

ANALYTICAL REPORT

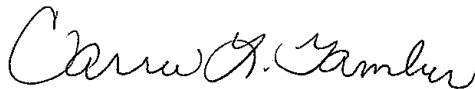
Job Number: 180-96180-1

Job Description: fYNOP

For:

Groundwater Sciences Corporation
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Attention: Christopher O'Neil



Approved for release.
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10/9/2019 4:25 PM

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10/09/2019

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Definitions/Glossary

Client: Groundwater Sciences Corporation
Project/Site: fYNOP

Job ID: 180-96180-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
^c	CCV Recovery is outside acceptance limits.
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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)

CASE NARRATIVE

Client: Groundwater Sciences Corporation

Project: fYNOP

Report Number: 180-96180-1

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

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

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

RECEIPT

The samples were received on 09/25/2019; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 1.1 C.

VOLATILES

The following sample was diluted to bring the concentration of target analytes within the calibration range: HD-QC1-0/1-1 (180-96180-15). Elevated reporting limits (RLs) are provided.

The laboratory control sample (LCS) for analytical batch 180-292962 recovered outside control limits for the following analytes: cis-1,2-Dichloroethene, Toluene, trans-1,2-Dichloroethene, Trichloroethene and Xylenes, Total. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Tetrachloroethene failed the recovery criteria low for the MS/MSD of sample HD-MW-110-0/1-0 (180-96180-13) in batch 180-293722.

The continuing calibration verification (CCV) analyzed in batch 180-293070 was outside the method criteria for the following analyte: 1,2-Dichloroethane-d4. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte is considered estimated.

The continuing calibration verification (CCV) analyzed in batch 180-293722 was outside the method criteria low for the following analyte: 1,2-Dichloroethane-d4. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte is considered estimated.

The continuing calibration verification (CCV) analyzed in 180-293722 was outside the method criteria high for the following analytes: Acetone and Napthalene. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analytes is considered estimated.

Detection Summary

Client: Groundwater Sciences Corporation
Project/Site: fYNOP

Job ID: 180-96180-1

Client Sample ID: HD-COD-SW-29-0/1-0

Lab Sample ID: 180-96180-1

No Detections.

Client Sample ID: HD-COD-SW-8-0/1-0

Lab Sample ID: 180-96180-2

No Detections.

Client Sample ID: HD-COD-SW-13-0/1-0

Lab Sample ID: 180-96180-3

No Detections.

Client Sample ID: HD-COD-SW-16-0/1-0

Lab Sample ID: 180-96180-4

No Detections.

Client Sample ID: HD-COD-SW-6-0/1-0

Lab Sample ID: 180-96180-5

No Detections.

Client Sample ID: HD-COD-SW-26-0/1-0

Lab Sample ID: 180-96180-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	5.1		1.0	0.47	ug/L	1		EPA 8260C	Total/NA

Client Sample ID: HD-COD-SW-7-0/1-0

Lab Sample ID: 180-96180-7

No Detections.

Client Sample ID: HD-COD-SW-9-0/1-0

Lab Sample ID: 180-96180-8

No Detections.

Client Sample ID: HD-COD-SW-28-0/1-0

Lab Sample ID: 180-96180-9

No Detections.

Client Sample ID: HD-COD-SW-15-0/1-0

Lab Sample ID: 180-96180-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.79	J	1.0	0.71	ug/L	1		EPA 8260C	Total/NA
Trichloroethene	0.96	J	1.0	0.69	ug/L	1		EPA 8260C	Total/NA
Tetrachloroethene	2.9		1.0	0.47	ug/L	1		EPA 8260C	Total/NA

Client Sample ID: HD-COD-SW-27-0/1-0

Lab Sample ID: 180-96180-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	5.4		5.0	3.4	ug/L	1		EPA 8260C	Total/NA

Client Sample ID: HD-QC1-0/1-2

Lab Sample ID: 180-96180-12

No Detections.

Client Sample ID: HD-MW-110-0/1-0

Lab Sample ID: 180-96180-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	0.71	J	1.0	0.69	ug/L	1		EPA 8260C	Total/NA
Tetrachloroethene	23	F1	1.0	0.47	ug/L	1		EPA 8260C	Total/NA

Client Sample ID: HD-MW-108D-0/1-0

Lab Sample ID: 180-96180-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.48	J	1.0	0.47	ug/L	1		EPA 8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Pittsburgh

Detection Summary

Client: Groundwater Sciences Corporation
Project/Site: fYNOP

Job ID: 180-96180-1

Client Sample ID: HD-QC1-0/1-1

Lab Sample ID: 180-96180-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	20		2.0	0.93	ug/L	2		EPA 8260C	Total/NA

Client Sample ID: HD-QC1-0/1-3

Lab Sample ID: 180-96180-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toluene	0.77	J	1.0	0.46	ug/L	1		EPA 8260C	Total/NA

Client Sample ID: HD-QC1-0/1-4

Lab Sample ID: 180-96180-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toluene	0.90	J	1.0	0.46	ug/L	1		EPA 8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP

Job ID: 180-96180-1

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

Client Sample ID: HD-COD-SW-29-0/1-0

Date Collected: 09/23/19 10:10

Date Received: 09/25/19 09:00

Lab Sample ID: 180-96180-1

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.90	ug/L			09/27/19 19:02	1
Vinyl chloride	ND		1.0	0.88	ug/L			09/27/19 19:02	1
Bromomethane	ND		1.0	0.89	ug/L			09/27/19 19:02	1
Chloroethane	ND		1.0	0.90	ug/L			09/27/19 19:02	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			09/27/19 19:02	1
Acetone	ND		5.0	3.4	ug/L			09/27/19 19:02	1
Carbon disulfide	ND		1.0	0.88	ug/L			09/27/19 19:02	1
Methylene Chloride	ND		1.0	0.89	ug/L			09/27/19 19:02	1
trans-1,2-Dichloroethene	ND	*	1.0	0.67	ug/L			09/27/19 19:02	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			09/27/19 19:02	1
1,1-Dichloroethane	ND		1.0	0.63	ug/L			09/27/19 19:02	1
cis-1,2-Dichloroethene	ND	*	1.0	0.71	ug/L			09/27/19 19:02	1
Bromochloromethane	ND		1.0	0.63	ug/L			09/27/19 19:02	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			09/27/19 19:02	1
Chloroform	ND		1.0	0.60	ug/L			09/27/19 19:02	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			09/27/19 19:02	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			09/27/19 19:02	1
Benzene	ND		1.0	0.60	ug/L			09/27/19 19:02	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			09/27/19 19:02	1
Trichloroethene	ND	*	1.0	0.69	ug/L			09/27/19 19:02	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			09/27/19 19:02	1
Bromodichloromethane	ND		1.0	0.64	ug/L			09/27/19 19:02	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			09/27/19 19:02	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			09/27/19 19:02	1
Toluene	ND	*	1.0	0.46	ug/L			09/27/19 19:02	1
trans-1,3-Dichloropropene	ND		1.0	0.58	ug/L			09/27/19 19:02	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			09/27/19 19:02	1
Tetrachloroethene	ND		1.0	0.47	ug/L			09/27/19 19:02	1
2-Hexanone	ND		5.0	3.3	ug/L			09/27/19 19:02	1
Dibromochloromethane	ND		1.0	0.84	ug/L			09/27/19 19:02	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			09/27/19 19:02	1
Chlorobenzene	ND		1.0	0.50	ug/L			09/27/19 19:02	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			09/27/19 19:02	1
Ethylbenzene	ND		1.0	0.51	ug/L			09/27/19 19:02	1
Xylenes, Total	ND	*	2.0	0.89	ug/L			09/27/19 19:02	1
Styrene	ND		1.0	0.47	ug/L			09/27/19 19:02	1
Bromoform	ND		1.0	0.98	ug/L			09/27/19 19:02	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			09/27/19 19:02	1
Acrylonitrile	ND		20	7.8	ug/L			09/27/19 19:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		70 - 150		09/27/19 19:02	1
Toluene-d8 (Surr)	88		78 - 128		09/27/19 19:02	1
4-Bromofluorobenzene (Surr)	80		64 - 123		09/27/19 19:02	1
Dibromofluoromethane (Surr)	117		75 - 147		09/27/19 19:02	1

Client Sample Results

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP

Job ID: 180-96180-1

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

Client Sample ID: HD-COD-SW-8-0/1-0

Date Collected: 09/23/19 10:30

Date Received: 09/25/19 09:00

Lab Sample ID: 180-96180-2

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.90	ug/L			09/27/19 19:27	1
Vinyl chloride	ND		1.0	0.88	ug/L			09/27/19 19:27	1
Bromomethane	ND		1.0	0.89	ug/L			09/27/19 19:27	1
Chloroethane	ND		1.0	0.90	ug/L			09/27/19 19:27	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			09/27/19 19:27	1
Acetone	ND		5.0	3.4	ug/L			09/27/19 19:27	1
Carbon disulfide	ND		1.0	0.88	ug/L			09/27/19 19:27	1
Methylene Chloride	ND		1.0	0.89	ug/L			09/27/19 19:27	1
trans-1,2-Dichloroethene	ND	*	1.0	0.67	ug/L			09/27/19 19:27	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			09/27/19 19:27	1
1,1-Dichloroethane	ND		1.0	0.63	ug/L			09/27/19 19:27	1
cis-1,2-Dichloroethene	ND	*	1.0	0.71	ug/L			09/27/19 19:27	1
Bromochloromethane	ND		1.0	0.63	ug/L			09/27/19 19:27	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			09/27/19 19:27	1
Chloroform	ND		1.0	0.60	ug/L			09/27/19 19:27	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			09/27/19 19:27	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			09/27/19 19:27	1
Benzene	ND		1.0	0.60	ug/L			09/27/19 19:27	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			09/27/19 19:27	1
Trichloroethene	ND	*	1.0	0.69	ug/L			09/27/19 19:27	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			09/27/19 19:27	1
Bromodichloromethane	ND		1.0	0.64	ug/L			09/27/19 19:27	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			09/27/19 19:27	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			09/27/19 19:27	1
Toluene	ND	*	1.0	0.46	ug/L			09/27/19 19:27	1
trans-1,3-Dichloropropene	ND		1.0	0.58	ug/L			09/27/19 19:27	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			09/27/19 19:27	1
Tetrachloroethene	ND		1.0	0.47	ug/L			09/27/19 19:27	1
2-Hexanone	ND		5.0	3.3	ug/L			09/27/19 19:27	1
Dibromochloromethane	ND		1.0	0.84	ug/L			09/27/19 19:27	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			09/27/19 19:27	1
Chlorobenzene	ND		1.0	0.50	ug/L			09/27/19 19:27	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			09/27/19 19:27	1
Ethylbenzene	ND		1.0	0.51	ug/L			09/27/19 19:27	1
Xylenes, Total	ND	*	2.0	0.89	ug/L			09/27/19 19:27	1
Styrene	ND		1.0	0.47	ug/L			09/27/19 19:27	1
Bromoform	ND		1.0	0.98	ug/L			09/27/19 19:27	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			09/27/19 19:27	1
Acrylonitrile	ND		20	7.8	ug/L			09/27/19 19:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		70 - 150		09/27/19 19:27	1
Toluene-d8 (Surr)	86		78 - 128		09/27/19 19:27	1
4-Bromofluorobenzene (Surr)	76		64 - 123		09/27/19 19:27	1
Dibromofluoromethane (Surr)	116		75 - 147		09/27/19 19:27	1

Client Sample Results

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP

Job ID: 180-96180-1

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

Client Sample ID: HD-COD-SW-13-0/1-0

Date Collected: 09/23/19 10:50

Date Received: 09/25/19 09:00

Lab Sample ID: 180-96180-3

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.90	ug/L			09/27/19 19:51	1
Vinyl chloride	ND		1.0	0.88	ug/L			09/27/19 19:51	1
Bromomethane	ND		1.0	0.89	ug/L			09/27/19 19:51	1
Chloroethane	ND		1.0	0.90	ug/L			09/27/19 19:51	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			09/27/19 19:51	1
Acetone	ND		5.0	3.4	ug/L			09/27/19 19:51	1
Carbon disulfide	ND		1.0	0.88	ug/L			09/27/19 19:51	1
Methylene Chloride	ND		1.0	0.89	ug/L			09/27/19 19:51	1
trans-1,2-Dichloroethene	ND	*	1.0	0.67	ug/L			09/27/19 19:51	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			09/27/19 19:51	1
1,1-Dichloroethane	ND		1.0	0.63	ug/L			09/27/19 19:51	1
cis-1,2-Dichloroethene	ND	*	1.0	0.71	ug/L			09/27/19 19:51	1
Bromochloromethane	ND		1.0	0.63	ug/L			09/27/19 19:51	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			09/27/19 19:51	1
Chloroform	ND		1.0	0.60	ug/L			09/27/19 19:51	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			09/27/19 19:51	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			09/27/19 19:51	1
Benzene	ND		1.0	0.60	ug/L			09/27/19 19:51	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			09/27/19 19:51	1
Trichloroethene	ND	*	1.0	0.69	ug/L			09/27/19 19:51	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			09/27/19 19:51	1
Bromodichloromethane	ND		1.0	0.64	ug/L			09/27/19 19:51	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			09/27/19 19:51	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			09/27/19 19:51	1
Toluene	ND	*	1.0	0.46	ug/L			09/27/19 19:51	1
trans-1,3-Dichloropropene	ND		1.0	0.58	ug/L			09/27/19 19:51	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			09/27/19 19:51	1
Tetrachloroethene	ND		1.0	0.47	ug/L			09/27/19 19:51	1
2-Hexanone	ND		5.0	3.3	ug/L			09/27/19 19:51	1
Dibromochloromethane	ND		1.0	0.84	ug/L			09/27/19 19:51	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			09/27/19 19:51	1
Chlorobenzene	ND		1.0	0.50	ug/L			09/27/19 19:51	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			09/27/19 19:51	1
Ethylbenzene	ND		1.0	0.51	ug/L			09/27/19 19:51	1
Xylenes, Total	ND	*	2.0	0.89	ug/L			09/27/19 19:51	1
Styrene	ND		1.0	0.47	ug/L			09/27/19 19:51	1
Bromoform	ND		1.0	0.98	ug/L			09/27/19 19:51	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			09/27/19 19:51	1
Acrylonitrile	ND		20	7.8	ug/L			09/27/19 19:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		70 - 150		09/27/19 19:51	1
Toluene-d8 (Surr)	90		78 - 128		09/27/19 19:51	1
4-Bromofluorobenzene (Surr)	76		64 - 123		09/27/19 19:51	1
Dibromofluoromethane (Surr)	119		75 - 147		09/27/19 19:51	1

Client Sample Results

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP

Job ID: 180-96180-1

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

Client Sample ID: HD-COD-SW-16-0/1-0

Date Collected: 09/23/19 11:15

Date Received: 09/25/19 09:00

Lab Sample ID: 180-96180-4

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.90	ug/L			09/27/19 20:16	1
Vinyl chloride	ND		1.0	0.88	ug/L			09/27/19 20:16	1
Bromomethane	ND		1.0	0.89	ug/L			09/27/19 20:16	1
Chloroethane	ND		1.0	0.90	ug/L			09/27/19 20:16	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			09/27/19 20:16	1
Acetone	ND		5.0	3.4	ug/L			09/27/19 20:16	1
Carbon disulfide	ND		1.0	0.88	ug/L			09/27/19 20:16	1
Methylene Chloride	ND		1.0	0.89	ug/L			09/27/19 20:16	1
trans-1,2-Dichloroethene	ND	*	1.0	0.67	ug/L			09/27/19 20:16	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			09/27/19 20:16	1
1,1-Dichloroethane	ND		1.0	0.63	ug/L			09/27/19 20:16	1
cis-1,2-Dichloroethene	ND	*	1.0	0.71	ug/L			09/27/19 20:16	1
Bromochloromethane	ND		1.0	0.63	ug/L			09/27/19 20:16	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			09/27/19 20:16	1
Chloroform	ND		1.0	0.60	ug/L			09/27/19 20:16	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			09/27/19 20:16	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			09/27/19 20:16	1
Benzene	ND		1.0	0.60	ug/L			09/27/19 20:16	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			09/27/19 20:16	1
Trichloroethene	ND	*	1.0	0.69	ug/L			09/27/19 20:16	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			09/27/19 20:16	1
Bromodichloromethane	ND		1.0	0.64	ug/L			09/27/19 20:16	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			09/27/19 20:16	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			09/27/19 20:16	1
Toluene	ND	*	1.0	0.46	ug/L			09/27/19 20:16	1
trans-1,3-Dichloropropene	ND		1.0	0.58	ug/L			09/27/19 20:16	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			09/27/19 20:16	1
Tetrachloroethene	ND		1.0	0.47	ug/L			09/27/19 20:16	1
2-Hexanone	ND		5.0	3.3	ug/L			09/27/19 20:16	1
Dibromochloromethane	ND		1.0	0.84	ug/L			09/27/19 20:16	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			09/27/19 20:16	1
Chlorobenzene	ND		1.0	0.50	ug/L			09/27/19 20:16	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			09/27/19 20:16	1
Ethylbenzene	ND		1.0	0.51	ug/L			09/27/19 20:16	1
Xylenes, Total	ND	*	2.0	0.89	ug/L			09/27/19 20:16	1
Styrene	ND		1.0	0.47	ug/L			09/27/19 20:16	1
Bromoform	ND		1.0	0.98	ug/L			09/27/19 20:16	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			09/27/19 20:16	1
Acrylonitrile	ND		20	7.8	ug/L			09/27/19 20:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		70 - 150		09/27/19 20:16	1
Toluene-d8 (Surr)	90		78 - 128		09/27/19 20:16	1
4-Bromofluorobenzene (Surr)	76		64 - 123		09/27/19 20:16	1
Dibromofluoromethane (Surr)	120		75 - 147		09/27/19 20:16	1

Client Sample Results

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP

Job ID: 180-96180-1

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

Client Sample ID: HD-COD-SW-6-0/1-0

Date Collected: 09/23/19 12:05

Date Received: 09/25/19 09:00

Lab Sample ID: 180-96180-5

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.90	ug/L			09/27/19 20:40	1
Vinyl chloride	ND		1.0	0.88	ug/L			09/27/19 20:40	1
Bromomethane	ND		1.0	0.89	ug/L			09/27/19 20:40	1
Chloroethane	ND		1.0	0.90	ug/L			09/27/19 20:40	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			09/27/19 20:40	1
Acetone	ND		5.0	3.4	ug/L			09/27/19 20:40	1
Carbon disulfide	ND		1.0	0.88	ug/L			09/27/19 20:40	1
Methylene Chloride	ND		1.0	0.89	ug/L			09/27/19 20:40	1
trans-1,2-Dichloroethene	ND	*	1.0	0.67	ug/L			09/27/19 20:40	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			09/27/19 20:40	1
1,1-Dichloroethane	ND		1.0	0.63	ug/L			09/27/19 20:40	1
cis-1,2-Dichloroethene	ND	*	1.0	0.71	ug/L			09/27/19 20:40	1
Bromochloromethane	ND		1.0	0.63	ug/L			09/27/19 20:40	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			09/27/19 20:40	1
Chloroform	ND		1.0	0.60	ug/L			09/27/19 20:40	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			09/27/19 20:40	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			09/27/19 20:40	1
Benzene	ND		1.0	0.60	ug/L			09/27/19 20:40	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			09/27/19 20:40	1
Trichloroethene	ND	*	1.0	0.69	ug/L			09/27/19 20:40	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			09/27/19 20:40	1
Bromodichloromethane	ND		1.0	0.64	ug/L			09/27/19 20:40	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			09/27/19 20:40	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			09/27/19 20:40	1
Toluene	ND	*	1.0	0.46	ug/L			09/27/19 20:40	1
trans-1,3-Dichloropropene	ND		1.0	0.58	ug/L			09/27/19 20:40	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			09/27/19 20:40	1
Tetrachloroethene	ND		1.0	0.47	ug/L			09/27/19 20:40	1
2-Hexanone	ND		5.0	3.3	ug/L			09/27/19 20:40	1
Dibromochloromethane	ND		1.0	0.84	ug/L			09/27/19 20:40	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			09/27/19 20:40	1
Chlorobenzene	ND		1.0	0.50	ug/L			09/27/19 20:40	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			09/27/19 20:40	1
Ethylbenzene	ND		1.0	0.51	ug/L			09/27/19 20:40	1
Xylenes, Total	ND	*	2.0	0.89	ug/L			09/27/19 20:40	1
Styrene	ND		1.0	0.47	ug/L			09/27/19 20:40	1
Bromoform	ND		1.0	0.98	ug/L			09/27/19 20:40	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			09/27/19 20:40	1
Acrylonitrile	ND		20	7.8	ug/L			09/27/19 20:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		70 - 150		09/27/19 20:40	1
Toluene-d8 (Surr)	90		78 - 128		09/27/19 20:40	1
4-Bromofluorobenzene (Surr)	78		64 - 123		09/27/19 20:40	1
Dibromofluoromethane (Surr)	116		75 - 147		09/27/19 20:40	1

Client Sample Results

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP

Job ID: 180-96180-1

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

Client Sample ID: HD-COD-SW-26-0/1-0

Date Collected: 09/23/19 12:40

Date Received: 09/25/19 09:00

Lab Sample ID: 180-96180-6

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.90	ug/L			09/27/19 21:04	1
Vinyl chloride	ND		1.0	0.88	ug/L			09/27/19 21:04	1
Bromomethane	ND		1.0	0.89	ug/L			09/27/19 21:04	1
Chloroethane	ND		1.0	0.90	ug/L			09/27/19 21:04	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			09/27/19 21:04	1
Acetone	ND		5.0	3.4	ug/L			09/27/19 21:04	1
Carbon disulfide	ND		1.0	0.88	ug/L			09/27/19 21:04	1
Methylene Chloride	ND		1.0	0.89	ug/L			09/27/19 21:04	1
trans-1,2-Dichloroethene	ND	*	1.0	0.67	ug/L			09/27/19 21:04	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			09/27/19 21:04	1
1,1-Dichloroethane	ND		1.0	0.63	ug/L			09/27/19 21:04	1
cis-1,2-Dichloroethene	ND	*	1.0	0.71	ug/L			09/27/19 21:04	1
Bromochloromethane	ND		1.0	0.63	ug/L			09/27/19 21:04	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			09/27/19 21:04	1
Chloroform	ND		1.0	0.60	ug/L			09/27/19 21:04	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			09/27/19 21:04	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			09/27/19 21:04	1
Benzene	ND		1.0	0.60	ug/L			09/27/19 21:04	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			09/27/19 21:04	1
Trichloroethene	ND	*	1.0	0.69	ug/L			09/27/19 21:04	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			09/27/19 21:04	1
Bromodichloromethane	ND		1.0	0.64	ug/L			09/27/19 21:04	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			09/27/19 21:04	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			09/27/19 21:04	1
Toluene	ND	*	1.0	0.46	ug/L			09/27/19 21:04	1
trans-1,3-Dichloropropene	ND		1.0	0.58	ug/L			09/27/19 21:04	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			09/27/19 21:04	1
Tetrachloroethene	5.1		1.0	0.47	ug/L			09/27/19 21:04	1
2-Hexanone	ND		5.0	3.3	ug/L			09/27/19 21:04	1
Dibromochloromethane	ND		1.0	0.84	ug/L			09/27/19 21:04	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			09/27/19 21:04	1
Chlorobenzene	ND		1.0	0.50	ug/L			09/27/19 21:04	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			09/27/19 21:04	1
Ethylbenzene	ND		1.0	0.51	ug/L			09/27/19 21:04	1
Xylenes, Total	ND	*	2.0	0.89	ug/L			09/27/19 21:04	1
Styrene	ND		1.0	0.47	ug/L			09/27/19 21:04	1
Bromoform	ND		1.0	0.98	ug/L			09/27/19 21:04	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			09/27/19 21:04	1
Acrylonitrile	ND		20	7.8	ug/L			09/27/19 21:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		70 - 150		09/27/19 21:04	1
Toluene-d8 (Surr)	91		78 - 128		09/27/19 21:04	1
4-Bromofluorobenzene (Surr)	74		64 - 123		09/27/19 21:04	1
Dibromofluoromethane (Surr)	117		75 - 147		09/27/19 21:04	1

Client Sample Results

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP

Job ID: 180-96180-1

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

Client Sample ID: HD-COD-SW-7-0/1-0

Date Collected: 09/23/19 13:00

Date Received: 09/25/19 09:00

Lab Sample ID: 180-96180-7

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.90	ug/L			09/27/19 21:29	1
Vinyl chloride	ND		1.0	0.88	ug/L			09/27/19 21:29	1
Bromomethane	ND		1.0	0.89	ug/L			09/27/19 21:29	1
Chloroethane	ND		1.0	0.90	ug/L			09/27/19 21:29	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			09/27/19 21:29	1
Acetone	ND		5.0	3.4	ug/L			09/27/19 21:29	1
Carbon disulfide	ND		1.0	0.88	ug/L			09/27/19 21:29	1
Methylene Chloride	ND		1.0	0.89	ug/L			09/27/19 21:29	1
trans-1,2-Dichloroethene	ND	*	1.0	0.67	ug/L			09/27/19 21:29	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			09/27/19 21:29	1
1,1-Dichloroethane	ND		1.0	0.63	ug/L			09/27/19 21:29	1
cis-1,2-Dichloroethene	ND	*	1.0	0.71	ug/L			09/27/19 21:29	1
Bromochloromethane	ND		1.0	0.63	ug/L			09/27/19 21:29	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			09/27/19 21:29	1
Chloroform	ND		1.0	0.60	ug/L			09/27/19 21:29	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			09/27/19 21:29	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			09/27/19 21:29	1
Benzene	ND		1.0	0.60	ug/L			09/27/19 21:29	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			09/27/19 21:29	1
Trichloroethene	ND	*	1.0	0.69	ug/L			09/27/19 21:29	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			09/27/19 21:29	1
Bromodichloromethane	ND		1.0	0.64	ug/L			09/27/19 21:29	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			09/27/19 21:29	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			09/27/19 21:29	1
Toluene	ND	*	1.0	0.46	ug/L			09/27/19 21:29	1
trans-1,3-Dichloropropene	ND		1.0	0.58	ug/L			09/27/19 21:29	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			09/27/19 21:29	1
Tetrachloroethene	ND		1.0	0.47	ug/L			09/27/19 21:29	1
2-Hexanone	ND		5.0	3.3	ug/L			09/27/19 21:29	1
Dibromochloromethane	ND		1.0	0.84	ug/L			09/27/19 21:29	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			09/27/19 21:29	1
Chlorobenzene	ND		1.0	0.50	ug/L			09/27/19 21:29	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			09/27/19 21:29	1
Ethylbenzene	ND		1.0	0.51	ug/L			09/27/19 21:29	1
Xylenes, Total	ND	*	2.0	0.89	ug/L			09/27/19 21:29	1
Styrene	ND		1.0	0.47	ug/L			09/27/19 21:29	1
Bromoform	ND		1.0	0.98	ug/L			09/27/19 21:29	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			09/27/19 21:29	1
Acrylonitrile	ND		20	7.8	ug/L			09/27/19 21:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		70 - 150		09/27/19 21:29	1
Toluene-d8 (Surr)	94		78 - 128		09/27/19 21:29	1
4-Bromofluorobenzene (Surr)	82		64 - 123		09/27/19 21:29	1
Dibromofluoromethane (Surr)	121		75 - 147		09/27/19 21:29	1

Client Sample Results

Client: Groundwater Sciences Corporation
Project/Site: fYNOP

Job ID: 180-96180-1

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

Client Sample ID: HD-COD-SW-9-0/1-0

Date Collected: 09/23/19 13:20

Date Received: 09/25/19 09:00

Lab Sample ID: 180-96180-8

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.90	ug/L			09/27/19 21:53	1
Vinyl chloride	ND		1.0	0.88	ug/L			09/27/19 21:53	1
Bromomethane	ND		1.0	0.89	ug/L			09/27/19 21:53	1
Chloroethane	ND		1.0	0.90	ug/L			09/27/19 21:53	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			09/27/19 21:53	1
Acetone	ND		5.0	3.4	ug/L			09/27/19 21:53	1
Carbon disulfide	ND		1.0	0.88	ug/L			09/27/19 21:53	1
Methylene Chloride	ND		1.0	0.89	ug/L			09/27/19 21:53	1
trans-1,2-Dichloroethene	ND	*	1.0	0.67	ug/L			09/27/19 21:53	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			09/27/19 21:53	1
1,1-Dichloroethane	ND		1.0	0.63	ug/L			09/27/19 21:53	1
cis-1,2-Dichloroethene	ND	*	1.0	0.71	ug/L			09/27/19 21:53	1
Bromochloromethane	ND		1.0	0.63	ug/L			09/27/19 21:53	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			09/27/19 21:53	1
Chloroform	ND		1.0	0.60	ug/L			09/27/19 21:53	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			09/27/19 21:53	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			09/27/19 21:53	1
Benzene	ND		1.0	0.60	ug/L			09/27/19 21:53	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			09/27/19 21:53	1
Trichloroethene	ND	*	1.0	0.69	ug/L			09/27/19 21:53	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			09/27/19 21:53	1
Bromodichloromethane	ND		1.0	0.64	ug/L			09/27/19 21:53	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			09/27/19 21:53	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			09/27/19 21:53	1
Toluene	ND	*	1.0	0.46	ug/L			09/27/19 21:53	1
trans-1,3-Dichloropropene	ND		1.0	0.58	ug/L			09/27/19 21:53	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			09/27/19 21:53	1
Tetrachloroethene	ND		1.0	0.47	ug/L			09/27/19 21:53	1
2-Hexanone	ND		5.0	3.3	ug/L			09/27/19 21:53	1
Dibromochloromethane	ND		1.0	0.84	ug/L			09/27/19 21:53	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			09/27/19 21:53	1
Chlorobenzene	ND		1.0	0.50	ug/L			09/27/19 21:53	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			09/27/19 21:53	1
Ethylbenzene	ND		1.0	0.51	ug/L			09/27/19 21:53	1
Xylenes, Total	ND	*	2.0	0.89	ug/L			09/27/19 21:53	1
Styrene	ND		1.0	0.47	ug/L			09/27/19 21:53	1
Bromoform	ND		1.0	0.98	ug/L			09/27/19 21:53	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			09/27/19 21:53	1
Acrylonitrile	ND		20	7.8	ug/L			09/27/19 21:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		70 - 150		09/27/19 21:53	1
Toluene-d8 (Surr)	91		78 - 128		09/27/19 21:53	1
4-Bromofluorobenzene (Surr)	76		64 - 123		09/27/19 21:53	1
Dibromofluoromethane (Surr)	116		75 - 147		09/27/19 21:53	1

Client Sample Results

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP

Job ID: 180-96180-1

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

Client Sample ID: HD-COD-SW-28-0/1-0

Date Collected: 09/23/19 13:45

Date Received: 09/25/19 09:00

Lab Sample ID: 180-96180-9

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.90	ug/L			09/27/19 22:17	1
Vinyl chloride	ND		1.0	0.88	ug/L			09/27/19 22:17	1
Bromomethane	ND		1.0	0.89	ug/L			09/27/19 22:17	1
Chloroethane	ND		1.0	0.90	ug/L			09/27/19 22:17	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			09/27/19 22:17	1
Acetone	ND		5.0	3.4	ug/L			09/27/19 22:17	1
Carbon disulfide	ND		1.0	0.88	ug/L			09/27/19 22:17	1
Methylene Chloride	ND		1.0	0.89	ug/L			09/27/19 22:17	1
trans-1,2-Dichloroethene	ND	*	1.0	0.67	ug/L			09/27/19 22:17	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			09/27/19 22:17	1
1,1-Dichloroethane	ND		1.0	0.63	ug/L			09/27/19 22:17	1
cis-1,2-Dichloroethene	ND	*	1.0	0.71	ug/L			09/27/19 22:17	1
Bromochloromethane	ND		1.0	0.63	ug/L			09/27/19 22:17	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			09/27/19 22:17	1
Chloroform	ND		1.0	0.60	ug/L			09/27/19 22:17	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			09/27/19 22:17	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			09/27/19 22:17	1
Benzene	ND		1.0	0.60	ug/L			09/27/19 22:17	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			09/27/19 22:17	1
Trichloroethene	ND	*	1.0	0.69	ug/L			09/27/19 22:17	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			09/27/19 22:17	1
Bromodichloromethane	ND		1.0	0.64	ug/L			09/27/19 22:17	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			09/27/19 22:17	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			09/27/19 22:17	1
Toluene	ND	*	1.0	0.46	ug/L			09/27/19 22:17	1
trans-1,3-Dichloropropene	ND		1.0	0.58	ug/L			09/27/19 22:17	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			09/27/19 22:17	1
Tetrachloroethene	ND		1.0	0.47	ug/L			09/27/19 22:17	1
2-Hexanone	ND		5.0	3.3	ug/L			09/27/19 22:17	1
Dibromochloromethane	ND		1.0	0.84	ug/L			09/27/19 22:17	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			09/27/19 22:17	1
Chlorobenzene	ND		1.0	0.50	ug/L			09/27/19 22:17	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			09/27/19 22:17	1
Ethylbenzene	ND		1.0	0.51	ug/L			09/27/19 22:17	1
Xylenes, Total	ND	*	2.0	0.89	ug/L			09/27/19 22:17	1
Styrene	ND		1.0	0.47	ug/L			09/27/19 22:17	1
Bromoform	ND		1.0	0.98	ug/L			09/27/19 22:17	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			09/27/19 22:17	1
Acrylonitrile	ND		20	7.8	ug/L			09/27/19 22:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		70 - 150		09/27/19 22:17	1
Toluene-d8 (Surr)	82		78 - 128		09/27/19 22:17	1
4-Bromofluorobenzene (Surr)	74		64 - 123		09/27/19 22:17	1
Dibromofluoromethane (Surr)	122		75 - 147		09/27/19 22:17	1

Client Sample Results

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP

Job ID: 180-96180-1

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

Client Sample ID: HD-COD-SW-15-0/1-0

Date Collected: 09/23/19 14:13

Date Received: 09/25/19 09:00

Lab Sample ID: 180-96180-10

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.90	ug/L			09/28/19 16:15	1
Vinyl chloride	ND		1.0	0.88	ug/L			09/28/19 16:15	1
Bromomethane	ND		1.0	0.89	ug/L			09/28/19 16:15	1
Chloroethane	ND		1.0	0.90	ug/L			09/28/19 16:15	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			09/28/19 16:15	1
Acetone	ND		5.0	3.4	ug/L			09/28/19 16:15	1
Carbon disulfide	ND		1.0	0.88	ug/L			09/28/19 16:15	1
Methylene Chloride	ND		1.0	0.89	ug/L			09/28/19 16:15	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			09/28/19 16:15	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			09/28/19 16:15	1
1,1-Dichloroethane	ND		1.0	0.63	ug/L			09/28/19 16:15	1
cis-1,2-Dichloroethene	0.79	J	1.0	0.71	ug/L			09/28/19 16:15	1
Bromochloromethane	ND		1.0	0.63	ug/L			09/28/19 16:15	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			09/28/19 16:15	1
Chloroform	ND		1.0	0.60	ug/L			09/28/19 16:15	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			09/28/19 16:15	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			09/28/19 16:15	1
Benzene	ND		1.0	0.60	ug/L			09/28/19 16:15	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			09/28/19 16:15	1
Trichloroethene	0.96	J	1.0	0.69	ug/L			09/28/19 16:15	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			09/28/19 16:15	1
Bromodichloromethane	ND		1.0	0.64	ug/L			09/28/19 16:15	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			09/28/19 16:15	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			09/28/19 16:15	1
Toluene	ND		1.0	0.46	ug/L			09/28/19 16:15	1
trans-1,3-Dichloropropene	ND		1.0	0.58	ug/L			09/28/19 16:15	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			09/28/19 16:15	1
Tetrachloroethene	2.9		1.0	0.47	ug/L			09/28/19 16:15	1
2-Hexanone	ND		5.0	3.3	ug/L			09/28/19 16:15	1
Dibromochloromethane	ND		1.0	0.84	ug/L			09/28/19 16:15	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			09/28/19 16:15	1
Chlorobenzene	ND		1.0	0.50	ug/L			09/28/19 16:15	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			09/28/19 16:15	1
Ethylbenzene	ND		1.0	0.51	ug/L			09/28/19 16:15	1
Xylenes, Total	ND		2.0	0.89	ug/L			09/28/19 16:15	1
Styrene	ND		1.0	0.47	ug/L			09/28/19 16:15	1
Bromoform	ND		1.0	0.98	ug/L			09/28/19 16:15	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			09/28/19 16:15	1
Acrylonitrile	ND		20	7.8	ug/L			09/28/19 16:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97	^c	70 - 150		09/28/19 16:15	1
Toluene-d8 (Surr)	93		78 - 128		09/28/19 16:15	1
4-Bromofluorobenzene (Surr)	82		64 - 123		09/28/19 16:15	1
Dibromofluoromethane (Surr)	112		75 - 147		09/28/19 16:15	1

Client Sample Results

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP

Job ID: 180-96180-1

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

Client Sample ID: HD-COD-SW-27-0/1-0

Date Collected: 09/23/19 14:30

Date Received: 09/25/19 09:00

Lab Sample ID: 180-96180-11

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.90	ug/L			09/27/19 23:06	1
Vinyl chloride	ND		1.0	0.88	ug/L			09/27/19 23:06	1
Bromomethane	ND		1.0	0.89	ug/L			09/27/19 23:06	1
Chloroethane	ND		1.0	0.90	ug/L			09/27/19 23:06	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			09/27/19 23:06	1
Acetone	5.4		5.0	3.4	ug/L			09/27/19 23:06	1
Carbon disulfide	ND		1.0	0.88	ug/L			09/27/19 23:06	1
Methylene Chloride	ND		1.0	0.89	ug/L			09/27/19 23:06	1
trans-1,2-Dichloroethene	ND	*	1.0	0.67	ug/L			09/27/19 23:06	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			09/27/19 23:06	1
1,1-Dichloroethane	ND		1.0	0.63	ug/L			09/27/19 23:06	1
cis-1,2-Dichloroethene	ND	*	1.0	0.71	ug/L			09/27/19 23:06	1
Bromochloromethane	ND		1.0	0.63	ug/L			09/27/19 23:06	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			09/27/19 23:06	1
Chloroform	ND		1.0	0.60	ug/L			09/27/19 23:06	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			09/27/19 23:06	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			09/27/19 23:06	1
Benzene	ND		1.0	0.60	ug/L			09/27/19 23:06	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			09/27/19 23:06	1
Trichloroethene	ND	*	1.0	0.69	ug/L			09/27/19 23:06	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			09/27/19 23:06	1
Bromodichloromethane	ND		1.0	0.64	ug/L			09/27/19 23:06	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			09/27/19 23:06	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			09/27/19 23:06	1
Toluene	ND	*	1.0	0.46	ug/L			09/27/19 23:06	1
trans-1,3-Dichloropropene	ND		1.0	0.58	ug/L			09/27/19 23:06	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			09/27/19 23:06	1
Tetrachloroethene	ND		1.0	0.47	ug/L			09/27/19 23:06	1
2-Hexanone	ND		5.0	3.3	ug/L			09/27/19 23:06	1
Dibromochloromethane	ND		1.0	0.84	ug/L			09/27/19 23:06	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			09/27/19 23:06	1
Chlorobenzene	ND		1.0	0.50	ug/L			09/27/19 23:06	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			09/27/19 23:06	1
Ethylbenzene	ND		1.0	0.51	ug/L			09/27/19 23:06	1
Xylenes, Total	ND	*	2.0	0.89	ug/L			09/27/19 23:06	1
Styrene	ND		1.0	0.47	ug/L			09/27/19 23:06	1
Bromoform	ND		1.0	0.98	ug/L			09/27/19 23:06	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			09/27/19 23:06	1
Acrylonitrile	ND		20	7.8	ug/L			09/27/19 23:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		70 - 150		09/27/19 23:06	1
Toluene-d8 (Surr)	87		78 - 128		09/27/19 23:06	1
4-Bromofluorobenzene (Surr)	76		64 - 123		09/27/19 23:06	1
Dibromofluoromethane (Surr)	118		75 - 147		09/27/19 23:06	1

Client Sample Results

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP

Job ID: 180-96180-1

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

Client Sample ID: HD-QC1-0/1-2

Date Collected: 09/23/19 00:00

Date Received: 09/25/19 09:00

Lab Sample ID: 180-96180-12

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.90	ug/L			09/27/19 23:30	1
Vinyl chloride	ND		1.0	0.88	ug/L			09/27/19 23:30	1
Bromomethane	ND		1.0	0.89	ug/L			09/27/19 23:30	1
Chloroethane	ND		1.0	0.90	ug/L			09/27/19 23:30	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			09/27/19 23:30	1
Acetone	ND		5.0	3.4	ug/L			09/27/19 23:30	1
Carbon disulfide	ND		1.0	0.88	ug/L			09/27/19 23:30	1
Methylene Chloride	ND		1.0	0.89	ug/L			09/27/19 23:30	1
trans-1,2-Dichloroethene	ND	*	1.0	0.67	ug/L			09/27/19 23:30	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			09/27/19 23:30	1
1,1-Dichloroethane	ND		1.0	0.63	ug/L			09/27/19 23:30	1
cis-1,2-Dichloroethene	ND	*	1.0	0.71	ug/L			09/27/19 23:30	1
Bromochloromethane	ND		1.0	0.63	ug/L			09/27/19 23:30	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			09/27/19 23:30	1
Chloroform	ND		1.0	0.60	ug/L			09/27/19 23:30	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			09/27/19 23:30	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			09/27/19 23:30	1
Benzene	ND		1.0	0.60	ug/L			09/27/19 23:30	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			09/27/19 23:30	1
Trichloroethene	ND	*	1.0	0.69	ug/L			09/27/19 23:30	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			09/27/19 23:30	1
Bromodichloromethane	ND		1.0	0.64	ug/L			09/27/19 23:30	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			09/27/19 23:30	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			09/27/19 23:30	1
Toluene	ND	*	1.0	0.46	ug/L			09/27/19 23:30	1
trans-1,3-Dichloropropene	ND		1.0	0.58	ug/L			09/27/19 23:30	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			09/27/19 23:30	1
Tetrachloroethene	ND		1.0	0.47	ug/L			09/27/19 23:30	1
2-Hexanone	ND		5.0	3.3	ug/L			09/27/19 23:30	1
Dibromochloromethane	ND		1.0	0.84	ug/L			09/27/19 23:30	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			09/27/19 23:30	1
Chlorobenzene	ND		1.0	0.50	ug/L			09/27/19 23:30	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			09/27/19 23:30	1
Ethylbenzene	ND		1.0	0.51	ug/L			09/27/19 23:30	1
Xylenes, Total	ND	*	2.0	0.89	ug/L			09/27/19 23:30	1
Styrene	ND		1.0	0.47	ug/L			09/27/19 23:30	1
Bromoform	ND		1.0	0.98	ug/L			09/27/19 23:30	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			09/27/19 23:30	1
Acrylonitrile	ND		20	7.8	ug/L			09/27/19 23:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		70 - 150		09/27/19 23:30	1
Toluene-d8 (Surr)	87		78 - 128		09/27/19 23:30	1
4-Bromofluorobenzene (Surr)	73		64 - 123		09/27/19 23:30	1
Dibromofluoromethane (Surr)	115		75 - 147		09/27/19 23:30	1

Client Sample Results

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP

Job ID: 180-96180-1

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

Client Sample ID: HD-MW-110-0/1-0

Date Collected: 09/24/19 13:30

Date Received: 09/25/19 09:00

Lab Sample ID: 180-96180-13

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.90	ug/L			10/04/19 15:13	1
Vinyl chloride	ND		1.0	0.88	ug/L			10/04/19 15:13	1
Bromomethane	ND		1.0	0.89	ug/L			10/04/19 15:13	1
Chloroethane	ND		1.0	0.90	ug/L			10/04/19 15:13	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			10/04/19 15:13	1
Acetone	ND	^c	5.0	3.4	ug/L			10/04/19 15:13	1
Carbon disulfide	ND		1.0	0.88	ug/L			10/04/19 15:13	1
Methylene Chloride	ND		1.0	0.89	ug/L			10/04/19 15:13	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			10/04/19 15:13	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			10/04/19 15:13	1
1,1-Dichloroethane	ND		1.0	0.63	ug/L			10/04/19 15:13	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			10/04/19 15:13	1
Bromochloromethane	ND		1.0	0.63	ug/L			10/04/19 15:13	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			10/04/19 15:13	1
Chloroform	ND		1.0	0.60	ug/L			10/04/19 15:13	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			10/04/19 15:13	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			10/04/19 15:13	1
Benzene	ND		1.0	0.60	ug/L			10/04/19 15:13	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			10/04/19 15:13	1
Trichloroethene	0.71	J	1.0	0.69	ug/L			10/04/19 15:13	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			10/04/19 15:13	1
Bromodichloromethane	ND		1.0	0.64	ug/L			10/04/19 15:13	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			10/04/19 15:13	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			10/04/19 15:13	1
Toluene	ND		1.0	0.46	ug/L			10/04/19 15:13	1
trans-1,3-Dichloropropene	ND		1.0	0.58	ug/L			10/04/19 15:13	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			10/04/19 15:13	1
Tetrachloroethene	23	F1	1.0	0.47	ug/L			10/04/19 15:13	1
2-Hexanone	ND		5.0	3.3	ug/L			10/04/19 15:13	1
Dibromochloromethane	ND		1.0	0.84	ug/L			10/04/19 15:13	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			10/04/19 15:13	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/04/19 15:13	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			10/04/19 15:13	1
Ethylbenzene	ND		1.0	0.51	ug/L			10/04/19 15:13	1
Xylenes, Total	ND		2.0	0.89	ug/L			10/04/19 15:13	1
Styrene	ND		1.0	0.47	ug/L			10/04/19 15:13	1
Bromoform	ND		1.0	0.98	ug/L			10/04/19 15:13	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			10/04/19 15:13	1
Acrylonitrile	ND		20	7.8	ug/L			10/04/19 15:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95	^c	70 - 150		10/04/19 15:13	1
Toluene-d8 (Surr)	84		78 - 128		10/04/19 15:13	1
4-Bromofluorobenzene (Surr)	80		64 - 123		10/04/19 15:13	1
Dibromofluoromethane (Surr)	113		75 - 147		10/04/19 15:13	1

Client Sample Results

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP

Job ID: 180-96180-1

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

Client Sample ID: HD-MW-108D-0/1-0

Date Collected: 09/24/19 12:45

Date Received: 09/25/19 09:00

Lab Sample ID: 180-96180-14

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.90	ug/L			10/04/19 15:37	1
Vinyl chloride	ND		1.0	0.88	ug/L			10/04/19 15:37	1
Bromomethane	ND		1.0	0.89	ug/L			10/04/19 15:37	1
Chloroethane	ND		1.0	0.90	ug/L			10/04/19 15:37	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			10/04/19 15:37	1
Acetone	ND	^c	5.0	3.4	ug/L			10/04/19 15:37	1
Carbon disulfide	ND		1.0	0.88	ug/L			10/04/19 15:37	1
Methylene Chloride	ND		1.0	0.89	ug/L			10/04/19 15:37	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			10/04/19 15:37	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			10/04/19 15:37	1
1,1-Dichloroethane	ND		1.0	0.63	ug/L			10/04/19 15:37	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			10/04/19 15:37	1
Bromochloromethane	ND		1.0	0.63	ug/L			10/04/19 15:37	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			10/04/19 15:37	1
Chloroform	ND		1.0	0.60	ug/L			10/04/19 15:37	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			10/04/19 15:37	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			10/04/19 15:37	1
Benzene	ND		1.0	0.60	ug/L			10/04/19 15:37	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			10/04/19 15:37	1
Trichloroethene	ND		1.0	0.69	ug/L			10/04/19 15:37	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			10/04/19 15:37	1
Bromodichloromethane	ND		1.0	0.64	ug/L			10/04/19 15:37	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			10/04/19 15:37	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			10/04/19 15:37	1
Toluene	ND		1.0	0.46	ug/L			10/04/19 15:37	1
trans-1,3-Dichloropropene	ND		1.0	0.58	ug/L			10/04/19 15:37	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			10/04/19 15:37	1
Tetrachloroethene	0.48	J	1.0	0.47	ug/L			10/04/19 15:37	1
2-Hexanone	ND		5.0	3.3	ug/L			10/04/19 15:37	1
Dibromochloromethane	ND		1.0	0.84	ug/L			10/04/19 15:37	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			10/04/19 15:37	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/04/19 15:37	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			10/04/19 15:37	1
Ethylbenzene	ND		1.0	0.51	ug/L			10/04/19 15:37	1
Xylenes, Total	ND		2.0	0.89	ug/L			10/04/19 15:37	1
Styrene	ND		1.0	0.47	ug/L			10/04/19 15:37	1
Bromoform	ND		1.0	0.98	ug/L			10/04/19 15:37	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			10/04/19 15:37	1
Acrylonitrile	ND		20	7.8	ug/L			10/04/19 15:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95	^c	70 - 150		10/04/19 15:37	1
Toluene-d8 (Surr)	83		78 - 128		10/04/19 15:37	1
4-Bromofluorobenzene (Surr)	71		64 - 123		10/04/19 15:37	1
Dibromofluoromethane (Surr)	116		75 - 147		10/04/19 15:37	1

Client Sample Results

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP

Job ID: 180-96180-1

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

Client Sample ID: HD-QC1-0/1-1

Date Collected: 09/24/19 12:00

Date Received: 09/25/19 09:00

Lab Sample ID: 180-96180-15

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		2.0	1.8	ug/L			10/04/19 16:50	2
Vinyl chloride	ND		2.0	1.8	ug/L			10/04/19 16:50	2
Bromomethane	ND		2.0	1.8	ug/L			10/04/19 16:50	2
Chloroethane	ND		2.0	1.8	ug/L			10/04/19 16:50	2
1,1-Dichloroethene	ND		2.0	1.1	ug/L			10/04/19 16:50	2
Acetone	ND	^c	10	6.9	ug/L			10/04/19 16:50	2
Carbon disulfide	ND		2.0	1.8	ug/L			10/04/19 16:50	2
Methylene Chloride	ND		2.0	1.8	ug/L			10/04/19 16:50	2
trans-1,2-Dichloroethene	ND		2.0	1.3	ug/L			10/04/19 16:50	2
Methyl tert-butyl ether	ND		2.0	1.2	ug/L			10/04/19 16:50	2
1,1-Dichloroethane	ND		2.0	1.3	ug/L			10/04/19 16:50	2
cis-1,2-Dichloroethene	ND		2.0	1.4	ug/L			10/04/19 16:50	2
Bromochloromethane	ND		2.0	1.3	ug/L			10/04/19 16:50	2
2-Butanone (MEK)	ND		10	5.2	ug/L			10/04/19 16:50	2
Chloroform	ND		2.0	1.2	ug/L			10/04/19 16:50	2
1,1,1-Trichloroethane	ND		2.0	1.2	ug/L			10/04/19 16:50	2
Carbon tetrachloride	ND		2.0	1.8	ug/L			10/04/19 16:50	2
Benzene	ND		2.0	1.2	ug/L			10/04/19 16:50	2
1,2-Dichloroethane	ND		2.0	1.1	ug/L			10/04/19 16:50	2
Trichloroethene	ND		2.0	1.4	ug/L			10/04/19 16:50	2
1,2-Dichloropropane	ND		2.0	1.3	ug/L			10/04/19 16:50	2
Bromodichloromethane	ND		2.0	1.3	ug/L			10/04/19 16:50	2
cis-1,3-Dichloropropene	ND		2.0	1.2	ug/L			10/04/19 16:50	2
4-Methyl-2-pentanone (MIBK)	ND		10	6.2	ug/L			10/04/19 16:50	2
Toluene	ND		2.0	0.91	ug/L			10/04/19 16:50	2
trans-1,3-Dichloropropene	ND		2.0	1.2	ug/L			10/04/19 16:50	2
1,1,2-Trichloroethane	ND		2.0	0.91	ug/L			10/04/19 16:50	2
Tetrachloroethene	20		2.0	0.93	ug/L			10/04/19 16:50	2
2-Hexanone	ND		10	6.6	ug/L			10/04/19 16:50	2
Dibromochloromethane	ND		2.0	1.7	ug/L			10/04/19 16:50	2
1,2-Dibromoethane (EDB)	ND		2.0	1.0	ug/L			10/04/19 16:50	2
Chlorobenzene	ND		2.0	1.0	ug/L			10/04/19 16:50	2
1,1,1,2-Tetrachloroethane	ND		2.0	1.1	ug/L			10/04/19 16:50	2
Ethylbenzene	ND		2.0	1.0	ug/L			10/04/19 16:50	2
Xylenes, Total	ND		4.0	1.8	ug/L			10/04/19 16:50	2
Styrene	ND		2.0	0.94	ug/L			10/04/19 16:50	2
Bromoform	ND		2.0	2.0	ug/L			10/04/19 16:50	2
1,1,2,2-Tetrachloroethane	ND		2.0	1.2	ug/L			10/04/19 16:50	2
Acrylonitrile	ND		40	16	ug/L			10/04/19 16:50	2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105	^c	70 - 150		10/04/19 16:50	2
Toluene-d8 (Surr)	81		78 - 128		10/04/19 16:50	2
4-Bromofluorobenzene (Surr)	75		64 - 123		10/04/19 16:50	2
Dibromofluoromethane (Surr)	125		75 - 147		10/04/19 16:50	2

Client Sample Results

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP

Job ID: 180-96180-1

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

Client Sample ID: HD-QC1-0/1-3

Date Collected: 09/24/19 14:15

Date Received: 09/25/19 09:00

Lab Sample ID: 180-96180-16

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.90	ug/L			10/04/19 16:02	1
Vinyl chloride	ND		1.0	0.88	ug/L			10/04/19 16:02	1
Bromomethane	ND		1.0	0.89	ug/L			10/04/19 16:02	1
Chloroethane	ND		1.0	0.90	ug/L			10/04/19 16:02	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			10/04/19 16:02	1
Acetone	ND	^c	5.0	3.4	ug/L			10/04/19 16:02	1
Carbon disulfide	ND		1.0	0.88	ug/L			10/04/19 16:02	1
Methylene Chloride	ND		1.0	0.89	ug/L			10/04/19 16:02	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			10/04/19 16:02	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			10/04/19 16:02	1
1,1-Dichloroethane	ND		1.0	0.63	ug/L			10/04/19 16:02	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			10/04/19 16:02	1
Bromochloromethane	ND		1.0	0.63	ug/L			10/04/19 16:02	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			10/04/19 16:02	1
Chloroform	ND		1.0	0.60	ug/L			10/04/19 16:02	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			10/04/19 16:02	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			10/04/19 16:02	1
Benzene	ND		1.0	0.60	ug/L			10/04/19 16:02	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			10/04/19 16:02	1
Trichloroethene	ND		1.0	0.69	ug/L			10/04/19 16:02	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			10/04/19 16:02	1
Bromodichloromethane	ND		1.0	0.64	ug/L			10/04/19 16:02	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			10/04/19 16:02	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			10/04/19 16:02	1
Toluene	0.77	J	1.0	0.46	ug/L			10/04/19 16:02	1
trans-1,3-Dichloropropene	ND		1.0	0.58	ug/L			10/04/19 16:02	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			10/04/19 16:02	1
Tetrachloroethene	ND		1.0	0.47	ug/L			10/04/19 16:02	1
2-Hexanone	ND		5.0	3.3	ug/L			10/04/19 16:02	1
Dibromochloromethane	ND		1.0	0.84	ug/L			10/04/19 16:02	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			10/04/19 16:02	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/04/19 16:02	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			10/04/19 16:02	1
Ethylbenzene	ND		1.0	0.51	ug/L			10/04/19 16:02	1
Xylenes, Total	ND		2.0	0.89	ug/L			10/04/19 16:02	1
Styrene	ND		1.0	0.47	ug/L			10/04/19 16:02	1
Bromoform	ND		1.0	0.98	ug/L			10/04/19 16:02	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			10/04/19 16:02	1
Acrylonitrile	ND		20	7.8	ug/L			10/04/19 16:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100	^c	70 - 150		10/04/19 16:02	1
Toluene-d8 (Surr)	85		78 - 128		10/04/19 16:02	1
4-Bromofluorobenzene (Surr)	79		64 - 123		10/04/19 16:02	1
Dibromofluoromethane (Surr)	119		75 - 147		10/04/19 16:02	1

Client Sample Results

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP

Job ID: 180-96180-1

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

Client Sample ID: HD-QC1-0/1-4

Date Collected: 09/24/19 14:20

Date Received: 09/25/19 09:00

Lab Sample ID: 180-96180-17

Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.90	ug/L			10/04/19 16:26	1
Vinyl chloride	ND		1.0	0.88	ug/L			10/04/19 16:26	1
Bromomethane	ND		1.0	0.89	ug/L			10/04/19 16:26	1
Chloroethane	ND		1.0	0.90	ug/L			10/04/19 16:26	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			10/04/19 16:26	1
Acetone	ND	^c	5.0	3.4	ug/L			10/04/19 16:26	1
Carbon disulfide	ND		1.0	0.88	ug/L			10/04/19 16:26	1
Methylene Chloride	ND		1.0	0.89	ug/L			10/04/19 16:26	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			10/04/19 16:26	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			10/04/19 16:26	1
1,1-Dichloroethane	ND		1.0	0.63	ug/L			10/04/19 16:26	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			10/04/19 16:26	1
Bromochloromethane	ND		1.0	0.63	ug/L			10/04/19 16:26	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			10/04/19 16:26	1
Chloroform	ND		1.0	0.60	ug/L			10/04/19 16:26	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			10/04/19 16:26	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			10/04/19 16:26	1
Benzene	ND		1.0	0.60	ug/L			10/04/19 16:26	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			10/04/19 16:26	1
Trichloroethene	ND		1.0	0.69	ug/L			10/04/19 16:26	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			10/04/19 16:26	1
Bromodichloromethane	ND		1.0	0.64	ug/L			10/04/19 16:26	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			10/04/19 16:26	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			10/04/19 16:26	1
Toluene	0.90	J	1.0	0.46	ug/L			10/04/19 16:26	1
trans-1,3-Dichloropropene	ND		1.0	0.58	ug/L			10/04/19 16:26	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			10/04/19 16:26	1
Tetrachloroethene	ND		1.0	0.47	ug/L			10/04/19 16:26	1
2-Hexanone	ND		5.0	3.3	ug/L			10/04/19 16:26	1
Dibromochloromethane	ND		1.0	0.84	ug/L			10/04/19 16:26	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			10/04/19 16:26	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/04/19 16:26	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			10/04/19 16:26	1
Ethylbenzene	ND		1.0	0.51	ug/L			10/04/19 16:26	1
Xylenes, Total	ND		2.0	0.89	ug/L			10/04/19 16:26	1
Styrene	ND		1.0	0.47	ug/L			10/04/19 16:26	1
Bromoform	ND		1.0	0.98	ug/L			10/04/19 16:26	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			10/04/19 16:26	1
Acrylonitrile	ND		20	7.8	ug/L			10/04/19 16:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100	^c	70 - 150		10/04/19 16:26	1
Toluene-d8 (Surr)	84		78 - 128		10/04/19 16:26	1
4-Bromofluorobenzene (Surr)	76		64 - 123		10/04/19 16:26	1
Dibromofluoromethane (Surr)	120		75 - 147		10/04/19 16:26	1

Default Detection Limits

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP

Job ID: 180-96180-1

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

Analyte	RL	MDL	Units
1,1,1,2-Tetrachloroethane	1.0	0.57	ug/L
1,1,1-Trichloroethane	1.0	0.60	ug/L
1,1,2,2-Tetrachloroethane	1.0	0.60	ug/L
1,1,2-Trichloroethane	1.0	0.45	ug/L
1,1-Dichloroethane	1.0	0.63	ug/L
1,1-Dichloroethene	1.0	0.55	ug/L
1,2-Dibromoethane (EDB)	1.0	0.50	ug/L
1,2-Dichloroethane	1.0	0.57	ug/L
1,2-Dichloropropane	1.0	0.66	ug/L
2-Butanone (MEK)	5.0	2.6	ug/L
2-Hexanone	5.0	3.3	ug/L
4-Methyl-2-pentanone (MIBK)	5.0	3.1	ug/L
Acetone	5.0	3.4	ug/L
Acrylonitrile	20	7.8	ug/L
Benzene	1.0	0.60	ug/L
Bromochloromethane	1.0	0.63	ug/L
Bromodichloromethane	1.0	0.64	ug/L
Bromoform	1.0	0.98	ug/L
Bromomethane	1.0	0.89	ug/L
Carbon disulfide	1.0	0.88	ug/L
Carbon tetrachloride	1.0	0.88	ug/L
Chlorobenzene	1.0	0.50	ug/L
Chloroethane	1.0	0.90	ug/L
Chloroform	1.0	0.60	ug/L
Chloromethane	1.0	0.90	ug/L
cis-1,2-Dichloroethene	1.0	0.71	ug/L
cis-1,3-Dichloropropene	1.0	0.59	ug/L
Dibromochloromethane	1.0	0.84	ug/L
Ethylbenzene	1.0	0.51	ug/L
Methyl tert-butyl ether	1.0	0.59	ug/L
Methylene Chloride	1.0	0.89	ug/L
Styrene	1.0	0.47	ug/L
Tetrachloroethene	1.0	0.47	ug/L
Toluene	1.0	0.46	ug/L
trans-1,2-Dichloroethene	1.0	0.67	ug/L
trans-1,3-Dichloropropene	1.0	0.58	ug/L
Trichloroethene	1.0	0.69	ug/L
Vinyl chloride	1.0	0.88	ug/L
Xylenes, Total	2.0	0.89	ug/L

Surrogate Summary

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP

Job ID: 180-96180-1

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (70-150)	TOL (78-128)	BFB (64-123)	DBFM (75-147)
180-96180-1	HD-COD-SW-29-0/1-0	98	88	80	117
180-96180-2	HD-COD-SW-8-0/1-0	102	86	76	116
180-96180-3	HD-COD-SW-13-0/1-0	98	90	76	119
180-96180-4	HD-COD-SW-16-0/1-0	103	90	76	120
180-96180-5	HD-COD-SW-6-0/1-0	103	90	78	116
180-96180-6	HD-COD-SW-26-0/1-0	101	91	74	117
180-96180-7	HD-COD-SW-7-0/1-0	101	94	82	121
180-96180-8	HD-COD-SW-9-0/1-0	98	91	76	116
180-96180-9	HD-COD-SW-28-0/1-0	107	82	74	122
180-96180-10	HD-COD-SW-15-0/1-0	97 ^c	93	82	112
180-96180-11	HD-COD-SW-27-0/1-0	106	87	76	118
180-96180-12	HD-QC1-0/1-2	100	87	73	115
180-96180-13	HD-MW-110-0/1-0	95 ^c	84	80	113
180-96180-13 MS	HD-MW-110-0/1-0	85	96	100	100
180-96180-13 MSD	HD-MW-110-0/1-0	79	97	98	98
180-96180-14	HD-MW-108D-0/1-0	95 ^c	83	71	116
180-96180-15	HD-QC1-0/1-1	105 ^c	81	75	125
180-96180-16	HD-QC1-0/1-3	100 ^c	85	79	119
180-96180-17	HD-QC1-0/1-4	100 ^c	84	76	120
LCS 180-292962/4	Lab Control Sample	81	100	98	97
LCS 180-293070/4	Lab Control Sample	79	101	97	91
LCS 180-293722/4	Lab Control Sample	78	92	94	98
MB 180-292962/6	Method Blank	96	88	82	105
MB 180-293070/6	Method Blank	92	94	80	108
MB 180-293722/6	Method Blank	92	88	80	112

Surrogate Legend

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

QC Sample Results

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP

Job ID: 180-96180-1

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

Lab Sample ID: MB 180-292962/6
Matrix: Water
Analysis Batch: 292962

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.90	ug/L			09/27/19 16:02	1
Vinyl chloride	ND		1.0	0.88	ug/L			09/27/19 16:02	1
Bromomethane	ND		1.0	0.89	ug/L			09/27/19 16:02	1
Chloroethane	ND		1.0	0.90	ug/L			09/27/19 16:02	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			09/27/19 16:02	1
Acetone	ND		5.0	3.4	ug/L			09/27/19 16:02	1
Carbon disulfide	ND		1.0	0.88	ug/L			09/27/19 16:02	1
Methylene Chloride	ND		1.0	0.89	ug/L			09/27/19 16:02	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			09/27/19 16:02	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			09/27/19 16:02	1
1,1-Dichloroethane	ND		1.0	0.63	ug/L			09/27/19 16:02	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			09/27/19 16:02	1
Bromochloromethane	ND		1.0	0.63	ug/L			09/27/19 16:02	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			09/27/19 16:02	1
Chloroform	ND		1.0	0.60	ug/L			09/27/19 16:02	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			09/27/19 16:02	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			09/27/19 16:02	1
Benzene	ND		1.0	0.60	ug/L			09/27/19 16:02	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			09/27/19 16:02	1
Trichloroethene	ND		1.0	0.69	ug/L			09/27/19 16:02	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			09/27/19 16:02	1
Bromodichloromethane	ND		1.0	0.64	ug/L			09/27/19 16:02	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			09/27/19 16:02	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			09/27/19 16:02	1
Toluene	ND		1.0	0.46	ug/L			09/27/19 16:02	1
trans-1,3-Dichloropropene	ND		1.0	0.58	ug/L			09/27/19 16:02	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			09/27/19 16:02	1
Tetrachloroethene	ND		1.0	0.47	ug/L			09/27/19 16:02	1
2-Hexanone	ND		5.0	3.3	ug/L			09/27/19 16:02	1
Dibromochloromethane	ND		1.0	0.84	ug/L			09/27/19 16:02	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			09/27/19 16:02	1
Chlorobenzene	ND		1.0	0.50	ug/L			09/27/19 16:02	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			09/27/19 16:02	1
Ethylbenzene	ND		1.0	0.51	ug/L			09/27/19 16:02	1
Xylenes, Total	ND		2.0	0.89	ug/L			09/27/19 16:02	1
Styrene	ND		1.0	0.47	ug/L			09/27/19 16:02	1
Bromoform	ND		1.0	0.98	ug/L			09/27/19 16:02	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			09/27/19 16:02	1
Acrylonitrile	ND		20	7.8	ug/L			09/27/19 16:02	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		70 - 150		09/27/19 16:02	1
Toluene-d8 (Surr)	88		78 - 128		09/27/19 16:02	1
4-Bromofluorobenzene (Surr)	82		64 - 123		09/27/19 16:02	1
Dibromofluoromethane (Surr)	105		75 - 147		09/27/19 16:02	1

QC Sample Results

Client: Groundwater Sciences Corporation
Project/Site: fYNOP

Job ID: 180-96180-1

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

Lab Sample ID: LCS 180-292962/4

Matrix: Water

Analysis Batch: 292962

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloromethane	10.0	13.1		ug/L		131	37 - 150
Vinyl chloride	10.0	13.7		ug/L		137	50 - 150
Bromomethane	10.0	12.1		ug/L		121	35 - 150
Chloroethane	10.0	13.2		ug/L		132	52 - 150
1,1-Dichloroethene	10.0	12.6		ug/L		126	79 - 132
Acetone	20.0	26.7		ug/L		133	37 - 150
Carbon disulfide	10.0	13.3		ug/L		133	66 - 134
Methylene Chloride	10.0	12.5		ug/L		125	72 - 131
trans-1,2-Dichloroethene	10.0	13.0	*	ug/L		130	81 - 126
Methyl tert-butyl ether	10.0	11.1		ug/L		111	65 - 125
1,1-Dichloroethane	10.0	12.3		ug/L		123	70 - 127
cis-1,2-Dichloroethene	10.0	12.5	*	ug/L		125	79 - 119
Bromochloromethane	10.0	11.7		ug/L		117	74 - 124
2-Butanone (MEK)	20.0	23.4		ug/L		117	35 - 150
Chloroform	10.0	11.6		ug/L		116	75 - 126
1,1,1-Trichloroethane	10.0	11.9		ug/L		119	63 - 142
Carbon tetrachloride	10.0	12.0		ug/L		120	55 - 150
Benzene	10.0	12.6		ug/L		126	72 - 127
1,2-Dichloroethane	10.0	10.6		ug/L		106	60 - 138
Trichloroethene	10.0	12.3	*	ug/L		123	81 - 121
1,2-Dichloropropane	10.0	11.9		ug/L		119	67 - 124
Bromodichloromethane	10.0	11.0		ug/L		110	67 - 131
cis-1,3-Dichloropropene	10.0	11.2		ug/L		112	69 - 122
4-Methyl-2-pentanone (MIBK)	20.0	22.2		ug/L		111	19 - 150
Toluene	10.0	12.5	*	ug/L		125	73 - 123
trans-1,3-Dichloropropene	10.0	10.6		ug/L		106	61 - 122
1,1,2-Trichloroethane	10.0	11.4		ug/L		114	72 - 120
Tetrachloroethene	10.0	12.0		ug/L		120	69 - 134
2-Hexanone	20.0	22.0		ug/L		110	24 - 150
Dibromochloromethane	10.0	11.0		ug/L		110	59 - 134
1,2-Dibromoethane (EDB)	10.0	11.0		ug/L		110	65 - 129
Chlorobenzene	10.0	11.6		ug/L		116	76 - 119
1,1,1,2-Tetrachloroethane	10.0	11.0		ug/L		110	65 - 132
Ethylbenzene	10.0	11.8		ug/L		118	76 - 118
Xylenes, Total	20.0	24.3	*	ug/L		121	76 - 116
Styrene	10.0	11.8		ug/L		118	74 - 118
Bromoform	10.0	10.9		ug/L		109	50 - 146
1,1,2,2-Tetrachloroethane	10.0	12.0		ug/L		120	57 - 135
Acrylonitrile	100	125		ug/L		125	43 - 149

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	81		70 - 150
Toluene-d8 (Surr)	100		78 - 128
4-Bromofluorobenzene (Surr)	98		64 - 123
Dibromofluoromethane (Surr)	97		75 - 147

QC Sample Results

Client: Groundwater Sciences Corporation
Project/Site: fYNOP

Job ID: 180-96180-1

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

Lab Sample ID: MB 180-293070/6

Matrix: Water

Analysis Batch: 293070

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.90	ug/L			09/28/19 12:00	1
Vinyl chloride	ND		1.0	0.88	ug/L			09/28/19 12:00	1
Bromomethane	ND		1.0	0.89	ug/L			09/28/19 12:00	1
Chloroethane	ND		1.0	0.90	ug/L			09/28/19 12:00	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			09/28/19 12:00	1
Acetone	ND		5.0	3.4	ug/L			09/28/19 12:00	1
Carbon disulfide	ND		1.0	0.88	ug/L			09/28/19 12:00	1
Methylene Chloride	ND		1.0	0.89	ug/L			09/28/19 12:00	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			09/28/19 12:00	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			09/28/19 12:00	1
1,1-Dichloroethane	ND		1.0	0.63	ug/L			09/28/19 12:00	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			09/28/19 12:00	1
Bromochloromethane	ND		1.0	0.63	ug/L			09/28/19 12:00	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			09/28/19 12:00	1
Chloroform	ND		1.0	0.60	ug/L			09/28/19 12:00	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			09/28/19 12:00	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			09/28/19 12:00	1
Benzene	ND		1.0	0.60	ug/L			09/28/19 12:00	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			09/28/19 12:00	1
Trichloroethene	ND		1.0	0.69	ug/L			09/28/19 12:00	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			09/28/19 12:00	1
Bromodichloromethane	ND		1.0	0.64	ug/L			09/28/19 12:00	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			09/28/19 12:00	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			09/28/19 12:00	1
Toluene	ND		1.0	0.46	ug/L			09/28/19 12:00	1
trans-1,3-Dichloropropene	ND		1.0	0.58	ug/L			09/28/19 12:00	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			09/28/19 12:00	1
Tetrachloroethene	ND		1.0	0.47	ug/L			09/28/19 12:00	1
2-Hexanone	ND		5.0	3.3	ug/L			09/28/19 12:00	1
Dibromochloromethane	ND		1.0	0.84	ug/L			09/28/19 12:00	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			09/28/19 12:00	1
Chlorobenzene	ND		1.0	0.50	ug/L			09/28/19 12:00	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			09/28/19 12:00	1
Ethylbenzene	ND		1.0	0.51	ug/L			09/28/19 12:00	1
Xylenes, Total	ND		2.0	0.89	ug/L			09/28/19 12:00	1
Styrene	ND		1.0	0.47	ug/L			09/28/19 12:00	1
Bromoform	ND		1.0	0.98	ug/L			09/28/19 12:00	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			09/28/19 12:00	1
Acrylonitrile	ND		20	7.8	ug/L			09/28/19 12:00	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		70 - 150		09/28/19 12:00	1
Toluene-d8 (Surr)	94		78 - 128		09/28/19 12:00	1
4-Bromofluorobenzene (Surr)	80		64 - 123		09/28/19 12:00	1
Dibromofluoromethane (Surr)	108		75 - 147		09/28/19 12:00	1

QC Sample Results

Client: Groundwater Sciences Corporation
Project/Site: fYNOP

Job ID: 180-96180-1

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

Lab Sample ID: LCS 180-293070/4

Matrix: Water

Analysis Batch: 293070

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloromethane	10.0	11.6		ug/L		116	37 - 150
Vinyl chloride	10.0	11.9		ug/L		119	50 - 150
Bromomethane	10.0	10.8		ug/L		108	35 - 150
Chloroethane	10.0	12.3		ug/L		123	52 - 150
1,1-Dichloroethene	10.0	11.8		ug/L		118	79 - 132
Acetone	20.0	27.4		ug/L		137	37 - 150
Carbon disulfide	10.0	11.6		ug/L		116	66 - 134
Methylene Chloride	10.0	11.9		ug/L		119	72 - 131
trans-1,2-Dichloroethene	10.0	12.1		ug/L		121	81 - 126
Methyl tert-butyl ether	10.0	9.93		ug/L		99	65 - 125
1,1-Dichloroethane	10.0	10.9		ug/L		109	70 - 127
cis-1,2-Dichloroethene	10.0	10.9		ug/L		109	79 - 119
Bromochloromethane	10.0	9.91		ug/L		99	74 - 124
2-Butanone (MEK)	20.0	24.2		ug/L		121	35 - 150
Chloroform	10.0	10.6		ug/L		106	75 - 126
1,1,1-Trichloroethane	10.0	10.9		ug/L		109	63 - 142
Carbon tetrachloride	10.0	11.1		ug/L		111	55 - 150
Benzene	10.0	11.6		ug/L		116	72 - 127
1,2-Dichloroethane	10.0	9.27		ug/L		93	60 - 138
Trichloroethene	10.0	10.9		ug/L		109	81 - 121
1,2-Dichloropropane	10.0	11.1		ug/L		111	67 - 124
Bromodichloromethane	10.0	10.0		ug/L		100	67 - 131
cis-1,3-Dichloropropene	10.0	10.4		ug/L		104	69 - 122
4-Methyl-2-pentanone (MIBK)	20.0	21.5		ug/L		108	19 - 150
Toluene	10.0	11.9		ug/L		119	73 - 123
trans-1,3-Dichloropropene	10.0	9.34		ug/L		93	61 - 122
1,1,2-Trichloroethane	10.0	11.0		ug/L		110	72 - 120
Tetrachloroethene	10.0	11.3		ug/L		113	69 - 134
2-Hexanone	20.0	24.2		ug/L		121	24 - 150
Dibromochloromethane	10.0	10.4		ug/L		104	59 - 134
1,2-Dibromoethane (EDB)	10.0	10.3		ug/L		103	65 - 129
Chlorobenzene	10.0	11.2		ug/L		112	76 - 119
1,1,1,2-Tetrachloroethane	10.0	10.5		ug/L		105	65 - 132
Ethylbenzene	10.0	11.2		ug/L		112	76 - 118
Xylenes, Total	20.0	23.0		ug/L		115	76 - 116
Styrene	10.0	11.3		ug/L		113	74 - 118
Bromoform	10.0	10.2		ug/L		102	50 - 146
1,1,2,2-Tetrachloroethane	10.0	11.3		ug/L		113	57 - 135
Acrylonitrile	100	117		ug/L		117	43 - 149

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	79		70 - 150
Toluene-d8 (Surr)	101		78 - 128
4-Bromofluorobenzene (Surr)	97		64 - 123
Dibromofluoromethane (Surr)	91		75 - 147

QC Sample Results

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP

Job ID: 180-96180-1

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

Lab Sample ID: MB 180-293722/6
Matrix: Water
Analysis Batch: 293722

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.90	ug/L			10/04/19 14:10	1
Vinyl chloride	ND		1.0	0.88	ug/L			10/04/19 14:10	1
Bromomethane	ND		1.0	0.89	ug/L			10/04/19 14:10	1
Chloroethane	ND		1.0	0.90	ug/L			10/04/19 14:10	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			10/04/19 14:10	1
Acetone	ND		5.0	3.4	ug/L			10/04/19 14:10	1
Carbon disulfide	ND		1.0	0.88	ug/L			10/04/19 14:10	1
Methylene Chloride	ND		1.0	0.89	ug/L			10/04/19 14:10	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			10/04/19 14:10	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			10/04/19 14:10	1
1,1-Dichloroethane	ND		1.0	0.63	ug/L			10/04/19 14:10	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			10/04/19 14:10	1
Bromochloromethane	ND		1.0	0.63	ug/L			10/04/19 14:10	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			10/04/19 14:10	1
Chloroform	ND		1.0	0.60	ug/L			10/04/19 14:10	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			10/04/19 14:10	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			10/04/19 14:10	1
Benzene	ND		1.0	0.60	ug/L			10/04/19 14:10	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			10/04/19 14:10	1
Trichloroethene	ND		1.0	0.69	ug/L			10/04/19 14:10	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			10/04/19 14:10	1
Bromodichloromethane	ND		1.0	0.64	ug/L			10/04/19 14:10	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			10/04/19 14:10	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			10/04/19 14:10	1
Toluene	ND		1.0	0.46	ug/L			10/04/19 14:10	1
trans-1,3-Dichloropropene	ND		1.0	0.58	ug/L			10/04/19 14:10	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			10/04/19 14:10	1
Tetrachloroethene	ND		1.0	0.47	ug/L			10/04/19 14:10	1
2-Hexanone	ND		5.0	3.3	ug/L			10/04/19 14:10	1
Dibromochloromethane	ND		1.0	0.84	ug/L			10/04/19 14:10	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			10/04/19 14:10	1
Chlorobenzene	ND		1.0	0.50	ug/L			10/04/19 14:10	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			10/04/19 14:10	1
Ethylbenzene	ND		1.0	0.51	ug/L			10/04/19 14:10	1
Xylenes, Total	ND		2.0	0.89	ug/L			10/04/19 14:10	1
Styrene	ND		1.0	0.47	ug/L			10/04/19 14:10	1
Bromoform	ND		1.0	0.98	ug/L			10/04/19 14:10	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			10/04/19 14:10	1
Acrylonitrile	ND		20	7.8	ug/L			10/04/19 14:10	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		70 - 150		10/04/19 14:10	1
Toluene-d8 (Surr)	88		78 - 128		10/04/19 14:10	1
4-Bromofluorobenzene (Surr)	80		64 - 123		10/04/19 14:10	1
Dibromofluoromethane (Surr)	112		75 - 147		10/04/19 14:10	1

QC Sample Results

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP

Job ID: 180-96180-1

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

Lab Sample ID: LCS 180-293722/4

Matrix: Water

Analysis Batch: 293722

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloromethane	10.0	11.3		ug/L		113	37 - 150
Vinyl chloride	10.0	12.2		ug/L		122	50 - 150
Bromomethane	10.0	10.4		ug/L		104	35 - 150
Chloroethane	10.0	11.1		ug/L		111	52 - 150
1,1-Dichloroethene	10.0	11.9		ug/L		119	79 - 132
Acetone	20.0	28.0		ug/L		140	37 - 150
Carbon disulfide	10.0	11.5		ug/L		115	66 - 134
Methylene Chloride	10.0	11.7		ug/L		117	72 - 131
trans-1,2-Dichloroethene	10.0	12.3		ug/L		123	81 - 126
Methyl tert-butyl ether	10.0	9.94		ug/L		99	65 - 125
1,1-Dichloroethane	10.0	11.3		ug/L		113	70 - 127
cis-1,2-Dichloroethene	10.0	11.6		ug/L		116	79 - 119
Bromochloromethane	10.0	10.1		ug/L		101	74 - 124
2-Butanone (MEK)	20.0	23.8		ug/L		119	35 - 150
Chloroform	10.0	10.6		ug/L		106	75 - 126
1,1,1-Trichloroethane	10.0	10.5		ug/L		105	63 - 142
Carbon tetrachloride	10.0	10.8		ug/L		108	55 - 150
Benzene	10.0	11.3		ug/L		113	72 - 127
1,2-Dichloroethane	10.0	8.85		ug/L		88	60 - 138
Trichloroethene	10.0	11.0		ug/L		110	81 - 121
1,2-Dichloropropane	10.0	10.6		ug/L		106	67 - 124
Bromodichloromethane	10.0	9.41		ug/L		94	67 - 131
cis-1,3-Dichloropropene	10.0	10.6		ug/L		106	69 - 122
4-Methyl-2-pentanone (MIBK)	20.0	18.3		ug/L		91	19 - 150
Toluene	10.0	10.0		ug/L		100	73 - 123
trans-1,3-Dichloropropene	10.0	8.07		ug/L		81	61 - 122
1,1,2-Trichloroethane	10.0	8.99		ug/L		90	72 - 120
Tetrachloroethene	10.0	9.73		ug/L		97	69 - 134
2-Hexanone	20.0	20.2		ug/L		101	24 - 150
Dibromochloromethane	10.0	8.72		ug/L		87	59 - 134
1,2-Dibromoethane (EDB)	10.0	8.76		ug/L		88	65 - 129
Chlorobenzene	10.0	9.93		ug/L		99	76 - 119
1,1,1,2-Tetrachloroethane	10.0	9.19		ug/L		92	65 - 132
Ethylbenzene	10.0	10.1		ug/L		101	76 - 118
Xylenes, Total	20.0	19.8		ug/L		99	76 - 116
Styrene	10.0	10.0		ug/L		100	74 - 118
Bromoform	10.0	9.28		ug/L		93	50 - 146
1,1,2,2-Tetrachloroethane	10.0	10.7		ug/L		107	57 - 135
Acrylonitrile	100	119		ug/L		119	43 - 149

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	78		70 - 150
Toluene-d8 (Surr)	92		78 - 128
4-Bromofluorobenzene (Surr)	94		64 - 123
Dibromofluoromethane (Surr)	98		75 - 147

QC Sample Results

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP

Job ID: 180-96180-1

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

Lab Sample ID: 180-96180-13 MS

Matrix: Water

Analysis Batch: 293722

Client Sample ID: HD-MW-110-0/1-0

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
Chloromethane	ND		10.0	9.37		ug/L		94		37 - 150
Vinyl chloride	ND		10.0	9.17		ug/L		92		50 - 150
Bromomethane	ND		10.0	9.66		ug/L		97		35 - 150
Chloroethane	ND		10.0	9.55		ug/L		95		52 - 150
1,1-Dichloroethene	ND		10.0	9.95		ug/L		99		79 - 132
Acetone	ND	^c	20.0	18.9		ug/L		95		37 - 150
Carbon disulfide	ND		10.0	9.28		ug/L		93		66 - 134
Methylene Chloride	ND		10.0	11.2		ug/L		112		72 - 131
trans-1,2-Dichloroethene	ND		10.0	10.3		ug/L		103		81 - 126
Methyl tert-butyl ether	ND		10.0	9.21		ug/L		92		65 - 125
1,1-Dichloroethane	ND		10.0	10.4		ug/L		104		70 - 127
cis-1,2-Dichloroethene	ND		10.0	10.3		ug/L		103		79 - 119
Bromochloromethane	ND		10.0	10.2		ug/L		102		74 - 124
2-Butanone (MEK)	ND		20.0	19.6		ug/L		98		35 - 150
Chloroform	ND		10.0	10.2		ug/L		102		75 - 126
1,1,1-Trichloroethane	ND		10.0	8.96		ug/L		90		63 - 142
Carbon tetrachloride	ND		10.0	8.67		ug/L		87		55 - 150
Benzene	ND		10.0	10.7		ug/L		107		72 - 127
1,2-Dichloroethane	ND		10.0	8.94		ug/L		89		60 - 138
Trichloroethene	0.71	J	10.0	9.84		ug/L		91		81 - 121
1,2-Dichloropropane	ND		10.0	10.2		ug/L		102		67 - 124
Bromodichloromethane	ND		10.0	9.24		ug/L		92		67 - 131
cis-1,3-Dichloropropene	ND		10.0	8.23		ug/L		82		69 - 122
4-Methyl-2-pentanone (MIBK)	ND		20.0	16.6		ug/L		83		19 - 150
Toluene	ND		10.0	9.35		ug/L		93		73 - 123
trans-1,3-Dichloropropene	ND		10.0	7.30		ug/L		73		61 - 122
1,1,2-Trichloroethane	ND		10.0	9.53		ug/L		95		72 - 120
Tetrachloroethene	23	F1	10.0	23.5	F1	ug/L		4		69 - 134
2-Hexanone	ND		20.0	16.9		ug/L		84		24 - 150
Dibromochloromethane	ND		10.0	9.27		ug/L		93		59 - 134
1,2-Dibromoethane (EDB)	ND		10.0	8.77		ug/L		88		65 - 129
Chlorobenzene	ND		10.0	9.74		ug/L		97		76 - 119
1,1,1,2-Tetrachloroethane	ND		10.0	9.33		ug/L		93		65 - 132
Ethylbenzene	ND		10.0	9.01		ug/L		90		76 - 118
Xylenes, Total	ND		20.0	18.8		ug/L		94		76 - 116
Styrene	ND		10.0	9.92		ug/L		99		74 - 118
Bromoform	ND		10.0	9.76		ug/L		98		50 - 146
1,1,2,2-Tetrachloroethane	ND		10.0	11.2		ug/L		112		57 - 135
Acrylonitrile	ND		100	117		ug/L		117		43 - 149
		MS MS								
Surrogate	%Recovery	Qualifier	Limits							
1,2-Dichloroethane-d4 (Surr)	85		70 - 150							
Toluene-d8 (Surr)	96		78 - 128							
4-Bromofluorobenzene (Surr)	100		64 - 123							
Dibromofluoromethane (Surr)	100		75 - 147							

QC Sample Results

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP

Job ID: 180-96180-1

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

Lab Sample ID: 180-96180-13 MSD

Matrix: Water

Analysis Batch: 293722

Client Sample ID: HD-MW-110-0/1-0

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits		
Chloromethane	ND		10.0	9.41		ug/L		94	37 - 150	0	35
Vinyl chloride	ND		10.0	8.34		ug/L		83	50 - 150	9	31
Bromomethane	ND		10.0	8.61		ug/L		86	35 - 150	12	35
Chloroethane	ND		10.0	9.14		ug/L		91	52 - 150	4	31
1,1-Dichloroethene	ND		10.0	9.02		ug/L		90	79 - 132	10	29
Acetone	ND	^c	20.0	19.3		ug/L		96	37 - 150	2	35
Carbon disulfide	ND		10.0	8.16		ug/L		82	66 - 134	13	31
Methylene Chloride	ND		10.0	10.1		ug/L		101	72 - 131	10	29
trans-1,2-Dichloroethene	ND		10.0	9.59		ug/L		96	81 - 126	7	27
Methyl tert-butyl ether	ND		10.0	8.66		ug/L		87	65 - 125	6	28
1,1-Dichloroethane	ND		10.0	9.76		ug/L		98	70 - 127	6	27
cis-1,2-Dichloroethene	ND		10.0	9.93		ug/L		99	79 - 119	4	28
Bromochloromethane	ND		10.0	9.77		ug/L		98	74 - 124	4	27
2-Butanone (MEK)	ND		20.0	19.5		ug/L		98	35 - 150	1	34
Chloroform	ND		10.0	9.39		ug/L		94	75 - 126	8	26
1,1,1-Trichloroethane	ND		10.0	8.12		ug/L		81	63 - 142	10	28
Carbon tetrachloride	ND		10.0	7.64		ug/L		76	55 - 150	13	29
Benzene	ND		10.0	9.90		ug/L		99	72 - 127	8	27
1,2-Dichloroethane	ND		10.0	8.61		ug/L		86	60 - 138	4	26
Trichloroethene	0.71	J	10.0	9.43		ug/L		87	81 - 121	4	28
1,2-Dichloropropane	ND		10.0	10.1		ug/L		101	67 - 124	1	27
Bromodichloromethane	ND		10.0	8.83		ug/L		88	67 - 131	4	28
cis-1,3-Dichloropropene	ND		10.0	8.35		ug/L		83	69 - 122	2	29
4-Methyl-2-pentanone (MIBK)	ND		20.0	16.7		ug/L		83	19 - 150	1	33
Toluene	ND		10.0	9.37		ug/L		94	73 - 123	0	31
trans-1,3-Dichloropropene	ND		10.0	7.43		ug/L		74	61 - 122	2	30
1,1,2-Trichloroethane	ND		10.0	9.42		ug/L		94	72 - 120	1	27
Tetrachloroethene	23	F1	10.0	23.3	F1	ug/L		2	69 - 134	1	27
2-Hexanone	ND		20.0	18.0		ug/L		90	24 - 150	7	32
Dibromochloromethane	ND		10.0	8.62		ug/L		86	59 - 134	7	28
1,2-Dibromoethane (EDB)	ND		10.0	8.59		ug/L		86	65 - 129	2	27
Chlorobenzene	ND		10.0	9.39		ug/L		94	76 - 119	4	25
1,1,1,2-Tetrachloroethane	ND		10.0	9.05		ug/L		91	65 - 132	3	28
Ethylbenzene	ND		10.0	8.57		ug/L		86	76 - 118	5	27
Xylenes, Total	ND		20.0	18.6		ug/L		93	76 - 116	1	27
Styrene	ND		10.0	9.64		ug/L		96	74 - 118	3	27
Bromoform	ND		10.0	8.60		ug/L		86	50 - 146	13	30
1,1,2,2-Tetrachloroethane	ND		10.0	10.6		ug/L		106	57 - 135	5	29
Acrylonitrile	ND		100	108		ug/L		108	43 - 149	7	34

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	79		70 - 150
Toluene-d8 (Surr)	97		78 - 128
4-Bromofluorobenzene (Surr)	98		64 - 123
Dibromofluoromethane (Surr)	98		75 - 147

QC Association Summary

Client: Groundwater Sciences Corporation
Project/Site: fYNOP

Job ID: 180-96180-1

GC/MS VOA

Analysis Batch: 292962

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-96180-1	HD-COD-SW-29-0/1-0	Total/NA	Water	EPA 8260C	
180-96180-2	HD-COD-SW-8-0/1-0	Total/NA	Water	EPA 8260C	
180-96180-3	HD-COD-SW-13-0/1-0	Total/NA	Water	EPA 8260C	
180-96180-4	HD-COD-SW-16-0/1-0	Total/NA	Water	EPA 8260C	
180-96180-5	HD-COD-SW-6-0/1-0	Total/NA	Water	EPA 8260C	
180-96180-6	HD-COD-SW-26-0/1-0	Total/NA	Water	EPA 8260C	
180-96180-7	HD-COD-SW-7-0/1-0	Total/NA	Water	EPA 8260C	
180-96180-8	HD-COD-SW-9-0/1-0	Total/NA	Water	EPA 8260C	
180-96180-9	HD-COD-SW-28-0/1-0	Total/NA	Water	EPA 8260C	
180-96180-11	HD-COD-SW-27-0/1-0	Total/NA	Water	EPA 8260C	
180-96180-12	HD-QC1-0/1-2	Total/NA	Water	EPA 8260C	
MB 180-292962/6	Method Blank	Total/NA	Water	EPA 8260C	
LCS 180-292962/4	Lab Control Sample	Total/NA	Water	EPA 8260C	

Analysis Batch: 293070

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-96180-10	HD-COD-SW-15-0/1-0	Total/NA	Water	EPA 8260C	
MB 180-293070/6	Method Blank	Total/NA	Water	EPA 8260C	
LCS 180-293070/4	Lab Control Sample	Total/NA	Water	EPA 8260C	

Analysis Batch: 293722

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-96180-13	HD-MW-110-0/1-0	Total/NA	Water	EPA 8260C	
180-96180-14	HD-MW-108D-0/1-0	Total/NA	Water	EPA 8260C	
180-96180-15	HD-QC1-0/1-1	Total/NA	Water	EPA 8260C	
180-96180-16	HD-QC1-0/1-3	Total/NA	Water	EPA 8260C	
180-96180-17	HD-QC1-0/1-4	Total/NA	Water	EPA 8260C	
MB 180-293722/6	Method Blank	Total/NA	Water	EPA 8260C	
LCS 180-293722/4	Lab Control Sample	Total/NA	Water	EPA 8260C	
180-96180-13 MS	HD-MW-110-0/1-0	Total/NA	Water	EPA 8260C	
180-96180-13 MSD	HD-MW-110-0/1-0	Total/NA	Water	EPA 8260C	

Lab Chronicle

Client: Groundwater Sciences Corporation
Project/Site: FYNOP

Job ID: 180-96180-1

Client Sample ID: HD-COD-SW-29-0/1-0

Lab Sample ID: 180-96180-1

Date Collected: 09/23/19 10:10

Matrix: Water

Date Received: 09/25/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 8260C		1	5 mL	5 mL	292962	09/27/19 19:02	HRB	TAL PIT
Instrument ID: CHHP5										

Client Sample ID: HD-COD-SW-8-0/1-0

Lab Sample ID: 180-96180-2

Date Collected: 09/23/19 10:30

Matrix: Water

Date Received: 09/25/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 8260C		1	5 mL	5 mL	292962	09/27/19 19:27	HRB	TAL PIT
Instrument ID: CHHP5										

Client Sample ID: HD-COD-SW-13-0/1-0

Lab Sample ID: 180-96180-3

Date Collected: 09/23/19 10:50

Matrix: Water

Date Received: 09/25/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 8260C		1	5 mL	5 mL	292962	09/27/19 19:51	HRB	TAL PIT
Instrument ID: CHHP5										

Client Sample ID: HD-COD-SW-16-0/1-0

Lab Sample ID: 180-96180-4

Date Collected: 09/23/19 11:15

Matrix: Water

Date Received: 09/25/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 8260C		1	5 mL	5 mL	292962	09/27/19 20:16	HRB	TAL PIT
Instrument ID: CHHP5										

Client Sample ID: HD-COD-SW-6-0/1-0

Lab Sample ID: 180-96180-5

Date Collected: 09/23/19 12:05

Matrix: Water

Date Received: 09/25/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 8260C		1	5 mL	5 mL	292962	09/27/19 20:40	HRB	TAL PIT
Instrument ID: CHHP5										

Client Sample ID: HD-COD-SW-26-0/1-0

Lab Sample ID: 180-96180-6

Date Collected: 09/23/19 12:40

Matrix: Water

Date Received: 09/25/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 8260C		1	5 mL	5 mL	292962	09/27/19 21:04	HRB	TAL PIT
Instrument ID: CHHP5										

Lab Chronicle

Client: Groundwater Sciences Corporation
Project/Site: fYNOP

Job ID: 180-96180-1

Client Sample ID: HD-COD-SW-7-0/1-0

Lab Sample ID: 180-96180-7

Date Collected: 09/23/19 13:00

Matrix: Water

Date Received: 09/25/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 8260C		1	5 mL	5 mL	292962	09/27/19 21:29	HRB	TAL PIT
Instrument ID: CHHP5										

Client Sample ID: HD-COD-SW-9-0/1-0

Lab Sample ID: 180-96180-8

Date Collected: 09/23/19 13:20

Matrix: Water

Date Received: 09/25/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 8260C		1	5 mL	5 mL	292962	09/27/19 21:53	HRB	TAL PIT
Instrument ID: CHHP5										

Client Sample ID: HD-COD-SW-28-0/1-0

Lab Sample ID: 180-96180-9

Date Collected: 09/23/19 13:45

Matrix: Water

Date Received: 09/25/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 8260C		1	5 mL	5 mL	292962	09/27/19 22:17	HRB	TAL PIT
Instrument ID: CHHP5										

Client Sample ID: HD-COD-SW-15-0/1-0

Lab Sample ID: 180-96180-10

Date Collected: 09/23/19 14:13

Matrix: Water

Date Received: 09/25/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 8260C		1	5 mL	5 mL	293070	09/28/19 16:15	HRB	TAL PIT
Instrument ID: CHHP5										

Client Sample ID: HD-COD-SW-27-0/1-0

Lab Sample ID: 180-96180-11

Date Collected: 09/23/19 14:30

Matrix: Water

Date Received: 09/25/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 8260C		1	5 mL	5 mL	292962	09/27/19 23:06	HRB	TAL PIT
Instrument ID: CHHP5										

Client Sample ID: HD-QC1-0/1-2

Lab Sample ID: 180-96180-12

Date Collected: 09/23/19 00:00

Matrix: Water

Date Received: 09/25/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 8260C		1	5 mL	5 mL	292962	09/27/19 23:30	HRB	TAL PIT
Instrument ID: CHHP5										

Lab Chronicle

Client: Groundwater Sciences Corporation
Project/Site: fYNOP

Job ID: 180-96180-1

Client Sample ID: HD-MW-110-0/1-0

Lab Sample ID: 180-96180-13

Date Collected: 09/24/19 13:30

Matrix: Water

Date Received: 09/25/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 8260C		1	5 mL	5 mL	293722	10/04/19 15:13	HRB	TAL PIT
Instrument ID: CHHP5										

Client Sample ID: HD-MW-108D-0/1-0

Lab Sample ID: 180-96180-14

Date Collected: 09/24/19 12:45

Matrix: Water

Date Received: 09/25/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 8260C		1	5 mL	5 mL	293722	10/04/19 15:37	HRB	TAL PIT
Instrument ID: CHHP5										

Client Sample ID: HD-QC1-0/1-1

Lab Sample ID: 180-96180-15

Date Collected: 09/24/19 12:00

Matrix: Water

Date Received: 09/25/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 8260C		2	5 mL	5 mL	293722	10/04/19 16:50	HRB	TAL PIT
Instrument ID: CHHP5										

Client Sample ID: HD-QC1-0/1-3

Lab Sample ID: 180-96180-16

Date Collected: 09/24/19 14:15

Matrix: Water

Date Received: 09/25/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 8260C		1	5 mL	5 mL	293722	10/04/19 16:02	HRB	TAL PIT
Instrument ID: CHHP5										

Client Sample ID: HD-QC1-0/1-4

Lab Sample ID: 180-96180-17

Date Collected: 09/24/19 14:20

Matrix: Water

Date Received: 09/25/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 8260C		1	5 mL	5 mL	293722	10/04/19 16:26	HRB	TAL PIT
Instrument ID: CHHP5										

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PIT

Batch Type: Analysis

HRB = Hannah Bowie

Accreditation/Certification Summary

Client: Groundwater Sciences Corporation
Project/Site: fYNOP

Job ID: 180-96180-1

Laboratory: Eurofins TestAmerica, Pittsburgh

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Pennsylvania	NELAP	02-00416	04-30-20

Method Summary

Client: Groundwater Sciences Corporation
Project/Site: fYNOP

Job ID: 180-96180-1

Method	Method Description	Protocol	Laboratory
EPA 8260C	Volatile Organic Compounds (GC/MS)	SW846	TAL PIT
5030C	Purge and Trap	SW846	TAL PIT

Protocol References:

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

Laboratory References:

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Sample Summary

Client: Groundwater Sciences Corporation
Project/Site: FYNOP

Job ID: 180-96180-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-96180-1	HD-COD-SW-29-0/1-0	Water	09/23/19 10:10	09/25/19 09:00	
180-96180-2	HD-COD-SW-8-0/1-0	Water	09/23/19 10:30	09/25/19 09:00	
180-96180-3	HD-COD-SW-13-0/1-0	Water	09/23/19 10:50	09/25/19 09:00	
180-96180-4	HD-COD-SW-16-0/1-0	Water	09/23/19 11:15	09/25/19 09:00	
180-96180-5	HD-COD-SW-6-0/1-0	Water	09/23/19 12:05	09/25/19 09:00	
180-96180-6	HD-COD-SW-26-0/1-0	Water	09/23/19 12:40	09/25/19 09:00	
180-96180-7	HD-COD-SW-7-0/1-0	Water	09/23/19 13:00	09/25/19 09:00	
180-96180-8	HD-COD-SW-9-0/1-0	Water	09/23/19 13:20	09/25/19 09:00	
180-96180-9	HD-COD-SW-28-0/1-0	Water	09/23/19 13:45	09/25/19 09:00	
180-96180-10	HD-COD-SW-15-0/1-0	Water	09/23/19 14:13	09/25/19 09:00	
180-96180-11	HD-COD-SW-27-0/1-0	Water	09/23/19 14:30	09/25/19 09:00	
180-96180-12	HD-QC1-0/1-2	Water	09/23/19 00:00	09/25/19 09:00	
180-96180-13	HD-MW-110-0/1-0	Water	09/24/19 13:30	09/25/19 09:00	
180-96180-14	HD-MW-108D-0/1-0	Water	09/24/19 12:45	09/25/19 09:00	
180-96180-15	HD-QC1-0/1-1	Water	09/24/19 12:00	09/25/19 09:00	
180-96180-16	HD-QC1-0/1-3	Water	09/24/19 14:15	09/25/19 09:00	
180-96180-17	HD-QC1-0/1-4	Water	09/24/19 14:20	09/25/19 09:00	

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Pittsb Job No.: 180-96180-1

SDG No.: _____

Instrument ID: CHHP5 Analysis Batch Number: 292045

Lab Sample ID: IC 180-292045/19 Client Sample ID: _____

Date Analyzed: 09/20/19 16:22 Lab File ID: 5092016.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2,2-Dichloropropane	6.17	Poor chromatography	bowieh	09/21/19 08:33
1,2-Dichloroethane	7.22	Peak assignment corrected	bowieh	09/21/19 08:33
Dibromochloromethane	10.02	Poor chromatography	bowieh	09/21/19 08:34
1,2,4-Trichlorobenzene	14.91	Poor chromatography	bowieh	09/21/19 08:34

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Pittsb Job No.: 180-96180-1

SDG No.: _____

Instrument ID: CHHP5 Analysis Batch Number: 292962Lab Sample ID: MB 180-292962/6 Client Sample ID: _____Date Analyzed: 09/27/19 16:02 Lab File ID: 5092710.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methylene Chloride	4.41	Peak assignment corrected	bowieh	09/28/19 10:48
1,1,2,2-Tetrachloroethane		Invalid Compound ID	bowieh	09/28/19 10:49
2-Hexanone		Invalid Compound ID	bowieh	09/28/19 10:49
4-Methyl-2-pentanone (MIBK)		Invalid Compound ID	bowieh	09/28/19 10:49
Benzene		Invalid Compound ID	bowieh	09/28/19 10:49
Bromomethane		Invalid Compound ID	bowieh	09/28/19 10:48

Lab Sample ID: 180-96180-1 Client Sample ID: HD-COD-SW-29-0/1-0Date Analyzed: 09/27/19 19:02 Lab File ID: 5092717.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Carbon disulfide	3.89	Poor chromatography	bowieh	09/28/19 11:02
Methylene Chloride	4.40	Poor chromatography	bowieh	09/28/19 11:02
2-Hexanone		Invalid Compound ID	bowieh	09/28/19 11:02
4-Methyl-2-pentanone (MIBK)		Invalid Compound ID	bowieh	09/28/19 11:02
Benzene		Invalid Compound ID	bowieh	09/28/19 11:02
Bromomethane		Invalid Compound ID	bowieh	09/28/19 11:01
Chloroethane		Invalid Compound ID	bowieh	09/28/19 11:01
cis-1,2-Dichloroethene		Invalid Compound ID	bowieh	09/28/19 11:02
Ethylbenzene		Invalid Compound ID	bowieh	09/28/19 11:02
Tetrachloroethene		Invalid Compound ID	bowieh	09/28/19 11:02

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Pittsb Job No.: 180-96180-1

SDG No.: _____

Instrument ID: CHHP5 Analysis Batch Number: 292962Lab Sample ID: 180-96180-2 Client Sample ID: HD-COD-SW-8-0/1-0Date Analyzed: 09/27/19 19:27 Lab File ID: 5092718.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Carbon disulfide	3.88	Peak assignment corrected	bowieh	09/28/19 11:06
Methylene Chloride	4.40	Peak assignment corrected	bowieh	09/28/19 11:06
Trichloroethene	7.89	Poor chromatography	bowieh	09/28/19 11:06
1,1,2-Trichloroethane		Invalid Compound ID	bowieh	09/28/19 11:07
2-Hexanone		Invalid Compound ID	bowieh	09/28/19 11:07
4-Methyl-2-pentanone (MIBK)		Invalid Compound ID	bowieh	09/28/19 11:06
Benzene		Invalid Compound ID	bowieh	09/28/19 11:06
Bromomethane		Invalid Compound ID	bowieh	09/28/19 11:06
Chloromethane		Invalid Compound ID	bowieh	09/28/19 11:06
Ethylbenzene		Invalid Compound ID	bowieh	09/28/19 11:07

Lab Sample ID: 180-96180-3 Client Sample ID: HD-COD-SW-13-0/1-0Date Analyzed: 09/27/19 19:51 Lab File ID: 5092719.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methylene Chloride	4.41	Peak assignment corrected	bowieh	09/28/19 11:11
Toluene	9.19	Peak assignment corrected	bowieh	09/28/19 11:11
2-Hexanone		Invalid Compound ID	bowieh	09/28/19 11:11
4-Methyl-2-pentanone (MIBK)		Invalid Compound ID	bowieh	09/28/19 11:11
Benzene		Invalid Compound ID	bowieh	09/28/19 11:11
Bromomethane		Invalid Compound ID	bowieh	09/28/19 11:10
Chloroethane		Invalid Compound ID	bowieh	09/28/19 11:10
Chloromethane		Invalid Compound ID	bowieh	09/28/19 11:10
Ethylbenzene		Invalid Compound ID	bowieh	09/28/19 11:11

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Pittsb Job No.: 180-96180-1

SDG No.: _____

Instrument ID: CHHP5 Analysis Batch Number: 292962Lab Sample ID: 180-96180-4 Client Sample ID: HD-COD-SW-16-0/1-0Date Analyzed: 09/27/19 20:16 Lab File ID: 5092720.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,1,2-Trichloroethane		Invalid Compound ID	bowieh	09/28/19 11:12
2-Hexanone		Invalid Compound ID	bowieh	09/28/19 11:12
4-Methyl-2-pentanone (MIBK)		Invalid Compound ID	bowieh	09/28/19 11:12
Benzene		Invalid Compound ID	bowieh	09/28/19 11:12
Chloroethane		Invalid Compound ID	bowieh	09/28/19 11:11
Chloromethane		Invalid Compound ID	bowieh	09/28/19 11:11
Ethylbenzene		Invalid Compound ID	bowieh	09/28/19 11:12
m-Xylene & p-Xylene	10.83	Peak assignment corrected	bowieh	09/28/19 11:12

Lab Sample ID: 180-96180-5 Client Sample ID: HD-COD-SW-6-0/1-0Date Analyzed: 09/27/19 20:40 Lab File ID: 5092721.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methylene Chloride	4.42	Peak assignment corrected	bowieh	09/28/19 11:13
1,1,2-Trichloroethane		Invalid Compound ID	bowieh	09/28/19 11:13
2-Hexanone		Invalid Compound ID	bowieh	09/28/19 11:13
4-Methyl-2-pentanone (MIBK)		Invalid Compound ID	bowieh	09/28/19 11:13
Benzene		Invalid Compound ID	bowieh	09/28/19 11:13
Bromomethane		Invalid Compound ID	bowieh	09/28/19 11:12
Chloromethane		Invalid Compound ID	bowieh	09/28/19 11:12
Ethylbenzene		Invalid Compound ID	bowieh	09/28/19 11:13

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Pittsb Job No.: 180-96180-1

SDG No.: _____

Instrument ID: CHHP5 Analysis Batch Number: 292962Lab Sample ID: 180-96180-6 Client Sample ID: HD-COD-SW-26-0/1-0Date Analyzed: 09/27/19 21:04 Lab File ID: 5092722.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.69	Split Peak	bowieh	09/28/19 11:13
Methylene Chloride	4.41	Split Peak	bowieh	09/28/19 11:14
1,1,2-Trichloroethane		Invalid Compound ID	bowieh	09/28/19 11:14
2-Hexanone		Invalid Compound ID	bowieh	09/28/19 11:14
4-Methyl-2-pentanone (MIBK)		Invalid Compound ID	bowieh	09/28/19 11:14
Benzene		Invalid Compound ID	bowieh	09/28/19 11:14
Chloroethane		Invalid Compound ID	bowieh	09/28/19 11:13

Lab Sample ID: 180-96180-7 Client Sample ID: HD-COD-SW-7-0/1-0Date Analyzed: 09/27/19 21:29 Lab File ID: 5092723.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Tetrachloroethene	9.71	Invalid Compound ID	bowieh	09/28/19 11:15
1,1,2-Trichloroethane		Invalid Compound ID	bowieh	09/28/19 11:15
2-Hexanone		Invalid Compound ID	bowieh	09/28/19 11:15
4-Methyl-2-pentanone (MIBK)		Invalid Compound ID	bowieh	09/28/19 11:14
Benzene		Invalid Compound ID	bowieh	09/28/19 11:14
Chloroethane		Invalid Compound ID	bowieh	09/28/19 11:14
cis-1,2-Dichloroethene		Invalid Compound ID	bowieh	09/28/19 11:14
Ethylbenzene		Invalid Compound ID	bowieh	09/28/19 11:15

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Pittsb Job No.: 180-96180-1

SDG No.: _____

Instrument ID: CHHP5 Analysis Batch Number: 292962Lab Sample ID: 180-96180-8 Client Sample ID: HD-COD-SW-9-0/1-0Date Analyzed: 09/27/19 21:53 Lab File ID: 5092724.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dichloroethane		Invalid Compound ID	bowieh	09/28/19 11:16
2-Butanone (MEK)		Invalid Compound ID	bowieh	09/28/19 11:16
2-Hexanone		Invalid Compound ID	bowieh	09/28/19 11:16
4-Methyl-2-pentanone (MIBK)		Invalid Compound ID	bowieh	09/28/19 11:16
Benzene		Invalid Compound ID	bowieh	09/28/19 11:16
Bromomethane		Invalid Compound ID	bowieh	09/28/19 11:16
Chloromethane		Invalid Compound ID	bowieh	09/28/19 11:16
cis-1,2-Dichloroethene		Invalid Compound ID	bowieh	09/28/19 11:16
Ethylbenzene		Invalid Compound ID	bowieh	09/28/19 11:16

Lab Sample ID: 180-96180-9 Client Sample ID: HD-COD-SW-28-0/1-0Date Analyzed: 09/27/19 22:17 Lab File ID: 5092725.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.67	Peak assignment corrected	bowieh	09/28/19 11:17
Carbon disulfide	3.87	Peak assignment corrected	bowieh	09/28/19 11:17
Methylene Chloride	4.43	Peak assignment corrected	bowieh	09/28/19 11:17
Chloroform	6.61	Poor chromatography	bowieh	09/28/19 11:18
Toluene	9.20	Poor chromatography	bowieh	09/28/19 11:18
2-Butanone (MEK)		Invalid Compound ID	bowieh	09/28/19 11:17
2-Hexanone		Invalid Compound ID	bowieh	09/28/19 11:18
4-Methyl-2-pentanone (MIBK)		Invalid Compound ID	bowieh	09/28/19 11:18
Benzene		Invalid Compound ID	bowieh	09/28/19 11:18
Bromomethane		Invalid Compound ID	bowieh	09/28/19 11:17
Chloromethane		Invalid Compound ID	bowieh	09/28/19 11:17
Ethylbenzene		Invalid Compound ID	bowieh	09/28/19 11:18
Styrene		Invalid Compound ID	bowieh	09/28/19 11:18
Vinyl chloride		Invalid Compound ID	bowieh	09/28/19 11:17

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Pittsb Job No.: 180-96180-1

SDG No.: _____

Instrument ID: CHHP5 Analysis Batch Number: 292962Lab Sample ID: 180-96180-11 Client Sample ID: HD-COD-SW-27-0/1-0Date Analyzed: 09/27/19 23:06 Lab File ID: 5092727.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloroform	6.59	Poor chromatography	bowieh	09/28/19 11:26
1,2-Dichloropropane		Invalid Compound ID	bowieh	09/28/19 11:26
2-Butanone (MEK)		Invalid Compound ID	bowieh	09/28/19 11:26
2-Hexanone		Invalid Compound ID	bowieh	09/28/19 11:26
4-Methyl-2-pentanone (MIBK)		Invalid Compound ID	bowieh	09/28/19 11:26
Benzene		Invalid Compound ID	bowieh	09/28/19 11:26
Bromomethane		Invalid Compound ID	bowieh	09/28/19 11:25
Chloromethane		Invalid Compound ID	bowieh	09/28/19 11:25
Ethylbenzene		Invalid Compound ID	bowieh	09/28/19 11:26

Lab Sample ID: 180-96180-12 Client Sample ID: HD-QC1-0/1-2Date Analyzed: 09/27/19 23:30 Lab File ID: 5092728.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dichloropropane		Invalid Compound ID	bowieh	09/28/19 11:27
4-Methyl-2-pentanone (MIBK)		Invalid Compound ID	bowieh	09/28/19 11:27
Acetone		Invalid Compound ID	bowieh	09/28/19 11:26
Bromomethane		Invalid Compound ID	bowieh	09/28/19 11:26
Chloroform		Invalid Compound ID	bowieh	09/28/19 11:27

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Pittsb Job No.: 180-96180-1

SDG No.: _____

Instrument ID: CHHP5 Analysis Batch Number: 293070Lab Sample ID: MB 180-293070/6 Client Sample ID: _____Date Analyzed: 09/28/19 12:00 Lab File ID: 5092806.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methylene Chloride	4.40	Peak assignment corrected	bowieh	09/28/19 14:57
2-Hexanone		Invalid Compound ID	bowieh	09/28/19 14:57
4-Methyl-2-pentanone (MIBK)		Invalid Compound ID	bowieh	09/28/19 14:57
Chloromethane		Invalid Compound ID	bowieh	09/28/19 14:57

Lab Sample ID: 180-96180-10 Client Sample ID: HD-COD-SW-15-0/1-0Date Analyzed: 09/28/19 16:15 Lab File ID: 5092816.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,1,2-Trichloroethane		Invalid Compound ID	bowieh	10/01/19 09:21
4-Methyl-2-pentanone (MIBK)		Invalid Compound ID	bowieh	10/01/19 09:21
Benzene		Invalid Compound ID	bowieh	10/01/19 09:21
Bromomethane		Invalid Compound ID	bowieh	10/01/19 09:20
Chloroethane		Invalid Compound ID	bowieh	10/01/19 09:20
Chloromethane		Invalid Compound ID	bowieh	10/01/19 09:20
Ethylbenzene		Invalid Compound ID	bowieh	10/01/19 09:21
Methylene Chloride		Invalid Compound ID	bowieh	10/01/19 09:21

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Pittsb Job No.: 180-96180-1

SDG No.: _____

Instrument ID: CHHP5 Analysis Batch Number: 293722Lab Sample ID: MB 180-293722/6 Client Sample ID: _____Date Analyzed: 10/04/19 14:10 Lab File ID: 5100407.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methylene Chloride	4.41	Peak assignment corrected	bowieh	10/05/19 09:15
Chloroform	6.61	Poor chromatography	bowieh	10/05/19 09:15
1,1,2,2-Tetrachloroethane		Invalid Compound ID	bowieh	10/05/19 09:15
2-Hexanone		Invalid Compound ID	bowieh	10/05/19 09:15
4-Methyl-2-pentanone (MIBK)		Invalid Compound ID	bowieh	10/05/19 09:15
Acetone		Invalid Compound ID	bowieh	10/05/19 09:15
Benzene		Invalid Compound ID	bowieh	10/05/19 09:15
Bromodichloromethane		Invalid Compound ID	bowieh	10/05/19 09:15
Bromomethane		Invalid Compound ID	bowieh	10/05/19 09:14
Chloroethane		Invalid Compound ID	bowieh	10/05/19 09:14

Lab Sample ID: 180-96180-13 Client Sample ID: HD-MW-110-0/1-0Date Analyzed: 10/04/19 15:13 Lab File ID: 5100408.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,1,2-Trichloroethane		Invalid Compound ID	bowieh	10/04/19 16:39
1,2-Dichloroethane		Invalid Compound ID	bowieh	10/04/19 16:39
Benzene		Invalid Compound ID	bowieh	10/04/19 16:39
Bromomethane		Invalid Compound ID	bowieh	10/04/19 16:34
cis-1,2-Dichloroethene		Invalid Compound ID	bowieh	10/04/19 16:34
Ethylbenzene		Invalid Compound ID	bowieh	10/04/19 16:39
Methyl tert-butyl ether		Invalid Compound ID	bowieh	10/08/19 09:39

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Pittsb Job No.: 180-96180-1

SDG No.: _____

Instrument ID: CHHP5 Analysis Batch Number: 293722Lab Sample ID: 180-96180-14 Client Sample ID: HD-MW-108D-0/1-0Date Analyzed: 10/04/19 15:37 Lab File ID: 5100409.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.71	Peak assignment corrected	bowieh	10/04/19 16:39
Trichloroethene	7.88	Poor chromatography	bowieh	10/04/19 16:40
Tetrachloroethene	9.72	Poor chromatography	bowieh	10/04/19 16:40
1,1,2-Trichloroethane		Invalid Compound ID	bowieh	10/04/19 16:40
2-Hexanone		Invalid Compound ID	bowieh	10/04/19 16:40
4-Methyl-2-pentanone (MIBK)		Invalid Compound ID	bowieh	10/04/19 16:40
Benzene		Invalid Compound ID	bowieh	10/04/19 16:40
Bromomethane		Invalid Compound ID	bowieh	10/04/19 16:39
Chloromethane		Invalid Compound ID	bowieh	10/04/19 16:39
Ethylbenzene		Invalid Compound ID	bowieh	10/04/19 16:40
m-Xylene & p-Xylene		Invalid Compound ID	bowieh	10/04/19 16:42

Lab Sample ID: 180-96180-16 Client Sample ID: HD-QC1-0/1-3Date Analyzed: 10/04/19 16:02 Lab File ID: 5100410.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dichloroethane		Invalid Compound ID	bowieh	10/04/19 16:43
2-Hexanone		Invalid Compound ID	bowieh	10/04/19 16:43
4-Methyl-2-pentanone (MIBK)		Invalid Compound ID	bowieh	10/04/19 16:43
Benzene		Invalid Compound ID	bowieh	10/04/19 16:43
Chloromethane		Invalid Compound ID	bowieh	10/04/19 16:43

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Pittsb Job No.: 180-96180-1

SDG No.: _____

Instrument ID: CHHP5 Analysis Batch Number: 293722Lab Sample ID: 180-96180-17 Client Sample ID: HD-QC1-0/1-4Date Analyzed: 10/04/19 16:26 Lab File ID: 5100411.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methylene Chloride	4.41	Peak assignment corrected	bowieh	10/05/19 09:17
1,2-Dichloropropane		Invalid Compound ID	bowieh	10/05/19 09:17
2-Hexanone		Invalid Compound ID	bowieh	10/05/19 09:17
4-Methyl-2-pentanone (MIBK)		Invalid Compound ID	bowieh	10/05/19 09:17
Acetone		Invalid Compound ID	bowieh	10/05/19 09:16
Benzene		Invalid Compound ID	bowieh	10/05/19 09:17
Bromomethane		Invalid Compound ID	bowieh	10/05/19 09:16
Carbon disulfide		Invalid Compound ID	bowieh	10/05/19 09:17
Chloroform		Invalid Compound ID	bowieh	10/05/19 09:17
Styrene		Invalid Compound ID	bowieh	10/05/19 09:17

Lab Sample ID: 180-96180-15 Client Sample ID: HD-QC1-0/1-1Date Analyzed: 10/04/19 16:50 Lab File ID: 5100412.D GC Column: DB-624 ID: 0.18 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.66	Peak assignment corrected	bowieh	10/05/19 09:18
Chloroform	6.60	Poor chromatography	bowieh	10/05/19 09:18
Trichloroethene	7.88	Poor chromatography	bowieh	10/05/19 09:18
1,1,2-Trichloroethane		Invalid Compound ID	bowieh	10/05/19 09:18
2-Hexanone		Invalid Compound ID	bowieh	10/05/19 09:18
4-Methyl-2-pentanone (MIBK)		Invalid Compound ID	bowieh	10/05/19 09:18
Bromomethane		Invalid Compound ID	bowieh	10/05/19 09:17
Chloromethane		Invalid Compound ID	bowieh	10/05/19 09:17
Ethylbenzene		Invalid Compound ID	bowieh	10/05/19 09:18
Methyl tert-butyl ether		Invalid Compound ID	bowieh	10/05/19 09:18

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration		
					Reagent ID	Volume Added				
VOA8260INT_00099	10/06/19	09/06/19	Methanol, Lot 3167189	10 mL	VOA8260INTRES_00166	1 mL	1,4-Dichlorobenzene-d4	25 ug/mL		
							Chlorobenzene-d5	25 ug/mL		
							Fluorobenzene (IS)	25 ug/mL		
							TBA-d9 (IS)	500 ug/mL		
.VOA8260INTRES_00166	01/31/24		Restek, Lot A0145169		(Purchased Reagent)		1,4-Dichlorobenzene-d4	250 ug/mL		
							Chlorobenzene-d5	250 ug/mL		
							Fluorobenzene (IS)	250 ug/mL		
							TBA-d9 (IS)	5000 ug/mL		
VOA8260SURR_00099	10/06/19	09/06/19	Methanol, Lot 3167189	100 mL	VOA8260SURRES_00160	1 mL	1,2-Dichloroethane-d4 (Surr)	25 ug/mL		
							4-Bromofluorobenzene (Surr)	25 ug/mL		
							Dibromofluoromethane (Surr)	25 ug/mL		
							Toluene-d8 (Surr)	25 ug/mL		
.VOA8260SURRES_00160	11/30/23		Restek, Lot A0143613		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL		
							4-Bromofluorobenzene (Surr)	2500 ug/mL		
							Dibromofluoromethane (Surr)	2500 ug/mL		
							Toluene-d8 (Surr)	2500 ug/mL		
VOA8260VOA2ND_00372	10/05/19	09/28/19	Methanol, Lot 3167194	10 mL	VOA8260GAS2ND_00283	0.1 mL	Bromomethane	25 ug/mL		
							Chloroethane	25 ug/mL		
							Chloromethane	25 ug/mL		
							Vinyl chloride	25 ug/mL		
							VOA8260VOA2ND_00367	1 mL	1,1,1,2-Tetrachloroethane	25 ug/mL
									1,1,1-Trichloroethane	25 ug/mL
									1,1,2,2-Tetrachloroethane	25 ug/mL
									1,1,2-Trichloroethane	25 ug/mL
					1,1-Dichloroethane	25 ug/mL				
					1,1-Dichloroethene	25 ug/mL				
					1,2-Dibromoethane (EDB)	25 ug/mL				
					1,2-Dichloroethane	25 ug/mL				
					1,2-Dichloropropane	25 ug/mL				
					Acrylonitrile	250 ug/mL				
					Benzene	25 ug/mL				
					Bromochloromethane	25 ug/mL				
					Bromodichloromethane	25 ug/mL				
					Bromoform	25 ug/mL				
					Carbon disulfide	25 ug/mL				
					Carbon tetrachloride	25 ug/mL				
					Chlorobenzene	25 ug/mL				
					Chloroform	25 ug/mL				
					cis-1,2-Dichloroethene	25 ug/mL				
					cis-1,3-Dichloropropene	25 ug/mL				
					Dibromochloromethane	25 ug/mL				
					Ethylbenzene	25 ug/mL				
					Methyl tert-butyl ether	25 ug/mL				
					Methylene Chloride	25 ug/mL				
					Styrene	25 ug/mL				
					Tetrachloroethene	25 ug/mL				
					Toluene	25 ug/mL				

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							trans-1,2-Dichloroethene	25 ug/mL
							trans-1,3-Dichloropropene	25 ug/mL
							Trichloroethene	25 ug/mL
							Xylenes, Total	50 ug/mL
.VOA8260GAS2ND_00283	04/30/22		Restek, Lot A0148330			(Purchased Reagent)	Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.VOA8260VOA2ND_00367	10/06/19	09/06/19	Methanol, Lot 3167192	10 mL	VOA8260MEGA2_00084	1 mL	1,1,1,2-Tetrachloroethane	250 ug/mL
							1,1,1-Trichloroethane	250 ug/mL
							1,1,2,2-Tetrachloroethane	250 ug/mL
							1,1,2-Trichloroethane	250 ug/mL
							1,1-Dichloroethane	250 ug/mL
							1,1-Dichloroethene	250 ug/mL
							1,2-Dibromoethane (EDB)	250 ug/mL
							1,2-Dichloroethane	250 ug/mL
							1,2-Dichloropropane	250 ug/mL
							Acrylonitrile	2500 ug/mL
							Benzene	250 ug/mL
							Bromochloromethane	250 ug/mL
							Bromodichloromethane	250 ug/mL
							Bromoform	250 ug/mL
							Carbon disulfide	250 ug/mL
							Carbon tetrachloride	250 ug/mL
							Chlorobenzene	250 ug/mL
							Chloroform	250 ug/mL
							cis-1,2-Dichloroethene	250 ug/mL
							cis-1,3-Dichloropropene	250 ug/mL
							Dibromochloromethane	250 ug/mL
							Ethylbenzene	250 ug/mL
							Methyl tert-butyl ether	250 ug/mL
							Methylene Chloride	250 ug/mL
							Styrene	250 ug/mL
							Tetrachloroethene	250 ug/mL
							Toluene	250 ug/mL
							trans-1,2-Dichloroethene	250 ug/mL
							trans-1,3-Dichloropropene	250 ug/mL
							Trichloroethene	250 ug/mL
							Xylenes, Total	500 ug/mL
..VOA8260MEGA2_00084	06/30/21		Restek, Lot A0144202			(Purchased Reagent)	1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,2-Dibromoethane (EDB)	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acrylonitrile	25000 ug/mL
							Benzene	2500 ug/mL
							Bromochloromethane	2500 ug/mL
							Bromodichloromethane	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Dibromochloromethane	2500 ug/mL
							Ethylbenzene	2500 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							Styrene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							Trichloroethene	2500 ug/mL
							Xylenes, Total	5000 ug/mL
VOA8260VOAPRI_00373	09/27/19	09/20/19	Methanol, Lot 3167192	10 mL	VOA8260GAS1ST_00277	0.1 mL	Bromomethane	25 ug/mL
							Butadiene	25 ug/mL
							Chloroethane	25 ug/mL
							Chloromethane	25 ug/mL
							Dichlorodifluoromethane	25 ug/mL
							Dichlorofluoromethane	25 ug/mL
							Trichlorofluoromethane	25 ug/mL
							Vinyl chloride	25 ug/mL
					VOA8260VOAPRI_00369	1 mL	2-Butanone (MEK)	25 ug/mL
							2-Hexanone	25 ug/mL
							4-Methyl-2-pentanone (MIBK)	25 ug/mL
							Acetone	25 ug/mL
							1,1,1,2-Tetrachloroethane	25 ug/mL
							1,1,1-Trichloroethane	25 ug/mL
							1,1,2,2-Tetrachloroethane	25 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	25 ug/mL
							1,1,2-Trichloroethane	25 ug/mL
							1,1-Dichloroethane	25 ug/mL
							1,1-Dichloroethene	25 ug/mL
							1,1-Dichloropropene	25 ug/mL
							1,2,3-Trichlorobenzene	25 ug/mL
							1,2,3-Trichloropropane	25 ug/mL
							1,2,4-Trichlorobenzene	25 ug/mL
							1,2,4-Trimethylbenzene	25 ug/mL
							1,2-Dibromo-3-Chloropropane	25 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Dibromoethane (EDB)	25 ug/mL
							1,2-Dichlorobenzene	25 ug/mL
							1,2-Dichloroethane	25 ug/mL
							1,2-Dichloropropane	25 ug/mL
							1,3,5-Trimethylbenzene	25 ug/mL
							1,3-Dichlorobenzene	25 ug/mL
							1,3-Dichloropropane	25 ug/mL
							1,4-Dichlorobenzene	25 ug/mL
							1,4-Dioxane	500 ug/mL
							2,2-Dichloropropane	25 ug/mL
							2-Chlorotoluene	25 ug/mL
							2-Methyl-2-propanol	250 ug/mL
							3-Chloro-1-propene	25 ug/mL
							4-Chlorotoluene	25 ug/mL
							4-Isopropyltoluene	25 ug/mL
							Acrylonitrile	250 ug/mL
							Benzene	25 ug/mL
							Bromobenzene	25 ug/mL
							Bromochloromethane	25 ug/mL
							Bromodichloromethane	25 ug/mL
							Bromoform	25 ug/mL
							Carbon disulfide	25 ug/mL
							Carbon tetrachloride	25 ug/mL
							Chlorobenzene	25 ug/mL
							Chloroform	25 ug/mL
							cis-1,2-Dichloroethene	25 ug/mL
							cis-1,3-Dichloropropene	25 ug/mL
							Cyclohexane	25 ug/mL
							Dibromochloromethane	25 ug/mL
							Dibromomethane	25 ug/mL
							Ethyl ether	25 ug/mL
							Ethyl methacrylate	25 ug/mL
							Ethylbenzene	25 ug/mL
							Hexachlorobutadiene	25 ug/mL
							Hexane	25 ug/mL
							Iodomethane	25 ug/mL
							Isobutyl alcohol	625 ug/mL
							Isopropylbenzene	25 ug/mL
							m-Xylene & p-Xylene	25 ug/mL
							Methyl acetate	50 ug/mL
							Methyl tert-butyl ether	25 ug/mL
							Methylcyclohexane	25 ug/mL
							Methylene Chloride	25 ug/mL
							n-Butylbenzene	25 ug/mL
							n-Heptane	25 ug/mL
							N-Propylbenzene	25 ug/mL
							Naphthalene	25 ug/mL
							o-Xylene	25 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							sec-Butylbenzene	25 ug/mL
							Styrene	25 ug/mL
							tert-Butylbenzene	25 ug/mL
							Tetrachloroethene	25 ug/mL
							Tetrahydrofuran	50 ug/mL
							Toluene	25 ug/mL
							trans-1,2-Dichloroethene	25 ug/mL
							trans-1,3-Dichloropropene	25 ug/mL
							trans-1,4-Dichloro-2-butene	25 ug/mL
							Trichloroethene	25 ug/mL
.VOA8260GAS1ST_00277	03/31/21		Restek, Lot A0146651			(Purchased Reagent)	Bromomethane	2500 ug/mL
							Butadiene	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Dichlorofluoromethane	2500 ug/mL
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.VOA8260VOAPRI_00369	09/27/19	08/27/19	Methanol, Lot 3167192	10 mL	VOA8260KET1ST_00132	0.2 mL	2-Butanone (MEK)	250 ug/mL
							2-Hexanone	250 ug/mL
							4-Methyl-2-pentanone (MIBK)	250 ug/mL
							Acetone	250 ug/mL
					VOA8260MEGA1_00090	1 mL	1,1,1,2-Tetrachloroethane	250 ug/mL
							1,1,1-Trichloroethane	250 ug/mL
							1,1,2,2-Tetrachloroethane	250 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	250 ug/mL
							1,1,2-Trichloroethane	250 ug/mL
							1,1-Dichloroethane	250 ug/mL
							1,1-Dichloroethene	250 ug/mL
							1,1-Dichloropropene	250 ug/mL
							1,2,3-Trichlorobenzene	250 ug/mL
							1,2,3-Trichloropropane	250 ug/mL
							1,2,4-Trichlorobenzene	250 ug/mL
							1,2,4-Trimethylbenzene	250 ug/mL
							1,2-Dibromo-3-Chloropropane	250 ug/mL
							1,2-Dibromoethane (EDB)	250 ug/mL
							1,2-Dichlorobenzene	250 ug/mL
							1,2-Dichloroethane	250 ug/mL
							1,2-Dichloropropane	250 ug/mL
							1,3,5-Trimethylbenzene	250 ug/mL
							1,3-Dichlorobenzene	250 ug/mL
							1,3-Dichloropropane	250 ug/mL
							1,4-Dichlorobenzene	250 ug/mL
							1,4-Dioxane	5000 ug/mL
							2,2-Dichloropropane	250 ug/mL
							2-Chlorotoluene	250 ug/mL
							2-Methyl-2-propanol	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..VOA8260KET1ST_00132	12/31/21		Restek, Lot A0143988			(Purchased Reagent)	3-Chloro-1-propene	250 ug/mL
							4-Chlorotoluene	250 ug/mL
							4-Isopropyltoluene	250 ug/mL
							Acrylonitrile	2500 ug/mL
							Benzene	250 ug/mL
							Bromobenzene	250 ug/mL
							Bromochloromethane	250 ug/mL
							Bromodichloromethane	250 ug/mL
							Bromoform	250 ug/mL
							Carbon disulfide	250 ug/mL
							Carbon tetrachloride	250 ug/mL
							Chlorobenzene	250 ug/mL
							Chloroform	250 ug/mL
							cis-1,2-Dichloroethene	250 ug/mL
							cis-1,3-Dichloropropene	250 ug/mL
							Cyclohexane	250 ug/mL
							Dibromochloromethane	250 ug/mL
							Dibromomethane	250 ug/mL
							Ethyl ether	250 ug/mL
							Ethyl methacrylate	250 ug/mL
							Ethylbenzene	250 ug/mL
							Hexachlorobutadiene	250 ug/mL
							Hexane	250 ug/mL
							Iodomethane	250 ug/mL
							Isobutyl alcohol	6250 ug/mL
							Isopropylbenzene	250 ug/mL
							m-Xylene & p-Xylene	250 ug/mL
							Methyl acetate	500 ug/mL
							Methyl tert-butyl ether	250 ug/mL
							Methylcyclohexane	250 ug/mL
							Methylene Chloride	250 ug/mL
							n-Butylbenzene	250 ug/mL
							n-Heptane	250 ug/mL
							N-Propylbenzene	250 ug/mL
							Naphthalene	250 ug/mL
							o-Xylene	250 ug/mL
							sec-Butylbenzene	250 ug/mL
							Styrene	250 ug/mL
							tert-Butylbenzene	250 ug/mL
							Tetrachloroethene	250 ug/mL
							Tetrahydrofuran	500 ug/mL
Toluene	250 ug/mL							
trans-1,2-Dichloroethene	250 ug/mL							
trans-1,3-Dichloropropene	250 ug/mL							
trans-1,4-Dichloro-2-butene	250 ug/mL							
Trichloroethene	250 ug/mL							
2-Butanone (MEK)	12500 ug/mL							
2-Hexanone	12500 ug/mL							

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..VOA8260MEGA1_00090	06/30/21		Restek, Lot A0143774			(Purchased Reagent)	4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
							1,1,1,2-Tetrachloroethane	2500 ug/mL
							1,1,1-Trichloroethane	2500 ug/mL
							1,1,2,2-Tetrachloroethane	2500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2500 ug/mL
							1,1,2-Trichloroethane	2500 ug/mL
							1,1-Dichloroethane	2500 ug/mL
							1,1-Dichloroethene	2500 ug/mL
							1,1-Dichloropropene	2500 ug/mL
							1,2,3-Trichlorobenzene	2500 ug/mL
							1,2,3-Trichloropropane	2500 ug/mL
							1,2,4-Trichlorobenzene	2500 ug/mL
							1,2,4-Trimethylbenzene	2500 ug/mL
							1,2-Dibromo-3-Chloropropane	2500 ug/mL
							1,2-Dibromoethane (EDB)	2500 ug/mL
							1,2-Dichlorobenzene	2500 ug/mL
							1,2-Dichloroethane	2500 ug/mL
							1,2-Dichloropropane	2500 ug/mL
							1,3,5-Trimethylbenzene	2500 ug/mL
							1,3-Dichlorobenzene	2500 ug/mL
							1,3-Dichloropropane	2500 ug/mL
							1,4-Dichlorobenzene	2500 ug/mL
							1,4-Dioxane	50000 ug/mL
							2,2-Dichloropropane	2500 ug/mL
							2-Chlorotoluene	2500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							3-Chloro-1-propene	2500 ug/mL
							4-Chlorotoluene	2500 ug/mL
							4-Isopropyltoluene	2500 ug/mL
							Acrylonitrile	25000 ug/mL
							Benzene	2500 ug/mL
							Bromobenzene	2500 ug/mL
							Bromochloromethane	2500 ug/mL
							Bromodichloromethane	2500 ug/mL
							Bromoform	2500 ug/mL
							Carbon disulfide	2500 ug/mL
							Carbon tetrachloride	2500 ug/mL
							Chlorobenzene	2500 ug/mL
							Chloroform	2500 ug/mL
							cis-1,2-Dichloroethene	2500 ug/mL
							cis-1,3-Dichloropropene	2500 ug/mL
							Cyclohexane	2500 ug/mL
Dibromochloromethane	2500 ug/mL							
Dibromomethane	2500 ug/mL							
Ethyl ether	2500 ug/mL							
Ethyl methacrylate	2500 ug/mL							

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Ethylbenzene	2500 ug/mL
							Hexachlorobutadiene	2500 ug/mL
							Hexane	2500 ug/mL
							Iodomethane	2500 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropylbenzene	2500 ug/mL
							m-Xylene & p-Xylene	2500 ug/mL
							Methyl acetate	5000 ug/mL
							Methyl tert-butyl ether	2500 ug/mL
							Methylcyclohexane	2500 ug/mL
							Methylene Chloride	2500 ug/mL
							n-Butylbenzene	2500 ug/mL
							n-Heptane	2500 ug/mL
							N-Propylbenzene	2500 ug/mL
							Naphthalene	2500 ug/mL
							o-Xylene	2500 ug/mL
							sec-Butylbenzene	2500 ug/mL
							Styrene	2500 ug/mL
							tert-Butylbenzene	2500 ug/mL
							Tetrachloroethene	2500 ug/mL
							Tetrahydrofuran	5000 ug/mL
							Toluene	2500 ug/mL
							trans-1,2-Dichloroethene	2500 ug/mL
							trans-1,3-Dichloropropene	2500 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
							Trichloroethene	2500 ug/mL
VOA8260VOAPRI_00373	09/27/19	09/20/19	Methanol, Lot 3167192	10 mL	VOA8260VOAPRI_00369	1 mL	Xylenes, Total	50 ug/mL
.VOA8260VOAPRI_00369	09/27/19	08/27/19	Methanol, Lot 3167192	10 mL	VOA8260MEGA1_00090	1 mL	Xylenes, Total	500 ug/mL
..VOA8260MEGA1_00090	06/30/21		Restek, Lot A0143774		(Purchased Reagent)		Xylenes, Total	5000 ug/mL
VOAACRPRI_00021	10/20/19	09/20/19	Methanol, Lot 3167194	100 mL	VOAACRORES_00148	125 uL	Acrolein	25 ug/mL
.VOAACRORES_00148	10/31/19		Restek, Lot A0147676		(Purchased Reagent)		Acrolein	20000 ug/mL
VOABFB25_00118							1,2-Dichloroethene, Total	
							1,3-Dichloropropene, Total	
							Tentatively Identified Compound	
							Total BTEX	
							Xylenes, Total	
.VOABFB50_00119	10/13/19	09/13/19	Methanol, Lot 3167189	50 mL	VOABFB50_00119	5 mL	BFB	25 ug/mL
..VOABFBRES_00081	11/30/23		Restek, Lot A0142868		VOABFBRES_00081	1 mL	BFB	50 ug/mL
					(Purchased Reagent)		BFB	2500 ug/mL
VOAVAPRI_00027	09/30/19	09/20/19	Methanol, Lot 3167194	10 mL	VOA8260VARES_00121	50 uL	Vinyl acetate	25 ug/mL
.VOA8260VARES_00121	09/30/19		Restek, Lot A0147136		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
voaWI/SHP5_00013	10/20/19	09/20/19	Methanol, Lot 3167194	25 mL	VOA8260INTSUR_00020	1 mL	1,4-Dichlorobenzene-d4	10 ug/mL
							Chlorobenzene-d5	10 ug/mL
							Fluorobenzene (IS)	10 ug/mL
							TBA-d9 (IS)	200 ug/mL
.VOA8260INTSUR_00020	01/31/22		Restek, Lot A0124021		(Purchased Reagent)		1,4-Dichlorobenzene-d4	250 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chlorobenzene-d5	250 ug/mL
							Fluorobenzene (IS)	250 ug/mL
							TBA-d9 (IS)	5000 ug/mL
voaWI/SHP5_00013	10/20/19	09/20/19	Methanol, Lot 3167194	25 mL	VOA8260INTSUR_00020	1 mL	1,2-Dichloroethane-d4 (Surr)	10 ug/mL
							4-Bromofluorobenzene (Surr)	10 ug/mL
							Dibromofluoromethane (Surr)	10 ug/mL
							Toluene-d8 (Surr)	10 ug/mL
.VOA8260INTSUR_00020	01/31/22		Restek, Lot A0124021			(Purchased Reagent)	1,2-Dichloroethane-d4 (Surr)	250 ug/mL
							4-Bromofluorobenzene (Surr)	250 ug/mL
							Dibromofluoromethane (Surr)	250 ug/mL
							Toluene-d8 (Surr)	250 ug/mL
voaWKet2ndRes_00043	10/06/19	09/06/19	Methanol, Lot 3167192	50 mL	VOA8260KET2ND_00124	100 uL	2-Butanone (MEK)	25 ug/mL
							2-Hexanone	25 ug/mL
							4-Methyl-2-pentanone (MIBK)	25 ug/mL
							Acetone	25 ug/mL
.VOA8260KET2ND_00124	11/30/21		Restek, Lot A0140456			(Purchased Reagent)	2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
voaWKetmix1st_00018	09/27/19	08/27/19	Methanol, Lot 3167192	50 mL	VOA8260KET1ST_00132	0.1 mL	2-Butanone (MEK)	25 ug/mL
							2-Hexanone	25 ug/mL
							4-Methyl-2-pentanone (MIBK)	25 ug/mL
							Acetone	25 ug/mL
.VOA8260KET1ST_00132	12/31/21		Restek, Lot A0143988			(Purchased Reagent)	2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL

Reagent

VOA8260GAS1ST_00277



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 569722 Lot No.: A0146651

Description : 8260 List 1 / Std #3 Gases (2015)
8260 List 1 / Std #3 Gases (2015) 2,500µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL Pkg Amt: > 1 mL

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

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Dichlorodifluoromethane (CFC-12) CAS # 75-71-8 (Lot 00012554) Purity 99%	2,500.2 µg/mL	+/- 19.5056 µg/mL +/- 140.7858 µg/mL +/- 144.0522 µg/mL	Gravimetric Unstressed Stressed	
2	Chloromethane (methyl chloride) CAS # 74-87-3 (Lot SHBJ6334) Purity 99%	2,501.5 µg/mL	+/- 20.4136 µg/mL +/- 140.9867 µg/mL +/- 144.2520 µg/mL	Gravimetric Unstressed Stressed	
3	Vinyl chloride CAS # 75-01-4 (Lot 00012557) Purity 99%	2,502.6 µg/mL	+/- 19.3699 µg/mL +/- 140.9018 µg/mL +/- 144.1719 µg/mL	Gravimetric Unstressed Stressed	
4	1,3-Butadiene CAS # 106-99-0 (Lot SHBK2299) Purity 99%	2,502.4 µg/mL	+/- 21.0409 µg/mL +/- 141.1253 µg/mL +/- 144.3895 µg/mL	Gravimetric Unstressed Stressed	
5	Bromomethane (methyl bromide) CAS # 74-83-9 (Lot 101604) Purity 99%	2,501.9 µg/mL	+/- 18.1039 µg/mL +/- 140.6930 µg/mL +/- 143.9660 µg/mL	Gravimetric Unstressed Stressed	
6	Chloroethane (ethyl chloride) CAS # 75-00-3 (Lot 107-401039114-1) Purity 99%	2,498.4 µg/mL	+/- 18.1959 µg/mL +/- 140.5102 µg/mL +/- 143.7782 µg/mL	Gravimetric Unstressed Stressed	
7	Dichlorofluoromethane (CFC-21) CAS # 75-43-4 (Lot 7978700) Purity 99%	2,500.0 µg/mL	+/- 14.5352 µg/mL +/- 140.1725 µg/mL +/- 143.4524 µg/mL	Gravimetric Unstressed Stressed	

8	Trichlorofluoromethane (CFC-11)	2,505.7 $\mu\text{g/mL}$	+/-	19.3191	$\mu\text{g/mL}$	Gravimetric
	CAS # 75-69-4 (Lot SHBH4155V)		+/-	141.0656	$\mu\text{g/mL}$	Unstressed
	Purity 99%		+/-	144.3399	$\mu\text{g/mL}$	Stressed

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

Tech Tips:

Raw material may contain trace amounts of tert-Butanol.

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

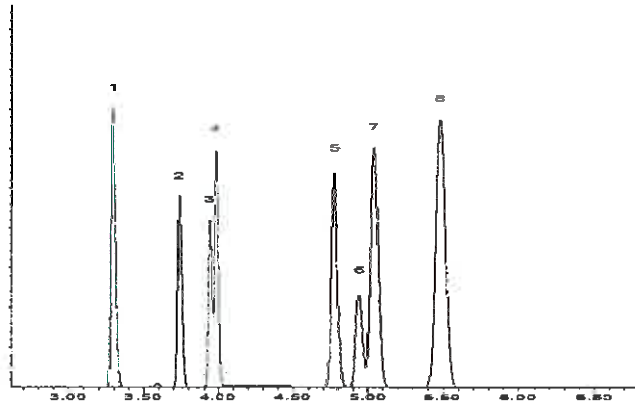
Carrier Gas:
 helium-constant pressure 30 psi

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

Inj. Temp:
 200°C

Det. Temp:
 250°C

Det. Type:
 MSD



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

Tom Suckar
 Tom Suckar - Mix Technician

Date Mixed: 05-Mar-2019 **Balance:** B707717271

John Lidgett
 John Lidgett - AD Chemist

Date Passed: 12-Mar-2019

Manufactured under Restek's ISO 9001:2015
 Registered Quality System
 Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

VOA8260GAS2ND_00283

8	Trichlorofluoromethane (CFC-11)	2,507.2	µg/mL	+/-	21.4957	µg/mL	Gravimetric
	CAS # 75-69-4.SEC (Lot 253600)			+/-	141.4611	µg/mL	Unstressed
	Purity 99%			+/-	144.7303	µg/mL	Stressed

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

* Restek is unable to identify a reliable and/or acceptable second source for this material - the same batch of neat material may have been used to produce both the primary and secondary standard. The primary and secondary standards were prepared using different equipment and personnel.

Tech Tips:

Raw material may contain trace amounts of tert-Butanol.

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

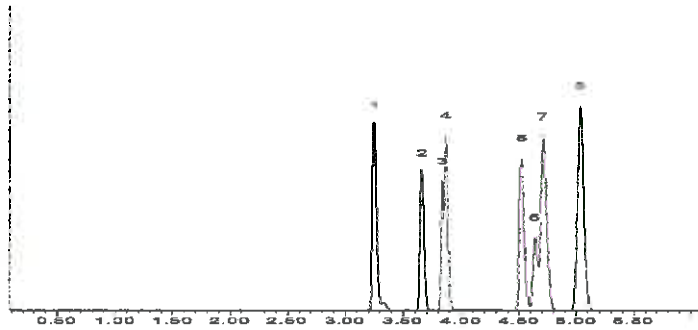
Carrier Gas:
 helium-constant pressure 30 psi

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

Inj. Temp:
 200°C

Det. Temp:
 250°C

Det. Type:
 MSD



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

Lane Kibe
 Lane Kibe - Mix Technician

Date Mixed: 18-Apr-2019 **Balance:** 1128342314

Peng-Yin Lu
 Peng-Yin Lu - QC Analyst

Date Passed: 30-Apr-2019

Manufactured under Restek's ISO 9001:2015
 Registered Quality System
 Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

VOA8260INTRES_00166



CERTIFIED REFERENCE MATERIAL

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

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Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 568718 **Lot No.:** A0145169
Description : 8260 Internal Standard 2014
8260 Internal Standard 2014 250-5,000µg/mL, P&T Methanol/Water (90:10), 5mL/ampul
Container Size : 5 mL **Pkg Amt:** > 5 mL
Expiration Date : January 31, 2024 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
			+/-	µg/mL	µg/mL	Gravimetric
1	tert-Butyl-d9-alcohol CAS # 25725-11-5 Purity 98% (Lot CD-107)	5,044.0 µg/mL	+/-	29.3246	µg/mL	Gravimetric
			+/-	107.9918	µg/mL	Unstressed
			+/-	111.1314	µg/mL	Stressed
2	2-Butanone-d5 CAS # 24313-50-6 Purity 99% (Lot M-276)	1,254.2 µg/mL	+/-	7.2922	µg/mL	Gravimetric
			+/-	26.8533	µg/mL	Unstressed
			+/-	27.6340	µg/mL	Stressed
3	Fluorobenzene CAS # 462-06-6 Purity 99% (Lot BCBK8171V)	252.1 µg/mL	+/-	1.4689	µg/mL	Gravimetric
			+/-	5.3977	µg/mL	Unstressed
			+/-	5.5545	µg/mL	Stressed
4	1,4-Dioxane-d8 CAS # 17647-74-4 Purity 99% (Lot I-19942)	5,027.8 µg/mL	+/-	29.2304	µg/mL	Gravimetric
			+/-	107.6448	µg/mL	Unstressed
			+/-	110.7743	µg/mL	Stressed
5	Chlorobenzene-d5 CAS # 3114-55-4 Purity 99% (Lot PR-23926)	250.6 µg/mL	+/-	1.4603	µg/mL	Gravimetric
			+/-	5.3661	µg/mL	Unstressed
			+/-	5.5220	µg/mL	Stressed
6	1,4-Dichlorobenzene-d4 CAS # 3855-82-1 Purity 99% (Lot PR-18488)	251.6 µg/mL	+/-	1.4660	µg/mL	Gravimetric
			+/-	5.3871	µg/mL	Unstressed
			+/-	5.5436	µg/mL	Stressed

Reagent

VOA8260INTSUR_00020



CERTIFIED REFERENCE MATERIAL

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Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 570812 **Lot No.:** A0124021
Description : 8260 IS/Surrogate Mix (2016)
8260 IS/Surrogate Mix (2016) 250-5000 µg/ml, P&T Methanol, 5 ml/ampul
Container Size : 5 mL **Pkg Amt:** > 5 mL
Expiration Date : January 31, 2022 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	tert-Butyl-d9-alcohol CAS # 25725-11-5 Purity 99% (Lot I-201)	5,000.4 µg/mL	+/- 29.0728	µg/mL	Gravimetric	
			+/- 107.0592	µg/mL	Unstressed	
			+/- 110.1716	µg/mL	Stressed	
2	Dibromofluoromethane CAS # 1868-53-7 Purity 99% (Lot 0012016)	250.4 µg/mL	+/- 1.4592	µg/mL	Gravimetric	
			+/- 5.3620	µg/mL	Unstressed	
			+/- 5.5178	µg/mL	Stressed	
3	1,2-Dichloroethane-d4 CAS # 17060-07-0 Purity 98% (Lot PR-25433)	250.4 µg/mL	+/- 1.4592	µg/mL	Gravimetric	
			+/- 5.3618	µg/mL	Unstressed	
			+/- 5.5176	µg/mL	Stressed	
4	1,4-Dioxane-d8 CAS # 17647-74-4 Purity 99% (Lot I-19942)	5,000.1 µg/mL	+/- 29.0710	µg/mL	Gravimetric	
			+/- 107.0527	µg/mL	Unstressed	
			+/- 110.1649	µg/mL	Stressed	
5	Fluorobenzene CAS # 462-06-6 Purity 99% (Lot BCBK8171V)	250.5 µg/mL	+/- 1.4598	µg/mL	Gravimetric	
			+/- 5.3641	µg/mL	Unstressed	
			+/- 5.5200	µg/mL	Stressed	
6	Toluene-d8 CAS # 2037-26-5 Purity 99% (Lot PR-27311)	250.1 µg/mL	+/- 1.4575	µg/mL	Gravimetric	
			+/- 5.3556	µg/mL	Unstressed	
			+/- 5.5112	µg/mL	Stressed	
7	Chlorobenzene-d5 CAS # 3114-55-4 Purity 99% (Lot PR-23926)	250.3 µg/mL	+/- 1.4586	µg/mL	Gravimetric	
			+/- 5.3599	µg/mL	Unstressed	
			+/- 5.5156	µg/mL	Stressed	

8	1-Bromo-4-fluorobenzene (BFB) CAS # 460-00-4 Purity 99%	(Lot 20401KOV)	250.7 µg/mL	+/- 1.4610 +/- 5.3684 +/- 5.5244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	1,4-Dichlorobenzene-d4 CAS # 3855-82-1 Purity 99%	(Lot PR-18488)	250.6 µg/mL	+/- 1.4604 +/- 5.3663 +/- 5.5222	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

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

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

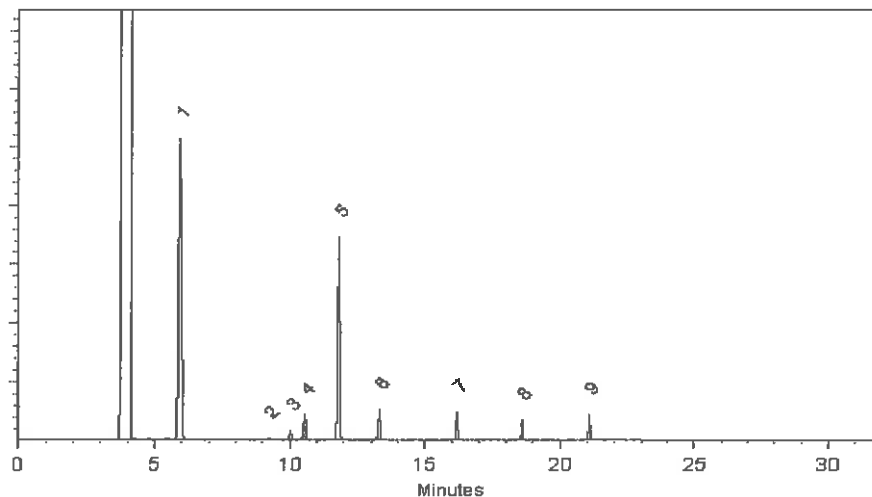
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



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

Michael Maje

Date Mixed: 06-Jan-2017 Balance: 1127510105

Jennifer J. Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 09-Jan-2017

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

Reagent

VOA8260KET1ST_00132



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

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 569721 **Lot No.:** A0143988
Description : 8260 List 1/ Std #2 Ketones (2015)
8260 List 1/ Std #2 Ketones (2015) 12,500µg/mL, P&T Methanol/Water (90:10), 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : December 31, 2021 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	Acetone	12,500.5 µg/mL	+/-	72.6790	µg/mL	Gravimetric
	CAS # 67-64-1 (Lot SHBJ7699)		+/-	754.2106	µg/mL	Unstressed
	Purity 99%		+/-	756.0012	µg/mL	Stressed
2	2-Butanone (MEK)	12,501.0 µg/mL	+/-	72.6819	µg/mL	Gravimetric
	CAS # 78-93-3 (Lot SHBF2461 V)		+/-	754.2407	µg/mL	Unstressed
	Purity 99%		+/-	756.0314	µg/mL	Stressed
3	4-Methyl-2-pentanone (MIBK)	12,501.5 µg/mL	+/-	72.6848	µg/mL	Gravimetric
	CAS # 108-10-1 (Lot SHBH8930)		+/-	754.2709	µg/mL	Unstressed
	Purity 99%		+/-	756.0617	µg/mL	Stressed
4	2-Hexanone	12,501.8 µg/mL	+/-	72.6863	µg/mL	Gravimetric
	CAS # 591-78-6 (Lot MKCD9048)		+/-	754.2860	µg/mL	Unstressed
	Purity 99%		+/-	756.0768	µg/mL	Stressed

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

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

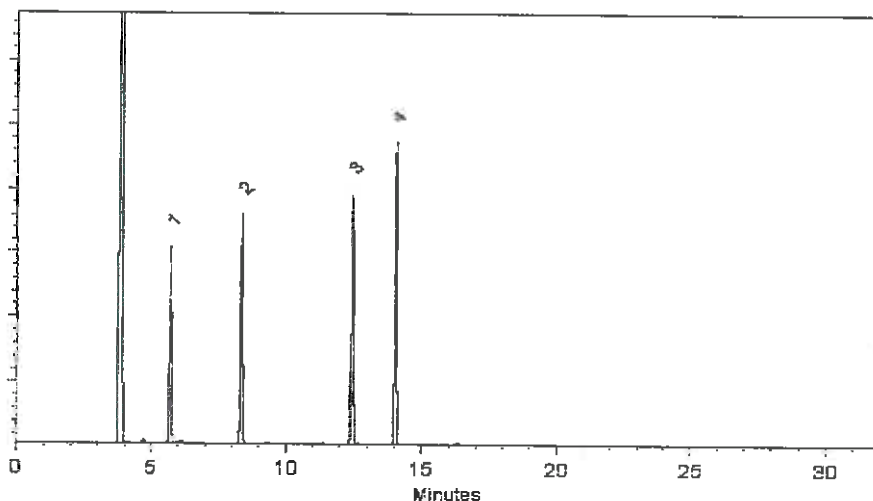
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



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

F. Joseph Talion - Mix Technician

Date Mixed: 11-Dec-2018 Balance: B251644995

Jennifer 2 Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 14-Dec-2018

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

VOA8260KET2ND_00124



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 569721.SEC **Lot No.:** A0143456

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

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

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

Expiration Date : November 30, 2021 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	Acetone	12,524.5 µg/mL (Lot U13B039)	+/-	72.8185	µg/mL	Gravimetric
	CAS # 67-64-1.SEC		+/-	755.6586	µg/mL	Unstressed
	Purity 99%		+/-	757.4526	µg/mL	Stressed
2	2-Butanone (MEK)	12,527.8 µg/mL (Lot RGZ2A)	+/-	72.8374	µg/mL	Gravimetric
	CAS # 78-93-3.SEC		+/-	755.8547	µg/mL	Unstressed
	Purity 99%		+/-	757.6492	µg/mL	Stressed
3	4-Methyl-2-pentanone (MIBK)	12,515.3 µg/mL (Lot E29T040)	+/-	72.7647	µg/mL	Gravimetric
	CAS # 108-10-1.SEC		+/-	755.1005	µg/mL	Unstressed
	Purity 99%		+/-	756.8932	µg/mL	Stressed
4	2-Hexanone	12,516.8 µg/mL (Lot Y3TUO)	+/-	72.7738	µg/mL	Gravimetric
	CAS # 591-78-6.SEC		+/-	755.1943	µg/mL	Unstressed
	Purity 98%		+/-	756.9873	µg/mL	Stressed

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

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

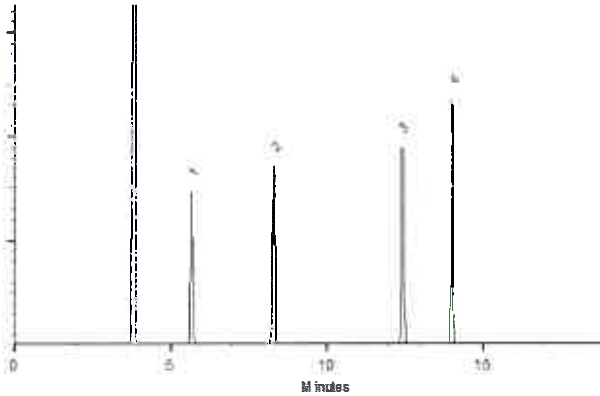
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



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

Dustin J. Lidgett
Dustin Lidgett - Mix Technician

Date Mixed: 20-Nov-2018 Balance: 1127510105

Justin M. Albersson
Justin M. Albersson - Operations Tech-APM GC

Date Passed: 29-Nov-2018

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

- The uncertainties are determined in accordance with ISO 17034 and Guide 35. The certified combined stressed uncertainty value (includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

$$U_{combined\ stressed} = k \sqrt{U_{gravimetric}^2 + U_{homogeneity}^2 + U_{storage\ stability}^2 + U_{shipping\ stability}^2}$$

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampules. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

VOA8260MEGA1_00090

RESTEK CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 571992 Lot No.: A0143774
 Description : 8260 List 1 / Std #1 MegaMix (2017)
8260 List 1 / Std #1 MegaMix (2017) 1,250-62,500µg/mL, P&T Methanol, 1mL/ampul
 Container Size : 2 mL Pkg Amt: > 1 mL
 Expiration Date : June 30, 2021 Storage: 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Diethyl ether (ethyl ether) CAS # 60-29-7 Purity 99% (Lot SHBJ5713)	2,500.6 µg/mL	+/-	14.5388	µg/mL Gravimetric
			+/-	150.8738	µg/mL Unstressed
			+/-	151.2320	µg/mL Stressed
2	1,1,2-Trichlorotrifluoroethane (CFC-113) CAS # 76-13-1 Purity 99% (Lot 00009482)	2,501.6 µg/mL	+/-	14.5447	µg/mL Gravimetric
			+/-	150.9341	µg/mL Unstressed
			+/-	151.2925	µg/mL Stressed
3	1,1-dichloroethene CAS # 75-35-4 Purity 99% (Lot SHBG8609V)	2,501.9 µg/mL	+/-	14.5461	µg/mL Gravimetric
			+/-	150.9492	µg/mL Unstressed
			+/-	151.3076	µg/mL Stressed
4	tert-Butanol (TBA) CAS # 75-65-0 Purity 99% (Lot SHBJ9404)	25,008.1 µg/mL	+/-	145.3918	µg/mL Gravimetric
			+/-	1,508.8503	µg/mL Unstressed
			+/-	1,512.4325	µg/mL Stressed
5	Methyl acetate CAS # 79-20-9 Purity 99% (Lot SHBG4345V)	5,000.8 µg/mL	+/-	29.0748	µg/mL Gravimetric
			+/-	301.7174	µg/mL Unstressed
			+/-	302.4337	µg/mL Stressed
6	Iodomethane (methyl iodide) CAS # 74-88-4 Purity 99% (Lot SHBH4362V)	2,500.6 µg/mL	+/-	14.5388	µg/mL Gravimetric
			+/-	150.8738	µg/mL Unstressed
			+/-	151.2320	µg/mL Stressed
7	Allyl chloride (3-chloropropene) CAS # 107-05-1 Purity 99% (Lot WXBB7852V)	2,502.0 µg/mL	+/-	14.5468	µg/mL Gravimetric
			+/-	150.9567	µg/mL Unstressed
			+/-	151.3151	µg/mL Stressed

8	Methylene chloride (dichloromethane) CAS # 75-09-2 Purity 99%	(Lot SHBK5095)	2,500.8 µg/mL	+/- 14.5396 +/- 150.8813 +/- 151.2395	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	Carbon disulfide CAS # 75-15-0 Purity 99%	(Lot U22D706)	2,501.1 µg/mL	+/- 14.5418 +/- 150.9040 +/- 151.2622	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	Acrylonitrile CAS # 107-13-1 Purity 99%	(Lot R15D047)	25,010.4 µg/mL	+/- 145.4049 +/- 1,508.9860 +/- 1,512.5686	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
11	Methyl-tert-butyl ether (MTBE) CAS # 1634-04-4 Purity 99%	(Lot SHBH9526)	2,500.3 µg/mL	+/- 14.5367 +/- 150.8512 +/- 151.2093	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
12	cis-1,2-Dichloroethene CAS # 156-59-2 Purity 99%	(Lot MKBX5945V)	2,501.3 µg/mL	+/- 14.5425 +/- 150.9115 +/- 151.2698	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
13	n-Hexane (C6) CAS # 110-54-3 Purity 99%	(Lot SHBH8106)	2,500.8 µg/mL	+/- 14.5396 +/- 150.8813 +/- 151.2395	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
14	1,1-Dichloroethane CAS # 75-34-3 Purity 99%	(Lot 462600)	2,500.4 µg/mL	+/- 14.5374 +/- 150.8587 +/- 151.2169	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
15	2,2-Dichloropropane CAS # 594-20-7 Purity 99%	(Lot BCBT5124)	2,500.9 µg/mL	+/- 14.5403 +/- 150.8889 +/- 151.2471	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
16	trans-1,2-Dichloroethene CAS # 156-60-5 Purity 99%	(Lot MKBH9850V)	2,500.3 µg/mL	+/- 14.5367 +/- 150.8512 +/- 151.2093	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
17	Isobutanol (2-Methyl-1-propanol) CAS # 78-83-1 Purity 99%	(Lot SHBK0551)	62,500.9 µg/mL	+/- 363.3665 +/- 3,770.9529 +/- 3,779.9058	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
18	chloroform CAS # 67-66-3 Purity 99%	(Lot SHBJ9076)	2,500.5 µg/mL	+/- 14.5381 +/- 150.8662 +/- 151.2244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
19	Bromochloromethane CAS # 74-97-5 Purity 98%	(Lot 00008541)	2,500.6 µg/mL	+/- 14.5387 +/- 150.8718 +/- 151.2300	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
20	Tetrahydrofuran CAS # 109-99-9 Purity 99%	(Lot SHBJ6179)	5,000.6 µg/mL	+/- 29.0741 +/- 301.7099 +/- 302.4262	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
21	1,1,1-trichloroethane CAS # 71-55-6 Purity 99%	(Lot B15W12061)	2,500.8 µg/mL	+/- 14.5396 +/- 150.8813 +/- 151.2395	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
22	Cyclohexane CAS # 110-82-7 Purity 99%	(Lot MKCC9660)	2,500.9 µg/mL	+/- 14.5403 +/- 150.8889 +/- 151.2471	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
23	1,1-Dichloropropene CAS # 563-58-6 Purity 99%	(Lot 180531JLM)	2,500.6 µg/mL	+/- 14.5388 +/- 150.8738 +/- 151.2320	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

24	carbon tetrachloride CAS # 56-23-5 Purity 99%	(Lot SHBJ2110)	2,501.1	µg/mL	+/-	14.5418	µg/mL	Gravimetric
					+/-	150.9040	µg/mL	Unstressed
					+/-	151.2622	µg/mL	Stressed
25	n-Heptane (C7) CAS # 142-82-5 Purity 99%	(Lot SHBJ2424)	2,501.6	µg/mL	+/-	14.5447	µg/mL	Gravimetric
					+/-	150.9341	µg/mL	Unstressed
					+/-	151.2925	µg/mL	Stressed
26	1,2-Dichloroethane CAS # 107-06-2 Purity 99%	(Lot SHBJ0707)	2,501.3	µg/mL	+/-	14.5425	µg/mL	Gravimetric
					+/-	150.9115	µg/mL	Unstressed
					+/-	151.2698	µg/mL	Stressed
27	Benzene CAS # 71-43-2 Purity 99%	(Lot SHBJ5344)	2,500.9	µg/mL	+/-	14.5403	µg/mL	Gravimetric
					+/-	150.8889	µg/mL	Unstressed
					+/-	151.2471	µg/mL	Stressed
28	Trichloroethene CAS # 79-01-6 Purity 99%	(Lot SHBH1955V)	2,500.5	µg/mL	+/-	14.5381	µg/mL	Gravimetric
					+/-	150.8662	µg/mL	Unstressed
					+/-	151.2244	µg/mL	Stressed
29	Methylcyclohexane CAS # 108-87-2 Purity 99%	(Lot SHBJ0457)	2,501.6	µg/mL	+/-	14.5447	µg/mL	Gravimetric
					+/-	150.9341	µg/mL	Unstressed
					+/-	151.2925	µg/mL	Stressed
30	1,2-Dichloropropane CAS # 78-87-5 Purity 99%	(Lot BCBR0882V)	2,500.5	µg/mL	+/-	14.5381	µg/mL	Gravimetric
					+/-	150.8662	µg/mL	Unstressed
					+/-	151.2244	µg/mL	Stressed
31	1,4-Dioxane CAS # 123-91-1 Purity 99%	(Lot SHBJ7415)	50,001.1	µg/mL	+/-	290.6957	µg/mL	Gravimetric
					+/-	3,016.7880	µg/mL	Unstressed
					+/-	3,023.9503	µg/mL	Stressed
32	Dibromomethane CAS # 74-95-3 Purity 99%	(Lot 10201030)	2,502.0	µg/mL	+/-	14.5468	µg/mL	Gravimetric
					+/-	150.9567	µg/mL	Unstressed
					+/-	151.3151	µg/mL	Stressed
33	cis-1,3-Dichloropropene CAS # 10061-01-5 Purity 99%	(Lot 25076)	2,501.4	µg/mL	+/-	14.5432	µg/mL	Gravimetric
					+/-	150.9190	µg/mL	Unstressed
					+/-	151.2773	µg/mL	Stressed
34	Toluene CAS # 108-88-3 Purity 99%	(Lot SHBJ5659)	2,500.1	µg/mL	+/-	14.5359	µg/mL	Gravimetric
					+/-	150.8436	µg/mL	Unstressed
					+/-	151.2017	µg/mL	Stressed
35	Ethyl methacrylate CAS # 97-63-2 Purity 99%	(Lot 69796APV)	2,502.8	µg/mL	+/-	14.5512	µg/mL	Gravimetric
					+/-	151.0020	µg/mL	Unstressed
					+/-	151.3605	µg/mL	Stressed
36	trans-1,3-Dichloropropene CAS # 10061-02-6 Purity 98%	(Lot C797620)	2,500.6	µg/mL	+/-	14.5387	µg/mL	Gravimetric
					+/-	150.8718	µg/mL	Unstressed
					+/-	151.2300	µg/mL	Stressed
37	1,1,2-Trichloroethane CAS # 79-00-5 Purity 99%	(Lot FGB01)	2,500.4	µg/mL	+/-	14.5374	µg/mL	Gravimetric
					+/-	150.8587	µg/mL	Unstressed
					+/-	151.2169	µg/mL	Stressed
38	1,3-Dichloropropane CAS # 142-28-9 Purity 99%	(Lot BCBG2162V)	2,500.9	µg/mL	+/-	14.5403	µg/mL	Gravimetric
					+/-	150.8889	µg/mL	Unstressed
					+/-	151.2471	µg/mL	Stressed
39	Tetrachloroethene CAS # 127-18-4 Purity 99%	(Lot SHBH9691)	2,501.0	µg/mL	+/-	14.5410	µg/mL	Gravimetric
					+/-	150.8964	µg/mL	Unstressed
					+/-	151.2547	µg/mL	Stressed

40	dibromochloromethane CAS # 124-48-1 Purity 98%	(Lot MKCC0877)	2,502.4 µg/mL	+/- 14.5493 +/- 150.9827 +/- 151.3411	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	1,2-Dibromoethane (EDB) CAS # 106-93-4 Purity 99%	(Lot BCBH3877V)	2,500.4 µg/mL	+/- 14.5374 +/- 150.8587 +/- 151.2169	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	Chlorobenzene CAS # 108-90-7 Purity 99%	(Lot SHBH4459V)	2,501.1 µg/mL	+/- 14.5418 +/- 150.9040 +/- 151.2622	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	m-Xylene CAS # 108-38-3 Purity 99%	(Lot SHBJ2338)	1,251.5 µg/mL	+/- 7.2763 +/- 75.5085 +/- 75.6878	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	p-Xylene CAS # 106-42-3 Purity 99%	(Lot SHBJ0052)	1,250.1 µg/mL	+/- 7.2683 +/- 75.4256 +/- 75.6047	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	Ethylbenzene CAS # 100-41-4 Purity 99%	(Lot SHBJ3183)	2,500.0 µg/mL	+/- 14.5352 +/- 150.8361 +/- 151.1942	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	1,1,1,2-Tetrachloroethane CAS # 630-20-6 Purity 99%	(Lot MKBS3769V)	2,500.0 µg/mL	+/- 14.5352 +/- 150.8361 +/- 151.1942	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	o-Xylene CAS # 95-47-6 Purity 99%	(Lot SHBH7231)	2,500.8 µg/mL	+/- 14.5396 +/- 150.8813 +/- 151.2395	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	Styrene CAS # 100-42-5 Purity 99%	(Lot MKCC9766)	2,500.0 µg/mL	+/- 14.5352 +/- 150.8361 +/- 151.1942	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	Isopropylbenzene (cumene) CAS # 98-82-8 Purity 99%	(Lot 10185056)	2,500.1 µg/mL	+/- 14.5359 +/- 150.8436 +/- 151.2017	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	bromoform CAS # 75-25-2 Purity 99%	(Lot SHBG3138V)	2,501.0 µg/mL	+/- 14.5410 +/- 150.8964 +/- 151.2547	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	bromodichloromethane CAS # 75-27-4 Purity 99%	(Lot MKCF8470)	2,501.6 µg/mL	+/- 14.5447 +/- 150.9341 +/- 151.2925	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	1,1,2,2-Tetrachloroethane CAS # 79-34-5 Purity 99%	(Lot CFA4D)	2,500.5 µg/mL	+/- 14.5381 +/- 150.8662 +/- 151.2244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	1,2,3-Trichloropropane CAS # 96-18-4 Purity 99%	(Lot BCBH8722V)	2,501.3 µg/mL	+/- 14.5425 +/- 150.9115 +/- 151.2698	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	trans-1,4-dichloro-2-butene CAS # 110-57-6 Purity 94%	(Lot MKBX7788V)	2,500.0 µg/mL	+/- 14.5355 +/- 150.8389 +/- 151.1971	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	n-Propylbenzene CAS # 103-65-1 Purity 99%	(Lot WXBC3346V)	2,500.0 µg/mL	+/- 14.5352 +/- 150.8361 +/- 151.1942	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

56	Bromobenzene CAS # 108-86-1 Purity 99%	(Lot WXBC5147V)	2,500.1 µg/mL	+/- 14.5359 +/- 150.8436 +/- 151.2017	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
57	1,3,5-Trimethylbenzene CAS # 108-67-8 Purity 99%	(Lot BCBS7648V)	2,500.5 µg/mL	+/- 14.5381 +/- 150.8662 +/- 151.2244	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
58	2-Chlorotoluene CAS # 95-49-8 Purity 99%	(Lot MKBW5554V)	2,500.1 µg/mL	+/- 14.5359 +/- 150.8436 +/- 151.2017	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
59	4-Chlorotoluene CAS # 106-43-4 Purity 99%	(Lot MKBL7753V)	2,500.9 µg/mL	+/- 14.5403 +/- 150.8889 +/- 151.2471	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
60	tert-Butylbenzene CAS # 98-06-6 Purity 99%	(Lot STBD6954V)	2,500.1 µg/mL	+/- 14.5359 +/- 150.8436 +/- 151.2017	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
61	1,2,4-Trimethylbenzene CAS # 95-63-6 Purity 97%	(Lot MKBH5027V)	2,499.9 µg/mL	+/- 14.5348 +/- 150.8320 +/- 151.1901	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
62	sec-Butylbenzene CAS # 135-98-8 Purity 99%	(Lot MKBR9260V)	2,501.1 µg/mL	+/- 14.5418 +/- 150.9040 +/- 151.2622	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
63	p-Isopropyltoluene (p-Cymene) CAS # 99-87-6 Purity 99%	(Lot MKBV3556V)	2,501.1 µg/mL	+/- 14.5418 +/- 150.9040 +/- 151.2622	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
64	1,3-Dichlorobenzene CAS # 541-73-1 Purity 99%	(Lot BCBQ7100V)	2,501.4 µg/mL	+/- 14.5432 +/- 150.9190 +/- 151.2773	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
65	1,4-Dichlorobenzene CAS # 106-46-7 Purity 99%	(Lot MKBS4401V)	2,501.5 µg/mL	+/- 14.5439 +/- 150.9266 +/- 151.2849	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
66	n-Butylbenzene CAS # 104-51-8 Purity 99%	(Lot 09804AE)	2,501.0 µg/mL	+/- 14.5410 +/- 150.8964 +/- 151.2547	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
67	1,2-Dichlorobenzene CAS # 95-50-1 Purity 99%	(Lot SHBG3111V)	2,502.9 µg/mL	+/- 14.5519 +/- 151.0095 +/- 151.3681	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
68	1,2-Dibromo-3-chloropropane CAS # 96-12-8 Purity 99%	(Lot FBL01)	2,502.0 µg/mL	+/- 14.5468 +/- 150.9567 +/- 151.3151	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
69	1,2,4-Trichlorobenzene CAS # 120-82-1 Purity 99%	(Lot SHBJ9215)	2,502.1 µg/mL	+/- 14.5476 +/- 150.9643 +/- 151.3227	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
70	Hexachlorobutadiene CAS # 87-68-3 Purity 99%	(Lot J31X013)	2,501.5 µg/mL	+/- 14.5439 +/- 150.9266 +/- 151.2849	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
71	Naphthalene CAS # 91-20-3 Purity 99%	(Lot MKBZ8680V)	2,502.8 µg/mL	+/- 14.5512 +/- 151.0020 +/- 151.3605	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

72 1,2,3-Trichlorobenzene 2,502.5 µg/mL +/- 14.5498 µg/mL Gravimetric
 CAS # 87-61-6 (Lot MKBX7627V) +/- 150.9869 µg/mL Unstressed
 Purity 99% +/- 151.3454 µg/mL Stressed

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

Column:

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

Carrier Gas:

helium-constant pressure 30 psi

Temp. Program:

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

Inj. Temp:

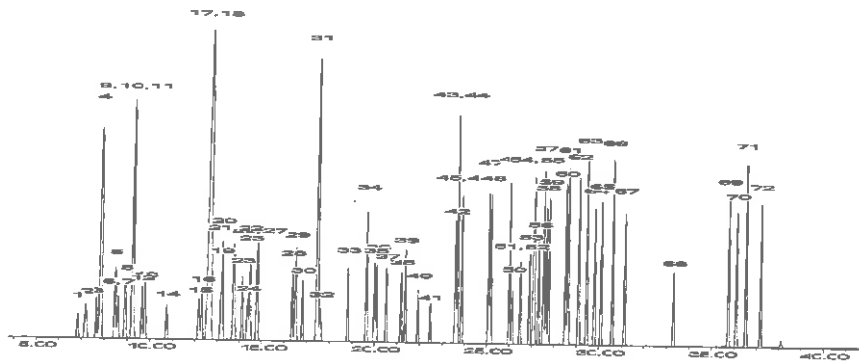
200°C

Det. Temp:

250°C

Det. Type:

MSD



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

F. Joseph Tailon - Mix Technician

Date Mixed: 05-Dec-2018

Balance: B251644995

Diane Shaffer
 Diane Shaffer - Operations Tech-ARM QC

Date Passed: 21-Dec-2018

Manufactured under Restek's ISO 9001:2015
 Registered Quality System
 Certificate #FM 80397

Reagent

VOA8260MEGA2_00084



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 571992.SEC **Lot No.:** A0144202

Description : 8260 List 1 / Std #1 MegaMix (2017)
8260 List 1 / Std #1 MegaMix (2017) 1,250-62,500µg/mL, P&T Methanol, 1mL/ampul

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

Expiration Date : June 30, 2021 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L. ; K=2)			
1	Diethyl ether (ethyl ether) CAS # 60-29-7.SEC (Lot F23X068) Purity 98%	2,517.0 µg/mL	+/-	14.6339	µg/mL	Gravimetric
			+/-	151.8598	µg/mL	Unstressed
			+/-	152.2203	µg/mL	Stressed
2	1,1,2-Trichlorotrifluoroethane (CFC-113) CAS # 76-13-1.SEC (Lot 18342) Purity 99%	2,506.7 µg/mL	+/-	14.5740	µg/mL	Gravimetric
			+/-	151.2383	µg/mL	Unstressed
			+/-	151.5974	µg/mL	Stressed
3	1,1-Dichloroethene CAS # 75-35-4.SEC (Lot 7692300) Purity 99%	2,503.3 µg/mL	+/-	14.5546	µg/mL	Gravimetric
			+/-	151.0372	µg/mL	Unstressed
			+/-	151.3958	µg/mL	Stressed
4	tert-Butanol (TBA) CAS # 75-65-0.SEC (Lot XYXDO) Purity 98%	25,000.8 µg/mL	+/-	145.3491	µg/mL	Gravimetric
			+/-	1,508.4071	µg/mL	Unstressed
			+/-	1,511.9883	µg/mL	Stressed
5	Methyl acetate CAS # 79-20-9.SEC (Lot UCNEL) Purity 99%	5,002.3 µg/mL	+/-	29.0840	µg/mL	Gravimetric
			+/-	301.8129	µg/mL	Unstressed
			+/-	302.5295	µg/mL	Stressed
6	Iodomethane (methyl iodide) CAS # 74-88-4.SEC (Lot Y25A027) Purity 99%	2,503.5 µg/mL	+/-	14.5556	µg/mL	Gravimetric
			+/-	151.0472	µg/mL	Unstressed
			+/-	151.4059	µg/mL	Stressed
7	Allyl chloride (3-chloropropene) CAS # 107-05-1.SEC (Lot H3HGC) Purity 99%	2,511.7 µg/mL	+/-	14.6030	µg/mL	Gravimetric
			+/-	151.5400	µg/mL	Unstressed
			+/-	151.8998	µg/mL	Stressed

8	Methylene chloride (dichloromethane)		2,506.7	µg/mL	+/-	14.5740	µg/mL	Gravimetric
	CAS # 75-09-2.SEC	(Lot FGM02)			+/-	151.2383	µg/mL	Unstressed
	Purity 99%				+/-	151.5974	µg/mL	Stressed
9	Carbon disulfide		2,500.7	µg/mL	+/-	14.5391	µg/mL	Gravimetric
	CAS # 75-15-0.SEC	(Lot MKBL1376V)			+/-	150.8763	µg/mL	Unstressed
	Purity 99%				+/-	151.2345	µg/mL	Stressed
10	Acrylonitrile		25,001.2	µg/mL	+/-	145.3513	µg/mL	Gravimetric
	CAS # 107-13-1.SEC	(Lot UERIL)			+/-	1,508.4304	µg/mL	Unstressed
	Purity 99%				+/-	1,512.0117	µg/mL	Stressed
11	Methyl-tert-butyl ether (MTBE)		2,501.5	µg/mL	+/-	14.5439	µg/mL	Gravimetric
	CAS # 1634-04-4.SEC	(Lot ZHKYA)			+/-	150.9266	µg/mL	Unstressed
	Purity 99%				+/-	151.2849	µg/mL	Stressed
12	cis-1,2-Dichloroethene		2,501.3	µg/mL	+/-	14.5427	µg/mL	Gravimetric
	CAS # 156-59-2.SEC	(Lot HGC01-BLKT)			+/-	150.9137	µg/mL	Unstressed
	Purity 98%				+/-	151.2720	µg/mL	Stressed
13	n-Hexane (C6)		2,503.2	µg/mL	+/-	14.5541	µg/mL	Gravimetric
	CAS # 110-54-3.SEC	(Lot K24W001)			+/-	151.0320	µg/mL	Unstressed
	Purity 97%				+/-	151.3905	µg/mL	Stressed
14	1,1-Dichloroethane		2,502.0	µg/mL	+/-	14.5468	µg/mL	Gravimetric
	CAS # 75-34-3.SEC	(Lot 5379000)			+/-	150.9567	µg/mL	Unstressed
	Purity 99%				+/-	151.3151	µg/mL	Stressed
15	2,2-Dichloropropane		2,503.2	µg/mL	+/-	14.5541	µg/mL	Gravimetric
	CAS # 594-20-7.SEC	(Lot I7E8E)			+/-	151.0320	µg/mL	Unstressed
	Purity 98%				+/-	151.3905	µg/mL	Stressed
16	trans-1,2-Dichloroethene		2,501.0	µg/mL	+/-	14.5409	µg/mL	Gravimetric
	CAS # 156-60-5.SEC	(Lot TS5UB)			+/-	150.8954	µg/mL	Unstressed
	Purity 97%				+/-	151.2537	µg/mL	Stressed
17	Isobutanol (2-Methyl-1-propanol)		62,508.3	µg/mL	+/-	363.4098	µg/mL	Gravimetric
	CAS # 78-83-1.SEC	(Lot PH2XK)			+/-	3,771.4029	µg/mL	Unstressed
	Purity 99%				+/-	3,780.3569	µg/mL	Stressed
18	Chloroform		2,500.5	µg/mL	+/-	14.5381	µg/mL	Gravimetric
	CAS # 67-66-3.SEC	(Lot 1297547)			+/-	150.8662	µg/mL	Unstressed
	Purity 99%				+/-	151.2244	µg/mL	Stressed
19	Bromochloromethane		2,507.0	µg/mL	+/-	14.5759	µg/mL	Gravimetric
	CAS # 74-97-5.SEC	(Lot 5670200)			+/-	151.2584	µg/mL	Unstressed
	Purity 99%				+/-	151.6175	µg/mL	Stressed
20	Tetrahydrofuran		5,006.7	µg/mL	+/-	29.1092	µg/mL	Gravimetric
	CAS # 109-99-9.SEC	(Lot 8DAOJ)			+/-	302.0744	µg/mL	Unstressed
	Purity 99%				+/-	302.7916	µg/mL	Stressed
21	1,1,1-Trichloroethane		2,507.7	µg/mL	+/-	14.5798	µg/mL	Gravimetric
	CAS # 71-55-6.SEC	(Lot 7998000)			+/-	151.2986	µg/mL	Unstressed
	Purity 99%				+/-	151.6579	µg/mL	Stressed
22	Cyclohexane		2,508.0	µg/mL	+/-	14.5817	µg/mL	Gravimetric
	CAS # 110-82-7.SEC	(Lot YADRA)			+/-	151.3188	µg/mL	Unstressed
	Purity 99%				+/-	151.6780	µg/mL	Stressed
23	1,1-Dichloropropene		2,502.4	µg/mL	+/-	14.5492	µg/mL	Gravimetric
	CAS # 563-58-6.SEC	(Lot 5221100)			+/-	150.9809	µg/mL	Unstressed
	Purity 96%				+/-	151.3393	µg/mL	Stressed

24	Carbon tetrachloride CAS # 56-23-5.SEC Purity 99%	(Lot 11466)	2,510.3 µg/mL	+/- 14.5953 +/- 151.4595 +/- 151.8191	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	n-Heptane (C7) CAS # 142-82-5.SEC Purity 99%	(Lot TFHUC)	2,511.8 µg/mL	+/- 14.6040 +/- 151.5500 +/- 151.9098	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	1,2-Dichloroethane CAS # 107-06-2.SEC Purity 99%	(Lot FO6PK)	2,501.3 µg/mL	+/- 14.5430 +/- 150.9165 +/- 151.2748	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	Benzene CAS # 71-43-2.SEC Purity 99%	(Lot B28Y008)	2,504.8 µg/mL	+/- 14.5633 +/- 151.1277 +/- 151.4865	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	Trichloroethene CAS # 79-01-6.SEC Purity 99%	(Lot H04X050)	2,508.7 µg/mL	+/- 14.5856 +/- 151.3590 +/- 151.7183	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	Methylcyclohexane CAS # 108-87-2.SEC Purity 99%	(Lot Q02QG)	2,504.5 µg/mL	+/- 14.5614 +/- 151.1076 +/- 151.4663	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	1,2-Dichloropropane CAS # 78-87-5.SEC Purity 99%	(Lot ERRBI-RH)	2,504.0 µg/mL	+/- 14.5585 +/- 151.0774 +/- 151.4361	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	1,4-Dioxane CAS # 123-91-1.SEC Purity 99%	(Lot YVP2C)	50,008.0 µg/mL	+/- 290.7356 +/- 3,017.2028 +/- 3,024.3661	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	Dibromomethane CAS # 74-95-3.SEC Purity 99%	(Lot FGI01-OICH)	2,509.5 µg/mL	+/- 14.5904 +/- 151.4093 +/- 151.7687	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	cis-1,3-Dichloropropene CAS # 10061-01-5.SEC Purity 99%	(Lot 4870A)	2,502.0 µg/mL	+/- 14.5468 +/- 150.9567 +/- 151.3151	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	Toluene CAS # 108-88-3.SEC Purity 99%	(Lot YND2B-BD)	2,501.5 µg/mL	+/- 14.5439 +/- 150.9266 +/- 151.2849	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Ethyl methacrylate CAS # 97-63-2.SEC Purity 99%	(Lot MLWYK-LS)	2,508.8 µg/mL	+/- 14.5866 +/- 151.3690 +/- 151.7284	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	trans-1,3-Dichloropropene CAS # 10061-02-6.SEC Purity 96%	(Lot ZDMSL)	2,502.9 µg/mL	+/- 14.5520 +/- 151.0098 +/- 151.3684	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	1,1,2-Trichloroethane CAS # 79-00-5.SEC Purity 99%	(Lot 7871500)	2,502.5 µg/mL	+/- 14.5498 +/- 150.9869 +/- 151.3454	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	1,3-Dichloropropane CAS # 142-28-9.SEC Purity 99%	(Lot AGN01-EFPC)	2,502.7 µg/mL	+/- 14.5507 +/- 150.9970 +/- 151.3555	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	Tetrachloroethene CAS # 127-18-4.SEC Purity 99%	(Lot F09W014)	2,505.0 µg/mL	+/- 14.5643 +/- 151.1378 +/- 151.4966	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

40	Dibromochloromethane CAS # 124-48-1.SEC Purity 97%	(Lot 10206360)	2,502.4 µg/mL	+/-	14.5494 µg/mL 150.9832 µg/mL 151.3417 µg/mL	Gravimetric Unstressed Stressed
41	1,2-Dibromoethane (EDB) CAS # 106-93-4.SEC Purity 99%	(Lot 3505900)	2,503.3 µg/mL	+/-	14.5546 µg/mL 151.0372 µg/mL 151.3958 µg/mL	Gravimetric Unstressed Stressed
42	Chlorobenzene CAS # 108-90-7.SEC Purity 99%	(Lot 1161936)	2,504.8 µg/mL	+/-	14.5633 µg/mL 151.1277 µg/mL 151.4865 µg/mL	Gravimetric Unstressed Stressed
43	m-Xylene CAS # 108-38-3.SEC Purity 99%	(Lot OUKMG-GB)	1,251.7 µg/mL	+/-	7.2941 µg/mL 75.5202 µg/mL 75.6995 µg/mL	Gravimetric Unstressed Stressed
44	p-Xylene CAS # 106-42-3.SEC Purity 99%	(Lot GM01)	1,253.7 µg/mL	+/-	7.3058 µg/mL 75.6409 µg/mL 75.8205 µg/mL	Gravimetric Unstressed Stressed
45	Ethylbenzene CAS # 100-41-4.SEC Purity 99%	(Lot PI4SE)	2,503.5 µg/mL	+/-	14.5556 µg/mL 151.0472 µg/mL 151.4059 µg/mL	Gravimetric Unstressed Stressed
46	1,1,1,2-Tetrachloroethane CAS # 630-20-6.SEC Purity 99%	(Lot GC01)	2,506.7 µg/mL	+/-	14.5740 µg/mL 151.2383 µg/mL 151.5974 µg/mL	Gravimetric Unstressed Stressed
47	o-Xylene CAS # 95-47-6.SEC Purity 99%	(Lot FGL01)	2,504.2 µg/mL	+/-	14.5594 µg/mL 151.0875 µg/mL 151.4462 µg/mL	Gravimetric Unstressed Stressed
48	Styrene CAS # 100-42-5.SEC Purity 99%	(Lot OFIOL-IA)	2,507.2 µg/mL	+/-	14.5769 µg/mL 151.2685 µg/mL 151.6276 µg/mL	Gravimetric Unstressed Stressed
49	Isopropylbenzene (cumene) CAS # 98-82-8.SEC Purity 99%	(Lot 2PHXG-IH)	2,505.2 µg/mL	+/-	14.5653 µg/mL 151.1478 µg/mL 151.5067 µg/mL	Gravimetric Unstressed Stressed
50	Bromoform CAS # 75-25-2.SEC Purity 97%	(Lot 5461400)	2,500.5 µg/mL	+/-	14.5381 µg/mL 150.8661 µg/mL 151.2243 µg/mL	Gravimetric Unstressed Stressed
51	Bromodichloromethane CAS # 75-27-4.SEC Purity 98%	(Lot 13780)	2,501.3 µg/mL	+/-	14.5427 µg/mL 150.9137 µg/mL 151.2720 µg/mL	Gravimetric Unstressed Stressed
52	1,1,2,2-Tetrachloroethane CAS # 79-34-5.SEC Purity 99%	(Lot CFA4D-AQ)	2,502.0 µg/mL	+/-	14.5468 µg/mL 150.9567 µg/mL 151.3151 µg/mL	Gravimetric Unstressed Stressed
53	1,2,3-Trichloropropane CAS # 96-18-4.SEC Purity 99%	(Lot GUHZN)	2,505.7 µg/mL	+/-	14.5682 µg/mL 151.1780 µg/mL 151.5369 µg/mL	Gravimetric Unstressed Stressed
54	trans-1,4-Dichloro-2-butene CAS # 110-57-6.SEC Purity 98%	(Lot 100700-3)	2,514.2 µg/mL	+/-	14.6177 µg/mL 151.6922 µg/mL 152.0524 µg/mL	Gravimetric Unstressed Stressed
55	n-Propylbenzene CAS # 103-65-1.SEC Purity 99%	(Lot T2HFC)	2,503.7 µg/mL	+/-	14.5565 µg/mL 151.0573 µg/mL 151.4159 µg/mL	Gravimetric Unstressed Stressed

56	Bromobenzene CAS # 108-86-1.SEC Purity 99%	(Lot 2FUHG-EM)	2,506.2 µg/mL	+/- 14.5711 +/- 151.2081 +/- 151.5671	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
57	1,3,5-Trimethylbenzene CAS # 108-67-8.SEC Purity 99%	(Lot FGH02-CMLN)	2,510.0 µg/mL	+/- 14.5934 +/- 151.4394 +/- 151.7990	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
58	2-Chlorotoluene CAS # 95-49-8.SEC Purity 99%	(Lot SW8QG-AO)	2,504.7 µg/mL	+/- 14.5623 +/- 151.1176 +/- 151.4764	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
59	4-Chlorotoluene CAS # 106-43-4.SEC Purity 99%	(Lot P4XHJ-AO)	2,509.2 µg/mL	+/- 14.5885 +/- 151.3891 +/- 151.7486	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
60	tert-Butylbenzene CAS # 98-06-6.SEC Purity 99%	(Lot D6OHC)	2,505.8 µg/mL	+/- 14.5691 +/- 151.1880 +/- 151.5470	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
61	1,2,4-Trimethylbenzene CAS # 95-63-6.SEC Purity 99%	(Lot JMIYD)	2,508.7 µg/mL	+/- 14.5856 +/- 151.3590 +/- 151.7183	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
62	sec-Butylbenzene CAS # 135-98-8.SEC Purity 99%	(Lot OGN01-IMA)	2,504.7 µg/mL	+/- 14.5623 +/- 151.1176 +/- 151.4764	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
63	4-Isopropyltoluene (p-cymene) CAS # 99-87-6.SEC Purity 99%	(Lot 6628200)	2,500.3 µg/mL	+/- 14.5372 +/- 150.8562 +/- 151.2143	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
64	1,3-Dichlorobenzene CAS # 541-73-1.SEC Purity 99%	(Lot FMDFD)	2,506.3 µg/mL	+/- 14.5720 +/- 151.2182 +/- 151.5772	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
65	1,4-Dichlorobenzene CAS # 106-46-7.SEC Purity 99%	(Lot 4Y5DC)	2,509.8 µg/mL	+/- 14.5924 +/- 151.4294 +/- 151.7889	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
66	n-Butylbenzene CAS # 104-51-8.SEC Purity 99%	(Lot MMPGA)	2,513.7 µg/mL	+/- 14.6147 +/- 151.6607 +/- 152.0207	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
67	1,2-Dichlorobenzene CAS # 95-50-1.SEC Purity 99%	(Lot R6QDM)	2,501.8 µg/mL	+/- 14.5459 +/- 150.9467 +/- 151.3051	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
68	1,2-Dibromo-3-chloropropane CAS # 96-12-8.SEC Purity 98%	(Lot LC00408V)	2,508.5 µg/mL	+/- 14.5845 +/- 151.3473 +/- 151.7066	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
69	1,2,4-Trichlorobenzene CAS # 120-82-1.SEC Purity 99%	(Lot 3LYYC)	2,503.3 µg/mL	+/- 14.5546 +/- 151.0372 +/- 151.3958	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
70	Hexachlorobutadiene CAS # 87-68-3.SEC Purity 97%	(Lot 5526800)	2,504.4 µg/mL	+/- 14.5607 +/- 151.1002 +/- 151.4590	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
71	Naphthalene CAS # 91-20-3.SEC Purity 99%	(Lot 4KW3H-OO)	2,503.3 µg/mL	+/- 14.5546 +/- 151.0372 +/- 151.3958	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

72	1,2,3-Trichlorobenzene		2,512.2 µg/mL	+/- 14.6063	µg/mL	Gravimetric
	CAS # 87-61-6.SEC	(Lot A0043055)		+/- 151.5740	µg/mL	Unstressed
	Purity 98%			+/- 151.9338	µg/mL	Stressed

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

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

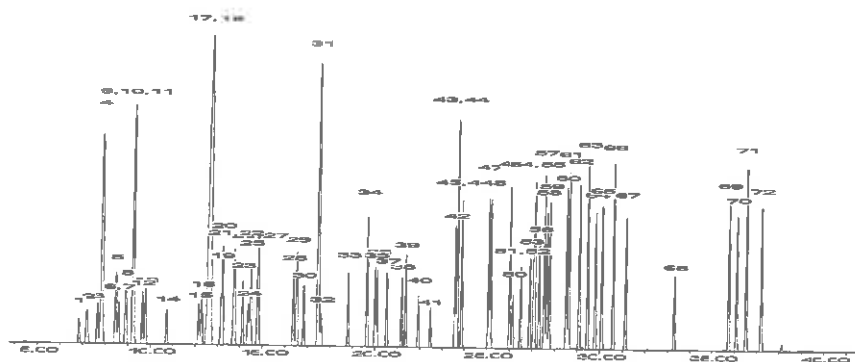
Carrier Gas:
helium-constant pressure 30 psi

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

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



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

Brandon Reish
Brandon Reish - Mix Technician

Date Mixed: 17-Dec-2018 **Balance:** 1127510105

Diane Shaffer
Diane Shaffer - Operations Tech-ARM QC

Date Passed: 21-Dec-2018

Manufactured under Restek's ISO 9001:2015
Registered Quality System
Certificate #FM 80397

Reagent

VOA8260SURRES_00160



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 567650 **Lot No.:** A0143613

Description : 8260 Surrogate Standard
8260 Surrogate Standard 2,500µg/mL, P&T Methanol, 5mL/ampul

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

Expiration Date : November 30, 2023 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	Dibromofluoromethane	2,506.4 µg/mL	+/-	14.5724	µg/mL	Gravimetric
	CAS # 1868-53-7 (Lot 0012017)		+/-	140.5314	µg/mL	Unstressed
	Purity 99%		+/-	143.8196	µg/mL	Stressed
2	1,2-Dichloroethane-d4	2,503.8 µg/mL	+/-	14.5570	µg/mL	Gravimetric
	CAS # 17060-07-0 (Lot PR-29377)		+/-	140.3828	µg/mL	Unstressed
	Purity 99%		+/-	143.6676	µg/mL	Stressed
3	Toluene-d8	2,512.2 µg/mL	+/-	14.6059	µg/mL	Gravimetric
	CAS # 2037-26-5 (Lot PR-27311)		+/-	140.8538	µg/mL	Unstressed
	Purity 99%		+/-	144.1496	µg/mL	Stressed
4	1-Bromo-4-fluorobenzene (BFB)	2,501.8 µg/mL	+/-	14.5457	µg/mL	Gravimetric
	CAS # 460-00-4 (Lot 20401.KO)		+/-	140.2734	µg/mL	Unstressed
	Purity 99%		+/-	143.5557	µg/mL	Stressed

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

Reagent

VOA8260VARES_00121



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 568720 **Lot No.:** A0147676

Description : 8260 List 1/Std #5 Acrolein High
8260 List 1/Std #5 Acrolein High 19,750µg/mL, Water, 1mL/ampul

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

Expiration Date : October 31, 2019 **Storage:** 0°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	Acrolein CAS # 107-02-8 Purity 99% (Lot 0012014-D0218)	19,822.0 µg/mL	+/-	116.0622	µg/mL	Gravimetric
			+/-	635.5556	µg/mL	Unstressed
			+/-	738.7639	µg/mL	Stressed

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

Reagent

VOAACRORES_00148



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 568720 **Lot No.:** A0147676

Description : 8260 List 1/Std #5 Acrolein High
8260 List 1/Std #5 Acrolein High 19,750µg/mL, Water, 1mL/ampul

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

Expiration Date : October 31, 2019 **Storage:** 0°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	Acrolein CAS # 107-02-8 Purity 99% (Lot 0012014-D0218)	19,822.0 µg/mL	+/-	116.0622	µg/mL	Gravimetric
			+/-	635.5556	µg/mL	Unstressed
			+/-	738.7639	µg/mL	Stressed

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

Reagent

VOABFBRES_00081



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 30067 **Lot No.:** A0142868

Description : 4-Bromofluorobenzene Standard
4-Bromofluorobenzene Standard 2,500µg/mL, P&T Methanol, 1mL/ampul

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

Expiration Date : November 30, 2023 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1-Bromo-4-fluorobenzene (BFB) CAS # 460-00-4 Purity 99% (Lot 20401KO)	2,510.0 µg/mL	+/- 14.7301	µg/mL	Gravimetric
			+/- 140.7475	µg/mL	Unstressed
			+/- 144.0401	µg/mL	Stressed

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

Method 8260C Low Level

Volatile Organic Compounds (GC/MS)
by Method 8260C Low Level

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1

SDG No.: _____

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18 (mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
HD-COD-SW-29-0/1-0	180-96180-1	117	98	88	80
HD-COD-SW-8-0/1-0	180-96180-2	116	102	86	76
HD-COD-SW-13-0/1-0	180-96180-3	119	98	90	76
HD-COD-SW-16-0/1-0	180-96180-4	120	103	90	76
HD-COD-SW-6-0/1-0	180-96180-5	116	103	90	78
HD-COD-SW-26-0/1-0	180-96180-6	117	101	91	74
HD-COD-SW-7-0/1-0	180-96180-7	121	101	94	82
HD-COD-SW-9-0/1-0	180-96180-8	116	98	91	76
HD-COD-SW-28-0/1-0	180-96180-9	122	107	82	74
HD-COD-SW-15-0/1-0	180-96180-10	112	97 ^c	93	82
HD-COD-SW-27-0/1-0	180-96180-11	118	106	87	76
HD-QC1-0/1-2	180-96180-12	115	100	87	73
HD-MW-110-0/1-0	180-96180-13	113	95 ^c	84	80
HD-MW-108D-0/1-0	180-96180-14	116	95 ^c	83	71
HD-QC1-0/1-1	180-96180-15	125	105 ^c	81	75
HD-QC1-0/1-3	180-96180-16	119	100 ^c	85	79
HD-QC1-0/1-4	180-96180-17	120	100 ^c	84	76
	MB 180-292962/6	105	96	88	82
	MB 180-293070/6	108	92	94	80
	MB 180-293722/6	112	92	88	80
	LCS 180-292962/4	97	81	100	98
	LCS 180-293070/4	91	79	101	97
	LCS 180-293722/4	98	78	92	94
HD-MW-110-0/1-0 MS	180-96180-13 MS	100	85	96	100
HD-MW-110-0/1-0 MSD	180-96180-13 MSD	98	79	97	98

QC LIMITS

DBFM = Dibromofluoromethane (Surr)	75-147
DCA = 1,2-Dichloroethane-d4 (Surr)	70-150
TOL = Toluene-d8 (Surr)	78-128
BFB = 4-Bromofluorobenzene (Surr)	64-123

Column to be used to flag recovery values

FORM II EPA 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1

SDG No.: _____

Matrix: Water Level: Low Lab File ID: 5092708.D

Lab ID: LCS 180-292962/4 Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Chloromethane	10.0	13.1	131	37-150	
Vinyl chloride	10.0	13.7	137	50-150	
Bromomethane	10.0	12.1	121	35-150	
Chloroethane	10.0	13.2	132	52-150	
1,1-Dichloroethene	10.0	12.6	126	79-132	
Acetone	20.0	26.7	133	37-150	
Carbon disulfide	10.0	13.3	133	66-134	
Methylene Chloride	10.0	12.5	125	72-131	
trans-1,2-Dichloroethene	10.0	13.0	130	81-126	*
Methyl tert-butyl ether	10.0	11.1	111	65-125	
1,1-Dichloroethane	10.0	12.3	123	70-127	
cis-1,2-Dichloroethene	10.0	12.5	125	79-119	*
Bromochloromethane	10.0	11.7	117	74-124	
2-Butanone (MEK)	20.0	23.4	117	35-150	
Chloroform	10.0	11.6	116	75-126	
1,1,1-Trichloroethane	10.0	11.9	119	63-142	
Carbon tetrachloride	10.0	12.0	120	55-150	
Benzene	10.0	12.6	126	72-127	
1,2-Dichloroethane	10.0	10.6	106	60-138	
Trichloroethene	10.0	12.3	123	81-121	*
1,2-Dichloropropane	10.0	11.9	119	67-124	
Bromodichloromethane	10.0	11.0	110	67-131	
cis-1,3-Dichloropropene	10.0	11.2	112	69-122	
4-Methyl-2-pentanone (MIBK)	20.0	22.2	111	19-150	
Toluene	10.0	12.5	125	73-123	*
trans-1,3-Dichloropropene	10.0	10.6	106	61-122	
1,1,2-Trichloroethane	10.0	11.4	114	72-120	
Tetrachloroethene	10.0	12.0	120	69-134	
2-Hexanone	20.0	22.0	110	24-150	
Dibromochloromethane	10.0	11.0	110	59-134	
1,2-Dibromoethane (EDB)	10.0	11.0	110	65-129	
Chlorobenzene	10.0	11.6	116	76-119	
1,1,1,2-Tetrachloroethane	10.0	11.0	110	65-132	
Ethylbenzene	10.0	11.8	118	76-118	
Xylenes, Total	20.0	24.3	121	76-116	*
Styrene	10.0	11.8	118	74-118	
Bromoform	10.0	10.9	109	50-146	
1,1,2,2-Tetrachloroethane	10.0	12.0	120	57-135	
Acrylonitrile	100	125	125	43-149	

Column to be used to flag recovery and RPD values

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1

SDG No.: _____

Matrix: Water Level: Low Lab File ID: 5092804.D

Lab ID: LCS 180-293070/4 Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Chloromethane	10.0	11.6	116	37-150	
Vinyl chloride	10.0	11.9	119	50-150	
Bromomethane	10.0	10.8	108	35-150	
Chloroethane	10.0	12.3	123	52-150	
1,1-Dichloroethene	10.0	11.8	118	79-132	
Acetone	20.0	27.4	137	37-150	
Carbon disulfide	10.0	11.6	116	66-134	
Methylene Chloride	10.0	11.9	119	72-131	
trans-1,2-Dichloroethene	10.0	12.1	121	81-126	
Methyl tert-butyl ether	10.0	9.93	99	65-125	
1,1-Dichloroethane	10.0	10.9	109	70-127	
cis-1,2-Dichloroethene	10.0	10.9	109	79-119	
Bromochloromethane	10.0	9.91	99	74-124	
2-Butanone (MEK)	20.0	24.2	121	35-150	
Chloroform	10.0	10.6	106	75-126	
1,1,1-Trichloroethane	10.0	10.9	109	63-142	
Carbon tetrachloride	10.0	11.1	111	55-150	
Benzene	10.0	11.6	116	72-127	
1,2-Dichloroethane	10.0	9.27	93	60-138	
Trichloroethene	10.0	10.9	109	81-121	
1,2-Dichloropropane	10.0	11.1	111	67-124	
Bromodichloromethane	10.0	10.0	100	67-131	
cis-1,3-Dichloropropene	10.0	10.4	104	69-122	
4-Methyl-2-pentanone (MIBK)	20.0	21.5	108	19-150	
Toluene	10.0	11.9	119	73-123	
trans-1,3-Dichloropropene	10.0	9.34	93	61-122	
1,1,2-Trichloroethane	10.0	11.0	110	72-120	
Tetrachloroethene	10.0	11.3	113	69-134	
2-Hexanone	20.0	24.2	121	24-150	
Dibromochloromethane	10.0	10.4	104	59-134	
1,2-Dibromoethane (EDB)	10.0	10.3	103	65-129	
Chlorobenzene	10.0	11.2	112	76-119	
1,1,1,2-Tetrachloroethane	10.0	10.5	105	65-132	
Ethylbenzene	10.0	11.2	112	76-118	
Xylenes, Total	20.0	23.0	115	76-116	
Styrene	10.0	11.3	113	74-118	
Bromoform	10.0	10.2	102	50-146	
1,1,2,2-Tetrachloroethane	10.0	11.3	113	57-135	
Acrylonitrile	100	117	117	43-149	

Column to be used to flag recovery and RPD values

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1

SDG No.: _____

Matrix: Water Level: Low Lab File ID: 5100405.D

Lab ID: LCS 180-293722/4 Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Chloromethane	10.0	11.3	113	37-150	
Vinyl chloride	10.0	12.2	122	50-150	
Bromomethane	10.0	10.4	104	35-150	
Chloroethane	10.0	11.1	111	52-150	
1,1-Dichloroethene	10.0	11.9	119	79-132	
Acetone	20.0	28.0	140	37-150	
Carbon disulfide	10.0	11.5	115	66-134	
Methylene Chloride	10.0	11.7	117	72-131	
trans-1,2-Dichloroethene	10.0	12.3	123	81-126	
Methyl tert-butyl ether	10.0	9.94	99	65-125	
1,1-Dichloroethane	10.0	11.3	113	70-127	
cis-1,2-Dichloroethene	10.0	11.6	116	79-119	
Bromochloromethane	10.0	10.1	101	74-124	
2-Butanone (MEK)	20.0	23.8	119	35-150	
Chloroform	10.0	10.6	106	75-126	
1,1,1-Trichloroethane	10.0	10.5	105	63-142	
Carbon tetrachloride	10.0	10.8	108	55-150	
Benzene	10.0	11.3	113	72-127	
1,2-Dichloroethane	10.0	8.85	88	60-138	
Trichloroethene	10.0	11.0	110	81-121	
1,2-Dichloropropane	10.0	10.6	106	67-124	
Bromodichloromethane	10.0	9.41	94	67-131	
cis-1,3-Dichloropropene	10.0	10.6	106	69-122	
4-Methyl-2-pentanone (MIBK)	20.0	18.3	91	19-150	
Toluene	10.0	10.0	100	73-123	
trans-1,3-Dichloropropene	10.0	8.07	81	61-122	
1,1,2-Trichloroethane	10.0	8.99	90	72-120	
Tetrachloroethene	10.0	9.73	97	69-134	
2-Hexanone	20.0	20.2	101	24-150	
Dibromochloromethane	10.0	8.72	87	59-134	
1,2-Dibromoethane (EDB)	10.0	8.76	88	65-129	
Chlorobenzene	10.0	9.93	99	76-119	
1,1,1,2-Tetrachloroethane	10.0	9.19	92	65-132	
Ethylbenzene	10.0	10.1	101	76-118	
Xylenes, Total	20.0	19.8	99	76-116	
Styrene	10.0	10.0	100	74-118	
Bromoform	10.0	9.28	93	50-146	
1,1,2,2-Tetrachloroethane	10.0	10.7	107	57-135	
Acrylonitrile	100	119	119	43-149	

