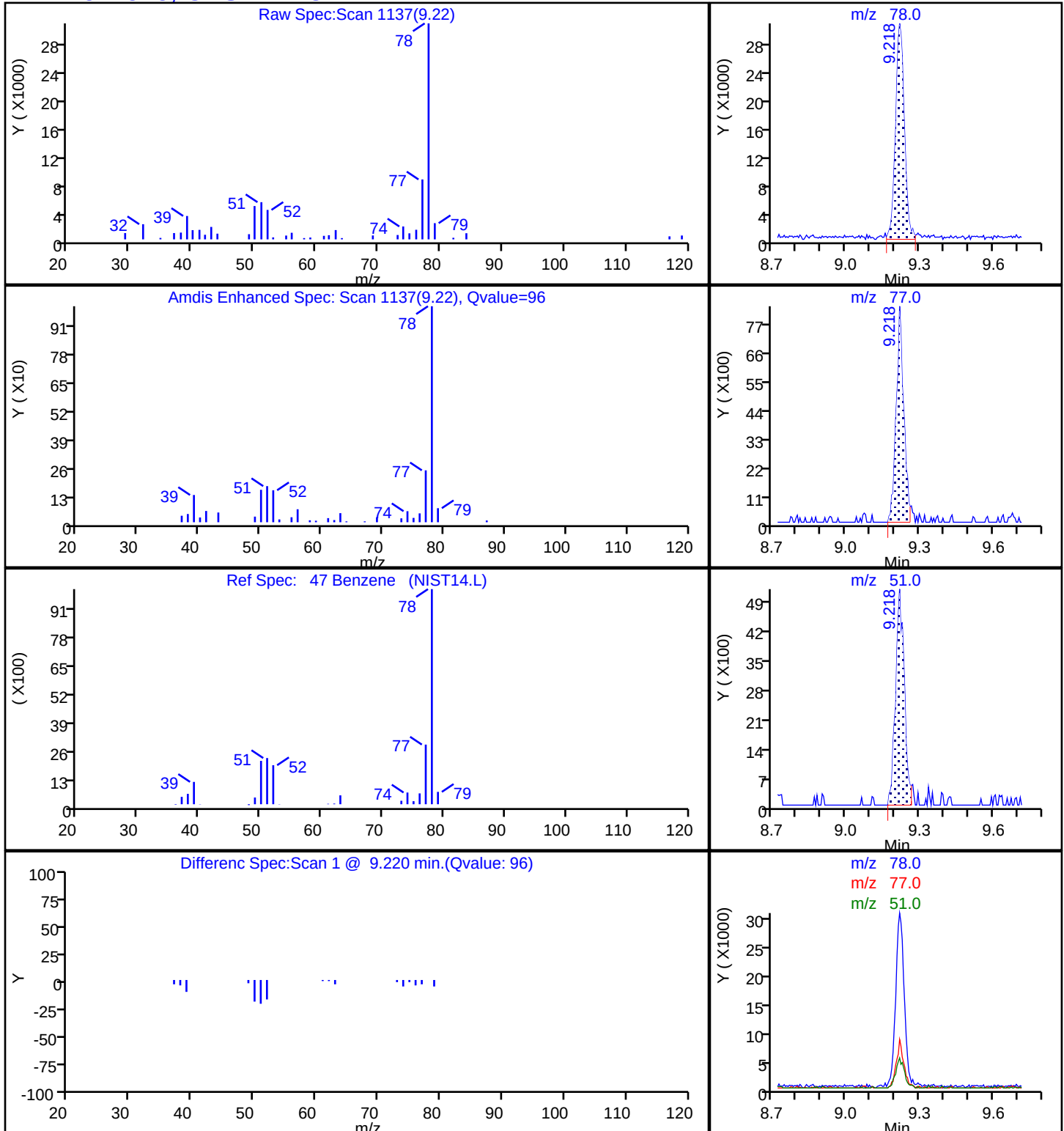
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P109.D

Injection Date: 03-Apr-2018 22:33:30

Instrument ID: MR

Lims ID: 140-11145-A-5

Lab Sample ID: 140-11145-5

Client ID: H41B-BA-2018

Operator ID:

ALS Bottle#: 9

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

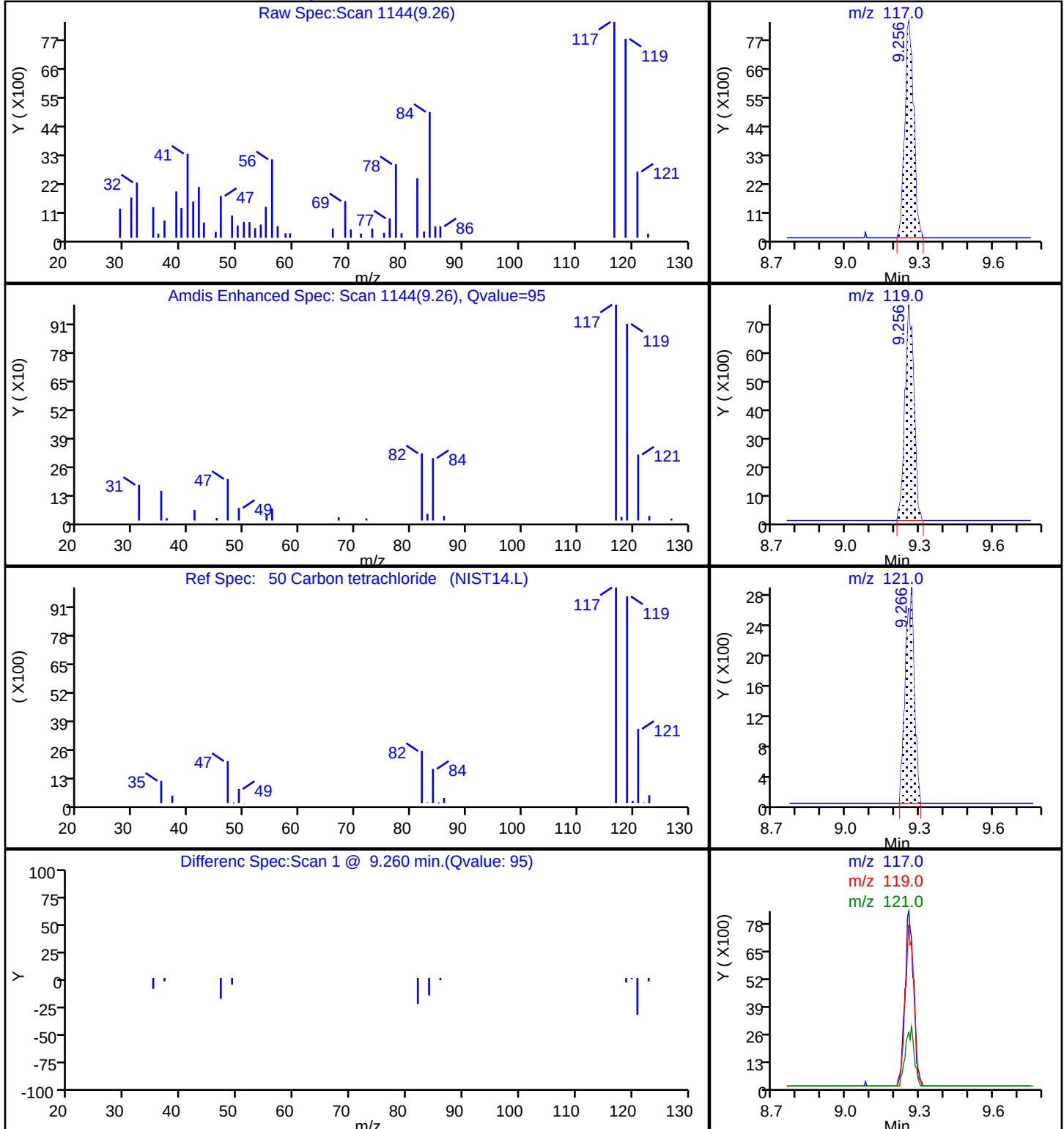
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

50 Carbon tetrachloride, CAS: 56-23-5



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P109.D

Injection Date: 03-Apr-2018 22:33:30

Instrument ID: MR

Lims ID: 140-11145-A-5

Lab Sample ID: 140-11145-5

Client ID: H41B-BA-2018

Operator ID:

ALS Bottle#:

Worklist Smp#: 15

Purge Vol: 500.000 mL

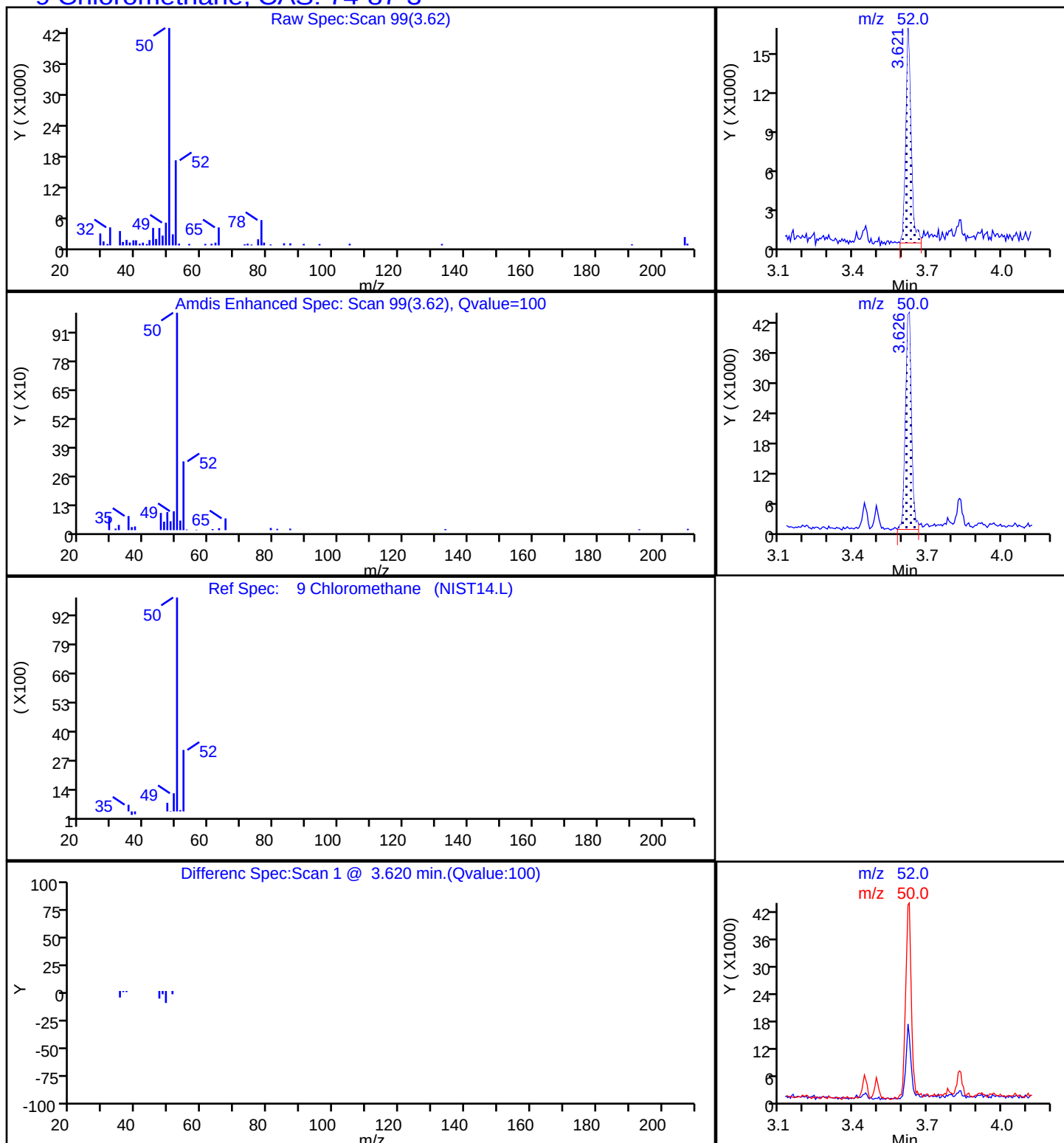
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

9 Chloromethane, CAS: 74-87-3

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P109.D

Injection Date: 03-Apr-2018 22:33:30

Instrument ID: MR

Lims ID: 140-11145-A-5

Lab Sample ID: 140-11145-5

Client ID: H41B-BA-2018

Operator ID:

ALS Bottle#:

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

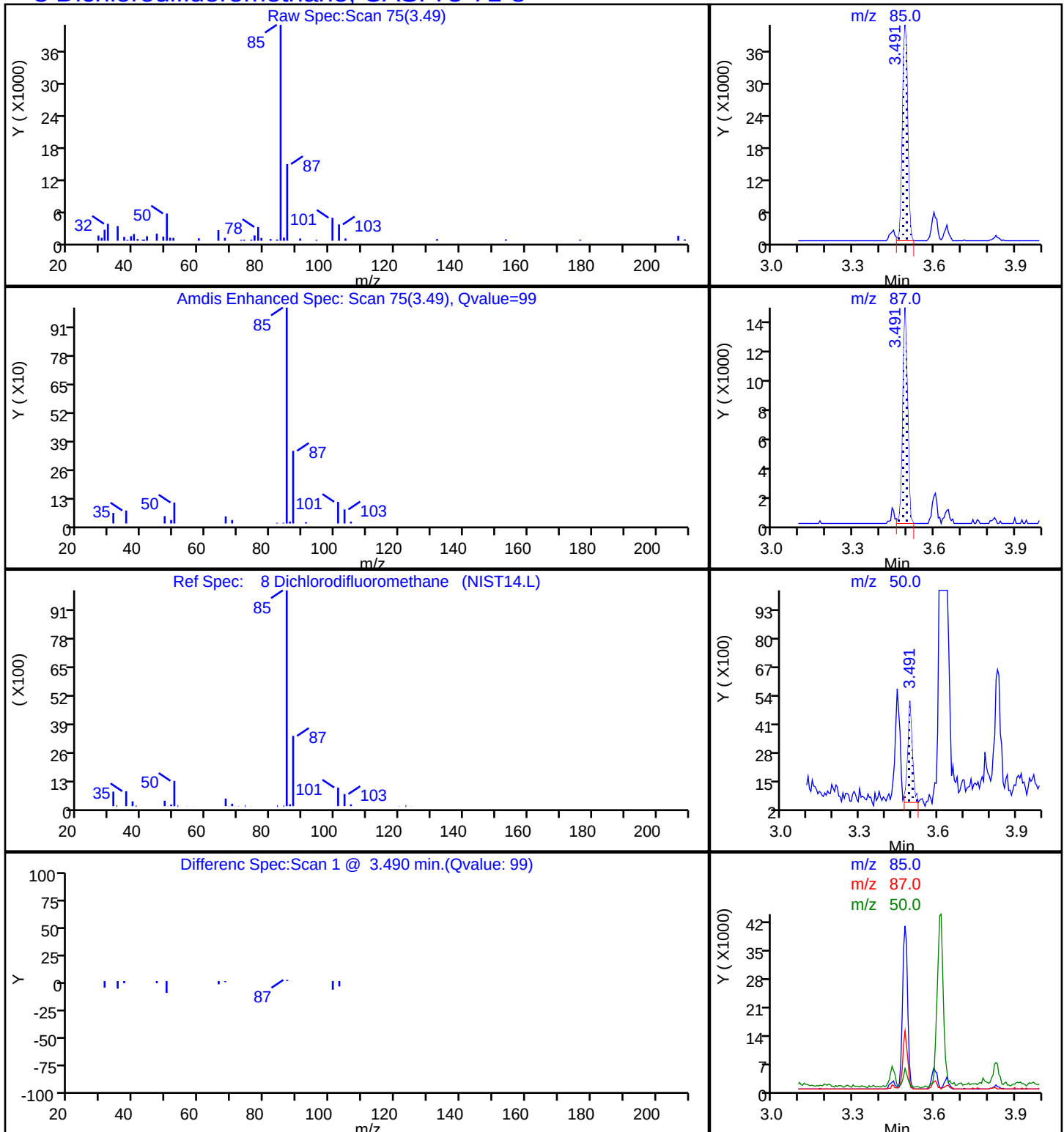
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P109.D

Injection Date: 03-Apr-2018 22:33:30

Instrument ID: MR

Lims ID: 140-11145-A-5

Lab Sample ID: 140-11145-5

Client ID: H41B-BA-2018

Operator ID:

ALS Bottle#:

Worklist Smp#: 15

Purge Vol: 500.000 mL

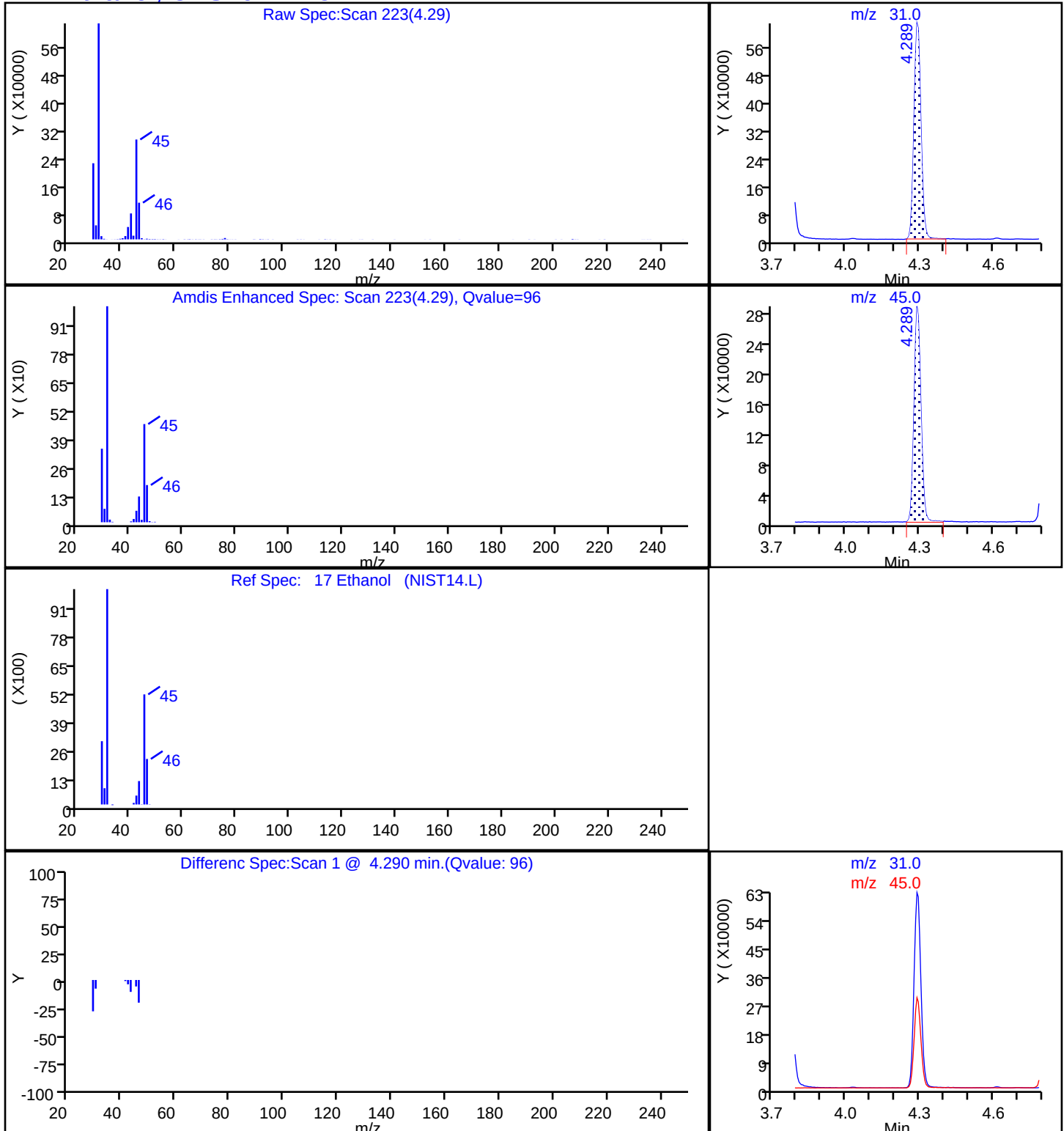
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

17 Ethanol, CAS: 64-17-5

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P109.D

Injection Date: 03-Apr-2018 22:33:30

Instrument ID: MR

Lims ID: 140-11145-A-5

Lab Sample ID: 140-11145-5

Client ID: H41B-BA-2018

Operator ID:

ALS Bottle#: 9

Worklist Smp#: 15

Purge Vol: 500.000 mL

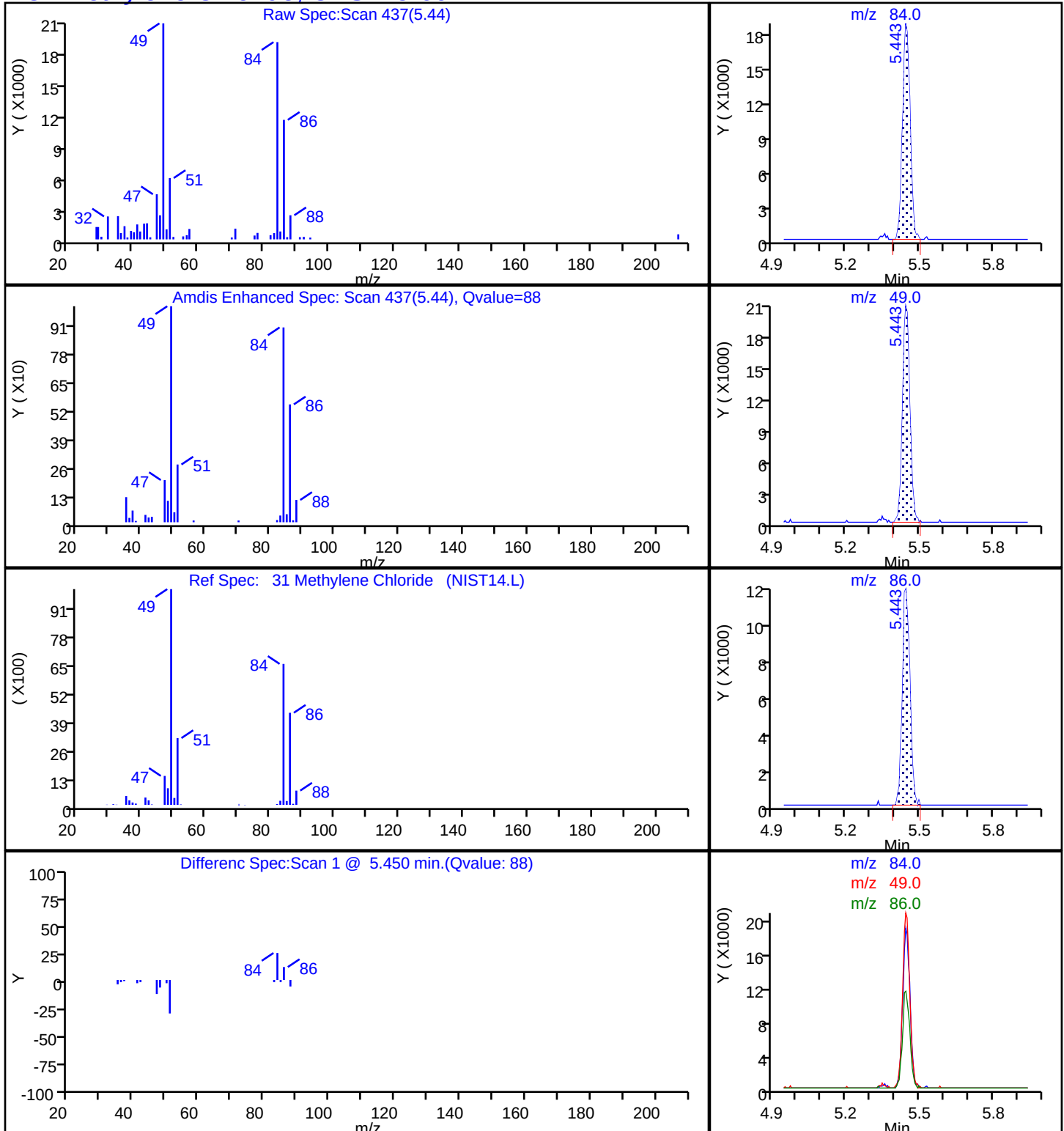
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P109.D

Injection Date: 03-Apr-2018 22:33:30

Instrument ID: MR

Lims ID: 140-11145-A-5

Lab Sample ID: 140-11145-5

Client ID: H41B-BA-2018

Operator ID:

ALS Bottle#:

Worklist Smp#: 15

Purge Vol: 500.000 mL

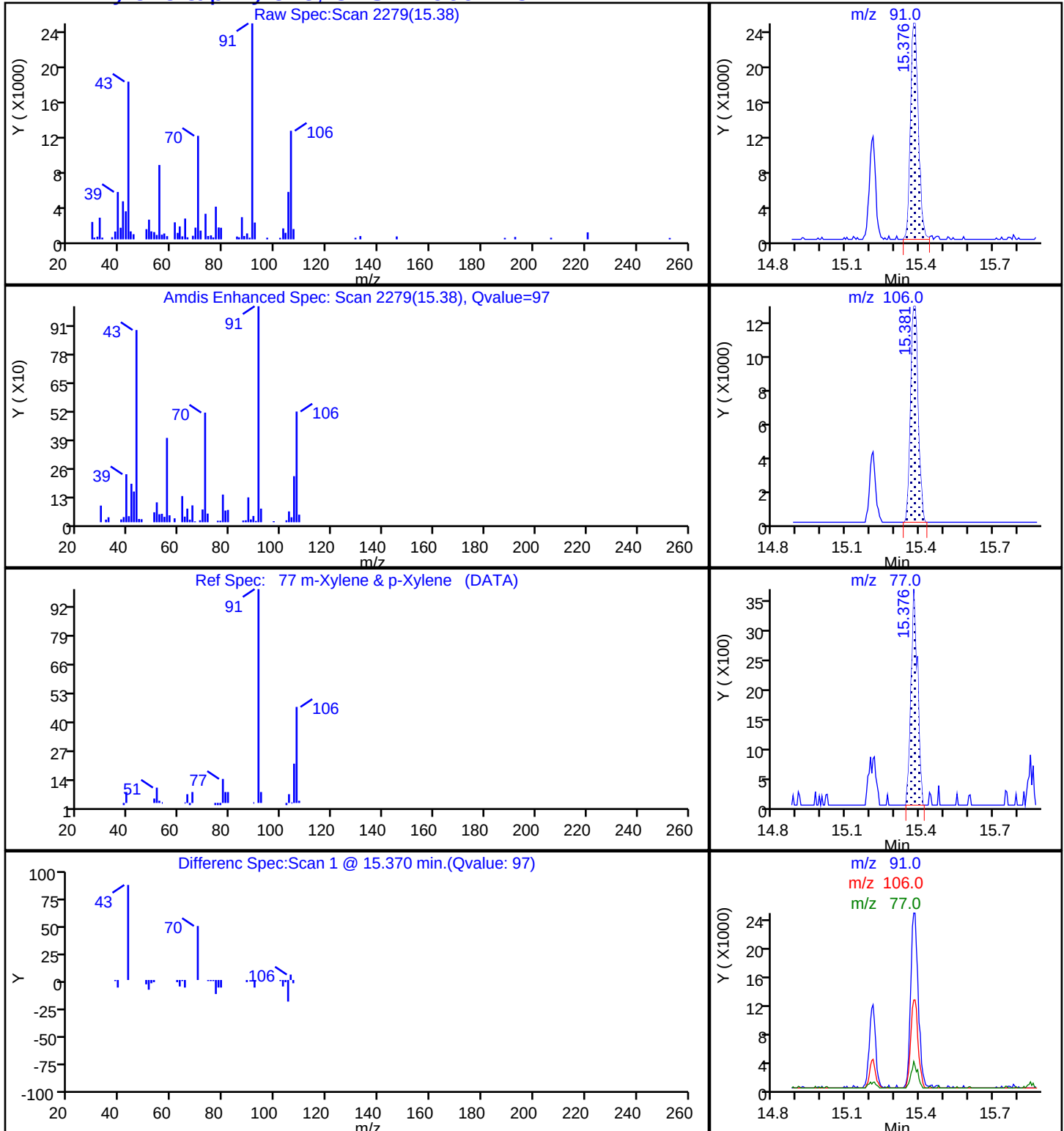
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

77 m-Xylene & p-Xylene, CAS: 179601-23-1

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P109.D

Injection Date: 03-Apr-2018 22:33:30

Instrument ID: MR

Lims ID: 140-11145-A-5

Lab Sample ID: 140-11145-5

Client ID: H41B-BA-2018

Operator ID:

ALS Bottle#: 9

Worklist Smp#: 15

Purge Vol: 500.000 mL

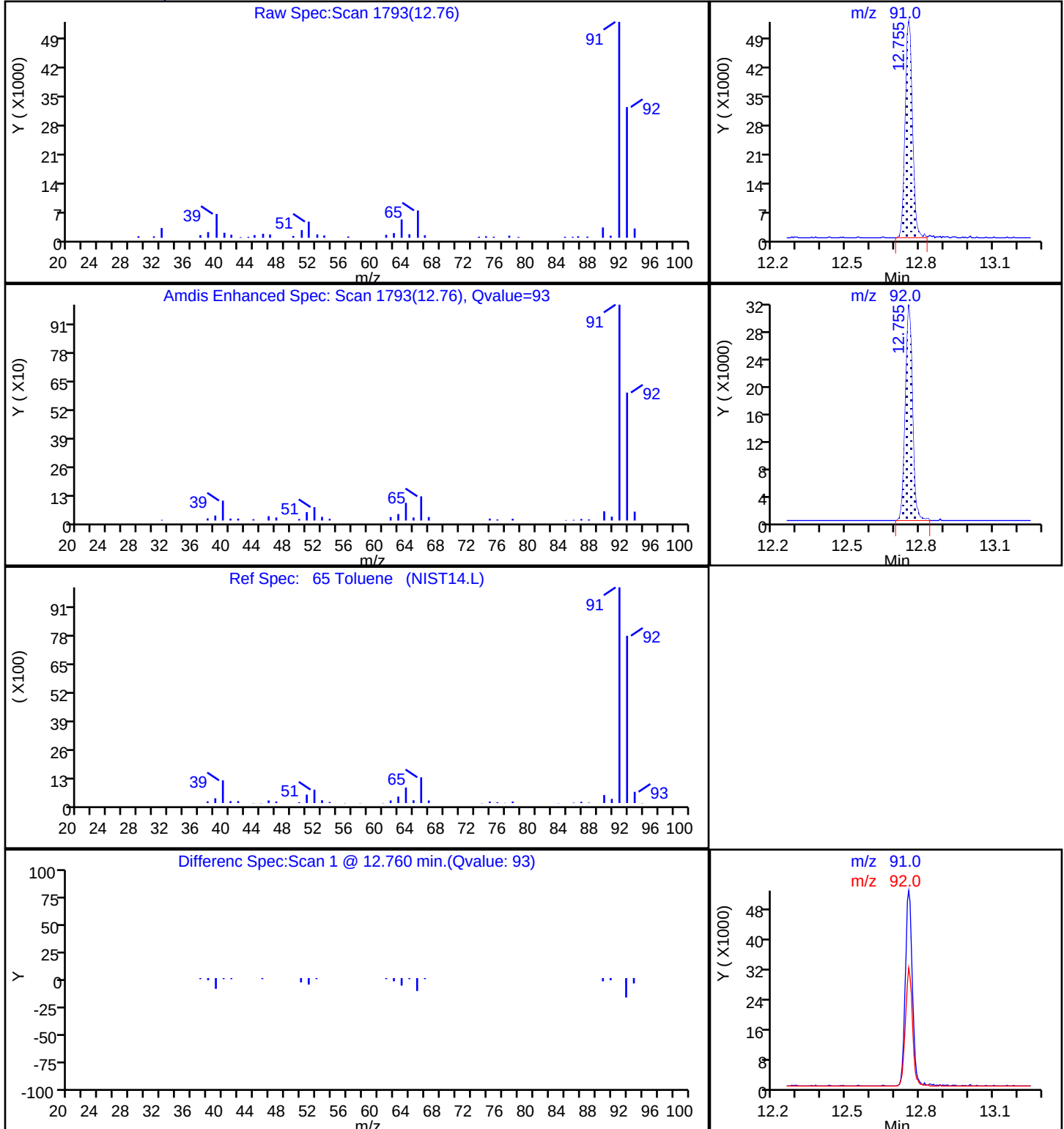
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

65 Toluene, CAS: 108-88-3

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P109.D

Injection Date: 03-Apr-2018 22:33:30

Instrument ID: MR

Lims ID: 140-11145-A-5

Lab Sample ID: 140-11145-5

Client ID: H41B-BA-2018

Operator ID:

ALS Bottle#:

Worklist Smp#: 15

Purge Vol: 500.000 mL

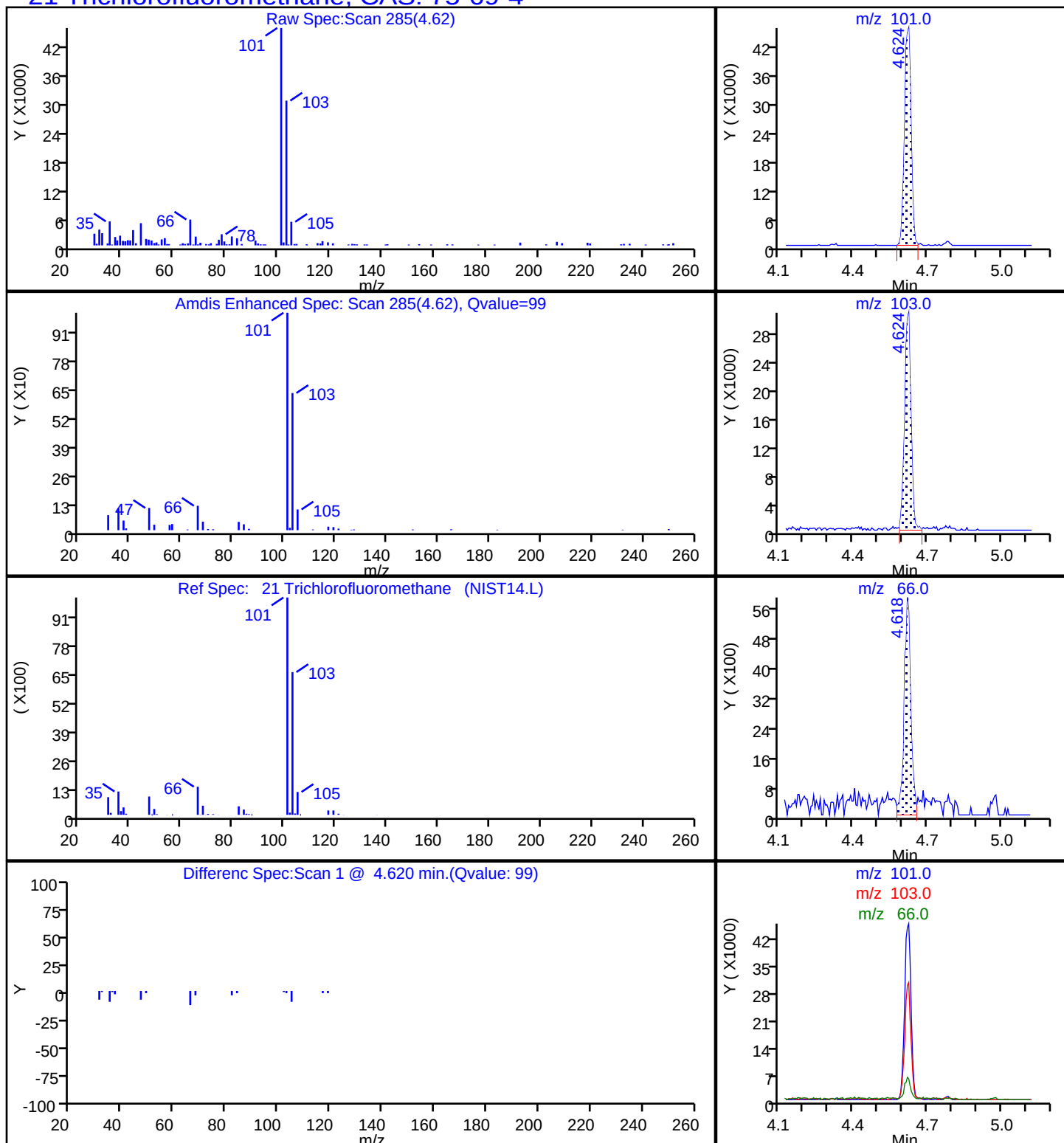
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

21 Trichlorofluoromethane, CAS: 75-69-4

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P109.D

Injection Date: 03-Apr-2018 22:33:30

Instrument ID: MR

Lims ID: 140-11145-A-5

Lab Sample ID: 140-11145-5

Client ID: H41B-BA-2018

Operator ID:

ALS Bottle#:

9

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: MR_TO15

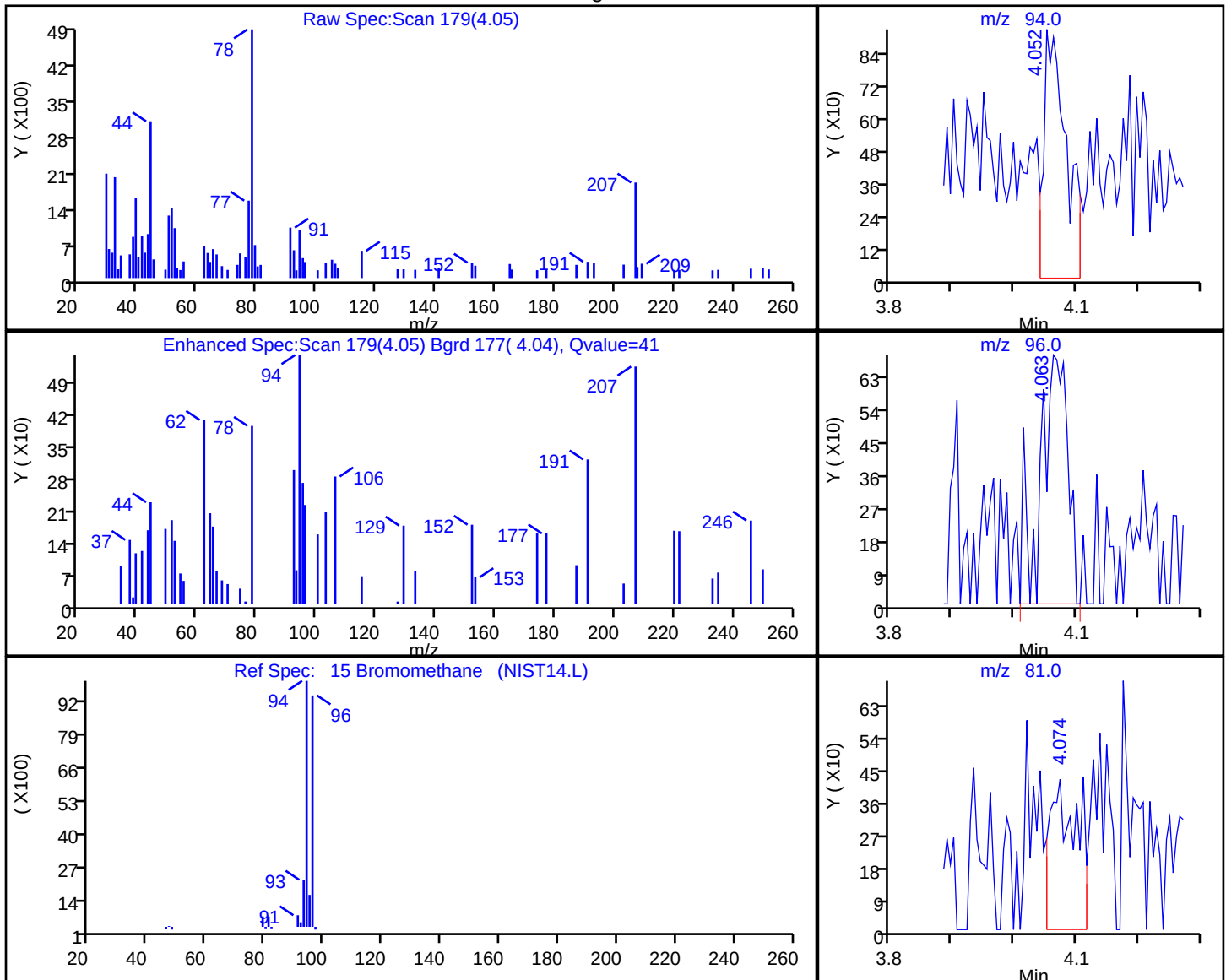
Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

15 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
4.05	94.00	2320	0.029444
4.06	96.00	2105	
4.07	81.00	1278	

Reviewer: tajh, 04-Apr-2018 09:50:16

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: H41-OA-2018 Lab Sample ID: 140-11145-6
 Matrix: Air Lab File ID: RD03P110.D
 Analysis Method: TO 15 LL Date Collected: 03/28/2018 11:41
 Sample wt/vol: 500 (mL) Date Analyzed: 04/03/2018 23:25
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19179 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	167.85	ND		0.080	
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	187.38	ND		0.080	
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	
75-35-4	1,1-Dichloroethene	96.94	ND		0.040	
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	
106-93-4	1,2-Dibromoethane	187.87	ND		0.080	
95-50-1	1,2-Dichlorobenzene	147.00	ND		0.080	
107-06-2	1,2-Dichloroethane	98.96	ND	*	0.080	
78-87-5	1,2-Dichloropropane	112.99	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	170.92	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	
541-73-1	1,3-Dichlorobenzene	147.00	ND		0.080	
106-46-7	1,4-Dichlorobenzene	147.00	ND		0.080	
123-91-1	1,4-Dioxane	88.11	ND		0.20	
540-84-1	2,2,4-Trimethylpentane	114.23	ND		0.20	
78-93-3	2-Butanone	72.11	ND		0.32	
108-10-1	4-Methyl-2-pentanone (MIBK)	100.16	ND		0.20	
71-43-2	Benzene	78.11	0.21		0.080	
100-44-7	Benzyl chloride	126.58	ND		0.16	
75-27-4	Bromodichloromethane	163.83	ND		0.080	
75-25-2	Bromoform	252.75	ND		0.080	
74-83-9	Bromomethane	94.94	ND		0.080	
56-23-5	Carbon tetrachloride	153.81	0.067		0.032	
108-90-7	Chlorobenzene	112.56	ND		0.080	
75-00-3	Chloroethane	64.52	ND		0.080	
67-66-3	Chloroform	119.38	ND		0.080	
74-87-3	Chloromethane	50.49	0.73		0.20	
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.040	
10061-01-5	cis-1,3-Dichloropropene	110.97	ND		0.080	
110-82-7	Cyclohexane	84.16	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: H41-OA-2018 Lab Sample ID: 140-11145-6
 Matrix: Air Lab File ID: RD03P110.D
 Analysis Method: TO 15 LL Date Collected: 03/28/2018 11:41
 Sample wt/vol: 500 (mL) Date Analyzed: 04/03/2018 23:25
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19179 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
124-48-1	Dibromochloromethane	208.29	ND		0.080	
75-71-8	Dichlorodifluoromethane	120.91	0.18		0.080	
64-17-5	Ethanol	46.07	8.0		2.0	
100-41-4	Ethylbenzene	106.17	ND		0.080	
87-68-3	Hexachlorobutadiene	260.76	ND		0.080	
110-54-3	Hexane	86.17	ND		0.20	
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.16	
75-09-2	Methylene Chloride	84.93	1.3		0.20	
179601-23-1	m-Xylene & p-Xylene	106.17	0.25		0.080	
95-47-6	o-Xylene	106.17	0.085		0.080	
100-42-5	Styrene	104.15	ND		0.080	
75-65-0	t-Butyl alcohol	74.12	ND		0.32	
127-18-4	Tetrachloroethene	165.83	ND		0.080	
108-88-3	Toluene	92.14	0.54		0.12	
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	110.97	ND		0.080	
79-01-6	Trichloroethene	131.39	ND		0.036	
75-69-4	Trichlorofluoromethane	137.37	0.29		0.080	
75-01-4	Vinyl chloride	62.50	ND		0.040	

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	88		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: H41-OA-2018 Lab Sample ID: 140-11145-6
 Matrix: Air Lab File ID: RD03P110.D
 Analysis Method: TO 15 LL Date Collected: 03/28/2018 11:41
 Sample wt/vol: 500 (mL) Date Analyzed: 04/03/2018 23:25
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19179 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	
79-34-5	1,1,2,2-Tetrachloroethane	167.85	ND		0.55	
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	
76-13-1	1,1,2-Trichlorotrifluoroethane	187.38	ND		0.61	
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	
75-35-4	1,1-Dichloroethene	96.94	ND		0.16	
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	
106-93-4	1,2-Dibromoethane	187.87	ND		0.61	
95-50-1	1,2-Dichlorobenzene	147.00	ND		0.48	
107-06-2	1,2-Dichloroethane	98.96	ND	*	0.32	
78-87-5	1,2-Dichloropropane	112.99	ND		0.37	
76-14-2	1,2-Dichlorotetrafluoroethane	170.92	ND		0.56	
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	
541-73-1	1,3-Dichlorobenzene	147.00	ND		0.48	
106-46-7	1,4-Dichlorobenzene	147.00	ND		0.48	
123-91-1	1,4-Dioxane	88.11	ND		0.72	
540-84-1	2,2,4-Trimethylpentane	114.23	ND		0.93	
78-93-3	2-Butanone	72.11	ND		0.94	
108-10-1	4-Methyl-2-pentanone (MIBK)	100.16	ND		0.82	
71-43-2	Benzene	78.11	0.68		0.26	
100-44-7	Benzyl chloride	126.58	ND		0.83	
75-27-4	Bromodichloromethane	163.83	ND		0.54	
75-25-2	Bromoform	252.75	ND		0.83	
74-83-9	Bromomethane	94.94	ND		0.31	
56-23-5	Carbon tetrachloride	153.81	0.42		0.20	
108-90-7	Chlorobenzene	112.56	ND		0.37	
75-00-3	Chloroethane	64.52	ND		0.21	
67-66-3	Chloroform	119.38	ND		0.39	
74-87-3	Chloromethane	50.49	1.5		0.41	
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.16	
10061-01-5	cis-1,3-Dichloropropene	110.97	ND		0.36	
110-82-7	Cyclohexane	84.16	ND		0.69	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: H41-OA-2018 Lab Sample ID: 140-11145-6
 Matrix: Air Lab File ID: RD03P110.D
 Analysis Method: TO 15 LL Date Collected: 03/28/2018 11:41
 Sample wt/vol: 500 (mL) Date Analyzed: 04/03/2018 23:25
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19179 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
124-48-1	Dibromochloromethane	208.29	ND		0.68	
75-71-8	Dichlorodifluoromethane	120.91	0.88		0.40	
64-17-5	Ethanol	46.07	15		3.8	
100-41-4	Ethylbenzene	106.17	ND		0.35	
87-68-3	Hexachlorobutadiene	260.76	ND		0.85	
110-54-3	Hexane	86.17	ND		0.70	
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.58	
75-09-2	Methylene Chloride	84.93	4.7		0.69	
179601-23-1	m-Xylene & p-Xylene	106.17	1.1		0.35	
95-47-6	o-Xylene	106.17	0.37		0.35	
100-42-5	Styrene	104.15	ND		0.34	
75-65-0	t-Butyl alcohol	74.12	ND		0.97	
127-18-4	Tetrachloroethene	165.83	ND		0.54	
108-88-3	Toluene	92.14	2.0		0.45	
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	
10061-02-6	trans-1,3-Dichloropropene	110.97	ND		0.36	
79-01-6	Trichloroethene	131.39	ND		0.19	
75-69-4	Trichlorofluoromethane	137.37	1.6		0.45	
75-01-4	Vinyl chloride	62.50	ND		0.10	

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	88		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P110.D
 Lims ID: 140-11145-A-6
 Client ID: H41-OA-2018
 Sample Type: Client
 Inject. Date: 03-Apr-2018 23:25:30 ALS Bottle#: 10 Worklist Smp#: 16
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0007767-016
 Misc. Info.: 140-11145-a-6
 Operator ID: Instrument ID: MR
 Method: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 04-Apr-2018 09:59:00 Calib Date: 30-Jan-2018 19:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK025

First Level Reviewer: tajh

Date: 04-Apr-2018 09:50:48

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.665	7.670	-0.005	78	330382	4.00	
* 2 1,4-Difluorobenzene	114	9.806	9.806	0.000	93	1941090	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.826	14.826	0.000	86	1493646	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.541	16.541	0.000	94	999575	3.53	
8 Dichlorodifluoromethane	85	3.513	3.507	0.006	100	55155	0.1778	
9 Chloromethane	52	3.642	3.642	0.000	99	20666	0.7315	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.664	3.664	0.000	35	3239	0.0154	
17 Ethanol	31	4.295	4.295	0.000	98	198748	8.02	
21 Trichlorofluoromethane	101	4.640	4.640	0.000	99	85026	0.2886	
29 2-Methyl-2-propanol	59	5.303	5.287	0.016	90	11863	0.0476	
30 1,1,2-Trichloro-1,2,2-trif	101	5.357	5.362	-0.005	91	18199	0.0680	
31 Methylene Chloride	84	5.459	5.465	-0.006	86	173190	1.34	
39 2-Butanone (MEK)	72	6.996	6.986	0.010	99	9437	0.1575	
40 Hexane	56	7.082	7.083	-0.001	88	16983	0.1753	
43 Chloroform	83	7.692	7.703	-0.011	92	7873	0.0258	
47 Benzene	78	9.229	9.229	0.000	95	79316	0.2139	
49 Cyclohexane	69	9.250	9.256	-0.006	46	3791	0.0637	
50 Carbon tetrachloride	117	9.261	9.272	-0.011	92	20076	0.0672	
53 Isooctane	57	10.102	10.102	0.000	97	35577	0.0662	
62 4-Methyl-2-pentanone (MIBK	43	11.839	11.828	0.011	97	33732	0.1623	
65 Toluene	91	12.761	12.761	0.000	94	220391	0.5357	
73 Tetrachloroethene	129	13.969	13.974	-0.005	95	5490	0.0358	
76 Ethylbenzene	91	15.209	15.209	0.000	97	41806	0.0776	
77 m-Xylene & p-Xylene	91	15.381	15.381	0.000	99	105994	0.2539	
80 Styrene	104	15.856	15.856	0.000	94	6723	0.0252	
82 o-Xylene	91	15.915	15.915	0.000	97	37468	0.0850	
93 1,2,4-Trimethylbenzene	105	17.862	17.857	0.005	97	27143	0.0527	

Reagents:

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P110.D

Injection Date: 03-Apr-2018 23:25:30

Instrument ID: MR

Operator ID:

Lims ID: 140-11145-A-6

Lab Sample ID: 140-11145-6

Worklist Smp#: 16

Client ID: H41-OA-2018

Purge Vol: 500.000 mL

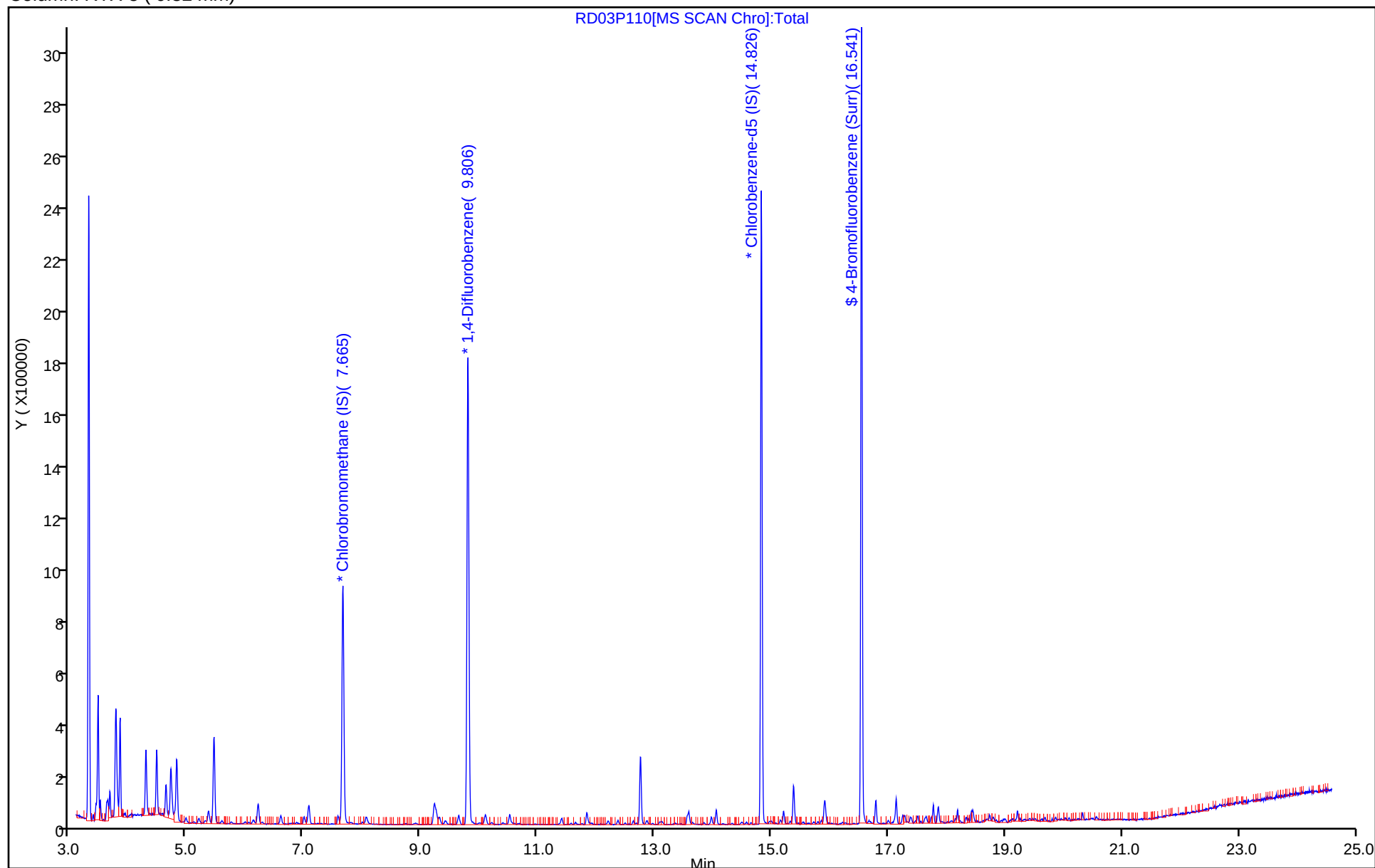
Dil. Factor: 1.0000

ALS Bottle#: 10

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P110.D
Lims ID: 140-11145-A-6
Client ID: H41-OA-2018
Sample Type: Client
Inject. Date: 03-Apr-2018 23:25:30 ALS Bottle#: 10 Worklist Smp#: 16
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007767-016
Misc. Info.: 140-11145-a-6
Operator ID: Instrument ID: MR
Method: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 04-Apr-2018 09:59:00 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D
Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: tajh

Date: 04-Apr-2018 09:50:48

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.53	88.24

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P110.D

Injection Date: 03-Apr-2018 23:25:30

Instrument ID: MR

Lims ID: 140-11145-A-6

Lab Sample ID: 140-11145-6

Client ID: H41-OA-2018

Operator ID:

ALS Bottle#: 10

Worklist Smp#: 16

Purge Vol: 500.000 mL

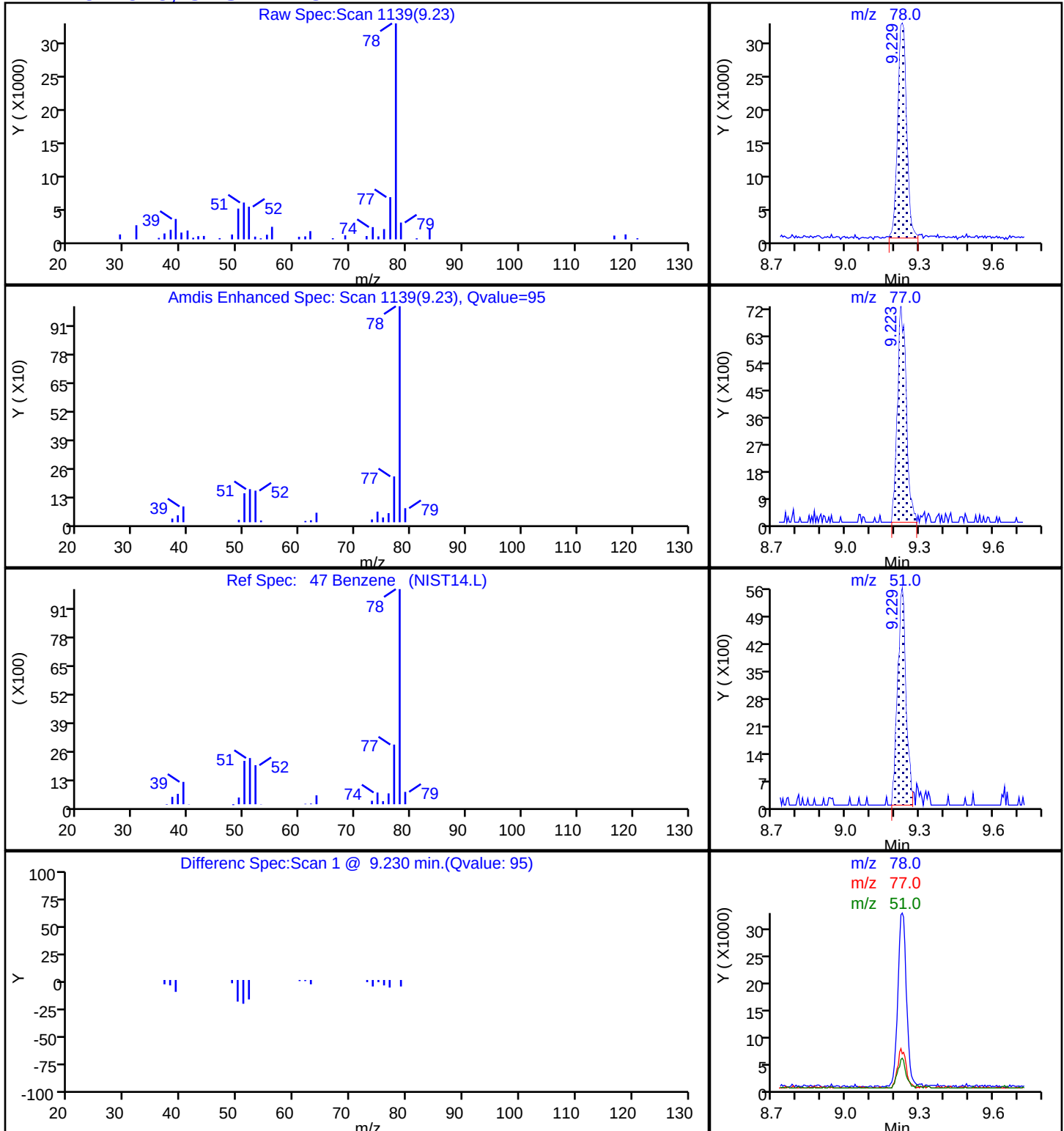
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P110.D

Injection Date: 03-Apr-2018 23:25:30

Instrument ID: MR

Lims ID: 140-11145-A-6

Lab Sample ID: 140-11145-6

Client ID: H41-OA-2018

Operator ID:

ALS Bottle#: 10

Worklist Smp#: 16

Purge Vol: 500.000 mL

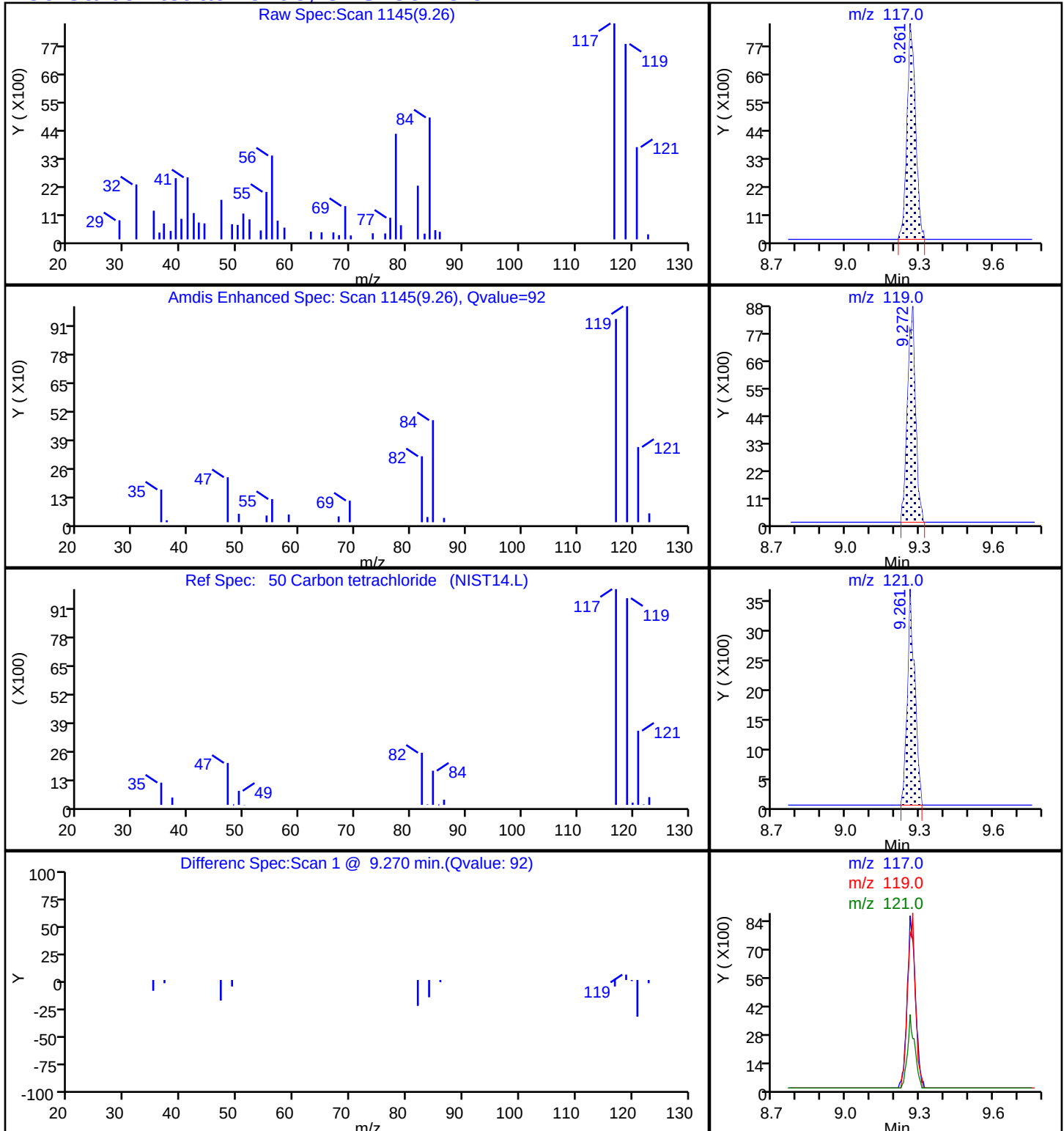
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

50 Carbon tetrachloride, CAS: 56-23-5

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P110.D

Injection Date: 03-Apr-2018 23:25:30

Instrument ID: MR

Lims ID: 140-11145-A-6

Lab Sample ID: 140-11145-6

Client ID: H41-OA-2018

Operator ID:

ALS Bottle#:

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

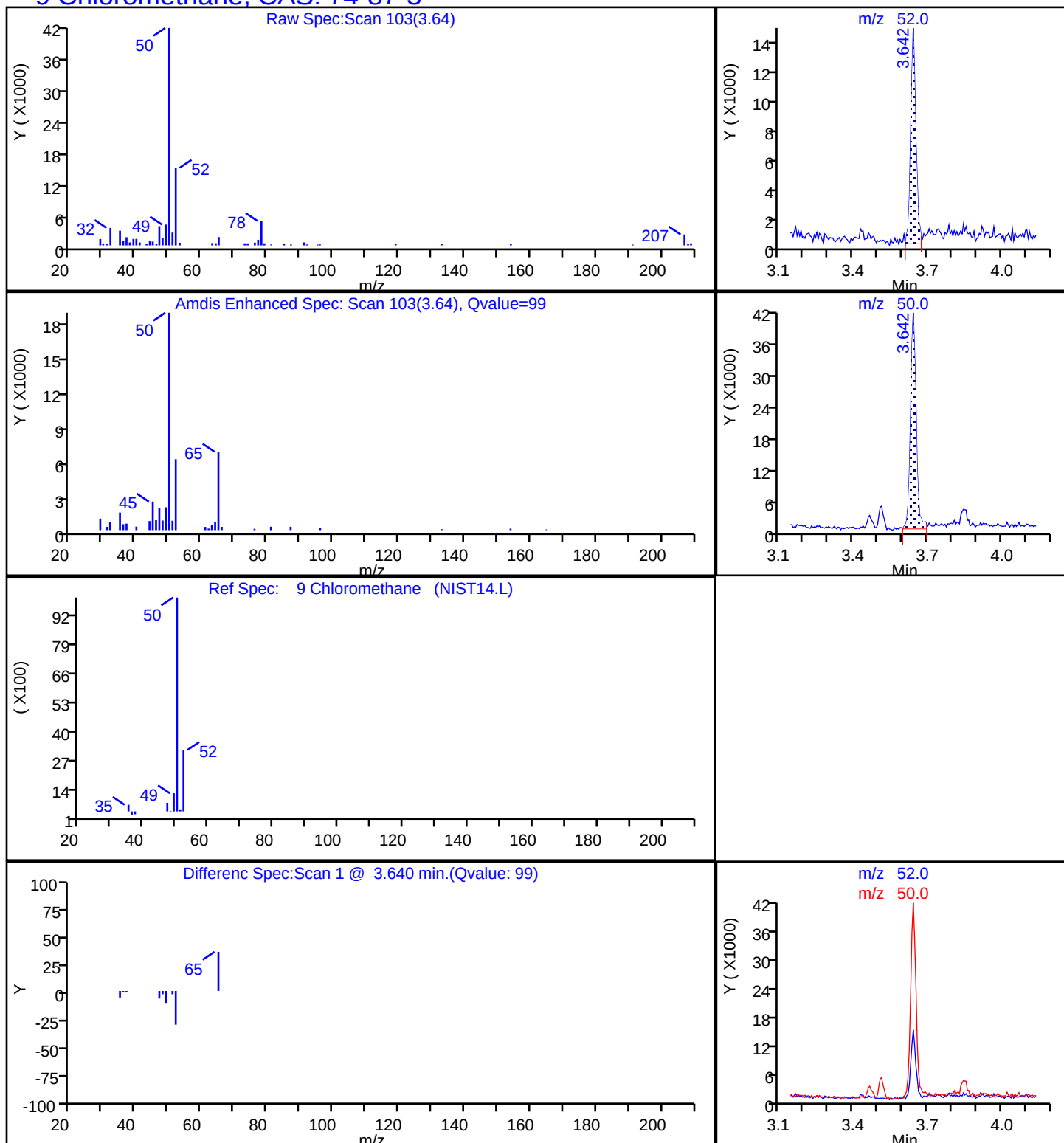
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

9 Chloromethane, CAS: 74-87-3



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P110.D

Injection Date: 03-Apr-2018 23:25:30

Instrument ID: MR

Lims ID: 140-11145-A-6

Lab Sample ID: 140-11145-6

Client ID: H41-OA-2018

Operator ID:

ALS Bottle#:

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

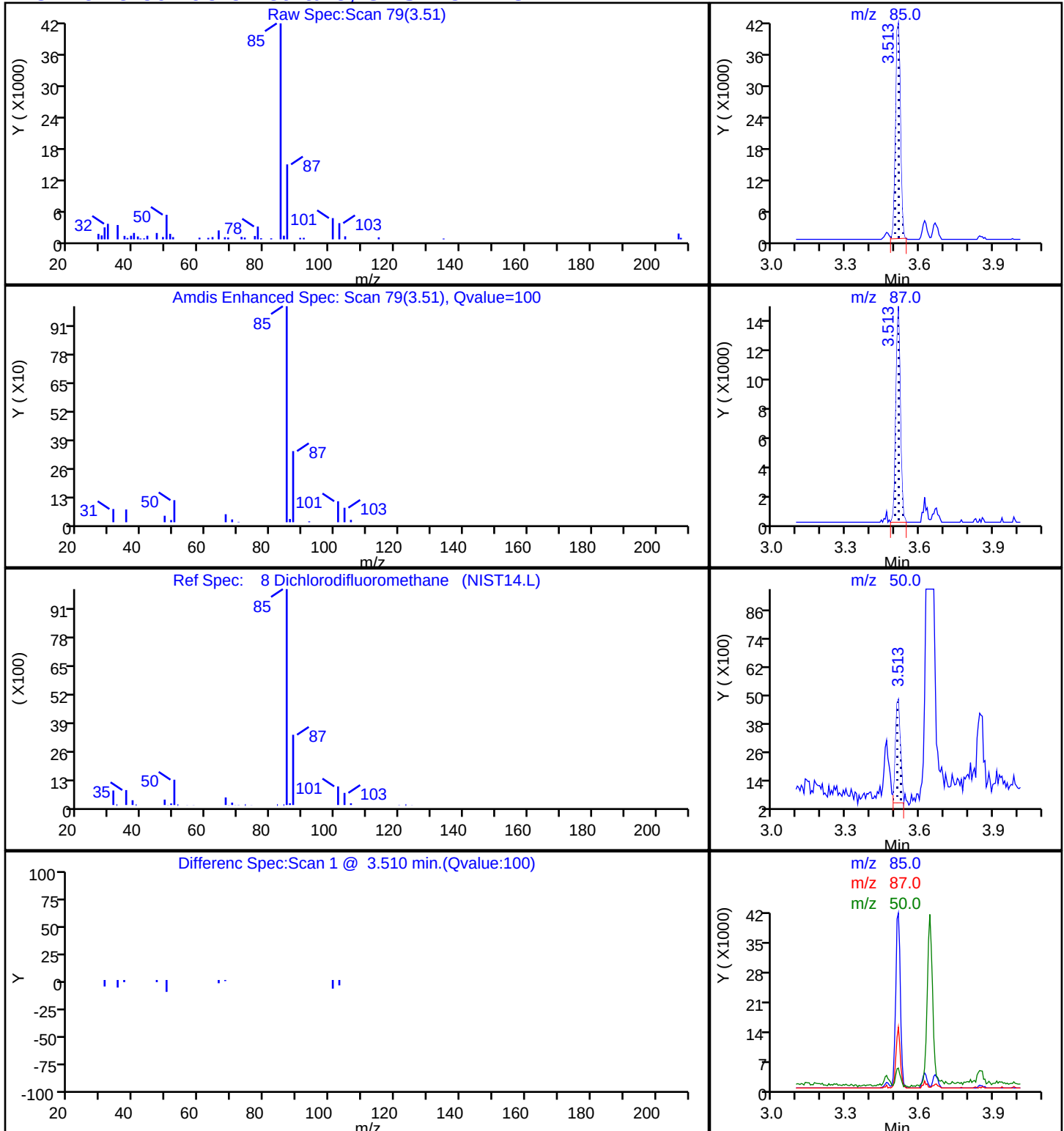
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P110.D

Injection Date: 03-Apr-2018 23:25:30

Instrument ID: MR

Lims ID: 140-11145-A-6

Lab Sample ID: 140-11145-6

Client ID: H41-OA-2018

Operator ID:

ALS Bottle#: 10

Worklist Smp#: 16

Purge Vol: 500.000 mL

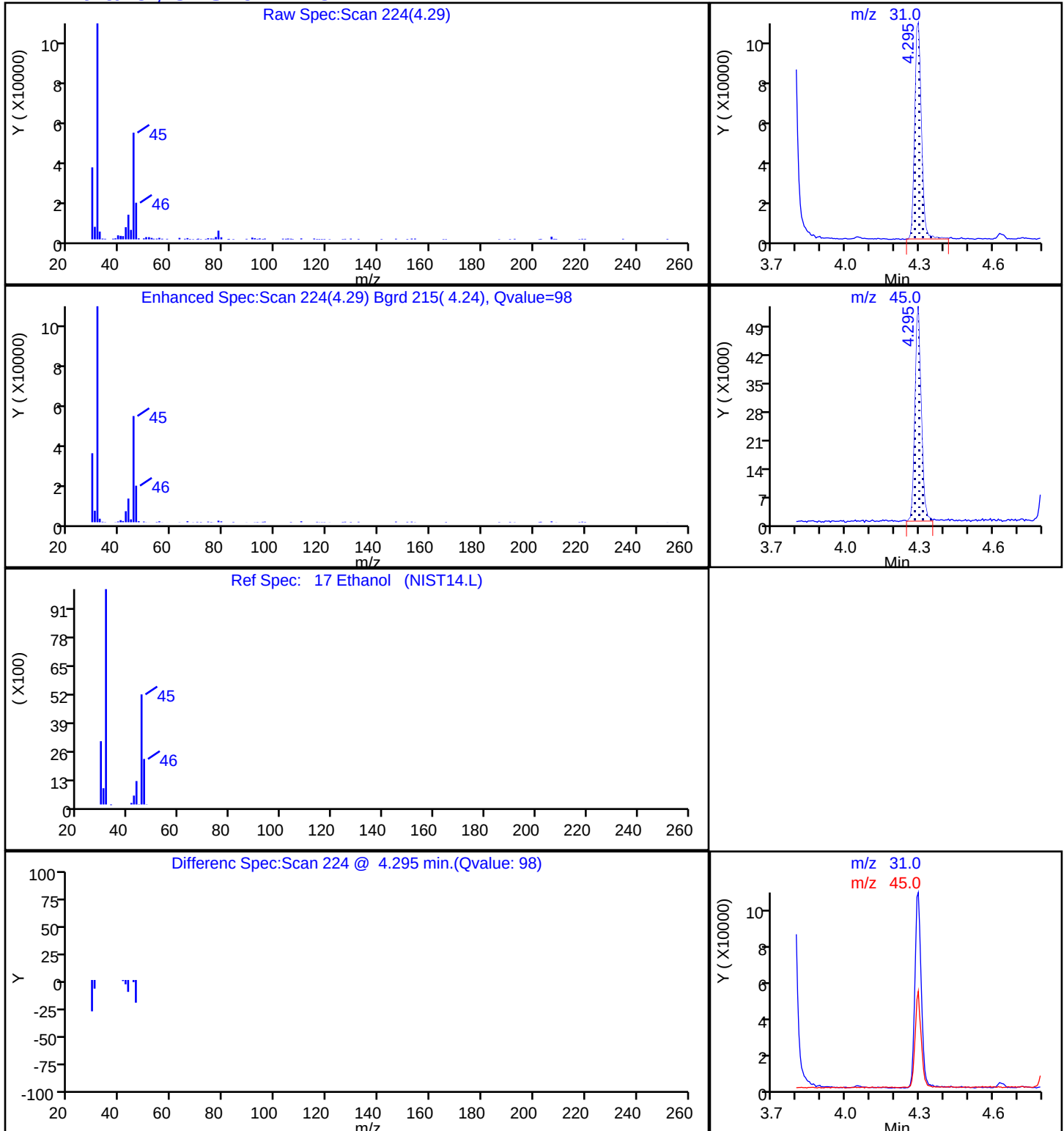
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

17 Ethanol, CAS: 64-17-5

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P110.D

Injection Date: 03-Apr-2018 23:25:30

Instrument ID: MR

Lims ID: 140-11145-A-6

Lab Sample ID: 140-11145-6

Client ID: H41-OA-2018

Operator ID:

ALS Bottle#:

Worklist Smp#: 16

Purge Vol: 500.000 mL

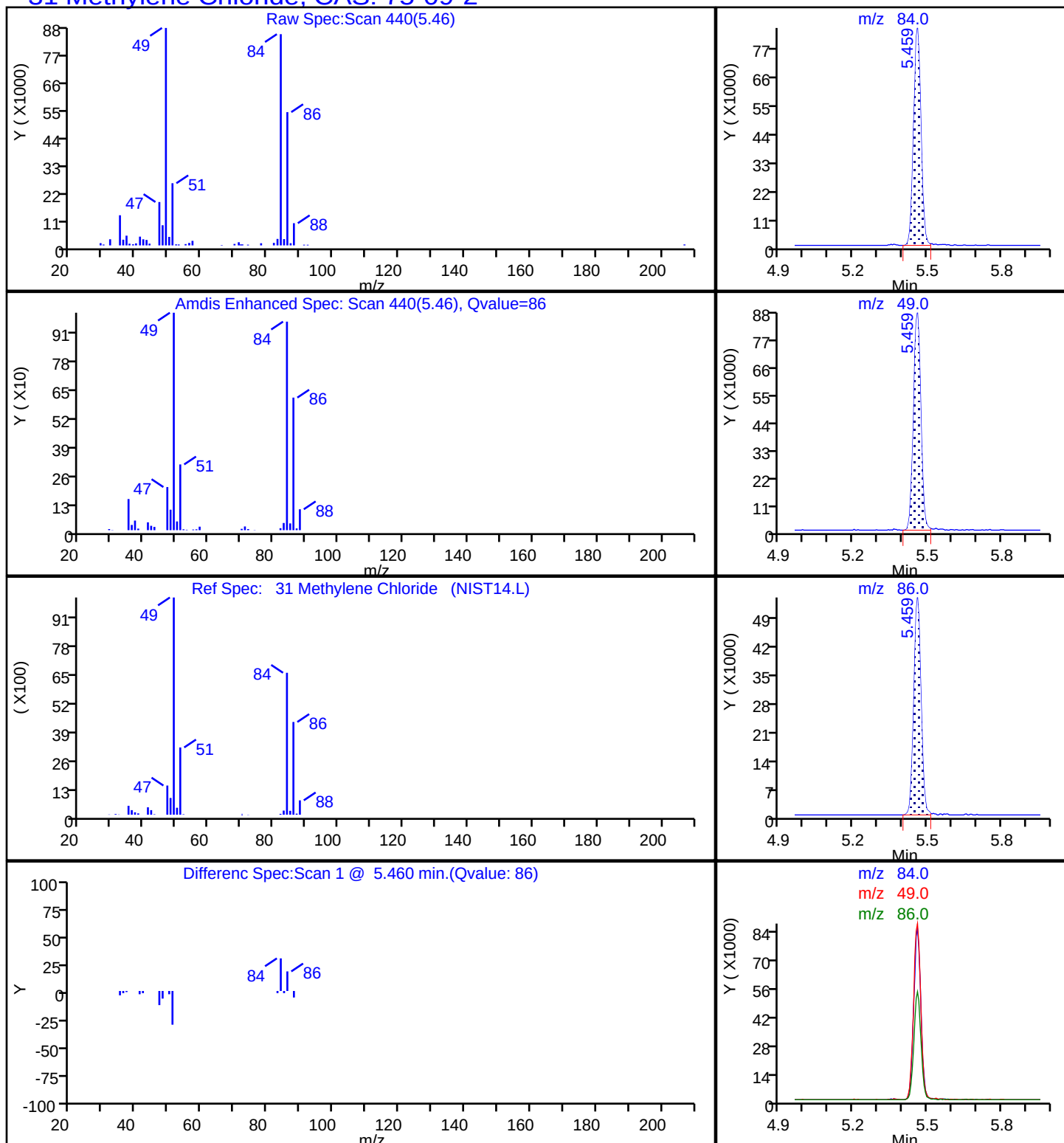
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P110.D

Injection Date: 03-Apr-2018 23:25:30

Instrument ID: MR

Lims ID: 140-11145-A-6

Lab Sample ID: 140-11145-6

Client ID: H41-OA-2018

Operator ID:

ALS Bottle#:

10

Worklist Smp#:

16

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

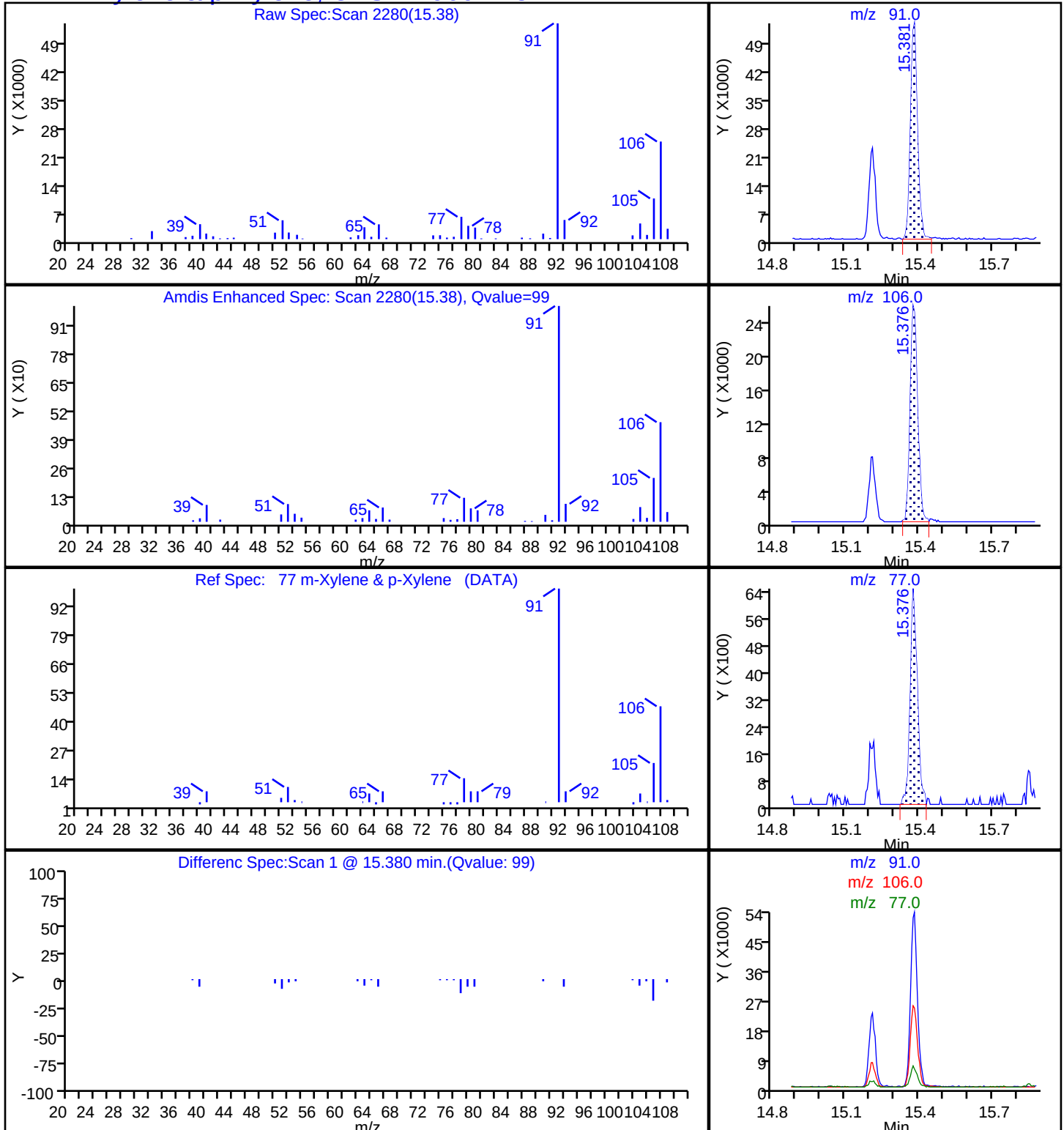
Limit Group:

MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

77 m-Xylene & p-Xylene, CAS: 179601-23-1

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P110.D

Injection Date: 03-Apr-2018 23:25:30

Instrument ID: MR

Lims ID: 140-11145-A-6

Lab Sample ID: 140-11145-6

Client ID: H41-OA-2018

Operator ID:

ALS Bottle#:

10

Worklist Smp#:

16

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

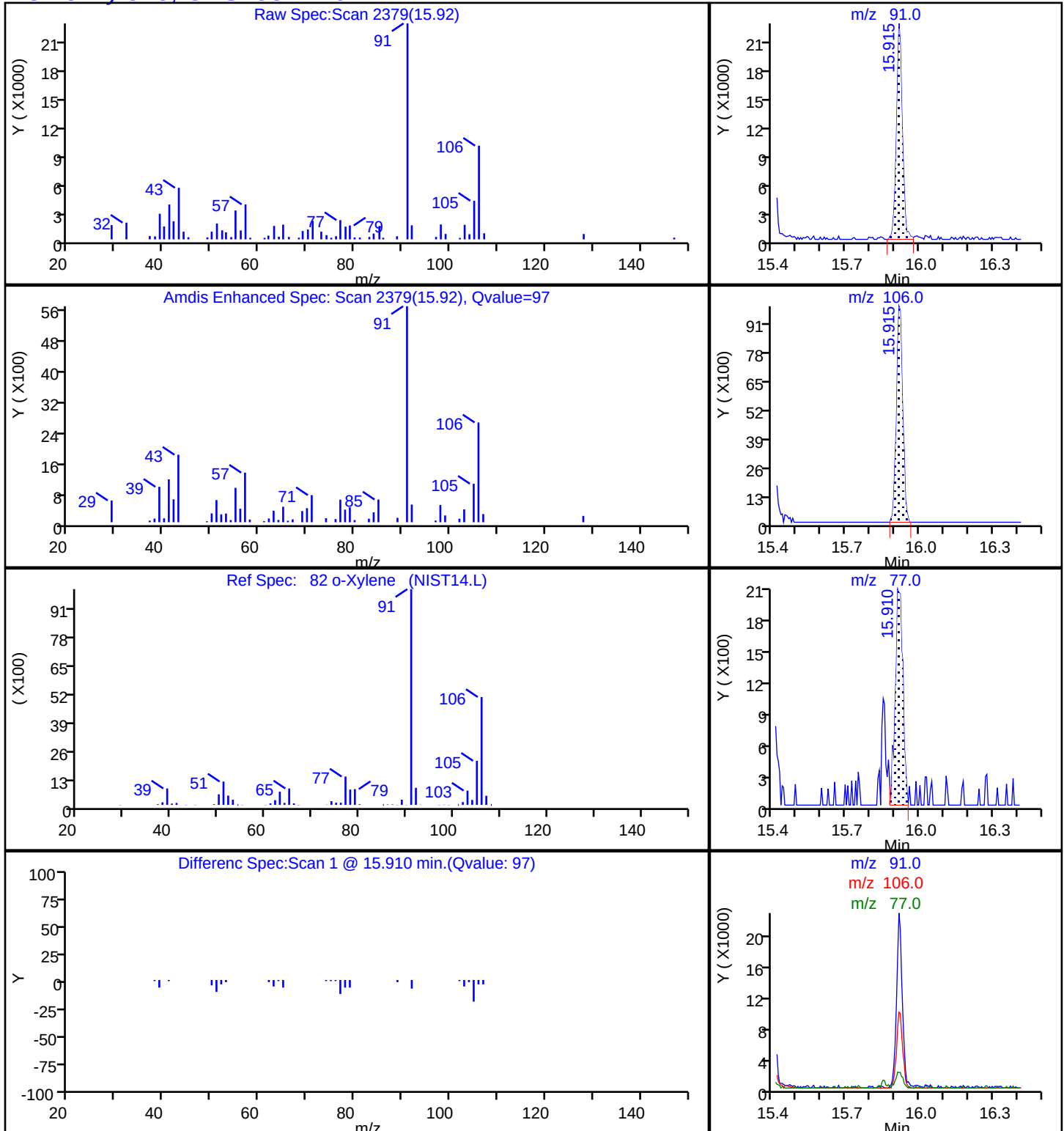
Limit Group:

MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

82 o-Xylene, CAS: 95-47-6

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P110.D

Injection Date: 03-Apr-2018 23:25:30

Instrument ID: MR

Lims ID: 140-11145-A-6

Lab Sample ID: 140-11145-6

Client ID: H41-OA-2018

Operator ID:

ALS Bottle#: 10

Worklist Smp#: 16

Purge Vol: 500.000 mL

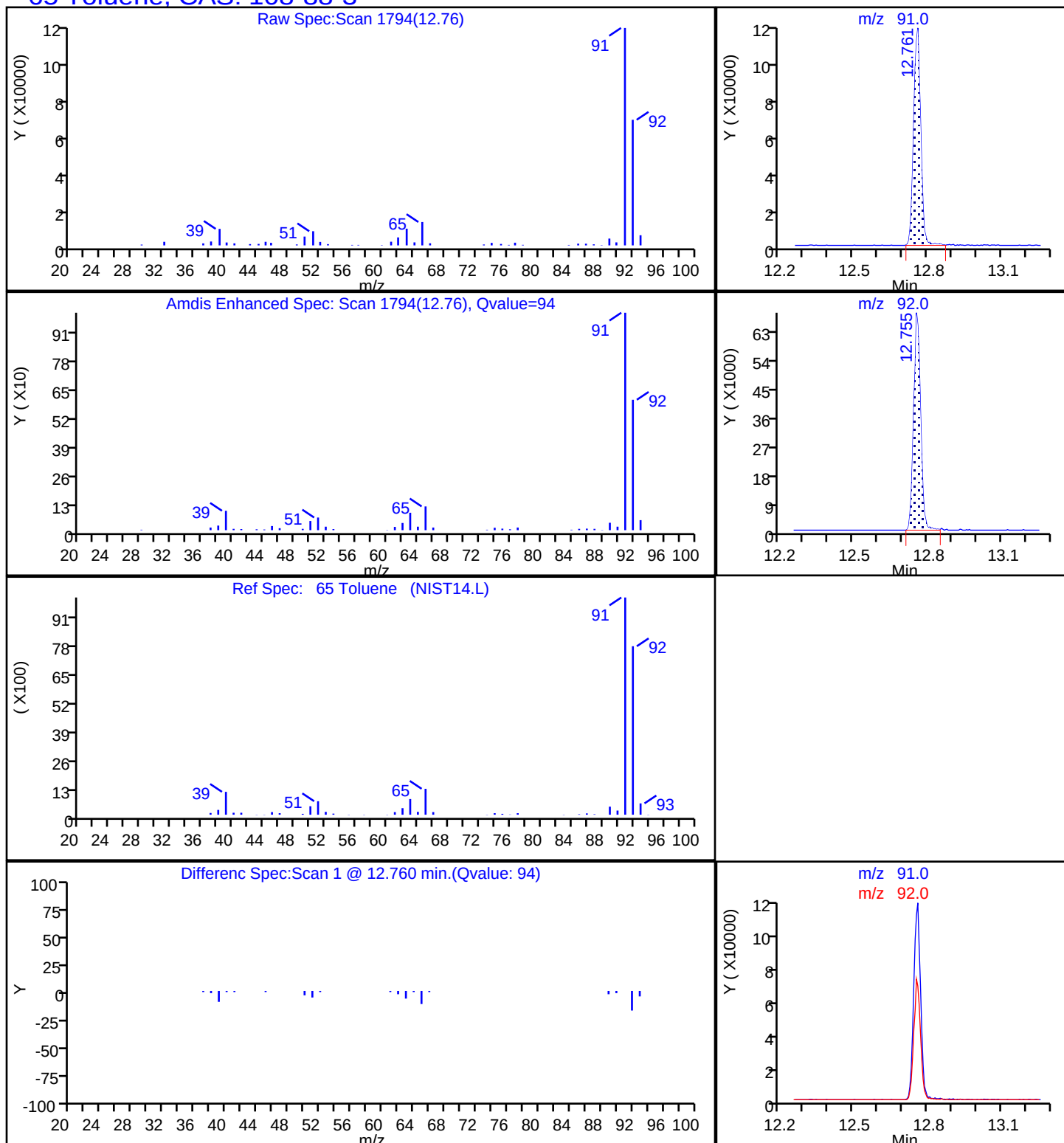
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

65 Toluene, CAS: 108-88-3

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P110.D

Injection Date: 03-Apr-2018 23:25:30

Instrument ID: MR

Lims ID: 140-11145-A-6

Lab Sample ID: 140-11145-6

Client ID: H41-OA-2018

Operator ID:

ALS Bottle#:

10

Worklist Smp#:

16

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

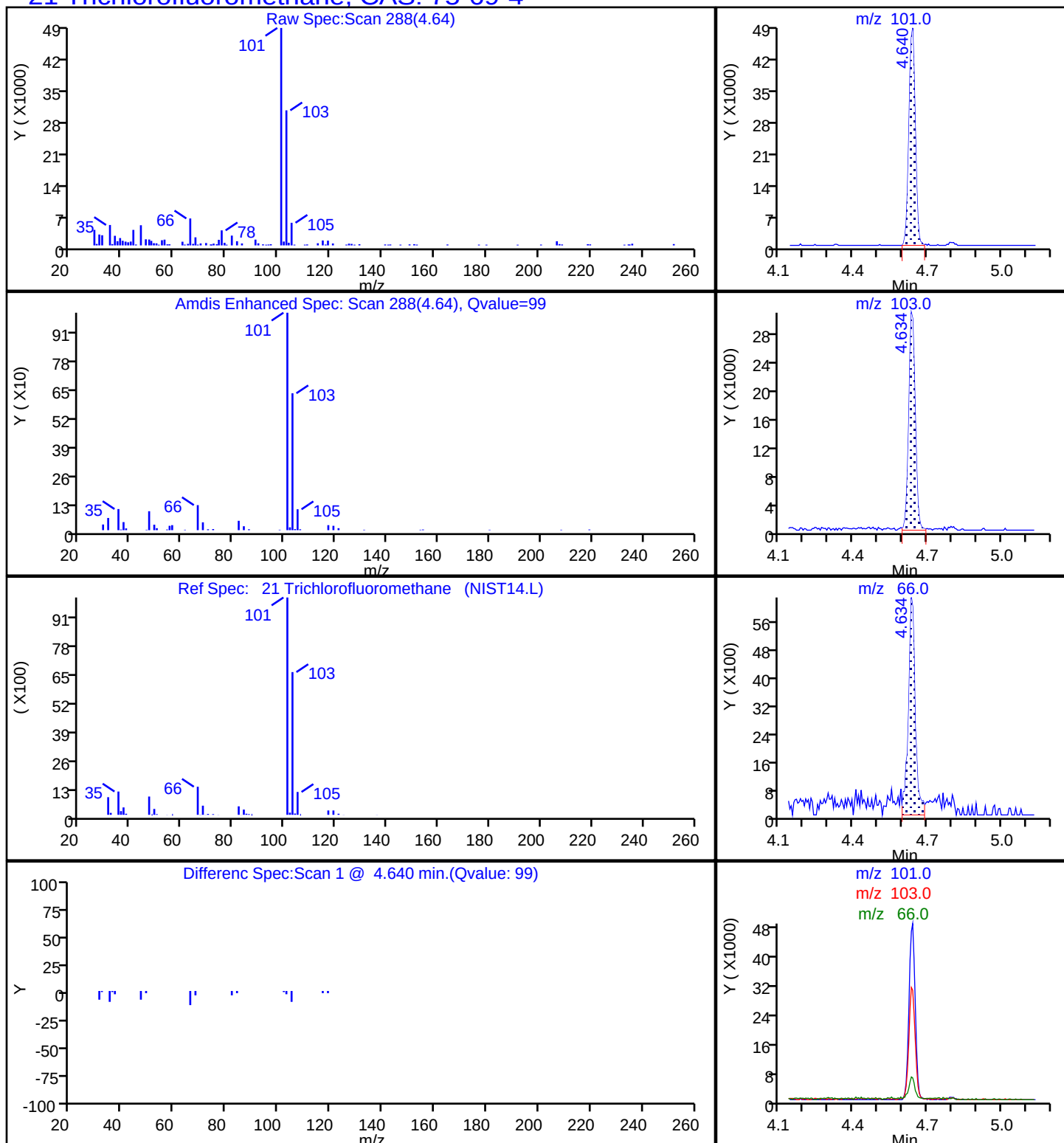
Limit Group:

MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

21 Trichlorofluoromethane, CAS: 75-69-4

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P110.D

Injection Date: 03-Apr-2018 23:25:30

Instrument ID: MR

Lims ID: 140-11145-A-6

Lab Sample ID: 140-11145-6

Client ID: H41-OA-2018

Operator ID:

ALS Bottle#:

10

Worklist Smp#: 16

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: MR_TO15

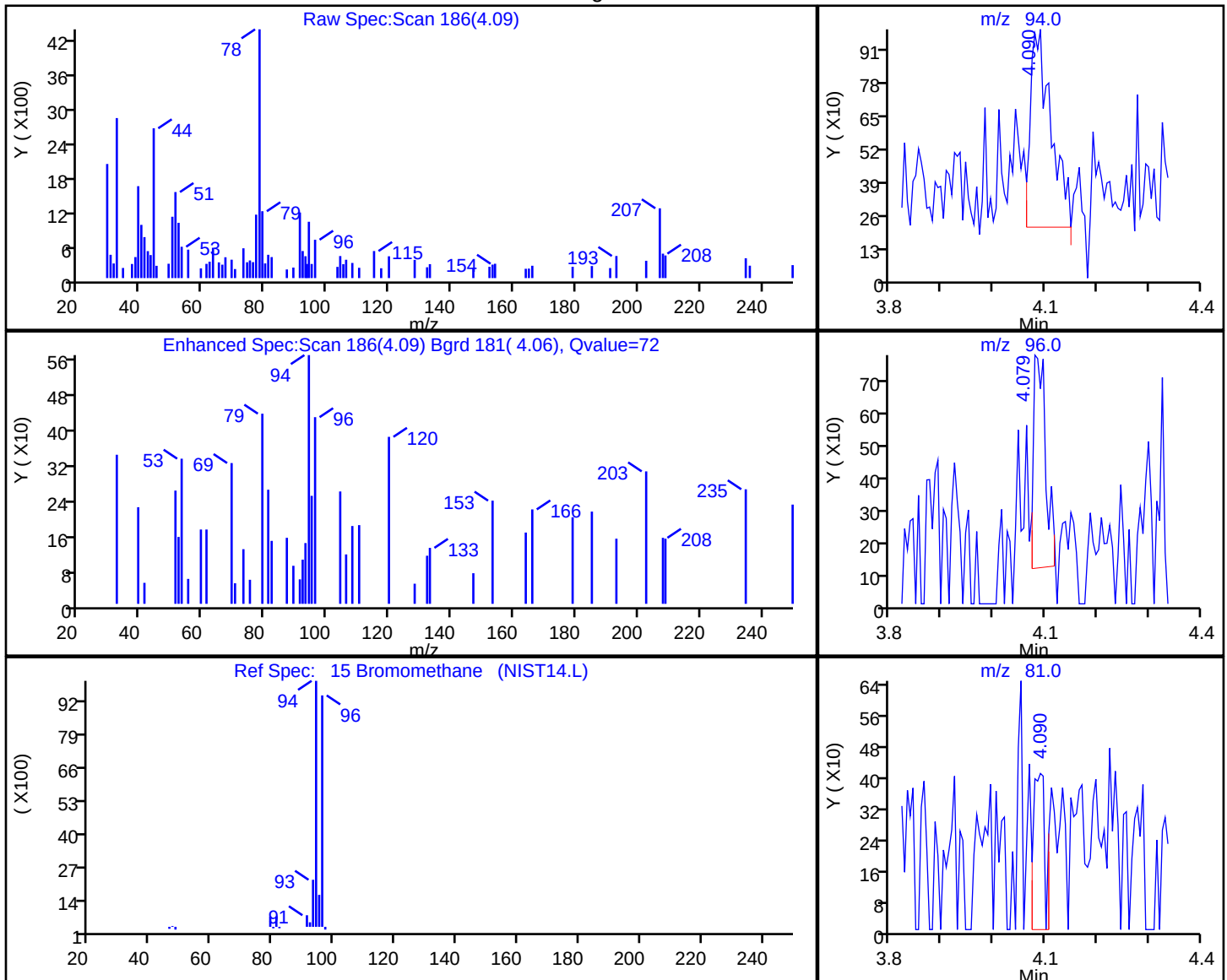
Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

15 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
4.09	94.00	2177	0.027158
4.08	96.00	1104	
4.09	81.00	653	

Reviewer: tajh, 04-Apr-2018 09:50:48

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: H41A-BA-2018 Lab Sample ID: 140-11145-7
 Matrix: Air Lab File ID: RD03P111.D
 Analysis Method: TO 15 LL Date Collected: 03/28/2018 11:39
 Sample wt/vol: 500 (mL) Date Analyzed: 04/04/2018 00:19
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19179 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	167.85	ND		0.080	
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	187.38	ND		0.080	
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	
75-35-4	1,1-Dichloroethene	96.94	ND		0.040	
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	
106-93-4	1,2-Dibromoethane	187.87	ND		0.080	
95-50-1	1,2-Dichlorobenzene	147.00	ND		0.080	
107-06-2	1,2-Dichloroethane	98.96	ND	*	0.080	
78-87-5	1,2-Dichloropropane	112.99	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	170.92	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	
541-73-1	1,3-Dichlorobenzene	147.00	ND		0.080	
106-46-7	1,4-Dichlorobenzene	147.00	ND		0.080	
123-91-1	1,4-Dioxane	88.11	ND		0.20	
540-84-1	2,2,4-Trimethylpentane	114.23	ND		0.20	
78-93-3	2-Butanone	72.11	0.32		0.32	
108-10-1	4-Methyl-2-pentanone (MIBK)	100.16	ND		0.20	
71-43-2	Benzene	78.11	0.21		0.080	
100-44-7	Benzyl chloride	126.58	ND		0.16	
75-27-4	Bromodichloromethane	163.83	ND		0.080	
75-25-2	Bromoform	252.75	ND		0.080	
74-83-9	Bromomethane	94.94	ND		0.080	
56-23-5	Carbon tetrachloride	153.81	0.071		0.032	
108-90-7	Chlorobenzene	112.56	ND		0.080	
75-00-3	Chloroethane	64.52	ND		0.080	
67-66-3	Chloroform	119.38	ND		0.080	
74-87-3	Chloromethane	50.49	0.88		0.20	
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.040	
10061-01-5	cis-1,3-Dichloropropene	110.97	ND		0.080	
110-82-7	Cyclohexane	84.16	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: H41A-BA-2018 Lab Sample ID: 140-11145-7
 Matrix: Air Lab File ID: RD03P111.D
 Analysis Method: TO 15 LL Date Collected: 03/28/2018 11:39
 Sample wt/vol: 500 (mL) Date Analyzed: 04/04/2018 00:19
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19179 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
124-48-1	Dibromochloromethane	208.29	ND		0.080	
75-71-8	Dichlorodifluoromethane	120.91	0.18		0.080	
64-17-5	<i>Ethanol</i>	<i>46.07</i>	<i>150</i>	<i>E</i>	<i>2.0</i>	
100-41-4	Ethylbenzene	106.17	ND		0.080	
87-68-3	Hexachlorobutadiene	260.76	ND		0.080	
110-54-3	Hexane	86.17	ND		0.20	
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.16	
75-09-2	Methylene Chloride	84.93	0.50		0.20	
179601-23-1	m-Xylene & p-Xylene	106.17	0.22		0.080	
95-47-6	o-Xylene	106.17	ND		0.080	
100-42-5	Styrene	104.15	ND		0.080	
75-65-0	t-Butyl alcohol	74.12	ND		0.32	
127-18-4	Tetrachloroethene	165.83	ND		0.080	
108-88-3	Toluene	92.14	0.31		0.12	
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	110.97	ND		0.080	
79-01-6	Trichloroethene	131.39	ND		0.036	
75-69-4	Trichlorofluoromethane	137.37	0.29		0.080	
75-01-4	Vinyl chloride	62.50	ND		0.040	

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	88		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: H41A-BA-2018 Lab Sample ID: 140-11145-7
 Matrix: Air Lab File ID: RD03P111.D
 Analysis Method: TO 15 LL Date Collected: 03/28/2018 11:39
 Sample wt/vol: 500 (mL) Date Analyzed: 04/04/2018 00:19
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19179 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	
79-34-5	1,1,2,2-Tetrachloroethane	167.85	ND		0.55	
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	
76-13-1	1,1,2-Trichlorotrifluoroethane	187.38	ND		0.61	
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	
75-35-4	1,1-Dichloroethene	96.94	ND		0.16	
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	
106-93-4	1,2-Dibromoethane	187.87	ND		0.61	
95-50-1	1,2-Dichlorobenzene	147.00	ND		0.48	
107-06-2	1,2-Dichloroethane	98.96	ND	*	0.32	
78-87-5	1,2-Dichloropropane	112.99	ND		0.37	
76-14-2	1,2-Dichlorotetrafluoroethane	170.92	ND		0.56	
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	
541-73-1	1,3-Dichlorobenzene	147.00	ND		0.48	
106-46-7	1,4-Dichlorobenzene	147.00	ND		0.48	
123-91-1	1,4-Dioxane	88.11	ND		0.72	
540-84-1	2,2,4-Trimethylpentane	114.23	ND		0.93	
78-93-3	2-Butanone	72.11	0.93		0.94	
108-10-1	4-Methyl-2-pentanone (MIBK)	100.16	ND		0.82	
71-43-2	Benzene	78.11	0.68		0.26	
100-44-7	Benzyl chloride	126.58	ND		0.83	
75-27-4	Bromodichloromethane	163.83	ND		0.54	
75-25-2	Bromoform	252.75	ND		0.83	
74-83-9	Bromomethane	94.94	ND		0.31	
56-23-5	Carbon tetrachloride	153.81	0.45		0.20	
108-90-7	Chlorobenzene	112.56	ND		0.37	
75-00-3	Chloroethane	64.52	ND		0.21	
67-66-3	Chloroform	119.38	ND		0.39	
74-87-3	Chloromethane	50.49	1.8		0.41	
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.16	
10061-01-5	cis-1,3-Dichloropropene	110.97	ND		0.36	
110-82-7	Cyclohexane	84.16	ND		0.69	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: H41A-BA-2018 Lab Sample ID: 140-11145-7
 Matrix: Air Lab File ID: RD03P111.D
 Analysis Method: TO 15 LL Date Collected: 03/28/2018 11:39
 Sample wt/vol: 500 (mL) Date Analyzed: 04/04/2018 00:19
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19179 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
124-48-1	Dibromochloromethane	208.29	ND		0.68	
75-71-8	Dichlorodifluoromethane	120.91	0.90		0.40	
64-17-5	<i>Ethanol</i>	<i>46.07</i>	<i>280</i>	<i>E</i>	<i>3.8</i>	
100-41-4	Ethylbenzene	106.17	ND		0.35	
87-68-3	Hexachlorobutadiene	260.76	ND		0.85	
110-54-3	Hexane	86.17	ND		0.70	
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.58	
75-09-2	Methylene Chloride	84.93	1.7		0.69	
179601-23-1	m-Xylene & p-Xylene	106.17	0.98		0.35	
95-47-6	o-Xylene	106.17	ND		0.35	
100-42-5	Styrene	104.15	ND		0.34	
75-65-0	t-Butyl alcohol	74.12	ND		0.97	
127-18-4	Tetrachloroethene	165.83	ND		0.54	
108-88-3	Toluene	92.14	1.2		0.45	
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	
10061-02-6	trans-1,3-Dichloropropene	110.97	ND		0.36	
79-01-6	Trichloroethene	131.39	ND		0.19	
75-69-4	Trichlorofluoromethane	137.37	1.7		0.45	
75-01-4	Vinyl chloride	62.50	ND		0.10	

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	88		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P111.D
 Lims ID: 140-11145-A-7
 Client ID: H41A-BA-2018
 Sample Type: Client
 Inject. Date: 04-Apr-2018 00:19:30 ALS Bottle#: 11 Worklist Smp#: 17
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0007767-017
 Misc. Info.: 140-11145-a-7
 Operator ID: Instrument ID: MR
 Method: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 04-Apr-2018 09:59:00 Calib Date: 30-Jan-2018 19:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK025

First Level Reviewer: tajh

Date: 04-Apr-2018 09:52:07

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.660	7.670	-0.010	80	320887	4.00	
* 2 1,4-Difluorobenzene	114	9.800	9.806	-0.006	93	1845270	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.826	14.826	0.000	85	1425206	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.541	16.541	0.000	94	950167	3.52	
8 Dichlorodifluoromethane	85	3.497	3.507	-0.010	99	54983	0.1825	
9 Chloromethane	52	3.621	3.642	-0.021	100	24122	0.8791	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.648	3.664	-0.016	35	3077	0.0151	
17 Ethanol	31	4.300	4.295	0.005	96	3556411	147.8	E
21 Trichlorofluoromethane	101	4.624	4.640	-0.016	99	84083	0.2938	
29 2-Methyl-2-propanol	59	5.308	5.287	0.021	93	9653	0.0399	
30 1,1,2-Trichloro-1,2,2-trif	101	5.346	5.362	-0.016	98	19857	0.0764	
31 Methylene Chloride	84	5.459	5.465	-0.006	86	63041	0.5024	
39 2-Butanone (MEK)	72	6.991	6.986	0.005	98	18342	0.3152	
40 Hexane	56	7.072	7.083	-0.011	87	10881	0.1156	
43 Chloroform	83	7.703	7.703	0.000	88	11494	0.0387	
47 Benzene	78	9.223	9.229	-0.006	95	75074	0.2130	
49 Cyclohexane	69	9.245	9.256	-0.011	53	1930	0.0341	
50 Carbon tetrachloride	117	9.266	9.272	-0.006	97	20222	0.0712	
53 Isooctane	57	10.097	10.102	-0.005	97	26641	0.0521	
62 4-Methyl-2-pentanone (MIBK	43	11.839	11.828	0.011	95	20811	0.1053	
65 Toluene	91	12.755	12.761	-0.006	94	122470	0.3120	
73 Tetrachloroethene	129	13.969	13.974	-0.005	90	3345	0.0229	
76 Ethylbenzene	91	15.203	15.209	-0.006	98	36082	0.0702	
77 m-Xylene & p-Xylene	91	15.376	15.381	-0.005	99	89620	0.2250	
82 o-Xylene	91	15.915	15.915	0.000	97	31078	0.0739	
93 1,2,4-Trimethylbenzene	105	17.856	17.857	-0.001	96	25653	0.0522	

[QC Flag Legend](#)

Processing Flags

E - Exceeded Maximum Amount

[Reagents:](#)

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P111.D

Injection Date: 04-Apr-2018 00:19:30

Instrument ID: MR

Operator ID:

Lims ID: 140-11145-A-7

Lab Sample ID: 140-11145-7

Worklist Smp#: 17

Client ID: H41A-BA-2018

Purge Vol: 500.000 mL

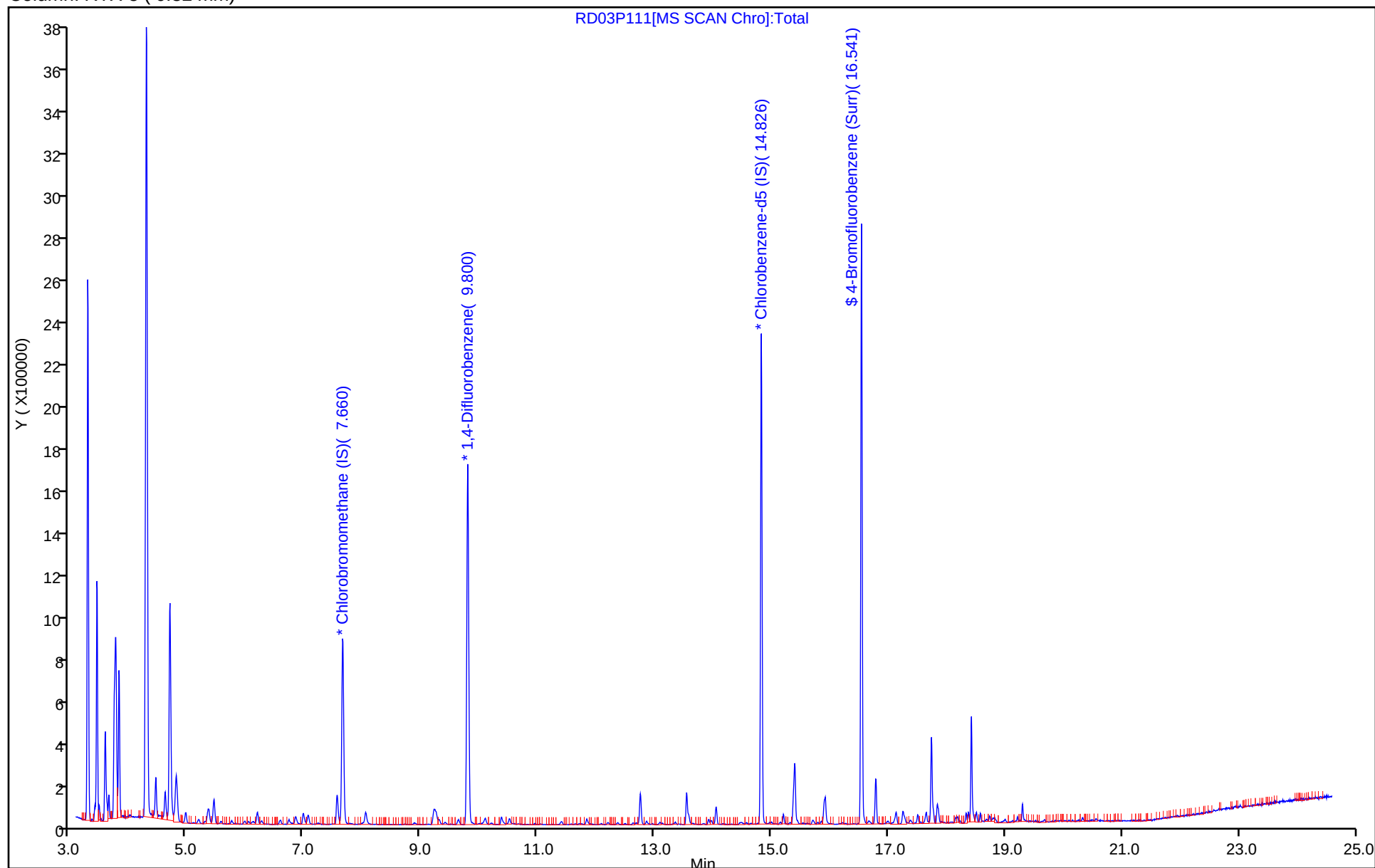
Dil. Factor: 1.0000

ALS Bottle#: 11

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P111.D
Lims ID: 140-11145-A-7
Client ID: H41A-BA-2018
Sample Type: Client
Inject. Date: 04-Apr-2018 00:19:30 ALS Bottle#: 11 Worklist Smp#: 17
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007767-017
Misc. Info.: 140-11145-a-7
Operator ID: Instrument ID: MR
Method: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 04-Apr-2018 09:59:00 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D
Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: tajh

Date: 04-Apr-2018 09:52:07

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.52	87.91

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P111.D

Injection Date: 04-Apr-2018 00:19:30

Instrument ID: MR

Lims ID: 140-11145-A-7

Lab Sample ID: 140-11145-7

Client ID: H41A-BA-2018

Operator ID:

ALS Bottle#: 11

Worklist Smp#: 17

Purge Vol: 500.000 mL

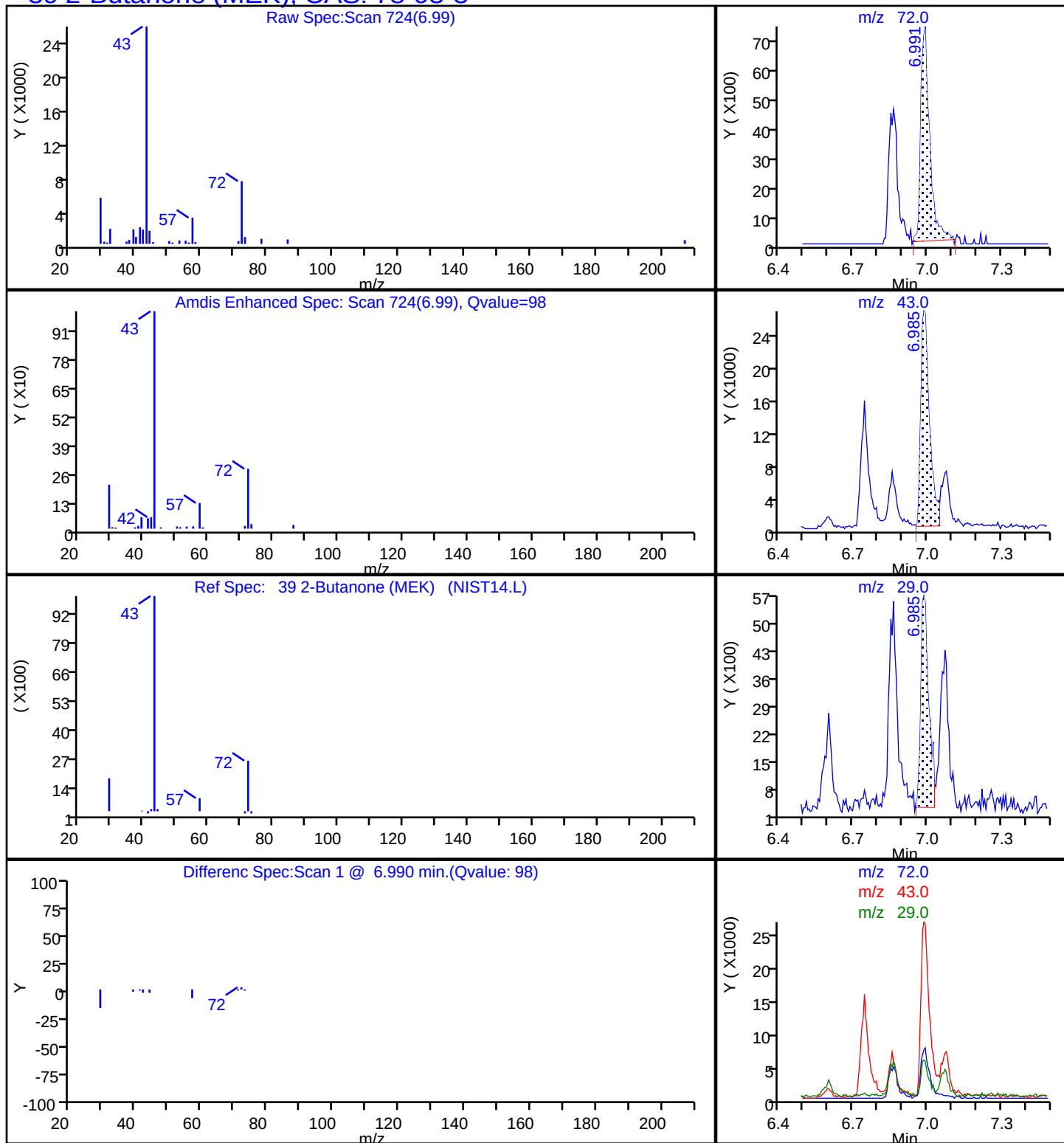
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

39 2-Butanone (MEK), CAS: 78-93-3

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P111.D

Injection Date: 04-Apr-2018 00:19:30

Instrument ID: MR

Lims ID: 140-11145-A-7

Lab Sample ID: 140-11145-7

Client ID: H41A-BA-2018

Operator ID:

ALS Bottle#: 11

Worklist Smp#: 17

Purge Vol: 500.000 mL

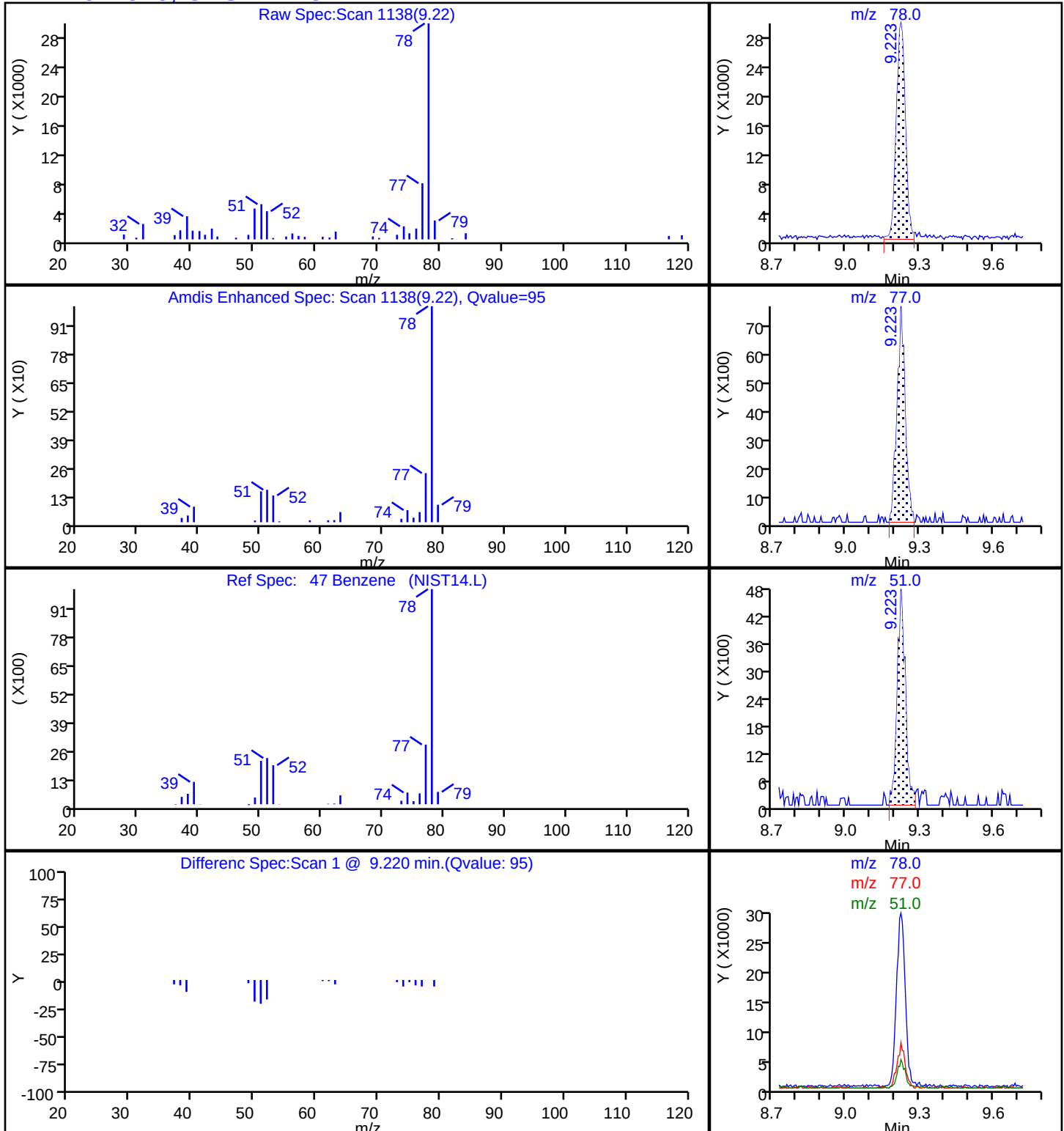
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P111.D

Injection Date: 04-Apr-2018 00:19:30

Instrument ID: MR

Lims ID: 140-11145-A-7

Lab Sample ID: 140-11145-7

Client ID: H41A-BA-2018

Operator ID:

ALS Bottle#: 11

Worklist Smp#: 17

Purge Vol: 500.000 mL

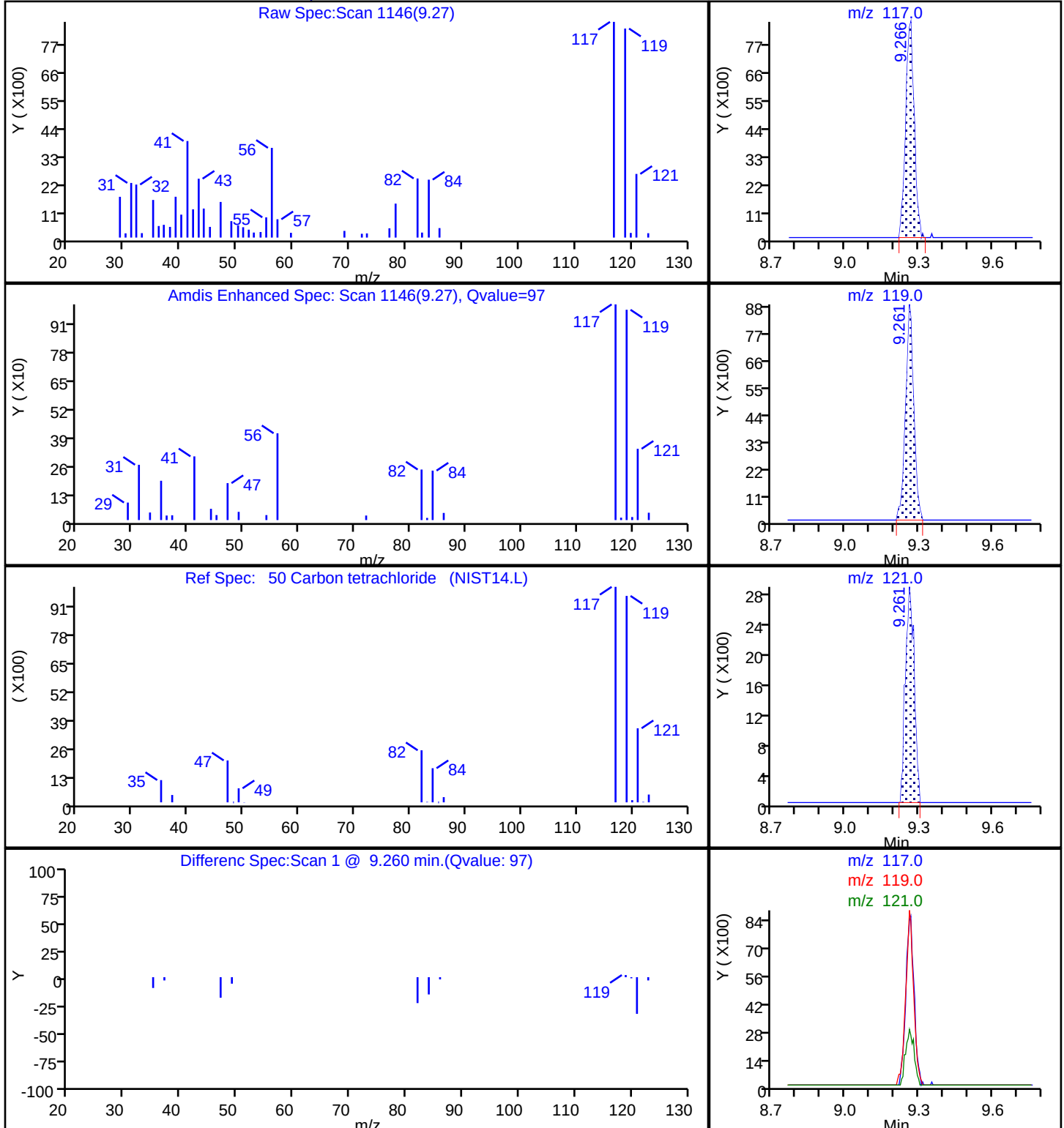
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

50 Carbon tetrachloride, CAS: 56-23-5

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P111.D

Injection Date: 04-Apr-2018 00:19:30

Instrument ID: MR

Lims ID: 140-11145-A-7

Lab Sample ID: 140-11145-7

Client ID: H41A-BA-2018

Operator ID:

ALS Bottle#: 11

Worklist Smp#: 17

Purge Vol: 500.000 mL

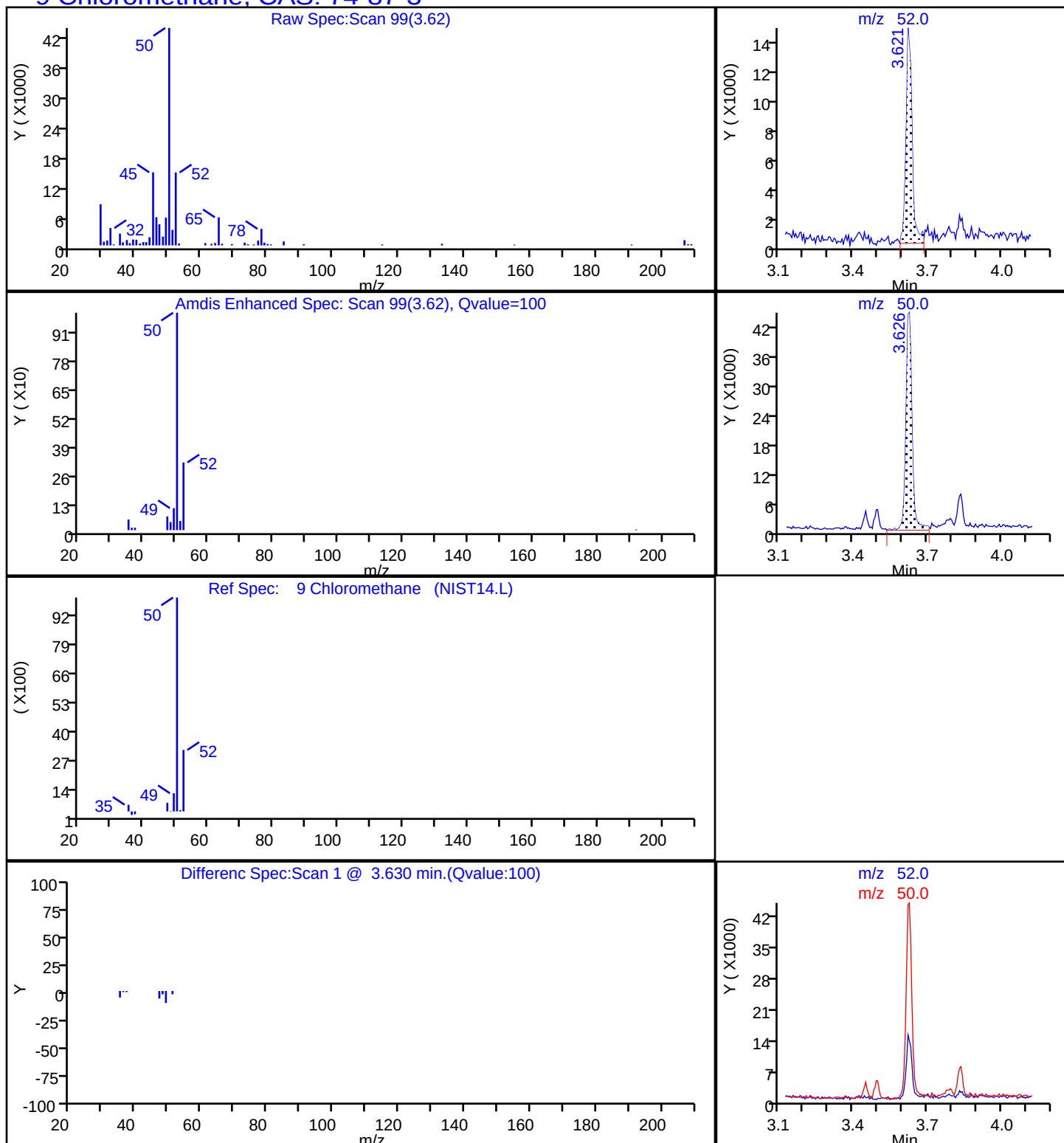
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

9 Chloromethane, CAS: 74-87-3

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P111.D

Injection Date: 04-Apr-2018 00:19:30

Instrument ID: MR

Lims ID: 140-11145-A-7

Lab Sample ID: 140-11145-7

Client ID: H41A-BA-2018

Operator ID:

ALS Bottle#:

Worklist Smp#: 17

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: MR_TO15

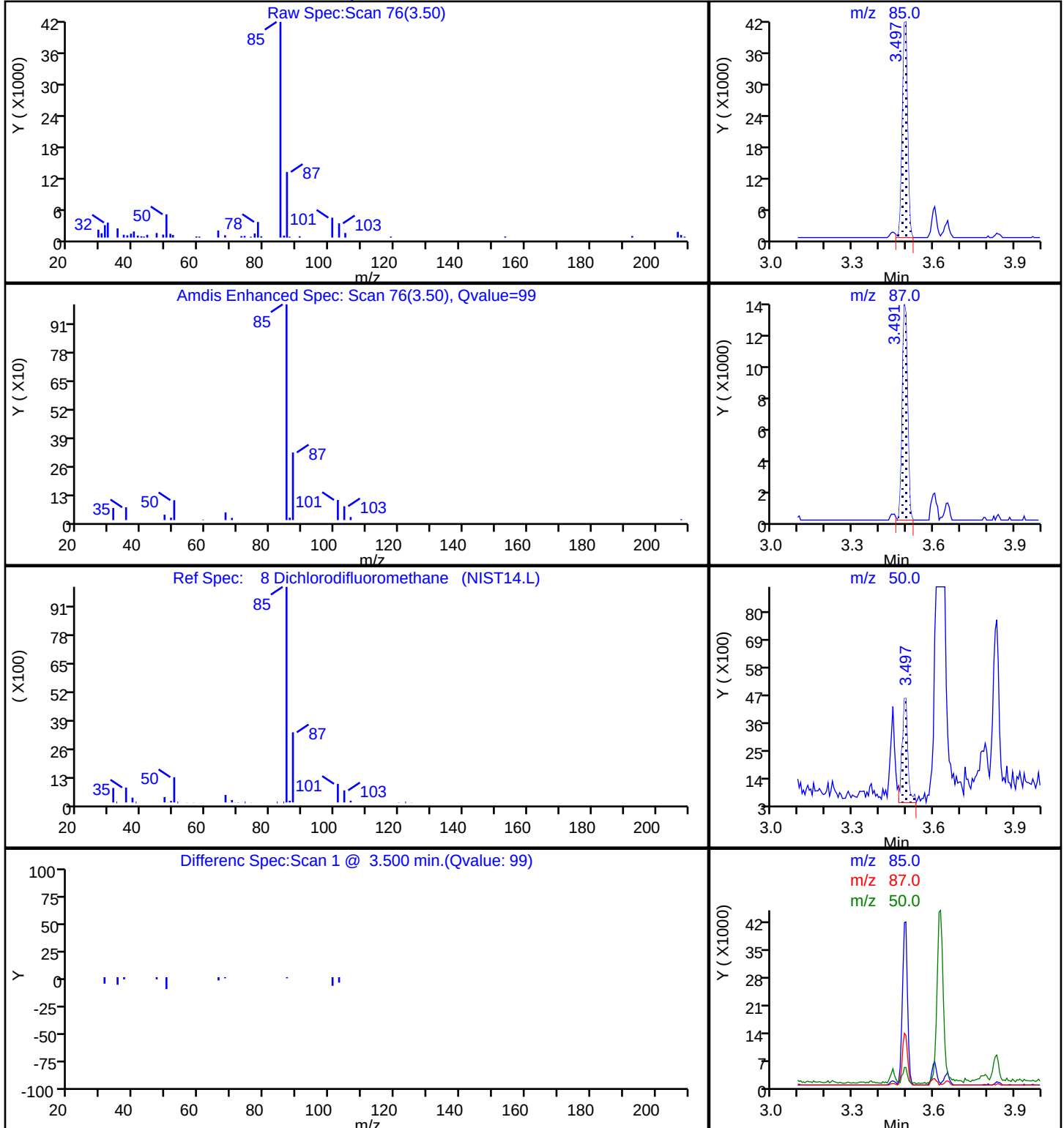
Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P111.D

Injection Date: 04-Apr-2018 00:19:30

Instrument ID: MR

Lims ID: 140-11145-A-7

Lab Sample ID: 140-11145-7

Client ID: H41A-BA-2018

Operator ID:

ALS Bottle#: 11

Worklist Smp#: 17

Purge Vol: 500.000 mL

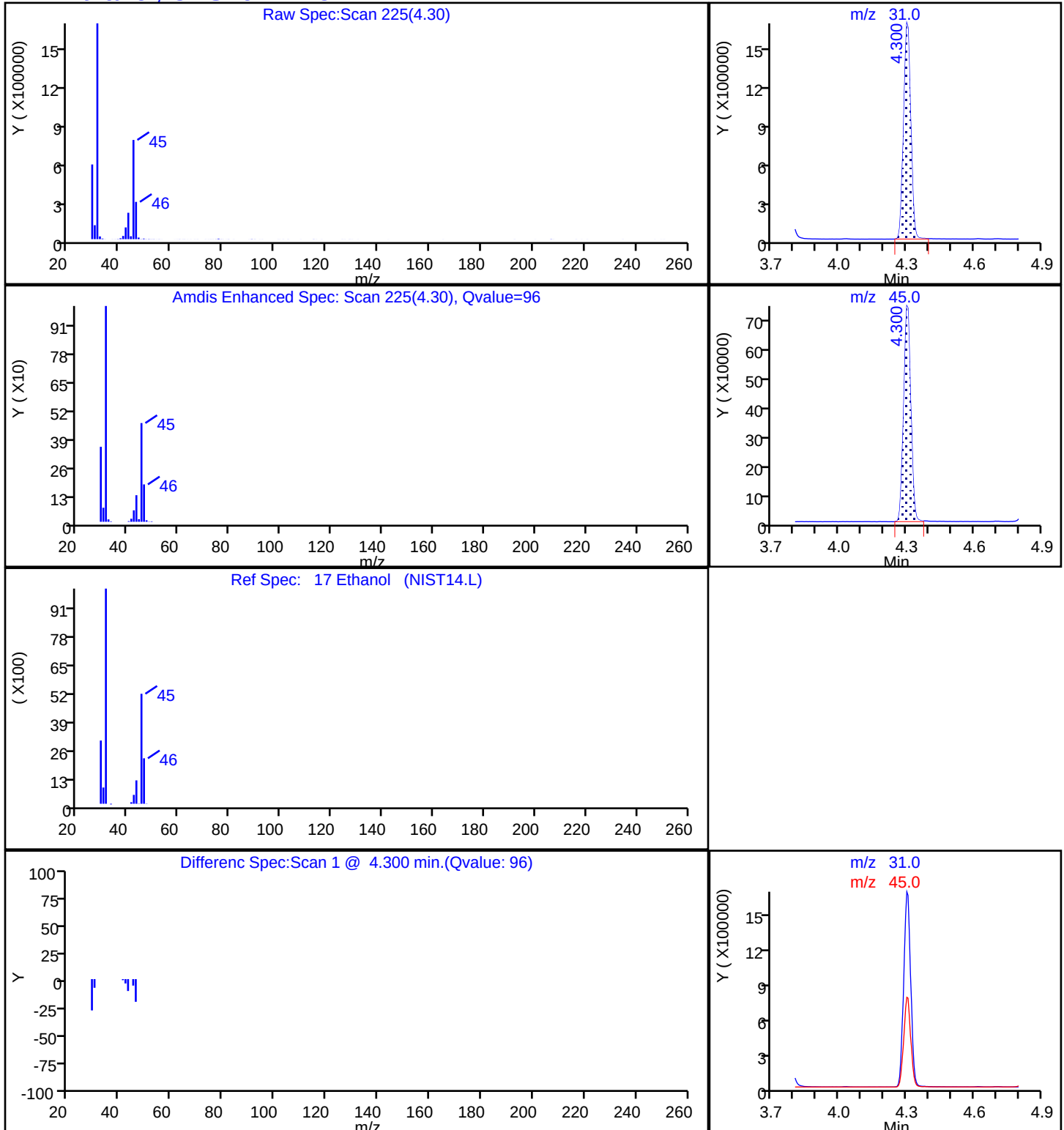
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

