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ANALYTICAL REPORT

Job Number: 180-102790-1

Job Description: fYNOP

For:
Groundwater Sciences Corporation
2601 Market Place Street, Suite 310
Harrisburg, PA 17110-9307

Attention: Christopher O'Neil

Approved for release.
Carrie L Gamber
Senior Project Manager
3/10/2020 6:47 AM

Carrie L Gamber, Senior Project Manager
301 Alpha Drive, Pittsburgh, PA, 15238
(412)963-2428
carrie.gamber@testamericainc.com
03/10/2020

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Definitions/Glossary

Client: Groundwater Sciences Corporation
Job ID: 180-102790-1
Project/Site: fYNOP

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.
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	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: 180-102790-1

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 02/25/2020; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 3.1 C.

MS/MSD containers were provided for the following sample, but were not listed on the COC: HD-COD-SW-26-0/1-0 (180-102790-9[MS]) and HD-COD-SW-26-0/1-0 (180-102790-9[MSD]). The client was contacted and the lab was instructed to log these samples and analyzed. They were inadvertently left off the COC.

VOLATILES

Surrogate recovery was outside acceptance limits for the following matrix spike duplicate (MSD) sample: HD-COD-SW-26-0/1-0 (180-102790-9[MSD]). The parent sample's and MS's surrogate recoveries were within limits. The MSD sample has been qualified and reported.

The laboratory control sample (LCS) for analytical batch 180-309079 recovered outside control limits for the following analytes: Total Xylenes. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Several analytes failed the recovery criteria high for the MS/MSD of sample HD-COD-SW-26-0/1-0 (180-102790-9) in batch 180-309079.

The continuing calibration verification (CCV) analyzed in batch 180-309079 was outside the method criteria for the following analytes: Acetone, Cis-1,3-Dichloropropene, Trans-1,3-Dichloropropene, Trichloroethene (RF), Methyl Tert Butyl Ether, and 1,2-Dichloroethane-d4 Surrogate. 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 analytes is considered estimated.

Detection Summary

Client: Groundwater Sciences Corporation
Project/Site: fYNOP

Job ID: 180-102790-1

Client Sample ID: HD-COD-SW-6-0/1-0 — Lab Sample ID: 180-102790-1

No Detections.

Client Sample ID: HD-COD-SW-7-0/1-0 — Lab Sample ID: 180-102790-2

No Detections.

Client Sample ID: HD-COD-SW-8-0/1-0 — Lab Sample ID: 180-102790-3

No Detections.

Client Sample ID: HD-COD-SW-9-0/1-0 — Lab Sample ID: 180-102790-4

No Detections.

Client Sample ID: HD-COD-SW-13-0/1-0 — Lab Sample ID: 180-102790-5

No Detections.

Client Sample ID: HD-COD-SW-15-0/1-0 — Lab Sample ID: 180-102790-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1.4		1.0	0.71	ug/L	1		EPA 8260C	Total/NA
Trichloroethene	1.4		1.0	0.69	ug/L	1		EPA 8260C	Total/NA
Tetrachloroethene	3.1		1.0	0.47	ug/L	1		EPA 8260C	Total/NA

Client Sample ID: HD-COD-SW-16-0/1-0 — Lab Sample ID: 180-102790-7

No Detections.

Client Sample ID: HD-COD-SW-17-0/1-0 — Lab Sample ID: 180-102790-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1.8		1.0	0.71	ug/L	1		EPA 8260C	Total/NA
Trichloroethene	2.5		1.0	0.69	ug/L	1		EPA 8260C	Total/NA
Tetrachloroethene	6.6		1.0	0.47	ug/L	1		EPA 8260C	Total/NA

Client Sample ID: HD-COD-SW-26-0/1-0 — Lab Sample ID: 180-102790-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	0.55	J F1	1.0	0.47	ug/L	1		EPA 8260C	Total/NA

Client Sample ID: HD-COD-SW-27-0/1-0 — Lab Sample ID: 180-102790-10

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

Client Sample ID: HD-COD-SW-28-0/1-0 — Lab Sample ID: 180-102790-11

No Detections.

Client Sample ID: HD-COD-SW-29-0/1-0 — Lab Sample ID: 180-102790-12

No Detections.

Client Sample ID: HD-QC1-0/1-1 — Lab Sample ID: 180-102790-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	2.1		1.0	0.71	ug/L	1		EPA 8260C	Total/NA
Trichloroethene	2.8		1.0	0.69	ug/L	1		EPA 8260C	Total/NA
Tetrachloroethene	7.5		1.0	0.47	ug/L	1		EPA 8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Groundwater Sciences Corporation
Job ID: 180-102790-1
Project/Site: fYNOP

Client Sample ID: HD-QC1-0/1-2
Lab Sample ID: 180-102790-14

No Detections.

This Detection Summary does not include radiochemical test results.

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

Client Sample ID: HD-COD-SW-6-0/1-0
Date Collected: 02/24/20 13:25
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102790-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.90	ug/L			03/06/20 13:03	1
Vinyl chloride	ND		1.0	0.40	ug/L			03/06/20 13:03	1
Bromomethane	ND		1.0	0.89	ug/L			03/06/20 13:03	1
Chloroethane	ND		1.0	0.90	ug/L			03/06/20 13:03	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			03/06/20 13:03	1
Acetone	ND	^c	5.0	3.4	ug/L			03/06/20 13:03	1
Carbon disulfide	ND		1.0	0.88	ug/L			03/06/20 13:03	1
Methylene Chloride	ND		1.0	0.89	ug/L			03/06/20 13:03	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			03/06/20 13:03	1
Methyl tert-butyl ether	ND	^c	1.0	0.59	ug/L			03/06/20 13:03	1
1,1-Dichloroethane	ND		1.0	0.31	ug/L			03/06/20 13:03	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			03/06/20 13:03	1
Bromochloromethane	ND		1.0	0.63	ug/L			03/06/20 13:03	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			03/06/20 13:03	1
Chloroform	ND		1.0	0.60	ug/L			03/06/20 13:03	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			03/06/20 13:03	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			03/06/20 13:03	1
Benzene	ND		1.0	0.60	ug/L			03/06/20 13:03	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			03/06/20 13:03	1
Trichloroethene	ND		1.0	0.69	ug/L			03/06/20 13:03	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			03/06/20 13:03	1
Bromodichloromethane	ND		1.0	0.64	ug/L			03/06/20 13:03	1
cis-1,3-Dichloropropene	ND	^c	1.0	0.59	ug/L			03/06/20 13:03	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			03/06/20 13:03	1
Toluene	ND		1.0	0.46	ug/L			03/06/20 13:03	1
trans-1,3-Dichloropropene	ND	^c	1.0	0.58	ug/L			03/06/20 13:03	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			03/06/20 13:03	1
Tetrachloroethene	ND		1.0	0.47	ug/L			03/06/20 13:03	1
2-Hexanone	ND		5.0	3.3	ug/L			03/06/20 13:03	1
Dibromochloromethane	ND		1.0	0.84	ug/L			03/06/20 13:03	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			03/06/20 13:03	1
Chlorobenzene	ND		1.0	0.50	ug/L			03/06/20 13:03	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			03/06/20 13:03	1
Ethylbenzene	ND		1.0	0.51	ug/L			03/06/20 13:03	1
Xylenes, Total	ND	*	2.0	0.89	ug/L			03/06/20 13:03	1
Styrene	ND		1.0	0.47	ug/L			03/06/20 13:03	1
Bromoform	ND		1.0	0.98	ug/L			03/06/20 13:03	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			03/06/20 13:03	1
Acrylonitrile	ND		20	7.8	ug/L			03/06/20 13:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*	*^c*	*70 - 150*		*03/06/20 13:03*	*1*
Toluene-d8 (Surr)	*91*		*78 - 128*		*03/06/20 13:03*	*1*
4-Bromofluorobenzene (Surr)	*97*		*64 - 123*		*03/06/20 13:03*	*1*
Dibromofluoromethane (Surr)	*89*		*75 - 147*		*03/06/20 13:03*	*1*

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

Client Sample ID: HD-COD-SW-7-0/1-0
Date Collected: 02/24/20 12:45
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102790-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.90	ug/L			03/06/20 13:29	1
Vinyl chloride	ND		1.0	0.40	ug/L			03/06/20 13:29	1
Bromomethane	ND		1.0	0.89	ug/L			03/06/20 13:29	1
Chloroethane	ND		1.0	0.90	ug/L			03/06/20 13:29	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			03/06/20 13:29	1
Acetone	ND	^c	5.0	3.4	ug/L			03/06/20 13:29	1
Carbon disulfide	ND		1.0	0.88	ug/L			03/06/20 13:29	1
Methylene Chloride	ND		1.0	0.89	ug/L			03/06/20 13:29	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			03/06/20 13:29	1
Methyl tert-butyl ether	ND	^c	1.0	0.59	ug/L			03/06/20 13:29	1
1,1-Dichloroethane	ND		1.0	0.31	ug/L			03/06/20 13:29	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			03/06/20 13:29	1
Bromochloromethane	ND		1.0	0.63	ug/L			03/06/20 13:29	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			03/06/20 13:29	1
Chloroform	ND		1.0	0.60	ug/L			03/06/20 13:29	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			03/06/20 13:29	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			03/06/20 13:29	1
Benzene	ND		1.0	0.60	ug/L			03/06/20 13:29	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			03/06/20 13:29	1
Trichloroethene	ND		1.0	0.69	ug/L			03/06/20 13:29	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			03/06/20 13:29	1
Bromodichloromethane	ND		1.0	0.64	ug/L			03/06/20 13:29	1
cis-1,3-Dichloropropene	ND	^c	1.0	0.59	ug/L			03/06/20 13:29	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			03/06/20 13:29	1
Toluene	ND		1.0	0.46	ug/L			03/06/20 13:29	1
trans-1,3-Dichloropropene	ND	^c	1.0	0.58	ug/L			03/06/20 13:29	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			03/06/20 13:29	1
Tetrachloroethene	ND		1.0	0.47	ug/L			03/06/20 13:29	1
2-Hexanone	ND		5.0	3.3	ug/L			03/06/20 13:29	1
Dibromochloromethane	ND		1.0	0.84	ug/L			03/06/20 13:29	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			03/06/20 13:29	1
Chlorobenzene	ND		1.0	0.50	ug/L			03/06/20 13:29	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			03/06/20 13:29	1
Ethylbenzene	ND		1.0	0.51	ug/L			03/06/20 13:29	1
Xylenes, Total	ND	*	2.0	0.89	ug/L			03/06/20 13:29	1
Styrene	ND		1.0	0.47	ug/L			03/06/20 13:29	1
Bromoform	ND		1.0	0.98	ug/L			03/06/20 13:29	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			03/06/20 13:29	1
Acrylonitrile	ND		20	7.8	ug/L			03/06/20 13:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*	*^c*	*70 - 150*		*03/06/20 13:29*	*1*
Toluene-d8 (Surr)	*89*		*78 - 128*		*03/06/20 13:29*	*1*
4-Bromofluorobenzene (Surr)	*96*		*64 - 123*		*03/06/20 13:29*	*1*
Dibromofluoromethane (Surr)	*92*		*75 - 147*		*03/06/20 13:29*	*1*

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

Client Sample ID: HD-COD-SW-8-0/1-0
Date Collected: 02/24/20 10:40
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102790-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.90	ug/L			03/06/20 13:57	1
Vinyl chloride	ND		1.0	0.40	ug/L			03/06/20 13:57	1
Bromomethane	ND		1.0	0.89	ug/L			03/06/20 13:57	1
Chloroethane	ND		1.0	0.90	ug/L			03/06/20 13:57	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			03/06/20 13:57	1
Acetone	ND	^c	5.0	3.4	ug/L			03/06/20 13:57	1
Carbon disulfide	ND		1.0	0.88	ug/L			03/06/20 13:57	1
Methylene Chloride	ND		1.0	0.89	ug/L			03/06/20 13:57	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			03/06/20 13:57	1
Methyl tert-butyl ether	ND	^c	1.0	0.59	ug/L			03/06/20 13:57	1
1,1-Dichloroethane	ND		1.0	0.31	ug/L			03/06/20 13:57	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			03/06/20 13:57	1
Bromochloromethane	ND		1.0	0.63	ug/L			03/06/20 13:57	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			03/06/20 13:57	1
Chloroform	ND		1.0	0.60	ug/L			03/06/20 13:57	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			03/06/20 13:57	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			03/06/20 13:57	1
Benzene	ND		1.0	0.60	ug/L			03/06/20 13:57	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			03/06/20 13:57	1
Trichloroethene	ND		1.0	0.69	ug/L			03/06/20 13:57	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			03/06/20 13:57	1
Bromodichloromethane	ND		1.0	0.64	ug/L			03/06/20 13:57	1
cis-1,3-Dichloropropene	ND	^c	1.0	0.59	ug/L			03/06/20 13:57	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			03/06/20 13:57	1
Toluene	ND		1.0	0.46	ug/L			03/06/20 13:57	1
trans-1,3-Dichloropropene	ND	^c	1.0	0.58	ug/L			03/06/20 13:57	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			03/06/20 13:57	1
Tetrachloroethene	ND		1.0	0.47	ug/L			03/06/20 13:57	1
2-Hexanone	ND		5.0	3.3	ug/L			03/06/20 13:57	1
Dibromochloromethane	ND		1.0	0.84	ug/L			03/06/20 13:57	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			03/06/20 13:57	1
Chlorobenzene	ND		1.0	0.50	ug/L			03/06/20 13:57	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			03/06/20 13:57	1
Ethylbenzene	ND		1.0	0.51	ug/L			03/06/20 13:57	1
Xylenes, Total	ND	*	2.0	0.89	ug/L			03/06/20 13:57	1
Styrene	ND		1.0	0.47	ug/L			03/06/20 13:57	1
Bromoform	ND		1.0	0.98	ug/L			03/06/20 13:57	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			03/06/20 13:57	1
Acrylonitrile	ND		20	7.8	ug/L			03/06/20 13:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*	*^c*	*70 - 150*		*03/06/20 13:57*	*1*
Toluene-d8 (Surr)	*88*		*78 - 128*		*03/06/20 13:57*	*1*
4-Bromofluorobenzene (Surr)	*92*		*64 - 123*		*03/06/20 13:57*	*1*
Dibromofluoromethane (Surr)	*91*		*75 - 147*		*03/06/20 13:57*	*1*

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

Client Sample ID: HD-COD-SW-9-0/1-0
Date Collected: 02/24/20 13:45
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102790-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.90	ug/L			03/06/20 14:25	1
Vinyl chloride	ND		1.0	0.40	ug/L			03/06/20 14:25	1
Bromomethane	ND		1.0	0.89	ug/L			03/06/20 14:25	1
Chloroethane	ND		1.0	0.90	ug/L			03/06/20 14:25	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			03/06/20 14:25	1
Acetone	ND	^c	5.0	3.4	ug/L			03/06/20 14:25	1
Carbon disulfide	ND		1.0	0.88	ug/L			03/06/20 14:25	1
Methylene Chloride	ND		1.0	0.89	ug/L			03/06/20 14:25	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			03/06/20 14:25	1
Methyl tert-butyl ether	ND	^c	1.0	0.59	ug/L			03/06/20 14:25	1
1,1-Dichloroethane	ND		1.0	0.31	ug/L			03/06/20 14:25	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			03/06/20 14:25	1
Bromochloromethane	ND		1.0	0.63	ug/L			03/06/20 14:25	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			03/06/20 14:25	1
Chloroform	ND		1.0	0.60	ug/L			03/06/20 14:25	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			03/06/20 14:25	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			03/06/20 14:25	1
Benzene	ND		1.0	0.60	ug/L			03/06/20 14:25	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			03/06/20 14:25	1
Trichloroethene	ND		1.0	0.69	ug/L			03/06/20 14:25	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			03/06/20 14:25	1
Bromodichloromethane	ND		1.0	0.64	ug/L			03/06/20 14:25	1
cis-1,3-Dichloropropene	ND	^c	1.0	0.59	ug/L			03/06/20 14:25	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			03/06/20 14:25	1
Toluene	ND		1.0	0.46	ug/L			03/06/20 14:25	1
trans-1,3-Dichloropropene	ND	^c	1.0	0.58	ug/L			03/06/20 14:25	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			03/06/20 14:25	1
Tetrachloroethene	ND		1.0	0.47	ug/L			03/06/20 14:25	1
2-Hexanone	ND		5.0	3.3	ug/L			03/06/20 14:25	1
Dibromochloromethane	ND		1.0	0.84	ug/L			03/06/20 14:25	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			03/06/20 14:25	1
Chlorobenzene	ND		1.0	0.50	ug/L			03/06/20 14:25	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			03/06/20 14:25	1
Ethylbenzene	ND		1.0	0.51	ug/L			03/06/20 14:25	1
Xylenes, Total	ND	*	2.0	0.89	ug/L			03/06/20 14:25	1
Styrene	ND		1.0	0.47	ug/L			03/06/20 14:25	1
Bromoform	ND		1.0	0.98	ug/L			03/06/20 14:25	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			03/06/20 14:25	1
Acrylonitrile	ND		20	7.8	ug/L			03/06/20 14:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*	*^c*	*70 - 150*		*03/06/20 14:25*	*1*
Toluene-d8 (Surr)	*92*		*78 - 128*		*03/06/20 14:25*	*1*
4-Bromofluorobenzene (Surr)	*95*		*64 - 123*		*03/06/20 14:25*	*1*
Dibromofluoromethane (Surr)	*94*		*75 - 147*		*03/06/20 14:25*	*1*

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

Client Sample ID: HD-COD-SW-13-0/1-0
Date Collected: 02/24/20 10:55
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102790-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.90	ug/L			03/06/20 14:52	1
Vinyl chloride	ND		1.0	0.40	ug/L			03/06/20 14:52	1
Bromomethane	ND		1.0	0.89	ug/L			03/06/20 14:52	1
Chloroethane	ND		1.0	0.90	ug/L			03/06/20 14:52	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			03/06/20 14:52	1
Acetone	ND	^c	5.0	3.4	ug/L			03/06/20 14:52	1
Carbon disulfide	ND		1.0	0.88	ug/L			03/06/20 14:52	1
Methylene Chloride	ND		1.0	0.89	ug/L			03/06/20 14:52	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			03/06/20 14:52	1
Methyl tert-butyl ether	ND	^c	1.0	0.59	ug/L			03/06/20 14:52	1
1,1-Dichloroethane	ND		1.0	0.31	ug/L			03/06/20 14:52	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			03/06/20 14:52	1
Bromochloromethane	ND		1.0	0.63	ug/L			03/06/20 14:52	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			03/06/20 14:52	1
Chloroform	ND		1.0	0.60	ug/L			03/06/20 14:52	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			03/06/20 14:52	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			03/06/20 14:52	1
Benzene	ND		1.0	0.60	ug/L			03/06/20 14:52	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			03/06/20 14:52	1
Trichloroethene	ND		1.0	0.69	ug/L			03/06/20 14:52	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			03/06/20 14:52	1
Bromodichloromethane	ND		1.0	0.64	ug/L			03/06/20 14:52	1
cis-1,3-Dichloropropene	ND	^c	1.0	0.59	ug/L			03/06/20 14:52	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			03/06/20 14:52	1
Toluene	ND		1.0	0.46	ug/L			03/06/20 14:52	1
trans-1,3-Dichloropropene	ND	^c	1.0	0.58	ug/L			03/06/20 14:52	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			03/06/20 14:52	1
Tetrachloroethene	ND		1.0	0.47	ug/L			03/06/20 14:52	1
2-Hexanone	ND		5.0	3.3	ug/L			03/06/20 14:52	1
Dibromochloromethane	ND		1.0	0.84	ug/L			03/06/20 14:52	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			03/06/20 14:52	1
Chlorobenzene	ND		1.0	0.50	ug/L			03/06/20 14:52	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			03/06/20 14:52	1
Ethylbenzene	ND		1.0	0.51	ug/L			03/06/20 14:52	1
Xylenes, Total	ND	*	2.0	0.89	ug/L			03/06/20 14:52	1
Styrene	ND		1.0	0.47	ug/L			03/06/20 14:52	1
Bromoform	ND		1.0	0.98	ug/L			03/06/20 14:52	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			03/06/20 14:52	1
Acrylonitrile	ND		20	7.8	ug/L			03/06/20 14:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*	*^c*	*70 - 150*		*03/06/20 14:52*	*1*
Toluene-d8 (Surr)	*89*		*78 - 128*		*03/06/20 14:52*	*1*
4-Bromofluorobenzene (Surr)	*98*		*64 - 123*		*03/06/20 14:52*	*1*
Dibromofluoromethane (Surr)	*92*		*75 - 147*		*03/06/20 14:52*	*1*

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

Client Sample ID: HD-COD-SW-15-0/1-0
Date Collected: 02/24/20 13:10
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102790-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.90	ug/L			03/06/20 15:20	1
Vinyl chloride	ND		1.0	0.40	ug/L			03/06/20 15:20	1
Bromomethane	ND		1.0	0.89	ug/L			03/06/20 15:20	1
Chloroethane	ND		1.0	0.90	ug/L			03/06/20 15:20	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			03/06/20 15:20	1
Acetone	ND	^c	5.0	3.4	ug/L			03/06/20 15:20	1
Carbon disulfide	ND		1.0	0.88	ug/L			03/06/20 15:20	1
Methylene Chloride	ND		1.0	0.89	ug/L			03/06/20 15:20	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			03/06/20 15:20	1
Methyl tert-butyl ether	ND	^c	1.0	0.59	ug/L			03/06/20 15:20	1
1,1-Dichloroethane	ND		1.0	0.31	ug/L			03/06/20 15:20	1
cis-1,2-Dichloroethene	**1.4**		1.0	0.71	ug/L			03/06/20 15:20	1
Bromochloromethane	ND		1.0	0.63	ug/L			03/06/20 15:20	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			03/06/20 15:20	1
Chloroform	ND		1.0	0.60	ug/L			03/06/20 15:20	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			03/06/20 15:20	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			03/06/20 15:20	1
Benzene	ND		1.0	0.60	ug/L			03/06/20 15:20	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			03/06/20 15:20	1
Trichloroethene	**1.4**		1.0	0.69	ug/L			03/06/20 15:20	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			03/06/20 15:20	1
Bromodichloromethane	ND		1.0	0.64	ug/L			03/06/20 15:20	1
cis-1,3-Dichloropropene	ND	^c	1.0	0.59	ug/L			03/06/20 15:20	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			03/06/20 15:20	1
Toluene	ND		1.0	0.46	ug/L			03/06/20 15:20	1
trans-1,3-Dichloropropene	ND	^c	1.0	0.58	ug/L			03/06/20 15:20	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			03/06/20 15:20	1
Tetrachloroethene	**3.1**		1.0	0.47	ug/L			03/06/20 15:20	1
2-Hexanone	ND		5.0	3.3	ug/L			03/06/20 15:20	1
Dibromochloromethane	ND		1.0	0.84	ug/L			03/06/20 15:20	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			03/06/20 15:20	1
Chlorobenzene	ND		1.0	0.50	ug/L			03/06/20 15:20	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			03/06/20 15:20	1
Ethylbenzene	ND		1.0	0.51	ug/L			03/06/20 15:20	1
Xylenes, Total	ND	*	2.0	0.89	ug/L			03/06/20 15:20	1
Styrene	ND		1.0	0.47	ug/L			03/06/20 15:20	1
Bromoform	ND		1.0	0.98	ug/L			03/06/20 15:20	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			03/06/20 15:20	1
Acrylonitrile	ND		20	7.8	ug/L			03/06/20 15:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*	*^c*	*70 - 150*		*03/06/20 15:20*	*1*
Toluene-d8 (Surr)	*89*		*78 - 128*		*03/06/20 15:20*	*1*
4-Bromofluorobenzene (Surr)	*92*		*64 - 123*		*03/06/20 15:20*	*1*
Dibromofluoromethane (Surr)	*91*		*75 - 147*		*03/06/20 15:20*	*1*

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

Client Sample ID: HD-COD-SW-16-0/1-0
Date Collected: 02/24/20 11:20
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102790-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.90	ug/L			03/06/20 15:48	1
Vinyl chloride	ND		1.0	0.40	ug/L			03/06/20 15:48	1
Bromomethane	ND		1.0	0.89	ug/L			03/06/20 15:48	1
Chloroethane	ND		1.0	0.90	ug/L			03/06/20 15:48	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			03/06/20 15:48	1
Acetone	ND	^c	5.0	3.4	ug/L			03/06/20 15:48	1
Carbon disulfide	ND		1.0	0.88	ug/L			03/06/20 15:48	1
Methylene Chloride	ND		1.0	0.89	ug/L			03/06/20 15:48	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			03/06/20 15:48	1
Methyl tert-butyl ether	ND	^c	1.0	0.59	ug/L			03/06/20 15:48	1
1,1-Dichloroethane	ND		1.0	0.31	ug/L			03/06/20 15:48	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			03/06/20 15:48	1
Bromochloromethane	ND		1.0	0.63	ug/L			03/06/20 15:48	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			03/06/20 15:48	1
Chloroform	ND		1.0	0.60	ug/L			03/06/20 15:48	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			03/06/20 15:48	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			03/06/20 15:48	1
Benzene	ND		1.0	0.60	ug/L			03/06/20 15:48	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			03/06/20 15:48	1
Trichloroethene	ND		1.0	0.69	ug/L			03/06/20 15:48	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			03/06/20 15:48	1
Bromodichloromethane	ND		1.0	0.64	ug/L			03/06/20 15:48	1
cis-1,3-Dichloropropene	ND	^c	1.0	0.59	ug/L			03/06/20 15:48	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			03/06/20 15:48	1
Toluene	ND		1.0	0.46	ug/L			03/06/20 15:48	1
trans-1,3-Dichloropropene	ND	^c	1.0	0.58	ug/L			03/06/20 15:48	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			03/06/20 15:48	1
Tetrachloroethene	ND		1.0	0.47	ug/L			03/06/20 15:48	1
2-Hexanone	ND		5.0	3.3	ug/L			03/06/20 15:48	1
Dibromochloromethane	ND		1.0	0.84	ug/L			03/06/20 15:48	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			03/06/20 15:48	1
Chlorobenzene	ND		1.0	0.50	ug/L			03/06/20 15:48	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			03/06/20 15:48	1
Ethylbenzene	ND		1.0	0.51	ug/L			03/06/20 15:48	1
Xylenes, Total	ND	*	2.0	0.89	ug/L			03/06/20 15:48	1
Styrene	ND		1.0	0.47	ug/L			03/06/20 15:48	1
Bromoform	ND		1.0	0.98	ug/L			03/06/20 15:48	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			03/06/20 15:48	1
Acrylonitrile	ND		20	7.8	ug/L			03/06/20 15:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*	*^c*	*70 - 150*		*03/06/20 15:48*	*1*
Toluene-d8 (Surr)	*89*		*78 - 128*		*03/06/20 15:48*	*1*
4-Bromofluorobenzene (Surr)	*97*		*64 - 123*		*03/06/20 15:48*	*1*
Dibromofluoromethane (Surr)	*89*		*75 - 147*		*03/06/20 15:48*	*1*

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

Client Sample ID: HD-COD-SW-17-0/1-0
Date Collected: 02/24/20 11:45
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102790-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.90	ug/L			03/06/20 16:16	1
Vinyl chloride	ND		1.0	0.40	ug/L			03/06/20 16:16	1
Bromomethane	ND		1.0	0.89	ug/L			03/06/20 16:16	1
Chloroethane	ND		1.0	0.90	ug/L			03/06/20 16:16	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			03/06/20 16:16	1
Acetone	ND	^c	5.0	3.4	ug/L			03/06/20 16:16	1
Carbon disulfide	ND		1.0	0.88	ug/L			03/06/20 16:16	1
Methylene Chloride	ND		1.0	0.89	ug/L			03/06/20 16:16	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			03/06/20 16:16	1
Methyl tert-butyl ether	ND	^c	1.0	0.59	ug/L			03/06/20 16:16	1
1,1-Dichloroethane	ND		1.0	0.31	ug/L			03/06/20 16:16	1
cis-1,2-Dichloroethene	**1.8**		1.0	0.71	ug/L			03/06/20 16:16	1
Bromochloromethane	ND		1.0	0.63	ug/L			03/06/20 16:16	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			03/06/20 16:16	1
Chloroform	ND		1.0	0.60	ug/L			03/06/20 16:16	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			03/06/20 16:16	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			03/06/20 16:16	1
Benzene	ND		1.0	0.60	ug/L			03/06/20 16:16	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			03/06/20 16:16	1
Trichloroethene	**2.5**		1.0	0.69	ug/L			03/06/20 16:16	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			03/06/20 16:16	1
Bromodichloromethane	ND		1.0	0.64	ug/L			03/06/20 16:16	1
cis-1,3-Dichloropropene	ND	^c	1.0	0.59	ug/L			03/06/20 16:16	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			03/06/20 16:16	1
Toluene	ND		1.0	0.46	ug/L			03/06/20 16:16	1
trans-1,3-Dichloropropene	ND	^c	1.0	0.58	ug/L			03/06/20 16:16	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			03/06/20 16:16	1
Tetrachloroethene	**6.6**		1.0	0.47	ug/L			03/06/20 16:16	1
2-Hexanone	ND		5.0	3.3	ug/L			03/06/20 16:16	1
Dibromochloromethane	ND		1.0	0.84	ug/L			03/06/20 16:16	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			03/06/20 16:16	1
Chlorobenzene	ND		1.0	0.50	ug/L			03/06/20 16:16	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			03/06/20 16:16	1
Ethylbenzene	ND		1.0	0.51	ug/L			03/06/20 16:16	1
Xylenes, Total	ND	*	2.0	0.89	ug/L			03/06/20 16:16	1
Styrene	ND		1.0	0.47	ug/L			03/06/20 16:16	1
Bromoform	ND		1.0	0.98	ug/L			03/06/20 16:16	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			03/06/20 16:16	1
Acrylonitrile	ND		20	7.8	ug/L			03/06/20 16:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*	*^c*	*70 - 150*		*03/06/20 16:16*	*1*
Toluene-d8 (Surr)	*88*		*78 - 128*		*03/06/20 16:16*	*1*
4-Bromofluorobenzene (Surr)	*92*		*64 - 123*		*03/06/20 16:16*	*1*
Dibromofluoromethane (Surr)	*91*		*75 - 147*		*03/06/20 16:16*	*1*

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

Client Sample ID: HD-COD-SW-26-0/1-0
Date Collected: 02/24/20 12:25
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102790-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND	F1	1.0	0.90	ug/L			03/06/20 10:47	1
Vinyl chloride	ND	F1	1.0	0.40	ug/L			03/06/20 10:47	1
Bromomethane	ND	F1	1.0	0.89	ug/L			03/06/20 10:47	1
Chloroethane	ND	F1	1.0	0.90	ug/L			03/06/20 10:47	1
1,1-Dichloroethene	ND	F1	1.0	0.55	ug/L			03/06/20 10:47	1
Acetone	ND	^c	5.0	3.4	ug/L			03/06/20 10:47	1
Carbon disulfide	ND	F1	1.0	0.88	ug/L			03/06/20 10:47	1
Methylene Chloride	ND		1.0	0.89	ug/L			03/06/20 10:47	1
trans-1,2-Dichloroethene	ND	F1	1.0	0.67	ug/L			03/06/20 10:47	1
Methyl tert-butyl ether	ND	F1 ^c	1.0	0.59	ug/L			03/06/20 10:47	1
1,1-Dichloroethane	ND	F1	1.0	0.31	ug/L			03/06/20 10:47	1
cis-1,2-Dichloroethene	ND	F1	1.0	0.71	ug/L			03/06/20 10:47	1
Bromochloromethane	ND	F1	1.0	0.63	ug/L			03/06/20 10:47	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			03/06/20 10:47	1
Chloroform	ND	F1	1.0	0.60	ug/L			03/06/20 10:47	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			03/06/20 10:47	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			03/06/20 10:47	1
Benzene	ND	F1	1.0	0.60	ug/L			03/06/20 10:47	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			03/06/20 10:47	1
Trichloroethene	ND	F1	1.0	0.69	ug/L			03/06/20 10:47	1
1,2-Dichloropropane	ND	F1	1.0	0.66	ug/L			03/06/20 10:47	1
Bromodichloromethane	ND		1.0	0.64	ug/L			03/06/20 10:47	1
cis-1,3-Dichloropropene	ND	F1 ^c	1.0	0.59	ug/L			03/06/20 10:47	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			03/06/20 10:47	1
Toluene	ND	F1	1.0	0.46	ug/L			03/06/20 10:47	1
trans-1,3-Dichloropropene	ND	^c	1.0	0.58	ug/L			03/06/20 10:47	1
1,1,2-Trichloroethane	ND	F1	1.0	0.45	ug/L			03/06/20 10:47	1
Tetrachloroethene	**0.55**	**J F1**	1.0	0.47	ug/L			03/06/20 10:47	1
2-Hexanone	ND		5.0	3.3	ug/L			03/06/20 10:47	1
Dibromochloromethane	ND		1.0	0.84	ug/L			03/06/20 10:47	1
1,2-Dibromoethane (EDB)	ND	F1	1.0	0.50	ug/L			03/06/20 10:47	1
Chlorobenzene	ND	F1	1.0	0.50	ug/L			03/06/20 10:47	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			03/06/20 10:47	1
Ethylbenzene	ND	F1	1.0	0.51	ug/L			03/06/20 10:47	1
Xylenes, Total	ND	F1 *	2.0	0.89	ug/L			03/06/20 10:47	1
Styrene	ND	F1	1.0	0.47	ug/L			03/06/20 10:47	1
Bromoform	ND		1.0	0.98	ug/L			03/06/20 10:47	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			03/06/20 10:47	1
Acrylonitrile	ND		20	7.8	ug/L			03/06/20 10:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*	*^c*	*70 - 150*		*03/06/20 10:47*	*1*
Toluene-d8 (Surr)	*115*		*78 - 128*		*03/06/20 10:47*	*1*
4-Bromofluorobenzene (Surr)	*98*		*64 - 123*		*03/06/20 10:47*	*1*
Dibromofluoromethane (Surr)	*101*		*75 - 147*		*03/06/20 10:47*	*1*

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

Client Sample ID: HD-COD-SW-27-0/1-0
Date Collected: 02/24/20 13:00
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102790-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.90	ug/L			03/06/20 16:44	1
Vinyl chloride	ND		1.0	0.40	ug/L			03/06/20 16:44	1
Bromomethane	ND		1.0	0.89	ug/L			03/06/20 16:44	1
Chloroethane	ND		1.0	0.90	ug/L			03/06/20 16:44	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			03/06/20 16:44	1
Acetone	**3.4**	**J ^c**	5.0	3.4	ug/L			03/06/20 16:44	1
Carbon disulfide	ND		1.0	0.88	ug/L			03/06/20 16:44	1
Methylene Chloride	ND		1.0	0.89	ug/L			03/06/20 16:44	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			03/06/20 16:44	1
Methyl tert-butyl ether	ND	^c	1.0	0.59	ug/L			03/06/20 16:44	1
1,1-Dichloroethane	ND		1.0	0.31	ug/L			03/06/20 16:44	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			03/06/20 16:44	1
Bromochloromethane	ND		1.0	0.63	ug/L			03/06/20 16:44	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			03/06/20 16:44	1
Chloroform	ND		1.0	0.60	ug/L			03/06/20 16:44	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			03/06/20 16:44	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			03/06/20 16:44	1
Benzene	ND		1.0	0.60	ug/L			03/06/20 16:44	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			03/06/20 16:44	1
Trichloroethene	ND		1.0	0.69	ug/L			03/06/20 16:44	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			03/06/20 16:44	1
Bromodichloromethane	ND		1.0	0.64	ug/L			03/06/20 16:44	1
cis-1,3-Dichloropropene	ND	^c	1.0	0.59	ug/L			03/06/20 16:44	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			03/06/20 16:44	1
Toluene	ND		1.0	0.46	ug/L			03/06/20 16:44	1
trans-1,3-Dichloropropene	ND	^c	1.0	0.58	ug/L			03/06/20 16:44	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			03/06/20 16:44	1
Tetrachloroethene	ND		1.0	0.47	ug/L			03/06/20 16:44	1
2-Hexanone	ND		5.0	3.3	ug/L			03/06/20 16:44	1
Dibromochloromethane	ND		1.0	0.84	ug/L			03/06/20 16:44	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			03/06/20 16:44	1
Chlorobenzene	ND		1.0	0.50	ug/L			03/06/20 16:44	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			03/06/20 16:44	1
Ethylbenzene	ND		1.0	0.51	ug/L			03/06/20 16:44	1
Xylenes, Total	ND	*	2.0	0.89	ug/L			03/06/20 16:44	1
Styrene	ND		1.0	0.47	ug/L			03/06/20 16:44	1
Bromoform	ND		1.0	0.98	ug/L			03/06/20 16:44	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			03/06/20 16:44	1
Acrylonitrile	ND		20	7.8	ug/L			03/06/20 16:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*	*^c*	*70 - 150*		*03/06/20 16:44*	*1*
Toluene-d8 (Surr)	*88*		*78 - 128*		*03/06/20 16:44*	*1*
4-Bromofluorobenzene (Surr)	*94*		*64 - 123*		*03/06/20 16:44*	*1*
Dibromofluoromethane (Surr)	*93*		*75 - 147*		*03/06/20 16:44*	*1*

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

Client Sample ID: HD-COD-SW-28-0/1-0
Date Collected: 02/24/20 14:05
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102790-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.90	ug/L			03/06/20 17:12	1
Vinyl chloride	ND		1.0	0.40	ug/L			03/06/20 17:12	1
Bromomethane	ND		1.0	0.89	ug/L			03/06/20 17:12	1
Chloroethane	ND		1.0	0.90	ug/L			03/06/20 17:12	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			03/06/20 17:12	1
Acetone	ND	^c	5.0	3.4	ug/L			03/06/20 17:12	1
Carbon disulfide	ND		1.0	0.88	ug/L			03/06/20 17:12	1
Methylene Chloride	ND		1.0	0.89	ug/L			03/06/20 17:12	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			03/06/20 17:12	1
Methyl tert-butyl ether	ND	^c	1.0	0.59	ug/L			03/06/20 17:12	1
1,1-Dichloroethane	ND		1.0	0.31	ug/L			03/06/20 17:12	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			03/06/20 17:12	1
Bromochloromethane	ND		1.0	0.63	ug/L			03/06/20 17:12	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			03/06/20 17:12	1
Chloroform	ND		1.0	0.60	ug/L			03/06/20 17:12	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			03/06/20 17:12	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			03/06/20 17:12	1
Benzene	ND		1.0	0.60	ug/L			03/06/20 17:12	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			03/06/20 17:12	1
Trichloroethene	ND		1.0	0.69	ug/L			03/06/20 17:12	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			03/06/20 17:12	1
Bromodichloromethane	ND		1.0	0.64	ug/L			03/06/20 17:12	1
cis-1,3-Dichloropropene	ND	^c	1.0	0.59	ug/L			03/06/20 17:12	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			03/06/20 17:12	1
Toluene	ND		1.0	0.46	ug/L			03/06/20 17:12	1
trans-1,3-Dichloropropene	ND	^c	1.0	0.58	ug/L			03/06/20 17:12	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			03/06/20 17:12	1
Tetrachloroethene	ND		1.0	0.47	ug/L			03/06/20 17:12	1
2-Hexanone	ND		5.0	3.3	ug/L			03/06/20 17:12	1
Dibromochloromethane	ND		1.0	0.84	ug/L			03/06/20 17:12	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			03/06/20 17:12	1
Chlorobenzene	ND		1.0	0.50	ug/L			03/06/20 17:12	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			03/06/20 17:12	1
Ethylbenzene	ND		1.0	0.51	ug/L			03/06/20 17:12	1
Xylenes, Total	ND	*	2.0	0.89	ug/L			03/06/20 17:12	1
Styrene	ND		1.0	0.47	ug/L			03/06/20 17:12	1
Bromoform	ND		1.0	0.98	ug/L			03/06/20 17:12	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			03/06/20 17:12	1
Acrylonitrile	ND		20	7.8	ug/L			03/06/20 17:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*	*^c*	*70 - 150*		*03/06/20 17:12*	*1*
Toluene-d8 (Surr)	*86*		*78 - 128*		*03/06/20 17:12*	*1*
4-Bromofluorobenzene (Surr)	*92*		*64 - 123*		*03/06/20 17:12*	*1*
Dibromofluoromethane (Surr)	*91*		*75 - 147*		*03/06/20 17:12*	*1*

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

Client Sample ID: HD-COD-SW-29-0/1-0
Date Collected: 02/24/20 10:25
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102790-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.90	ug/L			03/06/20 17:40	1
Vinyl chloride	ND		1.0	0.40	ug/L			03/06/20 17:40	1
Bromomethane	ND		1.0	0.89	ug/L			03/06/20 17:40	1
Chloroethane	ND		1.0	0.90	ug/L			03/06/20 17:40	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			03/06/20 17:40	1
Acetone	ND	^c	5.0	3.4	ug/L			03/06/20 17:40	1
Carbon disulfide	ND		1.0	0.88	ug/L			03/06/20 17:40	1
Methylene Chloride	ND		1.0	0.89	ug/L			03/06/20 17:40	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			03/06/20 17:40	1
Methyl tert-butyl ether	ND	^c	1.0	0.59	ug/L			03/06/20 17:40	1
1,1-Dichloroethane	ND		1.0	0.31	ug/L			03/06/20 17:40	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			03/06/20 17:40	1
Bromochloromethane	ND		1.0	0.63	ug/L			03/06/20 17:40	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			03/06/20 17:40	1
Chloroform	ND		1.0	0.60	ug/L			03/06/20 17:40	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			03/06/20 17:40	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			03/06/20 17:40	1
Benzene	ND		1.0	0.60	ug/L			03/06/20 17:40	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			03/06/20 17:40	1
Trichloroethene	ND		1.0	0.69	ug/L			03/06/20 17:40	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			03/06/20 17:40	1
Bromodichloromethane	ND		1.0	0.64	ug/L			03/06/20 17:40	1
cis-1,3-Dichloropropene	ND	^c	1.0	0.59	ug/L			03/06/20 17:40	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			03/06/20 17:40	1
Toluene	ND		1.0	0.46	ug/L			03/06/20 17:40	1
trans-1,3-Dichloropropene	ND	^c	1.0	0.58	ug/L			03/06/20 17:40	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			03/06/20 17:40	1
Tetrachloroethene	ND		1.0	0.47	ug/L			03/06/20 17:40	1
2-Hexanone	ND		5.0	3.3	ug/L			03/06/20 17:40	1
Dibromochloromethane	ND		1.0	0.84	ug/L			03/06/20 17:40	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			03/06/20 17:40	1
Chlorobenzene	ND		1.0	0.50	ug/L			03/06/20 17:40	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			03/06/20 17:40	1
Ethylbenzene	ND		1.0	0.51	ug/L			03/06/20 17:40	1
Xylenes, Total	ND	*	2.0	0.89	ug/L			03/06/20 17:40	1
Styrene	ND		1.0	0.47	ug/L			03/06/20 17:40	1
Bromoform	ND		1.0	0.98	ug/L			03/06/20 17:40	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			03/06/20 17:40	1
Acrylonitrile	ND		20	7.8	ug/L			03/06/20 17:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*	*^c*	*70 - 150*		*03/06/20 17:40*	*1*
Toluene-d8 (Surr)	*89*		*78 - 128*		*03/06/20 17:40*	*1*
4-Bromofluorobenzene (Surr)	*94*		*64 - 123*		*03/06/20 17:40*	*1*
Dibromofluoromethane (Surr)	*92*		*75 - 147*		*03/06/20 17:40*	*1*

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

Client Sample ID: HD-QC1-0/1-1
Date Collected: 02/24/20 12:00
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102790-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.90	ug/L			03/06/20 18:07	1
Vinyl chloride	ND		1.0	0.40	ug/L			03/06/20 18:07	1
Bromomethane	ND		1.0	0.89	ug/L			03/06/20 18:07	1
Chloroethane	ND		1.0	0.90	ug/L			03/06/20 18:07	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			03/06/20 18:07	1
Acetone	ND	^c	5.0	3.4	ug/L			03/06/20 18:07	1
Carbon disulfide	ND		1.0	0.88	ug/L			03/06/20 18:07	1
Methylene Chloride	ND		1.0	0.89	ug/L			03/06/20 18:07	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			03/06/20 18:07	1
Methyl tert-butyl ether	ND	^c	1.0	0.59	ug/L			03/06/20 18:07	1
1,1-Dichloroethane	ND		1.0	0.31	ug/L			03/06/20 18:07	1
cis-1,2-Dichloroethene	**2.1**		1.0	0.71	ug/L			03/06/20 18:07	1
Bromochloromethane	ND		1.0	0.63	ug/L			03/06/20 18:07	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			03/06/20 18:07	1
Chloroform	ND		1.0	0.60	ug/L			03/06/20 18:07	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			03/06/20 18:07	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			03/06/20 18:07	1
Benzene	ND		1.0	0.60	ug/L			03/06/20 18:07	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			03/06/20 18:07	1
Trichloroethene	**2.8**		1.0	0.69	ug/L			03/06/20 18:07	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			03/06/20 18:07	1
Bromodichloromethane	ND		1.0	0.64	ug/L			03/06/20 18:07	1
cis-1,3-Dichloropropene	ND	^c	1.0	0.59	ug/L			03/06/20 18:07	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			03/06/20 18:07	1
Toluene	ND		1.0	0.46	ug/L			03/06/20 18:07	1
trans-1,3-Dichloropropene	ND	^c	1.0	0.58	ug/L			03/06/20 18:07	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			03/06/20 18:07	1
Tetrachloroethene	**7.5**		1.0	0.47	ug/L			03/06/20 18:07	1
2-Hexanone	ND		5.0	3.3	ug/L			03/06/20 18:07	1
Dibromochloromethane	ND		1.0	0.84	ug/L			03/06/20 18:07	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			03/06/20 18:07	1
Chlorobenzene	ND		1.0	0.50	ug/L			03/06/20 18:07	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			03/06/20 18:07	1
Ethylbenzene	ND		1.0	0.51	ug/L			03/06/20 18:07	1
Xylenes, Total	ND	*	2.0	0.89	ug/L			03/06/20 18:07	1
Styrene	ND		1.0	0.47	ug/L			03/06/20 18:07	1
Bromoform	ND		1.0	0.98	ug/L			03/06/20 18:07	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			03/06/20 18:07	1
Acrylonitrile	ND		20	7.8	ug/L			03/06/20 18:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*	*^c*	*70 - 150*		*03/06/20 18:07*	*1*
Toluene-d8 (Surr)	*88*		*78 - 128*		*03/06/20 18:07*	*1*
4-Bromofluorobenzene (Surr)	*94*		*64 - 123*		*03/06/20 18:07*	*1*
Dibromofluoromethane (Surr)	*92*		*75 - 147*		*03/06/20 18:07*	*1*

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

Client Sample ID: HD-QC1-0/1-2
Date Collected: 02/24/20 00:00
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102790-14
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		1.0	0.90	ug/L			03/06/20 18:35	1
Vinyl chloride	ND		1.0	0.40	ug/L			03/06/20 18:35	1
Bromomethane	ND		1.0	0.89	ug/L			03/06/20 18:35	1
Chloroethane	ND		1.0	0.90	ug/L			03/06/20 18:35	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			03/06/20 18:35	1
Acetone	ND	^c	5.0	3.4	ug/L			03/06/20 18:35	1
Carbon disulfide	ND		1.0	0.88	ug/L			03/06/20 18:35	1
Methylene Chloride	ND		1.0	0.89	ug/L			03/06/20 18:35	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			03/06/20 18:35	1
Methyl tert-butyl ether	ND	^c	1.0	0.59	ug/L			03/06/20 18:35	1
1,1-Dichloroethane	ND		1.0	0.31	ug/L			03/06/20 18:35	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			03/06/20 18:35	1
Bromochloromethane	ND		1.0	0.63	ug/L			03/06/20 18:35	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			03/06/20 18:35	1
Chloroform	ND		1.0	0.60	ug/L			03/06/20 18:35	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			03/06/20 18:35	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			03/06/20 18:35	1
Benzene	ND		1.0	0.60	ug/L			03/06/20 18:35	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			03/06/20 18:35	1
Trichloroethene	ND		1.0	0.69	ug/L			03/06/20 18:35	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			03/06/20 18:35	1
Bromodichloromethane	ND		1.0	0.64	ug/L			03/06/20 18:35	1
cis-1,3-Dichloropropene	ND	^c	1.0	0.59	ug/L			03/06/20 18:35	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			03/06/20 18:35	1
Toluene	ND		1.0	0.46	ug/L			03/06/20 18:35	1
trans-1,3-Dichloropropene	ND	^c	1.0	0.58	ug/L			03/06/20 18:35	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			03/06/20 18:35	1
Tetrachloroethene	ND		1.0	0.47	ug/L			03/06/20 18:35	1
2-Hexanone	ND		5.0	3.3	ug/L			03/06/20 18:35	1
Dibromochloromethane	ND		1.0	0.84	ug/L			03/06/20 18:35	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			03/06/20 18:35	1
Chlorobenzene	ND		1.0	0.50	ug/L			03/06/20 18:35	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			03/06/20 18:35	1
Ethylbenzene	ND		1.0	0.51	ug/L			03/06/20 18:35	1
Xylenes, Total	ND	*	2.0	0.89	ug/L			03/06/20 18:35	1
Styrene	ND		1.0	0.47	ug/L			03/06/20 18:35	1
Bromoform	ND		1.0	0.98	ug/L			03/06/20 18:35	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			03/06/20 18:35	1
Acrylonitrile	ND		20	7.8	ug/L			03/06/20 18:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*	*^c*	*70 - 150*		*03/06/20 18:35*	*1*
Toluene-d8 (Surr)	*87*		*78 - 128*		*03/06/20 18:35*	*1*
4-Bromofluorobenzene (Surr)	*91*		*64 - 123*		*03/06/20 18:35*	*1*
Dibromofluoromethane (Surr)	*92*		*75 - 147*		*03/06/20 18:35*	*1*

Default Detection Limits

Client: Groundwater Sciences Corporation
Project/Site: fYNOP

Job ID: 180-102790-1

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	0.31	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	0.40	ug/L
Xylenes, Total	2.0	0.89	ug/L

Surrogate Summary

Client: Groundwater Sciences Corporation
Project/Site: fYNOP

Job ID: 180-102790-1

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

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	TOL	BFB	DBFM
Lab Sample ID	Client Sample ID	(70-150)	(78-128)	(64-123)	(75-147)
180-102790-1	HD-COD-SW-6-0/1-0	97 ^c	91	97	89
180-102790-2	HD-COD-SW-7-0/1-0	96 ^c	89	96	92
180-102790-3	HD-COD-SW-8-0/1-0	95 ^c	88	92	91
180-102790-4	HD-COD-SW-9-0/1-0	96 ^c	92	95	94
180-102790-5	HD-COD-SW-13-0/1-0	98 ^c	89	98	92
180-102790-6	HD-COD-SW-15-0/1-0	99 ^c	89	92	91
180-102790-7	HD-COD-SW-16-0/1-0	97 ^c	89	97	89
180-102790-8	HD-COD-SW-17-0/1-0	93 ^c	88	92	91
180-102790-9	HD-COD-SW-26-0/1-0	98 ^c	115	98	101
180-102790-9 MS	HD-COD-SW-26-0/1-0	103	110	105	106
180-102790-9 MSD	HD-COD-SW-26-0/1-0	123	139 X	130 X	123
180-102790-10	HD-COD-SW-27-0/1-0	95 ^c	88	94	93
180-102790-11	HD-COD-SW-28-0/1-0	97 ^c	86	92	91
180-102790-12	HD-COD-SW-29-0/1-0	98 ^c	89	94	92
180-102790-13	HD-QC1-0/1-1	93 ^c	88	94	92
180-102790-14	HD-QC1-0/1-2	97 ^c	87	91	92
LCS 180-309079/3	Lab Control Sample	98	112	106	103
MB 180-309079/7	Method Blank	98	105	90	94

Surrogate Legend

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

Client: Groundwater Sciences Corporation
Project/Site: fYNOP

Job ID: 180-102790-1

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

Lab Sample ID: MB 180-309079/7
Matrix: Water
Analysis Batch: 309079

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			03/06/20 10:20	1
Vinyl chloride	ND		1.0	0.40	ug/L			03/06/20 10:20	1
Bromomethane	ND		1.0	0.89	ug/L			03/06/20 10:20	1
Chloroethane	ND		1.0	0.90	ug/L			03/06/20 10:20	1
1,1-Dichloroethene	ND		1.0	0.55	ug/L			03/06/20 10:20	1
Acetone	ND		5.0	3.4	ug/L			03/06/20 10:20	1
Carbon disulfide	ND		1.0	0.88	ug/L			03/06/20 10:20	1
Methylene Chloride	ND		1.0	0.89	ug/L			03/06/20 10:20	1
trans-1,2-Dichloroethene	ND		1.0	0.67	ug/L			03/06/20 10:20	1
Methyl tert-butyl ether	ND		1.0	0.59	ug/L			03/06/20 10:20	1
1,1-Dichloroethane	ND		1.0	0.31	ug/L			03/06/20 10:20	1
cis-1,2-Dichloroethene	ND		1.0	0.71	ug/L			03/06/20 10:20	1
Bromochloromethane	ND		1.0	0.63	ug/L			03/06/20 10:20	1
2-Butanone (MEK)	ND		5.0	2.6	ug/L			03/06/20 10:20	1
Chloroform	ND		1.0	0.60	ug/L			03/06/20 10:20	1
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			03/06/20 10:20	1
Carbon tetrachloride	ND		1.0	0.88	ug/L			03/06/20 10:20	1
Benzene	ND		1.0	0.60	ug/L			03/06/20 10:20	1
1,2-Dichloroethane	ND		1.0	0.57	ug/L			03/06/20 10:20	1
Trichloroethene	ND		1.0	0.69	ug/L			03/06/20 10:20	1
1,2-Dichloropropane	ND		1.0	0.66	ug/L			03/06/20 10:20	1
Bromodichloromethane	ND		1.0	0.64	ug/L			03/06/20 10:20	1
cis-1,3-Dichloropropene	ND		1.0	0.59	ug/L			03/06/20 10:20	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1	ug/L			03/06/20 10:20	1
Toluene	ND		1.0	0.46	ug/L			03/06/20 10:20	1
trans-1,3-Dichloropropene	ND		1.0	0.58	ug/L			03/06/20 10:20	1
1,1,2-Trichloroethane	ND		1.0	0.45	ug/L			03/06/20 10:20	1
Tetrachloroethene	ND		1.0	0.47	ug/L			03/06/20 10:20	1
2-Hexanone	ND		5.0	3.3	ug/L			03/06/20 10:20	1
Dibromochloromethane	ND		1.0	0.84	ug/L			03/06/20 10:20	1
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			03/06/20 10:20	1
Chlorobenzene	ND		1.0	0.50	ug/L			03/06/20 10:20	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.57	ug/L			03/06/20 10:20	1
Ethylbenzene	ND		1.0	0.51	ug/L			03/06/20 10:20	1
Xylenes, Total	ND		2.0	0.89	ug/L			03/06/20 10:20	1
Styrene	ND		1.0	0.47	ug/L			03/06/20 10:20	1
Bromoform	ND		1.0	0.98	ug/L			03/06/20 10:20	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.60	ug/L			03/06/20 10:20	1
Acrylonitrile	ND		20	7.8	ug/L			03/06/20 10:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 150*		*03/06/20 10:20*	*1*
Toluene-d8 (Surr)	*105*		*78 - 128*		*03/06/20 10:20*	*1*
4-Bromofluorobenzene (Surr)	*90*		*64 - 123*		*03/06/20 10:20*	*1*
Dibromofluoromethane (Surr)	*94*		*75 - 147*		*03/06/20 10:20*	*1*

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

Lab Sample ID: LCS 180-309079/3
Matrix: Water
Analysis Batch: 309079

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	12.9		ug/L		129	37 - 150
Vinyl chloride	10.0	12.7		ug/L		127	50 - 150
Bromomethane	10.0	12.5		ug/L		125	35 - 150
Chloroethane	10.0	12.1		ug/L		121	52 - 150
1,1-Dichloroethene	10.0	12.8		ug/L		128	79 - 132
Acetone	20.0	14.5		ug/L		72	37 - 150
Carbon disulfide	10.0	11.5		ug/L		115	66 - 134
Methylene Chloride	10.0	10.3		ug/L		103	72 - 131
trans-1,2-Dichloroethene	10.0	11.1		ug/L		111	81 - 126
Methyl tert-butyl ether	10.0	9.80		ug/L		98	65 - 125
1,1-Dichloroethane	10.0	11.0		ug/L		110	70 - 127
cis-1,2-Dichloroethene	10.0	10.6		ug/L		106	79 - 119
Bromochloromethane	10.0	10.5		ug/L		105	74 - 124
2-Butanone (MEK)	20.0	15.7		ug/L		78	35 - 150
Chloroform	10.0	10.7		ug/L		107	75 - 126
1,1,1-Trichloroethane	10.0	11.2		ug/L		112	63 - 142
Carbon tetrachloride	10.0	12.1		ug/L		121	55 - 150
Benzene	10.0	10.9		ug/L		109	72 - 127
1,2-Dichloroethane	10.0	10.3		ug/L		103	60 - 138
Trichloroethene	10.0	11.0		ug/L		110	81 - 121
1,2-Dichloropropane	10.0	10.3		ug/L		103	67 - 124
Bromodichloromethane	10.0	10.4		ug/L		104	67 - 131
cis-1,3-Dichloropropene	10.0	9.72		ug/L		97	69 - 122
4-Methyl-2-pentanone (MIBK)	20.0	14.8		ug/L		74	19 - 150
Toluene	10.0	11.6		ug/L		116	73 - 123
trans-1,3-Dichloropropene	10.0	10.1		ug/L		101	61 - 122
1,1,2-Trichloroethane	10.0	10.8		ug/L		108	72 - 120
Tetrachloroethene	10.0	13.4		ug/L		134	69 - 134
2-Hexanone	20.0	15.3		ug/L		77	24 - 150
Dibromochloromethane	10.0	10.9		ug/L		109	59 - 134
1,2-Dibromoethane (EDB)	10.0	10.8		ug/L		108	65 - 129
Chlorobenzene	10.0	11.3		ug/L		113	76 - 119
1,1,1,2-Tetrachloroethane	10.0	11.1		ug/L		111	65 - 132
Ethylbenzene	10.0	11.6		ug/L		116	76 - 118
Xylenes, Total	20.0	23.3	*	ug/L		117	76 - 116
Styrene	10.0	11.5		ug/L		115	74 - 118
Bromoform	10.0	11.8		ug/L		118	50 - 146
1,1,2,2-Tetrachloroethane	10.0	11.1		ug/L		111	57 - 135
Acrylonitrile	100	103		ug/L		103	43 - 149

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 150*
Toluene-d8 (Surr)	*112*		*78 - 128*
4-Bromofluorobenzene (Surr)	*106*		*64 - 123*
Dibromofluoromethane (Surr)	*103*		*75 - 147*

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

Lab Sample ID: 180-102790-9 MS
Matrix: Water
Analysis Batch: 309079

Client Sample ID: HD-COD-SW-26-0/1-0
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloromethane	ND	F1	10.0	16.4	F1	ug/L		164	37 - 150
Vinyl chloride	ND	F1	10.0	16.0	F1	ug/L		160	50 - 150
Bromomethane	ND	F1	10.0	16.2	F1	ug/L		162	35 - 150
Chloroethane	ND	F1	10.0	15.9	F1	ug/L		159	52 - 150
1,1-Dichloroethene	ND	F1	10.0	16.4	F1	ug/L		164	79 - 132
Acetone	ND	^c	20.0	20.1		ug/L		101	37 - 150
Carbon disulfide	ND	F1	10.0	13.6	F1	ug/L		136	66 - 134
Methylene Chloride	ND		10.0	12.7		ug/L		127	72 - 131
trans-1,2-Dichloroethene	ND	F1	10.0	14.8	F1	ug/L		148	81 - 126
Methyl tert-butyl ether	ND	F1 ^c	10.0	13.1	F1	ug/L		131	65 - 125
1,1-Dichloroethane	ND	F1	10.0	13.9	F1	ug/L		139	70 - 127
cis-1,2-Dichloroethene	ND	F1	10.0	13.8	F1	ug/L		138	79 - 119
Bromochloromethane	ND	F1	10.0	13.6	F1	ug/L		136	74 - 124
2-Butanone (MEK)	ND		20.0	24.0		ug/L		120	35 - 150
Chloroform	ND	F1	10.0	13.9	F1	ug/L		139	75 - 126
1,1,1-Trichloroethane	ND		10.0	13.8		ug/L		138	63 - 142
Carbon tetrachloride	ND		10.0	13.8		ug/L		138	55 - 150
Benzene	ND	F1	10.0	14.1	F1	ug/L		141	72 - 127
1,2-Dichloroethane	ND		10.0	13.7		ug/L		137	60 - 138
Trichloroethene	ND	F1	10.0	14.2	F1	ug/L		142	81 - 121
1,2-Dichloropropane	ND	F1	10.0	13.7	F1	ug/L		137	67 - 124
Bromodichloromethane	ND		10.0	12.7		ug/L		127	67 - 131
cis-1,3-Dichloropropene	ND	F1 ^c	10.0	12.5	F1	ug/L		125	69 - 122
4-Methyl-2-pentanone (MIBK)	ND		20.0	24.9		ug/L		124	19 - 150
Toluene	ND	F1	10.0	14.2	F1	ug/L		142	73 - 123
trans-1,3-Dichloropropene	ND	^c	10.0	11.8		ug/L		118	61 - 122
1,1,2-Trichloroethane	ND	F1	10.0	13.3	F1	ug/L		133	72 - 120
Tetrachloroethene	0.55	J F1	10.0	17.0	F1	ug/L		165	69 - 134
2-Hexanone	ND		20.0	24.7		ug/L		123	24 - 150
Dibromochloromethane	ND		10.0	12.3		ug/L		123	59 - 134
1,2-Dibromoethane (EDB)	ND	F1	10.0	13.1	F1	ug/L		131	65 - 129
Chlorobenzene	ND	F1	10.0	13.9	F1	ug/L		139	76 - 119
1,1,1,2-Tetrachloroethane	ND		10.0	12.7		ug/L		127	65 - 132
Ethylbenzene	ND	F1	10.0	14.3	F1	ug/L		143	76 - 118
Xylenes, Total	ND	F1 *	20.0	28.5	F1	ug/L		143	76 - 116
Styrene	ND	F1	10.0	13.9	F1	ug/L		139	74 - 118
Bromoform	ND		10.0	13.4		ug/L		134	50 - 146
1,1,2,2-Tetrachloroethane	ND		10.0	13.2		ug/L		132	57 - 135
Acrylonitrile	ND		100	124		ug/L		124	43 - 149

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 150*
Toluene-d8 (Surr)	*110*		*78 - 128*
4-Bromofluorobenzene (Surr)	*105*		*64 - 123*
Dibromofluoromethane (Surr)	*106*		*75 - 147*

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

Lab Sample ID: 180-102790-9 MSD
Matrix: Water
Analysis Batch: 309079

Client Sample ID: HD-COD-SW-26-0/1-0
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloromethane	ND	F1	10.0	14.3		ug/L		143	37 - 150	14	35
Vinyl chloride	ND	F1	10.0	14.1		ug/L		141	50 - 150	13	31
Bromomethane	ND	F1	10.0	15.0		ug/L		150	35 - 150	7	35
Chloroethane	ND	F1	10.0	14.0		ug/L		140	52 - 150	12	31
1,1-Dichloroethene	ND	F1	10.0	14.0	F1	ug/L		140	79 - 132	16	29
Acetone	ND	^c	20.0	18.2		ug/L		91	37 - 150	10	35
Carbon disulfide	ND	F1	10.0	12.0		ug/L		120	66 - 134	13	31
Methylene Chloride	ND		10.0	10.9		ug/L		109	72 - 131	15	29
trans-1,2-Dichloroethene	ND	F1	10.0	12.8	F1	ug/L		128	81 - 126	14	27
Methyl tert-butyl ether	ND	F1 ^c	10.0	11.2		ug/L		112	65 - 125	15	28
1,1-Dichloroethane	ND	F1	10.0	12.3		ug/L		123	70 - 127	12	27
cis-1,2-Dichloroethene	ND	F1	10.0	11.7		ug/L		117	79 - 119	17	28
Bromochloromethane	ND	F1	10.0	11.4		ug/L		114	74 - 124	17	27
2-Butanone (MEK)	ND		20.0	21.4		ug/L		107	35 - 150	11	34
Chloroform	ND	F1	10.0	11.7		ug/L		117	75 - 126	17	26
1,1,1-Trichloroethane	ND		10.0	12.3		ug/L		123	63 - 142	12	28
Carbon tetrachloride	ND		10.0	11.7		ug/L		117	55 - 150	16	29
Benzene	ND	F1	10.0	12.1		ug/L		121	72 - 127	15	27
1,2-Dichloroethane	ND		10.0	11.6		ug/L		116	60 - 138	17	26
Trichloroethene	ND	F1	10.0	12.2	F1	ug/L		122	81 - 121	15	28
1,2-Dichloropropane	ND	F1	10.0	11.7		ug/L		117	67 - 124	16	27
Bromodichloromethane	ND		10.0	11.0		ug/L		110	67 - 131	14	28
cis-1,3-Dichloropropene	ND	F1 ^c	10.0	10.5		ug/L		105	69 - 122	17	29
4-Methyl-2-pentanone (MIBK)	ND		20.0	23.4		ug/L		117	19 - 150	6	33
Toluene	ND	F1	10.0	13.0	F1	ug/L		130	73 - 123	9	31
trans-1,3-Dichloropropene	ND	^c	10.0	10.6		ug/L		106	61 - 122	11	30
1,1,2-Trichloroethane	ND	F1	10.0	12.4	F1	ug/L		124	72 - 120	7	27
Tetrachloroethene	0.55	J F1	10.0	16.4	F1	ug/L		159	69 - 134	4	27
2-Hexanone	ND		20.0	24.2		ug/L		121	24 - 150	2	32
Dibromochloromethane	ND		10.0	11.2		ug/L		112	59 - 134	9	28
1,2-Dibromoethane (EDB)	ND	F1	10.0	12.0		ug/L		120	65 - 129	8	27
Chlorobenzene	ND	F1	10.0	12.5	F1	ug/L		125	76 - 119	11	25
1,1,1,2-Tetrachloroethane	ND		10.0	11.5		ug/L		115	65 - 132	10	28
Ethylbenzene	ND	F1	10.0	13.1	F1	ug/L		131	76 - 118	9	27
Xylenes, Total	ND	F1 *	20.0	25.4	F1	ug/L		127	76 - 116	11	27
Styrene	ND	F1	10.0	12.7	F1	ug/L		127	74 - 118	10	27
Bromoform	ND		10.0	11.9		ug/L		119	50 - 146	12	30
1,1,2,2-Tetrachloroethane	ND		10.0	12.2		ug/L		122	57 - 135	8	29
Acrylonitrile	ND		100	114		ug/L		114	43 - 149	8	34

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*123*		*70 - 150*
Toluene-d8 (Surr)	*139*	*X*	*78 - 128*
4-Bromofluorobenzene (Surr)	*130*	*X*	*64 - 123*
Dibromofluoromethane (Surr)	*123*		*75 - 147*

QC Association Summary

Client: Groundwater Sciences Corporation
Job ID: 180-102790-1
Project/Site: fYNOP

GC/MS VOA

Analysis Batch: 309079

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-102790-1	HD-COD-SW-6-0/1-0	Total/NA	Water	EPA 8260C	
180-102790-2	HD-COD-SW-7-0/1-0	Total/NA	Water	EPA 8260C	
180-102790-3	HD-COD-SW-8-0/1-0	Total/NA	Water	EPA 8260C	
180-102790-4	HD-COD-SW-9-0/1-0	Total/NA	Water	EPA 8260C	
180-102790-5	HD-COD-SW-13-0/1-0	Total/NA	Water	EPA 8260C	
180-102790-6	HD-COD-SW-15-0/1-0	Total/NA	Water	EPA 8260C	
180-102790-7	HD-COD-SW-16-0/1-0	Total/NA	Water	EPA 8260C	
180-102790-8	HD-COD-SW-17-0/1-0	Total/NA	Water	EPA 8260C	
180-102790-9	HD-COD-SW-26-0/1-0	Total/NA	Water	EPA 8260C	
180-102790-10	HD-COD-SW-27-0/1-0	Total/NA	Water	EPA 8260C	
180-102790-11	HD-COD-SW-28-0/1-0	Total/NA	Water	EPA 8260C	
180-102790-12	HD-COD-SW-29-0/1-0	Total/NA	Water	EPA 8260C	
180-102790-13	HD-QC1-0/1-1	Total/NA	Water	EPA 8260C	
180-102790-14	HD-QC1-0/1-2	Total/NA	Water	EPA 8260C	
MB 180-309079/7	Method Blank	Total/NA	Water	EPA 8260C	
LCS 180-309079/3	Lab Control Sample	Total/NA	Water	EPA 8260C	
180-102790-9 MS	HD-COD-SW-26-0/1-0	Total/NA	Water	EPA 8260C	
180-102790-9 MSD	HD-COD-SW-26-0/1-0	Total/NA	Water	EPA 8260C	

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

Lab Sample ID: 180-102790-1

Date Collected: 02/24/20 13:25

Matrix: Water

Date Received: 02/25/20 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	309079	03/06/20 13:03	KLG	TAL PIT
	Instrument ID: CHHP6									

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

Lab Sample ID: 180-102790-2

Date Collected: 02/24/20 12:45

Matrix: Water

Date Received: 02/25/20 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	309079	03/06/20 13:29	KLG	TAL PIT
	Instrument ID: CHHP6									

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

Lab Sample ID: 180-102790-3

Date Collected: 02/24/20 10:40

Matrix: Water

Date Received: 02/25/20 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	309079	03/06/20 13:57	KLG	TAL PIT
	Instrument ID: CHHP6									

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

Lab Sample ID: 180-102790-4

Date Collected: 02/24/20 13:45

Matrix: Water

Date Received: 02/25/20 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	309079	03/06/20 14:25	KLG	TAL PIT
	Instrument ID: CHHP6									

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

Lab Sample ID: 180-102790-5

Date Collected: 02/24/20 10:55

Matrix: Water

Date Received: 02/25/20 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	309079	03/06/20 14:52	KLG	TAL PIT
	Instrument ID: CHHP6									

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

Lab Sample ID: 180-102790-6

Date Collected: 02/24/20 13:10

Matrix: Water

Date Received: 02/25/20 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	309079	03/06/20 15:20	KLG	TAL PIT
	Instrument ID: CHHP6									

Client Sample ID: HD-COD-SW-16-0/1-0
Lab Sample ID: 180-102790-7
Date Collected: 02/24/20 11:20
Matrix: Water
Date Received: 02/25/20 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	309079	03/06/20 15:48	KLG	TAL PIT
	Instrument ID: CHHP6									

Client Sample ID: HD-COD-SW-17-0/1-0
Lab Sample ID: 180-102790-8
Date Collected: 02/24/20 11:45
Matrix: Water
Date Received: 02/25/20 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	309079	03/06/20 16:16	KLG	TAL PIT
	Instrument ID: CHHP6									

Client Sample ID: HD-COD-SW-26-0/1-0
Lab Sample ID: 180-102790-9
Date Collected: 02/24/20 12:25
Matrix: Water
Date Received: 02/25/20 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	309079	03/06/20 10:47	KLG	TAL PIT
	Instrument ID: CHHP6									

Client Sample ID: HD-COD-SW-27-0/1-0
Lab Sample ID: 180-102790-10
Date Collected: 02/24/20 13:00
Matrix: Water
Date Received: 02/25/20 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	309079	03/06/20 16:44	KLG	TAL PIT
	Instrument ID: CHHP6									

Client Sample ID: HD-COD-SW-28-0/1-0
Lab Sample ID: 180-102790-11
Date Collected: 02/24/20 14:05
Matrix: Water
Date Received: 02/25/20 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	309079	03/06/20 17:12	KLG	TAL PIT
	Instrument ID: CHHP6									

Client Sample ID: HD-COD-SW-29-0/1-0
Lab Sample ID: 180-102790-12
Date Collected: 02/24/20 10:25
Matrix: Water
Date Received: 02/25/20 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	309079	03/06/20 17:40	KLG	TAL PIT
	Instrument ID: CHHP6									

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

Date Collected: 02/24/20 12:00
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102790-13

Matrix: Water

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	309079	03/06/20 18:07	KLG	TAL PIT
	Instrument ID: CHHP6									

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

Date Collected: 02/24/20 00:00
Date Received: 02/25/20 09:00

Lab Sample ID: 180-102790-14

Matrix: Water

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	309079	03/06/20 18:35	KLG	TAL PIT
	Instrument ID: CHHP6									

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

KLG = Kathy Gordon

Accreditation/Certification Summary

Client: Groundwater Sciences Corporation
Job ID: 180-102790-1
Project/Site: fYNOP

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
Job ID: 180-102790-1
Project/Site: fYNOP

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: 180-102790-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-102790-1	HD-COD-SW-6-0/1-0	Water	02/24/20 13:25	02/25/20 09:00	
180-102790-2	HD-COD-SW-7-0/1-0	Water	02/24/20 12:45	02/25/20 09:00	
180-102790-3	HD-COD-SW-8-0/1-0	Water	02/24/20 10:40	02/25/20 09:00	
180-102790-4	HD-COD-SW-9-0/1-0	Water	02/24/20 13:45	02/25/20 09:00	
180-102790-5	HD-COD-SW-13-0/1-0	Water	02/24/20 10:55	02/25/20 09:00	
180-102790-6	HD-COD-SW-15-0/1-0	Water	02/24/20 13:10	02/25/20 09:00	
180-102790-7	HD-COD-SW-16-0/1-0	Water	02/24/20 11:20	02/25/20 09:00	
180-102790-8	HD-COD-SW-17-0/1-0	Water	02/24/20 11:45	02/25/20 09:00	
180-102790-9	HD-COD-SW-26-0/1-0	Water	02/24/20 12:25	02/25/20 09:00	
180-102790-10	HD-COD-SW-27-0/1-0	Water	02/24/20 13:00	02/25/20 09:00	
180-102790-11	HD-COD-SW-28-0/1-0	Water	02/24/20 14:05	02/25/20 09:00	
180-102790-12	HD-COD-SW-29-0/1-0	Water	02/24/20 10:25	02/25/20 09:00	
180-102790-13	HD-QC1-0/1-1	Water	02/24/20 12:00	02/25/20 09:00	
180-102790-14	HD-QC1-0/1-2	Water	02/24/20 00:00	02/25/20 09:00	

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Pittsb Job No.: 180-102790-1

SDG No.:

Instrument ID: CHHP6 Analysis Batch Number: 308714

Lab Sample ID: IC 180-308714/4 Client Sample ID:

Date Analyzed: 03/03/20 09:52 Lab File ID: 6030304.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloroethane	2.38	Peak assignment corrected	gordonk	03/03/20 18:30
Vinyl acetate	5.23	Peak assignment corrected	gordonk	03/03/20 10:20
Isobutyl alcohol	6.91	Peak assignment corrected	gordonk	03/03/20 10:20

Lab Sample ID: IC 180-308714/5 Client Sample ID:

Date Analyzed: 03/03/20 10:19 Lab File ID: 6030305.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Vinyl acetate	5.23	Peak assignment corrected	gordonk	03/03/20 10:49
Cyclohexane	6.58	Peak assignment corrected	gordonk	03/03/20 10:50
Isobutyl alcohol	6.92	Peak assignment corrected	gordonk	03/03/20 10:50

Lab Sample ID: ICIS 180-308714/6 Client Sample ID:

Date Analyzed: 03/03/20 10:47 Lab File ID: 6030306.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Vinyl acetate	5.22	Peak assignment corrected	gordonk	03/03/20 11:11
Dibromofluoromethane (Surr)	6.53	Peak assignment corrected	gordonk	03/03/20 11:11
Isobutyl alcohol	6.91	Peak assignment corrected	gordonk	03/03/20 11:11

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Pittsb Job No.: 180-102790-1

SDG No.:

Instrument ID: CHHP6 Analysis Batch Number: 309079

Lab Sample ID: MB 180-309079/7 Client Sample ID:

Date Analyzed: 03/06/20 10:20 Lab File ID: 6030606.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Methyl-2-pentanone (MIBK)		Invalid Compound ID	gordonk	03/06/20 10:38
Acetone		Invalid Compound ID	gordonk	03/06/20 10:37

Lab Sample ID: 180-102790-9 Client Sample ID: HD-COD-SW-26-0/1-0

Date Analyzed: 03/06/20 10:47 Lab File ID: 6030607.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.42	Poor chromatography	gordonk	03/06/20 11:07
2-Hexanone		Invalid Compound ID	gordonk	03/06/20 11:06
4-Methyl-2-pentanone (MIBK)		Invalid Compound ID	gordonk	03/06/20 11:06
cis-1,2-Dichloroethene		Invalid Compound ID	gordonk	03/06/20 11:07
Toluene		Invalid Compound ID	gordonk	03/06/20 11:06

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Pittsb Job No.: 180-102790-1

SDG No.:

Instrument ID: CHHP6 Analysis Batch Number: 309079

Lab Sample ID: 180-102790-1 Client Sample ID: HD-COD-SW-6-0/1-0

Date Analyzed: 03/06/20 13:03 Lab File ID: 6030612.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
cis-1,2-Dichloroethene	5.93	Invalid Compound ID	gordonk	03/06/20 13:26
1,1,2,2-Tetrachloroethane		Invalid Compound ID	gordonk	03/06/20 13:26
1,1,2-Trichloroethane		Invalid Compound ID	gordonk	03/06/20 13:26
1,2-Dibromoethane (EDB)		Invalid Compound ID	gordonk	03/06/20 13:26
1,2-Dichloroethane		Invalid Compound ID	gordonk	03/06/20 13:26
2-Hexanone		Invalid Compound ID	gordonk	03/06/20 13:26
4-Methyl-2-pentanone (MIBK)		Invalid Compound ID	gordonk	03/06/20 13:26
Acrylonitrile		Invalid Compound ID	gordonk	03/06/20 13:26
Benzene		Invalid Compound ID	gordonk	03/06/20 13:26
Ethylbenzene		Invalid Compound ID	gordonk	03/06/20 13:26
Styrene		Invalid Compound ID	gordonk	03/06/20 13:26
Toluene		Invalid Compound ID	gordonk	03/06/20 13:26

Lab Sample ID: 180-102790-2 Client Sample ID: HD-COD-SW-7-0/1-0

Date Analyzed: 03/06/20 13:29 Lab File ID: 6030613.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Carbon disulfide	3.62	Poor chromatography	gordonk	03/09/20 07:40
1,2-Dichloropropane		Invalid Compound ID	gordonk	03/09/20 07:40
4-Methyl-2-pentanone (MIBK)		Invalid Compound ID	gordonk	03/09/20 07:40
Styrene		Invalid Compound ID	gordonk	03/09/20 07:39

Lab Sample ID: 180-102790-3 Client Sample ID: HD-COD-SW-8-0/1-0

Date Analyzed: 03/06/20 13:57 Lab File ID: 6030614.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Methyl-2-pentanone (MIBK)		Invalid Compound ID	gordonk	03/09/20 07:45
Benzene		Invalid Compound ID	gordonk	03/09/20 07:45

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Pittsb Job No.: 180-102790-1

SDG No.:

Instrument ID: CHHP6 Analysis Batch Number: 309079

Lab Sample ID: 180-102790-4 Client Sample ID: HD-COD-SW-9-0/1-0

Date Analyzed: 03/06/20 14:25 Lab File ID: 6030615.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.43	Poor chromatography	gordonk	03/09/20 07:46
2-Hexanone		Invalid Compound ID	gordonk	03/09/20 07:45
4-Methyl-2-pentanone (MIBK)		Invalid Compound ID	gordonk	03/09/20 07:45
Carbon disulfide		Invalid Compound ID	gordonk	03/09/20 07:45

Lab Sample ID: 180-102790-5 Client Sample ID: HD-COD-SW-13-0/1-0

Date Analyzed: 03/06/20 14:52 Lab File ID: 6030616.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.43	Poor chromatography	gordonk	03/09/20 07:46
1,2-Dichloropropane		Invalid Compound ID	gordonk	03/09/20 07:46
2-Hexanone		Invalid Compound ID	gordonk	03/09/20 07:46
4-Methyl-2-pentanone (MIBK)		Invalid Compound ID	gordonk	03/09/20 07:46

Lab Sample ID: 180-102790-6 Client Sample ID: HD-COD-SW-15-0/1-0

Date Analyzed: 03/06/20 15:20 Lab File ID: 6030617.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
4-Methyl-2-pentanone (MIBK)		Invalid Compound ID	gordonk	03/09/20 07:47

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Pittsb Job No.: 180-102790-1

SDG No.:

Instrument ID: CHHP6 Analysis Batch Number: 309079

Lab Sample ID: 180-102790-7 Client Sample ID: HD-COD-SW-16-0/1-0

Date Analyzed: 03/06/20 15:48 Lab File ID: 6030618.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Butanone (MEK)		Invalid Compound ID	gordonk	03/09/20 07:47
2-Hexanone		Invalid Compound ID	gordonk	03/09/20 07:48
4-Methyl-2-pentanone (MIBK)		Invalid Compound ID	gordonk	03/09/20 07:48
Ethylbenzene		Invalid Compound ID	gordonk	03/09/20 07:48
m-Xylene & p-Xylene		Invalid Compound ID	gordonk	03/09/20 07:48

Lab Sample ID: 180-102790-8 Client Sample ID: HD-COD-SW-17-0/1-0

Date Analyzed: 03/06/20 16:16 Lab File ID: 6030619.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,1,1-Trichloroethane	6.52	Poor chromatography	gordonk	03/09/20 07:48
1,1,2-Trichloroethane		Invalid Compound ID	gordonk	03/09/20 07:48
1,2-Dichloropropane		Invalid Compound ID	gordonk	03/09/20 07:48
4-Methyl-2-pentanone (MIBK)		Invalid Compound ID	gordonk	03/09/20 07:48

Lab Sample ID: 180-102790-10 Client Sample ID: HD-COD-SW-27-0/1-0

Date Analyzed: 03/06/20 16:44 Lab File ID: 6030620.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.42	Poor chromatography	gordonk	03/09/20 07:49
2-Hexanone		Invalid Compound ID	gordonk	03/09/20 07:49
4-Methyl-2-pentanone (MIBK)		Invalid Compound ID	gordonk	03/09/20 07:49
Benzene		Invalid Compound ID	gordonk	03/09/20 07:49

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Pittsb Job No.: 180-102790-1

SDG No.:

Instrument ID: CHHP6 Analysis Batch Number: 309079

Lab Sample ID: 180-102790-11 Client Sample ID: HD-COD-SW-28-0/1-0

Date Analyzed: 03/06/20 17:12 Lab File ID: 6030621.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Carbon disulfide	3.60	Poor chromatography	gordonk	03/09/20 07:50
1,2-Dichloropropane		Invalid Compound ID	gordonk	03/09/20 07:50
2-Hexanone		Invalid Compound ID	gordonk	03/09/20 07:49
4-Methyl-2-pentanone (MIBK)		Invalid Compound ID	gordonk	03/09/20 07:50
Benzene		Invalid Compound ID	gordonk	03/09/20 07:50
Ethylbenzene		Invalid Compound ID	gordonk	03/09/20 07:49

Lab Sample ID: 180-102790-12 Client Sample ID: HD-COD-SW-29-0/1-0

Date Analyzed: 03/06/20 17:40 Lab File ID: 6030622.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichloroethene	7.66	Poor chromatography	gordonk	03/09/20 07:51
4-Methyl-2-pentanone (MIBK)		Invalid Compound ID	gordonk	03/09/20 07:51

Lab Sample ID: 180-102790-13 Client Sample ID: HD-QC1-0/1-1

Date Analyzed: 03/06/20 18:07 Lab File ID: 6030623.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.43	Poor chromatography	gordonk	03/09/20 07:52
4-Methyl-2-pentanone (MIBK)		Invalid Compound ID	gordonk	03/09/20 07:52
trans-1,2-Dichloroethene		Invalid Compound ID	gordonk	03/09/20 07:52

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins TestAmerica, Pittsb Job No.: 180-102790-1

SDG No.:

Instrument ID: CHHP6 Analysis Batch Number: 309079

Lab Sample ID: 180-102790-14 Client Sample ID: HD-QC1-0/1-2

Date Analyzed: 03/06/20 18:35 Lab File ID: 6030624.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.43	Poor chromatography	gordonk	03/09/20 07:53
1,2-Dichloropropane		Invalid Compound ID	gordonk	03/09/20 07:53
4-Methyl-2-pentanone (MIBK)		Invalid Compound ID	gordonk	03/09/20 07:53
Carbon disulfide		Invalid Compound ID	gordonk	03/09/20 07:53

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-102790-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
VOA BFB25_00007							1,2-Dichloroethene, Total	
							1,3-Dichloropropene, Total	
							Tentatively Identified Compound	
							Total BTEX	
							Xylenes, Total	
					VOABFB50_00124	5 mL	BFB	25 ug/mL
.VOABFB50_00124	03/17/20	02/17/20	Methanol, Lot 3167189	50 mL	VOABFBRES_00090	1 mL	BFB	50 ug/mL
..VOABFBRES_00090	04/30/24		Restek, Lot A0147670		(Purchased Reagent)		BFB	2500 ug/mL
VOA8260INT_00104	03/07/20	02/07/20	Methanol, Lot 3167194	10 mL	VOA8260INTRES_00162	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_00162	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_00104	03/07/20	02/07/20	Methanol, Lot 3167194	100 mL	VOA8260SURRES_00152	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_00152	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_00395	03/10/20	03/03/20	Methanol, Lot 3167192	10 mL	VOA8260GAS2ND_00302	0.1 mL	Bromomethane	25 ug/mL
							Chloroethane	25 ug/mL
							Chloromethane	25 ug/mL
							Vinyl chloride	25 ug/mL
					VOA8260VOA2ND_00394	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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-102790-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
							trans-1,2-Dichloroethene	25 ug/mL
							trans-1,3-Dichloropropene	25 ug/mL
							Trichloroethene	25 ug/mL
							Xylenes, Total	50 ug/mL
.VOA8260GAS2ND_00302	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_00394	04/03/20	03/03/20	Methanol, Lot 3167192	10 mL	VOA8260MEGA2_00099	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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-102790-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..VOA8260MEGA2_00099	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
							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_00392	03/03/20	02/25/20	Methanol, Lot 3167194	10 mL	VOA8260GAS1ST_00294	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
					VOA8260VOA_00006	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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-102790-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
							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

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-102790-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
							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_00294	11/30/22		Restek, Lot A0154679		(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
.VOA8260VOA_00006	03/03/20	02/03/20	Methanol, Lot 3167192	10 mL	VOA8260KET1ST_00136	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_00094	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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-102790-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
							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

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-102790-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
..VOA8260KET1ST_00136	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
..VOA8260MEGA1_00094	06/30/21		Restek, Lot A0143774		(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-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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-102790-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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
							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
VOAACRPRI_00025	03/19/20	02/19/20	Methanol, Lot 3167194	100 mL	VOAACRORES_00152	125 uL	Acrolein	25 ug/mL
.VOAACRORES_00152	03/31/20		Restek, Lot A0153030		(Purchased Reagent)		Acrolein	20000 ug/mL
VOAVAPRI_00034	03/30/20	03/02/20	Methanol, Lot 3167192	10 mL	VOA8260VARES_00130	50 uL	Vinyl acetate	25 ug/mL
.VOA8260VARES_00130	03/30/20		Restek, Lot A0154581		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
voaWKet2ndRes_00049	04/03/20	03/03/20	Methanol, Lot 3167192	50 mL	VOA8260KET2ND_00134	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
.VOA8260KET2ND_00134	11/30/21		Restek, Lot A0143456		(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 TRACEABILITY SUMMARY

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-102790-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
voaWKetmix1st_00023	03/03/20	02/03/20	Methanol, Lot 3167192	50 mL	VOA8260KET1ST_00136	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_00136	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_00294

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Testing Laboratory
Certificate #3222.02

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.:** A0154679

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 : November 30, 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%	2,502.7 µg/mL	+/- 18.2705 µg/mL +/- 140.7566 µg/mL +/- 144.0300 µg/mL	Gravimetric Unstressed Stressed
2	Chloromethane (methyl chloride) **CAS #** 74-87-3 (Lot SHBK6571) **Purity** 99%	2,500.3 µg/mL	+/- 18.7547 µg/mL +/- 140.6865 µg/mL +/- 143.9553 µg/mL	Gravimetric Unstressed Stressed
3	Vinyl chloride **CAS #** 75-01-4 (Lot 00015559) **Purity** 99%	2,501.1 µg/mL	+/- 18.5858 µg/mL +/- 140.7083 µg/mL +/- 143.9787 µg/mL	Gravimetric Unstressed Stressed
4	1,3-Butadiene **CAS #** 106-99-0 (Lot SHBK2299) **Purity** 99%	2,497.1 µg/mL	+/- 17.5808 µg/mL +/- 140.3628 µg/mL +/- 143.6309 µg/mL	Gravimetric Unstressed Stressed
5	Bromomethane (methyl bromide) **CAS #** 74-83-9 (Lot 101604) **Purity** 99%	2,500.8 µg/mL	+/- 23.3138 µg/mL +/- 141.3956 µg/mL +/- 144.6498 µg/mL	Gravimetric Unstressed Stressed
6	Chloroethane (ethyl chloride) **CAS #** 75-00-3 (Lot 107-401039114-1) **Purity** 99%	2,499.0 µg/mL	+/- 21.4252 µg/mL +/- 140.9973 µg/mL +/- 144.2558 µg/mL	Gravimetric Unstressed Stressed
7	Dichlorofluoromethane (CFC-21) **CAS #** 75-43-4 (Lot 4938100) **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)		2,499.6 µg/mL	+/-	21.2368	µg/mL	Gravimetric
	CAS # 75-69-4	(Lot 25931)		+/-	141.0019	µg/mL	Unstressed
	Purity 99%			+/-	144.2618	µg/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 1.4µm
Rtx-502.2 (cat.#10916)

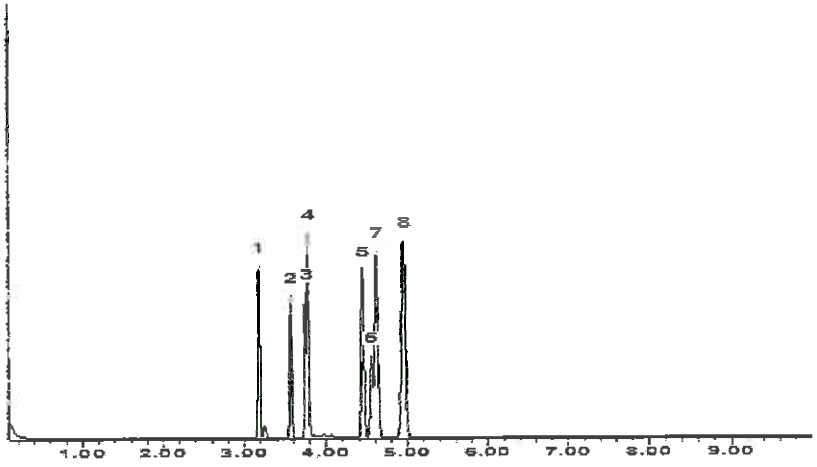
Carrier Gas:
helium-constant pressure 30 psi

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.