Column to be used to flag recovery and RPD values

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Matrix: Water Level: Low Lab File ID: 5100426.D
 Lab ID: 180-96180-13 MS Client ID: HD-MW-110-0/1-0 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Chloromethane	10.0	ND	9.37	94	37-150	
Vinyl chloride	10.0	ND	9.17	92	50-150	
Bromomethane	10.0	ND	9.66	97	35-150	
Chloroethane	10.0	ND	9.55	95	52-150	
1,1-Dichloroethene	10.0	ND	9.95	99	79-132	
Acetone	20.0	ND	18.9	95	37-150	
Carbon disulfide	10.0	ND	9.28	93	66-134	
Methylene Chloride	10.0	ND	11.2	112	72-131	
trans-1,2-Dichloroethene	10.0	ND	10.3	103	81-126	
Methyl tert-butyl ether	10.0	ND	9.21	92	65-125	
1,1-Dichloroethane	10.0	ND	10.4	104	70-127	
cis-1,2-Dichloroethene	10.0	ND	10.3	103	79-119	
Bromochloromethane	10.0	ND	10.2	102	74-124	
2-Butanone (MEK)	20.0	ND	19.6	98	35-150	
Chloroform	10.0	ND	10.2	102	75-126	
1,1,1-Trichloroethane	10.0	ND	8.96	90	63-142	
Carbon tetrachloride	10.0	ND	8.67	87	55-150	
Benzene	10.0	ND	10.7	107	72-127	
1,2-Dichloroethane	10.0	ND	8.94	89	60-138	
Trichloroethene	10.0	0.71 J	9.84	91	81-121	
1,2-Dichloropropane	10.0	ND	10.2	102	67-124	
Bromodichloromethane	10.0	ND	9.24	92	67-131	
cis-1,3-Dichloropropene	10.0	ND	8.23	82	69-122	
4-Methyl-2-pentanone (MIBK)	20.0	ND	16.6	83	19-150	
Toluene	10.0	ND	9.35	93	73-123	
trans-1,3-Dichloropropene	10.0	ND	7.30	73	61-122	
1,1,2-Trichloroethane	10.0	ND	9.53	95	72-120	
Tetrachloroethene	10.0	23	23.5	4	69-134	F1
2-Hexanone	20.0	ND	16.9	84	24-150	
Dibromochloromethane	10.0	ND	9.27	93	59-134	
1,2-Dibromoethane (EDB)	10.0	ND	8.77	88	65-129	
Chlorobenzene	10.0	ND	9.74	97	76-119	
1,1,1,2-Tetrachloroethane	10.0	ND	9.33	93	65-132	
Ethylbenzene	10.0	ND	9.01	90	76-118	
Xylenes, Total	20.0	ND	18.8	94	76-116	
Styrene	10.0	ND	9.92	99	74-118	
Bromoform	10.0	ND	9.76	98	50-146	
1,1,2,2-Tetrachloroethane	10.0	ND	11.2	112	57-135	
Acrylonitrile	100	ND	117	117	43-149	

Column to be used to flag recovery and RPD values

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1

SDG No.: _____

Matrix: Water Level: Low Lab File ID: 5100427.D

Lab ID: 180-96180-13 MSD Client ID: HD-MW-110-0/1-0 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
Chloromethane	10.0	9.41	94	0	35	37-150	
Vinyl chloride	10.0	8.34	83	9	31	50-150	
Bromomethane	10.0	8.61	86	12	35	35-150	
Chloroethane	10.0	9.14	91	4	31	52-150	
1,1-Dichloroethene	10.0	9.02	90	10	29	79-132	
Acetone	20.0	19.3	96	2	35	37-150	
Carbon disulfide	10.0	8.16	82	13	31	66-134	
Methylene Chloride	10.0	10.1	101	10	29	72-131	
trans-1,2-Dichloroethene	10.0	9.59	96	7	27	81-126	
Methyl tert-butyl ether	10.0	8.66	87	6	28	65-125	
1,1-Dichloroethane	10.0	9.76	98	6	27	70-127	
cis-1,2-Dichloroethene	10.0	9.93	99	4	28	79-119	
Bromochloromethane	10.0	9.77	98	4	27	74-124	
2-Butanone (MEK)	20.0	19.5	98	1	34	35-150	
Chloroform	10.0	9.39	94	8	26	75-126	
1,1,1-Trichloroethane	10.0	8.12	81	10	28	63-142	
Carbon tetrachloride	10.0	7.64	76	13	29	55-150	
Benzene	10.0	9.90	99	8	27	72-127	
1,2-Dichloroethane	10.0	8.61	86	4	26	60-138	
Trichloroethene	10.0	9.43	87	4	28	81-121	
1,2-Dichloropropane	10.0	10.1	101	1	27	67-124	
Bromodichloromethane	10.0	8.83	88	4	28	67-131	
cis-1,3-Dichloropropene	10.0	8.35	83	2	29	69-122	
4-Methyl-2-pentanone (MIBK)	20.0	16.7	83	1	33	19-150	
Toluene	10.0	9.37	94	0	31	73-123	
trans-1,3-Dichloropropene	10.0	7.43	74	2	30	61-122	
1,1,2-Trichloroethane	10.0	9.42	94	1	27	72-120	
Tetrachloroethene	10.0	23.3	2	1	27	69-134	F1
2-Hexanone	20.0	18.0	90	7	32	24-150	
Dibromochloromethane	10.0	8.62	86	7	28	59-134	
1,2-Dibromoethane (EDB)	10.0	8.59	86	2	27	65-129	
Chlorobenzene	10.0	9.39	94	4	25	76-119	
1,1,1,2-Tetrachloroethane	10.0	9.05	91	3	28	65-132	
Ethylbenzene	10.0	8.57	86	5	27	76-118	
Xylenes, Total	20.0	18.6	93	1	27	76-116	
Styrene	10.0	9.64	96	3	27	74-118	
Bromoform	10.0	8.60	86	13	30	50-146	
1,1,2,2-Tetrachloroethane	10.0	10.6	106	5	29	57-135	
Acrylonitrile	100	108	108	7	34	43-149	

Column to be used to flag recovery and RPD values

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Lab File ID: 5092710.D Lab Sample ID: MB 180-292962/6
 Matrix: Water Heated Purge: (Y/N) N
 Instrument ID: CHHP5 Date Analyzed: 09/27/2019 16:02
 GC Column: DB-624 ID: 0.18 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 180-292962/4	5092708.D	09/27/2019 15:03
HD-COD-SW-29-0/1-0	180-96180-1	5092717.D	09/27/2019 19:02
HD-COD-SW-8-0/1-0	180-96180-2	5092718.D	09/27/2019 19:27
HD-COD-SW-13-0/1-0	180-96180-3	5092719.D	09/27/2019 19:51
HD-COD-SW-16-0/1-0	180-96180-4	5092720.D	09/27/2019 20:16
HD-COD-SW-6-0/1-0	180-96180-5	5092721.D	09/27/2019 20:40
HD-COD-SW-26-0/1-0	180-96180-6	5092722.D	09/27/2019 21:04
HD-COD-SW-7-0/1-0	180-96180-7	5092723.D	09/27/2019 21:29
HD-COD-SW-9-0/1-0	180-96180-8	5092724.D	09/27/2019 21:53
HD-COD-SW-28-0/1-0	180-96180-9	5092725.D	09/27/2019 22:17
HD-COD-SW-27-0/1-0	180-96180-11	5092727.D	09/27/2019 23:06
HD-QC1-0/1-2	180-96180-12	5092728.D	09/27/2019 23:30

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Lab File ID: 5092806.D Lab Sample ID: MB 180-293070/6
 Matrix: Water Heated Purge: (Y/N) N
 Instrument ID: CHHP5 Date Analyzed: 09/28/2019 12:00
 GC Column: DB-624 ID: 0.18 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 180-293070/4	5092804.D	09/28/2019 11:01
HD-COD-SW-15-0/1-0	180-96180-10	5092816.D	09/28/2019 16:15

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Lab File ID: 5100407.D Lab Sample ID: MB 180-293722/6
 Matrix: Water Heated Purge: (Y/N) N
 Instrument ID: CHHP5 Date Analyzed: 10/04/2019 14:10
 GC Column: DB-624 ID: 0.18 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 180-293722/4	5100405.D	10/04/2019 13:21
HD-MW-110-0/1-0	180-96180-13	5100408.D	10/04/2019 15:13
HD-MW-108D-0/1-0	180-96180-14	5100409.D	10/04/2019 15:37
HD-QC1-0/1-3	180-96180-16	5100410.D	10/04/2019 16:02
HD-QC1-0/1-4	180-96180-17	5100411.D	10/04/2019 16:26
HD-QC1-0/1-1	180-96180-15	5100412.D	10/04/2019 16:50
HD-MW-110-0/1-0 MS	180-96180-13 MS	5100426.D	10/04/2019 22:32
HD-MW-110-0/1-0 MSD	180-96180-13 MSD	5100427.D	10/04/2019 22:57

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1

SDG No.: _____

Lab File ID: 5092001.D BFB Injection Date: 09/20/2019

Instrument ID: CHHP5 BFB Injection Time: 10:07

Analysis Batch No.: 292045

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	21.2
75	30.0 - 60.0 % of mass 95	52.7
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	5.7
173	Less than 2.0 % of mass 174	0.0 (0.0) 1
174	50.0 - 120.00 % of mass 95	85.6
175	5.0 - 9.0 % of mass 174	5.9 (6.9) 1
176	95.0 - 101.0 % of mass 174	85.8 (100.2) 1
177	5.0 - 9.0 % of mass 176	4.8 (5.6) 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 180-292045/5	5092005.D	09/20/2019	11:54
	ICIS 180-292045/6	5092006.D	09/20/2019	12:18
	IC 180-292045/7	5092007.D	09/20/2019	12:43
	IC 180-292045/8	5092008.D	09/20/2019	13:07
	IC 180-292045/9	5092009.D	09/20/2019	13:32
	IC 180-292045/10	5092010.D	09/20/2019	13:56
	IC 180-292045/11	5092011.D	09/20/2019	14:21
	IC 180-292045/19	5092016.D	09/20/2019	16:22

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1

SDG No.: _____

Lab File ID: 5092705B.D BFB Injection Date: 09/27/2019

Instrument ID: CHHP5 BFB Injection Time: 13:23

Analysis Batch No.: 292962

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	20.3
75	30.0 - 60.0 % of mass 95	59.5
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	6.3
173	Less than 2.0 % of mass 174	0.0 (0.0) 1
174	50.0 - 120.00 % of mass 95	86.0
175	5.0 - 9.0 % of mass 174	6.7 (7.8) 1
176	95.0 - 101.0 % of mass 174	86.2 (100.2) 1
177	5.0 - 9.0 % of mass 176	5.8 (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
	CCVIS 180-292962/3	5092707.D	09/27/2019	14:39
	LCS 180-292962/4	5092708.D	09/27/2019	15:03
	MB 180-292962/6	5092710.D	09/27/2019	16:02
HD-COD-SW-29-0/1-0	180-96180-1	5092717.D	09/27/2019	19:02
HD-COD-SW-8-0/1-0	180-96180-2	5092718.D	09/27/2019	19:27
HD-COD-SW-13-0/1-0	180-96180-3	5092719.D	09/27/2019	19:51
HD-COD-SW-16-0/1-0	180-96180-4	5092720.D	09/27/2019	20:16
HD-COD-SW-6-0/1-0	180-96180-5	5092721.D	09/27/2019	20:40
HD-COD-SW-26-0/1-0	180-96180-6	5092722.D	09/27/2019	21:04
HD-COD-SW-7-0/1-0	180-96180-7	5092723.D	09/27/2019	21:29
HD-COD-SW-9-0/1-0	180-96180-8	5092724.D	09/27/2019	21:53
HD-COD-SW-28-0/1-0	180-96180-9	5092725.D	09/27/2019	22:17
HD-COD-SW-27-0/1-0	180-96180-11	5092727.D	09/27/2019	23:06
HD-QC1-0/1-2	180-96180-12	5092728.D	09/27/2019	23:30

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Lab File ID: 5092801.D BFB Injection Date: 09/28/2019
 Instrument ID: CHHP5 BFB Injection Time: 10:01
 Analysis Batch No.: 293070

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.2	
75	30.0 - 60.0 % of mass 95	52.7	
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	0.8	(0.9) 1
174	50.0 - 120.00 % of mass 95	86.8	
175	5.0 - 9.0 % of mass 174	6.3	(7.2) 1
176	95.0 - 101.0 % of mass 174	86.0	(99.1) 1
177	5.0 - 9.0 % of mass 176	5.7	(6.6) 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 180-293070/2	5092802.D	09/28/2019	10:37
	LCS 180-293070/4	5092804.D	09/28/2019	11:01
	MB 180-293070/6	5092806.D	09/28/2019	12:00
HD-COD-SW-15-0/1-0	180-96180-10	5092816.D	09/28/2019	16:15

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1

SDG No.: _____

Lab File ID: 5100401C.D BFB Injection Date: 10/04/2019

Instrument ID: CHHP5 BFB Injection Time: 11:11

Analysis Batch No.: 293722

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	16.4	
75	30.0 - 60.0 % of mass 95	48.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.5	
173	Less than 2.0 % of mass 174	1.3	(1.4) 1
174	50.0 - 120.00 % of mass 95	95.2	
175	5.0 - 9.0 % of mass 174	7.1	(7.4) 1
176	95.0 - 101.0 % of mass 174	90.7	(95.3) 1
177	5.0 - 9.0 % of mass 176	7.0	(7.8) 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
	CCVIS 180-293722/3	5100403.D	10/04/2019	12:12
	LCS 180-293722/4	5100405.D	10/04/2019	13:21
	MB 180-293722/6	5100407.D	10/04/2019	14:10
HD-MW-110-0/1-0	180-96180-13	5100408.D	10/04/2019	15:13
HD-MW-108D-0/1-0	180-96180-14	5100409.D	10/04/2019	15:37
HD-QC1-0/1-3	180-96180-16	5100410.D	10/04/2019	16:02
HD-QC1-0/1-4	180-96180-17	5100411.D	10/04/2019	16:26
HD-QC1-0/1-1	180-96180-15	5100412.D	10/04/2019	16:50
HD-MW-110-0/1-0 MS	180-96180-13 MS	5100426.D	10/04/2019	22:32
HD-MW-110-0/1-0 MSD	180-96180-13 MSD	5100427.D	10/04/2019	22:57

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

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Sample No.: CCVIS 180-292962/3 Date Analyzed: 09/27/2019 14:39
 Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm)
 Lab File ID (Standard): 5092707.D Heated Purge: (Y/N) N
 Calibration ID: 41569

	TBA _d 9		FB		CBN _{Zd} 5		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	181213	4.53	362784	7.50	93124	10.58	
UPPER LIMIT	362426	5.03	725568	8.00	186248	11.08	
LOWER LIMIT	90607	4.03	181392	7.00	46562	10.08	
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 180-292962/4		168201	4.54	356455	7.50	90285	10.58
MB 180-292962/6		159428	4.54	299813	7.50	81330	10.58
180-96180-1	HD-COD-SW-29-0/1-0	152158	4.53	271098	7.50	70342	10.59
180-96180-2	HD-COD-SW-8-0/1-0	151213	4.54	271994	7.50	72130	10.58
180-96180-3	HD-COD-SW-13-0/1-0	155646	4.53	271932	7.50	70031	10.58
180-96180-4	HD-COD-SW-16-0/1-0	151601	4.53	266527	7.50	69371	10.59
180-96180-5	HD-COD-SW-6-0/1-0	154516	4.53	264579	7.50	69423	10.58
180-96180-6	HD-COD-SW-26-0/1-0	185382	4.53	273841	7.50	74590	10.58
180-96180-7	HD-COD-SW-7-0/1-0	163917	4.54	265167	7.50	66368	10.58
180-96180-8	HD-COD-SW-9-0/1-0	167340	4.53	271504	7.50	71779	10.58
180-96180-9	HD-COD-SW-28-0/1-0	167336	4.54	253304	7.50	73155	10.58
180-96180-11	HD-COD-SW-27-0/1-0	167485	4.54	265710	7.50	71273	10.58
180-96180-12	HD-QC1-0/1-2	180730	4.54	274083	7.50	76382	10.58

TBA_d9 = TBA-d₉ (IS)

FB = Fluorobenzene (IS)

CBN_{Zd}5 = Chlorobenzene-d₅

Area Limit = 50%-200% of internal standard area

RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

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

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Sample No.: CCVIS 180-292962/3 Date Analyzed: 09/27/2019 14:39
 Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm)
 Lab File ID (Standard): 5092707.D Heated Purge: (Y/N) N
 Calibration ID: 41569

		DCBd4					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		164871	12.92				
UPPER LIMIT		329742	13.42				
LOWER LIMIT		82436	12.42				
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 180-292962/4		177164	12.92				
MB 180-292962/6		122034	12.92				
180-96180-1	HD-COD-SW-29-0/1-0	112227	12.92				
180-96180-2	HD-COD-SW-8-0/1-0	110557	12.92				
180-96180-3	HD-COD-SW-13-0/1-0	110863	12.92				
180-96180-4	HD-COD-SW-16-0/1-0	107304	12.92				
180-96180-5	HD-COD-SW-6-0/1-0	106645	12.92				
180-96180-6	HD-COD-SW-26-0/1-0	98352	12.92				
180-96180-7	HD-COD-SW-7-0/1-0	110182	12.92				
180-96180-8	HD-COD-SW-9-0/1-0	111116	12.92				
180-96180-9	HD-COD-SW-28-0/1-0	104858	12.92				
180-96180-11	HD-COD-SW-27-0/1-0	103364	12.92				
180-96180-12	HD-QC1-0/1-2	111374	12.92				

DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
 RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

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

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Sample No.: CCVIS 180-293070/2 Date Analyzed: 09/28/2019 10:37
 Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm)
 Lab File ID (Standard): 5092802.D Heated Purge: (Y/N) N
 Calibration ID: 41569

	TBA _d 9		FB		CBN _{Zd} 5		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	214919	4.55	368623	7.49	89056	10.59	
UPPER LIMIT	429838	5.05	737246	7.99	178112	11.09	
LOWER LIMIT	107460	4.05	184312	6.99	44528	10.09	
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 180-293070/4	208911	4.55	368566	7.49	88993	10.59	
MB 180-293070/6	186474	4.54	297130	7.50	73734	10.58	
180-96180-10	HD-COD-SW-15-0/1-0	196682	4.53	299425	7.50	76920	10.59

TBA_d9 = TBA-d₉ (IS)
 FB = Fluorobenzene (IS)
 CBN_{Zd}5 = Chlorobenzene-d₅

Area Limit = 50%-200% of internal standard area
 RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

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

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Sample No.: CCVIS 180-293070/2 Date Analyzed: 09/28/2019 10:37
 Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm)
 Lab File ID (Standard): 5092802.D Heated Purge: (Y/N) N
 Calibration ID: 41569

	DCBd4					
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD	173275	12.92				
UPPER LIMIT	346550	13.42				
LOWER LIMIT	86638	12.42				
LAB SAMPLE ID	CLIENT SAMPLE ID					
LCS 180-293070/4	170998	12.92				
MB 180-293070/6	110724	12.92				
180-96180-10	HD-COD-SW-15-0/1-0	114773	12.92			

DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
 RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

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

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Sample No.: CCVIS 180-293722/3 Date Analyzed: 10/04/2019 12:12
 Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm)
 Lab File ID (Standard): 5100403.D Heated Purge: (Y/N) N
 Calibration ID: 41569

	TBA _d 9		FB		CBN _{Zd} 5		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	213912	4.55	382101	7.49	94312	10.58	
UPPER LIMIT	427824	5.05	764202	7.99	188624	11.08	
LOWER LIMIT	106956	4.05	191051	6.99	47156	10.08	
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 180-293722/4	245848	4.55	390494	7.50	107930	10.58	
MB 180-293722/6	215554	4.53	318419	7.49	89361	10.58	
180-96180-13	HD-MW-110-0/1-0	215433	4.53	327727	7.50	90672	10.58
180-96180-14	HD-MW-108D-0/1-0	197429	4.53	293140	7.50	86152	10.58
180-96180-16	HD-QC1-0/1-3	197115	4.54	286616	7.50	82280	10.58
180-96180-17	HD-QC1-0/1-4	191220	4.53	290275	7.50	82980	10.58
180-96180-15	HD-QC1-0/1-1	189508	4.54	274342	7.49	80703	10.58
180-96180-13 MS	HD-MW-110-0/1-0 MS	214066	4.56	349752	7.49	92050	10.58
180-96180-13 MSD	HD-MW-110-0/1-0 MSD	217935	4.54	381263	7.50	98622	10.58

TBA_d9 = TBA-d9 (IS)
 FB = Fluorobenzene (IS)
 CBN_{Zd}5 = Chlorobenzene-d5

Area Limit = 50%-200% of internal standard area
 RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

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

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Sample No.: CCVIS 180-293722/3 Date Analyzed: 10/04/2019 12:12
 Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm)
 Lab File ID (Standard): 5100403.D Heated Purge: (Y/N) N
 Calibration ID: 41569

	DCBd4					
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD	216962	12.92				
UPPER LIMIT	433924	13.42				
LOWER LIMIT	108481	12.42				
LAB SAMPLE ID	CLIENT SAMPLE ID					
LCS 180-293722/4	231772	12.92				
MB 180-293722/6	139205	12.92				
180-96180-13	HD-MW-110-0/1-0	150799	12.92			
180-96180-14	HD-MW-108D-0/1-0	131571	12.92			
180-96180-16	HD-QC1-0/1-3	128378	12.92			
180-96180-17	HD-QC1-0/1-4	129916	12.92			
180-96180-15	HD-QC1-0/1-1	125403	12.92			
180-96180-13 MS	HD-MW-110-0/1-0 MS	210515	12.92			
180-96180-13 MSD	HD-MW-110-0/1-0 MSD	214148	12.92			

DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
 RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-29-0/1-0 Lab Sample ID: 180-96180-1
 Matrix: Water Lab File ID: 5092717.D
 Analysis Method: EPA 8260C Date Collected: 09/23/2019 10:10
 Sample wt/vol: 5 (mL) Date Analyzed: 09/27/2019 19:02
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 292962 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	ND		1.0	0.90
75-01-4	Vinyl chloride	ND		1.0	0.88
74-83-9	Bromomethane	ND		1.0	0.89
75-00-3	Chloroethane	ND		1.0	0.90
75-35-4	1,1-Dichloroethene	ND		1.0	0.55
67-64-1	Acetone	ND		5.0	3.4
75-15-0	Carbon disulfide	ND		1.0	0.88
75-09-2	Methylene Chloride	ND		1.0	0.89
156-60-5	trans-1,2-Dichloroethene	ND	*	1.0	0.67
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.59
75-34-3	1,1-Dichloroethane	ND		1.0	0.63
156-59-2	cis-1,2-Dichloroethene	ND	*	1.0	0.71
74-97-5	Bromochloromethane	ND		1.0	0.63
78-93-3	2-Butanone (MEK)	ND		5.0	2.6
67-66-3	Chloroform	ND		1.0	0.60
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.60
56-23-5	Carbon tetrachloride	ND		1.0	0.88
71-43-2	Benzene	ND		1.0	0.60
107-06-2	1,2-Dichloroethane	ND		1.0	0.57
79-01-6	Trichloroethene	ND	*	1.0	0.69
78-87-5	1,2-Dichloropropane	ND		1.0	0.66
75-27-4	Bromodichloromethane	ND		1.0	0.64
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.59
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1
108-88-3	Toluene	ND	*	1.0	0.46
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.58
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.45
127-18-4	Tetrachloroethene	ND		1.0	0.47
591-78-6	2-Hexanone	ND		5.0	3.3
124-48-1	Dibromochloromethane	ND		1.0	0.84
106-93-4	1,2-Dibromoethane (EDB)	ND		1.0	0.50
108-90-7	Chlorobenzene	ND		1.0	0.50
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.57
100-41-4	Ethylbenzene	ND		1.0	0.51
1330-20-7	Xylenes, Total	ND	*	2.0	0.89
100-42-5	Styrene	ND		1.0	0.47

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-29-0/1-0 Lab Sample ID: 180-96180-1
 Matrix: Water Lab File ID: 5092717.D
 Analysis Method: EPA 8260C Date Collected: 09/23/2019 10:10
 Sample wt/vol: 5 (mL) Date Analyzed: 09/27/2019 19:02
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 292962 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	ND		1.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.60
107-13-1	Acrylonitrile	ND		20	7.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		70-150
2037-26-5	Toluene-d8 (Surr)	88		78-128
460-00-4	4-Bromofluorobenzene (Surr)	80		64-123
1868-53-7	Dibromofluoromethane (Surr)	117		75-147

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092717.D
 Lims ID: 180-96180-B-1
 Client ID: HD-COD-SW-29-0/1-0
 Sample Type: Client
 Inject. Date: 27-Sep-2019 19:02:30 ALS Bottle#: 7 Worklist Smp#: 13
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028863-013
 Misc. Info.: 180-96180-B-1
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 28-Sep-2019 11:02:44 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: bowieh

Date: 28-Sep-2019 11:02:43

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.534	4.532	0.002	0	152158	1000.0	
* 2 Fluorobenzene (IS)	96	7.502	7.495	0.007	98	271098	50.0	
* 3 Chlorobenzene-d5	119	10.587	10.579	0.008	89	70342	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.917	12.915	0.002	95	112227	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.778	6.777	0.001	93	91332	58.4	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.149	7.142	0.007	0	129776	49.2	
\$ 7 Toluene-d8 (Surr)	98	9.133	9.131	0.002	96	247588	44.2	
\$ 8 4-Bromofluorobenzene (Surr	95	11.761	11.766	-0.005	90	91551	39.8	
12 Chloromethane	50	1.912	1.910	0.002	41	2843	1.23	
13 Vinyl chloride	62		2.038				ND	
15 Bromomethane	94		2.379				ND	U
16 Chloroethane	64		2.543				ND	U
22 1,1-Dichloroethene	96		3.565				ND	
24 Acetone	43	3.682	3.668	0.014	85	10632	15.4	
26 Carbon disulfide	76	3.889	3.863	0.026	43	2395	0.6146	Ma
31 Methylene Chloride	84	4.400	4.405	-0.005	18	1587	-5.77	a
33 Acrylonitrile	53		4.782				ND	
34 trans-1,2-Dichloroethene	96		4.812				ND	
35 Methyl tert-butyl ether	73		4.824				ND	
37 1,1-Dichloroethane	63		5.439				ND	
45 cis-1,2-Dichloroethene	96		6.181				ND	U
46 2-Butanone (MEK)	43		6.187				ND	
49 Chlorobromomethane	128		6.455				ND	
52 Chloroform	83	6.596	6.595	0.001	1	934	-2.40	
53 1,1,1-Trichloroethane	97		6.759				ND	
56 Carbon tetrachloride	117		6.929				ND	
58 Benzene	78		7.154				ND	U
59 1,2-Dichloroethane	62		7.233				ND	
64 Trichloroethene	130	7.879	7.878	0.001	19	976	0.5392	
67 1,2-Dichloropropane	63		8.152				ND	
71 Dichlorobromomethane	83		8.432				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
74 cis-1,3-Dichloropropene	75		8.870				ND	
75 4-Methyl-2-pentanone (MIBK)	43		9.028				ND	U
76 Toluene	91	9.200	9.198	0.002	94	4574	0.6274	
77 trans-1,3-Dichloropropene	75		9.448				ND	
79 1,1,2-Trichloroethane	97		9.636				ND	
80 Tetrachloroethene	164		9.709				ND	U
82 2-Hexanone	43		9.855				ND	U
84 Chlorodibromomethane	129		10.007				ND	
85 Ethylene Dibromide	107		10.123				ND	
87 Chlorobenzene	112		10.610				ND	
89 1,1,1,2-Tetrachloroethane	131		10.701				ND	
90 Ethylbenzene	106		10.707				ND	U
91 m-Xylene & p-Xylene	106		10.835				ND	
92 o-Xylene	106		11.218				ND	
93 Styrene	104		11.242				ND	
94 Bromoform	173		11.419				ND	
99 1,1,2,2-Tetrachloroethane	83		11.899				ND	
S 133 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Reagents:

voaWI/SHP5_00013

Amount Added: 5.00

Units: uL

Run Reagent

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092717.D

Injection Date: 27-Sep-2019 19:02:30

Instrument ID: CHHP5

Operator ID: 433269

Lims ID: 180-96180-B-1

Lab Sample ID: 180-96180-1

Worklist Smp#: 13

Client ID: HD-COD-SW-29-0/1-0

Purge Vol: 5.000 mL

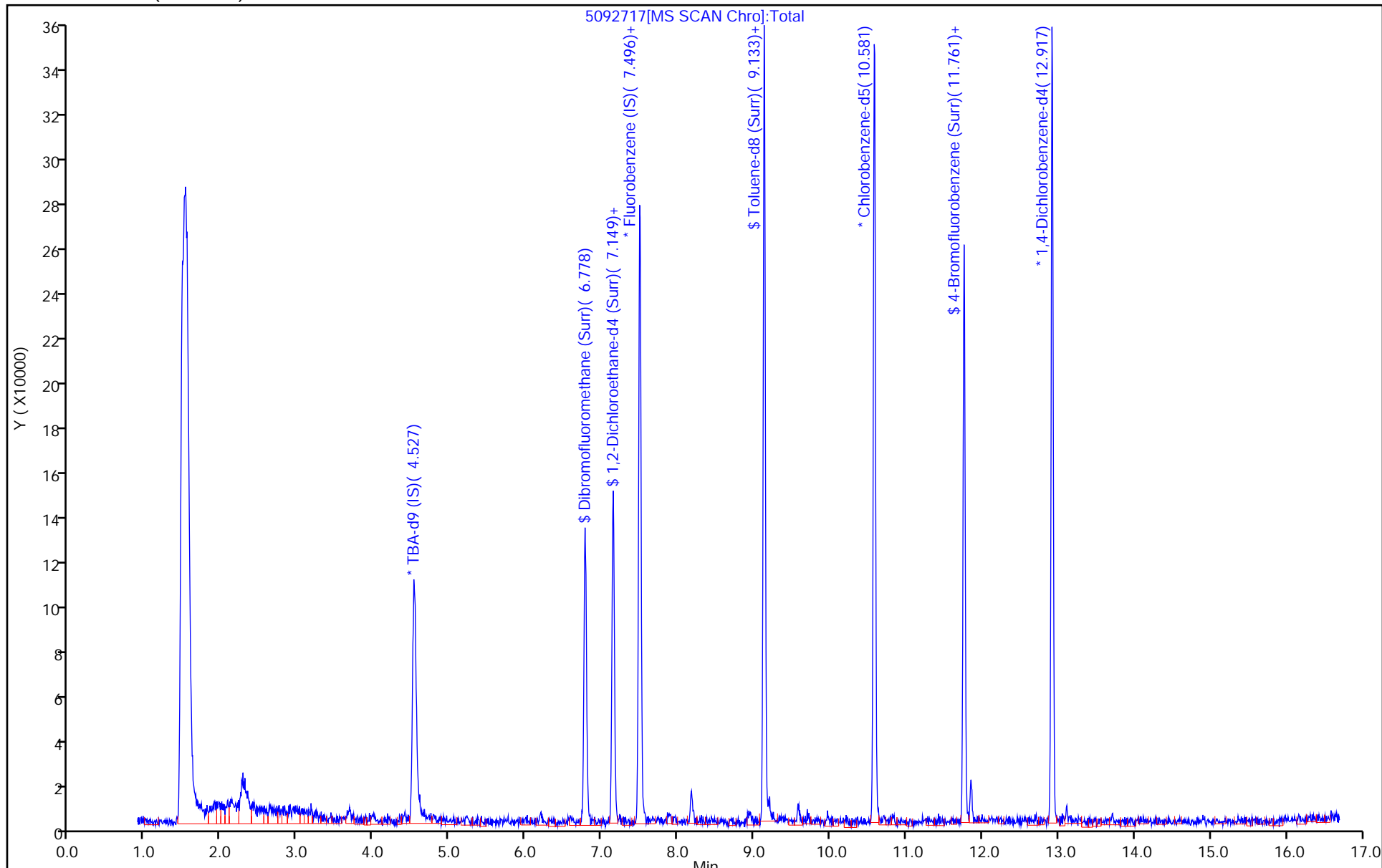
Dil. Factor: 1.0000

ALS Bottle#: 7

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Recovery Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092717.D
 Lims ID: 180-96180-B-1
 Client ID: HD-COD-SW-29-0/1-0
 Sample Type: Client
 Inject. Date: 27-Sep-2019 19:02:30 ALS Bottle#: 7 Worklist Smp#: 13
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028863-013
 Misc. Info.: 180-96180-B-1
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 28-Sep-2019 11:02:44 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: bowieh Date: 28-Sep-2019 11:02:43

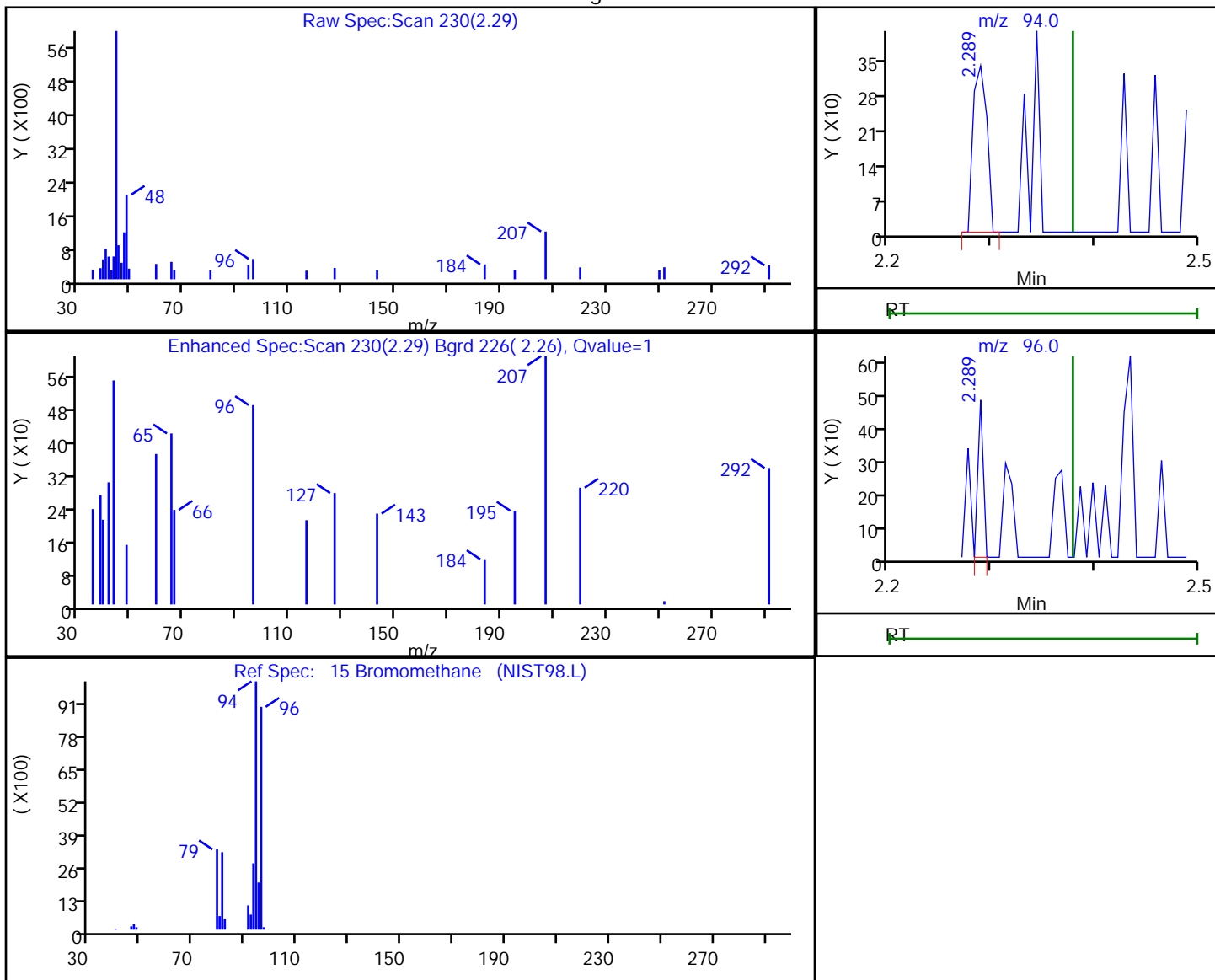
Compound	Amount Added	Amount Recovered	% Rec.
\$ 5 Dibromofluoromethane (Surr)	50.0	58.4	116.73
\$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	49.2	98.46
\$ 7 Toluene-d8 (Surr)	50.0	44.2	88.43
\$ 8 4-Bromofluorobenzene (Surr)	50.0	39.8	79.53

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092717.D
Injection Date: 27-Sep-2019 19:02:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-1 Lab Sample ID: 180-96180-1
Client ID: HD-COD-SW-29-0/1-0
Operator ID: 433269 ALS Bottle#: 7 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

15 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
2.29	94.00	312	0.187495
2.29	96.00	177	

Reviewer: bowieh, 28-Sep-2019 11:01:53

Audit Action: Marked Compound Undetected

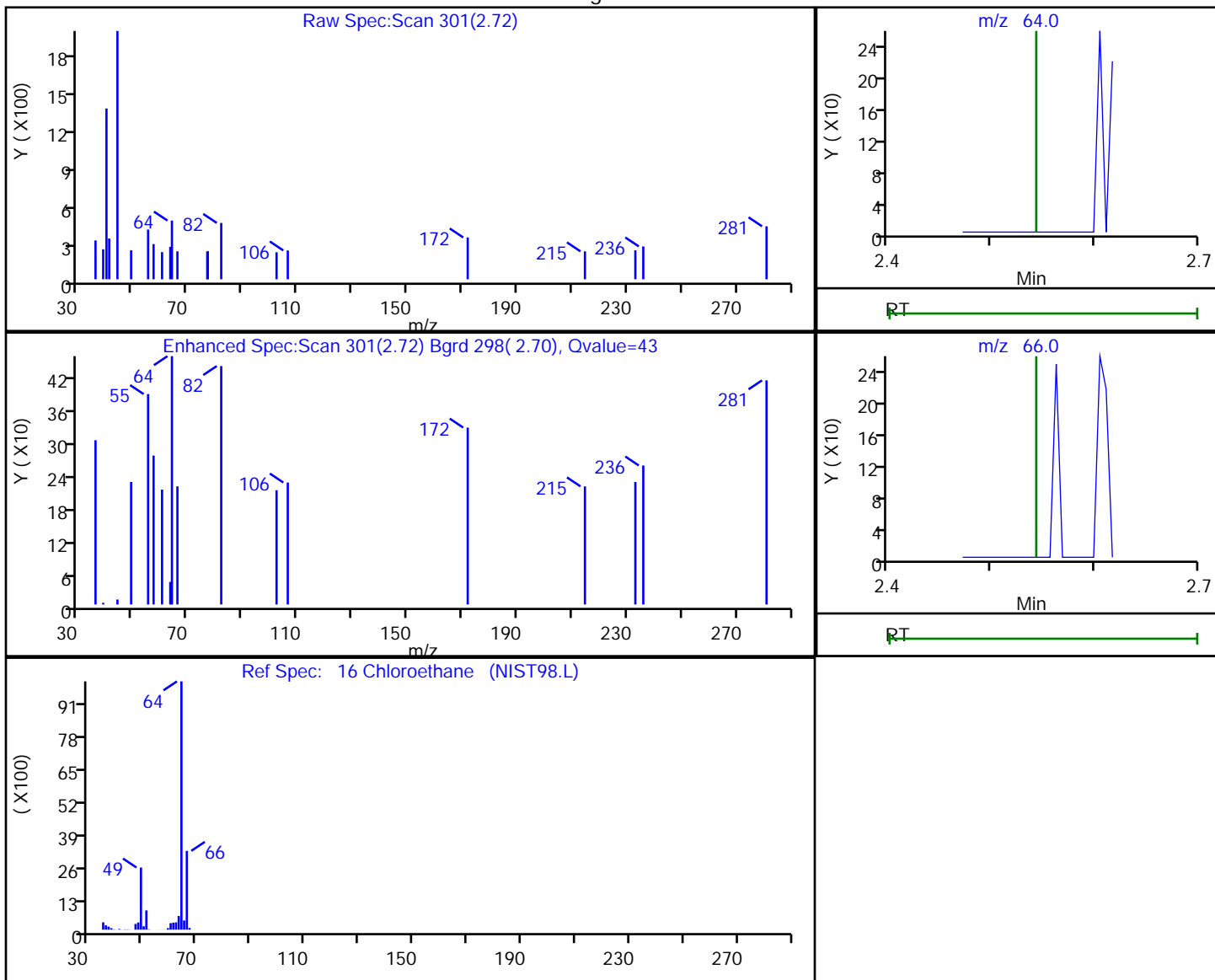
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092717.D
Injection Date: 27-Sep-2019 19:02:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-1 Lab Sample ID: 180-96180-1
Client ID: HD-COD-SW-29-0/1-0
Operator ID: 433269 ALS Bottle#: 7 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

16 Chloroethane, CAS: 75-00-3

Processing Results



RT	Mass	Response	Amount
2.72	64.00	165	0.112612
2.73	66.00	436	

Reviewer: bowieh, 28-Sep-2019 11:01:55

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

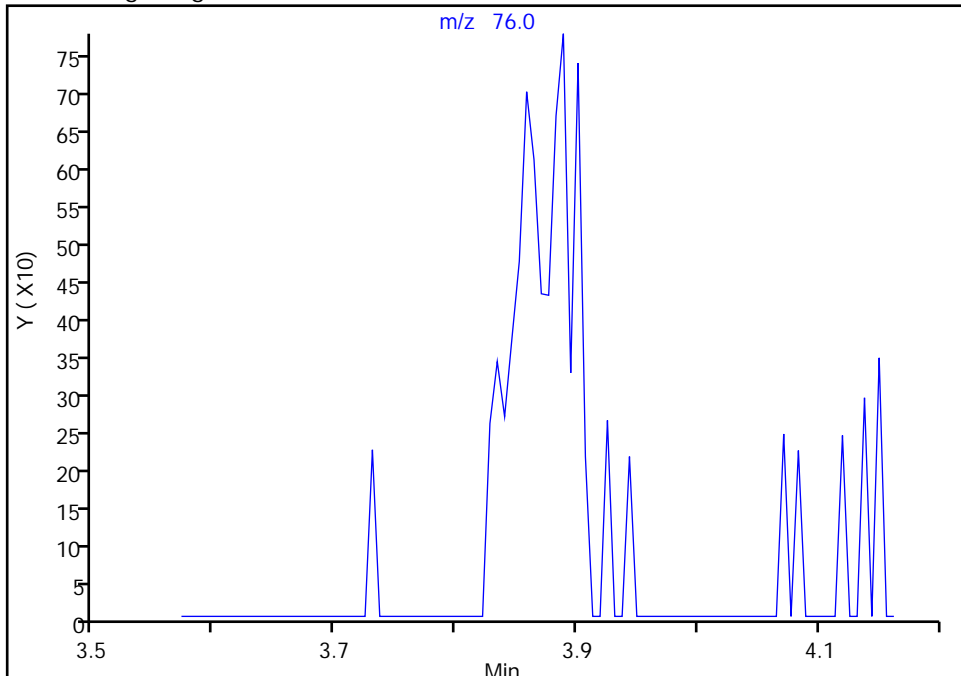
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Injection Date:	27-Sep-2019 19:02:30	Instrument ID:	CHHP5		
Lims ID:	180-96180-B-1	Lab Sample ID:	180-96180-1		
Client ID:	HD-COD-SW-29-0/1-0				
Operator ID:	433269	ALS Bottle#:	7	Worklist Smp#:	13
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector:	MS SCAN		

26 Carbon disulfide, CAS: 75-15-0

Signal: 1

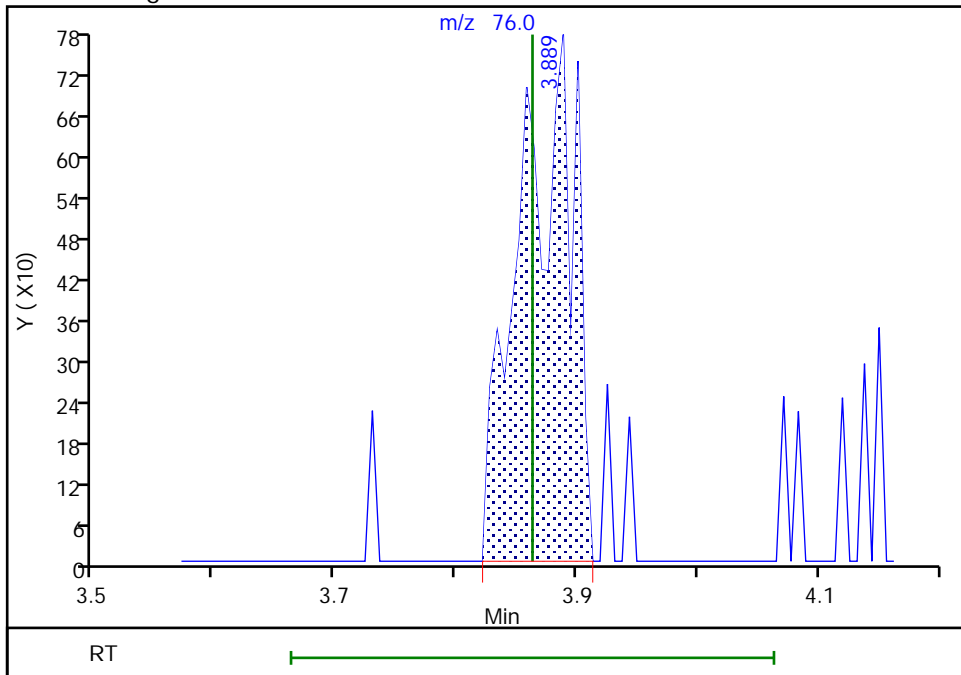
Not Detected
Expected RT: 3.86

Processing Integration Results



Manual Integration Results

RT: 3.89
Area: 2395
Amount: 0.614584
Amount Units: ng



Reviewer: bowieh, 28-Sep-2019 11:02:08
Audit Action: Manually Integrated

Eurofins TestAmerica, Pittsburgh

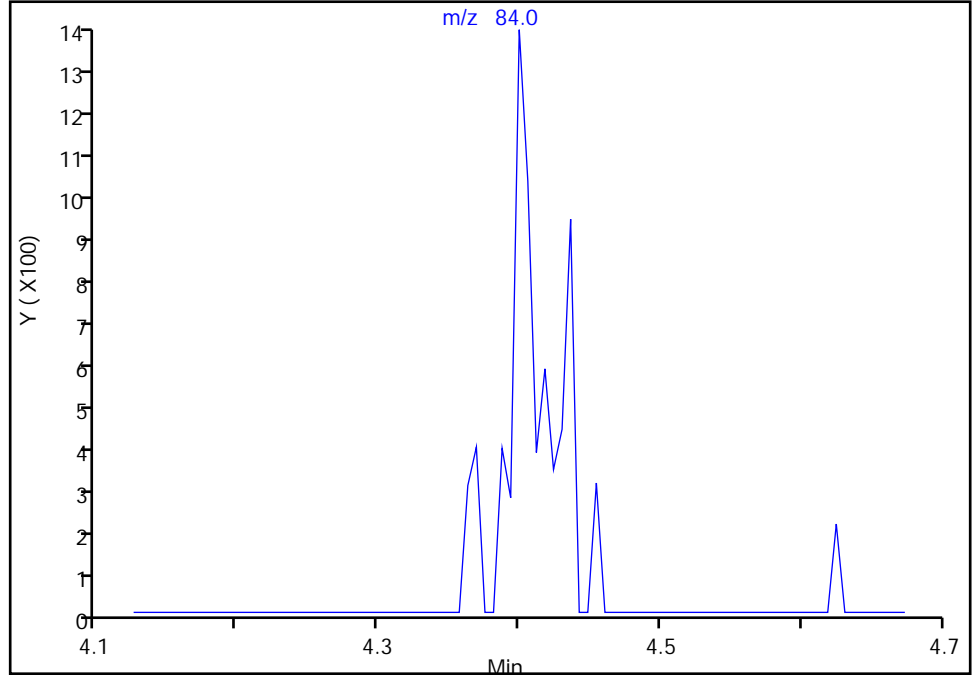
Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092717.D
Injection Date: 27-Sep-2019 19:02:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-1 Lab Sample ID: 180-96180-1
Client ID: HD-COD-SW-29-0/1-0
Operator ID: 433269 ALS Bottle#: 7 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2

Signal: 1

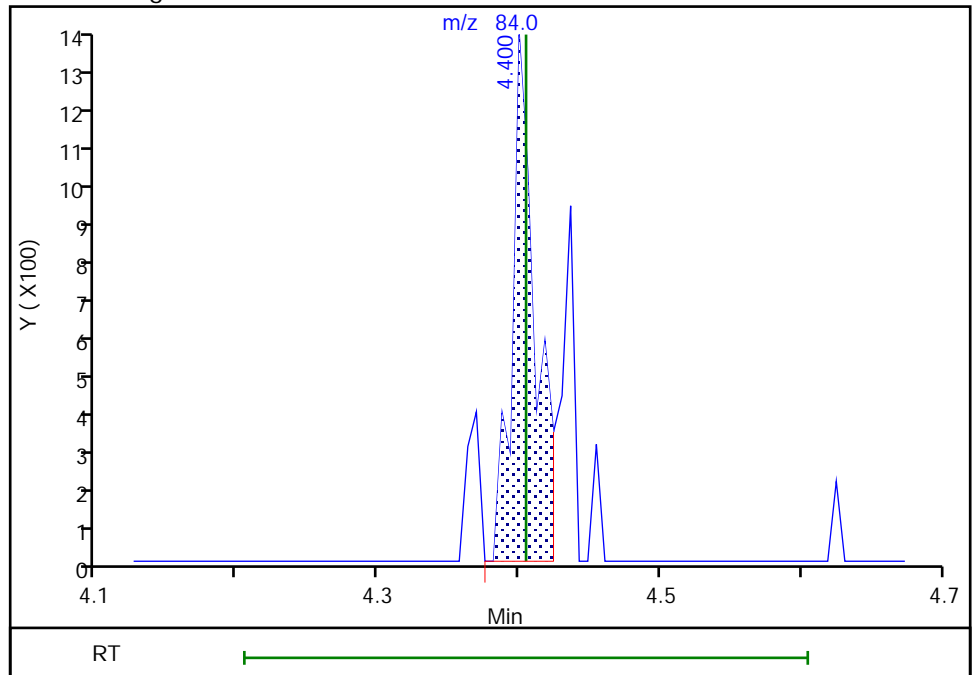
Not Detected
Expected RT: 4.40

Processing Integration Results



Manual Integration Results

RT: 4.40
Area: 1587
Amount: -5.771769
Amount Units: ng

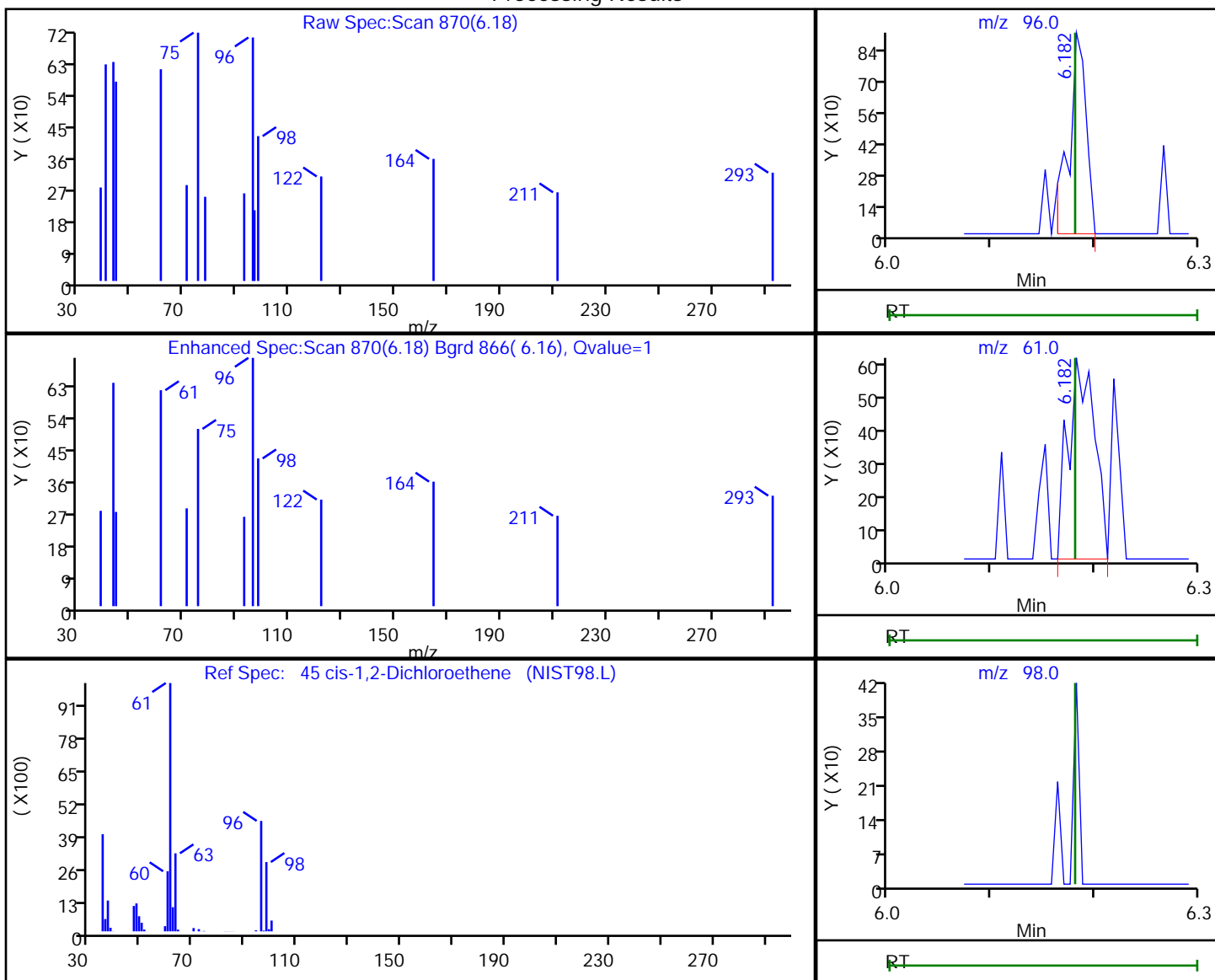


Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092717.D
 Injection Date: 27-Sep-2019 19:02:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-1 Lab Sample ID: 180-96180-1
 Client ID: HD-COD-SW-29-0/1-0
 Operator ID: 433269 ALS Bottle#: 7 Worklist Smp#: 13
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

45 cis-1,2-Dichloroethene, CAS: 156-59-2

Processing Results



RT	Mass	Response	Amount
6.18	96.00	1063	0.596729
6.18	61.00	1090	
6.18	98.00	0	

Reviewer: bowieh, 28-Sep-2019 11:02:19

Audit Action: Marked Compound Undetected

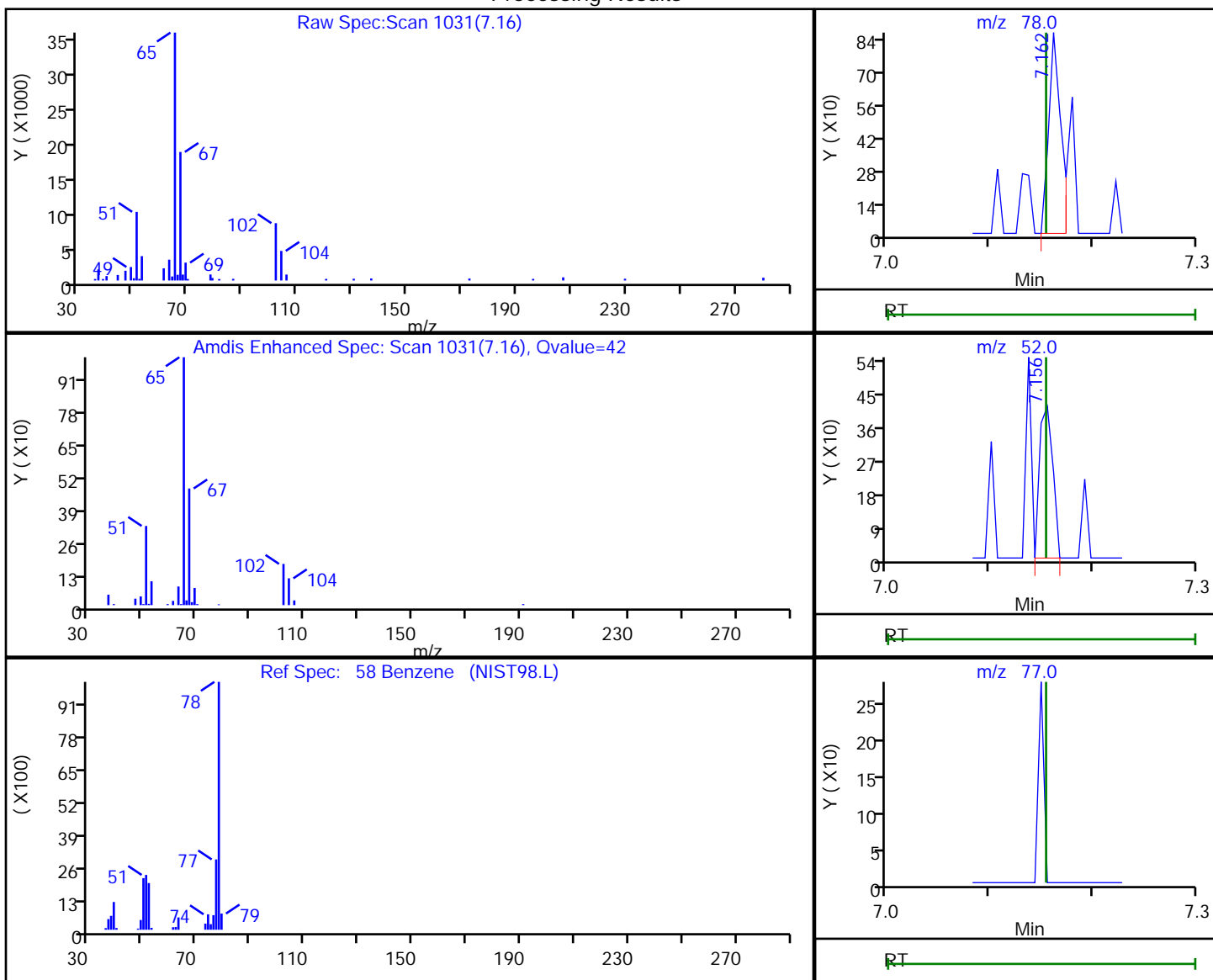
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092717.D
 Injection Date: 27-Sep-2019 19:02:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-1 Lab Sample ID: 180-96180-1
 Client ID: HD-COD-SW-29-0/1-0
 Operator ID: 433269 ALS Bottle#: 7 Worklist Smp#: 13
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

58 Benzene, CAS: 71-43-2

Processing Results



RT	Mass	Response	Amount
7.16	78.00	721	0.107673
7.16	52.00	371	
7.15	77.00	0	

Reviewer: bowieh, 28-Sep-2019 11:02:24

Audit Action: Marked Compound Undetected

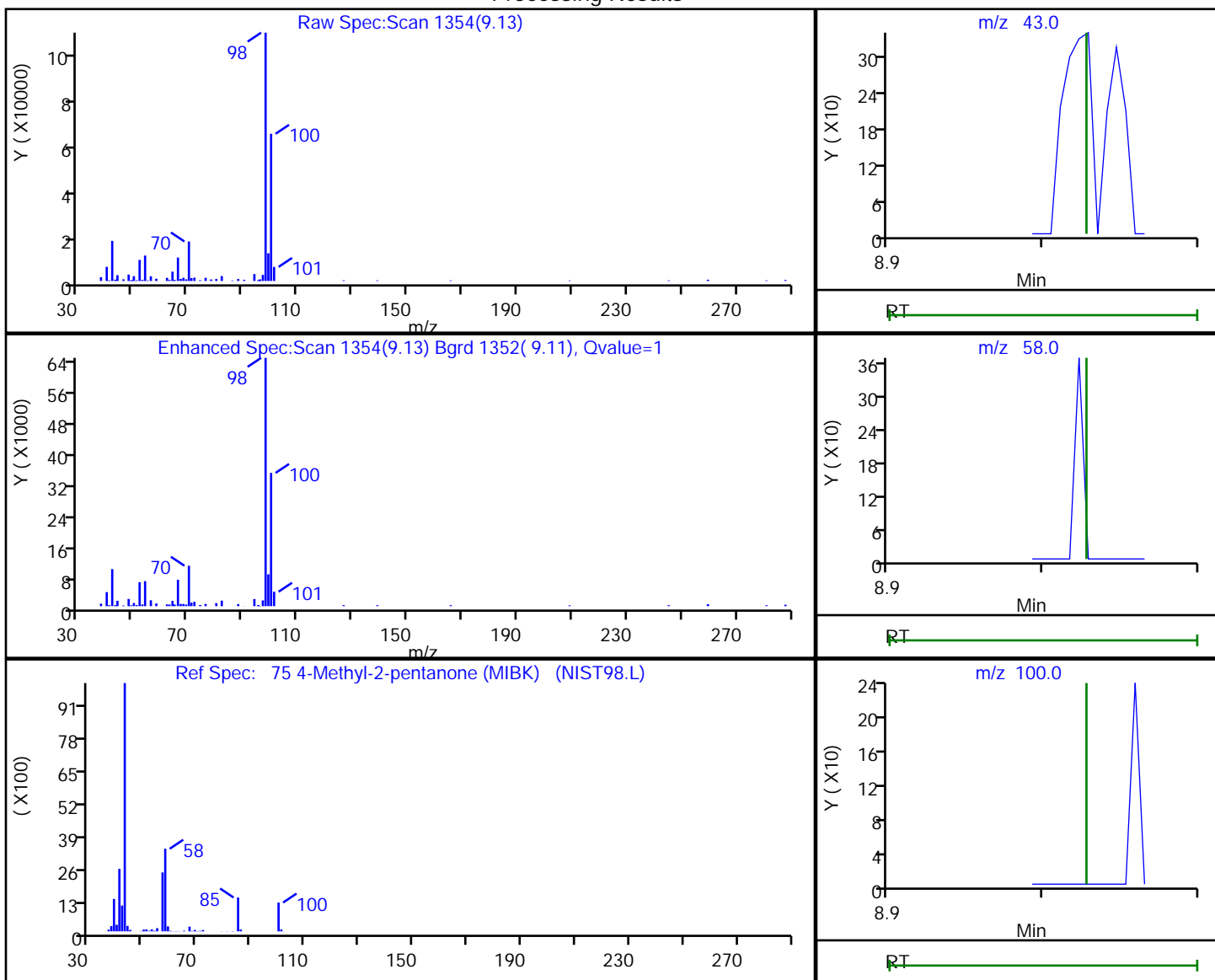
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092717.D
 Injection Date: 27-Sep-2019 19:02:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-1 Lab Sample ID: 180-96180-1
 Client ID: HD-COD-SW-29-0/1-0
 Operator ID: 433269 ALS Bottle#: 7 Worklist Smp#: 13
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

75 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1

Processing Results



RT	Mass	Response	Amount
9.13	43.00	425	0.264866
9.13	58.00	2646	
9.03	100.00	0	

Reviewer: bowieh, 28-Sep-2019 11:02:29

Audit Action: Marked Compound Undetected

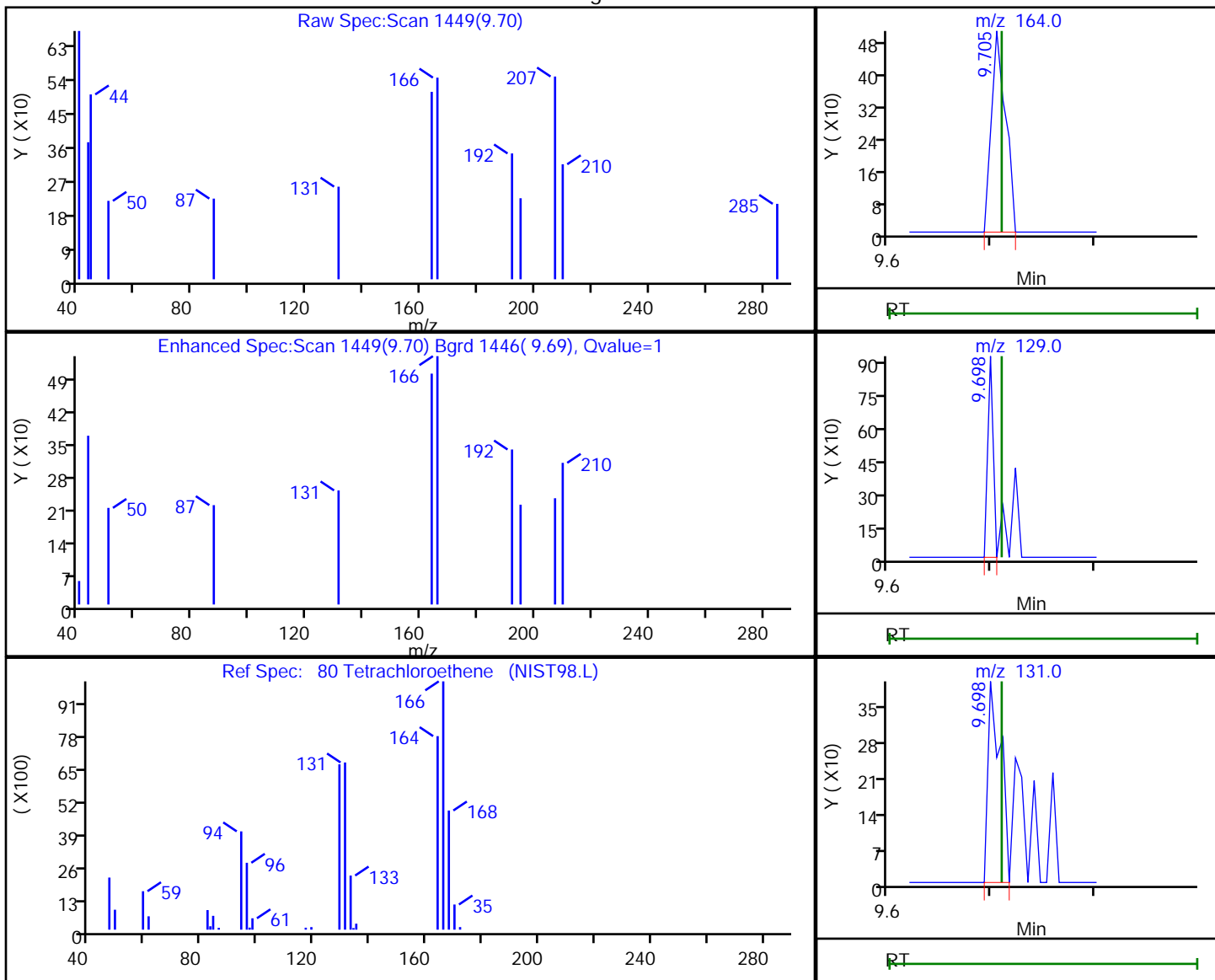
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092717.D
Injection Date: 27-Sep-2019 19:02:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-1 Lab Sample ID: 180-96180-1
Client ID: HD-COD-SW-29-0/1-0
Operator ID: 433269 ALS Bottle#: 7 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

80 Tetrachloroethene, CAS: 127-18-4

Processing Results



RT	Mass	Response	Amount
9.70	164.00	480	0.281921
9.70	129.00	337	
9.70	131.00	341	

Reviewer: bowieh, 28-Sep-2019 11:02:35

Audit Action: Marked Compound Undetected

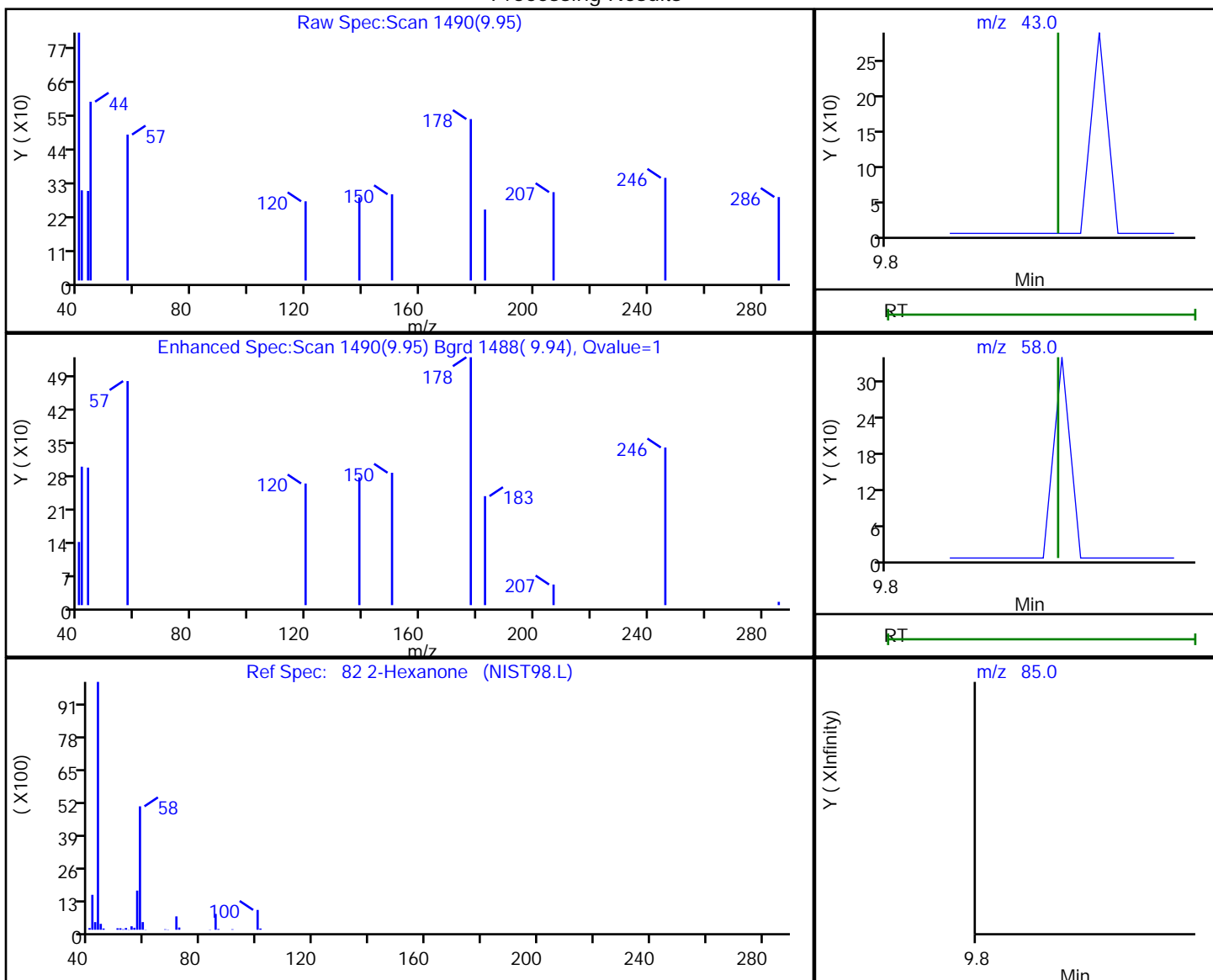
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092717.D
 Injection Date: 27-Sep-2019 19:02:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-1 Lab Sample ID: 180-96180-1
 Client ID: HD-COD-SW-29-0/1-0
 Operator ID: 433269 ALS Bottle#: 7 Worklist Smp#: 13
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

82 2-Hexanone, CAS: 591-78-6

Processing Results



RT	Mass	Response	Amount
9.95	43.00	192	0.165467
9.86	58.00	0	
9.86	85.00	0	

Reviewer: bowieh, 28-Sep-2019 11:02:36

Audit Action: Marked Compound Undetected

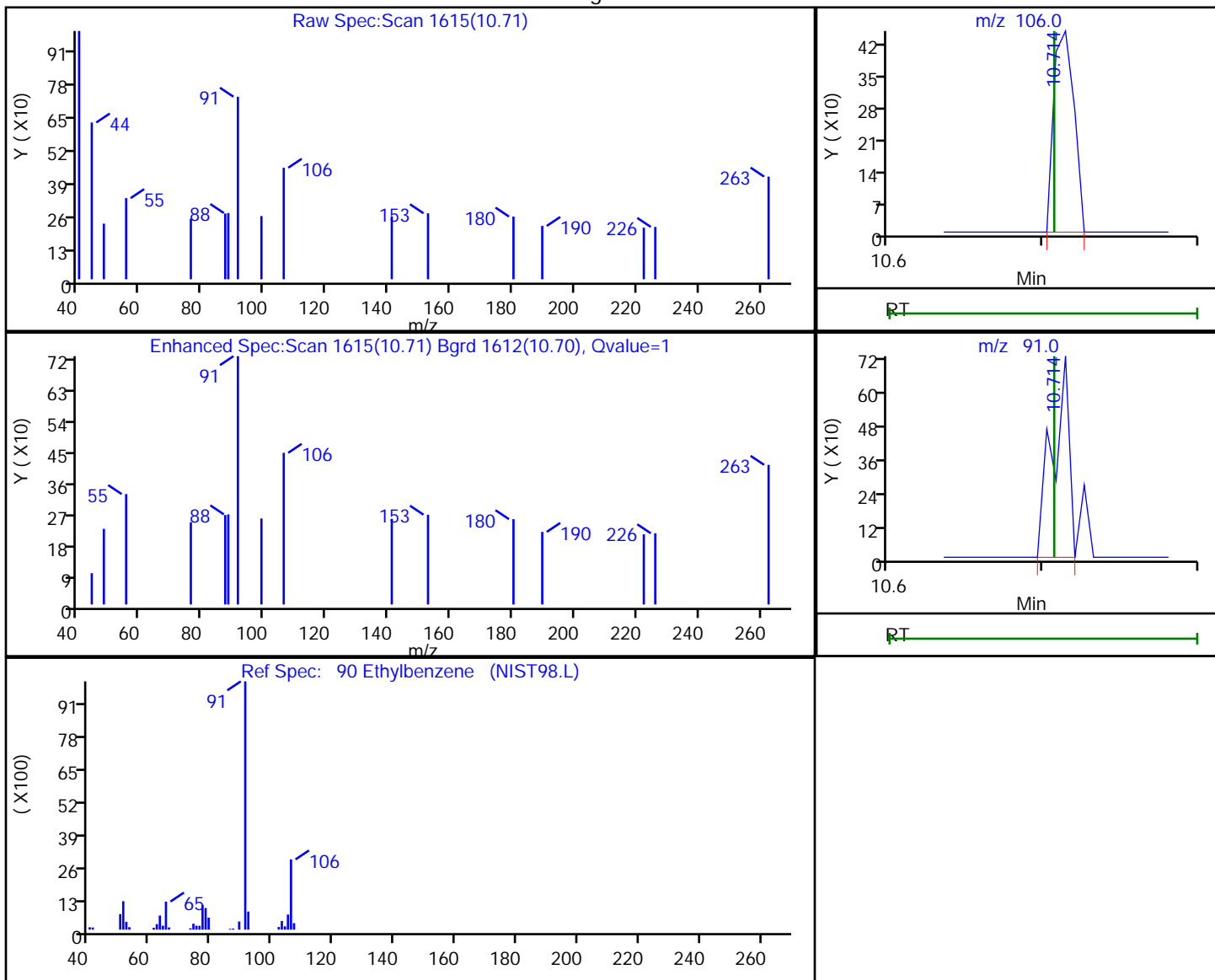
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092717.D
 Injection Date: 27-Sep-2019 19:02:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-1 Lab Sample ID: 180-96180-1
 Client ID: HD-COD-SW-29-0/1-0
 Operator ID: 433269 ALS Bottle#: 7 Worklist Smp#: 13
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

90 Ethylbenzene, CAS: 100-41-4

Processing Results



RT	Mass	Response	Amount
10.71	106.00	403	0.161139
10.71	91.00	532	

Reviewer: bowieh, 28-Sep-2019 11:02:38

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-8-0/1-0 Lab Sample ID: 180-96180-2
 Matrix: Water Lab File ID: 5092718.D
 Analysis Method: EPA 8260C Date Collected: 09/23/2019 10:30
 Sample wt/vol: 5 (mL) Date Analyzed: 09/27/2019 19:27
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 292962 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	ND		1.0	0.90
75-01-4	Vinyl chloride	ND		1.0	0.88
74-83-9	Bromomethane	ND		1.0	0.89
75-00-3	Chloroethane	ND		1.0	0.90
75-35-4	1,1-Dichloroethene	ND		1.0	0.55
67-64-1	Acetone	ND		5.0	3.4
75-15-0	Carbon disulfide	ND		1.0	0.88
75-09-2	Methylene Chloride	ND		1.0	0.89
156-60-5	trans-1,2-Dichloroethene	ND	*	1.0	0.67
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.59
75-34-3	1,1-Dichloroethane	ND		1.0	0.63
156-59-2	cis-1,2-Dichloroethene	ND	*	1.0	0.71
74-97-5	Bromochloromethane	ND		1.0	0.63
78-93-3	2-Butanone (MEK)	ND		5.0	2.6
67-66-3	Chloroform	ND		1.0	0.60
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.60
56-23-5	Carbon tetrachloride	ND		1.0	0.88
71-43-2	Benzene	ND		1.0	0.60
107-06-2	1,2-Dichloroethane	ND		1.0	0.57
79-01-6	Trichloroethene	ND	*	1.0	0.69
78-87-5	1,2-Dichloropropane	ND		1.0	0.66
75-27-4	Bromodichloromethane	ND		1.0	0.64
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.59
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1
108-88-3	Toluene	ND	*	1.0	0.46
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.58
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.45
127-18-4	Tetrachloroethene	ND		1.0	0.47
591-78-6	2-Hexanone	ND		5.0	3.3
124-48-1	Dibromochloromethane	ND		1.0	0.84
106-93-4	1,2-Dibromoethane (EDB)	ND		1.0	0.50
108-90-7	Chlorobenzene	ND		1.0	0.50
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.57
100-41-4	Ethylbenzene	ND		1.0	0.51
1330-20-7	Xylenes, Total	ND	*	2.0	0.89
100-42-5	Styrene	ND		1.0	0.47

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-8-0/1-0 Lab Sample ID: 180-96180-2
 Matrix: Water Lab File ID: 5092718.D
 Analysis Method: EPA 8260C Date Collected: 09/23/2019 10:30
 Sample wt/vol: 5 (mL) Date Analyzed: 09/27/2019 19:27
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 292962 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	ND		1.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.60
107-13-1	Acrylonitrile	ND		20	7.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		70-150
2037-26-5	Toluene-d8 (Surr)	86		78-128
460-00-4	4-Bromofluorobenzene (Surr)	76		64-123
1868-53-7	Dibromofluoromethane (Surr)	116		75-147

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092718.D
 Lims ID: 180-96180-B-2
 Client ID: HD-COD-SW-8-0/1-0
 Sample Type: Client
 Inject. Date: 27-Sep-2019 19:27:30 ALS Bottle#: 8 Worklist Smp#: 14
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028863-014
 Misc. Info.: 180-96180-B-2
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 28-Sep-2019 11:07:11 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: bowieh

Date: 28-Sep-2019 11:07:11

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.538	4.532	0.006	0	151213	1000.0	
* 2 Fluorobenzene (IS)	96	7.501	7.495	0.006	98	271994	50.0	
* 3 Chlorobenzene-d5	119	10.579	10.579	0.000	89	72130	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.915	12.915	0.000	95	110557	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.777	6.777	0.000	94	91291	58.1	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.148	7.142	0.006	0	134976	51.0	
\$ 7 Toluene-d8 (Surr)	98	9.137	9.131	0.006	95	246608	42.9	
\$ 8 4-Bromofluorobenzene (Surr	95	11.759	11.766	-0.007	91	90210	38.2	
12 Chloromethane	50		1.910				ND	U
13 Vinyl chloride	62		2.038				ND	
15 Bromomethane	94		2.379				ND	U
16 Chloroethane	64		2.543				ND	
22 1,1-Dichloroethene	96		3.565				ND	
24 Acetone	43	3.681	3.668	0.012	87	8980	13.0	
26 Carbon disulfide	76	3.875	3.863	0.012	76	2660	0.6803	a
31 Methylene Chloride	84	4.404	4.405	-0.001	39	1773	-5.67	a
33 Acrylonitrile	53		4.782				ND	
34 trans-1,2-Dichloroethene	96		4.812				ND	
35 Methyl tert-butyl ether	73		4.824				ND	
37 1,1-Dichloroethane	63		5.439				ND	
45 cis-1,2-Dichloroethene	96	6.193	6.181	0.012	1	1036	0.5797	
46 2-Butanone (MEK)	43	6.205	6.187	0.018	30	1084	1.32	
49 Chlorobromomethane	128		6.455				ND	
52 Chloroform	83	6.594	6.595	-0.001	29	1828	-2.13	
53 1,1,1-Trichloroethane	97		6.759				ND	
56 Carbon tetrachloride	117		6.929				ND	
58 Benzene	78		7.154				ND	U
59 1,2-Dichloroethane	62		7.233				ND	
64 Trichloroethene	130	7.890	7.878	0.012	28	1816	1.00	M
67 1,2-Dichloropropane	63		8.152				ND	
71 Dichlorobromomethane	83		8.432				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
74 cis-1,3-Dichloropropene	75		8.870				ND	
75 4-Methyl-2-pentanone (MIBK)	43		9.028				ND	U
76 Toluene	91	9.198	9.198	0.000	44	2906	0.3887	
77 trans-1,3-Dichloropropene	75		9.448				ND	
79 1,1,2-Trichloroethane	97		9.636				ND	U
80 Tetrachloroethene	164	9.703	9.709	-0.006	21	732	0.4193	
82 2-Hexanone	43		9.855				ND	U
84 Chlorodibromomethane	129		10.007				ND	
85 Ethylene Dibromide	107		10.123				ND	
87 Chlorobenzene	112		10.610				ND	
89 1,1,1,2-Tetrachloroethane	131		10.701				ND	
90 Ethylbenzene	106		10.707				ND	U
91 m-Xylene & p-Xylene	106		10.835				ND	
92 o-Xylene	106		11.218				ND	
93 Styrene	104		11.242				ND	
94 Bromoform	173		11.419				ND	
99 1,1,2,2-Tetrachloroethane	83		11.899				ND	
S 133 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Reagents:

voaWI/SHP5_00013

Amount Added: 5.00

Units: uL

Run Reagent

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092718.D

Injection Date: 27-Sep-2019 19:27:30

Instrument ID: CHHP5

Operator ID: 433269

Lims ID: 180-96180-B-2

Lab Sample ID: 180-96180-2

Worklist Smp#: 14

Client ID: HD-COD-SW-8-0/1-0

Purge Vol: 5.000 mL

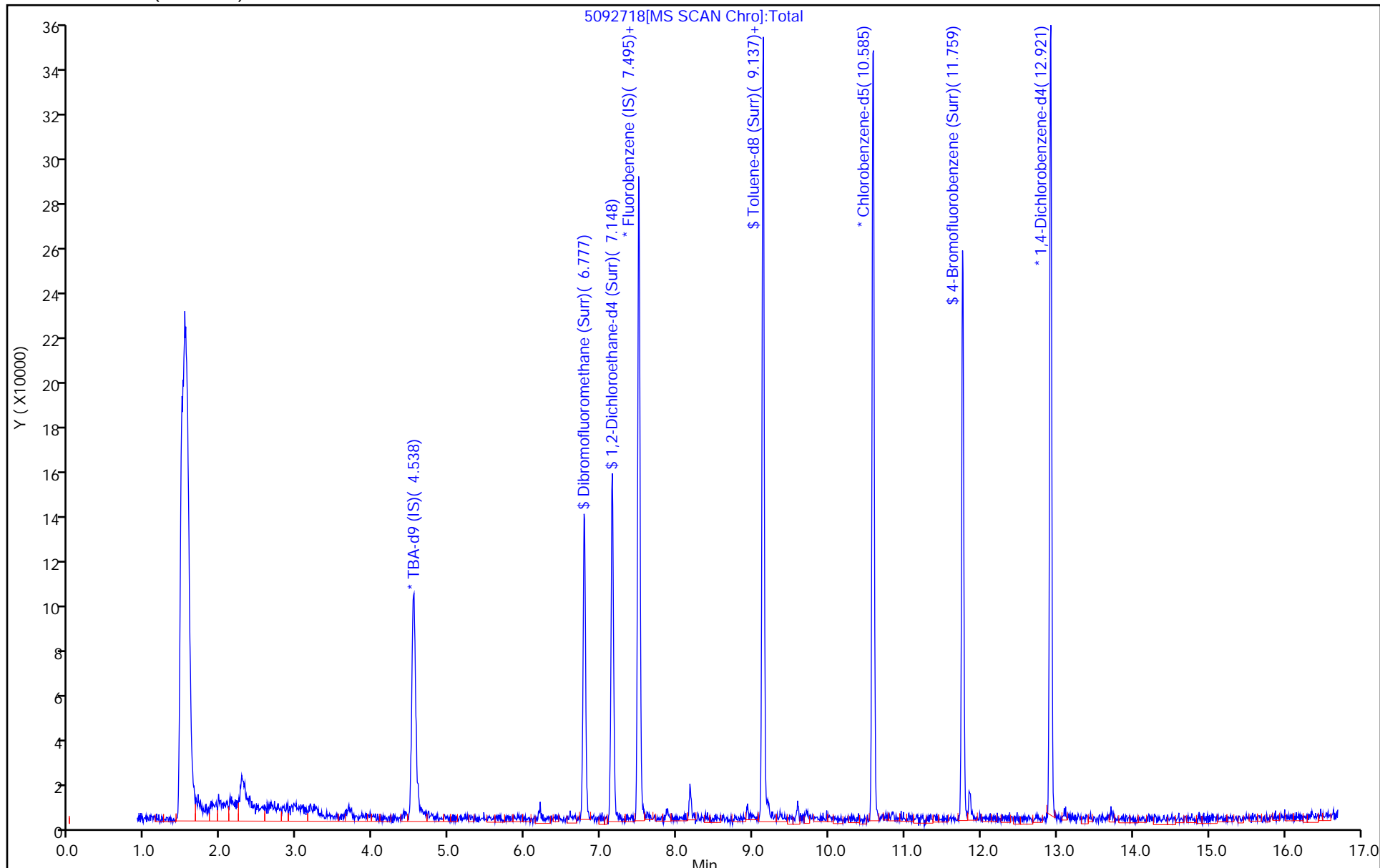
Dil. Factor: 1.0000

ALS Bottle#: 8

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Recovery Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092718.D
 Lims ID: 180-96180-B-2
 Client ID: HD-COD-SW-8-0/1-0
 Sample Type: Client
 Inject. Date: 27-Sep-2019 19:27:30 ALS Bottle#: 8 Worklist Smp#: 14
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028863-014
 Misc. Info.: 180-96180-B-2
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 28-Sep-2019 11:07:11 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: bowieh Date: 28-Sep-2019 11:07:11

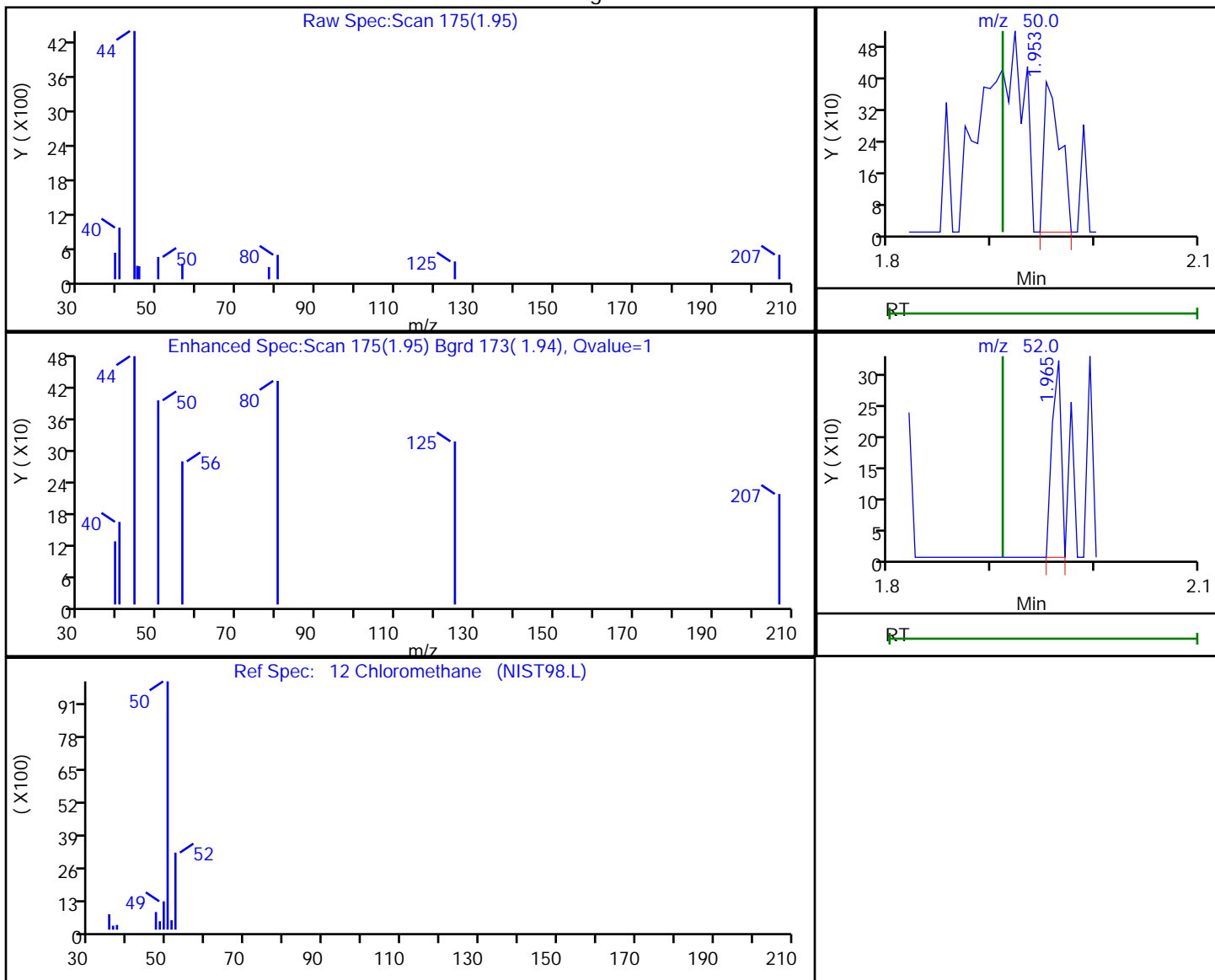
Compound	Amount Added	Amount Recovered	% Rec.
\$ 5 Dibromofluoromethane (Surr)	50.0	58.1	116.29
\$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	51.0	102.07
\$ 7 Toluene-d8 (Surr)	50.0	42.9	85.89
\$ 8 4-Bromofluorobenzene (Surr)	50.0	38.2	76.43

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092718.D
Injection Date: 27-Sep-2019 19:27:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-2 Lab Sample ID: 180-96180-2
Client ID: HD-COD-SW-8-0/1-0
Operator ID: 433269 ALS Bottle#: 8 Worklist Smp#: 14
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

12 Chloromethane, CAS: 74-87-3

Processing Results



RT	Mass	Response	Amount
1.95	50.00	427	0.183386
1.96	52.00	196	

Reviewer: bowieh, 28-Sep-2019 11:06:01

Audit Action: Marked Compound Undetected

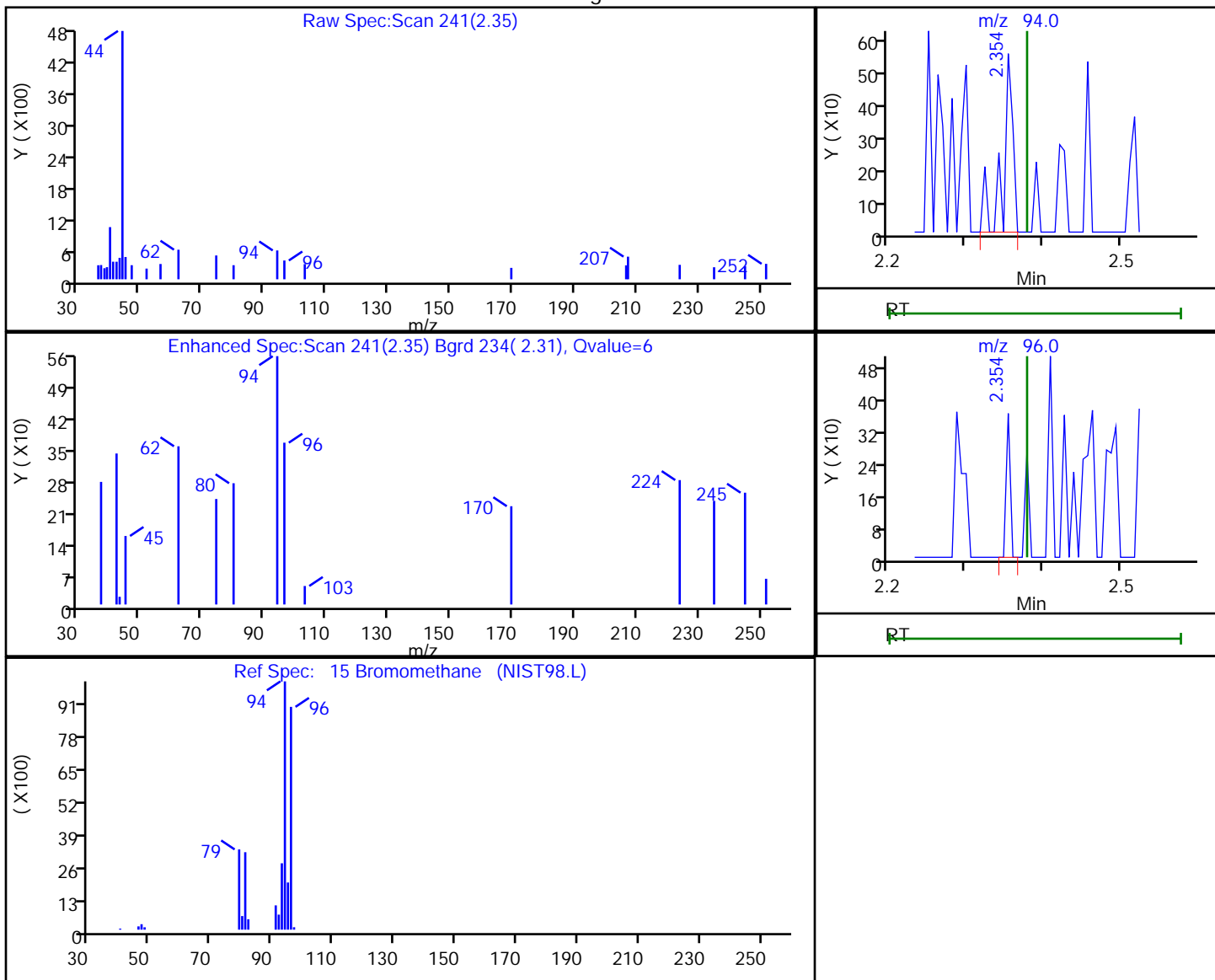
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092718.D
Injection Date: 27-Sep-2019 19:27:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-2 Lab Sample ID: 180-96180-2
Client ID: HD-COD-SW-8-0/1-0
Operator ID: 433269 ALS Bottle#: 8 Worklist Smp#: 14
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

15 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
2.35	94.00	484	0.289900
2.35	96.00	131	

Reviewer: bowieh, 28-Sep-2019 11:06:14

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

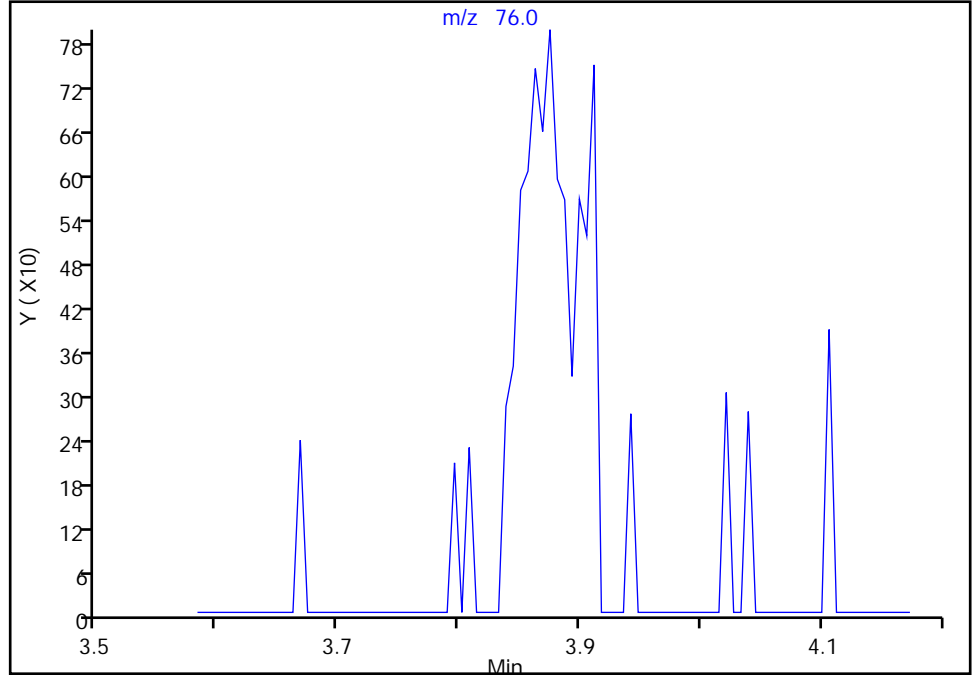
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Injection Date: 27-Sep-2019 19:27:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-2 Lab Sample ID: 180-96180-2
Client ID: HD-COD-SW-8-0/1-0
Operator ID: 433269 ALS Bottle#: 8 Worklist Smp#: 14
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

26 Carbon disulfide, CAS: 75-15-0

Signal: 1

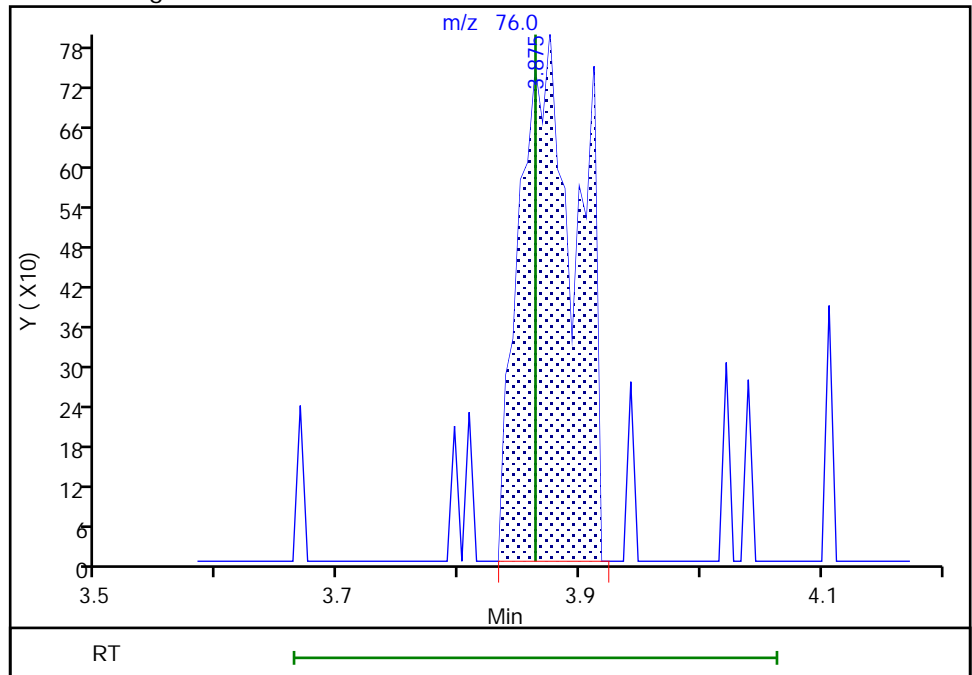
Not Detected
Expected RT: 3.86

Processing Integration Results



Manual Integration Results

RT: 3.88
Area: 2660
Amount: 0.680337
Amount Units: ng



Eurofins TestAmerica, Pittsburgh

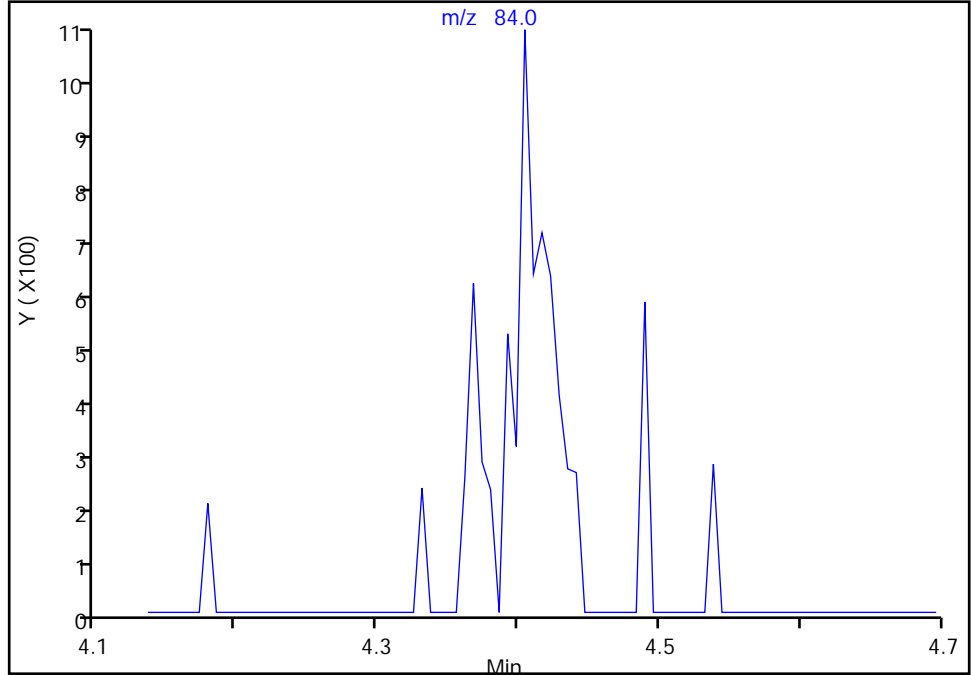
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Injection Date: 27-Sep-2019 19:27:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-2 Lab Sample ID: 180-96180-2
Client ID: HD-COD-SW-8-0/1-0
Operator ID: 433269 ALS Bottle#: 8 Worklist Smp#: 14
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2

Signal: 1

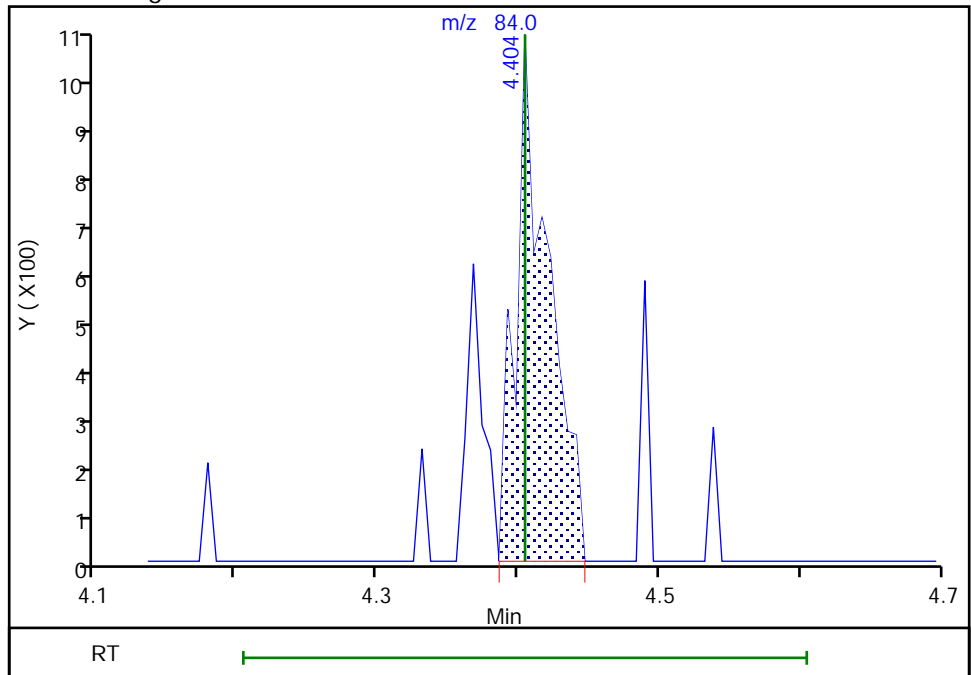
Not Detected
Expected RT: 4.40

Processing Integration Results



RT: 4.40
Area: 1773
Amount: -5.667128
Amount Units: ng

Manual Integration Results

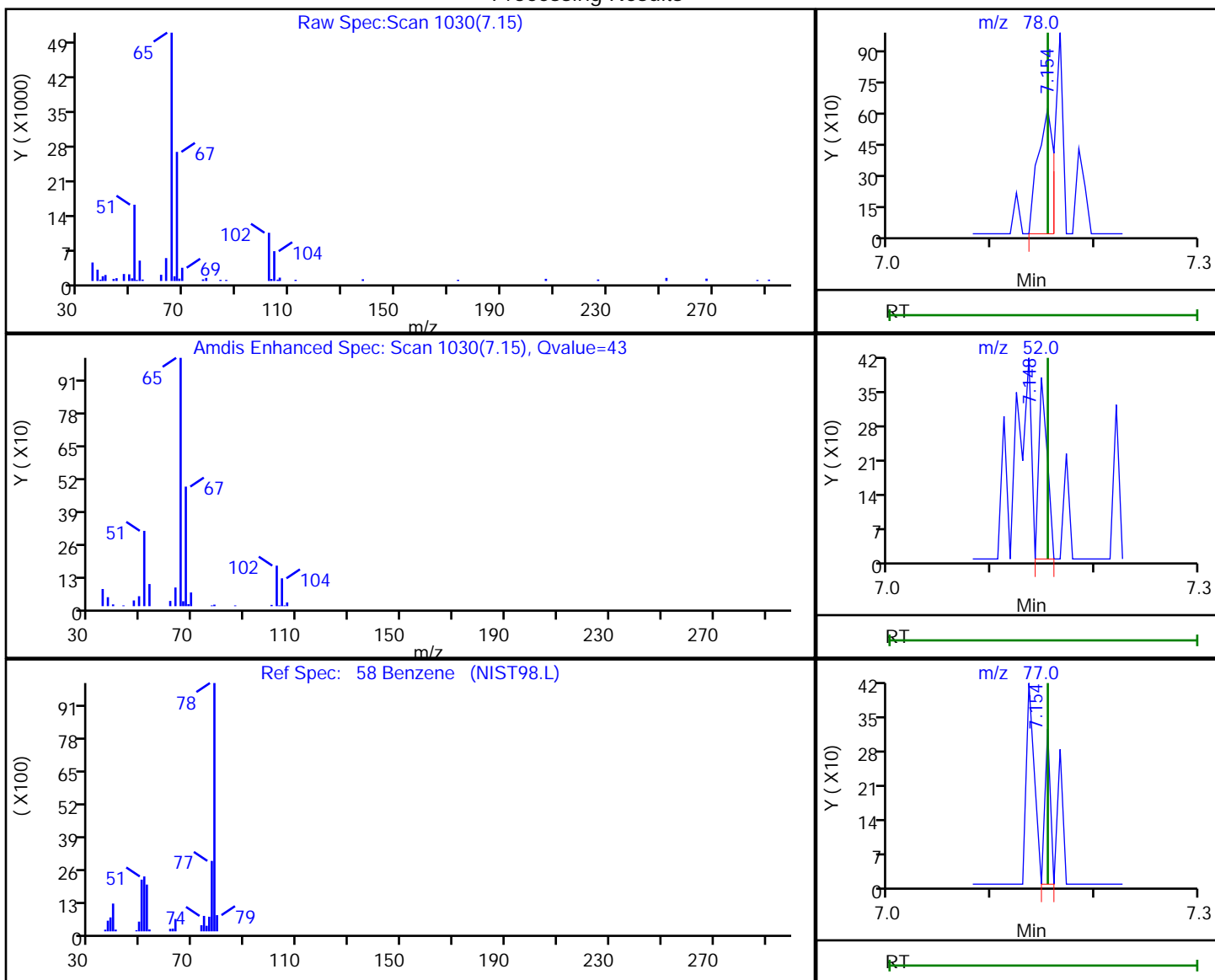


Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092718.D
 Injection Date: 27-Sep-2019 19:27:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-2 Lab Sample ID: 180-96180-2
 Client ID: HD-COD-SW-8-0/1-0
 Operator ID: 433269 ALS Bottle#: 8 Worklist Smp#: 14
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

58 Benzene, CAS: 71-43-2

Processing Results



RT	Mass	Response	Amount
7.15	78.00	651	0.096899
7.15	52.00	214	
7.15	77.00	117	

Reviewer: bowieh, 28-Sep-2019 11:06:41
 Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

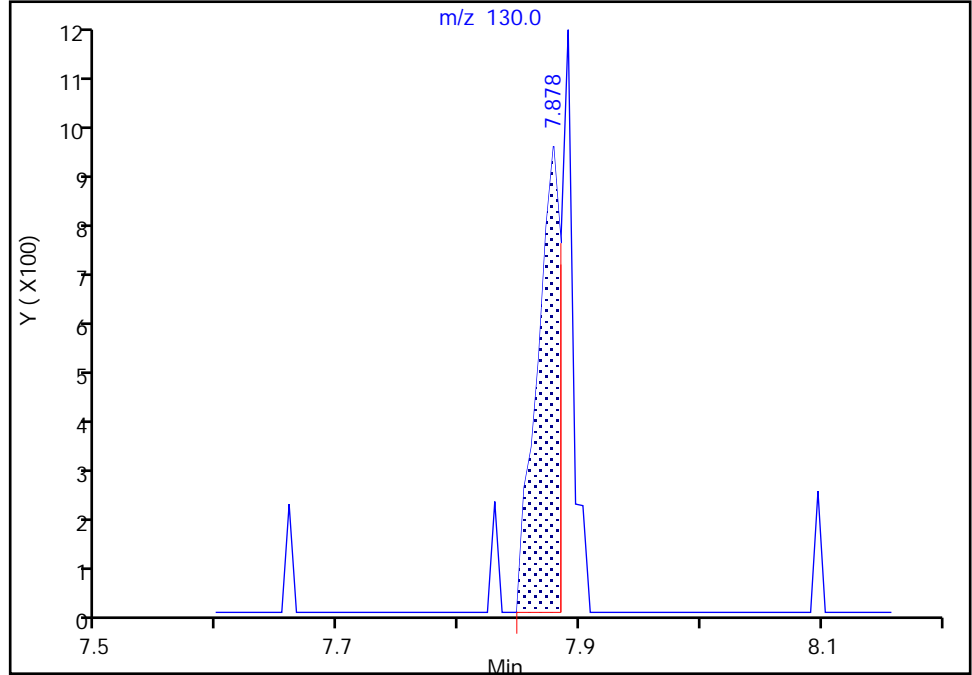
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Injection Date: 27-Sep-2019 19:27:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-2 Lab Sample ID: 180-96180-2
Client ID: HD-COD-SW-8-0/1-0
Operator ID: 433269 ALS Bottle#: 8 Worklist Smp#: 14
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

64 Trichloroethene, CAS: 79-01-6

Signal: 1

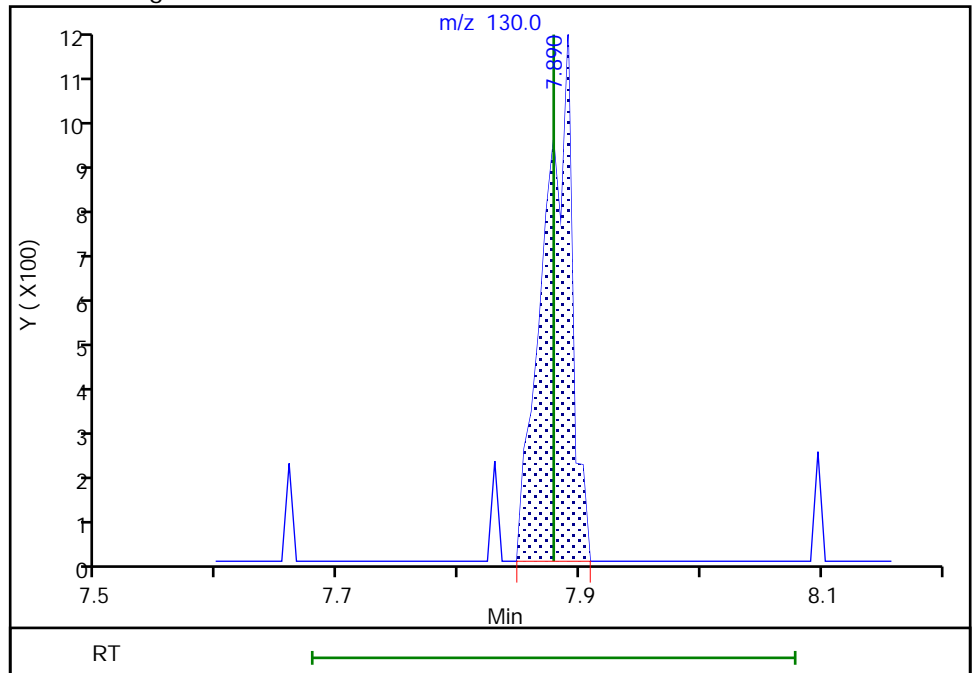
RT: 7.88
Area: 1251
Amount: 0.688902
Amount Units: ng

Processing Integration Results



RT: 7.89
Area: 1816
Amount: 1.000036
Amount Units: ng

Manual Integration Results



Reviewer: bowieh, 28-Sep-2019 11:06:54
Audit Action: Manually Integrated

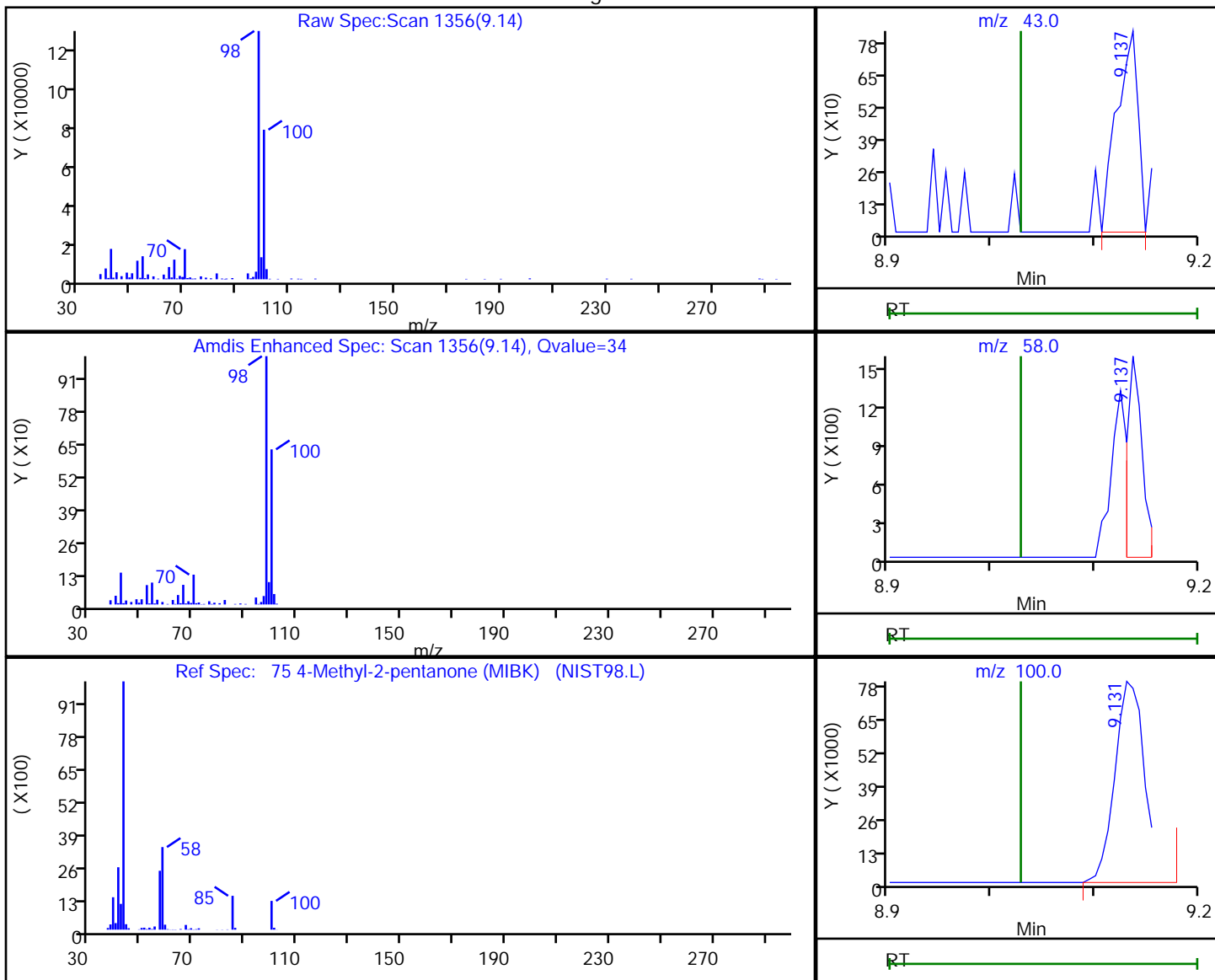
Audit Reason: Poor chromatography
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Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092718.D
 Injection Date: 27-Sep-2019 19:27:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-2 Lab Sample ID: 180-96180-2
 Client ID: HD-COD-SW-8-0/1-0
 Operator ID: 433269 ALS Bottle#: 8 Worklist Smp#: 14
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

75 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1

Processing Results



RT	Mass	Response	Amount
9.14	43.00	1179	0.716555
9.14	58.00	1515	
9.13	100.00	161038	

Reviewer: bowieh, 28-Sep-2019 11:06:57

Audit Action: Marked Compound Undetected

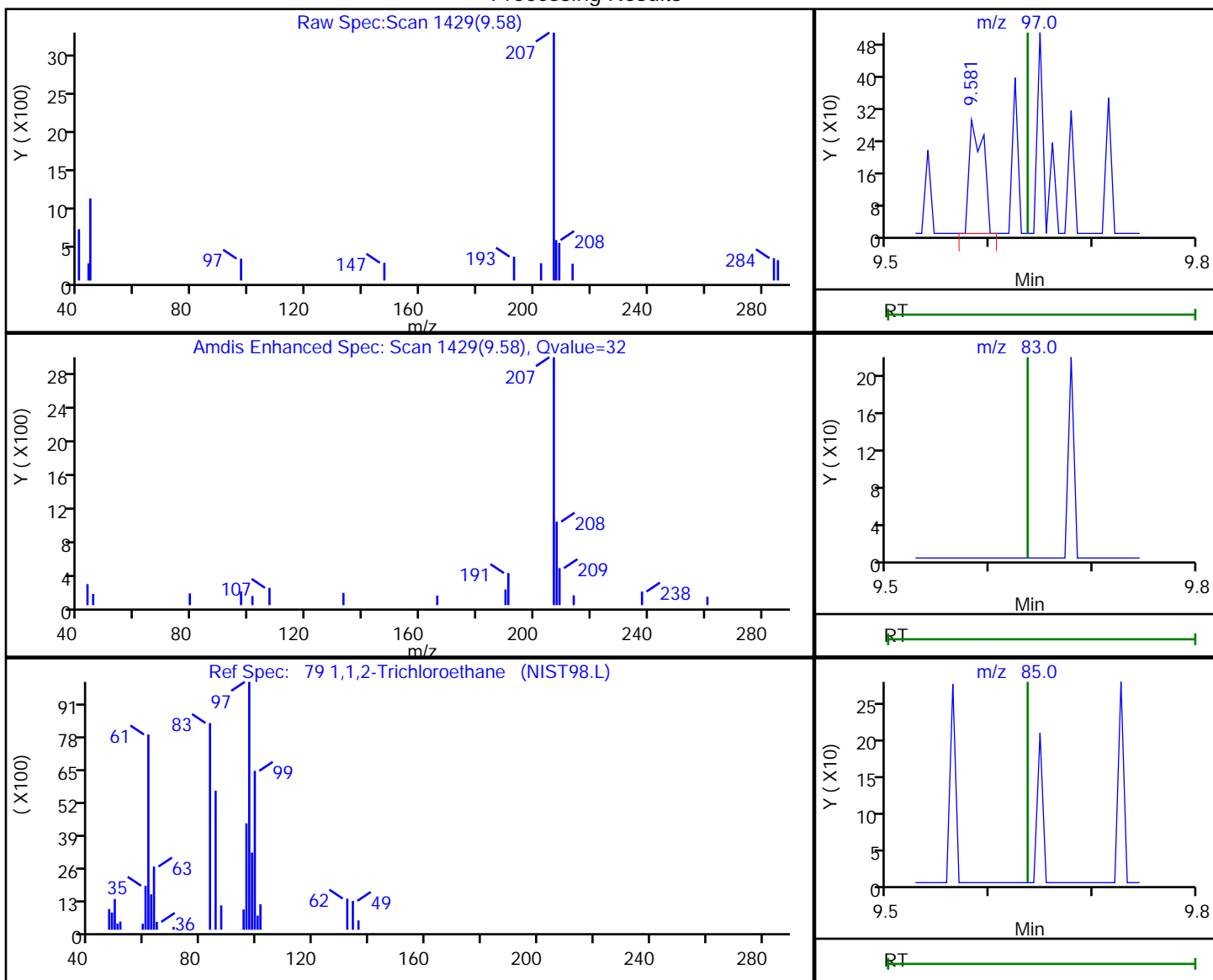
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092718.D
 Injection Date: 27-Sep-2019 19:27:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-2 Lab Sample ID: 180-96180-2
 Client ID: HD-COD-SW-8-0/1-0
 Operator ID: 433269 ALS Bottle#: 8 Worklist Smp#: 14
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

79 1,1,2-Trichloroethane, CAS: 79-00-5

Processing Results



RT	Mass	Response	Amount
9.58	97.00	271	0.171889
9.64	83.00	0	
9.64	85.00	0	

Reviewer: bowieh, 28-Sep-2019 11:07:00

Audit Action: Marked Compound Undetected

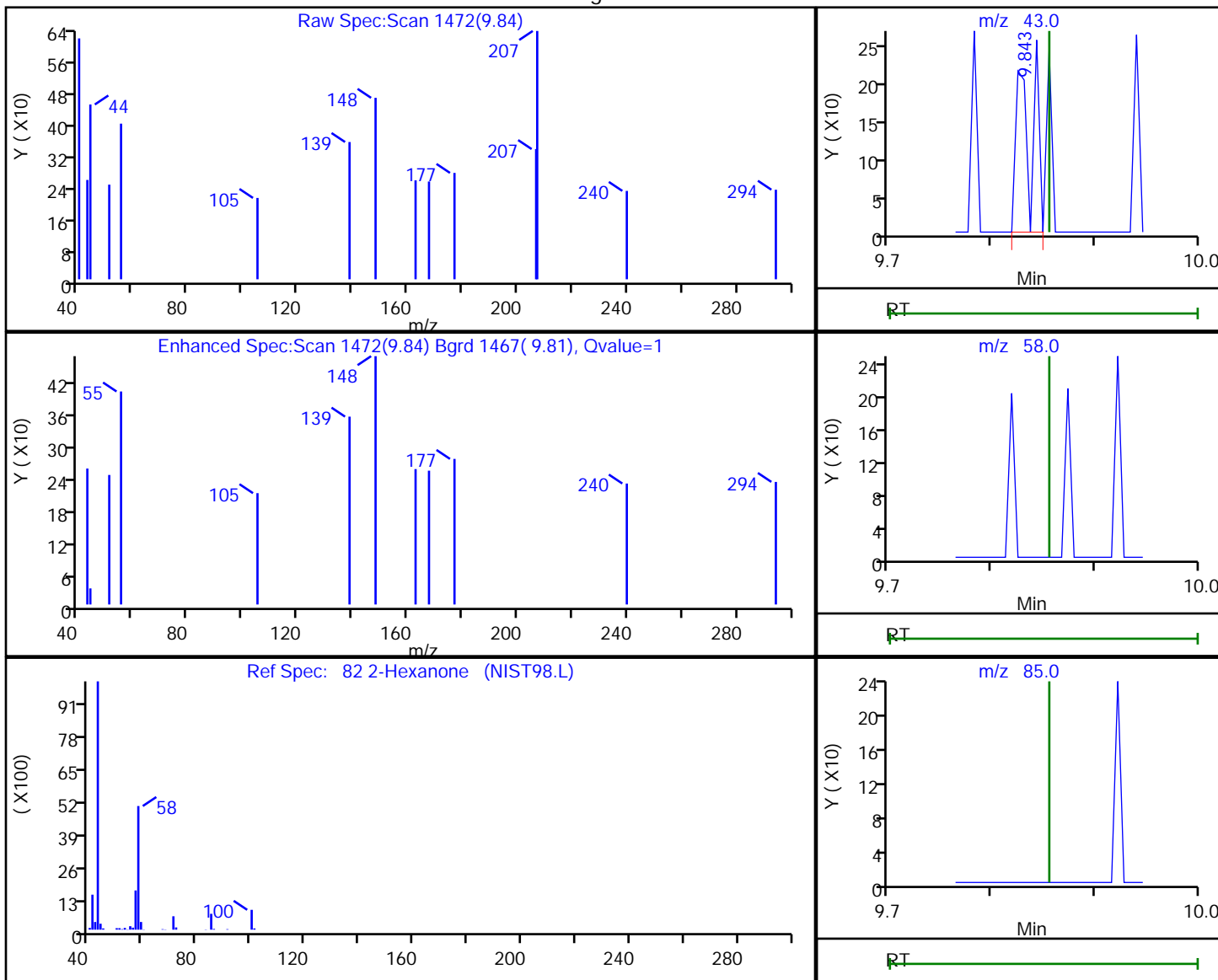
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092718.D
 Injection Date: 27-Sep-2019 19:27:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-2 Lab Sample ID: 180-96180-2
 Client ID: HD-COD-SW-8-0/1-0
 Operator ID: 433269 ALS Bottle#: 8 Worklist Smp#: 14
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

82 2-Hexanone, CAS: 591-78-6

Processing Results



RT	Mass	Response	Amount
9.84	43.00	244	0.205068
9.86	58.00	0	
9.86	85.00	0	

Reviewer: bowieh, 28-Sep-2019 11:07:03

Audit Action: Marked Compound Undetected

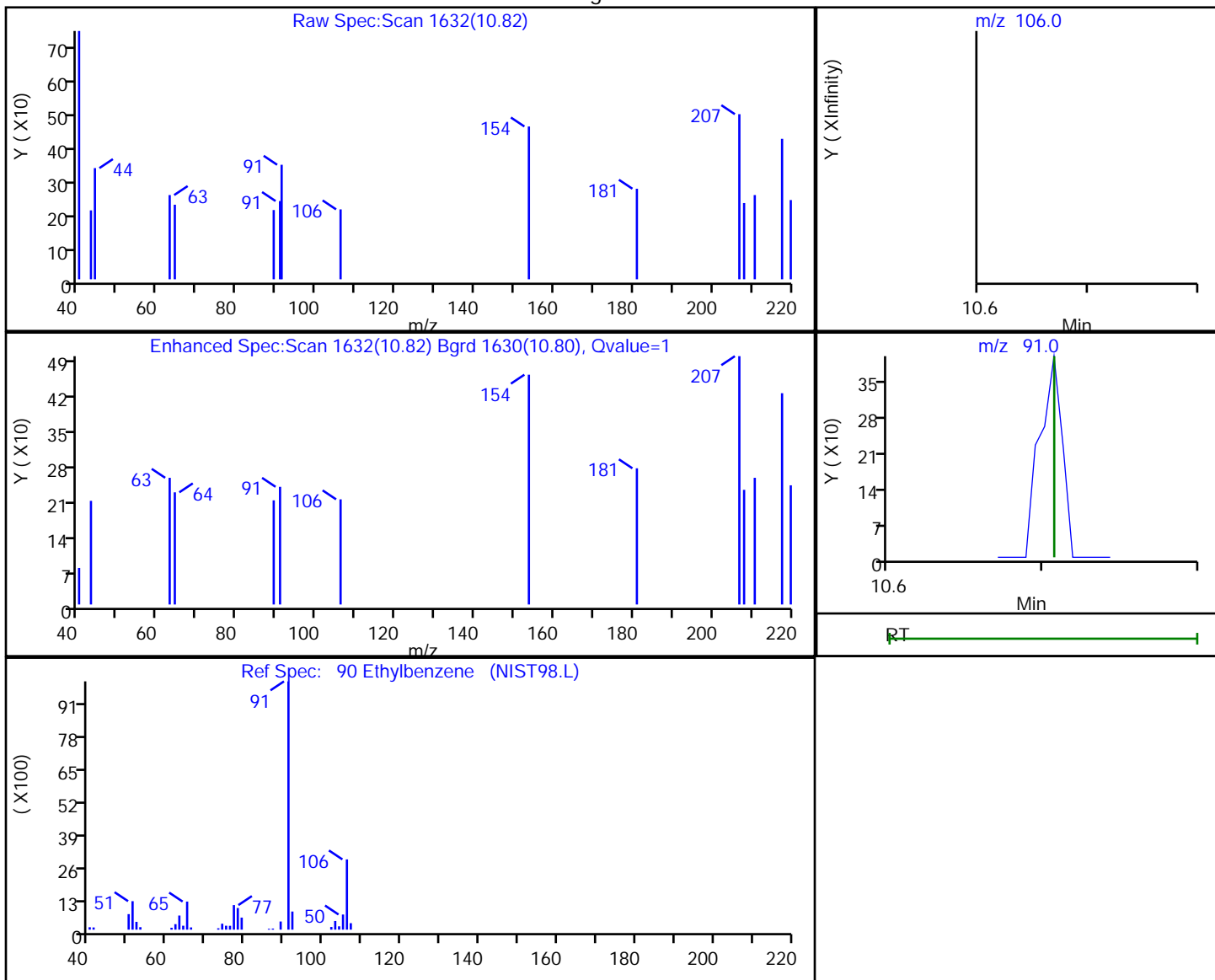
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092718.D
Injection Date: 27-Sep-2019 19:27:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-2 Lab Sample ID: 180-96180-2
Client ID: HD-COD-SW-8-0/1-0
Operator ID: 433269 ALS Bottle#: 8 Worklist Smp#: 14
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

90 Ethylbenzene, CAS: 100-41-4

Processing Results



RT	Mass	Response	Amount
10.82	106.00	77	0.030025
10.82	91.00	772	

Reviewer: bowieh, 28-Sep-2019 11:07:05

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-13-0/1-0 Lab Sample ID: 180-96180-3
 Matrix: Water Lab File ID: 5092719.D
 Analysis Method: EPA 8260C Date Collected: 09/23/2019 10:50
 Sample wt/vol: 5 (mL) Date Analyzed: 09/27/2019 19:51
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 292962 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	ND		1.0	0.90
75-01-4	Vinyl chloride	ND		1.0	0.88
74-83-9	Bromomethane	ND		1.0	0.89
75-00-3	Chloroethane	ND		1.0	0.90
75-35-4	1,1-Dichloroethene	ND		1.0	0.55
67-64-1	Acetone	ND		5.0	3.4
75-15-0	Carbon disulfide	ND		1.0	0.88
75-09-2	Methylene Chloride	ND		1.0	0.89
156-60-5	trans-1,2-Dichloroethene	ND	*	1.0	0.67
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.59
75-34-3	1,1-Dichloroethane	ND		1.0	0.63
156-59-2	cis-1,2-Dichloroethene	ND	*	1.0	0.71
74-97-5	Bromochloromethane	ND		1.0	0.63
78-93-3	2-Butanone (MEK)	ND		5.0	2.6
67-66-3	Chloroform	ND		1.0	0.60
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.60
56-23-5	Carbon tetrachloride	ND		1.0	0.88
71-43-2	Benzene	ND		1.0	0.60
107-06-2	1,2-Dichloroethane	ND		1.0	0.57
79-01-6	Trichloroethene	ND	*	1.0	0.69
78-87-5	1,2-Dichloropropane	ND		1.0	0.66
75-27-4	Bromodichloromethane	ND		1.0	0.64
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.59
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1
108-88-3	Toluene	ND	*	1.0	0.46
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.58
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.45
127-18-4	Tetrachloroethene	ND		1.0	0.47
591-78-6	2-Hexanone	ND		5.0	3.3
124-48-1	Dibromochloromethane	ND		1.0	0.84
106-93-4	1,2-Dibromoethane (EDB)	ND		1.0	0.50
108-90-7	Chlorobenzene	ND		1.0	0.50
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.57
100-41-4	Ethylbenzene	ND		1.0	0.51
1330-20-7	Xylenes, Total	ND	*	2.0	0.89
100-42-5	Styrene	ND		1.0	0.47

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-13-0/1-0 Lab Sample ID: 180-96180-3
 Matrix: Water Lab File ID: 5092719.D
 Analysis Method: EPA 8260C Date Collected: 09/23/2019 10:50
 Sample wt/vol: 5 (mL) Date Analyzed: 09/27/2019 19:51
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 292962 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	ND		1.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.60
107-13-1	Acrylonitrile	ND		20	7.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		70-150
2037-26-5	Toluene-d8 (Surr)	90		78-128
460-00-4	4-Bromofluorobenzene (Surr)	76		64-123
1868-53-7	Dibromofluoromethane (Surr)	119		75-147

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092719.D
 Lims ID: 180-96180-B-3
 Client ID: HD-COD-SW-13-0/1-0
 Sample Type: Client
 Inject. Date: 27-Sep-2019 19:51:30 ALS Bottle#: 9 Worklist Smp#: 15
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028863-015
 Misc. Info.: 180-96180-B-3
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 28-Sep-2019 11:11:46 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: bowieh

Date: 28-Sep-2019 11:11:46

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.532	4.532	0.000	0	155646	1000.0	
* 2 Fluorobenzene (IS)	96	7.501	7.495	0.006	98	271932	50.0	
* 3 Chlorobenzene-d5	119	10.579	10.579	0.000	88	70031	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.921	12.915	0.006	95	110863	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.777	6.777	0.000	93	93443	59.5	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.148	7.142	0.006	0	129260	48.9	
\$ 7 Toluene-d8 (Surr)	98	9.131	9.131	0.000	95	250027	44.8	
\$ 8 4-Bromofluorobenzene (Surr	95	11.765	11.766	-0.001	94	87341	38.1	
12 Chloromethane	50		1.910				ND	U
13 Vinyl chloride	62		2.038				ND	
15 Bromomethane	94		2.379				ND	U
16 Chloroethane	64		2.543				ND	U
22 1,1-Dichloroethene	96		3.565				ND	
24 Acetone	43	3.686	3.668	0.018	80	5881	8.50	
26 Carbon disulfide	76		3.863				ND	
31 Methylene Chloride	84	4.410	4.405	0.005	27	1454	-5.85	a
33 Acrylonitrile	53		4.782				ND	
34 trans-1,2-Dichloroethene	96		4.812				ND	
35 Methyl tert-butyl ether	73		4.824				ND	
37 1,1-Dichloroethane	63		5.439				ND	
45 cis-1,2-Dichloroethene	96	6.180	6.181	-0.001	1	1583	0.8859	
46 2-Butanone (MEK)	43		6.187				ND	
49 Chlorobromomethane	128		6.455				ND	
52 Chloroform	83	6.594	6.595	-0.001	12	777	-2.44	
53 1,1,1-Trichloroethane	97		6.759				ND	
56 Carbon tetrachloride	117		6.929				ND	
58 Benzene	78		7.154				ND	U
59 1,2-Dichloroethane	62		7.233				ND	
64 Trichloroethene	130	7.878	7.878	0.000	32	947	0.5216	
67 1,2-Dichloropropane	63		8.152				ND	
71 Dichlorobromomethane	83		8.432				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
74 cis-1,3-Dichloropropene	75		8.870				ND	
75 4-Methyl-2-pentanone (MIBK)	43		9.028				ND	U
76 Toluene	91	9.192	9.198	-0.006	31	3131	0.4314	a
77 trans-1,3-Dichloropropene	75		9.448				ND	
79 1,1,2-Trichloroethane	97		9.636				ND	
80 Tetrachloroethene	164	9.703	9.709	-0.006	0	952	0.5616	
82 2-Hexanone	43		9.855				ND	U
84 Chlorodibromomethane	129		10.007				ND	
85 Ethylene Dibromide	107		10.123				ND	
87 Chlorobenzene	112		10.610				ND	
89 1,1,1,2-Tetrachloroethane	131		10.701				ND	
90 Ethylbenzene	106		10.707				ND	U
91 m-Xylene & p-Xylene	106		10.835				ND	
92 o-Xylene	106		11.218				ND	
93 Styrene	104		11.242				ND	
94 Bromoform	173		11.419				ND	
99 1,1,2,2-Tetrachloroethane	83		11.899				ND	
S 133 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

U - Marked Undetected

a - User Assigned ID

Reagents:

voaWI/SHP5_00013

Amount Added: 5.00

Units: uL

Run Reagent

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092719.D

Injection Date: 27-Sep-2019 19:51:30

Instrument ID: CHHP5

Operator ID: 433269

Lims ID: 180-96180-B-3

Lab Sample ID: 180-96180-3

Worklist Smp#: 15

Client ID: HD-COD-SW-13-0/1-0

Purge Vol: 5.000 mL

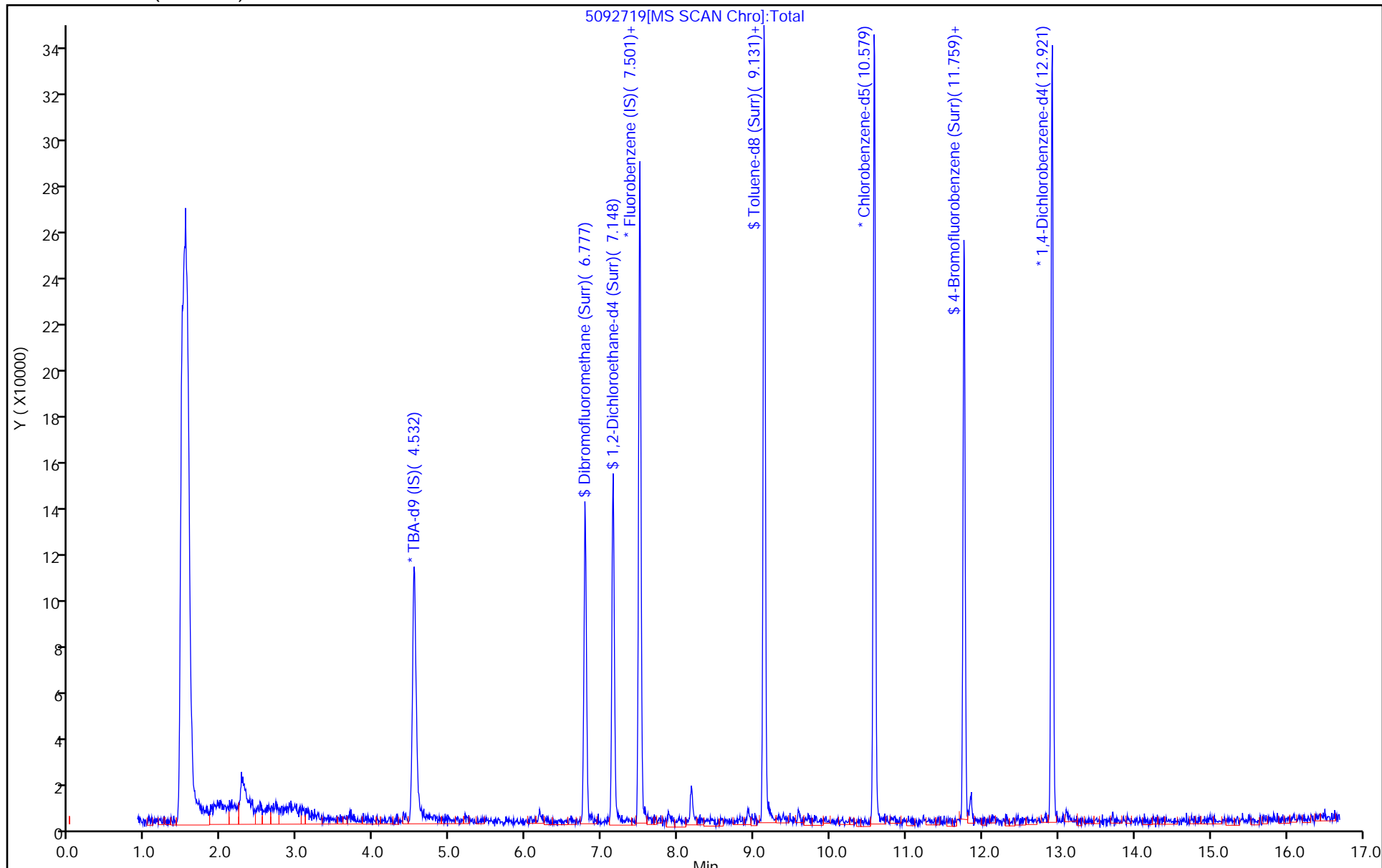
Dil. Factor: 1.0000

ALS Bottle#: 9

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Recovery Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092719.D
 Lims ID: 180-96180-B-3
 Client ID: HD-COD-SW-13-0/1-0
 Sample Type: Client
 Inject. Date: 27-Sep-2019 19:51:30 ALS Bottle#: 9 Worklist Smp#: 15
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028863-015
 Misc. Info.: 180-96180-B-3
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 28-Sep-2019 11:11:46 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: bowieh Date: 28-Sep-2019 11:11:46

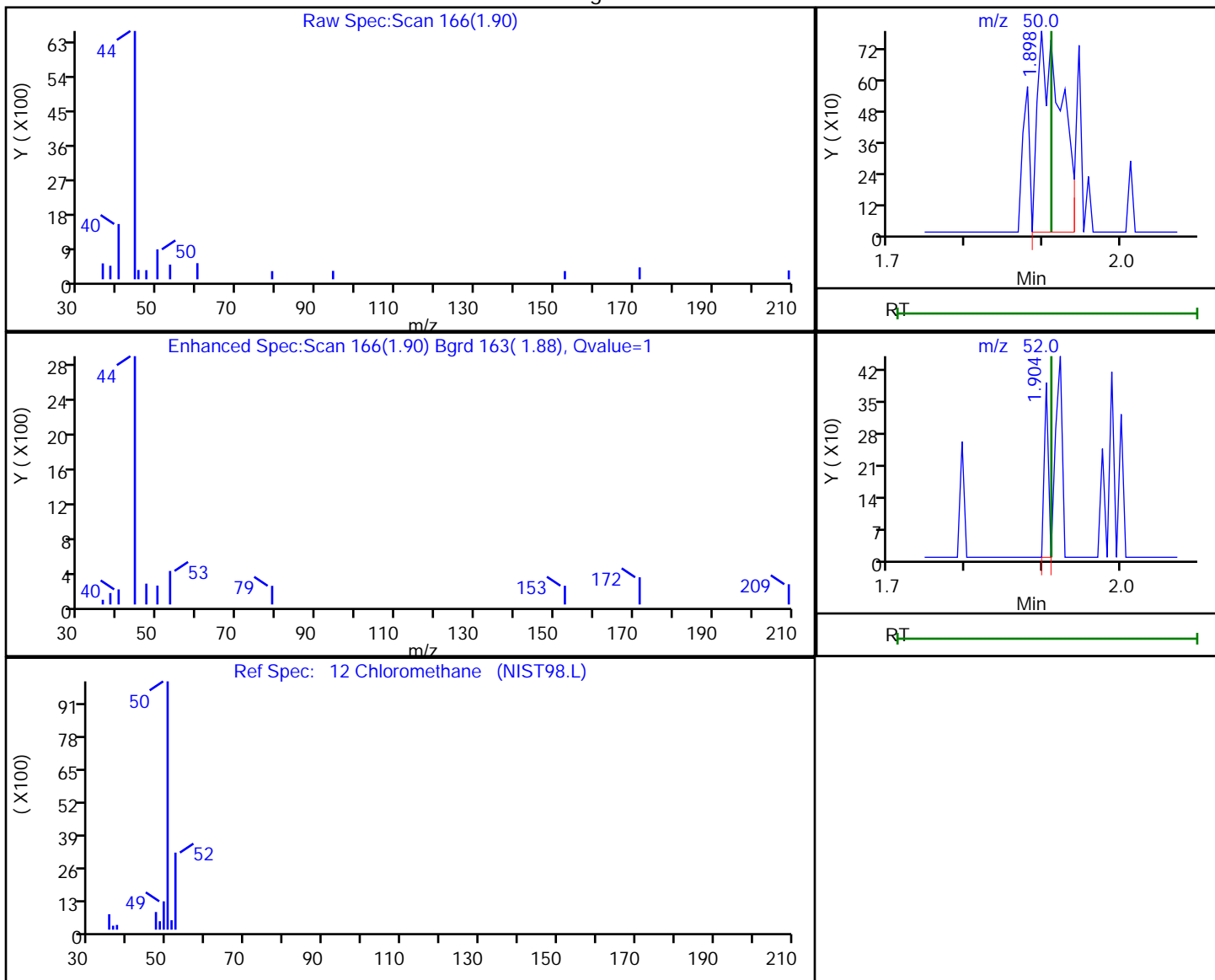
Compound	Amount Added	Amount Recovered	% Rec.
\$ 5 Dibromofluoromethane (Surr)	50.0	59.5	119.06
\$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	48.9	97.77
\$ 7 Toluene-d8 (Surr)	50.0	44.8	89.69
\$ 8 4-Bromofluorobenzene (Surr)	50.0	38.1	76.21

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092719.D
Injection Date: 27-Sep-2019 19:51:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-3 Lab Sample ID: 180-96180-3
Client ID: HD-COD-SW-13-0/1-0
Operator ID: 433269 ALS Bottle#: 9 Worklist Smp#: 15
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

12 Chloromethane, CAS: 74-87-3

Processing Results



RT	Mass	Response	Amount
1.90	50.00	1700	0.730274
1.90	52.00	143	

Reviewer: bowieh, 28-Sep-2019 11:10:55

Audit Action: Marked Compound Undetected

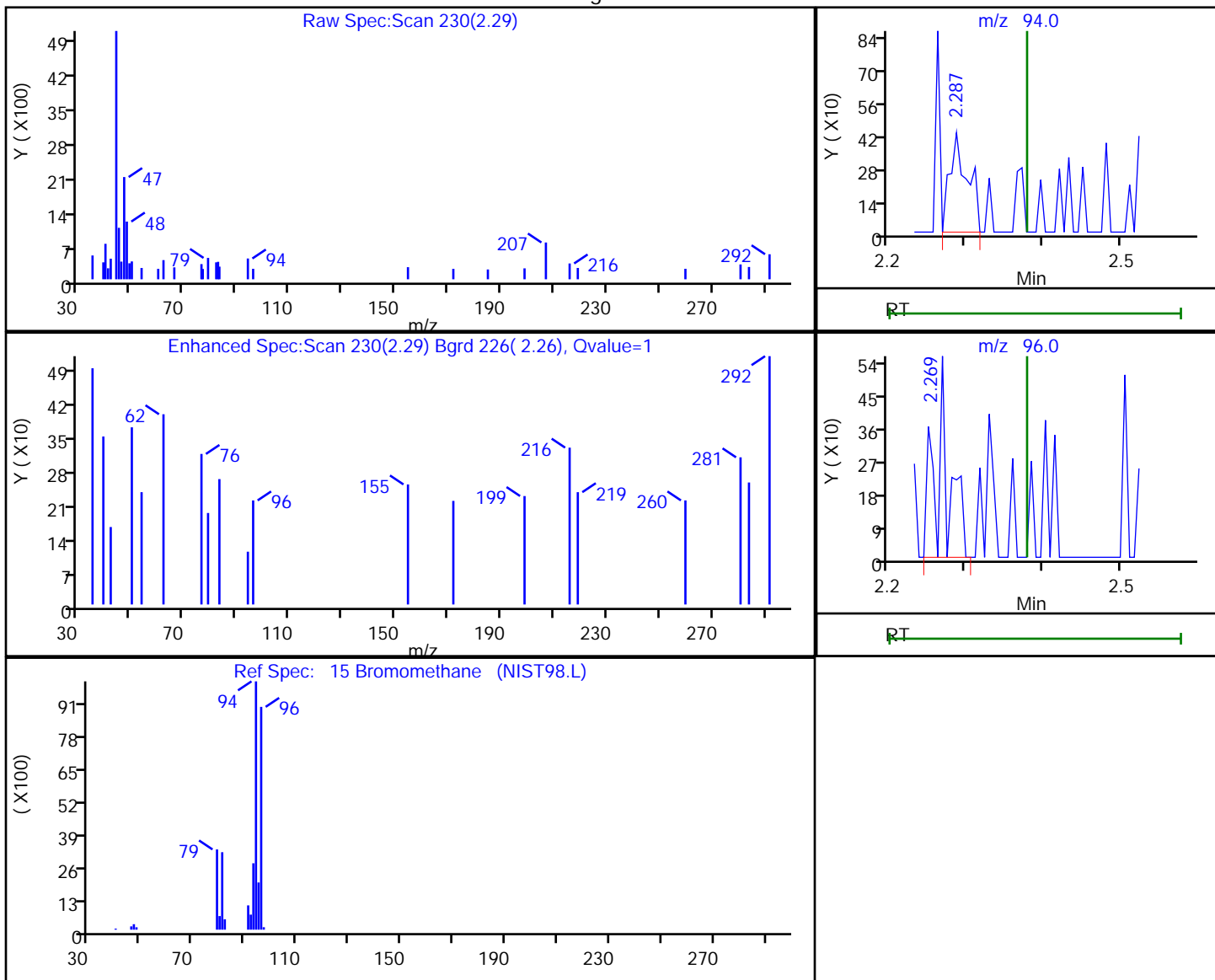
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092719.D
Injection Date: 27-Sep-2019 19:51:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-3 Lab Sample ID: 180-96180-3
Client ID: HD-COD-SW-13-0/1-0
Operator ID: 433269 ALS Bottle#: 9 Worklist Smp#: 15
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

15 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
2.29	94.00	685	0.410386
2.27	96.00	669	

Reviewer: bowieh, 28-Sep-2019 11:10:57

Audit Action: Marked Compound Undetected

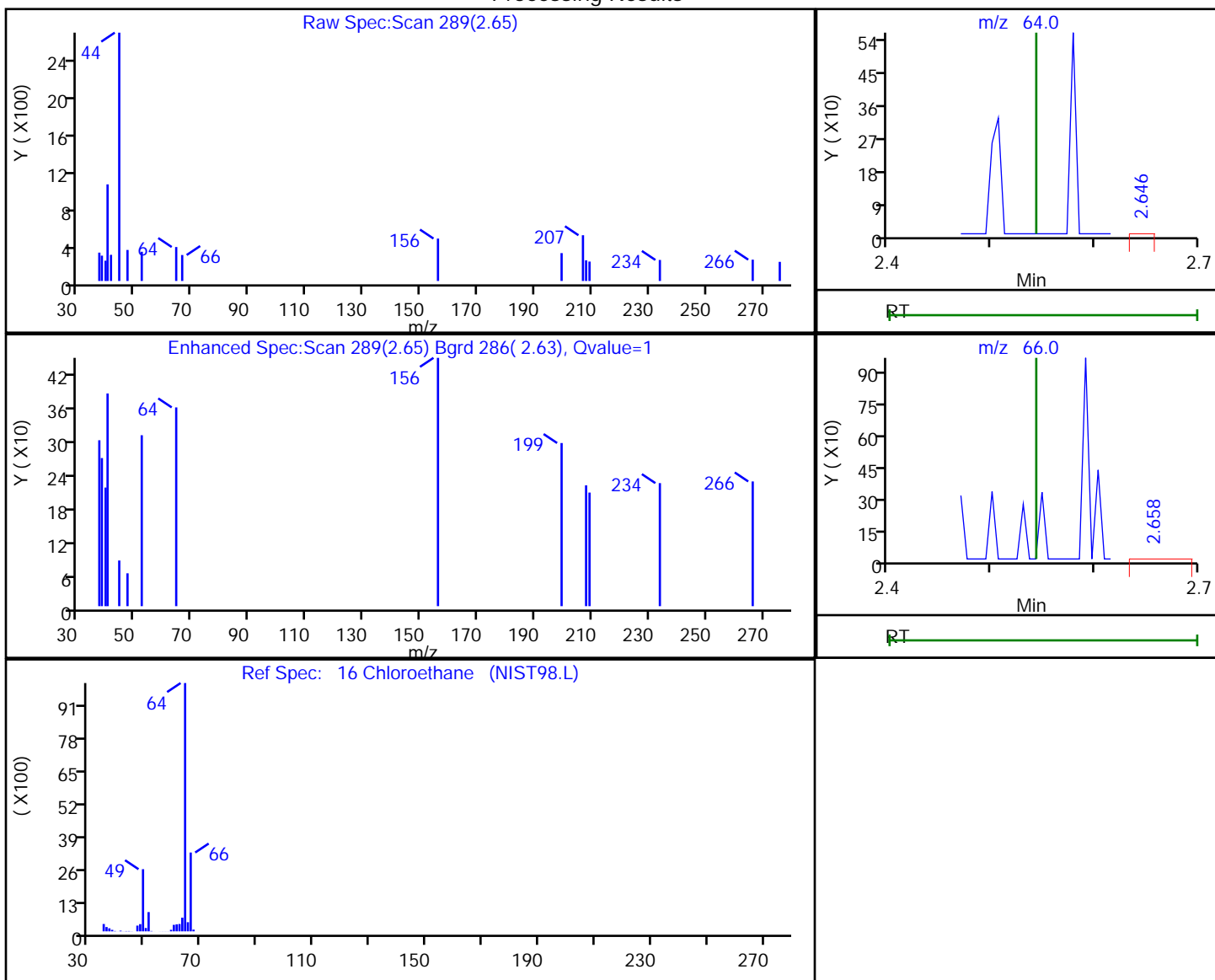
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092719.D
 Injection Date: 27-Sep-2019 19:51:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-3 Lab Sample ID: 180-96180-3
 Client ID: HD-COD-SW-13-0/1-0
 Operator ID: 433269 ALS Bottle#: 9 Worklist Smp#: 15
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

16 Chloroethane, CAS: 75-00-3

Processing Results



RT	Mass	Response	Amount
2.65	64.00	130	0.088452
2.66	66.00	376	

Reviewer: bowieh, 28-Sep-2019 11:10:58

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

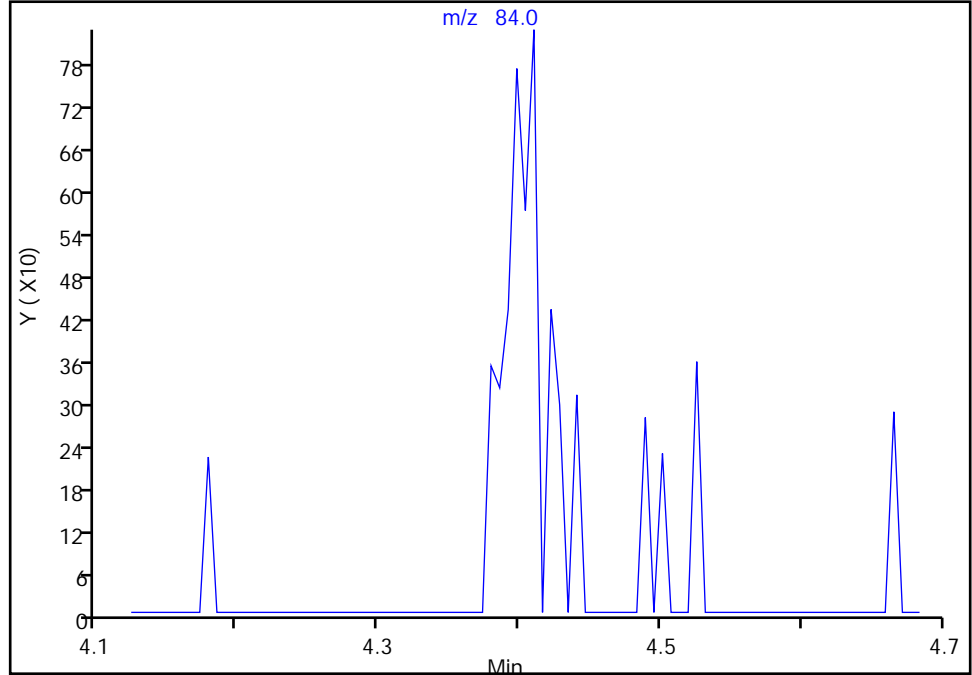
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Injection Date: 27-Sep-2019 19:51:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-3 Lab Sample ID: 180-96180-3
Client ID: HD-COD-SW-13-0/1-0
Operator ID: 433269 ALS Bottle#: 9 Worklist Smp#: 15
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2

Signal: 1

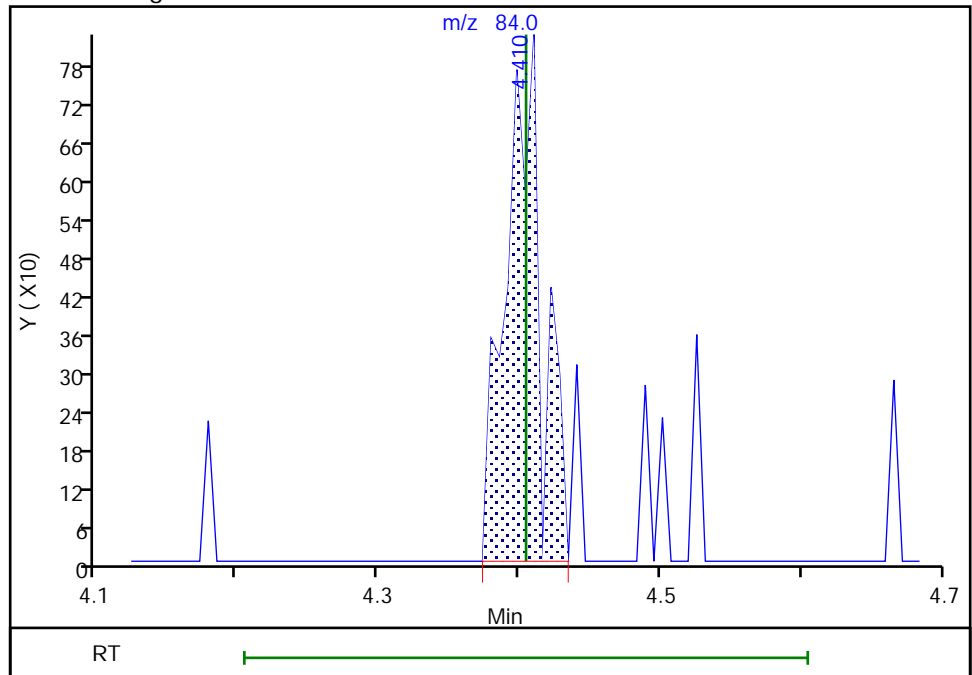
Not Detected
Expected RT: 4.40

Processing Integration Results



RT: 4.41
Area: 1454
Amount: -5.851608
Amount Units: ng

Manual Integration Results

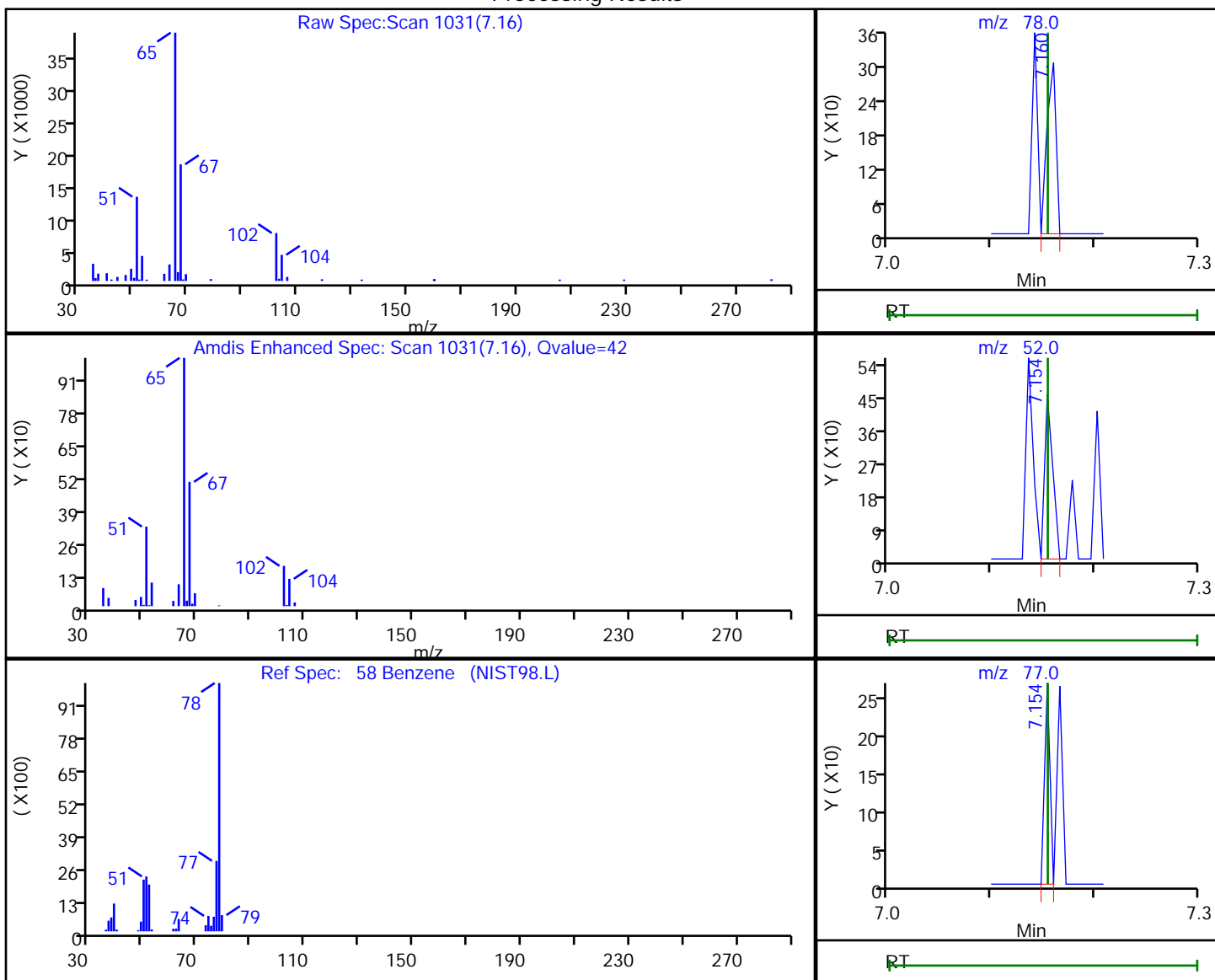


Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092719.D
 Injection Date: 27-Sep-2019 19:51:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-3 Lab Sample ID: 180-96180-3
 Client ID: HD-COD-SW-13-0/1-0
 Operator ID: 433269 ALS Bottle#: 9 Worklist Smp#: 15
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

58 Benzene, CAS: 71-43-2

Processing Results



RT	Mass	Response	Amount
7.16	78.00	184	0.027394
7.15	52.00	248	
7.15	77.00	96	

Reviewer: bowieh, 28-Sep-2019 11:11:19

Audit Action: Marked Compound Undetected

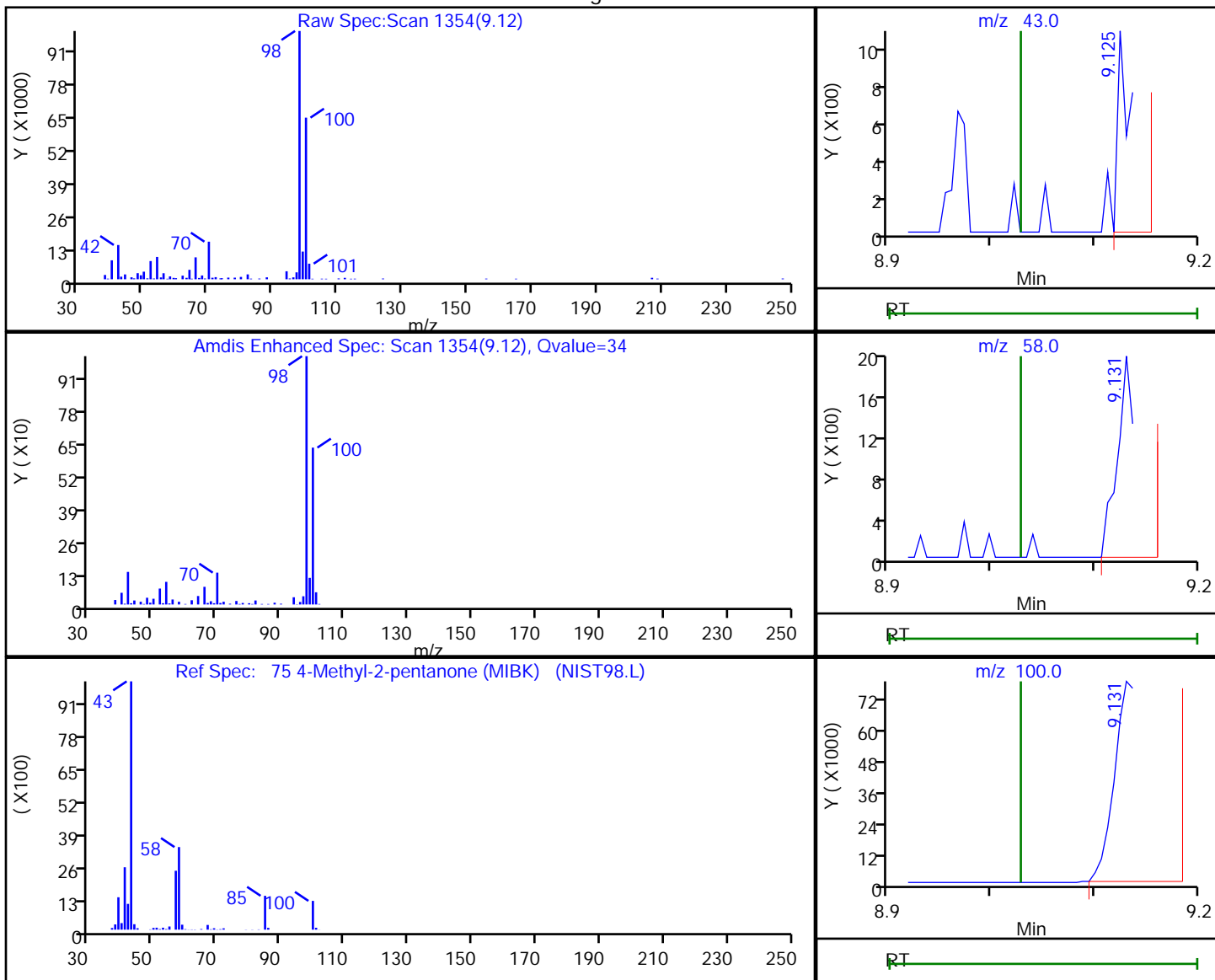
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092719.D
Injection Date: 27-Sep-2019 19:51:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-3 Lab Sample ID: 180-96180-3
Client ID: HD-COD-SW-13-0/1-0
Operator ID: 433269 ALS Bottle#: 9 Worklist Smp#: 15
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

75 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1

Processing Results



RT	Mass	Response	Amount
9.12	43.00	1138	0.712366
9.13	58.00	2457	
9.13	100.00	158886	

Reviewer: bowieh, 28-Sep-2019 11:11:24

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

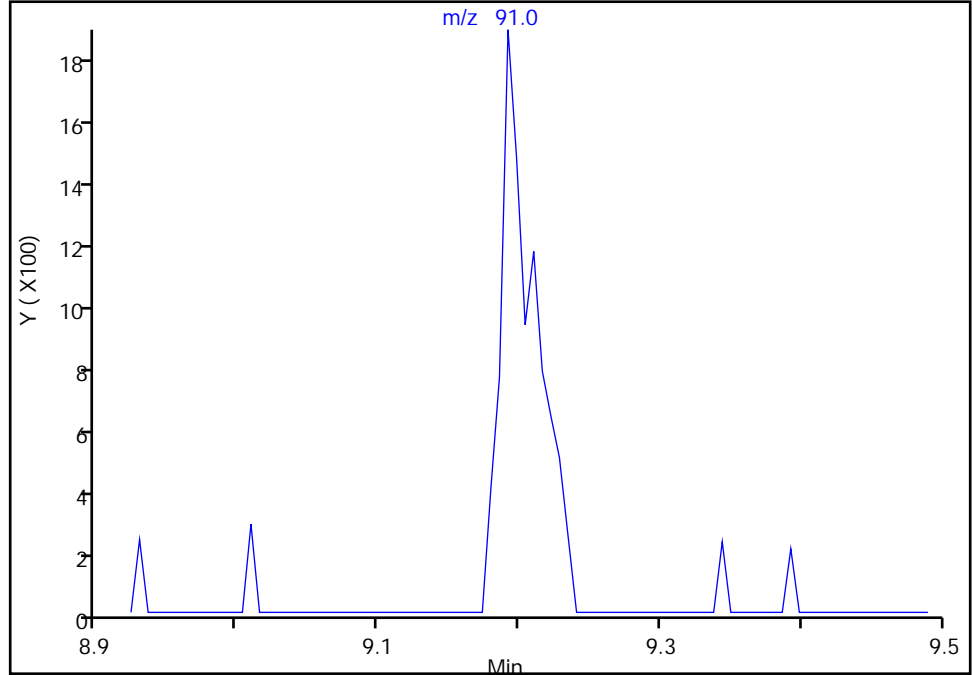
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Injection Date: 27-Sep-2019 19:51:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-3 Lab Sample ID: 180-96180-3
Client ID: HD-COD-SW-13-0/1-0
Operator ID: 433269 ALS Bottle#: 9 Worklist Smp#: 15
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

76 Toluene, CAS: 108-88-3

Signal: 1

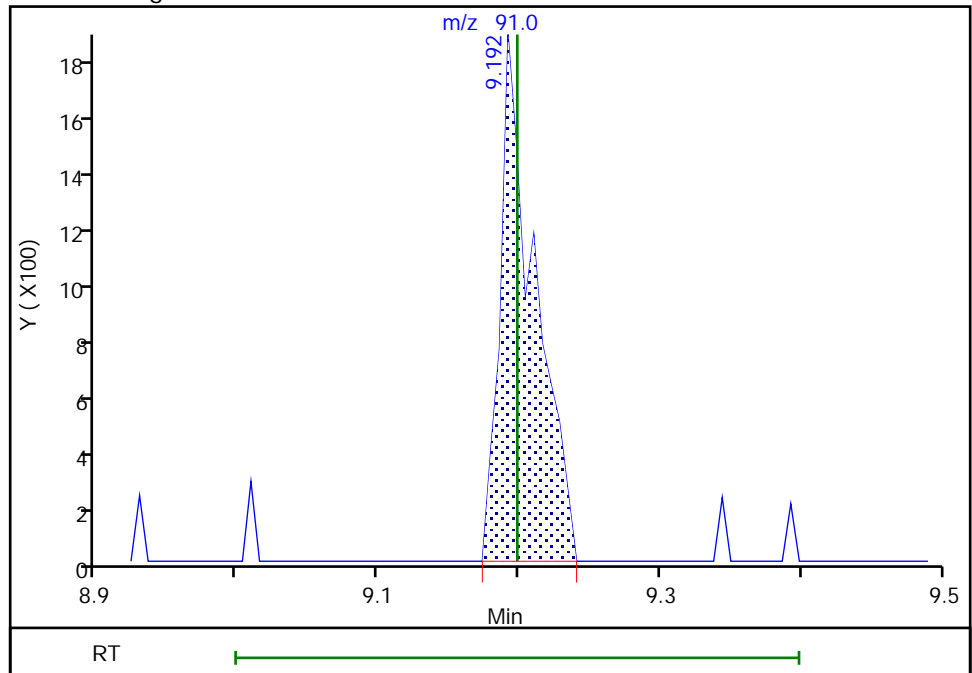
Not Detected
Expected RT: 9.20

Processing Integration Results



Manual Integration Results

RT: 9.19
Area: 3131
Amount: 0.431398
Amount Units: ng



Reviewer: bowieh, 28-Sep-2019 11:11:28
Audit Action: Assigned Compound ID

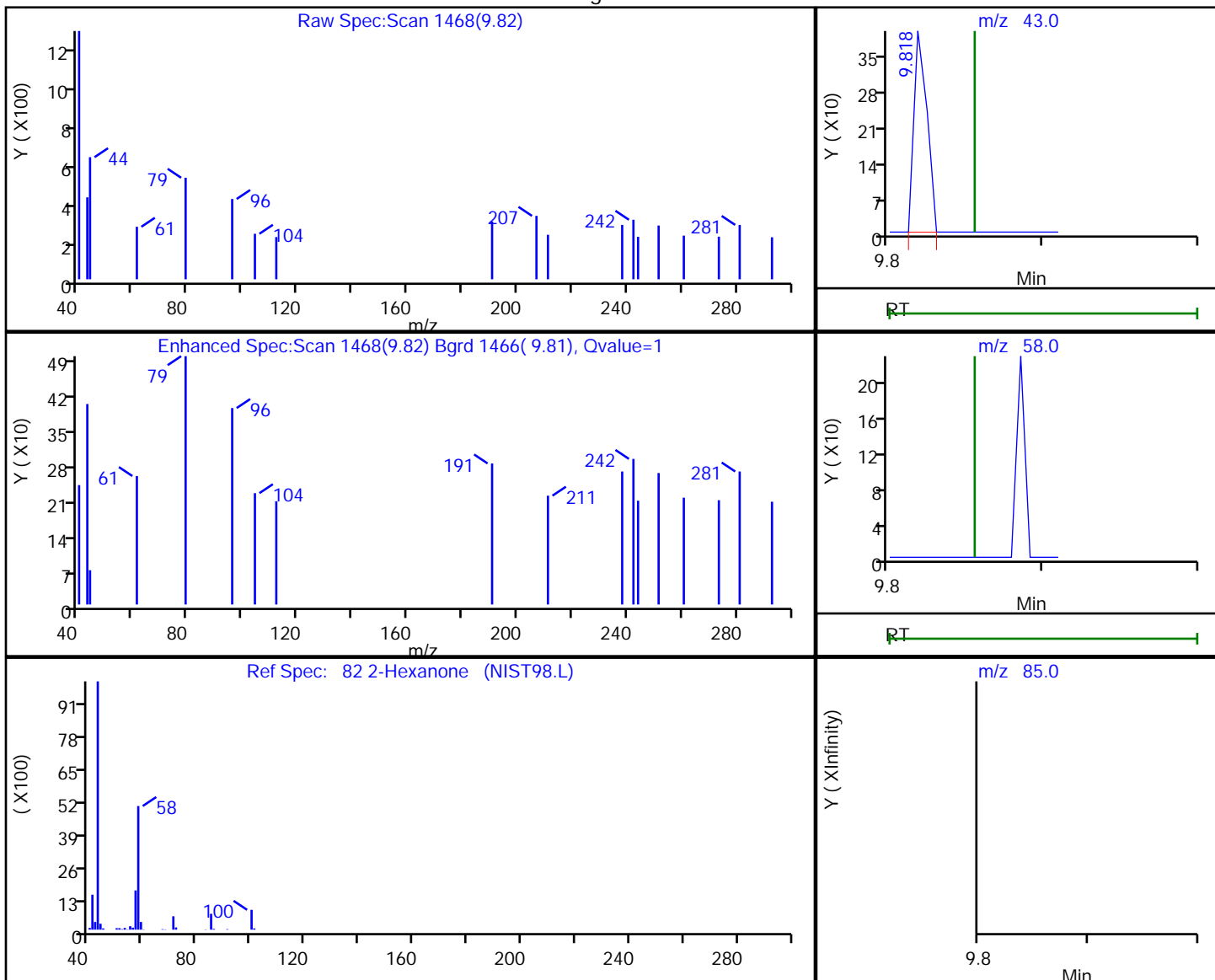
Audit Reason: Peak assignment corrected

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092719.D
 Injection Date: 27-Sep-2019 19:51:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-3 Lab Sample ID: 180-96180-3
 Client ID: HD-COD-SW-13-0/1-0
 Operator ID: 433269 ALS Bottle#: 9 Worklist Smp#: 15
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

82 2-Hexanone, CAS: 591-78-6

Processing Results



RT	Mass	Response	Amount
9.82	43.00	233	0.201693
9.86	58.00	0	
9.86	85.00	0	

Reviewer: bowieh, 28-Sep-2019 11:11:33

Audit Action: Marked Compound Undetected

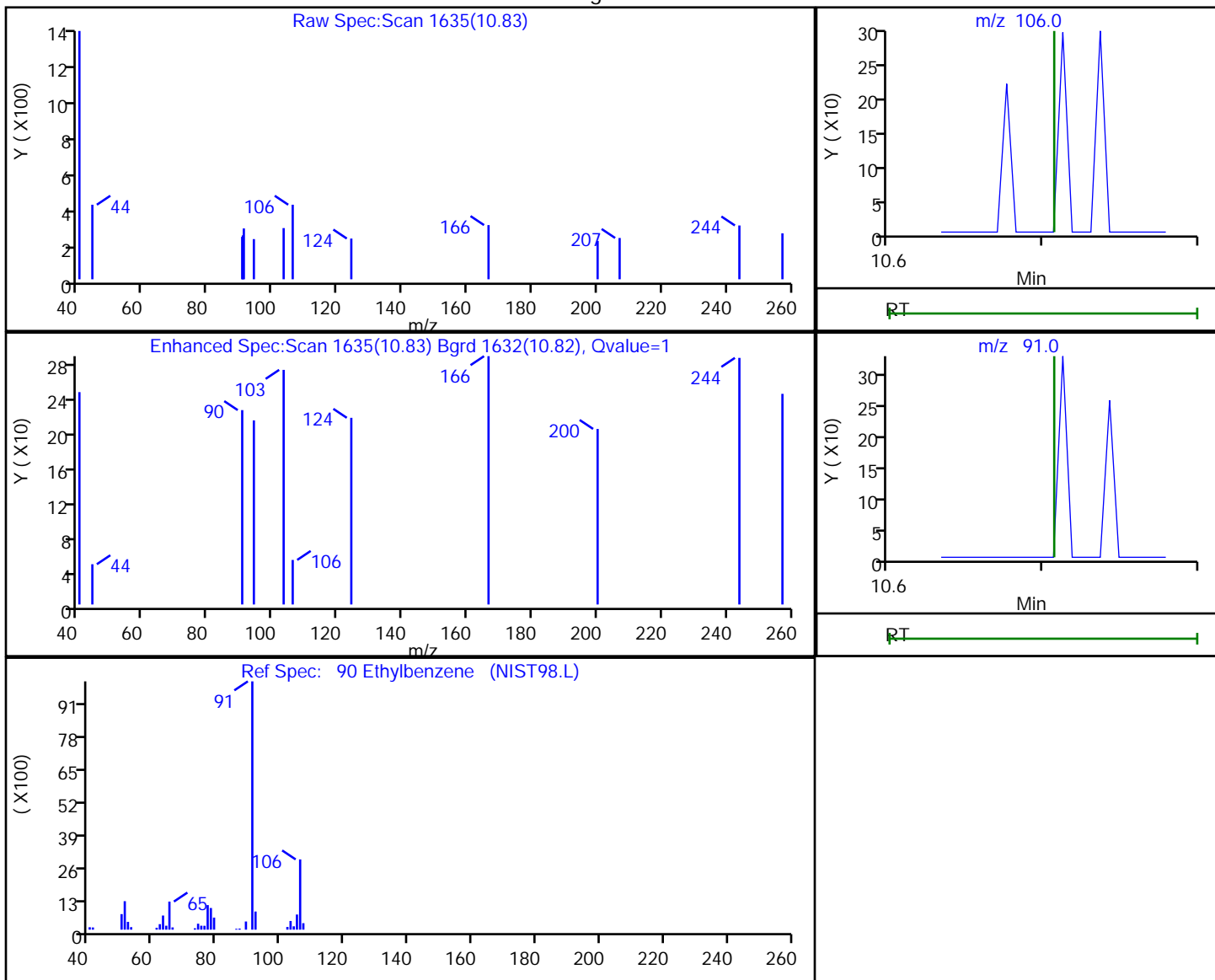
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092719.D
Injection Date: 27-Sep-2019 19:51:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-3 Lab Sample ID: 180-96180-3
Client ID: HD-COD-SW-13-0/1-0
Operator ID: 433269 ALS Bottle#: 9 Worklist Smp#: 15
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

90 Ethylbenzene, CAS: 100-41-4

Processing Results



RT	Mass	Response	Amount
10.83	106.00	447	0.179526
10.83	91.00	837	

Reviewer: bowieh, 28-Sep-2019 11:11:36

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-16-0/1-0 Lab Sample ID: 180-96180-4
 Matrix: Water Lab File ID: 5092720.D
 Analysis Method: EPA 8260C Date Collected: 09/23/2019 11:15
 Sample wt/vol: 5 (mL) Date Analyzed: 09/27/2019 20:16
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 292962 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	ND		1.0	0.90
75-01-4	Vinyl chloride	ND		1.0	0.88
74-83-9	Bromomethane	ND		1.0	0.89
75-00-3	Chloroethane	ND		1.0	0.90
75-35-4	1,1-Dichloroethene	ND		1.0	0.55
67-64-1	Acetone	ND		5.0	3.4
75-15-0	Carbon disulfide	ND		1.0	0.88
75-09-2	Methylene Chloride	ND		1.0	0.89
156-60-5	trans-1,2-Dichloroethene	ND	*	1.0	0.67
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.59
75-34-3	1,1-Dichloroethane	ND		1.0	0.63
156-59-2	cis-1,2-Dichloroethene	ND	*	1.0	0.71
74-97-5	Bromochloromethane	ND		1.0	0.63
78-93-3	2-Butanone (MEK)	ND		5.0	2.6
67-66-3	Chloroform	ND		1.0	0.60
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.60
56-23-5	Carbon tetrachloride	ND		1.0	0.88
71-43-2	Benzene	ND		1.0	0.60
107-06-2	1,2-Dichloroethane	ND		1.0	0.57
79-01-6	Trichloroethene	ND	*	1.0	0.69
78-87-5	1,2-Dichloropropane	ND		1.0	0.66
75-27-4	Bromodichloromethane	ND		1.0	0.64
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.59
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1
108-88-3	Toluene	ND	*	1.0	0.46
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.58
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.45
127-18-4	Tetrachloroethene	ND		1.0	0.47
591-78-6	2-Hexanone	ND		5.0	3.3
124-48-1	Dibromochloromethane	ND		1.0	0.84
106-93-4	1,2-Dibromoethane (EDB)	ND		1.0	0.50
108-90-7	Chlorobenzene	ND		1.0	0.50
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.57
100-41-4	Ethylbenzene	ND		1.0	0.51
1330-20-7	Xylenes, Total	ND	*	2.0	0.89
100-42-5	Styrene	ND		1.0	0.47

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-16-0/1-0 Lab Sample ID: 180-96180-4
 Matrix: Water Lab File ID: 5092720.D
 Analysis Method: EPA 8260C Date Collected: 09/23/2019 11:15
 Sample wt/vol: 5 (mL) Date Analyzed: 09/27/2019 20:16
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 292962 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	ND		1.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.60
107-13-1	Acrylonitrile	ND		20	7.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		70-150
2037-26-5	Toluene-d8 (Surr)	90		78-128
460-00-4	4-Bromofluorobenzene (Surr)	76		64-123
1868-53-7	Dibromofluoromethane (Surr)	120		75-147

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092720.D
 Lims ID: 180-96180-B-4
 Client ID: HD-COD-SW-16-0/1-0
 Sample Type: Client
 Inject. Date: 27-Sep-2019 20:16:30 ALS Bottle#: 10 Worklist Smp#: 16
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028863-016
 Misc. Info.: 180-96180-B-4
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 28-Sep-2019 11:12:41 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: bowieh

Date: 28-Sep-2019 11:12:41

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.531	4.532	-0.001	0	151601	1000.0	
* 2 Fluorobenzene (IS)	96	7.499	7.495	0.004	97	266527	50.0	
* 3 Chlorobenzene-d5	119	10.590	10.579	0.011	89	69371	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.920	12.915	0.005	96	107304	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.776	6.777	-0.001	93	92052	59.8	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.153	7.142	0.011	0	133094	51.4	
\$ 7 Toluene-d8 (Surr)	98	9.136	9.131	0.005	95	247901	44.9	
\$ 8 4-Bromofluorobenzene (Surr	95	11.758	11.766	-0.008	92	86226	38.0	
12 Chloromethane	50		1.910				ND	U
13 Vinyl chloride	62		2.038				ND	
15 Bromomethane	94		2.379				ND	
16 Chloroethane	64		2.543				ND	U
22 1,1-Dichloroethene	96		3.565				ND	
24 Acetone	43	3.703	3.668	0.035	72	8272	12.2	
26 Carbon disulfide	76		3.863				ND	
31 Methylene Chloride	84	4.391	4.405	-0.014	31	657	-6.31	
33 Acrylonitrile	53		4.782				ND	
34 trans-1,2-Dichloroethene	96		4.812				ND	
35 Methyl tert-butyl ether	73		4.824				ND	
37 1,1-Dichloroethane	63		5.439				ND	
45 cis-1,2-Dichloroethene	96	6.167	6.181	-0.014	1	1502	0.8576	
46 2-Butanone (MEK)	43		6.187				ND	
49 Chlorobromomethane	128		6.455				ND	
52 Chloroform	83	6.605	6.595	0.010	11	2158	-2.02	
53 1,1,1-Trichloroethane	97		6.759				ND	
56 Carbon tetrachloride	117		6.929				ND	
58 Benzene	78		7.154				ND	U
59 1,2-Dichloroethane	62		7.233				ND	
64 Trichloroethene	130	7.883	7.878	0.005	30	1615	0.9076	
67 1,2-Dichloropropane	63		8.152				ND	
71 Dichlorobromomethane	83		8.432				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
74 cis-1,3-Dichloropropene	75		8.870				ND	
75 4-Methyl-2-pentanone (MIBK)	43		9.028				ND	U
76 Toluene	91	9.203	9.198	0.005	35	3697	0.5142	
77 trans-1,3-Dichloropropene	75		9.448				ND	
79 1,1,2-Trichloroethane	97		9.636				ND	U
80 Tetrachloroethene	164		9.709				ND	
82 2-Hexanone	43		9.855				ND	U
84 Chlorodibromomethane	129		10.007				ND	
85 Ethylene Dibromide	107		10.123				ND	
87 Chlorobenzene	112		10.610				ND	
89 1,1,1,2-Tetrachloroethane	131		10.701				ND	
90 Ethylbenzene	106		10.707				ND	U
91 m-Xylene & p-Xylene	106	10.827	10.835	-0.008	0	1491	0.4902	a
92 o-Xylene	106		11.218				ND	
93 Styrene	104	11.241	11.242	-0.001	1	555	0.1088	
94 Bromoform	173		11.419				ND	
99 1,1,2,2-Tetrachloroethane	83		11.899				ND	
S 133 Xylenes, Total	106				0		0.4902	

QC Flag Legend

Review Flags

U - Marked Undetected

a - User Assigned ID

Reagents:

voaWI/SHP5_00013

Amount Added: 5.00

Units: uL

Run Reagent

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092720.D

Injection Date: 27-Sep-2019 20:16:30

Instrument ID: CHHP5

Operator ID: 433269

Lims ID: 180-96180-B-4

Lab Sample ID: 180-96180-4

Worklist Smp#: 16

Client ID: HD-COD-SW-16-0/1-0

Purge Vol: 5.000 mL

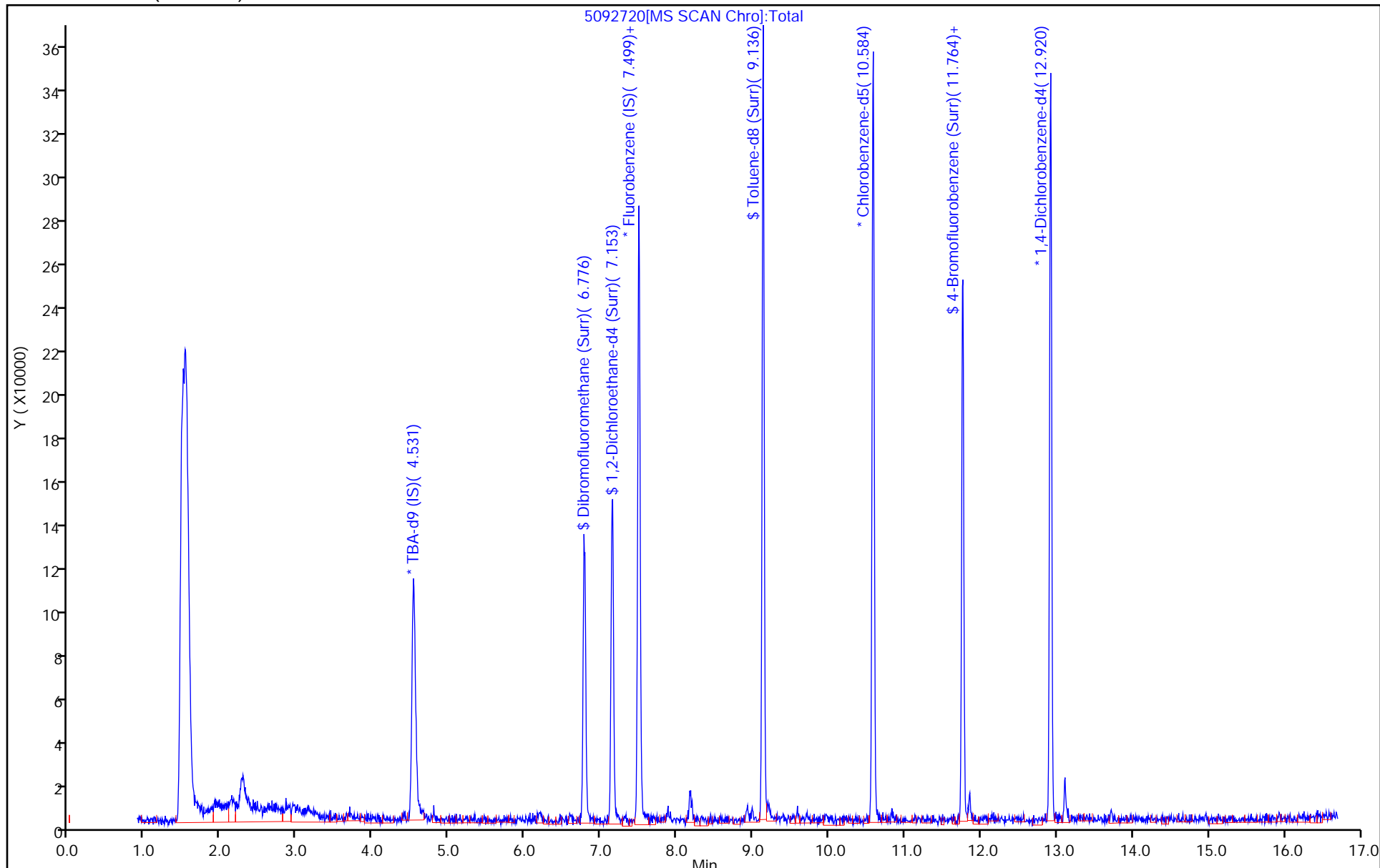
Dil. Factor: 1.0000

ALS Bottle#: 10

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Recovery Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092720.D
 Lims ID: 180-96180-B-4
 Client ID: HD-COD-SW-16-0/1-0
 Sample Type: Client
 Inject. Date: 27-Sep-2019 20:16:30 ALS Bottle#: 10 Worklist Smp#: 16
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028863-016
 Misc. Info.: 180-96180-B-4
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 28-Sep-2019 11:12:41 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: bowieh

Date: 28-Sep-2019 11:12:41

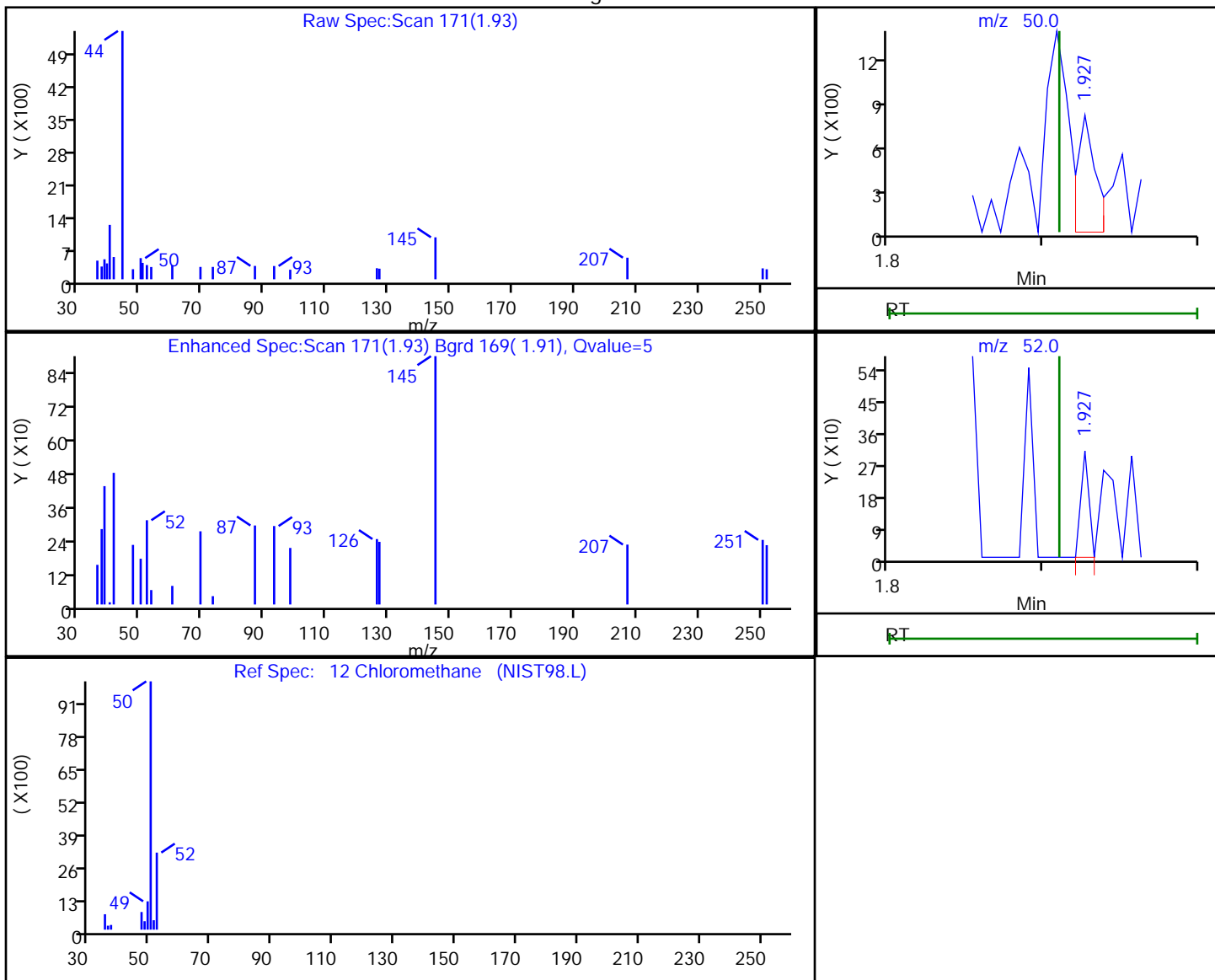
Compound	Amount Added	Amount Recovered	% Rec.
\$ 5 Dibromofluoromethane (Surr)	50.0	59.8	119.67
\$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	51.4	102.71
\$ 7 Toluene-d8 (Surr)	50.0	44.9	89.78
\$ 8 4-Bromofluorobenzene (Surr)	50.0	38.0	75.96

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092720.D
 Injection Date: 27-Sep-2019 20:16:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-4 Lab Sample ID: 180-96180-4
 Client ID: HD-COD-SW-16-0/1-0
 Operator ID: 433269 ALS Bottle#: 10 Worklist Smp#: 16
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

12 Chloromethane, CAS: 74-87-3

Processing Results



RT	Mass	Response	Amount
1.93	50.00	680	0.298033
1.93	52.00	111	

Reviewer: bowieh, 28-Sep-2019 11:11:56

Audit Action: Marked Compound Undetected

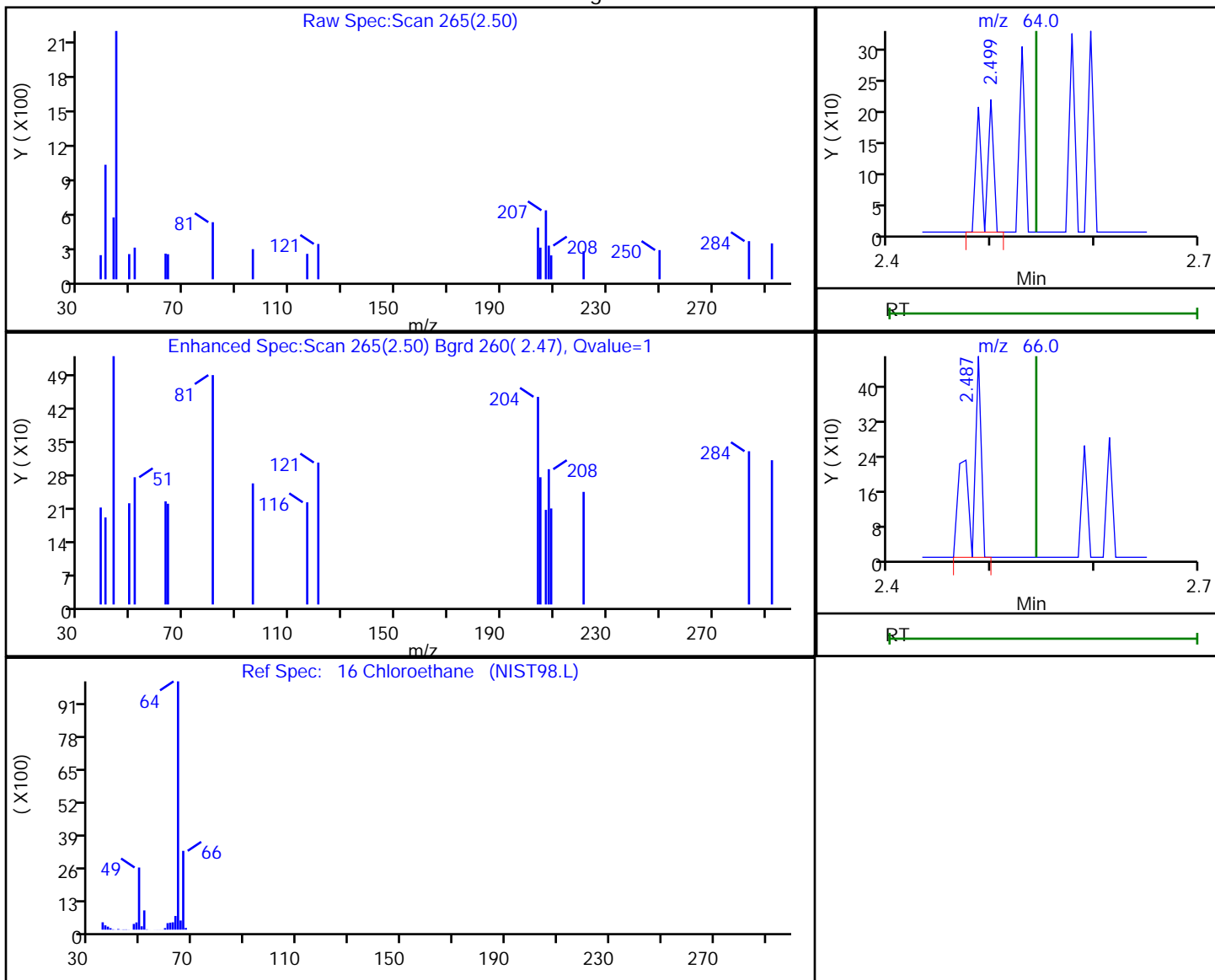
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092720.D
Injection Date: 27-Sep-2019 20:16:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-4 Lab Sample ID: 180-96180-4
Client ID: HD-COD-SW-16-0/1-0
Operator ID: 433269 ALS Bottle#: 10 Worklist Smp#: 16
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

16 Chloroethane, CAS: 75-00-3

Processing Results



RT	Mass	Response	Amount
2.50	64.00	151	0.104824
2.49	66.00	333	

Reviewer: bowieh, 28-Sep-2019 11:11:57

Audit Action: Marked Compound Undetected

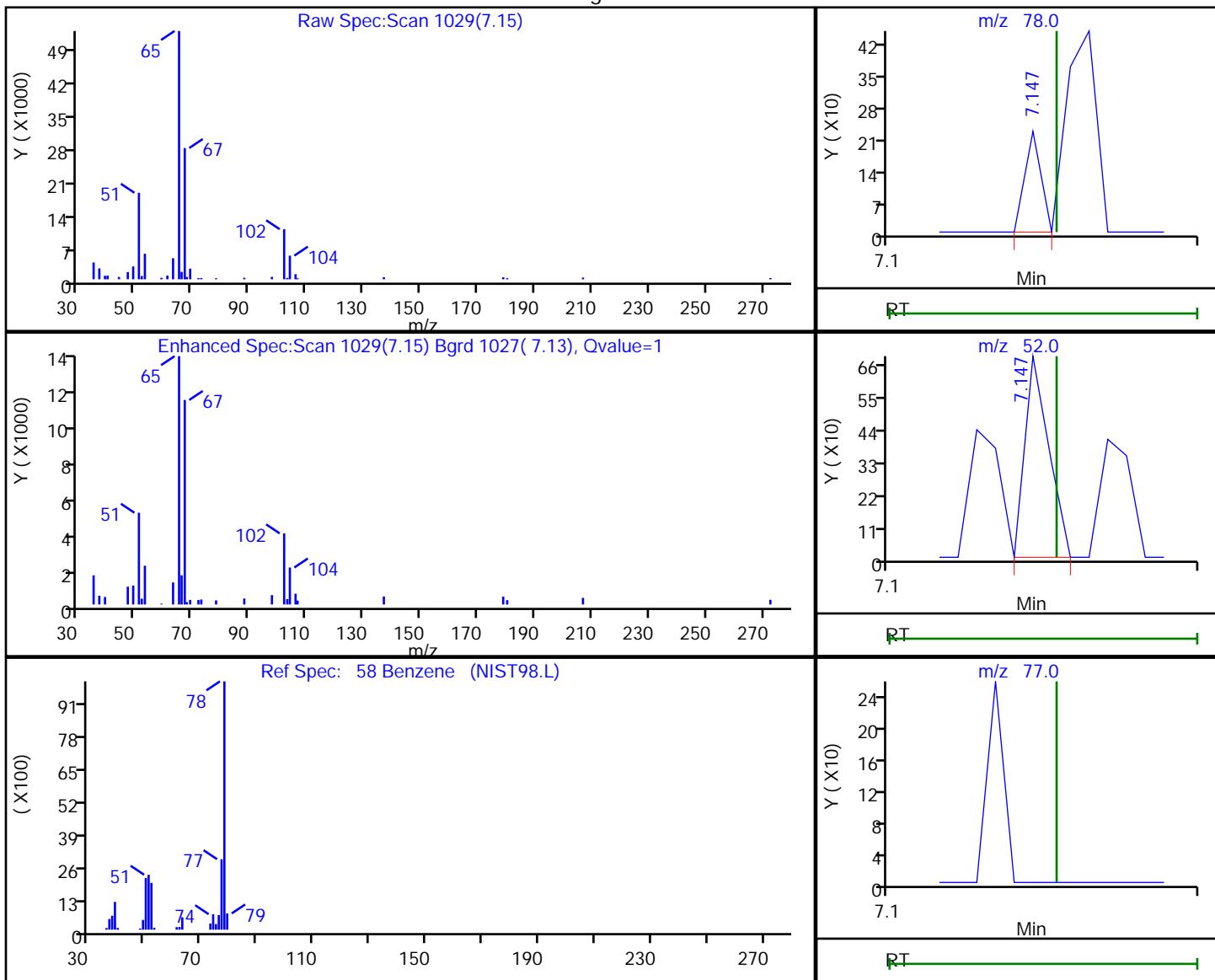
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092720.D
 Injection Date: 27-Sep-2019 20:16:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-4 Lab Sample ID: 180-96180-4
 Client ID: HD-COD-SW-16-0/1-0
 Operator ID: 433269 ALS Bottle#: 10 Worklist Smp#: 16
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

58 Benzene, CAS: 71-43-2

Processing Results



RT	Mass	Response	Amount
7.15	78.00	81	0.012304
7.15	52.00	369	
7.15	77.00	0	

Reviewer: bowieh, 28-Sep-2019 11:12:14

Audit Action: Marked Compound Undetected

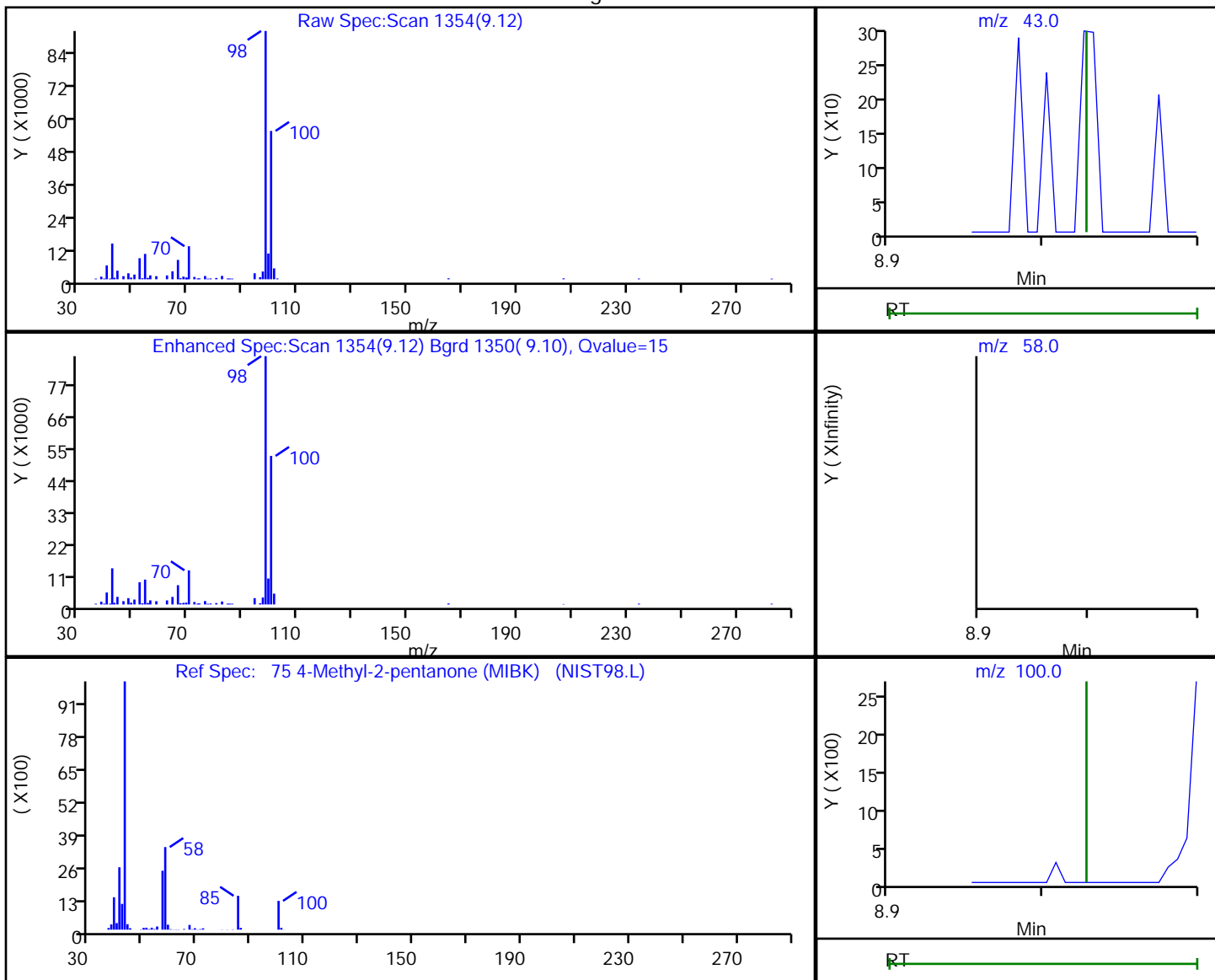
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092720.D
 Injection Date: 27-Sep-2019 20:16:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-4 Lab Sample ID: 180-96180-4
 Client ID: HD-COD-SW-16-0/1-0
 Operator ID: 433269 ALS Bottle#: 10 Worklist Smp#: 16
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