17 Ethanol, CAS: 64-17-5

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P111.D

Injection Date: 04-Apr-2018 00:19:30

Instrument ID: MR

Lims ID: 140-11145-A-7

Lab Sample ID: 140-11145-7

Client ID: H41A-BA-2018

Operator ID:

ALS Bottle#:

Worklist Smp#: 17

Purge Vol: 500.000 mL

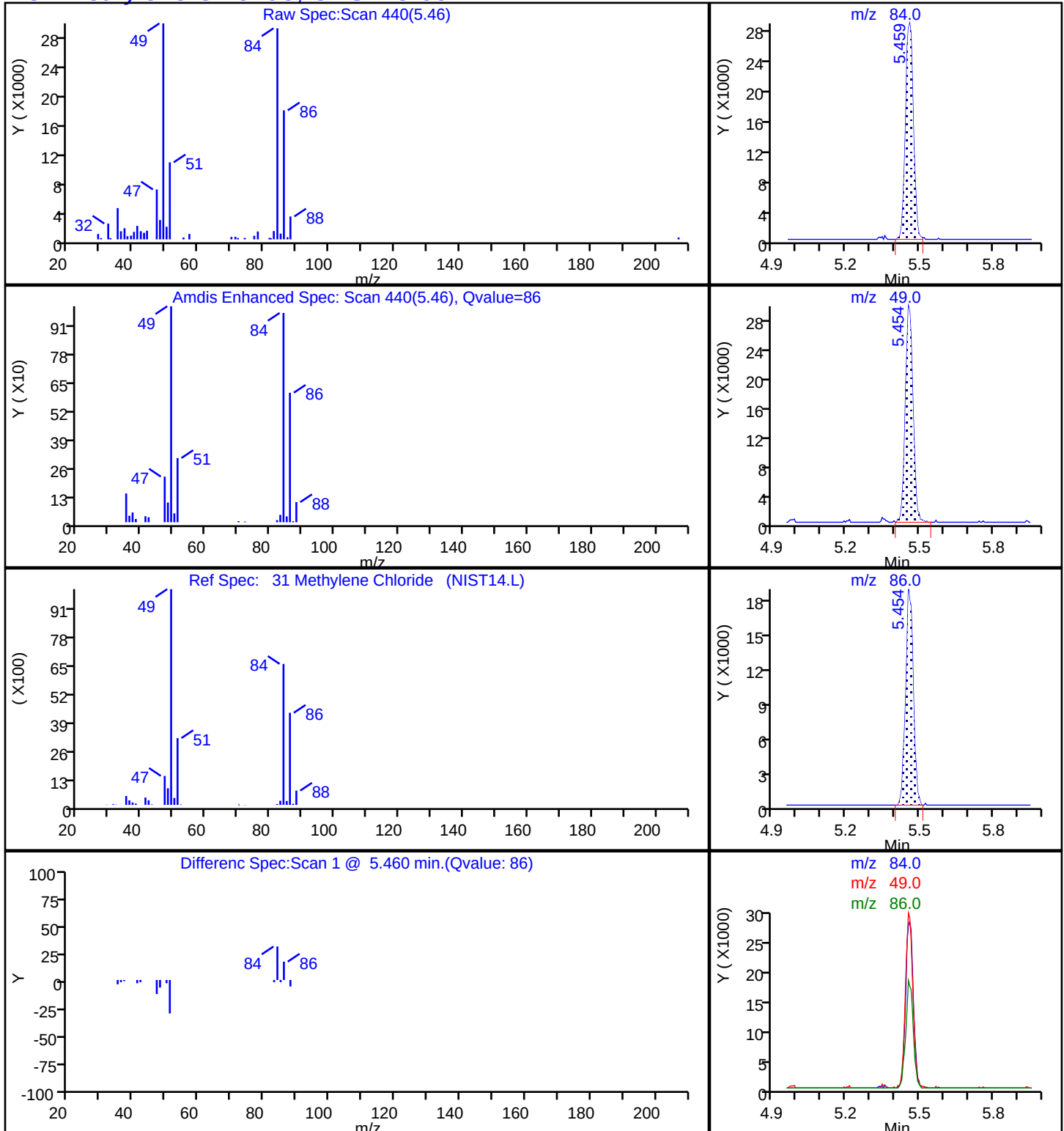
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P111.D

Injection Date: 04-Apr-2018 00:19:30

Instrument ID: MR

Lims ID: 140-11145-A-7

Lab Sample ID: 140-11145-7

Client ID: H41A-BA-2018

Operator ID:

ALS Bottle#:

11

Worklist Smp#:

17

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

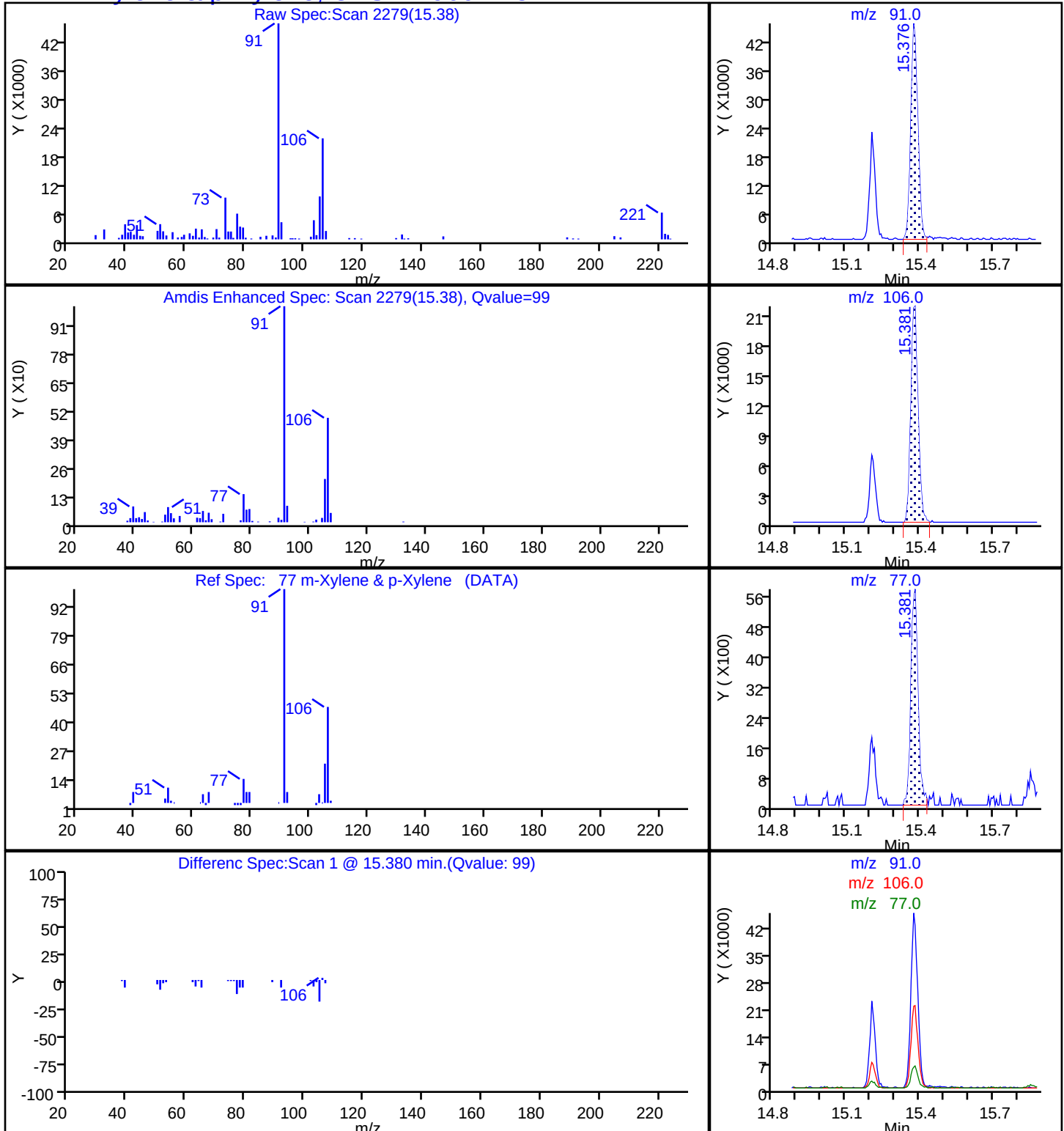
Limit Group:

MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

77 m-Xylene & p-Xylene, CAS: 179601-23-1

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P111.D

Injection Date: 04-Apr-2018 00:19:30

Instrument ID: MR

Lims ID: 140-11145-A-7

Lab Sample ID: 140-11145-7

Client ID: H41A-BA-2018

Operator ID:

ALS Bottle#: 11

Worklist Smp#: 17

Purge Vol: 500.000 mL

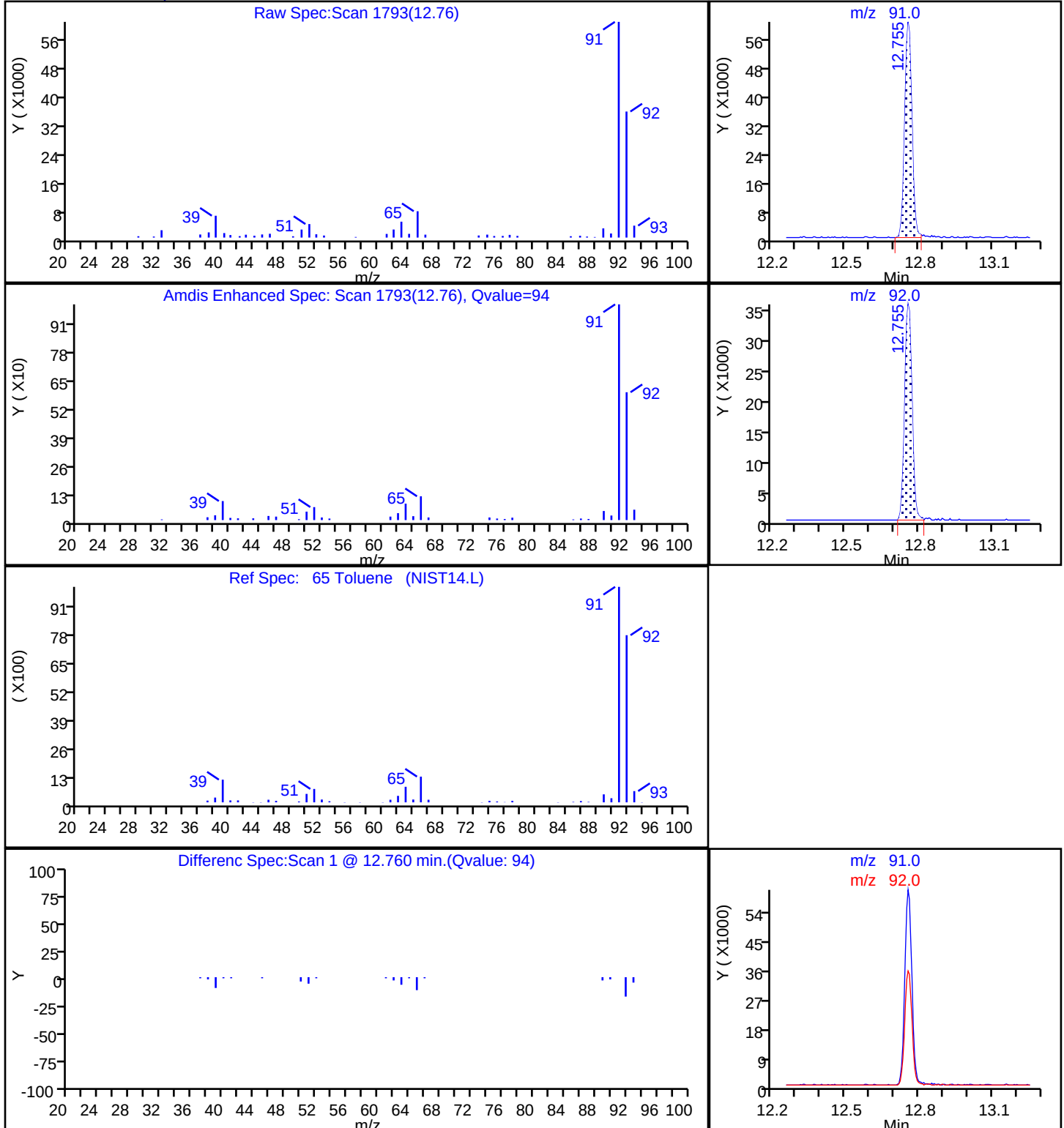
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

65 Toluene, CAS: 108-88-3

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P111.D

Injection Date: 04-Apr-2018 00:19:30

Instrument ID: MR

Lims ID: 140-11145-A-7

Lab Sample ID: 140-11145-7

Client ID: H41A-BA-2018

Operator ID:

ALS Bottle#:

11

Worklist Smp#:

17

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

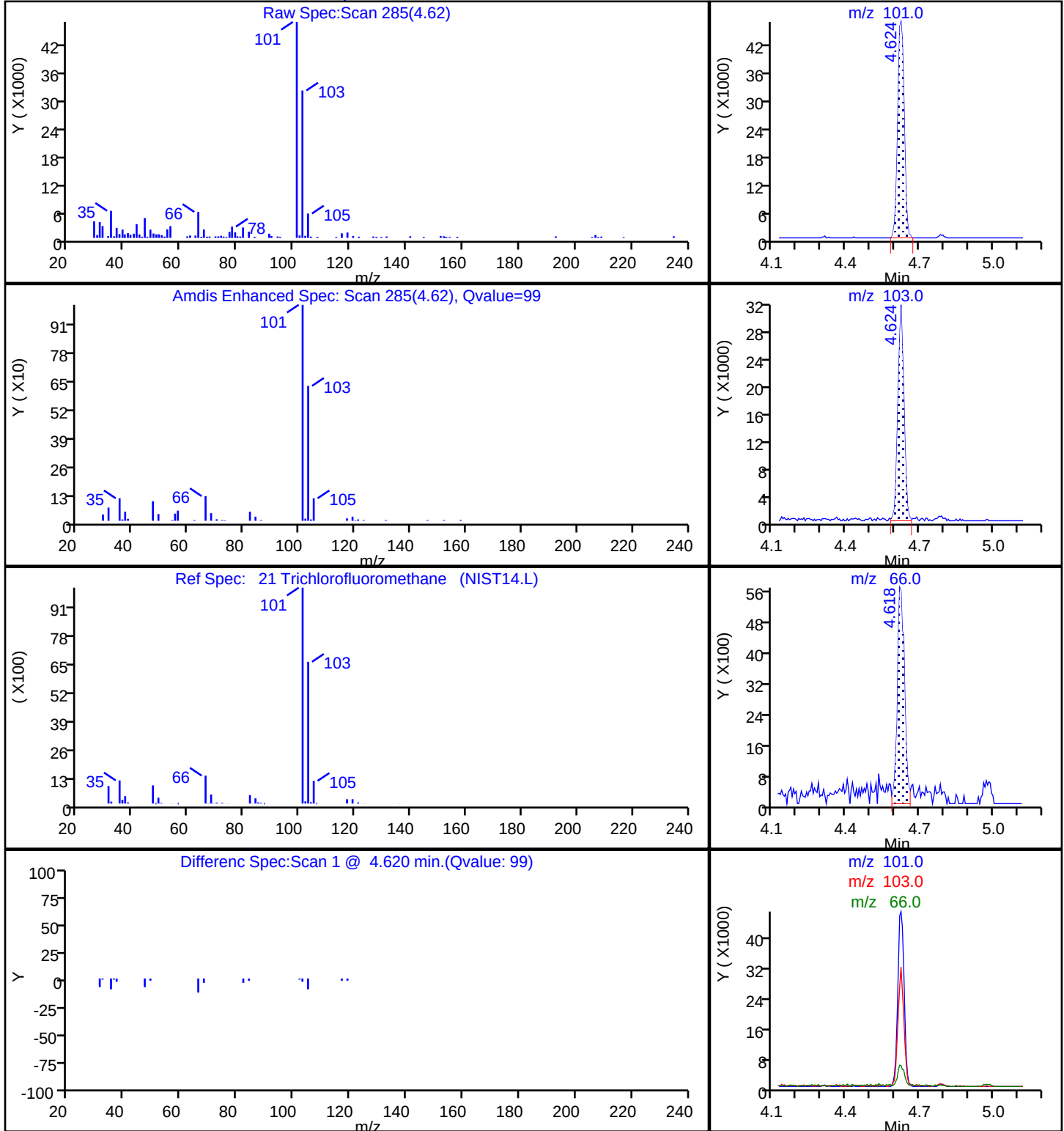
Limit Group:

MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector

MS SCAN

21 Trichlorofluoromethane, CAS: 75-69-4

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P111.D

Injection Date: 04-Apr-2018 00:19:30

Instrument ID: MR

Lims ID: 140-11145-A-7

Lab Sample ID: 140-11145-7

Client ID: H41A-BA-2018

Operator ID:

ALS Bottle#:

11

Worklist Smp#: 17

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

Limit Group:

MSA TO14A_15 Routine ICAL

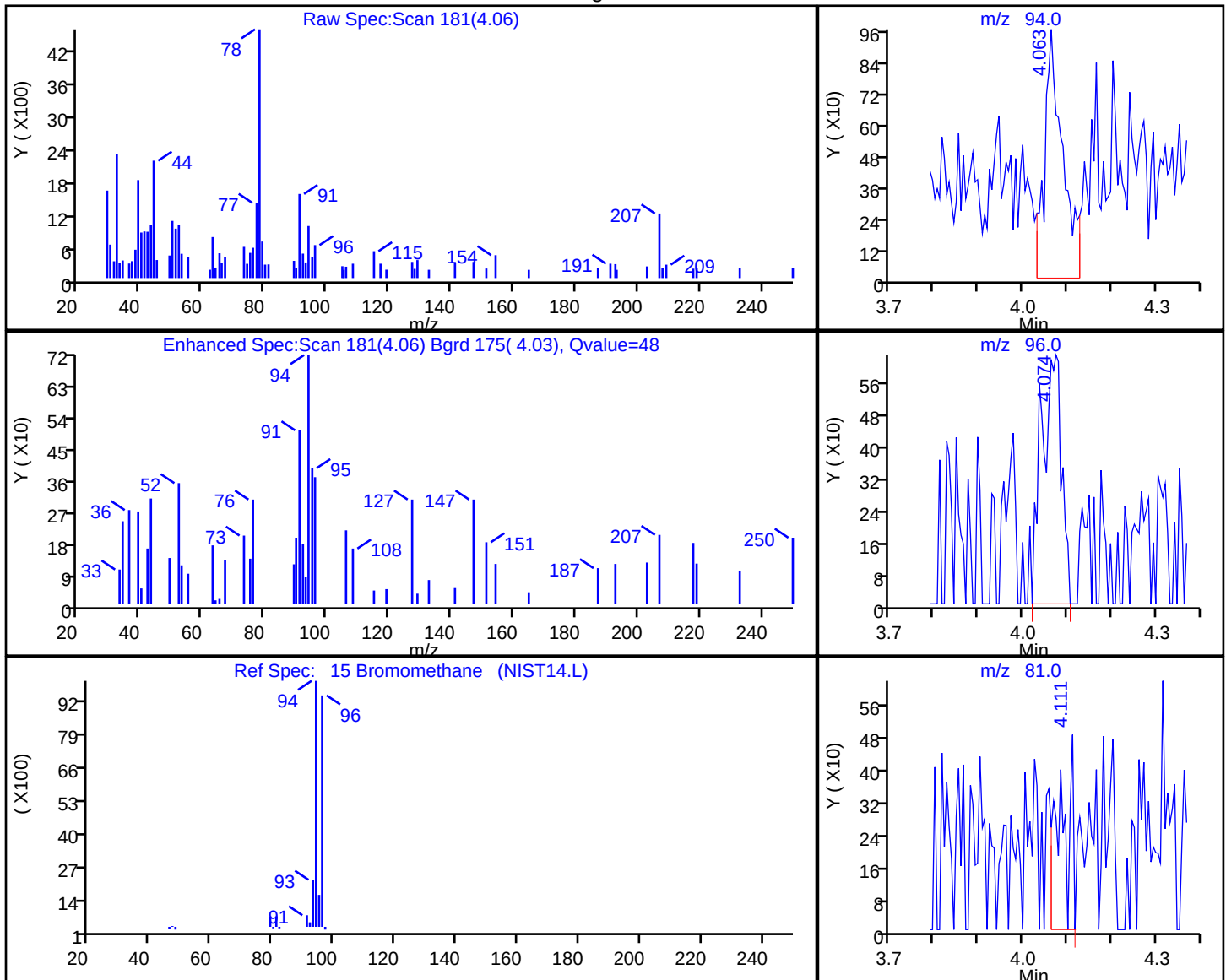
Column: RTX-5 (0.32 mm)

Detector

MS SCAN

15 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
4.06	94.00	2755	0.035385
4.07	96.00	1958	
4.11	81.00	883	

Reviewer: tajh, 04-Apr-2018 09:52:07

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: H41A-BA-2018 DL Lab Sample ID: 140-11145-7 DL
 Matrix: Air Lab File ID: JD04P111.D
 Analysis Method: TO 15 LL Date Collected: 03/28/2018 11:39
 Sample wt/vol: 100 (mL) Date Analyzed: 04/04/2018 22:35
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19215 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
64-17-5	Ethanol	46.07	86	D	10	

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: H41A-BA-2018 DL Lab Sample ID: 140-11145-7 DL
 Matrix: Air Lab File ID: JD04P111.D
 Analysis Method: TO 15 LL Date Collected: 03/28/2018 11:39
 Sample wt/vol: 100 (mL) Date Analyzed: 04/04/2018 22:35
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19215 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
64-17-5	Ethanol	46.07	160	D	19	

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180402-7781.b\JD04P111.D
 Lims ID: 140-11145-A-7
 Client ID: H41A-BA-2018
 Sample Type: Client
 Inject. Date: 04-Apr-2018 22:35:30 ALS Bottle#: 11 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0007781-018
 Misc. Info.: 140-11145-a-7
 Operator ID: 007126 Instrument ID: MJ
 Method: \\ChromNA\Knoxville\ChromData\MJ\20180402-7781.b\MJ_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 05-Apr-2018 13:43:38 Calib Date: 15-Feb-2018 22:24:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK004

First Level Reviewer: tajh

Date: 05-Apr-2018 11:48:50

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.663	9.672	-0.009	92	167920	4.00	
* 2 1,4-Difluorobenzene	114	11.766	11.770	-0.004	95	950776	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.365	16.370	-0.005	89	865302	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.969	17.970	-0.004	93	642802	4.11	
8 Dichlorodifluoromethane	85	4.272	4.273	-0.005	100	20080	0.1333	
9 Chloromethane	52	4.482	4.483	-0.004	98	2738	0.1553	
17 Ethanol	31	5.424	5.424	-0.004	97	349307	17.2	
20 Trichlorofluoromethane	101	5.924	5.923	-0.004	97	9199	0.0631	
29 1,1,2-Trichloro-1,2,2-trif	101	6.855	6.859	-0.009	91	1946	0.0169	
32 Methylene Chloride	84	7.048	7.041	0.001	95	15995	0.2659	
39 Hexane	56	8.899	8.896	-0.004	69	1387	0.0307	
50 Benzene	78	11.260	11.263	-0.010	96	7806	0.0463	
52 Carbon tetrachloride	117	11.287	11.284	-0.005	52	2261	0.0177	
68 Toluene	91	14.429	14.436	-0.009	90	13246	0.0725	

Reagents:

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180402-7781.b\JD04P111.D

Injection Date: 04-Apr-2018 22:35:30

Instrument ID: MJ

Operator ID: 007126

Lims ID: 140-11145-A-7

Lab Sample ID: 140-11145-7

Worklist Smp#: 18

Client ID: H41A-BA-2018

Purge Vol: 500.000 mL

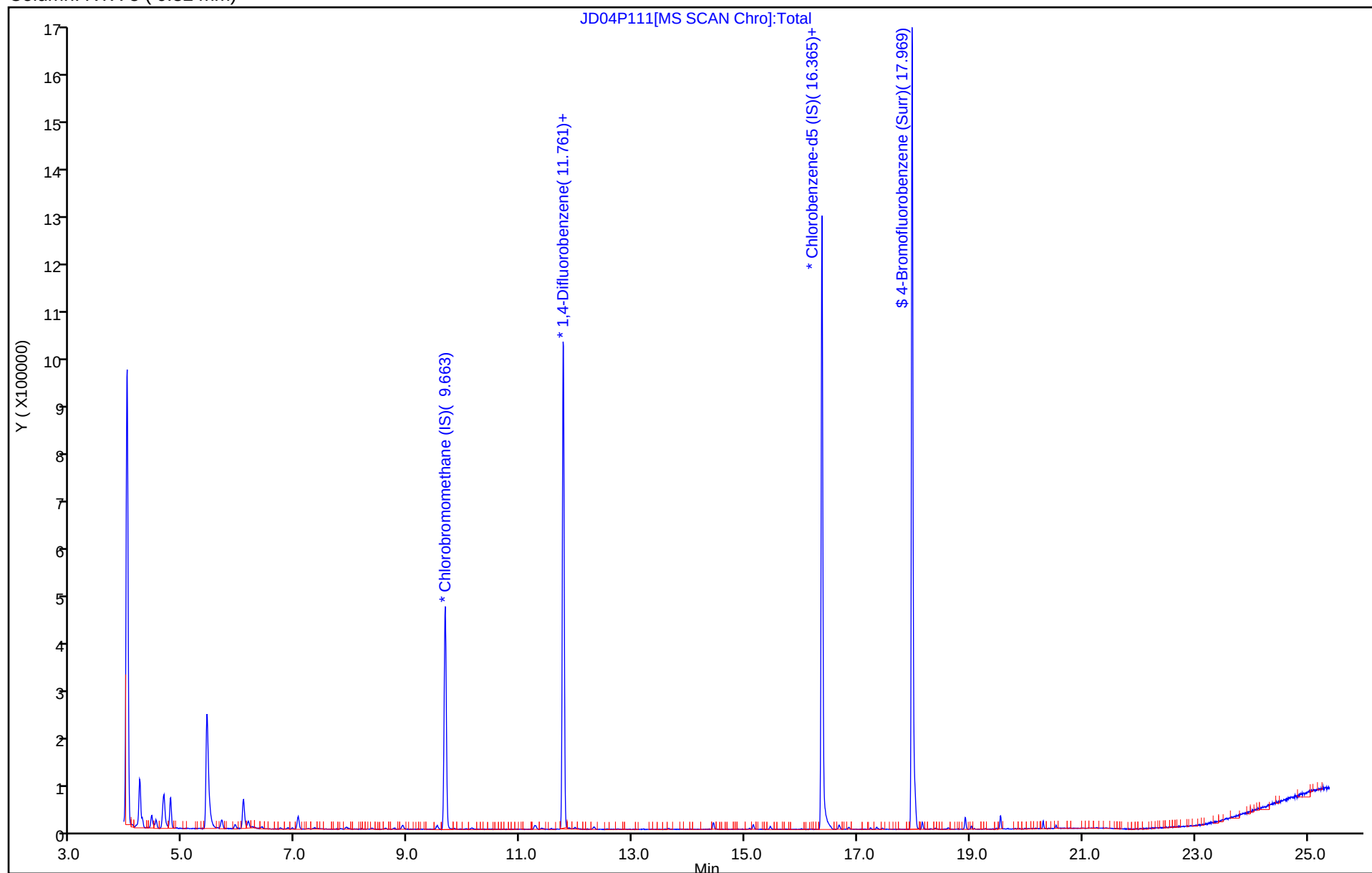
Dil. Factor: 1.0000

ALS Bottle#: 11

Method: MJ_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180402-7781.b\JD04P111.D
Lims ID: 140-11145-A-7
Client ID: H41A-BA-2018
Sample Type: Client
Inject. Date: 04-Apr-2018 22:35:30 ALS Bottle#: 11 Worklist Smp#: 18
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007781-018
Misc. Info.: 140-11145-a-7
Operator ID: 007126 Instrument ID: MJ
Method: \\ChromNA\Knoxville\ChromData\MJ\20180402-7781.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 05-Apr-2018 13:43:38 Calib Date: 15-Feb-2018 22:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D
Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK004

First Level Reviewer: tajh

Date: 05-Apr-2018 11:48:50

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.11	102.73

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180402-7781.b\JD04P111.D

Injection Date: 04-Apr-2018 22:35:30

Instrument ID: MJ

Lims ID: 140-11145-A-7

Lab Sample ID: 140-11145-7

Client ID: H41A-BA-2018

Operator ID: 007126

ALS Bottle#: 11

Worklist Smp#: 18

Purge Vol: 500.000 mL

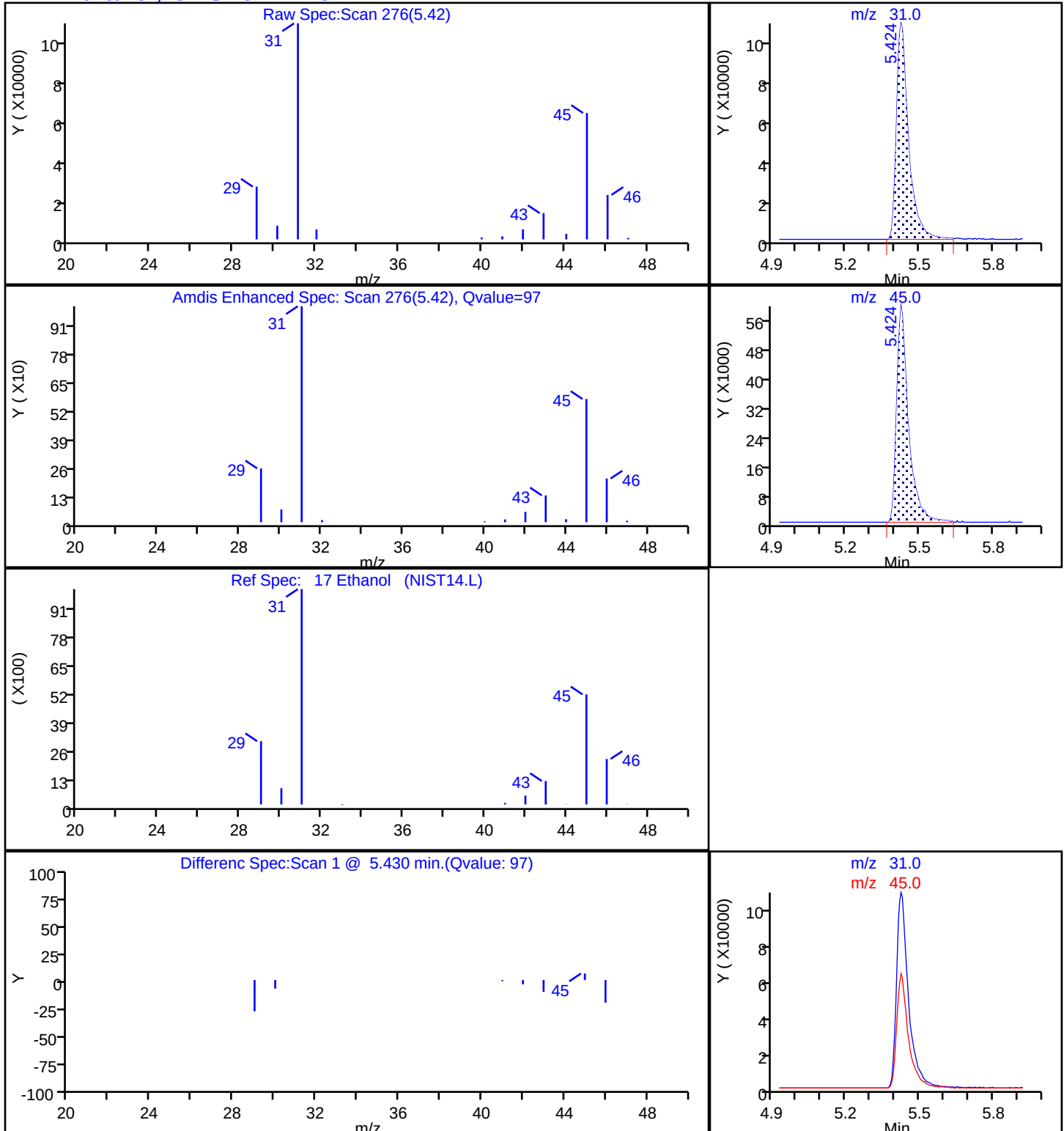
Dil. Factor: 1.0000

Method: MJ_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

17 Ethanol, CAS: 64-17-5

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: FD-2018 Lab Sample ID: 140-11145-8
 Matrix: Air Lab File ID: RD03P112.D
 Analysis Method: TO 15 LL Date Collected: 03/28/2018 00:00
 Sample wt/vol: 500 (mL) Date Analyzed: 04/04/2018 01:11
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19179 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	167.85	ND		0.080	
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	187.38	0.080		0.080	
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	
75-35-4	1,1-Dichloroethene	96.94	ND		0.040	
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	
106-93-4	1,2-Dibromoethane	187.87	ND		0.080	
95-50-1	1,2-Dichlorobenzene	147.00	ND		0.080	
107-06-2	1,2-Dichloroethane	98.96	ND	*	0.080	
78-87-5	1,2-Dichloropropane	112.99	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	170.92	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	
541-73-1	1,3-Dichlorobenzene	147.00	ND		0.080	
106-46-7	1,4-Dichlorobenzene	147.00	ND		0.080	
123-91-1	1,4-Dioxane	88.11	ND		0.20	
540-84-1	2,2,4-Trimethylpentane	114.23	ND		0.20	
78-93-3	2-Butanone	72.11	0.69		0.32	
108-10-1	4-Methyl-2-pentanone (MIBK)	100.16	ND		0.20	
71-43-2	Benzene	78.11	0.21		0.080	
100-44-7	Benzyl chloride	126.58	ND		0.16	
75-27-4	Bromodichloromethane	163.83	ND		0.080	
75-25-2	Bromoform	252.75	ND		0.080	
74-83-9	Bromomethane	94.94	ND		0.080	
56-23-5	Carbon tetrachloride	153.81	0.069		0.032	
108-90-7	Chlorobenzene	112.56	ND		0.080	
75-00-3	Chloroethane	64.52	ND		0.080	
67-66-3	Chloroform	119.38	ND		0.080	
74-87-3	Chloromethane	50.49	0.75		0.20	
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.040	
10061-01-5	cis-1,3-Dichloropropene	110.97	ND		0.080	
110-82-7	Cyclohexane	84.16	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: FD-2018 Lab Sample ID: 140-11145-8
 Matrix: Air Lab File ID: RD03P112.D
 Analysis Method: TO 15 LL Date Collected: 03/28/2018 00:00
 Sample wt/vol: 500 (mL) Date Analyzed: 04/04/2018 01:11
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19179 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
124-48-1	Dibromochloromethane	208.29	ND		0.080	
75-71-8	Dichlorodifluoromethane	120.91	0.18		0.080	
64-17-5	Ethanol	46.07	56		2.0	
100-41-4	Ethylbenzene	106.17	ND		0.080	
87-68-3	Hexachlorobutadiene	260.76	ND		0.080	
110-54-3	Hexane	86.17	ND		0.20	
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.16	
75-09-2	Methylene Chloride	84.93	0.31		0.20	
179601-23-1	m-Xylene & p-Xylene	106.17	0.14		0.080	
95-47-6	o-Xylene	106.17	ND		0.080	
100-42-5	Styrene	104.15	ND		0.080	
75-65-0	t-Butyl alcohol	74.12	ND		0.32	
127-18-4	Tetrachloroethene	165.83	ND		0.080	
108-88-3	Toluene	92.14	0.28		0.12	
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	110.97	ND		0.080	
79-01-6	Trichloroethene	131.39	ND		0.036	
75-69-4	Trichlorofluoromethane	137.37	0.28		0.080	
75-01-4	Vinyl chloride	62.50	ND		0.040	

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	88		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: FD-2018 Lab Sample ID: 140-11145-8
 Matrix: Air Lab File ID: RD03P112.D
 Analysis Method: TO 15 LL Date Collected: 03/28/2018 00:00
 Sample wt/vol: 500 (mL) Date Analyzed: 04/04/2018 01:11
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19179 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	
79-34-5	1,1,2,2-Tetrachloroethane	167.85	ND		0.55	
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	
76-13-1	1,1,2-Trichlorotrifluoroethane	187.38	0.61		0.61	
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	
75-35-4	1,1-Dichloroethene	96.94	ND		0.16	
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	
106-93-4	1,2-Dibromoethane	187.87	ND		0.61	
95-50-1	1,2-Dichlorobenzene	147.00	ND		0.48	
107-06-2	1,2-Dichloroethane	98.96	ND	*	0.32	
78-87-5	1,2-Dichloropropane	112.99	ND		0.37	
76-14-2	1,2-Dichlorotetrafluoroethane	170.92	ND		0.56	
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	
541-73-1	1,3-Dichlorobenzene	147.00	ND		0.48	
106-46-7	1,4-Dichlorobenzene	147.00	ND		0.48	
123-91-1	1,4-Dioxane	88.11	ND		0.72	
540-84-1	2,2,4-Trimethylpentane	114.23	ND		0.93	
78-93-3	2-Butanone	72.11	2.0		0.94	
108-10-1	4-Methyl-2-pentanone (MIBK)	100.16	ND		0.82	
71-43-2	Benzene	78.11	0.68		0.26	
100-44-7	Benzyl chloride	126.58	ND		0.83	
75-27-4	Bromodichloromethane	163.83	ND		0.54	
75-25-2	Bromoform	252.75	ND		0.83	
74-83-9	Bromomethane	94.94	ND		0.31	
56-23-5	Carbon tetrachloride	153.81	0.43		0.20	
108-90-7	Chlorobenzene	112.56	ND		0.37	
75-00-3	Chloroethane	64.52	ND		0.21	
67-66-3	Chloroform	119.38	ND		0.39	
74-87-3	Chloromethane	50.49	1.5		0.41	
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.16	
10061-01-5	cis-1,3-Dichloropropene	110.97	ND		0.36	
110-82-7	Cyclohexane	84.16	ND		0.69	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: FD-2018 Lab Sample ID: 140-11145-8
 Matrix: Air Lab File ID: RD03P112.D
 Analysis Method: TO 15 LL Date Collected: 03/28/2018 00:00
 Sample wt/vol: 500 (mL) Date Analyzed: 04/04/2018 01:11
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19179 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
124-48-1	Dibromochloromethane	208.29	ND		0.68	
75-71-8	Dichlorodifluoromethane	120.91	0.90		0.40	
64-17-5	Ethanol	46.07	110		3.8	
100-41-4	Ethylbenzene	106.17	ND		0.35	
87-68-3	Hexachlorobutadiene	260.76	ND		0.85	
110-54-3	Hexane	86.17	ND		0.70	
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.58	
75-09-2	Methylene Chloride	84.93	1.1		0.69	
179601-23-1	m-Xylene & p-Xylene	106.17	0.59		0.35	
95-47-6	o-Xylene	106.17	ND		0.35	
100-42-5	Styrene	104.15	ND		0.34	
75-65-0	t-Butyl alcohol	74.12	ND		0.97	
127-18-4	Tetrachloroethene	165.83	ND		0.54	
108-88-3	Toluene	92.14	1.1		0.45	
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	
10061-02-6	trans-1,3-Dichloropropene	110.97	ND		0.36	
79-01-6	Trichloroethene	131.39	ND		0.19	
75-69-4	Trichlorofluoromethane	137.37	1.5		0.45	
75-01-4	Vinyl chloride	62.50	ND		0.10	

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	88		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P112.D
 Lims ID: 140-11145-A-8
 Client ID: FD-2018
 Sample Type: Client
 Inject. Date: 04-Apr-2018 01:11:30 ALS Bottle#: 12 Worklist Smp#: 18
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0007767-018
 Misc. Info.: 140-11145-a-8
 Operator ID: Instrument ID: MR
 Method: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 04-Apr-2018 09:59:00 Calib Date: 30-Jan-2018 19:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK025

First Level Reviewer: tajh

Date: 04-Apr-2018 09:52:38

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.660	7.670	-0.010	78	328805	4.00	
* 2 1,4-Difluorobenzene	114	9.806	9.806	0.000	93	1908310	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.826	14.826	0.000	86	1500606	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.541	16.541	0.000	94	1005263	3.53	
8 Dichlorodifluoromethane	85	3.497	3.507	-0.010	99	56010	0.1814	
9 Chloromethane	52	3.626	3.642	-0.016	99	21006	0.7471	
17 Ethanol	31	4.295	4.295	0.000	97	1382105	56.1	
21 Trichlorofluoromethane	101	4.629	4.640	-0.011	100	80817	0.2756	
29 2-Methyl-2-propanol	59	5.298	5.287	0.011	97	16260	0.0656	
30 1,1,2-Trichloro-1,2,2-trif	101	5.352	5.362	-0.010	97	21179	0.0796	
31 Methylene Chloride	84	5.454	5.465	-0.011	89	39763	0.3093	
39 2-Butanone (MEK)	72	6.986	6.986	0.000	99	41193	0.6908	
40 Hexane	56	7.072	7.083	-0.011	87	10139	0.1051	
43 Chloroform	83	7.692	7.703	-0.011	31	12519	0.0411	
47 Benzene	78	9.223	9.229	-0.006	96	77991	0.2139	
49 Cyclohexane	69	9.240	9.256	-0.016	79	3579	0.0611	
50 Carbon tetrachloride	117	9.266	9.272	-0.006	95	20159	0.0686	
53 Isooctane	57	10.097	10.102	-0.005	95	28128	0.0532	
65 Toluene	91	12.761	12.761	0.000	93	115398	0.2792	
73 Tetrachloroethene	129	13.969	13.974	-0.005	94	2597	0.0169	
76 Ethylbenzene	91	15.209	15.209	0.000	97	24087	0.0445	
77 m-Xylene & p-Xylene	91	15.376	15.381	-0.005	98	56657	0.1351	
82 o-Xylene	91	15.915	15.915	0.000	97	23823	0.0538	
93 1,2,4-Trimethylbenzene	105	17.857	17.857	0.000	96	24501	0.0474	

Reagents:

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P112.D

Injection Date: 04-Apr-2018 01:11:30

Instrument ID: MR

Operator ID:

Lims ID: 140-11145-A-8

Lab Sample ID: 140-11145-8

Worklist Smp#: 18

Client ID: FD-2018

Purge Vol: 500.000 mL

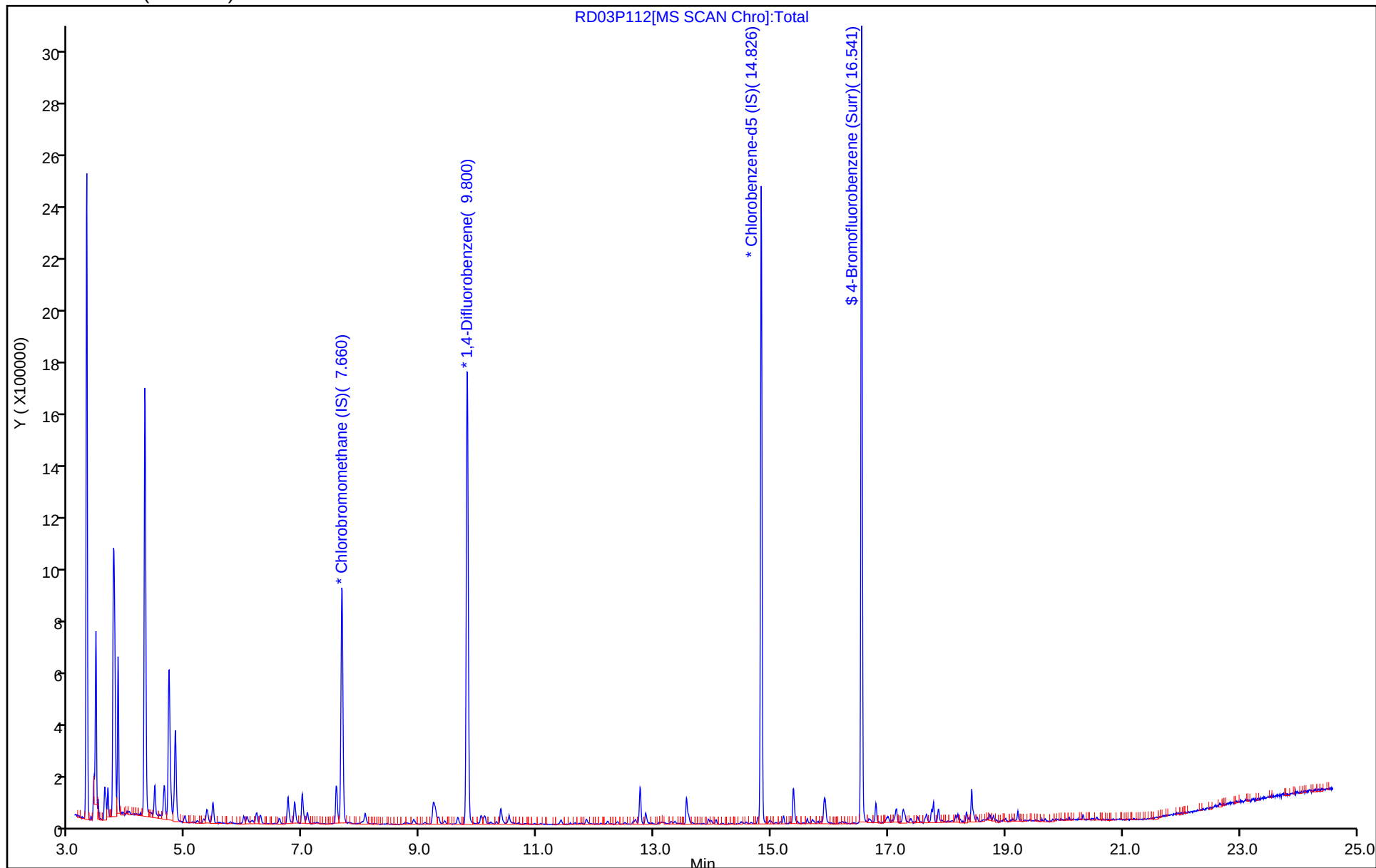
Dil. Factor: 1.0000

ALS Bottle#: 12

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P112.D
Lims ID: 140-11145-A-8
Client ID: FD-2018
Sample Type: Client
Inject. Date: 04-Apr-2018 01:11:30 ALS Bottle#: 12 Worklist Smp#: 18
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007767-018
Misc. Info.: 140-11145-a-8
Operator ID: Instrument ID: MR
Method: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 04-Apr-2018 09:59:00 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D
Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: tajh

Date: 04-Apr-2018 09:52:38

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.53	88.34

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P112.D

Injection Date: 04-Apr-2018 01:11:30

Instrument ID: MR

Lims ID: 140-11145-A-8

Lab Sample ID: 140-11145-8

Client ID: FD-2018

Operator ID:

ALS Bottle#: 12

Worklist Smp#: 18

Purge Vol: 500.000 mL

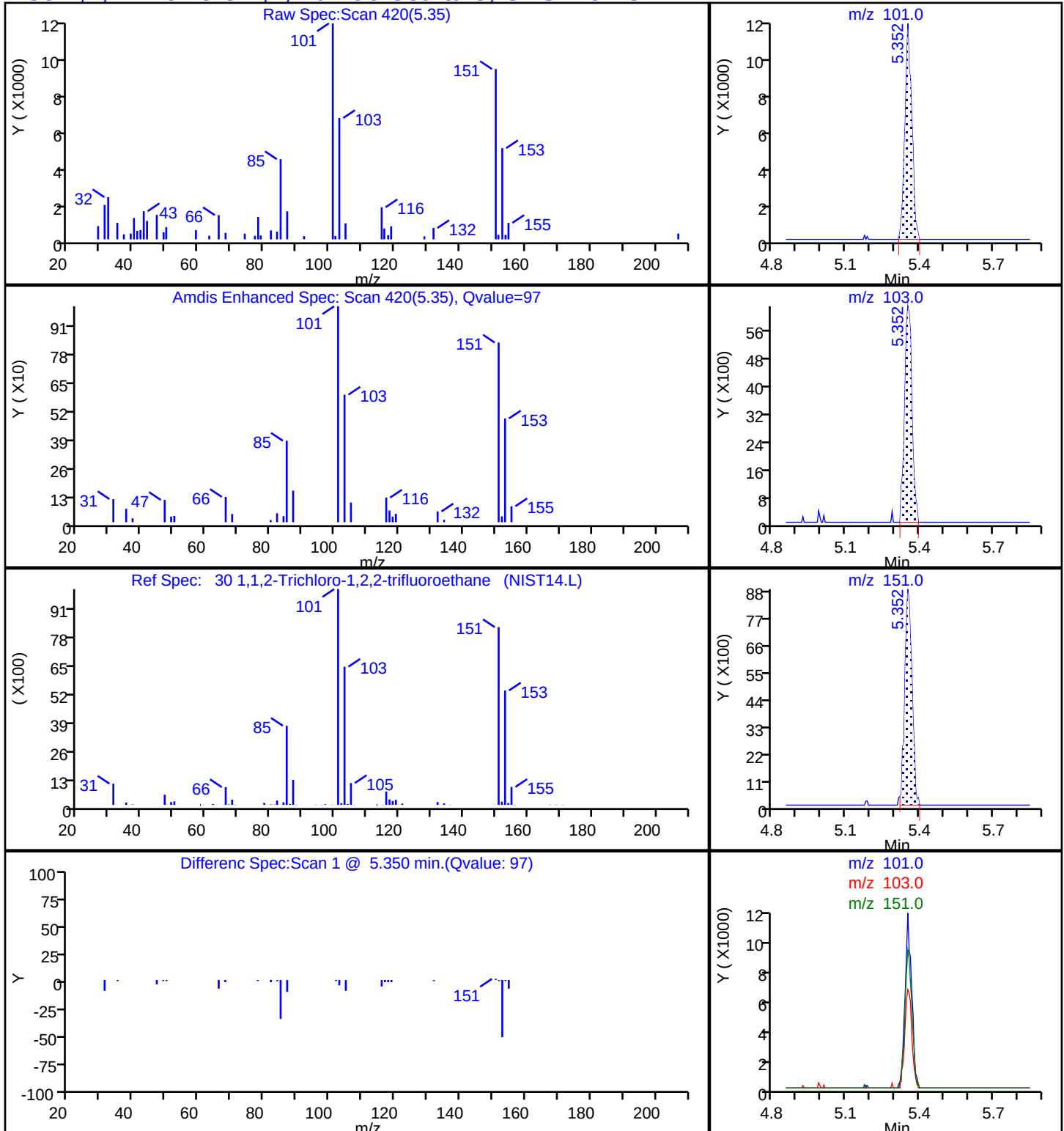
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

30 1,1,2-Trichloro-1,2,2-trifluoroethane, CAS: 76-13-1

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P112.D

Injection Date: 04-Apr-2018 01:11:30

Instrument ID: MR

Lims ID: 140-11145-A-8

Lab Sample ID: 140-11145-8

Client ID: FD-2018

Operator ID:

ALS Bottle#: 12

Worklist Smp#: 18

Purge Vol: 500.000 mL

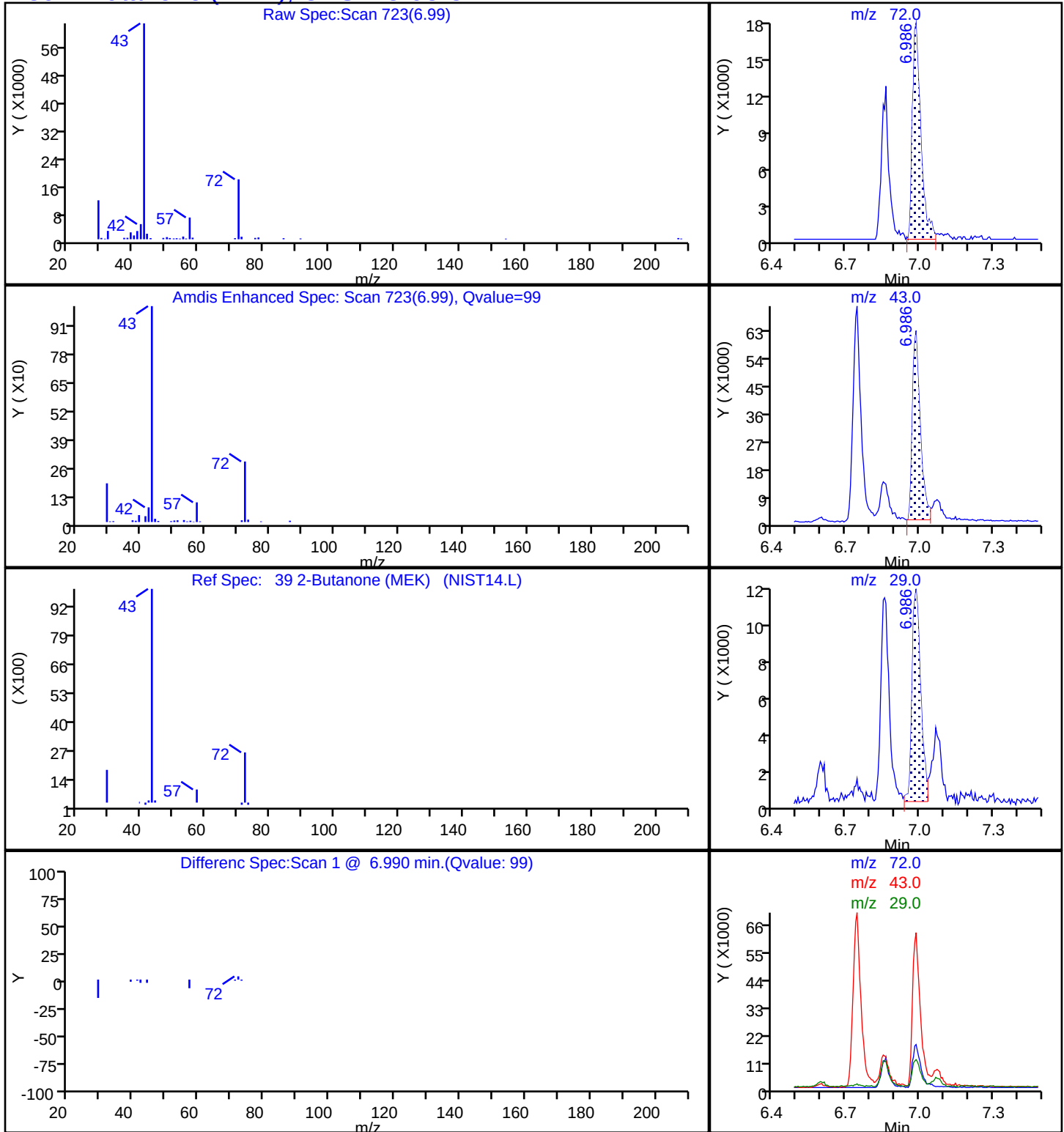
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

39 2-Butanone (MEK), CAS: 78-93-3

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P112.D

Injection Date: 04-Apr-2018 01:11:30

Instrument ID: MR

Lims ID: 140-11145-A-8

Lab Sample ID: 140-11145-8

Client ID: FD-2018

Operator ID:

ALS Bottle#:

Worklist Smp#: 18

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

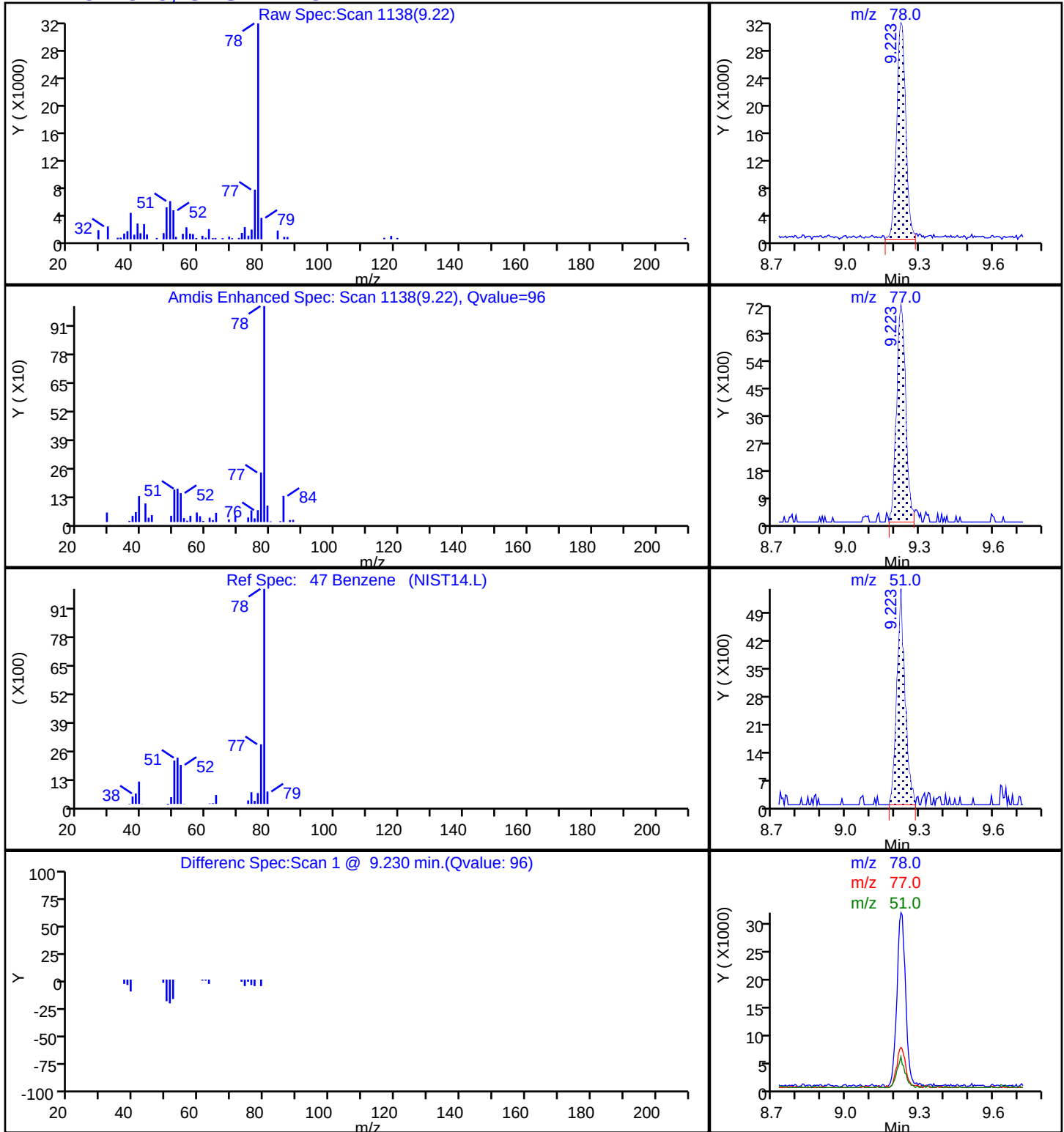
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

47 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P112.D

Injection Date: 04-Apr-2018 01:11:30

Instrument ID: MR

Lims ID: 140-11145-A-8

Lab Sample ID: 140-11145-8

Client ID: FD-2018

Operator ID:

ALS Bottle#: 12

Worklist Smp#: 18

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

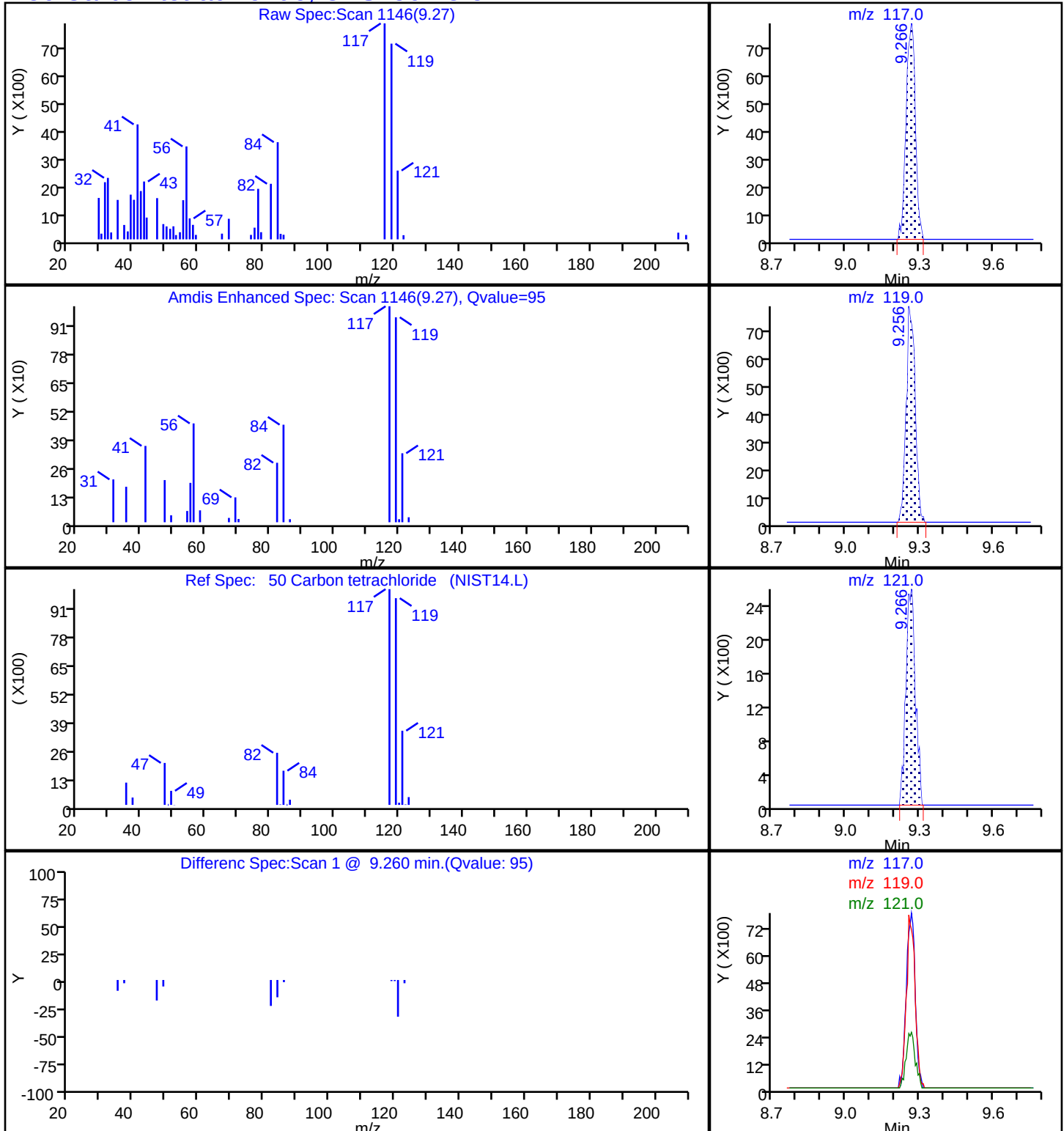
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

50 Carbon tetrachloride, CAS: 56-23-5



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P112.D

Injection Date: 04-Apr-2018 01:11:30

Instrument ID: MR

Lims ID: 140-11145-A-8

Lab Sample ID: 140-11145-8

Client ID: FD-2018

Operator ID:

ALS Bottle#: 12

Worklist Smp#: 18

Purge Vol: 500.000 mL

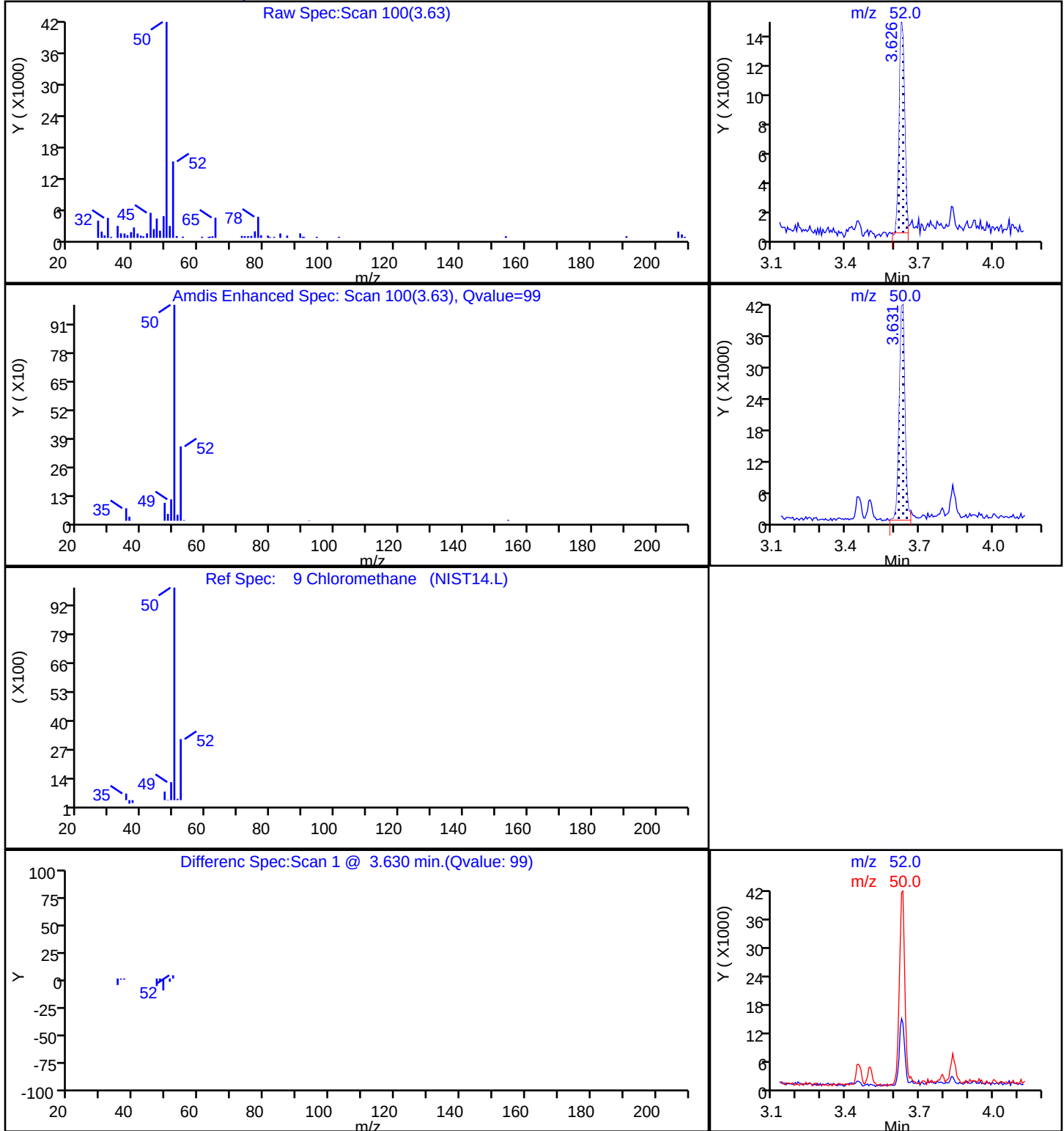
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

9 Chloromethane, CAS: 74-87-3

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P112.D

Injection Date: 04-Apr-2018 01:11:30

Instrument ID: MR

Lims ID: 140-11145-A-8

Lab Sample ID: 140-11145-8

Client ID: FD-2018

Operator ID:

ALS Bottle#: 12

Worklist Smp#: 18

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

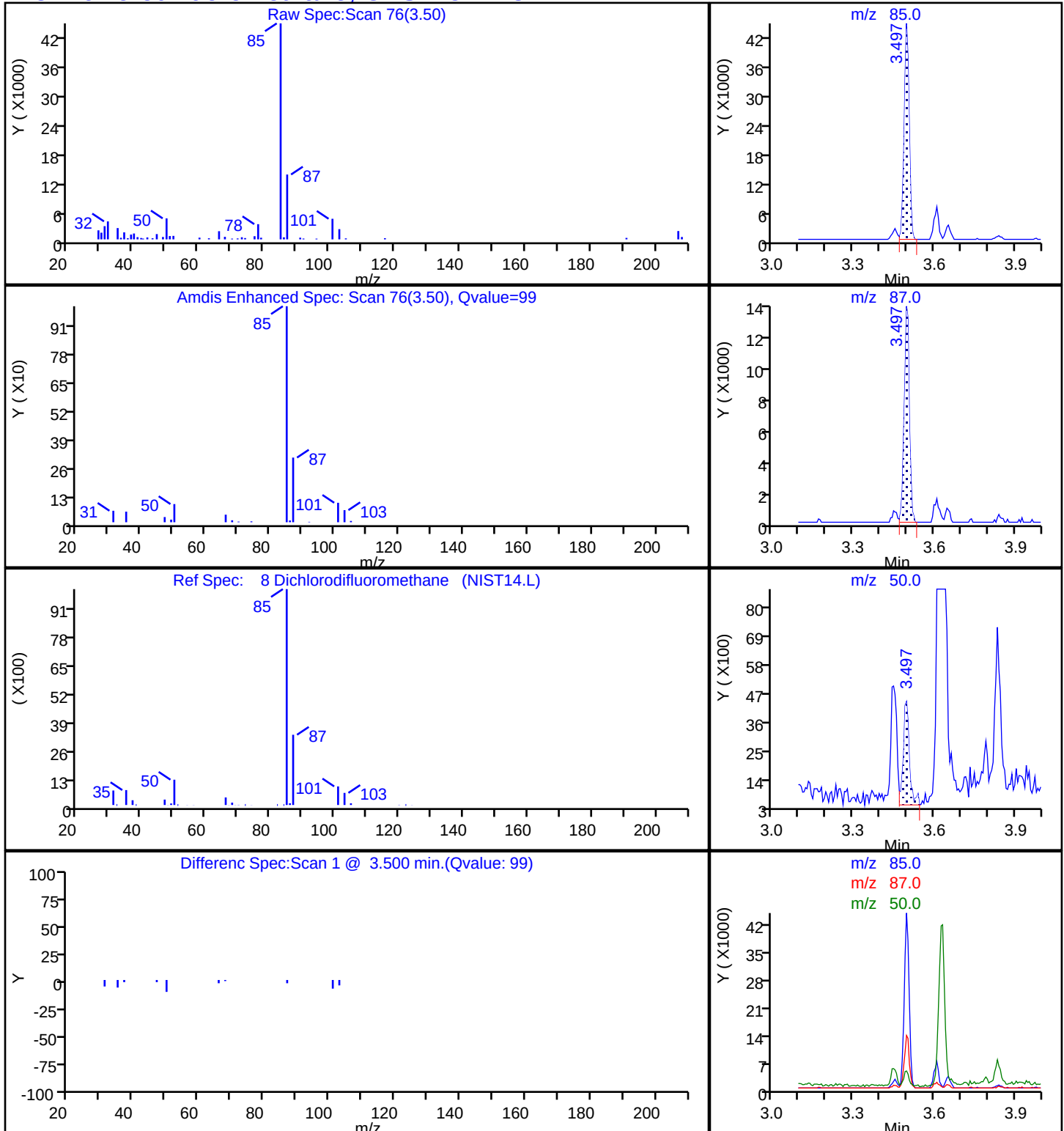
Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P112.D

Injection Date: 04-Apr-2018 01:11:30

Instrument ID: MR

Lims ID: 140-11145-A-8

Lab Sample ID: 140-11145-8

Client ID: FD-2018

Operator ID:

ALS Bottle#: 12

Worklist Smp#: 18

Purge Vol: 500.000 mL

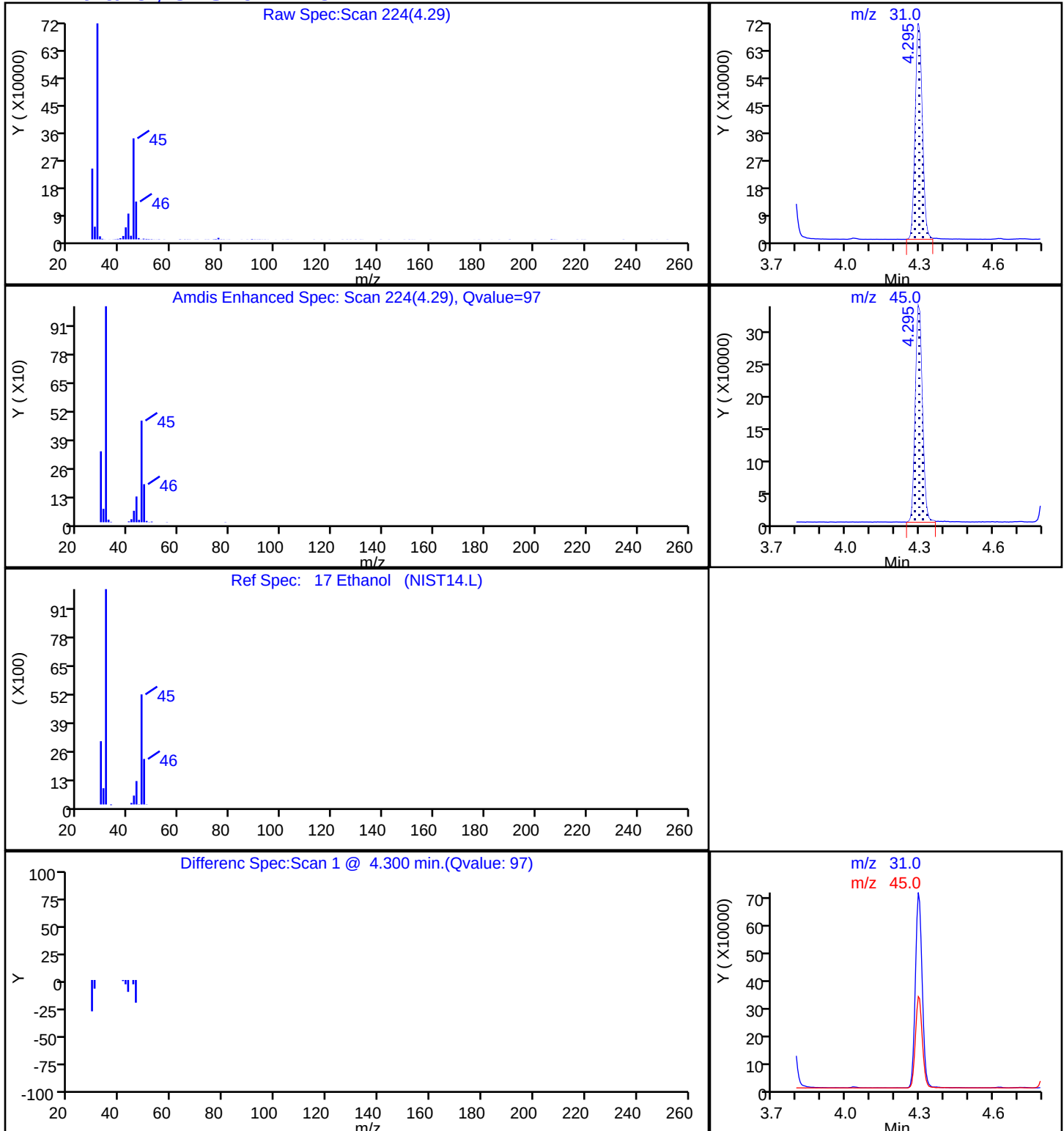
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

17 Ethanol, CAS: 64-17-5

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P112.D

Injection Date: 04-Apr-2018 01:11:30

Instrument ID: MR

Lims ID: 140-11145-A-8

Lab Sample ID: 140-11145-8

Client ID: FD-2018

Operator ID:

ALS Bottle#: 12

Worklist Smp#: 18

Purge Vol: 500.000 mL

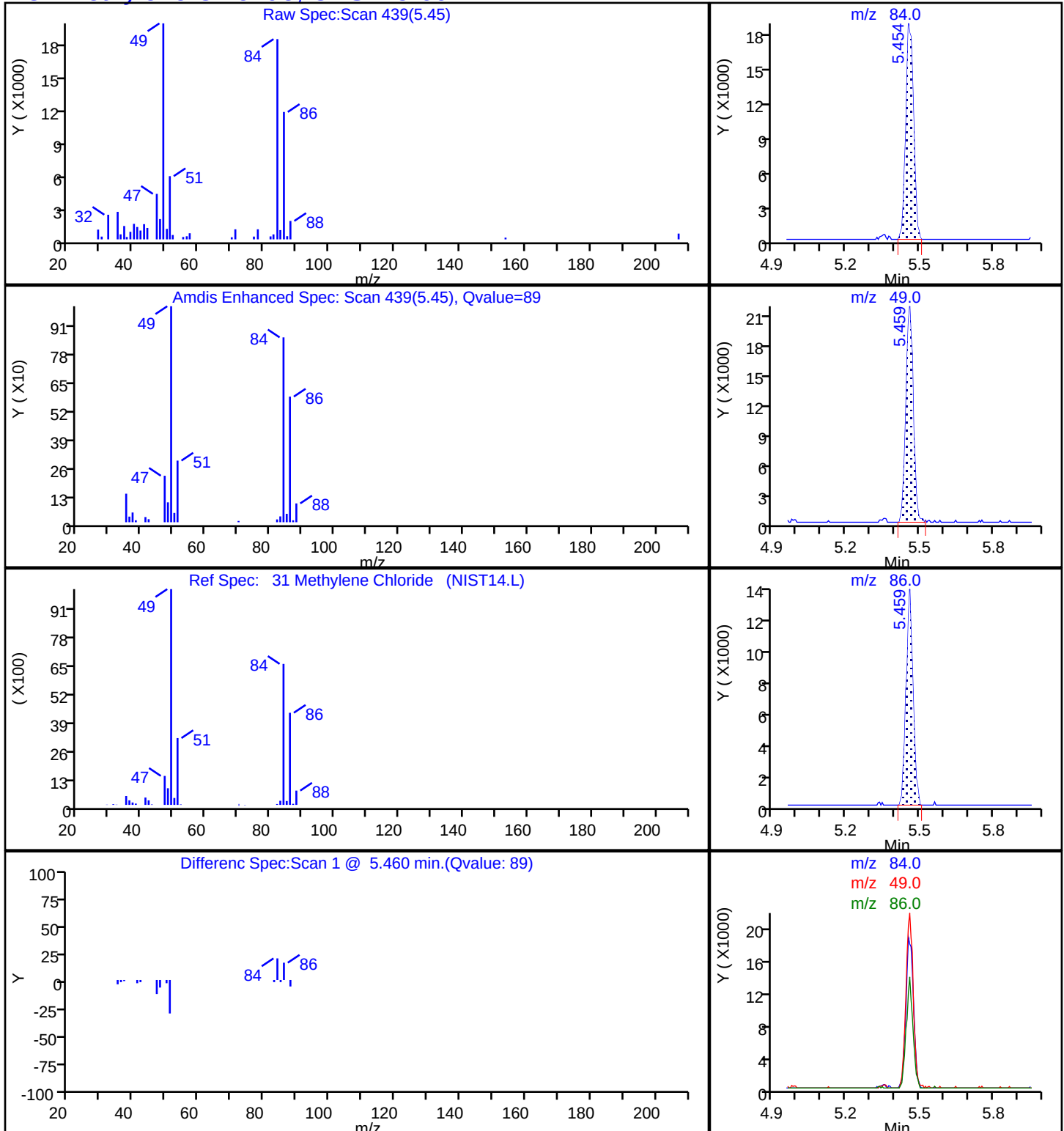
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P112.D

Injection Date: 04-Apr-2018 01:11:30

Instrument ID: MR

Lims ID: 140-11145-A-8

Lab Sample ID: 140-11145-8

Client ID: FD-2018

Operator ID:

ALS Bottle#:

Worklist Smp#: 18

Purge Vol: 500.000 mL

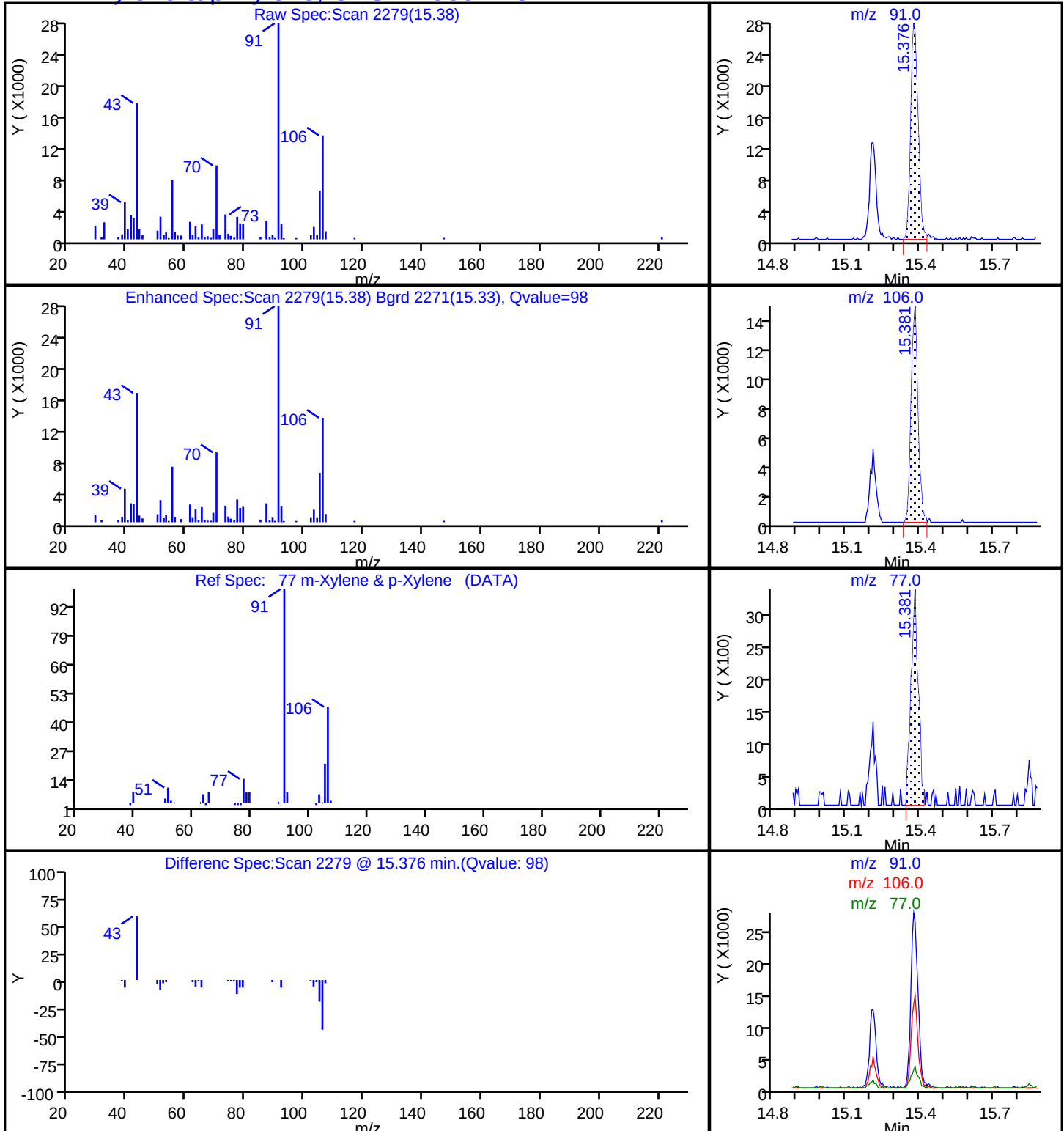
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

77 m-Xylene & p-Xylene, CAS: 179601-23-1

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P112.D

Injection Date: 04-Apr-2018 01:11:30

Instrument ID: MR

Lims ID: 140-11145-A-8

Lab Sample ID: 140-11145-8

Client ID: FD-2018

Operator ID:

ALS Bottle#: 12

Worklist Smp#: 18

Purge Vol: 500.000 mL

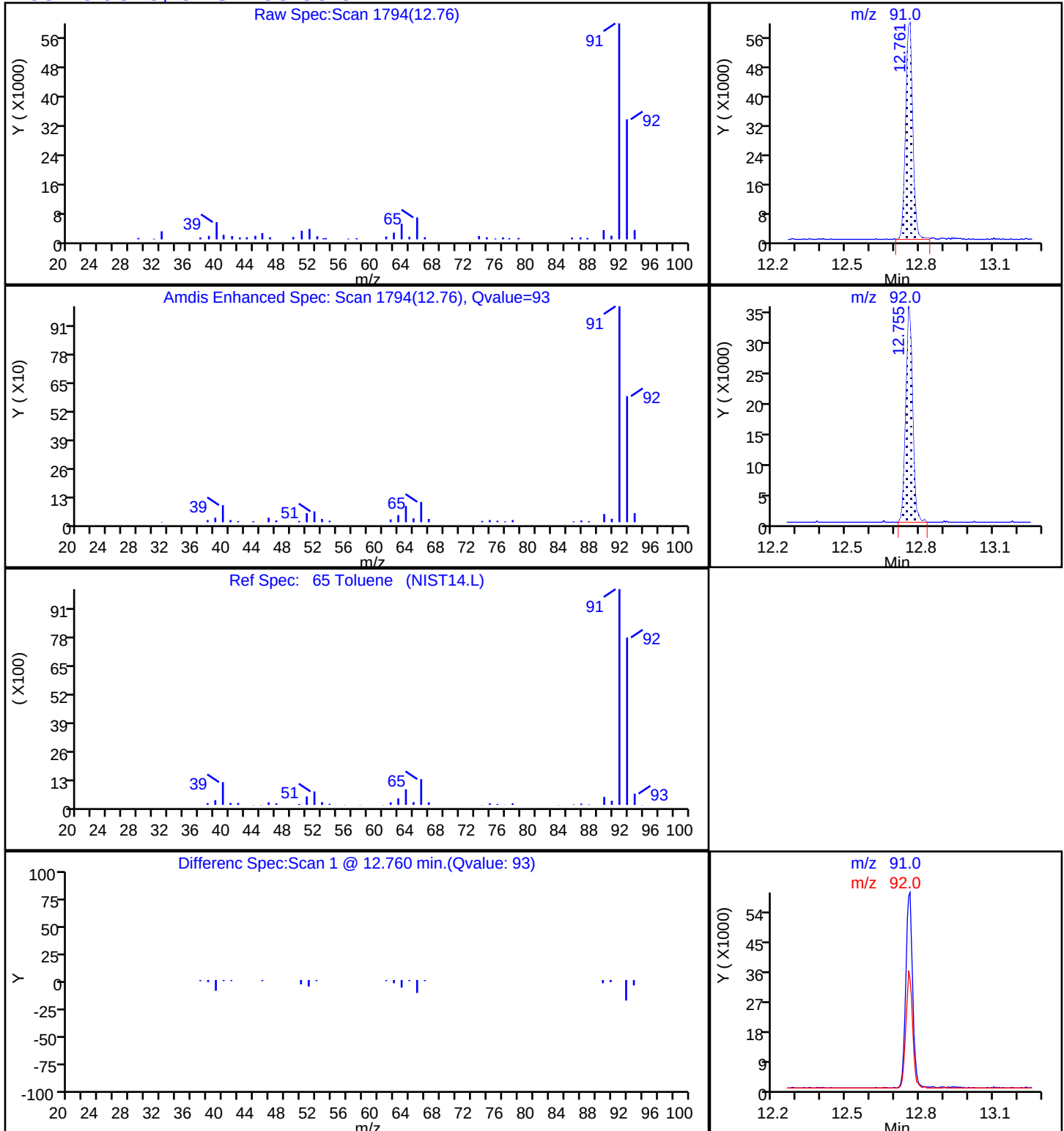
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

65 Toluene, CAS: 108-88-3

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P112.D

Injection Date: 04-Apr-2018 01:11:30

Instrument ID: MR

Lims ID: 140-11145-A-8

Lab Sample ID: 140-11145-8

Client ID: FD-2018

Operator ID:

ALS Bottle#: 12

Worklist Smp#: 18

Purge Vol: 500.000 mL

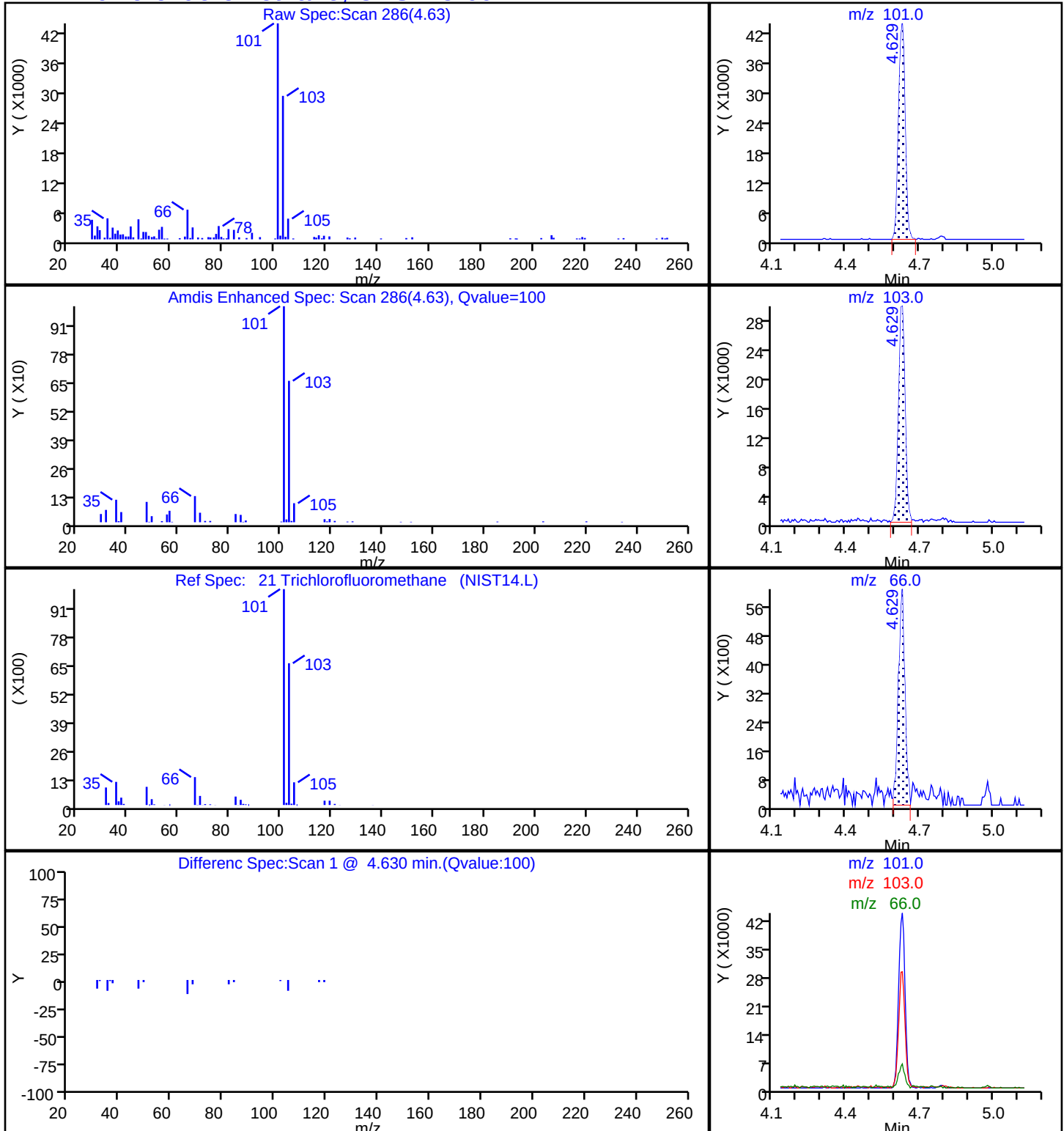
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

21 Trichlorofluoromethane, CAS: 75-69-4

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RD03P112.D

Injection Date: 04-Apr-2018 01:11:30

Instrument ID: MR

Lims ID: 140-11145-A-8

Lab Sample ID: 140-11145-8

Client ID: FD-2018

Operator ID:

ALS Bottle#:

12

Worklist Smp#: 18

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

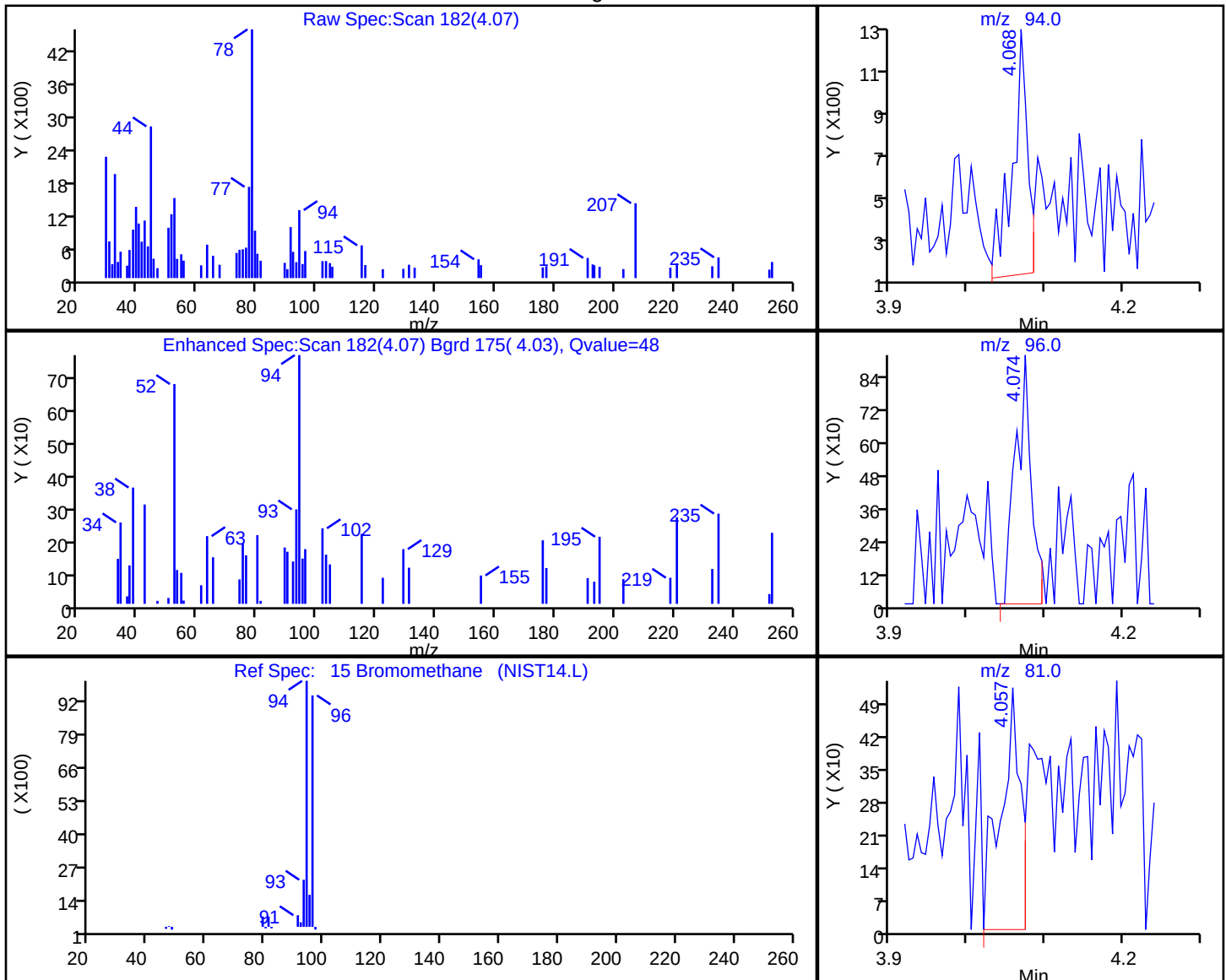
Column: RTX-5 (0.32 mm)

Detector

MS SCAN

15 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
4.07	94.00	1453	0.018213
4.07	96.00	1301	
4.06	81.00	941	

Reviewer: tajh, 04-Apr-2018 09:52:38

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1 Analy Batch No.: 18185

SDG No.: _____

Instrument ID: MJ GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-18185/3	JB15ICL01.D
Level 2	IC 140-18185/4	JB15ICL02.D
Level 3	IC 140-18185/5	JB15ICL03.D
Level 4	IC 140-18185/6	JB15ICL04.D
Level 5	IC 140-18185/7	JB15ICL05.D
Level 6	IC 140-18185/8	JB15ICL06.D
Level 7	ICIS 140-18185/9	JB15ICISL07.D
Level 8	IC 140-18185/10	JB15ICL08.D
Level 9	IC 140-18185/11	JB15ICL09.D
Level 10	IC 140-18185/12	JB15ICL10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Chlorodifluoromethane	++++ 0.3914	++++ 0.3824	0.6302 0.3743	0.4722 0.3630	0.4279 0.3774	Ave		0.4274				20.9		30.0			
Propene	++++ 1.1645	++++ 1.1300	1.3108 1.1715	1.1837 1.0943	1.1738 1.0836	Ave		1.1640				6.0		30.0			
Dichlorodifluoromethane	3.3176 3.5951	3.3925 3.7021	3.7269 3.7985	3.5660 3.4882	3.7705 3.5233	Ave		3.5881				4.5		30.0			
Chloromethane	++++ 0.4205	++++ 0.4168	++++ 0.4071	0.4724 0.3864	0.4596 0.3768	Ave		0.4199				8.4		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	2.1309 2.3962	2.1623 2.4267	2.4453 2.3778	2.3770 2.3294	2.5632 2.3092	Ave		2.3518				5.5		30.0			
Vinyl chloride	0.9082 1.3858	1.0603 1.4136	1.4400 1.3859	1.3679 1.3144	1.4774 1.3153	Ave		1.3069				13.8		30.0			
1,3-Butadiene	++++ 1.0489	++++ 1.0425	1.1500 1.0266	1.1067 0.9909	1.1086 0.9783	Ave		1.0566				5.7		30.0			
Butane	++++ 1.9486	++++ 2.0128	2.2836 1.9906	1.9974 1.8616	2.0933 1.8465	Ave		2.0043				6.9		30.0			
Bromomethane	1.1032 1.3116	1.2081 1.3214	1.4474 1.3073	1.3410 1.2837	1.3831 1.3116	Ave		1.3018				7.2		30.0			
Chloroethane	++++ 0.6702	0.6755 0.6774	0.6991 0.6771	0.6748 0.6561	0.7002 0.6756	Ave		0.6785				2.0		30.0			
Ethanol	++++ 0.4776	++++ 0.4727	++++ 0.5295	0.5377 0.4327	0.5682 0.3737	Ave		0.4846				13.8		30.0			
Vinyl bromide	++++ 1.2267	1.1089 1.2671	1.2671 1.2513	1.2154 1.2222	1.3143 1.2605	Ave		1.2371				4.6		30.0			
2-Methylbutane	++++ 1.4324	++++ 1.5281	++++ 1.4517	1.4899 1.3965	1.6262 1.4156	Ave		1.4772				5.4		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1 Analy Batch No.: 18185

SDG No.: _____

Instrument ID: MJ GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Trichlorofluoromethane	2.9333 3.5426	3.1213 3.6245	3.6584 3.4955	3.5125 3.4973	3.7881 3.5333	Ave		3.4707				7.3		30.0			
Acrolein	++++ 0.2927	++++ 0.3494	++++ 0.3794	++++ 0.3089	++++ 0.3486	Ave		0.3467				11.8		30.0			
Acetonitrile	++++ 0.3732	++++ 0.4191	++++ 0.4863	++++ 0.3852	0.5550 0.4137	Ave		0.4388				15.8		30.0			
Acetone	++++ 0.4105	++++ 0.4203	++++ 0.5020	++++ 0.3863	0.6154 0.3976	Ave		0.4553				19.4		30.0			
Pentane	++++ 0.2094	++++ 0.2152	++++ 0.2054	++++ 0.1988	0.2313 0.2099	Ave		0.2117				5.2		30.0			
Isopropyl alcohol	++++ 1.2520	1.4496 1.1363	1.4621 1.3026	1.3887 1.0811	1.6818 0.9956	Ave		1.3055				16.5		30.0			
Ethyl ether	++++ 0.9270	1.1907 1.0369	1.3172 1.1920	1.2567 0.9354	1.2816 1.0045	Ave		1.1269				13.5		30.0			
1,1-Dichloroethene	1.1918 1.2779	1.3811 1.3189	1.4766 1.2749	1.3150 1.2757	1.4083 1.3170	Ave		1.3237				6.1		30.0			
Acrylonitrile	++++ 0.6984	++++ 0.7526	++++ 0.8545	0.8339 0.7379	0.8884 0.7744	Ave		0.7914				8.7		30.0			
tert-Butyl alcohol	++++ 1.7947	++++ 1.5369	1.6759 1.5367	1.5338 1.5546	2.0606 1.3999	Lin1	0.0565	1.4729							0.9950		0.9900
1,1,2-Trichloro-1,2,2-trifluoroethane	2.4821 2.7500	2.5577 2.7957	2.8742 2.7881	2.8047 2.6832	3.0112 2.6922	Ave		2.7439				5.5		30.0			
Methylene Chloride	++++ 1.3146	++++ 1.2387	++++ 1.2211	2.2172 1.1503	1.7294 1.1578	Ave		1.4327				27.8		30.0			
3-Chloropropene	++++ 1.1751	++++ 1.1217	1.5866 1.2165	1.1607 1.1097	1.3605 1.1320	Lin1	0.0344	1.1332							0.9990		0.9900
Carbon disulfide	3.6911 3.7376	3.6386 3.8828	4.3506 3.7568	3.8971 3.6868	4.0058 3.7550	Ave		3.8402				5.5		30.0			
trans-1,2-Dichloroethene	++++ 1.3019	1.3022 1.3179	1.3875 1.3207	1.3062 1.2755	1.4288 1.2825	Ave		1.3248				3.8		30.0			
2-Methylpentane	++++ 2.9504	++++ 3.0134	3.6180 2.9503	3.0369 2.7948	3.3234 2.7231	Ave		3.0513				9.5		30.0			
Methyl tert-butyl ether	++++ 2.6811	2.6492 2.7626	3.0177 3.3524	3.1101 2.6889	3.4113 2.7957	Ave		2.9410				10.0		30.0			
1,1-Dichloroethane	2.4253 2.3381	2.5251 2.4388	2.6340 2.5420	2.5025 2.3639	2.7085 2.4053	Ave		2.4883				4.7		30.0			
Vinyl acetate	++++ 2.5034	2.3777 2.7208	2.8222 3.2054	3.1139 2.6767	3.2974 2.8203	Ave		2.8375				11.0		30.0			
2-Butanone (MEK)	++++ 0.4527	++++ 0.4569	++++ 0.5711	0.6323 0.4484	0.5874 0.4303	Ave		0.5113				16.1		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1 Analy Batch No.: 18185

SDG No.: _____

Instrument ID: MJ GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Hexane	+++++	+++++	+++++	1.1864	1.2001	Ave		1.0762				7.7		30.0			
	1.0408	1.0483	1.0588	0.9999	0.9988												
cis-1,2-Dichloroethene	1.2882	1.3496	1.4225	1.3669	1.4552	Ave		1.3515				4.2		30.0			
	1.2837	1.3287	1.3828	1.3054	1.3322												
Ethyl acetate	+++++	+++++	+++++	2.6021	2.7194	Ave		2.2612				15.0		30.0			
	1.9979	2.0327	2.5317	1.9919	1.9525												
Chloroform	+++++	+++++	+++++	2.9415	3.0730	Ave		2.8650				6.1		30.0			
	2.6905	2.7674	2.8838	2.6905	2.7342												
Tetrahydrofuran	+++++	+++++	+++++	1.4360	1.4535	Ave		1.2126				14.3		30.0			
	1.0858	1.1302	1.2587	1.0849	1.0393												
1,1,1-Trichloroethane	3.0053	3.1296	3.1969	2.9529	3.1866	Ave		2.9824				5.0		30.0			
	2.7843	2.9030	2.9798	2.8232	2.8621												
1,2-Dichloroethane	+++++	0.3093	0.3327	0.3151	0.3609	Ave		0.3245				4.9		30.0			
	0.3099	0.3230	0.3283	0.3169	0.3240												
1-Butanol	+++++	+++++	+++++	0.0891	0.0891	Ave		0.0692				17.6		30.0			
	0.0748	0.0634	0.0717	0.0609	0.0550												
Cyclohexane	+++++	+++++	0.1400	0.1166	0.1296	Ave		0.1171				10.2		30.0			
	0.1134	0.1152	0.1105	0.1078	0.1039												
Benzene	0.7960	0.7900	0.7649	0.7115	0.7640	Ave		0.7099				9.3		30.0			
	0.6620	0.6816	0.6859	0.6328	0.6104												
Carbon tetrachloride	0.4528	0.5183	0.5701	0.5301	0.5993	Ave		0.5362				7.0		30.0			
	0.5284	0.5468	0.5481	0.5316	0.5366												
2,3-Dimethylpentane	+++++	+++++	0.1839	0.1751	0.1840	Ave		0.1667				7.5		30.0			
	0.1594	0.1627	0.1605	0.1535	0.1543												
Thiophene	+++++	+++++	0.4215	0.4017	0.4462	Ave		0.4031				5.5		30.0			
	0.3782	0.4012	0.4038	0.3833	0.3888												
2,2,4-Trimethylpentane	+++++	+++++	1.2776	1.1667	1.2608	Ave		1.1384				8.2		30.0			
	1.1058	1.1220	1.1099	1.0517	1.0127												
Heptane	+++++	0.2555	0.2659	0.2523	0.2773	Ave		0.2498				5.9		30.0			
	0.2385	0.2445	0.2457	0.2345	0.2337												
1,2-Dichloropropane	+++++	0.2684	0.2900	0.2611	0.2873	Ave		0.2670				5.1		30.0			
	0.2524	0.2619	0.2714	0.2555	0.2552												
Trichloroethene	0.2965	0.3106	0.3255	0.3165	0.3477	Ave		0.3129				4.9		30.0			
	0.3009	0.3121	0.3179	0.3027	0.2985												
Dibromomethane	+++++	+++++	0.3340	0.3052	0.3252	Ave		0.2981				7.2		30.0			
	0.2764	0.2876	0.2946	0.2795	0.2826												
Bromodichloromethane	0.5065	0.5615	0.5252	0.5048	0.5661	Ave		0.5220				4.7		30.0			
	0.4927	0.5146	0.5303	0.5057	0.5130												
1,4-Dioxane	+++++	+++++	0.0700	0.0698	0.0813	Ave		0.0696				12.8		30.0			
	0.0706	0.0671	0.0796	0.0663	0.0522												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1 Analy Batch No.: 18185

SDG No.: _____

Instrument ID: MJ GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Methyl methacrylate	+++++ 0.2164	+++++ 0.2235	+++++ 0.2774	0.2561 0.2218	0.2876 0.2182	Ave		0.2430				12.5		30.0			
Methylcyclohexane	+++++ 0.4224	0.4795 0.4325	0.4877 0.4304	0.4477 0.4128	0.4868 0.4109	Ave		0.4456				7.0		30.0			
4-Methyl-2-pentanone (MIBK)	+++++ 0.3445	+++++ 0.3355	+++++ 0.4250	0.3988 0.3275	0.4126 0.3227	Ave		0.3667				11.9		30.0			
cis-1,3-Dichloropropene	+++++ 0.3914	0.4061 0.4130	0.4178 0.4318	0.3835 0.4090	0.4391 0.4126	Ave		0.4116				4.2		30.0			
trans-1,3-Dichloropropene	+++++ 0.3607	+++++ 0.3847	0.3761 0.4050	0.3899 0.3791	0.4095 0.3942	Ave		0.3874				4.1		30.0			
Toluene	+++++ 0.7961	0.8419 0.8288	0.8832 0.8490	0.9170 0.7827	0.9008 0.7967	Ave		0.8440				5.7		30.0			
1,1,2-Trichloroethane	0.2354 0.2448	0.2644 0.2549	0.2761 0.2638	0.2683 0.2436	0.2817 0.2452	Ave		0.2578				6.0		30.0			
2-Hexanone	+++++ 0.1960	0.1869 0.1890	0.2038 0.2229	0.1923 0.1857	0.2288 0.1842	Ave		0.1989				8.3		30.0			
Octane	0.3110 0.2841	0.3203 0.2857	0.3034 0.2821	0.2981 0.2678	0.3183 0.2602	Ave		0.2931				7.0		30.0			
C8 Range	+++++ 2.5336	+++++ 2.5549	+++++ 2.5396	+++++ 2.3690	+++++ 2.2706	Ave		2.4535				5.2		30.0			
Dibromochloromethane	0.4903 0.5637	0.5332 0.5979	0.5661 0.6011	0.5582 0.5775	0.6214 0.5781	Ave		0.5688				6.5		30.0			
1,2-Dibromoethane (EDB)	+++++ 0.4644	0.4366 0.4899	0.4944 0.4990	0.4837 0.4698	0.4883 0.4781	Ave		0.4783				4.0		30.0			
Tetrachloroethene	0.3238 0.3222	0.3463 0.3309	0.3757 0.3268	0.3374 0.3095	0.3691 0.3060	Ave		0.3348				6.9		30.0			
Chlorobenzene	+++++ 0.6718	0.6252 0.6856	0.7219 0.6939	0.7097 0.6453	0.7381 0.6303	Ave		0.6802				5.9		30.0			
Ethylbenzene	+++++ 0.9620	1.0030 1.0075	1.1261 1.0732	1.1581 0.9538	1.1728 0.9583	Ave		1.0461				8.4		30.0			
m-Xylene & p-Xylene	+++++ 0.7262	0.7641 0.7684	0.8422 0.8196	0.8471 0.7096	0.8800 0.6923	Ave		0.7833				8.5		30.0			
Nonane	0.5521 0.5484	0.6164 0.5569	0.6378 0.5700	0.6019 0.5066	0.6319 0.4868	Ave		0.5709				8.9		30.0			
Styrene	+++++ 0.5765	0.5431 0.5820	0.6122 0.6668	0.6311 0.5801	0.6964 0.5728	Ave		0.6068				8.2		30.0			
Bromoform	+++++ 0.5867	+++++ 0.6248	0.5936 0.6399	0.5635 0.6306	0.6263 0.6151	Ave		0.6101				4.3		30.0			
o-Xylene	+++++ 0.7733	0.7991 0.8031	0.8592 0.8583	0.9152 0.7508	0.9597 0.7600	Ave		0.8310				8.7		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1 Analy Batch No.: 18185

SDG No.: _____

Instrument ID: MJ GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
1,1,2,2-Tetrachloroethane	++++ 0.5489	0.5954 0.5728	0.6464 0.6308	0.6617 0.5281	0.6902 0.5309	Ave		0.6006				9.9		30.0			
1,2,3-Trichloropropane	++++ 0.1450	0.1401 0.1517	0.1675 0.1689	0.1690 0.1428	0.1847 0.1469	Ave		0.1574				9.9		30.0			
Isopropylbenzene	++++ 1.0062	1.1721 1.0564	1.2564 1.1558	1.2627 0.9849	1.3064 0.9795	Ave		1.1311				11.3		30.0			
Propylbenzene	++++ 0.2785	++++ 0.2940	0.3217 0.3306	0.3339 0.2824	0.3604 0.2873	Ave		0.3111				9.5		30.0			
2-Chlorotoluene	++++ 0.2845	0.3004 0.2935	0.3184 0.3113	0.3206 0.2768	0.3335 0.2770	Ave		0.3018				6.8		30.0			
4-Ethyltoluene	++++ 0.9690	1.0770 1.0296	1.1733 1.1652	1.2170 0.9653	1.2646 0.9651	Ave		1.0918				10.7		30.0			
1,3,5-Trimethylbenzene	++++ 0.4147	0.4164 0.4287	0.4881 0.4881	0.5237 0.4080	0.5328 0.4098	Ave		0.4567				11.2		30.0			
Alpha Methyl Styrene	++++ 0.4206	++++ 0.4612	0.4949 0.5158	0.4932 0.4428	0.5352 0.4435	Ave		0.4759				8.4		30.0			
Decane	++++ 0.6329	++++ 0.6476	0.7986 0.6804	0.7665 0.5676	0.7901 0.5208	Ave		0.6756				15.3		30.0			
tert-Butylbenzene	++++ 0.8685	0.9703 0.9110	1.0503 1.0233	1.1080 0.8376	1.1558 0.8071	Ave		0.9702				12.7		30.0			
1,2,4-Trimethylbenzene	++++ 0.8204	0.9073 0.8641	1.0002 0.9699	1.0394 0.7937	1.0800 0.7679	Ave		0.9159				12.3		30.0			
sec-Butylbenzene	++++ 1.2143	1.3303 1.2626	1.4419 1.4036	1.5356 1.1414	1.6225 1.0753	Ave		1.3364				13.6		30.0			
1,3-Dichlorobenzene	++++ 0.6323	0.6920 0.6595	0.7624 0.7096	0.7188 0.6252	0.7664 0.6091	Ave		0.6861				8.5		30.0			
Benzyl chloride	++++ 0.6434	0.7051 0.7157	0.7654 0.8307	0.7703 0.7084	0.8426 0.6740	Ave		0.7395				9.2		30.0			
1,4-Dichlorobenzene	++++ 0.6196	0.6863 0.6495	0.7654 0.7094	0.7149 0.6292	0.7611 0.6085	Ave		0.6827				8.7		30.0			
4-Isopropyltoluene	++++ 0.9923	1.0268 1.0264	1.2201 1.1604	1.2751 0.9383	1.3083 0.8709	Ave		1.0910				14.2		30.0			
1,2,3-Trimethylbenzene	++++ 0.8106	0.8636 0.8448	0.9649 0.9493	1.0285 0.7815	1.0696 0.7557	Ave		0.8965				12.4		30.0			
Indane	++++ 0.7777	0.8372 0.8138	0.9270 0.8958	0.9702 0.7435	1.0235 0.7090	Ave		0.8553				12.4		30.0			
1,2-Dichlorobenzene	++++ 0.5951	0.6675 0.6122	0.7291 0.6684	0.7064 0.5743	0.7450 0.5433	Ave		0.6490				11.0		30.0			
Butylbenzene	++++ 0.9588	1.0780 1.0007	1.1993 1.1225	1.2326 0.8919	1.2865 0.8121	Ave		1.0647				15.1		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1 Analy Batch No.: 18185

SDG No.: _____

Instrument ID: MJ GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Indene	++++ 0.6491	0.7026 0.6953	0.7542 0.7760	0.7840 0.6436	0.8528 0.6117	Ave		0.7188				10.9		30.0			
Undecane	++++ 0.6507	0.7536 0.6296	0.8097 0.7102	0.7686 0.6023	0.8572 0.5272	Ave		0.7010				15.2		30.0			
1,2-Dibromo-3-Chloropropane	++++ 0.2942	0.2917 0.3108	0.3325 0.3521	0.2976 0.3058	0.3780 0.2886	Ave		0.3168				9.8		30.0			
1,2,4,5-Tetramethylbenzene	++++ 0.8460	0.8453 0.8624	1.0089 1.0435	1.0149 0.8292	1.1345 0.7595	Ave		0.9272				13.5		30.0			
Dodecane	++++ 0.5144	++++ 0.4231	++++ 0.4312	++++ 0.4177	0.7424 0.3282	Qua	0.0236	0.4810	-0.009585						0.9980		0.9900
1,2,4-Trichlorobenzene	++++ 0.4369	0.4982 0.4649	0.5689 0.5411	0.3978 0.4735	0.6084 0.4323	Ave		0.4913				14.1		30.0			
Naphthalene	0.6835 0.7107	0.8474 0.7161	0.9734 0.8343	0.6430 0.6899	1.0586 0.6128	Ave		0.7770				19.0		30.0			
Hexachlorobutadiene	++++ 0.4556	0.5215 0.4700	0.5915 0.5048	0.5287 0.4315	0.6440 0.4119	Ave		0.5066				14.9		30.0			
1,2,3-Trichlorobenzene	++++ 0.3082	++++ 0.2848	0.4147 0.3143	0.2102 0.2816	0.4443 0.2430	Ave		0.3126				25.6		30.0			
2-Methylnaphthalene	++++ 0.0604	++++ 0.0525	++++ 0.0514	0.0394 0.0638	0.1016 ++++	Ave		0.0616				34.7		50.0			
1-Methylnaphthalene	++++ 0.0567	++++ 0.0469	0.0813 0.0453	0.0381 0.0555	0.1033 ++++	Ave		0.0610				38.0		50.0			
4-Bromofluorobenzene (Surr)	0.7353 0.7158	0.7351 0.7064	0.7390 0.7313	0.7145 0.7223	0.7395 0.6923	Ave		0.7231				2.2		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1 Analy Batch No.: 18185

SDG No.: _____

Instrument ID: MJ GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-18185/3	JB15ICL01.D
Level 2	IC 140-18185/4	JB15ICL02.D
Level 3	IC 140-18185/5	JB15ICL03.D
Level 4	IC 140-18185/6	JB15ICL04.D
Level 5	IC 140-18185/7	JB15ICL05.D
Level 6	IC 140-18185/8	JB15ICL06.D
Level 7	ICIS 140-18185/9	JB15ICISL07.D
Level 8	IC 140-18185/10	JB15ICL08.D
Level 9	IC 140-18185/11	JB15ICL09.D
Level 10	IC 140-18185/12	JB15ICL10.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Chlorodifluoromethane	CBM	Ave	++++ 27753	++++ 54851	3577 101106	5657 214696	12058 440085	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propene	CBM	Ave	++++ 82581	++++ 162079	7440 316474	14182 647152	33073 1263500	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dichlorodifluoromethane	CBM	Ave	4610 254947	9371 531010	21153 1026119	42724 2062839	106241 4108290	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloromethane	CBM	Ave	++++ 29822	++++ 59780	++++ 109960	5660 228533	12950 439355	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	2961 169926	5973 348077	13879 642320	28478 1377554	72222 2692563	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl chloride	CBM	Ave	1262 98274	2929 202765	8173 374370	16389 777336	41629 1533687	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Butadiene	CBM	Ave	++++ 74384	++++ 149529	6527 277320	13259 586005	31237 1140773	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butane	CBM	Ave	++++ 138185	++++ 288707	12961 537741	23931 1100932	58983 2153025	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromomethane	CBM	Ave	1533 93013	3337 189535	8215 353158	16066 759169	38970 1529331	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chloroethane	CBM	Ave	++++ 47525	1866 97167	3968 182916	8085 387996	19730 787780	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethanol	CBM	Ave	++++ 169364	++++ 339004	++++ 715122	32209 1279493	80056 2178805	++++ 5.00	++++ 10.0	++++ 20.0	0.800 40.0	2.00 80.0
Vinyl bromide	CBM	Ave	++++ 86990	3063 181747	7192 338017	14562 722769	37034 1469727	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylbutane	CBM	Ave	++++ 101583	++++ 219189	++++ 392146	17850 825846	45820 1650561	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Trichlorofluoromethane	CBM	Ave	4076 251225	8622 519886	20764 944269	42082 2068202	106737 4119857	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1 Analy Batch No.: 18185

SDG No.: _____

Instrument ID: MJ GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Acrolein	CBM	Ave	++++ 20755	++++ 50113	++++ 102480	++++ 182696	11307 406528	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Acetonitrile	CBM	Ave	++++ 26469	++++ 60118	++++ 131375	++++ 227816	15639 482336	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Acetone	CBM	Ave	++++ 87339	++++ 180855	++++ 406789	++++ 685323	52018 1390929	++++ 3.00	++++ 6.00	++++ 12.0	++++ 24.0	1.20 48.0
Pentane	CBM	Ave	++++ 14849	++++ 30864	++++ 55484	++++ 117550	6517 244732	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Isopropyl alcohol	CBM	Ave	++++ 266351	++++ 488972	++++ 1055630	++++ 1918054	142160 3482589	++++ 3.00	0.120 6.00	0.240 12.0	0.480 24.0	1.20 48.0
Ethyl ether	CBM	Ave	++++ 65736	++++ 148732	++++ 321989	++++ 553177	15056 1171220	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethene	CBM	Ave	++++ 90621	++++ 189184	++++ 344392	++++ 754423	39680 1535615	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Acrylonitrile	CBM	Ave	++++ 49529	++++ 107948	++++ 230835	++++ 436353	9991 902964	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
tert-Butyl alcohol	CBM	Lin1	++++ 127270	++++ 220441	++++ 415127	++++ 919383	58060 1632262	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	++++ 195021	++++ 401001	++++ 753175	++++ 1586774	33602 3139209	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methylene Chloride	CBM	Ave	++++ 93225	++++ 177679	++++ 329860	++++ 680277	26564 1349970	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
3-Chloropropene	CBM	Lin1	++++ 83333	++++ 160899	++++ 328625	++++ 656238	13906 1319889	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon disulfide	CBM	Ave	++++ 265055	++++ 556931	++++ 1014855	++++ 2180282	46690 4378353	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,2-Dichloroethene	CBM	Ave	++++ 92328	++++ 189036	++++ 356777	++++ 754307	15649 1495456	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylpentane	CBM	Ave	++++ 209227	++++ 432234	++++ 796987	++++ 1652759	36385 3175157	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methyl tert-butyl ether	CBM	Ave	++++ 190134	++++ 396264	++++ 905606	++++ 1590174	37261 3259814	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethane	CBM	Ave	++++ 165806	++++ 349810	++++ 686686	++++ 1397954	76318 2804661	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Vinyl acetate	CBM	Ave	++++ 177532	++++ 390265	++++ 865889	++++ 1582936	37307 3288528	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Butanone (MEK)	CBM	Ave	++++ 32107	++++ 65541	++++ 154279	++++ 265192	7576 501778	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Hexane	CBM	Ave	++++ 73808	++++ 150365	++++ 286027	++++ 591318	14214 1164610	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
cis-1,2-Dichloroethene	CBM	Ave	++++ 91036	++++ 190591	++++ 373543	++++ 771979	16376 1553316	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1 Analy Batch No.: 18185

SDG No.: _____

Instrument ID: MJ GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Ethyl acetate	CBM	Ave	++++ 141681	++++ 291559	++++ 683903	31175 1177995	76623 2276697	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Chloroform	CBM	Ave	++++ 190800	++++ 396942	++++ 779025	35241 1591098	86586 3188140	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrahydrofuran	CBM	Ave	++++ 76999	++++ 162110	++++ 340009	17204 641564	40956 1211876	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,1,1-Trichloroethane	CBM	Ave	4176 197454	8645 416395	18145 804959	35378 1669563	89788 3337256	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloroethane	DFBZ	Ave	++++ 123151	4723 259212	10626 509786	21442 1050690	56229 2135949	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1-Butanol	DFBZ	Ave	++++ 29744	++++ 50901	++++ 111381	++++ 202000	13885 362827	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Cyclohexane	DFBZ	Ave	++++ 45080	++++ 92419	4472 171655	7932 357423	20197 685290	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzene	DFBZ	Ave	6241 263091	12063 547051	24429 1065062	48414 2097890	119041 4024394	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Carbon tetrachloride	DFBZ	Ave	3550 209982	7915 438828	18207 851003	36066 1762311	93367 3537791	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,3-Dimethylpentane	DFBZ	Ave	++++ 63347	++++ 130603	5875 249155	11913 508864	28672 1017496	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Thiophene	DFBZ	Ave	++++ 150312	++++ 321955	13462 626957	27334 1270708	69518 2563344	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2,2,4-Trimethylpentane	DFBZ	Ave	++++ 439459	++++ 900463	40803 1723360	79383 3486427	196445 6676767	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Heptane	DFBZ	Ave	++++ 94765	3902 196222	8492 381559	17167 777358	43205 1540847	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichloropropane	DFBZ	Ave	++++ 100302	4098 210169	9261 421493	17767 847107	44766 1682910	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Trichloroethene	DFBZ	Ave	2325 119589	4743 250475	10397 493629	21535 1003544	54179 1968061	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dibromomethane	DFBZ	Ave	++++ 109851	++++ 230836	10667 457388	20766 926694	50669 1863214	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromodichloromethane	DFBZ	Ave	3971 195803	8574 413015	16774 823450	34347 1676336	88194 3382471	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dioxane	DFBZ	Ave	++++ 28069	++++ 53844	2237 123538	4748 219872	12668 344425	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Methyl methacrylate	DFBZ	Ave	++++ 85989	++++ 179409	++++ 430723	17426 735125	44804 1438539	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Methylcyclohexane	DFBZ	Ave	++++ 167878	7322 347070	15575 668329	30462 1368540	75845 2709025	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	++++ 136923	++++ 269233	++++ 659992	27138 1085608	64288 2127971	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1 Analy Batch No.: 18185

SDG No.: _____

Instrument ID: MJ GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
cis-1,3-Dichloropropene	DFBZ	Ave	+++++ 155553	6201 331437	13343 670433	26097 1355923	68409 2720193	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
trans-1,3-Dichloropropene	CBZd 5	Ave	+++++ 128407	+++++ 278618	10875 591191	23711 1173124	58578 2433426	+++++ 1.00	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Toluene	CBZd 5	Ave	+++++ 283412	11936 600208	25542 1239377	54782 2422147	131181 4918045	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloroethane	CBZd 5	Ave	1695 87152	3749 184581	7985 385134	16317 753906	40303 1513985	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Hexanone	CBZd 5	Ave	+++++ 69784	2650 136876	5895 325452	11694 574790	32729 1137183	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Octane	CBZd 5	Ave	2239 101126	4541 206925	8774 411769	18132 828864	45527 1606217	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
C8 Range	CBZd 5	Ave	+++++ 901978	+++++ 1850127	+++++ 3707341	+++++ 7331415	+++++ 14016806	+++++ 1.00	+++++ 2.00	+++++ 4.00	+++++ 8.00	+++++ 16.0
Dibromochloromethane	CBZd 5	Ave	3530 200692	7559 432967	16372 877444	33946 1787283	88886 3568712	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dibromoethane (EDB)	CBZd 5	Ave	+++++ 165343	6189 354754	14297 728486	29416 1453979	69856 2951686	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Tetrachloroethene	CBZd 5	Ave	2331 114687	4909 239650	10866 477136	20519 957712	52795 1889134	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Chlorobenzene	CBZd 5	Ave	+++++ 239164	8864 496514	20875 1012976	43161 1997116	105585 3891277	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Ethylbenzene	CBZd 5	Ave	+++++ 342484	14220 729559	32565 1566611	70429 2951613	167768 5915991	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
m-Xylene & p-Xylene	CBZd 5	Ave	+++++ 517067	21664 1112844	48711 2392826	103040 4391902	251768 8546976	+++++ 2.00	0.0800 4.00	0.160 8.00	0.320 16.0	0.800 32.0
Nonane	CBZd 5	Ave	3975 195236	8738 403252	18443 832138	36604 1567651	90392 3005085	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Styrene	CBZd 5	Ave	+++++ 205243	7700 421470	17705 973459	38384 1795211	99622 3536130	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Bromoform	CBZd 5	Ave	+++++ 208872	+++++ 452443	17167 934107	34267 1951424	89592 3797430	+++++ 1.00	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
o-Xylene	CBZd 5	Ave	+++++ 275312	11329 581607	24847 1252990	55661 2323383	137277 4691784	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	+++++ 195397	8441 414828	18692 920868	40240 1634322	98733 3277617	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichloropropane	CBZd 5	Ave	+++++ 51609	1986 109836	4845 246555	10278 441919	26427 906990	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Isopropylbenzene	CBZd 5	Ave	+++++ 358205	16616 764991	36334 1687204	76795 3047982	186877 6046514	+++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Propylbenzene	CBZd 5	Ave	+++++ 99164	+++++ 212901	9302 482571	20306 873966	51549 1773765	+++++ 1.00	+++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1 Analy Batch No.: 18185

SDG No.: _____

Instrument ID: MJ GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2-Chlorotoluene	CBZd 5	Ave	++++ 101293	4258 212574	9208 454373	19495 856661	47705 1710230	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Ethyltoluene	CBZd 5	Ave	++++ 344967	15269 745587	33930 1700936	74014 2987293	180899 5957624	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3,5-Trimethylbenzene	CBZd 5	Ave	++++ 147646	5903 310461	14114 712579	31849 1262527	76220 2530049	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Alpha Methyl Styrene	CBZd 5	Ave	++++ 149742	++++ 334017	14312 752971	29994 1370381	76565 2737983	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Decane	CBZd 5	Ave	++++ 225316	++++ 468958	23094 993210	46614 1756545	113027 3214750	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
tert-Butylbenzene	CBZd 5	Ave	++++ 309204	13756 659713	30373 1493882	67386 2592000	165330 4982279	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4-Trimethylbenzene	CBZd 5	Ave	++++ 292070	12863 625778	28923 1415936	63212 2456158	154495 4740203	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
sec-Butylbenzene	CBZd 5	Ave	++++ 432308	18860 914293	41696 2048964	93389 3532437	232101 6638117	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,3-Dichlorobenzene	CBZd 5	Ave	++++ 225116	9811 477551	22046 1035883	43715 1934769	109636 3759992	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Benzyl chloride	CBZd 5	Ave	++++ 229036	9996 518315	22135 1212674	46845 2192216	120536 4160862	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,4-Dichlorobenzene	CBZd 5	Ave	++++ 220578	9729 470366	22135 1035664	43480 1947184	108874 3756592	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
4-Isopropyltoluene	CBZd 5	Ave	++++ 353244	14557 743248	35283 1693897	77548 2903808	187151 5376440	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trimethylbenzene	CBZd 5	Ave	++++ 288587	12243 611735	27902 1385849	62548 2418553	153010 4664935	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indane	CBZd 5	Ave	++++ 276849	11869 589287	26808 1307644	59006 2301054	146404 4376817	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dichlorobenzene	CBZd 5	Ave	++++ 211868	9463 443319	21084 975697	42959 1777289	106565 3354013	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Butylbenzene	CBZd 5	Ave	++++ 341321	15282 724644	34682 1638649	74962 2760230	184036 5013238	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Indene	CBZd 5	Ave	++++ 231067	9960 503526	21811 1132821	47682 1991794	121997 3775959	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Undecane	CBZd 5	Ave	++++ 231645	10683 455946	23414 1036819	46744 1863928	122622 3254285	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	++++ 104745	4136 225034	9615 514013	18099 946492	54065 1781427	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	++++ 301194	11984 624537	29177 1523328	61721 2566257	162287 4688609	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Dodecane	CBZd 5	Qua	++++ 183122	++++ 306380	++++ 629519	++++ 1292753	106198 2025925	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1 Analy Batch No.: 18185

SDG No.: _____

Instrument ID: MJ GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
1,2,4-Trichlorobenzene	CBZd 5	Ave	++++ 155531	7063 336684	16452 789833	24193 1465426	87032 2668565	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Naphthalene	CBZd 5	Ave	4921 253015	12014 518551	28149 1217927	39105 2135019	151426 3783262	0.0200 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
Hexachlorobutadiene	CBZd 5	Ave	++++ 162206	7393 340335	17105 736883	32154 1335307	92129 2542924	++++ 1.00	0.0400 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichlorobenzene	CBZd 5	Ave	++++ 109718	++++ 206227	11991 458814	12782 871367	63553 1500391	++++ 1.00	++++ 2.00	0.0800 4.00	0.160 8.00	0.400 16.0
2-Methylnaphthalene	CBZd 5	Ave	++++ 67237	++++ 118911	++++ 234598	7493 617406	45438 ++++	++++ 3.13	++++ 6.25	++++ 12.5	0.500 25.0	1.25 ++++
1-Methylnaphthalene	CBZd 5	Ave	++++ 63122	++++ 106135	7343 206757	7235 536661	46180 ++++	++++ 3.13	++++ 6.25	0.250 12.5	0.500 25.0	1.25 ++++
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1058714 1019252	1042081 1023083	1068525 1067616	1086367 1117665	1057828 1068475	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Qua = Quadratic ISTD

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1 Analy Batch No.: 18185

SDG No.: _____

Instrument ID: MJ GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-18185/3	JB15ICL01.D
Level 2	IC 140-18185/4	JB15ICL02.D
Level 3	IC 140-18185/5	JB15ICL03.D
Level 4	IC 140-18185/6	JB15ICL04.D
Level 5	IC 140-18185/7	JB15ICL05.D
Level 6	IC 140-18185/8	JB15ICL06.D
Level 7	ICIS 140-18185/9	JB15ICISL07.D
Level 8	IC 140-18185/10	JB15ICL08.D
Level 9	IC 140-18185/11	JB15ICL09.D
Level 10	IC 140-18185/12	JB15ICL10.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chlorodifluoromethane	+++++	+++++	47.5						50			
Propene	+++++	+++++	12.6						50			
Dichlorodifluoromethane	-7.5						50					
Chloromethane	+++++	+++++	+++++	12.5						50		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	-9.4						50					
Vinyl chloride	-30.5						50					
1,3-Butadiene	+++++	+++++	8.8						50			
Butane	+++++	+++++	13.9						50			
Bromomethane	-15.3						50					
Chloroethane	+++++	-0.4						50				
Ethanol	+++++	+++++	+++++	11.0						50		
Vinyl bromide	+++++	-10.4						50				
2-Methylbutane	+++++	+++++	+++++	0.9						50		
Trichlorofluoromethane	-15.5						50					

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1 Analy Batch No.: 18185

SDG No.: _____

Instrument ID: MJ GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Acrolein	+++++	+++++	+++++	+++++	15.7						50	
Acetonitrile	+++++	+++++	+++++	+++++	26.5						50	
Acetone	+++++	+++++	+++++	+++++	35.1						80	
Pentane	+++++	+++++	+++++	+++++	9.3						50	
Isopropyl alcohol	+++++	11.0						50				
Ethyl ether	+++++	5.7						50				
1,1-Dichloroethene	-10.0						50					
Acrylonitrile	+++++	+++++	+++++	5.4						50		
tert-Butyl alcohol	+++++	+++++	-34.2						50			
1,1,2-Trichloro-1,2,2-trifluoroethane	-9.5						50					
Methylene Chloride	+++++	+++++	+++++	54.8						80		
3-Chloropropene	+++++	+++++	2.1						50			
Carbon disulfide	-3.9						50					
trans-1,2-Dichloroethene	+++++	-1.7						50				
2-Methylpentane	+++++	+++++	18.6						50			
Methyl tert-butyl ether	+++++	-9.9						50				
1,1-Dichloroethane	-2.5						50					
Vinyl acetate	+++++	-16.2						50				
2-Butanone (MEK)	+++++	+++++	+++++	23.7						50		
Hexane	+++++	+++++	+++++	10.2						50		
cis-1,2-Dichloroethene	-4.7						50					

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1 Analy Batch No.: 18185

SDG No.: _____

Instrument ID: MJ GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Ethyl acetate	+++++	+++++	+++++	15.1						50		
Chloroform	+++++	+++++	9.6						50			
Tetrahydrofuran	+++++	+++++	+++++	18.4						50		
1,1,1-Trichloroethane	0.8						50					
1,2-Dichloroethane	+++++	-4.7						50				
1-Butanol	+++++	+++++	+++++	+++++	28.8						50	
Cyclohexane	+++++	+++++	19.5						50			
Benzene	12.1						50					
Carbon tetrachloride	-15.6						50					
2,3-Dimethylpentane	+++++	+++++	10.4						50			
Thiophene	+++++	+++++	4.6						50			
2,2,4-Trimethylpentane	+++++	+++++	12.2						50			
Heptane	+++++	2.3						50				
1,2-Dichloropropane	+++++	0.5						50				
Trichloroethene	-5.2						50					
Dibromomethane	+++++	+++++	12.0						50			
Bromodichloromethane	-3.0						50					
1,4-Dioxane	+++++	+++++	0.6						50			
Methyl methacrylate	+++++	+++++	+++++	5.4						50		
Methylcyclohexane	+++++	7.6						50				
4-Methyl-2-pentanone (MIBK)	+++++	+++++	+++++	8.8						50		

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1 Analy Batch No.: 18185

SDG No.: _____

Instrument ID: MJ GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
cis-1,3-Dichloropropene	+++++	-1.3						50				
trans-1,3-Dichloropropene	+++++	+++++	-2.9						50			
Toluene	+++++	-0.2						50				
1,1,2-Trichloroethane	-8.7						50					
2-Hexanone	+++++	-6.0						50				
Octane	6.1						50					
Dibromochloromethane	-13.8						50					
1,2-Dibromoethane (EDB)	+++++	-8.7						50				
Tetrachloroethene	-3.3						50					
Chlorobenzene	+++++	-8.1						50				
Ethylbenzene	+++++	-4.1						50				
m-Xylene & p-Xylene	+++++	-2.5						50				
Nonane	-3.3						50					
Styrene	+++++	-10.5						50				
Bromoform	+++++	+++++	-2.7						50			
o-Xylene	+++++	-3.8						50				
1,1,2,2-Tetrachloroethane	+++++	-0.9						50				
1,2,3-Trichloropropane	+++++	-11.0						50				
Isopropylbenzene	+++++	3.6						50				
Propylbenzene	+++++	+++++	3.4						50			
2-Chlorotoluene	+++++	-0.5						50				

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1 Analy Batch No.: 18185

SDG No.: _____

Instrument ID: MJ GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
4-Ethyltoluene	+++++	-1.4						50				
1,3,5-Trimethylbenzene	+++++	-8.8						50				
Alpha Methyl Styrene	+++++	+++++	4.0						50			
Decane	+++++	+++++	18.2						50			
tert-Butylbenzene	+++++	0.0						50				
1,2,4-Trimethylbenzene	+++++	-0.9						50				
sec-Butylbenzene	+++++	-0.5						50				
1,3-Dichlorobenzene	+++++	0.9						50				
Benzyl chloride	+++++	-4.7						50				
1,4-Dichlorobenzene	+++++	0.5						50				
4-Isopropyltoluene	+++++	-5.9						50				
1,2,3-Trimethylbenzene	+++++	-3.7						50				
Indane	+++++	-2.1						50				
1,2-Dichlorobenzene	+++++	2.8						50				
Butylbenzene	+++++	1.2						50				
Indene	+++++	-2.3						50				
Undecane	+++++	7.5						50				
1,2-Dibromo-3-Chloropropane	+++++	-7.9						50				
1,2,4,5-Tetramethylbenzene	+++++	-8.8						50				
Dodecane	+++++	+++++	+++++	+++++	43.7						50	
1,2,4-Trichlorobenzene	+++++	1.4						50				

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1 Analy Batch No.: 18185

SDG No.: _____

Instrument ID: MJ GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/15/2018 15:35 Calibration End Date: 02/15/2018 22:24 Calibration ID: 1394