Tom Suckar - Mix Technician

Date Mixed: 04-Nov-2019 **Balance:** B707717271

Date Passed: 10-Nov-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:

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

  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_00302

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3222.02

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.SEC **Lot No.:** A0148330

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 : April 30, 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.SEC (Lot 25587) **Purity** 99%	2,513.2 µg/mL	+/- 19.3767 µg/mL +/- 141.4861 µg/mL +/- 144.7702 µg/mL	Gravimetric Unstressed Stressed
2	Chloromethane (methyl chloride) **CAS #** 74-87-3.SEC (Lot 18343) **Purity** 99%	2,505.2 µg/mL	+/- 20.4180 µg/mL +/- 141.1888 µg/mL +/- 144.4589 µg/mL	Gravimetric Unstressed Stressed
3	Vinyl chloride **CAS #** 75-01-4.SEC (Lot MKBK6872V) **Purity** 99%	2,524.8 µg/mL	+/- 17.9317 µg/mL +/- 141.9344 µg/mL +/- 145.2382 µg/mL	Gravimetric Unstressed Stressed
4	1,3-Butadiene **CAS #** 106-99-0.SEC (Lot 24033) **Purity** 99%	2,521.5 µg/mL	+/- 17.6825 µg/mL +/- 141.7249 µg/mL +/- 145.0252 µg/mL	Gravimetric Unstressed Stressed
5	Bromomethane (methyl bromide) **CAS #** 74-83-9.SEC (Lot Q119-46) **Purity** 99%	2,505.9 µg/mL	+/- 24.7917 µg/mL +/- 141.9274 µg/mL +/- 145.1827 µg/mL	Gravimetric Unstressed Stressed
6	Chloroethane (ethyl chloride) **CAS #** 75-00-3.SEC (Lot 00004202) **Purity** 99%	2,507.1 µg/mL	+/- 24.1112 µg/mL +/- 141.8739 µg/mL +/- 145.1334 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)		2,507.2 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)

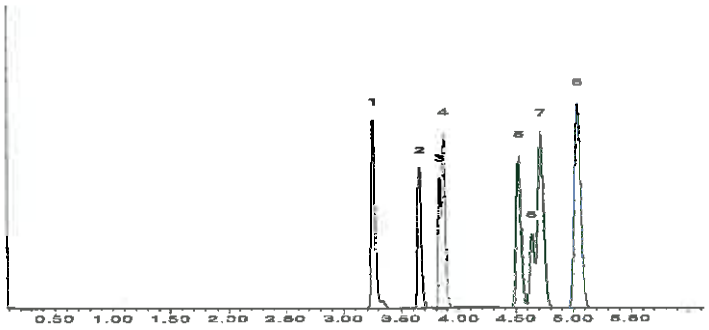
Carrier Gas:
helium-constant pressure 30 psi

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 - Mix Technician

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

Peng-Yan Lo - 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:

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

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_00162

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

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

Reagent

VOA8260KET1ST_00136

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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Reference Material Producer
Certificate 43222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate 43222.02

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 **CAS #** 67-64-1 **Purity** 99%	(Lot SHBJ7699)	12,500.5 µg/mL	+/- 72.6790 µg/mL +/- 754.2106 µg/mL +/- 756.0012 µg/mL		Gravimetric Unstressed Stressed
2	2-Butanone (MEK) **CAS #** 78-93-3 **Purity** 99%	(Lot SHBF2461V)	12,501.0 µg/mL	+/- 72.6819 µg/mL +/- 754.2407 µg/mL +/- 756.0314 µg/mL		Gravimetric Unstressed Stressed
3	4-Methyl-2-pentanone (MIBK) **CAS #** 108-10-1 **Purity** 99%	(Lot SHBH8930)	12,501.5 µg/mL	+/- 72.6848 µg/mL +/- 754.2709 µg/mL +/- 756.0617 µg/mL		Gravimetric Unstressed Stressed
4	2-Hexanone **CAS #** 591-78-6 **Purity** 99%	(Lot MKCD9048)	12,501.8 µg/mL	+/- 72.6863 µg/mL +/- 754.2860 µg/mL +/- 756.0768 µg/mL		Gravimetric Unstressed 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)

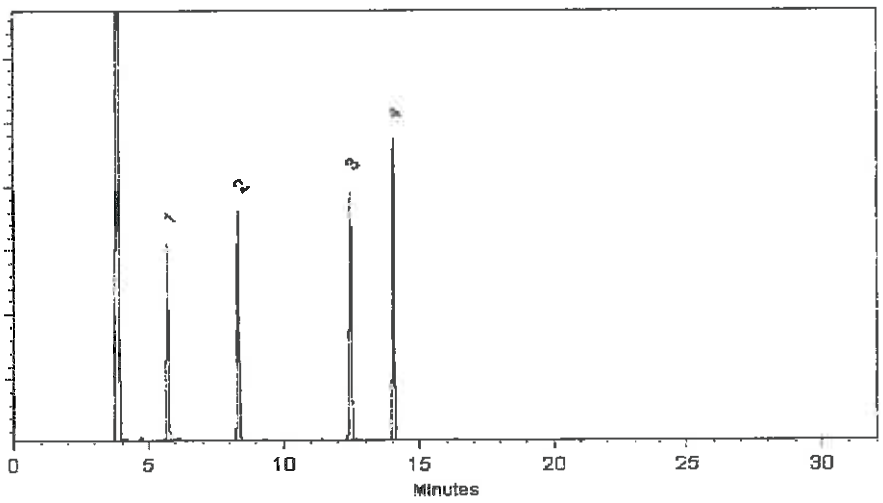
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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 Fallon - Mix Technician

Date Mixed: 11-Dec-2018 **Balance:** B251644995

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/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:

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

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_00134

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110 Benner Circle
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Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED ISO 17034 Accredited Reference Material Producer Certificate #3222.01

ACCREDITED ISO/IEC 17025 Accredited Testing Laboratory Certificate #3232.02

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 **CAS #** 67-64-1.SEC **Purity** 99%	(Lot U13B039)	12,524.5 µg/mL	+/- 72.8185 µg/mL +/- 755.6586 µg/mL +/- 757.4526 µg/mL	Gravimetric Unstressed Stressed
2	2-Butanone (MEK) **CAS #** 78-93-3.SEC **Purity** 99%	(Lot RGZ2A)	12,527.8 µg/mL	+/- 72.8374 µg/mL +/- 755.8547 µg/mL +/- 757.6492 µg/mL	Gravimetric Unstressed Stressed
3	4-Methyl-2-pentanone (MIBK) **CAS #** 108-10-1.SEC **Purity** 99%	(Lot E29T040)	12,515.3 µg/mL	+/- 72.7647 µg/mL +/- 755.1005 µg/mL +/- 756.8932 µg/mL	Gravimetric Unstressed Stressed
4	2-Hexanone **CAS #** 591-78-6.SEC **Purity** 98%	(Lot Y3TUO)	12,516.8 µg/mL	+/- 72.7738 µg/mL +/- 755.1943 µg/mL +/- 756.9873 µg/mL	Gravimetric Unstressed 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)

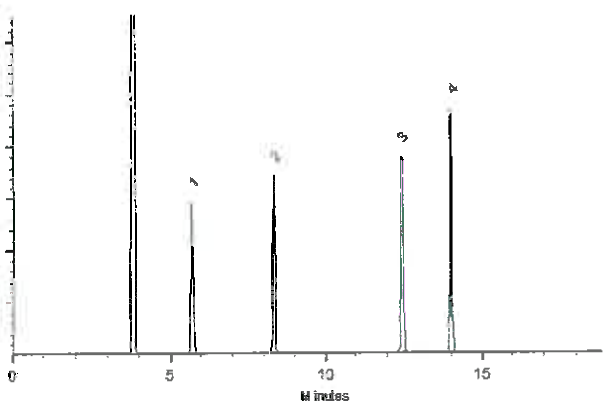
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

Justina Alberson - Operations Tech-ARM QC

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/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:

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

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

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

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 +/- 150.8738 +/- 151.2320	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	1,1,2-Trichlorotrifluoroethane (CFC-113) **CAS #** 76-13-1 **Purity** 99%	(Lot 00009482)	2,501.6	µg/mL	+/- 14.5447 +/- 150.9341 +/- 151.2925	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	1,1-dichloroethene **CAS #** 75-35-4 **Purity** 99%	(Lot SHBG8609V)	2,501.9	µg/mL	+/- 14.5461 +/- 150.9492 +/- 151.3076	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	tert-Butanol (TBA) **CAS #** 75-65-0 **Purity** 99%	(Lot SHBJ9404)	25,008.1	µg/mL	+/- 145.3918 +/- 1,508.8503 +/- 1,512.4325	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	Methyl acetate **CAS #** 79-20-9 **Purity** 99%	(Lot SHBG4345V)	5,000.8	µg/mL	+/- 29.0748 +/- 301.7174 +/- 302.4337	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	Iodomethane (methyl iodide) **CAS #** 74-88-4 **Purity** 99%	(Lot SHBH4362V)	2,500.6	µg/mL	+/- 14.5388 +/- 150.8738 +/- 151.2320	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
7	Allyl chloride (3-chloropropene) **CAS #** 107-05-1 **Purity** 99%	(Lot WXBB7852V)	2,502.0	µg/mL	+/- 14.5468 +/- 150.9567 +/- 151.3151	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

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

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

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

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

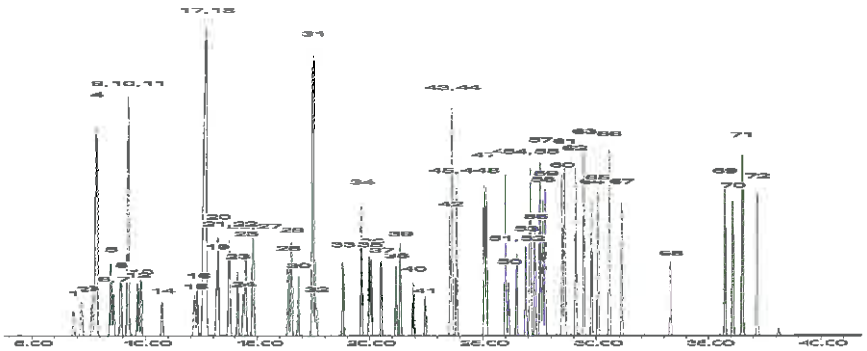
Carrier Gas:
helium-constant pressure 30 psi

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 Tation - Mix Technician

Date Mixed: 05-Dec-2018 **Balance:** B251644995

Diane Shaffer - Operations Tech-ARM QC

Date Passed: 21-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/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:

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

  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

VOA8260MEGA2_00099

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

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 +/- 151.8598 µg/mL +/- 152.2203 µg/mL	Gravimetric Unstressed 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 +/- 151.2383 µg/mL +/- 151.5974 µg/mL	Gravimetric Unstressed Stressed
3	1,1-Dichloroethene **CAS #** 75-35-4.SEC (Lot 7692300) **Purity** 99%	2,503.3 µg/mL	+/- 14.5546 µg/mL +/- 151.0372 µg/mL +/- 151.3958 µg/mL	Gravimetric Unstressed Stressed
4	tert-Butanol (TBA) **CAS #** 75-65-0.SEC (Lot XYXDO) **Purity** 98%	25,000.8 µg/mL	+/- 145.3491 µg/mL +/- 1,508.4071 µg/mL +/- 1,511.9883 µg/mL	Gravimetric Unstressed Stressed
5	Methyl acetate **CAS #** 79-20-9.SEC (Lot UCNEL) **Purity** 99%	5,002.3 µg/mL	+/- 29.0840 µg/mL +/- 301.8129 µg/mL +/- 302.5295 µg/mL	Gravimetric Unstressed Stressed
6	Iodomethane (methyl iodide) **CAS #** 74-88-4.SEC (Lot Y25A027) **Purity** 99%	2,503.5 µg/mL	+/- 14.5556 µg/mL +/- 151.0472 µg/mL +/- 151.4059 µg/mL	Gravimetric Unstressed Stressed
7	Allyl chloride (3-chloropropene) **CAS #** 107-05-1.SEC (Lot H3HGC) **Purity** 99%	2,511.7 µg/mL	+/- 14.6030 µg/mL +/- 151.5400 µg/mL +/- 151.8998 µg/mL	Gravimetric Unstressed 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 487OA)	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		2,502.4	µg/mL	+/-	14.5494	µg/mL	Gravimetric
	CAS # 124-48-1.SEC	(Lot 10206360)			+/-	150.9832	µg/mL	Unstressed
	Purity 97%				+/-	151.3417	µg/mL	Stressed
41	1,2-Dibromoethane (EDB)		2,503.3	µg/mL	+/-	14.5546	µg/mL	Gravimetric
	CAS # 106-93-4.SEC	(Lot 3505900)			+/-	151.0372	µg/mL	Unstressed
	Purity 99%				+/-	151.3958	µg/mL	Stressed
42	Chlorobenzene		2,504.8	µg/mL	+/-	14.5633	µg/mL	Gravimetric
	CAS # 108-90-7.SEC	(Lot 1161936)			+/-	151.1277	µg/mL	Unstressed
	Purity 99%				+/-	151.4865	µg/mL	Stressed
43	m-Xylene		1,251.7	µg/mL	+/-	7.2941	µg/mL	Gravimetric
	CAS # 108-38-3.SEC	(Lot OUKMG-GB)			+/-	75.5202	µg/mL	Unstressed
	Purity 99%				+/-	75.6995	µg/mL	Stressed
44	p-Xylene		1,253.7	µg/mL	+/-	7.3058	µg/mL	Gravimetric
	CAS # 106-42-3.SEC	(Lot GM01)			+/-	75.6409	µg/mL	Unstressed
	Purity 99%				+/-	75.8205	µg/mL	Stressed
45	Ethylbenzene		2,503.5	µg/mL	+/-	14.5556	µg/mL	Gravimetric
	CAS # 100-41-4.SEC	(Lot PI4SE)			+/-	151.0472	µg/mL	Unstressed
	Purity 99%				+/-	151.4059	µg/mL	Stressed
46	1,1,1,2-Tetrachloroethane		2,506.7	µg/mL	+/-	14.5740	µg/mL	Gravimetric
	CAS # 630-20-6.SEC	(Lot GC01)			+/-	151.2383	µg/mL	Unstressed
	Purity 99%				+/-	151.5974	µg/mL	Stressed
47	o-Xylene		2,504.2	µg/mL	+/-	14.5594	µg/mL	Gravimetric
	CAS # 95-47-6.SEC	(Lot FGL01)			+/-	151.0875	µg/mL	Unstressed
	Purity 99%				+/-	151.4462	µg/mL	Stressed
48	Styrene		2,507.2	µg/mL	+/-	14.5769	µg/mL	Gravimetric
	CAS # 100-42-5.SEC	(Lot OFIOL-IA)			+/-	151.2685	µg/mL	Unstressed
	Purity 99%				+/-	151.6276	µg/mL	Stressed
49	Isopropylbenzene (cumene)		2,505.2	µg/mL	+/-	14.5653	µg/mL	Gravimetric
	CAS # 98-82-8.SEC	(Lot 2PHXG-IH)			+/-	151.1478	µg/mL	Unstressed
	Purity 99%				+/-	151.5067	µg/mL	Stressed
50	Bromoform		2,500.5	µg/mL	+/-	14.5381	µg/mL	Gravimetric
	CAS # 75-25-2.SEC	(Lot 5461400)			+/-	150.8661	µg/mL	Unstressed
	Purity 97%				+/-	151.2243	µg/mL	Stressed
51	Bromodichloromethane		2,501.3	µg/mL	+/-	14.5427	µg/mL	Gravimetric
	CAS # 75-27-4.SEC	(Lot 13780)			+/-	150.9137	µg/mL	Unstressed
	Purity 98%				+/-	151.2720	µg/mL	Stressed
52	1,1,2,2-Tetrachloroethane		2,502.0	µg/mL	+/-	14.5468	µg/mL	Gravimetric
	CAS # 79-34-5.SEC	(Lot CFA4D-AQ)			+/-	150.9567	µg/mL	Unstressed
	Purity 99%				+/-	151.3151	µg/mL	Stressed
53	1,2,3-Trichloropropane		2,505.7	µg/mL	+/-	14.5682	µg/mL	Gravimetric
	CAS # 96-18-4.SEC	(Lot GUHZN)			+/-	151.1780	µg/mL	Unstressed
	Purity 99%				+/-	151.5369	µg/mL	Stressed
54	trans-1,4-Dichloro-2-butene		2,514.2	µg/mL	+/-	14.6177	µg/mL	Gravimetric
	CAS # 110-57-6.SEC	(Lot 100700-3)			+/-	151.6922	µg/mL	Unstressed
	Purity 98%				+/-	152.0524	µg/mL	Stressed
55	n-Propylbenzene		2,503.7	µg/mL	+/-	14.5565	µg/mL	Gravimetric
	CAS # 103-65-1.SEC	(Lot T2HFC)			+/-	151.0573	µg/mL	Unstressed
	Purity 99%				+/-	151.4159	µg/mL	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)

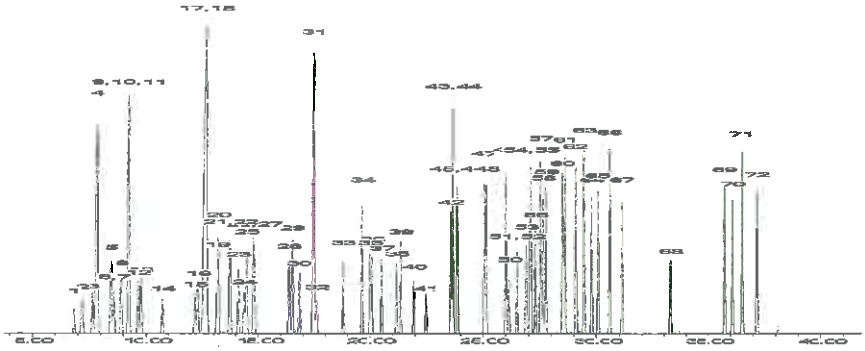
Carrier Gas:
helium-constant pressure 30 psi

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 - Mix Technician

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

Diane Shaffer - Operations Tech-ARM QC

Date Passed: 21-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/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:

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

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

VOA8260SURRES_00152

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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 **CAS #** 1868-53-7 **Purity** 99%	(Lot 0012017)	2,506.4	µg/mL	+/- 14.5724 +/- 140.5314 +/- 143.8196	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	1,2-Dichloroethane-d4 **CAS #** 17060-07-0 **Purity** 99%	(Lot PR-29377)	2,503.8	µg/mL	+/- 14.5570 +/- 140.3828 +/- 143.6676	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	Toluene-d8 **CAS #** 2037-26-5 **Purity** 99%	(Lot PR-27311)	2,512.2	µg/mL	+/- 14.6059 +/- 140.8538 +/- 144.1496	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	1-Bromo-4-fluorobenzene (BFB) **CAS #** 460-00-4 **Purity** 99%	(Lot 20401KO)	2,501.8	µg/mL	+/- 14.5457 +/- 140.2734 +/- 143.5557	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

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

Reagent

VOA8260VARES_00130

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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. : 569724 **Lot No.:** A0154581

Description : 8260 List 1 / Std #6 Vinyl Acetate (2015)

8260 List 1 / Std #6 Vinyl Acetate (2015) 5,000µg/mL, P&T Methanol, 1mL/ampul

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

Expiration Date : April 30, 2020 **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	Vinyl acetate	5,046.0 µg/mL	+/- 29.6128	µg/mL	Gravimetric
	CAS # 108-05-4 (Lot 192709KJ)		+/- 304.4742	µg/mL	Unstressed
	Purity 99%		+/- 305.1969	µg/mL	Stressed

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

Tech Tips:

Vinyl acetate is a volatile organic ester included in the target lists of several US EPA and other methods. Under acidic conditions, esters react with alcohols to form new esters (transesterification). Methanol-based mixes containing halogenated compounds are slightly acidic, so it is important to minimize exposure of vinyl acetate to mixes of halogenated compounds in methanol. For this reason, we offer vinyl acetate in individual solution, and suggest that it be introduced into the working level calibration solution immediately before use. This will minimize problems and ensure more consistent results.

Reagent

VOAACRORES_00152

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Certificate #3222.02

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.:** A0153030

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 : March 31, 2020 **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		19,750.1	µg/mL	+/- 115.6411	µg/mL	Gravimetric
	CAS # 107-02-8	(Lot D0022019819)			+/- 633.2497	µg/mL	Unstressed
	Purity 96%				+/- 736.0834	µg/mL	Stressed

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

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

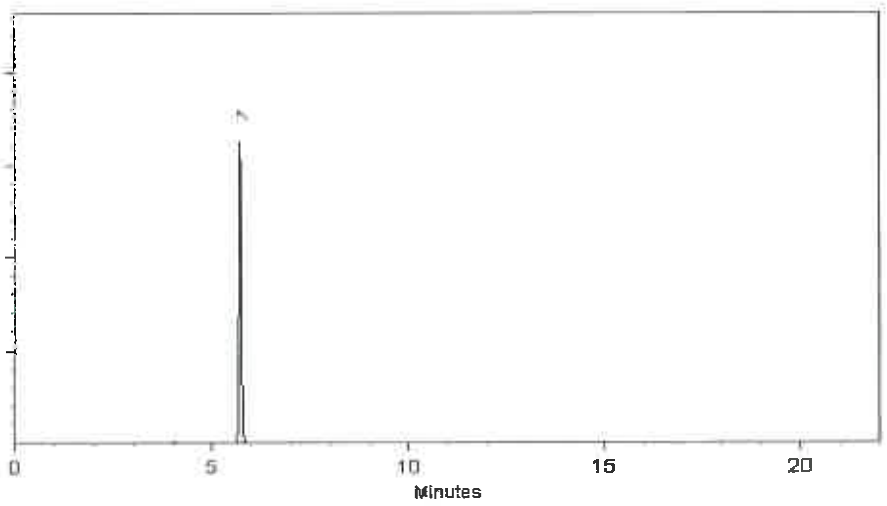
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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.

Joseph Jaglowski - Mix Technician

Date Mixed: 18-Sep-2019 **Balance:** B707717271

Date Passed: 20-Sep-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:

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

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

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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.:** A0147670

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 : April 30, 2024 **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)	2,511.0 µg/mL	+/- 14.7360	µg/mL	Gravimetric
	CAS # 460-00-4 (Lot 20401KO)		+/- 140.8035	µg/mL	Unstressed
	Purity 99%		+/- 144.0975	µg/mL	Stressed

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

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

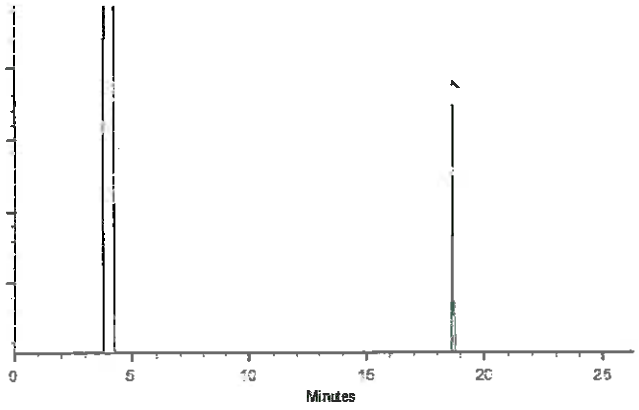
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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.

Dustin J. Lidgett

Dustin Lidgett - Mix Technician

Date Mixed: 01-Apr-2019 **Balance:** 1127510105

Justine Albertson - Operations Tech-ARM QC

Date Passed: 04-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:

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

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.

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.: 180-102790-1

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-6-0/1-0	180-102790-1	89	97 ^c	91	97
HD-COD-SW-7-0/1-0	180-102790-2	92	96 ^c	89	96
HD-COD-SW-8-0/1-0	180-102790-3	91	95 ^c	88	92
HD-COD-SW-9-0/1-0	180-102790-4	94	96 ^c	92	95
HD-COD-SW-13-0/1-0	180-102790-5	92	98 ^c	89	98
HD-COD-SW-15-0/1-0	180-102790-6	91	99 ^c	89	92
HD-COD-SW-16-0/1-0	180-102790-7	89	97 ^c	89	97
HD-COD-SW-17-0/1-0	180-102790-8	91	93 ^c	88	92
HD-COD-SW-26-0/1-0	180-102790-9	101	98 ^c	115	98
HD-COD-SW-27-0/1-0	180-102790-10	93	95 ^c	88	94
HD-COD-SW-28-0/1-0	180-102790-11	91	97 ^c	86	92
HD-COD-SW-29-0/1-0	180-102790-12	92	98 ^c	89	94
HD-QC1-0/1-1	180-102790-13	92	93 ^c	88	94
HD-QC1-0/1-2	180-102790-14	92	97 ^c	87	91
	MB 180-309079/7	94	98	105	90
	LCS 180-309079/3	103	98	112	106
HD-COD-SW-26-0/1-0 MS	180-102790-9 MS	106	103	110	105
HD-COD-SW-26-0/1-0 MSD	180-102790-9 MSD	123	123	139 X	130 X

	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.: 180-102790-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 6030603A.D

Lab ID: LCS 180-309079/3 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Chloromethane	10.0	12.9	129	37-150	
Vinyl chloride	10.0	12.7	127	50-150	
Bromomethane	10.0	12.5	125	35-150	
Chloroethane	10.0	12.1	121	52-150	
1,1-Dichloroethene	10.0	12.8	128	79-132	
Acetone	20.0	14.5	72	37-150	
Carbon disulfide	10.0	11.5	115	66-134	
Methylene Chloride	10.0	10.3	103	72-131	
trans-1,2-Dichloroethene	10.0	11.1	111	81-126	
Methyl tert-butyl ether	10.0	9.80	98	65-125	
1,1-Dichloroethane	10.0	11.0	110	70-127	
cis-1,2-Dichloroethene	10.0	10.6	106	79-119	
Bromochloromethane	10.0	10.5	105	74-124	
2-Butanone (MEK)	20.0	15.7	78	35-150	
Chloroform	10.0	10.7	107	75-126	
1,1,1-Trichloroethane	10.0	11.2	112	63-142	
Carbon tetrachloride	10.0	12.1	121	55-150	
Benzene	10.0	10.9	109	72-127	
1,2-Dichloroethane	10.0	10.3	103	60-138	
Trichloroethene	10.0	11.0	110	81-121	
1,2-Dichloropropane	10.0	10.3	103	67-124	
Bromodichloromethane	10.0	10.4	104	67-131	
cis-1,3-Dichloropropene	10.0	9.72	97	69-122	
4-Methyl-2-pentanone (MIBK)	20.0	14.8	74	19-150	
Toluene	10.0	11.6	116	73-123	
trans-1,3-Dichloropropene	10.0	10.1	101	61-122	
1,1,2-Trichloroethane	10.0	10.8	108	72-120	
Tetrachloroethene	10.0	13.4	134	69-134	
2-Hexanone	20.0	15.3	77	24-150	
Dibromochloromethane	10.0	10.9	109	59-134	
1,2-Dibromoethane (EDB)	10.0	10.8	108	65-129	
Chlorobenzene	10.0	11.3	113	76-119	
1,1,1,2-Tetrachloroethane	10.0	11.1	111	65-132	
Ethylbenzene	10.0	11.6	116	76-118	
Xylenes, Total	20.0	23.3	117	76-116	*
Styrene	10.0	11.5	115	74-118	
Bromoform	10.0	11.8	118	50-146	
1,1,2,2-Tetrachloroethane	10.0	11.1	111	57-135	
Acrylonitrile	100	103	103	43-149	

Column to be used to flag recovery and RPD values

FORM III EPA 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-102790-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 6030609.D

Lab ID: 180-102790-9 MS Client ID: HD-COD-SW-26-0/1-0 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Chloromethane	10.0	ND	16.4	164	37-150	F1
Vinyl chloride	10.0	ND	16.0	160	50-150	F1
Bromomethane	10.0	ND	16.2	162	35-150	F1
Chloroethane	10.0	ND	15.9	159	52-150	F1
1,1-Dichloroethene	10.0	ND	16.4	164	79-132	F1
Acetone	20.0	ND	20.1	101	37-150	
Carbon disulfide	10.0	ND	13.6	136	66-134	F1
Methylene Chloride	10.0	ND	12.7	127	72-131	
trans-1,2-Dichloroethene	10.0	ND	14.8	148	81-126	F1
Methyl tert-butyl ether	10.0	ND	13.1	131	65-125	F1
1,1-Dichloroethane	10.0	ND	13.9	139	70-127	F1
cis-1,2-Dichloroethene	10.0	ND	13.8	138	79-119	F1
Bromochloromethane	10.0	ND	13.6	136	74-124	F1
2-Butanone (MEK)	20.0	ND	24.0	120	35-150	
Chloroform	10.0	ND	13.9	139	75-126	F1
1,1,1-Trichloroethane	10.0	ND	13.8	138	63-142	
Carbon tetrachloride	10.0	ND	13.8	138	55-150	
Benzene	10.0	ND	14.1	141	72-127	F1
1,2-Dichloroethane	10.0	ND	13.7	137	60-138	
Trichloroethene	10.0	ND	14.2	142	81-121	F1
1,2-Dichloropropane	10.0	ND	13.7	137	67-124	F1
Bromodichloromethane	10.0	ND	12.7	127	67-131	
cis-1,3-Dichloropropene	10.0	ND	12.5	125	69-122	F1
4-Methyl-2-pentanone (MIBK)	20.0	ND	24.9	124	19-150	
Toluene	10.0	ND	14.2	142	73-123	F1
trans-1,3-Dichloropropene	10.0	ND	11.8	118	61-122	
1,1,2-Trichloroethane	10.0	ND	13.3	133	72-120	F1
Tetrachloroethene	10.0	0.55 J	17.0	165	69-134	F1
2-Hexanone	20.0	ND	24.7	123	24-150	
Dibromochloromethane	10.0	ND	12.3	123	59-134	
1,2-Dibromoethane (EDB)	10.0	ND	13.1	131	65-129	F1
Chlorobenzene	10.0	ND	13.9	139	76-119	F1
1,1,1,2-Tetrachloroethane	10.0	ND	12.7	127	65-132	
Ethylbenzene	10.0	ND	14.3	143	76-118	F1
Xylenes, Total	20.0	ND	28.5	143	76-116	F1
Styrene	10.0	ND	13.9	139	74-118	F1
Bromoform	10.0	ND	13.4	134	50-146	
1,1,2,2-Tetrachloroethane	10.0	ND	13.2	132	57-135	
Acrylonitrile	100	ND	124	124	43-149	

Column to be used to flag recovery and RPD values

FORM III EPA 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-102790-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 6030610.D

Lab ID: 180-102790-9 MSD Client ID: HD-COD-SW-26-0/1-0 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Chloromethane	10.0	14.3	143	14	35	37-150	
Vinyl chloride	10.0	14.1	141	13	31	50-150	
Bromomethane	10.0	15.0	150	7	35	35-150	
Chloroethane	10.0	14.0	140	12	31	52-150	
1,1-Dichloroethene	10.0	14.0	140	16	29	79-132	F1
Acetone	20.0	18.2	91	10	35	37-150	
Carbon disulfide	10.0	12.0	120	13	31	66-134	
Methylene Chloride	10.0	10.9	109	15	29	72-131	
trans-1,2-Dichloroethene	10.0	12.8	128	14	27	81-126	F1
Methyl tert-butyl ether	10.0	11.2	112	15	28	65-125	
1,1-Dichloroethane	10.0	12.3	123	12	27	70-127	
cis-1,2-Dichloroethene	10.0	11.7	117	17	28	79-119	
Bromochloromethane	10.0	11.4	114	17	27	74-124	
2-Butanone (MEK)	20.0	21.4	107	11	34	35-150	
Chloroform	10.0	11.7	117	17	26	75-126	
1,1,1-Trichloroethane	10.0	12.3	123	12	28	63-142	
Carbon tetrachloride	10.0	11.7	117	16	29	55-150	
Benzene	10.0	12.1	121	15	27	72-127	
1,2-Dichloroethane	10.0	11.6	116	17	26	60-138	
Trichloroethene	10.0	12.2	122	15	28	81-121	F1
1,2-Dichloropropane	10.0	11.7	117	16	27	67-124	
Bromodichloromethane	10.0	11.0	110	14	28	67-131	
cis-1,3-Dichloropropene	10.0	10.5	105	17	29	69-122	
4-Methyl-2-pentanone (MIBK)	20.0	23.4	117	6	33	19-150	
Toluene	10.0	13.0	130	9	31	73-123	F1
trans-1,3-Dichloropropene	10.0	10.6	106	11	30	61-122	
1,1,2-Trichloroethane	10.0	12.4	124	7	27	72-120	F1
Tetrachloroethene	10.0	16.4	159	4	27	69-134	F1
2-Hexanone	20.0	24.2	121	2	32	24-150	
Dibromochloromethane	10.0	11.2	112	9	28	59-134	
1,2-Dibromoethane (EDB)	10.0	12.0	120	8	27	65-129	
Chlorobenzene	10.0	12.5	125	11	25	76-119	F1
1,1,1,2-Tetrachloroethane	10.0	11.5	115	10	28	65-132	
Ethylbenzene	10.0	13.1	131	9	27	76-118	F1
Xylenes, Total	20.0	25.4	127	11	27	76-116	F1
Styrene	10.0	12.7	127	10	27	74-118	F1
Bromoform	10.0	11.9	119	12	30	50-146	
1,1,2,2-Tetrachloroethane	10.0	12.2	122	8	29	57-135	
Acrylonitrile	100	114	114	8	34	43-149	

Column to be used to flag recovery and RPD values

FORM III EPA 8260C

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-102790-1

SDG No.:

Lab File ID: 6030606.D Lab Sample ID: MB 180-309079/7

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: CHHP6 Date Analyzed: 03/06/2020 10:20

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 180-309079/3	6030603A.D	03/06/2020 08:47
HD-COD-SW-26-0/1-0	180-102790-9	6030607.D	03/06/2020 10:47
HD-COD-SW-26-0/1-0 MS	180-102790-9 MS	6030609.D	03/06/2020 11:42
HD-COD-SW-26-0/1-0 MSD	180-102790-9 MSD	6030610.D	03/06/2020 12:10
HD-COD-SW-6-0/1-0	180-102790-1	6030612.D	03/06/2020 13:03
HD-COD-SW-7-0/1-0	180-102790-2	6030613.D	03/06/2020 13:29
HD-COD-SW-8-0/1-0	180-102790-3	6030614.D	03/06/2020 13:57
HD-COD-SW-9-0/1-0	180-102790-4	6030615.D	03/06/2020 14:25
HD-COD-SW-13-0/1-0	180-102790-5	6030616.D	03/06/2020 14:52
HD-COD-SW-15-0/1-0	180-102790-6	6030617.D	03/06/2020 15:20
HD-COD-SW-16-0/1-0	180-102790-7	6030618.D	03/06/2020 15:48
HD-COD-SW-17-0/1-0	180-102790-8	6030619.D	03/06/2020 16:16
HD-COD-SW-27-0/1-0	180-102790-10	6030620.D	03/06/2020 16:44
HD-COD-SW-28-0/1-0	180-102790-11	6030621.D	03/06/2020 17:12
HD-COD-SW-29-0/1-0	180-102790-12	6030622.D	03/06/2020 17:40
HD-QC1-0/1-1	180-102790-13	6030623.D	03/06/2020 18:07
HD-QC1-0/1-2	180-102790-14	6030624.D	03/06/2020 18:35

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

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-102790-1

SDG No.:

Lab File ID: 6030301A.D BFB Injection Date: 03/03/2020

Instrument ID: CHHP6 BFB Injection Time: 08:18

Analysis Batch No.: 308714

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	15.3	
75	30.0 - 60.0 % of mass 95	47.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.1	(0.2) 1
174	50.0 - 120.00 % of mass 95	55.8	
175	5.0 - 9.0 % of mass 174	4.6	(8.2) 1
176	95.0 - 101.0 % of mass 174	53.1	(95.1) 1
177	5.0 - 9.0 % of mass 176	4.0	(7.5) 2

1-Value is % mass 174 2-Value is % mass 176

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

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 180-308714/4	6030304.D	03/03/2020	09:52
	IC 180-308714/5	6030305.D	03/03/2020	10:19
	ICIS 180-308714/6	6030306.D	03/03/2020	10:47
	IC 180-308714/7	6030307.D	03/03/2020	11:15
	IC 180-308714/8	6030308.D	03/03/2020	11:43
	IC 180-308714/9	6030309.D	03/03/2020	12:10
	IC 180-308714/10	6030310.D	03/03/2020	12:38
	IC 180-308714/11	6030311.D	03/03/2020	13:06

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

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-102790-1

SDG No.:

Lab File ID: 6030601A.D BFB Injection Date: 03/06/2020

Instrument ID: CHHP6 BFB Injection Time: 07:00

Analysis Batch No.: 309079

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	16.0	
75	30.0 - 60.0 % of mass 95	50.4	
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	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	59.8	
175	5.0 - 9.0 % of mass 174	4.2	(7.0) 1
176	95.0 - 101.0 % of mass 174	58.3	(97.5) 1
177	5.0 - 9.0 % of mass 176	4.3	(7.3) 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 180-309079/2	6030602.D	03/06/2020	07:32
	LCS 180-309079/3	6030603A.D	03/06/2020	08:47
	MB 180-309079/7	6030606.D	03/06/2020	10:20
HD-COD-SW-26-0/1-0	180-102790-9	6030607.D	03/06/2020	10:47
HD-COD-SW-26-0/1-0 MS	180-102790-9 MS	6030609.D	03/06/2020	11:42
HD-COD-SW-26-0/1-0 MSD	180-102790-9 MSD	6030610.D	03/06/2020	12:10
HD-COD-SW-6-0/1-0	180-102790-1	6030612.D	03/06/2020	13:03
HD-COD-SW-7-0/1-0	180-102790-2	6030613.D	03/06/2020	13:29
HD-COD-SW-8-0/1-0	180-102790-3	6030614.D	03/06/2020	13:57
HD-COD-SW-9-0/1-0	180-102790-4	6030615.D	03/06/2020	14:25
HD-COD-SW-13-0/1-0	180-102790-5	6030616.D	03/06/2020	14:52
HD-COD-SW-15-0/1-0	180-102790-6	6030617.D	03/06/2020	15:20
HD-COD-SW-16-0/1-0	180-102790-7	6030618.D	03/06/2020	15:48
HD-COD-SW-17-0/1-0	180-102790-8	6030619.D	03/06/2020	16:16
HD-COD-SW-27-0/1-0	180-102790-10	6030620.D	03/06/2020	16:44
HD-COD-SW-28-0/1-0	180-102790-11	6030621.D	03/06/2020	17:12
HD-COD-SW-29-0/1-0	180-102790-12	6030622.D	03/06/2020	17:40
HD-QC1-0/1-1	180-102790-13	6030623.D	03/06/2020	18:07
HD-QC1-0/1-2	180-102790-14	6030624.D	03/06/2020	18:35

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

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-102790-1

SDG No.:

Sample No.: CCVIS 180-309079/2 Date Analyzed: 03/06/2020 07:32

Instrument ID: CHHP6 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 6030602.D Heated Purge: (Y/N) N

Calibration ID: 42985

		TBAd9		FB		CBNZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		121218	4.25	592876	7.26	121172	10.38
UPPER LIMIT		242436	4.75	1185752	7.76	242344	10.88
LOWER LIMIT		60609	3.75	296438	6.76	60586	9.88
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 180-309079/3		121378	4.25	640781	7.26	130229	10.37
MB 180-309079/7		152954	4.25	675663	7.26	140005	10.37
180-102790-9	HD-COD-SW-26-0/1-0	138244	4.24	643848	7.26	129318	10.38
180-102790-9 MS	HD-COD-SW-26-0/1-0 MS	95071	4.25	510306	7.26	109177	10.38
180-102790-9 MSD	HD-COD-SW-26-0/1-0 MSD	102706	4.25	505487	7.26	102677	10.37
180-102790-1	HD-COD-SW-6-0/1-0	110795	4.25	441861	7.26	100046	10.38
180-102790-2	HD-COD-SW-7-0/1-0	106856	4.25	433740	7.26	99870	10.37
180-102790-3	HD-COD-SW-8-0/1-0	115067	4.25	444448	7.27	103109	10.37
180-102790-4	HD-COD-SW-9-0/1-0	106223	4.25	446061	7.27	100317	10.38
180-102790-5	HD-COD-SW-13-0/1-0	106123	4.25	442280	7.26	100413	10.37
180-102790-6	HD-COD-SW-15-0/1-0	104628	4.24	449387	7.27	104606	10.38
180-102790-7	HD-COD-SW-16-0/1-0	108223	4.24	445317	7.26	103156	10.37
180-102790-8	HD-COD-SW-17-0/1-0	110999	4.25	455339	7.26	105935	10.37
180-102790-10	HD-COD-SW-27-0/1-0	112416	4.25	461219	7.26	107158	10.37
180-102790-11	HD-COD-SW-28-0/1-0	92710	4.24	424892	7.26	99740	10.38
180-102790-12	HD-COD-SW-29-0/1-0	95543	4.25	417469	7.26	96836	10.38
180-102790-13	HD-QC1-0/1-1	99266	4.25	417380	7.26	98193	10.38
180-102790-14	HD-QC1-0/1-2	94439	4.25	422497	7.26	101473	10.37

TBAd9 = TBA-d9 (IS)
FB = Fluorobenzene (IS)
CBNZd5 = 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 EPA 8260C

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

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-102790-1

SDG No.:

Sample No.: CCVIS 180-309079/2 Date Analyzed: 03/06/2020 07:32

Instrument ID: CHHP6 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 6030602.D Heated Purge: (Y/N) N

Calibration ID: 42985

		DCBd4					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		146108	12.72				
UPPER LIMIT		292216	13.22				
LOWER LIMIT		73054	12.22				
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 180-309079/3		154271	12.72				
MB 180-309079/7		159621	12.72				
180-102790-9	HD-COD-SW-26-0/1-0	142539	12.72				
180-102790-9 MS	HD-COD-SW-26-0/1-0 MS	121626	12.72				
180-102790-9 MSD	HD-COD-SW-26-0/1-0 MSD	116624	12.72				
180-102790-1	HD-COD-SW-6-0/1-0	130509	12.72				
180-102790-2	HD-COD-SW-7-0/1-0	124526	12.72				
180-102790-3	HD-COD-SW-8-0/1-0	125992	12.72				
180-102790-4	HD-COD-SW-9-0/1-0	126233	12.72				
180-102790-5	HD-COD-SW-13-0/1-0	128225	12.72				
180-102790-6	HD-COD-SW-15-0/1-0	125210	12.72				
180-102790-7	HD-COD-SW-16-0/1-0	131623	12.72				
180-102790-8	HD-COD-SW-17-0/1-0	129367	12.72				
180-102790-10	HD-COD-SW-27-0/1-0	129166	12.72				
180-102790-11	HD-COD-SW-28-0/1-0	119956	12.72				
180-102790-12	HD-COD-SW-29-0/1-0	119271	12.72				
180-102790-13	HD-QC1-0/1-1	124285	12.72				
180-102790-14	HD-QC1-0/1-2	126732	12.72				

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 EPA 8260C

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-102790-1

SDG No.:

Client Sample ID: HD-COD-SW-6-0/1-0 Lab Sample ID: 180-102790-1

Matrix: Water Lab File ID: 6030612.D

Analysis Method: EPA 8260C Date Collected: 02/24/2020 13:25

Sample wt/vol: 5(mL) Date Analyzed: 03/06/2020 13:03

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.: 309079 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	0.40
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	^c	1.0	0.59
75-34-3	1,1-Dichloroethane	ND		1.0	0.31
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	^c	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	^c	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.: 180-102790-1

SDG No.:

Client Sample ID: HD-COD-SW-6-0/1-0 Lab Sample ID: 180-102790-1

Matrix: Water Lab File ID: 6030612.D

Analysis Method: EPA 8260C Date Collected: 02/24/2020 13:25

Sample wt/vol: 5(mL) Date Analyzed: 03/06/2020 13:03

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.: 309079 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)	91		78-128
460-00-4	4-Bromofluorobenzene (Surr)	97		64-123
1868-53-7	Dibromofluoromethane (Surr)	89		75-147

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030612.D
Lims ID: 180-102790-A-1
Client ID: HD-COD-SW-6-0/1-0
Sample Type: Client
Inject. Date: 06-Mar-2020 13:03:30 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-0031064-013
Operator ID: 10099 Instrument ID: CHHP6

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 06-Mar-2020 13:26:39 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0335

First Level Reviewer: gordonk Date: 06-Mar-2020 13:26:39

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.252	4.249	0.003	95	110795	1000.0	
* 2 Fluorobenzene (IS)	96	7.264	7.261	0.003	100	441861	50.0	
* 3 Chlorobenzene-d5	119	10.378	10.375	0.003	86	100046	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.721	12.717	0.004	98	130509	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.534	6.537	-0.003	90	79429	44.3	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.911	6.908	0.003	98	112756	48.4	
$ 7 Toluene-d8 (Surr)	98	8.918	8.915	0.003	93	433113	45.4	
$ 8 4-Bromofluorobenzene (Surr	95	11.559	11.562	-0.003	0	159602	48.3	
12 Chloromethane	50		1.828				ND	
13 Vinyl chloride	62		1.938				ND	
15 Bromomethane	94		2.260				ND	
16 Chloroethane	64		2.382				ND	
22 1,1-Dichloroethene	96		3.325				ND	
24 Acetone	43	3.419	3.422	-0.003	86	7168	12.7	
26 Carbon disulfide	76		3.617				ND	
31 Methylene Chloride	84		4.115				ND	
33 Acrylonitrile	53		4.505				ND	U
34 trans-1,2-Dichloroethene	96		4.529				ND	
35 Methyl tert-butyl ether	73		4.553				ND	
37 1,1-Dichloroethane	63		5.168				ND	
43 cis-1,2-Dichloroethene	96	5.931	5.922	0.009	1	879	0.4114	
44 2-Butanone (MEK)	43		5.940				ND	
48 Chlorobromomethane	128		6.208				ND	
50 Chloroform	83		6.354				ND	
51 1,1,1-Trichloroethane	97		6.512				ND	
53 Carbon tetrachloride	117		6.689				ND	
56 Benzene	78		6.914				ND	U
57 1,2-Dichloroethane	62		6.993				ND	U
61 Trichloroethene	130	7.647	7.650	-0.003	17	916	0.4935	
64 1,2-Dichloropropane	63		7.924				ND	
68 Dichlorobromomethane	83		8.210				ND	
71 cis-1,3-Dichloropropene	75		8.660				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
72 4-Methyl-2-pentanone (MIBK	43		8.818				ND	U
73 Toluene	91		8.988				ND	U
74 trans-1,3-Dichloropropene	75		9.238				ND	
76 1,1,2-Trichloroethane	97		9.432				ND	U
77 Tetrachloroethene	164		9.499				ND	
79 2-Hexanone	43		9.651				ND	U
81 Chlorodibromomethane	129		9.803				ND	
82 Ethylene Dibromide	107		9.913				ND	U
84 Chlorobenzene	112		10.406				ND	
86 1,1,1,2-Tetrachloroethane	131		10.497				ND	
87 Ethylbenzene	106		10.503				ND	U
88 m-Xylene & p-Xylene	106		10.637				ND	
89 o-Xylene	106		11.020				ND	
90 Styrene	104		11.038				ND	U
91 Bromoform	173		11.221				ND	
96 1,1,2,2-Tetrachloroethane	83		11.702				ND	U
S 131 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

VOA8260INT_00104	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00104	Amount Added:	2.00	Units: uL	Run Reagent

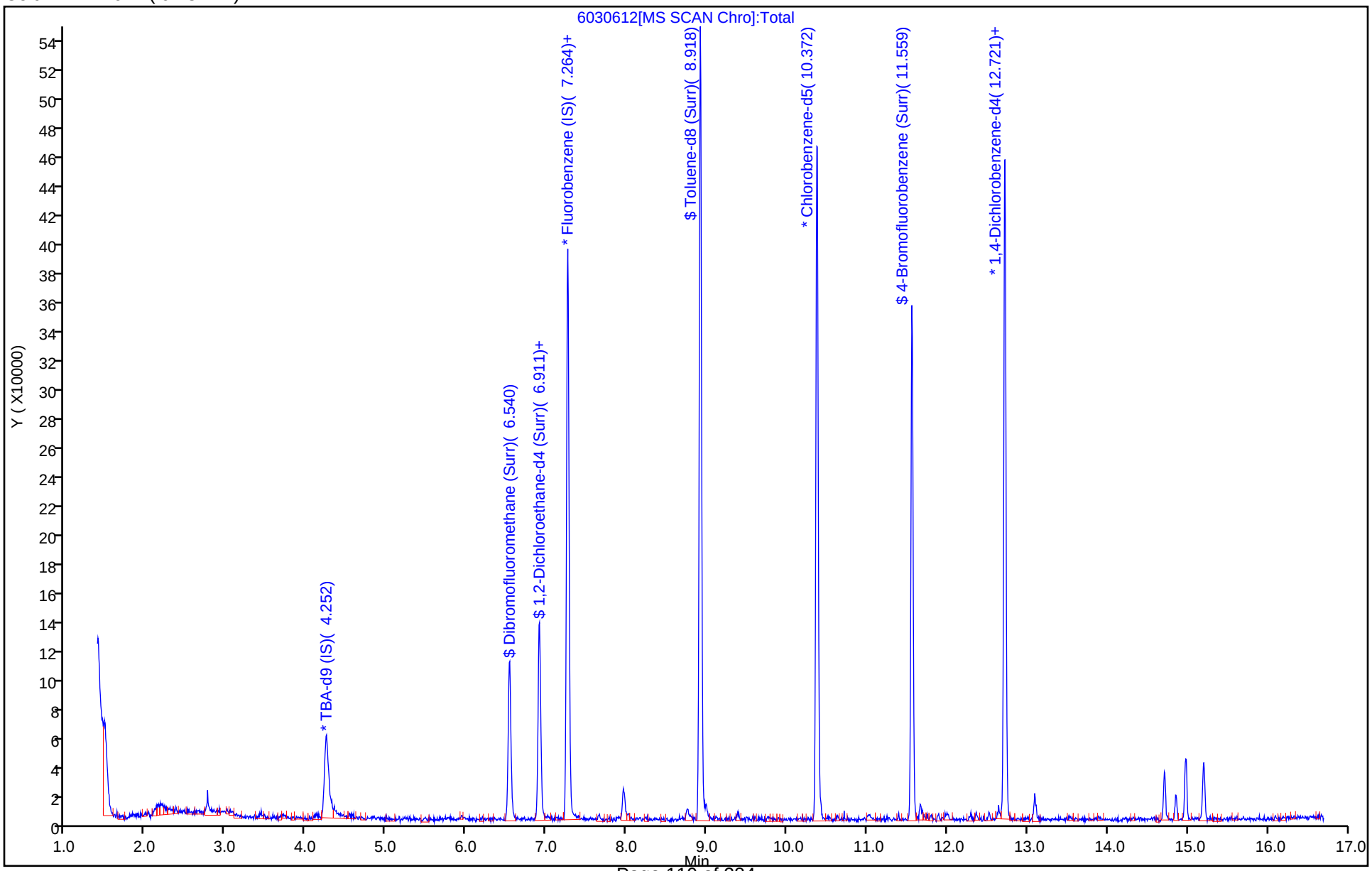
Report Date: 06-Mar-2020 13:26:39 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030612.D

Injection Date:	06-Mar-2020 13:03:30	Instrument ID:	CHHP6	Operator ID:	10099
Lims ID:	180-102790-A-1	Lab Sample ID:	180-102790-1	Worklist Smp#:	13
Client ID:	HD-COD-SW-6-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Recovery Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030612.D
Lims ID: 180-102790-A-1
Client ID: HD-COD-SW-6-0/1-0
Sample Type: Client
Inject. Date: 06-Mar-2020 13:03:30 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-0031064-013
Operator ID: 10099 Instrument ID: CHHP6

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 06-Mar-2020 13:26:39 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0335

First Level Reviewer: gordonk Date: 06-Mar-2020 13:26:39

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	50.0	44.3	88.52
$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	48.4	96.90
$ 7 Toluene-d8 (Surr)	50.0	45.4	90.84
$ 8 4-Bromofluorobenzene (Surr)	50.0	48.3	96.59

Eurofins TestAmerica, Pittsburgh

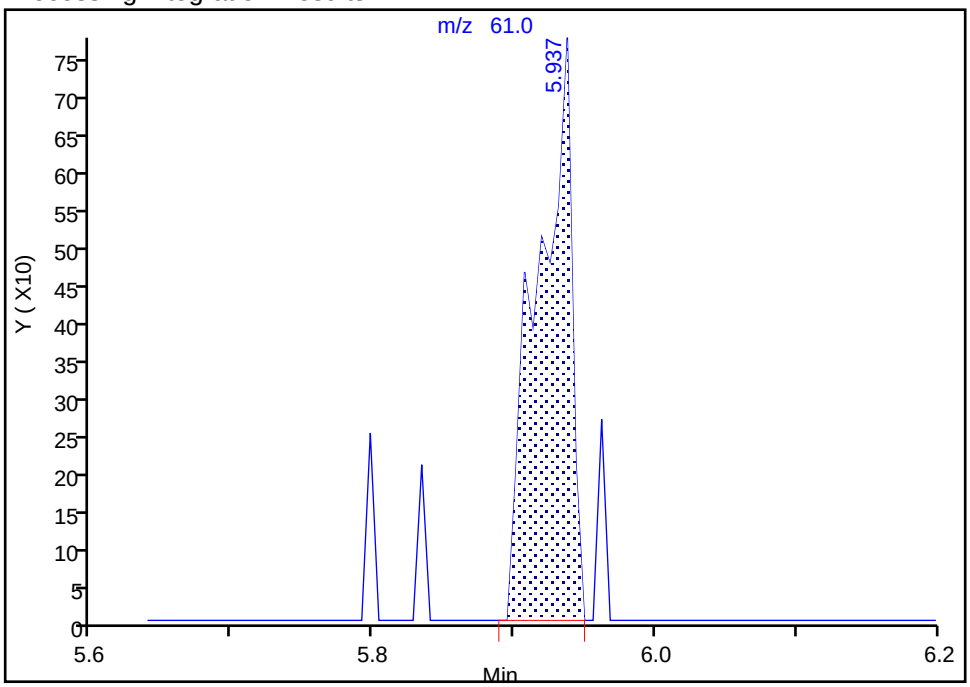
Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030612.D				
Injection Date:	06-Mar-2020 13:03:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-1	Lab Sample ID:	180-102790-1		
Client ID:	HD-COD-SW-6-0/1-0				
Operator ID:	10099	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

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

Signal: 2

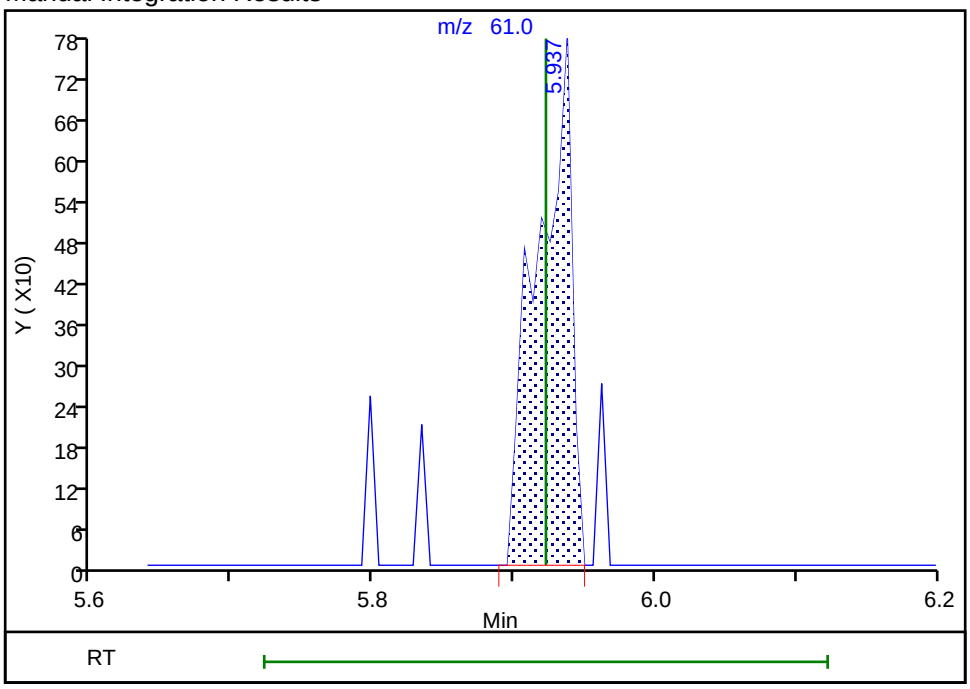
Processing Integration Results

RT: 5.94
Area: 1295
Amount: 0.411441
Amount Units: ng



Manual Integration Results

RT: 5.94
Area: 1295
Amount: 0.411441
Amount Units: ng



Reviewer: gordonk, 06-Mar-2020 13:26:08
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Pittsburgh

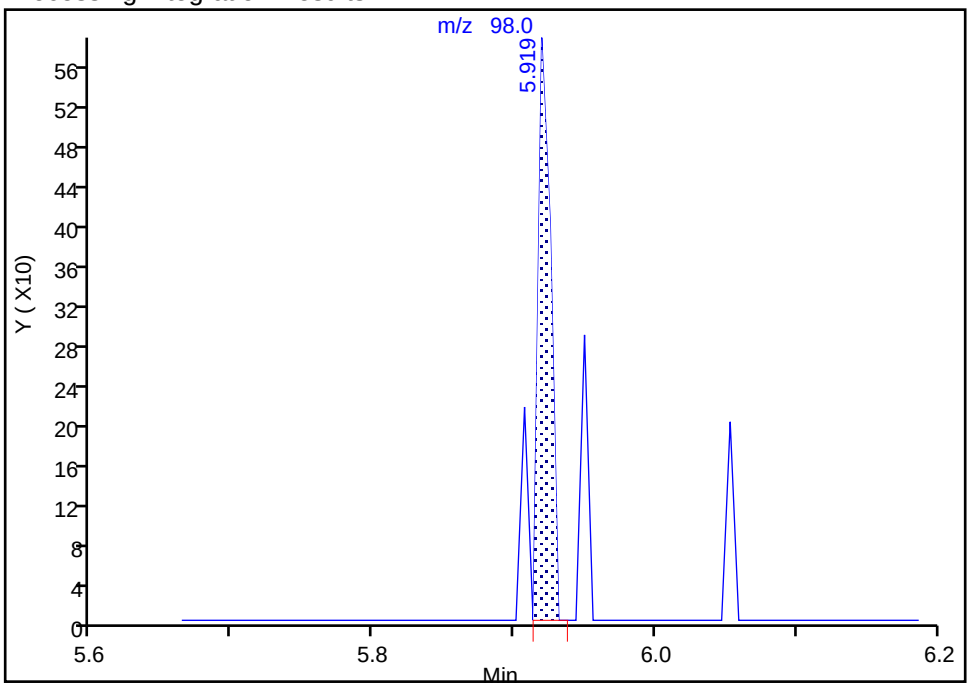
Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030612.D				
Injection Date:	06-Mar-2020 13:03:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-1	Lab Sample ID:	180-102790-1		
Client ID:	HD-COD-SW-6-0/1-0				
Operator ID:	10099	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

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

Signal: 3

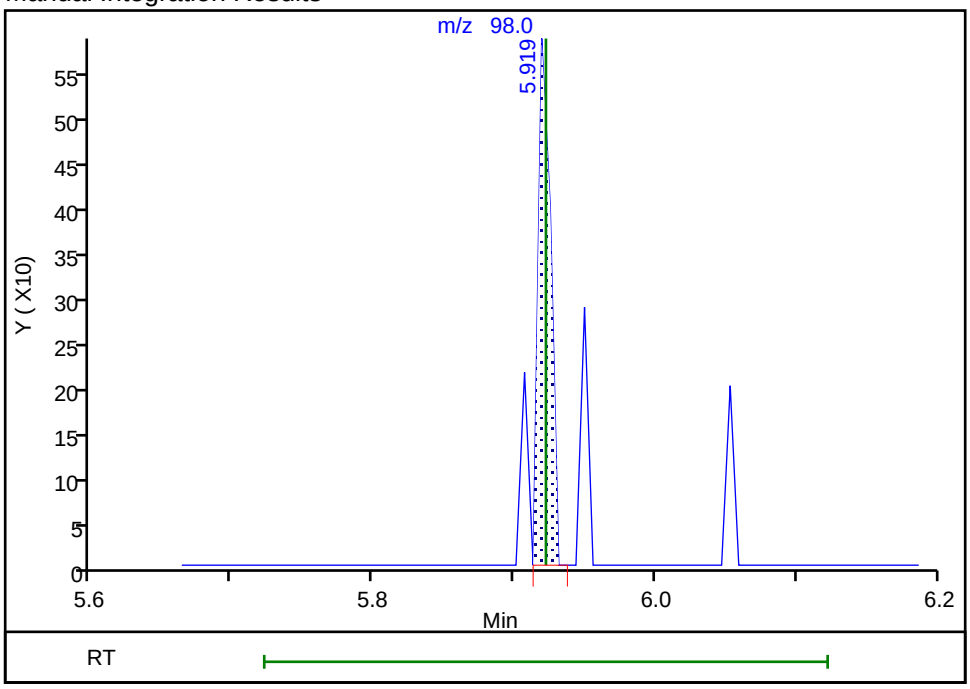
Processing Integration Results

RT: 5.92
Area: 362
Amount: 0.411441
Amount Units: ng



Manual Integration Results

RT: 5.92
Area: 362
Amount: 0.411441
Amount Units: ng



Reviewer: gordonk, 06-Mar-2020 13:26:08
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

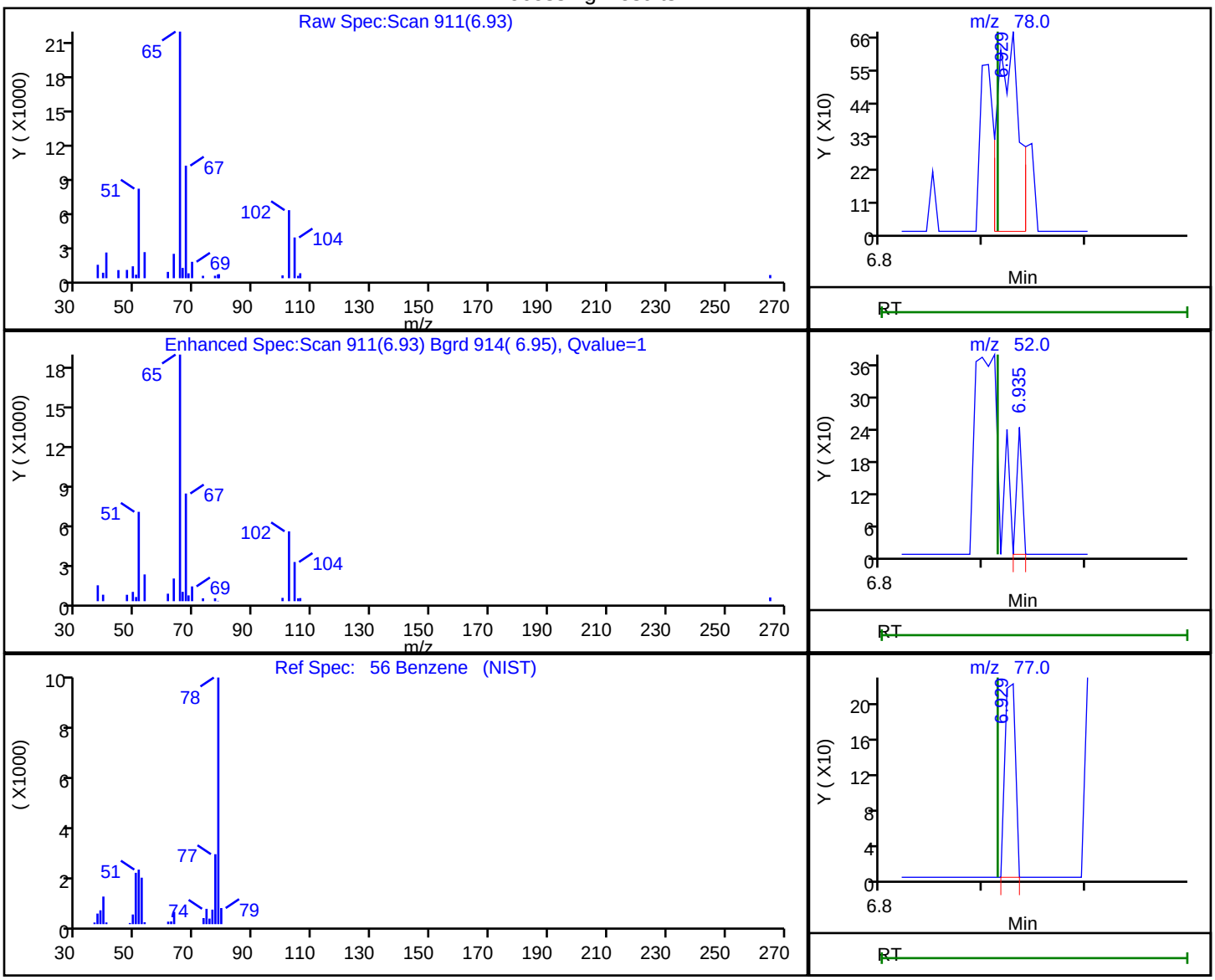
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030612.D				
Injection Date:	06-Mar-2020 13:03:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-1	Lab Sample ID:	180-102790-1		
Client ID:	HD-COD-SW-6-0/1-0				
Operator ID:	10099	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

56 Benzene, CAS: 71-43-2

Processing Results



RT	Mass	Response	Amount
6.93	78.00	964	0.120228
6.94	52.00	86	
6.93	77.00	155	

Reviewer: gordonk, 06-Mar-2020 13:26:11

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

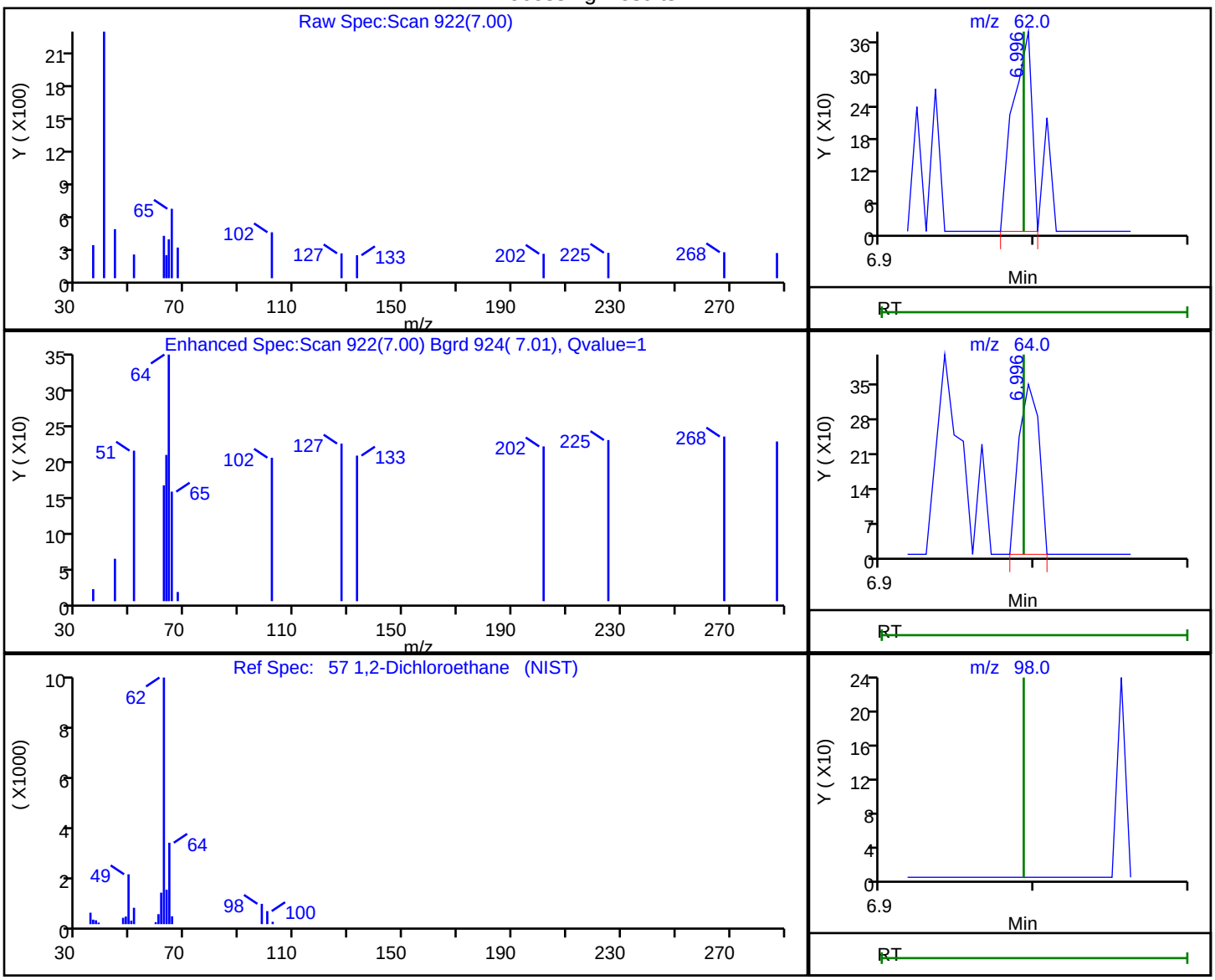
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030612.D				
Injection Date:	06-Mar-2020 13:03:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-1	Lab Sample ID:	180-102790-1		
Client ID:	HD-COD-SW-6-0/1-0				
Operator ID:	10099	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

57 1,2-Dichloroethane, CAS: 107-06-2

Processing Results



RT	Mass	Response	Amount
7.00	62.00	324	0.132384
7.00	64.00	319	
6.99	98.00	0	

Reviewer: gordonk, 06-Mar-2020 13:26:12

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

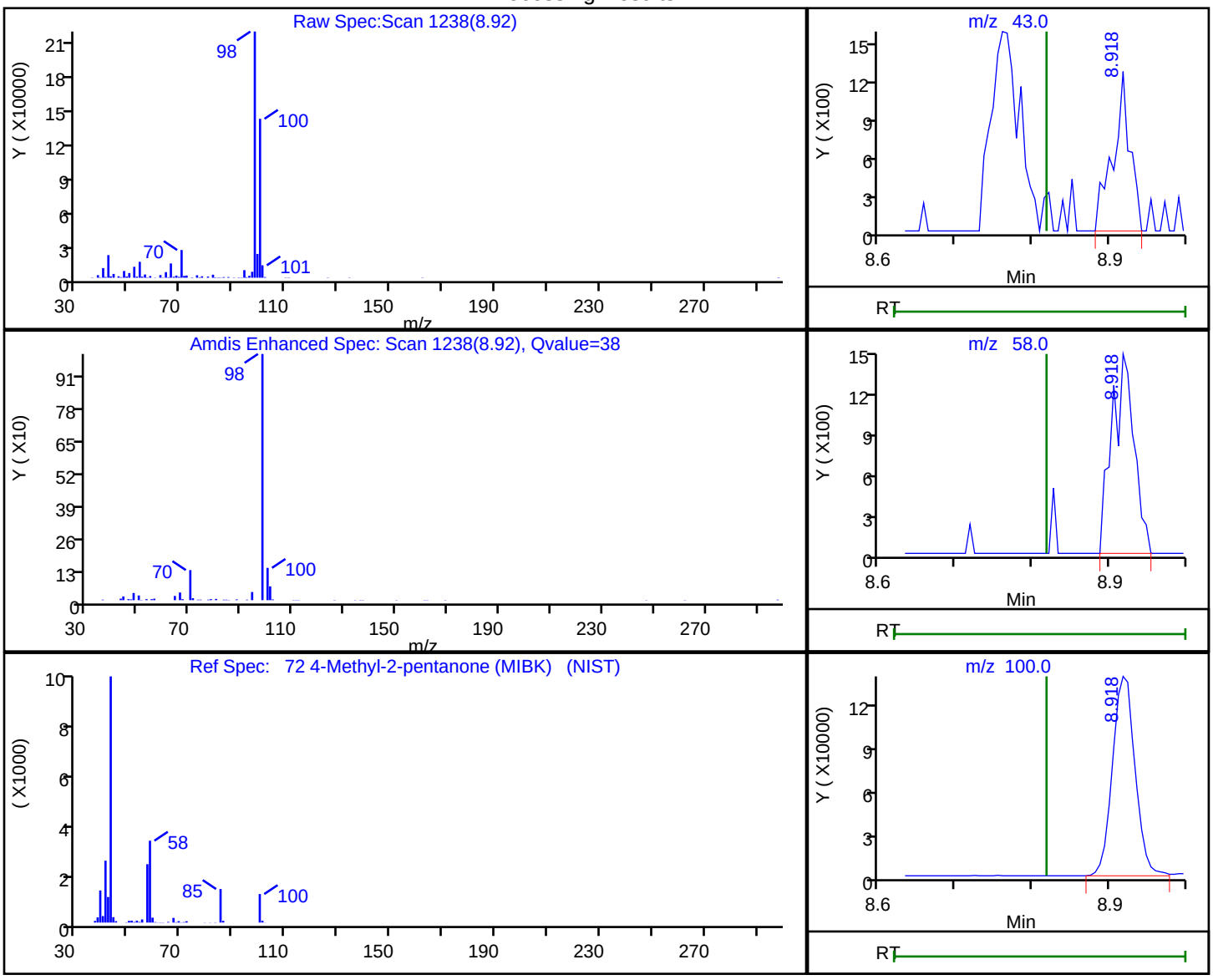
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030612.D				
Injection Date:	06-Mar-2020 13:03:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-1	Lab Sample ID:	180-102790-1		
Client ID:	HD-COD-SW-6-0/1-0				
Operator ID:	10099	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

72 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1

Processing Results



RT	Mass	Response	Amount
8.92	43.00	1915	1.123273
8.92	58.00	2952	
8.92	100.00	287626	