75 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1

Processing Results



RT	Mass	Response	Amount
9.12	43.00	718	0.453731
9.13	58.00	1980	
9.03	100.00	0	

Reviewer: bowieh, 28-Sep-2019 11:12:18

Audit Action: Marked Compound Undetected

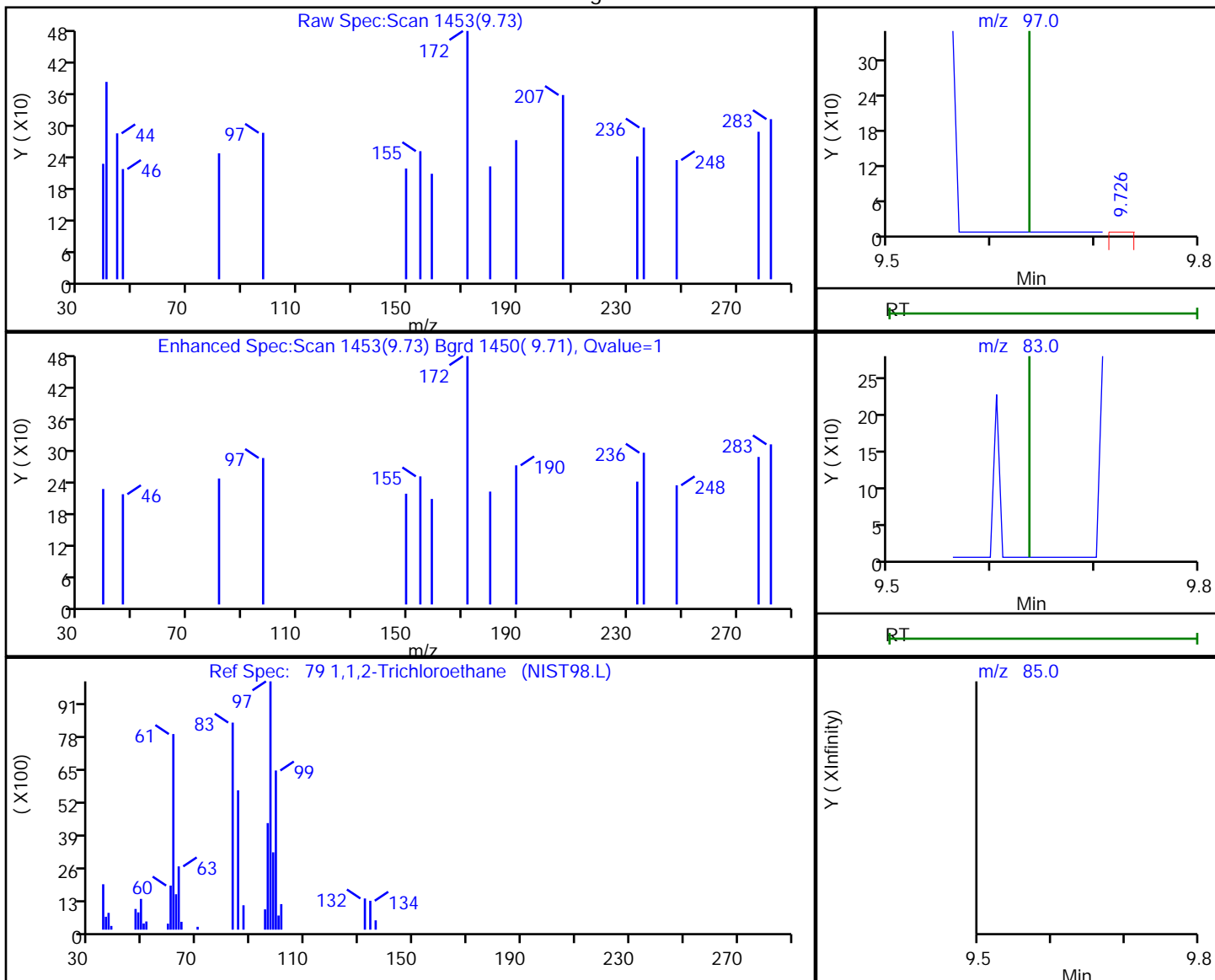
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092720.D
 Injection Date: 27-Sep-2019 20:16:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-4 Lab Sample ID: 180-96180-4
 Client ID: HD-COD-SW-16-0/1-0
 Operator ID: 433269 ALS Bottle#: 10 Worklist Smp#: 16
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

79 1,1,2-Trichloroethane, CAS: 79-00-5

Processing Results



RT	Mass	Response	Amount
9.73	97.00	102	0.067269
9.64	83.00	0	
9.64	85.00	0	

Reviewer: bowieh, 28-Sep-2019 11:12:21

Audit Action: Marked Compound Undetected

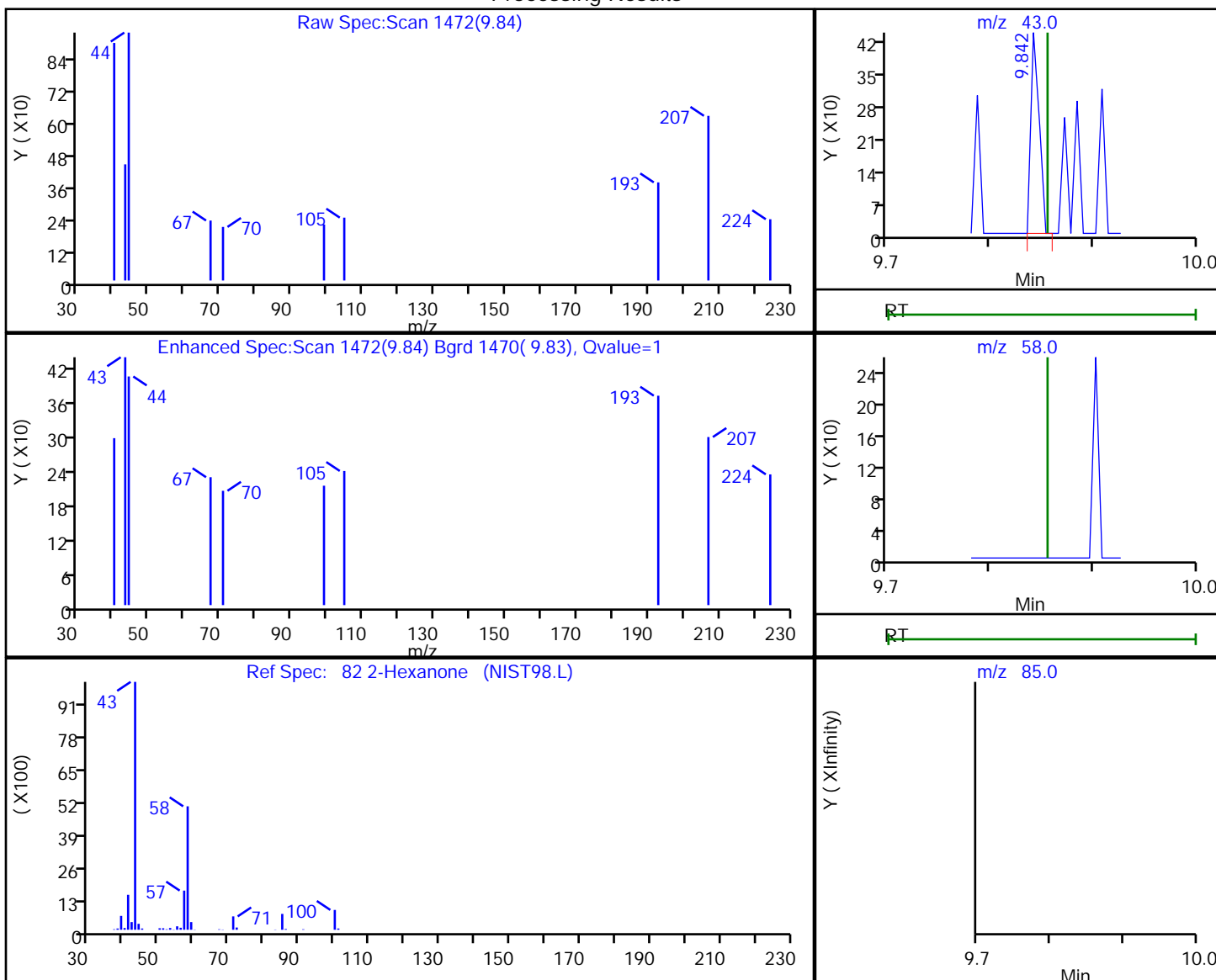
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092720.D
 Injection Date: 27-Sep-2019 20:16:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-4 Lab Sample ID: 180-96180-4
 Client ID: HD-COD-SW-16-0/1-0
 Operator ID: 433269 ALS Bottle#: 10 Worklist Smp#: 16
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

82 2-Hexanone, CAS: 591-78-6

Processing Results



RT	Mass	Response	Amount
9.84	43.00	246	0.214972
9.86	58.00	0	
9.86	85.00	0	

Reviewer: bowieh, 28-Sep-2019 11:12:23

Audit Action: Marked Compound Undetected

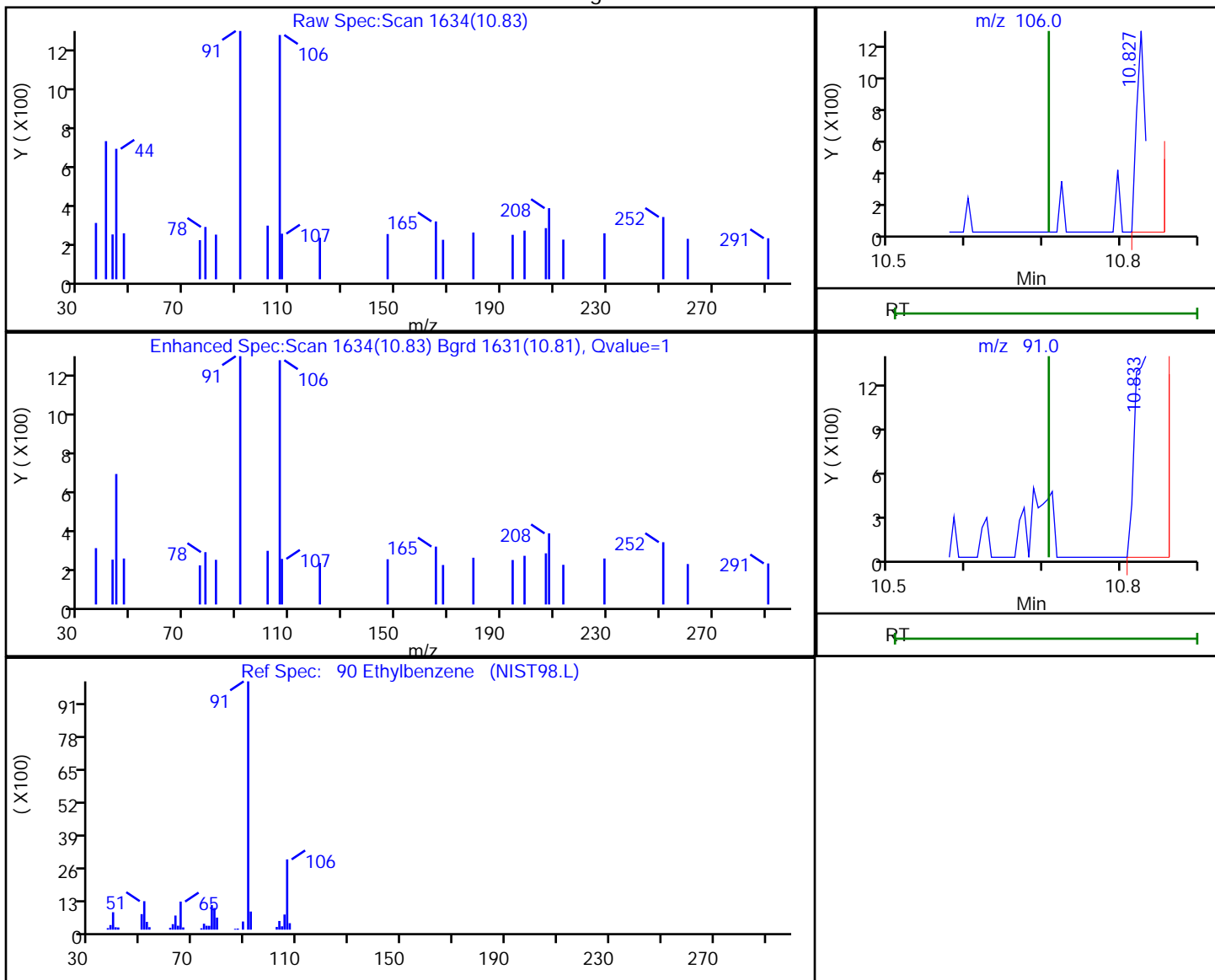
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092720.D
Injection Date: 27-Sep-2019 20:16:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-4 Lab Sample ID: 180-96180-4
Client ID: HD-COD-SW-16-0/1-0
Operator ID: 433269 ALS Bottle#: 10 Worklist Smp#: 16
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

90 Ethylbenzene, CAS: 100-41-4

Processing Results



RT	Mass	Response	Amount
10.83	106.00	1491	0.604520
10.83	91.00	2475	

Reviewer: bowieh, 28-Sep-2019 11:12:25

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

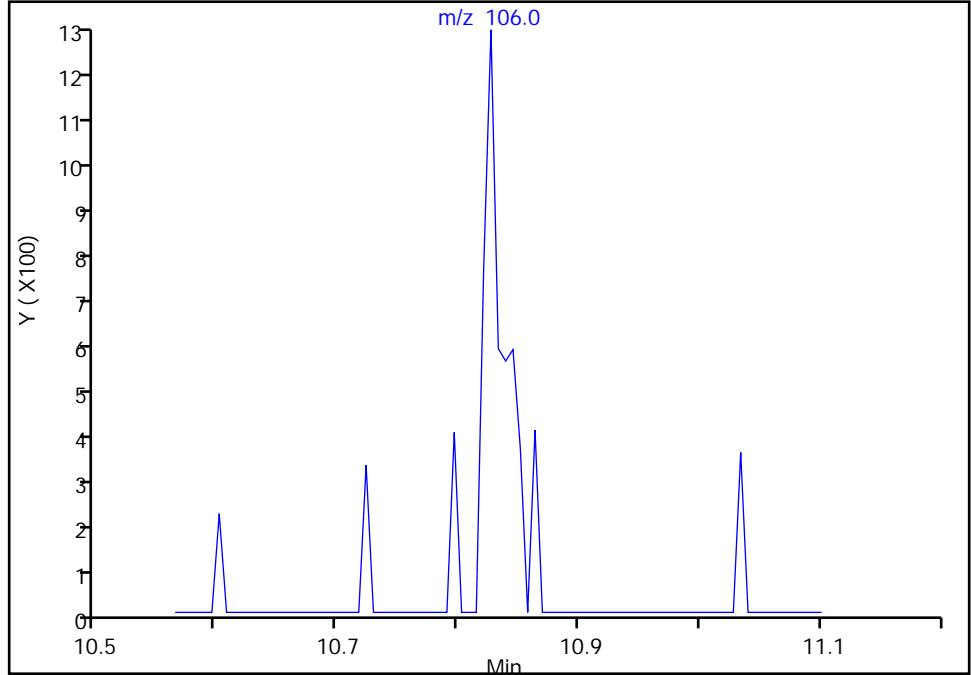
Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092720.D
Injection Date: 27-Sep-2019 20:16:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-4 Lab Sample ID: 180-96180-4
Client ID: HD-COD-SW-16-0/1-0
Operator ID: 433269 ALS Bottle#: 10 Worklist Smp#: 16
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

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

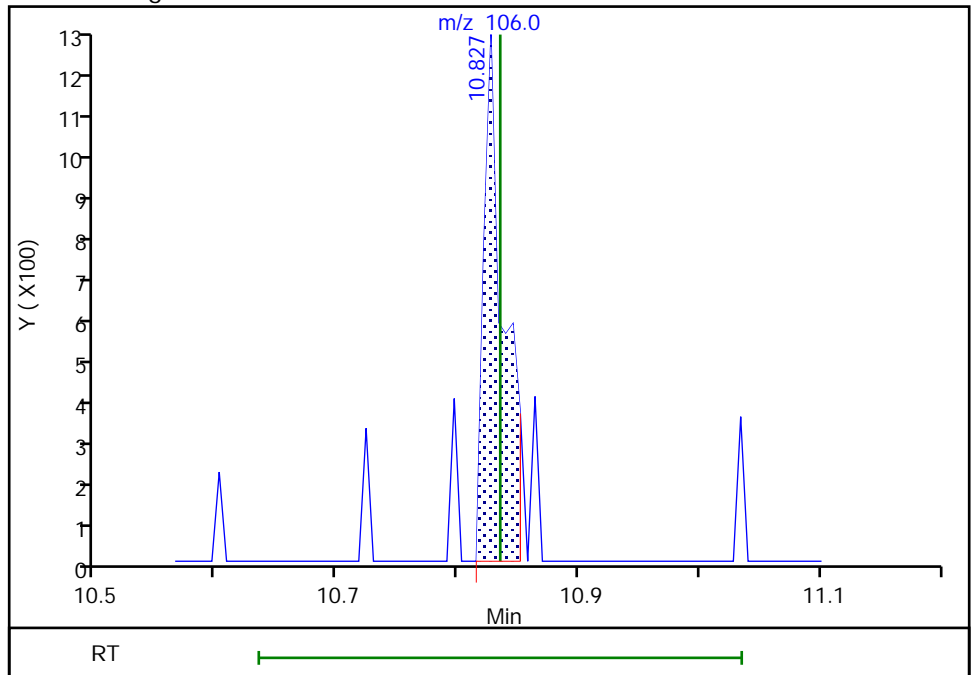
Signal: 1

Not Detected
Expected RT: 10.83

Processing Integration Results



Manual Integration Results



RT: 10.83
Area: 1491
Amount: 0.490226
Amount Units: ng

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-6-0/1-0 Lab Sample ID: 180-96180-5
 Matrix: Water Lab File ID: 5092721.D
 Analysis Method: EPA 8260C Date Collected: 09/23/2019 12:05
 Sample wt/vol: 5 (mL) Date Analyzed: 09/27/2019 20:40
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 292962 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	ND		1.0	0.90
75-01-4	Vinyl chloride	ND		1.0	0.88
74-83-9	Bromomethane	ND		1.0	0.89
75-00-3	Chloroethane	ND		1.0	0.90
75-35-4	1,1-Dichloroethene	ND		1.0	0.55
67-64-1	Acetone	ND		5.0	3.4
75-15-0	Carbon disulfide	ND		1.0	0.88
75-09-2	Methylene Chloride	ND		1.0	0.89
156-60-5	trans-1,2-Dichloroethene	ND	*	1.0	0.67
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.59
75-34-3	1,1-Dichloroethane	ND		1.0	0.63
156-59-2	cis-1,2-Dichloroethene	ND	*	1.0	0.71
74-97-5	Bromochloromethane	ND		1.0	0.63
78-93-3	2-Butanone (MEK)	ND		5.0	2.6
67-66-3	Chloroform	ND		1.0	0.60
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.60
56-23-5	Carbon tetrachloride	ND		1.0	0.88
71-43-2	Benzene	ND		1.0	0.60
107-06-2	1,2-Dichloroethane	ND		1.0	0.57
79-01-6	Trichloroethene	ND	*	1.0	0.69
78-87-5	1,2-Dichloropropane	ND		1.0	0.66
75-27-4	Bromodichloromethane	ND		1.0	0.64
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.59
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1
108-88-3	Toluene	ND	*	1.0	0.46
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.58
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.45
127-18-4	Tetrachloroethene	ND		1.0	0.47
591-78-6	2-Hexanone	ND		5.0	3.3
124-48-1	Dibromochloromethane	ND		1.0	0.84
106-93-4	1,2-Dibromoethane (EDB)	ND		1.0	0.50
108-90-7	Chlorobenzene	ND		1.0	0.50
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.57
100-41-4	Ethylbenzene	ND		1.0	0.51
1330-20-7	Xylenes, Total	ND	*	2.0	0.89
100-42-5	Styrene	ND		1.0	0.47

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-6-0/1-0 Lab Sample ID: 180-96180-5
 Matrix: Water Lab File ID: 5092721.D
 Analysis Method: EPA 8260C Date Collected: 09/23/2019 12:05
 Sample wt/vol: 5 (mL) Date Analyzed: 09/27/2019 20:40
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 292962 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	ND		1.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.60
107-13-1	Acrylonitrile	ND		20	7.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		70-150
2037-26-5	Toluene-d8 (Surr)	90		78-128
460-00-4	4-Bromofluorobenzene (Surr)	78		64-123
1868-53-7	Dibromofluoromethane (Surr)	116		75-147

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092721.D
 Lims ID: 180-96180-B-5
 Client ID: HD-COD-SW-6-0/1-0
 Sample Type: Client
 Inject. Date: 27-Sep-2019 20:40:30 ALS Bottle#: 11 Worklist Smp#: 17
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028863-017
 Misc. Info.: 180-96180-B-5
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 28-Sep-2019 11:13:34 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: bowieh

Date: 28-Sep-2019 11:13:34

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.534	4.532	0.002	0	154516	1000.0	
* 2 Fluorobenzene (IS)	96	7.497	7.495	0.002	98	264579	50.0	
* 3 Chlorobenzene-d5	119	10.581	10.579	0.002	89	69423	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.917	12.915	0.002	95	106645	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.779	6.777	0.002	93	88475	57.9	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.150	7.142	0.008	0	132910	51.7	
\$ 7 Toluene-d8 (Surr)	98	9.133	9.131	0.002	95	249012	45.1	
\$ 8 4-Bromofluorobenzene (Surr	95	11.761	11.766	-0.005	92	88691	39.0	
12 Chloromethane	50		1.910				ND	U
13 Vinyl chloride	62		2.038				ND	
15 Bromomethane	94		2.379				ND	U
16 Chloroethane	64		2.543				ND	
22 1,1-Dichloroethene	96		3.565				ND	
24 Acetone	43	3.695	3.668	0.027	75	8175	12.1	
26 Carbon disulfide	76		3.863				ND	
31 Methylene Chloride	84	4.419	4.405	0.014	35	1698	-5.68	a
33 Acrylonitrile	53		4.782				ND	
34 trans-1,2-Dichloroethene	96		4.812				ND	
35 Methyl tert-butyl ether	73		4.824				ND	
37 1,1-Dichloroethane	63		5.439				ND	
45 cis-1,2-Dichloroethene	96	6.171	6.181	-0.010	2	686	0.3946	
46 2-Butanone (MEK)	43		6.187				ND	
49 Chlorobromomethane	128		6.455				ND	
52 Chloroform	83	6.597	6.595	0.002	25	1663	-2.17	
53 1,1,1-Trichloroethane	97		6.759				ND	
56 Carbon tetrachloride	117		6.929				ND	
58 Benzene	78		7.154				ND	U
59 1,2-Dichloroethane	62		7.233				ND	
64 Trichloroethene	130	7.886	7.878	0.008	7	845	0.4784	
67 1,2-Dichloropropane	63		8.152				ND	
71 Dichlorobromomethane	83		8.432				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
74 cis-1,3-Dichloropropene	75		8.870				ND	
75 4-Methyl-2-pentanone (MIBK)	43		9.028				ND	U
76 Toluene	91		9.198				ND	
77 trans-1,3-Dichloropropene	75		9.448				ND	
79 1,1,2-Trichloroethane	97		9.636				ND	U
80 Tetrachloroethene	164		9.709				ND	
82 2-Hexanone	43		9.855				ND	U
84 Chlorodibromomethane	129		10.007				ND	
85 Ethylene Dibromide	107		10.123				ND	
87 Chlorobenzene	112		10.610				ND	
89 1,1,1,2-Tetrachloroethane	131		10.701				ND	
90 Ethylbenzene	106		10.707				ND	U
91 m-Xylene & p-Xylene	106		10.835				ND	
92 o-Xylene	106		11.218				ND	
93 Styrene	104		11.242				ND	
94 Bromoform	173		11.419				ND	
99 1,1,2,2-Tetrachloroethane	83		11.899				ND	
S 133 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

U - Marked Undetected

a - User Assigned ID

Reagents:

voaWI/SHP5_00013

Amount Added: 5.00

Units: uL

Run Reagent

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092721.D

Injection Date: 27-Sep-2019 20:40:30

Instrument ID: CHHP5

Operator ID: 433269

Lims ID: 180-96180-B-5

Lab Sample ID: 180-96180-5

Worklist Smp#: 17

Client ID: HD-COD-SW-6-0/1-0

Purge Vol: 5.000 mL

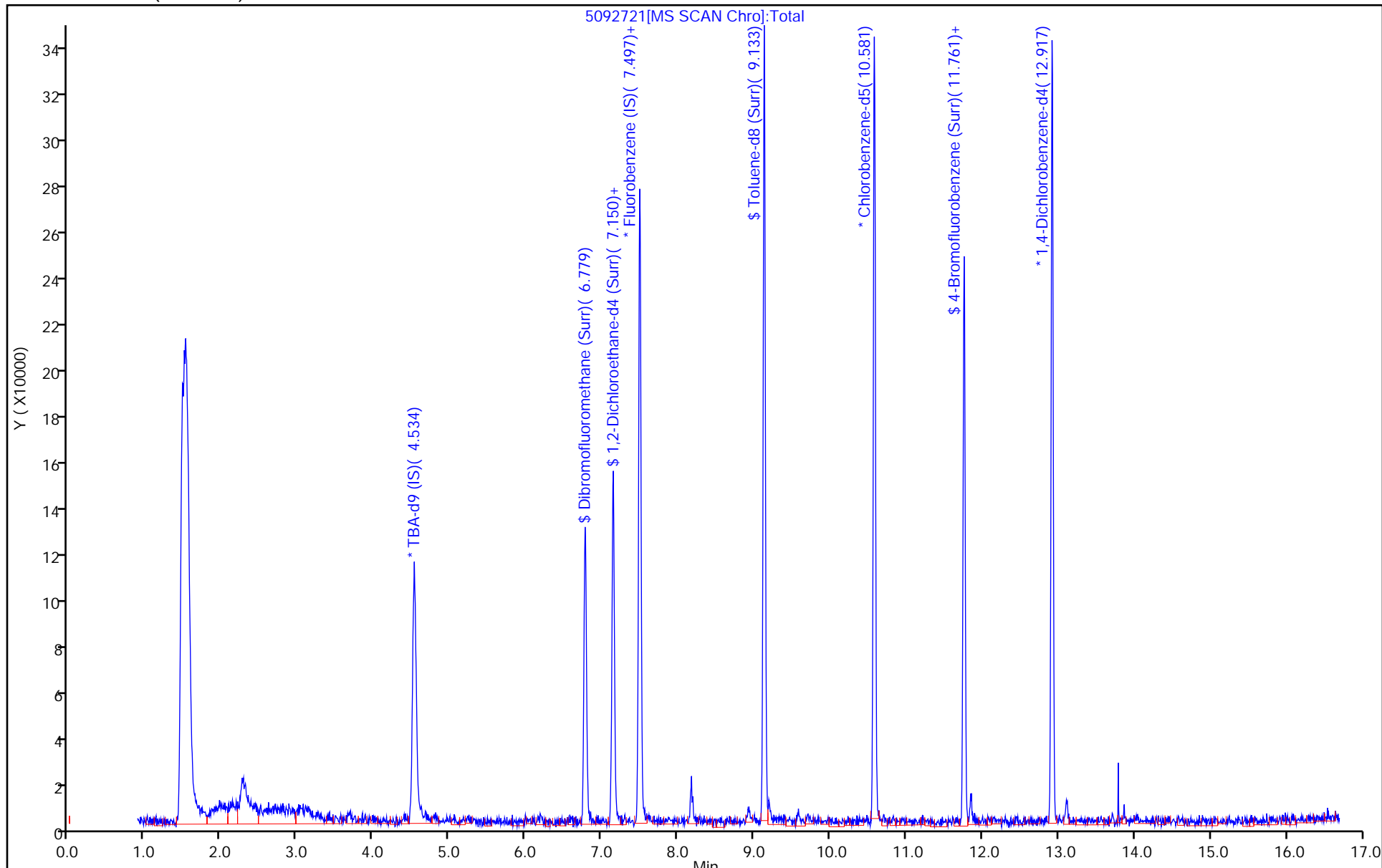
Dil. Factor: 1.0000

ALS Bottle#: 11

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Recovery Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092721.D
 Lims ID: 180-96180-B-5
 Client ID: HD-COD-SW-6-0/1-0
 Sample Type: Client
 Inject. Date: 27-Sep-2019 20:40:30 ALS Bottle#: 11 Worklist Smp#: 17
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028863-017
 Misc. Info.: 180-96180-B-5
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 28-Sep-2019 11:13:34 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: bowieh Date: 28-Sep-2019 11:13:34

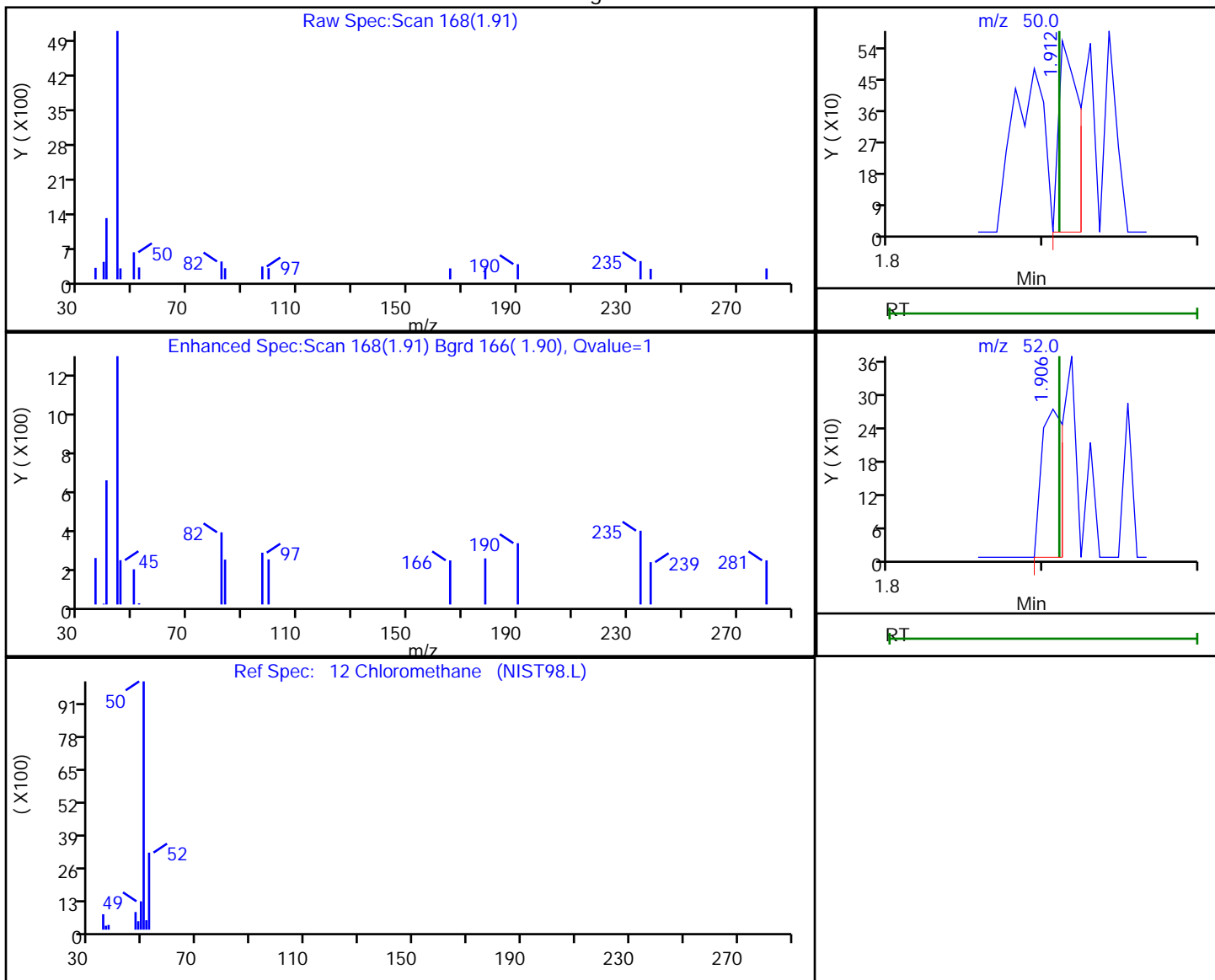
Compound	Amount Added	Amount Recovered	% Rec.
\$ 5 Dibromofluoromethane (Surr)	50.0	57.9	115.86
\$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	51.7	103.32
\$ 7 Toluene-d8 (Surr)	50.0	45.1	90.11
\$ 8 4-Bromofluorobenzene (Surr)	50.0	39.0	78.07

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092721.D
Injection Date: 27-Sep-2019 20:40:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-5 Lab Sample ID: 180-96180-5
Client ID: HD-COD-SW-6-0/1-0
Operator ID: 433269 ALS Bottle#: 11 Worklist Smp#: 17
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

12 Chloromethane, CAS: 74-87-3

Processing Results



RT	Mass	Response	Amount
1.91	50.00	502	0.221639
1.91	52.00	274	

Reviewer: bowieh, 28-Sep-2019 11:12:52

Audit Action: Marked Compound Undetected

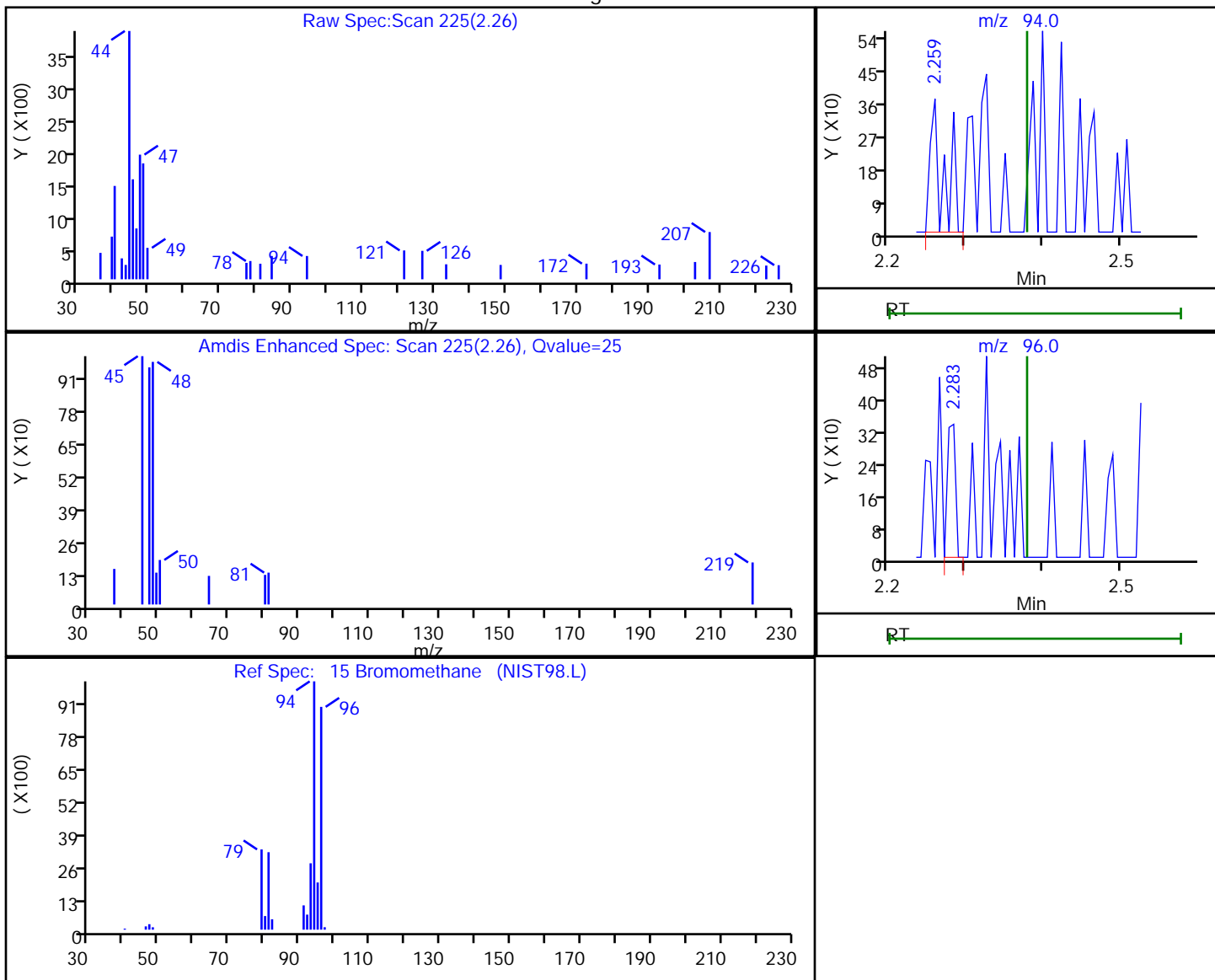
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092721.D
Injection Date: 27-Sep-2019 20:40:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-5 Lab Sample ID: 180-96180-5
Client ID: HD-COD-SW-6-0/1-0
Operator ID: 433269 ALS Bottle#: 11 Worklist Smp#: 17
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

15 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
2.26	94.00	419	0.258001
2.28	96.00	242	

Reviewer: bowieh, 28-Sep-2019 11:12:54

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

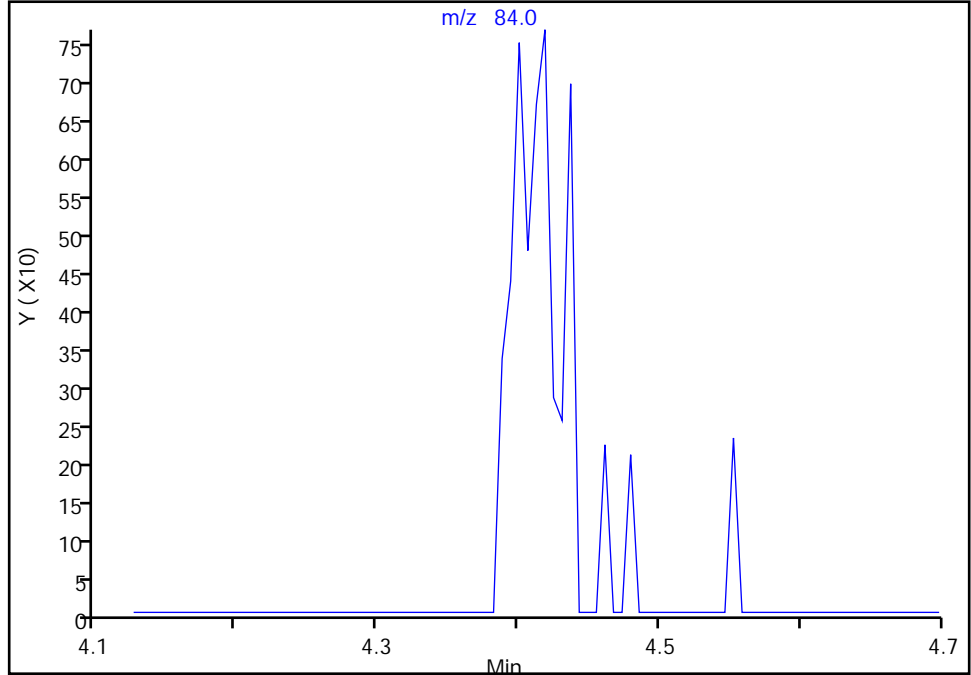
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Injection Date: 27-Sep-2019 20:40:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-5 Lab Sample ID: 180-96180-5
Client ID: HD-COD-SW-6-0/1-0
Operator ID: 433269 ALS Bottle#: 11 Worklist Smp#: 17
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2

Signal: 1

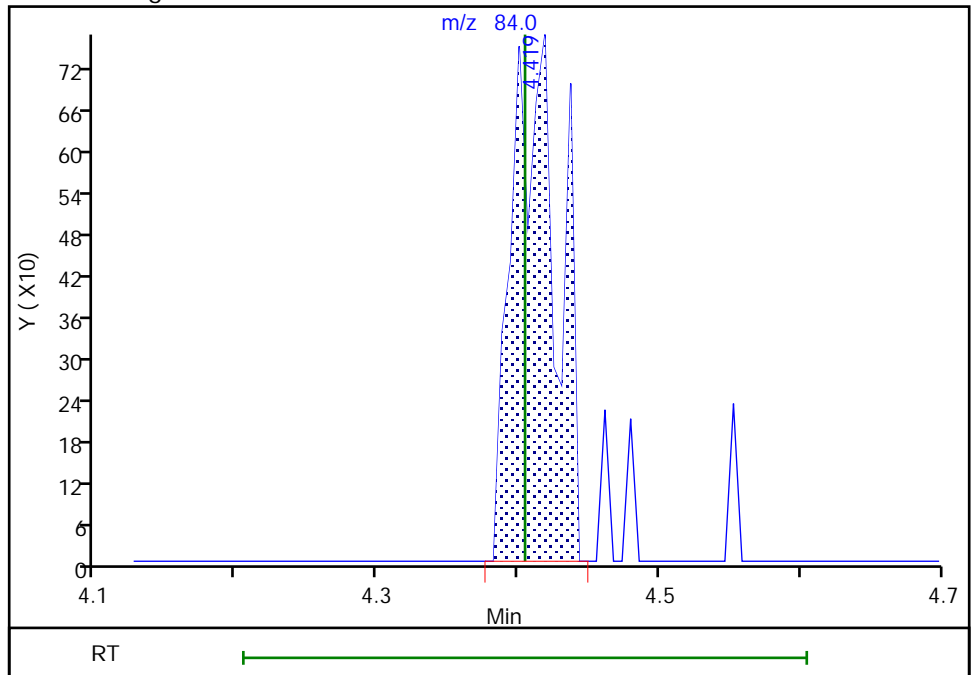
Not Detected
Expected RT: 4.40

Processing Integration Results



RT: 4.42
Area: 1698
Amount: -5.682997
Amount Units: ng

Manual Integration Results

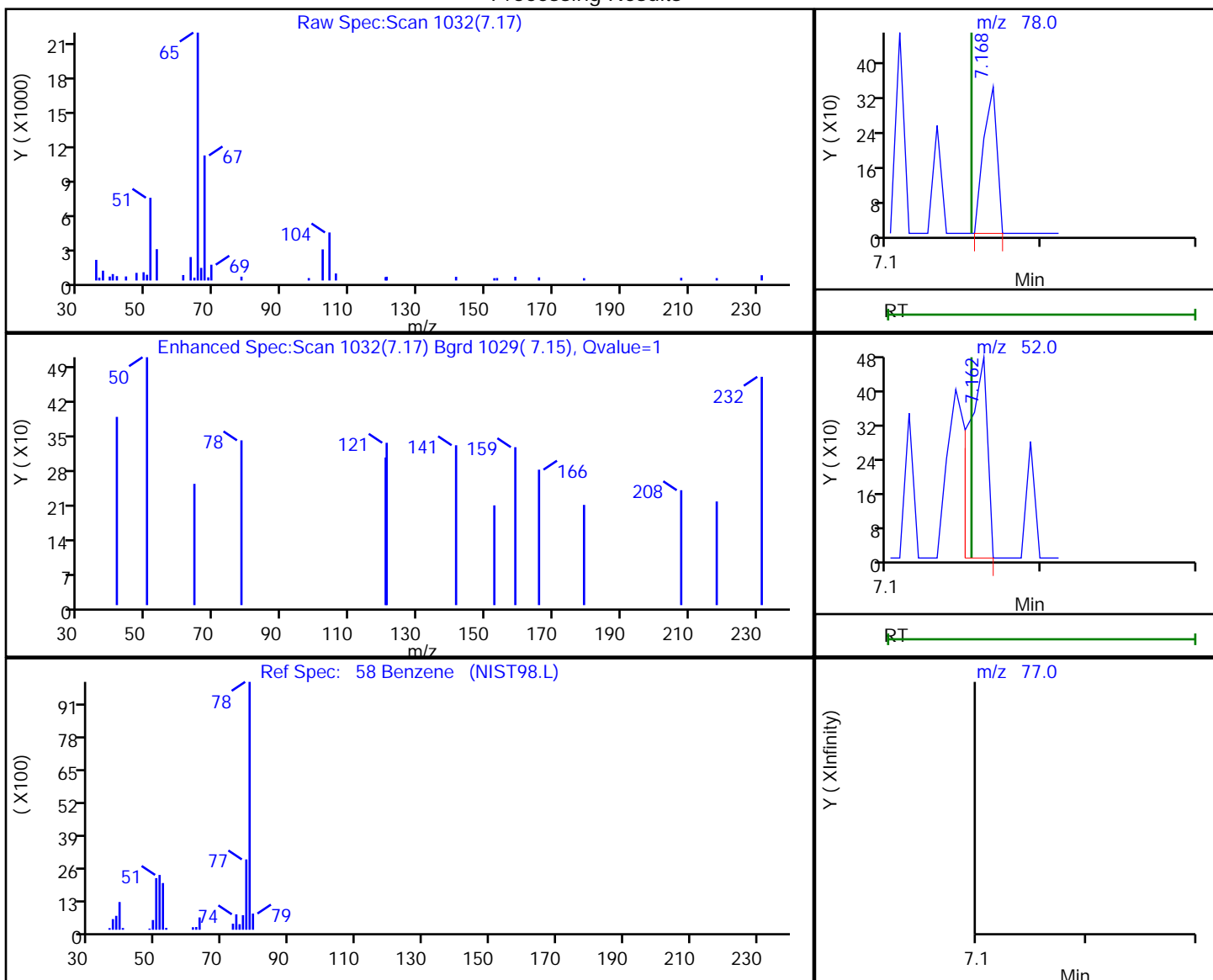


Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092721.D
 Injection Date: 27-Sep-2019 20:40:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-5 Lab Sample ID: 180-96180-5
 Client ID: HD-COD-SW-6-0/1-0
 Operator ID: 433269 ALS Bottle#: 11 Worklist Smp#: 17
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

58 Benzene, CAS: 71-43-2

Processing Results



RT	Mass	Response	Amount
7.17	78.00	203	0.031063
7.16	52.00	409	
7.15	77.00	0	

Reviewer: bowieh, 28-Sep-2019 11:13:10

Audit Action: Marked Compound Undetected

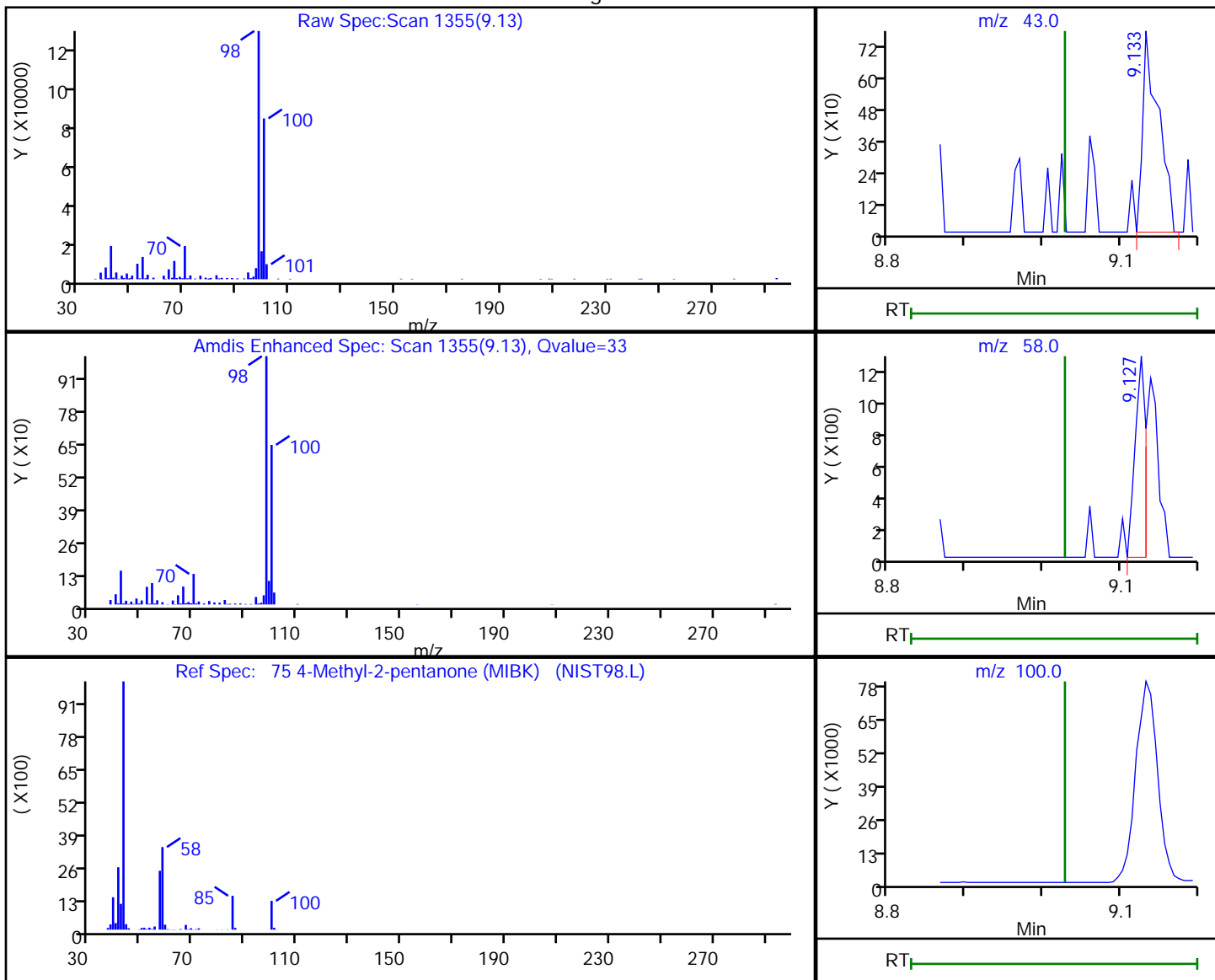
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092721.D
 Injection Date: 27-Sep-2019 20:40:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-5 Lab Sample ID: 180-96180-5
 Client ID: HD-COD-SW-6-0/1-0
 Operator ID: 433269 ALS Bottle#: 11 Worklist Smp#: 17
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

75 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1

Processing Results



RT	Mass	Response	Amount
9.13	43.00	1112	0.702187
9.13	58.00	1177	
9.13	100.00	159043	

Reviewer: bowieh, 28-Sep-2019 11:13:16

Audit Action: Marked Compound Undetected

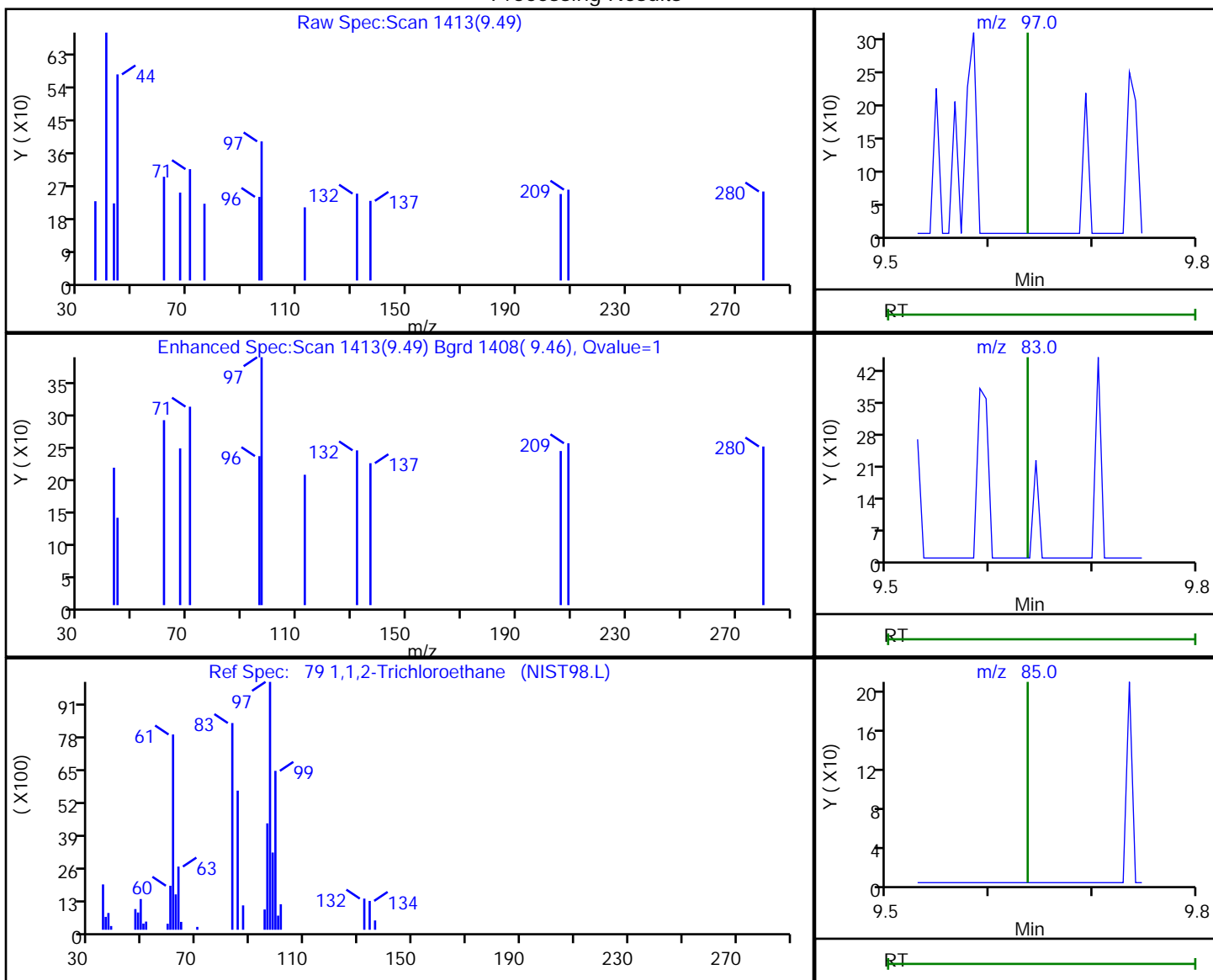
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092721.D
 Injection Date: 27-Sep-2019 20:40:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-5 Lab Sample ID: 180-96180-5
 Client ID: HD-COD-SW-6-0/1-0
 Operator ID: 433269 ALS Bottle#: 11 Worklist Smp#: 17
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

79 1,1,2-Trichloroethane, CAS: 79-00-5

Processing Results



RT	Mass	Response	Amount
9.49	97.00	333	0.219450
9.64	83.00	0	
9.64	85.00	0	

Reviewer: bowieh, 28-Sep-2019 11:13:24

Audit Action: Marked Compound Undetected

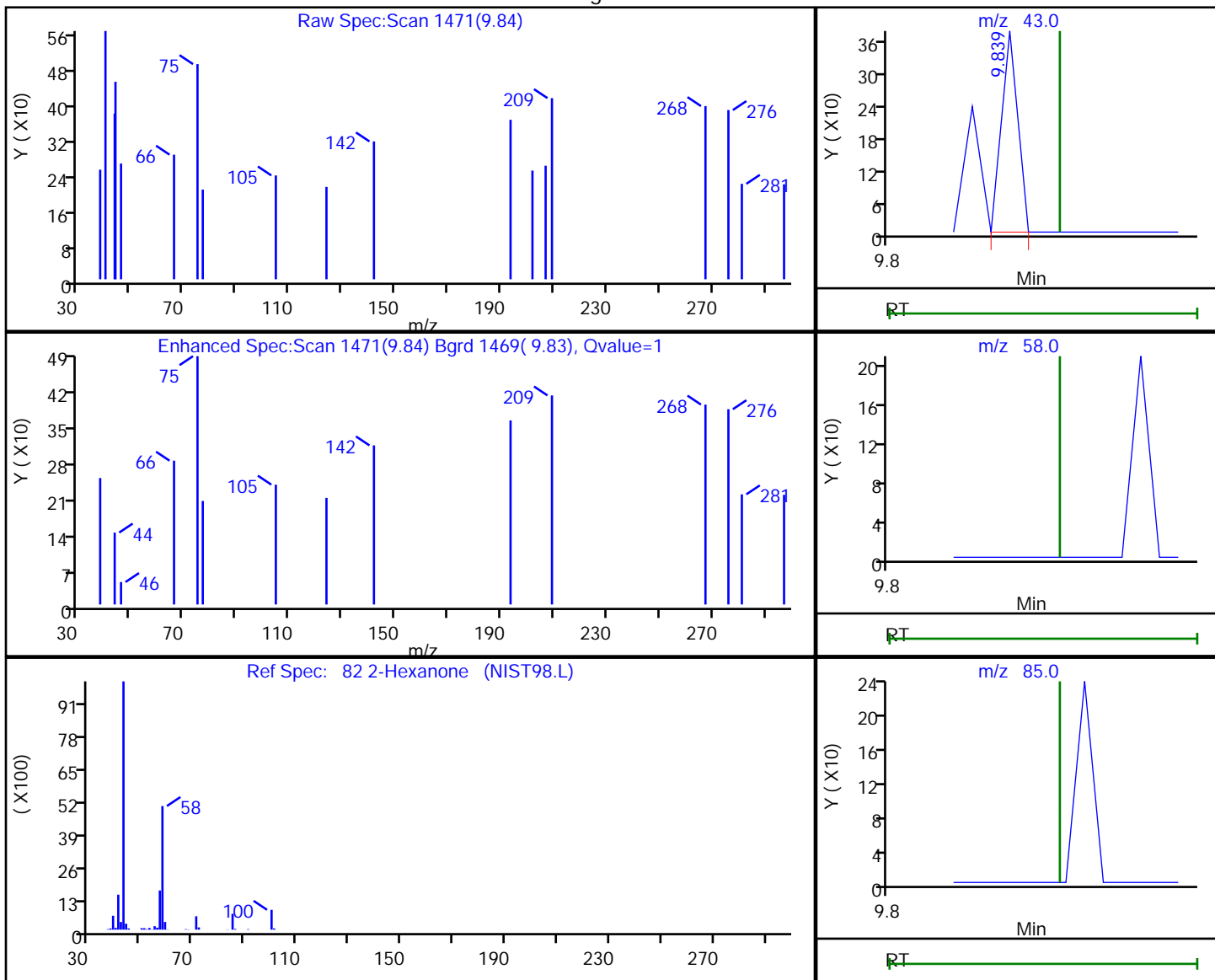
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092721.D
 Injection Date: 27-Sep-2019 20:40:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-5 Lab Sample ID: 180-96180-5
 Client ID: HD-COD-SW-6-0/1-0
 Operator ID: 433269 ALS Bottle#: 11 Worklist Smp#: 17
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

82 2-Hexanone, CAS: 591-78-6

Processing Results



RT	Mass	Response	Amount
9.84	43.00	137	0.119631
9.86	58.00	0	
9.86	85.00	0	

Reviewer: bowieh, 28-Sep-2019 11:13:26

Audit Action: Marked Compound Undetected

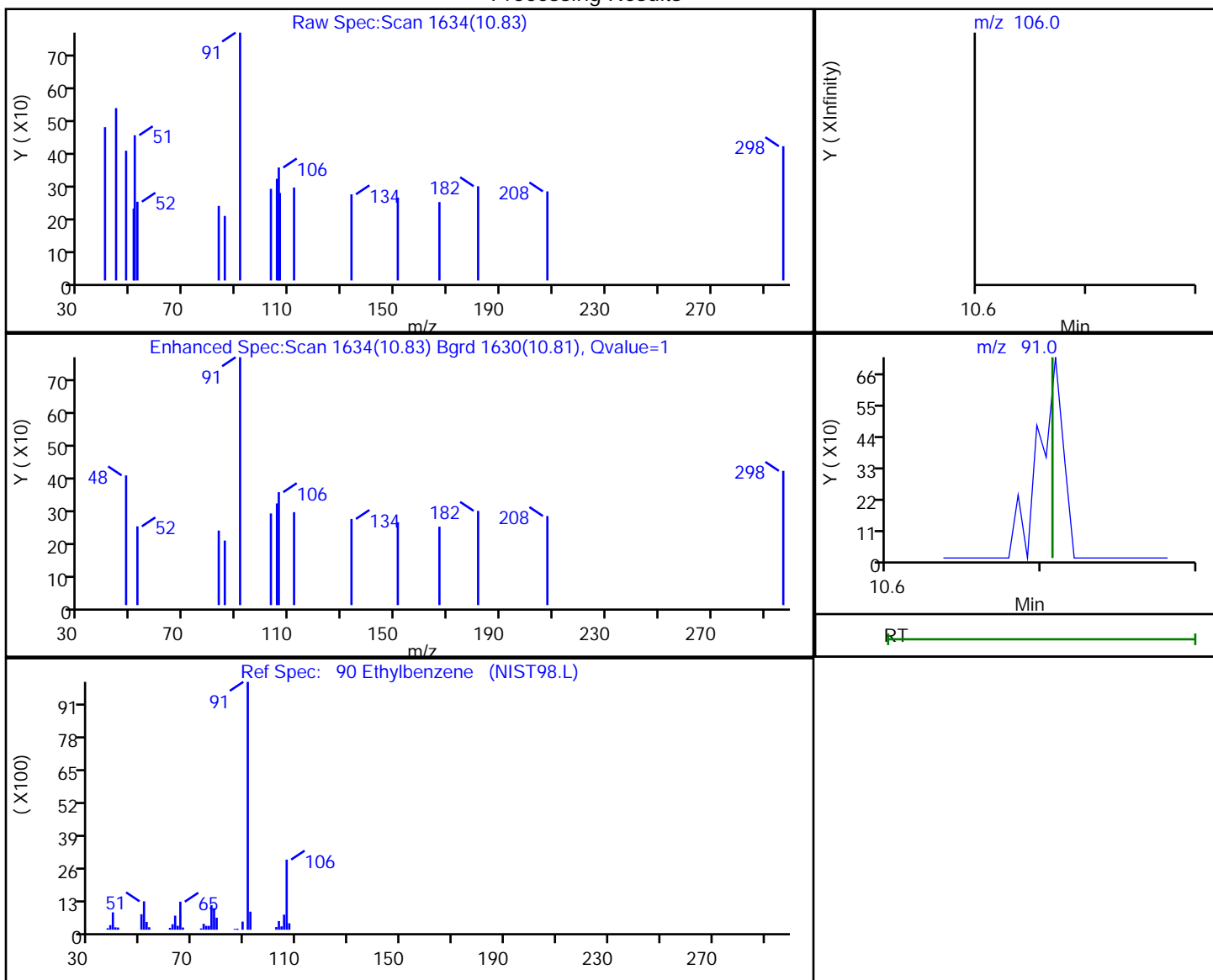
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092721.D
 Injection Date: 27-Sep-2019 20:40:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-5 Lab Sample ID: 180-96180-5
 Client ID: HD-COD-SW-6-0/1-0
 Operator ID: 433269 ALS Bottle#: 11 Worklist Smp#: 17
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

90 Ethylbenzene, CAS: 100-41-4

Processing Results



RT	Mass	Response	Amount
10.83	106.00	438	0.177452
10.83	91.00	1228	

Reviewer: bowieh, 28-Sep-2019 11:13:28

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-26-0/1-0 Lab Sample ID: 180-96180-6
 Matrix: Water Lab File ID: 5092722.D
 Analysis Method: EPA 8260C Date Collected: 09/23/2019 12:40
 Sample wt/vol: 5 (mL) Date Analyzed: 09/27/2019 21:04
 Soil Aliquot Vol.: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 292962 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	ND		1.0	0.90
75-01-4	Vinyl chloride	ND		1.0	0.88
74-83-9	Bromomethane	ND		1.0	0.89
75-00-3	Chloroethane	ND		1.0	0.90
75-35-4	1,1-Dichloroethene	ND		1.0	0.55
67-64-1	Acetone	ND		5.0	3.4
75-15-0	Carbon disulfide	ND		1.0	0.88
75-09-2	Methylene Chloride	ND		1.0	0.89
156-60-5	trans-1,2-Dichloroethene	ND	*	1.0	0.67
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.59
75-34-3	1,1-Dichloroethane	ND		1.0	0.63
156-59-2	cis-1,2-Dichloroethene	ND	*	1.0	0.71
74-97-5	Bromochloromethane	ND		1.0	0.63
78-93-3	2-Butanone (MEK)	ND		5.0	2.6
67-66-3	Chloroform	ND		1.0	0.60
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.60
56-23-5	Carbon tetrachloride	ND		1.0	0.88
71-43-2	Benzene	ND		1.0	0.60
107-06-2	1,2-Dichloroethane	ND		1.0	0.57
79-01-6	Trichloroethene	ND	*	1.0	0.69
78-87-5	1,2-Dichloropropane	ND		1.0	0.66
75-27-4	Bromodichloromethane	ND		1.0	0.64
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.59
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1
108-88-3	Toluene	ND	*	1.0	0.46
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.58
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.45
127-18-4	Tetrachloroethene	5.1		1.0	0.47
591-78-6	2-Hexanone	ND		5.0	3.3
124-48-1	Dibromochloromethane	ND		1.0	0.84
106-93-4	1,2-Dibromoethane (EDB)	ND		1.0	0.50
108-90-7	Chlorobenzene	ND		1.0	0.50
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.57
100-41-4	Ethylbenzene	ND		1.0	0.51
1330-20-7	Xylenes, Total	ND	*	2.0	0.89
100-42-5	Styrene	ND		1.0	0.47

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-26-0/1-0 Lab Sample ID: 180-96180-6
 Matrix: Water Lab File ID: 5092722.D
 Analysis Method: EPA 8260C Date Collected: 09/23/2019 12:40
 Sample wt/vol: 5 (mL) Date Analyzed: 09/27/2019 21:04
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 292962 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	ND		1.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.60
107-13-1	Acrylonitrile	ND		20	7.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		70-150
2037-26-5	Toluene-d8 (Surr)	91		78-128
460-00-4	4-Bromofluorobenzene (Surr)	74		64-123
1868-53-7	Dibromofluoromethane (Surr)	117		75-147

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092722.D
 Lims ID: 180-96180-B-6
 Client ID: HD-COD-SW-26-0/1-0
 Sample Type: Client
 Inject. Date: 27-Sep-2019 21:04:30 ALS Bottle#: 12 Worklist Smp#: 18
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028863-018
 Misc. Info.: 180-96180-B-6
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 28-Sep-2019 11:14:32 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: bowieh

Date: 28-Sep-2019 11:14:32

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.532	4.532	0.000	0	185382	1000.0	
* 2 Fluorobenzene (IS)	96	7.501	7.495	0.006	98	273841	50.0	
* 3 Chlorobenzene-d5	119	10.579	10.579	0.000	88	74590	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.921	12.915	0.006	96	98352	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.777	6.777	0.000	92	92409	58.5	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.148	7.142	0.006	0	135137	50.7	
\$ 7 Toluene-d8 (Surr)	98	9.131	9.131	0.000	95	269991	45.5	
\$ 8 4-Bromofluorobenzene (Surr	95	11.759	11.766	-0.007	93	90874	37.2	
12 Chloromethane	50		1.910				ND	
13 Vinyl chloride	62		2.038				ND	
15 Bromomethane	94		2.379				ND	
16 Chloroethane	64		2.543				ND	U
22 1,1-Dichloroethene	96	3.583	3.565	0.018	26	1542	1.07	
24 Acetone	43	3.686	3.668	0.018	67	8882	12.7	M
26 Carbon disulfide	76		3.863				ND	
31 Methylene Chloride	84	4.410	4.405	0.005	23	1811	-5.65	a
33 Acrylonitrile	53		4.782				ND	
34 trans-1,2-Dichloroethene	96		4.812				ND	
35 Methyl tert-butyl ether	73		4.824				ND	
37 1,1-Dichloroethane	63		5.439				ND	
45 cis-1,2-Dichloroethene	96	6.175	6.181	-0.006	1	924	0.5135	
46 2-Butanone (MEK)	43		6.187				ND	
49 Chlorobromomethane	128		6.455				ND	
52 Chloroform	83	6.600	6.595	0.005	97	16583	2.21	
53 1,1,1-Trichloroethane	97		6.759				ND	
56 Carbon tetrachloride	117		6.929				ND	
58 Benzene	78		7.154				ND	U
59 1,2-Dichloroethane	62		7.233				ND	
64 Trichloroethene	130	7.884	7.878	0.006	83	2297	1.26	
67 1,2-Dichloropropane	63		8.152				ND	
71 Dichlorobromomethane	83		8.432				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
74 cis-1,3-Dichloropropene	75		8.870				ND	
75 4-Methyl-2-pentanone (MIBK)	43		9.028				ND	U
76 Toluene	91	9.204	9.198	0.006	24	912	0.1180	
77 trans-1,3-Dichloropropene	75		9.448				ND	
79 1,1,2-Trichloroethane	97		9.636				ND	U
80 Tetrachloroethene	164	9.709	9.709	0.000	97	45869	25.4	
82 2-Hexanone	43		9.855				ND	U
84 Chlorodibromomethane	129		10.007				ND	
85 Ethylene Dibromide	107		10.123				ND	
87 Chlorobenzene	112		10.610				ND	
89 1,1,1,2-Tetrachloroethane	131		10.701				ND	
90 Ethylbenzene	106		10.707				ND	
91 m-Xylene & p-Xylene	106		10.835				ND	
92 o-Xylene	106		11.218				ND	
93 Styrene	104		11.242				ND	
94 Bromoform	173		11.419				ND	
99 1,1,2,2-Tetrachloroethane	83		11.899				ND	
S 133 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Reagents:

voaWI/SHP5_00013

Amount Added: 5.00

Units: uL

Run Reagent

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092722.D

Injection Date: 27-Sep-2019 21:04:30

Instrument ID: CHHP5

Operator ID: 433269

Lims ID: 180-96180-B-6

Lab Sample ID: 180-96180-6

Worklist Smp#: 18

Client ID: HD-COD-SW-26-0/1-0

Purge Vol: 5.000 mL

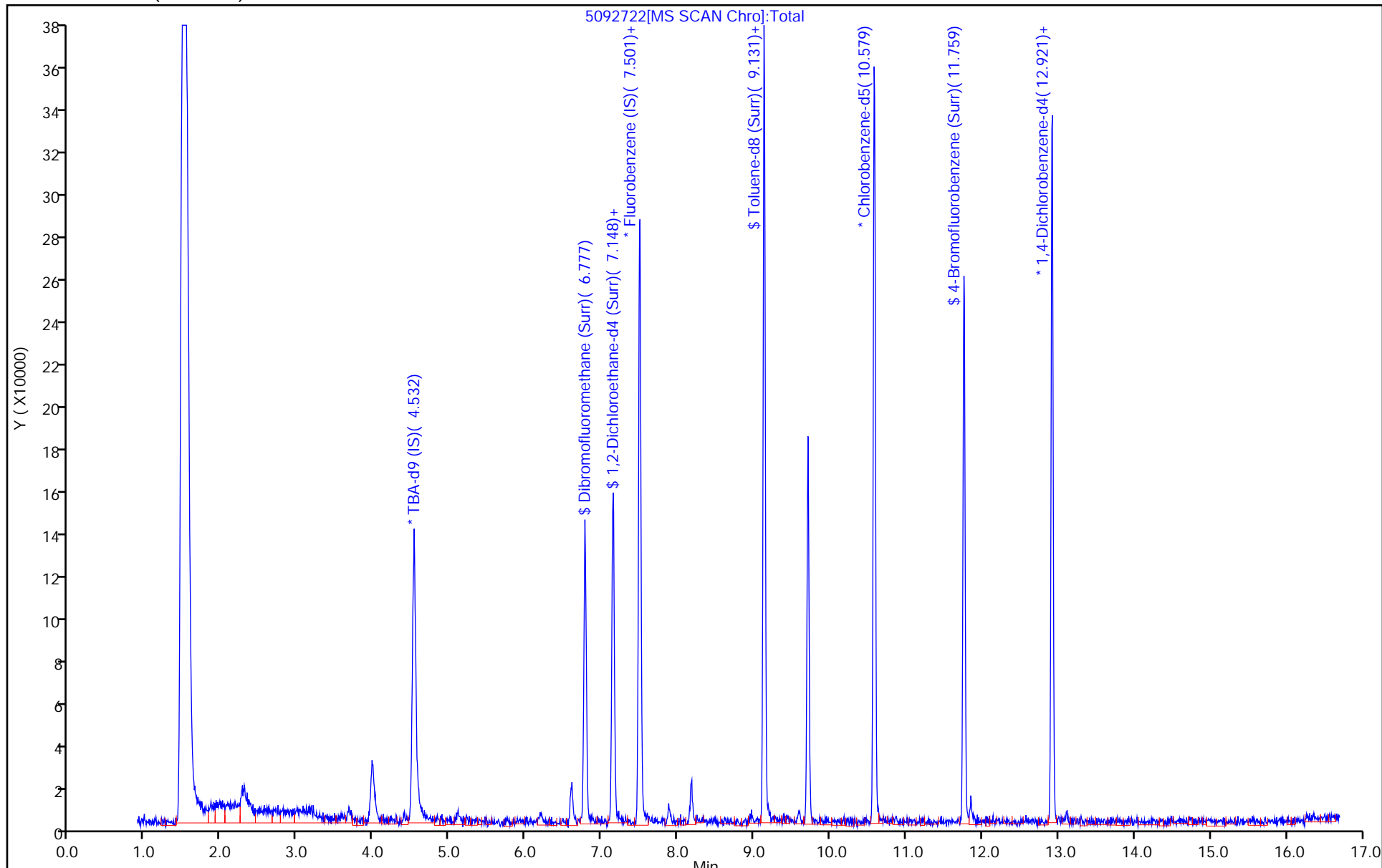
Dil. Factor: 1.0000

ALS Bottle#: 12

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Recovery Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092722.D
 Lims ID: 180-96180-B-6
 Client ID: HD-COD-SW-26-0/1-0
 Sample Type: Client
 Inject. Date: 27-Sep-2019 21:04:30 ALS Bottle#: 12 Worklist Smp#: 18
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028863-018
 Misc. Info.: 180-96180-B-6
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 28-Sep-2019 11:14:32 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0317

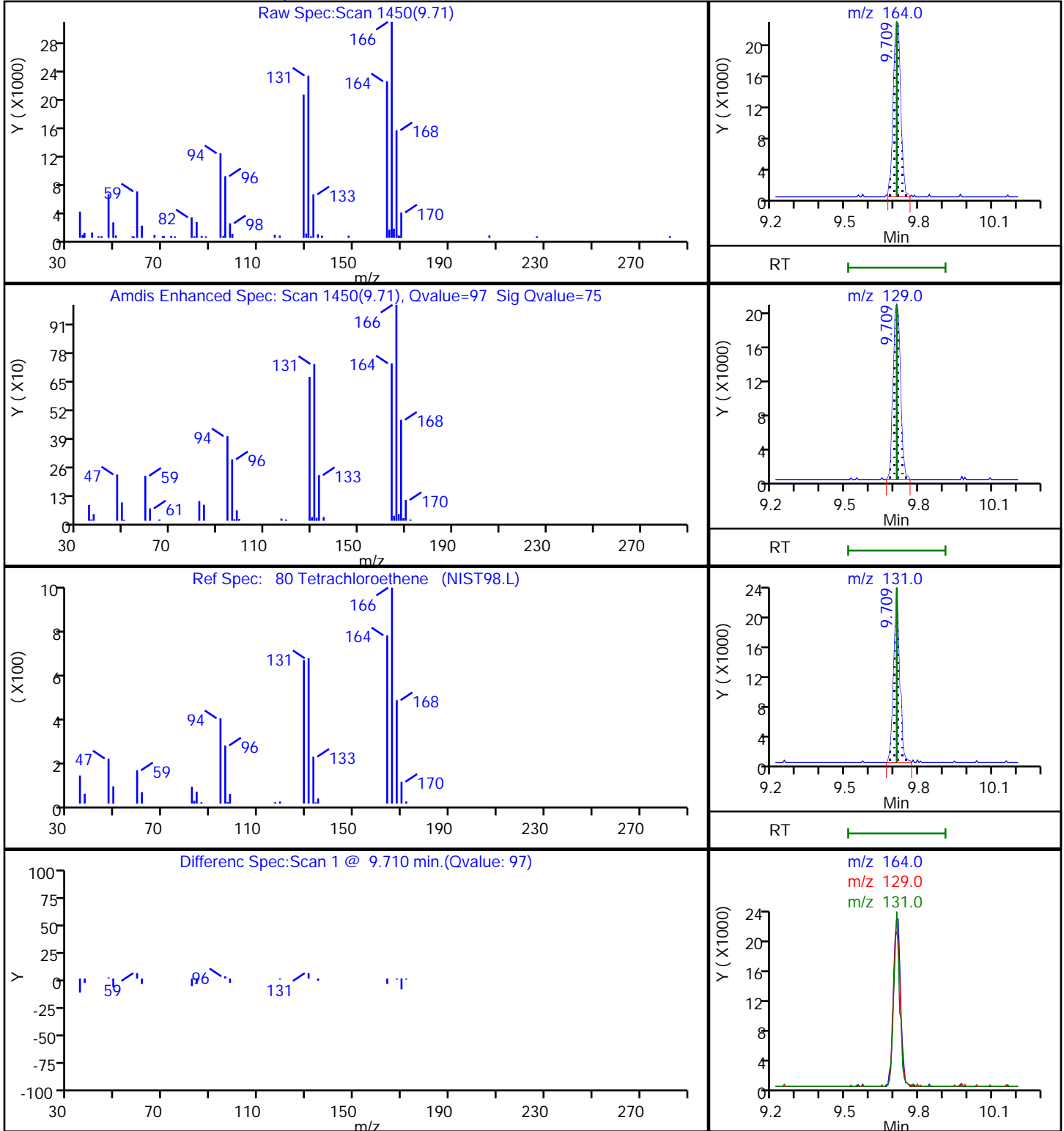
First Level Reviewer: bowieh Date: 28-Sep-2019 11:14:32

Compound	Amount Added	Amount Recovered	% Rec.
\$ 5 Dibromofluoromethane (Surr)	50.0	58.5	116.92
\$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	50.7	101.50
\$ 7 Toluene-d8 (Surr)	50.0	45.5	90.94
\$ 8 4-Bromofluorobenzene (Surr)	50.0	37.2	74.45

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092722.D
Injection Date: 27-Sep-2019 21:04:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-6 Lab Sample ID: 180-96180-6
Client ID: HD-COD-SW-26-0/1-0
Operator ID: 433269 ALS Bottle#: 12 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

80 Tetrachloroethene, CAS: 127-18-4

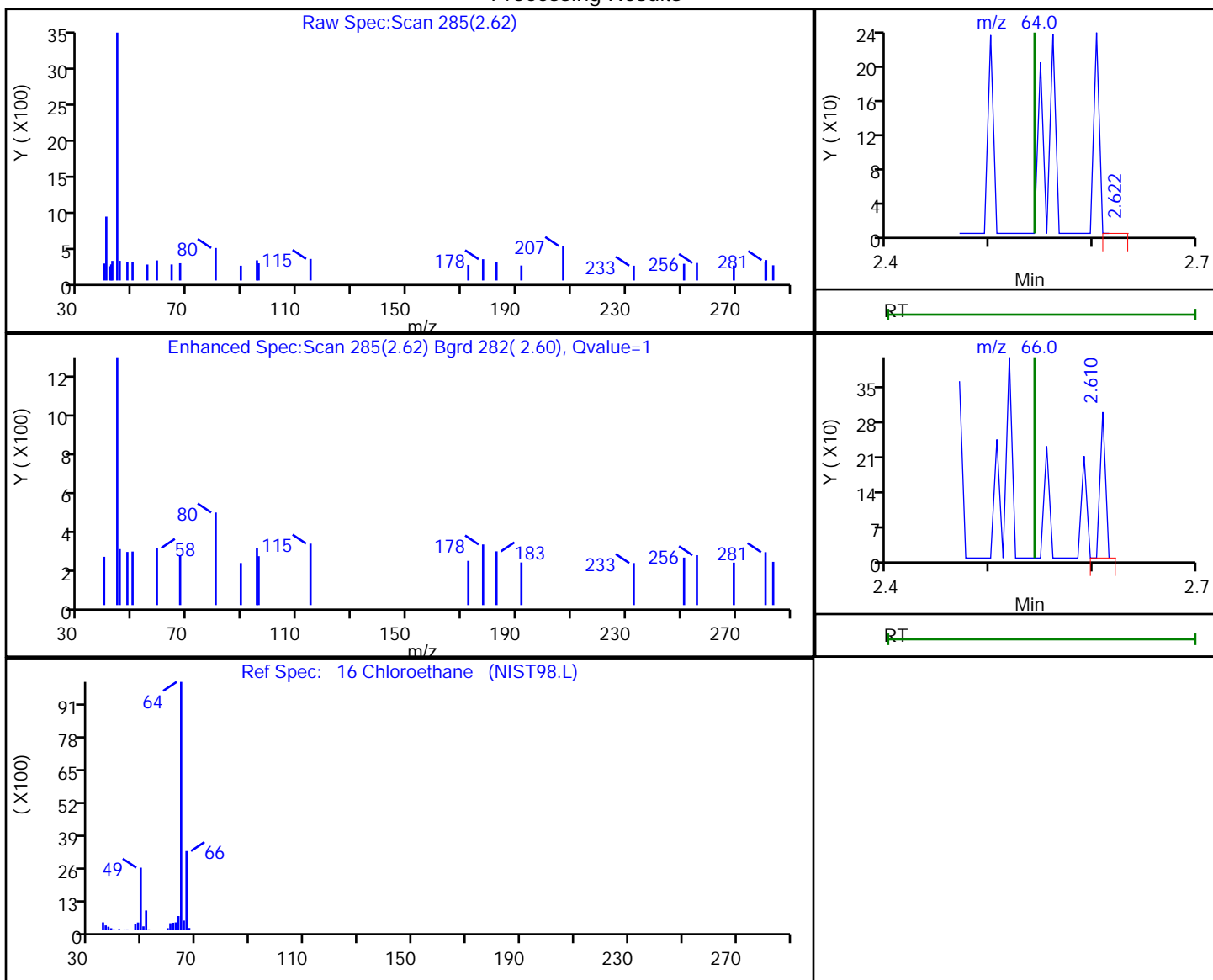


Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092722.D
 Injection Date: 27-Sep-2019 21:04:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-6 Lab Sample ID: 180-96180-6
 Client ID: HD-COD-SW-26-0/1-0
 Operator ID: 433269 ALS Bottle#: 12 Worklist Smp#: 18
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

16 Chloroethane, CAS: 75-00-3

Processing Results



RT	Mass	Response	Amount
2.62	64.00	82	0.055404
2.61	66.00	109	

Reviewer: bowieh, 28-Sep-2019 11:13:44

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

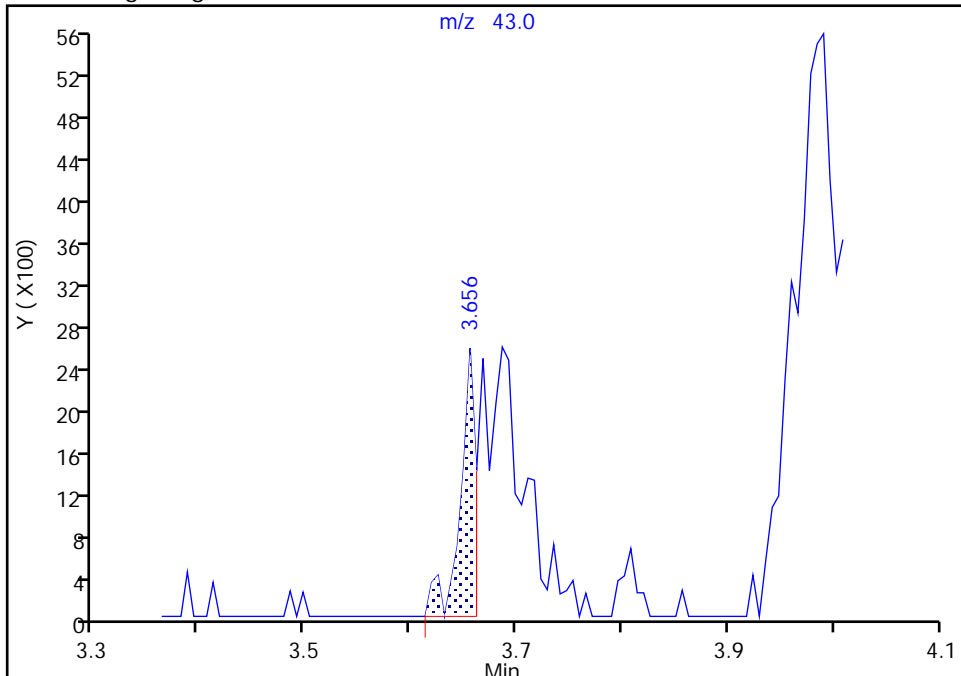
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Injection Date: 27-Sep-2019 21:04:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-6 Lab Sample ID: 180-96180-6
Client ID: HD-COD-SW-26-0/1-0
Operator ID: 433269 ALS Bottle#: 12 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

24 Acetone, CAS: 67-64-1

Signal: 1

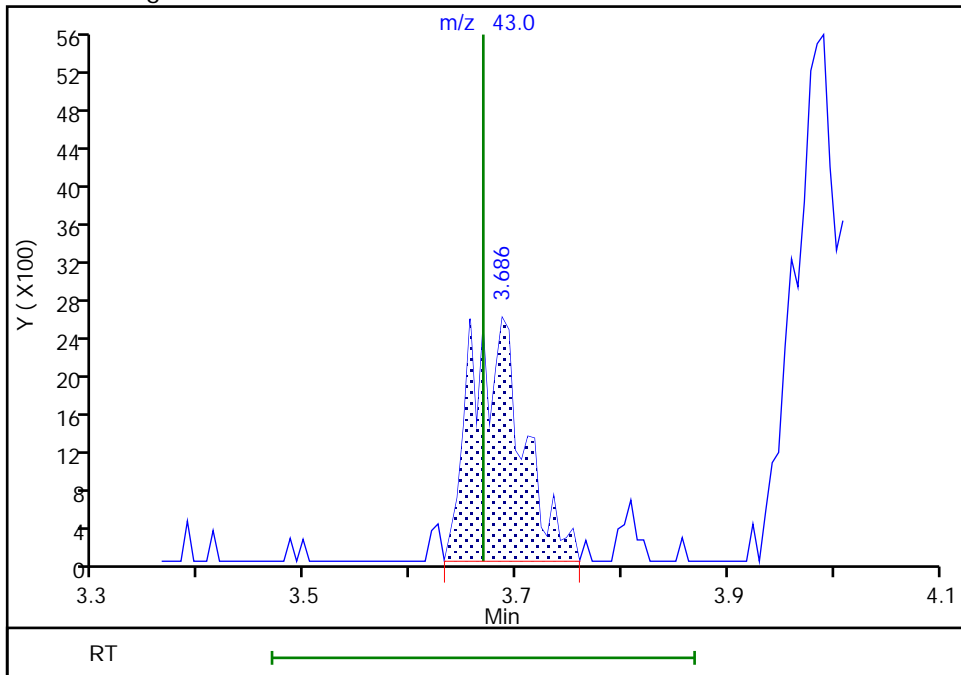
RT: 3.66
Area: 2602
Amount: 3.733893
Amount Units: ng

Processing Integration Results



RT: 3.69
Area: 8882
Amount: 12.745748
Amount Units: ng

Manual Integration Results



Reviewer: bowieh, 28-Sep-2019 11:13:55
Audit Action: Manually Integrated

Eurofins TestAmerica, Pittsburgh

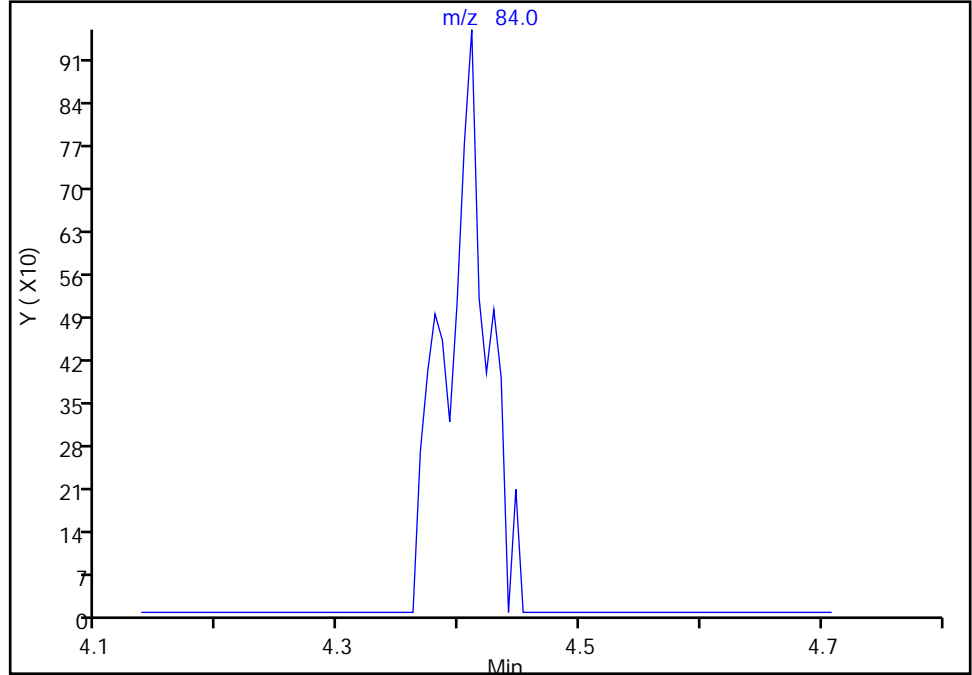
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Injection Date: 27-Sep-2019 21:04:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-6 Lab Sample ID: 180-96180-6
Client ID: HD-COD-SW-26-0/1-0
Operator ID: 433269 ALS Bottle#: 12 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2

Signal: 1

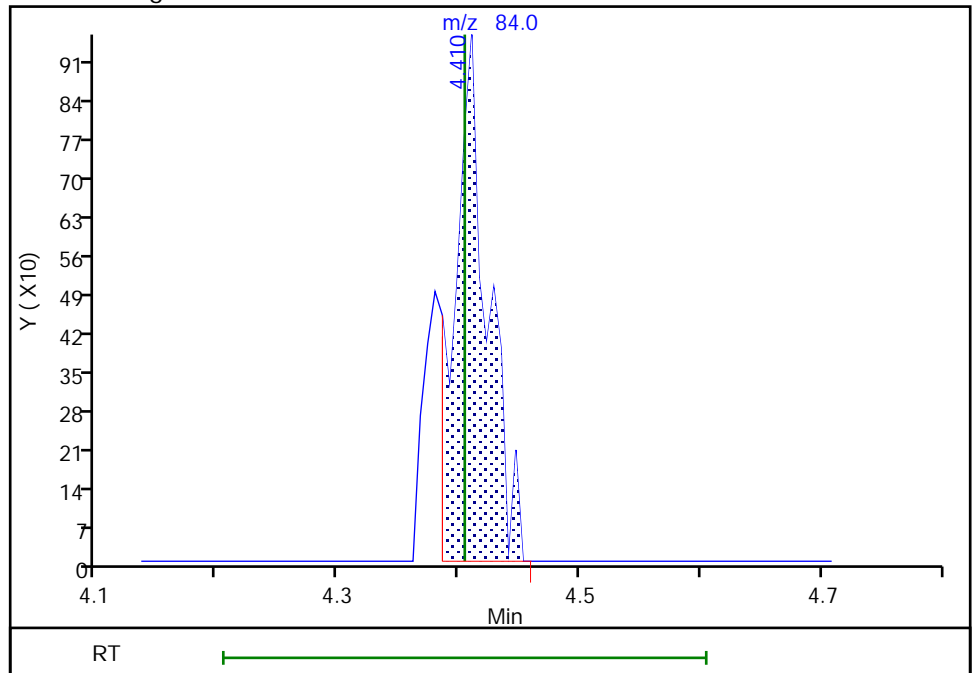
Not Detected
Expected RT: 4.40

Processing Integration Results



Manual Integration Results

RT: 4.41
Area: 1811
Amount: -5.652200
Amount Units: ng

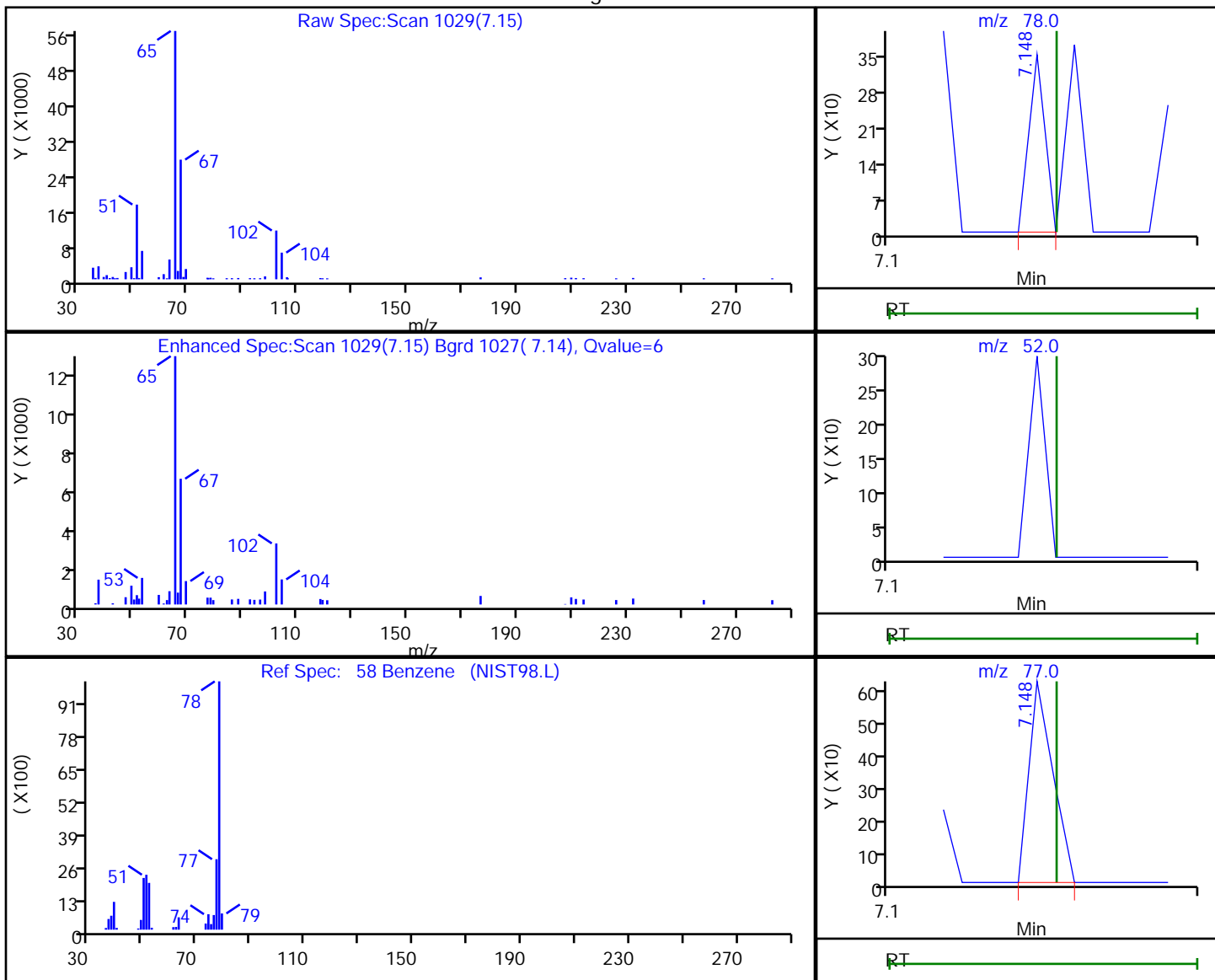


Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092722.D
 Injection Date: 27-Sep-2019 21:04:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-6 Lab Sample ID: 180-96180-6
 Client ID: HD-COD-SW-26-0/1-0
 Operator ID: 433269 ALS Bottle#: 12 Worklist Smp#: 18
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

58 Benzene, CAS: 71-43-2

Processing Results



RT	Mass	Response	Amount
7.15	78.00	126	0.018628
7.15	52.00	0	
7.15	77.00	335	

Reviewer: bowieh, 28-Sep-2019 11:14:09

Audit Action: Marked Compound Undetected

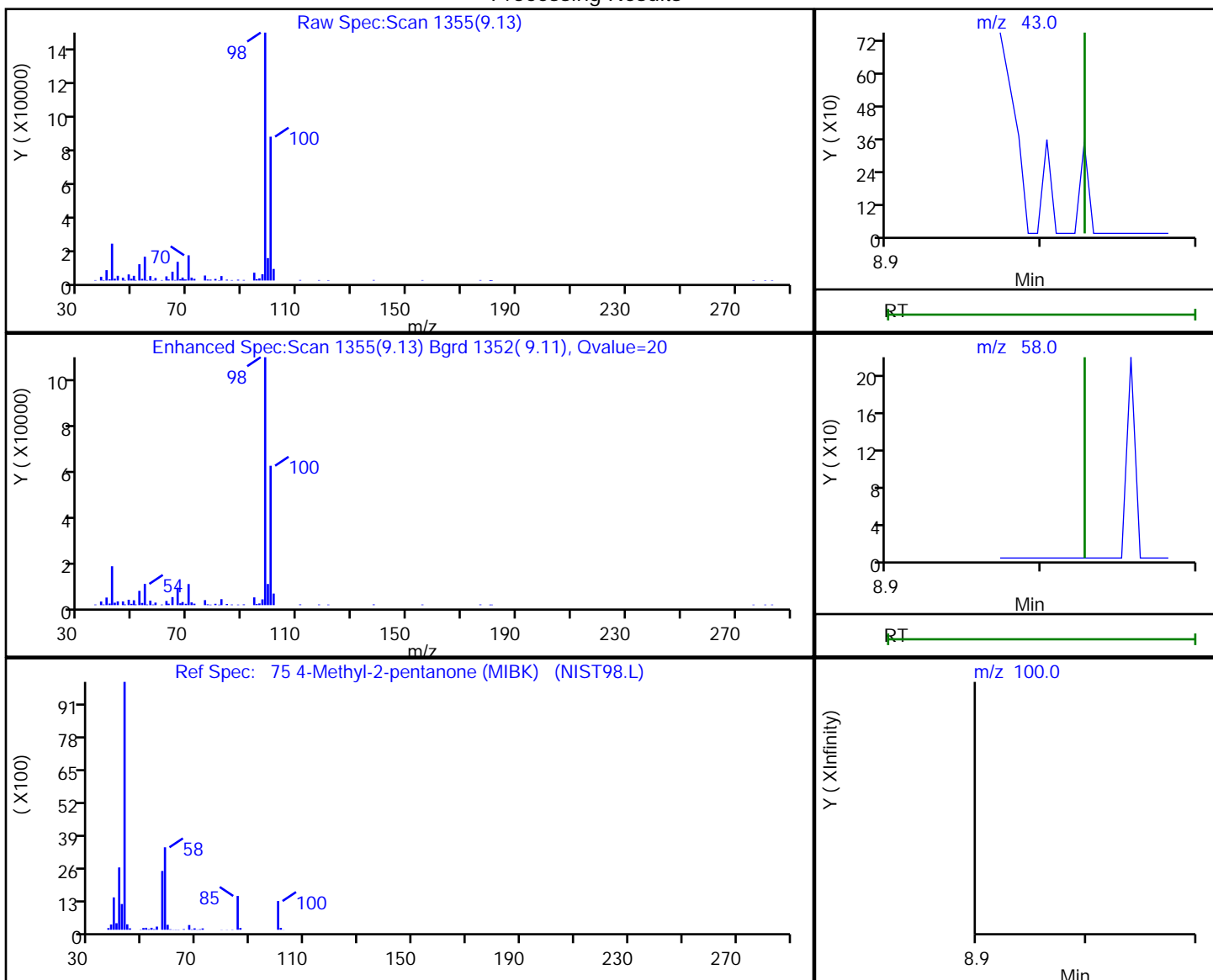
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092722.D
 Injection Date: 27-Sep-2019 21:04:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-6 Lab Sample ID: 180-96180-6
 Client ID: HD-COD-SW-26-0/1-0
 Operator ID: 433269 ALS Bottle#: 12 Worklist Smp#: 18
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

75 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1

Processing Results



RT	Mass	Response	Amount
9.13	43.00	747	0.439027
9.14	58.00	2602	
9.13	100.00	163743	

Reviewer: bowieh, 28-Sep-2019 11:14:12

Audit Action: Marked Compound Undetected

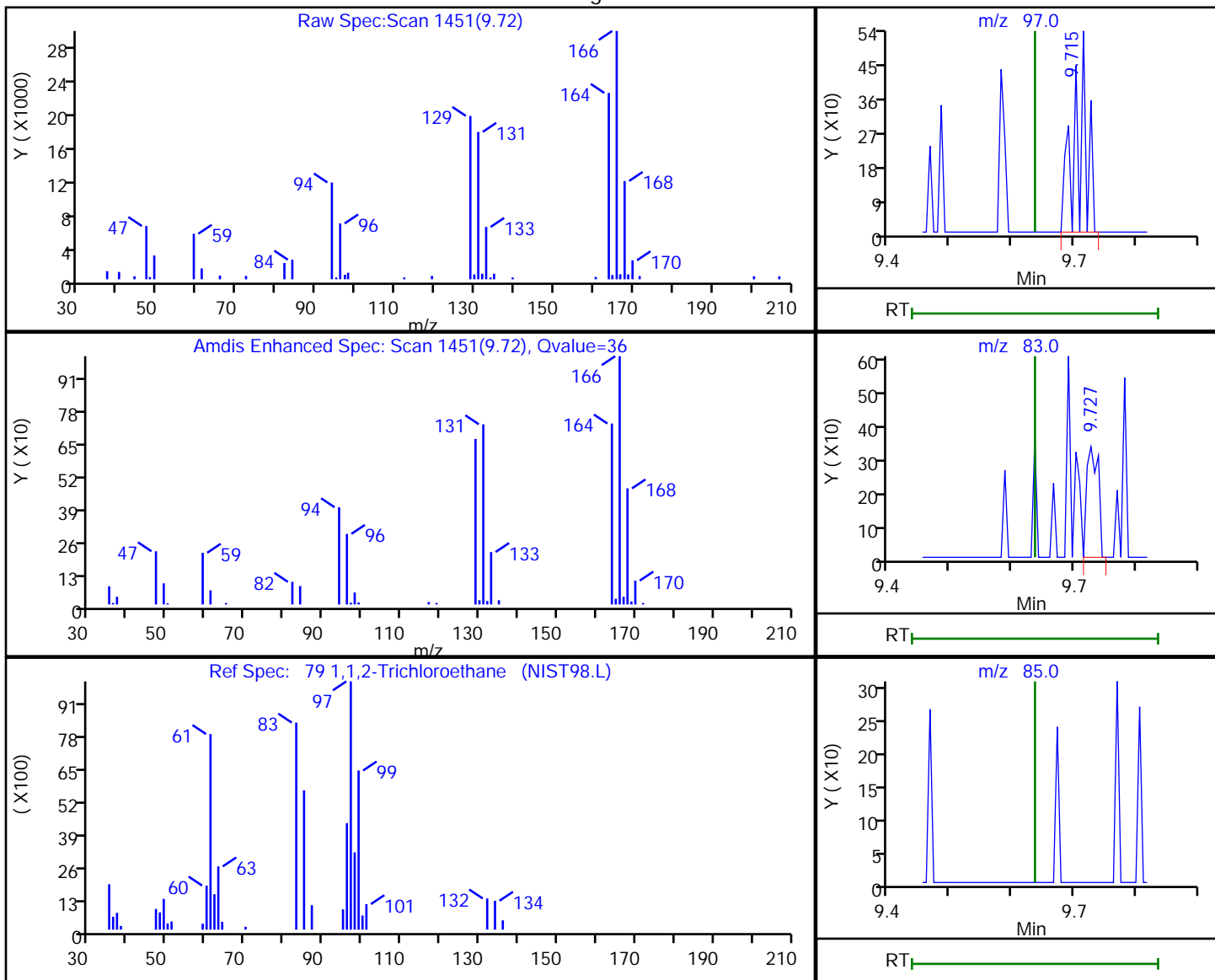
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092722.D
 Injection Date: 27-Sep-2019 21:04:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-6 Lab Sample ID: 180-96180-6
 Client ID: HD-COD-SW-26-0/1-0
 Operator ID: 433269 ALS Bottle#: 12 Worklist Smp#: 18
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

79 1,1,2-Trichloroethane, CAS: 79-00-5

Processing Results



RT	Mass	Response	Amount
9.72	97.00	662	0.406044
9.73	83.00	424	
9.64	85.00	0	

Reviewer: bowieh, 28-Sep-2019 11:14:20

Audit Action: Marked Compound Undetected

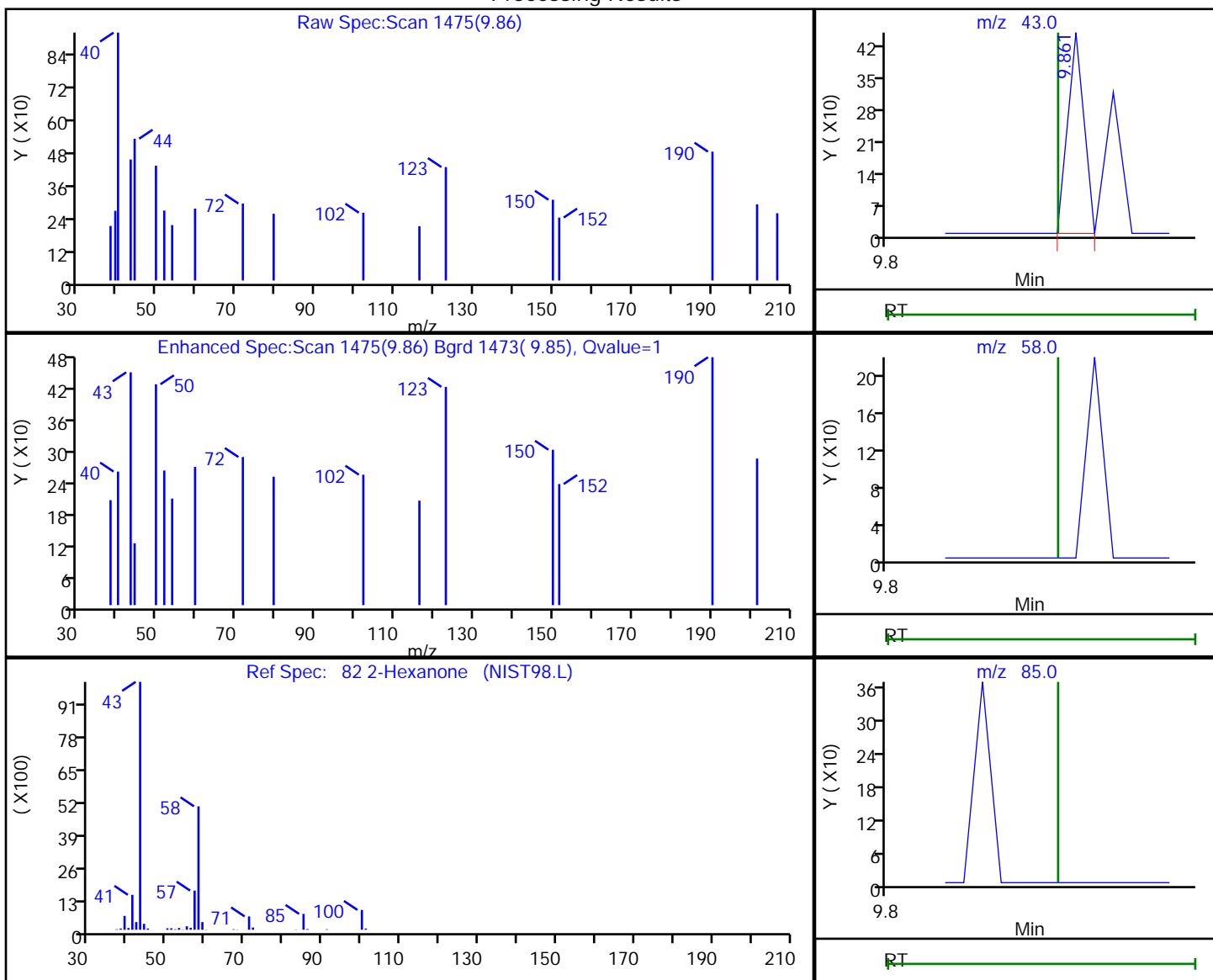
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092722.D
 Injection Date: 27-Sep-2019 21:04:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-6 Lab Sample ID: 180-96180-6
 Client ID: HD-COD-SW-26-0/1-0
 Operator ID: 433269 ALS Bottle#: 12 Worklist Smp#: 18
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

82 2-Hexanone, CAS: 591-78-6

Processing Results



RT	Mass	Response	Amount
9.86	43.00	164	0.133287
9.86	58.00	0	
9.86	85.00	0	

Reviewer: bowieh, 28-Sep-2019 11:14:24

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-7-0/1-0 Lab Sample ID: 180-96180-7
 Matrix: Water Lab File ID: 5092723.D
 Analysis Method: EPA 8260C Date Collected: 09/23/2019 13:00
 Sample wt/vol: 5 (mL) Date Analyzed: 09/27/2019 21:29
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 292962 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	ND		1.0	0.90
75-01-4	Vinyl chloride	ND		1.0	0.88
74-83-9	Bromomethane	ND		1.0	0.89
75-00-3	Chloroethane	ND		1.0	0.90
75-35-4	1,1-Dichloroethene	ND		1.0	0.55
67-64-1	Acetone	ND		5.0	3.4
75-15-0	Carbon disulfide	ND		1.0	0.88
75-09-2	Methylene Chloride	ND		1.0	0.89
156-60-5	trans-1,2-Dichloroethene	ND	*	1.0	0.67
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.59
75-34-3	1,1-Dichloroethane	ND		1.0	0.63
156-59-2	cis-1,2-Dichloroethene	ND	*	1.0	0.71
74-97-5	Bromochloromethane	ND		1.0	0.63
78-93-3	2-Butanone (MEK)	ND		5.0	2.6
67-66-3	Chloroform	ND		1.0	0.60
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.60
56-23-5	Carbon tetrachloride	ND		1.0	0.88
71-43-2	Benzene	ND		1.0	0.60
107-06-2	1,2-Dichloroethane	ND		1.0	0.57
79-01-6	Trichloroethene	ND	*	1.0	0.69
78-87-5	1,2-Dichloropropane	ND		1.0	0.66
75-27-4	Bromodichloromethane	ND		1.0	0.64
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.59
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1
108-88-3	Toluene	ND	*	1.0	0.46
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.58
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.45
127-18-4	Tetrachloroethene	ND		1.0	0.47
591-78-6	2-Hexanone	ND		5.0	3.3
124-48-1	Dibromochloromethane	ND		1.0	0.84
106-93-4	1,2-Dibromoethane (EDB)	ND		1.0	0.50
108-90-7	Chlorobenzene	ND		1.0	0.50
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.57
100-41-4	Ethylbenzene	ND		1.0	0.51
1330-20-7	Xylenes, Total	ND	*	2.0	0.89
100-42-5	Styrene	ND		1.0	0.47

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-7-0/1-0 Lab Sample ID: 180-96180-7
 Matrix: Water Lab File ID: 5092723.D
 Analysis Method: EPA 8260C Date Collected: 09/23/2019 13:00
 Sample wt/vol: 5 (mL) Date Analyzed: 09/27/2019 21:29
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 292962 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	ND		1.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.60
107-13-1	Acrylonitrile	ND		20	7.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		70-150
2037-26-5	Toluene-d8 (Surr)	94		78-128
460-00-4	4-Bromofluorobenzene (Surr)	82		64-123
1868-53-7	Dibromofluoromethane (Surr)	121		75-147

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092723.D
 Lims ID: 180-96180-B-7
 Client ID: HD-COD-SW-7-0/1-0
 Sample Type: Client
 Inject. Date: 27-Sep-2019 21:29:30 ALS Bottle#: 13 Worklist Smp#: 19
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028863-019
 Misc. Info.: 180-96180-B-7
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 28-Sep-2019 11:15:33 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: bowieh Date: 28-Sep-2019 11:15:33

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.540	4.532	0.008	0	163917	1000.0	
* 2 Fluorobenzene (IS)	96	7.497	7.495	0.002	98	265167	50.0	
* 3 Chlorobenzene-d5	119	10.581	10.579	0.002	89	66368	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.917	12.915	0.002	95	110182	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.779	6.777	0.002	93	92349	60.3	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.150	7.142	0.008	0	130137	50.5	
\$ 7 Toluene-d8 (Surr)	98	9.133	9.131	0.002	95	248709	47.1	
\$ 8 4-Bromofluorobenzene (Surr	95	11.761	11.766	-0.005	92	88842	40.9	
12 Chloromethane	50	1.894	1.910	-0.016	50	987	0.4348	
13 Vinyl chloride	62		2.038				ND	
15 Bromomethane	94		2.379				ND	
16 Chloroethane	64		2.543				ND	U
22 1,1-Dichloroethene	96		3.565				ND	
24 Acetone	43	3.682	3.668	0.014	83	7325	10.9	
26 Carbon disulfide	76		3.863				ND	
31 Methylene Chloride	84	4.406	4.405	0.001	26	2070	-5.46	
33 Acrylonitrile	53		4.782				ND	
34 trans-1,2-Dichloroethene	96		4.812				ND	
35 Methyl tert-butyl ether	73		4.824				ND	
37 1,1-Dichloroethane	63		5.439				ND	
45 cis-1,2-Dichloroethene	96		6.181				ND	U
46 2-Butanone (MEK)	43		6.187				ND	
49 Chlorobromomethane	128		6.455				ND	
52 Chloroform	83	6.590	6.595	-0.005	1	1725	-2.15	
53 1,1,1-Trichloroethane	97		6.759				ND	
56 Carbon tetrachloride	117		6.929				ND	
58 Benzene	78		7.154				ND	U
59 1,2-Dichloroethane	62		7.233				ND	
64 Trichloroethene	130	7.874	7.878	-0.004	27	1112	0.6281	
67 1,2-Dichloropropane	63		8.152				ND	
71 Dichlorobromomethane	83		8.432				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
74 cis-1,3-Dichloropropene	75		8.870				ND	
75 4-Methyl-2-pentanone (MIBK)	43		9.028				ND	U
76 Toluene	91		9.198				ND	
77 trans-1,3-Dichloropropene	75		9.448				ND	
79 1,1,2-Trichloroethane	97		9.636				ND	U
80 Tetrachloroethene	164	9.711	9.709	0.002	6	850	0.5291	
82 2-Hexanone	43		9.855				ND	U
84 Chlorodibromomethane	129		10.007				ND	
85 Ethylene Dibromide	107		10.123				ND	
87 Chlorobenzene	112		10.610				ND	
89 1,1,1,2-Tetrachloroethane	131		10.701				ND	
90 Ethylbenzene	106		10.707				ND	U
91 m-Xylene & p-Xylene	106	10.830	10.835	-0.005	0	670	0.2303	
92 o-Xylene	106		11.218				ND	
93 Styrene	104		11.242				ND	
94 Bromoform	173		11.419				ND	
99 1,1,2,2-Tetrachloroethane	83		11.899				ND	
S 133 Xylenes, Total	106				0		0.2303	

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

voaWI/SHP5_00013

Amount Added: 5.00

Units: uL

Run Reagent

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092723.D

Injection Date: 27-Sep-2019 21:29:30

Instrument ID: CHHP5

Operator ID: 433269

Lims ID: 180-96180-B-7

Lab Sample ID: 180-96180-7

Worklist Smp#: 19

Client ID: HD-COD-SW-7-0/1-0

Purge Vol: 5.000 mL

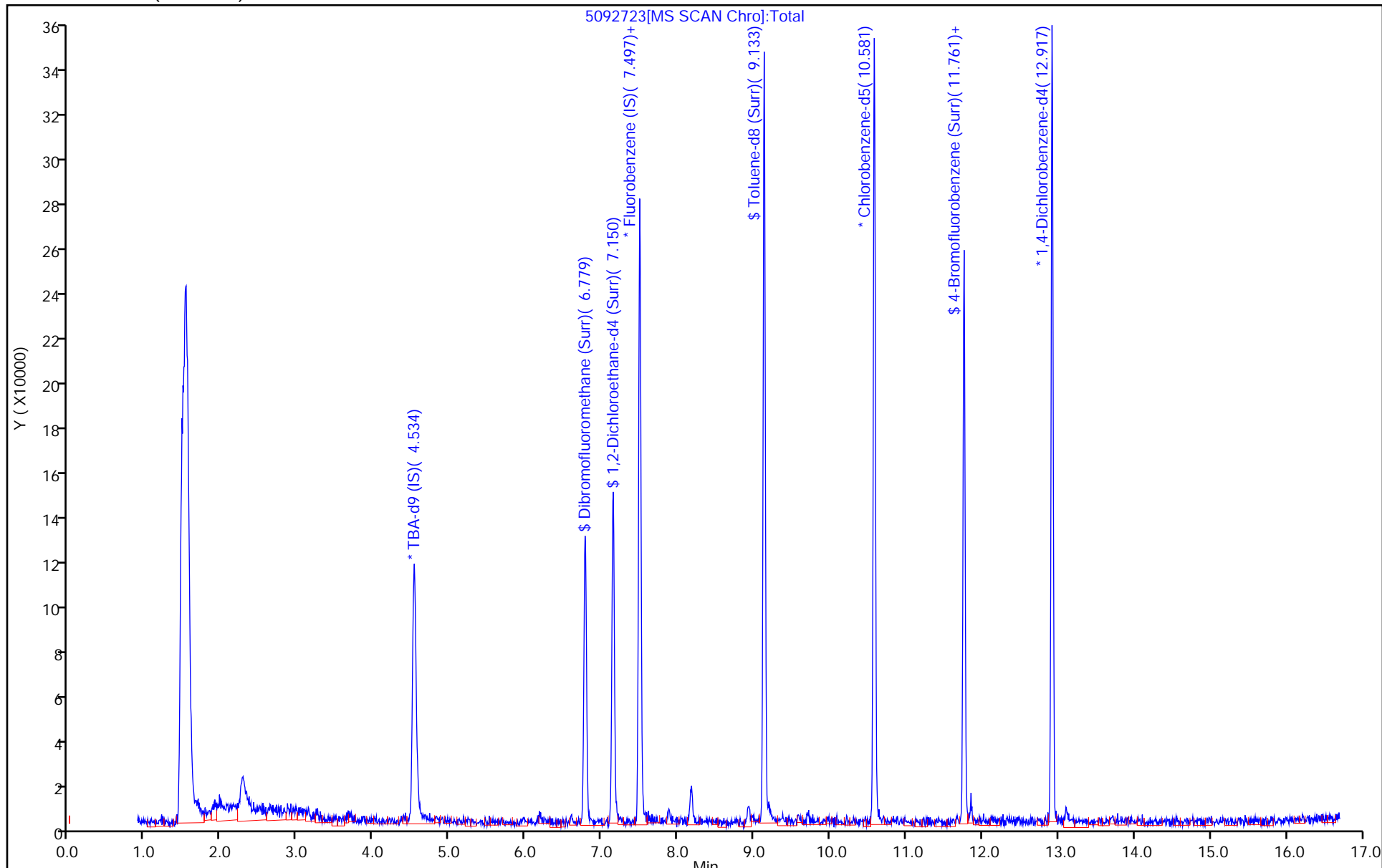
Dil. Factor: 1.0000

ALS Bottle#: 13

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Recovery Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092723.D
 Lims ID: 180-96180-B-7
 Client ID: HD-COD-SW-7-0/1-0
 Sample Type: Client
 Inject. Date: 27-Sep-2019 21:29:30 ALS Bottle#: 13 Worklist Smp#: 19
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028863-019
 Misc. Info.: 180-96180-B-7
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 28-Sep-2019 11:15:33 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: bowieh Date: 28-Sep-2019 11:15:33

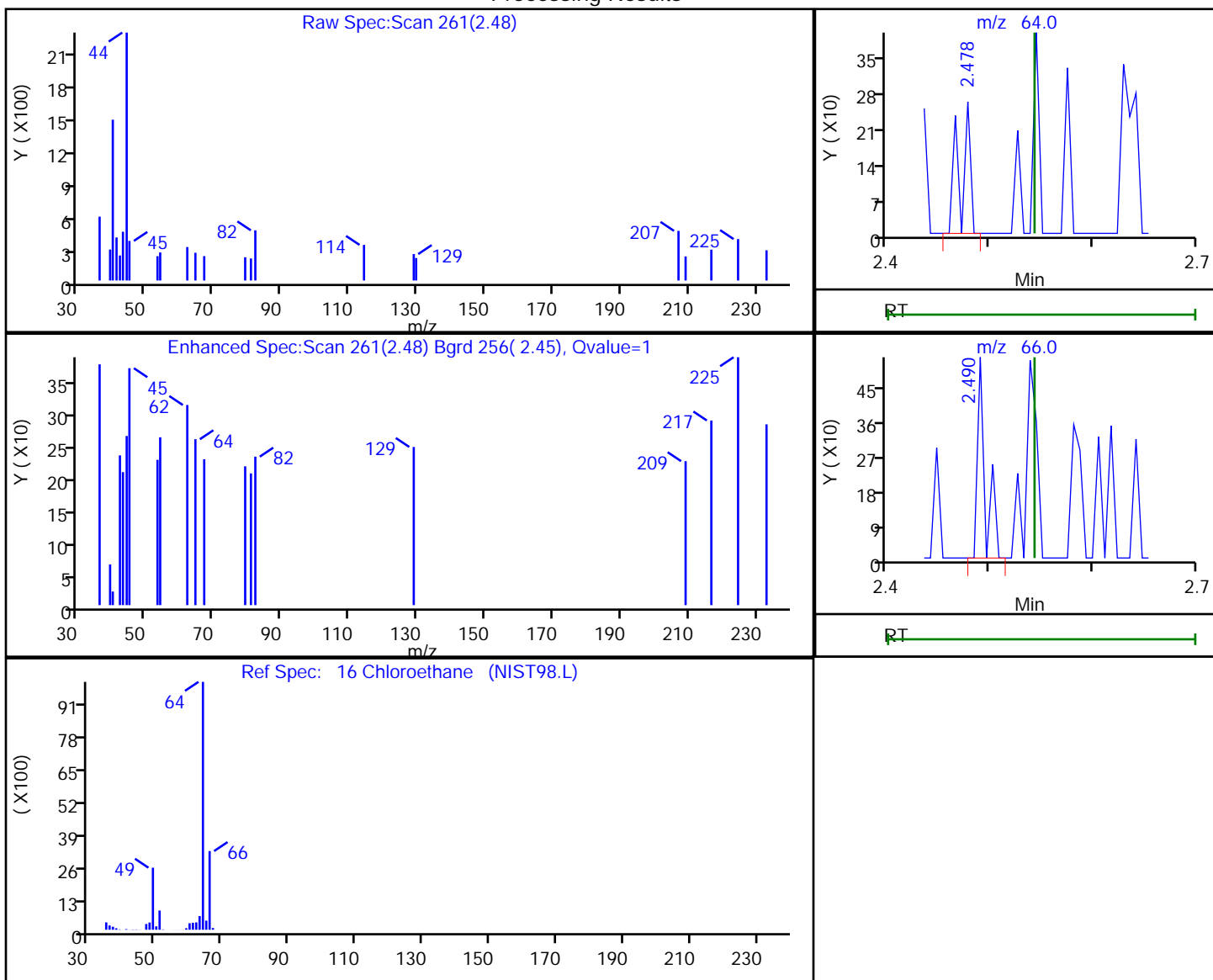
Compound	Amount Added	Amount Recovered	% Rec.
\$ 5 Dibromofluoromethane (Surr)	50.0	60.3	120.67
\$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	50.5	100.94
\$ 7 Toluene-d8 (Surr)	50.0	47.1	94.15
\$ 8 4-Bromofluorobenzene (Surr)	50.0	40.9	81.80

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092723.D
 Injection Date: 27-Sep-2019 21:29:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-7 Lab Sample ID: 180-96180-7
 Client ID: HD-COD-SW-7-0/1-0
 Operator ID: 433269 ALS Bottle#: 13 Worklist Smp#: 19
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

16 Chloroethane, CAS: 75-00-3

Processing Results



RT	Mass	Response	Amount
2.48	64.00	178	0.124201
2.49	66.00	282	

Reviewer: bowieh, 28-Sep-2019 11:14:43

Audit Action: Marked Compound Undetected

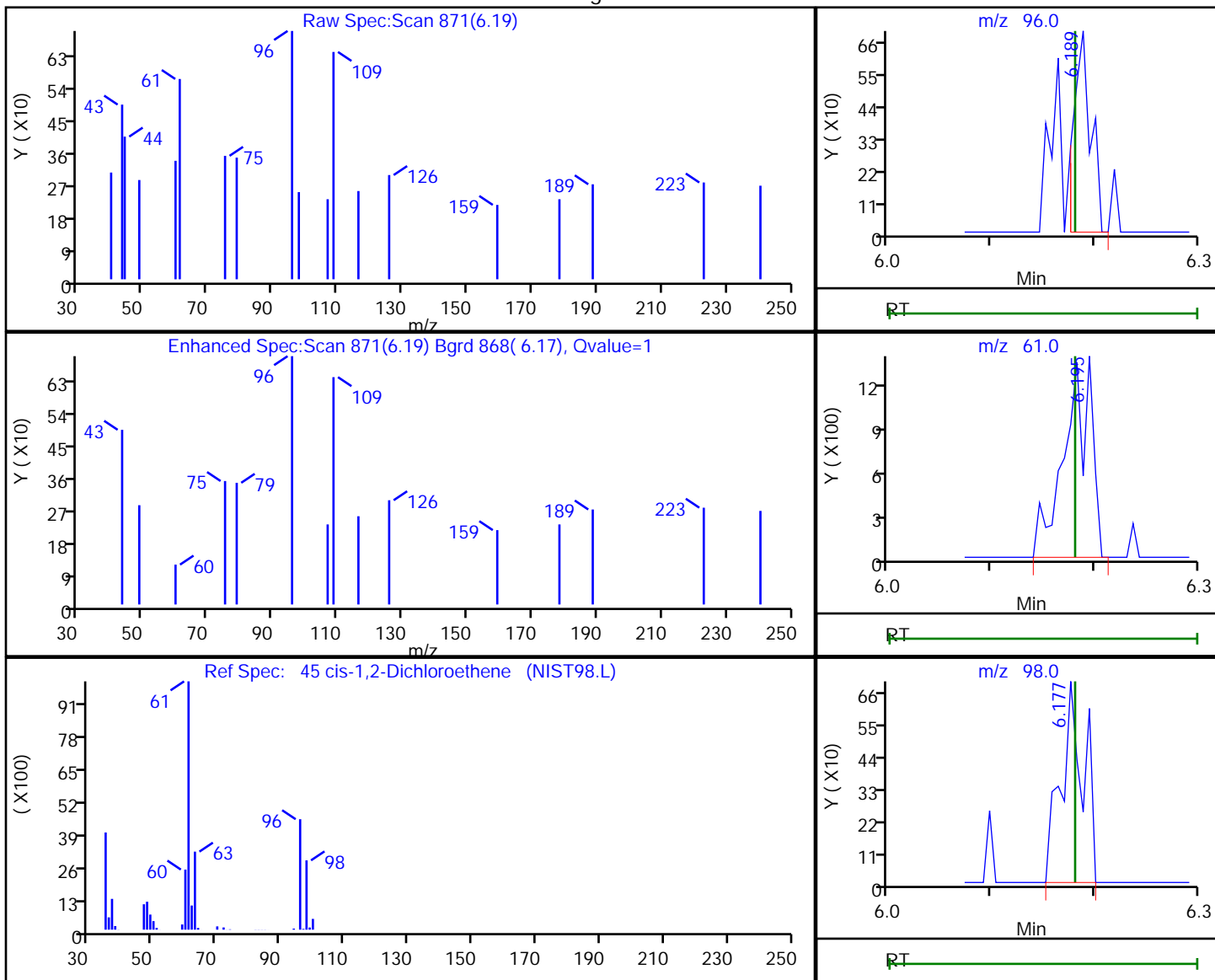
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092723.D
 Injection Date: 27-Sep-2019 21:29:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-7 Lab Sample ID: 180-96180-7
 Client ID: HD-COD-SW-7-0/1-0
 Operator ID: 433269 ALS Bottle#: 13 Worklist Smp#: 19
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

45 cis-1,2-Dichloroethene, CAS: 156-59-2

Processing Results



RT	Mass	Response	Amount
6.19	96.00	798	0.457987
6.19	61.00	2512	
6.18	98.00	1060	

Reviewer: bowieh, 28-Sep-2019 11:14:50

Audit Action: Marked Compound Undetected

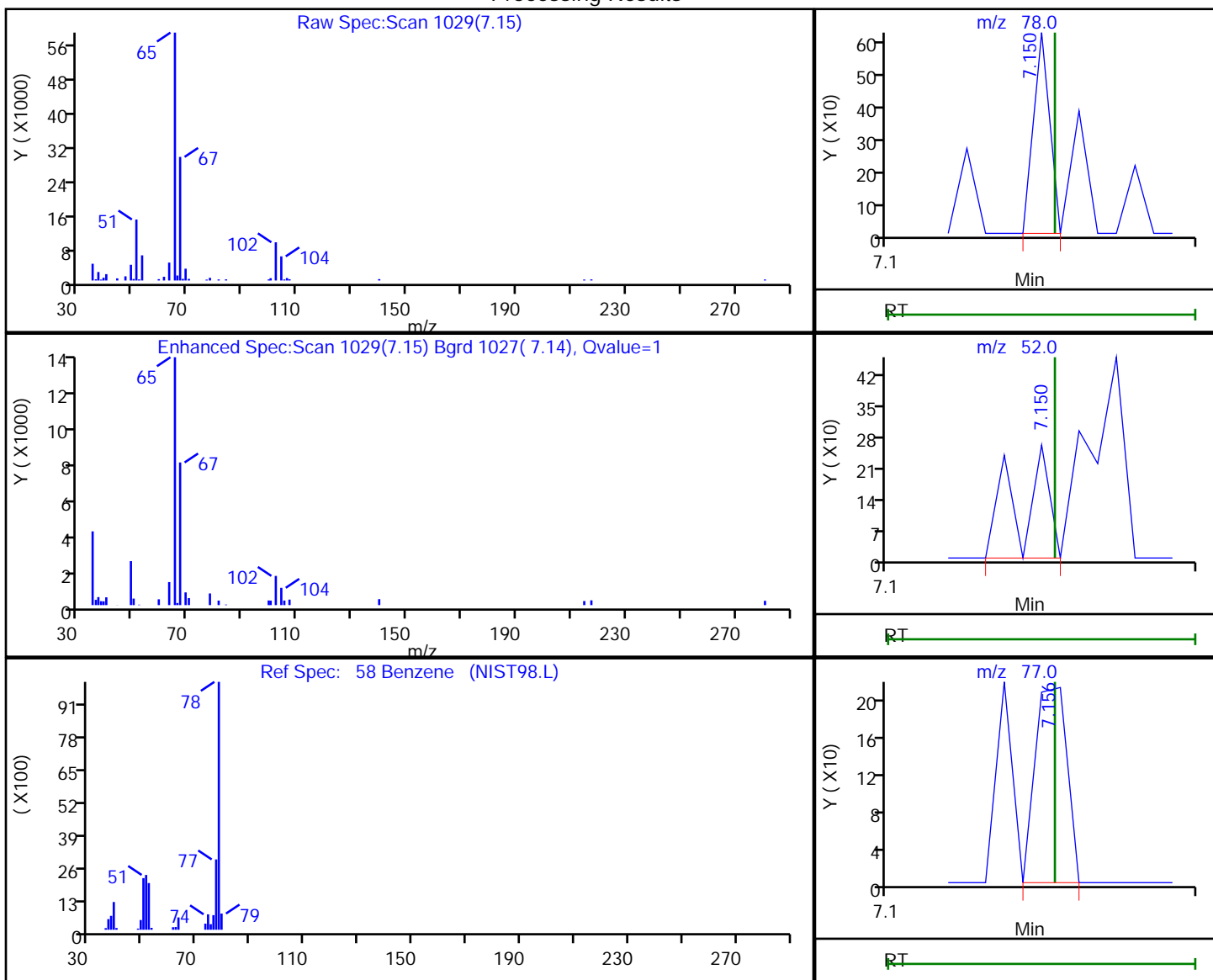
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092723.D
 Injection Date: 27-Sep-2019 21:29:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-7 Lab Sample ID: 180-96180-7
 Client ID: HD-COD-SW-7-0/1-0
 Operator ID: 433269 ALS Bottle#: 13 Worklist Smp#: 19
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

58 Benzene, CAS: 71-43-2

Processing Results



RT	Mass	Response	Amount
7.15	78.00	227	0.034658
7.15	52.00	178	
7.16	77.00	151	

Reviewer: bowieh, 28-Sep-2019 11:14:53

Audit Action: Marked Compound Undetected

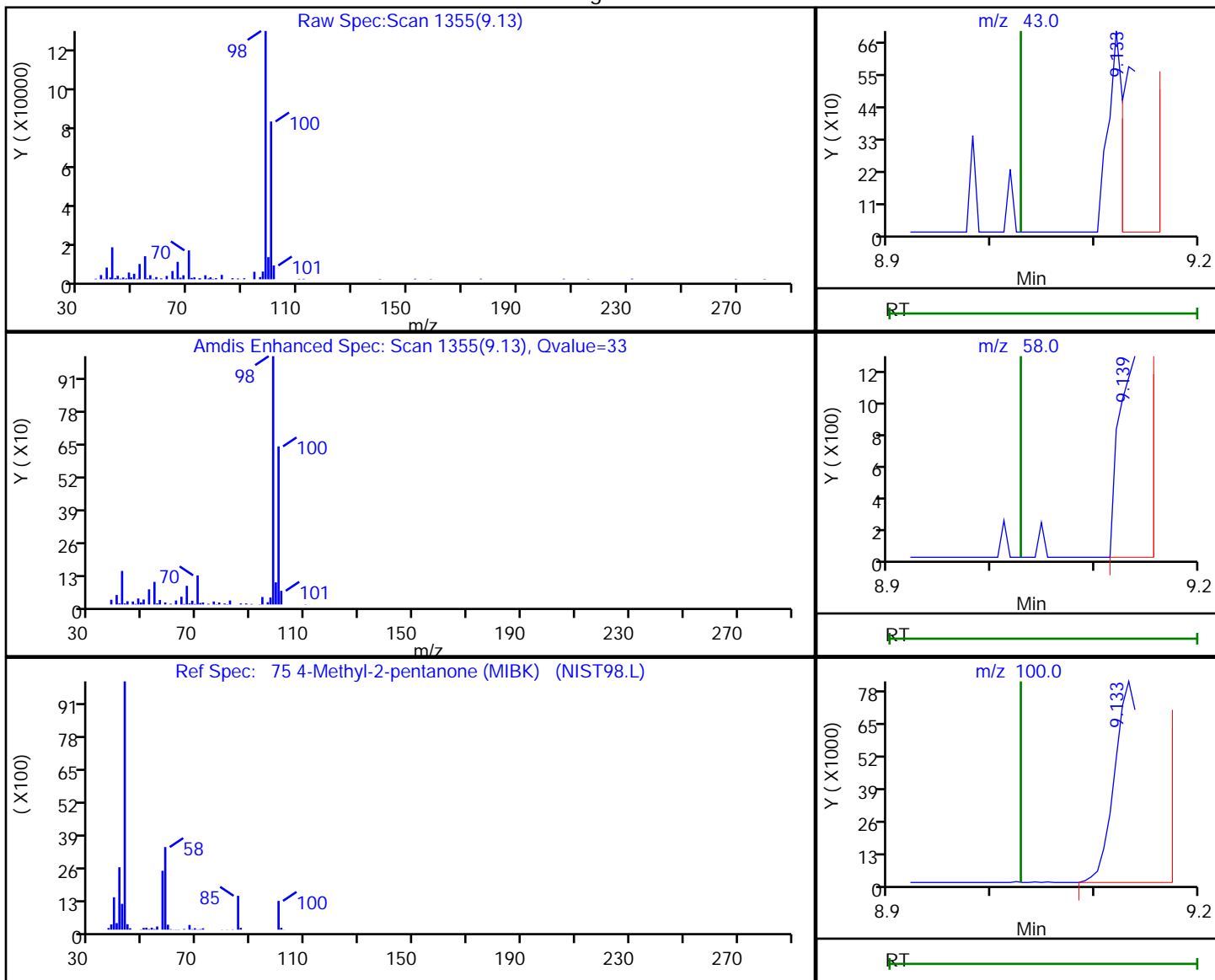
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092723.D
 Injection Date: 27-Sep-2019 21:29:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-7 Lab Sample ID: 180-96180-7
 Client ID: HD-COD-SW-7-0/1-0
 Operator ID: 433269 ALS Bottle#: 13 Worklist Smp#: 19
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

75 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1

Processing Results



RT	Mass	Response	Amount
9.13	43.00	1032	0.681667
9.14	58.00	1838	
9.13	100.00	156313	

Reviewer: bowieh, 28-Sep-2019 11:14:57

Audit Action: Marked Compound Undetected

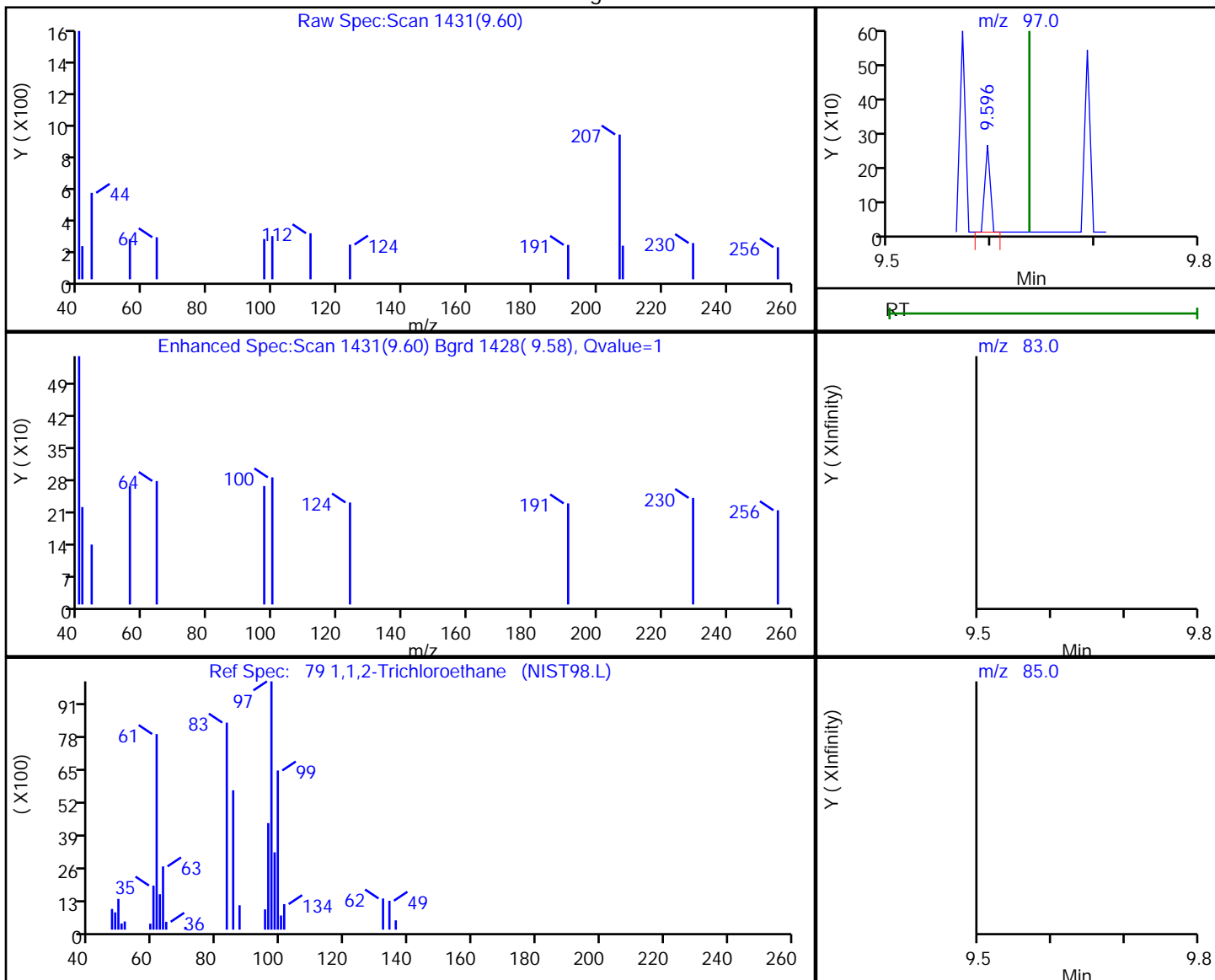
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092723.D
 Injection Date: 27-Sep-2019 21:29:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-7 Lab Sample ID: 180-96180-7
 Client ID: HD-COD-SW-7-0/1-0
 Operator ID: 433269 ALS Bottle#: 13 Worklist Smp#: 19
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

79 1,1,2-Trichloroethane, CAS: 79-00-5

Processing Results



RT	Mass	Response	Amount
9.60	97.00	94	0.064798
9.64	83.00	0	
9.64	85.00	0	

Reviewer: bowieh, 28-Sep-2019 11:15:04

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

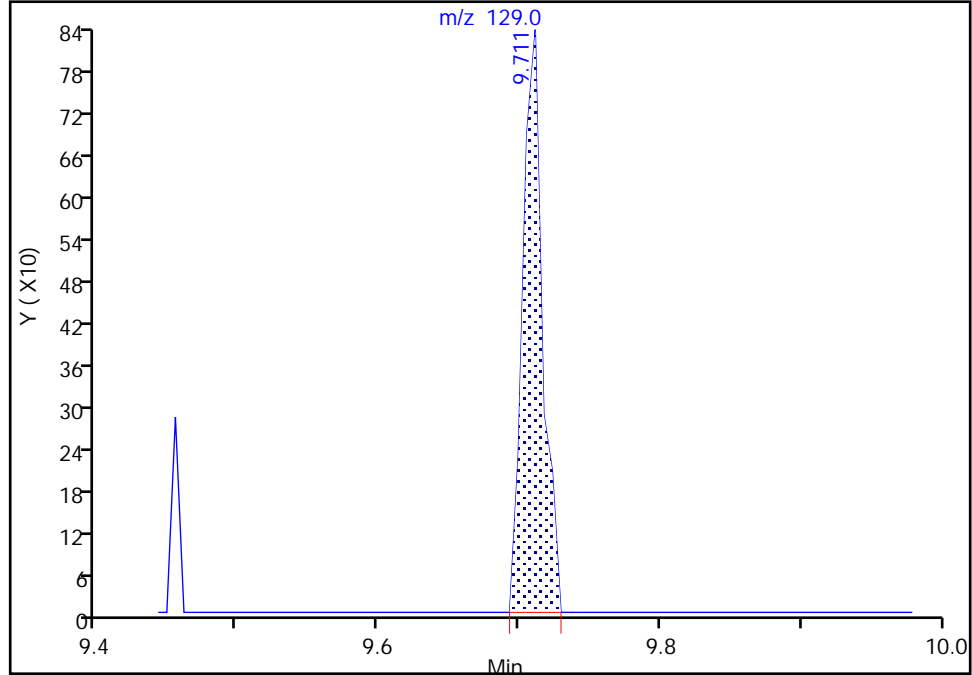
Data File:	\\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092723.D				
Injection Date:	27-Sep-2019 21:29:30	Instrument ID:	CHHP5		
Lims ID:	180-96180-B-7	Lab Sample ID:	180-96180-7		
Client ID:	HD-COD-SW-7-0/1-0				
Operator ID:	433269	ALS Bottle#:	13	Worklist Smp#:	19
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector:	MS SCAN		

80 Tetrachloroethene, CAS: 127-18-4

Signal: 2

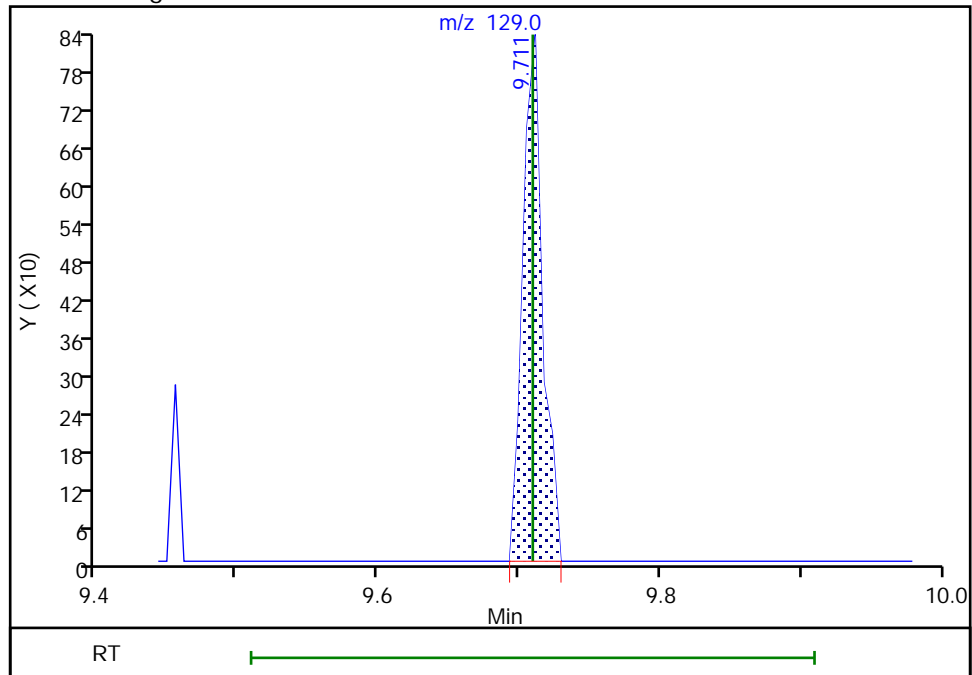
RT: 9.71
Area: 814
Amount: 0.529129
Amount Units: ng

Processing Integration Results



RT: 9.71
Area: 814
Amount: 0.529129
Amount Units: ng

Manual Integration Results



Eurofins TestAmerica, Pittsburgh

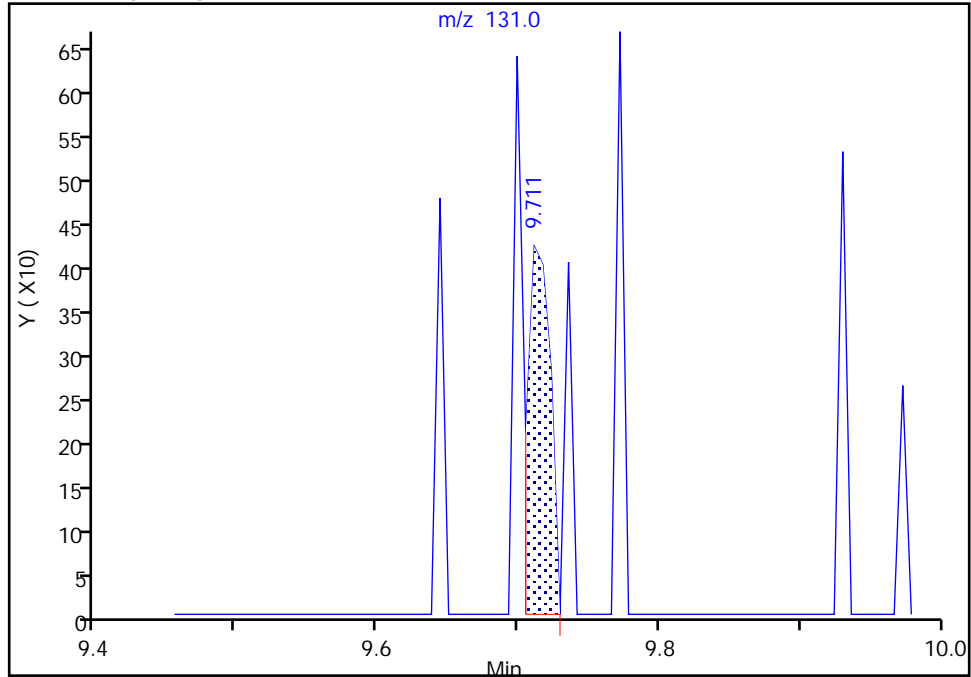
Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092723.D
Injection Date: 27-Sep-2019 21:29:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-7 Lab Sample ID: 180-96180-7
Client ID: HD-COD-SW-7-0/1-0
Operator ID: 433269 ALS Bottle#: 13 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

80 Tetrachloroethene, CAS: 127-18-4

Signal: 3

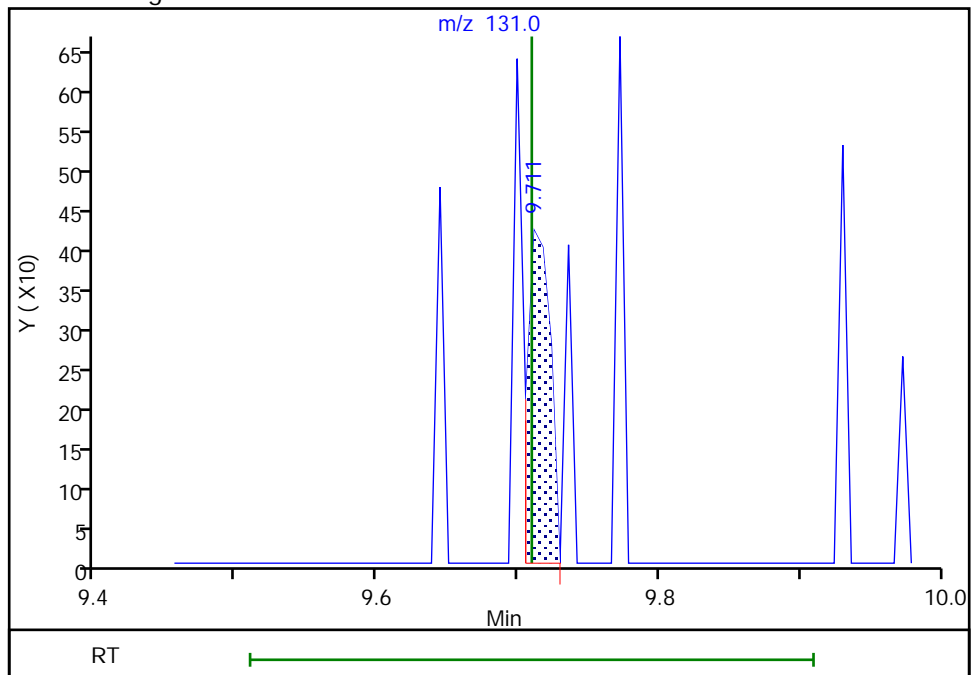
RT: 9.71
Area: 475
Amount: 0.529129
Amount Units: ng

Processing Integration Results



RT: 9.71
Area: 475
Amount: 0.529129
Amount Units: ng

Manual Integration Results

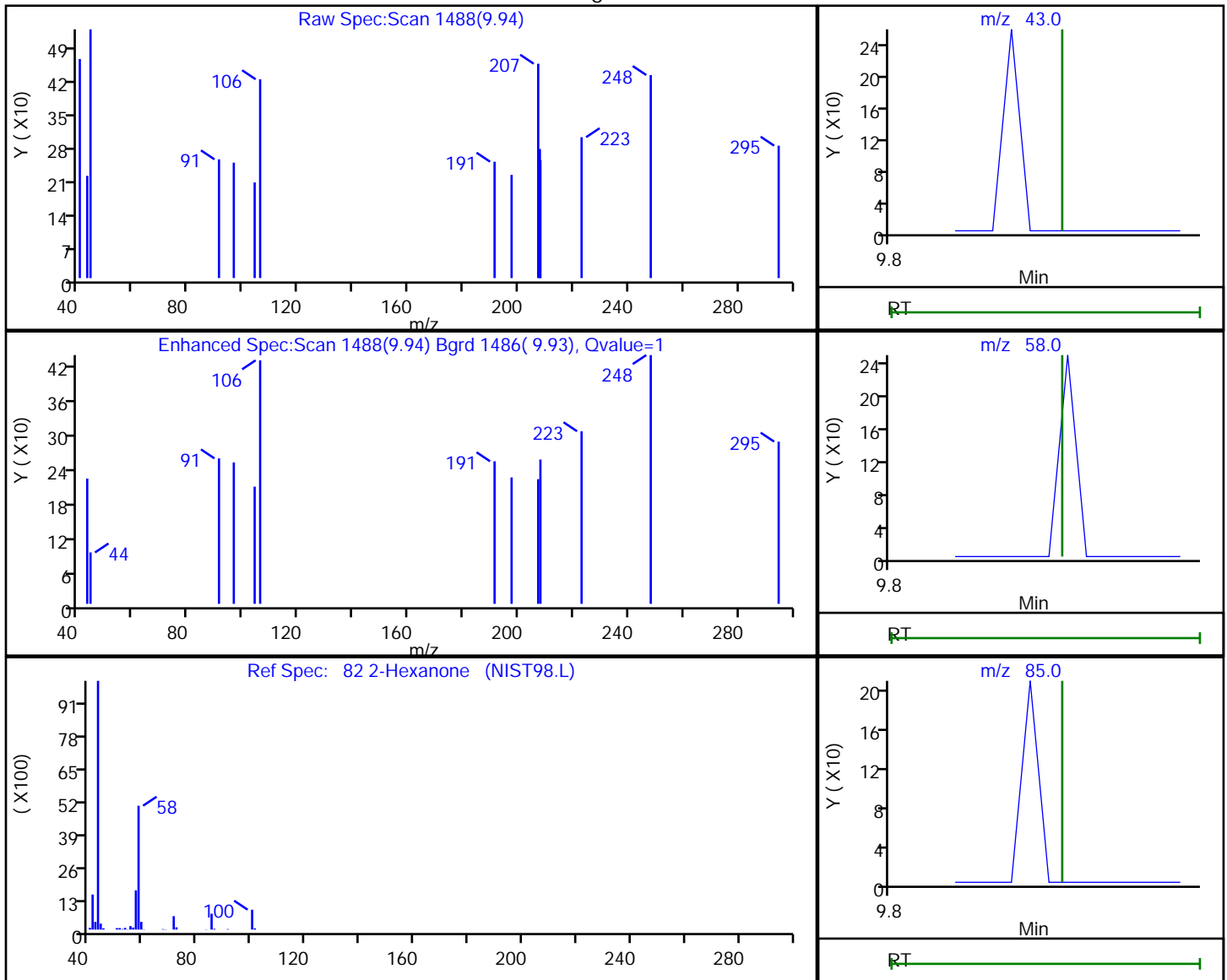


Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092723.D
 Injection Date: 27-Sep-2019 21:29:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-7 Lab Sample ID: 180-96180-7
 Client ID: HD-COD-SW-7-0/1-0
 Operator ID: 433269 ALS Bottle#: 13 Worklist Smp#: 19
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

82 2-Hexanone, CAS: 591-78-6

Processing Results



RT	Mass	Response	Amount
9.94	43.00	79	0.072159
9.86	58.00	0	
9.86	85.00	0	

Reviewer: bowieh, 28-Sep-2019 11:15:21
 Audit Action: Marked Compound Undetected

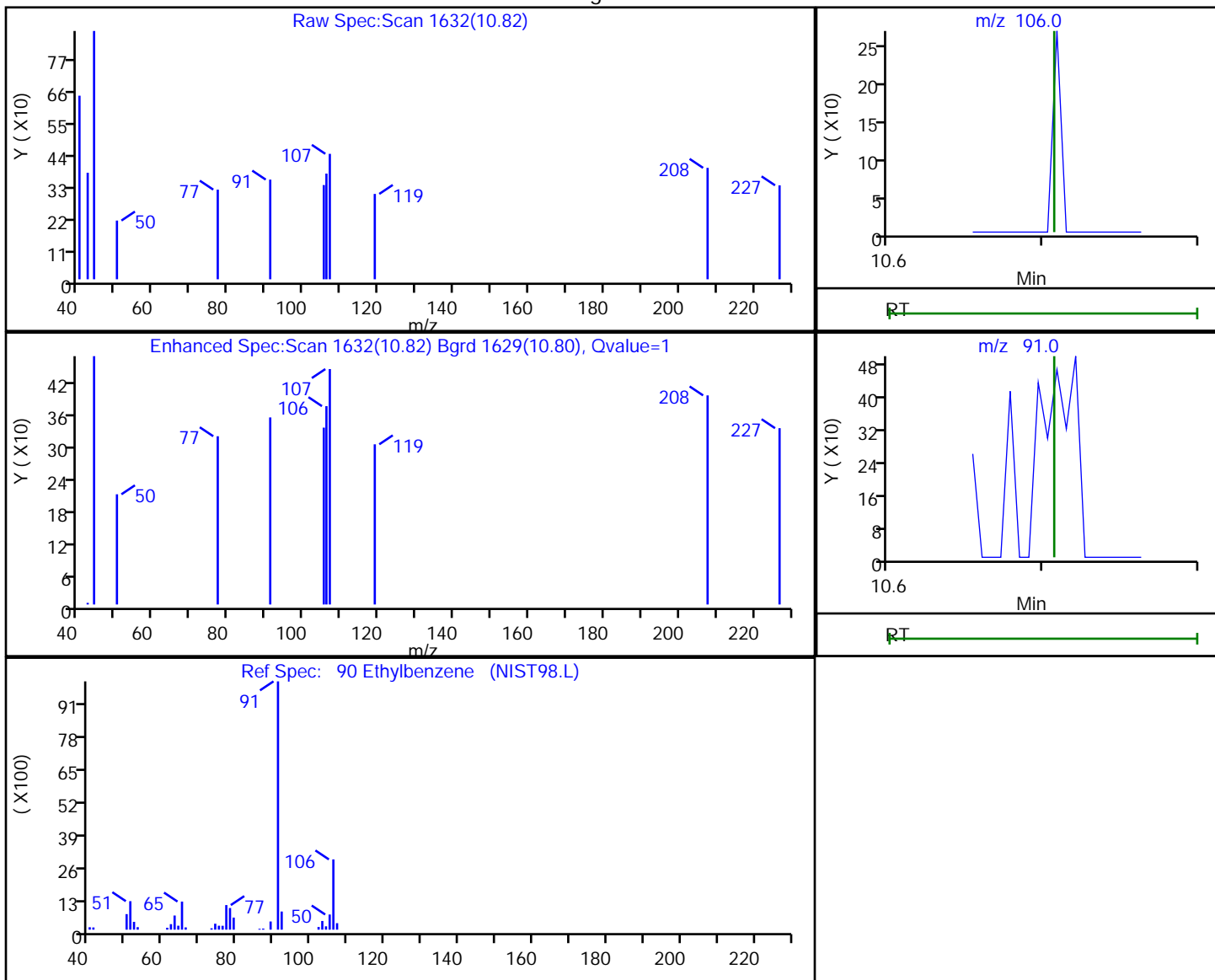
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092723.D
Injection Date: 27-Sep-2019 21:29:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-7 Lab Sample ID: 180-96180-7
Client ID: HD-COD-SW-7-0/1-0
Operator ID: 433269 ALS Bottle#: 13 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

90 Ethylbenzene, CAS: 100-41-4

Processing Results



RT	Mass	Response	Amount
10.82	106.00	321	0.136037
10.82	91.00	639	

Reviewer: bowieh, 28-Sep-2019 11:15:24

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-9-0/1-0 Lab Sample ID: 180-96180-8
 Matrix: Water Lab File ID: 5092724.D
 Analysis Method: EPA 8260C Date Collected: 09/23/2019 13:20
 Sample wt/vol: 5 (mL) Date Analyzed: 09/27/2019 21:53
 Soil Aliquot Vol.: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 292962 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	ND		1.0	0.90
75-01-4	Vinyl chloride	ND		1.0	0.88
74-83-9	Bromomethane	ND		1.0	0.89
75-00-3	Chloroethane	ND		1.0	0.90
75-35-4	1,1-Dichloroethene	ND		1.0	0.55
67-64-1	Acetone	ND		5.0	3.4
75-15-0	Carbon disulfide	ND		1.0	0.88
75-09-2	Methylene Chloride	ND		1.0	0.89
156-60-5	trans-1,2-Dichloroethene	ND	*	1.0	0.67
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.59
75-34-3	1,1-Dichloroethane	ND		1.0	0.63
156-59-2	cis-1,2-Dichloroethene	ND	*	1.0	0.71
74-97-5	Bromochloromethane	ND		1.0	0.63
78-93-3	2-Butanone (MEK)	ND		5.0	2.6
67-66-3	Chloroform	ND		1.0	0.60
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.60
56-23-5	Carbon tetrachloride	ND		1.0	0.88
71-43-2	Benzene	ND		1.0	0.60
107-06-2	1,2-Dichloroethane	ND		1.0	0.57
79-01-6	Trichloroethene	ND	*	1.0	0.69
78-87-5	1,2-Dichloropropane	ND		1.0	0.66
75-27-4	Bromodichloromethane	ND		1.0	0.64
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.59
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1
108-88-3	Toluene	ND	*	1.0	0.46
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.58
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.45
127-18-4	Tetrachloroethene	ND		1.0	0.47
591-78-6	2-Hexanone	ND		5.0	3.3
124-48-1	Dibromochloromethane	ND		1.0	0.84
106-93-4	1,2-Dibromoethane (EDB)	ND		1.0	0.50
108-90-7	Chlorobenzene	ND		1.0	0.50
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.57
100-41-4	Ethylbenzene	ND		1.0	0.51
1330-20-7	Xylenes, Total	ND	*	2.0	0.89
100-42-5	Styrene	ND		1.0	0.47

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-9-0/1-0 Lab Sample ID: 180-96180-8
 Matrix: Water Lab File ID: 5092724.D
 Analysis Method: EPA 8260C Date Collected: 09/23/2019 13:20
 Sample wt/vol: 5 (mL) Date Analyzed: 09/27/2019 21:53
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 292962 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	ND		1.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.60
107-13-1	Acrylonitrile	ND		20	7.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		70-150
2037-26-5	Toluene-d8 (Surr)	91		78-128
460-00-4	4-Bromofluorobenzene (Surr)	76		64-123
1868-53-7	Dibromofluoromethane (Surr)	116		75-147

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092724.D
 Lims ID: 180-96180-B-8
 Client ID: HD-COD-SW-9-0/1-0
 Sample Type: Client
 Inject. Date: 27-Sep-2019 21:53:30 ALS Bottle#: 14 Worklist Smp#: 20
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028863-020
 Misc. Info.: 180-96180-B-8
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 28-Sep-2019 11:17:01 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICAL File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: bowieh Date: 28-Sep-2019 11:17:01

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.531	4.532	-0.001	0	167340	1000.0	
* 2 Fluorobenzene (IS)	96	7.500	7.495	0.005	98	271504	50.0	
* 3 Chlorobenzene-d5	119	10.578	10.579	-0.001	88	71779	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.920	12.915	0.005	96	111116	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.782	6.777	0.005	94	91053	58.1	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.147	7.142	0.005	0	129432	49.0	
\$ 7 Toluene-d8 (Surr)	98	9.136	9.131	0.005	95	261085	45.7	
\$ 8 4-Bromofluorobenzene (Surr	95	11.758	11.766	-0.008	91	89667	38.2	
12 Chloromethane	50		1.910				ND	U
13 Vinyl chloride	62		2.038				ND	
15 Bromomethane	94		2.379				ND	U
16 Chloroethane	64		2.543				ND	
22 1,1-Dichloroethene	96		3.565				ND	
24 Acetone	43	3.679	3.668	0.011	97	10934	15.8	
26 Carbon disulfide	76		3.863				ND	
31 Methylene Chloride	84	4.403	4.405	-0.002	40	2045	-5.51	
33 Acrylonitrile	53		4.782				ND	
34 trans-1,2-Dichloroethene	96		4.812				ND	
35 Methyl tert-butyl ether	73		4.824				ND	
37 1,1-Dichloroethane	63		5.439				ND	
45 cis-1,2-Dichloroethene	96		6.181				ND	U
46 2-Butanone (MEK)	43		6.187				ND	U
49 Chlorobromomethane	128		6.455				ND	
52 Chloroform	83	6.600	6.595	0.005	15	2044	-2.07	
53 1,1,1-Trichloroethane	97		6.759				ND	
56 Carbon tetrachloride	117		6.929				ND	
58 Benzene	78		7.154				ND	U
59 1,2-Dichloroethane	62		7.233				ND	U
64 Trichloroethene	130		7.878				ND	
67 1,2-Dichloropropane	63		8.152				ND	
71 Dichlorobromomethane	83		8.432				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
74 cis-1,3-Dichloropropene	75		8.870				ND	
75 4-Methyl-2-pentanone (MIBK)	43		9.028				ND	U
76 Toluene	91	9.197	9.198	-0.001	29	2715	0.3650	
77 trans-1,3-Dichloropropene	75		9.448				ND	
79 1,1,2-Trichloroethane	97		9.636				ND	
80 Tetrachloroethene	164	9.708	9.709	-0.001	7	732	0.4213	
82 2-Hexanone	43		9.855				ND	U
84 Chlorodibromomethane	129		10.007				ND	
85 Ethylene Dibromide	107		10.123				ND	
87 Chlorobenzene	112		10.610				ND	
89 1,1,1,2-Tetrachloroethane	131		10.701				ND	
90 Ethylbenzene	106		10.707				ND	U
91 m-Xylene & p-Xylene	106		10.835				ND	
92 o-Xylene	106		11.218				ND	
93 Styrene	104		11.242				ND	
94 Bromoform	173		11.419				ND	
99 1,1,2,2-Tetrachloroethane	83		11.899				ND	
S 133 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

voaWI/SHP5_00013

Amount Added: 5.00

Units: uL

Run Reagent

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092724.D

Injection Date: 27-Sep-2019 21:53:30

Instrument ID: CHHP5

Operator ID: 433269

Lims ID: 180-96180-B-8

Lab Sample ID: 180-96180-8

Worklist Smp#: 20

Client ID: HD-COD-SW-9-0/1-0

Purge Vol: 5.000 mL

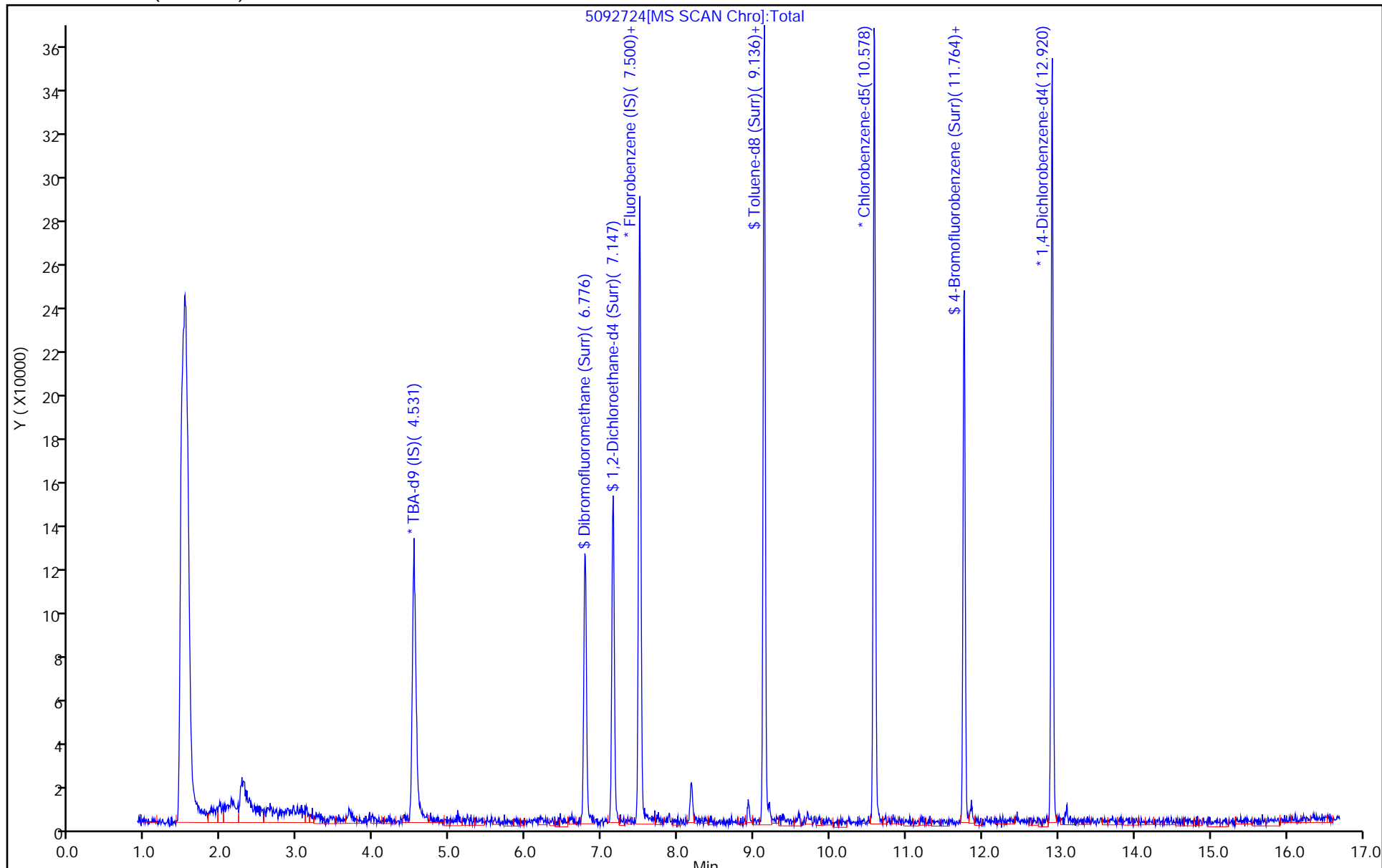
Dil. Factor: 1.0000

ALS Bottle#: 14

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Recovery Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092724.D
 Lims ID: 180-96180-B-8
 Client ID: HD-COD-SW-9-0/1-0
 Sample Type: Client
 Inject. Date: 27-Sep-2019 21:53:30 ALS Bottle#: 14 Worklist Smp#: 20
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028863-020
 Misc. Info.: 180-96180-B-8
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 28-Sep-2019 11:17:01 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: bowieh Date: 28-Sep-2019 11:17:01

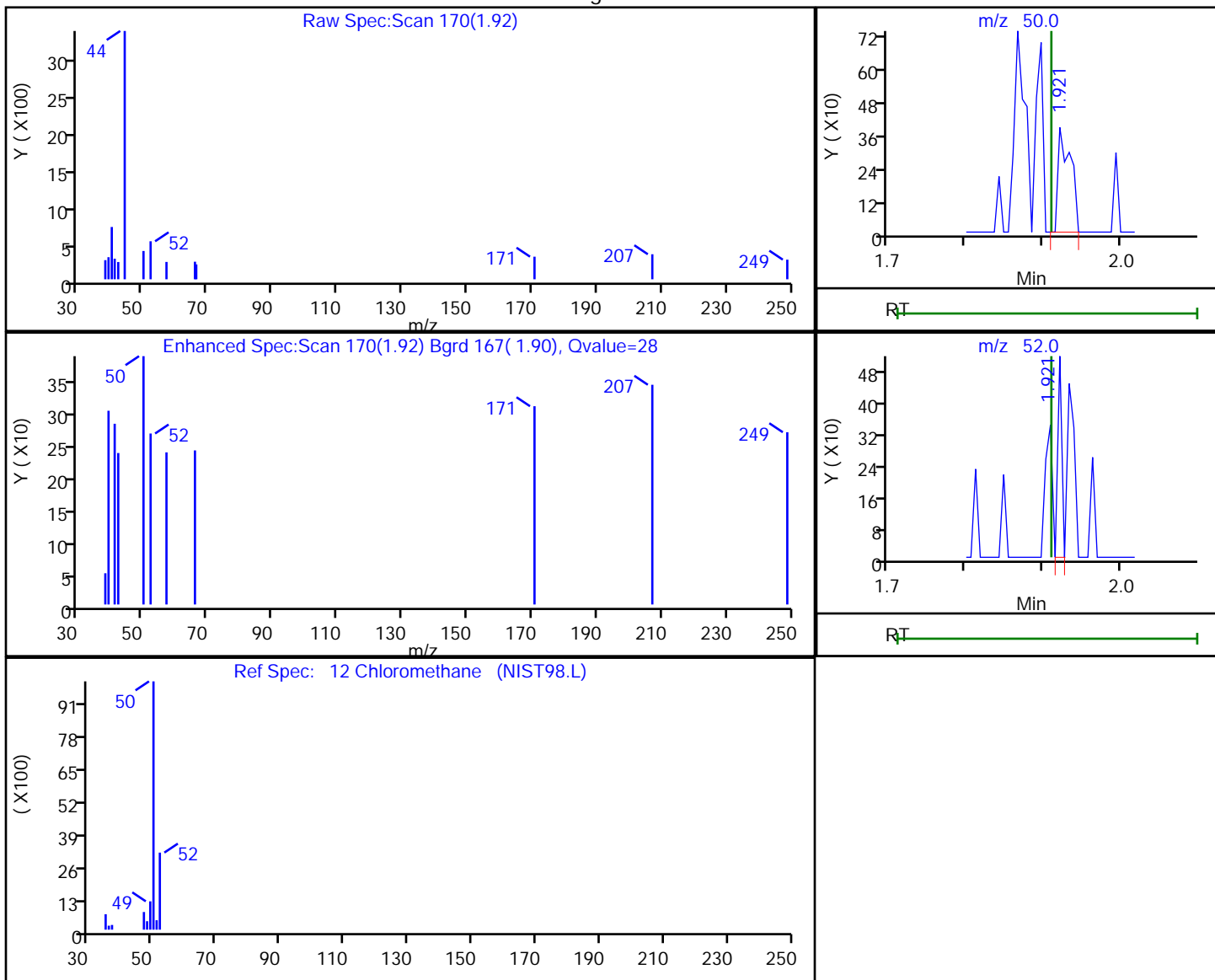
Compound	Amount Added	Amount Recovered	% Rec.
\$ 5 Dibromofluoromethane (Surr)	50.0	58.1	116.20
\$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	49.0	98.05
\$ 7 Toluene-d8 (Surr)	50.0	45.7	91.38
\$ 8 4-Bromofluorobenzene (Surr)	50.0	38.2	76.34

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092724.D
Injection Date: 27-Sep-2019 21:53:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-8 Lab Sample ID: 180-96180-8
Client ID: HD-COD-SW-9-0/1-0
Operator ID: 433269 ALS Bottle#: 14 Worklist Smp#: 20
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

12 Chloromethane, CAS: 74-87-3

Processing Results



RT	Mass	Response	Amount
1.92	50.00	428	0.184147
1.92	52.00	187	

Reviewer: bowieh, 28-Sep-2019 11:16:25

Audit Action: Marked Compound Undetected

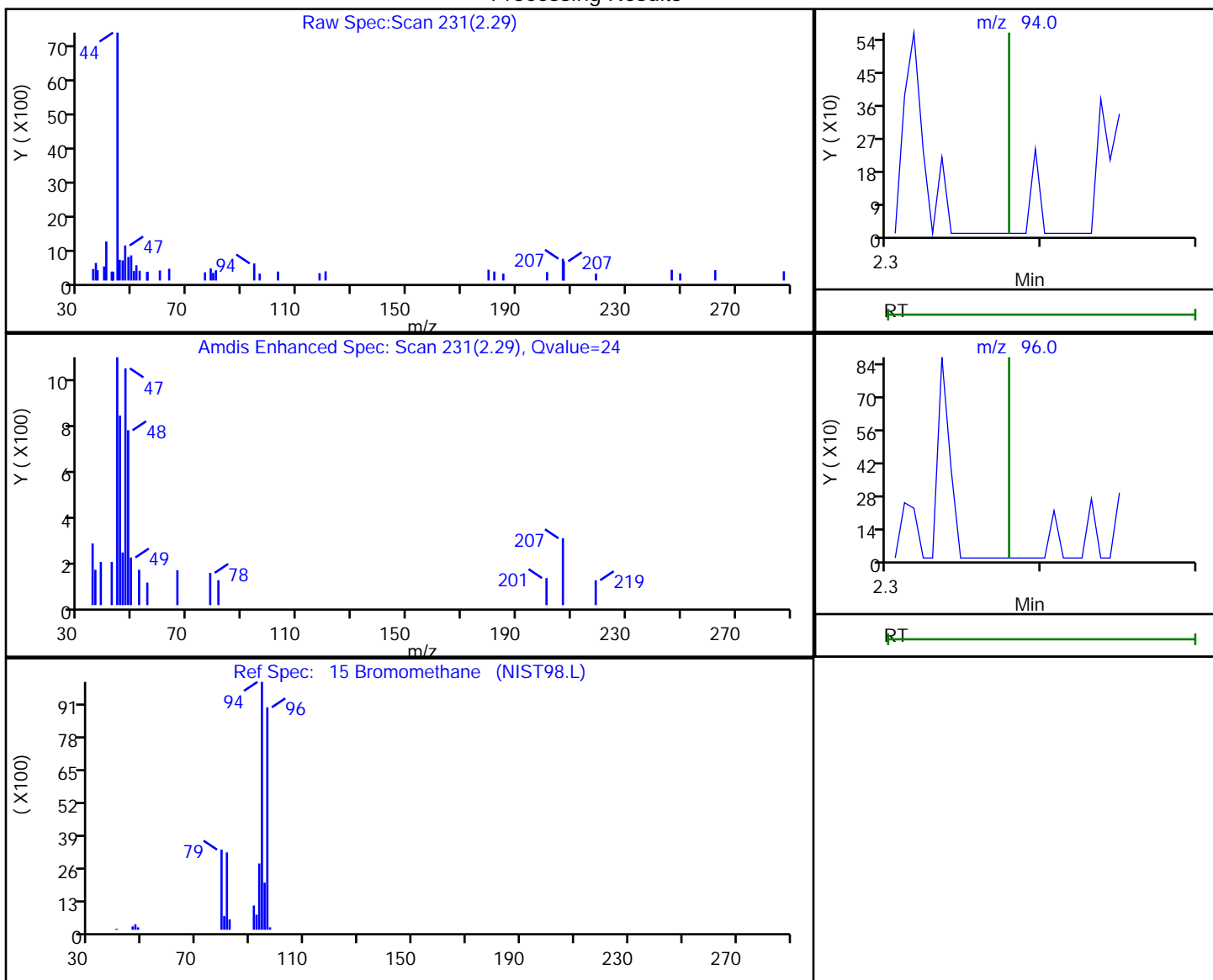
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092724.D
 Injection Date: 27-Sep-2019 21:53:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-8 Lab Sample ID: 180-96180-8
 Client ID: HD-COD-SW-9-0/1-0
 Operator ID: 433269 ALS Bottle#: 14 Worklist Smp#: 20
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

15 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
2.29	94.00	327	0.196216
2.28	96.00	409	

Reviewer: bowieh, 28-Sep-2019 11:16:26

Audit Action: Marked Compound Undetected

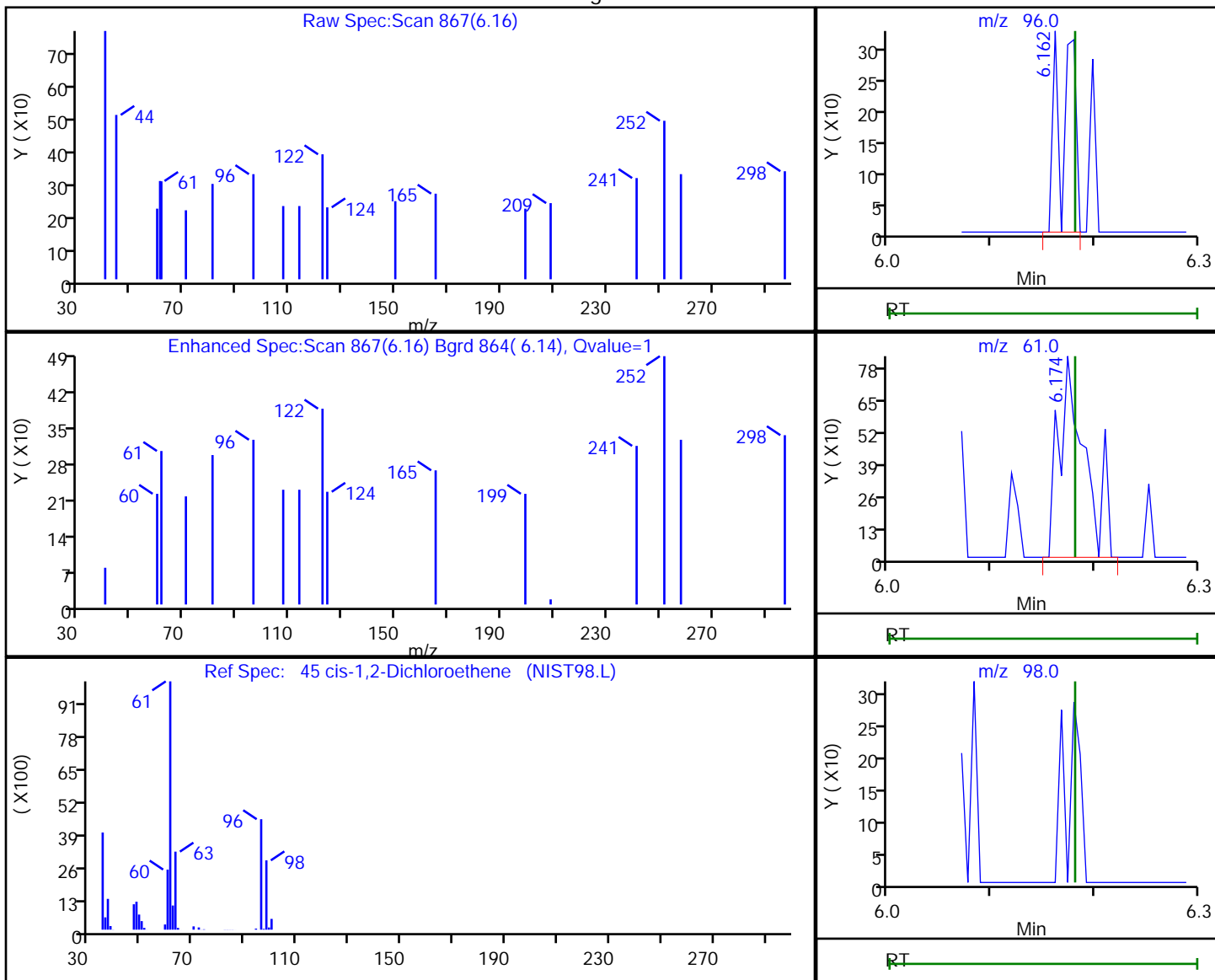
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092724.D
 Injection Date: 27-Sep-2019 21:53:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-8 Lab Sample ID: 180-96180-8
 Client ID: HD-COD-SW-9-0/1-0
 Operator ID: 433269 ALS Bottle#: 14 Worklist Smp#: 20
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

45 cis-1,2-Dichloroethene, CAS: 156-59-2

Processing Results



RT	Mass	Response	Amount
6.16	96.00	340	0.190578
6.17	61.00	1464	
6.18	98.00	0	

Reviewer: bowieh, 28-Sep-2019 11:16:34

Audit Action: Marked Compound Undetected

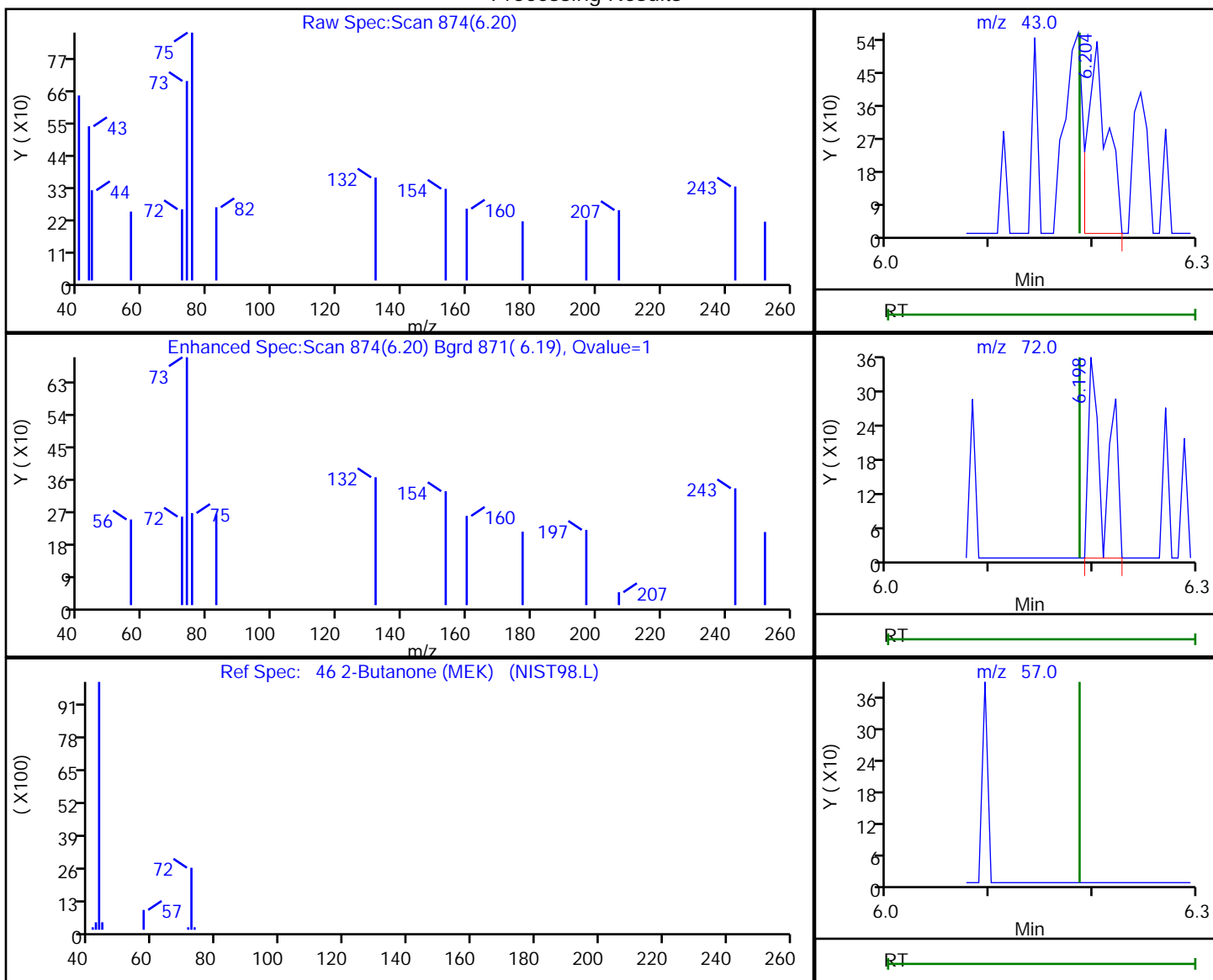
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092724.D
 Injection Date: 27-Sep-2019 21:53:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-8 Lab Sample ID: 180-96180-8
 Client ID: HD-COD-SW-9-0/1-0
 Operator ID: 433269 ALS Bottle#: 14 Worklist Smp#: 20
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

46 2-Butanone (MEK), CAS: 78-93-3

Processing Results



RT	Mass	Response	Amount
6.20	43.00	696	0.849160
6.20	72.00	395	
6.19	57.00	0	

Reviewer: bowieh, 28-Sep-2019 11:16:36

Audit Action: Marked Compound Undetected

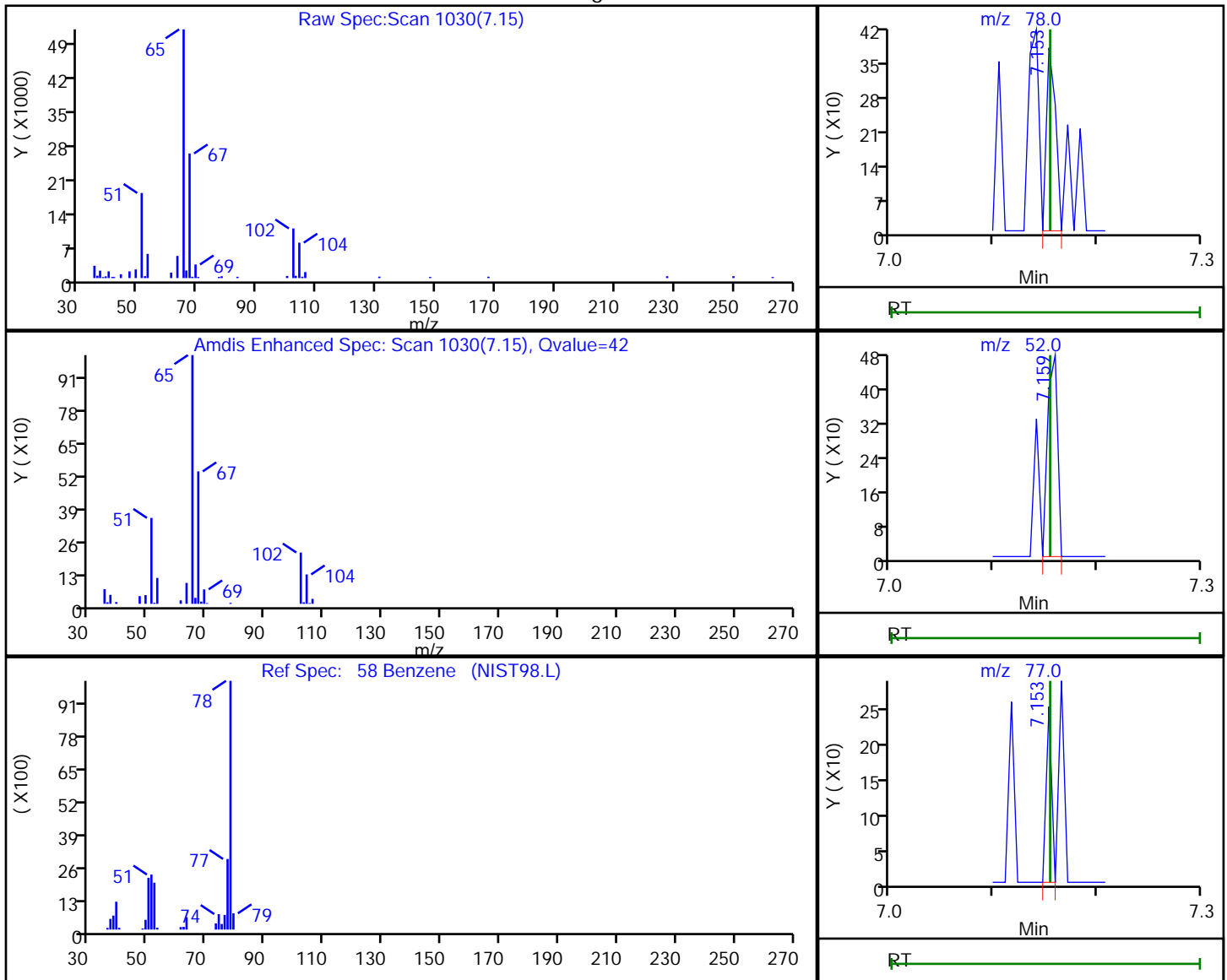
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092724.D
 Injection Date: 27-Sep-2019 21:53:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-8 Lab Sample ID: 180-96180-8
 Client ID: HD-COD-SW-9-0/1-0
 Operator ID: 433269 ALS Bottle#: 14 Worklist Smp#: 20
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

58 Benzene, CAS: 71-43-2

Processing Results



RT	Mass	Response	Amount
7.15	78.00	232	0.034595
7.16	52.00	315	
7.15	77.00	92	

Reviewer: bowieh, 28-Sep-2019 11:16:40

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092724.D

Injection Date: 27-Sep-2019 21:53:30

Instrument ID: CHHP5

Lims ID: 180-96180-B-8

Lab Sample ID: 180-96180-8

Client ID: HD-COD-SW-9-0/1-0

Operator ID: 433269

ALS Bottle#: 14 Worklist Smp#: 20

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

Method: MSVOA_LL_CHHP5

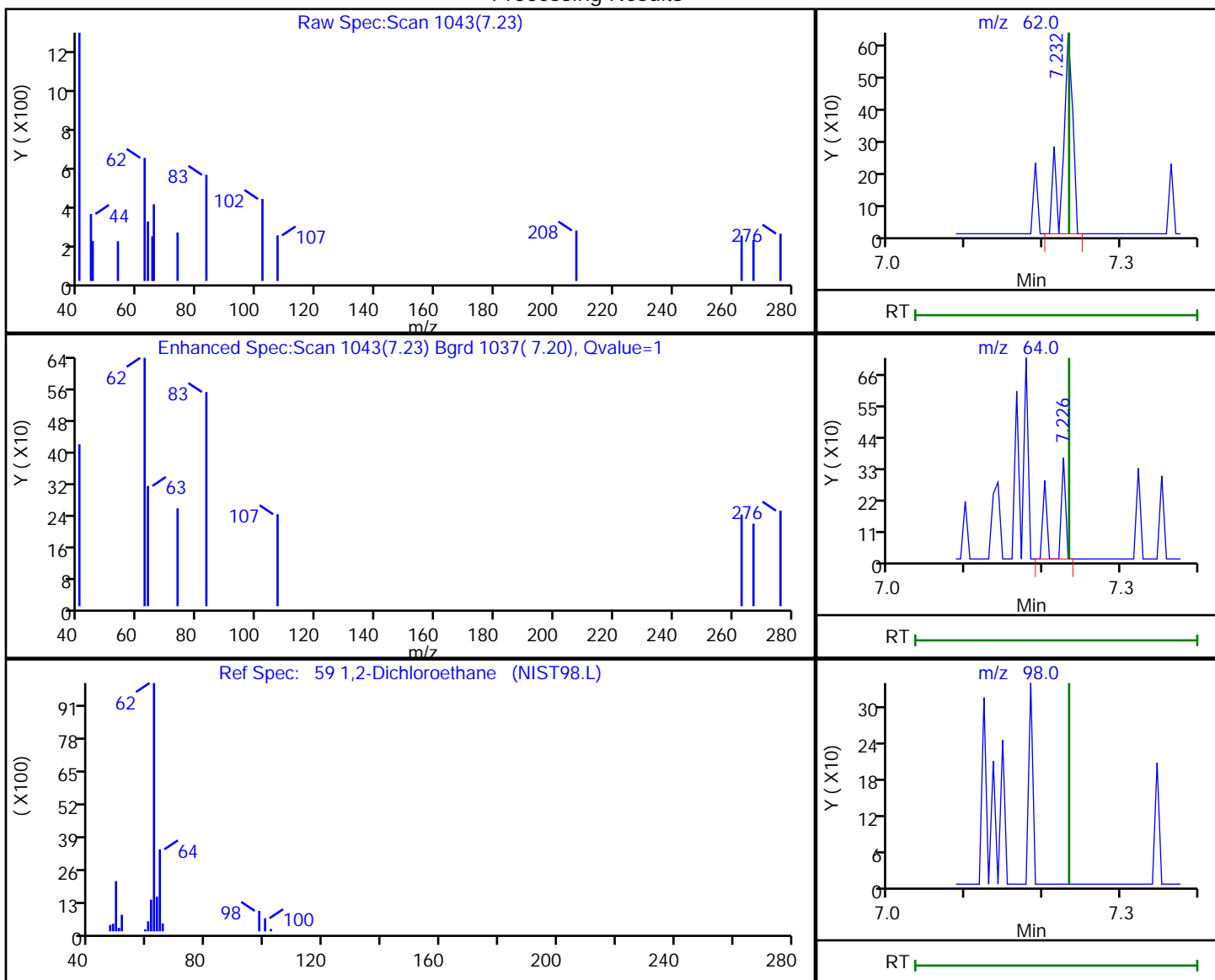
Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

59 1,2-Dichloroethane, CAS: 107-06-2

Processing Results



RT	Mass	Response	Amount
7.23	62.00	561	0.171112
7.23	64.00	233	
7.23	98.00	0	

Reviewer: bowieh, 28-Sep-2019 11:16:46

Audit Action: Marked Compound Undetected

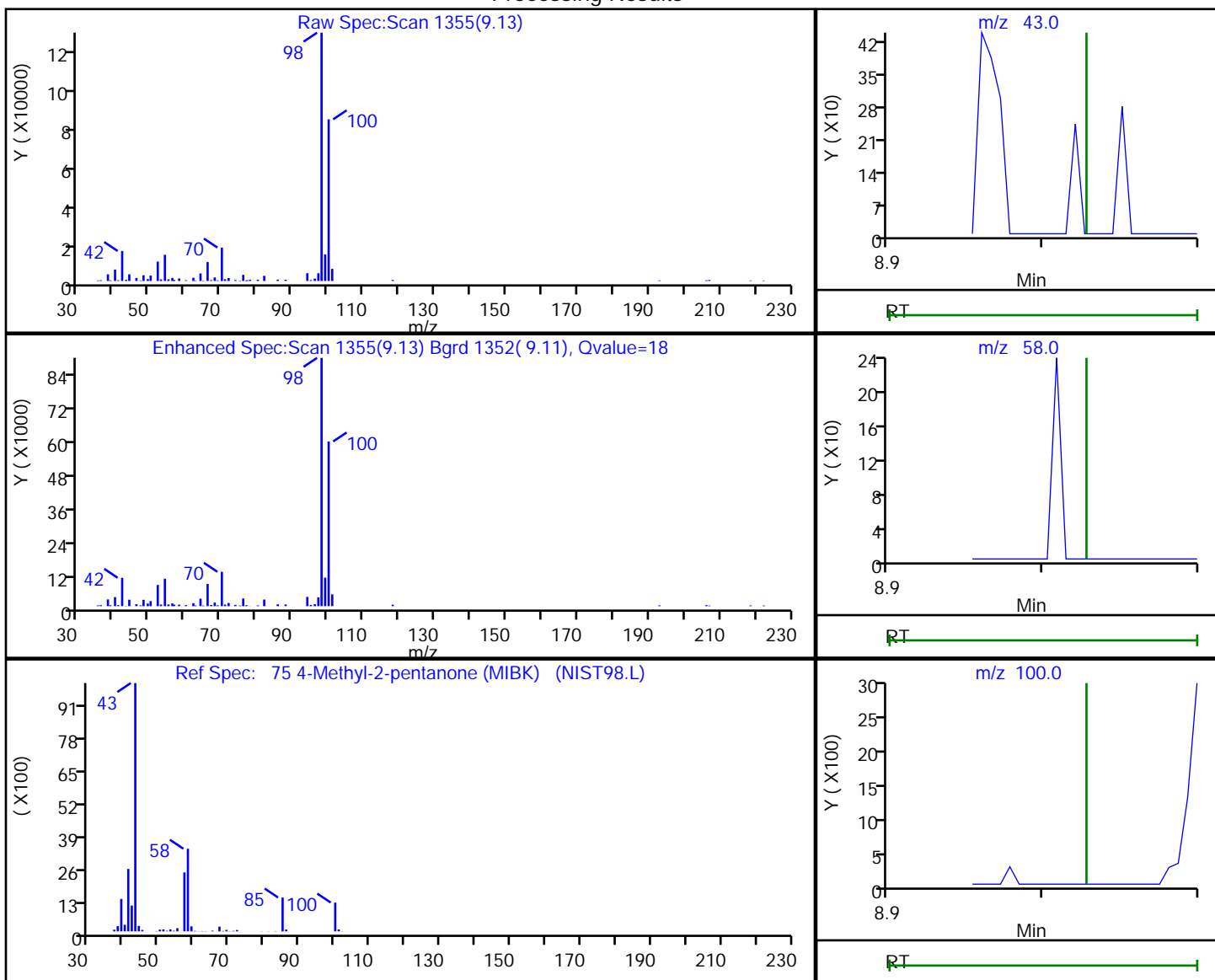
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092724.D
 Injection Date: 27-Sep-2019 21:53:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-8 Lab Sample ID: 180-96180-8
 Client ID: HD-COD-SW-9-0/1-0
 Operator ID: 433269 ALS Bottle#: 14 Worklist Smp#: 20
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

75 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1

Processing Results



RT	Mass	Response	Amount
9.13	43.00	647	0.395147
9.14	58.00	2279	
9.14	100.00	166012	

Reviewer: bowieh, 28-Sep-2019 11:16:48

Audit Action: Marked Compound Undetected

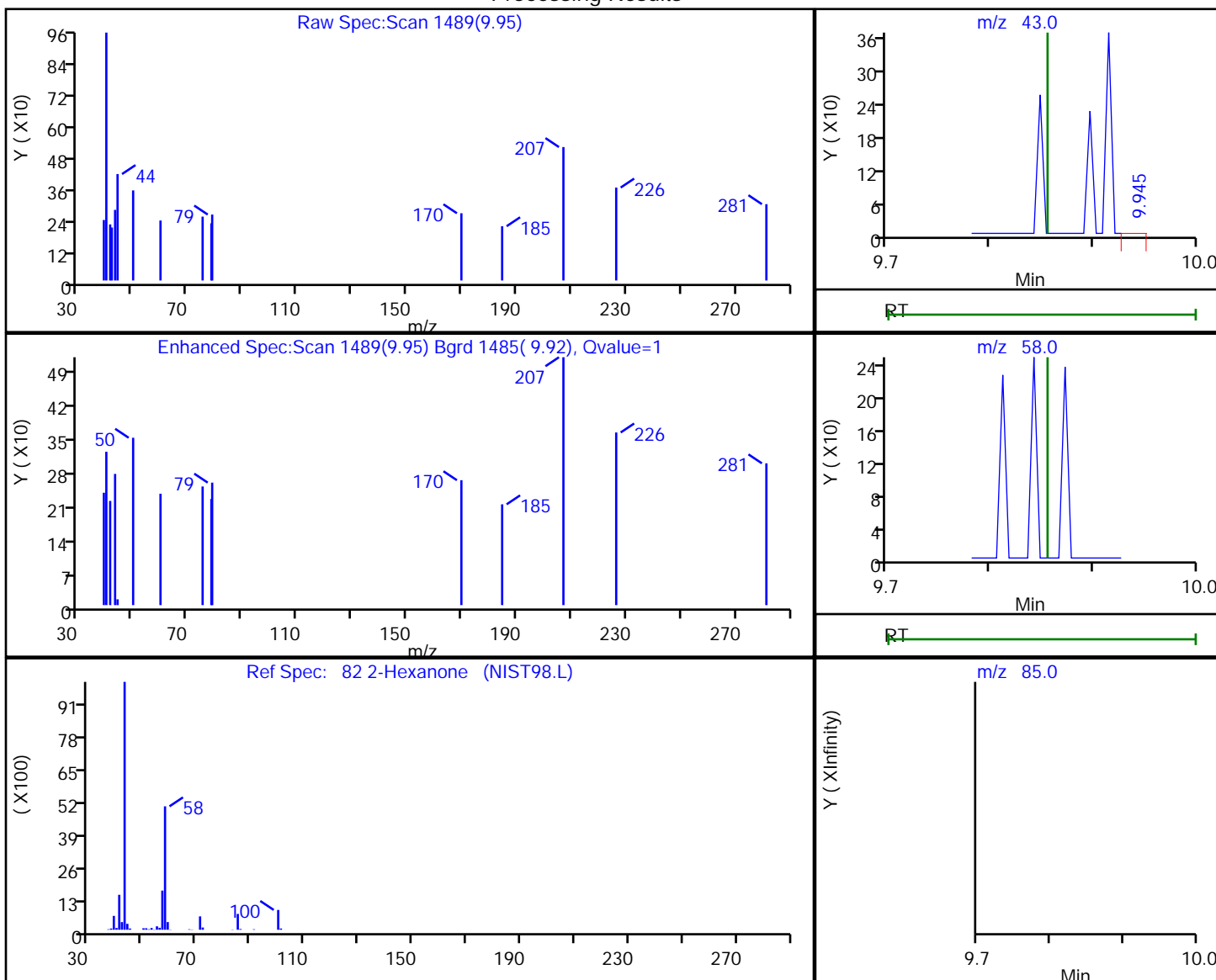
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092724.D
 Injection Date: 27-Sep-2019 21:53:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-8 Lab Sample ID: 180-96180-8
 Client ID: HD-COD-SW-9-0/1-0
 Operator ID: 433269 ALS Bottle#: 14 Worklist Smp#: 20
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

82 2-Hexanone, CAS: 591-78-6

Processing Results



RT	Mass	Response	Amount
9.95	43.00	187	0.157932
9.86	58.00	0	
9.86	85.00	0	

Reviewer: bowieh, 28-Sep-2019 11:16:52

Audit Action: Marked Compound Undetected

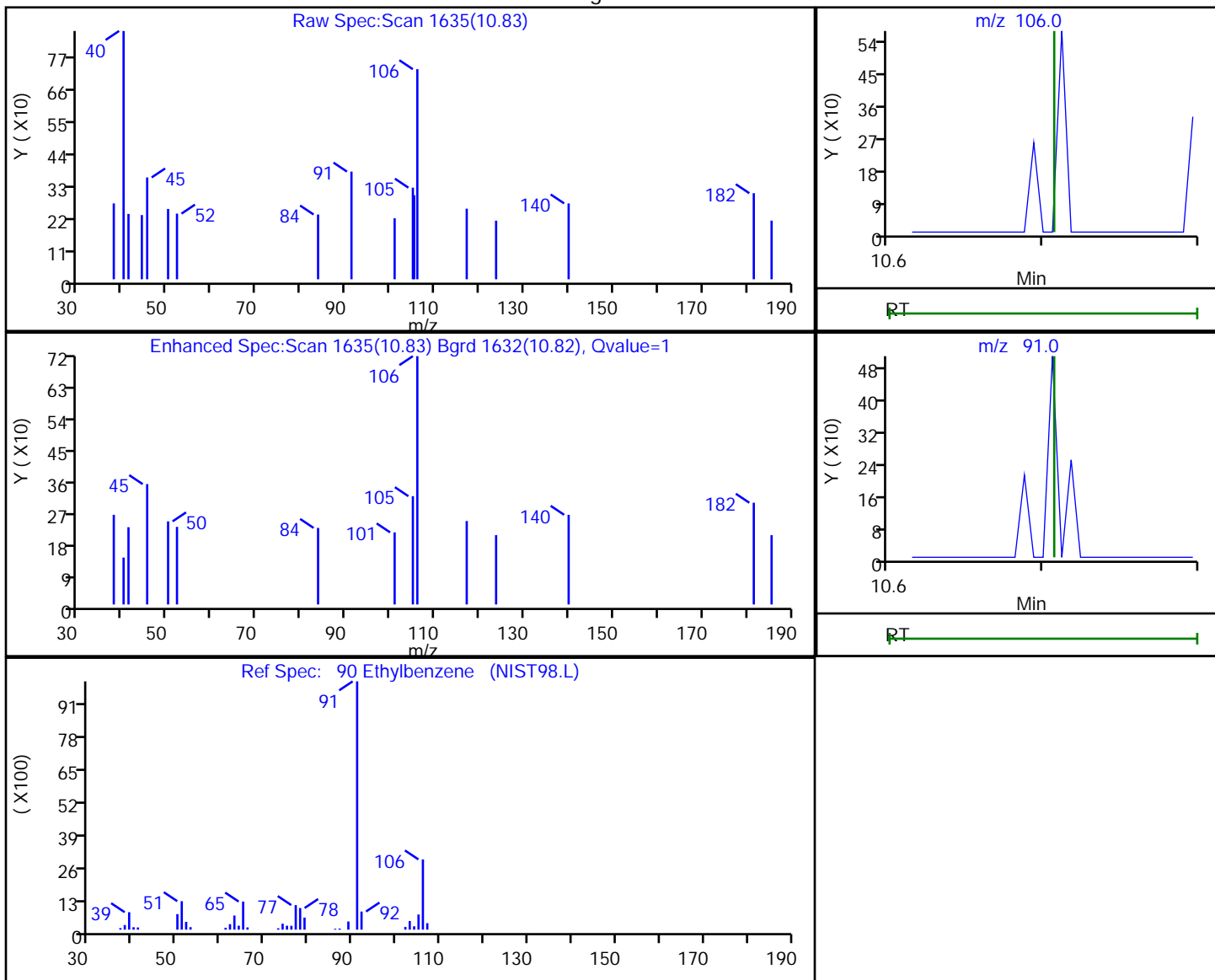
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092724.D
Injection Date: 27-Sep-2019 21:53:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-8 Lab Sample ID: 180-96180-8
Client ID: HD-COD-SW-9-0/1-0
Operator ID: 433269 ALS Bottle#: 14 Worklist Smp#: 20
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

90 Ethylbenzene, CAS: 100-41-4

Processing Results



RT	Mass	Response	Amount
10.83	106.00	619	0.242552
10.83	91.00	850	

Reviewer: bowieh, 28-Sep-2019 11:16:55

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-28-0/1-0 Lab Sample ID: 180-96180-9
 Matrix: Water Lab File ID: 5092725.D
 Analysis Method: EPA 8260C Date Collected: 09/23/2019 13:45
 Sample wt/vol: 5 (mL) Date Analyzed: 09/27/2019 22:17
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 292962 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	ND		1.0	0.90
75-01-4	Vinyl chloride	ND		1.0	0.88
74-83-9	Bromomethane	ND		1.0	0.89
75-00-3	Chloroethane	ND		1.0	0.90
75-35-4	1,1-Dichloroethene	ND		1.0	0.55
67-64-1	Acetone	ND		5.0	3.4
75-15-0	Carbon disulfide	ND		1.0	0.88
75-09-2	Methylene Chloride	ND		1.0	0.89
156-60-5	trans-1,2-Dichloroethene	ND	*	1.0	0.67
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.59
75-34-3	1,1-Dichloroethane	ND		1.0	0.63
156-59-2	cis-1,2-Dichloroethene	ND	*	1.0	0.71
74-97-5	Bromochloromethane	ND		1.0	0.63
78-93-3	2-Butanone (MEK)	ND		5.0	2.6
67-66-3	Chloroform	ND		1.0	0.60
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.60
56-23-5	Carbon tetrachloride	ND		1.0	0.88
71-43-2	Benzene	ND		1.0	0.60
107-06-2	1,2-Dichloroethane	ND		1.0	0.57
79-01-6	Trichloroethene	ND	*	1.0	0.69
78-87-5	1,2-Dichloropropane	ND		1.0	0.66
75-27-4	Bromodichloromethane	ND		1.0	0.64
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.59
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1
108-88-3	Toluene	ND	*	1.0	0.46
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.58
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.45
127-18-4	Tetrachloroethene	ND		1.0	0.47
591-78-6	2-Hexanone	ND		5.0	3.3
124-48-1	Dibromochloromethane	ND		1.0	0.84
106-93-4	1,2-Dibromoethane (EDB)	ND		1.0	0.50
108-90-7	Chlorobenzene	ND		1.0	0.50
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.57
100-41-4	Ethylbenzene	ND		1.0	0.51
1330-20-7	Xylenes, Total	ND	*	2.0	0.89
100-42-5	Styrene	ND		1.0	0.47

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-28-0/1-0 Lab Sample ID: 180-96180-9
 Matrix: Water Lab File ID: 5092725.D
 Analysis Method: EPA 8260C Date Collected: 09/23/2019 13:45
 Sample wt/vol: 5 (mL) Date Analyzed: 09/27/2019 22:17
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 292962 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	ND		1.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.60
107-13-1	Acrylonitrile	ND		20	7.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	107		70-150
2037-26-5	Toluene-d8 (Surr)	82		78-128
460-00-4	4-Bromofluorobenzene (Surr)	74		64-123
1868-53-7	Dibromofluoromethane (Surr)	122		75-147

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092725.D
 Lims ID: 180-96180-B-9
 Client ID: HD-COD-SW-28-0/1-0
 Sample Type: Client
 Inject. Date: 27-Sep-2019 22:17:30 ALS Bottle#: 15 Worklist Smp#: 21
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028863-021
 Misc. Info.: 180-96180-B-9
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 28-Sep-2019 11:18:42 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: bowieh