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Naphthalene	-12.0						80					
Hexachlorobutadiene	+++++	2.9						50				
1,2,3-Trichlorobenzene	+++++	+++++	32.6						50			
2-Methylnaphthalene	+++++	+++++	+++++	-35.9 +++++						80		
1-Methylnaphthalene	+++++	+++++	33.2	+++++					80			

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL01.D
 Lims ID: IC L1
 Client ID:
 Sample Type: IC Calib Level: 1
 Inject. Date: 15-Feb-2018 15:35:30 ALS Bottle#: 8 Worklist Smp#: 3
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0007391-003
 Misc. Info.: 140829
 Operator ID: 403648 Instrument ID: MJ
 Sublist: chrom-MJ_TO15*sub14
 Method: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\MJ_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Feb-2018 10:02:34 Calib Date: 15-Feb-2018 22:24:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK031

First Level Reviewer: tajh

Date: 15-Feb-2018 16:23:01

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.683	9.689	-0.006	92	277908	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.786	11.790	-0.004	95	1568041	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.386	16.389	-0.003	88	1439930	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.989	17.992	-0.003	94	1058714	4.00	4.07	
7 Propene	41	4.223	4.216	0.007	84	2145	0.0200	0.0265	
8 Dichlorodifluoromethane	85	4.277	4.274	0.003	95	4610	0.0200	0.0185	
9 Chloromethane	52	4.492	4.482	0.010	86	1267	0.0200	0.0434	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.497	4.489	0.008	89	2961	0.0200	0.0181	
11 Acetaldehyde	44	4.669	4.662	0.007	96	7382	0.1000	0.2280	
12 Vinyl chloride	62	4.680	4.679	0.001	90	1262	0.0200	0.0139	
13 Butadiene	54	4.772	4.777	-0.005	74	1578	0.0200	0.0215	
14 Butane	43	4.782	4.777	0.005	84	2812	0.0200	0.0202	
15 Bromomethane	94	5.148	5.146	0.002	79	1533	0.0200	0.0169	
17 Ethanol	31	5.460	5.435	0.025	90	3931	0.1000	0.1168	
18 Vinyl bromide	106	5.638	5.641	-0.003	93	1273	0.0200	0.0148	
19 2-Methylbutane	43	5.702	5.693	0.009	88	2249	0.0200	0.0219	
20 Trichlorofluoromethane	101	5.934	5.933	0.001	93	4076	0.0200	0.0169	
22 Acetone	58	6.106	6.081	0.025	92	3088	0.0600	0.0976	
25 Isopropyl alcohol	45	6.246	6.201	0.045	97	5659	0.0600	0.0624	
27 1,1-Dichloroethene	96	6.692	6.692	0.000	87	1656	0.0200	0.0180	
29 1,1,2-Trichloro-1,2,2-trif	101	6.880	6.875	0.005	92	3449	0.0200	0.0181	
32 Methylene Chloride	84	7.058	7.061	-0.003	96	13198	0.0200	0.1326	
31 3-Chloro-1-propene	39	7.079	7.077	0.002	30	2455	0.0200	0.000854	
33 Carbon disulfide	76	7.241	7.239	0.002	94	5129	0.0200	0.0192	
34 trans-1,2-Dichloroethene	96	7.897	7.903	-0.006	74	1569	0.0200	0.0170	
35 2-Methylpentane	43	7.924	7.917	0.007	91	5859	0.0200	0.0276	
37 1,1-Dichloroethane	63	8.344	8.343	0.001	93	3370	0.0200	0.0195	
42 cis-1,2-Dichloroethene	96	9.339	9.347	-0.008	88	1790	0.0200	0.0191	
47 1,1,1-Trichloroethane	97	10.727	10.721	0.006	90	4176	0.0200	0.0202	
50 Benzene	78	11.286	11.291	-0.005	95	6241	0.0200	0.0224	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
52 Carbon tetrachloride	117	11.313	11.310	0.003	69	3550	0.0200	0.0169	
55 2,3-Dimethylpentane	71	11.383	11.384	-0.001	86	1368	0.0200	0.0209	
56 Isooctane	57	11.991	11.995	-0.004	96	10818	0.0200	0.0242	
57 n-Heptane	71	12.335	12.342	-0.007	89	2340	0.0200	0.0239	
58 1,2-Dichloropropane	63	12.453	12.451	0.002	60	1669	0.0200	0.0159	
59 Trichloroethene	130	12.475	12.480	-0.005	92	2325	0.0200	0.0190	
60 Dibromomethane	93	12.566	12.569	-0.003	93	3446	0.0200	0.0295	
61 Dichlorobromomethane	83	12.701	12.704	-0.003	90	3971	0.0200	0.0194	
64 Methylcyclohexane	83	13.223	13.222	0.001	92	4080	0.0200	0.0234	
65 4-Methyl-2-pentanone (MIBK)	43	13.653	13.618	0.035	71	3273	0.0200	0.0228	
66 cis-1,3-Dichloropropene	75	13.658	13.659	-0.001	87	2659	0.0200	0.0165	
67 trans-1,3-Dichloropropene	75	14.325	14.329	-0.004	87	1950	0.0200	0.0140	
68 Toluene	91	14.449	14.458	-0.009	91	5238	0.0200	0.0172	
69 1,1,2-Trichloroethane	83	14.530	14.532	-0.002	85	1695	0.0200	0.0183	
73 n-Octane	85	15.095	15.100	-0.005	92	2239	0.0200	0.0212	
74 Chlorodibromomethane	129	15.224	15.227	-0.003	91	3530	0.0200	0.0172	
75 Ethylene Dibromide	107	15.514	15.514	0.000	95	2826	0.0200	0.0164	
76 Tetrachloroethene	129	15.579	15.575	0.004	93	2331	0.0200	0.0193	
79 Ethylbenzene	91	16.709	16.711	-0.002	94	5029	0.0200	0.0134	
81 m-Xylene & p-Xylene	91	16.865	16.869	-0.004	0	7004	0.0400	0.0248	
82 n-Nonane	57	17.252	17.252	0.000	92	3975	0.0200	0.0193	
83 Styrene	104	17.322	17.331	-0.009	92	2608	0.0200	0.0119	
84 Bromoform	173	17.327	17.333	-0.006	88	2789	0.0200	0.0127	
85 o-Xylene	91	17.386	17.391	-0.005	92	4017	0.0200	0.0134	
86 1,1,2,2-Tetrachloroethane	83	17.709	17.708	0.001	88	3090	0.0200	0.0143	
88 Isopropylbenzene	105	17.957	17.956	0.001	91	4974	0.0200	0.0122	
89 N-Propylbenzene	120	18.462	18.462	0.000	97	928	0.0200	0.008287	
90 2-Chlorotoluene	126	18.516	18.516	0.000	89	1194	0.0200	0.0110	
91 4-Ethyltoluene	105	18.602	18.602	0.000	94	4683	0.0200	0.0119	
92 1,3,5-Trimethylbenzene	120	18.672	18.672	0.000	89	1711	0.0200	0.0104	
93 Alpha Methyl Styrene	118	18.887	18.891	-0.004	80	1396	0.0200	0.008148	
94 n-Decane	57	18.920	18.923	-0.003	90	4548	0.0200	0.0187	
95 tert-Butylbenzene	119	19.081	19.079	0.002	74	4130	0.0200	0.0118	
96 1,2,4-Trimethylbenzene	105	19.092	19.091	0.001	89	3740	0.0200	0.0113	
97 sec-Butylbenzene	105	19.334	19.337	-0.003	96	5793	0.0200	0.0120	
98 1,3-Dichlorobenzene	146	19.361	19.363	-0.002	96	3672	0.0200	0.0149	
99 Benzyl chloride	91	19.431	19.431	0.000	94	3421	0.0200	0.0129	
100 1,4-Dichlorobenzene	146	19.441	19.445	-0.004	90	3423	0.0200	0.0139	
101 4-Isopropyltoluene	119	19.490	19.489	0.001	95	4393	0.0200	0.0112	
102 1,2,3-Trimethylbenzene	105	19.549	19.549	0.000	93	3903	0.0200	0.0121	
103 Butylcyclohexane	83	19.592	19.591	0.001	93	5501	0.0200	0.0185	
104 2,3-Dihydroindene	117	19.791	19.792	-0.001	88	3782	0.0200	0.0123	
105 1,2-Dichlorobenzene	146	19.796	19.795	0.001	90	3132	0.0200	0.0134	
106 n-Butylbenzene	91	19.904	19.907	-0.003	94	4751	0.0200	0.0124	
107 Indene	116	19.915	19.918	-0.003	67	2949	0.0200	0.0114	
108 Undecane	57	20.189	20.186	0.003	93	3741	0.0200	0.0148	
110 1,2-Dibromo-3-Chloropropan	157	20.377	20.381	-0.004	86	1272	0.0200	0.0112	
111 1,2,4,5-Tetramethylbenzene	119	20.657	20.658	-0.001	93	4311	0.0200	0.0129	
115 1,2,4-Trichlorobenzene	180	21.507	21.509	-0.002	90	2738	0.0200	0.0155	
116 Naphthalene	128	21.642	21.642	0.000	97	4921	0.0200	0.0176	
118 Hexachlorobutadiene	225	21.798	21.798	0.000	91	2537	0.0200	0.0139	
119 1,2,3-Trichlorobenzene	180	21.857	21.858	-0.001	91	2006	0.0200	0.0178	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
120 2-Methylnaphthalene	142	22.384	22.385	-0.001	93	1417	0.0625	0.0639	
121 1-Methylnaphthalene	142	22.513	22.509	0.004	94	1821	0.0625	0.0829	
A 123 C8 Range	1	15.110	(15.083-15.137)		0	25246	0.0200	0.0286	
S 124 Xylenes, Total	100				0		0.0600	0.0383	
S 125 1,2-Dichloroethene, Total	1				0		0.0400	0.0361	

Reagents:

40L1-3DQP_00001

Amount Added: 50.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL01.D

Injection Date: 15-Feb-2018 15:35:30

Instrument ID: MJ

Operator ID: 403648

Lims ID: IC L1

Worklist Smp#: 3

Client ID:

Purge Vol: 500.000 mL

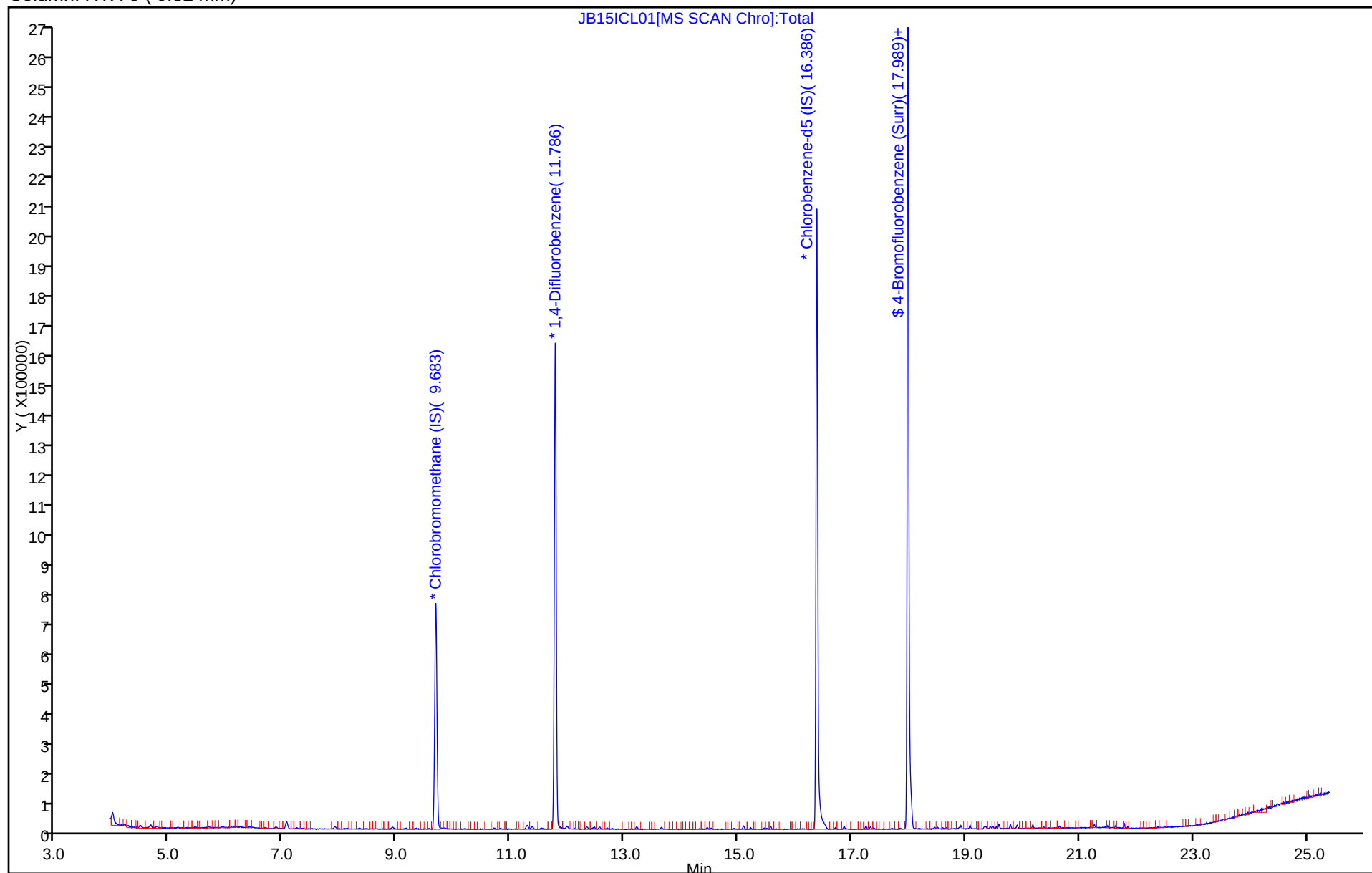
Dil. Factor: 1.0000

ALS Bottle#: 8

Method: MJ_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL01.D

Injection Date: 15-Feb-2018 15:35:30

Instrument ID: MJ

Lims ID: IC L1

Client ID:

Operator ID: 403648

ALS Bottle#: 8

Worklist Smp#: 3

Purge Vol: 500.000 mL

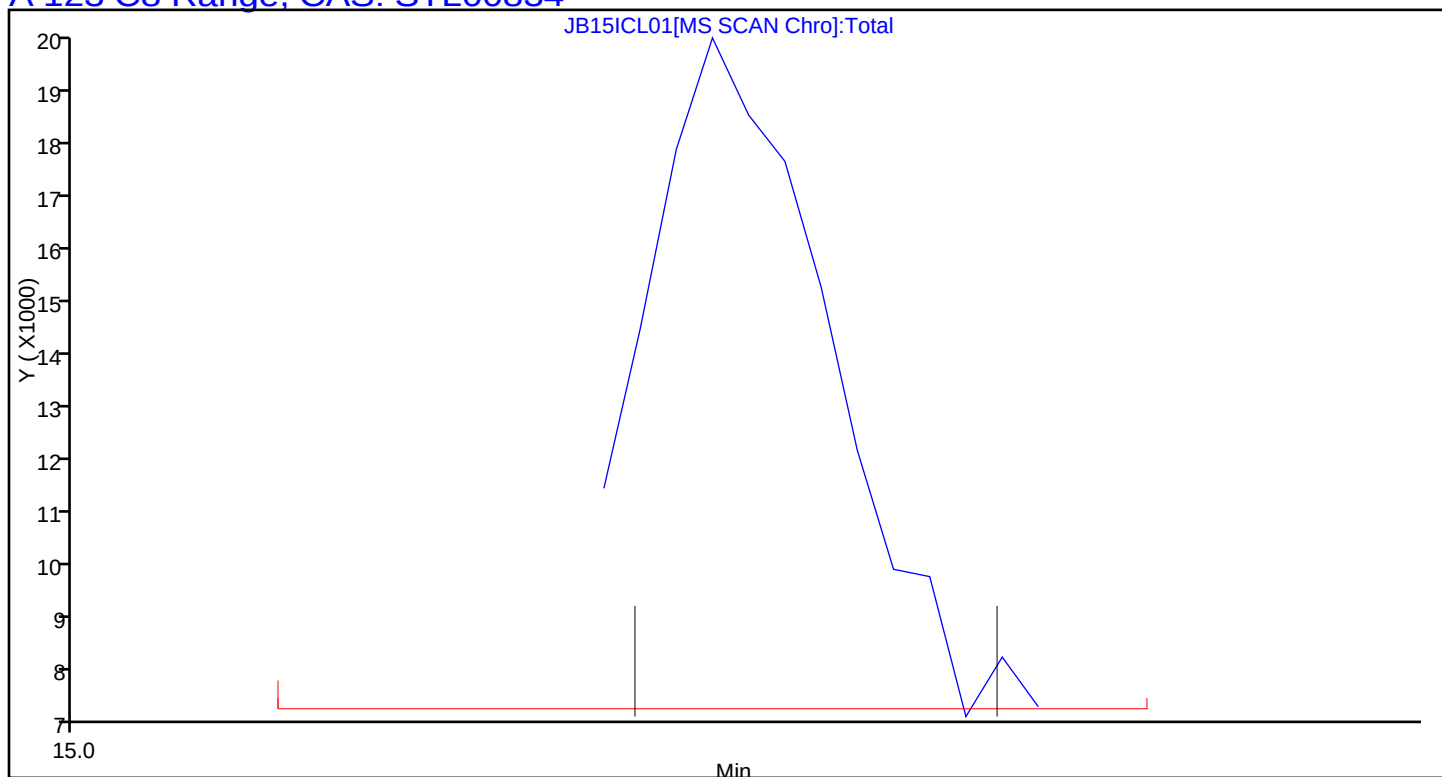
Dil. Factor: 1.0000

Method: MJ_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 123 C8 Range, CAS: STL00834

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL01.D

Injection Date: 15-Feb-2018 15:35:30

Instrument ID: MJ

Lims ID: IC L1

Client ID:

Operator ID: 403648

ALS Bottle#:

8

Worklist Smp#: 3

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MJ_TO15

Limit Group:

MSA TO14A_15 Routine ICAL

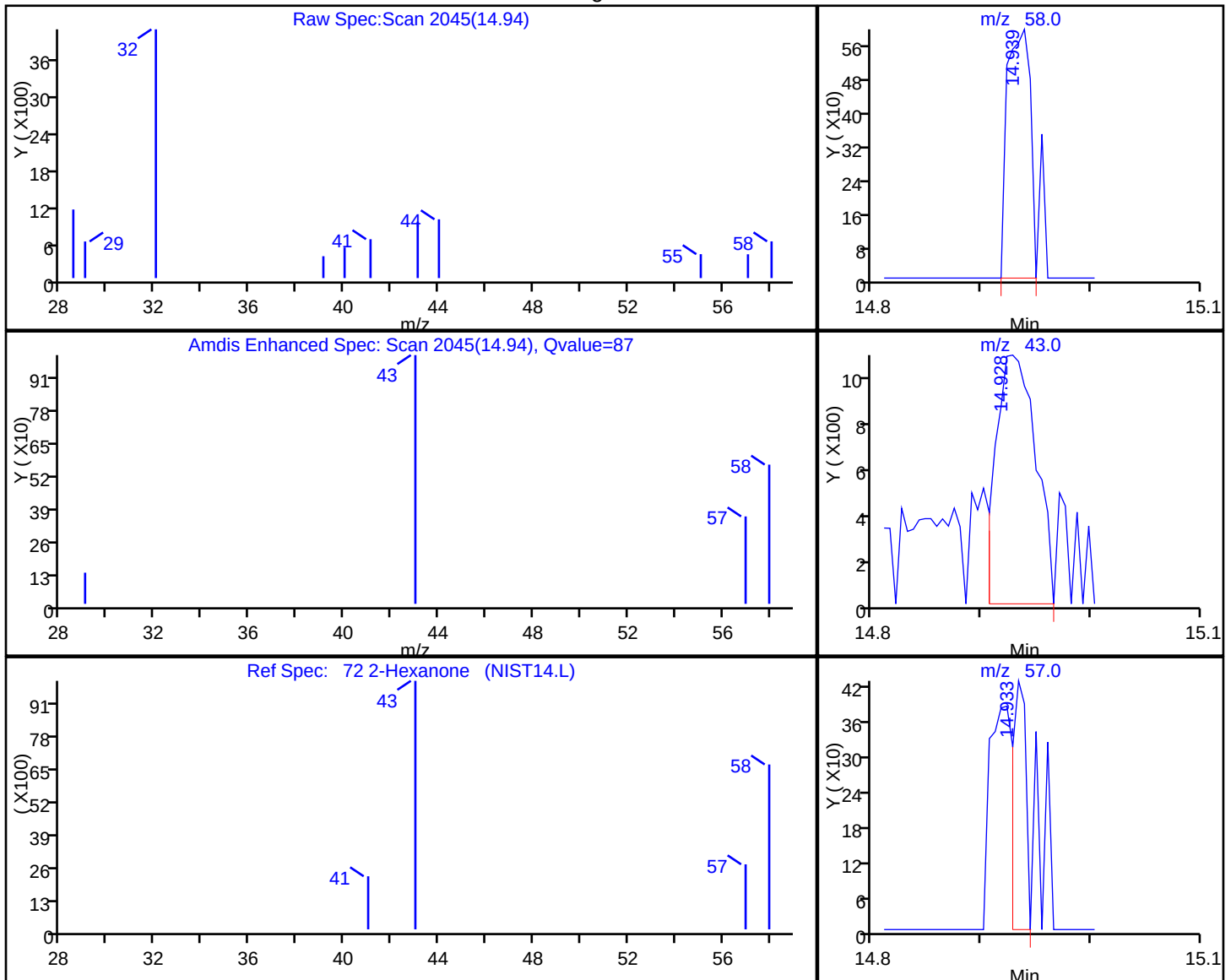
Column: RTX-5 (0.32 mm)

Detector

MS SCAN

72 2-Hexanone, CAS: 591-78-6

Processing Results



RT	Mass	Response	Amount
14.94	58.00	863	0.012055
14.93	43.00	2634	
14.93	57.00	360	

Reviewer: barlozhetskayaa, 16-Feb-2018 11:40:25

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL01.D

Injection Date: 15-Feb-2018 15:35:30

Instrument ID: MJ

Lims ID: IC L1

Client ID:

Operator ID: 403648

ALS Bottle#:

8

Worklist Smp#: 3

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MJ_TO15

Limit Group:

MSA TO14A_15 Routine ICAL

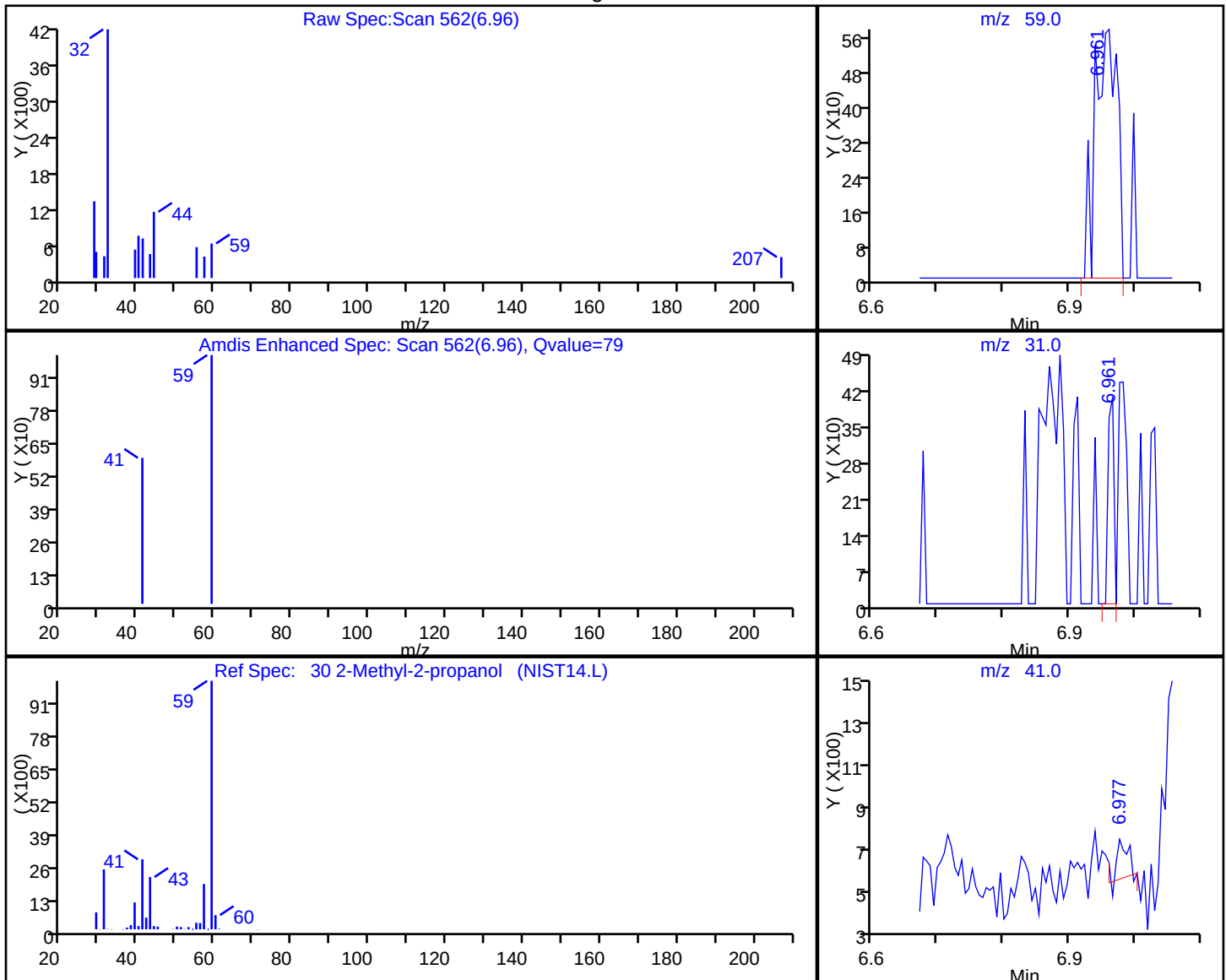
Column: RTX-5 (0.32 mm)

Detector

MS SCAN

30 2-Methyl-2-propanol, CAS: 75-65-0

Processing Results



RT	Mass	Response	Amount
6.96	59.00	1356	-0.025105
6.96	31.00	250	
6.98	41.00	178	

Reviewer: barlozhetskayaa, 16-Feb-2018 11:40:25

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL01.D

Injection Date: 15-Feb-2018 15:35:30

Instrument ID: MJ

Lims ID: IC L1

Client ID:

Operator ID: 403648

ALS Bottle#:

8

Worklist Smp#: 3

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: MJ_TO15

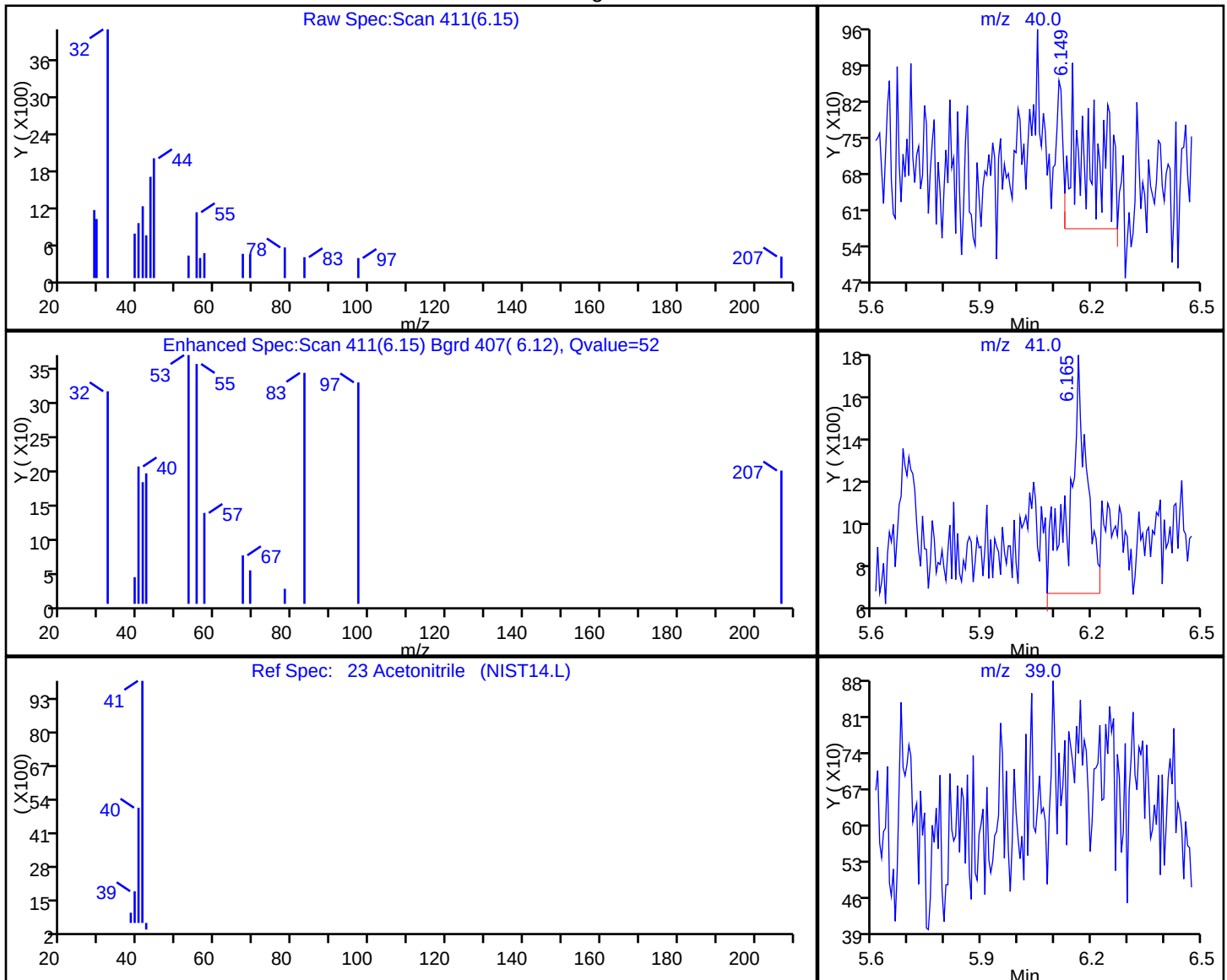
Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

23 Acetonitrile, CAS: 75-05-8

Processing Results



RT	Mass	Response	Amount
6.15	40.00	1166	0.039285
6.16	41.00	3703	
6.02	39.00	0	

Reviewer: barlozhetskayaa, 16-Feb-2018 11:40:25

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL01.D

Injection Date: 15-Feb-2018 15:35:30

Instrument ID: MJ

Lims ID: IC L1

Client ID:

Operator ID: 403648

ALS Bottle#:

8

Worklist Smp#: 3

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MJ_TO15

Limit Group:

MSA TO14A_15 Routine ICAL

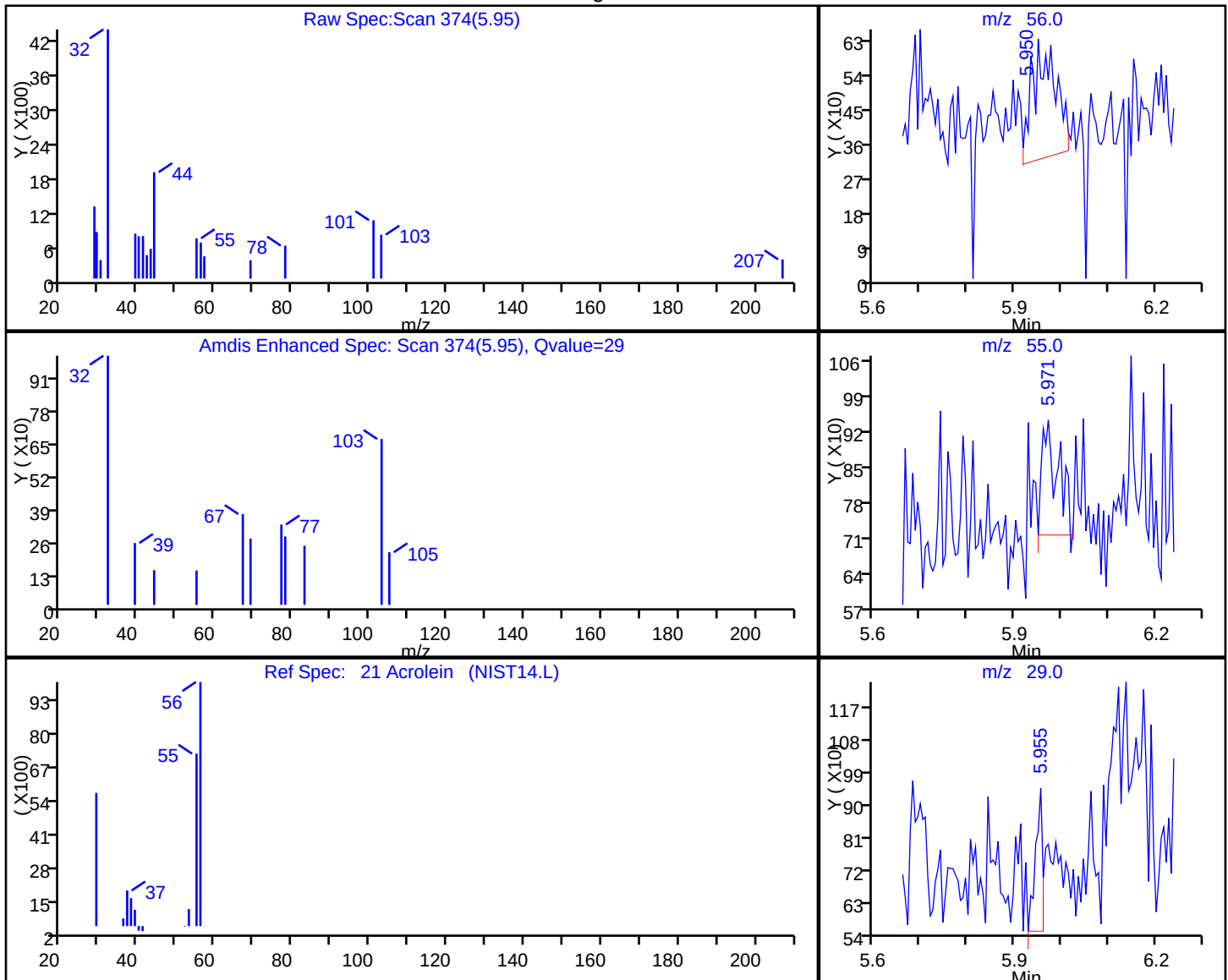
Column: RTX-5 (0.32 mm)

Detector

MS SCAN

21 Acrolein, CAS: 107-02-8

Processing Results



RT	Mass	Response	Amount
5.95	56.00	1076	0.044463
5.97	55.00	541	
5.96	29.00	408	

Reviewer: barlozhetskayaa, 16-Feb-2018 11:40:25

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL01.D

Injection Date: 15-Feb-2018 15:35:30

Instrument ID: MJ

Lims ID: IC L1

Client ID:

Operator ID: 403648

ALS Bottle#:

8

Worklist Smp#: 3

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: MJ_TO15

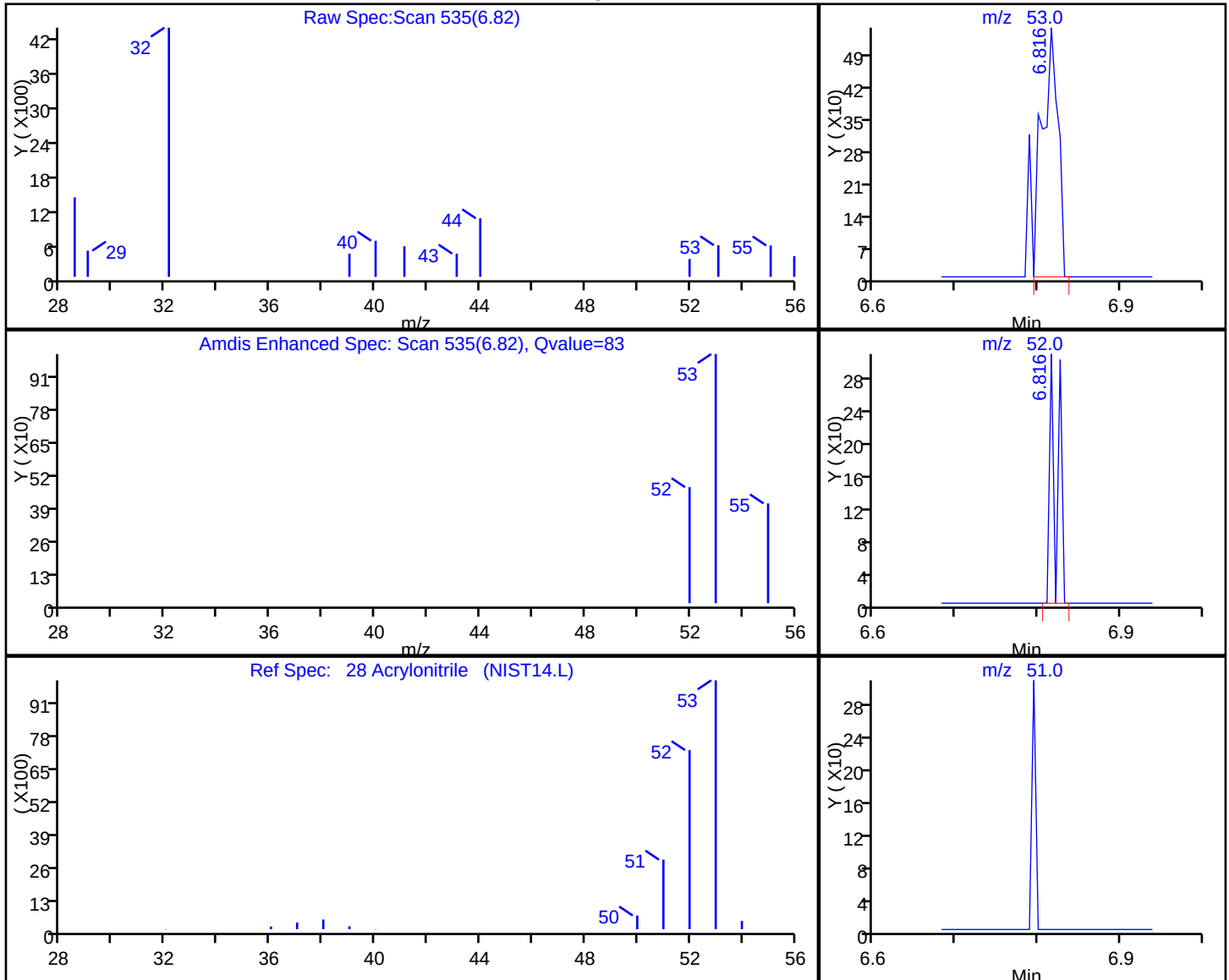
Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

28 Acrylonitrile, CAS: 107-13-1

Processing Results



RT	Mass	Response	Amount
6.82	53.00	727	0.013221
6.82	52.00	197	
6.81	51.00	0	

Reviewer: barlozhetskayaa, 16-Feb-2018 11:40:25

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL01.D

Injection Date: 15-Feb-2018 15:35:30

Instrument ID: MJ

Lims ID: IC L1

Client ID:

Operator ID: 403648

ALS Bottle#: 8

Worklist Smp#: 3

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: MJ_TO15

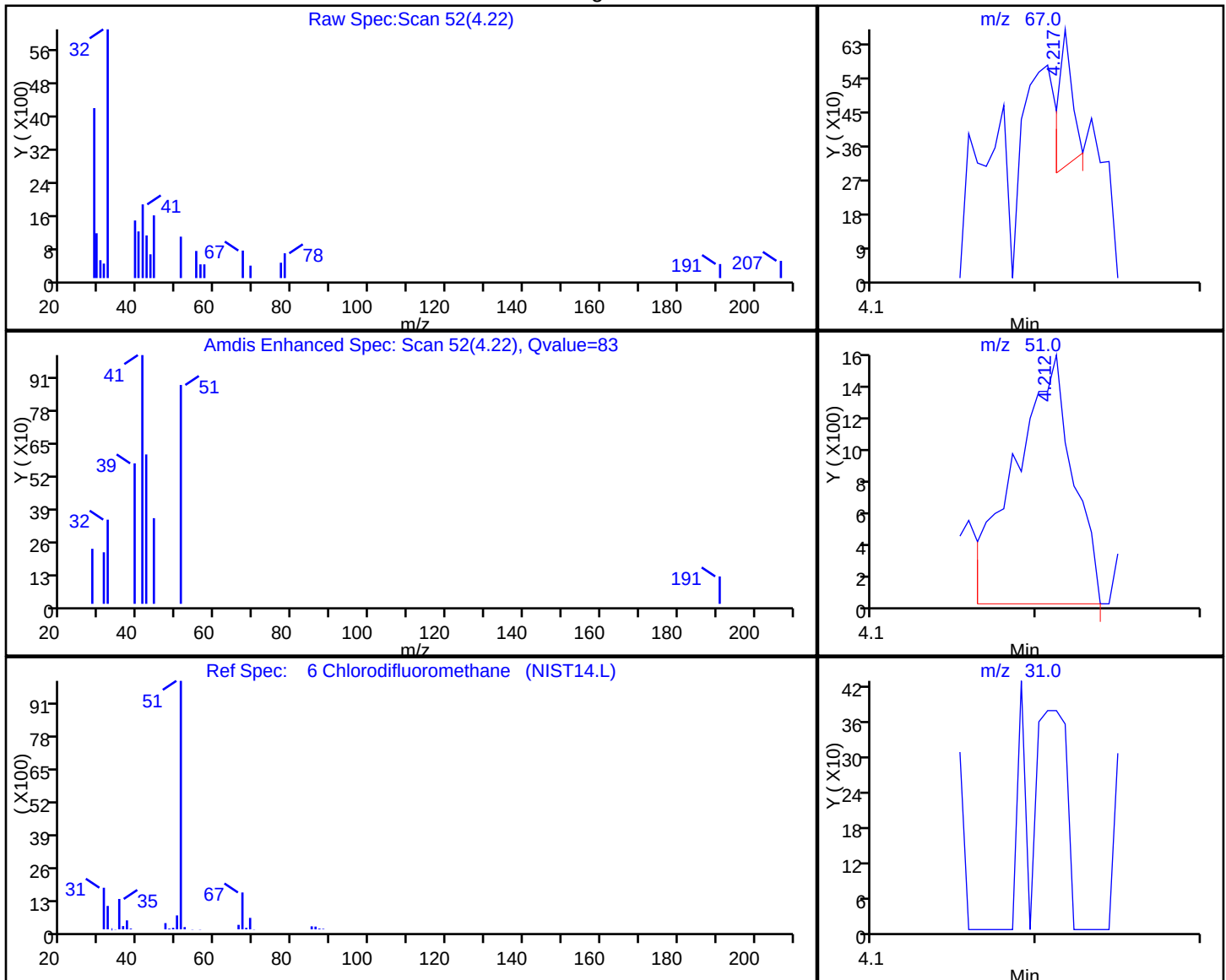
Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6

Processing Results



RT	Mass	Response	Amount
4.22	67.00	216	0.007275
4.21	51.00	3872	
4.20	31.00	0	

Reviewer: barlozhetskayaa, 16-Feb-2018 11:40:25

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL01.D

Injection Date: 15-Feb-2018 15:35:30

Instrument ID: MJ

Lims ID: IC L1

Client ID:

Operator ID: 403648

ALS Bottle#:

8

Worklist Smp#: 3

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MJ_TO15

Limit Group:

MSA TO14A_15 Routine ICAL

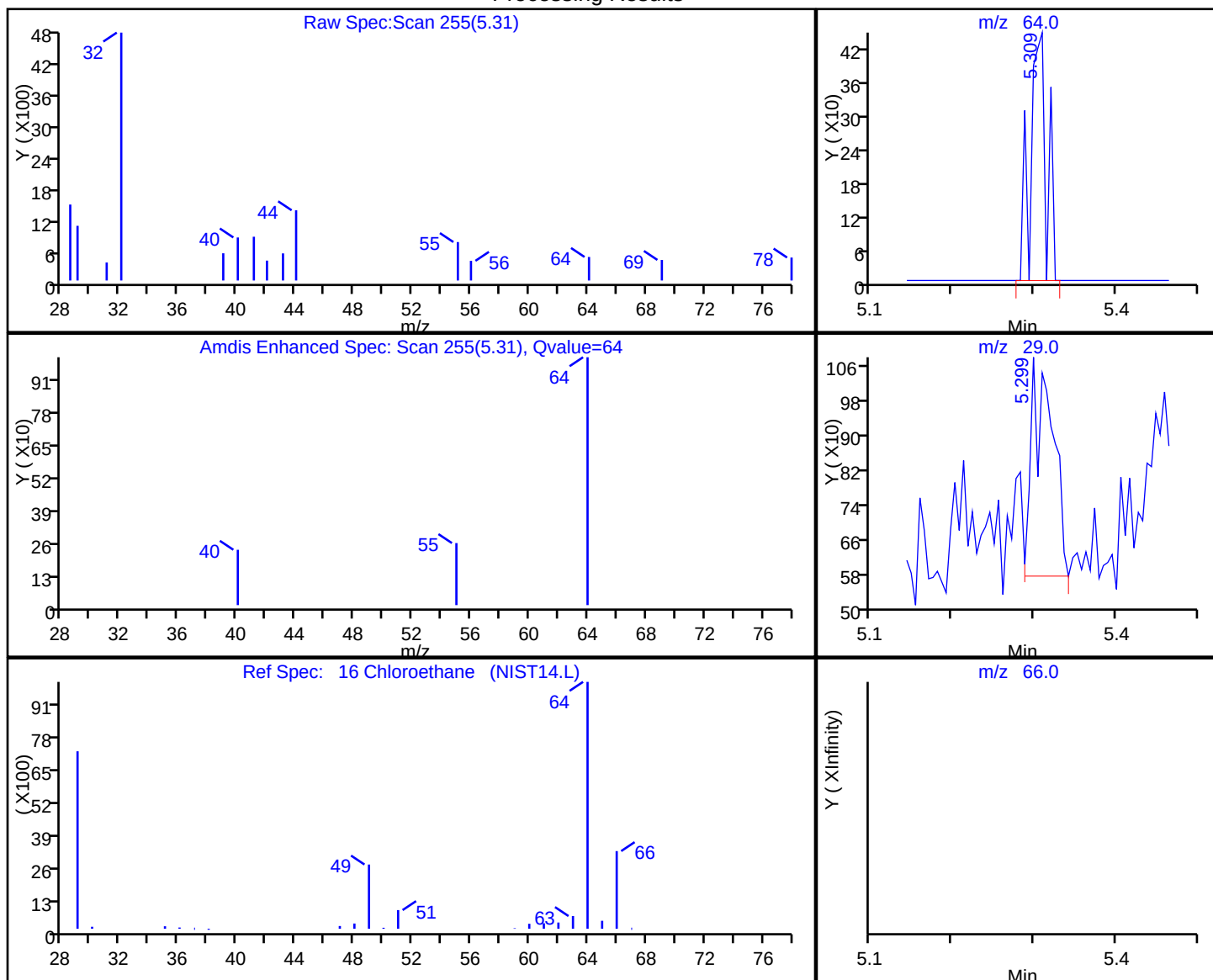
Column: RTX-5 (0.32 mm)

Detector

MS SCAN

16 Chloroethane, CAS: 75-00-3

Processing Results



RT	Mass	Response	Amount
5.31	64.00	615	0.013047
5.30	29.00	904	
5.30	66.00	0	

Reviewer: barlozhetskayaa, 16-Feb-2018 11:40:25

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL01.D

Injection Date: 15-Feb-2018 15:35:30

Instrument ID: MJ

Lims ID: IC L1

Client ID:

Operator ID: 403648

ALS Bottle#:

8

Worklist Smp#: 3

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MJ_TO15

Limit Group:

MSA TO14A_15 Routine ICAL

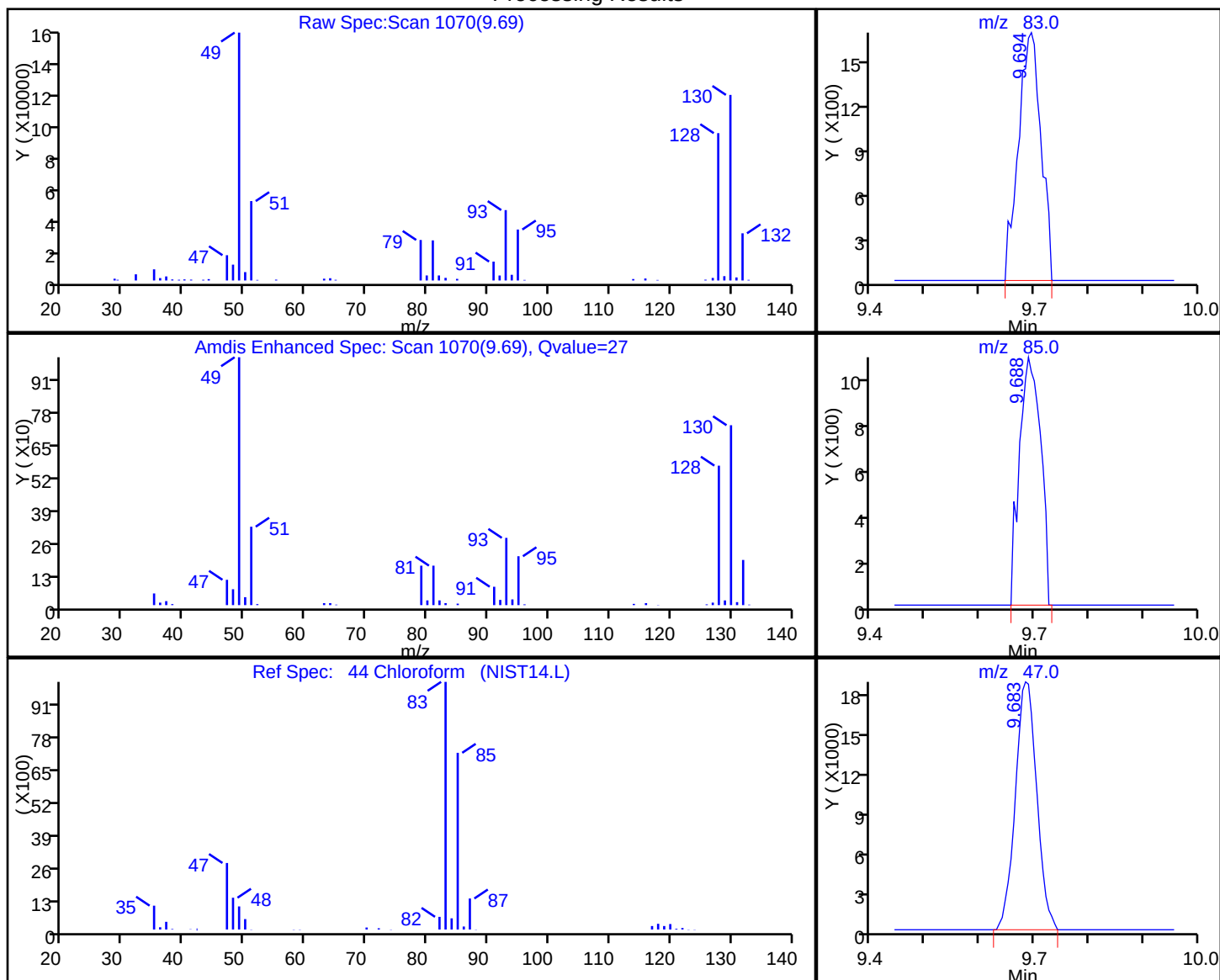
Column: RTX-5 (0.32 mm)

Detector

MS SCAN

44 Chloroform, CAS: 67-66-3

Processing Results



RT	Mass	Response	Amount
9.69	83.00	4732	0.023391
9.69	85.00	2896	
9.68	47.00	49939	

Reviewer: barlozhetskayaa, 16-Feb-2018 11:40:25

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL01.D

Injection Date: 15-Feb-2018 15:35:30

Instrument ID: MJ

Lims ID: IC L1

Client ID:

Operator ID: 403648

ALS Bottle#:

8

Worklist Smp#: 3

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MJ_TO15

Limit Group:

MSA TO14A_15 Routine ICAL

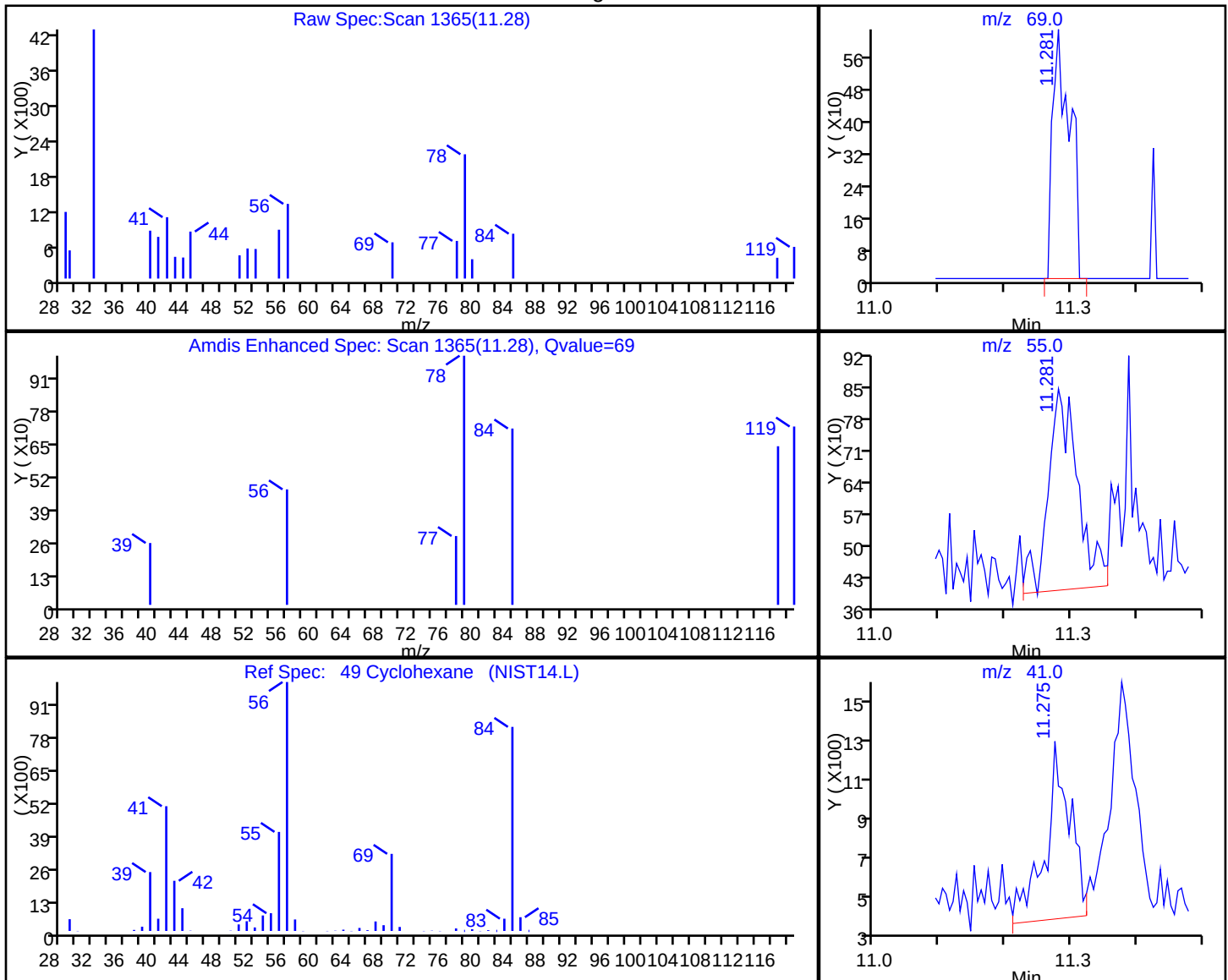
Column: RTX-5 (0.32 mm)

Detector

MS SCAN

49 Cyclohexane, CAS: 110-82-7

Processing Results



RT	Mass	Response	Amount
11.28	69.00	1144	0.024913
11.28	55.00	1390	
11.28	41.00	2388	

Reviewer: barlozhetskayaa, 16-Feb-2018 11:40:25

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL01.D

Injection Date: 15-Feb-2018 15:35:30

Instrument ID: MJ

Lims ID: IC L1

Client ID:

Operator ID: 403648

ALS Bottle#:

8

Worklist Smp#: 3

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MJ_TO15

Limit Group:

MSA TO14A_15 Routine ICAL

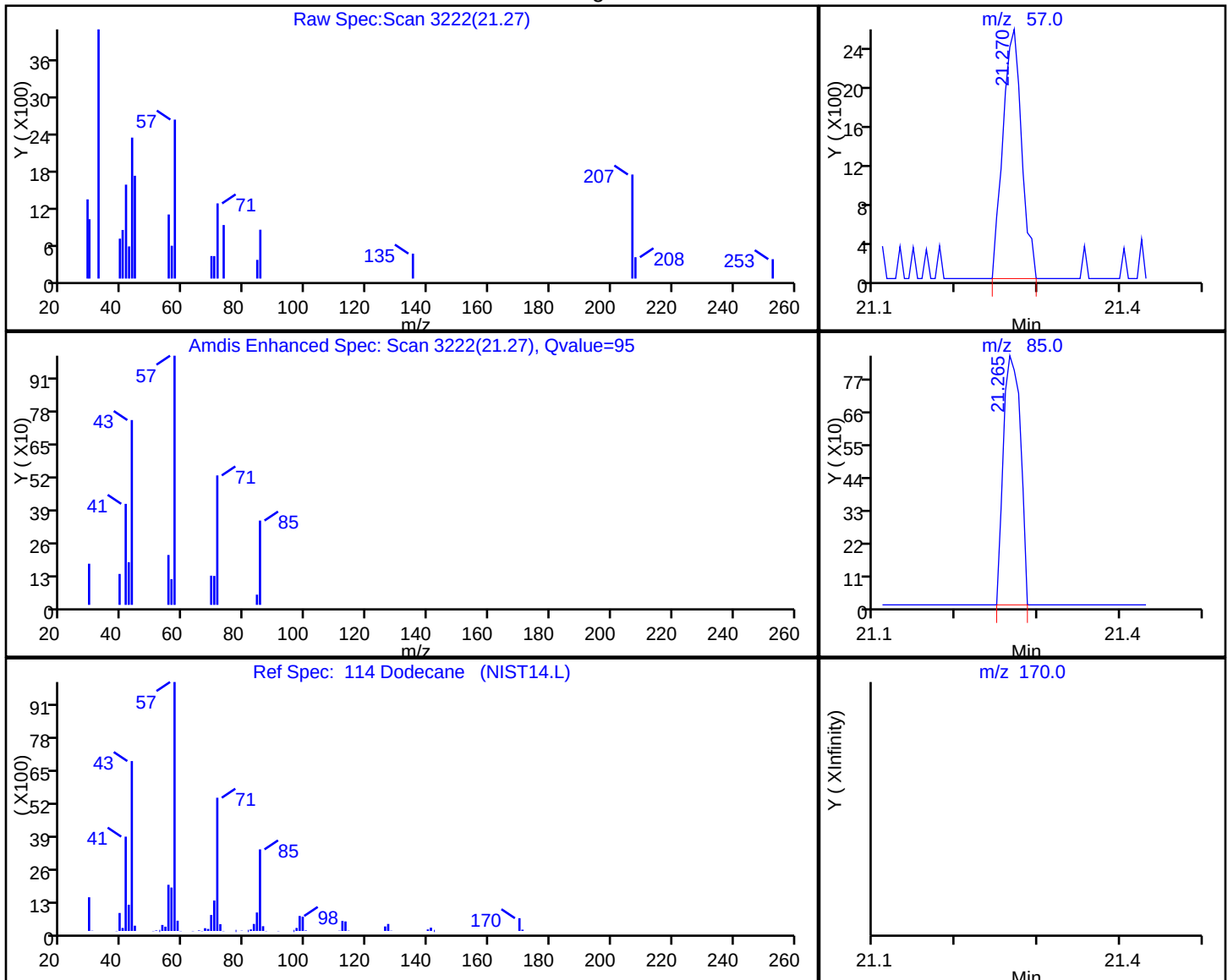
Column: RTX-5 (0.32 mm)

Detector

MS SCAN

114 Dodecane, CAS: 112-40-3

Processing Results



RT	Mass	Response	Amount
21.27	57.00	4095	-0.025336
21.26	85.00	1221	
21.27	170.00	0	

Reviewer: barlozhetskayaa, 16-Feb-2018 11:40:25

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL01.D

Injection Date: 15-Feb-2018 15:35:30

Instrument ID: MJ

Lims ID: IC L1

Client ID:

Operator ID: 403648

ALS Bottle#:

8

Worklist Smp#: 3

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MJ_TO15

Limit Group:

MSA TO14A_15 Routine ICAL

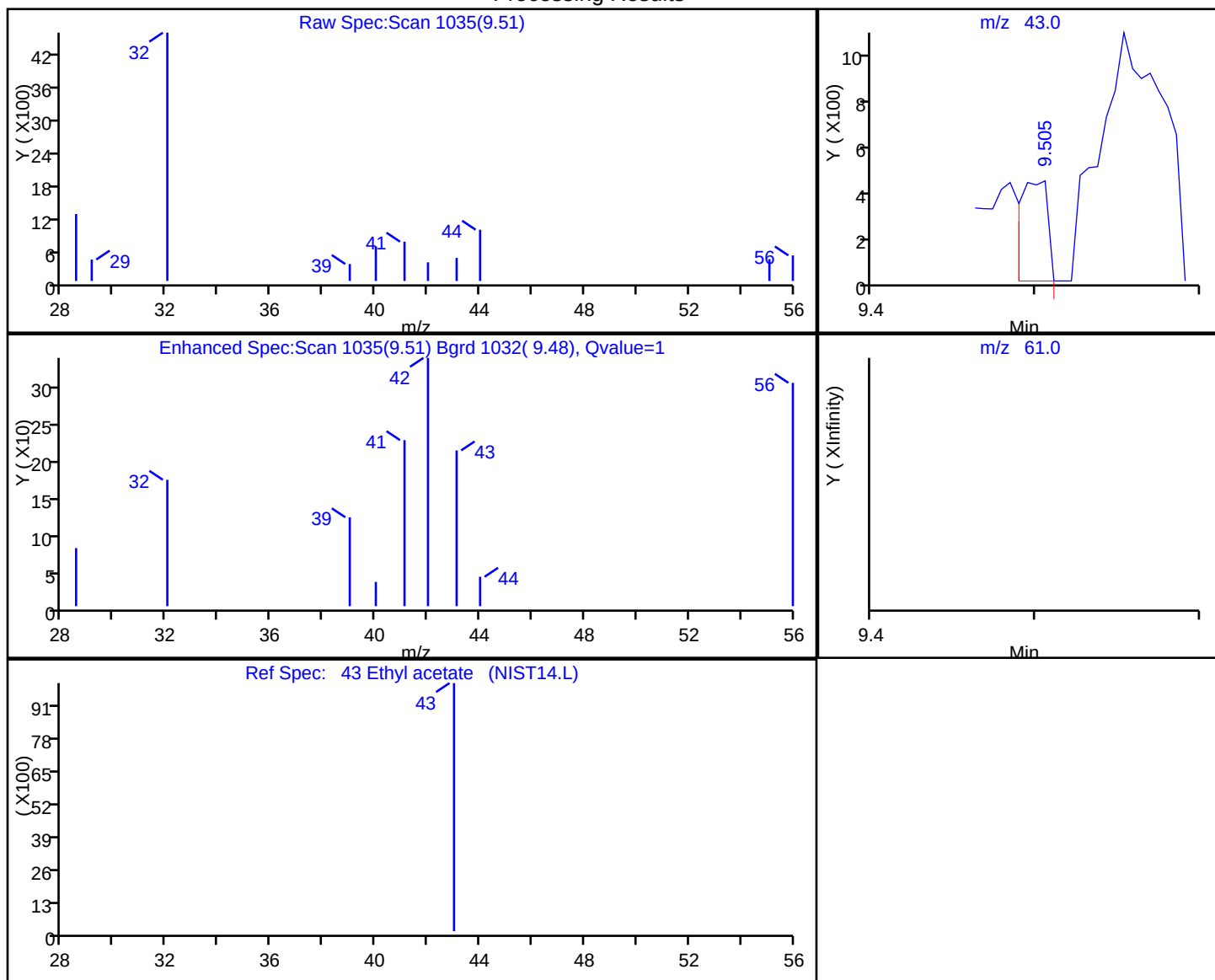
Column: RTX-5 (0.32 mm)

Detector

MS SCAN

43 Ethyl acetate, CAS: 141-78-6

Processing Results



RT	Mass	Response	Amount
9.51	43.00	500	0.003182
9.53	61.00	0	

Reviewer: barlozhetskayaa, 16-Feb-2018 11:40:25

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL01.D

Injection Date: 15-Feb-2018 15:35:30

Instrument ID: MJ

Lims ID: IC L1

Client ID:

Operator ID: 403648

ALS Bottle#:

8

Worklist Smp#: 3

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MJ_TO15

Limit Group:

MSA TO14A_15 Routine ICAL

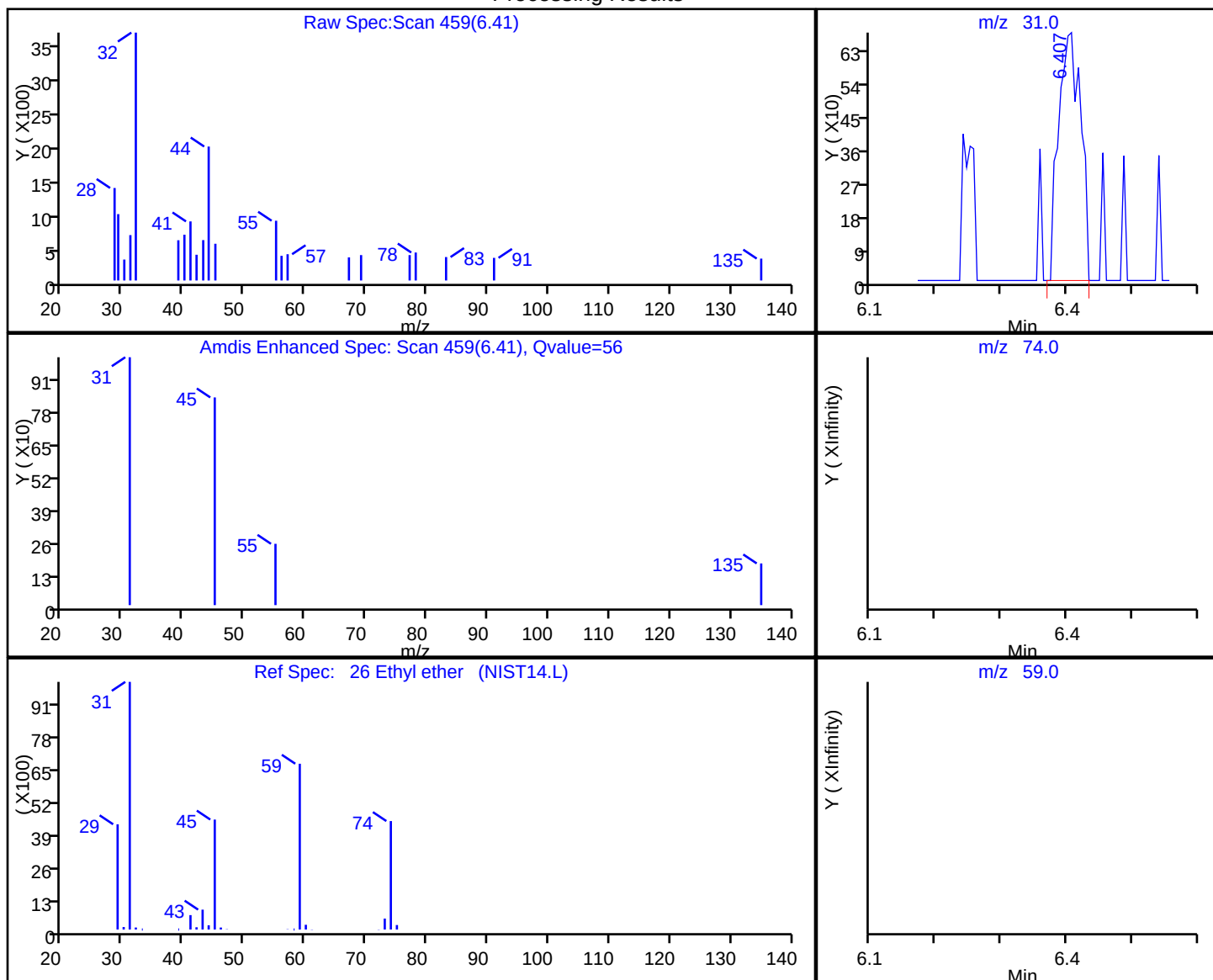
Column: RTX-5 (0.32 mm)

Detector

MS SCAN

26 Ethyl ether, CAS: 60-29-7

Processing Results



RT	Mass	Response	Amount
6.41	31.00	1588	0.020283
6.34	74.00	0	
6.34	59.00	0	

Reviewer: barlozhetskayaa, 16-Feb-2018 11:40:25

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL01.D

Injection Date: 15-Feb-2018 15:35:30

Instrument ID: MJ

Lims ID: IC L1

Client ID:

Operator ID: 403648

ALS Bottle#:

8

Worklist Smp#: 3

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MJ_TO15

Limit Group:

MSA TO14A_15 Routine ICAL

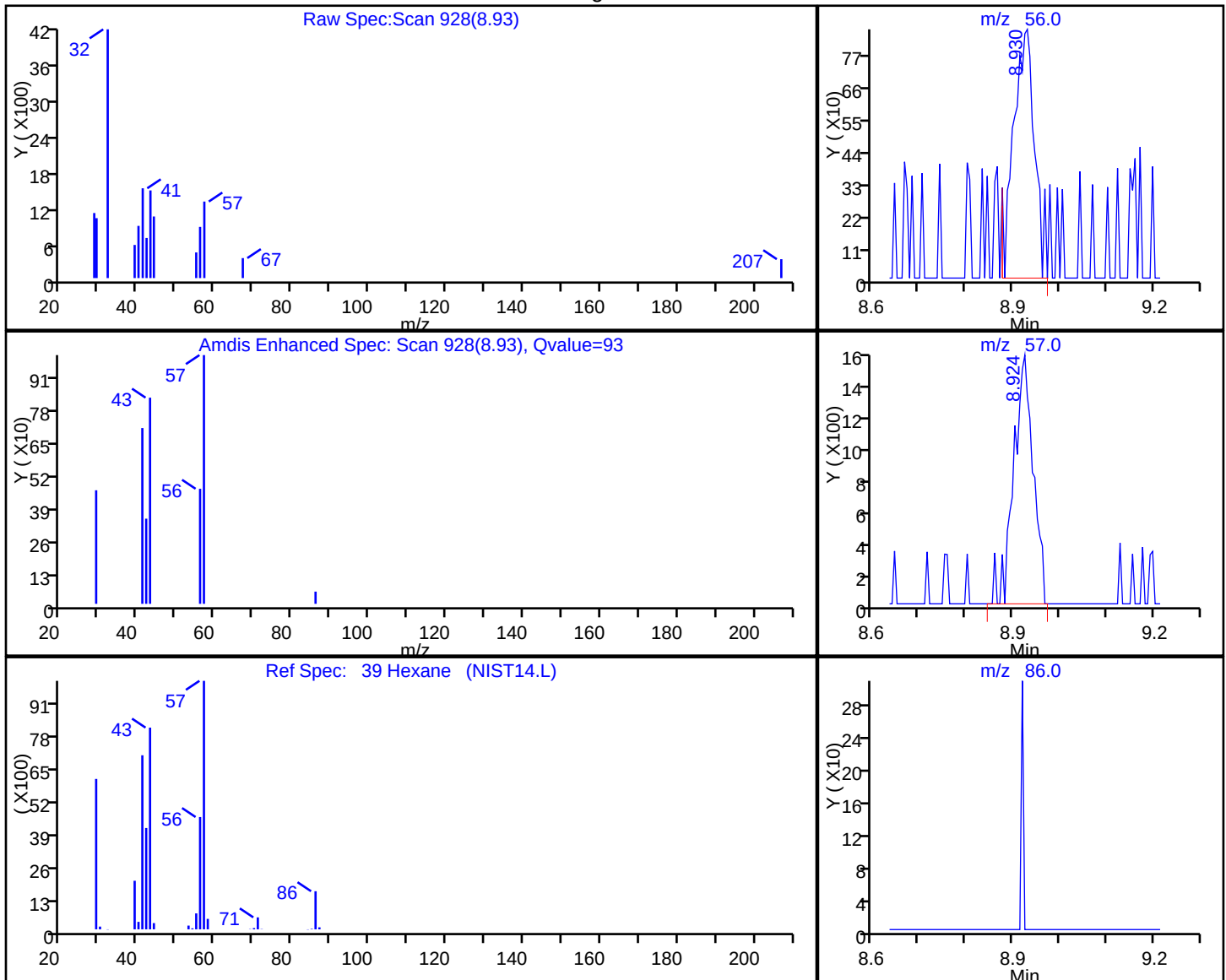
Column: RTX-5 (0.32 mm)

Detector

MS SCAN

39 Hexane, CAS: 110-54-3

Processing Results



RT	Mass	Response	Amount
8.93	56.00	2740	0.036647
8.92	57.00	4474	
8.92	86.00	0	

Reviewer: barlozhetskayaa, 16-Feb-2018 11:40:25

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL01.D

Injection Date: 15-Feb-2018 15:35:30

Instrument ID: MJ

Lims ID: IC L1

Client ID:

Operator ID: 403648

ALS Bottle#:

8

Worklist Smp#: 3

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MJ_TO15

Limit Group:

MSA TO14A_15 Routine ICAL

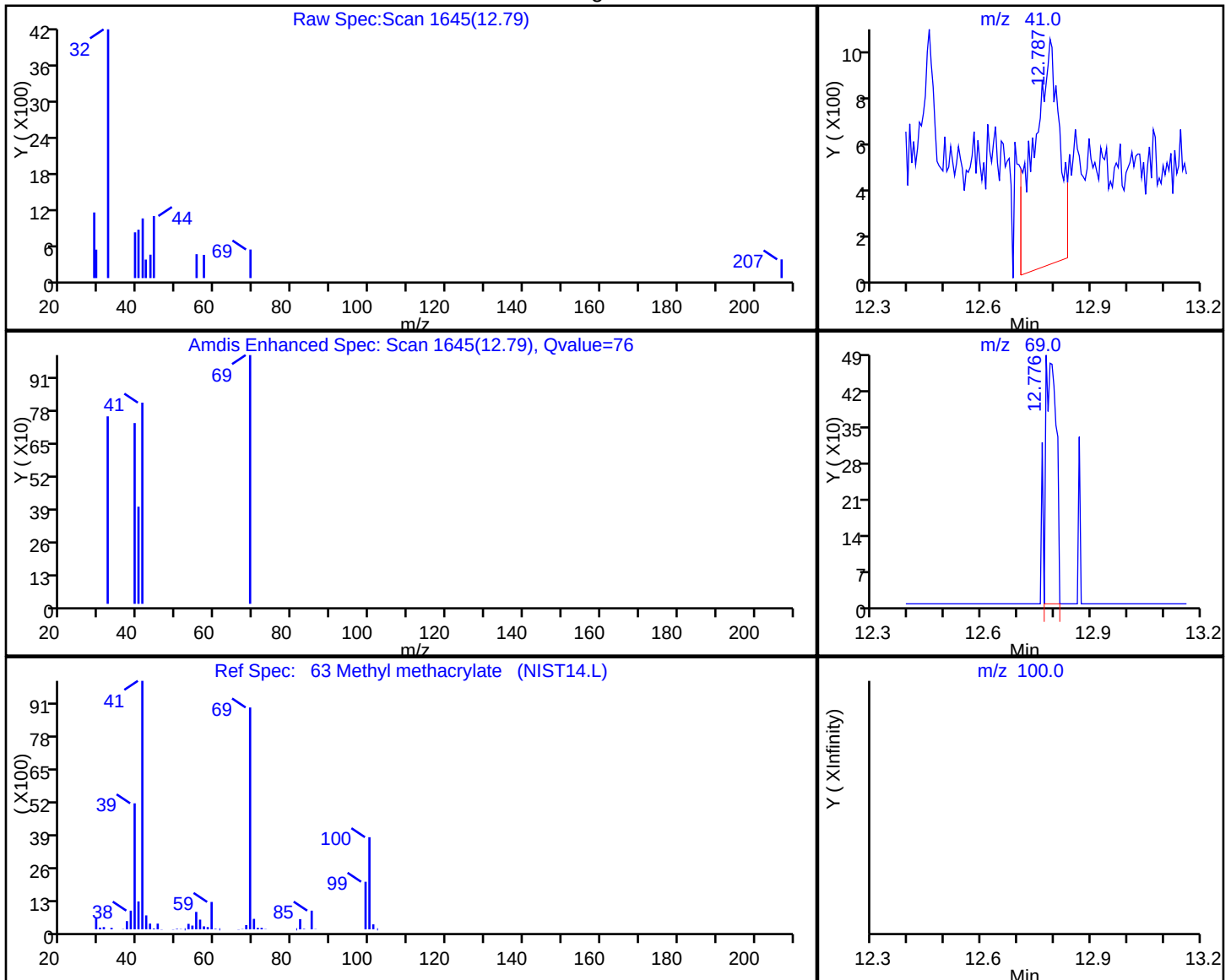
Column: RTX-5 (0.32 mm)

Detector

MS SCAN

63 Methyl methacrylate, CAS: 80-62-6

Processing Results



RT	Mass	Response	Amount
12.79	41.00	4591	0.048197
12.78	69.00	944	
12.78	100.00	0	

Reviewer: barlozhetskayaa, 16-Feb-2018 11:40:25

Audit Action: Marked Compound Undetected

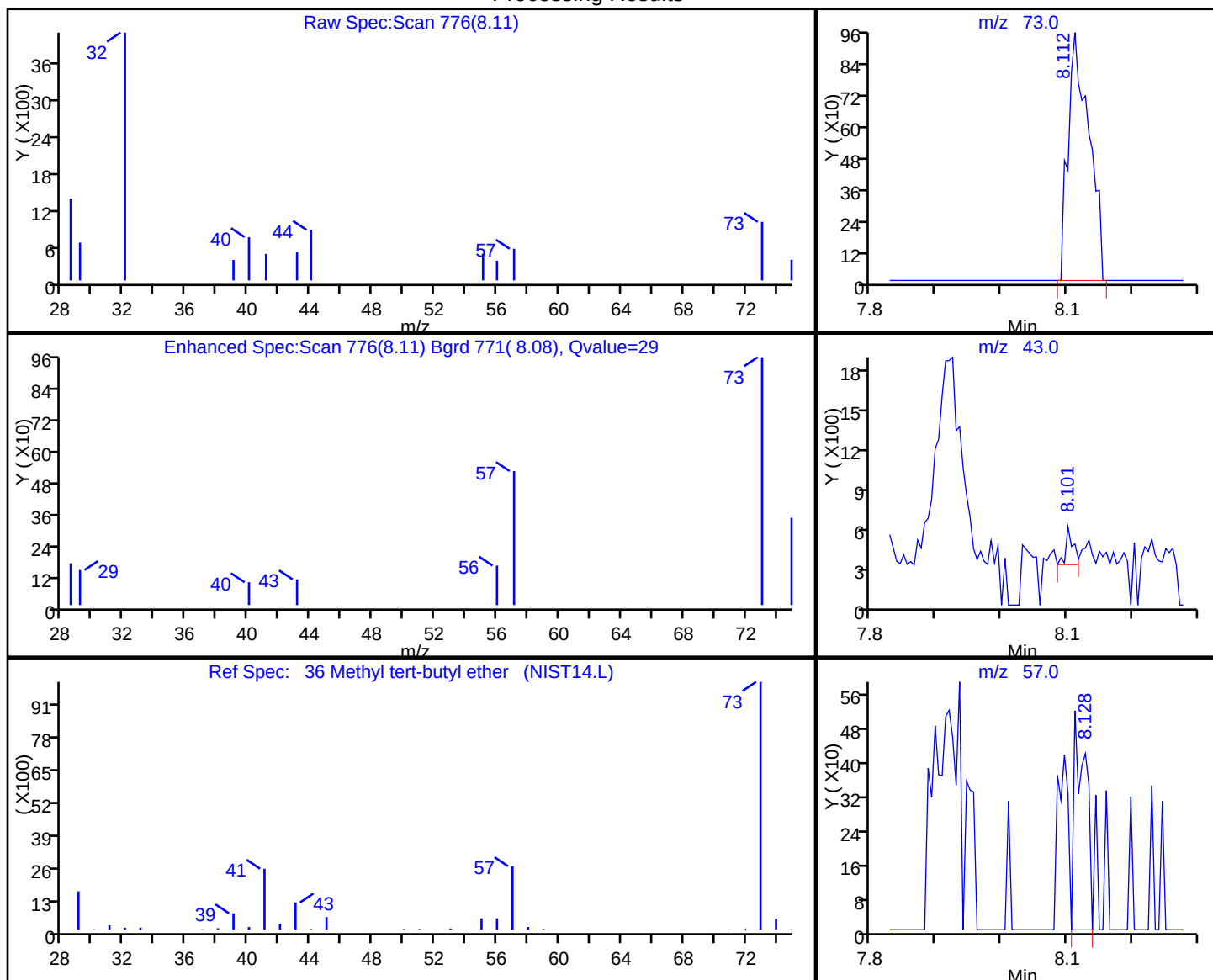
Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL01.D
Injection Date: 15-Feb-2018 15:35:30 Instrument ID: MJ
Lims ID: IC L1
Client ID:
Operator ID: 403648 ALS Bottle#: 8 Worklist Smp#: 3
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

36 Methyl tert-butyl ether, CAS: 1634-04-4

Processing Results



RT	Mass	Response	Amount
8.11	73.00	2117	0.010360
8.10	43.00	221	
8.13	57.00	639	

Reviewer: barlozhetskayaa, 16-Feb-2018 11:40:25

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL01.D

Injection Date: 15-Feb-2018 15:35:30

Instrument ID: MJ

Lims ID: IC L1

Client ID:

Operator ID: 403648

ALS Bottle#:

8

Worklist Smp#: 3

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MJ_TO15

Limit Group:

MSA TO14A_15 Routine ICAL

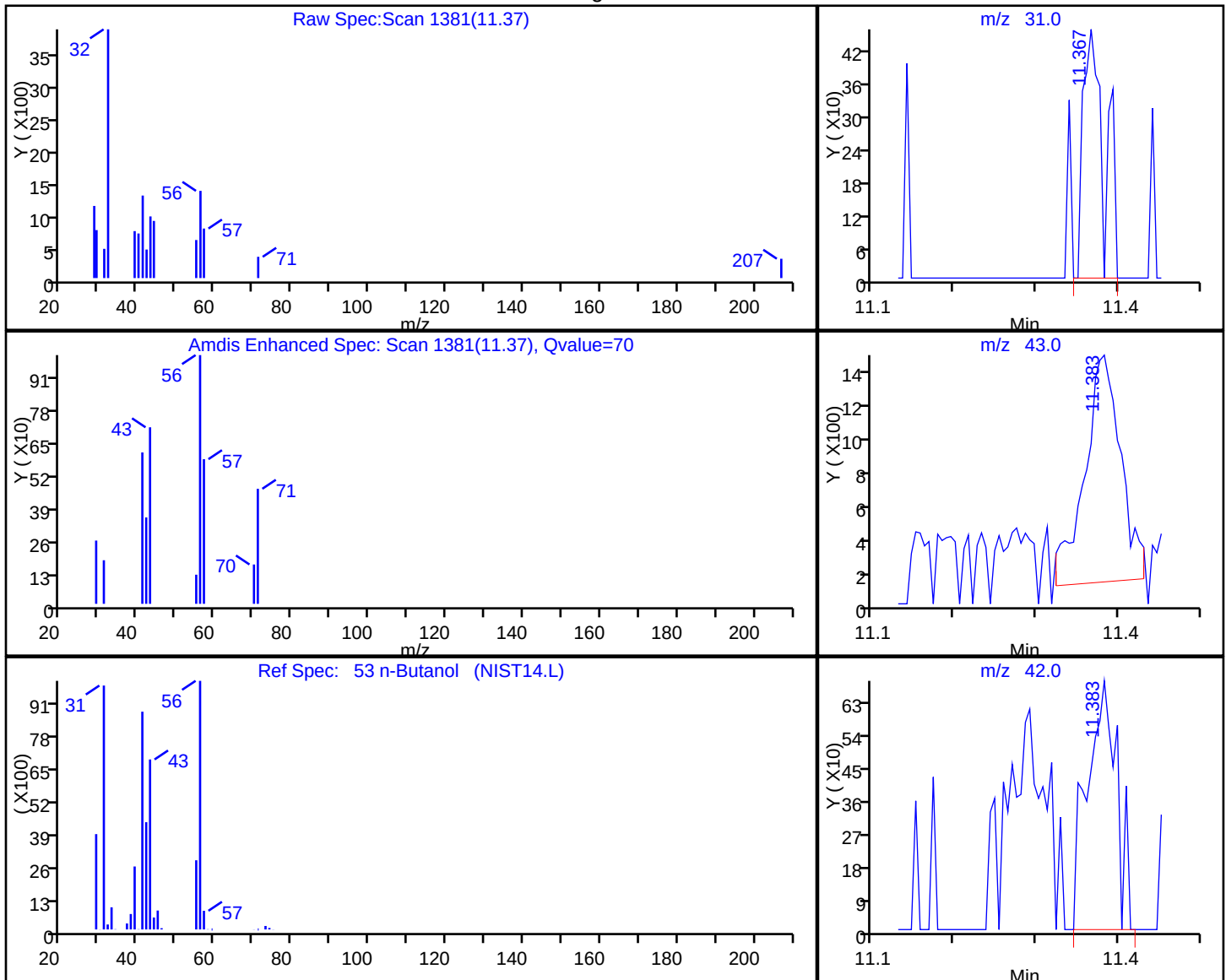
Column: RTX-5 (0.32 mm)

Detector

MS SCAN

53 n-Butanol, CAS: 71-36-3

Processing Results



RT	Mass	Response	Amount
11.37	31.00	820	0.030153
11.38	43.00	4206	
11.38	42.00	1731	

Reviewer: barlozhetskayaa, 16-Feb-2018 11:40:25

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL01.D

Injection Date: 15-Feb-2018 15:35:30

Instrument ID: MJ

Lims ID: IC L1

Client ID:

Operator ID: 403648

ALS Bottle#:

8

Worklist Smp#: 3

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MJ_TO15

Limit Group:

MSA TO14A_15 Routine ICAL

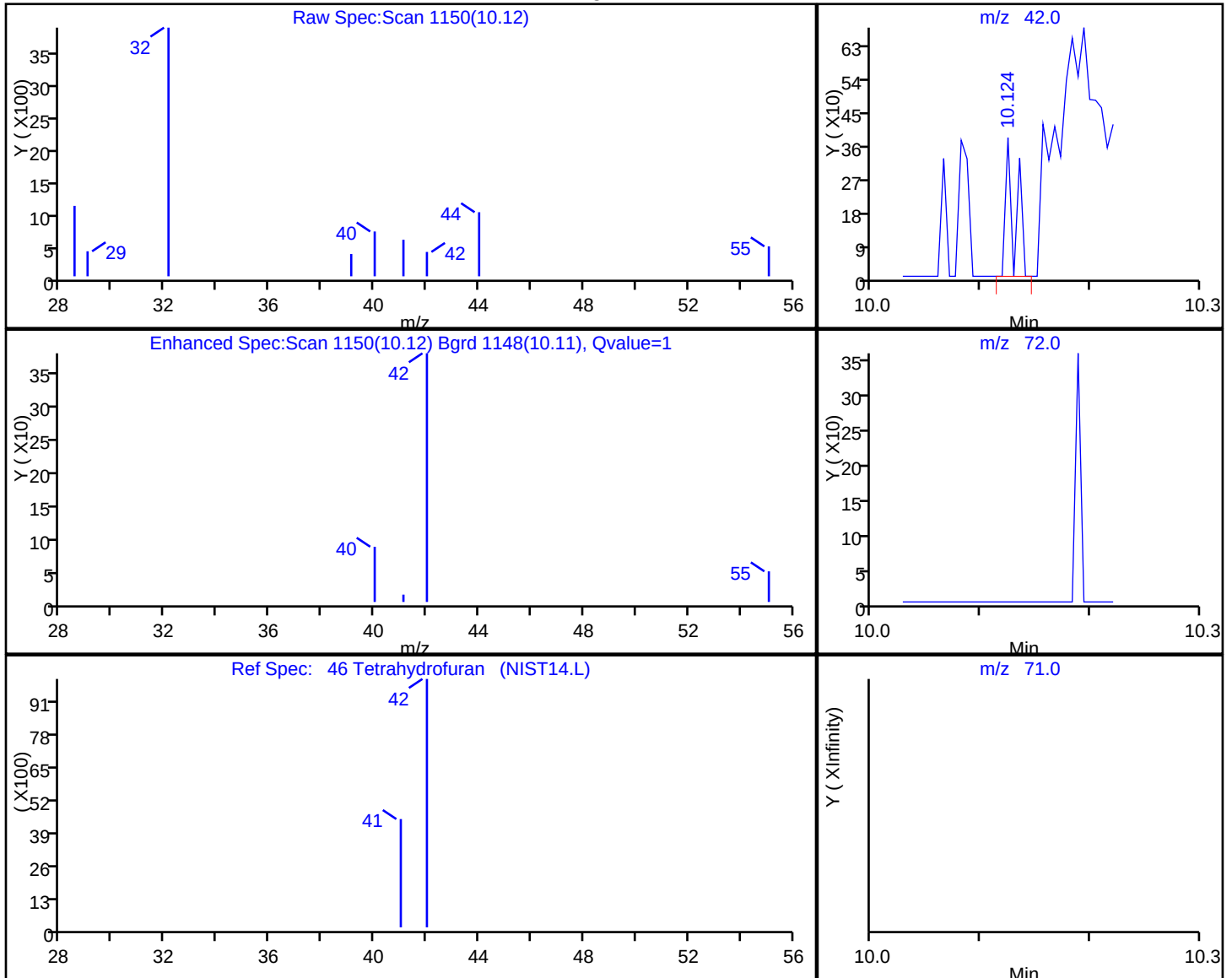
Column: RTX-5 (0.32 mm)

Detector

MS SCAN

46 Tetrahydrofuran, CAS: 109-99-9

Processing Results



RT	Mass	Response	Amount
10.12	42.00	224	0.002659
10.11	72.00	0	
10.11	71.00	0	

Reviewer: barlozhetskayaa, 16-Feb-2018 11:40:25

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL01.D

Injection Date: 15-Feb-2018 15:35:30

Instrument ID: MJ

Lims ID: IC L1

Client ID:

Operator ID: 403648

ALS Bottle#:

8

Worklist Smp#: 3

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MJ_TO15

Limit Group:

MSA TO14A_15 Routine ICAL

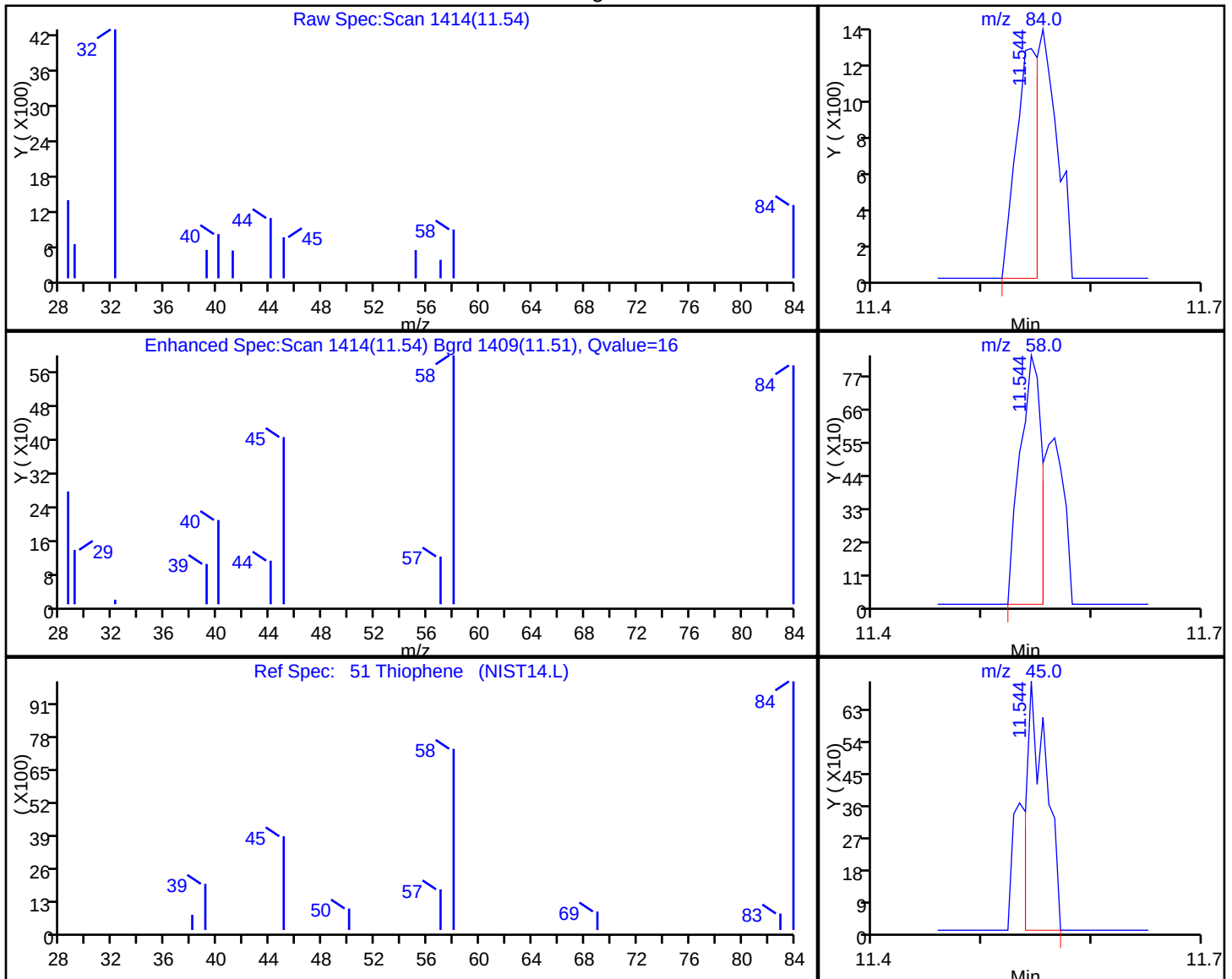
Column: RTX-5 (0.32 mm)

Detector

MS SCAN

51 Thiophene, CAS: 110-02-1

Processing Results



RT	Mass	Response	Amount
11.54	84.00	1787	0.011332
11.54	58.00	1135	
11.54	45.00	880	

Reviewer: barlozhetskayaa, 16-Feb-2018 11:40:25

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL01.D

Injection Date: 15-Feb-2018 15:35:30

Instrument ID: MJ

Lims ID: IC L1

Client ID:

Operator ID: 403648

ALS Bottle#: 8

Worklist Smp#: 3

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: MJ_TO15

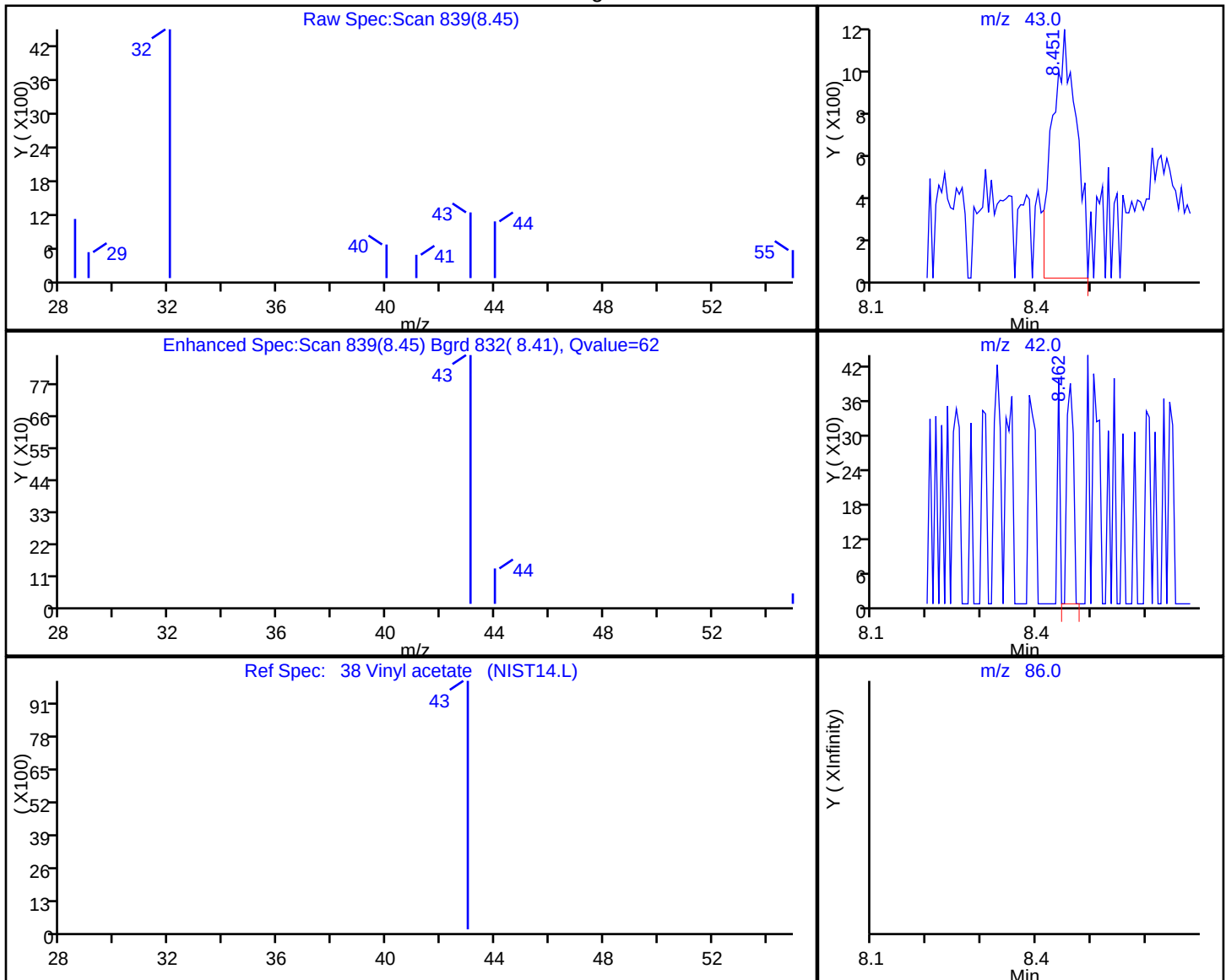
Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

38 Vinyl acetate, CAS: 108-05-4

Processing Results



RT	Mass	Response	Amount
8.45	43.00	3560	0.018058
8.46	42.00	331	
8.44	86.00	0	

Reviewer: barlozhetskayaa, 16-Feb-2018 11:40:25

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL02.D
 Lims ID: IC L2
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 15-Feb-2018 16:21:30 ALS Bottle#: 8 Worklist Smp#: 4
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0007391-004
 Misc. Info.: 140829
 Operator ID: 403648 Instrument ID: MJ
 Sublist: chrom-MJ_TO15*sub14
 Method: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\MJ_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Feb-2018 10:02:52 Calib Date: 15-Feb-2018 22:24:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK031

First Level Reviewer: barlozhetskayaa

Date: 15-Feb-2018 17:45:40

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.684	9.689	-0.005	92	276230	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.782	11.790	-0.008	95	1526968	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.387	16.389	-0.002	88	1417679	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.990	17.992	-0.002	95	1042081	4.00	4.07	
7 Propene	41	4.219	4.216	0.003	97	4882	0.0400	0.0607	
8 Dichlorodifluoromethane	85	4.278	4.274	0.004	98	9371	0.0400	0.0378	
9 Chloromethane	52	4.477	4.482	-0.005	63	1819	0.0400	0.0627	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.488	4.489	-0.001	91	5973	0.0400	0.0368	
11 Acetaldehyde	44	4.670	4.662	0.008	97	11943	0.2000	0.3712	
12 Vinyl chloride	62	4.676	4.679	-0.003	93	2929	0.0400	0.0325	
13 Butadiene	54	4.783	4.777	0.006	70	3002	0.0400	0.0411	
14 Butane	43	4.778	4.777	0.001	87	4911	0.0400	0.0355	
15 Bromomethane	94	5.144	5.146	-0.002	96	3337	0.0400	0.0371	
16 Chloroethane	64	5.300	5.304	-0.004	84	1866	0.0400	0.0398	
17 Ethanol	31	5.429	5.435	-0.006	96	8318	0.2000	0.2486	
18 Vinyl bromide	106	5.639	5.641	-0.002	88	3063	0.0400	0.0359	
19 2-Methylbutane	43	5.693	5.693	0.000	89	4581	0.0400	0.0449	
20 Trichlorofluoromethane	101	5.935	5.933	0.002	98	8622	0.0400	0.0360	
22 Acetone	58	6.101	6.081	0.020	96	6634	0.1200	0.2110	
24 Pentane	72	6.177	6.171	0.006	58	496	0.0400	0.0339	
25 Isopropyl alcohol	45	6.209	6.201	0.008	91	12013	0.1200	0.1332	
26 Ethyl ether	31	6.376	6.362	0.014	91	3289	0.0400	0.0423	
27 1,1-Dichloroethene	96	6.693	6.692	0.001	95	3815	0.0400	0.0417	
28 Acrylonitrile	53	6.811	6.809	0.002	68	2262	0.0400	0.0414	
30 2-Methyl-2-propanol	59	6.908	6.865	0.043	57	4857	0.0400	0.009395	
29 1,1,2-Trichloro-1,2,2-trif	101	6.876	6.875	0.001	95	7065	0.0400	0.0373	
32 Methylene Chloride	84	7.059	7.061	-0.002	95	14418	0.0400	0.1457	
31 3-Chloro-1-propene	39	7.070	7.077	-0.007	40	6552	0.0400	0.0534	
33 Carbon disulfide	76	7.236	7.239	-0.003	96	10051	0.0400	0.0379	
34 trans-1,2-Dichloroethene	96	7.903	7.903	0.000	94	3597	0.0400	0.0393	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
35 2-Methylpentane	43	7.914	7.917	-0.003	89	10342	0.0400	0.0491	
36 Methyl tert-butyl ether	73	8.086	8.053	0.033	94	7318	0.0400	0.0360	
37 1,1-Dichloroethane	63	8.334	8.343	-0.009	96	6975	0.0400	0.0406	
38 Vinyl acetate	43	8.436	8.442	-0.006	99	6568	0.0400	0.0335	
40 2-Butanone (MEK)	72	8.936	8.919	0.017	87	1491	0.0400	0.0422	
39 Hexane	56	8.926	8.922	0.004	82	4165	0.0400	0.0560	
41 Isopropyl ether	45	9.114	9.091	0.023	95	9423	0.0400	0.0387	
42 cis-1,2-Dichloroethene	96	9.345	9.347	-0.002	92	3728	0.0400	0.0399	
43 Ethyl acetate	43	9.539	9.529	0.010	95	7488	0.0400	0.0480	
44 Chloroform	83	9.689	9.697	-0.008	28	9078	0.0400	0.0459	
45 Tert-butyl ethyl ether	59	9.808	9.782	0.026	94	8001	0.0400	0.0353	
46 Tetrahydrofuran	42	10.157	10.126	0.031	84	4447	0.0400	0.0531	
47 1,1,1-Trichloroethane	97	10.712	10.721	-0.009	95	8645	0.0400	0.0420	
48 1,2-Dichloroethane	62	10.814	10.825	-0.011	91	4723	0.0400	0.0381	
49 Cyclohexane	69	11.287	11.287	0.000	68	2389	0.0400	0.0534	
50 Benzene	78	11.287	11.291	-0.004	97	12063	0.0400	0.0445	
52 Carbon tetrachloride	117	11.303	11.310	-0.007	95	7915	0.0400	0.0387	
55 2,3-Dimethylpentane	71	11.373	11.384	-0.011	92	2868	0.0400	0.0451	
51 Thiophene	84	11.551	11.554	-0.003	93	6808	0.0400	0.0442	
56 Isooctane	57	11.992	11.995	-0.003	98	20341	0.0400	0.0468	
57 n-Heptane	71	12.347	12.342	0.005	92	3902	0.0400	0.0409	
58 1,2-Dichloropropane	63	12.444	12.451	-0.007	86	4098	0.0400	0.0402	
59 Trichloroethene	130	12.476	12.480	-0.004	93	4743	0.0400	0.0397	
60 Dibromomethane	93	12.562	12.569	-0.007	94	5534	0.0400	0.0486	
61 Dichlorobromomethane	83	12.697	12.704	-0.007	97	8574	0.0400	0.0430	
63 Methyl methacrylate	41	12.777	12.776	0.001	89	3659	0.0400	0.0394	
64 Methylcyclohexane	83	13.213	13.222	-0.009	92	7322	0.0400	0.0430	
65 4-Methyl-2-pentanone (MIBK)	43	13.633	13.618	0.015	94	7724	0.0400	0.0552	
66 cis-1,3-Dichloropropene	75	13.654	13.659	-0.005	91	6201	0.0400	0.0395	
67 trans-1,3-Dichloropropene	75	14.321	14.329	-0.008	95	4713	0.0400	0.0343	
68 Toluene	91	14.456	14.458	-0.002	92	11936	0.0400	0.0399	
69 1,1,2-Trichloroethane	83	14.526	14.532	-0.006	93	3749	0.0400	0.0410	
72 2-Hexanone	58	14.913	14.908	0.005	89	2650	0.0400	0.0376	
73 n-Octane	85	15.096	15.100	-0.004	92	4541	0.0400	0.0437	
74 Chlorodibromomethane	129	15.220	15.227	-0.007	96	7559	0.0400	0.0375	
75 Ethylene Dibromide	107	15.515	15.514	0.001	98	6189	0.0400	0.0365	
76 Tetrachloroethene	129	15.569	15.575	-0.006	96	4909	0.0400	0.0414	
77 2,3-Dimethylheptane	43	16.419	16.423	-0.004	89	16951	0.0400	0.0556	
78 Chlorobenzene	112	16.430	16.437	-0.007	40	8864	0.0400	0.0368	
79 Ethylbenzene	91	16.704	16.711	-0.007	97	14220	0.0400	0.0384	
81 m-Xylene & p-Xylene	91	16.866	16.869	-0.003	0	21664	0.0800	0.0780	
82 n-Nonane	57	17.248	17.252	-0.004	92	8738	0.0400	0.0432	
83 Styrene	104	17.328	17.331	-0.003	96	7700	0.0400	0.0358	
84 Bromoform	173	17.328	17.333	-0.005	90	7178	0.0400	0.0332	
85 o-Xylene	91	17.387	17.391	-0.004	98	11329	0.0400	0.0385	
86 1,1,2,2-Tetrachloroethane	83	17.705	17.708	-0.003	96	8441	0.0400	0.0397	
87 1,2,3-Trichloropropane	110	17.861	17.864	-0.003	94	1986	0.0400	0.0356	
88 Isopropylbenzene	105	17.952	17.956	-0.004	88	16616	0.0400	0.0414	
89 N-Propylbenzene	120	18.458	18.462	-0.004	98	3912	0.0400	0.0355	
90 2-Chlorotoluene	126	18.512	18.516	-0.004	96	4258	0.0400	0.0398	
91 4-Ethyltoluene	105	18.598	18.602	-0.004	97	15269	0.0400	0.0395	
92 1,3,5-Trimethylbenzene	120	18.668	18.672	-0.004	92	5903	0.0400	0.0365	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
93 Alpha Methyl Styrene	118	18.888	18.891	-0.003	86	5794	0.0400	0.0344	
94 n-Decane	57	18.921	18.923	-0.002	90	11309	0.0400	0.0472	
95 tert-Butylbenzene	119	19.077	19.079	-0.002	93	13756	0.0400	0.0400	
96 1,2,4-Trimethylbenzene	105	19.087	19.091	-0.004	94	12863	0.0400	0.0396	
97 sec-Butylbenzene	105	19.335	19.337	-0.002	98	18860	0.0400	0.0398	
98 1,3-Dichlorobenzene	146	19.362	19.363	-0.001	95	9811	0.0400	0.0403	
99 Benzyl chloride	91	19.426	19.431	-0.005	98	9996	0.0400	0.0381	
100 1,4-Dichlorobenzene	146	19.442	19.445	-0.003	93	9729	0.0400	0.0402	
101 4-Isopropyltoluene	119	19.485	19.489	-0.004	97	14557	0.0400	0.0376	
102 1,2,3-Trimethylbenzene	105	19.545	19.549	-0.004	97	12243	0.0400	0.0385	
103 Butylcyclohexane	83	19.588	19.591	-0.003	95	13053	0.0400	0.0445	
104 2,3-Dihydroindene	117	19.787	19.792	-0.005	93	11869	0.0400	0.0392	
105 1,2-Dichlorobenzene	146	19.792	19.795	-0.003	91	9463	0.0400	0.0411	
106 n-Butylbenzene	91	19.905	19.907	-0.002	97	15282	0.0400	0.0405	
107 Indene	116	19.916	19.918	-0.002	90	9960	0.0400	0.0391	
108 Undecane	57	20.185	20.186	-0.001	95	10683	0.0400	0.0430	
110 1,2-Dibromo-3-Chloropropan	157	20.378	20.381	-0.003	93	4136	0.0400	0.0368	
111 1,2,4,5-Tetramethylbenzene	119	20.658	20.658	0.000	97	11984	0.0400	0.0365	
114 Dodecane	57	21.266	21.268	-0.002	93	8969	0.0400	0.003612	
115 1,2,4-Trichlorobenzene	180	21.508	21.509	-0.001	91	7063	0.0400	0.0406	
116 Naphthalene	128	21.643	21.642	0.001	98	12014	0.0400	0.0436	
118 Hexachlorobutadiene	225	21.799	21.798	0.001	95	7393	0.0400	0.0412	
119 1,2,3-Trichlorobenzene	180	21.858	21.858	0.000	93	5346	0.0400	0.0482	
120 2-Methylnaphthalene	142	22.385	22.385	0.000	96	3662	0.1250	0.1679	
121 1-Methylnaphthalene	142	22.509	22.509	0.000	97	4177	0.1250	0.1932	
A 123 C8 Range	1	15.099	(15.079-15.138)		0	44750	0.0400	0.0515	
S 124 Xylenes, Total	100				0		0.1200	0.1165	
S 125 1,2-Dichloroethene, Total	1				0		0.0800	0.0793	

Reagents:

40L1-3DQP_00001

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL02.D

Injection Date: 15-Feb-2018 16:21:30

Instrument ID: MJ

Operator ID: 403648

Lims ID: IC L2

Worklist Smp#: 4

Client ID:

Purge Vol: 500.000 mL

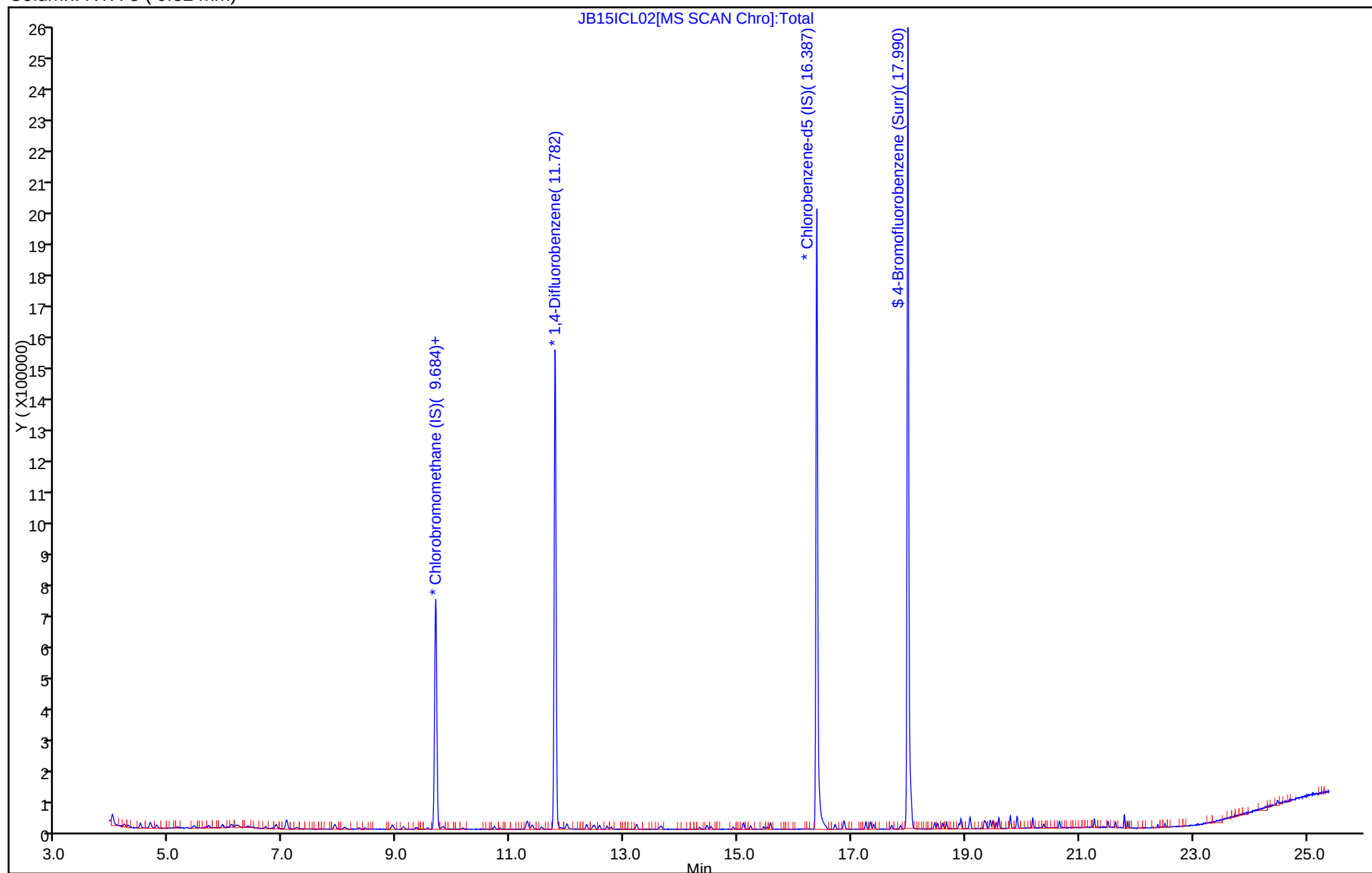
Dil. Factor: 1.0000

ALS Bottle#: 8

Method: MJ_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL02.D

Injection Date: 15-Feb-2018 16:21:30

Instrument ID: MJ

Lims ID: IC L2

Client ID:

Operator ID: 403648

ALS Bottle#: 8

Worklist Smp#: 4

Purge Vol: 500.000 mL

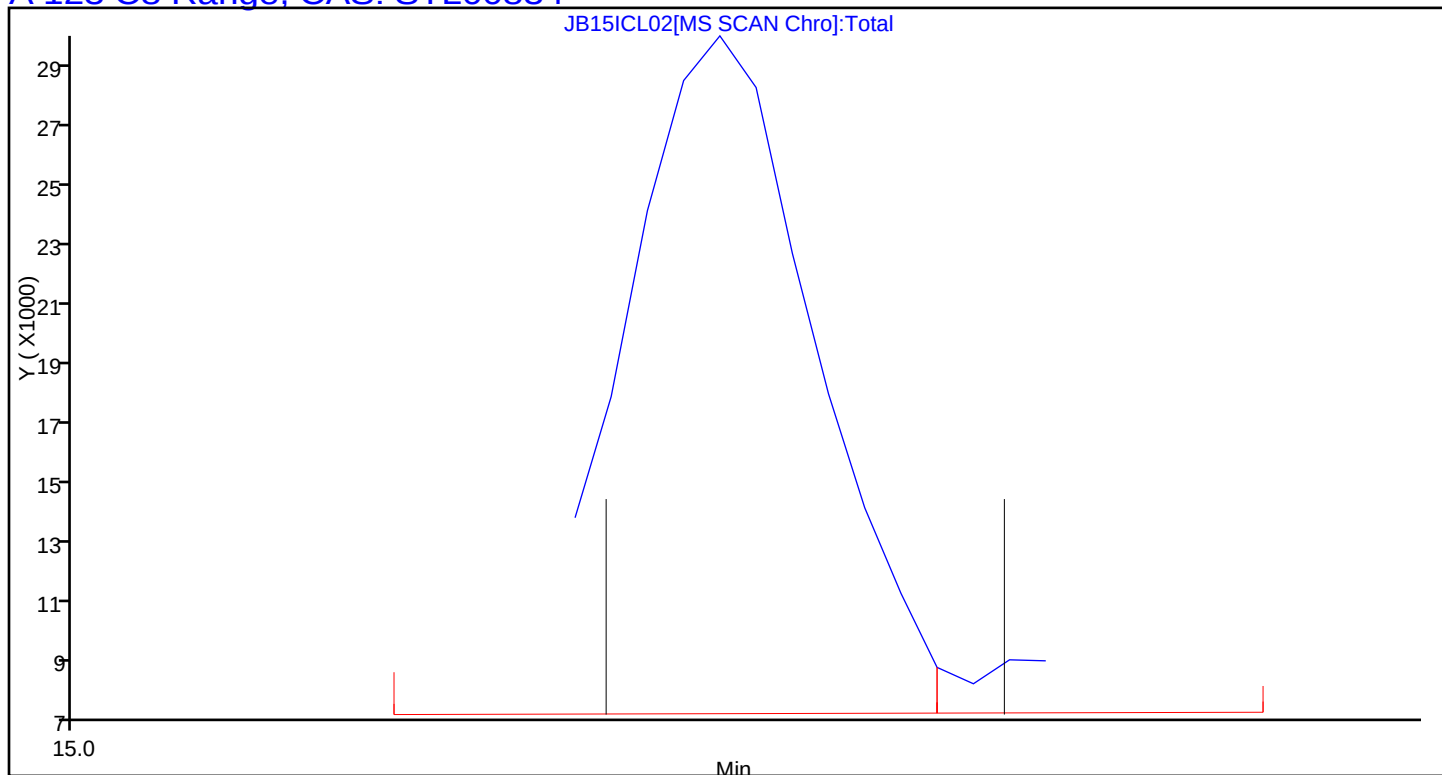
Dil. Factor: 1.0000

Method: MJ_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 123 C8 Range, CAS: STL00834

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL02.D

Injection Date: 15-Feb-2018 16:21:30

Instrument ID: MJ

Lims ID: IC L2

Client ID:

Operator ID: 403648

ALS Bottle#:

8

Worklist Smp#: 4

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MJ_TO15

Limit Group:

MSA TO14A_15 Routine ICAL

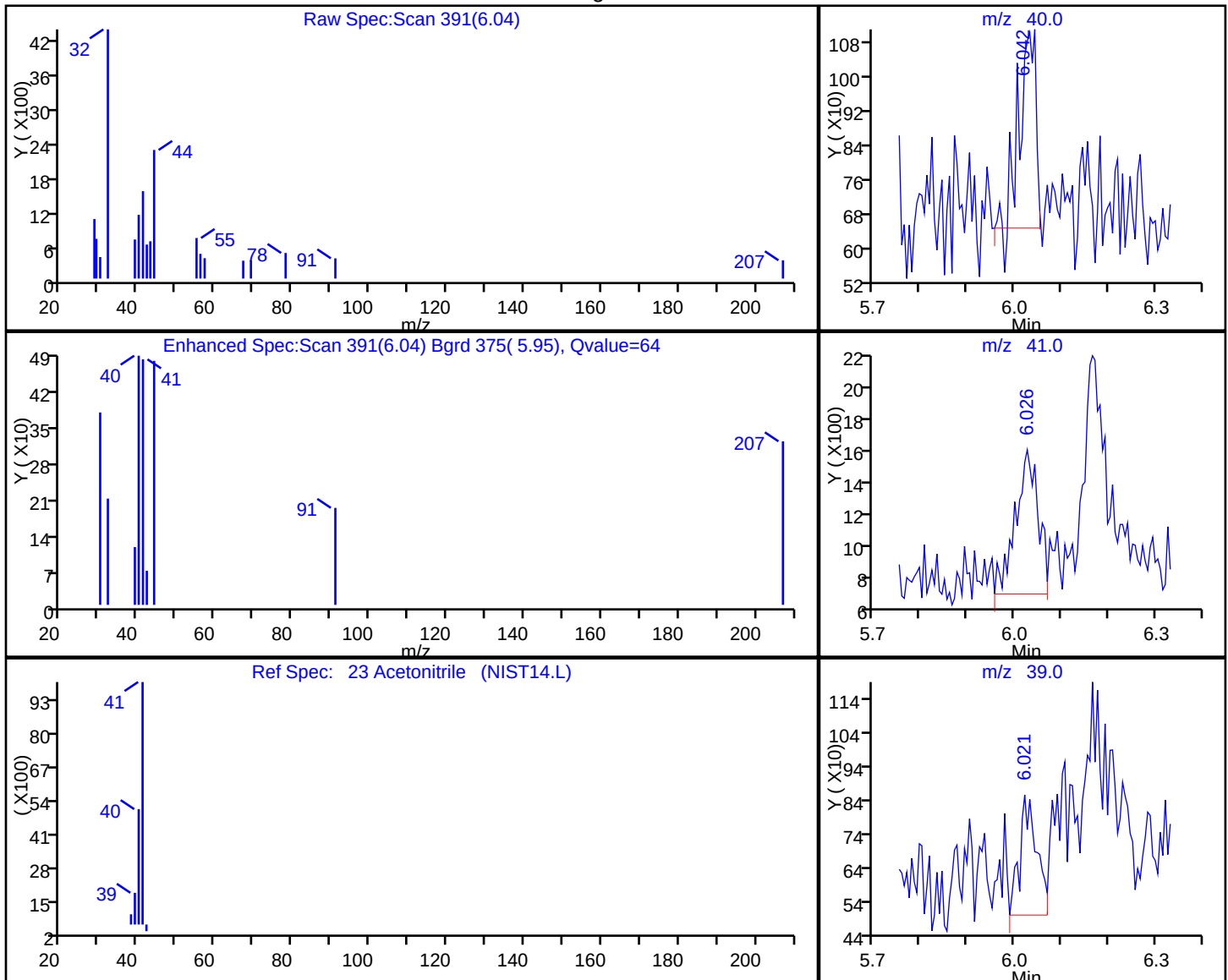
Column: RTX-5 (0.32 mm)

Detector

MS SCAN

23 Acetonitrile, CAS: 75-05-8

Processing Results



RT	Mass	Response	Amount
6.04	40.00	1113	0.037727
6.03	41.00	3003	
6.02	39.00	902	

Reviewer: barlozhetskayaa, 16-Feb-2018 11:45:14

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL02.D

Injection Date: 15-Feb-2018 16:21:30

Instrument ID: MJ

Lims ID: IC L2

Client ID:

Operator ID: 403648

ALS Bottle#:

8

Worklist Smp#: 4

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MJ_TO15

Limit Group:

MSA TO14A_15 Routine ICAL

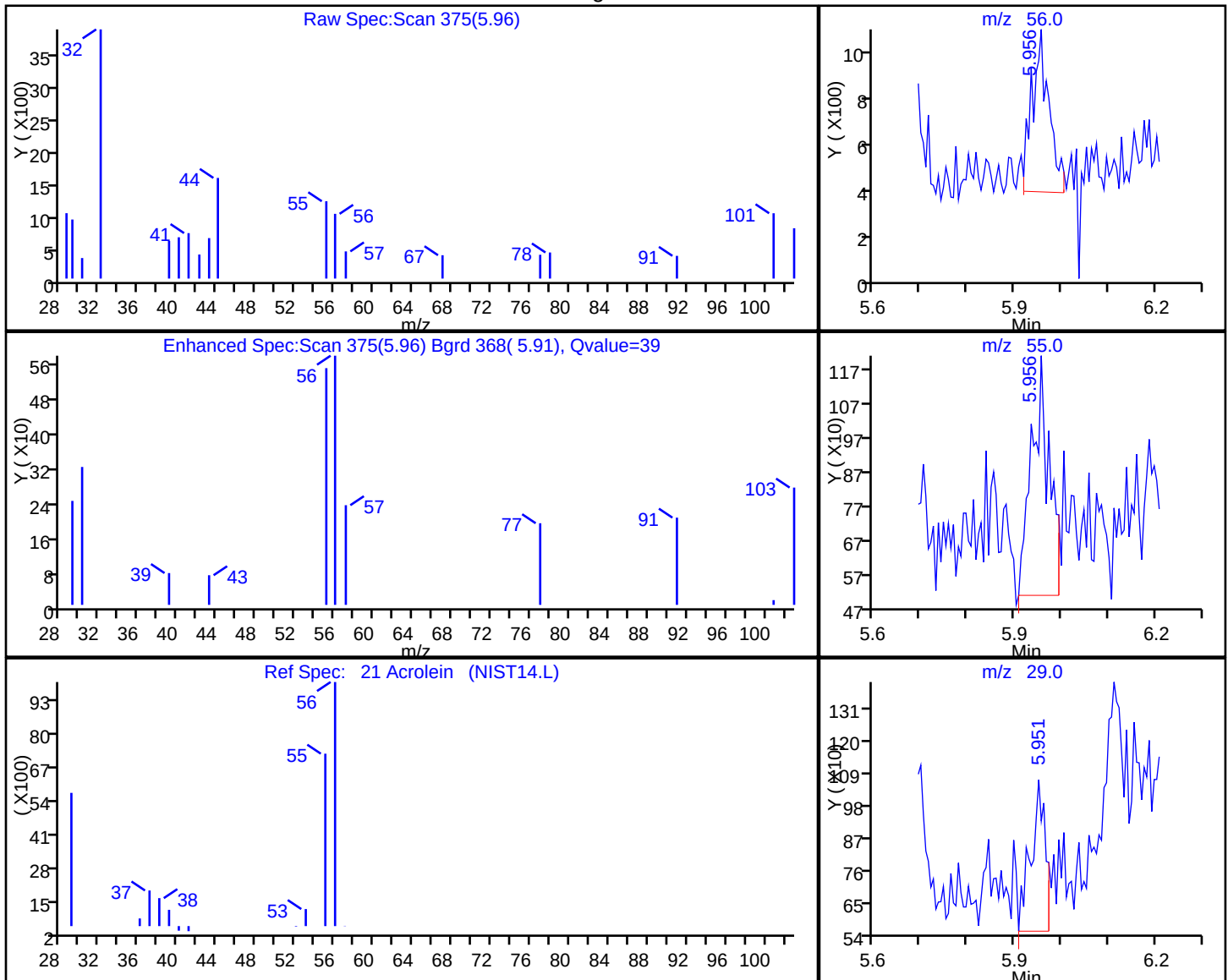
Column: RTX-5 (0.32 mm)

Detector

MS SCAN

21 Acrolein, CAS: 107-02-8

Processing Results



RT	Mass	Response	Amount
5.96	56.00	1671	0.069469
5.96	55.00	1852	
5.95	29.00	1112	

Reviewer: barlozhetskayaa, 16-Feb-2018 11:45:14

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL02.D

Injection Date: 15-Feb-2018 16:21:30

Instrument ID: MJ

Lims ID: IC L2

Client ID:

Operator ID: 403648

ALS Bottle#:

8

Worklist Smp#: 4

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MJ_TO15

Limit Group:

MSA TO14A_15 Routine ICAL

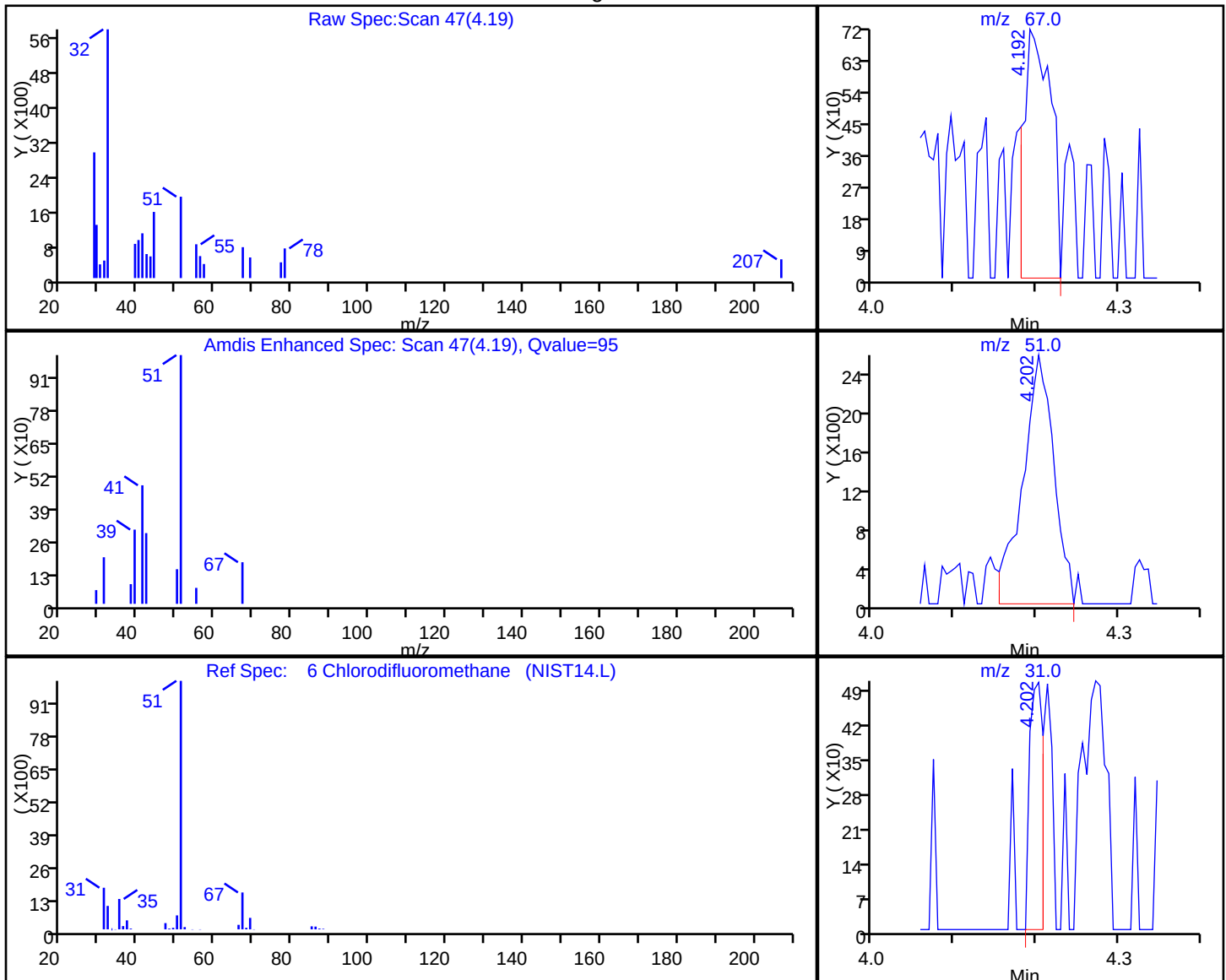
Column: RTX-5 (0.32 mm)

Detector

MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6

Processing Results



RT	Mass	Response	Amount
4.19	67.00	1632	0.055299
4.20	51.00	6789	
4.20	31.00	578	

Reviewer: barlozhetskayaa, 16-Feb-2018 11:45:14

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL02.D

Injection Date: 15-Feb-2018 16:21:30

Instrument ID: MJ

Lims ID: IC L2

Client ID:

Operator ID: 403648

ALS Bottle#:

8

Worklist Smp#: 4

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MJ_TO15

Limit Group:

MSA TO14A_15 Routine ICAL

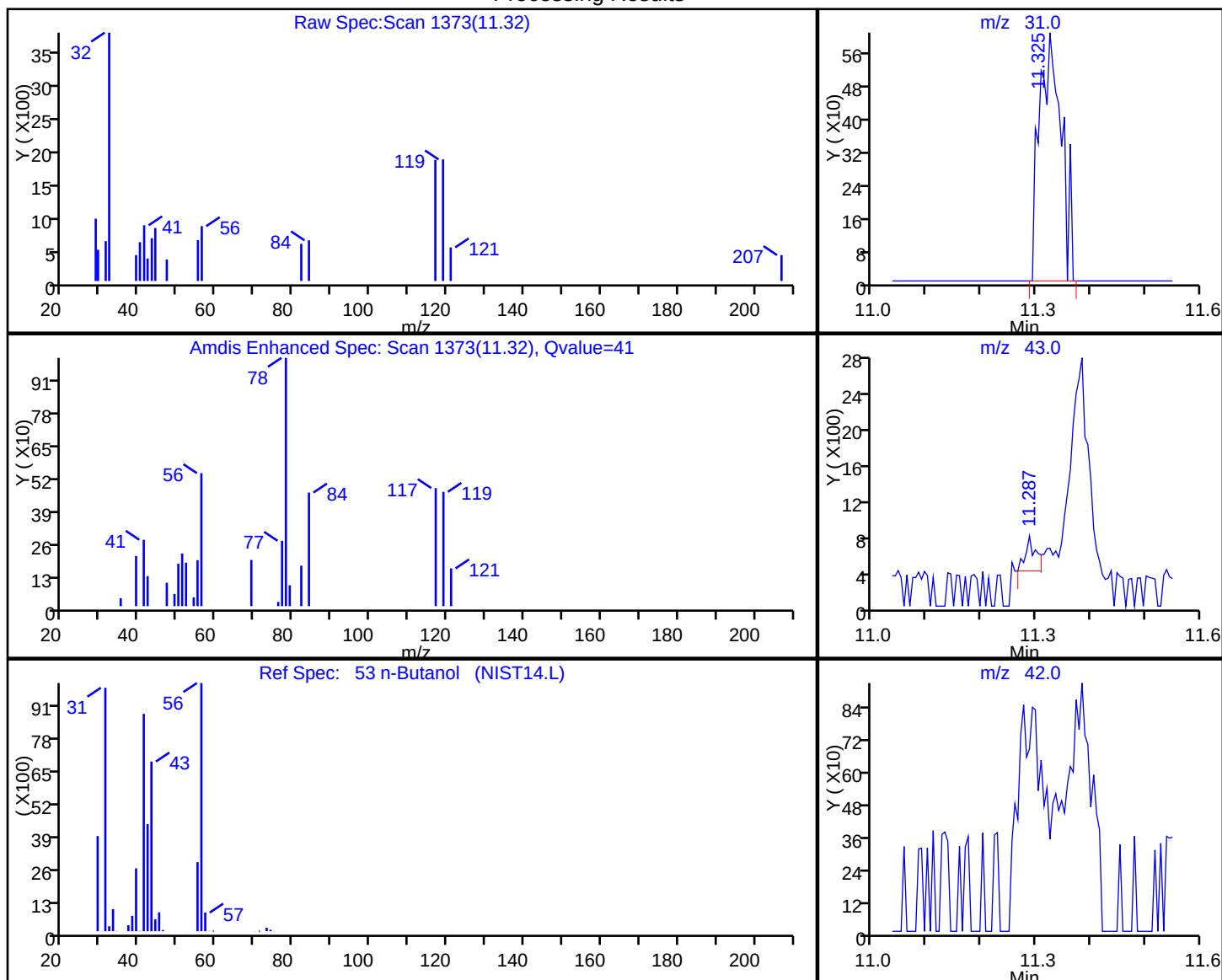
Column: RTX-5 (0.32 mm)

Detector

MS SCAN

53 n-Butanol, CAS: 71-36-3

Processing Results



RT	Mass	Response	Amount
11.32	31.00	1688	0.063741
11.29	43.00	529	
11.29	42.00	0	

Reviewer: barlozhetskayaa, 16-Feb-2018 11:45:14

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL03.D
 Lims ID: IC L3
 Client ID:
 Sample Type: IC Calib Level: 3
 Inject. Date: 15-Feb-2018 17:07:30 ALS Bottle#: 8 Worklist Smp#: 5
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0007391-005
 Misc. Info.: 140829
 Operator ID: 403648 Instrument ID: MJ
 Sublist: chrom-MJ_TO15*sub14
 Method: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\MJ_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Feb-2018 10:03:06 Calib Date: 15-Feb-2018 22:24:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK031