Reviewer: gordonk, 06-Mar-2020 13:26:19

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

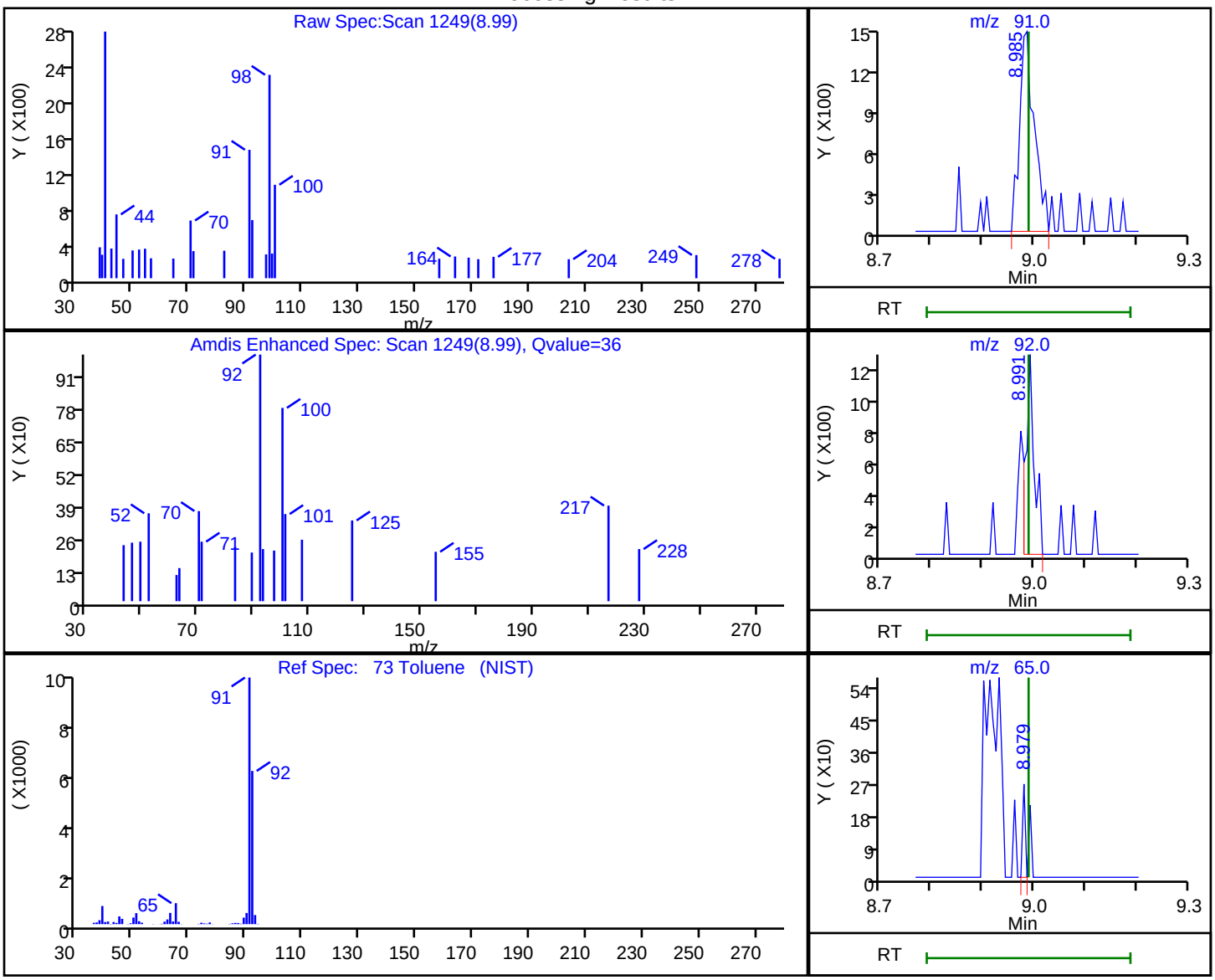
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030612.D				
Injection Date:	06-Mar-2020 13:03:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-1	Lab Sample ID:	180-102790-1		
Client ID:	HD-COD-SW-6-0/1-0				
Operator ID:	10099	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

73 Toluene, CAS: 108-88-3

Processing Results



RT	Mass	Response	Amount
8.99	91.00	2874	0.244650
8.99	92.00	1402	
8.98	65.00	97	

Reviewer: gordonk, 06-Mar-2020 13:26:20

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

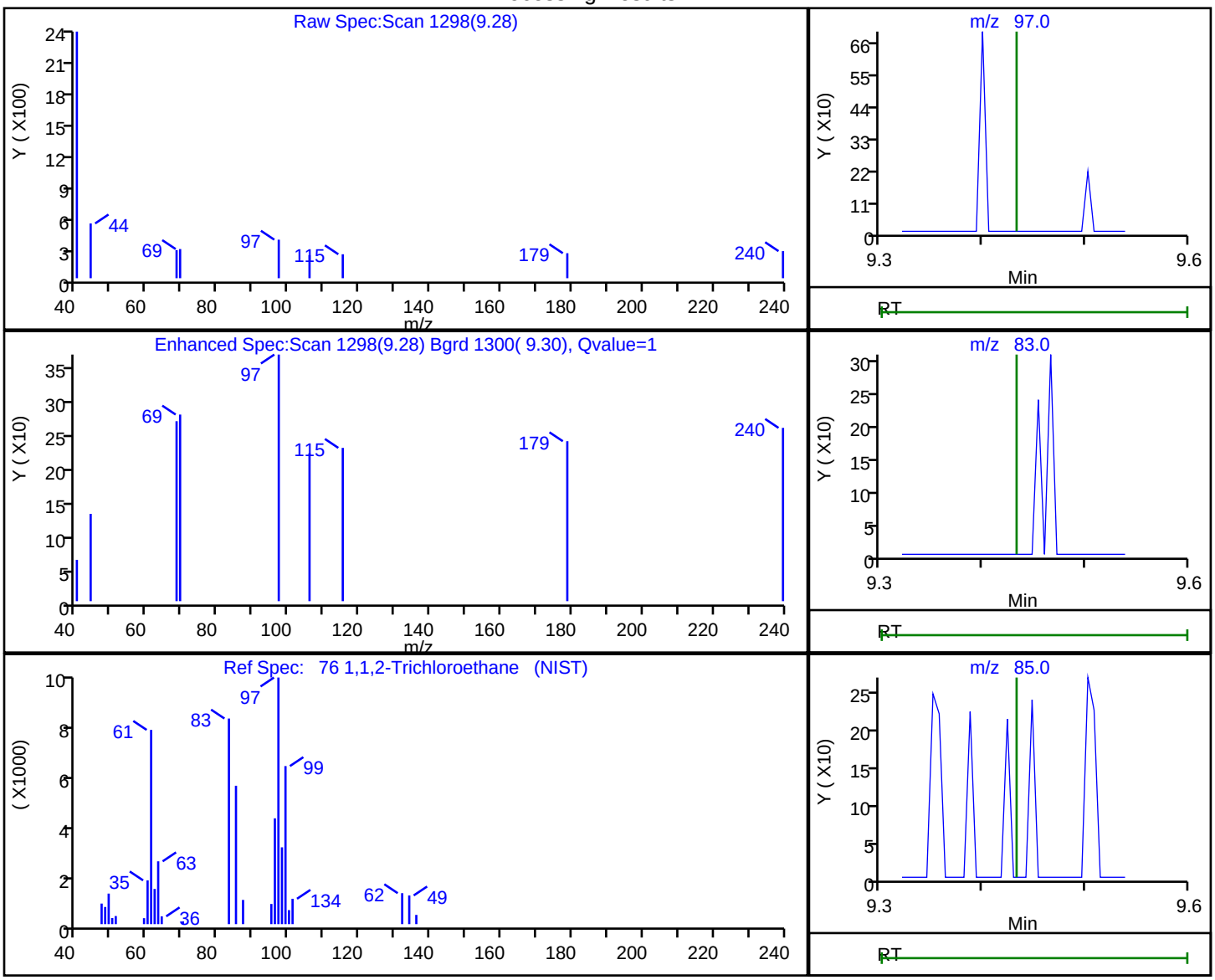
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030612.D				
Injection Date:	06-Mar-2020 13:03:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-1	Lab Sample ID:	180-102790-1		
Client ID:	HD-COD-SW-6-0/1-0				
Operator ID:	10099	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

76 1,1,2-Trichloroethane, CAS: 79-00-5

Processing Results



RT	Mass	Response	Amount
9.28	97.00	419	0.170938
9.43	83.00	0	
9.43	85.00	0	

Reviewer: gordonk, 06-Mar-2020 13:26:21

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

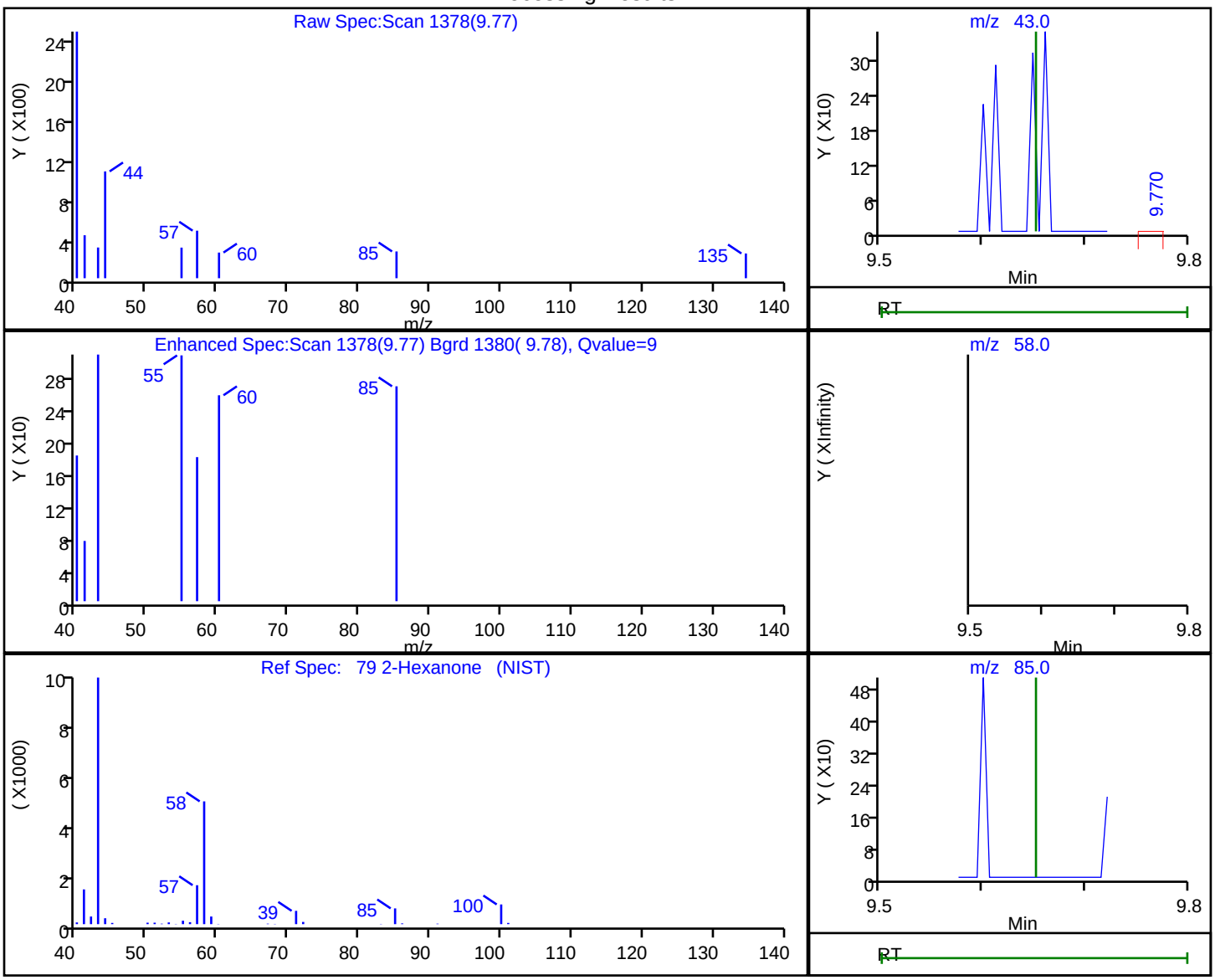
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030612.D				
Injection Date:	06-Mar-2020 13:03:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-1	Lab Sample ID:	180-102790-1		
Client ID:	HD-COD-SW-6-0/1-0				
Operator ID:	10099	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

79 2-Hexanone, CAS: 591-78-6

Processing Results



RT	Mass	Response	Amount
9.77	43.00	269	0.223325
9.65	58.00	0	
9.65	85.00	0	

Reviewer: gordonk, 06-Mar-2020 13:26:25

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

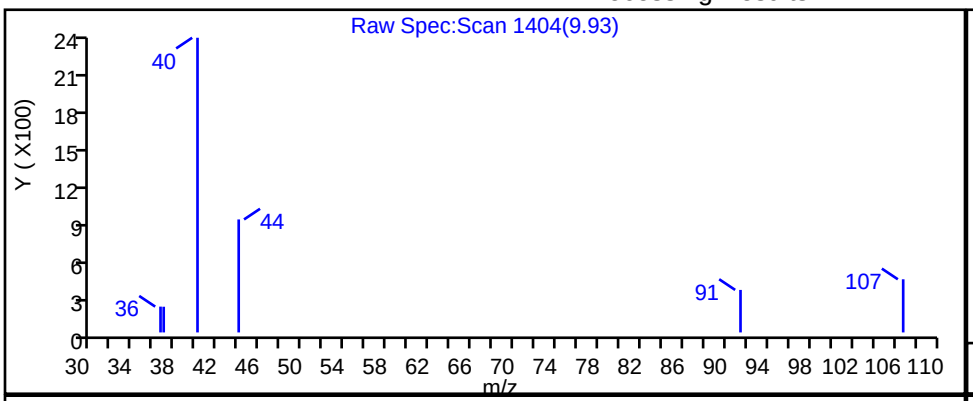
User Disabled Compound Report

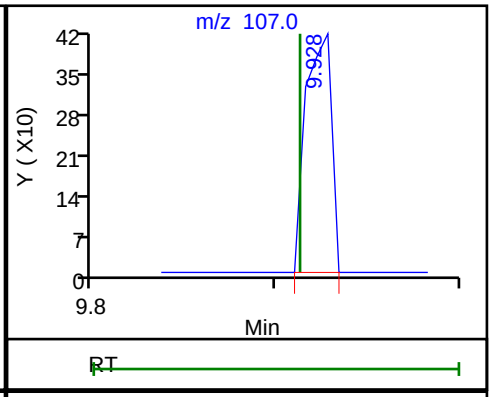
Eurofins TestAmerica, Pittsburgh

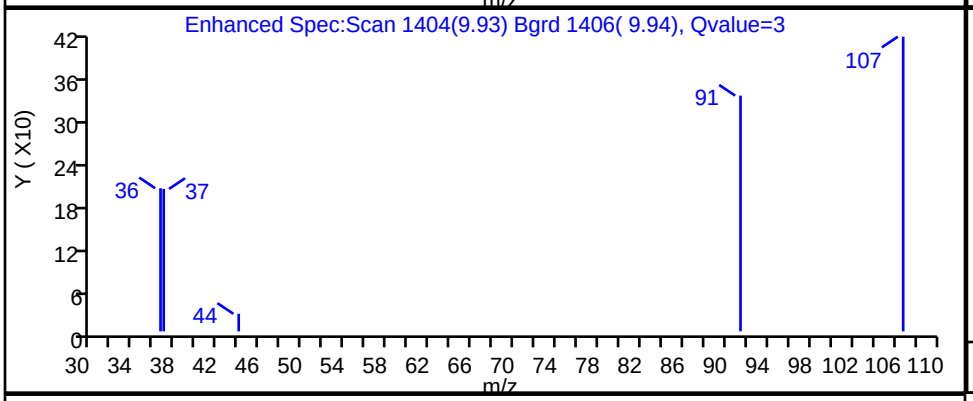
Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030612.D				
Injection Date:	06-Mar-2020 13:03:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-1	Lab Sample ID:	180-102790-1		
Client ID:	HD-COD-SW-6-0/1-0				
Operator ID:	10099	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

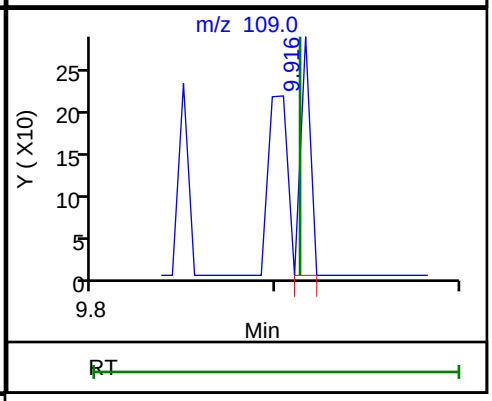
82 Ethylene Dibromide, CAS: 106-93-4

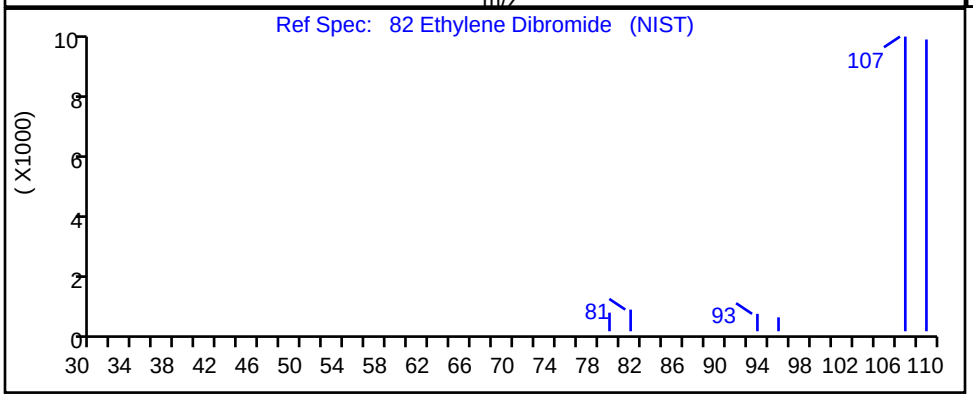
Processing Results











RT	Mass	Response	Amount
9.93	107.00	411	0.197148
9.92	109.00	104	

Reviewer: gordonk, 06-Mar-2020 13:26:25

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

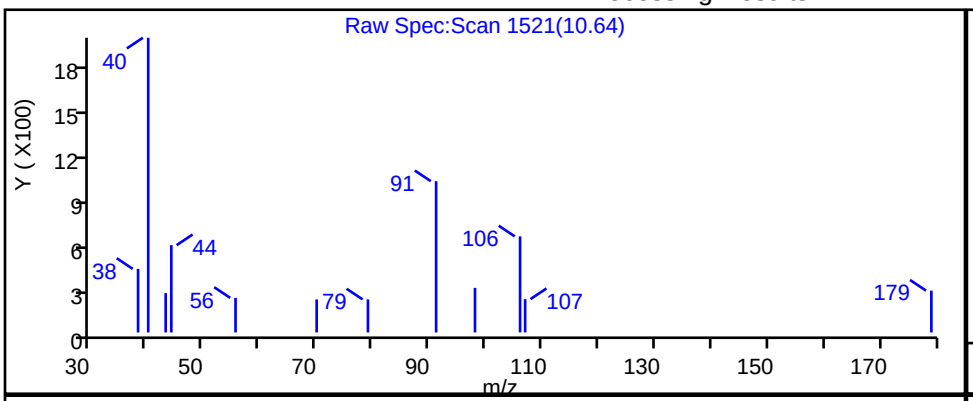
User Disabled Compound Report

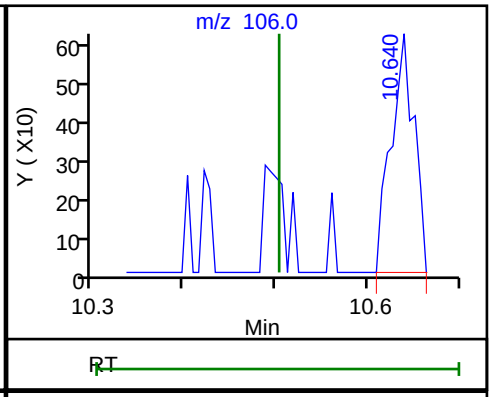
Eurofins TestAmerica, Pittsburgh

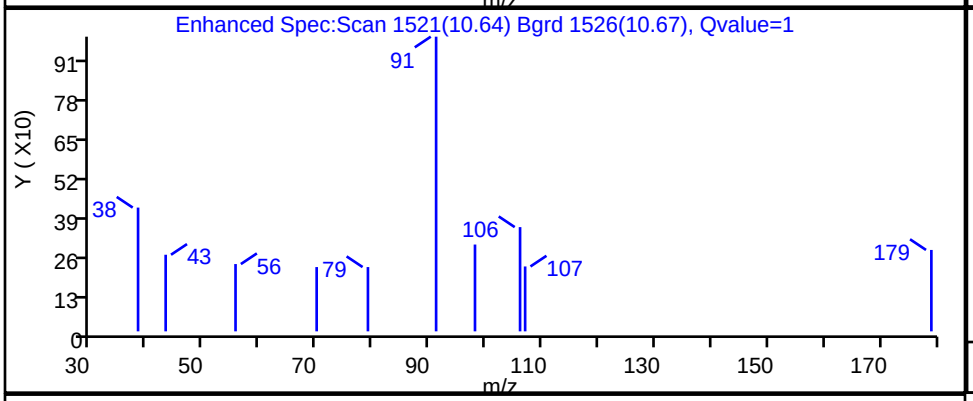
Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030612.D				
Injection Date:	06-Mar-2020 13:03:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-1	Lab Sample ID:	180-102790-1		
Client ID:	HD-COD-SW-6-0/1-0				
Operator ID:	10099	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

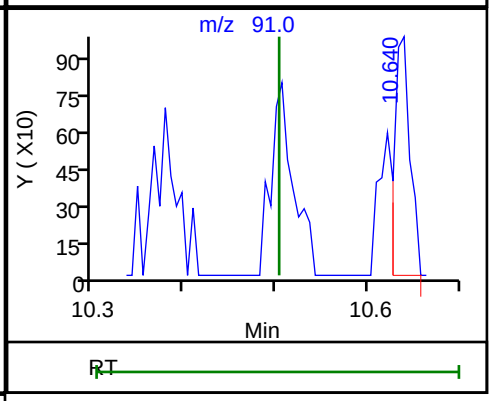
87 Ethylbenzene, CAS: 100-41-4

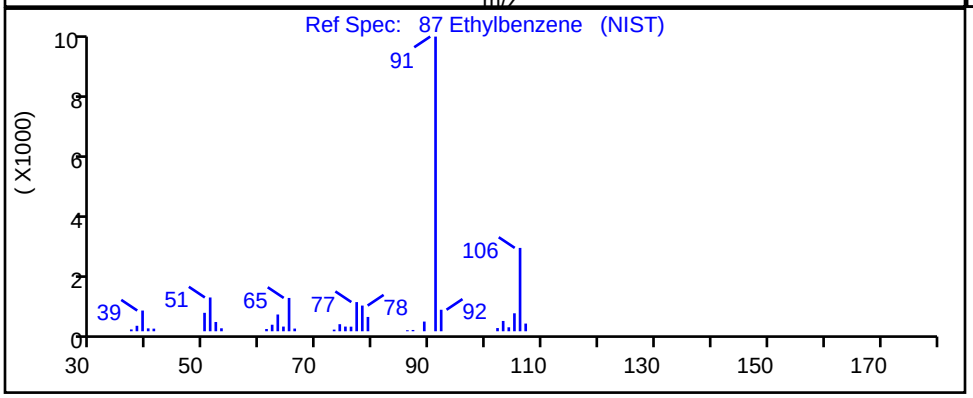
Processing Results











RT	Mass	Response	Amount
10.64	106.00	1092	0.229828
10.64	91.00	1132	

Reviewer: gordonk, 06-Mar-2020 13:26:29

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

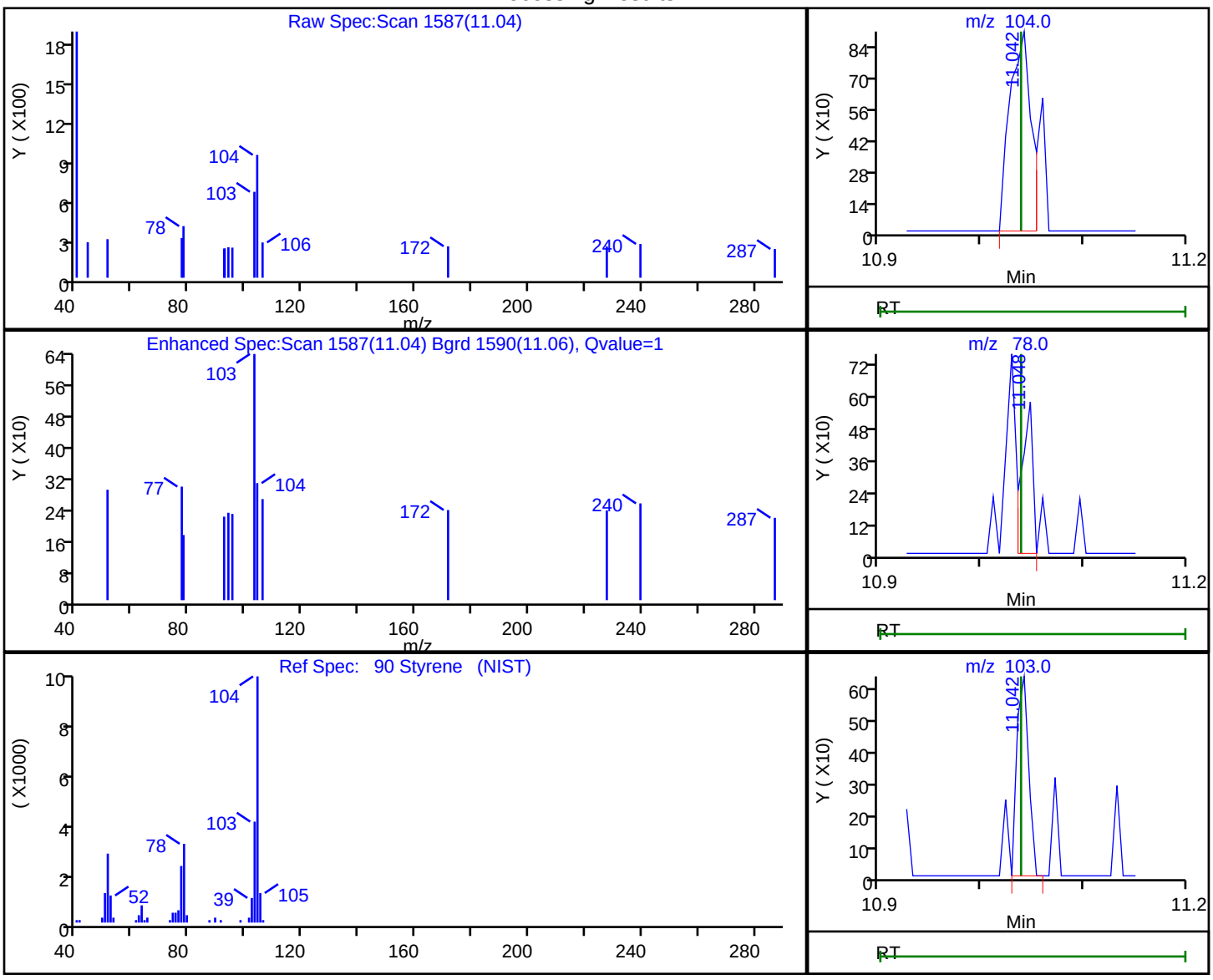
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030612.D				
Injection Date:	06-Mar-2020 13:03:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-1	Lab Sample ID:	180-102790-1		
Client ID:	HD-COD-SW-6-0/1-0				
Operator ID:	10099	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

90 Styrene, CAS: 100-42-5

Processing Results



RT	Mass	Response	Amount
11.04	104.00	1328	0.138089
11.05	78.00	436	
11.04	103.00	505	

Reviewer: gordonk, 06-Mar-2020 13:26:32

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

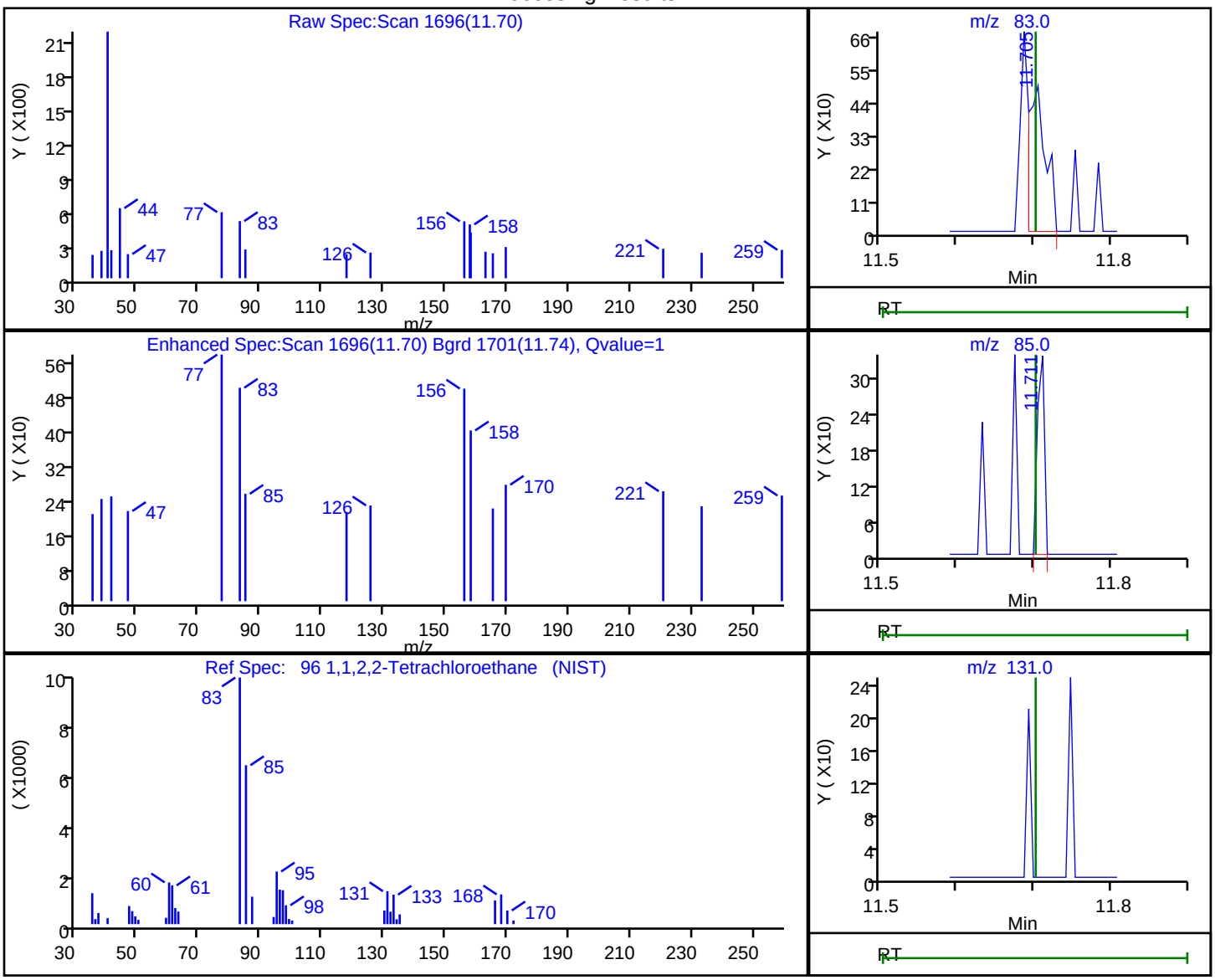
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030612.D				
Injection Date:	06-Mar-2020 13:03:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-1	Lab Sample ID:	180-102790-1		
Client ID:	HD-COD-SW-6-0/1-0				
Operator ID:	10099	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

96 1,1,2,2-Tetrachloroethane, CAS: 79-34-5

Processing Results



RT	Mass	Response	Amount
11.70	83.00	755	0.257208
11.71	85.00	211	
11.70	131.00	0	

Reviewer: gordonk, 06-Mar-2020 13:26:33

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

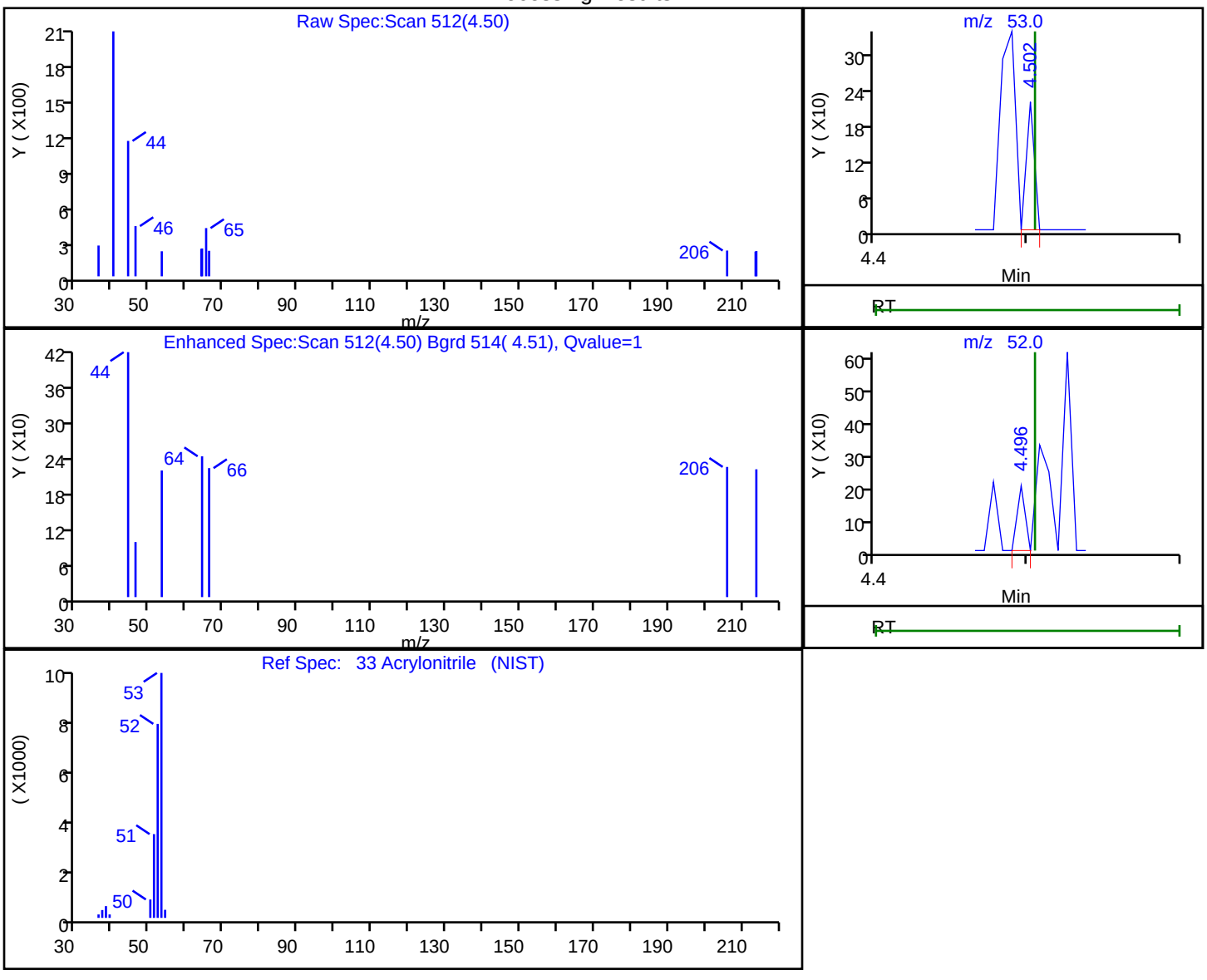
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030612.D				
Injection Date:	06-Mar-2020 13:03:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-1	Lab Sample ID:	180-102790-1		
Client ID:	HD-COD-SW-6-0/1-0				
Operator ID:	10099	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

33 Acrylonitrile, CAS: 107-13-1

Processing Results



RT	Mass	Response	Amount
4.50	53.00	78	0.143796
4.50	52.00	74	

Reviewer: gordonk, 06-Mar-2020 13:26:02

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.: 180-102790-1

SDG No.:

Client Sample ID: HD-COD-SW-7-0/1-0 Lab Sample ID: 180-102790-2

Matrix: Water Lab File ID: 6030613.D

Analysis Method: EPA 8260C Date Collected: 02/24/2020 12:45

Sample wt/vol: 5(mL) Date Analyzed: 03/06/2020 13:29

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.: 309079 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	0.40
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	^c	1.0	0.59
75-34-3	1,1-Dichloroethane	ND		1.0	0.31
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	^c	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	^c	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.: 180-102790-1

SDG No.:

Client Sample ID: HD-COD-SW-7-0/1-0 Lab Sample ID: 180-102790-2

Matrix: Water Lab File ID: 6030613.D

Analysis Method: EPA 8260C Date Collected: 02/24/2020 12:45

Sample wt/vol: 5(mL) Date Analyzed: 03/06/2020 13:29

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.: 309079 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	^c	70-150
2037-26-5	Toluene-d8 (Surr)	89		78-128
460-00-4	4-Bromofluorobenzene (Surr)	96		64-123
1868-53-7	Dibromofluoromethane (Surr)	92		75-147

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030613.D
Lims ID: 180-102790-A-2
Client ID: HD-COD-SW-7-0/1-0
Sample Type: Client
Inject. Date: 06-Mar-2020 13:29:30 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-0031064-014
Operator ID: 10099 Instrument ID: CHHP6

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 09-Mar-2020 07:40:36 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0332

First Level Reviewer: gordonk Date: 09-Mar-2020 07:40:36

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.247	4.249	-0.002	94	106856	1000.0	
* 2 Fluorobenzene (IS)	96	7.264	7.261	0.003	100	433740	50.0	
* 3 Chlorobenzene-d5	119	10.373	10.375	-0.002	86	99870	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.721	12.717	0.004	99	124526	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.534	6.537	-0.003	91	80791	45.9	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.905	6.908	-0.003	97	109979	48.1	
$ 7 Toluene-d8 (Surr)	98	8.919	8.915	0.004	92	425747	44.7	
$ 8 4-Bromofluorobenzene (Surr	95	11.559	11.562	-0.003	0	158178	48.0	
12 Chloromethane	50		1.828				ND	
13 Vinyl chloride	62		1.938				ND	
15 Bromomethane	94		2.260				ND	
16 Chloroethane	64		2.382				ND	
22 1,1-Dichloroethene	96		3.325				ND	
24 Acetone	43	3.413	3.422	-0.009	71	7048	12.7	
26 Carbon disulfide	76	3.620	3.617	0.003	55	3074	1.23	M
31 Methylene Chloride	84		4.115				ND	
33 Acrylonitrile	53		4.505				ND	
34 trans-1,2-Dichloroethene	96		4.529				ND	
35 Methyl tert-butyl ether	73		4.553				ND	
37 1,1-Dichloroethane	63		5.168				ND	
43 cis-1,2-Dichloroethene	96		5.922				ND	
44 2-Butanone (MEK)	43		5.940				ND	
48 Chlorobromomethane	128		6.208				ND	
50 Chloroform	83		6.354				ND	
51 1,1,1-Trichloroethane	97		6.512				ND	
53 Carbon tetrachloride	117		6.689				ND	
56 Benzene	78		6.914				ND	
57 1,2-Dichloroethane	62		6.993				ND	
61 Trichloroethene	130	7.653	7.650	0.003	5	741	0.4067	
64 1,2-Dichloropropane	63		7.924				ND	U
68 Dichlorobromomethane	83		8.210				ND	
71 cis-1,3-Dichloropropene	75		8.660				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
72 4-Methyl-2-pentanone (MIBK	43		8.818				ND	U
73 Toluene	91	8.986	8.988	-0.002	98	4003	0.3414	
74 trans-1,3-Dichloropropene	75		9.238				ND	
76 1,1,2-Trichloroethane	97		9.432				ND	
77 Tetrachloroethene	164		9.499				ND	
79 2-Hexanone	43		9.651				ND	
81 Chlorodibromomethane	129		9.803				ND	
82 Ethylene Dibromide	107		9.913				ND	
84 Chlorobenzene	112		10.406				ND	
86 1,1,1,2-Tetrachloroethane	131		10.497				ND	
87 Ethylbenzene	106		10.503				ND	
88 m-Xylene & p-Xylene	106		10.637				ND	
89 o-Xylene	106		11.020				ND	
90 Styrene	104		11.038				ND	U
91 Bromoform	173		11.221				ND	
96 1,1,2,2-Tetrachloroethane	83		11.702				ND	
S 131 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

U - Marked Undetected

Reagents:

VOA8260INT_00104	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00104	Amount Added:	2.00	Units: uL	Run Reagent

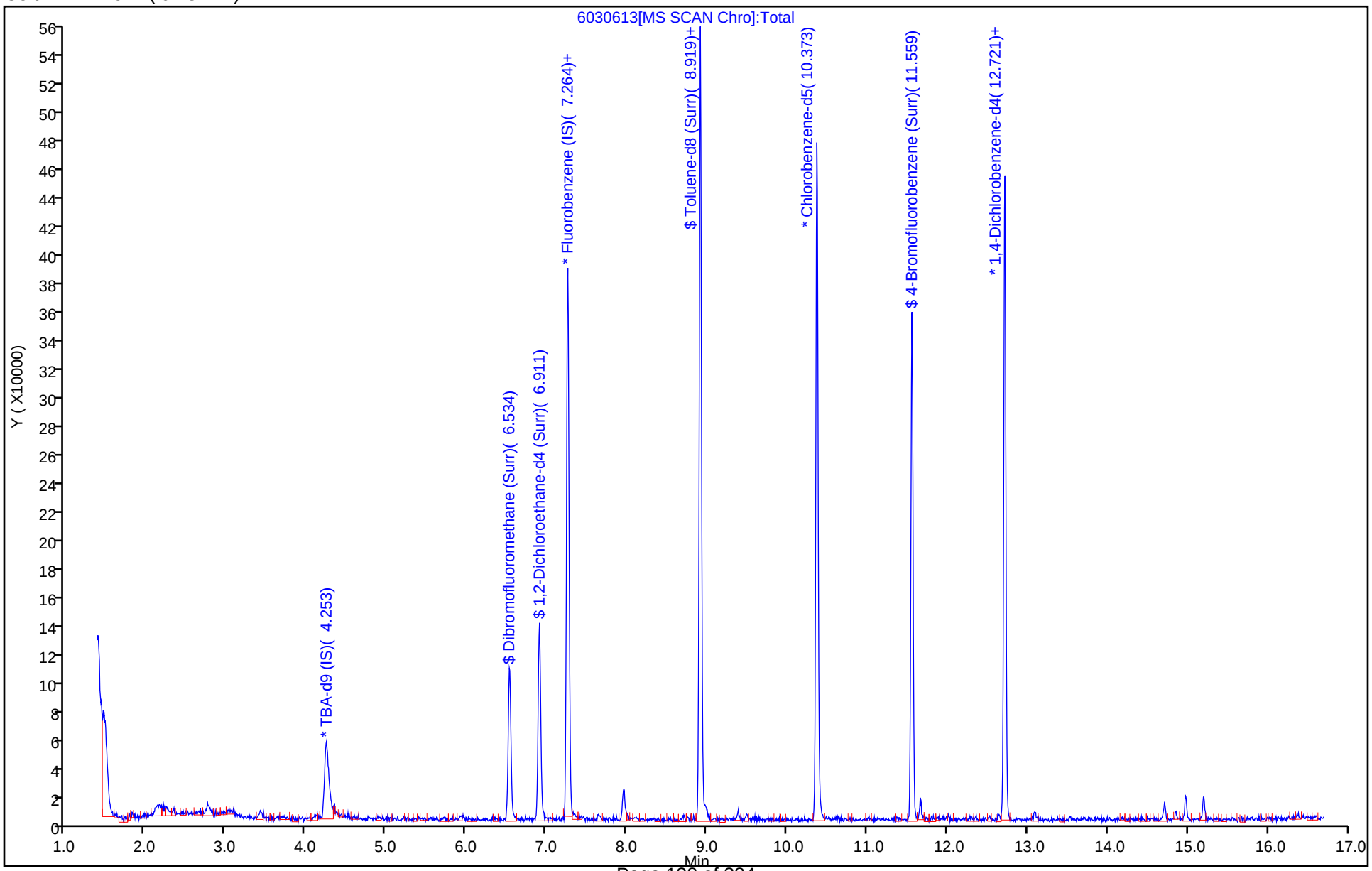
Report Date: 09-Mar-2020 07:40:36 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030613.D

Injection Date:	06-Mar-2020 13:29:30	Instrument ID:	CHHP6	Operator ID:	10099
Lims ID:	180-102790-A-2	Lab Sample ID:	180-102790-2	Worklist Smp#:	14
Client ID:	HD-COD-SW-7-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh

Recovery Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030613.D
Lims ID: 180-102790-A-2
Client ID: HD-COD-SW-7-0/1-0
Sample Type: Client
Inject. Date: 06-Mar-2020 13:29:30 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-0031064-014
Operator ID: 10099 Instrument ID: CHHP6

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 09-Mar-2020 07:40:36 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0332

First Level Reviewer: gordonk Date: 09-Mar-2020 07:40:36

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	50.0	45.9	91.72
$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	48.1	96.28
$ 7 Toluene-d8 (Surr)	50.0	44.7	89.46
$ 8 4-Bromofluorobenzene (Surr)	50.0	48.0	95.90

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Pittsburgh

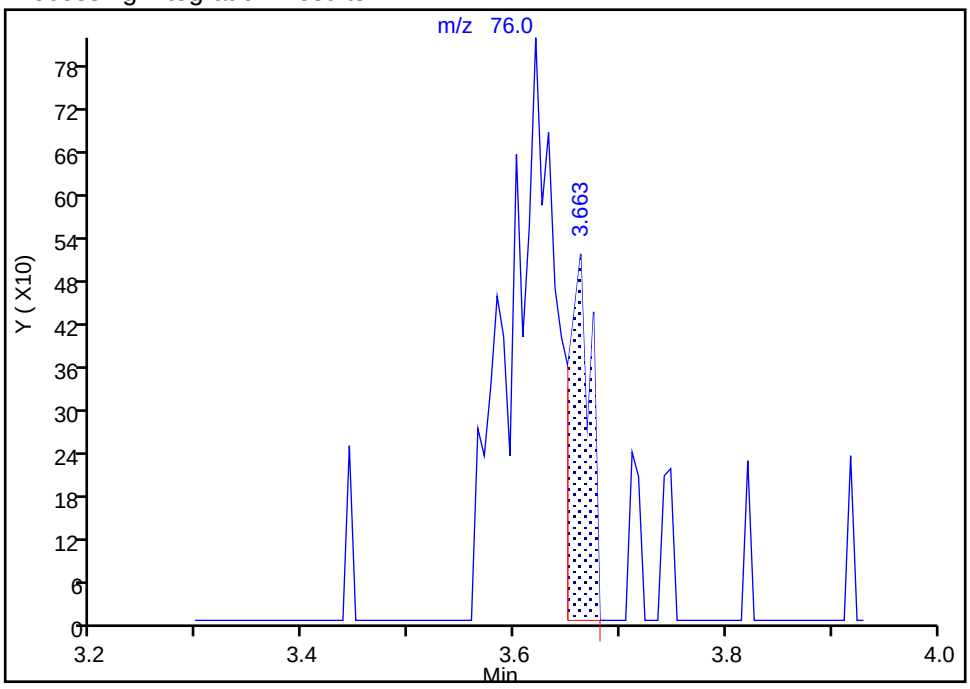
Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030613.D		
Injection Date:	06-Mar-2020 13:29:30	Instrument ID:	CHHP6
Lims ID:	180-102790-A-2	Lab Sample ID:	180-102790-2
Client ID:	HD-COD-SW-7-0/1-0		
Operator ID:	10099	ALS Bottle#:	13 Worklist Smp#: 14
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

26 Carbon disulfide, CAS: 75-15-0

Signal: 1

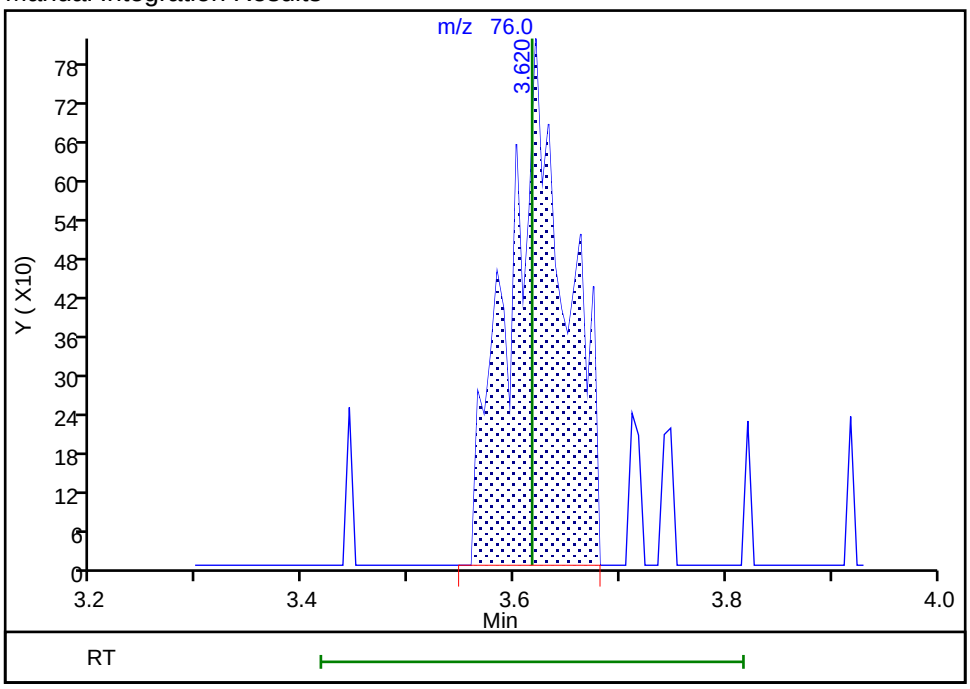
Processing Integration Results

RT: 3.66
Area: 724
Amount: 0.290087
Amount Units: ng



Manual Integration Results

RT: 3.62
Area: 3074
Amount: 1.231669
Amount Units: ng



Reviewer: gordonk, 09-Mar-2020 07:40:24

Audit Action: Manually Integrated Audit Reason: Poor chromatography

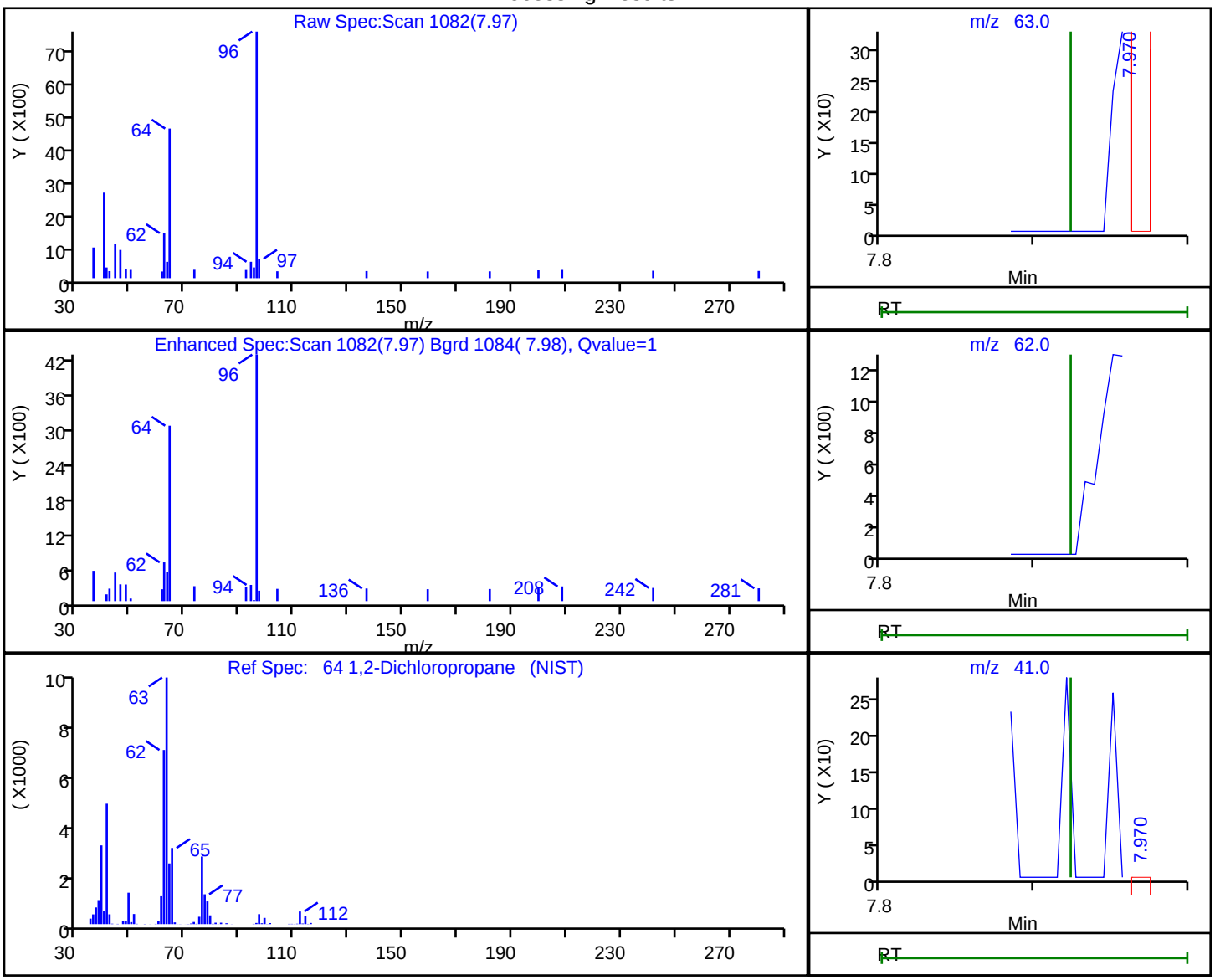
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030613.D				
Injection Date:	06-Mar-2020 13:29:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-2	Lab Sample ID:	180-102790-2		
Client ID:	HD-COD-SW-7-0/1-0				
Operator ID:	10099	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

64 1,2-Dichloropropane, CAS: 78-87-5

Processing Results



RT	Mass	Response	Amount
7.97	63.00	288	0.146946
7.96	62.00	3610	
7.97	41.00	120	

Reviewer: gordonk, 09-Mar-2020 07:40:05

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

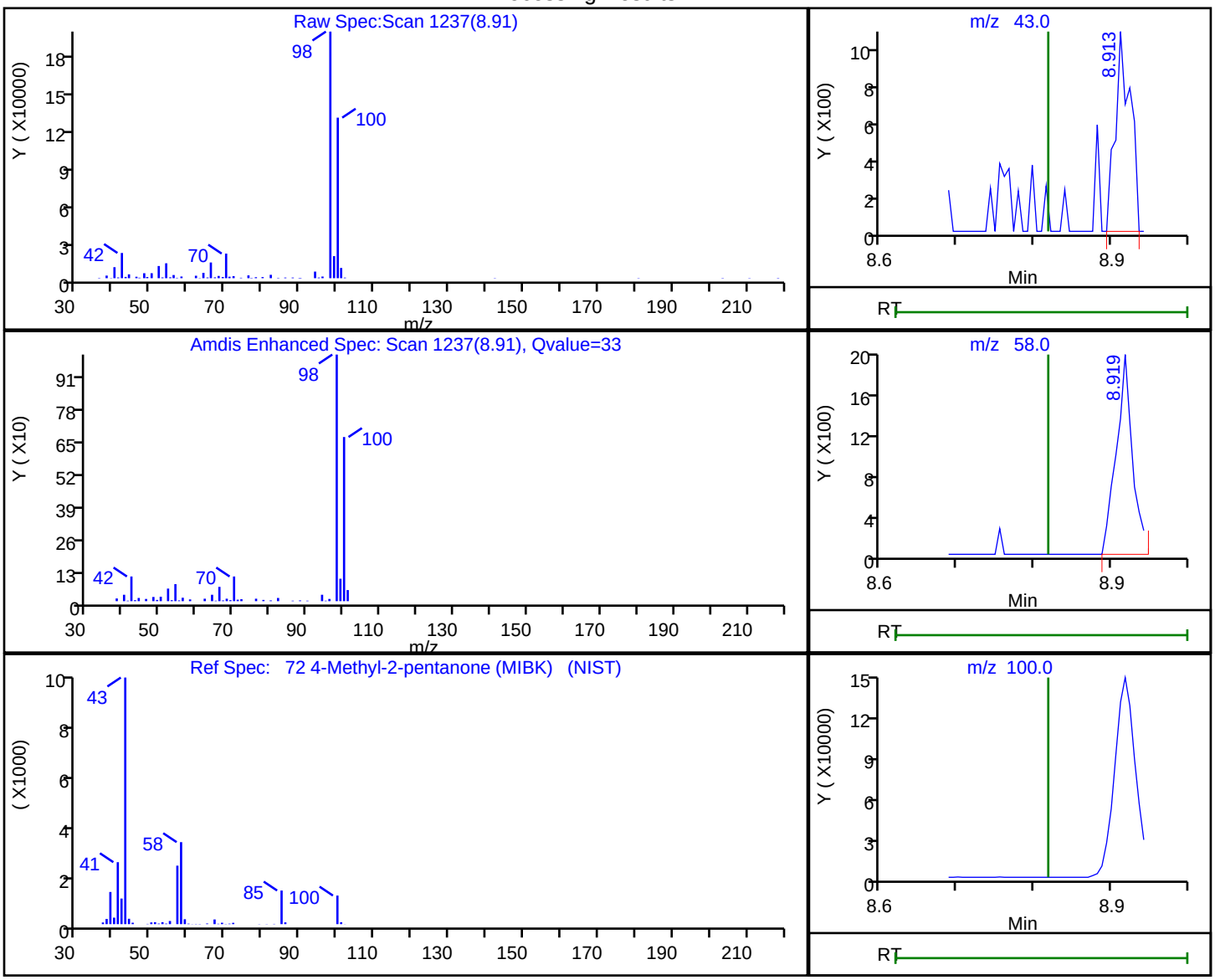
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030613.D				
Injection Date:	06-Mar-2020 13:29:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-2	Lab Sample ID:	180-102790-2		
Client ID:	HD-COD-SW-7-0/1-0				
Operator ID:	10099	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

72 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1

Processing Results



RT	Mass	Response	Amount
8.91	43.00	1384	0.813237
8.92	58.00	2905	
8.92	100.00	282597	

Reviewer: gordonk, 09-Mar-2020 07:40:04

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

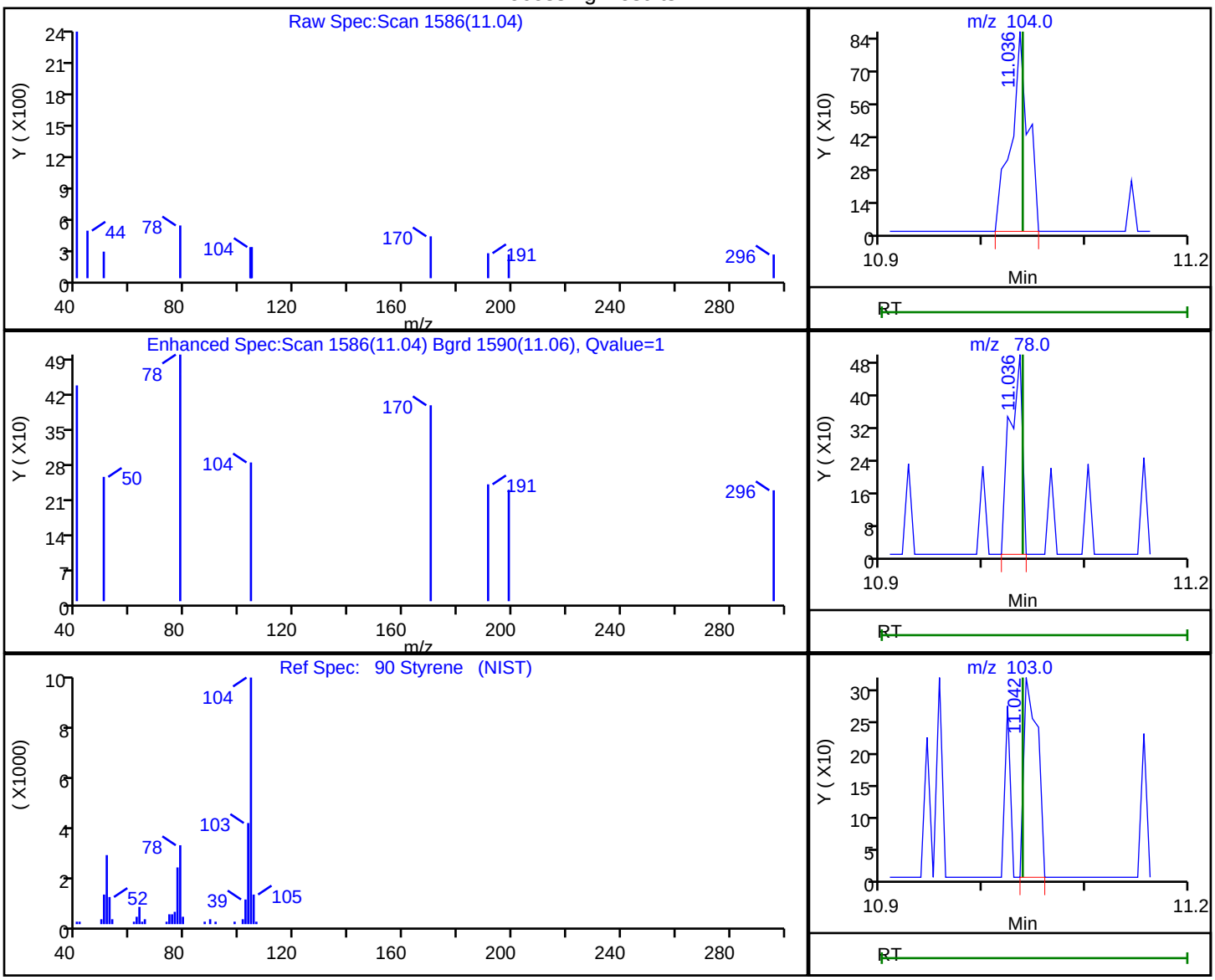
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030613.D				
Injection Date:	06-Mar-2020 13:29:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-2	Lab Sample ID:	180-102790-2		
Client ID:	HD-COD-SW-7-0/1-0				
Operator ID:	10099	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

90 Styrene, CAS: 100-42-5

Processing Results



RT	Mass	Response	Amount
11.04	104.00	998	0.103957
11.04	78.00	420	
11.04	103.00	295	

Reviewer: gordonk, 09-Mar-2020 07:39:58

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.: 180-102790-1

SDG No.:

Client Sample ID: HD-COD-SW-8-0/1-0 Lab Sample ID: 180-102790-3

Matrix: Water Lab File ID: 6030614.D

Analysis Method: EPA 8260C Date Collected: 02/24/2020 10:40

Sample wt/vol: 5(mL) Date Analyzed: 03/06/2020 13:57

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.: 309079 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	0.40
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	^c	1.0	0.59
75-34-3	1,1-Dichloroethane	ND		1.0	0.31
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	^c	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	^c	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.: 180-102790-1

SDG No.:

Client Sample ID: HD-COD-SW-8-0/1-0 Lab Sample ID: 180-102790-3

Matrix: Water Lab File ID: 6030614.D

Analysis Method: EPA 8260C Date Collected: 02/24/2020 10:40

Sample wt/vol: 5(mL) Date Analyzed: 03/06/2020 13:57

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.: 309079 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)	88		78-128
460-00-4	4-Bromofluorobenzene (Surr)	92		64-123
1868-53-7	Dibromofluoromethane (Surr)	91		75-147

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030614.D
Lims ID: 180-102790-A-3
Client ID: HD-COD-SW-8-0/1-0
Sample Type: Client
Inject. Date: 06-Mar-2020 13:57:30 ALS Bottle#: 14 Worklist Smp#: 15
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-0031064-015
Operator ID: 10099 Instrument ID: CHHP6

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 09-Mar-2020 07:45:27 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0332

First Level Reviewer: gordonk Date: 09-Mar-2020 07:45:27

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.247	4.249	-0.002	94	115067	1000.0	
* 2 Fluorobenzene (IS)	96	7.265	7.261	0.004	100	444448	50.0	
* 3 Chlorobenzene-d5	119	10.373	10.375	-0.002	86	103109	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.715	12.717	-0.002	98	125992	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.535	6.537	-0.002	91	82374	45.6	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.906	6.908	-0.002	97	111708	47.7	
$ 7 Toluene-d8 (Surr)	98	8.919	8.915	0.004	92	434342	44.2	
$ 8 4-Bromofluorobenzene (Surr	95	11.560	11.562	-0.002	0	157422	46.2	
12 Chloromethane	50		1.828				ND	
13 Vinyl chloride	62		1.938				ND	
15 Bromomethane	94		2.260				ND	
16 Chloroethane	64		2.382				ND	
22 1,1-Dichloroethene	96		3.325				ND	
24 Acetone	43	3.432	3.422	0.010	61	7871	13.8	
26 Carbon disulfide	76		3.617				ND	
31 Methylene Chloride	84		4.115				ND	
33 Acrylonitrile	53		4.505				ND	
34 trans-1,2-Dichloroethene	96		4.529				ND	
35 Methyl tert-butyl ether	73		4.553				ND	
37 1,1-Dichloroethane	63		5.168				ND	
43 cis-1,2-Dichloroethene	96	5.932	5.922	0.010	1	1880	0.8749	
44 2-Butanone (MEK)	43		5.940				ND	
48 Chlorobromomethane	128		6.208				ND	
50 Chloroform	83		6.354				ND	
51 1,1,1-Trichloroethane	97		6.512				ND	
53 Carbon tetrachloride	117		6.689				ND	
56 Benzene	78		6.914				ND	U
57 1,2-Dichloroethane	62		6.993				ND	
61 Trichloroethene	130	7.654	7.650	0.004	42	957	0.5126	
64 1,2-Dichloropropane	63		7.924				ND	
68 Dichlorobromomethane	83		8.210				ND	
71 cis-1,3-Dichloropropene	75		8.660				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
72 4-Methyl-2-pentanone (MIBK	43		8.818				ND	U
73 Toluene	91		8.988				ND	
74 trans-1,3-Dichloropropene	75		9.238				ND	
76 1,1,2-Trichloroethane	97		9.432				ND	
77 Tetrachloroethene	164		9.499				ND	
79 2-Hexanone	43		9.651				ND	
81 Chlorodibromomethane	129		9.803				ND	
82 Ethylene Dibromide	107		9.913				ND	
84 Chlorobenzene	112		10.406				ND	
86 1,1,1,2-Tetrachloroethane	131		10.497				ND	
87 Ethylbenzene	106		10.503				ND	
88 m-Xylene & p-Xylene	106		10.637				ND	
89 o-Xylene	106		11.020				ND	
90 Styrene	104		11.038				ND	
91 Bromoform	173		11.221				ND	
96 1,1,2,2-Tetrachloroethane	83		11.702				ND	
S 131 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

VOA8260INT_00104	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00104	Amount Added:	2.00	Units: uL	Run Reagent

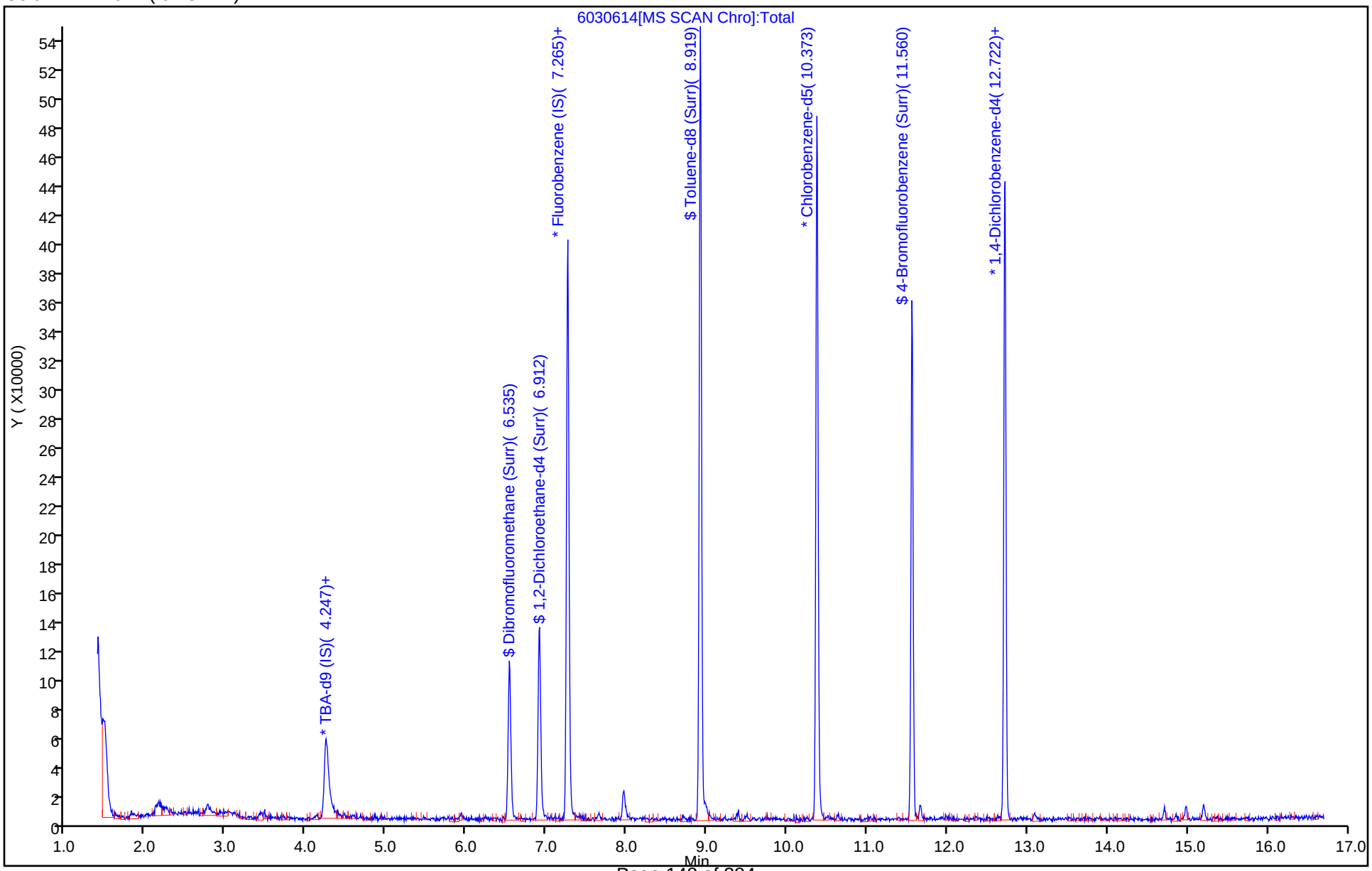
Report Date: 09-Mar-2020 07:45:27 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030614.D

Injection Date:	06-Mar-2020 13:57:30	Instrument ID:	CHHP6	Operator ID:	10099
Lims ID:	180-102790-A-3	Lab Sample ID:	180-102790-3	Worklist Smp#:	15
Client ID:	HD-COD-SW-8-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Recovery Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030614.D
Lims ID: 180-102790-A-3
Client ID: HD-COD-SW-8-0/1-0
Sample Type: Client
Inject. Date: 06-Mar-2020 13:57:30 ALS Bottle#: 14 Worklist Smp#: 15
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-0031064-015
Operator ID: 10099 Instrument ID: CHHP6

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 09-Mar-2020 07:45:27 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0332

First Level Reviewer: gordonk Date: 09-Mar-2020 07:45:27

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	50.0	45.6	91.27
$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	47.7	95.44
$ 7 Toluene-d8 (Surr)	50.0	44.2	88.39
$ 8 4-Bromofluorobenzene (Surr)	50.0	46.2	92.44

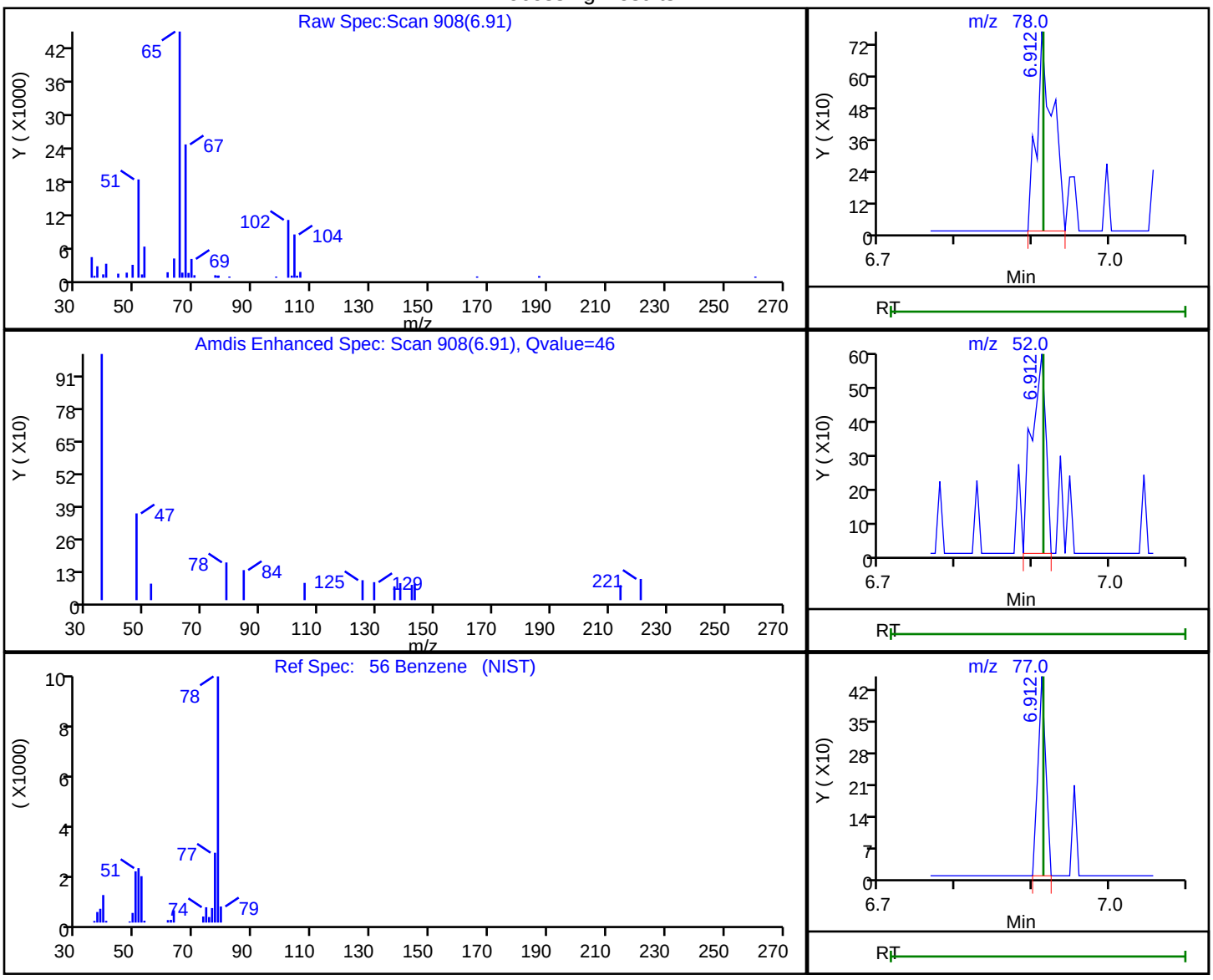
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030614.D				
Injection Date:	06-Mar-2020 13:57:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-3	Lab Sample ID:	180-102790-3		
Client ID:	HD-COD-SW-8-0/1-0				
Operator ID:	10099	ALS Bottle#:	14	Worklist Smp#:	15
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

56 Benzene, CAS: 71-43-2

Processing Results



RT	Mass	Response	Amount
6.91	78.00	1117	0.138499
6.91	52.00	759	
6.91	77.00	318	

Reviewer: gordonk, 09-Mar-2020 07:45:06

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

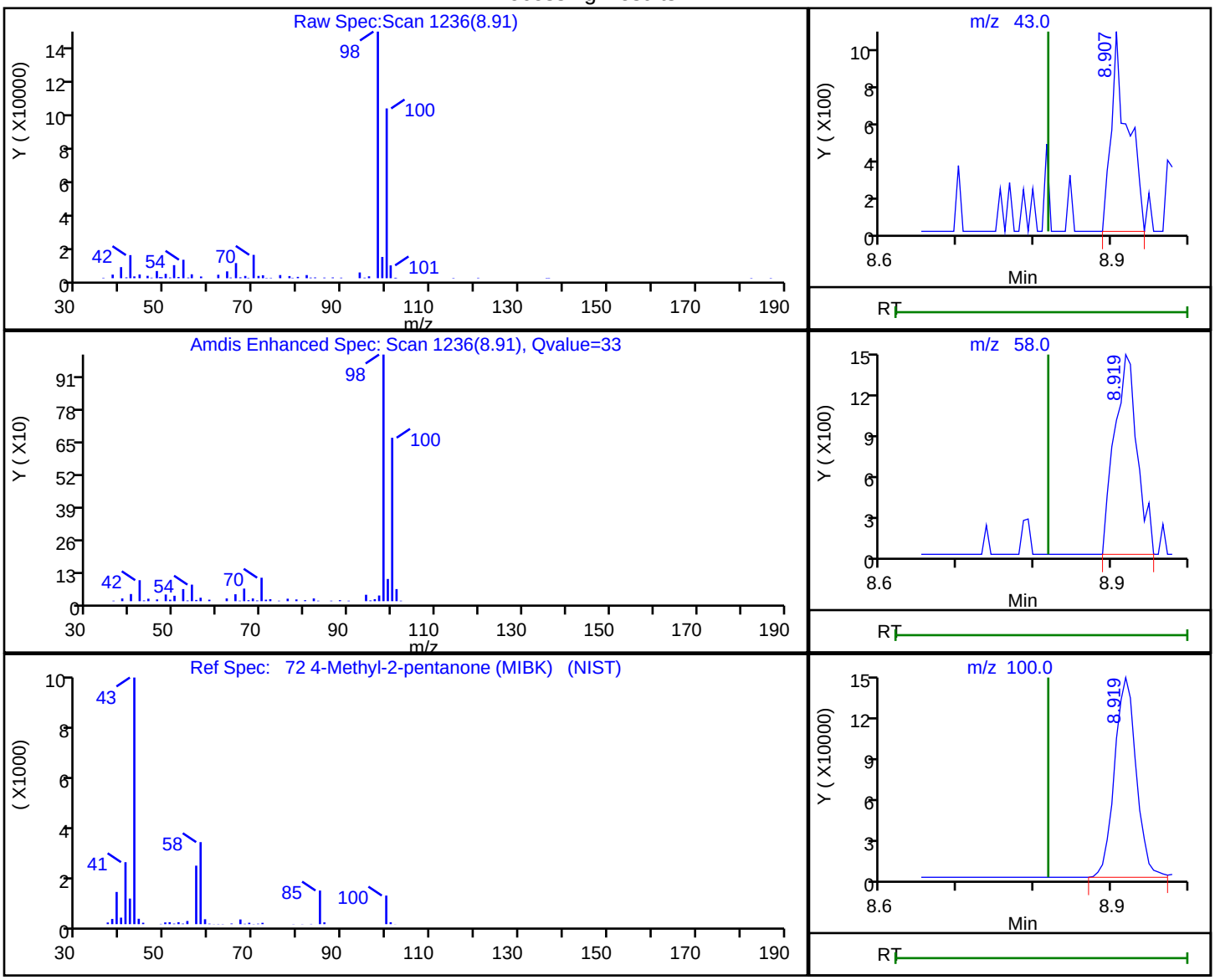
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030614.D				
Injection Date:	06-Mar-2020 13:57:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-3	Lab Sample ID:	180-102790-3		
Client ID:	HD-COD-SW-8-0/1-0				
Operator ID:	10099	ALS Bottle#:	14	Worklist Smp#:	15
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

72 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1

Processing Results



RT	Mass	Response	Amount
8.91	43.00	1589	0.904365
8.92	58.00	3042	
8.92	100.00	285023	

Reviewer: gordonk, 09-Mar-2020 07:45:16

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.: 180-102790-1

SDG No.:

Client Sample ID: HD-COD-SW-9-0/1-0 Lab Sample ID: 180-102790-4

Matrix: Water Lab File ID: 6030615.D

Analysis Method: EPA 8260C Date Collected: 02/24/2020 13:45

Sample wt/vol: 5(mL) Date Analyzed: 03/06/2020 14:25

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.: 309079 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	0.40
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	^c	1.0	0.59
75-34-3	1,1-Dichloroethane	ND		1.0	0.31
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	^c	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	^c	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.: 180-102790-1

SDG No.:

Client Sample ID: HD-COD-SW-9-0/1-0 Lab Sample ID: 180-102790-4

Matrix: Water Lab File ID: 6030615.D

Analysis Method: EPA 8260C Date Collected: 02/24/2020 13:45

Sample wt/vol: 5(mL) Date Analyzed: 03/06/2020 14:25

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.: 309079 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	^c	70-150
2037-26-5	Toluene-d8 (Surr)	92		78-128
460-00-4	4-Bromofluorobenzene (Surr)	95		64-123
1868-53-7	Dibromofluoromethane (Surr)	94		75-147

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030615.D
Lims ID: 180-102790-A-4
Client ID: HD-COD-SW-9-0/1-0
Sample Type: Client
Inject. Date: 06-Mar-2020 14:25:30 ALS Bottle#: 15 Worklist Smp#: 16
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-0031064-016
Operator ID: 10099 Instrument ID: CHHP6

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 09-Mar-2020 07:46:15 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0332