Date: 28-Sep-2019 11:18:42

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.537	4.532	0.005	0	167336	1000.0	
* 2 Fluorobenzene (IS)	96	7.500	7.495	0.005	98	253304	50.0	
* 3 Chlorobenzene-d5	119	10.584	10.579	0.005	87	73155	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.920	12.915	0.005	95	104858	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.782	6.777	0.005	94	88979	60.9	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.147	7.142	0.005	0	131253	53.3	
\$ 7 Toluene-d8 (Surr)	98	9.136	9.131	0.005	95	239154	41.1	
\$ 8 4-Bromofluorobenzene (Surr	95	11.758	11.766	-0.008	91	88069	36.8	
12 Chloromethane	50		1.910				ND	U
13 Vinyl chloride	62		2.038				ND	U
15 Bromomethane	94		2.379				ND	U
16 Chloroethane	64		2.543				ND	
22 1,1-Dichloroethene	96		3.565				ND	
24 Acetone	43	3.673	3.668	0.005	72	8712	13.5	a
26 Carbon disulfide	76	3.868	3.863	0.005	39	2405	0.6605	a
31 Methylene Chloride	84	4.428	4.405	0.023	13	1741	-5.61	a
33 Acrylonitrile	53		4.782				ND	
34 trans-1,2-Dichloroethene	96		4.812				ND	
35 Methyl tert-butyl ether	73		4.824				ND	
37 1,1-Dichloroethane	63		5.439				ND	
45 cis-1,2-Dichloroethene	96	6.168	6.181	-0.013	1	1197	0.7192	
46 2-Butanone (MEK)	43		6.187				ND	U
49 Chlorobromomethane	128		6.455				ND	
52 Chloroform	83	6.612	6.595	0.017	5	2832	-1.77	M
53 1,1,1-Trichloroethane	97		6.759				ND	
56 Carbon tetrachloride	117		6.929				ND	
58 Benzene	78		7.154				ND	U
59 1,2-Dichloroethane	62		7.233				ND	
64 Trichloroethene	130	7.889	7.878	0.011	8	1579	0.9337	
67 1,2-Dichloropropane	63		8.152				ND	
71 Dichlorobromomethane	83		8.432				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
74 cis-1,3-Dichloropropene	75		8.870				ND	
75 4-Methyl-2-pentanone (MIBK)	43		9.028				ND	U
76 Toluene	91	9.203	9.198	0.005	56	2850	0.3759	M
77 trans-1,3-Dichloropropene	75		9.448				ND	
79 1,1,2-Trichloroethane	97		9.636				ND	
80 Tetrachloroethene	164		9.709				ND	
82 2-Hexanone	43		9.855				ND	U
84 Chlorodibromomethane	129		10.007				ND	
85 Ethylene Dibromide	107		10.123				ND	
87 Chlorobenzene	112		10.610				ND	
89 1,1,1,2-Tetrachloroethane	131		10.701				ND	
90 Ethylbenzene	106		10.707				ND	U
91 m-Xylene & p-Xylene	106		10.835				ND	
92 o-Xylene	106		11.218				ND	
93 Styrene	104		11.242				ND	U
94 Bromoform	173		11.419				ND	
99 1,1,2,2-Tetrachloroethane	83		11.899				ND	
S 133 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Reagents:

voaWI/SHP5_00013

Amount Added: 5.00

Units: uL

Run Reagent

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092725.D

Injection Date: 27-Sep-2019 22:17:30

Instrument ID: CHHP5

Operator ID: 433269

Lims ID: 180-96180-B-9

Lab Sample ID: 180-96180-9

Worklist Smp#: 21

Client ID: HD-COD-SW-28-0/1-0

Purge Vol: 5.000 mL

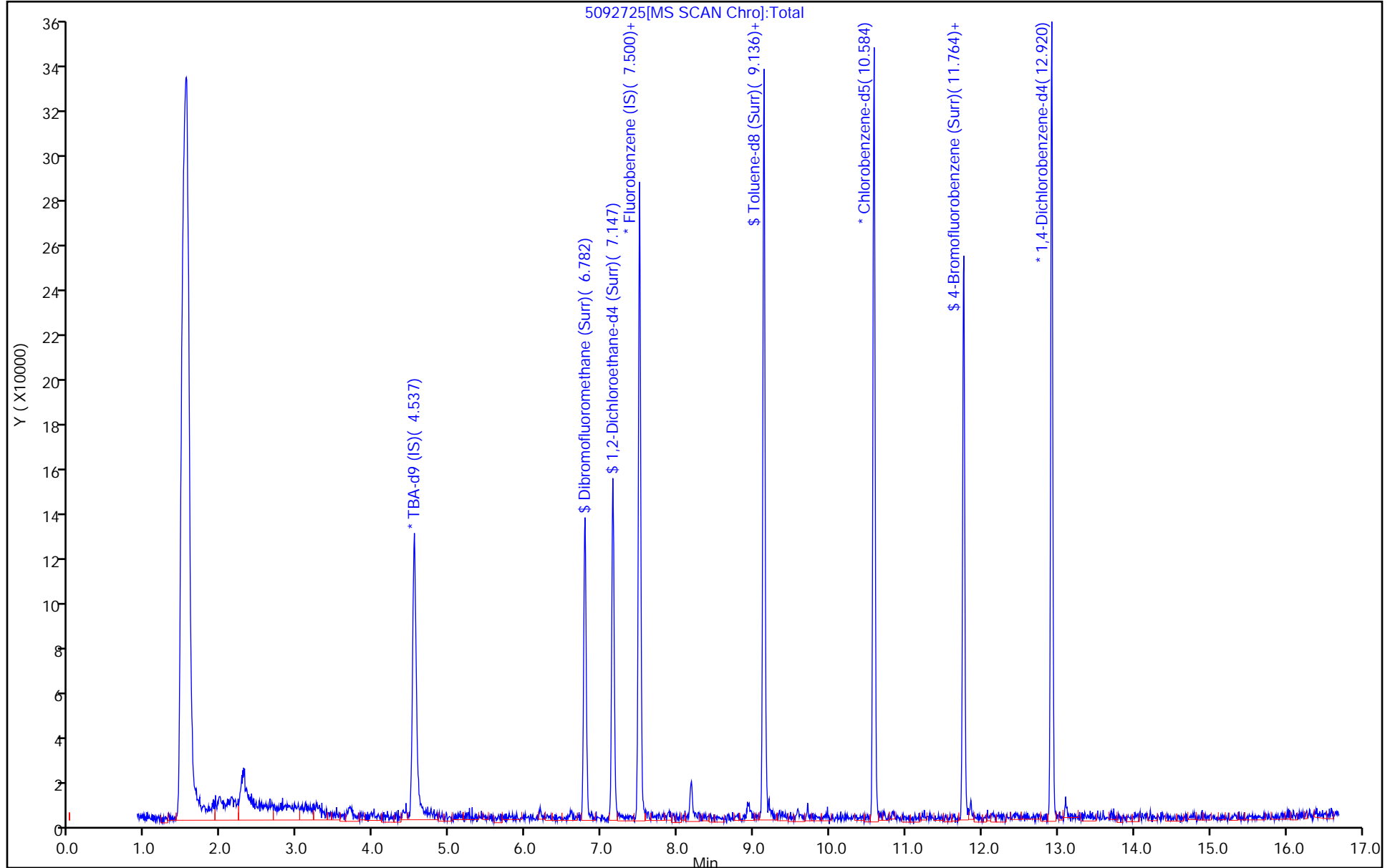
Dil. Factor: 1.0000

ALS Bottle#: 15

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Recovery Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092725.D
 Lims ID: 180-96180-B-9
 Client ID: HD-COD-SW-28-0/1-0
 Sample Type: Client
 Inject. Date: 27-Sep-2019 22:17:30 ALS Bottle#: 15 Worklist Smp#: 21
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028863-021
 Misc. Info.: 180-96180-B-9
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 28-Sep-2019 11:18:42 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: bowieh

Date: 28-Sep-2019 11:18:42

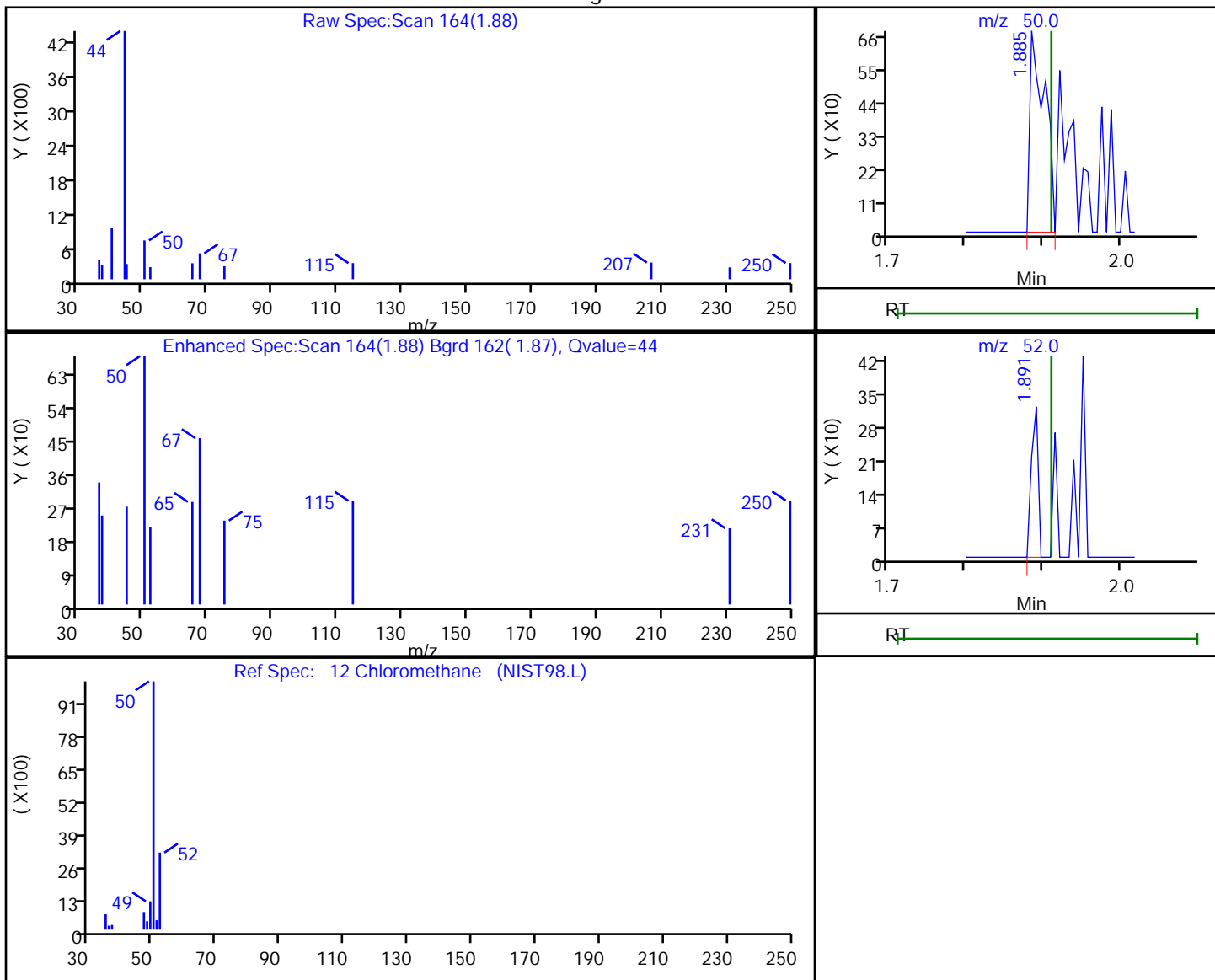
Compound	Amount Added	Amount Recovered	% Rec.
\$ 5 Dibromofluoromethane (Surr)	50.0	60.9	121.71
\$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	53.3	106.57
\$ 7 Toluene-d8 (Surr)	50.0	41.1	82.13
\$ 8 4-Bromofluorobenzene (Surr)	50.0	36.8	73.57

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092725.D
Injection Date: 27-Sep-2019 22:17:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-9 Lab Sample ID: 180-96180-9
Client ID: HD-COD-SW-28-0/1-0
Operator ID: 433269 ALS Bottle#: 15 Worklist Smp#: 21
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

12 Chloromethane, CAS: 74-87-3

Processing Results



RT	Mass	Response	Amount
1.88	50.00	911	0.420120
1.89	52.00	192	

Reviewer: bowieh, 28-Sep-2019 11:17:16

Audit Action: Marked Compound Undetected

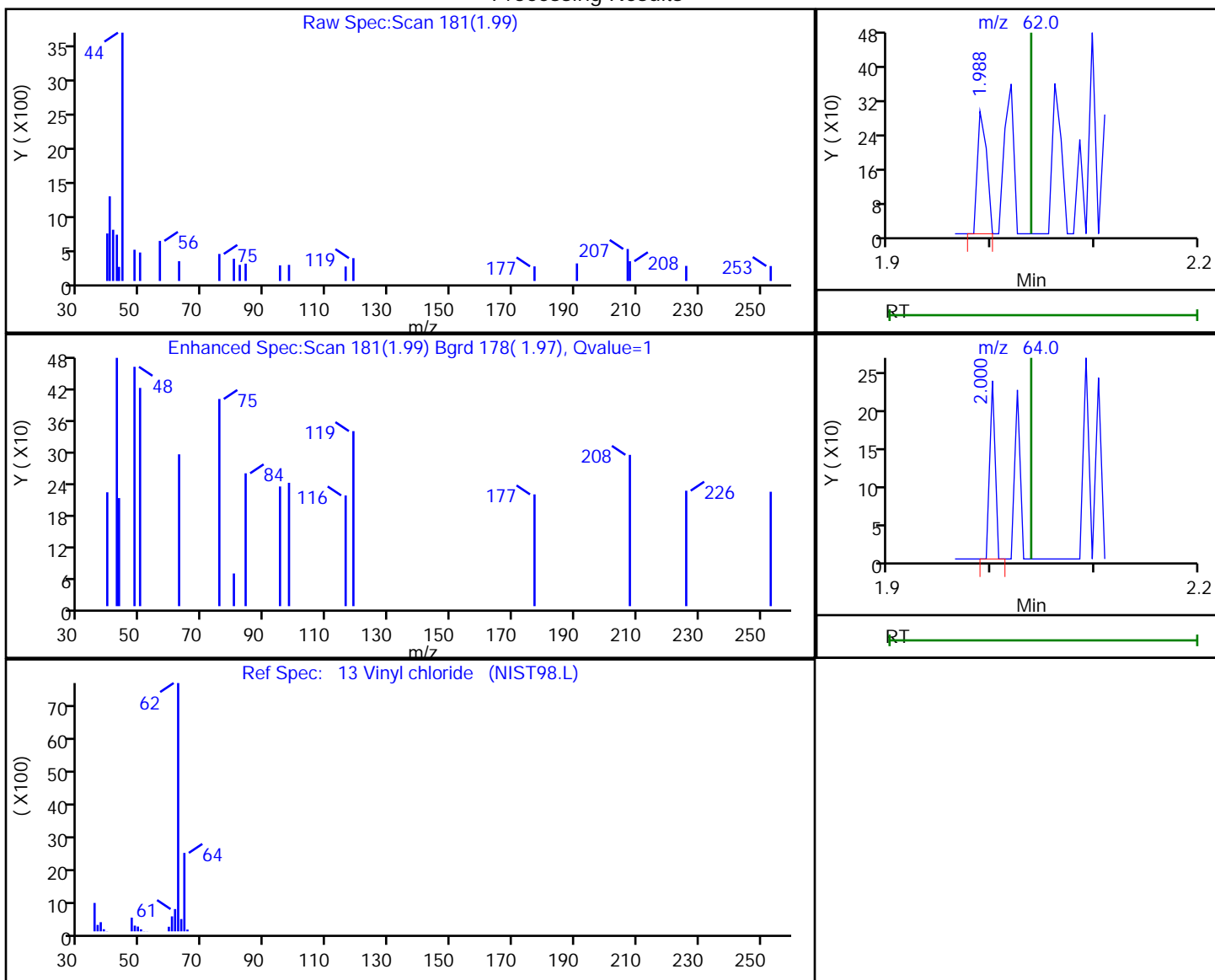
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092725.D
 Injection Date: 27-Sep-2019 22:17:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-9 Lab Sample ID: 180-96180-9
 Client ID: HD-COD-SW-28-0/1-0
 Operator ID: 433269 ALS Bottle#: 15 Worklist Smp#: 21
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

13 Vinyl chloride, CAS: 75-01-4

Processing Results



RT	Mass	Response	Amount
1.99	62.00	179	0.087964
2.00	64.00	85	

Reviewer: bowieh, 28-Sep-2019 11:17:17

Audit Action: Marked Compound Undetected

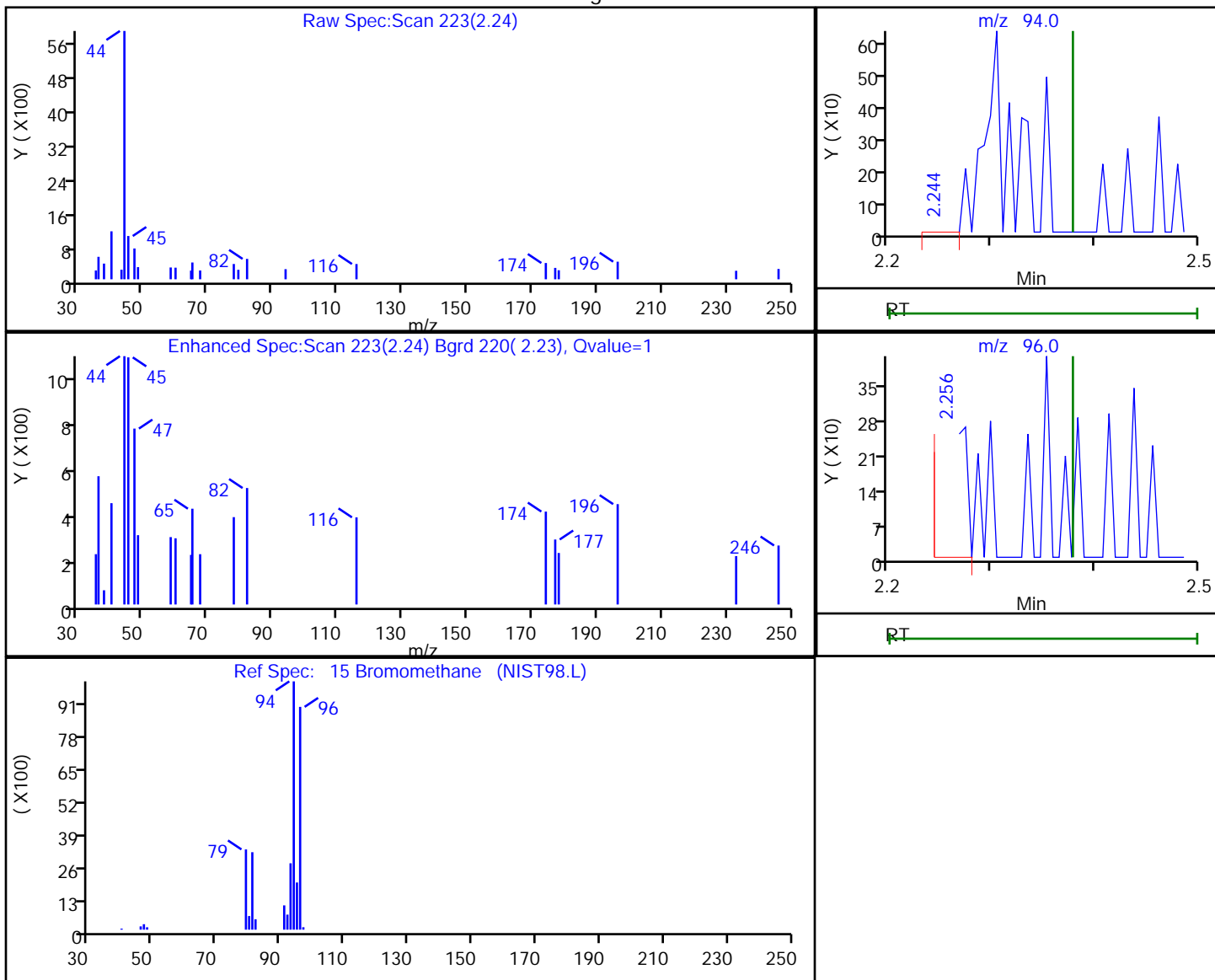
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092725.D
Injection Date: 27-Sep-2019 22:17:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-9 Lab Sample ID: 180-96180-9
Client ID: HD-COD-SW-28-0/1-0
Operator ID: 433269 ALS Bottle#: 15 Worklist Smp#: 21
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

15 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
2.24	94.00	168	0.108051
2.26	96.00	303	

Reviewer: bowieh, 28-Sep-2019 11:17:18

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

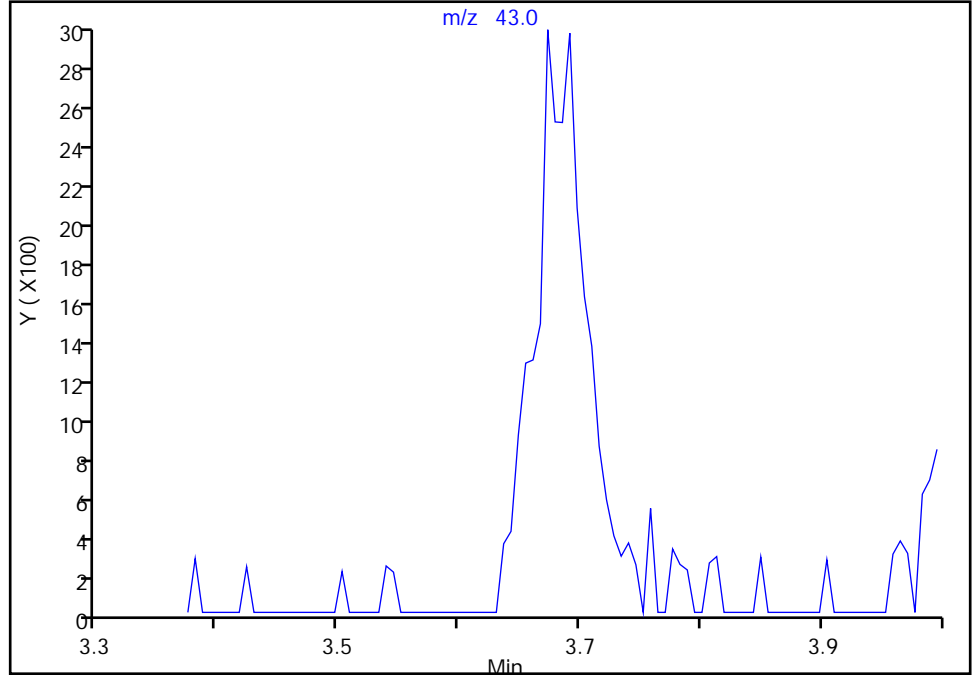
Data File:	\\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092725.D				
Injection Date:	27-Sep-2019 22:17:30	Instrument ID:	CHHP5		
Lims ID:	180-96180-B-9	Lab Sample ID:	180-96180-9		
Client ID:	HD-COD-SW-28-0/1-0				
Operator ID:	433269	ALS Bottle#:	15	Worklist Smp#:	21
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector:	MS SCAN		

24 Acetone, CAS: 67-64-1

Signal: 1

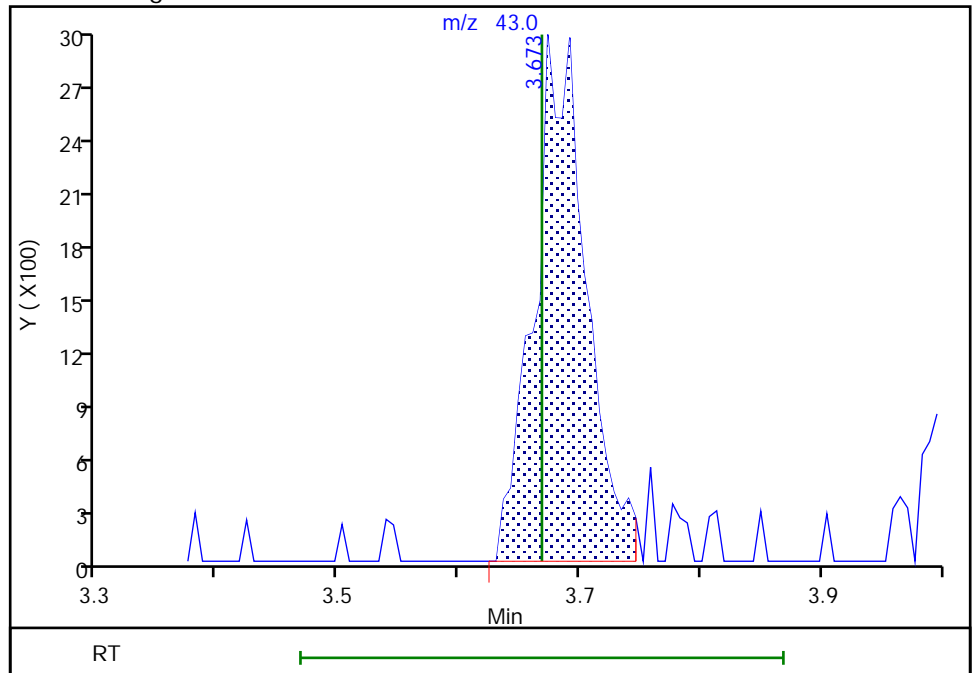
Not Detected
Expected RT: 3.67

Processing Integration Results



Manual Integration Results

RT: 3.67
Area: 8712
Amount: 13.515399
Amount Units: ng



Eurofins TestAmerica, Pittsburgh

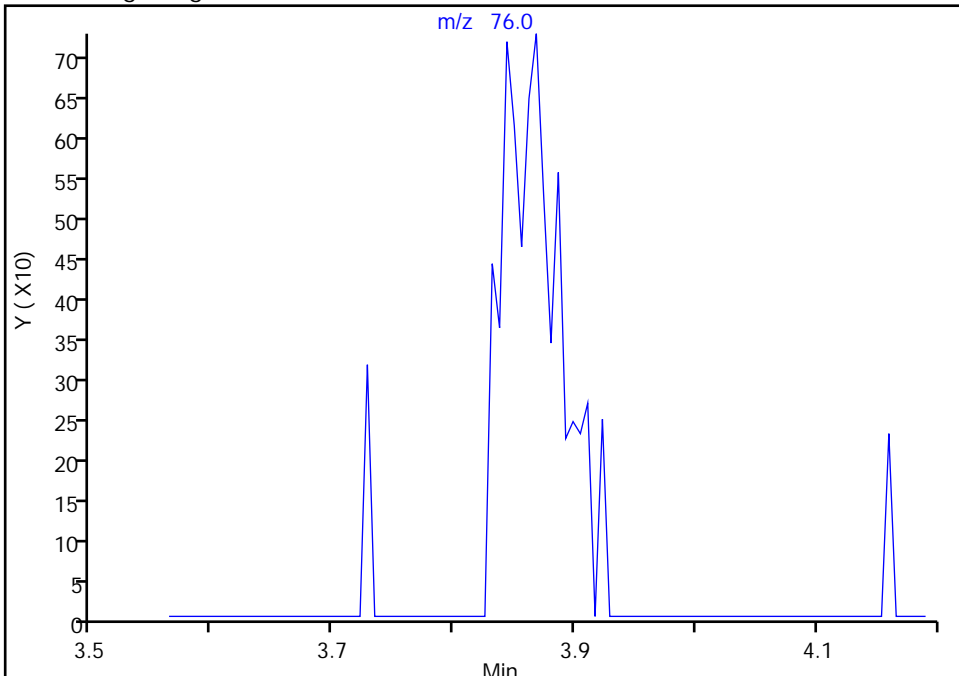
Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092725.D
Injection Date: 27-Sep-2019 22:17:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-9 Lab Sample ID: 180-96180-9
Client ID: HD-COD-SW-28-0/1-0
Operator ID: 433269 ALS Bottle#: 15 Worklist Smp#: 21
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

26 Carbon disulfide, CAS: 75-15-0

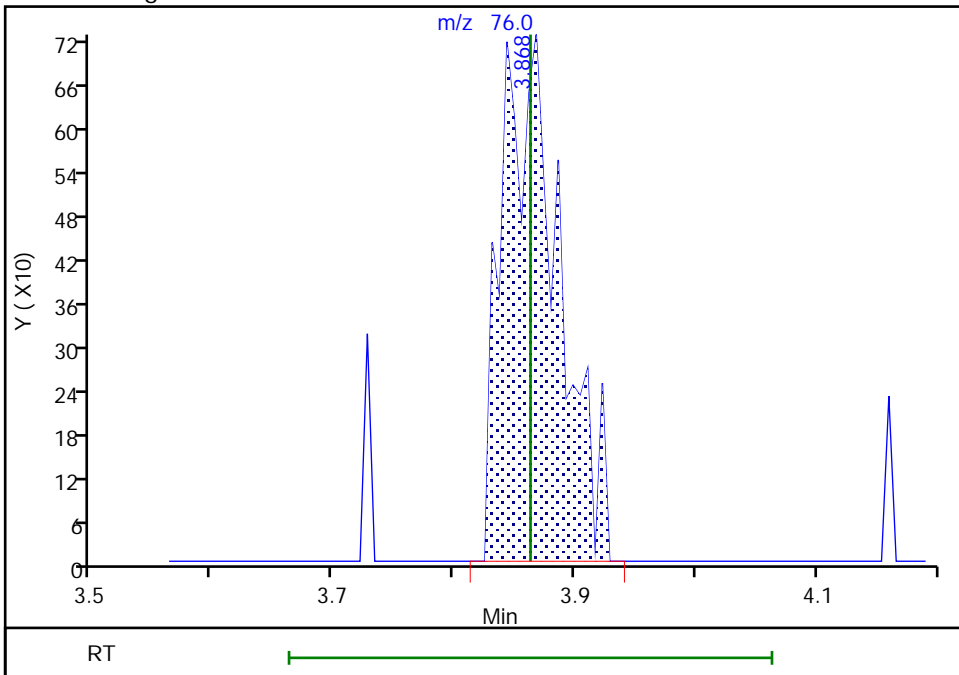
Signal: 1

Not Detected
Expected RT: 3.86

Processing Integration Results



Manual Integration Results



RT: 3.87
Area: 2405
Amount: 0.660503
Amount Units: ng

Eurofins TestAmerica, Pittsburgh

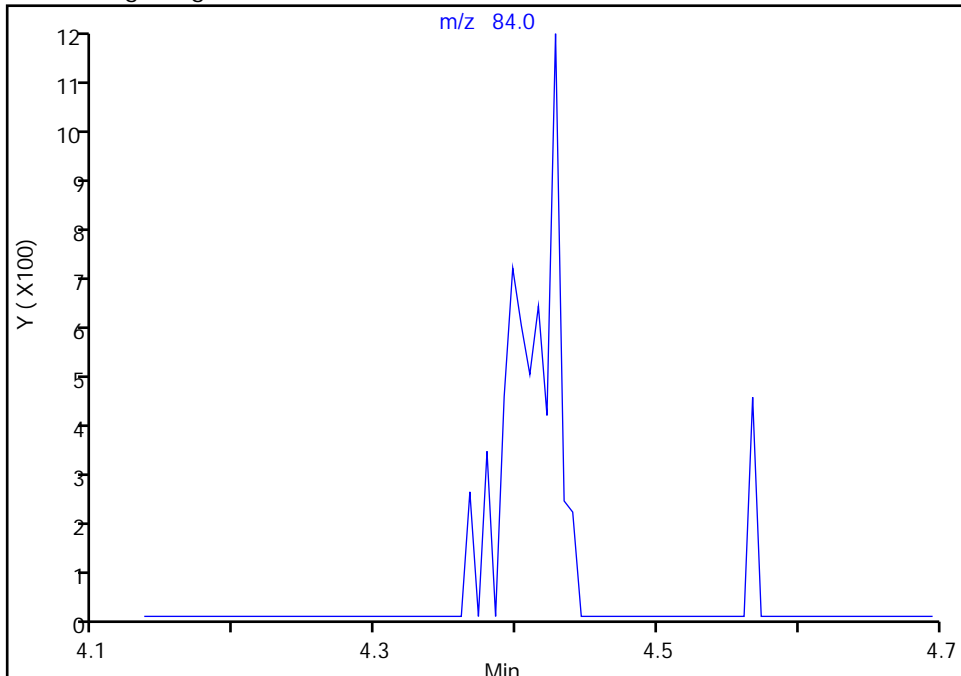
Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092725.D
Injection Date: 27-Sep-2019 22:17:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-9 Lab Sample ID: 180-96180-9
Client ID: HD-COD-SW-28-0/1-0
Operator ID: 433269 ALS Bottle#: 15 Worklist Smp#: 21
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2

Signal: 1

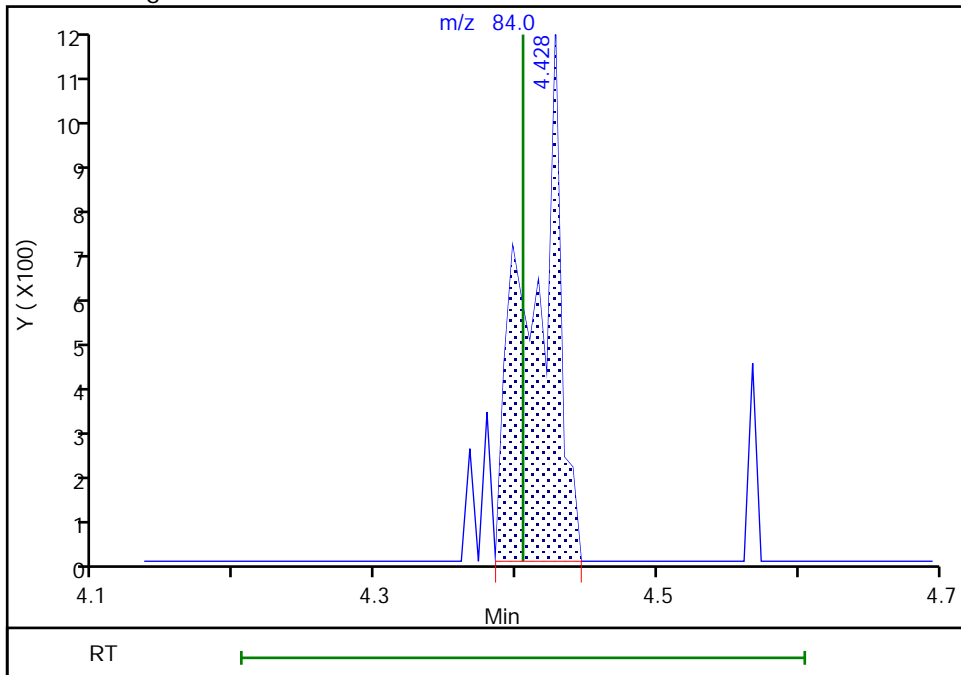
Not Detected
Expected RT: 4.40

Processing Integration Results



RT: 4.43
Area: 1741
Amount: -5.611286
Amount Units: ng

Manual Integration Results



Reviewer: bowieh, 28-Sep-2019 11:17:37
Audit Action: Assigned Compound ID

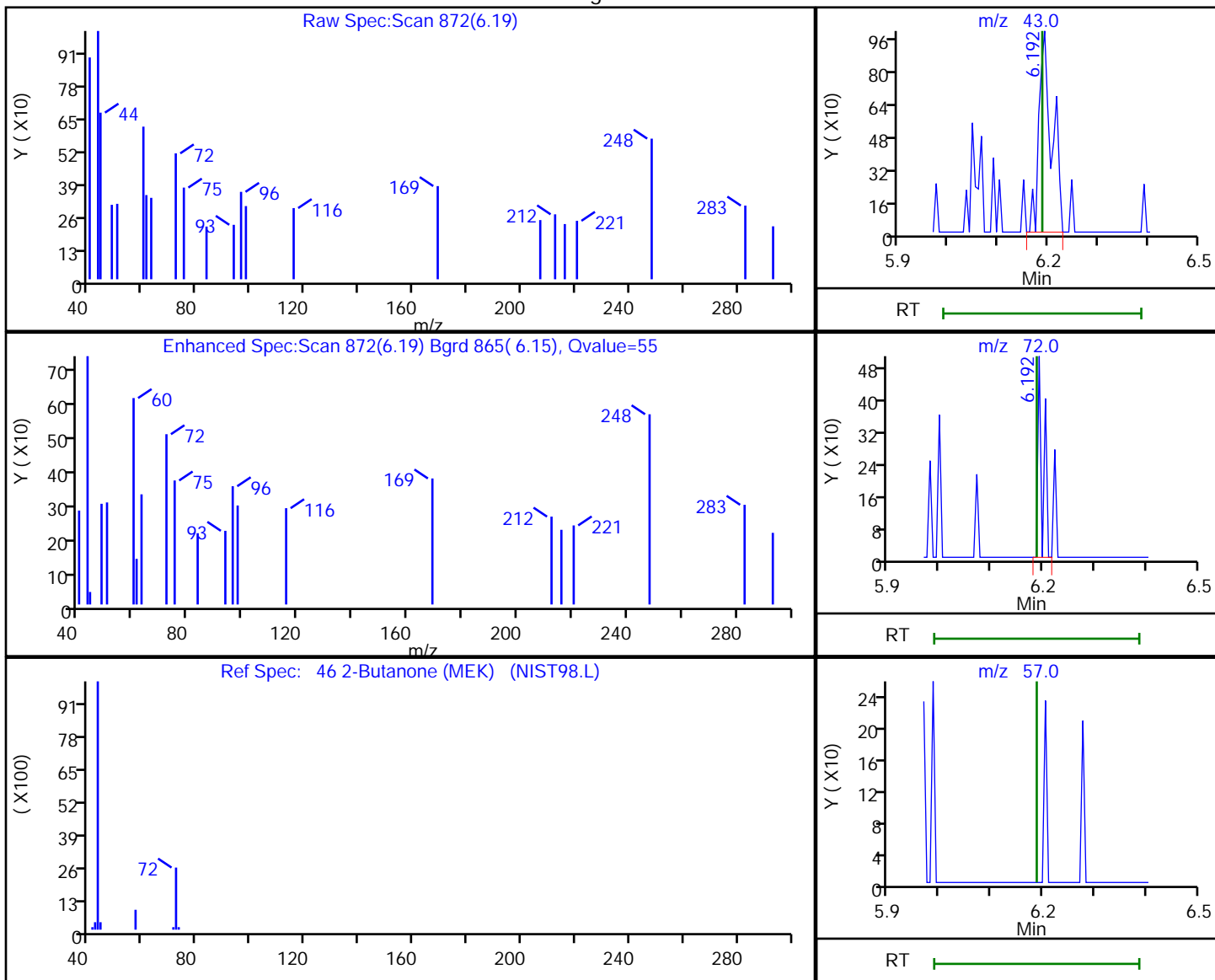
Audit Reason: Peak assignment corrected

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092725.D
 Injection Date: 27-Sep-2019 22:17:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-9 Lab Sample ID: 180-96180-9
 Client ID: HD-COD-SW-28-0/1-0
 Operator ID: 433269 ALS Bottle#: 15 Worklist Smp#: 21
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

46 2-Butanone (MEK), CAS: 78-93-3

Processing Results



RT	Mass	Response	Amount
6.19	43.00	1794	2.346048
6.19	72.00	329	
6.19	57.00	0	

Reviewer: bowieh, 28-Sep-2019 11:17:52

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

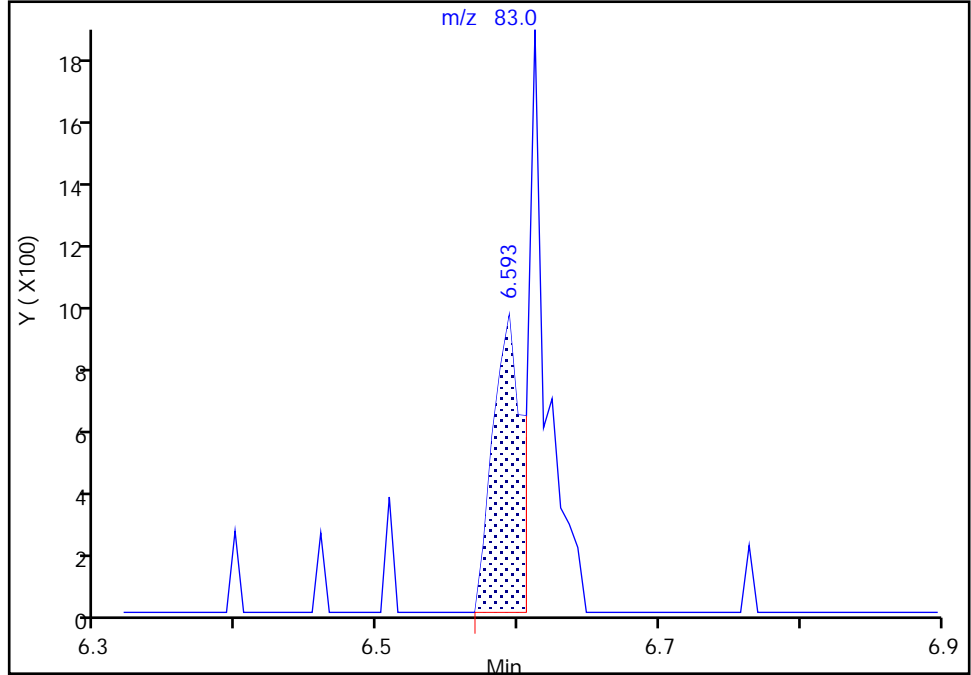
Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092725.D
Injection Date: 27-Sep-2019 22:17:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-9 Lab Sample ID: 180-96180-9
Client ID: HD-COD-SW-28-0/1-0
Operator ID: 433269 ALS Bottle#: 15 Worklist Smp#: 21
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

52 Chloroform, CAS: 67-66-3

Signal: 1

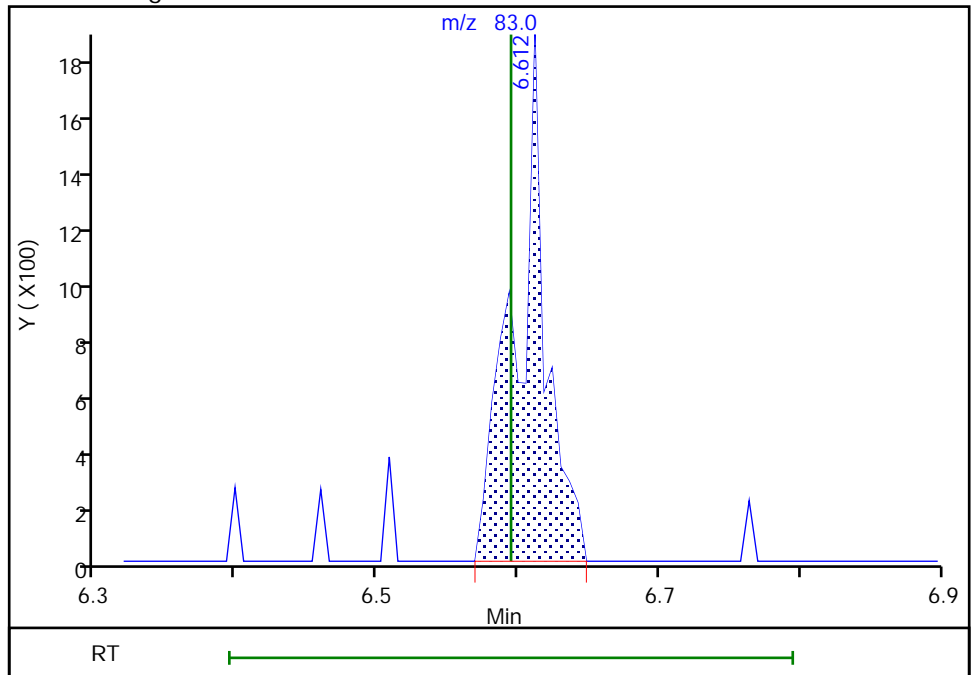
RT: 6.59
Area: 1384
Amount: -2.233812
Amount Units: ng

Processing Integration Results



RT: 6.61
Area: 2832
Amount: -1.772260
Amount Units: ng

Manual Integration Results



Reviewer: bowieh, 28-Sep-2019 11:18:10
Audit Action: Manually Integrated

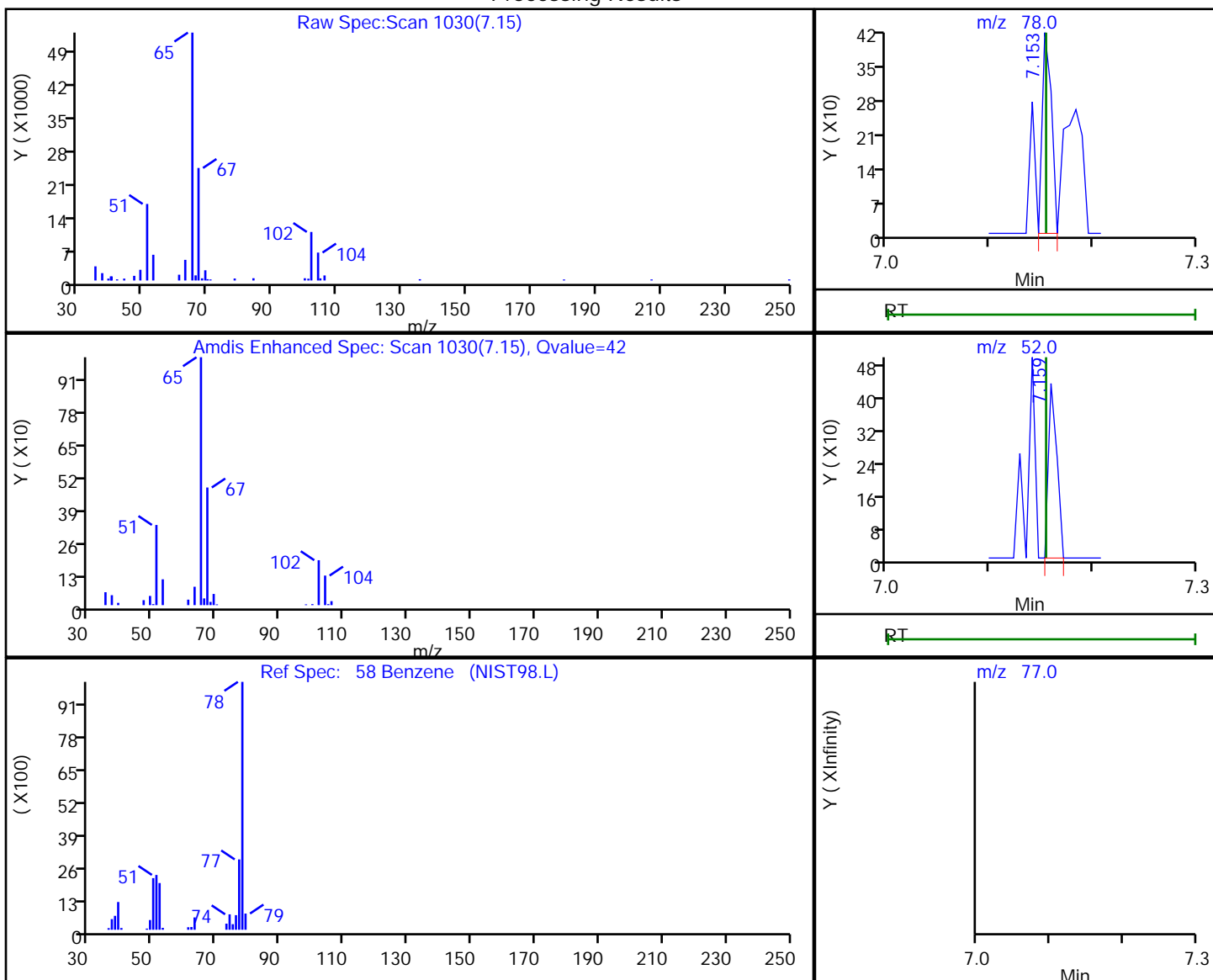
Audit Reason: Poor chromatography
Page 261 of 583

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092725.D
 Injection Date: 27-Sep-2019 22:17:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-9 Lab Sample ID: 180-96180-9
 Client ID: HD-COD-SW-28-0/1-0
 Operator ID: 433269 ALS Bottle#: 15 Worklist Smp#: 21
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

58 Benzene, CAS: 71-43-2

Processing Results



RT	Mass	Response	Amount
7.15	78.00	257	0.041076
7.16	52.00	248	
7.15	77.00	0	

Reviewer: bowieh, 28-Sep-2019 11:18:13

Audit Action: Marked Compound Undetected

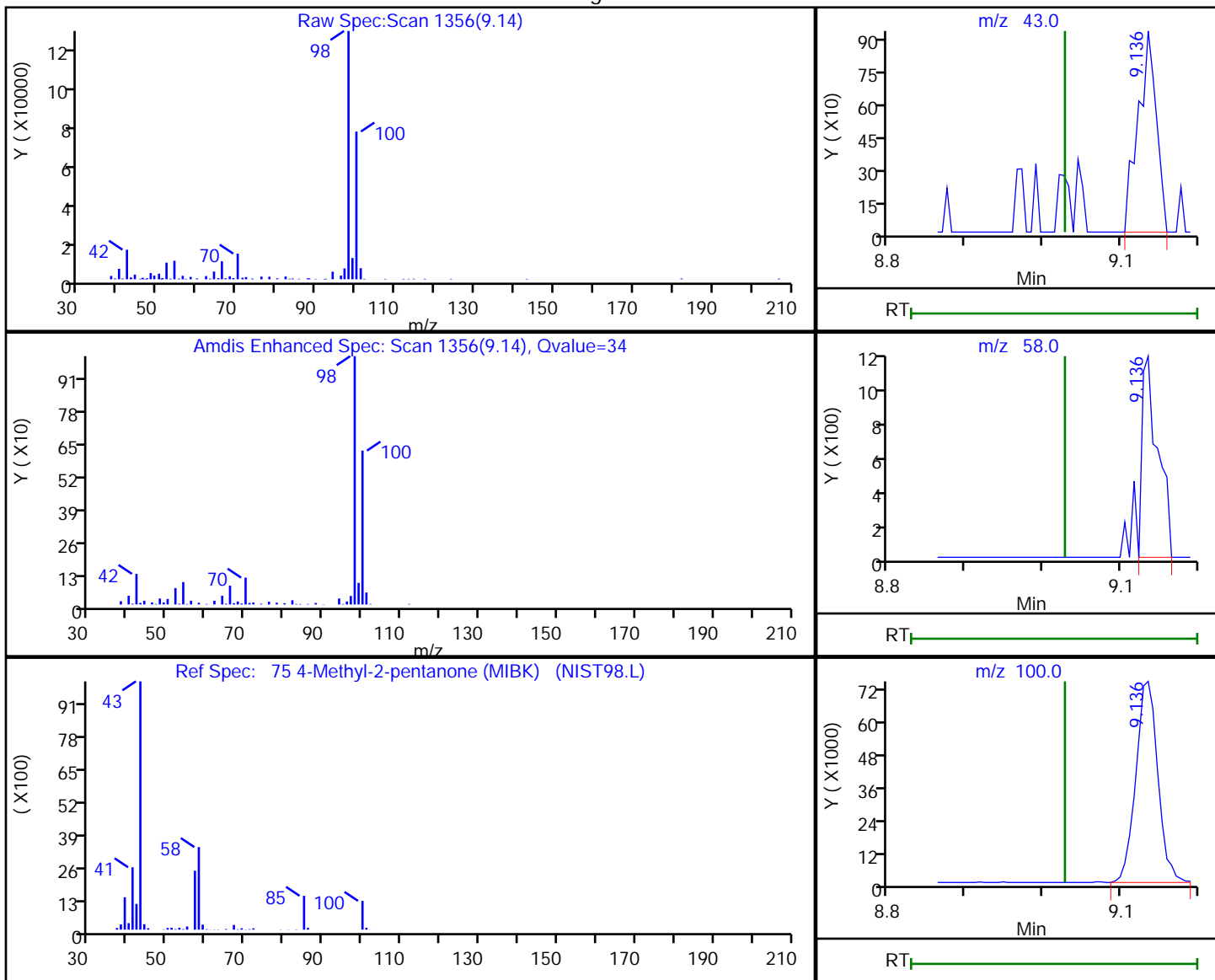
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092725.D
 Injection Date: 27-Sep-2019 22:17:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-9 Lab Sample ID: 180-96180-9
 Client ID: HD-COD-SW-28-0/1-0
 Operator ID: 433269 ALS Bottle#: 15 Worklist Smp#: 21
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

75 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1

Processing Results



RT	Mass	Response	Amount
9.14	43.00	1537	0.921046
9.14	58.00	1691	
9.14	100.00	148949	

Reviewer: bowieh, 28-Sep-2019 11:18:18

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

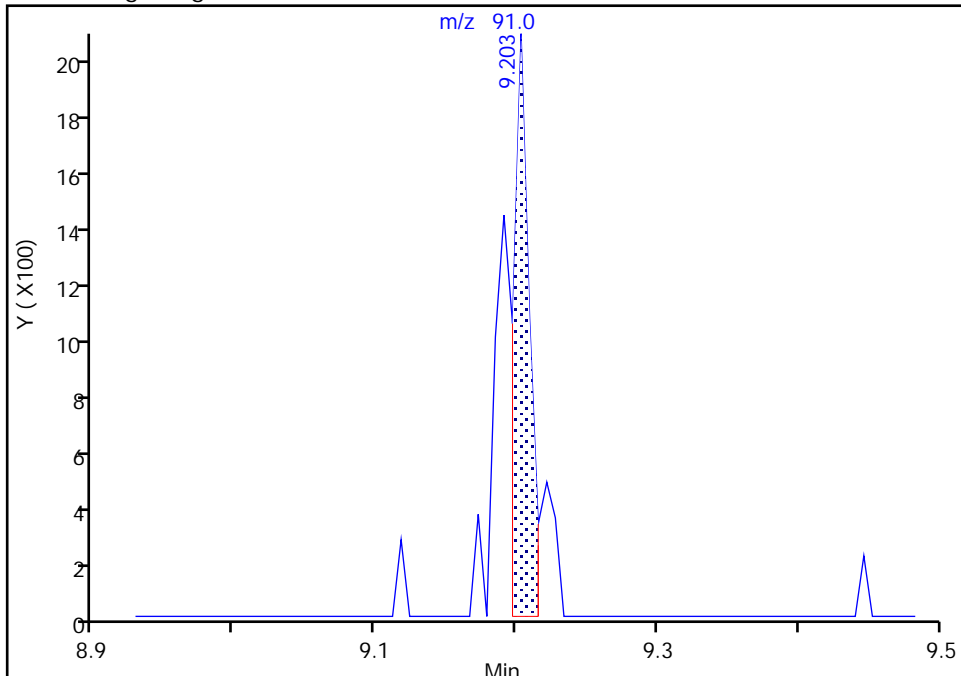
Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092725.D
Injection Date: 27-Sep-2019 22:17:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-9 Lab Sample ID: 180-96180-9
Client ID: HD-COD-SW-28-0/1-0
Operator ID: 433269 ALS Bottle#: 15 Worklist Smp#: 21
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

76 Toluene, CAS: 108-88-3

Signal: 1

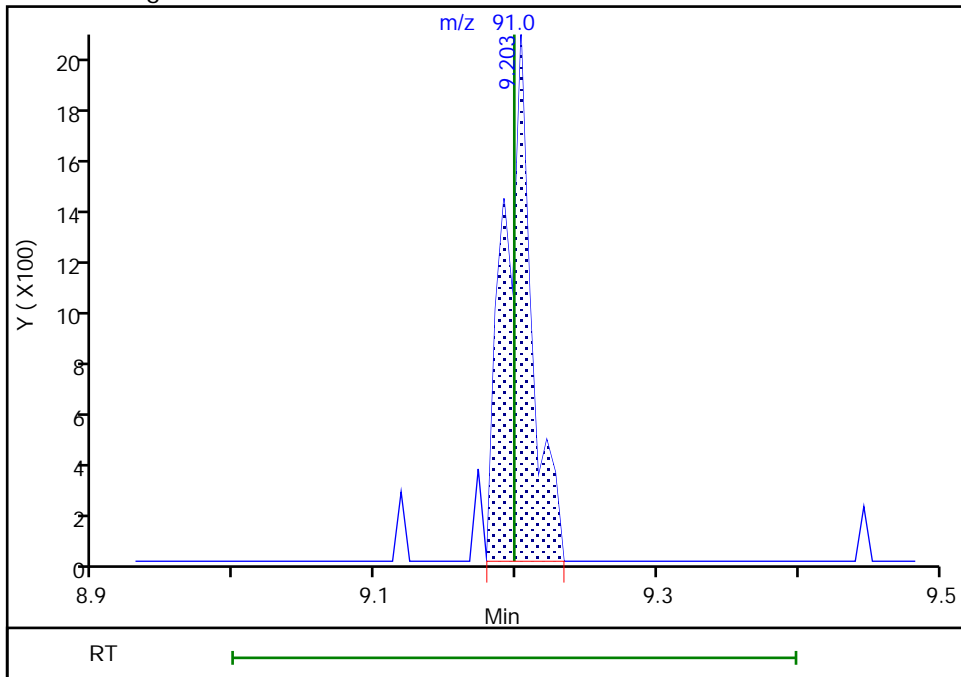
RT: 9.20
Area: 1655
Amount: 0.218293
Amount Units: ng

Processing Integration Results



RT: 9.20
Area: 2850
Amount: 0.375912
Amount Units: ng

Manual Integration Results



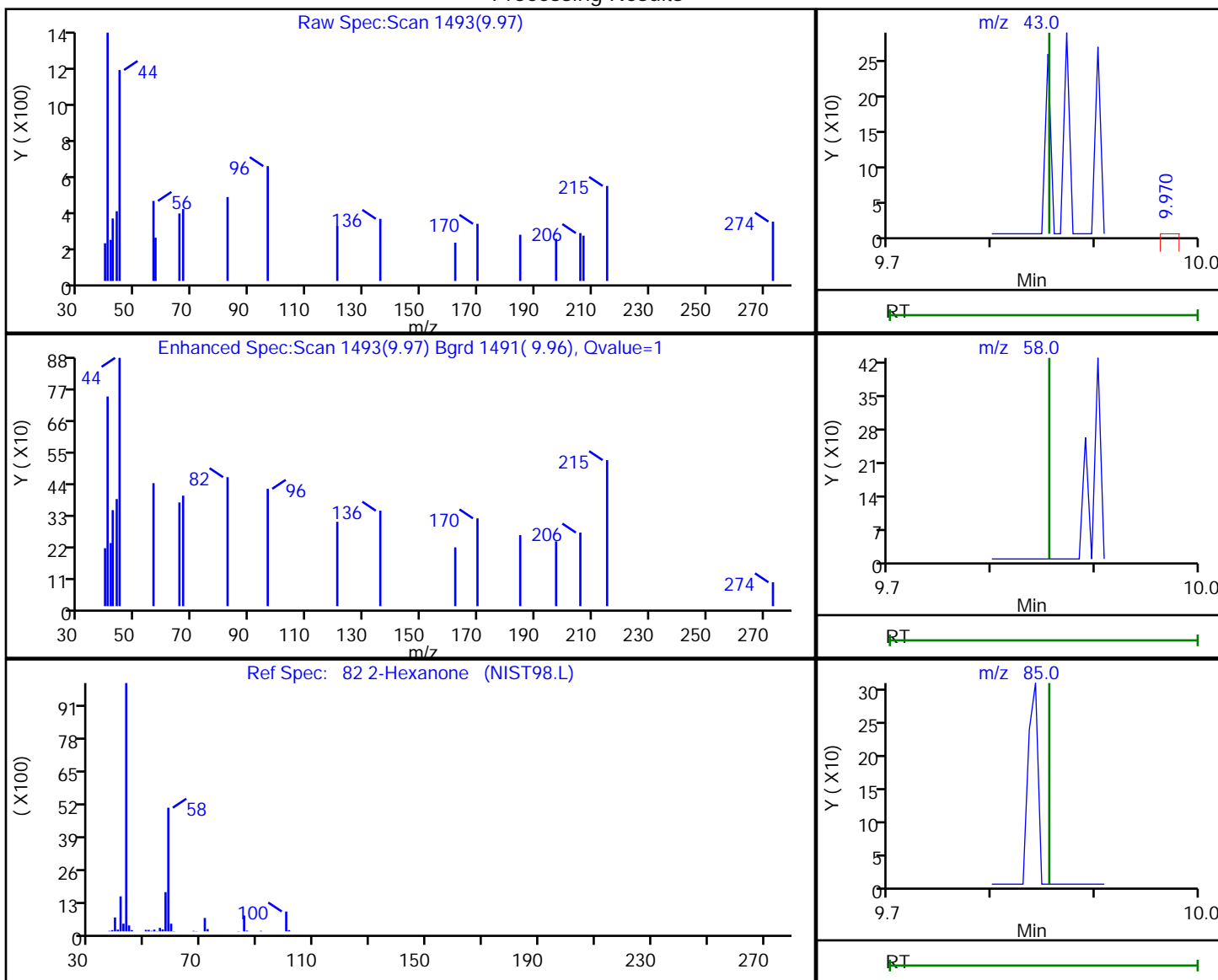
Reviewer: bowieh, 28-Sep-2019 11:18:29
Audit Action: Manually Integrated

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092725.D
 Injection Date: 27-Sep-2019 22:17:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-9 Lab Sample ID: 180-96180-9
 Client ID: HD-COD-SW-28-0/1-0
 Operator ID: 433269 ALS Bottle#: 15 Worklist Smp#: 21
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

82 2-Hexanone, CAS: 591-78-6

Processing Results



RT	Mass	Response	Amount
9.97	43.00	258	0.213797
9.86	58.00	0	
9.86	85.00	0	

Reviewer: bowieh, 28-Sep-2019 11:18:32

Audit Action: Marked Compound Undetected

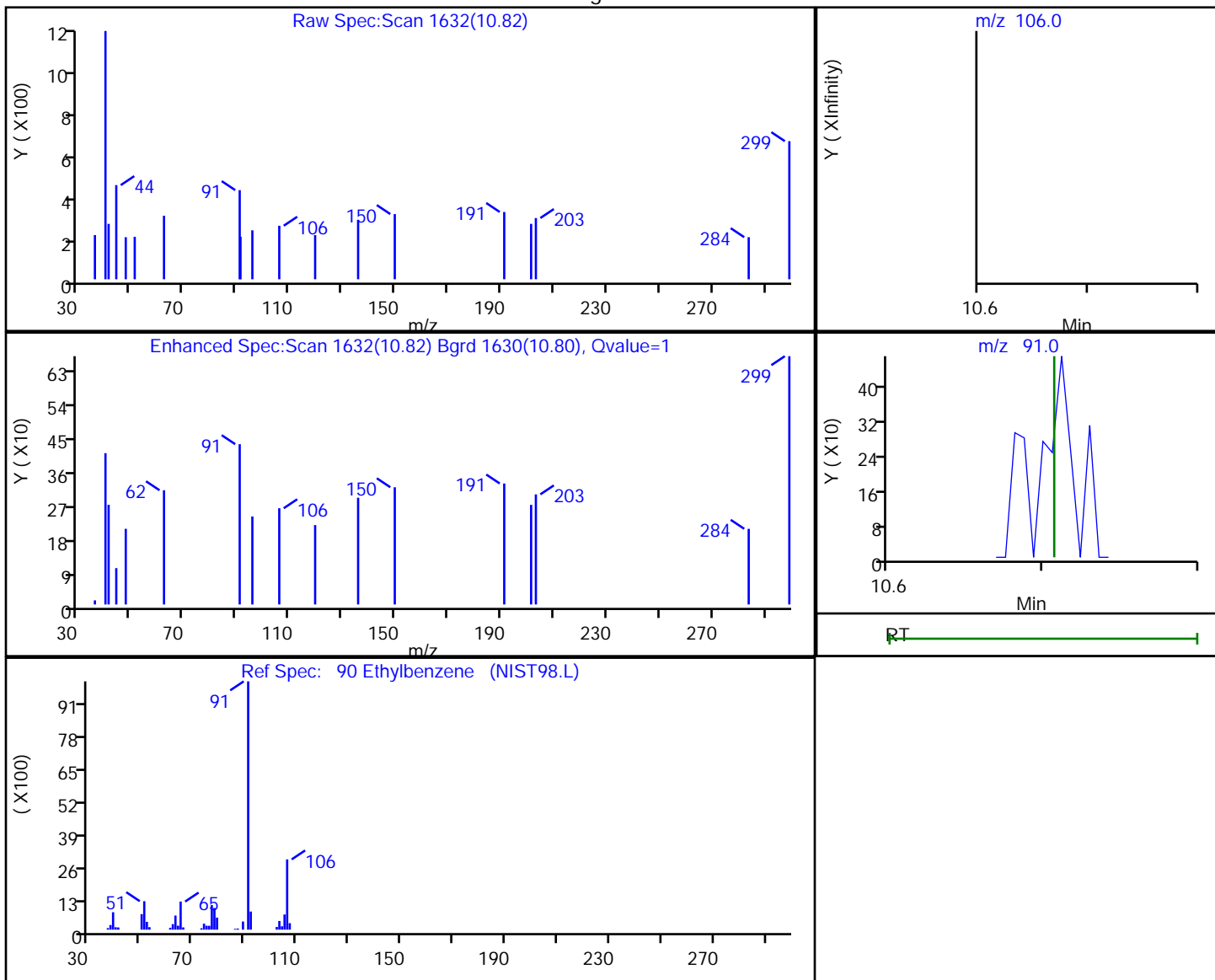
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092725.D
Injection Date: 27-Sep-2019 22:17:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-9 Lab Sample ID: 180-96180-9
Client ID: HD-COD-SW-28-0/1-0
Operator ID: 433269 ALS Bottle#: 15 Worklist Smp#: 21
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

90 Ethylbenzene, CAS: 100-41-4

Processing Results



RT	Mass	Response	Amount
10.82	106.00	94	0.036141
10.82	91.00	596	

Reviewer: bowieh, 28-Sep-2019 11:18:35

Audit Action: Marked Compound Undetected

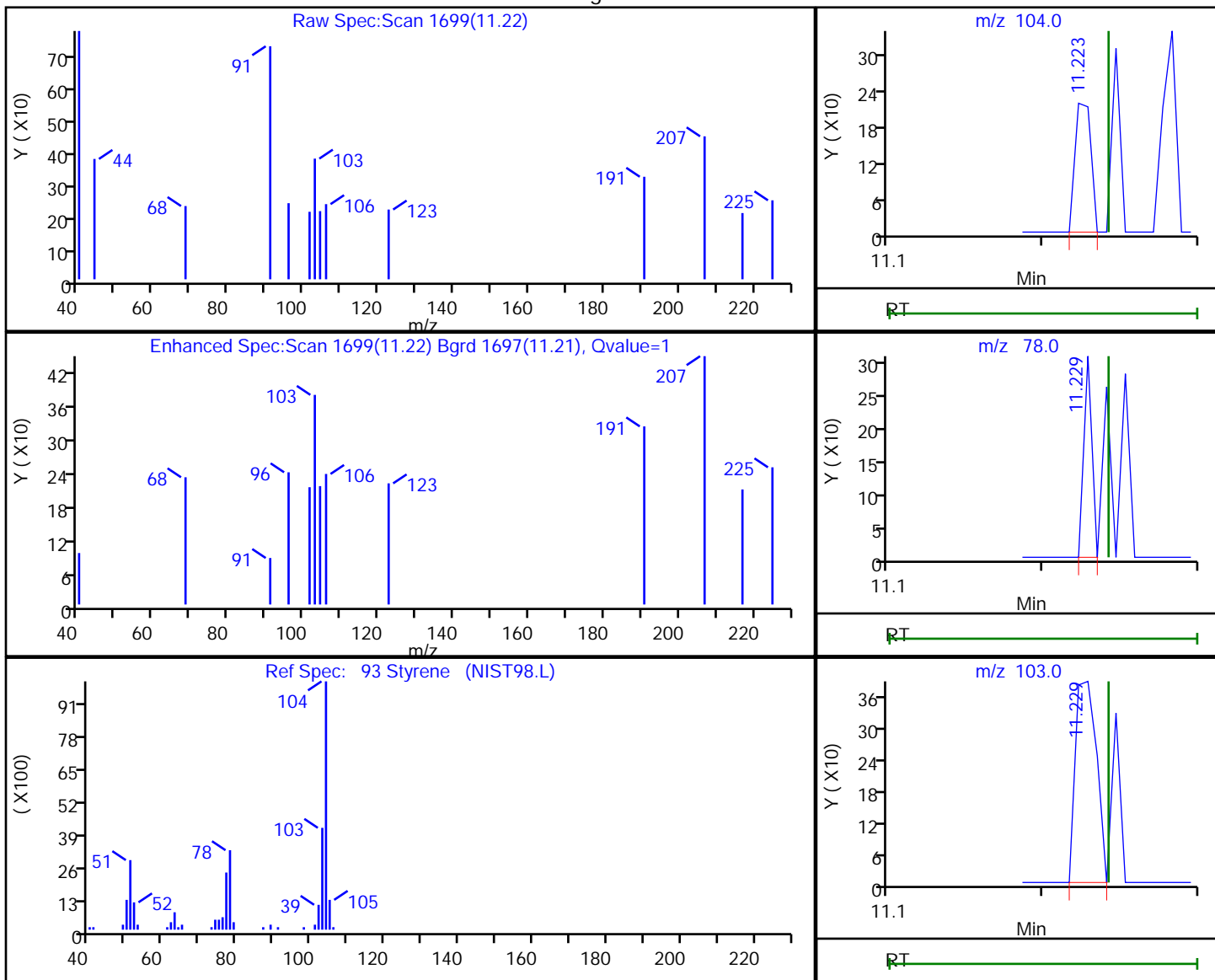
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092725.D
Injection Date: 27-Sep-2019 22:17:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-9 Lab Sample ID: 180-96180-9
Client ID: HD-COD-SW-28-0/1-0
Operator ID: 433269 ALS Bottle#: 15 Worklist Smp#: 21
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

93 Styrene, CAS: 100-42-5

Processing Results



RT	Mass	Response	Amount
11.22	104.00	154	0.028630
11.23	78.00	112	
11.23	103.00	368	

Reviewer: bowieh, 28-Sep-2019 11:18:37

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-15-0/1-0 Lab Sample ID: 180-96180-10
 Matrix: Water Lab File ID: 5092816.D
 Analysis Method: EPA 8260C Date Collected: 09/23/2019 14:13
 Sample wt/vol: 5 (mL) Date Analyzed: 09/28/2019 16:15
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 293070 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	ND		1.0	0.90
75-01-4	Vinyl chloride	ND		1.0	0.88
74-83-9	Bromomethane	ND		1.0	0.89
75-00-3	Chloroethane	ND		1.0	0.90
75-35-4	1,1-Dichloroethene	ND		1.0	0.55
67-64-1	Acetone	ND		5.0	3.4
75-15-0	Carbon disulfide	ND		1.0	0.88
75-09-2	Methylene Chloride	ND		1.0	0.89
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.67
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.59
75-34-3	1,1-Dichloroethane	ND		1.0	0.63
156-59-2	cis-1,2-Dichloroethene	0.79	J	1.0	0.71
74-97-5	Bromochloromethane	ND		1.0	0.63
78-93-3	2-Butanone (MEK)	ND		5.0	2.6
67-66-3	Chloroform	ND		1.0	0.60
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.60
56-23-5	Carbon tetrachloride	ND		1.0	0.88
71-43-2	Benzene	ND		1.0	0.60
107-06-2	1,2-Dichloroethane	ND		1.0	0.57
79-01-6	Trichloroethene	0.96	J	1.0	0.69
78-87-5	1,2-Dichloropropane	ND		1.0	0.66
75-27-4	Bromodichloromethane	ND		1.0	0.64
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.59
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1
108-88-3	Toluene	ND		1.0	0.46
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.58
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.45
127-18-4	Tetrachloroethene	2.9		1.0	0.47
591-78-6	2-Hexanone	ND		5.0	3.3
124-48-1	Dibromochloromethane	ND		1.0	0.84
106-93-4	1,2-Dibromoethane (EDB)	ND		1.0	0.50
108-90-7	Chlorobenzene	ND		1.0	0.50
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.57
100-41-4	Ethylbenzene	ND		1.0	0.51
1330-20-7	Xylenes, Total	ND		2.0	0.89
100-42-5	Styrene	ND		1.0	0.47

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-15-0/1-0 Lab Sample ID: 180-96180-10
 Matrix: Water Lab File ID: 5092816.D
 Analysis Method: EPA 8260C Date Collected: 09/23/2019 14:13
 Sample wt/vol: 5 (mL) Date Analyzed: 09/28/2019 16:15
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 293070 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	ND		1.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.60
107-13-1	Acrylonitrile	ND		20	7.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97	^c	70-150
2037-26-5	Toluene-d8 (Surr)	93		78-128
460-00-4	4-Bromofluorobenzene (Surr)	82		64-123
1868-53-7	Dibromofluoromethane (Surr)	112		75-147

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190928-28871.b\5092816.D
 Lims ID: 180-96180-C-10
 Client ID: HD-COD-SW-15-0/1-0
 Sample Type: Client
 Inject. Date: 28-Sep-2019 16:15:30 ALS Bottle#: 10 Worklist Smp#: 16
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028871-016
 Misc. Info.: 180-96180-C-10
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190928-28871.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 01-Oct-2019 09:21:32 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0306

First Level Reviewer: bowieh

Date: 01-Oct-2019 09:21:32

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.528	4.550	-0.022	0	196682	1000.0	
* 2 Fluorobenzene (IS)	96	7.497	7.494	0.003	98	299425	50.0	
* 3 Chlorobenzene-d5	119	10.587	10.585	0.002	88	76920	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.917	12.921	-0.004	96	114773	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.779	6.777	0.002	93	96606	55.9	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.150	7.142	0.008	0	141277	48.5	
\$ 7 Toluene-d8 (Surr)	98	9.133	9.131	0.002	95	283316	46.3	
\$ 8 4-Bromofluorobenzene (Surr	95	11.761	11.765	-0.004	89	103437	41.1	
12 Chloromethane	50		1.910				ND	U
13 Vinyl chloride	62		2.044				ND	
15 Bromomethane	94		2.372				ND	U
16 Chloroethane	64		2.518				ND	U
22 1,1-Dichloroethene	96		3.565				ND	
24 Acetone	43	3.682	3.680	0.002	31	3128	4.11	
26 Carbon disulfide	76		3.863				ND	
31 Methylene Chloride	84		4.398				ND	U
33 Acrylonitrile	53		4.787				ND	
34 trans-1,2-Dichloroethene	96		4.812				ND	
35 Methyl tert-butyl ether	73		4.824				ND	
37 1,1-Dichloroethane	63		5.438				ND	
45 cis-1,2-Dichloroethene	96	6.183	6.174	0.009	78	7760	3.94	
46 2-Butanone (MEK)	43		6.186				ND	
49 Chlorobromomethane	128		6.454				ND	
52 Chloroform	83	6.614	6.600	0.014	87	6317	-0.9716	
53 1,1,1-Trichloroethane	97		6.752				ND	
56 Carbon tetrachloride	117		6.929				ND	
58 Benzene	78		7.154				ND	U
59 1,2-Dichloroethane	62		7.233				ND	
64 Trichloroethene	130	7.880	7.878	0.002	95	9583	4.79	
67 1,2-Dichloropropane	63		8.151				ND	
71 Dichlorobromomethane	83		8.431				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
74 cis-1,3-Dichloropropene	75		8.869				ND	
75 4-Methyl-2-pentanone (MIBK)	43		9.027				ND	U
76 Toluene	91		9.204				ND	
77 trans-1,3-Dichloropropene	75		9.447				ND	
79 1,1,2-Trichloroethane	97		9.642				ND	U
80 Tetrachloroethene	164	9.711	9.709	0.002	96	26945	14.5	
82 2-Hexanone	43		9.855				ND	
84 Chlorodibromomethane	129		10.013				ND	
85 Ethylene Dibromide	107		10.122				ND	
87 Chlorobenzene	112		10.609				ND	
89 1,1,1,2-Tetrachloroethane	131		10.706				ND	
90 Ethylbenzene	106		10.706				ND	U
91 m-Xylene & p-Xylene	106		10.834				ND	
92 o-Xylene	106		11.224				ND	
93 Styrene	104		11.242				ND	
94 Bromoform	173		11.418				ND	
99 1,1,2,2-Tetrachloroethane	83		11.899				ND	
S 133 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

voaWI/SHP5_00013

Amount Added: 5.00

Units: uL

Run Reagent

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190928-28871.b\5092816.D

Injection Date: 28-Sep-2019 16:15:30

Instrument ID: CHHP5

Operator ID: 433269

Lims ID: 180-96180-C-10

Lab Sample ID: 180-96180-10

Worklist Smp#: 16

Client ID: HD-COD-SW-15-0/1-0

Purge Vol: 5.000 mL

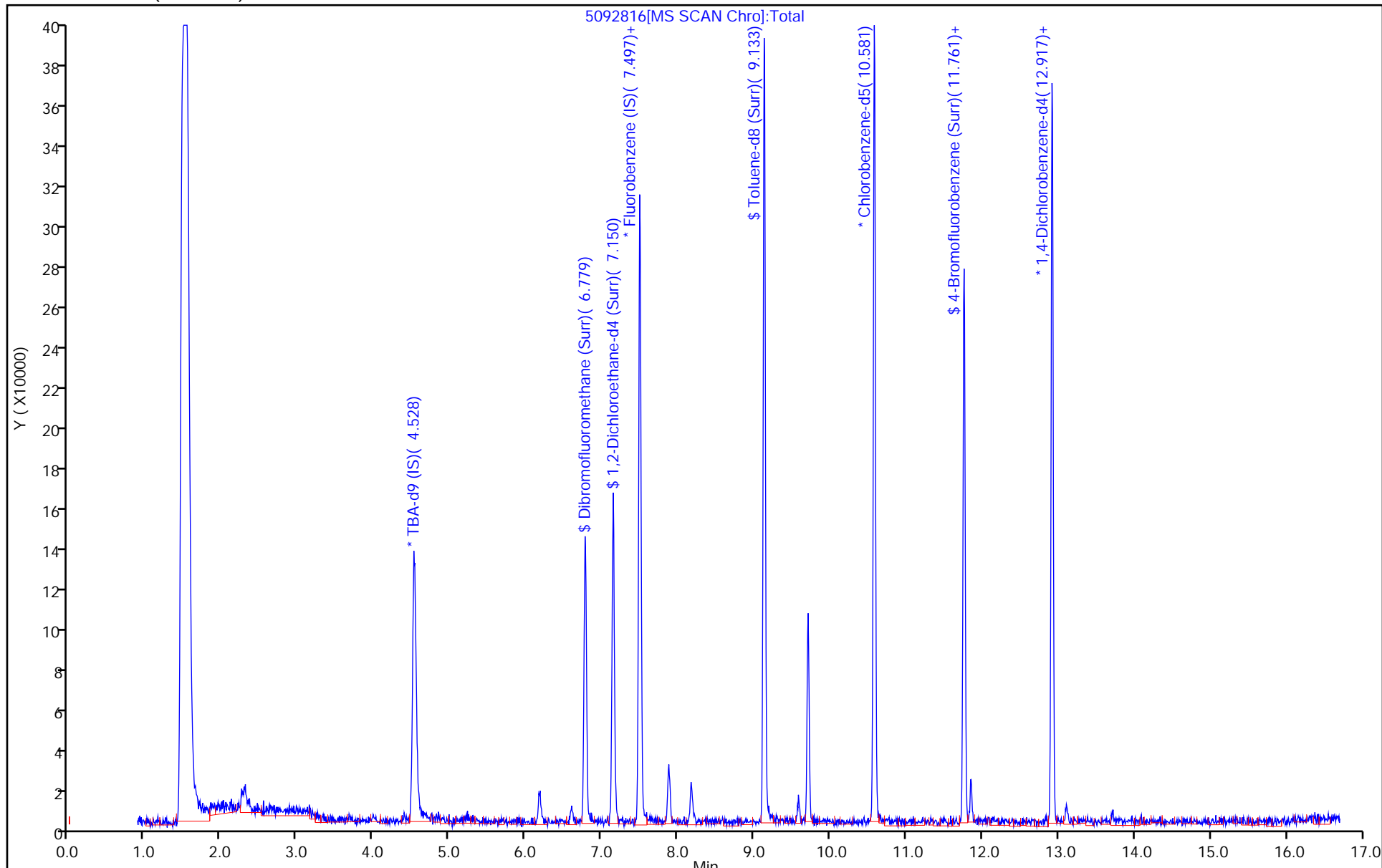
Dil. Factor: 1.0000

ALS Bottle#: 10

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Recovery Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190928-28871.b\5092816.D
 Lims ID: 180-96180-C-10
 Client ID: HD-COD-SW-15-0/1-0
 Sample Type: Client
 Inject. Date: 28-Sep-2019 16:15:30 ALS Bottle#: 10 Worklist Smp#: 16
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028871-016
 Misc. Info.: 180-96180-C-10
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190928-28871.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 01-Oct-2019 09:21:32 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0306

First Level Reviewer: bowieh Date: 01-Oct-2019 09:21:32

Compound	Amount Added	Amount Recovered	% Rec.
\$ 5 Dibromofluoromethane (Surr)	50.0	55.9	111.79
\$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	48.5	97.04
\$ 7 Toluene-d8 (Surr)	50.0	46.3	92.53
\$ 8 4-Bromofluorobenzene (Surr)	50.0	41.1	82.17

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190928-28871.b\5092816.D

Injection Date: 28-Sep-2019 16:15:30

Instrument ID: CHHP5

Lims ID: 180-96180-C-10

Lab Sample ID: 180-96180-10

Client ID: HD-COD-SW-15-0/1-0

Operator ID: 433269

ALS Bottle#: 10

Worklist Smp#: 16

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

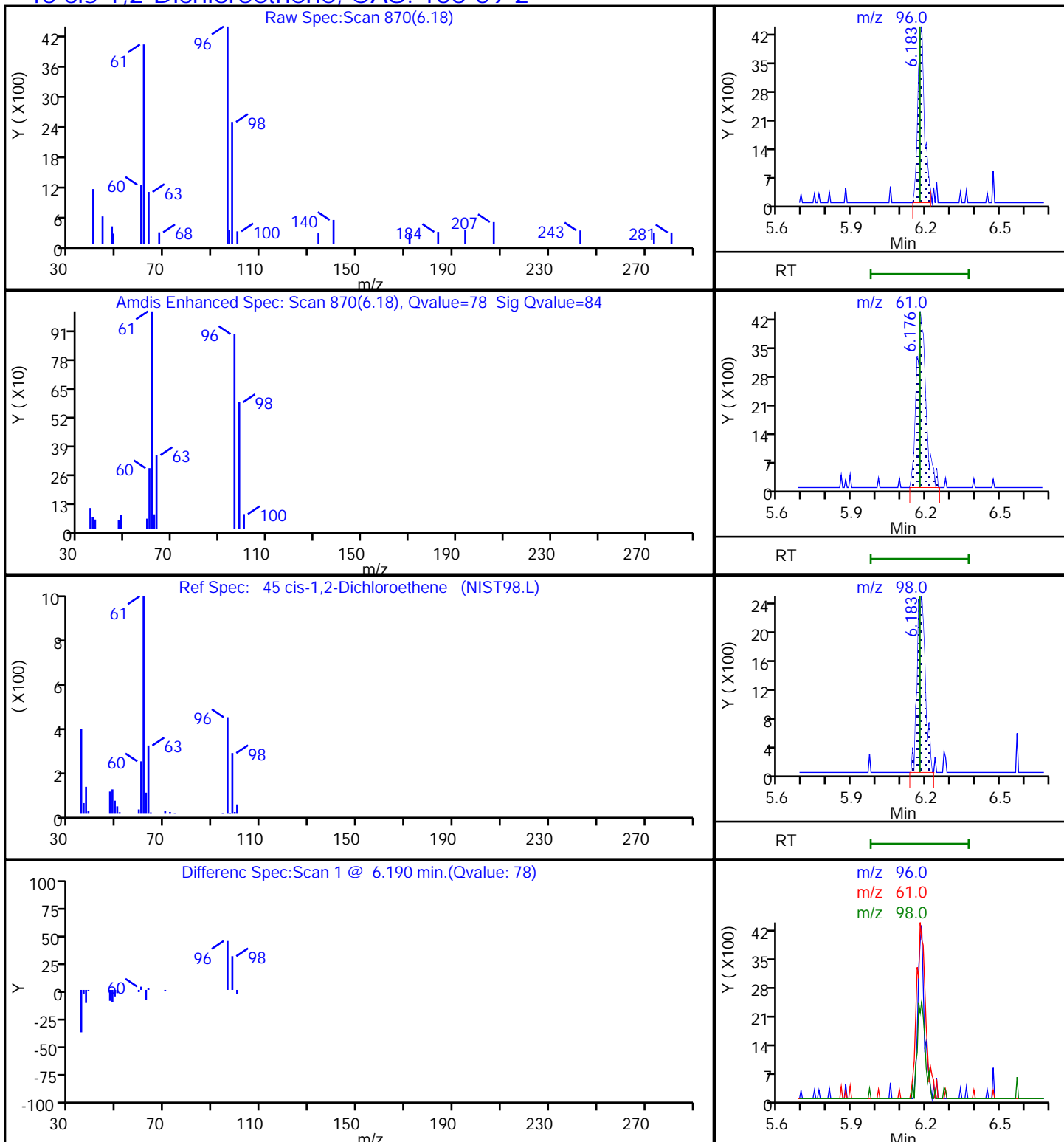
Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

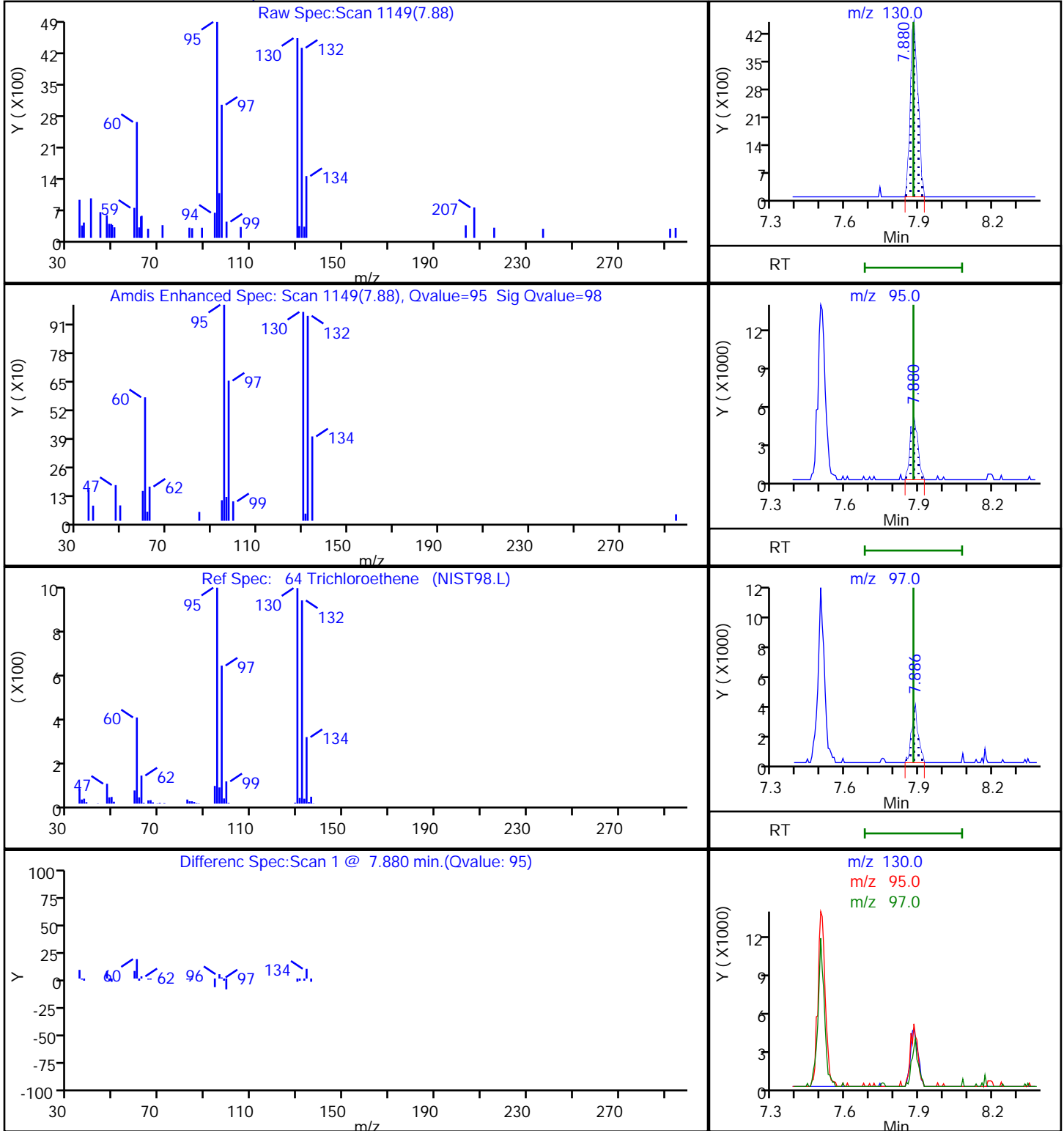
45 cis-1,2-Dichloroethene, CAS: 156-59-2



Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190928-28871.b\5092816.D
Injection Date: 28-Sep-2019 16:15:30 Instrument ID: CHHP5
Lims ID: 180-96180-C-10 Lab Sample ID: 180-96180-10
Client ID: HD-COD-SW-15-0/1-0
Operator ID: 433269 ALS Bottle#: 10 Worklist Smp#: 16
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

64 Trichloroethene, CAS: 79-01-6



Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190928-28871.b\5092816.D

Injection Date: 28-Sep-2019 16:15:30

Instrument ID: CHHP5

Lims ID: 180-96180-C-10

Lab Sample ID: 180-96180-10

Client ID: HD-COD-SW-15-0/1-0

Operator ID: 433269

ALS Bottle#: 10

Worklist Smp#: 16

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

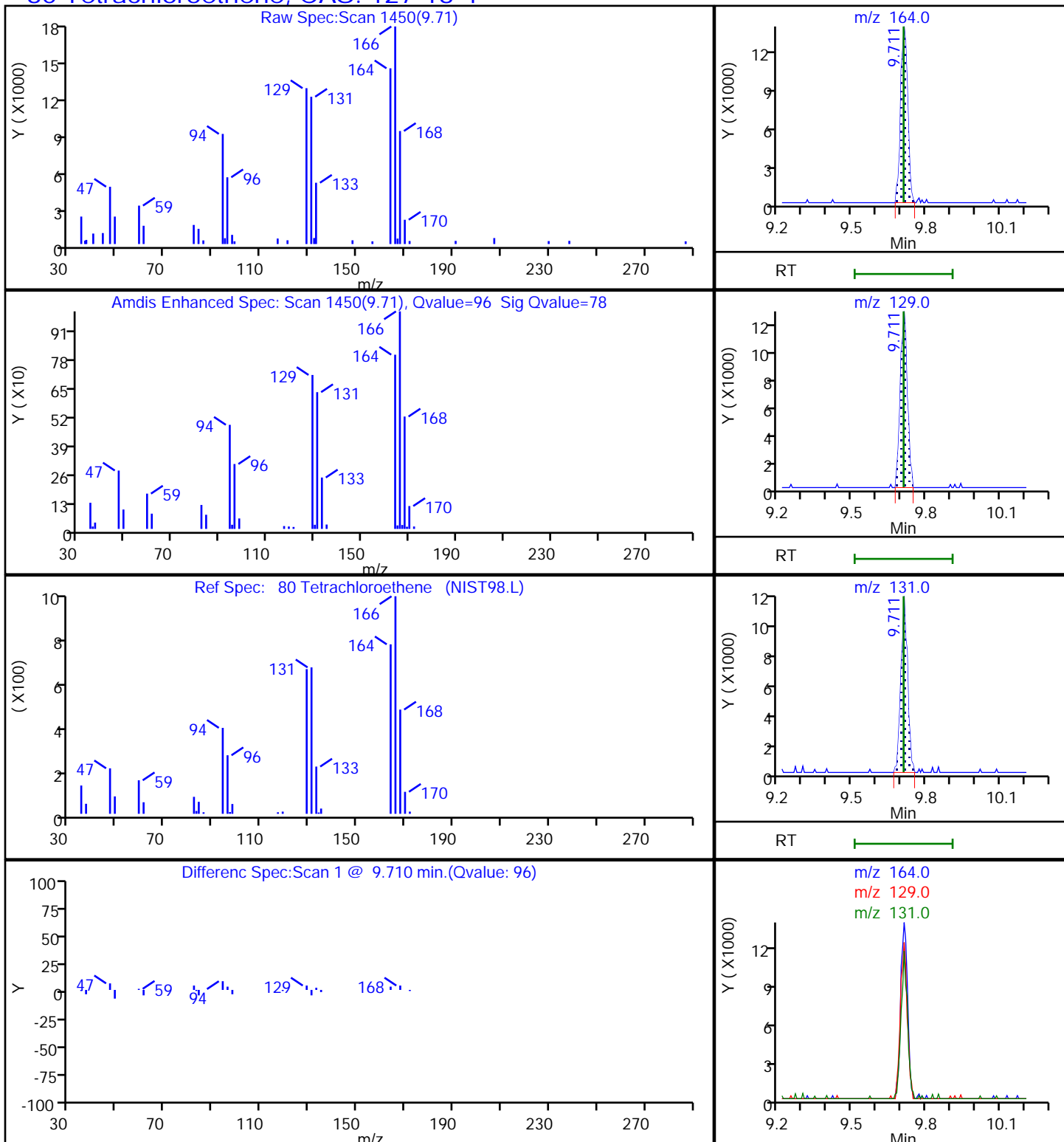
Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

80 Tetrachloroethene, CAS: 127-18-4

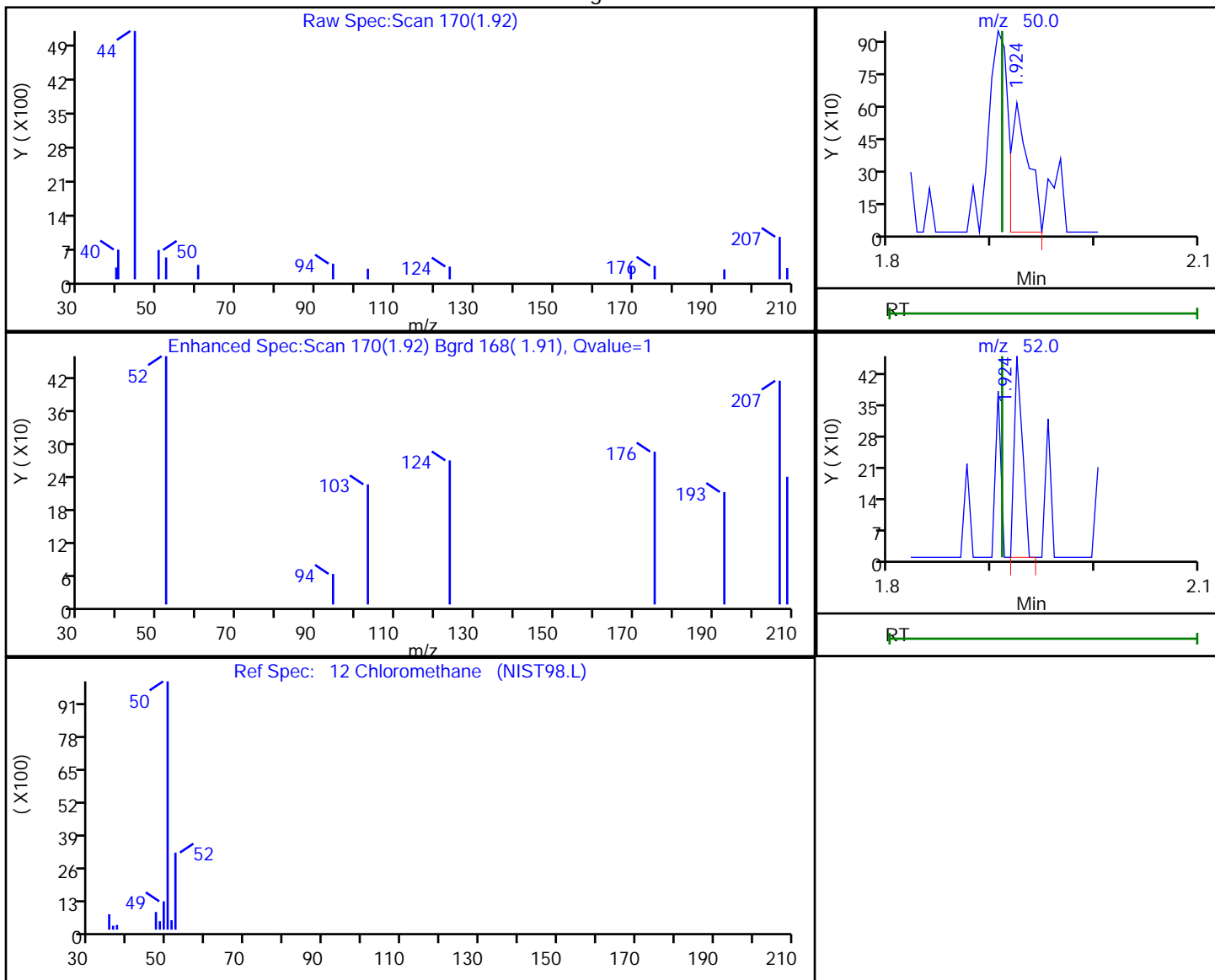


Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190928-28871.b\5092816.D
Injection Date: 28-Sep-2019 16:15:30 Instrument ID: CHHP5
Lims ID: 180-96180-C-10 Lab Sample ID: 180-96180-10
Client ID: HD-COD-SW-15-0/1-0
Operator ID: 433269 ALS Bottle#: 10 Worklist Smp#: 16
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

12 Chloromethane, CAS: 74-87-3

Processing Results



RT	Mass	Response	Amount
1.92	50.00	728	0.284015
1.92	52.00	252	

Reviewer: bowieh, 01-Oct-2019 09:20:56

Audit Action: Marked Compound Undetected

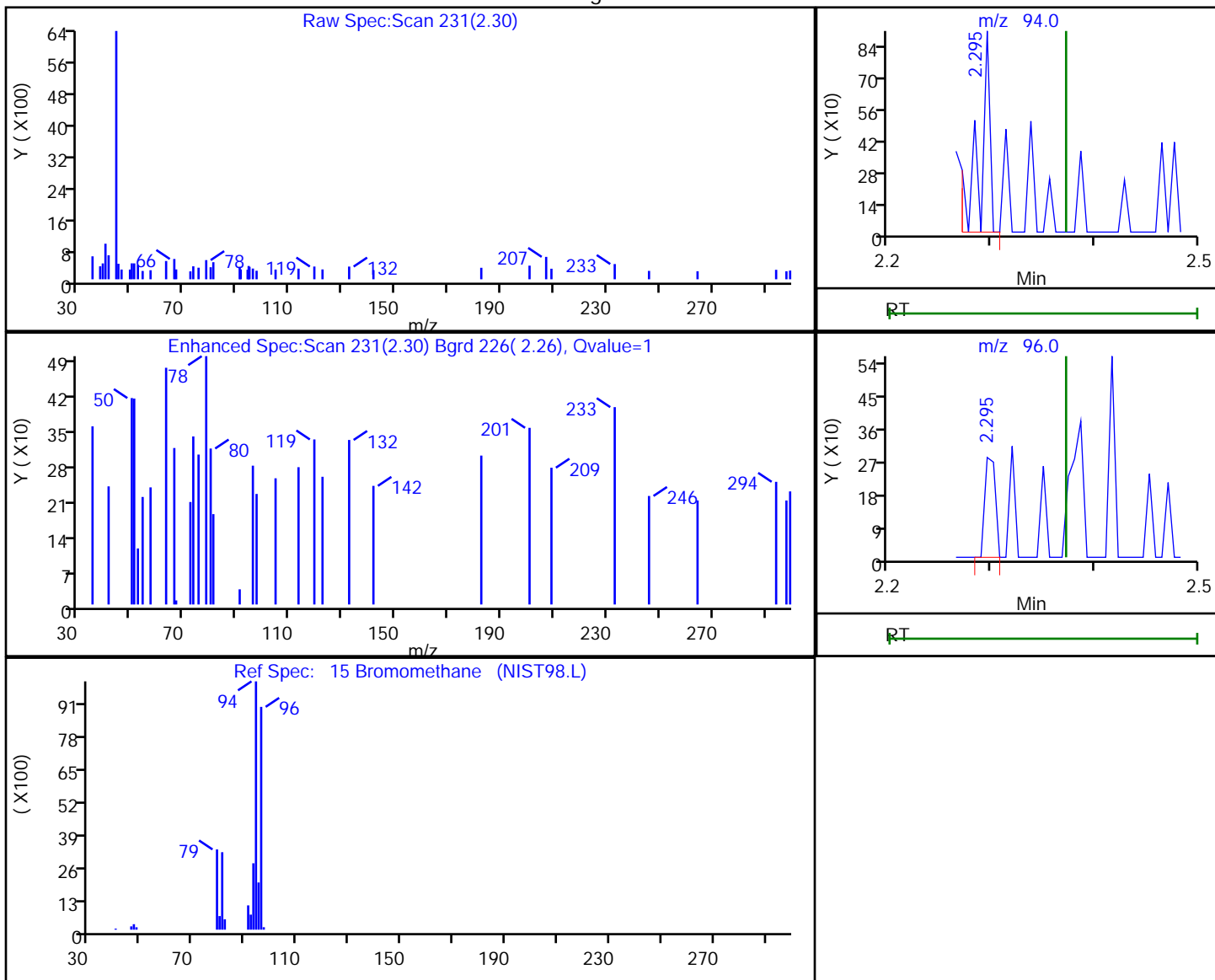
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190928-28871.b\5092816.D
Injection Date: 28-Sep-2019 16:15:30 Instrument ID: CHHP5
Lims ID: 180-96180-C-10 Lab Sample ID: 180-96180-10
Client ID: HD-COD-SW-15-0/1-0
Operator ID: 433269 ALS Bottle#: 10 Worklist Smp#: 16
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

15 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
2.30	94.00	614	0.334074
2.30	96.00	196	

Reviewer: bowieh, 01-Oct-2019 09:20:58

Audit Action: Marked Compound Undetected

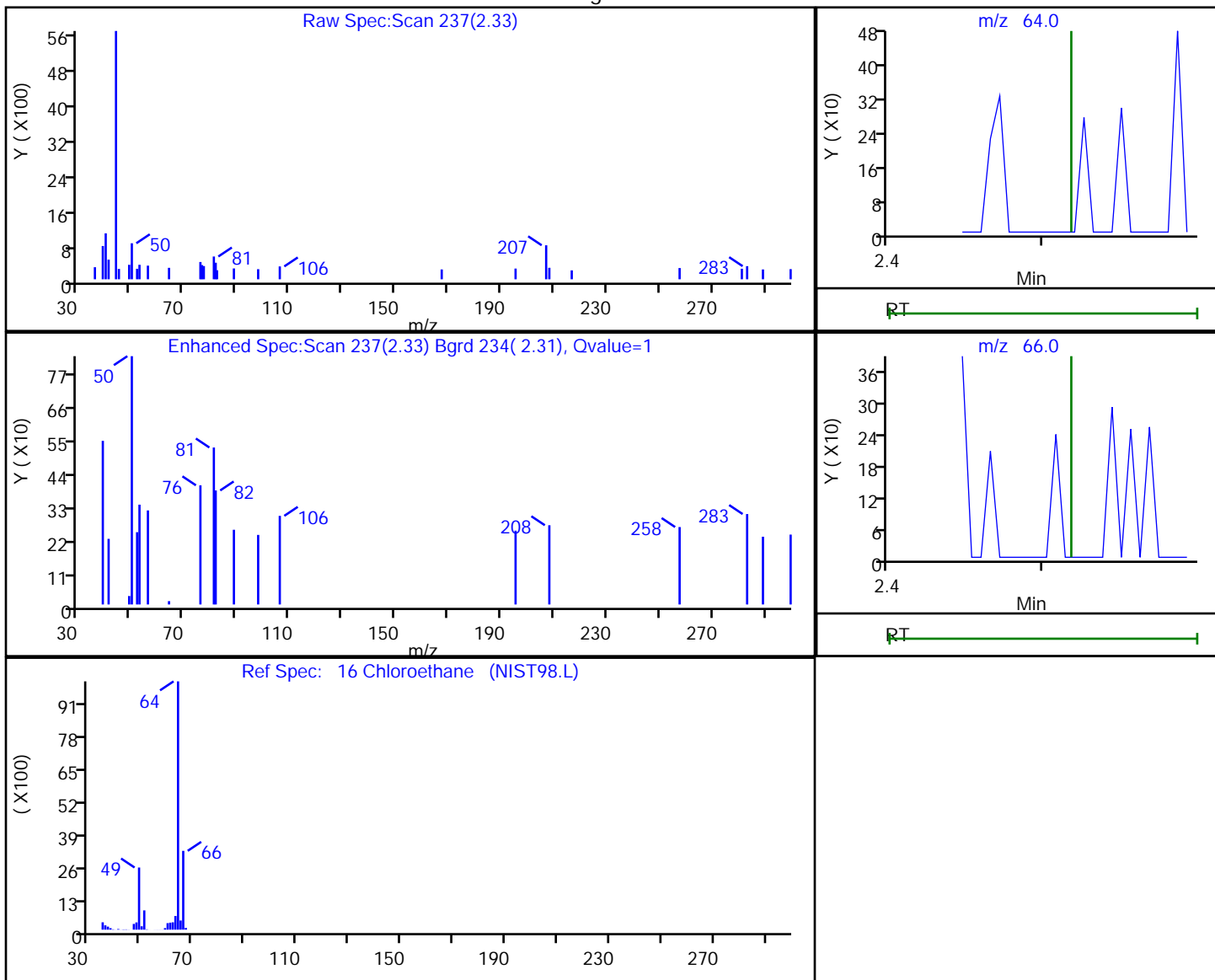
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190928-28871.b\5092816.D
Injection Date: 28-Sep-2019 16:15:30 Instrument ID: CHHP5
Lims ID: 180-96180-C-10 Lab Sample ID: 180-96180-10
Client ID: HD-COD-SW-15-0/1-0
Operator ID: 433269 ALS Bottle#: 10 Worklist Smp#: 16
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

16 Chloroethane, CAS: 75-00-3

Processing Results



RT	Mass	Response	Amount
2.33	64.00	95	0.058703
2.32	66.00	174	

Reviewer: bowieh, 01-Oct-2019 09:20:59

Audit Action: Marked Compound Undetected

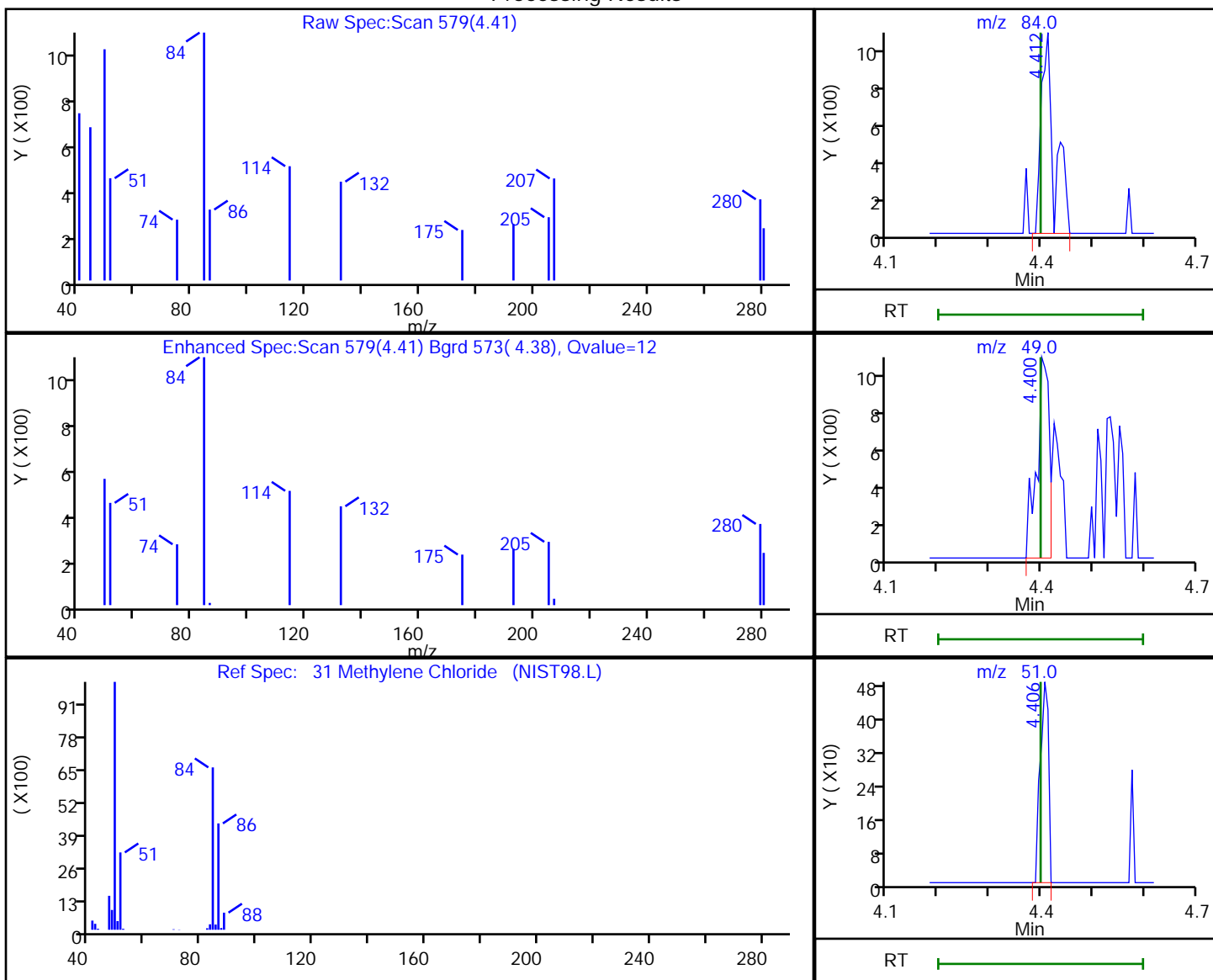
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190928-28871.b\5092816.D
 Injection Date: 28-Sep-2019 16:15:30 Instrument ID: CHHP5
 Lims ID: 180-96180-C-10 Lab Sample ID: 180-96180-10
 Client ID: HD-COD-SW-15-0/1-0
 Operator ID: 433269 ALS Bottle#: 10 Worklist Smp#: 16
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2

Processing Results



RT	Mass	Response	Amount
4.41	84.00	1798	-5.748012
4.40	49.00	1815	
4.41	51.00	542	

Reviewer: bowieh, 01-Oct-2019 09:21:03

Audit Action: Marked Compound Undetected

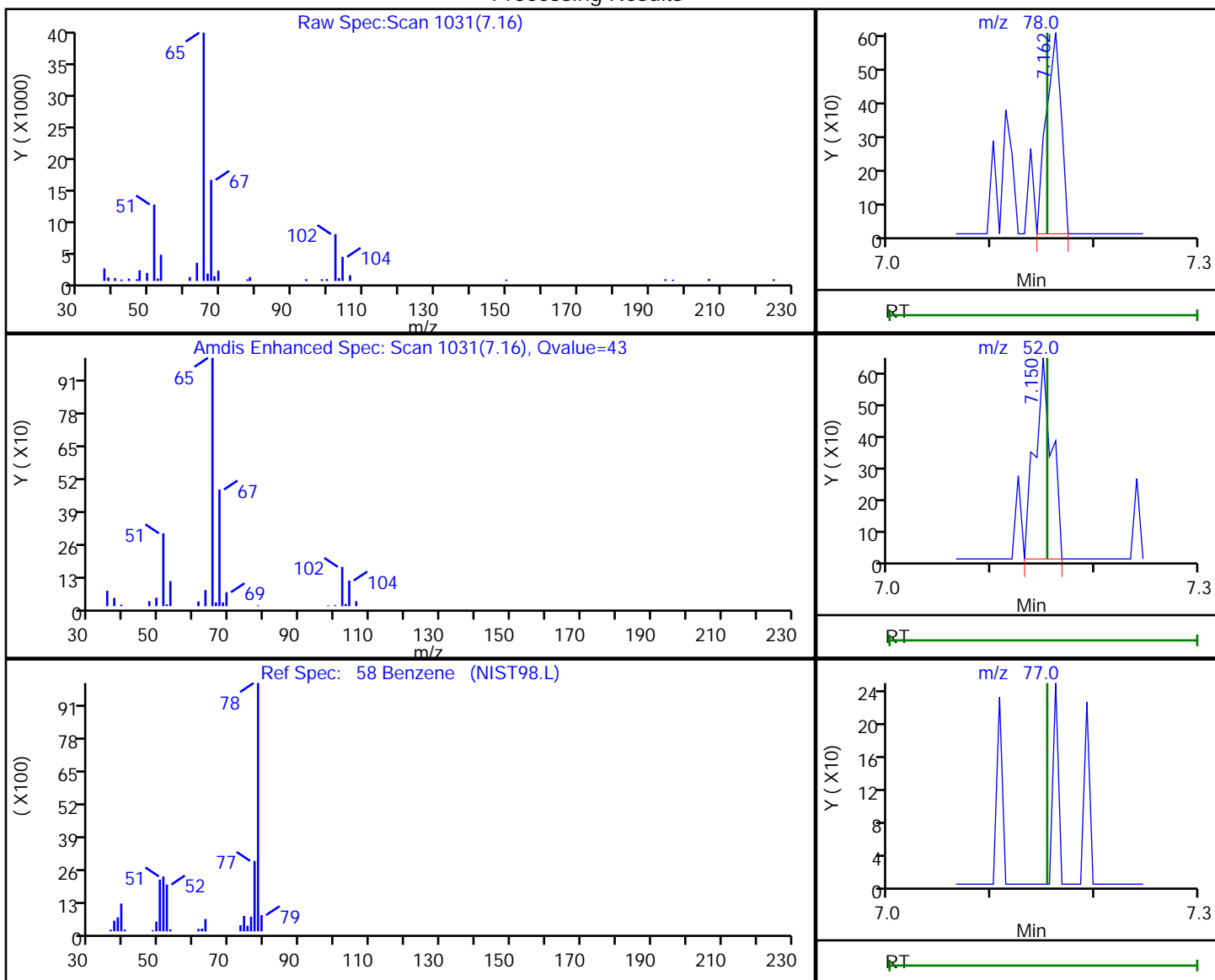
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190928-28871.b\5092816.D
 Injection Date: 28-Sep-2019 16:15:30 Instrument ID: CHHP5
 Lims ID: 180-96180-C-10 Lab Sample ID: 180-96180-10
 Client ID: HD-COD-SW-15-0/1-0
 Operator ID: 433269 ALS Bottle#: 10 Worklist Smp#: 16
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

58 Benzene, CAS: 71-43-2

Processing Results



RT	Mass	Response	Amount
7.16	78.00	607	0.082073
7.15	52.00	735	
7.15	77.00	0	

Reviewer: bowieh, 01-Oct-2019 09:21:11

Audit Action: Marked Compound Undetected

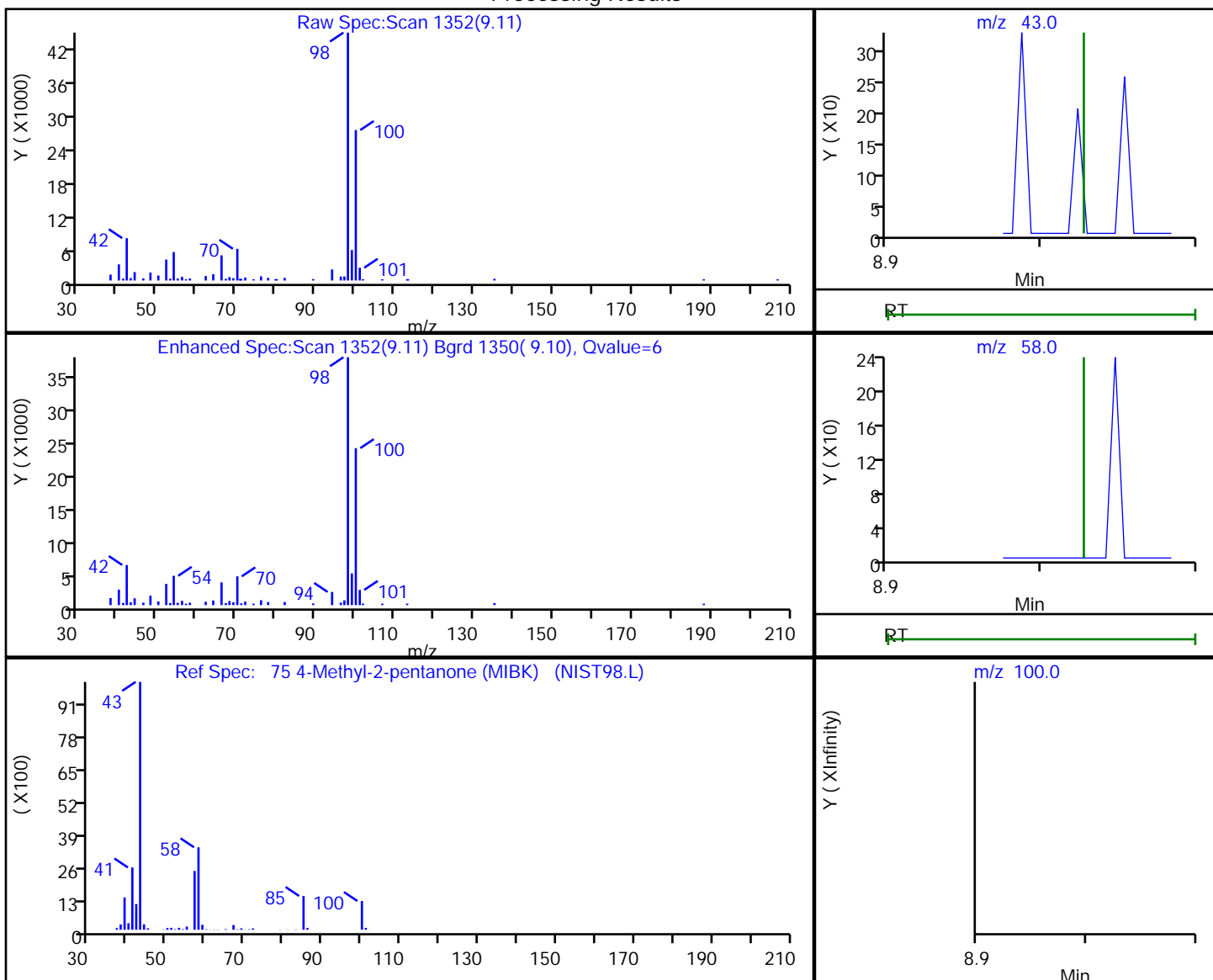
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190928-28871.b\5092816.D
 Injection Date: 28-Sep-2019 16:15:30 Instrument ID: CHHP5
 Lims ID: 180-96180-C-10 Lab Sample ID: 180-96180-10
 Client ID: HD-COD-SW-15-0/1-0
 Operator ID: 433269 ALS Bottle#: 10 Worklist Smp#: 16
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

75 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1

Processing Results



RT	Mass	Response	Amount
9.11	43.00	435	0.247914
9.13	58.00	2173	
9.03	100.00	0	

Reviewer: bowieh, 01-Oct-2019 09:21:14

Audit Action: Marked Compound Undetected

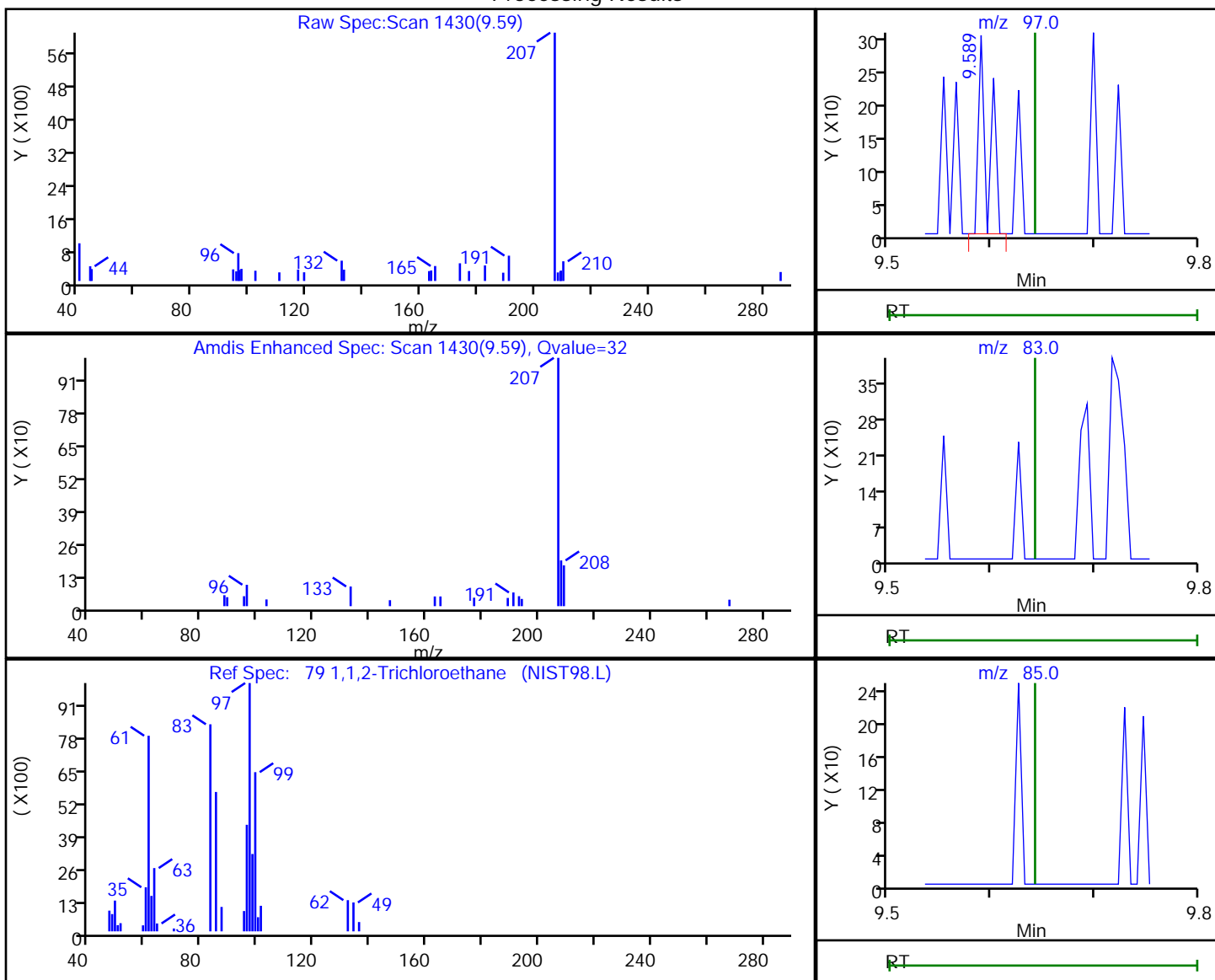
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190928-28871.b\5092816.D
 Injection Date: 28-Sep-2019 16:15:30 Instrument ID: CHHP5
 Lims ID: 180-96180-C-10 Lab Sample ID: 180-96180-10
 Client ID: HD-COD-SW-15-0/1-0
 Operator ID: 433269 ALS Bottle#: 10 Worklist Smp#: 16
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

79 1,1,2-Trichloroethane, CAS: 79-00-5

Processing Results



RT	Mass	Response	Amount
9.59	97.00	194	0.115387
9.64	83.00	0	
9.64	85.00	0	

Reviewer: bowieh, 01-Oct-2019 09:21:22

Audit Action: Marked Compound Undetected

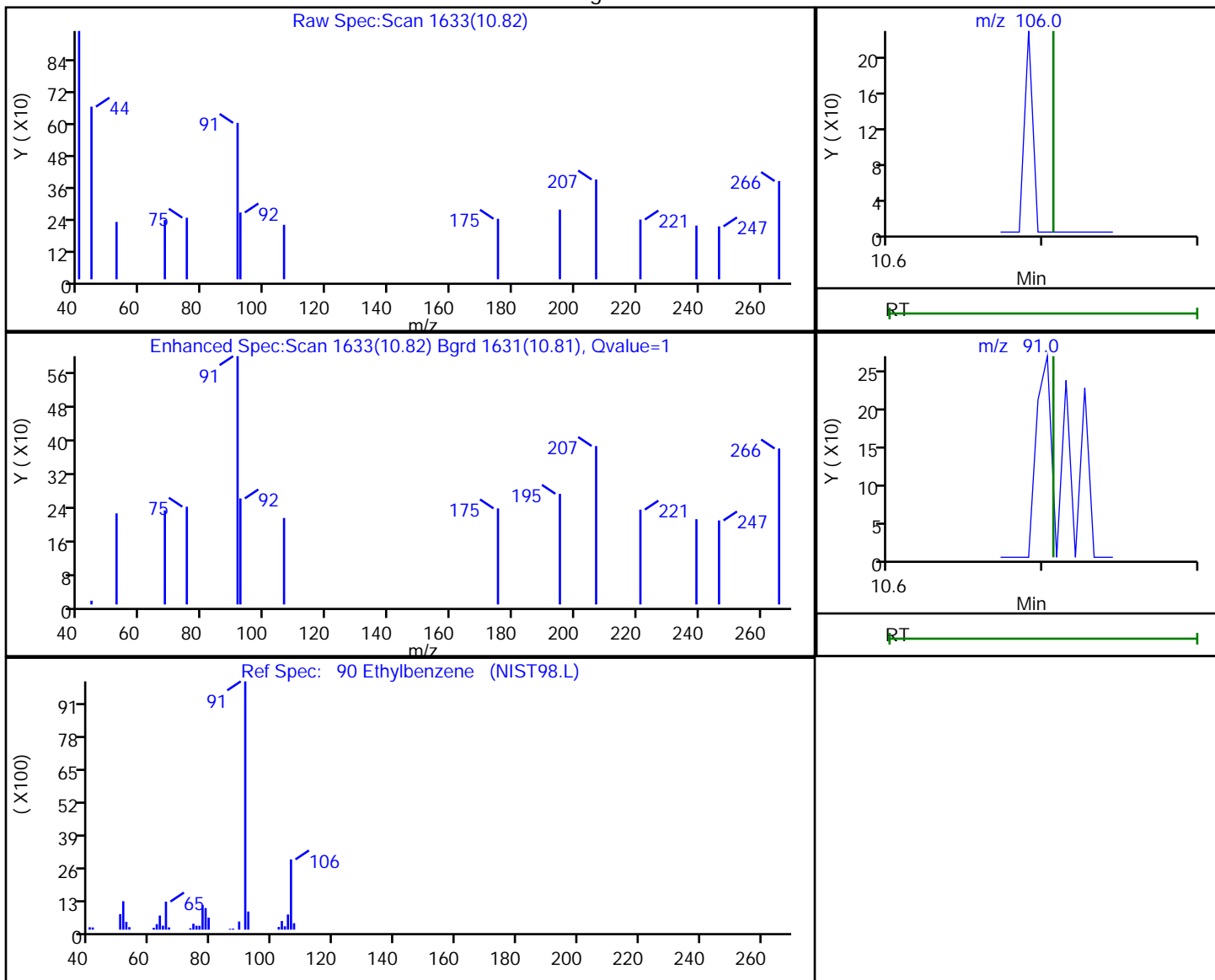
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190928-28871.b\5092816.D
Injection Date: 28-Sep-2019 16:15:30 Instrument ID: CHHP5
Lims ID: 180-96180-C-10 Lab Sample ID: 180-96180-10
Client ID: HD-COD-SW-15-0/1-0
Operator ID: 433269 ALS Bottle#: 10 Worklist Smp#: 16
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

90 Ethylbenzene, CAS: 100-41-4

Processing Results



RT	Mass	Response	Amount
10.82	106.00	76	0.027790
10.82	91.00	218	

Reviewer: bowieh, 01-Oct-2019 09:21:26

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-27-0/1-0 Lab Sample ID: 180-96180-11
 Matrix: Water Lab File ID: 5092727.D
 Analysis Method: EPA 8260C Date Collected: 09/23/2019 14:30
 Sample wt/vol: 5 (mL) Date Analyzed: 09/27/2019 23:06
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 292962 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	ND		1.0	0.90
75-01-4	Vinyl chloride	ND		1.0	0.88
74-83-9	Bromomethane	ND		1.0	0.89
75-00-3	Chloroethane	ND		1.0	0.90
75-35-4	1,1-Dichloroethene	ND		1.0	0.55
67-64-1	Acetone	5.4		5.0	3.4
75-15-0	Carbon disulfide	ND		1.0	0.88
75-09-2	Methylene Chloride	ND		1.0	0.89
156-60-5	trans-1,2-Dichloroethene	ND	*	1.0	0.67
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.59
75-34-3	1,1-Dichloroethane	ND		1.0	0.63
156-59-2	cis-1,2-Dichloroethene	ND	*	1.0	0.71
74-97-5	Bromochloromethane	ND		1.0	0.63
78-93-3	2-Butanone (MEK)	ND		5.0	2.6
67-66-3	Chloroform	ND		1.0	0.60
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.60
56-23-5	Carbon tetrachloride	ND		1.0	0.88
71-43-2	Benzene	ND		1.0	0.60
107-06-2	1,2-Dichloroethane	ND		1.0	0.57
79-01-6	Trichloroethene	ND	*	1.0	0.69
78-87-5	1,2-Dichloropropane	ND		1.0	0.66
75-27-4	Bromodichloromethane	ND		1.0	0.64
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.59
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1
108-88-3	Toluene	ND	*	1.0	0.46
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.58
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.45
127-18-4	Tetrachloroethene	ND		1.0	0.47
591-78-6	2-Hexanone	ND		5.0	3.3
124-48-1	Dibromochloromethane	ND		1.0	0.84
106-93-4	1,2-Dibromoethane (EDB)	ND		1.0	0.50
108-90-7	Chlorobenzene	ND		1.0	0.50
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.57
100-41-4	Ethylbenzene	ND		1.0	0.51
1330-20-7	Xylenes, Total	ND	*	2.0	0.89
100-42-5	Styrene	ND		1.0	0.47

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-27-0/1-0 Lab Sample ID: 180-96180-11
 Matrix: Water Lab File ID: 5092727.D
 Analysis Method: EPA 8260C Date Collected: 09/23/2019 14:30
 Sample wt/vol: 5 (mL) Date Analyzed: 09/27/2019 23:06
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 292962 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	ND		1.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.60
107-13-1	Acrylonitrile	ND		20	7.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	106		70-150
2037-26-5	Toluene-d8 (Surr)	87		78-128
460-00-4	4-Bromofluorobenzene (Surr)	76		64-123
1868-53-7	Dibromofluoromethane (Surr)	118		75-147

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092727.D
 Lims ID: 180-96180-B-11
 Client ID: HD-COD-SW-27-0/1-0
 Sample Type: Client
 Inject. Date: 27-Sep-2019 23:06:30 ALS Bottle#: 17 Worklist Smp#: 23
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028863-023
 Misc. Info.: 180-96180-B-11
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 28-Sep-2019 11:26:43 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: bowieh Date: 28-Sep-2019 11:26:43

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.537	4.532	0.005	0	167485	1000.0	
* 2 Fluorobenzene (IS)	96	7.500	7.495	0.005	98	265710	50.0	
* 3 Chlorobenzene-d5	119	10.584	10.579	0.005	88	71273	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.920	12.915	0.005	96	103364	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.776	6.777	-0.001	94	90713	59.1	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.147	7.142	0.005	0	136513	52.8	
\$ 7 Toluene-d8 (Surr)	98	9.136	9.131	0.005	95	247792	43.7	
\$ 8 4-Bromofluorobenzene (Surr	95	11.758	11.766	-0.008	89	89093	38.2	
12 Chloromethane	50		1.910				ND	U
13 Vinyl chloride	62		2.038				ND	
15 Bromomethane	94		2.379				ND	U
16 Chloroethane	64		2.543				ND	
22 1,1-Dichloroethene	96		3.565				ND	
24 Acetone	43	3.679	3.668	0.011	93	18239	27.0	
26 Carbon disulfide	76		3.863				ND	
31 Methylene Chloride	84		4.405				ND	
33 Acrylonitrile	53		4.782				ND	
34 trans-1,2-Dichloroethene	96		4.812				ND	
35 Methyl tert-butyl ether	73		4.824				ND	
37 1,1-Dichloroethane	63		5.439				ND	
45 cis-1,2-Dichloroethene	96	6.168	6.181	-0.013	10	777	0.4450	
46 2-Butanone (MEK)	43		6.187				ND	U
49 Chlorobromomethane	128		6.455				ND	
52 Chloroform	83	6.587	6.595	-0.008	1	2494	-1.92	M
53 1,1,1-Trichloroethane	97		6.759				ND	
56 Carbon tetrachloride	117		6.929				ND	
58 Benzene	78		7.154				ND	U
59 1,2-Dichloroethane	62		7.233				ND	
64 Trichloroethene	130	7.877	7.878	-0.001	15	1227	0.6917	
67 1,2-Dichloropropane	63		8.152				ND	U
71 Dichlorobromomethane	83		8.432				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
74 cis-1,3-Dichloropropene	75		8.870				ND	
75 4-Methyl-2-pentanone (MIBK)	43		9.028				ND	U
76 Toluene	91	9.203	9.198	0.005	61	3565	0.4826	
77 trans-1,3-Dichloropropene	75		9.448				ND	
79 1,1,2-Trichloroethane	97		9.636				ND	
80 Tetrachloroethene	164	9.708	9.709	-0.001	1	538	0.3119	
82 2-Hexanone	43		9.855				ND	U
84 Chlorodibromomethane	129		10.007				ND	
85 Ethylene Dibromide	107		10.123				ND	
87 Chlorobenzene	112		10.610				ND	
89 1,1,1,2-Tetrachloroethane	131		10.701				ND	
90 Ethylbenzene	106		10.707				ND	U
91 m-Xylene & p-Xylene	106		10.835				ND	
92 o-Xylene	106		11.218				ND	
93 Styrene	104		11.242				ND	
94 Bromoform	173		11.419				ND	
99 1,1,2,2-Tetrachloroethane	83		11.899				ND	
S 133 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

U - Marked Undetected

Reagents:

voaWI/SHP5_00013

Amount Added: 5.00

Units: uL

Run Reagent

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092727.D

Injection Date: 27-Sep-2019 23:06:30

Instrument ID: CHHP5

Operator ID: 433269

Lims ID: 180-96180-B-11

Lab Sample ID: 180-96180-11

Worklist Smp#: 23

Client ID: HD-COD-SW-27-0/1-0

Purge Vol: 5.000 mL

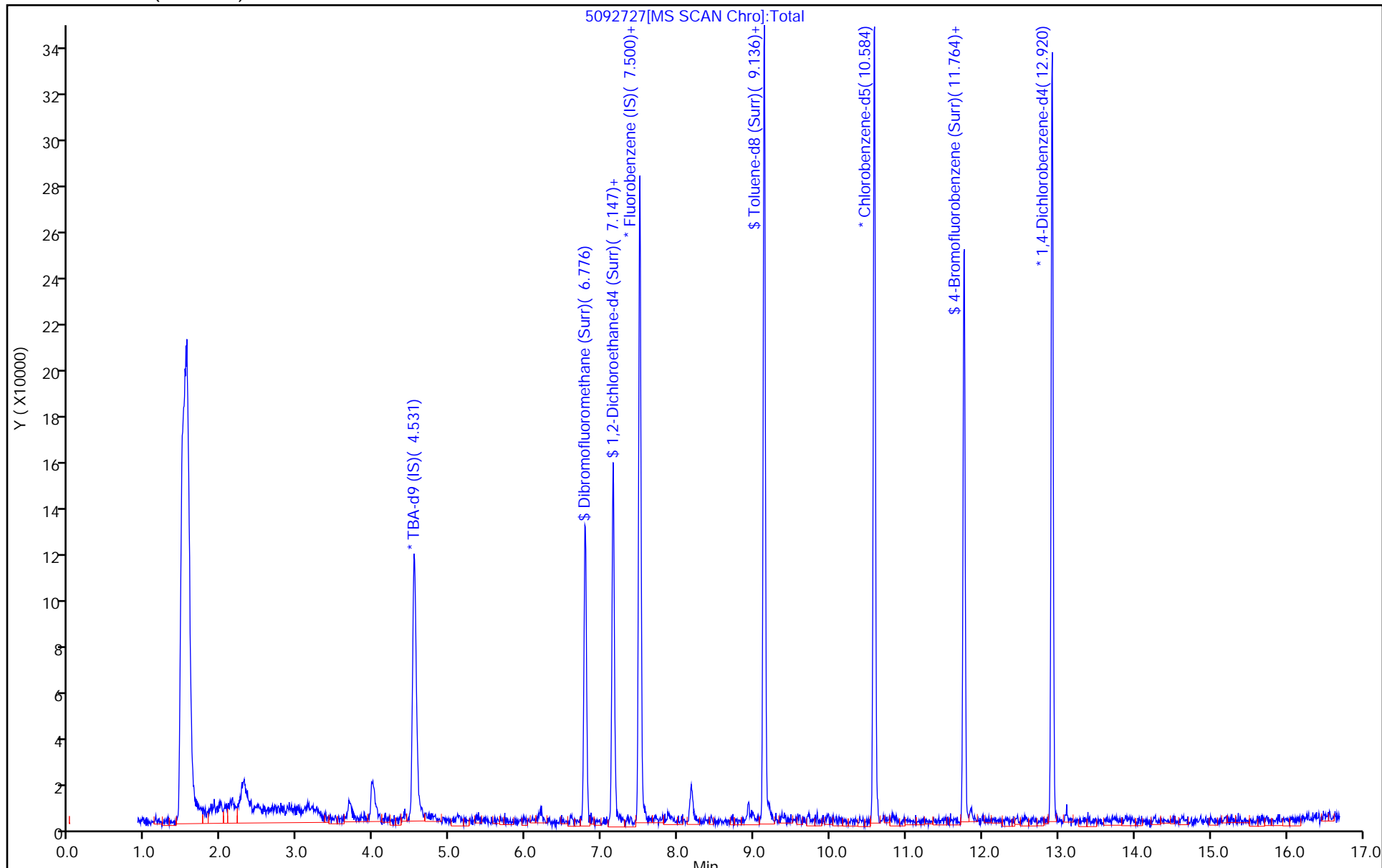
Dil. Factor: 1.0000

ALS Bottle#: 17

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Recovery Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092727.D
 Lims ID: 180-96180-B-11
 Client ID: HD-COD-SW-27-0/1-0
 Sample Type: Client
 Inject. Date: 27-Sep-2019 23:06:30 ALS Bottle#: 17 Worklist Smp#: 23
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028863-023
 Misc. Info.: 180-96180-B-11
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 28-Sep-2019 11:26:43 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: bowieh Date: 28-Sep-2019 11:26:43

Compound	Amount Added	Amount Recovered	% Rec.
\$ 5 Dibromofluoromethane (Surr)	50.0	59.1	118.29
\$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	52.8	105.67
\$ 7 Toluene-d8 (Surr)	50.0	43.7	87.34
\$ 8 4-Bromofluorobenzene (Surr)	50.0	38.2	76.39

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092727.D

Injection Date: 27-Sep-2019 23:06:30

Instrument ID: CHHP5

Lims ID: 180-96180-B-11

Lab Sample ID: 180-96180-11

Client ID: HD-COD-SW-27-0/1-0

Operator ID: 433269

ALS Bottle#: 17

Worklist Smp#: 23

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

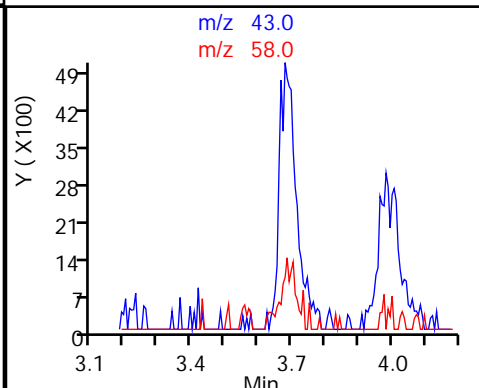
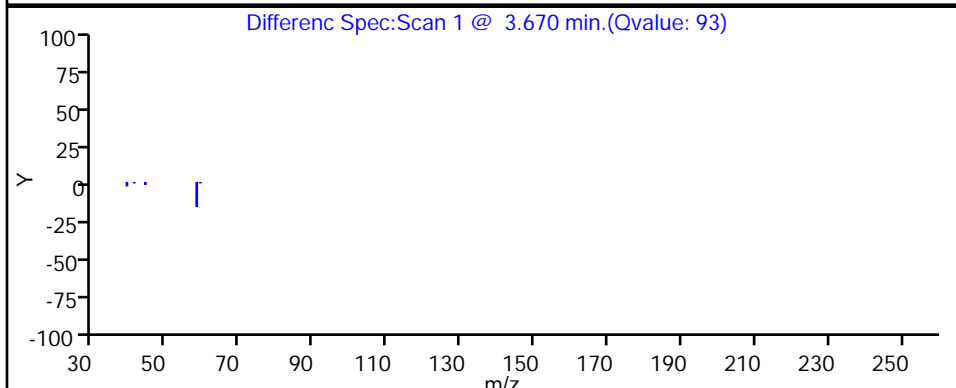
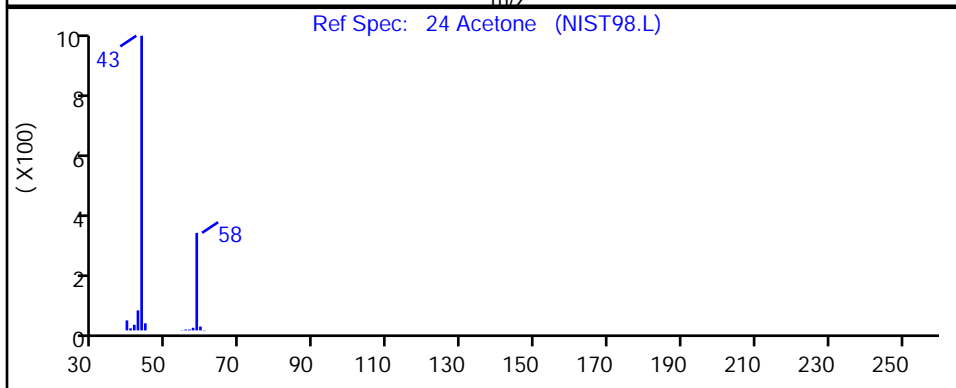
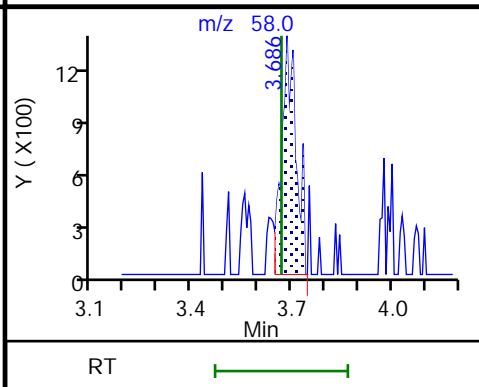
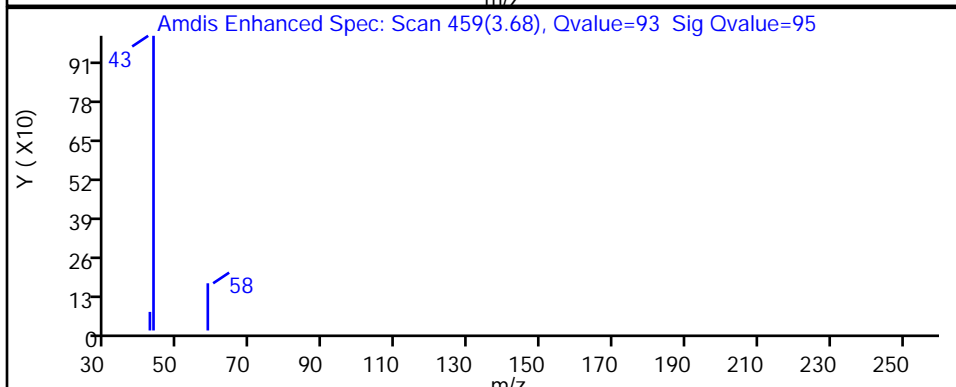
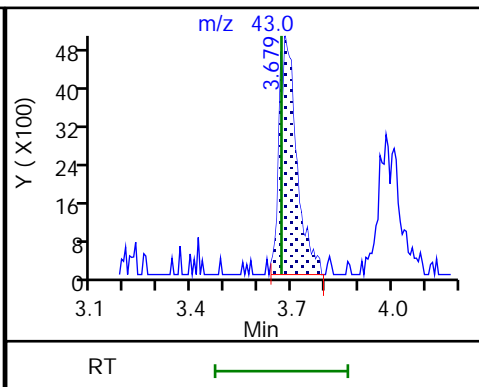
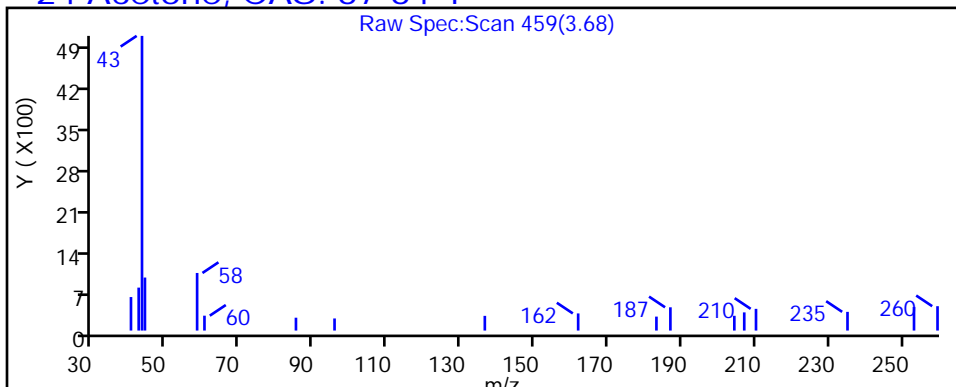
Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

24 Acetone, CAS: 67-64-1

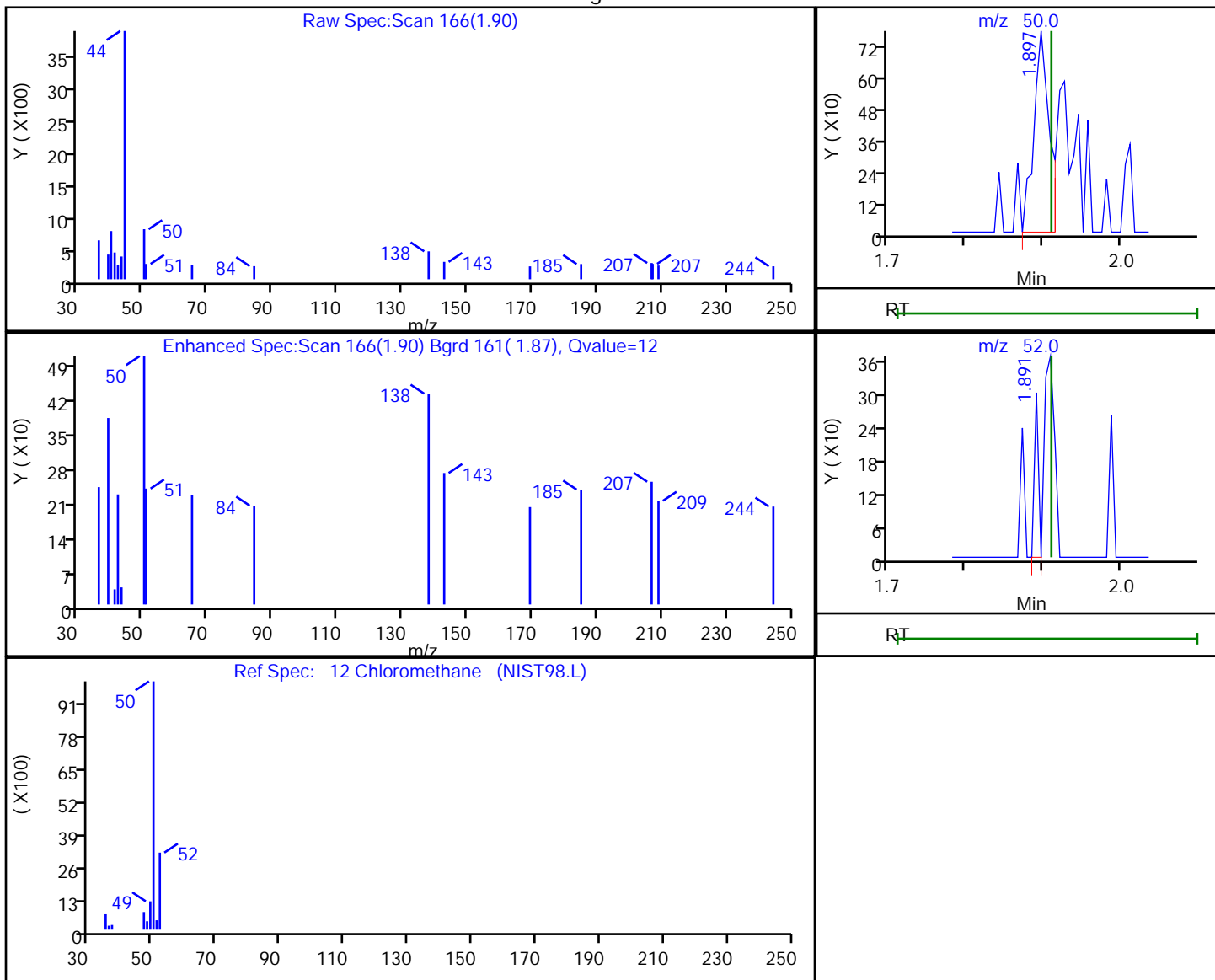


Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092727.D
Injection Date: 27-Sep-2019 23:06:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-11 Lab Sample ID: 180-96180-11
Client ID: HD-COD-SW-27-0/1-0
Operator ID: 433269 ALS Bottle#: 17 Worklist Smp#: 23
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

12 Chloromethane, CAS: 74-87-3

Processing Results



RT	Mass	Response	Amount
1.90	50.00	1082	0.475682
1.89	52.00	109	

Reviewer: bowieh, 28-Sep-2019 11:25:49

Audit Action: Marked Compound Undetected

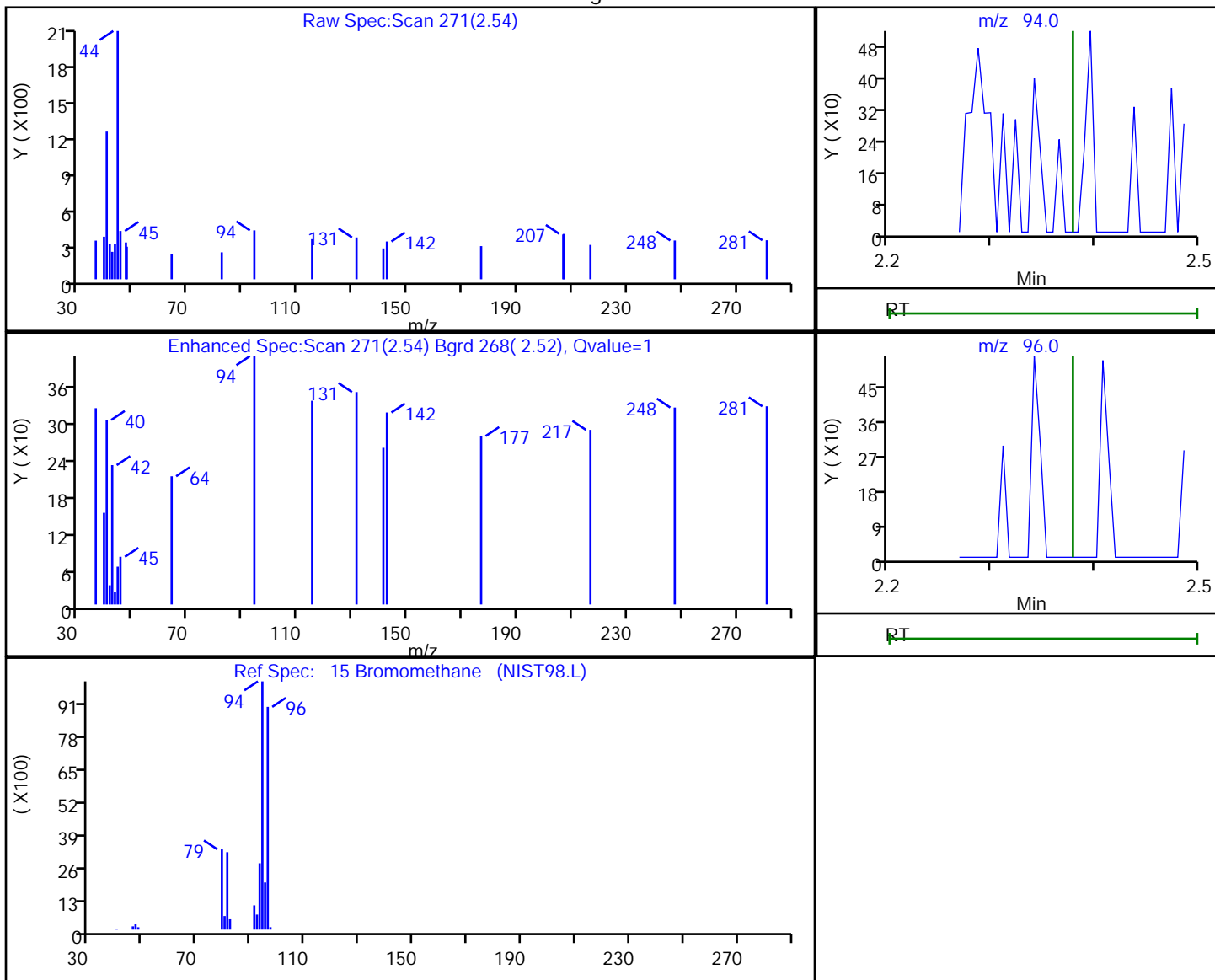
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092727.D
Injection Date: 27-Sep-2019 23:06:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-11 Lab Sample ID: 180-96180-11
Client ID: HD-COD-SW-27-0/1-0
Operator ID: 433269 ALS Bottle#: 17 Worklist Smp#: 23
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

15 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
2.54	94.00	461	0.282654
2.55	96.00	296	

Reviewer: bowieh, 28-Sep-2019 11:25:51
Audit Action: Marked Compound Undetected

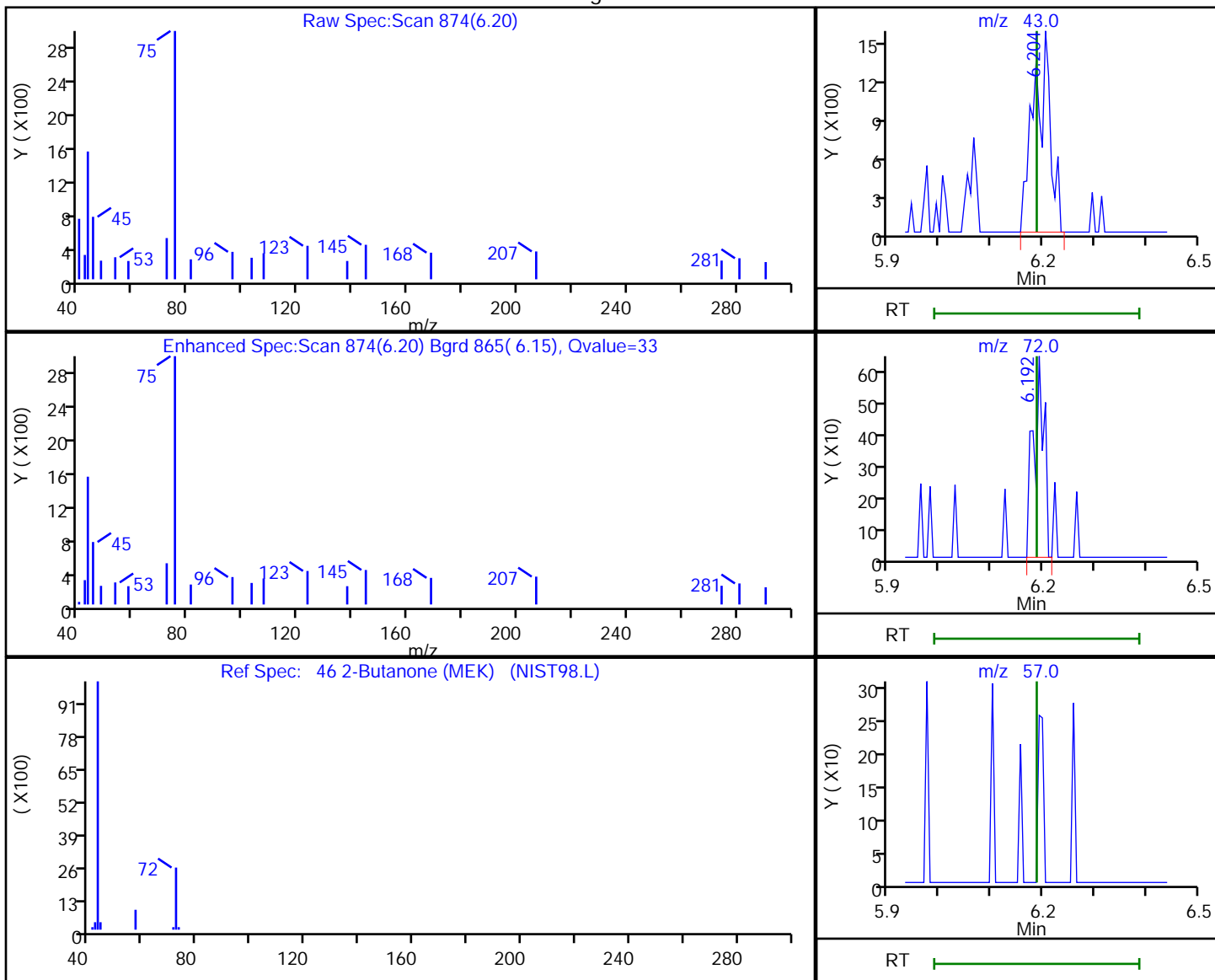
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092727.D
Injection Date: 27-Sep-2019 23:06:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-11 Lab Sample ID: 180-96180-11
Client ID: HD-COD-SW-27-0/1-0
Operator ID: 433269 ALS Bottle#: 17 Worklist Smp#: 23
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

46 2-Butanone (MEK), CAS: 78-93-3

Processing Results



RT	Mass	Response	Amount
6.20	43.00	3453	4.304724
6.19	72.00	918	
6.19	57.00	0	

Reviewer: bowieh, 28-Sep-2019 11:26:14

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

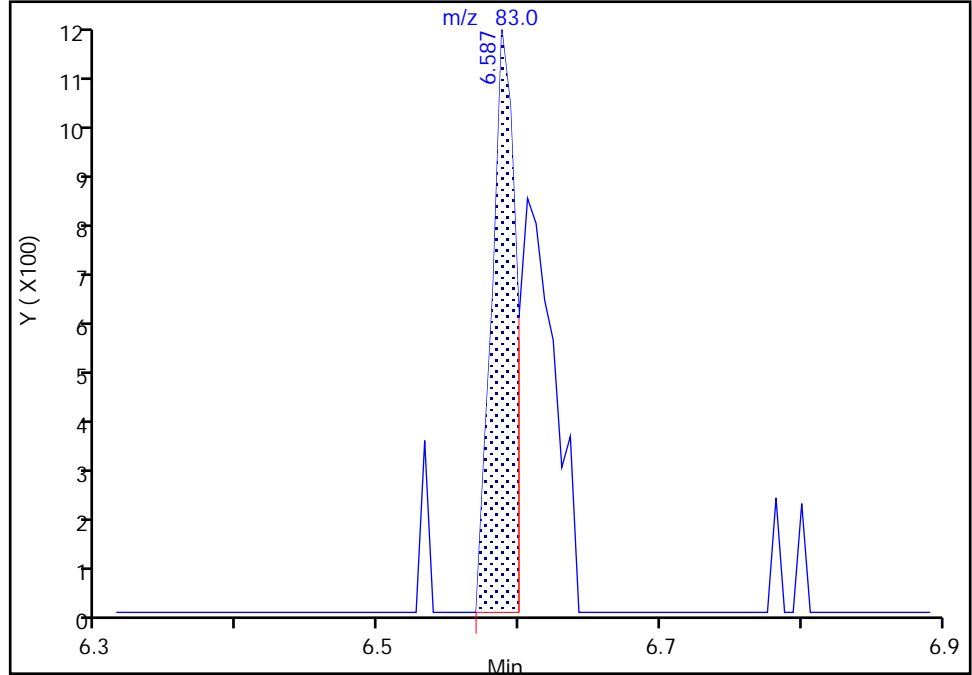
Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092727.D
Injection Date: 27-Sep-2019 23:06:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-11 Lab Sample ID: 180-96180-11
Client ID: HD-COD-SW-27-0/1-0
Operator ID: 433269 ALS Bottle#: 17 Worklist Smp#: 23
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

52 Chloroform, CAS: 67-66-3

Signal: 1

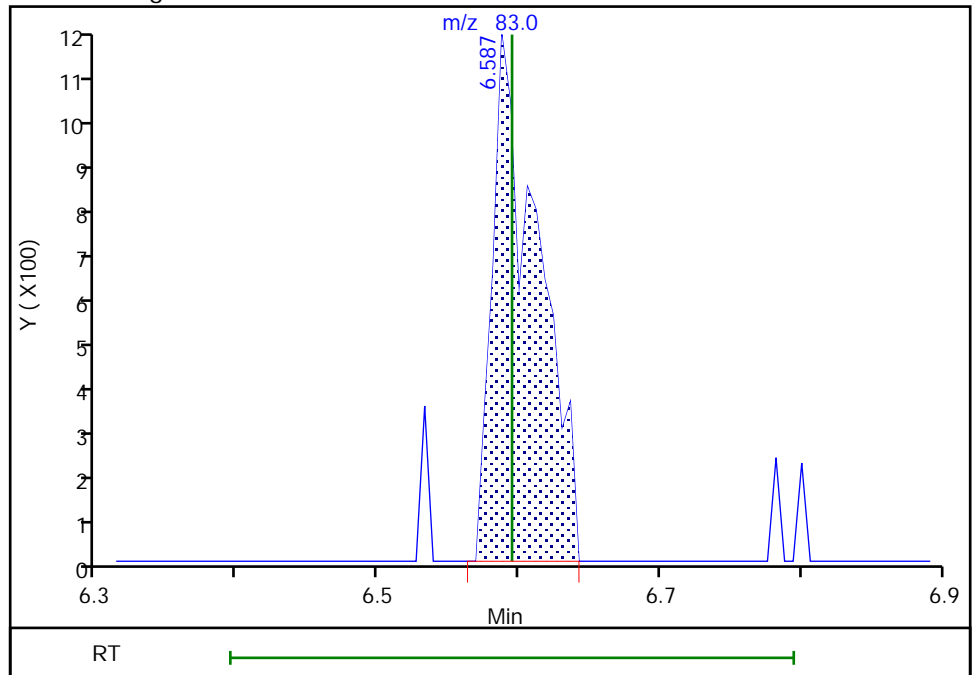
RT: 6.59
Area: 1308
Amount: -2.277504
Amount Units: ng

Processing Integration Results



RT: 6.59
Area: 2494
Amount: -1.917115
Amount Units: ng

Manual Integration Results



Reviewer: bowieh, 28-Sep-2019 11:26:22
Audit Action: Manually Integrated

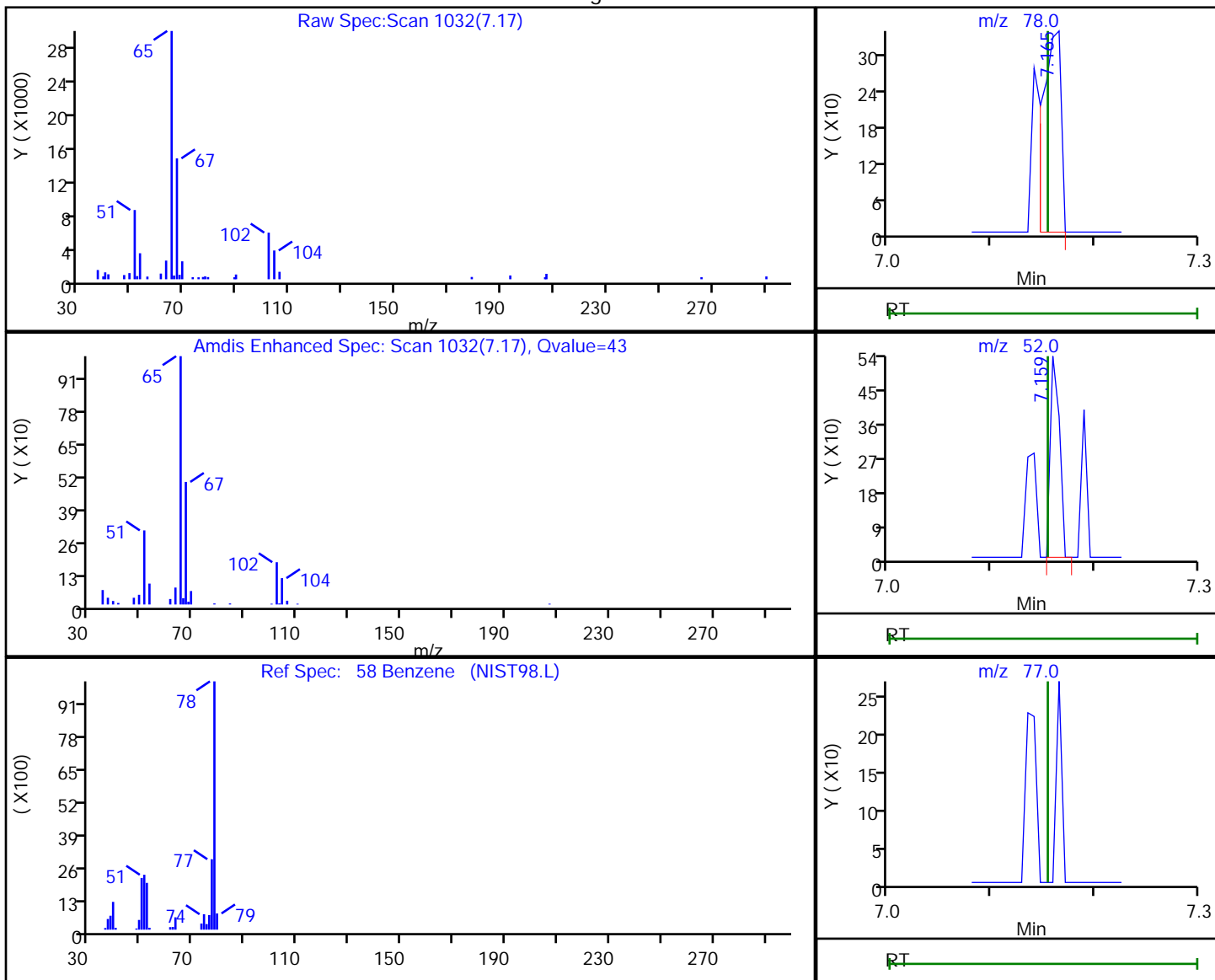
Audit Reason: Poor chromatography
Page 295 of 583

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092727.D
 Injection Date: 27-Sep-2019 23:06:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-11 Lab Sample ID: 180-96180-11
 Client ID: HD-COD-SW-27-0/1-0
 Operator ID: 433269 ALS Bottle#: 17 Worklist Smp#: 23
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

58 Benzene, CAS: 71-43-2

Processing Results



RT	Mass	Response	Amount
7.17	78.00	415	0.063232
7.16	52.00	331	
7.15	77.00	0	

Reviewer: bowieh, 28-Sep-2019 11:26:24

Audit Action: Marked Compound Undetected

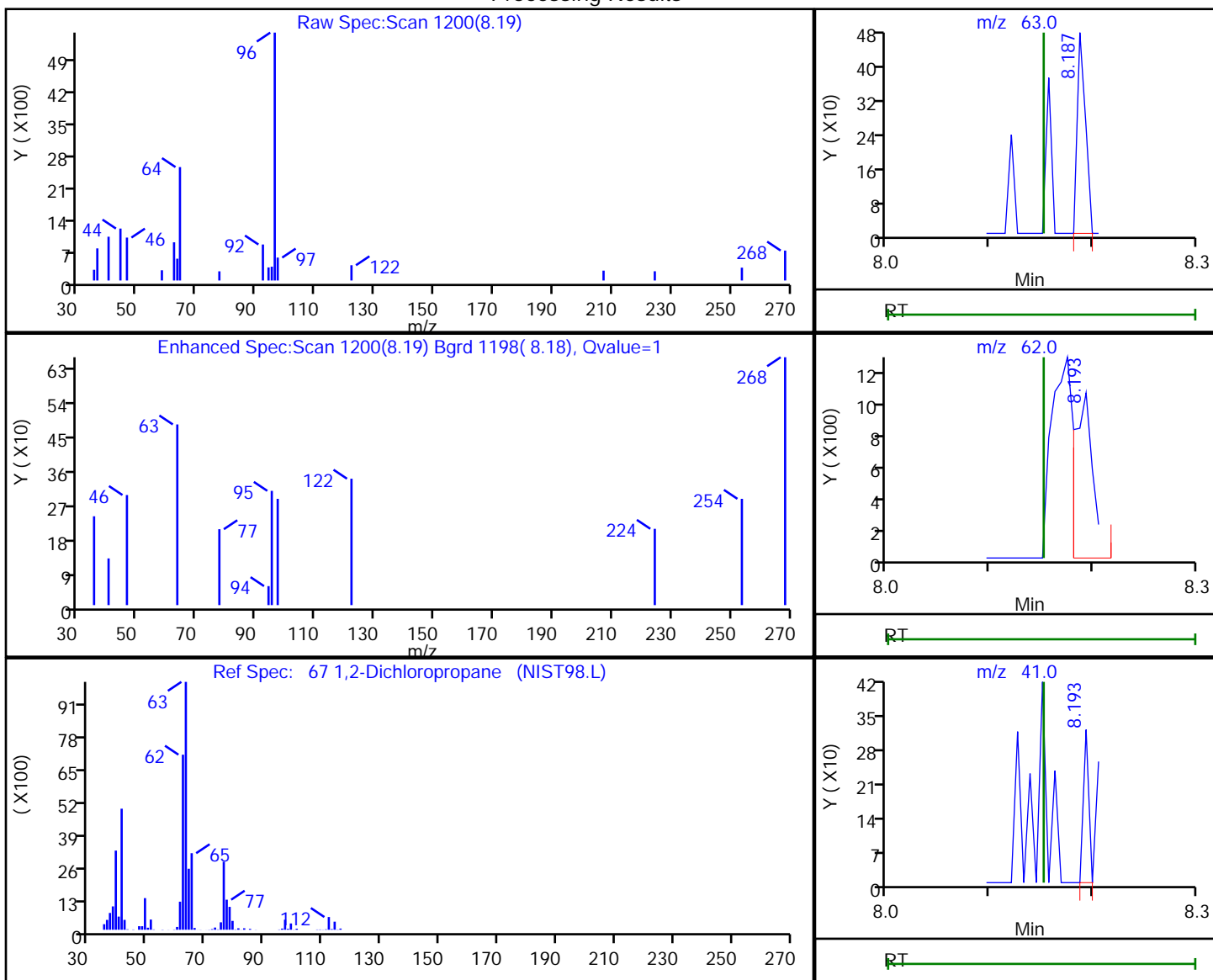
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092727.D
 Injection Date: 27-Sep-2019 23:06:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-11 Lab Sample ID: 180-96180-11
 Client ID: HD-COD-SW-27-0/1-0
 Operator ID: 433269 ALS Bottle#: 17 Worklist Smp#: 23
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

67 1,2-Dichloropropane, CAS: 78-87-5

Processing Results



RT	Mass	Response	Amount
8.19	63.00	266	0.163994
8.19	62.00	1376	
8.19	41.00	116	

Reviewer: bowieh, 28-Sep-2019 11:26:27

Audit Action: Marked Compound Undetected

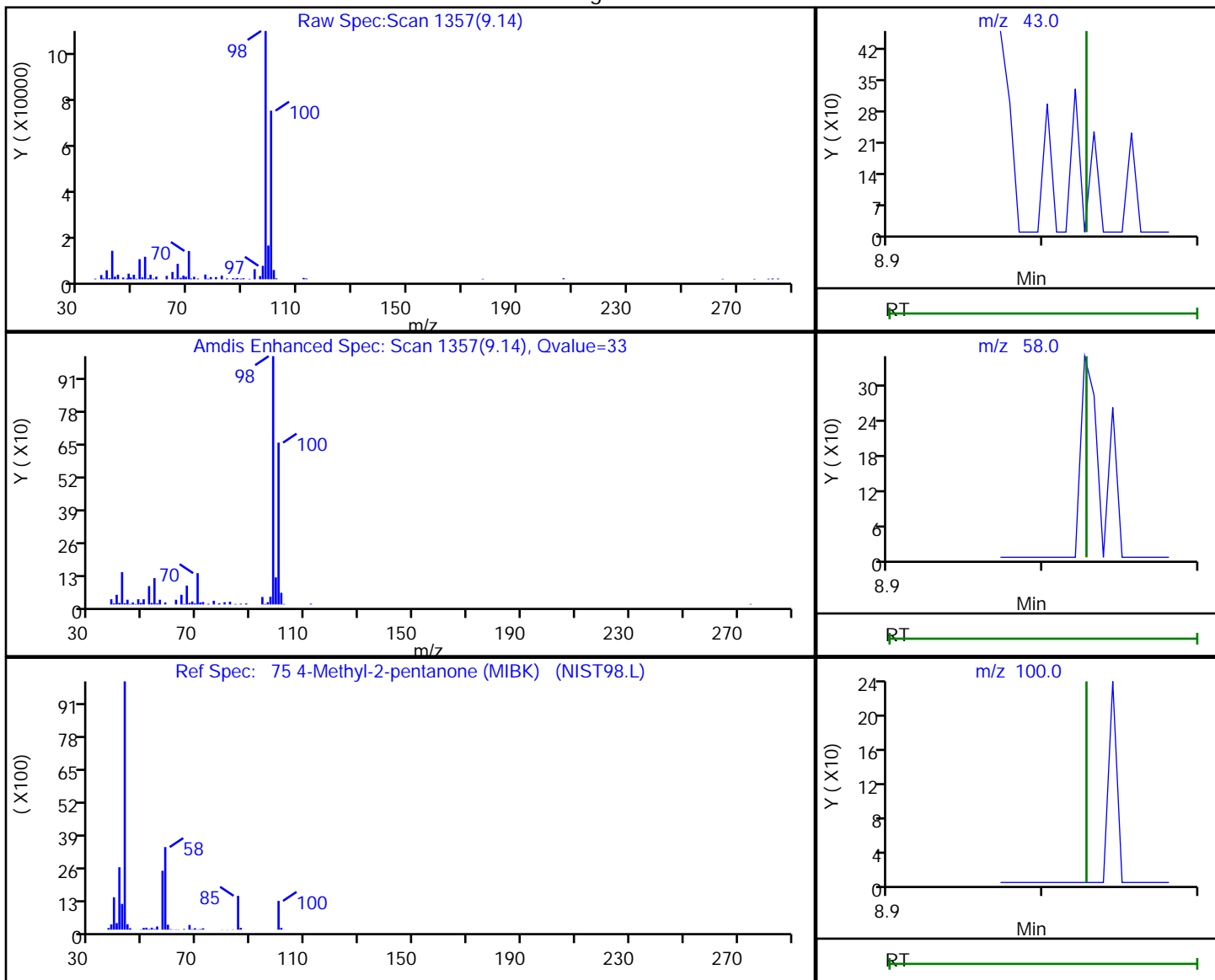
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

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 Injection Date: 27-Sep-2019 23:06:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-11 Lab Sample ID: 180-96180-11
 Client ID: HD-COD-SW-27-0/1-0
 Operator ID: 433269 ALS Bottle#: 17 Worklist Smp#: 23
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

75 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1

Processing Results



RT	Mass	Response	Amount
9.14	43.00	854	0.525272
9.14	58.00	2332	
9.14	100.00	161917	

Reviewer: bowieh, 28-Sep-2019 11:26:29

Audit Action: Marked Compound Undetected

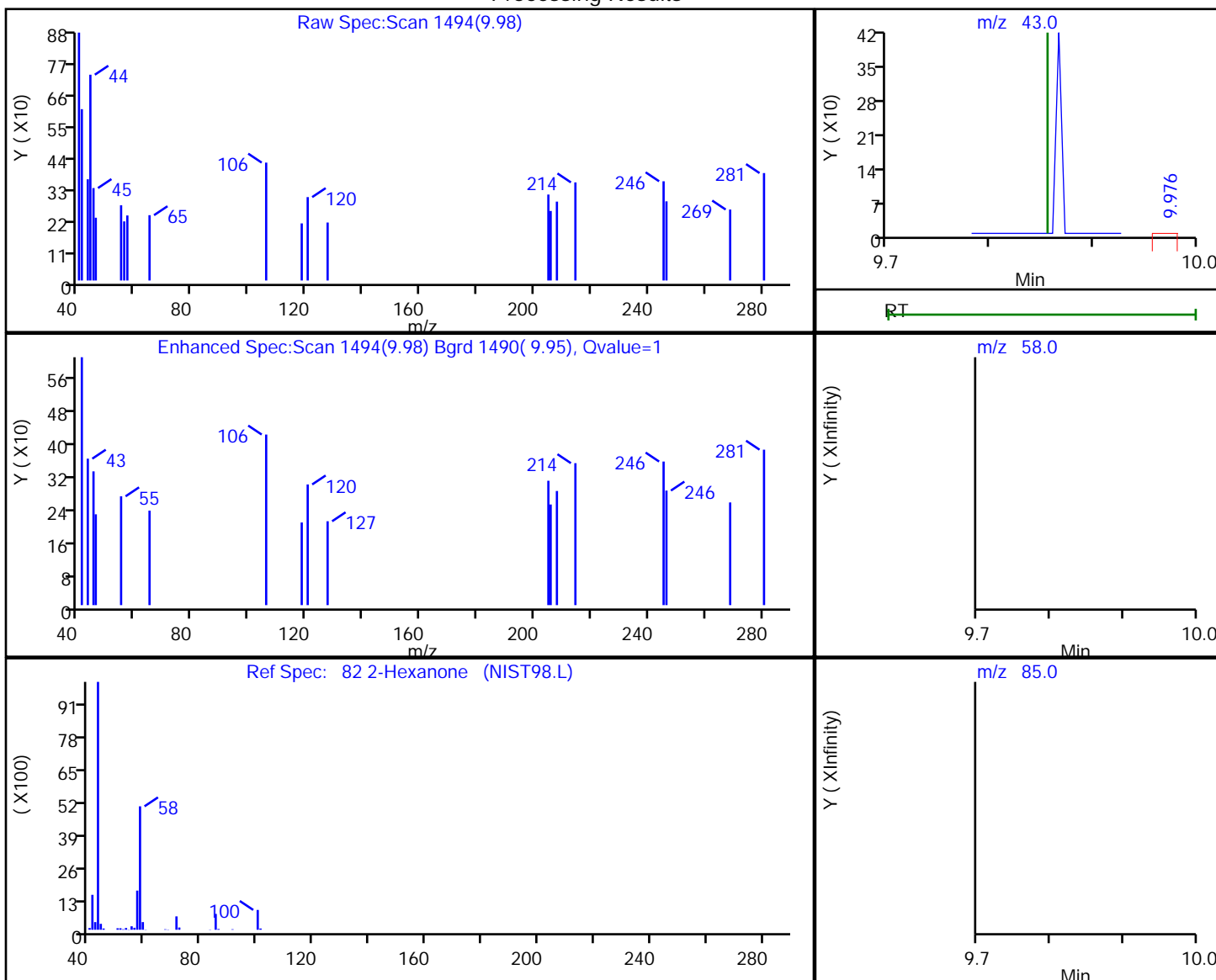
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092727.D
 Injection Date: 27-Sep-2019 23:06:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-11 Lab Sample ID: 180-96180-11
 Client ID: HD-COD-SW-27-0/1-0
 Operator ID: 433269 ALS Bottle#: 17 Worklist Smp#: 23
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

82 2-Hexanone, CAS: 591-78-6

Processing Results



RT	Mass	Response	Amount
9.98	43.00	293	0.249211
9.86	58.00	0	
9.86	85.00	0	

Reviewer: bowieh, 28-Sep-2019 11:26:34

Audit Action: Marked Compound Undetected

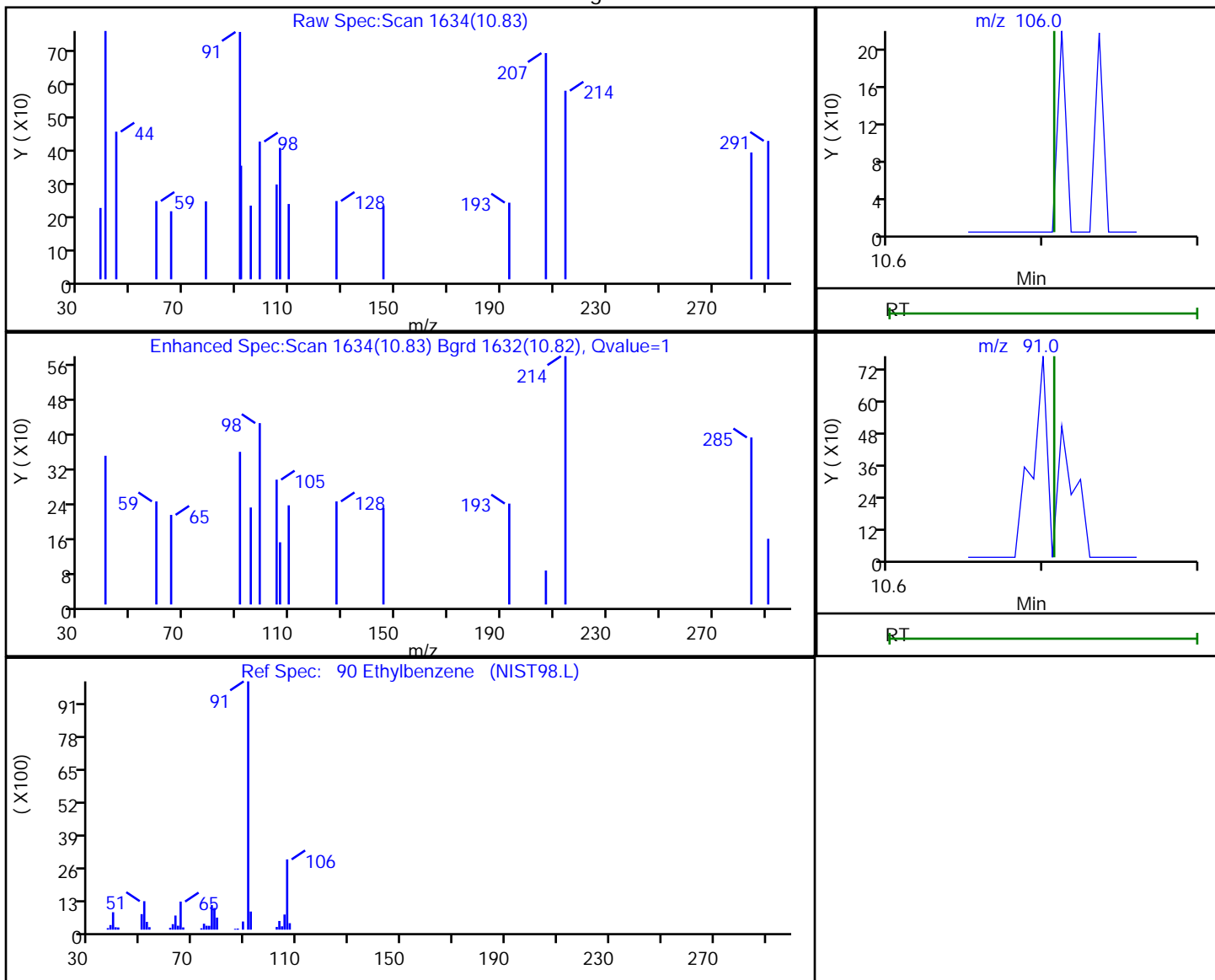
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092727.D
 Injection Date: 27-Sep-2019 23:06:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-11 Lab Sample ID: 180-96180-11
 Client ID: HD-COD-SW-27-0/1-0
 Operator ID: 433269 ALS Bottle#: 17 Worklist Smp#: 23
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

90 Ethylbenzene, CAS: 100-41-4

Processing Results



RT	Mass	Response	Amount
10.83	106.00	229	0.090369
10.83	91.00	2018	

Reviewer: bowieh, 28-Sep-2019 11:26:36

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: HD-QC1-0/1-2 Lab Sample ID: 180-96180-12
 Matrix: Water Lab File ID: 5092728.D
 Analysis Method: EPA 8260C Date Collected: 09/23/2019 00:00
 Sample wt/vol: 5 (mL) Date Analyzed: 09/27/2019 23:30
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 292962 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	ND		1.0	0.90
75-01-4	Vinyl chloride	ND		1.0	0.88
74-83-9	Bromomethane	ND		1.0	0.89
75-00-3	Chloroethane	ND		1.0	0.90
75-35-4	1,1-Dichloroethene	ND		1.0	0.55
67-64-1	Acetone	ND		5.0	3.4
75-15-0	Carbon disulfide	ND		1.0	0.88
75-09-2	Methylene Chloride	ND		1.0	0.89
156-60-5	trans-1,2-Dichloroethene	ND	*	1.0	0.67
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.59
75-34-3	1,1-Dichloroethane	ND		1.0	0.63
156-59-2	cis-1,2-Dichloroethene	ND	*	1.0	0.71
74-97-5	Bromochloromethane	ND		1.0	0.63
78-93-3	2-Butanone (MEK)	ND		5.0	2.6
67-66-3	Chloroform	ND		1.0	0.60
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.60
56-23-5	Carbon tetrachloride	ND		1.0	0.88
71-43-2	Benzene	ND		1.0	0.60
107-06-2	1,2-Dichloroethane	ND		1.0	0.57
79-01-6	Trichloroethene	ND	*	1.0	0.69
78-87-5	1,2-Dichloropropane	ND		1.0	0.66
75-27-4	Bromodichloromethane	ND		1.0	0.64
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.59
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1
108-88-3	Toluene	ND	*	1.0	0.46
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.58
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.45
127-18-4	Tetrachloroethene	ND		1.0	0.47
591-78-6	2-Hexanone	ND		5.0	3.3
124-48-1	Dibromochloromethane	ND		1.0	0.84
106-93-4	1,2-Dibromoethane (EDB)	ND		1.0	0.50
108-90-7	Chlorobenzene	ND		1.0	0.50
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.57
100-41-4	Ethylbenzene	ND		1.0	0.51
1330-20-7	Xylenes, Total	ND	*	2.0	0.89
100-42-5	Styrene	ND		1.0	0.47

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: HD-QC1-0/1-2 Lab Sample ID: 180-96180-12
 Matrix: Water Lab File ID: 5092728.D
 Analysis Method: EPA 8260C Date Collected: 09/23/2019 00:00
 Sample wt/vol: 5 (mL) Date Analyzed: 09/27/2019 23:30
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 292962 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	ND		1.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.60
107-13-1	Acrylonitrile	ND		20	7.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100		70-150
2037-26-5	Toluene-d8 (Surr)	87		78-128
460-00-4	4-Bromofluorobenzene (Surr)	73		64-123
1868-53-7	Dibromofluoromethane (Surr)	115		75-147

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092728.D
 Lims ID: 180-96180-B-12
 Client ID: HD-QC1-0/1-2
 Sample Type: Client
 Inject. Date: 27-Sep-2019 23:30:30 ALS Bottle#: 18 Worklist Smp#: 24
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028863-024
 Misc. Info.: 180-96180-B-12
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 28-Sep-2019 11:27:17 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: bowieh

Date: 28-Sep-2019 11:27:17

Compound	Sig	RT (min.)	Exp RT (min.)	Diff RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.535	4.532	0.003	0	180730	1000.0	
* 2 Fluorobenzene (IS)	96	7.497	7.495	0.002	97	274083	50.0	
* 3 Chlorobenzene-d5	119	10.582	10.579	0.003	87	76382	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.924	12.915	0.009	96	111374	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.786	6.777	0.009	93	91127	57.6	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.145	7.142	0.003	0	133847	50.2	
\$ 7 Toluene-d8 (Surr)	98	9.134	9.131	0.003	95	264912	43.6	
\$ 8 4-Bromofluorobenzene (Surr	95	11.762	11.766	-0.004	93	91866	36.7	
12 Chloromethane	50		1.910				ND	
13 Vinyl chloride	62		2.038				ND	
15 Bromomethane	94		2.379				ND	U
16 Chloroethane	64		2.543				ND	
22 1,1-Dichloroethene	96		3.565				ND	
24 Acetone	43		3.668				ND	U
26 Carbon disulfide	76		3.863				ND	
31 Methylene Chloride	84	4.401	4.405	-0.004	8	1494	-5.84	
33 Acrylonitrile	53		4.782				ND	
34 trans-1,2-Dichloroethene	96		4.812				ND	
35 Methyl tert-butyl ether	73		4.824				ND	
37 1,1-Dichloroethane	63		5.439				ND	
45 cis-1,2-Dichloroethene	96		6.181				ND	
46 2-Butanone (MEK)	43		6.187				ND	
49 Chlorobromomethane	128		6.455				ND	
52 Chloroform	83		6.595				ND	U
53 1,1,1-Trichloroethane	97		6.759				ND	
56 Carbon tetrachloride	117		6.929				ND	
58 Benzene	78		7.154				ND	
59 1,2-Dichloroethane	62		7.233				ND	
64 Trichloroethene	130		7.878				ND	
67 1,2-Dichloropropane	63		8.152				ND	U
71 Dichlorobromomethane	83		8.432				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
74 cis-1,3-Dichloropropene	75		8.870				ND	
75 4-Methyl-2-pentanone (MIBK)	43		9.028				ND	U
76 Toluene	91		9.198				ND	
77 trans-1,3-Dichloropropene	75		9.448				ND	
79 1,1,2-Trichloroethane	97		9.636				ND	
80 Tetrachloroethene	164		9.709				ND	
82 2-Hexanone	43		9.855				ND	
84 Chlorodibromomethane	129		10.007				ND	
85 Ethylene Dibromide	107		10.123				ND	
87 Chlorobenzene	112		10.610				ND	
89 1,1,1,2-Tetrachloroethane	131		10.701				ND	
90 Ethylbenzene	106		10.707				ND	
91 m-Xylene & p-Xylene	106		10.835				ND	
92 o-Xylene	106		11.218				ND	
93 Styrene	104		11.242				ND	
94 Bromoform	173		11.419				ND	
99 1,1,2,2-Tetrachloroethane	83		11.899				ND	
S 133 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

voaWI/SHP5_00013

Amount Added: 5.00

Units: uL

Run Reagent

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092728.D

Injection Date: 27-Sep-2019 23:30:30

Instrument ID: CHHP5

Operator ID: 433269

Lims ID: 180-96180-B-12

Lab Sample ID: 180-96180-12

Worklist Smp#: 24

Client ID: HD-QC1-0/1-2

Purge Vol: 5.000 mL

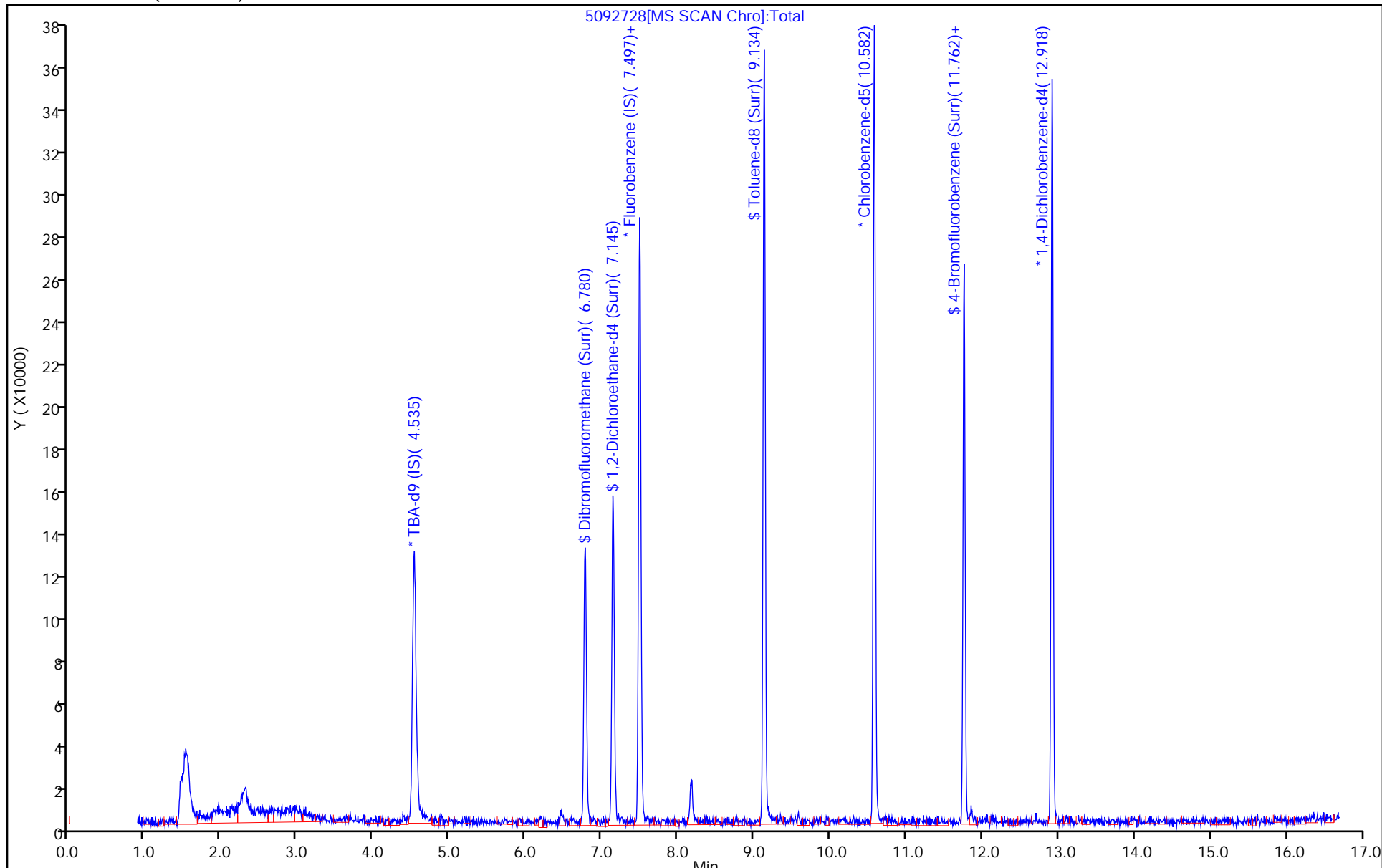
Dil. Factor: 1.0000

ALS Bottle#: 18

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Recovery Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092728.D
 Lims ID: 180-96180-B-12
 Client ID: HD-QC1-0/1-2
 Sample Type: Client
 Inject. Date: 27-Sep-2019 23:30:30 ALS Bottle#: 18 Worklist Smp#: 24
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028863-024
 Misc. Info.: 180-96180-B-12
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 28-Sep-2019 11:27:17 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: bowieh Date: 28-Sep-2019 11:27:17

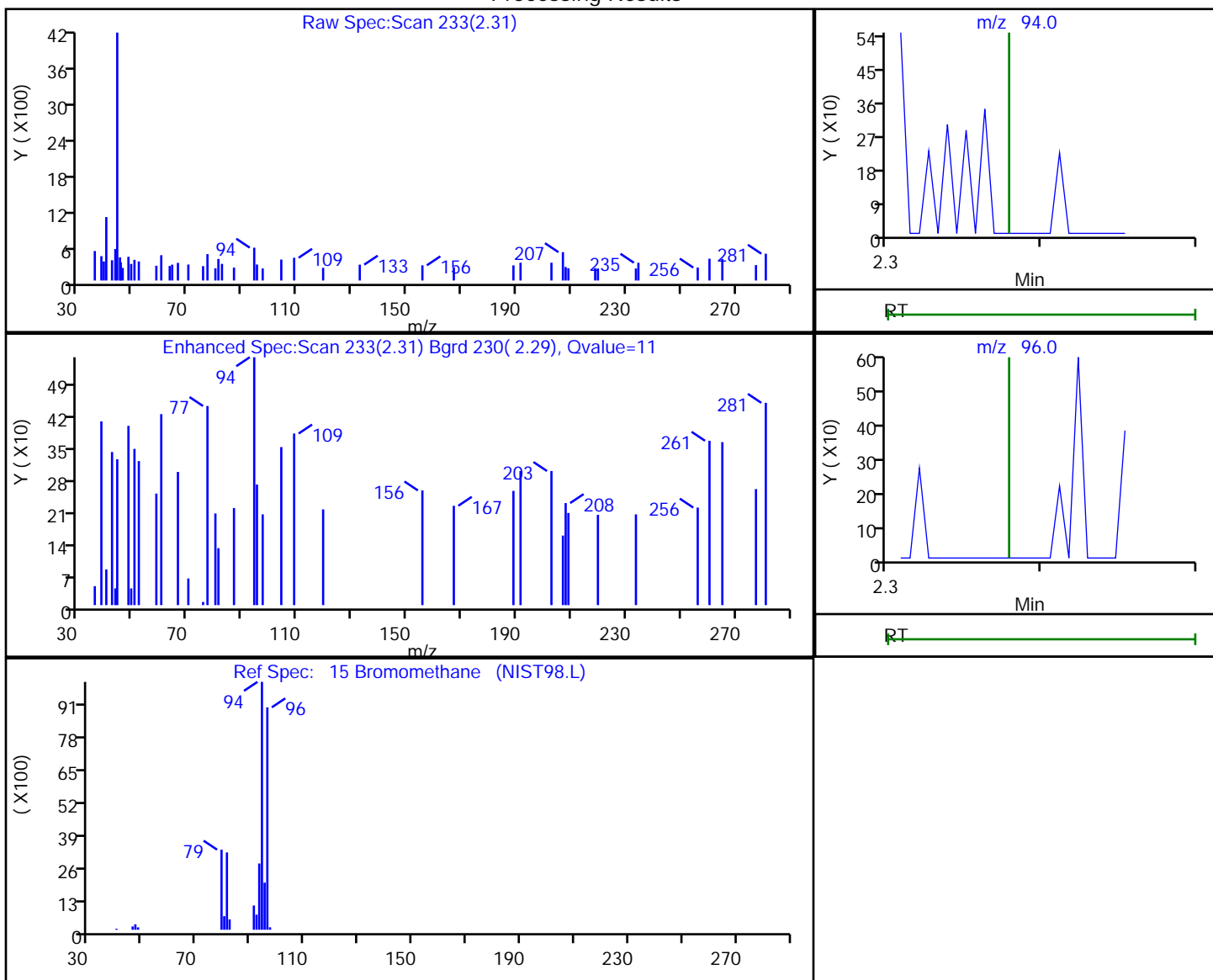
Compound	Amount Added	Amount Recovered	% Rec.
\$ 5 Dibromofluoromethane (Surr)	50.0	57.6	115.20
\$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	50.2	100.44
\$ 7 Toluene-d8 (Surr)	50.0	43.6	87.13
\$ 8 4-Bromofluorobenzene (Surr)	50.0	36.7	73.50

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092728.D
 Injection Date: 27-Sep-2019 23:30:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-12 Lab Sample ID: 180-96180-12
 Client ID: HD-QC1-0/1-2
 Operator ID: 433269 ALS Bottle#: 18 Worklist Smp#: 24
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

15 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
2.31	94.00	324	0.192586
2.30	96.00	302	

Reviewer: bowieh, 28-Sep-2019 11:26:55

Audit Action: Marked Compound Undetected

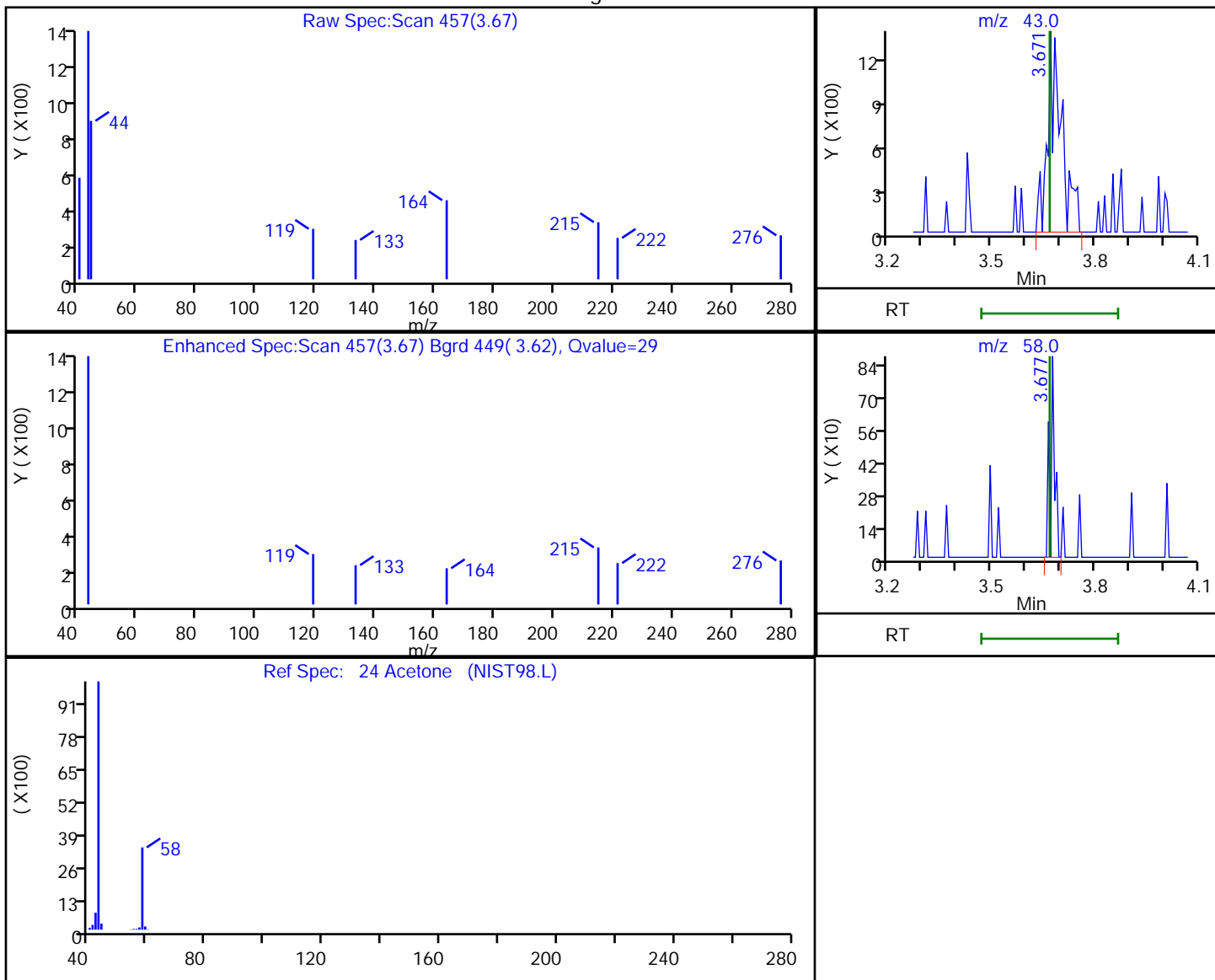
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092728.D
Injection Date: 27-Sep-2019 23:30:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-12 Lab Sample ID: 180-96180-12
Client ID: HD-QC1-0/1-2
Operator ID: 433269 ALS Bottle#: 18 Worklist Smp#: 24
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

24 Acetone, CAS: 67-64-1

Processing Results



RT	Mass	Response	Amount
3.67	43.00	3829	5.489797
3.68	58.00	764	

Reviewer: bowieh, 28-Sep-2019 11:26:59

Audit Action: Marked Compound Undetected

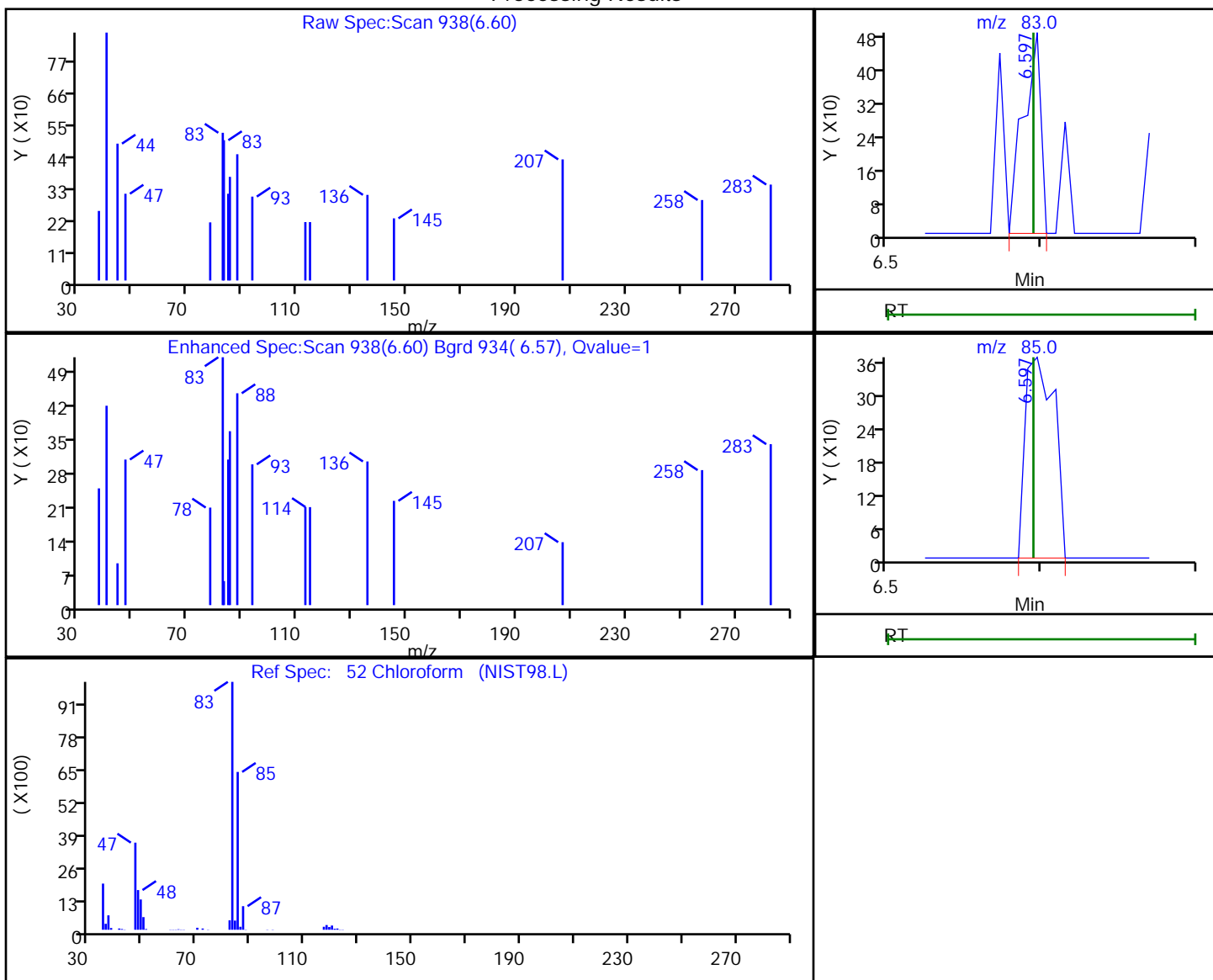
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092728.D
 Injection Date: 27-Sep-2019 23:30:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-12 Lab Sample ID: 180-96180-12
 Client ID: HD-QC1-0/1-2
 Operator ID: 433269 ALS Bottle#: 18 Worklist Smp#: 24
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

52 Chloroform, CAS: 67-66-3

Processing Results



RT	Mass	Response	Amount
6.60	83.00	386	-2.561254
6.60	85.00	472	

Reviewer: bowieh, 28-Sep-2019 11:27:04

Audit Action: Marked Compound Undetected

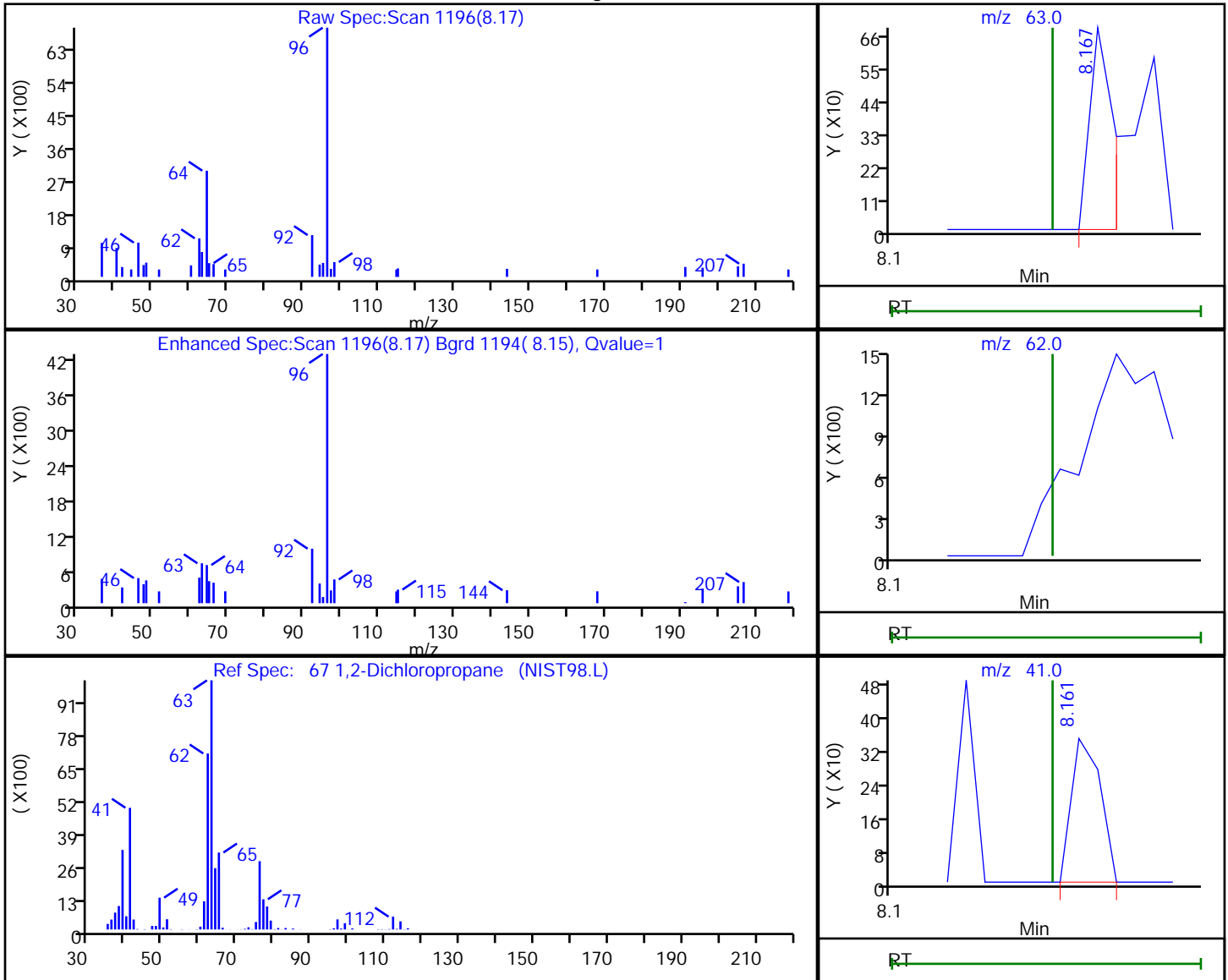
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092728.D
 Injection Date: 27-Sep-2019 23:30:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-12 Lab Sample ID: 180-96180-12
 Client ID: HD-QC1-0/1-2
 Operator ID: 433269 ALS Bottle#: 18 Worklist Smp#: 24
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