First Level Reviewer: barlozhetskayaa

Date: 15-Feb-2018 17:45:23

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.684	9.689	-0.005	92	283788	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.787	11.790	-0.003	95	1596917	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.387	16.389	-0.002	88	1445918	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.990	17.992	-0.002	94	1068525	4.00	4.09	
6 Chlorodifluoromethane	67	4.202	4.203	-0.001	94	3577	0.0800	0.1180	
7 Propene	41	4.213	4.216	-0.003	72	7440	0.0800	0.0901	
8 Dichlorodifluoromethane	85	4.277	4.274	0.003	99	21153	0.0800	0.0831	
9 Chloromethane	52	4.482	4.482	0.000	60	3270	0.0800	0.1098	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.487	4.489	-0.002	91	13879	0.0800	0.0832	
11 Acetaldehyde	44	4.665	4.662	0.003	97	23331	0.4000	0.7058	
12 Vinyl chloride	62	4.681	4.679	0.002	97	8173	0.0800	0.0881	
13 Butadiene	54	4.783	4.777	0.006	64	6527	0.0800	0.0871	
14 Butane	43	4.778	4.777	0.001	87	12961	0.0800	0.0911	
15 Bromomethane	94	5.149	5.146	0.003	97	8215	0.0800	0.0889	
16 Chloroethane	64	5.305	5.304	0.001	95	3968	0.0800	0.0824	
17 Ethanol	31	5.434	5.435	-0.001	97	16323	0.4000	0.4748	
18 Vinyl bromide	106	5.644	5.641	0.003	92	7192	0.0800	0.0819	
19 2-Methylbutane	43	5.692	5.693	-0.001	91	9927	0.0800	0.0947	
20 Trichlorofluoromethane	101	5.929	5.933	-0.004	99	20764	0.0800	0.0843	
21 Acrolein	56	5.956	5.950	0.006	26	3610	0.0800	0.1468	
22 Acetone	58	6.096	6.081	0.015	97	12587	0.2400	0.3896	
24 Pentane	72	6.171	6.171	0.000	97	1626	0.0800	0.1083	
25 Isopropyl alcohol	45	6.209	6.201	0.008	92	24895	0.2400	0.2688	
26 Ethyl ether	31	6.381	6.362	0.019	95	7476	0.0800	0.0935	
27 1,1-Dichloroethene	96	6.693	6.692	0.001	96	8381	0.0800	0.0892	
28 Acrylonitrile	53	6.806	6.809	-0.003	96	5617	0.0800	0.1000	
30 2-Methyl-2-propanol	59	6.897	6.865	0.032	75	9512	0.0800	0.0527	
29 1,1,2-Trichloro-1,2,2-trif	101	6.876	6.875	0.001	96	16313	0.0800	0.0838	
32 Methylene Chloride	84	7.059	7.061	-0.002	96	18593	0.0800	0.1829	
31 3-Chloro-1-propene	39	7.080	7.077	0.003	97	9005	0.0800	0.0817	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	7.242	7.239	0.003	98	24693	0.0800	0.0906	
34 trans-1,2-Dichloroethene	96	7.898	7.903	-0.005	74	7875	0.0800	0.0838	
35 2-Methylpentane	43	7.919	7.917	0.002	93	20535	0.0800	0.0949	
36 Methyl tert-butyl ether	73	8.070	8.053	0.017	95	17128	0.0800	0.0821	
37 1,1-Dichloroethane	63	8.344	8.343	0.001	98	14950	0.0800	0.0847	
38 Vinyl acetate	43	8.441	8.442	-0.001	100	16018	0.0800	0.0796	
40 2-Butanone (MEK)	72	8.941	8.919	0.022	81	3466	0.0800	0.0955	
39 Hexane	56	8.925	8.922	0.003	80	8192	0.0800	0.1073	
41 Isopropyl ether	45	9.108	9.091	0.017	97	20843	0.0800	0.0834	
42 cis-1,2-Dichloroethene	96	9.340	9.347	-0.007	95	8074	0.0800	0.0842	
43 Ethyl acetate	43	9.539	9.529	0.010	97	15186	0.0800	0.0947	
44 Chloroform	83	9.689	9.697	-0.008	29	17816	0.0800	0.0877	
45 Tert-butyl ethyl ether	59	9.808	9.782	0.026	94	18484	0.0800	0.0794	
46 Tetrahydrofuran	42	10.146	10.126	0.020	95	8227	0.0800	0.0956	
47 1,1,1-Trichloroethane	97	10.722	10.721	0.001	96	18145	0.0800	0.0858	
48 1,2-Dichloroethane	62	10.819	10.825	-0.006	95	10626	0.0800	0.0820	
49 Cyclohexane	69	11.287	11.287	0.000	69	4472	0.0800	0.0956	
50 Benzene	78	11.292	11.291	0.001	97	24429	0.0800	0.0862	
52 Carbon tetrachloride	117	11.314	11.310	0.004	97	18207	0.0800	0.0851	
55 2,3-Dimethylpentane	71	11.389	11.384	0.005	91	5875	0.0800	0.0883	
51 Thiophene	84	11.551	11.554	-0.004	95	13462	0.0800	0.0837	
56 Isooctane	57	11.997	11.995	0.002	98	40803	0.0800	0.0898	
57 n-Heptane	71	12.347	12.342	0.005	90	8492	0.0800	0.0852	
58 1,2-Dichloropropane	63	12.454	12.451	0.003	88	9261	0.0800	0.0869	
59 Trichloroethene	130	12.476	12.480	-0.004	95	10397	0.0800	0.0832	
60 Dibromomethane	93	12.567	12.569	-0.002	94	10667	0.0800	0.0896	
61 Dichlorobromomethane	83	12.702	12.704	-0.002	98	16774	0.0800	0.0805	
62 1,4-Dioxane	88	12.761	12.735	0.026	80	2237	0.0800	0.0805	
63 Methyl methacrylate	41	12.782	12.776	0.006	94	8382	0.0800	0.0864	
64 Methylcyclohexane	83	13.224	13.222	0.002	96	15575	0.0800	0.0875	
65 4-Methyl-2-pentanone (MIBK)	43	13.632	13.618	0.014	94	14225	0.0800	0.0972	
66 cis-1,3-Dichloropropene	75	13.659	13.659	0.000	96	13343	0.0800	0.0812	
67 trans-1,3-Dichloropropene	75	14.326	14.329	-0.003	97	10875	0.0800	0.0777	
68 Toluene	91	14.461	14.458	0.003	95	25542	0.0800	0.0837	
69 1,1,2-Trichloroethane	83	14.531	14.532	-0.001	96	7985	0.0800	0.0857	
72 2-Hexanone	58	14.918	14.908	0.010	94	5895	0.0800	0.0820	
73 n-Octane	85	15.101	15.100	0.001	94	8774	0.0800	0.0828	
74 Chlorodibromomethane	129	15.225	15.227	-0.002	97	16372	0.0800	0.0796	
75 Ethylene Dibromide	107	15.515	15.514	0.001	94	14297	0.0800	0.0827	
76 Tetrachloroethene	129	15.574	15.575	-0.001	96	10866	0.0800	0.0898	
77 2,3-Dimethylheptane	43	16.424	16.423	0.001	93	29861	0.0800	0.0960	
78 Chlorobenzene	112	16.435	16.437	-0.002	94	20875	0.0800	0.0849	
79 Ethylbenzene	91	16.709	16.711	-0.002	98	32565	0.0800	0.0861	
81 m-Xylene & p-Xylene	91	16.865	16.869	-0.004	0	48711	0.1600	0.1720	
82 n-Nonane	57	17.253	17.252	0.001	93	18443	0.0800	0.0894	
83 Styrene	104	17.328	17.331	-0.003	98	17705	0.0800	0.0807	
84 Bromoform	173	17.333	17.333	0.000	90	17167	0.0800	0.0778	
85 o-Xylene	91	17.393	17.391	0.002	99	24847	0.0800	0.0827	
86 1,1,2,2-Tetrachloroethane	83	17.705	17.708	-0.003	98	18692	0.0800	0.0861	
87 1,2,3-Trichloropropane	110	17.861	17.864	-0.003	98	4845	0.0800	0.0852	
88 Isopropylbenzene	105	17.952	17.956	-0.004	89	36334	0.0800	0.0889	
89 N-Propylbenzene	120	18.458	18.462	-0.004	99	9302	0.0800	0.0827	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
90 2-Chlorotoluene	126	18.517	18.516	0.001	97	9208	0.0800	0.0844	
91 4-Ethyltoluene	105	18.603	18.602	0.001	98	33930	0.0800	0.0860	
92 1,3,5-Trimethylbenzene	120	18.673	18.672	0.001	93	14114	0.0800	0.0855	
93 Alpha Methyl Styrene	118	18.888	18.891	-0.003	90	14312	0.0800	0.0832	
94 n-Decane	57	18.920	18.923	-0.003	91	23094	0.0800	0.0946	
95 tert-Butylbenzene	119	19.076	19.079	-0.003	92	30373	0.0800	0.0866	
96 1,2,4-Trimethylbenzene	105	19.087	19.091	-0.004	96	28923	0.0800	0.0874	
97 sec-Butylbenzene	105	19.335	19.337	-0.002	98	41696	0.0800	0.0863	
98 1,3-Dichlorobenzene	146	19.361	19.363	-0.002	97	22046	0.0800	0.0889	
99 Benzyl chloride	91	19.431	19.431	0.000	98	22135	0.0800	0.0828	
100 1,4-Dichlorobenzene	146	19.442	19.445	-0.003	95	22135	0.0800	0.0897	
101 4-Isopropyltoluene	119	19.485	19.489	-0.004	97	35283	0.0800	0.0895	
102 1,2,3-Trimethylbenzene	105	19.544	19.549	-0.005	97	27902	0.0800	0.0861	
103 Butylcyclohexane	83	19.587	19.591	-0.004	94	26670	0.0800	0.0891	
104 2,3-Dihydroindene	117	19.792	19.792	0.000	94	26808	0.0800	0.0867	
105 1,2-Dichlorobenzene	146	19.792	19.795	-0.003	94	21084	0.0800	0.0899	
106 n-Butylbenzene	91	19.905	19.907	-0.002	98	34682	0.0800	0.0901	
107 Indene	116	19.916	19.918	-0.002	89	21811	0.0800	0.0839	
108 Undecane	57	20.185	20.186	-0.001	96	23414	0.0800	0.0924	
110 1,2-Dibromo-3-Chloropropan	157	20.378	20.381	-0.003	97	9615	0.0800	0.0840	
111 1,2,4,5-Tetramethylbenzene	119	20.658	20.658	0.000	97	29177	0.0800	0.0871	
114 Dodecane	57	21.266	21.268	-0.002	96	20521	0.0800	0.0691	
115 1,2,4-Trichlorobenzene	180	21.508	21.509	-0.001	92	16452	0.0800	0.0926	
116 Naphthalene	128	21.642	21.642	0.000	99	28149	0.0800	0.1002	
118 Hexachlorobutadiene	225	21.798	21.798	0.000	95	17105	0.0800	0.0934	
119 1,2,3-Trichlorobenzene	180	21.858	21.858	0.000	95	11991	0.0800	0.1061	
120 2-Methylnaphthalene	142	22.385	22.385	0.000	97	6317	0.2500	0.2839	
121 1-Methylnaphthalene	142	22.508	22.509	-0.001	98	7343	0.2500	0.3329	
A 123 C8 Range	1	15.108	(15.073-15.143)		0	80373	0.0800	0.0906	
S 124 Xylenes, Total	100				0		0.2400	0.2548	
S 125 1,2-Dichloroethene, Total	1				0		0.1600	0.1680	

Reagents:

40L1-3DQP_00001

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL03.D

Injection Date: 15-Feb-2018 17:07:30

Instrument ID: MJ

Operator ID: 403648

Lims ID: IC L3

Worklist Smp#: 5

Client ID:

Purge Vol: 500.000 mL

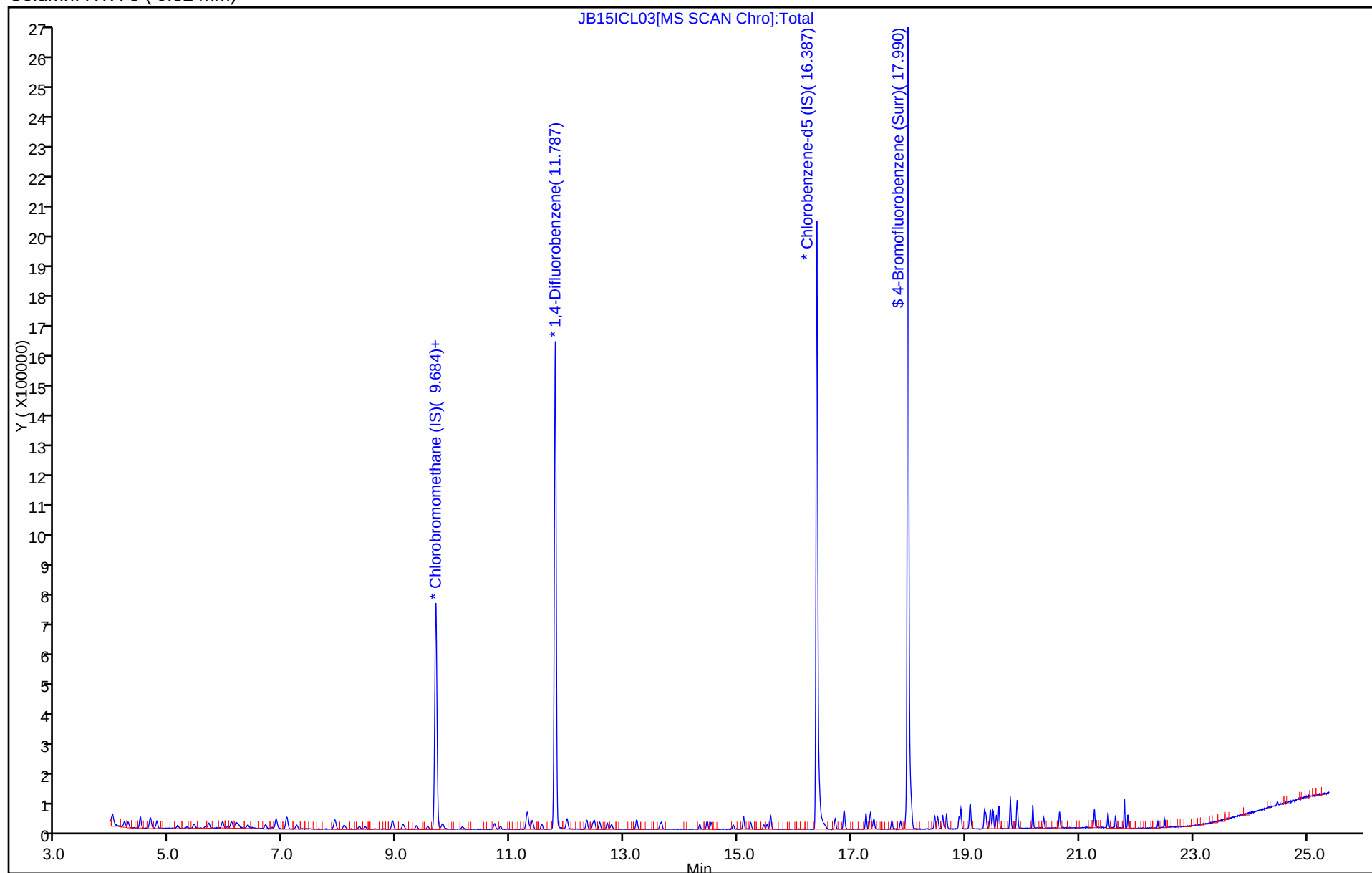
Dil. Factor: 1.0000

ALS Bottle#: 8

Method: MJ_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL03.D

Injection Date: 15-Feb-2018 17:07:30

Instrument ID: MJ

Lims ID: IC L3

Client ID:

Operator ID: 403648

ALS Bottle#: 8

Worklist Smp#: 5

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

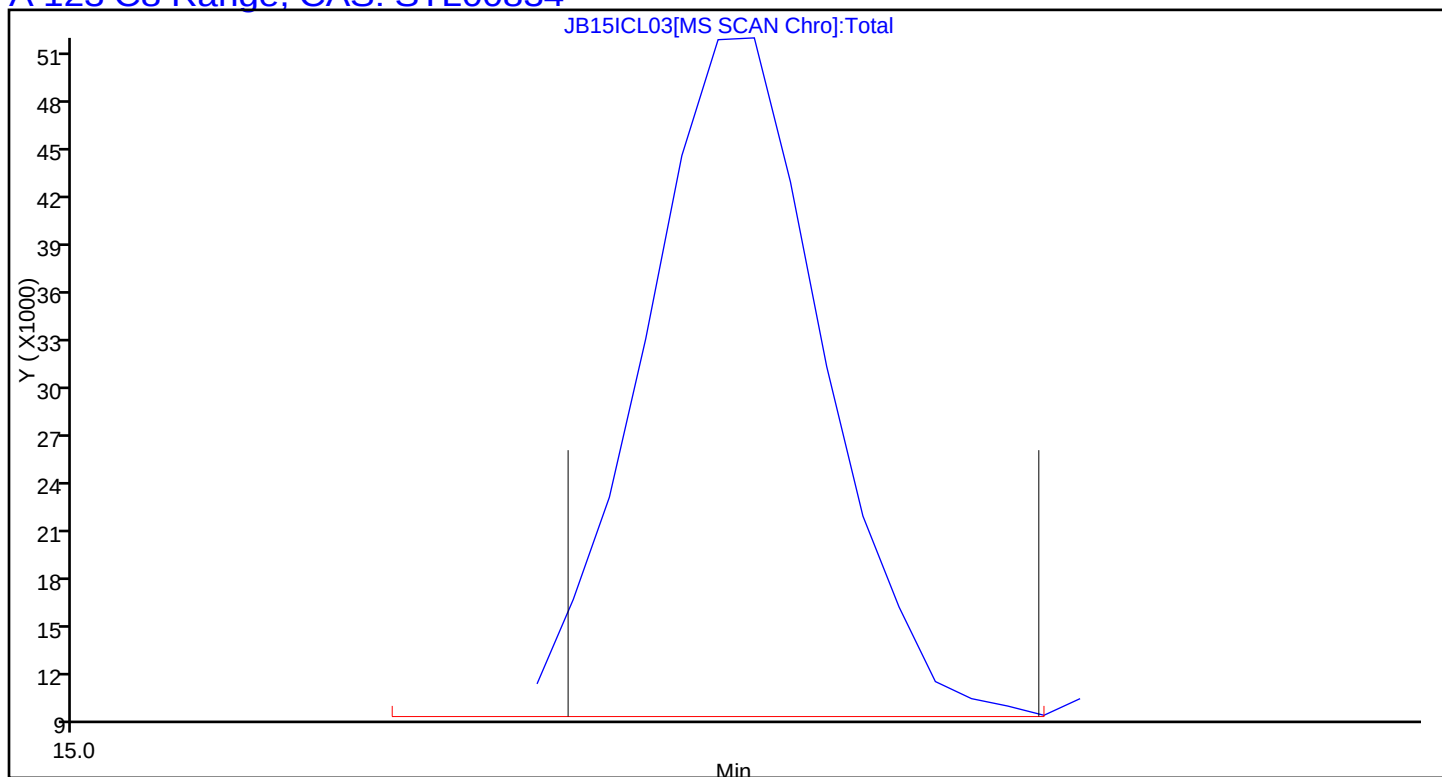
Method: MJ_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 123 C8 Range, CAS: STL00834



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL03.D

Injection Date: 15-Feb-2018 17:07:30

Instrument ID: MJ

Lims ID: IC L3

Client ID:

Operator ID: 403648

ALS Bottle#:

8

Worklist Smp#: 5

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MJ_TO15

Limit Group:

MSA TO14A_15 Routine ICAL

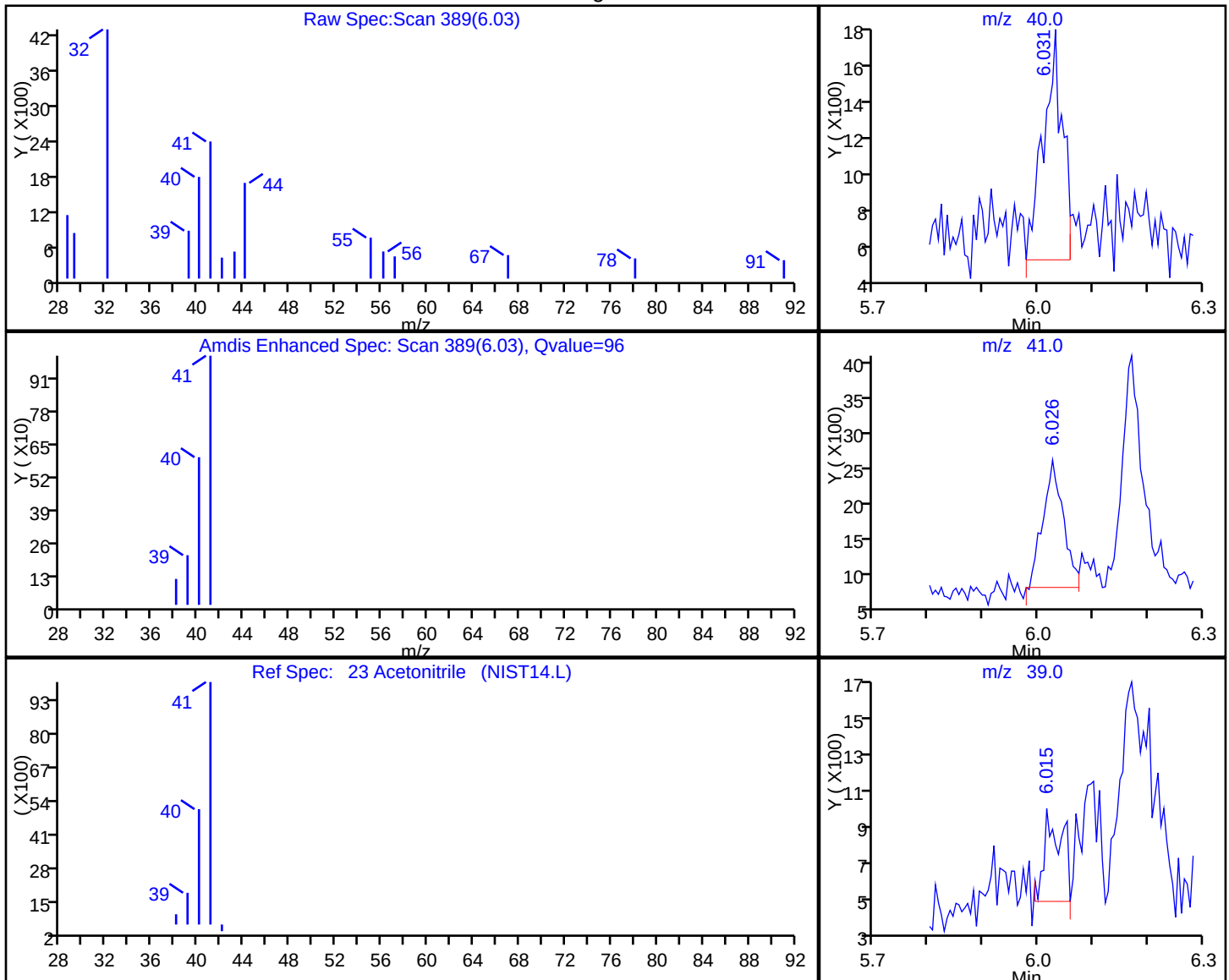
Column: RTX-5 (0.32 mm)

Detector

MS SCAN

23 Acetonitrile, CAS: 75-05-8

Processing Results



RT	Mass	Response	Amount
6.03	40.00	2814	0.092845
6.03	41.00	4676	
6.02	39.00	993	

Reviewer: barlozhetskayaa, 16-Feb-2018 11:50:20

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL03.D

Injection Date: 15-Feb-2018 17:07:30

Instrument ID: MJ

Lims ID: IC L3

Client ID:

Operator ID: 403648

ALS Bottle#: 8

Worklist Smp#: 5

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: MJ_TO15

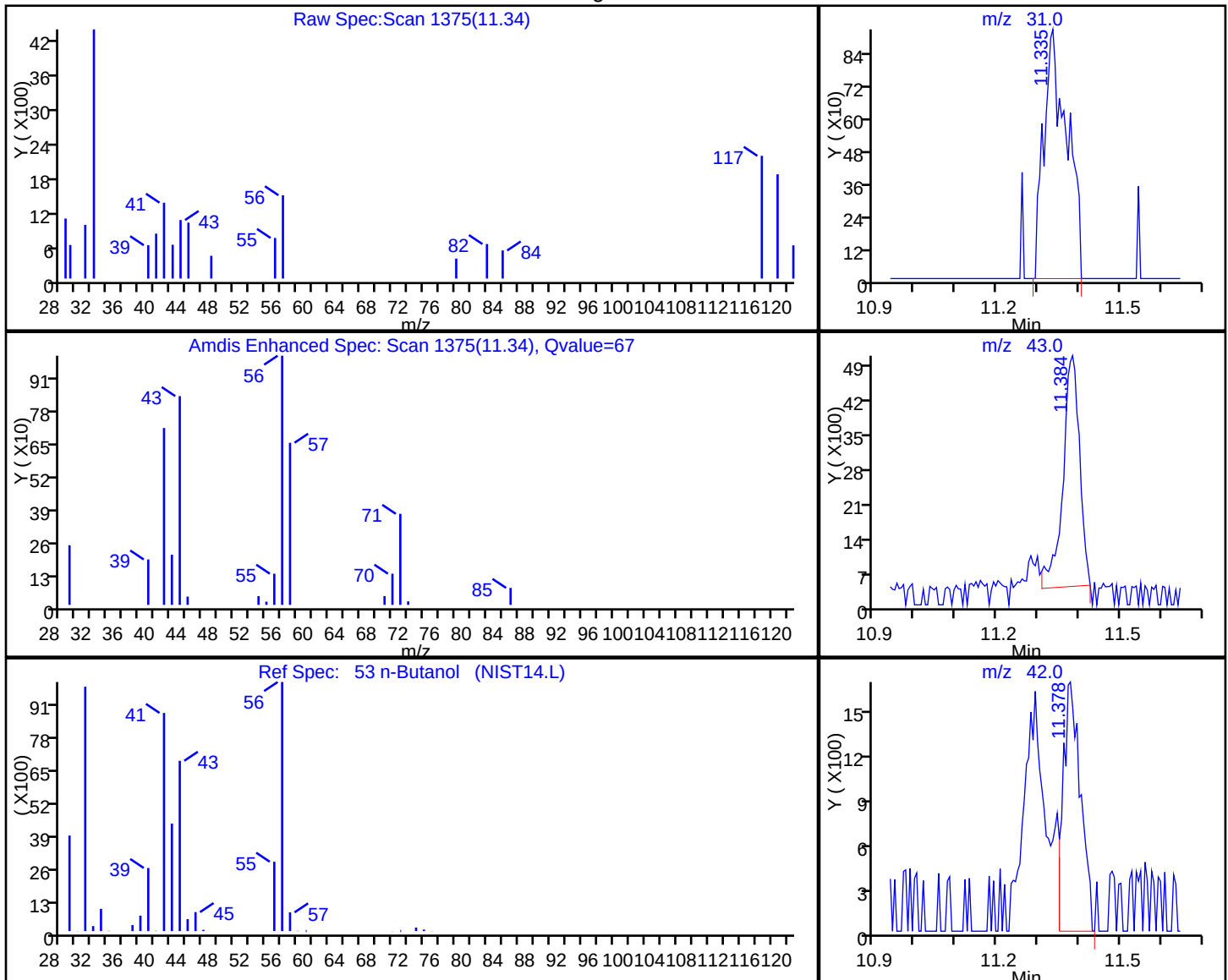
Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

53 n-Butanol, CAS: 71-36-3

Processing Results



RT	Mass	Response	Amount
11.34	31.00	3645	0.131611
11.38	43.00	13240	
11.38	42.00	4699	

Reviewer: barlozhetskayaa, 16-Feb-2018 11:50:20

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL04.D
 Lims ID: IC L4
 Client ID:
 Sample Type: IC Calib Level: 4
 Inject. Date: 15-Feb-2018 17:52:30 ALS Bottle#: 9 Worklist Smp#: 6
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0007391-006
 Misc. Info.: 140828
 Operator ID: 403648 Instrument ID: MJ
 Sublist: chrom-MJ_TO15*sub14
 Method: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\MJ_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Feb-2018 10:03:26 Calib Date: 15-Feb-2018 22:24:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK031

First Level Reviewer: barlozhetskayaa

Date: 16-Feb-2018 09:34:58

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.689	9.689	-0.001	92	299520	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.787	11.790	-0.004	95	1701031	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.386	16.389	-0.003	88	1520404	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.989	17.992	-0.003	94	1086367	4.00	3.95	
6 Chlorodifluoromethane	67	4.218	4.203	0.015	97	5657	0.1600	0.1768	
7 Propene	41	4.228	4.216	0.012	95	14182	0.1600	0.1627	
8 Dichlorodifluoromethane	85	4.282	4.274	0.008	100	42724	0.1600	0.1590	
9 Chloromethane	52	4.497	4.482	0.015	55	5660	0.1600	0.1800	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.497	4.489	0.008	92	28478	0.1600	0.1617	
11 Acetaldehyde	44	4.675	4.662	0.013	97	40347	0.8000	1.16	
12 Vinyl chloride	62	4.691	4.679	0.012	97	16389	0.1600	0.1675	
13 Butadiene	54	4.788	4.777	0.011	67	13259	0.1600	0.1676	
14 Butane	43	4.788	4.777	0.011	85	23931	0.1600	0.1595	
15 Bromomethane	94	5.154	5.146	0.008	96	16066	0.1600	0.1648	
16 Chloroethane	64	5.310	5.304	0.006	98	8085	0.1600	0.1591	
17 Ethanol	31	5.439	5.435	0.004	96	32209	0.8000	0.8876	
18 Vinyl bromide	106	5.649	5.641	0.008	96	14562	0.1600	0.1572	
19 2-Methylbutane	43	5.702	5.693	0.009	91	17850	0.1600	0.1614	
20 Trichlorofluoromethane	101	5.939	5.933	0.006	99	42082	0.1600	0.1619	
21 Acrolein	56	5.966	5.950	0.016	89	4690	0.1600	0.1806	
23 Acetonitrile	40	6.041	6.040	0.001	97	6532	0.1600	0.1988	
22 Acetone	58	6.095	6.081	0.014	98	26867	0.4800	0.7880	
24 Pentane	72	6.176	6.171	0.005	97	3215	0.1600	0.2029	
25 Isopropyl alcohol	45	6.208	6.201	0.007	96	49915	0.4800	0.5106	
26 Ethyl ether	31	6.380	6.362	0.018	95	15056	0.1600	0.1784	
27 1,1-Dichloroethene	96	6.698	6.692	0.006	98	15755	0.1600	0.1589	
28 Acrylonitrile	53	6.816	6.809	0.007	95	9991	0.1600	0.1686	
30 2-Methyl-2-propanol	59	6.897	6.865	0.032	55	18376	0.1600	0.1283	
29 1,1,2-Trichloro-1,2,2-trif	101	6.880	6.875	0.005	97	33602	0.1600	0.1635	
32 Methylene Chloride	84	7.063	7.061	0.002	96	26564	0.1600	0.2476	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
31 3-Chloro-1-propene	39	7.085	7.077	0.008	95	13906	0.1600	0.1336	
33 Carbon disulfide	76	7.246	7.239	0.007	99	46690	0.1600	0.1624	
34 trans-1,2-Dichloroethene	96	7.908	7.903	0.005	98	15649	0.1600	0.1577	
35 2-Methylpentane	43	7.924	7.917	0.007	94	36385	0.1600	0.1592	
36 Methyl tert-butyl ether	73	8.064	8.053	0.011	97	37261	0.1600	0.1692	
37 1,1-Dichloroethane	63	8.344	8.343	0.001	99	29982	0.1600	0.1609	
38 Vinyl acetate	43	8.446	8.442	0.004	100	37307	0.1600	0.1756	
40 2-Butanone (MEK)	72	8.925	8.919	0.006	85	7576	0.1600	0.1979	
39 Hexane	56	8.925	8.922	0.003	73	14214	0.1600	0.1764	
41 Isopropyl ether	45	9.108	9.091	0.017	97	45526	0.1600	0.1726	
42 cis-1,2-Dichloroethene	96	9.344	9.347	-0.003	95	16376	0.1600	0.1618	
43 Ethyl acetate	43	9.538	9.529	0.009	99	31175	0.1600	0.1841	
44 Chloroform	83	9.694	9.697	-0.003	31	35241	0.1600	0.1643	
45 Tert-butyl ethyl ether	59	9.796	9.782	0.014	94	43119	0.1600	0.1756	
46 Tetrahydrofuran	42	10.146	10.126	0.020	91	17204	0.1600	0.1895	
47 1,1,1-Trichloroethane	97	10.727	10.721	0.006	97	35378	0.1600	0.1584	
48 1,2-Dichloroethane	62	10.824	10.825	-0.001	96	21442	0.1600	0.1554	
49 Cyclohexane	69	11.286	11.287	-0.001	70	7932	0.1600	0.1592	
50 Benzene	78	11.292	11.291	0.001	97	48414	0.1600	0.1604	
53 n-Butanol	31	11.335	11.293	0.042	66	4922	0.1600	0.1673	
52 Carbon tetrachloride	117	11.308	11.310	-0.002	97	36066	0.1600	0.1582	
55 2,3-Dimethylpentane	71	11.388	11.384	0.004	91	11913	0.1600	0.1681	
51 Thiophene	84	11.550	11.554	-0.004	96	27334	0.1600	0.1595	
56 Isooctane	57	11.996	11.995	0.001	99	79383	0.1600	0.1640	
57 n-Heptane	71	12.341	12.342	-0.001	92	17167	0.1600	0.1616	
58 1,2-Dichloropropane	63	12.448	12.451	-0.003	90	17767	0.1600	0.1565	
59 Trichloroethene	130	12.480	12.480	0.000	96	21535	0.1600	0.1618	
60 Dibromomethane	93	12.567	12.569	-0.002	95	20766	0.1600	0.1638	
61 Dichlorobromomethane	83	12.706	12.704	0.002	99	34347	0.1600	0.1547	
62 1,4-Dioxane	88	12.760	12.735	0.025	86	4748	0.1600	0.1604	
63 Methyl methacrylate	41	12.776	12.776	0.000	94	17426	0.1600	0.1686	
64 Methylcyclohexane	83	13.223	13.222	0.001	96	30462	0.1600	0.1607	
65 4-Methyl-2-pentanone (MIBK)	43	13.632	13.618	0.014	95	27138	0.1600	0.1740	
66 cis-1,3-Dichloropropene	75	13.659	13.659	0.000	96	26097	0.1600	0.1491	
67 trans-1,3-Dichloropropene	75	14.331	14.329	0.002	97	23711	0.1600	0.1610	
68 Toluene	91	14.455	14.458	-0.003	94	54782	0.1600	0.1708	
69 1,1,2-Trichloroethane	83	14.530	14.532	-0.002	97	16317	0.1600	0.1665	
72 2-Hexanone	58	14.923	14.908	0.015	94	11694	0.1600	0.1547	
73 n-Octane	85	15.100	15.100	0.000	93	18132	0.1600	0.1628	
74 Chlorodibromomethane	129	15.219	15.227	-0.008	98	33946	0.1600	0.1570	
75 Ethylene Dibromide	107	15.509	15.514	-0.005	99	29416	0.1600	0.1618	
76 Tetrachloroethene	129	15.574	15.575	-0.001	96	20519	0.1600	0.1613	
77 2,3-Dimethylheptane	43	16.424	16.423	0.001	96	57387	0.1600	0.1755	
78 Chlorobenzene	112	16.434	16.437	-0.003	97	43161	0.1600	0.1669	
79 Ethylbenzene	91	16.709	16.711	-0.002	98	70429	0.1600	0.1771	
81 m-Xylene & p-Xylene	91	16.870	16.869	0.001	0	103040	0.3200	0.3461	
82 n-Nonane	57	17.252	17.252	0.000	93	36604	0.1600	0.1687	
83 Styrene	104	17.333	17.331	0.002	98	38384	0.1600	0.1664	
84 Bromoform	173	17.333	17.333	0.000	85	34267	0.1600	0.1478	
85 o-Xylene	91	17.392	17.391	0.001	98	55661	0.1600	0.1762	
86 1,1,2,2-Tetrachloroethane	83	17.704	17.708	-0.004	99	40240	0.1600	0.1763	
87 1,2,3-Trichloropropane	110	17.860	17.864	-0.004	98	10278	0.1600	0.1718	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
88 Isopropylbenzene	105	17.957	17.956	0.001	96	76795	0.1600	0.1786	
89 N-Propylbenzene	120	18.462	18.462	0.000	99	20306	0.1600	0.1717	
90 2-Chlorotoluene	126	18.511	18.516	-0.005	98	19495	0.1600	0.1700	
91 4-Ethyltoluene	105	18.602	18.602	0.000	99	74014	0.1600	0.1784	
92 1,3,5-Trimethylbenzene	120	18.667	18.672	-0.005	94	31849	0.1600	0.1835	
93 Alpha Methyl Styrene	118	18.887	18.891	-0.004	87	29994	0.1600	0.1658	
94 n-Decane	57	18.920	18.923	-0.003	90	46614	0.1600	0.1815	
95 tert-Butylbenzene	119	19.076	19.079	-0.003	93	67386	0.1600	0.1827	
96 1,2,4-Trimethylbenzene	105	19.092	19.091	0.001	96	63212	0.1600	0.1816	
97 sec-Butylbenzene	105	19.334	19.337	-0.003	99	93389	0.1600	0.1838	
98 1,3-Dichlorobenzene	146	19.361	19.363	-0.002	97	43715	0.1600	0.1676	
99 Benzyl chloride	91	19.431	19.431	0.000	99	46845	0.1600	0.1667	
100 1,4-Dichlorobenzene	146	19.441	19.445	-0.004	94	43480	0.1600	0.1676	
101 4-Isopropyltoluene	119	19.485	19.489	-0.004	98	77548	0.1600	0.1870	
102 1,2,3-Trimethylbenzene	105	19.549	19.549	0.000	98	62548	0.1600	0.1836	
103 Butylcyclohexane	83	19.592	19.591	0.001	96	55433	0.1600	0.1762	
104 2,3-Dihydroindene	117	19.791	19.792	-0.001	94	59006	0.1600	0.1815	
105 1,2-Dichlorobenzene	146	19.791	19.795	-0.004	96	42959	0.1600	0.1741	
106 n-Butylbenzene	91	19.904	19.907	-0.003	98	74962	0.1600	0.1852	
107 Indene	116	19.915	19.918	-0.003	90	47682	0.1600	0.1745	
108 Undecane	57	20.184	20.186	-0.002	96	46744	0.1600	0.1754	
110 1,2-Dibromo-3-Chloropropan	157	20.378	20.381	-0.003	98	18099	0.1600	0.1503	
111 1,2,4,5-Tetramethylbenzene	119	20.657	20.658	-0.001	97	61721	0.1600	0.1751	
114 Dodecane	57	21.271	21.268	0.002	96	22403	0.1600	0.0736	
115 1,2,4-Trichlorobenzene	180	21.507	21.509	-0.002	94	24193	0.1600	0.1295	
116 Naphthalene	128	21.642	21.642	0.000	99	39105	0.1600	0.1324	
118 Hexachlorobutadiene	225	21.798	21.798	0.000	96	32154	0.1600	0.1670	
119 1,2,3-Trichlorobenzene	180	21.857	21.858	-0.001	95	12782	0.1600	0.1076	
120 2-Methylnaphthalene	142	22.384	22.385	-0.001	98	7493	0.5000	0.3203	
121 1-Methylnaphthalene	142	22.508	22.509	-0.001	98	7235	0.5000	0.3120	
A 123 C8 Range	1	15.103	(15.073-15.153)		0	166916	0.1600	0.1790	
S 124 Xylenes, Total	100				0		0.4800	0.5223	
S 125 1,2-Dichloroethene, Total	1				0		0.3200	0.3196	

Reagents:

40L4DQP_00001

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

Report Date: 19-Feb-2018 10:03:29

Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL04.D

Injection Date: 15-Feb-2018 17:52:30

Instrument ID: MJ

Operator ID: 403648

Lims ID: IC L4

Worklist Smp#: 6

Client ID:

Purge Vol: 500.000 mL

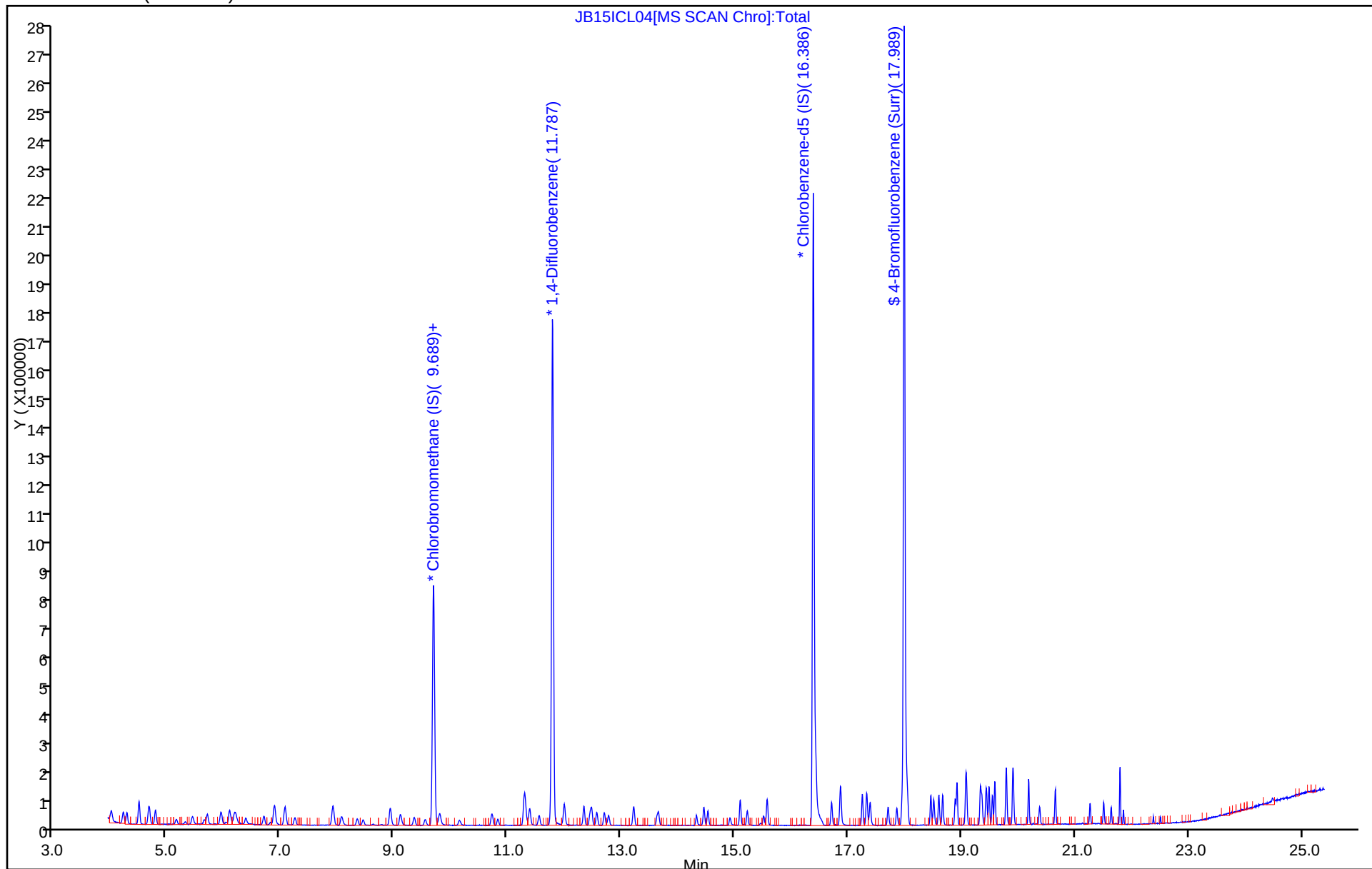
Dil. Factor: 1.0000

ALS Bottle#: 9

Method: MJ_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL04.D

Injection Date: 15-Feb-2018 17:52:30

Instrument ID: MJ

Lims ID: IC L4

Client ID:

Operator ID: 403648

ALS Bottle#: 9

Worklist Smp#: 6

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

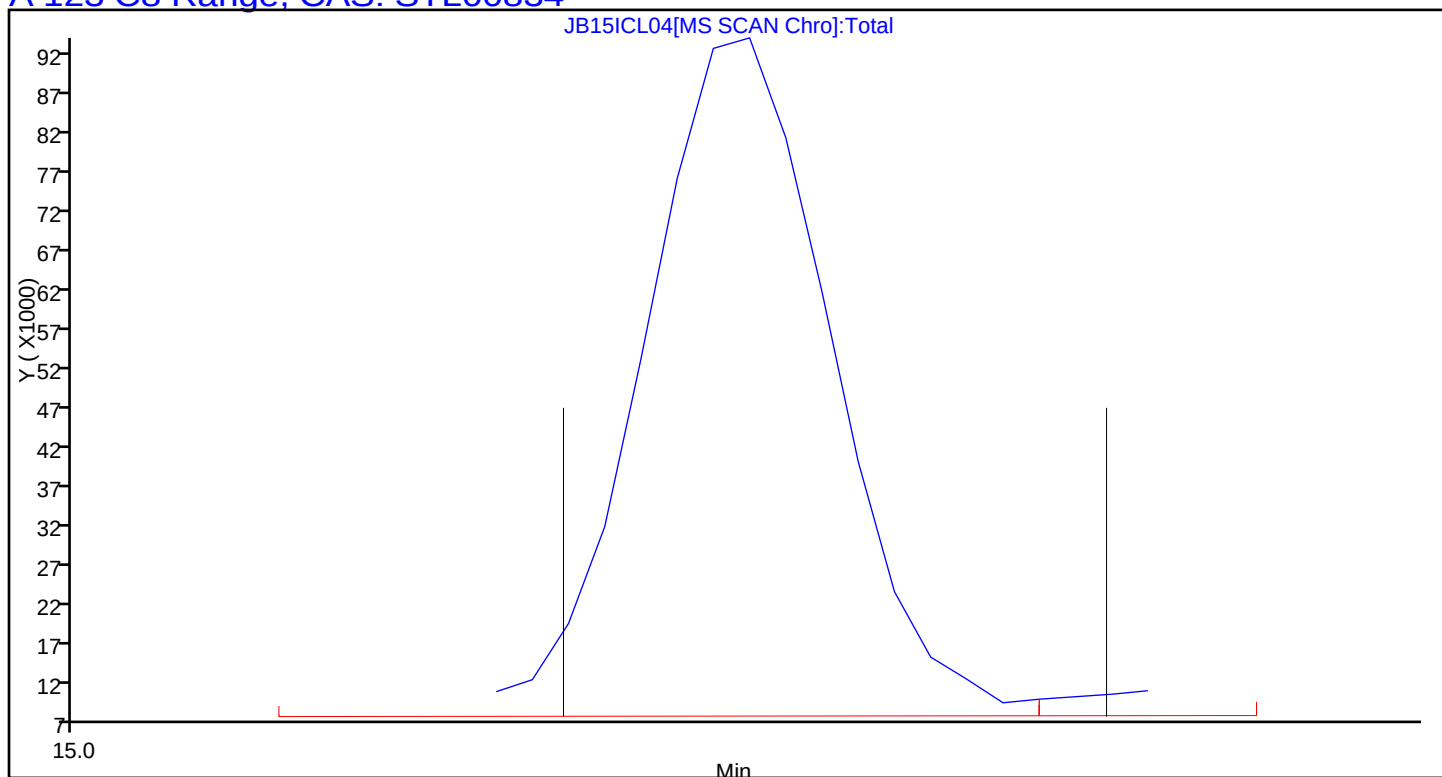
Method: MJ_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 123 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL05.D
 Lims ID: IC L5
 Client ID:
 Sample Type: IC Calib Level: 5
 Inject. Date: 15-Feb-2018 18:37:30 ALS Bottle#: 10 Worklist Smp#: 7
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0007391-007
 Misc. Info.: 140827
 Operator ID: 403648 Instrument ID: MJ
 Sublist: chrom-MJ_TO15*sub14
 Method: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\MJ_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Feb-2018 10:03:44 Calib Date: 15-Feb-2018 22:24:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK031

First Level Reviewer: barlozhetskayaa

Date: 16-Feb-2018 09:33:32

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.684	9.689	-0.005	92	281767	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.787	11.790	-0.003	95	1558059	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.386	16.389	-0.003	88	1430478	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.990	17.992	-0.002	97	1057828	4.00	4.09	
6 Chlorodifluoromethane	67	4.207	4.203	0.004	97	12058	0.4000	0.4005	
7 Propene	41	4.218	4.216	0.002	99	33073	0.4000	0.4033	
8 Dichlorodifluoromethane	85	4.277	4.274	0.003	99	106241	0.4000	0.4203	
9 Chloromethane	52	4.487	4.482	0.005	56	12950	0.4000	0.4378	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.492	4.489	0.003	92	72222	0.4000	0.4360	
11 Acetaldehyde	44	4.659	4.662	-0.003	100	83576	2.00	2.55	
12 Vinyl chloride	62	4.681	4.679	0.002	98	41629	0.4000	0.4522	
13 Butadiene	54	4.778	4.777	0.001	68	31237	0.4000	0.4197	
14 Butane	43	4.783	4.777	0.006	86	58983	0.4000	0.4178	
15 Bromomethane	94	5.143	5.146	-0.003	98	38970	0.4000	0.4250	
16 Chloroethane	64	5.305	5.304	0.001	97	19730	0.4000	0.4128	
17 Ethanol	31	5.418	5.435	-0.017	96	80056	2.00	2.35	
18 Vinyl bromide	106	5.644	5.641	0.003	98	37034	0.4000	0.4250	
19 2-Methylbutane	43	5.692	5.693	-0.001	91	45820	0.4000	0.4403	
20 Trichlorofluoromethane	101	5.934	5.933	0.001	99	106737	0.4000	0.4366	
21 Acrolein	56	5.950	5.950	0.000	26	11307	0.4000	0.4630	
23 Acetonitrile	40	6.026	6.040	-0.014	100	15639	0.4000	0.5060	
22 Acetone	58	6.074	6.081	-0.007	98	52018	1.20	1.62	
24 Pentane	72	6.171	6.171	0.000	76	6517	0.4000	0.4371	
25 Isopropyl alcohol	45	6.171	6.201	-0.030	81	142160	1.20	1.55	
26 Ethyl ether	31	6.359	6.362	-0.003	95	36110	0.4000	0.4549	
27 1,1-Dichloroethene	96	6.687	6.692	-0.005	96	39680	0.4000	0.4255	
28 Acrylonitrile	53	6.806	6.809	-0.003	95	25032	0.4000	0.4490	
30 2-Methyl-2-propanol	59	6.827	6.865	-0.038	92	58060	0.4000	0.5212	
29 1,1,2-Trichloro-1,2,2-trif	101	6.876	6.875	0.001	97	84847	0.4000	0.4390	
32 Methylene Chloride	84	7.058	7.061	-0.003	96	48728	0.4000	0.4828	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
31 3-Chloro-1-propene	39	7.075	7.077	-0.002	97	38333	0.4000	0.4499	
33 Carbon disulfide	76	7.236	7.239	-0.003	99	112870	0.4000	0.4172	
34 trans-1,2-Dichloroethene	96	7.898	7.903	-0.005	98	40259	0.4000	0.4314	
35 2-Methylpentane	43	7.914	7.917	-0.003	95	93643	0.4000	0.4357	
36 Methyl tert-butyl ether	73	8.043	8.053	-0.010	96	96118	0.4000	0.4640	
37 1,1-Dichloroethane	63	8.339	8.343	-0.004	100	76318	0.4000	0.4354	
38 Vinyl acetate	43	8.436	8.442	-0.006	100	92910	0.4000	0.4648	
40 2-Butanone (MEK)	72	8.914	8.919	-0.005	96	16551	0.4000	0.4595	
39 Hexane	56	8.914	8.922	-0.008	78	33815	0.4000	0.4461	
41 Isopropyl ether	45	9.081	9.091	-0.010	97	115208	0.4000	0.4642	
42 cis-1,2-Dichloroethene	96	9.345	9.347	-0.002	95	41004	0.4000	0.4307	
43 Ethyl acetate	43	9.522	9.529	-0.007	99	76623	0.4000	0.4811	
44 Chloroform	83	9.689	9.697	-0.008	57	86586	0.4000	0.4290	
45 Tert-butyl ethyl ether	59	9.775	9.782	-0.007	95	108840	0.4000	0.4711	
46 Tetrahydrofuran	42	10.119	10.126	-0.007	93	40956	0.4000	0.4795	
47 1,1,1-Trichloroethane	97	10.717	10.721	-0.004	96	89788	0.4000	0.4274	
48 1,2-Dichloroethane	62	10.819	10.825	-0.006	98	56229	0.4000	0.4449	
49 Cyclohexane	69	11.287	11.287	0.000	79	20197	0.4000	0.4426	
50 Benzene	78	11.287	11.291	-0.004	97	119041	0.4000	0.4305	
53 n-Butanol	31	11.265	11.293	-0.028	88	13885	0.4000	0.5153	
52 Carbon tetrachloride	117	11.303	11.310	-0.007	99	93367	0.4000	0.4470	
55 2,3-Dimethylpentane	71	11.378	11.384	-0.006	90	28672	0.4000	0.4416	
51 Thiophene	84	11.550	11.554	-0.004	96	69518	0.4000	0.4428	
54 Tert-amyl methyl ether	73	11.728	11.726	0.002	98	106673	0.4000	0.5005	
56 Isooctane	57	11.991	11.995	-0.004	99	196445	0.4000	0.4430	
57 n-Heptane	71	12.336	12.342	-0.006	92	43205	0.4000	0.4441	
58 1,2-Dichloropropane	63	12.443	12.451	-0.008	90	44766	0.4000	0.4304	
59 Trichloroethene	130	12.476	12.480	-0.004	96	54179	0.4000	0.4445	
60 Dibromomethane	93	12.562	12.569	-0.007	95	50669	0.4000	0.4363	
61 Dichlorobromomethane	83	12.696	12.704	-0.008	98	88194	0.4000	0.4337	
62 1,4-Dioxane	88	12.728	12.735	-0.007	87	12668	0.4000	0.4671	
63 Methyl methacrylate	41	12.766	12.776	-0.010	94	44804	0.4000	0.4734	
64 Methylcyclohexane	83	13.218	13.222	-0.004	96	75845	0.4000	0.4369	
65 4-Methyl-2-pentanone (MIBK)	43	13.605	13.618	-0.013	97	64288	0.4000	0.4501	
66 cis-1,3-Dichloropropene	75	13.654	13.659	-0.005	92	68409	0.4000	0.4267	
67 trans-1,3-Dichloropropene	75	14.326	14.329	-0.003	98	58578	0.4000	0.4228	
68 Toluene	91	14.455	14.458	-0.003	93	131181	0.4000	0.4346	
69 1,1,2-Trichloroethane	83	14.525	14.532	-0.007	97	40303	0.4000	0.4371	
72 2-Hexanone	58	14.902	14.908	-0.006	93	32729	0.4000	0.4602	
73 n-Octane	85	15.095	15.100	-0.005	94	45527	0.4000	0.4343	
74 Chlorodibromomethane	129	15.225	15.227	-0.003	98	88886	0.4000	0.4370	
75 Ethylene Dibromide	107	15.510	15.514	-0.004	99	69856	0.4000	0.4084	
76 Tetrachloroethene	129	15.574	15.575	-0.001	96	52795	0.4000	0.4410	
77 2,3-Dimethylheptane	43	16.419	16.423	-0.004	96	139123	0.4000	0.4523	
78 Chlorobenzene	112	16.435	16.437	-0.002	96	105585	0.4000	0.4340	
79 Ethylbenzene	91	16.709	16.711	-0.002	98	167768	0.4000	0.4485	
81 m-Xylene & p-Xylene	91	16.865	16.869	-0.004	0	251768	0.8000	0.8988	
82 n-Nonane	57	17.247	17.252	-0.005	92	90392	0.4000	0.4428	
83 Styrene	104	17.328	17.331	-0.003	98	99622	0.4000	0.4591	
84 Bromoform	173	17.328	17.333	-0.005	89	89592	0.4000	0.4107	
85 o-Xylene	91	17.387	17.391	-0.004	99	137277	0.4000	0.4619	
86 1,1,2,2-Tetrachloroethane	83	17.704	17.708	-0.004	99	98733	0.4000	0.4597	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
87 1,2,3-Trichloropropane	110	17.860	17.864	-0.004	98	26427	0.4000	0.4695	
88 Isopropylbenzene	105	17.952	17.956	-0.004	93	186877	0.4000	0.4620	
89 N-Propylbenzene	120	18.458	18.462	-0.004	99	51549	0.4000	0.4633	
90 2-Chlorotoluene	126	18.511	18.516	-0.005	97	47705	0.4000	0.4420	
91 4-Ethyltoluene	105	18.597	18.602	-0.005	99	180899	0.4000	0.4633	
92 1,3,5-Trimethylbenzene	120	18.667	18.672	-0.005	93	76220	0.4000	0.4667	
93 Alpha Methyl Styrene	118	18.888	18.891	-0.003	89	76565	0.4000	0.4499	
94 n-Decane	57	18.920	18.923	-0.003	90	113027	0.4000	0.4678	
95 tert-Butylbenzene	119	19.076	19.079	-0.003	95	165330	0.4000	0.4765	
96 1,2,4-Trimethylbenzene	105	19.087	19.091	-0.004	96	154495	0.4000	0.4717	
97 sec-Butylbenzene	105	19.334	19.337	-0.003	99	232101	0.4000	0.4856	
98 1,3-Dichlorobenzene	146	19.361	19.363	-0.002	97	109636	0.4000	0.4468	
99 Benzyl chloride	91	19.426	19.431	-0.005	98	120536	0.4000	0.4558	
100 1,4-Dichlorobenzene	146	19.442	19.445	-0.003	95	108874	0.4000	0.4460	
101 4-Isopropyltoluene	119	19.485	19.489	-0.004	97	187151	0.4000	0.4797	
102 1,2,3-Trimethylbenzene	105	19.544	19.549	-0.005	97	153010	0.4000	0.4773	
103 Butylcyclohexane	83	19.587	19.591	-0.004	96	138319	0.4000	0.4673	
104 2,3-Dihydroindene	117	19.792	19.792	0.000	94	146404	0.4000	0.4786	
105 1,2-Dichlorobenzene	146	19.792	19.795	-0.003	96	106565	0.4000	0.4591	
106 n-Butylbenzene	91	19.905	19.907	-0.002	98	184036	0.4000	0.4833	
107 Indene	116	19.915	19.918	-0.003	92	121997	0.4000	0.4746	
108 Undecane	57	20.184	20.186	-0.002	96	122622	0.4000	0.4891	
110 1,2-Dibromo-3-Chloropropan	157	20.378	20.381	-0.003	98	54065	0.4000	0.4772	
111 1,2,4,5-Tetramethylbenzene	119	20.658	20.658	0.000	97	162287	0.4000	0.4895	
114 Dodecane	57	21.266	21.268	-0.002	96	106198	0.4000	0.5749	
115 1,2,4-Trichlorobenzene	180	21.508	21.509	-0.001	94	87032	0.4000	0.4953	
116 Naphthalene	128	21.642	21.642	0.000	99	151426	0.4000	0.5450	
118 Hexachlorobutadiene	225	21.798	21.798	0.000	95	92129	0.4000	0.5085	
119 1,2,3-Trichlorobenzene	180	21.857	21.858	-0.001	95	63553	0.4000	0.5685	
120 2-Methylnaphthalene	142	22.385	22.385	0.000	100	45438	1.25	2.06	
121 1-Methylnaphthalene	142	22.508	22.509	-0.001	100	46180	1.25	2.12	
A 123 C8 Range	1	15.111	(15.062-15.159)		0	415352	0.4000	0.4734	
S 124 Xylenes, Total	100				0		1.20	1.36	
S 125 1,2-Dichloroethene, Total	1				0		0.8000	0.8621	

Reagents:

40L5DQP_00001

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL05.D

Injection Date: 15-Feb-2018 18:37:30

Instrument ID: MJ

Operator ID: 403648

Lims ID: IC L5

Worklist Smp#: 7

Client ID:

Purge Vol: 500.000 mL

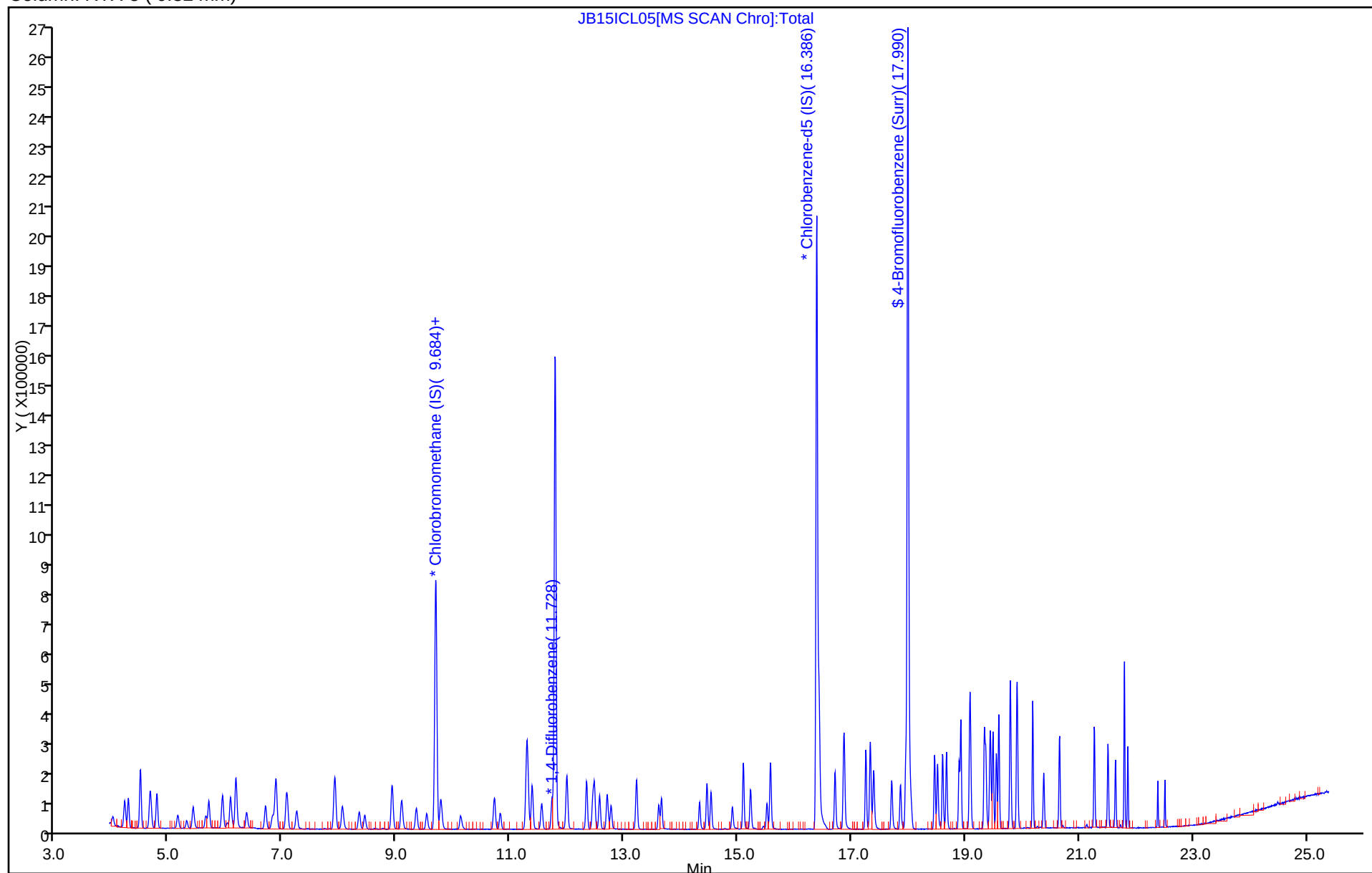
Dil. Factor: 1.0000

ALS Bottle#: 10

Method: MJ_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL05.D

Injection Date: 15-Feb-2018 18:37:30

Instrument ID: MJ

Lims ID: IC L5

Client ID:

Operator ID: 403648

ALS Bottle#: 10

Worklist Smp#: 7

Purge Vol: 500.000 mL

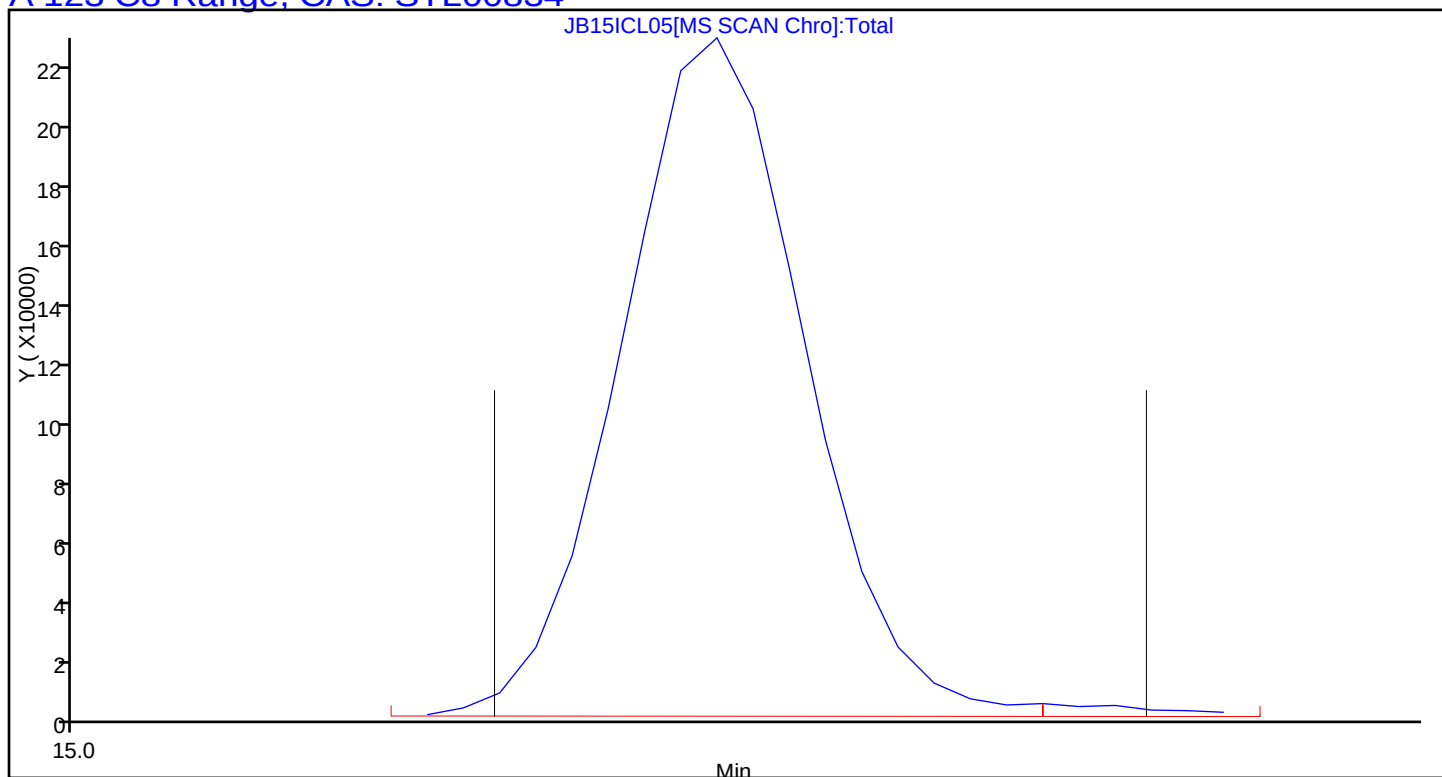
Dil. Factor: 1.0000

Method: MJ_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 123 C8 Range, CAS: STL00834

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL06.D
 Lims ID: IC L6
 Client ID:
 Sample Type: IC Calib Level: 6
 Inject. Date: 15-Feb-2018 19:22:30 ALS Bottle#: 11 Worklist Smp#: 8
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0007391-008
 Misc. Info.: 140776
 Operator ID: 403648 Instrument ID: MJ
 Sublist: chrom-MJ_TO15*sub14
 Method: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\MJ_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Feb-2018 10:04:00 Calib Date: 15-Feb-2018 22:24:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK031

First Level Reviewer: barlozhetskayaa

Date: 16-Feb-2018 09:35:22

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.686	9.689	-0.003	95	283663	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.784	11.790	-0.006	95	1589614	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.383	16.389	-0.006	88	1424004	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.986	17.992	-0.006	95	1019252	4.00	3.96	
6 Chlorodifluoromethane	67	4.199	4.203	-0.004	97	27753	1.00	0.9158	
7 Propene	41	4.209	4.216	-0.007	98	82581	1.00	1.00	
8 Dichlorodifluoromethane	85	4.269	4.274	-0.005	100	254947	1.00	1.00	
9 Chloromethane	52	4.473	4.482	-0.009	98	29822	1.00	1.00	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.484	4.489	-0.005	94	169926	1.00	1.02	
11 Acetaldehyde	44	4.651	4.662	-0.011	98	159683	5.00	4.83	
12 Vinyl chloride	62	4.672	4.679	-0.007	99	98274	1.00	1.06	
13 Butadiene	54	4.769	4.777	-0.008	68	74384	1.00	0.99	
14 Butane	43	4.769	4.777	-0.008	86	138185	1.00	0.9722	
15 Bromomethane	94	5.140	5.146	-0.006	98	93013	1.00	1.01	
16 Chloroethane	64	5.296	5.304	-0.008	99	47525	1.00	0.9878	
17 Ethanol	31	5.414	5.435	-0.021	97	169364	5.00	4.93	
18 Vinyl bromide	106	5.635	5.641	-0.006	98	86990	1.00	0.99	
19 2-Methylbutane	43	5.689	5.693	-0.004	91	101583	1.00	0.9697	
20 Trichlorofluoromethane	101	5.926	5.933	-0.007	100	251225	1.00	1.02	
21 Acrolein	56	5.936	5.950	-0.014	94	20755	1.00	0.8441	
23 Acetonitrile	40	6.012	6.040	-0.028	99	26469	1.00	0.8507	
22 Acetone	58	6.065	6.081	-0.016	98	87339	3.00	2.70	
24 Pentane	72	6.168	6.171	-0.003	97	14849	1.00	0.9893	
25 Isopropyl alcohol	45	6.157	6.201	-0.044	96	266351	3.00	2.88	
26 Ethyl ether	31	6.345	6.362	-0.017	95	65736	1.00	0.8226	
27 1,1-Dichloroethene	96	6.689	6.692	-0.003	98	90621	1.00	0.9654	
28 Acrylonitrile	53	6.797	6.809	-0.012	93	49529	1.00	0.8825	
30 2-Methyl-2-propanol	59	6.808	6.865	-0.057	94	127270	1.00	1.18	
29 1,1,2-Trichloro-1,2,2-trif	101	6.867	6.875	-0.008	98	195021	1.00	1.00	
32 Methylene Chloride	84	7.055	7.061	-0.006	97	93225	1.00	0.9175	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
31 3-Chloro-1-propene	39	7.071	7.077	-0.006	96	83333	1.00	1.01	
33 Carbon disulfide	76	7.233	7.239	-0.006	99	265055	1.00	0.9733	
34 trans-1,2-Dichloroethene	96	7.894	7.903	-0.009	98	92328	1.00	0.9827	
35 2-Methylpentane	43	7.911	7.917	-0.006	94	209227	1.00	0.9669	
36 Methyl tert-butyl ether	73	8.034	8.053	-0.019	97	190134	1.00	0.9116	
37 1,1-Dichloroethane	63	8.336	8.343	-0.007	100	165806	1.00	0.9396	
38 Vinyl acetate	43	8.432	8.442	-0.010	100	177532	1.00	0.8823	
40 2-Butanone (MEK)	72	8.906	8.919	-0.013	96	32107	1.00	0.8854	
39 Hexane	56	8.917	8.922	-0.006	84	73808	1.00	0.9671	
41 Isopropyl ether	45	9.078	9.091	-0.013	97	229240	1.00	0.9176	
42 cis-1,2-Dichloroethene	96	9.341	9.347	-0.006	95	91036	1.00	0.9498	
43 Ethyl acetate	43	9.519	9.529	-0.010	99	141681	1.00	0.8836	
44 Chloroform	83	9.686	9.697	-0.011	95	190800	1.00	0.9391	
45 Tert-butyl ethyl ether	59	9.766	9.782	-0.016	95	214864	1.00	0.9238	
46 Tetrahydrofuran	42	10.116	10.126	-0.010	94	76999	1.00	0.8954	
47 1,1,1-Trichloroethane	97	10.719	10.721	-0.002	97	197454	1.00	0.9336	
48 1,2-Dichloroethane	62	10.821	10.825	-0.004	98	123151	1.00	0.9551	
49 Cyclohexane	69	11.283	11.287	-0.004	75	45080	1.00	0.9684	
50 Benzene	78	11.283	11.291	-0.008	97	263091	1.00	0.9325	
53 n-Butanol	31	11.246	11.293	-0.047	90	29744	1.00	1.08	
52 Carbon tetrachloride	117	11.305	11.310	-0.005	99	209982	1.00	0.9854	
55 2,3-Dimethylpentane	71	11.380	11.384	-0.004	92	63347	1.00	0.9563	
51 Thiophene	84	11.547	11.554	-0.007	95	150312	1.00	0.9384	
54 Tert-amyl methyl ether	73	11.719	11.726	-0.007	98	195521	1.00	0.9215	
56 Isooctane	57	11.988	11.995	-0.007	99	439459	1.00	0.9714	
57 n-Heptane	71	12.338	12.342	-0.004	92	94765	1.00	0.9547	
58 1,2-Dichloropropane	63	12.445	12.451	-0.006	91	100302	1.00	0.9452	
59 Trichloroethene	130	12.478	12.480	-0.002	96	119589	1.00	0.9617	
60 Dibromomethane	93	12.564	12.569	-0.005	95	109851	1.00	0.9271	
61 Dichlorobromomethane	83	12.698	12.704	-0.006	99	195803	1.00	0.9438	
62 1,4-Dioxane	88	12.720	12.735	-0.015	86	28069	1.00	1.01	
63 Methyl methacrylate	41	12.768	12.776	-0.008	94	85989	1.00	0.8905	
64 Methylcyclohexane	83	13.215	13.222	-0.007	96	167878	1.00	0.9480	
65 4-Methyl-2-pentanone (MIBK)	43	13.597	13.618	-0.021	97	136923	1.00	0.9396	
66 cis-1,3-Dichloropropene	75	13.656	13.659	-0.003	93	155553	1.00	0.9510	
67 trans-1,3-Dichloropropene	75	14.323	14.329	-0.006	97	128407	1.00	0.9311	
68 Toluene	91	14.452	14.458	-0.006	94	283412	1.00	0.9432	
69 1,1,2-Trichloroethane	83	14.527	14.532	-0.005	98	87152	1.00	0.9494	
72 2-Hexanone	58	14.893	14.908	-0.015	93	69784	1.00	0.9857	
73 n-Octane	85	15.098	15.100	-0.002	94	101126	1.00	0.9692	
74 Chlorodibromomethane	129	15.221	15.227	-0.006	98	200692	1.00	0.99	
75 Ethylene Dibromide	107	15.506	15.514	-0.008	98	165343	1.00	0.9711	
76 Tetrachloroethene	129	15.571	15.575	-0.004	96	114687	1.00	0.9623	
77 2,3-Dimethylheptane	43	16.421	16.423	-0.002	96	306057	1.00	1.00	
78 Chlorobenzene	112	16.432	16.437	-0.005	95	239164	1.00	0.9876	
79 Ethylbenzene	91	16.706	16.711	-0.005	98	342484	1.00	0.9196	
81 m-Xylene & p-Xylene	91	16.867	16.869	-0.002	0	517067	2.00	1.85	
82 n-Nonane	57	17.249	17.252	-0.003	92	195236	1.00	0.9607	
83 Styrene	104	17.325	17.331	-0.006	99	205243	1.00	0.9501	
84 Bromoform	173	17.330	17.333	-0.003	96	208872	1.00	0.9617	
85 o-Xylene	91	17.389	17.391	-0.002	99	275312	1.00	0.9306	
86 1,1,2,2-Tetrachloroethane	83	17.701	17.708	-0.007	99	195397	1.00	0.9139	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
87 1,2,3-Trichloropropane	110	17.863	17.864	-0.001	99	51609	1.00	0.9210	
88 Isopropylbenzene	105	17.949	17.956	-0.007	94	358205	1.00	0.8895	
89 N-Propylbenzene	120	18.460	18.462	-0.002	99	99164	1.00	0.8954	
90 2-Chlorotoluene	126	18.513	18.516	-0.003	97	101293	1.00	0.9428	
91 4-Ethyltoluene	105	18.600	18.602	-0.002	99	344967	1.00	0.8875	
92 1,3,5-Trimethylbenzene	120	18.669	18.672	-0.003	94	147646	1.00	0.9081	
93 Alpha Methyl Styrene	118	18.890	18.891	-0.001	88	149742	1.00	0.8838	
94 n-Decane	57	18.922	18.923	-0.001	90	225316	1.00	0.9369	
95 tert-Butylbenzene	119	19.078	19.079	-0.001	92	309204	1.00	0.8952	
96 1,2,4-Trimethylbenzene	105	19.089	19.091	-0.002	96	292070	1.00	0.8958	
97 sec-Butylbenzene	105	19.331	19.337	-0.006	99	432308	1.00	0.9087	
98 1,3-Dichlorobenzene	146	19.358	19.363	-0.005	97	225116	1.00	0.9216	
99 Benzyl chloride	91	19.428	19.431	-0.003	98	229036	1.00	0.8700	
100 1,4-Dichlorobenzene	146	19.444	19.445	-0.001	94	220578	1.00	0.9076	
101 4-Isopropyltoluene	119	19.487	19.489	-0.002	97	353244	1.00	0.9095	
102 1,2,3-Trimethylbenzene	105	19.546	19.549	-0.003	97	288587	1.00	0.9042	
103 Butylcyclohexane	83	19.589	19.591	-0.002	95	277731	1.00	0.9426	
104 2,3-Dihydroindene	117	19.788	19.792	-0.004	94	276849	1.00	0.9092	
105 1,2-Dichlorobenzene	146	19.794	19.795	-0.001	96	211868	1.00	0.9170	
106 n-Butylbenzene	91	19.907	19.907	0.000	98	341321	1.00	0.9005	
107 Indene	116	19.918	19.918	0.000	89	231067	1.00	0.9030	
108 Undecane	57	20.186	20.186	0.000	96	231645	1.00	0.9282	
110 1,2-Dibromo-3-Chloropropan	157	20.380	20.381	-0.001	98	104745	1.00	0.9287	
111 1,2,4,5-Tetramethylbenzene	119	20.655	20.658	-0.004	98	301194	1.00	0.9125	
114 Dodecane	57	21.268	21.268	0.000	96	183122	1.00	1.04	
115 1,2,4-Trichlorobenzene	180	21.510	21.509	0.001	93	155531	1.00	0.8892	
116 Naphthalene	128	21.639	21.642	-0.003	99	253015	1.00	0.9147	
118 Hexachlorobutadiene	225	21.795	21.798	-0.003	96	162206	1.00	0.8994	
119 1,2,3-Trichlorobenzene	180	21.860	21.858	0.002	95	109718	1.00	0.9858	
120 2-Methylnaphthalene	142	22.387	22.385	0.002	100	67237	3.13	3.07	
121 1-Methylnaphthalene	142	22.510	22.509	0.001	100	63122	3.13	2.91	
A 123 C8 Range	1	15.108	(15.059-15.156)		0	901978	1.00	1.03	
S 124 Xylenes, Total	100				0		3.00	2.78	
S 125 1,2-Dichloroethene, Total	1				0		2.00	1.93	

Reagents:

40L6DQP_00001

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL06.D

Injection Date: 15-Feb-2018 19:22:30

Instrument ID: MJ

Operator ID: 403648

Lims ID: IC L6

Worklist Smp#: 8

Client ID:

Purge Vol: 500.000 mL

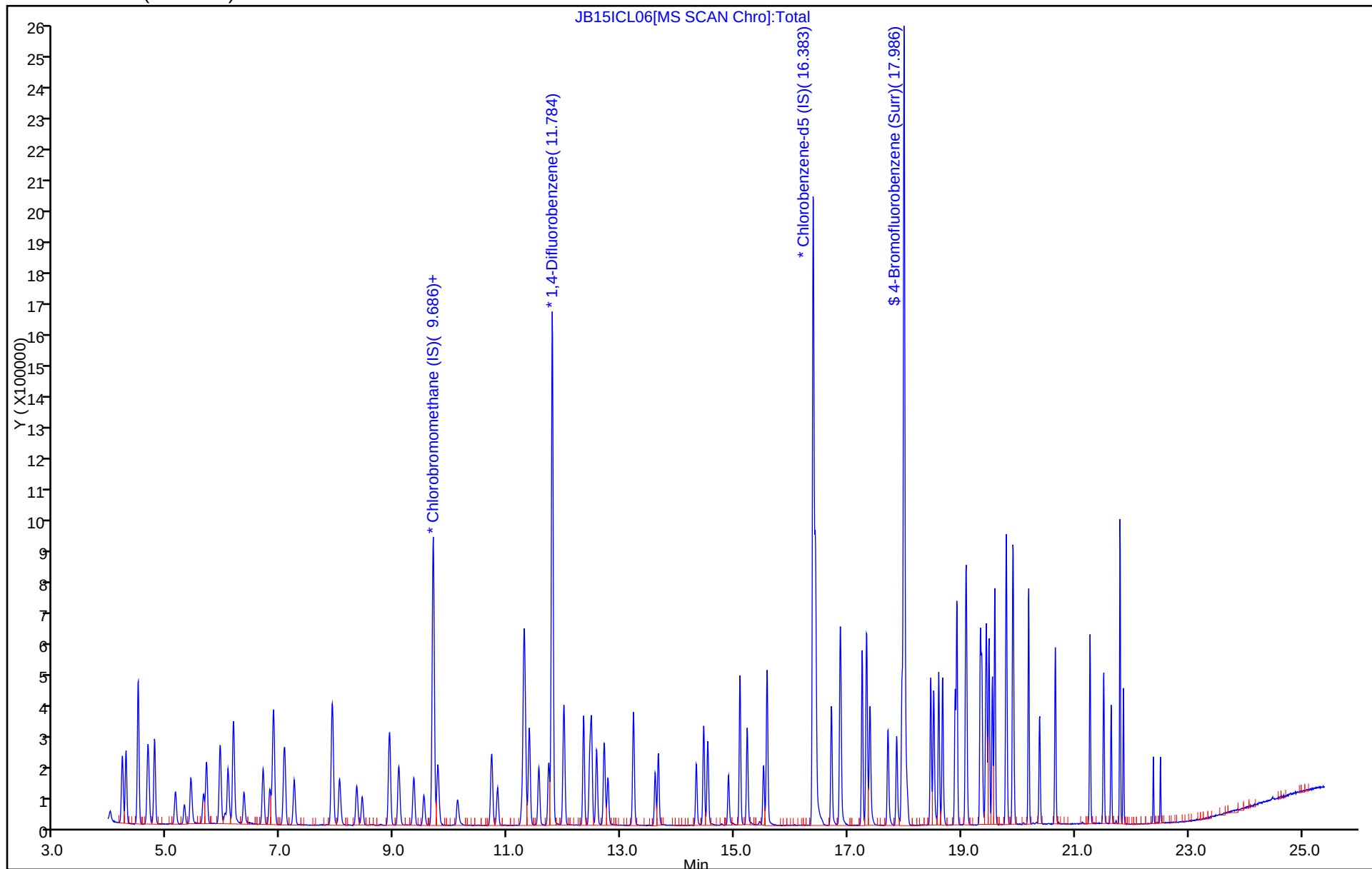
Dil. Factor: 1.0000

ALS Bottle#: 11

Method: MJ_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL06.D

Injection Date: 15-Feb-2018 19:22:30

Instrument ID: MJ

Lims ID: IC L6

Client ID:

Operator ID: 403648

ALS Bottle#: 11

Worklist Smp#: 8

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

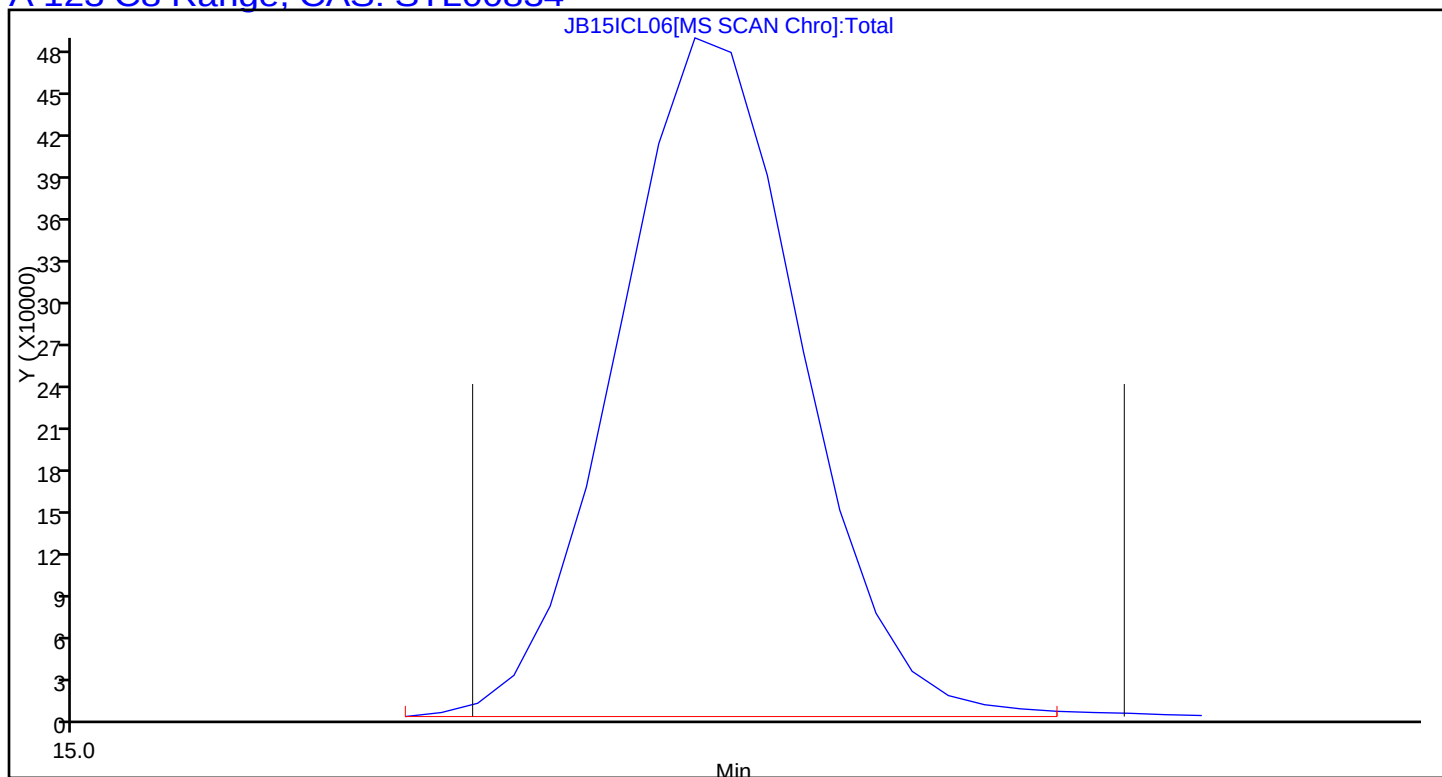
Method: MJ_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 123 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICISL07.D
 Lims ID: ICIS L7
 Client ID:
 Sample Type: ICIS Calib Level: 7
 Inject. Date: 15-Feb-2018 20:08:30 ALS Bottle#: 12 Worklist Smp#: 9
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0007391-009
 Misc. Info.: 140775
 Operator ID: 403648 Instrument ID: MJ
 Sublist: chrom-MJ_TO15*sub14
 Method: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\MJ_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Feb-2018 10:04:20 Calib Date: 15-Feb-2018 22:24:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK031

First Level Reviewer: barlozhetskayaa

Date: 16-Feb-2018 09:27:01

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.687	9.689	-0.002	95	286873	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.790	11.790	0.000	95	1605094	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.390	16.389	0.001	88	1448317	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.993	17.992	0.001	95	1023083	4.00	3.91	
6 Chlorodifluoromethane	67	4.205	4.203	0.002	96	54851	2.00	1.79	
7 Propene	41	4.216	4.216	0.000	99	162079	2.00	1.94	
8 Dichlorodifluoromethane	85	4.275	4.274	0.001	100	531010	2.00	2.06	
9 Chloromethane	52	4.485	4.482	0.003	65	59780	2.00	1.98	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.490	4.489	0.001	92	348077	2.00	2.06	
11 Acetaldehyde	44	4.657	4.662	-0.005	98	321920	10.0	9.63	
12 Vinyl chloride	62	4.678	4.679	-0.001	99	202765	2.00	2.16	
13 Butadiene	54	4.775	4.777	-0.002	67	149529	2.00	1.97	
14 Butane	43	4.775	4.777	-0.002	86	288707	2.00	2.01	
15 Bromomethane	94	5.146	5.146	0.000	99	189535	2.00	2.03	
16 Chloroethane	64	5.308	5.304	0.004	100	97167	2.00	2.00	
17 Ethanol	31	5.421	5.435	-0.014	97	339004	10.0	9.75	
18 Vinyl bromide	106	5.641	5.641	0.000	99	181747	2.00	2.05	
19 2-Methylbutane	43	5.690	5.693	-0.003	92	219189	2.00	2.07	
20 Trichlorofluoromethane	101	5.932	5.933	-0.001	100	519886	2.00	2.09	
21 Acrolein	56	5.943	5.950	-0.007	94	50113	2.00	2.02	
23 Acetonitrile	40	6.018	6.040	-0.022	99	60118	2.00	1.91	
22 Acetone	58	6.066	6.081	-0.015	98	180855	6.00	5.54	
24 Pentane	72	6.169	6.171	-0.002	98	30864	2.00	2.03	
25 Isopropyl alcohol	45	6.179	6.201	-0.022	95	488972	6.00	5.22	
26 Ethyl ether	31	6.346	6.362	-0.016	96	148732	2.00	1.84	
27 1,1-Dichloroethene	96	6.690	6.692	-0.002	97	189184	2.00	1.99	
28 Acrylonitrile	53	6.803	6.809	-0.006	95	107948	2.00	1.90	
30 2-Methyl-2-propanol	59	6.820	6.865	-0.045	95	220441	2.00	2.05	
29 1,1,2-Trichloro-1,2,2-trif	101	6.873	6.875	-0.002	98	401001	2.00	2.04	
32 Methylene Chloride	84	7.062	7.061	0.001	97	177679	2.00	1.73	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
31 3-Chloro-1-propene	39	7.072	7.077	-0.005	96	160899	2.00	1.95	
33 Carbon disulfide	76	7.239	7.239	0.000	98	556931	2.00	2.02	
34 trans-1,2-Dichloroethene	96	7.906	7.903	0.003	98	189036	2.00	1.99	
35 2-Methylpentane	43	7.917	7.917	0.000	95	432234	2.00	1.98	
36 Methyl tert-butyl ether	73	8.035	8.053	-0.018	96	396264	2.00	1.88	
37 1,1-Dichloroethane	63	8.342	8.343	-0.001	100	349810	2.00	1.96	
38 Vinyl acetate	43	8.439	8.442	-0.003	100	390265	2.00	1.92	
40 2-Butanone (MEK)	72	8.907	8.919	-0.012	95	65541	2.00	1.79	
39 Hexane	56	8.923	8.922	0.001	85	150365	2.00	1.95	
41 Isopropyl ether	45	9.079	9.091	-0.012	97	466015	2.00	1.84	
42 cis-1,2-Dichloroethene	96	9.348	9.347	0.001	95	190591	2.00	1.97	
43 Ethyl acetate	43	9.525	9.529	-0.004	99	291559	2.00	1.80	
44 Chloroform	83	9.698	9.697	0.001	96	396942	2.00	1.93	
45 Tert-butyl ethyl ether	59	9.767	9.782	-0.015	95	440792	2.00	1.87	
46 Tetrahydrofuran	42	10.112	10.126	-0.014	92	162110	2.00	1.86	
47 1,1,1-Trichloroethane	97	10.720	10.721	-0.001	96	416395	2.00	1.95	
48 1,2-Dichloroethane	62	10.827	10.825	0.002	98	259212	2.00	1.99	
49 Cyclohexane	69	11.284	11.287	-0.003	79	92419	2.00	1.97	
50 Benzene	78	11.290	11.291	-0.001	96	547051	2.00	1.92	
53 n-Butanol	31	11.263	11.293	-0.030	66	50901	2.00	1.83	
52 Carbon tetrachloride	117	11.311	11.310	0.001	99	438828	2.00	2.04	
55 2,3-Dimethylpentane	71	11.381	11.384	-0.003	92	130603	2.00	1.95	
51 Thiophene	84	11.553	11.554	-0.001	95	321955	2.00	1.99	
54 Tert-amyl methyl ether	73	11.726	11.726	0.000	98	411878	2.00	1.91	
56 Isooctane	57	11.995	11.995	0.000	99	900463	2.00	1.97	
57 n-Heptane	71	12.339	12.342	-0.003	92	196222	2.00	1.96	
58 1,2-Dichloropropane	63	12.446	12.451	-0.005	91	210169	2.00	1.96	
59 Trichloroethene	130	12.479	12.480	-0.001	96	250475	2.00	1.99	
60 Dibromomethane	93	12.570	12.569	0.001	95	230836	2.00	1.93	
61 Dichlorobromomethane	83	12.705	12.704	0.001	99	413015	2.00	1.97	
62 1,4-Dioxane	88	12.726	12.735	-0.009	86	53844	2.00	1.93	
63 Methyl methacrylate	41	12.769	12.776	-0.007	94	179409	2.00	1.84	
64 Methylcyclohexane	83	13.221	13.222	-0.001	96	347070	2.00	1.94	
65 4-Methyl-2-pentanone (MIBK)	43	13.603	13.618	-0.015	97	269233	2.00	1.83	
66 cis-1,3-Dichloropropene	75	13.657	13.659	-0.002	93	331437	2.00	2.01	
67 trans-1,3-Dichloropropene	75	14.329	14.329	0.000	98	278618	2.00	1.99	
68 Toluene	91	14.458	14.458	0.000	93	600208	2.00	1.96	
69 1,1,2-Trichloroethane	83	14.528	14.532	-0.004	98	184581	2.00	1.98	
72 2-Hexanone	58	14.894	14.908	-0.014	93	136876	2.00	1.90	
73 n-Octane	85	15.099	15.100	-0.002	94	206925	2.00	1.95	
74 Chlorodibromomethane	129	15.228	15.227	0.001	98	432967	2.00	2.10	
75 Ethylene Dibromide	107	15.513	15.514	-0.001	98	354754	2.00	2.05	
76 Tetrachloroethene	129	15.577	15.575	0.002	96	239650	2.00	1.98	
77 2,3-Dimethylheptane	43	16.422	16.423	-0.001	96	619887	2.00	1.99	
78 Chlorobenzene	112	16.438	16.437	0.001	94	496514	2.00	2.02	
79 Ethylbenzene	91	16.712	16.711	0.001	98	729559	2.00	1.93	
81 m-Xylene & p-Xylene	91	16.868	16.869	-0.001	100	1112844	4.00	3.92	
82 n-Nonane	57	17.250	17.252	-0.002	92	403252	2.00	1.95	
83 Styrene	104	17.331	17.331	0.000	99	421470	2.00	1.92	
84 Bromoform	173	17.331	17.333	-0.002	94	452443	2.00	2.05	
85 o-Xylene	91	17.390	17.391	-0.001	99	581607	2.00	1.93	
86 1,1,2,2-Tetrachloroethane	83	17.708	17.708	0.000	99	414828	2.00	1.91	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
87 1,2,3-Trichloropropane	110	17.864	17.864	0.000	99	109836	2.00	1.93	
88 Isopropylbenzene	105	17.955	17.956	-0.001	96	764991	2.00	1.87	
89 N-Propylbenzene	120	18.461	18.462	-0.001	99	212901	2.00	1.89	
90 2-Chlorotoluene	126	18.514	18.516	-0.002	97	212574	2.00	1.95	
91 4-Ethyltoluene	105	18.601	18.602	-0.001	99	745587	2.00	1.89	
92 1,3,5-Trimethylbenzene	120	18.670	18.672	-0.002	93	310461	2.00	1.88	
93 Alpha Methyl Styrene	118	18.891	18.891	0.000	88	334017	2.00	1.94	
94 n-Decane	57	18.923	18.923	0.000	90	468958	2.00	1.92	
95 tert-Butylbenzene	119	19.079	19.079	0.000	92	659713	2.00	1.88	
96 1,2,4-Trimethylbenzene	105	19.090	19.091	-0.001	96	625778	2.00	1.89	
97 sec-Butylbenzene	105	19.338	19.337	0.001	98	914293	2.00	1.89	
98 1,3-Dichlorobenzene	146	19.364	19.363	0.001	98	477551	2.00	1.92	
99 Benzyl chloride	91	19.429	19.431	-0.002	98	518315	2.00	1.94	
100 1,4-Dichlorobenzene	146	19.445	19.445	0.000	94	470366	2.00	1.90	
101 4-Isopropyltoluene	119	19.488	19.489	-0.001	97	743248	2.00	1.88	
102 1,2,3-Trimethylbenzene	105	19.547	19.549	-0.002	98	611735	2.00	1.88	
103 Butylcyclohexane	83	19.590	19.591	-0.001	95	578459	2.00	1.93	
104 2,3-Dihydroindene	117	19.789	19.792	-0.003	95	589287	2.00	1.90	
105 1,2-Dichlorobenzene	146	19.795	19.795	0.000	97	443319	2.00	1.89	
106 n-Butylbenzene	91	19.908	19.907	0.001	98	724644	2.00	1.88	
107 Indene	116	19.919	19.918	0.000	90	503526	2.00	1.93	
108 Undecane	57	20.187	20.186	0.001	96	455946	2.00	1.80	
110 1,2-Dibromo-3-Chloropropan	157	20.381	20.381	0.000	97	225034	2.00	1.96	
111 1,2,4,5-Tetramethylbenzene	119	20.655	20.658	-0.003	97	624537	2.00	1.86	
114 Dodecane	57	21.269	21.268	0.001	96	306380	2.00	1.77	
115 1,2,4-Trichlorobenzene	180	21.511	21.509	0.002	94	336684	2.00	1.89	
116 Naphthalene	128	21.640	21.642	-0.002	99	518551	2.00	1.84	
118 Hexachlorobutadiene	225	21.796	21.798	-0.002	95	340335	2.00	1.86	
119 1,2,3-Trichlorobenzene	180	21.860	21.858	0.002	95	206227	2.00	1.82	
120 2-Methylnaphthalene	142	22.382	22.385	-0.003	99	118911	6.25	5.34	
121 1-Methylnaphthalene	142	22.511	22.509	0.002	100	106135	6.25	4.80	
A 123 C8 Range	1	15.115	(15.060-15.189)		0	1850127	2.00	2.08	
S 124 Xylenes, Total	100				0		6.00	5.86	
S 125 1,2-Dichloroethene, Total	1				0		4.00	3.96	

Reagents:

40L7DQP_00001

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

Report Date: 19-Feb-2018 10:04:22

Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICISL07.D

Injection Date: 15-Feb-2018 20:08:30

Instrument ID: MJ

Operator ID: 403648

Lims ID: ICIS L7

Worklist Smp#: 9

Client ID:

Purge Vol: 500.000 mL

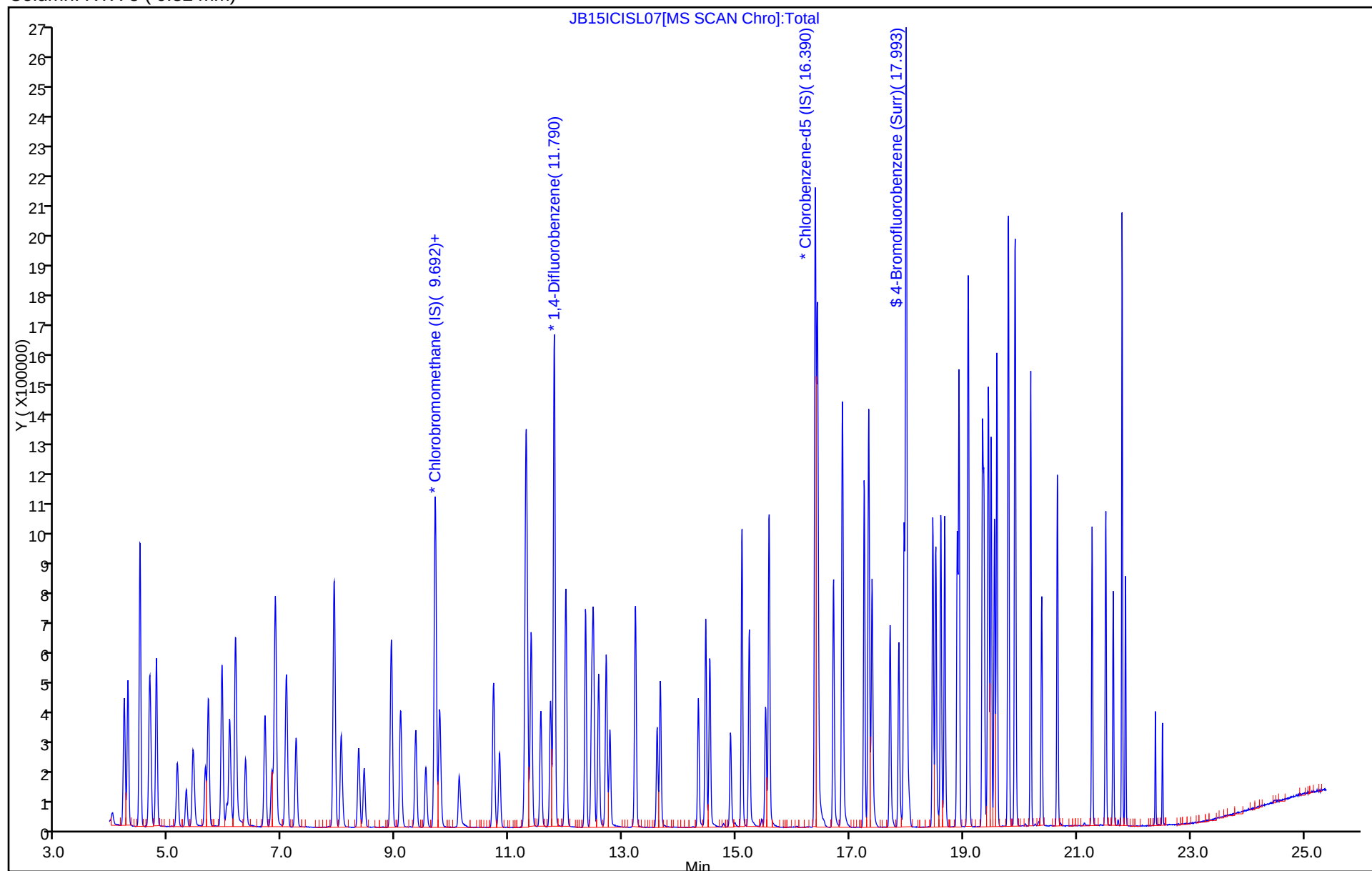
Dil. Factor: 1.0000

ALS Bottle#: 12

Method: MJ_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICISL07.D

Injection Date: 15-Feb-2018 20:08:30

Instrument ID: MJ

Lims ID: ICIS L7

Client ID:

Operator ID: 403648

ALS Bottle#: 12

Worklist Smp#: 9

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

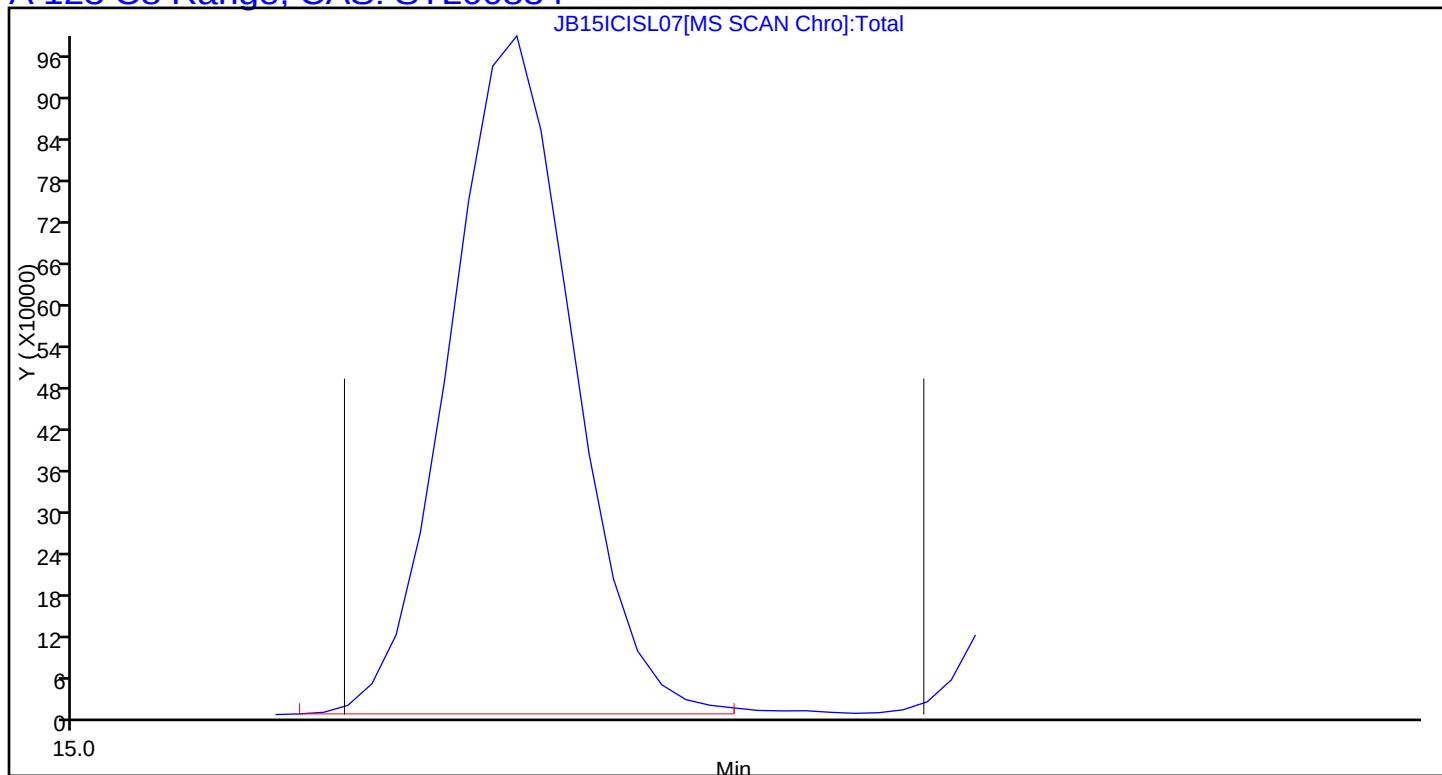
Method: MJ_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 123 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL08.D
 Lims ID: IC L8
 Client ID:
 Sample Type: IC Calib Level: 8
 Inject. Date: 15-Feb-2018 20:53:30 ALS Bottle#: 13 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0007391-010
 Misc. Info.: 140774
 Operator ID: 403648 Instrument ID: MJ
 Sublist: chrom-MJ_TO15*sub14
 Method: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\MJ_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Feb-2018 10:04:33 Calib Date: 15-Feb-2018 22:24:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK031

First Level Reviewer: barlozhetskayaa

Date: 16-Feb-2018 09:35:55

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.695	9.689	0.006	94	270136	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.793	11.790	0.003	95	1552764	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.392	16.389	0.003	88	1459814	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.995	17.992	0.003	96	1067616	4.00	4.05	
6 Chlorodifluoromethane	67	4.202	4.203	-0.001	96	101106	4.00	3.50	
7 Propene	41	4.218	4.216	0.002	99	316474	4.00	4.03	
8 Dichlorodifluoromethane	85	4.278	4.274	0.004	100	1026119	4.00	4.23	
9 Chloromethane	52	4.482	4.482	0.000	98	109960	4.00	3.88	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.487	4.489	-0.002	92	642320	4.00	4.04	
11 Acetaldehyde	44	4.660	4.662	-0.002	99	652801	20.0	20.7	
12 Vinyl chloride	62	4.681	4.679	0.002	99	374370	4.00	4.24	
13 Butadiene	54	4.778	4.777	0.001	66	277320	4.00	3.89	
14 Butane	43	4.778	4.777	0.001	86	537741	4.00	3.97	
15 Bromomethane	94	5.149	5.146	0.003	99	353158	4.00	4.02	
16 Chloroethane	64	5.305	5.304	0.001	99	182916	4.00	3.99	
17 Ethanol	31	5.434	5.435	-0.001	96	715122	20.0	21.9	
18 Vinyl bromide	106	5.639	5.641	-0.002	98	338017	4.00	4.05	
19 2-Methylbutane	43	5.692	5.693	-0.001	92	392146	4.00	3.93	
20 Trichlorofluoromethane	101	5.935	5.933	0.002	100	944269	4.00	4.03	
21 Acrolein	56	5.945	5.950	-0.005	94	102480	4.00	4.38	
23 Acetonitrile	40	6.026	6.040	-0.014	99	131375	4.00	4.43	
22 Acetone	58	6.069	6.081	-0.012	98	406789	12.0	13.2	
24 Pentane	72	6.171	6.171	0.000	96	55484	4.00	3.88	
25 Isopropyl alcohol	45	6.193	6.201	-0.008	96	1055630	12.0	12.0	
26 Ethyl ether	31	6.343	6.362	-0.019	96	321989	4.00	4.23	
27 1,1-Dichloroethene	96	6.693	6.692	0.001	96	344392	4.00	3.85	
28 Acrylonitrile	53	6.806	6.809	-0.003	95	230835	4.00	4.32	
30 2-Methyl-2-propanol	59	6.828	6.865	-0.037	94	415127	4.00	4.14	
29 1,1,2-Trichloro-1,2,2-trif	101	6.876	6.875	0.001	97	753175	4.00	4.06	
32 Methylene Chloride	84	7.064	7.061	0.003	97	329860	4.00	3.41	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
31 3-Chloro-1-propene	39	7.080	7.077	0.003	96	328625	4.00	4.26	
33 Carbon disulfide	76	7.242	7.239	0.003	98	1014855	4.00	3.91	
34 trans-1,2-Dichloroethene	96	7.903	7.903	0.000	98	356777	4.00	3.99	
35 2-Methylpentane	43	7.914	7.917	-0.003	94	796987	4.00	3.87	
36 Methyl tert-butyl ether	73	8.027	8.053	-0.026	96	905606	4.00	4.56	
37 1,1-Dichloroethane	63	8.345	8.343	0.002	100	686686	4.00	4.09	
38 Vinyl acetate	43	8.441	8.442	-0.001	100	865889	4.00	4.52	
40 2-Butanone (MEK)	72	8.909	8.919	-0.010	97	154279	4.00	4.47	
39 Hexane	56	8.920	8.922	-0.002	78	286027	4.00	3.94	
41 Isopropyl ether	45	9.082	9.091	-0.009	97	1063058	4.00	4.47	
42 cis-1,2-Dichloroethene	96	9.350	9.347	0.003	95	373543	4.00	4.09	
43 Ethyl acetate	43	9.528	9.529	-0.001	99	683903	4.00	4.48	
44 Chloroform	83	9.706	9.697	0.009	97	779025	4.00	4.03	
45 Tert-butyl ethyl ether	59	9.770	9.782	-0.012	95	1019842	4.00	4.60	
46 Tetrahydrofuran	42	10.109	10.126	-0.017	94	340009	4.00	4.15	
47 1,1,1-Trichloroethane	97	10.722	10.721	0.001	96	804959	4.00	4.00	
48 1,2-Dichloroethane	62	10.830	10.825	0.005	98	509786	4.00	4.05	
49 Cyclohexane	69	11.287	11.287	0.000	93	171655	4.00	3.77	
50 Benzene	78	11.292	11.291	0.001	97	1065062	4.00	3.86	
53 n-Butanol	31	11.266	11.293	-0.027	74	111381	4.00	4.15	
52 Carbon tetrachloride	117	11.314	11.310	0.004	99	851003	4.00	4.09	
55 2,3-Dimethylpentane	71	11.384	11.384	0.000	91	249155	4.00	3.85	
51 Thiophene	84	11.556	11.554	0.002	95	626957	4.00	4.01	
54 Tert-amyl methyl ether	73	11.723	11.726	-0.003	98	951508	4.00	4.37	
56 Isooctane	57	11.997	11.995	0.002	99	1723360	4.00	3.90	
57 n-Heptane	71	12.341	12.342	-0.001	91	381559	4.00	3.94	
58 1,2-Dichloropropane	63	12.454	12.451	0.003	91	421493	4.00	4.07	
59 Trichloroethene	130	12.481	12.480	0.001	96	493629	4.00	4.06	
60 Dibromomethane	93	12.573	12.569	0.004	95	457388	4.00	3.95	
61 Dichlorobromomethane	83	12.707	12.704	0.003	99	823450	4.00	4.06	
62 1,4-Dioxane	88	12.723	12.735	-0.012	84	123538	4.00	4.57	
63 Methyl methacrylate	41	12.772	12.776	-0.004	94	430723	4.00	4.57	
64 Methylcyclohexane	83	13.224	13.222	0.002	96	668329	4.00	3.86	
65 4-Methyl-2-pentanone (MIBK)	43	13.606	13.618	-0.012	97	659992	4.00	4.64	
66 cis-1,3-Dichloropropene	75	13.659	13.659	0.000	93	670433	4.00	4.20	
67 trans-1,3-Dichloropropene	75	14.332	14.329	0.003	98	591191	4.00	4.18	
68 Toluene	91	14.461	14.458	0.003	94	1239377	4.00	4.02	
69 1,1,2-Trichloroethane	83	14.536	14.532	0.004	98	385134	4.00	4.09	
72 2-Hexanone	58	14.897	14.908	-0.011	94	325452	4.00	4.48	
73 n-Octane	85	15.101	15.100	0.001	93	411769	4.00	3.85	
74 Chlorodibromomethane	129	15.230	15.227	0.003	98	877444	4.00	4.23	
75 Ethylene Dibromide	107	15.515	15.514	0.001	98	728486	4.00	4.17	
76 Tetrachloroethene	129	15.575	15.575	0.000	96	477136	4.00	3.91	
77 2,3-Dimethylheptane	43	16.424	16.423	0.001	96	1209837	4.00	3.85	
78 Chlorobenzene	112	16.441	16.437	0.004	94	1012976	4.00	4.08	
79 Ethylbenzene	91	16.715	16.711	0.004	98	1566611	4.00	4.10	
81 m-Xylene & p-Xylene	91	16.871	16.869	0.002	99	2392826	8.00	8.37	
82 n-Nonane	57	17.253	17.252	0.001	91	832138	4.00	3.99	
83 Styrene	104	17.334	17.331	0.003	98	973459	4.00	4.40	
84 Bromoform	173	17.334	17.333	0.001	96	934107	4.00	4.20	
85 o-Xylene	91	17.393	17.391	0.002	99	1252990	4.00	4.13	
86 1,1,2,2-Tetrachloroethane	83	17.710	17.708	0.002	99	920868	4.00	4.20	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
87 1,2,3-Trichloropropane	110	17.866	17.864	0.002	99	246555	4.00	4.29	
88 Isopropylbenzene	105	17.958	17.956	0.002	96	1687204	4.00	4.09	
89 N-Propylbenzene	120	18.463	18.462	0.001	99	482571	4.00	4.25	
90 2-Chlorotoluene	126	18.517	18.516	0.001	97	454373	4.00	4.13	
91 4-Ethyltoluene	105	18.603	18.602	0.001	98	1700936	4.00	4.27	
92 1,3,5-Trimethylbenzene	120	18.673	18.672	0.001	93	712579	4.00	4.28	
93 Alpha Methyl Styrene	118	18.894	18.891	0.003	88	752971	4.00	4.34	
94 n-Decane	57	18.926	18.923	0.003	91	993210	4.00	4.03	
95 tert-Butylbenzene	119	19.082	19.079	0.003	93	1493882	4.00	4.22	
96 1,2,4-Trimethylbenzene	105	19.093	19.091	0.002	96	1415936	4.00	4.24	
97 sec-Butylbenzene	105	19.340	19.337	0.003	98	2048964	4.00	4.20	
98 1,3-Dichlorobenzene	146	19.367	19.363	0.004	97	1035883	4.00	4.14	
99 Benzyl chloride	91	19.432	19.431	0.001	98	1212674	4.00	4.49	
100 1,4-Dichlorobenzene	146	19.448	19.445	0.003	94	1035664	4.00	4.16	
101 4-Isopropyltoluene	119	19.491	19.489	0.002	97	1693897	4.00	4.25	
102 1,2,3-Trimethylbenzene	105	19.550	19.549	0.001	98	1385849	4.00	4.24	
103 Butylcyclohexane	83	19.593	19.591	0.002	95	1214365	4.00	4.02	
104 2,3-Dihydroindene	117	19.792	19.792	0.000	95	1307644	4.00	4.19	
105 1,2-Dichlorobenzene	146	19.797	19.795	0.002	96	975697	4.00	4.12	
106 n-Butylbenzene	91	19.910	19.907	0.003	98	1638649	4.00	4.22	
107 Indene	116	19.921	19.918	0.003	91	1132821	4.00	4.32	
108 Undecane	57	20.185	20.186	-0.001	96	1036819	4.00	4.05	
110 1,2-Dibromo-3-Chloropropan	157	20.384	20.381	0.003	98	514013	4.00	4.45	
111 1,2,4,5-Tetramethylbenzene	119	20.658	20.658	0.000	97	1523328	4.00	4.50	
114 Dodecane	57	21.266	21.268	-0.002	96	629519	4.00	3.83	
115 1,2,4-Trichlorobenzene	180	21.508	21.509	-0.001	93	789833	4.00	4.40	
116 Naphthalene	128	21.643	21.642	0.001	99	1217927	4.00	4.30	
118 Hexachlorobutadiene	225	21.799	21.798	0.001	95	736883	4.00	3.99	
119 1,2,3-Trichlorobenzene	180	21.858	21.858	0.000	95	458814	4.00	4.02	
120 2-Methylnaphthalene	142	22.385	22.385	0.000	100	234598	12.5	10.4	
121 1-Methylnaphthalene	142	22.509	22.509	0.000	100	206757	12.5	9.29	
A 123 C8 Range	1	15.119	(15.063-15.176)		0	3707341	4.00	4.14	
S 124 Xylenes, Total	100				0		12.0	12.5	
S 125 1,2-Dichloroethene, Total	1				0		8.00	8.08	

Reagents:

40L8DQP_00001

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

Report Date: 19-Feb-2018 10:04:35

Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL08.D

Injection Date: 15-Feb-2018 20:53:30

Instrument ID: MJ

Operator ID: 403648

Lims ID: IC L8

Worklist Smp#: 10

Client ID:

Purge Vol: 500.000 mL

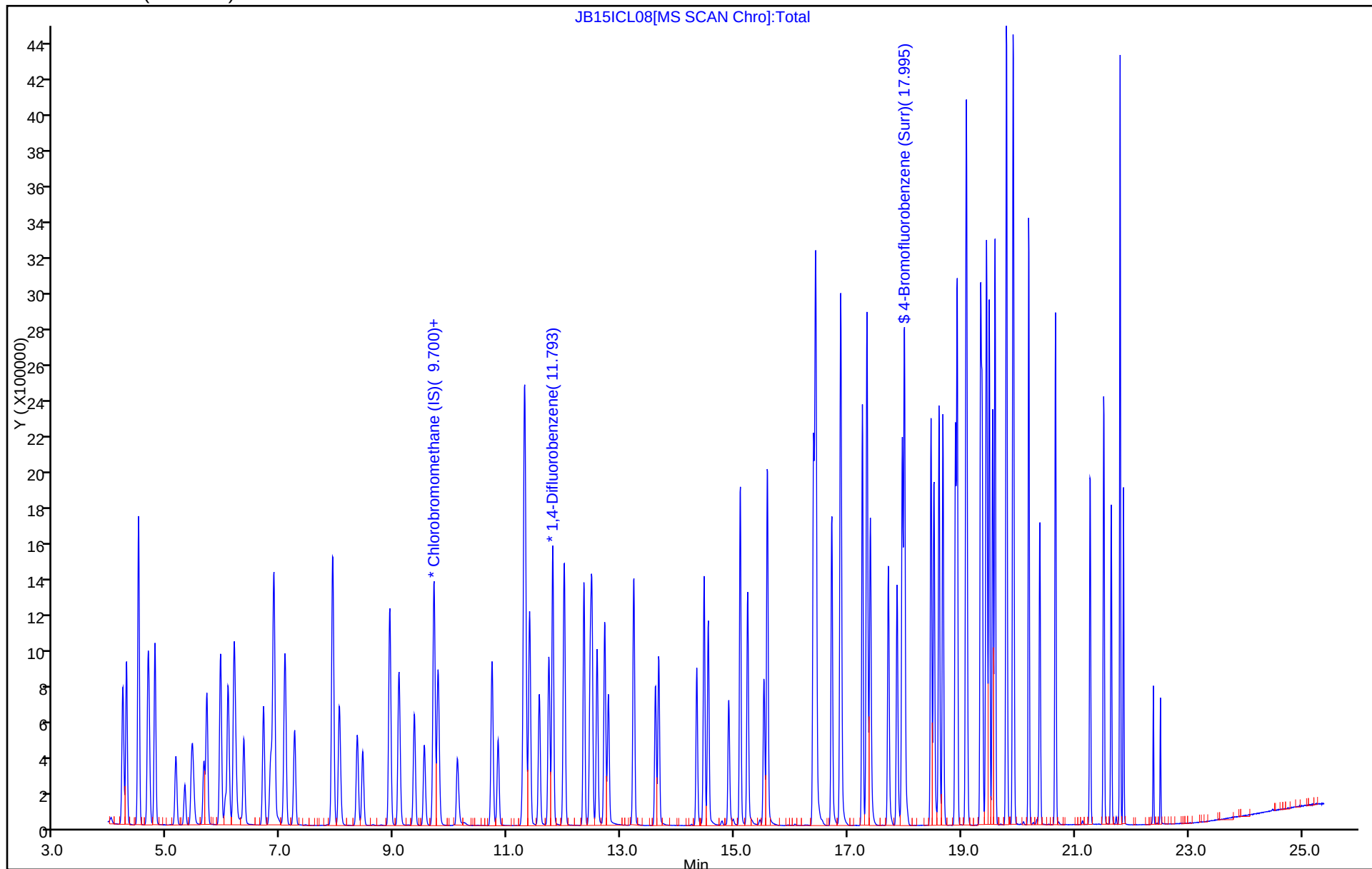
Dil. Factor: 1.0000

ALS Bottle#: 13

Method: MJ_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL08.D

Injection Date: 15-Feb-2018 20:53:30

Instrument ID: MJ

Lims ID: IC L8

Client ID:

Operator ID: 403648

ALS Bottle#: 13

Worklist Smp#: 10

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

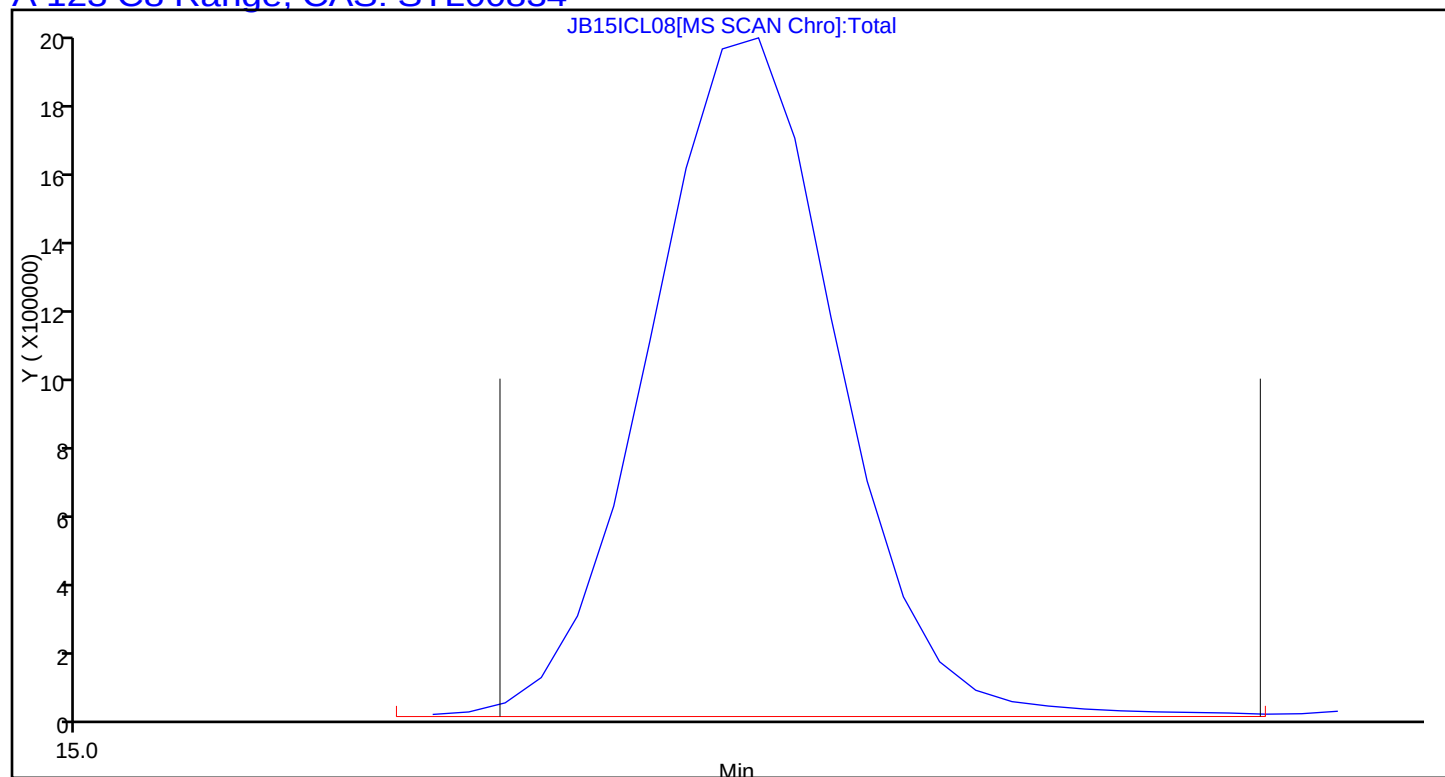
Method: MJ_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 123 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL09.D
 Lims ID: IC L9
 Client ID:
 Sample Type: IC Calib Level: 9
 Inject. Date: 15-Feb-2018 21:39:30 ALS Bottle#: 14 Worklist Smp#: 11
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0007391-011
 Misc. Info.: 140773
 Operator ID: 403648 Instrument ID: MJ
 Sublist: chrom-MJ_TO15*sub14
 Method: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\MJ_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Feb-2018 10:04:51 Calib Date: 15-Feb-2018 22:24:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK031

First Level Reviewer: barlozhetskayaa

Date: 16-Feb-2018 09:36:13

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.690	9.689	0.001	93	295689	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.794	11.790	0.004	95	1657510	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.393	16.389	0.004	87	1547348	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.996	17.992	0.004	96	1117665	4.00	4.00	
6 Chlorodifluoromethane	67	4.187	4.203	-0.016	96	214696	8.00	6.80	
7 Propene	41	4.198	4.216	-0.018	99	647152	8.00	7.52	
8 Dichlorodifluoromethane	85	4.257	4.274	-0.017	100	2062839	8.00	7.78	
9 Chloromethane	52	4.467	4.482	-0.015	98	228533	8.00	7.36	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.478	4.489	-0.011	92	1377554	8.00	7.92	
11 Acetaldehyde	44	4.650	4.662	-0.012	99	1220010	40.0	35.4	
12 Vinyl chloride	62	4.666	4.679	-0.013	99	777336	8.00	8.05	
13 Butadiene	54	4.763	4.777	-0.014	69	586005	8.00	7.50	
14 Butane	43	4.763	4.777	-0.014	85	1100932	8.00	7.43	
15 Bromomethane	94	5.134	5.146	-0.012	98	759169	8.00	7.89	
16 Chloroethane	64	5.295	5.304	-0.009	99	387996	8.00	7.74	
17 Ethanol	31	5.430	5.435	-0.005	96	1279493	40.0	35.7	
18 Vinyl bromide	106	5.634	5.641	-0.007	98	722769	8.00	7.90	
19 2-Methylbutane	43	5.683	5.693	-0.010	91	825846	8.00	7.56	
20 Trichlorofluoromethane	101	5.925	5.933	-0.008	100	2068202	8.00	8.06	
21 Acrolein	56	5.941	5.950	-0.009	94	182696	8.00	7.13	
23 Acetonitrile	40	6.016	6.040	-0.024	98	227816	8.00	7.02	
22 Acetone	58	6.059	6.081	-0.022	98	685323	24.0	20.4	
24 Pentane	72	6.161	6.171	-0.010	98	117550	8.00	7.51	
25 Isopropyl alcohol	45	6.188	6.201	-0.013	95	1918054	24.0	19.9	
26 Ethyl ether	31	6.339	6.362	-0.023	96	553177	8.00	6.64	
27 1,1-Dichloroethene	96	6.683	6.692	-0.009	97	754423	8.00	7.71	
28 Acrylonitrile	53	6.807	6.809	-0.002	94	436353	8.00	7.46	
30 2-Methyl-2-propanol	59	6.823	6.865	-0.042	94	919383	8.00	8.41	
29 1,1,2-Trichloro-1,2,2-trif	101	6.866	6.875	-0.009	97	1586774	8.00	7.82	
32 Methylene Chloride	84	7.060	7.061	-0.001	97	680277	8.00	6.42	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
31 3-Chloro-1-propene	39	7.071	7.077	-0.007	96	656238	8.00	7.80	
33 Carbon disulfide	76	7.232	7.239	-0.007	99	2180282	8.00	7.68	
34 trans-1,2-Dichloroethene	96	7.904	7.903	0.001	97	754307	8.00	7.70	
35 2-Methylpentane	43	7.910	7.917	-0.007	94	1652759	8.00	7.33	
36 Methyl tert-butyl ether	73	8.023	8.053	-0.030	96	1590174	8.00	7.31	
37 1,1-Dichloroethane	63	8.340	8.343	-0.003	100	1397954	8.00	7.60	
38 Vinyl acetate	43	8.437	8.442	-0.005	100	1582936	8.00	7.55	
40 2-Butanone (MEK)	72	8.905	8.919	-0.014	96	265192	8.00	7.02	
39 Hexane	56	8.916	8.922	-0.006	83	591318	8.00	7.43	
41 Isopropyl ether	45	9.077	9.091	-0.014	97	1860936	8.00	7.15	
42 cis-1,2-Dichloroethene	96	9.351	9.347	0.004	95	771979	8.00	7.73	
43 Ethyl acetate	43	9.524	9.529	-0.005	99	1177995	8.00	7.05	
44 Chloroform	83	9.701	9.697	0.004	96	1591098	8.00	7.51	
45 Tert-butyl ethyl ether	59	9.766	9.782	-0.016	95	1767069	8.00	7.29	
46 Tetrahydrofuran	42	10.105	10.126	-0.021	94	641564	8.00	7.16	
47 1,1,1-Trichloroethane	97	10.718	10.721	-0.003	96	1669563	8.00	7.57	
48 1,2-Dichloroethane	62	10.825	10.825	0.000	98	1050690	8.00	7.81	
49 Cyclohexane	69	11.288	11.287	0.001	95	357423	8.00	7.36	
50 Benzene	78	11.293	11.291	0.002	97	2097890	8.00	7.13	
53 n-Butanol	31	11.245	11.293	-0.048	81	202000	8.00	7.05	
52 Carbon tetrachloride	117	11.310	11.310	0.000	97	1762311	8.00	7.93	
55 2,3-Dimethylpentane	71	11.385	11.384	0.001	92	508864	8.00	7.37	
51 Thiophene	84	11.557	11.554	0.003	95	1270708	8.00	7.61	
54 Tert-amyl methyl ether	73	11.724	11.726	-0.002	98	1659453	8.00	7.20	
56 Isooctane	57	11.993	11.995	-0.002	99	3486427	8.00	7.39	
57 n-Heptane	71	12.342	12.342	0.000	91	777358	8.00	7.51	
58 1,2-Dichloropropane	63	12.455	12.451	0.004	91	847107	8.00	7.66	
59 Trichloroethene	130	12.482	12.480	0.002	96	1003544	8.00	7.74	
60 Dibromomethane	93	12.574	12.569	0.005	94	926694	8.00	7.50	
61 Dichlorobromomethane	83	12.708	12.704	0.004	99	1676336	8.00	7.75	
62 1,4-Dioxane	88	12.719	12.735	-0.016	84	219872	8.00	7.62	
63 Methyl methacrylate	41	12.773	12.776	-0.003	94	735125	8.00	7.30	
64 Methylcyclohexane	83	13.225	13.222	0.003	97	1368540	8.00	7.41	
65 4-Methyl-2-pentanone (MIBK)	43	13.601	13.618	-0.017	97	1085608	8.00	7.14	
66 cis-1,3-Dichloropropene	75	13.660	13.659	0.001	93	1355923	8.00	7.95	
67 trans-1,3-Dichloropropene	75	14.333	14.329	0.004	97	1173124	8.00	7.83	
68 Toluene	91	14.462	14.458	0.004	94	2422147	8.00	7.42	
69 1,1,2-Trichloroethane	83	14.537	14.532	0.005	98	753906	8.00	7.56	
72 2-Hexanone	58	14.892	14.908	-0.016	94	574790	8.00	7.47	
73 n-Octane	85	15.102	15.100	0.002	92	828864	8.00	7.31	
74 Chlorodibromomethane	129	15.231	15.227	0.004	97	1787283	8.00	8.12	
75 Ethylene Dibromide	107	15.516	15.514	0.002	98	1453979	8.00	7.86	
76 Tetrachloroethene	129	15.575	15.575	0.000	96	957712	8.00	7.40	
77 2,3-Dimethylheptane	43	16.425	16.423	0.002	95	2270585	8.00	6.82	
78 Chlorobenzene	112	16.442	16.437	0.005	94	1997116	8.00	7.59	
79 Ethylbenzene	91	16.716	16.711	0.005	98	2951613	8.00	7.29	
81 m-Xylene & p-Xylene	91	16.872	16.869	0.003	99	4391902	16.0	14.5	
82 n-Nonane	57	17.254	17.252	0.002	90	1567651	8.00	7.10	
83 Styrene	104	17.335	17.331	0.004	98	1795211	8.00	7.65	
84 Bromoform	173	17.335	17.333	0.002	97	1951424	8.00	8.27	
85 o-Xylene	91	17.394	17.391	0.003	99	2323383	8.00	7.23	
86 1,1,2,2-Tetrachloroethane	83	17.711	17.708	0.003	99	1634322	8.00	7.03	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
87 1,2,3-Trichloropropane	110	17.867	17.864	0.003	99	441919	8.00	7.26	
88 Isopropylbenzene	105	17.959	17.956	0.003	96	3047982	8.00	6.97	
89 N-Propylbenzene	120	18.464	18.462	0.002	99	873966	8.00	7.26	
90 2-Chlorotoluene	126	18.518	18.516	0.002	97	856661	8.00	7.34	
91 4-Ethyltoluene	105	18.604	18.602	0.002	98	2987293	8.00	7.07	
92 1,3,5-Trimethylbenzene	120	18.674	18.672	0.002	93	1262527	8.00	7.15	
93 Alpha Methyl Styrene	118	18.895	18.891	0.004	88	1370381	8.00	7.44	
94 n-Decane	57	18.927	18.923	0.004	91	1756545	8.00	6.72	
95 tert-Butylbenzene	119	19.083	19.079	0.004	92	2592000	8.00	6.91	
96 1,2,4-Trimethylbenzene	105	19.094	19.091	0.003	95	2456158	8.00	6.93	
97 sec-Butylbenzene	105	19.341	19.337	0.004	98	3532437	8.00	6.83	
98 1,3-Dichlorobenzene	146	19.363	19.363	0.000	98	1934769	8.00	7.29	
99 Benzyl chloride	91	19.433	19.431	0.002	98	2192216	8.00	7.66	
100 1,4-Dichlorobenzene	146	19.449	19.445	0.004	94	1947184	8.00	7.37	
101 4-Isopropyltoluene	119	19.492	19.489	0.003	97	2903808	8.00	6.88	
102 1,2,3-Trimethylbenzene	105	19.551	19.549	0.002	98	2418553	8.00	6.97	
103 Butylcyclohexane	83	19.594	19.591	0.003	95	2202912	8.00	6.88	
104 2,3-Dihydroindene	117	19.793	19.792	0.001	94	2301054	8.00	6.95	
105 1,2-Dichlorobenzene	146	19.798	19.795	0.003	96	1777289	8.00	7.08	
106 n-Butylbenzene	91	19.911	19.907	0.004	98	2760230	8.00	6.70	
107 Indene	116	19.922	19.918	0.004	90	1991794	8.00	7.16	
108 Undecane	57	20.186	20.186	0.000	95	1863928	8.00	6.87	
110 1,2-Dibromo-3-Chloropropan	157	20.385	20.381	0.004	97	946492	8.00	7.72	
111 1,2,4,5-Tetramethylbenzene	119	20.659	20.658	0.001	97	2566257	8.00	7.16	
114 Dodecane	57	21.267	21.268	-0.001	97	1292753	8.00	8.26	
115 1,2,4-Trichlorobenzene	180	21.509	21.509	0.000	93	1465426	8.00	7.71	
116 Naphthalene	128	21.643	21.642	0.001	99	2135019	8.00	7.10	
118 Hexachlorobutadiene	225	21.799	21.798	0.001	95	1335307	8.00	6.81	
119 1,2,3-Trichlorobenzene	180	21.859	21.858	0.001	95	871367	8.00	7.21	
120 2-Methylnaphthalene	142	22.386	22.385	0.001	100	617406	25.0	25.9	
121 1-Methylnaphthalene	142	22.510	22.509	0.001	100	536661	25.0	22.7	
A 123 C8 Range	1	15.110	(15.053-15.209)		0	7331415	8.00	7.72	
S 124 Xylenes, Total	100				0		24.0	21.7	
S 125 1,2-Dichloroethene, Total	1				0		16.0	15.4	

Reagents:

40L9DQP_00001

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

Report Date: 19-Feb-2018 10:04:54

Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL09.D

Injection Date: 15-Feb-2018 21:39:30

Instrument ID: MJ

Operator ID: 403648

Lims ID: IC L9

Worklist Smp#: 11

Client ID:

Purge Vol: 500.000 mL

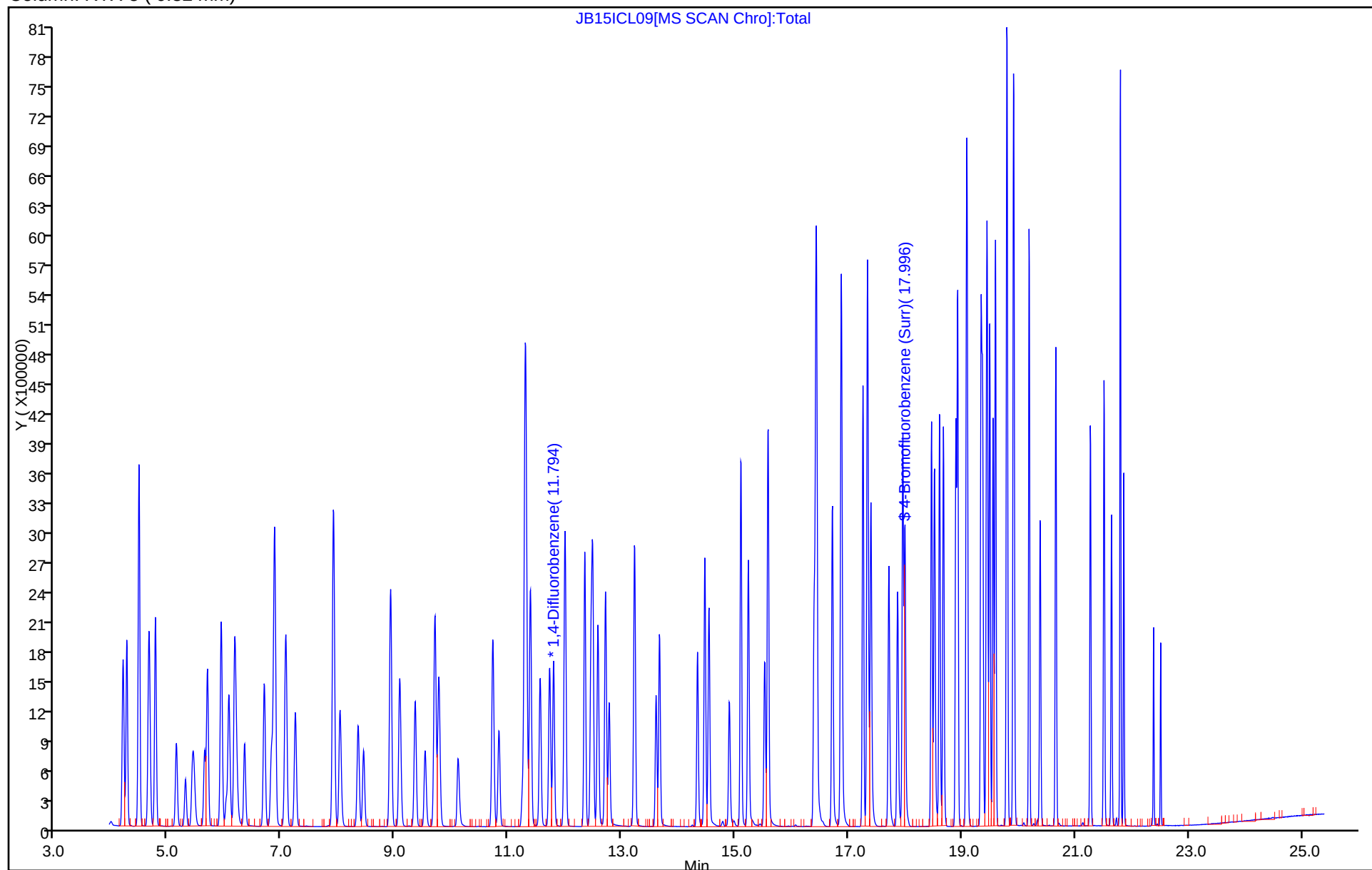
Dil. Factor: 1.0000

ALS Bottle#: 14

Method: MJ_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL09.D

Injection Date: 15-Feb-2018 21:39:30

Instrument ID: MJ

Lims ID: IC L9

Client ID:

Operator ID: 403648

ALS Bottle#: 14

Worklist Smp#: 11

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

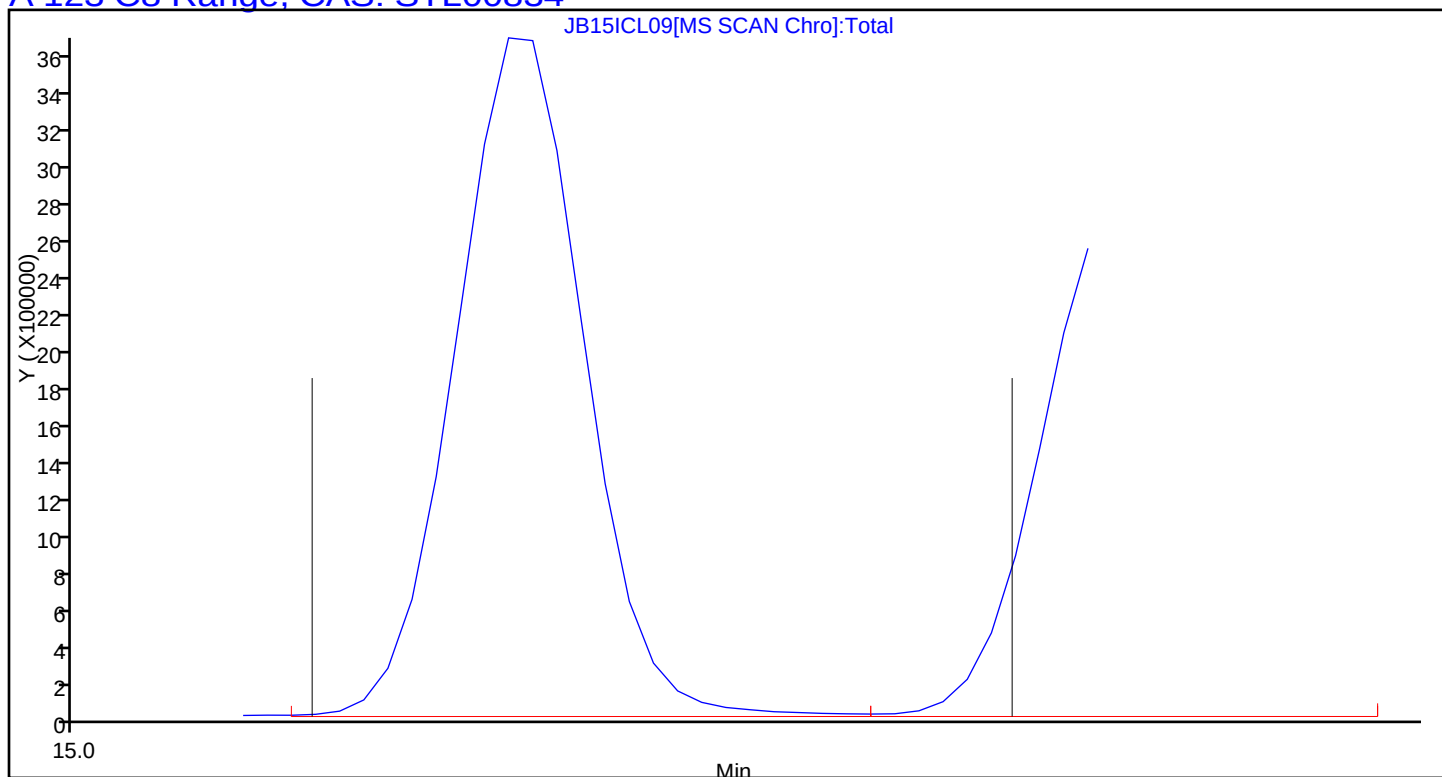
Method: MJ_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 123 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D
 Lims ID: IC L10
 Client ID:
 Sample Type: IC Calib Level: 10
 Inject. Date: 15-Feb-2018 22:24:30 ALS Bottle#: 15 Worklist Smp#: 12
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0007391-012
 Misc. Info.: 140768
 Operator ID: 403648 Instrument ID: MJ
 Sublist: chrom-MJ_TO15*sub14
 Method: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\MJ_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Feb-2018 10:05:10 Calib Date: 15-Feb-2018 22:24:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK031

First Level Reviewer: barlozhetskayaa

Date: 16-Feb-2018 09:36:32

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.710	9.689	0.021	93	291505	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.808	11.790	0.018	95	1648330	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.402	16.389	0.013	88	1543316	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	18.005	17.992	0.013	96	1068475	4.00	3.83	
6 Chlorodifluoromethane	67	4.201	4.203	-0.002	96	440085	16.0	14.1	
7 Propene	41	4.217	4.216	0.001	99	1263500	16.0	14.9	
8 Dichlorodifluoromethane	85	4.271	4.274	-0.003	100	4108290	16.0	15.7	
9 Chloromethane	52	4.481	4.482	-0.001	98	439355	16.0	14.4	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.486	4.489	-0.003	91	2692563	16.0	15.7	
11 Acetaldehyde	44	4.664	4.662	0.002	99	2375156	80.0	69.9	
12 Vinyl chloride	62	4.680	4.679	0.001	99	1533687	16.0	16.1	
13 Butadiene	54	4.777	4.777	0.000	68	1140773	16.0	14.8	
14 Butane	43	4.777	4.777	0.000	85	2153025	16.0	14.7	
15 Bromomethane	94	5.148	5.146	0.002	99	1529331	16.0	16.1	
16 Chloroethane	64	5.309	5.304	0.005	99	787780	16.0	15.9	
17 Ethanol	31	5.471	5.435	0.036	96	2178805	80.0	61.7	
18 Vinyl bromide	106	5.648	5.641	0.007	98	1469727	16.0	16.3	
19 2-Methylbutane	43	5.697	5.693	0.004	91	1650561	16.0	15.3	
20 Trichlorofluoromethane	101	5.939	5.933	0.006	100	4119857	16.0	16.3	
21 Acrolein	56	5.955	5.950	0.005	95	406528	16.0	16.1	
23 Acetonitrile	40	6.035	6.040	-0.005	99	482336	16.0	15.1	
22 Acetone	58	6.079	6.081	-0.003	97	1390929	48.0	41.9	
24 Pentane	72	6.175	6.171	0.004	99	244732	16.0	15.9	
25 Isopropyl alcohol	45	6.251	6.201	0.050	98	3482589	48.0	36.6	
26 Ethyl ether	31	6.347	6.362	-0.015	96	1171220	16.0	14.3	
27 1,1-Dichloroethene	96	6.697	6.692	0.005	97	1535615	16.0	15.9	
28 Acrylonitrile	53	6.826	6.809	0.017	94	902964	16.0	15.7	
30 2-Methyl-2-propanol	59	6.885	6.865	0.020	93	1632262	16.0	15.2	
29 1,1,2-Trichloro-1,2,2-trif	101	6.880	6.875	0.005	96	3139209	16.0	15.7	
32 Methylene Chloride	84	7.074	7.061	0.013	97	1349970	16.0	12.9	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
31 3-Chloro-1-propene	39	7.090	7.077	0.013	97	1319889	16.0	16.0	
33 Carbon disulfide	76	7.246	7.239	0.007	99	4378353	16.0	15.6	
34 trans-1,2-Dichloroethene	96	7.913	7.903	0.010	97	1495456	16.0	15.5	
35 2-Methylpentane	43	7.924	7.917	0.007	93	3175157	16.0	14.3	
36 Methyl tert-butyl ether	73	8.037	8.053	-0.016	96	3259814	16.0	15.2	
37 1,1-Dichloroethane	63	8.359	8.343	0.016	100	2804661	16.0	15.5	
38 Vinyl acetate	43	8.456	8.442	0.014	100	3288528	16.0	15.9	
40 2-Butanone (MEK)	72	8.930	8.919	0.011	97	501778	16.0	13.5	
39 Hexane	56	8.930	8.922	0.008	87	1164610	16.0	14.8	
41 Isopropyl ether	45	9.096	9.091	0.005	96	3697020	16.0	14.4	
42 cis-1,2-Dichloroethene	96	9.365	9.347	0.018	95	1553316	16.0	15.8	
43 Ethyl acetate	43	9.554	9.529	0.025	99	2276697	16.0	13.8	
44 Chloroform	83	9.720	9.697	0.023	97	3188140	16.0	15.3	
45 Tert-butyl ethyl ether	59	9.785	9.782	0.003	95	3540153	16.0	14.8	
46 Tetrahydrofuran	42	10.124	10.126	-0.002	93	1211876	16.0	13.7	
47 1,1,1-Trichloroethane	97	10.732	10.721	0.011	96	3337256	16.0	15.4	
48 1,2-Dichloroethane	62	10.845	10.825	0.020	98	2135949	16.0	16.0	
49 Cyclohexane	69	11.297	11.287	0.010	95	685290	16.0	14.2	
50 Benzene	78	11.307	11.291	0.016	97	4024394	16.0	13.8	
53 n-Butanol	31	11.280	11.293	-0.013	66	362827	16.0	12.7	
52 Carbon tetrachloride	117	11.323	11.310	0.013	99	3537791	16.0	16.0	
55 2,3-Dimethylpentane	71	11.393	11.384	0.009	91	1017496	16.0	14.8	
51 Thiophene	84	11.571	11.554	0.017	96	2563344	16.0	15.4	
54 Tert-amyl methyl ether	73	11.738	11.726	0.012	98	3235728	16.0	14.1	
56 Isooctane	57	12.007	11.995	0.012	98	6676767	16.0	14.2	
57 n-Heptane	71	12.356	12.342	0.014	90	1540847	16.0	15.0	
58 1,2-Dichloropropane	63	12.469	12.451	0.018	90	1682910	16.0	15.3	
59 Trichloroethene	130	12.496	12.480	0.016	96	1968061	16.0	15.3	
60 Dibromomethane	93	12.588	12.569	0.019	94	1863214	16.0	15.2	
61 Dichlorobromomethane	83	12.722	12.704	0.018	99	3382471	16.0	15.7	
62 1,4-Dioxane	88	12.744	12.735	0.009	83	344425	16.0	12.0	
63 Methyl methacrylate	41	12.792	12.776	0.016	94	1438539	16.0	14.4	
64 Methylcyclohexane	83	13.233	13.222	0.011	96	2709025	16.0	14.8	
65 4-Methyl-2-pentanone (MIBK)	43	13.621	13.618	0.003	97	2127971	16.0	14.1	
66 cis-1,3-Dichloropropene	75	13.674	13.659	0.015	93	2720193	16.0	16.0	
67 trans-1,3-Dichloropropene	75	14.347	14.329	0.018	98	2433426	16.0	16.3	
68 Toluene	91	14.476	14.458	0.018	94	4918045	16.0	15.1	
69 1,1,2-Trichloroethane	83	14.546	14.532	0.014	98	1513985	16.0	15.2	
72 2-Hexanone	58	14.912	14.908	0.004	94	1137183	16.0	14.8	
73 n-Octane	85	15.111	15.100	0.011	90	1606217	16.0	14.2	
74 Chlorodibromomethane	129	15.245	15.227	0.018	97	3568712	16.0	16.3	
75 Ethylene Dibromide	107	15.530	15.514	0.016	98	2951686	16.0	16.0	
76 Tetrachloroethene	129	15.584	15.575	0.009	96	1889134	16.0	14.6	
77 2,3-Dimethylheptane	43	16.429	16.423	0.006	93	4040042	16.0	12.2	
78 Chlorobenzene	112	16.450	16.437	0.013	93	3891277	16.0	14.8	
79 Ethylbenzene	91	16.724	16.711	0.013	98	5915991	16.0	14.7	
81 m-Xylene & p-Xylene	91	16.880	16.869	0.011	98	8546976	32.0	28.3	
82 n-Nonane	57	17.262	17.252	0.010	88	3005085	16.0	13.6	
83 Styrene	104	17.343	17.331	0.012	98	3536130	16.0	15.1	
84 Bromoform	173	17.348	17.333	0.015	97	3797430	16.0	16.1	
85 o-Xylene	91	17.402	17.391	0.011	99	4691784	16.0	14.6	
86 1,1,2,2-Tetrachloroethane	83	17.720	17.708	0.012	100	3277617	16.0	14.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
87 1,2,3-Trichloropropane	110	17.876	17.864	0.012	98	906990	16.0	14.9	
88 Isopropylbenzene	105	17.967	17.956	0.011	97	6046514	16.0	13.9	
89 N-Propylbenzene	120	18.473	18.462	0.011	99	1773765	16.0	14.8	
90 2-Chlorotoluene	126	18.527	18.516	0.011	97	1710230	16.0	14.7	
91 4-Ethyltoluene	105	18.613	18.602	0.011	97	5957624	16.0	14.1	
92 1,3,5-Trimethylbenzene	120	18.683	18.672	0.011	93	2530049	16.0	14.4	
93 Alpha Methyl Styrene	118	18.903	18.891	0.012	88	2737983	16.0	14.9	
94 n-Decane	57	18.930	18.923	0.007	93	3214750	16.0	12.3	
95 tert-Butylbenzene	119	19.086	19.079	0.007	92	4982279	16.0	13.3	
96 1,2,4-Trimethylbenzene	105	19.102	19.091	0.011	95	4740203	16.0	13.4	
97 sec-Butylbenzene	105	19.344	19.337	0.007	97	6638117	16.0	12.9	
98 1,3-Dichlorobenzene	146	19.371	19.363	0.008	98	3759992	16.0	14.2	
99 Benzyl chloride	91	19.441	19.431	0.010	98	4160862	16.0	14.6	
100 1,4-Dichlorobenzene	146	19.457	19.445	0.012	92	3756592	16.0	14.3	
101 4-Isopropyltoluene	119	19.500	19.489	0.011	96	5376440	16.0	12.8	
102 1,2,3-Trimethylbenzene	105	19.559	19.549	0.010	97	4664935	16.0	13.5	
103 Butylcyclohexane	83	19.597	19.591	0.006	94	4125394	16.0	12.9	
104 2,3-Dihydroindene	117	19.802	19.792	0.010	95	4376817	16.0	13.3	
105 1,2-Dichlorobenzene	146	19.807	19.795	0.012	95	3354013	16.0	13.4	
106 n-Butylbenzene	91	19.915	19.907	0.007	99	5013238	16.0	12.2	
107 Indene	116	19.925	19.918	0.007	90	3775959	16.0	13.6	
108 Undecane	57	20.189	20.186	0.003	93	3254285	16.0	12.0	
110 1,2-Dibromo-3-Chloropropan	157	20.388	20.381	0.007	97	1781427	16.0	14.6	
111 1,2,4,5-Tetramethylbenzene	119	20.662	20.658	0.004	97	4688609	16.0	13.1	
114 Dodecane	57	21.270	21.268	0.002	96	2025925	16.0	15.9	
115 1,2,4-Trichlorobenzene	180	21.512	21.509	0.003	94	2668565	16.0	14.1	
116 Naphthalene	128	21.647	21.642	0.005	98	3783262	16.0	12.6	
118 Hexachlorobutadiene	225	21.803	21.798	0.005	94	2542924	16.0	13.0	
119 1,2,3-Trichlorobenzene	180	21.862	21.858	0.004	95	1500391	16.0	12.4	
120 2-Methylnaphthalene	142	22.384	22.385	-0.001	100	166663	50.0	7.02	
121 1-Methylnaphthalene	142	22.507	22.509	-0.002	99	88097	50.0	3.74	
A 123 C8 Range	1	15.121	(15.061-15.239)		0	14016806	16.0	14.8	
S 124 Xylenes, Total	100				0		48.0	42.9	
S 125 1,2-Dichloroethene, Total	1				0		32.0	31.3	

Reagents:

40L10DQP_00001

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

Report Date: 19-Feb-2018 10:05:12

Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D

Injection Date: 15-Feb-2018 22:24:30

Instrument ID: MJ

Operator ID: 403648

Lims ID: IC L10

Worklist Smp#: 12

Client ID:

Purge Vol: 500.000 mL

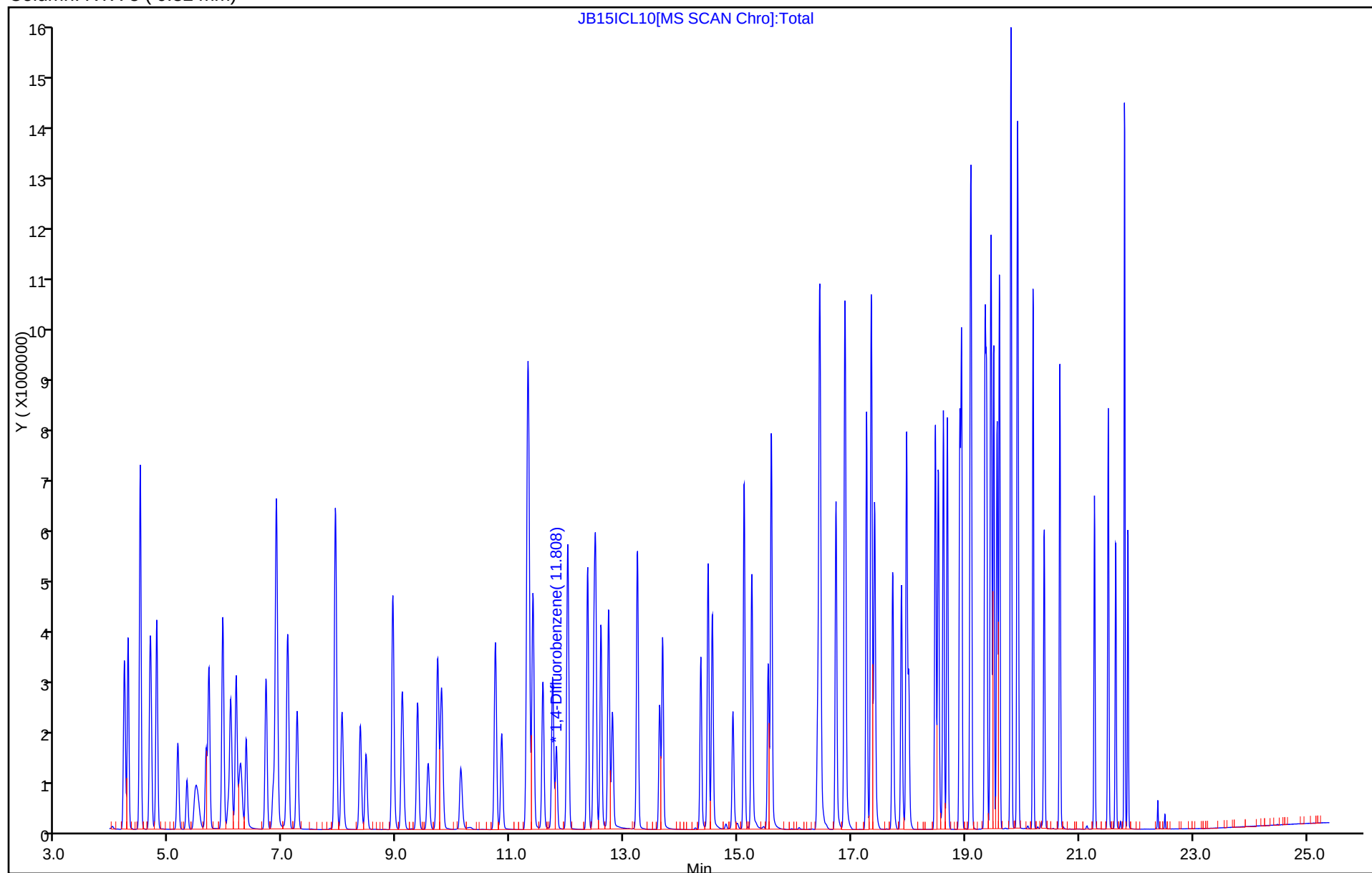
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MJ_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D

Injection Date: 15-Feb-2018 22:24:30

Instrument ID: MJ

Lims ID: IC L10

Client ID:

Operator ID: 403648

ALS Bottle#: 15

Worklist Smp#: 12

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

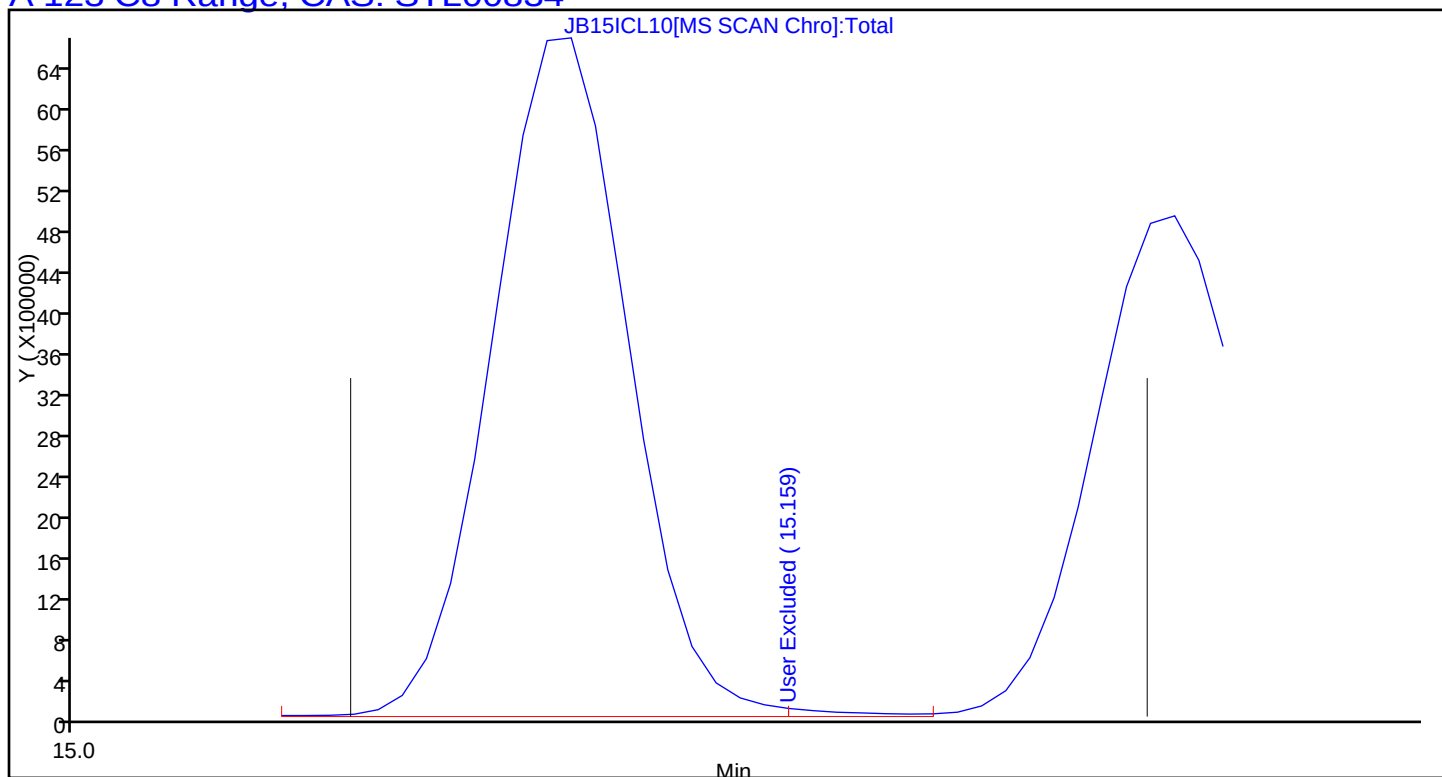
Method: MJ_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

Detector: MS SCAN

A 123 C8 Range, CAS: STL00834



FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1 Analy Batch No.: 17762

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-17762/3	RA30IC01.D
Level 2	IC 140-17762/4	RA30IC02.D
Level 3	IC 140-17762/5	RA30IC03.D
Level 4	IC 140-17762/6	RA30IC04.D
Level 5	IC 140-17762/7	RA30IC05.D
Level 6	IC 140-17762/8	RA30IC06.D
Level 7	ICIS 140-17762/9	RA30IC07.D
Level 8	IC 140-17762/10	RA30IC08.D
Level 9	IC 140-17762/11	RA30IC09.D
Level 10	IC 140-17762/12	RA30IC10.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
Chlorodifluoromethane	+++++ 0.4996	+++++ 0.5018	0.5364 0.4761	0.5007 0.4556	0.4969 0.4366	Ave		0.4879				6.4		30.0			
Propene	+++++ 1.0148	+++++ 1.0127	+++++ 0.9251	1.0749 0.8535	1.0335 0.7750	Ave		0.9557				11.4		30.0			
Dichlorodifluoromethane	+++++ 3.8576	+++++ 3.8716	3.9445 3.4238	4.4278 3.3920	3.8443 3.2841	Ave		3.7557				10.0		30.0			
Chloromethane	+++++ 0.3356	+++++ 0.3504	+++++ 0.3161	0.4352 0.2922	0.3844 0.2804	Ave		0.3421				15.8		30.0			
1,2-Dichlorotetrafluoroethane	2.9869 2.5228	2.8020 2.5888	2.6799 2.4191	2.4834 2.2928	2.5057 2.1607	Ave		2.5442				9.4		30.0			
Vinyl chloride	1.2473 1.0050	1.2981 1.0133	1.0342 0.9733	1.0613 0.9642	1.0145 0.8783	Ave		1.0490				12.2		30.0			
1,3-Butadiene	+++++ 0.6759	+++++ 0.6901	0.7589 0.6575	0.7160 0.6429	0.6702 0.6007	Ave		0.6765				7.0		30.0			
Butane	+++++ 1.1770	+++++ 1.1571	1.1761 1.0993	1.1870 1.0664	1.1472 0.9821	Ave		1.1240				6.3		30.0			
Bromomethane	+++++ 0.9756	+++++ 0.9799	1.0961 0.9468	0.9664 0.9339	0.9805 0.8851	Ave		0.9705				6.2		30.0			
Chloroethane	+++++ 0.4798	+++++ 0.4684	0.5400 0.4543	0.5007 0.4508	0.4816 0.4272	Ave		0.4754				7.2		30.0			
Ethanol	+++++ 0.3138	+++++ 0.3115	+++++ 0.2974	0.3206 0.2839	0.3092 0.2628	Ave		0.2999				6.8		30.0			
Vinyl bromide	+++++ 0.9734	+++++ 0.9603	1.0223 0.9264	0.9931 0.9030	0.9628 0.8698	Ave		0.9514				5.2		30.0			
2-Methylbutane	+++++ 0.7927	0.8473 0.7870	0.8827 0.7573	0.8140 0.7354	0.8057 0.7063	Ave		0.7921				6.9		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1 Analy Batch No.: 17762

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Acrolein	+++++	+++++	+++++	0.2463	0.2775	Ave		0.2209				16.0		30.0			
	0.2131	0.2023	0.1714	0.2369	0.1986												
Trichlorofluoromethane	3.8163	3.8962	3.7377	3.7221	3.6118	Ave		3.5674				7.4		30.0			
	3.6210	3.5670	3.3875	3.2631	3.0510												
Acetonitrile	+++++	+++++	+++++	+++++	0.3012	Ave		0.2718				6.4		30.0			
	0.2710	0.2792	0.2690	0.2590	0.2516												
Acetone	+++++	+++++	+++++	+++++	0.5743	Ave		0.4182				21.0		30.0			
	0.4445	0.4298	0.3730	0.3559	0.3319												
Isopropyl alcohol	+++++	+++++	+++++	1.7601	1.7064	Ave		1.6077				12.0		30.0			
	1.7615	1.7262	1.6035	1.4471	1.2490												
Pentane	+++++	0.3253	0.3062	0.2848	0.2797	Ave		0.2789				10.5		30.0			
	0.2821	0.2863	0.2706	0.2514	0.2238												
Ethyl ether	+++++	+++++	1.1464	1.0861	1.0639	Ave		1.0097				11.0		30.0			
	1.0595	1.0591	0.9558	0.8868	0.8197												
1,1-Dichloroethene	1.8230	1.6952	1.5415	1.4628	1.4710	Ave		1.5145				9.6		30.0			
	1.4732	1.5251	1.4388	1.3846	1.3297												
Acrylonitrile	+++++	1.0491	0.9699	0.9648	0.9313	Ave		0.9563				6.0		30.0			
	0.9755	1.0149	0.9431	0.8986	0.8597												
t-Butyl alcohol	+++++	+++++	3.2956	3.0814	3.0612	Ave		3.0144				6.7		30.0			
	3.0919	3.1666	2.9405	2.8297	2.6483												
1,1,2-Trichlorotrifluoroethane	3.6835	3.3240	3.3270	3.2027	3.2883	Ave		3.2387				7.5		30.0			
	3.3085	3.3647	3.1386	2.9781	2.7719												
Methylene Chloride	+++++	+++++	+++++	2.3963	1.7575	Ave		1.5642				26.4		30.0			
	1.5226	1.4846	1.3365	1.2627	1.1890												
3-Chloropropene	+++++	1.4624	1.3517	1.2960	1.2499	Ave		1.2571				9.1		30.0			
	1.2912	1.2679	1.1239	1.1775	1.0934												
Carbon disulfide	+++++	4.5429	4.2824	4.2202	4.1883	Ave		4.1898				5.3		30.0			
	4.3010	4.3495	4.0908	3.9413	3.7920												
trans-1,2-Dichloroethene	+++++	1.6529	1.5536	1.5451	1.5012	Ave		1.5366				4.5		30.0			
	1.5663	1.6054	1.5101	1.4740	1.4213												
Methyl tert-butyl ether	+++++	4.9780	4.7681	4.6401	4.7610	Ave		4.7386				4.5		30.0			
	4.8878	5.0046	4.7335	4.5480	4.3260												
1,1-Dichloroethane	3.2552	3.2402	3.0427	2.9120	2.9342	Ave		2.9270				8.0		30.0			
	2.9583	2.9974	2.7728	2.6386	2.5185												
Vinyl acetate	+++++	+++++	2.4722	2.4587	2.7400	Ave		2.8288				8.9		30.0			
	3.0422	3.0483	2.8443	3.0745	2.9503												
2-Butanone	+++++	+++++	+++++	0.7096	0.7825	Ave		0.7255				6.4		30.0			
	0.7255	0.7913	0.7057	0.7007	0.6631												
Hexane	+++++	1.3784	1.2369	1.1721	1.1769	Ave		1.1731				9.5		30.0			
	1.2050	1.2187	1.1204	1.0624	0.9868												

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1 Analy Batch No.: 17762

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
cis-1,2-Dichloroethene	1.9071 1.6125	1.8156 1.6678	1.6641 1.5780	1.6147 1.5302	1.6025 1.4817	Ave		1.6474				7.8		30.0			
Ethyl acetate	++++ 2.7290	++++ 2.8405	2.1840 2.6632	2.2813 2.5958	2.5408 2.4854	Ave		2.5400				8.7		30.0			
Chloroform	4.2863 3.7052	3.8694 3.7903	3.7705 3.5491	3.6794 3.4047	3.6984 3.2578	Ave		3.7011				7.5		30.0			
Tetrahydrofuran	++++ 1.3407	++++ 1.3730	1.3680 1.2688	1.3174 1.2195	1.3030 1.1665	Ave		1.2946				5.6		30.0			
1,1,1-Trichloroethane	4.1703 3.9689	4.0153 4.0994	3.8140 3.8790	3.6871 3.7835	3.8389 3.6271	Ave		3.8883				4.5		30.0			
1,2-Dichloroethane	0.4598 0.4390	0.4262 0.4435	0.3913 0.4170	0.4251 0.4087	0.3915	Ave		0.4231				5.2		30.0			
Benzene	0.8742 0.7844	0.8183 0.7925	0.7957 0.7383	0.7735 0.6873	0.7655 0.6121	Ave		0.7642				9.5		30.0			
1-Butanol	++++ 0.0491	++++ 0.0535	++++ 0.0554	++++ 0.0549	0.0399 0.0507	Ave		0.0506				11.4		30.0			
Cyclohexane	++++ 0.1282	0.1302 0.1319	0.1361 0.1198	0.1248 0.1109	0.1254 0.0971	Ave		0.1227				9.8		30.0			
Carbon tetrachloride	0.6377 0.6481	0.5867 0.6494	0.5971 0.6370	0.5827 0.6239	0.6061 0.5914	Ave		0.6160				4.2		30.0			
2,2,4-Trimethylpentane	++++ 1.1700	++++ 1.1823	1.1763 1.1037	1.1213 1.0350	1.1405 0.9359	Ave		1.1081				7.6		30.0			
1,2-Dichloropropane	0.2892 0.2749	0.2827 0.2781	0.2783 0.2608	0.2653 0.2439	0.2652 0.2201	Ave		0.2659				7.7		30.0			
Heptane	++++ 0.2794	0.2806 0.2826	0.2727 0.2668	0.2557 0.2502	0.2719 0.2244	Ave		0.2649				7.1		30.0			
Trichloroethene	0.3941 0.3561	0.3498 0.3989	0.3569 0.4050	0.3383 0.3430	0.3431 0.3253	Ave		0.3611				7.8		30.0			
Dibromomethane	++++ 0.3180	++++ 0.3337	0.3335 0.3154	0.3130 0.3075	0.3081 0.2866	Ave		0.3145				4.8		30.0			
Bromodichloromethane	0.5552 0.5927	0.5165 0.6275	0.5155 0.6065	0.5215 0.5926	0.5443 0.5621	Ave		0.5634				7.1		30.0			
1,4-Dioxane	++++ 0.1244	0.1026 0.1255	0.1107 0.1188	0.1100 0.1111	0.1114 0.0998	Ave		0.1127				7.8		30.0			
Methyl methacrylate	++++ 0.2534	++++ 0.2814	++++ 0.2766	++++ 0.2732	0.1921 0.2613	Ave		0.2509				13.3		30.0			
4-Methyl-2-pentanone (MIBK)	++++ 0.4476	++++ 0.4761	0.4073 0.4607	0.3703 0.4462	0.4067 0.4120	Ave		0.4284				8.2		30.0			
cis-1,3-Dichloropropene	0.4432 0.4616	0.4182 0.4890	0.4016 0.4666	0.4077 0.4542	0.4258 0.4244	Ave		0.4392				6.4		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1 Analy Batch No.: 17762

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
trans-1,3-Dichloropropene	0.5110 0.5036	0.4535 0.5257	0.4406 0.5134	0.4431 0.5163	0.4525 0.4903	Ave		0.4850				7.0		30.0			
Toluene	1.2824 1.1325	1.1432 1.1561	1.0870 1.0939	1.0545 1.0385	1.0799 0.9486	Ave		1.1017				7.9		30.0			
1,1,2-Trichloroethane	0.3289 0.3161	0.3191 0.3218	0.2970 0.3044	0.2890 0.2905	0.3016 0.2671	Ave		0.3035				6.1		30.0			
2-Hexanone	++++ 0.2856	++++ 0.3067	0.1978 0.3130	0.1839 0.2994	0.2390 0.2768	Ave		0.2628				19.0		30.0			
Dibromochloromethane	0.5478 0.6218	0.4611 0.6757	0.5045 0.6734	0.4783 0.6763	0.5239 0.6415	Ave		0.5804				14.9		30.0			
Octane	0.3713 0.3761	0.3521 0.3823	0.3634 0.3590	0.3351 0.3411	0.3561 0.3074	Ave		0.3544				6.2		30.0			
1,2-Dibromoethane	0.5777 0.5703	0.4862 0.5934	0.5028 0.5775	0.5036 0.5627	0.5214 0.5228	Ave		0.5418				7.1		30.0			
Tetrachloroethene	0.4510 0.4222	0.4302 0.4299	0.4096 0.4116	0.3928 0.3938	0.4006 0.3646	Ave		0.4106				5.9		30.0			
Chlorobenzene	1.0111 0.8808	0.9072 0.8981	0.8780 0.8583	0.8277 0.8176	0.8488 0.7523	Ave		0.8680				7.8		30.0			
Ethylbenzene	1.6592 1.4956	1.4733 1.5265	1.4692 1.4423	1.3826 1.3480	1.4274 1.1942	Ave		1.4418				8.4		30.0			
m-Xylene & p-Xylene	1.2623 1.1995	1.1484 1.2020	1.1693 1.1112	1.0926 1.0102	1.1299 0.8551	Ave		1.1181				10.3		30.0			
Bromoform	0.4567 0.5340	0.3917 0.5876	0.3879 0.5961	0.3803 0.6243	0.4243 0.6099	Ave		0.4993				20.2		30.0			
Styrene	++++ 0.7708	++++ 0.8353	0.5730 0.8116	0.5596 0.7867	0.6410 0.7271	Ave		0.7131				15.2		30.0			
Nonane	0.6231 0.6749	0.6344 0.6650	0.6202 0.5965	0.5897 0.5334	0.6338 0.4526	Ave		0.6024				11.0		30.0			
o-Xylene	1.3802 1.2416	1.2323 1.2309	1.2402 1.1408	1.1662 1.0563	1.1911 0.9246	Ave		1.1804				10.4		30.0			
1,1,2,2-Tetrachloroethane	0.7571 0.7998	0.6769 0.7375	0.6943 0.6416	0.6940 0.7009	0.7398 0.6230	Ave		0.7065				7.6		30.0			
1,2,3-Trichloropropane	0.2821 0.2687	0.2608 0.2698	0.2586 0.2533	0.2448 0.2410	0.2532 0.2251	Ave		0.2557				6.4		30.0			
Isopropylbenzene	++++ 1.6847	1.7627 1.6664	1.6980 1.5413	1.5734 1.4182	1.6200 1.2451	Ave		1.5789				10.2		30.0			
Propylbenzene	0.4393 0.4800	0.4121 0.4854	0.4266 0.4494	0.4019 0.4134	0.4353 0.3689	Ave		0.4312				8.2		30.0			
2-Chlorotoluene	0.4307 0.4308	0.4121 0.4227	0.4100 0.3945	0.3900 0.3647	0.4077 0.3250	Ave		0.3988				8.2		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1 Analy Batch No.: 17762

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10		B	M1	M2								
4-Ethyltoluene	1.6721 1.8578	1.5887 1.8488	1.6064 1.7062	1.5559 1.5414	1.6697 1.3406	Ave		1.6388				9.3		30.0			
1,3,5-Trimethylbenzene	0.6886 0.7368	0.6438 0.7377	0.6390 0.6854	0.6228 0.6329	0.6583 0.5712	Ave		0.6617				7.8		30.0			
Alpha Methyl Styrene	++++ 0.5961	++++ 0.6811	++++ 0.6723	0.3867 0.6319	0.4651 0.5717	Ave		0.5721				19.1		30.0			
Decane	0.7782 0.9615	0.7577 0.9673	0.8036 0.8765	0.7851 0.7693	0.8536 0.6351	Ave		0.8188				12.2		30.0			
tert-Butylbenzene	1.6747 1.7037	1.5629 1.6867	1.5711 1.5356	1.5162 1.3829	1.5602 1.1822	Ave		1.5376				10.2		30.0			
1,2,4-Trimethylbenzene	1.4061 1.5971	1.3356 1.5702	1.4117 1.4079	1.3483 1.2376	1.4396 1.0385	Ave		1.3793				11.6		30.0			
1,3-Dichlorobenzene	0.9382 0.9839	0.8463 0.9937	0.8839 0.9167	0.8388 0.8391	0.8924 0.7369	Ave		0.8870				8.7		30.0			
sec-Butylbenzene	2.1386 2.2501	1.9617 2.2330	1.9986 2.0283	1.9397 1.7523	2.0522 1.4290	Ave		1.9784				12.2		30.0			
Benzyl chloride	0.9176 1.2280	0.8673 1.3521	0.8700 1.2619	0.8429 1.1005	1.0250 0.9090	Ave		1.0374				18.1		30.0			
1,4-Dichlorobenzene	0.9388 0.9885	0.8643 0.9957	0.8741 0.9128	0.8360 0.8274	0.8810 0.7278	Ave		0.8846				9.0		30.0			
4-Isopropyltoluene	1.7285 1.9959	1.5857 2.0202	1.7817 1.8554	1.6423 1.6625	1.7503 1.3675	Ave		1.7390				11.1		30.0			
1,2,3-Trimethylbenzene	1.5856 1.7943	1.5711 1.7803	1.5668 1.6018	1.4899 1.4272	1.6163 1.2294	Ave		1.5663				10.4		30.0			
1,2-Dichlorobenzene	0.8942 0.9621	0.8150 0.9678	0.8654 0.8979	0.8005 0.8158	0.8702 0.7264	Ave		0.8615				8.7		30.0			
Butylbenzene	1.4292 1.8444	1.3568 1.8896	1.4519 1.7531	1.4134 1.5467	1.5664 1.2564	Ave		1.5508				13.8		30.0			
Undecane	0.7892 1.0726	0.7390 1.1100	0.7934 1.0270	0.8096 0.9132	0.8805 0.7285	Ave		0.8863				15.8		30.0			
1,2-Dibromo-3-Chloropropane	++++ 0.5969	++++ 0.6647	0.3685 0.6164	0.3739 0.6149	0.4386 0.5398	Ave		0.5267				22.2		30.0			
1,2,4,5-Tetramethylbenzene	++++ 0.9191	++++ 0.9859	0.7212 0.9676	0.6936 0.9342	0.7408 0.8332	Ave		0.8495				13.9		30.0			
Dodecane	++++ 0.9928	++++ 1.1283	0.5865 1.0229	0.6183 0.9289	0.6706 0.6900	Ave		0.8298				25.4		30.0			
1,2,4-Trichlorobenzene	++++ 0.7149	0.4150 0.8253	0.4838 0.8320	0.4553 0.8417	0.5017 0.7379	Ave		0.6453				27.7		30.0			
Naphthalene	1.0448 1.6712	0.9243 1.9078	1.1299 1.8929	1.1276 1.8463	1.2769 1.5182	Ave		1.4340				26.4		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1 Analy Batch No.: 17762

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7	LVL 8	LVL 9	LVL 10												
Hexachlorobutadiene	0.7046 0.7752	0.6195 0.8332	0.6587 0.8074	0.6012 0.7762	0.6084 0.6733	Ave		0.7058				12.3		30.0			
1,2,3-Trichlorobenzene	++++ 0.6757	++++ 0.7953	0.4965 0.7779	0.4801 0.7989	0.4939 0.7046	Ave		0.6529				21.7		30.0			
2-Methylnaphthalene	++++ 0.2487	++++ 0.4641	++++ 0.4569	++++ 0.4755	0.1340 0.3372	Ave		0.3527				39.5		50.0			
1-Methylnaphthalene	++++ 0.2715	++++ 0.5022	++++ 0.4656	0.2315 0.4794	0.1676 0.3359	Ave		0.3505				38.1		50.0			
4-Bromofluorobenzene (Surr)	0.7650 0.7800	0.7779 0.7658	0.7890 0.7351	0.7826 0.7176	0.7941 0.6764	Ave		0.7584				5.0		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1 Analy Batch No.: 17762

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-17762/3	RA30IC01.D
Level 2	IC 140-17762/4	RA30IC02.D
Level 3	IC 140-17762/5	RA30IC03.D
Level 4	IC 140-17762/6	RA30IC04.D
Level 5	IC 140-17762/7	RA30IC05.D
Level 6	IC 140-17762/8	RA30IC06.D
Level 7	ICIS 140-17762/9	RA30IC07.D
Level 8	IC 140-17762/10	RA30IC08.D
Level 9	IC 140-17762/11	RA30IC09.D
Level 10	IC 140-17762/12	RA30IC10.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Chlorodifluoromethane	CBM	Ave	++++ 49960	++++ 99602	4119 192008	7784 373011	19042 719553	++++ 1.00	++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Propene	CBM	Ave	++++ 101480	++++ 201013	++++ 373101	16712 698857	39604 1277376	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Dichlorodifluoromethane	CBM	Ave	++++ 385761	++++ 768499	30290 1380786	68839 2777340	147314 5412793	++++ 1.00	++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Chloromethane	CBM	Ave	++++ 33564	++++ 69549	++++ 127494	6766 239224	14731 462204	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
1,2-Dichlorotetrafluoroethane	CBM	Ave	5510 252275	10542 513872	20579 975595	38610 1877362	96019 3561275	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Vinyl chloride	CBM	Ave	2301 100495	4884 201144	7942 392525	16500 789520	38877 1447608	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,3-Butadiene	CBM	Ave	++++ 67588	++++ 136978	5828 265156	11132 526420	25683 990068	++++ 1.00	++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Butane	CBM	Ave	++++ 117697	++++ 229678	9031 443357	18455 873129	43962 1618667	++++ 1.00	++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Bromomethane	CBM	Ave	++++ 97562	++++ 194501	8417 381835	15024 764670	37574 1458793	++++ 1.00	++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Chloroethane	CBM	Ave	++++ 47978	++++ 92980	4147 183236	7784 369095	18456 704038	++++ 1.00	++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Ethanol	CBM	Ave	++++ 156896	++++ 309152	++++ 599728	24919 1162228	59239 2165410	++++ 5.01	++++ 9.99	++++ 20.0	0.800 40.0	2.00 80.0
Vinyl bromide	CBM	Ave	++++ 97338	++++ 190610	7850 373599	15440 739337	36894 1433559	++++ 1.00	++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
2-Methylbutane	CBM	Ave	++++ 79273	3188 156213	6778 305420	12656 602150	30876 1164068	++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Acrolein	CBM	Ave	++++ 21312	++++ 40157	++++ 69130	3830 193944	10635 327310	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1 Analy Batch No.: 17762

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Trichlorofluoromethane	CBM	Ave	7040 362096	14659 708040	28702 1366159	57868 2671794	138405 5028632	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Acetonitrile	CBM	Ave	++++ 27104	++++ 55420	++++ 108488	++++ 212047	++++ 414724	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	++++ 16.0
Acetone	CBM	Ave	++++ 133362	++++ 255969	++++ 451316	++++ 874182	66025 1641135	++++ 3.01	++++ 5.99	++++ 12.0	++++ 24.0	1.20 48.0
Isopropyl alcohol	CBM	Ave	++++ 528496	++++ 1027986	++++ 1940134	82100 3554966	196181 6176210	++++ 3.01	++++ 5.99	++++ 12.0	0.480 24.0	1.20 48.0
Pentane	CBM	Ave	++++ 28211	1224 56821	2351 109148	4428 205846	10720 368799	++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Ethyl ether	CBM	Ave	++++ 105952	++++ 210233	8803 385484	16886 726094	40771 1351034	++++ 1.00	++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethene	CBM	Ave	3363 147316	6378 302733	11837 580273	22742 1133673	56370 2191529	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Acrylonitrile	CBM	Ave	++++ 97550	3947 201452	7448 380336	15000 735807	35688 1416916	++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
t-Butyl alcohol	CBM	Ave	++++ 309191	++++ 628551	25307 1185900	47907 2316983	117307 4364855	++++ 1.00	++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichlorotrifluoroethane	CBM	Ave	6795 330843	12506 667885	25548 1265800	49793 2438487	126008 4568598	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Methylene Chloride	CBM	Ave	++++ 152260	++++ 294696	++++ 539025	37255 1033868	67350 1959635	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
3-Chloropropene	CBM	Ave	++++ 129123	5502 251667	10380 453252	20149 964101	47897 1802055	++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Carbon disulfide	CBM	Ave	++++ 430092	17092 863361	32885 1649806	65612 3227149	160500 6249903	++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
trans-1,2-Dichloroethene	CBM	Ave	++++ 156625	6219 318661	11930 609026	24021 1206934	57527 2342499	++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Methyl tert-butyl ether	CBM	Ave	++++ 488775	18729 993401	36615 1909019	72140 3723922	182444 7130125	++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,1-Dichloroethane	CBM	Ave	6005 295826	12191 594968	23365 1118272	45273 2160451	112441 4150884	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Vinyl acetate	CBM	Ave	++++ 304213	++++ 605079	18984 1147099	38225 2517397	104997 4862704	++++ 1.00	++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
2-Butanone	CBM	Ave	++++ 72547	++++ 157076	++++ 284611	11032 573697	29985 1092853	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Hexane	CBM	Ave	++++ 120502	5186 241914	9498 451862	18222 869891	45099 1626366	++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
cis-1,2-Dichloroethene	CBM	Ave	3518 161247	6831 331061	12779 636383	25103 1252882	61408 2442184	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Ethyl acetate	CBM	Ave	++++ 272902	++++ 563824	16771 1074075	35467 2125431	97364 4096409	++++ 1.00	++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1 Analy Batch No.: 17762

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
Chloroform	CBM	Ave	7907 370515	14558 752364	28954 1431329	57203 2787766	141724 5369459	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Tetrahydrofuran	CBM	Ave	++++ 134069	++++ 272546	10505 511682	20481 998545	49933 1922640	++++ 1.00	++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,1,1-Trichloroethane	CBM	Ave	7693 396883	15107 813727	29288 1564396	57324 3097922	147109 5978105	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2-Dichloroethane	DFBZ	Ave	5237 266293	9999 535650	20209 1019982	37522 2013816	100014 3907140	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Benzene	DFBZ	Ave	9957 475845	19199 957247	37499 1805776	74171 3386082	180099 6108554	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1-Butanol	DFBZ	Ave	++++ 29797	++++ 64569	++++ 135506	++++ 270253	9384 506348	++++ 1.00	++++ 2.00	++++ 4.00	++++ 8.00	0.400 16.0
Cyclohexane	DFBZ	Ave	++++ 77754	3056 159306	6414 293021	11967 546616	29509 968821	++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Carbon tetrachloride	DFBZ	Ave	7263 393178	13765 784365	28139 1557932	55870 3073958	142596 5902097	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
2,2,4-Trimethylpentane	DFBZ	Ave	++++ 709763	++++ 1428084	55433 2699507	107521 5099511	268337 9340512	++++ 1.00	++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2-Dichloropropane	DFBZ	Ave	3294 166795	6633 335945	13116 637774	25436 1201630	62400 2196910	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Heptane	DFBZ	Ave	++++ 169496	6584 341354	12852 652666	24522 1232469	63962 2239236	++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Trichloroethene	DFBZ	Ave	4489 216055	8207 481860	16817 990611	32437 1689959	80726 3246702	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Dibromomethane	DFBZ	Ave	++++ 192925	++++ 403081	15715 771427	30017 1514919	72482 2859943	++++ 1.00	++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Bromodichloromethane	DFBZ	Ave	6323 359583	12118 757973	24293 1483398	50003 2919706	128060 5610234	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,4-Dioxane	DFBZ	Ave	++++ 75444	2408 151582	5216 290497	10547 547334	26213 995848	++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Methyl methacrylate	DFBZ	Ave	++++ 153737	++++ 339847	++++ 676432	18423 1346179	51419 2607373	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	++++ 271515	++++ 575108	19192 1126777	35511 2198186	95687 4112261	++++ 1.00	++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
cis-1,3-Dichloropropene	DFBZ	Ave	5048 280020	9812 590578	18927 1141143	39090 2237825	100184 4235998	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
trans-1,3-Dichloropropene	CBZd 5	Ave	5113 264281	9248 552390	18004 1089547	37170 2203158	93053 4251750	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Toluene	CBZd 5	Ave	12831 594266	23313 1214847	44415 2321715	88464 4431626	222095 8226314	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,1,2-Trichloroethane	CBZd 5	Ave	3291 165862	6507 338126	12134 646119	24240 1239731	62032 2316335	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1 Analy Batch No.: 17762

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
2-Hexanone	CBZd 5	Ave	++++ 149844	++++ 322256	8080 664344	15426 1277875	49161 2400790	++++ 1.00	++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Dibromochloromethane	CBZd 5	Ave	5481 326299	9403 710033	20613 1429129	40122 2886064	107735 5563126	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Octane	CBZd 5	Ave	3715 197364	7181 401741	14847 761888	28115 1455739	73235 2665696	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2-Dibromoethane	CBZd 5	Ave	5780 299269	9915 623528	20544 1225652	42246 2401387	107221 4533785	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Tetrachloroethene	CBZd 5	Ave	4512 221546	8773 451735	16736 873561	32954 1680400	82386 3162320	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Chlorobenzene	CBZd 5	Ave	10116 462209	18500 943722	35874 1821596	69433 3488920	174562 6524458	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Ethylbenzene	CBZd 5	Ave	16601 784804	30045 1604021	60028 3061101	115987 5752584	293553 10356375	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
m-Xylene & p-Xylene	CBZd 5	Ave	25259 1258868	46840 2526057	95548 4717005	183320 8622122	464738 14832360	0.0392 2.00	0.0784 3.99	0.157 8.00	0.320 16.0	0.800 32.0
Bromoform	CBZd 5	Ave	4569 280201	7987 617419	15850 1265260	31906 2664358	87253 5289308	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Styrene	CBZd 5	Ave	++++ 404492	++++ 877726	23411 1722436	46940 3357063	131824 6305273	++++ 1.00	++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Nonane	CBZd 5	Ave	6234 354142	12938 698726	25340 1266112	49466 2276291	130349 3925374	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
o-Xylene	CBZd 5	Ave	13809 651529	25131 1293453	50674 2421285	97828 4507688	244961 8018750	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	7575 419698	13804 774984	28370 1361818	58220 2991028	152141 5403129	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichloropropane	CBZd 5	Ave	2822 140977	5319 283509	10568 537694	20539 1028585	52066 1952171	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Isopropylbenzene	CBZd 5	Ave	++++ 884009	35946 1751008	69379 3271189	131986 6052009	333169 10798333	++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Propylbenzene	CBZd 5	Ave	4395 251895	8404 510087	17429 953864	33714 1764153	89517 3199258	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
2-Chlorotoluene	CBZd 5	Ave	4309 226074	8403 444172	16753 837183	32718 1556290	83842 2818704	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
4-Ethyltoluene	CBZd 5	Ave	16730 974862	32398 1942649	65633 3621190	130522 6577901	343391 11626420	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,3,5-Trimethylbenzene	CBZd 5	Ave	6890 386617	13130 775132	26109 1454797	52246 2700808	135393 4953675	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Alpha Methyl Styrene	CBZd 5	Ave	++++ 312791	++++ 715672	++++ 1426907	32438 2696582	95659 4958200	++++ 1.00	++++ 2.00	++++ 4.00	0.160 8.00	0.400 16.0
Decane	CBZd 5	Ave	7786 504552	15452 1016420	32834 1860379	65857 3283161	175546 5508017	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1 Analy Batch No.: 17762

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5 LVL 10
tert-Butylbenzene	CBZd 5	Ave	16756 894018	31873 1772333	64192 3259179	127195 5901403	320875 10252438	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2,4-Trimethylbenzene	CBZd 5	Ave	14068 838081	27236 1649904	57678 2988133	113107 5281375	296062 9006683	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,3-Dichlorobenzene	CBZd 5	Ave	9387 516305	17259 1044130	36114 1945670	70364 3580637	183533 6390995	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
sec-Butylbenzene	CBZd 5	Ave	21397 1180727	40006 2346383	81660 4304932	162720 7478024	422045 12393102	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Benzyl chloride	CBZd 5	Ave	9181 644403	17686 1420806	35545 2678333	70710 4696324	210797 7883232	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,4-Dichlorobenzene	CBZd 5	Ave	9393 518691	17625 1046250	35715 1937249	70131 3530827	181180 6311344	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
4-Isopropyltoluene	CBZd 5	Ave	17294 1047342	32338 2122805	72796 3937880	137773 7094422	359958 11859110	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2,3-Trimethylbenzene	CBZd 5	Ave	15864 941539	32040 1870714	64016 3399572	124983 6090386	332416 10662003	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2-Dichlorobenzene	CBZd 5	Ave	8947 504861	16621 1016927	35357 1905685	67149 3481297	178966 6299641	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Butylbenzene	CBZd 5	Ave	14299 967842	27670 1985514	59321 3720801	118568 6600625	322145 10895604	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Undecane	CBZd 5	Ave	7896 562815	15070 1166396	32417 2179717	67912 3897040	181085 6317836	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	++++ 313235	++++ 698408	15056 1308310	31369 2624159	90207 4681454	++++ 1.00	++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	++++ 482300	++++ 1035933	29468 2053724	58187 3986557	152347 7226247	++++ 1.00	++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Dodecane	CBZd 5	Ave	++++ 520941	++++ 1185570	23965 2170914	51872 3963852	137913 5984092	++++ 1.00	++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2,4-Trichlorobenzene	CBZd 5	Ave	++++ 375125	8463 867227	19766 1765909	38197 3591958	103182 6399037	++++ 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Naphthalene	CBZd 5	Ave	10453 876926	18850 2004705	46167 4017474	94589 7879181	262605 13166564	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
Hexachlorobutadiene	CBZd 5	Ave	7050 406766	12634 875521	26912 1713702	50435 3312283	125133 5838950	0.0196 1.00	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
1,2,3-Trichlorobenzene	CBZd 5	Ave	++++ 354574	++++ 835689	20286 1650977	40272 3409456	101572 6110654	++++ 1.00	++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0
2-Methylnaphthalene	CBZd 5	Ave	++++ 300143	++++ 1121735	++++ 2230513	++++ 4666996	63395 6724954	++++ 2.30	++++ 4.59	++++ 9.20	++++ 18.4	0.920 36.8
1-Methylnaphthalene	CBZd 5	Ave	++++ 327721	++++ 1213833	++++ 2273024	44657 4705374	79264 6700143	++++ 2.30	++++ 4.59	++++ 9.20	0.368 18.4	0.920 36.8
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1562115 1634670	1618846 1611533	1644837 1560168	1641285 1531137	1633174 1466410	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1 Analy Batch No.: 17762
SDG No.: _____
Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N
Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

Curve Type Legend:

Ave = Average ISTD

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1 Analy Batch No.: 17762

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-17762/3	RA30IC01.D
Level 2	IC 140-17762/4	RA30IC02.D
Level 3	IC 140-17762/5	RA30IC03.D
Level 4	IC 140-17762/6	RA30IC04.D
Level 5	IC 140-17762/7	RA30IC05.D
Level 6	IC 140-17762/8	RA30IC06.D
Level 7	ICIS 140-17762/9	RA30IC07.D
Level 8	IC 140-17762/10	RA30IC08.D
Level 9	IC 140-17762/11	RA30IC09.D
Level 10	IC 140-17762/12	RA30IC10.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 # LVL 9 #	LVL 4 # LVL 10 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3 LVL 9	LVL 4 LVL 10	LVL 5	LVL 6
Chlorodifluoromethane	+++++	+++++	9.9						50			
Propene	+++++	+++++	+++++	12.5						50		
Dichlorodifluoromethane	+++++	+++++	5.0						50			
Chloromethane	+++++	+++++	+++++	27.2						50		
1,2-Dichlorotetrafluoroethane	17.4						50					
Vinyl chloride	18.9						50					
1,3-Butadiene	+++++	+++++	12.2						50			
Butane	+++++	+++++	4.6						50			
Bromomethane	+++++	+++++	12.9						50			
Chloroethane	+++++	+++++	13.6						50			
Ethanol	+++++	+++++	+++++	6.9						50		
Vinyl bromide	+++++	+++++	7.5						50			
2-Methylbutane	+++++	7.0						50				
Acrolein	+++++	+++++	+++++	11.5						50		

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1 Analy Batch No.: 17762

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Trichlorofluoromethane	7.0						50					
Acetonitrile	+++++	+++++	+++++	+++++	10.8						50	
Acetone	+++++	+++++	+++++	+++++	37.3						80	
Isopropyl alcohol	+++++	+++++	+++++	9.5						50		
Pentane	+++++	16.6						50				
Ethyl ether	+++++	+++++	13.5						50			
1,1-Dichloroethene	20.4						50					
Acrylonitrile	+++++	9.7						50				
t-Butyl alcohol	+++++	+++++	9.3						50			
1,1,2-Trichlorotrifluoroethane	13.7						50					
Methylene Chloride	+++++	+++++	+++++	53.2						80		
3-Chloropropene	+++++	16.3						50				
Carbon disulfide	+++++	8.4						50				
trans-1,2-Dichloroethene	+++++	7.6						50				
Methyl tert-butyl ether	+++++	5.1						50				
1,1-Dichloroethane	11.2						50					
Vinyl acetate	+++++	+++++	-12.6						50			
2-Butanone	+++++	+++++	+++++	-2.2						50		
Hexane	+++++	17.5						50				
cis-1,2-Dichloroethene	15.8						50					
Ethyl acetate	+++++	+++++	-14.0						50			

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1 Analy Batch No.: 17762

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
Chloroform	15.8						50					
Tetrahydrofuran	+++++	+++++	5.7						50			
1,1,1-Trichloroethane	7.2						50					
1,2-Dichloroethane	8.7						50					
Benzene	14.4						50					
1-Butanol	+++++	+++++	+++++	+++++	-21.1						50	
Cyclohexane	+++++	6.1						50				
Carbon tetrachloride	3.5						50					
2,2,4-Trimethylpentane	+++++	+++++	6.1						50			
1,2-Dichloropropane	8.8						50					
Heptane	+++++	5.9						50				
Trichloroethene	9.2						50					
Dibromomethane	+++++	+++++	6.0						50			
Bromodichloromethane	-1.5						50					
1,4-Dioxane	+++++	-8.9						50				
Methyl methacrylate	+++++	+++++	+++++	-23.4						50		
4-Methyl-2-pentanone (MIBK)	+++++	+++++	-4.9						50			
cis-1,3-Dichloropropene	0.9						50					
trans-1,3-Dichloropropene	5.4						50					
Toluene	16.4						50					
1,1,2-Trichloroethane	8.4						50					

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1 Analy Batch No.: 17762

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
2-Hexanone	+++++	+++++	-24.7						50			
Dibromochloromethane	-5.6						50					
Octane	4.8						50					
1,2-Dibromoethane	6.6						50					
Tetrachloroethene	9.8						50					
Chlorobenzene	16.5						50					
Ethylbenzene	15.1						50					
m-Xylene & p-Xylene	12.9						50					
Bromoform	-8.5						50					
Styrene	+++++	+++++	-19.7						50			
Nonane	3.4						50					
o-Xylene	16.9						50					
1,1,2,2-Tetrachloroethane	7.2						50					
1,2,3-Trichloropropane	10.3						50					
Isopropylbenzene	+++++	11.6						50				
Propylbenzene	1.9						50					
2-Chlorotoluene	8.0						50					
4-Ethyltoluene	2.0						50					
1,3,5-Trimethylbenzene	4.1						50					
Alpha Methyl Styrene	+++++	+++++	+++++	-32.4						50		
Decane	-5.0						50					

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1 Analy Batch No.: 17762

SDG No.: _____

Instrument ID: MR GC Column: RTX-5 ID: 0.32 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 01/30/2018 12:29 Calibration End Date: 01/30/2018 19:38 Calibration ID: 1371

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
	LVL 7 #	LVL 8 #	LVL 9 #	LVL 10 #			LVL 7	LVL 8	LVL 9	LVL 10		
tert-Butylbenzene	8.9						50					
1,2,4-Trimethylbenzene	1.9						50					
1,3-Dichlorobenzene	5.8						50					
sec-Butylbenzene	8.1						50					
Benzyl chloride	-11.5						50					
1,4-Dichlorobenzene	6.1						50					
4-Isopropyltoluene	-0.6						50					
1,2,3-Trimethylbenzene	1.2						50					
1,2-Dichlorobenzene	3.8						50					
Butylbenzene	-7.8						50					
Undecane	-11.0						50					
1,2-Dibromo-3-Chloropropane	+++++	+++++	-30.0						50			
1,2,4,5-Tetramethylbenzene	+++++	+++++	-15.1						50			
Dodecane	+++++	+++++	-29.3						50			
1,2,4-Trichlorobenzene	+++++	-35.7						50				
Naphthalene	-27.1						80					
Hexachlorobutadiene	-0.2						50					
1,2,3-Trichlorobenzene	+++++	+++++	-24.0						50			
2-Methylnaphthalene	+++++	+++++	+++++	+++++	-62.0						80	
1-Methylnaphthalene	+++++	+++++	+++++	-34.0						80		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC01.D
 Lims ID: IC L1
 Client ID:
 Sample Type: IC Calib Level: 1
 Inject. Date: 30-Jan-2018 12:29:30 ALS Bottle#: 9 Worklist Smp#: 3
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0007236-003
 Misc. Info.: 134528
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub13
 Method: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 05-Feb-2018 13:02:45 Calib Date: 30-Jan-2018 19:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK015

First Level Reviewer: tajh

Date: 30-Jan-2018 13:35:00

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.692	7.710	-0.018	86	376476	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.844	9.852	-0.008	95	2324388	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.858	14.859	-0.001	89	2041864	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.568	16.570	-0.002	86	1562115	4.00	4.04	
6 Chlorodifluoromethane	67	3.475	3.471	0.004	97	1114	0.0196	0.0243	
7 Propene	41	3.481	3.477	0.004	85	2863	0.0196	0.0318	
8 Dichlorodifluoromethane	85	3.518	3.519	-0.001	100	9712	0.0196	0.0275	
9 Chloromethane	52	3.648	3.653	-0.005	98	1546	0.0196	0.0480	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.669	3.675	-0.006	90	5510	0.0196	0.0230	
12 Vinyl chloride	62	3.793	3.789	0.004	41	2301	0.0196	0.0233	
14 Butadiene	54	3.863	3.863	0.000	68	1660	0.0196	0.0261	
15 Bromomethane	94	4.095	4.098	-0.003	95	2402	0.0196	0.0263	
16 Chloroethane	64	4.203	4.208	-0.005	76	1269	0.0196	0.0284	
17 Ethanol	31	4.306	4.313	-0.007	90	4299	0.0980	0.1523	
18 Vinyl bromide	106	4.440	4.441	-0.001	97	2560	0.0196	0.0286	
19 2-Methylbutane	43	4.494	4.498	-0.004	85	1726	0.0196	0.0232	
20 Acrolein	56	4.651	4.656	-0.005	32	2244	0.0196	0.1079	
21 Trichlorofluoromethane	101	4.651	4.659	-0.008	98	7040	0.0196	0.0210	
22 Acetonitrile	40	4.829	4.719	0.110	49	52	0.0196	0.002032	
23 Acetone	58	4.748	4.748	0.000	99	8407	0.0588	0.2136	
24 Isopropyl alcohol	45	4.839	4.843	-0.004	84	11498	0.0588	0.0760	
25 Pentane	72	4.845	4.847	-0.002	79	779	0.0196	0.0297	
26 Ethyl ether	31	4.985	4.975	0.010	84	2420	0.0196	0.0255	
27 1,1-Dichloroethene	96	5.211	5.218	-0.007	95	3363	0.0196	0.0236	
28 Acrylonitrile	53	5.282	5.288	-0.006	88	3069	0.0196	0.0341	
29 2-Methyl-2-propanol	59	5.330	5.325	0.005	94	6634	0.0196	0.0234	
30 1,1,2-Trichloro-1,2,2-trif	101	5.379	5.390	-0.011	94	6795	0.0196	0.0223	
31 Methylene Chloride	84	5.481	5.492	-0.011	90	18478	0.0196	0.1255	
32 3-Chloro-1-propene	39	5.503	5.514	-0.011	93	3037	0.0196	0.0257	
33 Carbon disulfide	76	5.616	5.625	-0.009	99	9012	0.0196	0.0229	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
34 trans-1,2-Dichloroethene	96	6.177	6.192	-0.015	97	3586	0.0196	0.0248	
36 Methyl tert-butyl ether	73	6.333	6.323	0.010	94	10267	0.0196	0.0230	
37 1,1-Dichloroethane	63	6.527	6.545	-0.018	99	6005	0.0196	0.0218	
38 Vinyl acetate	43	6.667	6.662	0.005	100	4484	0.0196	0.0168	
39 2-Butanone (MEK)	72	7.056	7.036	0.020	87	850	0.0196	0.0124	
40 Hexane	56	7.110	7.119	-0.009	83	2733	0.0196	0.0248	
41 cis-1,2-Dichloroethene	96	7.412	7.426	-0.014	94	3518	0.0196	0.0227	
42 Ethyl acetate	43	7.643	7.622	0.021	98	3285	0.0196	0.0137	
43 Chloroform	83	7.719	7.743	-0.024	89	7907	0.0196	0.0227	
44 Tetrahydrofuran	42	8.134	8.108	0.026	87	3253	0.0196	0.0267	
45 1,1,1-Trichloroethane	97	8.695	8.701	-0.006	94	7693	0.0196	0.0210	
46 1,2-Dichloroethane	62	8.754	8.771	-0.017	95	5237	0.0196	0.0213	
47 Benzene	78	9.267	9.274	-0.007	98	9957	0.0196	0.0224	
49 Cyclohexane	69	9.283	9.298	-0.015	94	1690	0.0196	0.0237	
50 Carbon tetrachloride	117	9.304	9.312	-0.008	96	7263	0.0196	0.0203	
53 Isooctane	57	10.140	10.145	-0.005	97	16099	0.0196	0.0250	
54 1,2-Dichloropropane	63	10.539	10.540	-0.001	75	3294	0.0196	0.0213	
55 n-Heptane	71	10.555	10.561	-0.006	78	3571	0.0196	0.0232	
56 Trichloroethene	130	10.593	10.605	-0.012	91	4489	0.0196	0.0214	
57 Dibromomethane	93	10.642	10.648	-0.006	92	5327	0.0196	0.0292	
58 Dichlorobromomethane	83	10.814	10.825	-0.011	96	6323	0.0196	0.0193	
59 1,4-Dioxane	88	10.868	10.851	0.017	37	938	0.0196	0.0143	
60 Methyl methacrylate	41	11.014	10.990	0.024	92	568	0.0196	0.003895	
62 4-Methyl-2-pentanone (MIBK)	43	11.903	11.878	0.025	58	3279	0.0196	0.0132	
63 cis-1,3-Dichloropropene	75	11.914	11.915	-0.001	95	5048	0.0196	0.0198	
64 trans-1,3-Dichloropropene	75	12.658	12.660	-0.002	95	5113	0.0196	0.0207	
65 Toluene	91	12.793	12.795	-0.002	94	12831	0.0196	0.0228	
66 1,1,2-Trichloroethane	83	12.847	12.853	-0.006	90	3291	0.0196	0.0212	
69 2-Hexanone	58	13.349	13.313	0.036	1	171	0.0196	0.001275	
70 Chlorodibromomethane	129	13.575	13.580	-0.005	97	5481	0.0196	0.0185	
71 n-Octane	85	13.618	13.618	0.000	84	3715	0.0196	0.0205	
72 Ethylene Dibromide	107	13.872	13.876	-0.004	95	5780	0.0196	0.0209	
73 Tetrachloroethene	129	14.001	14.005	-0.004	94	4512	0.0196	0.0215	
74 Chlorobenzene	112	14.907	14.910	-0.003	91	10116	0.0196	0.0228	
76 Ethylbenzene	91	15.236	15.237	-0.001	98	16601	0.0196	0.0226	
77 m-Xylene & p-Xylene	91	15.408	15.413	-0.005	99	25259	0.0392	0.0443	
79 Bromoform	173	15.807	15.812	-0.005	92	4569	0.0196	0.0179	
80 Styrene	104	15.883	15.884	-0.001	96	6414	0.0196	0.0176	
81 n-Nonane	57	15.926	15.926	0.000	80	6234	0.0196	0.0203	
82 o-Xylene	91	15.948	15.948	0.000	98	13809	0.0196	0.0229	
83 1,1,2,2-Tetrachloroethane	83	16.271	16.269	0.002	96	7575	0.0196	0.0210	
84 1,2,3-Trichloropropane	110	16.422	16.424	-0.002	97	2822	0.0196	0.0216	
85 Isopropylbenzene	105	16.562	16.566	-0.004	46	19387	0.0196	0.0241	
86 N-Propylbenzene	120	17.139	17.144	-0.005	97	4395	0.0196	0.0200	
87 2-Chlorotoluene	126	17.166	17.164	0.002	94	4309	0.0196	0.0212	
88 4-Ethyltoluene	105	17.312	17.312	0.000	99	16730	0.0196	0.0200	
89 1,3,5-Trimethylbenzene	120	17.404	17.400	0.004	92	6890	0.0196	0.0204	
90 Alpha Methyl Styrene	118	17.657	17.652	0.005	84	3968	0.0196	0.0136	
91 n-Decane	57	17.797	17.793	0.004	94	7786	0.0196	0.0186	
92 tert-Butylbenzene	119	17.867	17.868	-0.001	90	16756	0.0196	0.0213	
93 1,2,4-Trimethylbenzene	105	17.884	17.884	0.000	95	14068	0.0196	0.0200	
94 1,3-Dichlorobenzene	146	18.153	18.153	0.000	97	9387	0.0196	0.0207	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
95 sec-Butylbenzene	105	18.169	18.170	-0.001	98	21397	0.0196	0.0212	
96 Benzyl chloride	91	18.239	18.237	0.002	97	9181	0.0196	0.0173	
97 1,4-Dichlorobenzene	146	18.250	18.251	-0.001	91	9393	0.0196	0.0208	
98 4-Isopropyltoluene	119	18.358	18.358	0.000	96	17294	0.0196	0.0195	
99 1,2,3-Trimethylbenzene	105	18.390	18.393	-0.003	98	15864	0.0196	0.0198	
101 1,2-Dichlorobenzene	146	18.638	18.638	0.000	91	8947	0.0196	0.0203	
104 n-Butylbenzene	91	18.833	18.832	0.001	98	14299	0.0196	0.0181	
105 Undecane	57	19.232	19.228	0.004	92	7896	0.0196	0.0175	
106 1,2-Dibromo-3-Chloropropan	157	19.286	19.284	0.002	86	3926	0.0196	0.0146	
108 1,2,4,5-Tetramethylbenzene	119	19.641	19.641	0.000	96	7868	0.0196	0.0181	
111 Dodecane	57	20.337	20.340	-0.003	96	3630	0.0196	0.008570	
112 1,2,4-Trichlorobenzene	180	20.445	20.445	0.000	93	4733	0.0196	0.0144	
113 Naphthalene	128	20.574	20.574	0.000	98	10453	0.0196	0.0143	
115 Hexachlorobutadiene	225	20.822	20.827	-0.005	93	7050	0.0196	0.0196	
116 1,2,3-Trichlorobenzene	180	20.866	20.864	0.002	93	4640	0.0196	0.0139	
S 119 Xylenes, Total	100				0		0.0588	0.0672	
S 120 1,2-Dichloroethene, Total	1				0		0.0392	0.0475	

Reagents:

40L1-3DNP_00001

Amount Added: 50.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC01.D

Injection Date: 30-Jan-2018 12:29:30

Instrument ID: MR

Operator ID:

Lims ID: IC L1

Worklist Smp#: 3

Client ID:

Purge Vol: 500.000 mL

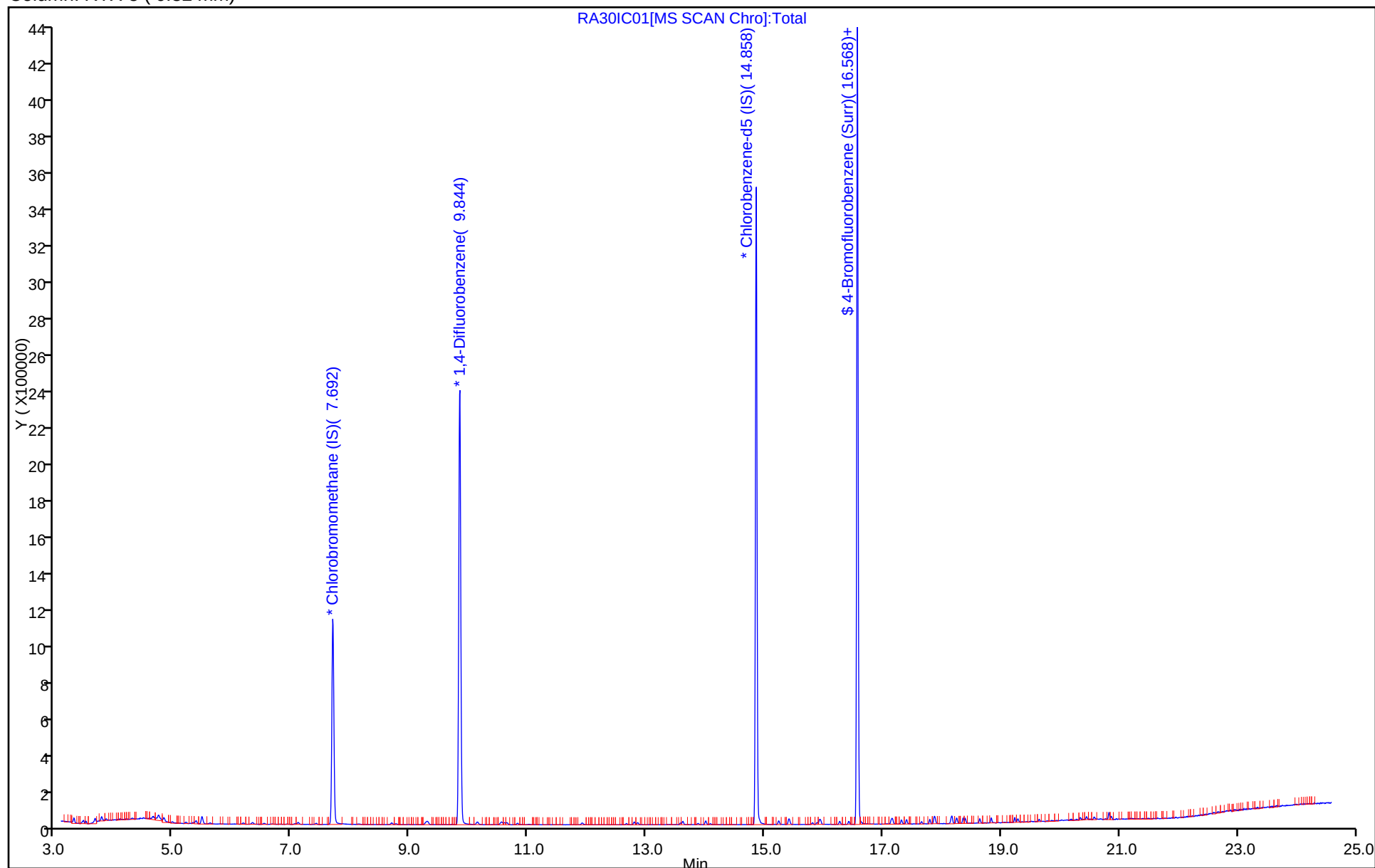
Dil. Factor: 1.0000

ALS Bottle#: 9

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC02.D
 Lims ID: IC L2
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 30-Jan-2018 13:16:30 ALS Bottle#: 9 Worklist Smp#: 4
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0007236-004
 Misc. Info.: 134528
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub13
 Method: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 05-Feb-2018 13:02:50 Calib Date: 30-Jan-2018 19:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa

Date: 30-Jan-2018 13:52:41

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.703	7.710	-0.007	86	383916	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.849	9.852	-0.003	95	2394140	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.858	14.859	-0.001	89	2080924	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.568	16.570	-0.002	86	1618846	4.00	4.10	
6 Chlorodifluoromethane	67	3.486	3.471	0.015	96	2123	0.0392	0.0453	
7 Propene	41	3.486	3.477	0.009	90	5102	0.0392	0.0556	
8 Dichlorodifluoromethane	85	3.529	3.519	0.010	100	17336	0.0392	0.0481	
9 Chloromethane	52	3.664	3.653	0.011	99	2252	0.0392	0.0686	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.685	3.675	0.010	93	10542	0.0392	0.0432	
12 Vinyl chloride	62	3.799	3.789	0.010	96	4884	0.0392	0.0485	
13 Butane	43	3.869	3.863	0.006	81	5263	0.0392	0.0488	
14 Butadiene	54	3.874	3.863	0.011	68	2949	0.0392	0.0454	
15 Bromomethane	94	4.106	4.098	0.008	95	4220	0.0392	0.0453	
16 Chloroethane	64	4.208	4.208	0.000	96	2193	0.0392	0.0481	
17 Ethanol	31	4.305	4.313	-0.008	90	7445	0.1960	0.2587	
18 Vinyl bromide	106	4.440	4.441	-0.001	97	4302	0.0392	0.0471	
19 2-Methylbutane	43	4.505	4.498	0.007	78	3188	0.0392	0.0419	
20 Acrolein	56	4.667	4.656	0.011	30	3603	0.0392	0.1700	
21 Trichlorofluoromethane	101	4.667	4.659	0.008	99	14659	0.0392	0.0428	
22 Acetonitrile	40	4.694	4.716	-0.022	84	1047	0.0392	0.0401	
23 Acetone	58	4.753	4.748	0.005	99	16017	0.1176	0.3990	
24 Isopropyl alcohol	45	4.845	4.843	0.002	80	23064	0.1176	0.1495	
25 Pentane	72	4.850	4.847	0.003	75	1224	0.0392	0.0457	
26 Ethyl ether	31	4.985	4.975	0.010	81	4487	0.0392	0.0463	
27 1,1-Dichloroethene	96	5.217	5.218	-0.001	94	6378	0.0392	0.0439	
28 Acrylonitrile	53	5.287	5.288	-0.001	91	3947	0.0392	0.0430	
29 2-Methyl-2-propanol	59	5.330	5.325	0.005	93	13003	0.0392	0.0449	
30 1,1,2-Trichloro-1,2,2-trif	101	5.389	5.390	-0.001	95	12506	0.0392	0.0402	
31 Methylene Chloride	84	5.492	5.492	0.000	92	21070	0.0392	0.1403	
32 3-Chloro-1-propene	39	5.513	5.514	-0.001	97	5502	0.0392	0.0456	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.627	5.625	0.002	98	17092	0.0392	0.0425	
34 trans-1,2-Dichloroethene	96	6.187	6.192	-0.005	96	6219	0.0392	0.0422	
36 Methyl tert-butyl ether	73	6.338	6.323	0.015	95	18729	0.0392	0.0412	
37 1,1-Dichloroethane	63	6.538	6.545	-0.007	99	12191	0.0392	0.0434	
38 Vinyl acetate	43	6.667	6.662	0.005	99	8219	0.0392	0.0303	
39 2-Butanone (MEK)	72	7.050	7.036	0.014	97	3926	0.0392	0.0564	
40 Hexane	56	7.120	7.119	0.001	83	5186	0.0392	0.0461	
41 cis-1,2-Dichloroethene	96	7.422	7.426	-0.004	94	6831	0.0392	0.0432	
42 Ethyl acetate	43	7.638	7.622	0.016	97	8705	0.0392	0.0357	
43 Chloroform	83	7.740	7.743	-0.003	92	14558	0.0392	0.0410	
44 Tetrahydrofuran	42	8.129	8.108	0.021	87	6016	0.0392	0.0484	
45 1,1,1-Trichloroethane	97	8.695	8.701	-0.006	95	15107	0.0392	0.0405	
46 1,2-Dichloroethane	62	8.765	8.771	-0.006	97	9999	0.0392	0.0395	
47 Benzene	78	9.266	9.274	-0.008	96	19199	0.0392	0.0420	
49 Cyclohexane	69	9.299	9.298	0.001	93	3056	0.0392	0.0416	
50 Carbon tetrachloride	117	9.310	9.312	-0.002	92	13765	0.0392	0.0373	
53 Isooctane	57	10.145	10.145	0.000	97	29173	0.0392	0.0440	
54 1,2-Dichloropropane	63	10.539	10.540	-0.001	88	6633	0.0392	0.0417	
55 n-Heptane	71	10.561	10.561	0.000	83	6584	0.0392	0.0415	
56 Trichloroethene	130	10.604	10.605	-0.001	93	8207	0.0392	0.0380	
57 Dibromomethane	93	10.641	10.648	-0.007	93	8735	0.0392	0.0464	
58 Dichlorobromomethane	83	10.819	10.825	-0.006	98	12118	0.0392	0.0359	
59 1,4-Dioxane	88	10.868	10.851	0.017	71	2408	0.0392	0.0357	
60 Methyl methacrylate	41	10.997	10.990	0.007	93	3421	0.0392	0.0228	
62 4-Methyl-2-pentanone (MIBK)	43	11.898	11.878	0.020	96	8155	0.0392	0.0318	
63 cis-1,3-Dichloropropene	75	11.914	11.915	-0.001	96	9812	0.0392	0.0373	
64 trans-1,3-Dichloropropene	75	12.658	12.660	-0.002	94	9248	0.0392	0.0367	
65 Toluene	91	12.798	12.795	0.003	95	23313	0.0392	0.0407	
66 1,1,2-Trichloroethane	83	12.852	12.853	-0.001	98	6507	0.0392	0.0412	
69 2-Hexanone	58	13.338	13.313	0.025	95	2418	0.0392	0.0177	
70 Chlorodibromomethane	129	13.575	13.580	-0.005	97	9403	0.0392	0.0311	
71 n-Octane	85	13.618	13.618	0.000	83	7181	0.0392	0.0389	
72 Ethylene Dibromide	107	13.877	13.876	0.001	99	9915	0.0392	0.0352	
73 Tetrachloroethene	129	14.006	14.005	0.001	94	8773	0.0392	0.0411	
74 Chlorobenzene	112	14.907	14.910	-0.003	94	18500	0.0392	0.0410	
76 Ethylbenzene	91	15.241	15.237	0.004	99	30045	0.0392	0.0401	
77 m-Xylene & p-Xylene	91	15.414	15.413	0.001	99	46840	0.0784	0.0805	
79 Bromoform	173	15.813	15.812	0.001	94	7987	0.0392	0.0307	
80 Styrene	104	15.883	15.884	-0.001	97	11145	0.0392	0.0300	
81 n-Nonane	57	15.926	15.926	0.000	84	12938	0.0392	0.0413	
82 o-Xylene	91	15.948	15.948	0.000	98	25131	0.0392	0.0409	
83 1,1,2,2-Tetrachloroethane	83	16.271	16.269	0.002	96	13804	0.0392	0.0376	
84 1,2,3-Trichloropropane	110	16.427	16.424	0.003	97	5319	0.0392	0.0400	
85 Isopropylbenzene	105	16.568	16.566	0.002	61	35946	0.0392	0.0438	
86 N-Propylbenzene	120	17.145	17.144	0.001	97	8404	0.0392	0.0375	
87 2-Chlorotoluene	126	17.166	17.164	0.002	95	8403	0.0392	0.0405	
88 4-Ethyltoluene	105	17.312	17.312	0.000	99	32398	0.0392	0.0380	
89 1,3,5-Trimethylbenzene	120	17.398	17.400	-0.002	92	13130	0.0392	0.0381	
90 Alpha Methyl Styrene	118	17.652	17.652	0.000	80	7239	0.0392	0.0243	
91 n-Decane	57	17.792	17.793	-0.001	93	15452	0.0392	0.0363	
92 tert-Butylbenzene	119	17.873	17.868	0.005	90	31873	0.0392	0.0398	
93 1,2,4-Trimethylbenzene	105	17.883	17.884	-0.001	96	27236	0.0392	0.0380	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
94 1,3-Dichlorobenzene	146	18.153	18.153	0.000	96	17259	0.0392	0.0374	
95 sec-Butylbenzene	105	18.169	18.170	-0.001	99	40006	0.0392	0.0389	
96 Benzyl chloride	91	18.239	18.237	0.002	98	17686	0.0392	0.0328	
97 1,4-Dichlorobenzene	146	18.250	18.251	-0.001	91	17625	0.0392	0.0383	
98 4-Isopropyltoluene	119	18.358	18.358	0.000	96	32338	0.0392	0.0357	
99 1,2,3-Trimethylbenzene	105	18.396	18.393	0.003	98	32040	0.0392	0.0393	
101 1,2-Dichlorobenzene	146	18.638	18.638	0.000	90	16621	0.0392	0.0371	
104 n-Butylbenzene	91	18.832	18.832	0.000	97	27670	0.0392	0.0343	
105 Undecane	57	19.232	19.228	0.004	93	15070	0.0392	0.0327	
106 1,2-Dibromo-3-Chloropropan	157	19.285	19.284	0.001	88	7054	0.0392	0.0257	
108 1,2,4,5-Tetramethylbenzene	119	19.641	19.641	0.000	95	14005	0.0392	0.0317	
111 Dodecane	57	20.342	20.340	0.002	97	8120	0.0392	0.0188	
112 1,2,4-Trichlorobenzene	180	20.445	20.445	0.000	91	8463	0.0392	0.0252	
113 Naphthalene	128	20.574	20.574	0.000	98	18850	0.0392	0.0253	
115 Hexachlorobutadiene	225	20.828	20.827	0.001	93	12634	0.0392	0.0344	
116 1,2,3-Trichlorobenzene	180	20.865	20.864	0.001	92	8967	0.0392	0.0264	
S 119 Xylenes, Total	100				0		0.1176	0.1215	
S 120 1,2-Dichloroethene, Total	1				0		0.0784	0.0854	

Reagents:

40L1-3DNP_00001

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC02.D

Injection Date: 30-Jan-2018 13:16:30

Instrument ID: MR

Operator ID:

Lims ID: IC L2

Worklist Smp#: 4

Client ID:

Purge Vol: 500.000 mL

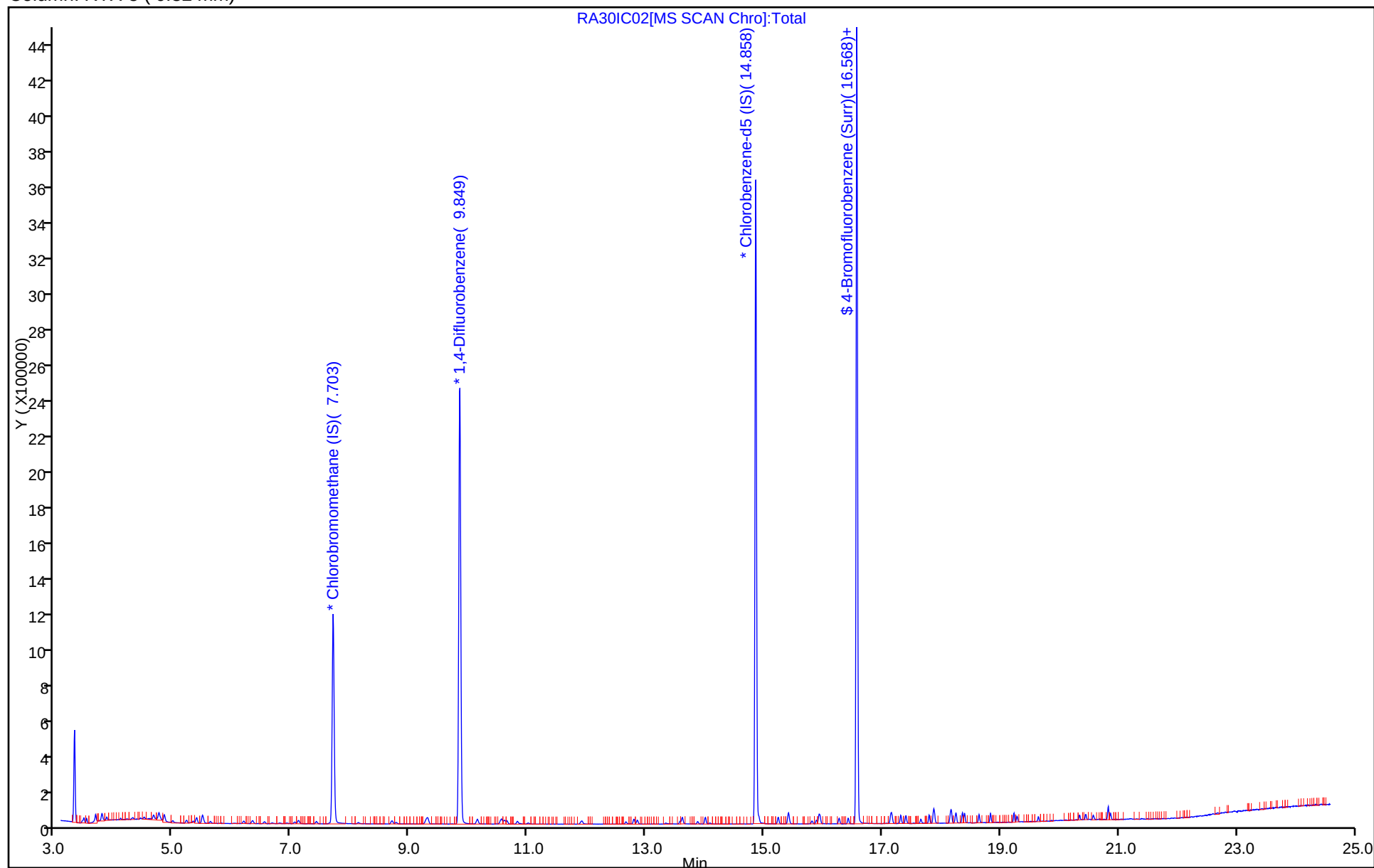
Dil. Factor: 1.0000

ALS Bottle#: 9

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC03.D
 Lims ID: IC L3
 Client ID:
 Sample Type: IC Calib Level: 3
 Inject. Date: 30-Jan-2018 14:04:30 ALS Bottle#: 9 Worklist Smp#: 5
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0007236-005
 Misc. Info.: 134528
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub13
 Method: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 05-Feb-2018 13:02:54 Calib Date: 30-Jan-2018 19:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK015

First Level Reviewer: tajh

Date: 30-Jan-2018 15:38:38

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.697	7.710	-0.013	85	391790	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.844	9.852	-0.008	95	2404366	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.858	14.859	-0.001	89	2084615	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.568	16.570	-0.002	86	1644837	4.00	4.16	
6 Chlorodifluoromethane	67	3.470	3.471	-0.001	95	4119	0.0784	0.0862	
7 Propene	41	3.470	3.477	-0.007	62	9912	0.0784	0.1059	
8 Dichlorodifluoromethane	85	3.513	3.519	-0.006	100	30290	0.0784	0.0823	
9 Chloromethane	52	3.642	3.653	-0.011	99	3537	0.0784	0.1056	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.669	3.675	-0.006	93	20579	0.0784	0.0826	
12 Vinyl chloride	62	3.783	3.789	-0.006	99	7942	0.0784	0.0773	
13 Butane	43	3.858	3.863	-0.005	78	9031	0.0784	0.0820	
14 Butadiene	54	3.853	3.863	-0.010	79	5828	0.0784	0.0880	
15 Bromomethane	94	4.090	4.098	-0.008	97	8417	0.0784	0.0885	
16 Chloroethane	64	4.198	4.208	-0.010	96	4147	0.0784	0.0891	
17 Ethanol	31	4.300	4.313	-0.013	90	14354	0.3920	0.4887	
18 Vinyl bromide	106	4.430	4.441	-0.011	98	7850	0.0784	0.0842	
19 2-Methylbutane	43	4.489	4.498	-0.009	81	6778	0.0784	0.0874	
20 Acrolein	56	4.645	4.656	-0.011	31	5394	0.0784	0.2493	
21 Trichlorofluoromethane	101	4.651	4.659	-0.008	98	28702	0.0784	0.0821	
22 Acetonitrile	40	4.688	4.713	-0.025	97	1986	0.0784	0.0746	
23 Acetone	58	4.742	4.748	-0.006	99	28281	0.2352	0.6904	
24 Isopropyl alcohol	45	4.834	4.843	-0.009	92	44345	0.2352	0.2816	
25 Pentane	72	4.834	4.847	-0.013	82	2351	0.0784	0.0861	
26 Ethyl ether	31	4.974	4.975	-0.001	84	8803	0.0784	0.0890	
27 1,1-Dichloroethene	96	5.206	5.218	-0.012	96	11837	0.0784	0.0798	
28 Acrylonitrile	53	5.276	5.288	-0.012	94	7448	0.0784	0.0795	
29 2-Methyl-2-propanol	59	5.325	5.325	0.000	93	25307	0.0784	0.0857	
30 1,1,2-Trichloro-1,2,2-trif	101	5.384	5.390	-0.006	95	25548	0.0784	0.0805	
31 Methylene Chloride	84	5.476	5.492	-0.016	93	26512	0.0784	0.1730	
32 3-Chloro-1-propene	39	5.503	5.514	-0.011	96	10380	0.0784	0.0843	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.611	5.625	-0.014	98	32885	0.0784	0.0801	
34 trans-1,2-Dichloroethene	96	6.182	6.192	-0.010	96	11930	0.0784	0.0793	
36 Methyl tert-butyl ether	73	6.322	6.323	-0.001	95	36615	0.0784	0.0789	
37 1,1-Dichloroethane	63	6.533	6.545	-0.012	99	23365	0.0784	0.0815	
38 Vinyl acetate	43	6.657	6.662	-0.005	99	18984	0.0784	0.0685	
39 2-Butanone (MEK)	72	7.034	7.036	-0.002	97	9098	0.0784	0.1280	
40 Hexane	56	7.110	7.119	-0.009	83	9498	0.0784	0.0827	
41 cis-1,2-Dichloroethene	96	7.417	7.426	-0.009	96	12779	0.0784	0.0792	
42 Ethyl acetate	43	7.627	7.622	0.005	99	16771	0.0784	0.0674	
43 Chloroform	83	7.730	7.743	-0.013	94	28954	0.0784	0.0799	
44 Tetrahydrofuran	42	8.118	8.108	0.010	86	10505	0.0784	0.0828	
45 1,1,1-Trichloroethane	97	8.690	8.701	-0.011	95	29288	0.0784	0.0769	
46 1,2-Dichloroethane	62	8.765	8.771	-0.006	99	20209	0.0784	0.0795	
47 Benzene	78	9.267	9.274	-0.007	98	37499	0.0784	0.0816	
48 n-Butanol	31	9.358	9.296	0.062	2	490	0.0784	0.0161	
49 Cyclohexane	69	9.288	9.298	-0.010	97	6414	0.0784	0.0870	
50 Carbon tetrachloride	117	9.299	9.312	-0.013	98	28139	0.0784	0.0760	
53 Isooctane	57	10.146	10.145	0.001	98	55433	0.0784	0.0832	
54 1,2-Dichloropropane	63	10.534	10.540	-0.006	87	13116	0.0784	0.0821	
55 n-Heptane	71	10.555	10.561	-0.006	83	12852	0.0784	0.0807	
56 Trichloroethene	130	10.598	10.605	-0.007	92	16817	0.0784	0.0775	
57 Dibromomethane	93	10.642	10.648	-0.006	96	15715	0.0784	0.0831	
58 Dichlorobromomethane	83	10.820	10.825	-0.005	99	24293	0.0784	0.0717	
59 1,4-Dioxane	88	10.868	10.851	0.017	68	5216	0.0784	0.0770	
60 Methyl methacrylate	41	10.998	10.990	0.008	95	9269	0.0784	0.0615	
62 4-Methyl-2-pentanone (MIBK)	43	11.882	11.878	0.004	92	19192	0.0784	0.0745	
63 cis-1,3-Dichloropropene	75	11.909	11.915	-0.006	96	18927	0.0784	0.0717	
64 trans-1,3-Dichloropropene	75	12.658	12.660	-0.002	96	18004	0.0784	0.0712	
65 Toluene	91	12.793	12.795	-0.002	92	44415	0.0784	0.0774	
66 1,1,2-Trichloroethane	83	12.853	12.853	-0.001	98	12134	0.0784	0.0767	
69 2-Hexanone	58	13.322	13.313	0.009	97	8080	0.0784	0.0590	
70 Chlorodibromomethane	129	13.580	13.580	0.000	97	20613	0.0784	0.0681	
71 n-Octane	85	13.618	13.618	0.000	83	14847	0.0784	0.0804	
72 Ethylene Dibromide	107	13.872	13.876	-0.004	96	20544	0.0784	0.0728	
73 Tetrachloroethene	129	14.001	14.005	-0.004	95	16736	0.0784	0.0782	
74 Chlorobenzene	112	14.907	14.910	-0.003	93	35874	0.0784	0.0793	
76 Ethylbenzene	91	15.236	15.237	-0.001	99	60028	0.0784	0.0799	
77 m-Xylene & p-Xylene	91	15.414	15.413	0.001	100	95548	0.1568	0.1640	
79 Bromoform	173	15.808	15.812	-0.004	93	15850	0.0784	0.0609	
80 Styrene	104	15.883	15.884	-0.001	99	23411	0.0784	0.0630	
81 n-Nonane	57	15.926	15.926	0.000	83	25340	0.0784	0.0807	
82 o-Xylene	91	15.948	15.948	0.000	97	50674	0.0784	0.0824	
83 1,1,2,2-Tetrachloroethane	83	16.266	16.269	-0.003	97	28370	0.0784	0.0771	
84 1,2,3-Trichloropropane	110	16.422	16.424	-0.002	98	10568	0.0784	0.0793	
85 Isopropylbenzene	105	16.562	16.566	-0.004	89	69379	0.0784	0.0843	
86 N-Propylbenzene	120	17.145	17.144	0.001	99	17429	0.0784	0.0776	
87 2-Chlorotoluene	126	17.161	17.164	-0.003	97	16753	0.0784	0.0806	
88 4-Ethyltoluene	105	17.312	17.312	0.000	99	65633	0.0784	0.0768	
89 1,3,5-Trimethylbenzene	120	17.398	17.400	-0.002	91	26109	0.0784	0.0757	
90 Alpha Methyl Styrene	118	17.652	17.652	0.000	86	15742	0.0784	0.0528	
91 n-Decane	57	17.792	17.793	-0.001	93	32834	0.0784	0.0769	
92 tert-Butylbenzene	119	17.867	17.868	-0.001	95	64192	0.0784	0.0801	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
93 1,2,4-Trimethylbenzene	105	17.884	17.884	0.000	96	57678	0.0784	0.0802	
94 1,3-Dichlorobenzene	146	18.153	18.153	0.000	98	36114	0.0784	0.0781	
95 sec-Butylbenzene	105	18.169	18.170	-0.001	98	81660	0.0784	0.0792	
96 Benzyl chloride	91	18.239	18.237	0.002	98	35545	0.0784	0.0657	
97 1,4-Dichlorobenzene	146	18.250	18.251	-0.001	92	35715	0.0784	0.0775	
98 4-Isopropyltoluene	119	18.358	18.358	0.000	96	72796	0.0784	0.0803	
99 1,2,3-Trimethylbenzene	105	18.390	18.393	-0.003	98	64016	0.0784	0.0784	
101 1,2-Dichlorobenzene	146	18.639	18.638	0.001	93	35357	0.0784	0.0787	
104 n-Butylbenzene	91	18.833	18.832	0.001	98	59321	0.0784	0.0734	
105 Undecane	57	19.226	19.228	-0.002	93	32417	0.0784	0.0702	
106 1,2-Dibromo-3-Chloropropan	157	19.286	19.284	0.002	89	15056	0.0784	0.0548	
108 1,2,4,5-Tetramethylbenzene	119	19.642	19.641	0.001	96	29468	0.0784	0.0666	
111 Dodecane	57	20.343	20.340	0.002	98	23965	0.0784	0.0554	
112 1,2,4-Trichlorobenzene	180	20.445	20.445	0.000	94	19766	0.0784	0.0588	
113 Naphthalene	128	20.574	20.574	0.000	99	46167	0.0784	0.0618	
115 Hexachlorobutadiene	225	20.828	20.827	0.001	95	26912	0.0784	0.0732	
116 1,2,3-Trichlorobenzene	180	20.860	20.864	-0.004	93	20286	0.0784	0.0596	
117 2-Methylnaphthalene	142	21.680	21.680	0.000	98	3036	0.1803	0.0165	
118 1-Methylnaphthalene	142	21.825	21.823	0.002	99	5988	0.1803	0.0328	
S 119 Xylenes, Total	100				0		0.2352	0.2464	
S 120 1,2-Dichloroethene, Total	1				0		0.1568	0.1585	

Reagents:

40L1-3DNP_00001
 40MXISSURP_00003

Amount Added: 200.00

Units: mL

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC03.D

Injection Date: 30-Jan-2018 14:04:30

Instrument ID: MR

Operator ID:

Lims ID: IC L3

Worklist Smp#: 5

Client ID:

Purge Vol: 500.000 mL

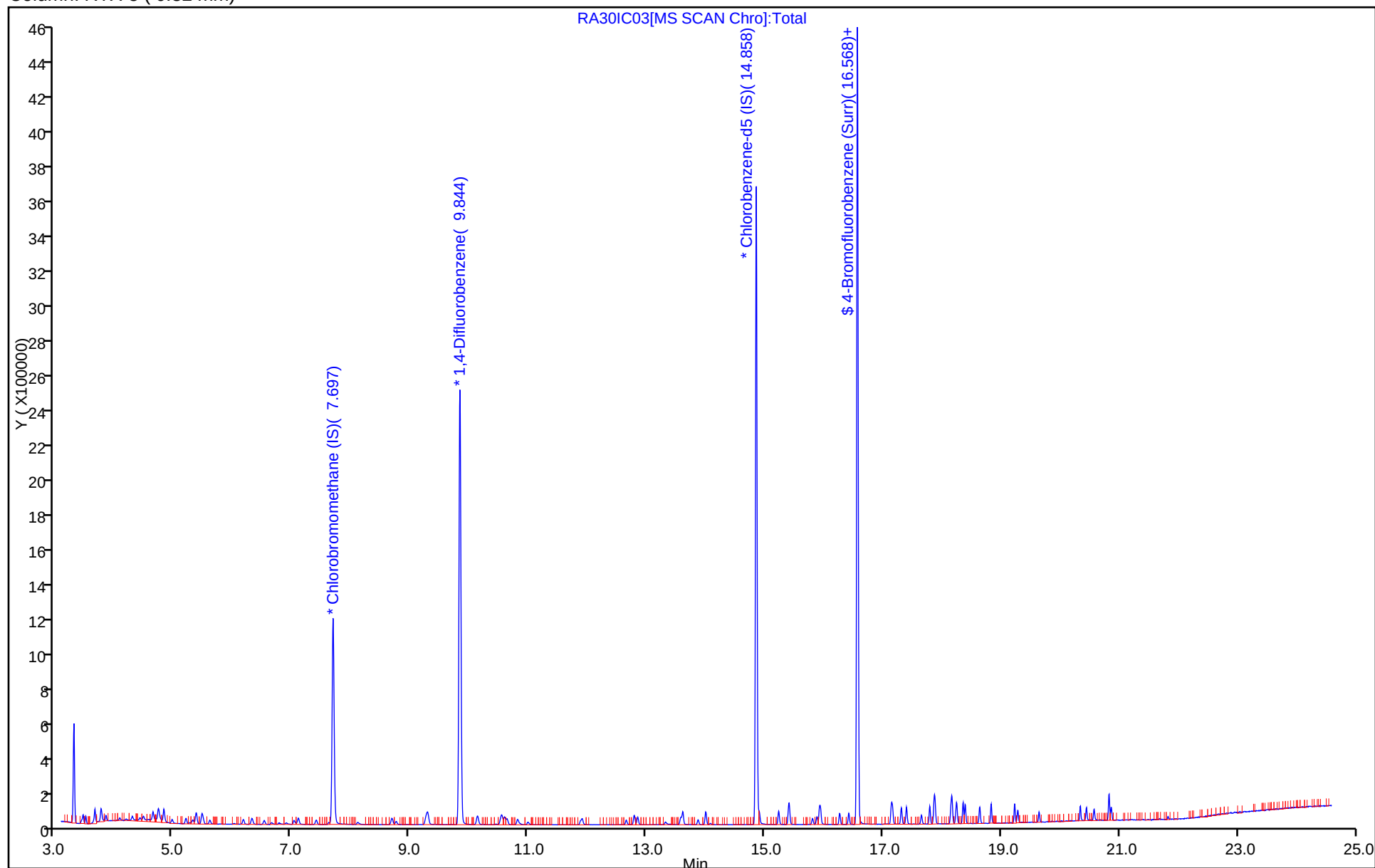
Dil. Factor: 1.0000

ALS Bottle#: 9

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC04.D
 Lims ID: IC L4
 Client ID:
 Sample Type: IC Calib Level: 4
 Inject. Date: 30-Jan-2018 14:50:30 ALS Bottle#: 10 Worklist Smp#: 6
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0007236-006
 Misc. Info.: 134526
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub13
 Method: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 05-Feb-2018 13:03:00 Calib Date: 30-Jan-2018 19:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK015

First Level Reviewer: tajh

Date: 30-Jan-2018 15:38:15

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.708	7.710	-0.002	85	388675	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.854	9.852	0.002	95	2397193	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.858	14.859	-0.001	89	2097206	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.568	16.570	-0.002	89	1641285	4.00	4.13	
6 Chlorodifluoromethane	67	3.481	3.471	0.010	96	7784	0.1600	0.1642	
7 Propene	41	3.486	3.477	0.009	97	16712	0.1600	0.1800	
8 Dichlorodifluoromethane	85	3.529	3.519	0.010	100	68839	0.1600	0.1886	
9 Chloromethane	52	3.659	3.653	0.006	99	6766	0.1600	0.2036	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.680	3.675	0.005	93	38610	0.1600	0.1562	
12 Vinyl chloride	62	3.799	3.789	0.010	99	16500	0.1600	0.1619	
13 Butane	43	3.869	3.863	0.006	79	18455	0.1600	0.1690	
14 Butadiene	54	3.869	3.863	0.006	71	11132	0.1600	0.1693	
15 Bromomethane	94	4.101	4.098	0.003	98	15024	0.1600	0.1593	
16 Chloroethane	64	4.214	4.208	0.006	98	7784	0.1600	0.1685	
17 Ethanol	31	4.306	4.313	-0.007	91	24919	0.8000	0.8552	
18 Vinyl bromide	106	4.440	4.441	-0.001	97	15440	0.1600	0.1670	
19 2-Methylbutane	43	4.500	4.498	0.002	81	12656	0.1600	0.1644	
20 Acrolein	56	4.661	4.656	0.005	29	3830	0.1600	0.1784	
21 Trichlorofluoromethane	101	4.661	4.659	0.002	100	57868	0.1600	0.1669	
22 Acetonitrile	40	4.699	4.713	-0.014	98	3781	0.1600	0.1431	
23 Acetone	58	4.753	4.748	0.005	99	28378	0.4800	0.6983	
24 Isopropyl alcohol	45	4.834	4.843	-0.009	96	82100	0.4800	0.5256	
25 Pentane	72	4.850	4.847	0.003	98	4428	0.1600	0.1634	
26 Ethyl ether	31	4.985	4.975	0.010	81	16886	0.1600	0.1721	
27 1,1-Dichloroethene	96	5.217	5.218	-0.001	95	22742	0.1600	0.1545	
28 Acrylonitrile	53	5.287	5.288	-0.001	91	15000	0.1600	0.1614	
29 2-Methyl-2-propanol	59	5.325	5.325	0.000	93	47907	0.1600	0.1636	
30 1,1,2-Trichloro-1,2,2-trif	101	5.395	5.390	0.005	95	49793	0.1600	0.1582	
31 Methylene Chloride	84	5.492	5.492	0.000	92	37255	0.1600	0.2451	
32 3-Chloro-1-propene	39	5.513	5.514	-0.001	95	20149	0.1600	0.1650	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.627	5.625	0.002	98	65612	0.1600	0.1612	
34 trans-1,2-Dichloroethene	96	6.188	6.192	-0.004	97	24021	0.1600	0.1609	
36 Methyl tert-butyl ether	73	6.328	6.323	0.005	95	72140	0.1600	0.1567	
37 1,1-Dichloroethane	63	6.543	6.545	-0.002	100	45273	0.1600	0.1592	
38 Vinyl acetate	43	6.662	6.662	0.000	99	38225	0.1600	0.1391	
39 2-Butanone (MEK)	72	7.040	7.036	0.004	97	11032	0.1600	0.1565	
40 Hexane	56	7.126	7.119	0.007	85	18222	0.1600	0.1599	
41 cis-1,2-Dichloroethene	96	7.422	7.426	-0.004	96	25103	0.1600	0.1568	
42 Ethyl acetate	43	7.627	7.622	0.005	99	35467	0.1600	0.1437	
43 Chloroform	83	7.746	7.743	0.003	88	57203	0.1600	0.1591	
44 Tetrahydrofuran	42	8.118	8.108	0.010	87	20481	0.1600	0.1628	
45 1,1,1-Trichloroethane	97	8.700	8.701	-0.001	96	57324	0.1600	0.1517	
46 1,2-Dichloroethane	62	8.770	8.771	-0.001	99	37522	0.1600	0.1480	
47 Benzene	78	9.272	9.274	-0.002	97	74171	0.1600	0.1620	
48 n-Butanol	31	9.337	9.296	0.041	56	2654	0.1600	0.0876	
49 Cyclohexane	69	9.304	9.298	0.006	95	11967	0.1600	0.1627	
50 Carbon tetrachloride	117	9.315	9.312	0.003	98	55870	0.1600	0.1513	
53 Isooctane	57	10.146	10.145	0.001	98	107521	0.1600	0.1619	
54 1,2-Dichloropropane	63	10.539	10.540	-0.001	87	25436	0.1600	0.1596	
55 n-Heptane	71	10.566	10.561	0.005	85	24522	0.1600	0.1545	
56 Trichloroethene	130	10.604	10.605	-0.001	95	32437	0.1600	0.1499	
57 Dibromomethane	93	10.647	10.648	-0.001	95	30017	0.1600	0.1593	
58 Dichlorobromomethane	83	10.825	10.825	0.000	99	50003	0.1600	0.1481	
59 1,4-Dioxane	88	10.852	10.851	0.001	86	10547	0.1600	0.1562	
60 Methyl methacrylate	41	10.992	10.990	0.002	97	18423	0.1600	0.1225	
62 4-Methyl-2-pentanone (MIBK)	43	11.882	11.878	0.004	93	35511	0.1600	0.1383	
63 cis-1,3-Dichloropropene	75	11.914	11.915	-0.001	96	39090	0.1600	0.1485	
64 trans-1,3-Dichloropropene	75	12.664	12.660	0.004	96	37170	0.1600	0.1462	
65 Toluene	91	12.793	12.795	-0.002	94	88464	0.1600	0.1532	
66 1,1,2-Trichloroethane	83	12.853	12.853	-0.001	98	24240	0.1600	0.1523	
69 2-Hexanone	58	13.322	13.313	0.009	98	15426	0.1600	0.1120	
70 Chlorodibromomethane	129	13.580	13.580	0.000	98	40122	0.1600	0.1318	
71 n-Octane	85	13.618	13.618	0.000	85	28115	0.1600	0.1513	
72 Ethylene Dibromide	107	13.877	13.876	0.001	97	42246	0.1600	0.1487	
73 Tetrachloroethene	129	14.006	14.005	0.001	94	32954	0.1600	0.1531	
74 Chlorobenzene	112	14.912	14.910	0.002	93	69433	0.1600	0.1526	
76 Ethylbenzene	91	15.236	15.237	-0.001	99	115987	0.1600	0.1534	
77 m-Xylene & p-Xylene	91	15.414	15.413	0.001	100	183320	0.3200	0.3127	
79 Bromoform	173	15.813	15.812	0.001	94	31906	0.1600	0.1219	
80 Styrene	104	15.888	15.884	0.004	98	46940	0.1600	0.1255	
81 n-Nonane	57	15.926	15.926	0.000	86	49466	0.1600	0.1566	
82 o-Xylene	91	15.948	15.948	0.000	97	97828	0.1600	0.1581	
83 1,1,2,2-Tetrachloroethane	83	16.271	16.269	0.002	97	58220	0.1600	0.1572	
84 1,2,3-Trichloropropane	110	16.428	16.424	0.004	98	20539	0.1600	0.1532	
85 Isopropylbenzene	105	16.568	16.566	0.002	90	131986	0.1600	0.1594	
86 N-Propylbenzene	120	17.145	17.144	0.001	98	33714	0.1600	0.1491	
87 2-Chlorotoluene	126	17.166	17.164	0.002	93	32718	0.1600	0.1565	
88 4-Ethyltoluene	105	17.312	17.312	0.000	99	130522	0.1600	0.1519	
89 1,3,5-Trimethylbenzene	120	17.398	17.400	-0.002	91	52246	0.1600	0.1506	
90 Alpha Methyl Styrene	118	17.652	17.652	0.000	87	32438	0.1600	0.1081	
91 n-Decane	57	17.792	17.793	-0.001	93	65857	0.1600	0.1534	
92 tert-Butylbenzene	119	17.867	17.868	-0.001	91	127195	0.1600	0.1578	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
93 1,2,4-Trimethylbenzene	105	17.884	17.884	0.000	96	113107	0.1600	0.1564	
94 1,3-Dichlorobenzene	146	18.153	18.153	0.000	98	70364	0.1600	0.1513	
95 sec-Butylbenzene	105	18.169	18.170	-0.001	98	162720	0.1600	0.1569	
96 Benzyl chloride	91	18.234	18.237	-0.003	97	70710	0.1600	0.1300	
97 1,4-Dichlorobenzene	146	18.250	18.251	-0.001	92	70131	0.1600	0.1512	
98 4-Isopropyltoluene	119	18.358	18.358	0.000	97	137773	0.1600	0.1511	
99 1,2,3-Trimethylbenzene	105	18.396	18.393	0.003	97	124983	0.1600	0.1522	
101 1,2-Dichlorobenzene	146	18.639	18.638	0.001	93	67149	0.1600	0.1487	
104 n-Butylbenzene	91	18.833	18.832	0.001	97	118568	0.1600	0.1458	
105 Undecane	57	19.232	19.228	0.004	92	67912	0.1600	0.1461	
106 1,2-Dibromo-3-Chloropropan	157	19.286	19.284	0.002	90	31369	0.1600	0.1136	
108 1,2,4,5-Tetramethylbenzene	119	19.642	19.641	0.001	96	58187	0.1600	0.1306	
111 Dodecane	57	20.343	20.340	0.002	98	51872	0.1600	0.1192	
112 1,2,4-Trichlorobenzene	180	20.445	20.445	0.000	94	38197	0.1600	0.1129	
113 Naphthalene	128	20.574	20.574	0.000	99	94589	0.1600	0.1258	
115 Hexachlorobutadiene	225	20.828	20.827	0.001	94	50435	0.1600	0.1363	
116 1,2,3-Trichlorobenzene	180	20.866	20.864	0.002	95	40272	0.1600	0.1177	
117 2-Methylnaphthalene	142	21.680	21.680	0.000	99	25770	0.3680	0.1393	
118 1-Methylnaphthalene	142	21.825	21.823	0.002	99	44657	0.3680	0.2430	
S 119 Xylenes, Total	100				0		0.4800	0.4708	
S 120 1,2-Dichloroethene, Total	1				0		0.3200	0.3177	

Reagents:

40L5DNP_00016

Amount Added: 80.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC04.D

Injection Date: 30-Jan-2018 14:50:30

Instrument ID: MR

Operator ID:

Lims ID: IC L4

Worklist Smp#: 6

Client ID:

Purge Vol: 500.000 mL

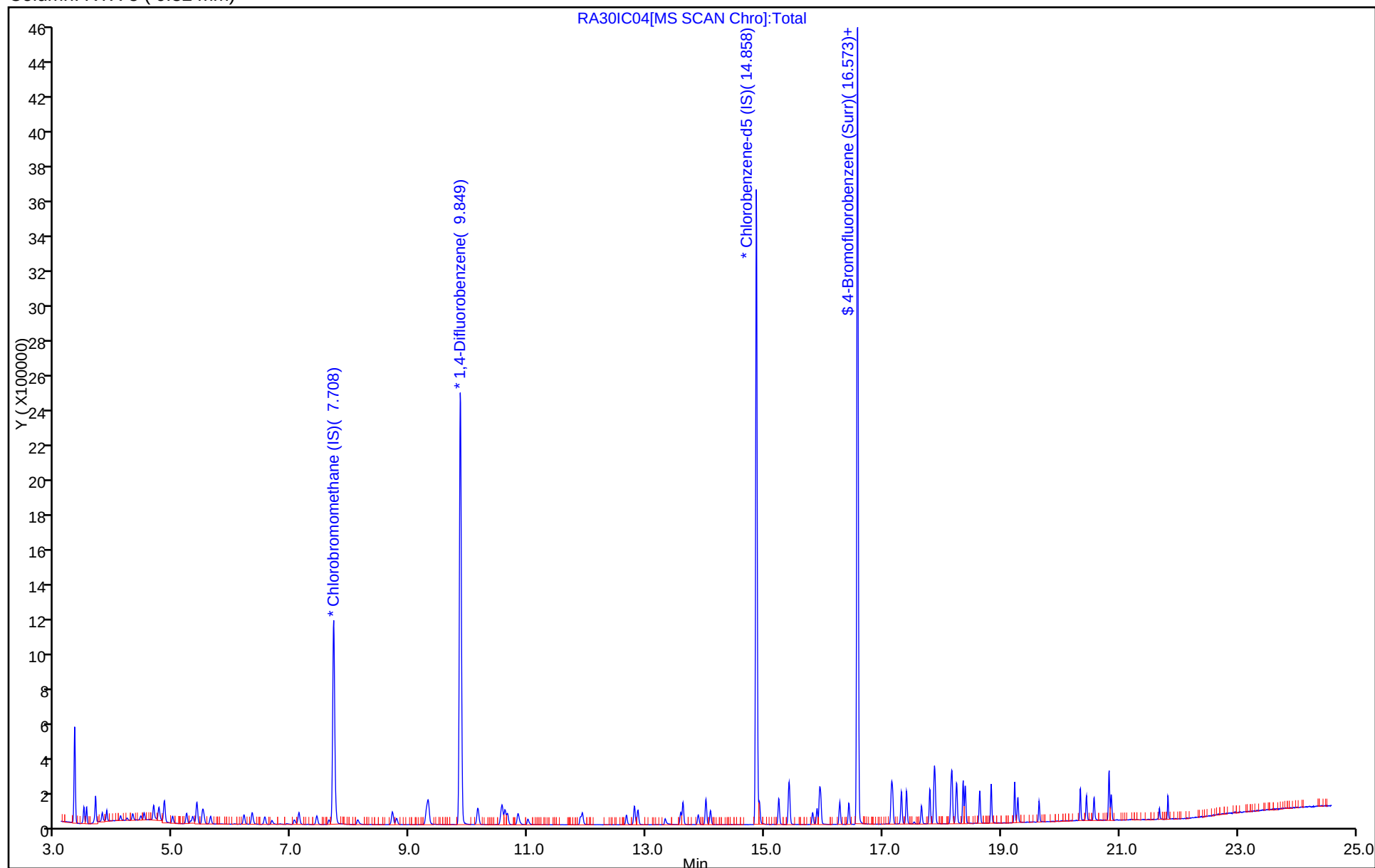
Dil. Factor: 1.0000

ALS Bottle#: 10

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC05.D
 Lims ID: IC L5
 Client ID:
 Sample Type: IC Calib Level: 5
 Inject. Date: 30-Jan-2018 15:39:30 ALS Bottle#: 10 Worklist Smp#: 7
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0007236-007
 Misc. Info.: 134526
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub13
 Method: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 05-Feb-2018 13:03:09 Calib Date: 30-Jan-2018 19:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa

Date: 30-Jan-2018 17:18:19

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.708	7.710	-0.002	85	383206	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.849	9.852	-0.003	95	2352829	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.858	14.859	-0.001	89	2056588	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.573	16.570	0.003	88	1633174	4.00	4.19	
6 Chlorodifluoromethane	67	3.475	3.471	0.004	96	19042	0.4000	0.4073	
7 Propene	41	3.481	3.477	0.004	98	39604	0.4000	0.4326	
8 Dichlorodifluoromethane	85	3.524	3.519	0.005	100	147314	0.4000	0.4094	
9 Chloromethane	52	3.653	3.653	0.000	99	14731	0.4000	0.4495	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.675	3.675	0.000	97	96019	0.4000	0.3939	
12 Vinyl chloride	62	3.788	3.789	-0.001	99	38877	0.4000	0.3869	
13 Butane	43	3.863	3.863	0.000	90	43962	0.4000	0.4083	
14 Butadiene	54	3.863	3.863	0.000	95	25683	0.4000	0.3963	
15 Bromomethane	94	4.095	4.098	-0.003	98	37574	0.4000	0.4041	
16 Chloroethane	64	4.209	4.208	0.000	97	18456	0.4000	0.4053	
17 Ethanol	31	4.306	4.313	-0.007	91	59239	2.00	2.06	
18 Vinyl bromide	106	4.440	4.441	-0.001	97	36894	0.4000	0.4048	
19 2-Methylbutane	43	4.494	4.498	-0.004	83	30876	0.4000	0.4069	
20 Acrolein	56	4.651	4.656	-0.005	29	10635	0.4000	0.5026	
21 Trichlorofluoromethane	101	4.656	4.659	-0.003	99	138405	0.4000	0.4050	
22 Acetonitrile	40	4.694	4.713	-0.019	98	11541	0.4000	0.4432	
23 Acetone	58	4.748	4.748	0.000	100	66025	1.20	1.65	
24 Isopropyl alcohol	45	4.834	4.843	-0.009	97	196181	1.20	1.27	
25 Pentane	72	4.845	4.847	-0.002	98	10720	0.4000	0.4012	
26 Ethyl ether	31	4.974	4.975	-0.001	81	40771	0.4000	0.4215	
27 1,1-Dichloroethene	96	5.217	5.218	-0.001	95	56370	0.4000	0.3885	
28 Acrylonitrile	53	5.287	5.288	-0.001	93	35688	0.4000	0.3895	
29 2-Methyl-2-propanol	59	5.319	5.325	-0.006	93	117307	0.4000	0.4062	
30 1,1,2-Trichloro-1,2,2-trif	101	5.389	5.390	-0.001	95	126008	0.4000	0.4061	
31 Methylene Chloride	84	5.486	5.492	-0.006	92	67350	0.4000	0.4494	
32 3-Chloro-1-propene	39	5.513	5.514	-0.001	98	47897	0.4000	0.3977	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.621	5.625	-0.004	98	160500	0.4000	0.3999	
34 trans-1,2-Dichloroethene	96	6.188	6.192	-0.004	96	57527	0.4000	0.3908	
36 Methyl tert-butyl ether	73	6.322	6.323	-0.001	95	182444	0.4000	0.4019	
37 1,1-Dichloroethane	63	6.543	6.545	-0.002	100	112441	0.4000	0.4010	
38 Vinyl acetate	43	6.657	6.662	-0.005	99	104997	0.4000	0.3874	
39 2-Butanone (MEK)	72	7.034	7.036	-0.002	98	29985	0.4000	0.4314	
40 Hexane	56	7.120	7.119	0.001	85	45099	0.4000	0.4013	
41 cis-1,2-Dichloroethene	96	7.422	7.426	-0.004	96	61408	0.4000	0.3891	
42 Ethyl acetate	43	7.622	7.622	0.000	99	97364	0.4000	0.4001	
43 Chloroform	83	7.741	7.743	-0.003	96	141724	0.4000	0.3997	
44 Tetrahydrofuran	42	8.107	8.108	-0.001	85	49933	0.4000	0.4026	
45 1,1,1-Trichloroethane	97	8.700	8.701	-0.001	95	147109	0.4000	0.3949	
46 1,2-Dichloroethane	62	8.776	8.771	0.005	98	100014	0.4000	0.4019	
47 Benzene	78	9.272	9.274	-0.002	98	180099	0.4000	0.4007	
48 n-Butanol	31	9.299	9.296	0.003	61	9384	0.4000	0.3154	
49 Cyclohexane	69	9.299	9.298	0.001	95	29509	0.4000	0.4088	
50 Carbon tetrachloride	117	9.310	9.312	-0.002	99	142596	0.4000	0.3935	
53 Isooctane	57	10.146	10.145	0.001	98	268337	0.4000	0.4117	
54 1,2-Dichloropropane	63	10.539	10.540	-0.001	85	62400	0.4000	0.3990	
55 n-Heptane	71	10.561	10.561	0.000	83	63962	0.4000	0.4105	
56 Trichloroethene	130	10.604	10.605	-0.001	93	80726	0.4000	0.3801	
57 Dibromomethane	93	10.647	10.648	-0.001	95	72482	0.4000	0.3918	
58 Dichlorobromomethane	83	10.825	10.825	0.000	99	128060	0.4000	0.3864	
59 1,4-Dioxane	88	10.852	10.851	0.001	85	26213	0.4000	0.3955	
60 Methyl methacrylate	41	10.987	10.990	-0.003	97	51419	0.4000	0.3484	
62 4-Methyl-2-pentanone (MIBK)	43	11.876	11.878	-0.002	93	95687	0.4000	0.3798	
63 cis-1,3-Dichloropropene	75	11.914	11.915	-0.001	92	100184	0.4000	0.3878	
64 trans-1,3-Dichloropropene	75	12.658	12.660	-0.002	96	93053	0.4000	0.3732	
65 Toluene	91	12.793	12.795	-0.002	93	222095	0.4000	0.3921	
66 1,1,2-Trichloroethane	83	12.852	12.853	-0.001	99	62032	0.4000	0.3975	
69 2-Hexanone	58	13.305	13.313	-0.008	97	49161	0.4000	0.3639	
70 Chlorodibromomethane	129	13.580	13.580	0.000	98	107735	0.4000	0.3610	
71 n-Octane	85	13.618	13.618	0.000	85	73235	0.4000	0.4019	
72 Ethylene Dibromide	107	13.877	13.876	0.001	98	107221	0.4000	0.3849	
73 Tetrachloroethene	129	14.006	14.005	0.001	95	82386	0.4000	0.3902	
74 Chlorobenzene	112	14.912	14.910	0.002	93	174562	0.4000	0.3912	
76 Ethylbenzene	91	15.236	15.237	-0.001	99	293553	0.4000	0.3960	
77 m-Xylene & p-Xylene	91	15.414	15.413	0.001	100	464738	0.8000	0.8085	
79 Bromoform	173	15.813	15.812	0.001	95	87253	0.4000	0.3399	
80 Styrene	104	15.883	15.884	-0.001	98	131824	0.4000	0.3595	
81 n-Nonane	57	15.926	15.926	0.000	84	130349	0.4000	0.4209	
82 o-Xylene	91	15.948	15.948	0.000	98	244961	0.4000	0.4036	
83 1,1,2,2-Tetrachloroethane	83	16.271	16.269	0.002	98	152141	0.4000	0.4188	
84 1,2,3-Trichloropropane	110	16.422	16.424	-0.002	98	52066	0.4000	0.3960	
85 Isopropylbenzene	105	16.568	16.566	0.002	97	333169	0.4000	0.4104	
86 N-Propylbenzene	120	17.145	17.144	0.001	99	89517	0.4000	0.4037	
87 2-Chlorotoluene	126	17.161	17.164	-0.003	93	83842	0.4000	0.4089	
88 4-Ethyltoluene	105	17.312	17.312	0.000	99	343391	0.4000	0.4076	
89 1,3,5-Trimethylbenzene	120	17.398	17.400	-0.002	92	135393	0.4000	0.3980	
90 Alpha Methyl Styrene	118	17.652	17.652	0.000	86	95659	0.4000	0.3252	
91 n-Decane	57	17.792	17.793	-0.001	93	175546	0.4000	0.4170	
92 tert-Butylbenzene	119	17.867	17.868	-0.001	91	320875	0.4000	0.4059	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
93 1,2,4-Trimethylbenzene	105	17.884	17.884	0.000	96	296062	0.4000	0.4175	
94 1,3-Dichlorobenzene	146	18.153	18.153	0.000	98	183533	0.4000	0.4024	
95 sec-Butylbenzene	105	18.169	18.170	-0.001	98	422045	0.4000	0.4149	
96 Benzyl chloride	91	18.239	18.237	0.002	97	210797	0.4000	0.3952	
97 1,4-Dichlorobenzene	146	18.250	18.251	-0.001	92	181180	0.4000	0.3983	
98 4-Isopropyltoluene	119	18.358	18.358	0.000	96	359958	0.4000	0.4026	
99 1,2,3-Trimethylbenzene	105	18.390	18.393	-0.003	98	332416	0.4000	0.4128	
101 1,2-Dichlorobenzene	146	18.638	18.638	0.000	93	178966	0.4000	0.4040	
104 n-Butylbenzene	91	18.833	18.832	0.001	98	322145	0.4000	0.4040	
105 Undecane	57	19.226	19.228	-0.002	93	181085	0.4000	0.3974	
106 1,2-Dibromo-3-Chloropropan	157	19.286	19.284	0.002	94	90207	0.4000	0.3331	
108 1,2,4,5-Tetramethylbenzene	119	19.641	19.641	0.000	96	152347	0.4000	0.3488	
111 Dodecane	57	20.337	20.340	-0.003	98	137913	0.4000	0.3233	
112 1,2,4-Trichlorobenzene	180	20.445	20.445	0.000	93	103182	0.4000	0.3110	
113 Naphthalene	128	20.574	20.574	0.000	99	262605	0.4000	0.3562	
115 Hexachlorobutadiene	225	20.828	20.827	0.001	95	125133	0.4000	0.3448	
116 1,2,3-Trichlorobenzene	180	20.866	20.864	0.002	94	101572	0.4000	0.3026	
117 2-Methylnaphthalene	142	21.680	21.680	0.000	100	63395	0.9200	0.3496	
118 1-Methylnaphthalene	142	21.825	21.823	0.002	100	79264	0.9200	0.4398	
S 119 Xylenes, Total	100				0		1.20	1.21	
S 120 1,2-Dichloroethene, Total	1				0		0.8000	0.7799	

Reagents:

40L5DNP_00016

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC05.D

Injection Date: 30-Jan-2018 15:39:30

Instrument ID: MR

Operator ID:

Lims ID: IC L5

Worklist Smp#: 7

Client ID:

Purge Vol: 500.000 mL

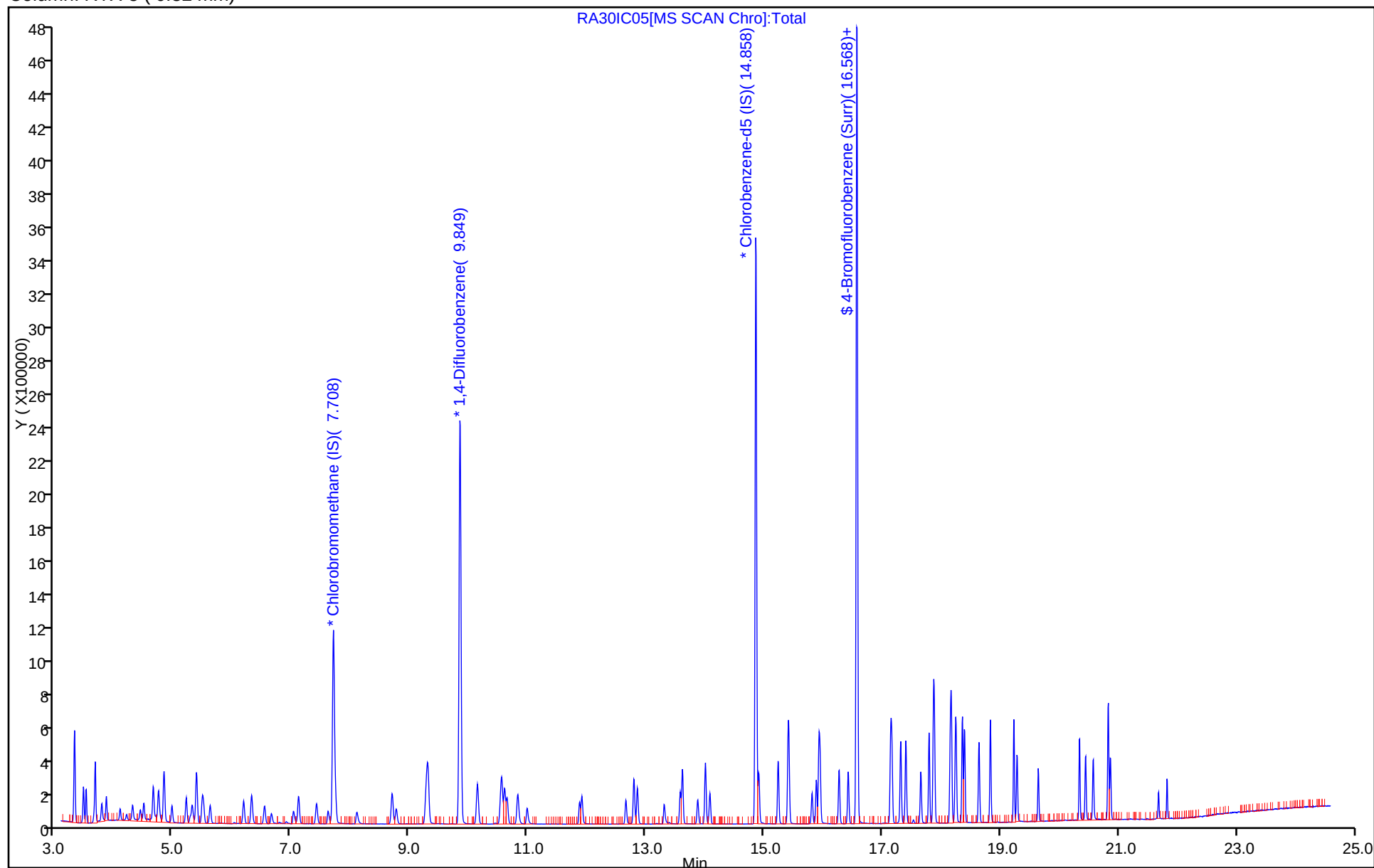
Dil. Factor: 1.0000

ALS Bottle#: 10

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC06.D
 Lims ID: IC L6
 Client ID:
 Sample Type: IC Calib Level: 6
 Inject. Date: 30-Jan-2018 16:27:30 ALS Bottle#: 11 Worklist Smp#: 8
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0007236-008
 Misc. Info.: 134525
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub13
 Method: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 05-Feb-2018 13:03:16 Calib Date: 30-Jan-2018 19:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa

Date: 30-Jan-2018 17:22:47

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.714	7.710	0.004	84	399358	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.854	9.852	0.002	95	2422753	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.858	14.859	-0.001	89	2095606	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.573	16.570	0.003	89	1634670	4.00	4.11	
6 Chlorodifluoromethane	67	3.470	3.471	-0.001	96	49960	1.00	1.03	
7 Propene	41	3.475	3.477	-0.002	97	101480	1.00	1.06	
8 Dichlorodifluoromethane	85	3.518	3.519	-0.001	100	385761	1.00	1.03	
9 Chloromethane	52	3.653	3.653	0.000	100	33564	1.00	0.9828	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.675	3.675	0.000	93	252275	1.00	0.99	
12 Vinyl chloride	62	3.788	3.789	-0.001	99	100495	1.00	0.9596	
13 Butane	43	3.863	3.863	0.000	89	117697	1.00	1.05	
14 Butadiene	54	3.863	3.863	0.000	93	67588	1.00	1.00	
15 Bromomethane	94	4.095	4.098	-0.003	98	97562	1.00	1.01	
16 Chloroethane	64	4.208	4.208	0.000	98	47978	1.00	1.01	
17 Ethanol	31	4.311	4.313	-0.002	91	156896	5.01	5.24	
18 Vinyl bromide	106	4.440	4.441	-0.001	97	97338	1.00	1.02	
19 2-Methylbutane	43	4.500	4.498	0.002	81	79273	1.00	1.00	
20 Acrolein	56	4.651	4.656	-0.005	95	21312	1.00	0.9664	
21 Trichlorofluoromethane	101	4.661	4.659	0.002	99	362096	1.00	1.02	
22 Acetonitrile	40	4.699	4.713	-0.014	97	27104	1.00	1.00	
23 Acetone	58	4.742	4.748	-0.006	99	133362	3.01	3.19	
24 Isopropyl alcohol	45	4.839	4.843	-0.004	97	528496	3.01	3.29	
25 Pentane	72	4.845	4.847	-0.002	97	28211	1.00	1.01	
26 Ethyl ether	31	4.969	4.975	-0.006	79	105952	1.00	1.05	
27 1,1-Dichloroethene	96	5.217	5.218	-0.001	95	147316	1.00	0.9743	
28 Acrylonitrile	53	5.287	5.288	-0.001	94	97550	1.00	1.02	
29 2-Methyl-2-propanol	59	5.319	5.325	-0.006	93	309191	1.00	1.03	
30 1,1,2-Trichloro-1,2,2-trif	101	5.389	5.390	-0.001	95	330843	1.00	1.02	
31 Methylene Chloride	84	5.492	5.492	0.000	92	152260	1.00	0.9750	
32 3-Chloro-1-propene	39	5.513	5.514	-0.001	97	129123	1.00	1.03	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.621	5.625	-0.004	98	430092	1.00	1.03	
34 trans-1,2-Dichloroethene	96	6.193	6.192	0.001	97	156625	1.00	1.02	
36 Methyl tert-butyl ether	73	6.317	6.323	-0.006	95	488775	1.00	1.03	
37 1,1-Dichloroethane	63	6.549	6.545	0.004	100	295826	1.00	1.01	
38 Vinyl acetate	43	6.657	6.662	-0.005	99	304213	1.00	1.08	
39 2-Butanone (MEK)	72	7.029	7.036	-0.007	98	72547	1.00	1.00	
40 Hexane	56	7.120	7.119	0.001	85	120502	1.00	1.03	
41 cis-1,2-Dichloroethene	96	7.428	7.426	0.002	96	161247	1.00	0.9804	
42 Ethyl acetate	43	7.611	7.622	-0.011	99	272902	1.00	1.08	
43 Chloroform	83	7.746	7.743	0.003	96	370515	1.00	1.00	
44 Tetrahydrofuran	42	8.096	8.108	-0.012	87	134069	1.00	1.04	
45 1,1,1-Trichloroethane	97	8.706	8.701	0.005	95	396883	1.00	1.02	
46 1,2-Dichloroethane	62	8.770	8.771	-0.001	98	266293	1.00	1.04	
47 Benzene	78	9.277	9.274	0.003	97	475845	1.00	1.03	
48 n-Butanol	31	9.283	9.296	-0.013	62	29797	1.00	0.9727	
49 Cyclohexane	69	9.299	9.298	0.001	96	77754	1.00	1.05	
50 Carbon tetrachloride	117	9.315	9.312	0.003	97	393178	1.00	1.05	
53 Isooctane	57	10.145	10.145	0.000	98	709763	1.00	1.06	
54 1,2-Dichloropropane	63	10.539	10.540	-0.001	90	166795	1.00	1.04	
55 n-Heptane	71	10.561	10.561	0.000	83	169496	1.00	1.06	
56 Trichloroethene	130	10.604	10.605	-0.001	94	216055	1.00	0.9880	
57 Dibromomethane	93	10.647	10.648	-0.001	95	192925	1.00	1.01	
58 Dichlorobromomethane	83	10.825	10.825	0.000	98	359583	1.00	1.05	
59 1,4-Dioxane	88	10.841	10.851	-0.010	83	75444	1.00	1.11	
60 Methyl methacrylate	41	10.981	10.990	-0.009	97	153737	1.00	1.01	
62 4-Methyl-2-pentanone (MIBK)	43	11.871	11.878	-0.007	94	271515	1.00	1.05	
63 cis-1,3-Dichloropropene	75	11.914	11.915	-0.001	92	280020	1.00	1.05	
64 trans-1,3-Dichloropropene	75	12.658	12.660	-0.002	96	264281	1.00	1.04	
65 Toluene	91	12.793	12.795	-0.002	94	594266	1.00	1.03	
66 1,1,2-Trichloroethane	83	12.852	12.853	-0.001	99	165862	1.00	1.04	
69 2-Hexanone	58	13.300	13.313	-0.013	98	149844	1.00	1.09	
70 Chlorodibromomethane	129	13.580	13.580	0.000	97	326299	1.00	1.07	
71 n-Octane	85	13.618	13.618	0.000	85	197364	1.00	1.06	
72 Ethylene Dibromide	107	13.877	13.876	0.001	98	299269	1.00	1.05	
73 Tetrachloroethene	129	14.006	14.005	0.001	95	221546	1.00	1.03	
74 Chlorobenzene	112	14.912	14.910	0.002	92	462209	1.00	1.02	
76 Ethylbenzene	91	15.236	15.237	-0.001	99	784804	1.00	1.04	
77 m-Xylene & p-Xylene	91	15.414	15.413	0.001	100	1258868	2.00	2.15	
79 Bromoform	173	15.813	15.812	0.001	95	280201	1.00	1.07	
80 Styrene	104	15.883	15.884	-0.001	99	404492	1.00	1.08	
81 n-Nonane	57	15.926	15.926	0.000	83	354142	1.00	1.12	
82 o-Xylene	91	15.948	15.948	0.000	98	651529	1.00	1.05	
83 1,1,2,2-Tetrachloroethane	83	16.266	16.269	-0.003	99	419698	1.00	1.13	
84 1,2,3-Trichloropropane	110	16.422	16.424	-0.002	98	140977	1.00	1.05	
85 Isopropylbenzene	105	16.568	16.566	0.002	98	884009	1.00	1.07	
86 N-Propylbenzene	120	17.145	17.144	0.001	99	251895	1.00	1.11	
87 2-Chlorotoluene	126	17.161	17.164	-0.003	93	226074	1.00	1.08	
88 4-Ethyltoluene	105	17.312	17.312	0.000	99	974862	1.00	1.14	
89 1,3,5-Trimethylbenzene	120	17.398	17.400	-0.002	92	386617	1.00	1.12	
90 Alpha Methyl Styrene	118	17.652	17.652	0.000	87	312791	1.00	1.04	
91 n-Decane	57	17.792	17.793	-0.001	93	504552	1.00	1.18	
92 tert-Butylbenzene	119	17.867	17.868	-0.001	90	894018	1.00	1.11	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
93 1,2,4-Trimethylbenzene	105	17.884	17.884	0.000	96	838081	1.00	1.16	
94 1,3-Dichlorobenzene	146	18.153	18.153	0.000	99	516305	1.00	1.11	
95 sec-Butylbenzene	105	18.169	18.170	-0.001	98	1180727	1.00	1.14	
96 Benzyl chloride	91	18.234	18.237	-0.003	98	644403	1.00	1.19	
97 1,4-Dichlorobenzene	146	18.250	18.251	-0.001	93	518691	1.00	1.12	
98 4-Isopropyltoluene	119	18.358	18.358	0.000	96	1047342	1.00	1.15	
99 1,2,3-Trimethylbenzene	105	18.390	18.393	-0.003	97	941539	1.00	1.15	
101 1,2-Dichlorobenzene	146	18.638	18.638	0.000	93	504861	1.00	1.12	
104 n-Butylbenzene	91	18.833	18.832	0.001	98	967842	1.00	1.19	
105 Undecane	57	19.226	19.228	-0.002	93	562815	1.00	1.21	
106 1,2-Dibromo-3-Chloropropan	157	19.286	19.284	0.002	97	313235	1.00	1.14	
108 1,2,4,5-Tetramethylbenzene	119	19.641	19.641	0.000	96	482300	1.00	1.08	
111 Dodecane	57	20.342	20.340	0.002	99	520941	1.00	1.20	
112 1,2,4-Trichlorobenzene	180	20.445	20.445	0.000	94	375125	1.00	1.11	
113 Naphthalene	128	20.574	20.574	0.000	99	876926	1.00	1.17	
115 Hexachlorobutadiene	225	20.828	20.827	0.001	95	406766	1.00	1.10	
116 1,2,3-Trichlorobenzene	180	20.866	20.864	0.002	94	354574	1.00	1.04	
117 2-Methylnaphthalene	142	21.680	21.680	0.000	99	300143	2.30	1.62	
118 1-Methylnaphthalene	142	21.820	21.823	-0.003	99	327721	2.30	1.78	
S 119 Xylenes, Total	100				0		3.00	3.20	
S 120 1,2-Dichloroethene, Total	1				0		2.00	2.00	

Reagents:

40L6DNP_00017

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC06.D

Injection Date: 30-Jan-2018 16:27:30

Instrument ID: MR

Operator ID:

Lims ID: IC L6

Worklist Smp#: 8

Client ID:

Purge Vol: 500.000 mL

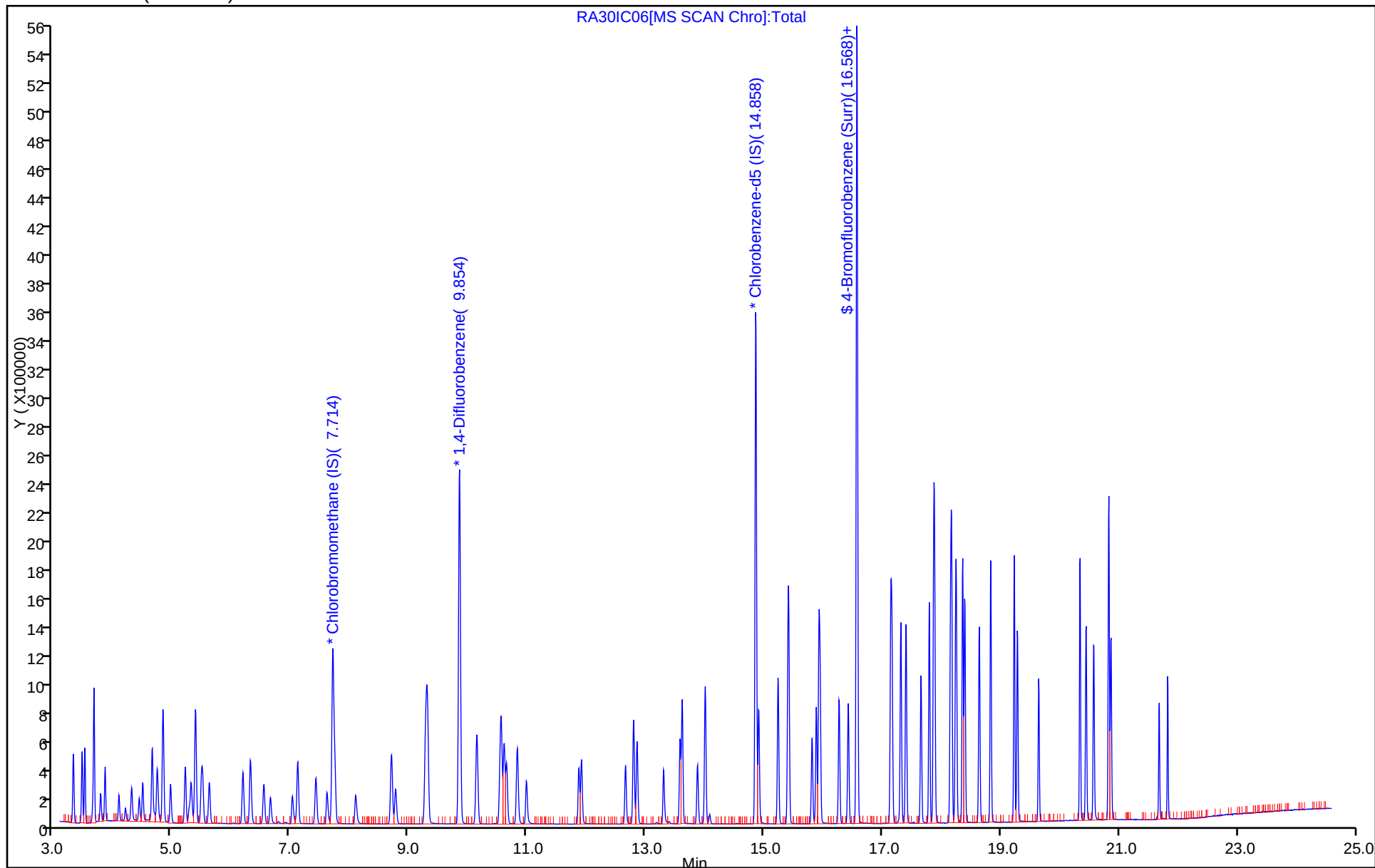
Dil. Factor: 1.0000

ALS Bottle#: 11

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC07.D
 Lims ID: ICIS L7
 Client ID:
 Sample Type: ICIS Calib Level: 7
 Inject. Date: 30-Jan-2018 17:15:30 ALS Bottle#: 12 Worklist Smp#: 9
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0007236-009
 Misc. Info.: 134523
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub13
 Method: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 05-Feb-2018 13:03:23 Calib Date: 30-Jan-2018 19:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa

Date: 30-Jan-2018 18:02:14

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.714	7.710	0.004	85	397524	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.849	9.852	-0.003	95	2418900	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.859	14.859	-0.001	88	2104378	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.568	16.570	-0.002	90	1611533	4.00	4.04	
6 Chlorodifluoromethane	67	3.464	3.471	-0.007	96	99602	2.00	2.05	
7 Propene	41	3.475	3.477	-0.002	97	201013	2.00	2.12	
8 Dichlorodifluoromethane	85	3.513	3.519	-0.006	100	768499	2.00	2.06	
9 Chloromethane	52	3.648	3.653	-0.005	99	69549	2.00	2.05	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.669	3.675	-0.006	93	513872	2.00	2.03	
12 Vinyl chloride	62	3.783	3.789	-0.006	99	201144	2.00	1.93	
13 Butane	43	3.858	3.863	-0.005	89	229678	2.00	2.06	
14 Butadiene	54	3.858	3.863	-0.005	94	136978	2.00	2.04	
15 Bromomethane	94	4.095	4.098	-0.003	97	194501	2.00	2.02	
16 Chloroethane	64	4.203	4.208	-0.005	99	92980	2.00	1.97	
17 Ethanol	31	4.311	4.313	-0.002	91	309152	9.99	10.4	
18 Vinyl bromide	106	4.435	4.441	-0.006	97	190610	2.00	2.02	
19 2-Methylbutane	43	4.494	4.498	-0.004	82	156213	2.00	1.98	
20 Acrolein	56	4.651	4.656	-0.005	93	40157	2.00	1.83	
21 Trichlorofluoromethane	101	4.656	4.659	-0.003	99	708040	2.00	2.00	
22 Acetonitrile	40	4.699	4.713	-0.014	98	55420	2.00	2.05	
23 Acetone	58	4.742	4.748	-0.006	99	255969	5.99	6.16	
24 Isopropyl alcohol	45	4.839	4.843	-0.004	94	1027986	5.99	6.43	
25 Pentane	72	4.845	4.847	-0.002	96	56821	2.00	2.05	
26 Ethyl ether	31	4.964	4.975	-0.011	78	210233	2.00	2.10	
27 1,1-Dichloroethene	96	5.217	5.218	-0.001	96	302733	2.00	2.01	
28 Acrylonitrile	53	5.287	5.288	-0.001	93	201452	2.00	2.12	
29 2-Methyl-2-propanol	59	5.319	5.325	-0.006	93	628551	2.00	2.10	
30 1,1,2-Trichloro-1,2,2-trif	101	5.390	5.390	0.000	96	667885	2.00	2.08	
31 Methylene Chloride	84	5.492	5.492	0.000	90	294696	2.00	1.90	
32 3-Chloro-1-propene	39	5.514	5.514	0.000	97	251667	2.00	2.01	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.621	5.625	-0.004	98	863361	2.00	2.07	
34 trans-1,2-Dichloroethene	96	6.193	6.192	0.001	97	318661	2.00	2.09	
36 Methyl tert-butyl ether	73	6.312	6.323	-0.011	95	993401	2.00	2.11	
37 1,1-Dichloroethane	63	6.543	6.545	-0.002	100	594968	2.00	2.05	
38 Vinyl acetate	43	6.657	6.662	-0.005	99	605079	2.00	2.15	
39 2-Butanone (MEK)	72	7.023	7.036	-0.013	97	157076	2.00	2.18	
40 Hexane	56	7.115	7.119	-0.004	85	241914	2.00	2.08	
41 cis-1,2-Dichloroethene	96	7.422	7.426	-0.004	95	331061	2.00	2.02	
42 Ethyl acetate	43	7.606	7.622	-0.016	99	563824	2.00	2.23	
43 Chloroform	83	7.746	7.743	0.003	97	752364	2.00	2.05	
44 Tetrahydrofuran	42	8.091	8.108	-0.017	85	272546	2.00	2.12	
45 1,1,1-Trichloroethane	97	8.700	8.701	-0.001	96	813727	2.00	2.11	
46 1,2-Dichloroethane	62	8.771	8.771	0.000	99	535650	2.00	2.09	
47 Benzene	78	9.272	9.274	-0.002	97	957247	2.00	2.07	
48 n-Butanol	31	9.272	9.296	-0.024	60	64569	2.00	2.11	
49 Cyclohexane	69	9.299	9.298	0.001	96	159306	2.00	2.15	
50 Carbon tetrachloride	117	9.310	9.312	-0.002	98	784365	2.00	2.11	
53 Isooctane	57	10.140	10.145	-0.005	97	1428084	2.00	2.13	
54 1,2-Dichloropropane	63	10.539	10.540	-0.001	86	335945	2.00	2.09	
55 n-Heptane	71	10.561	10.561	0.000	83	341354	2.00	2.13	
56 Trichloroethene	130	10.604	10.605	-0.001	94	481860	2.00	2.21	
57 Dibromomethane	93	10.647	10.648	-0.001	95	403081	2.00	2.12	
58 Dichlorobromomethane	83	10.825	10.825	0.000	98	757973	2.00	2.22	
59 1,4-Dioxane	88	10.836	10.851	-0.015	83	151582	2.00	2.22	
60 Methyl methacrylate	41	10.981	10.990	-0.009	97	339847	2.00	2.24	
62 4-Methyl-2-pentanone (MIBK)	43	11.866	11.878	-0.012	93	575108	2.00	2.22	
63 cis-1,3-Dichloropropene	75	11.914	11.915	-0.001	92	590578	2.00	2.22	
64 trans-1,3-Dichloropropene	75	12.658	12.660	-0.002	96	552390	2.00	2.16	
65 Toluene	91	12.793	12.795	-0.002	93	1214847	2.00	2.10	
66 1,1,2-Trichloroethane	83	12.853	12.853	0.000	99	338126	2.00	2.12	
69 2-Hexanone	58	13.300	13.313	-0.013	98	322256	2.00	2.33	
70 Chlorodibromomethane	129	13.581	13.580	0.001	98	710033	2.00	2.33	
71 n-Octane	85	13.613	13.618	-0.005	85	401741	2.00	2.15	
72 Ethylene Dibromide	107	13.872	13.876	-0.004	99	623528	2.00	2.19	
73 Tetrachloroethene	129	14.001	14.005	-0.004	95	451735	2.00	2.09	
74 Chlorobenzene	112	14.907	14.910	-0.003	93	943722	2.00	2.07	
76 Ethylbenzene	91	15.236	15.237	-0.001	99	1604021	2.00	2.11	
77 m-Xylene & p-Xylene	91	15.409	15.413	-0.004	100	2526057	3.99	4.29	
79 Bromoform	173	15.813	15.812	0.001	96	617419	2.00	2.35	
80 Styrene	104	15.883	15.884	-0.001	99	877726	2.00	2.34	
81 n-Nonane	57	15.926	15.926	0.000	83	698726	2.00	2.20	
82 o-Xylene	91	15.942	15.948	-0.006	98	1293453	2.00	2.08	
83 1,1,2,2-Tetrachloroethane	83	16.266	16.269	-0.003	99	774984	2.00	2.09	
84 1,2,3-Trichloropropane	110	16.422	16.424	-0.002	98	283509	2.00	2.11	
85 Isopropylbenzene	105	16.562	16.566	-0.004	97	1751008	2.00	2.11	
86 N-Propylbenzene	120	17.139	17.144	-0.005	99	510087	2.00	2.25	
87 2-Chlorotoluene	126	17.161	17.164	-0.003	94	444172	2.00	2.12	
88 4-Ethyltoluene	105	17.312	17.312	0.000	99	1942649	2.00	2.25	
89 1,3,5-Trimethylbenzene	120	17.398	17.400	-0.002	92	775132	2.00	2.23	
90 Alpha Methyl Styrene	118	17.652	17.652	0.000	87	715672	2.00	2.38	
91 n-Decane	57	17.792	17.793	-0.001	93	1016420	2.00	2.36	
92 tert-Butylbenzene	119	17.867	17.868	-0.001	91	1772333	2.00	2.19	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
93 1,2,4-Trimethylbenzene	105	17.884	17.884	0.000	96	1649904	2.00	2.27	
94 1,3-Dichlorobenzene	146	18.153	18.153	0.000	99	1044130	2.00	2.24	
95 sec-Butylbenzene	105	18.169	18.170	-0.001	98	2346383	2.00	2.25	
96 Benzyl chloride	91	18.234	18.237	-0.003	98	1420806	2.00	2.60	
97 1,4-Dichlorobenzene	146	18.250	18.251	-0.001	93	1046250	2.00	2.25	
98 4-Isopropyltoluene	119	18.358	18.358	0.000	97	2122805	2.00	2.32	
99 1,2,3-Trimethylbenzene	105	18.391	18.393	-0.003	98	1870714	2.00	2.27	
101 1,2-Dichlorobenzene	146	18.639	18.638	0.001	94	1016927	2.00	2.24	
104 n-Butylbenzene	91	18.827	18.832	-0.005	99	1985514	2.00	2.43	
105 Undecane	57	19.226	19.228	-0.002	92	1166396	2.00	2.50	
106 1,2-Dibromo-3-Chloropropan	157	19.280	19.284	-0.004	97	698408	2.00	2.52	
108 1,2,4,5-Tetramethylbenzene	119	19.642	19.641	0.001	96	1035933	2.00	2.32	
111 Dodecane	57	20.337	20.340	-0.003	98	1185570	2.00	2.72	
112 1,2,4-Trichlorobenzene	180	20.445	20.445	0.000	94	867227	2.00	2.55	
113 Naphthalene	128	20.569	20.574	-0.005	99	2004705	2.00	2.66	
115 Hexachlorobutadiene	225	20.828	20.827	0.001	96	875521	2.00	2.36	
116 1,2,3-Trichlorobenzene	180	20.860	20.864	-0.004	94	835689	2.00	2.43	
117 2-Methylnaphthalene	142	21.680	21.680	0.000	100	1121735	4.59	6.04	
118 1-Methylnaphthalene	142	21.820	21.823	-0.003	99	1213833	4.59	6.58	
S 119 Xylenes, Total	100				0		5.99	6.38	
S 120 1,2-Dichloroethene, Total	1				0		3.99	4.11	

Reagents:

40L7DNP_00016

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC07.D

Injection Date: 30-Jan-2018 17:15:30

Instrument ID: MR

Operator ID:

Lims ID: ICIS L7

Worklist Smp#: 9

Client ID:

Purge Vol: 500.000 mL

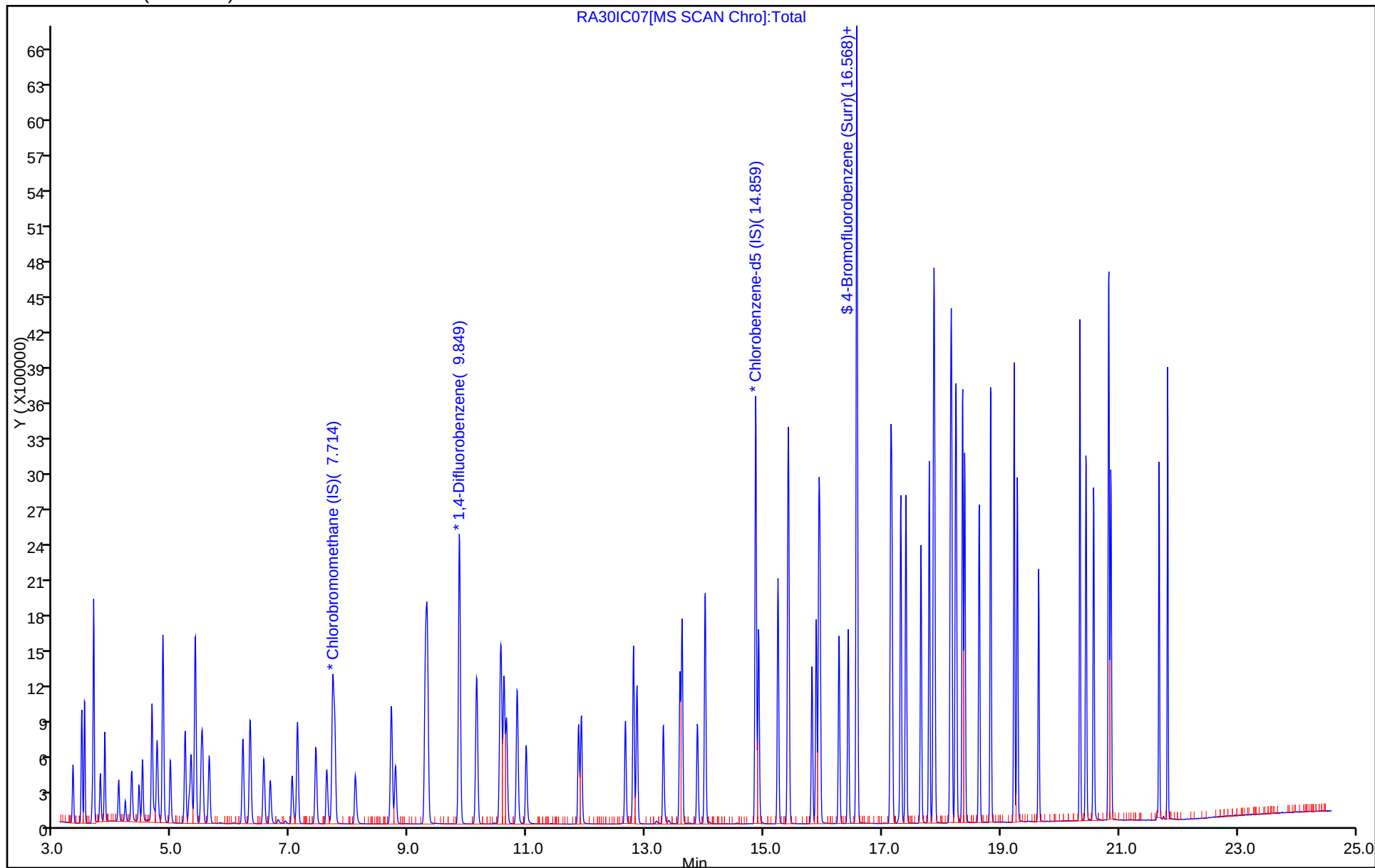
Dil. Factor: 1.0000

ALS Bottle#: 12

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC08.D
 Lims ID: IC L8
 Client ID:
 Sample Type: IC Calib Level: 8
 Inject. Date: 30-Jan-2018 18:03:30 ALS Bottle#: 13 Worklist Smp#: 10
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0007236-010
 Misc. Info.: 134524
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub13
 Method: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 05-Feb-2018 13:03:29 Calib Date: 30-Jan-2018 19:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa

Date: 30-Jan-2018 18:45:29

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.713	7.710	0.003	83	403296	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.854	9.852	0.002	95	2445825	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.858	14.859	-0.001	88	2122398	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.573	16.570	0.003	90	1560168	4.00	3.88	
6 Chlorodifluoromethane	67	3.470	3.471	-0.001	95	192008	4.00	3.90	
7 Propene	41	3.475	3.477	-0.002	97	373101	4.00	3.87	
8 Dichlorodifluoromethane	85	3.518	3.519	-0.001	100	1380786	4.00	3.65	
9 Chloromethane	52	3.653	3.653	0.000	99	127494	4.00	3.70	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.675	3.675	0.000	92	975595	4.00	3.80	
12 Vinyl chloride	62	3.788	3.789	-0.001	99	392525	4.00	3.71	
13 Butane	43	3.863	3.863	0.000	90	443357	4.00	3.91	
14 Butadiene	54	3.863	3.863	0.000	95	265156	4.00	3.89	
15 Bromomethane	94	4.101	4.098	0.003	98	381835	4.00	3.90	
16 Chloroethane	64	4.208	4.208	0.000	99	183236	4.00	3.82	
17 Ethanol	31	4.322	4.313	0.009	90	599728	20.0	19.8	
18 Vinyl bromide	106	4.446	4.441	0.005	97	373599	4.00	3.89	
19 2-Methylbutane	43	4.500	4.498	0.002	82	305420	4.00	3.82	
20 Acrolein	56	4.656	4.656	0.000	95	69130	4.00	3.10	
21 Trichlorofluoromethane	101	4.661	4.659	0.002	100	1366159	4.00	3.80	
22 Acetonitrile	40	4.705	4.713	-0.008	97	108488	4.00	3.96	
23 Acetone	58	4.748	4.748	0.000	99	451316	12.0	10.7	
24 Isopropyl alcohol	45	4.845	4.843	0.002	94	1940134	12.0	12.0	
25 Pentane	72	4.850	4.847	0.003	97	109148	4.00	3.88	
26 Ethyl ether	31	4.969	4.975	-0.006	76	385484	4.00	3.79	
27 1,1-Dichloroethene	96	5.222	5.218	0.004	96	580273	4.00	3.80	
28 Acrylonitrile	53	5.292	5.288	0.004	93	380336	4.00	3.94	
29 2-Methyl-2-propanol	59	5.319	5.325	-0.006	93	1185900	4.00	3.90	
30 1,1,2-Trichloro-1,2,2-trif	101	5.395	5.390	0.005	97	1265800	4.00	3.88	
31 Methylene Chloride	84	5.497	5.492	0.005	90	539025	4.00	3.42	
32 3-Chloro-1-propene	39	5.519	5.514	0.005	96	453252	4.00	3.58	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.632	5.625	0.007	98	1649806	4.00	3.91	
34 trans-1,2-Dichloroethene	96	6.198	6.192	0.006	98	609026	4.00	3.93	
36 Methyl tert-butyl ether	73	6.317	6.323	-0.006	94	1909019	4.00	4.00	
37 1,1-Dichloroethane	63	6.554	6.545	0.009	100	1118272	4.00	3.79	
38 Vinyl acetate	43	6.662	6.662	0.000	99	1147099	4.00	4.02	
39 2-Butanone (MEK)	72	7.029	7.036	-0.007	97	284611	4.00	3.89	
40 Hexane	56	7.120	7.119	0.001	85	451862	4.00	3.82	
41 cis-1,2-Dichloroethene	96	7.433	7.426	0.007	95	636383	4.00	3.83	
42 Ethyl acetate	43	7.611	7.622	-0.011	99	1074075	4.00	4.19	
43 Chloroform	83	7.751	7.743	0.008	97	1431329	4.00	3.84	
44 Tetrahydrofuran	42	8.096	8.108	-0.012	85	511682	4.00	3.92	
45 1,1,1-Trichloroethane	97	8.706	8.701	0.005	95	1564396	4.00	3.99	
46 1,2-Dichloroethane	62	8.776	8.771	0.005	99	1019982	4.00	3.94	
47 Benzene	78	9.277	9.274	0.003	97	1805776	4.00	3.86	
48 n-Butanol	31	9.272	9.296	-0.024	61	135506	4.00	4.38	
49 Cyclohexane	69	9.304	9.298	0.006	95	293021	4.00	3.91	
50 Carbon tetrachloride	117	9.315	9.312	0.003	97	1557932	4.00	4.14	
53 Isooctane	57	10.145	10.145	0.000	97	2699507	4.00	3.98	
54 1,2-Dichloropropane	63	10.539	10.540	-0.001	87	637774	4.00	3.92	
55 n-Heptane	71	10.561	10.561	0.000	81	652666	4.00	4.03	
56 Trichloroethene	130	10.609	10.605	0.004	95	990611	4.00	4.49	
57 Dibromomethane	93	10.652	10.648	0.004	95	771427	4.00	4.01	
58 Dichlorobromomethane	83	10.830	10.825	0.005	98	1483398	4.00	4.31	
59 1,4-Dioxane	88	10.836	10.851	-0.015	82	290497	4.00	4.22	
60 Methyl methacrylate	41	10.981	10.990	-0.009	97	676432	4.00	4.41	
62 4-Methyl-2-pentanone (MIBK)	43	11.866	11.878	-0.012	93	1126777	4.00	4.30	
63 cis-1,3-Dichloropropene	75	11.914	11.915	-0.001	92	1141143	4.00	4.25	
64 trans-1,3-Dichloropropene	75	12.658	12.660	-0.002	96	1089547	4.00	4.23	
65 Toluene	91	12.798	12.795	0.003	93	2321715	4.00	3.97	
66 1,1,2-Trichloroethane	83	12.852	12.853	-0.001	99	646119	4.00	4.01	
69 2-Hexanone	58	13.300	13.313	-0.013	98	664344	4.00	4.76	
70 Chlorodibromomethane	129	13.580	13.580	0.000	98	1429129	4.00	4.64	
71 n-Octane	85	13.618	13.618	0.000	84	761888	4.00	4.05	
72 Ethylene Dibromide	107	13.877	13.876	0.001	98	1225652	4.00	4.26	
73 Tetrachloroethene	129	14.006	14.005	0.001	96	873561	4.00	4.01	
74 Chlorobenzene	112	14.912	14.910	0.002	93	1821596	4.00	3.96	
76 Ethylbenzene	91	15.236	15.237	-0.001	99	3061101	4.00	4.00	
77 m-Xylene & p-Xylene	91	15.414	15.413	0.001	99	4717005	8.00	7.95	
79 Bromoform	173	15.813	15.812	0.001	96	1265260	4.00	4.78	
80 Styrene	104	15.883	15.884	-0.001	98	1722436	4.00	4.55	
81 n-Nonane	57	15.926	15.926	0.000	82	1266112	4.00	3.96	
82 o-Xylene	91	15.948	15.948	0.000	98	2421285	4.00	3.87	
83 1,1,2,2-Tetrachloroethane	83	16.266	16.269	-0.003	99	1361818	4.00	3.63	
84 1,2,3-Trichloropropane	110	16.422	16.424	-0.002	98	537694	4.00	3.96	
85 Isopropylbenzene	105	16.568	16.566	0.002	97	3271189	4.00	3.90	
86 N-Propylbenzene	120	17.145	17.144	0.001	99	953864	4.00	4.17	
87 2-Chlorotoluene	126	17.161	17.164	-0.003	93	837183	4.00	3.96	
88 4-Ethyltoluene	105	17.312	17.312	0.000	99	3621190	4.00	4.16	
89 1,3,5-Trimethylbenzene	120	17.398	17.400	-0.002	92	1454797	4.00	4.14	
90 Alpha Methyl Styrene	118	17.652	17.652	0.000	87	1426907	4.00	4.70	
91 n-Decane	57	17.792	17.793	-0.001	94	1860379	4.00	4.28	
92 tert-Butylbenzene	119	17.867	17.868	-0.001	91	3259179	4.00	3.99	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
93 1,2,4-Trimethylbenzene	105	17.883	17.884	-0.001	96	2988133	4.00	4.08	
94 1,3-Dichlorobenzene	146	18.153	18.153	0.000	99	1945670	4.00	4.13	
95 sec-Butylbenzene	105	18.169	18.170	-0.001	98	4304932	4.00	4.10	
96 Benzyl chloride	91	18.234	18.237	-0.003	98	2678333	4.00	4.87	
97 1,4-Dichlorobenzene	146	18.250	18.251	-0.001	92	1937249	4.00	4.13	
98 4-Isopropyltoluene	119	18.358	18.358	0.000	96	3937880	4.00	4.27	
99 1,2,3-Trimethylbenzene	105	18.396	18.393	0.003	97	3399572	4.00	4.09	
101 1,2-Dichlorobenzene	146	18.638	18.638	0.000	94	1905685	4.00	4.17	
104 n-Butylbenzene	91	18.833	18.832	0.001	99	3720801	4.00	4.52	
105 Undecane	57	19.226	19.228	-0.002	92	2179717	4.00	4.64	
106 1,2-Dibromo-3-Chloropropan	157	19.280	19.284	-0.004	98	1308310	4.00	4.68	
108 1,2,4,5-Tetramethylbenzene	119	19.641	19.641	0.000	96	2053724	4.00	4.56	
111 Dodecane	57	20.337	20.340	-0.003	98	2170914	4.00	4.93	
112 1,2,4-Trichlorobenzene	180	20.445	20.445	0.000	94	1765909	4.00	5.16	
113 Naphthalene	128	20.574	20.574	0.000	99	4017474	4.00	5.28	
115 Hexachlorobutadiene	225	20.828	20.827	0.001	96	1713702	4.00	4.58	
116 1,2,3-Trichlorobenzene	180	20.865	20.864	0.001	94	1650977	4.00	4.77	
117 2-Methylnaphthalene	142	21.680	21.680	0.000	99	2230513	9.20	11.9	
118 1-Methylnaphthalene	142	21.820	21.823	-0.003	99	2273024	9.20	12.2	
S 119 Xylenes, Total	100				0		12.0	11.8	
S 120 1,2-Dichloroethene, Total	1				0		8.00	7.76	

Reagents:

40L8DNP_00016

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC08.D

Injection Date: 30-Jan-2018 18:03:30

Instrument ID: MR

Operator ID:

Lims ID: IC L8

Worklist Smp#: 10

Client ID:

Purge Vol: 500.000 mL

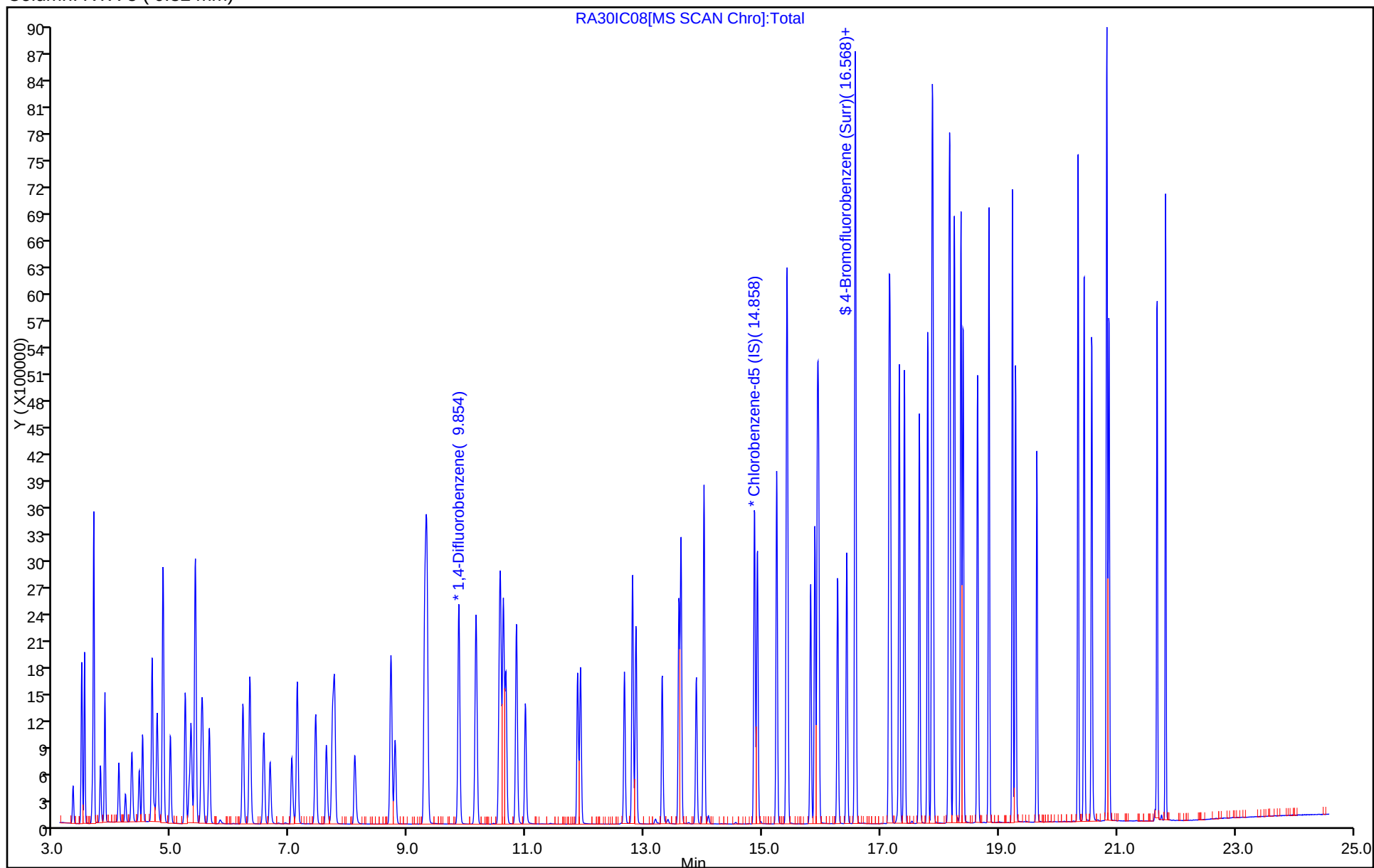
Dil. Factor: 1.0000

ALS Bottle#: 13

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC09.D
 Lims ID: IC L9
 Client ID:
 Sample Type: IC Calib Level: 9
 Inject. Date: 30-Jan-2018 18:50:30 ALS Bottle#: 14 Worklist Smp#: 11
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0007236-011
 Misc. Info.: 134508
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub13
 Method: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 05-Feb-2018 13:03:33 Calib Date: 30-Jan-2018 19:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa

Date: 30-Jan-2018 19:34:59

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.724	7.710	0.014	81	409398	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.860	9.852	0.008	95	2463428	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.864	14.859	0.005	88	2133724	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.573	16.570	0.003	88	1531137	4.00	3.78	
6 Chlorodifluoromethane	67	3.470	3.471	-0.001	95	373011	8.00	7.47	
7 Propene	41	3.475	3.477	-0.002	97	698857	8.00	7.14	
8 Dichlorodifluoromethane	85	3.518	3.519	-0.001	100	2777340	8.00	7.23	
9 Chloromethane	52	3.658	3.653	0.005	99	239224	8.00	6.83	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.680	3.675	0.005	92	1877362	8.00	7.21	
12 Vinyl chloride	62	3.793	3.789	0.004	99	789520	8.00	7.35	
13 Butane	43	3.869	3.863	0.006	90	873129	8.00	7.59	
14 Butadiene	54	3.869	3.863	0.006	93	526420	8.00	7.60	
15 Bromomethane	94	4.106	4.098	0.008	98	764670	8.00	7.70	
16 Chloroethane	64	4.219	4.208	0.011	98	369095	8.00	7.59	
17 Ethanol	31	4.327	4.313	0.014	91	1162228	40.0	37.9	
18 Vinyl bromide	106	4.451	4.441	0.010	97	739337	8.00	7.59	
19 2-Methylbutane	43	4.505	4.498	0.007	82	602150	8.00	7.43	
20 Acrolein	56	4.661	4.656	0.005	96	193944	8.00	8.58	
21 Trichlorofluoromethane	101	4.667	4.659	0.008	99	2671794	8.00	7.32	
22 Acetonitrile	40	4.710	4.713	-0.003	97	212047	8.00	7.62	
23 Acetone	58	4.753	4.748	0.005	99	874182	24.0	20.4	
24 Isopropyl alcohol	45	4.856	4.843	0.013	81	3554966	24.0	21.6	
25 Pentane	72	4.856	4.847	0.009	75	205846	8.00	7.21	
26 Ethyl ether	31	4.974	4.975	-0.001	76	726094	8.00	7.03	
27 1,1-Dichloroethene	96	5.233	5.218	0.015	97	1133673	8.00	7.31	
28 Acrylonitrile	53	5.298	5.288	0.010	94	735807	8.00	7.52	
29 2-Methyl-2-propanol	59	5.330	5.325	0.005	93	2316983	8.00	7.51	
30 1,1,2-Trichloro-1,2,2-trif	101	5.400	5.390	0.010	97	2438487	8.00	7.36	
31 Methylene Chloride	84	5.508	5.492	0.016	89	1033868	8.00	6.46	
32 3-Chloro-1-propene	39	5.524	5.514	0.010	95	964101	8.00	7.49	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.637	5.625	0.012	98	3227149	8.00	7.53	
34 trans-1,2-Dichloroethene	96	6.209	6.192	0.017	98	1206934	8.00	7.67	
36 Methyl tert-butyl ether	73	6.322	6.323	-0.001	94	3723922	8.00	7.68	
37 1,1-Dichloroethane	63	6.560	6.545	0.015	100	2160451	8.00	7.21	
38 Vinyl acetate	43	6.667	6.662	0.005	99	2517397	8.00	8.69	
39 2-Butanone (MEK)	72	7.029	7.036	-0.007	97	573697	8.00	7.73	
40 Hexane	56	7.126	7.119	0.007	84	869891	8.00	7.25	
41 cis-1,2-Dichloroethene	96	7.439	7.426	0.013	95	1252882	8.00	7.43	
42 Ethyl acetate	43	7.616	7.622	-0.006	99	2125431	8.00	8.18	
43 Chloroform	83	7.757	7.743	0.014	96	2787766	8.00	7.36	
44 Tetrahydrofuran	42	8.096	8.108	-0.012	84	998545	8.00	7.54	
45 1,1,1-Trichloroethane	97	8.711	8.701	0.010	95	3097922	8.00	7.78	
46 1,2-Dichloroethane	62	8.781	8.771	0.010	99	2013816	8.00	7.73	
47 Benzene	78	9.283	9.274	0.009	97	3386082	8.00	7.19	
48 n-Butanol	31	9.272	9.296	-0.024	56	270253	8.00	8.68	
49 Cyclohexane	69	9.304	9.298	0.006	94	546616	8.00	7.23	
50 Carbon tetrachloride	117	9.320	9.312	0.008	97	3073958	8.00	8.10	
53 Isooctane	57	10.151	10.145	0.006	97	5099511	8.00	7.47	
54 1,2-Dichloropropane	63	10.545	10.540	0.005	86	1201630	8.00	7.34	
55 n-Heptane	71	10.566	10.561	0.005	81	1232469	8.00	7.55	
56 Trichloroethene	130	10.615	10.605	0.010	94	1689959	8.00	7.60	
57 Dibromomethane	93	10.658	10.648	0.010	94	1514919	8.00	7.82	
58 Dichlorobromomethane	83	10.836	10.825	0.011	99	2919706	8.00	8.41	
59 1,4-Dioxane	88	10.841	10.851	-0.010	81	547334	8.00	7.89	
60 Methyl methacrylate	41	10.987	10.990	-0.003	96	1346179	8.00	8.71	
62 4-Methyl-2-pentanone (MIBK)	43	11.866	11.878	-0.012	93	2198186	8.00	8.33	
63 cis-1,3-Dichloropropene	75	11.920	11.915	0.005	92	2237825	8.00	8.27	
64 trans-1,3-Dichloropropene	75	12.664	12.660	0.004	96	2203158	8.00	8.52	
65 Toluene	91	12.799	12.795	0.004	94	4431626	8.00	7.54	
66 1,1,2-Trichloroethane	83	12.858	12.853	0.005	98	1239731	8.00	7.66	
69 2-Hexanone	58	13.300	13.313	-0.013	98	1277875	8.00	9.12	
70 Chlorodibromomethane	129	13.586	13.580	0.006	97	2886064	8.00	9.32	
71 n-Octane	85	13.618	13.618	0.000	83	1455739	8.00	7.70	
72 Ethylene Dibromide	107	13.877	13.876	0.001	98	2401387	8.00	8.31	
73 Tetrachloroethene	129	14.006	14.005	0.001	96	1680400	8.00	7.67	
74 Chlorobenzene	112	14.912	14.910	0.002	93	3488920	8.00	7.54	
76 Ethylbenzene	91	15.241	15.237	0.004	99	5752584	8.00	7.48	
77 m-Xylene & p-Xylene	91	15.414	15.413	0.001	99	8622122	16.0	14.5	
79 Bromoform	173	15.813	15.812	0.001	96	2664358	8.00	10.0	
80 Styrene	104	15.883	15.884	-0.001	98	3357063	8.00	8.83	
81 n-Nonane	57	15.926	15.926	0.000	83	2276291	8.00	7.08	
82 o-Xylene	91	15.948	15.948	0.000	98	4507688	8.00	7.16	
83 1,1,2,2-Tetrachloroethane	83	16.271	16.269	0.002	99	2991028	8.00	7.94	
84 1,2,3-Trichloropropane	110	16.428	16.424	0.004	98	1028585	8.00	7.54	
85 Isopropylbenzene	105	16.568	16.566	0.002	98	6052009	8.00	7.19	
86 N-Propylbenzene	120	17.145	17.144	0.001	98	1764153	8.00	7.67	
87 2-Chlorotoluene	126	17.166	17.164	0.002	95	1556290	8.00	7.32	
88 4-Ethyltoluene	105	17.312	17.312	0.000	98	6577901	8.00	7.52	
89 1,3,5-Trimethylbenzene	120	17.404	17.400	0.004	92	2700808	8.00	7.65	
90 Alpha Methyl Styrene	118	17.652	17.652	0.000	87	2696582	8.00	8.84	
91 n-Decane	57	17.797	17.793	0.004	94	3283161	8.00	7.52	
92 tert-Butylbenzene	119	17.867	17.868	-0.001	91	5901403	8.00	7.19	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
93 1,2,4-Trimethylbenzene	105	17.884	17.884	0.000	96	5281375	8.00	7.18	
94 1,3-Dichlorobenzene	146	18.153	18.153	0.000	99	3580637	8.00	7.57	
95 sec-Butylbenzene	105	18.175	18.170	0.005	97	7478024	8.00	7.09	
96 Benzyl chloride	91	18.239	18.237	0.002	98	4696324	8.00	8.49	
97 1,4-Dichlorobenzene	146	18.250	18.251	-0.001	95	3530827	8.00	7.48	
98 4-Isopropyltoluene	119	18.358	18.358	0.000	96	7094422	8.00	7.65	
99 1,2,3-Trimethylbenzene	105	18.396	18.393	0.003	98	6090386	8.00	7.29	
101 1,2-Dichlorobenzene	146	18.638	18.638	0.000	94	3481297	8.00	7.58	
104 n-Butylbenzene	91	18.833	18.832	0.001	98	6600625	8.00	7.98	
105 Undecane	57	19.226	19.228	-0.002	91	3897040	8.00	8.24	
106 1,2-Dibromo-3-Chloropropan	157	19.286	19.284	0.002	98	2624159	8.00	9.34	
108 1,2,4,5-Tetramethylbenzene	119	19.641	19.641	0.000	97	3986557	8.00	8.80	
111 Dodecane	57	20.342	20.340	0.002	97	3963852	8.00	8.96	
112 1,2,4-Trichlorobenzene	180	20.445	20.445	0.000	94	3591958	8.00	10.4	
113 Naphthalene	128	20.574	20.574	0.000	98	7879181	8.00	10.3	
115 Hexachlorobutadiene	225	20.828	20.827	0.001	96	3312283	8.00	8.80	
116 1,2,3-Trichlorobenzene	180	20.866	20.864	0.002	95	3409456	8.00	9.79	
117 2-Methylnaphthalene	142	21.680	21.680	0.000	99	4666996	18.4	24.8	
118 1-Methylnaphthalene	142	21.825	21.823	0.002	99	4705374	18.4	25.2	
S 119 Xylenes, Total	100				0		24.0	21.6	
S 120 1,2-Dichloroethene, Total	1				0		16.0	15.1	

Reagents:

40L9DNP_00019

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC09.D

Injection Date: 30-Jan-2018 18:50:30

Instrument ID: MR

Operator ID:

Lims ID: IC L9

Worklist Smp#: 11

Client ID:

Purge Vol: 500.000 mL

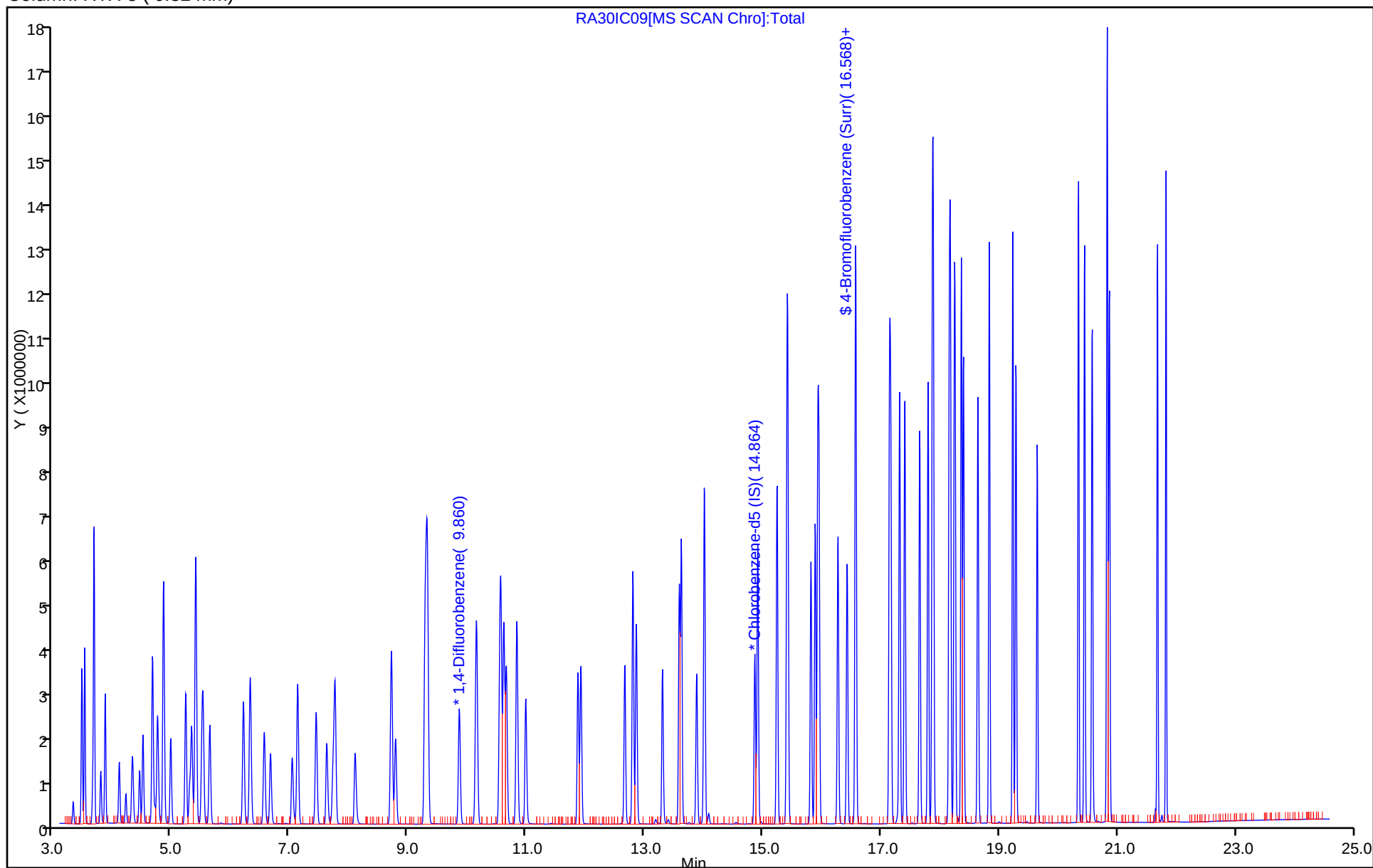
Dil. Factor: 1.0000

ALS Bottle#: 14

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D
 Lims ID: IC L10
 Client ID:
 Sample Type: IC Calib Level: 10
 Inject. Date: 30-Jan-2018 19:38:30 ALS Bottle#: 15 Worklist Smp#: 12
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0007236-012
 Misc. Info.: 134507
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub13
 Method: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 05-Feb-2018 13:03:37 Calib Date: 30-Jan-2018 19:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa

Date: 31-Jan-2018 16:10:49

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.724	7.710	0.014	91	412046	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.860	9.852	0.008	94	2495007	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.864	14.859	0.005	87	2168094	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.573	16.570	0.003	93	1466410	4.00	3.57	
6 Chlorodifluoromethane	67	3.453	3.471	-0.018	97	719553	16.0	14.3	
7 Propene	41	3.464	3.477	-0.013	96	1277376	16.0	13.0	
8 Dichlorodifluoromethane	85	3.507	3.519	-0.012	100	5412793	16.0	14.0	
9 Chloromethane	52	3.648	3.653	-0.005	99	462204	16.0	13.1	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.669	3.675	-0.006	91	3561275	16.0	13.6	
12 Vinyl chloride	62	3.782	3.789	-0.007	99	1447608	16.0	13.4	
13 Butane	43	3.858	3.863	-0.005	78	1618667	16.0	14.0	
14 Butadiene	54	3.858	3.863	-0.005	79	990068	16.0	14.2	
15 Bromomethane	94	4.095	4.098	-0.003	98	1458793	16.0	14.6	
16 Chloroethane	64	4.214	4.208	0.006	99	704038	16.0	14.4	
17 Ethanol	31	4.332	4.313	0.019	91	2165410	80.0	70.1	
18 Vinyl bromide	106	4.446	4.441	0.005	97	1433559	16.0	14.6	
19 2-Methylbutane	43	4.500	4.498	0.002	81	1164068	16.0	14.3	
20 Acrolein	56	4.661	4.656	0.005	96	327310	16.0	14.4	
21 Trichlorofluoromethane	101	4.661	4.659	0.002	99	5028632	16.0	13.7	
22 Acetonitrile	40	4.710	4.713	-0.003	96	414724	16.0	14.8	
23 Acetone	58	4.753	4.748	0.005	99	1641135	48.0	38.1	
24 Isopropyl alcohol	45	4.861	4.843	0.018	93	6176210	48.0	37.3	
25 Pentane	72	4.850	4.847	0.003	96	368799	16.0	12.8	
26 Ethyl ether	31	4.974	4.975	-0.001	75	1351034	16.0	13.0	
27 1,1-Dichloroethene	96	5.228	5.218	0.010	97	2191529	16.0	14.0	
28 Acrylonitrile	53	5.298	5.288	0.010	93	1416916	16.0	14.4	
29 2-Methyl-2-propanol	59	5.335	5.325	0.010	92	4364855	16.0	14.1	
30 1,1,2-Trichloro-1,2,2-trif	101	5.395	5.390	0.005	96	4568598	16.0	13.7	
31 Methylene Chloride	84	5.503	5.492	0.011	89	1959635	16.0	12.2	
32 3-Chloro-1-propene	39	5.524	5.514	0.010	95	1802055	16.0	13.9	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.632	5.625	0.007	98	6249903	16.0	14.5	
34 trans-1,2-Dichloroethene	96	6.209	6.192	0.017	99	2342499	16.0	14.8	
36 Methyl tert-butyl ether	73	6.317	6.323	-0.006	94	7130125	16.0	14.6	
37 1,1-Dichloroethane	63	6.560	6.545	0.015	100	4150884	16.0	13.8	
38 Vinyl acetate	43	6.667	6.662	0.005	99	4862704	16.0	16.7	
39 2-Butanone (MEK)	72	7.034	7.036	-0.002	97	1092853	16.0	14.6	
40 Hexane	56	7.126	7.119	0.007	84	1626366	16.0	13.5	
41 cis-1,2-Dichloroethene	96	7.438	7.426	0.012	94	2442184	16.0	14.4	
42 Ethyl acetate	43	7.616	7.622	-0.006	99	4096409	16.0	15.7	
43 Chloroform	83	7.757	7.743	0.014	97	5369459	16.0	14.1	
44 Tetrahydrofuran	42	8.096	8.108	-0.012	83	1922640	16.0	14.4	
45 1,1,1-Trichloroethane	97	8.711	8.701	0.010	96	5978105	16.0	14.9	
46 1,2-Dichloroethane	62	8.781	8.771	0.010	99	3907140	16.0	14.8	
47 Benzene	78	9.283	9.274	0.009	97	6108554	16.0	12.8	
48 n-Butanol	31	9.272	9.296	-0.024	65	506348	16.0	16.1	
49 Cyclohexane	69	9.304	9.298	0.006	92	968821	16.0	12.7	
50 Carbon tetrachloride	117	9.320	9.312	0.008	98	5902097	16.0	15.4	
53 Isooctane	57	10.151	10.145	0.006	97	9340512	16.0	13.5	
54 1,2-Dichloropropane	63	10.544	10.540	0.004	85	2196910	16.0	13.2	
55 n-Heptane	71	10.566	10.561	0.005	79	2239236	16.0	13.6	
56 Trichloroethene	130	10.615	10.605	0.010	96	3246702	16.0	14.4	
57 Dibromomethane	93	10.658	10.648	0.010	94	2859943	16.0	14.6	
58 Dichlorobromomethane	83	10.836	10.825	0.011	99	5610234	16.0	16.0	
59 1,4-Dioxane	88	10.846	10.851	-0.005	81	995848	16.0	14.2	
60 Methyl methacrylate	41	10.987	10.990	-0.003	96	2607373	16.0	16.7	
62 4-Methyl-2-pentanone (MIBK)	43	11.871	11.878	-0.007	92	4112261	16.0	15.4	
63 cis-1,3-Dichloropropene	75	11.920	11.915	0.005	92	4235998	16.0	15.5	
64 trans-1,3-Dichloropropene	75	12.664	12.660	0.004	97	4251750	16.0	16.2	
65 Toluene	91	12.798	12.795	0.003	94	8226314	16.0	13.8	
66 1,1,2-Trichloroethane	83	12.858	12.853	0.005	98	2316335	16.0	14.1	
69 2-Hexanone	58	13.300	13.313	-0.013	98	2400790	16.0	16.9	
70 Chlorodibromomethane	129	13.586	13.580	0.006	97	5563126	16.0	17.7	
71 n-Octane	85	13.624	13.618	0.006	81	2665696	16.0	13.9	
72 Ethylene Dibromide	107	13.882	13.876	0.006	98	4533785	16.0	15.4	
73 Tetrachloroethene	129	14.012	14.005	0.007	96	3162320	16.0	14.2	
74 Chlorobenzene	112	14.912	14.910	0.002	92	6524458	16.0	13.9	
76 Ethylbenzene	91	15.241	15.237	0.004	98	10356375	16.0	13.3	
77 m-Xylene & p-Xylene	91	15.419	15.413	0.006	97	14832360	32.0	24.5	
79 Bromoform	173	15.813	15.812	0.001	96	5289308	16.0	19.5	
80 Styrene	104	15.888	15.884	0.004	98	6305273	16.0	16.3	
81 n-Nonane	57	15.926	15.926	0.000	81	3925374	16.0	12.0	
82 o-Xylene	91	15.953	15.948	0.005	98	8018750	16.0	12.5	
83 1,1,2,2-Tetrachloroethane	83	16.271	16.269	0.002	98	5403129	16.0	14.1	
84 1,2,3-Trichloropropane	110	16.428	16.424	0.004	97	1952171	16.0	14.1	
85 Isopropylbenzene	105	16.568	16.566	0.002	98	10798333	16.0	12.6	
86 N-Propylbenzene	120	17.145	17.144	0.001	98	3199258	16.0	13.7	
87 2-Chlorotoluene	126	17.166	17.164	0.002	95	2818704	16.0	13.0	
88 4-Ethyltoluene	105	17.312	17.312	0.000	97	11626420	16.0	13.1	
89 1,3,5-Trimethylbenzene	120	17.404	17.400	0.004	93	4953675	16.0	13.8	
90 Alpha Methyl Styrene	118	17.652	17.652	0.000	89	4958200	16.0	16.0	
91 n-Decane	57	17.797	17.793	0.004	95	5508017	16.0	12.4	
92 tert-Butylbenzene	119	17.873	17.868	0.005	89	10252438	16.0	12.3	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
93 1,2,4-Trimethylbenzene	105	17.889	17.884	0.005	96	9006683	16.0	12.0	
94 1,3-Dichlorobenzene	146	18.153	18.153	0.000	98	6390995	16.0	13.3	
95 sec-Butylbenzene	105	18.175	18.170	0.005	98	12393102	16.0	11.6	
96 Benzyl chloride	91	18.239	18.237	0.002	98	7883232	16.0	14.0	
97 1,4-Dichlorobenzene	146	18.256	18.251	0.005	93	6311344	16.0	13.2	
98 4-Isopropyltoluene	119	18.358	18.358	0.000	95	11859110	16.0	12.6	
99 1,2,3-Trimethylbenzene	105	18.396	18.393	0.003	97	10662003	16.0	12.6	
101 1,2-Dichlorobenzene	146	18.638	18.638	0.000	93	6299641	16.0	13.5	
104 n-Butylbenzene	91	18.833	18.832	0.001	98	10895604	16.0	13.0	
105 Undecane	57	19.232	19.228	0.004	88	6317836	16.0	13.2	
106 1,2-Dibromo-3-Chloropropan	157	19.285	19.284	0.001	98	4681454	16.0	16.4	
108 1,2,4,5-Tetramethylbenzene	119	19.641	19.641	0.000	97	7226247	16.0	15.7	
111 Dodecane	57	20.342	20.340	0.002	94	5984092	16.0	13.3	
112 1,2,4-Trichlorobenzene	180	20.445	20.445	0.000	94	6399037	16.0	18.3	
113 Naphthalene	128	20.574	20.574	0.000	97	13166564	16.0	16.9	
115 Hexachlorobutadiene	225	20.828	20.827	0.001	96	5838950	16.0	15.3	
116 1,2,3-Trichlorobenzene	180	20.865	20.864	0.001	94	6110654	16.0	17.3	
117 2-Methylnaphthalene	142	21.680	21.680	0.000	99	6724954	36.8	35.2	
118 1-Methylnaphthalene	142	21.825	21.823	0.002	98	6700143	36.8	35.3	
S 119 Xylenes, Total	100				0		48.0	37.0	
S 120 1,2-Dichloroethene, Total	1				0		32.0	29.2	

Reagents:

40L10DNP_00001

Amount Added: 200.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D

Injection Date: 30-Jan-2018 19:38:30

Instrument ID: MR

Operator ID:

Lims ID: IC L10

Worklist Smp#: 12

Client ID:

Purge Vol: 500.000 mL

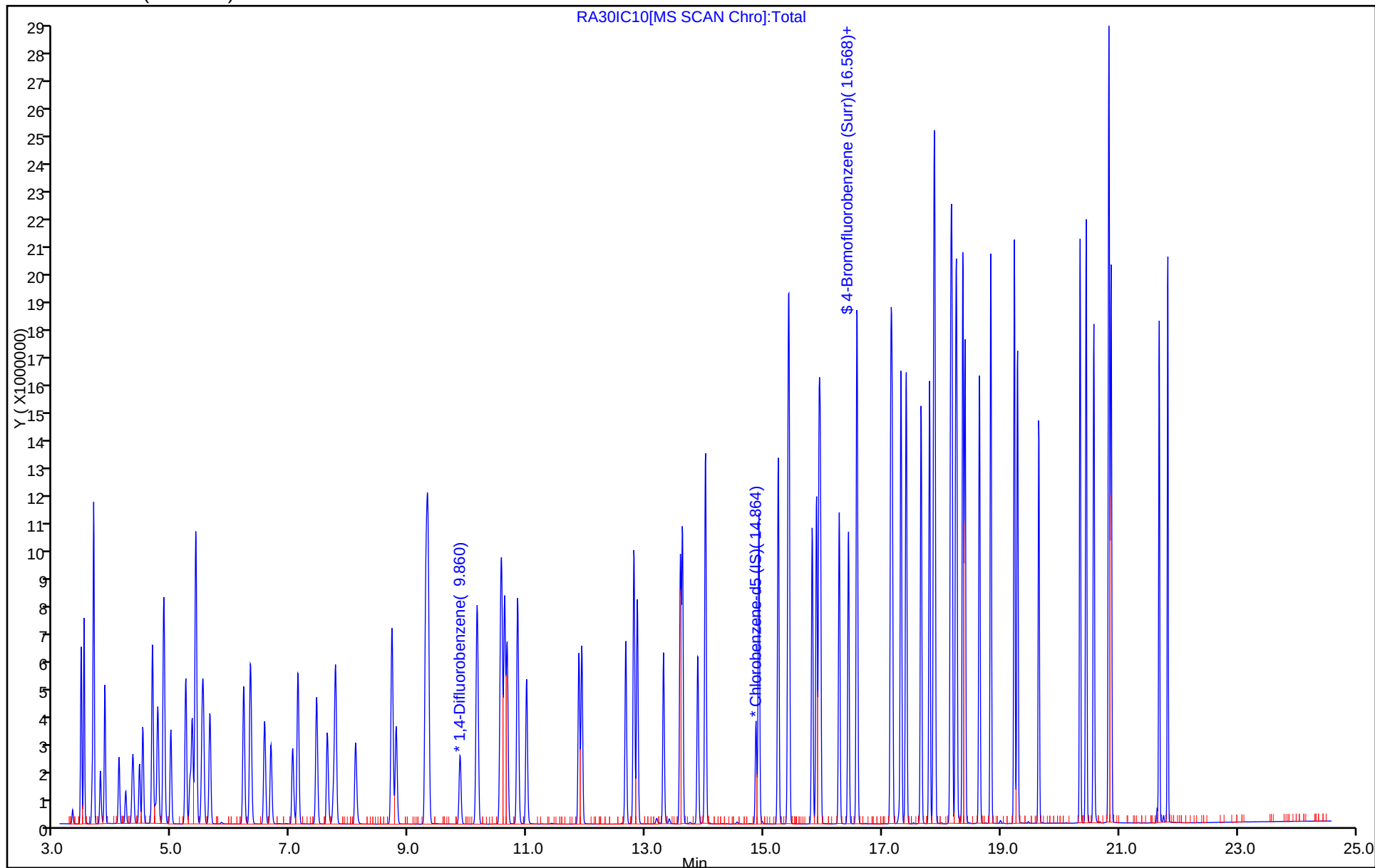
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Lab Sample ID (1): CCVIS 140-19179/2 Instrument ID (1): MR
 GC Column (1): RTX-5 ID: 0.32 (mm) Date Analyzed (1): 04/03/2018 10:10

ANALYTE	RT	RESOLUTION (%)
Dichlorodifluoromethane	3.51	100.0
Chloromethane	3.64	100.0
1,2-Dichlorotetrafluoroethane	3.66	100.0
Vinyl chloride	3.78	100.0
Bromomethane	4.08	100.0
Chloroethane	4.19	100.0
Ethanol	4.30	100.0
Trichlorofluoromethane	4.64	100.0
1,1-Dichloroethene	5.20	100.0
t-Butyl alcohol	5.29	100.0
1,1,2-Trichlorotrifluoroethane	5.36	100.0
Methylene Chloride	5.47	100.0
trans-1,2-Dichloroethene	6.16	100.0
Methyl tert-butyl ether	6.29	100.0
1,1-Dichloroethane	6.51	100.0
2-Butanone	6.99	100.0
Hexane	7.08	100.0
cis-1,2-Dichloroethene	7.39	100.0
Chloroform	7.70	100.0
1,1,1-Trichloroethane	8.66	100.0
1,2-Dichloroethane	8.73	100.0
Benzene	9.23	100.0
Cyclohexane	9.26	100.0
Carbon tetrachloride	9.27	100.0
2,2,4-Trimethylpentane	10.10	100.0
1,2-Dichloropropane	10.50	100.0
Trichloroethene	10.56	100.0
Bromodichloromethane	10.79	100.0
1,4-Dioxane	10.79	100.0
4-Methyl-2-pentanone (MIBK)	11.83	100.0
cis-1,3-Dichloropropene	11.87	100.0
trans-1,3-Dichloropropene	12.62	100.0
Toluene	12.76	100.0
1,1,2-Trichloroethane	12.82	100.0
Dibromochloromethane	13.54	100.0
1,2-Dibromoethane	13.84	100.0
Tetrachloroethene	13.97	100.0
Chlorobenzene	14.88	100.0
Ethylbenzene	15.21	100.0
m-Xylene & p-Xylene	15.38	100.0
Bromoform	15.78	100.0
Styrene	15.86	100.0
o-Xylene	15.92	100.0
1,1,2,2-Tetrachloroethane	16.24	100.0
4-Bromofluorobenzene (Surr)	16.54	100.0

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
SDG No.: _____
Lab Sample ID (1): CCVIS 140-19179/2 Instrument ID (1): MR
GC Column (1): RTX-5 ID: 0.32 (mm) Date Analyzed (1): 04/03/2018 10:10

ANALYTE	RT	RESOLUTION (%)
1,3,5-Trimethylbenzene	17.37	100.0
1,2,4-Trimethylbenzene	17.86	100.0
1,3-Dichlorobenzene	18.13	100.0
Benzyl chloride	18.21	100.0
1,4-Dichlorobenzene	18.22	100.0
1,2-Dichlorobenzene	18.61	100.0
1,2,4-Trichlorobenzene	20.42	100.0
Hexachlorobutadiene	20.81	100.0

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Lab Sample ID (1): LCS 140-19179/1002 Instrument ID (1): MR
 GC Column (1): RTX-5 ID: 0.32 (mm) Date Analyzed (1): 04/03/2018 10:10

ANALYTE	RT	RESOLUTION (%)
Dichlorodifluoromethane	3.51	100.0
Chloromethane	3.64	100.0
1,2-Dichlorotetrafluoroethane	3.66	100.0
Vinyl chloride	3.78	100.0
Bromomethane	4.08	100.0
Chloroethane	4.19	100.0
Ethanol	4.30	100.0
Trichlorofluoromethane	4.64	100.0
1,1-Dichloroethene	5.20	100.0
t-Butyl alcohol	5.29	100.0
1,1,2-Trichlorotrifluoroethane	5.36	100.0
Methylene Chloride	5.47	100.0
trans-1,2-Dichloroethene	6.16	100.0
Methyl tert-butyl ether	6.29	100.0
1,1-Dichloroethane	6.51	100.0
2-Butanone	6.99	100.0
Hexane	7.08	100.0
cis-1,2-Dichloroethene	7.39	100.0
Chloroform	7.70	100.0
1,1,1-Trichloroethane	8.66	100.0
1,2-Dichloroethane	8.73	100.0
Benzene	9.23	100.0
Cyclohexane	9.26	100.0
Carbon tetrachloride	9.27	100.0
2,2,4-Trimethylpentane	10.10	100.0
1,2-Dichloropropane	10.50	100.0
Trichloroethene	10.56	100.0
Bromodichloromethane	10.79	100.0
1,4-Dioxane	10.79	100.0
4-Methyl-2-pentanone (MIBK)	11.83	100.0
cis-1,3-Dichloropropene	11.87	100.0
trans-1,3-Dichloropropene	12.62	100.0
Toluene	12.76	100.0
1,1,2-Trichloroethane	12.82	100.0
Dibromochloromethane	13.54	100.0
1,2-Dibromoethane	13.84	100.0
Tetrachloroethene	13.97	100.0
Chlorobenzene	14.88	100.0
Ethylbenzene	15.21	100.0
m-Xylene & p-Xylene	15.38	100.0
Bromoform	15.78	100.0
Styrene	15.86	100.0
o-Xylene	15.92	100.0
1,1,2,2-Tetrachloroethane	16.24	100.0
4-Bromofluorobenzene (Surr)	16.54	100.0

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
SDG No.: _____
Lab Sample ID (1): LCS 140-19179/1002 Instrument ID (1): MR
GC Column (1): RTX-5 ID: 0.32 (mm) Date Analyzed (1): 04/03/2018 10:10

ANALYTE	RT	RESOLUTION (%)
1,3,5-Trimethylbenzene	17.37	100.0
1,2,4-Trimethylbenzene	17.86	100.0
1,3-Dichlorobenzene	18.13	100.0
Benzyl chloride	18.21	100.0
1,4-Dichlorobenzene	18.22	100.0
1,2-Dichlorobenzene	18.61	100.0
1,2,4-Trichlorobenzene	20.42	100.0
Hexachlorobutadiene	20.81	100.0

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Lab Sample ID (1): CCVIS 140-19215/2 Instrument ID (1): MJ
 GC Column (1): RTX-5 ID: 0.32 (mm) Date Analyzed (1): 04/04/2018 10:21

ANALYTE	RT	RESOLUTION (%)
Dichlorodifluoromethane	4.28	100.0
Chloromethane	4.49	100.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	4.49	100.0
Vinyl chloride	4.68	100.0
Bromomethane	5.14	100.0
Chloroethane	5.30	100.0
Ethanol	5.43	100.0
Trichlorofluoromethane	5.93	100.0
1,1-Dichloroethene	6.69	100.0
tert-Butyl alcohol	6.83	100.0
1,1,2-Trichloro-1,2,2-trifluoroethane	6.86	100.0
Methylene Chloride	7.05	100.0
trans-1,2-Dichloroethene	7.89	100.0
Methyl tert-butyl ether	8.03	100.0
1,1-Dichloroethane	8.33	100.0
Hexane	8.90	100.0
2-Butanone (MEK)	8.90	100.0
cis-1,2-Dichloroethene	9.33	100.0
Chloroform	9.68	100.0
1,1,1-Trichloroethane	10.70	100.0
1,2-Dichloroethane	10.81	100.0
Cyclohexane	11.27	100.0
Benzene	11.27	100.0
Carbon tetrachloride	11.29	100.0
2,2,4-Trimethylpentane	11.98	100.0
1,2-Dichloropropane	12.43	100.0
Trichloroethene	12.46	100.0
Bromodichloromethane	12.69	100.0
1,4-Dioxane	12.71	100.0
4-Methyl-2-pentanone (MIBK)	13.59	100.0
cis-1,3-Dichloropropene	13.64	100.0
trans-1,3-Dichloropropene	14.31	100.0
Toluene	14.44	100.0
1,1,2-Trichloroethane	14.51	100.0
Dibromochloromethane	15.21	100.0
1,2-Dibromoethane (EDB)	15.50	100.0
Tetrachloroethene	15.56	100.0
Chlorobenzene	16.42	100.0
Ethylbenzene	16.69	100.0
m-Xylene & p-Xylene	16.85	100.0
Styrene	17.32	100.0
Bromoform	17.32	100.0
o-Xylene	17.38	100.0
1,1,2,2-Tetrachloroethane	17.69	100.0
4-Bromofluorobenzene (Surr)	17.97	100.0

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
SDG No.: _____
Lab Sample ID (1): CCVIS 140-19215/2 Instrument ID (1): MJ
GC Column (1): RTX-5 ID: 0.32 (mm) Date Analyzed (1): 04/04/2018 10:21

ANALYTE	RT	RESOLUTION (%)
1,3,5-Trimethylbenzene	18.66	100.0
1,2,4-Trimethylbenzene	19.08	100.0
1,3-Dichlorobenzene	19.35	100.0
Benzyl chloride	19.42	100.0
1,4-Dichlorobenzene	19.43	100.0
1,2-Dichlorobenzene	19.78	100.0
1,2,4-Trichlorobenzene	21.50	100.0
Hexachlorobutadiene	21.79	100.0

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Lab Sample ID (1): LCS 140-19215/1002 Instrument ID (1): MJ
 GC Column (1): RTX-5 ID: 0.32 (mm) Date Analyzed (1): 04/04/2018 10:21

ANALYTE	RT	RESOLUTION (%)
Dichlorodifluoromethane	4.28	100.0
Chloromethane	4.49	100.0
1,2-Dichlorotetrafluoroethane	4.49	100.0
Vinyl chloride	4.68	100.0
Bromomethane	5.14	100.0
Chloroethane	5.30	100.0
Ethanol	5.43	100.0
Trichlorofluoromethane	5.93	100.0
1,1-Dichloroethene	6.69	100.0
t-Butyl alcohol	6.83	100.0
1,1,2-Trichlorotrifluoroethane	6.86	100.0
Methylene Chloride	7.05	100.0
trans-1,2-Dichloroethene	7.89	100.0
Methyl tert-butyl ether	8.03	100.0
1,1-Dichloroethane	8.33	100.0
Hexane	8.90	100.0
2-Butanone	8.90	100.0
cis-1,2-Dichloroethene	9.33	100.0
Chloroform	9.68	100.0
1,1,1-Trichloroethane	10.70	100.0
1,2-Dichloroethane	10.81	100.0
Cyclohexane	11.27	100.0
Benzene	11.27	100.0
Carbon tetrachloride	11.29	100.0
2,2,4-Trimethylpentane	11.98	100.0
1,2-Dichloropropane	12.43	100.0
Trichloroethene	12.46	100.0
Bromodichloromethane	12.69	100.0
1,4-Dioxane	12.71	100.0
4-Methyl-2-pentanone (MIBK)	13.59	100.0
cis-1,3-Dichloropropene	13.64	100.0
trans-1,3-Dichloropropene	14.31	100.0
Toluene	14.44	100.0
1,1,2-Trichloroethane	14.51	100.0
Dibromochloromethane	15.21	100.0
1,2-Dibromoethane	15.50	100.0
Tetrachloroethene	15.56	100.0
Chlorobenzene	16.42	100.0
Ethylbenzene	16.69	100.0
m-Xylene & p-Xylene	16.85	100.0
Styrene	17.32	100.0
Bromoform	17.32	100.0
o-Xylene	17.38	100.0
1,1,2,2-Tetrachloroethane	17.69	100.0
4-Bromofluorobenzene (Surr)	17.97	100.0

FORM VI
RESOLUTION CHECK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
SDG No.: _____
Lab Sample ID (1): LCS 140-19215/1002 Instrument ID (1): MJ
GC Column (1): RTX-5 ID: 0.32 (mm) Date Analyzed (1): 04/04/2018 10:21

ANALYTE	RT	RESOLUTION (%)
1,3,5-Trimethylbenzene	18.66	100.0
1,2,4-Trimethylbenzene	19.08	100.0
1,3-Dichlorobenzene	19.35	100.0
Benzyl chloride	19.42	100.0
1,4-Dichlorobenzene	19.43	100.0
1,2-Dichlorobenzene	19.78	100.0
1,2,4-Trichlorobenzene	21.50	100.0
Hexachlorobutadiene	21.79	100.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Lab Sample ID: ICV 140-18185/15 Calibration Date: 02/16/2018 00:43
 Instrument ID: MJ Calib Start Date: 05/28/2017 18:27
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 05/29/2017 00:31
 Lab File ID: JLCSB16.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Methylthiophene	Ave	0.6836	0.7003			2.00	2.5	35.0
3-Methylthiophene	Ave	0.6771	0.6848			2.00	1.1	35.0
2-Ethylthiophene	Ave	0.8046	0.7673			2.00	-4.6	35.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.7737	0.0050			2.00	-99.4*	35.0
1,2,3,5-Tetramethylbenzene	Ave	0.5914	0.4575			2.00	-22.6	35.0
1,2,3,4-Tetramethylbenzene	Ave	0.7242	0.5864			2.00	-19.0	35.0
Benzo (b) thiophene	Ave	0.3024	0.3654			2.00	20.8	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JLCSB16.D

Lims ID: ICV

Client ID:

Sample Type: ICV

Inject. Date: 16-Feb-2018 00:43:30

ALS Bottle#: 2

Worklist Smp#: 15

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Sample Info: 140-0007391-015

Misc. Info.: 140830s56

Operator ID: 403648

Instrument ID: MJ

Sublist:

Method: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\MJ_TO15.m

Limit Group: MSA TO14A_15 Routine ICAL

Last Update: 19-Feb-2018 10:35:48

Calib Date: 15-Feb-2018 22:24:30

Integrator: RTE

ID Type: Deconvolution ID

Quant Method: Internal Standard

Quant By: Initial Calibration

Last Ical File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D

Column 1 : RTX-5 (0.32 mm)

Det: MS SCAN

Process Host: XAWRK031

First Level Reviewer: barlozhetskayaa

Date: 19-Feb-2018 10:35:48

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.686	9.689	-0.003	95	287782	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.790	11.790	0.000	95	1626462	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.389	16.389	0.000	88	1472970	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.992	17.992	0.000	98	1054483	4.00	3.96	
6 Chlorodifluoromethane	67	4.199	4.202	-0.004	96	52856	2.00	1.72	
7 Propene	41	4.210	4.215	-0.006	98	150725	2.00	1.80	
8 Dichlorodifluoromethane	85	4.269	4.273	-0.005	100	486185	2.00	1.88	
9 Chloromethane	52	4.479	4.481	-0.003	98	56098	2.00	1.86	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.484	4.487	-0.005	93	334132	2.00	1.97	
11 Acetaldehyde	44	4.657	4.661	-0.005	99	280575	10.0	8.37	
12 Vinyl chloride	62	4.673	4.677	-0.006	99	196327	2.00	2.09	
13 Butadiene	54	4.775	4.775	-0.002	68	145441	2.00	1.91	
14 Butane	43	4.775	4.776	-0.002	86	271560	2.00	1.88	
15 Bromomethane	94	5.141	5.144	-0.005	99	179320	2.00	1.91	
16 Chloroethane	64	5.302	5.303	-0.002	99	99336	2.00	2.04	
17 Ethanol	31	5.420	5.433	-0.015	96	232501	10.0	6.67	
18 Vinyl bromide	106	5.636	5.639	-0.005	98	187478	2.00	2.11	
19 2-Methylbutane	43	5.689	5.692	-0.004	91	209621	2.00	1.97	
20 Trichlorofluoromethane	101	5.932	5.931	-0.001	99	497825	2.00	1.99	
21 Acrolein	56	5.942	5.948	-0.008	93	48581	2.00	1.95	
23 Acetonitrile	40	6.018	6.038	-0.022	99	53765	2.00	1.70	
22 Acetone	58	6.071	6.079	-0.010	97	59848	2.00	1.83	
24 Pentane	72	6.168	6.169	-0.003	98	31523	2.00	2.07	
25 Isopropyl alcohol	45	6.174	6.199	-0.027	92	156171	2.00	1.66	
26 Ethyl ether	31	6.346	6.361	-0.016	95	149269	2.00	1.84	
27 1,1-Dichloroethene	96	6.690	6.690	-0.002	97	187983	2.00	1.97	
28 Acrylonitrile	53	6.803	6.808	-0.006	95	105910	2.00	1.86	
30 2-Methyl-2-propanol	59	6.819	6.863	-0.046	91	155024	2.00	1.42	
29 1,1,2-Trichloro-1,2,2-trif	101	6.873	6.873	-0.002	98	405137	2.00	2.05	
32 Methylene Chloride	84	7.056	7.059	-0.005	96	180290	2.00	1.75	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
31 3-Chloro-1-propene	39	7.072	7.075	-0.005	96	161069	2.00	1.95	
33 Carbon disulfide	76	7.239	7.237	0.000	98	517232	2.00	1.87	
34 trans-1,2-Dichloroethene	96	7.900	7.900	-0.003	98	189391	2.00	1.99	
35 2-Methylpentane	43	7.917	7.915	0.000	94	397547	2.00	1.81	
36 Methyl tert-butyl ether	73	8.030	8.051	-0.023	96	388420	2.00	1.84	
37 1,1-Dichloroethane	63	8.342	8.340	-0.001	100	353986	2.00	1.98	
38 Vinyl acetate	43	8.438	8.439	-0.004	100	375167	2.00	1.84	
40 2-Butanone (MEK)	72	8.912	8.917	-0.007	96	63000	2.00	1.71	
39 Hexane	56	8.917	8.920	-0.005	83	147749	2.00	1.91	
41 Isopropyl ether	45	9.079	9.089	-0.013	97	466228	2.00	1.84	
42 cis-1,2-Dichloroethene	96	9.347	9.344	0.000	95	193567	2.00	1.99	
43 Ethyl acetate	43	9.525	9.527	-0.004	99	266871	2.00	1.64	
44 Chloroform	83	9.697	9.694	0.000	96	392560	2.00	1.90	
45 Tert-butyl ethyl ether	59	9.767	9.780	-0.015	95	408157	2.00	1.73	
46 Tetrahydrofuran	42	10.117	10.123	-0.009	93	143930	2.00	1.65	
47 1,1,1-Trichloroethane	97	10.719	10.718	-0.002	96	408866	2.00	1.91	
48 1,2-Dichloroethane	62	10.821	10.825	-0.004	98	258215	2.00	1.96	
49 Cyclohexane	69	11.284	11.287	-0.003	85	90920	2.00	1.91	
50 Benzene	78	11.289	11.291	-0.002	97	545632	2.00	1.89	
53 n-Butanol	31	11.284	11.293	-0.009	66	48337	2.00	1.72	
52 Carbon tetrachloride	117	11.306	11.310	-0.004	99	443891	2.00	2.04	
55 2,3-Dimethylpentane	71	11.381	11.384	-0.003	92	125572	2.00	1.85	
51 Thiophene	84	11.553	11.554	-0.001	95	311687	2.00	1.90	
54 Tert-amyl methyl ether	73	11.725	11.726	-0.001	98	393826	2.00	1.79	
56 Isooctane	57	11.994	11.995	-0.001	99	899009	2.00	1.94	
57 n-Heptane	71	12.338	12.342	-0.004	92	192306	2.00	1.89	
58 1,2-Dichloropropane	63	12.446	12.451	-0.005	92	210473	2.00	1.94	
59 Trichloroethene	130	12.478	12.480	-0.002	96	256708	2.00	2.02	
60 Dibromomethane	93	12.570	12.569	0.001	95	232246	2.00	1.92	
61 Dichlorobromomethane	83	12.704	12.704	0.000	99	409065	2.00	1.93	
62 1,4-Dioxane	88	12.737	12.735	0.002	89	46513	2.00	1.64	
63 Methyl methacrylate	41	12.774	12.776	-0.002	96	170709	2.00	1.73	
64 Methylcyclohexane	83	13.221	13.222	-0.001	97	418370	2.00	2.31	
65 4-Methyl-2-pentanone (MIBK)	43	13.603	13.618	-0.015	96	234460	2.00	1.57	
66 cis-1,3-Dichloropropene	75	13.656	13.659	-0.003	93	333420	2.00	1.99	
67 trans-1,3-Dichloropropene	75	14.329	14.329	0.000	97	283336	2.00	1.99	
68 Toluene	91	14.458	14.458	0.000	94	593295	2.00	1.91	
69 1,1,2-Trichloroethane	83	14.528	14.528	-0.004	98	182039	2.00	1.92	
70 2-Methylthiophene	97	14.609	14.610	-0.001	97	515793	NC	NC	
71 3-Methylthiophene	97	14.808	14.804	0.004	99	504373	NC	NC	
72 2-Hexanone	58	14.899	14.908	-0.009	93	117208	2.00	1.60	
73 n-Octane	85	15.098	15.100	-0.002	93	208214	2.00	1.93	
74 Chlorodibromomethane	129	15.227	15.227	0.000	98	435311	2.00	2.08	
75 Ethylene Dibromide	107	15.512	15.514	-0.002	98	356668	2.00	2.03	
76 Tetrachloroethene	129	15.572	15.575	-0.003	96	243703	2.00	1.98	
77 2,3-Dimethylheptane	43	16.421	16.423	-0.002	96	559200	2.00	1.77	
78 Chlorobenzene	112	16.438	16.437	0.001	94	510314	2.00	2.04	
79 Ethylbenzene	91	16.712	16.711	0.001	98	721739	2.00	1.87	
80 2-Ethylthiophene	97	16.814	16.816	-0.002	98	565099	NC	NC	
81 m-Xylene & p-Xylene	91	16.868	16.869	-0.001	100	1100192	4.00	3.81	
82 n-Nonane	57	17.250	17.252	-0.002	92	409945	2.00	1.95	
83 Styrene	104	17.331	17.331	0.000	98	446593	2.00	2.00	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Bromoform	173	17.331	17.333	-0.002	95	458593	2.00	2.04	
85 o-Xylene	91	17.390	17.391	-0.001	99	562026	2.00	1.84	
86 1,1,2,2-Tetrachloroethane	83	17.707	17.708	-0.001	99	399521	2.00	1.81	
87 1,2,3-Trichloropropane	110	17.863	17.864	-0.001	99	106172	2.00	1.83	
88 Isopropylbenzene	105	17.955	17.956	-0.001	96	767830	2.00	1.84	
89 N-Propylbenzene	120	18.460	18.462	-0.002	99	214319	2.00	1.87	
90 2-Chlorotoluene	126	18.514	18.516	-0.002	97	218133	2.00	1.96	
91 4-Ethyltoluene	105	18.600	18.602	-0.002	99	703932	2.00	1.75	
92 1,3,5-Trimethylbenzene	120	18.670	18.672	-0.002	93	349942	2.00	2.08	
93 Alpha Methyl Styrene	118	18.891	18.891	0.000	89	327456	2.00	1.87	
94 n-Decane	57	18.923	18.923	0.000	90	473704	2.00	1.90	
95 tert-Butylbenzene	119	19.079	19.079	0.000	94	651582	2.00	1.82	
96 1,2,4-Trimethylbenzene	105	19.090	19.091	-0.001	96	617444	2.00	1.83	
97 sec-Butylbenzene	105	19.337	19.337	0.000	99	902739	2.00	1.83	
98 1,3-Dichlorobenzene	146	19.359	19.363	-0.004	97	487169	2.00	1.93	
99 Benzyl chloride	91	19.429	19.431	-0.002	98	498494	2.00	1.83	
100 1,4-Dichlorobenzene	146	19.445	19.445	0.000	94	486231	2.00	1.93	
101 4-Isopropyltoluene	119	19.488	19.489	-0.001	97	724728	2.00	1.80	
102 1,2,3-Trimethylbenzene	105	19.547	19.549	-0.002	97	444708	2.00	1.35	
103 Butylcyclohexane	83	19.590	19.591	-0.001	95	552102	2.00	1.81	
104 2,3-Dihydroindene	117	19.789	19.792	-0.003	95	568264	2.00	1.80	
105 1,2-Dichlorobenzene	146	19.794	19.795	-0.001	97	453295	2.00	1.90	
106 n-Butylbenzene	91	19.907	19.907	0.000	98	710810	2.00	1.81	
107 Indene	116	19.918	19.918	0.000	89	421630	2.00	1.59	
108 Undecane	57	20.187	20.186	0.001	96	464323	2.00	1.80	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.332	20.334	-0.002	67	3679	NC	NC	
110 1,2-Dibromo-3-Chloropropan	157	20.381	20.381	0.000	97	179440	2.00	1.54	
111 1,2,4,5-Tetramethylbenzene	119	20.655	20.658	-0.003	97	563871	2.00	1.65	
112 1,2,3,5-Tetramethylbenzene	119	20.714	20.716	-0.002	96	336974	NC	NC	
113 1,2,3,4-Tetramethylbenzene	119	21.134	21.135	-0.001	98	431895	NC	NC	
114 Dodecane	57	21.268	21.268	0.000	96	354820	2.00	2.04	
115 1,2,4-Trichlorobenzene	180	21.510	21.509	0.001	93	364712	2.00	2.02	
116 Naphthalene	128	21.640	21.642	-0.002	99	539447	2.00	1.89	
117 Benzo(b)thiophene	134	21.726	21.727	-0.001	99	269084	NC	NC	
118 Hexachlorobutadiene	225	21.796	21.798	-0.002	95	334244	2.00	1.79	
119 1,2,3-Trichlorobenzene	180	21.855	21.858	-0.003	95	243492	2.00	2.12	
120 2-Methylnaphthalene	142	22.382	22.385	-0.003	100	285485	6.40	12.6	
121 1-Methylnaphthalene	142	22.511	22.509	0.002	100	317085	6.05	14.1	
A 123 C8 Range	1	15.150	(15.061-15.239)		0	3291613	2.00	3.64	
S 124 Xylenes, Total	100				0		6.00	5.65	
S 125 1,2-Dichloroethene, Total	1				0		4.00	3.98	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101S_00056

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

Report Date: 19-Feb-2018 10:35:50

Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JLCSB16.D

Injection Date: 16-Feb-2018 00:43:30

Instrument ID: MJ

Operator ID: 403648

Lims ID: ICV

Worklist Smp#: 15

Client ID:

Purge Vol: 500.000 mL

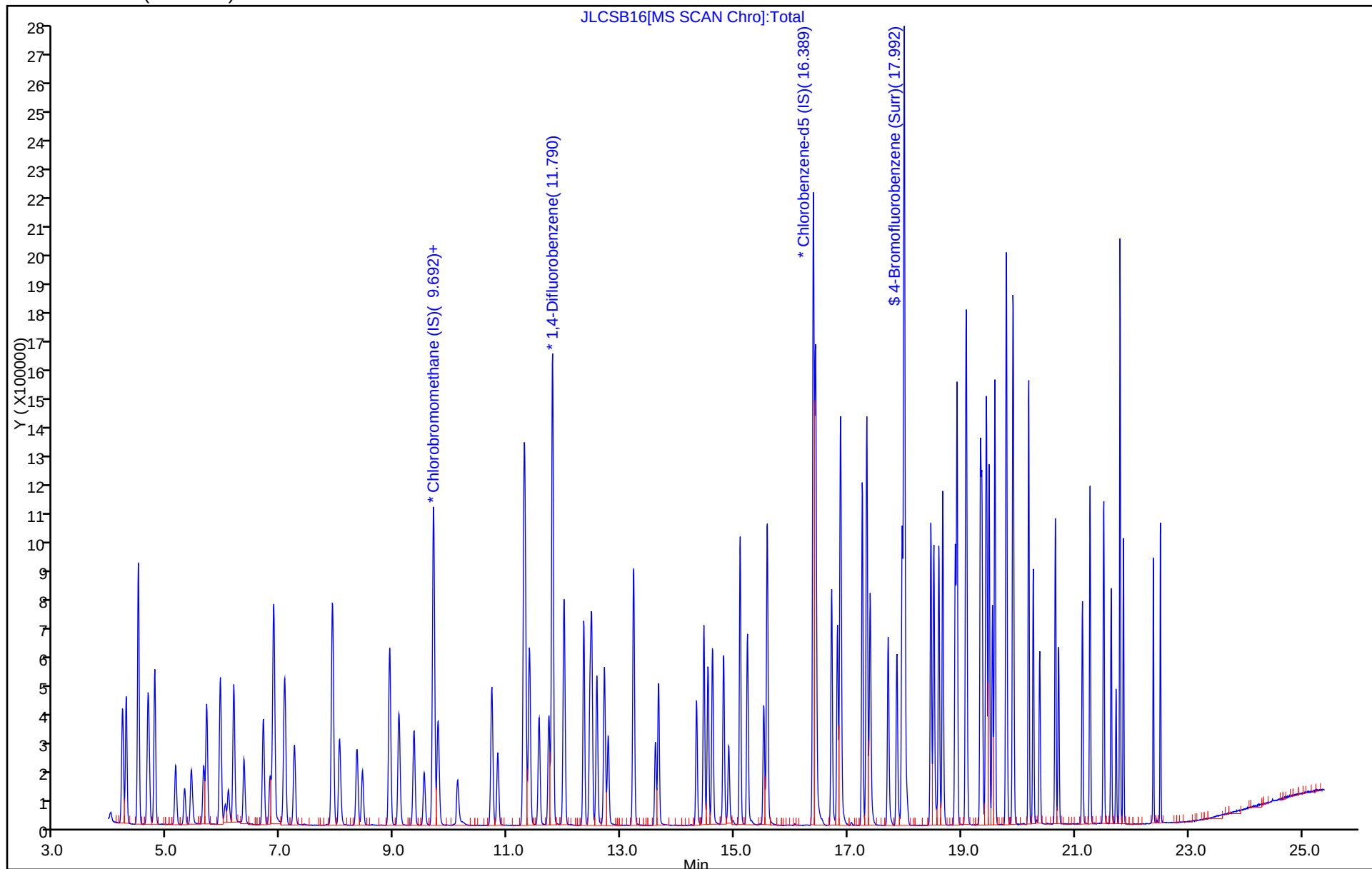
Dil. Factor: 1.0000

ALS Bottle#: 2

Method: MJ_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Lab Sample ID: ICV 140-18185/15 Calibration Date: 02/16/2018 00:43
 Instrument ID: MJ Calib Start Date: 02/15/2018 15:35
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/15/2018 22:24
 Lab File ID: JLCSB16.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4274	0.3673		1.72	2.00	-14.0	35.0
Propene	Ave	1.164	1.047		1.80	2.00	-10.0	35.0
Dichlorodifluoromethane	Ave	3.588	3.379		1.88	2.00	-5.8	35.0
Chloromethane	Ave	0.4199	0.3899		1.86	2.00	-7.2	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.352	2.322		1.97	2.00	-1.3	35.0
Acetaldehyde	Ave	0.4660	0.3900		8.37	10.0	-16.3	35.0
Vinyl chloride	Ave	1.307	1.364		2.09	2.00	4.4	35.0
1,3-Butadiene	Ave	1.057	1.011		1.91	2.00	-4.3	35.0
Butane	Ave	2.004	1.887		1.88	2.00	-5.8	35.0
Bromomethane	Ave	1.302	1.246		1.91	2.00	-4.3	35.0
Chloroethane	Ave	0.6785	0.6904		2.04	2.00	1.8	35.0
Ethanol	Ave	0.4846	0.3232		6.67	10.0	-33.3	35.0
Vinyl bromide	Ave	1.237	1.303		2.11	2.00	5.3	35.0
2-Methylbutane	Ave	1.477	1.457		1.97	2.00	-1.4	35.0
Trichlorofluoromethane	Ave	3.471	3.460		1.99	2.00	-0.3	35.0
Acrolein	Ave	0.3467	0.3376		1.95	2.00	-2.6	35.0
Acetonitrile	Ave	0.4388	0.3737		1.70	2.00	-14.8	35.0
Acetone	Ave	0.4553	0.4159			2.00	-8.7	35.0
Pentane	Ave	0.2117	0.2191		2.07	2.00	3.5	35.0
Isopropyl alcohol	Ave	1.306	1.085		1.66	2.00	-16.9	35.0
Ethyl ether	Ave	1.127	1.037		1.84	2.00	-7.9	35.0
1,1-Dichloroethene	Ave	1.324	1.306		1.97	2.00	-1.3	35.0
Acrylonitrile	Ave	0.7914	0.7360		1.86	2.00	-7.0	35.0
tert-Butyl alcohol	Lin1		1.077		1.42	2.00	-28.8	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.744	2.816		2.05	2.00	2.6	35.0
Methylene Chloride	Ave	1.433	1.253		1.75	2.00	-12.5	35.0
3-Chloropropene	Lin1		1.119		1.95	2.00	-2.7	35.0
Carbon disulfide	Ave	3.840	3.595		1.87	2.00	-6.4	35.0
trans-1,2-Dichloroethene	Ave	1.325	1.316		1.99	2.00	-0.6	35.0
2-Methylpentane	Ave	3.051	2.763		1.81	2.00	-9.5	35.0
Methyl tert-butyl ether	Ave	2.941	2.699		1.84	2.00	-8.2	35.0
1,1-Dichloroethane	Ave	2.488	2.460		1.98	2.00	-1.1	35.0
Vinyl acetate	Ave	2.838	2.607		1.84	2.00	-8.1	35.0
2-Butanone (MEK)	Ave	0.5113	0.4378		1.71	2.00	-14.4	35.0
Hexane	Ave	1.076	1.027		1.91	2.00	-4.6	35.0
Isopropyl ether	Ave	3.523	3.240		1.84	2.00	-8.0	35.0
cis-1,2-Dichloroethene	Ave	1.352	1.345		1.99	2.00	-0.5	35.0
Ethyl acetate	Ave	2.261	1.855		1.64	2.00	-18.0	35.0
Chloroform	Ave	2.865	2.728		1.90	2.00	-4.8	35.0
Tert-butyl ethyl ether	Ave	3.280	2.837		1.73	2.00	-13.5	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Lab Sample ID: ICV 140-18185/15 Calibration Date: 02/16/2018 00:43
 Instrument ID: MJ Calib Start Date: 02/15/2018 15:35
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/15/2018 22:24
 Lab File ID: JLCSB16.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.213	1.000		1.65	2.00	-17.5	35.0
1,1,1-Trichloroethane	Ave	2.982	2.842		1.91	2.00	-4.7	35.0
1,2-Dichloroethane	Ave	0.3245	0.3175		1.96	2.00	-2.1	35.0
1-Butanol	Ave	0.0692	0.0594		1.72	2.00	-14.1	35.0
Cyclohexane	Ave	0.1171	0.1118		1.91	2.00	-4.6	35.0
Benzene	Ave	0.7099	0.6709		1.89	2.00	-5.5	35.0
Carbon tetrachloride	Ave	0.5362	0.5458		2.04	2.00	1.8	35.0
2,3-Dimethylpentane	Ave	0.1667	0.1544		1.85	2.00	-7.4	35.0
Thiophene	Ave	0.4031	0.3833		1.90	2.00	-4.9	35.0
Tert-amyl methyl ether	Ave	0.5960	0.5347		1.79	2.00	-10.3	35.0
2,2,4-Trimethylpentane	Ave	1.138	1.105		1.94	2.00	-2.9	35.0
Heptane	Ave	0.2498	0.2365		1.89	2.00	-5.3	35.0
1,2-Dichloropropane	Ave	0.2670	0.2588		1.94	2.00	-3.1	35.0
Trichloroethene	Ave	0.3129	0.3157		2.02	2.00	0.9	35.0
Dibromomethane	Ave	0.2981	0.2856		1.92	2.00	-4.2	35.0
Bromodichloromethane	Ave	0.5220	0.5030		1.93	2.00	-3.6	35.0
1,4-Dioxane	Ave	0.0696	0.0572		1.64	2.00	-17.8	35.0
Methyl methacrylate	Ave	0.2430	0.2099		1.73	2.00	-13.6	35.0
Methylcyclohexane	Ave	0.4456	0.5145		2.31	2.00	15.4	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3667	0.2883		1.57	2.00	-21.4	35.0
cis-1,3-Dichloropropene	Ave	0.4116	0.4100		1.99	2.00	-0.4	35.0
trans-1,3-Dichloropropene	Ave	0.3874	0.3847		1.99	2.00	-0.7	35.0
Toluene	Ave	0.8440	0.8056		1.91	2.00	-4.6	35.0
1,1,2-Trichloroethane	Ave	0.2578	0.2472		1.92	2.00	-4.1	35.0
2-Hexanone	Ave	0.1989	0.1592		1.60	2.00	-20.0	35.0
Octane	Ave	0.2931	0.2827		1.93	2.00	-3.5	35.0
Dibromochloromethane	Ave	0.5688	0.5911		2.08	2.00	3.9	35.0
1,2-Dibromoethane (EDB)	Ave	0.4783	0.4843		2.03	2.00	1.3	35.0
Tetrachloroethene	Ave	0.3348	0.3309		1.98	2.00	-1.2	35.0
2,3-Dimethylheptane	Ave	0.8602	0.7593		1.77	2.00	-11.7	35.0
Chlorobenzene	Ave	0.6802	0.6929		2.04	2.00	1.9	35.0
Ethylbenzene	Ave	1.046	0.9800		1.87	2.00	-6.3	35.0
m-Xylene & p-Xylene	Ave	0.7833	0.7469		3.81	4.00	-4.6	35.0
Nonane	Ave	0.5709	0.5566		1.95	2.00	-2.5	35.0
Bromoform	Ave	0.6101	0.6227		2.04	2.00	2.1	35.0
Styrene	Ave	0.6068	0.6064		2.00	2.00	-0.0	35.0
o-Xylene	Ave	0.8310	0.7631		1.84	2.00	-8.2	35.0
1,1,2,2-Tetrachloroethane	Ave	0.6006	0.5425		1.81	2.00	-9.7	35.0
1,2,3-Trichloropropane	Ave	0.1574	0.1442		1.83	2.00	-8.4	35.0
Isopropylbenzene	Ave	1.131	1.043		1.84	2.00	-7.8	35.0
Propylbenzene	Ave	0.3111	0.2910		1.87	2.00	-6.5	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Lab Sample ID: ICV 140-18185/15 Calibration Date: 02/16/2018 00:43
 Instrument ID: MJ Calib Start Date: 02/15/2018 15:35
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/15/2018 22:24
 Lab File ID: JLCSB16.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chlorotoluene	Ave	0.3018	0.2962		1.96	2.00	-1.9	35.0
4-Ethyltoluene	Ave	1.092	0.9558		1.75	2.00	-12.5	35.0
1,3,5-Trimethylbenzene	Ave	0.4567	0.4752		2.08	2.00	4.0	35.0
Alpha Methyl Styrene	Ave	0.4759	0.4446		1.87	2.00	-6.6	35.0
Decane	Ave	0.6756	0.6432		1.90	2.00	-4.8	35.0
tert-Butylbenzene	Ave	0.9702	0.8847		1.82	2.00	-8.8	35.0
1,2,4-Trimethylbenzene	Ave	0.9159	0.8384		1.83	2.00	-8.5	35.0
sec-Butylbenzene	Ave	1.336	1.226		1.83	2.00	-8.3	35.0
1,3-Dichlorobenzene	Ave	0.6861	0.6615		1.93	2.00	-3.6	35.0
Benzyl chloride	Ave	0.7395	0.6769		1.83	2.00	-8.5	35.0
1,4-Dichlorobenzene	Ave	0.6827	0.6602		1.93	2.00	-3.3	35.0
4-Isopropyltoluene	Ave	1.091	0.9840		1.80	2.00	-9.8	35.0
1,2,3-Trimethylbenzene	Ave	0.8965	0.6038		1.35	2.00	-32.6	35.0
Butylcyclohexane	Ave	0.8276	0.7496		1.81	2.00	-9.4	35.0
Indane	Ave	0.8553	0.7716		1.80	2.00	-9.8	35.0
1,2-Dichlorobenzene	Ave	0.6490	0.6155		1.90	2.00	-5.2	35.0
Butylbenzene	Ave	1.065	0.9651		1.81	2.00	-9.4	35.0
Indene	Ave	0.7188	0.5725		1.59	2.00	-20.4	35.0
Undecane	Ave	0.7010	0.6305		1.80	2.00	-10.1	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.3168	0.2436		1.54	2.00	-23.1	35.0
1,2,4,5-Tetramethylbenzene	Ave	0.9272	0.7656		1.65	2.00	-17.4	35.0
Dodecane	Qua		0.4818		2.04	2.00	1.8	35.0
1,2,4-Trichlorobenzene	Ave	0.4913	0.4952		2.02	2.00	0.8	35.0
Naphthalene	Ave	0.7770	0.7325		1.89	2.00	-5.7	35.0
Hexachlorobutadiene	Ave	0.5066	0.4538		1.79	2.00	-10.4	35.0
1,2,3-Trichlorobenzene	Ave	0.3126	0.3306		2.12	2.00	5.8	35.0
2-Methylnaphthalene	Ave	0.0616	0.1211		12.6	6.40	96.8*	50.0
1-Methylnaphthalene	Ave	0.0610	0.1423		14.1	6.05	133.3*	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7231	0.7159		3.96	4.00	-1.0	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JLCSB16.D
 Lims ID: ICV
 Client ID:
 Sample Type: ICV
 Inject. Date: 16-Feb-2018 00:43:30 ALS Bottle#: 2 Worklist Smp#: 15
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0007391-015
 Misc. Info.: 140830s56
 Operator ID: 403648 Instrument ID: MJ
 Sublist:
 Method: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\MJ_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 19-Feb-2018 10:35:48 Calib Date: 15-Feb-2018 22:24:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK031

First Level Reviewer: barlozhetskayaa

Date: 19-Feb-2018 10:35:48

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.686	9.689	-0.003	95	287782	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.790	11.790	0.000	95	1626462	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.389	16.389	0.000	88	1472970	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.992	17.992	0.000	98	1054483	4.00	3.96	
6 Chlorodifluoromethane	67	4.199	4.202	-0.004	96	52856	2.00	1.72	
7 Propene	41	4.210	4.215	-0.006	98	150725	2.00	1.80	
8 Dichlorodifluoromethane	85	4.269	4.273	-0.005	100	486185	2.00	1.88	
9 Chloromethane	52	4.479	4.481	-0.003	98	56098	2.00	1.86	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.484	4.487	-0.005	93	334132	2.00	1.97	
11 Acetaldehyde	44	4.657	4.661	-0.005	99	280575	10.0	8.37	
12 Vinyl chloride	62	4.673	4.677	-0.006	99	196327	2.00	2.09	
13 Butadiene	54	4.775	4.775	-0.002	68	145441	2.00	1.91	
14 Butane	43	4.775	4.776	-0.002	86	271560	2.00	1.88	
15 Bromomethane	94	5.141	5.144	-0.005	99	179320	2.00	1.91	
16 Chloroethane	64	5.302	5.303	-0.002	99	99336	2.00	2.04	
17 Ethanol	31	5.420	5.433	-0.015	96	232501	10.0	6.67	
18 Vinyl bromide	106	5.636	5.639	-0.005	98	187478	2.00	2.11	
19 2-Methylbutane	43	5.689	5.692	-0.004	91	209621	2.00	1.97	
20 Trichlorofluoromethane	101	5.932	5.931	-0.001	99	497825	2.00	1.99	
21 Acrolein	56	5.942	5.948	-0.008	93	48581	2.00	1.95	
23 Acetonitrile	40	6.018	6.038	-0.022	99	53765	2.00	1.70	
22 Acetone	58	6.071	6.079	-0.010	97	59848	2.00	1.83	
24 Pentane	72	6.168	6.169	-0.003	98	31523	2.00	2.07	
25 Isopropyl alcohol	45	6.174	6.199	-0.027	92	156171	2.00	1.66	
26 Ethyl ether	31	6.346	6.361	-0.016	95	149269	2.00	1.84	
27 1,1-Dichloroethene	96	6.690	6.690	-0.002	97	187983	2.00	1.97	
28 Acrylonitrile	53	6.803	6.808	-0.006	95	105910	2.00	1.86	
30 2-Methyl-2-propanol	59	6.819	6.863	-0.046	91	155024	2.00	1.42	
29 1,1,2-Trichloro-1,2,2-trif	101	6.873	6.873	-0.002	98	405137	2.00	2.05	
32 Methylene Chloride	84	7.056	7.059	-0.005	96	180290	2.00	1.75	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
31 3-Chloro-1-propene	39	7.072	7.075	-0.005	96	161069	2.00	1.95	
33 Carbon disulfide	76	7.239	7.237	0.000	98	517232	2.00	1.87	
34 trans-1,2-Dichloroethene	96	7.900	7.900	-0.003	98	189391	2.00	1.99	
35 2-Methylpentane	43	7.917	7.915	0.000	94	397547	2.00	1.81	
36 Methyl tert-butyl ether	73	8.030	8.051	-0.023	96	388420	2.00	1.84	
37 1,1-Dichloroethane	63	8.342	8.340	-0.001	100	353986	2.00	1.98	
38 Vinyl acetate	43	8.438	8.439	-0.004	100	375167	2.00	1.84	
40 2-Butanone (MEK)	72	8.912	8.917	-0.007	96	63000	2.00	1.71	
39 Hexane	56	8.917	8.920	-0.005	83	147749	2.00	1.91	
41 Isopropyl ether	45	9.079	9.089	-0.013	97	466228	2.00	1.84	
42 cis-1,2-Dichloroethene	96	9.347	9.344	0.000	95	193567	2.00	1.99	
43 Ethyl acetate	43	9.525	9.527	-0.004	99	266871	2.00	1.64	
44 Chloroform	83	9.697	9.694	0.000	96	392560	2.00	1.90	
45 Tert-butyl ethyl ether	59	9.767	9.780	-0.015	95	408157	2.00	1.73	
46 Tetrahydrofuran	42	10.117	10.123	-0.009	93	143930	2.00	1.65	
47 1,1,1-Trichloroethane	97	10.719	10.718	-0.002	96	408866	2.00	1.91	
48 1,2-Dichloroethane	62	10.821	10.825	-0.004	98	258215	2.00	1.96	
49 Cyclohexane	69	11.284	11.287	-0.003	85	90920	2.00	1.91	
50 Benzene	78	11.289	11.291	-0.002	97	545632	2.00	1.89	
53 n-Butanol	31	11.284	11.293	-0.009	66	48337	2.00	1.72	
52 Carbon tetrachloride	117	11.306	11.310	-0.004	99	443891	2.00	2.04	
55 2,3-Dimethylpentane	71	11.381	11.384	-0.003	92	125572	2.00	1.85	
51 Thiophene	84	11.553	11.554	-0.001	95	311687	2.00	1.90	
54 Tert-amyl methyl ether	73	11.725	11.726	-0.001	98	393826	2.00	1.79	
56 Isooctane	57	11.994	11.995	-0.001	99	899009	2.00	1.94	
57 n-Heptane	71	12.338	12.342	-0.004	92	192306	2.00	1.89	
58 1,2-Dichloropropane	63	12.446	12.451	-0.005	92	210473	2.00	1.94	
59 Trichloroethene	130	12.478	12.480	-0.002	96	256708	2.00	2.02	
60 Dibromomethane	93	12.570	12.569	0.001	95	232246	2.00	1.92	
61 Dichlorobromomethane	83	12.704	12.704	0.000	99	409065	2.00	1.93	
62 1,4-Dioxane	88	12.737	12.735	0.002	89	46513	2.00	1.64	
63 Methyl methacrylate	41	12.774	12.776	-0.002	96	170709	2.00	1.73	
64 Methylcyclohexane	83	13.221	13.222	-0.001	97	418370	2.00	2.31	
65 4-Methyl-2-pentanone (MIBK)	43	13.603	13.618	-0.015	96	234460	2.00	1.57	
66 cis-1,3-Dichloropropene	75	13.656	13.659	-0.003	93	333420	2.00	1.99	
67 trans-1,3-Dichloropropene	75	14.329	14.329	0.000	97	283336	2.00	1.99	
68 Toluene	91	14.458	14.458	0.000	94	593295	2.00	1.91	
69 1,1,2-Trichloroethane	83	14.528	14.528	-0.004	98	182039	2.00	1.92	
70 2-Methylthiophene	97	14.609	14.610	-0.001	97	515793	NC	NC	
71 3-Methylthiophene	97	14.808	14.804	0.004	99	504373	NC	NC	
72 2-Hexanone	58	14.899	14.908	-0.009	93	117208	2.00	1.60	
73 n-Octane	85	15.098	15.100	-0.002	93	208214	2.00	1.93	
74 Chlorodibromomethane	129	15.227	15.227	0.000	98	435311	2.00	2.08	
75 Ethylene Dibromide	107	15.512	15.514	-0.002	98	356668	2.00	2.03	
76 Tetrachloroethene	129	15.572	15.575	-0.003	96	243703	2.00	1.98	
77 2,3-Dimethylheptane	43	16.421	16.423	-0.002	96	559200	2.00	1.77	
78 Chlorobenzene	112	16.438	16.437	0.001	94	510314	2.00	2.04	
79 Ethylbenzene	91	16.712	16.711	0.001	98	721739	2.00	1.87	
80 2-Ethylthiophene	97	16.814	16.816	-0.002	98	565099	NC	NC	
81 m-Xylene & p-Xylene	91	16.868	16.869	-0.001	100	1100192	4.00	3.81	
82 n-Nonane	57	17.250	17.252	-0.002	92	409945	2.00	1.95	
83 Styrene	104	17.331	17.331	0.000	98	446593	2.00	2.00	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Bromoform	173	17.331	17.333	-0.002	95	458593	2.00	2.04	
85 o-Xylene	91	17.390	17.391	-0.001	99	562026	2.00	1.84	
86 1,1,2,2-Tetrachloroethane	83	17.707	17.708	-0.001	99	399521	2.00	1.81	
87 1,2,3-Trichloropropane	110	17.863	17.864	-0.001	99	106172	2.00	1.83	
88 Isopropylbenzene	105	17.955	17.956	-0.001	96	767830	2.00	1.84	
89 N-Propylbenzene	120	18.460	18.462	-0.002	99	214319	2.00	1.87	
90 2-Chlorotoluene	126	18.514	18.516	-0.002	97	218133	2.00	1.96	
91 4-Ethyltoluene	105	18.600	18.602	-0.002	99	703932	2.00	1.75	
92 1,3,5-Trimethylbenzene	120	18.670	18.672	-0.002	93	349942	2.00	2.08	
93 Alpha Methyl Styrene	118	18.891	18.891	0.000	89	327456	2.00	1.87	
94 n-Decane	57	18.923	18.923	0.000	90	473704	2.00	1.90	
95 tert-Butylbenzene	119	19.079	19.079	0.000	94	651582	2.00	1.82	
96 1,2,4-Trimethylbenzene	105	19.090	19.091	-0.001	96	617444	2.00	1.83	
97 sec-Butylbenzene	105	19.337	19.337	0.000	99	902739	2.00	1.83	
98 1,3-Dichlorobenzene	146	19.359	19.363	-0.004	97	487169	2.00	1.93	
99 Benzyl chloride	91	19.429	19.431	-0.002	98	498494	2.00	1.83	
100 1,4-Dichlorobenzene	146	19.445	19.445	0.000	94	486231	2.00	1.93	
101 4-Isopropyltoluene	119	19.488	19.489	-0.001	97	724728	2.00	1.80	
102 1,2,3-Trimethylbenzene	105	19.547	19.549	-0.002	97	444708	2.00	1.35	
103 Butylcyclohexane	83	19.590	19.591	-0.001	95	552102	2.00	1.81	
104 2,3-Dihydroindene	117	19.789	19.792	-0.003	95	568264	2.00	1.80	
105 1,2-Dichlorobenzene	146	19.794	19.795	-0.001	97	453295	2.00	1.90	
106 n-Butylbenzene	91	19.907	19.907	0.000	98	710810	2.00	1.81	
107 Indene	116	19.918	19.918	0.000	89	421630	2.00	1.59	
108 Undecane	57	20.187	20.186	0.001	96	464323	2.00	1.80	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.332	20.334	-0.002	67	3679	NC	NC	
110 1,2-Dibromo-3-Chloropropan	157	20.381	20.381	0.000	97	179440	2.00	1.54	
111 1,2,4,5-Tetramethylbenzene	119	20.655	20.658	-0.003	97	563871	2.00	1.65	
112 1,2,3,5-Tetramethylbenzene	119	20.714	20.716	-0.002	96	336974	NC	NC	
113 1,2,3,4-Tetramethylbenzene	119	21.134	21.135	-0.001	98	431895	NC	NC	
114 Dodecane	57	21.268	21.268	0.000	96	354820	2.00	2.04	
115 1,2,4-Trichlorobenzene	180	21.510	21.509	0.001	93	364712	2.00	2.02	
116 Naphthalene	128	21.640	21.642	-0.002	99	539447	2.00	1.89	
117 Benzo(b)thiophene	134	21.726	21.727	-0.001	99	269084	NC	NC	
118 Hexachlorobutadiene	225	21.796	21.798	-0.002	95	334244	2.00	1.79	
119 1,2,3-Trichlorobenzene	180	21.855	21.858	-0.003	95	243492	2.00	2.12	
120 2-Methylnaphthalene	142	22.382	22.385	-0.003	100	285485	6.40	12.6	
121 1-Methylnaphthalene	142	22.511	22.509	0.002	100	317085	6.05	14.1	
A 123 C8 Range	1	15.150	(15.061-15.239)		0	3291613	2.00	3.64	
S 124 Xylenes, Total	100				0		6.00	5.65	
S 125 1,2-Dichloroethene, Total	1				0		4.00	3.98	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101S_00056

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

Report Date: 19-Feb-2018 10:35:50

Chrom Revision: 2.2 08-Feb-2018 13:38:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JLCSB16.D

Injection Date: 16-Feb-2018 00:43:30

Instrument ID: MJ

Operator ID: 403648

Lims ID: ICV

Worklist Smp#: 15

Client ID:

Purge Vol: 500.000 mL

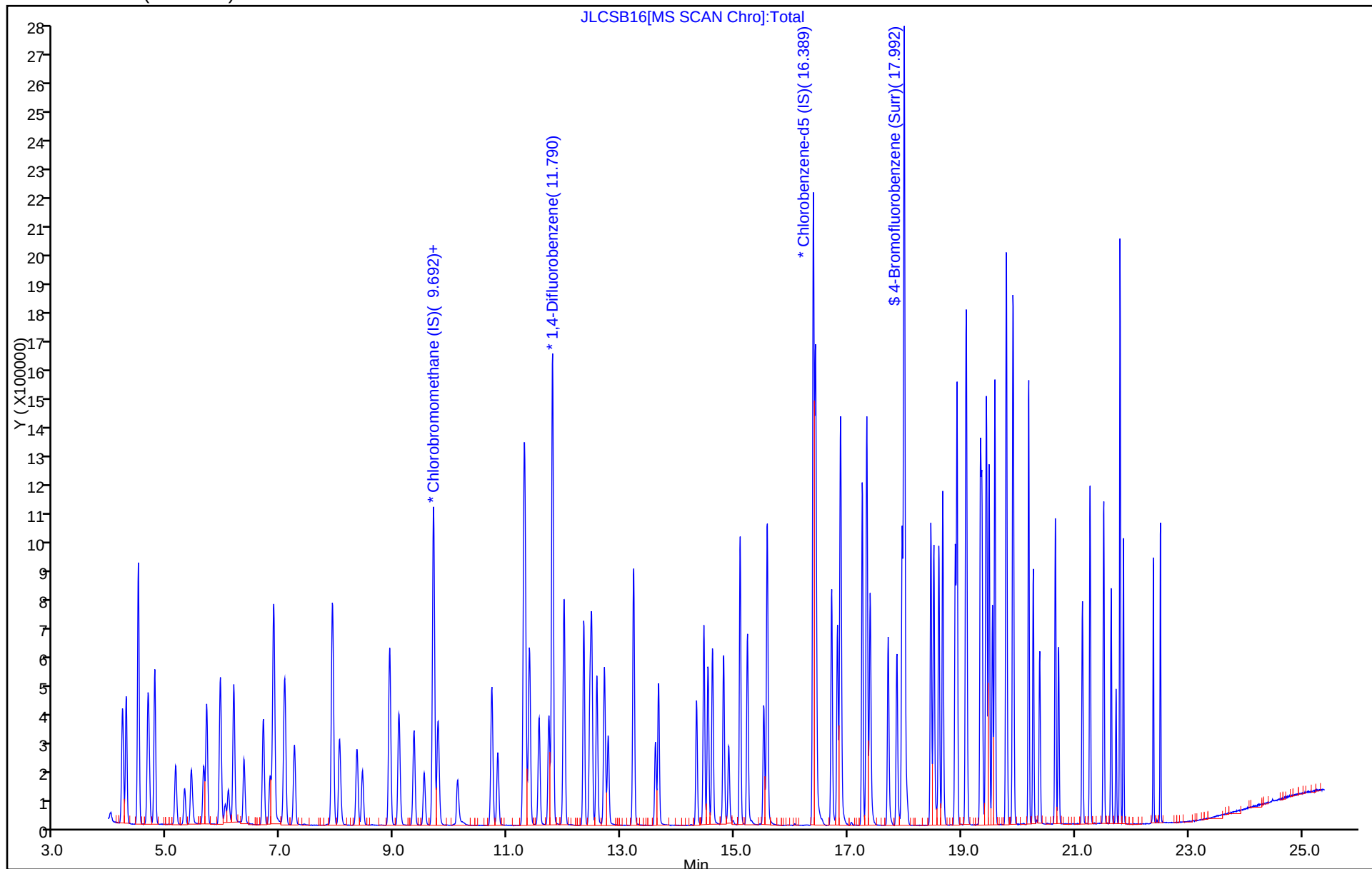
Dil. Factor: 1.0000

ALS Bottle#: 2

Method: MJ_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-19215/2 Calibration Date: 04/04/2018 10:21
 Instrument ID: MJ Calib Start Date: 02/15/2018 15:35
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/15/2018 22:24
 Lab File ID: JCCVD04.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4274	0.4529		2.12	2.00	6.0	30.0
Propene	Ave	1.164	1.231		2.11	2.00	5.7	30.0
Dichlorodifluoromethane	Ave	3.588	4.187		2.33	2.00	16.7	30.0
Chloromethane	Ave	0.4199	0.4302		2.05	2.00	2.4	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.352	2.581		2.19	2.00	9.7	30.0
Acetaldehyde	Ave	0.4660	0.3924		8.42	10.0	-15.8	30.0
Vinyl chloride	Ave	1.307	1.399		2.14	2.00	7.0	30.0
1,3-Butadiene	Ave	1.057	1.024		1.94	2.00	-3.0	30.0
Butane	Ave	2.004	2.012		2.01	2.00	0.4	30.0
Bromomethane	Ave	1.302	1.318		2.02	2.00	1.2	30.0
Chloroethane	Ave	0.6785	0.6644		1.96	2.00	-2.1	30.0
Ethanol	Ave	0.4846	0.4485		9.26	10.0	-7.4	30.0
Vinyl bromide	Ave	1.237	1.255		2.03	2.00	1.5	30.0
2-Methylbutane	Ave	1.477	1.497		2.03	2.00	1.3	30.0
Trichlorofluoromethane	Ave	3.471	4.218		2.43	2.00	21.5	30.0
Acrolein	Ave	0.3467	0.2657		1.53	2.00	-23.4	30.0
Acetonitrile	Ave	0.4388	0.3193		1.46	2.00	-27.2	30.0
Acetone	Ave	0.4553	0.3126		4.12	6.00	-31.4*	30.0
Pentane	Ave	0.2117	0.2077		1.96	2.00	-1.9	30.0
Isopropyl alcohol	Ave	1.306	1.193		5.48	6.00	-8.7	30.0
Ethyl ether	Ave	1.127	0.8309		1.47	2.00	-26.3	30.0
1,1-Dichloroethene	Ave	1.324	1.318		1.99	2.00	-0.5	30.0
Acrylonitrile	Ave	0.7914	0.5618		1.42	2.00	-29.0	30.0
tert-Butyl alcohol	Lin1		1.802		2.41	2.00	20.4	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.744	2.886		2.10	2.00	5.2	30.0
Methylene Chloride	Ave	1.433	1.225		1.71	2.00	-14.5	30.0
3-Chloropropene	Lin1		1.138		1.98	2.00	-1.1	30.0
Carbon disulfide	Ave	3.840	3.830		1.99	2.00	-0.3	30.0
trans-1,2-Dichloroethene	Ave	1.325	1.301		1.96	2.00	-1.8	30.0
2-Methylpentane	Ave	3.051	2.932		1.92	2.00	-3.9	30.0
Methyl tert-butyl ether	Ave	2.941	2.337		1.59	2.00	-20.5	30.0
1,1-Dichloroethane	Ave	2.488	2.460		1.98	2.00	-1.1	30.0
Vinyl acetate	Ave	2.838	2.072		1.46	2.00	-27.0	30.0
2-Butanone (MEK)	Ave	0.5113	0.3529		1.38	2.00	-31.0*	30.0
Hexane	Ave	1.076	1.007		1.87	2.00	-6.4	30.0
Isopropyl ether	Ave	3.523	2.606		1.48	2.00	-26.0	30.0
cis-1,2-Dichloroethene	Ave	1.352	1.275		1.89	2.00	-5.7	30.0
Ethyl acetate	Ave	2.261	1.567		1.39	2.00	-30.7*	30.0
Chloroform	Ave	2.865	2.880		2.01	2.00	0.5	30.0
Tert-butyl ethyl ether	Ave	3.280	2.526		1.54	2.00	-23.0	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-19215/2 Calibration Date: 04/04/2018 10:21
 Instrument ID: MJ Calib Start Date: 02/15/2018 15:35
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/15/2018 22:24
 Lab File ID: JCCVD04.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.213	0.8390		1.38	2.00	-30.8*	30.0
1,1,1-Trichloroethane	Ave	2.982	3.118		2.09	2.00	4.5	30.0
1,2-Dichloroethane	Ave	0.3245	0.3604		2.22	2.00	11.1	30.0
Benzene	Ave	0.7099	0.6260		1.76	2.00	-11.8	30.0
Cyclohexane	Ave	0.1171	0.1091		1.86	2.00	-6.8	30.0
1-Butanol	Ave	0.0692	0.0666		1.93	2.00	-3.7	30.0
Carbon tetrachloride	Ave	0.5362	0.6255		2.33	2.00	16.6	30.0
2,3-Dimethylpentane	Ave	0.1667	0.1518		1.82	2.00	-8.9	30.0
Thiophene	Ave	0.4031	0.3703		1.84	2.00	-8.1	30.0
Tert-amyl methyl ether	Ave	0.5960	0.5025		1.69	2.00	-15.7	30.0
2,2,4-Trimethylpentane	Ave	1.138	1.056		1.86	2.00	-7.2	30.0
Heptane	Ave	0.2498	0.2234		1.79	2.00	-10.5	30.0
1,2-Dichloropropane	Ave	0.2670	0.2450		1.84	2.00	-8.2	30.0
Trichloroethene	Ave	0.3129	0.2963		1.89	2.00	-5.3	30.0
Dibromomethane	Ave	0.2981	0.2902		1.95	2.00	-2.7	30.0
Bromodichloromethane	Ave	0.5220	0.5313		2.04	2.00	1.8	30.0
1,4-Dioxane	Ave	0.0696	0.0607		1.74	2.00	-12.9	30.0
Methyl methacrylate	Ave	0.2430	0.1745		1.44	2.00	-28.2	30.0
Methylcyclohexane	Ave	0.4456	0.4017		1.80	2.00	-9.9	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3667	0.3013		1.64	2.00	-17.8	30.0
cis-1,3-Dichloropropene	Ave	0.4116	0.3851		1.87	2.00	-6.4	30.0
trans-1,3-Dichloropropene	Ave	0.3874	0.3672		1.90	2.00	-5.2	30.0
Toluene	Ave	0.8440	0.7025		1.66	2.00	-16.8	30.0
1,1,2-Trichloroethane	Ave	0.2578	0.2262		1.75	2.00	-12.3	30.0
2-Hexanone	Ave	0.1989	0.1713		1.72	2.00	-13.8	30.0
Octane	Ave	0.2931	0.2553		1.74	2.00	-12.9	30.0
Dibromochloromethane	Ave	0.5688	0.6080		2.14	2.00	6.9	30.0
1,2-Dibromoethane (EDB)	Ave	0.4783	0.4713		1.97	2.00	-1.5	30.0
Tetrachloroethene	Ave	0.3348	0.3286		1.96	2.00	-1.8	30.0
2,3-Dimethylheptane	Ave	0.8602	0.8173		1.90	2.00	-5.0	30.0
Chlorobenzene	Ave	0.6802	0.6515		1.92	2.00	-4.2	30.0
Ethylbenzene	Ave	1.046	0.8260		1.58	2.00	-21.0	30.0
m-Xylene & p-Xylene	Ave	0.7833	0.6182		3.16	4.00	-21.1	30.0
Nonane	Ave	0.5709	0.5012		1.76	2.00	-12.2	30.0
Bromoform	Ave	0.6101	0.6456		2.12	2.00	5.8	30.0
Styrene	Ave	0.6068	0.4583		1.51	2.00	-24.5	30.0
o-Xylene	Ave	0.8310	0.6491		1.56	2.00	-21.9	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6006	0.4678		1.56	2.00	-22.1	30.0
1,2,3-Trichloropropane	Ave	0.1574	0.1298		1.65	2.00	-17.5	30.0
Isopropylbenzene	Ave	1.131	0.8433		1.49	2.00	-25.4	30.0
Propylbenzene	Ave	0.3111	0.2261		1.45	2.00	-27.3	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-19215/2 Calibration Date: 04/04/2018 10:21
 Instrument ID: MJ Calib Start Date: 02/15/2018 15:35
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 02/15/2018 22:24
 Lab File ID: JCCVD04.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chlorotoluene	Ave	0.3018	0.2493		1.65	2.00	-17.4	30.0
4-Ethyltoluene	Ave	1.092	0.8210		1.50	2.00	-24.8	30.0
1,3,5-Trimethylbenzene	Ave	0.4567	0.3365		1.47	2.00	-26.3	30.0
Alpha Methyl Styrene	Ave	0.4759	0.3474		1.46	2.00	-27.0	30.0
Decane	Ave	0.6756	0.5221		1.55	2.00	-22.7	30.0
tert-Butylbenzene	Ave	0.9702	0.7182		1.48	2.00	-26.0	30.0
1,2,4-Trimethylbenzene	Ave	0.9159	0.6776		1.48	2.00	-26.0	30.0
sec-Butylbenzene	Ave	1.336	0.9946		1.49	2.00	-25.6	30.0
1,3-Dichlorobenzene	Ave	0.6861	0.5653		1.65	2.00	-17.6	30.0
Benzyl chloride	Ave	0.7395	0.5865		1.59	2.00	-20.7	30.0
1,4-Dichlorobenzene	Ave	0.6827	0.5588		1.64	2.00	-18.1	30.0
4-Isopropyltoluene	Ave	1.091	0.8110		1.49	2.00	-25.7	30.0
1,2,3-Trimethylbenzene	Ave	0.8965	0.6600		1.47	2.00	-26.4	30.0
Butylcyclohexane	Ave	0.8276	0.6864		1.66	2.00	-17.1	30.0
Indane	Ave	0.8553	0.6292		1.47	2.00	-26.4	30.0
1,2-Dichlorobenzene	Ave	0.6490	0.5220		1.61	2.00	-19.6	30.0
Butylbenzene	Ave	1.065	0.7914		1.49	2.00	-25.7	30.0
Indene	Ave	0.7188	0.5279		1.47	2.00	-26.6	30.0
Undecane	Ave	0.7010	0.4737		1.35	2.00	-32.4*	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.3168	0.2550		1.61	2.00	-19.5	30.0
1,2,4,5-Tetramethylbenzene	Ave	0.9272	0.7242		1.56	2.00	-21.9	30.0
Dodecane	Qua		0.3977		1.66	2.00	-17.0	30.0
1,2,4-Trichlorobenzene	Ave	0.4913	0.3673		1.49	2.00	-25.3	30.0
Naphthalene	Ave	0.7770	0.5200		1.34	2.00	-33.1*	30.0
Hexachlorobutadiene	Ave	0.5066	0.3719		1.47	2.00	-26.6	30.0
1,2,3-Trichlorobenzene	Ave	0.3126	0.2524		1.61	2.00	-19.3	30.0
2-Methylnaphthalene	Ave	0.0616	0.1428		6.96	3.00	131.9*	50.0
1-Methylnaphthalene	Ave	0.0610	0.1538		7.56	3.00	152.1*	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7231	0.7420		4.10	4.00	2.6	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180402-7781.b\JCCVD04.D
 Lims ID: CCVIS
 Client ID:
 Sample Type: CCVIS
 Inject. Date: 04-Apr-2018 10:21:30 ALS Bottle#: 15 Worklist Smp#: 2
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0007781-002
 Misc. Info.: P59
 Operator ID: 007126 Instrument ID: MJ
 Sublist: chrom-MJ_TO15*sub14
 Method: \\ChromNA\Knoxville\ChromData\MJ\20180402-7781.b\MJ_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 04-Apr-2018 14:25:46 Calib Date: 15-Feb-2018 22:24:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK025