First Level Reviewer: gordonk Date: 09-Mar-2020 07:46:15

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.249	4.249	0.000	94	106223	1000.0	
* 2 Fluorobenzene (IS)	96	7.266	7.261	0.005	100	446061	50.0	
* 3 Chlorobenzene-d5	119	10.375	10.375	0.000	87	100317	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.723	12.717	0.006	96	126233	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.536	6.537	-0.001	91	85062	47.0	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.913	6.908	0.005	97	112693	48.0	
$ 7 Toluene-d8 (Surr)	98	8.921	8.915	0.006	92	439758	46.0	
$ 8 4-Bromofluorobenzene (Surr	95	11.561	11.562	-0.001	0	156603	47.3	
12 Chloromethane	50		1.828				ND	
13 Vinyl chloride	62		1.938				ND	
15 Bromomethane	94		2.260				ND	
16 Chloroethane	64		2.382				ND	
22 1,1-Dichloroethene	96		3.325				ND	
24 Acetone	43	3.434	3.422	0.012	89	8126	14.2	M
26 Carbon disulfide	76		3.617				ND	U
31 Methylene Chloride	84		4.115				ND	
33 Acrylonitrile	53		4.505				ND	
34 trans-1,2-Dichloroethene	96		4.529				ND	
35 Methyl tert-butyl ether	73		4.553				ND	
37 1,1-Dichloroethane	63		5.168				ND	
43 cis-1,2-Dichloroethene	96	5.928	5.922	0.006	1	907	0.4205	
44 2-Butanone (MEK)	43		5.940				ND	
48 Chlorobromomethane	128		6.208				ND	
50 Chloroform	83		6.354				ND	
51 1,1,1-Trichloroethane	97		6.512				ND	
53 Carbon tetrachloride	117		6.689				ND	
56 Benzene	78		6.914				ND	
57 1,2-Dichloroethane	62		6.993				ND	
61 Trichloroethene	130	7.650	7.650	0.000	25	1156	0.6170	
64 1,2-Dichloropropane	63		7.924				ND	
68 Dichlorobromomethane	83		8.210				ND	
71 cis-1,3-Dichloropropene	75		8.660				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
72 4-Methyl-2-pentanone (MIBK	43		8.818				ND	U
73 Toluene	91	8.988	8.988	0.000	93	8172	0.6938	
74 trans-1,3-Dichloropropene	75		9.238				ND	
76 1,1,2-Trichloroethane	97		9.432				ND	
77 Tetrachloroethene	164		9.499				ND	
79 2-Hexanone	43		9.651				ND	U
81 Chlorodibromomethane	129		9.803				ND	
82 Ethylene Dibromide	107		9.913				ND	
84 Chlorobenzene	112		10.406				ND	
86 1,1,1,2-Tetrachloroethane	131		10.497				ND	
87 Ethylbenzene	106		10.503				ND	
88 m-Xylene & p-Xylene	106		10.637				ND	
89 o-Xylene	106		11.020				ND	
90 Styrene	104		11.038				ND	
91 Bromoform	173		11.221				ND	
96 1,1,2,2-Tetrachloroethane	83		11.702				ND	
S 131 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

U - Marked Undetected

Reagents:

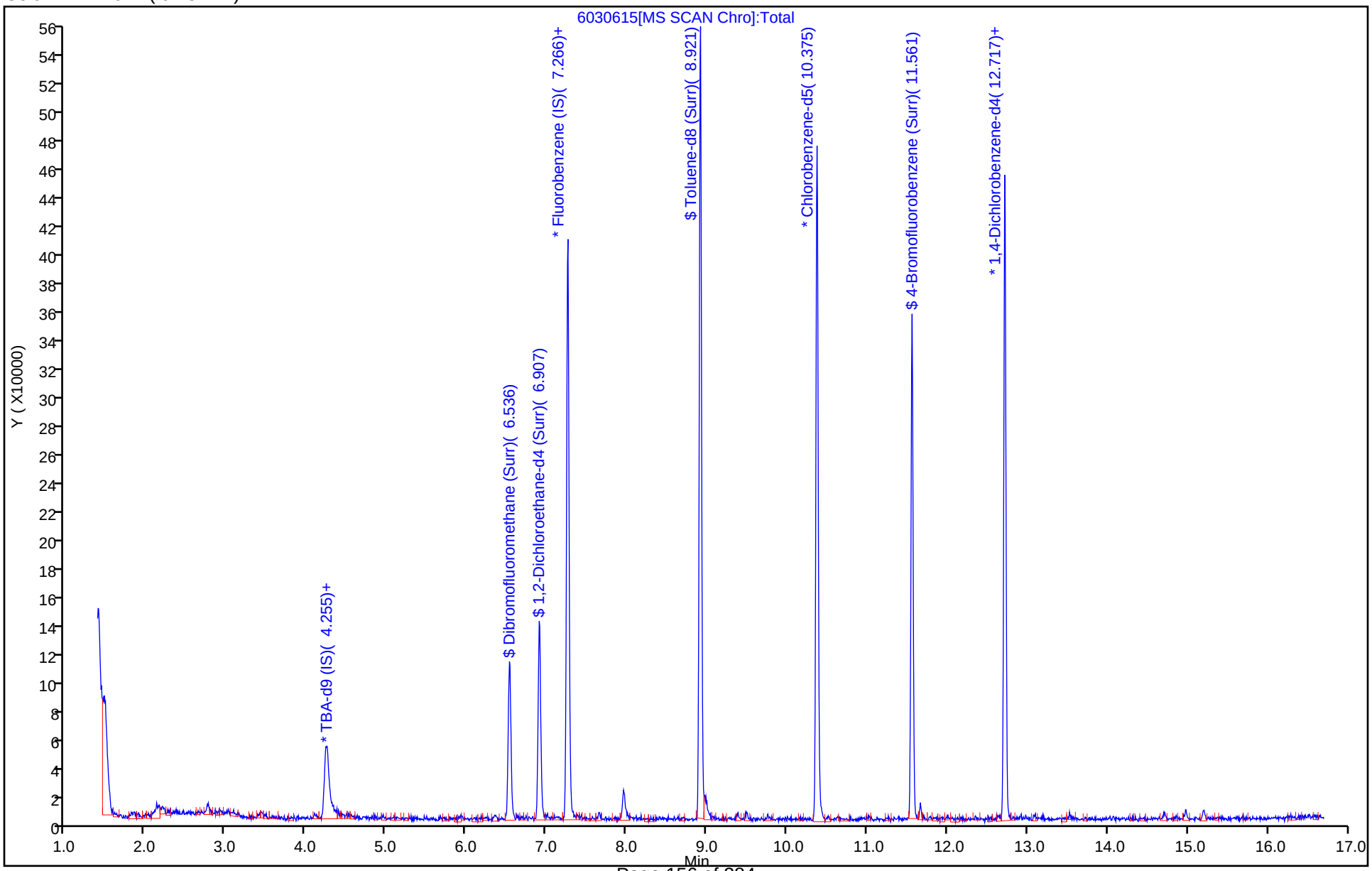
VOA8260INT_00104	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00104	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 09-Mar-2020 07:46:16 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030615.D				
Injection Date:	06-Mar-2020 14:25:30	Instrument ID:	CHHP6	Operator ID:	10099
Lims ID:	180-102790-A-4	Lab Sample ID:	180-102790-4	Worklist Smp#:	16
Client ID:	HD-COD-SW-9-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Recovery Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030615.D
Lims ID: 180-102790-A-4
Client ID: HD-COD-SW-9-0/1-0
Sample Type: Client
Inject. Date: 06-Mar-2020 14:25:30 ALS Bottle#: 15 Worklist Smp#: 16
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-0031064-016
Operator ID: 10099 Instrument ID: CHHP6

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 09-Mar-2020 07:46:15 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0332

First Level Reviewer: gordonk Date: 09-Mar-2020 07:46:15

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	50.0	47.0	93.90
$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	48.0	95.93
$ 7 Toluene-d8 (Surr)	50.0	46.0	91.99
$ 8 4-Bromofluorobenzene (Surr)	50.0	47.3	94.52

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Pittsburgh

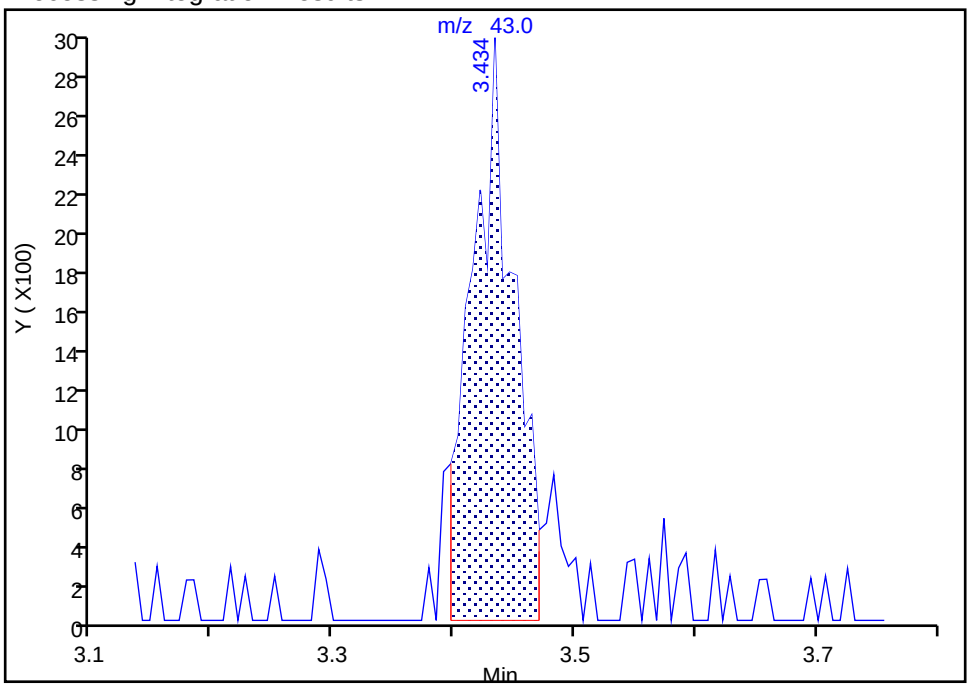
Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030615.D		
Injection Date:	06-Mar-2020 14:25:30	Instrument ID:	CHHP6
Lims ID:	180-102790-A-4	Lab Sample ID:	180-102790-4
Client ID:	HD-COD-SW-9-0/1-0		
Operator ID:	10099	ALS Bottle#:	15 Worklist Smp#: 16
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

24 Acetone, CAS: 67-64-1

Signal: 1

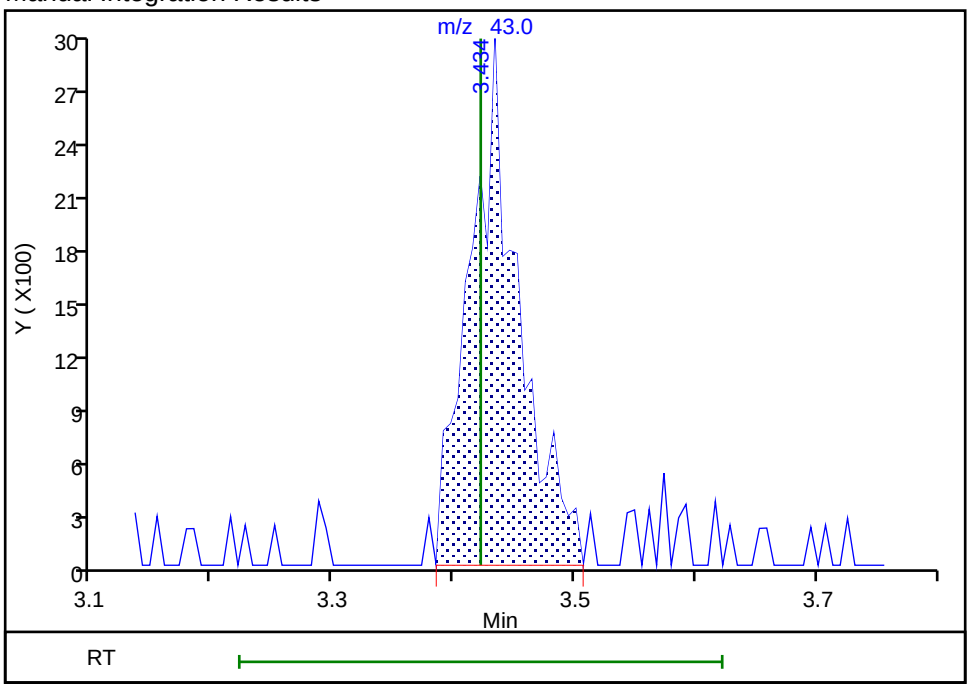
Processing Integration Results

RT: 3.43
Area: 7068
Amount: 12.362044
Amount Units: ng



Manual Integration Results

RT: 3.43
Area: 8126
Amount: 14.212503
Amount Units: ng



Reviewer: gordonk, 09-Mar-2020 07:46:08

Audit Action: Manually Integrated Audit Reason: Poor chromatography

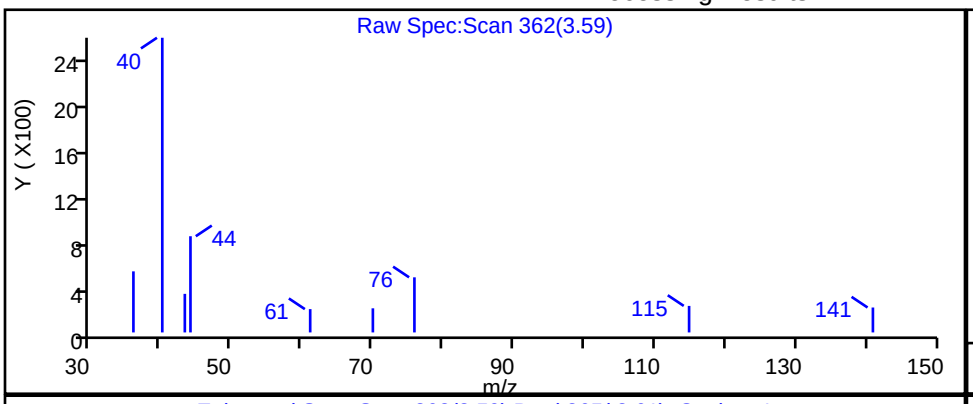
User Disabled Compound Report

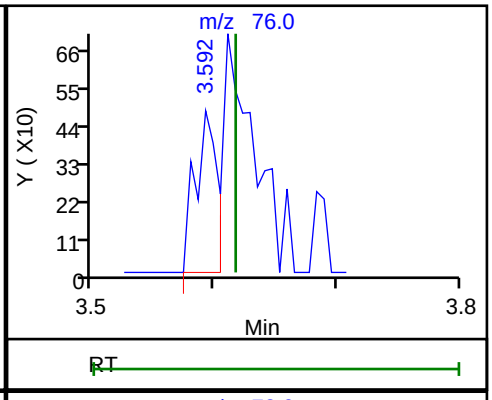
Eurofins TestAmerica, Pittsburgh

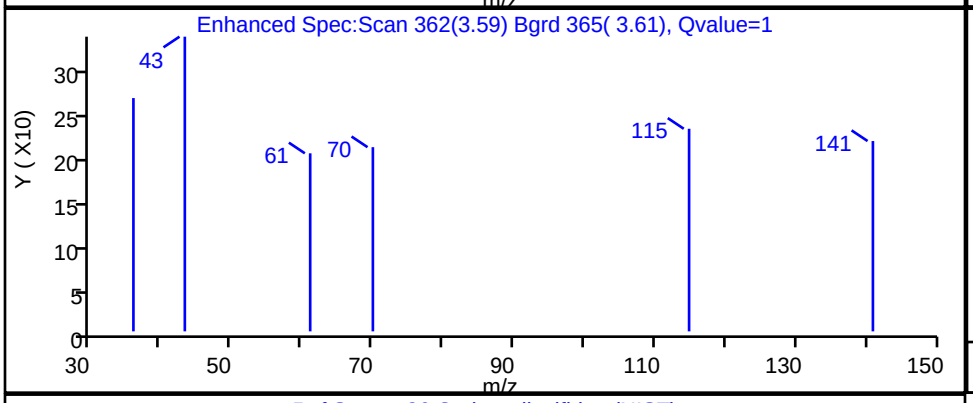
Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030615.D		
Injection Date:	06-Mar-2020 14:25:30	Instrument ID:	CHHP6
Lims ID:	180-102790-A-4	Lab Sample ID:	180-102790-4
Client ID:	HD-COD-SW-9-0/1-0		
Operator ID:	10099	ALS Bottle#:	15 Worklist Smp#: 16
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

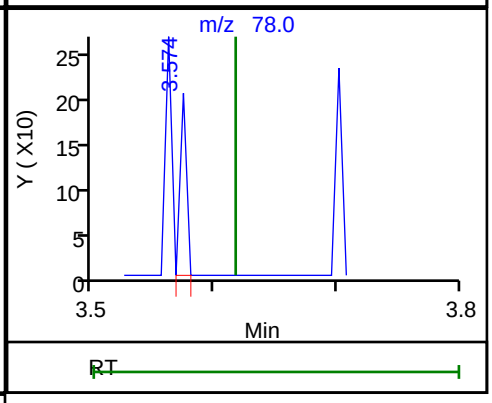
26 Carbon disulfide, CAS: 75-15-0

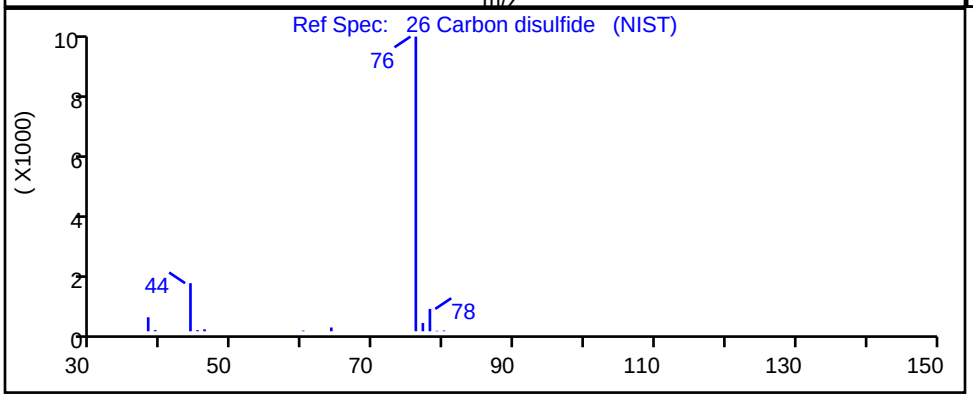
Processing Results











RT	Mass	Response	Amount
3.59	76.00	600	0.233763
3.57	78.00	74	

Reviewer: gordonk, 09-Mar-2020 07:45:55

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

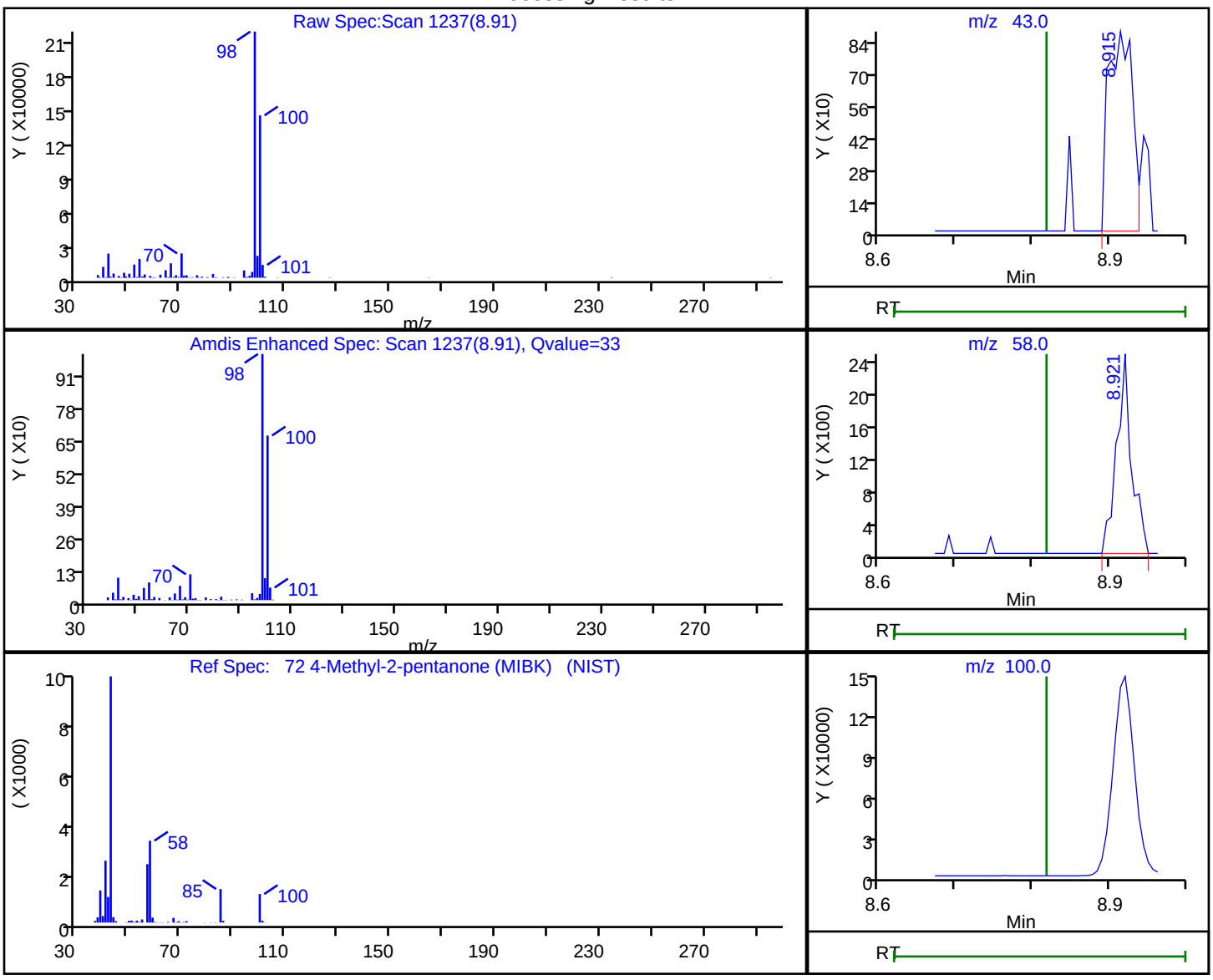
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030615.D				
Injection Date:	06-Mar-2020 14:25:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-4	Lab Sample ID:	180-102790-4		
Client ID:	HD-COD-SW-9-0/1-0				
Operator ID:	10099	ALS Bottle#:	15	Worklist Smp#:	16
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

72 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1

Processing Results



RT	Mass	Response	Amount
8.91	43.00	1954	1.143053
8.92	58.00	3374	
8.92	100.00	291710	

Reviewer: gordonk, 09-Mar-2020 07:45:45

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

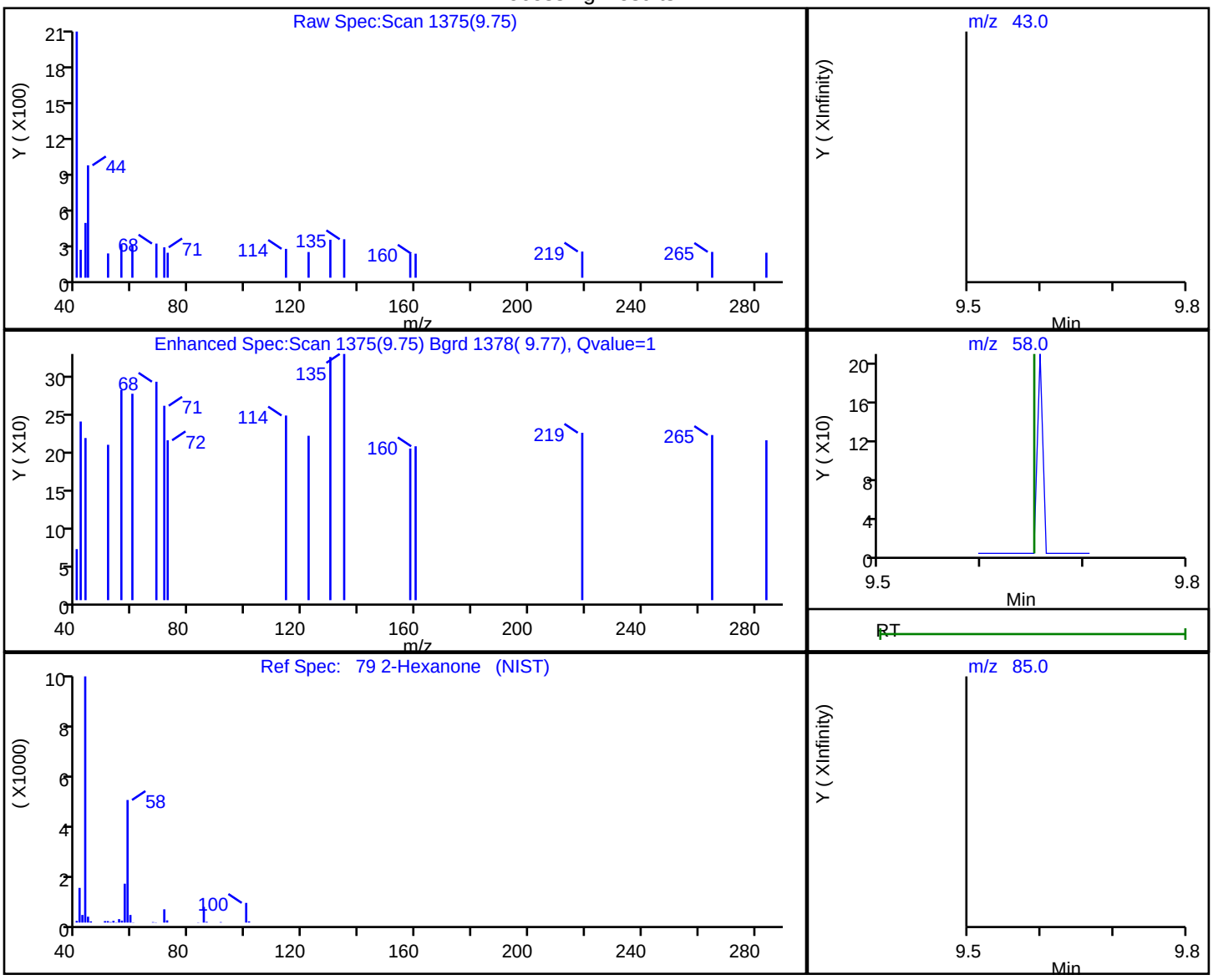
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030615.D				
Injection Date:	06-Mar-2020 14:25:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-4	Lab Sample ID:	180-102790-4		
Client ID:	HD-COD-SW-9-0/1-0				
Operator ID:	10099	ALS Bottle#:	15	Worklist Smp#:	16
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

79 2-Hexanone, CAS: 591-78-6

Processing Results



RT	Mass	Response	Amount
9.75	43.00	331	0.274055
9.65	58.00	0	
9.65	85.00	0	

Reviewer: gordonk, 09-Mar-2020 07:45:40

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.: 180-102790-1

SDG No.:

Client Sample ID: HD-COD-SW-13-0/1-0 Lab Sample ID: 180-102790-5

Matrix: Water Lab File ID: 6030616.D

Analysis Method: EPA 8260C Date Collected: 02/24/2020 10:55

Sample wt/vol: 5(mL) Date Analyzed: 03/06/2020 14:52

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.: 309079 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	0.40
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	^c	1.0	0.59
75-34-3	1,1-Dichloroethane	ND		1.0	0.31
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	^c	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	^c	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.: 180-102790-1

SDG No.:

Client Sample ID: HD-COD-SW-13-0/1-0 Lab Sample ID: 180-102790-5

Matrix: Water Lab File ID: 6030616.D

Analysis Method: EPA 8260C Date Collected: 02/24/2020 10:55

Sample wt/vol: 5(mL) Date Analyzed: 03/06/2020 14:52

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.: 309079 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	^c	70-150
2037-26-5	Toluene-d8 (Surr)	89		78-128
460-00-4	4-Bromofluorobenzene (Surr)	98		64-123
1868-53-7	Dibromofluoromethane (Surr)	92		75-147

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030616.D
Lims ID: 180-102790-A-5
Client ID: HD-COD-SW-13-0/1-0
Sample Type: Client
Inject. Date: 06-Mar-2020 14:52:30 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-0031064-017
Operator ID: 10099 Instrument ID: CHHP6

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 09-Mar-2020 07:46:59 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0332

First Level Reviewer: gordonk Date: 09-Mar-2020 07:46:59

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.247	4.249	-0.002	93	106123	1000.0	
* 2 Fluorobenzene (IS)	96	7.264	7.261	0.003	100	442280	50.0	
* 3 Chlorobenzene-d5	119	10.373	10.375	-0.002	87	100413	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.721	12.717	0.004	97	128225	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.534	6.537	-0.003	91	82852	46.1	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.906	6.908	-0.002	97	114431	49.1	
$ 7 Toluene-d8 (Surr)	98	8.919	8.915	0.004	92	428042	44.7	
$ 8 4-Bromofluorobenzene (Surr	95	11.559	11.562	-0.003	0	161968	48.8	
12 Chloromethane	50		1.828				ND	
13 Vinyl chloride	62		1.938				ND	
15 Bromomethane	94		2.260				ND	
16 Chloroethane	64		2.382				ND	
22 1,1-Dichloroethene	96		3.325				ND	
24 Acetone	43	3.426	3.422	0.004	97	9360	16.5	M
26 Carbon disulfide	76		3.617				ND	
31 Methylene Chloride	84		4.115				ND	
33 Acrylonitrile	53		4.505				ND	
34 trans-1,2-Dichloroethene	96		4.529				ND	
35 Methyl tert-butyl ether	73		4.553				ND	
37 1,1-Dichloroethane	63		5.168				ND	
43 cis-1,2-Dichloroethene	96	5.932	5.922	0.010	1	1168	0.5462	
44 2-Butanone (MEK)	43		5.940				ND	
48 Chlorobromomethane	128		6.208				ND	
50 Chloroform	83		6.354				ND	
51 1,1,1-Trichloroethane	97		6.512				ND	
53 Carbon tetrachloride	117		6.689				ND	
56 Benzene	78		6.914				ND	
57 1,2-Dichloroethane	62		6.993				ND	
61 Trichloroethene	130	7.648	7.650	-0.002	12	535	0.2880	
64 1,2-Dichloropropane	63		7.924				ND	U
68 Dichlorobromomethane	83		8.210				ND	
71 cis-1,3-Dichloropropene	75		8.660				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
72 4-Methyl-2-pentanone (MIBK	43		8.818				ND	U
73 Toluene	91	8.986	8.988	-0.002	97	3749	0.3180	
74 trans-1,3-Dichloropropene	75		9.238				ND	
76 1,1,2-Trichloroethane	97		9.432				ND	
77 Tetrachloroethene	164		9.499				ND	
79 2-Hexanone	43		9.651				ND	U
81 Chlorodibromomethane	129		9.803				ND	
82 Ethylene Dibromide	107		9.913				ND	
84 Chlorobenzene	112		10.406				ND	
86 1,1,1,2-Tetrachloroethane	131		10.497				ND	
87 Ethylbenzene	106		10.503				ND	
88 m-Xylene & p-Xylene	106		10.637				ND	
89 o-Xylene	106		11.020				ND	
90 Styrene	104		11.038				ND	
91 Bromoform	173		11.221				ND	
96 1,1,2,2-Tetrachloroethane	83		11.702				ND	
S 131 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

U - Marked Undetected

Reagents:

VOA8260INT_00104	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00104	Amount Added:	2.00	Units: uL	Run Reagent

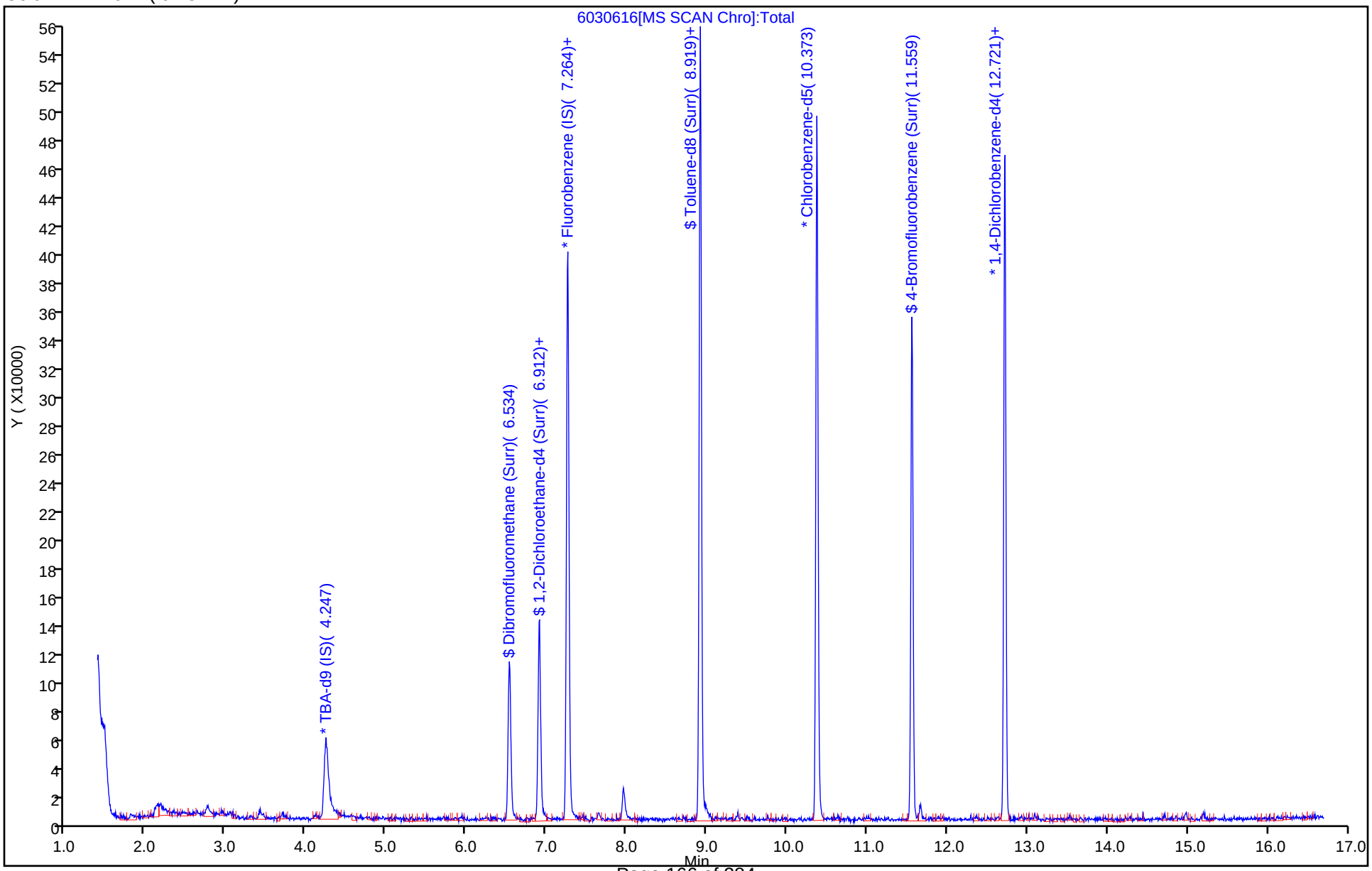
Report Date: 09-Mar-2020 07:46:59 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030616.D

Injection Date:	06-Mar-2020 14:52:30	Instrument ID:	CHHP6	Operator ID:	10099
Lims ID:	180-102790-A-5	Lab Sample ID:	180-102790-5	Worklist Smp#:	17
Client ID:	HD-COD-SW-13-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Recovery Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030616.D
Lims ID: 180-102790-A-5
Client ID: HD-COD-SW-13-0/1-0
Sample Type: Client
Inject. Date: 06-Mar-2020 14:52:30 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-0031064-017
Operator ID: 10099 Instrument ID: CHHP6

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 09-Mar-2020 07:46:59 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0332

First Level Reviewer: gordonk Date: 09-Mar-2020 07:46:59

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	50.0	46.1	92.24
$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	49.1	98.24
$ 7 Toluene-d8 (Surr)	50.0	44.7	89.45
$ 8 4-Bromofluorobenzene (Surr)	50.0	48.8	97.67

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Pittsburgh

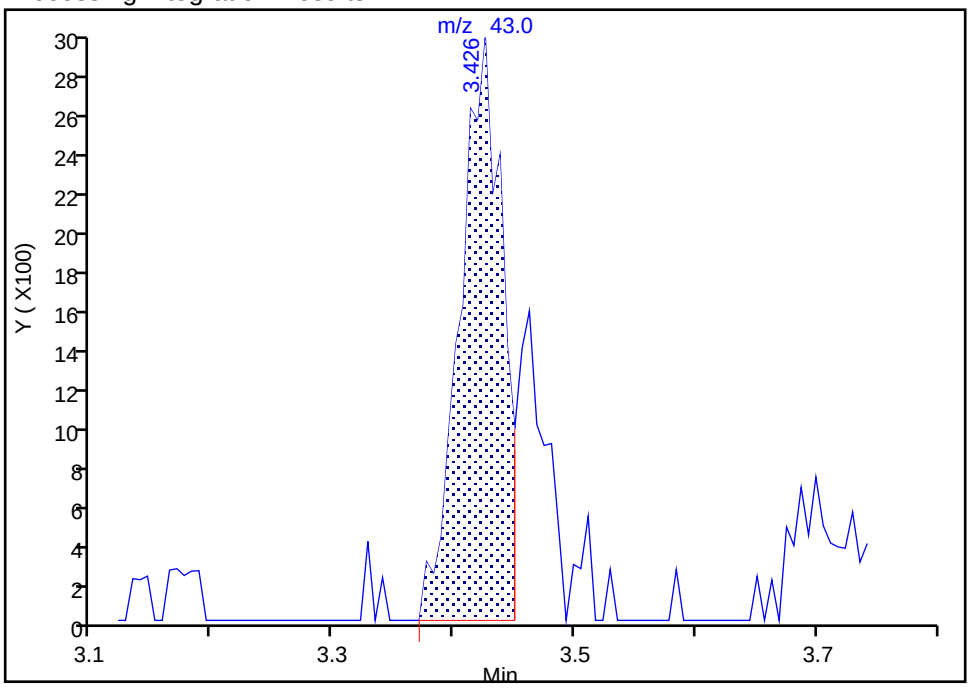
Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030616.D				
Injection Date:	06-Mar-2020 14:52:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-5	Lab Sample ID:	180-102790-5		
Client ID:	HD-COD-SW-13-0/1-0				
Operator ID:	10099	ALS Bottle#:	16	Worklist Smp#:	17
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

24 Acetone, CAS: 67-64-1

Signal: 1

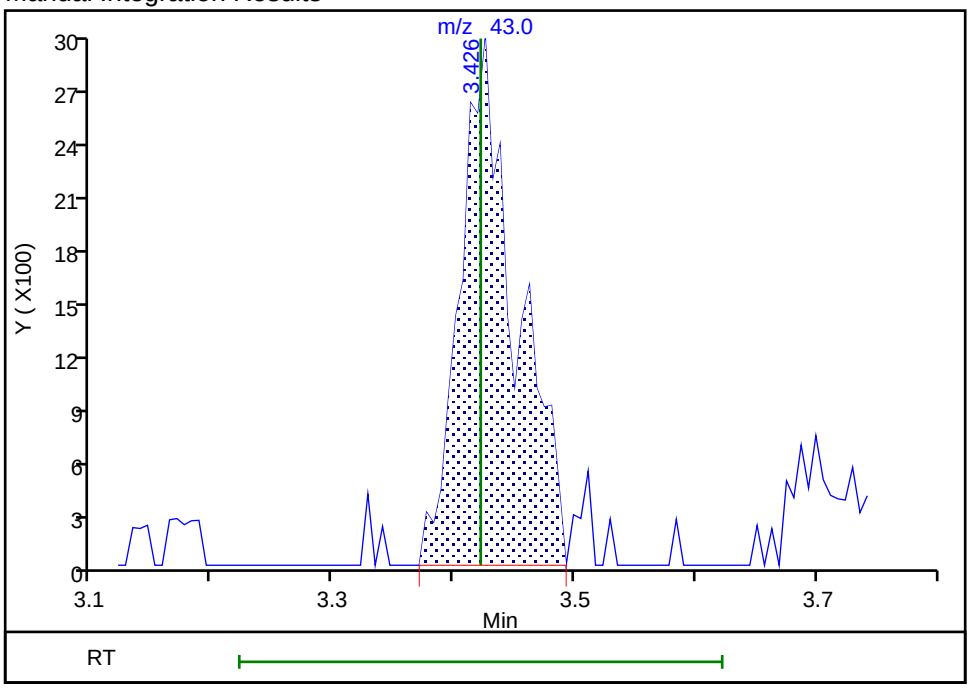
Processing Integration Results

RT: 3.43
Area: 7138
Amount: 12.591204
Amount Units: ng



Manual Integration Results

RT: 3.43
Area: 9360
Amount: 16.510741
Amount Units: ng



Reviewer: gordonk, 09-Mar-2020 07:46:35

Audit Action: Manually Integrated Audit Reason: Poor chromatography

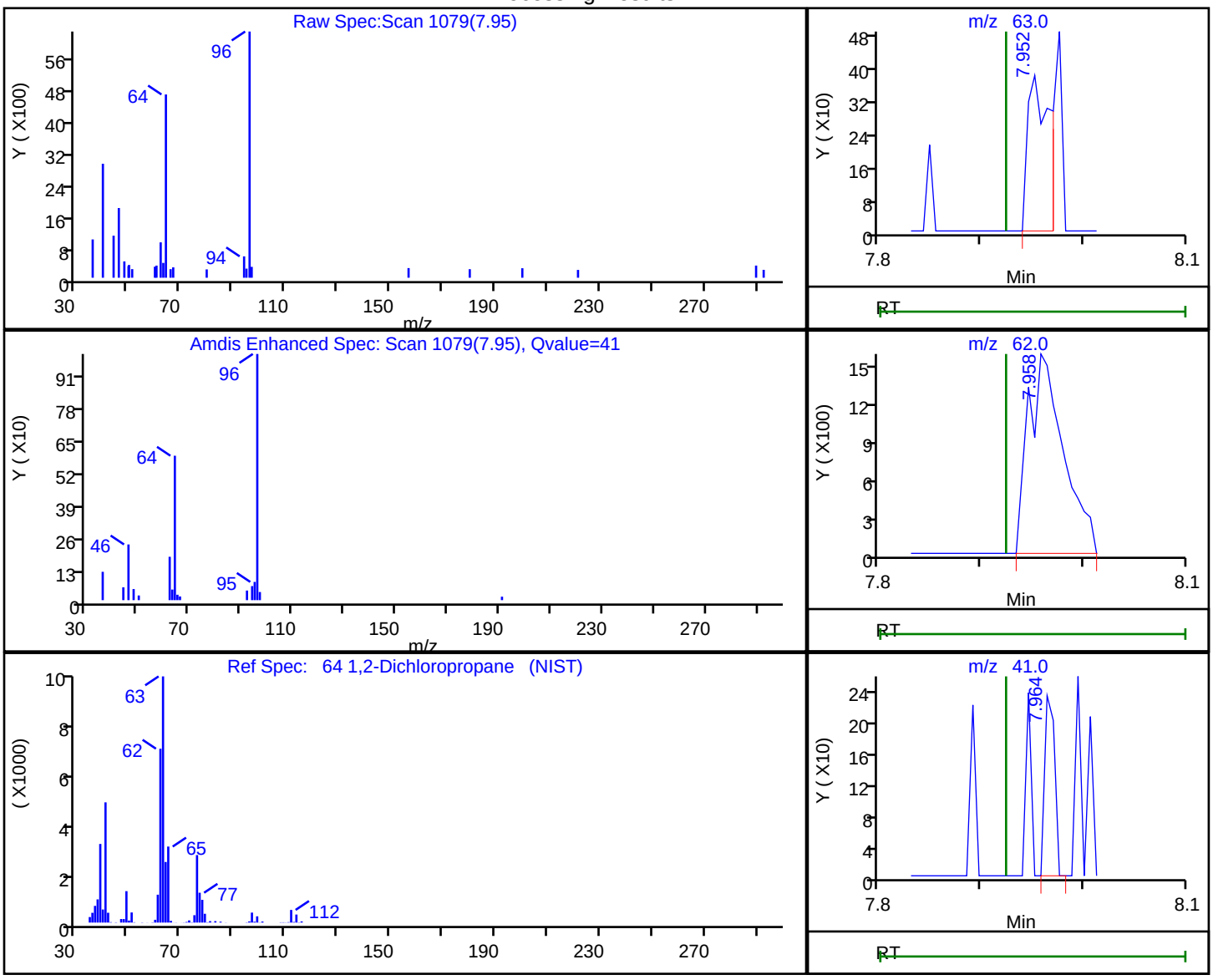
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030616.D				
Injection Date:	06-Mar-2020 14:52:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-5	Lab Sample ID:	180-102790-5		
Client ID:	HD-COD-SW-13-0/1-0				
Operator ID:	10099	ALS Bottle#:	16	Worklist Smp#:	17
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

64 1,2-Dichloropropane, CAS: 78-87-5

Processing Results



RT	Mass	Response	Amount
7.95	63.00	564	0.282213
7.96	62.00	3741	
7.96	41.00	158	

Reviewer: gordonk, 09-Mar-2020 07:46:47

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

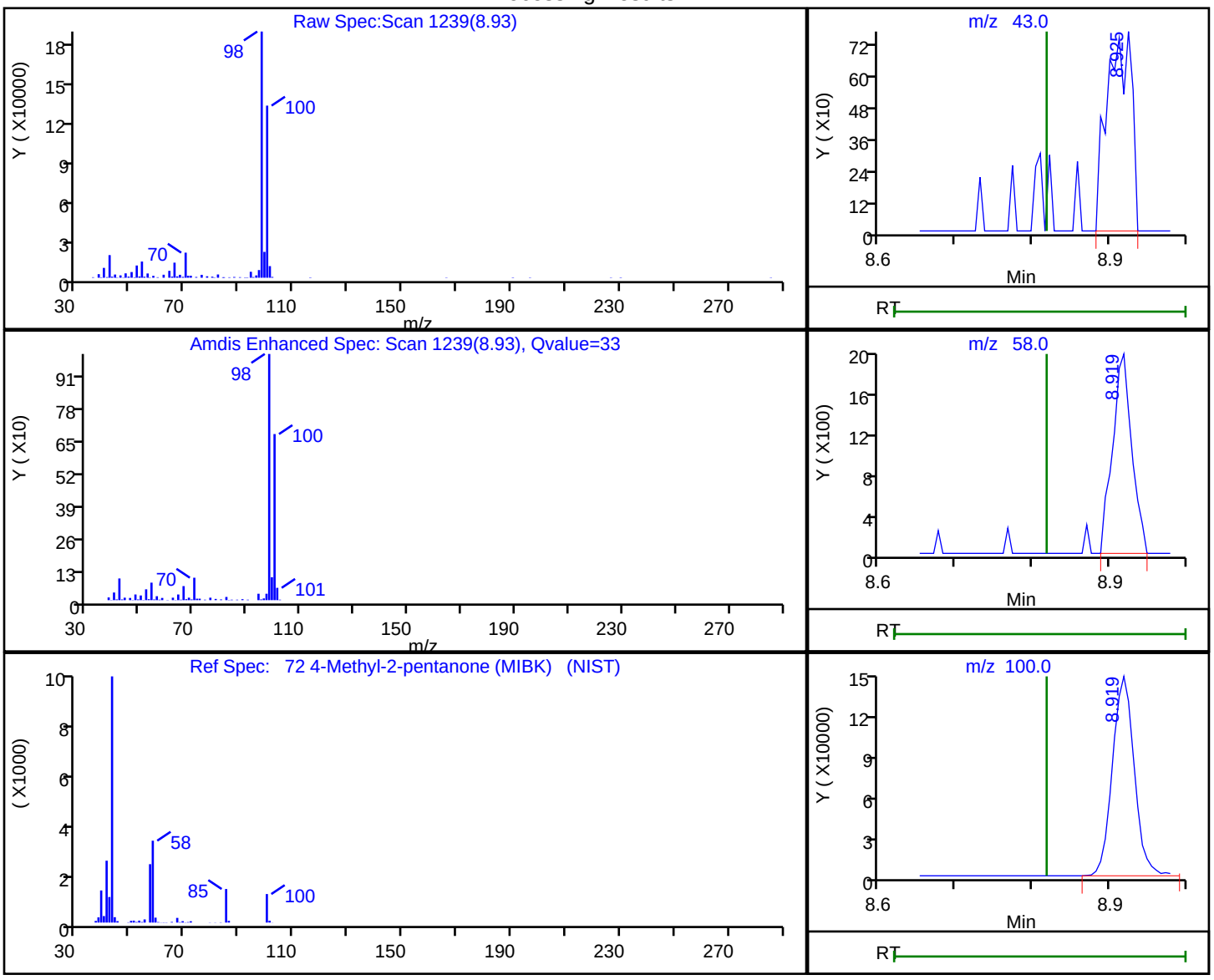
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030616.D				
Injection Date:	06-Mar-2020 14:52:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-5	Lab Sample ID:	180-102790-5		
Client ID:	HD-COD-SW-13-0/1-0				
Operator ID:	10099	ALS Bottle#:	16	Worklist Smp#:	17
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

72 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1

Processing Results



RT	Mass	Response	Amount
8.93	43.00	1709	0.998777
8.92	58.00	3423	
8.92	100.00	291078	

Reviewer: gordonk, 09-Mar-2020 07:46:50

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

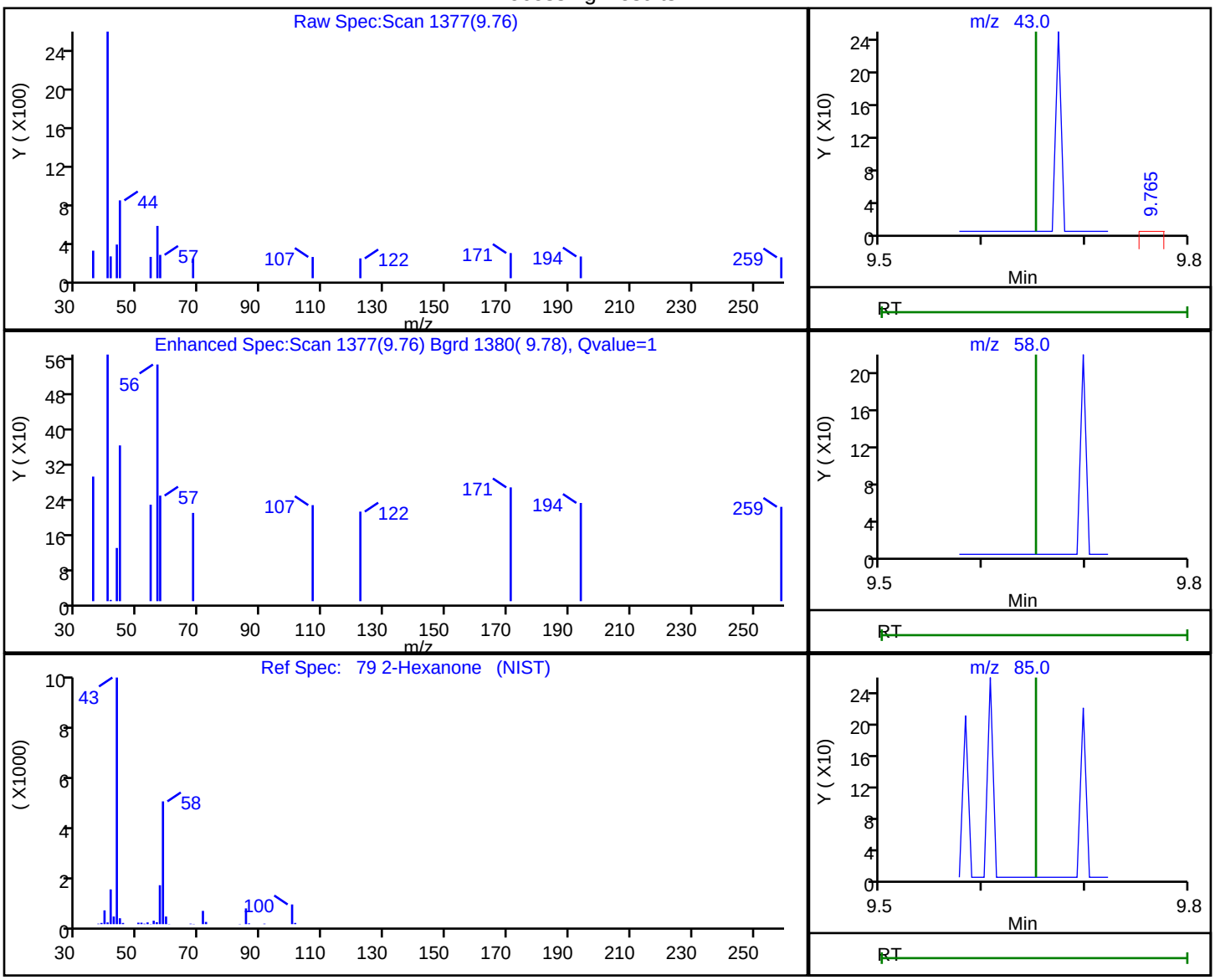
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030616.D				
Injection Date:	06-Mar-2020 14:52:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-5	Lab Sample ID:	180-102790-5		
Client ID:	HD-COD-SW-13-0/1-0				
Operator ID:	10099	ALS Bottle#:	16	Worklist Smp#:	17
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

79 2-Hexanone, CAS: 591-78-6

Processing Results



RT	Mass	Response	Amount
9.76	43.00	285	0.235744
9.65	58.00	0	
9.65	85.00	0	

Reviewer: gordonk, 09-Mar-2020 07:46:54

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.: 180-102790-1

SDG No.:

Client Sample ID: HD-COD-SW-15-0/1-0 Lab Sample ID: 180-102790-6

Matrix: Water Lab File ID: 6030617.D

Analysis Method: EPA 8260C Date Collected: 02/24/2020 13:10

Sample wt/vol: 5(mL) Date Analyzed: 03/06/2020 15:20

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.: 309079 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	0.40
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	^c	1.0	0.59
75-34-3	1,1-Dichloroethane	ND		1.0	0.31
156-59-2	cis-1,2-Dichloroethene	1.4		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	1.4		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	^c	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	^c	1.0	0.58
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.45
127-18-4	Tetrachloroethene	3.1		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.: 180-102790-1

SDG No.:

Client Sample ID: HD-COD-SW-15-0/1-0 Lab Sample ID: 180-102790-6

Matrix: Water Lab File ID: 6030617.D

Analysis Method: EPA 8260C Date Collected: 02/24/2020 13:10

Sample wt/vol: 5(mL) Date Analyzed: 03/06/2020 15:20

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.: 309079 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)	99	^c	70-150
2037-26-5	Toluene-d8 (Surr)	89		78-128
460-00-4	4-Bromofluorobenzene (Surr)	92		64-123
1868-53-7	Dibromofluoromethane (Surr)	91		75-147

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030617.D
Lims ID: 180-102790-A-6
Client ID: HD-COD-SW-15-0/1-0
Sample Type: Client
Inject. Date: 06-Mar-2020 15:20:30 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-0031064-018
Operator ID: 10099 Instrument ID: CHHP6

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 09-Mar-2020 07:47:36 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0332

First Level Reviewer: gordonk Date: 09-Mar-2020 07:47:36

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.242	4.249	-0.007	94	104628	1000.0	
* 2 Fluorobenzene (IS)	96	7.266	7.261	0.005	100	449387	50.0	
* 3 Chlorobenzene-d5	119	10.375	10.375	0.000	87	104606	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.717	12.717	0.000	98	125210	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.536	6.537	-0.001	90	82887	45.4	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.901	6.908	-0.007	97	116603	49.3	
$ 7 Toluene-d8 (Surr)	98	8.921	8.915	0.006	92	441837	44.3	
$ 8 4-Bromofluorobenzene (Surr	95	11.561	11.562	-0.001	0	159258	46.1	
12 Chloromethane	50		1.828				ND	
13 Vinyl chloride	62		1.938				ND	
15 Bromomethane	94		2.260				ND	
16 Chloroethane	64		2.382				ND	
22 1,1-Dichloroethene	96		3.325				ND	
24 Acetone	43	3.427	3.422	0.005	58	3510	6.09	
26 Carbon disulfide	76		3.617				ND	
31 Methylene Chloride	84		4.115				ND	
33 Acrylonitrile	53		4.505				ND	
34 trans-1,2-Dichloroethene	96		4.529				ND	
35 Methyl tert-butyl ether	73		4.553				ND	
37 1,1-Dichloroethane	63		5.168				ND	
43 cis-1,2-Dichloroethene	96	5.921	5.922	-0.001	71	15391	7.08	
44 2-Butanone (MEK)	43		5.940				ND	
48 Chlorobromomethane	128		6.208				ND	
50 Chloroform	83		6.354				ND	
51 1,1,1-Trichloroethane	97	6.518	6.512	0.006	35	2054	0.9633	
53 Carbon tetrachloride	117		6.689				ND	
56 Benzene	78		6.914				ND	
57 1,2-Dichloroethane	62		6.993				ND	
61 Trichloroethene	130	7.655	7.650	0.005	92	13111	6.95	
64 1,2-Dichloropropane	63		7.924				ND	
68 Dichlorobromomethane	83		8.210				ND	
71 cis-1,3-Dichloropropene	75		8.660				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
72 4-Methyl-2-pentanone (MIBK	43		8.818				ND	U
73 Toluene	91		8.988				ND	
74 trans-1,3-Dichloropropene	75		9.238				ND	
76 1,1,2-Trichloroethane	97		9.432				ND	
77 Tetrachloroethene	164	9.499	9.499	0.000	93	27662	15.7	
79 2-Hexanone	43		9.651				ND	
81 Chlorodibromomethane	129		9.803				ND	
82 Ethylene Dibromide	107		9.913				ND	
84 Chlorobenzene	112		10.406				ND	
86 1,1,1,2-Tetrachloroethane	131		10.497				ND	
87 Ethylbenzene	106		10.503				ND	
88 m-Xylene & p-Xylene	106		10.637				ND	
89 o-Xylene	106		11.020				ND	
90 Styrene	104		11.038				ND	
91 Bromoform	173		11.221				ND	
96 1,1,2,2-Tetrachloroethane	83		11.702				ND	
S 131 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

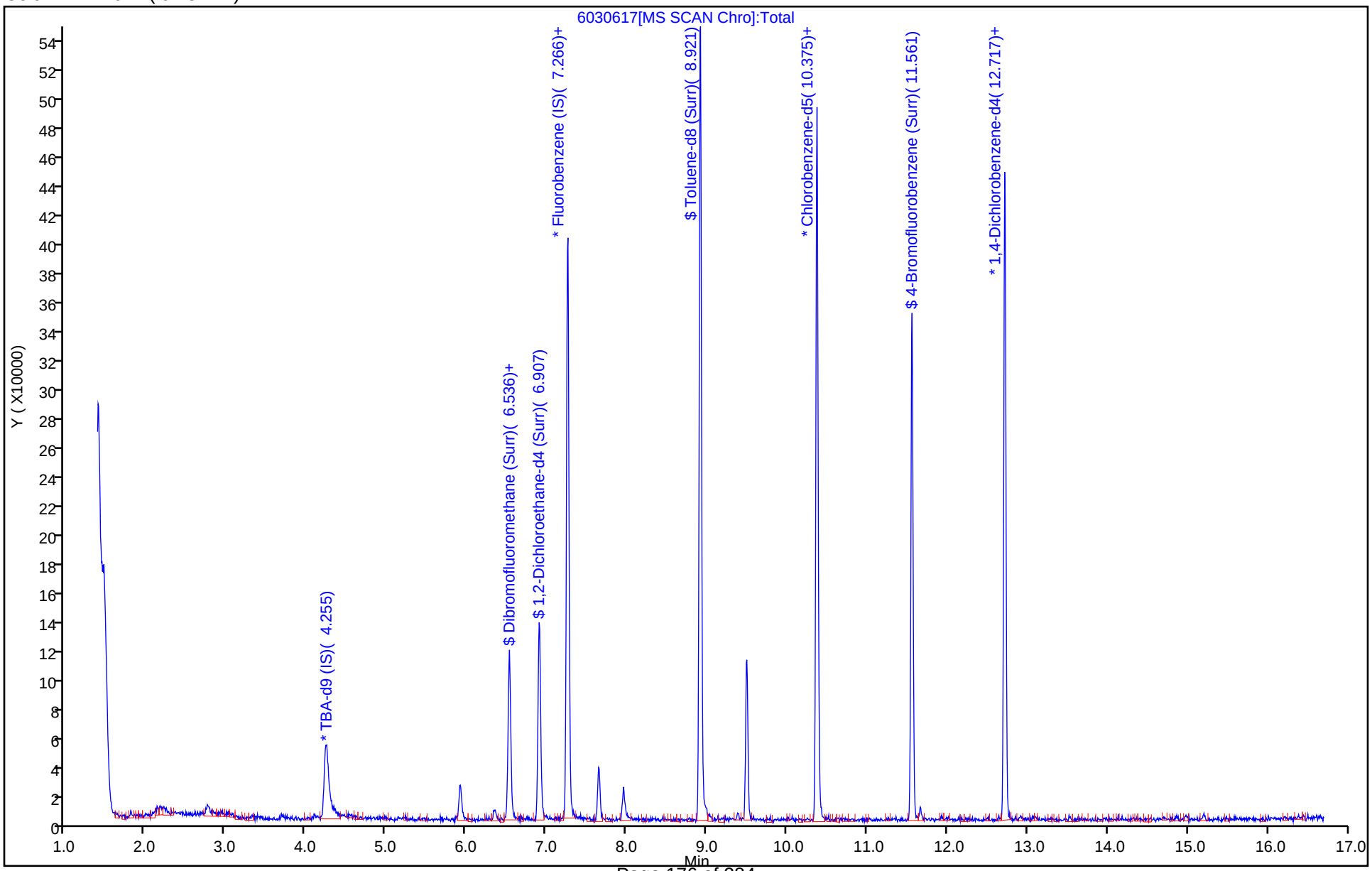
VOA8260INT_00104	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00104	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 09-Mar-2020 07:47:36 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030617.D				
Injection Date:	06-Mar-2020 15:20:30	Instrument ID:	CHHP6	Operator ID:	10099
Lims ID:	180-102790-A-6	Lab Sample ID:	180-102790-6	Worklist Smp#:	18
Client ID:	HD-COD-SW-15-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Recovery Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030617.D
Lims ID: 180-102790-A-6
Client ID: HD-COD-SW-15-0/1-0
Sample Type: Client
Inject. Date: 06-Mar-2020 15:20:30 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-0031064-018
Operator ID: 10099 Instrument ID: CHHP6

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 09-Mar-2020 07:47:36 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0332

First Level Reviewer: gordonk Date: 09-Mar-2020 07:47:36

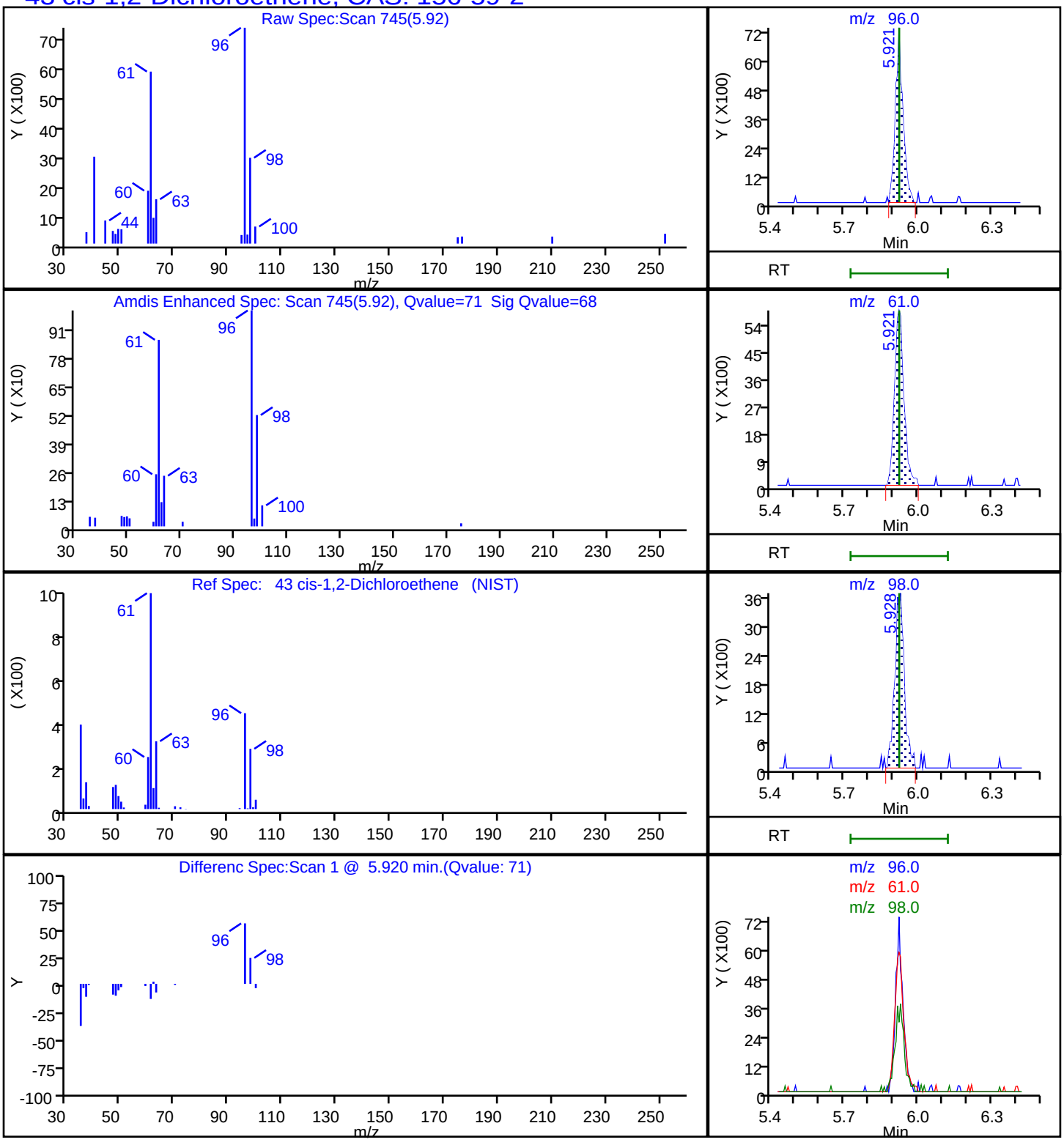
Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	50.0	45.4	90.82
$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	49.3	98.52
$ 7 Toluene-d8 (Surr)	50.0	44.3	88.63
$ 8 4-Bromofluorobenzene (Surr)	50.0	46.1	92.18

Report Date: 09-Mar-2020 07:47:36 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030617.D				
Injection Date:	06-Mar-2020 15:20:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-6	Lab Sample ID:	180-102790-6		
Client ID:	HD-COD-SW-15-0/1-0				
Operator ID:	10099	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

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



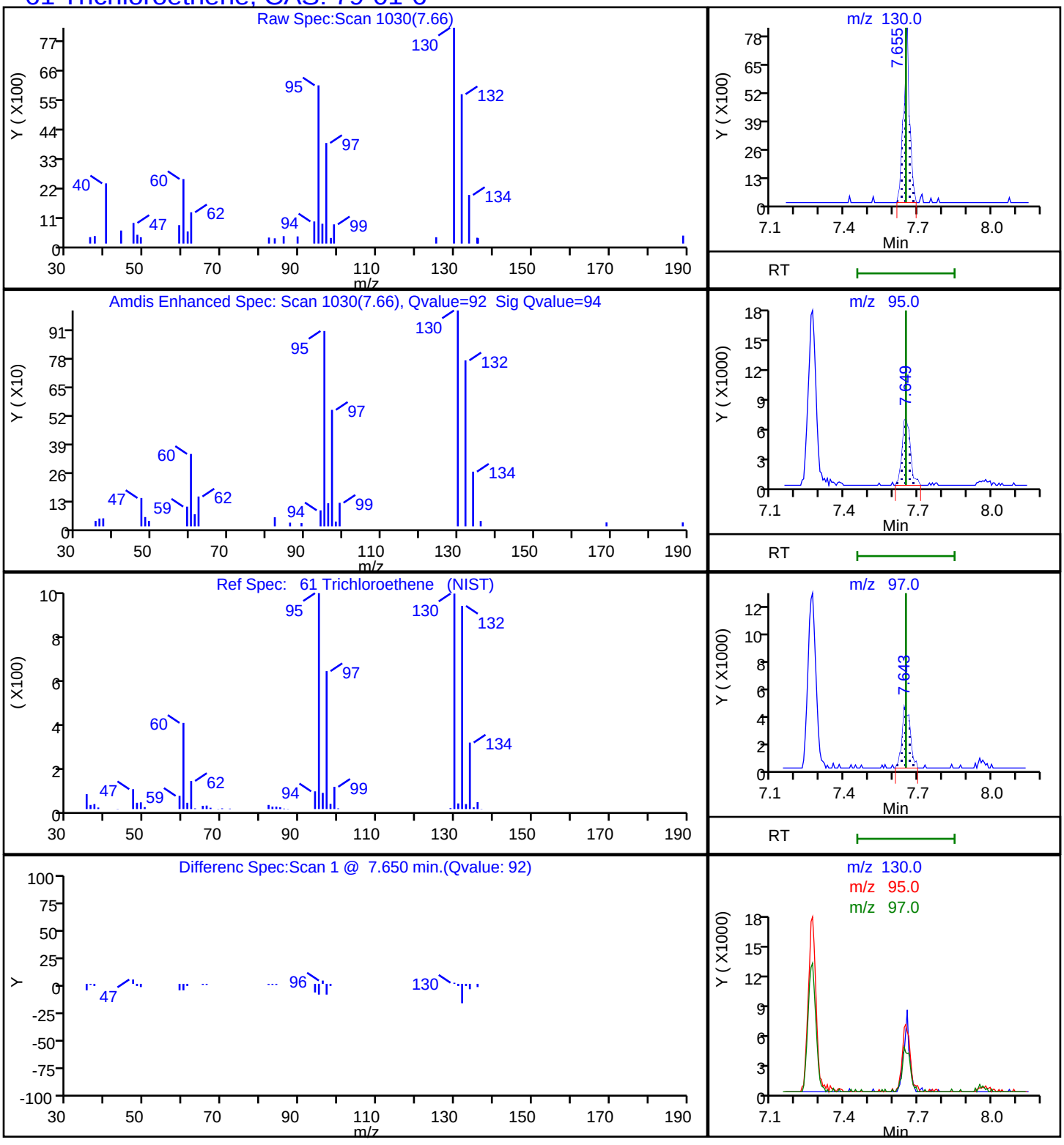
Report Date: 09-Mar-2020 07:47:37 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030617.D

Injection Date:	06-Mar-2020 15:20:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-6	Lab Sample ID:	180-102790-6		
Client ID:	HD-COD-SW-15-0/1-0				
Operator ID:	10099	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

61 Trichloroethene, CAS: 79-01-6



Report Date: 09-Mar-2020 07:47:37 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030617.D

Injection Date: 06-Mar-2020 15:20:30 Instrument ID: CHHP6

Lims ID: 180-102790-A-6 Lab Sample ID: 180-102790-6

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

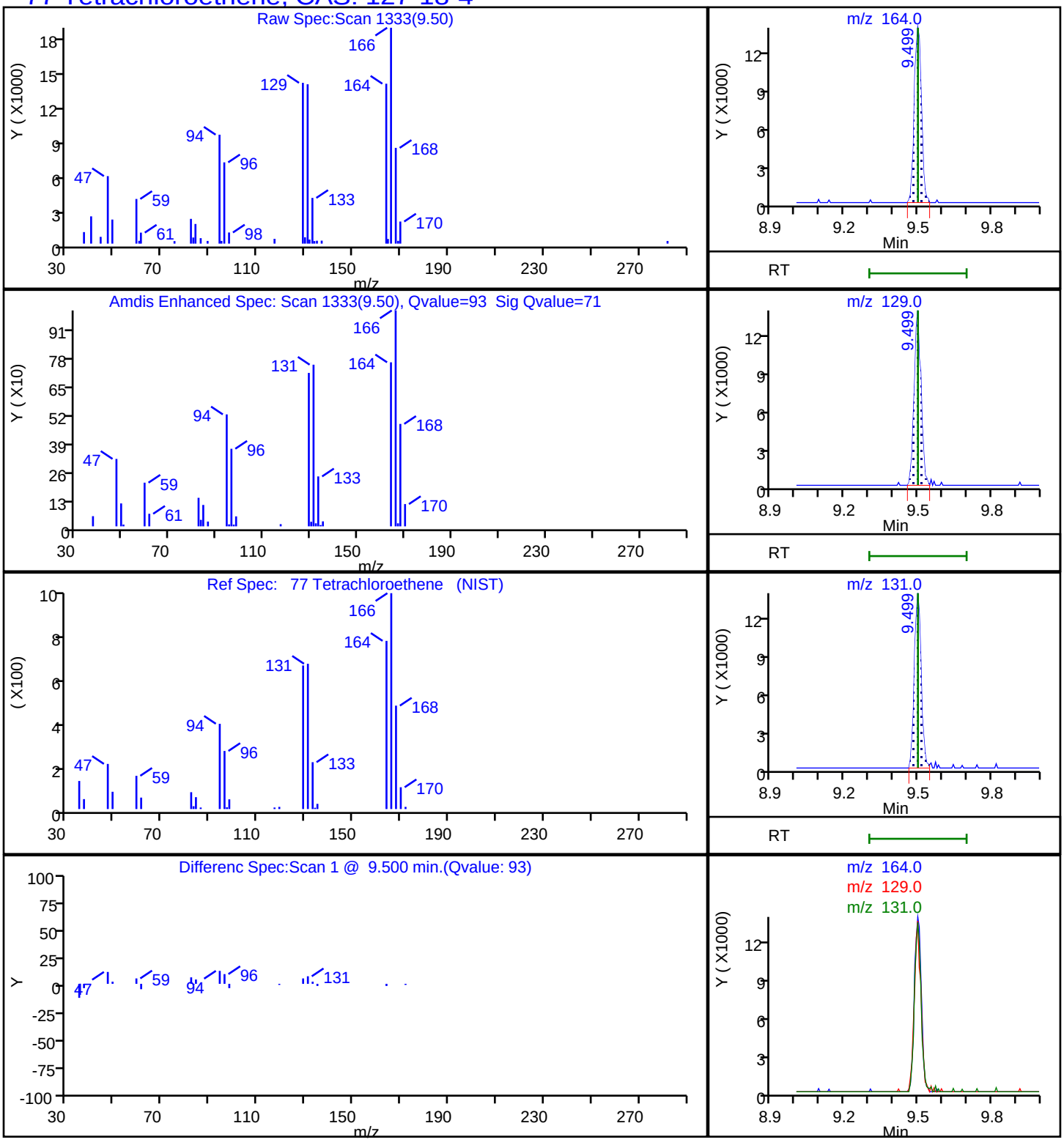
Operator ID: 10099 ALS Bottle#: 17 Worklist Smp#: 18

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: MSVOA_LL_CHHP6 Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm) Detector MS SCAN

77 Tetrachloroethene, CAS: 127-18-4



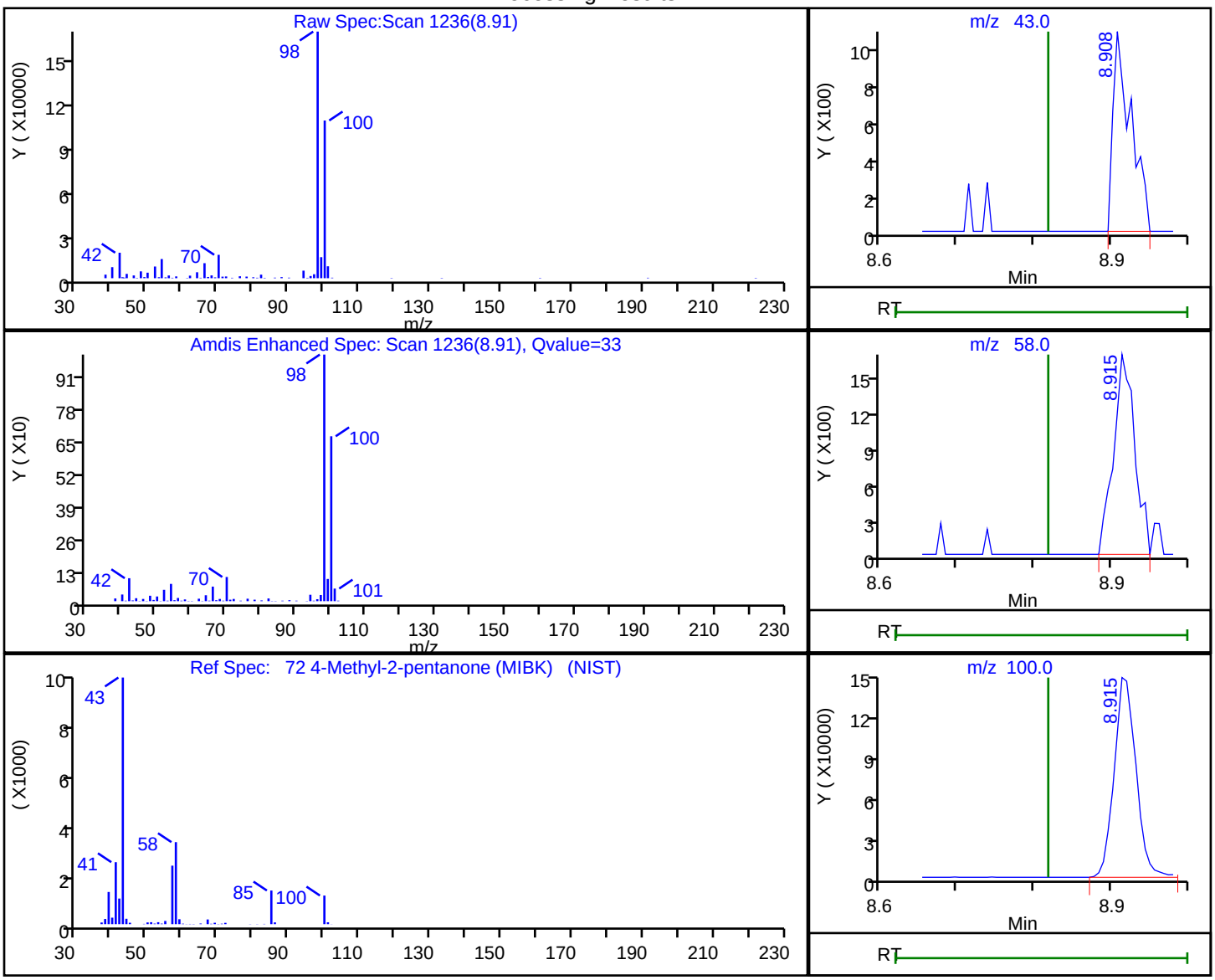
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030617.D				
Injection Date:	06-Mar-2020 15:20:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-6	Lab Sample ID:	180-102790-6		
Client ID:	HD-COD-SW-15-0/1-0				
Operator ID:	10099	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

72 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1

Processing Results



RT	Mass	Response	Amount
8.91	43.00	1669	0.936302
8.91	58.00	3250	
8.91	100.00	291590	

Reviewer: gordonk, 09-Mar-2020 07:47:11

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.: 180-102790-1

SDG No.:

Client Sample ID: HD-COD-SW-16-0/1-0 Lab Sample ID: 180-102790-7

Matrix: Water Lab File ID: 6030618.D

Analysis Method: EPA 8260C Date Collected: 02/24/2020 11:20

Sample wt/vol: 5(mL) Date Analyzed: 03/06/2020 15:48

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.: 309079 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	0.40
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	^c	1.0	0.59
75-34-3	1,1-Dichloroethane	ND		1.0	0.31
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	^c	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	^c	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.: 180-102790-1

SDG No.:

Client Sample ID: HD-COD-SW-16-0/1-0 Lab Sample ID: 180-102790-7

Matrix: Water Lab File ID: 6030618.D

Analysis Method: EPA 8260C Date Collected: 02/24/2020 11:20

Sample wt/vol: 5(mL) Date Analyzed: 03/06/2020 15:48

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.: 309079 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)	89		78-128
460-00-4	4-Bromofluorobenzene (Surr)	97		64-123
1868-53-7	Dibromofluoromethane (Surr)	89		75-147

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030618.D
Lims ID: 180-102790-A-7
Client ID: HD-COD-SW-16-0/1-0
Sample Type: Client
Inject. Date: 06-Mar-2020 15:48:30 ALS Bottle#: 18 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-0031064-019
Operator ID: 10099 Instrument ID: CHHP6

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 09-Mar-2020 07:48:20 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0332

First Level Reviewer: gordonk Date: 09-Mar-2020 07:48:19

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.240	4.249	-0.009	93	108223	1000.0	
* 2 Fluorobenzene (IS)	96	7.264	7.261	0.003	99	445317	50.0	
* 3 Chlorobenzene-d5	119	10.373	10.375	-0.002	87	103156	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.721	12.717	0.004	98	131623	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.540	6.537	0.003	92	80890	44.7	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.905	6.908	-0.003	97	113873	48.5	
$ 7 Toluene-d8 (Surr)	98	8.919	8.915	0.004	93	438987	44.6	
$ 8 4-Bromofluorobenzene (Surr	95	11.559	11.562	-0.003	0	164521	48.3	
12 Chloromethane	50		1.828				ND	
13 Vinyl chloride	62		1.938				ND	
15 Bromomethane	94		2.260				ND	
16 Chloroethane	64		2.382				ND	
22 1,1-Dichloroethene	96		3.325				ND	
24 Acetone	43	3.437	3.422	0.015	80	7633	13.4	
26 Carbon disulfide	76		3.617				ND	
31 Methylene Chloride	84		4.115				ND	
33 Acrylonitrile	53		4.505				ND	
34 trans-1,2-Dichloroethene	96		4.529				ND	
35 Methyl tert-butyl ether	73		4.553				ND	
37 1,1-Dichloroethane	63		5.168				ND	
43 cis-1,2-Dichloroethene	96	5.919	5.922	-0.003	1	1392	0.6465	
44 2-Butanone (MEK)	43		5.940				ND	U
48 Chlorobromomethane	128		6.208				ND	
50 Chloroform	83		6.354				ND	
51 1,1,1-Trichloroethane	97		6.512				ND	
53 Carbon tetrachloride	117		6.689				ND	
56 Benzene	78		6.914				ND	
57 1,2-Dichloroethane	62		6.993				ND	
61 Trichloroethene	130	7.659	7.650	0.009	19	1022	0.5464	
64 1,2-Dichloropropane	63		7.924				ND	
68 Dichlorobromomethane	83		8.210				ND	
71 cis-1,3-Dichloropropene	75		8.660				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
72 4-Methyl-2-pentanone (MIBK	43		8.818				ND	U
73 Toluene	91	8.986	8.988	-0.002	44	3284	0.2711	
74 trans-1,3-Dichloropropene	75		9.238				ND	
76 1,1,2-Trichloroethane	97		9.432				ND	
77 Tetrachloroethene	164		9.499				ND	
79 2-Hexanone	43		9.651				ND	U
81 Chlorodibromomethane	129		9.803				ND	
82 Ethylene Dibromide	107		9.913				ND	
84 Chlorobenzene	112		10.406				ND	
86 1,1,1,2-Tetrachloroethane	131		10.497				ND	
87 Ethylbenzene	106		10.503				ND	U
88 m-Xylene & p-Xylene	106		10.637				ND	U
89 o-Xylene	106		11.020				ND	
90 Styrene	104		11.038				ND	
91 Bromoform	173		11.221				ND	
96 1,1,2,2-Tetrachloroethane	83		11.702				ND	
S 131 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