67 1,2-Dichloropropane, CAS: 78-87-5

Processing Results



RT	Mass	Response	Amount
8.17	63.00	366	0.218752
8.17	62.00	2927	
8.16	41.00	225	

Reviewer: bowieh, 28-Sep-2019 11:27:07

Audit Action: Marked Compound Undetected

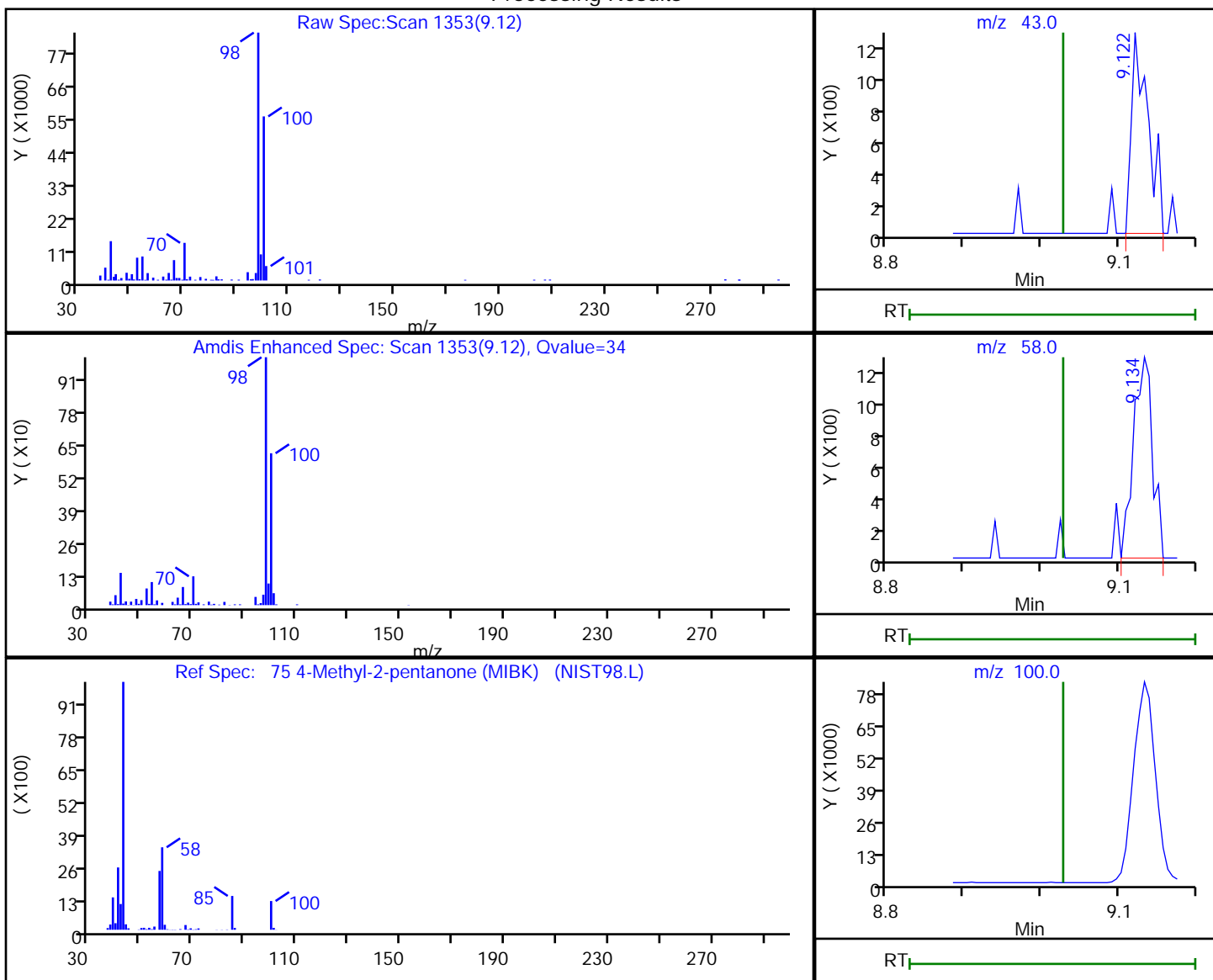
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092728.D
 Injection Date: 27-Sep-2019 23:30:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-12 Lab Sample ID: 180-96180-12
 Client ID: HD-QC1-0/1-2
 Operator ID: 433269 ALS Bottle#: 18 Worklist Smp#: 24
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

75 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1

Processing Results



RT	Mass	Response	Amount
9.12	43.00	1899	1.089897
9.13	58.00	2074	
9.13	100.00	163579	

Reviewer: bowieh, 28-Sep-2019 11:27:09

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: HD-MW-110-0/1-0 Lab Sample ID: 180-96180-13
 Matrix: Water Lab File ID: 5100408.D
 Analysis Method: EPA 8260C Date Collected: 09/24/2019 13:30
 Sample wt/vol: 5 (mL) Date Analyzed: 10/04/2019 15:13
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 293722 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	ND		1.0	0.90
75-01-4	Vinyl chloride	ND		1.0	0.88
74-83-9	Bromomethane	ND		1.0	0.89
75-00-3	Chloroethane	ND		1.0	0.90
75-35-4	1,1-Dichloroethene	ND		1.0	0.55
67-64-1	Acetone	ND	^c	5.0	3.4
75-15-0	Carbon disulfide	ND		1.0	0.88
75-09-2	Methylene Chloride	ND		1.0	0.89
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.67
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.59
75-34-3	1,1-Dichloroethane	ND		1.0	0.63
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.71
74-97-5	Bromochloromethane	ND		1.0	0.63
78-93-3	2-Butanone (MEK)	ND		5.0	2.6
67-66-3	Chloroform	ND		1.0	0.60
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.60
56-23-5	Carbon tetrachloride	ND		1.0	0.88
71-43-2	Benzene	ND		1.0	0.60
107-06-2	1,2-Dichloroethane	ND		1.0	0.57
79-01-6	Trichloroethene	0.71	J	1.0	0.69
78-87-5	1,2-Dichloropropane	ND		1.0	0.66
75-27-4	Bromodichloromethane	ND		1.0	0.64
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.59
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1
108-88-3	Toluene	ND		1.0	0.46
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.58
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.45
127-18-4	Tetrachloroethene	23	F1	1.0	0.47
591-78-6	2-Hexanone	ND		5.0	3.3
124-48-1	Dibromochloromethane	ND		1.0	0.84
106-93-4	1,2-Dibromoethane (EDB)	ND		1.0	0.50
108-90-7	Chlorobenzene	ND		1.0	0.50
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.57
100-41-4	Ethylbenzene	ND		1.0	0.51
1330-20-7	Xylenes, Total	ND		2.0	0.89
100-42-5	Styrene	ND		1.0	0.47

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: HD-MW-110-0/1-0 Lab Sample ID: 180-96180-13
 Matrix: Water Lab File ID: 5100408.D
 Analysis Method: EPA 8260C Date Collected: 09/24/2019 13:30
 Sample wt/vol: 5 (mL) Date Analyzed: 10/04/2019 15:13
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 293722 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	ND		1.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.60
107-13-1	Acrylonitrile	ND		20	7.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95	^c	70-150
2037-26-5	Toluene-d8 (Surr)	84		78-128
460-00-4	4-Bromofluorobenzene (Surr)	80		64-123
1868-53-7	Dibromofluoromethane (Surr)	113		75-147

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100408.D
 Lims ID: 180-96180-B-13
 Client ID: HD-MW-110-0/1-0
 Sample Type: Client
 Inject. Date: 04-Oct-2019 15:13:30 ALS Bottle#: 1 Worklist Smp#: 7
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028969-007
 Misc. Info.: 180-96180-B-13
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 08-Oct-2019 09:40:23 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0329

First Level Reviewer: bowieh

Date: 08-Oct-2019 09:40:23

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.526	4.549	-0.023	0	215433	1000.0	
* 2 Fluorobenzene (IS)	96	7.495	7.494	0.001	98	327727	50.0	
* 3 Chlorobenzene-d5	119	10.579	10.584	-0.005	87	90672	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.921	12.920	0.001	95	150799	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.771	6.776	-0.005	93	106476	56.3	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.148	7.141	0.007	0	151247	47.5	
\$ 7 Toluene-d8 (Surr)	98	9.131	9.130	0.001	95	304328	42.2	
\$ 8 4-Bromofluorobenzene (Surr	95	11.759	11.758	0.001	93	118039	39.8	
11 Dichlorodifluoromethane	85		1.690				ND	
12 Chloromethane	50		1.909				ND	
13 Vinyl chloride	62		2.037				ND	
14 Butadiene	39		2.049				ND	U
15 Bromomethane	94		2.371				ND	U
16 Chloroethane	64		2.511				ND	
19 Ethanol	45	2.573	2.640	-0.067	10	197	NC	
17 Dichlorofluoromethane	67		2.834				ND	
18 Trichlorofluoromethane	101		2.846				ND	
20 Ethyl ether	59		3.247				ND	
21 Acrolein	56		3.448				ND	
22 1,1-Dichloroethene	96		3.564				ND	
23 1,1,2-Trichloro-1,2,2-trif	101		3.631				ND	
24 Acetone	43	3.674	3.685	-0.011	71	4126	4.95	
25 Iodomethane	142		3.764				ND	
26 Carbon disulfide	76		3.850				ND	
27 Isopropyl alcohol	45	3.991	3.990	0.001	71	11334	102.6	
29 Acetonitrile	41		4.148				ND	U
28 3-Chloro-1-propene	76		4.178				ND	
30 Methyl acetate	43		4.209				ND	
31 Methylene Chloride	84	4.404	4.403	0.001	51	3502	-5.01	
32 2-Methyl-2-propanol	59		4.671				ND	U
33 Acrylonitrile	53		4.787				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
34 trans-1,2-Dichloroethene	96		4.805				ND	
35 Methyl tert-butyl ether	73		4.829				ND	Ua
36 Hexane	57	5.214	5.218	-0.004	41	1710	0.5559	
37 1,1-Dichloroethane	63		5.437				ND	
38 Vinyl acetate	43		5.480				ND	U
39 2-Chloro-1,3-butadiene	53		5.529				ND	
41 Isopropyl ether	45		5.535				ND	
42 Tert-butyl ethyl ether	59		5.997				ND	
44 2,2-Dichloropropane	97		6.161				ND	U
45 cis-1,2-Dichloroethene	96		6.174				ND	U
46 2-Butanone (MEK)	43		6.186				ND	
48 Ethyl acetate	43		6.259				ND	U
47 Propionitrile	54		6.265				ND	U
50 Methacrylonitrile	41		6.441				ND	
49 Chlorobromomethane	128		6.453				ND	
51 Tetrahydrofuran	42		6.466				ND	
52 Chloroform	83	6.601	6.599	0.002	93	14620	0.9269	
53 1,1,1-Trichloroethane	97		6.758				ND	
54 Cyclohexane	56		6.818				ND	
56 Carbon tetrachloride	117		6.922				ND	
55 1,1-Dichloropropene	75		6.940				ND	
57 Isobutyl alcohol	41		7.141				ND	U
58 Benzene	78		7.153				ND	U
59 1,2-Dichloroethane	62		7.226				ND	U
151 Isooctane	57		7.305				ND	U
61 Tert-amyl methyl ether	73		7.330				ND	U
62 n-Heptane	43		7.506				ND	U
63 n-Butanol	56		7.841				ND	
64 Trichloroethene	130	7.878	7.877	0.001	95	7754	3.54	
65 Ethyl acrylate	55		7.999				ND	
66 Methylcyclohexane	83		8.108				ND	
67 1,2-Dichloropropane	63		8.151				ND	
69 Methyl methacrylate	69		8.230				ND	
70 1,4-Dioxane	88		8.236				ND	
68 Dibromomethane	93		8.236				ND	
71 Dichlorobromomethane	83		8.430				ND	
73 2-Chloroethyl vinyl ether	63		8.729				ND	
74 cis-1,3-Dichloropropene	75		8.869				ND	
75 4-Methyl-2-pentanone (MIBK)	43		9.027				ND	
76 Toluene	91		9.197				ND	
77 trans-1,3-Dichloropropene	75		9.440				ND	
78 Ethyl methacrylate	69		9.501				ND	
79 1,1,2-Trichloroethane	97		9.641				ND	U
80 Tetrachloroethene	164	9.709	9.708	0.001	98	253568	115.5	
81 1,3-Dichloropropane	76		9.799				ND	
82 2-Hexanone	43		9.854				ND	
83 n-Butyl acetate	43		9.970				ND	
84 Chlorodibromomethane	129		10.012				ND	
85 Ethylene Dibromide	107		10.122				ND	
86 3-Chlorobenzotrifluoride	180		10.445				ND	
87 Chlorobenzene	112		10.608				ND	
89 1,1,1,2-Tetrachloroethane	131		10.700				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
90 Ethylbenzene	106		10.712				ND	U
88 4-Chlorobenzotrifluoride	180		10.779				ND	
91 m-Xylene & p-Xylene	106		10.840				ND	
92 o-Xylene	106		11.223				ND	
93 Styrene	104		11.241				ND	
94 Bromoform	173		11.417				ND	
96 2-Chlorobenzotrifluoride	180		11.521				ND	
97 Isopropylbenzene	105		11.582				ND	
98 Cyclohexanone	55		11.679				ND	
99 1,1,2,2-Tetrachloroethane	83		11.898				ND	
100 Bromobenzene	156		11.904				ND	
102 trans-1,4-Dichloro-2-buten	53		11.941				ND	U
101 1,2,3-Trichloropropane	110		11.953				ND	
103 N-Propylbenzene	120		12.001				ND	
104 2-Chlorotoluene	126		12.093				ND	U
106 1,3,5-Trimethylbenzene	105		12.184				ND	
105 3-Chlorotoluene	126	12.222	12.212	0.010	1	211	NC	
107 4-Chlorotoluene	126		12.214				ND	U
111 1,2-dichloro-4-(trifluorom	214		12.463				ND	
108 tert-Butylbenzene	119		12.500				ND	
110 1,2,4-Trimethylbenzene	105		12.555				ND	
112 sec-Butylbenzene	105		12.719				ND	
116 2,4-Dichloro-1-(triflourom	214		12.836				ND	
113 1,3-Dichlorobenzene	146	12.830	12.841	-0.011	1	1341	0.2863	
114 4-Isopropyltoluene	119		12.878				ND	
118 2,5-Dichlorobenzotrifluori	214		12.878				ND	
115 1,4-Dichlorobenzene	146	12.946	12.944	0.002	1	974	0.2004	
117 1,2,3-Trimethylbenzene	105		12.969				ND	
119 Benzyl chloride	91		13.060				ND	
120 n-Butylbenzene	91		13.285				ND	U
121 1,2-Dichlorobenzene	146	13.305	13.303	0.002	1	752	0.1755	
122 1,2-Dibromo-3-Chloropropan	75		14.088				ND	
123 2,4- & 2,5- & 2,6- Dichlor	125		14.125				ND	
124 1,3,5-Trichlorobenzene	180		14.277				ND	
125 2,3- & 3,4- Dichlorotoluen	125		14.557				ND	
126 1,2,4-Trichlorobenzene	180		14.909				ND	
127 Hexachlorobutadiene	225		15.055				ND	U
128 Naphthalene	128		15.183				ND	U
129 1,2,3-Trichlorobenzene	180		15.420				ND	
131 2,4,5-Trichlorotoluene	159		16.090				ND	
130 2,3,6-Trichlorotoluene	159		16.090				ND	
S 133 Xylenes, Total	106		1.000				ND	
S 134 1,2-Dichloroethene, Total	96		1.000				ND	
S 154 Total BTEX	106		1.000				ND	
S 135 1,3-Dichloropropene, Total	1		0.000				ND	
T 156 2-ethoxy-2-methyl butane T	59		0.000				ND	
T 157 Ethanol TIC	45		0.000				ND	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

U - Marked Undetected

a - User Assigned ID

Reagents:

voaWI/SHP5_00013

Amount Added: 5.00

Units: uL

Run Reagent

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100408.D

Injection Date: 04-Oct-2019 15:13:30

Instrument ID: CHHP5

Operator ID: 433269

Lims ID: 180-96180-B-13

Lab Sample ID: 180-96180-13

Worklist Smp#: 7

Client ID: HD-MW-110-0/1-0

Purge Vol: 5.000 mL

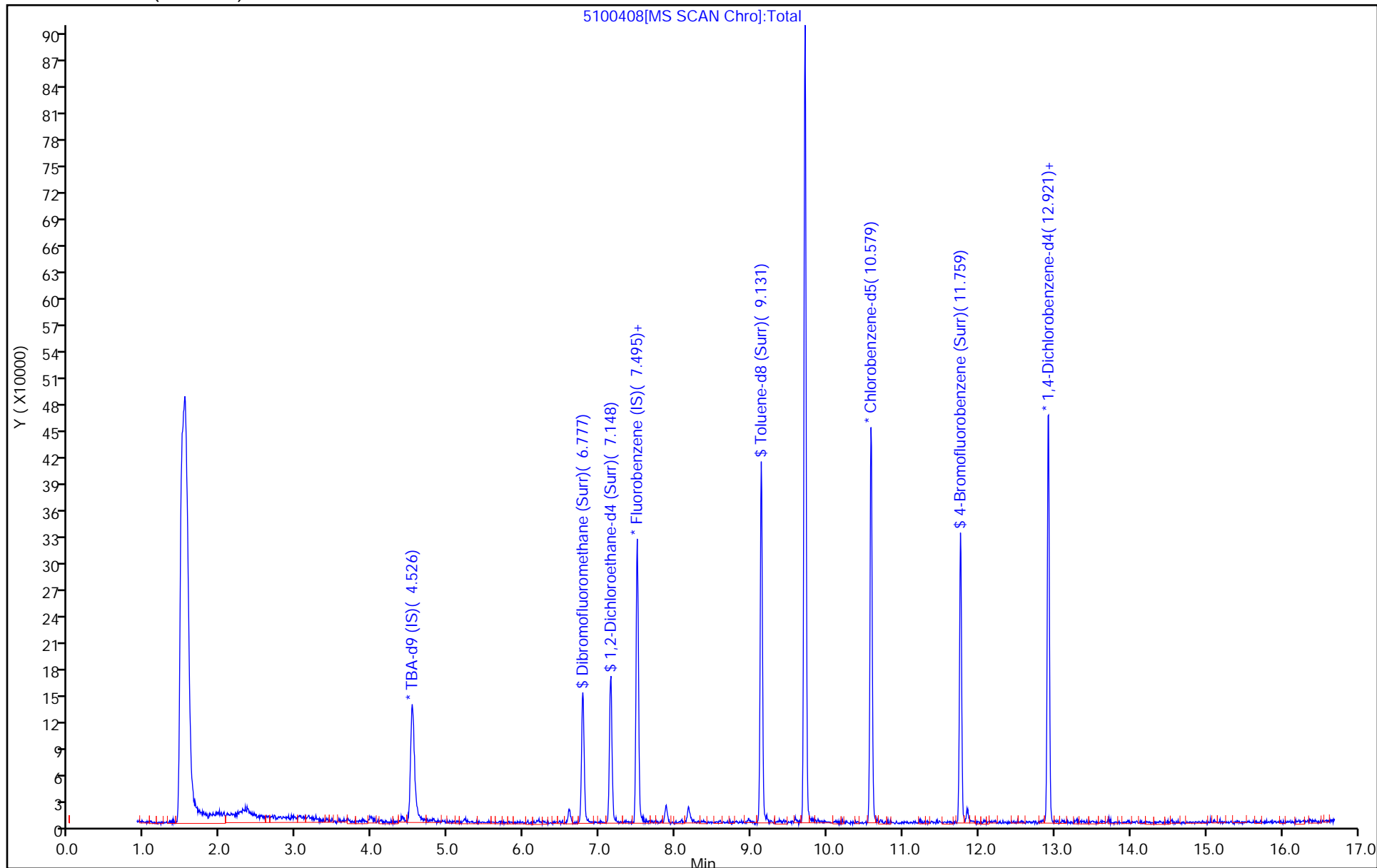
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Recovery Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100408.D
 Lims ID: 180-96180-B-13
 Client ID: HD-MW-110-0/1-0
 Sample Type: Client
 Inject. Date: 04-Oct-2019 15:13:30 ALS Bottle#: 1 Worklist Smp#: 7
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028969-007
 Misc. Info.: 180-96180-B-13
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 08-Oct-2019 09:40:23 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0329

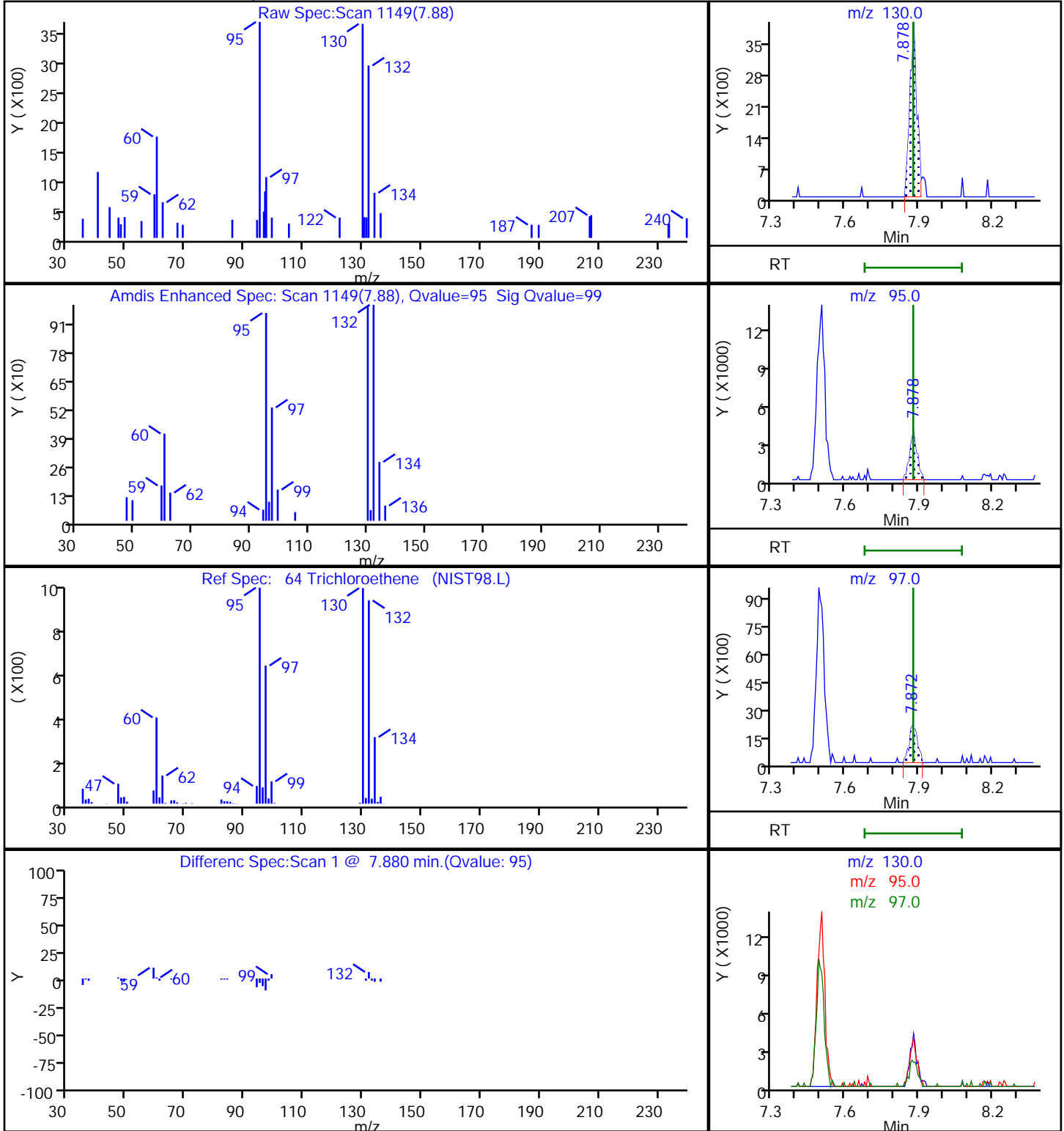
First Level Reviewer: bowieh Date: 08-Oct-2019 09:40:23

Compound	Amount Added	Amount Recovered	% Rec.
\$ 5 Dibromofluoromethane (Surr)	50.0	56.3	112.57
\$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	47.5	94.92
\$ 7 Toluene-d8 (Surr)	50.0	42.2	84.32
\$ 8 4-Bromofluorobenzene (Surr)	50.0	39.8	79.55

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100408.D
Injection Date: 04-Oct-2019 15:13:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-13 Lab Sample ID: 180-96180-13
Client ID: HD-MW-110-0/1-0
Operator ID: 433269 ALS Bottle#: 1 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

64 Trichloroethene, CAS: 79-01-6



Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100408.D

Injection Date: 04-Oct-2019 15:13:30

Instrument ID: CHHP5

Lims ID: 180-96180-B-13

Lab Sample ID: 180-96180-13

Client ID: HD-MW-110-0/1-0

Operator ID: 433269

ALS Bottle#: 1 Worklist Smp#: 7

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

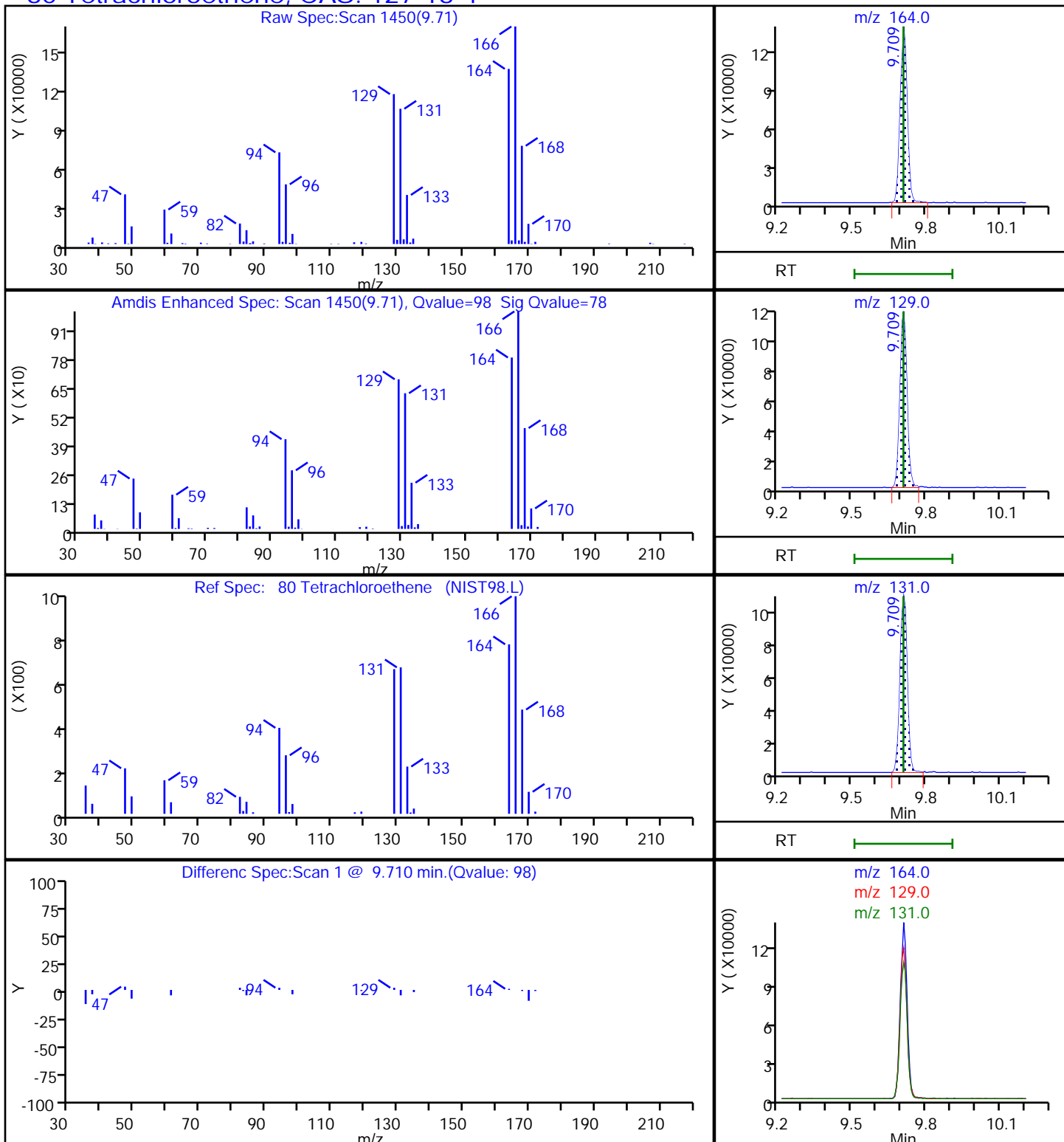
Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

80 Tetrachloroethene, CAS: 127-18-4

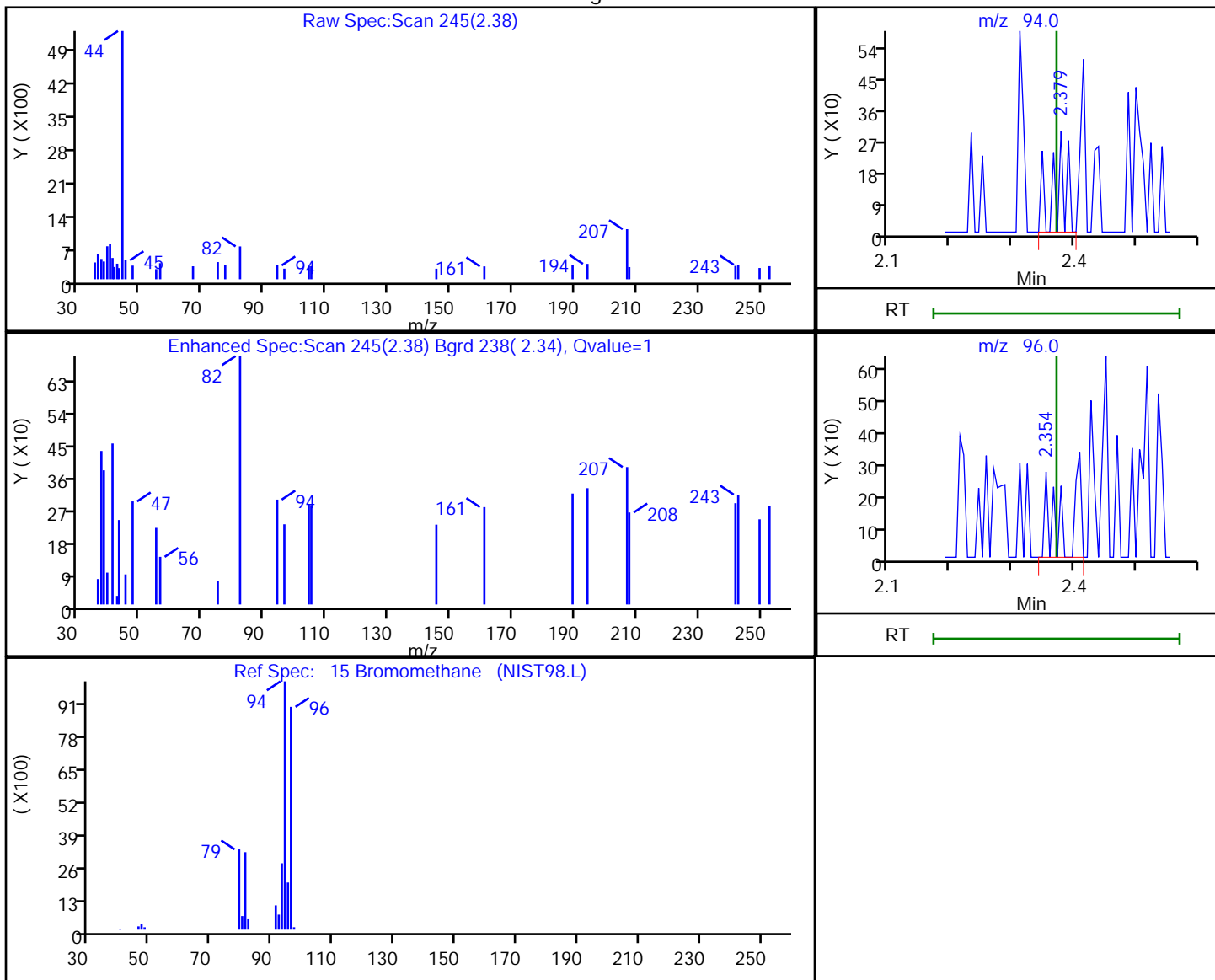


Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100408.D
Injection Date: 04-Oct-2019 15:13:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-13 Lab Sample ID: 180-96180-13
Client ID: HD-MW-110-0/1-0
Operator ID: 433269 ALS Bottle#: 1 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

15 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
2.38	94.00	374	0.185918
2.35	96.00	468	

Reviewer: bowieh, 04-Oct-2019 16:34:37

Audit Action: Marked Compound Undetected

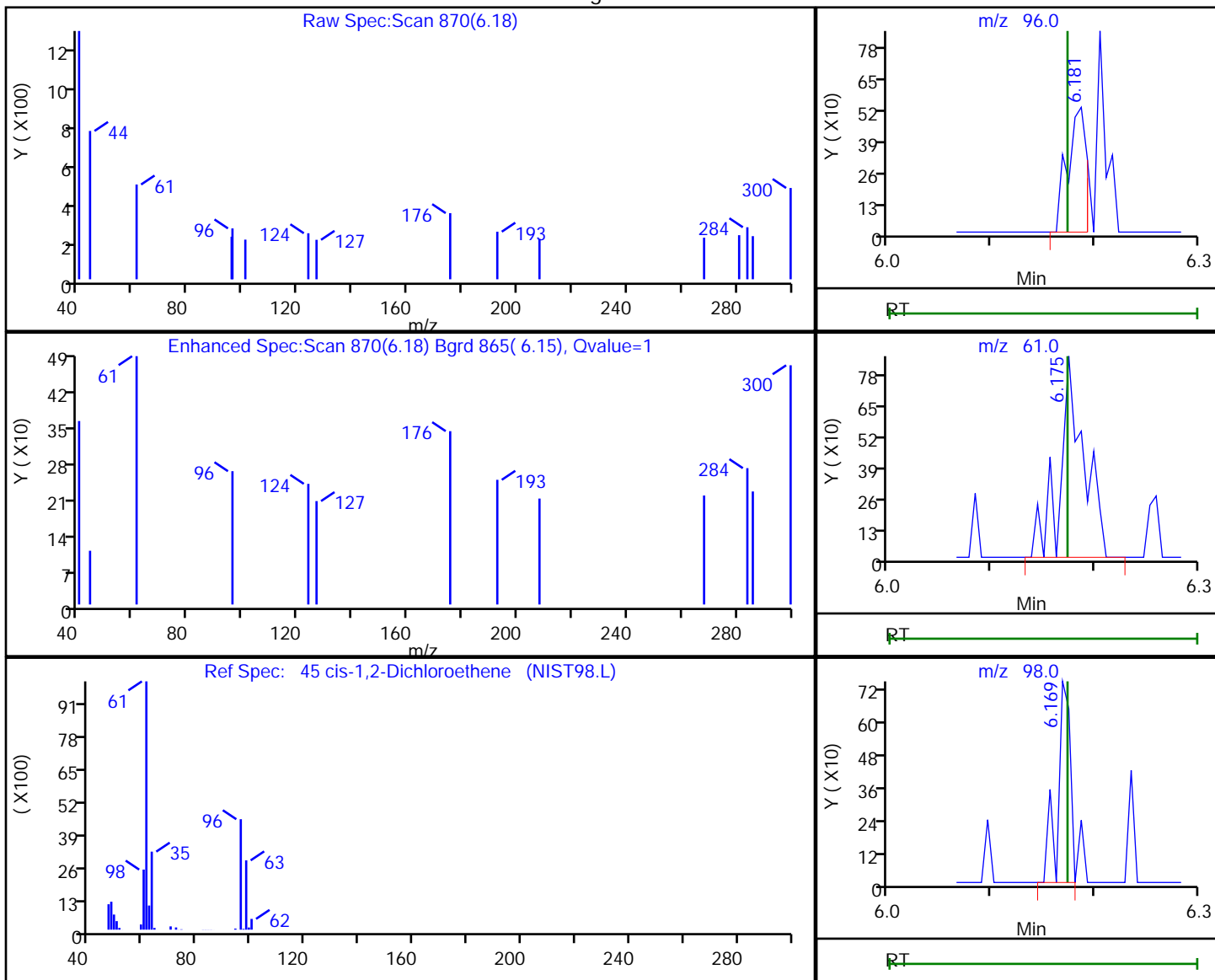
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100408.D
 Injection Date: 04-Oct-2019 15:13:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-13 Lab Sample ID: 180-96180-13
 Client ID: HD-MW-110-0/1-0
 Operator ID: 433269 ALS Bottle#: 1 Worklist Smp#: 7
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

45 cis-1,2-Dichloroethene, CAS: 156-59-2

Processing Results



RT	Mass	Response	Amount
6.18	96.00	675	0.313445
6.17	61.00	1396	
6.17	98.00	637	

Reviewer: bowieh, 04-Oct-2019 16:34:56

Audit Action: Marked Compound Undetected

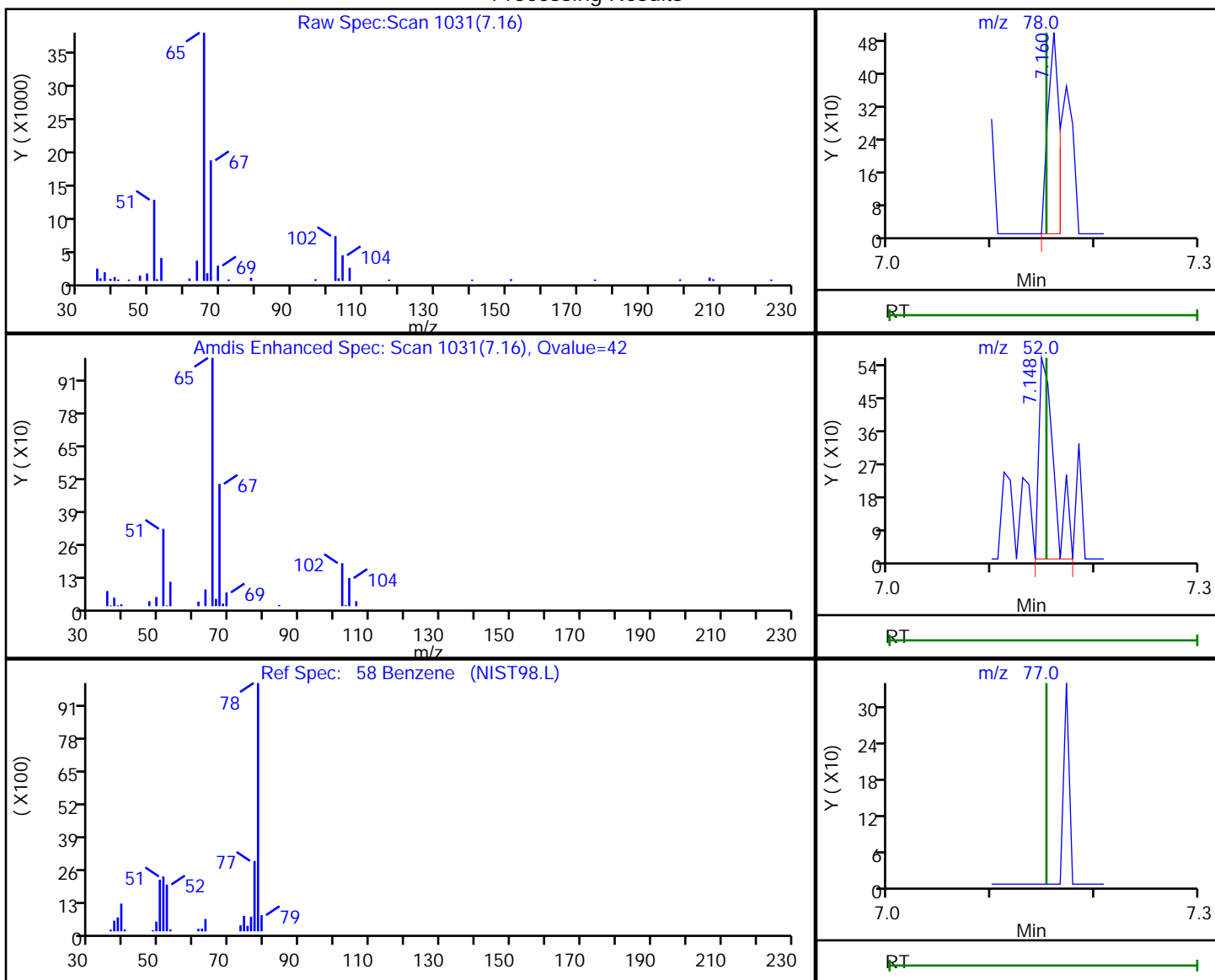
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100408.D
 Injection Date: 04-Oct-2019 15:13:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-13 Lab Sample ID: 180-96180-13
 Client ID: HD-MW-110-0/1-0
 Operator ID: 433269 ALS Bottle#: 1 Worklist Smp#: 7
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

58 Benzene, CAS: 71-43-2

Processing Results



RT	Mass	Response	Amount
7.16	78.00	380	0.046943
7.15	52.00	556	
7.15	77.00	0	

Reviewer: bowieh, 04-Oct-2019 16:39:13

Audit Action: Marked Compound Undetected

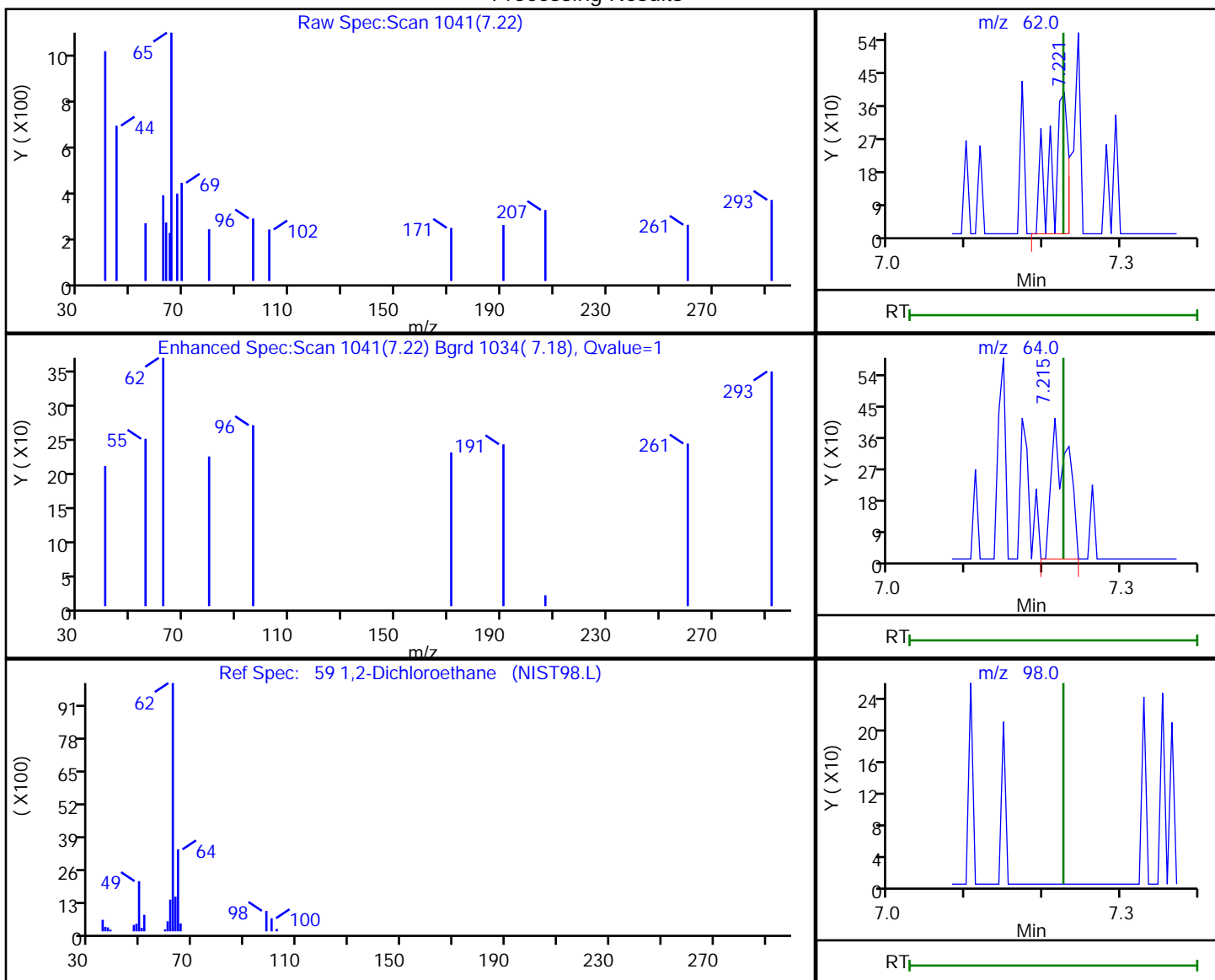
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100408.D
 Injection Date: 04-Oct-2019 15:13:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-13 Lab Sample ID: 180-96180-13
 Client ID: HD-MW-110-0/1-0
 Operator ID: 433269 ALS Bottle#: 1 Worklist Smp#: 7
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

59 1,2-Dichloroethane, CAS: 107-06-2

Processing Results



RT	Mass	Response	Amount
7.22	62.00	566	0.143020
7.22	64.00	611	
7.23	98.00	0	

Reviewer: bowieh, 04-Oct-2019 16:39:14

Audit Action: Marked Compound Undetected

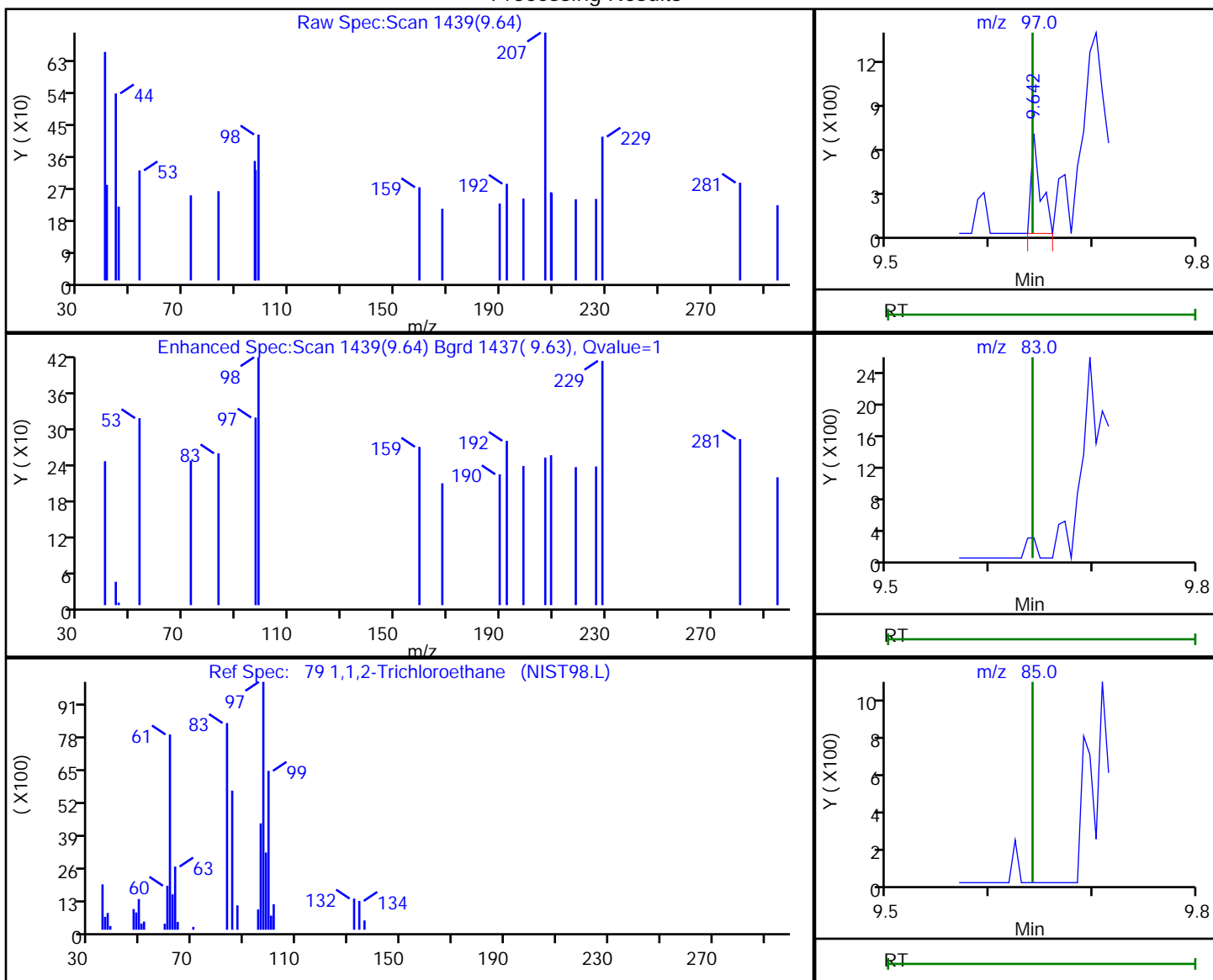
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100408.D
 Injection Date: 04-Oct-2019 15:13:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-13 Lab Sample ID: 180-96180-13
 Client ID: HD-MW-110-0/1-0
 Operator ID: 433269 ALS Bottle#: 1 Worklist Smp#: 7
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

79 1,1,2-Trichloroethane, CAS: 79-00-5

Processing Results



RT	Mass	Response	Amount
9.64	97.00	414	0.208892
9.64	83.00	0	
9.64	85.00	0	

Reviewer: bowieh, 04-Oct-2019 16:39:18

Audit Action: Marked Compound Undetected

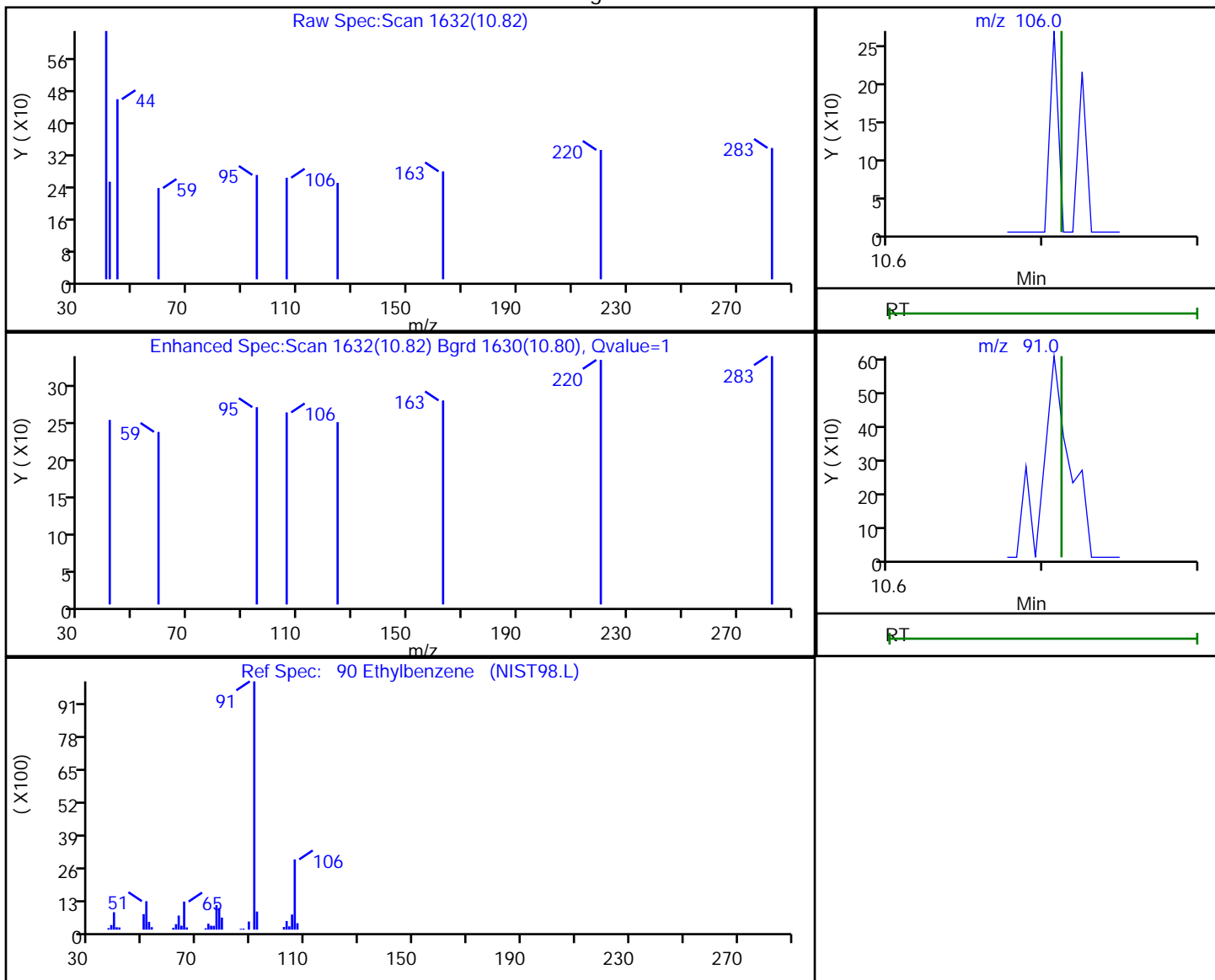
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100408.D
Injection Date: 04-Oct-2019 15:13:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-13 Lab Sample ID: 180-96180-13
Client ID: HD-MW-110-0/1-0
Operator ID: 433269 ALS Bottle#: 1 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

90 Ethylbenzene, CAS: 100-41-4

Processing Results



RT	Mass	Response	Amount
10.82	106.00	93	0.028848
10.82	91.00	647	

Reviewer: bowieh, 04-Oct-2019 16:39:22

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: HD-MW-108D-0/1-0 Lab Sample ID: 180-96180-14
 Matrix: Water Lab File ID: 5100409.D
 Analysis Method: EPA 8260C Date Collected: 09/24/2019 12:45
 Sample wt/vol: 5 (mL) Date Analyzed: 10/04/2019 15:37
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 293722 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	ND		1.0	0.90
75-01-4	Vinyl chloride	ND		1.0	0.88
74-83-9	Bromomethane	ND		1.0	0.89
75-00-3	Chloroethane	ND		1.0	0.90
75-35-4	1,1-Dichloroethene	ND		1.0	0.55
67-64-1	Acetone	ND	^c	5.0	3.4
75-15-0	Carbon disulfide	ND		1.0	0.88
75-09-2	Methylene Chloride	ND		1.0	0.89
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.67
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.59
75-34-3	1,1-Dichloroethane	ND		1.0	0.63
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.71
74-97-5	Bromochloromethane	ND		1.0	0.63
78-93-3	2-Butanone (MEK)	ND		5.0	2.6
67-66-3	Chloroform	ND		1.0	0.60
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.60
56-23-5	Carbon tetrachloride	ND		1.0	0.88
71-43-2	Benzene	ND		1.0	0.60
107-06-2	1,2-Dichloroethane	ND		1.0	0.57
79-01-6	Trichloroethene	ND		1.0	0.69
78-87-5	1,2-Dichloropropane	ND		1.0	0.66
75-27-4	Bromodichloromethane	ND		1.0	0.64
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.59
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1
108-88-3	Toluene	ND		1.0	0.46
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.58
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.45
127-18-4	Tetrachloroethene	0.48	J	1.0	0.47
591-78-6	2-Hexanone	ND		5.0	3.3
124-48-1	Dibromochloromethane	ND		1.0	0.84
106-93-4	1,2-Dibromoethane (EDB)	ND		1.0	0.50
108-90-7	Chlorobenzene	ND		1.0	0.50
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.57
100-41-4	Ethylbenzene	ND		1.0	0.51
1330-20-7	Xylenes, Total	ND		2.0	0.89
100-42-5	Styrene	ND		1.0	0.47

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: HD-MW-108D-0/1-0 Lab Sample ID: 180-96180-14
 Matrix: Water Lab File ID: 5100409.D
 Analysis Method: EPA 8260C Date Collected: 09/24/2019 12:45
 Sample wt/vol: 5 (mL) Date Analyzed: 10/04/2019 15:37
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 293722 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	ND		1.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.60
107-13-1	Acrylonitrile	ND		20	7.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95	^c	70-150
2037-26-5	Toluene-d8 (Surr)	83		78-128
460-00-4	4-Bromofluorobenzene (Surr)	71		64-123
1868-53-7	Dibromofluoromethane (Surr)	116		75-147

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100409.D
 Lims ID: 180-96180-B-14
 Client ID: HD-MW-108D-0/1-0
 Sample Type: Client
 Inject. Date: 04-Oct-2019 15:37:30 ALS Bottle#: 2 Worklist Smp#: 8
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028969-008
 Misc. Info.: 180-96180-B-14
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 04-Oct-2019 16:43:07 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0327

First Level Reviewer: bowieh Date: 04-Oct-2019 16:43:07

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.531	4.549	-0.018	0	197429	1000.0	
* 2 Fluorobenzene (IS)	96	7.500	7.494	0.006	98	293140	50.0	
* 3 Chlorobenzene-d5	119	10.584	10.584	0.000	88	86152	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.920	12.920	0.000	95	131571	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.776	6.776	0.000	93	98503	58.2	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.147	7.141	0.006	0	135832	47.7	
\$ 7 Toluene-d8 (Surr)	98	9.130	9.130	0.000	95	283872	41.4	
\$ 8 4-Bromofluorobenzene (Surr	95	11.764	11.758	0.006	94	100787	35.7	
12 Chloromethane	50		1.909				ND	U
13 Vinyl chloride	62		2.037				ND	
15 Bromomethane	94		2.371				ND	U
16 Chloroethane	64		2.511				ND	
22 1,1-Dichloroethene	96		3.564				ND	
24 Acetone	43	3.710	3.685	0.025	43	3967	5.32	a
26 Carbon disulfide	76		3.850				ND	
31 Methylene Chloride	84	4.416	4.403	0.013	14	2002	-5.62	
33 Acrylonitrile	53		4.787				ND	
34 trans-1,2-Dichloroethene	96		4.805				ND	
35 Methyl tert-butyl ether	73	4.829	4.829	0.000	61	3575	0.6788	
37 1,1-Dichloroethane	63		5.437				ND	
45 cis-1,2-Dichloroethene	96		6.174				ND	
46 2-Butanone (MEK)	43		6.186				ND	
49 Chlorobromomethane	128		6.453				ND	
52 Chloroform	83	6.606	6.599	0.007	93	9262	-0.1239	
53 1,1,1-Trichloroethane	97		6.758				ND	
56 Carbon tetrachloride	117		6.922				ND	
58 Benzene	78		7.153				ND	U
59 1,2-Dichloroethane	62		7.226				ND	
64 Trichloroethene	130	7.877	7.877	0.000	89	3531	1.80	M
67 1,2-Dichloropropane	63		8.151				ND	
71 Dichlorobromomethane	83		8.430				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
74 cis-1,3-Dichloropropene	75		8.869				ND	
75 4-Methyl-2-pentanone (MIBK)	43		9.027				ND	U
76 Toluene	91	9.197	9.197	0.000	48	2464	0.2760	
77 trans-1,3-Dichloropropene	75		9.440				ND	
79 1,1,2-Trichloroethane	97		9.641				ND	U
80 Tetrachloroethene	164	9.720	9.708	0.012	94	5007	2.40	M
82 2-Hexanone	43		9.854				ND	U
84 Chlorodibromomethane	129		10.012				ND	
85 Ethylene Dibromide	107		10.122				ND	
87 Chlorobenzene	112		10.608				ND	
89 1,1,1,2-Tetrachloroethane	131		10.700				ND	
90 Ethylbenzene	106		10.712				ND	U
91 m-Xylene & p-Xylene	106		10.840				ND	U
92 o-Xylene	106		11.223				ND	
93 Styrene	104		11.241				ND	
94 Bromoform	173		11.417				ND	
99 1,1,2,2-Tetrachloroethane	83		11.898				ND	
S 133 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Reagents:

voaWI/SHP5_00013

Amount Added: 5.00

Units: uL

Run Reagent

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100409.D

Injection Date: 04-Oct-2019 15:37:30

Instrument ID: CHHP5

Operator ID: 433269

Lims ID: 180-96180-B-14

Lab Sample ID: 180-96180-14

Worklist Smp#: 8

Client ID: HD-MW-108D-0/1-0

Purge Vol: 5.000 mL

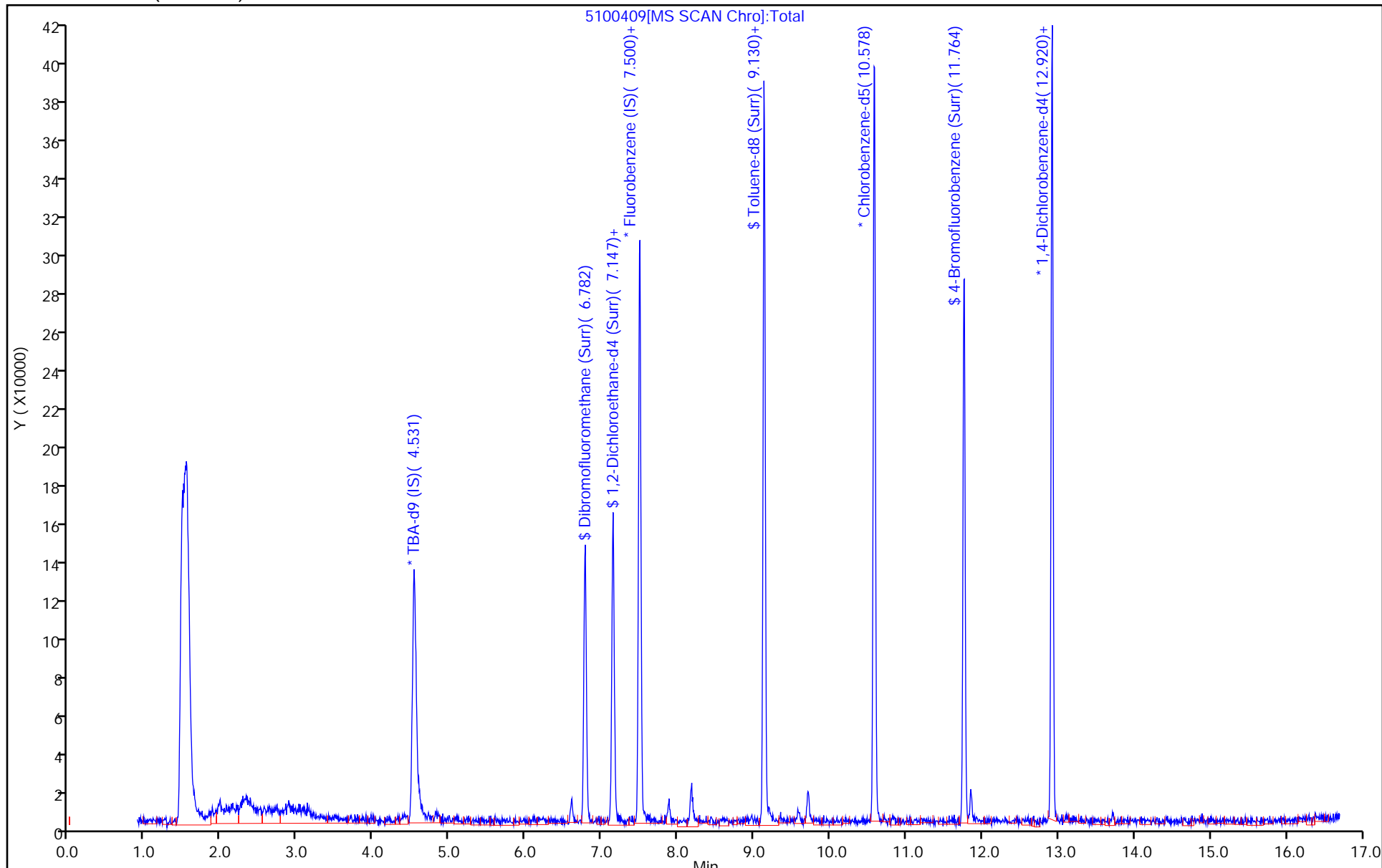
Dil. Factor: 1.0000

ALS Bottle#: 2

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Recovery Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100409.D
 Lims ID: 180-96180-B-14
 Client ID: HD-MW-108D-0/1-0
 Sample Type: Client
 Inject. Date: 04-Oct-2019 15:37:30 ALS Bottle#: 2 Worklist Smp#: 8
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028969-008
 Misc. Info.: 180-96180-B-14
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 04-Oct-2019 16:43:07 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0327

First Level Reviewer: bowieh Date: 04-Oct-2019 16:43:07

Compound	Amount Added	Amount Recovered	% Rec.
\$ 5 Dibromofluoromethane (Surr)	50.0	58.2	116.43
\$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	47.7	95.30
\$ 7 Toluene-d8 (Surr)	50.0	41.4	82.78
\$ 8 4-Bromofluorobenzene (Surr)	50.0	35.7	71.49

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100409.D

Injection Date: 04-Oct-2019 15:37:30

Instrument ID: CHHP5

Lims ID: 180-96180-B-14

Lab Sample ID: 180-96180-14

Client ID: HD-MW-108D-0/1-0

Operator ID: 433269

ALS Bottle#: 2 Worklist Smp#: 8

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

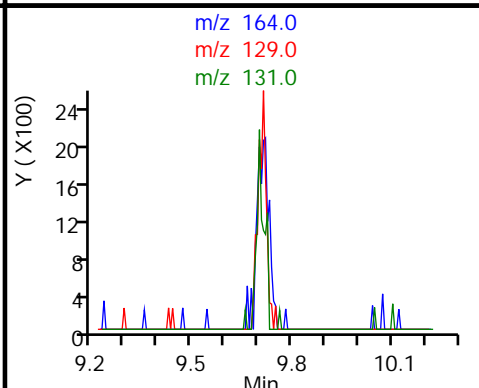
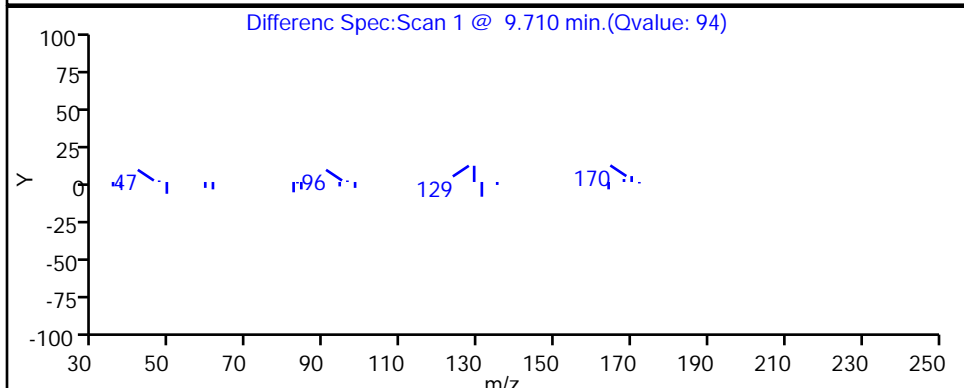
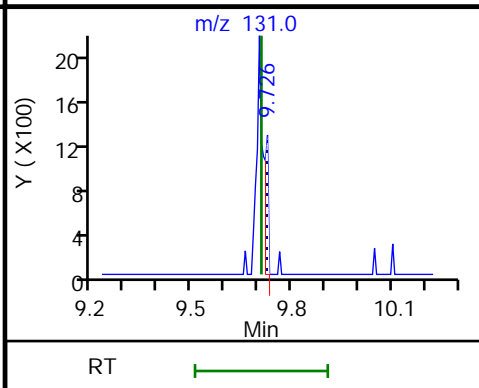
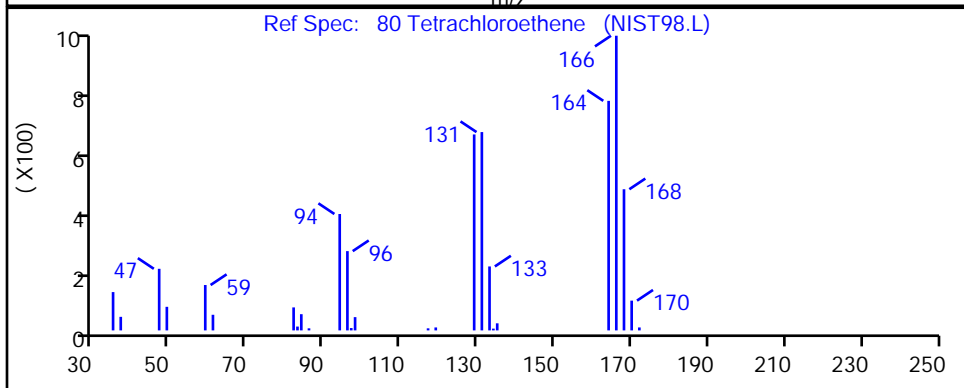
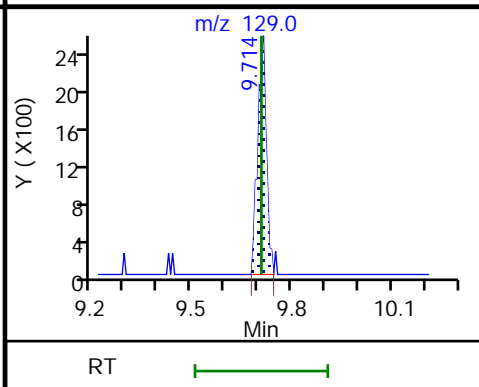
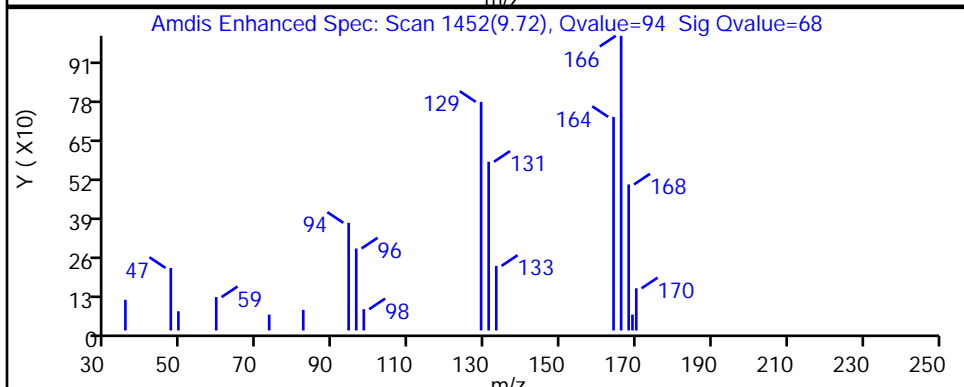
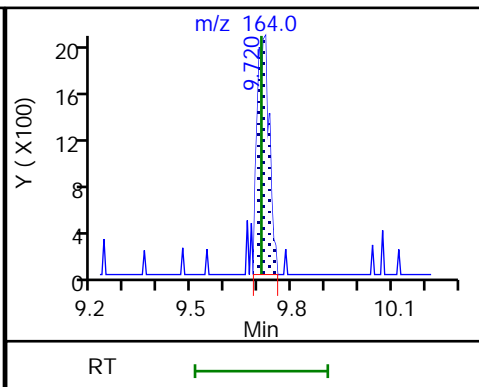
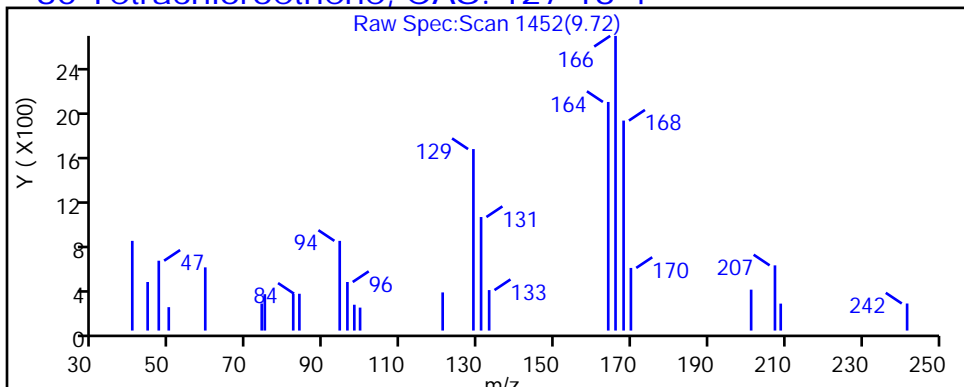
Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

80 Tetrachloroethene, CAS: 127-18-4

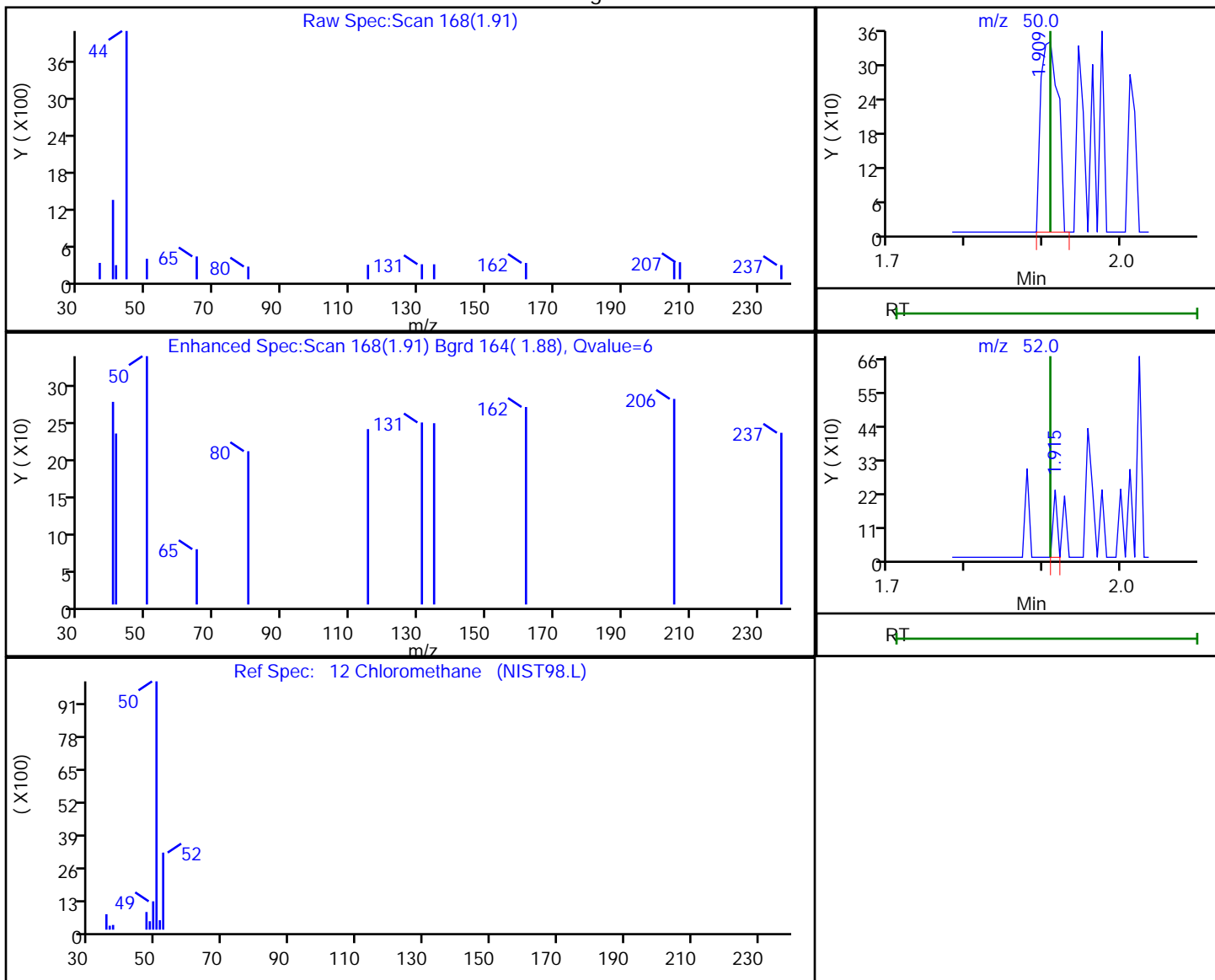


Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100409.D
Injection Date: 04-Oct-2019 15:37:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-14 Lab Sample ID: 180-96180-14
Client ID: HD-MW-108D-0/1-0
Operator ID: 433269 ALS Bottle#: 2 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

12 Chloromethane, CAS: 74-87-3

Processing Results



RT	Mass	Response	Amount
1.91	50.00	526	0.209608
1.92	52.00	81	

Reviewer: bowieh, 04-Oct-2019 16:39:37

Audit Action: Marked Compound Undetected

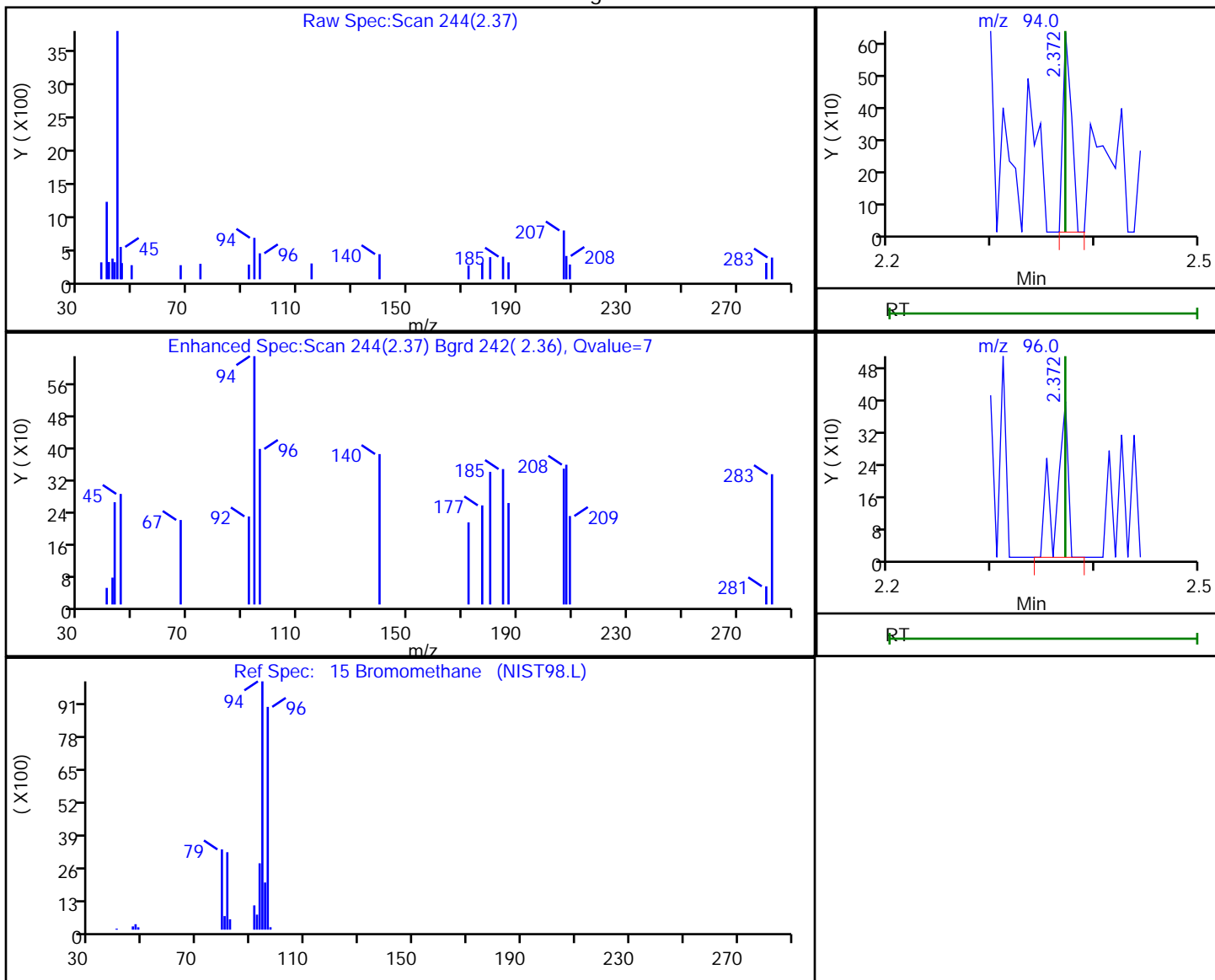
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100409.D
Injection Date: 04-Oct-2019 15:37:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-14 Lab Sample ID: 180-96180-14
Client ID: HD-MW-108D-0/1-0
Operator ID: 433269 ALS Bottle#: 2 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

15 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
2.37	94.00	362	0.201185
2.37	96.00	314	

Reviewer: bowieh, 04-Oct-2019 16:39:39

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

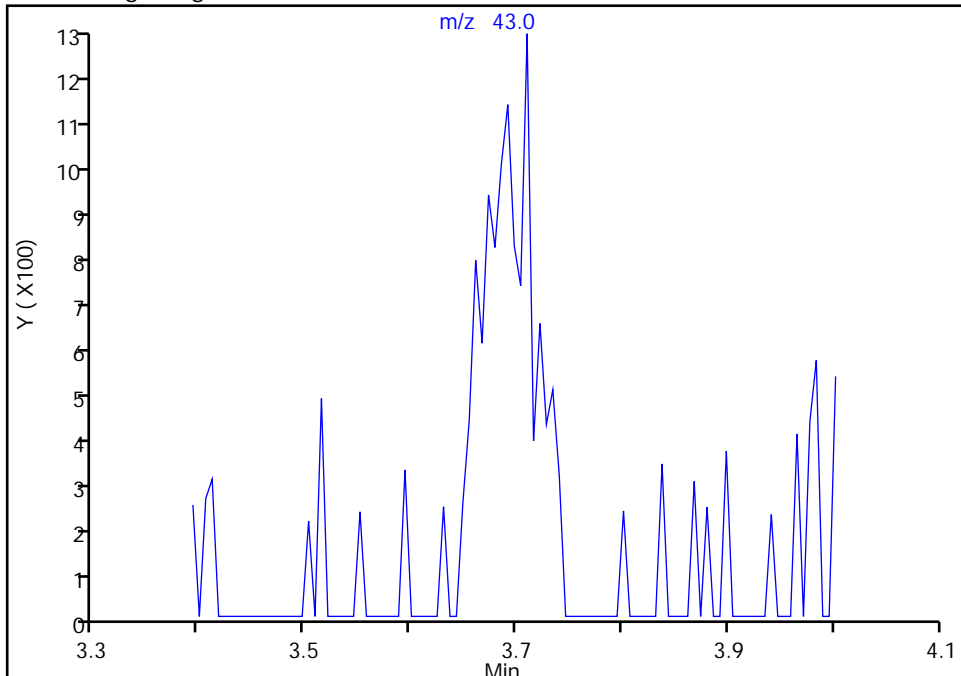
Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100409.D
Injection Date: 04-Oct-2019 15:37:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-14 Lab Sample ID: 180-96180-14
Client ID: HD-MW-108D-0/1-0
Operator ID: 433269 ALS Bottle#: 2 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

24 Acetone, CAS: 67-64-1

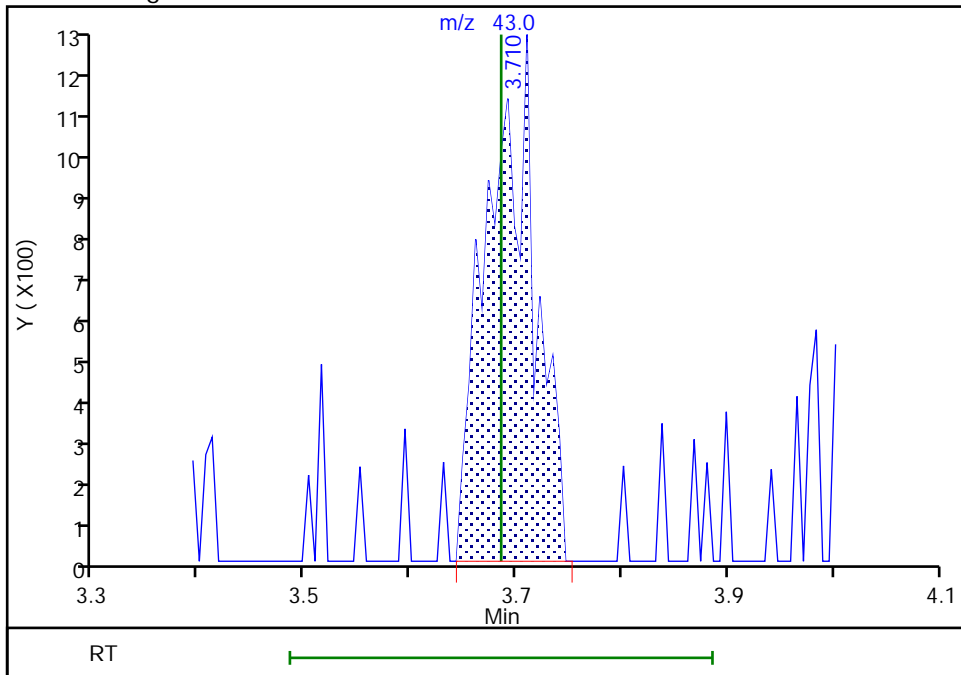
Signal: 1

Not Detected
Expected RT: 3.69

Processing Integration Results



Manual Integration Results



RT: 3.71
Area: 3967
Amount: 5.317900
Amount Units: ng

Reviewer: bowieh, 04-Oct-2019 16:39:43
Audit Action: Assigned Compound ID

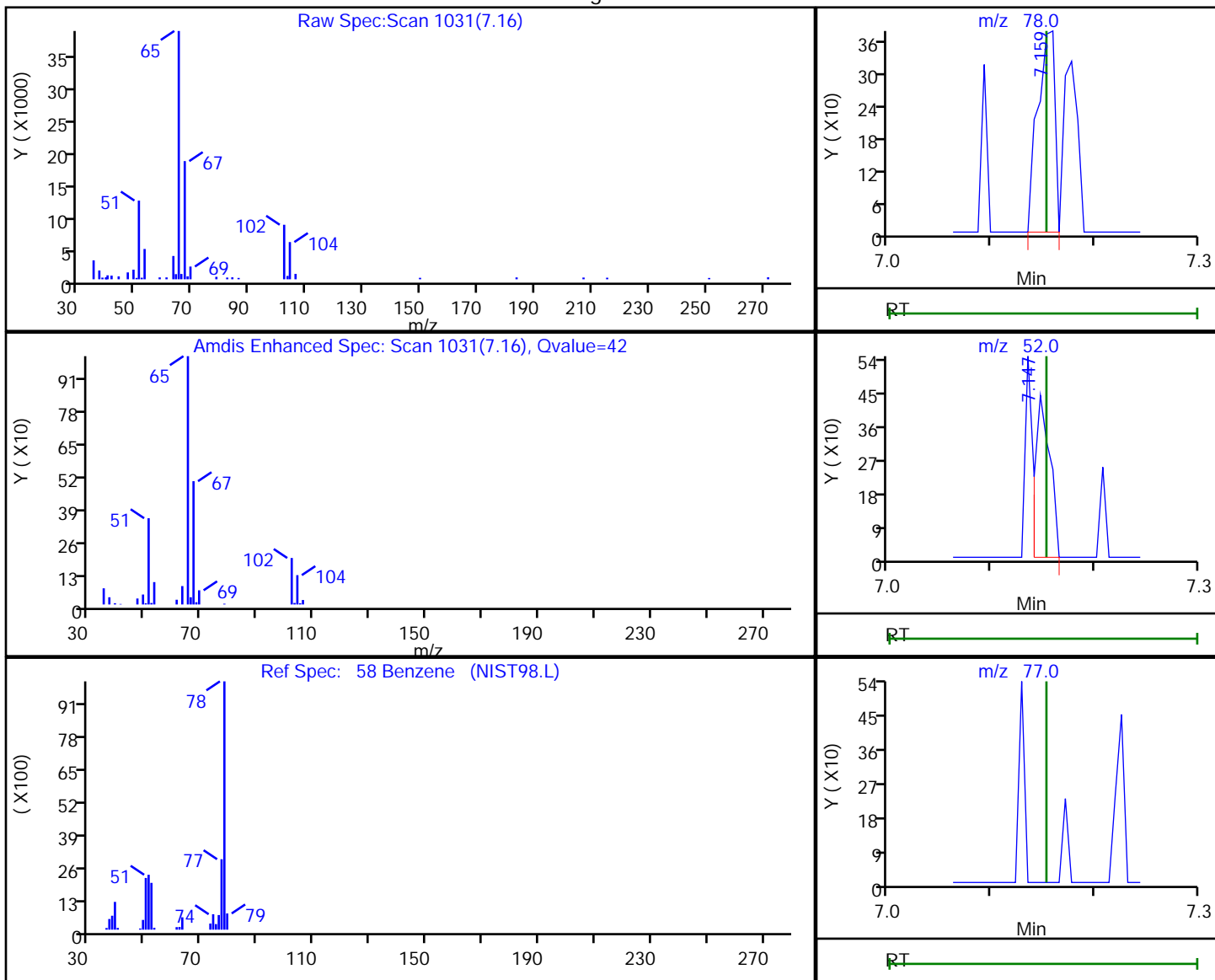
Audit Reason: Peak assignment corrected

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100409.D
 Injection Date: 04-Oct-2019 15:37:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-14 Lab Sample ID: 180-96180-14
 Client ID: HD-MW-108D-0/1-0
 Operator ID: 433269 ALS Bottle#: 2 Worklist Smp#: 8
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

58 Benzene, CAS: 71-43-2

Processing Results



RT	Mass	Response	Amount
7.16	78.00	441	0.060906
7.15	52.00	444	
7.15	77.00	0	

Reviewer: bowieh, 04-Oct-2019 16:40:05

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

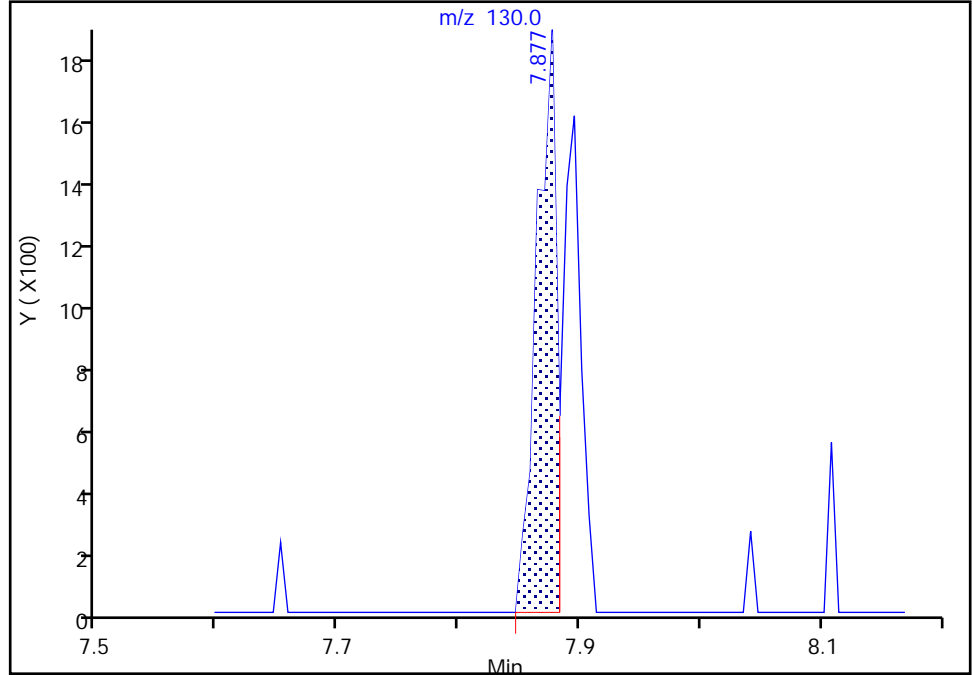
Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100409.D
Injection Date: 04-Oct-2019 15:37:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-14 Lab Sample ID: 180-96180-14
Client ID: HD-MW-108D-0/1-0
Operator ID: 433269 ALS Bottle#: 2 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

64 Trichloroethene, CAS: 79-01-6

Signal: 1

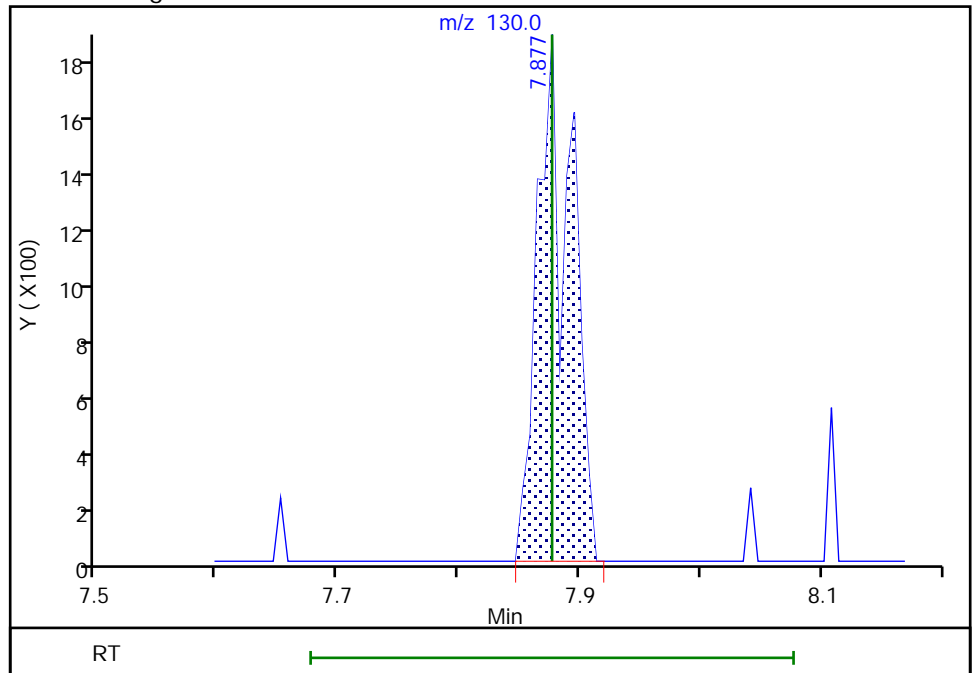
RT: 7.88
Area: 2095
Amount: 1.070454
Amount Units: ng

Processing Integration Results



RT: 7.88
Area: 3531
Amount: 1.804188
Amount Units: ng

Manual Integration Results



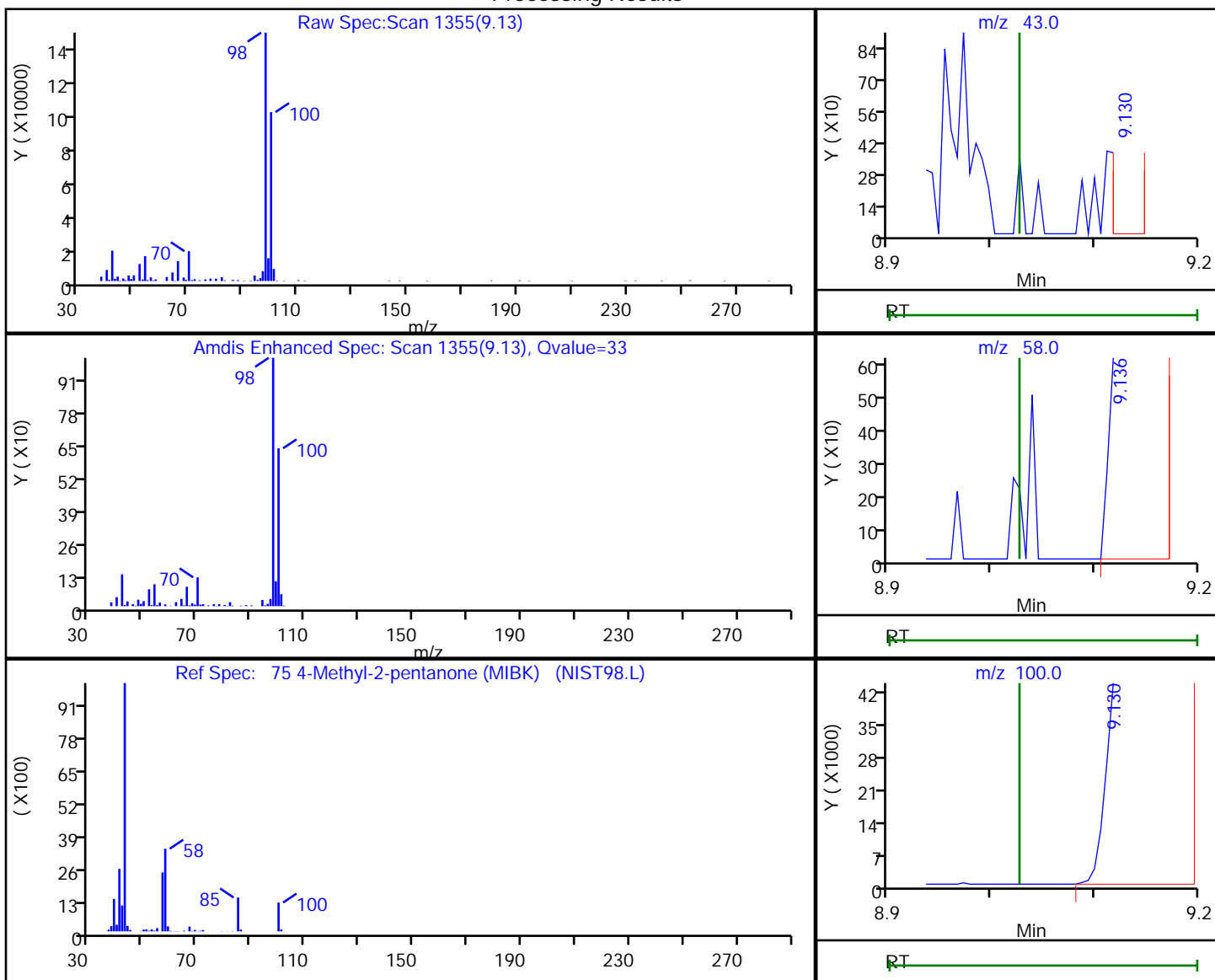
Reviewer: bowieh, 04-Oct-2019 16:40:13
Audit Action: Manually Integrated

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100409.D
 Injection Date: 04-Oct-2019 15:37:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-14 Lab Sample ID: 180-96180-14
 Client ID: HD-MW-108D-0/1-0
 Operator ID: 433269 ALS Bottle#: 2 Worklist Smp#: 8
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

75 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1

Processing Results



RT	Mass	Response	Amount
9.13	43.00	1208	0.614686
9.14	58.00	2141	
9.13	100.00	178298	

Reviewer: bowieh, 04-Oct-2019 16:40:17

Audit Action: Marked Compound Undetected

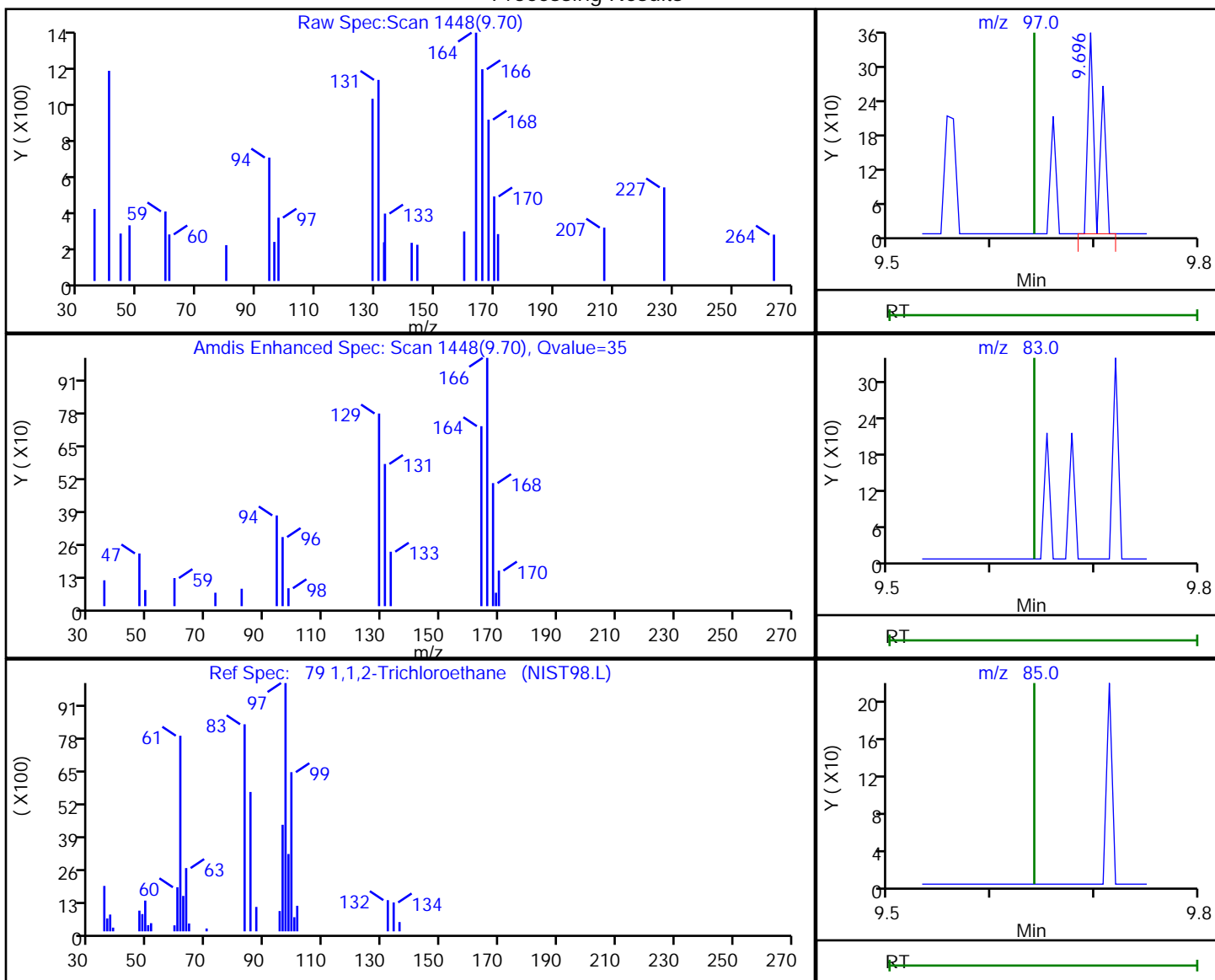
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100409.D
 Injection Date: 04-Oct-2019 15:37:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-14 Lab Sample ID: 180-96180-14
 Client ID: HD-MW-108D-0/1-0
 Operator ID: 433269 ALS Bottle#: 2 Worklist Smp#: 8
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

79 1,1,2-Trichloroethane, CAS: 79-00-5

Processing Results



RT	Mass	Response	Amount
9.70	97.00	225	0.119485
9.64	83.00	0	
9.64	85.00	0	

Reviewer: bowieh, 04-Oct-2019 16:40:20

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

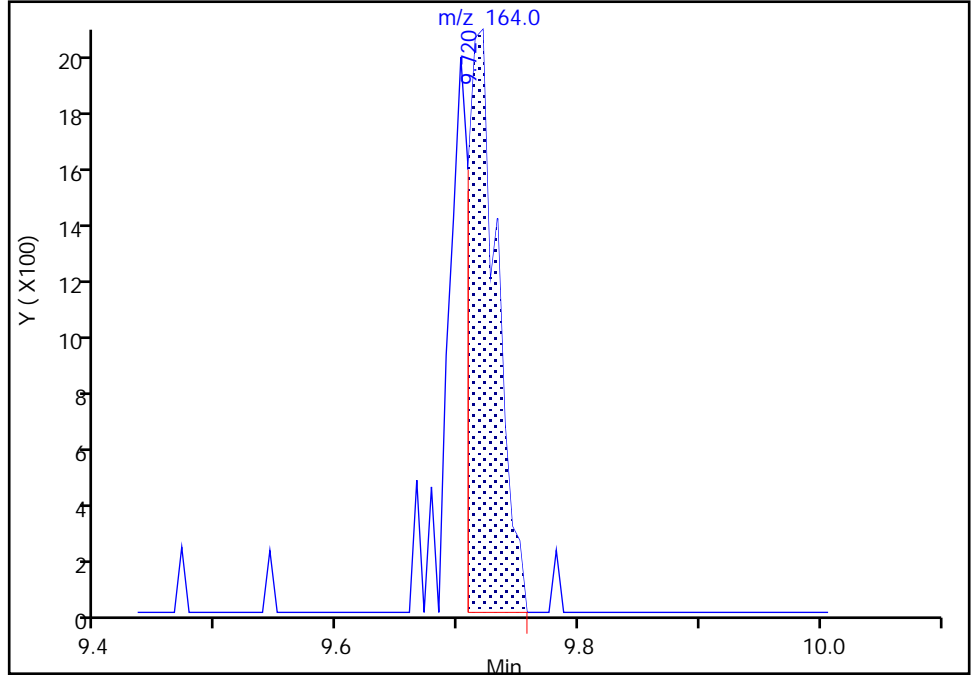
Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100409.D
Injection Date: 04-Oct-2019 15:37:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-14 Lab Sample ID: 180-96180-14
Client ID: HD-MW-108D-0/1-0
Operator ID: 433269 ALS Bottle#: 2 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

80 Tetrachloroethene, CAS: 127-18-4

Signal: 1

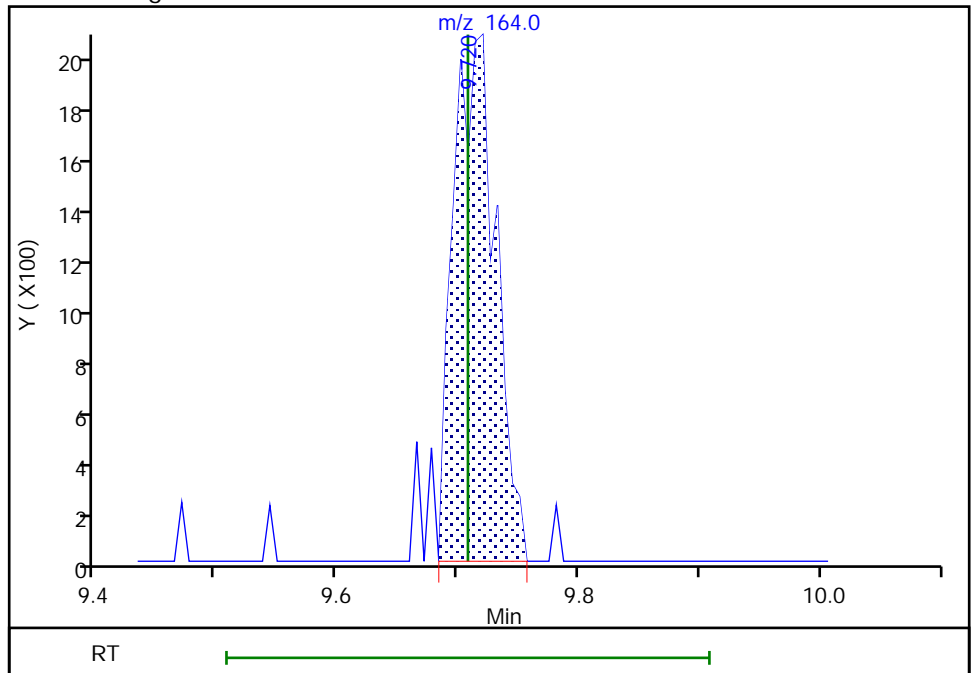
RT: 9.72
Area: 3449
Amount: 1.653975
Amount Units: ng

Processing Integration Results



RT: 9.72
Area: 5007
Amount: 2.401117
Amount Units: ng

Manual Integration Results



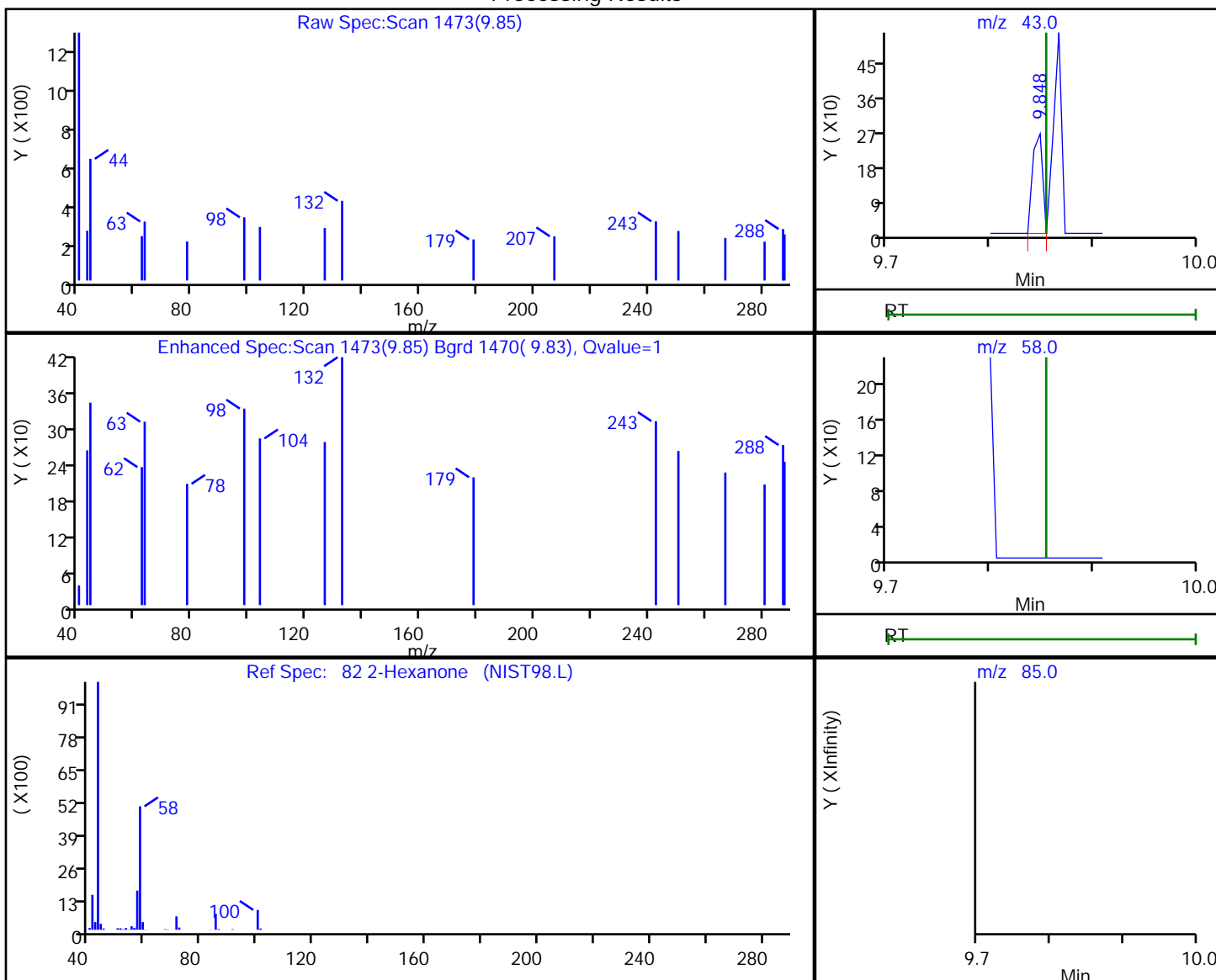
Reviewer: bowieh, 04-Oct-2019 16:40:25
Audit Action: Manually Integrated

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100409.D
Injection Date: 04-Oct-2019 15:37:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-14 Lab Sample ID: 180-96180-14
Client ID: HD-MW-108D-0/1-0
Operator ID: 433269 ALS Bottle#: 2 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

82 2-Hexanone, CAS: 591-78-6

Processing Results



RT	Mass	Response	Amount
9.85	43.00	174	0.122436
9.85	58.00	0	
9.85	85.00	0	

Reviewer: bowieh, 04-Oct-2019 16:40:36

Audit Action: Marked Compound Undetected

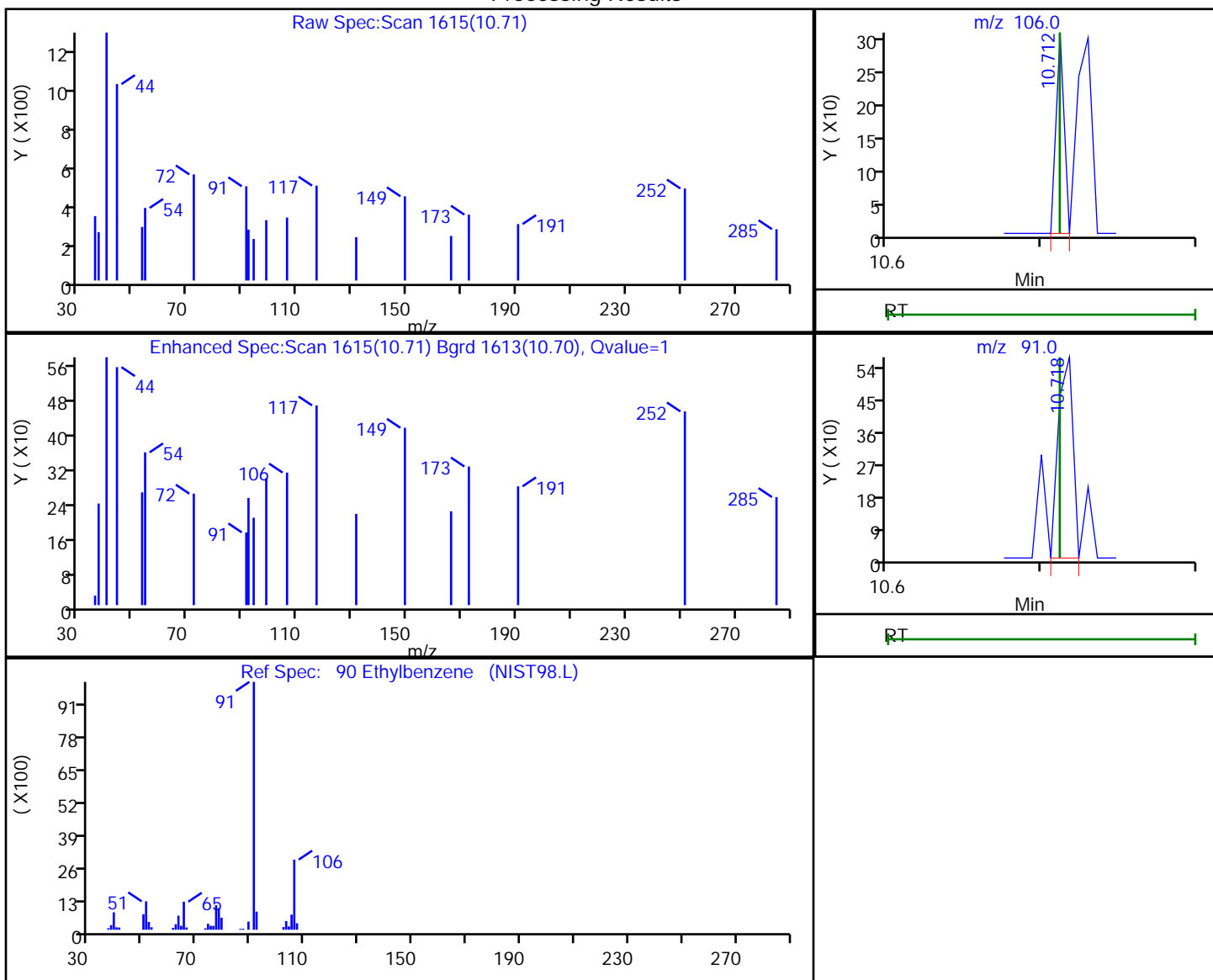
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100409.D
 Injection Date: 04-Oct-2019 15:37:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-14 Lab Sample ID: 180-96180-14
 Client ID: HD-MW-108D-0/1-0
 Operator ID: 433269 ALS Bottle#: 2 Worklist Smp#: 8
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

90 Ethylbenzene, CAS: 100-41-4

Processing Results



RT	Mass	Response	Amount
10.71	106.00	112	0.036565
10.72	91.00	376	

Reviewer: bowieh, 04-Oct-2019 16:40:41

Audit Action: Marked Compound Undetected

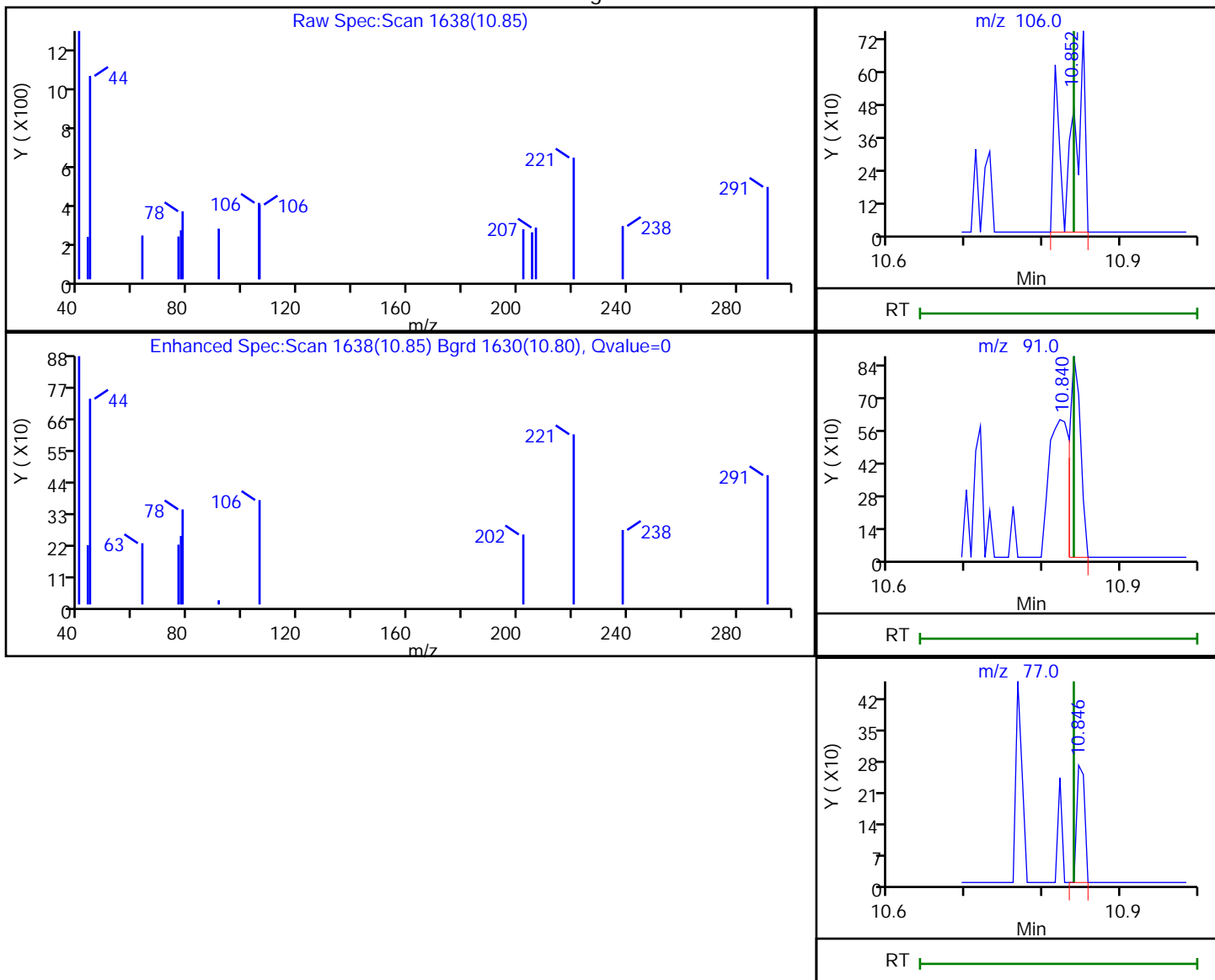
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100409.D
 Injection Date: 04-Oct-2019 15:37:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-14 Lab Sample ID: 180-96180-14
 Client ID: HD-MW-108D-0/1-0
 Operator ID: 433269 ALS Bottle#: 2 Worklist Smp#: 8
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

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

Processing Results



RT	Mass	Response	Amount
10.85	106.00	979	0.259187
10.84	91.00	853	
10.85	77.00	185	

Reviewer: bowieh, 04-Oct-2019 16:42:37

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: HD-QC1-0/1-1 Lab Sample ID: 180-96180-15
 Matrix: Water Lab File ID: 5100412.D
 Analysis Method: EPA 8260C Date Collected: 09/24/2019 12:00
 Sample wt/vol: 5 (mL) Date Analyzed: 10/04/2019 16:50
 Soil Aliquot Vol: _____ Dilution Factor: 2
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 293722 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	ND		2.0	1.8
75-01-4	Vinyl chloride	ND		2.0	1.8
74-83-9	Bromomethane	ND		2.0	1.8
75-00-3	Chloroethane	ND		2.0	1.8
75-35-4	1,1-Dichloroethene	ND		2.0	1.1
67-64-1	Acetone	ND	^c	10	6.9
75-15-0	Carbon disulfide	ND		2.0	1.8
75-09-2	Methylene Chloride	ND		2.0	1.8
156-60-5	trans-1,2-Dichloroethene	ND		2.0	1.3
1634-04-4	Methyl tert-butyl ether	ND		2.0	1.2
75-34-3	1,1-Dichloroethane	ND		2.0	1.3
156-59-2	cis-1,2-Dichloroethene	ND		2.0	1.4
74-97-5	Bromochloromethane	ND		2.0	1.3
78-93-3	2-Butanone (MEK)	ND		10	5.2
67-66-3	Chloroform	ND		2.0	1.2
71-55-6	1,1,1-Trichloroethane	ND		2.0	1.2
56-23-5	Carbon tetrachloride	ND		2.0	1.8
71-43-2	Benzene	ND		2.0	1.2
107-06-2	1,2-Dichloroethane	ND		2.0	1.1
79-01-6	Trichloroethene	ND		2.0	1.4
78-87-5	1,2-Dichloropropane	ND		2.0	1.3
75-27-4	Bromodichloromethane	ND		2.0	1.3
10061-01-5	cis-1,3-Dichloropropene	ND		2.0	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		10	6.2
108-88-3	Toluene	ND		2.0	0.91
10061-02-6	trans-1,3-Dichloropropene	ND		2.0	1.2
79-00-5	1,1,2-Trichloroethane	ND		2.0	0.91
127-18-4	Tetrachloroethene	20		2.0	0.93
591-78-6	2-Hexanone	ND		10	6.6
124-48-1	Dibromochloromethane	ND		2.0	1.7
106-93-4	1,2-Dibromoethane (EDB)	ND		2.0	1.0
108-90-7	Chlorobenzene	ND		2.0	1.0
630-20-6	1,1,1,2-Tetrachloroethane	ND		2.0	1.1
100-41-4	Ethylbenzene	ND		2.0	1.0
1330-20-7	Xylenes, Total	ND		4.0	1.8
100-42-5	Styrene	ND		2.0	0.94

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: HD-QC1-0/1-1 Lab Sample ID: 180-96180-15
 Matrix: Water Lab File ID: 5100412.D
 Analysis Method: EPA 8260C Date Collected: 09/24/2019 12:00
 Sample wt/vol: 5 (mL) Date Analyzed: 10/04/2019 16:50
 Soil Aliquot Vol: _____ Dilution Factor: 2
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 293722 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	ND		2.0	2.0
79-34-5	1,1,2,2-Tetrachloroethane	ND		2.0	1.2
107-13-1	Acrylonitrile	ND		40	16

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	105	^c	70-150
2037-26-5	Toluene-d8 (Surr)	81		78-128
460-00-4	4-Bromofluorobenzene (Surr)	75		64-123
1868-53-7	Dibromofluoromethane (Surr)	125		75-147

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100412.D
 Lims ID: 180-96180-A-15
 Client ID: HD-QC1-0/1-1
 Sample Type: Client
 Inject. Date: 04-Oct-2019 16:50:30 ALS Bottle#: 5 Worklist Smp#: 11
 Purge Vol: 5.000 mL Dil. Factor: 2.0000
 Sample Info: 180-0028969-011
 Misc. Info.: 180-96180-A-15
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 05-Oct-2019 09:18:57 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0311

First Level Reviewer: bowieh

Date: 05-Oct-2019 09:18:57

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.537	4.549	-0.012	0	189508	1000.0	
* 2 Fluorobenzene (IS)	96	7.494	7.494	0.000	98	274342	50.0	
* 3 Chlorobenzene-d5	119	10.578	10.584	-0.006	89	80703	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.920	12.920	0.000	96	125403	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.782	6.776	0.006	93	99253	62.7	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.147	7.141	0.006	0	140689	52.7	
\$ 7 Toluene-d8 (Surr)	98	9.130	9.130	0.000	95	260356	40.5	
\$ 8 4-Bromofluorobenzene (Surr	95	11.758	11.758	0.000	94	98802	37.4	
12 Chloromethane	50		1.909				ND	U
13 Vinyl chloride	62		2.037				ND	
15 Bromomethane	94		2.371				ND	U
16 Chloroethane	64		2.511				ND	
22 1,1-Dichloroethene	96		3.564				ND	
24 Acetone	43	3.661	3.685	-0.024	33	3874	5.55	a
26 Carbon disulfide	76		3.850				ND	
31 Methylene Chloride	84	4.422	4.403	0.019	95	13201	0.8833	
33 Acrylonitrile	53		4.787				ND	
34 trans-1,2-Dichloroethene	96		4.805				ND	
35 Methyl tert-butyl ether	73		4.829				ND	U
37 1,1-Dichloroethane	63		5.437				ND	
45 cis-1,2-Dichloroethene	96		6.174				ND	
46 2-Butanone (MEK)	43		6.186				ND	
49 Chlorobromomethane	128		6.453				ND	
52 Chloroform	83	6.599	6.599	0.000	89	8392	-0.2051	M
53 1,1,1-Trichloroethane	97		6.758				ND	
56 Carbon tetrachloride	117		6.922				ND	
58 Benzene	78		7.153				ND	
59 1,2-Dichloroethane	62		7.226				ND	
64 Trichloroethene	130	7.883	7.877	0.006	86	3246	1.77	M
67 1,2-Dichloropropane	63		8.151				ND	
71 Dichlorobromomethane	83		8.430				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
74 cis-1,3-Dichloropropene	75		8.869				ND	
75 4-Methyl-2-pentanone (MIBK)	43		9.027				ND	U
76 Toluene	91	9.197	9.197	0.000	1	798	0.0954	
77 trans-1,3-Dichloropropene	75		9.440				ND	
79 1,1,2-Trichloroethane	97		9.641				ND	U
80 Tetrachloroethene	164	9.708	9.708	0.000	98	95392	48.8	
82 2-Hexanone	43		9.854				ND	U
84 Chlorodibromomethane	129		10.012				ND	
85 Ethylene Dibromide	107		10.122				ND	
87 Chlorobenzene	112		10.608				ND	
89 1,1,1,2-Tetrachloroethane	131		10.700				ND	
90 Ethylbenzene	106		10.712				ND	U
91 m-Xylene & p-Xylene	106		10.840				ND	
92 o-Xylene	106		11.223				ND	
93 Styrene	104		11.241				ND	
94 Bromoform	173		11.417				ND	
99 1,1,2,2-Tetrachloroethane	83		11.898				ND	
S 133 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Reagents:

voaWI/SHP5_00013

Amount Added: 5.00

Units: uL

Run Reagent

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100412.D

Injection Date: 04-Oct-2019 16:50:30

Instrument ID: CHHP5

Operator ID: 433269

Lims ID: 180-96180-A-15

Lab Sample ID: 180-96180-15

Worklist Smp#: 11

Client ID: HD-QC1-0/1-1

Purge Vol: 5.000 mL

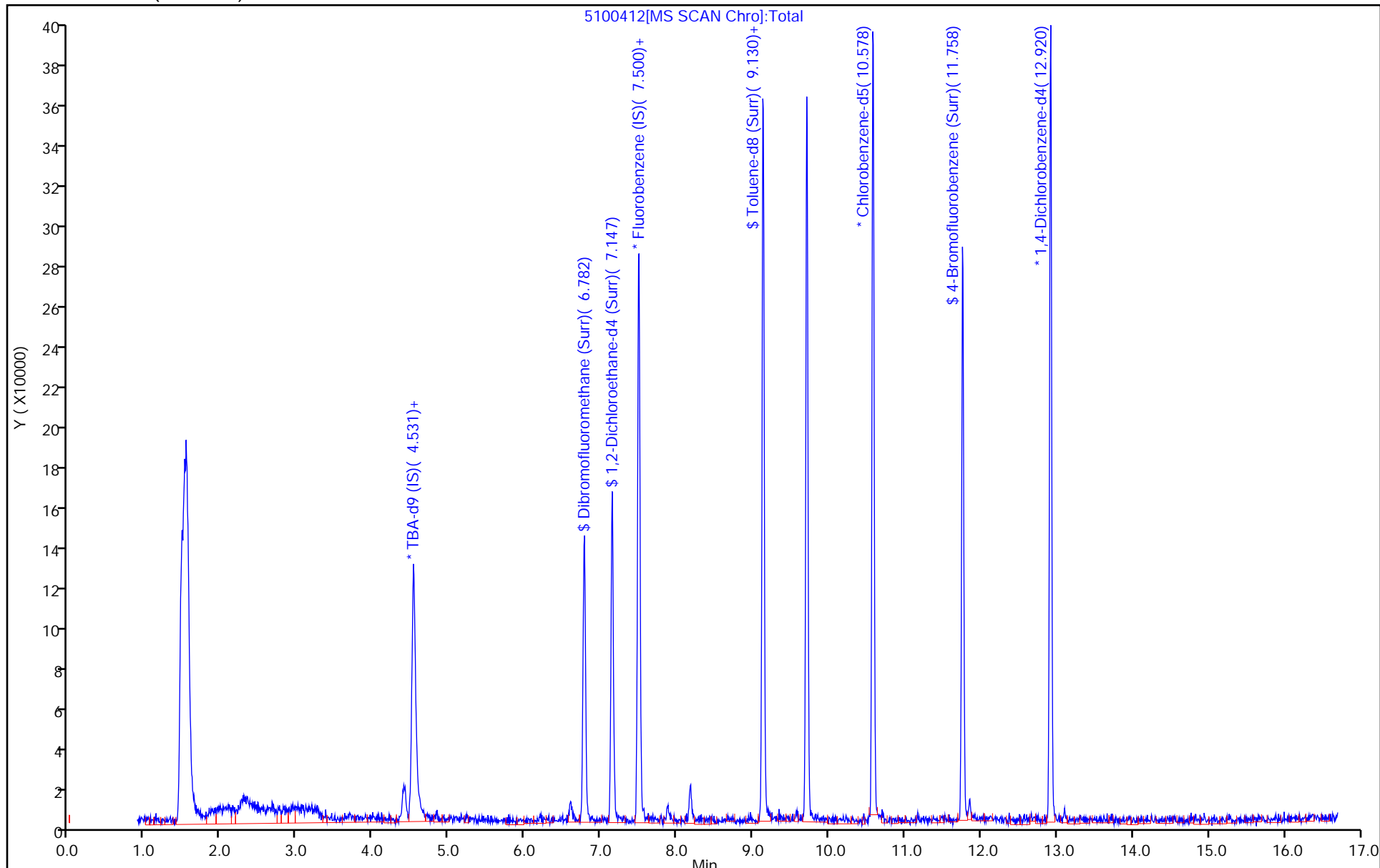
Dil. Factor: 2.0000

ALS Bottle#: 5

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Recovery Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100412.D
 Lims ID: 180-96180-A-15
 Client ID: HD-QC1-0/1-1
 Sample Type: Client
 Inject. Date: 04-Oct-2019 16:50:30 ALS Bottle#: 5 Worklist Smp#: 11
 Purge Vol: 5.000 mL Dil. Factor: 2.0000
 Sample Info: 180-0028969-011
 Misc. Info.: 180-96180-A-15
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 05-Oct-2019 09:18:57 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0311

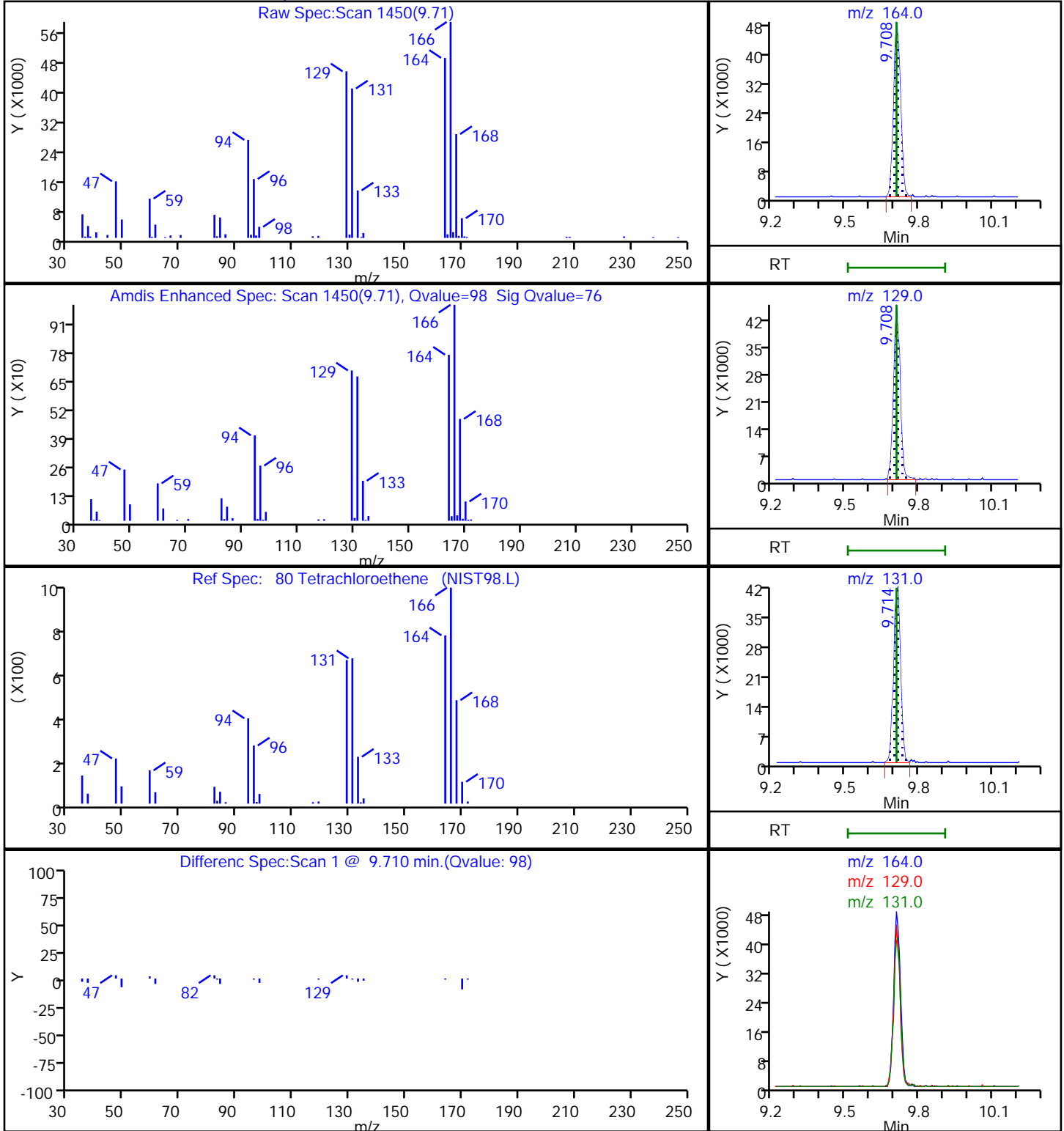
First Level Reviewer: bowieh Date: 05-Oct-2019 09:18:57

Compound	Amount Added	Amount Recovered	% Rec.
\$ 5 Dibromofluoromethane (Surr)	50.0	62.7	125.35
\$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	52.7	105.47
\$ 7 Toluene-d8 (Surr)	50.0	40.5	81.05
\$ 8 4-Bromofluorobenzene (Surr)	50.0	37.4	74.81

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100412.D
Injection Date: 04-Oct-2019 16:50:30 Instrument ID: CHHP5
Lims ID: 180-96180-A-15 Lab Sample ID: 180-96180-15
Client ID: HD-QC1-0/1-1
Operator ID: 433269 ALS Bottle#: 5 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 2.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

80 Tetrachloroethene, CAS: 127-18-4

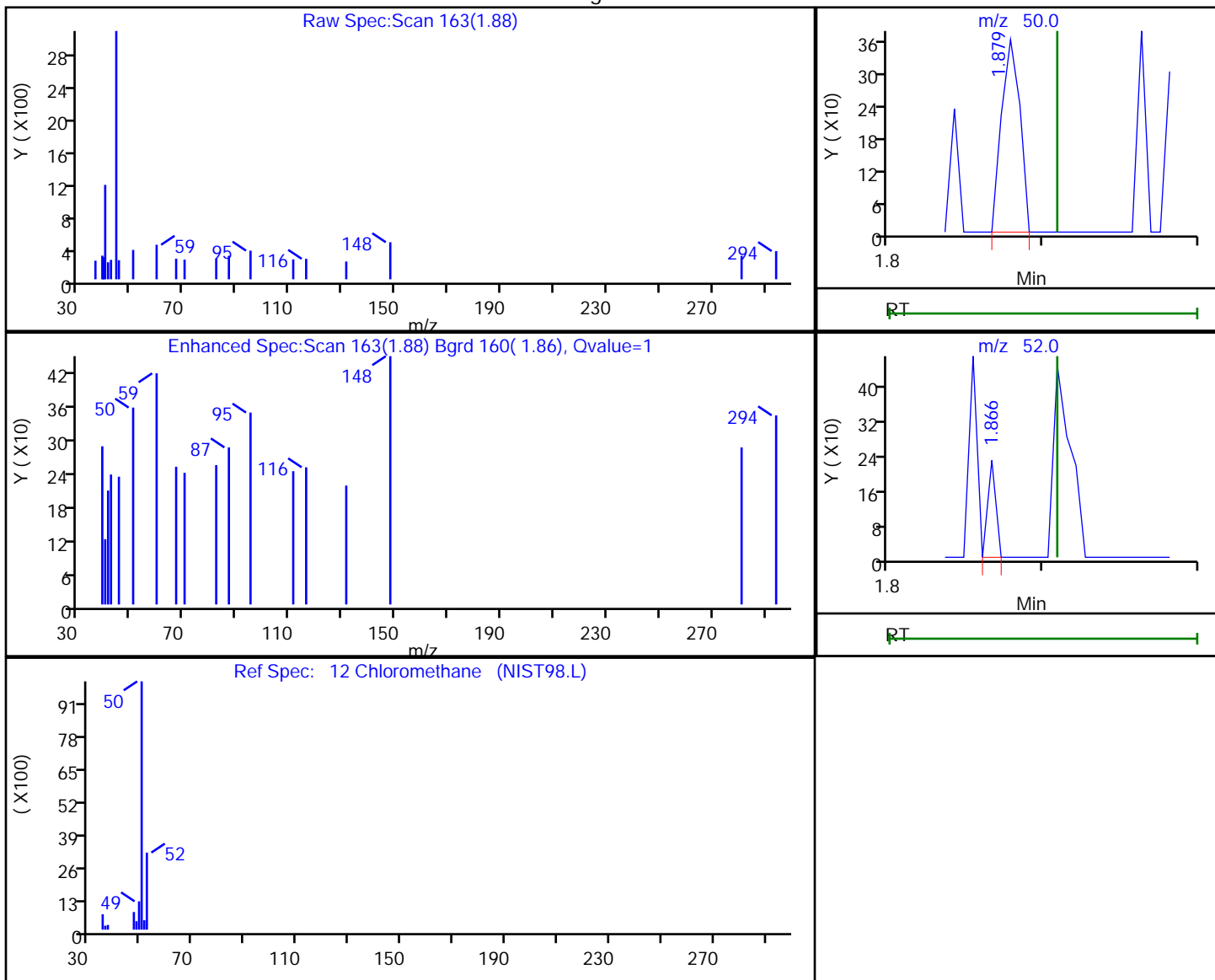


Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100412.D
Injection Date: 04-Oct-2019 16:50:30 Instrument ID: CHHP5
Lims ID: 180-96180-A-15 Lab Sample ID: 180-96180-15
Client ID: HD-QC1-0/1-1
Operator ID: 433269 ALS Bottle#: 5 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 2.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

12 Chloromethane, CAS: 74-87-3

Processing Results



RT	Mass	Response	Amount
1.88	50.00	295	0.125611
1.87	52.00	82	

Reviewer: bowieh, 05-Oct-2019 09:17:57

Audit Action: Marked Compound Undetected

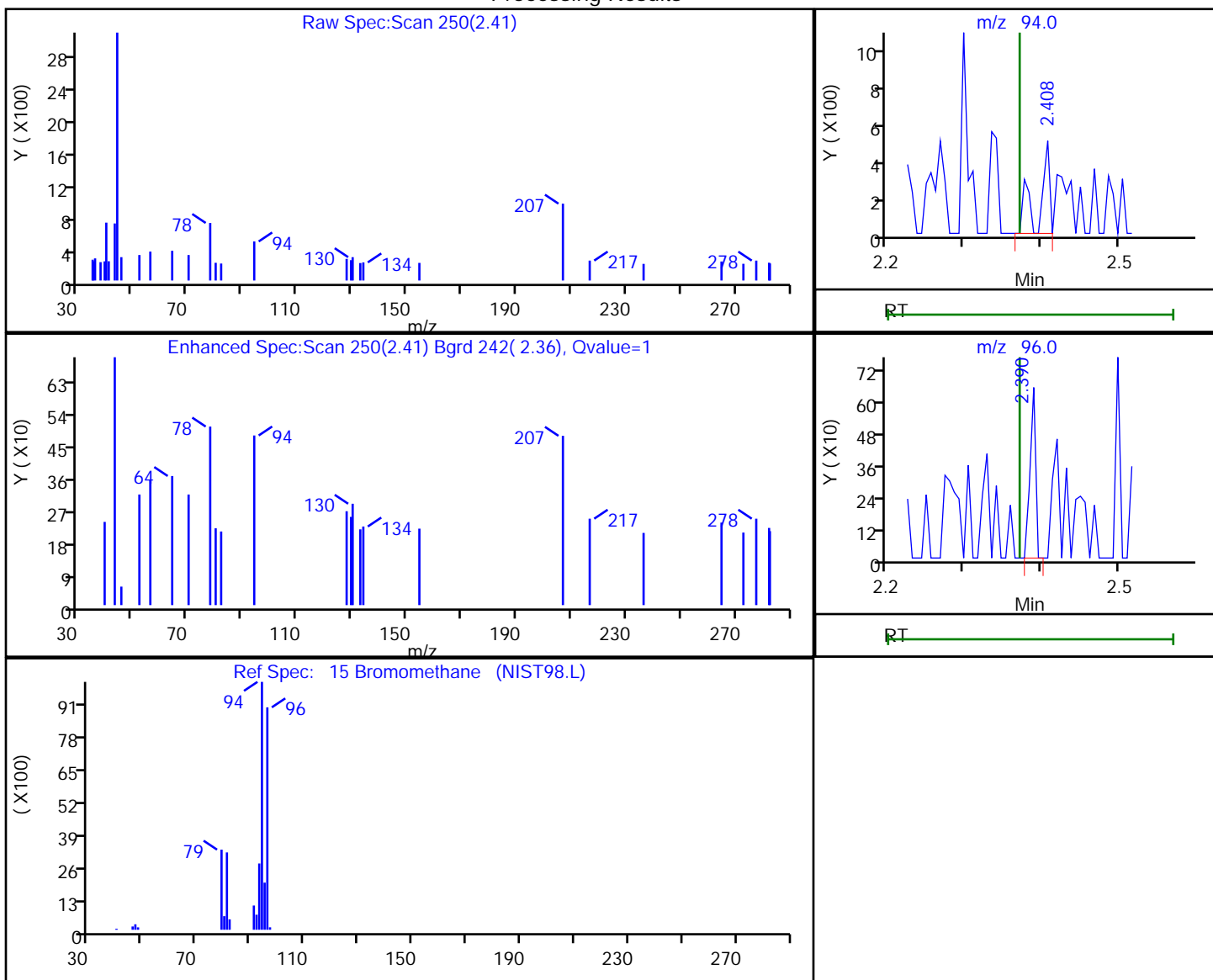
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100412.D
Injection Date: 04-Oct-2019 16:50:30 Instrument ID: CHHP5
Lims ID: 180-96180-A-15 Lab Sample ID: 180-96180-15
Client ID: HD-QC1-0/1-1
Operator ID: 433269 ALS Bottle#: 5 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 2.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

15 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
2.41	94.00	438	0.260102
2.39	96.00	331	

Reviewer: bowieh, 05-Oct-2019 09:17:59

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

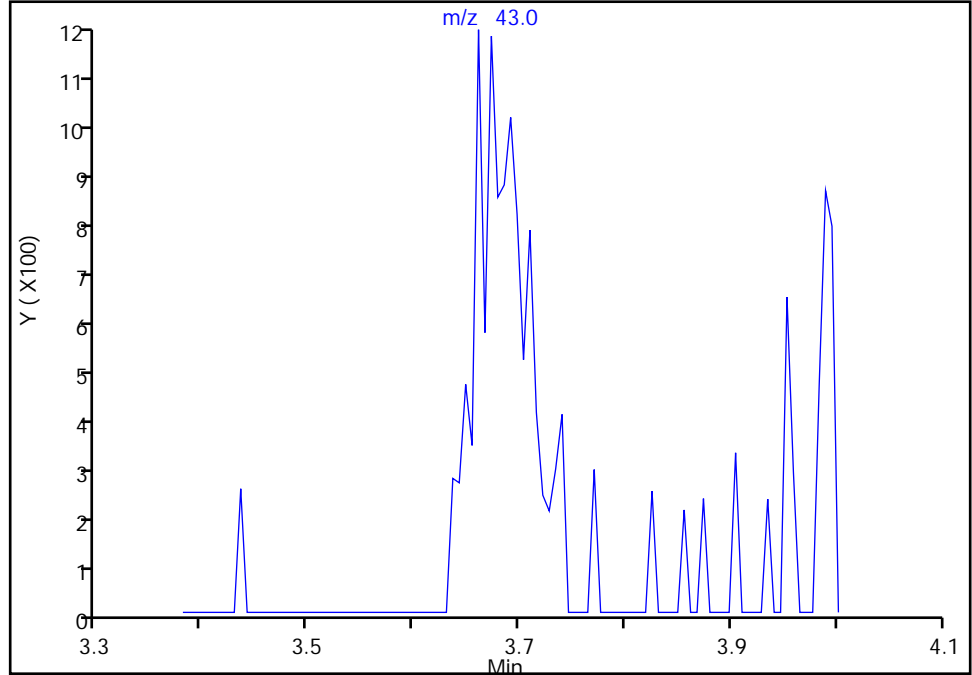
Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100412.D
Injection Date: 04-Oct-2019 16:50:30 Instrument ID: CHHP5
Lims ID: 180-96180-A-15 Lab Sample ID: 180-96180-15
Client ID: HD-QC1-0/1-1
Operator ID: 433269 ALS Bottle#: 5 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 2.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

24 Acetone, CAS: 67-64-1

Signal: 1

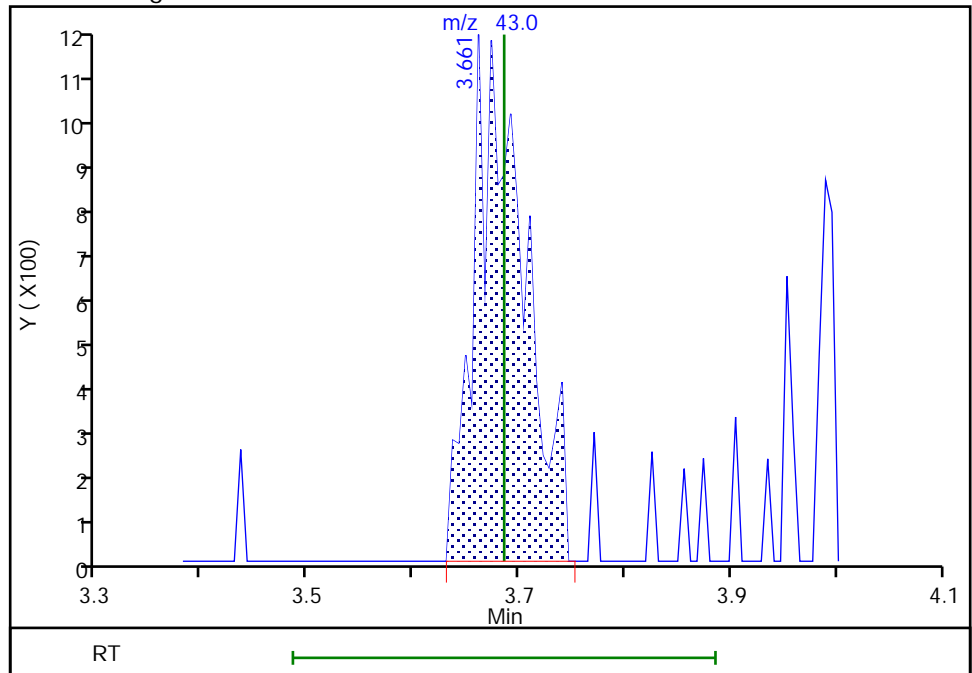
Not Detected
Expected RT: 3.69

Processing Integration Results



Manual Integration Results

RT: 3.66
Area: 3874
Amount: 5.549072
Amount Units: ng



Reviewer: bowieh, 05-Oct-2019 09:18:03
Audit Action: Assigned Compound ID

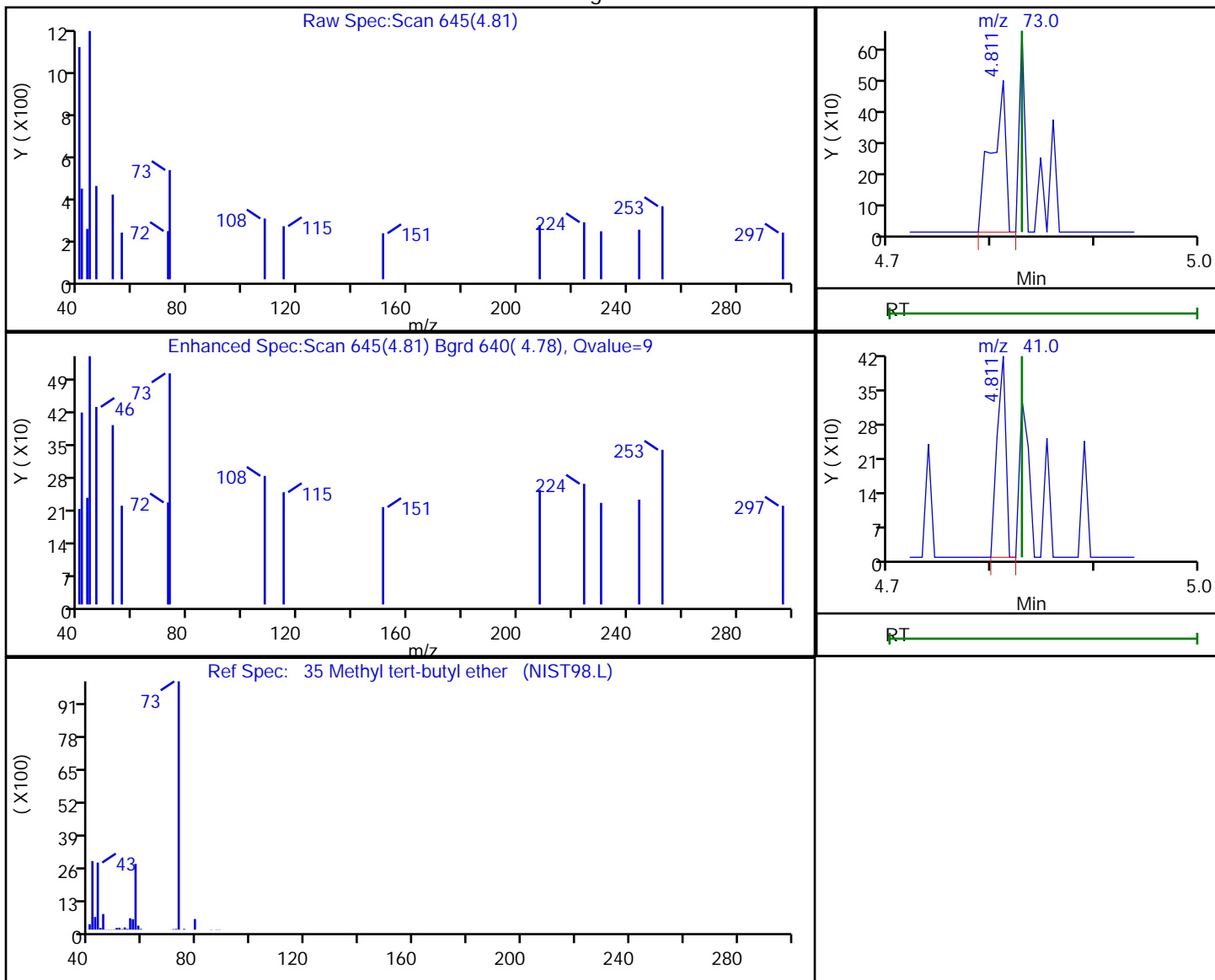
Audit Reason: Peak assignment corrected

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100412.D
Injection Date: 04-Oct-2019 16:50:30 Instrument ID: CHHP5
Lims ID: 180-96180-A-15 Lab Sample ID: 180-96180-15
Client ID: HD-QC1-0/1-1
Operator ID: 433269 ALS Bottle#: 5 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 2.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

35 Methyl tert-butyl ether, CAS: 1634-04-4

Processing Results



RT	Mass	Response	Amount
4.81	73.00	467	0.094749
4.81	41.00	240	

Reviewer: bowieh, 05-Oct-2019 09:18:07

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

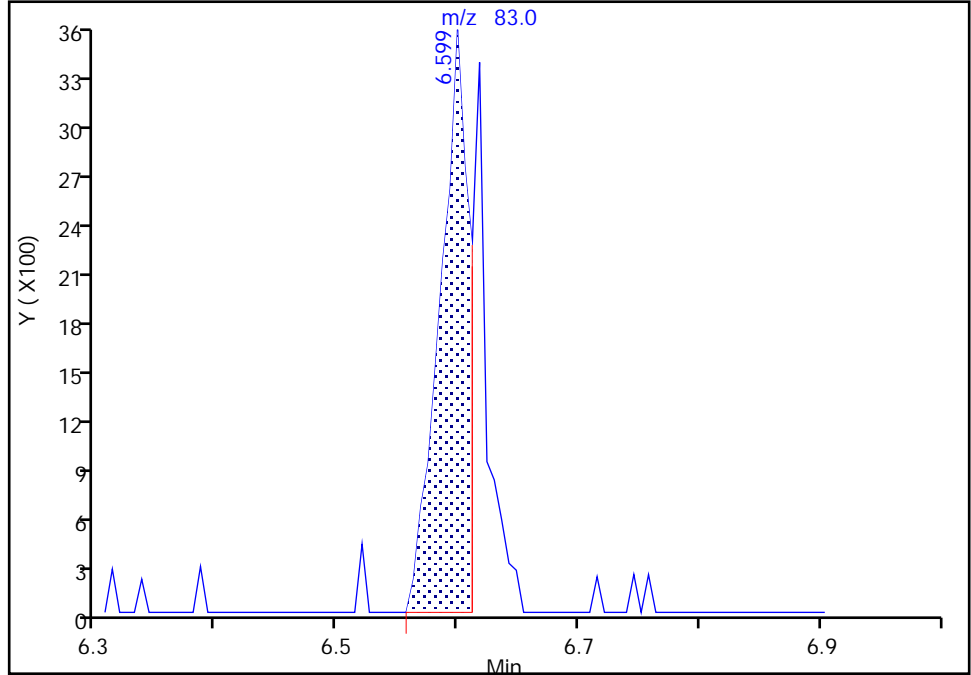
Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100412.D
Injection Date: 04-Oct-2019 16:50:30 Instrument ID: CHHP5
Lims ID: 180-96180-A-15 Lab Sample ID: 180-96180-15
Client ID: HD-QC1-0/1-1
Operator ID: 433269 ALS Bottle#: 5 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 2.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

52 Chloroform, CAS: 67-66-3

Signal: 1

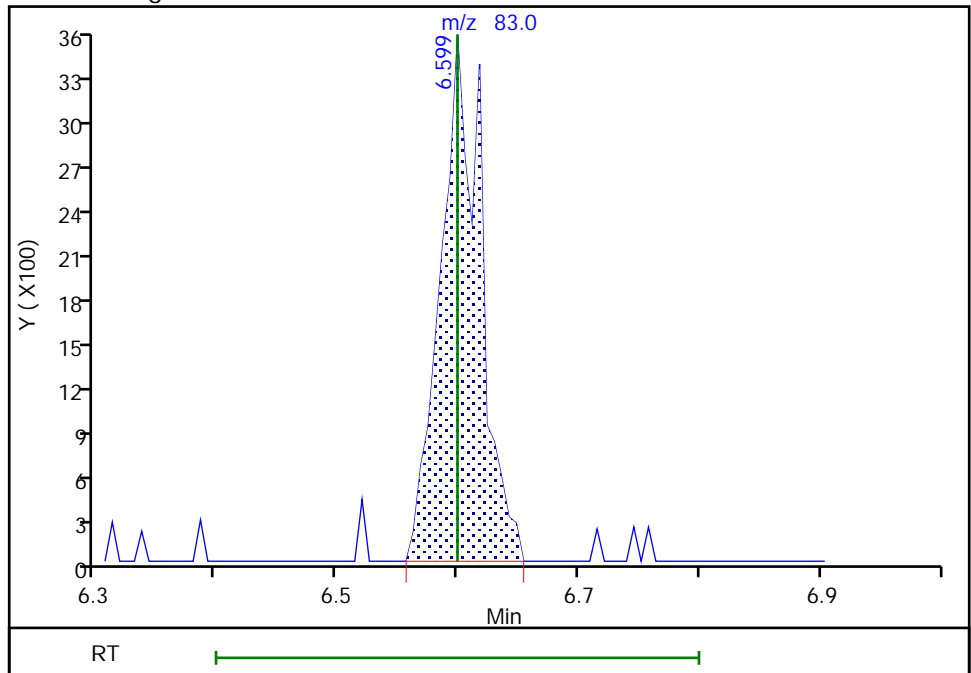
RT: 6.60
Area: 6101
Amount: -0.879392
Amount Units: ng

Processing Integration Results



RT: 6.60
Area: 8392
Amount: -0.205133
Amount Units: ng

Manual Integration Results



Eurofins TestAmerica, Pittsburgh

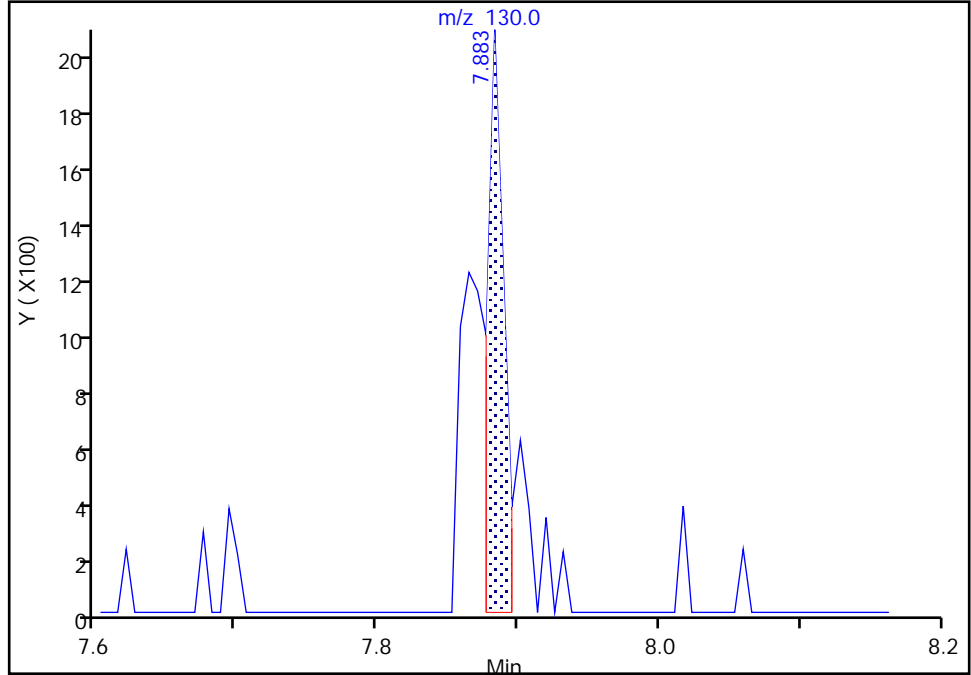
Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100412.D
Injection Date: 04-Oct-2019 16:50:30 Instrument ID: CHHP5
Lims ID: 180-96180-A-15 Lab Sample ID: 180-96180-15
Client ID: HD-QC1-0/1-1
Operator ID: 433269 ALS Bottle#: 5 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 2.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

64 Trichloroethene, CAS: 79-01-6

Signal: 1

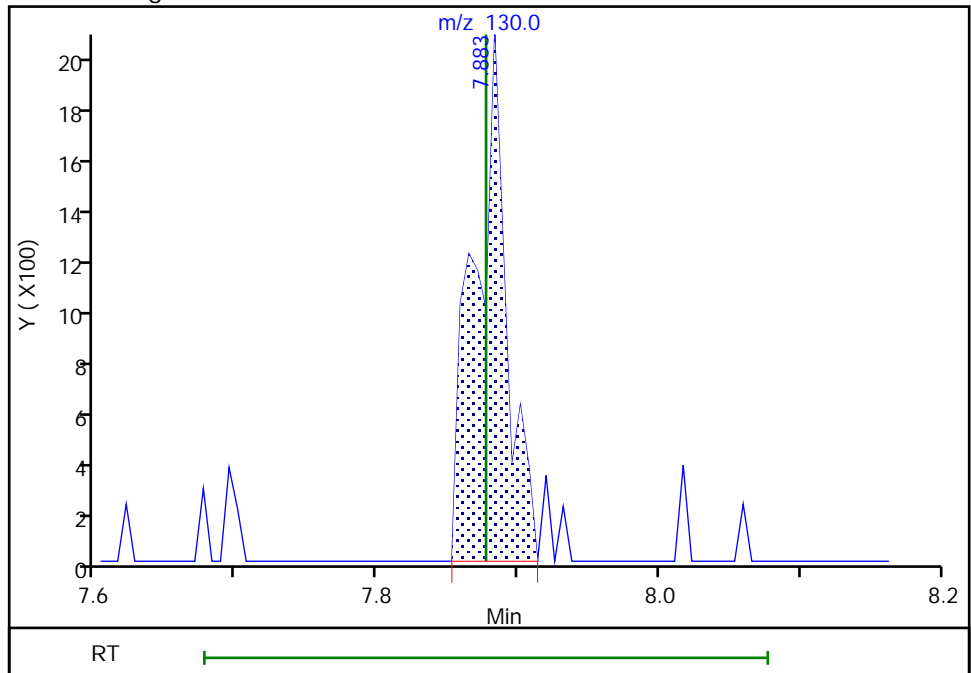
RT: 7.88
Area: 1678
Amount: 0.916134
Amount Units: ng

Processing Integration Results



RT: 7.88
Area: 3246
Amount: 1.772211
Amount Units: ng

Manual Integration Results



Reviewer: bowieh, 05-Oct-2019 09:18:22
Audit Action: Manually Integrated

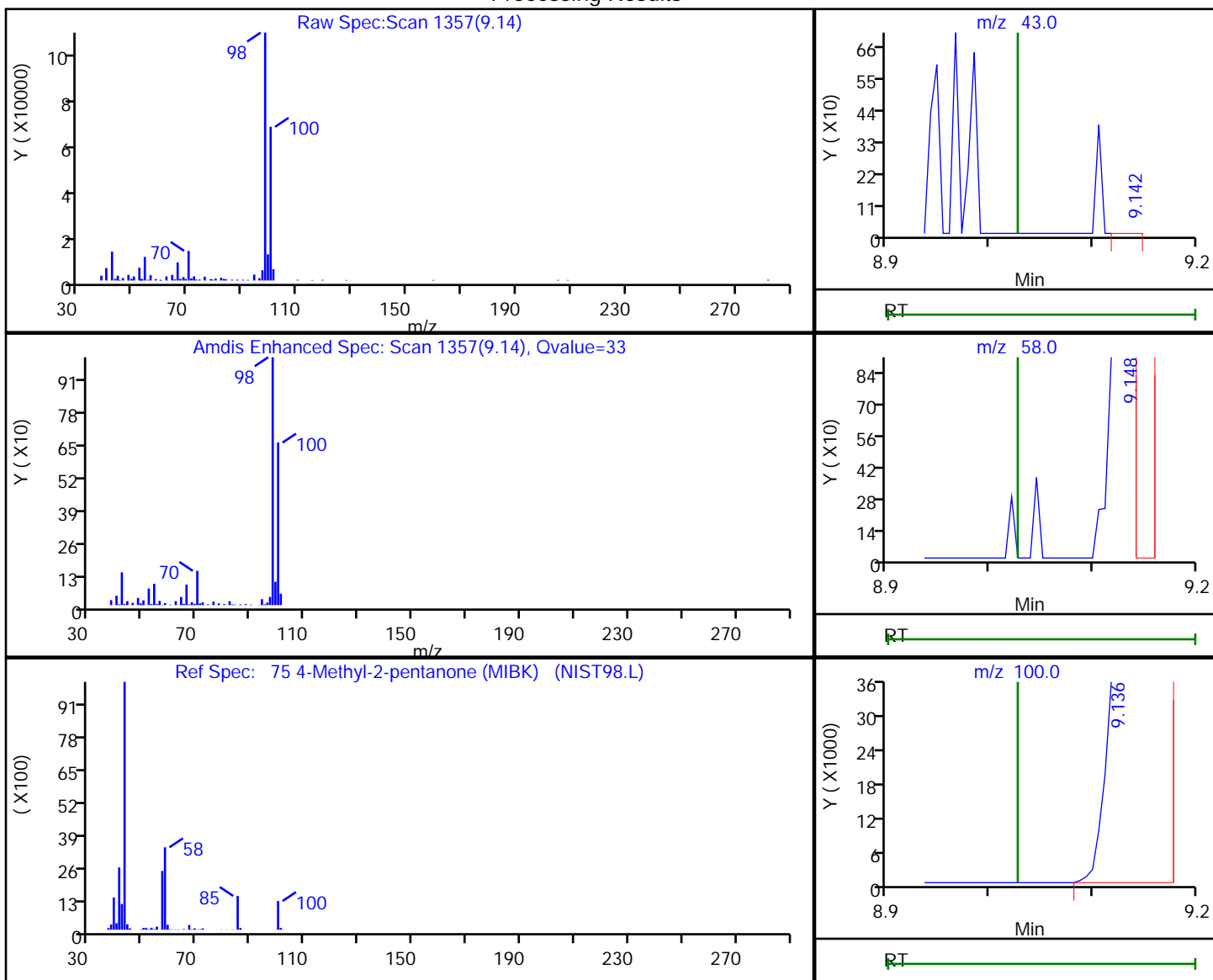
Audit Reason: Poor chromatography
Page 358 of 583

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100412.D
Injection Date: 04-Oct-2019 16:50:30 Instrument ID: CHHP5
Lims ID: 180-96180-A-15 Lab Sample ID: 180-96180-15
Client ID: HD-QC1-0/1-1
Operator ID: 433269 ALS Bottle#: 5 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 2.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

75 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1

Processing Results



RT	Mass	Response	Amount
9.14	43.00	873	0.474216
9.15	58.00	870	
9.14	100.00	164101	

Reviewer: bowieh, 05-Oct-2019 09:18:25

Audit Action: Marked Compound Undetected

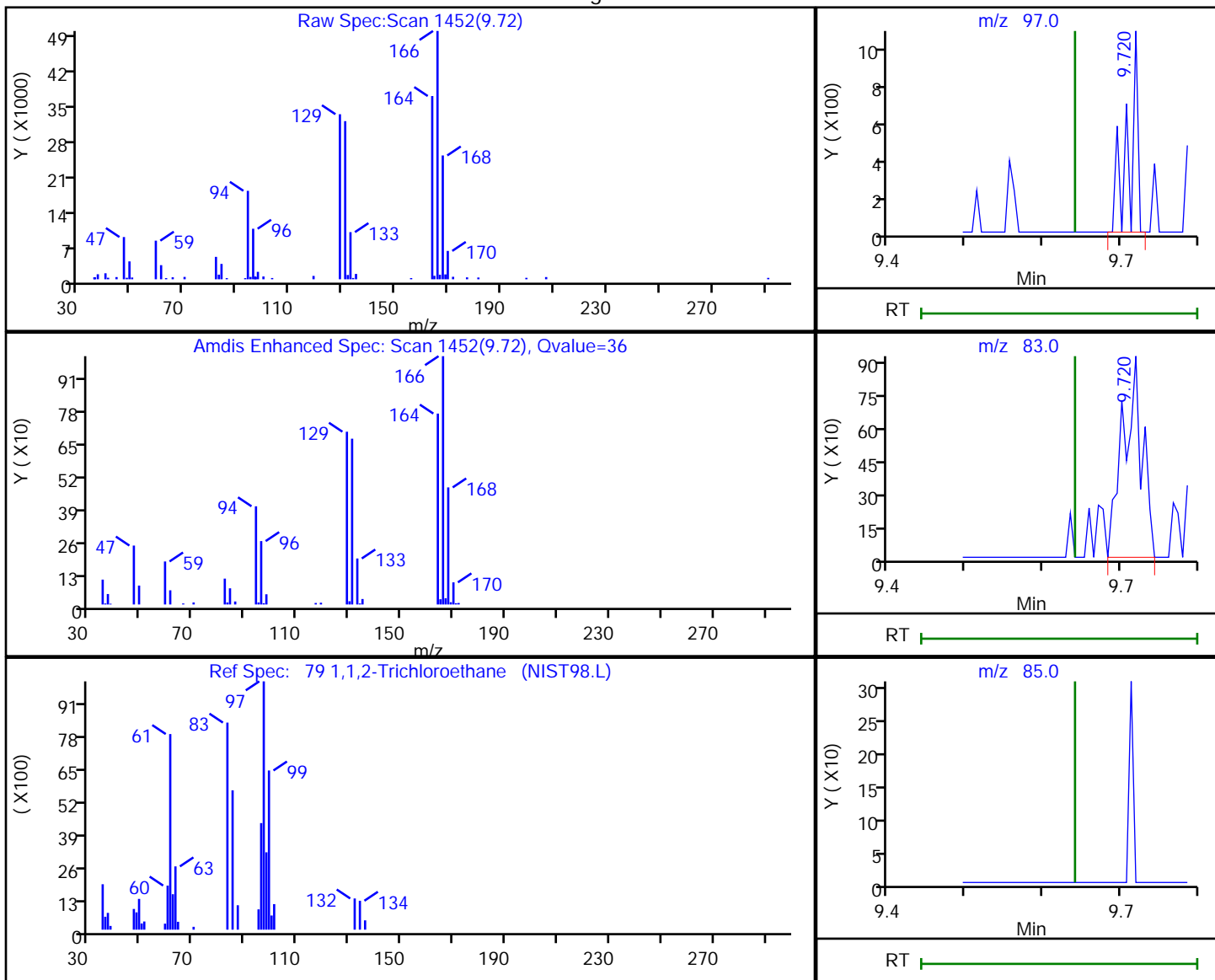
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100412.D
Injection Date: 04-Oct-2019 16:50:30 Instrument ID: CHHP5
Lims ID: 180-96180-A-15 Lab Sample ID: 180-96180-15
Client ID: HD-QC1-0/1-1
Operator ID: 433269 ALS Bottle#: 5 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 2.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

79 1,1,2-Trichloroethane, CAS: 79-00-5

Processing Results



RT	Mass	Response	Amount
9.72	97.00	807	0.457487
9.72	83.00	1593	
9.64	85.00	0	

Reviewer: bowieh, 05-Oct-2019 09:18:45

Audit Action: Marked Compound Undetected

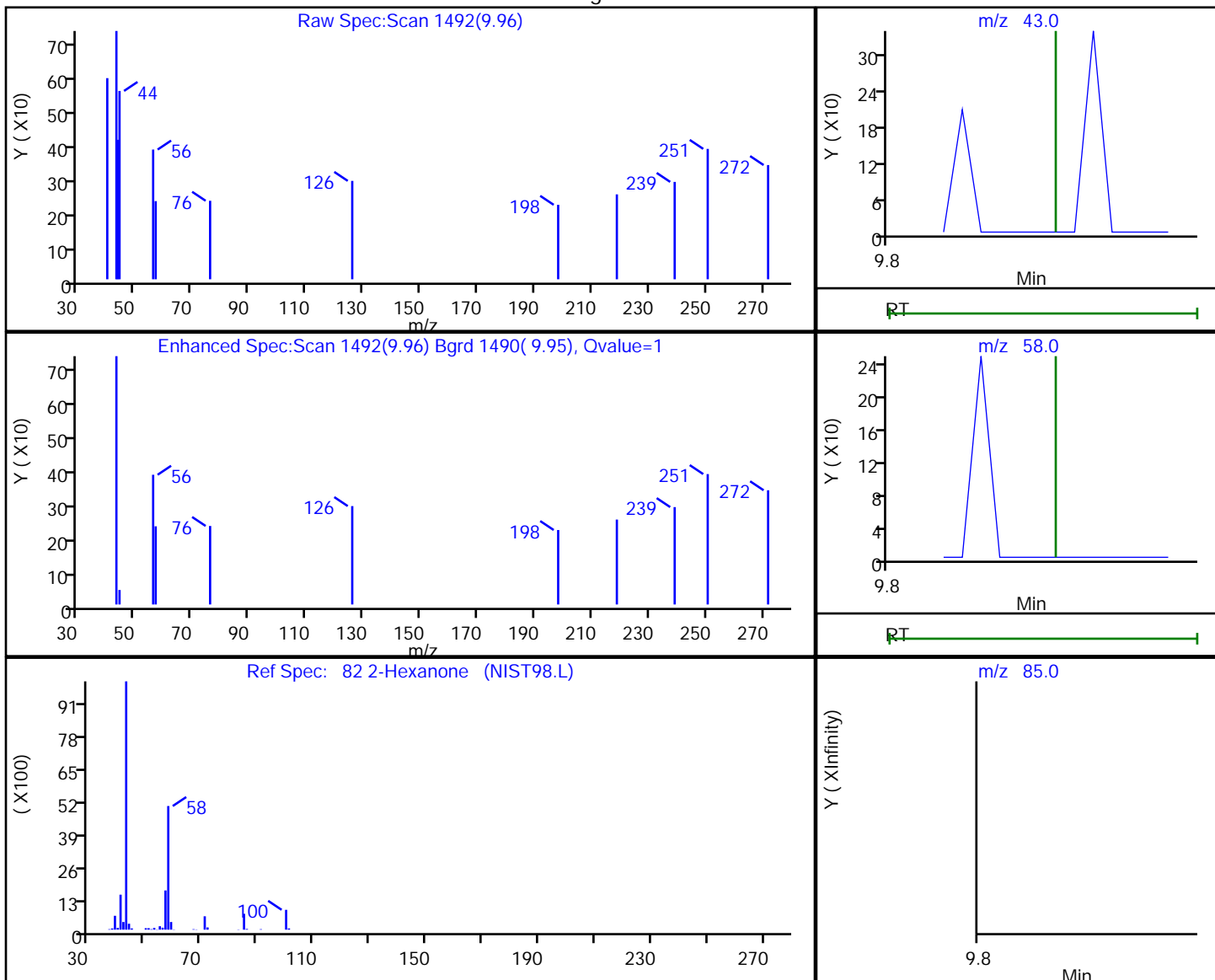
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100412.D
 Injection Date: 04-Oct-2019 16:50:30 Instrument ID: CHHP5
 Lims ID: 180-96180-A-15 Lab Sample ID: 180-96180-15
 Client ID: HD-QC1-0/1-1
 Operator ID: 433269 ALS Bottle#: 5 Worklist Smp#: 11
 Purge Vol: 5.000 mL Dil. Factor: 2.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

82 2-Hexanone, CAS: 591-78-6

Processing Results



RT	Mass	Response	Amount
9.96	43.00	420	0.315489
9.85	58.00	0	
9.85	85.00	0	

Reviewer: bowieh, 05-Oct-2019 09:18:48

Audit Action: Marked Compound Undetected

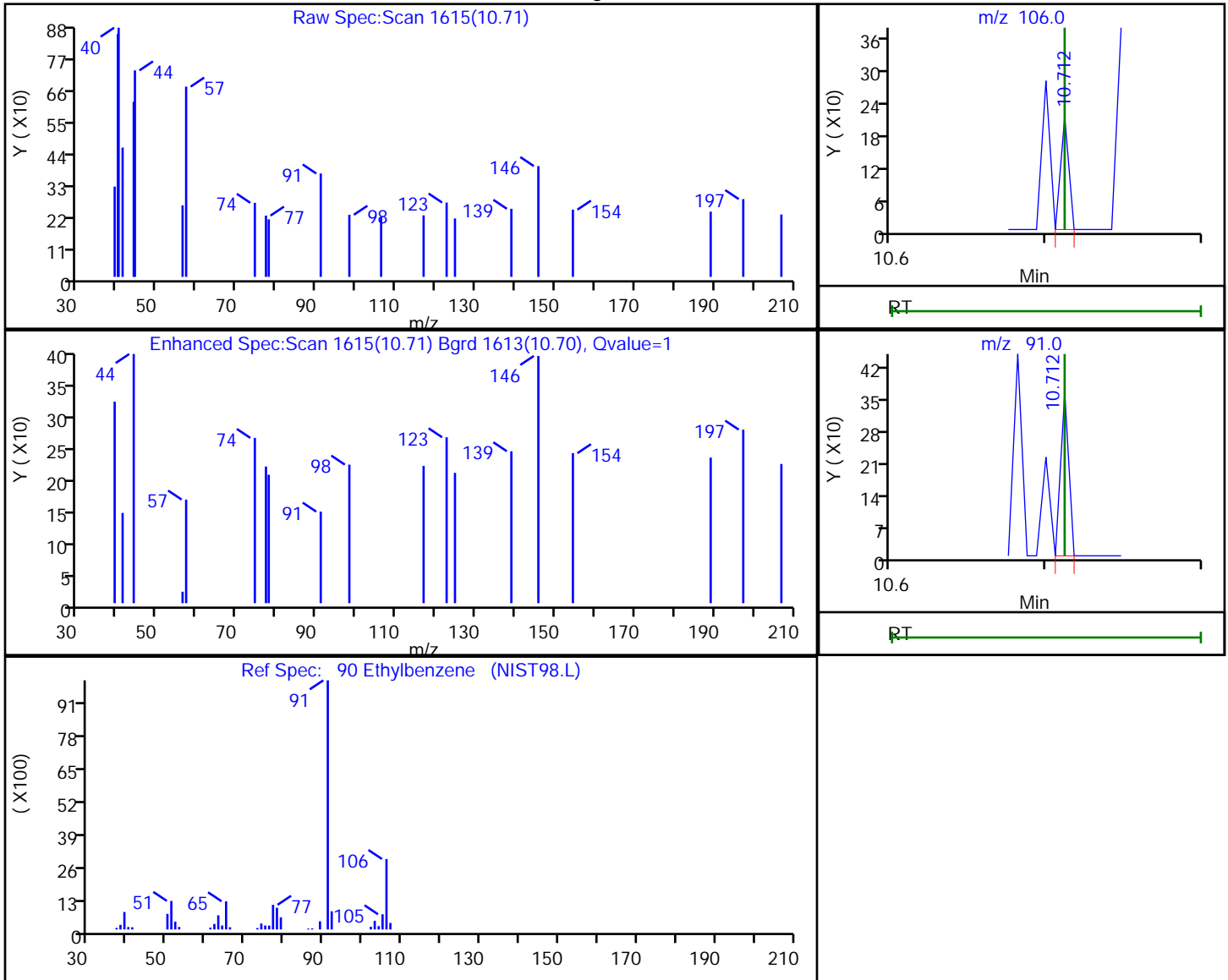
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100412.D
Injection Date: 04-Oct-2019 16:50:30 Instrument ID: CHHP5
Lims ID: 180-96180-A-15 Lab Sample ID: 180-96180-15
Client ID: HD-QC1-0/1-1
Operator ID: 433269 ALS Bottle#: 5 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 2.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

90 Ethylbenzene, CAS: 100-41-4

Processing Results



RT	Mass	Response	Amount
10.71	106.00	77	0.026836
10.71	91.00	132	

Reviewer: bowieh, 05-Oct-2019 09:18:51

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: HD-QC1-0/1-3 Lab Sample ID: 180-96180-16
 Matrix: Water Lab File ID: 5100410.D
 Analysis Method: EPA 8260C Date Collected: 09/24/2019 14:15
 Sample wt/vol: 5 (mL) Date Analyzed: 10/04/2019 16:02
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 293722 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	ND		1.0	0.90
75-01-4	Vinyl chloride	ND		1.0	0.88
74-83-9	Bromomethane	ND		1.0	0.89
75-00-3	Chloroethane	ND		1.0	0.90
75-35-4	1,1-Dichloroethene	ND		1.0	0.55
67-64-1	Acetone	ND	^c	5.0	3.4
75-15-0	Carbon disulfide	ND		1.0	0.88
75-09-2	Methylene Chloride	ND		1.0	0.89
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.67
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.59
75-34-3	1,1-Dichloroethane	ND		1.0	0.63
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.71
74-97-5	Bromochloromethane	ND		1.0	0.63
78-93-3	2-Butanone (MEK)	ND		5.0	2.6
67-66-3	Chloroform	ND		1.0	0.60
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.60
56-23-5	Carbon tetrachloride	ND		1.0	0.88
71-43-2	Benzene	ND		1.0	0.60
107-06-2	1,2-Dichloroethane	ND		1.0	0.57
79-01-6	Trichloroethene	ND		1.0	0.69
78-87-5	1,2-Dichloropropane	ND		1.0	0.66
75-27-4	Bromodichloromethane	ND		1.0	0.64
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.59
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1
108-88-3	Toluene	0.77	J	1.0	0.46
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.58
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.45
127-18-4	Tetrachloroethene	ND		1.0	0.47
591-78-6	2-Hexanone	ND		5.0	3.3
124-48-1	Dibromochloromethane	ND		1.0	0.84
106-93-4	1,2-Dibromoethane (EDB)	ND		1.0	0.50
108-90-7	Chlorobenzene	ND		1.0	0.50
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.57
100-41-4	Ethylbenzene	ND		1.0	0.51
1330-20-7	Xylenes, Total	ND		2.0	0.89
100-42-5	Styrene	ND		1.0	0.47

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: HD-QC1-0/1-3 Lab Sample ID: 180-96180-16
 Matrix: Water Lab File ID: 5100410.D
 Analysis Method: EPA 8260C Date Collected: 09/24/2019 14:15
 Sample wt/vol: 5 (mL) Date Analyzed: 10/04/2019 16:02
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 293722 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	ND		1.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.60
107-13-1	Acrylonitrile	ND		20	7.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100	^c	70-150
2037-26-5	Toluene-d8 (Surr)	85		78-128
460-00-4	4-Bromofluorobenzene (Surr)	79		64-123
1868-53-7	Dibromofluoromethane (Surr)	119		75-147

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100410.D
 Lims ID: 180-96180-B-16
 Client ID: HD-QC1-0/1-3
 Sample Type: Client
 Inject. Date: 04-Oct-2019 16:02:30 ALS Bottle#: 3 Worklist Smp#: 9
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028969-009
 Misc. Info.: 180-96180-B-16
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 04-Oct-2019 16:44:07 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICAL File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0327

First Level Reviewer: bowieh

Date: 04-Oct-2019 16:44:07

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.538	4.549	-0.011	0	197115	1000.0	
* 2 Fluorobenzene (IS)	96	7.501	7.494	0.007	98	286616	50.0	
* 3 Chlorobenzene-d5	119	10.579	10.584	-0.005	87	82280	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.921	12.920	0.001	94	128378	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.783	6.776	0.007	94	98197	59.4	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.148	7.141	0.007	0	139437	50.0	
\$ 7 Toluene-d8 (Surr)	98	9.137	9.130	0.007	95	277825	42.4	
\$ 8 4-Bromofluorobenzene (Surr	95	11.759	11.758	0.001	92	105816	39.3	
12 Chloromethane	50		1.909				ND	U
13 Vinyl chloride	62		2.037				ND	
15 Bromomethane	94		2.371				ND	
16 Chloroethane	64		2.511				ND	
22 1,1-Dichloroethene	96		3.564				ND	
24 Acetone	43	3.680	3.685	-0.005	84	5444	7.46	
26 Carbon disulfide	76	3.875	3.850	0.025	46	1721	0.4177	
31 Methylene Chloride	84	4.398	4.403	-0.005	27	3327	-4.87	
33 Acrylonitrile	53		4.787				ND	
34 trans-1,2-Dichloroethene	96		4.805				ND	
35 Methyl tert-butyl ether	73		4.829				ND	
37 1,1-Dichloroethane	63		5.437				ND	
45 cis-1,2-Dichloroethene	96		6.174				ND	
46 2-Butanone (MEK)	43		6.186				ND	
49 Chlorobromomethane	128		6.453				ND	
52 Chloroform	83	6.606	6.599	0.007	1	714	-2.47	
53 1,1,1-Trichloroethane	97		6.758				ND	
56 Carbon tetrachloride	117		6.922				ND	
58 Benzene	78		7.153				ND	U
59 1,2-Dichloroethane	62		7.226				ND	U
64 Trichloroethene	130		7.877				ND	
67 1,2-Dichloropropane	63		8.151				ND	
71 Dichlorobromomethane	83		8.430				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
74 cis-1,3-Dichloropropene	75		8.869				ND	
75 4-Methyl-2-pentanone (MIBK)	43		9.027				ND	U
76 Toluene	91	9.204	9.197	0.007	98	32853	3.85	
77 trans-1,3-Dichloropropene	75		9.440				ND	
79 1,1,2-Trichloroethane	97		9.641				ND	
80 Tetrachloroethene	164	9.709	9.708	0.001	11	1017	0.5107	
82 2-Hexanone	43		9.854				ND	U
84 Chlorodibromomethane	129		10.012				ND	
85 Ethylene Dibromide	107		10.122				ND	
87 Chlorobenzene	112		10.608				ND	
89 1,1,1,2-Tetrachloroethane	131		10.700				ND	
90 Ethylbenzene	106	10.694	10.712	-0.018	94	1455	0.4974	
91 m-Xylene & p-Xylene	106	10.834	10.840	-0.006	0	6368	1.77	
92 o-Xylene	106	11.211	11.223	-0.012	94	2313	0.6718	
93 Styrene	104	11.236	11.241	-0.005	55	1668	0.2757	
94 Bromoform	173		11.417				ND	
99 1,1,2,2-Tetrachloroethane	83		11.898				ND	
S 133 Xylenes, Total	106				0		2.44	

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

voaWI/SHP5_00013

Amount Added: 5.00

Units: uL

Run Reagent

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100410.D

Injection Date: 04-Oct-2019 16:02:30

Instrument ID: CHHP5

Operator ID: 433269

Lims ID: 180-96180-B-16

Lab Sample ID: 180-96180-16

Worklist Smp#: 9

Client ID: HD-QC1-0/1-3

Purge Vol: 5.000 mL

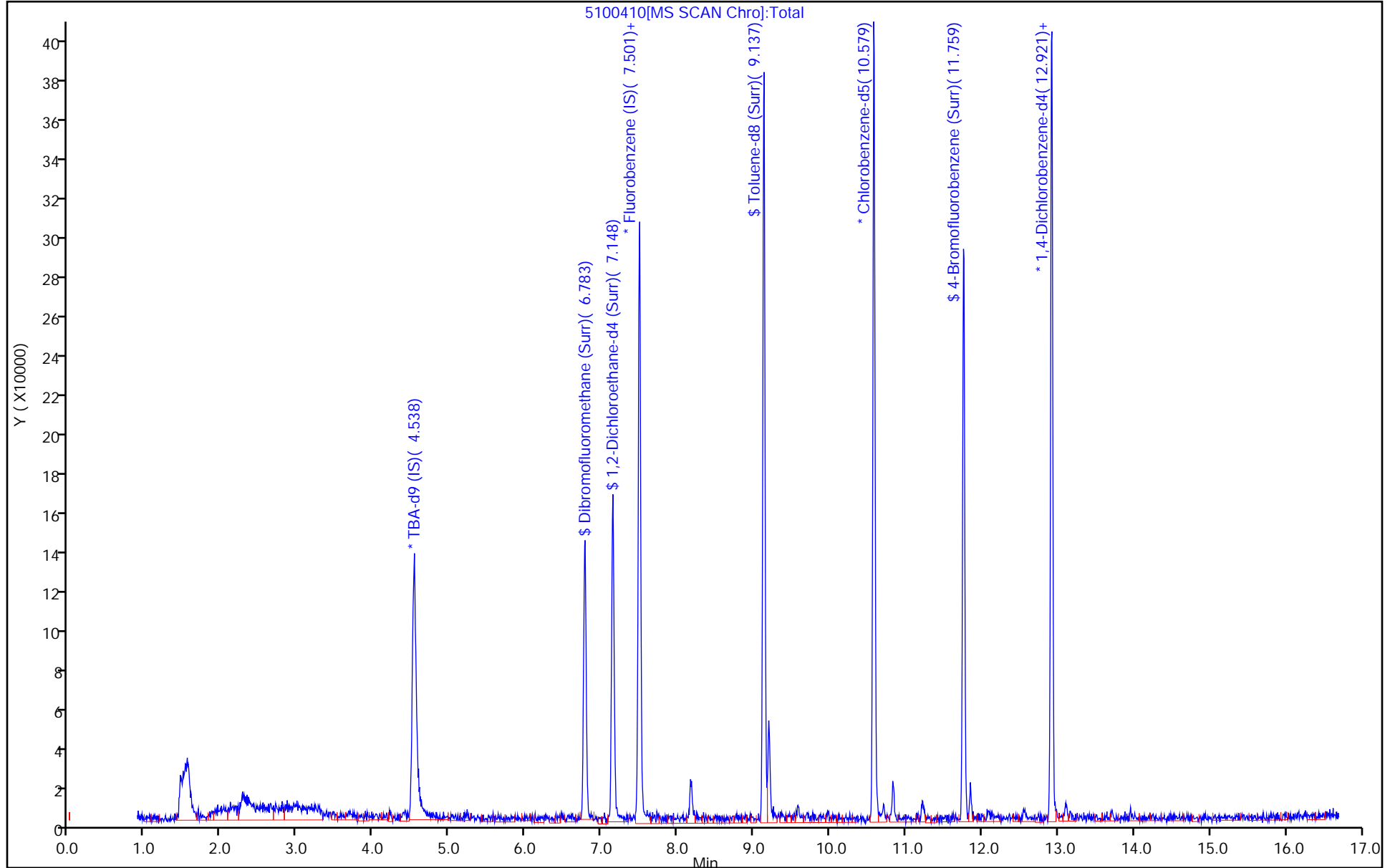
Dil. Factor: 1.0000

ALS Bottle#: 3

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Recovery Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100410.D
 Lims ID: 180-96180-B-16
 Client ID: HD-QC1-0/1-3
 Sample Type: Client
 Inject. Date: 04-Oct-2019 16:02:30 ALS Bottle#: 3 Worklist Smp#: 9
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028969-009
 Misc. Info.: 180-96180-B-16
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 04-Oct-2019 16:44:07 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0327

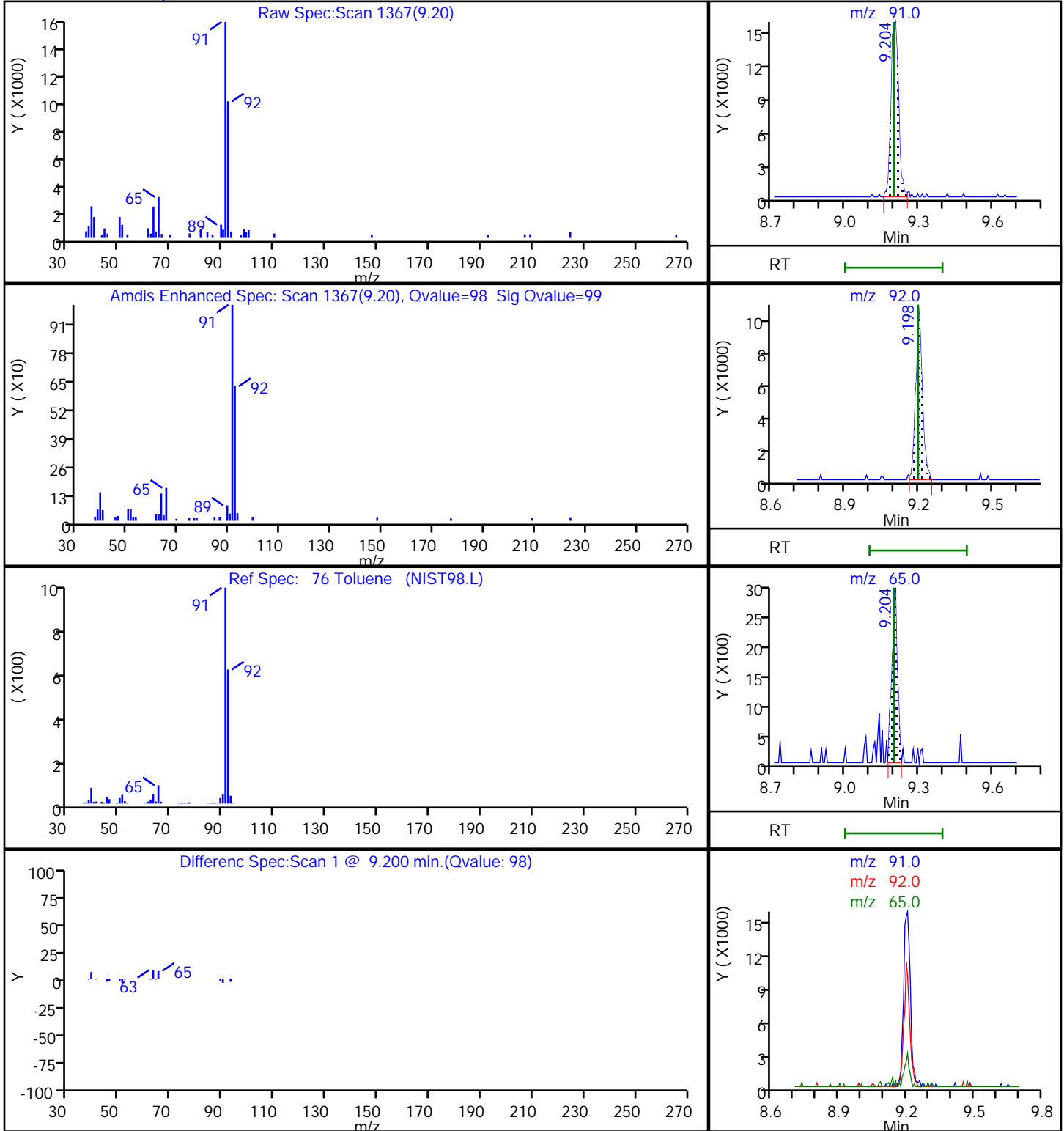
First Level Reviewer: bowieh Date: 04-Oct-2019 16:44:07

Compound	Amount Added	Amount Recovered	% Rec.
\$ 5 Dibromofluoromethane (Surr)	50.0	59.4	118.71
\$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	50.0	100.06
\$ 7 Toluene-d8 (Surr)	50.0	42.4	84.83
\$ 8 4-Bromofluorobenzene (Surr)	50.0	39.3	78.59

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100410.D
Injection Date: 04-Oct-2019 16:02:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-16 Lab Sample ID: 180-96180-16
Client ID: HD-QC1-0/1-3
Operator ID: 433269 ALS Bottle#: 3 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

76 Toluene, CAS: 108-88-3

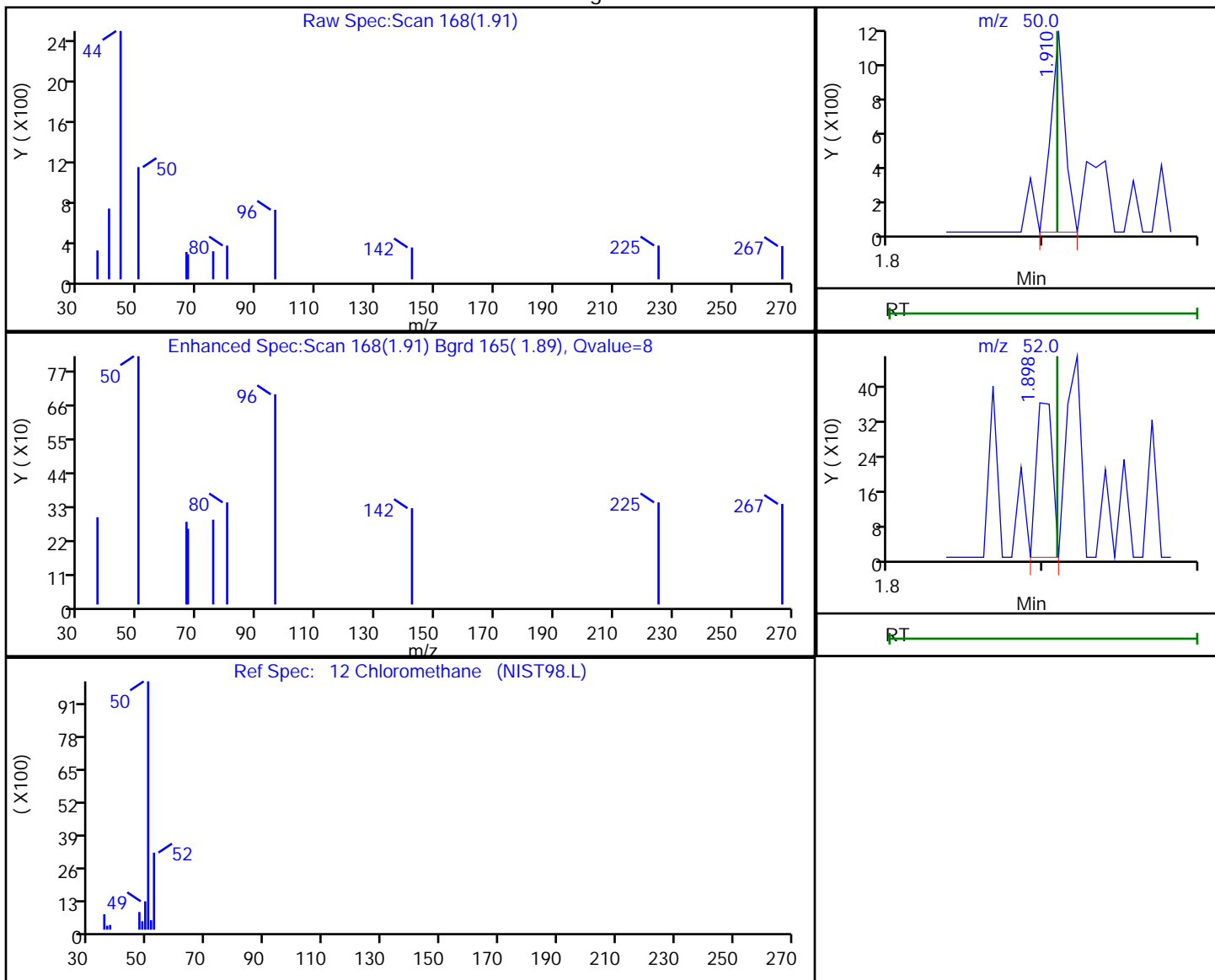


Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100410.D
Injection Date: 04-Oct-2019 16:02:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-16 Lab Sample ID: 180-96180-16
Client ID: HD-QC1-0/1-3
Operator ID: 433269 ALS Bottle#: 3 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

12 Chloromethane, CAS: 74-87-3

Processing Results



RT	Mass	Response	Amount
1.91	50.00	711	0.289779
1.90	52.00	257	

Reviewer: bowieh, 04-Oct-2019 16:43:21

Audit Action: Marked Compound Undetected

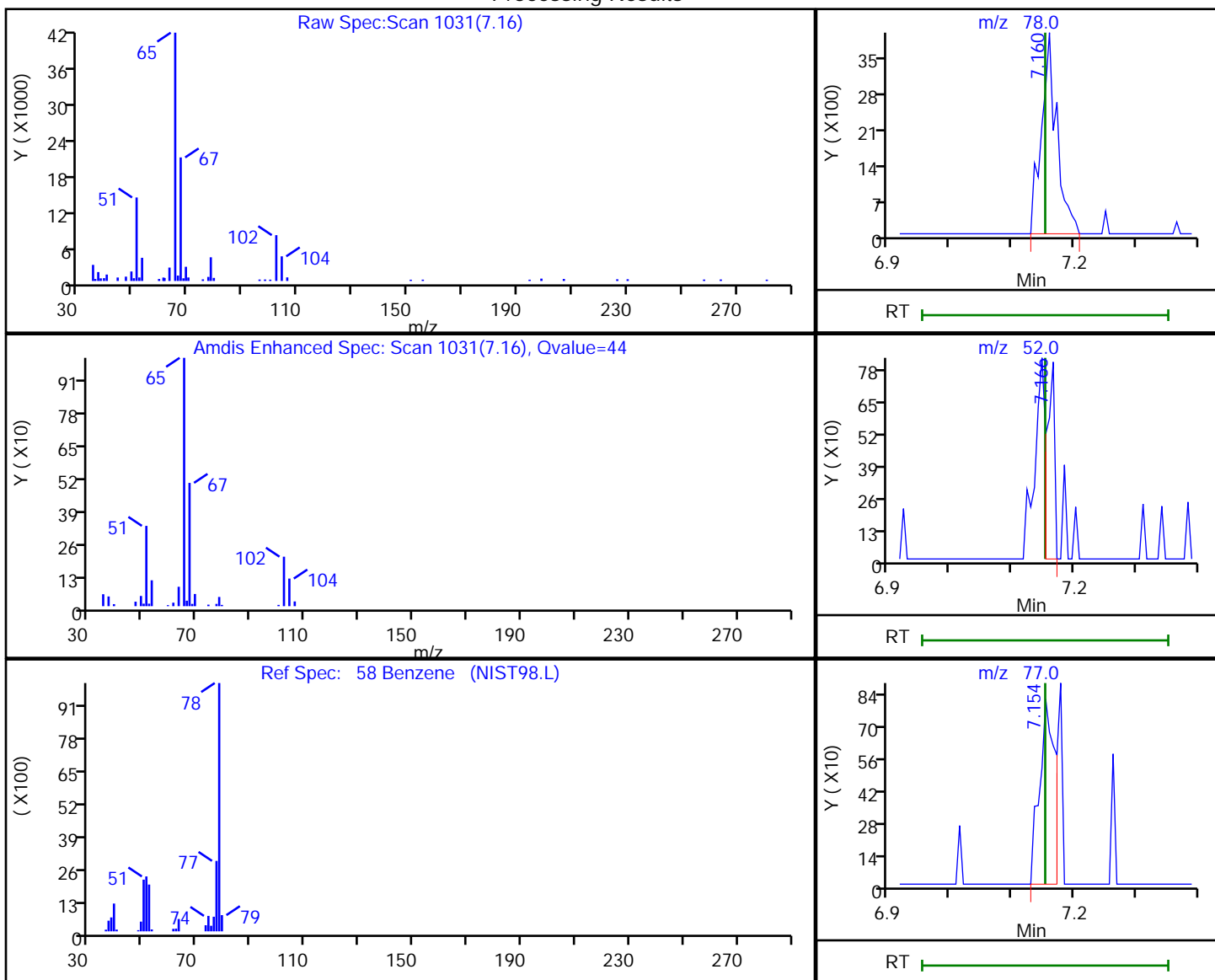
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100410.D
 Injection Date: 04-Oct-2019 16:02:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-16 Lab Sample ID: 180-96180-16
 Client ID: HD-QC1-0/1-3
 Operator ID: 433269 ALS Bottle#: 3 Worklist Smp#: 9
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

58 Benzene, CAS: 71-43-2

Processing Results



RT	Mass	Response	Amount
7.16	78.00	6829	0.964616
7.17	52.00	692	
7.15	77.00	1410	

Reviewer: bowieh, 04-Oct-2019 16:43:39

Audit Action: Marked Compound Undetected

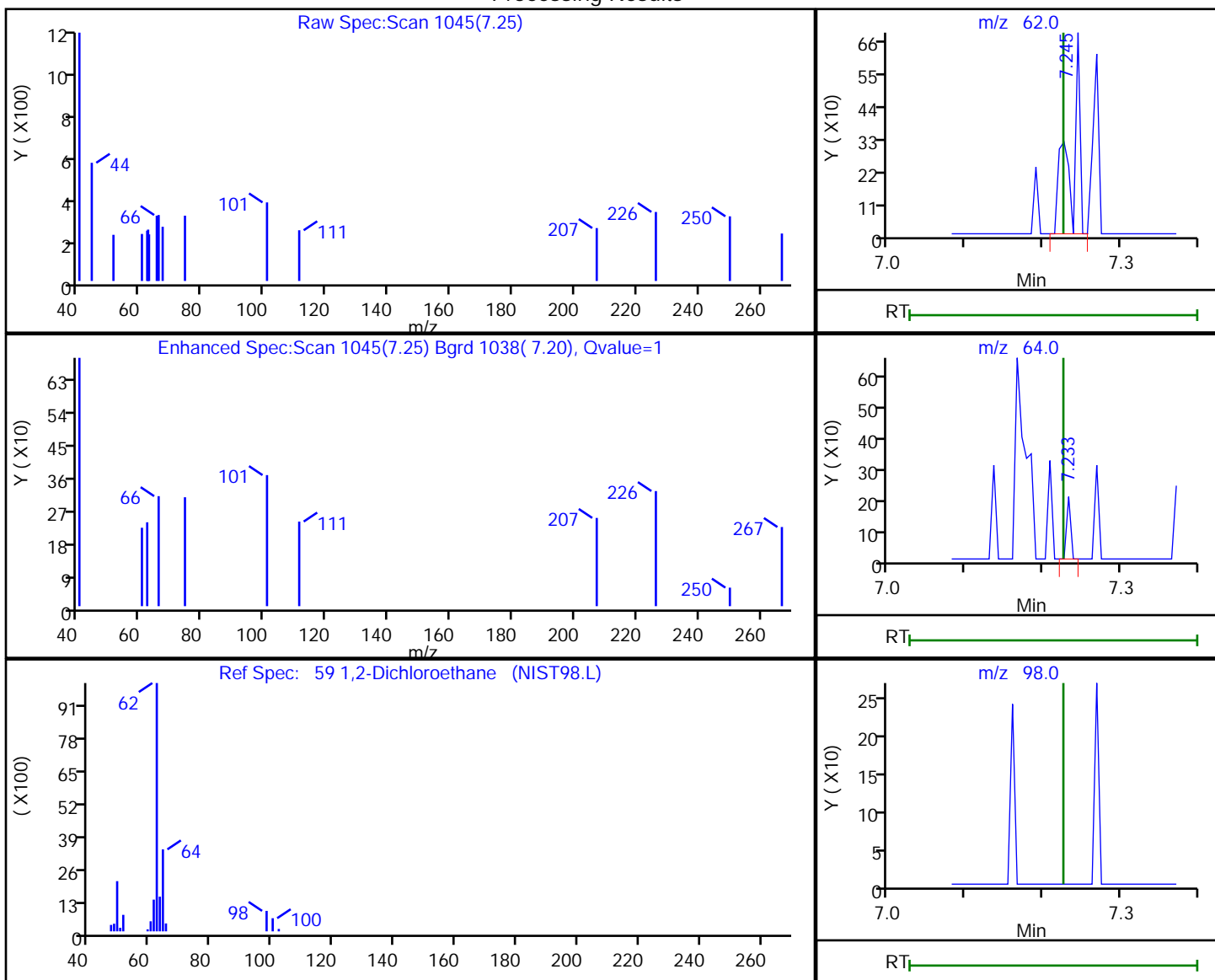
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100410.D
 Injection Date: 04-Oct-2019 16:02:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-16 Lab Sample ID: 180-96180-16
 Client ID: HD-QC1-0/1-3
 Operator ID: 433269 ALS Bottle#: 3 Worklist Smp#: 9
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

59 1,2-Dichloroethane, CAS: 107-06-2

Processing Results



RT	Mass	Response	Amount
7.25	62.00	550	0.158912
7.23	64.00	74	
7.23	98.00	0	

Reviewer: bowieh, 04-Oct-2019 16:43:41

Audit Action: Marked Compound Undetected

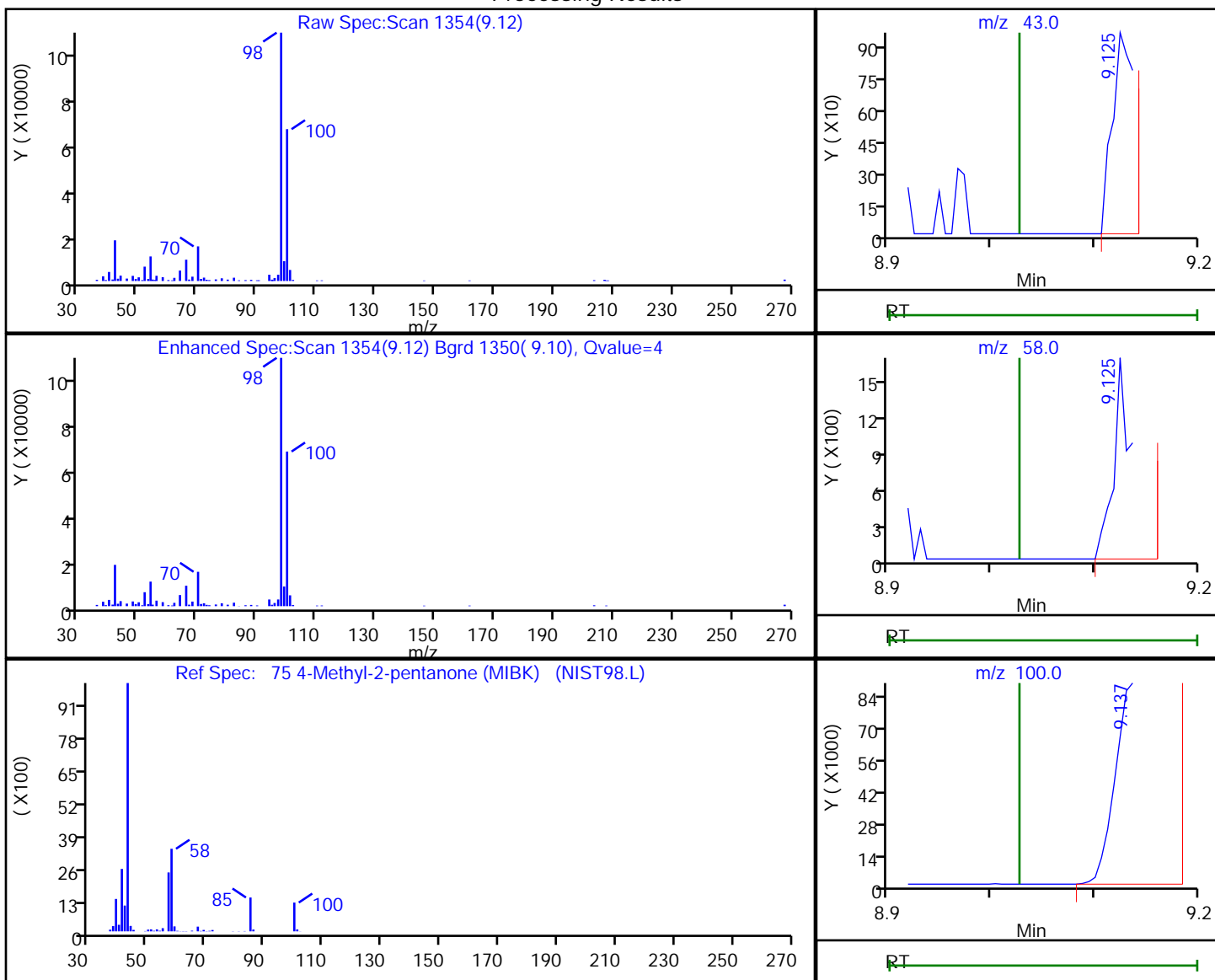
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100410.D
 Injection Date: 04-Oct-2019 16:02:30 Instrument ID: CHHP5
 Lims ID: 180-96180-B-16 Lab Sample ID: 180-96180-16
 Client ID: HD-QC1-0/1-3
 Operator ID: 433269 ALS Bottle#: 3 Worklist Smp#: 9
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