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.672	9.672	0.000	95	191585	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.770	11.770	0.000	95	1049636	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.370	16.370	0.000	89	911794	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.973	17.973	0.000	93	676520	4.00	4.10	
6 Chlorodifluoromethane	67	4.207	4.207	0.000	96	43386	2.00	2.12	
7 Propene	41	4.223	4.223	0.000	99	117898	2.00	2.11	
8 Dichlorodifluoromethane	85	4.277	4.277	0.000	100	401072	2.00	2.33	
9 Chloromethane	52	4.487	4.487	0.000	98	41205	2.00	2.05	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.492	4.492	0.000	96	247228	2.00	2.19	
11 Acetaldehyde	44	4.664	4.664	0.000	96	187952	10.0	8.42	
12 Vinyl chloride	62	4.680	4.680	0.000	99	133982	2.00	2.14	
14 Butane	43	4.782	4.782	0.000	85	192743	2.00	2.01	
13 Butadiene	54	4.782	4.782	0.000	68	98131	2.00	1.94	
15 Bromomethane	94	5.143	5.143	0.000	98	126219	2.00	2.02	
16 Chloroethane	64	5.299	5.299	0.000	95	63647	2.00	1.96	
17 Ethanol	31	5.428	5.428	0.000	97	214834	10.0	9.26	
18 Vinyl bromide	106	5.638	5.638	0.000	98	120256	2.00	2.03	
19 2-Methylbutane	43	5.692	5.692	0.000	91	143413	2.00	2.03	
20 Trichlorofluoromethane	101	5.928	5.928	0.000	99	404096	2.00	2.43	
21 Acrolein	56	5.944	5.944	0.000	95	25448	2.00	1.53	
23 Acetonitrile	40	6.014	6.014	0.000	96	30589	2.00	1.46	
22 Acetone	58	6.073	6.073	0.000	99	89832	6.00	4.12	
24 Pentane	72	6.165	6.165	0.000	96	19895	2.00	1.96	
25 Isopropyl alcohol	45	6.186	6.186	0.000	95	342720	6.00	5.48	
26 Ethyl ether	31	6.348	6.348	0.000	95	79590	2.00	1.47	
27 1,1-Dichloroethene	96	6.687	6.687	0.000	95	126219	2.00	1.99	
28 Acrylonitrile	53	6.794	6.794	0.000	93	53819	2.00	1.42	
30 2-Methyl-2-propanol	59	6.832	6.832	0.000	91	172623	2.00	2.41	
29 1,1,2-Trichloro-1,2,2-trif	101	6.864	6.864	0.000	97	276426	2.00	2.10	
32 Methylene Chloride	84	7.047	7.047	0.000	97	117357	2.00	1.71	
31 3-Chloro-1-propene	39	7.069	7.069	0.000	98	108998	2.00	1.98	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	7.230	7.230	0.000	99	366915	2.00	1.99	
34 trans-1,2-Dichloroethene	96	7.892	7.892	0.000	96	124650	2.00	1.96	
35 2-Methylpentane	43	7.902	7.902	0.000	94	280854	2.00	1.92	
36 Methyl tert-butyl ether	73	8.032	8.032	0.000	96	223879	2.00	1.59	
37 1,1-Dichloroethane	63	8.327	8.327	0.000	100	235695	2.00	1.98	
38 Vinyl acetate	43	8.424	8.424	0.000	100	198497	2.00	1.46	
40 2-Butanone (MEK)	72	8.903	8.903	0.000	94	33805	2.00	1.38	
39 Hexane	56	8.903	8.903	0.000	85	96481	2.00	1.87	
41 Isopropyl ether	45	9.070	9.070	0.000	96	249659	2.00	1.48	
42 cis-1,2-Dichloroethene	96	9.328	9.328	0.000	97	122107	2.00	1.89	
43 Ethyl acetate	43	9.516	9.516	0.000	99	150065	2.00	1.39	
44 Chloroform	83	9.678	9.678	0.000	96	275857	2.00	2.01	
45 Tert-butyl ethyl ether	59	9.758	9.758	0.000	96	241961	2.00	1.54	
46 Tetrahydrofuran	42	10.103	10.103	0.000	92	80371	2.00	1.38	
47 1,1,1-Trichloroethane	97	10.700	10.700	0.000	96	298679	2.00	2.09	
48 1,2-Dichloroethane	62	10.807	10.807	0.000	98	189168	2.00	2.22	
49 Cyclohexane	69	11.270	11.270	0.000	89	57277	2.00	1.86	
50 Benzene	78	11.270	11.270	0.000	97	328531	2.00	1.76	
53 n-Butanol	31	11.275	11.275	0.000	67	34962	2.00	1.93	
52 Carbon tetrachloride	117	11.292	11.292	0.000	99	328251	2.00	2.33	
55 2,3-Dimethylpentane	71	11.361	11.361	0.000	91	79676	2.00	1.82	
51 Thiophene	84	11.534	11.534	0.000	96	194323	2.00	1.84	
54 Tert-amyl methyl ether	73	11.711	11.711	0.000	98	229105	2.00	1.69	
56 Isooctane	57	11.975	11.975	0.000	98	554434	2.00	1.86	
57 n-Heptane	71	12.324	12.324	0.000	92	117259	2.00	1.79	
58 1,2-Dichloropropane	63	12.432	12.432	0.000	89	128592	2.00	1.84	
59 Trichloroethene	130	12.464	12.464	0.000	96	155508	2.00	1.89	
60 Dibromomethane	93	12.550	12.550	0.000	95	152316	2.00	1.95	
61 Dichlorobromomethane	83	12.685	12.685	0.000	99	278857	2.00	2.04	
62 1,4-Dioxane	88	12.706	12.706	0.000	92	31837	2.00	1.74	
63 Methyl methacrylate	41	12.755	12.755	0.000	93	91575	2.00	1.44	
64 Methylcyclohexane	83	13.201	13.201	0.000	95	210806	2.00	1.80	
65 4-Methyl-2-pentanone (MIBK)	43	13.589	13.589	0.000	97	158100	2.00	1.64	
66 cis-1,3-Dichloropropene	75	13.642	13.642	0.000	95	202093	2.00	1.87	
67 trans-1,3-Dichloropropene	75	14.309	14.309	0.000	97	167400	2.00	1.90	
68 Toluene	91	14.439	14.439	0.000	93	320248	2.00	1.66	
69 1,1,2-Trichloroethane	83	14.514	14.514	0.000	99	103126	2.00	1.75	
72 2-Hexanone	58	14.885	14.885	0.000	93	78111	2.00	1.72	
73 n-Octane	85	15.079	15.079	0.000	93	116366	2.00	1.74	
74 Chlorodibromomethane	129	15.208	15.208	0.000	97	277171	2.00	2.14	
75 Ethylene Dibromide	107	15.498	15.498	0.000	98	214869	2.00	1.97	
76 Tetrachloroethene	129	15.557	15.557	0.000	95	149827	2.00	1.96	
77 2,3-Dimethylheptane	43	16.407	16.407	0.000	96	372593	2.00	1.90	
78 Chlorobenzene	112	16.418	16.418	0.000	96	297019	2.00	1.92	
79 Ethylbenzene	91	16.693	16.693	0.000	99	376546	2.00	1.58	
81 m-Xylene & p-Xylene	91	16.849	16.849	0.000	99	563633	4.00	3.16	
82 n-Nonane	57	17.236	17.236	0.000	91	228507	2.00	1.76	
83 Styrene	104	17.317	17.317	0.000	87	208958	2.00	1.51	
84 Bromoform	173	17.317	17.317	0.000	96	294329	2.00	2.12	
85 o-Xylene	91	17.376	17.376	0.000	99	295899	2.00	1.56	
86 1,1,2,2-Tetrachloroethane	83	17.693	17.693	0.000	99	213263	2.00	1.56	
87 1,2,3-Trichloropropane	110	17.844	17.844	0.000	98	59176	2.00	1.65	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
88 Isopropylbenzene	105	17.941	17.941	0.000	97	384462	2.00	1.49	
89 N-Propylbenzene	120	18.446	18.446	0.000	99	103089	2.00	1.45	
90 2-Chlorotoluene	126	18.500	18.500	0.000	98	113648	2.00	1.65	
91 4-Ethyltoluene	105	18.586	18.586	0.000	98	374311	2.00	1.50	
92 1,3,5-Trimethylbenzene	120	18.656	18.656	0.000	92	153426	2.00	1.47	
93 Alpha Methyl Styrene	118	18.877	18.877	0.000	88	158391	2.00	1.46	
94 n-Decane	57	18.909	18.909	0.000	91	238029	2.00	1.55	
95 tert-Butylbenzene	119	19.065	19.065	0.000	92	327422	2.00	1.48	
96 1,2,4-Trimethylbenzene	105	19.076	19.076	0.000	96	308934	2.00	1.48	
97 sec-Butylbenzene	105	19.323	19.323	0.000	98	453438	2.00	1.49	
98 1,3-Dichlorobenzene	146	19.350	19.350	0.000	98	257720	2.00	1.65	
99 Benzyl chloride	91	19.415	19.415	0.000	97	267374	2.00	1.59	
100 1,4-Dichlorobenzene	146	19.431	19.431	0.000	93	254745	2.00	1.64	
101 4-Isopropyltoluene	119	19.474	19.474	0.000	97	369732	2.00	1.49	
102 1,2,3-Trimethylbenzene	105	19.533	19.533	0.000	99	300902	2.00	1.47	
103 Butylcyclohexane	83	19.576	19.576	0.000	94	312919	2.00	1.66	
104 2,3-Dihydroindene	117	19.775	19.775	0.000	94	286841	2.00	1.47	
105 1,2-Dichlorobenzene	146	19.780	19.780	0.000	97	237957	2.00	1.61	
106 n-Butylbenzene	91	19.893	19.893	0.000	97	360779	2.00	1.49	
107 Indene	116	19.904	19.904	0.000	94	240650	2.00	1.47	
108 Undecane	57	20.173	20.173	0.000	95	215959	2.00	1.35	
110 1,2-Dibromo-3-Chloropropan	157	20.367	20.367	0.000	99	116265	2.00	1.61	
111 1,2,4,5-Tetramethylbenzene	119	20.646	20.646	0.000	97	330168	2.00	1.56	
114 Dodecane	57	21.254	21.254	0.000	95	181308	2.00	1.66	
115 1,2,4-Trichlorobenzene	180	21.496	21.496	0.000	93	167427	2.00	1.49	
116 Naphthalene	128	21.631	21.631	0.000	98	237049	2.00	1.34	
118 Hexachlorobutadiene	225	21.787	21.787	0.000	96	169524	2.00	1.47	
119 1,2,3-Trichlorobenzene	180	21.846	21.846	0.000	94	115069	2.00	1.61	
120 2-Methylnaphthalene	142	22.379	22.379	0.000	99	97635	3.00	6.96	
121 1-Methylnaphthalene	142	22.502	22.502	0.000	99	105171	3.00	7.56	
A 123 C8 Range	1	15.091	(15.046-15.137)		0	1106359	2.00	1.98	
S 124 Xylenes, Total	100				0		6.00	4.72	
S 125 1,2-Dichloroethene, Total	1				0		4.00	3.85	

Reagents:

40CV101P_00059

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180402-7781.b\JCCVD04.D

Injection Date: 04-Apr-2018 10:21:30

Instrument ID: MJ

Operator ID: 007126

Lims ID: CCVIS

Worklist Smp#: 2

Client ID:

Purge Vol: 500.000 mL

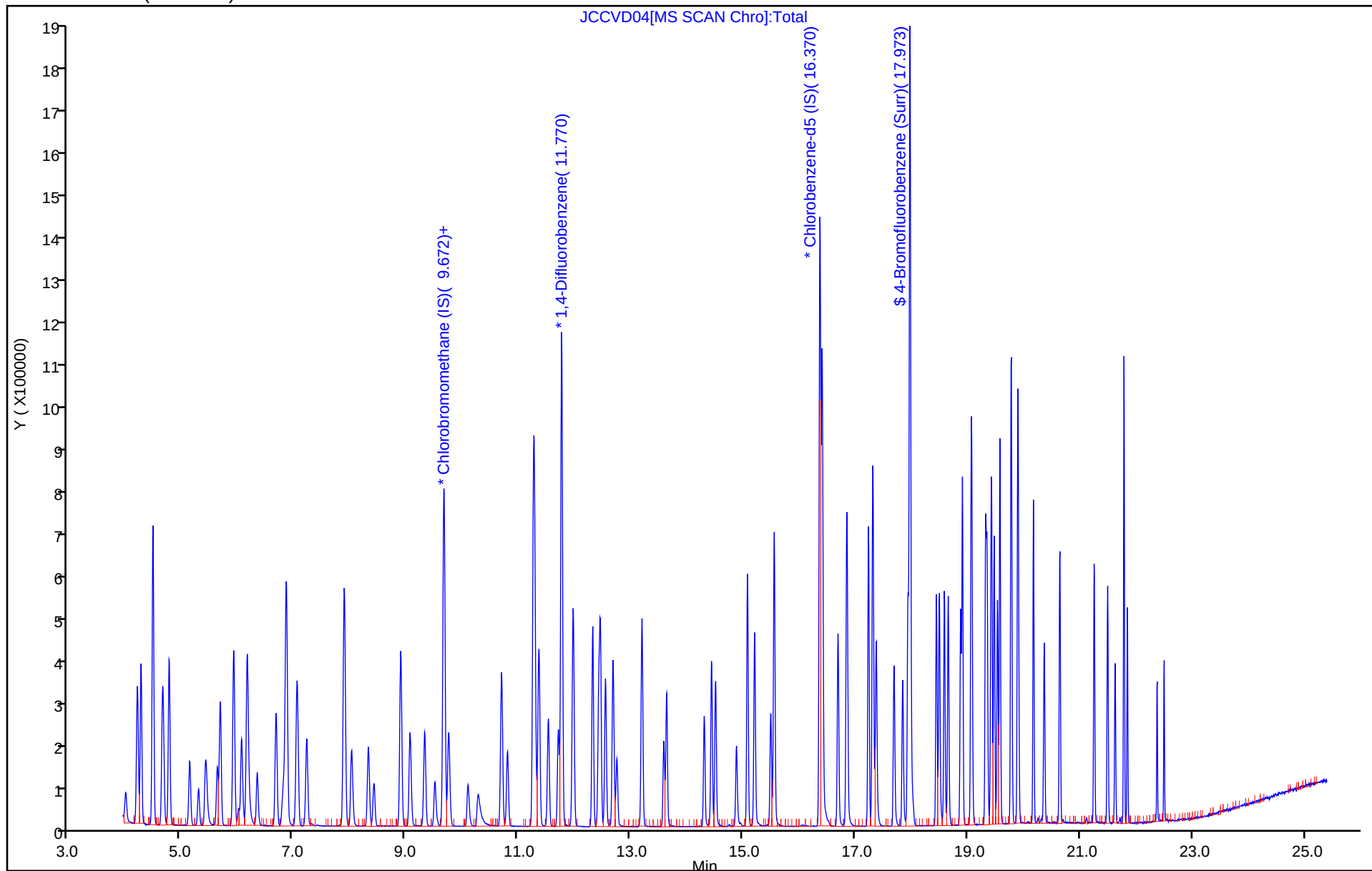
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MJ_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Lab Sample ID: ICV 140-17762/14 Calibration Date: 01/30/2018 21:11
 Instrument ID: MR Calib Start Date: 01/30/2018 12:29
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/30/2018 19:38
 Lab File ID: RA30ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4879	0.5051		2.56	2.47	3.5	35.0
Propene	Ave	0.9557	0.9570		2.47	2.47	0.1	35.0
Dichlorodifluoromethane	Ave	3.756	4.377		2.88	2.47	16.6	35.0
Chloromethane	Ave	0.3421	0.3220		2.32	2.47	-5.9	35.0
1,2-Dichlorotetrafluoroethane	Ave	2.544	2.591		2.52	2.47	1.9	35.0
Vinyl chloride	Ave	1.049	1.041		2.45	2.47	-0.8	35.0
1,3-Butadiene	Ave	0.6765	0.6768		2.47	2.47	0.0	35.0
Butane	Ave	1.124	1.183		2.60	2.47	5.2	35.0
Bromomethane	Ave	0.9705	0.9841		2.50	2.47	1.4	35.0
Chloroethane	Ave	0.4754	0.4775		2.48	2.47	0.5	35.0
Ethanol	Ave	0.2999	0.2849		11.7	12.3	-5.0	35.0
Vinyl bromide	Ave	0.9514	1.041		2.70	2.47	9.4	35.0
2-Methylbutane	Ave	0.7921	0.8138		2.54	2.47	2.8	35.0
Acrolein	Ave	0.2209	0.2275		2.54	2.47	3.0	35.0
Trichlorofluoromethane	Ave	3.567	3.678		2.55	2.47	3.1	35.0
Acetonitrile	Ave	0.2718	0.2877		2.61	2.47	5.8	35.0
Acetone	Ave	0.4182	0.3903		6.91	7.41	-6.7	35.0
Isopropyl alcohol	Ave	1.608	1.805		8.32	7.41	12.3	35.0
Pentane	Ave	0.2789	0.2842		2.52	2.47	1.9	35.0
Ethyl ether	Ave	1.010	1.023		2.50	2.47	1.4	35.0
1,1-Dichloroethene	Ave	1.514	1.434		2.34	2.47	-5.3	35.0
Acrylonitrile	Ave	0.9563	0.9635		2.49	2.47	0.8	35.0
t-Butyl alcohol	Ave	3.014	3.014		2.47	2.47	0.0	35.0
1,1,2-Trichlorotrifluoroethane	Ave	3.239	3.252		2.48	2.47	0.4	35.0
Methylene Chloride	Ave	1.564	1.381		2.18	2.47	-11.7	35.0
3-Chloropropene	Ave	1.257	1.307		2.57	2.47	4.0	35.0
Carbon disulfide	Ave	4.190	4.077		2.40	2.47	-2.7	35.0
trans-1,2-Dichloroethene	Ave	1.537	1.515		2.44	2.47	-1.4	35.0
Methyl tert-butyl ether	Ave	4.739	4.873		2.54	2.47	2.8	35.0
1,1-Dichloroethane	Ave	2.927	2.890		2.44	2.47	-1.2	35.0
Vinyl acetate	Ave	2.829	3.271		2.85	2.47	15.6	35.0
2-Butanone	Ave	0.7255	0.7119		2.42	2.47	-1.9	35.0
Hexane	Ave	1.173	1.154		2.43	2.47	-1.7	35.0
cis-1,2-Dichloroethene	Ave	1.647	1.637		2.45	2.47	-0.6	35.0
Ethyl acetate	Ave	2.540	2.598		2.53	2.47	2.3	35.0
Chloroform	Ave	3.701	3.702		2.47	2.47	0.0	35.0
Tetrahydrofuran	Ave	1.295	1.329		2.54	2.47	2.7	35.0
1,1,1-Trichloroethane	Ave	3.888	4.070		2.58	2.47	4.7	35.0
1,2-Dichloroethane	Ave	0.4231	0.4407		2.57	2.47	4.2	35.0
1-Butanol	Ave	0.0506	0.0556		2.72	2.47	10.0	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Lab Sample ID: ICV 140-17762/14 Calibration Date: 01/30/2018 21:11
 Instrument ID: MR Calib Start Date: 01/30/2018 12:29
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/30/2018 19:38
 Lab File ID: RA30ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzene	Ave	0.7642	0.7746		2.50	2.47	1.4	35.0
Cyclohexane	Ave	0.1227	0.1250		2.51	2.47	1.8	35.0
Carbon tetrachloride	Ave	0.6160	0.6889		2.76	2.47	11.8	35.0
2,2,4-Trimethylpentane	Ave	1.108	1.146		2.55	2.47	3.4	35.0
1,2-Dichloropropane	Ave	0.2659	0.2696		2.50	2.47	1.4	35.0
Heptane	Ave	0.2649	0.2721		2.54	2.47	2.7	35.0
Trichloroethene	Ave	0.3611	0.3691		2.52	2.47	2.2	35.0
Dibromomethane	Ave	0.3145	0.3283		2.58	2.47	4.4	35.0
Bromodichloromethane	Ave	0.5634	0.6271		2.75	2.47	11.3	35.0
1,4-Dioxane	Ave	0.1127	0.1179		2.58	2.47	4.7	35.0
Methyl methacrylate	Ave	0.2509	0.2746		2.70	2.47	9.4	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4284	0.4624		2.67	2.47	7.9	35.0
cis-1,3-Dichloropropene	Ave	0.4392	0.4887		2.75	2.47	11.3	35.0
trans-1,3-Dichloropropene	Ave	0.4850	0.5351		2.72	2.47	10.3	35.0
Toluene	Ave	1.102	1.122		2.52	2.47	1.9	35.0
1,1,2-Trichloroethane	Ave	0.3035	0.3092		2.52	2.47	1.9	35.0
2-Hexanone	Ave	0.2628	0.2981		2.80	2.47	13.5	35.0
Dibromochloromethane	Ave	0.5804	0.6993		2.98	2.47	20.5	35.0
Octane	Ave	0.3544	0.3754		2.62	2.47	5.9	35.0
1,2-Dibromoethane	Ave	0.5418	0.5896		2.69	2.47	8.8	35.0
Tetrachloroethene	Ave	0.4106	0.4276		2.57	2.47	4.1	35.0
Chlorobenzene	Ave	0.8680	0.8977		2.55	2.47	3.4	35.0
Ethylbenzene	Ave	1.442	1.497		2.56	2.47	3.8	35.0
m-Xylene & p-Xylene	Ave	1.118	1.183		5.23	4.94	5.8	35.0
Bromoform	Ave	0.4993	0.6381		3.16	2.47	27.8	35.0
Styrene	Ave	0.7131	0.8370		2.90	2.47	17.4	35.0
Nonane	Ave	0.6024	0.6373		2.61	2.47	5.8	35.0
o-Xylene	Ave	1.180	1.193		2.49	2.47	1.0	35.0
1,1,2,2-Tetrachloroethane	Ave	0.7065	0.7765		2.71	2.47	9.9	35.0
1,2,3-Trichloropropane	Ave	0.2557	0.2673		2.58	2.47	4.5	35.0
Isopropylbenzene	Ave	1.579	1.681		2.63	2.47	6.5	35.0
Propylbenzene	Ave	0.4312	0.4920		2.82	2.47	14.1	35.0
2-Chlorotoluene	Ave	0.3988	0.4292		2.66	2.47	7.6	35.0
4-Ethyltoluene	Ave	1.639	1.745		2.63	2.47	6.5	35.0
1,3,5-Trimethylbenzene	Ave	0.6617	0.7303		2.73	2.47	10.4	35.0
Alpha Methyl Styrene	Ave	0.5721	0.6952		3.00	2.47	21.5	35.0
Decane	Ave	0.8188	0.9370		2.83	2.47	14.4	35.0
tert-Butylbenzene	Ave	1.538	1.672		2.69	2.47	8.8	35.0
1,2,4-Trimethylbenzene	Ave	1.379	1.533		2.74	2.47	11.1	35.0
1,3-Dichlorobenzene	Ave	0.8870	0.9882		2.75	2.47	11.4	35.0
sec-Butylbenzene	Ave	1.978	2.196		2.74	2.47	11.0	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Lab Sample ID: ICV 140-17762/14 Calibration Date: 01/30/2018 21:11
 Instrument ID: MR Calib Start Date: 01/30/2018 12:29
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/30/2018 19:38
 Lab File ID: RA30ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzyl chloride	Ave	1.037	1.335		3.18	2.47	28.7	35.0
1,4-Dichlorobenzene	Ave	0.8846	0.9798		2.74	2.47	10.8	35.0
4-Isopropyltoluene	Ave	1.739	1.961		2.78	2.47	12.7	35.0
1,2,3-Trimethylbenzene	Ave	1.566	1.539		2.43	2.47	-1.7	35.0
1,2-Dichlorobenzene	Ave	0.8615	0.9599		2.75	2.47	11.4	35.0
Butylbenzene	Ave	1.551	1.840		2.93	2.47	18.7	35.0
Undecane	Ave	0.8863	1.046		2.91	2.47	18.0	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.5267	0.4263		2.00	2.47	-19.1	35.0
1,2,4,5-Tetramethylbenzene	Ave	0.8495	1.694		4.92	2.47	99.4*	35.0
Dodecane	Ave	0.8298	0.9946		2.96	2.47	19.9	35.0
1,2,4-Trichlorobenzene	Ave	0.6453	0.7696		2.94	2.47	19.3	35.0
Naphthalene	Ave	1.434	1.710		2.95	2.47	19.3	35.0
Hexachlorobutadiene	Ave	0.7058	0.7878		2.76	2.47	11.6	35.0
1,2,3-Trichlorobenzene	Ave	0.6529	0.7394		2.80	2.47	13.3	35.0
2-Methylnaphthalene	Ave	0.3527	0.1484		2.38	5.67	-57.9*	50.0
1-Methylnaphthalene	Ave	0.3505	0.1569		2.54	5.68	-55.3*	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7584	0.7641		4.03	4.00	0.8	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30ICV.D
 Lims ID: ICV
 Client ID:
 Sample Type: ICV
 Inject. Date: 30-Jan-2018 21:11:30 ALS Bottle#: 1 Worklist Smp#: 14
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0007236-014
 Misc. Info.: 134531
 Operator ID: Instrument ID: MR
 Sublist:
 Method: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 05-Feb-2018 13:03:43 Calib Date: 30-Jan-2018 19:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa

Date: 31-Jan-2018 09:35:25

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.719	7.710	0.009	84	374886	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.854	9.852	0.002	95	2292324	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.864	14.859	0.005	88	1999070	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.573	16.570	0.003	89	1527412	4.00	4.03	
6 Chlorodifluoromethane	67	3.470	3.471	-0.001	96	116900	2.47	2.56	
7 Propene	41	3.475	3.477	-0.002	97	221466	2.47	2.47	
8 Dichlorodifluoromethane	85	3.518	3.519	-0.001	100	1013033	2.47	2.88	
9 Chloromethane	52	3.653	3.653	0.000	99	74517	2.47	2.32	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.675	3.675	0.000	92	599700	2.47	2.52	
12 Vinyl chloride	62	3.788	3.789	-0.001	99	240822	2.47	2.45	
13 Butane	43	3.863	3.863	0.000	89	273678	2.47	2.60	
14 Butadiene	54	3.863	3.863	0.000	93	156627	2.47	2.47	
15 Bromomethane	94	4.101	4.098	0.003	98	227760	2.47	2.50	
16 Chloroethane	64	4.208	4.208	0.000	99	110511	2.47	2.48	
17 Ethanol	31	4.316	4.313	0.003	91	329645	12.3	11.7	
18 Vinyl bromide	106	4.440	4.441	-0.001	97	240966	2.47	2.70	
19 2-Methylbutane	43	4.500	4.498	0.002	81	188346	2.47	2.54	
20 Acrolein	56	4.656	4.656	0.000	93	52652	2.47	2.54	
21 Trichlorofluoromethane	101	4.661	4.659	0.002	99	851270	2.47	2.55	
22 Acetonitrile	40	4.699	4.713	-0.014	97	66575	2.47	2.61	
23 Acetone	58	4.748	4.748	0.000	99	270975	7.41	6.91	
24 Isopropyl alcohol	45	4.845	4.843	0.002	96	1253124	7.41	8.32	
25 Pentane	72	4.850	4.847	0.003	98	65775	2.47	2.52	
26 Ethyl ether	31	4.969	4.975	-0.006	78	236830	2.47	2.50	
27 1,1-Dichloroethene	96	5.222	5.218	0.004	95	331896	2.47	2.34	
28 Acrylonitrile	53	5.292	5.288	0.004	93	222987	2.47	2.49	
29 2-Methyl-2-propanol	59	5.319	5.325	-0.006	93	697625	2.47	2.47	
30 1,1,2-Trichloro-1,2,2-trif	101	5.395	5.390	0.005	97	752517	2.47	2.48	
31 Methylene Chloride	84	5.497	5.492	0.005	90	319538	2.47	2.18	
32 3-Chloro-1-propene	39	5.519	5.514	0.005	96	302572	2.47	2.57	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.632	5.625	0.007	98	943446	2.47	2.40	
34 trans-1,2-Dichloroethene	96	6.198	6.192	0.006	97	350688	2.47	2.44	
36 Methyl tert-butyl ether	73	6.317	6.323	-0.006	95	1127699	2.47	2.54	
37 1,1-Dichloroethane	63	6.549	6.545	0.004	100	668941	2.47	2.44	
38 Vinyl acetate	43	6.662	6.662	0.000	99	756912	2.47	2.85	
39 2-Butanone (MEK)	72	7.029	7.036	-0.007	98	164762	2.47	2.42	
40 Hexane	56	7.120	7.119	0.001	85	266984	2.47	2.43	
41 cis-1,2-Dichloroethene	96	7.433	7.426	0.007	95	378841	2.47	2.45	
42 Ethyl acetate	43	7.616	7.622	-0.006	99	601349	2.47	2.53	
43 Chloroform	83	7.751	7.743	0.008	97	856696	2.47	2.47	
44 Tetrahydrofuran	42	8.096	8.108	-0.012	85	307649	2.47	2.54	
45 1,1,1-Trichloroethane	97	8.706	8.701	0.005	95	941934	2.47	2.58	
46 1,2-Dichloroethane	62	8.776	8.771	0.005	99	623694	2.47	2.57	
47 Benzene	78	9.277	9.274	0.003	97	1096164	2.47	2.50	
48 n-Butanol	31	9.272	9.296	-0.024	63	78715	2.47	2.72	
49 Cyclohexane	69	9.299	9.298	0.001	95	176817	2.47	2.51	
50 Carbon tetrachloride	117	9.315	9.312	0.003	97	974834	2.47	2.76	
53 Isooctane	57	10.145	10.145	0.000	97	1621108	2.47	2.55	
54 1,2-Dichloropropane	63	10.539	10.540	-0.001	86	381491	2.47	2.50	
55 n-Heptane	71	10.566	10.561	0.005	82	385034	2.47	2.54	
56 Trichloroethene	130	10.609	10.605	0.004	94	522341	2.47	2.52	
57 Dibromomethane	93	10.647	10.648	-0.001	95	464526	2.47	2.58	
58 Dichlorobromomethane	83	10.830	10.825	0.005	99	887479	2.47	2.75	
59 1,4-Dioxane	88	10.841	10.851	-0.010	83	166899	2.47	2.58	
60 Methyl methacrylate	41	10.981	10.990	-0.009	97	388529	2.47	2.70	
62 4-Methyl-2-pentanone (MIBK)	43	11.866	11.878	-0.012	93	654369	2.47	2.67	
63 cis-1,3-Dichloropropene	75	11.914	11.915	-0.001	92	691544	2.47	2.75	
64 trans-1,3-Dichloropropene	75	12.658	12.660	-0.002	96	660382	2.47	2.72	
65 Toluene	91	12.799	12.795	0.003	93	1384914	2.47	2.52	
66 1,1,2-Trichloroethane	83	12.852	12.853	-0.001	99	381618	2.47	2.52	
69 2-Hexanone	58	13.300	13.313	-0.013	98	367923	2.47	2.80	
70 Chlorodibromomethane	129	13.580	13.580	0.000	97	863008	2.47	2.98	
71 n-Octane	85	13.618	13.618	0.000	84	463240	2.47	2.62	
72 Ethylene Dibromide	107	13.877	13.876	0.001	98	727571	2.47	2.69	
73 Tetrachloroethene	129	14.006	14.005	0.001	95	527727	2.47	2.57	
74 Chlorobenzene	112	14.912	14.910	0.002	93	1107854	2.47	2.55	
76 Ethylbenzene	91	15.236	15.237	-0.001	99	1846858	2.47	2.56	
77 m-Xylene & p-Xylene	91	15.414	15.413	0.001	100	2920104	4.94	5.23	
79 Bromoform	173	15.813	15.812	0.001	96	787496	2.47	3.16	
80 Styrene	104	15.883	15.884	-0.001	98	1032916	2.47	2.90	
81 n-Nonane	57	15.926	15.926	0.000	83	786465	2.47	2.61	
82 o-Xylene	91	15.948	15.948	0.000	98	1471695	2.47	2.49	
83 1,1,2,2-Tetrachloroethane	83	16.271	16.269	0.002	99	958280	2.47	2.71	
84 1,2,3-Trichloropropane	110	16.422	16.424	-0.002	98	329888	2.47	2.58	
85 Isopropylbenzene	105	16.568	16.566	0.002	97	2074532	2.47	2.63	
86 N-Propylbenzene	120	17.145	17.144	0.001	98	607119	2.47	2.82	
87 2-Chlorotoluene	126	17.161	17.164	-0.003	94	529617	2.47	2.66	
88 4-Ethyltoluene	105	17.312	17.312	0.000	99	2153012	2.47	2.63	
89 1,3,5-Trimethylbenzene	120	17.398	17.400	-0.002	92	901269	2.47	2.73	
90 Alpha Methyl Styrene	118	17.652	17.652	0.000	87	857882	2.47	3.00	
91 n-Decane	57	17.792	17.793	-0.001	93	1156312	2.47	2.83	
92 tert-Butylbenzene	119	17.867	17.868	-0.001	91	2063899	2.47	2.69	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
93 1,2,4-Trimethylbenzene	105	17.884	17.884	0.000	96	1891808	2.47	2.74	
94 1,3-Dichlorobenzene	146	18.153	18.153	0.000	99	1219490	2.47	2.75	
95 sec-Butylbenzene	105	18.169	18.170	-0.001	98	2709561	2.47	2.74	
96 Benzyl chloride	91	18.234	18.237	-0.003	98	1647735	2.47	3.18	
97 1,4-Dichlorobenzene	146	18.250	18.251	-0.001	94	1209201	2.47	2.74	
98 4-Isopropyltoluene	119	18.358	18.358	0.000	97	2419457	2.47	2.78	
99 1,2,3-Trimethylbenzene	105	18.390	18.393	-0.003	99	1899492	2.47	2.43	
101 1,2-Dichlorobenzene	146	18.638	18.638	0.000	94	1184654	2.47	2.75	
104 n-Butylbenzene	91	18.833	18.832	0.001	99	2271258	2.47	2.93	
105 Undecane	57	19.226	19.228	-0.002	92	1290712	2.47	2.91	
106 1,2-Dibromo-3-Chloropropan	157	19.286	19.284	0.002	97	526122	2.47	2.00	
108 1,2,4,5-Tetramethylbenzene	119	19.641	19.641	0.000	96	2090737	2.47	4.92	
111 Dodecane	57	20.337	20.340	-0.003	98	1227394	2.47	2.96	
112 1,2,4-Trichlorobenzene	180	20.445	20.445	0.000	94	949711	2.47	2.94	
113 Naphthalene	128	20.569	20.574	-0.005	99	2110664	2.47	2.95	
115 Hexachlorobutadiene	225	20.828	20.827	0.001	96	972166	2.47	2.76	
116 1,2,3-Trichlorobenzene	180	20.865	20.864	0.001	94	912486	2.47	2.80	
117 2-Methylnaphthalene	142	21.680	21.680	0.000	99	420170	5.67	2.38	
118 1-Methylnaphthalene	142	21.820	21.823	-0.003	99	445201	5.68	2.54	
S 119 Xylenes, Total	100				0		7.41	7.72	
S 120 1,2-Dichloroethene, Total	1				0		4.94	4.89	

Reagents:

40CV101S_00054

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30ICV.D

Injection Date: 30-Jan-2018 21:11:30

Instrument ID: MR

Operator ID:

Lims ID: ICV

Worklist Smp#: 14

Client ID:

Purge Vol: 500.000 mL

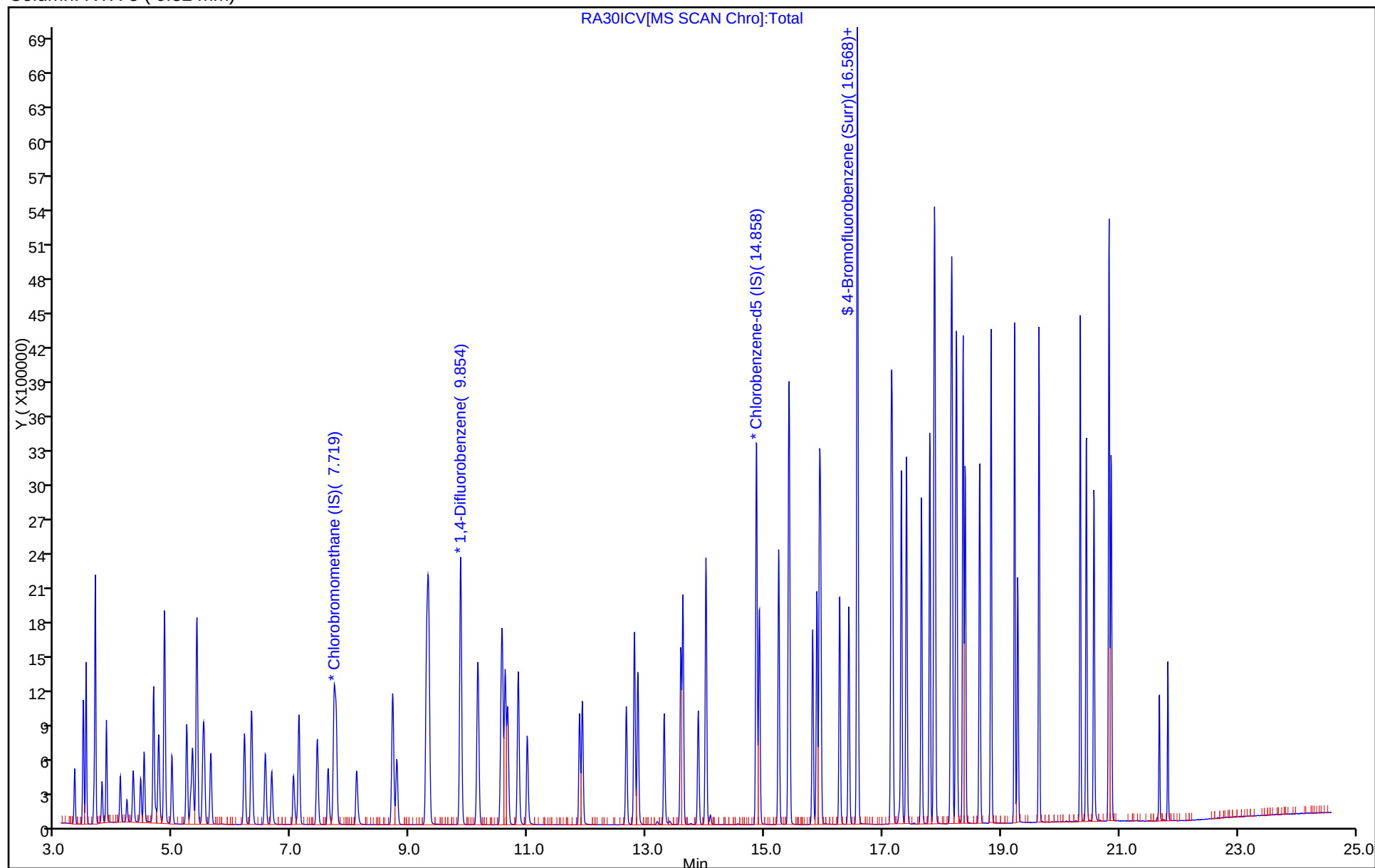
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-19179/2 Calibration Date: 04/03/2018 10:10
 Instrument ID: MR Calib Start Date: 06/28/2017 15:35
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 06/28/2017 21:58
 Lab File ID: RCCVD03.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Acetaldehyde	Ave	0.3474	0.3099			10.0	-10.8	30.0
2-Methylpentane	Ave	1.822	2.154			2.00	18.2	30.0
2,3-Dimethylpentane	Ave	0.1274	0.1474			2.00	15.7	30.0
Thiophene	Ave	0.3433	0.3902			2.00	13.7	30.0
Methylcyclohexane	Ave	0.4439	0.4964			2.00	11.8	30.0
2-Methylthiophene	Ave	0.6999	0.7948			2.00	13.6	30.0
3-Methylthiophene	Ave	0.6908	0.7809			2.00	13.0	30.0
2,3-Dimethylheptane	Ave	0.5998	0.7002			2.00	16.7	30.0
2-Ethylthiophene	Ave	0.9153	0.9279			2.00	1.4	30.0
Butylcyclohexane	Ave	0.7978	0.996			2.00	24.8	30.0
Indane	Ave	1.030	1.197			2.00	16.3	30.0
Indene	QuaF		0.8896			2.00		30.0
1,2-Dimethyl-4-Ethylbenzene	QuaF		1.395			2.00		30.0
1,2,3,5-Tetramethylbenzene	Ave	0.9142	1.142			2.00	24.9	30.0
1,2,3,4-Tetramethylbenzene	Ave	1.236	0.0004			2.00	-100.0*	30.0
Benzo (b) thiophene	Ave	0.9147	0.8281			2.00	-9.5	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RCCVD03.D
 Lims ID: CCVIS
 Client ID:
 Sample Type: CCVIS
 Inject. Date: 03-Apr-2018 10:10:30 ALS Bottle#: 15 Worklist Smp#: 2
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0007767-002
 Misc. Info.: S60
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub19
 Method: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 04-Apr-2018 10:08:42 Calib Date: 30-Jan-2018 19:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last Ical File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK025

First Level Reviewer: tajh

Date: 03-Apr-2018 11:01:26

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.670	7.670	0.000	78	337085	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.806	9.806	0.000	93	1973372	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.826	14.826	0.000	85	1613919	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.541	16.541	0.000	96	1093451	4.00	3.57	
6 Chlorodifluoromethane	67	3.459	3.459	0.000	97	63121	2.00	1.54	
7 Propene	41	3.464	3.464	0.000	99	166529	2.00	2.07	
8 Dichlorodifluoromethane	85	3.507	3.507	0.000	100	600226	2.00	1.90	
9 Chloromethane	52	3.642	3.642	0.000	100	56544	2.00	1.96	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.664	3.664	0.000	90	527980	2.00	2.46	
11 Acetaldehyde	44	3.766	3.766	0.000	90	261159	NC	NC	
12 Vinyl chloride	62	3.777	3.777	0.000	99	172482	2.00	1.95	
14 Butadiene	54	3.847	3.847	0.000	92	111272	2.00	1.95	
13 Butane	43	3.853	3.853	0.000	92	232253	2.00	2.45	
15 Bromomethane	94	4.079	4.079	0.000	97	198026	2.00	2.42	
16 Chloroethane	64	4.192	4.192	0.000	88	83307	2.00	2.08	
17 Ethanol	31	4.295	4.295	0.000	97	296585	10.0	11.7	
18 Vinyl bromide	106	4.424	4.424	0.000	97	200092	2.00	2.50	
19 2-Methylbutane	43	4.478	4.478	0.000	87	154604	2.00	2.32	
20 Acrolein	56	4.629	4.629	0.000	95	51416	2.00	2.76	
21 Trichlorofluoromethane	101	4.640	4.640	0.000	99	756759	2.00	2.52	
22 Acetonitrile	40	4.672	4.672	0.000	98	54588	2.00	2.38	
23 Acetone	58	4.721	4.721	0.000	100	63615	2.00	1.80	
24 Isopropyl alcohol	45	4.812	4.812	0.000	92	277202	2.00	2.05	
25 Pentane	72	4.823	4.823	0.000	97	39184	2.00	1.67	
26 Ethyl ether	31	4.947	4.947	0.000	94	203241	2.00	2.39	
27 1,1-Dichloroethene	96	5.195	5.195	0.000	95	236975	2.00	1.86	
28 Acrylonitrile	53	5.255	5.255	0.000	96	125956	2.00	1.56	
29 2-Methyl-2-propanol	59	5.287	5.287	0.000	95	331280	2.00	1.30	
30 1,1,2-Trichloro-1,2,2-trif	101	5.362	5.362	0.000	98	541845	2.00	1.99	
31 Methylene Chloride	84	5.465	5.465	0.000	85	222844	2.00	1.69	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.486	5.486	0.000	98	166673	2.00	1.57	
33 Carbon disulfide	76	5.594	5.594	0.000	99	618536	2.00	1.75	
34 trans-1,2-Dichloroethene	96	6.160	6.160	0.000	91	239478	2.00	1.85	
35 2-Methylpentane	43	6.209	6.209	0.000	93	362976	NC	NC	
36 Methyl tert-butyl ether	73	6.285	6.285	0.000	95	591809	2.00	1.48	
37 1,1-Dichloroethane	63	6.511	6.511	0.000	99	379318	2.00	1.54	
38 Vinyl acetate	43	6.619	6.619	0.000	99	446942	2.00	1.87	
39 2-Butanone (MEK)	72	6.986	6.986	0.000	98	95932	2.00	1.57	
40 Hexane	56	7.083	7.083	0.000	89	139733	2.00	1.41	
41 cis-1,2-Dichloroethene	96	7.385	7.385	0.000	84	259620	2.00	1.87	
42 Ethyl acetate	43	7.568	7.568	0.000	98	359714	2.00	1.68	
43 Chloroform	83	7.703	7.703	0.000	94	498095	2.00	1.60	
44 Tetrahydrofuran	42	8.048	8.048	0.000	90	201271	2.00	1.84	
45 1,1,1-Trichloroethane	97	8.657	8.657	0.000	95	496265	2.00	1.51	
46 1,2-Dichloroethane	62	8.727	8.727	0.000	97	268391	2.00	1.29	
47 Benzene	78	9.229	9.229	0.000	95	648948	2.00	1.72	
48 n-Butanol	31	9.229	9.229	0.000	62	61213	2.00	2.45	
49 Cyclohexane	69	9.256	9.256	0.000	91	103060	2.00	1.70	
50 Carbon tetrachloride	117	9.272	9.272	0.000	98	548201	2.00	1.80	
51 2,3-Dimethylpentane	71	9.423	9.423	0.000	91	145454	NC	NC	
52 Thiophene	84	9.493	9.493	0.000	90	384965	NC	NC	
53 Isooctane	57	10.102	10.102	0.000	98	918308	2.00	1.68	
54 1,2-Dichloropropane	63	10.496	10.496	0.000	89	227139	2.00	1.73	
55 n-Heptane	71	10.523	10.523	0.000	90	228900	2.00	1.75	
56 Trichloroethene	130	10.561	10.561	0.000	91	339271	2.00	1.90	
57 Dibromomethane	93	10.604	10.604	0.000	93	295547	2.00	1.91	
58 Dichlorobromomethane	83	10.787	10.787	0.000	98	487287	2.00	1.75	
59 1,4-Dioxane	88	10.793	10.793	0.000	86	94599	2.00	1.70	
60 Methyl methacrylate	41	10.944	10.944	0.000	98	212157	2.00	1.71	
61 Methylcyclohexane	83	11.413	11.413	0.000	92	489821	NC	NC	
62 4-Methyl-2-pentanone (MIBK)	43	11.828	11.828	0.000	97	392882	2.00	1.86	
63 cis-1,3-Dichloropropene	75	11.871	11.871	0.000	92	370061	2.00	1.71	
64 trans-1,3-Dichloropropene	75	12.621	12.621	0.000	98	322043	2.00	1.65	
65 Toluene	91	12.761	12.761	0.000	94	821796	2.00	1.85	
66 1,1,2-Trichloroethane	83	12.815	12.815	0.000	96	242332	2.00	1.98	
67 2-Methylthiophene	97	12.906	12.906	0.000	0	641396	NC	NC	
68 3-Methylthiophene	97	13.122	13.122	0.000	0	630124	NC	NC	
69 2-Hexanone	58	13.262	13.262	0.000	94	194102	2.00	1.83	
70 Chlorodibromomethane	129	13.543	13.543	0.000	96	508254	2.00	2.17	
71 n-Octane	85	13.586	13.586	0.000	91	256734	2.00	1.80	
72 Ethylene Dibromide	107	13.839	13.839	0.000	97	449726	2.00	2.06	
73 Tetrachloroethene	129	13.974	13.974	0.000	97	312303	2.00	1.88	
74 Chlorobenzene	112	14.880	14.880	0.000	98	705469	2.00	2.01	
75 2,3-Dimethylheptane	43	14.999	14.999	0.000	91	565028	NC	NC	
76 Ethylbenzene	91	15.209	15.209	0.000	97	1077523	2.00	1.85	
78 2-Ethylthiophene	97	15.306	15.306	0.000	0	748743	NC	NC	
77 m-Xylene & p-Xylene	91	15.381	15.381	0.000	99	1698925	4.00	3.77	
79 Bromoform	173	15.780	15.780	0.000	96	495471	2.00	2.46	
80 Styrene	104	15.856	15.856	0.000	96	610335	2.00	2.12	
81 n-Nonane	57	15.899	15.899	0.000	88	442172	2.00	1.82	
82 o-Xylene	91	15.915	15.915	0.000	98	863290	2.00	1.81	
83 1,1,2,2-Tetrachloroethane	83	16.239	16.239	0.000	99	615227	2.00	2.16	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 1,2,3-Trichloropropane	110	16.395	16.395	0.000	95	190992	2.00	1.85	
85 Isopropylbenzene	105	16.535	16.535	0.000	97	1220326	2.00	1.92	
86 N-Propylbenzene	120	17.112	17.112	0.000	99	346959	2.00	1.99	
87 2-Chlorotoluene	126	17.134	17.134	0.000	97	333934	2.00	2.08	
88 4-Ethyltoluene	105	17.285	17.285	0.000	99	1224767	2.00	1.85	
89 1,3,5-Trimethylbenzene	120	17.371	17.371	0.000	93	587078	2.00	2.20	
90 Alpha Methyl Styrene	118	17.625	17.625	0.000	91	477069	2.00	2.07	
91 n-Decane	57	17.770	17.770	0.000	92	589882	2.00	1.79	
92 tert-Butylbenzene	119	17.840	17.840	0.000	92	1144320	2.00	1.84	
93 1,2,4-Trimethylbenzene	105	17.857	17.857	0.000	96	1090893	2.00	1.96	
94 1,3-Dichlorobenzene	146	18.126	18.126	0.000	98	780442	2.00	2.18	
95 sec-Butylbenzene	105	18.142	18.142	0.000	98	1614094	2.00	2.02	
96 Benzyl chloride	91	18.212	18.212	0.000	99	921240	2.00	2.20	
97 1,4-Dichlorobenzene	146	18.223	18.223	0.000	95	782723	2.00	2.19	
98 4-Isopropyltoluene	119	18.331	18.331	0.000	96	1402562	2.00	2.00	
99 1,2,3-Trimethylbenzene	105	18.369	18.369	0.000	98	862682	2.00	1.37	
100 Butylcyclohexane	83	18.466	18.466	0.000	96	803697	NC	NC	
101 1,2-Dichlorobenzene	146	18.611	18.611	0.000	95	763045	2.00	2.20	
102 2,3-Dihydroindene	117	18.622	18.622	0.000	94	966276	NC	NC	
103 Indene	116	18.762	18.762	0.000	91	717884	NC	NC	
104 n-Butylbenzene	91	18.806	18.806	0.000	98	1376983	2.00	2.20	
105 Undecane	57	19.210	19.210	0.000	88	677881	2.00	1.90	
106 1,2-Dibromo-3-Chloropropan	157	19.259	19.259	0.000	97	306844	2.00	1.44	
107 1,2-Dimethyl-4-Ethylbenzen	119	19.620	19.620	0.000	0	1125886	NC	NC	
108 1,2,4,5-Tetramethylbenzene	119	19.679	19.679	0.000	97	691579	2.00	2.02	
109 1,2,3,5-Tetramethylbenzene	119	20.084	20.084	0.000	95	921358	NC	NC	
111 Dodecane	57	20.321	20.321	0.000	93	604710	2.00	1.81	
110 1,2,3,4-Tetramethylbenzene	119	20.353	20.353	0.000	1	330	NC	NC	
112 1,2,4-Trichlorobenzene	180	20.418	20.418	0.000	94	635739	2.00	2.44	
113 Naphthalene	128	20.547	20.547	0.000	99	1397769	2.00	2.42	
114 Benzo(b)thiophene	134	20.650	20.650	0.000	0	668270	NC	NC	
115 Hexachlorobutadiene	225	20.806	20.806	0.000	94	512193	2.00	1.80	
116 1,2,3-Trichlorobenzene	180	20.839	20.839	0.000	96	595628	2.00	2.26	
S 119 Xylenes, Total	100				0		6.00	5.58	
S 120 1,2-Dichloroethene, Total	1				0		4.00	3.72	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101S_00060

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RCCVD03.D

Injection Date: 03-Apr-2018 10:10:30

Instrument ID: MR

Operator ID:

Lims ID: CCVIS

Worklist Smp#: 2

Client ID:

Purge Vol: 500.000 mL

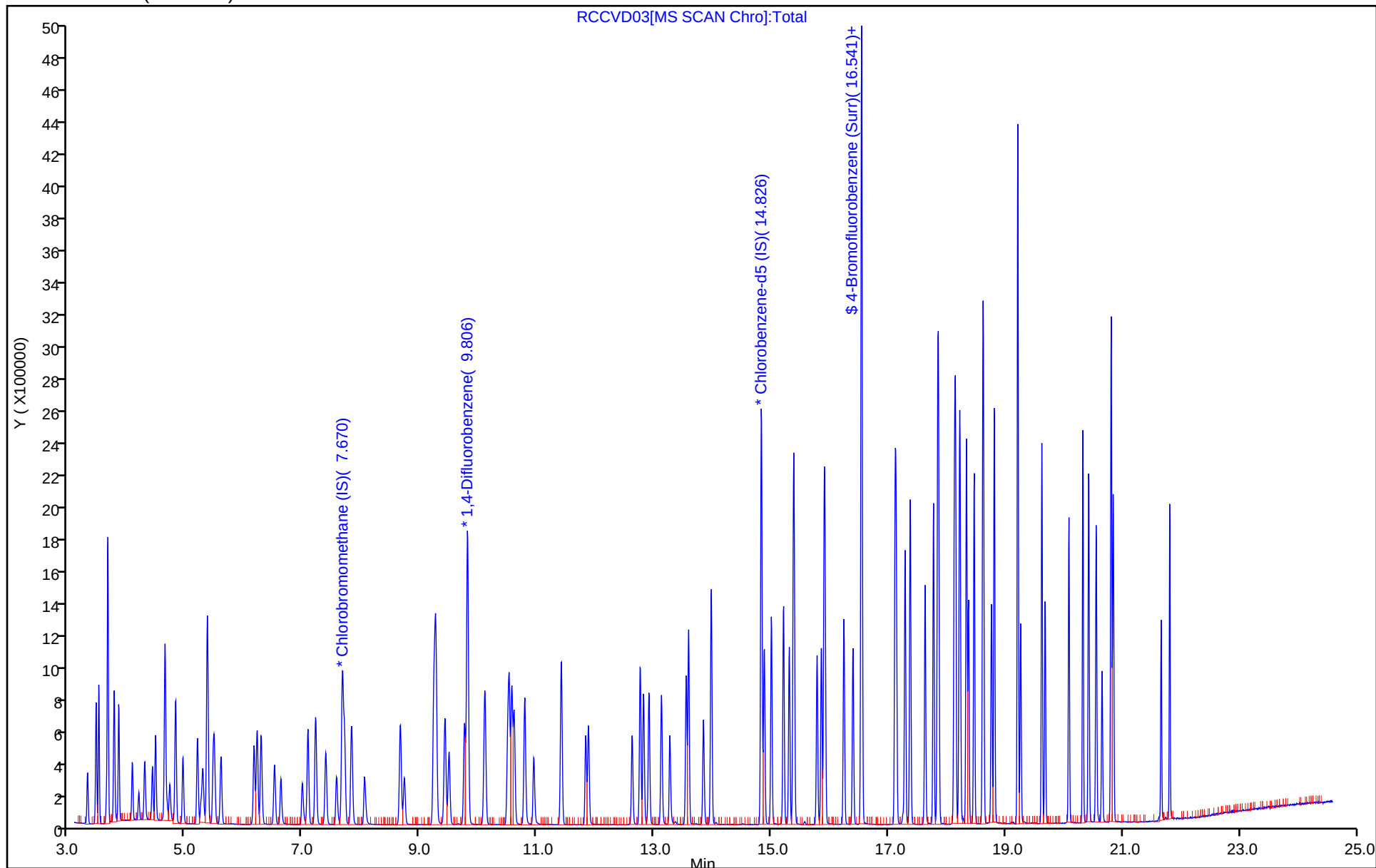
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1

SDG No.: _____

Lab Sample ID: CCVIS 140-19179/2 Calibration Date: 04/03/2018 10:10

Instrument ID: MR Calib Start Date: 01/30/2018 12:29

GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/30/2018 19:38

Lab File ID: RCCVD03.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4879	0.3745		1.54	2.00	-23.2	30.0
Propene	Ave	0.9557	0.9881		2.07	2.00	3.4	30.0
Dichlorodifluoromethane	Ave	3.756	3.561		1.90	2.00	-5.2	30.0
Chloromethane	Ave	0.3421	0.3355		1.96	2.00	-1.9	30.0
1,2-Dichlorotetrafluoroethane	Ave	2.544	3.133		2.46	2.00	23.1	30.0
Vinyl chloride	Ave	1.049	1.023		1.95	2.00	-2.4	30.0
1,3-Butadiene	Ave	0.6765	0.6602		1.95	2.00	-2.4	30.0
Butane	Ave	1.124	1.378		2.45	2.00	22.6	30.0
Bromomethane	Ave	0.9705	1.175		2.42	2.00	21.1	30.0
Chloroethane	Ave	0.4754	0.4943		2.08	2.00	4.0	30.0
Ethanol	Ave	0.2999	0.3519		11.7	10.0	17.4	30.0
Vinyl bromide	Ave	0.9514	1.187		2.50	2.00	24.8	30.0
2-Methylbutane	Ave	0.7921	0.9173		2.32	2.00	15.8	30.0
Acrolein	Ave	0.2209	0.3051		2.76	2.00	38.1*	30.0
Trichlorofluoromethane	Ave	3.567	4.490		2.52	2.00	25.9	30.0
Acetonitrile	Ave	0.2718	0.3239		2.38	2.00	19.1	30.0
Acetone	Ave	0.4182	0.3774			2.00	-9.8	30.0
Isopropyl alcohol	Ave	1.608	1.645		2.05	2.00	2.3	30.0
Pentane	Ave	0.2789	0.2325		1.67	2.00	-16.6	30.0
Ethyl ether	Ave	1.010	1.206		2.39	2.00	19.4	30.0
1,1-Dichloroethene	Ave	1.514	1.406		1.86	2.00	-7.2	30.0
Acrylonitrile	Ave	0.9563	0.7473		1.56	2.00	-21.9	30.0
t-Butyl alcohol	Ave	3.014	1.966		1.30	2.00	-34.8*	30.0
1,1,2-Trichlorotrifluoroethane	Ave	3.239	3.215		1.99	2.00	-0.7	30.0
Methylene Chloride	Ave	1.564	1.322		1.69	2.00	-15.5	30.0
3-Chloropropene	Ave	1.257	0.9889		1.57	2.00	-21.3	30.0
Carbon disulfide	Ave	4.190	3.670		1.75	2.00	-12.4	30.0
trans-1,2-Dichloroethene	Ave	1.537	1.421		1.85	2.00	-7.5	30.0
Methyl tert-butyl ether	Ave	4.739	3.511		1.48	2.00	-25.9	30.0
1,1-Dichloroethane	Ave	2.927	2.251		1.54	2.00	-23.1	30.0
Vinyl acetate	Ave	2.829	2.652		1.87	2.00	-6.3	30.0
2-Butanone	Ave	0.7255	0.5692		1.57	2.00	-21.5	30.0
Hexane	Ave	1.173	0.8291		1.41	2.00	-29.3	30.0
cis-1,2-Dichloroethene	Ave	1.647	1.540		1.87	2.00	-6.5	30.0
Ethyl acetate	Ave	2.540	2.134		1.68	2.00	-16.0	30.0
Chloroform	Ave	3.701	2.955		1.60	2.00	-20.2	30.0
Tetrahydrofuran	Ave	1.295	1.194		1.84	2.00	-7.8	30.0
1,1,1-Trichloroethane	Ave	3.888	2.944		1.51	2.00	-24.3	30.0
1,2-Dichloroethane	Ave	0.4231	0.2720		1.29	2.00	-35.7*	30.0
1-Butanol	Ave	0.0506	0.0620		2.45	2.00	22.7	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1

SDG No.: _____

Lab Sample ID: CCVIS 140-19179/2 Calibration Date: 04/03/2018 10:10

Instrument ID: MR Calib Start Date: 01/30/2018 12:29

GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/30/2018 19:38

Lab File ID: RCCVD03.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzene	Ave	0.7642	0.6577		1.72	2.00	-13.9	30.0
Cyclohexane	Ave	0.1227	0.1045		1.70	2.00	-14.9	30.0
Carbon tetrachloride	Ave	0.6160	0.5556		1.80	2.00	-9.8	30.0
2,2,4-Trimethylpentane	Ave	1.108	0.9307		1.68	2.00	-16.0	30.0
1,2-Dichloropropane	Ave	0.2659	0.2302		1.73	2.00	-13.4	30.0
Heptane	Ave	0.2649	0.2320		1.75	2.00	-12.4	30.0
Trichloroethene	Ave	0.3611	0.3439		1.90	2.00	-4.8	30.0
Dibromomethane	Ave	0.3145	0.2995		1.91	2.00	-4.7	30.0
Bromodichloromethane	Ave	0.5634	0.4939		1.75	2.00	-12.3	30.0
1,4-Dioxane	Ave	0.1127	0.0959		1.70	2.00	-14.9	30.0
Methyl methacrylate	Ave	0.2509	0.2150		1.71	2.00	-14.3	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4284	0.3982		1.86	2.00	-7.0	30.0
cis-1,3-Dichloropropene	Ave	0.4392	0.3751		1.71	2.00	-14.6	30.0
trans-1,3-Dichloropropene	Ave	0.4850	0.3991		1.65	2.00	-17.7	30.0
Toluene	Ave	1.102	1.018		1.85	2.00	-7.6	30.0
1,1,2-Trichloroethane	Ave	0.3035	0.3003		1.98	2.00	-1.1	30.0
2-Hexanone	Ave	0.2628	0.2405		1.83	2.00	-8.5	30.0
Dibromochloromethane	Ave	0.5804	0.6298		2.17	2.00	8.5	30.0
Octane	Ave	0.3544	0.3182		1.80	2.00	-10.2	30.0
1,2-Dibromoethane	Ave	0.5418	0.5573		2.06	2.00	2.9	30.0
Tetrachloroethene	Ave	0.4106	0.3870		1.88	2.00	-5.8	30.0
Chlorobenzene	Ave	0.8680	0.8742		2.01	2.00	0.7	30.0
Ethylbenzene	Ave	1.442	1.335		1.85	2.00	-7.4	30.0
m-Xylene & p-Xylene	Ave	1.118	1.053		3.77	4.00	-5.8	30.0
Bromoform	Ave	0.4993	0.6140		2.46	2.00	23.0	30.0
Styrene	Ave	0.7131	0.7563		2.12	2.00	6.1	30.0
Nonane	Ave	0.6024	0.5480		1.82	2.00	-9.0	30.0
o-Xylene	Ave	1.180	1.070		1.81	2.00	-9.4	30.0
1,1,2,2-Tetrachloroethane	Ave	0.7065	0.7624		2.16	2.00	7.9	30.0
1,2,3-Trichloropropane	Ave	0.2557	0.2367		1.85	2.00	-7.5	30.0
Isopropylbenzene	Ave	1.579	1.512		1.92	2.00	-4.2	30.0
Propylbenzene	Ave	0.4312	0.4300		1.99	2.00	-0.3	30.0
2-Chlorotoluene	Ave	0.3988	0.4138		2.08	2.00	3.8	30.0
4-Ethyltoluene	Ave	1.639	1.518		1.85	2.00	-7.4	30.0
1,3,5-Trimethylbenzene	Ave	0.6617	0.7275		2.20	2.00	10.0	30.0
Alpha Methyl Styrene	Ave	0.5721	0.5912		2.07	2.00	3.3	30.0
Decane	Ave	0.8188	0.7310		1.79	2.00	-10.7	30.0
tert-Butylbenzene	Ave	1.538	1.418		1.84	2.00	-7.8	30.0
1,2,4-Trimethylbenzene	Ave	1.379	1.352		1.96	2.00	-2.0	30.0
1,3-Dichlorobenzene	Ave	0.8870	0.9671		2.18	2.00	9.0	30.0
sec-Butylbenzene	Ave	1.978	2.000		2.02	2.00	1.1	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Lab Sample ID: CCVIS 140-19179/2 Calibration Date: 04/03/2018 10:10
 Instrument ID: MR Calib Start Date: 01/30/2018 12:29
 GC Column: RTX-5 ID: 0.32 (mm) Calib End Date: 01/30/2018 19:38
 Lab File ID: RCCVD03.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzyl chloride	Ave	1.037	1.142		2.20	2.00	10.0	30.0
1,4-Dichlorobenzene	Ave	0.8846	0.9700		2.19	2.00	9.6	30.0
4-Isopropyltoluene	Ave	1.739	1.738		2.00	2.00	-0.0	30.0
1,2,3-Trimethylbenzene	Ave	1.566	1.069		1.37	2.00	-31.7*	30.0
1,2-Dichlorobenzene	Ave	0.8615	0.9456		2.20	2.00	9.8	30.0
Butylbenzene	Ave	1.551	1.706		2.20	2.00	10.0	30.0
Undecane	Ave	0.8863	0.8400		1.90	2.00	-5.2	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.5267	0.3803		1.44	2.00	-27.8	30.0
1,2,4,5-Tetramethylbenzene	Ave	0.8495	0.8570		2.02	2.00	0.9	30.0
Dodecane	Ave	0.8298	0.7494		1.81	2.00	-9.7	30.0
1,2,4-Trichlorobenzene	Ave	0.6453	0.7878		2.44	2.00	22.1	30.0
Naphthalene	Ave	1.434	1.732		2.42	2.00	20.8	30.0
Hexachlorobutadiene	Ave	0.7058	0.6347		1.80	2.00	-10.1	30.0
1,2,3-Trichlorobenzene	Ave	0.6529	0.7381		2.26	2.00	13.1	30.0
1-Methylnaphthalene	Ave	0.3505				3.00		
2-Methylnaphthalene	Ave	0.3527				3.00		
4-Bromofluorobenzene (Surr)	Ave	0.7584	0.6775		3.57	4.00	-10.7	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RCCVD03.D
 Lims ID: CCVIS
 Client ID:
 Sample Type: CCVIS
 Inject. Date: 03-Apr-2018 10:10:30 ALS Bottle#: 15 Worklist Smp#: 2
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0007767-002
 Misc. Info.: S60
 Operator ID: Instrument ID: MR
 Sublist: chrom-MR_TO15*sub19
 Method: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 04-Apr-2018 10:08:42 Calib Date: 30-Jan-2018 19:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK025

First Level Reviewer: tajh

Date: 03-Apr-2018 11:01:26

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.670	7.670	0.000	78	337085	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.806	9.806	0.000	93	1973372	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.826	14.826	0.000	85	1613919	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.541	16.541	0.000	96	1093451	4.00	3.57	
6 Chlorodifluoromethane	67	3.459	3.459	0.000	97	63121	2.00	1.54	
7 Propene	41	3.464	3.464	0.000	99	166529	2.00	2.07	
8 Dichlorodifluoromethane	85	3.507	3.507	0.000	100	600226	2.00	1.90	
9 Chloromethane	52	3.642	3.642	0.000	100	56544	2.00	1.96	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.664	3.664	0.000	90	527980	2.00	2.46	
11 Acetaldehyde	44	3.766	3.766	0.000	90	261159	NC	NC	
12 Vinyl chloride	62	3.777	3.777	0.000	99	172482	2.00	1.95	
14 Butadiene	54	3.847	3.847	0.000	92	111272	2.00	1.95	
13 Butane	43	3.853	3.853	0.000	92	232253	2.00	2.45	
15 Bromomethane	94	4.079	4.079	0.000	97	198026	2.00	2.42	
16 Chloroethane	64	4.192	4.192	0.000	88	83307	2.00	2.08	
17 Ethanol	31	4.295	4.295	0.000	97	296585	10.0	11.7	
18 Vinyl bromide	106	4.424	4.424	0.000	97	200092	2.00	2.50	
19 2-Methylbutane	43	4.478	4.478	0.000	87	154604	2.00	2.32	
20 Acrolein	56	4.629	4.629	0.000	95	51416	2.00	2.76	
21 Trichlorofluoromethane	101	4.640	4.640	0.000	99	756759	2.00	2.52	
22 Acetonitrile	40	4.672	4.672	0.000	98	54588	2.00	2.38	
23 Acetone	58	4.721	4.721	0.000	100	63615	2.00	1.80	
24 Isopropyl alcohol	45	4.812	4.812	0.000	92	277202	2.00	2.05	
25 Pentane	72	4.823	4.823	0.000	97	39184	2.00	1.67	
26 Ethyl ether	31	4.947	4.947	0.000	94	203241	2.00	2.39	
27 1,1-Dichloroethene	96	5.195	5.195	0.000	95	236975	2.00	1.86	
28 Acrylonitrile	53	5.255	5.255	0.000	96	125956	2.00	1.56	
29 2-Methyl-2-propanol	59	5.287	5.287	0.000	95	331280	2.00	1.30	
30 1,1,2-Trichloro-1,2,2-trif	101	5.362	5.362	0.000	98	541845	2.00	1.99	
31 Methylene Chloride	84	5.465	5.465	0.000	85	222844	2.00	1.69	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.486	5.486	0.000	98	166673	2.00	1.57	
33 Carbon disulfide	76	5.594	5.594	0.000	99	618536	2.00	1.75	
34 trans-1,2-Dichloroethene	96	6.160	6.160	0.000	91	239478	2.00	1.85	
35 2-Methylpentane	43	6.209	6.209	0.000	93	362976	NC	NC	
36 Methyl tert-butyl ether	73	6.285	6.285	0.000	95	591809	2.00	1.48	
37 1,1-Dichloroethane	63	6.511	6.511	0.000	99	379318	2.00	1.54	
38 Vinyl acetate	43	6.619	6.619	0.000	99	446942	2.00	1.87	
39 2-Butanone (MEK)	72	6.986	6.986	0.000	98	95932	2.00	1.57	
40 Hexane	56	7.083	7.083	0.000	89	139733	2.00	1.41	
41 cis-1,2-Dichloroethene	96	7.385	7.385	0.000	84	259620	2.00	1.87	
42 Ethyl acetate	43	7.568	7.568	0.000	98	359714	2.00	1.68	
43 Chloroform	83	7.703	7.703	0.000	94	498095	2.00	1.60	
44 Tetrahydrofuran	42	8.048	8.048	0.000	90	201271	2.00	1.84	
45 1,1,1-Trichloroethane	97	8.657	8.657	0.000	95	496265	2.00	1.51	
46 1,2-Dichloroethane	62	8.727	8.727	0.000	97	268391	2.00	1.29	
47 Benzene	78	9.229	9.229	0.000	95	648948	2.00	1.72	
48 n-Butanol	31	9.229	9.229	0.000	62	61213	2.00	2.45	
49 Cyclohexane	69	9.256	9.256	0.000	91	103060	2.00	1.70	
50 Carbon tetrachloride	117	9.272	9.272	0.000	98	548201	2.00	1.80	
51 2,3-Dimethylpentane	71	9.423	9.423	0.000	91	145454	NC	NC	
52 Thiophene	84	9.493	9.493	0.000	90	384965	NC	NC	
53 Isooctane	57	10.102	10.102	0.000	98	918308	2.00	1.68	
54 1,2-Dichloropropane	63	10.496	10.496	0.000	89	227139	2.00	1.73	
55 n-Heptane	71	10.523	10.523	0.000	90	228900	2.00	1.75	
56 Trichloroethene	130	10.561	10.561	0.000	91	339271	2.00	1.90	
57 Dibromomethane	93	10.604	10.604	0.000	93	295547	2.00	1.91	
58 Dichlorobromomethane	83	10.787	10.787	0.000	98	487287	2.00	1.75	
59 1,4-Dioxane	88	10.793	10.793	0.000	86	94599	2.00	1.70	
60 Methyl methacrylate	41	10.944	10.944	0.000	98	212157	2.00	1.71	
61 Methylcyclohexane	83	11.413	11.413	0.000	92	489821	NC	NC	
62 4-Methyl-2-pentanone (MIBK)	43	11.828	11.828	0.000	97	392882	2.00	1.86	
63 cis-1,3-Dichloropropene	75	11.871	11.871	0.000	92	370061	2.00	1.71	
64 trans-1,3-Dichloropropene	75	12.621	12.621	0.000	98	322043	2.00	1.65	
65 Toluene	91	12.761	12.761	0.000	94	821796	2.00	1.85	
66 1,1,2-Trichloroethane	83	12.815	12.815	0.000	96	242332	2.00	1.98	
67 2-Methylthiophene	97	12.906	12.906	0.000	0	641396	NC	NC	
68 3-Methylthiophene	97	13.122	13.122	0.000	0	630124	NC	NC	
69 2-Hexanone	58	13.262	13.262	0.000	94	194102	2.00	1.83	
70 Chlorodibromomethane	129	13.543	13.543	0.000	96	508254	2.00	2.17	
71 n-Octane	85	13.586	13.586	0.000	91	256734	2.00	1.80	
72 Ethylene Dibromide	107	13.839	13.839	0.000	97	449726	2.00	2.06	
73 Tetrachloroethene	129	13.974	13.974	0.000	97	312303	2.00	1.88	
74 Chlorobenzene	112	14.880	14.880	0.000	98	705469	2.00	2.01	
75 2,3-Dimethylheptane	43	14.999	14.999	0.000	91	565028	NC	NC	
76 Ethylbenzene	91	15.209	15.209	0.000	97	1077523	2.00	1.85	
78 2-Ethylthiophene	97	15.306	15.306	0.000	0	748743	NC	NC	
77 m-Xylene & p-Xylene	91	15.381	15.381	0.000	99	1698925	4.00	3.77	
79 Bromoform	173	15.780	15.780	0.000	96	495471	2.00	2.46	
80 Styrene	104	15.856	15.856	0.000	96	610335	2.00	2.12	
81 n-Nonane	57	15.899	15.899	0.000	88	442172	2.00	1.82	
82 o-Xylene	91	15.915	15.915	0.000	98	863290	2.00	1.81	
83 1,1,2,2-Tetrachloroethane	83	16.239	16.239	0.000	99	615227	2.00	2.16	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 1,2,3-Trichloropropane	110	16.395	16.395	0.000	95	190992	2.00	1.85	
85 Isopropylbenzene	105	16.535	16.535	0.000	97	1220326	2.00	1.92	
86 N-Propylbenzene	120	17.112	17.112	0.000	99	346959	2.00	1.99	
87 2-Chlorotoluene	126	17.134	17.134	0.000	97	333934	2.00	2.08	
88 4-Ethyltoluene	105	17.285	17.285	0.000	99	1224767	2.00	1.85	
89 1,3,5-Trimethylbenzene	120	17.371	17.371	0.000	93	587078	2.00	2.20	
90 Alpha Methyl Styrene	118	17.625	17.625	0.000	91	477069	2.00	2.07	
91 n-Decane	57	17.770	17.770	0.000	92	589882	2.00	1.79	
92 tert-Butylbenzene	119	17.840	17.840	0.000	92	1144320	2.00	1.84	
93 1,2,4-Trimethylbenzene	105	17.857	17.857	0.000	96	1090893	2.00	1.96	
94 1,3-Dichlorobenzene	146	18.126	18.126	0.000	98	780442	2.00	2.18	
95 sec-Butylbenzene	105	18.142	18.142	0.000	98	1614094	2.00	2.02	
96 Benzyl chloride	91	18.212	18.212	0.000	99	921240	2.00	2.20	
97 1,4-Dichlorobenzene	146	18.223	18.223	0.000	95	782723	2.00	2.19	
98 4-Isopropyltoluene	119	18.331	18.331	0.000	96	1402562	2.00	2.00	
99 1,2,3-Trimethylbenzene	105	18.369	18.369	0.000	98	862682	2.00	1.37	
100 Butylcyclohexane	83	18.466	18.466	0.000	96	803697	NC	NC	
101 1,2-Dichlorobenzene	146	18.611	18.611	0.000	95	763045	2.00	2.20	
102 2,3-Dihydroindene	117	18.622	18.622	0.000	94	966276	NC	NC	
103 Indene	116	18.762	18.762	0.000	91	717884	NC	NC	
104 n-Butylbenzene	91	18.806	18.806	0.000	98	1376983	2.00	2.20	
105 Undecane	57	19.210	19.210	0.000	88	677881	2.00	1.90	
106 1,2-Dibromo-3-Chloropropan	157	19.259	19.259	0.000	97	306844	2.00	1.44	
107 1,2-Dimethyl-4-Ethylbenzen	119	19.620	19.620	0.000	0	1125886	NC	NC	
108 1,2,4,5-Tetramethylbenzene	119	19.679	19.679	0.000	97	691579	2.00	2.02	
109 1,2,3,5-Tetramethylbenzene	119	20.084	20.084	0.000	95	921358	NC	NC	
111 Dodecane	57	20.321	20.321	0.000	93	604710	2.00	1.81	
110 1,2,3,4-Tetramethylbenzene	119	20.353	20.353	0.000	1	330	NC	NC	
112 1,2,4-Trichlorobenzene	180	20.418	20.418	0.000	94	635739	2.00	2.44	
113 Naphthalene	128	20.547	20.547	0.000	99	1397769	2.00	2.42	
114 Benzo(b)thiophene	134	20.650	20.650	0.000	0	668270	NC	NC	
115 Hexachlorobutadiene	225	20.806	20.806	0.000	94	512193	2.00	1.80	
116 1,2,3-Trichlorobenzene	180	20.839	20.839	0.000	96	595628	2.00	2.26	
S 119 Xylenes, Total	100				0		6.00	5.58	
S 120 1,2-Dichloroethene, Total	1				0		4.00	3.72	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101S_00060

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RCCVD03.D

Injection Date: 03-Apr-2018 10:10:30

Instrument ID: MR

Operator ID:

Lims ID: CCVIS

Worklist Smp#: 2

Client ID:

Purge Vol: 500.000 mL

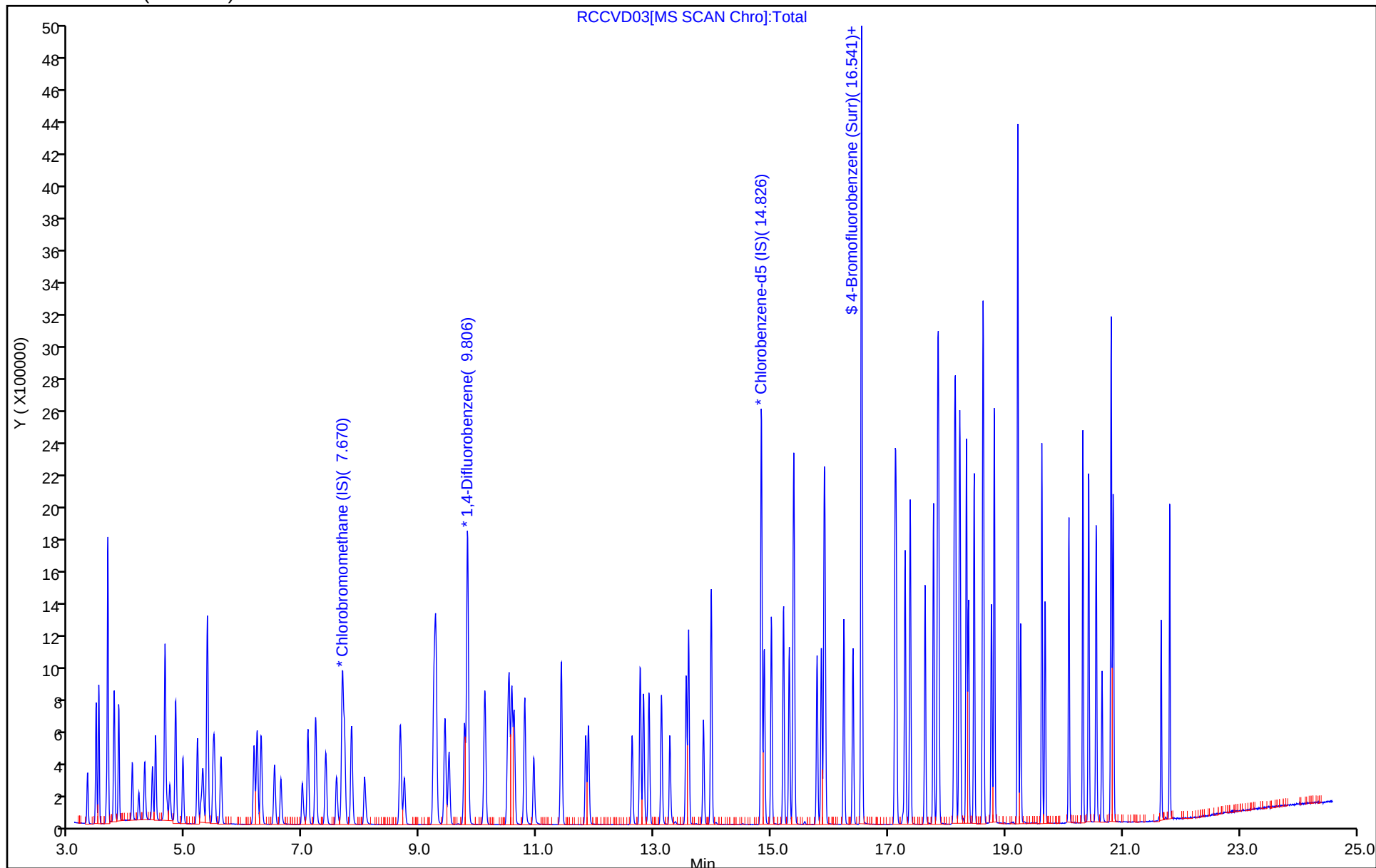
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JBFB15.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 15-Feb-2018 14:16:30 ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Sample Info: 140-0007391-001
Misc. Info.: BFB
Operator ID: 403648 Instrument ID: MJ
Method: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 19-Feb-2018 10:05:22 Calib Date: 15-Feb-2018 22:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D
Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK031

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags

\$ 5 BFB	95	4.423	4.423	0.000	0	571491	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

40MXSUR_00002

Amount Added: 40.00

Units: mL

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JBFB15.D

Injection Date: 15-Feb-2018 14:16:30

Instrument ID: MJ

Lims ID: BFB

Client ID:

Operator ID: 403648

ALS Bottle#: 16

Worklist Smp#: 1

Injection Vol: 500.0 mL

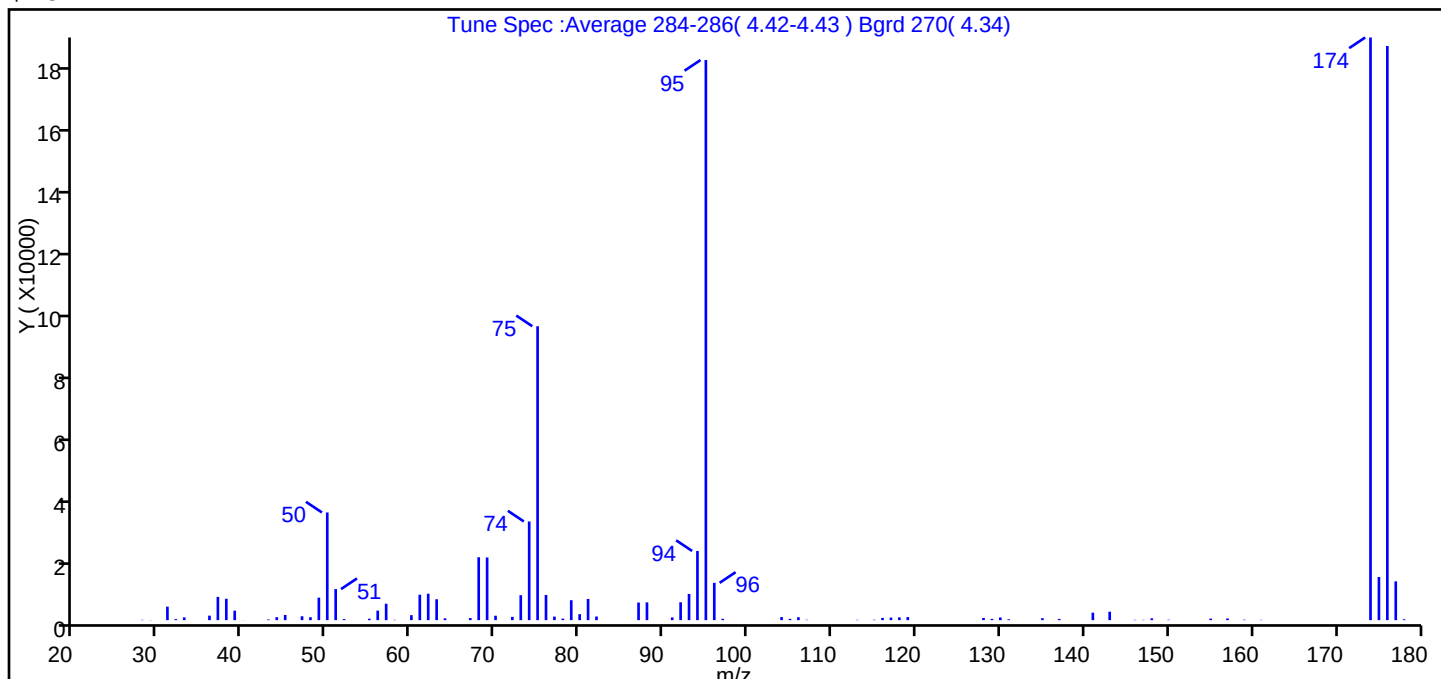
Dil. Factor: 1.0000

Method: MJ_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Tune Method: BFB Method 8260

\$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	19.2
75	30 to 60% of m/z 95	52.5
96	5 to 9% of m/z 95	6.7
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	104.0
175	5 to 9% of m/z 174	7.7 (7.4)
176	Greater than 95% but less than 101% of m/z 174	102.5 (98.5)
177	5 to 9% of m/z 176	6.9 (6.8)

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JBFB15.D\MJ_TO15.rslt\spectra.d
Injection Date: 15-Feb-2018 14:16:30
Spectrum: Tune Spec :Average 284-286(4.42-4.43) Bgrd 270(4.34)
Base Peak: 174.00
Minimum % Base Peak: 0
Number of Points: 83

m/z	Y	m/z	Y	m/z	Y	m/z	Y
28.00	106	57.00	5180	82.00	1147	129.00	397
29.00	51	58.00	110	87.00	5542	130.00	847
31.00	4246	60.00	1574	88.00	5589	131.00	273
32.00	334	61.00	8010	91.00	862	135.00	608
33.00	880	62.00	8327	92.00	5626	137.00	391
36.00	1420	63.00	6584	93.00	8251	141.00	2355
37.00	7330	64.00	574	94.00	21784	143.00	2654
38.00	6730	67.00	668	95.00	176384	146.00	108
39.00	2983	68.00	19808	96.00	11748	147.00	101
40.00	30	69.00	19736	97.00	422	148.00	569
43.00	218	70.00	1389	104.00	973	150.00	133
44.00	936	72.00	1031	105.00	416	155.00	479
45.00	1633	73.00	7862	106.00	922	157.00	534
47.00	1227	74.00	31072	107.00	119	159.00	150
48.00	921	75.00	92560	113.00	106	161.00	102
49.00	7091	76.00	7920	115.00	132	174.00	183488
50.00	33912	77.00	1118	116.00	707	175.00	13588
51.00	9776	78.00	483	117.00	798	176.00	180800
52.00	330	79.00	6276	118.00	876	177.00	12220
55.00	447	80.00	1882	119.00	973	178.00	273
56.00	2998	81.00	6677	128.00	700		

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JBFBB15.D

Injection Date: 15-Feb-2018 14:16:30

Instrument ID: MJ

Operator ID: 403648

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 500.0 mL

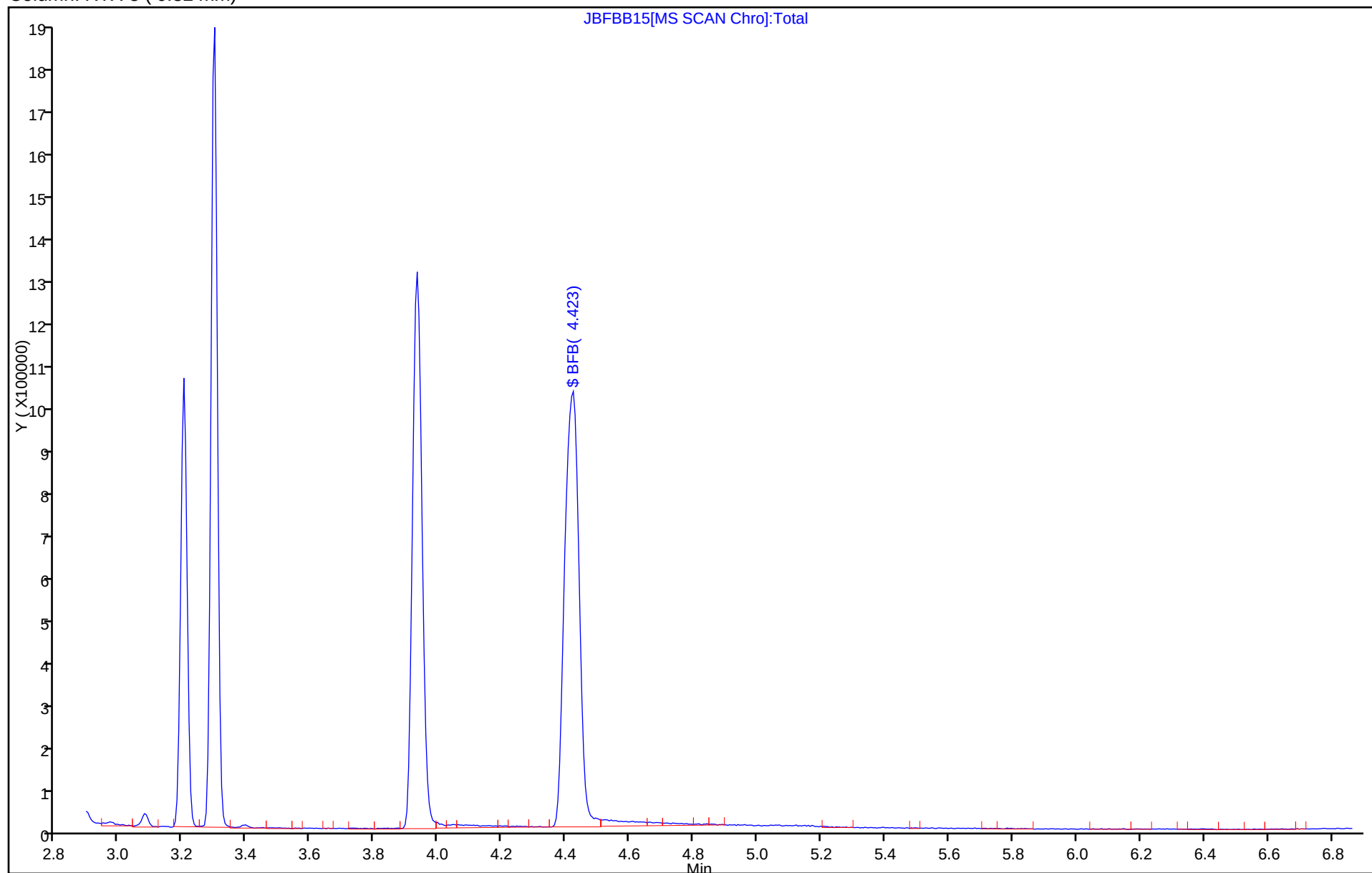
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MJ_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180402-7781.b\JBFB04.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 04-Apr-2018 09:53:30 ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Sample Info: 140-0007781-001
Misc. Info.: TUNE
Operator ID: 007126 Instrument ID: MJ
Method: \\ChromNA\Knoxville\ChromData\MJ\20180402-7781.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 04-Apr-2018 14:25:44 Calib Date: 15-Feb-2018 22:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D
Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
\$ 5 BFB	95	4.400	4.400	0.000	0	438789	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

40MXSUR_00002

Amount Added: 40.00

Units: mL

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180402-7781.b\JBFB04.D

Injection Date: 04-Apr-2018 09:53:30

Instrument ID: MJ

Lims ID: BFB

Client ID:

Operator ID: 007126

ALS Bottle#: 16

Worklist Smp#: 1

Injection Vol: 500.0 mL

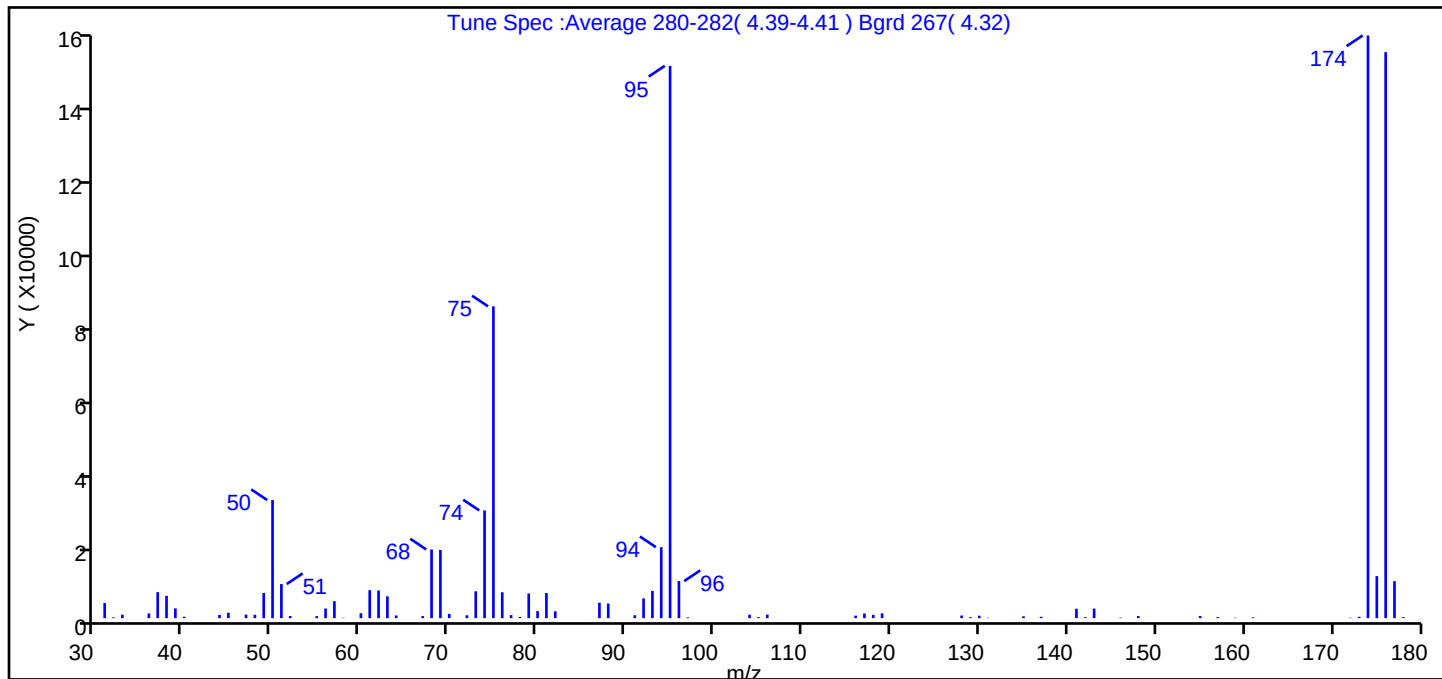
Dil. Factor: 1.0000

Method: MJ_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Tune Method: BFB Method 8260

\$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	21.4
75	30 to 60% of m/z 95	56.5
96	5 to 9% of m/z 95	6.7
173	Less than 2% of m/z 174	0.2 (0.2)
174	50 to 120% of m/z 95	105.5
175	5 to 9% of m/z 174	7.6 (7.2)
176	Greater than 95% but less than 101% of m/z 174	102.5 (97.1)
177	5 to 9% of m/z 176	6.7 (6.5)

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180402-7781.b\JBFB04.D\MJ_TO15.rslt\spectra.d
Injection Date: 04-Apr-2018 09:53:30
Spectrum: Tune Spec :Average 280-282(4.39-4.41) Bgrd 267(4.32)
Base Peak: 174.00
Minimum % Base Peak: 0
Number of Points: 78

m/z	Y	m/z	Y	m/z	Y	m/z	Y
31.00	4013	60.00	1300	87.00	4087	135.00	490
32.00	214	61.00	7438	88.00	3874	137.00	366
33.00	923	62.00	7346	91.00	773	141.00	2494
36.00	1241	63.00	5787	92.00	5237	142.00	253
37.00	6893	64.00	711	93.00	7245	143.00	2530
38.00	5914	67.00	551	94.00	18840	146.00	131
39.00	2591	68.00	18240	95.00	146624	148.00	547
40.00	374	69.00	18096	96.00	9851	155.00	566
44.00	859	70.00	1132	97.00	222	157.00	274
45.00	1440	72.00	762	104.00	913	159.00	111
47.00	948	73.00	7136	105.00	255	161.00	206
48.00	894	74.00	28600	106.00	953	172.00	115
49.00	6694	75.00	82776	116.00	659	173.00	365
50.00	31352	76.00	6882	117.00	1230	174.00	154688
51.00	9050	77.00	805	118.00	866	175.00	11161
52.00	575	78.00	331	119.00	1279	176.00	150272
55.00	538	79.00	6552	128.00	698	177.00	9813
56.00	2554	80.00	1887	129.00	266	178.00	251
57.00	4506	81.00	6679	130.00	643		
58.00	101	82.00	1805	131.00	101		

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180402-7781.b\JBFBD04.D

Injection Date: 04-Apr-2018 09:53:30

Instrument ID: MJ

Operator ID: 007126

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 500.0 mL

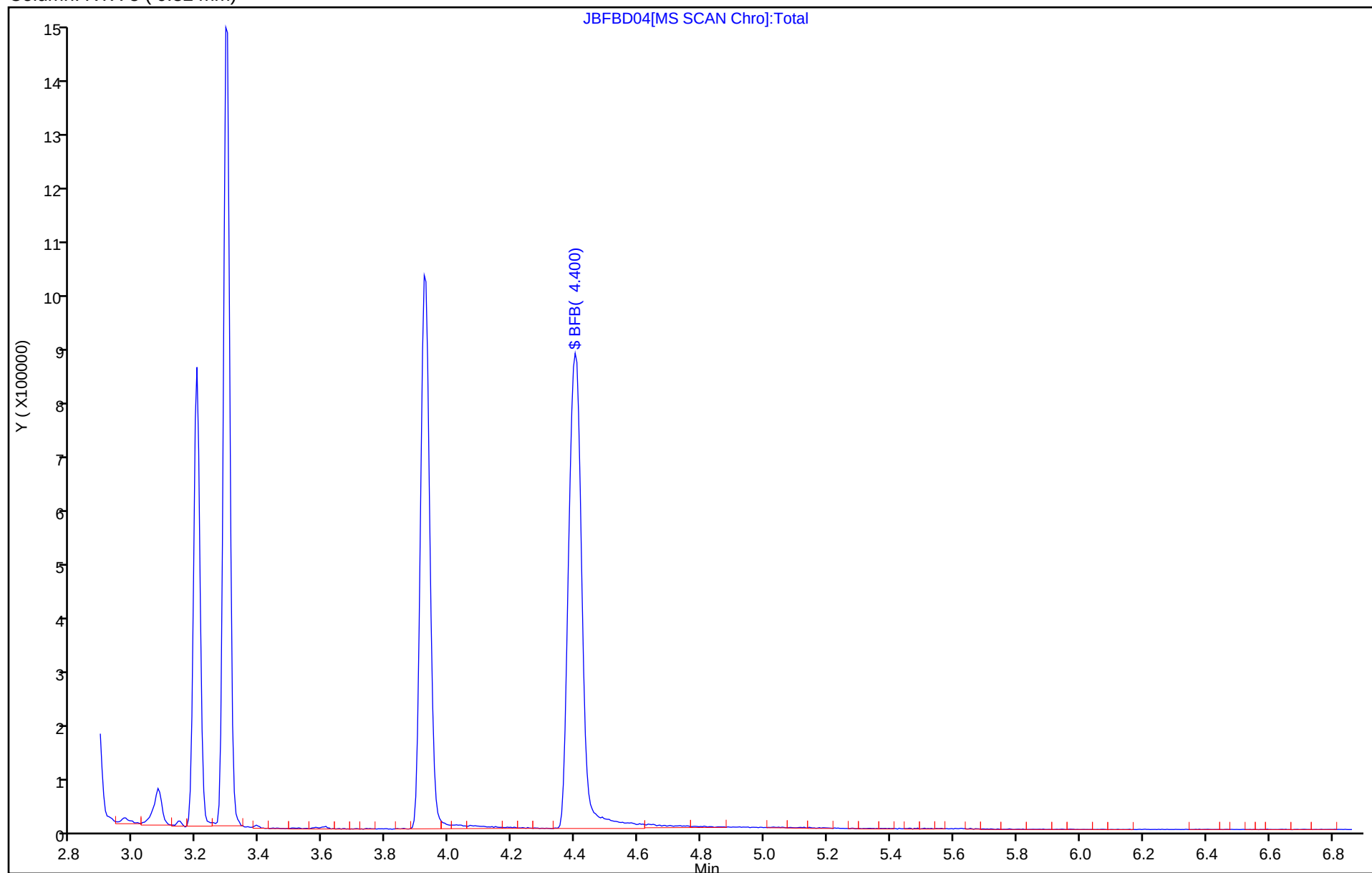
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MJ_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\BFBFA30.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 30-Jan-2018 11:12:30 ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Sample Info: 140-0007236-001
Misc. Info.: BFB
Operator ID: Instrument ID: MR
Method: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 05-Feb-2018 13:03:43 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D
Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags

\$ 5 BFB	95	4.328	4.408	-0.080	0	1711941	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

40MXSUR_00002

Amount Added: 40.00

Units: mL

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\BFBFA30.D

Injection Date: 30-Jan-2018 11:12:30

Instrument ID: MR

Lims ID: BFB

Client ID:

Operator ID:

ALS Bottle#:

16

Worklist Smp#: 1

Injection Vol: 500.0 mL

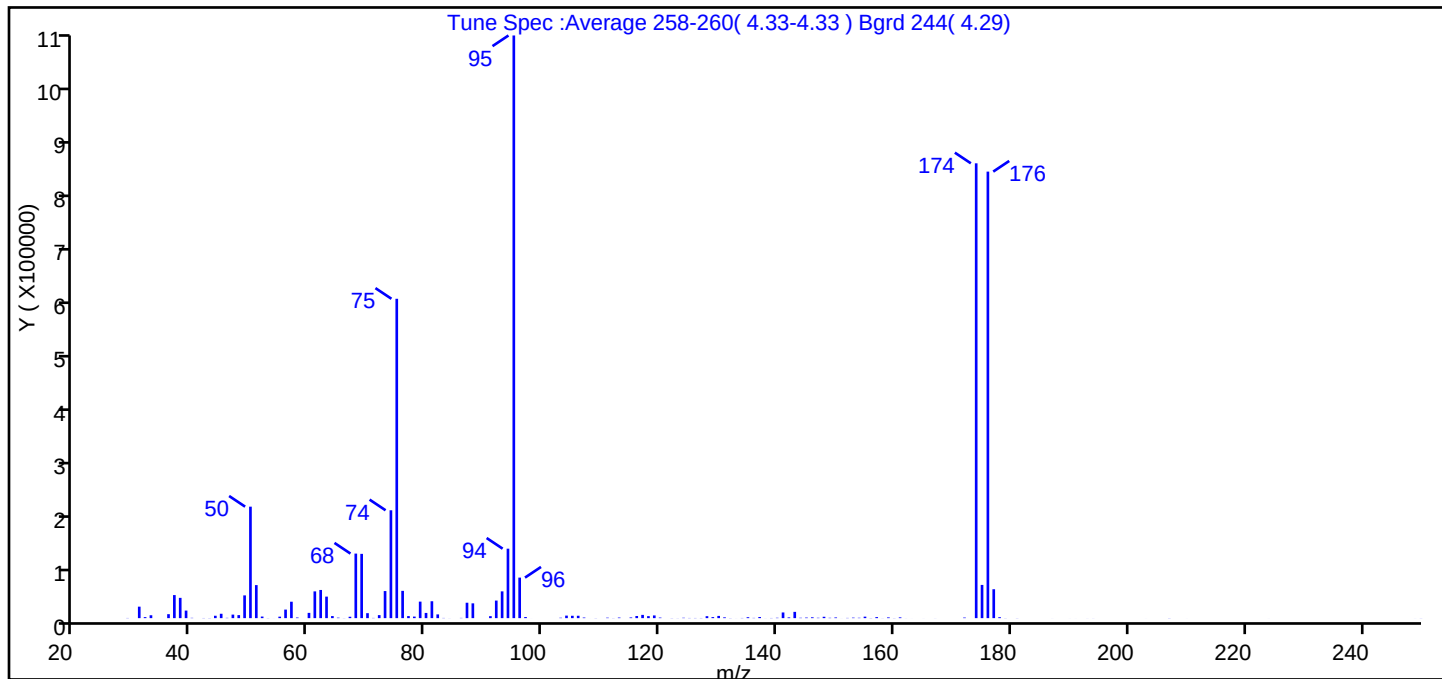
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Tune Method: BFB Method 8260

\$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	19.1
75	30 to 60% of m/z 95	54.8
96	5 to 9% of m/z 95	7.0
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	78.1
175	5 to 9% of m/z 174	5.7 (7.3)
176	Greater than 95% but less than 101% of m/z 174	76.6 (98.2)
177	5 to 9% of m/z 176	5.0 (6.5)

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RBFBA30.D\MR_TO15.rslt\spectra.d
Injection Date: 30-Jan-2018 11:12:30
Spectrum: Tune Spec :Average 258-260(4.33-4.33) Bgrd 244(4.29)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 142

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	324	70.00	9036	115.00	1264	152.00	401
31.00	20896	71.00	383	116.00	3902	153.00	899
32.00	1867	72.00	5492	117.00	5927	154.00	656
33.00	5271	73.00	49280	118.00	3658	155.00	2692
36.00	7229	74.00	196288	119.00	4937	156.00	237
37.00	41976	75.00	581184	120.00	1007	157.00	1860
38.00	36920	76.00	49648	122.00	209	158.00	109
39.00	13749	77.00	3735	123.00	140	159.00	1331
40.00	537	78.00	2828	124.00	676	160.00	200
42.00	290	79.00	30072	125.00	329	161.00	1362
43.00	255	80.00	9490	126.00	311	162.00	67
44.00	4349	81.00	30752	127.00	273	163.00	37
45.00	7970	82.00	6831	128.00	3582	165.00	49
46.00	525	83.00	363	129.00	1881	167.00	83
47.00	6435	84.00	102	130.00	4059	172.00	1039
48.00	5497	86.00	429	131.00	1448	174.00	827712
49.00	41408	87.00	28040	132.00	219	175.00	60448
50.00	202880	88.00	26936	133.00	53	176.00	812608
51.00	60136	91.00	3596	134.00	327	177.00	52616
52.00	2904	92.00	31976	135.00	1662	178.00	1672
53.00	187	93.00	48736	136.00	441	179.00	171
54.00	39	94.00	126416	137.00	2035	181.00	172
55.00	2684	95.00	1060352	138.00	72	187.00	43
56.00	15572	96.00	73776	139.00	312	190.00	38
57.00	29888	97.00	1966	140.00	673	191.00	35
58.00	1141	98.00	36	141.00	10337	193.00	64
60.00	9583	103.00	725	142.00	1343	194.00	77
61.00	48696	104.00	4614	143.00	11431	203.00	36
62.00	51280	105.00	4311	144.00	656	207.00	218
63.00	39168	106.00	4347	145.00	1034	209.00	4
64.00	3758	107.00	1083	146.00	1535	210.00	33
65.00	855	108.00	25	147.00	664	224.00	41
66.00	165	109.00	185	148.00	2487	249.00	57

Report Date: 05-Feb-2018 13:03:43

Chrom Revision: 2.2 24-Jan-2018 15:37:30

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RBFBA30.D\MR_TO15.rslt\spectra.d

Injection Date: 30-Jan-2018 11:12:30

Spectrum: Tune Spec :Average 258-260(4.33-4.33) Bgrd 244(4.29)

Base Peak: 95.00

Minimum % Base Peak: 0

Number of Points: 142

m/z	Y	m/z	Y	m/z	Y	m/z	Y
67.00	2514	111.00	846	149.00	605	250.00	135
68.00	117480	112.00	180	150.00	1241		
69.00	116984	113.00	1062	151.00	46		

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RBFBFA30.D

Injection Date: 30-Jan-2018 11:12:30

Instrument ID: MR

Operator ID:

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 500.0 mL

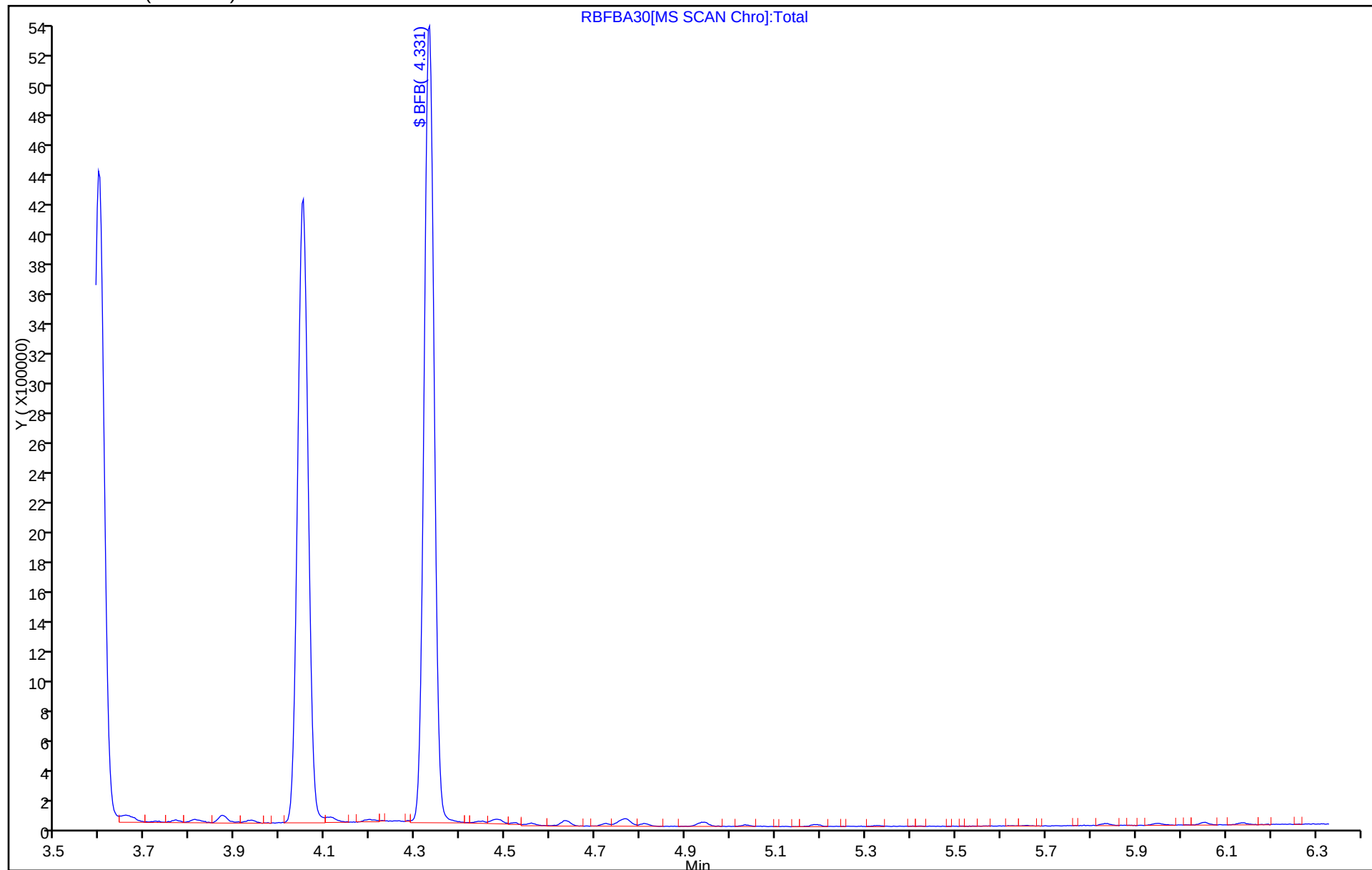
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RBFB03.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 03-Apr-2018 09:39:30 ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Sample Info: 140-0007767-001
Misc. Info.: BFB
Operator ID: Instrument ID: MR
Method: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 04-Apr-2018 09:58:57 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D
Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
\$ 5 BFB	95	4.320	4.320	0.000	0	1379857	NR	NR	8

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

8 - Failed MS Tune Ratio Test

Reagents:

40MXSUR_00002

Amount Added: 40.00

Units: mL

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\BFBFD03.D

Injection Date: 03-Apr-2018 09:39:30

Instrument ID: MR

Lims ID: BFB

Client ID:

Operator ID:

ALS Bottle#:

16

Worklist Smp#: 1

Injection Vol: 500.0 mL

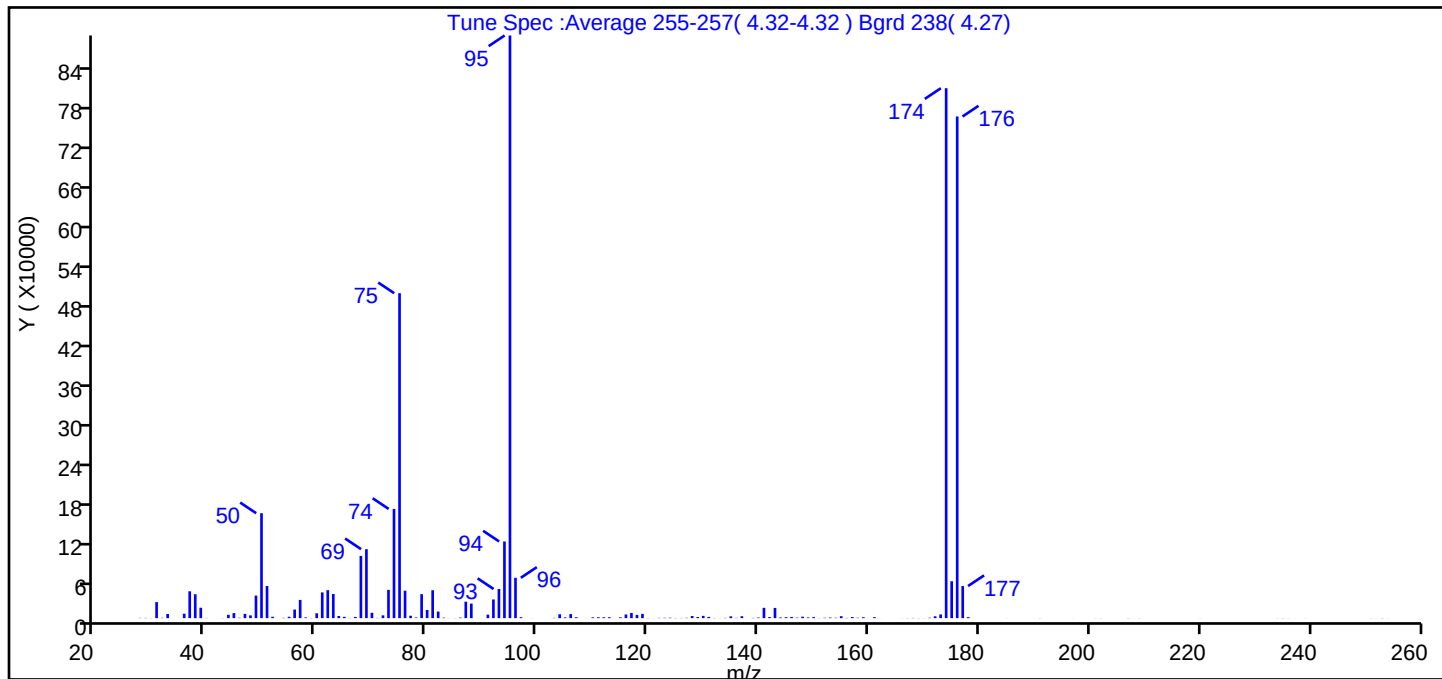
Dil. Factor: 1.0000

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Tune Method: BFB Method 8260

\$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	18.0
75	30 to 60% of m/z 95	55.8
96	5 to 9% of m/z 95	6.9
173	Less than 2% of m/z 174	0.6 (0.7)
174	50 to 120% of m/z 95	90.9
175	5 to 9% of m/z 174	6.3 (7.0)
176	Greater than 95% but less than 101% of m/z 174	86.1 (94.7)*
177	5 to 9% of m/z 176	5.5 (6.4)

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RBFB03.D\MR_TO15.rslt\spectra.d
Injection Date: 03-Apr-2018 09:39:30
Spectrum: Tune Spec :Average 255-257(4.32-4.32) Bgrd 238(4.27)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 165

m/z	Y	m/z	Y	m/z	Y	m/z	Y
28.00	401	73.00	42824	121.00	83	166.00	94
29.00	338	74.00	165632	122.00	420	167.00	190
30.00	138	75.00	492864	123.00	571	168.00	342
31.00	24368	76.00	41584	124.00	677	169.00	197
32.00	456	77.00	3622	125.00	225	170.00	155
33.00	6342	78.00	974	126.00	270	171.00	655
34.00	42	79.00	36400	127.00	465	172.00	2831
36.00	6760	80.00	12374	128.00	3202	173.00	5624
37.00	40744	81.00	42296	129.00	1646	174.00	803776
38.00	36296	82.00	10011	130.00	3446	175.00	55944
39.00	15771	83.00	700	131.00	1860	176.00	760896
40.00	286	84.00	104	132.00	251	177.00	48664
42.00	16	85.00	157	133.00	118	178.00	1553
43.00	160	86.00	858	134.00	413	185.00	87
44.00	5011	87.00	24920	135.00	2717	187.00	34
45.00	7686	88.00	22096	136.00	414	190.00	37
46.00	568	90.00	48	137.00	2901	191.00	143
47.00	6497	91.00	5280	139.00	358	197.00	72
48.00	4224	92.00	28352	140.00	912	201.00	102
49.00	34240	93.00	44192	141.00	15667	202.00	149
50.00	159168	94.00	116296	142.00	1688	203.00	26
51.00	48744	95.00	883776	143.00	15504	205.00	47
52.00	2098	96.00	61184	144.00	1052	207.00	201
54.00	492	97.00	1436	145.00	1455	209.00	150
55.00	2065	99.00	98	146.00	1801	210.00	45
56.00	13057	103.00	422	147.00	734	220.00	111
57.00	27632	104.00	5862	148.00	2235	224.00	43
58.00	1137	105.00	1123	149.00	1022	232.00	44
59.00	219	106.00	6172	150.00	1537	234.00	100
60.00	7370	107.00	1394	151.00	180	235.00	183
61.00	39048	109.00	40	152.00	558	236.00	103
62.00	42440	110.00	1207	153.00	930	237.00	37
63.00	36664	111.00	1395	154.00	588	239.00	80

Report Date: 04-Apr-2018 09:58:58

Chrom Revision: 2.2 13-Mar-2018 08:45:20

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RBFB03.D\MR_TO15.rslt\spectra.d

Injection Date: 03-Apr-2018 09:39:30

Spectrum: Tune Spec :Average 255-257(4.32-4.32) Bgrd 238(4.27)

Base Peak: 95.00

Minimum % Base Peak: 0

Number of Points: 165

m/z	Y	m/z	Y	m/z	Y	m/z	Y
64.00	3249	112.00	1316	155.00	2967	247.00	46
65.00	1976	113.00	1460	156.00	324	249.00	40
66.00	214	114.00	55	157.00	1676	251.00	114
67.00	1798	115.00	1220	158.00	535	252.00	58
68.00	94416	116.00	5553	159.00	1360	253.00	218
69.00	104624	117.00	7833	160.00	50	254.00	71
70.00	8101	118.00	4866	161.00	1512		
71.00	328	119.00	6493	162.00	105		
72.00	4231	120.00	224	165.00	8		

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RBFBFD03.D

Injection Date: 03-Apr-2018 09:39:30

Instrument ID: MR

Operator ID:

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 500.0 mL

Dil. Factor: 1.0000

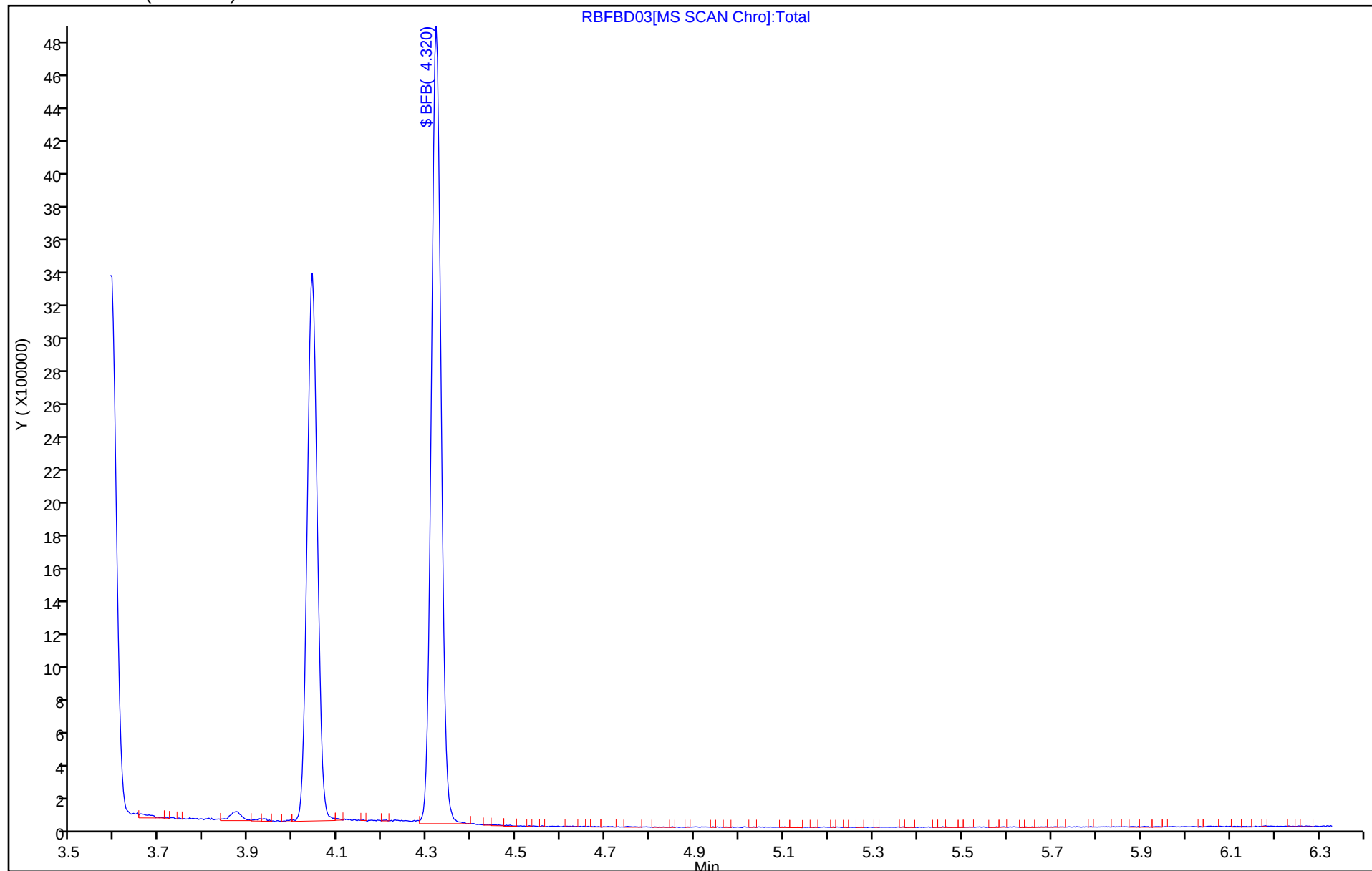
ALS Bottle#: 16

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)

RBFBFD03[MS SCAN Chro]:Total



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-19179/4
 Matrix: Air Lab File ID: R500BD03.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500 (mL) Date Analyzed: 04/03/2018 11:58
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19179 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	167.85	ND		0.080	
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	187.38	ND		0.080	
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	
75-35-4	1,1-Dichloroethene	96.94	ND		0.040	
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	
106-93-4	1,2-Dibromoethane	187.87	ND		0.080	
95-50-1	1,2-Dichlorobenzene	147.00	ND		0.080	
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	
78-87-5	1,2-Dichloropropane	112.99	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	170.92	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	
541-73-1	1,3-Dichlorobenzene	147.00	ND		0.080	
106-46-7	1,4-Dichlorobenzene	147.00	ND		0.080	
123-91-1	1,4-Dioxane	88.11	ND		0.20	
540-84-1	2,2,4-Trimethylpentane	114.23	ND		0.20	
78-93-3	2-Butanone	72.11	ND		0.32	
108-10-1	4-Methyl-2-pentanone (MIBK)	100.16	ND		0.20	
71-43-2	Benzene	78.11	ND		0.080	
100-44-7	Benzyl chloride	126.58	ND		0.16	
75-27-4	Bromodichloromethane	163.83	ND		0.080	
75-25-2	Bromoform	252.75	ND		0.080	
74-83-9	Bromomethane	94.94	ND		0.080	
56-23-5	Carbon tetrachloride	153.81	ND		0.032	
108-90-7	Chlorobenzene	112.56	ND		0.080	
75-00-3	Chloroethane	64.52	ND		0.080	
67-66-3	Chloroform	119.38	ND		0.080	
74-87-3	Chloromethane	50.49	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.040	
10061-01-5	cis-1,3-Dichloropropene	110.97	ND		0.080	
110-82-7	Cyclohexane	84.16	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-19179/4
 Matrix: Air Lab File ID: R500BD03.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500 (mL) Date Analyzed: 04/03/2018 11:58
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19179 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
124-48-1	Dibromochloromethane	208.29	ND		0.080	
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	
64-17-5	Ethanol	46.07	ND		2.0	
100-41-4	Ethylbenzene	106.17	ND		0.080	
87-68-3	Hexachlorobutadiene	260.76	ND		0.080	
110-54-3	Hexane	86.17	ND		0.20	
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.16	
75-09-2	Methylene Chloride	84.93	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	106.17	ND		0.080	
95-47-6	o-Xylene	106.17	ND		0.080	
100-42-5	Styrene	104.15	ND		0.080	
75-65-0	t-Butyl alcohol	74.12	ND		0.32	
127-18-4	Tetrachloroethene	165.83	ND		0.080	
108-88-3	Toluene	92.14	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	110.97	ND		0.080	
79-01-6	Trichloroethene	131.39	ND		0.036	
75-69-4	Trichlorofluoromethane	137.37	ND		0.080	
75-01-4	Vinyl chloride	62.50	ND		0.040	

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	87		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-19179/4
 Matrix: Air Lab File ID: R500BD03.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500 (mL) Date Analyzed: 04/03/2018 11:58
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19179 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	
79-34-5	1,1,2,2-Tetrachloroethane	167.85	ND		0.55	
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	
76-13-1	1,1,2-Trichlorotrifluoroethane	187.38	ND		0.61	
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	
75-35-4	1,1-Dichloroethene	96.94	ND		0.16	
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	
106-93-4	1,2-Dibromoethane	187.87	ND		0.61	
95-50-1	1,2-Dichlorobenzene	147.00	ND		0.48	
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	
78-87-5	1,2-Dichloropropane	112.99	ND		0.37	
76-14-2	1,2-Dichlorotetrafluoroethane	170.92	ND		0.56	
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	
541-73-1	1,3-Dichlorobenzene	147.00	ND		0.48	
106-46-7	1,4-Dichlorobenzene	147.00	ND		0.48	
123-91-1	1,4-Dioxane	88.11	ND		0.72	
540-84-1	2,2,4-Trimethylpentane	114.23	ND		0.93	
78-93-3	2-Butanone	72.11	ND		0.94	
108-10-1	4-Methyl-2-pentanone (MIBK)	100.16	ND		0.82	
71-43-2	Benzene	78.11	ND		0.26	
100-44-7	Benzyl chloride	126.58	ND		0.83	
75-27-4	Bromodichloromethane	163.83	ND		0.54	
75-25-2	Bromoform	252.75	ND		0.83	
74-83-9	Bromomethane	94.94	ND		0.31	
56-23-5	Carbon tetrachloride	153.81	ND		0.20	
108-90-7	Chlorobenzene	112.56	ND		0.37	
75-00-3	Chloroethane	64.52	ND		0.21	
67-66-3	Chloroform	119.38	ND		0.39	
74-87-3	Chloromethane	50.49	ND		0.41	
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.16	
10061-01-5	cis-1,3-Dichloropropene	110.97	ND		0.36	
110-82-7	Cyclohexane	84.16	ND		0.69	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-19179/4
 Matrix: Air Lab File ID: R500BD03.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500 (mL) Date Analyzed: 04/03/2018 11:58
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19179 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
124-48-1	Dibromochloromethane	208.29	ND		0.68	
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	
64-17-5	Ethanol	46.07	ND		3.8	
100-41-4	Ethylbenzene	106.17	ND		0.35	
87-68-3	Hexachlorobutadiene	260.76	ND		0.85	
110-54-3	Hexane	86.17	ND		0.70	
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.58	
75-09-2	Methylene Chloride	84.93	ND		0.69	
179601-23-1	m-Xylene & p-Xylene	106.17	ND		0.35	
95-47-6	o-Xylene	106.17	ND		0.35	
100-42-5	Styrene	104.15	ND		0.34	
75-65-0	t-Butyl alcohol	74.12	ND		0.97	
127-18-4	Tetrachloroethene	165.83	ND		0.54	
108-88-3	Toluene	92.14	ND		0.45	
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	
10061-02-6	trans-1,3-Dichloropropene	110.97	ND		0.36	
79-01-6	Trichloroethene	131.39	ND		0.19	
75-69-4	Trichlorofluoromethane	137.37	ND		0.45	
75-01-4	Vinyl chloride	62.50	ND		0.10	

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	87		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\R500BD03.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 03-Apr-2018 11:58:30 ALS Bottle#: 16 Worklist Smp#: 4
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0007767-004
 Misc. Info.: 500ML BLK
 Operator ID: Instrument ID: MR
 Method: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 04-Apr-2018 09:59:00 Calib Date: 30-Jan-2018 19:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK025

First Level Reviewer: tajh

Date: 03-Apr-2018 13:31:57

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.660	7.670	-0.010	78	344740	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.806	9.806	0.000	93	1998474	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.826	14.826	0.000	86	1608553	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.541	16.541	0.000	94	1067363	4.00	3.50	
11 Acetaldehyde	44	3.772	3.766	0.006	87	42606		NC	
13 Butane	43	3.858	3.853	0.005	97	8350		0.0862	
23 Acetone	58	4.731	4.721	0.010	99	22870		0.6345	
35 2-Methylpentane	43	6.214	6.209	0.005	1	725		NC	
75 2,3-Dimethylheptane	43	15.004	14.999	0.005	1	280		NC	
102 2,3-Dihydroindene	117	18.628	18.622	0.006	1	812		NC	
103 Indene	116	18.757	18.762	-0.005	1	307		NC	
107 1,2-Dimethyl-4-Ethylbenzen	119	19.625	19.620	0.005	0	1086		NC	
109 1,2,3,5-Tetramethylbenzene	119	20.078	20.084	-0.006	1	433		NC	
110 1,2,3,4-Tetramethylbenzene	119	20.326	20.353	-0.027	1	186		NC	
114 Benzo(b)thiophene	134	20.655	20.650	0.005	0	2897		NC	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\R500BD03.D

Injection Date: 03-Apr-2018 11:58:30

Instrument ID: MR

Operator ID:

Lims ID: MB

Worklist Smp#: 4

Client ID:

Purge Vol: 500.000 mL

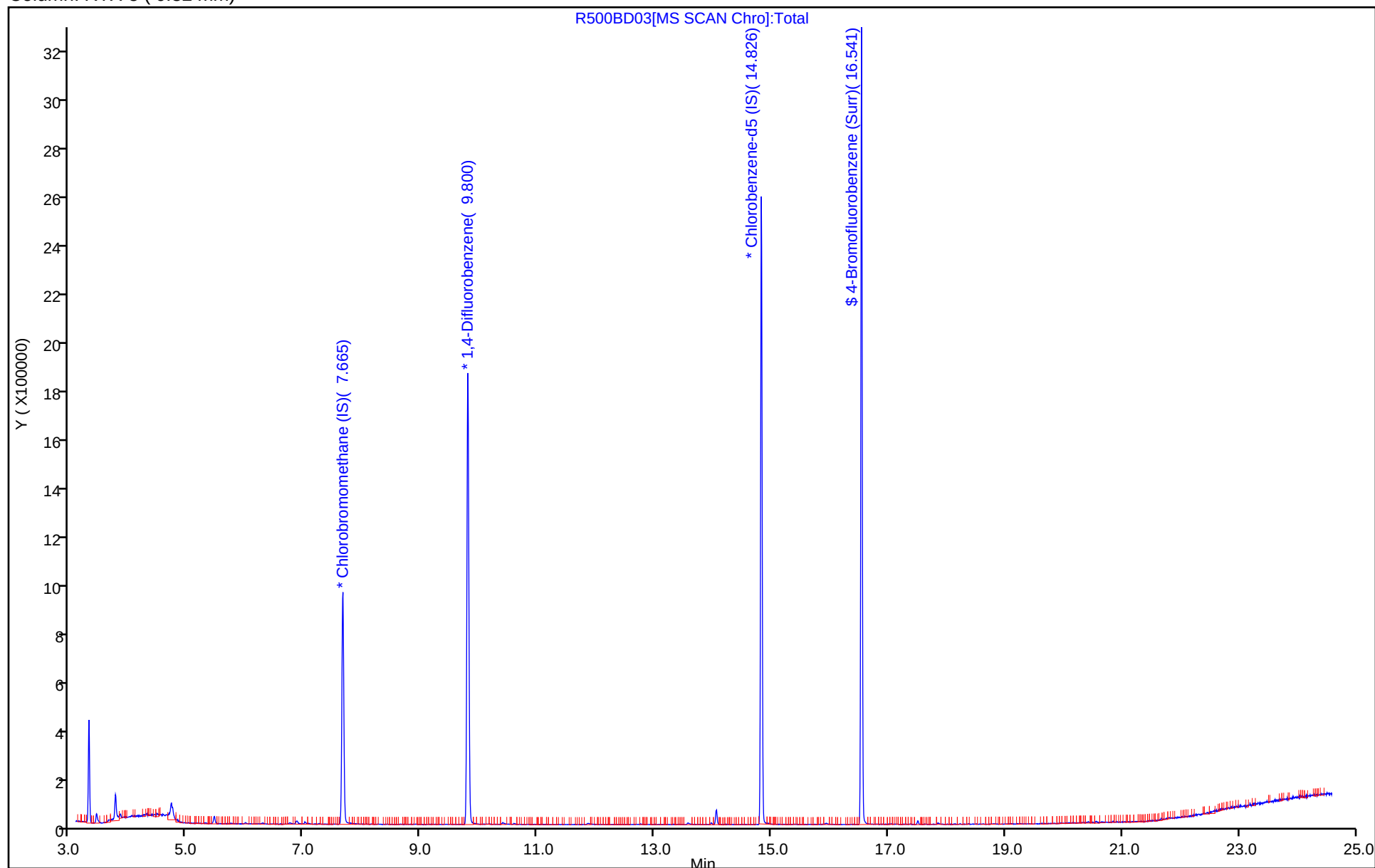
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\R500BD03.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 03-Apr-2018 11:58:30 ALS Bottle#: 16 Worklist Smp#: 4
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007767-004
Misc. Info.: 500ML BLK
Operator ID: Instrument ID: MR
Method: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 04-Apr-2018 09:59:00 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D
Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: tajh