U - Marked Undetected

Reagents:

VOA8260INT_00104	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00104	Amount Added:	2.00	Units: uL	Run Reagent

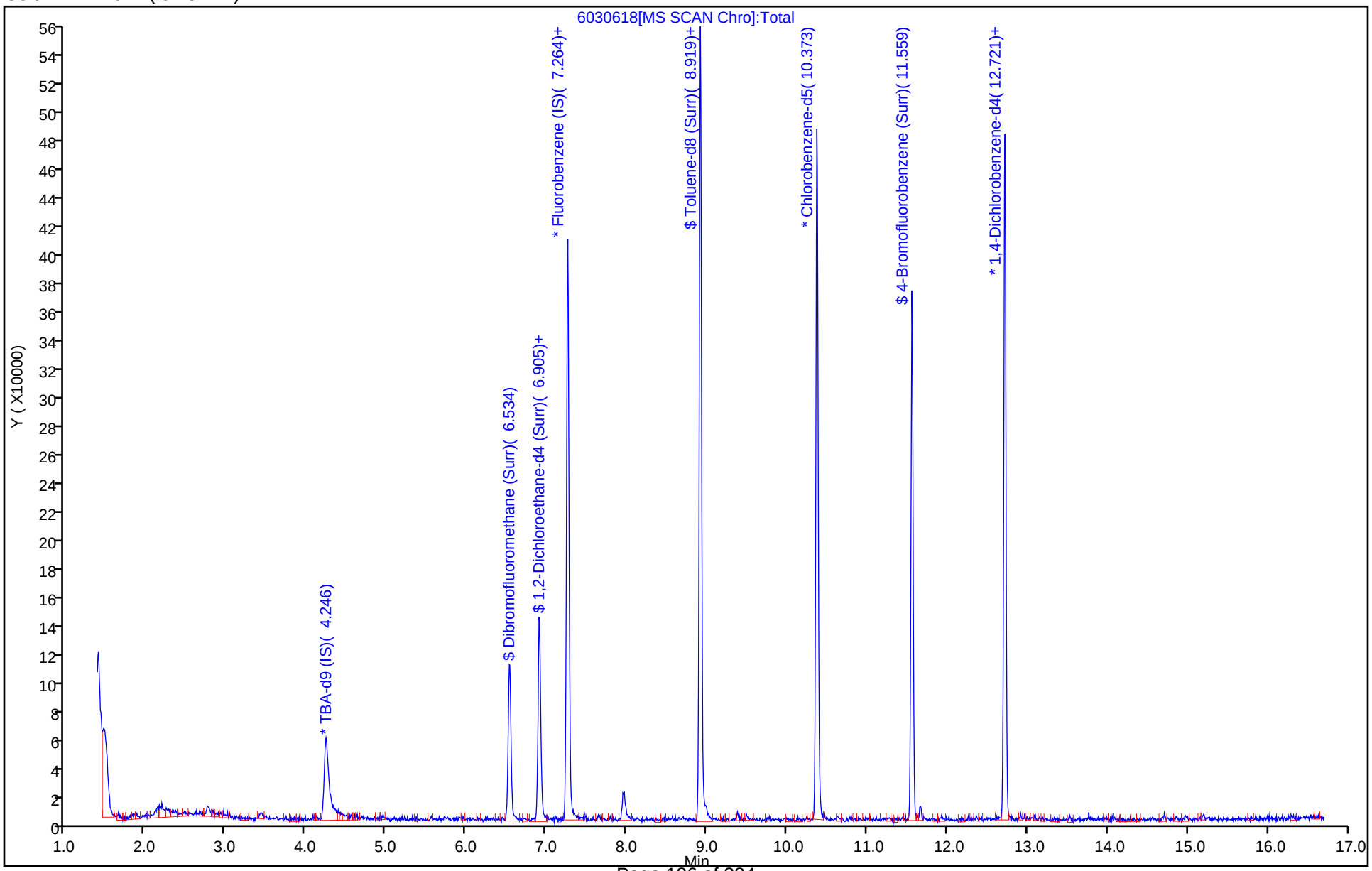
Report Date: 09-Mar-2020 07:48:21 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030618.D

Injection Date:	06-Mar-2020 15:48:30	Instrument ID:	CHHP6	Operator ID:	10099
Lims ID:	180-102790-A-7	Lab Sample ID:	180-102790-7	Worklist Smp#:	19
Client ID:	HD-COD-SW-16-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Recovery Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030618.D
Lims ID: 180-102790-A-7
Client ID: HD-COD-SW-16-0/1-0
Sample Type: Client
Inject. Date: 06-Mar-2020 15:48:30 ALS Bottle#: 18 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-0031064-019
Operator ID: 10099 Instrument ID: CHHP6

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 09-Mar-2020 07:48:20 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0332

First Level Reviewer: gordonk Date: 09-Mar-2020 07:48:19

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	50.0	44.7	89.45
$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	48.5	97.10
$ 7 Toluene-d8 (Surr)	50.0	44.6	89.30
$ 8 4-Bromofluorobenzene (Surr)	50.0	48.3	96.57

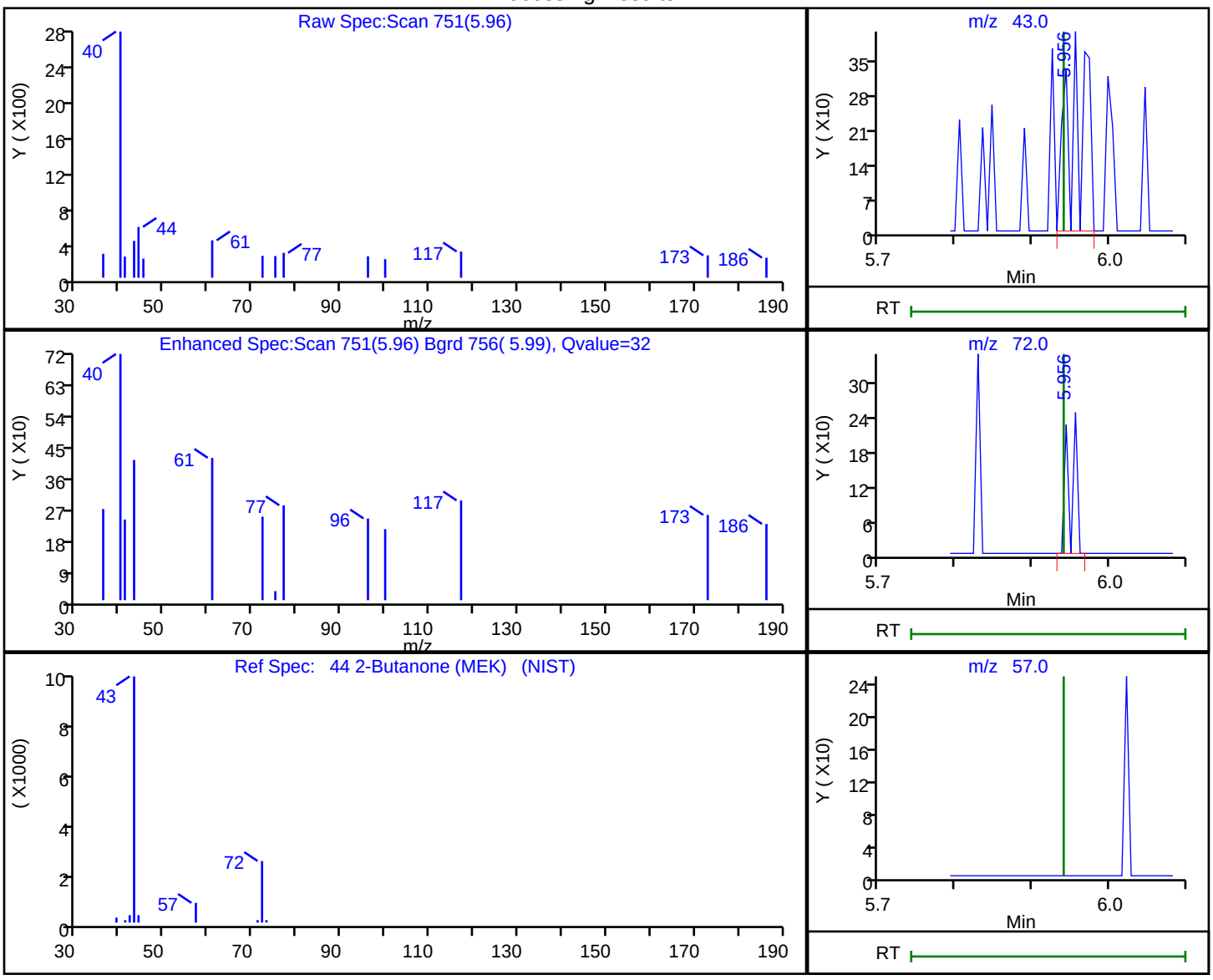
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030618.D				
Injection Date:	06-Mar-2020 15:48:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-7	Lab Sample ID:	180-102790-7		
Client ID:	HD-COD-SW-16-0/1-0				
Operator ID:	10099	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

44 2-Butanone (MEK), CAS: 78-93-3

Processing Results



RT	Mass	Response	Amount
5.96	43.00	608	0.737919
5.96	72.00	168	
5.94	57.00	0	

Reviewer: gordonk, 09-Mar-2020 07:47:50

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

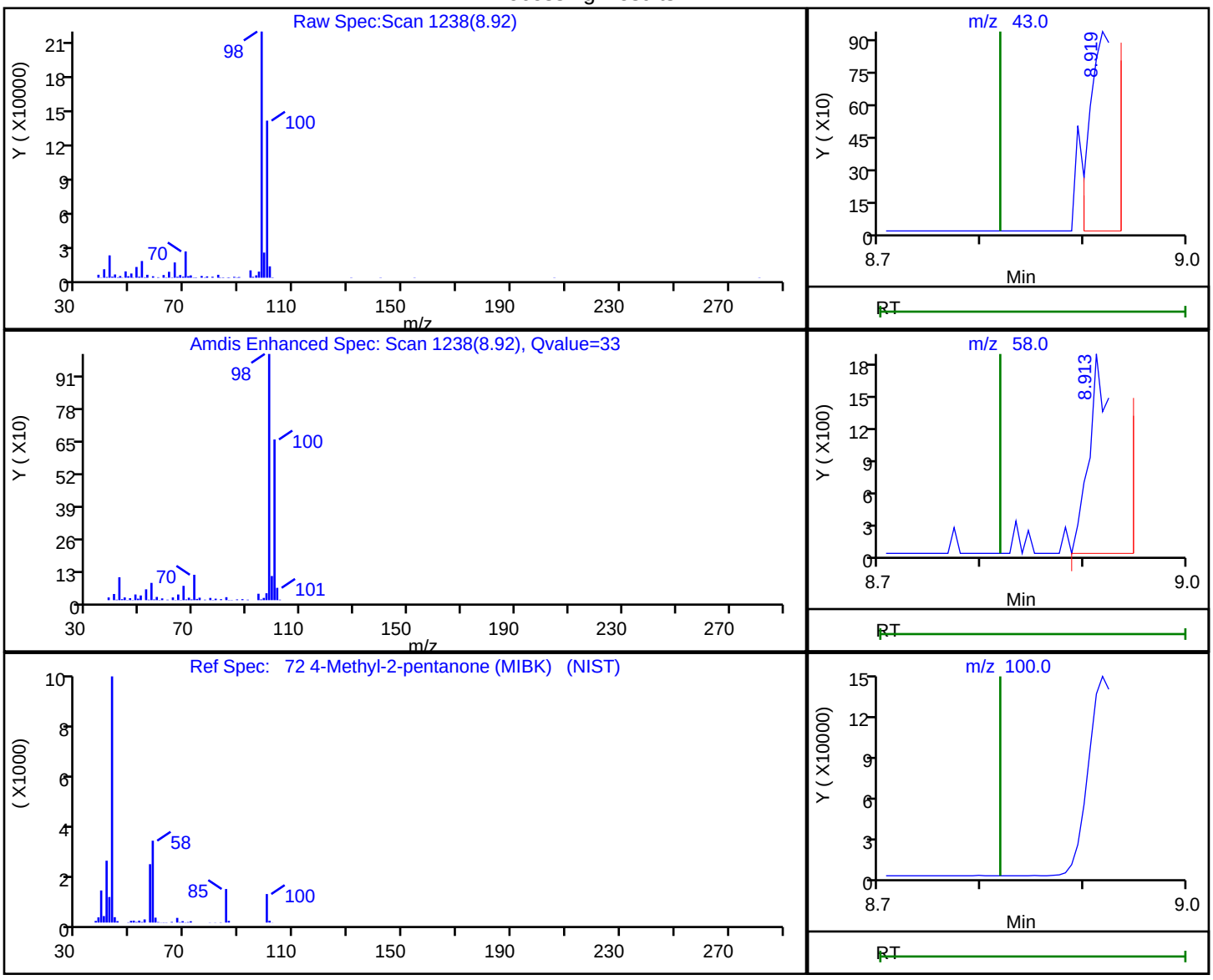
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030618.D				
Injection Date:	06-Mar-2020 15:48:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-7	Lab Sample ID:	180-102790-7		
Client ID:	HD-COD-SW-16-0/1-0				
Operator ID:	10099	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

72 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1

Processing Results



RT	Mass	Response	Amount
8.92	43.00	1520	0.864700
8.91	58.00	3023	
8.92	100.00	289672	

Reviewer: gordonk, 09-Mar-2020 07:48:00

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

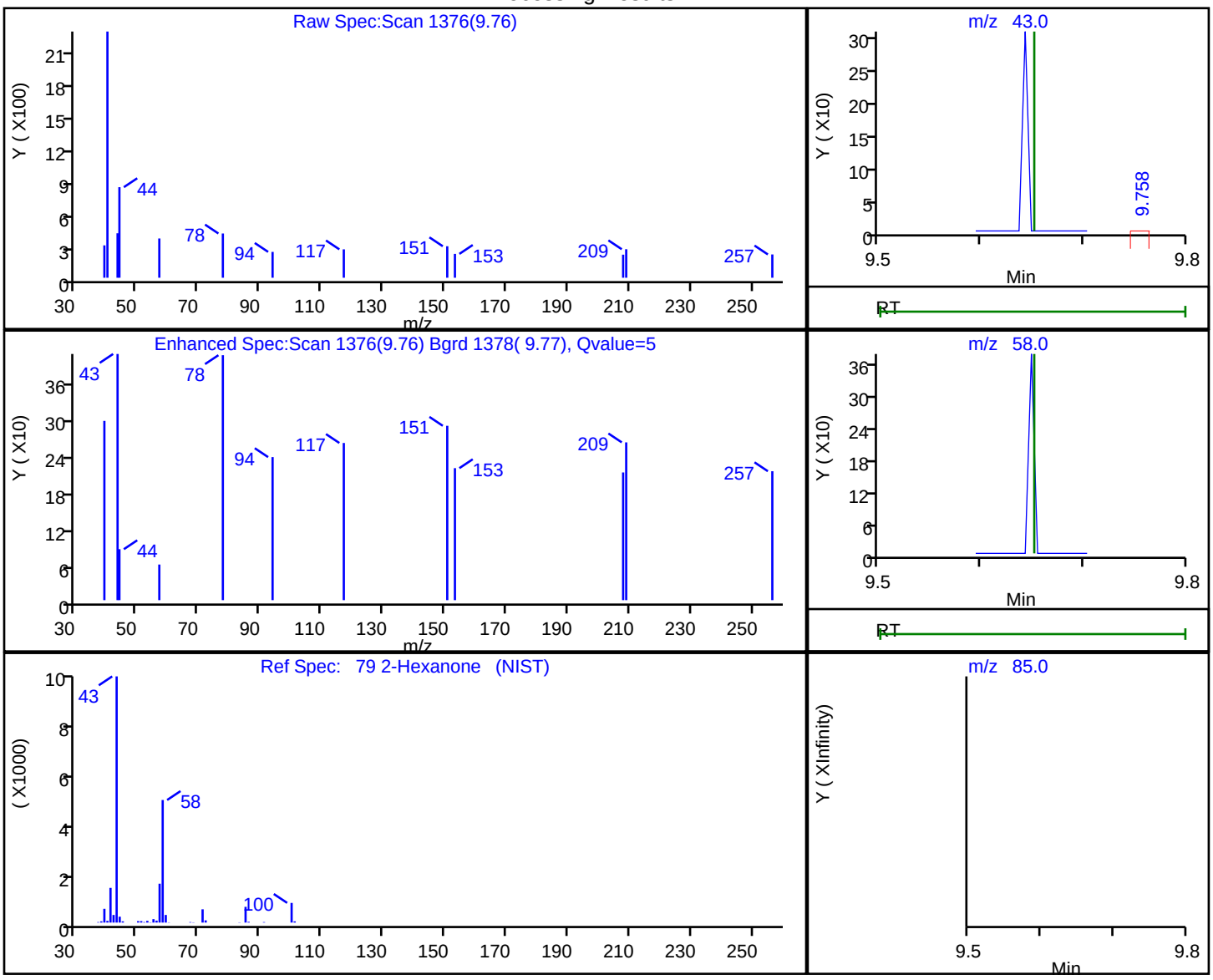
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030618.D		
Injection Date:	06-Mar-2020 15:48:30	Instrument ID:	CHHP6
Lims ID:	180-102790-A-7	Lab Sample ID:	180-102790-7
Client ID:	HD-COD-SW-16-0/1-0		
Operator ID:	10099	ALS Bottle#:	18 Worklist Smp#: 19
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

79 2-Hexanone, CAS: 591-78-6

Processing Results



RT	Mass	Response	Amount
9.76	43.00	268	0.215787
9.65	58.00	0	
9.65	85.00	0	

Reviewer: gordonk, 09-Mar-2020 07:48:07

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

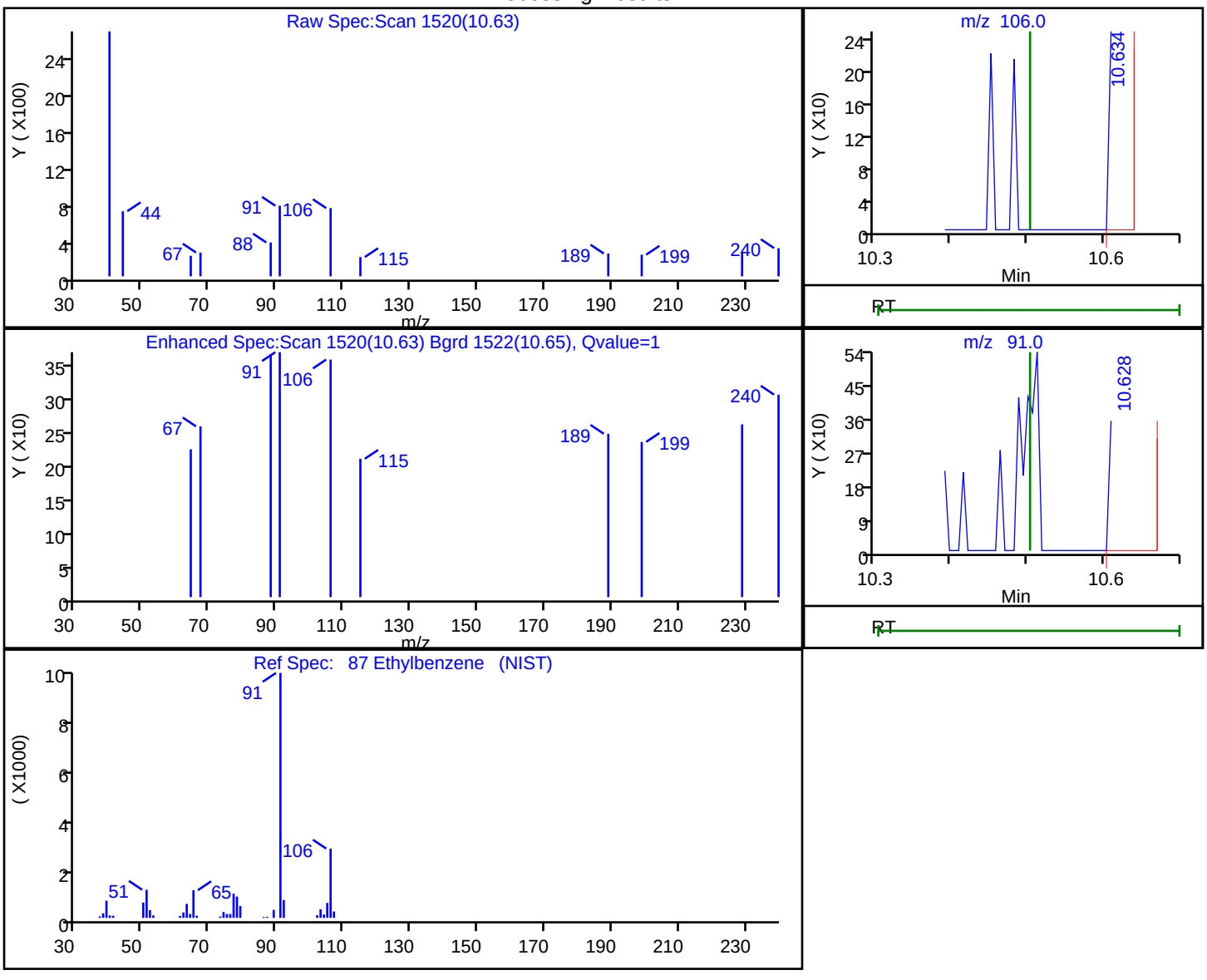
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030618.D				
Injection Date:	06-Mar-2020 15:48:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-7	Lab Sample ID:	180-102790-7		
Client ID:	HD-COD-SW-16-0/1-0				
Operator ID:	10099	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

87 Ethylbenzene, CAS: 100-41-4

Processing Results



RT	Mass	Response	Amount
10.63	106.00	876	0.178809
10.63	91.00	1723	

Reviewer: gordonk, 09-Mar-2020 07:48:12

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

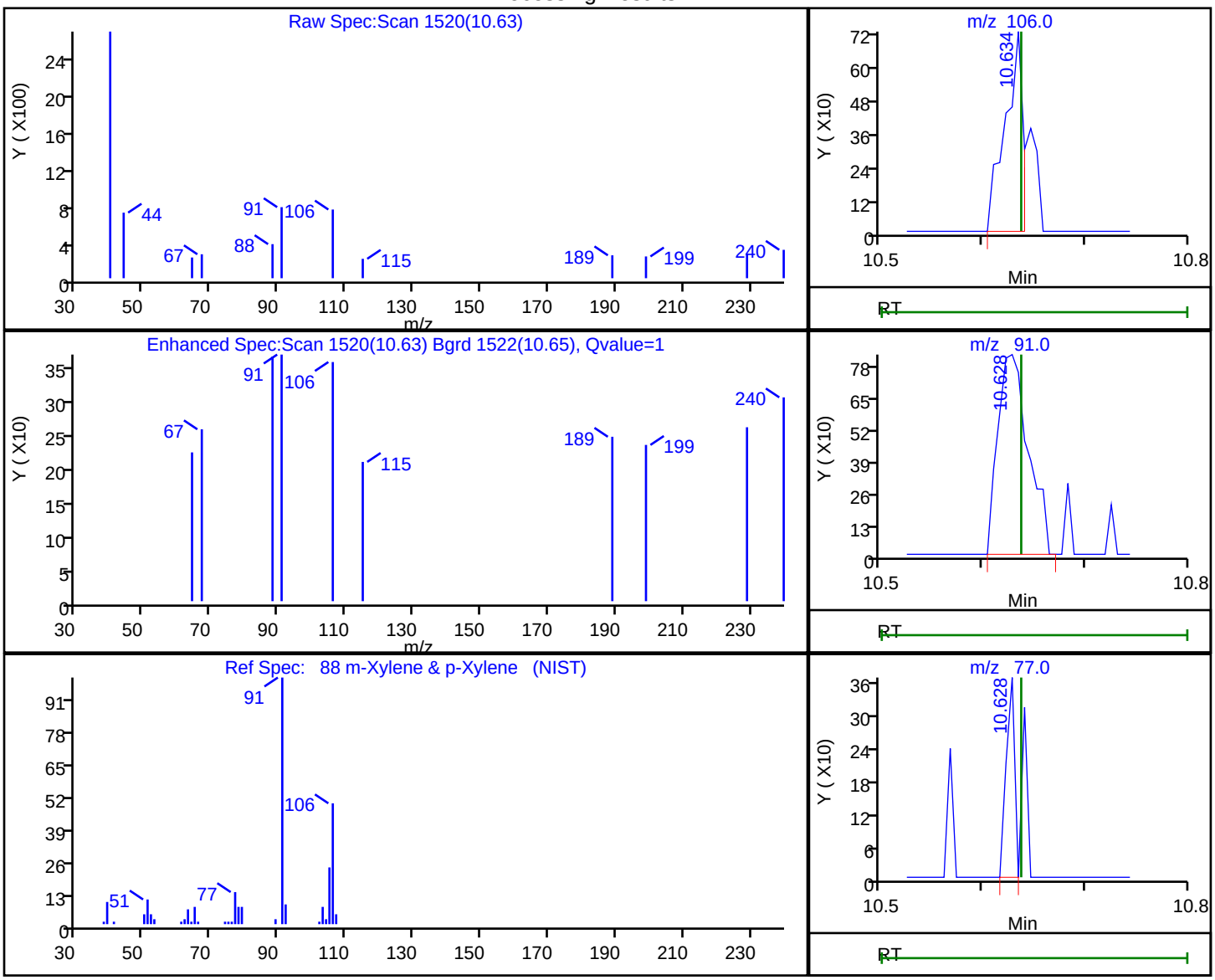
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030618.D				
Injection Date:	06-Mar-2020 15:48:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-7	Lab Sample ID:	180-102790-7		
Client ID:	HD-COD-SW-16-0/1-0				
Operator ID:	10099	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

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

Processing Results



RT	Mass	Response	Amount
10.63	106.00	876	0.146177
10.63	91.00	1723	
10.63	77.00	212	

Reviewer: gordonk, 09-Mar-2020 07:48:15

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.: 180-102790-1

SDG No.:

Client Sample ID: HD-COD-SW-17-0/1-0 Lab Sample ID: 180-102790-8

Matrix: Water Lab File ID: 6030619.D

Analysis Method: EPA 8260C Date Collected: 02/24/2020 11:45

Sample wt/vol: 5(mL) Date Analyzed: 03/06/2020 16:16

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.: 309079 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	0.40
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	^c	1.0	0.59
75-34-3	1,1-Dichloroethane	ND		1.0	0.31
156-59-2	cis-1,2-Dichloroethene	1.8		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	2.5		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	^c	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	^c	1.0	0.58
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.45
127-18-4	Tetrachloroethene	6.6		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.: 180-102790-1

SDG No.:

Client Sample ID: HD-COD-SW-17-0/1-0 Lab Sample ID: 180-102790-8

Matrix: Water Lab File ID: 6030619.D

Analysis Method: EPA 8260C Date Collected: 02/24/2020 11:45

Sample wt/vol: 5(mL) Date Analyzed: 03/06/2020 16:16

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.: 309079 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)	93	^c	70-150
2037-26-5	Toluene-d8 (Surr)	88		78-128
460-00-4	4-Bromofluorobenzene (Surr)	92		64-123
1868-53-7	Dibromofluoromethane (Surr)	91		75-147

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030619.D
Lims ID: 180-102790-A-8
Client ID: HD-COD-SW-17-0/1-0
Sample Type: Client
Inject. Date: 06-Mar-2020 16:16:30 ALS Bottle#: 19 Worklist Smp#: 20
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-0031064-020
Operator ID: 10099 Instrument ID: CHHP6

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 09-Mar-2020 07:49:07 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0332

First Level Reviewer: gordonk Date: 09-Mar-2020 07:49:07

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.247	4.249	-0.002	92	110999	1000.0	
* 2 Fluorobenzene (IS)	96	7.264	7.261	0.003	100	455339	50.0	
* 3 Chlorobenzene-d5	119	10.373	10.375	-0.002	86	105935	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.721	12.717	0.004	98	129367	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.534	6.537	-0.003	92	84596	45.7	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.911	6.908	0.003	97	111723	46.6	
$ 7 Toluene-d8 (Surr)	98	8.919	8.915	0.004	92	442022	43.8	
$ 8 4-Bromofluorobenzene (Surr	95	11.559	11.562	-0.003	0	160969	46.0	
12 Chloromethane	50		1.828				ND	
13 Vinyl chloride	62		1.938				ND	
15 Bromomethane	94		2.260				ND	
16 Chloroethane	64		2.382				ND	
22 1,1-Dichloroethene	96		3.325				ND	
24 Acetone	43		3.422				ND	
26 Carbon disulfide	76		3.617				ND	
31 Methylene Chloride	84		4.115				ND	
33 Acrylonitrile	53		4.505				ND	
34 trans-1,2-Dichloroethene	96		4.529				ND	
35 Methyl tert-butyl ether	73	4.563	4.553	0.010	1	1056	0.2792	
37 1,1-Dichloroethane	63		5.168				ND	
43 cis-1,2-Dichloroethene	96	5.920	5.922	-0.002	76	19638	8.92	
44 2-Butanone (MEK)	43		5.940				ND	
48 Chlorobromomethane	128		6.208				ND	
50 Chloroform	83		6.354				ND	
51 1,1,1-Trichloroethane	97	6.516	6.512	0.004	12	3167	1.47	M
53 Carbon tetrachloride	117		6.689				ND	
56 Benzene	78		6.914				ND	
57 1,2-Dichloroethane	62		6.993				ND	
61 Trichloroethene	130	7.648	7.650	-0.002	92	24333	12.7	
64 1,2-Dichloropropane	63		7.924				ND	U
68 Dichlorobromomethane	83		8.210				ND	
71 cis-1,3-Dichloropropene	75		8.660				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
72 4-Methyl-2-pentanone (MIBK	43		8.818				ND	U
73 Toluene	91		8.988				ND	
74 trans-1,3-Dichloropropene	75		9.238				ND	
76 1,1,2-Trichloroethane	97		9.432				ND	U
77 Tetrachloroethene	164	9.497	9.499	-0.002	94	53758	33.2	
79 2-Hexanone	43		9.651				ND	
81 Chlorodibromomethane	129		9.803				ND	
82 Ethylene Dibromide	107		9.913				ND	
84 Chlorobenzene	112		10.406				ND	
86 1,1,1,2-Tetrachloroethane	131		10.497				ND	
87 Ethylbenzene	106		10.503				ND	
88 m-Xylene & p-Xylene	106		10.637				ND	
89 o-Xylene	106		11.020				ND	
90 Styrene	104		11.038				ND	
91 Bromoform	173		11.221				ND	
96 1,1,2,2-Tetrachloroethane	83		11.702				ND	
S 131 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

U - Marked Undetected

Reagents:

VOA8260INT_00104	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00104	Amount Added:	2.00	Units: uL	Run Reagent

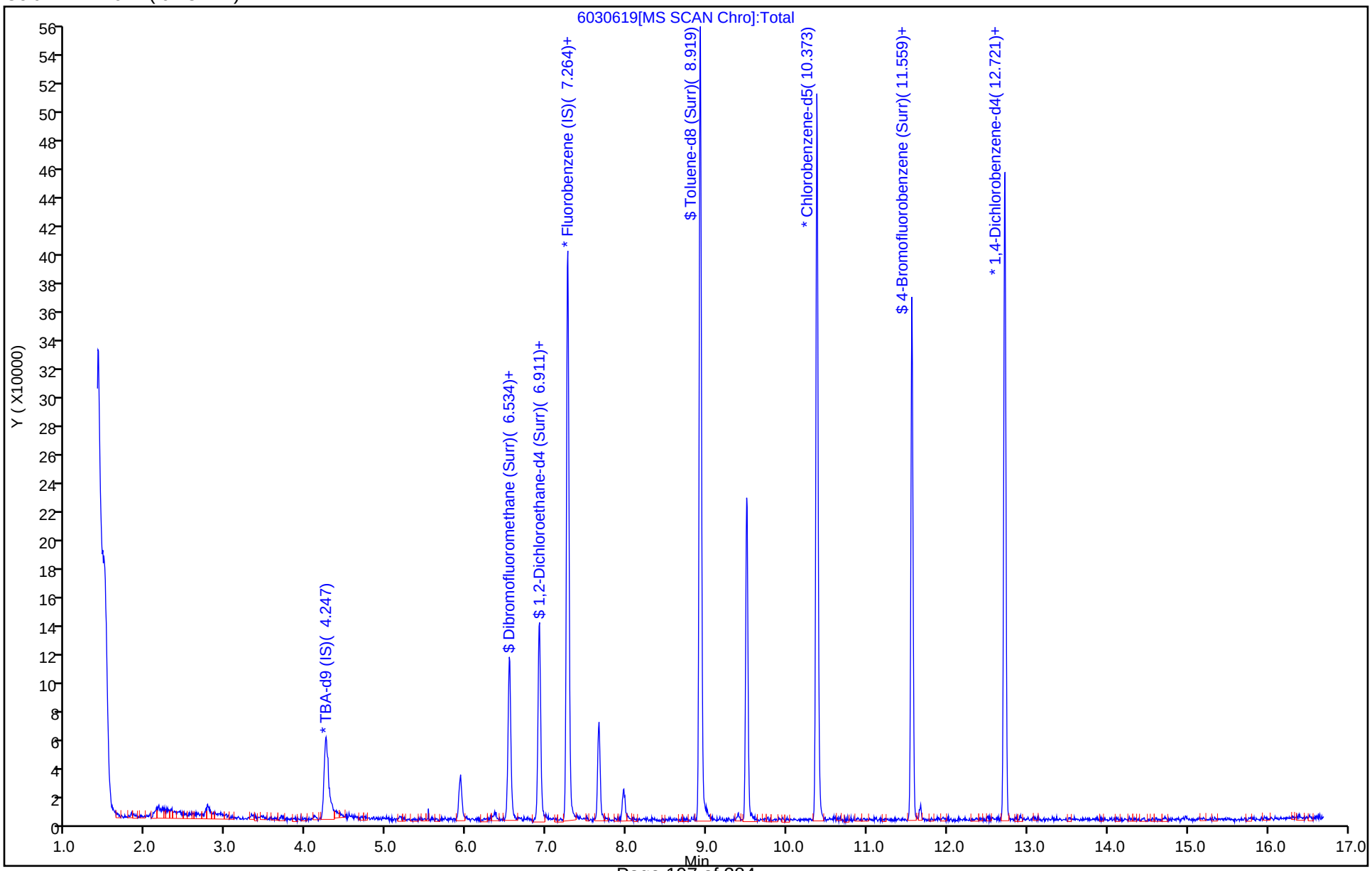
Report Date: 09-Mar-2020 07:49:07 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030619.D

Injection Date:	06-Mar-2020 16:16:30	Instrument ID:	CHHP6	Operator ID:	10099
Lims ID:	180-102790-A-8	Lab Sample ID:	180-102790-8	Worklist Smp#:	20
Client ID:	HD-COD-SW-17-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Recovery Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030619.D
Lims ID: 180-102790-A-8
Client ID: HD-COD-SW-17-0/1-0
Sample Type: Client
Inject. Date: 06-Mar-2020 16:16:30 ALS Bottle#: 19 Worklist Smp#: 20
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-0031064-020
Operator ID: 10099 Instrument ID: CHHP6

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 09-Mar-2020 07:49:07 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0332

First Level Reviewer: gordonk Date: 09-Mar-2020 07:49:07

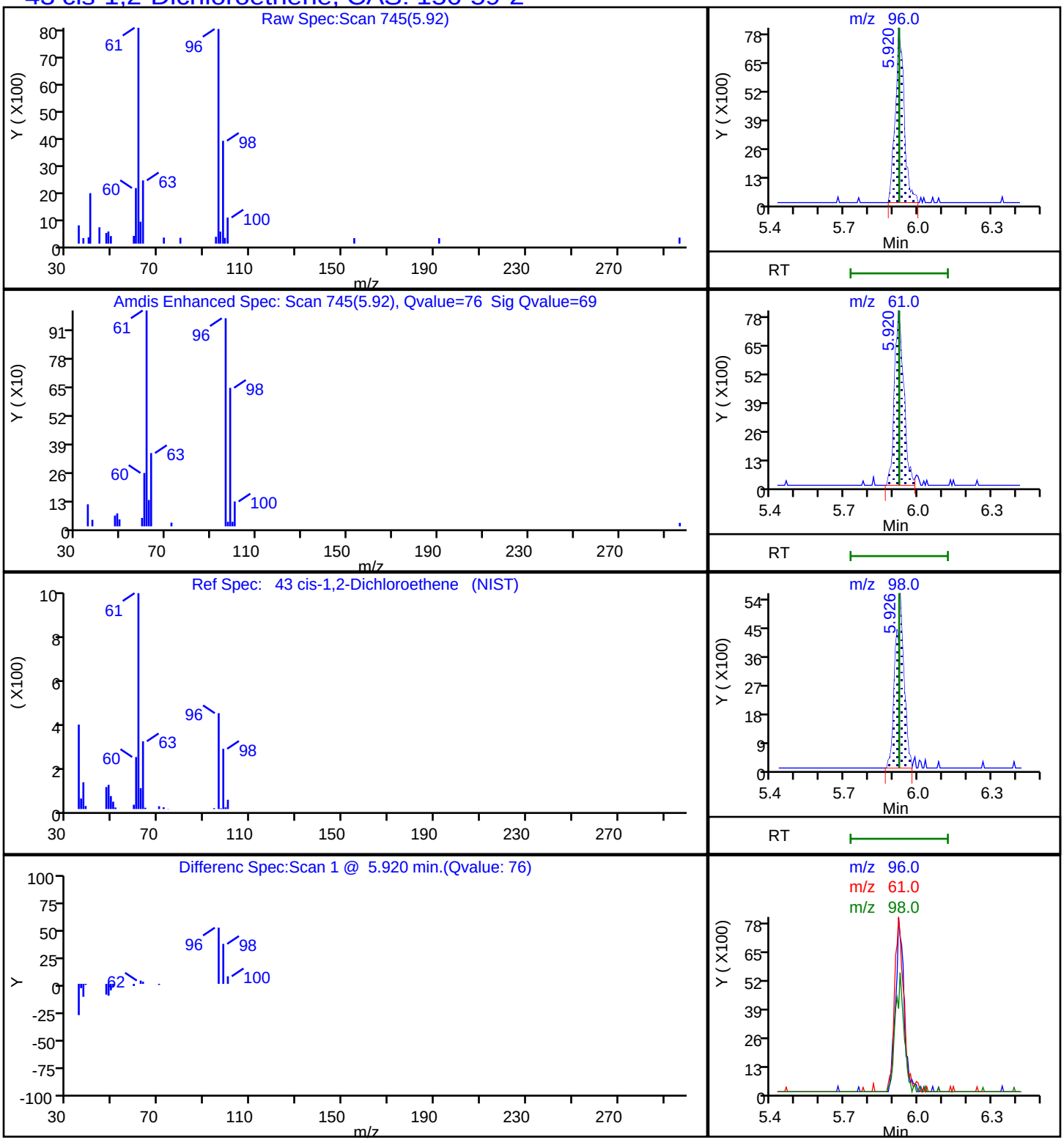
Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	50.0	45.7	91.49
$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	46.6	93.17
$ 7 Toluene-d8 (Surr)	50.0	43.8	87.56
$ 8 4-Bromofluorobenzene (Surr)	50.0	46.0	92.01

Report Date: 09-Mar-2020 07:49:07 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030619.D				
Injection Date:	06-Mar-2020 16:16:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-8	Lab Sample ID:	180-102790-8		
Client ID:	HD-COD-SW-17-0/1-0				
Operator ID:	10099	ALS Bottle#:	19	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

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



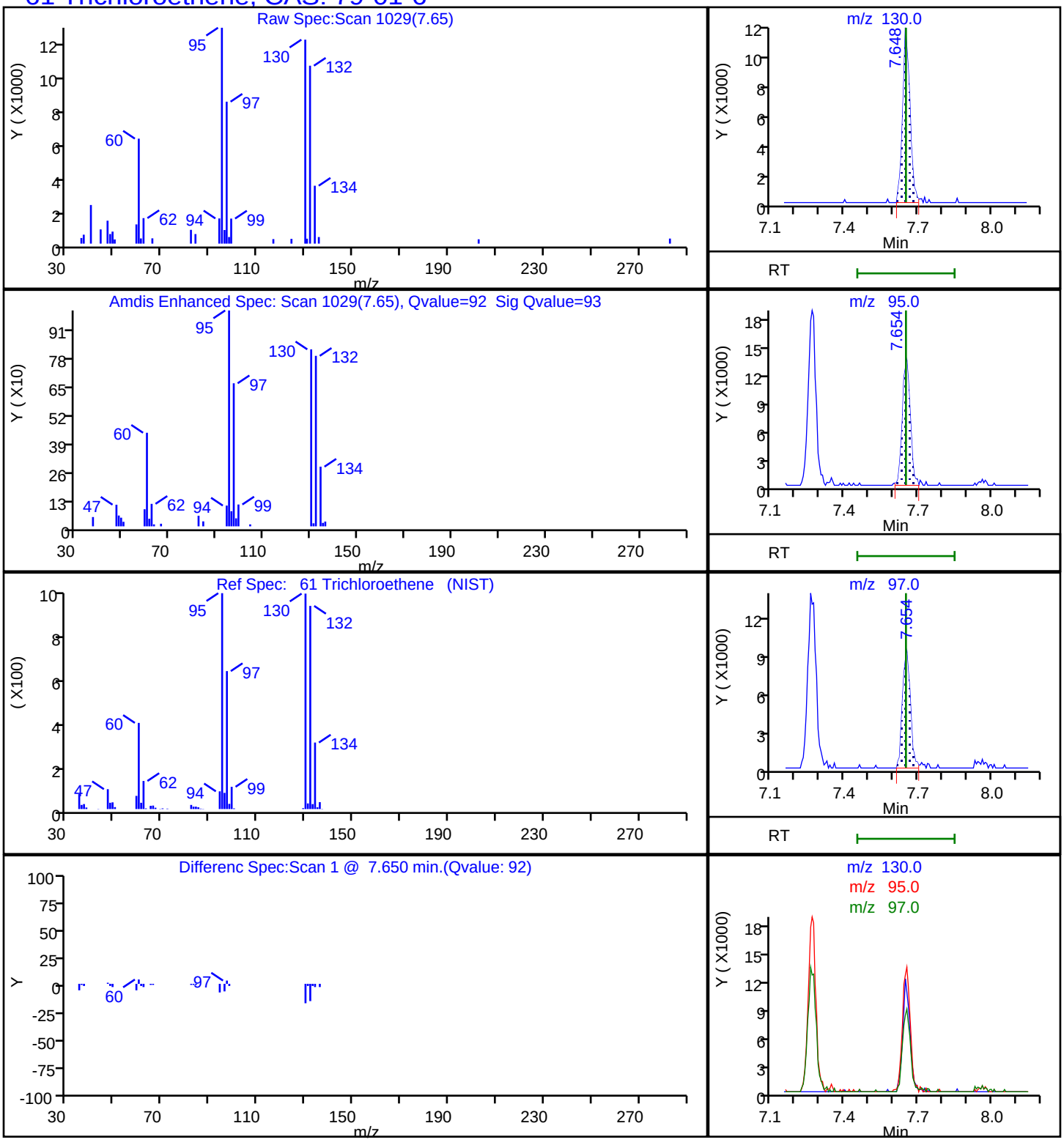
Report Date: 09-Mar-2020 07:49:07 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030619.D

Injection Date:	06-Mar-2020 16:16:30	Instrument ID:	CHHP6
Lims ID:	180-102790-A-8	Lab Sample ID:	180-102790-8
Client ID:	HD-COD-SW-17-0/1-0		
Operator ID:	10099	ALS Bottle#:	19 Worklist Smp#: 20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

61 Trichloroethene, CAS: 79-01-6

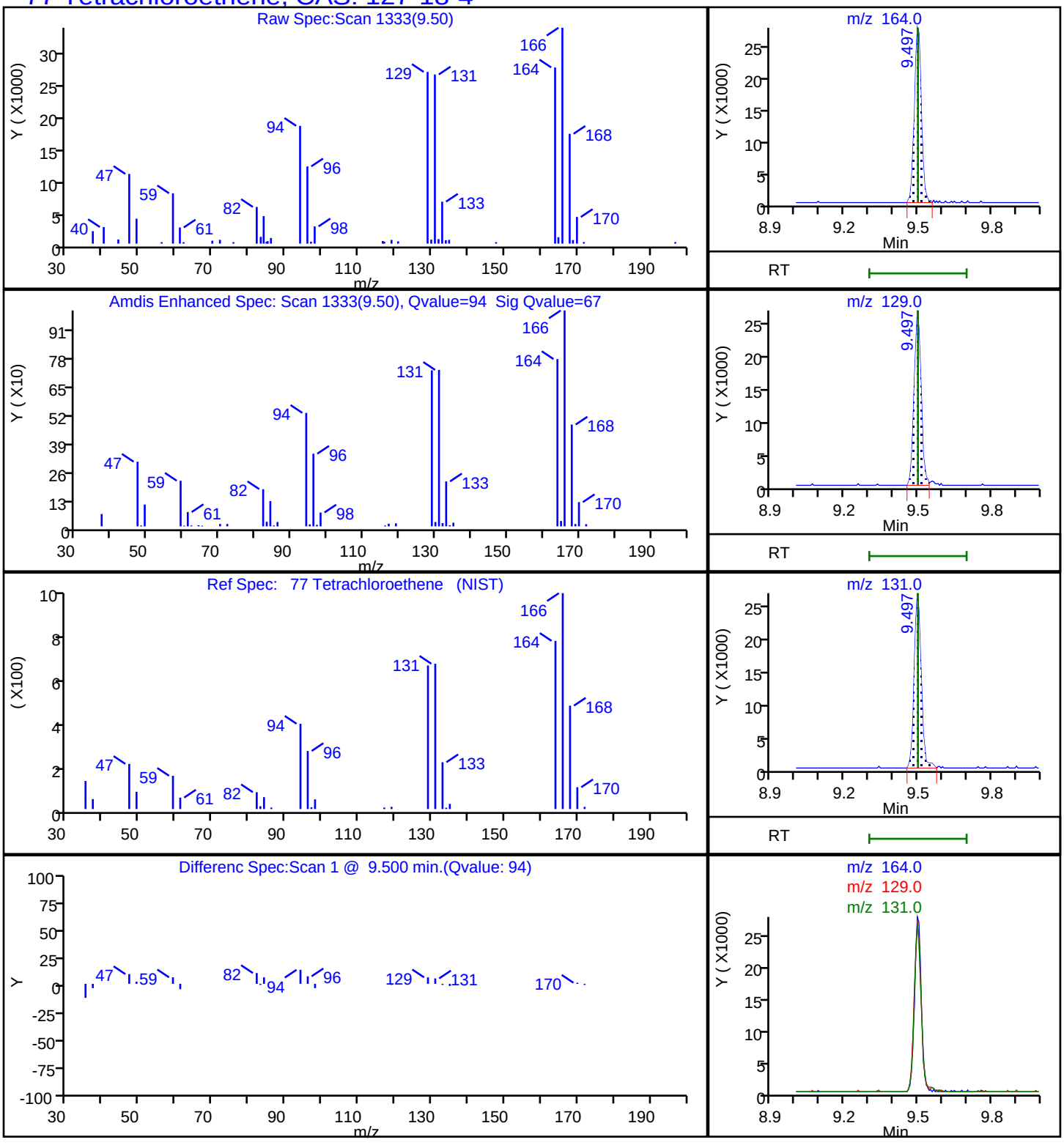


Report Date: 09-Mar-2020 07:49:08 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030619.D		
Injection Date:	06-Mar-2020 16:16:30	Instrument ID:	CHHP6
Lims ID:	180-102790-A-8	Lab Sample ID:	180-102790-8
Client ID:	HD-COD-SW-17-0/1-0		
Operator ID:	10099	ALS Bottle#:	19 Worklist Smp#: 20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

77 Tetrachloroethene, CAS: 127-18-4



Eurofins TestAmerica, Pittsburgh

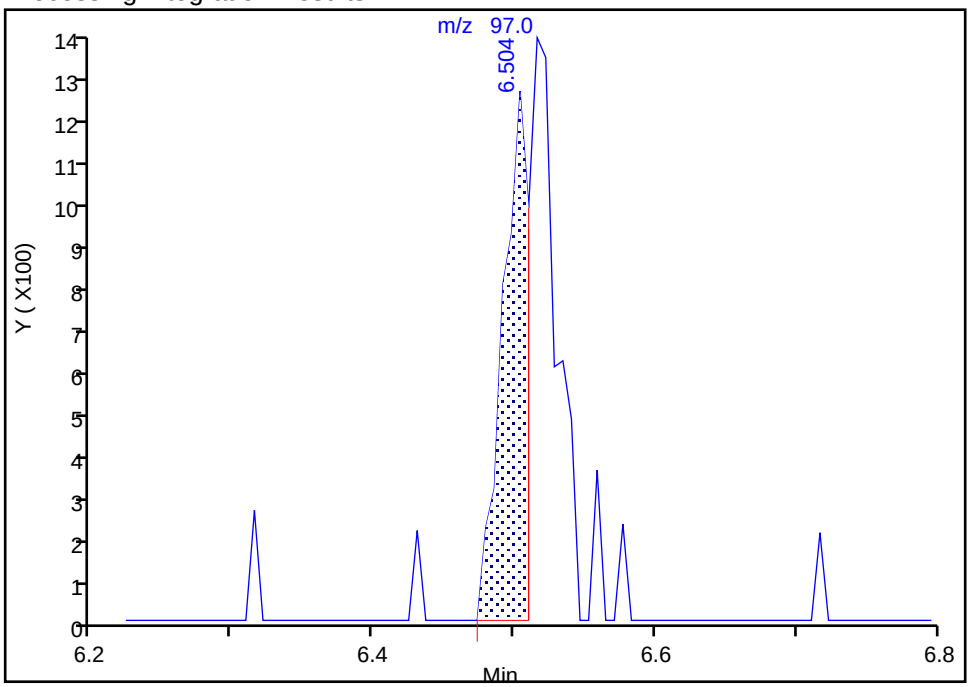
Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030619.D				
Injection Date:	06-Mar-2020 16:16:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-8	Lab Sample ID:	180-102790-8		
Client ID:	HD-COD-SW-17-0/1-0				
Operator ID:	10099	ALS Bottle#:	19	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

51 1,1,1-Trichloroethane, CAS: 71-55-6

Signal: 1

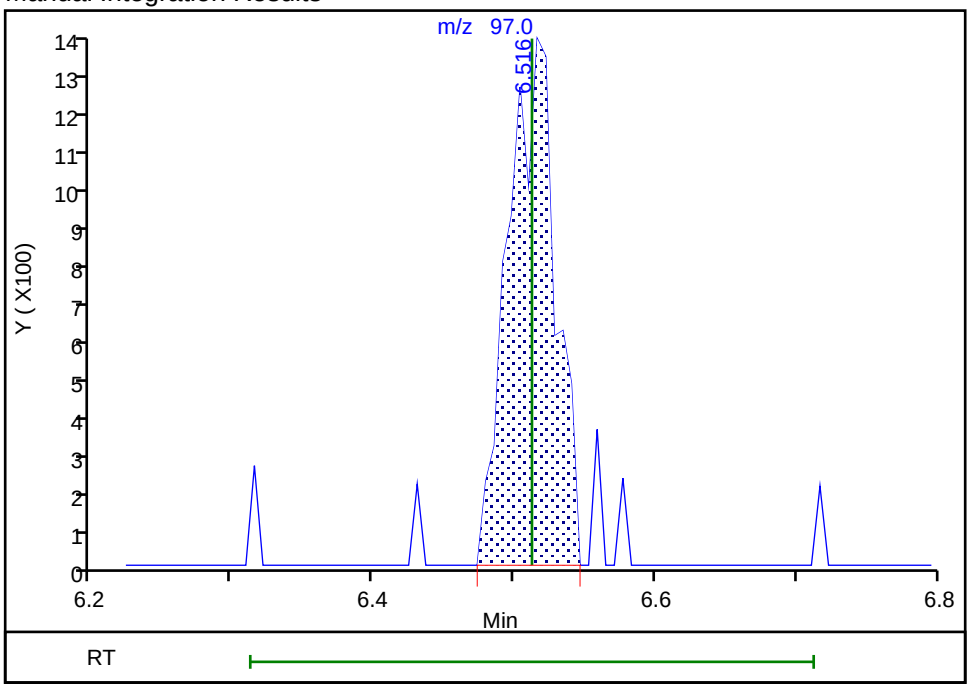
Processing Integration Results

RT: 6.50
Area: 1597
Amount: 0.739186
Amount Units: ng



Manual Integration Results

RT: 6.52
Area: 3167
Amount: 1.465874
Amount Units: ng



Reviewer: gordonk, 09-Mar-2020 07:48:53
Audit Action: Manually Integrated Audit Reason: Poor chromatography

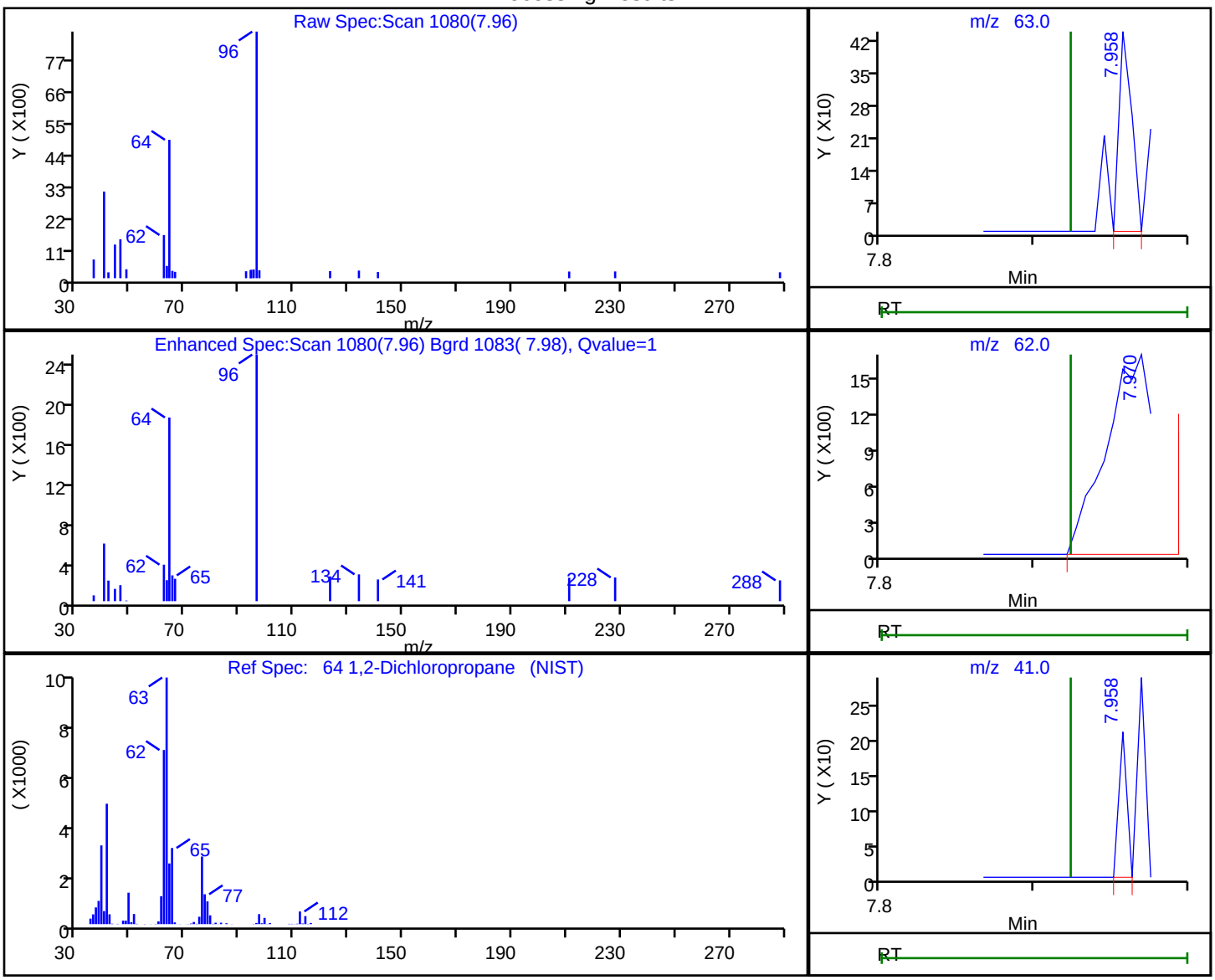
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030619.D				
Injection Date:	06-Mar-2020 16:16:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-8	Lab Sample ID:	180-102790-8		
Client ID:	HD-COD-SW-17-0/1-0				
Operator ID:	10099	ALS Bottle#:	19	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

64 1,2-Dichloropropane, CAS: 78-87-5

Processing Results



RT	Mass	Response	Amount
7.96	63.00	248	0.120535
7.97	62.00	3664	
7.96	41.00	75	

Reviewer: gordonk, 09-Mar-2020 07:48:33

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

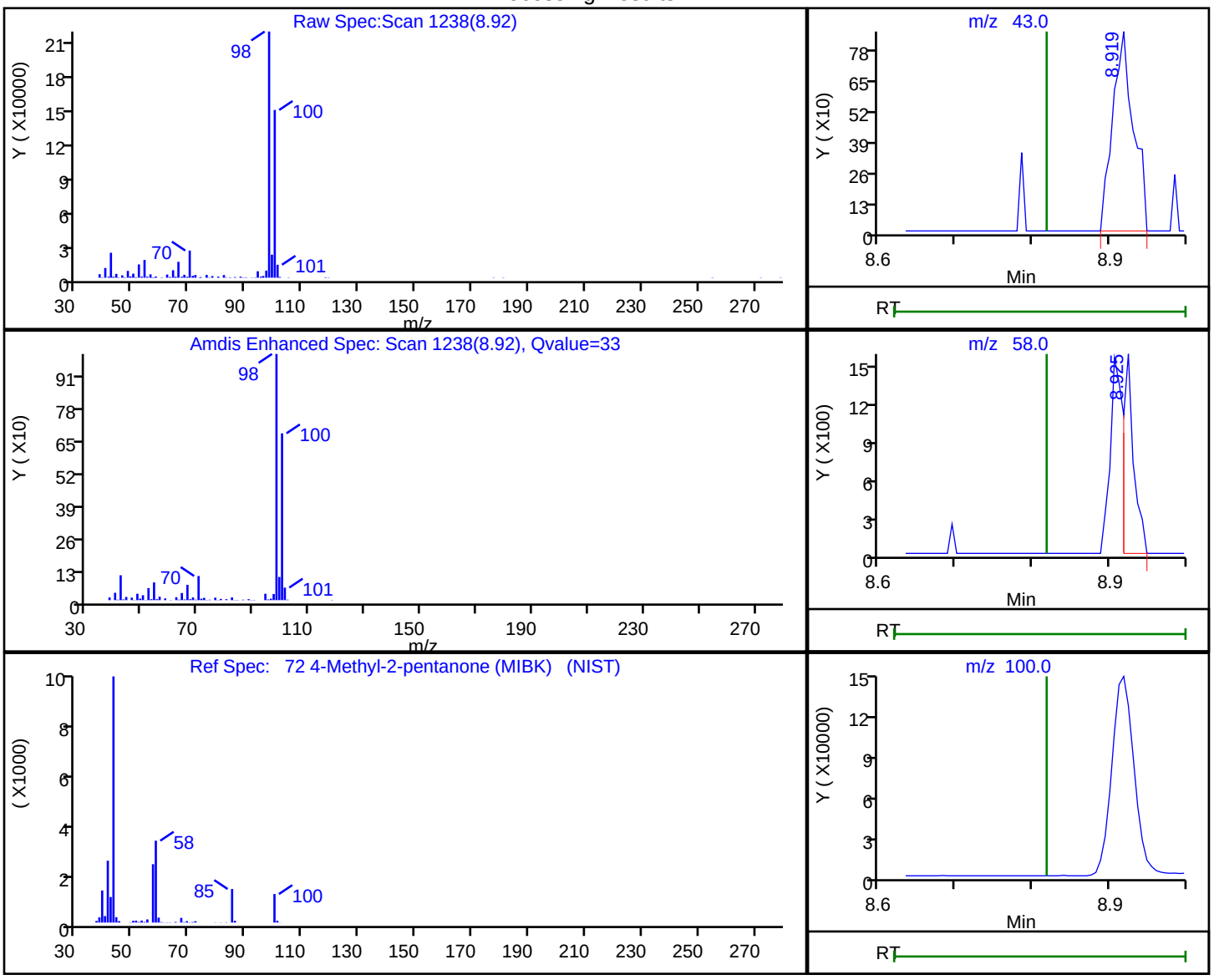
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030619.D				
Injection Date:	06-Mar-2020 16:16:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-8	Lab Sample ID:	180-102790-8		
Client ID:	HD-COD-SW-17-0/1-0				
Operator ID:	10099	ALS Bottle#:	19	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

72 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1

Processing Results



RT	Mass	Response	Amount
8.92	43.00	1621	0.897966
8.93	58.00	1413	
8.92	100.00	297579	

Reviewer: gordonk, 09-Mar-2020 07:48:31

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

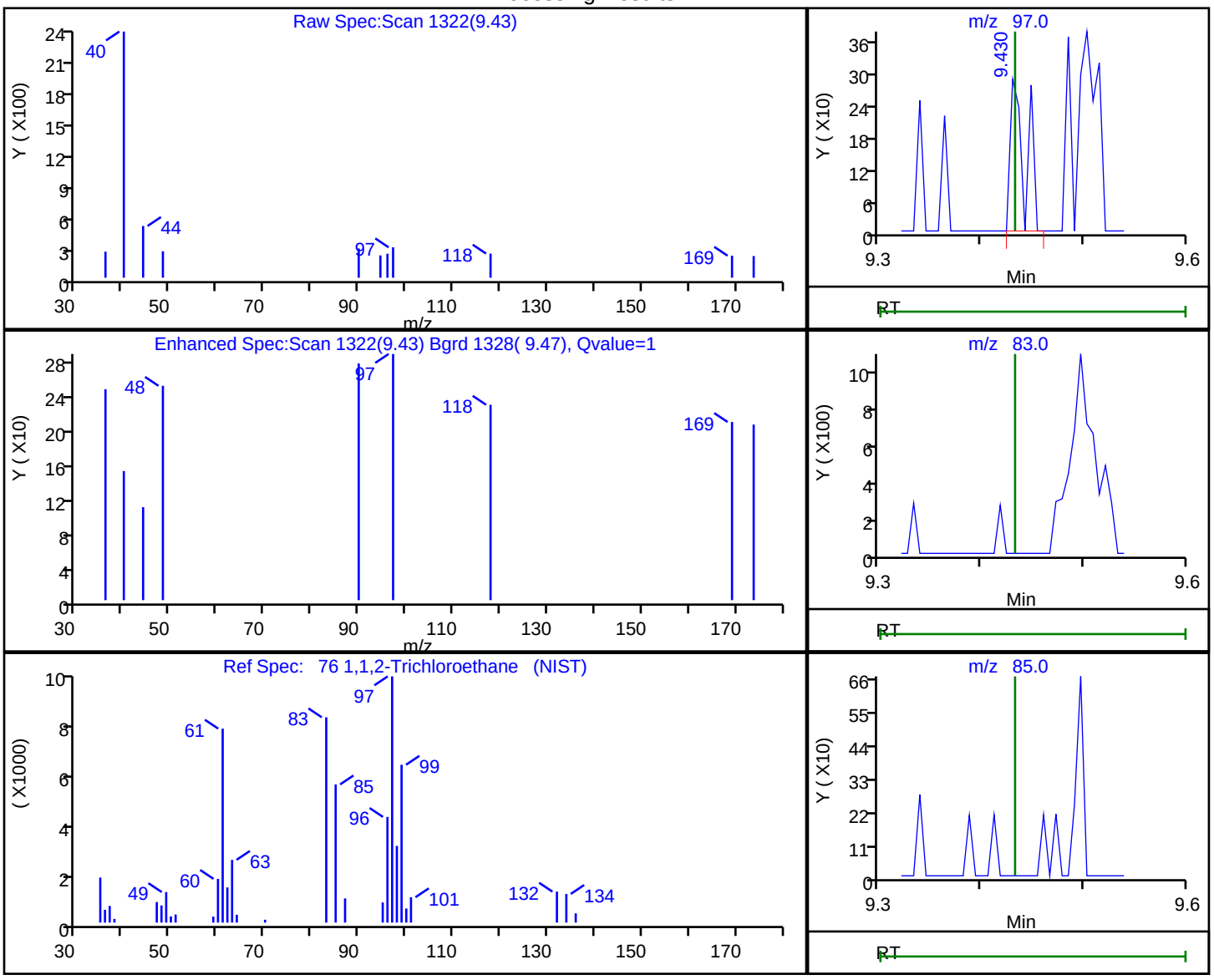
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030619.D				
Injection Date:	06-Mar-2020 16:16:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-8	Lab Sample ID:	180-102790-8		
Client ID:	HD-COD-SW-17-0/1-0				
Operator ID:	10099	ALS Bottle#:	19	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

76 1,1,2-Trichloroethane, CAS: 79-00-5

Processing Results



RT	Mass	Response	Amount
9.43	97.00	290	0.111733
9.43	83.00	0	
9.43	85.00	0	

Reviewer: gordonk, 09-Mar-2020 07:48:29

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.: 180-102790-1

SDG No.:

Client Sample ID: HD-COD-SW-26-0/1-0 Lab Sample ID: 180-102790-9

Matrix: Water Lab File ID: 6030607.D

Analysis Method: EPA 8260C Date Collected: 02/24/2020 12:25

Sample wt/vol: 5(mL) Date Analyzed: 03/06/2020 10:47

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.: 309079 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	ND	F1	1.0	0.90
75-01-4	Vinyl chloride	ND	F1	1.0	0.40
74-83-9	Bromomethane	ND	F1	1.0	0.89
75-00-3	Chloroethane	ND	F1	1.0	0.90
75-35-4	1,1-Dichloroethene	ND	F1	1.0	0.55
67-64-1	Acetone	ND	^c	5.0	3.4
75-15-0	Carbon disulfide	ND	F1	1.0	0.88
75-09-2	Methylene Chloride	ND		1.0	0.89
156-60-5	trans-1,2-Dichloroethene	ND	F1	1.0	0.67
1634-04-4	Methyl tert-butyl ether	ND	F1 ^c	1.0	0.59
75-34-3	1,1-Dichloroethane	ND	F1	1.0	0.31
156-59-2	cis-1,2-Dichloroethene	ND	F1	1.0	0.71
74-97-5	Bromochloromethane	ND	F1	1.0	0.63
78-93-3	2-Butanone (MEK)	ND		5.0	2.6
67-66-3	Chloroform	ND	F1	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	F1	1.0	0.60
107-06-2	1,2-Dichloroethane	ND		1.0	0.57
79-01-6	Trichloroethene	ND	F1	1.0	0.69
78-87-5	1,2-Dichloropropane	ND	F1	1.0	0.66
75-27-4	Bromodichloromethane	ND		1.0	0.64
10061-01-5	cis-1,3-Dichloropropene	ND	F1 ^c	1.0	0.59
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	3.1
108-88-3	Toluene	ND	F1	1.0	0.46
10061-02-6	trans-1,3-Dichloropropene	ND	^c	1.0	0.58
79-00-5	1,1,2-Trichloroethane	ND	F1	1.0	0.45
127-18-4	Tetrachloroethene	0.55	J 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	F1	1.0	0.50
108-90-7	Chlorobenzene	ND	F1	1.0	0.50
630-20-6	1,1,1,2-Tetrachloroethane	ND		1.0	0.57
100-41-4	Ethylbenzene	ND	F1	1.0	0.51
1330-20-7	Xylenes, Total	ND	F1 *	2.0	0.89
100-42-5	Styrene	ND	F1	1.0	0.47

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-102790-1

SDG No.:

Client Sample ID: HD-COD-SW-26-0/1-0 Lab Sample ID: 180-102790-9

Matrix: Water Lab File ID: 6030607.D

Analysis Method: EPA 8260C Date Collected: 02/24/2020 12:25

Sample wt/vol: 5(mL) Date Analyzed: 03/06/2020 10:47

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.: 309079 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	^c	70-150
2037-26-5	Toluene-d8 (Surr)	115		78-128
460-00-4	4-Bromofluorobenzene (Surr)	98		64-123
1868-53-7	Dibromofluoromethane (Surr)	101		75-147

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030607.D
Lims ID: 180-102790-A-9
Client ID: HD-COD-SW-26-0/1-0
Sample Type: Client
Inject. Date: 06-Mar-2020 10:47:30 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-0031064-008
Operator ID: 10099 Instrument ID: CHHP6

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 06-Mar-2020 11:07:51 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0335

First Level Reviewer: gordonk Date: 06-Mar-2020 11:07:51

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.243	4.249	-0.006	97	138244	1000.0	
* 2 Fluorobenzene (IS)	96	7.261	7.261	-0.001	99	643848	50.0	
* 3 Chlorobenzene-d5	119	10.375	10.375	0.000	86	129318	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.717	12.717	0.000	98	142539	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.537	6.537	0.000	92	132405	50.6	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.908	6.908	0.000	97	166822	49.2	
$ 7 Toluene-d8 (Surr)	98	8.921	8.915	0.006	93	710613	57.7	
$ 8 4-Bromofluorobenzene (Surr	95	11.562	11.562	0.000	0	209197	49.0	
11 Dichlorodifluoromethane	85		1.615				ND	
12 Chloromethane	50		1.828				ND	
14 Butadiene	39		1.938				ND	
13 Vinyl chloride	62		1.938				ND	
15 Bromomethane	94		2.260				ND	
16 Chloroethane	64		2.382				ND	
17 Dichlorofluoromethane	67		2.661				ND	
18 Trichlorofluoromethane	101		2.686				ND	
19 Ethanol	45	2.947	2.909	0.038	0	769	NC	
20 Ethyl ether	59		3.027				ND	
21 Acrolein	56		3.213				ND	
22 1,1-Dichloroethene	96		3.325				ND	
23 1,1,2-Trichloro-1,2,2-trif	101		3.392				ND	
24 Acetone	43	3.416	3.422	-0.006	70	8962	10.9	M
25 Iodomethane	142		3.519				ND	
27 Isopropyl alcohol	45		3.597				ND	U
26 Carbon disulfide	76		3.617				ND	
29 3-Chloro-1-propene	76		3.896				ND	
30 Methyl acetate	43		3.921				ND	
28 Acetonitrile	41		4.113				ND	U
31 Methylene Chloride	84		4.115				ND	
32 2-Methyl-2-propanol	59		4.389				ND	
33 Acrylonitrile	53		4.505				ND	
34 trans-1,2-Dichloroethene	96		4.529				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
35 Methyl tert-butyl ether	73		4.553				ND	
36 Hexane	57		4.955				ND	
37 1,1-Dichloroethane	63		5.168				ND	
38 Vinyl acetate	43		5.226				ND	U
39 2-Chloro-1,3-butadiene	53		5.318				ND	
41 Tert-butyl ethyl ether	59		5.324				ND	
40 Isopropyl ether	45		5.324				ND	
45 Propionitrile	54		5.871				ND	U
42 2,2-Dichloropropane	97		5.916				ND	
43 cis-1,2-Dichloroethene	96		5.922				ND	U
44 2-Butanone (MEK)	43		5.940				ND	
46 Ethyl acetate	43		5.955				ND	
48 Chlorobromomethane	128		6.208				ND	
49 Tetrahydrofuran	42		6.226				ND	
47 Methacrylonitrile	41		6.236				ND	
50 Chloroform	83		6.354				ND	
51 1,1,1-Trichloroethane	97		6.512				ND	
52 Cyclohexane	56		6.579				ND	
53 Carbon tetrachloride	117		6.689				ND	
54 1,1-Dichloropropene	75		6.701				ND	
55 Isobutyl alcohol	41		6.908				ND	U
56 Benzene	78		6.914				ND	
57 1,2-Dichloroethane	62		6.993				ND	
148 Isooctane	57		7.112				ND	
58 Tert-amyl methyl ether	73		7.264				ND	U
59 n-Heptane	43		7.279				ND	
61 Trichloroethene	130	7.650	7.650	0.000	46	1784	0.6597	
60 n-Butanol	56		7.702				ND	U
62 Ethyl acrylate	55		7.818				ND	
63 Methylcyclohexane	83		7.887				ND	
64 1,2-Dichloropropane	63		7.924				ND	
67 Dibromomethane	93		8.015				ND	
65 1,4-Dioxane	88		8.021				ND	
66 Methyl methacrylate	69		8.055				ND	
68 Dichlorobromomethane	83		8.210				ND	
70 2-Chloroethyl vinyl ether	63		8.511				ND	
71 cis-1,3-Dichloropropene	75		8.660				ND	
72 4-Methyl-2-pentanone (MIBK	43		8.818				ND	U
73 Toluene	91		8.988				ND	U
74 trans-1,3-Dichloropropene	75		9.238				ND	
75 Ethyl methacrylate	69		9.299				ND	
76 1,1,2-Trichloroethane	97		9.432				ND	
77 Tetrachloroethene	164	9.499	9.499	0.000	91	11040	2.74	
78 1,3-Dichloropropane	76		9.591				ND	
79 2-Hexanone	43		9.651				ND	U
81 Chlorodibromomethane	129		9.803				ND	
80 n-Butyl acetate	43		9.813				ND	
82 Ethylene Dibromide	107		9.913				ND	
83 3-Chlorobenzotrifluoride	180		10.196				ND	
85 4-Chlorobenzotrifluoride	180		10.363				ND	
84 Chlorobenzene	112		10.406				ND	
86 1,1,1,2-Tetrachloroethane	131		10.497				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
87 Ethylbenzene	106		10.503				ND	
88 m-Xylene & p-Xylene	106		10.637				ND	
89 o-Xylene	106		11.020				ND	
90 Styrene	104		11.038				ND	
91 Bromoform	173		11.221				ND	
92 2-Chlorobenzotrifluoride	180		11.288				ND	
93 Isopropylbenzene	105		11.385				ND	
94 Cyclohexanone	55		11.517				ND	
95 Bromobenzene	156		11.695				ND	
96 1,1,2,2-Tetrachloroethane	83		11.702				ND	
97 trans-1,4-Dichloro-2-buten	53		11.738				ND	U
98 1,2,3-Trichloropropane	110		11.756				ND	
99 N-Propylbenzene	120		11.805				ND	
100 2-Chlorotoluene	126		11.890				ND	
102 1,3,5-Trimethylbenzene	105		11.987				ND	
101 3-Chlorotoluene	126	12.012	12.010	0.002	1	134	NC	
103 4-Chlorotoluene	126		12.012				ND	
104 tert-Butylbenzene	119		12.298				ND	
106 1,2,4-Trimethylbenzene	105		12.359				ND	
107 1,2-dichloro-4-(trifluorom	214		12.468				ND	
108 sec-Butylbenzene	105		12.523				ND	
113 2,4-Dichloro-1-(triflourom	214		12.568				ND	
109 1,3-Dichlorobenzene	146		12.638				ND	
114 2,5-Dichlorobenzotrifluori	214		12.645				ND	
110 4-Isopropyltoluene	119		12.681				ND	
111 1,4-Dichlorobenzene	146		12.742				ND	U
112 1,2,3-Trimethylbenzene	105		12.806				ND	
115 Benzyl chloride	91		12.898				ND	
116 n-Butylbenzene	91		13.089				ND	
117 1,2-Dichlorobenzene	146		13.101				ND	U
118 1,2-Dibromo-3-Chloropropan	75		13.892				ND	
119 2,4- & 2,5- & 2,6- Dichlor	125		13.995				ND	
120 1,3,5-Trichlorobenzene	180		14.120				ND	
121 2,3- & 3,4- Dichlorotoluen	125		14.190				ND	
122 1,2,4-Trichlorobenzene	180	14.707	14.713	-0.006	0	1525	0.7871	
123 Hexachlorobutadiene	225		14.853				ND	U
124 Naphthalene	128	14.974	14.981	-0.007	97	5528	1.02	
125 1,2,3-Trichlorobenzene	180	15.206	15.200	0.006	88	2401	1.73	M
127 2,3,6-Trichlorotoluene	159		15.759				ND	
126 2,4,5-Trichlorotoluene	159		15.759				ND	
S 131 Xylenes, Total	106		1.000				ND	
S 130 1,2-Dichloroethene, Total	96		1.000				ND	
S 154 Total BTEX	1		0.000				ND	
S 132 1,3-Dichloropropene, Total	1		0.000				ND	
T 155 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
M - Manually Integrated
U - Marked Undetected

Reagents:

VOA8260INT_00104	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00104	Amount Added:	2.00	Units: uL	Run Reagent

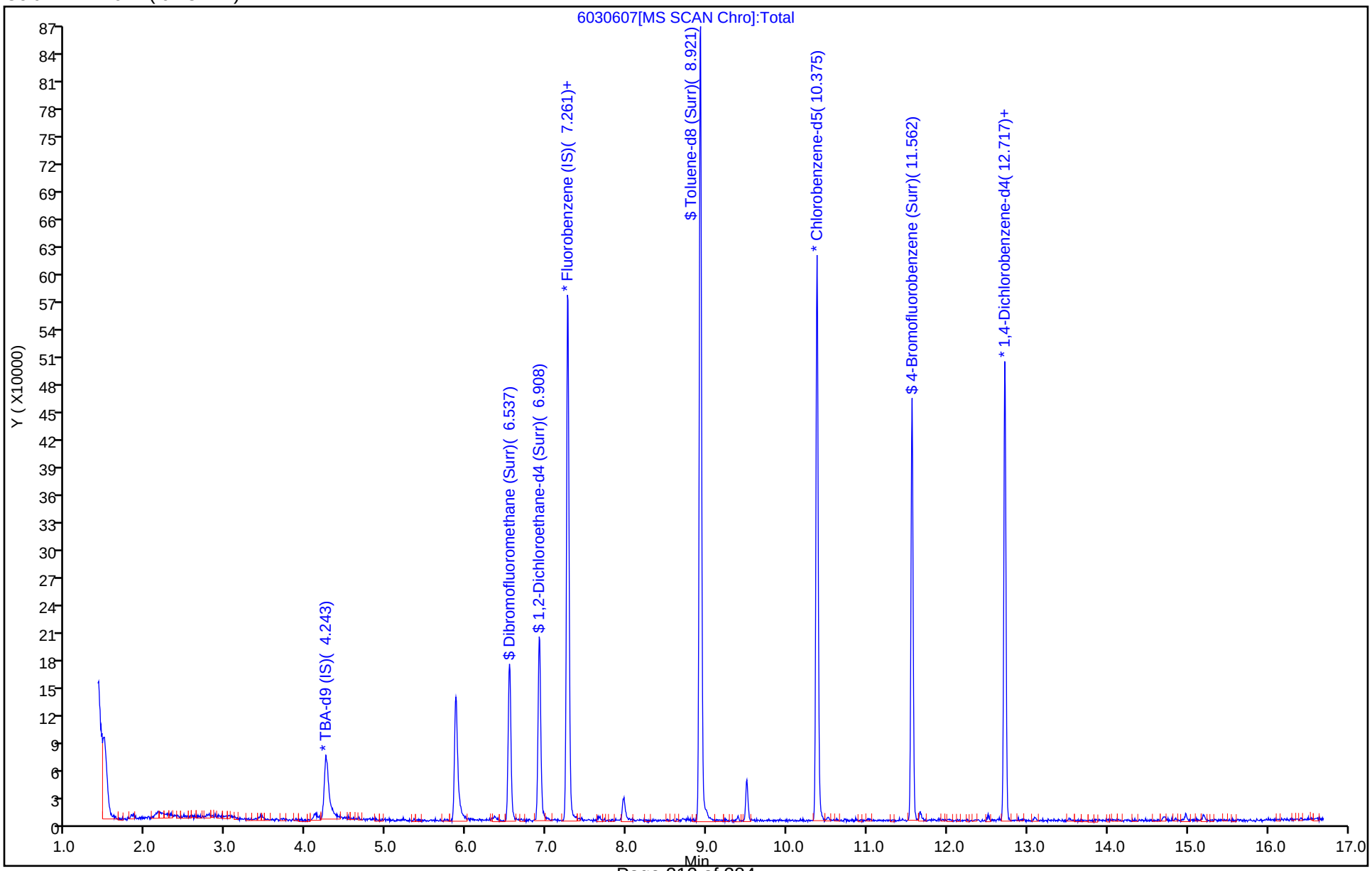
Report Date: 06-Mar-2020 11:07:51 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030607.D

Injection Date:	06-Mar-2020 10:47:30	Instrument ID:	CHHP6	Operator ID:	10099
Lims ID:	180-102790-A-9	Lab Sample ID:	180-102790-9	Worklist Smp#:	8
Client ID:	HD-COD-SW-26-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Recovery Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030607.D
Lims ID: 180-102790-A-9
Client ID: HD-COD-SW-26-0/1-0
Sample Type: Client
Inject. Date: 06-Mar-2020 10:47:30 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-0031064-008
Operator ID: 10099 Instrument ID: CHHP6

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 06-Mar-2020 11:07:51 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0335