75 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1

Processing Results



RT	Mass	Response	Amount
9.12	43.00	1437	0.765621
9.12	58.00	2387	
9.14	100.00	177607	

Reviewer: bowieh, 04-Oct-2019 16:43:43

Audit Action: Marked Compound Undetected

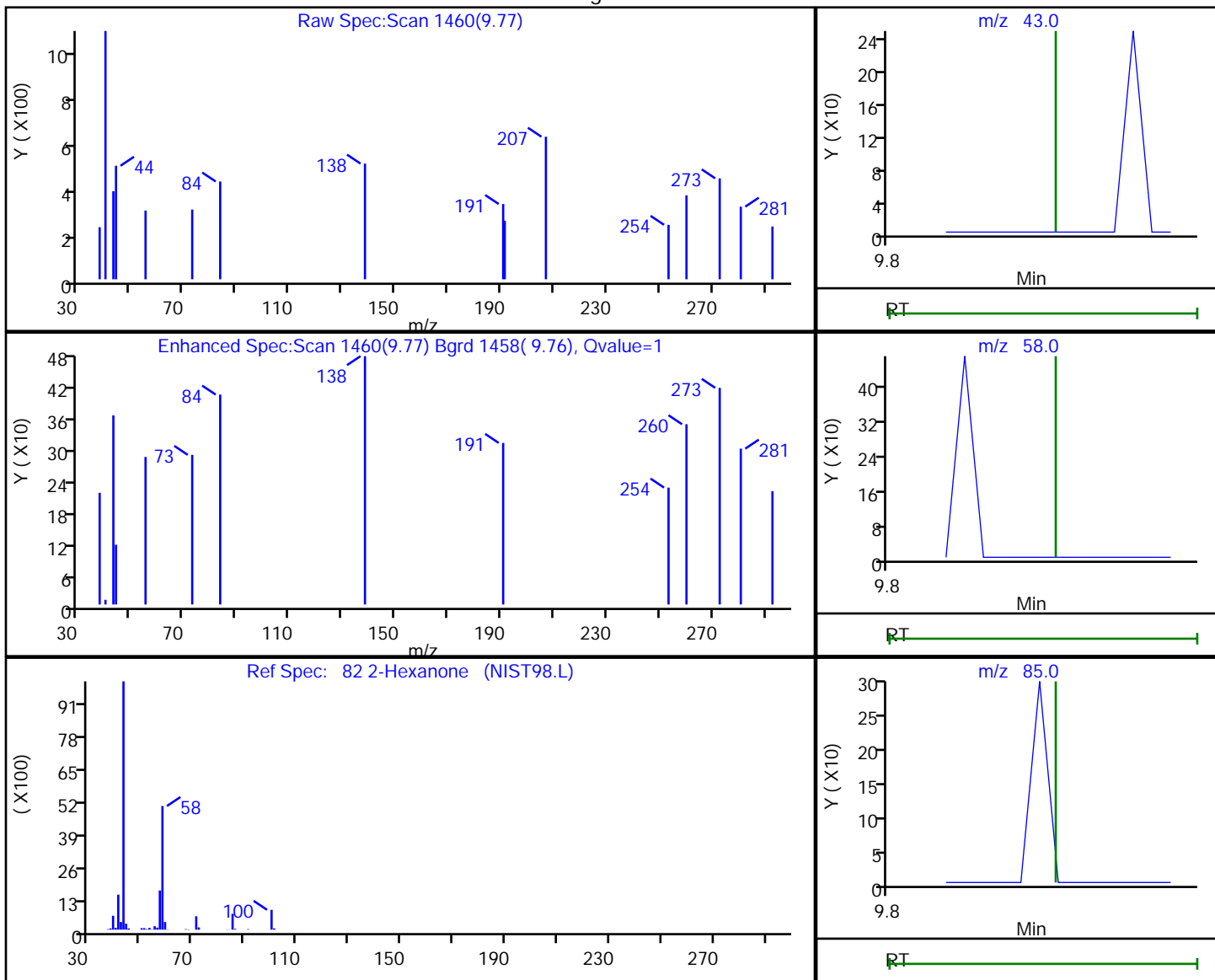
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100410.D
Injection Date: 04-Oct-2019 16:02:30 Instrument ID: CHHP5
Lims ID: 180-96180-B-16 Lab Sample ID: 180-96180-16
Client ID: HD-QC1-0/1-3
Operator ID: 433269 ALS Bottle#: 3 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

82 2-Hexanone, CAS: 591-78-6

Processing Results



RT	Mass	Response	Amount
9.77	43.00	133	0.097990
9.85	58.00	0	
9.85	85.00	0	

Reviewer: bowieh, 04-Oct-2019 16:43:47

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: HD-QC1-0/1-4 Lab Sample ID: 180-96180-17
 Matrix: Water Lab File ID: 5100411.D
 Analysis Method: EPA 8260C Date Collected: 09/24/2019 14:20
 Sample wt/vol: 5 (mL) Date Analyzed: 10/04/2019 16:26
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 293722 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	ND		1.0	0.90
75-01-4	Vinyl chloride	ND		1.0	0.88
74-83-9	Bromomethane	ND		1.0	0.89
75-00-3	Chloroethane	ND		1.0	0.90
75-35-4	1,1-Dichloroethene	ND		1.0	0.55
67-64-1	Acetone	ND	^c	5.0	3.4
75-15-0	Carbon disulfide	ND		1.0	0.88
75-09-2	Methylene Chloride	ND		1.0	0.89
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.67
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.59
75-34-3	1,1-Dichloroethane	ND		1.0	0.63
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.71
74-97-5	Bromochloromethane	ND		1.0	0.63
78-93-3	2-Butanone (MEK)	ND		5.0	2.6
67-66-3	Chloroform	ND		1.0	0.60
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.60
56-23-5	Carbon tetrachloride	ND		1.0	0.88
71-43-2	Benzene	ND		1.0	0.60
107-06-2	1,2-Dichloroethane	ND		1.0	0.57
79-01-6	Trichloroethene	ND		1.0	0.69
78-87-5	1,2-Dichloropropane	ND		1.0	0.66
75-27-4	Bromodichloromethane	ND		1.0	0.64
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.59
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1
108-88-3	Toluene	0.90	J	1.0	0.46
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.58
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.45
127-18-4	Tetrachloroethene	ND		1.0	0.47
591-78-6	2-Hexanone	ND		5.0	3.3
124-48-1	Dibromochloromethane	ND		1.0	0.84
106-93-4	1,2-Dibromoethane (EDB)	ND		1.0	0.50
108-90-7	Chlorobenzene	ND		1.0	0.50
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.57
100-41-4	Ethylbenzene	ND		1.0	0.51
1330-20-7	Xylenes, Total	ND		2.0	0.89
100-42-5	Styrene	ND		1.0	0.47

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: HD-QC1-0/1-4 Lab Sample ID: 180-96180-17
 Matrix: Water Lab File ID: 5100411.D
 Analysis Method: EPA 8260C Date Collected: 09/24/2019 14:20
 Sample wt/vol: 5 (mL) Date Analyzed: 10/04/2019 16:26
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 293722 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	ND		1.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.60
107-13-1	Acrylonitrile	ND		20	7.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100	^c	70-150
2037-26-5	Toluene-d8 (Surr)	84		78-128
460-00-4	4-Bromofluorobenzene (Surr)	76		64-123
1868-53-7	Dibromofluoromethane (Surr)	120		75-147

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100411.D
 Lims ID: 180-96180-A-17
 Client ID: HD-QC1-0/1-4
 Sample Type: Client
 Inject. Date: 04-Oct-2019 16:26:30 ALS Bottle#: 4 Worklist Smp#: 10
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028969-010
 Misc. Info.: 180-96180-A-17
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 05-Oct-2019 09:17:47 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0311

First Level Reviewer: bowieh

Date: 05-Oct-2019 09:17:47

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.534	4.549	-0.015	0	191220	1000.0	
* 2 Fluorobenzene (IS)	96	7.496	7.494	0.002	99	290275	50.0	
* 3 Chlorobenzene-d5	119	10.581	10.584	-0.003	87	82980	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.917	12.920	-0.003	95	129916	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.778	6.776	0.002	94	100166	59.8	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.143	7.141	0.002	0	140843	49.9	
\$ 7 Toluene-d8 (Surr)	98	9.133	9.130	0.003	95	276753	41.9	
\$ 8 4-Bromofluorobenzene (Surr	95	11.761	11.758	0.003	94	102979	37.9	
12 Chloromethane	50		1.909				ND	
13 Vinyl chloride	62		2.037				ND	
15 Bromomethane	94		2.371				ND	U
16 Chloroethane	64		2.511				ND	
22 1,1-Dichloroethene	96		3.564				ND	
24 Acetone	43		3.685				ND	U
26 Carbon disulfide	76		3.850				ND	U
31 Methylene Chloride	84	4.412	4.403	0.009	47	2985	-5.07	a
33 Acrylonitrile	53		4.787				ND	
34 trans-1,2-Dichloroethene	96		4.805				ND	
35 Methyl tert-butyl ether	73		4.829				ND	
37 1,1-Dichloroethane	63		5.437				ND	
45 cis-1,2-Dichloroethene	96		6.174				ND	
46 2-Butanone (MEK)	43		6.186				ND	
49 Chlorobromomethane	128		6.453				ND	
52 Chloroform	83		6.599				ND	U
53 1,1,1-Trichloroethane	97		6.758				ND	
56 Carbon tetrachloride	117		6.922				ND	
58 Benzene	78		7.153				ND	U
59 1,2-Dichloroethane	62		7.226				ND	
64 Trichloroethene	130		7.877				ND	
67 1,2-Dichloropropane	63		8.151				ND	U
71 Dichlorobromomethane	83		8.430				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
74 cis-1,3-Dichloropropene	75		8.869				ND	
75 4-Methyl-2-pentanone (MIBK)	43		9.027				ND	U
76 Toluene	91	9.206	9.197	0.009	97	38533	4.48	
77 trans-1,3-Dichloropropene	75		9.440				ND	
79 1,1,2-Trichloroethane	97		9.641				ND	
80 Tetrachloroethene	164		9.708				ND	
82 2-Hexanone	43		9.854				ND	U
84 Chlorodibromomethane	129		10.012				ND	
85 Ethylene Dibromide	107		10.122				ND	
87 Chlorobenzene	112		10.608				ND	
89 1,1,1,2-Tetrachloroethane	131		10.700				ND	
90 Ethylbenzene	106	10.702	10.712	-0.010	93	1857	0.6294	
91 m-Xylene & p-Xylene	106	10.836	10.840	-0.004	0	8605	2.37	
92 o-Xylene	106	11.219	11.223	-0.004	93	2992	0.8616	
93 Styrene	104		11.241				ND	U
94 Bromoform	173		11.417				ND	
99 1,1,2,2-Tetrachloroethane	83		11.898				ND	
S 133 Xylenes, Total	106				0		3.23	

QC Flag Legend

Review Flags

U - Marked Undetected

a - User Assigned ID

Reagents:

voaWI/SHP5_00013

Amount Added: 5.00

Units: uL

Run Reagent

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100411.D

Injection Date: 04-Oct-2019 16:26:30

Instrument ID: CHHP5

Operator ID: 433269

Lims ID: 180-96180-A-17

Lab Sample ID: 180-96180-17

Worklist Smp#: 10

Client ID: HD-QC1-0/1-4

Purge Vol: 5.000 mL

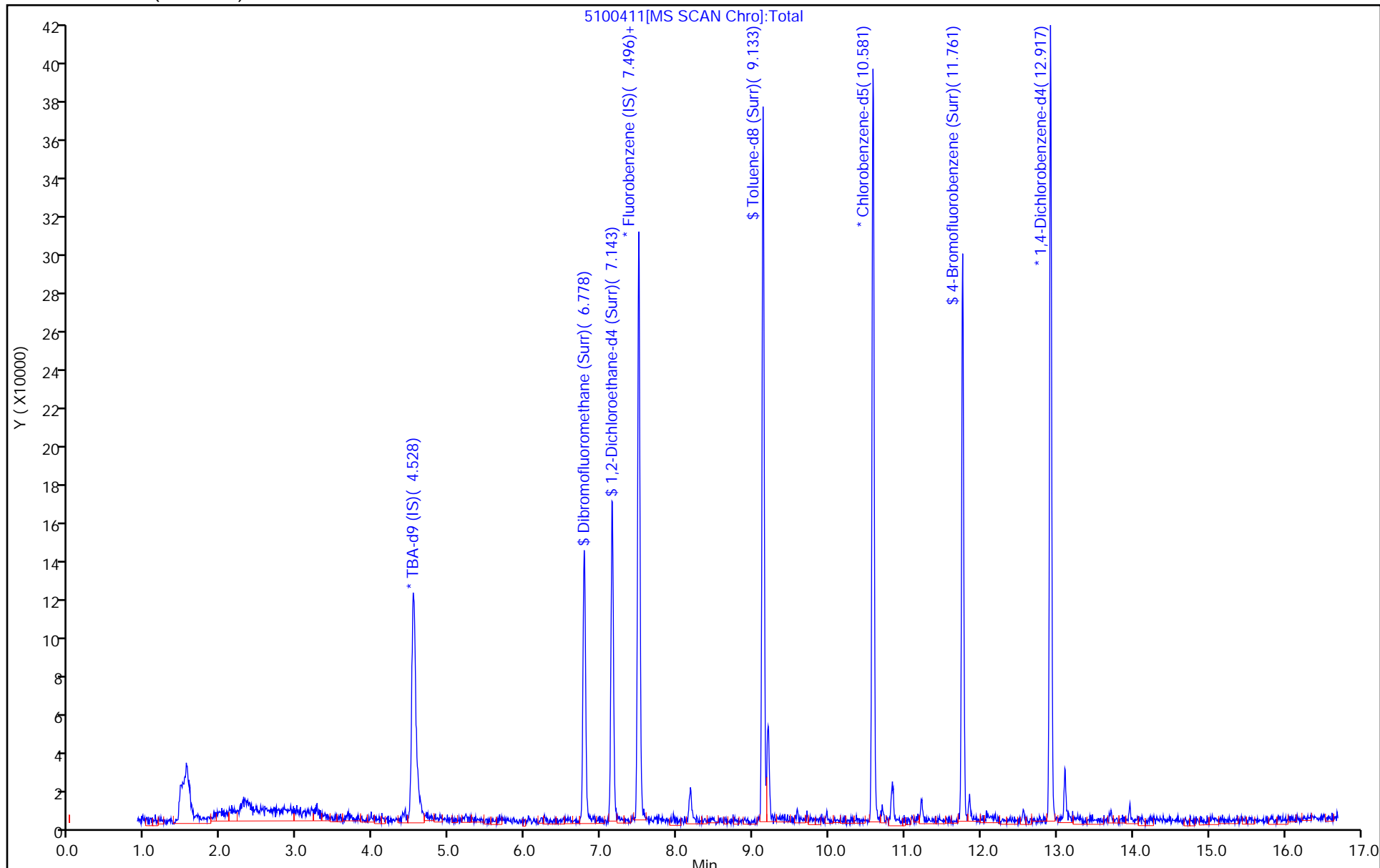
Dil. Factor: 1.0000

ALS Bottle#: 4

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Recovery Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100411.D
 Lims ID: 180-96180-A-17
 Client ID: HD-QC1-0/1-4
 Sample Type: Client
 Inject. Date: 04-Oct-2019 16:26:30 ALS Bottle#: 4 Worklist Smp#: 10
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028969-010
 Misc. Info.: 180-96180-A-17
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 05-Oct-2019 09:17:47 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0311

First Level Reviewer: bowieh

Date: 05-Oct-2019 09:17:47

Compound	Amount Added	Amount Recovered	% Rec.
\$ 5 Dibromofluoromethane (Surr)	50.0	59.8	119.56
\$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	49.9	99.79
\$ 7 Toluene-d8 (Surr)	50.0	41.9	83.79
\$ 8 4-Bromofluorobenzene (Surr)	50.0	37.9	75.84

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100411.D

Injection Date: 04-Oct-2019 16:26:30

Instrument ID: CHHP5

Lims ID: 180-96180-A-17

Lab Sample ID: 180-96180-17

Client ID: HD-QC1-0/1-4

Operator ID: 433269

ALS Bottle#: 4 Worklist Smp#: 10

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

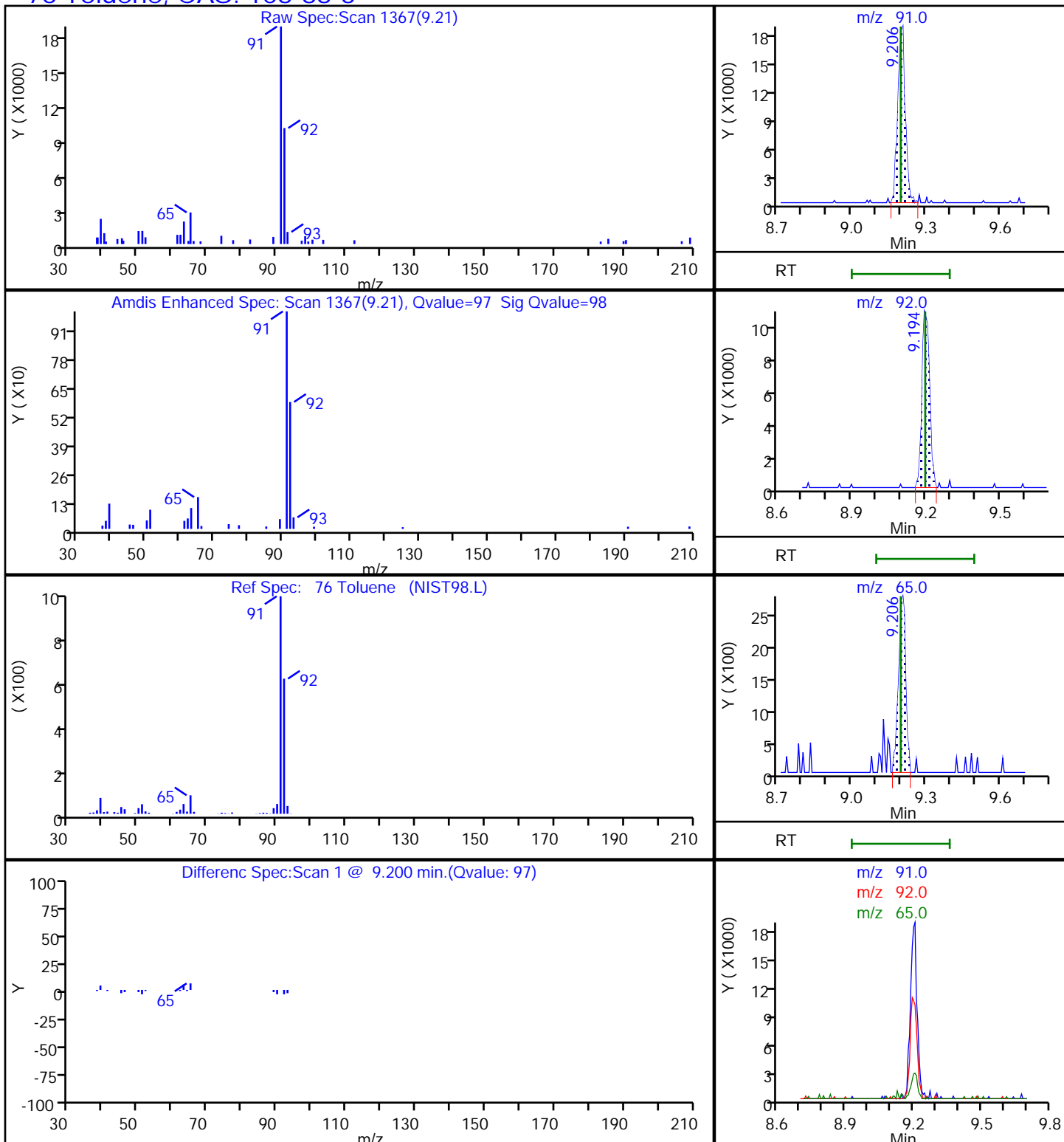
Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

76 Toluene, CAS: 108-88-3

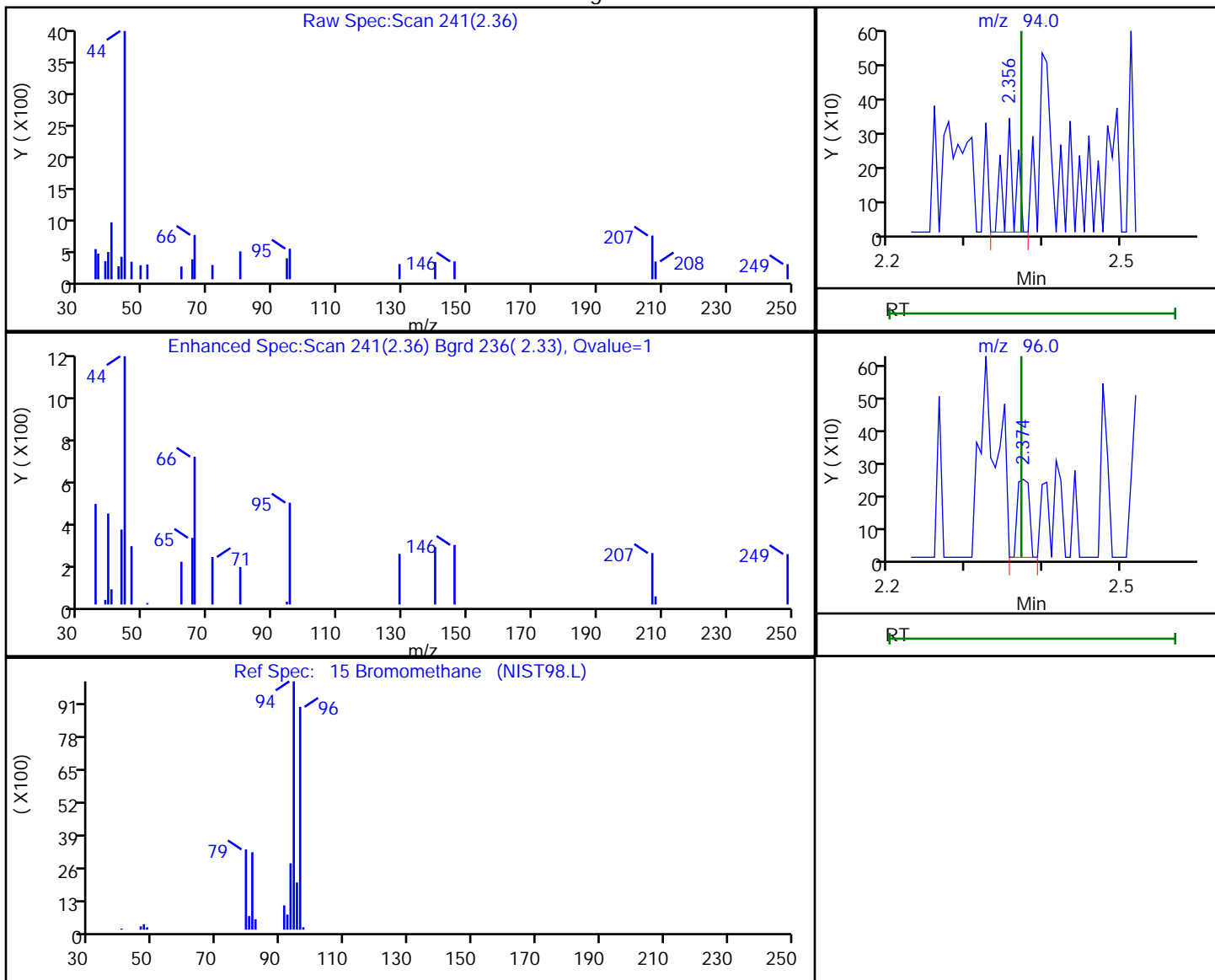


Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100411.D
Injection Date: 04-Oct-2019 16:26:30 Instrument ID: CHHP5
Lims ID: 180-96180-A-17 Lab Sample ID: 180-96180-17
Client ID: HD-QC1-0/1-4
Operator ID: 433269 ALS Bottle#: 4 Worklist Smp#: 10
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

15 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
2.36	94.00	295	0.165567
2.37	96.00	260	

Reviewer: bowieh, 05-Oct-2019 09:16:54

Audit Action: Marked Compound Undetected

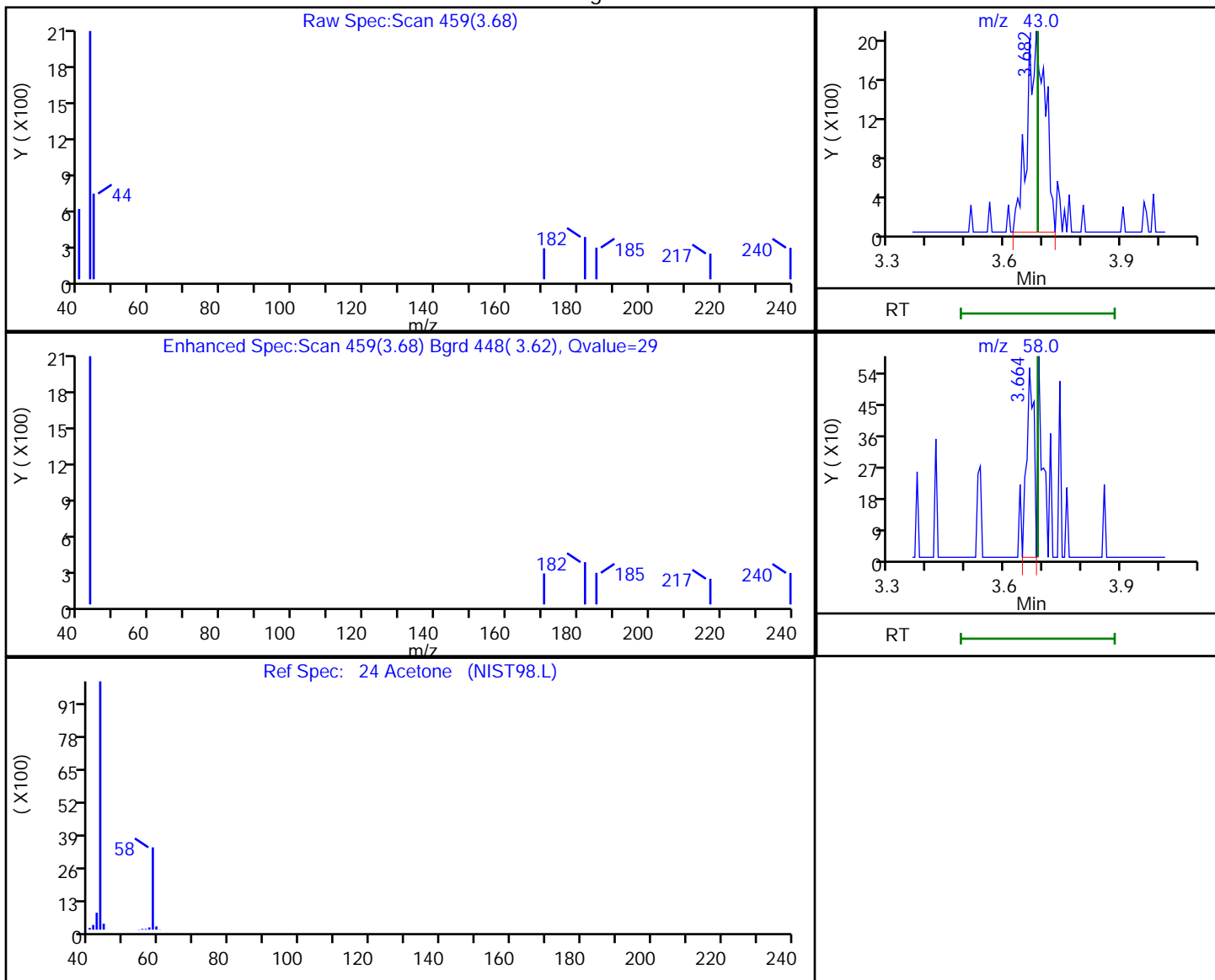
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100411.D
Injection Date: 04-Oct-2019 16:26:30 Instrument ID: CHHP5
Lims ID: 180-96180-A-17 Lab Sample ID: 180-96180-17
Client ID: HD-QC1-0/1-4
Operator ID: 433269 ALS Bottle#: 4 Worklist Smp#: 10
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

24 Acetone, CAS: 67-64-1

Processing Results



RT	Mass	Response	Amount
3.68	43.00	6653	9.006601
3.66	58.00	717	

Reviewer: bowieh, 05-Oct-2019 09:16:58

Audit Action: Marked Compound Undetected

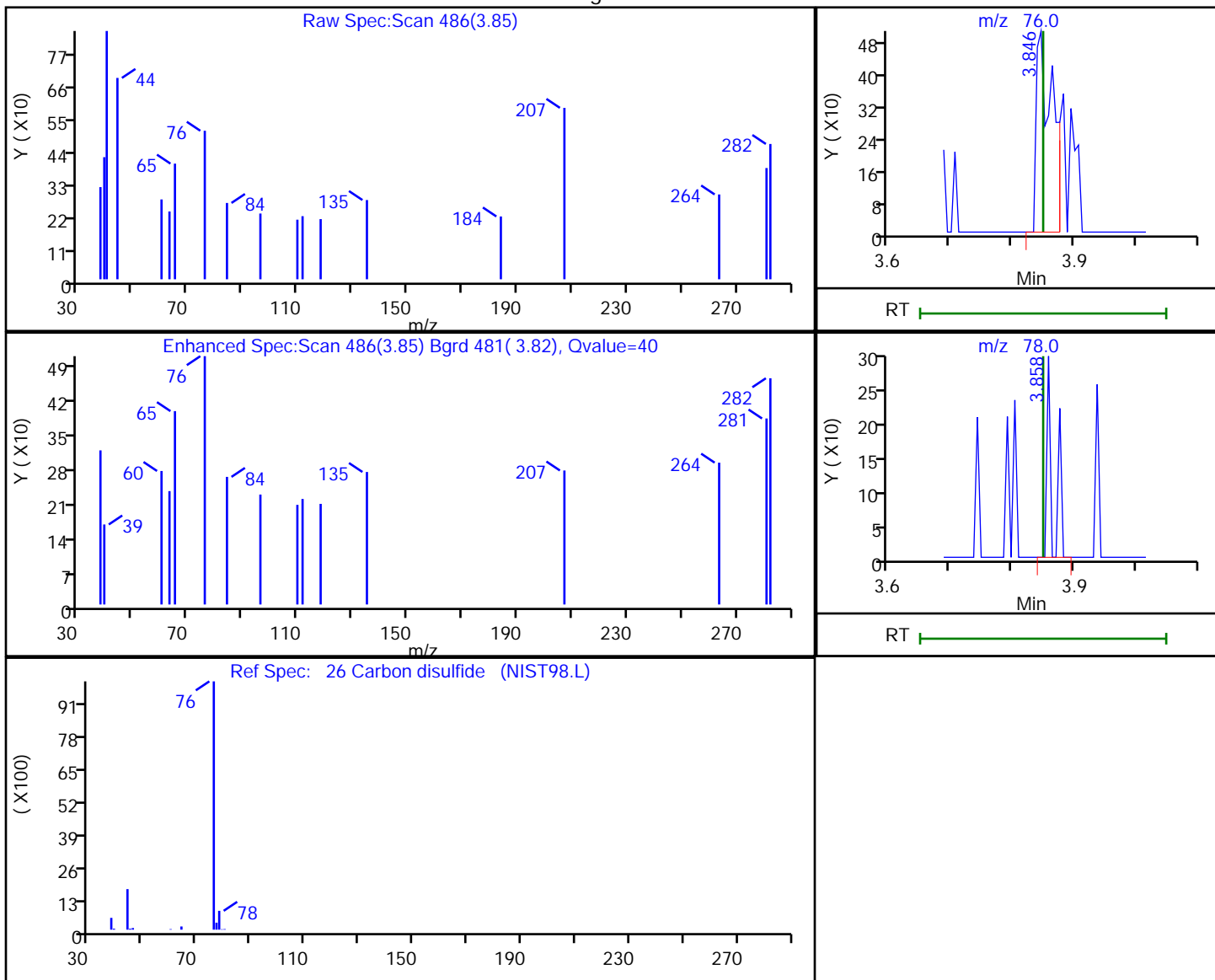
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100411.D
 Injection Date: 04-Oct-2019 16:26:30 Instrument ID: CHHP5
 Lims ID: 180-96180-A-17 Lab Sample ID: 180-96180-17
 Client ID: HD-QC1-0/1-4
 Operator ID: 433269 ALS Bottle#: 4 Worklist Smp#: 10
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

26 Carbon disulfide, CAS: 75-15-0

Processing Results



RT	Mass	Response	Amount
3.85	76.00	913	0.218808
3.86	78.00	186	

Reviewer: bowieh, 05-Oct-2019 09:17:03

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

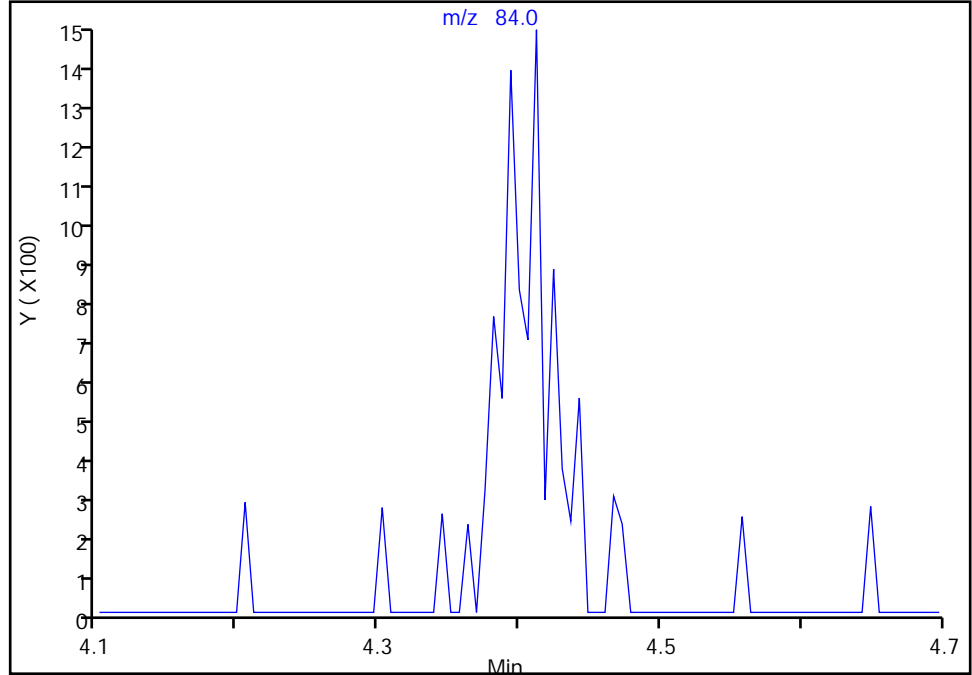
Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100411.D
Injection Date: 04-Oct-2019 16:26:30 Instrument ID: CHHP5
Lims ID: 180-96180-A-17 Lab Sample ID: 180-96180-17
Client ID: HD-QC1-0/1-4
Operator ID: 433269 ALS Bottle#: 4 Worklist Smp#: 10
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2

Signal: 1

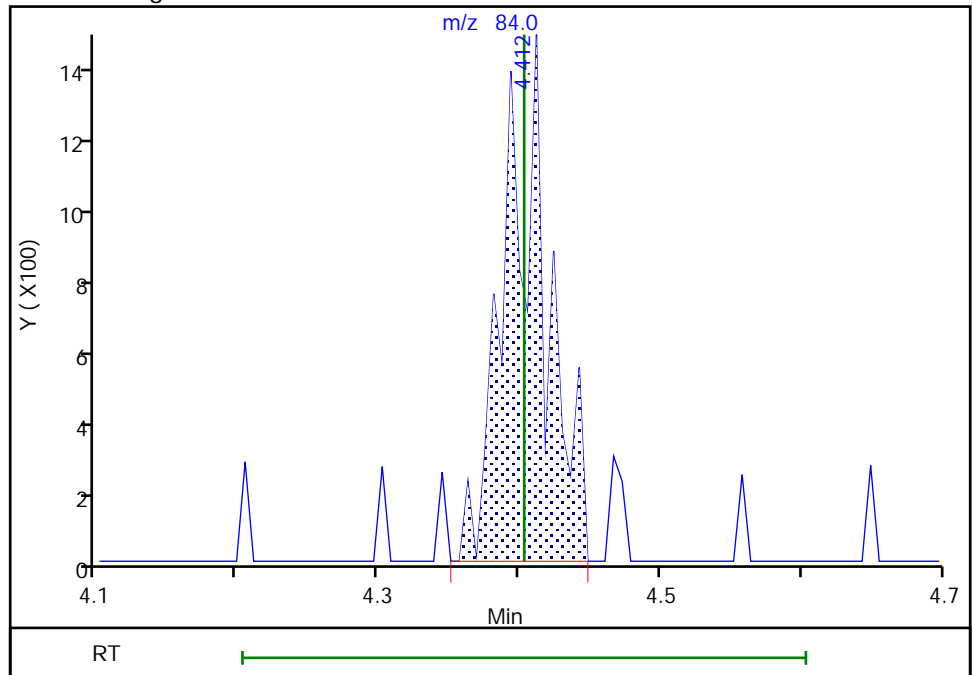
Not Detected
Expected RT: 4.40

Processing Integration Results



Manual Integration Results

RT: 4.41
Area: 2985
Amount: -5.074317
Amount Units: ng

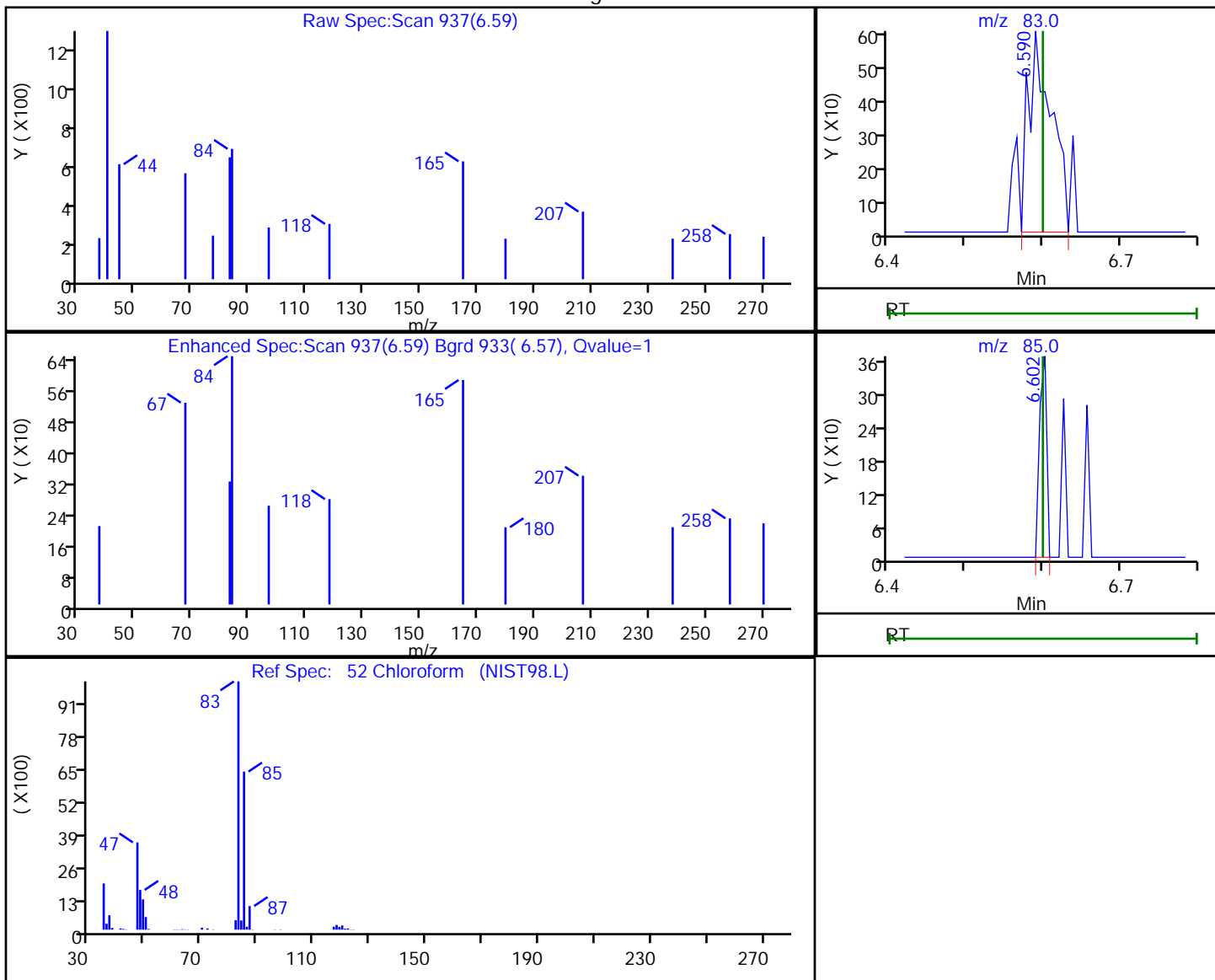


Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100411.D
Injection Date: 04-Oct-2019 16:26:30 Instrument ID: CHHP5
Lims ID: 180-96180-A-17 Lab Sample ID: 180-96180-17
Client ID: HD-QC1-0/1-4
Operator ID: 433269 ALS Bottle#: 4 Worklist Smp#: 10
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

52 Chloroform, CAS: 67-66-3

Processing Results



RT	Mass	Response	Amount
6.59	83.00	1259	-2.324769
6.60	85.00	236	

Reviewer: bowieh, 05-Oct-2019 09:17:15

Audit Action: Marked Compound Undetected

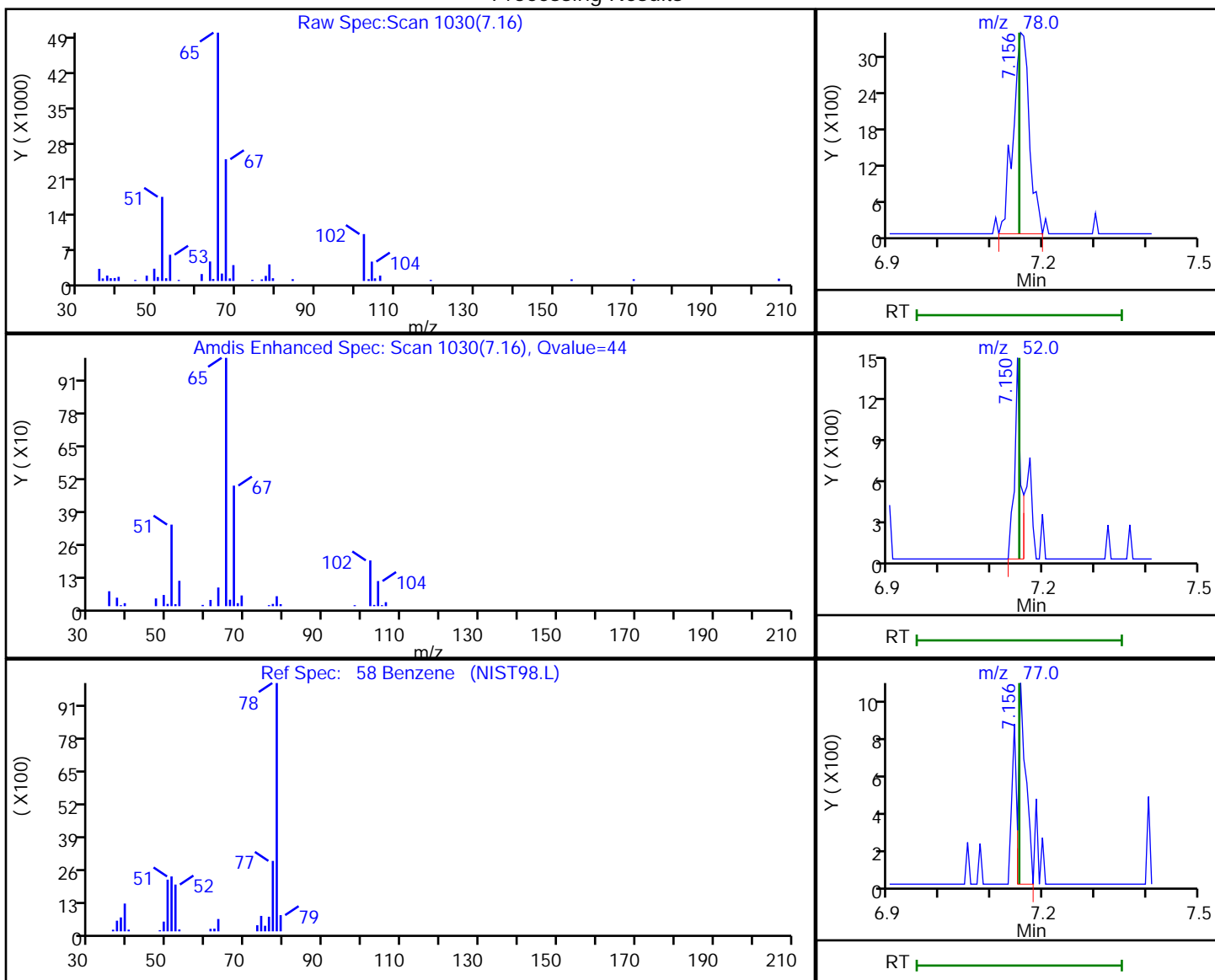
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100411.D
 Injection Date: 04-Oct-2019 16:26:30 Instrument ID: CHHP5
 Lims ID: 180-96180-A-17 Lab Sample ID: 180-96180-17
 Client ID: HD-QC1-0/1-4
 Operator ID: 433269 ALS Bottle#: 4 Worklist Smp#: 10
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

58 Benzene, CAS: 71-43-2

Processing Results



RT	Mass	Response	Amount
7.16	78.00	7325	1.021635
7.15	52.00	1232	
7.16	77.00	995	

Reviewer: bowieh, 05-Oct-2019 09:17:26

Audit Action: Marked Compound Undetected

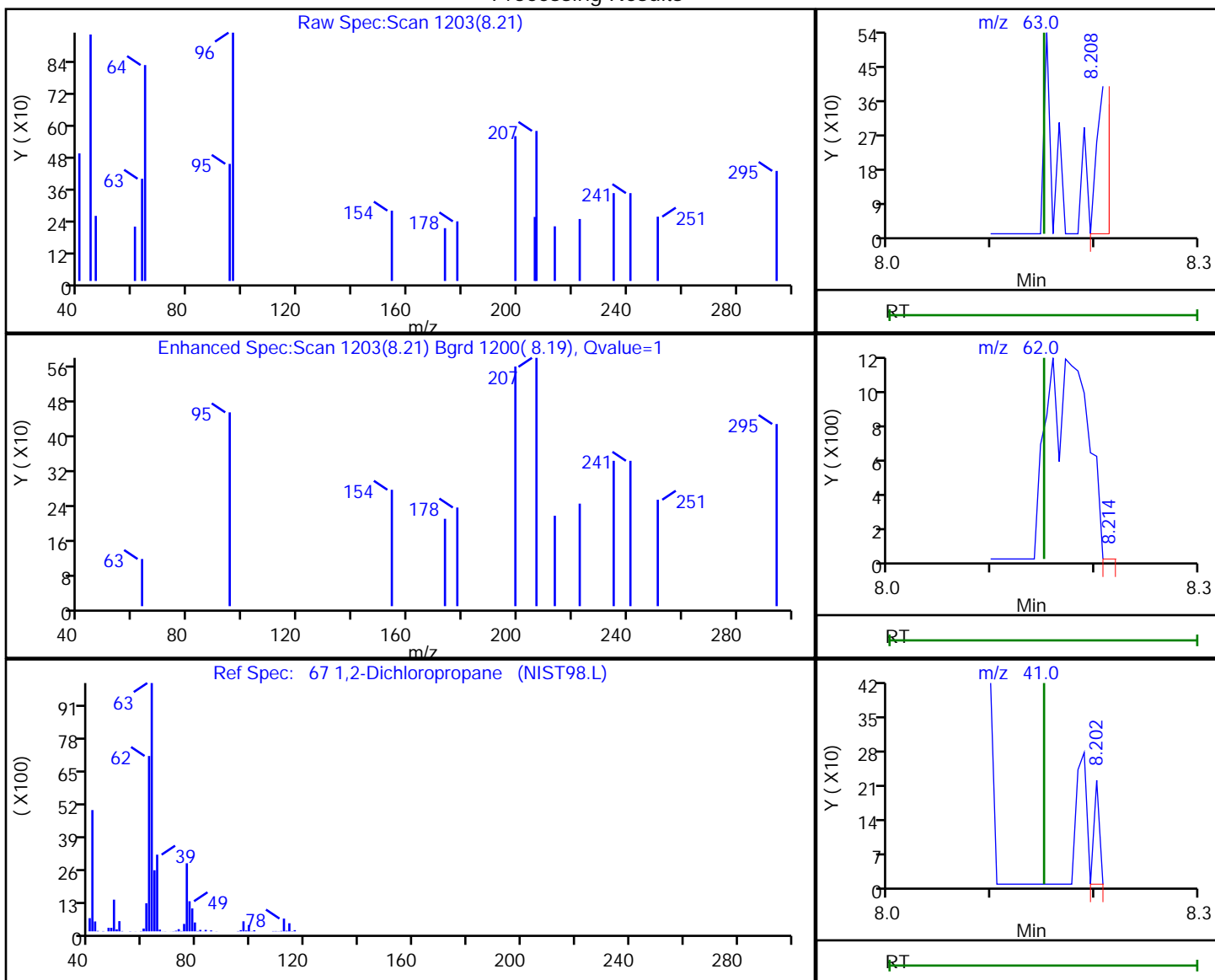
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100411.D
 Injection Date: 04-Oct-2019 16:26:30 Instrument ID: CHHP5
 Lims ID: 180-96180-A-17 Lab Sample ID: 180-96180-17
 Client ID: HD-QC1-0/1-4
 Operator ID: 433269 ALS Bottle#: 4 Worklist Smp#: 10
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

67 1,2-Dichloropropane, CAS: 78-87-5

Processing Results



RT	Mass	Response	Amount
8.21	63.00	231	0.130363
8.21	62.00	131	
8.20	41.00	79	

Reviewer: bowieh, 05-Oct-2019 09:17:28

Audit Action: Marked Compound Undetected

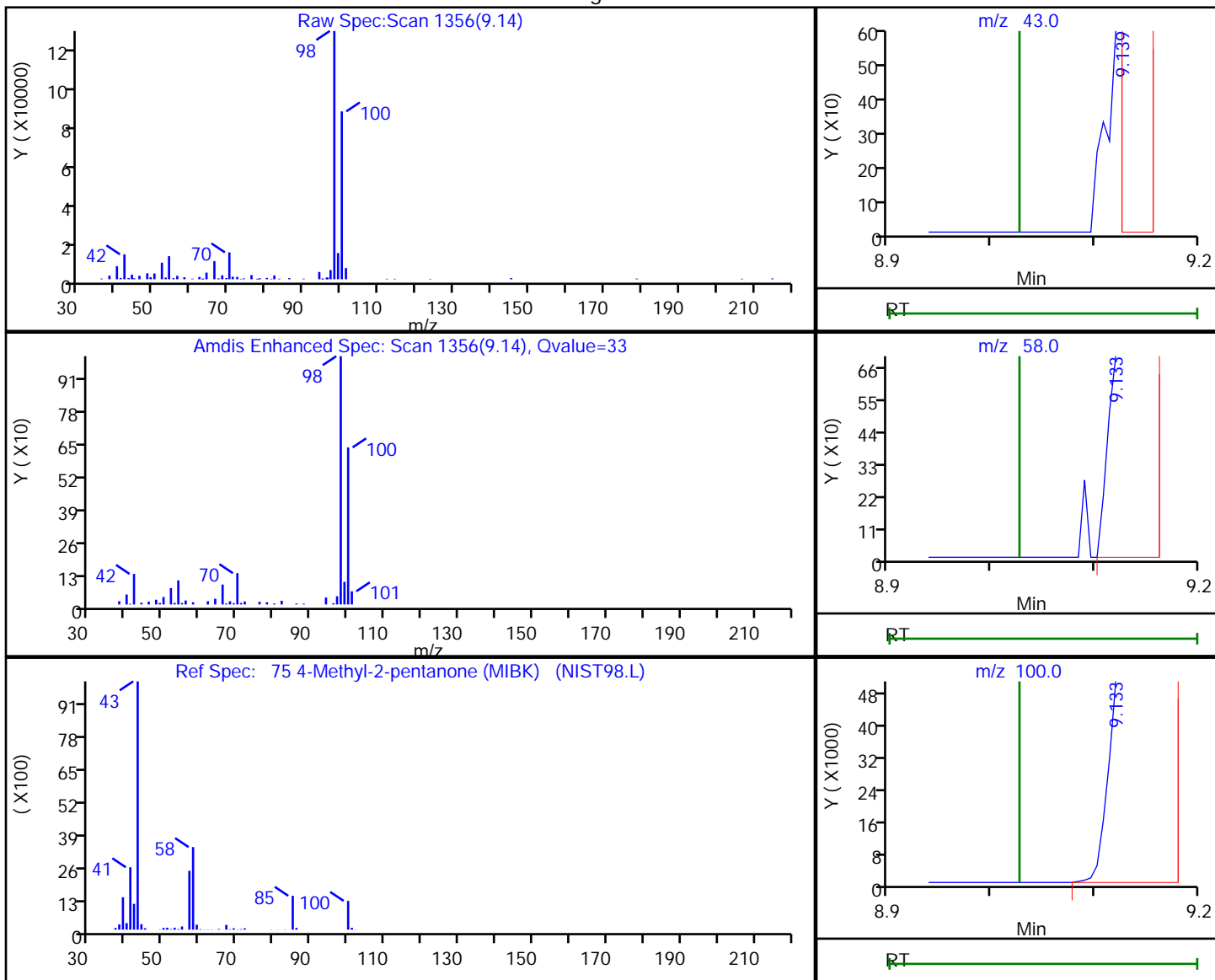
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100411.D
Injection Date: 04-Oct-2019 16:26:30 Instrument ID: CHHP5
Lims ID: 180-96180-A-17 Lab Sample ID: 180-96180-17
Client ID: HD-QC1-0/1-4
Operator ID: 433269 ALS Bottle#: 4 Worklist Smp#: 10
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

75 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1

Processing Results



RT	Mass	Response	Amount
9.14	43.00	702	0.370864
9.13	58.00	2344	
9.13	100.00	172002	

Reviewer: bowieh, 05-Oct-2019 09:17:29

Audit Action: Marked Compound Undetected

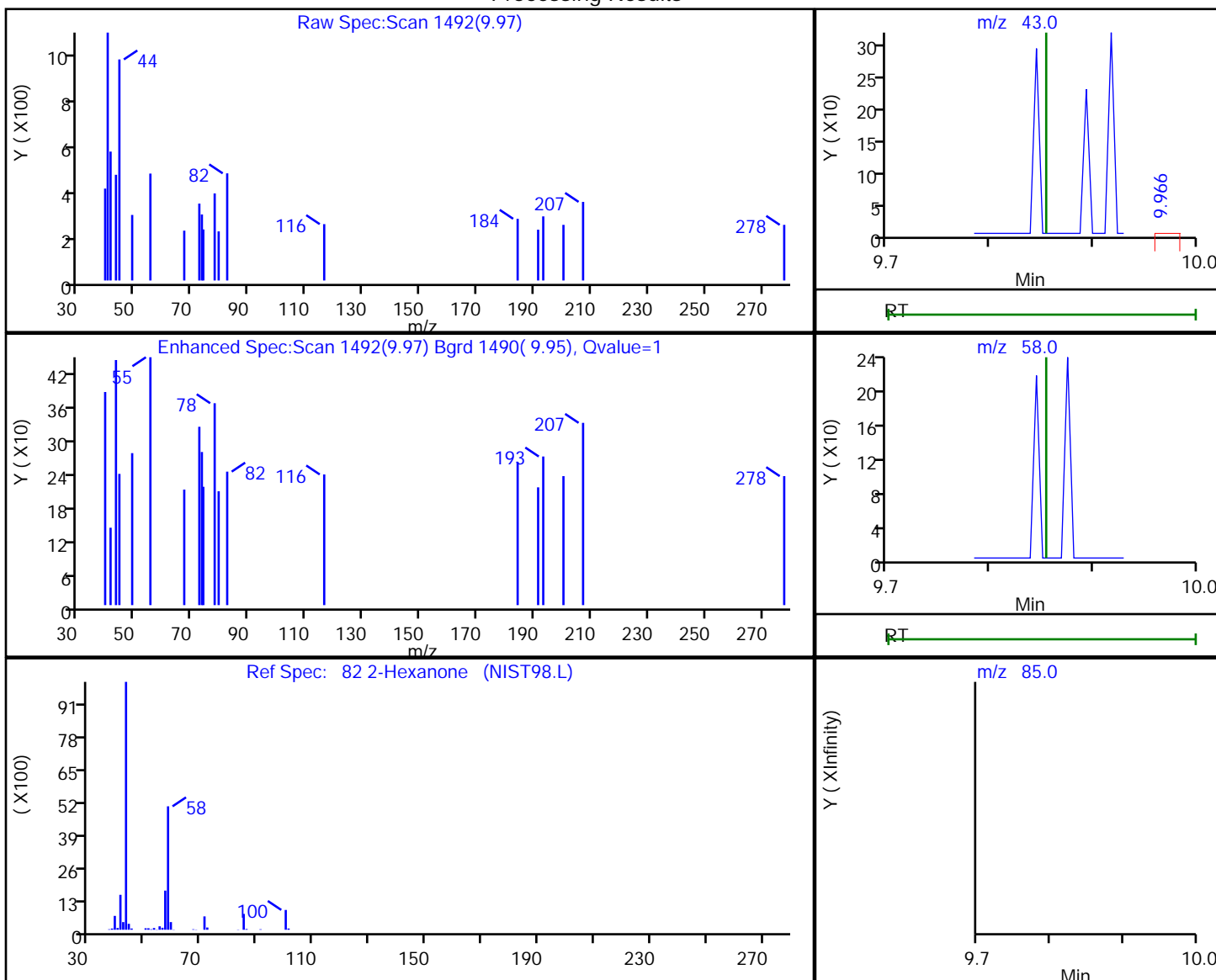
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100411.D
 Injection Date: 04-Oct-2019 16:26:30 Instrument ID: CHHP5
 Lims ID: 180-96180-A-17 Lab Sample ID: 180-96180-17
 Client ID: HD-QC1-0/1-4
 Operator ID: 433269 ALS Bottle#: 4 Worklist Smp#: 10
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

82 2-Hexanone, CAS: 591-78-6

Processing Results



RT	Mass	Response	Amount
9.97	43.00	330	0.241082
9.85	58.00	0	
9.85	85.00	0	

Reviewer: bowieh, 05-Oct-2019 09:17:33

Audit Action: Marked Compound Undetected

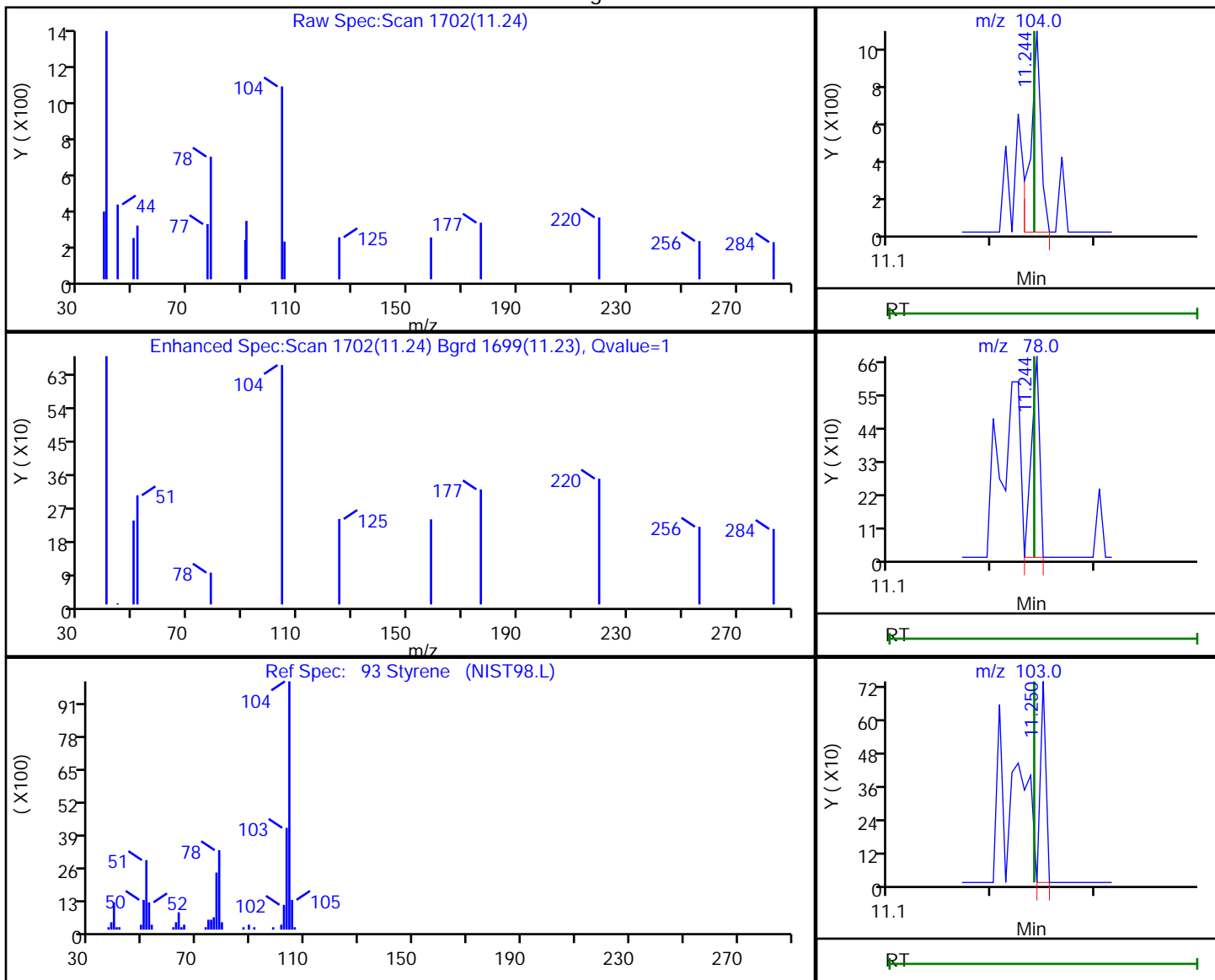
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100411.D
Injection Date: 04-Oct-2019 16:26:30 Instrument ID: CHHP5
Lims ID: 180-96180-A-17 Lab Sample ID: 180-96180-17
Client ID: HD-QC1-0/1-4
Operator ID: 433269 ALS Bottle#: 4 Worklist Smp#: 10
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

93 Styrene, CAS: 100-42-5

Processing Results



RT	Mass	Response	Amount
11.24	104.00	718	0.117679
11.24	78.00	366	
11.25	103.00	269	

Reviewer: bowieh, 05-Oct-2019 09:17:38

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

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

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1 Analy Batch No.: 292045

SDG No.: _____

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/20/2019 11:54 Calibration End Date: 09/20/2019 16:22 Calibration ID: 41569

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-292045/19	5092016.D
Level 2	IC 180-292045/5	5092005.D
Level 3	ICIS 180-292045/6	5092006.D
Level 4	IC 180-292045/7	5092007.D
Level 5	IC 180-292045/8	5092008.D
Level 6	IC 180-292045/9	5092009.D
Level 7	IC 180-292045/10	5092010.D
Level 8	IC 180-292045/11	5092011.D

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														
Dichlorodifluoromethane	0.5798 0.5022	0.6099 0.4826	0.5185 0.4712	0.4940	0.4931	Ave		0.5189			0.1000	9.5	20.0				
Chloromethane	0.5003 0.3981	0.4716 0.4171	0.4132 0.4174	0.3929	0.4137	Ave		0.4280			0.1000	8.8	20.0				
Vinyl chloride	0.4414 0.3899	0.4442 0.3838	0.3921 0.3766	0.3965	0.3889	Ave		0.4017			0.1000	6.5	20.0				
1,3-Butadiene	0.5105 0.4299	0.4993 0.4079	0.4240 0.4149	0.4438	0.4219	Ave		0.4440			0.0100	8.8	20.0				
Bromomethane	0.3537 0.2926	0.3253 0.3080	0.2929 0.2978	0.2799	0.3051	Ave		0.3069			0.0500	7.5	20.0				
Chloroethane	0.3312 0.2463	0.3027 0.2516	0.2636 0.2562	0.2601	0.2502	Ave		0.2702			0.0500	11.2	20.0				
Dichlorofluoromethane	0.7326 0.6462	0.7859 0.6387	0.6922 0.6483	0.6751	0.6549	Ave		0.6842			0.0100	7.5	20.0				
Trichlorofluoromethane	0.8659 0.6727	0.8645 0.6502	0.7374 0.6212	0.7140	0.6977	Ave		0.7279			0.1000	12.7	20.0				
Ethyl ether	0.3901 0.2712	0.3360 0.2894	0.3047 0.3080	0.2783	0.2874	Ave		0.3081			0.0100	12.6	20.0				
Acrolein	0.0591 0.0512	0.0517 0.0540	0.0497 0.0573	0.0485	0.0482	Ave		0.0525			0.0100	7.7	20.0				
1,1-Dichloroethene	0.3301 0.2384	0.3027 0.2451	0.2494 0.2482	0.2533	0.2449	Ave		0.2640			0.1000	12.7	20.0				
1,1,2-Trichloro-1,2,2-trifluoroethane	0.3167 0.2953	0.3486 0.2856	0.3082 0.2806	0.3186	0.2885	Ave		0.3053			0.1000	7.4	20.0				
Acetone	0.1552 0.1229	0.1365 0.1179	0.1221 0.1172	0.1233	0.1227	Ave		0.1272			0.0500	10.0	20.0				
Iodomethane	0.4797 0.4412	0.4899 0.4568	0.4585 0.4707	0.4364	0.4479	Ave		0.4601			0.0100	4.1	20.0				

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

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

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1 Analy Batch No.: 292045

SDG No.: _____

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/20/2019 11:54 Calibration End Date: 09/20/2019 16:22 Calibration ID: 41569

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														
Carbon disulfide	0.7437 0.7027	0.7688 0.7115	0.6719 0.7489	0.7154	0.6869	Ave		0.7187			0.1000	4.6	20.0				
Allyl chloride	0.1774 0.1531	0.1479 0.1538	0.1519 0.1663	0.1476	0.1477	Ave		0.1557			0.0100	6.9	20.0				
Methyl acetate	0.3005 0.2374	0.2527 0.2541	0.2437 0.2647	0.2493	0.2496	Ave		0.2565			0.1000	7.6	20.0				
Methylene Chloride	0.7324 0.3013	0.4530 0.3124	0.3875 0.3255	0.3332	0.3287	Lin2	2.1255	0.3175			0.1000			0.9920		0.9900	
tert-Butyl alcohol	1.1474 1.0720	1.1451 1.0930	1.0305 1.1729	0.9897	1.0387	Ave		1.0862			0.0100	6.0	20.0				
Acrylonitrile	0.1265 0.1090	0.1191 0.1173	0.1113 0.1210	0.1094	0.1136	Ave		0.1159			0.0100	5.3	20.0				
trans-1,2-Dichloroethene	0.3643 0.2743	0.3138 0.2708	0.2906 0.2869	0.2984	0.2806	Ave		0.2975			0.1000	10.2	20.0				
Methyl tert-butyl ether	0.9645 0.8754	0.8489 0.9052	0.8711 0.9597	0.8688	0.8927	Ave		0.8983			0.1000	4.8	20.0				
Hexane	0.5653 0.4572	0.4579 0.4597	0.4360 0.4568	0.4761	0.4451	Ave		0.4693			0.0100	8.6	20.0				
1,1-Dichloroethane	0.6031 0.5381	0.6291 0.5392	0.5784 0.5670	0.5420	0.5550	Ave		0.5690			0.2000	5.8	20.0				
Vinyl acetate	0.5603 0.5391	0.4611 0.5945	0.5096 0.6258	0.5076	0.5301	Ave		0.5410			0.0100	9.6	20.0				
2,2-Dichloropropane	0.0749 0.0690	0.0775 0.0694	0.0680 0.0736	0.0717	0.0631	Ave		0.0709			0.0100	6.4	20.0				
cis-1,2-Dichloroethene	0.3786 0.3110	0.3346 0.3216	0.3294 0.3347	0.3050	0.3134	Ave		0.3285			0.1000	7.0	20.0				
2-Butanone (MEK)	0.1688 0.1480	0.1295 0.1547	0.1468 0.1596	0.1471	0.1530	Ave		0.1509			0.0500	7.6	20.0				
Bromochloromethane	0.2181 0.1661	0.1886 0.1714	0.1753 0.1799	0.1585	0.1702	Ave		0.1785			0.0100	10.3	20.0				
Tetrahydrofuran	0.0866 0.0891	0.0726 0.0961	0.0882 0.0997	0.0835	0.0854	Ave		0.0877			0.0100	9.3	20.0				
Chloroform	0.9397 0.6076	0.7510 0.6127	0.6564 0.6333	0.6241	0.6230	Lin2	1.6565	0.6193			0.2000			0.9980		0.9900	
1,1,1-Trichloroethane	0.5684 0.5335	0.6159 0.5316	0.5379 0.5178	0.5544	0.5298	Ave		0.5487			0.1000	5.7	20.0				
Cyclohexane	0.5318 0.5415	0.5215 0.5534	0.4888 0.5368	0.5435	0.5290	Ave		0.5308			0.1000	3.7	20.0				
Carbon tetrachloride	0.5467 0.4523	0.5565 0.4545	0.4743 0.4465	0.4897	0.4605	Ave		0.4851			0.1000	8.9	20.0				

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

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

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1 Analy Batch No.: 292045

SDG No.: _____

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/20/2019 11:54 Calibration End Date: 09/20/2019 16:22 Calibration ID: 41569

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														
1,1-Dichloropropene	0.5078 0.4334	0.4812 0.4406	0.4318 0.4421	0.4432	0.4271	Ave		0.4509			0.0100	6.3	20.0				
Isobutyl alcohol	0.0100 0.0092	0.0081 0.0103	0.0096 0.0112	0.0094	0.0104	Ave		0.0098		*	0.0100	9.4	20.0				
Benzene	1.3631 1.1772	1.2945 1.1904	1.2346 1.2492	1.1800	1.1912	Ave		1.2350			0.5000	5.3	20.0				
1,2-Dichloroethane	0.6433 0.5594	0.6490 0.5729	0.6172 0.5968	0.5851	0.6066	Ave		0.6038			0.1000	5.3	20.0				
n-Heptane	0.4043 0.4063	0.3587 0.4146	0.3655 0.4058	0.3972	0.3964	Ave		0.3936			0.0100	5.2	20.0				
Trichloroethene	0.3921 0.3206	0.3447 0.3218	0.3290 0.3281	0.3139	0.3204	Ave		0.3338			0.2000	7.6	20.0				
Methylcyclohexane	0.4808 0.5385	0.5097 0.5476	0.4993 0.5419	0.5343	0.5293	Ave		0.5227			0.1000	4.5	20.0				
1,2-Dichloropropane	0.3915 0.2865	0.2984 0.2979	0.2807 0.3088	0.2829	0.2950	Ave		0.3052			0.1000	11.8	20.0				
1,4-Dioxane	0.0013 0.0020	0.0017 0.0020	0.0016 ++++	0.0016	0.0020	Lin2	-0.063	0.0019		*	0.0100			0.9920		0.9900	
Dibromomethane	0.2421 0.1934	0.2168 0.1974	0.2118 0.2054	0.1943	0.1960	Ave		0.2072			0.0100	8.0	20.0				
Bromodichloromethane	0.5271 0.4476	0.4499 0.4655	0.4395 0.4801	0.4358	0.4469	Ave		0.4615			0.2000	6.5	20.0				
cis-1,3-Dichloropropene	0.4360 0.4798	0.3766 0.4980	0.4211 0.5230	0.4325	0.4546	Ave		0.4527			0.2000	10.3	20.0				
4-Methyl-2-pentanone (MIBK)	1.0188 1.2159	0.9769 1.2699	1.0644 1.3026	1.1257	1.1502	Ave		1.1406			0.1000	10.3	20.0				
Toluene	5.5476 5.1227	5.0910 5.2369	4.9034 5.3913	5.2177	4.9441	Ave		5.1819			0.4000	4.2	20.0				
trans-1,3-Dichloropropene	1.6461 1.8727	1.5389 1.9809	1.7145 2.0514	1.7828	1.7875	Ave		1.7969			0.1000	9.4	20.0				
Ethyl methacrylate	1.0861 1.5005	1.0409 ++++	1.2347 ++++	1.3173	1.3478	Ave		1.2546			0.0100	13.7	20.0				
1,1,2-Trichloroethane	1.1552 1.0772	1.1247 1.1108	1.0961 1.1231	1.0409	1.0152	Ave		1.0929			0.1000	4.3	20.0				
Tetrachloroethene	1.5370 1.1741	1.2383 1.1406	1.1336 1.1436	1.2068	1.1078	Ave		1.2102			0.2000	11.5	20.0				
1,3-Dichloropropane	2.2813 1.9115	1.8729 2.0130	1.8941 2.0676	1.8838	1.9014	Ave		1.9782			0.0100	7.1	20.0				
2-Hexanone	0.6873 0.9411	0.7302 0.9251	0.7894 0.9326	0.7809	0.8117	Ave		0.8248			0.1000	11.8	20.0				

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

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

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1 Analy Batch No.: 292045

SDG No.: _____

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/20/2019 11:54 Calibration End Date: 09/20/2019 16:22 Calibration ID: 41569

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														
Dibromochloromethane	1.1032 1.2810	1.2164 1.3145	1.1937 1.3534	1.2143	1.2123	Ave		1.2361			0.1000	6.3	20.0				
1,2-Dibromoethane (EDB)	1.2010 1.0818	1.1502 1.1520	1.0654 1.1689	1.0708	1.0507	Ave		1.1176			0.1000	5.1	20.0				
Chlorobenzene	3.9306 3.3770	3.3817 3.5151	3.2444 3.6183	3.2659	3.3028	Ave		3.4545			0.5000	6.7	20.0				
1,1,1,2-Tetrachloroethane	1.3959 1.3109	1.3415 1.3264	1.3022 1.3548	1.2857	1.2745	Ave		1.3240			0.0100	3.0	20.0				
Ethylbenzene	1.7527 1.8159	1.6201 1.8961	1.6857 1.9274	1.8040	1.7197	Ave		1.7777			0.1000	5.9	20.0				
m-Xylene & p-Xylene	1.8855 2.3054	2.0787 2.3288	2.0742 2.4001	2.2722	2.1924	Ave		2.1922			0.1000	7.7	20.0				
o-Xylene	1.7897 2.2590	1.9568 2.3057	1.9195 2.3280	2.1093	2.0707	Ave		2.0923			0.3000	9.4	20.0				
Styrene	2.8357 3.8830	3.4363 4.0563	3.5555 4.1267	3.7666	3.7510	Ave		3.6764			0.3000	11.2	20.0				
Bromoform	0.7242 0.8145	0.8165 0.8604	0.7330 0.8577	0.7534	0.7810	Ave		0.7926			0.1000	6.7	20.0				
Isopropylbenzene	4.7242 6.2651	5.2699 6.4222	5.2421 6.3369	5.8302	5.8893	Ave		5.7475			0.1000	10.7	20.0				
1,1,2,2-Tetrachloroethane	1.2553 1.3149	1.3112 1.3750	1.2724 1.3695	1.2544	1.3070	Ave		1.3074			0.3000	3.6	20.0				
Bromobenzene	0.9013 0.8165	0.8149 0.8329	0.8214 0.9010	0.8348	0.7515	Ave		0.8343			0.0100	5.8	20.0				
trans-1,4-Dichloro-2-butene	0.3258 0.2989	0.2587 0.2792	0.2771 0.3146	0.2948	0.2673	Ave		0.2895			0.0100	8.0	20.0				
1,2,3-Trichloropropane	0.4118 0.2716	0.2718 0.2668	0.2779 0.2916	0.2773	0.2534	Lin2	0.7217	0.2634			0.0100			0.9970		0.9900	
N-Propylbenzene	0.7282 0.9007	0.8165 0.8814	0.8391 0.9319	0.9259	0.7814	Ave		0.8506			0.0100	8.5	20.0				
2-Chlorotoluene	0.6418 0.7494	0.6854 0.7558	0.7183 0.8046	0.7670	0.7004	Ave		0.7278			0.0100	7.1	20.0				
1,3,5-Trimethylbenzene	2.2658 2.8015	2.4192 2.7655	2.5027 2.9441	2.7672	2.4939	Ave		2.6200			0.0100	8.8	20.0				
4-Chlorotoluene	0.7110 0.7912	0.7615 0.7990	0.7940 0.8682	0.8254	0.7231	Ave		0.7842			0.0100	6.6	20.0				
tert-Butylbenzene	1.9064 2.3002	1.8763 2.2954	2.0204 2.3887	2.2491	2.0303	Ave		2.1333			0.0100	9.3	20.0				
1,2,4-Trimethylbenzene	1.9331 2.8017	2.4081 2.8670	2.5484 2.9679	2.8449	2.5653	Ave		2.6170			0.0100	12.8	20.0				

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

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

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1 Analy Batch No.: 292045

SDG No.: _____

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/20/2019 11:54 Calibration End Date: 09/20/2019 16:22 Calibration ID: 41569

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														
sec-Butylbenzene	2.6215 3.1319	2.7010 3.1472	2.7289 3.2411	3.1218	2.8181	Ave		2.9389			0.0100	8.3	20.0				
1,3-Dichlorobenzene	1.7390 1.5372	1.5082 1.5733	1.4479 1.6265	1.5457	1.4444	Ave		1.5528			0.6000	6.2	20.0				
4-Isopropyltoluene	2.0560 2.8186	2.3586 2.8860	2.3604 2.9362	2.7854	2.5940	Ave		2.5994			0.0100	12.1	20.0				
1,4-Dichlorobenzene	1.8481 1.5594	1.6150 1.5890	1.5204 1.6776	1.5986	1.4850	Ave		1.6116			0.5000	7.0	20.0				
n-Butylbenzene	1.7525 2.2821	1.7846 2.3359	1.7596 2.3054	2.1713	2.0298	Ave		2.0526			0.0100	12.5	20.0				
1,2-Dichlorobenzene	1.6144 1.4082	1.3617 1.4650	1.3112 1.4902	1.3905	1.3276	Ave		1.4211			0.4000	7.0	20.0				
1,2-Dibromo-3-Chloropropane	0.1333 0.1290	0.1234 0.1370	0.1133 0.1340	0.1278	0.1225	Ave		0.1275			0.0500	6.0	20.0				
1,2,4-Trichlorobenzene	0.4419 0.5015	0.3528 ++++	0.3455 ++++	0.4187	0.4702	Ave		0.4218			0.2000	14.9	20.0				
Hexachlorobutadiene	0.3818 0.2677	0.2626 ++++	0.2188 ++++	0.2447	0.2565	Lin2	0.7034	0.2381			0.0100			0.9920		0.9900	
Naphthalene	0.6669 1.2871	0.6431 1.5835	0.7518 ++++	0.9402	1.1124	Qua	1.2667	0.5178	0.0049844		0.0100			0.9930		0.9900	
1,2,3-Trichlorobenzene	0.4352 0.3985	0.2825 ++++	0.2801 ++++	0.3480	0.3781	Ave		0.3537			0.0100	17.8	20.0				
Dibromofluoromethane (Surr)	0.3239 0.2629	0.3088 0.2806	0.2989 0.2775	0.2860	0.2705	Ave		0.2886				7.1	20.0				
1,2-Dichloroethane-d4 (Surr)	0.5999 0.4400	0.5110 0.4508	0.5082 0.4504	0.4616	0.4677	Ave		0.4862				10.9	20.0				
Toluene-d8 (Surr)	4.0365 3.9379	3.8573 4.1192	4.0157 3.9874	4.0271	3.8626	Ave		3.9804				2.3	20.0				
4-Bromofluorobenzene (Surr)	1.5853 1.6512	1.6402 1.7391	1.5375 1.6678	1.6591	1.6113	Ave		1.6364				3.7	20.0				

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

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

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1 Analy Batch No.: 292045

SDG No.: _____

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/20/2019 11:54 Calibration End Date: 09/20/2019 16:22 Calibration ID: 41569

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-292045/19	5092016.D
Level 2	IC 180-292045/5	5092005.D
Level 3	ICIS 180-292045/6	5092006.D
Level 4	IC 180-292045/7	5092007.D
Level 5	IC 180-292045/8	5092008.D
Level 6	IC 180-292045/9	5092009.D
Level 7	IC 180-292045/10	5092010.D
Level 8	IC 180-292045/11	5092011.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7	LVL 8			LVL 6	LVL 7	LVL 8		
Dichlorodifluoromethane	FB	Ave	14359 529002	71395 577226	133953 725029	207084	276894	5.00 175	25.0 200	50.0 250	75.0	100
Chloromethane	FB	Ave	12390 419374	55201 498835	106748 642257	164705	232298	5.00 175	25.0 200	50.0 250	75.0	100
Vinyl chloride	FB	Ave	10932 410786	51995 459026	101318 579360	166202	218367	5.00 175	25.0 200	50.0 250	75.0	100
1,3-Butadiene	FB	Ave	12644 452916	58449 487821	109541 638414	186025	236928	5.00 175	25.0 200	50.0 250	75.0	100
Bromomethane	FB	Ave	8759 308218	38081 368426	75666 458144	117347	171312	5.00 175	25.0 200	50.0 250	75.0	100
Chloroethane	FB	Ave	8203 259419	35435 300892	68112 394251	109028	140474	5.00 175	25.0 200	50.0 250	75.0	100
Dichlorofluoromethane	FB	Ave	18143 680729	91989 763932	178848 997422	283010	367770	5.00 175	25.0 200	50.0 250	75.0	100
Trichlorofluoromethane	FB	Ave	21445 708600	101194 777669	190517 955823	299306	391781	5.00 175	25.0 200	50.0 250	75.0	100
Ethyl ether	FB	Ave	9660 285742	39331 346140	78729 473828	116676	161400	5.00 175	25.0 200	50.0 250	75.0	100
Acrolein	FB	Ave	29270 69308	30241 80773	38548 97017	47433	54113	100 225	125 250	150 275	175	200
1,1-Dichloroethene	FB	Ave	8174 251100	35438 293173	64426 381865	106180	137528	5.00 175	25.0 200	50.0 250	75.0	100
1,1,2-Trichloro-1,2,2-trifluoroethane	FB	Ave	7844 311086	40804 341620	79621 431773	133559	162014	5.00 175	25.0 200	50.0 250	75.0	100
Acetone	FB	Ave	19221 258854	31966 282006	63116 360628	103407	137810	25.0 350	50.0 400	100 500	150	200
Iodomethane	FB	Ave	11881 464749	57341 546340	118456 724229	182940	251537	5.00 175	25.0 200	50.0 250	75.0	100
Carbon disulfide	FB	Ave	18419 740288	89988 850946	173610 1152245	299903	385717	5.00 175	25.0 200	50.0 250	75.0	100

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

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1 Analy Batch No.: 292045

SDG No.: _____

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/20/2019 11:54 Calibration End Date: 09/20/2019 16:22 Calibration ID: 41569

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Allyl chloride	FB	Ave	4393 161291	17307 183924	39252 255891	61857	82927	5.00 175	25.0 200	50.0 250	75.0	100
Methyl acetate	FB	Ave	14885 500176	59164 607835	125939 814658	209039	280297	10.0 350	50.0 400	100 500	150	200
Methylene Chloride	FB	Lin2	18138 317379	53020 373621	100113 500755	139671	184568	5.00 175	25.0 200	50.0 250	75.0	100
tert-Butyl alcohol	TBAd 9	Ave	6485 258285	26638 319507	57967 429417	93130	141629	50.0 1750	250 2000	500 2500	750	1000
Acrylonitrile	FB	Ave	31326 1148771	139458 1403334	287692 1861262	458544	638165	50.0 1750	250 2000	500 2500	750	1000
trans-1,2-Dichloroethene	FB	Ave	9023 288990	36737 323920	75093 441377	125066	157546	5.00 175	25.0 200	50.0 250	75.0	100
Methyl tert-butyl ether	FB	Ave	23887 922181	99371 1082666	225071 1476639	364178	501296	5.00 175	25.0 200	50.0 250	75.0	100
Hexane	FB	Ave	14001 481651	53604 549863	112658 702850	199585	249922	5.00 175	25.0 200	50.0 250	75.0	100
1,1-Dichloroethane	FB	Ave	14937 566865	73639 644905	149430 872353	227201	311636	5.00 175	25.0 200	50.0 250	75.0	100
Vinyl acetate	FB	Ave	13876 567858	53979 711005	131675 962815	212787	297666	5.00 175	25.0 200	50.0 250	75.0	100
2,2-Dichloropropane	FB	Ave	1854 72653	9077 83036	17572 113212	30061	35413	5.00 175	25.0 200	50.0 250	75.0	100
cis-1,2-Dichloroethene	FB	Ave	9377 327656	39172 384672	85109 514934	127839	175990	5.00 175	25.0 200	50.0 250	75.0	100
2-Butanone (MEK)	FB	Ave	20900 311890	30314 369967	75863 491242	123311	171883	25.0 350	50.0 400	100 500	150	200
Bromochloromethane	FB	Ave	5401 175004	22073 205042	45303 276758	66445	95557	5.00 175	25.0 200	50.0 250	75.0	100
Tetrahydrofuran	FB	Ave	4288 187697	17005 229913	45552 306916	70031	95959	10.0 350	50.0 400	100 500	150	200
Chloroform	FB	Lin2	23272 640059	87908 732849	169603 974354	261623	349838	5.00 175	25.0 200	50.0 250	75.0	100
1,1,1-Trichloroethane	FB	Ave	14077 562039	72094 635773	138979 796707	232413	297529	5.00 175	25.0 200	50.0 250	75.0	100
Cyclohexane	FB	Ave	13170 570394	61044 661912	126287 825948	227809	297039	5.00 175	25.0 200	50.0 250	75.0	100
Carbon tetrachloride	FB	Ave	13540 476516	65143 543551	122551 686943	205286	258569	5.00 175	25.0 200	50.0 250	75.0	100
1,1-Dichloropropene	FB	Ave	12575 456536	56328 527006	111569 680215	185764	239855	5.00 175	25.0 200	50.0 250	75.0	100
Isobutyl alcohol	FB	Ave	6211 243585	23694 309417	62203 429129	98541	146415	125 4375	625 5000	1250 6250	1875	2500

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

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1 Analy Batch No.: 292045

SDG No.: _____

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/20/2019 11:54 Calibration End Date: 09/20/2019 16:22 Calibration ID: 41569

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Benzene	FB	Ave	33758 1240147	151522 1423810	318973 1922005	494620	668905	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dichloroethane	FB	Ave	15931 589336	75968 685199	159463 918160	245268	340619	5.00 175	25.0 200	50.0 250	75.0	100
n-Heptane	FB	Ave	10014 428062	41987 495849	94431 624364	166488	222573	5.00 175	25.0 200	50.0 250	75.0	100
Trichloroethene	FB	Ave	9711 337686	40351 384847	84998 504830	131595	179904	5.00 175	25.0 200	50.0 250	75.0	100
Methylcyclohexane	FB	Ave	11908 567288	59666 654998	128999 833778	223961	297240	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dichloropropane	FB	Ave	9697 301832	34929 356244	72527 475130	118586	165682	5.00 175	25.0 200	50.0 250	75.0	100
1,4-Dioxane	FB	Lin2	636 41416	4053 48677	8297 ++++	13823	22611	100 3500	500 4000	1000 ++++	1500	2000
Dibromomethane	FB	Ave	5995 203750	25373 236079	54718 316049	81468	110090	5.00 175	25.0 200	50.0 250	75.0	100
Bromodichloromethane	FB	Ave	13055 471473	52659 556749	113554 738702	182682	250959	5.00 175	25.0 200	50.0 250	75.0	100
cis-1,3-Dichloropropene	FB	Ave	10799 505399	44084 595666	108807 804695	181300	255269	5.00 175	25.0 200	50.0 250	75.0	100
4-Methyl-2-pentanone (MIBK)	CBNZ d5	Ave	30684 650323	57001 783898	142966 1035437	233889	339222	25.0 350	50.0 400	100 500	150	200
Toluene	CBNZ d5	Ave	33415 1369984	148523 1616305	329294 2142806	542056	729054	5.00 175	25.0 200	50.0 250	75.0	100
trans-1,3-Dichloropropene	CBNZ d5	Ave	9915 500832	44895 611391	115136 815355	185208	263587	5.00 175	25.0 200	50.0 250	75.0	100
Ethyl methacrylate	CBNZ d5	Ave	6542 401281	30367 ++++	82917 ++++	136852	198745	5.00 175	25.0 ++++	50.0 ++++	75.0	100
1,1,2-Trichloroethane	CBNZ d5	Ave	6958 288077	32811 342852	73608 446379	108133	149692	5.00 175	25.0 200	50.0 250	75.0	100
Tetrachloroethene	CBNZ d5	Ave	9258 313989	36127 352046	76125 454535	125374	163350	5.00 175	25.0 200	50.0 250	75.0	100
1,3-Dichloropropane	CBNZ d5	Ave	13741 511187	54639 621286	127198 821795	195707	280380	5.00 175	25.0 200	50.0 250	75.0	100
2-Hexanone	CBNZ d5	Ave	20700 503354	42605 571056	106027 741341	162254	239379	25.0 350	50.0 400	100 500	150	200
Dibromochloromethane	CBNZ d5	Ave	6645 342593	35487 405709	80164 537920	126155	178763	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dibromoethane (EDB)	CBNZ d5	Ave	7234 289299	33556 355544	71545 464585	111248	154936	5.00 175	25.0 200	50.0 250	75.0	100
Chlorobenzene	CBNZ d5	Ave	23675 903110	98657 1084902	217879 1438100	339290	487020	5.00 175	25.0 200	50.0 250	75.0	100

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

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1 Analy Batch No.: 292045

SDG No.: _____

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/20/2019 11:54 Calibration End Date: 09/20/2019 16:22 Calibration ID: 41569

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
1,1,1,2-Tetrachloroethane	CBNZ d5	Ave	8408 350585	39135 409377	87449 538460	133567	187934	5.00 175	25.0 200	50.0 250	75.0	100
Ethylbenzene	CBNZ d5	Ave	10557 485637	47263 585227	113204 766056	187413	253584	5.00 175	25.0 200	50.0 250	75.0	100
m-Xylene & p-Xylene	CBNZ d5	Ave	11357 616529	60644 718769	139296 953944	236051	323284	5.00 175	25.0 200	50.0 250	75.0	100
o-Xylene	CBNZ d5	Ave	10780 604136	57086 711624	128904 925271	219133	305347	5.00 175	25.0 200	50.0 250	75.0	100
Styrene	CBNZ d5	Ave	17080 1038449	100249 1251938	238774 1640160	391311	553110	5.00 175	25.0 200	50.0 250	75.0	100
Bromoform	CBNZ d5	Ave	4362 217834	23820 265561	49228 340913	78268	115160	5.00 175	25.0 200	50.0 250	75.0	100
Isopropylbenzene	CBNZ d5	Ave	28455 1675497	153740 1982146	352038 2518639	605691	868419	5.00 175	25.0 200	50.0 250	75.0	100
1,1,2,2-Tetrachloroethane	CBNZ d5	Ave	7561 351644	38252 424366	85451 544317	130314	192721	5.00 175	25.0 200	50.0 250	75.0	100
Bromobenzene	DCBd 4	Ave	9162 421309	47681 516731	100673 650386	158630	225023	5.00 175	25.0 200	50.0 250	75.0	100
trans-1,4-Dichloro-2-butene	DCBd 4	Ave	3312 154245	15136 173206	33964 227080	56011	80030	5.00 175	25.0 200	50.0 250	75.0	100
1,2,3-Trichloropropane	DCBd 4	Lin2	4186 140129	15902 165541	34063 210489	52702	75870	5.00 175	25.0 200	50.0 250	75.0	100
N-Propylbenzene	DCBd 4	Ave	7403 464727	47769 546810	102839 672639	175939	233986	5.00 175	25.0 200	50.0 250	75.0	100
2-Chlorotoluene	DCBd 4	Ave	6524 386645	40104 468929	88039 580737	145758	209713	5.00 175	25.0 200	50.0 250	75.0	100
1,3,5-Trimethylbenzene	DCBd 4	Ave	23033 1445448	141540 1715723	306721 2125099	525838	746783	5.00 175	25.0 200	50.0 250	75.0	100
4-Chlorotoluene	DCBd 4	Ave	7228 408208	44556 495728	97305 626647	156855	216537	5.00 175	25.0 200	50.0 250	75.0	100
tert-Butylbenzene	DCBd 4	Ave	19380 1186803	109778 1424102	247617 1724184	427400	607935	5.00 175	25.0 200	50.0 250	75.0	100
1,2,4-Trimethylbenzene	DCBd 4	Ave	19651 1445558	140894 1778727	312321 2142309	540614	768143	5.00 175	25.0 200	50.0 250	75.0	100
sec-Butylbenzene	DCBd 4	Ave	26649 1615920	158029 1952579	334453 2339448	593231	843854	5.00 175	25.0 200	50.0 250	75.0	100
1,3-Dichlorobenzene	DCBd 4	Ave	17678 793126	88241 976110	177456 1174054	293721	432511	5.00 175	25.0 200	50.0 250	75.0	100
4-Isopropyltoluene	DCBd 4	Ave	20901 1454315	137999 1790526	289284 2119386	529297	776754	5.00 175	25.0 200	50.0 250	75.0	100
1,4-Dichlorobenzene	DCBd 4	Ave	18787 804615	94488 985841	186335 1210940	303779	444655	5.00 175	25.0 200	50.0 250	75.0	100

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

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1 Analy Batch No.: 292045

SDG No.: _____

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/20/2019 11:54 Calibration End Date: 09/20/2019 16:22 Calibration ID: 41569

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
n-Butylbenzene	DCBd 4	Ave	17815 1177456	104413 1449204	215658 1664070	412600	607810	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dichlorobenzene	DCBd 4	Ave	16411 726592	79671 908873	160696 1075621	264228	397531	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dibromo-3-Chloropropane	DCBd 4	Ave	1355 66547	7219 84967	13886 96744	24295	36670	5.00 175	25.0 200	50.0 250	75.0	100
1,2,4-Trichlorobenzene	DCBd 4	Ave	4492 258760	20641 +++++	42340 +++++	79571	140805	5.00 175	25.0 +++++	50.0 +++++	75.0	100
Hexachlorobutadiene	DCBd 4	Lin2	3881 138134	15364 +++++	26814 +++++	46509	76808	5.00 175	25.0 +++++	50.0 +++++	75.0	100
Naphthalene	DCBd 4	Qua	6780 664115	37628 982407	92140 +++++	178657	333082	5.00 175	25.0 200	50.0 +++++	75.0	100
1,2,3-Trichlorobenzene	DCBd 4	Ave	4424 205615	16526 +++++	34325 +++++	66125	113230	5.00 175	25.0 +++++	50.0 +++++	75.0	100
Dibromofluoromethane (Surr)	FB	Ave	8022 276904	36141 335550	77218 426948	119880	151883	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dichloroethane-d4 (Surr)	FB	Ave	14857 463554	59809 539219	131296 692960	193516	262643	5.00 175	25.0 200	50.0 250	75.0	100
Toluene-d8 (Surr)	CBNZ d5	Ave	24313 1053116	112531 1271348	269675 1584798	418368	569574	5.00 175	25.0 200	50.0 250	75.0	100
4-Bromofluorobenzene (Surr)	CBNZ d5	Ave	9549 441591	47849 536767	103254 662864	172366	237598	5.00 175	25.0 200	50.0 250	75.0	100

Curve Type Legend:

Ave = Average ISTD
Lin2 = Linear 1/conc^2 ISTD
Qua = Quadratic ISTD

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

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1 Analy Batch No.: 292045

SDG No.: _____

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/20/2019 11:54 Calibration End Date: 09/20/2019 16:22 Calibration ID: 41569

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-292045/19	5092016.D
Level 2	IC 180-292045/5	5092005.D
Level 3	ICIS 180-292045/6	5092006.D
Level 4	IC 180-292045/7	5092007.D
Level 5	IC 180-292045/8	5092008.D
Level 6	IC 180-292045/9	5092009.D
Level 7	IC 180-292045/10	5092010.D
Level 8	IC 180-292045/11	5092011.D

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 7	LVL 8				
Dichlorodifluoromethane	11.7 -7.0	17.5 -9.2	-0.1	-4.8	-5.0	-3.2	50 30	30	30	30	30	30
Chloromethane	16.9 -2.6	10.2 -2.5	-3.5	-8.2	-3.4	-7.0	50 30	30	30	30	30	30
Vinyl chloride	9.9 -4.5	10.6 -6.3	-2.4	-1.3	-3.2	-2.9	50 30	30	30	30	30	30
1,3-Butadiene	15.0 -8.1	12.5 -6.6	-4.5	-0.1	-5.0	-3.2	50 30	30	30	30	30	30
Bromomethane	15.2 0.4	6.0 -3.0	-4.6	-8.8	-0.6	-4.7	50 30	30	30	30	30	30
Chloroethane	22.6 -6.9	12.0 -5.2	-2.4	-3.8	-7.4	-8.9	50 30	30	30	30	30	30
Dichlorofluoromethane	7.1 -6.7	14.9 -5.3	1.2	-1.3	-4.3	-5.6	50 30	30	30	30	30	30
Trichlorofluoromethane	19.0 -10.7	18.8 -14.7	1.3	-1.9	-4.2	-7.6	50 30	30	30	30	30	30
Ethyl ether	26.6 -6.1	9.0 -0.1	-1.1	-9.7	-6.7	-12.0	50 30	30	30	30	30	30
Acrolein	12.6 3.0	-1.5 9.3	-5.2	-7.6	-8.2	-2.5	50 30	30	30	30	30	30
1,1-Dichloroethene	25.0 -7.2	14.7 -6.0	-5.5	-4.1	-7.2	-9.7	50 30	30	30	30	30	30
1,1,2-Trichloro-1,2,2-trifluoroethane	3.8 -6.4	14.2 -8.1	0.9	4.4	-5.5	-3.3	50 30	30	30	30	30	30
Acetone	22.0 -7.3	7.3 -7.9	-4.0	-3.1	-3.6	-3.4	50 30	30	30	30	30	30
Iodomethane	4.3 -0.7	6.5 2.3	-0.4	-5.2	-2.7	-4.1	50 30	30	30	30	30	30
Carbon disulfide	3.5 -1.0	7.0 4.2	-6.5	-0.5	-4.4	-2.2	50 30	30	30	30	30	30

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

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1 Analy Batch No.: 292045

SDG No.: _____

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/20/2019 11:54 Calibration End Date: 09/20/2019 16:22 Calibration ID: 41569

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 7	LVL 8				
Allyl chloride	13.9	-5.0	-2.4	-5.2	-5.2	-1.7	50	30	30	30	30	30
	-1.2	6.8					30	30				
Methyl acetate	17.2	-1.5	-5.0	-2.8	-2.7	-7.5	50	30	30	30	30	30
	-0.9	3.2					30	30				
Methylene Chloride	-3.2	15.9	8.6	-4.0	-3.2	-8.9	50	30	30	30	30	30
	-5.0	-0.2					30	30				
tert-Butyl alcohol	5.6	5.4	-5.1	-8.9	-4.4	-1.3	50	30	30	30	30	30
	0.6	8.0					30	30				
Acrylonitrile	9.1	2.8	-3.9	-5.6	-2.0	-5.9	50	30	30	30	30	30
	1.2	4.4					30	30				
trans-1,2-Dichloroethene	22.5	5.5	-2.3	0.3	-5.7	-7.8	50	30	30	30	30	30
	-9.0	-3.6					30	30				
Methyl tert-butyl ether	7.4	-5.5	-3.0	-3.3	-0.6	-2.5	50	30	30	30	30	30
	0.8	6.8					30	30				
Hexane	20.5	-2.4	-7.1	1.5	-5.2	-2.6	50	30	30	30	30	30
	-2.0	-2.7					30	30				
1,1-Dichloroethane	6.0	10.6	1.6	-4.7	-2.5	-5.4	50	30	30	30	30	30
	-5.2	-0.4					30	30				
Vinyl acetate	3.6	-14.8	-5.8	-6.2	-2.0	-0.4	50	30	30	30	30	30
	9.9	15.7					30	30				
2,2-Dichloropropane	5.6	9.4	-4.1	1.2	-11.0	-2.7	50	30	30	30	30	30
	-2.1	3.8					30	30				
cis-1,2-Dichloroethene	15.2	1.9	0.3	-7.2	-4.6	-5.3	50	30	30	30	30	30
	-2.1	1.9					30	30				
2-Butanone (MEK)	11.8	-14.2	-2.7	-2.6	1.4	-1.9	50	30	30	30	30	30
	2.5	5.8					30	30				
Bromochloromethane	22.2	5.6	-1.8	-11.2	-4.7	-6.9	50	30	30	30	30	30
	-4.0	0.8					30	30				
Tetrahydrofuran	-1.2	-17.1	0.6	-4.7	-2.5	1.6	50	30	30	30	30	30
	9.6	13.8					30	30				
Chloroform	-1.8	10.6	0.7	-2.8	-2.1	-3.4	50	30	30	30	30	30
	-2.4	1.2					30	30				
1,1,1-Trichloroethane	3.6	12.3	-2.0	1.1	-3.4	-2.8	50	30	30	30	30	30
	-3.1	-5.6					30	30				
Cyclohexane	0.2	-1.7	-7.9	2.4	-0.3	2.0	50	30	30	30	30	30
	4.3	1.1					30	30				
Carbon tetrachloride	12.7	14.7	-2.2	0.9	-5.1	-6.8	50	30	30	30	30	30
	-6.3	-8.0					30	30				
1,1-Dichloropropene	12.6	6.7	-4.2	-1.7	-5.3	-3.9	50	30	30	30	30	30
	-2.3	-2.0					30	30				
Isobutyl alcohol	2.4	-17.3	-1.7	-4.0	6.5	-5.6	50	30	30	30	30	30
	5.7	13.9					30	30				

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

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1 Analy Batch No.: 292045

SDG No.: _____

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/20/2019 11:54 Calibration End Date: 09/20/2019 16:22 Calibration ID: 41569

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 7	LVL 8				
Benzene	10.4 -3.6	4.8 1.1	0.0	-4.5	-3.6	-4.7	50 30	30 30	30	30	30	30
1,2-Dichloroethane	6.5 -5.1	7.5 -1.2	2.2	-3.1	0.5	-7.3	50 30	30 30	30	30	30	30
n-Heptane	2.7 5.3	-8.9 3.1	-7.1	0.9	0.7	3.2	50 30	30 30	30	30	30	30
Trichloroethene	17.5 -3.6	3.3 -1.7	-1.4	-6.0	-4.0	-4.0	50 30	30 30	30	30	30	30
Methylcyclohexane	-8.0 4.8	-2.5 3.7	-4.5	2.2	1.3	3.0	50 30	30 30	30	30	30	30
1,2-Dichloropropane	28.3 -2.4	-2.2 1.2	-8.0	-7.3	-3.3	-6.1	50 30	30 30	30	30	30	30
1,4-Dioxane	1.4 8.7	-1.6 ++++	-11.6	-10.4	8.4	5.1	50 30	30	30	30	30	30
Dibromomethane	16.9 -4.7	4.6 -0.8	2.2	-6.2	-5.4	-6.6	50 30	30 30	30	30	30	30
Bromodichloromethane	14.2 0.9	-2.5 4.0	-4.8	-5.6	-3.2	-3.0	50 30	30 30	30	30	30	30
cis-1,3-Dichloropropene	-3.7 10.0	-16.8 15.5	-7.0	-4.5	0.4	6.0	50 30	30 30	30	30	30	30
4-Methyl-2-pentanone (MIBK)	-10.7 11.3	-14.3 14.2	-6.7	-1.3	0.8	6.6	50 30	30 30	30	30	30	30
Toluene	7.1 1.1	-1.8 4.0	-5.4	0.7	-4.6	-1.1	50 30	30 30	30	30	30	30
trans-1,3-Dichloropropene	-8.4 10.2	-14.4 14.2	-4.6	-0.8	-0.5	4.2	50 30	30 30	30	30	30	30
Ethyl methacrylate	-13.4 ++++	-17.0 ++++	-1.6	5.0	7.4	19.6	50	30	30	30	30	30
1,1,2-Trichloroethane	5.7 1.6	2.9 2.8	0.3	-4.8	-7.1	-1.4	50 30	30 30	30	30	30	30
Tetrachloroethene	27.0 -5.8	2.3 -5.5	-6.3	-0.3	-8.5	-3.0	50 30	30 30	30	30	30	30
1,3-Dichloropropane	15.3 1.8	-5.3 4.5	-4.3	-4.8	-3.9	-3.4	50 30	30 30	30	30	30	30
2-Hexanone	-16.7 12.2	-11.5 13.1	-4.3	-5.3	-1.6	14.1	50 30	30 30	30	30	30	30
Dibromochloromethane	-10.8 6.3	-1.6 9.5	-3.4	-1.8	-1.9	3.6	50 30	30 30	30	30	30	30
1,2-Dibromoethane (EDB)	7.5 3.1	2.9 4.6	-4.7	-4.2	-6.0	-3.2	50 30	30 30	30	30	30	30
Chlorobenzene	13.8 1.8	-2.1 4.7	-6.1	-5.5	-4.4	-2.2	50 30	30 30	30	30	30	30

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

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1 Analy Batch No.: 292045

SDG No.: _____

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/20/2019 11:54 Calibration End Date: 09/20/2019 16:22 Calibration ID: 41569

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 7	LVL 8				
1,1,1,2-Tetrachloroethane	5.4	1.3	-1.6	-2.9	-3.7	-1.0	50	30	30	30	30	30
	0.2	2.3					30	30				
Ethylbenzene	-1.4	-8.9	-5.2	1.5	-3.3	2.2	50	30	30	30	30	30
	6.7	8.4					30	30				
m-Xylene & p-Xylene	-14.0	-5.2	-5.4	3.6	0.0	5.2	50	30	30	30	30	30
	6.2	9.5					30	30				
o-Xylene	-14.5	-6.5	-8.3	0.8	-1.0	8.0	50	30	30	30	30	30
	10.2	11.3					30	30				
Styrene	-22.9	-6.5	-3.3	2.5	2.0	5.6	50	30	30	30	30	30
	10.3	12.2					30	30				
Bromoform	-8.6	3.0	-7.5	-4.9	-1.5	2.8	50	30	30	30	30	30
	8.6	8.2					30	30				
Isopropylbenzene	-17.8	-8.3	-8.8	1.4	2.5	9.0	50	30	30	30	30	30
	11.7	10.3					30	30				
1,1,2,2-Tetrachloroethane	-4.0	0.3	-2.7	-4.1	0.0	0.6	50	30	30	30	30	30
	5.2	4.7					30	30				
Bromobenzene	8.0	-2.3	-1.5	0.1	-9.9	-2.1	50	30	30	30	30	30
	-0.2	8.0					30	30				
trans-1,4-Dichloro-2-butene	12.5	-10.7	-4.3	1.8	-7.7	3.2	50	30	30	30	30	30
	-3.6	8.7					30	30				
1,2,3-Trichloropropane	1.5	-7.8	0.0	1.6	-6.5	1.5	50	30	30	30	30	30
	-0.1	9.6					30	30				
N-Propylbenzene	-14.4	-4.0	-1.4	8.8	-8.1	5.9	50	30	30	30	30	30
	3.6	9.6					30	30				
2-Chlorotoluene	-11.8	-5.8	-1.3	5.4	-3.8	3.0	50	30	30	30	30	30
	3.8	10.5					30	30				
1,3,5-Trimethylbenzene	-13.5	-7.7	-4.5	5.6	-4.8	6.9	50	30	30	30	30	30
	5.6	12.4					30	30				
4-Chlorotoluene	-9.3	-2.9	1.2	5.3	-7.8	0.9	50	30	30	30	30	30
	1.9	10.7					30	30				
tert-Butylbenzene	-10.6	-12.0	-5.3	5.4	-4.8	7.8	50	30	30	30	30	30
	7.6	12.0					30	30				
1,2,4-Trimethylbenzene	-26.1	-8.0	-2.6	8.7	-2.0	7.1	50	30	30	30	30	30
	9.6	13.4					30	30				
sec-Butylbenzene	-10.8	-8.1	-7.1	6.2	-4.1	6.6	50	30	30	30	30	30
	7.1	10.3					30	30				
1,3-Dichlorobenzene	12.0	-2.9	-6.8	-0.5	-7.0	-1.0	50	30	30	30	30	30
	1.3	4.7					30	30				
4-Isopropyltoluene	-20.9	-9.3	-9.2	7.2	-0.2	8.4	50	30	30	30	30	30
	11.0	13.0					30	30				
1,4-Dichlorobenzene	14.7	0.2	-5.7	-0.8	-7.9	-3.2	50	30	30	30	30	30
	-1.4	4.1					30	30				

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

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1 Analy Batch No.: 292045

SDG No.: _____

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/20/2019 11:54 Calibration End Date: 09/20/2019 16:22 Calibration ID: 41569

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 7	LVL 8				
n-Butylbenzene	-14.6 13.8	-13.1 12.3	-14.3	5.8	-1.1	11.2	50 30	30 30	30	30	30	30
1,2-Dichlorobenzene	13.6 3.1	-4.2 4.9	-7.7	-2.2	-6.6	-0.9	50 30	30 30	30	30	30	30
1,2-Dibromo-3-Chloropropane	4.5 7.4	-3.3 5.1	-11.2	0.2	-4.0	1.1	50 30	30 30	30	30	30	30
1,2,4-Trichlorobenzene	4.8 ++++	-16.4 ++++	-18.1	-0.7	11.5	18.9	50	30	30	30	30	30
Hexachlorobutadiene	1.2 ++++	-1.5 ++++	-14.0	-1.2	4.8	10.7	50	30	30	30	30	30
Naphthalene	-23.0 2.5	-6.6 ++++	-4.0	2.5	5.4	-5.0	50 30	30	30	30	30	30
1,2,3-Trichlorobenzene	23.0 ++++	-20.1 ++++	-20.8	-1.6	6.9	12.7	50	30	30	30	30	30
Dibromofluoromethane (Surr)	12.2 -2.8	7.0 -3.9	3.6	-0.9	-6.3	-8.9	50 30	30 30	30	30	30	30
1,2-Dichloroethane-d4 (Surr)	23.4 -7.3	5.1 -7.4	4.5	-5.1	-3.8	-9.5	50 30	30 30	30	30	30	30
Toluene-d8 (Surr)	1.4 3.5	-3.1 0.2	0.9	1.2	-3.0	-1.1	50 30	30 30	30	30	30	30
4-Bromofluorobenzene (Surr)	-3.1 6.3	0.2 1.9	-6.0	1.4	-1.5	0.9	50 30	30 30	30	30	30	30

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092005.D
 Lims ID: IC VSTD5
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 20-Sep-2019 11:54:30 ALS Bottle#: 5 Worklist Smp#: 5
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028737-005
 Misc. Info.: IC VSTD5
 Operator ID: 433269 Instrument ID: CHHP5
 Sublist: chrom-MSVOA_LL_CHHP5*sub146
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 21-Sep-2019 09:16:43 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0334

First Level Reviewer: bowieh

Date: 20-Sep-2019 12:48:35

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.546	4.538	0.008	0	93049	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.496	7.501	-0.005	97	234108	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.581	10.579	0.002	90	58347	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.917	12.915	0.002	95	117016	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.779	6.783	-0.004	67	36141	25.0	26.7	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.137	7.148	-0.011	0	59809	25.0	26.3	
\$ 7 Toluene-d8 (Surr)	98	9.133	9.138	-0.005	93	112531	25.0	24.2	
\$ 8 4-Bromofluorobenzene (Surr	95	11.761	11.759	0.002	90	47849	25.0	25.1	
11 Dichlorodifluoromethane	85	1.693	1.691	0.002	99	71395	25.0	29.4	
12 Chloromethane	50	1.924	1.910	0.014	98	55201	25.0	27.5	
13 Vinyl chloride	62	2.046	2.044	0.002	79	51995	25.0	27.6	
14 Butadiene	39	2.052	2.050	0.002	97	58449	25.0	28.1	
15 Bromomethane	94	2.386	2.385	0.001	91	38081	25.0	26.5	
16 Chloroethane	64	2.557	2.531	0.026	97	35435	25.0	28.0	
17 Dichlorofluoromethane	67	2.836	2.835	0.001	98	91989	25.0	28.7	
18 Trichlorofluoromethane	101	2.861	2.859	0.002	97	101194	25.0	29.7	
20 Ethyl ether	59	3.250	3.249	0.001	88	39331	25.0	27.3	
21 Acrolein	56	3.451	3.456	-0.005	96	30241	125.0	123.1	
22 1,1-Dichloroethene	96	3.573	3.565	0.008	95	35438	25.0	28.7	
23 1,1,2-Trichloro-1,2,2-trif	101	3.639	3.632	0.007	90	40804	25.0	28.5	
24 Acetone	43	3.688	3.687	0.001	82	31966	50.0	53.7	
25 Iodomethane	142	3.785	3.778	0.007	95	57341	25.0	26.6	
26 Carbon disulfide	76	3.871	3.869	0.002	99	89988	25.0	26.7	
28 3-Chloro-1-propene	76	4.193	4.186	0.007	83	17307	25.0	23.7	
30 Methyl acetate	43	4.211	4.210	0.001	98	59164	50.0	49.3	
31 Methylene Chloride	84	4.400	4.398	0.002	96	53020	25.0	29.0	
32 2-Methyl-2-propanol	59	4.661	4.666	-0.005	93	26638	250.0	263.6	
33 Acrylonitrile	53	4.783	4.794	-0.011	98	139458	250.0	256.9	
34 trans-1,2-Dichloroethene	96	4.820	4.812	0.008	94	36737	25.0	26.4	
35 Methyl tert-butyl ether	73	4.832	4.824	0.008	97	99371	25.0	23.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	5.227	5.226	0.001	85	53604	25.0	24.4	
37 1,1-Dichloroethane	63	5.440	5.439	0.001	98	73639	25.0	27.6	
38 Vinyl acetate	43	5.489	5.487	0.002	98	53979	25.0	21.3	
44 2,2-Dichloropropane	97	6.176	6.169	0.007	72	9077	25.0	27.3	
45 cis-1,2-Dichloroethene	96	6.182	6.175	0.007	88	39172	25.0	25.5	
46 2-Butanone (MEK)	43	6.182	6.193	-0.011	46	30314	50.0	42.9	
49 Chlorobromomethane	128	6.462	6.455	0.007	97	22073	25.0	26.4	
51 Tetrahydrofuran	42	6.474	6.473	0.001	78	17005	50.0	41.4	
52 Chloroform	83	6.602	6.601	0.001	95	87908	25.0	27.6	
53 1,1,1-Trichloroethane	97	6.754	6.759	-0.005	98	72094	25.0	28.1	
54 Cyclohexane	56	6.821	6.826	-0.005	89	61044	25.0	24.6	
56 Carbon tetrachloride	117	6.931	6.929	0.002	96	65143	25.0	28.7	
55 1,1-Dichloropropene	75	6.949	6.941	0.008	92	56328	25.0	26.7	
57 Isobutyl alcohol	41	7.144	7.142	0.002	52	23694	625.0	516.7	
58 Benzene	78	7.156	7.160	-0.004	97	151522	25.0	26.2	
59 1,2-Dichloroethane	62	7.229	7.227	0.002	98	75968	25.0	26.9	
62 n-Heptane	43	7.509	7.507	0.002	84	41987	25.0	22.8	
64 Trichloroethene	130	7.880	7.884	-0.004	92	40351	25.0	25.8	
66 Methylcyclohexane	83	8.111	8.109	0.002	93	59666	25.0	24.4	
67 1,2-Dichloropropane	63	8.153	8.152	0.001	88	34929	25.0	24.4	
70 1,4-Dioxane	88	8.226	8.231	-0.005	30	4053	500.0	492.1	
68 Dibromomethane	93	8.239	8.243	-0.004	93	25373	25.0	26.2	
71 Dichlorobromomethane	83	8.433	8.432	0.001	98	52659	25.0	24.4	
74 cis-1,3-Dichloropropene	75	8.871	8.876	-0.005	88	44084	25.0	20.8	
75 4-Methyl-2-pentanone (MIBK)	43	9.029	9.028	0.001	94	57001	50.0	42.8	
76 Toluene	91	9.200	9.204	-0.004	98	148523	25.0	24.6	
77 trans-1,3-Dichloropropene	75	9.443	9.448	-0.005	98	44895	25.0	21.4	
78 Ethyl methacrylate	69	9.504	9.503	0.002	91	30367	25.0	20.7	
79 1,1,2-Trichloroethane	97	9.644	9.636	0.008	96	32811	25.0	25.7	
80 Tetrachloroethene	164	9.711	9.709	0.002	93	36127	25.0	25.6	
81 1,3-Dichloropropane	76	9.796	9.795	0.001	98	54639	25.0	23.7	
82 2-Hexanone	43	9.857	9.855	0.002	97	42605	50.0	44.3	
84 Chlorodibromomethane	129	10.009	10.007	0.002	92	35487	25.0	24.6	
85 Ethylene Dibromide	107	10.124	10.123	0.001	96	33556	25.0	25.7	
87 Chlorobenzene	112	10.611	10.610	0.001	92	98657	25.0	24.5	
89 1,1,1,2-Tetrachloroethane	131	10.696	10.701	-0.005	85	39135	25.0	25.3	
90 Ethylbenzene	106	10.708	10.707	0.001	99	47263	25.0	22.8	
91 m-Xylene & p-Xylene	106	10.836	10.835	0.001	0	60644	25.0	23.7	
92 o-Xylene	106	11.219	11.218	0.001	97	57086	25.0	23.4	
93 Styrene	104	11.244	11.242	0.002	93	100249	25.0	23.4	
94 Bromoform	173	11.420	11.425	-0.005	95	23820	25.0	25.8	
97 Isopropylbenzene	105	11.584	11.583	0.001	97	153740	25.0	22.9	
99 1,1,2,2-Tetrachloroethane	83	11.901	11.899	0.002	78	38252	25.0	25.1	
100 Bromobenzene	156	11.901	11.905	-0.004	92	47681	25.0	24.4	
102 trans-1,4-Dichloro-2-buten	53	11.937	11.942	-0.005	64	15136	25.0	22.3	
101 1,2,3-Trichloropropane	110	11.956	11.954	0.002	86	15902	25.0	23.1	
103 N-Propylbenzene	120	12.004	11.997	0.007	99	47769	25.0	24.0	
104 2-Chlorotoluene	126	12.095	12.094	0.001	94	40104	25.0	23.5	
106 1,3,5-Trimethylbenzene	105	12.187	12.179	0.008	93	141540	25.0	23.1	
107 4-Chlorotoluene	126	12.217	12.216	0.001	99	44556	25.0	24.3	
108 tert-Butylbenzene	119	12.497	12.496	0.001	94	109778	25.0	22.0	
110 1,2,4-Trimethylbenzene	105	12.558	12.556	0.002	98	140894	25.0	23.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
112 sec-Butylbenzene	105	12.722	12.721	0.001	96	158029	25.0	23.0	
113 1,3-Dichlorobenzene	146	12.844	12.842	0.002	96	88241	25.0	24.3	
114 4-Isopropyltoluene	119	12.874	12.873	0.001	97	137999	25.0	22.7	
115 1,4-Dichlorobenzene	146	12.941	12.946	-0.005	94	94488	25.0	25.1	
120 n-Butylbenzene	91	13.282	13.280	0.002	96	104413	25.0	21.7	
121 1,2-Dichlorobenzene	146	13.306	13.305	0.001	95	79671	25.0	24.0	
122 1,2-Dibromo-3-Chloropropan	75	14.097	14.089	0.008	72	7219	25.0	24.2	
126 1,2,4-Trichlorobenzene	180	14.906	14.911	-0.005	92	20641	25.0	20.9	
127 Hexachlorobutadiene	225	15.058	15.051	0.007	95	15364	25.0	24.6	
128 Naphthalene	128	15.180	15.184	-0.004	97	37628	25.0	23.4	
129 1,2,3-Trichlorobenzene	180	15.417	15.416	0.001	93	16526	25.0	20.0	
S 133 Xylenes, Total	106				0		50.0	47.1	
S 134 1,2-Dichloroethene, Total	96				0		50.0	51.8	
S 154 Total BTEX	106				0		125.0	120.6	
S 135 1,3-Dichloropropene, Total	1				0		50.0	42.2	

Reagents:

VOA8260SURR_00099	Amount Added: 1.00	Units: uL	
voaWKetmix1st_00018	Amount Added: 1.00	Units: uL	
VOA8260VOAPRI_00373	Amount Added: 1.00	Units: uL	
VOAACRPRI_00021	Amount Added: 5.00	Units: uL	
VOAVAPRI_00027	Amount Added: 1.00	Units: uL	
VOA8260INT_00099	Amount Added: 2.00	Units: uL	Run Reagent

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092005.D

Injection Date: 20-Sep-2019 11:54:30

Instrument ID: CHHP5

Operator ID: 433269

Lims ID: IC VSTD5

Worklist Smp#: 5

Client ID:

Purge Vol: 5.000 mL

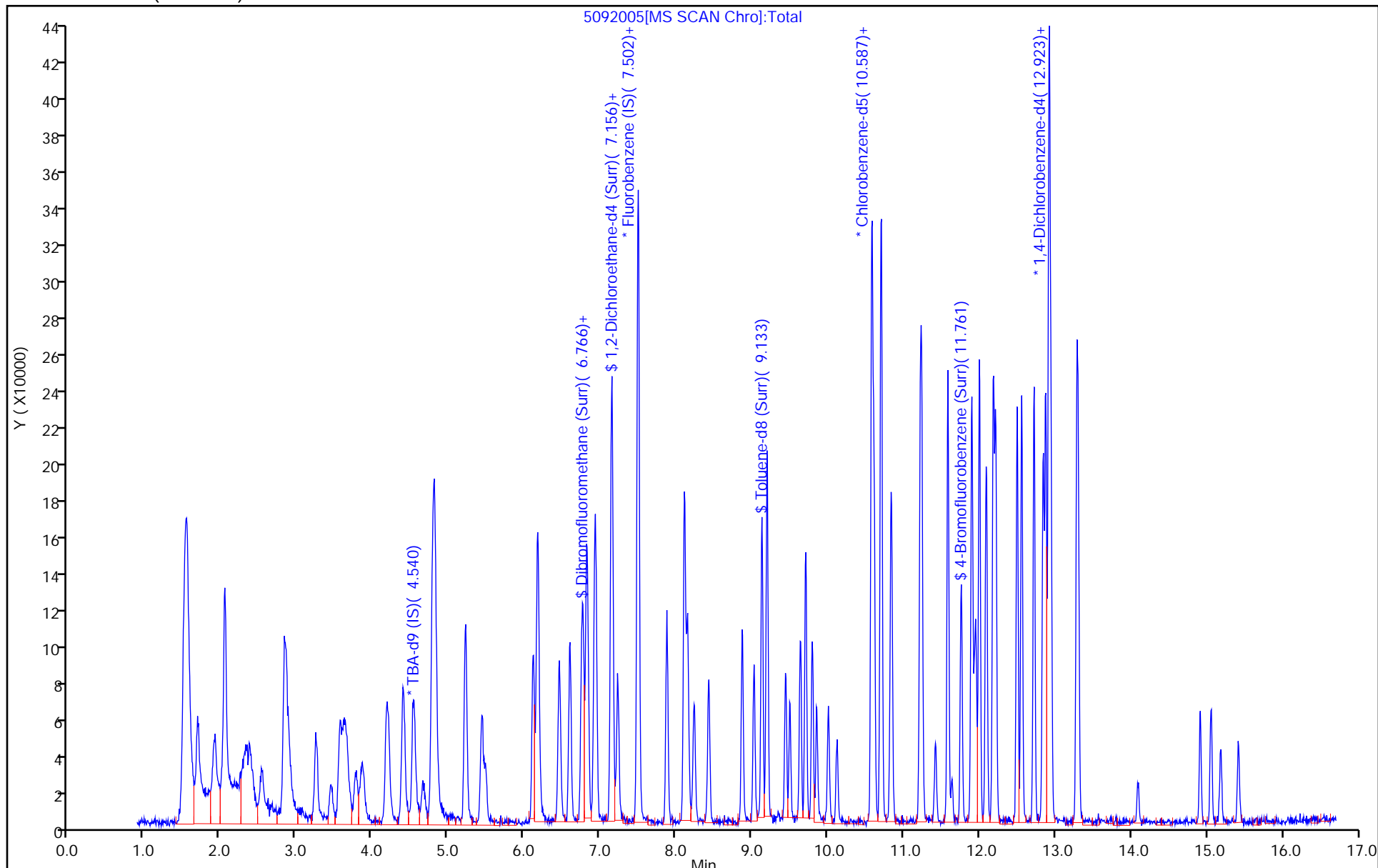
Dil. Factor: 1.0000

ALS Bottle#: 5

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092006.D
 Lims ID: ICIS VSTD10
 Client ID:
 Sample Type: ICIS Calib Level: 3
 Inject. Date: 20-Sep-2019 12:18:30 ALS Bottle#: 6 Worklist Smp#: 6
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028737-006
 Misc. Info.: ICIS VSTD10
 Operator ID: 433269 Instrument ID: CHHP5
 Sublist: chrom-MSVOA_LL_CHHP5*sub146
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 21-Sep-2019 09:16:52 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0334

First Level Reviewer: bowieh

Date: 20-Sep-2019 12:47:54

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.539	4.539	0.000	0	112500	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.496	7.496	0.000	96	258368	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.580	10.580	0.000	90	67156	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.916	12.916	0.000	93	122558	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.784	6.784	0.000	94	77218	50.0	51.8	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.143	7.143	0.000	0	131296	50.0	52.3	
\$ 7 Toluene-d8 (Surr)	98	9.132	9.132	0.000	95	269675	50.0	50.4	
\$ 8 4-Bromofluorobenzene (Surr	95	11.766	11.766	0.000	88	103254	50.0	47.0	
11 Dichlorodifluoromethane	85	1.692	1.692	0.000	99	133953	50.0	50.0	
12 Chloromethane	50	1.911	1.911	0.000	99	106748	50.0	48.3	
13 Vinyl chloride	62	2.039	2.039	0.000	93	101318	50.0	48.8	
14 Butadiene	39	2.045	2.045	0.000	97	109541	50.0	47.7	
15 Bromomethane	94	2.404	2.404	0.000	92	75666	50.0	47.7	
16 Chloroethane	64	2.538	2.538	0.000	97	68112	50.0	48.8	
17 Dichlorofluoromethane	67	2.842	2.842	0.000	96	178848	50.0	50.6	
18 Trichlorofluoromethane	101	2.860	2.860	0.000	95	190517	50.0	50.6	
20 Ethyl ether	59	3.250	3.250	0.000	92	78729	50.0	49.4	
21 Acrolein	56	3.456	3.456	0.000	98	38548	150.0	142.2	
22 1,1-Dichloroethene	96	3.560	3.560	0.000	92	64426	50.0	47.2	
23 1,1,2-Trichloro-1,2,2-trif	101	3.639	3.639	0.000	90	79621	50.0	50.5	
24 Acetone	43	3.688	3.688	0.000	99	63116	100.0	96.0	
25 Iodomethane	142	3.773	3.773	0.000	99	118456	50.0	49.8	
26 Carbon disulfide	76	3.864	3.864	0.000	99	173610	50.0	46.7	
28 3-Chloro-1-propene	76	4.186	4.186	0.000	83	39252	50.0	48.8	
30 Methyl acetate	43	4.205	4.205	0.000	97	125939	100.0	95.0	
31 Methylene Chloride	84	4.399	4.399	0.000	90	100113	50.0	54.3	
32 2-Methyl-2-propanol	59	4.655	4.655	0.000	93	57967	500.0	474.4	
33 Acrylonitrile	53	4.789	4.789	0.000	96	287692	500.0	480.3	
34 trans-1,2-Dichloroethene	96	4.807	4.807	0.000	93	75093	50.0	48.9	
35 Methyl tert-butyl ether	73	4.825	4.825	0.000	98	225071	50.0	48.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	5.221	5.221	0.000	91	112658	50.0	46.5	
37 1,1-Dichloroethane	63	5.440	5.440	0.000	98	149430	50.0	50.8	
38 Vinyl acetate	43	5.488	5.488	0.000	97	131675	50.0	47.1	
44 2,2-Dichloropropane	97	6.170	6.170	0.000	62	17572	50.0	48.0	
45 cis-1,2-Dichloroethene	96	6.176	6.176	0.000	85	85109	50.0	50.1	
46 2-Butanone (MEK)	43	6.194	6.194	0.000	85	75863	100.0	97.3	
49 Chlorobromomethane	128	6.462	6.462	0.000	94	45303	50.0	49.1	
51 Tetrahydrofuran	42	6.468	6.468	0.000	85	45552	100.0	100.6	
52 Chloroform	83	6.602	6.602	0.000	97	169603	50.0	50.3	
53 1,1,1-Trichloroethane	97	6.760	6.760	0.000	98	138979	50.0	49.0	
54 Cyclohexane	56	6.821	6.821	0.000	90	126287	50.0	46.0	
56 Carbon tetrachloride	117	6.924	6.924	0.000	98	122551	50.0	48.9	
55 1,1-Dichloropropene	75	6.942	6.942	0.000	89	111569	50.0	47.9	
57 Isobutyl alcohol	41	7.143	7.143	0.000	66	62203	1250.0	1229.2	
58 Benzene	78	7.155	7.155	0.000	98	318973	50.0	50.0	
59 1,2-Dichloroethane	62	7.234	7.234	0.000	99	159463	50.0	51.1	
62 n-Heptane	43	7.508	7.508	0.000	86	94431	50.0	46.4	
64 Trichloroethene	130	7.879	7.879	0.000	95	84998	50.0	49.3	
66 Methylcyclohexane	83	8.110	8.110	0.000	93	128999	50.0	47.8	
67 1,2-Dichloropropane	63	8.147	8.147	0.000	81	72527	50.0	46.0	
70 1,4-Dioxane	88	8.232	8.232	0.000	32	8297	1000.0	884.3	
68 Dibromomethane	93	8.238	8.238	0.000	91	54718	50.0	51.1	
71 Dichlorobromomethane	83	8.433	8.433	0.000	98	113554	50.0	47.6	
74 cis-1,3-Dichloropropene	75	8.871	8.871	0.000	88	108807	50.0	46.5	
75 4-Methyl-2-pentanone (MIBK)	43	9.029	9.029	0.000	96	142966	100.0	93.3	
76 Toluene	91	9.205	9.205	0.000	97	329294	50.0	47.3	
77 trans-1,3-Dichloropropene	75	9.443	9.443	0.000	99	115136	50.0	47.7	
78 Ethyl methacrylate	69	9.503	9.503	0.000	90	82917	50.0	49.2	
79 1,1,2-Trichloroethane	97	9.637	9.637	0.000	97	73608	50.0	50.1	
80 Tetrachloroethene	164	9.710	9.710	0.000	96	76125	50.0	46.8	
81 1,3-Dichloropropane	76	9.801	9.801	0.000	96	127198	50.0	47.9	
82 2-Hexanone	43	9.856	9.856	0.000	96	106027	100.0	95.7	
84 Chlorodibromomethane	129	10.008	10.008	0.000	91	80164	50.0	48.3	
85 Ethylene Dibromide	107	10.124	10.124	0.000	96	71545	50.0	47.7	
87 Chlorobenzene	112	10.611	10.611	0.000	92	217879	50.0	47.0	
89 1,1,1,2-Tetrachloroethane	131	10.702	10.702	0.000	86	87449	50.0	49.2	
90 Ethylbenzene	106	10.708	10.708	0.000	99	113204	50.0	47.4	
91 m-Xylene & p-Xylene	106	10.836	10.836	0.000	0	139296	50.0	47.3	
92 o-Xylene	106	11.219	11.219	0.000	98	128904	50.0	45.9	
93 Styrene	104	11.237	11.237	0.000	94	238774	50.0	48.4	
94 Bromoform	173	11.420	11.420	0.000	95	49228	50.0	46.2	
97 Isopropylbenzene	105	11.584	11.584	0.000	98	352038	50.0	45.6	
99 1,1,2,2-Tetrachloroethane	83	11.900	11.900	0.000	79	85451	50.0	48.7	
100 Bromobenzene	156	11.900	11.900	0.000	95	100673	50.0	49.2	
102 trans-1,4-Dichloro-2-buten	53	11.937	11.937	0.000	81	33964	50.0	47.9	
101 1,2,3-Trichloropropane	110	11.949	11.949	0.000	86	34063	50.0	50.0	
103 N-Propylbenzene	120	11.998	11.998	0.000	99	102839	50.0	49.3	
104 2-Chlorotoluene	126	12.089	12.089	0.000	95	88039	50.0	49.3	
106 1,3,5-Trimethylbenzene	105	12.186	12.186	0.000	93	306721	50.0	47.8	
107 4-Chlorotoluene	126	12.217	12.217	0.000	99	97305	50.0	50.6	
108 tert-Butylbenzene	119	12.496	12.496	0.000	94	247617	50.0	47.4	
110 1,2,4-Trimethylbenzene	105	12.557	12.557	0.000	98	312321	50.0	48.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
112 sec-Butylbenzene	105	12.722	12.722	0.000	95	334453	50.0	46.4	
113 1,3-Dichlorobenzene	146	12.843	12.843	0.000	97	177456	50.0	46.6	
114 4-Isopropyltoluene	119	12.874	12.874	0.000	97	289284	50.0	45.4	
115 1,4-Dichlorobenzene	146	12.941	12.941	0.000	92	186335	50.0	47.2	
120 n-Butylbenzene	91	13.281	13.281	0.000	97	215658	50.0	42.9	
121 1,2-Dichlorobenzene	146	13.299	13.299	0.000	95	160696	50.0	46.1	
122 1,2-Dibromo-3-Chloropropan	75	14.090	14.090	0.000	73	13886	50.0	44.4	
126 1,2,4-Trichlorobenzene	180	14.912	14.912	0.000	92	42340	50.0	41.0	
127 Hexachlorobutadiene	225	15.051	15.051	0.000	94	26814	50.0	43.0	
128 Naphthalene	128	15.185	15.185	0.000	97	92140	50.0	48.0	
129 1,2,3-Trichlorobenzene	180	15.410	15.410	0.000	94	34325	50.0	39.6	
S 133 Xylenes, Total	106				0		100.0	93.2	
S 134 1,2-Dichloroethene, Total	96				0		100.0	99.0	
S 154 Total BTEX	106				0		250.0	237.9	
S 135 1,3-Dichloropropene, Total	1				0		100.0	94.2	

Reagents:

VOA8260SURR_00099	Amount Added: 2.00	Units: uL	
voaWKetmix1st_00018	Amount Added: 2.00	Units: uL	
VOA8260VOAPRI_00373	Amount Added: 2.00	Units: uL	
VOAACRPRI_00021	Amount Added: 6.00	Units: uL	
VOAVAPRI_00027	Amount Added: 2.00	Units: uL	
VOA8260INT_00099	Amount Added: 2.00	Units: uL	Run Reagent

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092006.D

Injection Date: 20-Sep-2019 12:18:30

Instrument ID: CHHP5

Operator ID: 433269

Lims ID: ICIS VSTD10

Worklist Smp#: 6

Client ID:

Purge Vol: 5.000 mL

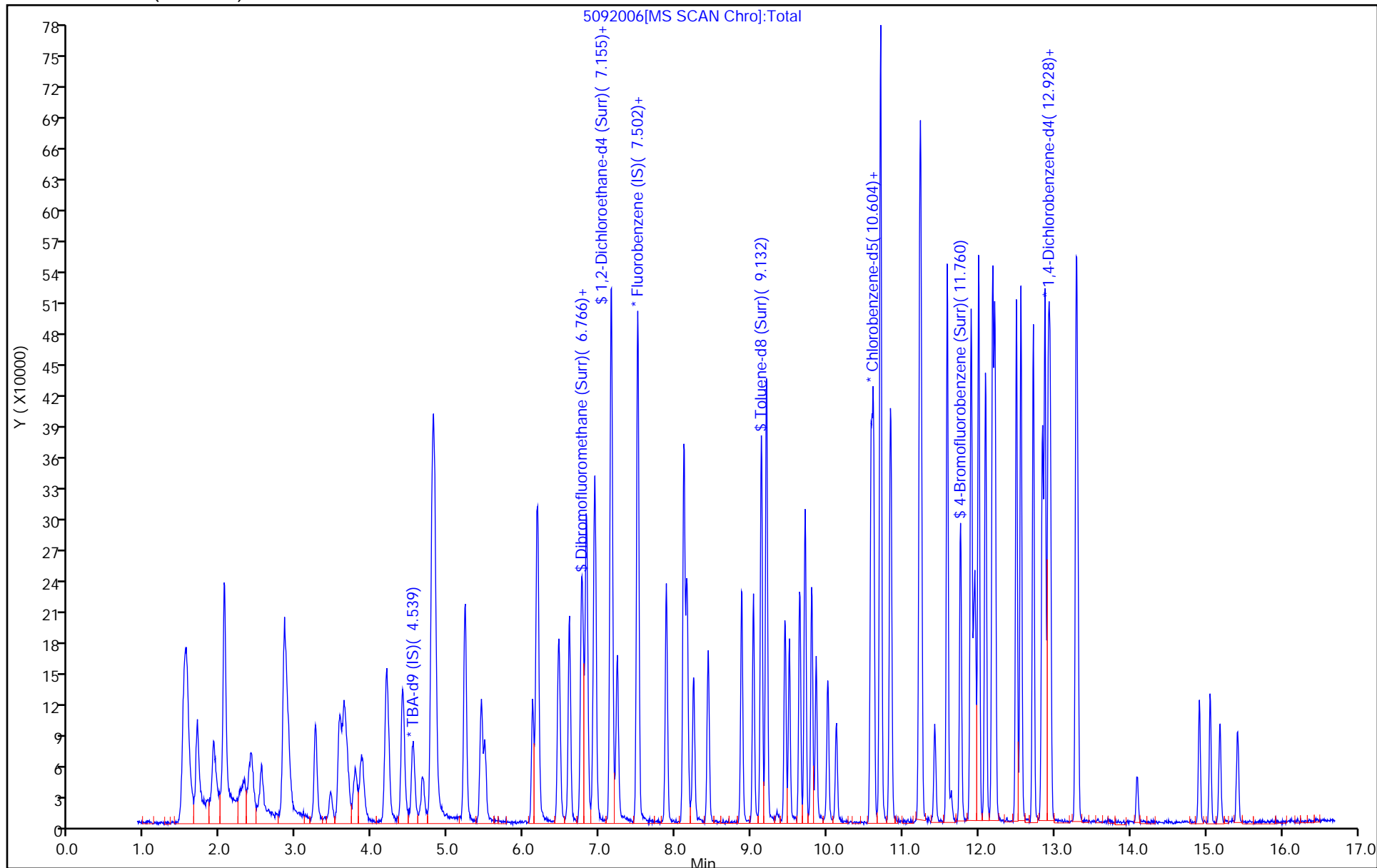
Dil. Factor: 1.0000

ALS Bottle#: 6

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092007.D
 Lims ID: IC VSTD15
 Client ID:
 Sample Type: IC Calib Level: 4
 Inject. Date: 20-Sep-2019 12:43:30 ALS Bottle#: 7 Worklist Smp#: 7
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028737-007
 Misc. Info.: IC VSTD15
 Operator ID: 433269 Instrument ID: CHHP5
 Sublist: chrom-MSVOA_LL_CHHP5*sub146
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 21-Sep-2019 09:17:01 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0334

First Level Reviewer: bowieh

Date: 20-Sep-2019 13:06:53

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.538	4.538	0.000	0	125467	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.501	7.501	0.000	96	279458	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.579	10.579	0.000	91	69259	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.915	12.915	0.000	93	126685	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.783	6.783	0.000	93	119880	75.0	74.3	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.148	7.148	0.000	0	193516	75.0	71.2	
\$ 7 Toluene-d8 (Surr)	98	9.138	9.138	0.000	96	418368	75.0	75.9	
\$ 8 4-Bromofluorobenzene (Surr	95	11.759	11.759	0.000	88	172366	75.0	76.0	
11 Dichlorodifluoromethane	85	1.691	1.691	0.000	99	207084	75.0	71.4	
12 Chloromethane	50	1.910	1.910	0.000	99	164705	75.0	68.8	
13 Vinyl chloride	62	2.044	2.044	0.000	71	166202	75.0	74.0	
14 Butadiene	39	2.050	2.050	0.000	98	186025	75.0	75.0	
15 Bromomethane	94	2.385	2.385	0.000	94	117347	75.0	68.4	
16 Chloroethane	64	2.531	2.531	0.000	99	109028	75.0	72.2	
17 Dichlorofluoromethane	67	2.835	2.835	0.000	99	283010	75.0	74.0	
18 Trichlorofluoromethane	101	2.859	2.859	0.000	98	299306	75.0	73.6	
20 Ethyl ether	59	3.249	3.249	0.000	92	116676	75.0	67.7	
21 Acrolein	56	3.456	3.456	0.000	98	47433	175.0	161.8	
22 1,1-Dichloroethene	96	3.565	3.565	0.000	95	106180	75.0	72.0	
23 1,1,2-Trichloro-1,2,2-trif	101	3.632	3.632	0.000	91	133559	75.0	78.3	
24 Acetone	43	3.687	3.687	0.000	98	103407	150.0	145.4	
25 Iodomethane	142	3.778	3.778	0.000	97	182940	75.0	71.1	
26 Carbon disulfide	76	3.869	3.869	0.000	100	299903	75.0	74.7	
28 3-Chloro-1-propene	76	4.186	4.186	0.000	84	61857	75.0	71.1	
30 Methyl acetate	43	4.210	4.210	0.000	98	209039	150.0	145.8	
31 Methylene Chloride	84	4.398	4.398	0.000	93	139671	75.0	72.0	
32 2-Methyl-2-propanol	59	4.666	4.666	0.000	92	93130	750.0	683.4	
33 Acrylonitrile	53	4.794	4.794	0.000	96	458544	750.0	707.7	
34 trans-1,2-Dichloroethene	96	4.812	4.812	0.000	95	125066	75.0	75.2	
35 Methyl tert-butyl ether	73	4.824	4.824	0.000	99	364178	75.0	72.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	5.226	5.226	0.000	93	199585	75.0	76.1	
37 1,1-Dichloroethane	63	5.439	5.439	0.000	98	227201	75.0	71.4	
38 Vinyl acetate	43	5.487	5.487	0.000	98	212787	75.0	70.4	
44 2,2-Dichloropropane	97	6.169	6.169	0.000	72	30061	75.0	75.9	
45 cis-1,2-Dichloroethene	96	6.175	6.175	0.000	89	127839	75.0	69.6	
46 2-Butanone (MEK)	43	6.193	6.193	0.000	100	123311	150.0	146.2	
49 Chlorobromomethane	128	6.455	6.455	0.000	95	66445	75.0	66.6	
51 Tetrahydrofuran	42	6.473	6.473	0.000	81	70031	150.0	142.9	
52 Chloroform	83	6.601	6.601	0.000	97	261623	75.0	72.9	
53 1,1,1-Trichloroethane	97	6.759	6.759	0.000	98	232413	75.0	75.8	
54 Cyclohexane	56	6.826	6.826	0.000	94	227809	75.0	76.8	
56 Carbon tetrachloride	117	6.929	6.929	0.000	96	205286	75.0	75.7	
55 1,1-Dichloropropene	75	6.941	6.941	0.000	90	185764	75.0	73.7	
57 Isobutyl alcohol	41	7.142	7.142	0.000	72	98541	1875.0	1800.3	
58 Benzene	78	7.160	7.160	0.000	97	494620	75.0	71.7	
59 1,2-Dichloroethane	62	7.227	7.227	0.000	99	245268	75.0	72.7	
62 n-Heptane	43	7.507	7.507	0.000	88	166488	75.0	75.7	
64 Trichloroethene	130	7.884	7.884	0.000	96	131595	75.0	70.5	
66 Methylcyclohexane	83	8.109	8.109	0.000	94	223961	75.0	76.7	
67 1,2-Dichloropropane	63	8.152	8.152	0.000	91	118586	75.0	69.5	
70 1,4-Dioxane	88	8.231	8.231	0.000	35	13823	1500.0	1344.0	
68 Dibromomethane	93	8.243	8.243	0.000	93	81468	75.0	70.4	
71 Dichlorobromomethane	83	8.432	8.432	0.000	99	182682	75.0	70.8	
74 cis-1,3-Dichloropropene	75	8.876	8.876	0.000	89	181300	75.0	71.7	
75 4-Methyl-2-pentanone (MIBK)	43	9.028	9.028	0.000	97	233889	150.0	148.0	
76 Toluene	91	9.204	9.204	0.000	96	542056	75.0	75.5	
77 trans-1,3-Dichloropropene	75	9.448	9.448	0.000	98	185208	75.0	74.4	
78 Ethyl methacrylate	69	9.503	9.503	0.000	90	136852	75.0	78.8	
79 1,1,2-Trichloroethane	97	9.636	9.636	0.000	97	108133	75.0	71.4	
80 Tetrachloroethene	164	9.709	9.709	0.000	95	125374	75.0	74.8	
81 1,3-Dichloropropane	76	9.795	9.795	0.000	96	195707	75.0	71.4	
82 2-Hexanone	43	9.855	9.855	0.000	97	162254	150.0	142.0	
84 Chlorodibromomethane	129	10.007	10.007	0.000	90	126155	75.0	73.7	
85 Ethylene Dibromide	107	10.123	10.123	0.000	99	111248	75.0	71.9	
87 Chlorobenzene	112	10.610	10.610	0.000	89	339290	75.0	70.9	
89 1,1,1,2-Tetrachloroethane	131	10.701	10.701	0.000	89	133567	75.0	72.8	
90 Ethylbenzene	106	10.707	10.707	0.000	100	187413	75.0	76.1	
91 m-Xylene & p-Xylene	106	10.835	10.835	0.000	0	236051	75.0	77.7	
92 o-Xylene	106	11.218	11.218	0.000	98	219133	75.0	75.6	
93 Styrene	104	11.242	11.242	0.000	94	391311	75.0	76.8	
94 Bromoform	173	11.425	11.425	0.000	96	78268	75.0	71.3	
97 Isopropylbenzene	105	11.583	11.583	0.000	98	605691	75.0	76.1	
99 1,1,2,2-Tetrachloroethane	83	11.899	11.899	0.000	87	130314	75.0	72.0	
100 Bromobenzene	156	11.905	11.905	0.000	94	158630	75.0	75.0	
102 trans-1,4-Dichloro-2-buten	53	11.942	11.942	0.000	68	56011	75.0	76.3	
101 1,2,3-Trichloropropane	110	11.954	11.954	0.000	88	52702	75.0	76.2	
103 N-Propylbenzene	120	11.997	11.997	0.000	99	175939	75.0	81.6	
104 2-Chlorotoluene	126	12.094	12.094	0.000	95	145758	75.0	79.0	
106 1,3,5-Trimethylbenzene	105	12.179	12.179	0.000	94	525838	75.0	79.2	
107 4-Chlorotoluene	126	12.216	12.216	0.000	98	156855	75.0	78.9	
108 tert-Butylbenzene	119	12.496	12.496	0.000	93	427400	75.0	79.1	
110 1,2,4-Trimethylbenzene	105	12.556	12.556	0.000	98	540614	75.0	81.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
112 sec-Butylbenzene	105	12.721	12.721	0.000	96	593231	75.0	79.7	
113 1,3-Dichlorobenzene	146	12.842	12.842	0.000	97	293721	75.0	74.7	
114 4-Isopropyltoluene	119	12.873	12.873	0.000	97	529297	75.0	80.4	
115 1,4-Dichlorobenzene	146	12.946	12.946	0.000	93	303779	75.0	74.4	
120 n-Butylbenzene	91	13.280	13.280	0.000	97	412600	75.0	79.3	
121 1,2-Dichlorobenzene	146	13.305	13.305	0.000	96	264228	75.0	73.4	
122 1,2-Dibromo-3-Chloropropan	75	14.089	14.089	0.000	76	24295	75.0	75.2	
126 1,2,4-Trichlorobenzene	180	14.911	14.911	0.000	93	79571	75.0	74.5	
127 Hexachlorobutadiene	225	15.051	15.051	0.000	97	46509	75.0	74.1	
128 Naphthalene	128	15.184	15.184	0.000	97	178657	75.0	76.9	
129 1,2,3-Trichlorobenzene	180	15.416	15.416	0.000	96	66125	75.0	73.8	
S 133 Xylenes, Total	106				0		150.0	153.3	
S 134 1,2-Dichloroethene, Total	96				0		150.0	144.8	
S 154 Total BTEX	106				0		375.0	376.6	
S 135 1,3-Dichloropropene, Total	1				0		150.0	146.1	

Reagents:

VOA8260SURR_00099	Amount Added: 3.00	Units: uL	
voaWKetmix1st_00018	Amount Added: 3.00	Units: uL	
VOA8260VOAPRI_00373	Amount Added: 3.00	Units: uL	
VOAACRPRI_00021	Amount Added: 7.00	Units: uL	
VOAVAPRI_00027	Amount Added: 3.00	Units: uL	
VOA8260INT_00099	Amount Added: 2.00	Units: uL	Run Reagent

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092007.D

Injection Date: 20-Sep-2019 12:43:30

Instrument ID: CHHP5

Operator ID: 433269

Lims ID: IC VSTD15

Worklist Smp#: 7

Client ID:

Purge Vol: 5.000 mL

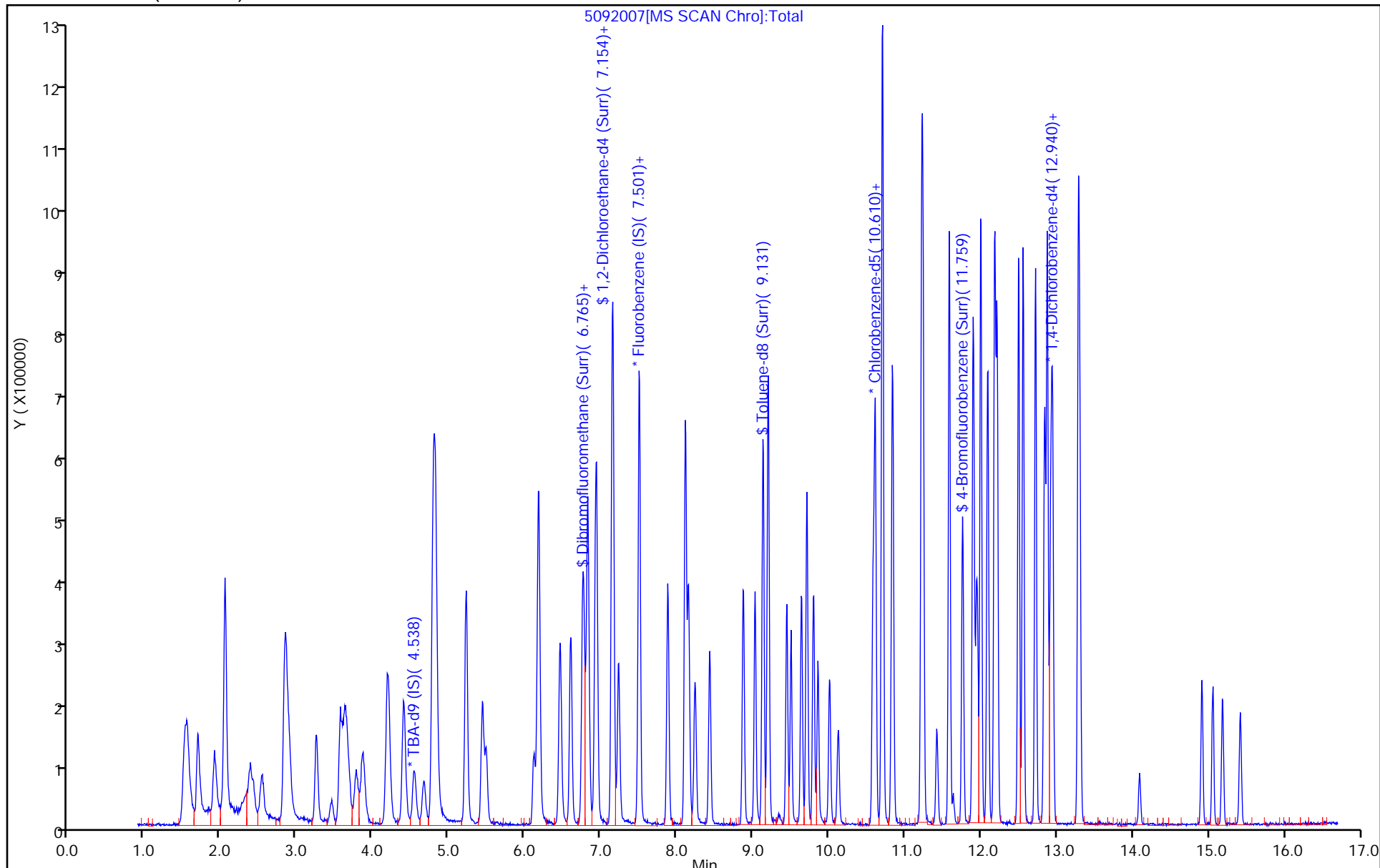
Dil. Factor: 1.0000

ALS Bottle#: 7

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092008.D
 Lims ID: IC VSTD20
 Client ID:
 Sample Type: IC Calib Level: 5
 Inject. Date: 20-Sep-2019 13:07:30 ALS Bottle#: 8 Worklist Smp#: 8
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028737-008
 Misc. Info.: IC VSTD20
 Operator ID: 433269 Instrument ID: CHHP5
 Sublist: chrom-MSVOA_LL_CHHP5*sub146
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 21-Sep-2019 09:17:13 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0334

First Level Reviewer: bowieh

Date: 20-Sep-2019 13:32:08

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.549	4.538	0.011	0	136353	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.499	7.501	-0.002	94	280777	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.584	10.579	0.005	90	73729	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.920	12.915	0.005	93	149719	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.776	6.783	-0.007	93	151883	100.0	93.7	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.147	7.148	-0.001	0	262643	100.0	96.2	
\$ 7 Toluene-d8 (Surr)	98	9.130	9.138	-0.008	95	569574	100.0	97.0	
\$ 8 4-Bromofluorobenzene (Surr	95	11.758	11.759	-0.001	89	237598	100.0	98.5	
11 Dichlorodifluoromethane	85	1.696	1.691	0.005	99	276894	100.0	95.0	
12 Chloromethane	50	1.909	1.910	-0.001	98	232298	100.0	96.6	
13 Vinyl chloride	62	2.043	2.044	-0.001	83	218367	100.0	96.8	
14 Butadiene	39	2.055	2.050	0.005	99	236928	100.0	95.0	
15 Bromomethane	94	2.377	2.385	-0.008	92	171312	100.0	99.4	
16 Chloroethane	64	2.529	2.531	-0.002	99	140474	100.0	92.6	
17 Dichlorofluoromethane	67	2.840	2.835	0.005	99	367770	100.0	95.7	
18 Trichlorofluoromethane	101	2.864	2.859	0.005	96	391781	100.0	95.8	
20 Ethyl ether	59	3.253	3.249	0.004	92	161400	100.0	93.3	
21 Acrolein	56	3.448	3.456	-0.008	95	54113	200.0	183.7	
22 1,1-Dichloroethene	96	3.570	3.565	0.005	95	137528	100.0	92.8	
23 1,1,2-Trichloro-1,2,2-trif	101	3.636	3.632	0.004	92	162014	100.0	94.5	
24 Acetone	43	3.685	3.687	-0.002	97	137810	200.0	192.9	
25 Iodomethane	142	3.770	3.778	-0.008	97	251537	100.0	97.3	
26 Carbon disulfide	76	3.862	3.869	-0.007	99	385717	100.0	95.6	
28 3-Chloro-1-propene	76	4.178	4.186	-0.008	83	82927	100.0	94.8	
30 Methyl acetate	43	4.208	4.210	-0.002	98	280297	200.0	194.6	
31 Methylene Chloride	84	4.403	4.398	0.005	94	184568	100.0	96.8	
32 2-Methyl-2-propanol	59	4.665	4.666	-0.001	93	141629	1000.0	956.3	
33 Acrylonitrile	53	4.786	4.794	-0.008	99	638165	1000.0	980.3	
34 trans-1,2-Dichloroethene	96	4.811	4.812	-0.001	95	157546	100.0	94.3	
35 Methyl tert-butyl ether	73	4.829	4.824	0.005	98	501296	100.0	99.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	5.218	5.226	-0.008	92	249922	100.0	94.8	
37 1,1-Dichloroethane	63	5.437	5.439	-0.002	98	311636	100.0	97.5	
38 Vinyl acetate	43	5.480	5.487	-0.007	98	297666	100.0	98.0	
44 2,2-Dichloropropane	97	6.173	6.169	0.004	81	35413	100.0	89.0	
45 cis-1,2-Dichloroethene	96	6.179	6.175	0.004	88	175990	100.0	95.4	
46 2-Butanone (MEK)	43	6.192	6.193	-0.001	82	171883	200.0	202.8	
49 Chlorobromomethane	128	6.459	6.455	0.004	95	95557	100.0	95.3	
51 Tetrahydrofuran	42	6.471	6.473	-0.002	84	95959	200.0	194.9	
52 Chloroform	83	6.599	6.601	-0.002	97	349838	100.0	97.9	
53 1,1,1-Trichloroethane	97	6.757	6.759	-0.002	98	297529	100.0	96.6	
54 Cyclohexane	56	6.824	6.826	-0.002	92	297039	100.0	99.7	
56 Carbon tetrachloride	117	6.922	6.929	-0.007	98	258569	100.0	94.9	
55 1,1-Dichloropropene	75	6.946	6.941	0.005	91	239855	100.0	94.7	
57 Isobutyl alcohol	41	7.141	7.142	-0.001	77	146415	2500.0	2662.4	
58 Benzene	78	7.159	7.160	-0.001	98	668905	100.0	96.4	
59 1,2-Dichloroethane	62	7.232	7.227	0.005	98	340619	100.0	100.5	
62 n-Heptane	43	7.506	7.507	-0.001	90	222573	100.0	100.7	
64 Trichloroethene	130	7.877	7.884	-0.007	97	179904	100.0	96.0	
66 Methylcyclohexane	83	8.108	8.109	-0.001	93	297240	100.0	101.3	
67 1,2-Dichloropropane	63	8.150	8.152	-0.002	87	165682	100.0	96.7	
70 1,4-Dioxane	88	8.223	8.231	-0.008	40	22611	2000.0	2167.2	
68 Dibromomethane	93	8.236	8.243	-0.007	93	110090	100.0	94.6	
71 Dichlorobromomethane	83	8.430	8.432	-0.002	99	250959	100.0	96.8	
74 cis-1,3-Dichloropropene	75	8.874	8.876	-0.002	89	255269	100.0	100.4	
75 4-Methyl-2-pentanone (MIBK)	43	9.032	9.028	0.004	98	339222	200.0	201.7	
76 Toluene	91	9.203	9.204	-0.001	97	729054	100.0	95.4	
77 trans-1,3-Dichloropropene	75	9.446	9.448	-0.002	99	263587	100.0	99.5	
78 Ethyl methacrylate	69	9.501	9.503	-0.001	91	198745	100.0	107.4	
79 1,1,2-Trichloroethane	97	9.641	9.636	0.005	98	149692	100.0	92.9	
80 Tetrachloroethene	164	9.714	9.709	0.005	97	163350	100.0	91.5	
81 1,3-Dichloropropane	76	9.799	9.795	0.004	97	280380	100.0	96.1	
82 2-Hexanone	43	9.854	9.855	-0.001	97	239379	200.0	196.8	
84 Chlorodibromomethane	129	10.012	10.007	0.005	91	178763	100.0	98.1	
85 Ethylene Dibromide	107	10.121	10.123	-0.002	97	154936	100.0	94.0	
87 Chlorobenzene	112	10.608	10.610	-0.002	91	487020	100.0	95.6	
89 1,1,1,2-Tetrachloroethane	131	10.699	10.701	-0.002	90	187934	100.0	96.3	
90 Ethylbenzene	106	10.705	10.707	-0.002	99	253584	100.0	96.7	
91 m-Xylene & p-Xylene	106	10.839	10.835	0.004	0	323284	100.0	100.0	
92 o-Xylene	106	11.223	11.218	0.005	98	305347	100.0	99.0	
93 Styrene	104	11.241	11.242	-0.001	94	553110	100.0	102.0	
94 Bromoform	173	11.423	11.425	-0.002	96	115160	100.0	98.5	
97 Isopropylbenzene	105	11.581	11.583	-0.002	97	868419	100.0	102.5	
100 Bromobenzene	156	11.904	11.905	-0.001	95	225023	100.0	90.1	
99 1,1,2,2-Tetrachloroethane	83	11.892	11.899	-0.007	93	192721	100.0	100.0	
102 trans-1,4-Dichloro-2-buten	53	11.934	11.942	-0.008	83	80030	100.0	92.3	
101 1,2,3-Trichloropropane	110	11.953	11.954	-0.001	85	75870	100.0	93.5	
103 N-Propylbenzene	120	12.001	11.997	0.004	99	233986	100.0	91.9	
104 2-Chlorotoluene	126	12.092	12.094	-0.002	95	209713	100.0	96.2	
106 1,3,5-Trimethylbenzene	105	12.184	12.179	0.005	94	746783	100.0	95.2	
107 4-Chlorotoluene	126	12.214	12.216	-0.002	99	216537	100.0	92.2	
108 tert-Butylbenzene	119	12.500	12.496	0.004	93	607935	100.0	95.2	
110 1,2,4-Trimethylbenzene	105	12.555	12.556	-0.001	98	768143	100.0	98.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
112 sec-Butylbenzene	105	12.719	12.721	-0.002	96	843854	100.0	95.9	
113 1,3-Dichlorobenzene	146	12.841	12.842	-0.001	97	432511	100.0	93.0	
114 4-Isopropyltoluene	119	12.871	12.873	-0.002	97	776754	100.0	99.8	
115 1,4-Dichlorobenzene	146	12.944	12.946	-0.002	93	444655	100.0	92.1	
120 n-Butylbenzene	91	13.285	13.280	0.005	98	607810	100.0	98.9	
121 1,2-Dichlorobenzene	146	13.303	13.305	-0.002	95	397531	100.0	93.4	
122 1,2-Dibromo-3-Chloropropan	75	14.088	14.089	-0.001	72	36670	100.0	96.0	
126 1,2,4-Trichlorobenzene	180	14.909	14.911	-0.002	94	140805	100.0	111.5	
127 Hexachlorobutadiene	225	15.055	15.051	0.004	97	76808	100.0	104.8	
128 Naphthalene	128	15.177	15.184	-0.007	98	333082	100.0	105.4	
129 1,2,3-Trichlorobenzene	180	15.414	15.416	-0.002	93	113230	100.0	106.9	
S 133 Xylenes, Total	106				0		200.0	199.0	
S 134 1,2-Dichloroethene, Total	96				0		200.0	189.7	
S 154 Total BTEX	106				0		500.0	487.6	
S 135 1,3-Dichloropropene, Total	1				0		200.0	199.9	

Reagents:

VOA8260SURR_00099	Amount Added: 4.00	Units: uL	
voaWKetmix1st_00018	Amount Added: 4.00	Units: uL	
VOA8260VOAPRI_00373	Amount Added: 4.00	Units: uL	
VOAACRPRI_00021	Amount Added: 8.00	Units: uL	
VOAVAPRI_00027	Amount Added: 4.00	Units: uL	
VOA8260INT_00099	Amount Added: 2.00	Units: uL	Run Reagent

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092008.D

Injection Date: 20-Sep-2019 13:07:30

Instrument ID: CHHP5

Operator ID: 433269

Lims ID: IC VSTD20

Worklist Smp#: 8

Client ID:

Purge Vol: 5.000 mL

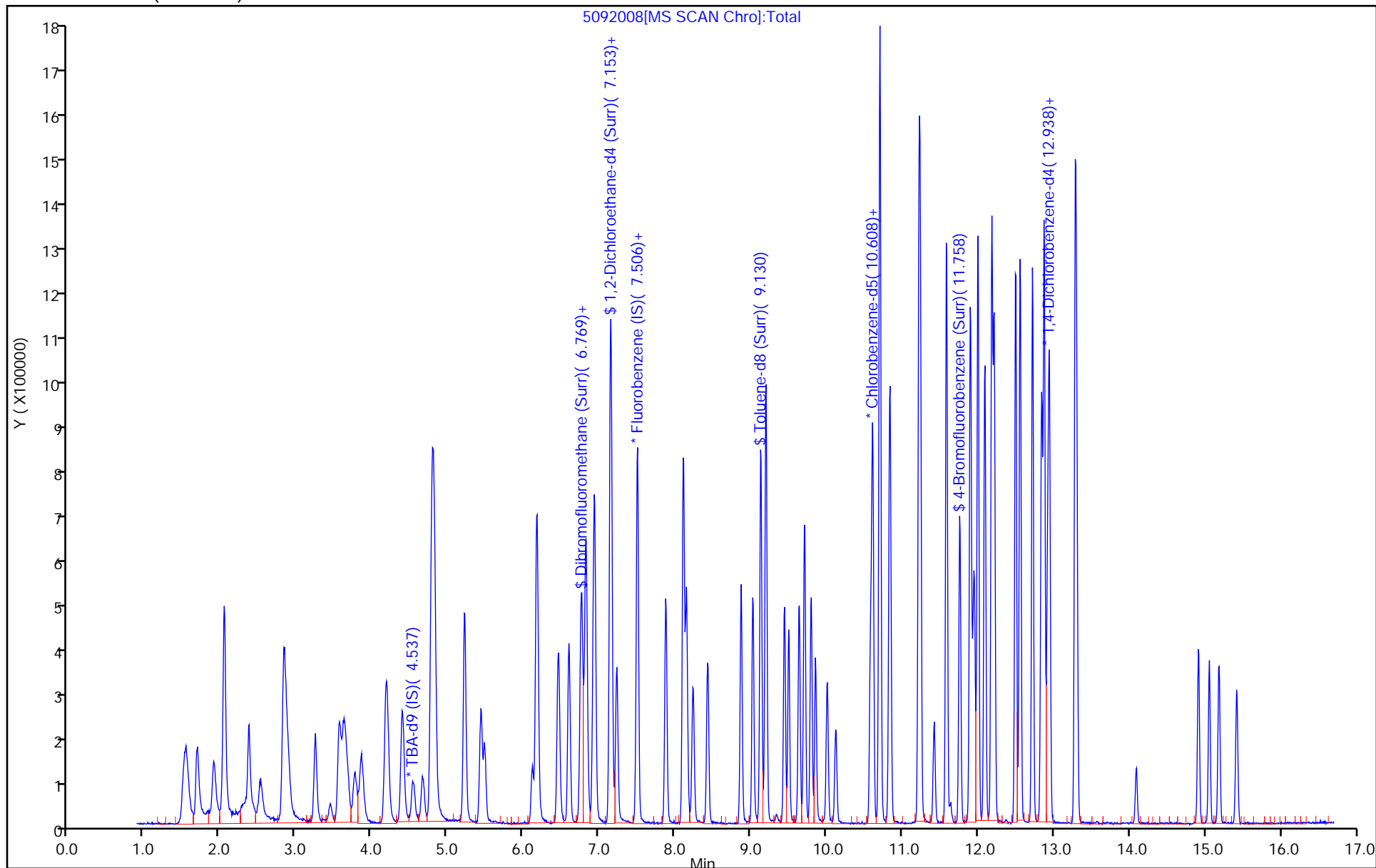
Dil. Factor: 1.0000

ALS Bottle#: 8

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092009.D
 Lims ID: IC VSTD35
 Client ID:
 Sample Type: IC Calib Level: 6
 Inject. Date: 20-Sep-2019 13:32:30 ALS Bottle#: 9 Worklist Smp#: 9
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028737-009
 Misc. Info.: IC VSTD35
 Operator ID: 433269 Instrument ID: CHHP5
 Sublist: chrom-MSVOA_LL_CHHP5*sub146
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 21-Sep-2019 09:17:21 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0334

First Level Reviewer: bowieh

Date: 20-Sep-2019 14:06:37

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.550	4.538	0.012	0	137674	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.500	7.501	-0.001	97	300982	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.579	10.579	0.000	88	76409	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.915	12.915	0.000	93	147418	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.783	6.783	0.000	94	276904	175.0	159.4	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.148	7.148	0.000	0	463554	175.0	158.4	
\$ 7 Toluene-d8 (Surr)	98	9.137	9.138	-0.001	95	1053116	175.0	173.1	
\$ 8 4-Bromofluorobenzene (Surr	95	11.759	11.759	0.000	94	441591	175.0	176.6	
11 Dichlorodifluoromethane	85	1.697	1.691	0.006	100	529002	175.0	169.4	
12 Chloromethane	50	1.910	1.910	0.000	100	419374	175.0	162.8	
13 Vinyl chloride	62	2.038	2.044	-0.006	99	410786	175.0	169.9	
14 Butadiene	39	2.050	2.050	0.000	99	452916	175.0	169.4	
15 Bromomethane	94	2.372	2.385	-0.013	92	308218	175.0	166.8	
16 Chloroethane	64	2.524	2.531	-0.007	98	259419	175.0	159.5	
17 Dichlorofluoromethane	67	2.841	2.835	0.006	99	680729	175.0	165.3	
18 Trichlorofluoromethane	101	2.853	2.859	-0.006	99	708600	175.0	161.7	
20 Ethyl ether	59	3.254	3.249	0.005	93	285742	175.0	154.0	
21 Acrolein	56	3.449	3.456	-0.007	97	69308	225.0	219.5	
22 1,1-Dichloroethene	96	3.571	3.565	0.006	94	251100	175.0	158.0	
23 1,1,2-Trichloro-1,2,2-trif	101	3.631	3.632	-0.001	93	311086	175.0	169.3	
24 Acetone	43	3.686	3.687	-0.001	97	258854	350.0	338.0	
25 Iodomethane	142	3.783	3.778	0.005	98	464749	175.0	167.8	
26 Carbon disulfide	76	3.863	3.869	-0.006	99	740288	175.0	171.1	
28 3-Chloro-1-propene	76	4.185	4.186	-0.001	84	161291	175.0	172.1	
30 Methyl acetate	43	4.215	4.210	0.005	98	500176	350.0	323.9	
31 Methylene Chloride	84	4.404	4.398	0.006	94	317379	175.0	159.3	
32 2-Methyl-2-propanol	59	4.678	4.666	0.012	94	258285	1750.0	1727.2	
33 Acrylonitrile	53	4.793	4.794	-0.001	96	1148771	1750.0	1646.3	
34 trans-1,2-Dichloroethene	96	4.812	4.812	0.000	94	288990	175.0	161.4	
35 Methyl tert-butyl ether	73	4.830	4.824	0.006	98	922181	175.0	170.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	5.225	5.226	-0.001	92	481651	175.0	170.5	
37 1,1-Dichloroethane	63	5.438	5.439	-0.001	98	566865	175.0	165.5	
38 Vinyl acetate	43	5.487	5.487	0.000	98	567858	175.0	174.4	
44 2,2-Dichloropropane	97	6.180	6.169	0.011	86	72653	175.0	170.2	
45 cis-1,2-Dichloroethene	96	6.180	6.175	0.005	89	327656	175.0	165.7	
46 2-Butanone (MEK)	43	6.193	6.193	0.000	99	311890	350.0	343.3	
49 Chlorobromomethane	128	6.460	6.455	0.005	96	175004	175.0	162.9	
51 Tetrahydrofuran	42	6.472	6.473	-0.001	82	187697	350.0	355.7	
52 Chloroform	83	6.600	6.601	-0.001	97	640059	175.0	169.0	
53 1,1,1-Trichloroethane	97	6.758	6.759	-0.001	98	562039	175.0	170.2	
54 Cyclohexane	56	6.825	6.826	-0.001	94	570394	175.0	178.5	
56 Carbon tetrachloride	117	6.923	6.929	-0.006	97	476516	175.0	163.2	
55 1,1-Dichloropropene	75	6.947	6.941	0.006	90	456536	175.0	168.2	
57 Isobutyl alcohol	41	7.148	7.142	0.006	83	243585	4375.0	4132.0	
58 Benzene	78	7.160	7.160	0.000	98	1240147	175.0	166.8	
59 1,2-Dichloroethane	62	7.233	7.227	0.006	99	589336	175.0	162.1	
62 n-Heptane	43	7.507	7.507	0.000	92	428062	175.0	180.7	
64 Trichloroethene	130	7.884	7.884	0.000	96	337686	175.0	168.0	
66 Methylcyclohexane	83	8.115	8.109	0.006	93	567288	175.0	180.3	
67 1,2-Dichloropropane	63	8.151	8.152	-0.001	92	301832	175.0	164.3	
70 1,4-Dioxane	88	8.230	8.231	-0.001	37	41416	3500.0	3679.5	
68 Dibromomethane	93	8.243	8.243	0.000	93	203750	175.0	163.4	
71 Dichlorobromomethane	83	8.431	8.432	-0.001	99	471473	175.0	169.7	
74 cis-1,3-Dichloropropene	75	8.875	8.876	-0.001	89	505399	175.0	185.5	
75 4-Methyl-2-pentanone (MIBK)	43	9.027	9.028	-0.001	97	650323	350.0	373.1	
76 Toluene	91	9.198	9.204	-0.006	97	1369984	175.0	173.0	
77 trans-1,3-Dichloropropene	75	9.447	9.448	-0.001	99	500832	175.0	182.4	
78 Ethyl methacrylate	69	9.502	9.503	0.000	91	401281	175.0	209.3	
79 1,1,2-Trichloroethane	97	9.636	9.636	0.000	96	288077	175.0	172.5	
80 Tetrachloroethene	164	9.709	9.709	0.000	96	313989	175.0	169.8	
81 1,3-Dichloropropane	76	9.800	9.795	0.005	96	511187	175.0	169.1	
82 2-Hexanone	43	9.855	9.855	0.000	98	503354	350.0	399.4	
84 Chlorodibromomethane	129	10.007	10.007	0.000	90	342593	175.0	181.4	
85 Ethylene Dibromide	107	10.122	10.123	-0.001	98	289299	175.0	169.4	
87 Chlorobenzene	112	10.609	10.610	-0.001	91	903110	175.0	171.1	
89 1,1,1,2-Tetrachloroethane	131	10.700	10.701	-0.001	91	350585	175.0	173.3	
90 Ethylbenzene	106	10.706	10.707	-0.001	100	485637	175.0	178.8	
91 m-Xylene & p-Xylene	106	10.840	10.835	0.005	0	616529	175.0	184.0	
92 o-Xylene	106	11.217	11.218	-0.001	98	604136	175.0	188.9	
93 Styrene	104	11.242	11.242	0.000	94	1038449	175.0	184.8	
94 Bromoform	173	11.418	11.425	-0.007	96	217834	175.0	179.8	
97 Isopropylbenzene	105	11.582	11.583	-0.001	97	1675497	175.0	190.8	
99 1,1,2,2-Tetrachloroethane	83	11.899	11.899	0.000	75	351644	175.0	176.0	
100 Bromobenzene	156	11.899	11.905	-0.006	96	421309	175.0	171.3	
102 trans-1,4-Dichloro-2-buten	53	11.935	11.942	-0.007	88	154245	175.0	180.7	
101 1,2,3-Trichloropropane	110	11.954	11.954	0.000	86	140129	175.0	177.7	
103 N-Propylbenzene	120	12.002	11.997	0.005	99	464727	175.0	185.3	
104 2-Chlorotoluene	126	12.087	12.094	-0.007	95	386645	175.0	180.2	
106 1,3,5-Trimethylbenzene	105	12.185	12.179	0.006	94	1445448	175.0	187.1	
107 4-Chlorotoluene	126	12.215	12.216	-0.001	99	408208	175.0	176.6	
108 tert-Butylbenzene	119	12.495	12.496	-0.001	93	1186803	175.0	188.7	
110 1,2,4-Trimethylbenzene	105	12.556	12.556	0.000	98	1445558	175.0	187.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
112 sec-Butylbenzene	105	12.720	12.721	-0.001	95	1615920	175.0	186.5	
113 1,3-Dichlorobenzene	146	12.842	12.842	0.000	97	793126	175.0	173.2	
114 4-Isopropyltoluene	119	12.872	12.873	-0.001	97	1454315	175.0	189.8	
115 1,4-Dichlorobenzene	146	12.945	12.946	-0.001	93	804615	175.0	169.3	
120 n-Butylbenzene	91	13.280	13.280	0.000	98	1177456	175.0	194.6	
121 1,2-Dichlorobenzene	146	13.304	13.305	-0.001	96	726592	175.0	173.4	
122 1,2-Dibromo-3-Chloropropan	75	14.095	14.089	0.006	80	66547	175.0	177.0	
126 1,2,4-Trichlorobenzene	180	14.910	14.911	-0.001	94	258760	175.0	208.1	
127 Hexachlorobutadiene	225	15.056	15.051	0.005	96	138134	175.0	193.8	
128 Naphthalene	128	15.178	15.184	-0.006	97	664115	175.0	166.3	
129 1,2,3-Trichlorobenzene	180	15.415	15.416	-0.001	95	205615	175.0	197.2	
S 133 Xylenes, Total	106				0		350.0	373.0	
S 134 1,2-Dichloroethene, Total	96				0		350.0	327.1	
S 154 Total BTEX	106				0		875.0	891.6	
S 135 1,3-Dichloropropene, Total	1				0		350.0	367.8	

Reagents:

VOA8260SURR_00099	Amount Added: 7.00	Units: uL	
voaWKetmix1st_00018	Amount Added: 7.00	Units: uL	
VOA8260VOAPRI_00373	Amount Added: 7.00	Units: uL	
VOAACRPRI_00021	Amount Added: 9.00	Units: uL	
VOAVAPRI_00027	Amount Added: 7.00	Units: uL	
VOA8260INT_00099	Amount Added: 2.00	Units: uL	Run Reagent

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092009.D

Injection Date: 20-Sep-2019 13:32:30

Instrument ID: CHHP5

Operator ID: 433269

Lims ID: IC VSTD35

Worklist Smp#: 9

Client ID:

Purge Vol: 5.000 mL

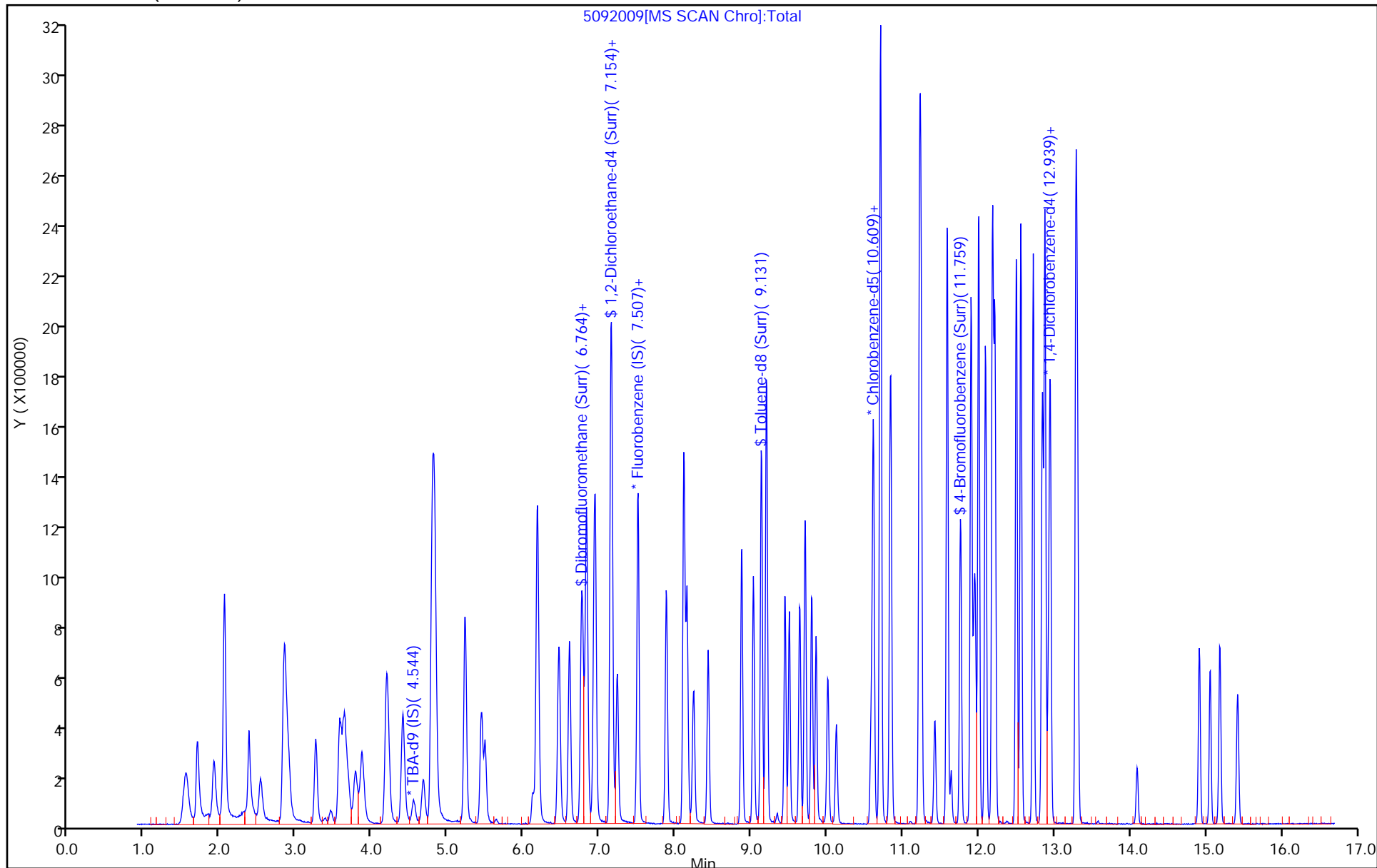
Dil. Factor: 1.0000

ALS Bottle#: 9

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092010.D
 Lims ID: IC VSTD40
 Client ID:
 Sample Type: IC Calib Level: 7
 Inject. Date: 20-Sep-2019 13:56:30 ALS Bottle#: 10 Worklist Smp#: 10
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028737-010
 Misc. Info.: IC VSTD40
 Operator ID: 433269 Instrument ID: CHHP5
 Sublist: chrom-MSVOA_LL_CHHP5*sub146
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 21-Sep-2019 09:17:28 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0334

First Level Reviewer: bowieh

Date: 20-Sep-2019 14:40:42

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.544	4.538	0.006	0	146165	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.494	7.501	-0.007	97	299008	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.578	10.579	-0.001	91	77160	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.920	12.915	0.005	91	155102	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.776	6.783	-0.007	93	335550	200.0	194.4	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.147	7.148	-0.001	0	539219	200.0	185.5	
\$ 7 Toluene-d8 (Surr)	98	9.130	9.138	-0.008	95	1271348	200.0	207.0	
\$ 8 4-Bromofluorobenzene (Surr	95	11.759	11.759	0.000	90	536767	200.0	212.5	
11 Dichlorodifluoromethane	85	1.690	1.691	-0.001	99	577226	200.0	186.0	
12 Chloromethane	50	1.909	1.910	-0.001	99	498835	200.0	194.9	
13 Vinyl chloride	62	2.037	2.044	-0.007	90	459026	200.0	191.1	
14 Butadiene	39	2.049	2.050	-0.001	97	487821	200.0	183.7	
15 Bromomethane	94	2.372	2.385	-0.013	93	368426	200.0	200.7	
16 Chloroethane	64	2.512	2.531	-0.019	99	300892	200.0	186.2	
17 Dichlorofluoromethane	67	2.834	2.835	-0.001	99	763932	200.0	186.7	
18 Trichlorofluoromethane	101	2.852	2.859	-0.007	95	777669	200.0	178.6	
20 Ethyl ether	59	3.248	3.249	-0.001	92	346140	200.0	187.8	
21 Acrolein	56	3.449	3.456	-0.008	99	80773	250.0	257.5	
22 1,1-Dichloroethene	96	3.570	3.565	0.005	97	293173	200.0	185.7	
23 1,1,2-Trichloro-1,2,2-trif	101	3.625	3.632	-0.007	91	341620	200.0	187.1	
24 Acetone	43	3.680	3.687	-0.007	98	282006	400.0	370.6	
25 Iodomethane	142	3.771	3.778	-0.007	99	546340	200.0	198.5	
26 Carbon disulfide	76	3.856	3.869	-0.013	100	850946	200.0	198.0	
28 3-Chloro-1-propene	76	4.179	4.186	-0.007	84	183924	200.0	197.5	
30 Methyl acetate	43	4.203	4.210	-0.007	98	607835	400.0	396.2	
31 Methylene Chloride	84	4.404	4.398	0.006	95	373621	200.0	190.1	
32 2-Methyl-2-propanol	59	4.671	4.666	0.005	94	319507	2000.0	2012.5	
33 Acrylonitrile	53	4.787	4.794	-0.007	97	1403334	2000.0	2024.4	
34 trans-1,2-Dichloroethene	96	4.805	4.812	-0.007	94	323920	200.0	182.1	
35 Methyl tert-butyl ether	73	4.823	4.824	-0.001	98	1082666	200.0	201.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	5.225	5.226	-0.001	93	549863	200.0	195.9	
37 1,1-Dichloroethane	63	5.432	5.439	-0.007	98	644905	200.0	189.5	
38 Vinyl acetate	43	5.486	5.487	-0.001	98	711005	200.0	219.8	
44 2,2-Dichloropropane	97	6.174	6.169	0.005	87	83036	200.0	195.9	
45 cis-1,2-Dichloroethene	96	6.180	6.175	0.005	89	384672	200.0	195.8	
46 2-Butanone (MEK)	43	6.186	6.193	-0.007	100	369967	400.0	409.9	
49 Chlorobromomethane	128	6.454	6.455	-0.001	97	205042	200.0	192.1	
51 Tetrahydrofuran	42	6.472	6.473	-0.001	86	229913	400.0	438.6	
52 Chloroform	83	6.600	6.601	-0.001	97	732849	200.0	195.2	
53 1,1,1-Trichloroethane	97	6.758	6.759	-0.001	98	635773	200.0	193.8	
54 Cyclohexane	56	6.819	6.826	-0.007	95	661912	200.0	208.5	
56 Carbon tetrachloride	117	6.922	6.929	-0.007	98	543551	200.0	187.4	
55 1,1-Dichloropropene	75	6.940	6.941	-0.001	91	527006	200.0	195.4	
57 Isobutyl alcohol	41	7.141	7.142	-0.001	84	309417	5000.0	5283.4	
58 Benzene	78	7.153	7.160	-0.007	98	1423810	200.0	192.8	
59 1,2-Dichloroethane	62	7.232	7.227	0.005	99	685199	200.0	189.8	
62 n-Heptane	43	7.506	7.507	-0.001	92	495849	200.0	210.7	
64 Trichloroethene	130	7.877	7.884	-0.007	96	384847	200.0	192.8	
66 Methylcyclohexane	83	8.108	8.109	-0.001	93	654998	200.0	209.5	
67 1,2-Dichloropropane	63	8.145	8.152	-0.007	91	356244	200.0	195.2	
70 1,4-Dioxane	88	8.230	8.231	-0.001	37	48677	4000.0	4347.1	
68 Dibromomethane	93	8.236	8.243	-0.007	92	236079	200.0	190.6	
71 Dichlorobromomethane	83	8.431	8.432	-0.001	99	556749	200.0	201.7	
74 cis-1,3-Dichloropropene	75	8.875	8.876	-0.001	90	595666	200.0	220.0	
75 4-Methyl-2-pentanone (MIBK)	43	9.027	9.028	-0.001	98	783898	400.0	445.4	
76 Toluene	91	9.197	9.204	-0.007	97	1616305	200.0	202.1	
77 trans-1,3-Dichloropropene	75	9.447	9.448	-0.001	98	611391	200.0	220.5	
78 Ethyl methacrylate	69	9.502	9.503	0.000	90	492522	200.0	254.4	
79 1,1,2-Trichloroethane	97	9.641	9.636	0.005	96	342852	200.0	203.3	
80 Tetrachloroethene	164	9.708	9.709	-0.001	97	352046	200.0	188.5	
81 1,3-Dichloropropane	76	9.800	9.795	0.005	97	621286	200.0	203.5	
82 2-Hexanone	43	9.854	9.855	-0.001	97	571056	400.0	448.7	
84 Chlorodibromomethane	129	10.013	10.007	0.006	91	405709	200.0	212.7	
85 Ethylene Dibromide	107	10.122	10.123	-0.001	98	355544	200.0	206.2	
87 Chlorobenzene	112	10.609	10.610	-0.001	91	1084902	200.0	203.5	
89 1,1,1,2-Tetrachloroethane	131	10.700	10.701	-0.001	92	409377	200.0	200.4	
90 Ethylbenzene	106	10.706	10.707	-0.001	99	585227	200.0	213.3	
91 m-Xylene & p-Xylene	106	10.840	10.835	0.005	0	718769	200.0	212.5	
92 o-Xylene	106	11.217	11.218	-0.001	98	711624	200.0	220.4	
93 Styrene	104	11.241	11.242	-0.001	94	1251938	200.0	220.7	
94 Bromoform	173	11.424	11.425	-0.001	97	265561	200.0	217.1	
97 Isopropylbenzene	105	11.582	11.583	-0.001	97	1982146	200.0	223.5	
99 1,1,2,2-Tetrachloroethane	83	11.898	11.899	-0.001	92	424366	200.0	210.3	
100 Bromobenzene	156	11.905	11.905	0.000	94	516731	200.0	199.7	
102 trans-1,4-Dichloro-2-buten	53	11.935	11.942	-0.007	80	173206	200.0	192.8	
101 1,2,3-Trichloropropane	110	11.953	11.954	-0.001	87	165541	200.0	199.9	
103 N-Propylbenzene	120	12.002	11.997	0.005	99	546810	200.0	207.2	
104 2-Chlorotoluene	126	12.093	12.094	-0.001	95	468929	200.0	207.7	
106 1,3,5-Trimethylbenzene	105	12.184	12.179	0.005	93	1715723	200.0	211.1	
107 4-Chlorotoluene	126	12.215	12.216	-0.001	99	495728	200.0	203.8	
108 tert-Butylbenzene	119	12.495	12.496	-0.001	93	1424102	200.0	215.2	
110 1,2,4-Trimethylbenzene	105	12.555	12.556	-0.001	98	1778727	200.0	219.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
112 sec-Butylbenzene	105	12.720	12.721	-0.001	95	1952579	200.0	214.2	
113 1,3-Dichlorobenzene	146	12.841	12.842	-0.001	98	976110	200.0	202.6	
114 4-Isopropyltoluene	119	12.872	12.873	-0.001	97	1790526	200.0	222.1	
115 1,4-Dichlorobenzene	146	12.945	12.946	-0.001	93	985841	200.0	197.2	
120 n-Butylbenzene	91	13.279	13.280	-0.001	98	1449204	200.0	227.6	
121 1,2-Dichlorobenzene	146	13.304	13.305	-0.001	96	908873	200.0	206.2	
122 1,2-Dibromo-3-Chloropropan	75	14.088	14.089	-0.001	77	84967	200.0	214.8	
126 1,2,4-Trichlorobenzene	180	14.910	14.911	-0.001	94	372818	200.0	285.0	
127 Hexachlorobutadiene	225	15.056	15.051	0.005	96	183831	200.0	245.9	
128 Naphthalene	128	15.177	15.184	-0.007	97	982407	200.0	204.9	
129 1,2,3-Trichlorobenzene	180	15.415	15.416	-0.001	95	307877	200.0	280.6	
S 133 Xylenes, Total	106				0		400.0	432.9	
S 134 1,2-Dichloroethene, Total	96				0		400.0	377.9	
S 154 Total BTEX	106				0		1000.0	1041.1	
S 135 1,3-Dichloropropene, Total	1				0		400.0	440.5	

Reagents:

VOA8260SURR_00099	Amount Added: 8.00	Units: uL	
voaWKetmix1st_00018	Amount Added: 8.00	Units: uL	
VOA8260VOAPRI_00373	Amount Added: 8.00	Units: uL	
VOAACRPRI_00021	Amount Added: 10.00	Units: uL	
VOAVAPRI_00027	Amount Added: 8.00	Units: uL	
VOA8260INT_00099	Amount Added: 2.00	Units: uL	Run Reagent

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092010.D

Injection Date: 20-Sep-2019 13:56:30

Instrument ID: CHHP5

Operator ID: 433269

Lims ID: IC VSTD40

Worklist Smp#: 10

Client ID:

Purge Vol: 5.000 mL

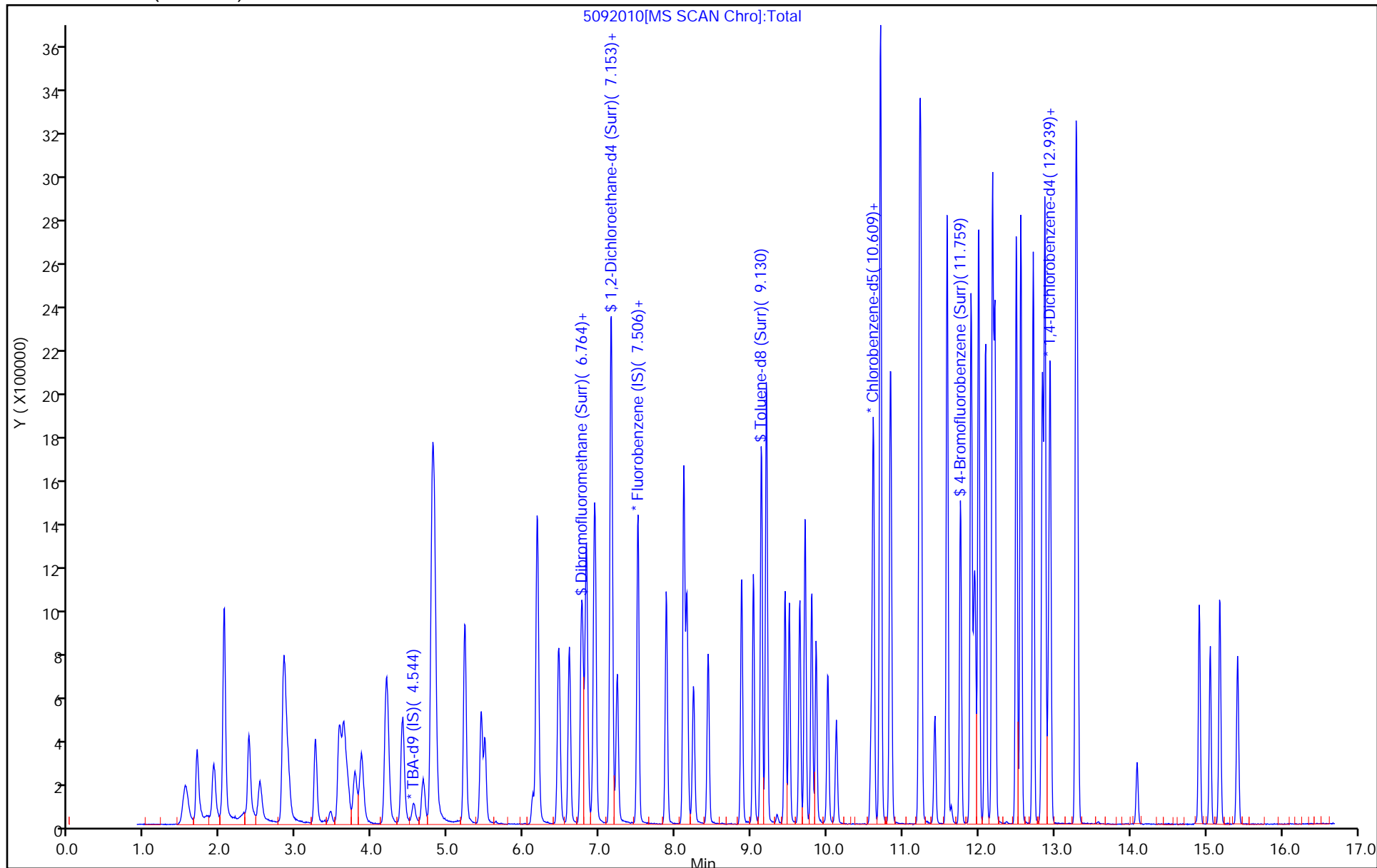
Dil. Factor: 1.0000

ALS Bottle#: 10

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092011.D
 Lims ID: IC VSTD50
 Client ID:
 Sample Type: IC Calib Level: 8
 Inject. Date: 20-Sep-2019 14:21:30 ALS Bottle#: 11 Worklist Smp#: 11
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028737-011
 Misc. Info.: IC VSTD50
 Operator ID: 433269 Instrument ID: CHHP5
 Sublist: chrom-MSVOA_LL_CHHP5*sub146
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 21-Sep-2019 09:17:36 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0334

First Level Reviewer: bowieh

Date: 20-Sep-2019 14:50:33

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.545	4.538	0.007	0	146448	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.495	7.501	-0.006	98	307718	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.579	10.579	0.000	89	79491	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.915	12.915	0.000	92	144363	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.777	6.783	-0.006	93	426948	250.0	240.4	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.148	7.148	0.000	0	692960	250.0	231.6	
\$ 7 Toluene-d8 (Surr)	98	9.132	9.138	-0.006	95	1584798	250.0	250.4	
\$ 8 4-Bromofluorobenzene (Surr	95	11.760	11.759	0.001	89	662864	250.0	254.8	
11 Dichlorodifluoromethane	85	1.685	1.691	-0.006	100	725029	250.0	227.0	
12 Chloromethane	50	1.904	1.910	-0.006	100	642257	250.0	243.8	
13 Vinyl chloride	62	2.038	2.044	-0.006	99	579360	250.0	234.4	
14 Butadiene	39	2.044	2.050	-0.006	98	638414	250.0	233.6	
15 Bromomethane	94	2.367	2.385	-0.018	93	458144	250.0	242.6	
16 Chloroethane	64	2.525	2.531	-0.006	99	394251	250.0	237.1	
17 Dichlorofluoromethane	67	2.835	2.835	0.000	98	997422	250.0	236.9	
18 Trichlorofluoromethane	101	2.853	2.859	-0.006	100	955823	250.0	213.4	
20 Ethyl ether	59	3.249	3.249	0.000	92	473828	250.0	249.9	
21 Acrolein	56	3.444	3.456	-0.012	97	97017	275.0	300.5	
22 1,1-Dichloroethene	96	3.559	3.565	-0.006	97	381865	250.0	235.0	
23 1,1,2-Trichloro-1,2,2-trif	101	3.632	3.632	0.000	92	431773	250.0	229.8	
24 Acetone	43	3.675	3.687	-0.012	98	360628	500.0	460.5	
25 Iodomethane	142	3.766	3.778	-0.012	99	724229	250.0	255.7	
26 Carbon disulfide	76	3.863	3.869	-0.006	100	1152245	250.0	260.5	
28 3-Chloro-1-propene	76	4.186	4.186	0.000	85	255891	250.0	267.0	
30 Methyl acetate	43	4.210	4.210	0.000	98	814658	500.0	516.0	
31 Methylene Chloride	84	4.399	4.398	0.001	95	500755	250.0	249.5	
32 2-Methyl-2-propanol	59	4.666	4.666	0.000	94	429417	2500.0	2699.6	
33 Acrylonitrile	53	4.782	4.794	-0.012	97	1861262	2500.0	2608.9	
34 trans-1,2-Dichloroethene	96	4.806	4.812	-0.006	95	441377	250.0	241.1	
35 Methyl tert-butyl ether	73	4.824	4.824	0.000	98	1476639	250.0	267.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	5.220	5.226	-0.006	93	702850	250.0	243.4	
37 1,1-Dichloroethane	63	5.433	5.439	-0.006	98	872353	250.0	249.1	
38 Vinyl acetate	43	5.488	5.487	0.001	98	962815	250.0	289.2	
44 2,2-Dichloropropane	97	6.175	6.169	0.006	92	113212	250.0	259.5	
45 cis-1,2-Dichloroethene	96	6.175	6.175	0.000	87	514934	250.0	254.7	
46 2-Butanone (MEK)	43	6.187	6.193	-0.006	100	491242	500.0	528.8	
49 Chlorobromomethane	128	6.461	6.455	0.006	94	276758	250.0	251.9	
51 Tetrahydrofuran	42	6.461	6.473	-0.012	86	306916	500.0	568.9	
52 Chloroform	83	6.601	6.601	0.000	96	974354	250.0	253.0	
53 1,1,1-Trichloroethane	97	6.759	6.759	0.000	98	796707	250.0	235.9	
54 Cyclohexane	56	6.820	6.826	-0.006	93	825948	250.0	252.8	
56 Carbon tetrachloride	117	6.923	6.929	-0.006	97	686943	250.0	230.1	
55 1,1-Dichloropropene	75	6.942	6.941	0.001	91	680215	250.0	245.1	
57 Isobutyl alcohol	41	7.142	7.142	0.000	83	429129	6250.0	7120.1	
58 Benzene	78	7.154	7.160	-0.006	98	1922005	250.0	252.9	
59 1,2-Dichloroethane	62	7.234	7.227	0.007	98	918160	250.0	247.1	
62 n-Heptane	43	7.501	7.507	-0.006	92	624364	250.0	257.8	
64 Trichloroethene	130	7.878	7.884	-0.006	96	504830	250.0	245.7	
66 Methylcyclohexane	83	8.110	8.109	0.001	93	833778	250.0	259.2	
67 1,2-Dichloropropane	63	8.146	8.152	-0.006	89	475130	250.0	252.9	
70 1,4-Dioxane	88	8.231	8.231	0.000	36	69831	5000.0	6046.6	
68 Dibromomethane	93	8.237	8.243	-0.006	92	316049	250.0	247.9	
71 Dichlorobromomethane	83	8.432	8.432	0.000	99	738702	250.0	260.1	
74 cis-1,3-Dichloropropene	75	8.870	8.876	-0.006	91	804695	250.0	288.8	
75 4-Methyl-2-pentanone (MIBK)	43	9.028	9.028	0.000	98	1035437	500.0	571.0	
76 Toluene	91	9.198	9.204	-0.006	97	2142806	250.0	260.1	
77 trans-1,3-Dichloropropene	75	9.442	9.448	-0.006	98	815355	250.0	285.4	
78 Ethyl methacrylate	69	9.503	9.503	0.001	90	660861	250.0	331.3	
79 1,1,2-Trichloroethane	97	9.636	9.636	0.000	97	446379	250.0	256.9	
80 Tetrachloroethene	164	9.709	9.709	0.000	96	454535	250.0	236.2	
81 1,3-Dichloropropane	76	9.795	9.795	0.000	96	821795	250.0	261.3	
82 2-Hexanone	43	9.855	9.855	0.000	97	741341	500.0	565.4	
84 Chlorodibromomethane	129	10.008	10.007	0.001	91	537920	250.0	273.7	
85 Ethylene Dibromide	107	10.123	10.123	0.000	100	464585	250.0	261.5	
87 Chlorobenzene	112	10.610	10.610	0.000	92	1438100	250.0	261.9	
89 1,1,1,2-Tetrachloroethane	131	10.701	10.701	0.000	89	538460	250.0	255.8	
90 Ethylbenzene	106	10.707	10.707	0.000	99	766056	250.0	271.1	
91 m-Xylene & p-Xylene	106	10.835	10.835	0.000	0	953944	250.0	273.7	
92 o-Xylene	106	11.218	11.218	0.000	98	925271	250.0	278.2	
93 Styrene	104	11.236	11.242	-0.006	94	1640160	250.0	280.6	
94 Bromoform	173	11.419	11.425	-0.006	97	340913	250.0	270.5	
97 Isopropylbenzene	105	11.583	11.583	0.000	96	2518639	250.0	275.6	
99 1,1,2,2-Tetrachloroethane	83	11.900	11.899	0.001	73	544317	250.0	261.9	
100 Bromobenzene	156	11.900	11.905	-0.005	96	650386	250.0	270.0	
102 trans-1,4-Dichloro-2-buten	53	11.936	11.942	-0.006	85	227080	250.0	271.6	
101 1,2,3-Trichloropropane	110	11.954	11.954	0.000	85	210489	250.0	274.0	
103 N-Propylbenzene	120	12.003	11.997	0.006	99	672639	250.0	273.9	
104 2-Chlorotoluene	126	12.088	12.094	-0.006	95	580737	250.0	276.3	
106 1,3,5-Trimethylbenzene	105	12.179	12.179	0.000	93	2125099	250.0	280.9	
107 4-Chlorotoluene	126	12.210	12.216	-0.006	98	626647	250.0	276.8	
108 tert-Butylbenzene	119	12.496	12.496	0.000	93	1724184	250.0	279.9	
110 1,2,4-Trimethylbenzene	105	12.557	12.556	0.001	98	2142309	250.0	283.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
112 sec-Butylbenzene	105	12.721	12.721	0.000	95	2339448	250.0	275.7	
113 1,3-Dichlorobenzene	146	12.842	12.842	0.000	98	1174054	250.0	261.9	
114 4-Isopropyltoluene	119	12.873	12.873	0.000	97	2119386	250.0	282.4	
115 1,4-Dichlorobenzene	146	12.940	12.946	-0.006	94	1210940	250.0	260.2	
120 n-Butylbenzene	91	13.280	13.280	0.000	98	1664070	250.0	280.8	
121 1,2-Dichlorobenzene	146	13.299	13.305	-0.006	98	1075621	250.0	262.2	
122 1,2-Dibromo-3-Chloropropan	75	14.090	14.089	0.001	80	96744	250.0	262.7	
126 1,2,4-Trichlorobenzene	180	14.917	14.911	0.006	94	393827	250.0	323.4	
127 Hexachlorobutadiene	225	15.051	15.051	0.000	96	192630	250.0	277.2	
128 Naphthalene	128	15.185	15.184	0.001	97	1063026	250.0	224.3	
129 1,2,3-Trichlorobenzene	180	15.416	15.416	0.000	95	319597	250.0	312.9	
S 133 Xylenes, Total	106				0		500.0	551.9	
S 134 1,2-Dichloroethene, Total	96				0		500.0	495.8	
S 154 Total BTEX	106				0		1250.0	1335.9	
S 135 1,3-Dichloropropene, Total	1				0		500.0	574.2	

Reagents:

VOA8260SURR_00099	Amount Added: 10.00	Units: uL	
voaWKetmix1st_00018	Amount Added: 10.00	Units: uL	
VOA8260VOAPRI_00373	Amount Added: 10.00	Units: uL	
VOAACRPRI_00021	Amount Added: 11.00	Units: uL	
VOAVAPRI_00027	Amount Added: 10.00	Units: uL	
VOA8260INT_00099	Amount Added: 2.00	Units: uL	Run Reagent

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092011.D

Injection Date: 20-Sep-2019 14:21:30

Instrument ID: CHHP5

Operator ID: 433269

Lims ID: IC VSTD50

Worklist Smp#: 11

Client ID:

Purge Vol: 5.000 mL

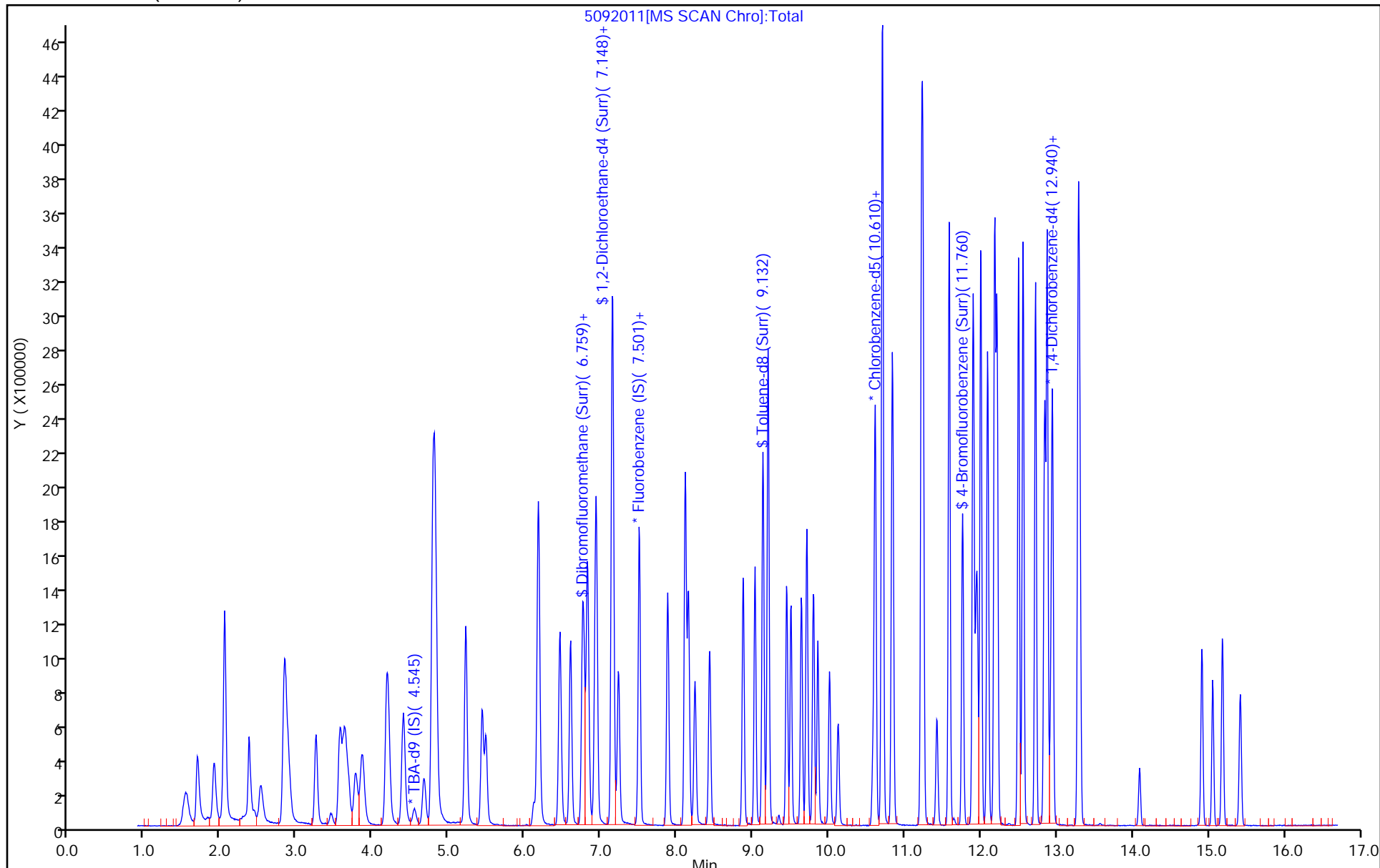
Dil. Factor: 1.0000

ALS Bottle#: 11

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Lims ID: IC VSTD1
 Client ID:
 Sample Type: IC Calib Level: 1
 Inject. Date: 20-Sep-2019 16:22:30 ALS Bottle#: 16 Worklist Smp#: 19
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028737-019
 Misc. Info.: IC VSTD1
 Operator ID: 433269 Instrument ID: CHHP5
 Sublist: chrom-MSVOA_LL_CHHP5*sub146
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 21-Sep-2019 09:17:45 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0334