Date: 03-Apr-2018 13:31:57

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.50	87.50

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\R500BD03.D

Injection Date: 03-Apr-2018 11:58:30

Instrument ID: MR

Lims ID: MB

Client ID:

Operator ID:

ALS Bottle#:

16

Worklist Smp#: 4

Purge Vol: 500.000 mL

Dil. Factor:

1.0000

Method: MR_TO15

Limit Group:

MSA TO14A_15 Routine ICAL

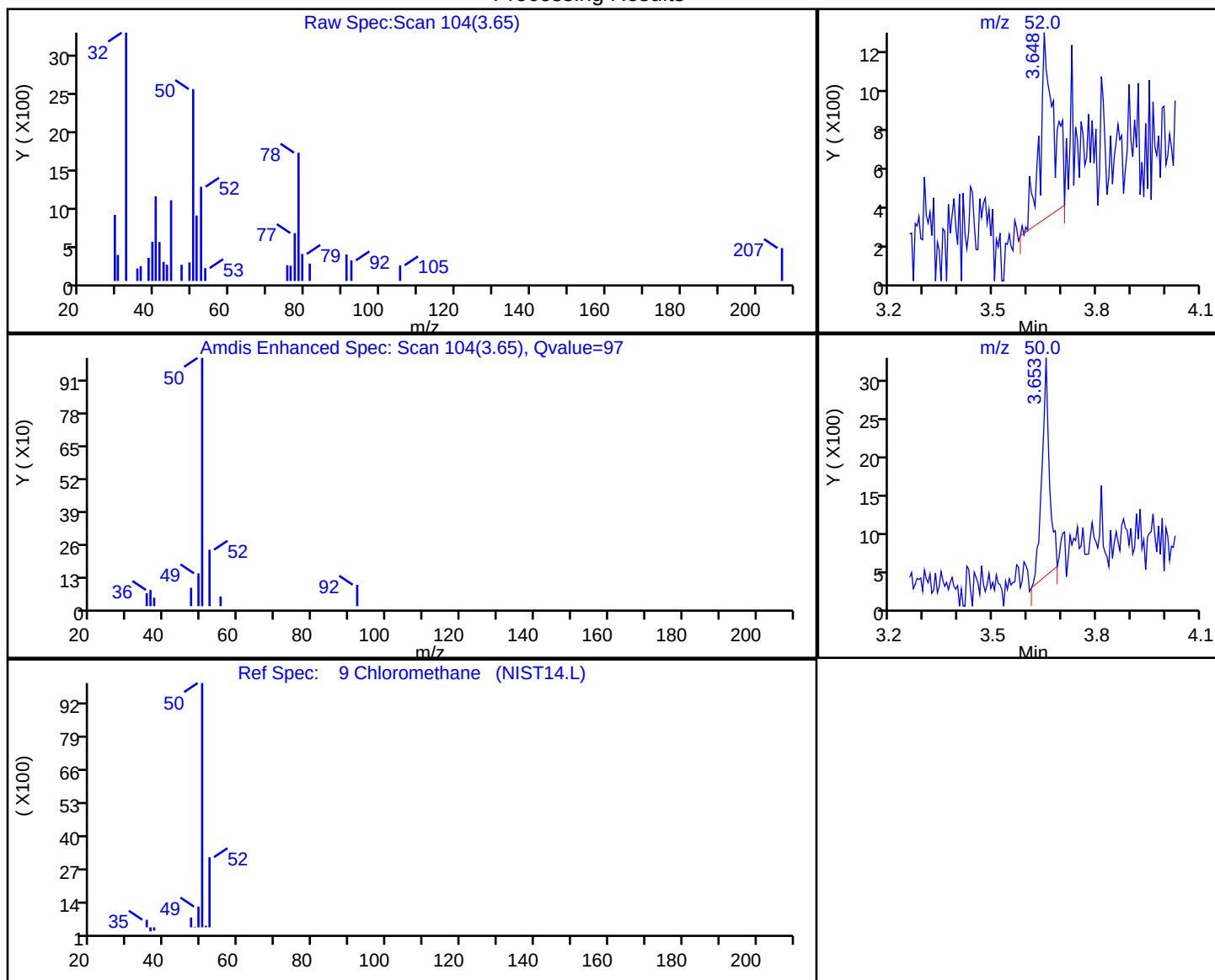
Column: RTX-5 (0.32 mm)

Detector

MS SCAN

9 Chloromethane, CAS: 74-87-3

Processing Results



RT	Mass	Response	Amount
3.65	52.00	2584	0.087654
3.65	50.00	4325	

Reviewer: tajh, 03-Apr-2018 13:31:57

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-19215/5
 Matrix: Air Lab File ID: J500BD04.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500 (mL) Date Analyzed: 04/04/2018 12:49
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19215 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	167.85	ND		0.080	
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	187.38	ND		0.080	
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	
75-35-4	1,1-Dichloroethene	96.94	ND		0.040	
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	
106-93-4	1,2-Dibromoethane	187.87	ND		0.080	
95-50-1	1,2-Dichlorobenzene	147.00	ND		0.080	
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	
78-87-5	1,2-Dichloropropane	112.99	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	170.92	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	
541-73-1	1,3-Dichlorobenzene	147.00	ND		0.080	
106-46-7	1,4-Dichlorobenzene	147.00	ND		0.080	
123-91-1	1,4-Dioxane	88.11	ND		0.20	
540-84-1	2,2,4-Trimethylpentane	114.23	ND		0.20	
78-93-3	2-Butanone	72.11	ND		0.32	
108-10-1	4-Methyl-2-pentanone (MIBK)	100.16	ND		0.20	
71-43-2	Benzene	78.11	ND		0.080	
100-44-7	Benzyl chloride	126.58	ND		0.16	
75-27-4	Bromodichloromethane	163.83	ND		0.080	
75-25-2	Bromoform	252.75	ND		0.080	
74-83-9	Bromomethane	94.94	ND		0.080	
56-23-5	Carbon tetrachloride	153.81	ND		0.032	
108-90-7	Chlorobenzene	112.56	ND		0.080	
75-00-3	Chloroethane	64.52	ND		0.080	
67-66-3	Chloroform	119.38	ND		0.080	
74-87-3	Chloromethane	50.49	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.040	
10061-01-5	cis-1,3-Dichloropropene	110.97	ND		0.080	
110-82-7	Cyclohexane	84.16	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-19215/5
 Matrix: Air Lab File ID: J500BD04.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500 (mL) Date Analyzed: 04/04/2018 12:49
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19215 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
124-48-1	Dibromochloromethane	208.29	ND		0.080	
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	
64-17-5	Ethanol	46.07	ND		2.0	
100-41-4	Ethylbenzene	106.17	ND		0.080	
87-68-3	Hexachlorobutadiene	260.76	ND		0.080	
110-54-3	Hexane	86.17	ND		0.20	
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.16	
75-09-2	Methylene Chloride	84.93	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	106.17	ND		0.080	
95-47-6	o-Xylene	106.17	ND		0.080	
100-42-5	Styrene	104.15	ND		0.080	
75-65-0	t-Butyl alcohol	74.12	ND		0.32	
127-18-4	Tetrachloroethene	165.83	ND		0.080	
108-88-3	Toluene	92.14	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	110.97	ND		0.080	
79-01-6	Trichloroethene	131.39	ND		0.036	
75-69-4	Trichlorofluoromethane	137.37	ND		0.080	
75-01-4	Vinyl chloride	62.50	ND		0.040	

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-19215/5
 Matrix: Air Lab File ID: J500BD04.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500 (mL) Date Analyzed: 04/04/2018 12:49
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19215 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	
79-34-5	1,1,2,2-Tetrachloroethane	167.85	ND		0.55	
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	
76-13-1	1,1,2-Trichlorotrifluoroethane	187.38	ND		0.61	
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	
75-35-4	1,1-Dichloroethene	96.94	ND		0.16	
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	
106-93-4	1,2-Dibromoethane	187.87	ND		0.61	
95-50-1	1,2-Dichlorobenzene	147.00	ND		0.48	
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	
78-87-5	1,2-Dichloropropane	112.99	ND		0.37	
76-14-2	1,2-Dichlorotetrafluoroethane	170.92	ND		0.56	
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	
541-73-1	1,3-Dichlorobenzene	147.00	ND		0.48	
106-46-7	1,4-Dichlorobenzene	147.00	ND		0.48	
123-91-1	1,4-Dioxane	88.11	ND		0.72	
540-84-1	2,2,4-Trimethylpentane	114.23	ND		0.93	
78-93-3	2-Butanone	72.11	ND		0.94	
108-10-1	4-Methyl-2-pentanone (MIBK)	100.16	ND		0.82	
71-43-2	Benzene	78.11	ND		0.26	
100-44-7	Benzyl chloride	126.58	ND		0.83	
75-27-4	Bromodichloromethane	163.83	ND		0.54	
75-25-2	Bromoform	252.75	ND		0.83	
74-83-9	Bromomethane	94.94	ND		0.31	
56-23-5	Carbon tetrachloride	153.81	ND		0.20	
108-90-7	Chlorobenzene	112.56	ND		0.37	
75-00-3	Chloroethane	64.52	ND		0.21	
67-66-3	Chloroform	119.38	ND		0.39	
74-87-3	Chloromethane	50.49	ND		0.41	
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.16	
10061-01-5	cis-1,3-Dichloropropene	110.97	ND		0.36	
110-82-7	Cyclohexane	84.16	ND		0.69	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 140-19215/5
 Matrix: Air Lab File ID: J500BD04.D
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500 (mL) Date Analyzed: 04/04/2018 12:49
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19215 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
124-48-1	Dibromochloromethane	208.29	ND		0.68	
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	
64-17-5	Ethanol	46.07	ND		3.8	
100-41-4	Ethylbenzene	106.17	ND		0.35	
87-68-3	Hexachlorobutadiene	260.76	ND		0.85	
110-54-3	Hexane	86.17	ND		0.70	
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.58	
75-09-2	Methylene Chloride	84.93	ND		0.69	
179601-23-1	m-Xylene & p-Xylene	106.17	ND		0.35	
95-47-6	o-Xylene	106.17	ND		0.35	
100-42-5	Styrene	104.15	ND		0.34	
75-65-0	t-Butyl alcohol	74.12	ND		0.97	
127-18-4	Tetrachloroethene	165.83	ND		0.54	
108-88-3	Toluene	92.14	ND		0.45	
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	
10061-02-6	trans-1,3-Dichloropropene	110.97	ND		0.36	
79-01-6	Trichloroethene	131.39	ND		0.19	
75-69-4	Trichlorofluoromethane	137.37	ND		0.45	
75-01-4	Vinyl chloride	62.50	ND		0.10	

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180402-7781.b\J500BD04.D
 Lims ID: mb
 Client ID:
 Sample Type: MB
 Inject. Date: 04-Apr-2018 12:49:30 ALS Bottle#: 16 Worklist Smp#: 5
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0007781-005
 Misc. Info.: 500ML BLK
 Operator ID: 007126 Instrument ID: MJ
 Method: \\ChromNA\Knoxville\ChromData\MJ\20180402-7781.b\MJ_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 04-Apr-2018 14:25:46 Calib Date: 15-Feb-2018 22:24:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK025

First Level Reviewer: tajh

Date: 04-Apr-2018 13:38:00

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.667	9.672	-0.005	90	187743	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.765	11.770	-0.005	95	1038649	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.369	16.370	-0.001	89	936503	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.972	17.973	-0.001	94	687003	4.00	4.06	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180402-7781.b\J500BD04.D

Injection Date: 04-Apr-2018 12:49:30

Instrument ID: MJ

Operator ID: 007126

Lims ID: mb

Worklist Smp#: 5

Client ID:

Purge Vol: 500.000 mL

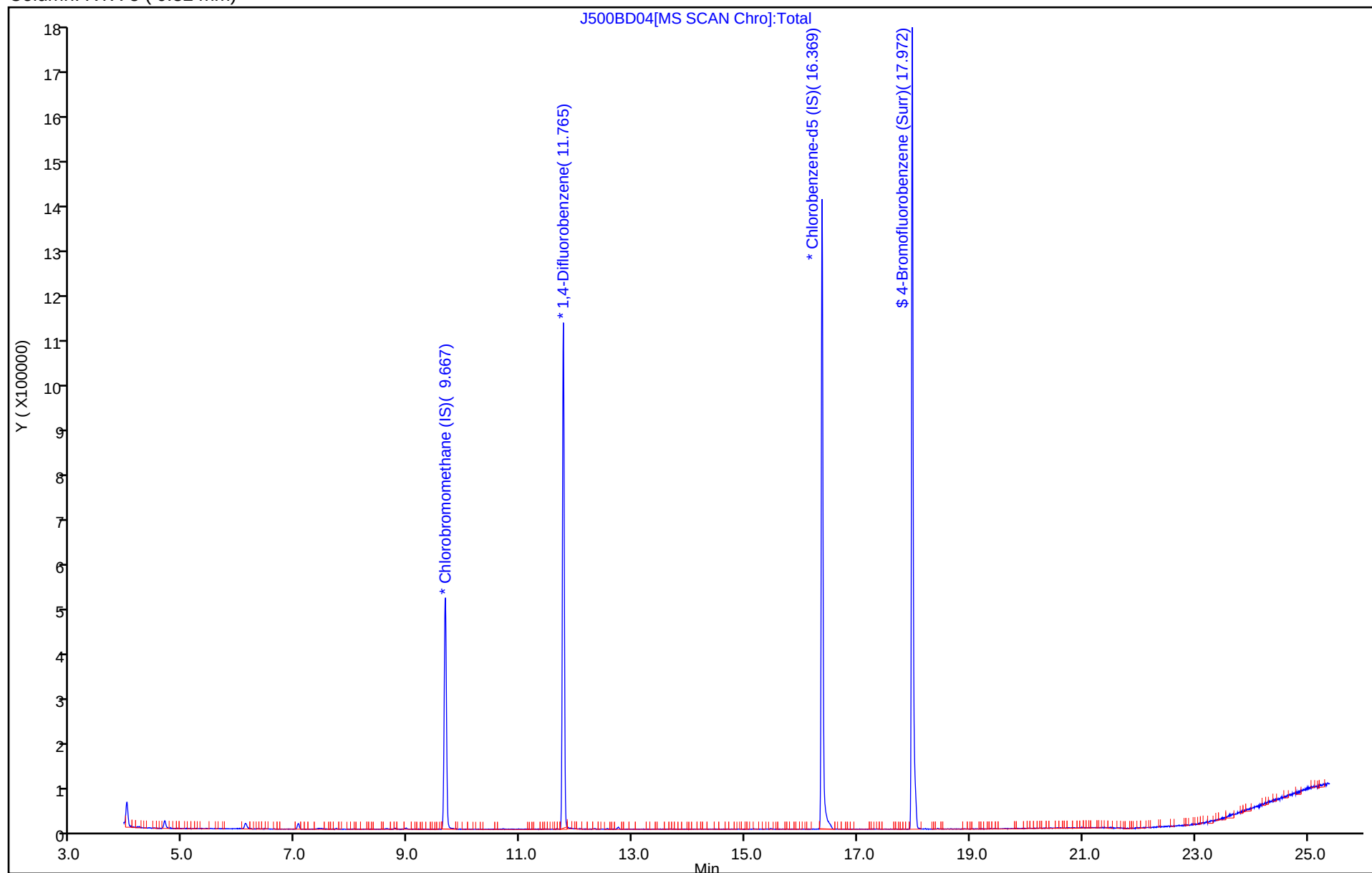
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MJ_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180402-7781.b\J500BD04.D
Lims ID: mb
Client ID:
Sample Type: MB
Inject. Date: 04-Apr-2018 12:49:30 ALS Bottle#: 16 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007781-005
Misc. Info.: 500ML BLK
Operator ID: 007126 Instrument ID: MJ
Method: \\ChromNA\Knoxville\ChromData\MJ\20180402-7781.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 04-Apr-2018 14:25:46 Calib Date: 15-Feb-2018 22:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D
Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: tajh

Date: 04-Apr-2018 13:38:00

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.06	101.44

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 140-19179/1002
 Matrix: Air Lab File ID: RCCVD03-LCS.d
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500 (mL) Date Analyzed: 04/03/2018 10:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19179 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	133.41	1.51		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	167.85	2.16		0.080	
79-00-5	1,1,2-Trichloroethane	133.41	1.98		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	187.38	1.99		0.080	
75-34-3	1,1-Dichloroethane	98.96	1.54		0.080	
75-35-4	1,1-Dichloroethene	96.94	1.86		0.040	
120-82-1	1,2,4-Trichlorobenzene	181.45	2.44		0.080	
95-63-6	1,2,4-Trimethylbenzene	120.20	1.96		0.080	
106-93-4	1,2-Dibromoethane	187.87	2.06		0.080	
95-50-1	1,2-Dichlorobenzene	147.00	2.20		0.080	
107-06-2	1,2-Dichloroethane	98.96	1.29		0.080	
78-87-5	1,2-Dichloropropane	112.99	1.73		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	170.92	2.46		0.080	
108-67-8	1,3,5-Trimethylbenzene	120.20	2.20		0.080	
541-73-1	1,3-Dichlorobenzene	147.00	2.18		0.080	
106-46-7	1,4-Dichlorobenzene	147.00	2.19		0.080	
123-91-1	1,4-Dioxane	88.11	1.70		0.20	
540-84-1	2,2,4-Trimethylpentane	114.23	1.68		0.20	
78-93-3	2-Butanone	72.11	1.57		0.32	
108-10-1	4-Methyl-2-pentanone (MIBK)	100.16	1.86		0.20	
71-43-2	Benzene	78.11	1.72		0.080	
100-44-7	Benzyl chloride	126.58	2.20		0.16	
75-27-4	Bromodichloromethane	163.83	1.75		0.080	
75-25-2	Bromoform	252.75	2.46		0.080	
74-83-9	Bromomethane	94.94	2.42		0.080	
56-23-5	Carbon tetrachloride	153.81	1.80		0.032	
108-90-7	Chlorobenzene	112.56	2.01		0.080	
75-00-3	Chloroethane	64.52	2.08		0.080	
67-66-3	Chloroform	119.38	1.60		0.080	
74-87-3	Chloromethane	50.49	1.96		0.20	
156-59-2	cis-1,2-Dichloroethene	96.94	1.87		0.040	
10061-01-5	cis-1,3-Dichloropropene	110.97	1.71		0.080	
110-82-7	Cyclohexane	84.16	1.70		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 140-19179/1002
 Matrix: Air Lab File ID: RCCVD03-LCS.d
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500 (mL) Date Analyzed: 04/03/2018 10:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19179 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
124-48-1	Dibromochloromethane	208.29	2.17		0.080	
75-71-8	Dichlorodifluoromethane	120.91	1.90		0.080	
64-17-5	Ethanol	46.07	11.7		2.0	
100-41-4	Ethylbenzene	106.17	1.85		0.080	
87-68-3	Hexachlorobutadiene	260.76	1.80		0.080	
110-54-3	Hexane	86.17	1.41		0.20	
1634-04-4	Methyl tert-butyl ether	88.15	1.48		0.16	
75-09-2	Methylene Chloride	84.93	1.69		0.20	
179601-23-1	m-Xylene & p-Xylene	106.17	3.77		0.080	
95-47-6	o-Xylene	106.17	1.81		0.080	
100-42-5	Styrene	104.15	2.12		0.080	
75-65-0	t-Butyl alcohol	74.12	1.30		0.32	
127-18-4	Tetrachloroethene	165.83	1.88		0.080	
108-88-3	Toluene	92.14	1.85		0.12	
156-60-5	trans-1,2-Dichloroethene	96.94	1.85		0.080	
10061-02-6	trans-1,3-Dichloropropene	110.97	1.65		0.080	
79-01-6	Trichloroethene	131.39	1.90		0.036	
75-69-4	Trichlorofluoromethane	137.37	2.52		0.080	
75-01-4	Vinyl chloride	62.50	1.95		0.040	

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	89		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RCCVD03-LCS.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 03-Apr-2018 10:10:30 ALS Bottle#: 15 Worklist Smp#: 1002
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0007767-002
 Misc. Info.: S60
 Operator ID: Instrument ID: MR
 Method: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\MR_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 04-Apr-2018 10:08:42 Calib Date: 30-Jan-2018 19:38:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK025

First Level Reviewer: tajh

Date: 03-Apr-2018 11:01:26

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.670	7.670	0.000	78	337085	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.806	9.806	0.000	93	1973372	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.826	14.826	0.000	85	1613919	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.541	16.541	0.000	96	1093451	4.00	3.57	
6 Chlorodifluoromethane	67	3.459	3.459	0.000	97	63121	2.00	1.54	
7 Propene	41	3.464	3.464	0.000	99	166529	2.00	2.07	
8 Dichlorodifluoromethane	85	3.507	3.507	0.000	100	600226	2.00	1.90	
9 Chloromethane	52	3.642	3.642	0.000	100	56544	2.00	1.96	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.664	3.664	0.000	90	527980	2.00	2.46	
11 Acetaldehyde	44	3.766	3.766	0.000	90	261159	NC	NC	
12 Vinyl chloride	62	3.777	3.777	0.000	99	172482	2.00	1.95	
14 Butadiene	54	3.847	3.847	0.000	92	111272	2.00	1.95	
13 Butane	43	3.853	3.853	0.000	92	232253	2.00	2.45	
15 Bromomethane	94	4.079	4.079	0.000	97	198026	2.00	2.42	
16 Chloroethane	64	4.192	4.192	0.000	88	83307	2.00	2.08	
17 Ethanol	31	4.295	4.295	0.000	97	296585	10.0	11.7	
18 Vinyl bromide	106	4.424	4.424	0.000	97	200092	2.00	2.50	
19 2-Methylbutane	43	4.478	4.478	0.000	87	154604	2.00	2.32	
20 Acrolein	56	4.629	4.629	0.000	95	51416	2.00	2.76	
21 Trichlorofluoromethane	101	4.640	4.640	0.000	99	756759	2.00	2.52	
22 Acetonitrile	40	4.672	4.672	0.000	98	54588	2.00	2.38	
23 Acetone	58	4.721	4.721	0.000	100	63615	2.00	1.80	
24 Isopropyl alcohol	45	4.812	4.812	0.000	92	277202	2.00	2.05	
25 Pentane	72	4.823	4.823	0.000	97	39184	2.00	1.67	
26 Ethyl ether	31	4.947	4.947	0.000	94	203241	2.00	2.39	
27 1,1-Dichloroethene	96	5.195	5.195	0.000	95	236975	2.00	1.86	
28 Acrylonitrile	53	5.255	5.255	0.000	96	125956	2.00	1.56	
29 2-Methyl-2-propanol	59	5.287	5.287	0.000	95	331280	2.00	1.30	
30 1,1,2-Trichloro-1,2,2-trif	101	5.362	5.362	0.000	98	541845	2.00	1.99	
31 Methylene Chloride	84	5.465	5.465	0.000	85	222844	2.00	1.69	
32 3-Chloro-1-propene	39	5.486	5.486	0.000	98	166673	2.00	1.57	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.594	5.594	0.000	99	618536	2.00	1.75	
34 trans-1,2-Dichloroethene	96	6.160	6.160	0.000	91	239478	2.00	1.85	
35 2-Methylpentane	43	6.209	6.209	0.000	93	362976	NC	NC	
36 Methyl tert-butyl ether	73	6.285	6.285	0.000	95	591809	2.00	1.48	
37 1,1-Dichloroethane	63	6.511	6.511	0.000	99	379318	2.00	1.54	
38 Vinyl acetate	43	6.619	6.619	0.000	99	446942	2.00	1.87	
39 2-Butanone (MEK)	72	6.986	6.986	0.000	98	95932	2.00	1.57	
40 Hexane	56	7.083	7.083	0.000	89	139733	2.00	1.41	
41 cis-1,2-Dichloroethene	96	7.385	7.385	0.000	84	259620	2.00	1.87	
42 Ethyl acetate	43	7.568	7.568	0.000	98	359714	2.00	1.68	
43 Chloroform	83	7.703	7.703	0.000	94	498095	2.00	1.60	
44 Tetrahydrofuran	42	8.048	8.048	0.000	90	201271	2.00	1.84	
45 1,1,1-Trichloroethane	97	8.657	8.657	0.000	95	496265	2.00	1.51	
46 1,2-Dichloroethane	62	8.727	8.727	0.000	97	268391	2.00	1.29	
47 Benzene	78	9.229	9.229	0.000	95	648948	2.00	1.72	
48 n-Butanol	31	9.229	9.229	0.000	62	61213	2.00	2.45	
49 Cyclohexane	69	9.256	9.256	0.000	91	103060	2.00	1.70	
50 Carbon tetrachloride	117	9.272	9.272	0.000	98	548201	2.00	1.80	
51 2,3-Dimethylpentane	71	9.423	9.423	0.000	91	145454	NC	NC	
52 Thiophene	84	9.493	9.493	0.000	90	384965	NC	NC	
53 Isooctane	57	10.102	10.102	0.000	98	918308	2.00	1.68	
54 1,2-Dichloropropane	63	10.496	10.496	0.000	89	227139	2.00	1.73	
55 n-Heptane	71	10.523	10.523	0.000	90	228900	2.00	1.75	
56 Trichloroethene	130	10.561	10.561	0.000	91	339271	2.00	1.90	
57 Dibromomethane	93	10.604	10.604	0.000	93	295547	2.00	1.91	
58 Dichlorobromomethane	83	10.787	10.787	0.000	98	487287	2.00	1.75	
59 1,4-Dioxane	88	10.793	10.793	0.000	86	94599	2.00	1.70	
60 Methyl methacrylate	41	10.944	10.944	0.000	98	212157	2.00	1.71	
61 Methylcyclohexane	83	11.413	11.413	0.000	92	489821	NC	NC	
62 4-Methyl-2-pentanone (MIBK)	43	11.828	11.828	0.000	97	392882	2.00	1.86	
63 cis-1,3-Dichloropropene	75	11.871	11.871	0.000	92	370061	2.00	1.71	
64 trans-1,3-Dichloropropene	75	12.621	12.621	0.000	98	322043	2.00	1.65	
65 Toluene	91	12.761	12.761	0.000	94	821796	2.00	1.85	
66 1,1,2-Trichloroethane	83	12.815	12.815	0.000	96	242332	2.00	1.98	
67 2-Methylthiophene	97	12.906	12.906	0.000	0	641396	NC	NC	
68 3-Methylthiophene	97	13.122	13.122	0.000	0	630124	NC	NC	
69 2-Hexanone	58	13.262	13.262	0.000	94	194102	2.00	1.83	
70 Chlorodibromomethane	129	13.543	13.543	0.000	96	508254	2.00	2.17	
71 n-Octane	85	13.586	13.586	0.000	91	256734	2.00	1.80	
72 Ethylene Dibromide	107	13.839	13.839	0.000	97	449726	2.00	2.06	
73 Tetrachloroethene	129	13.974	13.974	0.000	97	312303	2.00	1.88	
74 Chlorobenzene	112	14.880	14.880	0.000	98	705469	2.00	2.01	
75 2,3-Dimethylheptane	43	14.999	14.999	0.000	91	565028	NC	NC	
76 Ethylbenzene	91	15.209	15.209	0.000	97	1077523	2.00	1.85	
78 2-Ethylthiophene	97	15.306	15.306	0.000	0	748743	NC	NC	
77 m-Xylene & p-Xylene	91	15.381	15.381	0.000	99	1698925	4.00	3.77	
79 Bromoform	173	15.780	15.780	0.000	96	495471	2.00	2.46	
80 Styrene	104	15.856	15.856	0.000	96	610335	2.00	2.12	
81 n-Nonane	57	15.899	15.899	0.000	88	442172	2.00	1.82	
82 o-Xylene	91	15.915	15.915	0.000	98	863290	2.00	1.81	
83 1,1,2,2-Tetrachloroethane	83	16.239	16.239	0.000	99	615227	2.00	2.16	
84 1,2,3-Trichloropropane	110	16.395	16.395	0.000	95	190992	2.00	1.85	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 Isopropylbenzene	105	16.535	16.535	0.000	97	1220326	2.00	1.92	
86 N-Propylbenzene	120	17.112	17.112	0.000	99	346959	2.00	1.99	
87 2-Chlorotoluene	126	17.134	17.134	0.000	97	333934	2.00	2.08	
88 4-Ethyltoluene	105	17.285	17.285	0.000	99	1224767	2.00	1.85	
89 1,3,5-Trimethylbenzene	120	17.371	17.371	0.000	93	587078	2.00	2.20	
90 Alpha Methyl Styrene	118	17.625	17.625	0.000	91	477069	2.00	2.07	
91 n-Decane	57	17.770	17.770	0.000	92	589882	2.00	1.79	
92 tert-Butylbenzene	119	17.840	17.840	0.000	92	1144320	2.00	1.84	
93 1,2,4-Trimethylbenzene	105	17.857	17.857	0.000	96	1090893	2.00	1.96	
94 1,3-Dichlorobenzene	146	18.126	18.126	0.000	98	780442	2.00	2.18	
95 sec-Butylbenzene	105	18.142	18.142	0.000	98	1614094	2.00	2.02	
96 Benzyl chloride	91	18.212	18.212	0.000	99	921240	2.00	2.20	
97 1,4-Dichlorobenzene	146	18.223	18.223	0.000	95	782723	2.00	2.19	
98 4-Isopropyltoluene	119	18.331	18.331	0.000	96	1402562	2.00	2.00	
99 1,2,3-Trimethylbenzene	105	18.369	18.369	0.000	98	862682	2.00	1.37	
100 Butylcyclohexane	83	18.466	18.466	0.000	96	803697	NC	NC	
101 1,2-Dichlorobenzene	146	18.611	18.611	0.000	95	763045	2.00	2.20	
102 2,3-Dihydroindene	117	18.622	18.622	0.000	94	966276	NC	NC	
103 Indene	116	18.762	18.762	0.000	91	717884	NC	NC	
104 n-Butylbenzene	91	18.806	18.806	0.000	98	1376983	2.00	2.20	
105 Undecane	57	19.210	19.210	0.000	88	677881	2.00	1.90	
106 1,2-Dibromo-3-Chloropropan	157	19.259	19.259	0.000	97	306844	2.00	1.44	
107 1,2-Dimethyl-4-Ethylbenzen	119	19.620	19.620	0.000	0	1125886	NC	NC	
108 1,2,4,5-Tetramethylbenzene	119	19.679	19.679	0.000	97	691579	2.00	2.02	
109 1,2,3,5-Tetramethylbenzene	119	20.084	20.084	0.000	95	921358	NC	NC	
111 Dodecane	57	20.321	20.321	0.000	93	604710	2.00	1.81	
110 1,2,3,4-Tetramethylbenzene	119	20.353	20.353	0.000	1	330	NC	NC	
112 1,2,4-Trichlorobenzene	180	20.418	20.418	0.000	94	635739	2.00	2.44	
113 Naphthalene	128	20.547	20.547	0.000	99	1397769	2.00	2.42	
114 Benzo(b)thiophene	134	20.650	20.650	0.000	0	668270	NC	NC	
115 Hexachlorobutadiene	225	20.806	20.806	0.000	94	512193	2.00	1.80	
116 1,2,3-Trichlorobenzene	180	20.839	20.839	0.000	96	595628	2.00	2.26	
S 119 Xylenes, Total	100				0		6.00	5.58	
S 120 1,2-Dichloroethene, Total	1				0		4.00	3.72	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

40CV101S_00060

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Laboratories

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RCCVD03-LCS.d

Injection Date: 03-Apr-2018 10:10:30

Instrument ID: MR

Operator ID:

Lims ID: LCS

Worklist Smp#: 1002

Client ID:

Purge Vol: 500.000 mL

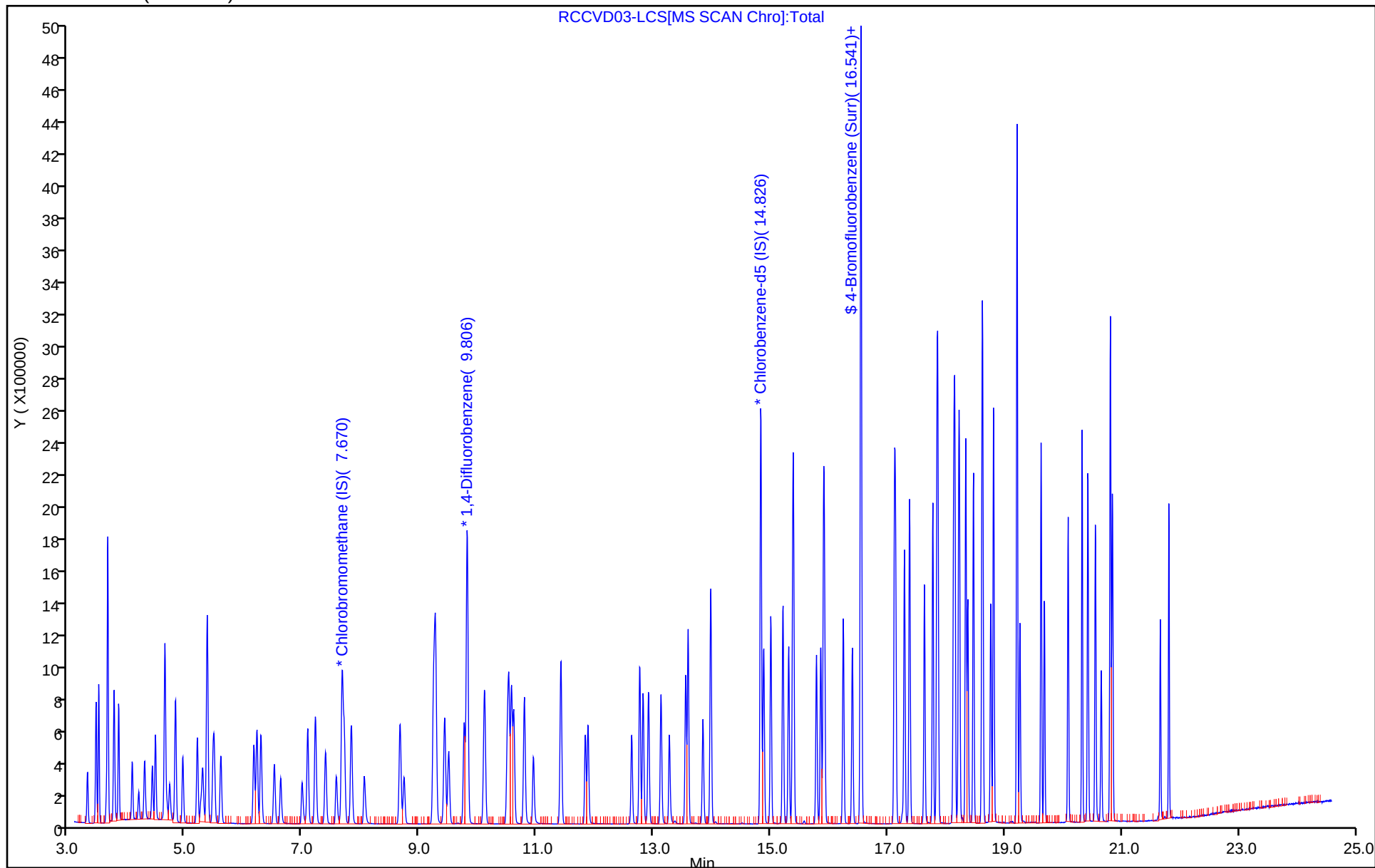
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MR_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Laboratories
Recovery Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\RCCVD03-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 03-Apr-2018 10:10:30 ALS Bottle#: 15 Worklist Smp#: 1002
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007767-002
Misc. Info.: S60
Operator ID: Instrument ID: MR
Method: \\ChromNA\Knoxville\ChromData\MR\20180330-7767.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 04-Apr-2018 10:08:42 Calib Date: 30-Jan-2018 19:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20180129-7236.b\RA30IC10.D
Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: tajh

Date: 03-Apr-2018 11:01:26

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	3.57	89.34

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 140-19215/1002
 Matrix: Air Lab File ID: JCCVD04-LCS.d
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500 (mL) Date Analyzed: 04/04/2018 10:21
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19215 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	133.41	2.09		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	167.85	1.56		0.080	
79-00-5	1,1,2-Trichloroethane	133.41	1.75		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	187.38	2.10		0.080	
75-34-3	1,1-Dichloroethane	98.96	1.98		0.080	
75-35-4	1,1-Dichloroethene	96.94	1.99		0.040	
120-82-1	1,2,4-Trichlorobenzene	181.45	1.49		0.080	
95-63-6	1,2,4-Trimethylbenzene	120.20	1.48		0.080	
106-93-4	1,2-Dibromoethane	187.87	1.97		0.080	
95-50-1	1,2-Dichlorobenzene	147.00	1.61		0.080	
107-06-2	1,2-Dichloroethane	98.96	2.22		0.080	
78-87-5	1,2-Dichloropropane	112.99	1.84		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	170.92	2.19		0.080	
108-67-8	1,3,5-Trimethylbenzene	120.20	1.47		0.080	
541-73-1	1,3-Dichlorobenzene	147.00	1.65		0.080	
106-46-7	1,4-Dichlorobenzene	147.00	1.64		0.080	
123-91-1	1,4-Dioxane	88.11	1.74		0.20	
540-84-1	2,2,4-Trimethylpentane	114.23	1.86		0.20	
78-93-3	2-Butanone	72.11	1.38		0.32	
108-10-1	4-Methyl-2-pentanone (MIBK)	100.16	1.64		0.20	
71-43-2	Benzene	78.11	1.76		0.080	
100-44-7	Benzyl chloride	126.58	1.59		0.16	
75-27-4	Bromodichloromethane	163.83	2.04		0.080	
75-25-2	Bromoform	252.75	2.12		0.080	
74-83-9	Bromomethane	94.94	2.02		0.080	
56-23-5	Carbon tetrachloride	153.81	2.33		0.032	
108-90-7	Chlorobenzene	112.56	1.92		0.080	
75-00-3	Chloroethane	64.52	1.96		0.080	
67-66-3	Chloroform	119.38	2.01		0.080	
74-87-3	Chloromethane	50.49	2.05		0.20	
156-59-2	cis-1,2-Dichloroethene	96.94	1.89		0.040	
10061-01-5	cis-1,3-Dichloropropene	110.97	1.87		0.080	
110-82-7	Cyclohexane	84.16	1.86		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11145-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 140-19215/1002
 Matrix: Air Lab File ID: JCCVD04-LCS.d
 Analysis Method: TO 15 LL Date Collected: _____
 Sample wt/vol: 500 (mL) Date Analyzed: 04/04/2018 10:21
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 19215 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	
124-48-1	Dibromochloromethane	208.29	2.14		0.080	
75-71-8	Dichlorodifluoromethane	120.91	2.33		0.080	
64-17-5	Ethanol	46.07	9.26		2.0	
100-41-4	Ethylbenzene	106.17	1.58		0.080	
87-68-3	Hexachlorobutadiene	260.76	1.47		0.080	
110-54-3	Hexane	86.17	1.87		0.20	
1634-04-4	Methyl tert-butyl ether	88.15	1.59		0.16	
75-09-2	Methylene Chloride	84.93	1.71		0.20	
179601-23-1	m-Xylene & p-Xylene	106.17	3.16		0.080	
95-47-6	o-Xylene	106.17	1.56		0.080	
100-42-5	Styrene	104.15	1.51		0.080	
75-65-0	t-Butyl alcohol	74.12	2.41		0.32	
127-18-4	Tetrachloroethene	165.83	1.96		0.080	
108-88-3	Toluene	92.14	1.66		0.12	
156-60-5	trans-1,2-Dichloroethene	96.94	1.96		0.080	
10061-02-6	trans-1,3-Dichloropropene	110.97	1.90		0.080	
79-01-6	Trichloroethene	131.39	1.89		0.036	
75-69-4	Trichlorofluoromethane	137.37	2.43		0.080	
75-01-4	Vinyl chloride	62.50	2.14		0.040	

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180402-7781.b\JCCVD04-LCS.d
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 04-Apr-2018 10:21:30 ALS Bottle#: 15 Worklist Smp#: 1002
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0007781-002
 Misc. Info.: P59
 Operator ID: 007126 Instrument ID: MJ
 Method: \\ChromNA\Knoxville\ChromData\MJ\20180402-7781.b\MJ_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 04-Apr-2018 14:25:46 Calib Date: 15-Feb-2018 22:24:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK025

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.672	9.672	0.000	95	191585	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.770	11.770	0.000	95	1049636	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.370	16.370	0.000	89	911794	4.00	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	17.973	17.973	0.000	93	676520	4.00	4.10	
6 Chlorodifluoromethane	67	4.207	4.207	0.000	96	43386	2.00	2.12	
7 Propene	41	4.223	4.223	0.000	99	117898	2.00	2.11	
8 Dichlorodifluoromethane	85	4.277	4.277	0.000	100	401072	2.00	2.33	
9 Chloromethane	52	4.487	4.487	0.000	98	41205	2.00	2.05	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.492	4.492	0.000	96	247228	2.00	2.19	
11 Acetaldehyde	44	4.664	4.664	0.000	96	187952	10.0	8.42	
12 Vinyl chloride	62	4.680	4.680	0.000	99	133982	2.00	2.14	
14 Butane	43	4.782	4.782	0.000	85	192743	2.00	2.01	
13 Butadiene	54	4.782	4.782	0.000	68	98131	2.00	1.94	
15 Bromomethane	94	5.143	5.143	0.000	98	126219	2.00	2.02	
16 Chloroethane	64	5.299	5.299	0.000	95	63647	2.00	1.96	
17 Ethanol	31	5.428	5.428	0.000	97	214834	10.0	9.26	
18 Vinyl bromide	106	5.638	5.638	0.000	98	120256	2.00	2.03	
19 2-Methylbutane	43	5.692	5.692	0.000	91	143413	2.00	2.03	
20 Trichlorofluoromethane	101	5.928	5.928	0.000	99	404096	2.00	2.43	
21 Acrolein	56	5.944	5.944	0.000	95	25448	2.00	1.53	
23 Acetonitrile	40	6.014	6.014	0.000	96	30589	2.00	1.46	
22 Acetone	58	6.073	6.073	0.000	99	89832	6.00	4.12	
24 Pentane	72	6.165	6.165	0.000	96	19895	2.00	1.96	
25 Isopropyl alcohol	45	6.186	6.186	0.000	95	342720	6.00	5.48	
26 Ethyl ether	31	6.348	6.348	0.000	95	79590	2.00	1.47	
27 1,1-Dichloroethene	96	6.687	6.687	0.000	95	126219	2.00	1.99	
28 Acrylonitrile	53	6.794	6.794	0.000	93	53819	2.00	1.42	
30 2-Methyl-2-propanol	59	6.832	6.832	0.000	91	172623	2.00	2.41	
29 1,1,2-Trichloro-1,2,2-trif	101	6.864	6.864	0.000	97	276426	2.00	2.10	
32 Methylene Chloride	84	7.047	7.047	0.000	97	117357	2.00	1.71	
31 3-Chloro-1-propene	39	7.069	7.069	0.000	98	108998	2.00	1.98	
33 Carbon disulfide	76	7.230	7.230	0.000	99	366915	2.00	1.99	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
34 trans-1,2-Dichloroethene	96	7.892	7.892	0.000	96	124650	2.00	1.96	
35 2-Methylpentane	43	7.902	7.902	0.000	94	280854	2.00	1.92	
36 Methyl tert-butyl ether	73	8.032	8.032	0.000	96	223879	2.00	1.59	
37 1,1-Dichloroethane	63	8.327	8.327	0.000	100	235695	2.00	1.98	
38 Vinyl acetate	43	8.424	8.424	0.000	100	198497	2.00	1.46	
40 2-Butanone (MEK)	72	8.903	8.903	0.000	94	33805	2.00	1.38	
39 Hexane	56	8.903	8.903	0.000	85	96481	2.00	1.87	
41 Isopropyl ether	45	9.070	9.070	0.000	96	249659	2.00	1.48	
42 cis-1,2-Dichloroethene	96	9.328	9.328	0.000	97	122107	2.00	1.89	
43 Ethyl acetate	43	9.516	9.516	0.000	99	150065	2.00	1.39	
44 Chloroform	83	9.678	9.678	0.000	96	275857	2.00	2.01	
45 Tert-butyl ethyl ether	59	9.758	9.758	0.000	96	241961	2.00	1.54	
46 Tetrahydrofuran	42	10.103	10.103	0.000	92	80371	2.00	1.38	
47 1,1,1-Trichloroethane	97	10.700	10.700	0.000	96	298679	2.00	2.09	
48 1,2-Dichloroethane	62	10.807	10.807	0.000	98	189168	2.00	2.22	
49 Cyclohexane	69	11.270	11.270	0.000	89	57277	2.00	1.86	
50 Benzene	78	11.270	11.270	0.000	97	328531	2.00	1.76	
53 n-Butanol	31	11.275	11.275	0.000	67	34962	2.00	1.93	
52 Carbon tetrachloride	117	11.292	11.292	0.000	99	328251	2.00	2.33	
55 2,3-Dimethylpentane	71	11.361	11.361	0.000	91	79676	2.00	1.82	
51 Thiophene	84	11.534	11.534	0.000	96	194323	2.00	1.84	
54 Tert-amyl methyl ether	73	11.711	11.711	0.000	98	229105	2.00	1.69	
56 Isooctane	57	11.975	11.975	0.000	98	554434	2.00	1.86	
57 n-Heptane	71	12.324	12.324	0.000	92	117259	2.00	1.79	
58 1,2-Dichloropropane	63	12.432	12.432	0.000	89	128592	2.00	1.84	
59 Trichloroethene	130	12.464	12.464	0.000	96	155508	2.00	1.89	
60 Dibromomethane	93	12.550	12.550	0.000	95	152316	2.00	1.95	
61 Dichlorobromomethane	83	12.685	12.685	0.000	99	278857	2.00	2.04	
62 1,4-Dioxane	88	12.706	12.706	0.000	92	31837	2.00	1.74	
63 Methyl methacrylate	41	12.755	12.755	0.000	93	91575	2.00	1.44	
64 Methylcyclohexane	83	13.201	13.201	0.000	95	210806	2.00	1.80	
65 4-Methyl-2-pentanone (MIBK)	43	13.589	13.589	0.000	97	158100	2.00	1.64	
66 cis-1,3-Dichloropropene	75	13.642	13.642	0.000	95	202093	2.00	1.87	
67 trans-1,3-Dichloropropene	75	14.309	14.309	0.000	97	167400	2.00	1.90	
68 Toluene	91	14.439	14.439	0.000	93	320248	2.00	1.66	
69 1,1,2-Trichloroethane	83	14.514	14.514	0.000	99	103126	2.00	1.75	
72 2-Hexanone	58	14.885	14.885	0.000	93	78111	2.00	1.72	
73 n-Octane	85	15.079	15.079	0.000	93	116366	2.00	1.74	
74 Chlorodibromomethane	129	15.208	15.208	0.000	97	277171	2.00	2.14	
75 Ethylene Dibromide	107	15.498	15.498	0.000	98	214869	2.00	1.97	
76 Tetrachloroethene	129	15.557	15.557	0.000	95	149827	2.00	1.96	
77 2,3-Dimethylheptane	43	16.407	16.407	0.000	96	372593	2.00	1.90	
78 Chlorobenzene	112	16.418	16.418	0.000	96	297019	2.00	1.92	
79 Ethylbenzene	91	16.693	16.693	0.000	99	376546	2.00	1.58	
81 m-Xylene & p-Xylene	91	16.849	16.849	0.000	99	563633	4.00	3.16	
82 n-Nonane	57	17.236	17.236	0.000	91	228507	2.00	1.76	
83 Styrene	104	17.317	17.317	0.000	87	208958	2.00	1.51	
84 Bromoform	173	17.317	17.317	0.000	96	294329	2.00	2.12	
85 o-Xylene	91	17.376	17.376	0.000	99	295899	2.00	1.56	
86 1,1,2,2-Tetrachloroethane	83	17.693	17.693	0.000	99	213263	2.00	1.56	
87 1,2,3-Trichloropropane	110	17.844	17.844	0.000	98	59176	2.00	1.65	
88 Isopropylbenzene	105	17.941	17.941	0.000	97	384462	2.00	1.49	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
89 N-Propylbenzene	120	18.446	18.446	0.000	99	103089	2.00	1.45	
90 2-Chlorotoluene	126	18.500	18.500	0.000	98	113648	2.00	1.65	
91 4-Ethyltoluene	105	18.586	18.586	0.000	98	374311	2.00	1.50	
92 1,3,5-Trimethylbenzene	120	18.656	18.656	0.000	92	153426	2.00	1.47	
93 Alpha Methyl Styrene	118	18.877	18.877	0.000	88	158391	2.00	1.46	
94 n-Decane	57	18.909	18.909	0.000	91	238029	2.00	1.55	
95 tert-Butylbenzene	119	19.065	19.065	0.000	92	327422	2.00	1.48	
96 1,2,4-Trimethylbenzene	105	19.076	19.076	0.000	96	308934	2.00	1.48	
97 sec-Butylbenzene	105	19.323	19.323	0.000	98	453438	2.00	1.49	
98 1,3-Dichlorobenzene	146	19.350	19.350	0.000	98	257720	2.00	1.65	
99 Benzyl chloride	91	19.415	19.415	0.000	97	267374	2.00	1.59	
100 1,4-Dichlorobenzene	146	19.431	19.431	0.000	93	254745	2.00	1.64	
101 4-Isopropyltoluene	119	19.474	19.474	0.000	97	369732	2.00	1.49	
102 1,2,3-Trimethylbenzene	105	19.533	19.533	0.000	99	300902	2.00	1.47	
103 Butylcyclohexane	83	19.576	19.576	0.000	94	312919	2.00	1.66	
104 2,3-Dihydroindene	117	19.775	19.775	0.000	94	286841	2.00	1.47	
105 1,2-Dichlorobenzene	146	19.780	19.780	0.000	97	237957	2.00	1.61	
106 n-Butylbenzene	91	19.893	19.893	0.000	97	360779	2.00	1.49	
107 Indene	116	19.904	19.904	0.000	94	240650	2.00	1.47	
108 Undecane	57	20.173	20.173	0.000	95	215959	2.00	1.35	
110 1,2-Dibromo-3-Chloropropan	157	20.367	20.367	0.000	99	116265	2.00	1.61	
111 1,2,4,5-Tetramethylbenzene	119	20.646	20.646	0.000	97	330168	2.00	1.56	
114 Dodecane	57	21.254	21.254	0.000	95	181308	2.00	1.66	
115 1,2,4-Trichlorobenzene	180	21.496	21.496	0.000	93	167427	2.00	1.49	
116 Naphthalene	128	21.631	21.631	0.000	98	237049	2.00	1.34	
118 Hexachlorobutadiene	225	21.787	21.787	0.000	96	169524	2.00	1.47	
119 1,2,3-Trichlorobenzene	180	21.846	21.846	0.000	94	115069	2.00	1.61	
120 2-Methylnaphthalene	142	22.379	22.379	0.000	99	97635	3.00	6.96	
121 1-Methylnaphthalene	142	22.502	22.502	0.000	99	105171	3.00	7.56	
A 123 C8 Range	1	15.091	(15.046-15.137)		0	1106359	2.00	1.98	
S 124 Xylenes, Total	100				0		6.00	4.72	
S 125 1,2-Dichloroethene, Total	1				0		4.00	3.85	

Reagents:

40CV101P_00059

Amount Added: 100.00

Units: mL

40MXISSURP_00003

Amount Added: 40.00

Units: mL

Run Reagent

TestAmerica Laboratories

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180402-7781.b\JCCVD04-LCS.d

Injection Date: 04-Apr-2018 10:21:30

Instrument ID: MJ

Operator ID: 007126

Lims ID: LCS

Worklist Smp#: 1002

Client ID:

Purge Vol: 500.000 mL

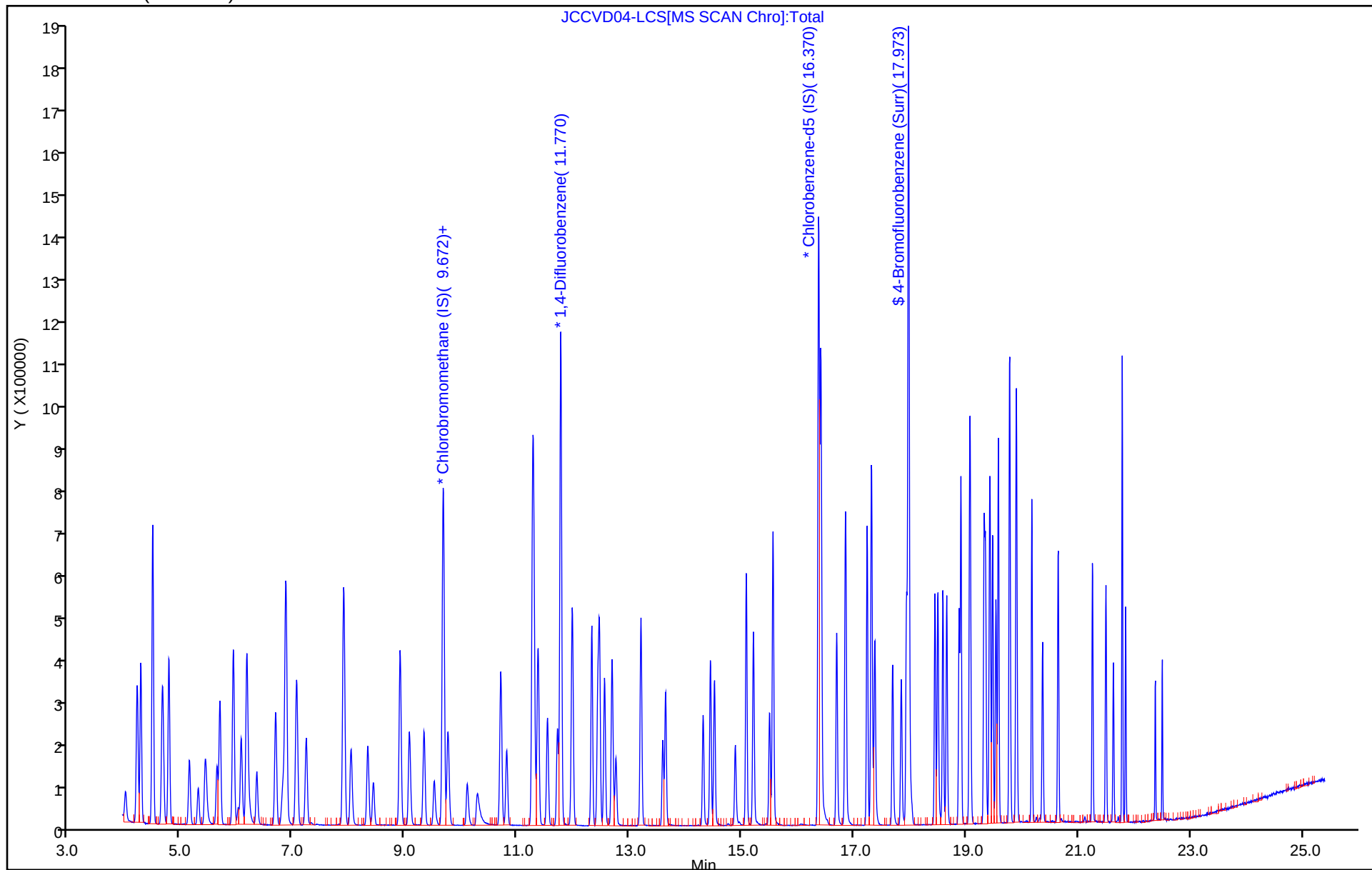
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MJ_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Laboratories
Recovery Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20180402-7781.b\JCCVD04-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 04-Apr-2018 10:21:30 ALS Bottle#: 15 Worklist Smp#: 1002
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0007781-002
Misc. Info.: P59
Operator ID: 007126 Instrument ID: MJ
Method: \\ChromNA\Knoxville\ChromData\MJ\20180402-7781.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 04-Apr-2018 14:25:46 Calib Date: 15-Feb-2018 22:24:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20180215-7391.b\JB15ICL10.D
Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

Compound	Amount Added	Amount Recovered	% Rec.
\$ 4 4-Bromofluorobenzene (Surr)	4.00	4.10	102.60

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica KnoxvilleJob No.: 140-11145-1

SDG No.: _____

Instrument ID: MRStart Date: 01/30/2018 11:12Analysis Batch Number: 17762End Date: 01/30/2018 23:36

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-17762/1		01/30/2018 11:12	1	RBFBFA30.D	RTX-5 0.32 (mm)
IC 140-17762/3		01/30/2018 12:29	1	RA30IC01.D	RTX-5 0.32 (mm)
IC 140-17762/4		01/30/2018 13:16	1	RA30IC02.D	RTX-5 0.32 (mm)
140-10625-A-5 MDLV		01/30/2018 13:16	1		RTX-5 0.32 (mm)
ZZZZZ		01/30/2018 13:16	1		RTX-5 0.32 (mm)
IC 140-17762/5		01/30/2018 14:04	1	RA30IC03.D	RTX-5 0.32 (mm)
140-10625-A-6 MDLV		01/30/2018 14:04	1		RTX-5 0.32 (mm)
ZZZZZ		01/30/2018 14:04	1		RTX-5 0.32 (mm)
IC 140-17762/6		01/30/2018 14:50	1	RA30IC04.D	RTX-5 0.32 (mm)
140-10625-A-7 MDLV		01/30/2018 14:50	1		RTX-5 0.32 (mm)
ZZZZZ		01/30/2018 14:50	1		RTX-5 0.32 (mm)
IC 140-17762/7		01/30/2018 15:39	1	RA30IC05.D	RTX-5 0.32 (mm)
140-10625-A-8 MDLV		01/30/2018 15:39	1		RTX-5 0.32 (mm)
ZZZZZ		01/30/2018 15:39	1		RTX-5 0.32 (mm)
IC 140-17762/8		01/30/2018 16:27	1	RA30IC06.D	RTX-5 0.32 (mm)
ICIS 140-17762/9		01/30/2018 17:15	1	RA30IC07.D	RTX-5 0.32 (mm)
IC 140-17762/10		01/30/2018 18:03	1	RA30IC08.D	RTX-5 0.32 (mm)
IC 140-17762/11		01/30/2018 18:50	1	RA30IC09.D	RTX-5 0.32 (mm)
IC 140-17762/12		01/30/2018 19:38	1	RA30IC10.D	RTX-5 0.32 (mm)
ICV 140-17762/14		01/30/2018 21:11	1	RA30ICV.D	RTX-5 0.32 (mm)
ZZZZZ		01/30/2018 23:36	1		RTX-5 0.32 (mm)

TestAmerica Knoxville GC/MS Air - Initial Calibration Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 18 & KNOX-MS-0023, Rev 3

Analysis Date:	1/30/18	Instrument:	MR	Chrom WL #:	7236	TALS Batch & Event #	TO14/15: 1762 / 1371					
						DOD:	1764 / 1373	OHIO:	1763 / 1372			
Chrom/Worklist Review						1 st	Comments			2 nd		
1. Re-read each Limit Group [method editor-limit groups]						✓				NA		
2. Verify LODV in Chrom [method editor -> edit -> MDL]						✓				NA		
3. Are the reagents and init/final volumes correct and first level "unlock/clear"? (Verify reagents & amt. injected at each level) [WL Sample Reagents Tab vs. Entech]						✓				✓		
4. Files linked properly to calibration levels? [Sample List- Lab ID vs. Info]						✓				✓		
5. Did BFB meet tune criteria? [F8]						✓				✓		
6. Were all standards injected within 24 hr of BFB? [F7]						✓				✓		
7. High point checked for saturation and point removed if so? [Chrom]						✓				✓		
8. If manual integrations performed, are they properly performed, correct, baseline clearly identified, and correct reason given? [Chrom]						NA				NA		
9. RT for each IS +20 sec avg. RT? [F6 IstdRec]						✓				✓		
10. Area for each IS + 40% avg. area? [F6 IstdRec]						✓				✓		
11. Each analyte + 0.06 RRT of avg. RRT? [F6 - RRT]						✓				✓		
12. Elution order checked on isomeric pairs? [Chrom]												
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane						✓				✓		
• 2-methyl butane / acrolein						✓				✓		
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane						✓				✓		
• vinyl acetate / hexane						✓				✓		
• cis- and trans- isomers						✓				✓		
• ethyl benzene / m/p-xylene / o-xylene						✓				✓		
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene/1,2,3-trimethylbenzene						✓				✓		
• tert-butylbenzene/4-isopropyltoluene						✓				✓		
• 1,3-, 1,4-, and 1,2-dichlorobenzene						✓				✓		
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes						NA				NA		
• 1,2,4- and 1,2,3-trichlorobenzenes						✓				✓		
• 2-, and 1-methylnaphthalene						NA				NA		
13. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?						NA				NA		
MLG Review						TO	DOD	OH	Comments	TO	DOD	OH
14. Is %RSD for all target analytes ≤ 30%? (with up to 2 compounds with RSD ≤ 40%) 1 & 2 methylnaphthalene ≤ 50% [F6 Σ]						✓	✓	✓		✓	✓	✓
15. Were at least 5 levels of each compound analyzed? [F6]						✓	✓	✓		✓	✓	✓
16. Is low level std at or <RL and are the remaining points consec.? [F6]						✓	✓	✓		✓	✓	✓
17. At least 6 consec. points used for quad curves; at least 5 consec. points for linear curves? (Note: Ohio does not allow quad) [F6]						NA	NA	NA		NA	NA	NA
18. If curves were used, is correlation coefficient ≥ 0.990? [F6]						NA	NA	NA		NA	NA	NA
19. Is the intercept less than the RL for each curve? [F6]						NA	NA	NA		NA	NA	NA
20. For quadratic: is a tangent's slope to the curve entirely positive or negative and continuous. [Cntrl-C, details]						NA	NA	NA		NA	NA	NA
21. Is low point RSE ≤ 50 %? [F6]						✓	✓	✓	Neq.	✓	✓	✓
22. Is the second source analysis within limits? [F8 - icv]						✓	✓	✓	DNV 1+2 r.	✓	✓	✓
Analyst/Date:						2nd Level Reviewer/Date:						
2/8/18						2/8/18						
TALS Review						TO	DOD	OH	Comments	TO	DOD	OH
23. Upload ICAL						✓	✓	✓		✓	✓	✓
24. Graphics uploaded? [paperclip]						✓	✓	✓		✓	✓	✓
25. All points are in the most recent active calibration event? [Calibration Events - 'Fix ICAL linkage' if needed]						✓	✓	✓		✓	✓	✓
26. Runs linked to BFB? [QC Links]						✓	✓	✓		✓	✓	✓
27. Run Checklist and acknowledge findings [F8]						✓	✓	✓		✓	✓	✓
28. If criteria not met, was a NCM generated?						NA	NA	NA		NA	NA	NA
29. After review in TALS, approve the method in TALS.						NA	NA	NA		NA	NA	NA
30. After verifying TALS is correct, lock method in Chrom [resolve any error issues]						NA	NA	NA		NA	NA	NA
31. Checklist & Entech report scanned, attached & assigned properly?						NA	NA	NA		NA	NA	NA
Analyst/date:						2nd Level Reviewer/date:						
2/8/18						2/8/18						
Comments:						Comments:						
1st 1st methylnaph 1st 1st @ 451.												

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica KnoxvilleJob No.: 140-11145-1

SDG No.: _____

Instrument ID: MJStart Date: 02/15/2018 14:16Analysis Batch Number: 18185End Date: 02/16/2018 03:02

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-18185/1		02/15/2018 14:16	1	JBFB15.D	RTX-5 0.32 (mm)
IC 140-18185/3		02/15/2018 15:35	1	JB15ICL01.D	RTX-5 0.32 (mm)
IC 140-18185/4		02/15/2018 16:21	1	JB15ICL02.D	RTX-5 0.32 (mm)
140-10626-A-5 MDLV		02/15/2018 16:21	1		RTX-5 0.32 (mm)
ZZZZZ		02/15/2018 16:21	1		RTX-5 0.32 (mm)
IC 140-18185/5		02/15/2018 17:07	1	JB15ICL03.D	RTX-5 0.32 (mm)
140-10626-A-6 MDLV		02/15/2018 17:07	1		RTX-5 0.32 (mm)
ZZZZZ		02/15/2018 17:07	1		RTX-5 0.32 (mm)
IC 140-18185/6		02/15/2018 17:52	1	JB15ICL04.D	RTX-5 0.32 (mm)
140-10626-A-7 MDLV		02/15/2018 17:52	1		RTX-5 0.32 (mm)
ZZZZZ		02/15/2018 17:52	1		RTX-5 0.32 (mm)
IC 140-18185/7		02/15/2018 18:37	1	JB15ICL05.D	RTX-5 0.32 (mm)
140-10626-A-8 MDLV		02/15/2018 18:37	1		RTX-5 0.32 (mm)
ZZZZZ		02/15/2018 18:37	1		RTX-5 0.32 (mm)
IC 140-18185/8		02/15/2018 19:22	1	JB15ICL06.D	RTX-5 0.32 (mm)
ICIS 140-18185/9		02/15/2018 20:08	1	JB15ICISL07.D	RTX-5 0.32 (mm)
IC 140-18185/10		02/15/2018 20:53	1	JB15ICL08.D	RTX-5 0.32 (mm)
IC 140-18185/11		02/15/2018 21:39	1	JB15ICL09.D	RTX-5 0.32 (mm)
IC 140-18185/12		02/15/2018 22:24	1	JB15ICL10.D	RTX-5 0.32 (mm)
ICV 140-18185/15		02/16/2018 00:43	1	JLCSB16.D	RTX-5 0.32 (mm)
ZZZZZ		02/16/2018 03:02	1		RTX-5 0.32 (mm)

180215

TA-Knoxville
TO-14 Autosampler Log

Sample	Position/Volume	psia	Date	Time
BFB	16 - 101 mL	28.2	2/15/2018	2:16:46 PM
BLK	16 - 501 mL	26.9	2/15/2018	2:49:37 PM
ICL01	8 - 51 mL	39.2	2/15/2018	3:35:27 PM
ICL02	8 - 101 mL	38.4	2/15/2018	4:20:59 PM
ICL03	8 - 200 mL	37.5	2/15/2018	5:07:09 PM
ICL04	9 - 200 mL	35.2	2/15/2018	5:52:00 PM
ICL05	10 - 201 mL	34.3	2/15/2018	6:37:21 PM
ICL06	11 - 201 mL	30.5	2/15/2018	7:22:43 PM
ICL07	12 - 200 mL	35	2/15/2018	8:08:01 PM
ICL08	13 - 201 mL	33.4	2/15/2018	8:53:05 PM
ICL09	14 - 201 mL	31.6	2/15/2018	9:39:08 PM
ICL10	15 - 201 mL	33.1	2/15/2018	10:24:43 PM
BLK	16 - 500 mL	26.8	2/15/2018	11:13:05 PM
ICV	1 - 101 mL	35.6	2/15/2018	11:57:37 PM
LCS	2 - 101 mL	34.8	2/16/2018	12:43:32 AM
PEcan	3 - 100 mL	32.6	2/16/2018	1:28:17 AM
BLK	16 - 500 mL	25.9	2/16/2018	2:15:19 AM
BLK	16 - 500 mL	25.5	2/16/2018	3:02:40 AM

MJ ICAL WL 73941


2/21/18

TestAmerica Knoxville GC/MS Air - Initial Calibration Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 18 & KNOX-MS-0023, Rev 3

Analysis Date: 2/15/18	Instrument: MJ	Chrom WL #: 7391	TALS Batch & Event #	TO14/15: 18185/1394	DOD: 18187/1396	OHIO: 18186/1395
Chrom/Worklist Review				1 st	Comments	2 nd
1. Re-read each Limit Group [method editor-limit groups]				✓		NA
2. Verify LODV in Chrom [method editor -> edit -> MDL]				✓		NA
3. Are the reagents and init/final volumes correct and first level "unlock/clear"? (Verify reagents & amt. injected at each level) [WL Sample Reagents Tab vs. Entech]				✓		✓
4. Files linked properly to calibration levels? [Sample List- Lab ID vs. Info]				✓		✓
5. Did BFB meet tune criteria? [F8]				✓		✓
6. Were all standards injected within 24 hr of BFB? [F7]				✓		✓
7. High point checked for saturation and point removed if so? [Chrom]				✓		✓
8. If manual integrations performed, are they properly performed, correct, baseline clearly identified, and correct reason given? [Chrom]				NA		NA
9. RT for each IS +20 sec avg. RT? [F6 IstdRec]				✓		✓
10. Area for each IS + 40% avg. area? [F6 IstdRec]				✓		✓
11. Each analyte ± 0.06 RRT of avg. RRT? [F6 - RRT]				✓		✓
12. Elution order checked on isomeric pairs? [Chrom]						
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane				✓		✓
• 2-methyl butane / acrolein				✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane				✓		✓
• vinyl acetate / hexane				✓		✓
• cis- and trans- isomers				✓		✓
• ethyl benzene / m/p-xylene / o-xylene				✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/ sec-butylbenzene/1,2,3-trimethylbenzene				✓		✓
• tert-butylbenzene/4-isopropyltoluene				✓		✓
• 1,3-, 1,4-, and 1,2-dichlorobenzene				✓		✓
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes				✓		✓
• 1,2,4- and 1,2,3-trichlorobenzenes				✓		✓
• 2-, and 1-methylnaphthalene				✓		✓
13. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?				✓		✓
MLG Review				TO	DOD	OH
14. Is %RSD for all target analytes ≤ 30%? (with up to 2 compounds with RSD ≤ 40%) 1 & 2 methylnaphthalene ≤ 50% [F6 Σ]				✓	✓	✓
15. Were at least 5 levels of each compound analyzed? [F6]				✓	✓	✓
16. Is low level std at or <RL and are the remaining points consec.? [F6]				✓	✓	✓
17. At least 6 consec. points used for quad curves; at least 5 consec. points for linear curves? (Note: Ohio does not allow quad) [F6]				✓	✓	✓
18. If curves were used, is correlation coefficient ≥ 0.990? [F6]				✓	✓	✓
19. Is the intercept less than the RL for each curve? [F6]				✓	✓	✓
20. For quadratic: is a tangent's slope to the curve entirely positive or negative and continuous. [Cntrl-C, details]				NA	NA	NA
21. Is low point RSE ≤ 50 %? MCL, 1,2-m-naphth.				✓	✓	✓
22. Is the second source analysis within limits? ↑ 1,2-m-naphth. ok ↑, ND [F8 - icv]				✓	✓	✓
Analyst/Date: AS 2/16/18				2nd Level Reviewer/Date: 02/16/18		
TALS Review				TO	DOD	OH
23. Upload ICAL				✓	✓	✓
24. Graphics uploaded? [paperclip]				✓	✓	✓
25. All points are in the most recent active calibration event? [Calibration Events - 'Fix ICAL linkage' if needed]				✓	✓	✓
26. Runs linked to BFB? [QC Links]				✓	✓	✓
27. Run Checklist and acknowledge findings [F8]				✓	✓	✓
28. If criteria not met, was a NCM generated?				NA	NA	NA
29. After review in TALS, approve the method in TALS.				NA	NA	NA
30. After verifying TALS is correct, lock method in Chrom <resolve any error issues>				✓	✓	✓
31. Checklist & Entech report scanned, attached & assigned properly?				✓	✓	✓
Analyst/date: AS 2/19/18				2nd Level Reviewer/date: 02/19/18		
Comments: DNU Tert-amyl methyl ether (TAME)				Comments:		

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica KnoxvilleJob No.: 140-11145-1

SDG No.: _____

Instrument ID: MRStart Date: 04/03/2018 09:39Analysis Batch Number: 19179End Date: 04/04/2018 06:21

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-19179/1		04/03/2018 09:39	1	RBFB03.D	RTX-5 0.32 (mm)
CCVIS 140-19179/2		04/03/2018 10:10	1	RCCVD03.D	RTX-5 0.32 (mm)
LCS 140-19179/1002		04/03/2018 10:10	1	RCCVD03-LCS.d	RTX-5 0.32 (mm)
MB 140-19179/4		04/03/2018 11:58	1	R500BD03.D	RTX-5 0.32 (mm)
ZZZZZ		04/03/2018 12:46	1		RTX-5 0.32 (mm)
ZZZZZ		04/03/2018 15:49	2.43		RTX-5 0.32 (mm)
ZZZZZ		04/03/2018 16:36	1		RTX-5 0.32 (mm)
ZZZZZ		04/03/2018 17:23	1		RTX-5 0.32 (mm)
ZZZZZ		04/03/2018 18:10	1		RTX-5 0.32 (mm)
140-11145-1		04/03/2018 19:02	1	RD03P105.D	RTX-5 0.32 (mm)
140-11145-2		04/03/2018 19:55	1	RD03P106.D	RTX-5 0.32 (mm)
140-11145-3		04/03/2018 20:48	1	RD03P107.D	RTX-5 0.32 (mm)
140-11145-4		04/03/2018 21:40	1	RD03P108.D	RTX-5 0.32 (mm)
140-11145-5		04/03/2018 22:33	1	RD03P109.D	RTX-5 0.32 (mm)
140-11145-6		04/03/2018 23:25	1	RD03P110.D	RTX-5 0.32 (mm)
140-11145-7		04/04/2018 00:19	1	RD03P111.D	RTX-5 0.32 (mm)
140-11145-8		04/04/2018 01:11	1	RD03P112.D	RTX-5 0.32 (mm)
ZZZZZ		04/04/2018 02:04	1		RTX-5 0.32 (mm)
ZZZZZ		04/04/2018 02:56	1		RTX-5 0.32 (mm)
ZZZZZ		04/04/2018 03:49	1		RTX-5 0.32 (mm)
ZZZZZ		04/04/2018 04:40	1		RTX-5 0.32 (mm)
ZZZZZ		04/04/2018 05:34	1		RTX-5 0.32 (mm)
ZZZZZ		04/04/2018 06:21	1		RTX-5 0.32 (mm)

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 18 & KNOX-MS-0023, Rev 3

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Instrument/Date	MR 4/3/18	Routine	DOD	OHIO
CCAL Chrom WL #	7267	CCAL Batch #	19179	
ICAL Chrom WL #	7236	ICAL Batch # / Event #	17262 / 1371	

Chrom Review		1 st	If No, why is data reportable?	2 nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]		/	4/3/18 1726 1726 94.7	/
2. Did BFB meet tune criteria? [F8]		/	☐ Failed TO-14A, but passes TO-15 (NCM#)	/
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICAL File batch #/start/end Cal date/time)? [F8]		/		/
4. Is the %D ≤ 30% for all target analytes? [Chrom-F8] [TALS-Sample Results Tab]		/	☐ CCV - %D - LCS criteria met (NCM# 11903) ☐ CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM#)	/
5. Elution order checked on isomeric pairs? [Chrom]		/		/
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane		/		/
• 2-methyl butane / acrolein		/		/
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane		/		/
• vinyl acetate / hexane		/		/
• cis- and trans- isomers		/		/
• ethyl benzene / m/p-xylene / o-xylene		/		/
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene/1,2,3-trimethylbenzene		/		/
• tert-butylbenzene/4-isopropyltoluene		/		/
• 1,3-, 1,4-, and 1,2-dichlorobenzene		/		/
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes		M		18
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene		/		/
• 2-, and 1-methylnaphthalene		/		/
6. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?		M		18
7. Has the RT been updated to the method?		/		/
Analyst/date		2nd Level Reviewer/date		
8. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]		/	✓ on screen	/
9. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]		/		/
10. Were all samples/QC analyzed within 24 hr. of BFB? [F7]		/		/
11. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). If no, list blank ID:		/	☐ Method Blank - Report, ND (NCM#) ☐ Method Blank - Report, 10X (NCM#)	/
12. All runs - peaks ID'd correctly and false positives removed?		/		/
13. If manual integrations performed, are they properly performed, correctly ID'd, baseline clearly identified, and reason given?		/		/
14. IS/Surr within limits? List samples and reason (e.g., 1 thru 5): [Batch Results IS & SUR Tab]		/	☐ (1) Surrogate - Matrix (NCM#) ☐ (2) Surrogate - High, ND (NCM#) ☐ (3) ISTD - RA/RA Concurs (NCM#) ☐ (4) Surrogate -RX concurs, Report both (NCM#) ☐ (5) ISTD - Matrix, DL required (NCM#)	/
Sample	Reason	Sample	Reason	
15. Samples outside calibration range scheduled for dilution?		/	☐ ICAL - Range Exceeded; Minimum Dilution	/
Chrom Review		1 st	If No, why is data reportable?	2 nd
16. For first analysis that is at a dilution, is highest target analyte >20% cal range? List samples and reason:		/	☐ (1) Reporting Limit - Dilution, Matrix (NCM#) ☐ (2) Reporting Limit - Dilution, Non-Target (NCM#) ☐ (3) Issues with initial collection volume; see DRC.	/
Sample	Reason	Sample	Reason	
17. RIC inspected for proper integration for TPH?		/		/
18. Obvious non-TPH peaks excluded?		/		/
19. Individual TPH peak area < octane high point area?		/		/

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04/11/2018

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica KnoxvilleJob No.: 140-11145-1

SDG No.: _____

Instrument ID: MJStart Date: 04/04/2018 09:53Analysis Batch Number: 19215End Date: 04/05/2018 00:48

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-19215/1		04/04/2018 09:53	1	JBFBD04.D	RTX-5 0.32 (mm)
CCVIS 140-19215/2		04/04/2018 10:21	1	JCCVD04.D	RTX-5 0.32 (mm)
LCS 140-19215/1002		04/04/2018 10:21	1	JCCVD04-LCS.d	RTX-5 0.32 (mm)
ZZZZZ		04/04/2018 12:00	1		RTX-5 0.32 (mm)
MB 140-19215/5		04/04/2018 12:49	1	J500BD04.D	RTX-5 0.32 (mm)
ZZZZZ		04/04/2018 13:35	1		RTX-5 0.32 (mm)
ZZZZZ		04/04/2018 15:08	1		RTX-5 0.32 (mm)
ZZZZZ		04/04/2018 15:53	1		RTX-5 0.32 (mm)
ZZZZZ		04/04/2018 16:38	1		RTX-5 0.32 (mm)
ZZZZZ		04/04/2018 17:23	1		RTX-5 0.32 (mm)
ZZZZZ		04/04/2018 18:07	1		RTX-5 0.32 (mm)
ZZZZZ		04/04/2018 18:52	1		RTX-5 0.32 (mm)
ZZZZZ		04/04/2018 19:36	1		RTX-5 0.32 (mm)
ZZZZZ		04/04/2018 20:20	1		RTX-5 0.32 (mm)
ZZZZZ		04/04/2018 21:06	1		RTX-5 0.32 (mm)
ZZZZZ		04/04/2018 21:50	1		RTX-5 0.32 (mm)
140-11145-7 DL		04/04/2018 22:35	1	JD04P111.D	RTX-5 0.32 (mm)
ZZZZZ		04/04/2018 23:19	1		RTX-5 0.32 (mm)
ZZZZZ		04/05/2018 00:03	3.92		RTX-5 0.32 (mm)
ZZZZZ		04/05/2018 00:48	12.3		RTX-5 0.32 (mm)

180404

TA-Knoxville
TO-14 Autosampler Log

Sample	Position/Volume	psia	Date	Time
BFB	16 - 101 mL	30.9	4/4/2018	9:53:34 AM
CCV	15 - 101 mL	35	4/4/2018	10:21:16 AM
dnuf flush	15 - 20 mL	25.1	4/4/2018	11:29:41 AM
LOT11155	15 - 501 mL	22.2	4/4/2018	12:00:47 PM
mb500	16 - 501 mL	29.9	4/4/2018	12:49:39 PM
LOT11158	1 - 202 mL	24.1	4/4/2018	1:35:55 PM
dnuf flush	1 - 11 mL	7.4	4/4/2018	2:41:12 PM
11114-01	1 - 51 mL	5.9	4/4/2018	3:08:29 PM
11114-04	2 - 151 mL	6.7	4/4/2018	3:53:02 PM
11114-08	3 - 151 mL	7	4/4/2018	4:38:10 PM
11114-11	4 - 151 mL	7.4	4/4/2018	5:23:13 PM
11113-06	5 - 21 mL	7.2	4/4/2018	6:07:26 PM
11113-07	6 - 51 mL	8.6	4/4/2018	6:52:01 PM
11113-08	7 - 51 mL	6.4	4/4/2018	7:36:54 PM
11113-10	8 - 151 mL	8.6	4/4/2018	8:20:50 PM
11113-11	9 - 11 mL	7.8	4/4/2018	9:06:09 PM
11113-13	10 - 201 mL	2.2	4/4/2018	9:50:09 PM
11145-07	11 - 101 mL	6.9	4/4/2018	10:35:41 PM
11138-07	12 - 16 mL	8.7	4/4/2018	11:19:52 PM
11138-08	13 - 16 mL	11.7	4/5/2018	12:03:48 AM
11138-09	14 - 21 mL	10.4	4/5/2018	12:48:47 AM
11138-10	15 - 21 mL	11	4/5/2018	1:34:09 AM
11138-11	16 - 21 mL	11	4/5/2018	2:19:24 AM
11138-11	16 - 21 mL	9.1	4/5/2018	3:05:01 AM
11138-11	16 - 21 mL	7.4	4/5/2018	3:50:13 AM

MJ WL 7781

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 18 & KNOX-MS-0023, Rev 3

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Instrument/Date	<u>MJ</u> <u>4/4/18</u>	Routine	DOD	OHIO
CCAL Chrom WL #	<u>7781</u>	CCAL Batch #	<u>19215</u>	
ICAL Chrom WL #	<u>7391</u>	ICAL Batch # / Event #	<u>18185</u> <u>1394</u>	<u>/</u>

Chrom Review	1 st	If No, why is data reportable?	2 nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]	/		/
2. Did BFB meet tune criteria? [F8]	/	☐ [Failed TO-14A, but passes TO-15] (NCM#)	/
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICAL File batch #/start/end Cal date/time)? [F8]	/		/
4. Is the %D ≤ 30% for all target analytes? [≤ 50% for 1&2 methylnaphthalene] [Chrom-F8] [TALS-Sample Results Tab]	<u>autose new neg</u> <u>9/14, 11/14, 11/15</u>	☐ CCV - %D - LCS criteria met (NCM# <u>11138</u>) ☐ CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM# <u>11138</u>)	/
5. Elution order checked on isomeric pairs? [Chrom]	/		/
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	/		/
• 2-methyl butane / acrolein	/		/
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	/		/
• vinyl acetate / hexane	/		/
• cis- and trans- isomers	/		/
• ethyl benzene / m/p-xylene / o-xylene	/		/
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene/1,2,3-trimethylbenzene	/		/
• tert-butylbenzene/4-isopropyltoluene	/		/
• 1,3-, 1,4-, and 1,2-dichlorobenzene	/		/
• 1,2-dimethyl-4-ethylbenzene/1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	<u>N</u>		<u>18</u>
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene	/		/
• 2-, and 1-methylnaphthalene	/		/
6. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	<u>N</u>		<u>18</u>
7. Has the RT been updated to the method?	/		/
Analyst/date	<u>GJ</u> <u>4/4/18</u>	2nd Level Reviewer/date	<u>040518</u>
8. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]	/		/
9. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]	/		/
10. Were all samples/QC analyzed within 24 hr of BFB? [F7]	/		/
11. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). If no, list blank ID:	/	☐ Method Blank - Report, ND (NCM#) ☐ Method Blank - Report, 10X (NCM#)	/
12. All runs - peaks ID'd correctly and false positives removed?	/		/
13. If manual integrations performed, are they properly performed, correctly ID'd, baseline clearly identified, and reason given?	/		/
14. IS/Surr within limits? List samples and reason (e.g., 1 thru 5): [Batch Results IS & SUR Tab]	/	☐ (1) Surrogate - Matrix (NCM#) ☐ (2) Surrogate - High, ND (NCM#) ☐ (3) ISTD - RA/RA Concurs (NCM#) ☐ (4) Surrogate -RX concur, Report both (NCM#) ☐ (5) ISTD - Matrix, DL required (NCM#)	/
Sample Reason Sample Reason			
15. Samples outside calibration range scheduled for dilution?	/	☐ ICAL - Range Exceeded; Minimum Dilution	/

Chrom Review	1 st	If No, why is data reportable?	2 nd
16. For first analysis that is at a dilution, is highest target analyte >20% cal range? List samples and reason:	/	☐ (1) Reporting Limit - Dilution, Matrix (NCM#) ☐ (2) Reporting Limit - Dilution, Non-Target (NCM#) ☐ (3) Issues with initial collection volume; see DRC.	/
Sample Reason Sample Reason			
17. RIC inspected for proper integration for TPH?	<u>ng</u>		<u>18</u>
18. Obvious non-TPH peaks excluded?	/		/
19. Individual TPH peak area < octane high point area?	/		/

Page 2 of 2

Analyst: <i>JK</i>	Date: <i>4/15/18</i>	2nd Level Reviewer: <i>[Signature]</i>	Date: <i>4/16/18</i>
Comments:		Comments: <i>* analyzed ok, didn't upload.</i>	
Example Calculation:	<i>11114-1</i>	<i>ME</i>	
On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF			
<i>2.2998 p50ME x 1.22998</i>			

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Knoxville</u>	Job No.: <u>140-10999-1</u>
SDG No.: _____	
Client Sample ID: <u>09783</u>	Lab Sample ID: <u>140-10999-10</u>
Matrix: <u>Air</u>	Lab File ID: <u>GL10999.D</u>
Analysis Method: <u>TO 15 LL</u>	Date Collected: <u>03/20/2018 11:35</u>
Sample wt/vol: <u>500 (mL)</u>	Date Analyzed: <u>03/21/2018 21:14</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>RTX-5</u> ID: <u>0.32 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>18967</u>	Units: <u>ppb v/v</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadiene	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Knoxville</u>	Job No.: <u>140-10999-1</u>
SDG No.: _____	
Client Sample ID: <u>09783</u>	Lab Sample ID: <u>140-10999-10</u>
Matrix: <u>Air</u>	Lab File ID: <u>GL10999.D</u>
Analysis Method: <u>TO 15 LL</u>	Date Collected: <u>03/20/2018 11:35</u>
Sample wt/vol: <u>500 (mL)</u>	Date Analyzed: <u>03/21/2018 21:14</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>RTX-5</u> ID: <u>0.32 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>18967</u>	Units: <u>ppb v/v</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-10999-1
 SDG No.: _____
 Client Sample ID: 09783 Lab Sample ID: 140-10999-10
 Matrix: Air Lab File ID: GL10999.D
 Analysis Method: TO 15 LL Date Collected: 03/20/2018 11:35
 Sample wt/vol: 500 (mL) Date Analyzed: 03/21/2018 21:14
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 18967 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-10999-1
SDG No.: _____
Client Sample ID: 09783 Lab Sample ID: 140-10999-10
Matrix: Air Lab File ID: GL10999.D
Analysis Method: TO 15 LL Date Collected: 03/20/2018 11:35
Sample wt/vol: 500 (mL) Date Analyzed: 03/21/2018 21:14
Soil Aliquot Vol: _____ Dilution Factor: 1
Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
% Moisture: _____ Level: (low/med) Low
Analysis Batch No.: 18967 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
107-83-5	2-Methylpentane TIC		ND		
565-59-3	2,3-Dimethylpentane TIC		ND		
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\GL10999.D
 Lims ID: 140-10999-A-10
 Client ID: 09783
 Sample Type: Client
 Inject. Date: 21-Mar-2018 21:14:30 ALS Bottle#: 1 Worklist Smp#: 20
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0007695-020
 Misc. Info.: 09783
 Operator ID: 007126 Instrument ID: MG
 Method: \\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 22-Mar-2018 13:17:08 Calib Date: 20-Mar-2018 22:00:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\GC20IC10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK004

First Level Reviewer: barlozhetskayaa

Date: 22-Mar-2018 12:08:59

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.566	7.571	-0.005	96	329535	4.00	
* 2 1,4-Difluorobenzene	114	9.690	9.696	-0.006	95	1922705	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.640	14.646	-0.006	88	1686307	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.328	16.334	-0.006	94	1179419	3.96	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20180321-7695.b\GL10999.D

Injection Date: 21-Mar-2018 21:14:30

Instrument ID: MG

Operator ID: 007126

Lims ID: 140-10999-A-10

Lab Sample ID: 140-10999-10

Worklist Smp#: 20

Client ID: 09783

Purge Vol: 500.000 mL

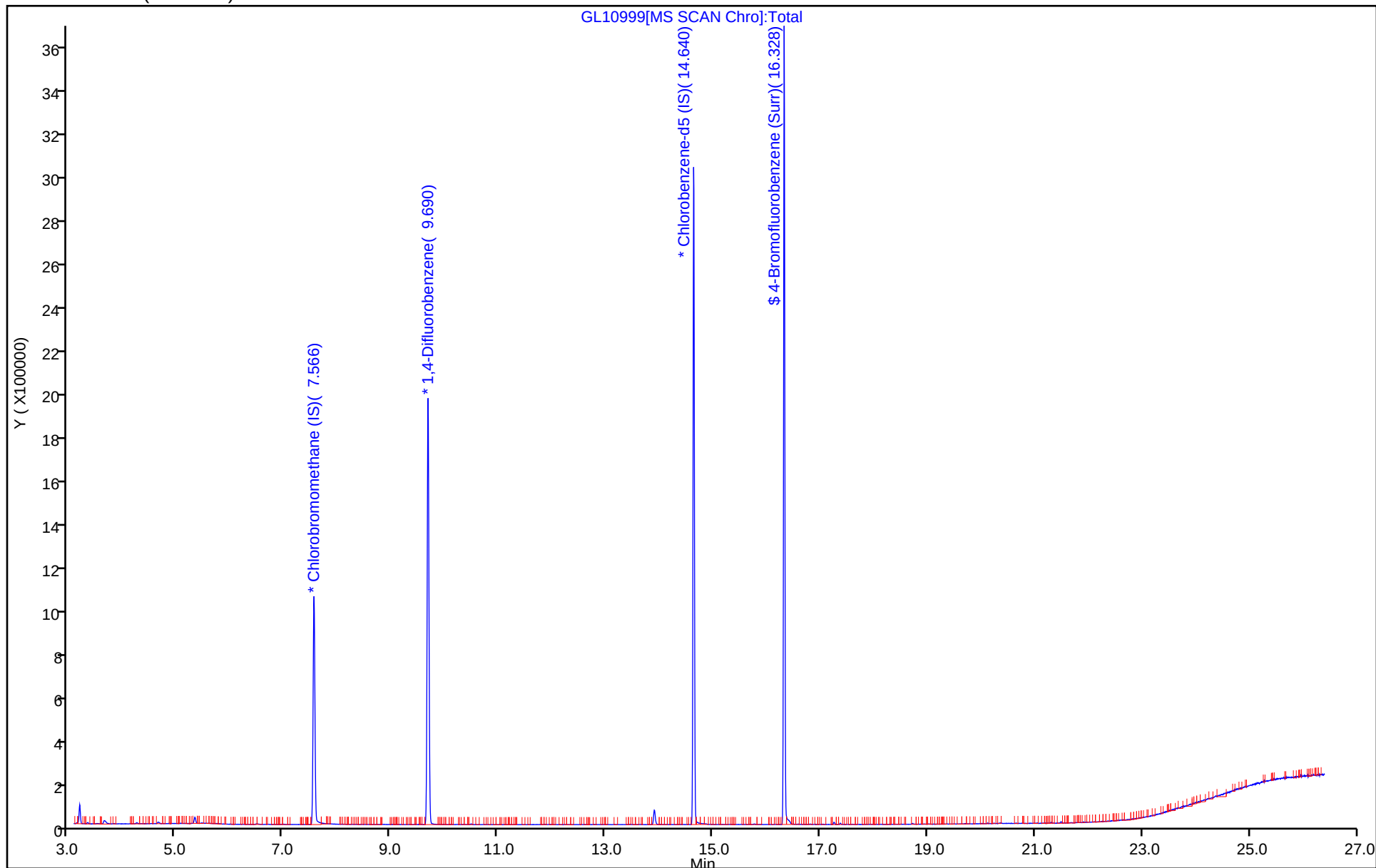
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: <u>TestAmerica Knoxville</u>	Job No.: <u>140-11006-1</u>
SDG No.: _____	
Client Sample ID: <u>10552</u>	Lab Sample ID: <u>140-11006-1</u>
Matrix: <u>Air</u>	Lab File ID: <u>C22L11006.D</u>
Analysis Method: <u>TO 15 LL</u>	Date Collected: <u>03/21/2018 13:00</u>
Sample wt/vol: <u>500 (mL)</u>	Date Analyzed: <u>03/22/2018 14:56</u>
Soil Aliquot Vol: _____	Dilution Factor: <u>1</u>
Soil Extract Vol.: _____	GC Column: <u>RTX-5</u> ID: <u>0.32 (mm)</u>
% Moisture: _____	Level: (low/med) <u>Low</u>
Analysis Batch No.: <u>18968</u>	Units: <u>ppb v/v</u>

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.080	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.080	
79-00-5	1,1,2-Trichloroethane	ND		0.080	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.080	
75-34-3	1,1-Dichloroethane	ND		0.080	
75-35-4	1,1-Dichloroethene	ND		0.080	
87-61-6	1,2,3-Trichlorobenzene	ND		0.40	
96-18-4	1,2,3-Trichloropropane	ND		0.20	
526-73-8	1,2,3-Trimethylbenzene	ND		0.080	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.080	
120-82-1	1,2,4-Trichlorobenzene	ND		0.080	
95-63-6	1,2,4-Trimethylbenzene	ND		0.080	
106-93-4	1,2-Dibromoethane	ND		0.080	
95-50-1	1,2-Dichlorobenzene	ND		0.080	
107-06-2	1,2-Dichloroethane	ND		0.080	
78-87-5	1,2-Dichloropropane	ND		0.080	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.080	
108-67-8	1,3,5-Trimethylbenzene	ND		0.080	
106-99-0	1,3-Butadiene	ND		0.16	
541-73-1	1,3-Dichlorobenzene	ND		0.080	
106-46-7	1,4-Dichlorobenzene	ND		0.080	
123-91-1	1,4-Dioxane	ND		0.20	
71-36-3	1-Butanol	ND		0.80	
90-12-0	1-Methylnaphthalene	ND		1.0	
540-84-1	2,2,4-Trimethylpentane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.080	
78-93-3	2-Butanone	ND		0.32	
95-49-8	2-Chlorotoluene	ND		0.16	
591-78-6	2-Hexanone	ND		0.20	
78-78-4	2-Methylbutane	ND		0.20	
91-57-6	2-Methylnaphthalene	ND		1.0	
107-83-5	2-Methylpentane	ND		0.080	
107-05-1	3-Chloroprene	ND		0.080	
622-96-8	4-Ethyltoluene	ND		0.16	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.20	
67-64-1	Acetone	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11006-1
SDG No.: _____
Client Sample ID: 10552 Lab Sample ID: 140-11006-1
Matrix: Air Lab File ID: C22L11006.D
Analysis Method: TO 15 LL Date Collected: 03/21/2018 13:00
Sample wt/vol: 500 (mL) Date Analyzed: 03/22/2018 14:56
Soil Aliquot Vol: _____ Dilution Factor: 1
Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
% Moisture: _____ Level: (low/med) Low
Analysis Batch No.: 18968 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-05-8	Acetonitrile	ND		0.40	
107-02-8	Acrolein	ND		0.40	
107-13-1	Acrylonitrile	ND		0.80	
98-83-9	Alpha Methyl Styrene	ND		0.16	
71-43-2	Benzene	ND		0.080	
100-44-7	Benzyl chloride	ND		0.16	
75-27-4	Bromodichloromethane	ND		0.080	
75-25-2	Bromoform	ND		0.080	
74-83-9	Bromomethane	ND		0.080	
106-97-8	Butane	ND		0.16	
75-15-0	Carbon disulfide	ND		0.20	
56-23-5	Carbon tetrachloride	ND		0.040	
108-90-7	Chlorobenzene	ND		0.080	
75-45-6	Chlorodifluoromethane	ND		0.080	
75-00-3	Chloroethane	ND		0.080	
67-66-3	Chloroform	ND		0.080	
74-87-3	Chloromethane	ND		0.20	
156-59-2	cis-1,2-Dichloroethene	ND		0.080	
10061-01-5	cis-1,3-Dichloropropene	ND		0.080	
98-82-8	Cumene	ND		0.16	
110-82-7	Cyclohexane	ND		0.20	
124-48-1	Dibromochloromethane	ND		0.080	
74-95-3	Dibromomethane	ND		0.16	
75-71-8	Dichlorodifluoromethane	ND		0.080	
64-17-5	Ethanol	ND		2.0	
141-78-6	Ethyl acetate	ND		0.80	
60-29-7	Ethyl ether	ND		0.80	
100-41-4	Ethylbenzene	ND		0.080	
87-68-3	Hexachlorobutadiene	ND		0.080	
110-54-3	Hexane	ND		0.20	
496-11-7	Indane	ND		0.080	
95-13-6	Indene	ND		0.16	
67-63-0	Isopropyl alcohol	ND		0.80	
80-62-6	Methyl methacrylate	ND		0.20	
1634-04-4	Methyl tert-butyl ether	ND		0.16	
108-87-2	Methylcyclohexane	ND		0.080	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-11006-1
 SDG No.: _____
 Client Sample ID: 10552 Lab Sample ID: 140-11006-1
 Matrix: Air Lab File ID: C22L11006.D
 Analysis Method: TO 15 LL Date Collected: 03/21/2018 13:00
 Sample wt/vol: 500 (mL) Date Analyzed: 03/22/2018 14:56
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 18968 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-09-2	Methylene Chloride	ND		0.20	
179601-23-1	m-Xylene & p-Xylene	ND		0.080	
91-20-3	Naphthalene	ND		0.20	
104-51-8	n-Butylbenzene	ND		0.16	
124-18-5	n-Decane	ND		0.40	
112-40-3	n-Dodecane	ND		0.40	
142-82-5	n-Heptane	ND		0.20	
111-84-2	n-Nonane	ND		0.20	
111-65-9	n-Octane	ND		0.16	
103-65-1	N-Propylbenzene	ND		0.16	
95-47-6	o-Xylene	ND		0.080	
99-87-6	p-Cymene	ND		0.080	
109-66-0	Pentane	ND		0.40	
115-07-1	Propene	ND		0.20	
135-98-8	sec-Butylbenzene	ND		0.16	
100-42-5	Styrene	ND		0.080	
75-65-0	tert-Butanol	ND		0.32	
98-06-6	tert-Butylbenzene	ND		0.20	
127-18-4	Tetrachloroethene	ND		0.040	
109-99-9	Tetrahydrofuran	ND		0.40	
110-02-1	Thiophene	ND		0.080	
108-88-3	Toluene	ND		0.12	
156-60-5	trans-1,2-Dichloroethene	ND		0.080	
10061-02-6	trans-1,3-Dichloropropene	ND		0.080	
79-01-6	Trichloroethene	ND		0.040	
75-69-4	Trichlorofluoromethane	ND		0.080	
1120-21-4	Undecane	ND		0.40	
108-05-4	Vinyl acetate	ND		0.40	
593-60-2	Vinyl bromide	ND		0.080	
75-01-4	Vinyl chloride	ND		0.040	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TARGETED TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Knoxville Job No.: 140-11006-1
SDG No.: _____
Client Sample ID: 10552 Lab Sample ID: 140-11006-1
Matrix: Air Lab File ID: C22L11006.D
Analysis Method: TO 15 LL Date Collected: 03/21/2018 13:00
Sample wt/vol: 500 (mL) Date Analyzed: 03/22/2018 14:56
Soil Aliquot Vol: _____ Dilution Factor: 1
Soil Extract Vol.: _____ GC Column: RTX-5 ID: 0.32 (mm)
% Moisture: _____ Level: (low/med) Low
Analysis Batch No.: 18968 Units: ppb v/v

CAS NO.	COMPOUND NAME	RT	RESULT	Q	MATCH QUALITY
107-83-5	2-Methylpentane TIC		ND		
565-59-3	2,3-Dimethylpentane TIC		ND		
496-11-7	Indane TIC		ND		
95-13-6	Indene TIC		ND		
110-02-1	Thiophene TIC		ND		

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20180321-7696.b\C22L11006.D
 Lims ID: 140-11006-A-1
 Client ID: 10552
 Sample Type: Client
 Inject. Date: 22-Mar-2018 14:56:30 ALS Bottle#: 2 Worklist Smp#: 7
 Purge Vol: 500.000 mL Dil. Factor: 1.0000
 Sample Info: 140-0007696-007
 Misc. Info.: 10552
 Operator ID: 7126 Instrument ID: MG
 Method: \\ChromNA\Knoxville\ChromData\MG\20180321-7696.b\MG_TO15.m
 Limit Group: MSA TO14A_15 Routine ICAL
 Last Update: 23-Mar-2018 09:47:16 Calib Date: 20-Mar-2018 22:00:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20180320-7686.b\GC20IC10.D
 Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
 Process Host: XAWRK013

First Level Reviewer: tajh

Date: 22-Mar-2018 15:51:41

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.544	7.576	-0.032	96	310248	4.00	
* 2 1,4-Difluorobenzene	114	9.663	9.701	-0.038	95	1767385	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.624	14.646	-0.022	88	1600242	4.00	
\$ 4 4-Bromofluorobenzene (Surr	95	16.307	16.334	-0.027	93	1144783	4.05	
33 Carbon disulfide	76	5.457	5.479	-0.022	99	29328	0.1063	

Reagents:

40MXISSURP_00003 Amount Added: 40.00 Units: mL Run Reagent

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20180321-7696.b\C22L11006.D

Injection Date: 22-Mar-2018 14:56:30

Instrument ID: MG

Operator ID: 7126

Lims ID: 140-11006-A-1

Lab Sample ID: 140-11006-1

Worklist Smp#: 7

Client ID: 10552

Purge Vol: 500.000 mL

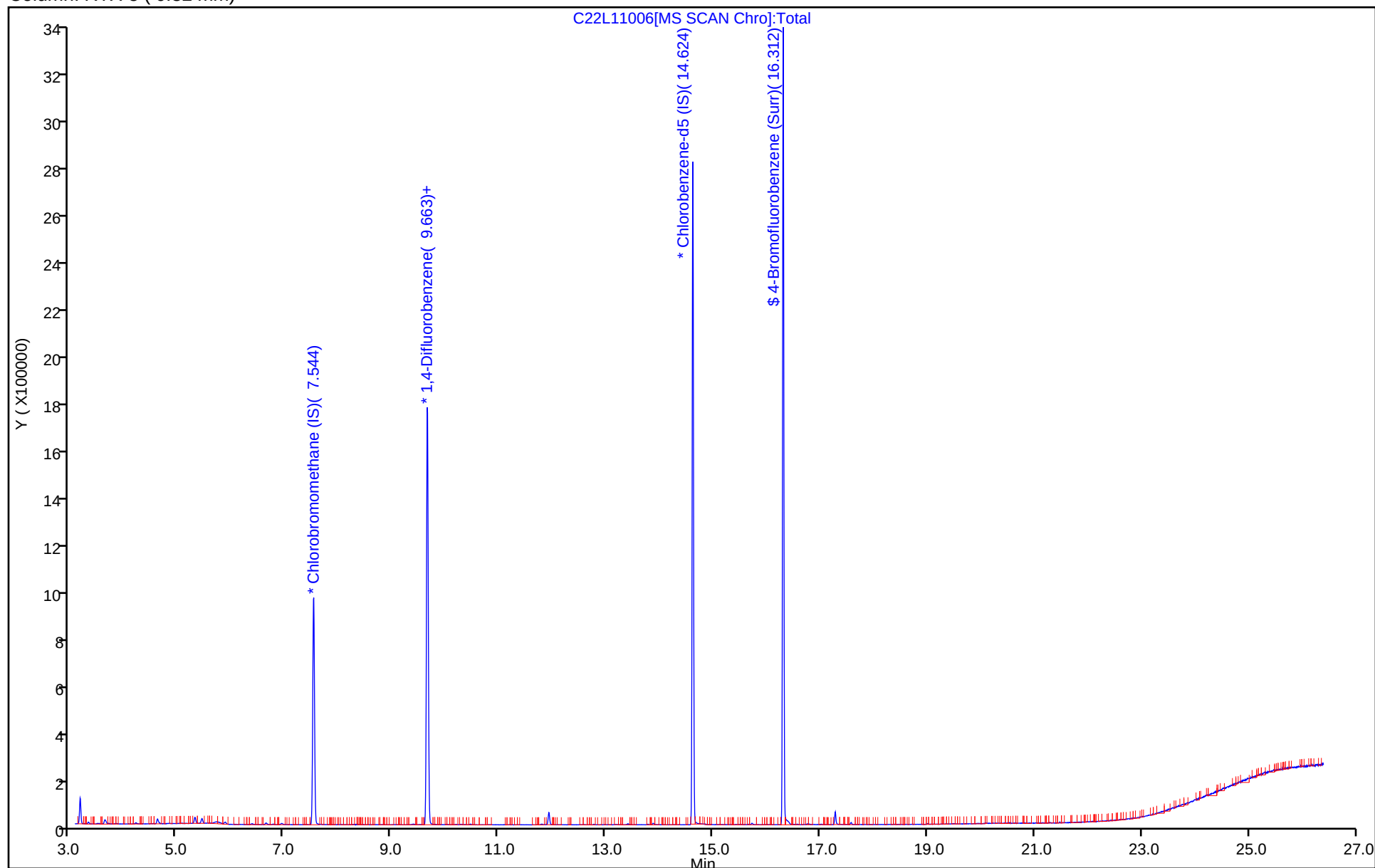
Dil. Factor: 1.0000

ALS Bottle#: 2

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20180321-7696.b\C22L11006.D

Injection Date: 22-Mar-2018 14:56:30

Instrument ID: MG

Lims ID: 140-11006-A-1

Lab Sample ID: 140-11006-1

Client ID: 10552

Operator ID: 7126

ALS Bottle#:

2

Worklist Smp#: 7

Purge Vol: 500.000 mL

Dil. Factor: 1.0000

Method: MG_TO15

Limit Group: MSA TO14A_15 Routine ICAL

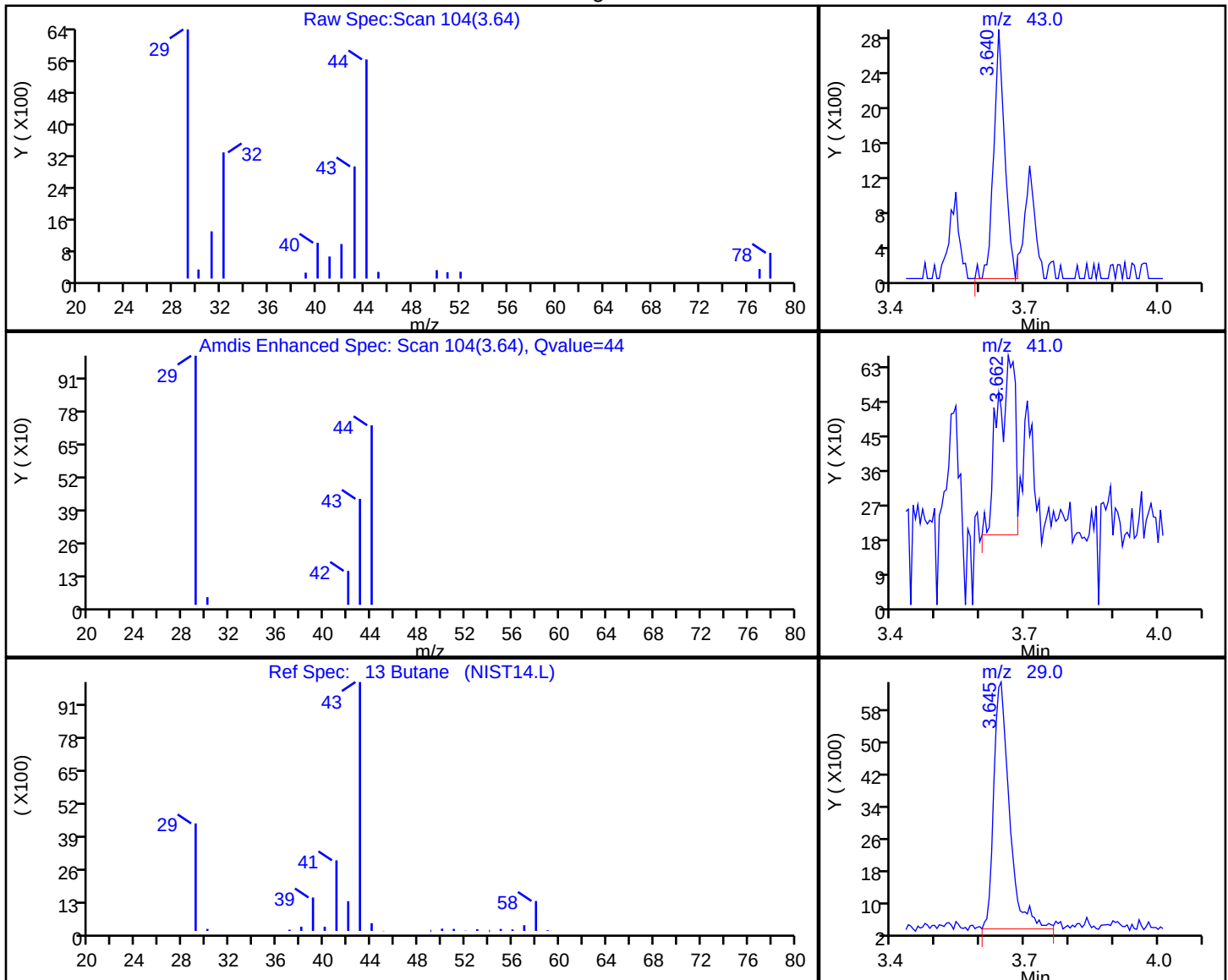
Column: RTX-5 (0.32 mm)

Detector

MS SCAN

13 Butane, CAS: 106-97-8

Processing Results



RT	Mass	Response	Amount
3.64	43.00	5005	0.030250
3.66	41.00	1280	
3.65	29.00	15443	

Reviewer: tajh, 22-Mar-2018 15:51:41

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

Shipping and Receiving Documents

TestAmerica[®]

THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information		Project Manager: Gary Priscott		i of 2 COCs																
Company: NYSDEC		Phone: 607-775-2545																		
Address: Region 7 Kirkwood, NY		Site Contact:																		
City/State/Zip		TAL Contact:																		
Phone:																				
FAX:																				
Project Name: Former Ithaca Gun Factory		Analysis Turnaround Time																		
Site/location: Ithaca, NY		Standard (Specify)																		
PO # Site #C755019A		Rush (Specify)																		
Sample Identification		Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
H45-BA-2018		3-28-18	8:16	7:51	-30	-4	10620	11236	x											
H45-CS-2018		3-28-18	8:15	7:52	-30	-5	09556	11219	x											
H46-SS-2018		3-28-18	10:34	9:57	-30	-4	09554	10579	x											
H46-BA-2018		3-28-18	10:35	9:58	-30	-3	09553	10637	x											
H41B-BA-2018		3-28-18	11:42	11:35	-30	-5	10878	11046	x											
H41A-BA-2018		3-28-18	11:47	11:41	-30	-4	11916	10222	x											
Sampled by: <u>Garth Barrell</u>																				
Special Instructions/QC Requirements & Comments: Category B																				
gwprisco@gw.dec.state.ny.us																				
tgiamichael@aztechtech.com																				
email report to:																				
Canisters Shipped by:																				
Samples Relinquished by: <u>Garth Barrell</u>																				
Relinquished by: <u>Garth Barrell</u>																				
Canisters Received by: <u>Garth Barrell</u>																				
Received by: <u>Garth Barrell</u>																				
Date/Time: 3-29-18 1700																				
Date/Time: 3-30-18 1800																				
Lab Use Only																				
Shipper Name:																				
Opened by:																				
Condition:																				

TAL Knoxville

5815 Middlebrook Pike

Knoxville, TN 37921

phone 865-291-3000 fax 865-584-4315

480501-Albany

Canister Samples Chain of Custody Record

TestAmerica

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

THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information		Project Manager: Gary Priscott		2 of 2 COCs															
Company: NYSDEC		Phone: 607-775-2545																	
Address: Region 7 Kirkwood, NY		Site Contact:																	
City/State/Zip		TAL Contact:																	
Phone:																			
FAX:																			
Project Name: Former Ithaca Gun Factory		Analysis Turnaround Time																	
Site/location: Ithaca, NY		Standard (Specify)																	
PO # Site #C755019A		Rush (Specify)																	
Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
44-0A-2018 ¹⁵ H41A-BA-2018	3-28-18	11:50	11:39	-26	-2	10468	10093	X											
FD-2018	3-28-18	—	—	-29	-4	11057	10057	X											
								X											
								X											
								X											
								X											
								X											
Sampled by: <i>Earl Barrett</i>																			
Temperature (Fahrenheit)																			
Interior																			
Ambient																			
Start																			
Stop																			
Pressure (inches of Hg)																			
Interior																			
Ambient																			
Start																			
Stop																			
Special Instructions/QC Requirements & Comments: Category B																			
gwprisco@gw.dec.state.ny.us tgiamicheal@aztechtech.com																			
email report to:																			
Canisters Shipped by:		Date/Time:		Canisters Received by:		Date/Time:													
Samples Relinquished by:		Date/Time:		Received by:		Date/Time:													
Relinquished by:		Date/Time:		Received by:		Date/Time:													
<i>Gary Priscott</i>		3-29-18 1701		<i>Earl Barrett</i>		4/2/18 09:15 TA KNOX													
<i>Earl Barrett</i>		3-30-18 1800		<i>Earl Barrett</i>		3-30-18 0700													
Lab Use Only		Shipper Name:		Opened by:		Condition:													

Log In Number:

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Review Items	Yes	No	NA	If No, what was the problem?	Comments/Actions Taken
1. Are the shipping containers intact?	✓			☐ Containers, Broken	7, ED-2018, CLIENT SWITCHED FLOW CONTROLLER AND CANISTER ASSET NUMBERS ON COC.
2. Were ambient air containers received intact?		✓		☒ Checked in lab	
3. The coolers/containers custody seal if present, is it intact?			✓	☐ Yes ☐ NA	
4. Is the cooler temperature within limits? (> freezing temp. of water to 6°C, VOST: 10°C) Thermometer ID: _____ Correction factor: _____			✓	☐ Cooler Out of Temp, Client Contacted, Proceed/Cancel ☐ Cooler Out of Temp, Same Day Receipt	
5. Were all of the sample containers received intact?	✓			☐ Containers, Broken	
6. Were samples received in appropriate containers?	✓			☐ Containers, Improper; Client Contacted; Proceed/Cancel	
7. Do sample container labels match COC? (IDs, Dates, Times)	✓	✓		☒ COC & Samples Do Not Match ☐ COC Incorrect/Incomplete ☐ COC Not Received	
8. Were all of the samples listed on the COC received?	✓			☐ Sample Received, Not on COC ☐ Sample on COC, Not Received	
9. Is the date/time of sample collection noted?	✓			☐ COC; No Date/Time; Client Contacted	
10. Was the sampler identified on the COC?	✓			☐ Sampler Not Listed on COC	
11. Is the client and project name/# identified?	✓			☐ COC Incorrect/Incomplete	
12. Are tests/parameters listed for each sample?	✓			☐ COC No tests on COC	
13. Is the matrix of the samples noted?	✓			☐ COC Incorrect/Incomplete	
14. Was COC relinquished? (Signed/Dated/Timed)	✓			☐ COC Incorrect/Incomplete	
15. Were samples received within holding time?	✓			☐ Holding Time - Receipt	
16. Were samples received with correct chemical preservative (excluding Encore)?			✓	☐ pH Adjusted, pH Included (See box 16A) ☐ Incorrect Preservative	
17. Were VOA samples received without headspace?			✓	☐ Headspace (VOA only) ☐ Residual Chlorine	
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number: _____			✓		
19. For 1613B water samples is pH<9?			✓	☐ If no, lab will adjust	
20. For rad samples was sample activity info. Provided?			✓	☐ Project missing info	
Project #: <u>1400005 12-16 PM Instructions: NA</u> <u>14062111</u>					

Box 16A: pH Preservation

Box 18A: Residual Chlorine

Preservative: _____

Lot Number: _____

Exp Date: _____

Analyst: _____

Date: _____

Time: _____

Labeling Verified by: _____ Date: _____

pH test strip lot number: _____

QA026R30.doc, 080916

Date: 4/2/18

Sample Receiving Associate: Rico Hancock

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G5

Date: 4/3/2018

[illegible]

Attachment D – Data Validation Usability
Summary Report

Data Usability Summary Report

**Former Ithaca Gun Factory
Ithaca, New York**

**Soil Vapor Samples
Lot # C755019A
March 2018 Sampling**

May 2018

ZDATA REPORTS

Data Management and Validation Services

118 Rose Lane Terrace, Syracuse, NY 13219, (716) 907-2341

Data Usability Summary Report

**Soil Vapor Samples
Lot # C755019A**

**Former Ithaca Gun Factory
Ithaca, New York**

Prepared By:

ZDATA REPORTS

Data Management and Validation Services

118 Rose Lane Terrace, Syracuse, NY 13219, (716) 907-2341

EXECUTIVE SUMMARY

This report addresses data quality for eight air samples collected at the former Ithaca Gun Factory located in Ithaca, New York. The samples were analyzed for TO-15 volatile organics (VOCs) following New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocol (ASP) methodologies. Sample collection was performed by Aztech Environmental Technologies, Inc. located in Ballston Spa, New York. Analytical services were provided by TestAmerica Laboratories, Inc. located in Knoxville, Tennessee.

The TO-15 volatile organic analyses data were determined to be usable for qualitative and quantitative purposes as presented by the laboratory. Sample results for several compounds were qualified based on deviations from continuing calibration criteria and laboratory control samples.

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1.4 Data Qualifiers	2
SECTION 2 - DATA VALIDATION SUMMARY	4
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Appendices

Appendix A - Data Validation Checklists

SECTION 1 - INTRODUCTION

1.1 Introduction

This report addresses data quality for eight air samples collected at the former Ithaca Gun Factory located in Ithaca, New York. The samples were analyzed for TO-15 volatile organics (VOCs) following New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocol (ASP) methodologies. Sample collection was performed by Aztech Technologies, Inc. located in Ballston Spa, New York. Analytical services were provided by TestAmerica Laboratories, Inc. located in Knoxville, Tennessee. The quantity and type of samples submitted for data validation are tabulated below.

Table 1: Introduction - Sample Summary Table

SDG#	Date Collected	Sample Matrix	Sample Identification	
			Client ID	Laboratory ID
140-11145-1	03/28/2018	Soil Vapor	H45-BA-2018	140-11145-1
			H45-CS-2018	140-11145-2
			H46-SS-2018	140-11145-3
			H46-BA-2018	140-11145-4
			H41B-BA-2018	140-11145-5
			H41-OA-2018	140-11145-6
			H41A-BA-2018	140-11145-1
			FD-2018	140-11145-8

1.2 Analytical Methods

The samples were analyzed for TO-15 volatile organics (VOCs) following New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocol (ASP) methodologies (2005 update). Laboratory analyses were provided by TestAmerica Laboratories, Inc. located in Knoxville, Tennessee.

1.3 Validation Protocols

Data validation is a process that involves the evaluation of analytical data against prescribed quality control criteria to determine the usefulness of the data. The analytical data addressed in this report were evaluated utilizing the quality control criteria presented in the following documents:

- *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review*, EPA-540-R-08-01, June 2008.
- *CLP Organics Data Review and Preliminary Review*, SOP No. HW-6 Revision #14, USEPA Region II, September 2006.
- *Validating Volatile Organic Compounds By Gas Chromatography/Mass Spectrometry SW-846 Method 8260B*, SOP No. HW-24 Revision #2, USEPA Hazardous Waste Support Branch, October 2006.
- *Validating Air Samples Volatile Organic Analysis of Ambient Air in Canister by Method TO-15*, SOP No. HW-31 Revision #4, USEPA Hazardous Waste Support Branch, October 2006.

- *Exhibit E of New York State Department of Environmental Conservation Analytical Services Protocol (NYSDEC ASP), NYSDEC June 2005.*

1.3.1 Organic Parameters

The validation of organic parameters for this project followed the requirements presented in the analytical methodology and the data validation guidelines presented above. The following QA/QC parameters were evaluated:

TO-15 Volatile Organics Analyses

1. Holding Times
2. GC/MS Instrument Tuning Criteria
3. Calibration
 - a. Initial Calibration
 - b. Continuing Calibration
4. Blank Analysis
5. Surrogate Recovery
6. Matrix Spike / Matrix Spike Duplicate Analysis
7. Reference Standard Analysis
8. Internal Standards Recovery
9. Compound Identification and Quantification
10. Field Duplicate Analysis
11. System Performance
12. Documentation Completeness
13. Overall Data Assessment

1.4 Data Qualifiers

The following qualifiers as specified in the guidance documents presented in Section 1.3 of this report have been used for this data validation.

U	Indicates that the compound was analyzed for, but was not detected. The sample quantification limit is presented and adjusted for dilution. This qualifier is also used to signify that the detection limit of an analyte was raised due to blank contamination.
J	Indicates that the result should be considered approximate. This qualifier is used when the data validation procedure identifies a deficiency in the data generation process.
UJ	Indicates that the detection limit for the analyte in this sample should be considered approximate. This qualifier is used when the data validation process identifies a deficiency in the data generation process.
R	Indicates that the previously reported detection limit or sample result has been rejected due to a major deficiency in the data generation procedure. The data are considered to be unusable for both qualitative and quantitative purposes.

The following sections of this document present a summary of the data validation process. Section 2 discusses data compliance with established QA/QC criteria and qualifications performed on the sample data. A discussion of the Precision, Accuracy, Representativeness, Comparability, and Completeness (PARCC) of the data and data usability are discussed in Section 3. The USEPA Region II Data Validation Checklist is presented in Appendix A.

SECTION 2 - DATA VALIDATION SUMMARY

This section presents a discussion of QA/QC parameter compliance with established criteria and the qualification of data performed when QA/QC parameter deviations were identified. When several deviations from established QA/QC criteria were observed, the final qualifier assigned to the data was based on the cumulative effect of the deviations.

2.1 Volatile Organics Analysis

Data validation was performed for twenty-seven soil vapor samples. The QA/QC parameters presented in Section 1.3.1 of this report were found to be within specified limits. The overall data assessment is presented below.

Continuing Calibration

The continuing calibration percent difference (%D) limit, which requires the %D to be less than 30 percent, was exceeded for several compounds. Sample qualification included the approximation (J, UJ) of results when %D criteria were exceeded but were less than 90 percent. Samples requiring qualification due to these deviations are tabulated below.

Table 3: Volatile Organics Analysis - Continuing Calibration Deviations

Date Analyzed	Compound	%D	Result Qualifier	Affected Samples
MJ 04/04/2018 10:31	2-Butanone	-31.0	J, UJ	H45-BA-2018 H45-CS-2018 H46-SS-2018 H46-BA-2018 H41B-BA-2018 H41-OA-2018 H41A-BA-2018 FD-2018

Laboratory Control Sample Analysis

Laboratory control sample/laboratory control sample duplicate (LCS/LCSD) recovery criteria requiring compound recoveries to be within laboratory generated control limits were exceeded for several compounds. Qualification of sample results included the approximation of results when spike recoveries were greater than the upper limit, but less than 200 percent or less than the lower limit, but greater than 10 percent. Samples qualified due to LCS recovery deviations are tabulated below.

Table 4: Volatile Organics Analyses – Laboratory Control Sample Deviations

Matrix	Compound	Percent Recovery	Control Limits	Qualifier	Affected Samples
Air	1,2-Dichloroethane	64 %	70 % to 130 %	UJ	H45-BA-2018 H45-CS-2018 H46-SS-2018 H46-BA-2018 H41B-BA-2018 H41-OA-2018 H41A-BA-2018 FD-2018

Overall Data Assessment

Overall, the laboratory performed TO-15 volatile organic analyses in accordance with the requirements specified in the methods listed in Section 1.2. These data were determined to be usable for qualitative and quantitative purposes as presented by the laboratory. Sample results for several compounds were qualified based on deviations from continuing calibration criteria and laboratory control samples.

SECTION 3 - DATA USABILITY and PARCC EVALUATION

3.1 Data Usability

This section presents a summary of the usability of the analytical data and an evaluation of the PARCC parameters. Data usability was calculated as the percentage of data that was not qualified as rejected based on a significant deviation from established QA/QC criteria. Data usability which was calculated separately for each type of analysis is tabulated below.

Table 5: Data Usability and PARCC Evaluation - Data Usability

Parameter	Usability	Deviations
TO-15 Volatile Organics	100 %	None resulting in the rejection of data.

3.2 PARCC Evaluation

The following sections provide an evaluation of the analytical data with respect to the precision, accuracy, representativeness, comparability, and completeness (PARCC) parameters.

3.2.1 Precision

Precision is measured through field duplicate samples, split samples, and laboratory duplicate samples. For this sampling program, none of the data were qualified for laboratory duplicate criteria deviations and none of the data were qualified for field duplicate criteria deviations.

3.2.2 Accuracy

Matrix spike sample, surrogate recovery, internal standard recovery, laboratory control samples, and calibration criteria indicate the accuracy of the data. For this sampling program, none of the analytical data were qualified for deviations from matrix spike recovery criteria; none of the data were qualified for surrogate recovery criteria deviations; none of the data were qualified for internal standard recovery criteria deviations; 1.92 percent of the data were qualified for laboratory control sample deviations; and 1.92 percent of the data were qualified for calibration criteria deviations.

3.2.3 Representativeness

Holding times, sample preservation, and blank analysis are indicators of the representativeness of the analytical data. For this investigation, none of the analytical data required qualification for holding time deviations and none of the analytical data required qualification for blank analysis deviations.

3.2.4 Comparability

Comparability is not compromised provided that the analytical methods did not change over time. A major component of comparability is the use of standard reference materials for calibration and QC. These standards are compared to other unknowns to verify their

concentrations. Since standard analytical methods and reporting procedures were consistently used by the laboratory, the comparability criteria for the analytical data were met.

3.2.5 Completeness

The percent usability or completeness of the data was determined to be 100 percent.

APPENDIX A

DATA VALIDATION CHECKLISTS

Table of Contents

	<u>Page</u>
I. Part A: TO-15 VOA Analyses	2

Data Validation Checklist - Part A: TO-15 VOA Analyses

No:	Parameter	YES	NO	N/A
1.0	<u>Data Completeness and Deliverables</u>			
1.1	Have any missing deliverables been received and added to the data package?	☐	☒	☐
2.0	<u>Cover Letter, Narrative, and Data Reporting Forms</u>			
2.1	Is the Lab. Narrative and Cover Page Present?	☒	☐	☐
2.2	Is Case Number contained in the Narrative?	☒	☐	☐
2.3	Are the following Data Reporting Forms present?			
	Analysis Data Sheet [Form I/Equivalent]	☒	☐	☐
	Tentatively Identified Compounds [Form I-TIC]	☒	☐	☐
	Blank Summary [Form IV/Equivalent]	☒	☐	☐
	Laboratory Control Sample Data Sheet [Form III/Equivalent]	☒	☐	☐
	GC/MS Instrument Performance Check and Mass Calibration [Form V/Equivalent]	☒	☐	☐
	Initial Calibration [Form VI/Equivalent]	☒	☐	☐
	Continuing Calibration [Form VII/Equivalent]	☒	☐	☐
	Internal Standard Area and RT Summary [Form VIII/Equivalent]	☒	☐	☐
	Canister Certification [Form IX/Equivalent]	☒	☐	☐
3.0	<u>Canister Receipt/Log-in Sheet</u>			
3.1	Do all info items agree with each sample?	☒	☐	☐
4.0	<u>Traffic Reports and Laboratory Narrative</u>			
4.1	Are the Traffic Report Forms present for all samples?	☒	☐	☐
5.0	<u>Holding Times</u>			
5.1	Have any VOA technical holding times of 30 days, determined from the date of sample collection to the date of analysis, been exceeded?	☐	☒	☐
6.0	<u>Leak Test Evaluation</u>			
6.1	Did the pressure test not vary by more than ± 13.8 kPa (± 2 psi) over the 24 hours period?	☒	☐	☐
7.0	<u>Canister Certification Form IX/Equivalent</u>			
7.1	Blank Analysis			
	Were the <u>target</u> analytes < the required detection limits specified in the task order?	☒	☐	☐
7.2	Is the canister certification form provided, and the associated canister sample identification included? When contamination, included contamination detected (all raw data), analyte and reference mass spectra.	☒	☐	☐

Data Validation Checklist - Part A: TO-15 VOA Analyses

No:	Parameter	YES	NO	N/A
8.0	<u>Laboratory Control Samples</u>			
8.1	Is an LCS Data Sheet [Form III/Equivalent] present and complete for each LCS?	X		
8.2	Was an LCS prepared (10 ppbv total scan, 0.1 ppbv SIM) and analyzed at the required frequency (once per 24 hour analytical sequence, and concurrently with the samples in the SDG)?	X		
8.3	Are there any transcription/calculation errors between the raw data and Form III/Equivalent?		X	
8.4	Is the % recovery within 70 – 130 % for each LCS <u>target compound</u> reported on Form III/Equivalent?		X	
8.5	Is the RT of <u>each reported LCS compound</u> within the windows established during the most recent valid calibration?	X		
8.6	Do the Internal Standards meet the requirements specified in Sections 18.1 and 18.2?	X		
9.0	<u>GC/MS Instrument Performance Check</u>			
9.1	Are the GC/MS Instrument Performance Check Forms [Form V/Equivalent] present for Bromofluorobenzene (BFB)?	X		
9.2	Are the enhanced bar graph spectrum and mass/charge (m/z) listing for the 50 ng BFB provided for each twenty-four hour shift?	X		
9.3	Has the instrument performance compound been analyzed for every twenty-four hours of sample analysis per instrument?	X		
9.4	Have the ion abundances been normalized to m/z 95?	X		
9.5	Have the ion abundance criteria been met for each instrument used?	X		
9.6	Are there any transcription/calculation errors between mass lists and Form Vs?		X	
9.7	Have the appropriate number of significant figures (two) been reported?	X		
9.8	Are the spectra of the mass calibration compound acceptable?	X		
10.0	<u>Performance Evaluation Sample (Optional)</u>			
10.1	Was a PE sample submitted from the Agency with each SDG?			X
10.2	Do the Internal Standards meet the requirements specified in Section 18.1 and 18.2?			X
11.0	<u>Laboratory Method Blanks</u>			
11.1	Is an Analysis Data Sheet [Form IV/Equivalent] present and complete for each method blank?	X		
11.2	Frequency of Analysis:			
	Has a method blank analysis been reported per instrument for each 24-hour analytical sequence?	X		
	Has a method blank been analyzed after the initial calibration or a valid calibration check standard, and before the LCS, prior to sample analysis?	X		
11.3	Is the chromatographic performance (baseline stability) for each instrument acceptable?	X		
11.4	Was the area response of each Internal Standard (IS) in the blank within ± 40 % of the mean area response of the IS of the most recent valid calibration?	X		

Data Validation Checklist - Part A: TO-15 VOA Analyses

No:	Parameter	YES	NO	N/A
11.5	Were the RTs of each IS within ± 0.33 min (20 sec.) between blanks and most recent valid calibration?	<u> X </u>	<u> </u>	<u> </u>
12.0	<u>Blank Contamination</u>			
12.1	Do any method blanks have positive target and non-target VOA results?	<u> </u>	<u> X </u>	<u> </u>
13.0	<u>Target Compound Analytes</u>			
13.1	Are the Organic Analysis Data Sheets [Form I/Equivalent], VOA chromatograms, and data system printouts present and complete with required header information for each of the following:			
	a. Samples?	<u> X </u>	<u> </u>	<u> </u>
	b. Method blanks?	<u> X </u>	<u> </u>	<u> </u>
	c. Laboratory Control Sample (LCS)?	<u> X </u>	<u> </u>	<u> </u>
	d. Performance Evaluation Sample (PES)?	<u> X </u>	<u> </u>	<u> </u>
13.2	Is the chromatographic performance acceptable with respect to:			
	a. Baseline stability?	<u> X </u>	<u> </u>	<u> </u>
	b. Resolution?	<u> X </u>	<u> </u>	<u> </u>
	c. Peak shape?	<u> X </u>	<u> </u>	<u> </u>
	d. Full-scale graph (attenuation)?	<u> X </u>	<u> </u>	<u> </u>
	e. Other?	<u> </u>	<u> </u>	<u> X </u>
13.3	Were any electropositive displacement (negative peaks) or unusual peaks seen?	<u> </u>	<u> X </u>	<u> </u>
13.4	Is the sample component relative retention time (RRT) within ± 0.06 RRT units of the RRT of the standard component from the most recent continuing calibration?	<u> X </u>	<u> </u>	<u> </u>
13.5	Was Nafion dryer used?	<u> </u>	<u> </u>	<u> X </u>
14.0	<u>Tentatively Identified Compounds (TIC)</u>			
14.1	Are all Tentatively Identified Compound Forms [Form I-TIC] present and are retention time, estimated concentration and "JN" qualifier listed corresponding to each TIC?	<u> </u>	<u> </u>	<u> X </u>
14.2	Are the mass spectra for the tentatively identified compounds and associated "best match" spectra included in the sample package for each of the following?			
	a. Samples	<u> </u>	<u> </u>	<u> X </u>
	b. Blanks	<u> </u>	<u> </u>	<u> X </u>
14.3	Are all ions present in the reference mass spectrum with a relative intensity greater than 10 % also present in the sample mass spectrum?	<u> </u>	<u> </u>	<u> X </u>
14.4	Do TIC and "best match" standard relative ion intensities agree within 20 %?	<u> </u>	<u> </u>	<u> X </u>
15.0	<u>Initial Calibration and System Performance [Form VI/Equivalent]</u>			
15.1	Were each GC/MS system calibrated at 5 concentrations that span the monitoring range of the interest in an initial calibration sequence to determine the sensitivity and the linearity of the GC/MS response for the target compounds?	<u> X </u>	<u> </u>	<u> </u>
15.2	Was the same volume introduced into the trap consistently for all field and QC-sample analyses?	<u> X </u>	<u> </u>	<u> </u>

Data Validation Checklist - Part A: TO-15 VOA Analyses

No:	Parameter	YES	NO	N/A
15.3	Was the area response (Y) at each calibration level within $\pm 40\%$ of the mean area response (mean Y) over the initial calibration range for each Internal Standard?	X		
	Did the laboratory tabulate the area response (Y) of the primary ions and the corresponding concentration for each compound and Internal Standard?	X		
15.4	Are the relative retention times (RRTs) for each of the target compounds at each calibration level within ± 0.06 RRT units of the mean relative retention time for the compound?	X		
15.5	Are all individual RRF and average RRFs ≥ 0.050 ?	X		
15.6	Are the response factors (RF) stable i.e., % Relative Standard Deviation (%RSD) $\leq 40.0\%$?	X		
15.7	Are there any transcription/calculation errors in the reporting of average response factors (RRFs) or %RSDs?		X	
15.8	Are the RT shift for each Internal Standard (IS) at each calibration level within 20 seconds of the mean RT over the initial calibration range of each IS?	X		
16.0	<u>Daily Calibration (Form VII/Equivalent)</u>			
16.1	Are the daily Calibration Forms [Form VII/Equivalent] present and complete for the volatile fraction?	X		
16.2	Has the daily calibration standard (20 ppbv total scan, 0.1 ppbv SIM) been analyzed for every twenty-four hours of sample analysis per instrument after the BFB tuning analysis?	X		
16.3	Do any volatile compounds have a % Difference (%D) between the initial and daily RRFs which exceed the $\pm 30\%$ criteria?	X		
16.4	Are there any transcription/calculation errors in the reporting of the average response factors (RRF) or % difference (%D) between initial and daily RRFs?		X	
17.0	<u>Compound Quantitation and Reported Detection Limits</u>			
17.1	Are there any transcription/calculations errors in Form I results?		X	
17.2	Are the reported detection limits adjusted to reflect sample dilutions?	X		
17.3	Have any target compound concentrations exceeded the calibration range of the GC?		X	
17.4	Was more than one method of quantitation used to calculate sample results within a batch or 24-hour analytical sequence?		X	
17.5	Did the lab report the target compounds below CRQLs with the suffix "J"?			X
18.0	<u>Internal Standards (Form VIII/Equivalent)</u>			
18.1	Are the 3 internal standard areas [Form VIII] of every sample, LCS, PE, and blank within the upper and lower limits (+ 40 % to - 40 %) for each continuing calibration or 10 ppbv level of initial calibration?	X		
18.2	Are the internal standard retention times in each sample, LCS, PE, and blank within 20 seconds of the corresponding retention times in the associated calibration standard?	X		
19.0	<u>Mass Spectral Interpretation/Identification</u>			
19.1	Are the Organic Analysis Data Sheets present with required header information on each page, for each of the following:			
	a. Samples and/or fractions as appropriate?	X		

Data Validation Checklist - Part A: TO-15 VOA Analyses

No:	Parameter	YES	NO	N/A
	b. Laboratory Control Samples?	<u> X </u>	<u> </u>	<u> </u>
	c. Blanks?	<u> X </u>	<u> </u>	<u> </u>
19.2	Are the VOA Reconstructed Ion Chromatograms, the mass spectra for the identified compounds, and the data system printouts (quant reports) included in the sample package for each of the following:			
	a. Samples and/or fractions as appropriate?	<u> X </u>	<u> </u>	<u> </u>
	b. Laboratory Control Samples?	<u> X </u>	<u> </u>	<u> </u>
	c. Blanks?	<u> X </u>	<u> </u>	<u> </u>
19.3	Is chromatographic performance acceptable with respect to:			
	a. Baseline stability?	<u> X </u>	<u> </u>	<u> </u>
	b. Resolution?	<u> X </u>	<u> </u>	<u> </u>
	c. Peak shape?	<u> X </u>	<u> </u>	<u> </u>
	d. Full-scale graph (attenuation)?	<u> X </u>	<u> </u>	<u> </u>
	e. Other:	<u> </u>	<u> </u>	<u> X </u>
19.4	Are the lab-generated standard mass spectra of the identified compounds present for each sample?	<u> X </u>	<u> </u>	<u> </u>
19.5	Is the RRT of each reported compound within 0.06 RRT units of the standard RRT in the continuing calibration?	<u> X </u>	<u> </u>	<u> </u>
19.6	Are all ions present in the reference standard mass spectrum at a relative intensity greater than 10 % also present in the sample mass spectrum?	<u> X </u>	<u> </u>	<u> </u>
19.7	Do sample and reference standard relative ion intensities agree within ± 20 %?	<u> X </u>	<u> </u>	<u> </u>
20.0	<u>Field Duplicates</u>			
15.1	Were any field duplicates submitted for VOA analysis?	<u> X </u>	<u> </u>	<u> </u>