First Level Reviewer: gordonk Date: 06-Mar-2020 11:07:51

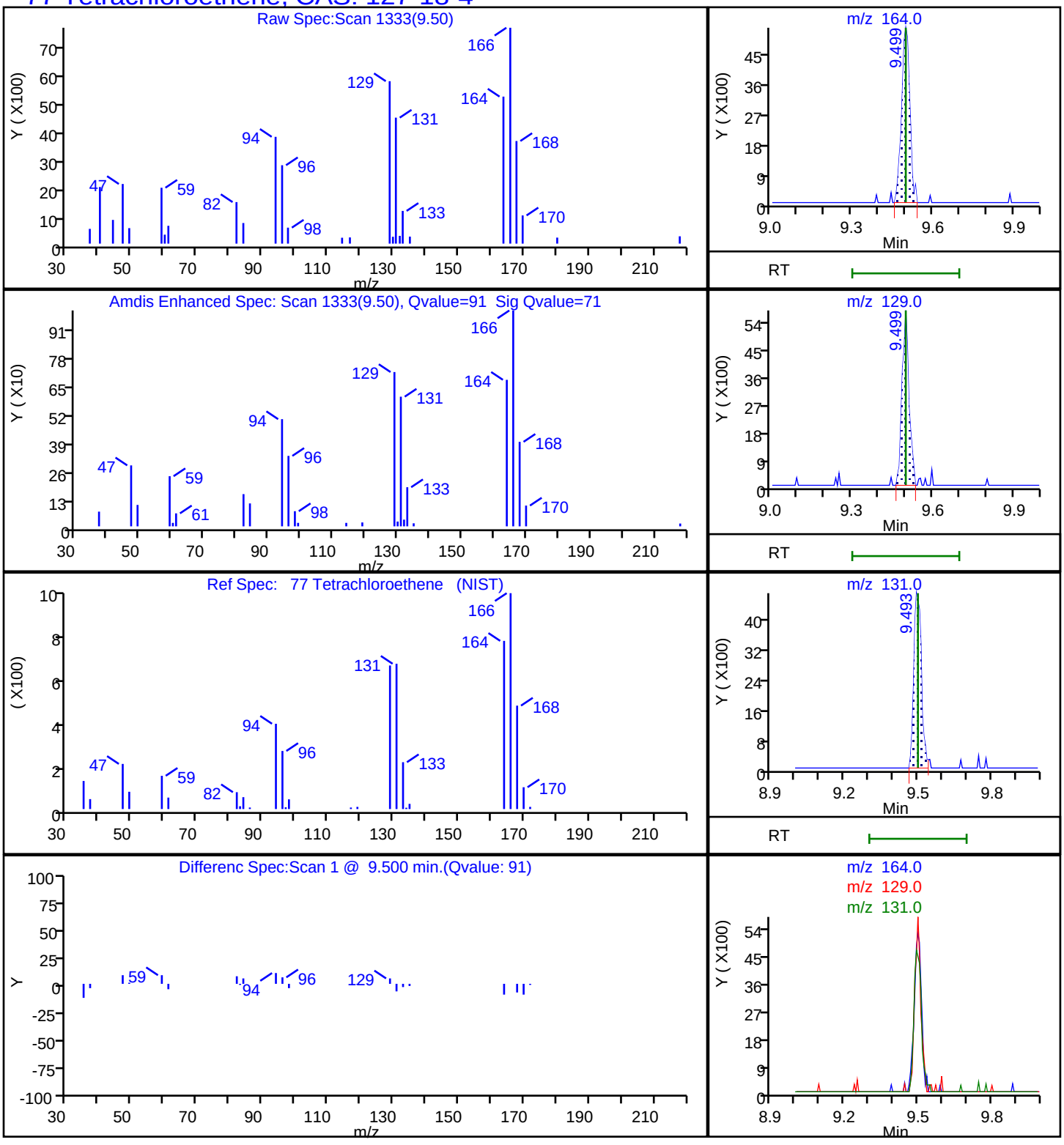
Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	50.0	50.6	101.26
$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	49.2	98.38
$ 7 Toluene-d8 (Surr)	50.0	57.7	115.31
$ 8 4-Bromofluorobenzene (Surr)	50.0	49.0	97.95

Report Date: 06-Mar-2020 11:07:51 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030607.D		
Injection Date:	06-Mar-2020 10:47:30	Instrument ID:	CHHP6
Lims ID:	180-102790-A-9	Lab Sample ID:	180-102790-9
Client ID:	HD-COD-SW-26-0/1-0		
Operator ID:	10099	ALS Bottle#:	7 Worklist Smp#: 8
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

77 Tetrachloroethene, CAS: 127-18-4



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Pittsburgh

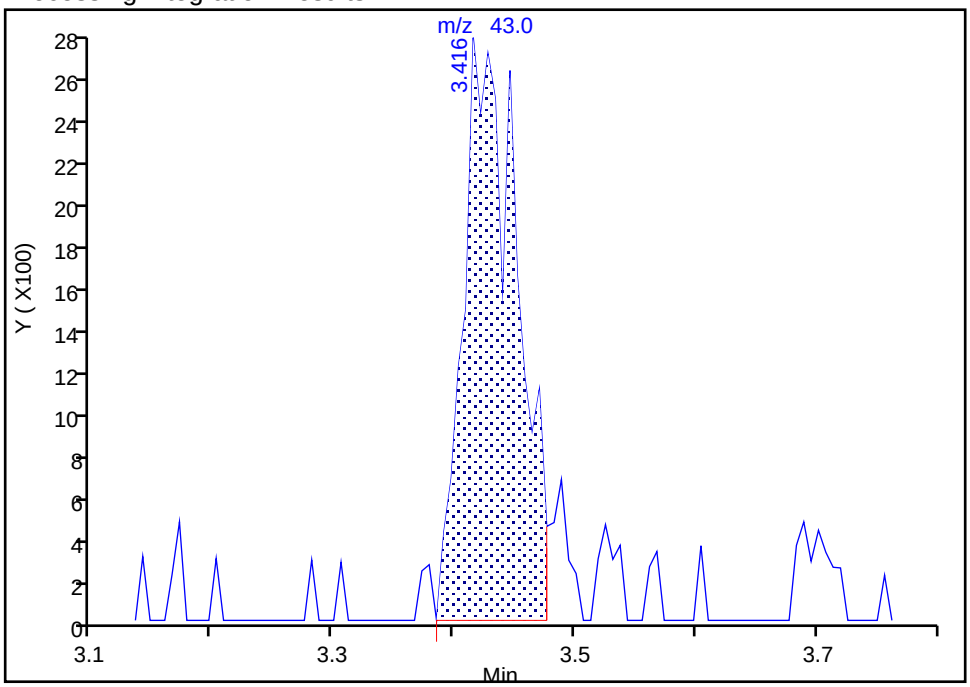
Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030607.D				
Injection Date:	06-Mar-2020 10:47:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-9	Lab Sample ID:	180-102790-9		
Client ID:	HD-COD-SW-26-0/1-0				
Operator ID:	10099	ALS Bottle#:	7	Worklist Smp#:	8
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

24 Acetone, CAS: 67-64-1

Signal: 1

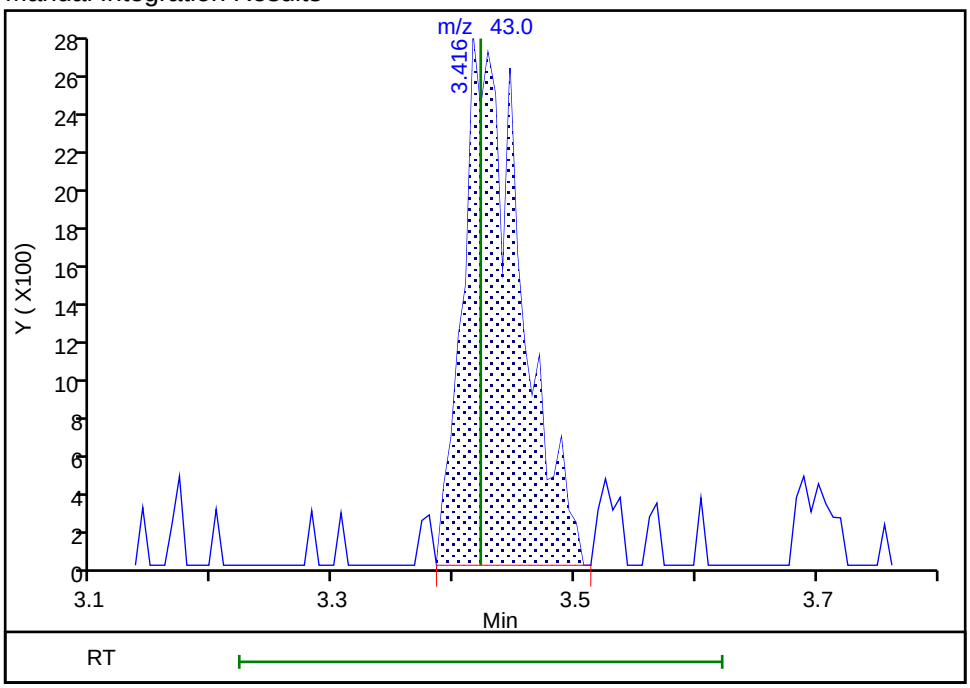
Processing Integration Results

RT: 3.42
Area: 8375
Amount: 10.148211
Amount Units: ng



Manual Integration Results

RT: 3.42
Area: 8962
Amount: 10.859494
Amount Units: ng



Reviewer: gordonk, 06-Mar-2020 11:07:39

Audit Action: Manually Integrated Audit Reason: Poor chromatography

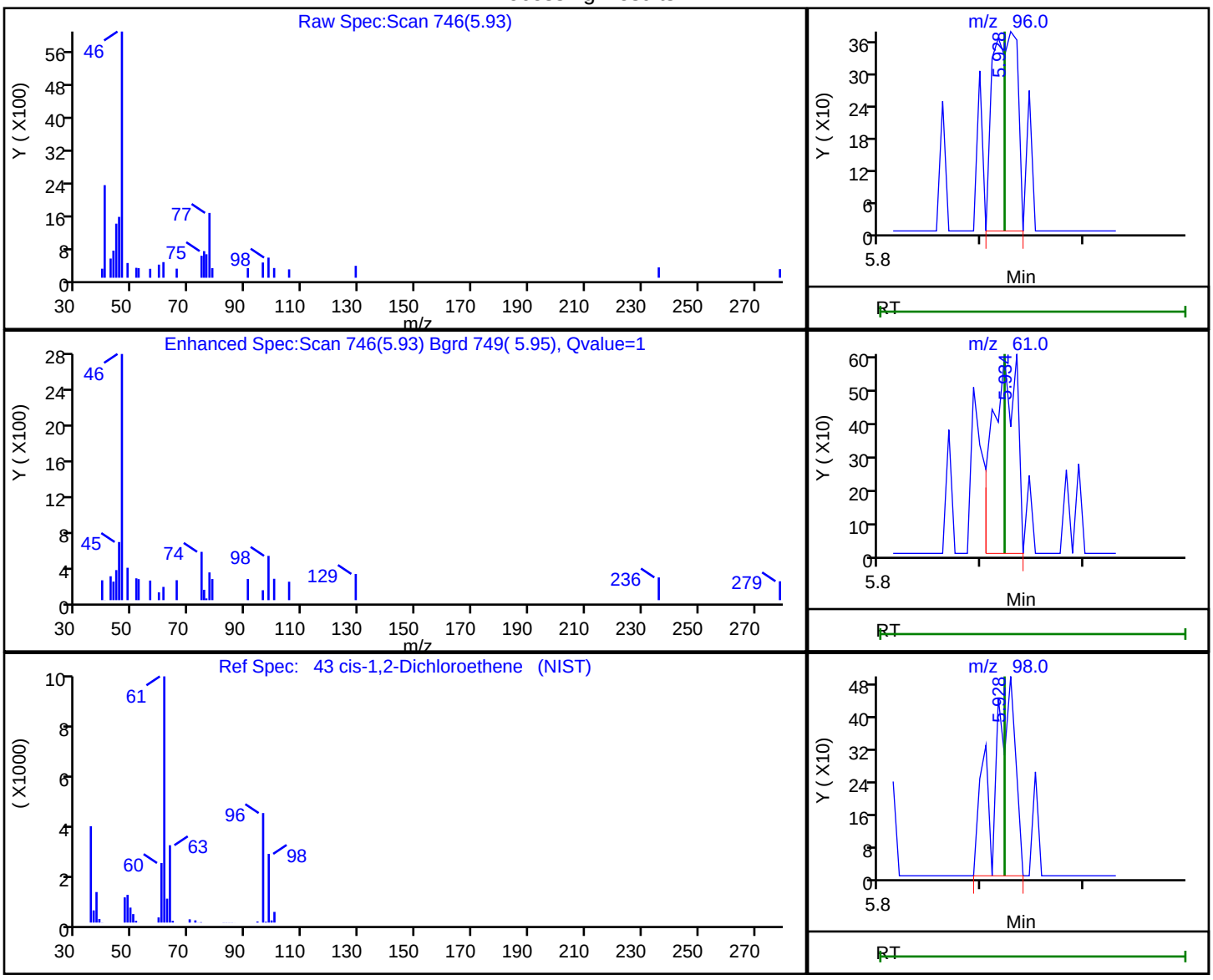
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030607.D				
Injection Date:	06-Mar-2020 10:47:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-9	Lab Sample ID:	180-102790-9		
Client ID:	HD-COD-SW-26-0/1-0				
Operator ID:	10099	ALS Bottle#:	7	Worklist Smp#:	8
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

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

Processing Results



RT	Mass	Response	Amount
5.93	96.00	639	0.205268
5.93	61.00	976	
5.93	98.00	749	

Reviewer: gordonk, 06-Mar-2020 11:07:12

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

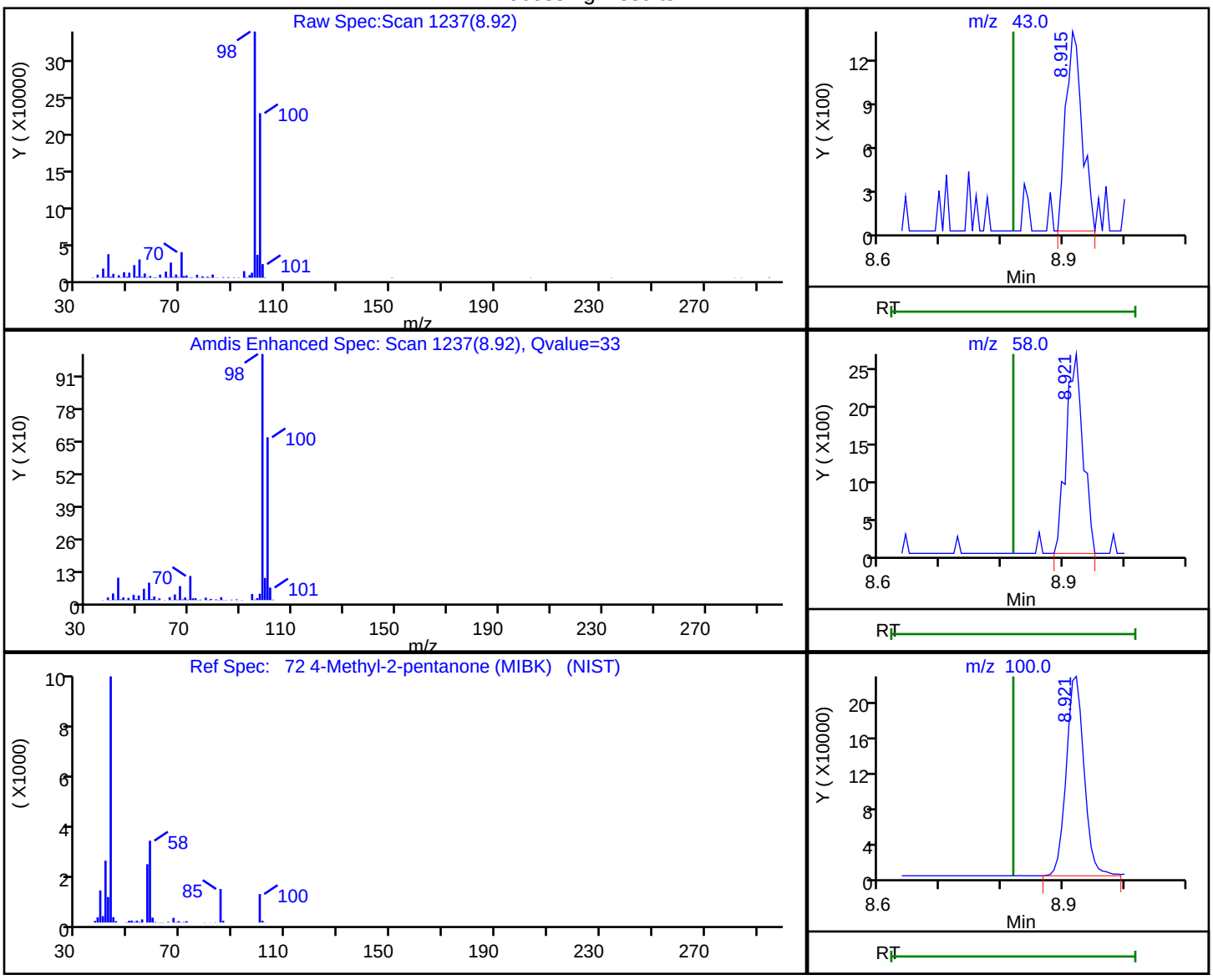
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030607.D				
Injection Date:	06-Mar-2020 10:47:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-9	Lab Sample ID:	180-102790-9		
Client ID:	HD-COD-SW-26-0/1-0				
Operator ID:	10099	ALS Bottle#:	7	Worklist Smp#:	8
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

72 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1

Processing Results



RT	Mass	Response	Amount
8.92	43.00	2412	1.094547
8.92	58.00	5023	
8.92	100.00	464246	

Reviewer: gordonk, 06-Mar-2020 11:06:55

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

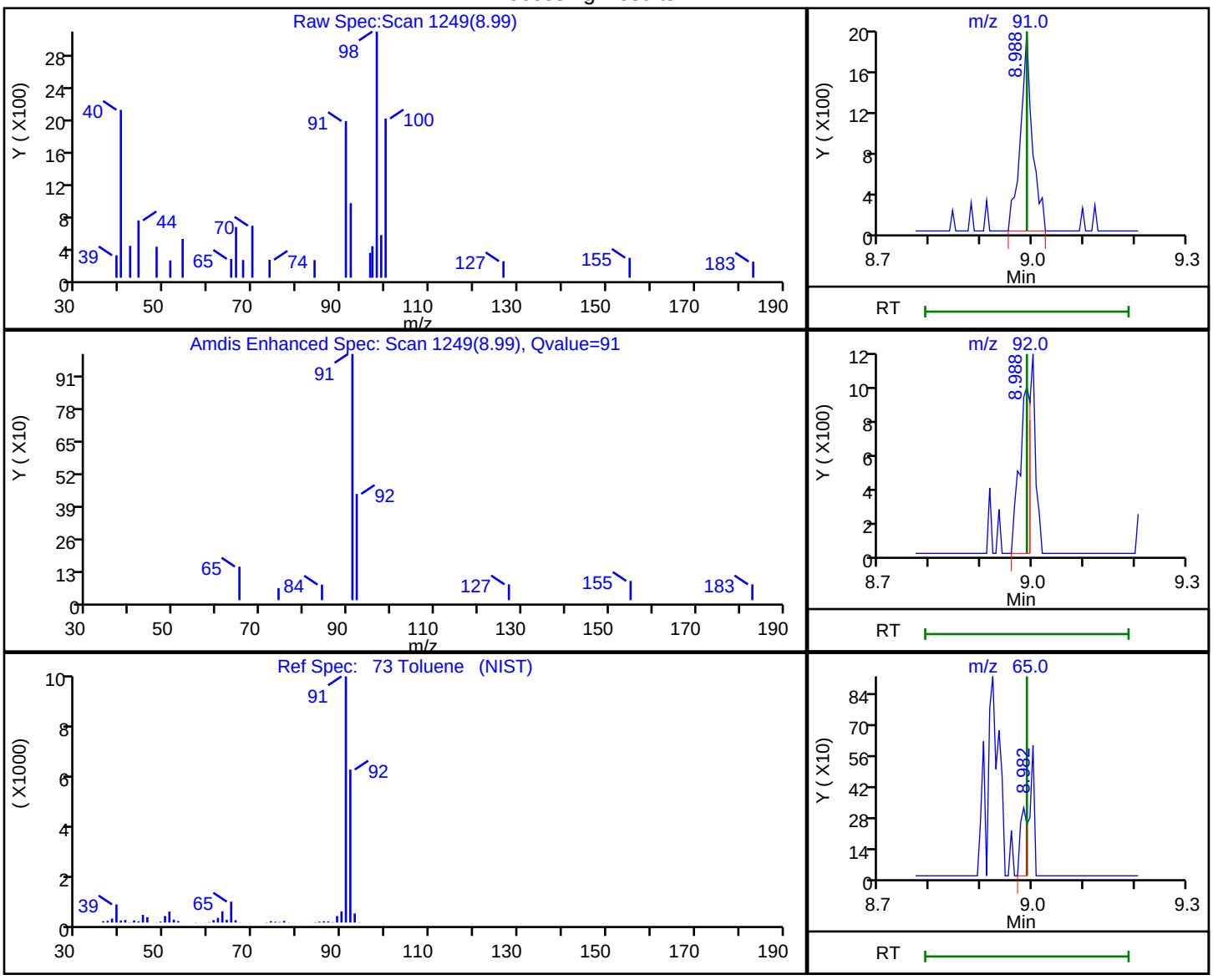
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030607.D				
Injection Date:	06-Mar-2020 10:47:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-9	Lab Sample ID:	180-102790-9		
Client ID:	HD-COD-SW-26-0/1-0				
Operator ID:	10099	ALS Bottle#:	7	Worklist Smp#:	8
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

73 Toluene, CAS: 108-88-3

Processing Results



RT	Mass	Response	Amount
8.99	91.00	3146	0.207185
8.99	92.00	1385	
8.98	65.00	289	

Reviewer: gordonk, 06-Mar-2020 11:06:54

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

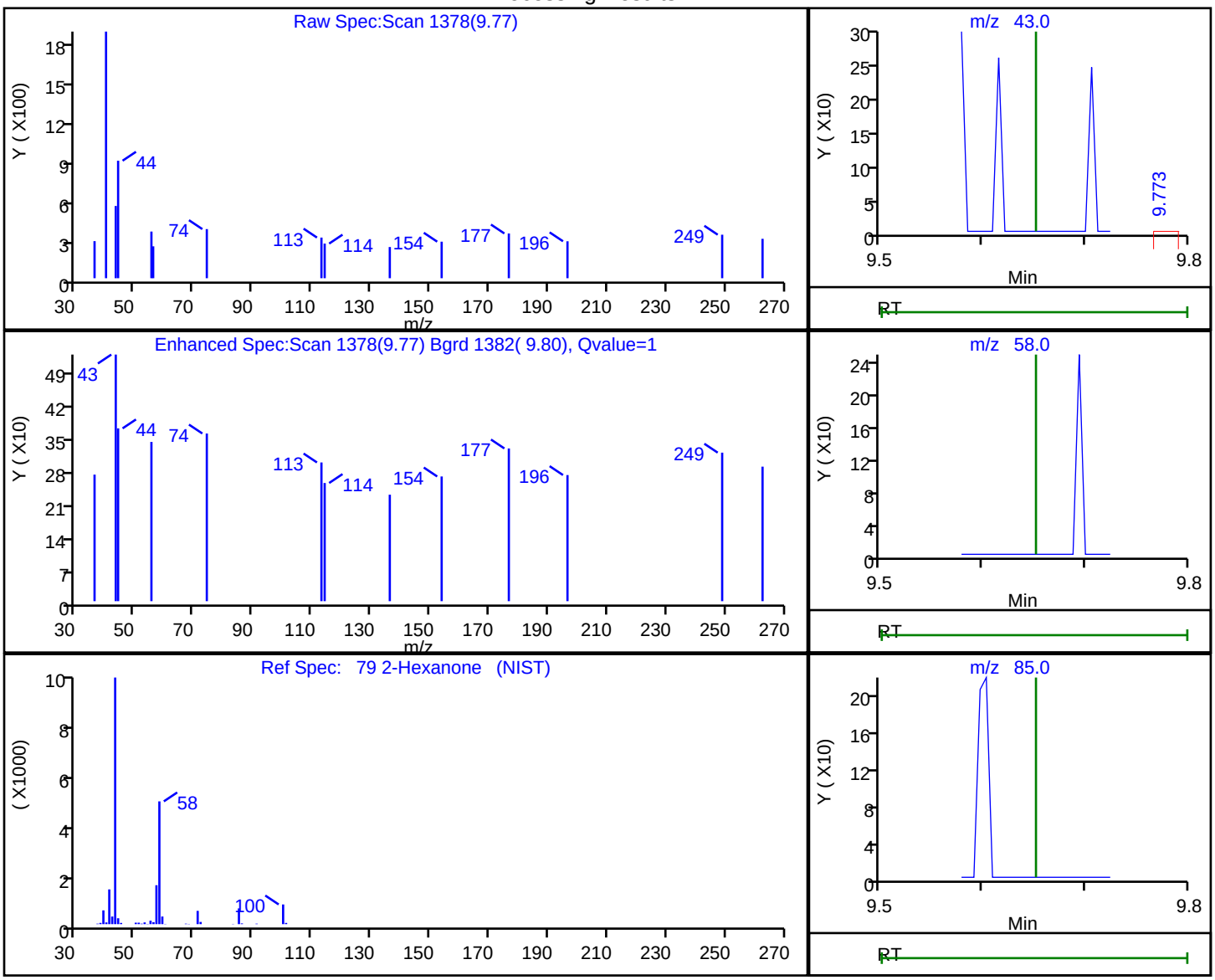
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030607.D				
Injection Date:	06-Mar-2020 10:47:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-9	Lab Sample ID:	180-102790-9		
Client ID:	HD-COD-SW-26-0/1-0				
Operator ID:	10099	ALS Bottle#:	7	Worklist Smp#:	8
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

79 2-Hexanone, CAS: 591-78-6

Processing Results



RT	Mass	Response	Amount
9.77	43.00	380	0.244067
9.65	58.00	0	
9.65	85.00	0	

Reviewer: gordonk, 06-Mar-2020 11:06:46

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.: 180-102790-1

SDG No.:

Client Sample ID: HD-COD-SW-27-0/1-0 Lab Sample ID: 180-102790-10

Matrix: Water Lab File ID: 6030620.D

Analysis Method: EPA 8260C Date Collected: 02/24/2020 13:00

Sample wt/vol: 5(mL) Date Analyzed: 03/06/2020 16:44

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.: 309079 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	0.40
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	3.4	J ^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	^c	1.0	0.59
75-34-3	1,1-Dichloroethane	ND		1.0	0.31
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	^c	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	^c	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.: 180-102790-1

SDG No.:

Client Sample ID: HD-COD-SW-27-0/1-0 Lab Sample ID: 180-102790-10

Matrix: Water Lab File ID: 6030620.D

Analysis Method: EPA 8260C Date Collected: 02/24/2020 13:00

Sample wt/vol: 5(mL) Date Analyzed: 03/06/2020 16:44

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.: 309079 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)	88		78-128
460-00-4	4-Bromofluorobenzene (Surr)	94		64-123
1868-53-7	Dibromofluoromethane (Surr)	93		75-147

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030620.D
Lims ID: 180-102790-A-10
Client ID: HD-COD-SW-27-0/1-0
Sample Type: Client
Inject. Date: 06-Mar-2020 16:44:30 ALS Bottle#: 20 Worklist Smp#: 21
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-0031064-021
Operator ID: 10099 Instrument ID: CHHP6

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 09-Mar-2020 07:49:51 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0332

First Level Reviewer: gordonk Date: 09-Mar-2020 07:49:51

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.247	4.249	-0.002	92	112416	1000.0	
* 2 Fluorobenzene (IS)	96	7.264	7.261	0.003	99	461219	50.0	
* 3 Chlorobenzene-d5	119	10.373	10.375	-0.002	86	107158	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.721	12.717	0.004	97	129166	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.534	6.537	-0.003	92	87032	46.5	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.911	6.908	0.003	97	115812	47.7	
$ 7 Toluene-d8 (Surr)	98	8.919	8.915	0.004	92	451064	44.2	
$ 8 4-Bromofluorobenzene (Surr	95	11.559	11.562	-0.003	0	165911	46.9	
12 Chloromethane	50		1.828				ND	
13 Vinyl chloride	62		1.938				ND	
15 Bromomethane	94		2.260				ND	
16 Chloroethane	64		2.382				ND	
22 1,1-Dichloroethene	96		3.325				ND	
24 Acetone	43	3.420	3.422	-0.002	98	9974	16.9	M
26 Carbon disulfide	76		3.617				ND	
31 Methylene Chloride	84		4.115				ND	
33 Acrylonitrile	53		4.505				ND	
34 trans-1,2-Dichloroethene	96		4.529				ND	
35 Methyl tert-butyl ether	73		4.553				ND	
37 1,1-Dichloroethane	63		5.168				ND	
43 cis-1,2-Dichloroethene	96	5.914	5.922	-0.008	1	1376	0.6170	
44 2-Butanone (MEK)	43		5.940				ND	
48 Chlorobromomethane	128		6.208				ND	
50 Chloroform	83		6.354				ND	
51 1,1,1-Trichloroethane	97		6.512				ND	
53 Carbon tetrachloride	117		6.689				ND	
56 Benzene	78		6.914				ND	U
57 1,2-Dichloroethane	62		6.993				ND	
61 Trichloroethene	130	7.654	7.650	0.004	24	1575	0.8130	
64 1,2-Dichloropropane	63		7.924				ND	
68 Dichlorobromomethane	83		8.210				ND	
71 cis-1,3-Dichloropropene	75		8.660				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
72 4-Methyl-2-pentanone (MIBK	43		8.818				ND	U
73 Toluene	91	8.980	8.988	-0.008	97	5292	0.4206	
74 trans-1,3-Dichloropropene	75		9.238				ND	
76 1,1,2-Trichloroethane	97		9.432				ND	
77 Tetrachloroethene	164		9.499				ND	
79 2-Hexanone	43		9.651				ND	U
81 Chlorodibromomethane	129		9.803				ND	
82 Ethylene Dibromide	107		9.913				ND	
84 Chlorobenzene	112		10.406				ND	
86 1,1,1,2-Tetrachloroethane	131		10.497				ND	
87 Ethylbenzene	106		10.503				ND	
88 m-Xylene & p-Xylene	106		10.637				ND	
89 o-Xylene	106		11.020				ND	
90 Styrene	104		11.038				ND	
91 Bromoform	173		11.221				ND	
96 1,1,2,2-Tetrachloroethane	83		11.702				ND	
S 131 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

U - Marked Undetected

Reagents:

VOA8260INT_00104	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00104	Amount Added:	2.00	Units: uL	Run Reagent

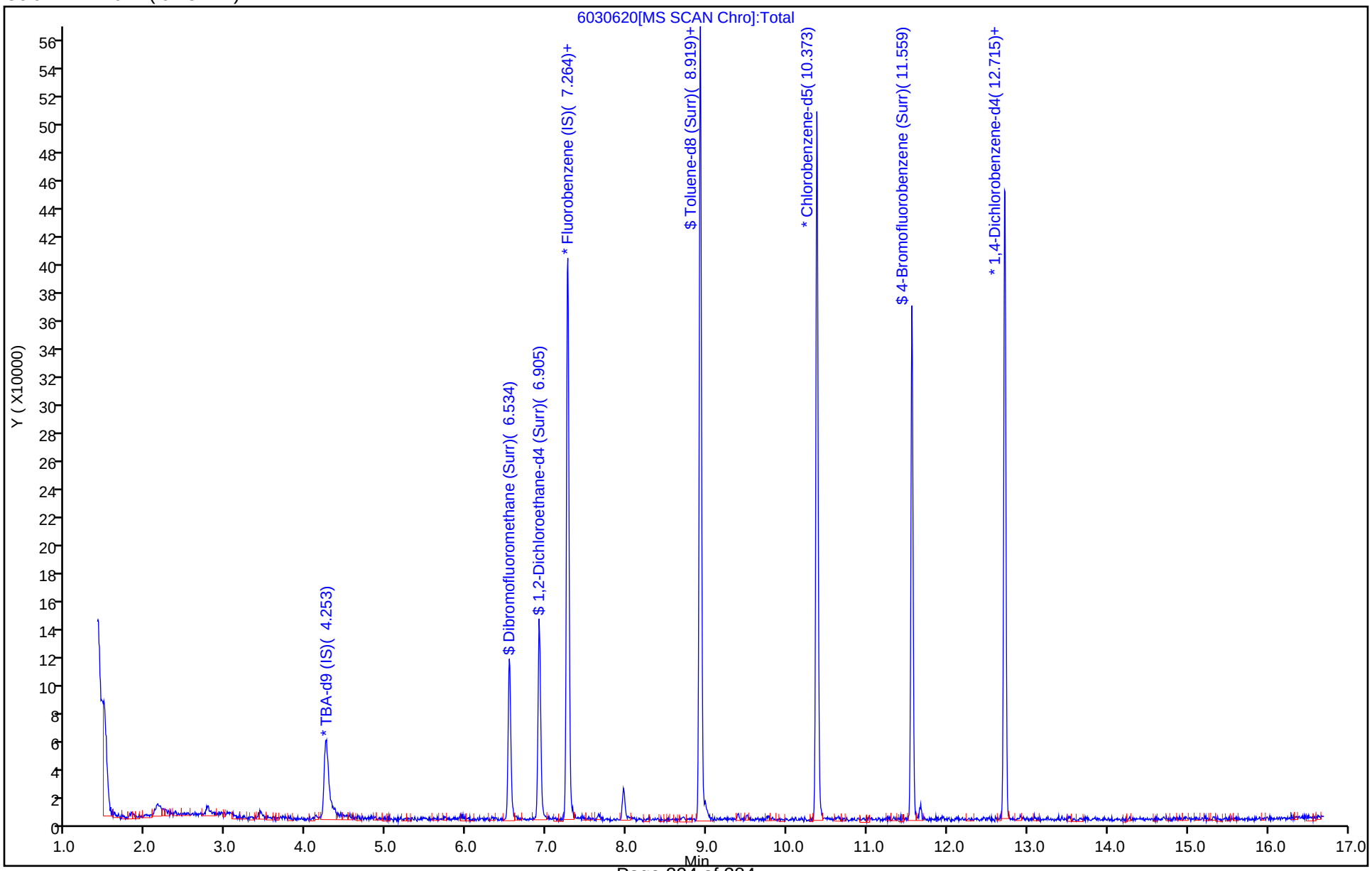
Report Date: 09-Mar-2020 07:49:51 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030620.D

Injection Date:	06-Mar-2020 16:44:30	Instrument ID:	CHHP6	Operator ID:	10099
Lims ID:	180-102790-A-10	Lab Sample ID:	180-102790-10	Worklist Smp#:	21
Client ID:	HD-COD-SW-27-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Recovery Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030620.D
Lims ID: 180-102790-A-10
Client ID: HD-COD-SW-27-0/1-0
Sample Type: Client
Inject. Date: 06-Mar-2020 16:44:30 ALS Bottle#: 20 Worklist Smp#: 21
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-0031064-021
Operator ID: 10099 Instrument ID: CHHP6

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 09-Mar-2020 07:49:51 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0332

First Level Reviewer: gordonk Date: 09-Mar-2020 07:49:51

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	50.0	46.5	92.92
$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	47.7	95.34
$ 7 Toluene-d8 (Surr)	50.0	44.2	88.33
$ 8 4-Bromofluorobenzene (Surr)	50.0	46.9	93.75

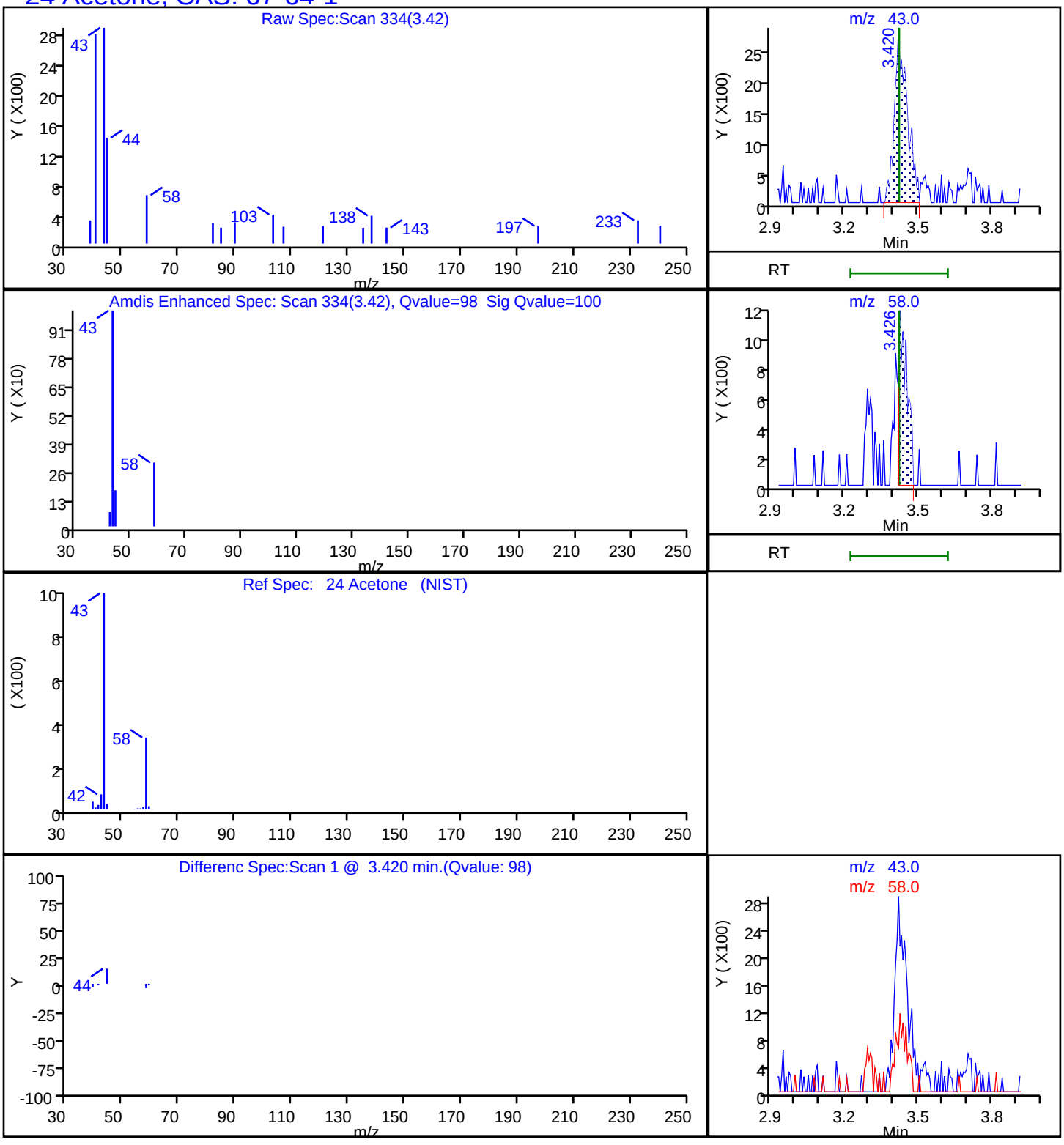
Report Date: 09-Mar-2020 07:49:51 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030620.D

Injection Date:	06-Mar-2020 16:44:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-10	Lab Sample ID:	180-102790-10		
Client ID:	HD-COD-SW-27-0/1-0				
Operator ID:	10099	ALS Bottle#:	20	Worklist Smp#:	21
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

24 Acetone, CAS: 67-64-1



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Pittsburgh

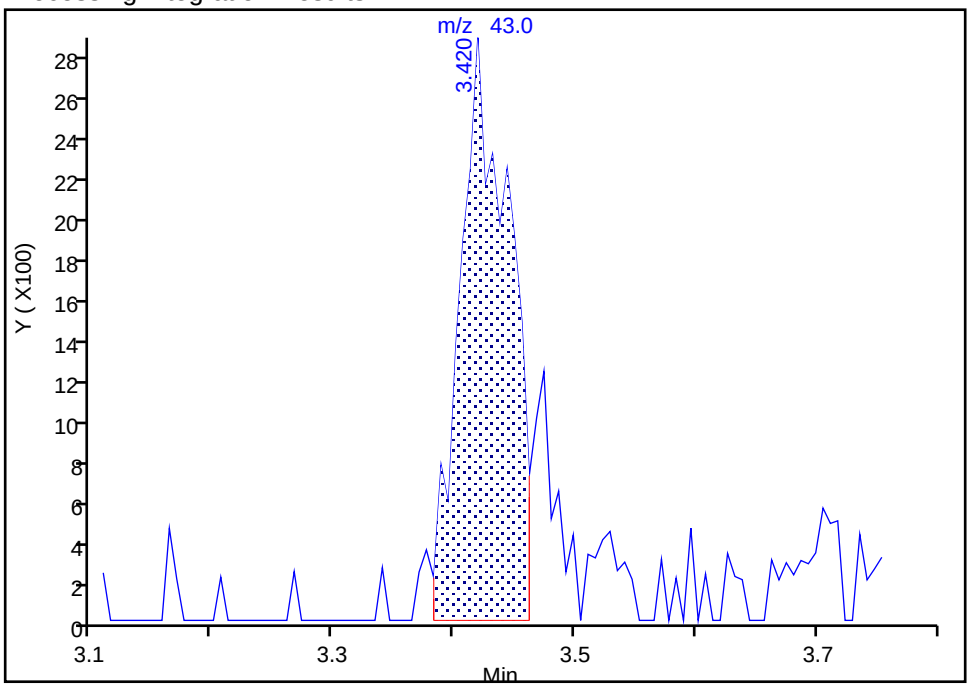
Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030620.D				
Injection Date:	06-Mar-2020 16:44:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-10	Lab Sample ID:	180-102790-10		
Client ID:	HD-COD-SW-27-0/1-0				
Operator ID:	10099	ALS Bottle#:	20	Worklist Smp#:	21
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

24 Acetone, CAS: 67-64-1

Signal: 1

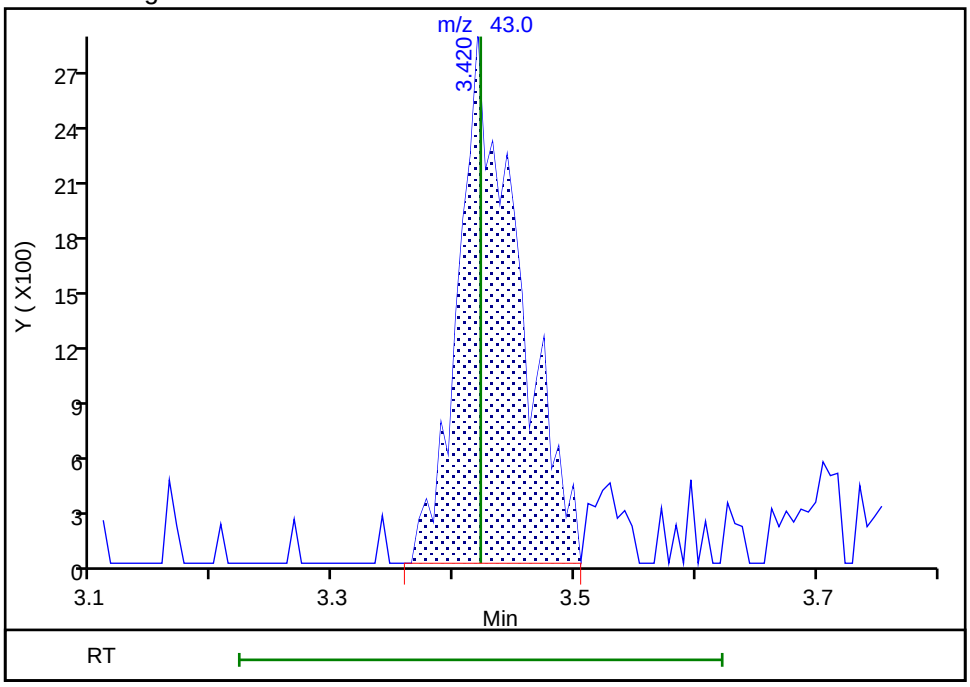
Processing Integration Results

RT: 3.42
Area: 8283
Amount: 14.010979
Amount Units: ng



Manual Integration Results

RT: 3.42
Area: 9974
Amount: 16.871363
Amount Units: ng



Reviewer: gordonk, 09-Mar-2020 07:49:26

Audit Action: Manually Integrated Audit Reason: Poor chromatography

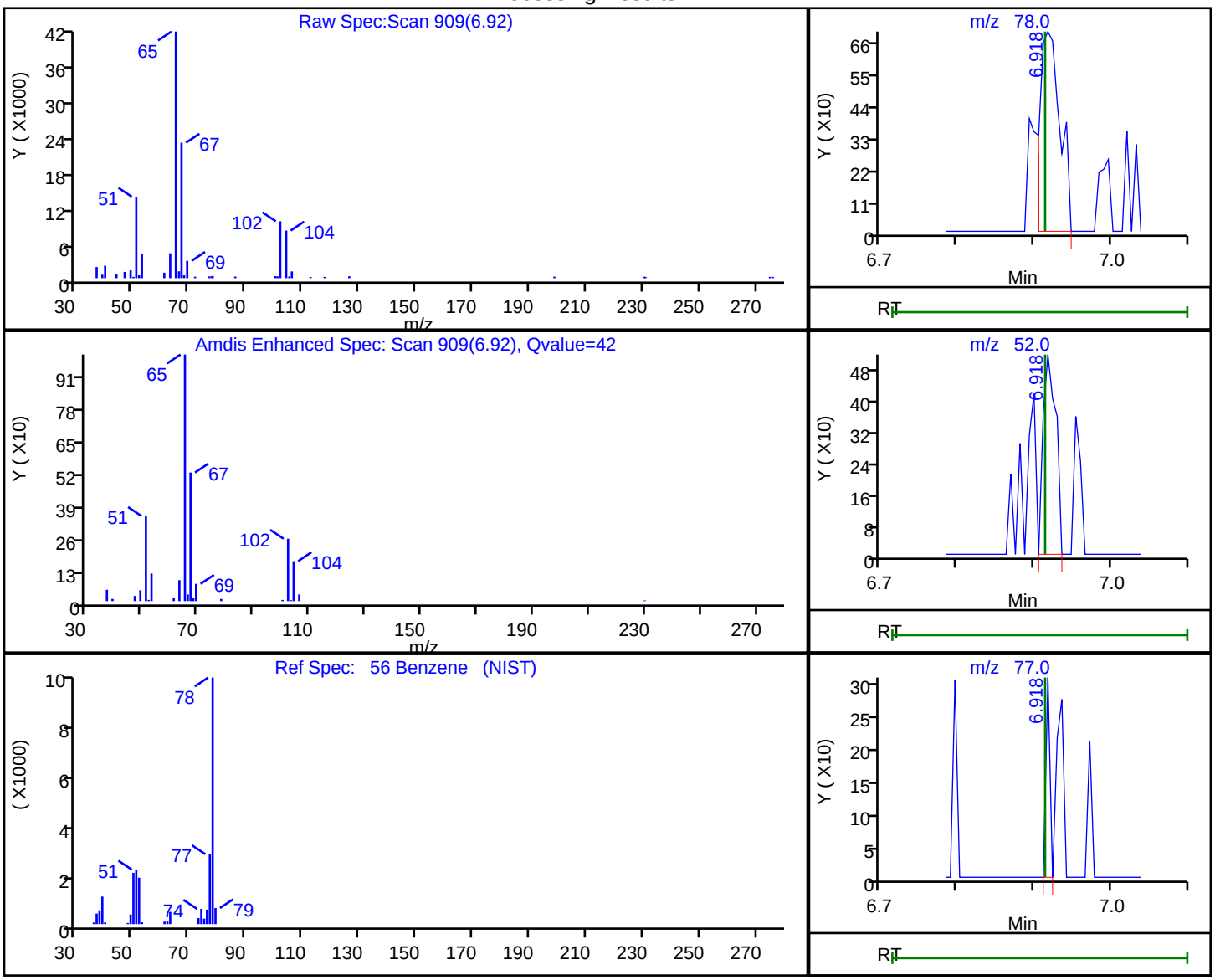
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030620.D				
Injection Date:	06-Mar-2020 16:44:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-10	Lab Sample ID:	180-102790-10		
Client ID:	HD-COD-SW-27-0/1-0				
Operator ID:	10099	ALS Bottle#:	20	Worklist Smp#:	21
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

56 Benzene, CAS: 71-43-2

Processing Results



RT	Mass	Response	Amount
6.92	78.00	1266	0.151266
6.92	52.00	596	
6.92	77.00	110	

Reviewer: gordonk, 09-Mar-2020 07:49:34

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

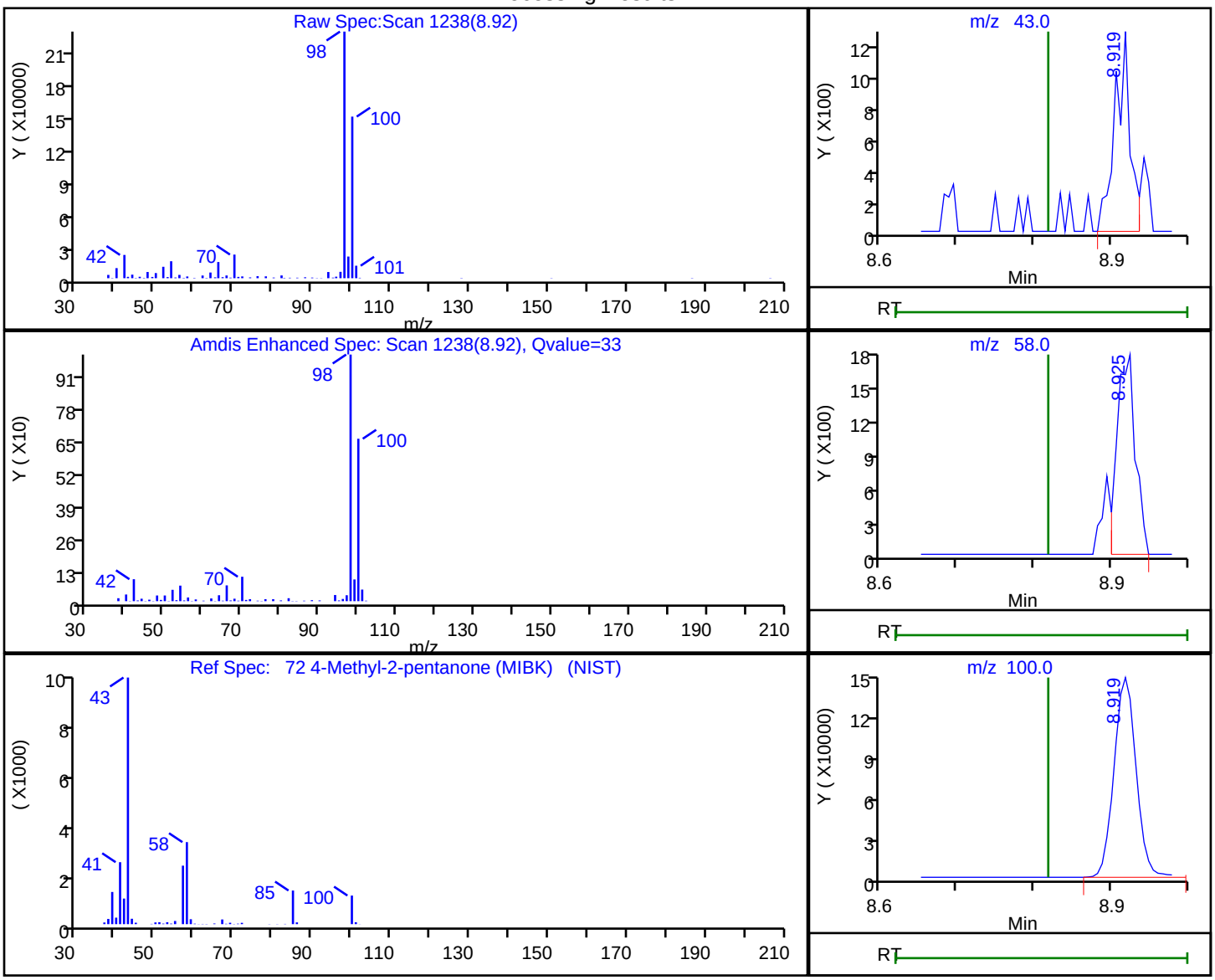
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030620.D				
Injection Date:	06-Mar-2020 16:44:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-10	Lab Sample ID:	180-102790-10		
Client ID:	HD-COD-SW-27-0/1-0				
Operator ID:	10099	ALS Bottle#:	20	Worklist Smp#:	21
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

72 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1

Processing Results



RT	Mass	Response	Amount
8.92	43.00	1738	0.951791
8.93	58.00	2929	
8.92	100.00	300273	

Reviewer: gordonk, 09-Mar-2020 07:49:41

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

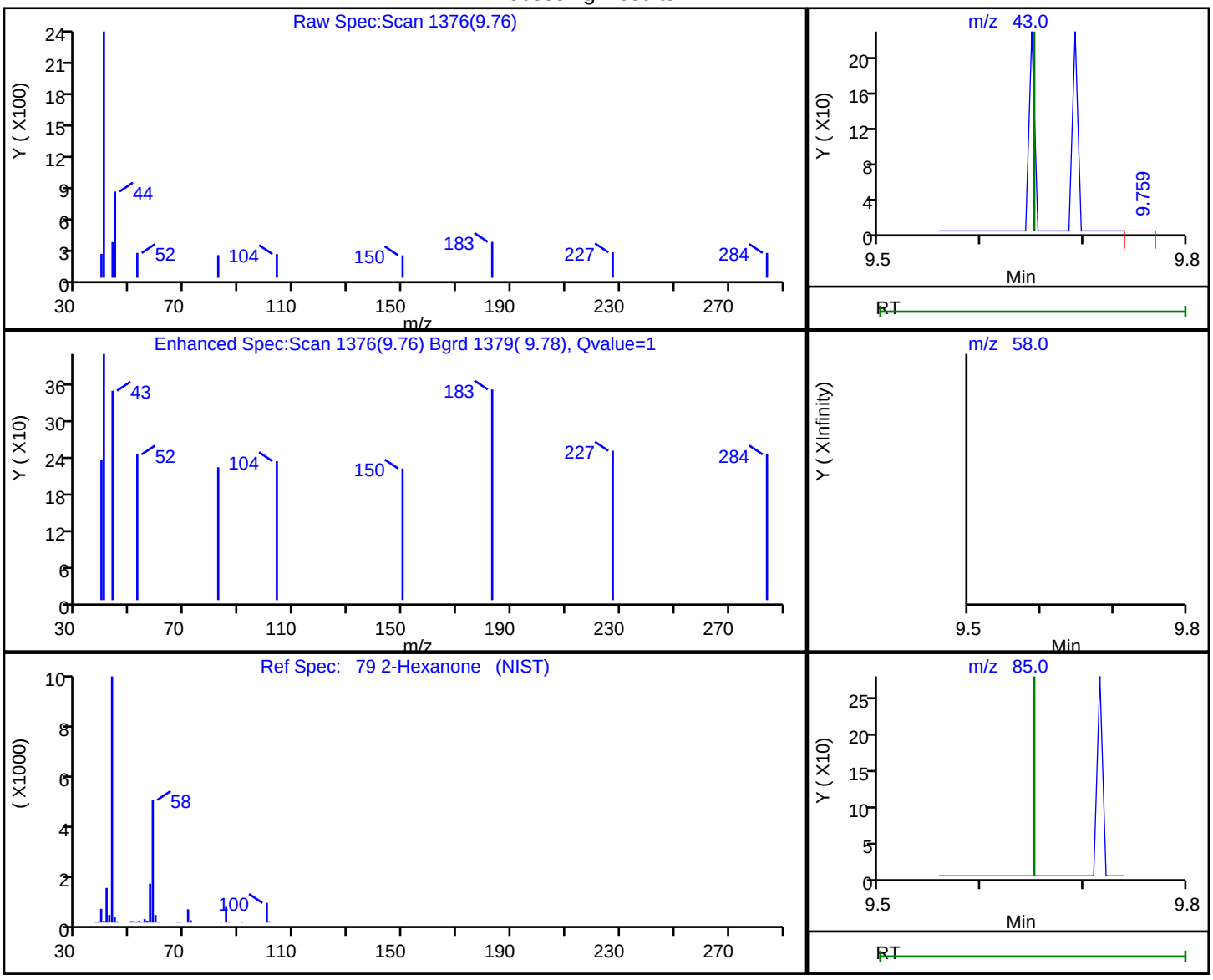
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030620.D				
Injection Date:	06-Mar-2020 16:44:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-10	Lab Sample ID:	180-102790-10		
Client ID:	HD-COD-SW-27-0/1-0				
Operator ID:	10099	ALS Bottle#:	20	Worklist Smp#:	21
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

79 2-Hexanone, CAS: 591-78-6

Processing Results



RT	Mass	Response	Amount
9.76	43.00	396	0.306941
9.65	58.00	0	
9.65	85.00	0	

Reviewer: gordonk, 09-Mar-2020 07:49:45

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.: 180-102790-1

SDG No.:

Client Sample ID: HD-COD-SW-28-0/1-0 Lab Sample ID: 180-102790-11

Matrix: Water Lab File ID: 6030621.D

Analysis Method: EPA 8260C Date Collected: 02/24/2020 14:05

Sample wt/vol: 5(mL) Date Analyzed: 03/06/2020 17:12

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.: 309079 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	0.40
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	^c	1.0	0.59
75-34-3	1,1-Dichloroethane	ND		1.0	0.31
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	^c	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	^c	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.: 180-102790-1

SDG No.:

Client Sample ID: HD-COD-SW-28-0/1-0 Lab Sample ID: 180-102790-11

Matrix: Water Lab File ID: 6030621.D

Analysis Method: EPA 8260C Date Collected: 02/24/2020 14:05

Sample wt/vol: 5(mL) Date Analyzed: 03/06/2020 17:12

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.: 309079 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)	86		78-128
460-00-4	4-Bromofluorobenzene (Surr)	92		64-123
1868-53-7	Dibromofluoromethane (Surr)	91		75-147

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030621.D
Lims ID: 180-102790-A-11
Client ID: HD-COD-SW-28-0/1-0
Sample Type: Client
Inject. Date: 06-Mar-2020 17:12:30 ALS Bottle#: 21 Worklist Smp#: 22
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-0031064-022
Operator ID: 10099 Instrument ID: CHHP6

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 09-Mar-2020 07:50:39 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0332

First Level Reviewer: gordonk Date: 09-Mar-2020 07:50:39

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.243	4.249	-0.006	95	92710	1000.0	
* 2 Fluorobenzene (IS)	96	7.260	7.261	-0.001	99	424892	50.0	
* 3 Chlorobenzene-d5	119	10.375	10.375	0.000	87	99740	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.717	12.717	0.000	98	119956	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.530	6.537	-0.007	91	78389	45.4	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.907	6.908	-0.001	97	108895	48.7	
$ 7 Toluene-d8 (Surr)	98	8.915	8.915	0.000	92	411065	43.2	
$ 8 4-Bromofluorobenzene (Surr	95	11.555	11.562	-0.007	0	150958	45.8	
12 Chloromethane	50		1.828				ND	
13 Vinyl chloride	62		1.938				ND	
15 Bromomethane	94		2.260				ND	
16 Chloroethane	64		2.382				ND	
22 1,1-Dichloroethene	96		3.325				ND	
24 Acetone	43		3.422				ND	
26 Carbon disulfide	76	3.604	3.617	-0.013	35	2112	0.8638	M
31 Methylene Chloride	84		4.115				ND	
33 Acrylonitrile	53		4.505				ND	
34 trans-1,2-Dichloroethene	96		4.529				ND	
35 Methyl tert-butyl ether	73		4.553				ND	
37 1,1-Dichloroethane	63		5.168				ND	
43 cis-1,2-Dichloroethene	96		5.922				ND	
44 2-Butanone (MEK)	43		5.940				ND	
48 Chlorobromomethane	128		6.208				ND	
50 Chloroform	83		6.354				ND	
51 1,1,1-Trichloroethane	97		6.512				ND	
53 Carbon tetrachloride	117		6.689				ND	
56 Benzene	78		6.914				ND	U
57 1,2-Dichloroethane	62		6.993				ND	
61 Trichloroethene	130	7.650	7.650	0.000	83	1525	0.8545	
64 1,2-Dichloropropane	63		7.924				ND	U
68 Dichlorobromomethane	83		8.210				ND	
71 cis-1,3-Dichloropropene	75		8.660				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
72 4-Methyl-2-pentanone (MIBK	43		8.818				ND	U
73 Toluene	91	8.982	8.988	-0.006	92	4889	0.4175	
74 trans-1,3-Dichloropropene	75		9.238				ND	
76 1,1,2-Trichloroethane	97		9.432				ND	
77 Tetrachloroethene	164		9.499				ND	
79 2-Hexanone	43		9.651				ND	U
81 Chlorodibromomethane	129		9.803				ND	
82 Ethylene Dibromide	107		9.913				ND	
84 Chlorobenzene	112		10.406				ND	
86 1,1,1,2-Tetrachloroethane	131		10.497				ND	
87 Ethylbenzene	106		10.503				ND	U
88 m-Xylene & p-Xylene	106		10.637				ND	
89 o-Xylene	106		11.020				ND	
90 Styrene	104		11.038				ND	
91 Bromoform	173		11.221				ND	
96 1,1,2,2-Tetrachloroethane	83		11.702				ND	
S 131 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

U - Marked Undetected

Reagents:

VOA8260INT_00104	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00104	Amount Added:	2.00	Units: uL	Run Reagent

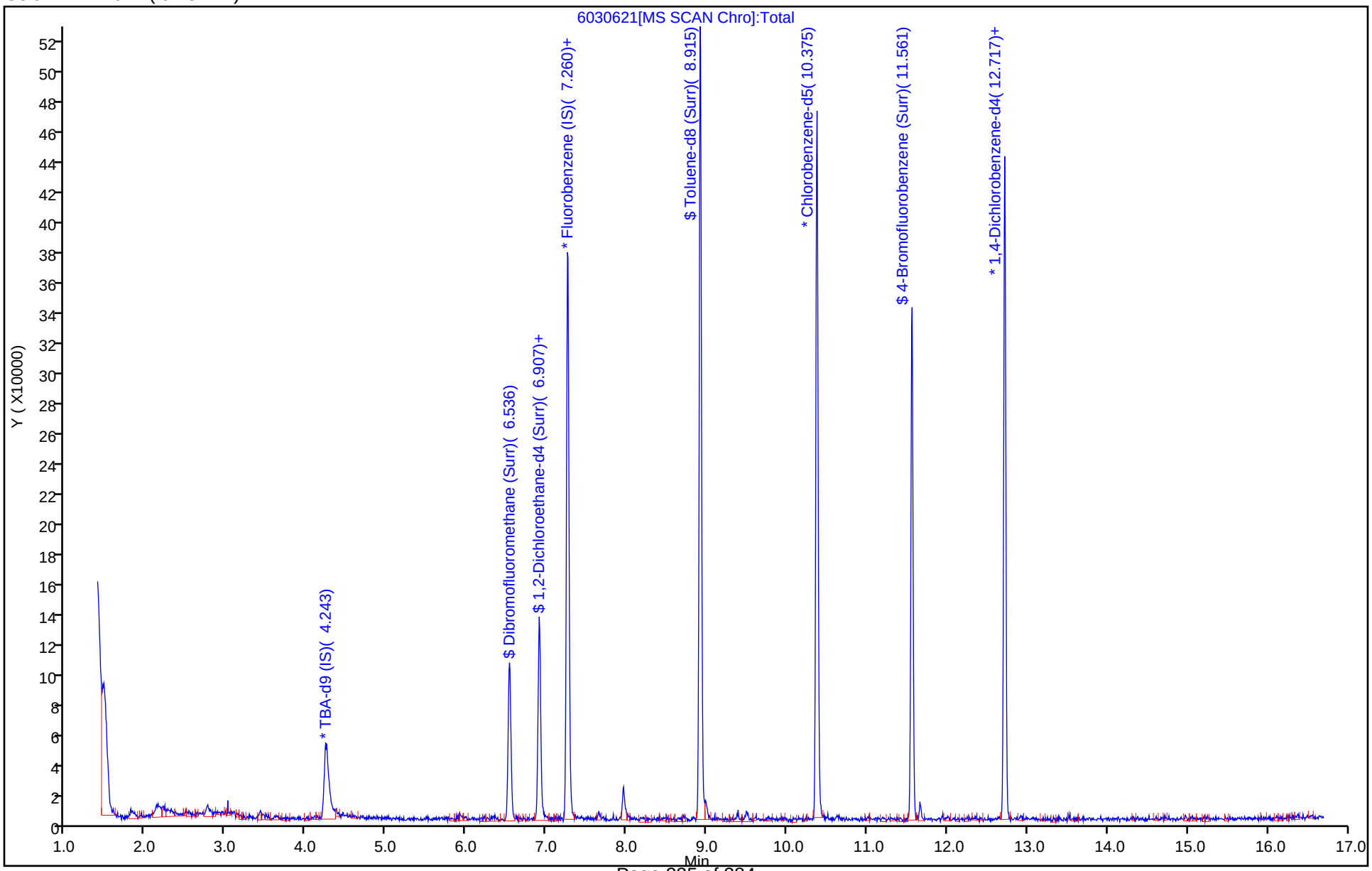
Report Date: 09-Mar-2020 07:50:39 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030621.D

Injection Date:	06-Mar-2020 17:12:30	Instrument ID:	CHHP6	Operator ID:	10099
Lims ID:	180-102790-A-11	Lab Sample ID:	180-102790-11	Worklist Smp#:	22
Client ID:	HD-COD-SW-28-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	21
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Recovery Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030621.D
Lims ID: 180-102790-A-11
Client ID: HD-COD-SW-28-0/1-0
Sample Type: Client
Inject. Date: 06-Mar-2020 17:12:30 ALS Bottle#: 21 Worklist Smp#: 22
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-0031064-022
Operator ID: 10099 Instrument ID: CHHP6

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 09-Mar-2020 07:50:39 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0332

First Level Reviewer: gordonk Date: 09-Mar-2020 07:50:39

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	50.0	45.4	90.85
$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	48.7	97.31
$ 7 Toluene-d8 (Surr)	50.0	43.2	86.48
$ 8 4-Bromofluorobenzene (Surr)	50.0	45.8	91.64

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Pittsburgh

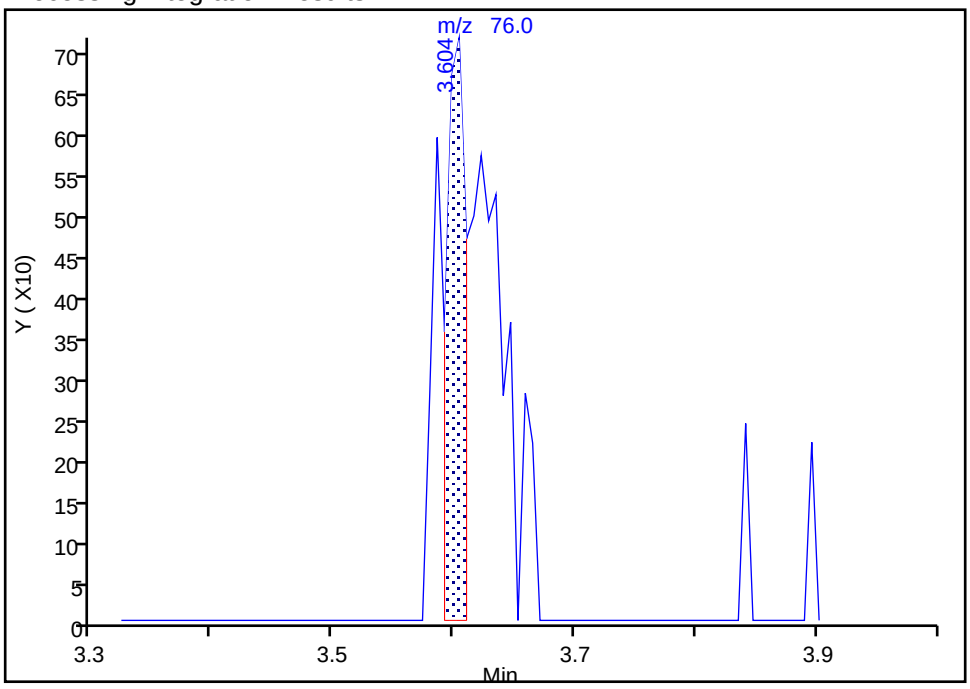
Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030621.D				
Injection Date:	06-Mar-2020 17:12:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-11	Lab Sample ID:	180-102790-11		
Client ID:	HD-COD-SW-28-0/1-0				
Operator ID:	10099	ALS Bottle#:	21	Worklist Smp#:	22
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

26 Carbon disulfide, CAS: 75-15-0

Signal: 1

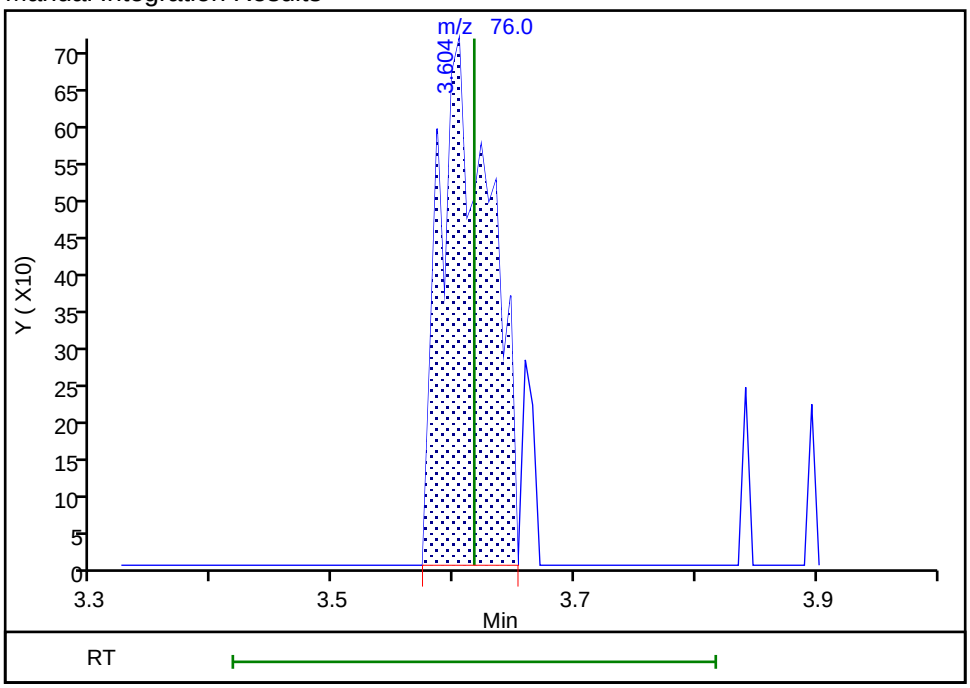
Processing Integration Results

RT: 3.60
Area: 802
Amount: 0.328031
Amount Units: ng



Manual Integration Results

RT: 3.60
Area: 2112
Amount: 0.863843
Amount Units: ng



Reviewer: gordonk, 09-Mar-2020 07:50:25

Audit Action: Manually Integrated Audit Reason: Poor chromatography

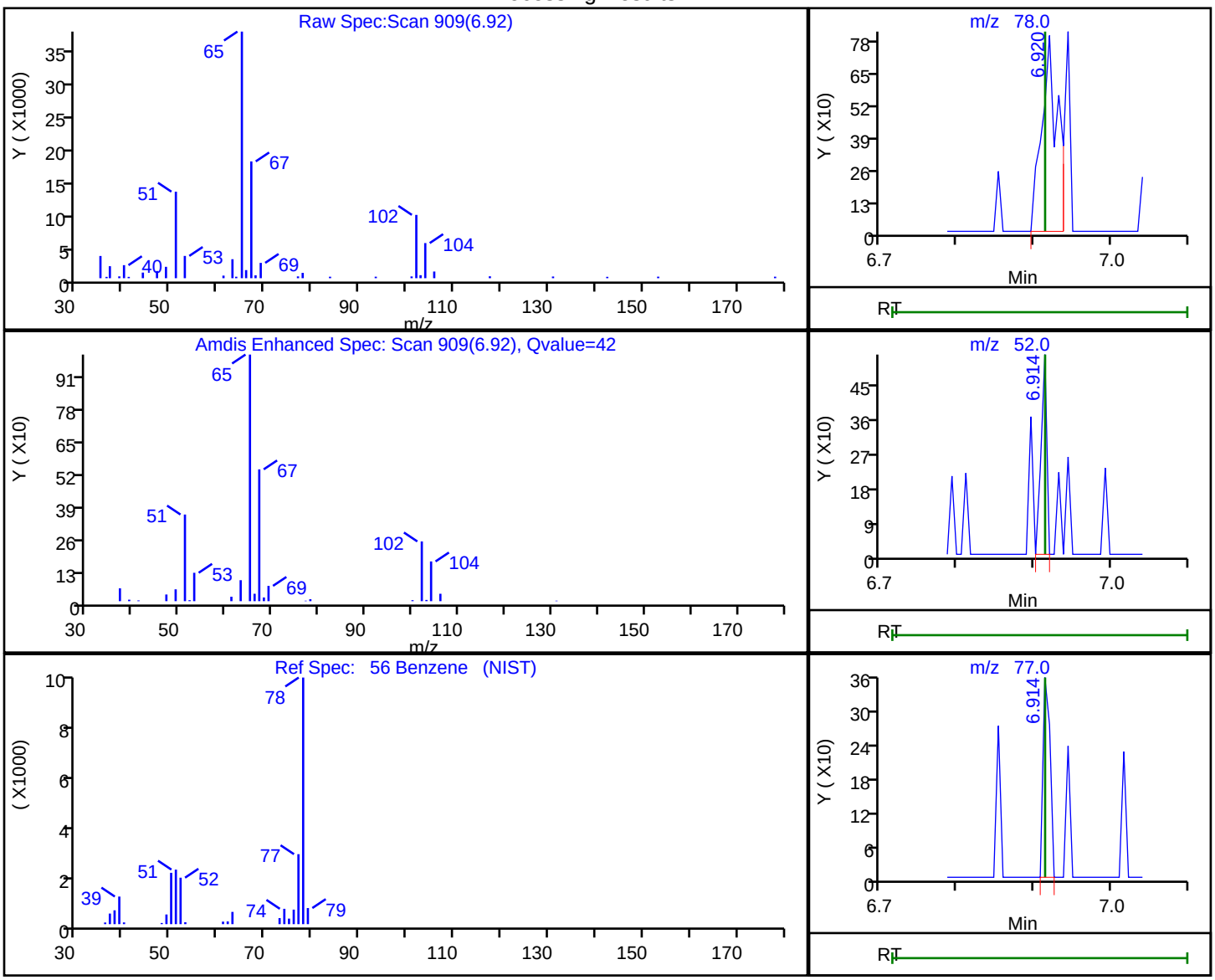
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030621.D				
Injection Date:	06-Mar-2020 17:12:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-11	Lab Sample ID:	180-102790-11		
Client ID:	HD-COD-SW-28-0/1-0				
Operator ID:	10099	ALS Bottle#:	21	Worklist Smp#:	22
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

56 Benzene, CAS: 71-43-2

Processing Results



RT	Mass	Response	Amount
6.92	78.00	1169	0.151618
6.91	52.00	271	
6.91	77.00	229	

Reviewer: gordonk, 09-Mar-2020 07:50:11

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

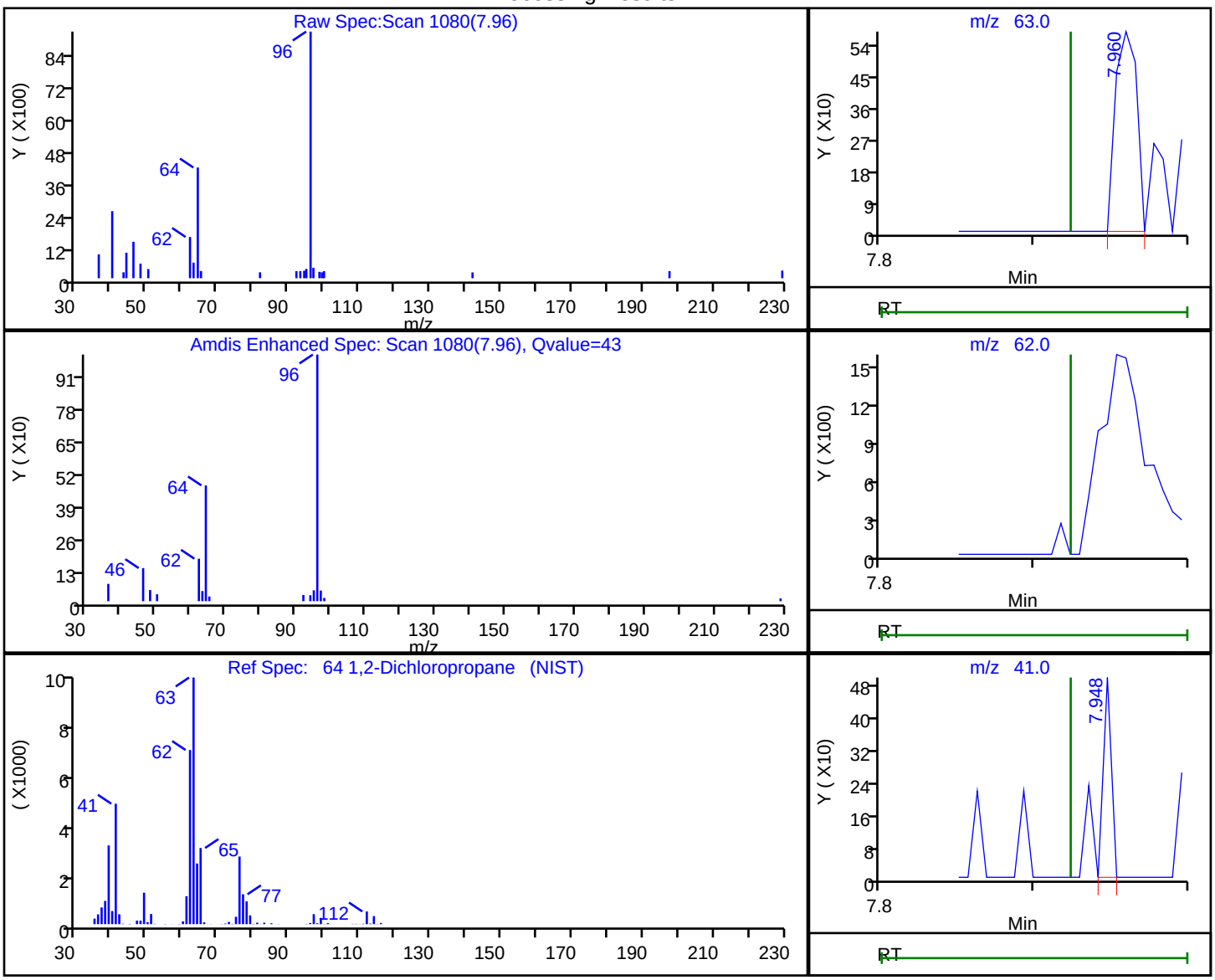
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030621.D				
Injection Date:	06-Mar-2020 17:12:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-11	Lab Sample ID:	180-102790-11		
Client ID:	HD-COD-SW-28-0/1-0				
Operator ID:	10099	ALS Bottle#:	21	Worklist Smp#:	22
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

64 1,2-Dichloropropane, CAS: 78-87-5

Processing Results



RT	Mass	Response	Amount
7.96	63.00	560	0.291679
7.95	62.00	3382	
7.95	41.00	180	

Reviewer: gordonk, 09-Mar-2020 07:50:03

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

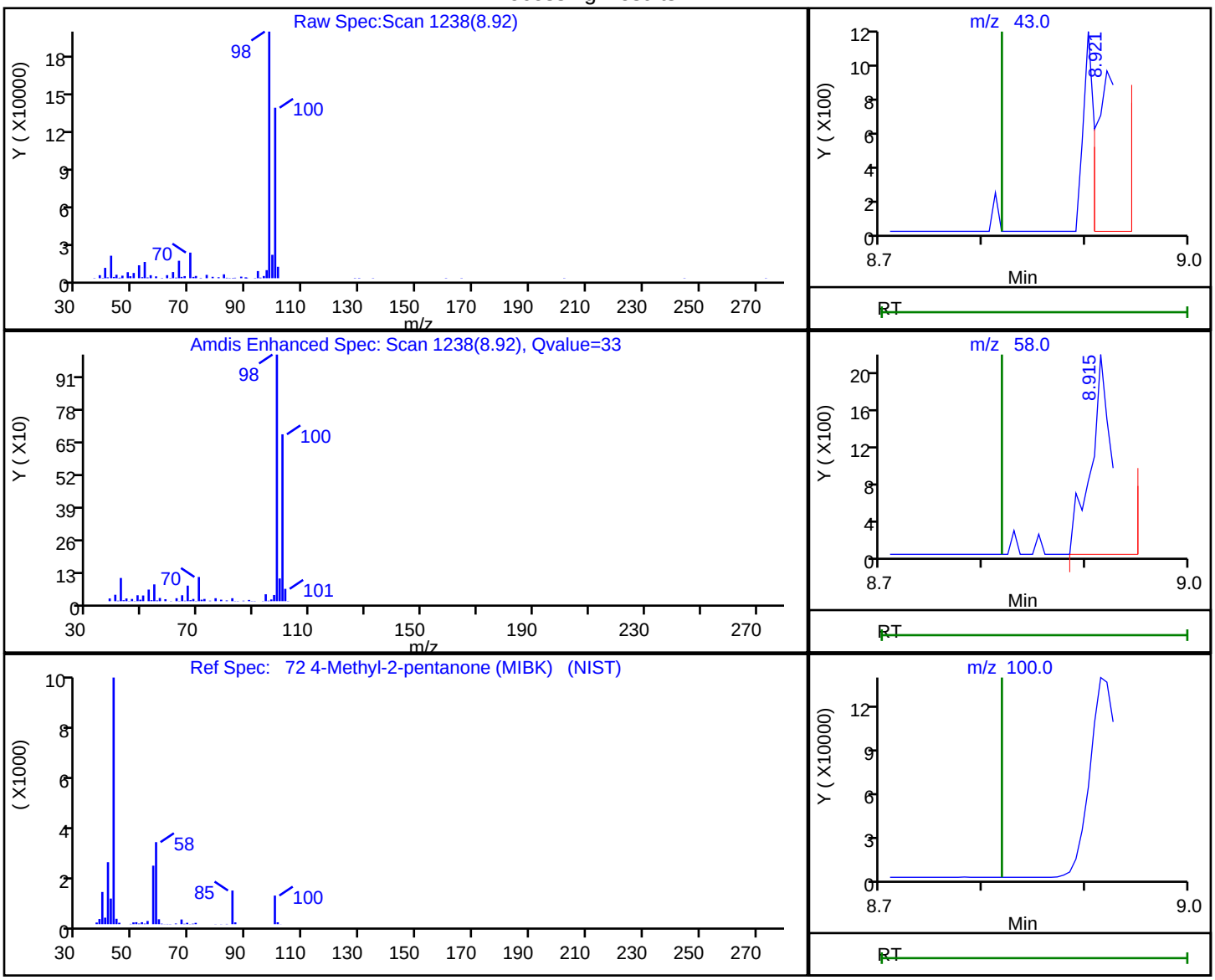
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030621.D				
Injection Date:	06-Mar-2020 17:12:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-11	Lab Sample ID:	180-102790-11		
Client ID:	HD-COD-SW-28-0/1-0				
Operator ID:	10099	ALS Bottle#:	21	Worklist Smp#:	22
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

72 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1

Processing Results



RT	Mass	Response	Amount
8.92	43.00	1389	0.817239
8.91	58.00	3215	
8.91	100.00	274439	