First Level Reviewer: bowieh

Date: 21-Sep-2019 08:39:56

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.540	4.538	0.002	0	113040	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.497	7.501	-0.004	97	247658	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.581	10.579	0.002	90	60233	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.917	12.915	0.002	96	101657	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.779	6.783	-0.004	93	8022	5.00	5.61	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.138	7.148	-0.010	0	14857	5.00	6.17	
\$ 7 Toluene-d8 (Surr)	98	9.133	9.138	-0.005	95	24313	5.00	5.07	
\$ 8 4-Bromofluorobenzene (Surr	95	11.761	11.759	0.002	89	9549	5.00	4.84	
11 Dichlorodifluoromethane	85	1.693	1.691	0.002	95	14359	5.00	5.59	
12 Chloromethane	50	1.906	1.910	-0.004	68	12390	5.00	5.84	
13 Vinyl chloride	62	2.034	2.044	-0.010	57	10932	5.00	5.49	
14 Butadiene	39	2.052	2.050	0.002	97	12644	5.00	5.75	
15 Bromomethane	94	2.381	2.385	-0.004	31	8759	5.00	5.76	
16 Chloroethane	64	2.551	2.531	0.020	70	8203	5.00	6.13	
17 Dichlorofluoromethane	67	2.837	2.835	0.002	98	18143	5.00	5.35	
18 Trichlorofluoromethane	101	2.867	2.859	0.008	78	21445	5.00	5.95	
20 Ethyl ether	59	3.245	3.249	-0.004	94	9660	5.00	6.33	
21 Acrolein	56	3.457	3.456	0.001	96	29270	100.0	112.6	
22 1,1-Dichloroethene	96	3.561	3.565	-0.004	76	8174	5.00	6.25	
23 1,1,2-Trichloro-1,2,2-trif	101	3.646	3.632	0.014	57	7844	5.00	5.19	
24 Acetone	43	3.676	3.687	-0.011	95	19221	25.0	30.5	
25 Iodomethane	142	3.792	3.778	0.014	72	11881	5.00	5.21	
26 Carbon disulfide	76	3.853	3.869	-0.016	99	18419	5.00	5.17	
28 3-Chloro-1-propene	76	4.175	4.186	-0.011	79	4393	5.00	5.70	
30 Methyl acetate	43	4.206	4.210	-0.004	93	14885	10.0	11.7	
31 Methylene Chloride	84	4.406	4.398	0.008	92	18138	5.00	4.84	
32 2-Methyl-2-propanol	59	4.662	4.666	-0.004	44	6485	50.0	52.8	
33 Acrylonitrile	53	4.784	4.794	-0.010	94	31326	50.0	54.6	
34 trans-1,2-Dichloroethene	96	4.814	4.812	0.002	93	9023	5.00	6.12	
35 Methyl tert-butyl ether	73	4.826	4.824	0.002	97	23887	5.00	5.37	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	5.222	5.226	-0.004	85	14001	5.00	6.02	
37 1,1-Dichloroethane	63	5.447	5.439	0.008	96	14937	5.00	5.30	
38 Vinyl acetate	43	5.489	5.487	0.002	95	13876	5.00	5.18	
44 2,2-Dichloropropane	97	6.165	6.169	-0.004	53	1854	5.00	5.28	M
45 cis-1,2-Dichloroethene	96	6.171	6.175	-0.004	86	9377	5.00	5.76	
46 2-Butanone (MEK)	43	6.195	6.193	0.002	99	20900	25.0	28.0	
49 Chlorobromomethane	128	6.457	6.455	0.002	92	5401	5.00	6.11	
51 Tetrahydrofuran	42	6.475	6.473	0.002	72	4288	10.0	9.88	
52 Chloroform	83	6.603	6.601	0.002	97	23272	5.00	4.91	
53 1,1,1-Trichloroethane	97	6.761	6.759	0.002	92	14077	5.00	5.18	
54 Cyclohexane	56	6.822	6.826	-0.004	92	13170	5.00	5.01	
56 Carbon tetrachloride	117	6.919	6.929	-0.010	91	13540	5.00	5.63	
55 1,1-Dichloropropene	75	6.943	6.941	0.002	91	12575	5.00	5.63	
57 Isobutyl alcohol	41	7.138	7.142	-0.004	65	6211	125.0	128.0	
58 Benzene	78	7.162	7.160	0.002	97	33758	5.00	5.52	
59 1,2-Dichloroethane	62	7.223	7.227	-0.004	98	15931	5.00	5.33	a
62 n-Heptane	43	7.509	7.507	0.002	39	10014	5.00	5.14	
64 Trichloroethene	130	7.886	7.884	0.002	93	9711	5.00	5.87	
66 Methylcyclohexane	83	8.105	8.109	-0.004	90	11908	5.00	4.60	
67 1,2-Dichloropropane	63	8.148	8.152	-0.004	81	9697	5.00	6.41	
70 1,4-Dioxane	88	8.227	8.231	-0.004	35	636	100.0	101.4	
68 Dibromomethane	93	8.239	8.243	-0.004	91	5995	5.00	5.84	
71 Dichlorobromomethane	83	8.428	8.432	-0.004	96	13055	5.00	5.71	
74 cis-1,3-Dichloropropene	75	8.878	8.876	0.002	89	10799	5.00	4.82	
75 4-Methyl-2-pentanone (MIBK)	43	9.030	9.028	0.002	96	30684	25.0	22.3	
76 Toluene	91	9.206	9.204	0.002	98	33415	5.00	5.35	
77 trans-1,3-Dichloropropene	75	9.444	9.448	-0.004	95	9915	5.00	4.58	
78 Ethyl methacrylate	69	9.492	9.503	-0.010	88	6542	5.00	4.33	
79 1,1,2-Trichloroethane	97	9.638	9.636	0.002	93	6958	5.00	5.29	
80 Tetrachloroethene	164	9.711	9.709	0.002	94	9258	5.00	6.35	
81 1,3-Dichloropropane	76	9.790	9.795	-0.005	93	13741	5.00	5.77	
82 2-Hexanone	43	9.851	9.855	-0.004	94	20700	25.0	20.8	
84 Chlorodibromomethane	129	10.015	10.007	0.008	92	6645	5.00	4.46	a
85 Ethylene Dibromide	107	10.131	10.123	0.008	96	7234	5.00	5.37	
87 Chlorobenzene	112	10.612	10.610	0.002	94	23675	5.00	5.69	
89 1,1,1,2-Tetrachloroethane	131	10.703	10.701	0.002	48	8408	5.00	5.27	
90 Ethylbenzene	106	10.709	10.707	0.002	98	10557	5.00	4.93	
91 m-Xylene & p-Xylene	106	10.831	10.835	-0.004	0	11357	5.00	4.30	
92 o-Xylene	106	11.220	11.218	0.002	96	10780	5.00	4.28	
93 Styrene	104	11.244	11.242	0.002	93	17080	5.00	3.86	
94 Bromoform	173	11.415	11.425	-0.010	93	4362	5.00	4.57	
97 Isopropylbenzene	105	11.579	11.583	-0.004	96	28455	5.00	4.11	
99 1,1,2,2-Tetrachloroethane	83	11.901	11.899	0.002	78	7561	5.00	4.80	
100 Bromobenzene	156	11.901	11.905	-0.004	97	9162	5.00	5.40	
102 trans-1,4-Dichloro-2-buten	53	11.926	11.942	-0.016	1	3312	5.00	5.63	
101 1,2,3-Trichloropropane	110	11.962	11.954	0.008	82	4186	5.00	5.08	
103 N-Propylbenzene	120	11.999	11.997	0.002	98	7403	5.00	4.28	
104 2-Chlorotoluene	126	12.096	12.094	0.002	93	6524	5.00	4.41	
106 1,3,5-Trimethylbenzene	105	12.187	12.179	0.008	90	23033	5.00	4.32	
107 4-Chlorotoluene	126	12.212	12.216	-0.004	98	7228	5.00	4.53	
108 tert-Butylbenzene	119	12.491	12.496	-0.005	92	19380	5.00	4.47	
110 1,2,4-Trimethylbenzene	105	12.552	12.556	-0.004	98	19651	5.00	3.69	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
112 sec-Butylbenzene	105	12.717	12.721	-0.005	96	26649	5.00	4.46	
113 1,3-Dichlorobenzene	146	12.844	12.842	0.002	96	17678	5.00	5.60	
114 4-Isopropyltoluene	119	12.875	12.873	0.002	95	20901	5.00	3.95	
115 1,4-Dichlorobenzene	146	12.942	12.946	-0.004	91	18787	5.00	5.73	
120 n-Butylbenzene	91	13.282	13.280	0.002	96	17815	5.00	4.27	
121 1,2-Dichlorobenzene	146	13.307	13.305	0.002	95	16411	5.00	5.68	
122 1,2-Dibromo-3-Chloropropan	75	14.091	14.089	0.002	1	1355	5.00	5.23	
126 1,2,4-Trichlorobenzene	180	14.907	14.911	-0.004	87	4492	5.00	5.24	M
127 Hexachlorobutadiene	225	15.053	15.051	0.002	81	3881	5.00	5.06	
128 Naphthalene	128	15.180	15.184	-0.004	94	6780	5.00	3.85	
129 1,2,3-Trichlorobenzene	180	15.424	15.416	0.008	89	4424	5.00	6.15	
S 133 Xylenes, Total	106				0		10.0	8.58	
S 134 1,2-Dichloroethene, Total	96				0		10.0	11.9	
S 154 Total BTEX	106				0		25.0	24.4	
S 135 1,3-Dichloropropene, Total	1				0		10.0	9.40	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

VOAACRPRI_00021	Amount Added: 4.00	Units: uL	
VOAVAPRI_00027	Amount Added: 0.20	Units: uL	
VOA8260SURR_00099	Amount Added: 0.20	Units: uL	
voaWKetmix1st_00018	Amount Added: 0.80	Units: uL	
VOA8260VOAPRI_00373	Amount Added: 0.20	Units: uL	
VOA8260INT_00099	Amount Added: 2.00	Units: uL	Run Reagent

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D

Injection Date: 20-Sep-2019 16:22:30

Instrument ID: CHHP5

Operator ID: 433269

Lims ID: IC VSTD1

Worklist Smp#: 19

Client ID:

Purge Vol: 5.000 mL

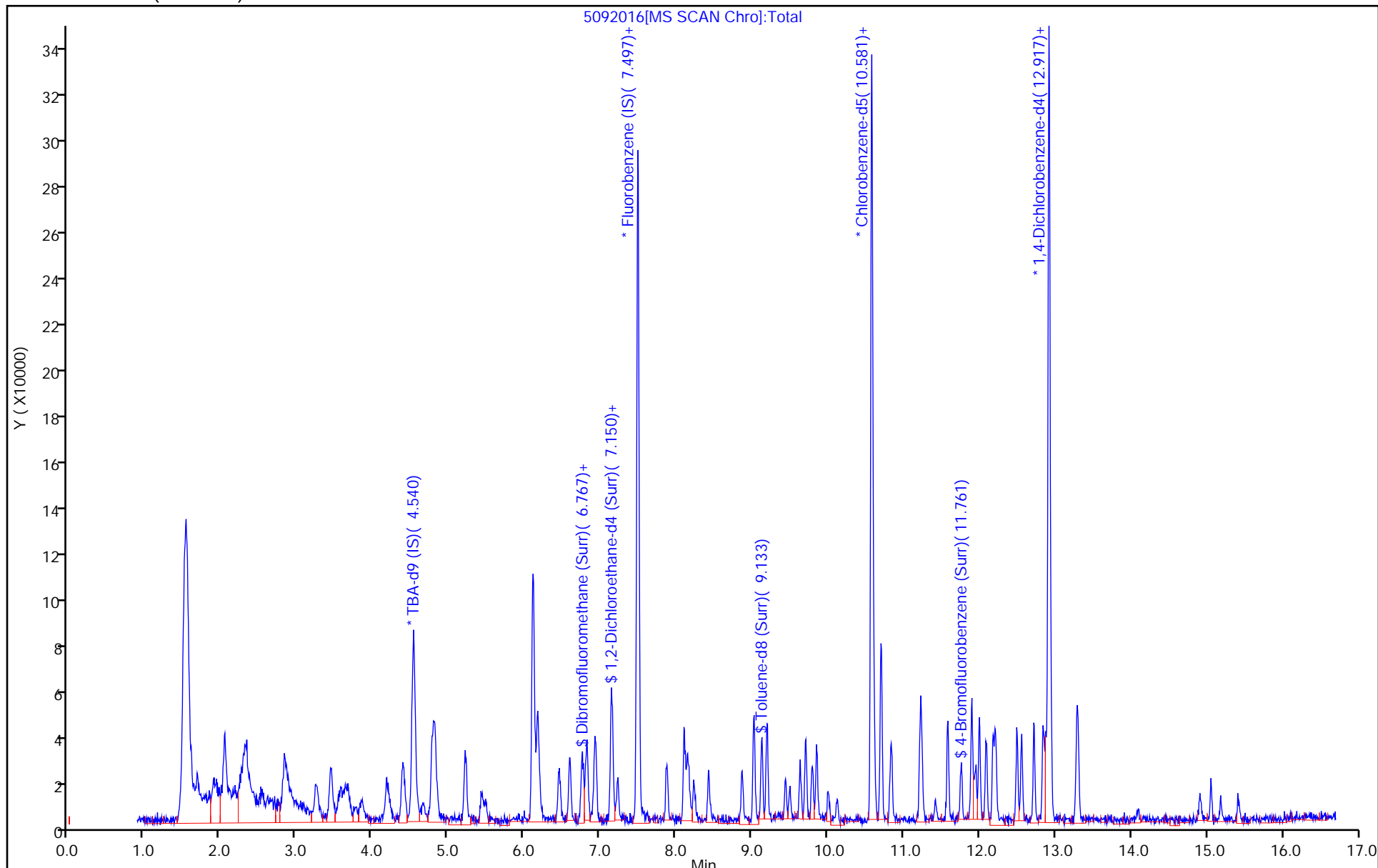
Dil. Factor: 1.0000

ALS Bottle#: 16

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh

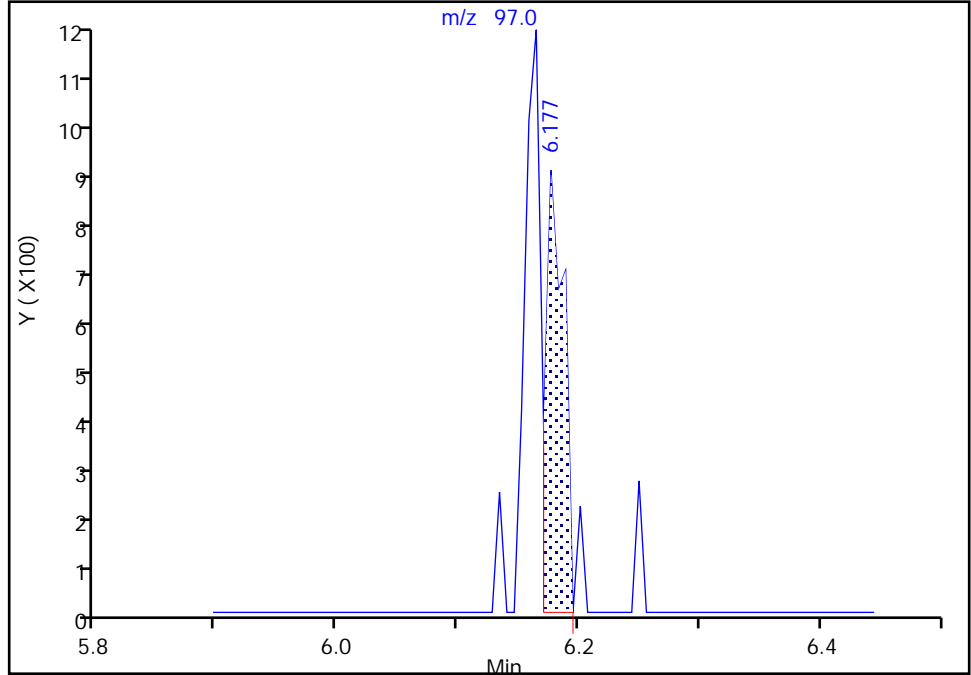
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Injection Date: 20-Sep-2019 16:22:30 Instrument ID: CHHP5
Lims ID: IC VSTD1
Client ID:
Operator ID: 433269 ALS Bottle#: 16 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

44 2,2-Dichloropropane, CAS: 594-20-7

Signal: 1

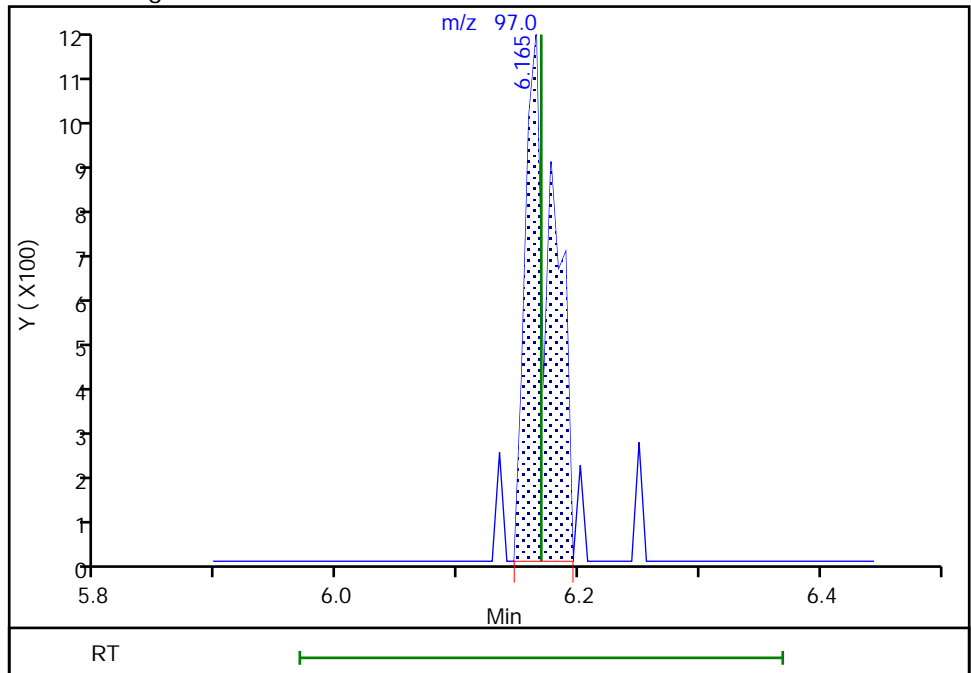
RT: 6.18
Area: 933
Amount: 2.843344
Amount Units: ng

Processing Integration Results



RT: 6.16
Area: 1854
Amount: 5.279648
Amount Units: ng

Manual Integration Results



Reviewer: bowieh, 21-Sep-2019 08:33:49
Audit Action: Manually Integrated

Audit Reason: Poor chromatography
Page 439 of 583

Eurofins TestAmerica, Pittsburgh

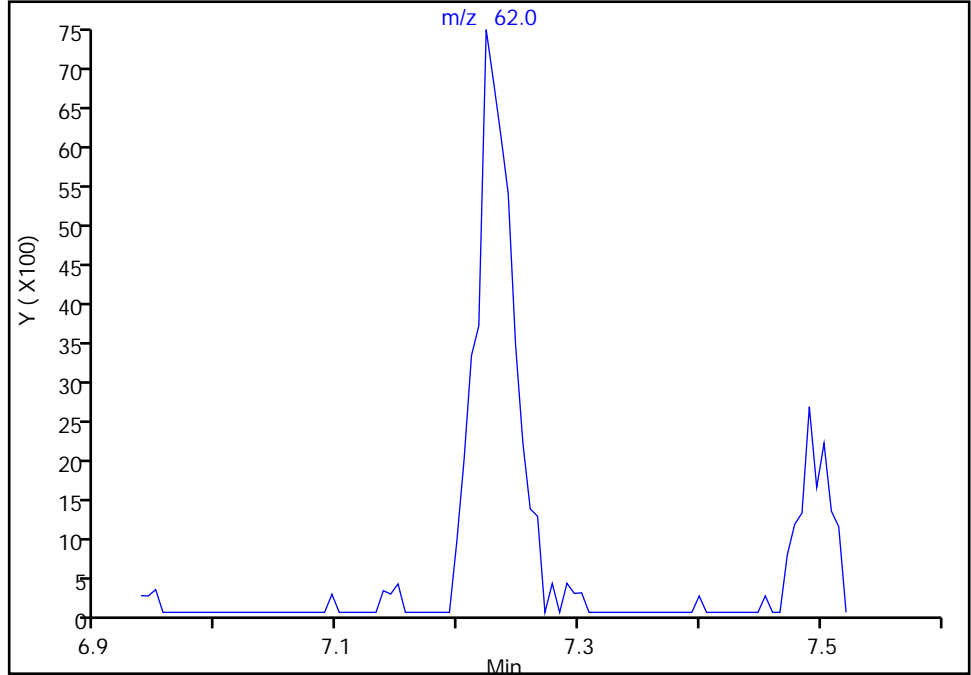
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Injection Date: 20-Sep-2019 16:22:30 Instrument ID: CHHP5
Lims ID: IC VSTD1
Client ID:
Operator ID: 433269 ALS Bottle#: 16 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

59 1,2-Dichloroethane, CAS: 107-06-2

Signal: 1

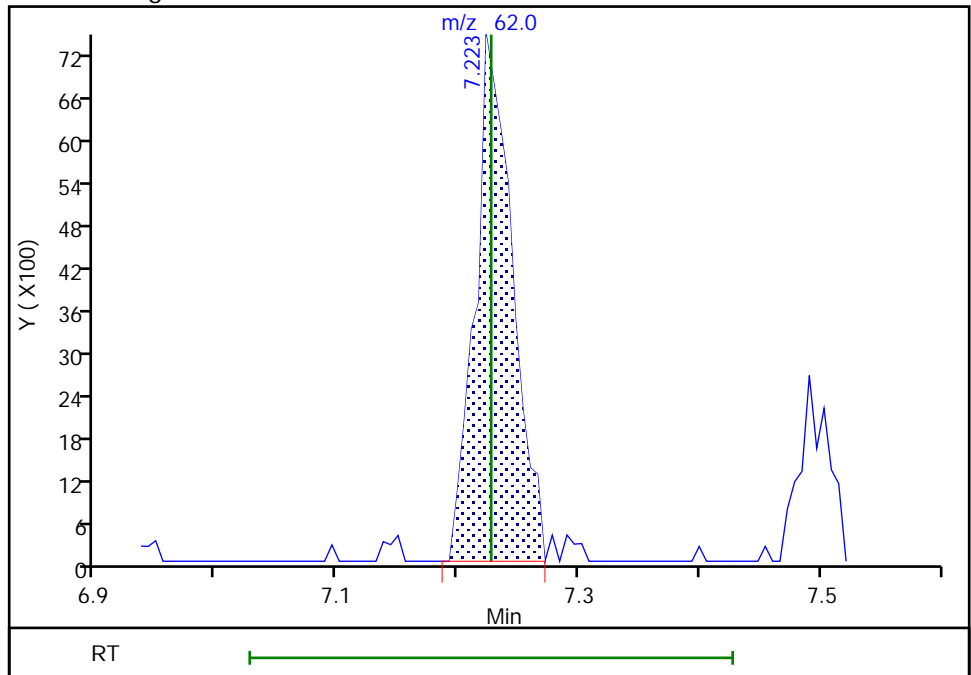
Not Detected
Expected RT: 7.23

Processing Integration Results



Manual Integration Results

RT: 7.22
Area: 15931
Amount: 5.327016
Amount Units: ng



Eurofins TestAmerica, Pittsburgh

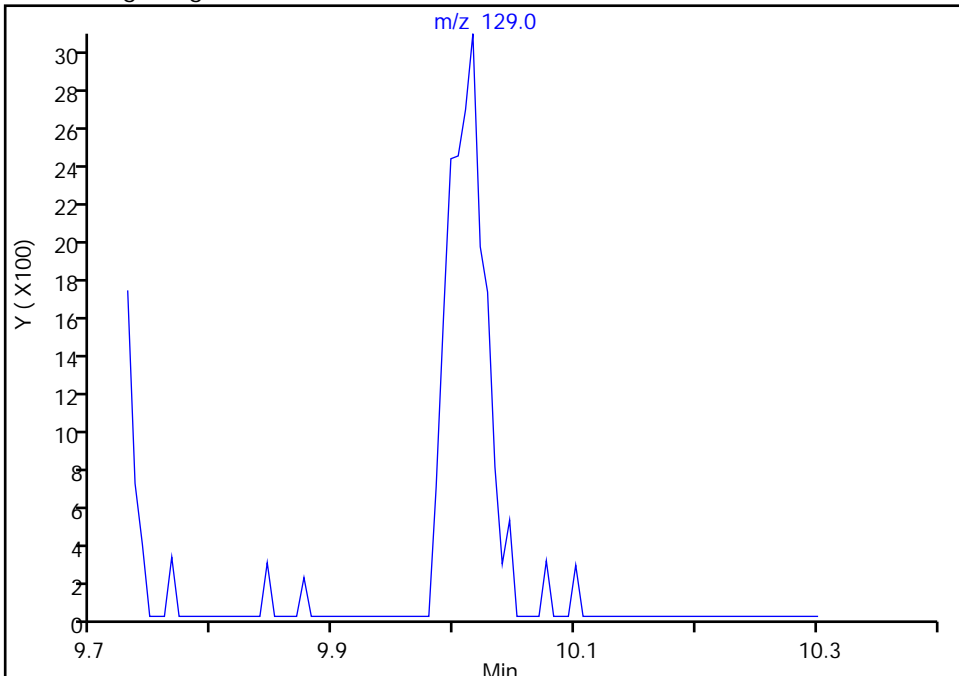
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Injection Date: 20-Sep-2019 16:22:30 Instrument ID: CHHP5
Lims ID: IC VSTD1
Client ID:
Operator ID: 433269 ALS Bottle#: 16 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

84 Chlorodibromomethane, CAS: 124-48-1

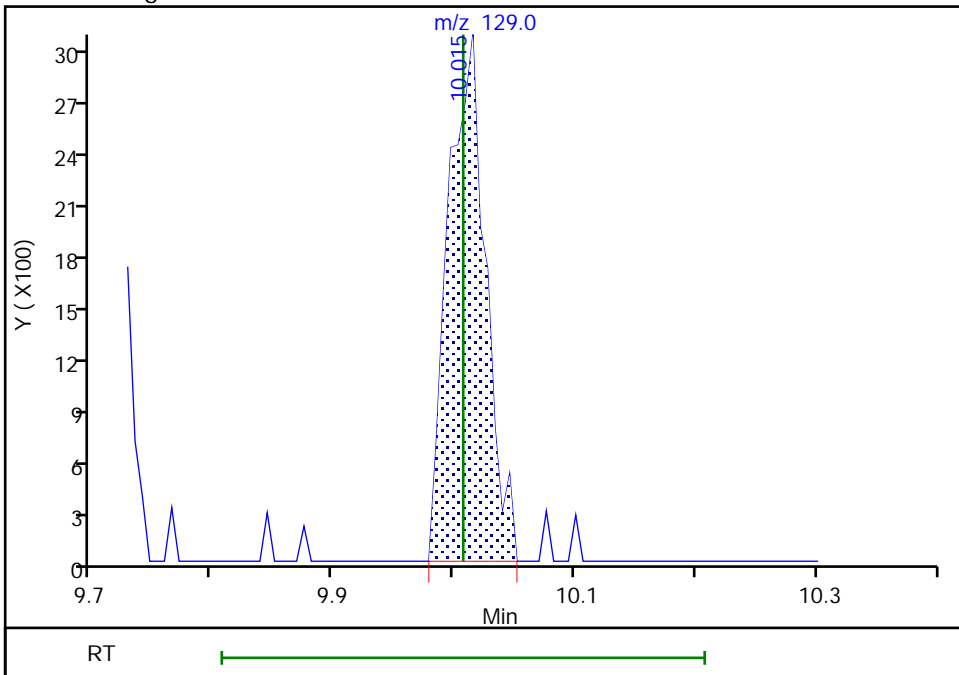
Signal: 1

Not Detected
Expected RT: 10.01

Processing Integration Results



Manual Integration Results



RT: 10.02
Area: 6645
Amount: 4.462432
Amount Units: ng

Eurofins TestAmerica, Pittsburgh

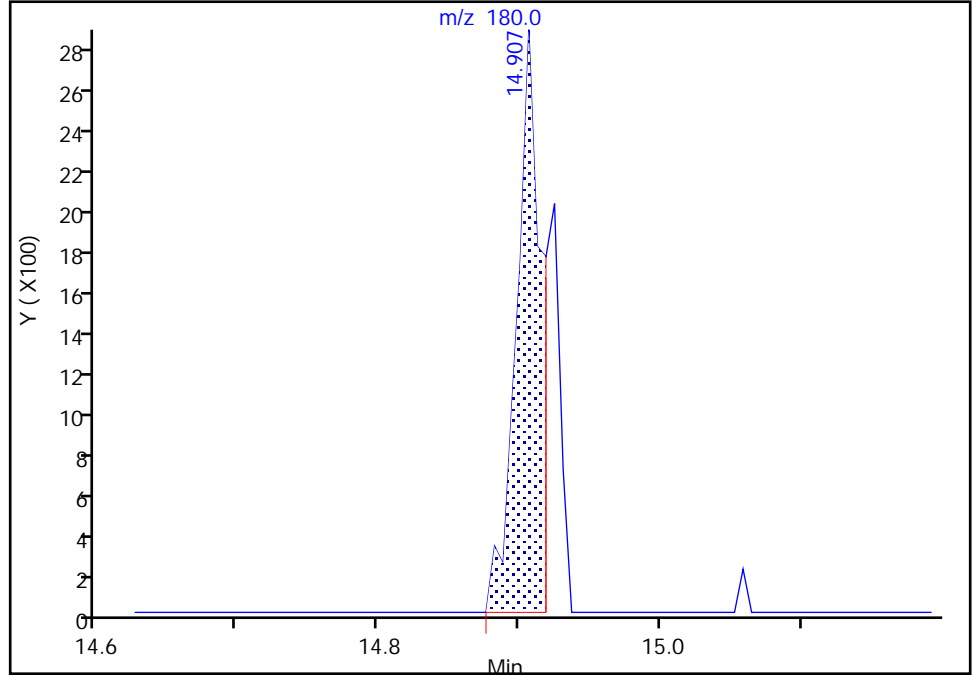
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Injection Date: 20-Sep-2019 16:22:30 Instrument ID: CHHP5
Lims ID: IC VSTD1
Client ID:
Operator ID: 433269 ALS Bottle#: 16 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

126 1,2,4-Trichlorobenzene, CAS: 120-82-1

Signal: 1

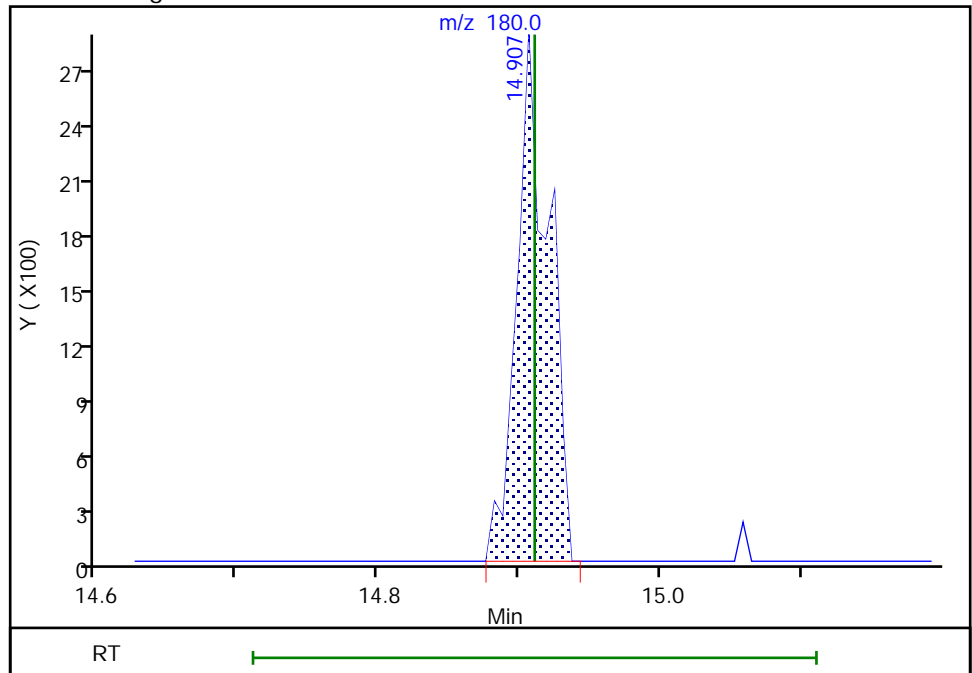
RT: 14.91
Area: 3508
Amount: 3.855293
Amount Units: ng

Processing Integration Results



RT: 14.91
Area: 4492
Amount: 5.238397
Amount Units: ng

Manual Integration Results



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1

SDG No.: _____

Lab Sample ID: CCVIS 180-292962/3 Calibration Date: 09/27/2019 14:39

Instrument ID: CHHP5 Calib Start Date: 09/20/2019 11:54

GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 09/20/2019 16:22

Lab File ID: 5092707.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.5189	0.5101	0.1000	9.83	10.0	-1.7	20.0
Chloromethane	Ave	0.4280	0.4621	0.1000	10.8	10.0	8.0	20.0
Vinyl chloride	Ave	0.4017	0.4356	0.1000	10.8	10.0	8.4	20.0
1,3-Butadiene	Ave	0.4440	0.4829	0.0100	10.9	10.0	8.8	20.0
Bromomethane	Ave	0.3069	0.3061	0.0500	9.97	10.0	-0.3	20.0
Chloroethane	Ave	0.2702	0.2780	0.0500	10.3	10.0	2.9	20.0
Dichlorofluoromethane	Ave	0.6842	0.6909	0.0100	10.1	10.0	1.0	20.0
Trichlorofluoromethane	Ave	0.7279	0.6942	0.1000	9.54	10.0	-4.6	20.0
Ethyl ether	Ave	0.3081	0.2948	0.0100	9.57	10.0	-4.3	20.0
1,1-Dichloroethene	Ave	0.2640	0.2678	0.1000	10.1	10.0	1.4	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.3053	0.3322	0.1000	10.9	10.0	8.8	20.0
Acetone	Ave	0.1272	0.1470	0.0500	23.1	20.0	15.6	20.0
Iodomethane	Ave	0.4601	0.4733	0.0100	10.3	10.0	2.9	20.0
Carbon disulfide	Ave	0.7187	0.7581	0.1000	10.5	10.0	5.5	20.0
Allyl chloride	Ave	0.1557	0.1666	0.0100	10.7	10.0	7.0	20.0
Methyl acetate	Ave	0.2565	0.2460	0.1000	19.2	20.0	-4.1	20.0
Methylene Chloride	Lin2		0.3911	0.1000	11.0	10.0	9.8	20.0
tert-Butyl alcohol	Ave	1.086	1.063	0.0100	97.8	100	-2.2	20.0
Acrylonitrile	Ave	0.1159	0.1204	0.0100	104	100	3.9	20.0
trans-1,2-Dichloroethene	Ave	0.2975	0.3169	0.1000	10.7	10.0	6.5	20.0
Methyl tert-butyl ether	Ave	0.8983	0.8534	0.1000	9.50	10.0	-5.0	20.0
Hexane	Ave	0.4693	0.4720	0.0100	10.1	10.0	0.6	20.0
1,1-Dichloroethane	Ave	0.5690	0.5780	0.2000	10.2	10.0	1.6	20.0
2,2-Dichloropropane	Ave	0.0709	0.0789	0.0100	11.1	10.0	11.3	20.0
cis-1,2-Dichloroethene	Ave	0.3285	0.3201	0.1000	9.74	10.0	-2.6	20.0
2-Butanone (MEK)	Ave	0.1509	0.1613	0.0500	21.4	20.0	6.9	20.0
Bromochloromethane	Ave	0.1785	0.1798	0.0100	10.1	10.0	0.7	20.0
Tetrahydrofuran	Ave	0.0877	0.0926	0.0100	21.1	20.0	5.6	20.0
Chloroform	Lin2		0.6100	0.2000	9.32	10.0	-6.8	20.0
1,1,1-Trichloroethane	Ave	0.5487	0.5373	0.1000	9.79	10.0	-2.1	20.0
Cyclohexane	Ave	0.5308	0.5564	0.1000	10.5	10.0	4.8	20.0
Carbon tetrachloride	Ave	0.4851	0.4911	0.1000	10.1	10.0	1.2	20.0
1,1-Dichloropropene	Ave	0.4509	0.4483	0.0100	9.94	10.0	-0.6	20.0
Isobutyl alcohol	Ave	0.0098	0.0103	0.0100	263	250	5.0	20.0
Benzene	Ave	1.235	1.320	0.5000	10.7	10.0	6.9	20.0
1,2-Dichloroethane	Ave	0.6038	0.5387	0.1000	8.92	10.0	-10.8	20.0
n-Heptane	Ave	0.3936	0.3998	0.0100	10.2	10.0	1.6	20.0
Trichloroethene	Ave	0.3338	0.3414	0.2000	10.2	10.0	2.3	20.0
Methylcyclohexane	Ave	0.5227	0.5280	0.1000	10.1	10.0	1.0	20.0
1,2-Dichloropropane	Ave	0.3052	0.3081	0.1000	10.1	10.0	1.0	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Lab Sample ID: CCVIS 180-292962/3 Calibration Date: 09/27/2019 14:39
 Instrument ID: CHHP5 Calib Start Date: 09/20/2019 11:54
 GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 09/20/2019 16:22
 Lab File ID: 5092707.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Lin2		0.0021*	0.0100	226	200	12.8	20.0
Dibromomethane	Ave	0.2072	0.1896	0.0100	9.15	10.0	-8.5	20.0
Bromodichloromethane	Ave	0.4615	0.4358	0.2000	9.44	10.0	-5.6	20.0
cis-1,3-Dichloropropene	Ave	0.4527	0.4294	0.2000	9.49	10.0	-5.1	20.0
4-Methyl-2-pentanone (MIBK)	Ave	1.141	1.123	0.1000	19.7	20.0	-1.6	20.0
Toluene	Ave	5.182	5.398	0.4000	10.4	10.0	4.2	20.0
trans-1,3-Dichloropropene	Ave	1.797	1.702	0.1000	9.47	10.0	-5.3	20.0
Ethyl methacrylate	Ave	1.255	1.308	0.0100	10.4	10.0	4.3	20.0
1,1,2-Trichloroethane	Ave	1.093	1.115	0.1000	10.2	10.0	2.0	20.0
Tetrachloroethene	Ave	1.210	1.240	0.2000	10.2	10.0	2.5	20.0
1,3-Dichloropropane	Ave	1.978	1.930	0.0100	9.76	10.0	-2.4	20.0
2-Hexanone	Ave	0.8248	0.8643	0.1000	21.0	20.0	4.8	20.0
Dibromochloromethane	Ave	1.236	1.137	0.1000	9.20	10.0	-8.0	20.0
1,2-Dibromoethane (EDB)	Ave	1.118	1.055	0.1000	9.44	10.0	-5.6	20.0
Chlorobenzene	Ave	3.454	3.493	0.5000	10.1	10.0	1.1	20.0
1,1,1,2-Tetrachloroethane	Ave	1.324	1.267	0.0100	9.57	10.0	-4.3	20.0
Ethylbenzene	Ave	1.778	1.793	0.1000	10.1	10.0	0.9	20.0
m-Xylene & p-Xylene	Ave	2.192	2.256	0.1000	10.3	10.0	2.9	20.0
o-Xylene	Ave	2.092	2.038	0.3000	9.74	10.0	-2.6	20.0
Styrene	Ave	3.676	3.670	0.3000	9.98	10.0	-0.2	20.0
Bromoform	Ave	0.7926	0.7015	0.1000	8.85	10.0	-11.5	20.0
Isopropylbenzene	Ave	5.747	5.641	0.1000	9.81	10.0	-1.9	20.0
1,1,2,2-Tetrachloroethane	Ave	1.307	1.288	0.3000	9.85	10.0	-1.5	20.0
Bromobenzene	Ave	0.8343	0.8476	0.0100	10.2	10.0	1.6	20.0
trans-1,4-Dichloro-2-butene	Ave	0.2895	0.2640	0.0100	9.12	10.0	-8.8	20.0
1,2,3-Trichloropropane	Lin2		0.2914	0.0100	10.5	10.0	5.2	20.0
N-Propylbenzene	Ave	0.8506	0.9064	0.0100	10.7	10.0	6.6	20.0
2-Chlorotoluene	Ave	0.7278	0.7850	0.0100	10.8	10.0	7.9	20.0
1,3,5-Trimethylbenzene	Ave	2.620	2.658	0.0100	10.1	10.0	1.4	20.0
4-Chlorotoluene	Ave	0.7842	0.8397	0.0100	10.7	10.0	7.1	20.0
tert-Butylbenzene	Ave	2.133	2.044	0.0100	9.58	10.0	-4.2	20.0
1,2,4-Trimethylbenzene	Ave	2.617	2.668	0.0100	10.2	10.0	1.9	20.0
sec-Butylbenzene	Ave	2.939	2.978	0.0100	10.1	10.0	1.3	20.0
1,3-Dichlorobenzene	Ave	1.553	1.515	0.6000	9.76	10.0	-2.4	20.0
4-Isopropyltoluene	Ave	2.599	2.585	0.0100	9.95	10.0	-0.5	20.0
1,4-Dichlorobenzene	Ave	1.612	1.532	0.5000	9.51	10.0	-4.9	20.0
n-Butylbenzene	Ave	2.053	1.880	0.0100	9.16	10.0	-8.4	20.0
1,2-Dichlorobenzene	Ave	1.421	1.391	0.4000	9.79	10.0	-2.1	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.1275	0.1145	0.0500	8.98	10.0	-10.2	20.0
1,2,4-Trichlorobenzene	Ave	0.4218	0.3995	0.2000	9.47	10.0	-5.3	20.0
Hexachlorobutadiene	Lin2		0.2536	0.0100	10.1	10.0	0.6	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Lab Sample ID: CCVIS 180-292962/3 Calibration Date: 09/27/2019 14:39
 Instrument ID: CHHP5 Calib Start Date: 09/20/2019 11:54
 GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 09/20/2019 16:22
 Lab File ID: 5092707.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Naphthalene	Qua		0.8051	0.0100	10.1	10.0	1.2	20.0
1,2,3-Trichlorobenzene	Ave	0.3537	0.3150	0.0100	8.90	10.0	-11.0	20.0
Dibromofluoromethane (Surr)	Ave	0.2886	0.2619		9.07	10.0	-9.3	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.4862	0.3934		8.09	10.0	-19.1	20.0
Toluene-d8 (Surr)	Ave	3.980	4.069		10.2	10.0	2.2	20.0
4-Bromofluorobenzene (Surr)	Ave	1.636	1.498		9.15	10.0	-8.5	20.0

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092707.D
 Lims ID: CCVIS
 Client ID:
 Sample Type: CCVIS
 Inject. Date: 27-Sep-2019 14:39:30 ALS Bottle#: 3 Worklist Smp#: 3
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028863-003
 Misc. Info.: CCVIS
 Operator ID: 433269 Instrument ID: CHHP5
 Sublist: chrom-MSVOA_LL_CHHP5*sub144
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 28-Sep-2019 10:44:19 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: bowieh

Date: 28-Sep-2019 10:44:19

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.532	4.532	0.000	0	181213	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.495	7.495	0.000	98	362784	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.579	10.579	0.000	88	93124	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.915	12.915	0.000	93	164871	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.777	6.777	0.000	93	95010	50.0	45.4	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.142	7.142	0.000	0	142707	50.0	40.5	
\$ 7 Toluene-d8 (Surr)	98	9.131	9.131	0.000	95	378928	50.0	51.1	
\$ 8 4-Bromofluorobenzene (Surr	95	11.766	11.766	0.000	92	139462	50.0	45.8	
11 Dichlorodifluoromethane	85	1.691	1.691	0.000	99	185042	50.0	49.1	
12 Chloromethane	50	1.910	1.910	0.000	100	167631	50.0	54.0	
13 Vinyl chloride	62	2.038	2.038	0.000	97	158033	50.0	54.2	
14 Butadiene	39	2.050	2.050	0.000	97	175185	50.0	54.4	
15 Bromomethane	94	2.379	2.379	0.000	90	111044	50.0	49.9	
16 Chloroethane	64	2.543	2.543	0.000	99	100846	50.0	51.4	
17 Dichlorofluoromethane	67	2.841	2.841	0.000	97	250628	50.0	50.5	
18 Trichlorofluoromethane	101	2.853	2.853	0.000	82	251858	50.0	47.7	
20 Ethyl ether	59	3.249	3.249	0.000	96	106929	50.0	47.8	
22 1,1-Dichloroethene	96	3.565	3.565	0.000	97	97159	50.0	50.7	
23 1,1,2-Trichloro-1,2,2-trif	101	3.632	3.632	0.000	92	120522	50.0	54.4	
24 Acetone	43	3.668	3.668	0.000	97	106691	100.0	115.6	
25 Iodomethane	142	3.772	3.772	0.000	99	171694	50.0	51.4	
26 Carbon disulfide	76	3.863	3.863	0.000	100	275040	50.0	52.7	
28 3-Chloro-1-propene	76	4.186	4.186	0.000	86	60447	50.0	53.5	
30 Methyl acetate	43	4.210	4.210	0.000	97	178450	100.0	95.9	
31 Methylene Chloride	84	4.405	4.405	0.000	94	141892	50.0	54.9	
32 2-Methyl-2-propanol	59	4.660	4.660	0.000	93	96295	500.0	489.2	
33 Acrylonitrile	53	4.782	4.782	0.000	98	436823	500.0	519.4	
34 trans-1,2-Dichloroethene	96	4.812	4.812	0.000	96	114977	50.0	53.3	
35 Methyl tert-butyl ether	73	4.824	4.824	0.000	98	309611	50.0	47.5	
36 Hexane	57	5.220	5.220	0.000	94	171231	50.0	50.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
37 1,1-Dichloroethane	63	5.439	5.439	0.000	98	209675	50.0	50.8	
44 2,2-Dichloropropane	97	6.169	6.169	0.000	72	28628	50.0	55.7	
45 cis-1,2-Dichloroethene	96	6.181	6.181	0.000	86	116126	50.0	48.7	
46 2-Butanone (MEK)	43	6.187	6.187	0.000	86	117023	100.0	106.9	
49 Chlorobromomethane	128	6.455	6.455	0.000	97	65234	50.0	50.4	
51 Tetrahydrofuran	42	6.467	6.467	0.000	87	67196	100.0	105.6	
52 Chloroform	83	6.595	6.595	0.000	97	221301	50.0	46.6	
53 1,1,1-Trichloroethane	97	6.759	6.759	0.000	98	194932	50.0	49.0	
54 Cyclohexane	56	6.820	6.820	0.000	94	201836	50.0	52.4	
56 Carbon tetrachloride	117	6.929	6.929	0.000	98	178159	50.0	50.6	
55 1,1-Dichloropropene	75	6.935	6.935	0.000	92	162634	50.0	49.7	
57 Isobutyl alcohol	41	7.142	7.142	0.000	83	93300	1250.0	1313.1	
58 Benzene	78	7.154	7.154	0.000	97	478814	50.0	53.4	
59 1,2-Dichloroethane	62	7.233	7.233	0.000	99	195415	50.0	44.6	
62 n-Heptane	43	7.507	7.507	0.000	86	145027	50.0	50.8	
64 Trichloroethene	130	7.878	7.878	0.000	96	123849	50.0	51.1	
66 Methylcyclohexane	83	8.109	8.109	0.000	94	191551	50.0	50.5	
67 1,2-Dichloropropane	63	8.152	8.152	0.000	92	111783	50.0	50.5	
70 1,4-Dioxane	88	8.225	8.225	0.000	40	14992	1000.0	1128.4	
68 Dibromomethane	93	8.237	8.237	0.000	93	68796	50.0	45.8	
71 Dichlorobromomethane	83	8.432	8.432	0.000	99	158093	50.0	47.2	
74 cis-1,3-Dichloropropene	75	8.870	8.870	0.000	91	155788	50.0	47.4	
75 4-Methyl-2-pentanone (MIBK)	43	9.028	9.028	0.000	97	209090	100.0	98.4	
76 Toluene	91	9.198	9.198	0.000	97	502684	50.0	52.1	
77 trans-1,3-Dichloropropene	75	9.448	9.448	0.000	96	158525	50.0	47.4	
78 Ethyl methacrylate	69	9.503	9.503	0.000	92	121847	50.0	52.1	
79 1,1,2-Trichloroethane	97	9.636	9.636	0.000	93	103836	50.0	51.0	
80 Tetrachloroethene	164	9.709	9.709	0.000	97	115483	50.0	51.2	
81 1,3-Dichloropropane	76	9.795	9.795	0.000	95	179749	50.0	48.8	
82 2-Hexanone	43	9.855	9.855	0.000	96	160970	100.0	104.8	
84 Chlorodibromomethane	129	10.007	10.007	0.000	91	105864	50.0	46.0	
85 Ethylene Dibromide	107	10.123	10.123	0.000	97	98289	50.0	47.2	
87 Chlorobenzene	112	10.610	10.610	0.000	93	325257	50.0	50.6	
89 1,1,1,2-Tetrachloroethane	131	10.701	10.701	0.000	89	117964	50.0	47.8	
90 Ethylbenzene	106	10.707	10.707	0.000	99	166995	50.0	50.4	
91 m-Xylene & p-Xylene	106	10.835	10.835	0.000	0	210111	50.0	51.5	
92 o-Xylene	106	11.218	11.218	0.000	98	189812	50.0	48.7	
93 Styrene	104	11.242	11.242	0.000	95	341748	50.0	49.9	
94 Bromoform	173	11.419	11.419	0.000	96	65328	50.0	44.3	
97 Isopropylbenzene	105	11.583	11.583	0.000	96	525320	50.0	49.1	
99 1,1,2,2-Tetrachloroethane	83	11.899	11.899	0.000	77	119989	50.0	49.3	
100 Bromobenzene	156	11.899	11.899	0.000	94	139743	50.0	50.8	
102 trans-1,4-Dichloro-2-buten	53	11.936	11.936	0.000	63	43526	50.0	45.6	
101 1,2,3-Trichloropropane	110	11.954	11.954	0.000	87	48047	50.0	52.6	
103 N-Propylbenzene	120	12.003	12.003	0.000	99	149437	50.0	53.3	
104 2-Chlorotoluene	126	12.088	12.088	0.000	95	129425	50.0	53.9	
106 1,3,5-Trimethylbenzene	105	12.185	12.185	0.000	94	438209	50.0	50.7	
107 4-Chlorotoluene	126	12.216	12.216	0.000	98	138439	50.0	53.5	
108 tert-Butylbenzene	119	12.502	12.502	0.000	93	336980	50.0	47.9	
110 1,2,4-Trimethylbenzene	105	12.556	12.556	0.000	98	439875	50.0	51.0	
112 sec-Butylbenzene	105	12.721	12.721	0.000	95	491026	50.0	50.7	
113 1,3-Dichlorobenzene	146	12.842	12.842	0.000	98	249779	50.0	48.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
114 4-Isopropyltoluene	119	12.873	12.873	0.000	97	426260	50.0	49.7	
115 1,4-Dichlorobenzene	146	12.946	12.946	0.000	93	252637	50.0	47.5	
120 n-Butylbenzene	91	13.286	13.286	0.000	97	309966	50.0	45.8	
121 1,2-Dichlorobenzene	146	13.305	13.305	0.000	96	229348	50.0	48.9	
122 1,2-Dibromo-3-Chloropropan	75	14.096	14.096	0.000	78	18880	50.0	44.9	
126 1,2,4-Trichlorobenzene	180	14.911	14.911	0.000	91	65862	50.0	47.4	
127 Hexachlorobutadiene	225	15.057	15.057	0.000	93	41815	50.0	50.3	
128 Naphthalene	128	15.184	15.184	0.000	97	132729	50.0	50.6	
129 1,2,3-Trichlorobenzene	180	15.422	15.422	0.000	95	51932	50.0	44.5	
S 154 Total BTEX	106				0		250.0	256.1	
S 134 1,2-Dichloroethene, Total	96				0		100.0	102.0	
S 133 Xylenes, Total	106				0		100.0	100.2	
S 135 1,3-Dichloropropene, Total	1				0		100.0	94.8	

Reagents:

voaWKetmix1st_00018

Amount Added: 2.00

Units: uL

VOA8260VOAPRI_00373

Amount Added: 2.00

Units: uL

voaWI/SHP5_00013

Amount Added: 5.00

Units: uL

Run Reagent

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092707.D

Injection Date: 27-Sep-2019 14:39:30

Instrument ID: CHHP5

Operator ID: 433269

Lims ID: CCVIS

Worklist Smp#: 3

Client ID:

Purge Vol: 5.000 mL

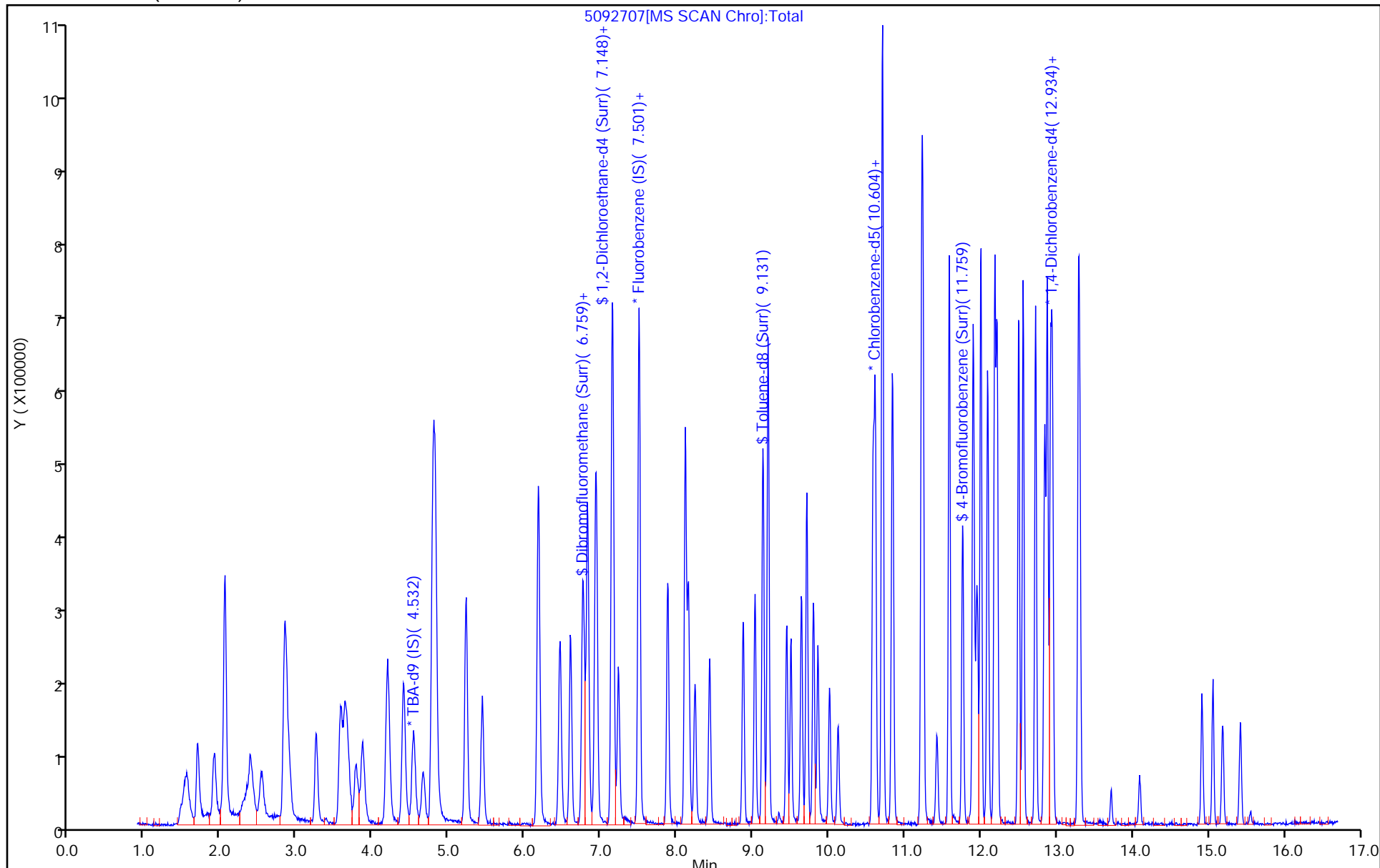
Dil. Factor: 1.0000

ALS Bottle#: 3

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Lab Sample ID: CCVIS 180-293070/2 Calibration Date: 09/28/2019 10:37
 Instrument ID: CHHP5 Calib Start Date: 07/25/2019 16:09
 GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 07/25/2019 18:59
 Lab File ID: 5092802.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Ave	0.1827	0.1578	0.0100	17.3	20.0	-13.7	20.0

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190928-28871.b\5092802.D
 Lims ID: CCVIS
 Client ID:
 Sample Type: CCVIS
 Inject. Date: 28-Sep-2019 10:37:30 ALS Bottle#: 2 Worklist Smp#: 2
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028871-002
 Misc. Info.: CCVIS
 Operator ID: 433269 Instrument ID: CHHP5
 Sublist: chrom-MSVOA_LL_CHHP5*sub142
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190928-28871.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 28-Sep-2019 14:55:53 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: bowieh

Date: 28-Sep-2019 14:55:53

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.550	4.550	0.000	0	214919	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.494	7.494	0.000	98	368623	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.585	10.585	0.000	90	89056	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.921	12.921	0.000	94	173275	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.777	6.777	0.000	92	103642	50.0	48.7	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.142	7.142	0.000	0	142818	50.0	39.8	
\$ 7 Toluene-d8 (Surr)	98	9.131	9.131	0.000	94	358706	50.0	50.6	
\$ 8 4-Bromofluorobenzene (Surr	95	11.765	11.765	0.000	89	141098	50.0	48.4	
11 Dichlorodifluoromethane	85	1.691	1.691	0.000	99	202766	50.0	53.0	
12 Chloromethane	50	1.910	1.910	0.000	99	171992	50.0	54.5	
13 Vinyl chloride	62	2.044	2.044	0.000	79	172124	50.0	58.1	
14 Butadiene	39	2.050	2.050	0.000	96	198982	50.0	60.8	
15 Bromomethane	94	2.372	2.372	0.000	92	121377	50.0	53.6	
16 Chloroethane	64	2.518	2.518	0.000	99	112525	50.0	56.5	
17 Dichlorofluoromethane	67	2.834	2.834	0.000	97	273526	50.0	54.2	
18 Trichlorofluoromethane	101	2.853	2.853	0.000	83	276076	50.0	51.4	
20 Ethyl ether	59	3.248	3.248	0.000	92	127320	50.0	56.0	
21 Acrolein	56	3.443	3.443	0.000	98	22324	150.0	57.7	
22 1,1-Dichloroethene	96	3.565	3.565	0.000	96	110953	50.0	57.0	
23 1,1,2-Trichloro-1,2,2-trif	101	3.638	3.638	0.000	92	129981	50.0	57.8	
24 Acetone	43	3.680	3.680	0.000	97	97091	100.0	103.5	
25 Iodomethane	142	3.765	3.765	0.000	99	186996	50.0	55.1	
26 Carbon disulfide	76	3.863	3.863	0.000	100	293373	50.0	55.4	
28 3-Chloro-1-propene	76	4.185	4.185	0.000	86	62120	50.0	54.1	
30 Methyl acetate	43	4.203	4.203	0.000	98	213802	100.0	113.1	
31 Methylene Chloride	84	4.398	4.398	0.000	93	145772	50.0	55.6	
32 2-Methyl-2-propanol	59	4.672	4.672	0.000	92	117110	500.0	501.7	
33 Acrylonitrile	53	4.787	4.787	0.000	99	500193	500.0	585.3	
34 trans-1,2-Dichloroethene	96	4.812	4.812	0.000	95	120716	50.0	55.0	
35 Methyl tert-butyl ether	73	4.824	4.824	0.000	97	304675	50.0	46.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	5.213	5.213	0.000	92	167689	50.0	48.5	
37 1,1-Dichloroethane	63	5.438	5.438	0.000	97	227144	50.0	54.1	
38 Vinyl acetate	43	5.487	5.487	0.000	97	174677	50.0	43.8	
44 2,2-Dichloropropane	97	6.174	6.174	0.000	69	28964	50.0	55.4	
45 cis-1,2-Dichloroethene	96	6.174	6.174	0.000	86	126097	50.0	52.1	
46 2-Butanone (MEK)	43	6.186	6.186	0.000	95	123054	100.0	110.6	
49 Chlorobromomethane	128	6.454	6.454	0.000	94	63811	50.0	48.5	
51 Tetrahydrofuran	42	6.472	6.472	0.000	86	74126	100.0	114.7	
52 Chloroform	83	6.600	6.600	0.000	96	242440	50.0	50.4	
53 1,1,1-Trichloroethane	97	6.752	6.752	0.000	98	206741	50.0	51.1	
54 Cyclohexane	56	6.819	6.819	0.000	92	204200	50.0	52.2	
56 Carbon tetrachloride	117	6.929	6.929	0.000	98	188038	50.0	52.6	
55 1,1-Dichloropropene	75	6.941	6.941	0.000	93	171639	50.0	51.6	
57 Isobutyl alcohol	41	7.142	7.142	0.000	87	116560	1250.0	1614.4	
58 Benzene	78	7.154	7.154	0.000	98	500397	50.0	55.0	
59 1,2-Dichloroethane	62	7.233	7.233	0.000	98	211230	50.0	47.5	
62 n-Heptane	43	7.507	7.507	0.000	86	138972	50.0	47.9	
64 Trichloroethene	130	7.878	7.878	0.000	98	131274	50.0	53.3	
66 Methylcyclohexane	83	8.109	8.109	0.000	93	181570	50.0	47.1	
67 1,2-Dichloropropane	63	8.151	8.151	0.000	93	122387	50.0	54.4	
70 1,4-Dioxane	88	8.224	8.224	0.000	50	23888	1000.0	1750.5	
68 Dibromomethane	93	8.243	8.243	0.000	92	73403	50.0	48.1	
71 Dichlorobromomethane	83	8.431	8.431	0.000	99	161666	50.0	47.5	
73 2-Chloroethyl vinyl ether	63	8.729	8.729	0.000	94	116321	100.0	86.3	
74 cis-1,3-Dichloropropene	75	8.869	8.869	0.000	92	168367	50.0	50.4	
75 4-Methyl-2-pentanone (MIBK)	43	9.027	9.027	0.000	97	206224	100.0	101.5	
76 Toluene	91	9.204	9.204	0.000	98	518634	50.0	56.2	
77 trans-1,3-Dichloropropene	75	9.447	9.447	0.000	97	152498	50.0	47.6	
78 Ethyl methacrylate	69	9.508	9.508	0.000	90	118554	50.0	53.1	
79 1,1,2-Trichloroethane	97	9.642	9.642	0.000	94	105976	50.0	54.4	
80 Tetrachloroethene	164	9.709	9.709	0.000	97	117524	50.0	54.5	
81 1,3-Dichloropropane	76	9.800	9.800	0.000	95	181822	50.0	51.6	
82 2-Hexanone	43	9.855	9.855	0.000	97	153731	100.0	104.6	
84 Chlorodibromomethane	129	10.013	10.013	0.000	90	107803	50.0	49.0	
85 Ethylene Dibromide	107	10.122	10.122	0.000	99	98904	50.0	49.7	
87 Chlorobenzene	112	10.609	10.609	0.000	93	334489	50.0	54.4	
89 1,1,1,2-Tetrachloroethane	131	10.706	10.706	0.000	93	123396	50.0	52.3	
90 Ethylbenzene	106	10.706	10.706	0.000	99	170063	50.0	53.7	
91 m-Xylene & p-Xylene	106	10.834	10.834	0.000	0	213477	50.0	54.7	
92 o-Xylene	106	11.224	11.224	0.000	98	192611	50.0	51.7	
93 Styrene	104	11.242	11.242	0.000	93	352015	50.0	53.8	
94 Bromoform	173	11.418	11.418	0.000	96	71293	50.0	50.5	
97 Isopropylbenzene	105	11.589	11.589	0.000	96	515124	50.0	50.3	
99 1,1,2,2-Tetrachloroethane	83	11.899	11.899	0.000	92	129509	50.0	55.6	
100 Bromobenzene	156	11.905	11.905	0.000	93	146241	50.0	50.6	
102 trans-1,4-Dichloro-2-buten	53	11.935	11.935	0.000	78	47288	50.0	47.1	
101 1,2,3-Trichloropropane	110	11.954	11.954	0.000	85	49273	50.0	51.2	
103 N-Propylbenzene	120	12.002	12.002	0.000	99	148968	50.0	50.5	
104 2-Chlorotoluene	126	12.094	12.094	0.000	95	123513	50.0	49.0	
106 1,3,5-Trimethylbenzene	105	12.185	12.185	0.000	95	429493	50.0	47.3	
107 4-Chlorotoluene	126	12.215	12.215	0.000	98	142928	50.0	52.6	
108 tert-Butylbenzene	119	12.495	12.495	0.000	94	333782	50.0	45.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
110 1,2,4-Trimethylbenzene	105	12.556	12.556	0.000	98	448981	50.0	49.5	
112 sec-Butylbenzene	105	12.720	12.720	0.000	95	475514	50.0	46.7	
113 1,3-Dichlorobenzene	146	12.842	12.842	0.000	97	251900	50.0	46.8	
114 4-Isopropyltoluene	119	12.878	12.878	0.000	97	421551	50.0	46.8	
115 1,4-Dichlorobenzene	146	12.945	12.945	0.000	94	265085	50.0	47.5	
120 n-Butylbenzene	91	13.286	13.286	0.000	98	305824	50.0	43.0	
121 1,2-Dichlorobenzene	146	13.304	13.304	0.000	96	228946	50.0	46.5	
122 1,2-Dibromo-3-Chloropropan	75	14.089	14.089	0.000	80	21150	50.0	47.9	
126 1,2,4-Trichlorobenzene	180	14.910	14.910	0.000	95	67546	50.0	46.2	
127 Hexachlorobutadiene	225	15.062	15.062	0.000	95	47468	50.0	54.6	
128 Naphthalene	128	15.178	15.178	0.000	97	144754	50.0	52.1	
129 1,2,3-Trichlorobenzene	180	15.415	15.415	0.000	94	54171	50.0	44.2	
S 133 Xylenes, Total	106				0		100.0	106.4	
S 134 1,2-Dichloroethene, Total	96				0		100.0	107.1	
S 154 Total BTEX	106				0		250.0	271.2	
S 135 1,3-Dichloropropene, Total	1				0		100.0	98.1	

Reagents:

voaWKet2ndRes_00043	Amount Added: 2.00	Units: uL	
VOA8260VOA2ND_00372	Amount Added: 2.00	Units: uL	
VOAVAPRI_00027	Amount Added: 2.00	Units: uL	
VOACEVE2ND_00026	Amount Added: 2.00	Units: uL	
VOAACRPRI_00021	Amount Added: 6.00	Units: uL	
voaWI/SHP5_00013	Amount Added: 5.00	Units: uL	Run Reagent

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190928-28871.b\5092802.D

Injection Date: 28-Sep-2019 10:37:30

Instrument ID: CHHP5

Operator ID: 433269

Lims ID: CCVIS

Worklist Smp#: 2

Client ID:

Purge Vol: 5.000 mL

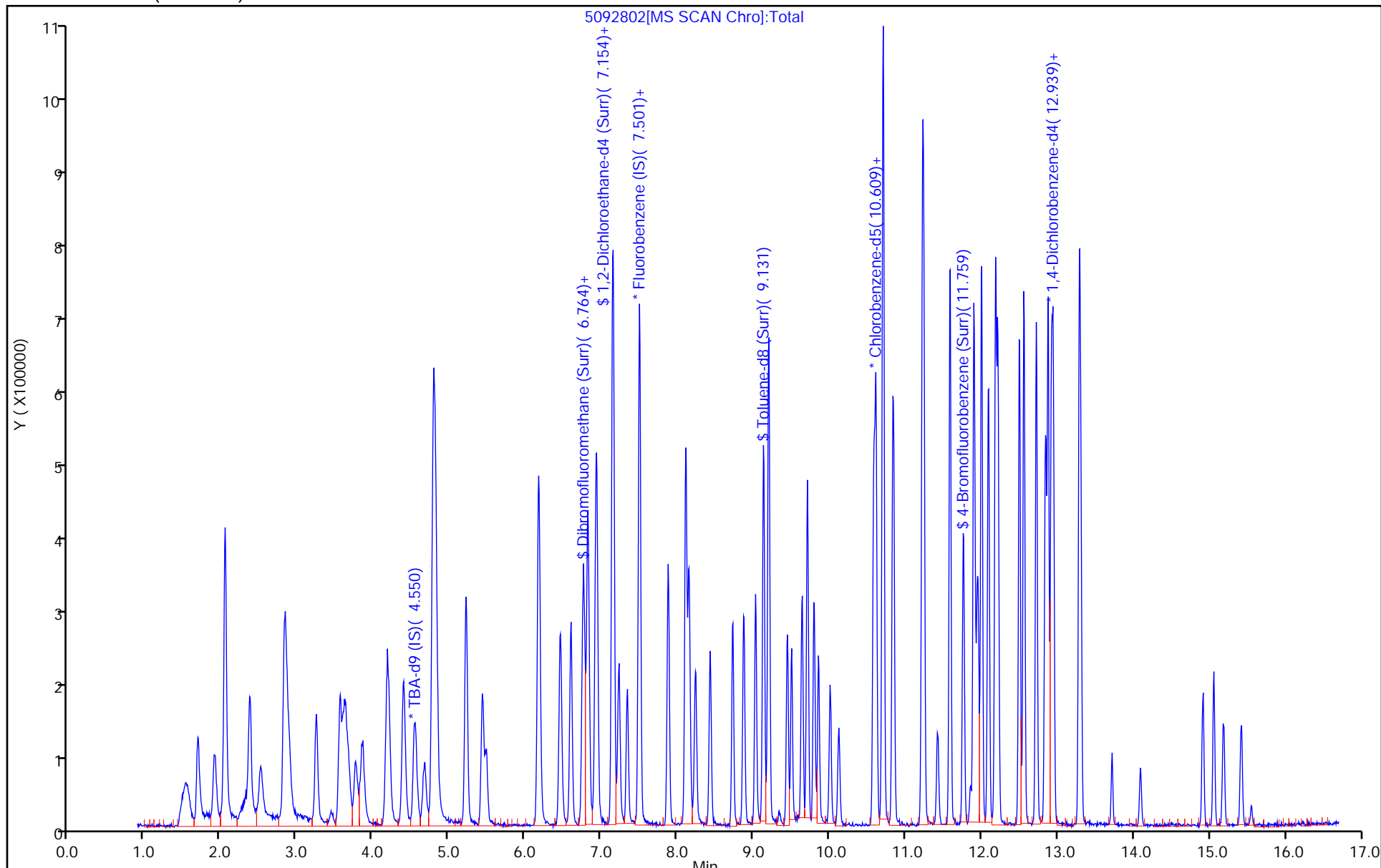
Dil. Factor: 1.0000

ALS Bottle#: 2

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Lab Sample ID: CCVIS 180-293070/2 Calibration Date: 09/28/2019 10:37
 Instrument ID: CHHP5 Calib Start Date: 09/20/2019 11:54
 GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 09/20/2019 16:22
 Lab File ID: 5092802.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.5189	0.5501	0.1000	10.6	10.0	6.0	20.0
Chloromethane	Ave	0.4280	0.4666	0.1000	10.9	10.0	9.0	20.0
Vinyl chloride	Ave	0.4017	0.4669	0.1000	11.6	10.0	16.2	20.0
1,3-Butadiene	Ave	0.4440	0.5398	0.0100	12.2	10.0	21.6*	20.0
Bromomethane	Ave	0.3069	0.3293	0.0500	10.7	10.0	7.3	20.0
Chloroethane	Ave	0.2702	0.3053	0.0500	11.3	10.0	13.0	20.0
Dichlorofluoromethane	Ave	0.6842	0.7420	0.0100	10.8	10.0	8.4	20.0
Trichlorofluoromethane	Ave	0.7279	0.7489	0.1000	10.3	10.0	2.9	20.0
Ethyl ether	Ave	0.3081	0.3454	0.0100	11.2	10.0	12.1	20.0
Acrolein	Ave	0.0525	0.0202	0.0100		30.0	-61.5*	20.0
1,1-Dichloroethene	Ave	0.2640	0.3010	0.1000	11.4	10.0	14.0	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.3053	0.3526	0.1000	11.6	10.0	15.5	20.0
Acetone	Ave	0.1272	0.1317	0.0500	20.7	20.0	3.5	20.0
Iodomethane	Ave	0.4601	0.5073	0.0100	11.0	10.0	10.2	20.0
Carbon disulfide	Ave	0.7187	0.7959	0.1000	11.1	10.0	10.7	20.0
Allyl chloride	Ave	0.1557	0.1685	0.0100	10.8	10.0	8.2	20.0
Methyl acetate	Ave	0.2565	0.2900	0.1000	22.6	20.0	13.1	20.0
Methylene Chloride	Lin2		0.3955	0.1000	11.1	10.0	11.1	20.0
tert-Butyl alcohol	Ave	1.086	1.090	0.0100	100	100	0.3	20.0
Acrylonitrile	Ave	0.1159	0.1357	0.0100	117	100	17.1	20.0
trans-1,2-Dichloroethene	Ave	0.2975	0.3275	0.1000	11.0	10.0	10.1	20.0
Methyl tert-butyl ether	Ave	0.8983	0.8265	0.1000	9.20	10.0	-8.0	20.0
Hexane	Ave	0.4693	0.4549	0.0100	9.69	10.0	-3.1	20.0
1,1-Dichloroethane	Ave	0.5690	0.6162	0.2000	10.8	10.0	8.3	20.0
Vinyl acetate	Ave	0.5410	0.4739	0.0100	8.76	10.0	-12.4	20.0
2,2-Dichloropropane	Ave	0.0709	0.0786	0.0100	11.1	10.0	10.8	20.0
cis-1,2-Dichloroethene	Ave	0.3285	0.3421	0.1000	10.4	10.0	4.1	20.0
2-Butanone (MEK)	Ave	0.1509	0.1669	0.0500	22.1	20.0	10.6	20.0
Bromochloromethane	Ave	0.1785	0.1731	0.0100	9.70	10.0	-3.0	20.0
Tetrahydrofuran	Ave	0.0877	0.1005	0.0100	22.9	20.0	14.7	20.0
Chloroform	Lin2		0.6577	0.2000	10.1	10.0	0.9	20.0
1,1,1-Trichloroethane	Ave	0.5487	0.5609	0.1000	10.2	10.0	2.2	20.0
Cyclohexane	Ave	0.5308	0.5540	0.1000	10.4	10.0	4.4	20.0
Carbon tetrachloride	Ave	0.4851	0.5101	0.1000	10.5	10.0	5.1	20.0
1,1-Dichloropropene	Ave	0.4509	0.4656	0.0100	10.3	10.0	3.3	20.0
Isobutyl alcohol	Ave	0.0098	0.0127	0.0100	323	250	29.2*	20.0
Benzene	Ave	1.235	1.357	0.5000	11.0	10.0	9.9	20.0
1,2-Dichloroethane	Ave	0.6038	0.5730	0.1000	9.49	10.0	-5.1	20.0
n-Heptane	Ave	0.3936	0.3770	0.0100	9.58	10.0	-4.2	20.0
Trichloroethene	Ave	0.3338	0.3561	0.2000	10.7	10.0	6.7	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1

SDG No.: _____

Lab Sample ID: CCVIS 180-293070/2 Calibration Date: 09/28/2019 10:37

Instrument ID: CHHP5 Calib Start Date: 09/20/2019 11:54

GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 09/20/2019 16:22

Lab File ID: 5092802.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.5227	0.4926	0.1000	9.42	10.0	-5.8	20.0
1,2-Dichloropropane	Ave	0.3052	0.3320	0.1000	10.9	10.0	8.8	20.0
1,4-Dioxane	Lin2		0.0032*	0.0100	350	200	75.0*	20.0
Dibromomethane	Ave	0.2072	0.1991	0.0100	9.61	10.0	-3.9	20.0
Bromodichloromethane	Ave	0.4615	0.4386	0.2000	9.50	10.0	-5.0	20.0
cis-1,3-Dichloropropene	Ave	0.4527	0.4568	0.2000	10.1	10.0	0.9	20.0
4-Methyl-2-pentanone (MIBK)	Ave	1.141	1.158	0.1000	20.3	20.0	1.5	20.0
Toluene	Ave	5.182	5.824	0.4000	11.2	10.0	12.4	20.0
trans-1,3-Dichloropropene	Ave	1.797	1.712	0.1000	9.53	10.0	-4.7	20.0
Ethyl methacrylate	Ave	1.255	1.331	0.0100	10.6	10.0	6.1	20.0
1,1,2-Trichloroethane	Ave	1.093	1.190	0.1000	10.9	10.0	8.9	20.0
Tetrachloroethene	Ave	1.210	1.320	0.2000	10.9	10.0	9.0	20.0
1,3-Dichloropropane	Ave	1.978	2.042	0.0100	10.3	10.0	3.2	20.0
2-Hexanone	Ave	0.8248	0.8631	0.1000	20.9	20.0	4.6	20.0
Dibromochloromethane	Ave	1.236	1.211	0.1000	9.79	10.0	-2.1	20.0
1,2-Dibromoethane (EDB)	Ave	1.118	1.111	0.1000	9.94	10.0	-0.6	20.0
Chlorobenzene	Ave	3.454	3.756	0.5000	10.9	10.0	8.7	20.0
1,1,1,2-Tetrachloroethane	Ave	1.324	1.386	0.0100	10.5	10.0	4.7	20.0
Ethylbenzene	Ave	1.778	1.910	0.1000	10.7	10.0	7.4	20.0
m-Xylene & p-Xylene	Ave	2.192	2.397	0.1000	10.9	10.0	9.3	20.0
o-Xylene	Ave	2.092	2.163	0.3000	10.3	10.0	3.4	20.0
Styrene	Ave	3.676	3.953	0.3000	10.8	10.0	7.5	20.0
Bromoform	Ave	0.7926	0.8005	0.1000	10.1	10.0	1.0	20.0
Isopropylbenzene	Ave	5.747	5.784	0.1000	10.1	10.0	0.6	20.0
1,1,2,2-Tetrachloroethane	Ave	1.307	1.454	0.3000	11.1	10.0	11.2	20.0
Bromobenzene	Ave	0.8343	0.8440	0.0100	10.1	10.0	1.2	20.0
trans-1,4-Dichloro-2-butene	Ave	0.2895	0.2729	0.0100	9.43	10.0	-5.7	20.0
1,2,3-Trichloropropane	Lin2		0.2844	0.0100	10.2	10.0	2.5	20.0
N-Propylbenzene	Ave	0.8506	0.8597	0.0100	10.1	10.0	1.1	20.0
2-Chlorotoluene	Ave	0.7278	0.7128	0.0100	9.79	10.0	-2.1	20.0
1,3,5-Trimethylbenzene	Ave	2.620	2.479	0.0100	9.46	10.0	-5.4	20.0
4-Chlorotoluene	Ave	0.7842	0.8249	0.0100	10.5	10.0	5.2	20.0
tert-Butylbenzene	Ave	2.133	1.926	0.0100	9.03	10.0	-9.7	20.0
1,2,4-Trimethylbenzene	Ave	2.617	2.591	0.0100	9.90	10.0	-1.0	20.0
sec-Butylbenzene	Ave	2.939	2.744	0.0100	9.34	10.0	-6.6	20.0
1,3-Dichlorobenzene	Ave	1.553	1.454	0.6000	9.36	10.0	-6.4	20.0
4-Isopropyltoluene	Ave	2.599	2.433	0.0100	9.36	10.0	-6.4	20.0
1,4-Dichlorobenzene	Ave	1.612	1.530	0.5000	9.49	10.0	-5.1	20.0
n-Butylbenzene	Ave	2.053	1.765	0.0100	8.60	10.0	-14.0	20.0
1,2-Dichlorobenzene	Ave	1.421	1.321	0.4000	9.30	10.0	-7.0	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.1275	0.1221	0.0500	9.57	10.0	-4.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Lab Sample ID: CCVIS 180-293070/2 Calibration Date: 09/28/2019 10:37
 Instrument ID: CHHP5 Calib Start Date: 09/20/2019 11:54
 GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 09/20/2019 16:22
 Lab File ID: 5092802.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,4-Trichlorobenzene	Ave	0.4218	0.3898	0.2000	9.24	10.0	-7.6	20.0
Hexachlorobutadiene	Lin2		0.2740	0.0100	10.9	10.0	9.1	20.0
Naphthalene	Qua		0.8354	0.0100	10.4	10.0	4.2	20.0
1,2,3-Trichlorobenzene	Ave	0.3537	0.3126	0.0100	8.84	10.0	-11.6	20.0
Dibromofluoromethane (Surr)	Ave	0.2886	0.2812		9.74	10.0	-2.6	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.4862	0.3874		7.97	10.0	-20.3*	20.0
Toluene-d8 (Surr)	Ave	3.980	4.028		10.1	10.0	1.2	20.0
4-Bromofluorobenzene (Surr)	Ave	1.636	1.584		9.68	10.0	-3.2	20.0

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190928-28871.b\5092802.D
 Lims ID: CCVIS
 Client ID:
 Sample Type: CCVIS
 Inject. Date: 28-Sep-2019 10:37:30 ALS Bottle#: 2 Worklist Smp#: 2
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028871-002
 Misc. Info.: CCVIS
 Operator ID: 433269 Instrument ID: CHHP5
 Sublist: chrom-MSVOA_LL_CHHP5*sub142

Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190928-28871.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 28-Sep-2019 14:55:53 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: bowieh

Date: 28-Sep-2019 14:55:53

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.550	4.550	0.000	0	214919	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.494	7.494	0.000	98	368623	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.585	10.585	0.000	90	89056	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.921	12.921	0.000	94	173275	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.777	6.777	0.000	92	103642	50.0	48.7	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.142	7.142	0.000	0	142818	50.0	39.8	
\$ 7 Toluene-d8 (Surr)	98	9.131	9.131	0.000	94	358706	50.0	50.6	
\$ 8 4-Bromofluorobenzene (Surr	95	11.765	11.765	0.000	89	141098	50.0	48.4	
11 Dichlorodifluoromethane	85	1.691	1.691	0.000	99	202766	50.0	53.0	
12 Chloromethane	50	1.910	1.910	0.000	99	171992	50.0	54.5	
13 Vinyl chloride	62	2.044	2.044	0.000	79	172124	50.0	58.1	
14 Butadiene	39	2.050	2.050	0.000	96	198982	50.0	60.8	
15 Bromomethane	94	2.372	2.372	0.000	92	121377	50.0	53.6	
16 Chloroethane	64	2.518	2.518	0.000	99	112525	50.0	56.5	
17 Dichlorofluoromethane	67	2.834	2.834	0.000	97	273526	50.0	54.2	
18 Trichlorofluoromethane	101	2.853	2.853	0.000	83	276076	50.0	51.4	
20 Ethyl ether	59	3.248	3.248	0.000	92	127320	50.0	56.0	
21 Acrolein	56	3.443	3.443	0.000	98	22324	150.0	57.7	
22 1,1-Dichloroethene	96	3.565	3.565	0.000	96	110953	50.0	57.0	
23 1,1,2-Trichloro-1,2,2-trif	101	3.638	3.638	0.000	92	129981	50.0	57.8	
24 Acetone	43	3.680	3.680	0.000	97	97091	100.0	103.5	
25 Iodomethane	142	3.765	3.765	0.000	99	186996	50.0	55.1	
26 Carbon disulfide	76	3.863	3.863	0.000	100	293373	50.0	55.4	
28 3-Chloro-1-propene	76	4.185	4.185	0.000	86	62120	50.0	54.1	
30 Methyl acetate	43	4.203	4.203	0.000	98	213802	100.0	113.1	
31 Methylene Chloride	84	4.398	4.398	0.000	93	145772	50.0	55.6	
32 2-Methyl-2-propanol	59	4.672	4.672	0.000	92	117110	500.0	501.7	
33 Acrylonitrile	53	4.787	4.787	0.000	99	500193	500.0	585.3	
34 trans-1,2-Dichloroethene	96	4.812	4.812	0.000	95	120716	50.0	55.0	
35 Methyl tert-butyl ether	73	4.824	4.824	0.000	97	304675	50.0	46.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	5.213	5.213	0.000	92	167689	50.0	48.5	
37 1,1-Dichloroethane	63	5.438	5.438	0.000	97	227144	50.0	54.1	
38 Vinyl acetate	43	5.487	5.487	0.000	97	174677	50.0	43.8	
44 2,2-Dichloropropane	97	6.174	6.174	0.000	69	28964	50.0	55.4	
45 cis-1,2-Dichloroethene	96	6.174	6.174	0.000	86	126097	50.0	52.1	
46 2-Butanone (MEK)	43	6.186	6.186	0.000	95	123054	100.0	110.6	
49 Chlorobromomethane	128	6.454	6.454	0.000	94	63811	50.0	48.5	
51 Tetrahydrofuran	42	6.472	6.472	0.000	86	74126	100.0	114.7	
52 Chloroform	83	6.600	6.600	0.000	96	242440	50.0	50.4	
53 1,1,1-Trichloroethane	97	6.752	6.752	0.000	98	206741	50.0	51.1	
54 Cyclohexane	56	6.819	6.819	0.000	92	204200	50.0	52.2	
56 Carbon tetrachloride	117	6.929	6.929	0.000	98	188038	50.0	52.6	
55 1,1-Dichloropropene	75	6.941	6.941	0.000	93	171639	50.0	51.6	
57 Isobutyl alcohol	41	7.142	7.142	0.000	87	116560	1250.0	1614.4	
58 Benzene	78	7.154	7.154	0.000	98	500397	50.0	55.0	
59 1,2-Dichloroethane	62	7.233	7.233	0.000	98	211230	50.0	47.5	
62 n-Heptane	43	7.507	7.507	0.000	86	138972	50.0	47.9	
64 Trichloroethene	130	7.878	7.878	0.000	98	131274	50.0	53.3	
66 Methylcyclohexane	83	8.109	8.109	0.000	93	181570	50.0	47.1	
67 1,2-Dichloropropane	63	8.151	8.151	0.000	93	122387	50.0	54.4	
70 1,4-Dioxane	88	8.224	8.224	0.000	50	23888	1000.0	1750.5	
68 Dibromomethane	93	8.243	8.243	0.000	92	73403	50.0	48.1	
71 Dichlorobromomethane	83	8.431	8.431	0.000	99	161666	50.0	47.5	
73 2-Chloroethyl vinyl ether	63	8.729	8.729	0.000	94	116321	100.0	86.3	
74 cis-1,3-Dichloropropene	75	8.869	8.869	0.000	92	168367	50.0	50.4	
75 4-Methyl-2-pentanone (MIBK)	43	9.027	9.027	0.000	97	206224	100.0	101.5	
76 Toluene	91	9.204	9.204	0.000	98	518634	50.0	56.2	
77 trans-1,3-Dichloropropene	75	9.447	9.447	0.000	97	152498	50.0	47.6	
78 Ethyl methacrylate	69	9.508	9.508	0.000	90	118554	50.0	53.1	
79 1,1,2-Trichloroethane	97	9.642	9.642	0.000	94	105976	50.0	54.4	
80 Tetrachloroethene	164	9.709	9.709	0.000	97	117524	50.0	54.5	
81 1,3-Dichloropropane	76	9.800	9.800	0.000	95	181822	50.0	51.6	
82 2-Hexanone	43	9.855	9.855	0.000	97	153731	100.0	104.6	
84 Chlorodibromomethane	129	10.013	10.013	0.000	90	107803	50.0	49.0	
85 Ethylene Dibromide	107	10.122	10.122	0.000	99	98904	50.0	49.7	
87 Chlorobenzene	112	10.609	10.609	0.000	93	334489	50.0	54.4	
89 1,1,1,2-Tetrachloroethane	131	10.706	10.706	0.000	93	123396	50.0	52.3	
90 Ethylbenzene	106	10.706	10.706	0.000	99	170063	50.0	53.7	
91 m-Xylene & p-Xylene	106	10.834	10.834	0.000	0	213477	50.0	54.7	
92 o-Xylene	106	11.224	11.224	0.000	98	192611	50.0	51.7	
93 Styrene	104	11.242	11.242	0.000	93	352015	50.0	53.8	
94 Bromoform	173	11.418	11.418	0.000	96	71293	50.0	50.5	
97 Isopropylbenzene	105	11.589	11.589	0.000	96	515124	50.0	50.3	
99 1,1,2,2-Tetrachloroethane	83	11.899	11.899	0.000	92	129509	50.0	55.6	
100 Bromobenzene	156	11.905	11.905	0.000	93	146241	50.0	50.6	
102 trans-1,4-Dichloro-2-buten	53	11.935	11.935	0.000	78	47288	50.0	47.1	
101 1,2,3-Trichloropropane	110	11.954	11.954	0.000	85	49273	50.0	51.2	
103 N-Propylbenzene	120	12.002	12.002	0.000	99	148968	50.0	50.5	
104 2-Chlorotoluene	126	12.094	12.094	0.000	95	123513	50.0	49.0	
106 1,3,5-Trimethylbenzene	105	12.185	12.185	0.000	95	429493	50.0	47.3	
107 4-Chlorotoluene	126	12.215	12.215	0.000	98	142928	50.0	52.6	
108 tert-Butylbenzene	119	12.495	12.495	0.000	94	333782	50.0	45.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
110 1,2,4-Trimethylbenzene	105	12.556	12.556	0.000	98	448981	50.0	49.5	
112 sec-Butylbenzene	105	12.720	12.720	0.000	95	475514	50.0	46.7	
113 1,3-Dichlorobenzene	146	12.842	12.842	0.000	97	251900	50.0	46.8	
114 4-Isopropyltoluene	119	12.878	12.878	0.000	97	421551	50.0	46.8	
115 1,4-Dichlorobenzene	146	12.945	12.945	0.000	94	265085	50.0	47.5	
120 n-Butylbenzene	91	13.286	13.286	0.000	98	305824	50.0	43.0	
121 1,2-Dichlorobenzene	146	13.304	13.304	0.000	96	228946	50.0	46.5	
122 1,2-Dibromo-3-Chloropropan	75	14.089	14.089	0.000	80	21150	50.0	47.9	
126 1,2,4-Trichlorobenzene	180	14.910	14.910	0.000	95	67546	50.0	46.2	
127 Hexachlorobutadiene	225	15.062	15.062	0.000	95	47468	50.0	54.6	
128 Naphthalene	128	15.178	15.178	0.000	97	144754	50.0	52.1	
129 1,2,3-Trichlorobenzene	180	15.415	15.415	0.000	94	54171	50.0	44.2	
S 133 Xylenes, Total	106				0		100.0	106.4	
S 134 1,2-Dichloroethene, Total	96				0		100.0	107.1	
S 154 Total BTEX	106				0		250.0	271.2	
S 135 1,3-Dichloropropene, Total	1				0		100.0	98.1	

Reagents:

voaWKet2ndRes_00043	Amount Added: 2.00	Units: uL	
VOA8260VOA2ND_00372	Amount Added: 2.00	Units: uL	
VOAVAPRI_00027	Amount Added: 2.00	Units: uL	
VOACEVE2ND_00026	Amount Added: 2.00	Units: uL	
VOAACRPRI_00021	Amount Added: 6.00	Units: uL	
voaWI/SHP5_00013	Amount Added: 5.00	Units: uL	Run Reagent

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190928-28871.b\5092802.D

Injection Date: 28-Sep-2019 10:37:30

Instrument ID: CHHP5

Operator ID: 433269

Lims ID: CCVIS

Worklist Smp#: 2

Client ID:

Purge Vol: 5.000 mL

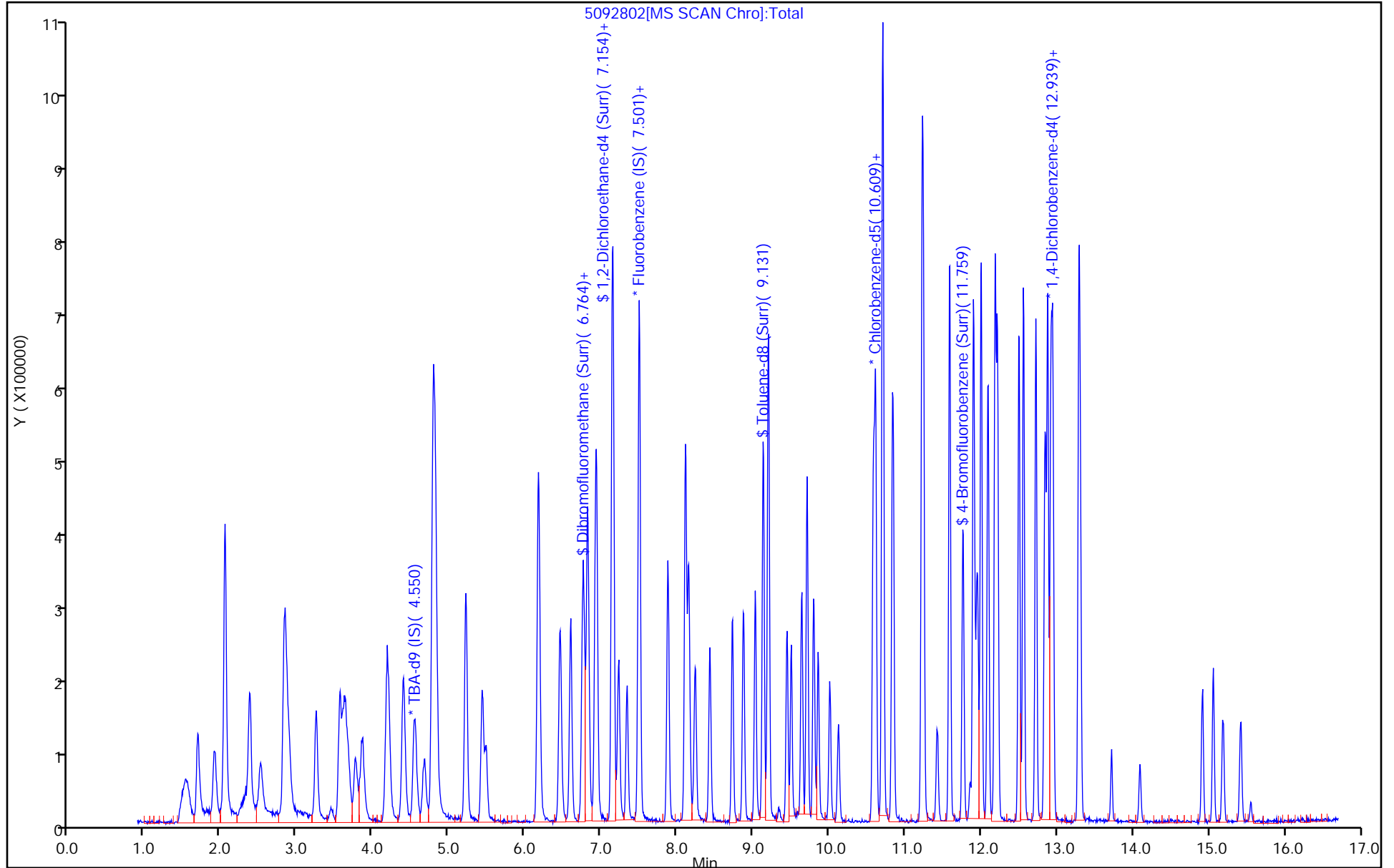
Dil. Factor: 1.0000

ALS Bottle#: 2

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Lab Sample ID: CCVIS 180-293722/3 Calibration Date: 10/04/2019 12:12
 Instrument ID: CHHP5 Calib Start Date: 07/25/2019 16:09
 GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 07/25/2019 18:59
 Lab File ID: 5100403.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Ave	0.1827	0.1873	0.0100	20.5	20.0	2.5	20.0

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100403.D
 Lims ID: CCVIS
 Client ID:
 Sample Type: CCVIS
 Inject. Date: 04-Oct-2019 12:12:30 ALS Bottle#: 3 Worklist Smp#: 3
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028969-003
 Misc. Info.: CCVIS
 Operator ID: 433269 Instrument ID: CHHP5
 Sublist: chrom-MSVOA_LL_CHHP5*sub142
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 05-Oct-2019 09:12:59 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0311

First Level Reviewer: bowieh

Date: 05-Oct-2019 09:12:59

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.549	4.549	0.000	0	213912	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.494	7.494	0.000	98	382101	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.584	10.584	0.000	87	94312	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.920	12.920	0.000	92	216962	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.776	6.776	0.000	95	102637	50.0	46.5	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.141	7.141	0.000	0	141410	50.0	38.1	
\$ 7 Toluene-d8 (Surr)	98	9.130	9.130	0.000	95	379186	50.0	50.5	
\$ 8 4-Bromofluorobenzene (Surr	95	11.758	11.758	0.000	93	155017	50.0	50.2	
11 Dichlorodifluoromethane	85	1.690	1.690	0.000	100	184496	50.0	46.5	
12 Chloromethane	50	1.909	1.909	0.000	100	180429	50.0	55.2	
13 Vinyl chloride	62	2.037	2.037	0.000	97	175162	50.0	57.1	
14 Butadiene	39	2.049	2.049	0.000	99	198042	50.0	58.4	
15 Bromomethane	94	2.371	2.371	0.000	92	111616	50.0	47.6	
16 Chloroethane	64	2.511	2.511	0.000	100	111427	50.0	54.0	
17 Dichlorofluoromethane	67	2.834	2.834	0.000	97	264500	50.0	50.6	
18 Trichlorofluoromethane	101	2.846	2.846	0.000	92	269930	50.0	48.5	
20 Ethyl ether	59	3.247	3.247	0.000	92	123382	50.0	52.4	
21 Acrolein	56	3.448	3.448	0.000	95	53837	150.0	134.3	
22 1,1-Dichloroethene	96	3.564	3.564	0.000	96	118063	50.0	58.5	
23 1,1,2-Trichloro-1,2,2-trif	101	3.631	3.631	0.000	91	137284	50.0	58.8	
24 Acetone	43	3.685	3.685	0.000	98	127749	100.0	131.4	
25 Iodomethane	142	3.764	3.764	0.000	99	188354	50.0	53.6	
26 Carbon disulfide	76	3.850	3.850	0.000	99	304211	50.0	55.4	
28 3-Chloro-1-propene	76	4.178	4.178	0.000	87	60354	50.0	50.7	
30 Methyl acetate	43	4.209	4.209	0.000	98	194321	100.0	99.1	
31 Methylene Chloride	84	4.403	4.403	0.000	94	149661	50.0	55.0	
32 2-Methyl-2-propanol	59	4.671	4.671	0.000	96	108486	500.0	466.9	
33 Acrylonitrile	53	4.787	4.787	0.000	99	485974	500.0	548.6	
34 trans-1,2-Dichloroethene	96	4.805	4.805	0.000	98	128547	50.0	56.5	
35 Methyl tert-butyl ether	73	4.829	4.829	0.000	98	303845	50.0	44.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	5.218	5.218	0.000	94	181424	50.0	50.6	
37 1,1-Dichloroethane	63	5.437	5.437	0.000	97	236523	50.0	54.4	
38 Vinyl acetate	43	5.480	5.480	0.000	98	204825	50.0	49.5	
44 2,2-Dichloropropane	97	6.161	6.161	0.000	78	33493	50.0	61.8	
45 cis-1,2-Dichloroethene	96	6.174	6.174	0.000	86	133338	50.0	53.1	
46 2-Butanone (MEK)	43	6.186	6.186	0.000	87	130249	100.0	112.9	
49 Chlorobromomethane	128	6.453	6.453	0.000	97	66885	50.0	49.0	
51 Tetrahydrofuran	42	6.466	6.466	0.000	85	65702	100.0	98.1	
52 Chloroform	83	6.599	6.599	0.000	96	242274	50.0	48.5	
53 1,1,1-Trichloroethane	97	6.758	6.758	0.000	99	207402	50.0	49.5	
54 Cyclohexane	56	6.818	6.818	0.000	94	222963	50.0	55.0	
56 Carbon tetrachloride	117	6.922	6.922	0.000	99	195974	50.0	52.9	
55 1,1-Dichloropropene	75	6.940	6.940	0.000	93	183559	50.0	53.3	
57 Isobutyl alcohol	41	7.141	7.141	0.000	84	107448	1250.0	1435.7	
58 Benzene	78	7.153	7.153	0.000	97	529583	50.0	56.1	
59 1,2-Dichloroethane	62	7.226	7.226	0.000	98	200264	50.0	43.4	
62 n-Heptane	43	7.506	7.506	0.000	90	155783	50.0	51.8	
64 Trichloroethene	130	7.877	7.877	0.000	95	141244	50.0	55.4	
66 Methylcyclohexane	83	8.108	8.108	0.000	92	201326	50.0	50.4	
67 1,2-Dichloropropane	63	8.151	8.151	0.000	94	126682	50.0	54.3	
70 1,4-Dioxane	88	8.236	8.236	0.000	39	20691	1000.0	1468.2	
68 Dibromomethane	93	8.236	8.236	0.000	93	75521	50.0	47.7	
71 Dichlorobromomethane	83	8.430	8.430	0.000	99	163381	50.0	46.3	
73 2-Chloroethyl vinyl ether	63	8.729	8.729	0.000	95	143158	100.0	102.5	
74 cis-1,3-Dichloropropene	75	8.869	8.869	0.000	91	170513	50.0	49.3	
75 4-Methyl-2-pentanone (MIBK)	43	9.027	9.027	0.000	97	222173	100.0	103.3	
76 Toluene	91	9.197	9.197	0.000	98	539313	50.0	55.2	
77 trans-1,3-Dichloropropene	75	9.440	9.440	0.000	96	149448	50.0	44.1	
78 Ethyl methacrylate	69	9.501	9.501	0.000	89	120514	50.0	50.9	
79 1,1,2-Trichloroethane	97	9.641	9.641	0.000	93	105102	50.0	51.0	
80 Tetrachloroethene	164	9.708	9.708	0.000	98	131084	50.0	57.4	
81 1,3-Dichloropropane	76	9.799	9.799	0.000	95	183951	50.0	49.3	
82 2-Hexanone	43	9.854	9.854	0.000	98	174592	100.0	112.2	
84 Chlorodibromomethane	129	10.012	10.012	0.000	92	107564	50.0	46.1	
85 Ethylene Dibromide	107	10.122	10.122	0.000	98	103059	50.0	48.9	
87 Chlorobenzene	112	10.608	10.608	0.000	94	359823	50.0	55.2	
89 1,1,1,2-Tetrachloroethane	131	10.700	10.700	0.000	93	126328	50.0	50.6	
90 Ethylbenzene	106	10.712	10.712	0.000	99	185953	50.0	55.5	
91 m-Xylene & p-Xylene	106	10.840	10.840	0.000	0	231741	50.0	56.0	
92 o-Xylene	106	11.223	11.223	0.000	98	211159	50.0	53.5	
93 Styrene	104	11.241	11.241	0.000	96	385238	50.0	55.6	
94 Bromoform	173	11.417	11.417	0.000	97	71297	50.0	47.7	
97 Isopropylbenzene	105	11.582	11.582	0.000	96	580165	50.0	53.5	
99 1,1,2,2-Tetrachloroethane	83	11.898	11.898	0.000	84	143434	50.0	58.2	
100 Bromobenzene	156	11.904	11.904	0.000	92	155239	50.0	42.9	
102 trans-1,4-Dichloro-2-buten	53	11.941	11.941	0.000	80	47028	50.0	37.4	
101 1,2,3-Trichloropropane	110	11.953	11.953	0.000	85	50309	50.0	41.3	
103 N-Propylbenzene	120	12.001	12.001	0.000	99	172765	50.0	46.8	
104 2-Chlorotoluene	126	12.093	12.093	0.000	96	149984	50.0	47.5	
106 1,3,5-Trimethylbenzene	105	12.184	12.184	0.000	94	522150	50.0	45.9	
107 4-Chlorotoluene	126	12.214	12.214	0.000	98	166978	50.0	49.1	
108 tert-Butylbenzene	119	12.500	12.500	0.000	94	414248	50.0	44.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
110 1,2,4-Trimethylbenzene	105	12.555	12.555	0.000	98	550095	50.0	48.4	
112 sec-Butylbenzene	105	12.719	12.719	0.000	95	619473	50.0	48.6	
113 1,3-Dichlorobenzene	146	12.841	12.841	0.000	98	309002	50.0	45.9	
114 4-Isopropyltoluene	119	12.878	12.878	0.000	97	542521	50.0	48.1	
115 1,4-Dichlorobenzene	146	12.944	12.944	0.000	94	320736	50.0	45.9	
120 n-Butylbenzene	91	13.285	13.285	0.000	98	417246	50.0	46.8	
121 1,2-Dichlorobenzene	146	13.303	13.303	0.000	97	297433	50.0	48.2	
122 1,2-Dibromo-3-Chloropropan	75	14.088	14.088	0.000	74	23420	50.0	42.3	
126 1,2,4-Trichlorobenzene	180	14.909	14.909	0.000	94	113372	50.0	61.9	
127 Hexachlorobutadiene	225	15.055	15.055	0.000	95	80485	50.0	74.9	
128 Naphthalene	128	15.183	15.183	0.000	97	240159	50.0	64.5	
129 1,2,3-Trichlorobenzene	180	15.420	15.420	0.000	95	106918	50.0	69.7	
S 133 Xylenes, Total	106				0		100.0	109.5	
S 134 1,2-Dichloroethene, Total	96				0		100.0	109.7	
S 154 Total BTEX	106				0		250.0	276.3	
S 135 1,3-Dichloropropene, Total	1				0		100.0	93.4	

Reagents:

voaWKet2ndRes_00043	Amount Added: 2.00	Units: uL	
VOA8260VOA2ND_00372	Amount Added: 2.00	Units: uL	
VOACEVE2ND_00027	Amount Added: 2.00	Units: uL	
VOAACRPRI_00021	Amount Added: 6.00	Units: uL	
VOAVAPRI_00028	Amount Added: 2.00	Units: uL	
voaWI/SHP5_00013	Amount Added: 5.00	Units: uL	Run Reagent

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100403.D

Injection Date: 04-Oct-2019 12:12:30

Instrument ID: CHHP5

Operator ID: 433269

Lims ID: CCVIS

Worklist Smp#: 3

Client ID:

Purge Vol: 5.000 mL

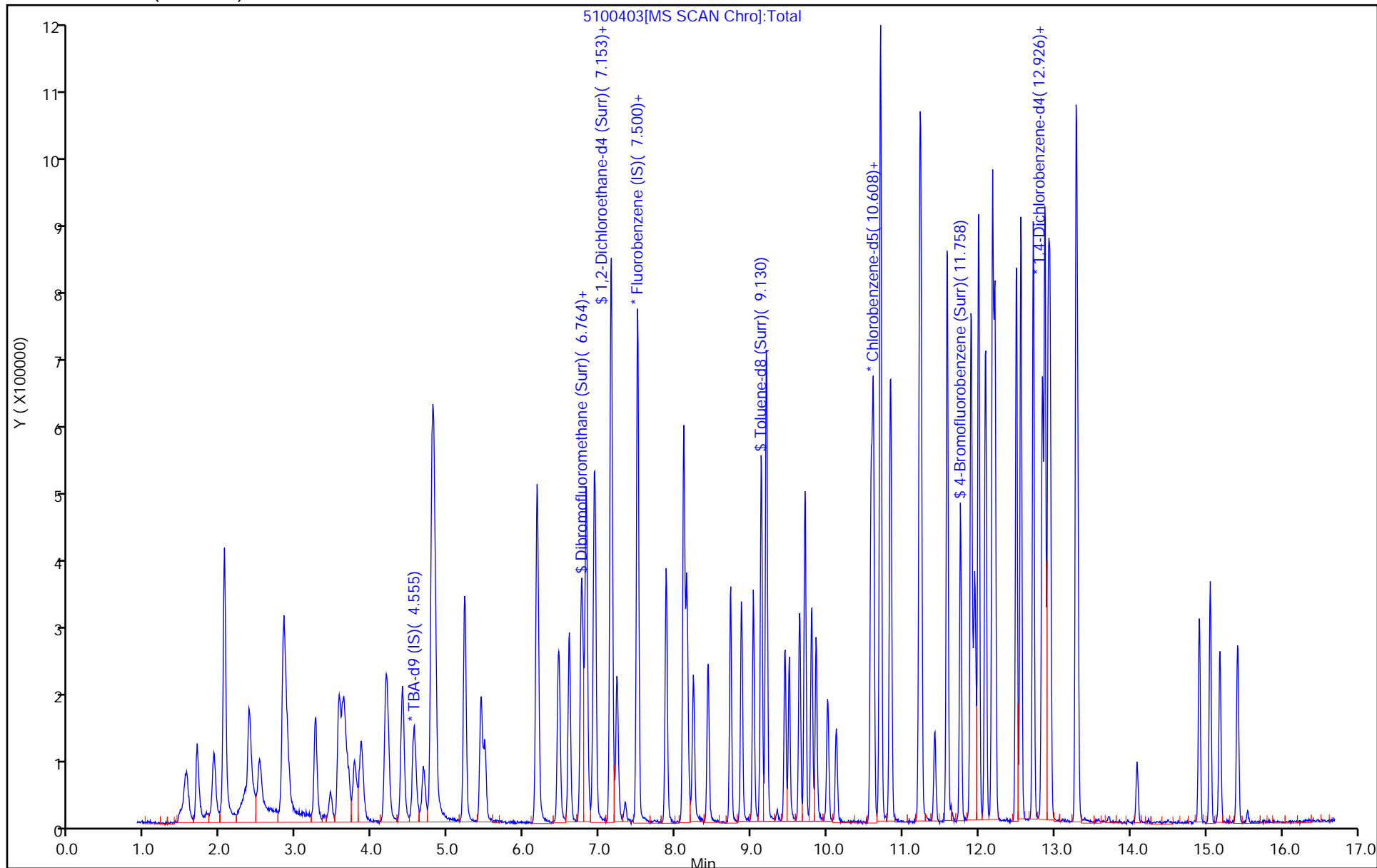
Dil. Factor: 1.0000

ALS Bottle#: 3

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Lab Sample ID: CCVIS 180-293722/3 Calibration Date: 10/04/2019 12:12
 Instrument ID: CHHP5 Calib Start Date: 09/20/2019 11:54
 GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 09/20/2019 16:22
 Lab File ID: 5100403.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.5189	0.4829	0.1000	9.30	10.0	-7.0	20.0
Chloromethane	Ave	0.4280	0.4722	0.1000	11.0	10.0	10.3	20.0
Vinyl chloride	Ave	0.4017	0.4584	0.1000	11.4	10.0	14.1	20.0
1,3-Butadiene	Ave	0.4440	0.5183	0.0100	11.7	10.0	16.7	20.0
Bromomethane	Ave	0.3069	0.2921	0.0500	9.52	10.0	-4.8	20.0
Chloroethane	Ave	0.2702	0.2916	0.0500	10.8	10.0	7.9	20.0
Dichlorofluoromethane	Ave	0.6842	0.6922	0.0100	10.1	10.0	1.2	20.0
Trichlorofluoromethane	Ave	0.7279	0.7064	0.1000	9.70	10.0	-3.0	20.0
Ethyl ether	Ave	0.3081	0.3229	0.0100	10.5	10.0	4.8	20.0
Acrolein	Ave	0.0525	0.0470	0.0100	26.9	30.0	-10.5	20.0
1,1-Dichloroethene	Ave	0.2640	0.3090	0.1000	11.7	10.0	17.0	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	0.3053	0.3593	0.1000	11.8	10.0	17.7	20.0
Acetone	Ave	0.1272	0.1672	0.0500	26.3	20.0	31.4*	20.0
Iodomethane	Ave	0.4601	0.4929	0.0100	10.7	10.0	7.1	20.0
Carbon disulfide	Ave	0.7187	0.7962	0.1000	11.1	10.0	10.8	20.0
Allyl chloride	Ave	0.1557	0.1580	0.0100	10.1	10.0	1.4	20.0
Methyl acetate	Ave	0.2565	0.2543	0.1000	19.8	20.0	-0.9	20.0
Methylene Chloride	Lin2		0.3917	0.1000	11.0	10.0	10.0	20.0
tert-Butyl alcohol	Ave	1.086	1.014	0.0100	93.4	100	-6.6	20.0
Acrylonitrile	Ave	0.1159	0.1272	0.0100	110	100	9.7	20.0
trans-1,2-Dichloroethene	Ave	0.2975	0.3364	0.1000	11.3	10.0	13.1	20.0
Methyl tert-butyl ether	Ave	0.8983	0.7952	0.1000	8.85	10.0	-11.5	20.0
Hexane	Ave	0.4693	0.4748	0.0100	10.1	10.0	1.2	20.0
1,1-Dichloroethane	Ave	0.5690	0.6190	0.2000	10.9	10.0	8.8	20.0
Vinyl acetate	Ave	0.5410	0.5361	0.0100	9.91	10.0	-0.9	20.0
2,2-Dichloropropane	Ave	0.0709	0.0877	0.0100	12.4	10.0	23.6*	20.0
cis-1,2-Dichloroethene	Ave	0.3285	0.3490	0.1000	10.6	10.0	6.2	20.0
2-Butanone (MEK)	Ave	0.1509	0.1704	0.0500	22.6	20.0	12.9	20.0
Bromochloromethane	Ave	0.1785	0.1751	0.0100	9.81	10.0	-1.9	20.0
Tetrahydrofuran	Ave	0.0877	0.0860	0.0100	19.6	20.0	-1.9	20.0
Chloroform	Lin2		0.6341	0.2000	9.70	10.0	-3.0	20.0
1,1,1-Trichloroethane	Ave	0.5487	0.5428	0.1000	9.89	10.0	-1.1	20.0
Cyclohexane	Ave	0.5308	0.5835	0.1000	11.0	10.0	9.9	20.0
Carbon tetrachloride	Ave	0.4851	0.5129	0.1000	10.6	10.0	5.7	20.0
1,1-Dichloropropene	Ave	0.4509	0.4804	0.0100	10.7	10.0	6.5	20.0
Isobutyl alcohol	Ave	0.0098	0.0113	0.0100	287	250	14.9	20.0
Benzene	Ave	1.235	1.386	0.5000	11.2	10.0	12.2	20.0
1,2-Dichloroethane	Ave	0.6038	0.5241	0.1000	8.68	10.0	-13.2	20.0
n-Heptane	Ave	0.3936	0.4077	0.0100	10.4	10.0	3.6	20.0
Trichloroethene	Ave	0.3338	0.3697	0.2000	11.1	10.0	10.7	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1

SDG No.: _____

Lab Sample ID: CCVIS 180-293722/3 Calibration Date: 10/04/2019 12:12

Instrument ID: CHHP5 Calib Start Date: 09/20/2019 11:54

GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 09/20/2019 16:22

Lab File ID: 5100403.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methylcyclohexane	Ave	0.5227	0.5269	0.1000	10.1	10.0	0.8	20.0
1,2-Dichloropropane	Ave	0.3052	0.3315	0.1000	10.9	10.0	8.6	20.0
1,4-Dioxane	Lin2		0.0027*	0.0100	294	200	46.8*	20.0
Dibromomethane	Ave	0.2072	0.1977	0.0100	9.54	10.0	-4.6	20.0
Bromodichloromethane	Ave	0.4615	0.4276	0.2000	9.26	10.0	-7.4	20.0
cis-1,3-Dichloropropene	Ave	0.4527	0.4463	0.2000	9.86	10.0	-1.4	20.0
4-Methyl-2-pentanone (MIBK)	Ave	1.141	1.178	0.1000	20.7	20.0	3.3	20.0
Toluene	Ave	5.182	5.718	0.4000	11.0	10.0	10.4	20.0
trans-1,3-Dichloropropene	Ave	1.797	1.585	0.1000	8.82	10.0	-11.8	20.0
Ethyl methacrylate	Ave	1.255	1.278	0.0100	10.2	10.0	1.9	20.0
1,1,2-Trichloroethane	Ave	1.093	1.114	0.1000	10.2	10.0	2.0	20.0
Tetrachloroethene	Ave	1.210	1.390	0.2000	11.5	10.0	14.8	20.0
1,3-Dichloropropane	Ave	1.978	1.950	0.0100	9.86	10.0	-1.4	20.0
2-Hexanone	Ave	0.8248	0.9256	0.1000	22.4	20.0	12.2	20.0
Dibromochloromethane	Ave	1.236	1.141	0.1000	9.23	10.0	-7.7	20.0
1,2-Dibromoethane (EDB)	Ave	1.118	1.093	0.1000	9.78	10.0	-2.2	20.0
Chlorobenzene	Ave	3.454	3.815	0.5000	11.0	10.0	10.4	20.0
1,1,1,2-Tetrachloroethane	Ave	1.324	1.339	0.0100	10.1	10.0	1.2	20.0
Ethylbenzene	Ave	1.778	1.972	0.1000	11.1	10.0	10.9	20.0
m-Xylene & p-Xylene	Ave	2.192	2.457	0.1000	11.2	10.0	12.1	20.0
o-Xylene	Ave	2.092	2.239	0.3000	10.7	10.0	7.0	20.0
Styrene	Ave	3.676	4.085	0.3000	11.1	10.0	11.1	20.0
Bromoform	Ave	0.7926	0.7560	0.1000	9.54	10.0	-4.6	20.0
Isopropylbenzene	Ave	5.747	6.152	0.1000	10.7	10.0	7.0	20.0
1,1,2,2-Tetrachloroethane	Ave	1.307	1.521	0.3000	11.6	10.0	16.3	20.0
Bromobenzene	Ave	0.8343	0.7155	0.0100	8.58	10.0	-14.2	20.0
trans-1,4-Dichloro-2-butene	Ave	0.2895	0.2168	0.0100	7.49	10.0	-25.1*	20.0
1,2,3-Trichloropropane	Lin2		0.2319	0.0100	8.26	10.0	-17.4	20.0
N-Propylbenzene	Ave	0.8506	0.7963	0.0100	9.36	10.0	-6.4	20.0
2-Chlorotoluene	Ave	0.7278	0.6913	0.0100	9.50	10.0	-5.0	20.0
1,3,5-Trimethylbenzene	Ave	2.620	2.407	0.0100	9.19	10.0	-8.1	20.0
4-Chlorotoluene	Ave	0.7842	0.7696	0.0100	9.81	10.0	-1.9	20.0
tert-Butylbenzene	Ave	2.133	1.909	0.0100	8.95	10.0	-10.5	20.0
1,2,4-Trimethylbenzene	Ave	2.617	2.535	0.0100	9.69	10.0	-3.1	20.0
sec-Butylbenzene	Ave	2.939	2.855	0.0100	9.72	10.0	-2.8	20.0
1,3-Dichlorobenzene	Ave	1.553	1.424	0.6000	9.17	10.0	-8.3	20.0
4-Isopropyltoluene	Ave	2.599	2.501	0.0100	9.62	10.0	-3.8	20.0
1,4-Dichlorobenzene	Ave	1.612	1.478	0.5000	9.17	10.0	-8.3	20.0
n-Butylbenzene	Ave	2.053	1.923	0.0100	9.37	10.0	-6.3	20.0
1,2-Dichlorobenzene	Ave	1.421	1.371	0.4000	9.65	10.0	-3.5	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.1275	0.1080	0.0500	8.46	10.0	-15.4	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Lab Sample ID: CCVIS 180-293722/3 Calibration Date: 10/04/2019 12:12
 Instrument ID: CHHP5 Calib Start Date: 09/20/2019 11:54
 GC Column: DB-624 ID: 0.18 (mm) Calib End Date: 09/20/2019 16:22
 Lab File ID: 5100403.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,4-Trichlorobenzene	Ave	0.4218	0.5225	0.2000	12.4	10.0	23.9*	20.0
Hexachlorobutadiene	Lin2		0.3710	0.0100	15.0	10.0	49.9*	20.0
Naphthalene	Qua		1.107	0.0100	12.9	10.0	28.9*	20.0
1,2,3-Trichlorobenzene	Ave	0.3537	0.4928	0.0100	13.9	10.0	39.3*	20.0
Dibromofluoromethane (Surr)	Ave	0.2886	0.2686		9.31	10.0	-6.9	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.4862	0.3701		7.61	10.0	-23.9*	20.0
Toluene-d8 (Surr)	Ave	3.980	4.021		10.1	10.0	1.0	20.0
4-Bromofluorobenzene (Surr)	Ave	1.636	1.644		10.0	10.0	0.4	20.0

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100403.D
 Lims ID: CCVIS
 Client ID:
 Sample Type: CCVIS
 Inject. Date: 04-Oct-2019 12:12:30 ALS Bottle#: 3 Worklist Smp#: 3
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028969-003
 Misc. Info.: CCVIS
 Operator ID: 433269 Instrument ID: CHHP5
 Sublist: chrom-MSVOA_LL_CHHP5*sub142
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 05-Oct-2019 09:12:59 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0311

First Level Reviewer: bowieh

Date: 05-Oct-2019 09:12:59

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.549	4.549	0.000	0	213912	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.494	7.494	0.000	98	382101	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.584	10.584	0.000	87	94312	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.920	12.920	0.000	92	216962	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.776	6.776	0.000	95	102637	50.0	46.5	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.141	7.141	0.000	0	141410	50.0	38.1	
\$ 7 Toluene-d8 (Surr)	98	9.130	9.130	0.000	95	379186	50.0	50.5	
\$ 8 4-Bromofluorobenzene (Surr	95	11.758	11.758	0.000	93	155017	50.0	50.2	
11 Dichlorodifluoromethane	85	1.690	1.690	0.000	100	184496	50.0	46.5	
12 Chloromethane	50	1.909	1.909	0.000	100	180429	50.0	55.2	
13 Vinyl chloride	62	2.037	2.037	0.000	97	175162	50.0	57.1	
14 Butadiene	39	2.049	2.049	0.000	99	198042	50.0	58.4	
15 Bromomethane	94	2.371	2.371	0.000	92	111616	50.0	47.6	
16 Chloroethane	64	2.511	2.511	0.000	100	111427	50.0	54.0	
17 Dichlorofluoromethane	67	2.834	2.834	0.000	97	264500	50.0	50.6	
18 Trichlorofluoromethane	101	2.846	2.846	0.000	92	269930	50.0	48.5	
20 Ethyl ether	59	3.247	3.247	0.000	92	123382	50.0	52.4	
21 Acrolein	56	3.448	3.448	0.000	95	53837	150.0	134.3	
22 1,1-Dichloroethene	96	3.564	3.564	0.000	96	118063	50.0	58.5	
23 1,1,2-Trichloro-1,2,2-trif	101	3.631	3.631	0.000	91	137284	50.0	58.8	
24 Acetone	43	3.685	3.685	0.000	98	127749	100.0	131.4	
25 Iodomethane	142	3.764	3.764	0.000	99	188354	50.0	53.6	
26 Carbon disulfide	76	3.850	3.850	0.000	99	304211	50.0	55.4	
28 3-Chloro-1-propene	76	4.178	4.178	0.000	87	60354	50.0	50.7	
30 Methyl acetate	43	4.209	4.209	0.000	98	194321	100.0	99.1	
31 Methylene Chloride	84	4.403	4.403	0.000	94	149661	50.0	55.0	
32 2-Methyl-2-propanol	59	4.671	4.671	0.000	96	108486	500.0	466.9	
33 Acrylonitrile	53	4.787	4.787	0.000	99	485974	500.0	548.6	
34 trans-1,2-Dichloroethene	96	4.805	4.805	0.000	98	128547	50.0	56.5	
35 Methyl tert-butyl ether	73	4.829	4.829	0.000	98	303845	50.0	44.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	5.218	5.218	0.000	94	181424	50.0	50.6	
37 1,1-Dichloroethane	63	5.437	5.437	0.000	97	236523	50.0	54.4	
38 Vinyl acetate	43	5.480	5.480	0.000	98	204825	50.0	49.5	
44 2,2-Dichloropropane	97	6.161	6.161	0.000	78	33493	50.0	61.8	
45 cis-1,2-Dichloroethene	96	6.174	6.174	0.000	86	133338	50.0	53.1	
46 2-Butanone (MEK)	43	6.186	6.186	0.000	87	130249	100.0	112.9	
49 Chlorobromomethane	128	6.453	6.453	0.000	97	66885	50.0	49.0	
51 Tetrahydrofuran	42	6.466	6.466	0.000	85	65702	100.0	98.1	
52 Chloroform	83	6.599	6.599	0.000	96	242274	50.0	48.5	
53 1,1,1-Trichloroethane	97	6.758	6.758	0.000	99	207402	50.0	49.5	
54 Cyclohexane	56	6.818	6.818	0.000	94	222963	50.0	55.0	
56 Carbon tetrachloride	117	6.922	6.922	0.000	99	195974	50.0	52.9	
55 1,1-Dichloropropene	75	6.940	6.940	0.000	93	183559	50.0	53.3	
57 Isobutyl alcohol	41	7.141	7.141	0.000	84	107448	1250.0	1435.7	
58 Benzene	78	7.153	7.153	0.000	97	529583	50.0	56.1	
59 1,2-Dichloroethane	62	7.226	7.226	0.000	98	200264	50.0	43.4	
62 n-Heptane	43	7.506	7.506	0.000	90	155783	50.0	51.8	
64 Trichloroethene	130	7.877	7.877	0.000	95	141244	50.0	55.4	
66 Methylcyclohexane	83	8.108	8.108	0.000	92	201326	50.0	50.4	
67 1,2-Dichloropropane	63	8.151	8.151	0.000	94	126682	50.0	54.3	
70 1,4-Dioxane	88	8.236	8.236	0.000	39	20691	1000.0	1468.2	
68 Dibromomethane	93	8.236	8.236	0.000	93	75521	50.0	47.7	
71 Dichlorobromomethane	83	8.430	8.430	0.000	99	163381	50.0	46.3	
73 2-Chloroethyl vinyl ether	63	8.729	8.729	0.000	95	143158	100.0	102.5	
74 cis-1,3-Dichloropropene	75	8.869	8.869	0.000	91	170513	50.0	49.3	
75 4-Methyl-2-pentanone (MIBK)	43	9.027	9.027	0.000	97	222173	100.0	103.3	
76 Toluene	91	9.197	9.197	0.000	98	539313	50.0	55.2	
77 trans-1,3-Dichloropropene	75	9.440	9.440	0.000	96	149448	50.0	44.1	
78 Ethyl methacrylate	69	9.501	9.501	0.000	89	120514	50.0	50.9	
79 1,1,2-Trichloroethane	97	9.641	9.641	0.000	93	105102	50.0	51.0	
80 Tetrachloroethene	164	9.708	9.708	0.000	98	131084	50.0	57.4	
81 1,3-Dichloropropane	76	9.799	9.799	0.000	95	183951	50.0	49.3	
82 2-Hexanone	43	9.854	9.854	0.000	98	174592	100.0	112.2	
84 Chlorodibromomethane	129	10.012	10.012	0.000	92	107564	50.0	46.1	
85 Ethylene Dibromide	107	10.122	10.122	0.000	98	103059	50.0	48.9	
87 Chlorobenzene	112	10.608	10.608	0.000	94	359823	50.0	55.2	
89 1,1,1,2-Tetrachloroethane	131	10.700	10.700	0.000	93	126328	50.0	50.6	
90 Ethylbenzene	106	10.712	10.712	0.000	99	185953	50.0	55.5	
91 m-Xylene & p-Xylene	106	10.840	10.840	0.000	0	231741	50.0	56.0	
92 o-Xylene	106	11.223	11.223	0.000	98	211159	50.0	53.5	
93 Styrene	104	11.241	11.241	0.000	96	385238	50.0	55.6	
94 Bromoform	173	11.417	11.417	0.000	97	71297	50.0	47.7	
97 Isopropylbenzene	105	11.582	11.582	0.000	96	580165	50.0	53.5	
99 1,1,2,2-Tetrachloroethane	83	11.898	11.898	0.000	84	143434	50.0	58.2	
100 Bromobenzene	156	11.904	11.904	0.000	92	155239	50.0	42.9	
102 trans-1,4-Dichloro-2-buten	53	11.941	11.941	0.000	80	47028	50.0	37.4	
101 1,2,3-Trichloropropane	110	11.953	11.953	0.000	85	50309	50.0	41.3	
103 N-Propylbenzene	120	12.001	12.001	0.000	99	172765	50.0	46.8	
104 2-Chlorotoluene	126	12.093	12.093	0.000	96	149984	50.0	47.5	
106 1,3,5-Trimethylbenzene	105	12.184	12.184	0.000	94	522150	50.0	45.9	
107 4-Chlorotoluene	126	12.214	12.214	0.000	98	166978	50.0	49.1	
108 tert-Butylbenzene	119	12.500	12.500	0.000	94	414248	50.0	44.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
110 1,2,4-Trimethylbenzene	105	12.555	12.555	0.000	98	550095	50.0	48.4	
112 sec-Butylbenzene	105	12.719	12.719	0.000	95	619473	50.0	48.6	
113 1,3-Dichlorobenzene	146	12.841	12.841	0.000	98	309002	50.0	45.9	
114 4-Isopropyltoluene	119	12.878	12.878	0.000	97	542521	50.0	48.1	
115 1,4-Dichlorobenzene	146	12.944	12.944	0.000	94	320736	50.0	45.9	
120 n-Butylbenzene	91	13.285	13.285	0.000	98	417246	50.0	46.8	
121 1,2-Dichlorobenzene	146	13.303	13.303	0.000	97	297433	50.0	48.2	
122 1,2-Dibromo-3-Chloropropan	75	14.088	14.088	0.000	74	23420	50.0	42.3	
126 1,2,4-Trichlorobenzene	180	14.909	14.909	0.000	94	113372	50.0	61.9	
127 Hexachlorobutadiene	225	15.055	15.055	0.000	95	80485	50.0	74.9	
128 Naphthalene	128	15.183	15.183	0.000	97	240159	50.0	64.5	
129 1,2,3-Trichlorobenzene	180	15.420	15.420	0.000	95	106918	50.0	69.7	
S 133 Xylenes, Total	106				0		100.0	109.5	
S 134 1,2-Dichloroethene, Total	96				0		100.0	109.7	
S 154 Total BTEX	106				0		250.0	276.3	
S 135 1,3-Dichloropropene, Total	1				0		100.0	93.4	

Reagents:

voaWKet2ndRes_00043	Amount Added: 2.00	Units: uL	
VOA8260VOA2ND_00372	Amount Added: 2.00	Units: uL	
VOACEVE2ND_00027	Amount Added: 2.00	Units: uL	
VOAACRPRI_00021	Amount Added: 6.00	Units: uL	
VOAVAPRI_00028	Amount Added: 2.00	Units: uL	
voaWI/SHP5_00013	Amount Added: 5.00	Units: uL	Run Reagent

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100403.D

Injection Date: 04-Oct-2019 12:12:30

Instrument ID: CHHP5

Operator ID: 433269

Lims ID: CCVIS

Worklist Smp#: 3

Client ID:

Purge Vol: 5.000 mL

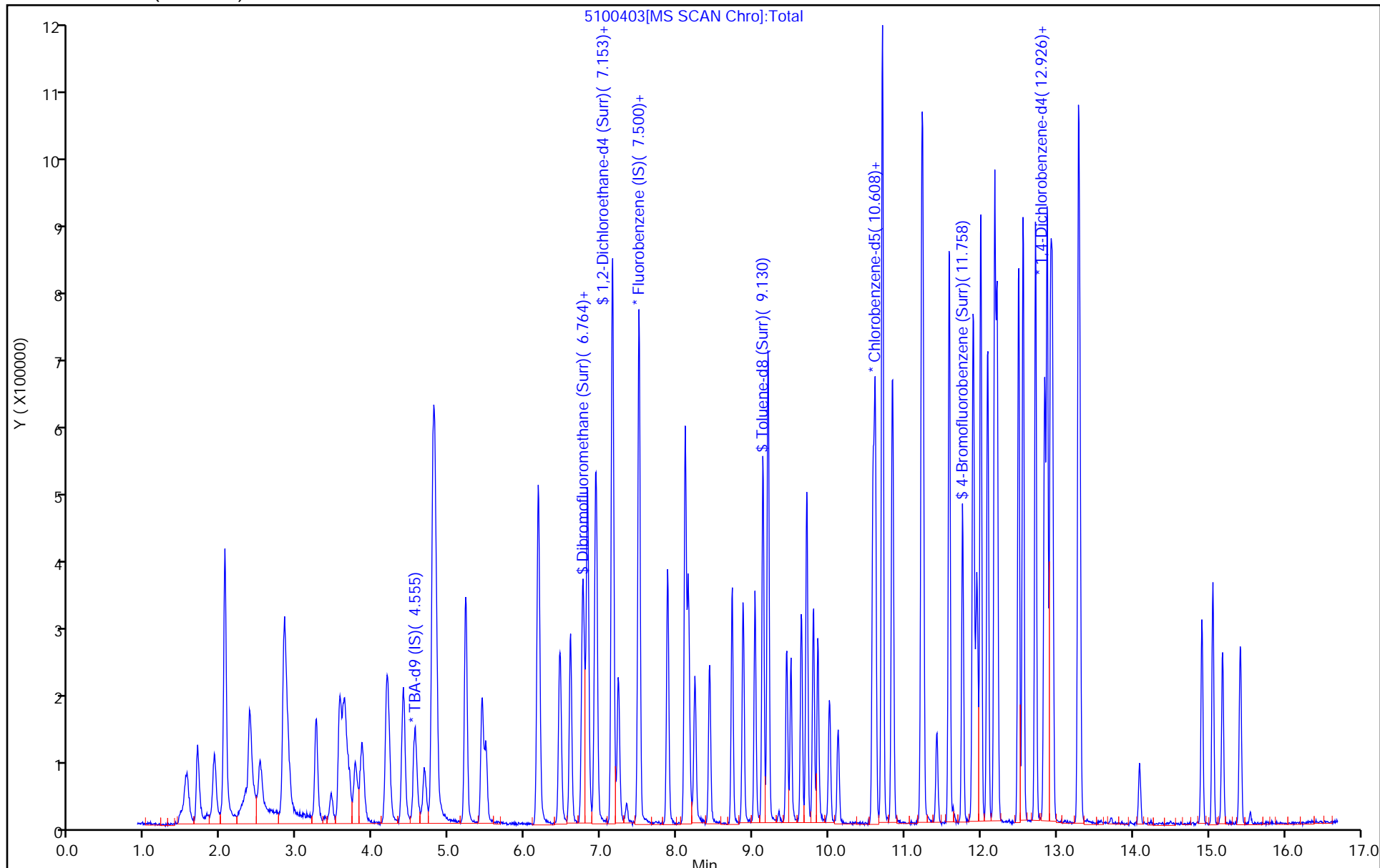
Dil. Factor: 1.0000

ALS Bottle#: 3

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092001.D
 Lims ID: BFB
 Client ID:
 Sample Type: BFB
 Inject. Date: 20-Sep-2019 10:07:30 ALS Bottle#: 1 Worklist Smp#: 1
 Injection Vol: 5.0 mL Dil. Factor: 1.0000
 Sample Info: 180-0028737-001
 Misc. Info.: BFB
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 21-Sep-2019 09:17:42 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0334

First Level Reviewer: bowieh Date: 20-Sep-2019 10:43:13

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
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\$ 10 BFB	95	8.451	8.451	0.000	0	42377	NR	NR	
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QC Flag Legend

Processing Flags

NR - Missing Quant Standard

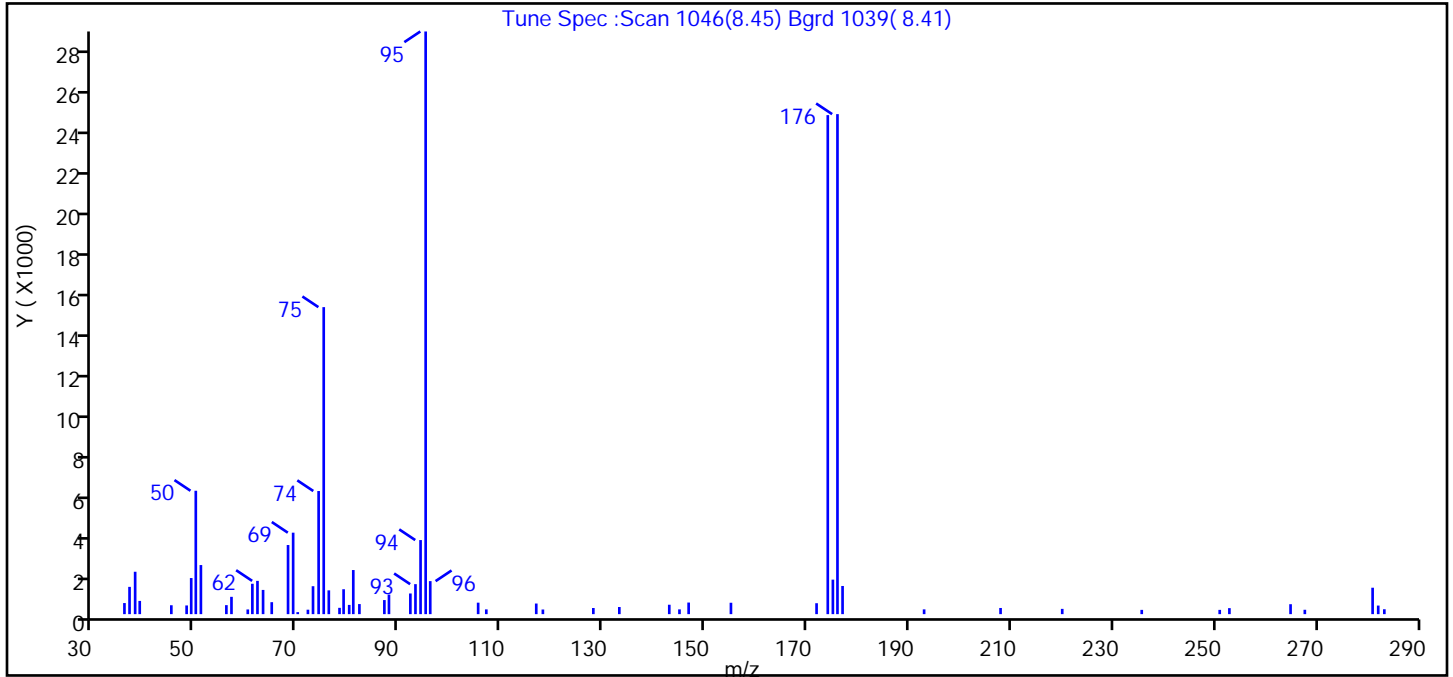
Reagents:

VOABFB25_00118 Amount Added: 1.00 Units: uL

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092001.D
 Injection Date: 20-Sep-2019 10:07:30 Instrument ID: CHHP5
 Lims ID: BFB
 Client ID:
 Operator ID: 433269 ALS Bottle#: 1 Worklist Smp#: 1
 Injection Vol: 5.0 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Tune Method: BFB Method 8260

\$ 10 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	21.2
75	30 to 60% of m/z 95	52.7
96	5 to 9% of m/z 95	5.7
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	85.6
175	5 to 9% of m/z 174	5.9 (6.9)
176	Greater than 95% but less than 101% of m/z 174	85.8 (100.2)
177	5 to 9% of m/z 176	4.8 (5.6)

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092001.D\MSVOA_LL_CHHP5.rsl\spectra
 Injection Date: 20-Sep-2019 10:07:30
 Spectrum: Tune Spec :Scan 1046(8.45) Bgrd 1039(8.41)
 Base Peak: 95.10
 Minimum % Base Peak: 0
 Number of Points: 62

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	543	68.10	3385	93.10	1469	175.00	1690
37.00	1336	69.10	3990	94.10	3628	175.90	24488
38.10	2076	70.00	98	95.10	28536	176.90	1379
39.00	648	72.00	218	96.00	1617	192.90	234
45.20	436	73.00	1368	105.40	562	207.90	302
48.20	426	74.10	6030	107.00	233	220.00	258
49.10	1768	75.10	15036	116.80	520	235.60	209
50.00	6043	76.10	1165	118.10	227	250.90	209
51.00	2404	78.20	309	128.00	300	252.80	294
56.00	441	79.00	1220	133.10	349	264.80	487
57.00	848	80.10	452	142.90	461	267.60	214
60.20	230	80.90	2160	144.90	234	280.90	1294
61.10	1488	82.10	494	146.70	568	282.00	420
62.10	1629	87.00	689	155.00	558	283.20	240
63.20	1186	87.90	958	171.80	535		
64.90	586	92.10	1012	174.00	24440		

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092001.D

Injection Date: 20-Sep-2019 10:07:30

Instrument ID: CHHP5

Operator ID: 433269

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 5.0 mL

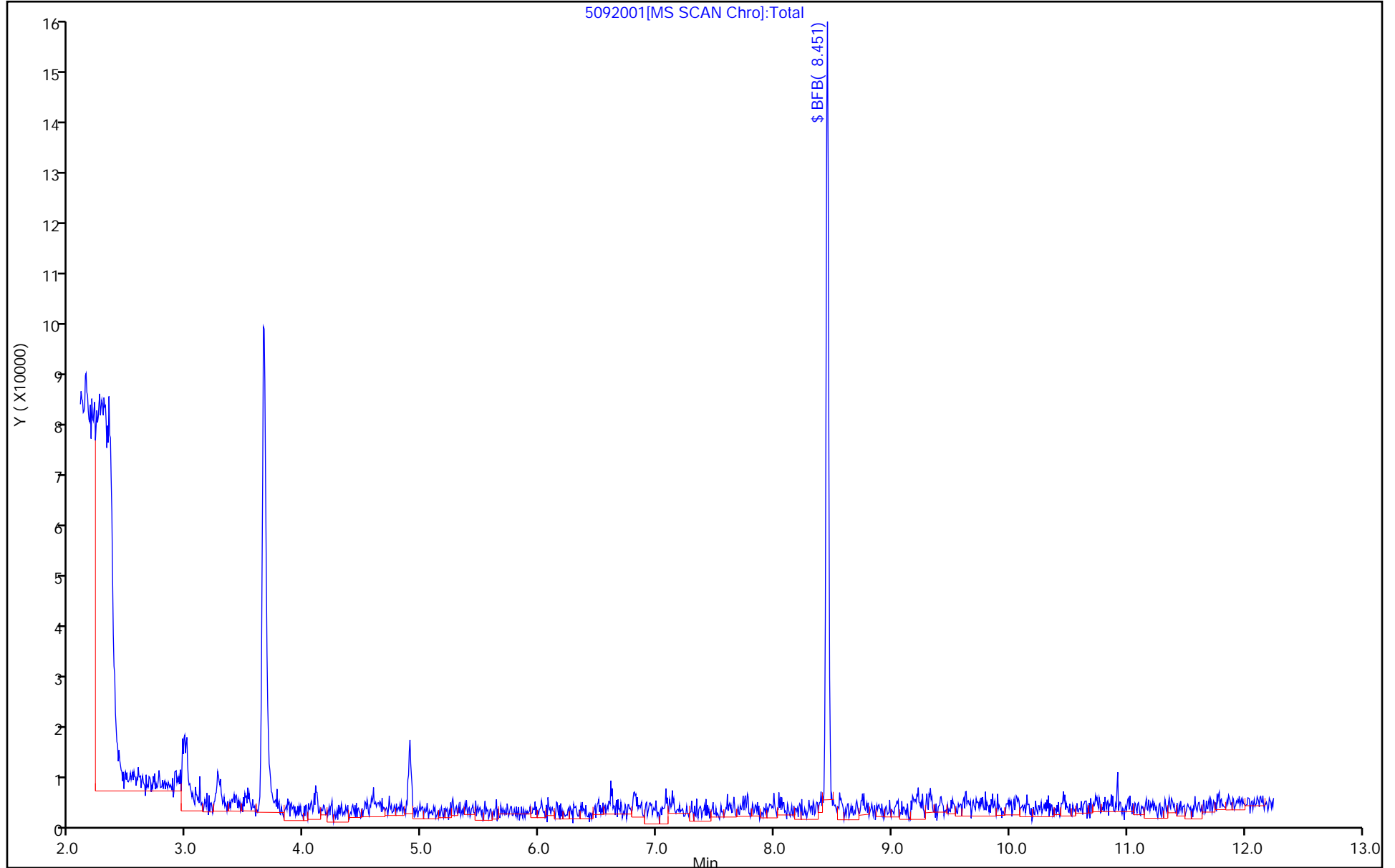
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
 Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092705B.D
 Lims ID: BFB
 Client ID:
 Sample Type: BFB
 Inject. Date: 27-Sep-2019 13:23:30 ALS Bottle#: 1 Worklist Smp#: 1
 Injection Vol: 5.0 mL Dil. Factor: 1.0000
 Sample Info: 180-0028863-001
 Misc. Info.: BFB
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 28-Sep-2019 10:43:08 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: bowieh Date: 28-Sep-2019 10:43:08

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
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\$ 10 BFB	95	8.450	8.450	0.000	0	61053	NR	NR	
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QC Flag Legend

Processing Flags

NR - Missing Quant Standard

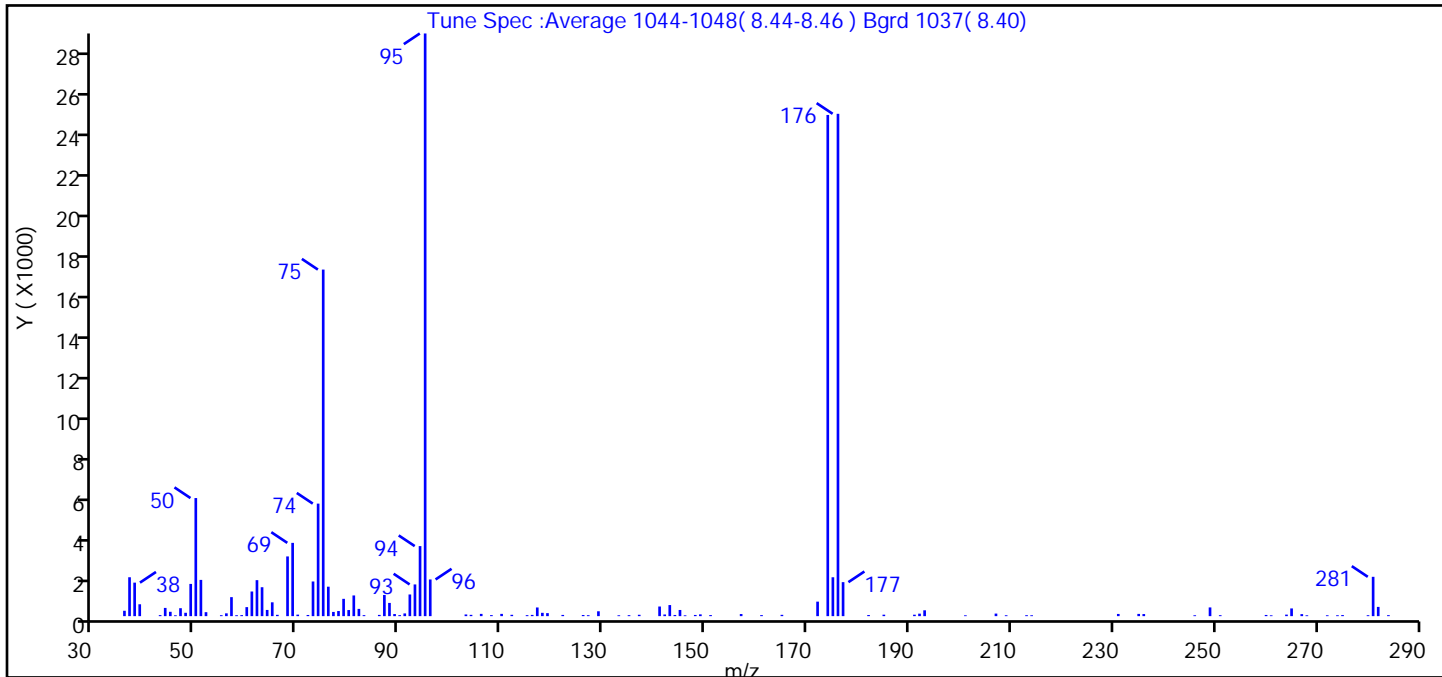
Reagents:

VOABFB25_00118 Amount Added: 1.00 Units: uL

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092705B.D
 Injection Date: 27-Sep-2019 13:23:30 Instrument ID: CHHP5
 Lims ID: BFB
 Client ID:
 Operator ID: 433269 ALS Bottle#: 1 Worklist Smp#: 1
 Injection Vol: 5.0 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Tune Method: BFB Method 8260

\$ 10 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	20.3
75	30 to 60% of m/z 95	59.5
96	5 to 9% of m/z 95	6.3
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	86.0
175	5 to 9% of m/z 174	6.7 (7.8)
176	Greater than 95% but less than 101% of m/z 174	86.2 (100.2)
177	5 to 9% of m/z 176	5.8 (6.8)

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092705B.D\MSVOA_LL_CHHP5.rsl\spectr
Injection Date: 27-Sep-2019 13:23:30
Spectrum: Tune Spec :Average 1044-1048(8.44-8.46) Bgrd 1037(8.40)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 116

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	264	72.00	57	115.00	48	182.00	54
37.00	1910	73.00	1702	116.00	61	185.00	72
38.00	1645	74.00	5525	117.00	426	191.00	71
39.00	583	75.00	17016	118.00	163	192.00	122
43.00	51	76.00	1446	119.00	148	193.00	287
44.00	404	77.00	207	122.00	60	201.00	41
45.00	213	78.00	251	126.00	56	207.00	126
46.00	42	79.00	850	127.00	46	209.00	43
47.00	390	80.00	299	129.00	239	213.00	46
48.00	165	81.00	1016	133.00	42	214.00	43
49.00	1582	82.00	356	135.00	47	231.00	108
50.00	5798	83.00	49	137.00	67	235.00	110
51.00	1780	86.00	61	141.00	473	236.00	103
52.00	195	87.00	1040	142.00	81	246.00	43
55.00	46	88.00	649	143.00	544	249.00	428
56.00	138	89.00	103	144.00	57	251.00	46
57.00	933	90.00	49	145.00	303	260.00	58
58.00	45	91.00	133	146.00	40	261.00	40
59.00	50	92.00	1064	148.00	58	264.00	75
60.00	443	93.00	1557	149.00	87	265.00	379
61.00	1210	94.00	3439	151.00	52	267.00	99
62.00	1767	95.00	28608	157.00	104	268.00	41
63.00	1420	96.00	1801	161.00	50	272.00	42
64.00	304	103.00	83	165.00	65	274.00	43
65.00	679	104.00	64	172.00	712	275.00	53
66.00	65	106.00	111	174.00	24608	280.00	45
68.00	2932	108.00	50	175.00	1909	281.00	1931
69.00	3598	110.00	111	176.00	24664	282.00	454
70.00	74	112.00	66	177.00	1669	284.00	48

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092705B.D

Injection Date: 27-Sep-2019 13:23:30

Instrument ID: CHHP5

Operator ID: 433269

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 5.0 mL

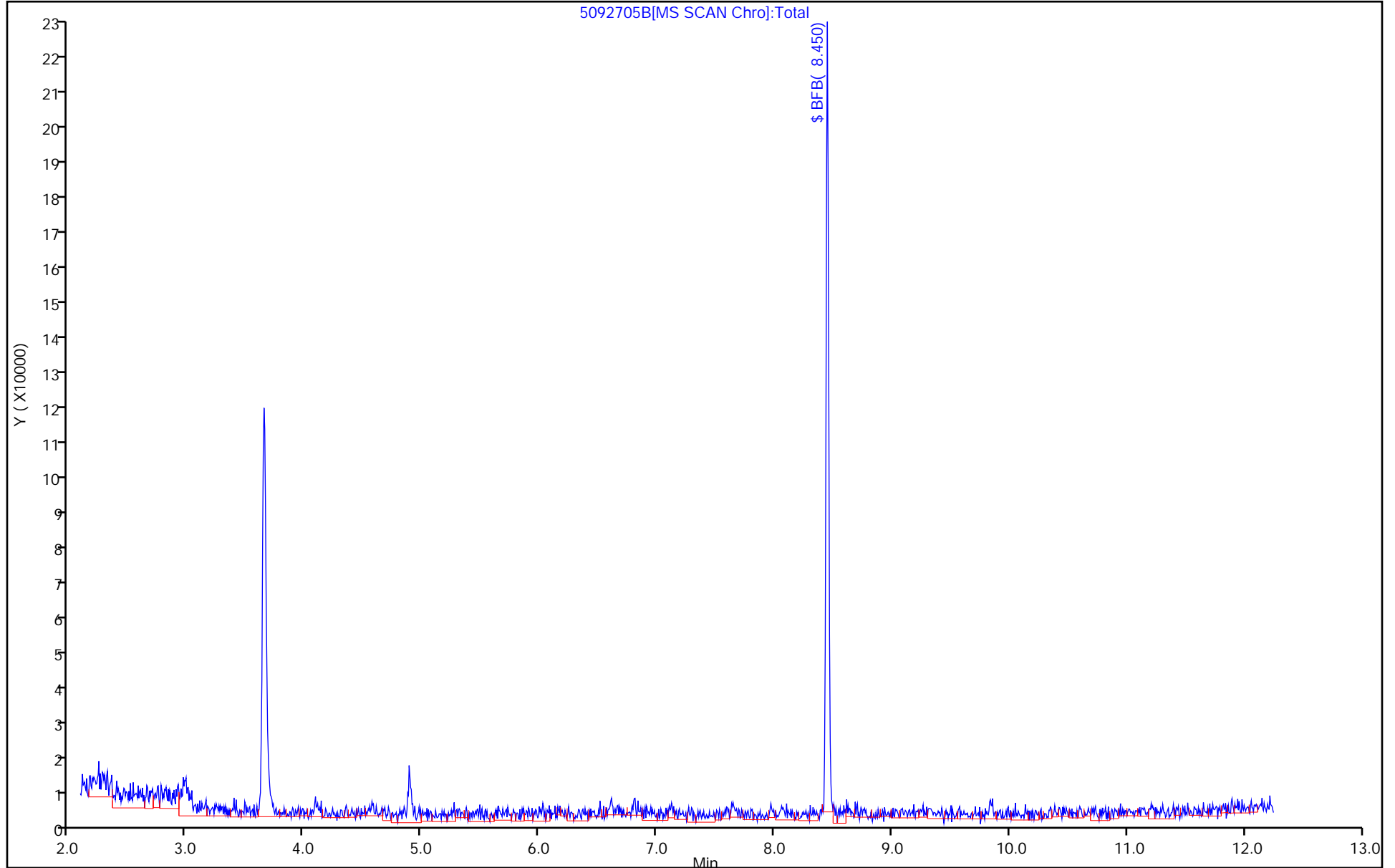
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190928-28871.b\5092801.D
 Lims ID: BFB
 Client ID:
 Sample Type: BFB
 Inject. Date: 28-Sep-2019 10:01:30 ALS Bottle#: 1 Worklist Smp#: 1
 Injection Vol: 5.0 mL Dil. Factor: 1.0000
 Sample Info: 180-0028871-001
 Misc. Info.: BFB
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190928-28871.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 28-Sep-2019 14:54:52 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: bowieh Date: 28-Sep-2019 14:54:52

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
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\$ 10 BFB	95	8.451	8.451	0.000	0	70606	NR	NR	
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QC Flag Legend

Processing Flags

NR - Missing Quant Standard

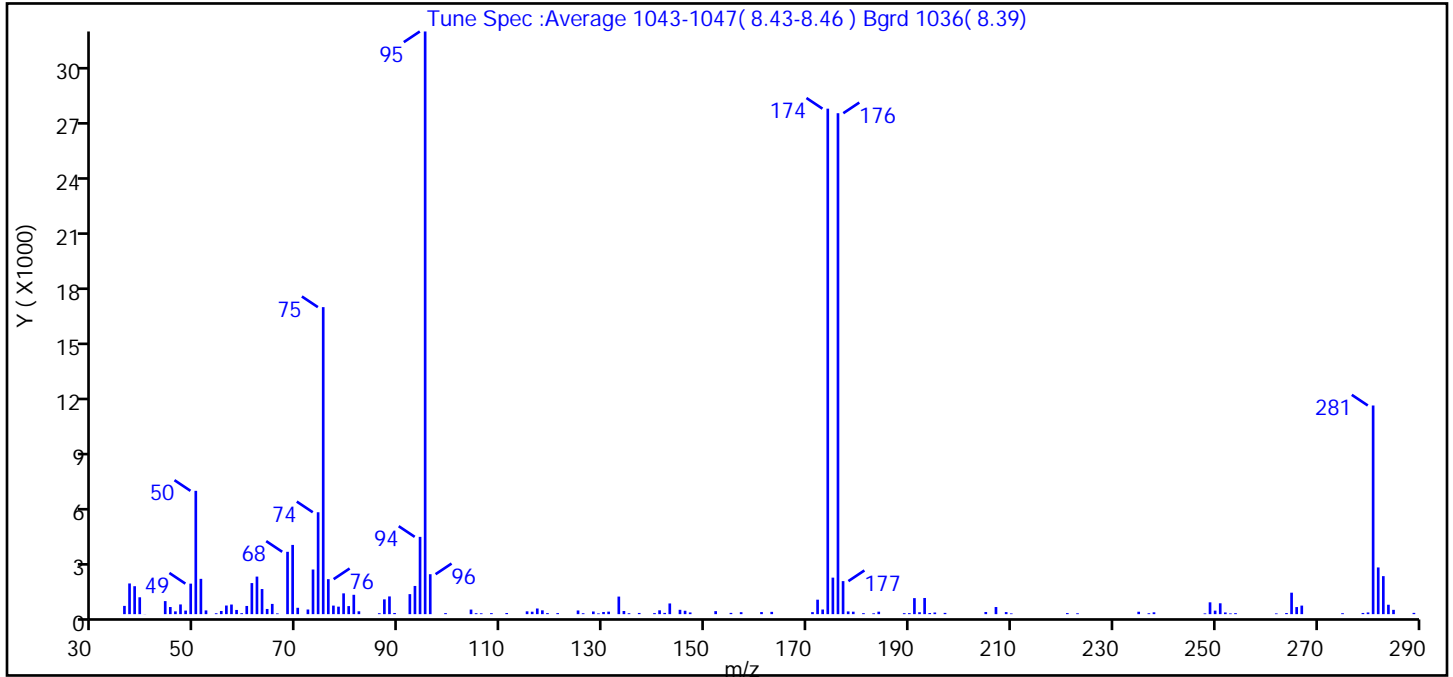
Reagents:

VOABFB25_00118 Amount Added: 1.00 Units: uL

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190928-28871.b\5092801.D
 Injection Date: 28-Sep-2019 10:01:30 Instrument ID: CHHP5
 Lims ID: BFB
 Client ID:
 Operator ID: 433269 ALS Bottle#: 1 Worklist Smp#: 1
 Injection Vol: 5.0 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Tune Method: BFB Method 8260

\$ 10 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	21.2
75	30 to 60% of m/z 95	52.7
96	5 to 9% of m/z 95	6.9
173	Less than 2% of m/z 174	0.8 (0.9)
174	50 to 120% of m/z 95	86.8
175	5 to 9% of m/z 174	6.3 (7.2)
176	Greater than 95% but less than 101% of m/z 174	86.0 (99.1)
177	5 to 9% of m/z 176	5.7 (6.6)

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190928-28871.b\5092801.D\MSVOA_LL_CHHP5.rslt\spectra
Injection Date: 28-Sep-2019 10:01:30
Spectrum: Tune Spec :Average 1043-1047(8.43-8.46) Bgrd 1036(8.39)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 134

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	451	76.00	1911	133.00	959	195.00	89
37.00	1676	77.00	467	134.00	172	197.00	69
38.00	1526	78.00	409	135.00	50	205.00	118
39.00	921	79.00	1135	137.00	65	207.00	389
40.00	7	80.00	440	140.00	57	209.00	114
44.00	712	81.00	1057	141.00	209	210.00	40
45.00	389	82.00	156	142.00	67	221.00	59
46.00	152	86.00	51	143.00	584	223.00	48
47.00	530	87.00	808	145.00	237	235.00	131
48.00	194	88.00	968	146.00	185	237.00	49
49.00	1666	89.00	63	147.00	93	238.00	100
50.00	6735	92.00	1093	152.00	164	248.00	41
51.00	1928	93.00	1540	155.00	69	249.00	646
52.00	204	94.00	4221	157.00	107	250.00	191
54.00	49	95.00	31824	161.00	114	251.00	593
55.00	173	96.00	2181	163.00	125	252.00	92
56.00	471	99.00	56	171.00	110	253.00	40
57.00	525	104.00	250	172.00	790	254.00	54
58.00	229	105.00	52	173.00	253	262.00	40
59.00	52	106.00	46	174.00	27608	264.00	61
60.00	447	108.00	55	175.00	1994	265.00	1172
61.00	1697	111.00	61	176.00	27360	266.00	387
62.00	2051	115.00	154	177.00	1804	267.00	467
63.00	1371	116.00	133	178.00	149	275.00	51
64.00	283	117.00	308	179.00	135	279.00	65
65.00	559	118.00	209	181.00	53	280.00	93
66.00	40	119.00	57	183.00	46	281.00	11396
68.00	3405	121.00	58	184.00	134	282.00	2550
69.00	3781	125.00	200	189.00	53	283.00	2076
70.00	347	126.00	49	190.00	54	284.00	513
72.00	254	128.00	145	191.00	875	285.00	235
73.00	2438	129.00	41	192.00	105	289.00	69
74.00	5565	130.00	118	193.00	883		

Report Date: 28-Sep-2019 14:54:53

Chrom Revision: 2.3 17-Sep-2019 16:19:08

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190928-28871.b\5092801.D\MSVOA_LL_CHHP5.rsl\spectra

Injection Date: 28-Sep-2019 10:01:30

Spectrum: Tune Spec :Average 1043-1047(8.43-8.46) Bgrd 1036(8.39)

Base Peak: 95.00

Minimum % Base Peak: 0

Number of Points: 134

m/z	Y	m/z	Y	m/z	Y	m/z	Y
75.00	16768	131.00	137	194.00	61		

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190928-28871.b\5092801.D

Injection Date: 28-Sep-2019 10:01:30

Instrument ID: CHHP5

Operator ID: 433269

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 5.0 mL

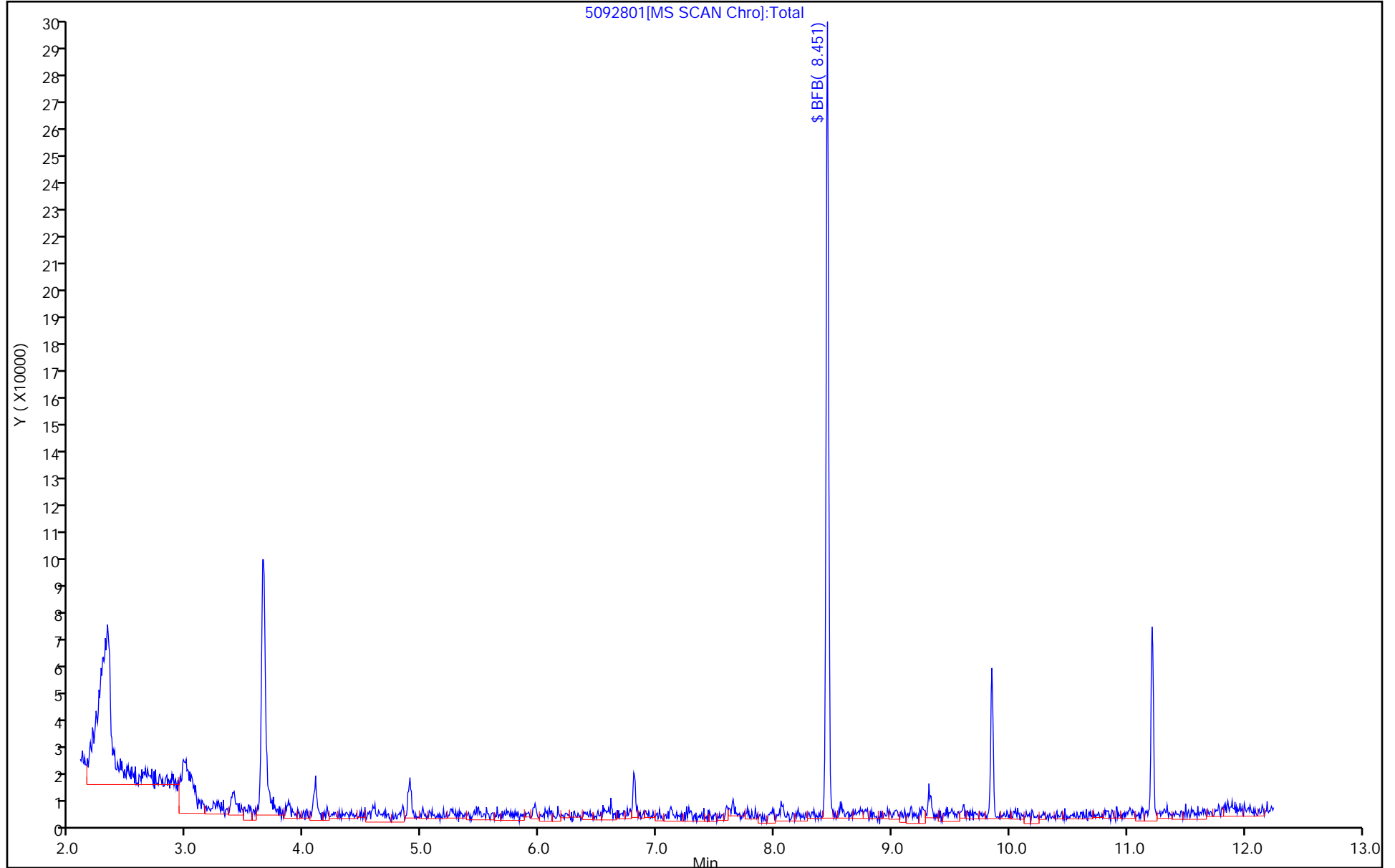
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100401C.D
 Lims ID: BFB
 Client ID:
 Sample Type: BFB
 Inject. Date: 04-Oct-2019 11:11:30 ALS Bottle#: 1 Worklist Smp#: 1
 Injection Vol: 5.0 mL Dil. Factor: 1.0000
 Sample Info: 180-0028969-001
 Misc. Info.: BFB
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 05-Oct-2019 09:12:50 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0311

First Level Reviewer: bowieh Date: 05-Oct-2019 09:12:50

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
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\$ 10 BFB	95	8.450	8.450	0.000	0	50047	NR	NR	
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QC Flag Legend

Processing Flags

NR - Missing Quant Standard

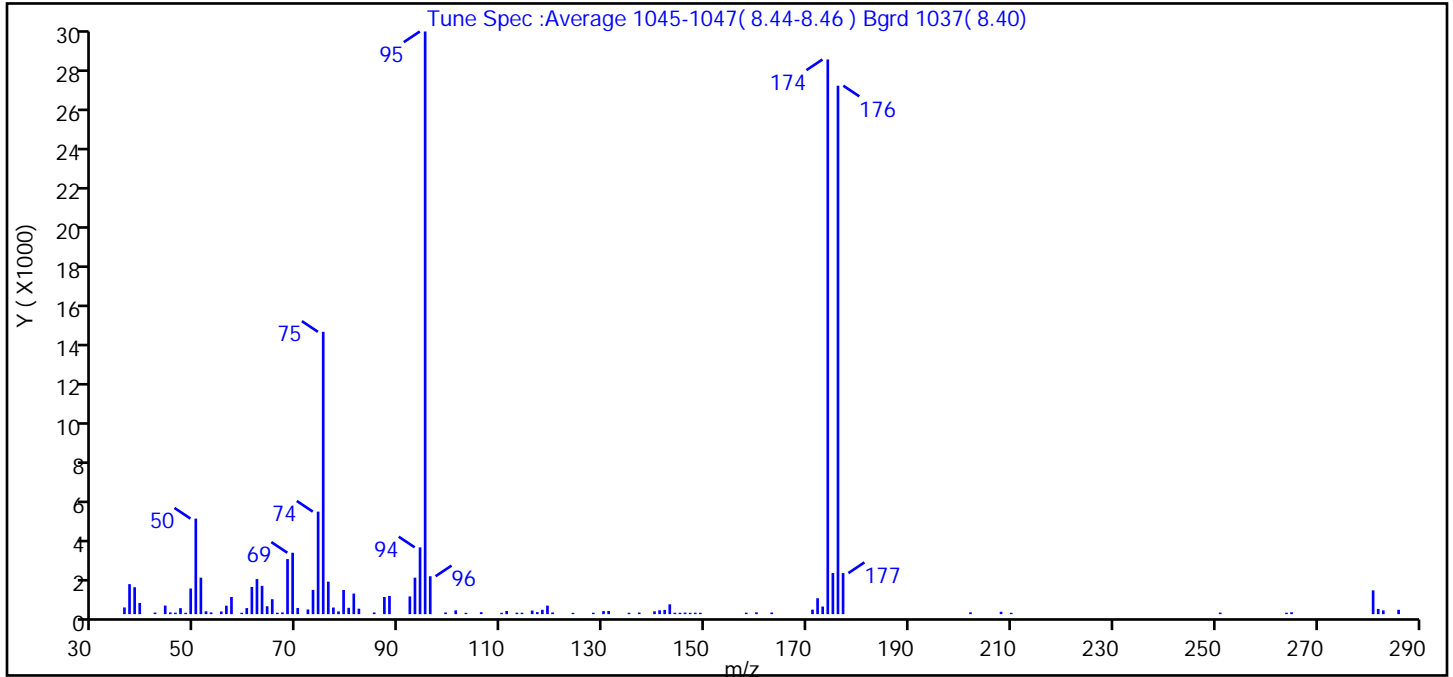
Reagents:

VOABFB25_00118 Amount Added: 1.00 Units: uL

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100401C.D
 Injection Date: 04-Oct-2019 11:11:30 Instrument ID: CHHP5
 Lims ID: BFB
 Client ID:
 Operator ID: 433269 ALS Bottle#: 1 Worklist Smp#: 1
 Injection Vol: 5.0 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Tune Method: BFB Method 8260

\$ 10 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	16.4
75	30 to 60% of m/z 95	48.5
96	5 to 9% of m/z 95	6.5
173	Less than 2% of m/z 174	1.3 (1.4)
174	50 to 120% of m/z 95	95.2
175	5 to 9% of m/z 174	7.1 (7.4)
176	Greater than 95% but less than 101% of m/z 174	90.7 (95.3)
177	5 to 9% of m/z 176	7.0 (7.8)

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100401C.D\MSVOA_LL_CHHP5.rsl\spectr
Injection Date: 04-Oct-2019 11:11:30
Spectrum: Tune Spec :Average 1045-1047(8.44-8.46) Bgrd 1037(8.40)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 98

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	336	66.00	72	101.00	190	147.00	69
37.00	1509	67.00	88	103.00	67	148.00	75
38.00	1354	68.00	2771	106.00	100	149.00	70
39.00	564	69.00	3089	110.00	69	158.00	75
42.00	79	70.00	311	111.00	160	160.00	91
44.00	431	72.00	236	113.00	74	163.00	83
45.00	87	73.00	1221	114.00	74	171.00	228
46.00	75	74.00	5157	116.00	182	172.00	801
47.00	302	75.00	14204	117.00	102	173.00	382
48.00	68	76.00	1635	118.00	218	174.00	27904
49.00	1289	77.00	333	119.00	429	175.00	2068
50.00	4806	78.00	137	120.00	86	176.00	26584
51.00	1835	79.00	1215	124.00	66	177.00	2066
52.00	144	80.00	319	128.00	70	202.00	91
53.00	88	81.00	1035	130.00	153	208.00	120
55.00	133	82.00	275	131.00	158	210.00	68
56.00	426	85.00	86	135.00	69	251.00	79
57.00	863	87.00	864	137.00	80	264.00	72
59.00	70	88.00	917	140.00	141	265.00	96
60.00	306	92.00	892	141.00	194	281.00	1196
61.00	1369	93.00	1834	142.00	212	282.00	262
62.00	1764	94.00	3360	143.00	494	283.00	188
63.00	1424	95.00	29312	144.00	71	286.00	219
64.00	396	96.00	1907	145.00	69		
65.00	752	99.00	85	146.00	80		

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100401C.D

Injection Date: 04-Oct-2019 11:11:30

Instrument ID: CHHP5

Operator ID: 433269

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 5.0 mL

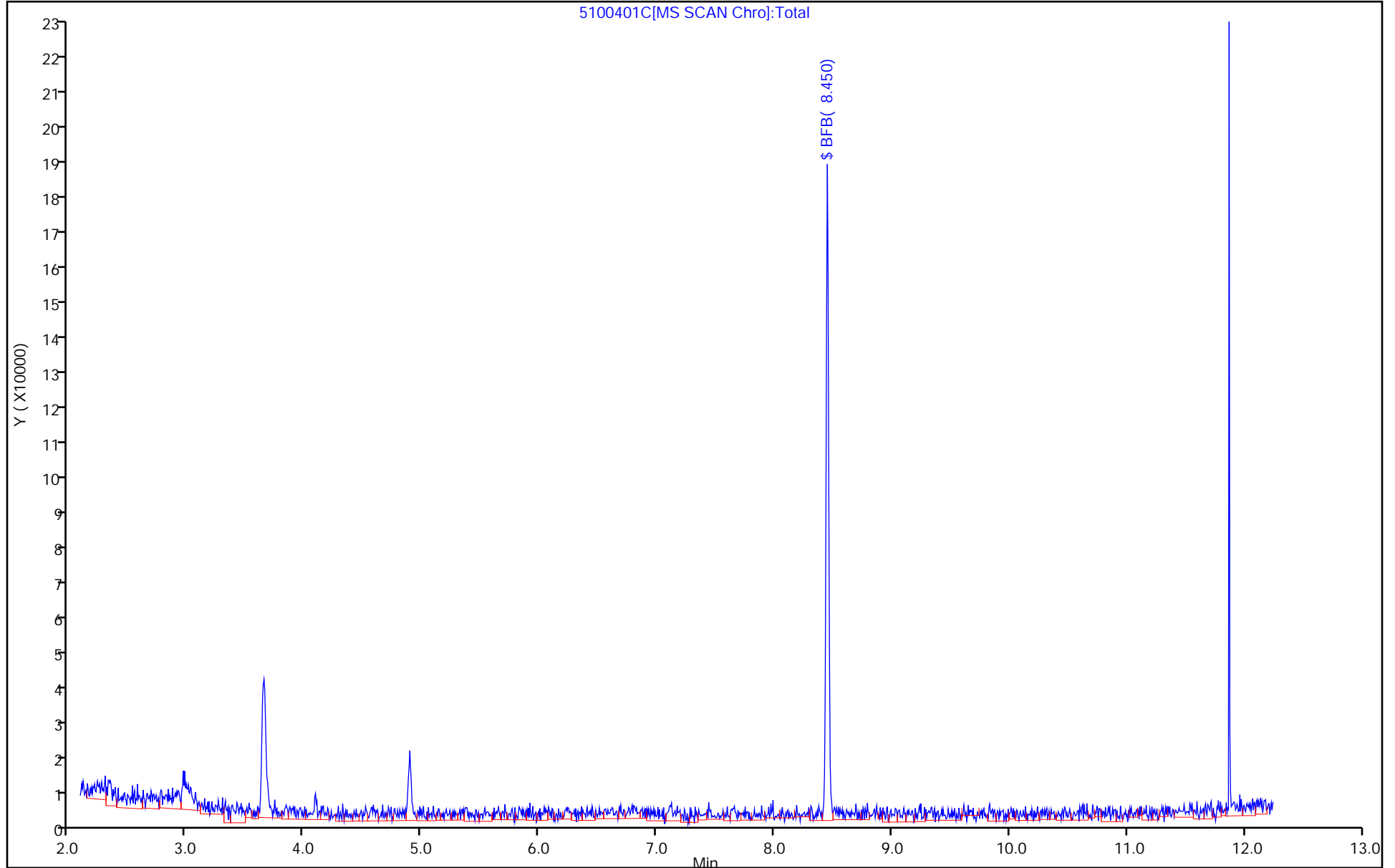
Dil. Factor: 1.0000

ALS Bottle#: 1

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 180-292962/6
 Matrix: Water Lab File ID: 5092710.D
 Analysis Method: EPA 8260C Date Collected: _____
 Sample wt/vol: 5 (mL) Date Analyzed: 09/27/2019 16:02
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 292962 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	ND		1.0	0.90
75-01-4	Vinyl chloride	ND		1.0	0.88
74-83-9	Bromomethane	ND		1.0	0.89
75-00-3	Chloroethane	ND		1.0	0.90
75-35-4	1,1-Dichloroethene	ND		1.0	0.55
67-64-1	Acetone	ND		5.0	3.4
75-15-0	Carbon disulfide	ND		1.0	0.88
75-09-2	Methylene Chloride	ND		1.0	0.89
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.67
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.59
75-34-3	1,1-Dichloroethane	ND		1.0	0.63
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.71
74-97-5	Bromochloromethane	ND		1.0	0.63
78-93-3	2-Butanone (MEK)	ND		5.0	2.6
67-66-3	Chloroform	ND		1.0	0.60
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.60
56-23-5	Carbon tetrachloride	ND		1.0	0.88
71-43-2	Benzene	ND		1.0	0.60
107-06-2	1,2-Dichloroethane	ND		1.0	0.57
79-01-6	Trichloroethene	ND		1.0	0.69
78-87-5	1,2-Dichloropropane	ND		1.0	0.66
75-27-4	Bromodichloromethane	ND		1.0	0.64
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.59
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1
108-88-3	Toluene	ND		1.0	0.46
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.58
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.45
127-18-4	Tetrachloroethene	ND		1.0	0.47
591-78-6	2-Hexanone	ND		5.0	3.3
124-48-1	Dibromochloromethane	ND		1.0	0.84
106-93-4	1,2-Dibromoethane (EDB)	ND		1.0	0.50
108-90-7	Chlorobenzene	ND		1.0	0.50
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.57
100-41-4	Ethylbenzene	ND		1.0	0.51
1330-20-7	Xylenes, Total	ND		2.0	0.89
100-42-5	Styrene	ND		1.0	0.47

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 180-292962/6
 Matrix: Water Lab File ID: 5092710.D
 Analysis Method: EPA 8260C Date Collected: _____
 Sample wt/vol: 5 (mL) Date Analyzed: 09/27/2019 16:02
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 292962 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	ND		1.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.60
107-13-1	Acrylonitrile	ND		20	7.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	96		70-150
2037-26-5	Toluene-d8 (Surr)	88		78-128
460-00-4	4-Bromofluorobenzene (Surr)	82		64-123
1868-53-7	Dibromofluoromethane (Surr)	105		75-147

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092710.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 27-Sep-2019 16:02:30 ALS Bottle#: 6 Worklist Smp#: 6
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028863-006
 Misc. Info.: MB
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 28-Sep-2019 10:49:55 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: bowieh Date: 28-Sep-2019 10:49:55

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.537	4.532	0.005	0	159428	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.499	7.495	0.004	97	299813	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.578	10.579	-0.001	88	81330	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.920	12.915	0.005	96	122034	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.782	6.777	0.005	93	90547	50.0	52.3	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.147	7.142	0.005	0	139898	50.0	48.0	
\$ 7 Toluene-d8 (Surr)	98	9.136	9.131	0.005	95	283839	50.0	43.8	
\$ 8 4-Bromofluorobenzene (Surr	95	11.758	11.766	-0.008	90	108790	50.0	40.9	
11 Dichlorodifluoromethane	85		1.691					ND	
12 Chloromethane	50		1.910					ND	
13 Vinyl chloride	62		2.038					ND	
14 Butadiene	39		2.050					ND	U
15 Bromomethane	94		2.379					ND	U
16 Chloroethane	64		2.543					ND	
19 Ethanol	45	2.627	2.640	-0.013	0	779		NC	
17 Dichlorofluoromethane	67		2.841					ND	
18 Trichlorofluoromethane	101		2.853					ND	
20 Ethyl ether	59		3.249					ND	
21 Acrolein	56		3.442					ND	
22 1,1-Dichloroethene	96		3.565					ND	
23 1,1,2-Trichloro-1,2,2-trif	101		3.632					ND	
24 Acetone	43		3.668					ND	
25 Iodomethane	142		3.772					ND	
26 Carbon disulfide	76		3.863					ND	
27 Isopropyl alcohol	45		3.990					ND	U
29 Acetonitrile	41		4.148					ND	
28 3-Chloro-1-propene	76		4.186					ND	U
30 Methyl acetate	43		4.210					ND	
31 Methylene Chloride	84	4.409	4.405	0.004	95	9740		-1.58	a
32 2-Methyl-2-propanol	59		4.660					ND	
33 Acrylonitrile	53		4.782					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
34 trans-1,2-Dichloroethene	96		4.812					ND	
35 Methyl tert-butyl ether	73		4.824					ND	
36 Hexane	57		5.220					ND	U
37 1,1-Dichloroethane	63		5.439					ND	
38 Vinyl acetate	43		5.486					ND	U
39 2-Chloro-1,3-butadiene	53		5.529					ND	
41 Isopropyl ether	45		5.535					ND	
42 Tert-butyl ethyl ether	59		5.997					ND	
44 2,2-Dichloropropane	97		6.169					ND	U
45 cis-1,2-Dichloroethene	96		6.181					ND	
46 2-Butanone (MEK)	43		6.187					ND	
48 Ethyl acetate	43		6.259					ND	
47 Propionitrile	54		6.265					ND	
50 Methacrylonitrile	41		6.441					ND	
49 Chlorobromomethane	128		6.455					ND	
51 Tetrahydrofuran	42		6.467					ND	
52 Chloroform	83	6.605	6.595	0.010	94	6049		-1.05	
53 1,1,1-Trichloroethane	97		6.759					ND	
54 Cyclohexane	56		6.820					ND	
56 Carbon tetrachloride	117		6.929					ND	
55 1,1-Dichloropropene	75		6.935					ND	
57 Isobutyl alcohol	41		7.142					ND	
58 Benzene	78		7.154					ND	U
59 1,2-Dichloroethane	62		7.233					ND	
151 Isooctane	57		7.305					ND	U
61 Tert-amyl methyl ether	73		7.330					ND	U
62 n-Heptane	43		7.507					ND	U
63 n-Butanol	56		7.841					ND	
64 Trichloroethene	130		7.878					ND	
65 Ethyl acrylate	55		7.999					ND	
66 Methylcyclohexane	83		8.109					ND	
67 1,2-Dichloropropane	63		8.152					ND	
70 1,4-Dioxane	88		8.225					ND	
69 Methyl methacrylate	69		8.230					ND	
68 Dibromomethane	93		8.237					ND	
71 Dichlorobromomethane	83		8.432					ND	
73 2-Chloroethyl vinyl ether	63		8.723					ND	
74 cis-1,3-Dichloropropene	75		8.870					ND	
75 4-Methyl-2-pentanone (MIBK)	43		9.028					ND	U
76 Toluene	91		9.198					ND	
77 trans-1,3-Dichloropropene	75		9.448					ND	
78 Ethyl methacrylate	69		9.503					ND	
79 1,1,2-Trichloroethane	97		9.636					ND	
80 Tetrachloroethene	164		9.709					ND	
81 1,3-Dichloropropane	76		9.795					ND	
82 2-Hexanone	43		9.855					ND	U
83 n-Butyl acetate	43		9.970					ND	
84 Chlorodibromomethane	129		10.007					ND	
85 Ethylene Dibromide	107		10.123					ND	
86 3-Chlorobenzotrifluoride	180		10.445					ND	
87 Chlorobenzene	112		10.610					ND	
89 1,1,1,2-Tetrachloroethane	131		10.701					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
90 Ethylbenzene	106		10.707					ND	
88 4-Chlorobenzotrifluoride	180		10.779					ND	
91 m-Xylene & p-Xylene	106		10.835					ND	
92 o-Xylene	106		11.218					ND	
93 Styrene	104		11.242					ND	
94 Bromoform	173		11.419					ND	
96 2-Chlorobenzotrifluoride	180		11.521					ND	
97 Isopropylbenzene	105		11.583					ND	
98 Cyclohexanone	55		11.679					ND	
99 1,1,2,2-Tetrachloroethane	83		11.899					ND	U
100 Bromobenzene	156		11.899					ND	
102 trans-1,4-Dichloro-2-buten	53		11.936					ND	U
101 1,2,3-Trichloropropane	110		11.954					ND	
103 N-Propylbenzene	120		12.003					ND	
104 2-Chlorotoluene	126		12.088					ND	
106 1,3,5-Trimethylbenzene	105		12.185					ND	
105 3-Chlorotoluene	126		12.212					ND	
107 4-Chlorotoluene	126		12.216					ND	
111 1,2-dichloro-4-(trifluorom	214		12.463					ND	
108 tert-Butylbenzene	119		12.502					ND	
110 1,2,4-Trimethylbenzene	105		12.556					ND	
112 sec-Butylbenzene	105		12.721					ND	
116 2,4-Dichloro-1-(triflourom	214		12.836					ND	
113 1,3-Dichlorobenzene	146		12.842					ND	
114 4-Isopropyltoluene	119		12.873					ND	
118 2,5-Dichlorobenzotrifluori	214		12.878					ND	
115 1,4-Dichlorobenzene	146		12.946					ND	U
117 1,2,3-Trimethylbenzene	105		12.969					ND	
119 Benzyl chloride	91		13.060					ND	
120 n-Butylbenzene	91		13.286					ND	U
121 1,2-Dichlorobenzene	146		13.305					ND	
122 1,2-Dibromo-3-Chloropropan	75		14.096					ND	
123 2,4- & 2,5- & 2,6- Dichlor	125		14.125					ND	
124 1,3,5-Trichlorobenzene	180		14.277					ND	
125 2,3- & 3,4- Dichlorotoluen	125		14.557					ND	
126 1,2,4-Trichlorobenzene	180		14.911					ND	
127 Hexachlorobutadiene	225		15.057					ND	U
128 Naphthalene	128		15.184					ND	U
129 1,2,3-Trichlorobenzene	180		15.422					ND	
131 2,4,5-Trichlorotoluene	159		16.090					ND	
130 2,3,6-Trichlorotoluene	159		16.090					ND	
S 154 Total BTEX	106		1.000					ND	
S 134 1,2-Dichloroethene, Total	96		1.000					ND	
S 133 Xylenes, Total	106		1.000					ND	
S 135 1,3-Dichloropropene, Total	1		0.000					ND	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

U - Marked Undetected

a - User Assigned ID

Reagents:

voaWI/SHP5_00013

Amount Added: 5.00

Units: uL

Run Reagent

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092710.D

Injection Date: 27-Sep-2019 16:02:30

Instrument ID: CHHP5

Operator ID: 433269

Lims ID: MB

Worklist Smp#: 6

Client ID:

Purge Vol: 5.000 mL

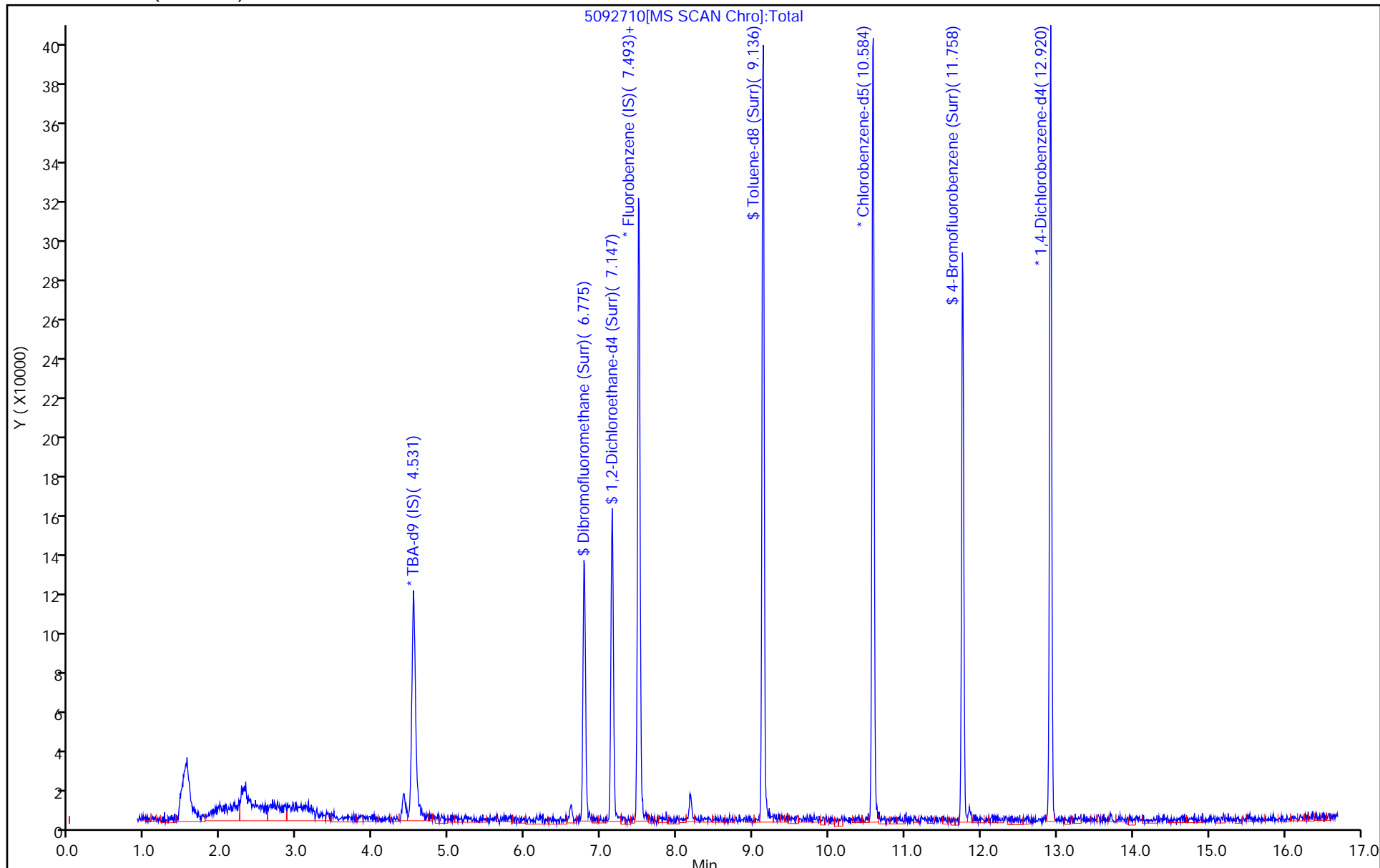
Dil. Factor: 1.0000

ALS Bottle#: 6

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Recovery Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092710.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 27-Sep-2019 16:02:30 ALS Bottle#: 6 Worklist Smp#: 6
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028863-006
 Misc. Info.: MB
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 28-Sep-2019 10:49:55 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: bowieh Date: 28-Sep-2019 10:49:55

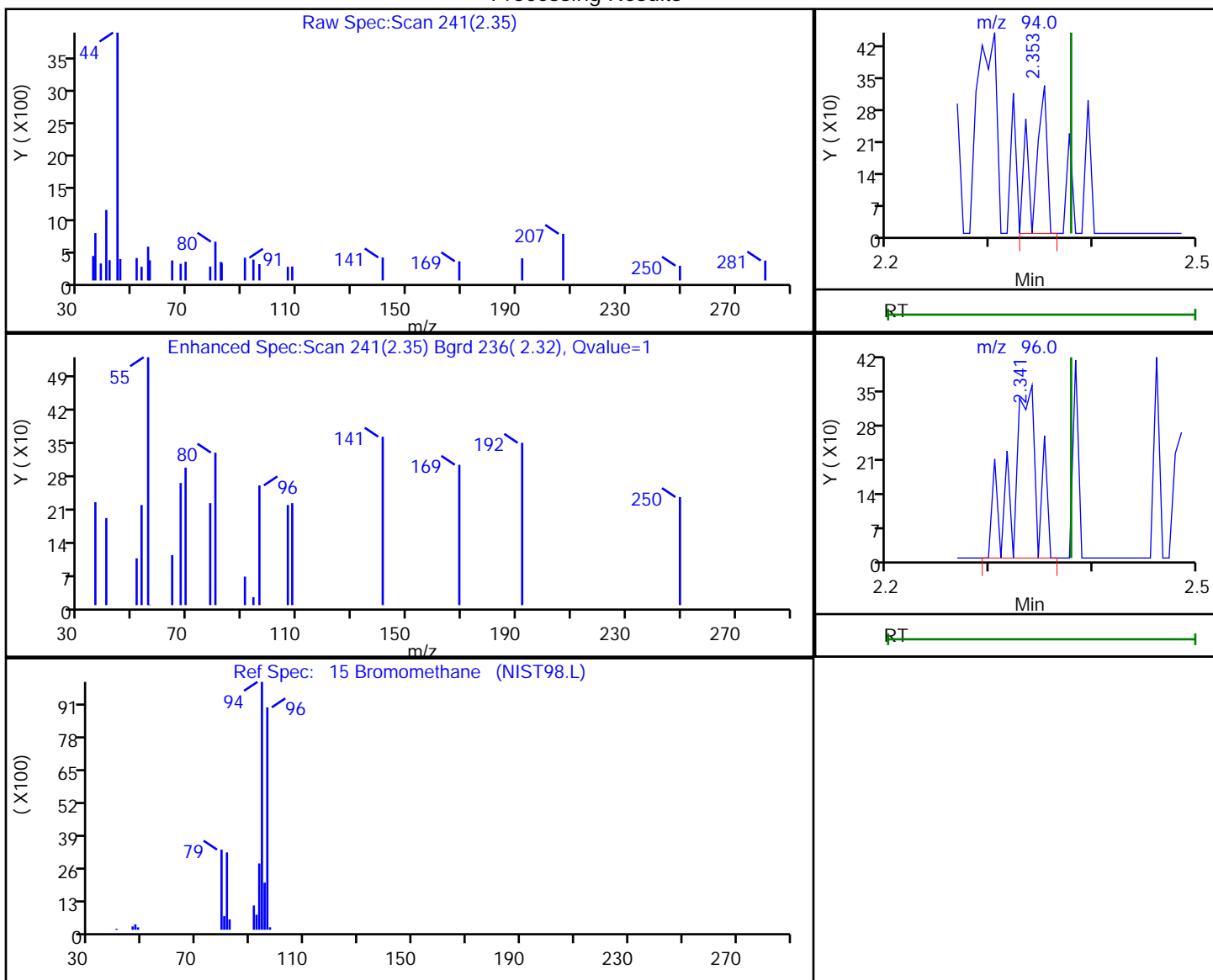
Compound	Amount Added	Amount Recovered	% Rec.
\$ 5 Dibromofluoromethane (Surr)	50.0	52.3	104.64
\$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	48.0	95.97
\$ 7 Toluene-d8 (Surr)	50.0	43.8	87.68
\$ 8 4-Bromofluorobenzene (Surr)	50.0	40.9	81.74

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092710.D
 Injection Date: 27-Sep-2019 16:02:30 Instrument ID: CHHP5
 Lims ID: MB
 Client ID:
 Operator ID: 433269 ALS Bottle#: 6 Worklist Smp#: 6
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

15 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
2.35	94.00	287	0.155953
2.34	96.00	618	

Reviewer: bowieh, 28-Sep-2019 10:48:43

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

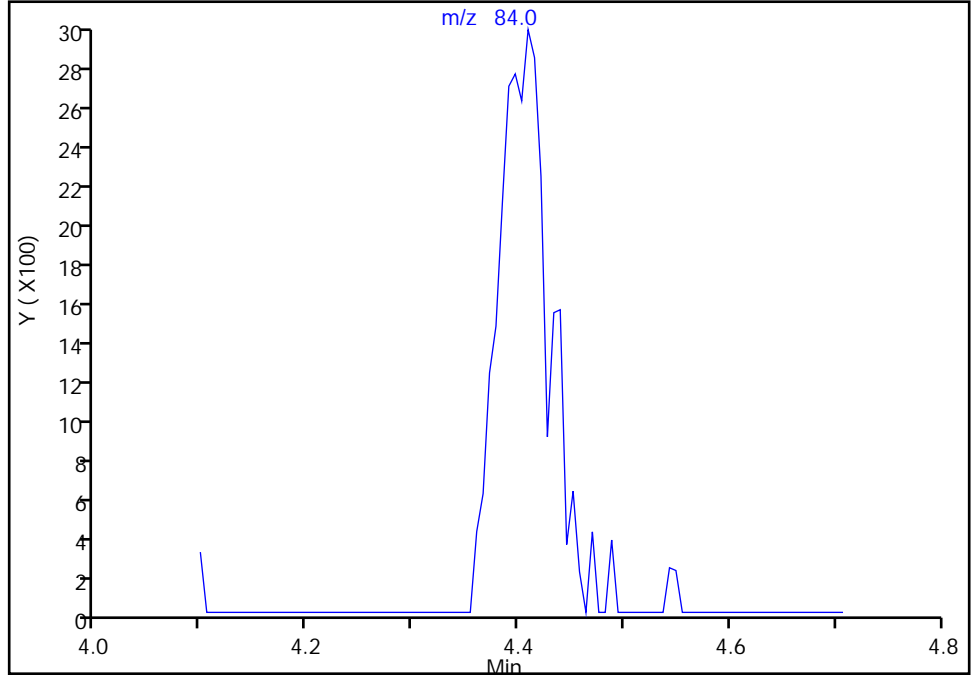
Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092710.D
Injection Date: 27-Sep-2019 16:02:30 Instrument ID: CHHP5
Lims ID: MB
Client ID:
Operator ID: 433269 ALS Bottle#: 6 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2

Signal: 1

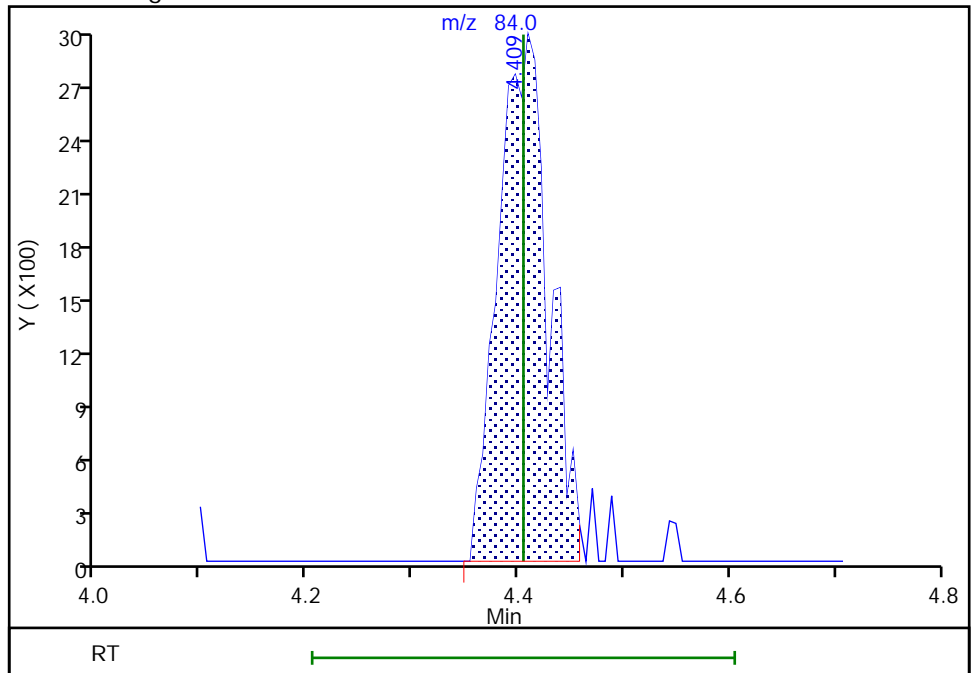
Not Detected
Expected RT: 4.40

Processing Integration Results



RT: 4.41
Area: 9740
Amount: -1.578135
Amount Units: ng

Manual Integration Results

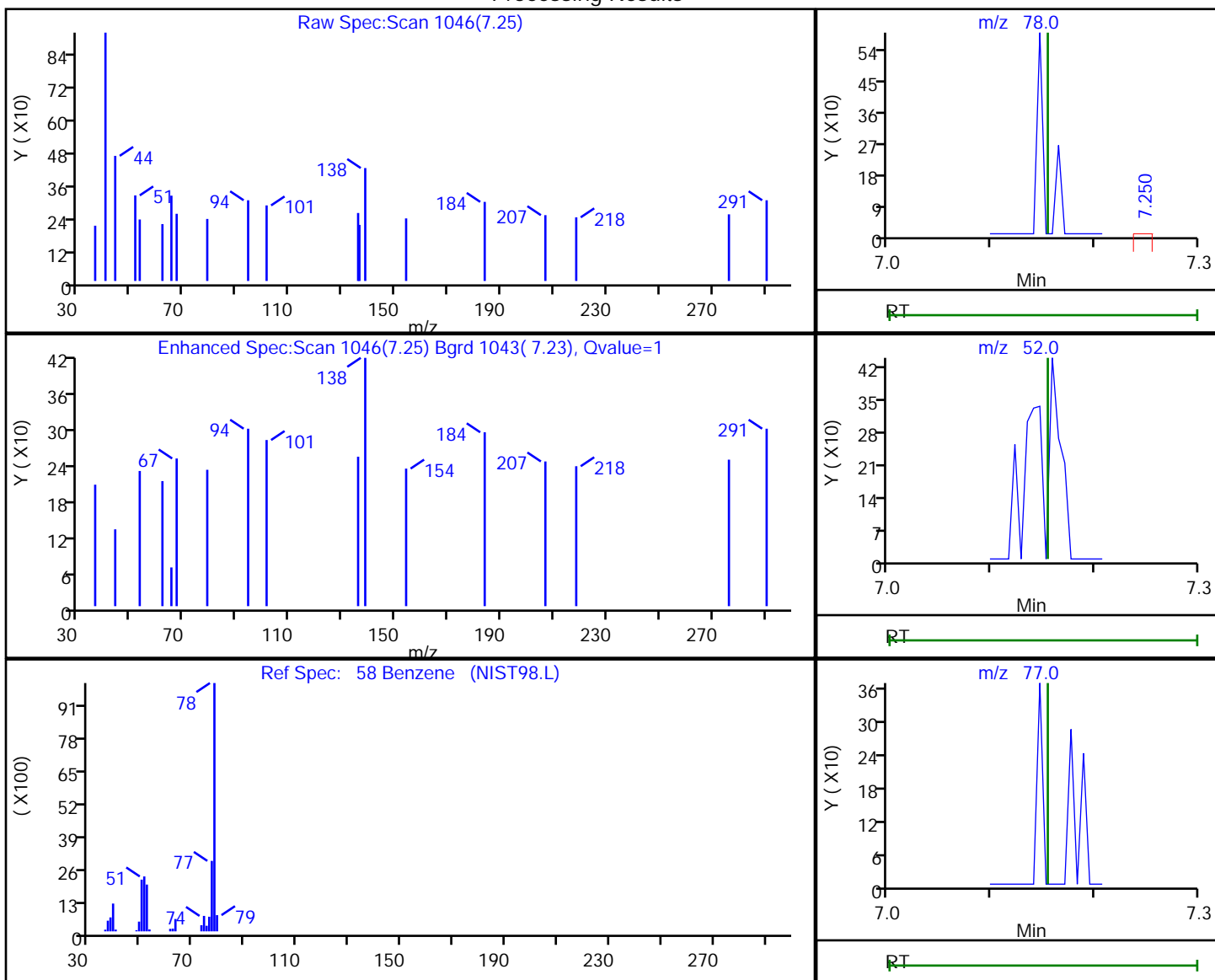


Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092710.D
 Injection Date: 27-Sep-2019 16:02:30 Instrument ID: CHHP5
 Lims ID: MB
 Client ID:
 Operator ID: 433269 ALS Bottle#: 6 Worklist Smp#: 6
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

58 Benzene, CAS: 71-43-2

Processing Results



RT	Mass	Response	Amount
7.25	78.00	166	0.022416
7.15	52.00	0	
7.15	77.00	0	

Reviewer: bowieh, 28-Sep-2019 10:49:14

Audit Action: Marked Compound Undetected

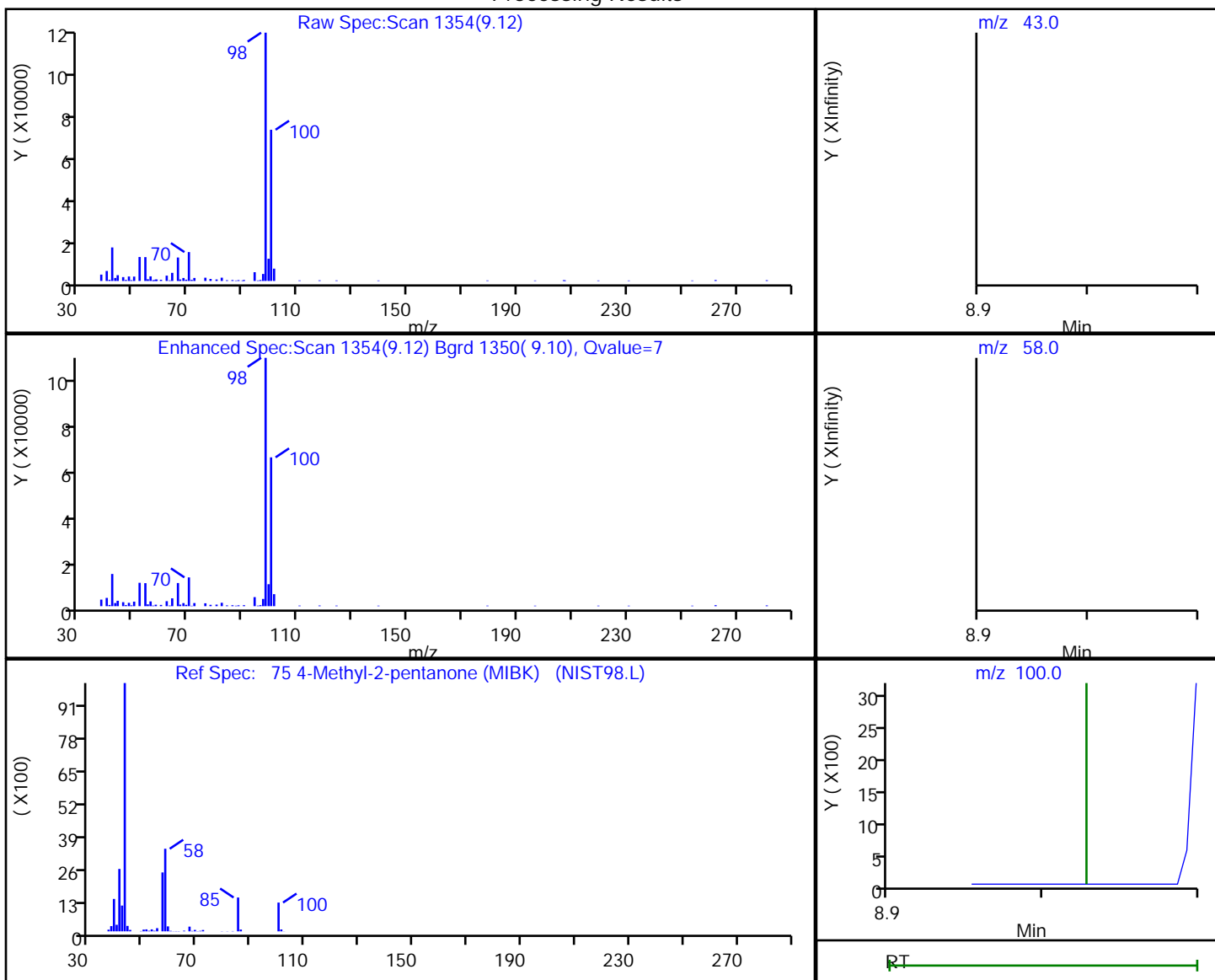
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092710.D
 Injection Date: 27-Sep-2019 16:02:30 Instrument ID: CHHP5
 Lims ID: MB
 Client ID:
 Operator ID: 433269 ALS Bottle#: 6 Worklist Smp#: 6
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