Reviewer: gordonk, 09-Mar-2020 07:50:01

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

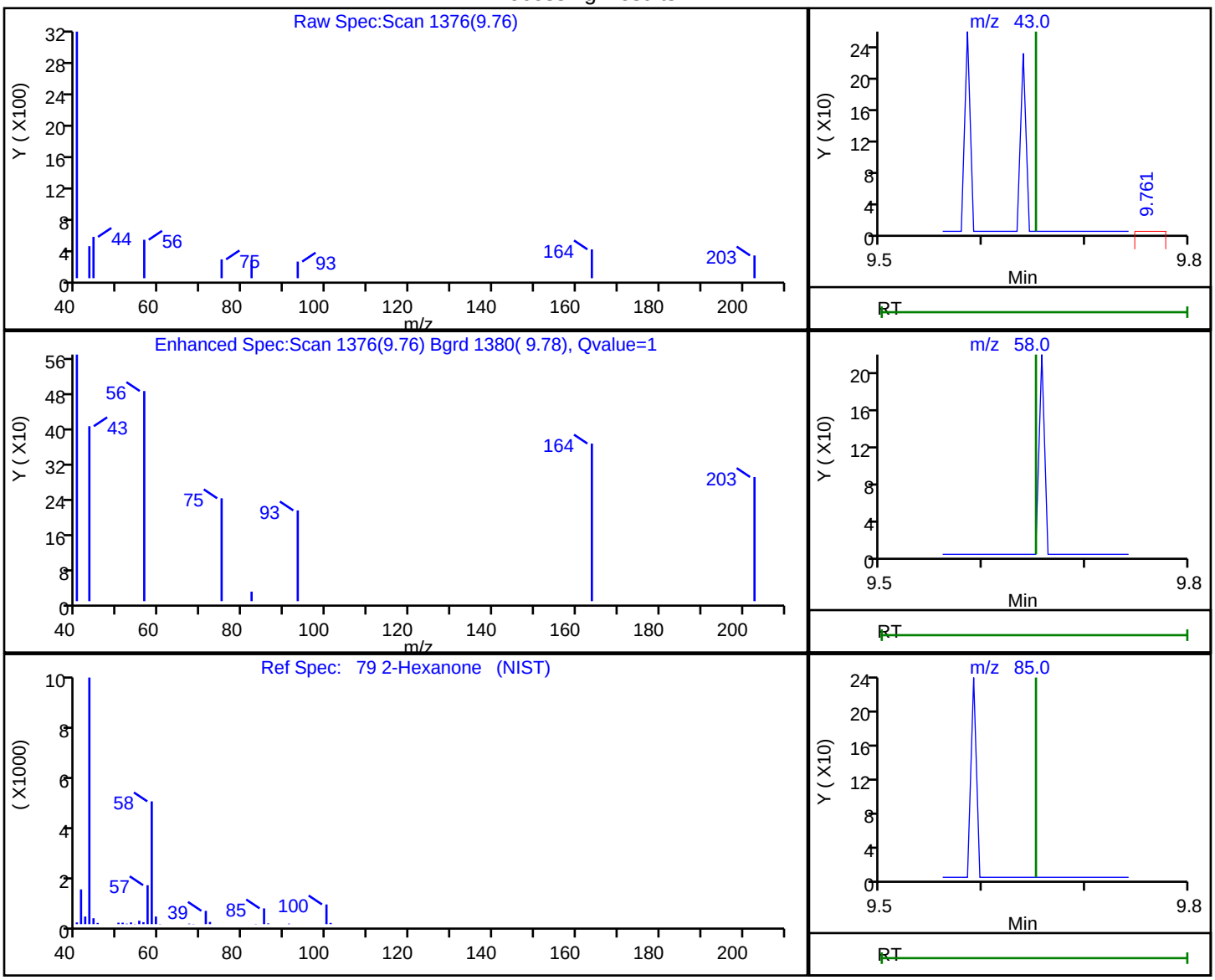
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030621.D				
Injection Date:	06-Mar-2020 17:12:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-11	Lab Sample ID:	180-102790-11		
Client ID:	HD-COD-SW-28-0/1-0				
Operator ID:	10099	ALS Bottle#:	21	Worklist Smp#:	22
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

79 2-Hexanone, CAS: 591-78-6

Processing Results



RT	Mass	Response	Amount
9.76	43.00	439	0.365578
9.65	58.00	0	
9.65	85.00	0	

Reviewer: gordonk, 09-Mar-2020 07:49:59

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

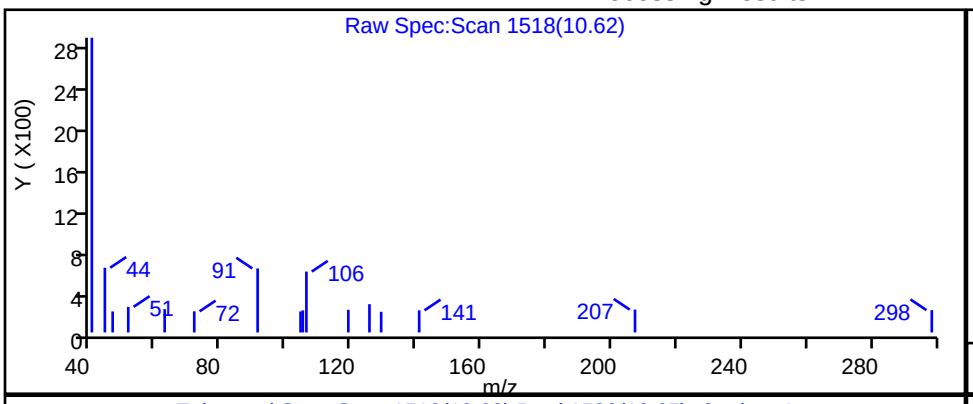
User Disabled Compound Report

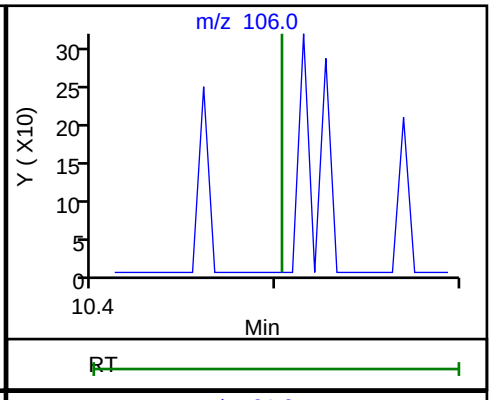
Eurofins TestAmerica, Pittsburgh

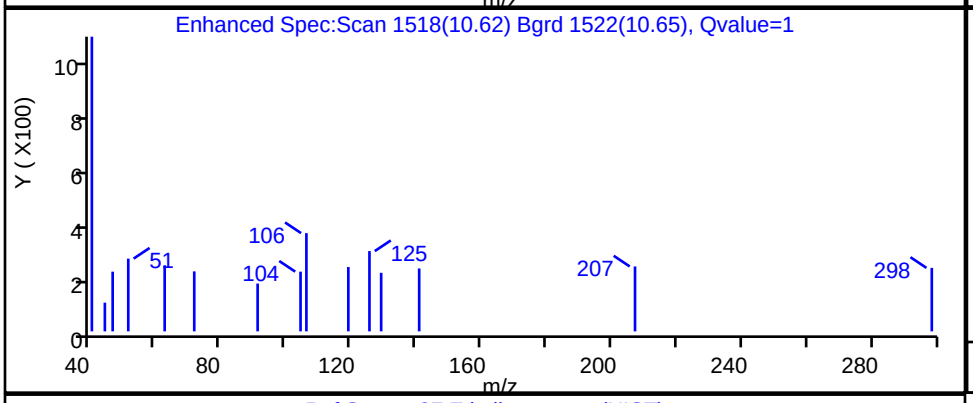
Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030621.D				
Injection Date:	06-Mar-2020 17:12:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-11	Lab Sample ID:	180-102790-11		
Client ID:	HD-COD-SW-28-0/1-0				
Operator ID:	10099	ALS Bottle#:	21	Worklist Smp#:	22
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

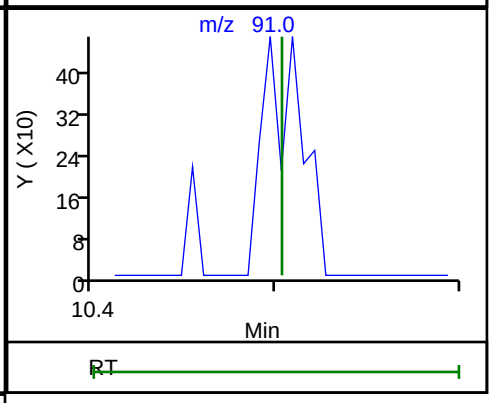
87 Ethylbenzene, CAS: 100-41-4

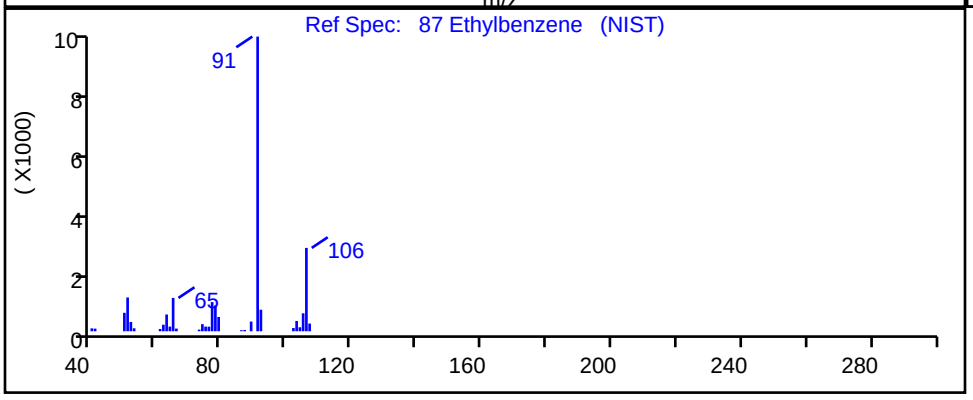
Processing Results











RT	Mass	Response	Amount
10.62	106.00	709	0.149678
10.63	91.00	1253	

Reviewer: gordonk, 09-Mar-2020 07:49:57

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.: 180-102790-1

SDG No.:

Client Sample ID: HD-COD-SW-29-0/1-0 Lab Sample ID: 180-102790-12

Matrix: Water Lab File ID: 6030622.D

Analysis Method: EPA 8260C Date Collected: 02/24/2020 10:25

Sample wt/vol: 5(mL) Date Analyzed: 03/06/2020 17:40

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.: 309079 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	0.40
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	^c	1.0	0.59
75-34-3	1,1-Dichloroethane	ND		1.0	0.31
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	^c	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	^c	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.: 180-102790-1

SDG No.:

Client Sample ID: HD-COD-SW-29-0/1-0 Lab Sample ID: 180-102790-12

Matrix: Water Lab File ID: 6030622.D

Analysis Method: EPA 8260C Date Collected: 02/24/2020 10:25

Sample wt/vol: 5(mL) Date Analyzed: 03/06/2020 17:40

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.: 309079 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	^c	70-150
2037-26-5	Toluene-d8 (Surr)	89		78-128
460-00-4	4-Bromofluorobenzene (Surr)	94		64-123
1868-53-7	Dibromofluoromethane (Surr)	92		75-147

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030622.D
Lims ID: 180-102790-C-12
Client ID: HD-COD-SW-29-0/1-0
Sample Type: Client
Inject. Date: 06-Mar-2020 17:40:30 ALS Bottle#: 22 Worklist Smp#: 23
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-0031064-023
Operator ID: 10099 Instrument ID: CHHP6

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 09-Mar-2020 07:51:24 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0332

First Level Reviewer: gordonk Date: 09-Mar-2020 07:51:24

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.250	4.249	0.001	94	95543	1000.0	
* 2 Fluorobenzene (IS)	96	7.262	7.261	0.001	100	417469	50.0	
* 3 Chlorobenzene-d5	119	10.376	10.375	0.001	86	96836	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.719	12.717	0.001	97	119271	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.538	6.537	0.001	91	78061	46.0	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.909	6.908	0.001	97	107927	49.1	
$ 7 Toluene-d8 (Surr)	98	8.922	8.915	0.007	92	409103	44.3	
$ 8 4-Bromofluorobenzene (Surr	95	11.563	11.562	0.001	0	149954	46.9	
12 Chloromethane	50	1.823	1.828	-0.005	38	7642	0.5131	
13 Vinyl chloride	62		1.938				ND	
15 Bromomethane	94		2.260				ND	
16 Chloroethane	64		2.382				ND	
22 1,1-Dichloroethene	96		3.325				ND	
24 Acetone	43	3.435	3.422	0.013	92	7283	13.6	
26 Carbon disulfide	76		3.617				ND	
31 Methylene Chloride	84		4.115				ND	
33 Acrylonitrile	53		4.505				ND	
34 trans-1,2-Dichloroethene	96		4.529				ND	
35 Methyl tert-butyl ether	73		4.553				ND	
37 1,1-Dichloroethane	63		5.168				ND	
43 cis-1,2-Dichloroethene	96		5.922				ND	
44 2-Butanone (MEK)	43		5.940				ND	
48 Chlorobromomethane	128		6.208				ND	
50 Chloroform	83		6.354				ND	
51 1,1,1-Trichloroethane	97		6.512				ND	
53 Carbon tetrachloride	117		6.689				ND	
56 Benzene	78		6.914				ND	
57 1,2-Dichloroethane	62		6.993				ND	
61 Trichloroethene	130	7.657	7.650	0.007	39	1285	0.7328	M
64 1,2-Dichloropropane	63		7.924				ND	
68 Dichlorobromomethane	83		8.210				ND	
71 cis-1,3-Dichloropropene	75		8.660				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
72 4-Methyl-2-pentanone (MIBK	43		8.818				ND	U
73 Toluene	91	8.983	8.988	-0.005	91	3746	0.3294	
74 trans-1,3-Dichloropropene	75		9.238				ND	
76 1,1,2-Trichloroethane	97		9.432				ND	
77 Tetrachloroethene	164		9.499				ND	
79 2-Hexanone	43		9.651				ND	
81 Chlorodibromomethane	129		9.803				ND	
82 Ethylene Dibromide	107		9.913				ND	
84 Chlorobenzene	112		10.406				ND	
86 1,1,1,2-Tetrachloroethane	131		10.497				ND	
87 Ethylbenzene	106		10.503				ND	
88 m-Xylene & p-Xylene	106		10.637				ND	
89 o-Xylene	106		11.020				ND	
90 Styrene	104		11.038				ND	
91 Bromoform	173		11.221				ND	
96 1,1,2,2-Tetrachloroethane	83		11.702				ND	
S 131 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

U - Marked Undetected

Reagents:

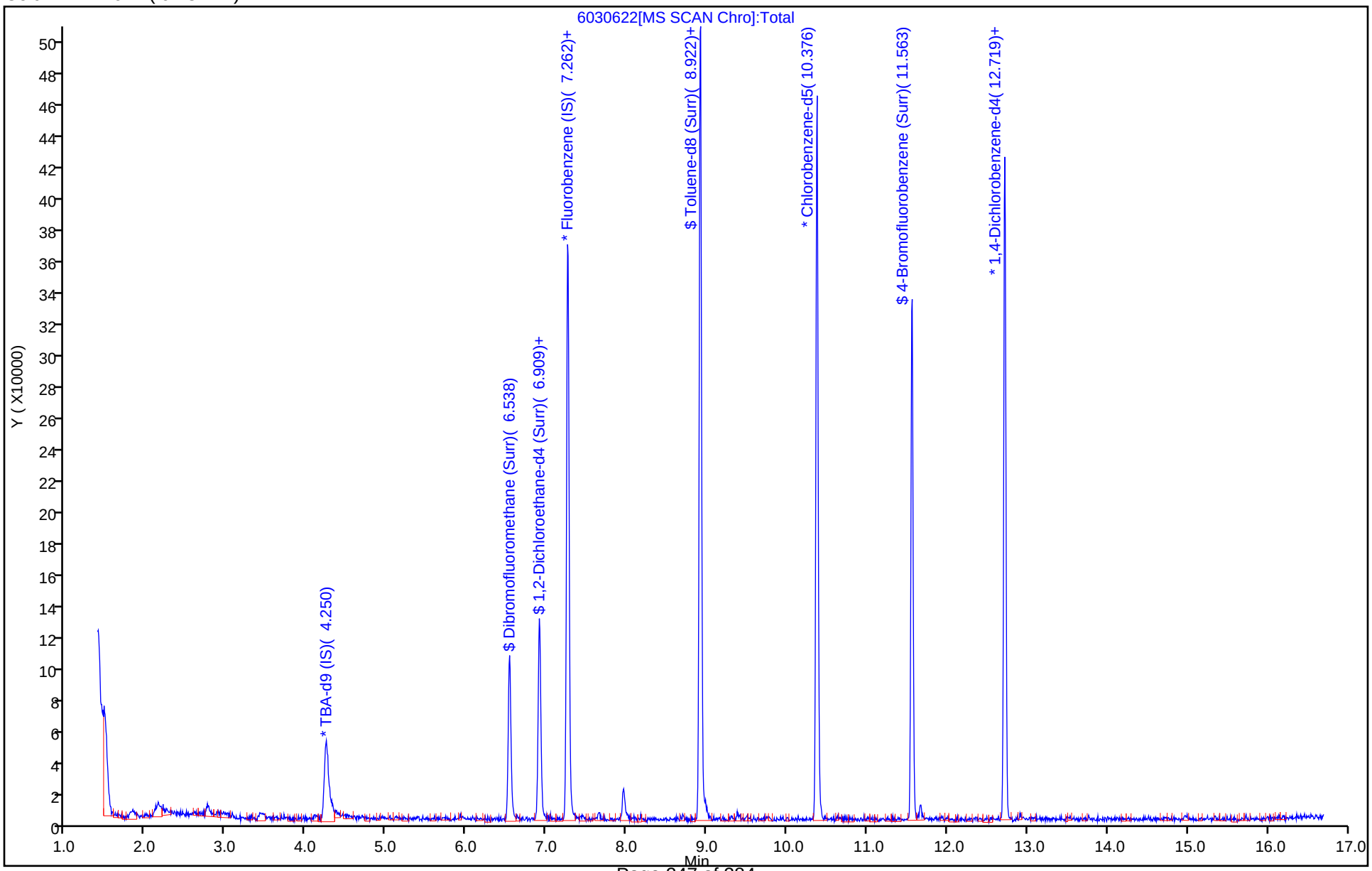
VOA8260INT_00104	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00104	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 09-Mar-2020 07:51:24 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030622.D				
Injection Date:	06-Mar-2020 17:40:30	Instrument ID:	CHHP6	Operator ID:	10099
Lims ID:	180-102790-C-12	Lab Sample ID:	180-102790-12	Worklist Smp#:	23
Client ID:	HD-COD-SW-29-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	22
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Recovery Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030622.D
Lims ID: 180-102790-C-12
Client ID: HD-COD-SW-29-0/1-0
Sample Type: Client
Inject. Date: 06-Mar-2020 17:40:30 ALS Bottle#: 22 Worklist Smp#: 23
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-0031064-023
Operator ID: 10099 Instrument ID: CHHP6

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 09-Mar-2020 07:51:24 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0332

First Level Reviewer: gordonk Date: 09-Mar-2020 07:51:24

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	50.0	46.0	92.08
$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	49.1	98.16
$ 7 Toluene-d8 (Surr)	50.0	44.3	88.65
$ 8 4-Bromofluorobenzene (Surr)	50.0	46.9	93.76

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Pittsburgh

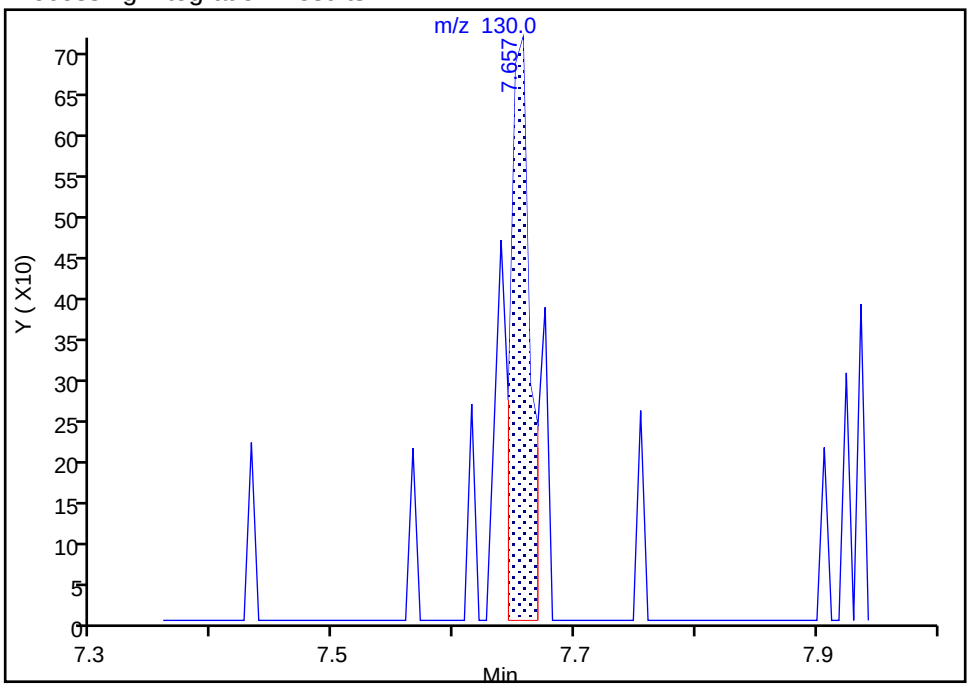
Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030622.D				
Injection Date:	06-Mar-2020 17:40:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-C-12	Lab Sample ID:	180-102790-12		
Client ID:	HD-COD-SW-29-0/1-0				
Operator ID:	10099	ALS Bottle#:	22	Worklist Smp#:	23
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

61 Trichloroethene, CAS: 79-01-6

Signal: 1

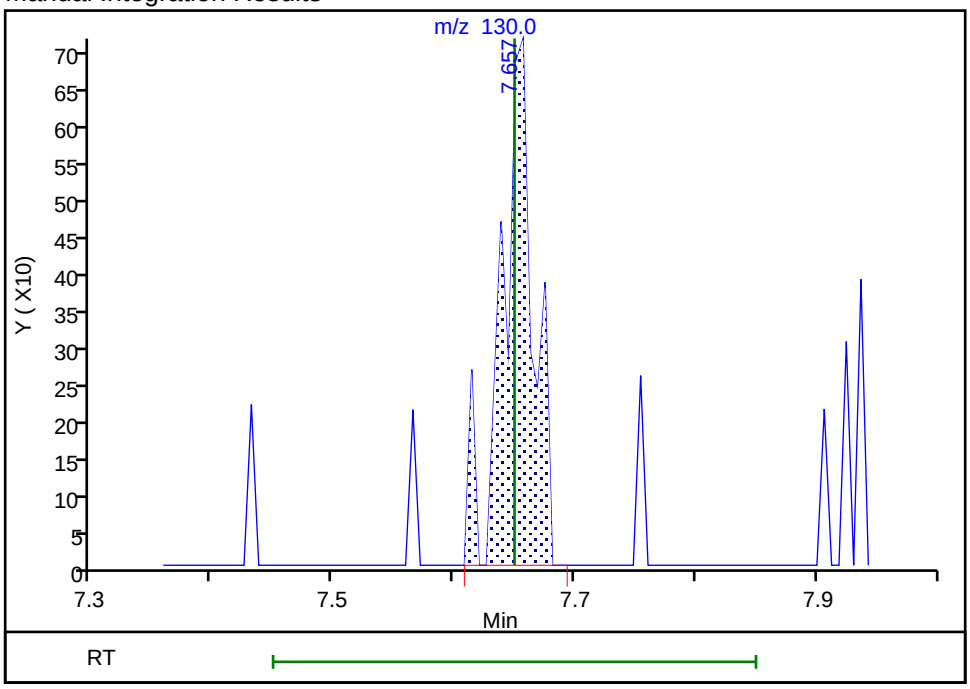
Processing Integration Results

RT: 7.66
Area: 797
Amount: 0.454521
Amount Units: ng



Manual Integration Results

RT: 7.66
Area: 1285
Amount: 0.732822
Amount Units: ng



Reviewer: gordonk, 09-Mar-2020 07:51:08

Audit Action: Manually Integrated Audit Reason: Poor chromatography

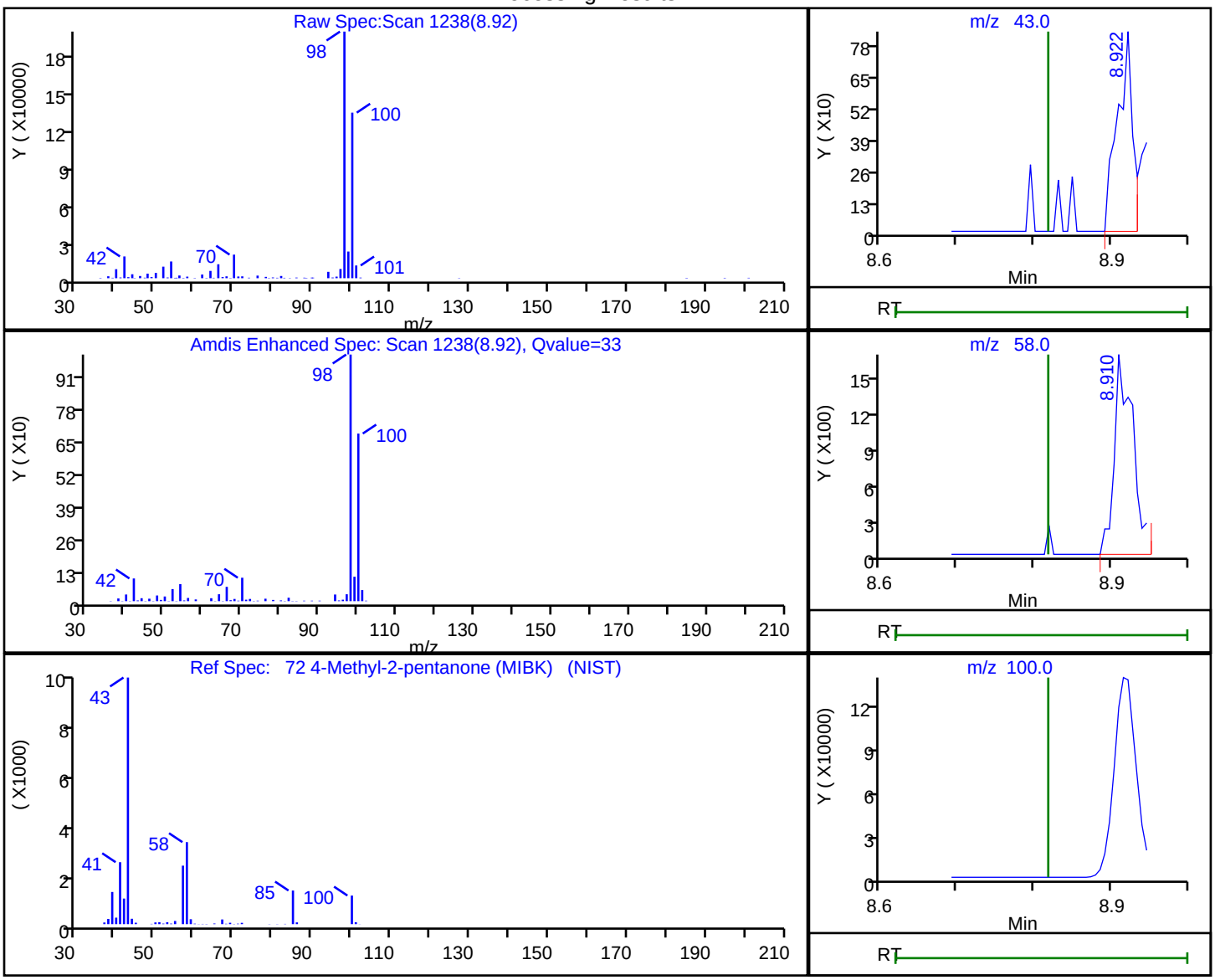
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030622.D				
Injection Date:	06-Mar-2020 17:40:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-C-12	Lab Sample ID:	180-102790-12		
Client ID:	HD-COD-SW-29-0/1-0				
Operator ID:	10099	ALS Bottle#:	22	Worklist Smp#:	23
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

72 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1

Processing Results



RT	Mass	Response	Amount
8.92	43.00	1167	0.707213
8.91	58.00	2688	
8.92	100.00	276437	

Reviewer: gordonk, 09-Mar-2020 07:51:13

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.: 180-102790-1

SDG No.:

Client Sample ID: HD-QC1-0/1-1 Lab Sample ID: 180-102790-13

Matrix: Water Lab File ID: 6030623.D

Analysis Method: EPA 8260C Date Collected: 02/24/2020 12:00

Sample wt/vol: 5(mL) Date Analyzed: 03/06/2020 18:07

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.: 309079 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	0.40
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	^c	1.0	0.59
75-34-3	1,1-Dichloroethane	ND		1.0	0.31
156-59-2	cis-1,2-Dichloroethene	2.1		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	2.8		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	^c	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	^c	1.0	0.58
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.45
127-18-4	Tetrachloroethene	7.5		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.: 180-102790-1

SDG No.:

Client Sample ID: HD-QC1-0/1-1 Lab Sample ID: 180-102790-13

Matrix: Water Lab File ID: 6030623.D

Analysis Method: EPA 8260C Date Collected: 02/24/2020 12:00

Sample wt/vol: 5(mL) Date Analyzed: 03/06/2020 18:07

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.: 309079 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)	93	^c	70-150
2037-26-5	Toluene-d8 (Surr)	88		78-128
460-00-4	4-Bromofluorobenzene (Surr)	94		64-123
1868-53-7	Dibromofluoromethane (Surr)	92		75-147

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030623.D
Lims ID: 180-102790-C-13
Client ID: HD-QC1-0/1-1
Sample Type: Client
Inject. Date: 06-Mar-2020 18:07:30 ALS Bottle#: 23 Worklist Smp#: 24
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-0031064-024
Operator ID: 10099 Instrument ID: CHHP6

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 09-Mar-2020 07:53:10 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0332

First Level Reviewer: gordonk Date: 09-Mar-2020 07:53:17

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.247	4.249	-0.002	93	99266	1000.0	
* 2 Fluorobenzene (IS)	96	7.264	7.261	0.003	100	417380	50.0	
* 3 Chlorobenzene-d5	119	10.379	10.375	0.004	86	98193	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.721	12.717	0.004	98	124285	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.540	6.537	0.003	91	77867	45.9	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.905	6.908	-0.003	97	102410	46.6	
$ 7 Toluene-d8 (Surr)	98	8.919	8.915	0.004	92	411723	44.0	
$ 8 4-Bromofluorobenzene (Surr	95	11.559	11.562	-0.003	0	153184	47.2	
12 Chloromethane	50		1.828				ND	
13 Vinyl chloride	62		1.938				ND	
15 Bromomethane	94		2.260				ND	
16 Chloroethane	64		2.382				ND	
22 1,1-Dichloroethene	96		3.325				ND	
24 Acetone	43	3.432	3.422	0.010	69	2462	4.60	M
26 Carbon disulfide	76		3.617				ND	
31 Methylene Chloride	84		4.115				ND	
33 Acrylonitrile	53		4.505				ND	
34 trans-1,2-Dichloroethene	96		4.529				ND	U
35 Methyl tert-butyl ether	73		4.553				ND	
37 1,1-Dichloroethane	63		5.168				ND	
43 cis-1,2-Dichloroethene	96	5.926	5.922	0.004	75	20764	10.3	
44 2-Butanone (MEK)	43		5.940				ND	
48 Chlorobromomethane	128		6.208				ND	
50 Chloroform	83		6.354				ND	
51 1,1,1-Trichloroethane	97	6.522	6.512	0.010	35	3477	1.76	
53 Carbon tetrachloride	117		6.689				ND	
56 Benzene	78		6.914				ND	
57 1,2-Dichloroethane	62		6.993				ND	
61 Trichloroethene	130	7.653	7.650	0.003	90	24740	14.1	
64 1,2-Dichloropropane	63		7.924				ND	
68 Dichlorobromomethane	83		8.210				ND	
71 cis-1,3-Dichloropropene	75		8.660				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
72 4-Methyl-2-pentanone (MIBK	43		8.818				ND	U
73 Toluene	91		8.988				ND	
74 trans-1,3-Dichloropropene	75		9.238				ND	
76 1,1,2-Trichloroethane	97		9.432				ND	
77 Tetrachloroethene	164	9.497	9.499	-0.002	93	55379	37.3	
79 2-Hexanone	43		9.651				ND	
81 Chlorodibromomethane	129		9.803				ND	
82 Ethylene Dibromide	107		9.913				ND	
84 Chlorobenzene	112		10.406				ND	
86 1,1,1,2-Tetrachloroethane	131		10.497				ND	
87 Ethylbenzene	106		10.503				ND	
88 m-Xylene & p-Xylene	106		10.637				ND	
89 o-Xylene	106		11.020				ND	
90 Styrene	104		11.038				ND	
91 Bromoform	173		11.221				ND	
96 1,1,2,2-Tetrachloroethane	83		11.702				ND	
S 131 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

U - Marked Undetected

Reagents:

VOA8260INT_00104	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00104	Amount Added:	2.00	Units: uL	Run Reagent

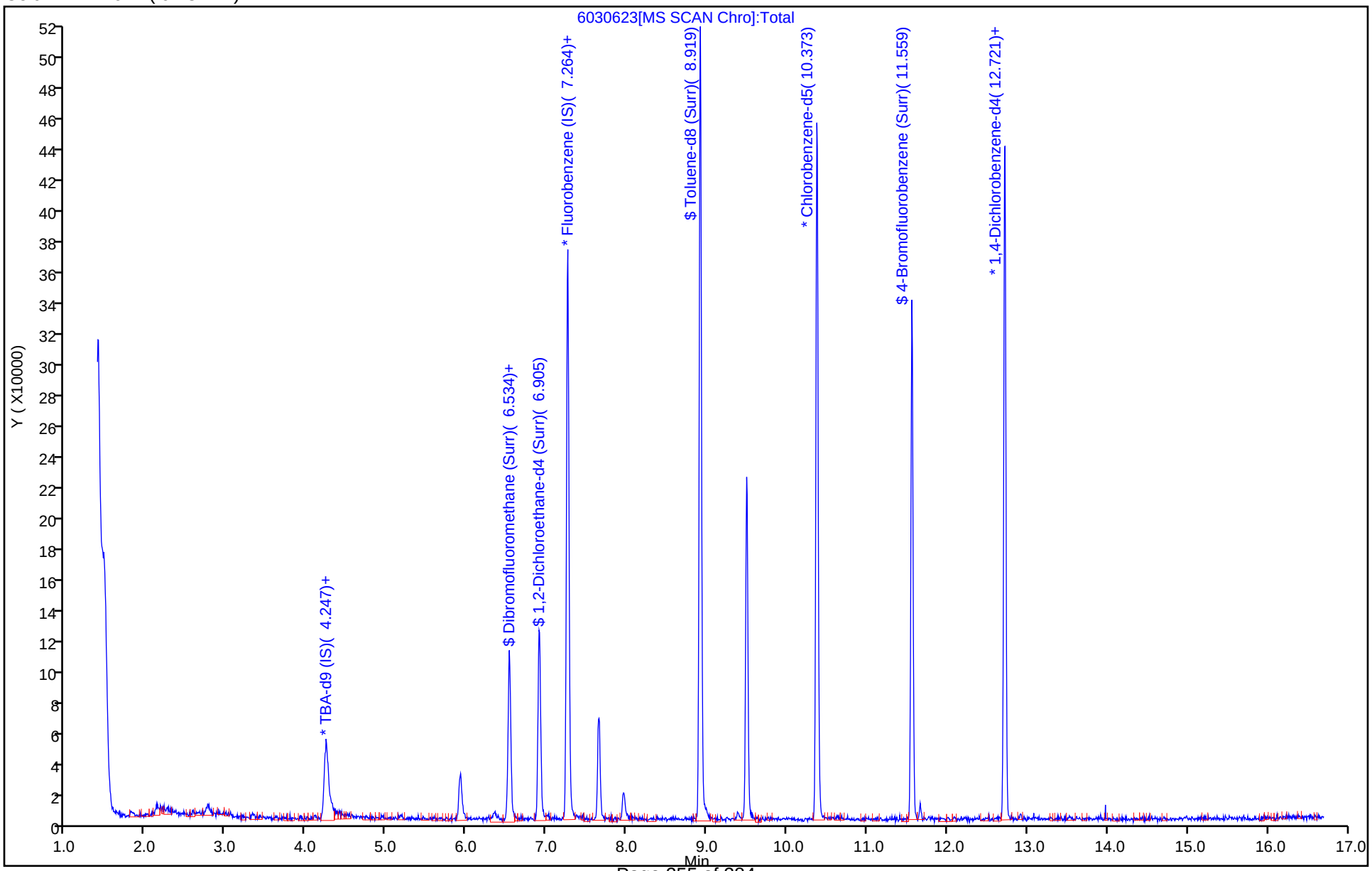
Report Date: 09-Mar-2020 07:53:17 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030623.D

Injection Date:	06-Mar-2020 18:07:30	Instrument ID:	CHHP6	Operator ID:	10099
Lims ID:	180-102790-C-13	Lab Sample ID:	180-102790-13	Worklist Smp#:	24
Client ID:	HD-QC1-0/1-1				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	23
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Recovery Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030623.D
Lims ID: 180-102790-C-13
Client ID: HD-QC1-0/1-1
Sample Type: Client
Inject. Date: 06-Mar-2020 18:07:30 ALS Bottle#: 23 Worklist Smp#: 24
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-0031064-024
Operator ID: 10099 Instrument ID: CHHP6

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 09-Mar-2020 07:53:10 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0332

First Level Reviewer: gordonk Date: 09-Mar-2020 07:53:17

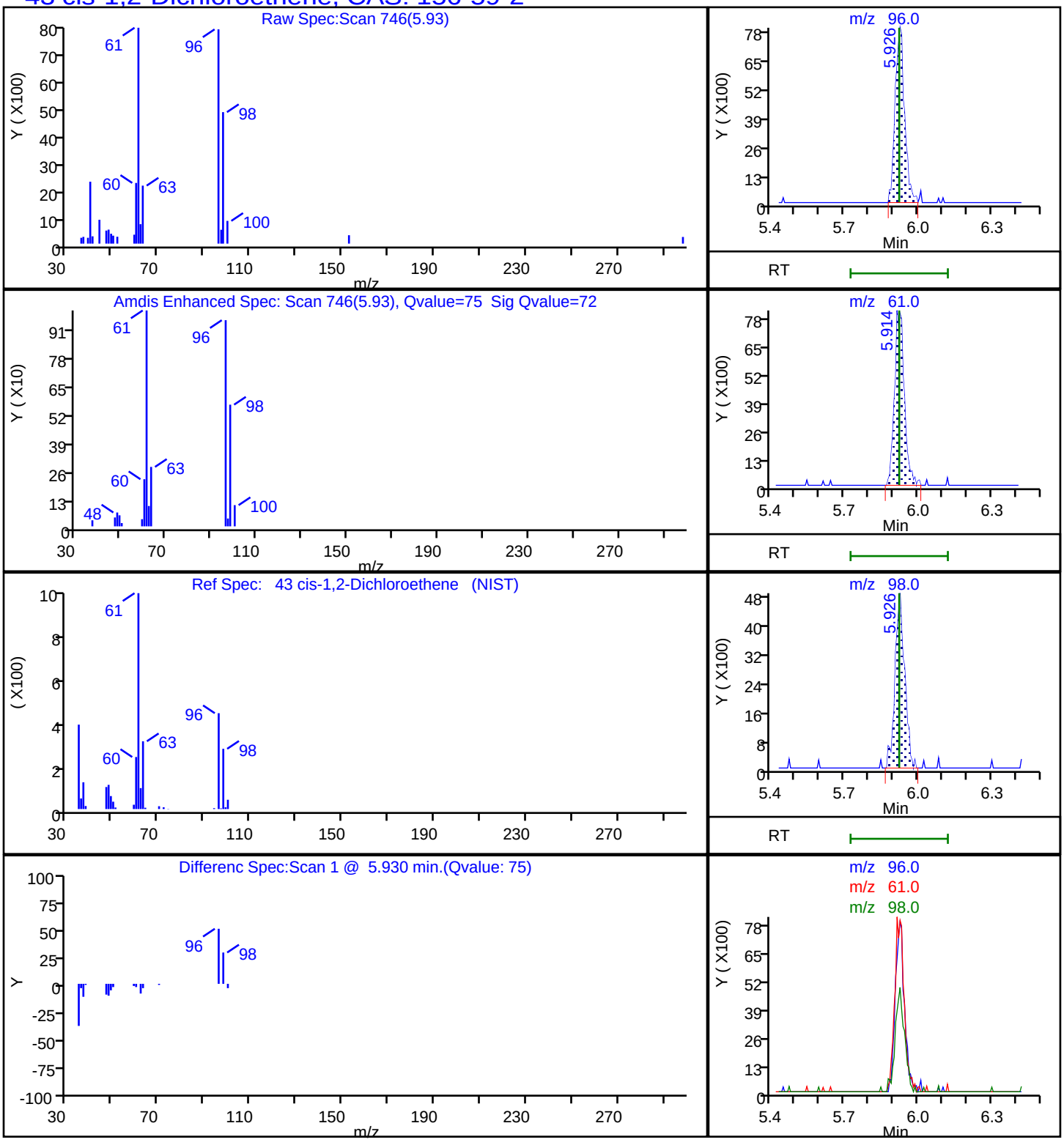
Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	50.0	45.9	91.87
$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	46.6	93.17
$ 7 Toluene-d8 (Surr)	50.0	44.0	87.99
$ 8 4-Bromofluorobenzene (Surr)	50.0	47.2	94.46

Report Date: 09-Mar-2020 07:53:17 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030623.D				
Injection Date:	06-Mar-2020 18:07:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-C-13	Lab Sample ID:	180-102790-13		
Client ID:	HD-QC1-0/1-1				
Operator ID:	10099	ALS Bottle#:	23	Worklist Smp#:	24
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

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



Report Date: 09-Mar-2020 07:53:17 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030623.D

Injection Date: 06-Mar-2020 18:07:30 Instrument ID: CHHP6

Lims ID: 180-102790-C-13 Lab Sample ID: 180-102790-13

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

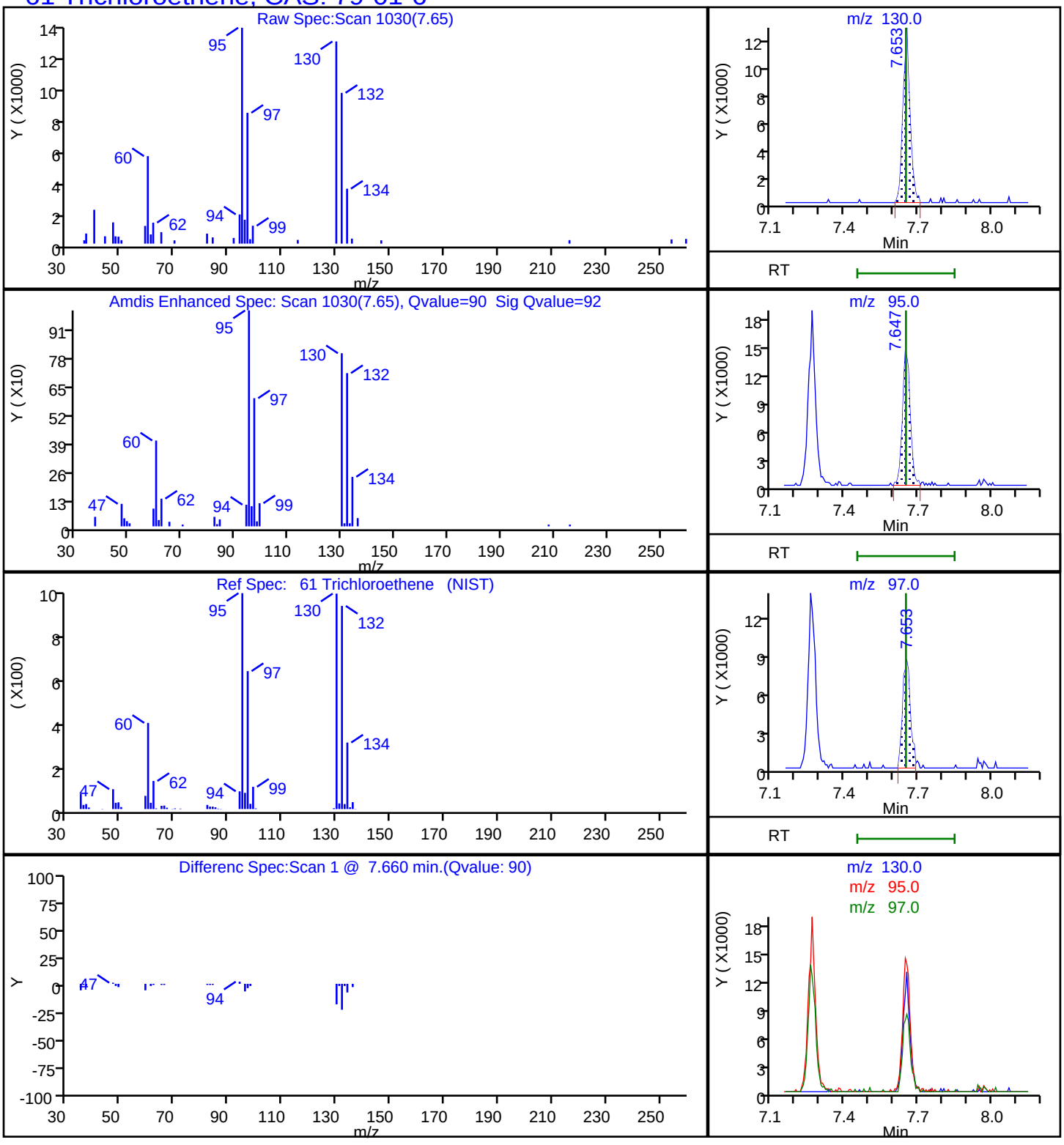
Operator ID: 10099 ALS Bottle#: 23 Worklist Smp#: 24

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: MSVOA_LL_CHHP6 Limit Group: VOA 8260C_D ICAL

Column: DB-624 (0.18 mm) Detector MS SCAN

61 Trichloroethene, CAS: 79-01-6

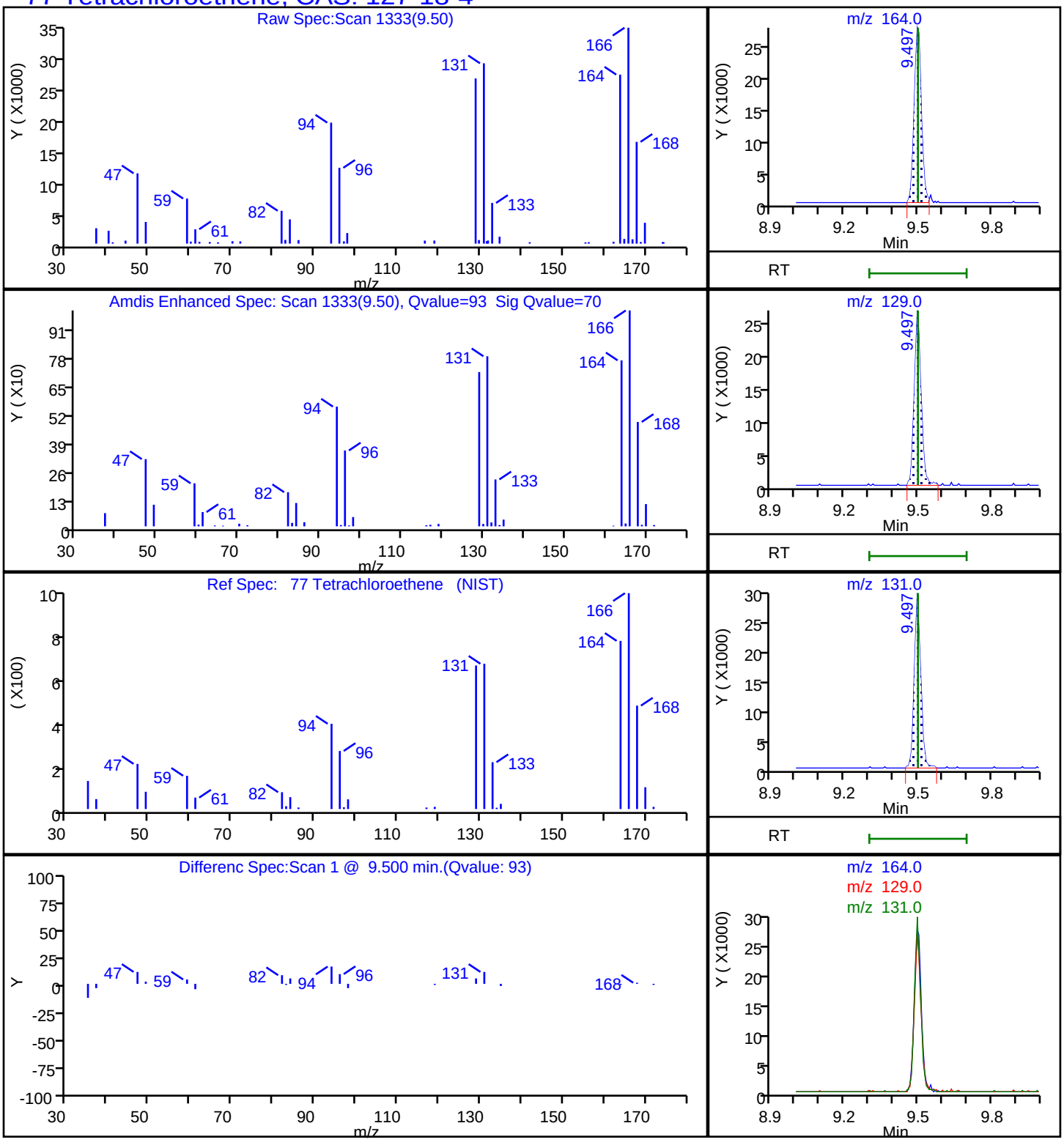


Report Date: 09-Mar-2020 07:53:17 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030623.D				
Injection Date:	06-Mar-2020 18:07:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-C-13	Lab Sample ID:	180-102790-13		
Client ID:	HD-QC1-0/1-1				
Operator ID:	10099	ALS Bottle#:	23	Worklist Smp#:	24
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

77 Tetrachloroethene, CAS: 127-18-4



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Pittsburgh

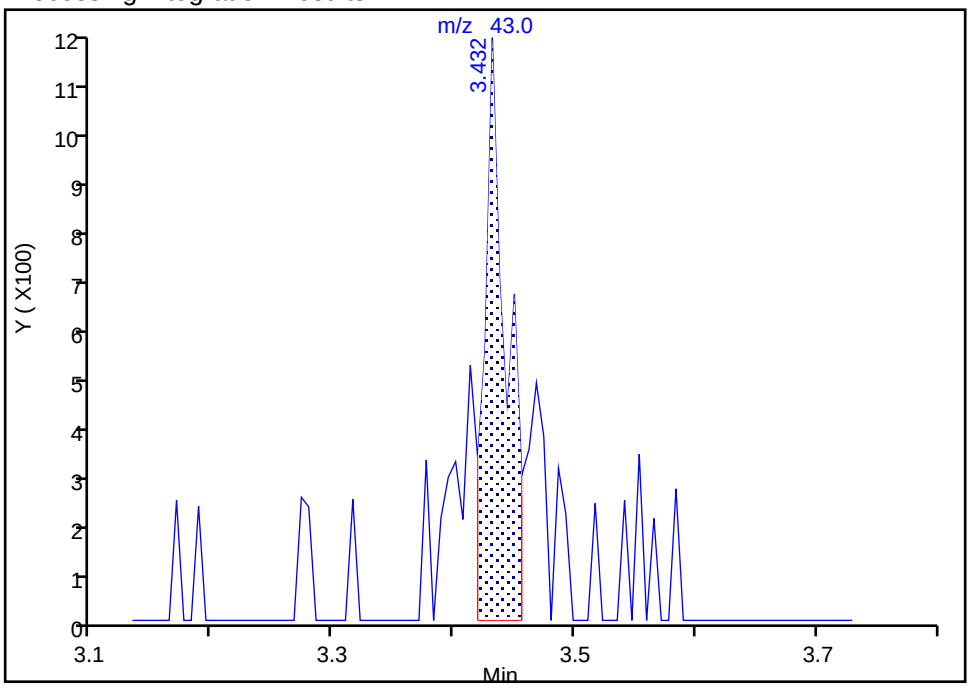
Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030623.D		
Injection Date:	06-Mar-2020 18:07:30	Instrument ID:	CHHP6
Lims ID:	180-102790-C-13	Lab Sample ID:	180-102790-13
Client ID:	HD-QC1-0/1-1		
Operator ID:	10099	ALS Bottle#:	23 Worklist Smp#: 24
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

24 Acetone, CAS: 67-64-1

Signal: 1

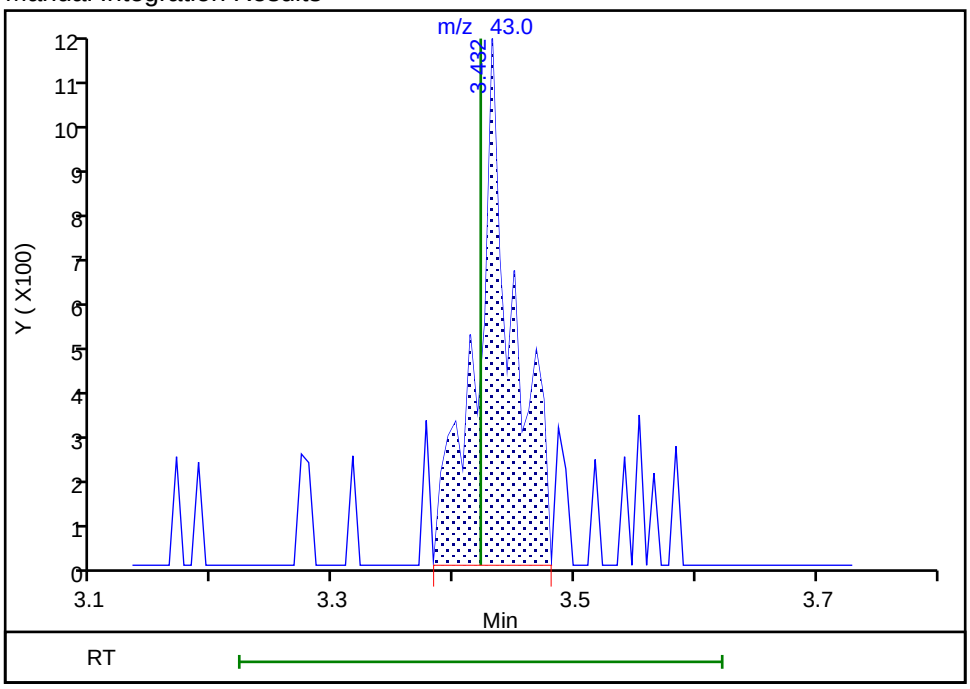
Processing Integration Results

RT: 3.43
Area: 1479
Amount: 2.764551
Amount Units: ng



Manual Integration Results

RT: 3.43
Area: 2462
Amount: 4.601977
Amount Units: ng



Reviewer: gordonk, 09-Mar-2020 07:52:49

Audit Action: Manually Integrated Audit Reason: Poor chromatography

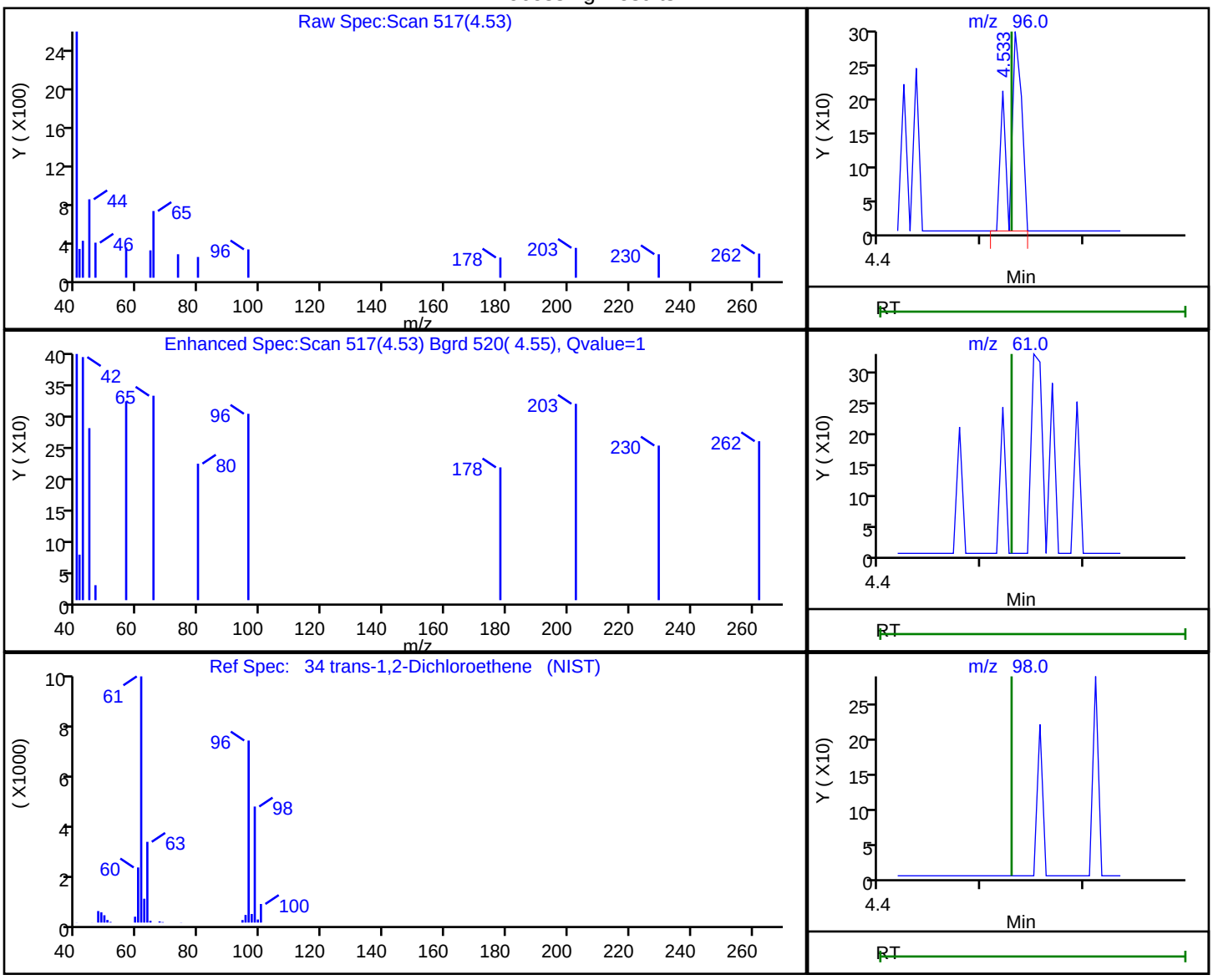
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030623.D				
Injection Date:	06-Mar-2020 18:07:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-C-13	Lab Sample ID:	180-102790-13		
Client ID:	HD-QC1-0/1-1				
Operator ID:	10099	ALS Bottle#:	23	Worklist Smp#:	24
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

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

Processing Results



RT	Mass	Response	Amount
4.53	96.00	260	0.168644
4.53	61.00	0	
4.53	98.00	0	

Reviewer: gordonk, 09-Mar-2020 07:52:24

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

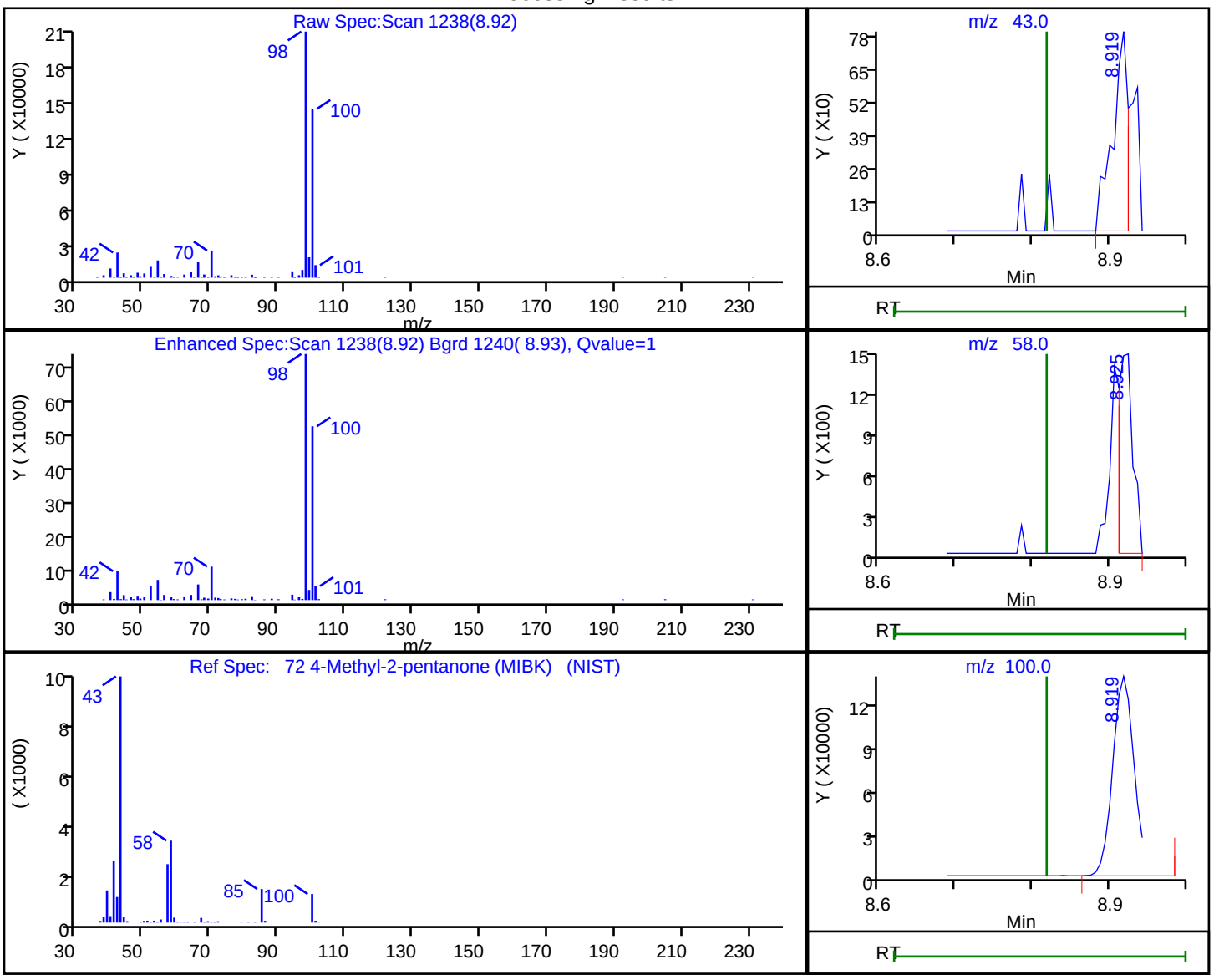
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030623.D				
Injection Date:	06-Mar-2020 18:07:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-C-13	Lab Sample ID:	180-102790-13		
Client ID:	HD-QC1-0/1-1				
Operator ID:	10099	ALS Bottle#:	23	Worklist Smp#:	24
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

72 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1

Processing Results



RT	Mass	Response	Amount
8.92	43.00	1104	0.659789
8.92	58.00	1933	
8.92	100.00	274462	

Reviewer: gordonk, 09-Mar-2020 07:52:01

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.: 180-102790-1

SDG No.:

Client Sample ID: HD-QC1-0/1-2 Lab Sample ID: 180-102790-14

Matrix: Water Lab File ID: 6030624.D

Analysis Method: EPA 8260C Date Collected: 02/24/2020 00:00

Sample wt/vol: 5(mL) Date Analyzed: 03/06/2020 18:35

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.: 309079 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	0.40
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	^c	1.0	0.59
75-34-3	1,1-Dichloroethane	ND		1.0	0.31
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	^c	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	^c	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.: 180-102790-1

SDG No.:

Client Sample ID: HD-QC1-0/1-2 Lab Sample ID: 180-102790-14

Matrix: Water Lab File ID: 6030624.D

Analysis Method: EPA 8260C Date Collected: 02/24/2020 00:00

Sample wt/vol: 5(mL) Date Analyzed: 03/06/2020 18:35

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.: 309079 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)	87		78-128
460-00-4	4-Bromofluorobenzene (Surr)	91		64-123
1868-53-7	Dibromofluoromethane (Surr)	92		75-147

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030624.D
Lims ID: 180-102790-A-14
Client ID: HD-QC1-0/1-2
Sample Type: Client
Inject. Date: 06-Mar-2020 18:35:30 ALS Bottle#: 24 Worklist Smp#: 25
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-0031064-025
Operator ID: 10099 Instrument ID: CHHP6

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 09-Mar-2020 07:53:50 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0332

First Level Reviewer: gordonk Date: 09-Mar-2020 07:53:50

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.247	4.249	-0.002	92	94439	1000.0	
* 2 Fluorobenzene (IS)	96	7.264	7.261	0.003	99	422497	50.0	
* 3 Chlorobenzene-d5	119	10.373	10.375	-0.002	86	101473	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.721	12.717	0.004	98	126732	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.540	6.537	0.003	91	78659	45.8	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.911	6.908	0.003	98	108206	48.6	
$ 7 Toluene-d8 (Surr)	98	8.919	8.915	0.004	92	421603	43.6	
$ 8 4-Bromofluorobenzene (Surr	95	11.559	11.562	-0.003	0	152333	45.4	
12 Chloromethane	50		1.828				ND	
13 Vinyl chloride	62		1.938				ND	
15 Bromomethane	94		2.260				ND	
16 Chloroethane	64		2.382				ND	
22 1,1-Dichloroethene	96		3.325				ND	
24 Acetone	43	3.431	3.422	0.009	56	4552	8.41	M
26 Carbon disulfide	76		3.617				ND	U
31 Methylene Chloride	84		4.115				ND	
33 Acrylonitrile	53		4.505				ND	
34 trans-1,2-Dichloroethene	96		4.529				ND	
35 Methyl tert-butyl ether	73		4.553				ND	
37 1,1-Dichloroethane	63		5.168				ND	
43 cis-1,2-Dichloroethene	96		5.922				ND	
44 2-Butanone (MEK)	43		5.940				ND	
48 Chlorobromomethane	128		6.208				ND	
50 Chloroform	83		6.354				ND	
51 1,1,1-Trichloroethane	97		6.512				ND	
53 Carbon tetrachloride	117		6.689				ND	
56 Benzene	78		6.914				ND	
57 1,2-Dichloroethane	62		6.993				ND	
61 Trichloroethene	130		7.650				ND	
64 1,2-Dichloropropane	63		7.924				ND	U
68 Dichlorobromomethane	83		8.210				ND	
71 cis-1,3-Dichloropropene	75		8.660				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
72 4-Methyl-2-pentanone (MIBK	43		8.818				ND	U
73 Toluene	91		8.988				ND	
74 trans-1,3-Dichloropropene	75		9.238				ND	
76 1,1,2-Trichloroethane	97		9.432				ND	
77 Tetrachloroethene	164		9.499				ND	
79 2-Hexanone	43		9.651				ND	
81 Chlorodibromomethane	129		9.803				ND	
82 Ethylene Dibromide	107		9.913				ND	
84 Chlorobenzene	112		10.406				ND	
86 1,1,1,2-Tetrachloroethane	131		10.497				ND	
87 Ethylbenzene	106		10.503				ND	
88 m-Xylene & p-Xylene	106		10.637				ND	
89 o-Xylene	106		11.020				ND	
90 Styrene	104		11.038				ND	
91 Bromoform	173		11.221				ND	
96 1,1,2,2-Tetrachloroethane	83		11.702				ND	
S 131 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

U - Marked Undetected

Reagents:

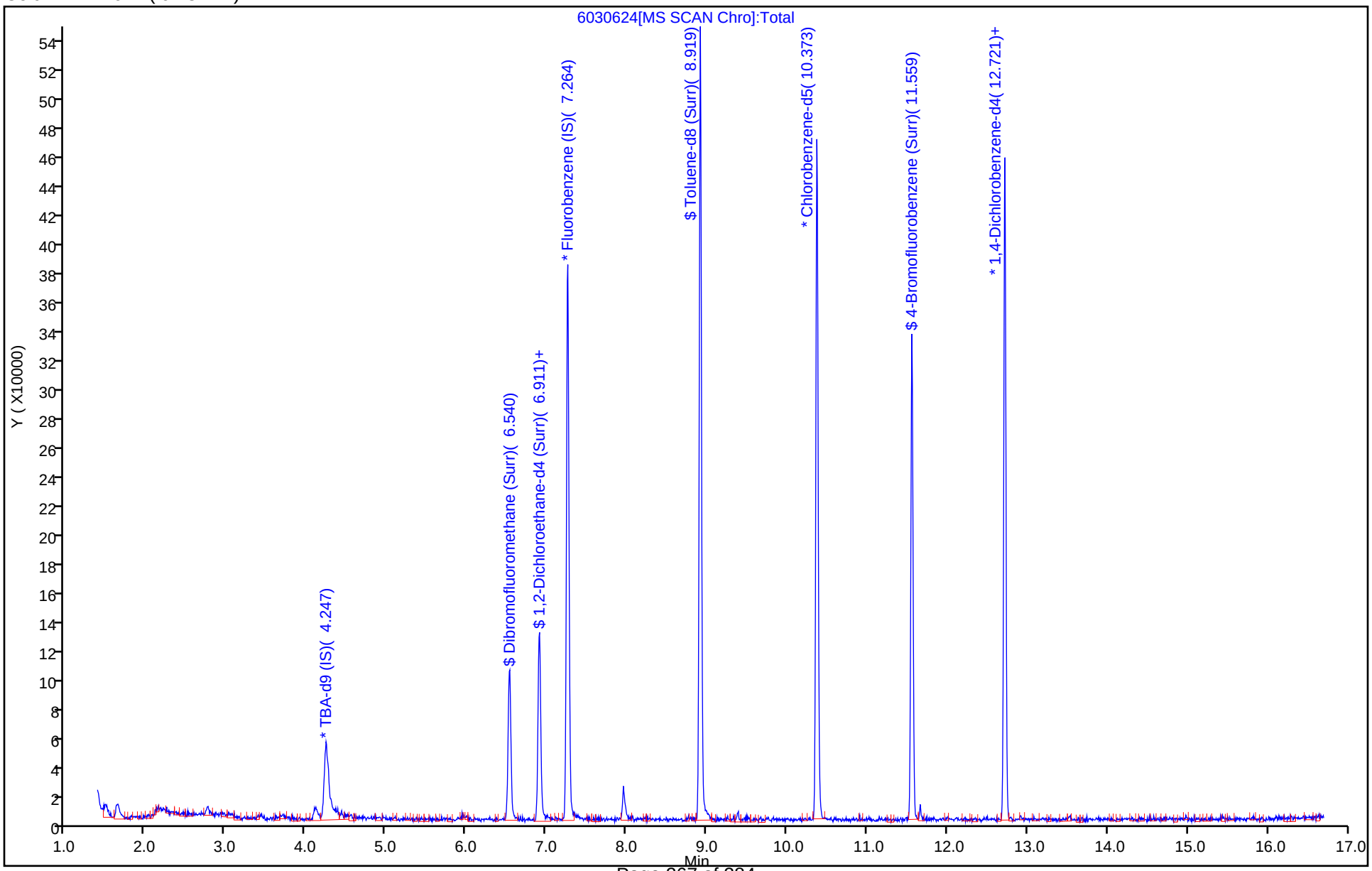
VOA8260INT_00104	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00104	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 09-Mar-2020 07:53:51 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030624.D				
Injection Date:	06-Mar-2020 18:35:30	Instrument ID:	CHHP6	Operator ID:	10099
Lims ID:	180-102790-A-14	Lab Sample ID:	180-102790-14	Worklist Smp#:	25
Client ID:	HD-QC1-0/1-2				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Recovery Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030624.D
Lims ID: 180-102790-A-14
Client ID: HD-QC1-0/1-2
Sample Type: Client
Inject. Date: 06-Mar-2020 18:35:30 ALS Bottle#: 24 Worklist Smp#: 25
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-0031064-025
Operator ID: 10099 Instrument ID: CHHP6

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 09-Mar-2020 07:53:50 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0332

First Level Reviewer: gordonk Date: 09-Mar-2020 07:53:50

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	50.0	45.8	91.68
$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	48.6	97.25
$ 7 Toluene-d8 (Surr)	50.0	43.6	87.19
$ 8 4-Bromofluorobenzene (Surr)	50.0	45.4	90.90

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Pittsburgh

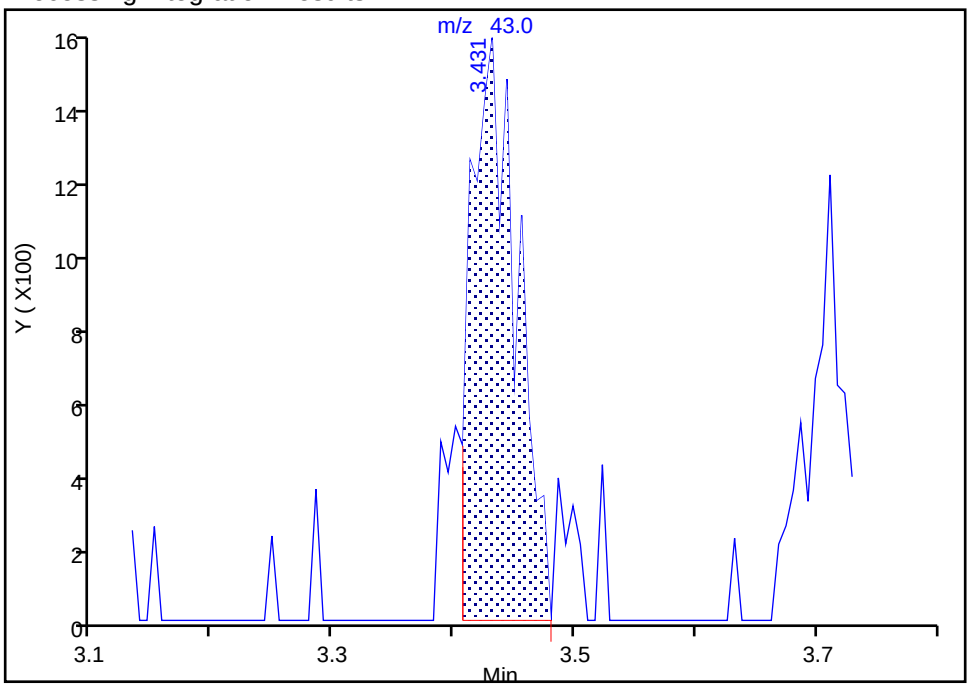
Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030624.D				
Injection Date:	06-Mar-2020 18:35:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-14	Lab Sample ID:	180-102790-14		
Client ID:	HD-QC1-0/1-2				
Operator ID:	10099	ALS Bottle#:	24	Worklist Smp#:	25
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

24 Acetone, CAS: 67-64-1

Signal: 1

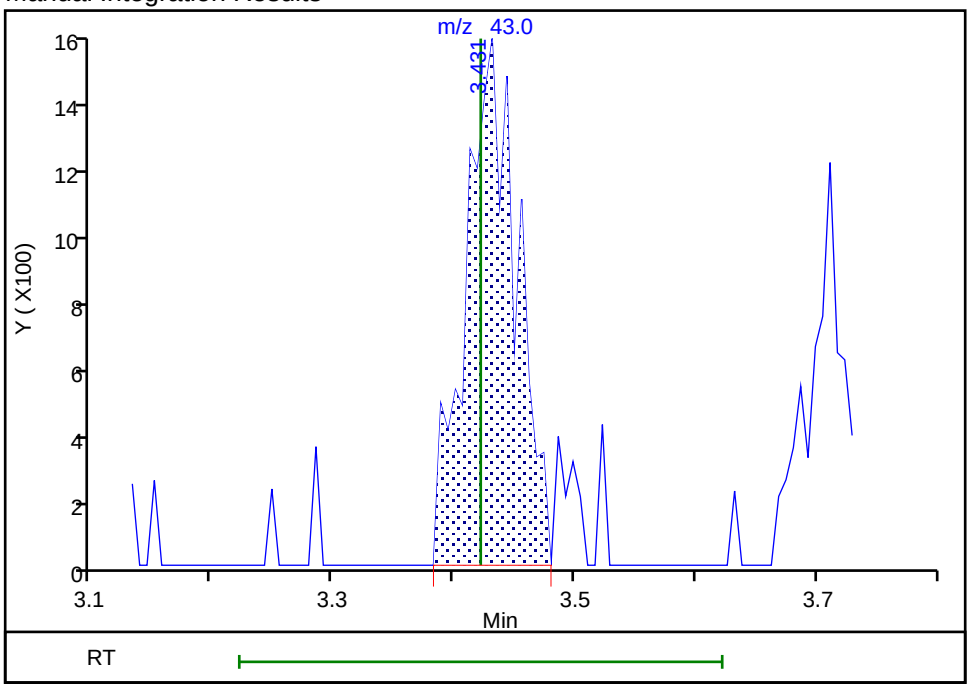
Processing Integration Results

RT: 3.43
Area: 4047
Amount: 7.473045
Amount Units: ng



Manual Integration Results

RT: 3.43
Area: 4552
Amount: 8.405560
Amount Units: ng



Reviewer: gordonk, 09-Mar-2020 07:53:34

Audit Action: Manually Integrated Audit Reason: Poor chromatography

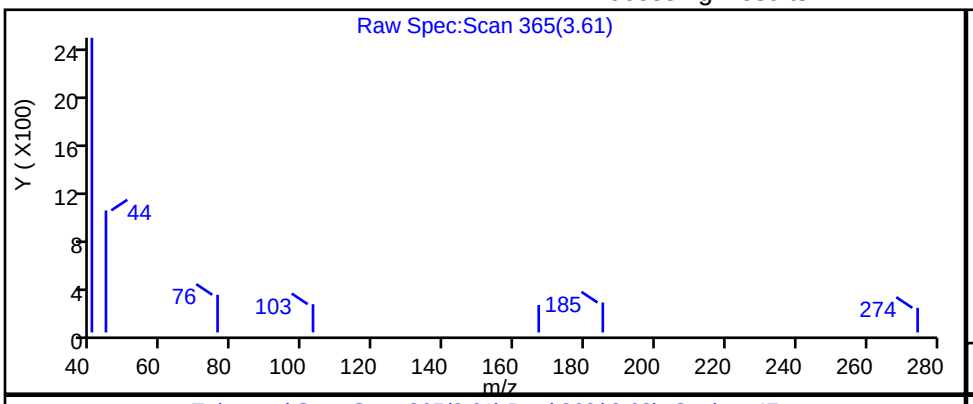
User Disabled Compound Report

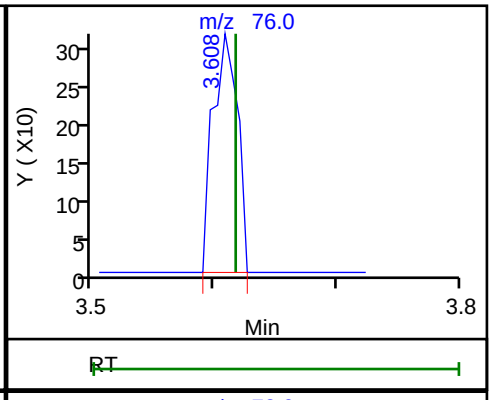
Eurofins TestAmerica, Pittsburgh

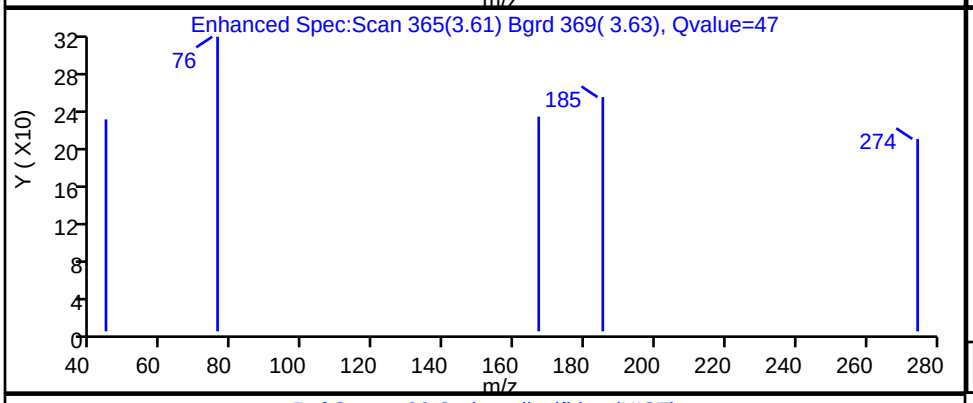
Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030624.D				
Injection Date:	06-Mar-2020 18:35:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-14	Lab Sample ID:	180-102790-14		
Client ID:	HD-QC1-0/1-2				
Operator ID:	10099	ALS Bottle#:	24	Worklist Smp#:	25
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