75 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1

Processing Results



RT	Mass	Response	Amount
9.12	43.00	1211	0.652747
9.12	58.00	1289	
9.03	100.00	0	

Reviewer: bowieh, 28-Sep-2019 10:49:23

Audit Action: Marked Compound Undetected

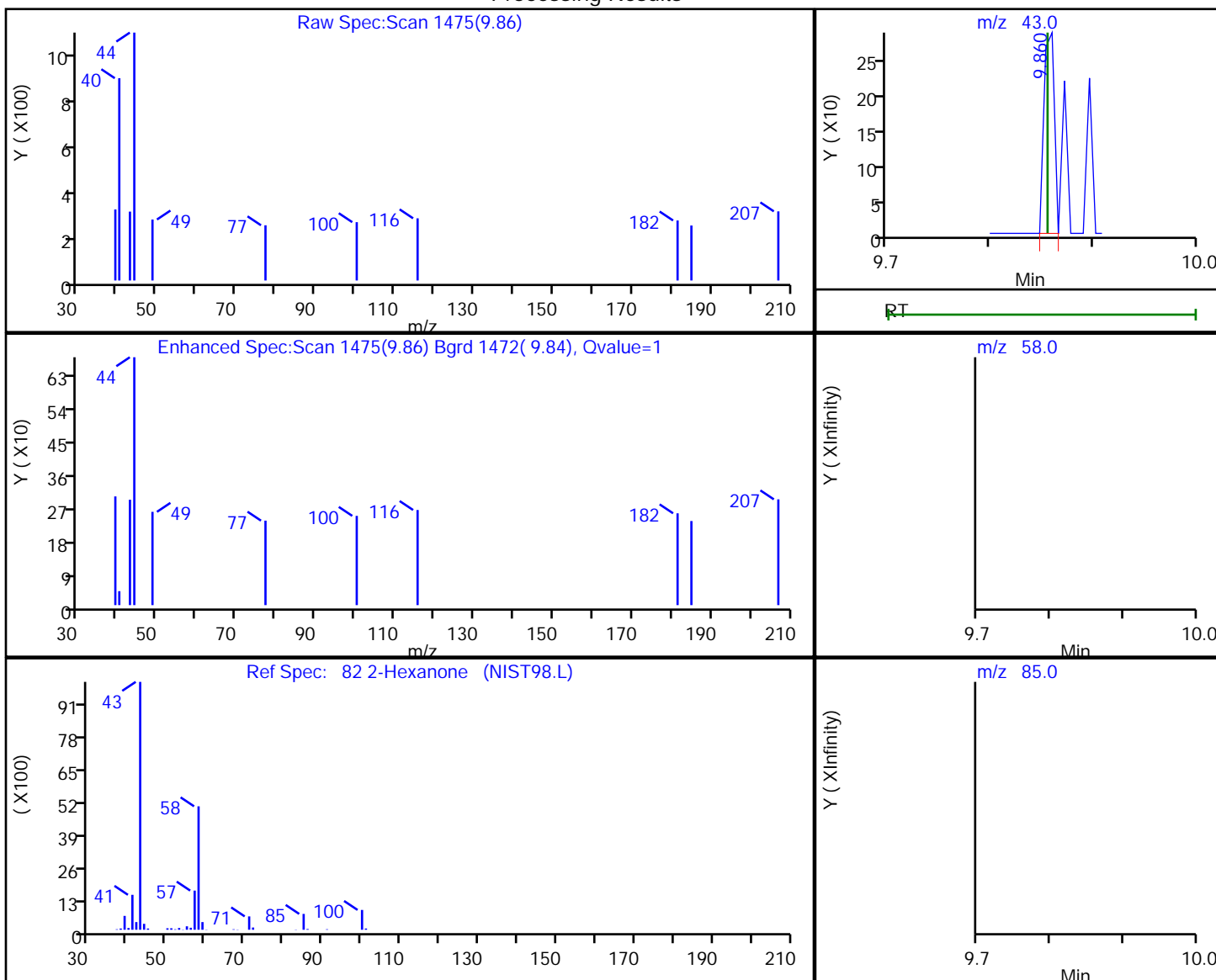
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092710.D
 Injection Date: 27-Sep-2019 16:02:30 Instrument ID: CHHP5
 Lims ID: MB
 Client ID:
 Operator ID: 433269 ALS Bottle#: 6 Worklist Smp#: 6
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

82 2-Hexanone, CAS: 591-78-6

Processing Results



RT	Mass	Response	Amount
9.86	43.00	202	0.150566
9.86	58.00	0	
9.86	85.00	0	

Reviewer: bowieh, 28-Sep-2019 10:49:26

Audit Action: Marked Compound Undetected

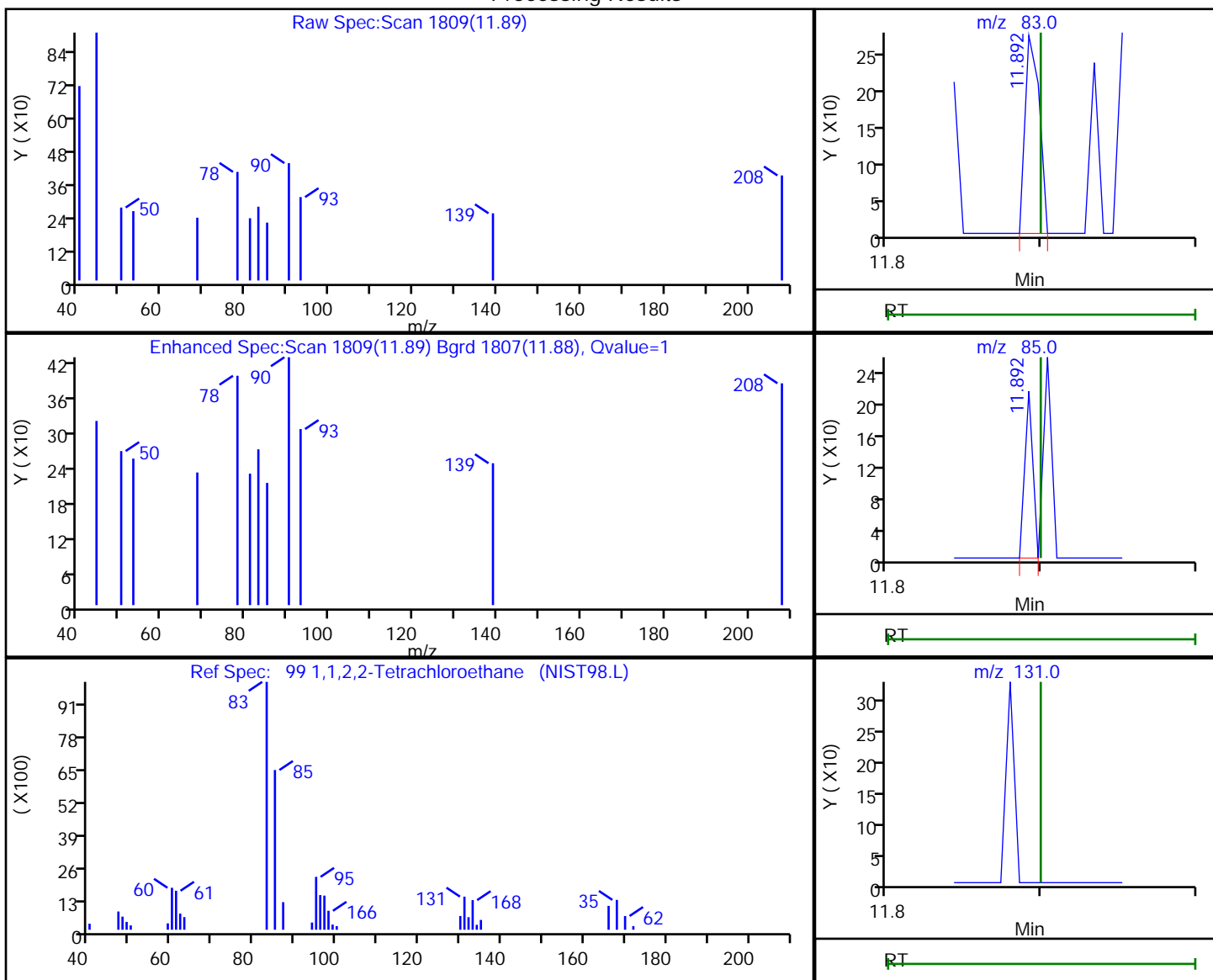
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092710.D
 Injection Date: 27-Sep-2019 16:02:30 Instrument ID: CHHP5
 Lims ID: MB
 Client ID:
 Operator ID: 433269 ALS Bottle#: 6 Worklist Smp#: 6
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

99 1,1,2,2-Tetrachloroethane, CAS: 79-34-5

Processing Results



RT	Mass	Response	Amount
11.89	83.00	172	0.080877
11.89	85.00	77	
11.90	131.00	0	

Reviewer: bowieh, 28-Sep-2019 10:49:31
 Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 180-293070/6
 Matrix: Water Lab File ID: 5092806.D
 Analysis Method: EPA 8260C Date Collected: _____
 Sample wt/vol: 5 (mL) Date Analyzed: 09/28/2019 12:00
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 293070 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	ND		1.0	0.90
75-01-4	Vinyl chloride	ND		1.0	0.88
74-83-9	Bromomethane	ND		1.0	0.89
75-00-3	Chloroethane	ND		1.0	0.90
75-35-4	1,1-Dichloroethene	ND		1.0	0.55
67-64-1	Acetone	ND		5.0	3.4
75-15-0	Carbon disulfide	ND		1.0	0.88
75-09-2	Methylene Chloride	ND		1.0	0.89
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.67
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.59
75-34-3	1,1-Dichloroethane	ND		1.0	0.63
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.71
74-97-5	Bromochloromethane	ND		1.0	0.63
78-93-3	2-Butanone (MEK)	ND		5.0	2.6
67-66-3	Chloroform	ND		1.0	0.60
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.60
56-23-5	Carbon tetrachloride	ND		1.0	0.88
71-43-2	Benzene	ND		1.0	0.60
107-06-2	1,2-Dichloroethane	ND		1.0	0.57
79-01-6	Trichloroethene	ND		1.0	0.69
78-87-5	1,2-Dichloropropane	ND		1.0	0.66
75-27-4	Bromodichloromethane	ND		1.0	0.64
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.59
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1
108-88-3	Toluene	ND		1.0	0.46
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.58
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.45
127-18-4	Tetrachloroethene	ND		1.0	0.47
591-78-6	2-Hexanone	ND		5.0	3.3
124-48-1	Dibromochloromethane	ND		1.0	0.84
106-93-4	1,2-Dibromoethane (EDB)	ND		1.0	0.50
108-90-7	Chlorobenzene	ND		1.0	0.50
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.57
100-41-4	Ethylbenzene	ND		1.0	0.51
1330-20-7	Xylenes, Total	ND		2.0	0.89
100-42-5	Styrene	ND		1.0	0.47

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 180-293070/6
 Matrix: Water Lab File ID: 5092806.D
 Analysis Method: EPA 8260C Date Collected: _____
 Sample wt/vol: 5 (mL) Date Analyzed: 09/28/2019 12:00
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 293070 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	ND		1.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.60
107-13-1	Acrylonitrile	ND		20	7.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		70-150
2037-26-5	Toluene-d8 (Surr)	94		78-128
460-00-4	4-Bromofluorobenzene (Surr)	80		64-123
1868-53-7	Dibromofluoromethane (Surr)	108		75-147

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190928-28871.b\5092806.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 28-Sep-2019 12:00:30 ALS Bottle#: 6 Worklist Smp#: 6
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028871-006
 Misc. Info.: MB
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190928-28871.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 28-Sep-2019 14:58:42 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: bowieh Date: 28-Sep-2019 14:58:42

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.538	4.550	-0.012	0	186474	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.501	7.494	0.007	98	297130	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.579	10.585	-0.006	90	73734	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.921	12.921	0.000	96	110724	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.783	6.777	0.006	93	92528	50.0	53.9	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.148	7.142	0.006	0	133190	50.0	46.1	
\$ 7 Toluene-d8 (Surr)	98	9.137	9.131	0.006	95	274909	50.0	46.8	
\$ 8 4-Bromofluorobenzene (Surr	95	11.759	11.765	-0.006	92	96831	50.0	40.1	
11 Dichlorodifluoromethane	85		1.691					ND	
12 Chloromethane	50		1.910					ND	U
13 Vinyl chloride	62		2.044					ND	
14 Butadiene	39		2.050					ND	U
15 Bromomethane	94		2.372					ND	
16 Chloroethane	64		2.518					ND	
19 Ethanol	45	2.609	2.640	-0.031	22	1380		NC	
17 Dichlorofluoromethane	67		2.834					ND	
18 Trichlorofluoromethane	101		2.853					ND	
20 Ethyl ether	59		3.248					ND	
21 Acrolein	56		3.443					ND	
22 1,1-Dichloroethene	96		3.565					ND	
23 1,1,2-Trichloro-1,2,2-trif	101		3.638					ND	
24 Acetone	43		3.680					ND	
25 Iodomethane	142		3.765					ND	
26 Carbon disulfide	76		3.863					ND	
27 Isopropyl alcohol	45		3.990					ND	U
29 Acetonitrile	41		4.148					ND	U
28 3-Chloro-1-propene	76		4.185					ND	U
30 Methyl acetate	43		4.203					ND	
31 Methylene Chloride	84	4.404	4.398	0.006	91	9099		-1.87	a
32 2-Methyl-2-propanol	59		4.672					ND	
33 Acrylonitrile	53		4.787					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Diff RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
34 trans-1,2-Dichloroethene	96		4.812					ND	
35 Methyl tert-butyl ether	73		4.824					ND	
36 Hexane	57	5.225	5.213	0.012	61	1739		0.6236	
37 1,1-Dichloroethane	63		5.438					ND	
38 Vinyl acetate	43		5.487					ND	U
39 2-Chloro-1,3-butadiene	53		5.529					ND	
41 Isopropyl ether	45		5.535					ND	
42 Tert-butyl ethyl ether	59		5.997					ND	
44 2,2-Dichloropropane	97		6.174					ND	
45 cis-1,2-Dichloroethene	96		6.174					ND	
46 2-Butanone (MEK)	43		6.186					ND	
48 Ethyl acetate	43		6.259					ND	
47 Propionitrile	54		6.265					ND	
50 Methacrylonitrile	41		6.441					ND	
49 Chlorobromomethane	128		6.454					ND	
51 Tetrahydrofuran	42		6.472					ND	
52 Chloroform	83	6.600	6.600	0.000	94	9062		-0.2125	
53 1,1,1-Trichloroethane	97		6.752					ND	
54 Cyclohexane	56		6.819					ND	
56 Carbon tetrachloride	117		6.929					ND	
55 1,1-Dichloropropene	75		6.941					ND	
57 Isobutyl alcohol	41		7.142					ND	
58 Benzene	78		7.154					ND	
59 1,2-Dichloroethane	62		7.233					ND	
151 Isooctane	57		7.305					ND	
61 Tert-amyl methyl ether	73		7.330					ND	U
62 n-Heptane	43		7.507					ND	U
63 n-Butanol	56		7.841					ND	
64 Trichloroethene	130		7.878					ND	
65 Ethyl acrylate	55		7.999					ND	
66 Methylcyclohexane	83		8.109					ND	
67 1,2-Dichloropropane	63		8.151					ND	
70 1,4-Dioxane	88		8.224					ND	
69 Methyl methacrylate	69		8.230					ND	
68 Dibromomethane	93		8.243					ND	
71 Dichlorobromomethane	83		8.431					ND	
73 2-Chloroethyl vinyl ether	63		8.729					ND	
74 cis-1,3-Dichloropropene	75		8.869					ND	
75 4-Methyl-2-pentanone (MIBK)	43		9.027					ND	U
76 Toluene	91		9.204					ND	
77 trans-1,3-Dichloropropene	75		9.447					ND	
78 Ethyl methacrylate	69		9.508					ND	
79 1,1,2-Trichloroethane	97		9.642					ND	
80 Tetrachloroethene	164		9.709					ND	
81 1,3-Dichloropropane	76		9.800					ND	
82 2-Hexanone	43		9.855					ND	U
83 n-Butyl acetate	43		9.970					ND	
84 Chlorodibromomethane	129		10.013					ND	
85 Ethylene Dibromide	107		10.122					ND	
86 3-Chlorobenzotrifluoride	180		10.445					ND	
87 Chlorobenzene	112		10.609					ND	
89 1,1,1,2-Tetrachloroethane	131		10.706					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
90 Ethylbenzene	106		10.706					ND	
88 4-Chlorobenzotrifluoride	180		10.779					ND	
91 m-Xylene & p-Xylene	106		10.834					ND	
92 o-Xylene	106		11.224					ND	
93 Styrene	104		11.242					ND	
94 Bromoform	173		11.418					ND	
96 2-Chlorobenzotrifluoride	180		11.521					ND	
97 Isopropylbenzene	105		11.589					ND	
98 Cyclohexanone	55		11.679					ND	U
99 1,1,2,2-Tetrachloroethane	83		11.899					ND	
100 Bromobenzene	156		11.905					ND	
102 trans-1,4-Dichloro-2-buten	53		11.935					ND	U
101 1,2,3-Trichloropropane	110		11.954					ND	
103 N-Propylbenzene	120		12.002					ND	
104 2-Chlorotoluene	126		12.094					ND	
106 1,3,5-Trimethylbenzene	105		12.185					ND	
105 3-Chlorotoluene	126		12.212					ND	
107 4-Chlorotoluene	126		12.215					ND	
111 1,2-dichloro-4-(trifluorom	214		12.463					ND	
108 tert-Butylbenzene	119		12.495					ND	
110 1,2,4-Trimethylbenzene	105		12.556					ND	
112 sec-Butylbenzene	105		12.720					ND	
116 2,4-Dichloro-1-(triflourom	214		12.836					ND	
113 1,3-Dichlorobenzene	146		12.842					ND	U
118 2,5-Dichlorobenzotrifluori	214		12.878					ND	
114 4-Isopropyltoluene	119		12.878					ND	
115 1,4-Dichlorobenzene	146		12.945					ND	U
117 1,2,3-Trimethylbenzene	105		12.969					ND	
119 Benzyl chloride	91		13.060					ND	
120 n-Butylbenzene	91		13.286					ND	
121 1,2-Dichlorobenzene	146		13.304					ND	
122 1,2-Dibromo-3-Chloropropan	75		14.089					ND	
123 2,4- & 2,5- & 2,6- Dichlor	125		14.125					ND	
124 1,3,5-Trichlorobenzene	180		14.277					ND	
125 2,3- & 3,4- Dichlorotoluen	125		14.557					ND	
126 1,2,4-Trichlorobenzene	180		14.910					ND	
127 Hexachlorobutadiene	225		15.062					ND	U
128 Naphthalene	128		15.178					ND	U
129 1,2,3-Trichlorobenzene	180		15.415					ND	
131 2,4,5-Trichlorotoluene	159		16.090					ND	
130 2,3,6-Trichlorotoluene	159		16.090					ND	
S 133 Xylenes, Total	106		1.000					ND	
S 134 1,2-Dichloroethene, Total	96		1.000					ND	
S 154 Total BTEX	106		1.000					ND	
S 135 1,3-Dichloropropene, Total	1		0.000					ND	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

U - Marked Undetected

a - User Assigned ID

Reagents:

voaWI/SHP5_00013

Amount Added: 5.00

Units: uL

Run Reagent

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190928-28871.b\5092806.D

Injection Date: 28-Sep-2019 12:00:30

Instrument ID: CHHP5

Operator ID: 433269

Lims ID: MB

Worklist Smp#: 6

Client ID:

Purge Vol: 5.000 mL

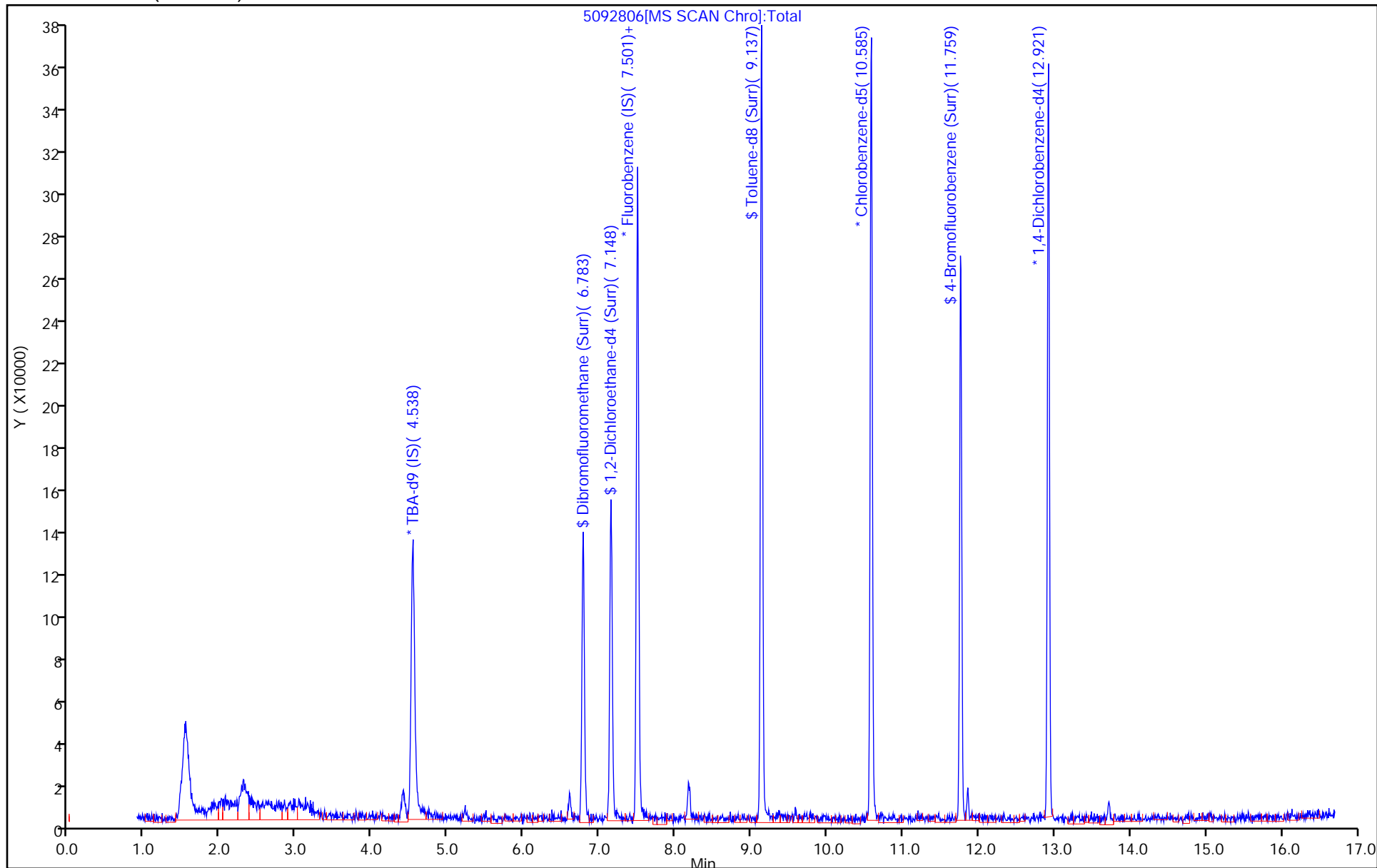
Dil. Factor: 1.0000

ALS Bottle#: 6

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Recovery Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190928-28871.b\5092806.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 28-Sep-2019 12:00:30 ALS Bottle#: 6 Worklist Smp#: 6
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028871-006
 Misc. Info.: MB
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190928-28871.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 28-Sep-2019 14:58:42 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: bowieh Date: 28-Sep-2019 14:58:42

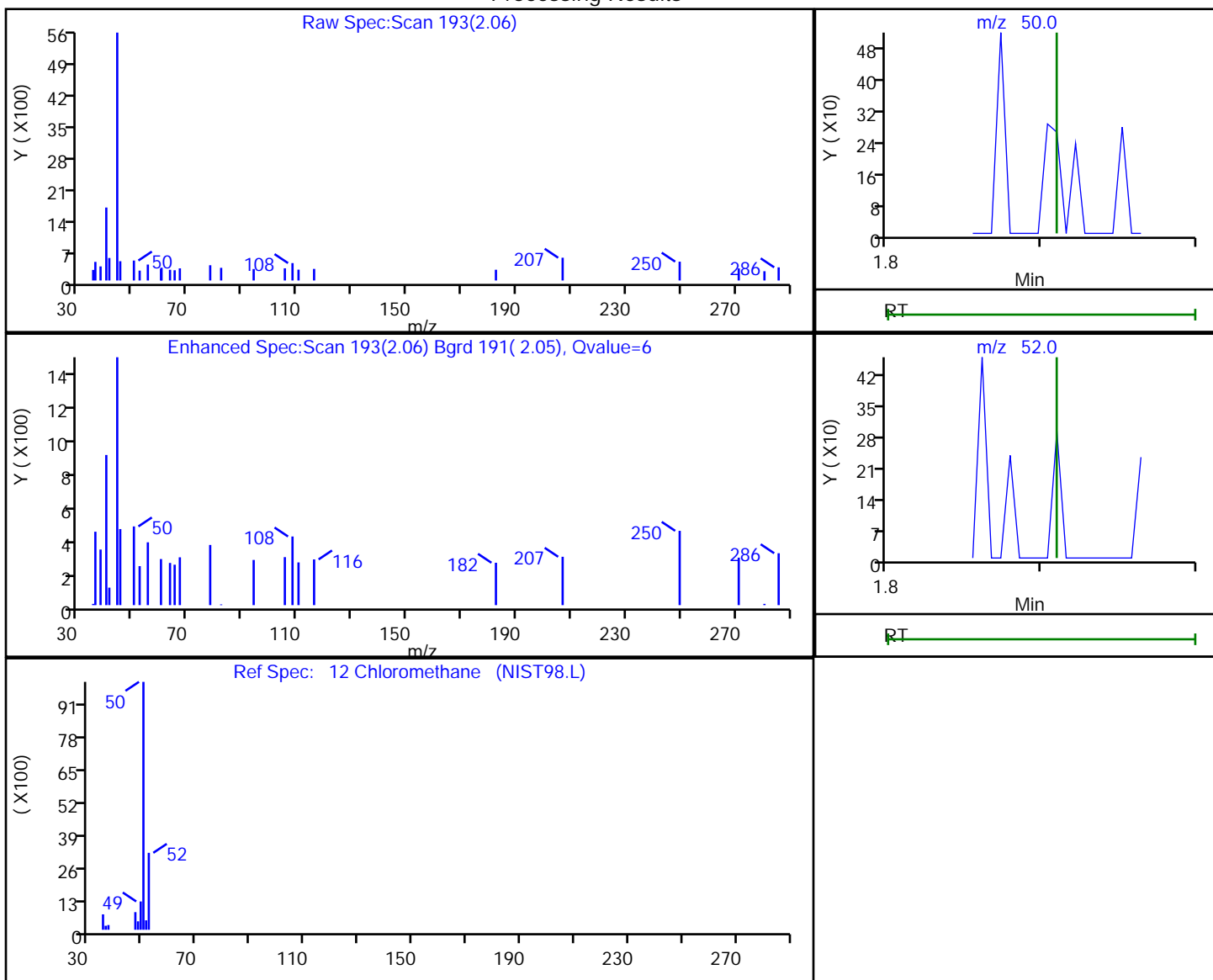
Compound	Amount Added	Amount Recovered	% Rec.
\$ 5 Dibromofluoromethane (Surr)	50.0	53.9	107.90
\$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	46.1	92.19
\$ 7 Toluene-d8 (Surr)	50.0	46.8	93.67
\$ 8 4-Bromofluorobenzene (Surr)	50.0	40.1	80.25

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190928-28871.b\5092806.D
 Injection Date: 28-Sep-2019 12:00:30 Instrument ID: CHHP5
 Lims ID: MB
 Client ID:
 Operator ID: 433269 ALS Bottle#: 6 Worklist Smp#: 6
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

12 Chloromethane, CAS: 74-87-3

Processing Results



RT	Mass	Response	Amount
2.06	50.00	282	0.110866
2.07	52.00	195	

Reviewer: bowieh, 28-Sep-2019 14:57:20

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

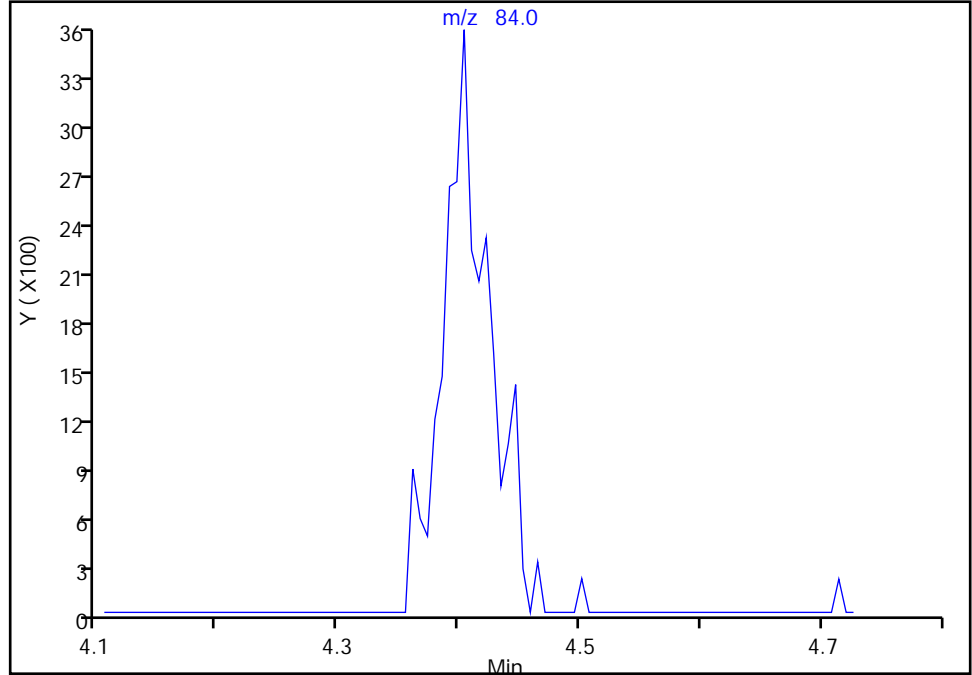
Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190928-28871.b\5092806.D
Injection Date: 28-Sep-2019 12:00:30 Instrument ID: CHHP5
Lims ID: MB
Client ID:
Operator ID: 433269 ALS Bottle#: 6 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2

Signal: 1

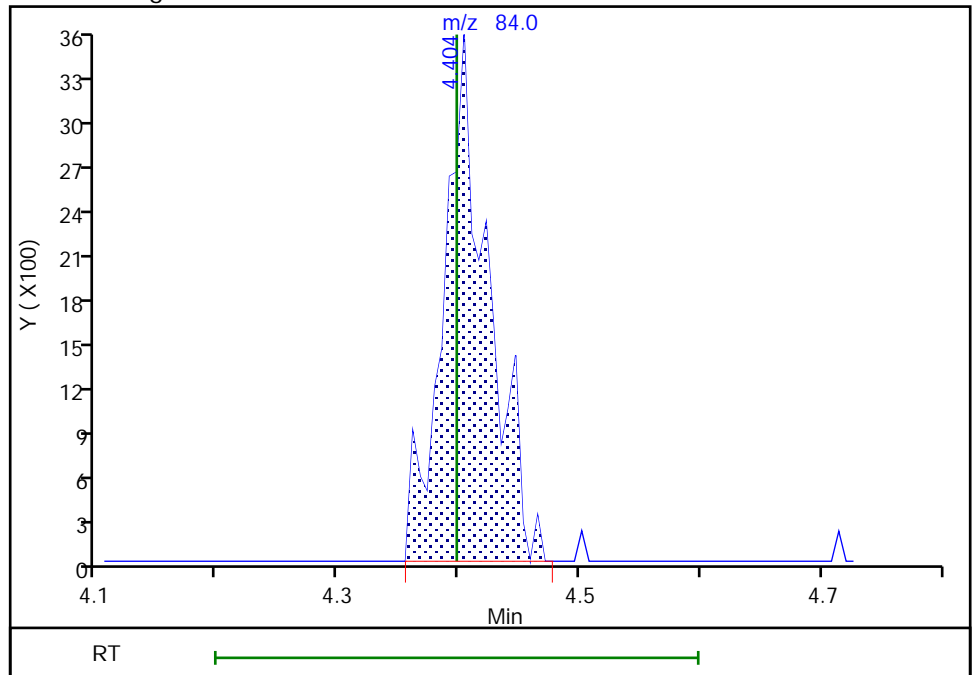
Not Detected
Expected RT: 4.40

Processing Integration Results



Manual Integration Results

RT: 4.40
Area: 9099
Amount: -1.871634
Amount Units: ng

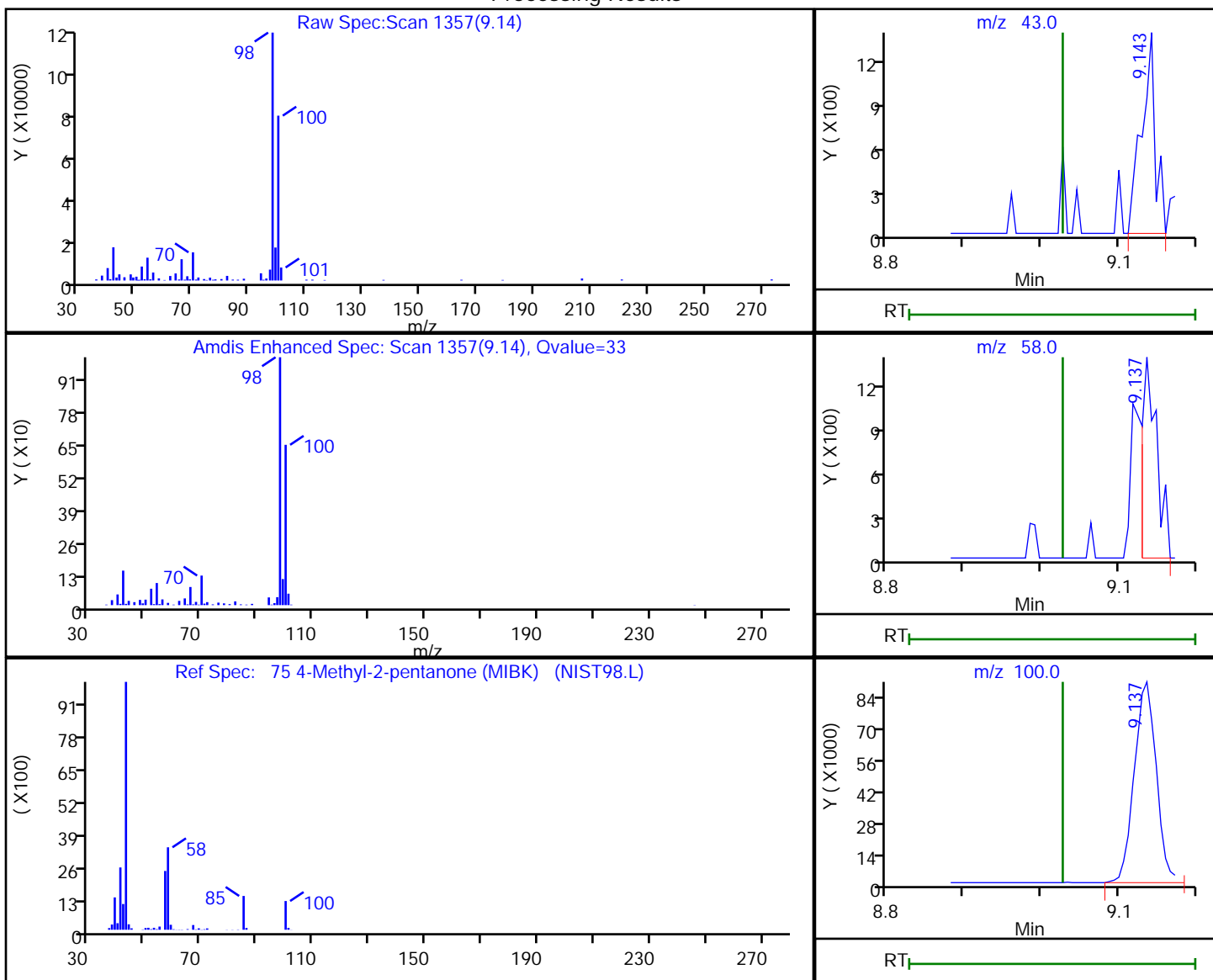


Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190928-28871.b\5092806.D
 Injection Date: 28-Sep-2019 12:00:30 Instrument ID: CHHP5
 Lims ID: MB
 Client ID:
 Operator ID: 433269 ALS Bottle#: 6 Worklist Smp#: 6
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

75 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1

Processing Results



RT	Mass	Response	Amount
9.14	43.00	1640	0.975052
9.14	58.00	1802	
9.14	100.00	180153	

Reviewer: bowieh, 28-Sep-2019 14:57:53

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190928-28871.b\5092806.D

Injection Date: 28-Sep-2019 12:00:30

Instrument ID: CHHP5

Lims ID: MB

Client ID:

Operator ID: 433269

ALS Bottle#: 6

Worklist Smp#: 6

Purge Vol: 5.000 mL

Dil. Factor: 1.0000

Method: MSVOA_LL_CHHP5

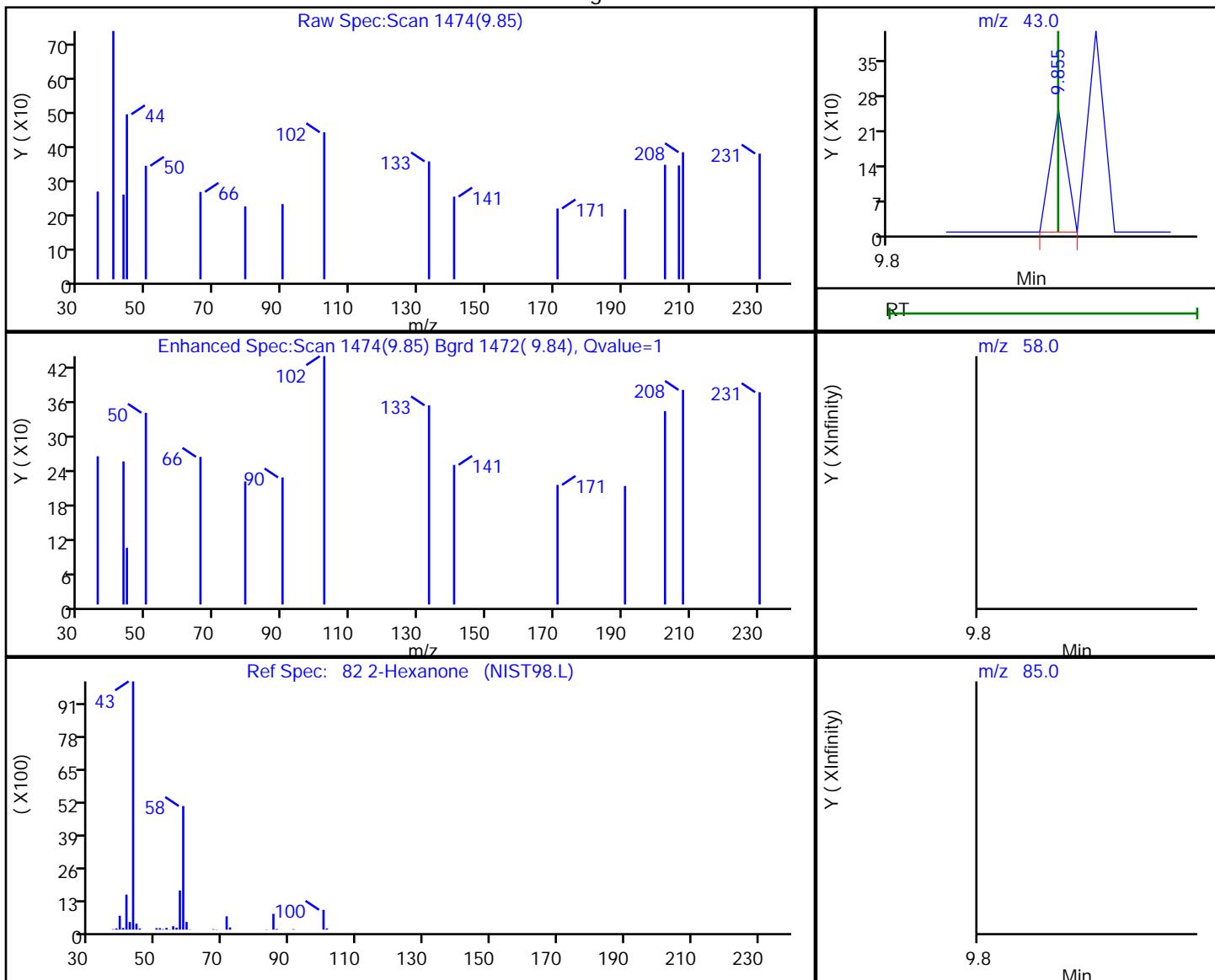
Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)

Detector: MS SCAN

82 2-Hexanone, CAS: 591-78-6

Processing Results



RT	Mass	Response	Amount
9.85	43.00	91	0.074817
9.85	58.00	0	
9.85	85.00	0	

Reviewer: bowieh, 28-Sep-2019 14:57:56

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 180-293722/6
 Matrix: Water Lab File ID: 5100407.D
 Analysis Method: EPA 8260C Date Collected: _____
 Sample wt/vol: 5 (mL) Date Analyzed: 10/04/2019 14:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 293722 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	ND		1.0	0.90
75-01-4	Vinyl chloride	ND		1.0	0.88
74-83-9	Bromomethane	ND		1.0	0.89
75-00-3	Chloroethane	ND		1.0	0.90
75-35-4	1,1-Dichloroethene	ND		1.0	0.55
67-64-1	Acetone	ND		5.0	3.4
75-15-0	Carbon disulfide	ND		1.0	0.88
75-09-2	Methylene Chloride	ND		1.0	0.89
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.67
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.59
75-34-3	1,1-Dichloroethane	ND		1.0	0.63
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.71
74-97-5	Bromochloromethane	ND		1.0	0.63
78-93-3	2-Butanone (MEK)	ND		5.0	2.6
67-66-3	Chloroform	ND		1.0	0.60
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.60
56-23-5	Carbon tetrachloride	ND		1.0	0.88
71-43-2	Benzene	ND		1.0	0.60
107-06-2	1,2-Dichloroethane	ND		1.0	0.57
79-01-6	Trichloroethene	ND		1.0	0.69
78-87-5	1,2-Dichloropropane	ND		1.0	0.66
75-27-4	Bromodichloromethane	ND		1.0	0.64
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.59
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1
108-88-3	Toluene	ND		1.0	0.46
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.58
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.45
127-18-4	Tetrachloroethene	ND		1.0	0.47
591-78-6	2-Hexanone	ND		5.0	3.3
124-48-1	Dibromochloromethane	ND		1.0	0.84
106-93-4	1,2-Dibromoethane (EDB)	ND		1.0	0.50
108-90-7	Chlorobenzene	ND		1.0	0.50
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.57
100-41-4	Ethylbenzene	ND		1.0	0.51
1330-20-7	Xylenes, Total	ND		2.0	0.89
100-42-5	Styrene	ND		1.0	0.47

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 180-293722/6
 Matrix: Water Lab File ID: 5100407.D
 Analysis Method: EPA 8260C Date Collected: _____
 Sample wt/vol: 5 (mL) Date Analyzed: 10/04/2019 14:10
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 293722 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	ND		1.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.60
107-13-1	Acrylonitrile	ND		20	7.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		70-150
2037-26-5	Toluene-d8 (Surr)	88		78-128
460-00-4	4-Bromofluorobenzene (Surr)	80		64-123
1868-53-7	Dibromofluoromethane (Surr)	112		75-147

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100407.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 04-Oct-2019 14:10:30 ALS Bottle#: 7 Worklist Smp#: 6
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028969-006
 Misc. Info.: MB
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 05-Oct-2019 09:16:38 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0311

First Level Reviewer: bowieh

Date: 05-Oct-2019 09:16:38

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.532	4.549	-0.017	0	215554	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.494	7.494	0.000	98	318419	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.579	10.584	-0.006	88	89361	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.921	12.920	0.001	95	139205	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.782	6.776	0.006	92	103093	50.0	56.1	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.147	7.141	0.006	0	142159	50.0	45.9	
\$ 7 Toluene-d8 (Surr)	98	9.137	9.130	0.007	95	312484	50.0	43.9	
\$ 8 4-Bromofluorobenzene (Surr	95	11.765	11.758	0.007	92	116536	50.0	39.8	
11 Dichlorodifluoromethane	85		1.690					ND	
12 Chloromethane	50		1.909					ND	
13 Vinyl chloride	62		2.037					ND	
14 Butadiene	39		2.049					ND	U
15 Bromomethane	94		2.371					ND	U
16 Chloroethane	64		2.511					ND	U
19 Ethanol	45	2.621	2.640	-0.019	1	185		NC	
17 Dichlorofluoromethane	67		2.834					ND	
18 Trichlorofluoromethane	101		2.846					ND	
20 Ethyl ether	59		3.247					ND	
21 Acrolein	56		3.448					ND	
22 1,1-Dichloroethene	96		3.564					ND	
23 1,1,2-Trichloro-1,2,2-trif	101		3.631					ND	
24 Acetone	43		3.685					ND	U
25 Iodomethane	142		3.764					ND	
26 Carbon disulfide	76		3.850					ND	
27 Isopropyl alcohol	45		3.990					ND	U
29 Acetonitrile	41		4.148					ND	
28 3-Chloro-1-propene	76		4.178					ND	
30 Methyl acetate	43		4.209					ND	
31 Methylene Chloride	84	4.410	4.403	0.007	96	9149		-2.17	a
32 2-Methyl-2-propanol	59		4.671					ND	U
33 Acrylonitrile	53		4.787					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
34 trans-1,2-Dichloroethene	96		4.805					ND	
35 Methyl tert-butyl ether	73		4.829					ND	
36 Hexane	57		5.218					ND	U
37 1,1-Dichloroethane	63		5.437					ND	
38 Vinyl acetate	43		5.480					ND	U
39 2-Chloro-1,3-butadiene	53		5.529					ND	
41 Isopropyl ether	45		5.535					ND	
42 Tert-butyl ethyl ether	59		5.997					ND	
44 2,2-Dichloropropane	97		6.161					ND	
45 cis-1,2-Dichloroethene	96		6.174					ND	
46 2-Butanone (MEK)	43		6.186					ND	
48 Ethyl acetate	43		6.259					ND	U
47 Propionitrile	54		6.265					ND	
50 Methacrylonitrile	41		6.441					ND	
49 Chlorobromomethane	128		6.453					ND	
51 Tetrahydrofuran	42		6.466					ND	
52 Chloroform	83	6.606	6.599	0.007	93	7415		-0.7948	M
53 1,1,1-Trichloroethane	97		6.758					ND	
54 Cyclohexane	56		6.818					ND	
56 Carbon tetrachloride	117		6.922					ND	
55 1,1-Dichloropropene	75		6.940					ND	
57 Isobutyl alcohol	41		7.141					ND	U
58 Benzene	78		7.153					ND	U
59 1,2-Dichloroethane	62		7.226					ND	
151 Isooctane	57		7.305					ND	U
61 Tert-amyl methyl ether	73		7.330					ND	U
62 n-Heptane	43		7.506					ND	U
63 n-Butanol	56		7.841					ND	
64 Trichloroethene	130		7.877					ND	
65 Ethyl acrylate	55		7.999					ND	
66 Methylcyclohexane	83		8.108					ND	
67 1,2-Dichloropropane	63		8.151					ND	
69 Methyl methacrylate	69		8.230					ND	
70 1,4-Dioxane	88		8.236					ND	
68 Dibromomethane	93		8.236					ND	
71 Dichlorobromomethane	83		8.430					ND	U
73 2-Chloroethyl vinyl ether	63		8.729					ND	U
74 cis-1,3-Dichloropropene	75		8.869					ND	
75 4-Methyl-2-pentanone (MIBK)	43		9.027					ND	U
76 Toluene	91		9.197					ND	
77 trans-1,3-Dichloropropene	75		9.440					ND	
78 Ethyl methacrylate	69		9.501					ND	
79 1,1,2-Trichloroethane	97		9.641					ND	
80 Tetrachloroethene	164		9.708					ND	
81 1,3-Dichloropropane	76		9.799					ND	
82 2-Hexanone	43		9.854					ND	U
83 n-Butyl acetate	43		9.970					ND	
84 Chlorodibromomethane	129		10.012					ND	
85 Ethylene Dibromide	107		10.122					ND	
86 3-Chlorobenzotrifluoride	180		10.445					ND	
87 Chlorobenzene	112		10.608					ND	
89 1,1,1,2-Tetrachloroethane	131		10.700					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
90 Ethylbenzene	106		10.712					ND	
88 4-Chlorobenzotrifluoride	180		10.779					ND	
91 m-Xylene & p-Xylene	106		10.840					ND	
92 o-Xylene	106		11.223					ND	
93 Styrene	104		11.241					ND	
94 Bromoform	173		11.417					ND	
96 2-Chlorobenzotrifluoride	180		11.521					ND	
97 Isopropylbenzene	105		11.582					ND	
98 Cyclohexanone	55		11.679					ND	
99 1,1,2,2-Tetrachloroethane	83		11.898					ND	U
100 Bromobenzene	156		11.904					ND	U
102 trans-1,4-Dichloro-2-buten	53		11.941					ND	
101 1,2,3-Trichloropropane	110		11.953					ND	
103 N-Propylbenzene	120		12.001					ND	
104 2-Chlorotoluene	126		12.093					ND	
106 1,3,5-Trimethylbenzene	105		12.184					ND	
105 3-Chlorotoluene	126	12.209	12.212	-0.003	1	155		NC	
107 4-Chlorotoluene	126		12.214					ND	
111 1,2-dichloro-4-(trifluorom	214		12.463					ND	
108 tert-Butylbenzene	119		12.500					ND	
110 1,2,4-Trimethylbenzene	105		12.555					ND	
112 sec-Butylbenzene	105		12.719					ND	
116 2,4-Dichloro-1-(triflourom	214		12.836					ND	
113 1,3-Dichlorobenzene	146	12.835	12.841	-0.006	1	567		0.1312	
114 4-Isopropyltoluene	119		12.878					ND	
118 2,5-Dichlorobenzotrifluori	214		12.878					ND	
115 1,4-Dichlorobenzene	146		12.944					ND	U
117 1,2,3-Trimethylbenzene	105		12.969					ND	
119 Benzyl chloride	91		13.060					ND	
120 n-Butylbenzene	91		13.285					ND	
121 1,2-Dichlorobenzene	146		13.303					ND	U
122 1,2-Dibromo-3-Chloropropan	75		14.088					ND	
123 2,4- & 2,5- & 2,6- Dichlor	125		14.125					ND	
124 1,3,5-Trichlorobenzene	180		14.277					ND	
125 2,3- & 3,4- Dichlorotoluen	125		14.557					ND	
126 1,2,4-Trichlorobenzene	180		14.909					ND	
127 Hexachlorobutadiene	225		15.055					ND	U
128 Naphthalene	128		15.183					ND	U
129 1,2,3-Trichlorobenzene	180		15.420					ND	
131 2,4,5-Trichlorotoluene	159		16.090					ND	
130 2,3,6-Trichlorotoluene	159		16.090					ND	
S 133 Xylenes, Total	106		1.000					ND	
S 134 1,2-Dichloroethene, Total	96		1.000					ND	
S 154 Total BTEX	106		1.000					ND	
S 135 1,3-Dichloropropene, Total	1		0.000					ND	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Reagents:

voaWI/SHP5_00013

Amount Added: 5.00

Units: uL

Run Reagent

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100407.D

Injection Date: 04-Oct-2019 14:10:30

Instrument ID: CHHP5

Operator ID: 433269

Lims ID: MB

Worklist Smp#: 6

Client ID:

Purge Vol: 5.000 mL

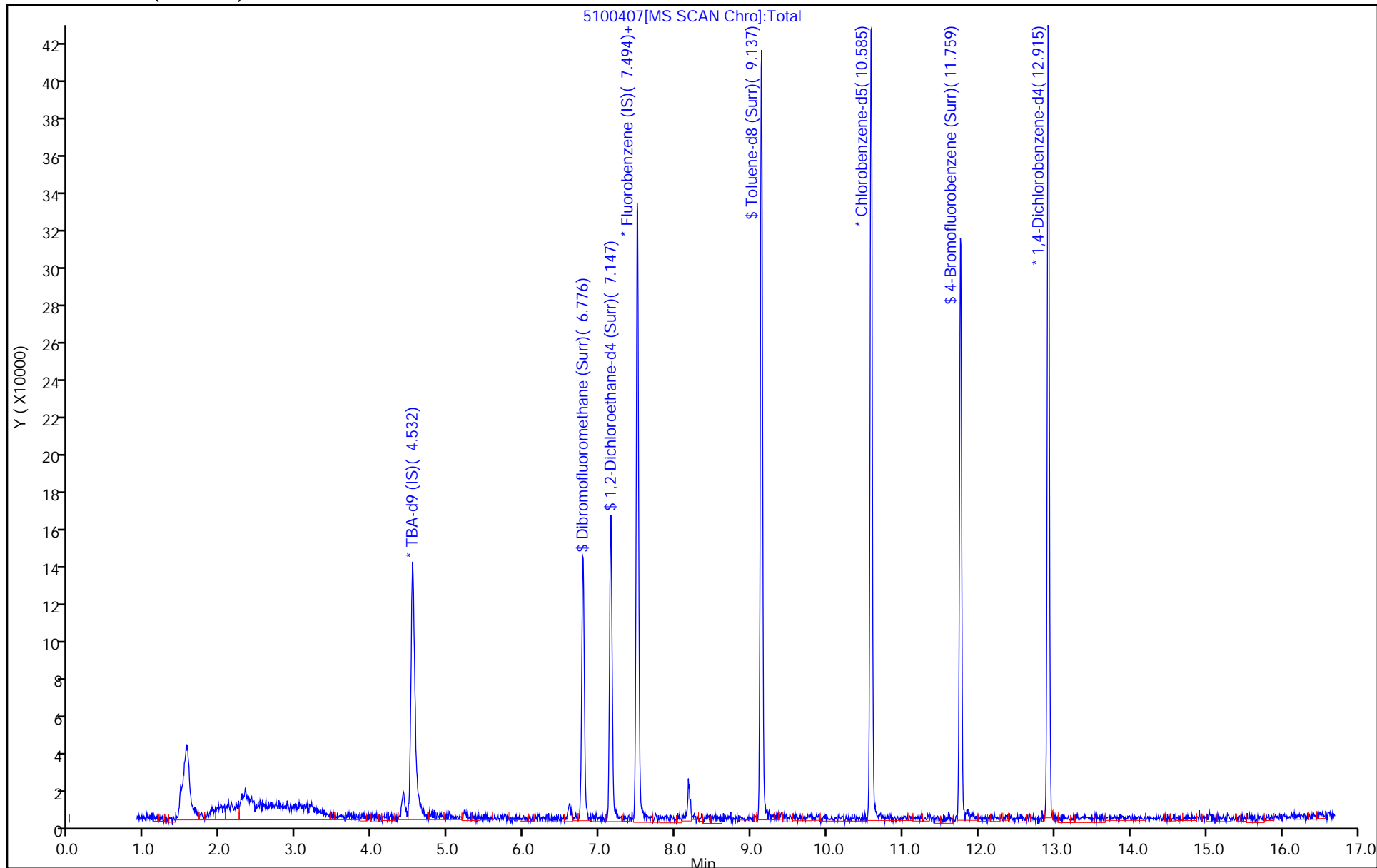
Dil. Factor: 1.0000

ALS Bottle#: 7

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Recovery Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100407.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 04-Oct-2019 14:10:30 ALS Bottle#: 7 Worklist Smp#: 6
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028969-006
 Misc. Info.: MB
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 05-Oct-2019 09:16:38 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0311

First Level Reviewer: bowieh

Date: 05-Oct-2019 09:16:38

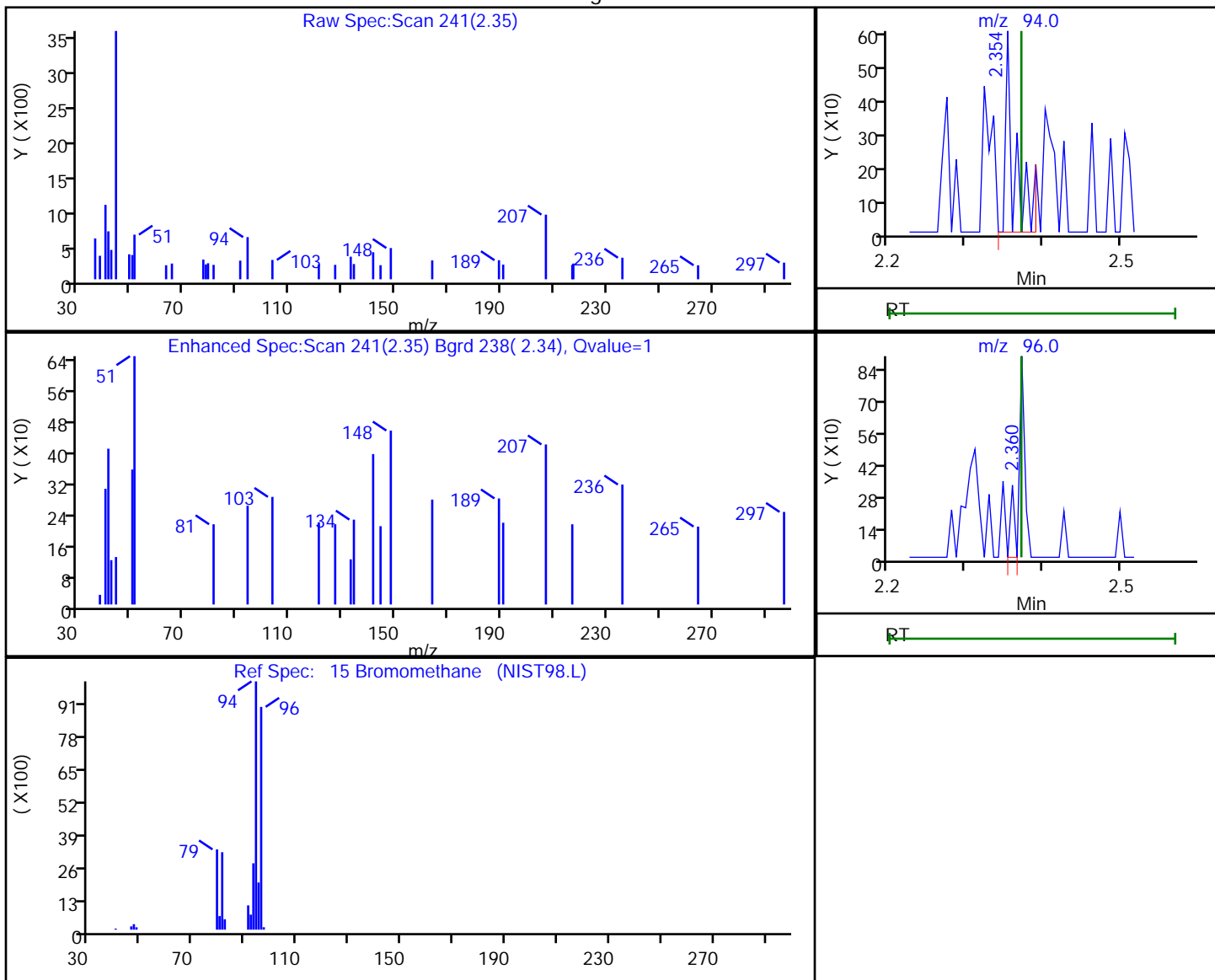
Compound	Amount Added	Amount Recovered	% Rec.
\$ 5 Dibromofluoromethane (Surr)	50.0	56.1	112.18
\$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	45.9	91.82
\$ 7 Toluene-d8 (Surr)	50.0	43.9	87.85
\$ 8 4-Bromofluorobenzene (Surr)	50.0	39.8	79.69

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100407.D
Injection Date: 04-Oct-2019 14:10:30 Instrument ID: CHHP5
Lims ID: MB
Client ID:
Operator ID: 433269 ALS Bottle#: 7 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

15 Bromomethane, CAS: 74-83-9

Processing Results



RT	Mass	Response	Amount
2.35	94.00	484	0.247633
2.36	96.00	118	

Reviewer: bowieh, 05-Oct-2019 09:14:57

Audit Action: Marked Compound Undetected

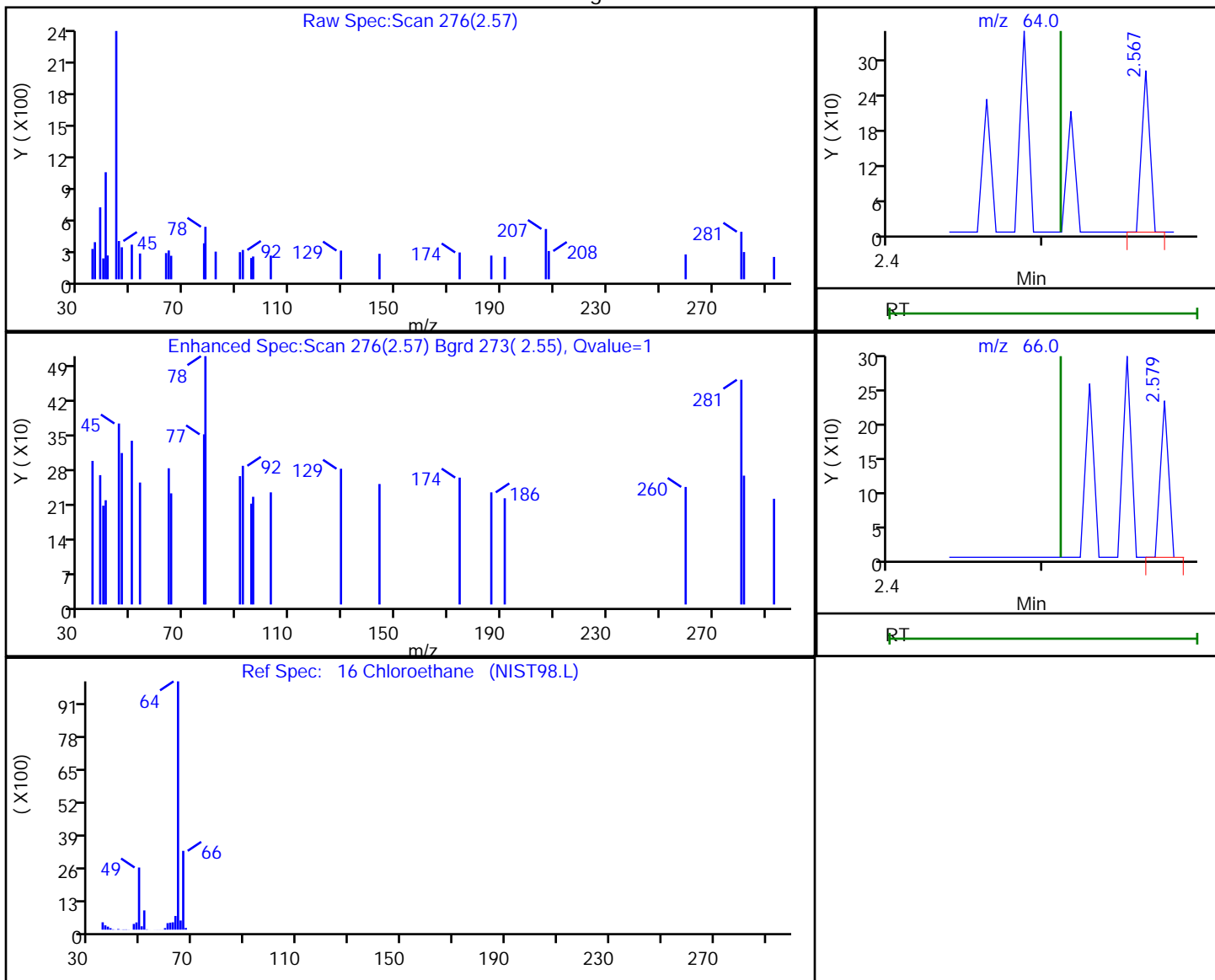
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100407.D
Injection Date: 04-Oct-2019 14:10:30 Instrument ID: CHHP5
Lims ID: MB
Client ID:
Operator ID: 433269 ALS Bottle#: 7 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

16 Chloroethane, CAS: 75-00-3

Processing Results



RT	Mass	Response	Amount
2.57	64.00	101	0.058688
2.58	66.00	83	

Reviewer: bowieh, 05-Oct-2019 09:14:58

Audit Action: Marked Compound Undetected

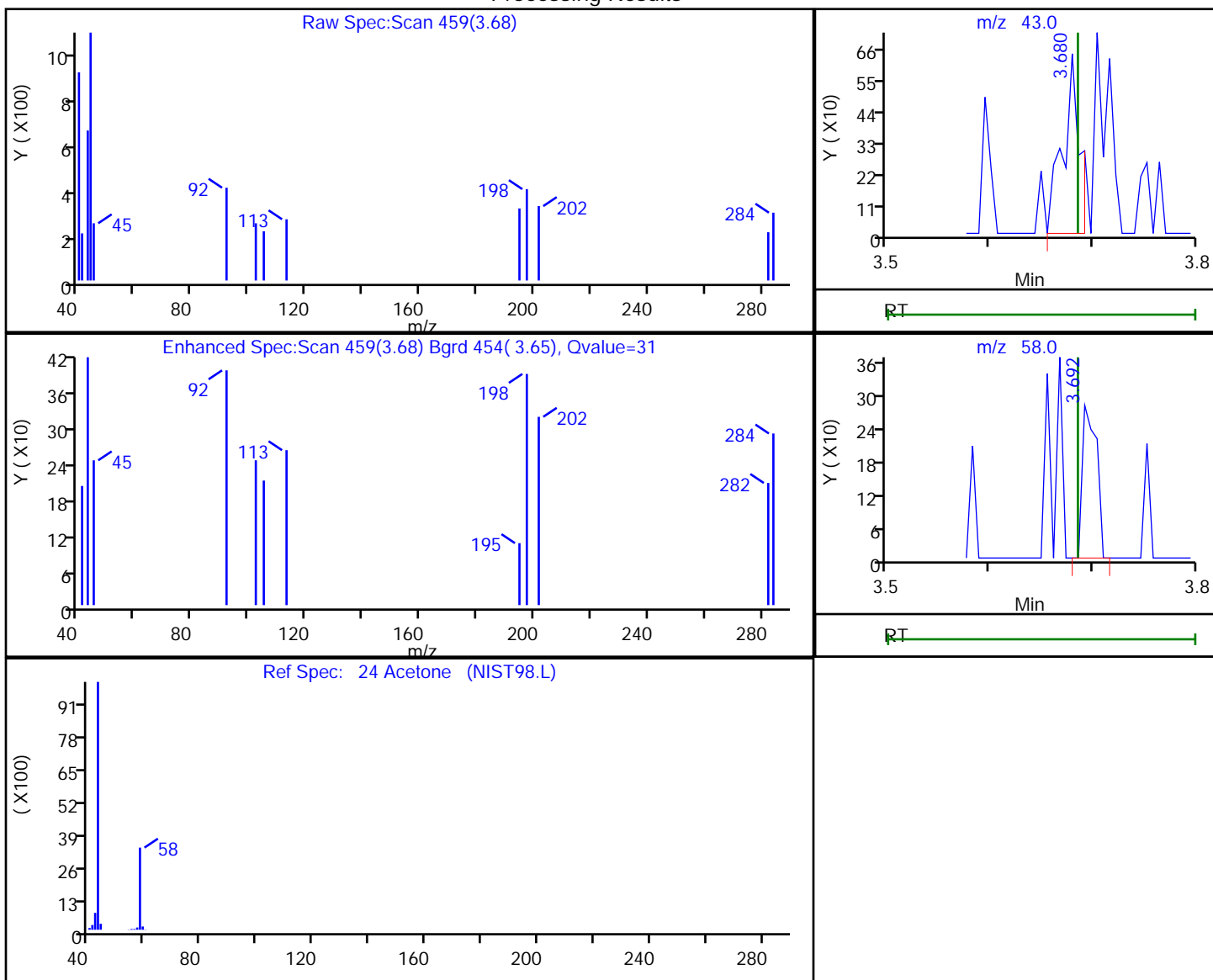
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100407.D
 Injection Date: 04-Oct-2019 14:10:30 Instrument ID: CHHP5
 Lims ID: MB
 Client ID:
 Operator ID: 433269 ALS Bottle#: 7 Worklist Smp#: 6
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

24 Acetone, CAS: 67-64-1

Processing Results



RT	Mass	Response	Amount
3.68	43.00	724	0.893496
3.69	58.00	267	

Reviewer: bowieh, 05-Oct-2019 09:15:07

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

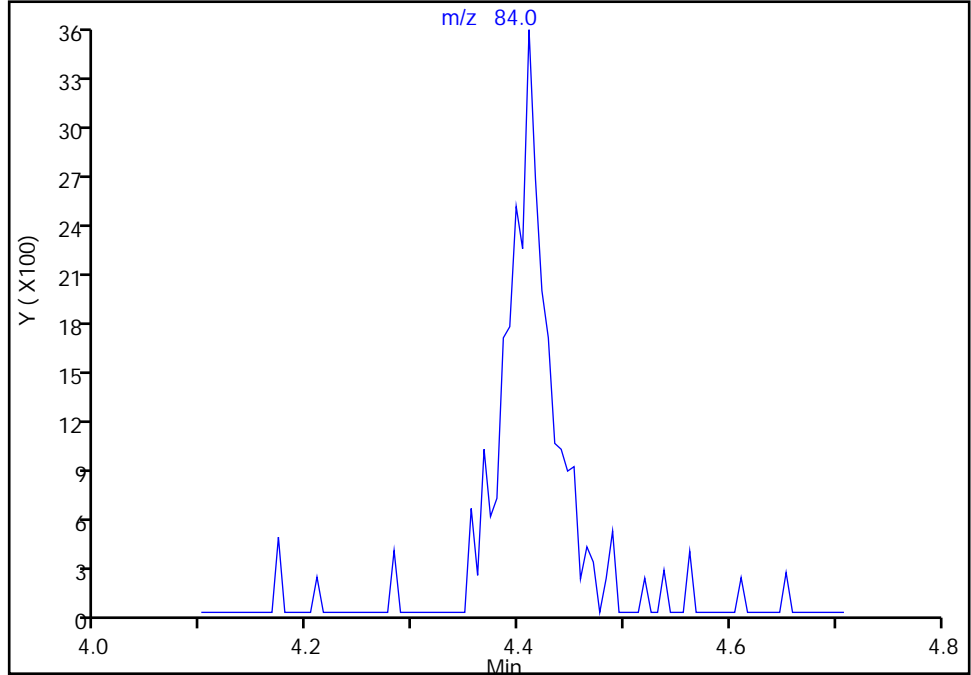
Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100407.D
Injection Date: 04-Oct-2019 14:10:30 Instrument ID: CHHP5
Lims ID: MB
Client ID:
Operator ID: 433269 ALS Bottle#: 7 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

31 Methylene Chloride, CAS: 75-09-2

Signal: 1

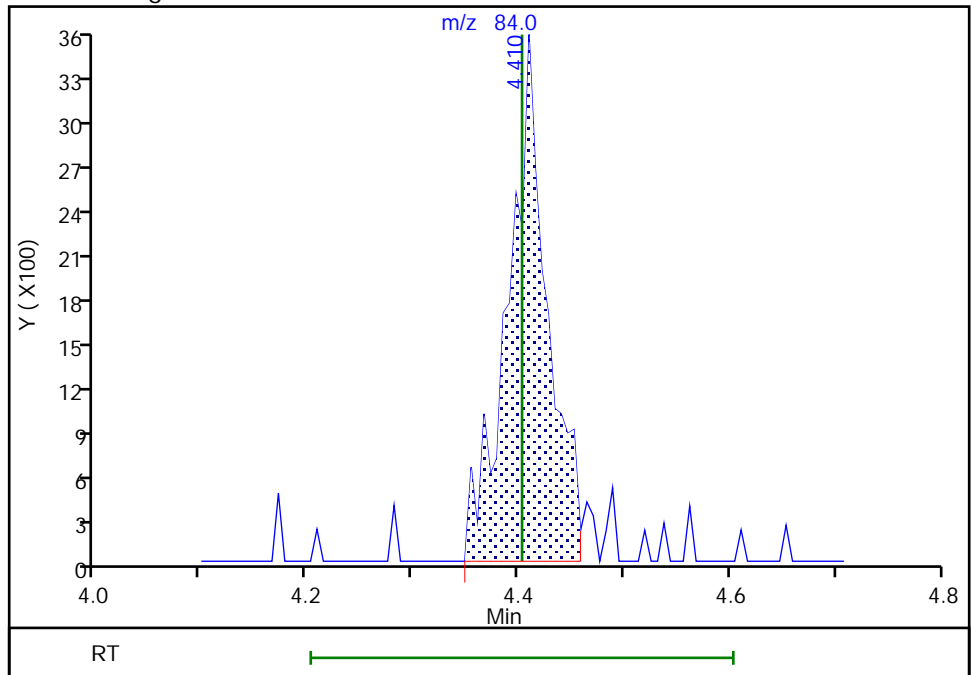
Not Detected
Expected RT: 4.40

Processing Integration Results



Manual Integration Results

RT: 4.41
Area: 9149
Amount: -2.169294
Amount Units: ng



Reviewer: bowieh, 05-Oct-2019 09:15:12
Audit Action: Assigned Compound ID

Audit Reason: Peak assignment corrected

Eurofins TestAmerica, Pittsburgh

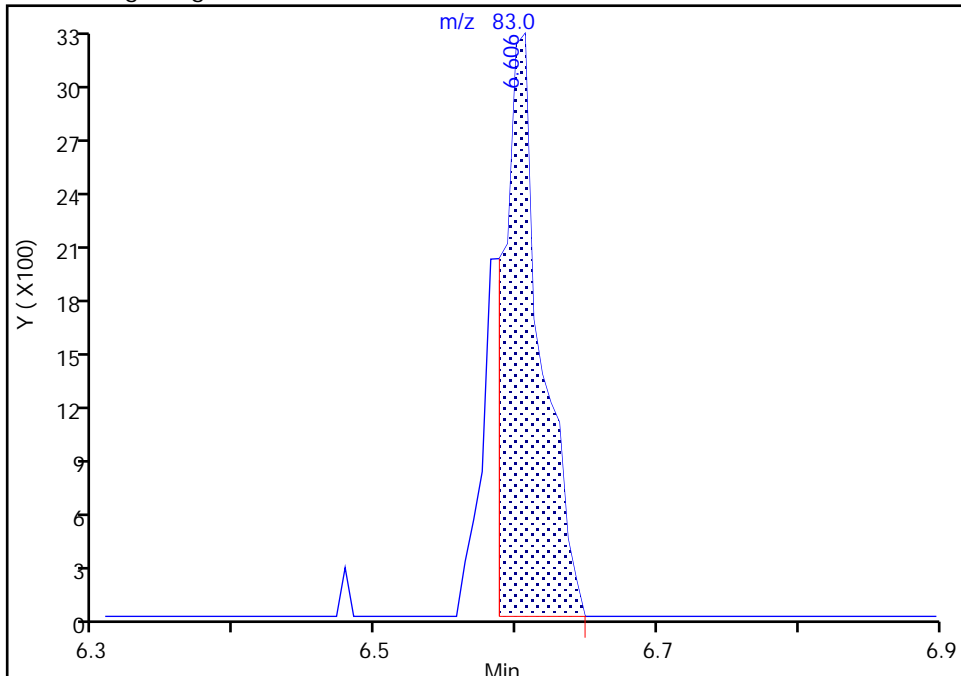
Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100407.D
Injection Date: 04-Oct-2019 14:10:30 Instrument ID: CHHP5
Lims ID: MB
Client ID:
Operator ID: 433269 ALS Bottle#: 7 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector: MS SCAN

52 Chloroform, CAS: 67-66-3

Signal: 1

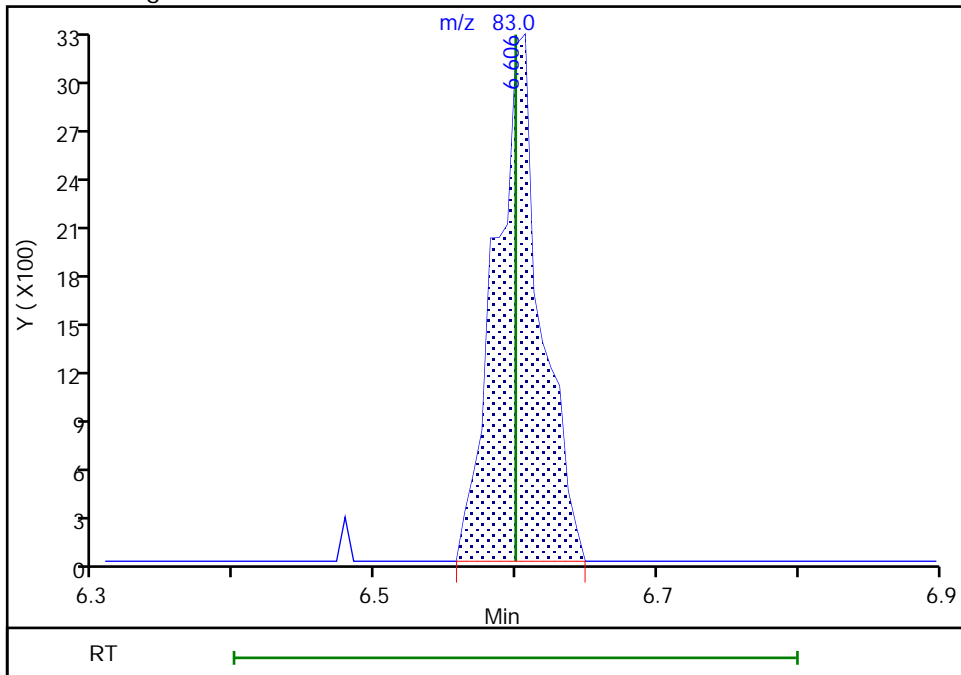
RT: 6.61
Area: 6069
Amount: -1.136057
Amount Units: ng

Processing Integration Results



RT: 6.61
Area: 7415
Amount: -0.794754
Amount Units: ng

Manual Integration Results

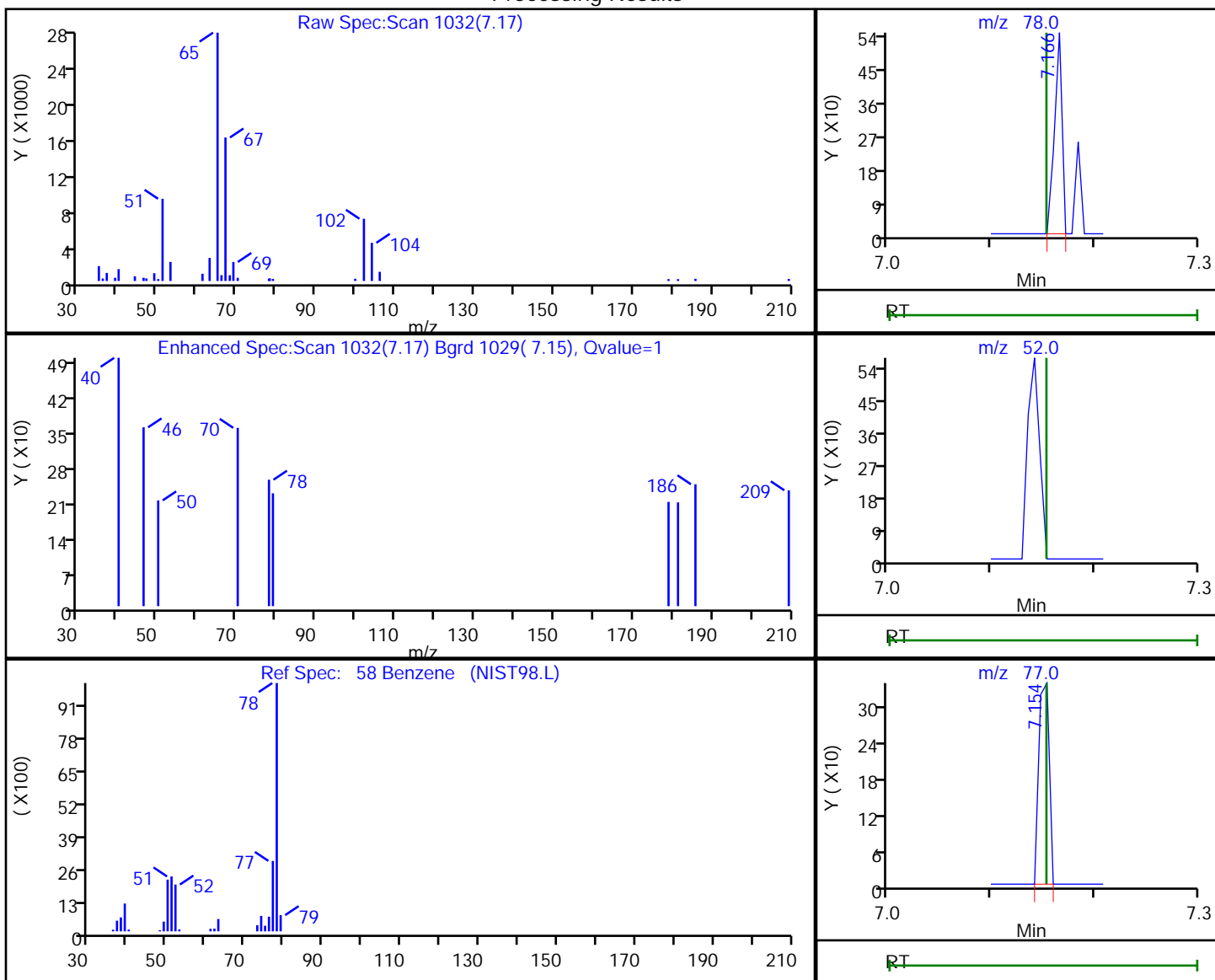


Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100407.D
 Injection Date: 04-Oct-2019 14:10:30 Instrument ID: CHHP5
 Lims ID: MB
 Client ID:
 Operator ID: 433269 ALS Bottle#: 7 Worklist Smp#: 6
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

58 Benzene, CAS: 71-43-2

Processing Results



RT	Mass	Response	Amount
7.17	78.00	277	0.035219
7.15	52.00	0	
7.15	77.00	238	

Reviewer: bowieh, 05-Oct-2019 09:15:40

Audit Action: Marked Compound Undetected

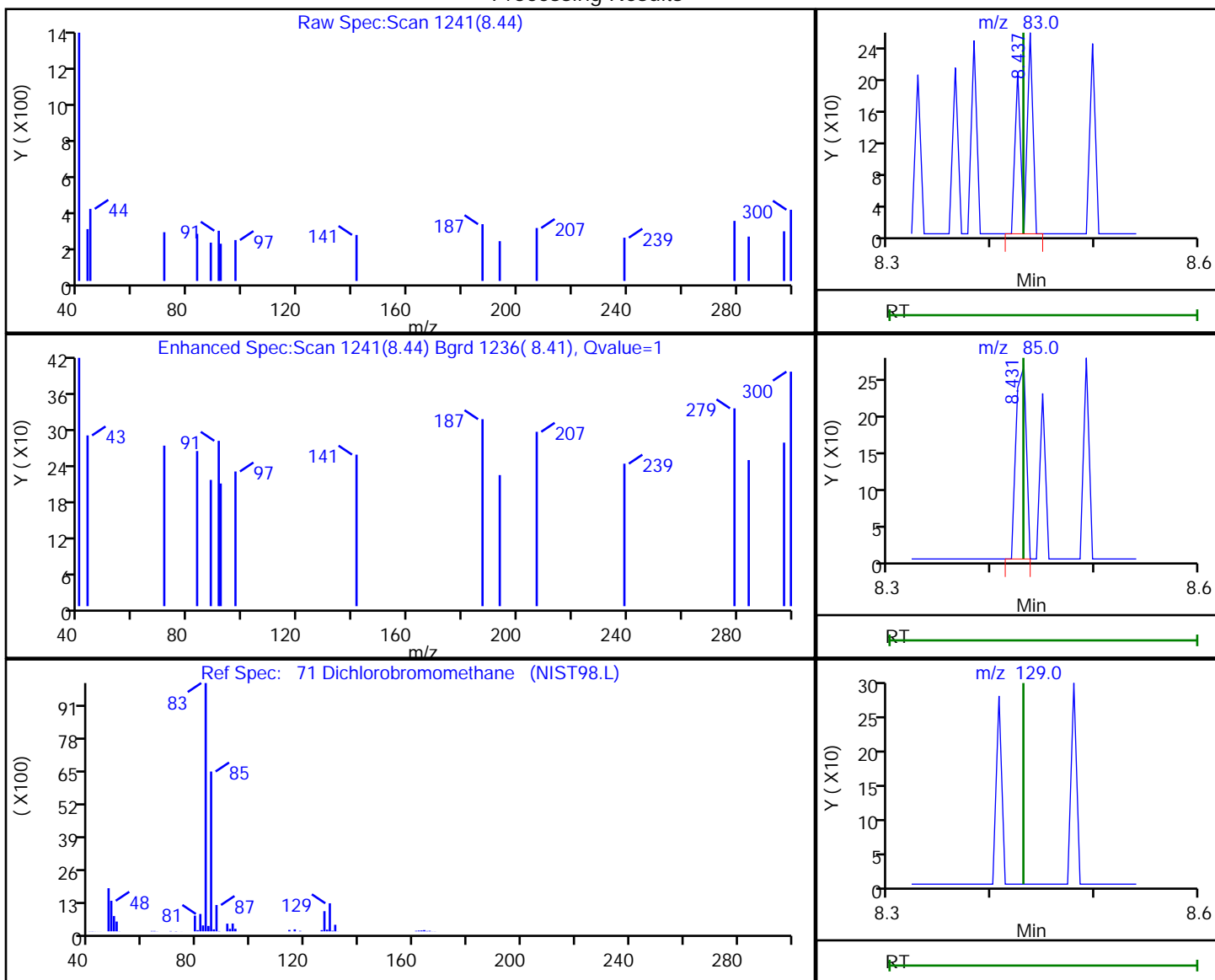
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100407.D
 Injection Date: 04-Oct-2019 14:10:30 Instrument ID: CHHP5
 Lims ID: MB
 Client ID:
 Operator ID: 433269 ALS Bottle#: 7 Worklist Smp#: 6
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

71 Dichlorobromomethane, CAS: 75-27-4

Processing Results



RT	Mass	Response	Amount
8.44	83.00	170	0.057837
8.43	85.00	183	
8.43	129.00	0	

Reviewer: bowieh, 05-Oct-2019 09:15:48

Audit Action: Marked Compound Undetected

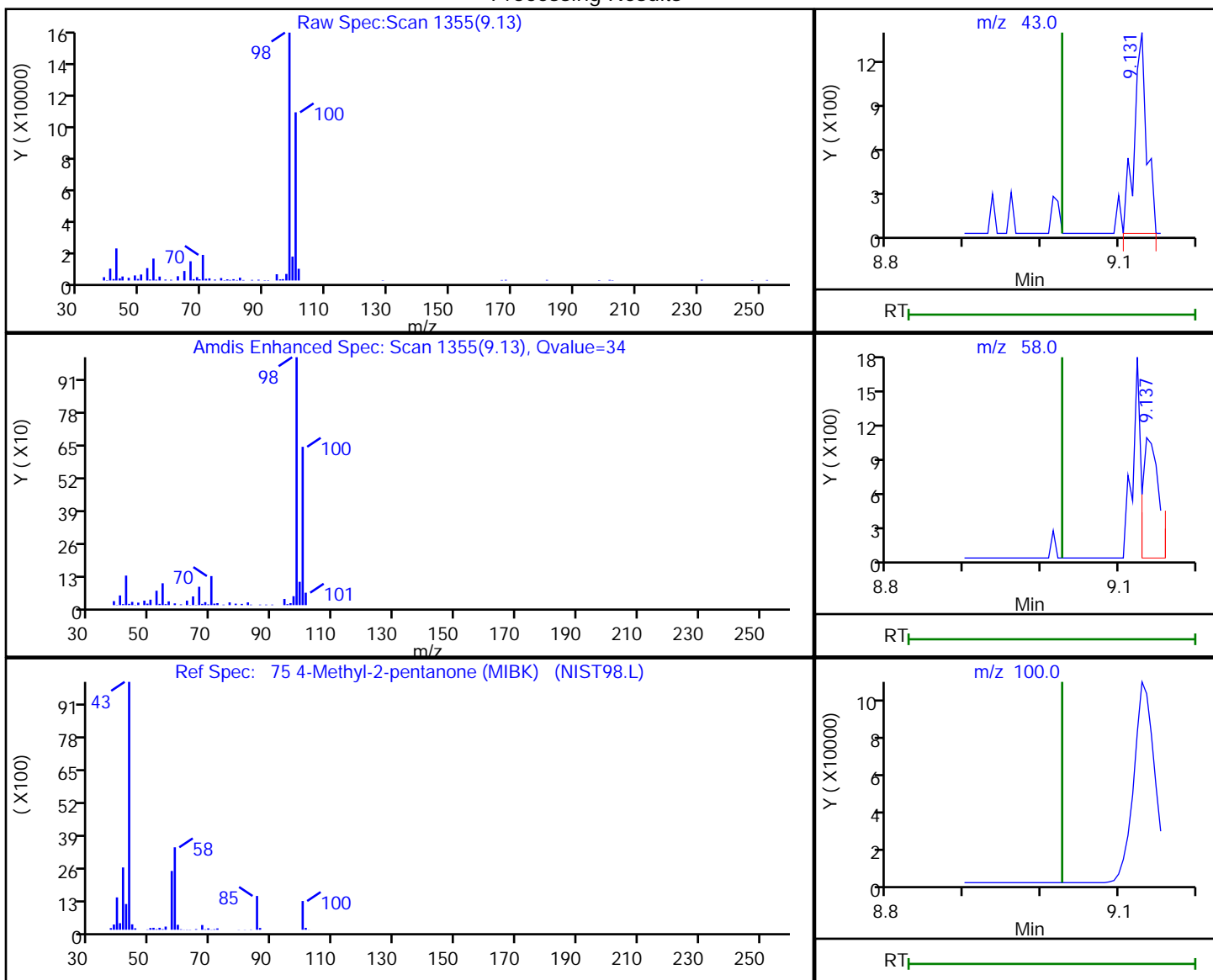
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100407.D
 Injection Date: 04-Oct-2019 14:10:30 Instrument ID: CHHP5
 Lims ID: MB
 Client ID:
 Operator ID: 433269 ALS Bottle#: 7 Worklist Smp#: 6
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

75 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1

Processing Results



RT	Mass	Response	Amount
9.13	43.00	1489	0.730463
9.14	58.00	1374	
9.13	100.00	197366	

Reviewer: bowieh, 05-Oct-2019 09:15:50

Audit Action: Marked Compound Undetected

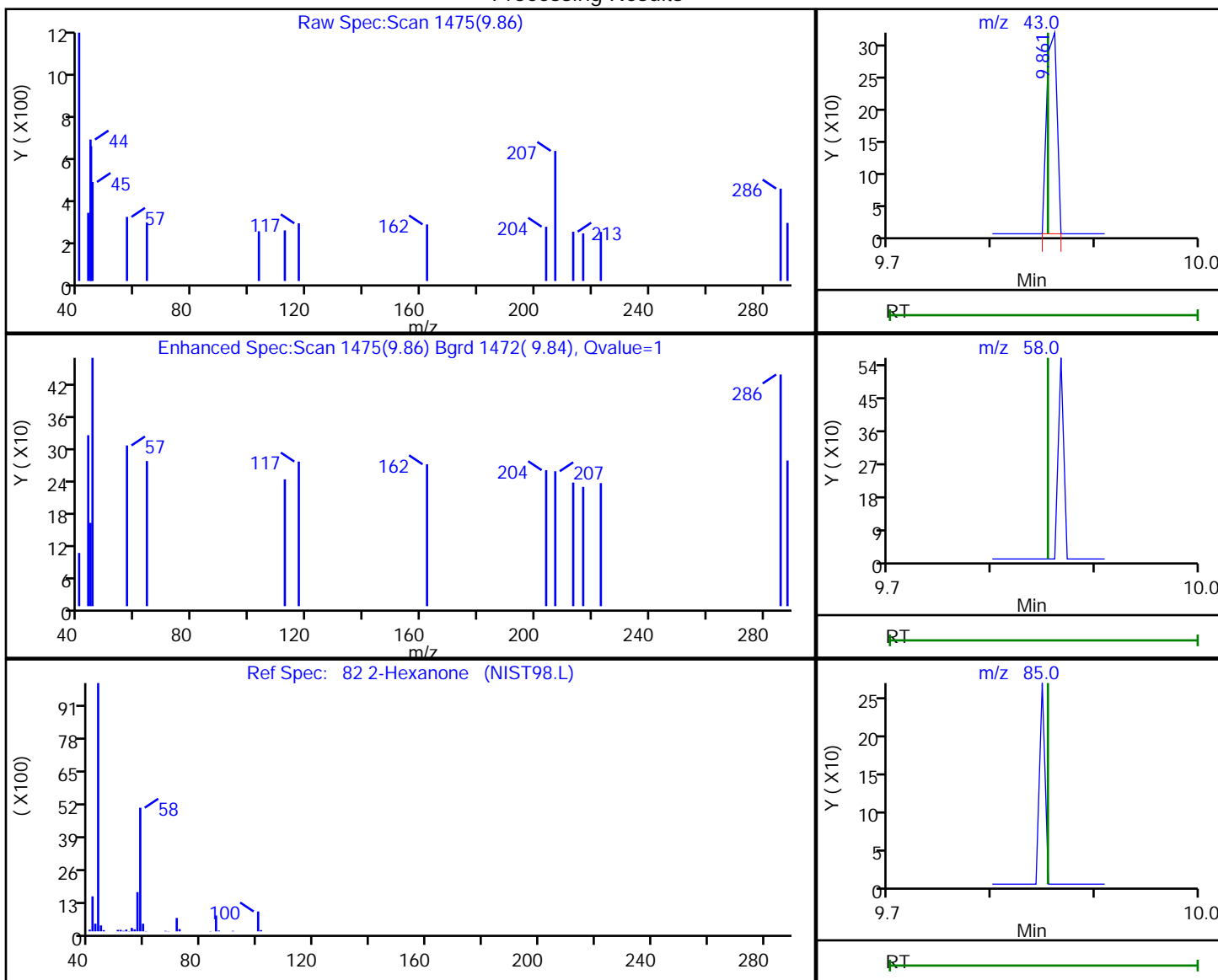
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100407.D
 Injection Date: 04-Oct-2019 14:10:30 Instrument ID: CHHP5
 Lims ID: MB
 Client ID:
 Operator ID: 433269 ALS Bottle#: 7 Worklist Smp#: 6
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

82 2-Hexanone, CAS: 591-78-6

Processing Results



RT	Mass	Response	Amount
9.86	43.00	221	0.149923
9.85	58.00	0	
9.85	85.00	0	

Reviewer: bowieh, 05-Oct-2019 09:15:53

Audit Action: Marked Compound Undetected

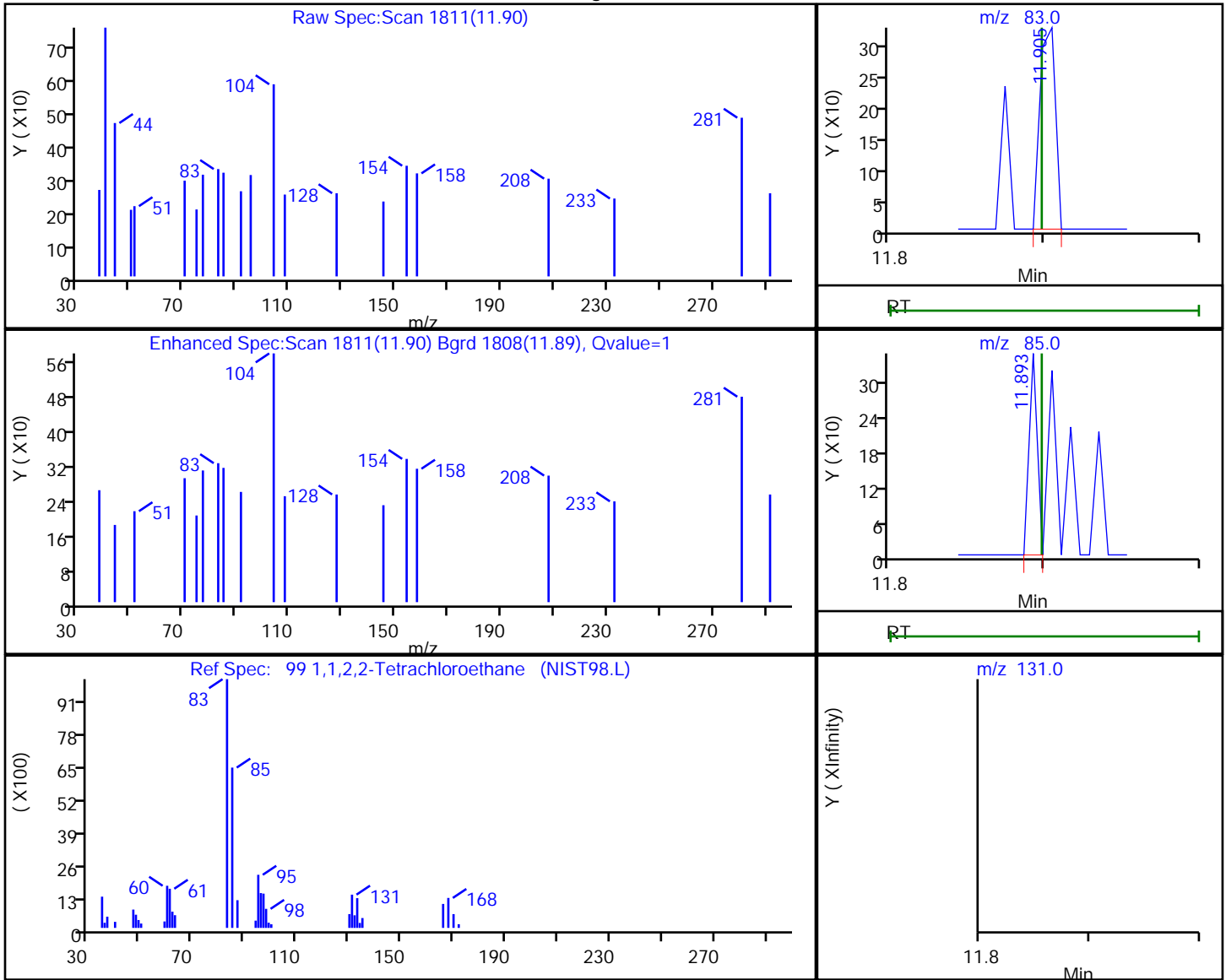
Audit Reason: Invalid Compound ID

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100407.D
 Injection Date: 04-Oct-2019 14:10:30 Instrument ID: CHHP5
 Lims ID: MB
 Client ID:
 Operator ID: 433269 ALS Bottle#: 7 Worklist Smp#: 6
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C_D ICAL
 Column: DB-624 (0.18 mm) Detector: MS SCAN

99 1,1,2,2-Tetrachloroethane, CAS: 79-34-5

Processing Results



RT	Mass	Response	Amount
11.90	83.00	225	0.096290
11.89	85.00	125	
11.90	131.00	0	

Reviewer: bowieh, 05-Oct-2019 09:15:57

Audit Action: Marked Compound Undetected

Audit Reason: Invalid Compound ID

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 180-292962/4
 Matrix: Water Lab File ID: 5092708.D
 Analysis Method: EPA 8260C Date Collected: _____
 Sample wt/vol: 5 (mL) Date Analyzed: 09/27/2019 15:03
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 292962 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	13.1		1.0	0.90
75-01-4	Vinyl chloride	13.7		1.0	0.88
74-83-9	Bromomethane	12.1		1.0	0.89
75-00-3	Chloroethane	13.2		1.0	0.90
75-35-4	1,1-Dichloroethene	12.6		1.0	0.55
67-64-1	Acetone	26.7		5.0	3.4
75-15-0	Carbon disulfide	13.3		1.0	0.88
75-09-2	Methylene Chloride	12.5		1.0	0.89
156-60-5	trans-1,2-Dichloroethene	13.0		1.0	0.67
1634-04-4	Methyl tert-butyl ether	11.1		1.0	0.59
75-34-3	1,1-Dichloroethane	12.3		1.0	0.63
156-59-2	cis-1,2-Dichloroethene	12.5		1.0	0.71
74-97-5	Bromochloromethane	11.7		1.0	0.63
78-93-3	2-Butanone (MEK)	23.4		5.0	2.6
67-66-3	Chloroform	11.6		1.0	0.60
71-55-6	1,1,1-Trichloroethane	11.9		1.0	0.60
56-23-5	Carbon tetrachloride	12.0		1.0	0.88
71-43-2	Benzene	12.6		1.0	0.60
107-06-2	1,2-Dichloroethane	10.6		1.0	0.57
79-01-6	Trichloroethene	12.3		1.0	0.69
78-87-5	1,2-Dichloropropane	11.9		1.0	0.66
75-27-4	Bromodichloromethane	11.0		1.0	0.64
10061-01-5	cis-1,3-Dichloropropene	11.2		1.0	0.59
108-10-1	4-Methyl-2-pentanone (MIBK)	22.2		5.0	3.1
108-88-3	Toluene	12.5		1.0	0.46
10061-02-6	trans-1,3-Dichloropropene	10.6		1.0	0.58
79-00-5	1,1,2-Trichloroethane	11.4		1.0	0.45
127-18-4	Tetrachloroethene	12.0		1.0	0.47
591-78-6	2-Hexanone	22.0		5.0	3.3
124-48-1	Dibromochloromethane	11.0		1.0	0.84
106-93-4	1,2-Dibromoethane (EDB)	11.0		1.0	0.50
108-90-7	Chlorobenzene	11.6		1.0	0.50
630-20-6	1,1,1,2-Tetrachloroethane	11.0		1.0	0.57
100-41-4	Ethylbenzene	11.8		1.0	0.51
1330-20-7	Xylenes, Total	24.3		2.0	0.89
100-42-5	Styrene	11.8		1.0	0.47

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 180-292962/4
 Matrix: Water Lab File ID: 5092708.D
 Analysis Method: EPA 8260C Date Collected: _____
 Sample wt/vol: 5 (mL) Date Analyzed: 09/27/2019 15:03
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 292962 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	10.9		1.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	12.0		1.0	0.60
107-13-1	Acrylonitrile	125		20	7.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	81		70-150
2037-26-5	Toluene-d8 (Surr)	100		78-128
460-00-4	4-Bromofluorobenzene (Surr)	98		64-123
1868-53-7	Dibromofluoromethane (Surr)	97		75-147

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092708.D
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 27-Sep-2019 15:03:30 ALS Bottle#: 4 Worklist Smp#: 4
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028863-004
 Misc. Info.: LCS
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 28-Sep-2019 10:44:19 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: bowieh

Date: 28-Sep-2019 10:44:28

Compound	Sig	RT (min.)	Exp RT (min.)	Diff RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.535	4.532	0.003	0	168201	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.497	7.495	0.002	97	356455	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.582	10.579	0.003	87	90285	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.918	12.915	0.003	94	177164	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.780	6.777	0.003	93	99556	50.0	48.4	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.145	7.142	0.003	0	141240	50.0	40.7	
\$ 7 Toluene-d8 (Surr)	98	9.134	9.131	0.003	94	361026	50.0	50.2	
\$ 8 4-Bromofluorobenzene (Surr	95	11.762	11.766	-0.004	92	144552	50.0	48.9	
11 Dichlorodifluoromethane	85	1.694	1.691	0.003	99	229222	50.0	62.0	
12 Chloromethane	50	1.913	1.910	0.003	100	199886	50.0	65.5	
13 Vinyl chloride	62	2.047	2.038	0.009	81	196059	50.0	68.5	
14 Butadiene	39	2.053	2.050	0.003	98	211242	50.0	66.7	
15 Bromomethane	94	2.381	2.379	0.002	91	132139	50.0	60.4	
16 Chloroethane	64	2.533	2.543	-0.010	99	127357	50.0	66.1	
17 Dichlorofluoromethane	67	2.844	2.841	0.003	97	304251	50.0	62.4	
18 Trichlorofluoromethane	101	2.856	2.853	0.003	97	308778	50.0	59.5	
20 Ethyl ether	59	3.257	3.249	0.008	93	127376	50.0	58.0	
22 1,1-Dichloroethene	96	3.580	3.565	0.015	95	118465	50.0	62.9	
23 1,1,2-Trichloro-1,2,2-trif	101	3.647	3.632	0.015	91	142413	50.0	65.4	
24 Acetone	43	3.683	3.668	0.015	97	121067	100.0	133.5	
25 Iodomethane	142	3.786	3.772	0.014	99	208695	50.0	63.6	
26 Carbon disulfide	76	3.859	3.863	-0.004	100	339910	50.0	66.3	
28 3-Chloro-1-propene	76	4.188	4.186	0.002	87	71294	50.0	64.2	
30 Methyl acetate	43	4.206	4.210	-0.004	98	205778	100.0	112.5	
31 Methylene Chloride	84	4.401	4.405	-0.004	94	156537	50.0	62.5	
32 2-Methyl-2-propanol	59	4.669	4.660	0.009	94	105834	500.0	579.3	
33 Acrylonitrile	53	4.790	4.782	0.008	98	516818	500.0	625.4	
34 trans-1,2-Dichloroethene	96	4.808	4.812	-0.004	95	137975	50.0	65.1	
35 Methyl tert-butyl ether	73	4.827	4.824	0.003	98	354514	50.0	55.4	
36 Hexane	57	5.222	5.220	0.002	94	192557	50.0	57.6	
37 1,1-Dichloroethane	63	5.435	5.439	-0.004	98	248703	50.0	61.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
44 2,2-Dichloropropane	97	6.177	6.169	0.008	68	33707	50.0	66.7	
45 cis-1,2-Dichloroethene	96	6.177	6.181	-0.004	86	146208	50.0	62.4	
46 2-Butanone (MEK)	43	6.189	6.187	0.002	81	126007	100.0	117.1	
49 Chlorobromomethane	128	6.457	6.455	0.002	95	74749	50.0	58.7	
51 Tetrahydrofuran	42	6.469	6.467	0.002	89	72990	100.0	116.8	
52 Chloroform	83	6.603	6.595	0.008	96	268930	50.0	58.2	
53 1,1,1-Trichloroethane	97	6.761	6.759	0.002	98	233297	50.0	59.6	
54 Cyclohexane	56	6.822	6.820	0.002	94	240812	50.0	63.6	
56 Carbon tetrachloride	117	6.926	6.929	-0.003	97	208186	50.0	60.2	
55 1,1-Dichloropropene	75	6.938	6.935	0.003	92	198726	50.0	61.8	
57 Isobutyl alcohol	41	7.145	7.142	0.003	77	108983	1250.0	1561.0	
58 Benzene	78	7.157	7.154	0.003	98	554489	50.0	63.0	
59 1,2-Dichloroethane	62	7.236	7.233	0.003	99	228942	50.0	53.2	
62 n-Heptane	43	7.510	7.507	0.003	88	153893	50.0	54.8	
64 Trichloroethene	130	7.881	7.878	0.003	96	146592	50.0	61.6	
66 Methylcyclohexane	83	8.112	8.109	0.003	93	222465	50.0	59.7	
67 1,2-Dichloropropane	63	8.154	8.152	0.002	93	129074	50.0	59.3	
70 1,4-Dioxane	88	8.227	8.225	0.002	40	15769	1000.0	1205.6	
68 Dibromomethane	93	8.233	8.237	-0.004	93	80661	50.0	54.6	
71 Dichlorobromomethane	83	8.428	8.432	-0.004	99	181337	50.0	55.1	
74 cis-1,3-Dichloropropene	75	8.872	8.870	0.002	91	180086	50.0	55.8	
75 4-Methyl-2-pentanone (MIBK)	43	9.030	9.028	0.002	99	228655	100.0	111.0	
76 Toluene	91	9.201	9.198	0.003	96	584981	50.0	62.5	
77 trans-1,3-Dichloropropene	75	9.444	9.448	-0.004	98	172554	50.0	53.2	
78 Ethyl methacrylate	69	9.499	9.503	-0.004	92	130727	50.0	57.7	
79 1,1,2-Trichloroethane	97	9.639	9.636	0.003	95	112275	50.0	56.9	
80 Tetrachloroethene	164	9.712	9.709	0.003	98	131061	50.0	60.0	
81 1,3-Dichloropropane	76	9.797	9.795	0.002	96	196524	50.0	55.0	
82 2-Hexanone	43	9.858	9.855	0.003	98	163548	100.0	109.8	
84 Chlorodibromomethane	129	10.010	10.007	0.003	90	123247	50.0	55.2	
85 Ethylene Dibromide	107	10.119	10.123	-0.004	98	111345	50.0	55.2	
87 Chlorobenzene	112	10.612	10.610	0.002	92	361251	50.0	57.9	
89 1,1,1,2-Tetrachloroethane	131	10.697	10.701	-0.004	91	132069	50.0	55.2	
90 Ethylbenzene	106	10.709	10.707	0.002	99	189598	50.0	59.1	
91 m-Xylene & p-Xylene	106	10.837	10.835	0.002	0	245495	50.0	62.0	
92 o-Xylene	106	11.220	11.218	0.002	98	224118	50.0	59.3	
93 Styrene	104	11.239	11.242	-0.003	94	390142	50.0	58.8	
94 Bromoform	173	11.421	11.419	0.002	97	78230	50.0	54.7	
97 Isopropylbenzene	105	11.585	11.583	0.002	97	610327	50.0	58.8	
99 1,1,2,2-Tetrachloroethane	83	11.902	11.899	0.003	74	141810	50.0	60.1	
100 Bromobenzene	156	11.902	11.899	0.003	95	165125	50.0	55.9	
102 trans-1,4-Dichloro-2-buten	53	11.938	11.936	0.002	76	51146	50.0	49.9	
101 1,2,3-Trichloropropane	110	11.957	11.954	0.003	85	51873	50.0	52.8	
103 N-Propylbenzene	120	12.005	12.003	0.002	99	179840	50.0	59.7	
104 2-Chlorotoluene	126	12.090	12.088	0.002	96	151422	50.0	58.7	
106 1,3,5-Trimethylbenzene	105	12.182	12.185	-0.003	94	515227	50.0	55.5	
107 4-Chlorotoluene	126	12.212	12.216	-0.004	98	156325	50.0	56.3	
108 tert-Butylbenzene	119	12.498	12.502	-0.004	94	421713	50.0	55.8	
110 1,2,4-Trimethylbenzene	105	12.559	12.556	0.003	98	517433	50.0	55.8	
112 sec-Butylbenzene	105	12.723	12.721	0.002	95	596414	50.0	57.3	
113 1,3-Dichlorobenzene	146	12.839	12.842	-0.003	98	296308	50.0	53.9	
114 4-Isopropyltoluene	119	12.875	12.873	0.002	97	522915	50.0	56.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
115 1,4-Dichlorobenzene	146	12.942	12.946	-0.004	93	305604	50.0	53.5	
120 n-Butylbenzene	91	13.289	13.286	0.003	98	388373	50.0	53.4	
121 1,2-Dichlorobenzene	146	13.301	13.305	-0.004	96	268669	50.0	53.4	
122 1,2-Dibromo-3-Chloropropan	75	14.092	14.096	-0.004	83	21534	50.0	47.7	
126 1,2,4-Trichlorobenzene	180	14.913	14.911	0.002	94	83659	50.0	56.0	
127 Hexachlorobutadiene	225	15.053	15.057	-0.004	96	54633	50.0	61.8	
128 Naphthalene	128	15.187	15.184	0.003	97	179085	50.0	60.2	
129 1,2,3-Trichlorobenzene	180	15.418	15.422	-0.004	95	71175	50.0	56.8	
S 154 Total BTEX	106				0		250.0	305.9	
S 134 1,2-Dichloroethene, Total	96				0		100.0	127.5	
S 133 Xylenes, Total	106				0		100.0	121.3	
S 135 1,3-Dichloropropene, Total	1				0		100.0	109.0	

Reagents:

voaWKetmix1st_00018

Amount Added: 2.00

Units: uL

VOA8260VOAPRI_00373

Amount Added: 2.00

Units: uL

voaWI/SHP5_00013

Amount Added: 5.00

Units: uL

Run Reagent

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092708.D

Injection Date: 27-Sep-2019 15:03:30

Instrument ID: CHHP5

Operator ID: 433269

Lims ID: LCS

Worklist Smp#: 4

Client ID:

Purge Vol: 5.000 mL

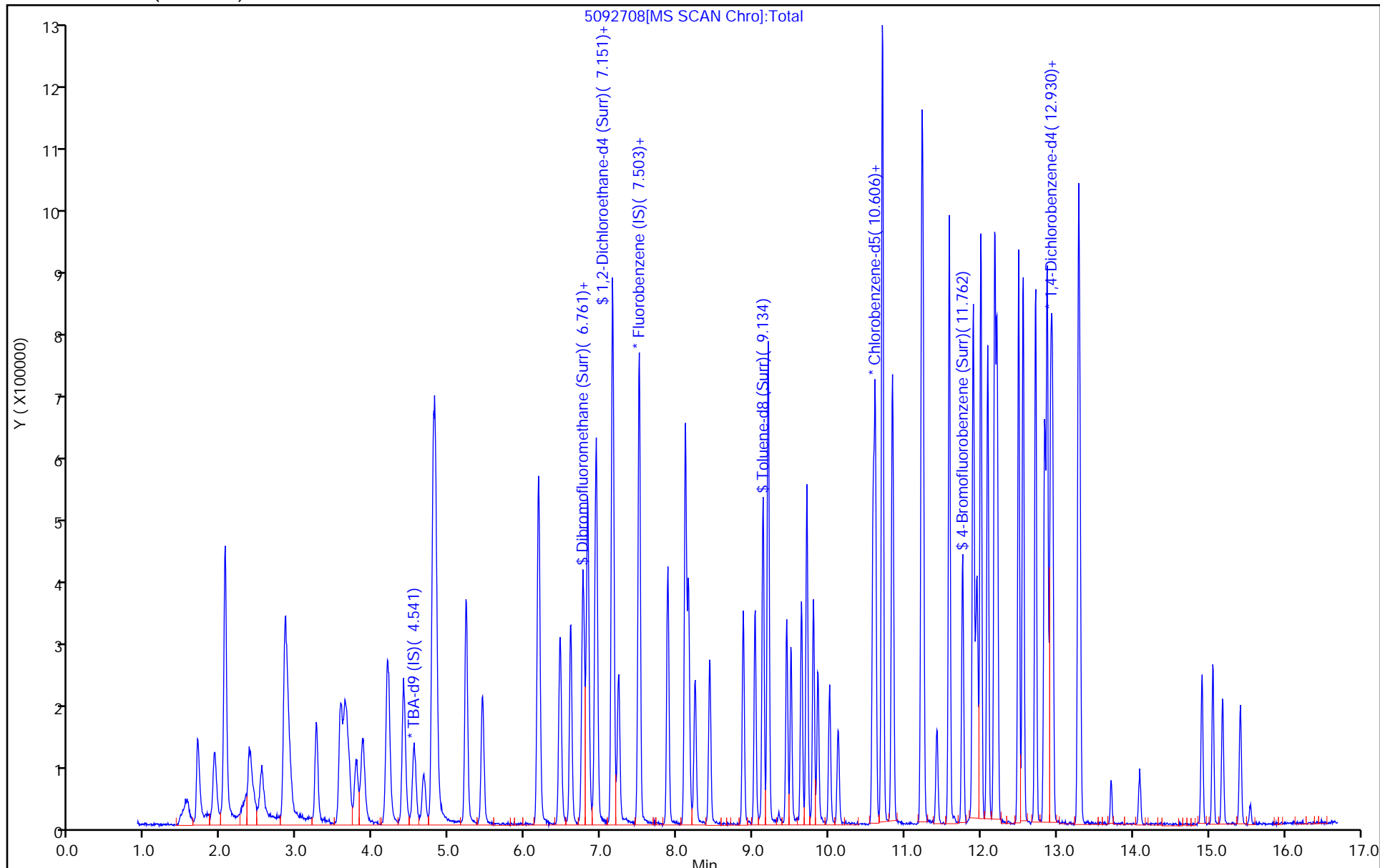
Dil. Factor: 1.0000

ALS Bottle#: 4

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Recovery Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\5092708.D
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 27-Sep-2019 15:03:30 ALS Bottle#: 4 Worklist Smp#: 4
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028863-004
 Misc. Info.: LCS
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190927-28863.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 28-Sep-2019 10:44:19 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: bowieh

Date: 28-Sep-2019 10:44:28

Compound	Amount Added	Amount Recovered	% Rec.
\$ 5 Dibromofluoromethane (Surr)	50.0	48.4	96.77
\$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	40.7	81.50
\$ 7 Toluene-d8 (Surr)	50.0	50.2	100.46
\$ 8 4-Bromofluorobenzene (Surr)	50.0	48.9	97.84

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 180-293070/4
 Matrix: Water Lab File ID: 5092804.D
 Analysis Method: EPA 8260C Date Collected: _____
 Sample wt/vol: 5 (mL) Date Analyzed: 09/28/2019 11:01
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 293070 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	11.6		1.0	0.90
75-01-4	Vinyl chloride	11.9		1.0	0.88
74-83-9	Bromomethane	10.8		1.0	0.89
75-00-3	Chloroethane	12.3		1.0	0.90
75-35-4	1,1-Dichloroethene	11.8		1.0	0.55
67-64-1	Acetone	27.4		5.0	3.4
75-15-0	Carbon disulfide	11.6		1.0	0.88
75-09-2	Methylene Chloride	11.9		1.0	0.89
156-60-5	trans-1,2-Dichloroethene	12.1		1.0	0.67
1634-04-4	Methyl tert-butyl ether	9.93		1.0	0.59
75-34-3	1,1-Dichloroethane	10.9		1.0	0.63
156-59-2	cis-1,2-Dichloroethene	10.9		1.0	0.71
74-97-5	Bromochloromethane	9.91		1.0	0.63
78-93-3	2-Butanone (MEK)	24.2		5.0	2.6
67-66-3	Chloroform	10.6		1.0	0.60
71-55-6	1,1,1-Trichloroethane	10.9		1.0	0.60
56-23-5	Carbon tetrachloride	11.1		1.0	0.88
71-43-2	Benzene	11.6		1.0	0.60
107-06-2	1,2-Dichloroethane	9.27		1.0	0.57
79-01-6	Trichloroethene	10.9		1.0	0.69
78-87-5	1,2-Dichloropropane	11.1		1.0	0.66
75-27-4	Bromodichloromethane	10.0		1.0	0.64
10061-01-5	cis-1,3-Dichloropropene	10.4		1.0	0.59
108-10-1	4-Methyl-2-pentanone (MIBK)	21.5		5.0	3.1
108-88-3	Toluene	11.9		1.0	0.46
10061-02-6	trans-1,3-Dichloropropene	9.34		1.0	0.58
79-00-5	1,1,2-Trichloroethane	11.0		1.0	0.45
127-18-4	Tetrachloroethene	11.3		1.0	0.47
591-78-6	2-Hexanone	24.2		5.0	3.3
124-48-1	Dibromochloromethane	10.4		1.0	0.84
106-93-4	1,2-Dibromoethane (EDB)	10.3		1.0	0.50
108-90-7	Chlorobenzene	11.2		1.0	0.50
630-20-6	1,1,1,2-Tetrachloroethane	10.5		1.0	0.57
100-41-4	Ethylbenzene	11.2		1.0	0.51
1330-20-7	Xylenes, Total	23.0		2.0	0.89
100-42-5	Styrene	11.3		1.0	0.47

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 180-293070/4
 Matrix: Water Lab File ID: 5092804.D
 Analysis Method: EPA 8260C Date Collected: _____
 Sample wt/vol: 5 (mL) Date Analyzed: 09/28/2019 11:01
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 293070 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	10.2		1.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	11.3		1.0	0.60
107-13-1	Acrylonitrile	117		20	7.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	79		70-150
2037-26-5	Toluene-d8 (Surr)	101		78-128
460-00-4	4-Bromofluorobenzene (Surr)	97		64-123
1868-53-7	Dibromofluoromethane (Surr)	91		75-147

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190928-28871.b\5092804.D
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 28-Sep-2019 11:01:30 ALS Bottle#: 4 Worklist Smp#: 4
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028871-004
 Misc. Info.: LCS
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190928-28871.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 28-Sep-2019 14:55:53 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: bowieh

Date: 28-Sep-2019 14:56:04

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.550	4.550	0.000	0	208911	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.494	7.494	0.000	98	368566	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.585	10.585	0.000	88	88993	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.921	12.921	0.000	93	170998	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.777	6.777	0.000	93	97033	50.0	45.6	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.142	7.142	0.000	0	141743	50.0	39.5	
\$ 7 Toluene-d8 (Surr)	98	9.131	9.131	0.000	94	358182	50.0	50.6	
\$ 8 4-Bromofluorobenzene (Surr	95	11.759	11.765	-0.006	92	141673	50.0	48.6	
11 Dichlorodifluoromethane	85	1.685	1.691	-0.006	99	207125	50.0	54.1	
12 Chloromethane	50	1.910	1.910	0.000	100	182229	50.0	57.8	
13 Vinyl chloride	62	2.038	2.044	-0.006	98	176828	50.0	59.7	
14 Butadiene	39	2.050	2.050	0.000	99	211445	50.0	64.6	
15 Bromomethane	94	2.372	2.372	0.000	91	122117	50.0	54.0	
16 Chloroethane	64	2.524	2.518	0.006	99	122412	50.0	61.5	
17 Dichlorofluoromethane	67	2.841	2.834	0.007	96	288282	50.0	57.2	
18 Trichlorofluoromethane	101	2.853	2.853	0.000	97	290286	50.0	54.1	
20 Ethyl ether	59	3.248	3.248	0.000	92	124529	50.0	54.8	
21 Acrolein	56	3.455	3.443	0.012	89	17328	150.0	44.8	
22 1,1-Dichloroethene	96	3.558	3.565	-0.006	94	114754	50.0	59.0	
23 1,1,2-Trichloro-1,2,2-trif	101	3.631	3.638	-0.007	92	138816	50.0	61.7	
24 Acetone	43	3.680	3.680	0.000	98	128427	100.0	136.9	
25 Iodomethane	142	3.765	3.765	0.000	99	191518	50.0	56.5	
26 Carbon disulfide	76	3.863	3.863	0.000	100	307804	50.0	58.1	
28 3-Chloro-1-propene	76	4.179	4.185	-0.006	86	65478	50.0	57.1	
30 Methyl acetate	43	4.209	4.203	0.006	98	217974	100.0	115.3	
31 Methylene Chloride	84	4.398	4.398	0.000	96	154768	50.0	59.4	
32 2-Methyl-2-propanol	59	4.678	4.672	0.006	93	118893	500.0	524.0	
33 Acrylonitrile	53	4.787	4.787	0.000	99	500931	500.0	586.2	
34 trans-1,2-Dichloroethene	96	4.812	4.812	0.000	96	132216	50.0	60.3	
35 Methyl tert-butyl ether	73	4.824	4.824	0.000	98	328899	50.0	49.7	
36 Hexane	57	5.219	5.213	0.006	94	184298	50.0	53.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
37 1,1-Dichloroethane	63	5.438	5.438	0.000	98	228550	50.0	54.5	
38 Vinyl acetate	43	5.487	5.487	0.000	97	171681	50.0	43.0	
44 2,2-Dichloropropane	97	6.174	6.174	0.000	67	31778	50.0	60.8	
45 cis-1,2-Dichloroethene	96	6.174	6.174	0.000	87	132463	50.0	54.7	
46 2-Butanone (MEK)	43	6.187	6.186	0.001	100	134874	100.0	121.2	
49 Chlorobromomethane	128	6.460	6.454	0.006	96	65177	50.0	49.5	
51 Tetrahydrofuran	42	6.466	6.472	-0.006	84	74238	100.0	114.9	
52 Chloroform	83	6.600	6.600	0.000	95	253655	50.0	52.9	
53 1,1,1-Trichloroethane	97	6.758	6.752	0.006	98	220309	50.0	54.5	
54 Cyclohexane	56	6.825	6.819	0.006	94	225156	50.0	57.5	
56 Carbon tetrachloride	117	6.923	6.929	-0.006	98	198184	50.0	55.4	
55 1,1-Dichloropropene	75	6.941	6.941	0.000	92	181847	50.0	54.7	
57 Isobutyl alcohol	41	7.148	7.142	0.006	85	109340	1250.0	1514.7	
58 Benzene	78	7.154	7.154	0.000	98	526594	50.0	57.8	
59 1,2-Dichloroethane	62	7.233	7.233	0.000	99	206281	50.0	46.3	
62 n-Heptane	43	7.507	7.507	0.000	92	157267	50.0	54.2	
64 Trichloroethene	130	7.884	7.878	0.006	98	133588	50.0	54.3	
66 Methylcyclohexane	83	8.115	8.109	0.006	92	204595	50.0	53.1	
67 1,2-Dichloropropane	63	8.152	8.151	0.001	93	124718	50.0	55.4	
70 1,4-Dioxane	88	8.231	8.224	0.007	40	23871	1000.0	1749.5	
68 Dibromomethane	93	8.237	8.243	-0.006	92	74196	50.0	48.6	
71 Dichlorobromomethane	83	8.431	8.431	0.000	99	170208	50.0	50.0	
73 2-Chloroethyl vinyl ether	63	8.723	8.729	-0.006	94	107527	100.0	79.8	
74 cis-1,3-Dichloropropene	75	8.875	8.869	0.006	92	173770	50.0	52.1	
75 4-Methyl-2-pentanone (MIBK)	43	9.028	9.027	0.001	98	218634	100.0	107.7	
76 Toluene	91	9.198	9.204	-0.006	97	548806	50.0	59.5	
77 trans-1,3-Dichloropropene	75	9.447	9.447	0.000	98	149284	50.0	46.7	
78 Ethyl methacrylate	69	9.502	9.508	-0.006	89	122923	50.0	55.1	
79 1,1,2-Trichloroethane	97	9.636	9.642	-0.006	94	107309	50.0	55.2	
80 Tetrachloroethene	164	9.715	9.709	0.006	98	121705	50.0	56.5	
81 1,3-Dichloropropane	76	9.800	9.800	0.000	96	182998	50.0	52.0	
82 2-Hexanone	43	9.855	9.855	0.000	98	177524	100.0	120.9	
84 Chlorodibromomethane	129	10.007	10.013	-0.006	89	114339	50.0	52.0	
85 Ethylene Dibromide	107	10.123	10.122	0.001	98	102643	50.0	51.6	
87 Chlorobenzene	112	10.609	10.609	0.000	93	344166	50.0	56.0	
89 1,1,1,2-Tetrachloroethane	131	10.700	10.706	-0.006	90	123547	50.0	52.4	
90 Ethylbenzene	106	10.713	10.706	0.007	99	177893	50.0	56.2	
91 m-Xylene & p-Xylene	106	10.840	10.834	0.006	0	227917	50.0	58.4	
92 o-Xylene	106	11.218	11.224	-0.006	98	210189	50.0	56.4	
93 Styrene	104	11.242	11.242	0.000	96	368737	50.0	56.4	
94 Bromoform	173	11.418	11.418	0.000	96	72051	50.0	51.1	
97 Isopropylbenzene	105	11.589	11.589	0.000	97	554522	50.0	54.2	
99 1,1,2,2-Tetrachloroethane	83	11.899	11.899	0.000	92	131524	50.0	56.5	
100 Bromobenzene	156	11.905	11.905	0.000	93	149336	50.0	52.3	
102 trans-1,4-Dichloro-2-buten	53	11.935	11.935	0.000	86	46078	50.0	46.5	
101 1,2,3-Trichloropropane	110	11.954	11.954	0.000	86	49246	50.0	51.9	
103 N-Propylbenzene	120	12.002	12.002	0.000	99	158035	50.0	54.3	
104 2-Chlorotoluene	126	12.088	12.094	-0.006	96	133196	50.0	53.5	
106 1,3,5-Trimethylbenzene	105	12.185	12.185	0.000	94	461802	50.0	51.5	
107 4-Chlorotoluene	126	12.215	12.215	0.000	98	148054	50.0	55.2	
108 tert-Butylbenzene	119	12.495	12.495	0.000	94	359089	50.0	49.2	
110 1,2,4-Trimethylbenzene	105	12.556	12.556	0.000	98	470459	50.0	52.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
112 sec-Butylbenzene	105	12.720	12.720	0.000	95	517422	50.0	51.5	
113 1,3-Dichlorobenzene	146	12.842	12.842	0.000	98	260138	50.0	49.0	
114 4-Isopropyltoluene	119	12.872	12.878	-0.006	97	453952	50.0	51.1	
115 1,4-Dichlorobenzene	146	12.945	12.945	0.000	94	268466	50.0	48.7	
120 n-Butylbenzene	91	13.286	13.286	0.000	97	336488	50.0	47.9	
121 1,2-Dichlorobenzene	146	13.304	13.304	0.000	97	235919	50.0	48.5	
122 1,2-Dibromo-3-Chloropropan	75	14.089	14.089	0.000	76	22012	50.0	50.5	
126 1,2,4-Trichlorobenzene	180	14.910	14.910	0.000	94	70137	50.0	48.6	
127 Hexachlorobutadiene	225	15.056	15.062	-0.006	96	48830	50.0	57.0	
128 Naphthalene	128	15.184	15.178	0.006	97	148573	50.0	53.7	
129 1,2,3-Trichlorobenzene	180	15.415	15.415	0.000	94	58525	50.0	48.4	
S 133 Xylenes, Total	106				0		100.0	114.9	
S 134 1,2-Dichloroethene, Total	96				0		100.0	115.0	
S 154 Total BTEX	106				0		250.0	288.4	
S 135 1,3-Dichloropropene, Total	1				0		100.0	98.8	

Reagents:

voaWKet2ndRes_00043	Amount Added: 2.00	Units: uL	
VOA8260VOA2ND_00372	Amount Added: 2.00	Units: uL	
VOAVAPRI_00027	Amount Added: 2.00	Units: uL	
VOACEVE2ND_00026	Amount Added: 2.00	Units: uL	
VOAACRPRI_00021	Amount Added: 6.00	Units: uL	
voaWI/SHP5_00013	Amount Added: 5.00	Units: uL	Run Reagent

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190928-28871.b\5092804.D

Injection Date: 28-Sep-2019 11:01:30

Instrument ID: CHHP5

Operator ID: 433269

Lims ID: LCS

Worklist Smp#: 4

Client ID:

Purge Vol: 5.000 mL

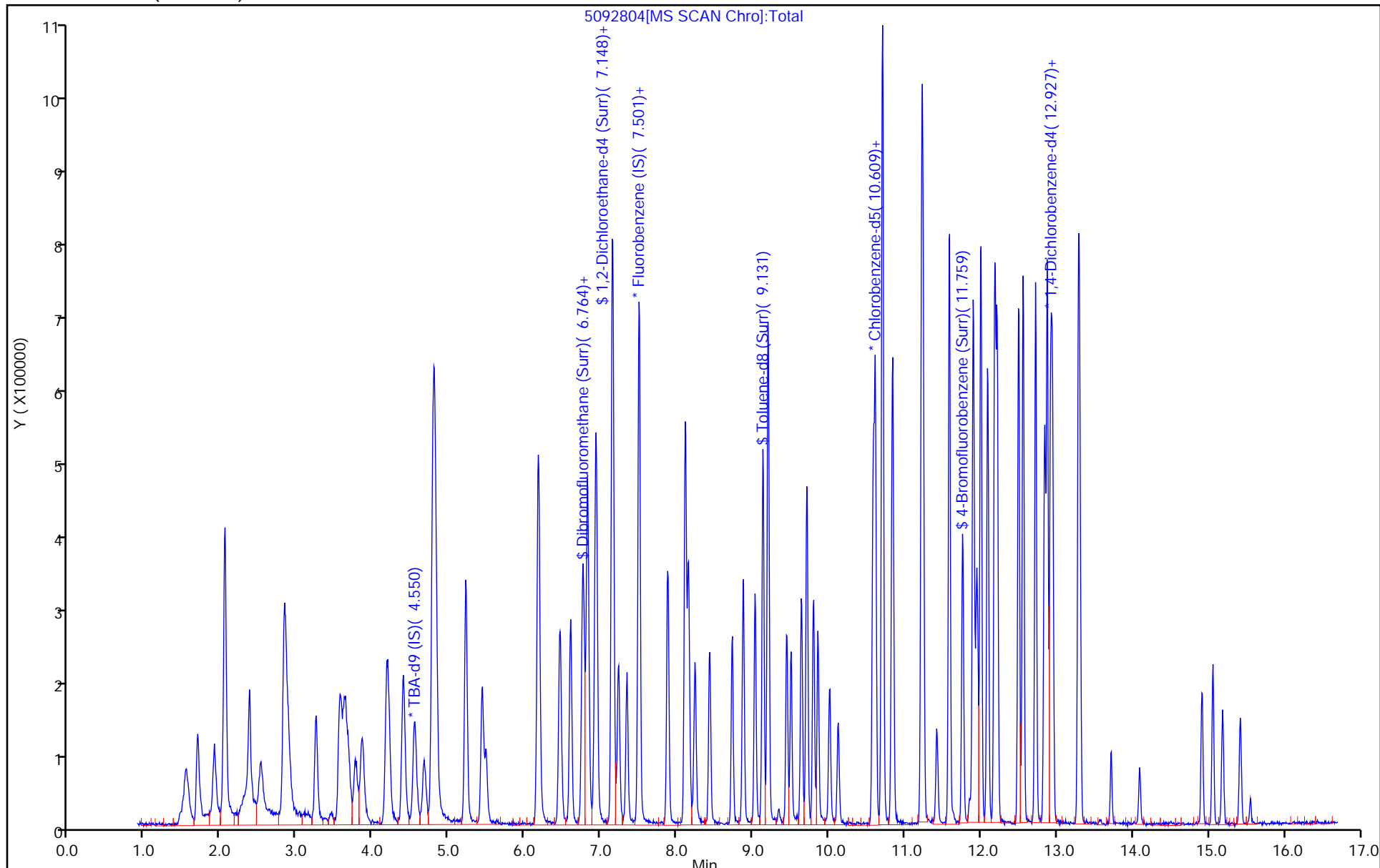
Dil. Factor: 1.0000

ALS Bottle#: 4

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Recovery Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20190928-28871.b\5092804.D
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 28-Sep-2019 11:01:30 ALS Bottle#: 4 Worklist Smp#: 4
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028871-004
 Misc. Info.: LCS
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20190928-28871.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 28-Sep-2019 14:55:53 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0317

First Level Reviewer: bowieh

Date: 28-Sep-2019 14:56:04

Compound	Amount Added	Amount Recovered	% Rec.
\$ 5 Dibromofluoromethane (Surr)	50.0	45.6	91.22
\$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	39.5	79.10
\$ 7 Toluene-d8 (Surr)	50.0	50.6	101.12
\$ 8 4-Bromofluorobenzene (Surr)	50.0	48.6	97.28

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 180-293722/4
 Matrix: Water Lab File ID: 5100405.D
 Analysis Method: EPA 8260C Date Collected: _____
 Sample wt/vol: 5 (mL) Date Analyzed: 10/04/2019 13:21
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 293722 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	11.3		1.0	0.90
75-01-4	Vinyl chloride	12.2		1.0	0.88
74-83-9	Bromomethane	10.4		1.0	0.89
75-00-3	Chloroethane	11.1		1.0	0.90
75-35-4	1,1-Dichloroethene	11.9		1.0	0.55
67-64-1	Acetone	28.0		5.0	3.4
75-15-0	Carbon disulfide	11.5		1.0	0.88
75-09-2	Methylene Chloride	11.7		1.0	0.89
156-60-5	trans-1,2-Dichloroethene	12.3		1.0	0.67
1634-04-4	Methyl tert-butyl ether	9.94		1.0	0.59
75-34-3	1,1-Dichloroethane	11.3		1.0	0.63
156-59-2	cis-1,2-Dichloroethene	11.6		1.0	0.71
74-97-5	Bromochloromethane	10.1		1.0	0.63
78-93-3	2-Butanone (MEK)	23.8		5.0	2.6
67-66-3	Chloroform	10.6		1.0	0.60
71-55-6	1,1,1-Trichloroethane	10.5		1.0	0.60
56-23-5	Carbon tetrachloride	10.8		1.0	0.88
71-43-2	Benzene	11.3		1.0	0.60
107-06-2	1,2-Dichloroethane	8.85		1.0	0.57
79-01-6	Trichloroethene	11.0		1.0	0.69
78-87-5	1,2-Dichloropropane	10.6		1.0	0.66
75-27-4	Bromodichloromethane	9.41		1.0	0.64
10061-01-5	cis-1,3-Dichloropropene	10.6		1.0	0.59
108-10-1	4-Methyl-2-pentanone (MIBK)	18.3		5.0	3.1
108-88-3	Toluene	10.0		1.0	0.46
10061-02-6	trans-1,3-Dichloropropene	8.07		1.0	0.58
79-00-5	1,1,2-Trichloroethane	8.99		1.0	0.45
127-18-4	Tetrachloroethene	9.73		1.0	0.47
591-78-6	2-Hexanone	20.2		5.0	3.3
124-48-1	Dibromochloromethane	8.72		1.0	0.84
106-93-4	1,2-Dibromoethane (EDB)	8.76		1.0	0.50
108-90-7	Chlorobenzene	9.93		1.0	0.50
630-20-6	1,1,1,2-Tetrachloroethane	9.19		1.0	0.57
100-41-4	Ethylbenzene	10.1		1.0	0.51
1330-20-7	Xylenes, Total	19.8		2.0	0.89
100-42-5	Styrene	10.0		1.0	0.47

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 180-293722/4
 Matrix: Water Lab File ID: 5100405.D
 Analysis Method: EPA 8260C Date Collected: _____
 Sample wt/vol: 5 (mL) Date Analyzed: 10/04/2019 13:21
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 293722 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	9.28		1.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	10.7		1.0	0.60
107-13-1	Acrylonitrile	119		20	7.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	78		70-150
2037-26-5	Toluene-d8 (Surr)	92		78-128
460-00-4	4-Bromofluorobenzene (Surr)	94		64-123
1868-53-7	Dibromofluoromethane (Surr)	98		75-147

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100405.D
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 04-Oct-2019 13:21:30 ALS Bottle#: 5 Worklist Smp#: 4
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028969-004
 Misc. Info.: LCS
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 05-Oct-2019 09:12:59 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0311

First Level Reviewer: bowieh

Date: 05-Oct-2019 09:13:11

Compound	Sig	RT (min.)	Exp RT (min.)	Diff RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.550	4.549	0.001	0	245848	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.495	7.494	0.001	98	390494	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.579	10.584	-0.005	86	107930	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.915	12.920	-0.005	93	231772	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.777	6.776	0.001	94	110126	50.0	48.9	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.142	7.141	0.001	0	147222	50.0	38.8	
\$ 7 Toluene-d8 (Surr)	98	9.131	9.130	0.001	94	396980	50.0	46.2	
\$ 8 4-Bromofluorobenzene (Surr	95	11.759	11.758	0.001	91	166415	50.0	47.1	
11 Dichlorodifluoromethane	85	1.685	1.690	-0.005	100	186458	50.0	46.0	
12 Chloromethane	50	1.898	1.909	-0.011	100	188189	50.0	56.3	
13 Vinyl chloride	62	2.038	2.037	0.001	99	191129	50.0	60.9	
14 Butadiene	39	2.050	2.049	0.001	95	204266	50.0	58.9	
15 Bromomethane	94	2.372	2.371	0.001	91	124425	50.0	51.9	
16 Chloroethane	64	2.506	2.511	-0.005	99	117660	50.0	55.7	
17 Dichlorofluoromethane	67	2.829	2.834	-0.005	96	287354	50.0	53.8	
18 Trichlorofluoromethane	101	2.829	2.846	-0.017	84	288633	50.0	50.8	
20 Ethyl ether	59	3.248	3.247	0.001	94	135783	50.0	56.4	
21 Acrolein	56	3.443	3.448	-0.005	100	61835	150.0	150.9	
22 1,1-Dichloroethene	96	3.559	3.564	-0.005	97	122180	50.0	59.3	
23 1,1,2-Trichloro-1,2,2-trif	101	3.607	3.631	-0.024	91	139672	50.0	58.6	
24 Acetone	43	3.686	3.685	0.001	98	138965	100.0	139.8	
25 Iodomethane	142	3.765	3.764	0.001	100	204662	50.0	57.0	
26 Carbon disulfide	76	3.857	3.850	0.007	99	321759	50.0	57.3	
28 3-Chloro-1-propene	76	4.173	4.178	-0.005	88	73073	50.0	60.1	
30 Methyl acetate	43	4.203	4.209	-0.006	98	209946	100.0	104.8	
31 Methylene Chloride	84	4.398	4.403	-0.005	93	161775	50.0	58.5	
32 2-Methyl-2-propanol	59	4.684	4.671	0.013	93	123613	500.0	462.9	
33 Acrylonitrile	53	4.787	4.787	0.001	98	536740	500.0	592.9	
34 trans-1,2-Dichloroethene	96	4.806	4.805	0.001	94	143162	50.0	61.6	
35 Methyl tert-butyl ether	73	4.824	4.829	-0.005	98	348735	50.0	49.7	
36 Hexane	57	5.213	5.218	-0.005	91	184381	50.0	50.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
37 1,1-Dichloroethane	63	5.432	5.437	-0.005	96	250002	50.0	56.3	
38 Vinyl acetate	43	5.481	5.480	0.001	98	214230	50.0	50.7	
44 2,2-Dichloropropane	97	6.168	6.161	0.007	71	35396	50.0	63.9	
45 cis-1,2-Dichloroethene	96	6.175	6.174	0.000	86	149210	50.0	58.2	
46 2-Butanone (MEK)	43	6.187	6.186	0.001	94	140110	100.0	118.9	
49 Chlorobromomethane	128	6.454	6.453	0.001	95	70092	50.0	50.3	
51 Tetrahydrofuran	42	6.467	6.466	0.001	79	73256	100.0	107.0	
52 Chloroform	83	6.600	6.599	0.001	94	268280	50.0	52.8	
53 1,1,1-Trichloroethane	97	6.759	6.758	0.001	97	223982	50.0	52.3	
54 Cyclohexane	56	6.819	6.818	0.001	94	242502	50.0	58.5	
56 Carbon tetrachloride	117	6.923	6.922	0.001	97	204493	50.0	54.0	
55 1,1-Dichloropropene	75	6.935	6.940	-0.005	94	193502	50.0	54.9	
57 Isobutyl alcohol	41	7.142	7.141	0.001	84	117582	1250.0	1537.4	
58 Benzene	78	7.154	7.153	0.001	98	544921	50.0	56.5	
59 1,2-Dichloroethane	62	7.233	7.226	0.007	98	208605	50.0	44.2	
62 n-Heptane	43	7.501	7.506	-0.005	88	152380	50.0	49.6	
64 Trichloroethene	130	7.878	7.877	0.001	98	143874	50.0	55.2	
66 Methylcyclohexane	83	8.109	8.108	0.001	93	214808	50.0	52.6	
67 1,2-Dichloropropane	63	8.146	8.151	-0.005	94	126583	50.0	53.1	
70 1,4-Dioxane	88	8.231	8.236	-0.005	39	26353	1000.0	1821.6	
68 Dibromomethane	93	8.237	8.236	0.001	90	78437	50.0	48.5	
71 Dichlorobromomethane	83	8.425	8.430	-0.005	99	169679	50.0	47.1	
73 2-Chloroethyl vinyl ether	63	8.723	8.729	-0.006	94	135873	100.0	95.2	
74 cis-1,3-Dichloropropene	75	8.869	8.869	0.001	92	187586	50.0	53.1	
75 4-Methyl-2-pentanone (MIBK)	43	9.022	9.027	-0.005	98	225047	100.0	91.4	
76 Toluene	91	9.198	9.197	0.001	98	559429	50.0	50.0	
77 trans-1,3-Dichloropropene	75	9.441	9.440	0.001	96	156470	50.0	40.3	
78 Ethyl methacrylate	69	9.502	9.501	0.001	90	120610	50.0	44.5	
79 1,1,2-Trichloroethane	97	9.636	9.641	-0.005	95	106073	50.0	45.0	
80 Tetrachloroethene	164	9.709	9.708	0.001	98	127081	50.0	48.6	
81 1,3-Dichloropropane	76	9.794	9.799	-0.005	96	189088	50.0	44.3	
82 2-Hexanone	43	9.855	9.854	0.001	97	179419	100.0	100.8	
84 Chlorodibromomethane	129	10.007	10.012	-0.005	90	116307	50.0	43.6	
85 Ethylene Dibromide	107	10.117	10.122	-0.005	97	105648	50.0	43.8	
87 Chlorobenzene	112	10.609	10.608	0.001	93	370262	50.0	49.7	
89 1,1,1,2-Tetrachloroethane	131	10.701	10.700	0.001	92	131305	50.0	45.9	
90 Ethylbenzene	106	10.707	10.712	-0.005	99	193061	50.0	50.3	
91 m-Xylene & p-Xylene	106	10.834	10.840	-0.006	0	234741	50.0	49.6	
92 o-Xylene	106	11.218	11.223	-0.005	97	223243	50.0	49.4	
93 Styrene	104	11.236	11.241	-0.005	94	398591	50.0	50.2	
94 Bromoform	173	11.425	11.417	0.008	98	79390	50.0	46.4	
97 Isopropylbenzene	105	11.583	11.582	0.001	96	615353	50.0	49.6	
99 1,1,2,2-Tetrachloroethane	83	11.899	11.898	0.001	78	150636	50.0	53.4	
100 Bromobenzene	156	11.899	11.904	-0.005	93	173589	50.0	44.9	
102 trans-1,4-Dichloro-2-buten	53	11.936	11.941	-0.005	65	53803	50.0	40.1	
101 1,2,3-Trichloropropane	110	11.954	11.953	0.001	84	55222	50.0	42.5	
103 N-Propylbenzene	120	12.002	12.001	0.001	99	181892	50.0	46.1	
104 2-Chlorotoluene	126	12.094	12.093	0.001	97	161944	50.0	48.0	
106 1,3,5-Trimethylbenzene	105	12.185	12.184	0.001	93	536831	50.0	44.2	
107 4-Chlorotoluene	126	12.215	12.214	0.001	97	170146	50.0	46.8	
108 tert-Butylbenzene	119	12.495	12.500	-0.005	95	427394	50.0	43.2	
110 1,2,4-Trimethylbenzene	105	12.556	12.555	0.001	97	562651	50.0	46.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
112 sec-Butylbenzene	105	12.720	12.719	0.001	95	630693	50.0	46.3	
113 1,3-Dichlorobenzene	146	12.842	12.841	0.001	98	337060	50.0	46.8	
114 4-Isopropyltoluene	119	12.872	12.878	-0.006	97	559798	50.0	46.5	
115 1,4-Dichlorobenzene	146	12.945	12.944	0.001	95	346266	50.0	46.4	
120 n-Butylbenzene	91	13.286	13.285	0.001	97	441960	50.0	46.4	
121 1,2-Dichlorobenzene	146	13.304	13.303	0.001	98	319764	50.0	48.5	
122 1,2-Dibromo-3-Chloropropan	75	14.095	14.088	0.007	83	27545	50.0	46.6	
126 1,2,4-Trichlorobenzene	180	14.910	14.909	0.001	94	126264	50.0	64.6	
127 Hexachlorobutadiene	225	15.056	15.055	0.001	95	83461	50.0	72.7	
128 Naphthalene	128	15.178	15.183	-0.005	97	282551	50.0	69.2	
129 1,2,3-Trichlorobenzene	180	15.421	15.420	0.001	95	121326	50.0	74.0	
S 133 Xylenes, Total	106				0		100.0	99.0	
S 134 1,2-Dichloroethene, Total	96				0		100.0	119.8	
S 154 Total BTEX	106				0		250.0	255.9	
S 135 1,3-Dichloropropene, Total	1				0		100.0	93.4	

Reagents:

voaWKet2ndRes_00043	Amount Added: 2.00	Units: uL	
VOA8260VOA2ND_00372	Amount Added: 2.00	Units: uL	
VOACEVE2ND_00027	Amount Added: 2.00	Units: uL	
VOAACRPRI_00021	Amount Added: 6.00	Units: uL	
VOAVAPRI_00028	Amount Added: 2.00	Units: uL	
voaWI/SHP5_00013	Amount Added: 5.00	Units: uL	Run Reagent

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100405.D

Injection Date: 04-Oct-2019 13:21:30

Instrument ID: CHHP5

Operator ID: 433269

Lims ID: LCS

Worklist Smp#: 4

Client ID:

Purge Vol: 5.000 mL

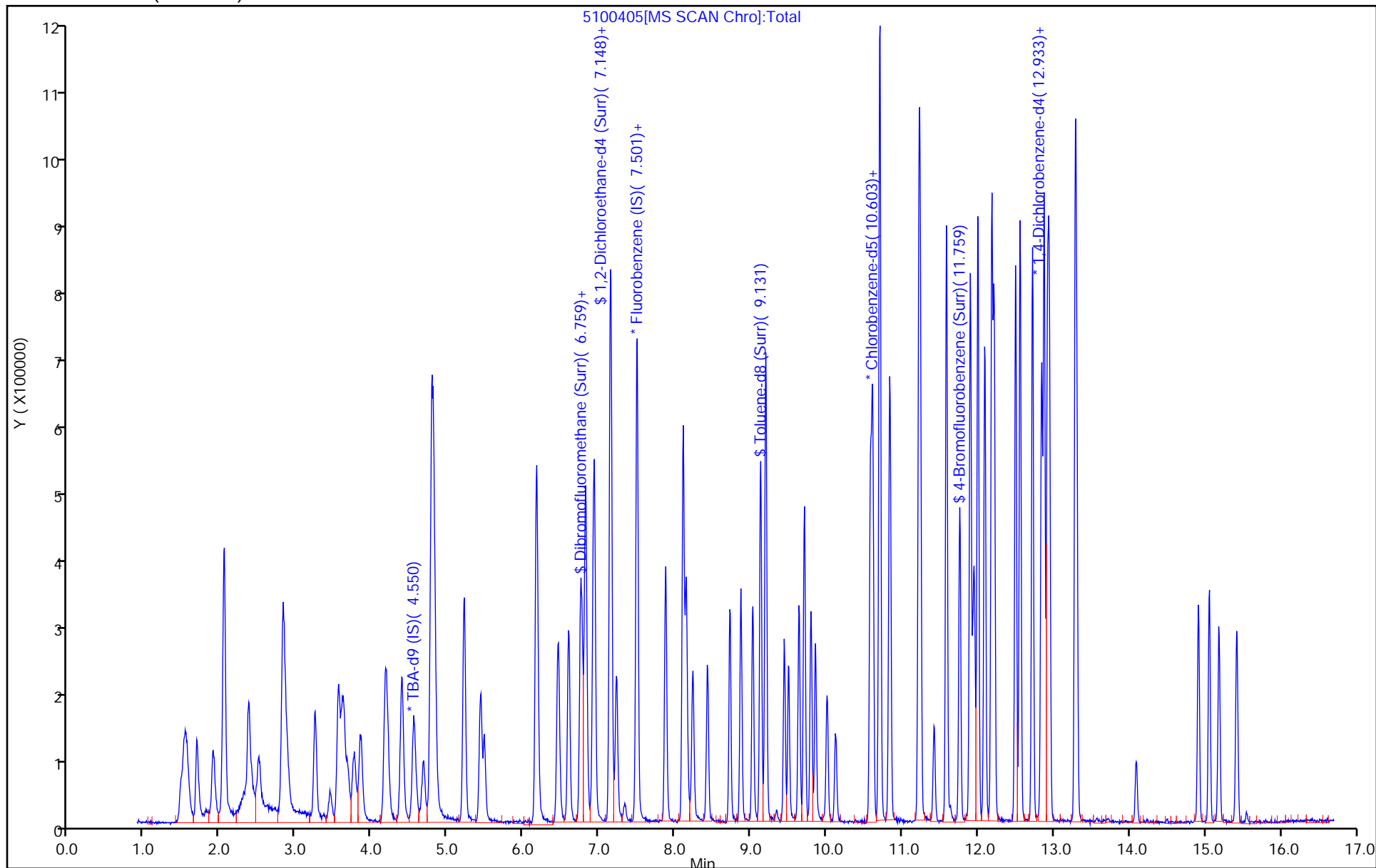
Dil. Factor: 1.0000

ALS Bottle#: 5

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Recovery Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100405.D
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 04-Oct-2019 13:21:30 ALS Bottle#: 5 Worklist Smp#: 4
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028969-004
 Misc. Info.: LCS
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 05-Oct-2019 09:12:59 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0311

First Level Reviewer: bowieh

Date: 05-Oct-2019 09:13:11

Compound	Amount Added	Amount Recovered	% Rec.
\$ 5 Dibromofluoromethane (Surr)	50.0	48.9	97.72
\$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	38.8	77.54
\$ 7 Toluene-d8 (Surr)	50.0	46.2	92.40
\$ 8 4-Bromofluorobenzene (Surr)	50.0	47.1	94.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: HD-MW-110-0/1-0 MS Lab Sample ID: 180-96180-13 MS
 Matrix: Water Lab File ID: 5100426.D
 Analysis Method: EPA 8260C Date Collected: 09/24/2019 13:30
 Sample wt/vol: 5 (mL) Date Analyzed: 10/04/2019 22:32
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 293722 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	9.37		1.0	0.90
75-01-4	Vinyl chloride	9.17		1.0	0.88
74-83-9	Bromomethane	9.66		1.0	0.89
75-00-3	Chloroethane	9.55		1.0	0.90
75-35-4	1,1-Dichloroethene	9.95		1.0	0.55
67-64-1	Acetone	18.9		5.0	3.4
75-15-0	Carbon disulfide	9.28		1.0	0.88
75-09-2	Methylene Chloride	11.2		1.0	0.89
156-60-5	trans-1,2-Dichloroethene	10.3		1.0	0.67
1634-04-4	Methyl tert-butyl ether	9.21		1.0	0.59
75-34-3	1,1-Dichloroethane	10.4		1.0	0.63
156-59-2	cis-1,2-Dichloroethene	10.3		1.0	0.71
74-97-5	Bromochloromethane	10.2		1.0	0.63
78-93-3	2-Butanone (MEK)	19.6		5.0	2.6
67-66-3	Chloroform	10.2		1.0	0.60
71-55-6	1,1,1-Trichloroethane	8.96		1.0	0.60
56-23-5	Carbon tetrachloride	8.67		1.0	0.88
71-43-2	Benzene	10.7		1.0	0.60
107-06-2	1,2-Dichloroethane	8.94		1.0	0.57
79-01-6	Trichloroethene	9.84		1.0	0.69
78-87-5	1,2-Dichloropropane	10.2		1.0	0.66
75-27-4	Bromodichloromethane	9.24		1.0	0.64
10061-01-5	cis-1,3-Dichloropropene	8.23		1.0	0.59
108-10-1	4-Methyl-2-pentanone (MIBK)	16.6		5.0	3.1
108-88-3	Toluene	9.35		1.0	0.46
10061-02-6	trans-1,3-Dichloropropene	7.30		1.0	0.58
79-00-5	1,1,2-Trichloroethane	9.53		1.0	0.45
127-18-4	Tetrachloroethene	23.5		1.0	0.47
591-78-6	2-Hexanone	16.9		5.0	3.3
124-48-1	Dibromochloromethane	9.27		1.0	0.84
106-93-4	1,2-Dibromoethane (EDB)	8.77		1.0	0.50
108-90-7	Chlorobenzene	9.74		1.0	0.50
630-20-6	1,1,1,2-Tetrachloroethane	9.33		1.0	0.57
100-41-4	Ethylbenzene	9.01		1.0	0.51
1330-20-7	Xylenes, Total	18.8		2.0	0.89
100-42-5	Styrene	9.92		1.0	0.47

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: HD-MW-110-0/1-0 MS Lab Sample ID: 180-96180-13 MS
 Matrix: Water Lab File ID: 5100426.D
 Analysis Method: EPA 8260C Date Collected: 09/24/2019 13:30
 Sample wt/vol: 5 (mL) Date Analyzed: 10/04/2019 22:32
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 293722 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	9.76		1.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	11.2		1.0	0.60
107-13-1	Acrylonitrile	117		20	7.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	85		70-150
2037-26-5	Toluene-d8 (Surr)	96		78-128
460-00-4	4-Bromofluorobenzene (Surr)	100		64-123
1868-53-7	Dibromofluoromethane (Surr)	100		75-147

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100426.D
 Lims ID: 180-96180-B-13 MS
 Client ID: HD-MW-110-0/1-0
 Sample Type: MS
 Inject. Date: 04-Oct-2019 22:32:30 ALS Bottle#: 19 Worklist Smp#: 25
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028969-025
 Misc. Info.: 180-96180-B-13 MS
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 05-Oct-2019 09:28:15 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0311

First Level Reviewer: bowieh

Date: 05-Oct-2019 09:28:15

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.555	4.549	0.006	0	214066	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.493	7.494	-0.001	98	349752	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.584	10.584	0.000	86	92050	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.920	12.920	0.000	93	210515	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.776	6.776	0.000	94	100504	50.0	49.8	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.141	7.141	0.000	0	143737	50.0	42.3	
\$ 7 Toluene-d8 (Surr)	98	9.136	9.130	0.006	94	352348	50.0	48.1	
\$ 8 4-Bromofluorobenzene (Surr	95	11.764	11.758	0.006	92	151171	50.0	50.2	
11 Dichlorodifluoromethane	85	1.684	1.690	-0.006	100	127022	50.0	35.0	
12 Chloromethane	50	1.903	1.909	-0.006	99	140295	50.0	46.9	
13 Vinyl chloride	62	2.037	2.037	0.000	99	128877	50.0	45.9	
14 Butadiene	39	2.049	2.049	0.000	96	133897	50.0	43.1	
15 Bromomethane	94	2.371	2.371	0.000	92	103651	50.0	48.3	
16 Chloroethane	64	2.511	2.511	0.000	99	90251	50.0	47.7	
17 Dichlorofluoromethane	67	2.827	2.834	-0.007	99	230938	50.0	48.2	
18 Trichlorofluoromethane	101	2.833	2.846	-0.013	79	205050	50.0	40.3	
20 Ethyl ether	59	3.253	3.247	0.006	93	118399	50.0	54.9	
21 Acrolein	56	3.448	3.448	0.000	97	47570	150.0	129.6	
22 1,1-Dichloroethene	96	3.551	3.564	-0.013	97	91873	50.0	49.7	
23 1,1,2-Trichloro-1,2,2-trif	101	3.618	3.631	-0.013	91	100243	50.0	46.9	
24 Acetone	43	3.679	3.685	-0.006	98	84179	100.0	94.6	
25 Iodomethane	142	3.770	3.764	0.006	99	168899	50.0	52.5	
26 Carbon disulfide	76	3.849	3.850	-0.001	100	233213	50.0	46.4	
28 3-Chloro-1-propene	76	4.184	4.178	0.006	88	54664	50.0	50.2	
30 Methyl acetate	43	4.214	4.209	0.005	97	173932	100.0	96.9	
31 Methylene Chloride	84	4.403	4.403	0.000	91	138731	50.0	55.8	
32 2-Methyl-2-propanol	59	4.665	4.671	-0.006	92	101873	500.0	438.1	
33 Acrylonitrile	53	4.780	4.787	-0.006	99	472828	500.0	583.1	
34 trans-1,2-Dichloroethene	96	4.805	4.805	-0.001	94	106912	50.0	51.4	
35 Methyl tert-butyl ether	73	4.829	4.829	0.000	96	289337	50.0	46.0	
36 Hexane	57	5.218	5.218	0.000	93	120719	50.0	36.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
37 1,1-Dichloroethane	63	5.437	5.437	0.000	97	206745	50.0	51.9	
38 Vinyl acetate	43	5.480	5.480	0.000	98	156388	50.0	41.3	
44 2,2-Dichloropropane	97	6.173	6.161	0.012	61	25274	50.0	51.0	
45 cis-1,2-Dichloroethene	96	6.173	6.174	-0.001	86	118900	50.0	51.7	
46 2-Butanone (MEK)	43	6.185	6.186	-0.001	73	103586	100.0	98.1	
49 Chlorobromomethane	128	6.453	6.453	0.000	96	63469	50.0	50.8	
51 Tetrahydrofuran	42	6.471	6.466	0.005	86	60755	100.0	99.1	
52 Chloroform	83	6.599	6.599	0.000	96	231961	50.0	50.9	
53 1,1,1-Trichloroethane	97	6.751	6.758	-0.007	98	172035	50.0	44.8	
54 Cyclohexane	56	6.824	6.818	0.006	92	152940	50.0	41.2	
56 Carbon tetrachloride	117	6.922	6.922	0.000	98	147081	50.0	43.3	
55 1,1-Dichloropropene	75	6.946	6.940	0.006	94	135520	50.0	43.0	
57 Isobutyl alcohol	41	7.141	7.141	0.000	81	102389	1250.0	1494.7	
58 Benzene	78	7.153	7.153	0.000	97	461036	50.0	53.4	
59 1,2-Dichloroethane	62	7.232	7.226	0.006	99	188735	50.0	44.7	
62 n-Heptane	43	7.499	7.506	-0.007	80	92958	50.0	33.8	
64 Trichloroethene	130	7.877	7.877	0.000	96	114863	50.0	49.2	
66 Methylcyclohexane	83	8.114	8.108	0.006	90	140319	50.0	38.4	
67 1,2-Dichloropropane	63	8.150	8.151	-0.001	93	108964	50.0	51.0	
70 1,4-Dioxane	88	8.230	8.236	-0.006	39	21473	1000.0	1660.2	
68 Dibromomethane	93	8.236	8.236	0.000	90	68246	50.0	47.1	
71 Dichlorobromomethane	83	8.430	8.430	0.000	98	149130	50.0	46.2	
73 2-Chloroethyl vinyl ether	63		8.729				ND	ND	U
74 cis-1,3-Dichloropropene	75	8.868	8.869	0.000	92	130234	50.0	41.1	
75 4-Methyl-2-pentanone (MIBK)	43	9.026	9.027	-0.001	97	173766	100.0	82.8	
76 Toluene	91	9.197	9.197	0.000	97	445832	50.0	46.7	
77 trans-1,3-Dichloropropene	75	9.446	9.440	0.006	97	120805	50.0	36.5	
78 Ethyl methacrylate	69	9.501	9.501	0.000	91	97311	50.0	42.1	
79 1,1,2-Trichloroethane	97	9.635	9.641	-0.006	94	95823	50.0	47.6	
80 Tetrachloroethene	164	9.708	9.708	0.000	99	261948	50.0	117.6	
81 1,3-Dichloropropane	76	9.793	9.799	-0.006	96	166011	50.0	45.6	
82 2-Hexanone	43	9.854	9.854	0.000	99	127970	100.0	84.3	
84 Chlorodibromomethane	129	10.006	10.012	-0.006	90	105467	50.0	46.3	
85 Ethylene Dibromide	107	10.121	10.122	-0.001	96	90252	50.0	43.9	
87 Chlorobenzene	112	10.608	10.608	0.000	94	309786	50.0	48.7	
89 1,1,1,2-Tetrachloroethane	131	10.699	10.700	-0.001	92	113719	50.0	46.7	
90 Ethylbenzene	106	10.712	10.712	0.000	99	147458	50.0	45.1	
91 m-Xylene & p-Xylene	106	10.833	10.840	-0.007	0	186761	50.0	46.3	
92 o-Xylene	106	11.223	11.223	0.000	97	183404	50.0	47.6	
93 Styrene	104	11.241	11.241	0.000	95	335697	50.0	49.6	
94 Bromoform	173	11.423	11.417	0.006	96	71235	50.0	48.8	
97 Isopropylbenzene	105	11.581	11.582	-0.001	97	453187	50.0	42.8	
99 1,1,2,2-Tetrachloroethane	83	11.898	11.898	0.000	79	134585	50.0	55.9	
100 Bromobenzene	156	11.898	11.904	-0.006	93	146719	50.0	41.8	
102 trans-1,4-Dichloro-2-buten	53	11.934	11.941	-0.007	80	41484	50.0	34.0	
101 1,2,3-Trichloropropane	110	11.953	11.953	0.000	83	50434	50.0	42.7	
103 N-Propylbenzene	120	12.001	12.001	0.000	99	138165	50.0	38.6	
104 2-Chlorotoluene	126	12.093	12.093	-0.001	96	132530	50.0	43.2	
106 1,3,5-Trimethylbenzene	105	12.184	12.184	0.000	94	421876	50.0	38.2	
107 4-Chlorotoluene	126	12.214	12.214	0.000	98	142884	50.0	43.3	
108 tert-Butylbenzene	119	12.500	12.500	0.000	94	315664	50.0	35.1	
110 1,2,4-Trimethylbenzene	105	12.555	12.555	0.000	97	451251	50.0	41.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
112 sec-Butylbenzene	105	12.719	12.719	0.000	95	456567	50.0	36.9	
113 1,3-Dichlorobenzene	146	12.841	12.841	0.000	97	278434	50.0	42.6	
114 4-Isopropyltoluene	119	12.877	12.878	-0.001	97	413567	50.0	37.8	
115 1,4-Dichlorobenzene	146	12.944	12.944	0.000	94	294493	50.0	43.4	
120 n-Butylbenzene	91	13.285	13.285	0.000	97	306442	50.0	35.5	
121 1,2-Dichlorobenzene	146	13.303	13.303	0.000	97	271468	50.0	45.4	
122 1,2-Dibromo-3-Chloropropan	75	14.088	14.088	0.000	80	22233	50.0	41.4	
126 1,2,4-Trichlorobenzene	180	14.909	14.909	0.000	94	77616	50.0	43.7	
127 Hexachlorobutadiene	225	15.055	15.055	0.000	93	51081	50.0	48.0	
128 Naphthalene	128	15.183	15.183	0.000	97	159215	50.0	48.2	
129 1,2,3-Trichlorobenzene	180	15.414	15.420	-0.006	94	70576	50.0	47.4	
S 133 Xylenes, Total	106				0		100.0	93.9	
S 134 1,2-Dichloroethene, Total	96				0		100.0	103.1	
S 154 Total BTEX	106				0		250.0	239.0	
S 135 1,3-Dichloropropene, Total	1				0		100.0	77.6	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

voaWKet2ndRes_00043	Amount Added: 2.00	Units: uL	
VOA8260VOA2ND_00372	Amount Added: 2.00	Units: uL	
VOACEVE2ND_00027	Amount Added: 2.00	Units: uL	
VOAACRPRI_00021	Amount Added: 6.00	Units: uL	
VOAVAPRI_00028	Amount Added: 2.00	Units: uL	
voaWI/SHP5_00013	Amount Added: 5.00	Units: uL	Run Reagent

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100426.D

Injection Date: 04-Oct-2019 22:32:30

Instrument ID: CHHP5

Operator ID: 433269

Lims ID: 180-96180-B-13 MS

Worklist Smp#: 25

Client ID: HD-MW-110-0/1-0

Purge Vol: 5.000 mL

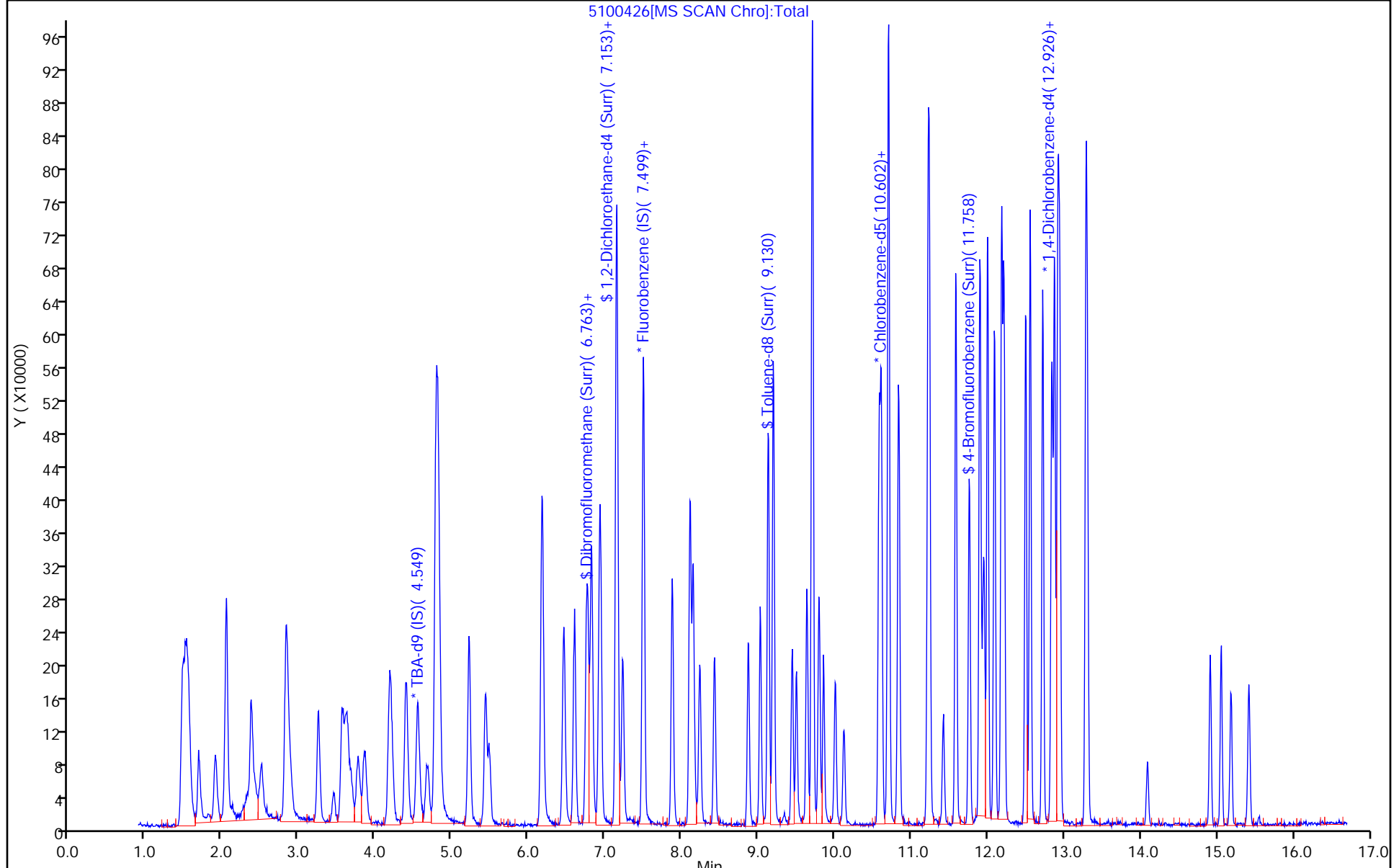
Dil. Factor: 1.0000

ALS Bottle#: 19

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Recovery Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100426.D
 Lims ID: 180-96180-B-13 MS
 Client ID: HD-MW-110-0/1-0
 Sample Type: MS
 Inject. Date: 04-Oct-2019 22:32:30 ALS Bottle#: 19 Worklist Smp#: 25
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028969-025
 Misc. Info.: 180-96180-B-13 MS
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 05-Oct-2019 09:28:15 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0311

First Level Reviewer: bowieh Date: 05-Oct-2019 09:28:15

Compound	Amount Added	Amount Recovered	% Rec.
\$ 5 Dibromofluoromethane (Surr)	50.0	49.8	99.57
\$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	42.3	84.53
\$ 7 Toluene-d8 (Surr)	50.0	48.1	96.16
\$ 8 4-Bromofluorobenzene (Surr)	50.0	50.2	100.36

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: HD-MW-110-0/1-0 MSD Lab Sample ID: 180-96180-13 MSD
 Matrix: Water Lab File ID: 5100427.D
 Analysis Method: EPA 8260C Date Collected: 09/24/2019 13:30
 Sample wt/vol: 5 (mL) Date Analyzed: 10/04/2019 22:57
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 293722 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	9.41		1.0	0.90
75-01-4	Vinyl chloride	8.34		1.0	0.88
74-83-9	Bromomethane	8.61		1.0	0.89
75-00-3	Chloroethane	9.14		1.0	0.90
75-35-4	1,1-Dichloroethene	9.02		1.0	0.55
67-64-1	Acetone	19.3		5.0	3.4
75-15-0	Carbon disulfide	8.16		1.0	0.88
75-09-2	Methylene Chloride	10.1		1.0	0.89
156-60-5	trans-1,2-Dichloroethene	9.59		1.0	0.67
1634-04-4	Methyl tert-butyl ether	8.66		1.0	0.59
75-34-3	1,1-Dichloroethane	9.76		1.0	0.63
156-59-2	cis-1,2-Dichloroethene	9.93		1.0	0.71
74-97-5	Bromochloromethane	9.77		1.0	0.63
78-93-3	2-Butanone (MEK)	19.5		5.0	2.6
67-66-3	Chloroform	9.39		1.0	0.60
71-55-6	1,1,1-Trichloroethane	8.12		1.0	0.60
56-23-5	Carbon tetrachloride	7.64		1.0	0.88
71-43-2	Benzene	9.90		1.0	0.60
107-06-2	1,2-Dichloroethane	8.61		1.0	0.57
79-01-6	Trichloroethene	9.43		1.0	0.69
78-87-5	1,2-Dichloropropane	10.1		1.0	0.66
75-27-4	Bromodichloromethane	8.83		1.0	0.64
10061-01-5	cis-1,3-Dichloropropene	8.35		1.0	0.59
108-10-1	4-Methyl-2-pentanone (MIBK)	16.7		5.0	3.1
108-88-3	Toluene	9.37		1.0	0.46
10061-02-6	trans-1,3-Dichloropropene	7.43		1.0	0.58
79-00-5	1,1,2-Trichloroethane	9.42		1.0	0.45
127-18-4	Tetrachloroethene	23.3		1.0	0.47
591-78-6	2-Hexanone	18.0		5.0	3.3
124-48-1	Dibromochloromethane	8.62		1.0	0.84
106-93-4	1,2-Dibromoethane (EDB)	8.59		1.0	0.50
108-90-7	Chlorobenzene	9.39		1.0	0.50
630-20-6	1,1,1,2-Tetrachloroethane	9.05		1.0	0.57
100-41-4	Ethylbenzene	8.57		1.0	0.51
1330-20-7	Xylenes, Total	18.6		2.0	0.89
100-42-5	Styrene	9.64		1.0	0.47

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1
 SDG No.: _____
 Client Sample ID: HD-MW-110-0/1-0 MSD Lab Sample ID: 180-96180-13 MSD
 Matrix: Water Lab File ID: 5100427.D
 Analysis Method: EPA 8260C Date Collected: 09/24/2019 13:30
 Sample wt/vol: 5 (mL) Date Analyzed: 10/04/2019 22:57
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: DB-624 ID: 0.18 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 293722 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	8.60		1.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	10.6		1.0	0.60
107-13-1	Acrylonitrile	108		20	7.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	79		70-150
2037-26-5	Toluene-d8 (Surr)	97		78-128
460-00-4	4-Bromofluorobenzene (Surr)	98		64-123
1868-53-7	Dibromofluoromethane (Surr)	98		75-147

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100427.D
 Lims ID: 180-96180-A-13 MSD
 Client ID: HD-MW-110-0/1-0
 Sample Type: MSD
 Inject. Date: 04-Oct-2019 22:57:30 ALS Bottle#: 20 Worklist Smp#: 26
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028969-026
 Misc. Info.: 180-96180-A-13 MSD
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 05-Oct-2019 09:29:02 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0311

First Level Reviewer: bowieh

Date: 05-Oct-2019 09:29:02

Compound	Sig	RT (min.)	Exp RT (min.)	Diff RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.543	4.549	-0.006	0	217935	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.499	7.494	0.005	98	381263	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.578	10.584	-0.006	88	98622	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.920	12.920	0.000	93	214148	50.0	50.0	
\$ 5 Dibromofluoromethane (Surr	113	6.775	6.776	-0.001	93	108073	50.0	49.1	
\$ 6 1,2-Dichloroethane-d4 (Sur	65	7.140	7.141	-0.001	0	146184	50.0	39.4	
\$ 7 Toluene-d8 (Surr)	98	9.136	9.130	0.006	94	382228	50.0	48.7	
\$ 8 4-Bromofluorobenzene (Surr	95	11.758	11.758	0.000	93	157608	50.0	48.8	
11 Dichlorodifluoromethane	85	1.690	1.690	0.000	100	123959	50.0	31.3	
12 Chloromethane	50	1.909	1.909	0.000	99	153607	50.0	47.1	
13 Vinyl chloride	62	2.043	2.037	0.005	92	127796	50.0	41.7	
14 Butadiene	39	2.055	2.049	0.006	96	130567	50.0	38.6	
15 Bromomethane	94	2.377	2.371	0.006	93	100701	50.0	43.0	
16 Chloroethane	64	2.523	2.511	0.012	99	94217	50.0	45.7	
17 Dichlorofluoromethane	67	2.833	2.834	-0.001	98	228141	50.0	43.7	
18 Trichlorofluoromethane	101	2.846	2.846	0.000	76	189572	50.0	34.2	
20 Ethyl ether	59	3.259	3.247	0.012	90	110921	50.0	47.2	
21 Acrolein	56	3.448	3.448	0.000	98	55190	150.0	138.0	
22 1,1-Dichloroethene	96	3.569	3.564	0.005	96	90783	50.0	45.1	
23 1,1,2-Trichloro-1,2,2-trif	101	3.624	3.631	-0.007	90	95064	50.0	40.8	
24 Acetone	43	3.679	3.685	-0.006	100	93516	100.0	96.4	
25 Iodomethane	142	3.770	3.764	0.006	99	174913	50.0	49.9	
26 Carbon disulfide	76	3.855	3.850	0.005	100	223718	50.0	40.8	
28 3-Chloro-1-propene	76	4.172	4.178	-0.006	86	49871	50.0	42.0	
30 Methyl acetate	43	4.214	4.209	0.005	98	183805	100.0	94.0	
31 Methylene Chloride	84	4.403	4.403	0.000	92	138249	50.0	50.4	
32 2-Methyl-2-propanol	59	4.671	4.671	0.000	91	106078	500.0	448.1	
33 Acrylonitrile	53	4.786	4.787	0.000	99	479210	500.0	542.1	
34 trans-1,2-Dichloroethene	96	4.810	4.805	0.005	96	108738	50.0	47.9	
35 Methyl tert-butyl ether	73	4.823	4.829	-0.006	97	296589	50.0	43.3	
36 Hexane	57	5.224	5.218	0.006	94	125104	50.0	35.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
37 1,1-Dichloroethane	63	5.437	5.437	0.000	97	211719	50.0	48.8	
38 Vinyl acetate	43	5.486	5.480	0.006	98	183769	50.0	44.5	
44 2,2-Dichloropropane	97	6.173	6.161	0.012	84	22620	50.0	41.8	
45 cis-1,2-Dichloroethene	96	6.179	6.174	0.005	85	124445	50.0	49.7	
46 2-Butanone (MEK)	43	6.185	6.186	-0.001	98	112224	100.0	97.5	
49 Chlorobromomethane	128	6.453	6.453	0.000	96	66476	50.0	48.8	
51 Tetrahydrofuran	42	6.471	6.466	0.005	87	65162	100.0	97.5	
52 Chloroform	83	6.599	6.599	0.000	96	234417	50.0	47.0	
53 1,1,1-Trichloroethane	97	6.757	6.758	-0.001	98	169875	50.0	40.6	
54 Cyclohexane	56	6.824	6.818	0.006	92	153166	50.0	37.8	
56 Carbon tetrachloride	117	6.928	6.922	0.006	97	141271	50.0	38.2	
55 1,1-Dichloropropene	75	6.940	6.940	0.000	93	136511	50.0	39.7	
57 Isobutyl alcohol	41	7.140	7.141	-0.001	85	104936	1250.0	1405.2	
58 Benzene	78	7.159	7.153	0.006	97	466049	50.0	49.5	
59 1,2-Dichloroethane	62	7.232	7.226	0.006	97	198302	50.0	43.1	
62 n-Heptane	43	7.505	7.506	-0.001	88	103378	50.0	34.4	
64 Trichloroethene	130	7.883	7.877	0.006	97	120039	50.0	47.2	
66 Methylcyclohexane	83	8.108	8.108	0.000	94	137575	50.0	34.5	
67 1,2-Dichloropropane	63	8.150	8.151	-0.001	95	118048	50.0	50.7	
70 1,4-Dioxane	88	8.235	8.236	-0.001	41	22988	1000.0	1631.0	
68 Dibromomethane	93	8.235	8.236	-0.001	92	69770	50.0	44.2	
71 Dichlorobromomethane	83	8.430	8.430	0.000	98	155467	50.0	44.2	
73 2-Chloroethyl vinyl ether	63		8.729				ND	ND	U
74 cis-1,3-Dichloropropene	75	8.868	8.869	0.000	92	144118	50.0	41.7	
75 4-Methyl-2-pentanone (MIBK)	43	9.026	9.027	-0.001	97	187842	100.0	83.5	
76 Toluene	91	9.197	9.197	0.000	97	479045	50.0	46.9	
77 trans-1,3-Dichloropropene	75	9.440	9.440	0.000	97	131627	50.0	37.1	
78 Ethyl methacrylate	69	9.501	9.501	0.000	93	107261	50.0	43.3	
79 1,1,2-Trichloroethane	97	9.641	9.641	0.000	93	101578	50.0	47.1	
80 Tetrachloroethene	164	9.708	9.708	0.000	99	278117	50.0	116.5	
81 1,3-Dichloropropane	76	9.799	9.799	0.000	95	176951	50.0	45.4	
82 2-Hexanone	43	9.854	9.854	0.000	99	146386	100.0	90.0	
84 Chlorodibromomethane	129	10.012	10.012	0.000	92	105127	50.0	43.1	
85 Ethylene Dibromide	107	10.121	10.122	-0.001	97	94726	50.0	43.0	
87 Chlorobenzene	112	10.608	10.608	0.000	94	319780	50.0	46.9	
89 1,1,1,2-Tetrachloroethane	131	10.699	10.700	-0.001	92	118191	50.0	45.3	
90 Ethylbenzene	106	10.705	10.712	-0.007	99	150219	50.0	42.8	
91 m-Xylene & p-Xylene	106	10.839	10.840	-0.001	0	202117	50.0	46.7	
92 o-Xylene	106	11.222	11.223	-0.001	97	190677	50.0	46.2	
93 Styrene	104	11.241	11.241	0.000	96	349488	50.0	48.2	
94 Bromoform	173	11.423	11.417	0.006	96	67229	50.0	43.0	
97 Isopropylbenzene	105	11.587	11.582	0.005	96	471909	50.0	41.6	
99 1,1,2,2-Tetrachloroethane	83	11.898	11.898	0.000	78	137135	50.0	53.2	
100 Bromobenzene	156	11.898	11.904	-0.006	94	145128	50.0	40.6	
102 trans-1,4-Dichloro-2-buten	53	11.934	11.941	-0.007	74	40326	50.0	32.5	
101 1,2,3-Trichloropropane	110	11.952	11.953	-0.001	86	50205	50.0	41.8	
103 N-Propylbenzene	120	12.001	12.001	0.000	99	138993	50.0	38.2	
104 2-Chlorotoluene	126	12.092	12.093	-0.001	96	130353	50.0	41.8	
106 1,3,5-Trimethylbenzene	105	12.184	12.184	0.000	94	433129	50.0	38.6	
107 4-Chlorotoluene	126	12.208	12.214	-0.006	98	144599	50.0	43.1	
108 tert-Butylbenzene	119	12.500	12.500	0.000	94	316453	50.0	34.6	
110 1,2,4-Trimethylbenzene	105	12.555	12.555	0.000	97	451952	50.0	40.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
112 sec-Butylbenzene	105	12.719	12.719	0.000	95	457298	50.0	36.3	
113 1,3-Dichlorobenzene	146	12.841	12.841	0.000	98	278491	50.0	41.9	
114 4-Isopropyltoluene	119	12.877	12.878	-0.001	96	409735	50.0	36.8	
115 1,4-Dichlorobenzene	146	12.944	12.944	0.000	96	286828	50.0	41.6	
120 n-Butylbenzene	91	13.285	13.285	0.000	98	300848	50.0	34.2	
121 1,2-Dichlorobenzene	146	13.303	13.303	0.000	97	265977	50.0	43.7	
122 1,2-Dibromo-3-Chloropropan	75	14.088	14.088	0.000	83	22553	50.0	41.3	
126 1,2,4-Trichlorobenzene	180	14.909	14.909	0.000	95	80803	50.0	44.7	
127 Hexachlorobutadiene	225	15.049	15.055	-0.006	94	49280	50.0	45.4	
128 Naphthalene	128	15.183	15.183	0.000	97	170406	50.0	50.2	
129 1,2,3-Trichlorobenzene	180	15.414	15.420	-0.006	96	74645	50.0	49.3	
S 133 Xylenes, Total	106				0		100.0	92.9	
S 134 1,2-Dichloroethene, Total	96				0		100.0	97.6	
S 154 Total BTEX	106				0		250.0	232.1	
S 135 1,3-Dichloropropene, Total	1				0		100.0	78.9	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

voaWKet2ndRes_00043	Amount Added: 2.00	Units: uL	
VOA8260VOA2ND_00372	Amount Added: 2.00	Units: uL	
VOACEVE2ND_00027	Amount Added: 2.00	Units: uL	
VOAACRPRI_00021	Amount Added: 6.00	Units: uL	
VOAVAPRI_00028	Amount Added: 2.00	Units: uL	
voaWI/SHP5_00013	Amount Added: 5.00	Units: uL	Run Reagent

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100427.D

Injection Date: 04-Oct-2019 22:57:30

Instrument ID: CHHP5

Operator ID: 433269

Lims ID: 180-96180-A-13 MSD

Worklist Smp#: 26

Client ID: HD-MW-110-0/1-0

Purge Vol: 5.000 mL

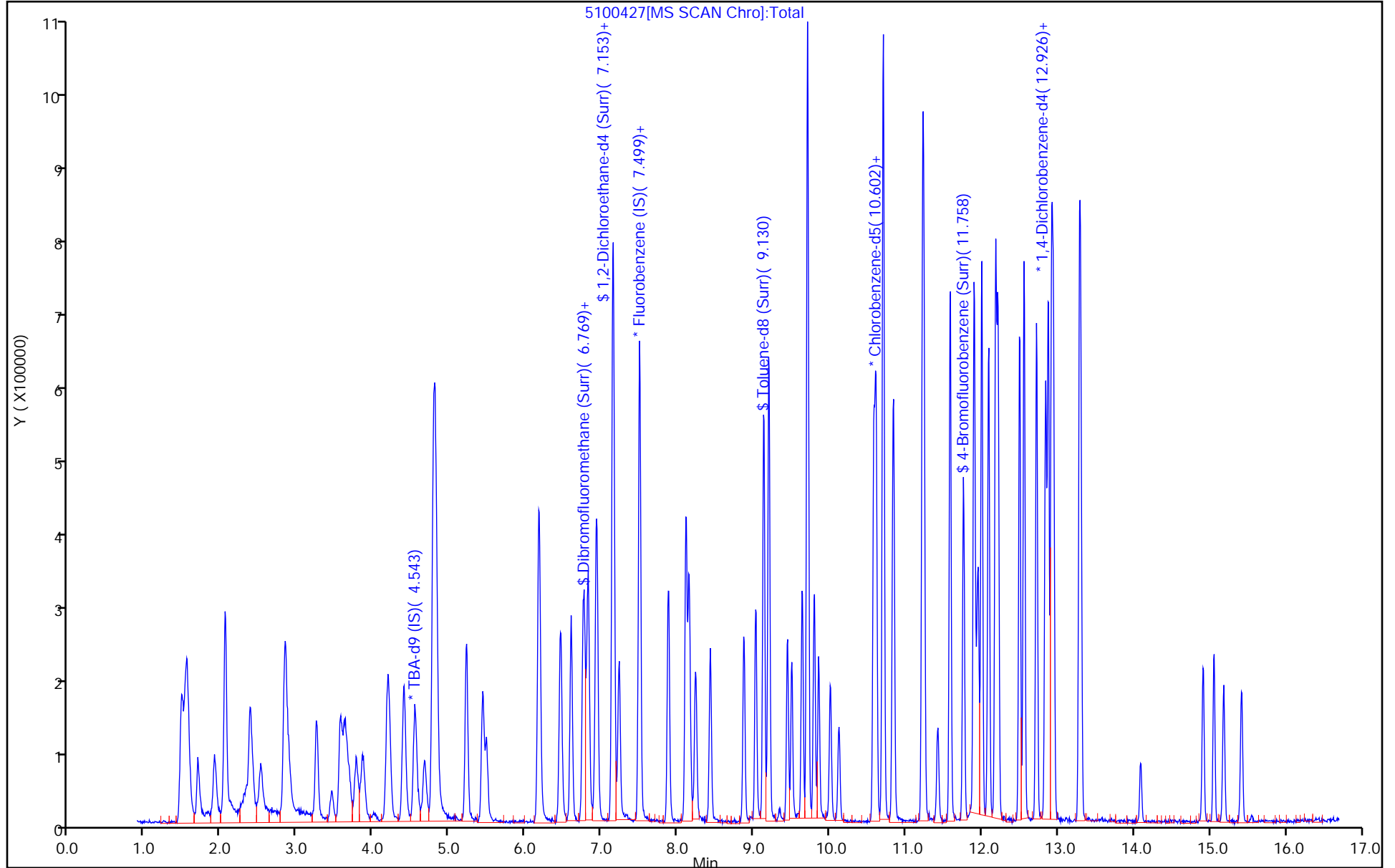
Dil. Factor: 1.0000

ALS Bottle#: 20

Method: MSVOA_LL_CHHP5

Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Recovery Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\5100427.D
 Lims ID: 180-96180-A-13 MSD
 Client ID: HD-MW-110-0/1-0
 Sample Type: MSD
 Inject. Date: 04-Oct-2019 22:57:30 ALS Bottle#: 20 Worklist Smp#: 26
 Purge Vol: 5.000 mL Dil. Factor: 1.0000
 Sample Info: 180-0028969-026
 Misc. Info.: 180-96180-A-13 MSD
 Operator ID: 433269 Instrument ID: CHHP5
 Method: \\chromna\Pittsburgh\ChromData\CHHP5\20191004-28969.b\MSVOA_LL_CHHP5.m
 Limit Group: VOA 8260C_D ICAL
 Last Update: 05-Oct-2019 09:29:02 Calib Date: 20-Sep-2019 16:22:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP5\20190920-28737.b\5092016.D
 Column 1 : DB-624 (0.18 mm) Det: MS SCAN
 Process Host: CTX0311

First Level Reviewer: bowieh

Date: 05-Oct-2019 09:29:02

Compound	Amount Added	Amount Recovered	% Rec.
\$ 5 Dibromofluoromethane (Surr)	50.0	49.1	98.22
\$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	39.4	78.86
\$ 7 Toluene-d8 (Surr)	50.0	48.7	97.37
\$ 8 4-Bromofluorobenzene (Surr)	50.0	48.8	97.66

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1

SDG No.: _____

Instrument ID: CHHP5 Start Date: 09/20/2019 10:07Analysis Batch Number: 292045 End Date: 09/20/2019 17:35

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 180-292045/1		09/20/2019 10:07	1	5092001.D	DB-624 0.18 (mm)
IC 180-292045/5		09/20/2019 11:54	1	5092005.D	DB-624 0.18 (mm)
ICIS 180-292045/6		09/20/2019 12:18	1	5092006.D	DB-624 0.18 (mm)
IC 180-292045/7		09/20/2019 12:43	1	5092007.D	DB-624 0.18 (mm)
IC 180-292045/8		09/20/2019 13:07	1	5092008.D	DB-624 0.18 (mm)
IC 180-292045/9		09/20/2019 13:32	1	5092009.D	DB-624 0.18 (mm)
IC 180-292045/10		09/20/2019 13:56	1	5092010.D	DB-624 0.18 (mm)
IC 180-292045/11		09/20/2019 14:21	1	5092011.D	DB-624 0.18 (mm)
IC 180-292045/19		09/20/2019 16:22	1	5092016.D	DB-624 0.18 (mm)
ICV 180-292045/16		09/20/2019 16:47	1		DB-624 0.18 (mm)
ZZZZZ		09/20/2019 17:35	1		DB-624 0.18 (mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1

SDG No.: _____

Instrument ID: CHHP5 Start Date: 09/27/2019 13:23Analysis Batch Number: 292962 End Date: 09/27/2019 23:30

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 180-292962/1		09/27/2019 13:23	1	5092705B.D	DB-624 0.18 (mm)
CCVIS 180-292962/3		09/27/2019 14:39	1	5092707.D	DB-624 0.18 (mm)
LCS 180-292962/4		09/27/2019 15:03	1	5092708.D	DB-624 0.18 (mm)
ZZZZZ		09/27/2019 15:38	1		DB-624 0.18 (mm)
MB 180-292962/6		09/27/2019 16:02	1	5092710.D	DB-624 0.18 (mm)
180-96180-1		09/27/2019 19:02	1	5092717.D	DB-624 0.18 (mm)
180-96180-2		09/27/2019 19:27	1	5092718.D	DB-624 0.18 (mm)
180-96180-3		09/27/2019 19:51	1	5092719.D	DB-624 0.18 (mm)
180-96180-4		09/27/2019 20:16	1	5092720.D	DB-624 0.18 (mm)
180-96180-5		09/27/2019 20:40	1	5092721.D	DB-624 0.18 (mm)
180-96180-6		09/27/2019 21:04	1	5092722.D	DB-624 0.18 (mm)
180-96180-7		09/27/2019 21:29	1	5092723.D	DB-624 0.18 (mm)
180-96180-8		09/27/2019 21:53	1	5092724.D	DB-624 0.18 (mm)
180-96180-9		09/27/2019 22:17	1	5092725.D	DB-624 0.18 (mm)
ZZZZZ		09/27/2019 22:41	1		DB-624 0.18 (mm)
180-96180-11		09/27/2019 23:06	1	5092727.D	DB-624 0.18 (mm)
180-96180-12		09/27/2019 23:30	1	5092728.D	DB-624 0.18 (mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1

SDG No.: _____

Instrument ID: CHHP5 Start Date: 09/28/2019 10:01

Analysis Batch Number: 293070 End Date: 09/28/2019 19:30

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 180-293070/1		09/28/2019 10:01	1	5092801.D	DB-624 0.18 (mm)
CCVIS 180-293070/2		09/28/2019 10:37	1	5092802.D	DB-624 0.18 (mm)
LCS 180-293070/4		09/28/2019 11:01	1	5092804.D	DB-624 0.18 (mm)
ZZZZZ		09/28/2019 11:36	1		DB-624 0.18 (mm)
MB 180-293070/6		09/28/2019 12:00	1	5092806.D	DB-624 0.18 (mm)
180-96180-10		09/28/2019 16:15	1	5092816.D	DB-624 0.18 (mm)
ZZZZZ		09/28/2019 16:39	1		DB-624 0.18 (mm)
ZZZZZ		09/28/2019 17:03	1		DB-624 0.18 (mm)
ZZZZZ		09/28/2019 17:28	1		DB-624 0.18 (mm)
ZZZZZ		09/28/2019 17:52	25		DB-624 0.18 (mm)
ZZZZZ		09/28/2019 18:16	1		DB-624 0.18 (mm)
ZZZZZ		09/28/2019 18:41	1		DB-624 0.18 (mm)
ZZZZZ		09/28/2019 19:05	100		DB-624 0.18 (mm)
ZZZZZ		09/28/2019 19:30	1		DB-624 0.18 (mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-96180-1

SDG No.: _____

Instrument ID: CHHP5 Start Date: 10/04/2019 11:11Analysis Batch Number: 293722 End Date: 10/04/2019 22:57

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 180-293722/1		10/04/2019 11:11	1	5100401C.D	DB-624 0.18 (mm)
CCVIS 180-293722/3		10/04/2019 12:12	1	5100403.D	DB-624 0.18 (mm)
LCS 180-293722/4		10/04/2019 13:21	1	5100405.D	DB-624 0.18 (mm)
ZZZZZ		10/04/2019 13:45	1		DB-624 0.18 (mm)
MB 180-293722/6		10/04/2019 14:10	1	5100407.D	DB-624 0.18 (mm)
180-96180-13		10/04/2019 15:13	1	5100408.D	DB-624 0.18 (mm)
180-96180-14		10/04/2019 15:37	1	5100409.D	DB-624 0.18 (mm)
180-96180-16		10/04/2019 16:02	1	5100410.D	DB-624 0.18 (mm)
180-96180-17		10/04/2019 16:26	1	5100411.D	DB-624 0.18 (mm)
180-96180-15		10/04/2019 16:50	2	5100412.D	DB-624 0.18 (mm)
ZZZZZ		10/04/2019 17:39	50		DB-624 0.18 (mm)
ZZZZZ		10/04/2019 18:04	1		DB-624 0.18 (mm)
ZZZZZ		10/04/2019 18:28	1		DB-624 0.18 (mm)
ZZZZZ		10/04/2019 18:53	10		DB-624 0.18 (mm)
ZZZZZ		10/04/2019 19:17	10		DB-624 0.18 (mm)
ZZZZZ		10/04/2019 20:06	1		DB-624 0.18 (mm)
ZZZZZ		10/04/2019 20:30	1		DB-624 0.18 (mm)
ZZZZZ		10/04/2019 20:54	5		DB-624 0.18 (mm)
ZZZZZ		10/04/2019 21:19	1		DB-624 0.18 (mm)
ZZZZZ		10/04/2019 21:43	1		DB-624 0.18 (mm)
ZZZZZ		10/04/2019 22:08	1		DB-624 0.18 (mm)
180-96180-13 MS		10/04/2019 22:32	1	5100426.D	DB-624 0.18 (mm)
180-96180-13 MSD		10/04/2019 22:57	1	5100427.D	DB-624 0.18 (mm)

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Pittsbur Job No.: 180-96180-1

SDG No.: _____

Batch Number: 292962 Batch Start Date: 09/27/19 13:23 Batch Analyst: Bowie, Hannah R

Batch Method: EPA 8260C Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	VOA8260VOAPRI 00373	VOABFB25 00118	voaWI/SHP5 00013
BFB 180-292962/1		EPA 8260C		5 mL	5 mL			1 uL	
CCVIS 180-292962/3		EPA 8260C		5 mL	5 mL		2 uL		5 uL
LCS 180-292962/4		EPA 8260C		5 mL	5 mL		2 uL		5 uL
MB 180-292962/6		EPA 8260C		5 mL	5 mL				5 uL
180-96180-B-1	HD-COD-SW-29-0/1-0	EPA 8260C	T	5 mL	5 mL	<2 SU			5 uL
180-96180-B-2	HD-COD-SW-8-0/1-0	EPA 8260C	T	5 mL	5 mL	<2 SU			5 uL
180-96180-B-3	HD-COD-SW-13-0/1-0	EPA 8260C	T	5 mL	5 mL	<2 SU			5 uL
180-96180-B-4	HD-COD-SW-16-0/1-0	EPA 8260C	T	5 mL	5 mL	<2 SU			5 uL
180-96180-B-5	HD-COD-SW-6-0/1-0	EPA 8260C	T	5 mL	5 mL	<2 SU			5 uL
180-96180-B-6	HD-COD-SW-26-0/1-0	EPA 8260C	T	5 mL	5 mL	<2 SU			5 uL
180-96180-B-7	HD-COD-SW-7-0/1-0	EPA 8260C	T	5 mL	5 mL	<2 SU			5 uL
180-96180-B-8	HD-COD-SW-9-0/1-0	EPA 8260C	T	5 mL	5 mL	<2 SU			5 uL
180-96180-B-9	HD-COD-SW-28-0/1-0	EPA 8260C	T	5 mL	5 mL	<2 SU			5 uL
180-96180-B-11	HD-COD-SW-27-0/1-0	EPA 8260C	T	5 mL	5 mL	<2 SU			5 uL
180-96180-B-12	HD-QC1-0/1-2	EPA 8260C	T	5 mL	5 mL	<2 SU			5 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	voaWKetmix1st 00018					
BFB 180-292962/1		EPA 8260C							
CCVIS 180-292962/3		EPA 8260C		2 uL					
LCS 180-292962/4		EPA 8260C		2 uL					
MB 180-292962/6		EPA 8260C							
180-96180-B-1	HD-COD-SW-29-0/1-0	EPA 8260C	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Pittsbur Job No.: 180-96180-1

SDG No.: _____

Batch Number: 292962 Batch Start Date: 09/27/19 13:23 Batch Analyst: Bowie, Hannah R

Batch Method: EPA 8260C Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	voaWketmix1st 00018					
180-96180-B-2	HD-COD-SW-8-0/1-0	EPA 8260C	T						
180-96180-B-3	HD-COD-SW-13-0/1-0	EPA 8260C	T						
180-96180-B-4	HD-COD-SW-16-0/1-0	EPA 8260C	T						
180-96180-B-5	HD-COD-SW-6-0/1-0	EPA 8260C	T						
180-96180-B-6	HD-COD-SW-26-0/1-0	EPA 8260C	T						
180-96180-B-7	HD-COD-SW-7-0/1-0	EPA 8260C	T						
180-96180-B-8	HD-COD-SW-9-0/1-0	EPA 8260C	T						
180-96180-B-9	HD-COD-SW-28-0/1-0	EPA 8260C	T						
180-96180-B-11	HD-COD-SW-27-0/1-0	EPA 8260C	T						
180-96180-B-12	HD-QC1-0/1-2	EPA 8260C	T						

Batch Notes	
Batch Comment	MeOH 3167194
pH Indicator ID	HC991818

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Pittsbur Job No.: 180-96180-1

SDG No.: _____

Batch Number: 293070 Batch Start Date: 09/28/19 10:01 Batch Analyst: Bowie, Hannah R

Batch Method: EPA 8260C Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	VOA8260VOA2ND 00372	VOAACRPRI 00021	VOABFB25 00118
BFB 180-293070/1		EPA 8260C		5 mL	5 mL				1 uL
CCVIS 180-293070/2		EPA 8260C		5 mL	5 mL		2 uL	6 uL	
LCS 180-293070/4		EPA 8260C		5 mL	5 mL		2 uL	6 uL	
MB 180-293070/6		EPA 8260C		5 mL	5 mL				
180-96180-C-10	HD-COD-SW-15-0/1 -0	EPA 8260C	T	5 mL	5 mL	<2 SU			

Lab Sample ID	Client Sample ID	Method Chain	Basis	VOACEVE2ND 00026	VOAVAPRI 00027	voaWI/SHP5 00013	voaWKet2ndRes 00043		
BFB 180-293070/1		EPA 8260C							
CCVIS 180-293070/2		EPA 8260C		2 uL	2 uL	5 uL	2 uL		
LCS 180-293070/4		EPA 8260C		2 uL	2 uL	5 uL	2 uL		
MB 180-293070/6		EPA 8260C				5 uL			
180-96180-C-10	HD-COD-SW-15-0/1 -0	EPA 8260C	T			5 uL			

Batch Notes	
Batch Comment	MeOH 3167194
pH Indicator ID	HC991818

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Pittsbur Job No.: 180-96180-1

SDG No.: _____

Batch Number: 293722 Batch Start Date: 10/04/19 11:11 Batch Analyst: Bowie, Hannah R

Batch Method: EPA 8260C Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	VOA8260VOA2ND 00372	VOAACRPRI 00021	VOABFB25 00118
BFB 180-293722/1		EPA 8260C		5 mL	5 mL				1 uL
CCVIS 180-293722/3		EPA 8260C		5 mL	5 mL		2 uL	6 uL	
LCS 180-293722/4		EPA 8260C		5 mL	5 mL		2 uL	6 uL	
MB 180-293722/6		EPA 8260C		5 mL	5 mL				
180-96180-B-13	HD-MW-110-0/1-0	EPA 8260C	T	5 mL	5 mL	<2 SU			
180-96180-B-14	HD-MW-108D-0/1-0	EPA 8260C	T	5 mL	5 mL	<2 SU			
180-96180-B-16	HD-QC1-0/1-3	EPA 8260C	T	5 mL	5 mL	<2 SU			
180-96180-A-17	HD-QC1-0/1-4	EPA 8260C	T	5 mL	5 mL	<2 SU			
180-96180-A-15	HD-QC1-0/1-1	EPA 8260C	T	5 mL	5 mL	<2 SU			
180-96180-B-13 MS	HD-MW-110-0/1-0	EPA 8260C	T	5 mL	5 mL	<2 SU	2 uL	6 uL	
180-96180-A-13 MSD	HD-MW-110-0/1-0	EPA 8260C	T	5 mL	5 mL	<2 SU	2 uL	6 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	VOACEVE2ND 00027	VOAVAPRI 00028	voaWI/SHP5 00013	voaWKet2ndRes 00043		
BFB 180-293722/1		EPA 8260C							
CCVIS 180-293722/3		EPA 8260C		2 uL	2 uL	5 uL	2 uL		
LCS 180-293722/4		EPA 8260C		2 uL	2 uL	5 uL	2 uL		
MB 180-293722/6		EPA 8260C				5 uL			
180-96180-B-13	HD-MW-110-0/1-0	EPA 8260C	T			5 uL			
180-96180-B-14	HD-MW-108D-0/1-0	EPA 8260C	T			5 uL			
180-96180-B-16	HD-QC1-0/1-3	EPA 8260C	T			5 uL			
180-96180-A-17	HD-QC1-0/1-4	EPA 8260C	T			5 uL			
180-96180-A-15	HD-QC1-0/1-1	EPA 8260C	T			5 uL			
180-96180-B-13 MS	HD-MW-110-0/1-0	EPA 8260C	T	2 uL	2 uL	5 uL	2 uL		
180-96180-A-13 MSD	HD-MW-110-0/1-0	EPA 8260C	T	2 uL	2 uL	5 uL	2 uL		

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Pittsbur Job No.: 180-96180-1

SDG No.: _____

Batch Number: 293722 Batch Start Date: 10/04/19 11:11 Batch Analyst: Bowie, Hannah R

Batch Method: EPA 8260C Batch End Date: _____

Batch Notes	
Batch Comment	MeOH 3167194
pH Indicator ID	HC991818

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Shipping and Receiving Documents

Client Information Client Contact: CHRIS O'NEIL Address: Groundwater Sciences Corporation 2601 Market Place Street, Suite 310 Harrisburg PA, 17110-9307 Phone: 717 375-3150 Email: coneil@groundwatersciences.com Project Name: FYNOP Site: FYNOP YORK PA		Lab PM: Gamber, Carrie L E-Mail: carrie.gamber@testamerica.com Sampler: CASEY LITTLEFIELD Phone: 717 375-3150		COC No: 180-54390-5058.10 Page: 40 of 11 Job #: 10012.42		Carrier Tracking No(s): 7AP 2090924	
Due Date Requested: TAT Requested (days): STANDARD PO #: ON-FILE Purchase Order not required WO #: 18010144 Project #: 18010144 SOW#:		Analysis Requested VOC's (266) SITE SPECIFIC LIST		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
Sample Identification		Field Filtered Sample (Yes or No)		Total Number of Containers		Spec	
Sample ID: HD-SOD-SW-29-0/1-0 HD-COD-SW-0-0/1-0 HD-COD-SW-13-0/1-0 HD-COD-SW-16-0/1-0 HD-COD-SW-6-0/1-0 HD-COD-SW-26-0/1-0 HD-COD-SW-7-0/1-0 HD-COD-SW-9-0/1-0 HD-COD-SW-28-0/1-0 HD-COD-SW-15-0/1-0		Sample Date: 9/23/19 1030 1050 10115 1205 1240 1300 1320 1345 1413 1430		Sample Time: 6 1 1 1 1 1 1 1 1 1 1		Matrix (W=water, S=solid, O=wasteloi, BT=Tissue, ASAK) SW 1 1 1 1 1 1 1 1 1	
Possible Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Deliverable Requested: I, II, III, IV, Other (specify)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For Months		Special Instructions/QC Requirements:	
Empty Kit Relinquished by:		Date:		Method of Shipment:		Relinquished by: CASEY LITTLEFIELD Date/Time: 9/24/19 1515 Company: GSC	
Relinquished by: [Signature] Date/Time: 9/24/19 Company: ETA		Relinquished by: [Signature] Date/Time: 9/24/19 Company: ETA		Relinquished by: [Signature] Date/Time: 9-25-19 Company: ETA		Cooler Temperature(s) °C and Other Remarks: 9:00	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Ver: 01/16/2019		180-96180 Chain of Custody	

Client Information
 Client Contact: **Chris O'NEIL**
 Altian-Miller
 Company: Groundwater Sciences Corporation
 Address: 2601 Market Place Street, Suite 310
 City: Harrisburg
 State, Zip: PA, 17110-9307
 Phone: **ON-FICE**
 Email: **CONEL**
 Project Name: **Harley-Davidson - FYNOP**
 Site: **FYNOP YORK, PA**

Lab PM: **Gamber, Carrie L**
 E-Mail: **carrie.gamber@testamericainc.com**
 Sampler: **CASEY LITTLEFIELD**
 Phone: **717 395-3150**
 Due Date Requested: **STANDARD**
 TAT Requested (days): **STANDARD**
 PO #: **Purchase Order not required**
 WO #: **18010144**
 Project #: **18010144**
 SSOW#: **SSOW#:**

Carrier Tracking No(s): **HARRISBURG, PA**
 COC No: **180-54390-5058.11**
 Page: **Page 11 of 11**
 Job #: **10012.40**
 Preservation Codes:
 M - Hexane
 N - None
 O - AsNaO2
 P - Na2O4S
 Q - Na2SO3
 R - Na2S2O3
 S - H2SO4
 T - TSP Dodecahydrate
 U - Acetone
 V - MCAA
 W - pH 4-5
 Z - other (specify)
 Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wast/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MSD (Yes or No)	Analysis Requested	Total Number of Containers	Special Instructions/Note:
HD-QC1-0/1-2	9/23/19			TRIP					
HD-MW-110-0/1-0MSD	9/24/19	1330	G	GW	X				
HD-MW-110-0/1-0MS		1330	G	GW	X				
HD-MW-110-0/1-0		1330	G	GW	X				
HD-MW-108D-0/1-0		1245	G	GW	X				
HD-QC1-0/1-1		1200	G	GW	X				
HD-QC1-0/1-3		1415	G	WASTE BLANK	X				
HD-QC1-0/1-4		1420	G	FIELD BLANK	X				

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological
 Deliverable Requested: I, II, III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months
 Special Instructions/QC Requirements:

Empty Kit Relinquished by: _____ Date: _____
 Relinquished by: **CASEY LITTLEFIELD** Date/Time: **9/24/19 1515** Company: **GSC**
 Relinquished by: **[Signature]** Date/Time: **9/24/19** Company: **ETA**
 Relinquished by: **[Signature]** Date/Time: **9-25-19** Company: **FAP, PA**

Custody Seal No.: **900**
 Custody Seals Intact: Yes No

Do Not Lift Using This Tag

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

RT 97

1 10:30

A 1140
09.25

ORIGIN ID: G FZ
TESTAMERICA
5020 RITTER RD
SUITE 205/206
MECHANICSBURG, PA 170554837
UNITED STATES US

SHIP DATE: 24SEP19
ACTWGT: 54.00 LB MAN
CAD: Q129689/CAFE3211

BILL RECIPIENT

TO **SAMPLE RECEIVING**
TESTAMERICA PITTSBURGH
301 ALPHA DRIVE
RIDC PARK
PITTSBURGH PA 152382907

(412) 963-7058
TMU:
PO:

REF:

DEPT:



FedEx
Express



1 of 2
TRK# 4690 5823 1140
0201
MASTER

WED - 25 SEP 10:30A
PRIORITY OVERNIGHT

EK AGCA

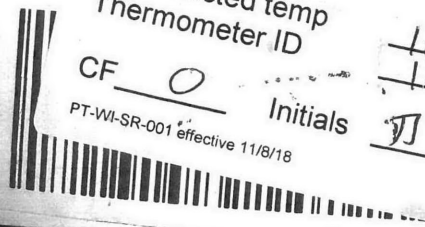
15238
PA-US PIT

Uncorrected temp
Thermometer ID

CF 0 Initials TJ

PT-WI-SR-001 effective 11/8/18

1.1 °C
1.0



Login Sample Receipt Checklist

Client: Groundwater Sciences Corporation

Job Number: 180-96180-1

Login Number: 96180
List Number: 1
Creator: Watson, Debbie

List Source: Eurofins TestAmerica, Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	