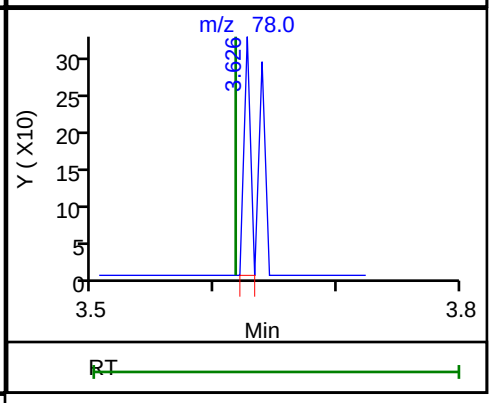
26 Carbon disulfide, CAS: 75-15-0

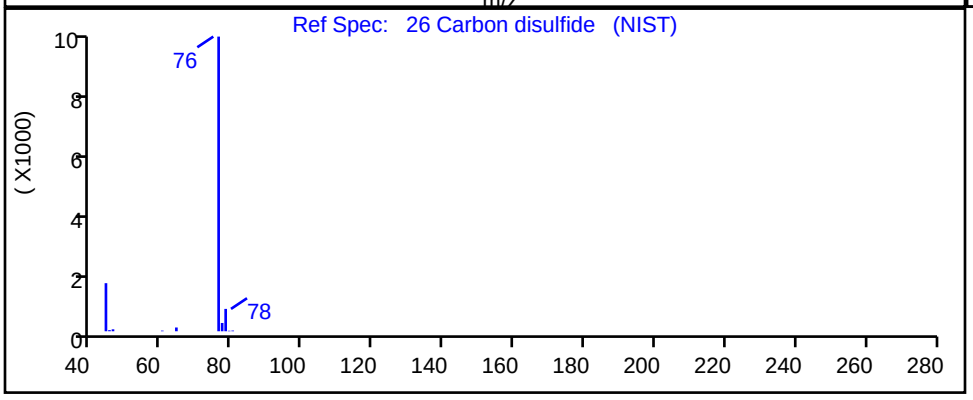
Processing Results











RT	Mass	Response	Amount
3.61	76.00	444	0.182633
3.63	78.00	118	

Reviewer: gordonk, 09-Mar-2020 07:53:38

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

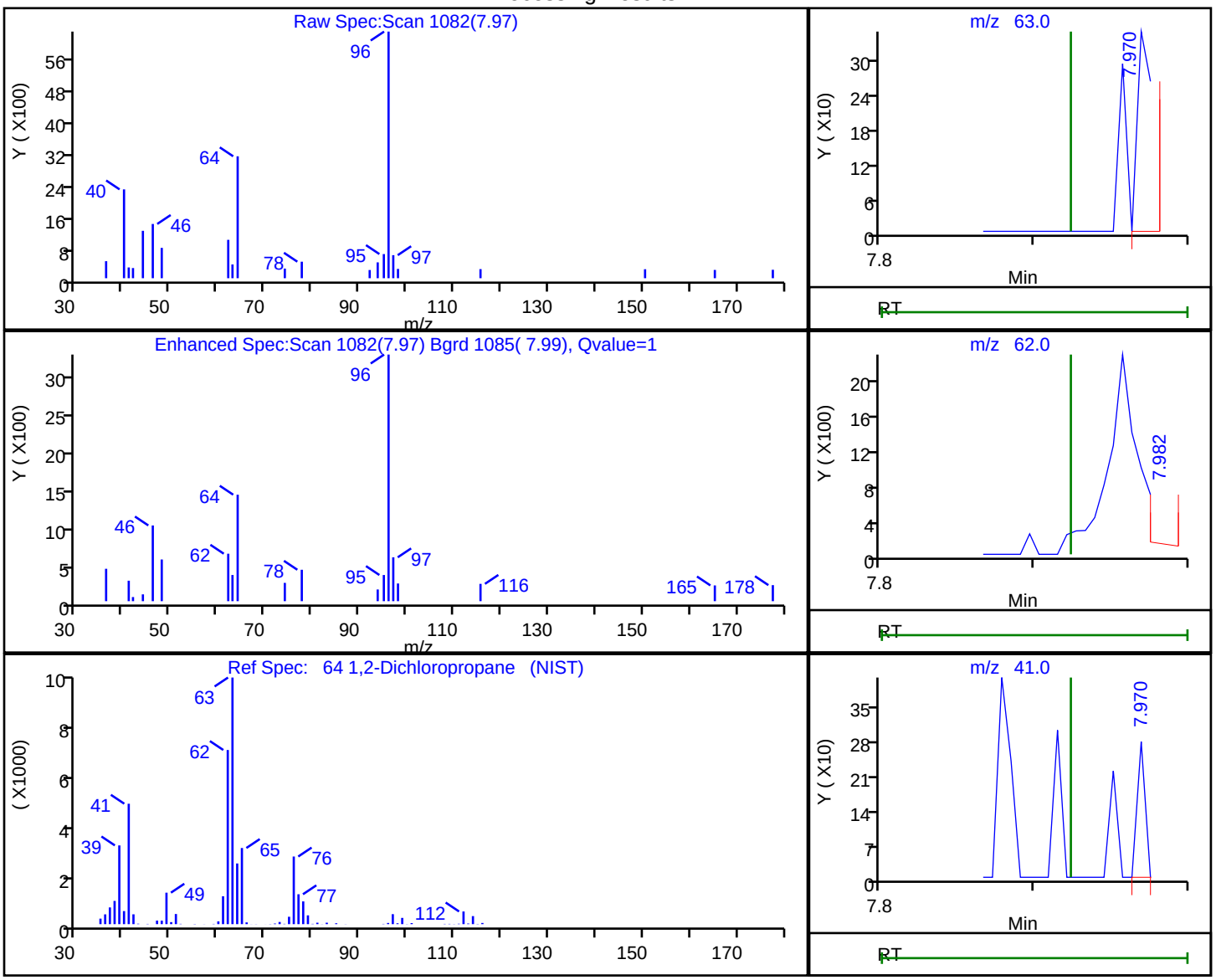
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030624.D				
Injection Date:	06-Mar-2020 18:35:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-14	Lab Sample ID:	180-102790-14		
Client ID:	HD-QC1-0/1-2				
Operator ID:	10099	ALS Bottle#:	24	Worklist Smp#:	25
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

64 1,2-Dichloropropane, CAS: 78-87-5

Processing Results



RT	Mass	Response	Amount
7.97	63.00	223	0.116809
7.98	62.00	726	
7.97	41.00	100	

Reviewer: gordonk, 09-Mar-2020 07:53:42

Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

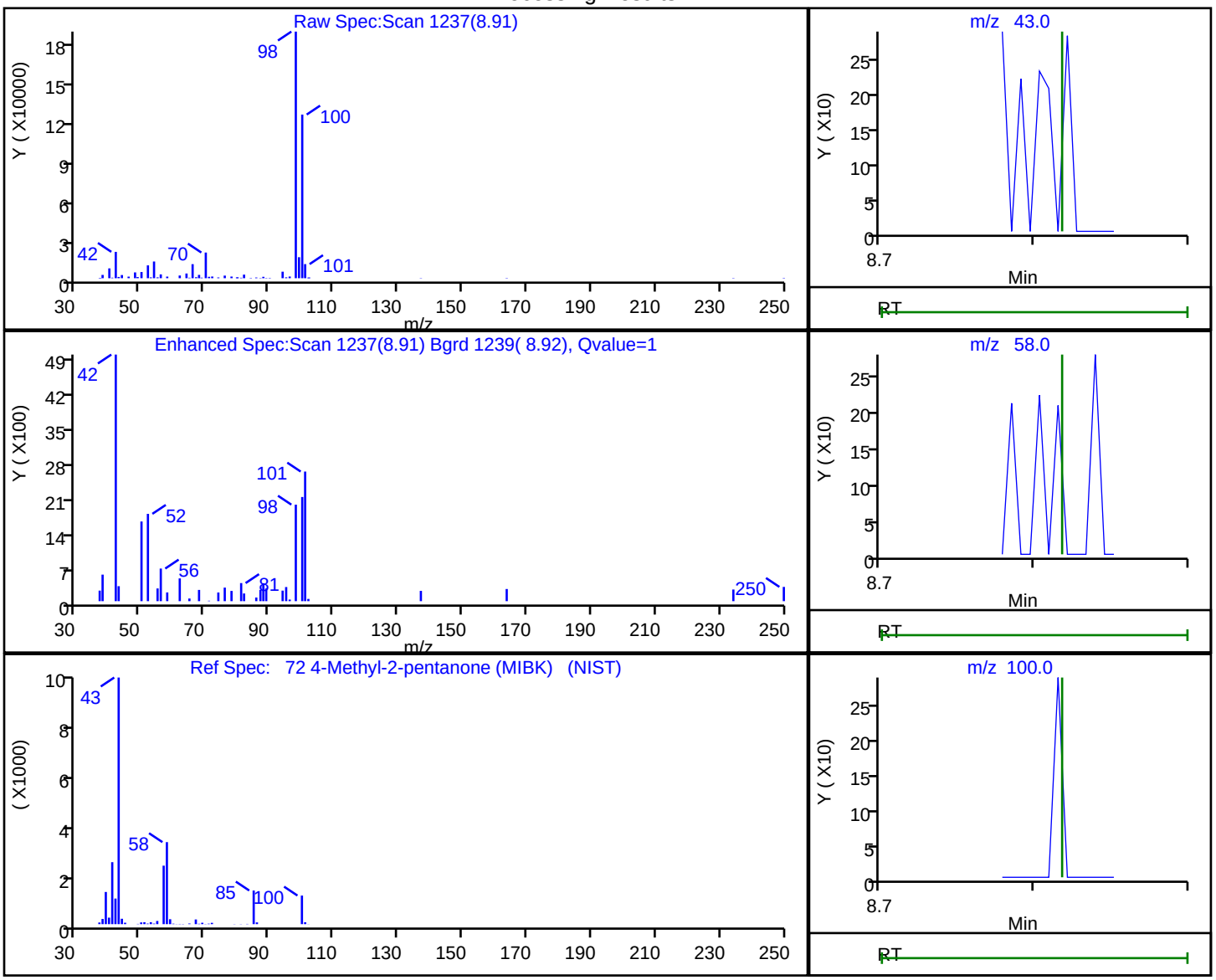
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030624.D				
Injection Date:	06-Mar-2020 18:35:30	Instrument ID:	CHHP6		
Lims ID:	180-102790-A-14	Lab Sample ID:	180-102790-14		
Client ID:	HD-QC1-0/1-2				
Operator ID:	10099	ALS Bottle#:	24	Worklist Smp#:	25
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

72 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1

Processing Results



RT	Mass	Response	Amount
8.91	43.00	493	0.285110
8.92	58.00	2942	
8.92	100.00	278551	

Reviewer: gordonk, 09-Mar-2020 07:53:44

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.: 180-102790-1 Analy Batch No.: 308714

SDG No.:

Instrument ID: CHHP6 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/03/2020 09:52 Calibration End Date: 03/03/2020 13:06 Calibration ID: 42985

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-308714/4	6030304.D
Level 2	IC 180-308714/5	6030305.D
Level 3	ICIS 180-308714/6	6030306.D
Level 4	IC 180-308714/7	6030307.D
Level 5	IC 180-308714/8	6030308.D
Level 6	IC 180-308714/9	6030309.D
Level 7	IC 180-308714/10	6030310.D
Level 8	IC 180-308714/11	6030311.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.3596 0.2355	0.2910 +++++	0.2455 +++++	0.2344	0.2420	Ave		0.2680			0.1000	18.5		20.0			
Chloromethane	0.3877 0.2398	0.2833 0.2319	0.2372 0.2404	0.2204	0.2412	Lin2	0.7970	0.2305			0.1000				0.9970		0.9900
1,3-Butadiene	0.3894 0.2385	0.2878 0.2190	0.2379 0.2248	0.2283	0.2347	Lin2	0.8364	0.2264			0.0100				0.9960		0.9900
Vinyl chloride	0.3910 0.2654	0.2979 0.2519	0.2616 0.2580	0.2433	0.2606	Ave		0.2787			0.1000	17.2		20.0			
Bromomethane	0.3093 0.1913	0.2228 0.1855	0.1969 0.1850	0.1879	0.1902	Lin2	0.6304	0.1851			0.0500				0.9990		0.9900
Chloroethane	0.2846 0.1860	0.2205 0.1803	0.1894 0.1833	0.1842	0.1914	Ave		0.2025			0.0500	17.5		20.0			
Dichlorofluoromethane	0.7004 0.4664	0.5635 0.4435	0.4723 0.4624	0.4667	0.4809	Ave		0.5070			0.0100	17.0		20.0			
Trichlorofluoromethane	0.7178 0.4338	0.5793 +++++	0.4637 +++++	0.4523	0.4591	Lin2	1.3910	0.4507			0.1000				0.9920		0.9900
Ethyl ether	0.1802 0.1240	0.1339 0.1280	0.1206 0.1330	0.1157	0.1289	Ave		0.1330			0.0100	15.1		20.0			
Acrolein	0.0293 0.0252	0.0306 0.0252	0.0264 0.0282	0.0241	0.0236	Ave		0.0266			0.0100	9.6		20.0			
1,1-Dichloroethene	0.2183 0.1334	0.1569 0.1272	0.1320 0.1338	0.1228	0.1314	Lin2	0.4611	0.1273			0.1000				0.9970		0.9900
1,1,2-Trichloro-1,2,2-trifluoroethane	0.2466 0.1532	0.1723 0.1426	0.1490 0.1460	0.1428	0.1496	Lin2	0.5201	0.1434			0.1000				0.9980		0.9900
Acetone	0.0756 0.0568	0.0698 0.0585	0.0581 0.0722	0.0563	0.0654	Ave		0.0641			0.0500	12.0		20.0			
Iodomethane	0.2400 0.1706	0.1879 0.1686	0.1616 0.1789	0.1535	0.1708	Ave		0.1790			0.0100	14.9		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.: 180-102790-1 Analy Batch No.: 308714

SDG No.:

Instrument ID: CHHP6 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/03/2020 09:52 Calibration End Date: 03/03/2020 13:06 Calibration ID: 42985

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Carbon disulfide	0.4135 0.2914	0.2783 0.2744	0.2411 0.2959	0.2430	0.2641	Ave		0.2877			0.1000	19.0		20.0			
Allyl chloride	0.1004 0.0733	0.0745 0.0774	0.0658 0.0794	0.0675	0.0717	Ave		0.0763			0.0100	14.1		20.0			
Methyl acetate	0.1251 0.0994	0.0977 0.1040	0.0909 0.1123	0.0879	0.0998	Ave		0.1022			0.1000	11.7		20.0			
Methylene Chloride	0.5568 0.1898	0.2702 0.1907	0.2058 0.1970	0.1840	0.1989	Lin2	1.8974	0.1785			0.1000				0.9950		0.9900
tert-Butyl alcohol	1.5085 1.2005	1.1424 1.2860	1.1120 1.2216	1.0938	1.2436	Ave		1.2261			0.0100	10.8		20.0			
Acrylonitrile	0.0697 0.0592	0.0607 0.0644	0.0550 0.0671	0.0538	0.0611	Ave		0.0614			0.0100	9.0		20.0			
trans-1,2-Dichloroethene	0.2392 0.1786	0.1918 0.1733	0.1702 0.1846	0.1601	0.1796	Ave		0.1847			0.1000	13.0		20.0			
Methyl tert-butyl ether	0.4690 0.3998	0.4086 0.4280	0.3830 0.4550	0.3706	0.4083	Ave		0.4153			0.1000	8.1		20.0			
Hexane	0.3331 0.2044	0.2380 +++++	0.2047 +++++	0.1839	0.1966	Lin2	0.7138	0.1924			0.0100				0.9950		0.9900
1,1-Dichloroethane	0.3822 0.2952	0.3122 0.2892	0.2787 0.3110	0.2630	0.2934	Ave		0.3031			0.2000	11.8		20.0			
Vinyl acetate	0.2683 0.3155	0.3000 0.4115	0.2927 0.3767	0.2738	0.3129	Ave		0.3189			0.0100	15.7		20.0			
2,2-Dichloropropane	0.0348 0.0345	0.0338 0.0351	0.0292 0.0374	0.0313	0.0340	Ave		0.0338			0.0100	7.4		20.0			
cis-1,2-Dichloroethene	0.3135 0.2326	0.2430 0.2313	0.2227 0.2468	0.2073	0.2368	Ave		0.2417			0.1000	13.0		20.0			
2-Butanone (MEK)	0.1046 0.0849	0.0963 0.0928	0.0794 0.1039	0.0836	0.0948	Ave		0.0925			0.0500	10.0		20.0			
Bromochloromethane	0.1080 0.0887	0.0933 0.0912	0.0797 0.0949	0.0797	0.0902	Ave		0.0907			0.0100	10.0		20.0			
Tetrahydrofuran	0.0653 0.0453	0.0459 0.0487	0.0443 0.0512	0.0390	0.0485	Ave		0.0485			0.0100	15.8		20.0			
Chloroform	0.7994 0.3910	0.4530 0.3913	0.3829 0.4087	0.3587	0.3956	Lin2	2.1385	0.3679			0.2000				0.9960		0.9900
1,1,1-Trichloroethane	0.3001 0.2410	0.2348 0.2334	0.2101 0.2476	0.2039	0.2271	Ave		0.2372			0.1000	12.4		20.0			
Cyclohexane	0.4127 0.2739	0.3160 +++++	0.2745 +++++	0.2492	0.2647	Lin2	0.7722	0.2613			0.1000				0.9960		0.9900
Carbon tetrachloride	0.1862 0.1499	0.1405 0.1425	0.1240 0.1557	0.1212	0.1345	Ave		0.1443			0.1000	14.3		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.: 180-102790-1 Analy Batch No.: 308714

SDG No.:

Instrument ID: CHHP6 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/03/2020 09:52 Calibration End Date: 03/03/2020 13:06 Calibration ID: 42985

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
1,1-Dichloropropene	0.3697 0.2686	0.2863 0.2514	0.2576 0.2659	0.2400	0.2613	Ave		0.2751			0.0100	14.7		20.0			
Isobutyl alcohol	0.0051 0.0059	0.0041 0.0066	0.0041 +++++	0.0042	0.0057	Ave		0.0051		*	0.0100	19.4		20.0			
Benzene	1.1920 0.8686	0.9390 0.8621	0.8220 0.9133	0.7845	0.8771	Ave		0.9073			0.5000	13.7		20.0			
1,2-Dichloroethane	0.3266 0.2670	0.2847 0.2782	0.2501 0.2931	0.2427	0.2732	Ave		0.2769			0.1000	9.4		20.0			
n-Heptane	0.2698 0.1653	0.1925 +++++	0.1730 +++++	0.1420	0.1588	Lin2	0.5807	0.1556			0.0100				0.9930		0.9900
Trichloroethene	0.2623 0.2045	0.2161 0.1974	0.1914 0.2162	0.1870	0.2053	Ave		0.2100			0.2000	11.2		20.0			
Methylcyclohexane	0.5013 0.3347	0.3720 0.3138	0.3338 0.3269	0.3036	0.3279	Ave		0.3518			0.1000	18.1		20.0			
1,2-Dichloropropane	0.2850 0.2191	0.2211 0.2211	0.2027 0.2354	0.2001	0.2230	Ave		0.2259			0.1000	11.7		20.0			
Dibromomethane	0.1485 0.1323	0.1302 0.1394	0.1255 0.1457	0.1198	0.1375	Ave		0.1348			0.0100	7.3		20.0			
1,4-Dioxane	0.0037 0.0030	0.0032 0.0033	0.0027 0.0033	0.0028	0.0031	Ave		0.0031		*	0.0100	10.1		20.0			
Bromodichloromethane	0.2769 0.2823	0.2326 0.2961	0.2271 0.3146	0.2250	0.2660	Ave		0.2651			0.2000	12.7		20.0			
cis-1,3-Dichloropropene	0.2777 0.3542	0.2587 0.3705	0.2668 0.4008	0.2731	0.3335	Ave		0.3169			0.2000	17.3		20.0			
4-Methyl-2-pentanone (MIBK)	0.8913 0.8130	0.8671 0.9122	0.7215 0.9865	0.7662	0.8583	Ave		0.8520			0.1000	9.9		20.0			
Toluene	8.1733 5.6155	6.0402 5.4325	5.4327 5.7543	5.0173	5.5023	Ave		5.8710			0.4000	16.6		20.0			
trans-1,3-Dichloropropene	1.1640 1.4377	0.9638 1.4892	1.0226 1.6114	1.0668	1.2872	Ave		1.2553			0.1000	19.0		20.0			
Ethyl methacrylate	1.2833 1.5311	1.1341 1.5995	1.1880 1.7048	1.2621	1.4557	Ave		1.3948			0.0100	14.9		20.0			
1,1,2-Trichloroethane	1.6011 1.1719	1.2475 1.1786	1.1168 1.2247	1.0746	1.1850	Ave		1.2250			0.1000	13.2		20.0			
Tetrachloroethene	1.1604 0.7234	0.8339 0.6855	0.7382 0.7125	0.6762	0.7128	Lin2	2.3737	0.6919			0.2000				0.9980		0.9900
1,3-Dichloropropane	2.5000 1.9925	2.0862 2.0093	1.8795 2.0978	1.8023	2.0419	Ave		2.0512			0.0100	10.1		20.0			
2-Hexanone	0.5818 0.5880	0.6116 0.6538	0.5204 0.7061	0.5381	0.6160	Ave		0.6020			0.1000	10.0		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.: 180-102790-1 Analy Batch No.: 308714

SDG No.:

Instrument ID: CHHP6 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/03/2020 09:52 Calibration End Date: 03/03/2020 13:06 Calibration ID: 42985

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Dibromochloromethane	0.6451 0.7016	0.5433 0.7390	0.5253 0.7920	0.5560	0.6488	Ave		0.6439			0.1000	15.1		20.0			
1,2-Dibromoethane (EDB)	1.2317 1.0549	0.9770 1.0652	0.9116 1.1341	0.9326	1.0279	Ave		1.0419			0.1000	10.2		20.0			
Chlorobenzene	5.6073 3.9292	4.1476 3.8650	3.7489 4.1032	3.5321	3.8499	Ave		4.0979			0.5000	15.6		20.0			
1,1,1,2-Tetrachloroethane	0.7910 0.8866	0.6712 0.8826	0.6589 0.9453	0.6842	0.7832	Ave		0.7879			0.0100	13.9		20.0			
Ethylbenzene	3.1853 2.3041	2.4264 2.2086	2.1871 2.3740	2.0591	2.2522	Ave		2.3746			0.1000	14.6		20.0			
m-Xylene & p-Xylene	3.7454 2.8069	3.0024 2.7344	2.7341 2.8964	2.5294	2.7885	Ave		2.9047			0.1000	12.6		20.0			
o-Xylene	3.7313 2.8050	2.8241 2.7434	2.5696 2.9337	2.4995	2.7352	Ave		2.8552			0.3000	13.3		20.0			
Styrene	5.2773 4.9673	4.5093 4.9787	4.3637 5.2754	4.2975	4.7810	Ave		4.8063			0.3000	8.0		20.0			
Bromoform	0.2702 0.3399	0.2050 +++++	0.2286 +++++	0.2406	0.2744	Ave		0.2598			0.1000	18.1		20.0			
Isopropylbenzene	9.6364 7.4222	7.5310 7.1734	6.8780 7.5720	6.4923	6.9871	Ave		7.4615			0.1000	12.8		20.0			
Bromobenzene	1.4098 0.9844	1.1000 1.0019	1.0154 1.0204	0.9054	0.9811	Ave		1.0523			0.0100	14.6		20.0			
1,1,2,2-Tetrachloroethane	1.5872 1.4852	1.4245 1.5773	1.3154 1.5787	1.2955	1.4724	Ave		1.4670			0.3000	7.9		20.0			
trans-1,4-Dichloro-2-butene	0.2768 0.2216	0.2038 0.2459	0.1927 0.2499	0.1914	0.2069	Ave		0.2236			0.0100	13.8		20.0			
1,2,3-Trichloropropane	0.5172 0.3677	0.3978 0.3842	0.3846 0.3912	0.3406	0.3784	Ave		0.3952			0.0100	13.2		20.0			
N-Propylbenzene	2.0245 1.4563	1.6202 1.4102	1.4813 1.4395	1.3342	1.3876	Ave		1.5192			0.0100	14.5		20.0			
2-Chlorotoluene	1.6025 1.1223	1.2248 1.1299	1.1542 1.1507	1.0510	1.1041	Ave		1.1924			0.0100	14.5		20.0			
1,3,5-Trimethylbenzene	5.7970 4.5202	4.7322 4.5155	4.4496 4.5952	4.0311	4.2651	Ave		4.6132			0.0100	11.4		20.0			
4-Chlorotoluene	1.6520 1.2160	1.2972 1.2277	1.2209 1.2307	1.1132	1.1663	Ave		1.2655			0.0100	13.0		20.0			
tert-Butylbenzene	5.0445 3.5194	3.9629 3.5081	3.6359 3.5640	3.2015	3.4013	Ave		3.7297			0.0100	15.4		20.0			
1,2,4-Trimethylbenzene	5.6688 4.5848	4.6494 4.6627	4.5241 4.6954	4.0649	4.4154	Ave		4.6582			0.0100	9.8		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.: 180-102790-1 Analy Batch No.: 308714

SDG No.:

Instrument ID: CHHP6 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/03/2020 09:52 Calibration End Date: 03/03/2020 13:06 Calibration ID: 42985

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
sec-Butylbenzene	7.5965 5.5137	6.0200 5.3984	5.6160 5.5056	4.9135	5.2180	Ave		5.7227			0.0100	14.3		20.0			
1,3-Dichlorobenzene	2.6714 1.9366	2.0264 1.9646	1.9434 1.9831	1.7194	1.8794	Ave		2.0155			0.6000	13.9		20.0			
4-Isopropyltoluene	5.5772 4.2571	4.5039 4.2244	4.2210 4.2931	3.8007	4.0041	Ave		4.3602			0.0100	12.2		20.0			
1,4-Dichlorobenzene	2.9170 1.9911	2.1159 2.0305	2.0265 2.0463	1.7742	1.9396	Ave		2.1051			0.5000	16.3		20.0			
n-Butylbenzene	5.0894 3.8699	4.0294 3.8145	3.8763 3.8727	3.3999	3.6313	Ave		3.9479			0.0100	12.6		20.0			
1,2-Dichlorobenzene	2.5960 1.8287	1.9804 1.9079	1.8229 1.9077	1.6601	1.8170	Ave		1.9401			0.4000	14.5		20.0			
1,2-Dibromo-3-Chloropropane	0.1167 0.1143	0.0774 +++++	0.0778 +++++	0.0778	0.0939	Ave		0.0930			0.0500	20.0		20.0			
1,2,4-Trichlorobenzene	0.8734 0.6439	0.6637 0.7029	0.6387 0.6935	0.5478	0.6730	Ave		0.6796			0.2000	13.5		20.0			
Hexachlorobutadiene	0.3430 0.2213	0.2767 0.2191	0.2473 0.2166	0.2055	0.2235	Ave		0.2441			0.0100	18.7		20.0			
Naphthalene	2.0513 1.9023	1.5852 2.2822	1.6929 2.2506	1.5148	1.9552	Ave		1.9043			0.0100	15.2		20.0			
1,2,3-Trichlorobenzene	0.6818 0.4473	0.4567 0.5219	0.4421 0.5060	0.3722	0.4765	Ave		0.4881			0.0100	18.5		20.0			
Dibromofluoromethane (Surr)	0.1688 0.2069	0.2235 0.2080	0.1948 0.2151	0.1891	0.2183	Ave		0.2031				8.9		20.0			
1,2-Dichloroethane-d4 (Surr)	0.2380 0.2615	0.2857 0.2687	0.2573 0.2744	0.2446	0.2768	Ave		0.2634				6.2		20.0			
Toluene-d8 (Surr)	4.6351 4.7836	5.3557 4.5834	4.6911 4.7762	4.4069	4.8922	Ave		4.7655				5.9		20.0			
4-Bromofluorobenzene (Surr)	1.5842 1.6742	1.7149 1.6751	1.5696 1.7272	1.5531	1.7140	Ave		1.6515				4.3		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.: 180-102790-1 Analy Batch No.: 308714

SDG No.:

Instrument ID: CHHP6 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/03/2020 09:52 Calibration End Date: 03/03/2020 13:06 Calibration ID: 42985

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-308714/4	6030304.D
Level 2	IC 180-308714/5	6030305.D
Level 3	ICIS 180-308714/6	6030306.D
Level 4	IC 180-308714/7	6030307.D
Level 5	IC 180-308714/8	6030308.D
Level 6	IC 180-308714/9	6030309.D
Level 7	IC 180-308714/10	6030310.D
Level 8	IC 180-308714/11	6030311.D

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
Dichlorodifluoromethane	FB	Ave	19090 516424	73332 +++++	149932 +++++	221624	288358	5.00 175	25.0 +++++	50.0 +++++	75.0	100
Chloromethane	FB	Lin2	20583 525786	71391 554544	144909 676422	208339	287294	5.00 175	25.0 200	50.0 250	75.0	100
1,3-Butadiene	FB	Lin2	20671 522980	72535 523772	145308 632648	215806	279587	5.00 175	25.0 200	50.0 250	75.0	100
Vinyl chloride	FB	Ave	20758 581910	75072 602583	159769 726087	230020	310518	5.00 175	25.0 200	50.0 250	75.0	100
Bromomethane	FB	Lin2	16419 419562	56149 443789	120289 520542	177597	226600	5.00 175	25.0 200	50.0 250	75.0	100
Chloroethane	FB	Ave	15111 407873	55574 431296	115689 515757	174152	228070	5.00 175	25.0 200	50.0 250	75.0	100
Dichlorofluoromethane	FB	Ave	37179 1022737	142017 1060741	288470 1301258	441182	572917	5.00 175	25.0 200	50.0 250	75.0	100
Trichlorofluoromethane	FB	Lin2	38107 951211	145994 +++++	283238 +++++	427579	546887	5.00 175	25.0 +++++	50.0 +++++	75.0	100
Ethyl ether	FB	Ave	9568 271821	33755 306238	73667 374319	109380	153520	5.00 175	25.0 200	50.0 250	75.0	100
Acrolein	FB	Ave	31109 71190	38606 75201	48411 87444	53091	56187	100 225	125 250	150 275	175	200
1,1-Dichloroethene	FB	Lin2	11591 292445	39536 304142	80621 376654	116112	156565	5.00 175	25.0 200	50.0 250	75.0	100
1,1,2-Trichloro-1,2,2-trifluoroethane	FB	Lin2	13092 335946	43430 341172	91014 410947	135033	178258	5.00 175	25.0 200	50.0 250	75.0	100
Acetone	FB	Ave	20072 249241	35160 279835	70998 406271	106383	155909	25.0 350	50.0 400	100 500	150	200
Iodomethane	FB	Ave	12741 374102	47360 403300	98720 503355	145090	203445	5.00 175	25.0 200	50.0 250	75.0	100
Carbon disulfide	FB	Ave	21950 639102	70133 656311	147253 832575	229697	314671	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.: 180-102790-1 Analy Batch No.: 308714

SDG No.:

Instrument ID: CHHP6 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/03/2020 09:52 Calibration End Date: 03/03/2020 13:06 Calibration ID: 42985

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	5332 160763	18786 185220	40212 223447	63829	85448	5.00 175	25.0 200	50.0 250	75.0	100
Methyl acetate	FB	Ave	13285 436124	49266 497312	111028 632219	166226	237882	10.0 350	50.0 400	100 500	150	200
Methylene Chloride	FB	Lin2	29557 416243	68103 456095	125718 554521	173911	236979	5.00 175	25.0 200	50.0 250	75.0	100
tert-Butyl alcohol	TBAd9	Ave	7964 311247	34220 390413	75246 476469	119872	176272	50.0 1750	250 2000	500 2500	750	1000
Acrylonitrile	FB	Ave	36981 1299156	153083 1540468	336214 1888050	508188	727887	50.0 1750	250 2000	500 2500	750	1000
trans-1,2-Dichloroethene	FB	Ave	12698 391717	48343 414518	103974 519580	151324	213989	5.00 175	25.0 200	50.0 250	75.0	100
Methyl tert-butyl ether	FB	Ave	24900 876765	102963 1023677	233948 1280451	350306	486380	5.00 175	25.0 200	50.0 250	75.0	100
Hexane	FB	Lin2	17681 448175	59967 +++++	125040 +++++	173873	234223	5.00 175	25.0 +++++	50.0 +++++	75.0	100
1,1-Dichloroethane	FB	Ave	20289 647389	78680 691716	170218 875196	248602	349549	5.00 175	25.0 200	50.0 250	75.0	100
Vinyl acetate	FB	Ave	14242 691830	75611 984145	178772 1060162	258794	372719	5.00 175	25.0 200	50.0 250	75.0	100
2,2-Dichloropropane	FB	Ave	1849 75696	8523 83861	17854 105255	29607	40544	5.00 175	25.0 200	50.0 250	75.0	100
cis-1,2-Dichloroethene	FB	Ave	16645 510018	61248 553176	136007 694655	195934	282089	5.00 175	25.0 200	50.0 250	75.0	100
2-Butanone (MEK)	FB	Ave	27759 372167	48516 443740	96968 584736	158082	225766	25.0 350	50.0 400	100 500	150	200
Bromochloromethane	FB	Ave	5733 194570	23500 218035	48659 267012	75331	107517	5.00 175	25.0 200	50.0 250	75.0	100
Tetrahydrofuran	FB	Ave	6929 198545	23116 233077	54162 287893	73830	115646	10.0 350	50.0 400	100 500	150	200
Chloroform	FB	Lin2	42436 857447	114167 935865	233886 1150086	339059	471239	5.00 175	25.0 200	50.0 250	75.0	100
1,1,1-Trichloroethane	FB	Ave	15931 528458	59162 558181	128327 696865	192748	270534	5.00 175	25.0 200	50.0 250	75.0	100
Cyclohexane	FB	Lin2	21907 600540	79633 +++++	167688 +++++	235556	315371	5.00 175	25.0 +++++	50.0 +++++	75.0	100
Carbon tetrachloride	FB	Ave	9884 328811	35415 340723	75770 438108	114533	160228	5.00 175	25.0 200	50.0 250	75.0	100
1,1-Dichloropropene	FB	Ave	19628 588978	72162 601262	157358 748162	226863	311352	5.00 175	25.0 200	50.0 250	75.0	100
Isobutyl alcohol	FB	Ave	6812 321103	26110 392414	61893 +++++	99825	169689	125 4375	625 5000	1250 +++++	1875	2500

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

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-102790-1 Analy Batch No.: 308714

SDG No.:

Instrument ID: CHHP6 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/03/2020 09:52 Calibration End Date: 03/03/2020 13:06 Calibration ID: 42985

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	63277 1904735	236633 2061934	502088 2570011	741587	1044964	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dichloroethane	FB	Ave	17336 585442	71740 665444	152774 824825	229408	325530	5.00 175	25.0 200	50.0 250	75.0	100
n-Heptane	FB	Lin2	14323 362566	48500 +++++	105656 +++++	134257	189229	5.00 175	25.0 +++++	50.0 +++++	75.0	100
Trichloroethene	FB	Ave	13923 448350	54447 472132	116932 608542	176736	244595	5.00 175	25.0 200	50.0 250	75.0	100
Methylcyclohexane	FB	Ave	26611 733977	93754 750472	203886 919870	287050	390697	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dichloropropane	FB	Ave	15130 480435	55729 528860	123788 662345	189183	265611	5.00 175	25.0 200	50.0 250	75.0	100
Dibromomethane	FB	Ave	7882 290225	32804 333295	76673 410041	113209	163760	5.00 175	25.0 200	50.0 250	75.0	100
1,4-Dioxane	FB	Ave	3912 129785	16097 156995	32744 184519	52913	73350	100 3500	500 4000	1000 5000	1500	2000
Bromodichloromethane	FB	Ave	14699 619003	58623 708282	138688 885382	212726	316890	5.00 175	25.0 200	50.0 250	75.0	100
cis-1,3-Dichloropropene	FB	Ave	14743 776740	65203 886136	162956 1128012	258150	397297	5.00 175	25.0 200	50.0 250	75.0	100
4-Methyl-2-pentanone (MIBK)	CBNZ d5	Ave	47899 798628	94371 1003209	192541 1277481	321115	461866	25.0 350	50.0 400	100 500	150	200
Toluene	CBNZ d5	Ave	87846 2758131	328682 2987170	724871 3725710	1051400	1480372	5.00 175	25.0 200	50.0 250	75.0	100
trans-1,3-Dichloropropene	CBNZ d5	Ave	12511 706128	52444 818855	136449 1043353	223553	346309	5.00 175	25.0 200	50.0 250	75.0	100
Ethyl methacrylate	CBNZ d5	Ave	13793 752027	61714 879513	158519 1103822	264486	391640	5.00 175	25.0 200	50.0 250	75.0	100
1,1,2-Trichloroethane	CBNZ d5	Ave	17208 575581	67886 648080	149014 792966	225190	318818	5.00 175	25.0 200	50.0 250	75.0	100
Tetrachloroethene	CBNZ d5	Lin2	12472 355294	45375 376941	98498 461328	141699	191768	5.00 175	25.0 200	50.0 250	75.0	100
1,3-Dichloropropane	CBNZ d5	Ave	26870 978648	113523 1104833	250773 1358252	377684	549367	5.00 175	25.0 200	50.0 250	75.0	100
2-Hexanone	CBNZ d5	Ave	31263 577569	66567 719058	138885 914372	225508	331489	25.0 350	50.0 400	100 500	150	200
Dibromochloromethane	CBNZ d5	Ave	6934 344614	29565 406332	70094 512804	116517	174562	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dibromoethane (EDB)	CBNZ d5	Ave	13238 518154	53162 585723	121636 734298	195437	276566	5.00 175	25.0 200	50.0 250	75.0	100
Chlorobenzene	CBNZ d5	Ave	60267 1929867	225694 2125219	500202 2656682	740158	1035801	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.: 180-102790-1 Analy Batch No.: 308714

SDG No.:

Instrument ID: CHHP6 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/03/2020 09:52 Calibration End Date: 03/03/2020 13:06 Calibration ID: 42985

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	8502 435475	36526 485301	87914 612032	143375	210723	5.00 175	25.0 200	50.0 250	75.0	100
Ethylbenzene	CBNZ d5	Ave	34235 1131681	132035 1214459	291817 1537087	431499	605941	5.00 175	25.0 200	50.0 250	75.0	100
m-Xylene & p-Xylene	CBNZ d5	Ave	40255 1378638	163378 1503573	364811 1875357	530035	750251	5.00 175	25.0 200	50.0 250	75.0	100
o-Xylene	CBNZ d5	Ave	40104 1377729	153674 1508533	342855 1899467	523775	735906	5.00 175	25.0 200	50.0 250	75.0	100
Styrene	CBNZ d5	Ave	56720 2439781	245377 2737653	582237 3415686	900558	1286325	5.00 175	25.0 200	50.0 250	75.0	100
Bromoform	CBNZ d5	Ave	2904 166943	11157 +++++	30495 +++++	50419	73823	5.00 175	25.0 +++++	50.0 +++++	75.0	100
Isopropylbenzene	CBNZ d5	Ave	103571 3645532	409806 3944429	917716 4902648	1360474	1879858	5.00 175	25.0 200	50.0 250	75.0	100
Bromobenzene	DCBd 4	Ave	17671 624084	71159 700305	158593 871385	237526	340586	5.00 175	25.0 200	50.0 250	75.0	100
1,1,2,2-Tetrachloroethane	CBNZ d5	Ave	17059 729474	77514 867310	175511 1022151	271467	396136	5.00 175	25.0 200	50.0 250	75.0	100
trans-1,4-Dichloro-2-butene	DCBd 4	Ave	3470 140497	13181 171889	30095 213406	50214	71828	5.00 175	25.0 200	50.0 250	75.0	100
1,2,3-Trichloropropane	DCBd 4	Ave	6483 233113	25735 268565	60075 334070	89366	131346	5.00 175	25.0 200	50.0 250	75.0	100
N-Propylbenzene	DCBd 4	Ave	25376 923232	104811 985660	231367 1229284	350026	481682	5.00 175	25.0 200	50.0 250	75.0	100
2-Chlorotoluene	DCBd 4	Ave	20086 711506	79231 789779	180278 982641	275729	383283	5.00 175	25.0 200	50.0 250	75.0	100
1,3,5-Trimethylbenzene	DCBd 4	Ave	72661 2865616	306123 3156226	694998 3923988	1057595	1480585	5.00 175	25.0 200	50.0 250	75.0	100
4-Chlorotoluene	DCBd 4	Ave	20706 770867	83919 858144	190691 1050952	292051	404869	5.00 175	25.0 200	50.0 250	75.0	100
tert-Butylbenzene	DCBd 4	Ave	63229 2231146	256361 2452030	567894 3043416	839926	1180741	5.00 175	25.0 200	50.0 250	75.0	100
1,2,4-Trimethylbenzene	DCBd 4	Ave	71054 2906548	300770 3259127	706633 4009625	1066444	1532783	5.00 175	25.0 200	50.0 250	75.0	100
sec-Butylbenzene	DCBd 4	Ave	95216 3495469	389436 3773354	877169 4701426	1289094	1811384	5.00 175	25.0 200	50.0 250	75.0	100
1,3-Dichlorobenzene	DCBd 4	Ave	33484 1227714	131088 1373217	303550 1693462	451104	652410	5.00 175	25.0 200	50.0 250	75.0	100
4-Isopropyltoluene	DCBd 4	Ave	69906 2698779	291357 2952717	659287 3666082	997146	1389976	5.00 175	25.0 200	50.0 250	75.0	100
1,4-Dichlorobenzene	DCBd 4	Ave	36562 1262284	136876 1419293	316526 1747458	465462	673328	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.: 180-102790-1 Analy Batch No.: 308714

SDG No.:

Instrument ID: CHHP6 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/03/2020 09:52 Calibration End Date: 03/03/2020 13:06 Calibration ID: 42985

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	63791 2453322	260663 2666246	605452 3307039	891983	1260590	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dichlorobenzene	DCBd 4	Ave	32539 1159340	128110 1333588	284728 1629046	435550	630765	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dibromo-3-Chloropropane	DCBd 4	Ave	1463 72467	5009 +++++	12145 +++++	20412	32607	5.00 175	25.0 +++++	50.0 +++++	75.0	100
1,2,4-Trichlorobenzene	DCBd 4	Ave	10947 408187	42937 491327	99760 592210	143722	233626	5.00 175	25.0 200	50.0 250	75.0	100
Hexachlorobutadiene	DCBd 4	Ave	4299 140323	17898 153176	38633 184941	53921	77589	5.00 175	25.0 200	50.0 250	75.0	100
Naphthalene	DCBd 4	Ave	25711 1205995	102548 1595203	264411 1921840	397421	678735	5.00 175	25.0 200	50.0 250	75.0	100
1,2,3-Trichlorobenzene	DCBd 4	Ave	8546 283547	29541 364782	69049 432098	97654	165414	5.00 175	25.0 200	50.0 250	75.0	100
Dibromofluoromethane (Surr)	FB	Ave	8963 453811	56333 497534	119016 605190	178733	260098	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dichloroethane-d4 (Surr)	FB	Ave	12633 573454	71990 642565	157168 772148	231280	329708	5.00 175	25.0 200	50.0 250	75.0	100
Toluene-d8 (Surr)	CBNZ d5	Ave	49818 2349551	291438 2520239	625923 3092429	923482	1316240	5.00 175	25.0 200	50.0 250	75.0	100
4-Bromofluorobenzene (Surr)	CBNZ d5	Ave	17027 822313	93317 921083	209424 1118294	325463	461153	5.00 175	25.0 200	50.0 250	75.0	100

Curve Type Legend:

Ave = Average ISTD
Lin2 = Linear 1/conc^2 ISTD

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

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-102790-1 Analy Batch No.: 308714

SDG No.:

Instrument ID: CHHP6 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/03/2020 09:52 Calibration End Date: 03/03/2020 13:06 Calibration ID: 42985

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-308714/4	6030304.D
Level 2	IC 180-308714/5	6030305.D
Level 3	ICIS 180-308714/6	6030306.D
Level 4	IC 180-308714/7	6030307.D
Level 5	IC 180-308714/8	6030308.D
Level 6	IC 180-308714/9	6030309.D
Level 7	IC 180-308714/10	6030310.D
Level 8	IC 180-308714/11	6030311.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3	LVL 4	LVL 5	LVL 6
Dichlorodifluoromethane	34.2 +++++	8.6 +++++	-8.4	-12.5	-9.7	-12.1	50	30	30	30	30	30
Chloromethane	-1.0 -1.2	9.1 2.9	-4.0	-9.0	1.2	2.0	50 30	30 30	30	30	30	30
1,3-Butadiene	-1.9 -5.1	12.4 -2.2	-2.3	-4.1	0.0	3.2	50 30	30 30	30	30	30	30
Vinyl chloride	40.3 -9.6	6.9 -7.4	-6.2	-12.7	-6.5	-4.8	50 30	30 30	30	30	30	30
Bromomethane	-1.0 -1.5	6.7 -1.4	-0.4	-3.1	-0.7	1.4	50 30	30 30	30	30	30	30
Chloroethane	40.6 -10.9	8.9 -9.5	-6.5	-9.0	-5.5	-8.1	50 30	30 30	30	30	30	30
Dichlorofluoromethane	38.1 -12.5	11.2 -8.8	-6.9	-8.0	-5.1	-8.0	50 30	30 30	30	30	30	30
Trichlorofluoromethane	-2.4 +++++	16.2 +++++	-3.3	-3.8	-1.2	-5.5	50	30	30	30	30	30
Ethyl ether	35.5 -3.8	0.7 0.0	-9.3	-13.0	-3.1	-6.8	50 30	30 30	30	30	30	30
Acrolein	10.2 -5.4	15.3 6.3	-0.6	-9.5	-11.3	-5.0	50 30	30 30	30	30	30	30
1,1-Dichloroethene	-0.9 -1.9	8.8 3.7	-3.6	-8.3	-0.4	2.7	50 30	30 30	30	30	30	30
1,1,2-Trichloro-1,2,2-trifluoroethane	-0.6 -2.3	5.7 0.4	-3.4	-5.2	0.7	4.8	50 30	30 30	30	30	30	30
Acetone	18.0 -8.7	8.8 12.6	-9.3	-12.2	2.1	-11.3	50 30	30 30	30	30	30	30
Iodomethane	34.1 -5.8	5.0 -0.1	-9.7	-14.3	-4.6	-4.7	50 30	30 30	30	30	30	30
Carbon disulfide	43.7 -4.6	-3.3 2.8	-16.2	-15.5	-8.2	1.3	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.: 180-102790-1 Analy Batch No.: 308714

SDG No.:

Instrument ID: CHHP6 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/03/2020 09:52 Calibration End Date: 03/03/2020 13:06 Calibration ID: 42985

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3	LVL 4	LVL 5	LVL 6
Allyl chloride	31.7 1.5	-2.3 4.1	-13.7	-11.5	-6.0	-3.9	50 30	30 30	30	30	30	30
Methyl acetate	22.5 1.8	-4.3 10.0	-11.0	-13.9	-2.3	-2.7	50 30	30 30	30	30	30	30
Methylene Chloride	-0.7 1.5	8.9 6.2	-5.9	-11.1	0.8	0.3	50 30	30 30	30	30	30	30
tert-Butyl alcohol	23.0 4.9	-6.8 -0.4	-9.3	-10.8	1.4	-2.1	50 30	30 30	30	30	30	30
Acrylonitrile	13.5 4.9	-1.0 9.3	-10.3	-12.4	-0.5	-3.5	50 30	30 30	30	30	30	30
trans-1,2-Dichloroethene	29.5 -6.2	3.9 0.0	-7.8	-13.3	-2.7	-3.3	50 30	30 30	30	30	30	30
Methyl tert-butyl ether	12.9 3.1	-1.6 9.6	-7.8	-10.8	-1.7	-3.7	50 30	30 30	30	30	30	30
Hexane	-1.1 +++++	8.8 +++++	-1.0	-9.3	-1.5	4.1	50	30	30	30	30	30
1,1-Dichloroethane	26.1 -4.6	3.0 2.6	-8.1	-13.2	-3.2	-2.6	50 30	30 30	30	30	30	30
Vinyl acetate	-15.9 29.0	-5.9 18.1	-8.2	-14.2	-1.9	-1.1	50 30	30 30	30	30	30	30
2,2-Dichloropropane	3.1 3.8	0.1 10.7	-13.5	-7.3	0.8	2.2	50 30	30 30	30	30	30	30
cis-1,2-Dichloroethene	29.7 -4.3	0.5 2.1	-7.9	-14.3	-2.1	-3.8	50 30	30 30	30	30	30	30
2-Butanone (MEK)	13.0 0.3	4.1 12.3	-14.2	-9.6	2.4	-8.3	50 30	30 30	30	30	30	30
Bromochloromethane	19.1 0.5	2.8 4.6	-12.2	-12.1	-0.5	-2.2	50 30	30 30	30	30	30	30
Tetrahydrofuran	34.5 0.4	-5.5 5.4	-8.6	-19.5	0.0	-6.7	50 30	30 30	30	30	30	30
Chloroform	1.0 3.5	-0.1 8.8	-7.5	-10.3	1.7	3.0	50 30	30 30	30	30	30	30
1,1,1-Trichloroethane	26.5 -1.6	-1.0 4.4	-11.4	-14.1	-4.3	1.6	50 30	30 30	30	30	30	30
Cyclohexane	-1.2 +++++	9.1 +++++	-0.8	-8.6	-1.6	3.1	50	30	30	30	30	30
Carbon tetrachloride	29.0 -1.3	-2.6 7.9	-14.0	-16.0	-6.8	3.9	50 30	30 30	30	30	30	30
1,1-Dichloropropene	34.4 -8.6	4.1 -3.4	-6.4	-12.8	-5.0	-2.4	50 30	30 30	30	30	30	30
Isobutyl alcohol	0.7 28.8	-18.7 +++++	-20.5	-17.1	11.8	14.9	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.: 180-102790-1 Analy Batch No.: 308714

SDG No.:

Instrument ID: CHHP6 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/03/2020 09:52 Calibration End Date: 03/03/2020 13:06 Calibration ID: 42985

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3	LVL 4	LVL 5	LVL 6
Benzene	31.4 -5.0	3.5 0.7	-9.4	-13.5	-3.3	-4.3	50 30	30 30	30	30	30	30
1,2-Dichloroethane	17.9 0.5	2.8 5.8	-9.7	-12.4	-1.3	-3.6	50 30	30 30	30	30	30	30
n-Heptane	-1.2 +++++	8.8 +++++	3.7	-13.7	-1.6	4.1	50	30	30	30	30	30
Trichloroethene	24.9 -6.0	2.9 3.0	-8.8	-11.0	-2.2	-2.6	50 30	30 30	30	30	30	30
Methylcyclohexane	42.5 -10.8	5.8 -7.1	-5.1	-13.7	-6.8	-4.8	50 30	30 30	30	30	30	30
1,2-Dichloropropane	26.1 -2.1	-2.1 4.2	-10.3	-11.4	-1.3	-3.0	50 30	30 30	30	30	30	30
Dibromomethane	10.1 3.3	-3.5 8.1	-6.9	-11.2	1.9	-1.9	50 30	30 30	30	30	30	30
1,4-Dioxane	18.1 5.2	2.4 5.1	-14.1	-10.3	-1.3	-5.1	50 30	30 30	30	30	30	30
Bromodichloromethane	4.5 11.7	-12.2 18.7	-14.3	-15.1	0.3	6.5	50 30	30 30	30	30	30	30
cis-1,3-Dichloropropene	-12.4 16.9	-18.4 26.5	-15.8	-13.8	5.2	11.8	50 30	30 30	30	30	30	30
4-Methyl-2-pentanone (MIBK)	4.6 7.1	1.8 15.8	-15.3	-10.1	0.7	-4.6	50 30	30 30	30	30	30	30
Toluene	39.2 -7.5	2.9 -2.0	-7.5	-14.5	-6.3	-4.4	50 30	30 30	30	30	30	30
trans-1,3-Dichloropropene	-7.3 18.6	-23.2 28.4	-18.5	-15.0	2.5	14.5	50 30	30 30	30	30	30	30
Ethyl methacrylate	-8.0 14.7	-18.7 22.2	-14.8	-9.5	4.4	9.8	50 30	30 30	30	30	30	30
1,1,2-Trichloroethane	30.7 -3.8	1.8 0.0	-8.8	-12.3	-3.3	-4.3	50 30	30 30	30	30	30	30
Tetrachloroethene	-0.9 -2.6	6.8 1.6	-0.2	-6.8	-0.4	2.6	50 30	30 30	30	30	30	30
1,3-Dichloropropane	21.9 -2.0	1.7 2.3	-8.4	-12.1	-0.5	-2.9	50 30	30 30	30	30	30	30
2-Hexanone	-3.4 8.6	1.6 17.3	-13.5	-10.6	2.3	-2.3	50 30	30 30	30	30	30	30
Dibromochloromethane	0.2 14.8	-15.6 23.0	-18.4	-13.6	0.8	9.0	50 30	30 30	30	30	30	30
1,2-Dibromoethane (EDB)	18.2 2.2	-6.2 8.9	-12.5	-10.5	-1.3	1.3	50 30	30 30	30	30	30	30
Chlorobenzene	36.8 -5.7	1.2 0.1	-8.5	-13.8	-6.1	-4.1	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.: 180-102790-1 Analy Batch No.: 308714

SDG No.:

Instrument ID: CHHP6 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/03/2020 09:52 Calibration End Date: 03/03/2020 13:06 Calibration ID: 42985

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3	LVL 4	LVL 5	LVL 6
1,1,1,2-Tetrachloroethane	0.4 12.0	-14.8 20.0	-16.4	-13.2	-0.6	12.5	50 30	30 30	30	30	30	30
Ethylbenzene	34.1 -7.0	2.2 0.0	-7.9	-13.3	-5.2	-3.0	50 30	30 30	30	30	30	30
m-Xylene & p-Xylene	28.9 -5.9	3.4 -0.3	-5.9	-12.9	-4.0	-3.4	50 30	30 30	30	30	30	30
o-Xylene	30.7 -3.9	-1.1 2.7	-10.0	-12.5	-4.2	-1.8	50 30	30 30	30	30	30	30
Styrene	9.8 3.6	-6.2 9.8	-9.2	-10.6	-0.5	3.4	50 30	30 30	30	30	30	30
Bromoform	4.0 +++++	-21.1 +++++	-12.0	-7.4	5.6	30.8 *	50	30	30	30	30	30
Isopropylbenzene	29.1 -3.9	0.9 1.5	-7.8	-13.0	-6.4	-0.5	50 30	30 30	30	30	30	30
Bromobenzene	34.0 -4.8	4.5 -3.0	-3.5	-14.0	-6.8	-6.5	50 30	30 30	30	30	30	30
1,1,2,2-Tetrachloroethane	8.2 7.5	-2.9 7.6	-10.3	-11.7	0.4	1.2	50 30	30 30	30	30	30	30
trans-1,4-Dichloro-2-butene	23.8 10.0	-8.9 11.8	-13.8	-14.4	-7.5	-0.9	50 30	30 30	30	30	30	30
1,2,3-Trichloropropane	30.9 -2.8	0.7 -1.0	-2.7	-13.8	-4.3	-7.0	50 30	30 30	30	30	30	30
N-Propylbenzene	33.3 -7.2	6.6 -5.2	-2.5	-12.2	-8.7	-4.1	50 30	30 30	30	30	30	30
2-Chlorotoluene	34.4 -5.2	2.7 -3.5	-3.2	-11.9	-7.4	-5.9	50 30	30 30	30	30	30	30
1,3,5-Trimethylbenzene	25.7 -2.1	2.6 -0.4	-3.5	-12.6	-7.5	-2.0	50 30	30 30	30	30	30	30
4-Chlorotoluene	30.5 -3.0	2.5 -2.7	-3.5	-12.0	-7.8	-3.9	50 30	30 30	30	30	30	30
tert-Butylbenzene	35.3 -5.9	6.3 -4.4	-2.5	-14.2	-8.8	-5.6	50 30	30 30	30	30	30	30
1,2,4-Trimethylbenzene	21.7 0.1	-0.2 0.8	-2.9	-12.7	-5.2	-1.6	50 30	30 30	30	30	30	30
sec-Butylbenzene	32.7 -5.7	5.2 -3.8	-1.9	-14.1	-8.8	-3.7	50 30	30 30	30	30	30	30
1,3-Dichlorobenzene	32.5 -2.5	0.5 -1.6	-3.6	-14.7	-6.8	-3.9	50 30	30 30	30	30	30	30
4-Isopropyltoluene	27.9 -3.1	3.3 -1.5	-3.2	-12.8	-8.2	-2.4	50 30	30 30	30	30	30	30
1,4-Dichlorobenzene	38.6 -3.5	0.5 -2.8	-3.7	-15.7	-7.9	-5.4	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.: 180-102790-1 Analy Batch No.: 308714

SDG No.:

Instrument ID: CHHP6 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/03/2020 09:52 Calibration End Date: 03/03/2020 13:06 Calibration ID: 42985

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 # LVL 8 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2 LVL 8	LVL 3	LVL 4	LVL 5	LVL 6
n-Butylbenzene	28.9 -3.4	2.1 -1.9	-1.8	-13.9	-8.0	-2.0	50 30	30 30	30	30	30	30
1,2-Dichlorobenzene	33.8 -1.7	2.1 -1.7	-6.0	-14.4	-6.3	-5.7	50 30	30 30	30	30	30	30
1,2-Dibromo-3-Chloropropane	25.5 +++++	-16.7 +++++	-16.4	-16.3	1.0	22.9	50	30	30	30	30	30
1,2,4-Trichlorobenzene	28.5 3.4	-2.3 2.0	-6.0	-19.4	-1.0	-5.3	50 30	30 30	30	30	30	30
Hexachlorobutadiene	40.5 -10.2	13.3 -11.3	1.3	-15.8	-8.4	-9.3	50 30	30 30	30	30	30	30
Naphthalene	7.7 19.8	-16.8 18.2	-11.1	-20.5	2.7	-0.1	50 30	30 30	30	30	30	30
1,2,3-Trichlorobenzene	39.7 6.9	-6.4 3.7	-9.4	-23.7	-2.4	-8.4	50 30	30 30	30	30	30	30
Dibromofluoromethane (Surr)	-16.9 2.4	10.1 5.9	-4.1	-6.9	7.5	1.9	50 30	30 30	30	30	30	30
1,2-Dichloroethane-d4 (Surr)	-9.6 2.0	8.5 4.2	-2.3	-7.1	5.1	-0.7	50 30	30 30	30	30	30	30
Toluene-d8 (Surr)	-2.7 -3.8	12.4 0.2	-1.6	-7.5	2.7	0.4	50 30	30 30	30	30	30	30
4-Bromofluorobenzene (Surr)	-4.1 1.4	3.8 4.6	-5.0	-6.0	3.8	1.4	50 30	30 30	30	30	30	30

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030304.D
Lims ID: IC VSTD1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 03-Mar-2020 09:52:30 ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-0031016-004
Operator ID: 10099 Instrument ID: CHHP6
Sublist: chrom-MSVOA_LL_CHHP6*sub121

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 04-Mar-2020 07:28:38 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0334

First Level Reviewer: gordonk Date: 03-Mar-2020 10:22:23

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.252	4.259	-0.007	95	105588	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.263	7.264	-0.001	99	530863	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.378	10.379	-0.001	86	107479	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.720	12.721	-0.001	97	125342	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.539	6.534	0.005	92	8963	5.00	4.16	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.910	6.911	-0.001	47	12633	5.00	4.52	
$ 7 Toluene-d8 (Surr)	98	8.918	8.919	-0.001	91	49818	5.00	4.86	
$ 8 4-Bromofluorobenzene (Surr	95	11.558	11.559	-0.001	0	17027	5.00	4.80	
11 Dichlorodifluoromethane	85	1.612	1.613	-0.001	98	19090	5.00	6.71	
12 Chloromethane	50	1.813	1.820	-0.007	99	20583	5.00	4.95	
14 Butadiene	39	1.940	1.935	0.005	92	20671	5.00	4.91	
13 Vinyl chloride	62	1.946	1.935	0.011	65	20758	5.00	7.01	
15 Bromomethane	94	2.263	2.245	0.018	92	16419	5.00	4.95	
16 Chloroethane	64	2.378	2.373	0.005	97	15111	5.00	7.03	a
17 Dichlorofluoromethane	67	2.652	2.659	-0.007	95	37179	5.00	6.91	
18 Trichlorofluoromethane	101	2.689	2.677	0.012	97	38107	5.00	4.88	
20 Ethyl ether	59	3.035	3.030	0.005	89	9568	5.00	6.77	
21 Acrolein	56	3.212	3.213	-0.001	99	31109	100.0	110.2	
22 1,1-Dichloroethene	96	3.333	3.328	0.005	92	11591	5.00	4.95	
23 1,1,2-Trichloro-1,2,2-trif	101	3.394	3.389	0.005	66	13092	5.00	4.97	
24 Acetone	43	3.425	3.426	-0.001	100	20072	25.0	29.5	
25 Iodomethane	142	3.516	3.511	0.005	78	12741	5.00	6.70	
26 Carbon disulfide	76	3.619	3.626	-0.007	98	21950	5.00	7.19	
29 3-Chloro-1-propene	76	3.899	3.888	0.011	87	5332	5.00	6.58	
30 Methyl acetate	43	3.917	3.918	-0.001	97	13285	10.0	12.2	
31 Methylene Chloride	84	4.112	4.113	-0.001	87	29557	5.00	4.97	
32 2-Methyl-2-propanol	59	4.392	4.393	-0.001	91	7964	50.0	61.5	
33 Acrylonitrile	53	4.501	4.502	-0.001	99	36981	50.0	56.7	
34 trans-1,2-Dichloroethene	96	4.526	4.533	-0.007	93	12698	5.00	6.48	
35 Methyl tert-butyl ether	73	4.550	4.557	-0.007	91	24900	5.00	5.65	
36 Hexane	57	4.952	4.953	-0.001	86	17681	5.00	4.95	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
37 1,1-Dichloroethane	63	5.165	5.172	-0.007	95	20289	5.00	6.30	
38 Vinyl acetate	43	5.225	5.226	-0.001	97	14242	5.00	4.21	a
42 2,2-Dichloropropane	97	5.901	5.914	-0.013	52	1849	5.00	5.16	
43 cis-1,2-Dichloroethene	96	5.925	5.926	-0.001	77	16645	5.00	6.48	
44 2-Butanone (MEK)	43	5.943	5.938	0.005	98	27759	25.0	28.3	
48 Chlorobromomethane	128	6.211	6.206	0.005	94	5733	5.00	5.95	
49 Tetrahydrofuran	42	6.235	6.224	0.011	0	6929	10.0	13.4	
50 Chloroform	83	6.357	6.352	0.005	95	42436	5.00	5.05	
51 1,1,1-Trichloroethane	97	6.515	6.510	0.005	96	15931	5.00	6.32	
52 Cyclohexane	56	6.582	6.583	-0.001	85	21907	5.00	4.94	
53 Carbon tetrachloride	117	6.685	6.680	0.005	93	9884	5.00	6.45	
54 1,1-Dichloropropene	75	6.704	6.705	-0.001	95	19628	5.00	6.72	
55 Isobutyl alcohol	41	6.910	6.911	-0.001	36	6812	125.0	125.9	a
56 Benzene	78	6.917	6.917	0.000	95	63277	5.00	6.57	
57 1,2-Dichloroethane	62	6.996	6.997	-0.001	98	17336	5.00	5.90	
59 n-Heptane	43	7.282	7.283	0.000	86	14323	5.00	4.94	
61 Trichloroethene	130	7.653	7.654	-0.001	92	13923	5.00	6.24	
63 Methylcyclohexane	83	7.884	7.885	-0.001	80	26611	5.00	7.13	
64 1,2-Dichloropropane	63	7.926	7.927	-0.001	92	15130	5.00	6.31	
67 Dibromomethane	93	8.006	8.019	-0.013	91	7882	5.00	5.51	
65 1,4-Dioxane	88	8.024	8.019	0.005	52	3912	100.0	118.1	
68 Dichlorobromomethane	83	8.212	8.213	-0.001	98	14699	5.00	5.22	
71 cis-1,3-Dichloropropene	75	8.656	8.657	-0.001	94	14743	5.00	4.38	
72 4-Methyl-2-pentanone (MIBK	43	8.827	8.816	0.011	93	47899	25.0	26.2	
73 Toluene	91	8.985	8.986	-0.001	98	87846	5.00	6.96	
74 trans-1,3-Dichloropropene	75	9.247	9.241	0.006	96	12511	5.00	4.64	
75 Ethyl methacrylate	69	9.301	9.302	-0.001	85	13793	5.00	4.60	
76 1,1,2-Trichloroethane	97	9.435	9.430	0.005	87	17208	5.00	6.53	
77 Tetrachloroethene	164	9.496	9.497	-0.001	89	12472	5.00	4.95	
78 1,3-Dichloropropane	76	9.593	9.588	0.005	88	26870	5.00	6.09	
79 2-Hexanone	43	9.654	9.655	-0.001	93	31263	25.0	24.2	
81 Chlorodibromomethane	129	9.806	9.807	-0.001	91	6934	5.00	5.01	
82 Ethylene Dibromide	107	9.910	9.917	-0.007	94	13238	5.00	5.91	
84 Chlorobenzene	112	10.402	10.403	-0.001	94	60267	5.00	6.84	
86 1,1,1,2-Tetrachloroethane	131	10.500	10.501	-0.001	77	8502	5.00	5.02	
87 Ethylbenzene	106	10.506	10.507	-0.001	97	34235	5.00	6.71	
88 m-Xylene & p-Xylene	106	10.640	10.634	0.006	99	40255	5.00	6.45	
89 o-Xylene	106	11.017	11.018	-0.001	95	40104	5.00	6.53	
90 Styrene	104	11.041	11.042	-0.001	94	56720	5.00	5.49	
91 Bromoform	173	11.224	11.219	0.006	89	2904	5.00	5.20	
93 Isopropylbenzene	105	11.388	11.389	-0.001	96	103571	5.00	6.46	
95 Bromobenzene	156	11.698	11.699	-0.001	94	17671	5.00	6.70	
96 1,1,2,2-Tetrachloroethane	83	11.704	11.699	0.005	92	17059	5.00	5.41	
97 trans-1,4-Dichloro-2-buten	53	11.735	11.742	-0.007	60	3470	5.00	6.19	
98 1,2,3-Trichloropropane	110	11.759	11.754	0.005	85	6483	5.00	6.54	
99 N-Propylbenzene	120	11.802	11.803	0.000	99	25376	5.00	6.66	
100 2-Chlorotoluene	126	11.887	11.888	-0.001	95	20086	5.00	6.72	
102 1,3,5-Trimethylbenzene	105	11.984	11.985	-0.001	93	72661	5.00	6.28	
103 4-Chlorotoluene	126	12.015	12.015	0.000	98	20706	5.00	6.53	
104 tert-Butylbenzene	119	12.300	12.301	-0.001	93	63229	5.00	6.76	
106 1,2,4-Trimethylbenzene	105	12.361	12.362	-0.001	97	71054	5.00	6.08	
108 sec-Butylbenzene	105	12.526	12.526	0.000	94	95216	5.00	6.64	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
109 1,3-Dichlorobenzene	146	12.641	12.642	-0.001	93	33484	5.00	6.63	
110 4-Isopropyltoluene	119	12.684	12.679	0.005	97	69906	5.00	6.40	
111 1,4-Dichlorobenzene	146	12.745	12.745	0.000	93	36562	5.00	6.93	
116 n-Butylbenzene	91	13.091	13.086	0.005	97	63791	5.00	6.45	
117 1,2-Dichlorobenzene	146	13.103	13.104	-0.001	93	32539	5.00	6.69	
118 1,2-Dibromo-3-Chloropropan	75	13.882	13.895	-0.013	72	1463	5.00	6.28	
122 1,2,4-Trichlorobenzene	180	14.716	14.717	0.000	90	10947	5.00	6.43	
123 Hexachlorobutadiene	225	14.862	14.856	0.006	85	4299	5.00	7.02	
124 Naphthalene	128	14.983	14.978	0.005	97	25711	5.00	5.39	
125 1,2,3-Trichlorobenzene	180	15.202	15.203	-0.001	91	8546	5.00	6.99	
S 131 Xylenes, Total	106				0		10.0	13.0	
S 130 1,2-Dichloroethene, Total	96				0		10.0	13.0	
S 154 Total BTEX	1				0		25.0	33.2	
S 132 1,3-Dichloropropene, Total	1				0		10.0	9.02	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

VOA8260VOAPRI_00392	Amount Added:	0.20	Units: uL		
VOA8260SURR_00104	Amount Added:	0.20	Units: uL		
VOAACRPRI_00025	Amount Added:	4.00	Units: uL		
voaWKetmix1st_00023	Amount Added:	0.80	Units: uL		
VOAVAPRI_00034	Amount Added:	0.20	Units: uL		
VOA8260INT_00104	Amount Added:	2.00	Units: uL	Run Reagent	

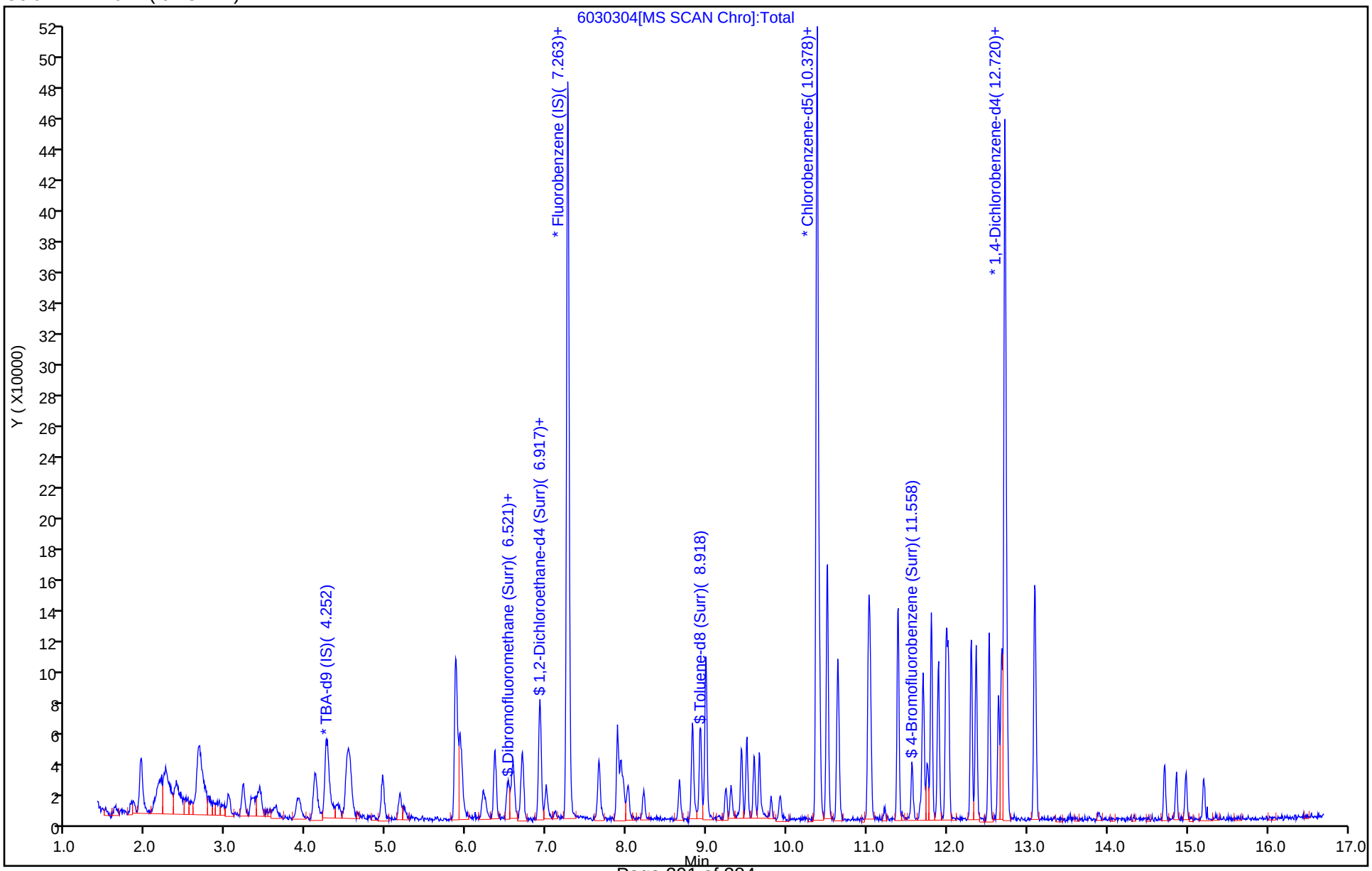
Report Date: 04-Mar-2020 07:28:39 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030304.D

Injection Date:	03-Mar-2020 09:52:30	Instrument ID:	CHHP6	Operator ID:	10099
Lims ID:	IC VSTD1			Worklist Smp#:	4
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Pittsburgh

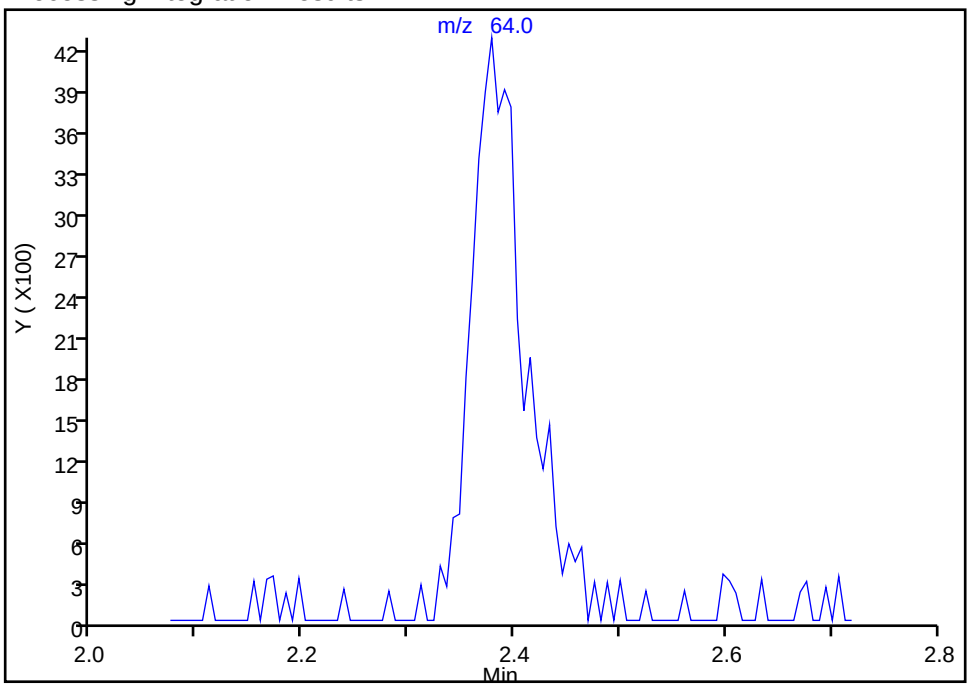
Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030304.D				
Injection Date:	03-Mar-2020 09:52:30	Instrument ID:	CHHP6		
Lims ID:	IC VSTD1				
Client ID:					
Operator ID:	10099	ALS Bottle#:	4	Worklist Smp#:	4
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

16 Chloroethane, CAS: 75-00-3

Signal: 1

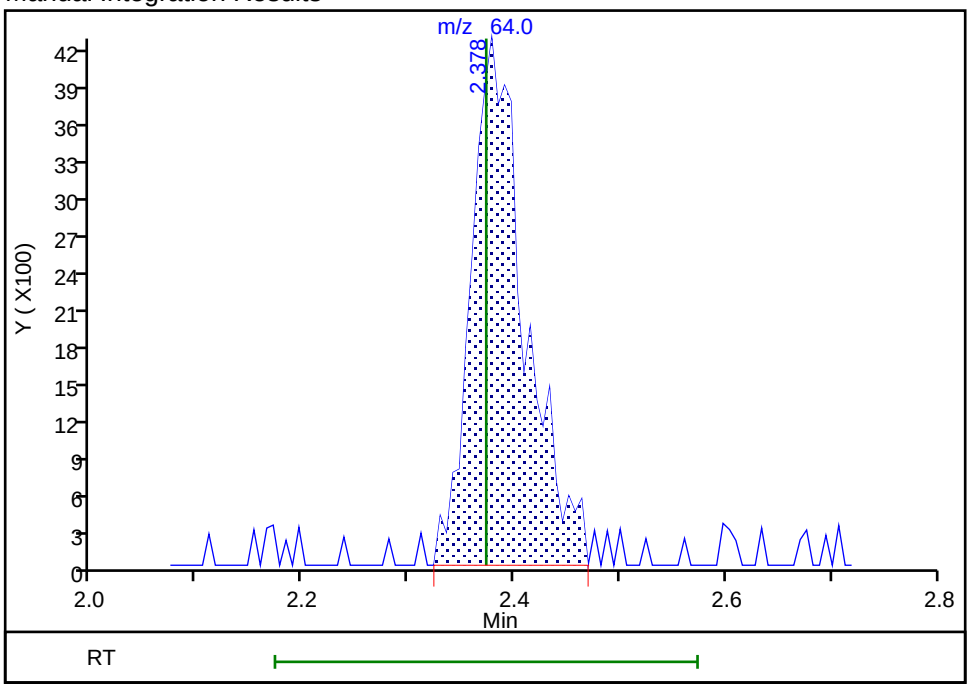
Not Detected
Expected RT: 2.37

Processing Integration Results



Manual Integration Results

RT: 2.38
Area: 15111
Amount: 7.029130
Amount Units: ng



Reviewer: gordonk, 03-Mar-2020 18:30:07
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Pittsburgh

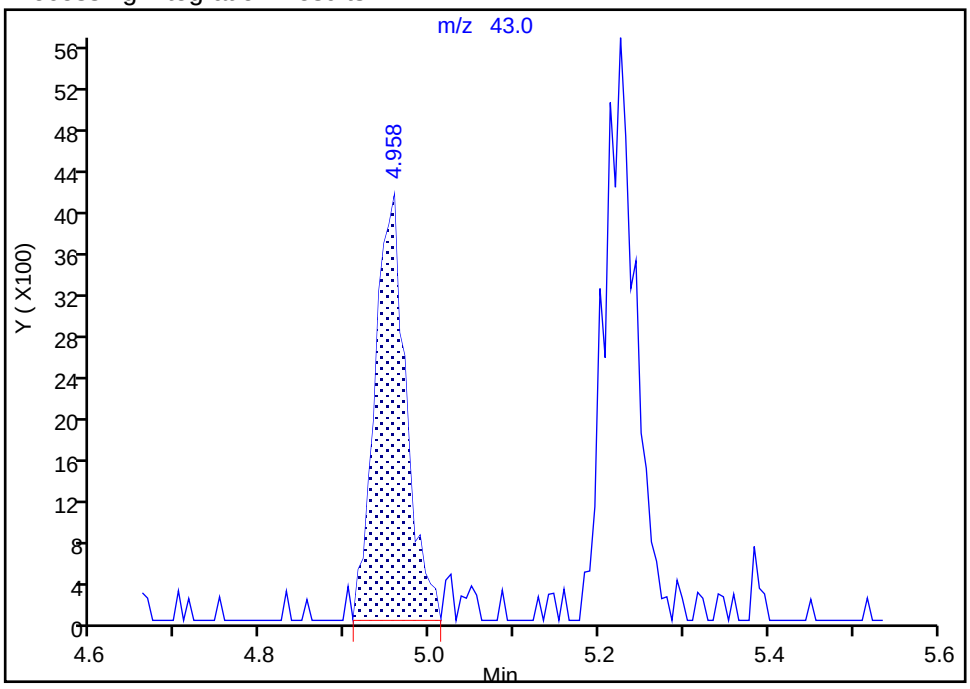
Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030304.D				
Injection Date:	03-Mar-2020 09:52:30	Instrument ID:	CHHP6		
Lims ID:	IC VSTD1				
Client ID:					
Operator ID:	10099	ALS Bottle#:	4	Worklist Smp#:	4
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

38 Vinyl acetate, CAS: 108-05-4

Signal: 1

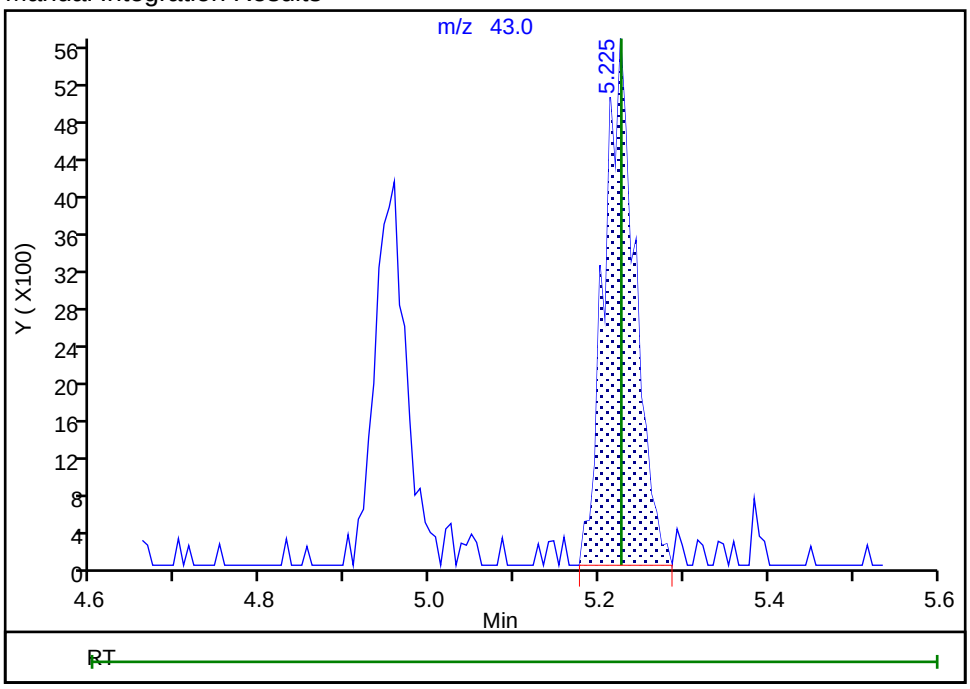
Processing Integration Results

RT: 4.96
Area: 10490
Amount: 5.000000
Amount Units: ng



Manual Integration Results

RT: 5.23
Area: 14242
Amount: 4.206195
Amount Units: ng



Reviewer: gordonk, 03-Mar-2020 10:20:30
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Pittsburgh

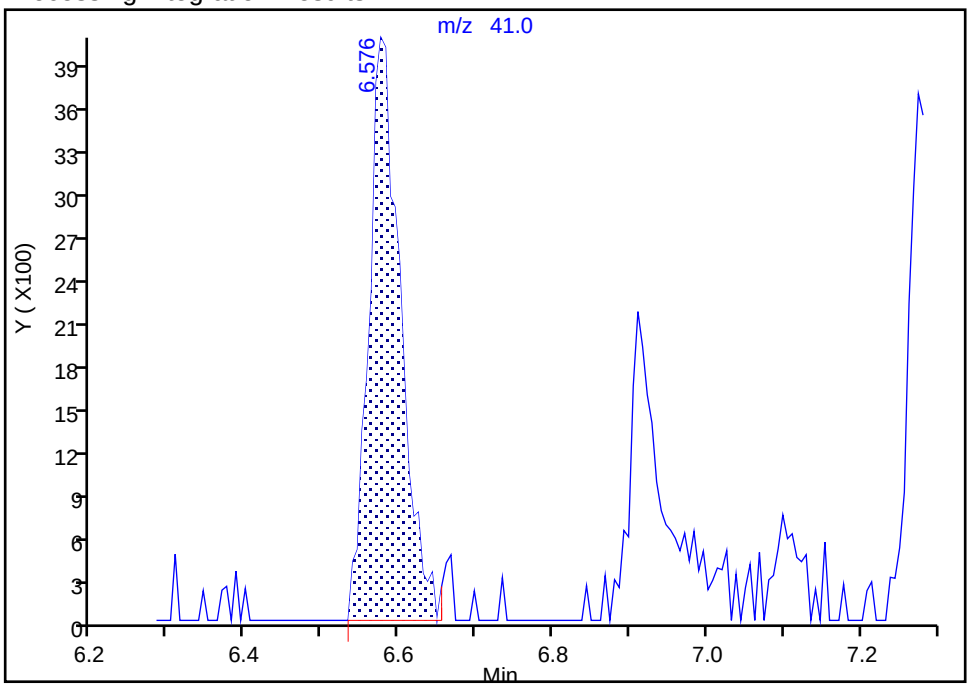
Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030304.D				
Injection Date:	03-Mar-2020 09:52:30	Instrument ID:	CHHP6		
Lims ID:	IC VSTD1				
Client ID:					
Operator ID:	10099	ALS Bottle#:	4	Worklist Smp#:	4
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

55 Isobutyl alcohol, CAS: 78-83-1

Signal: 1

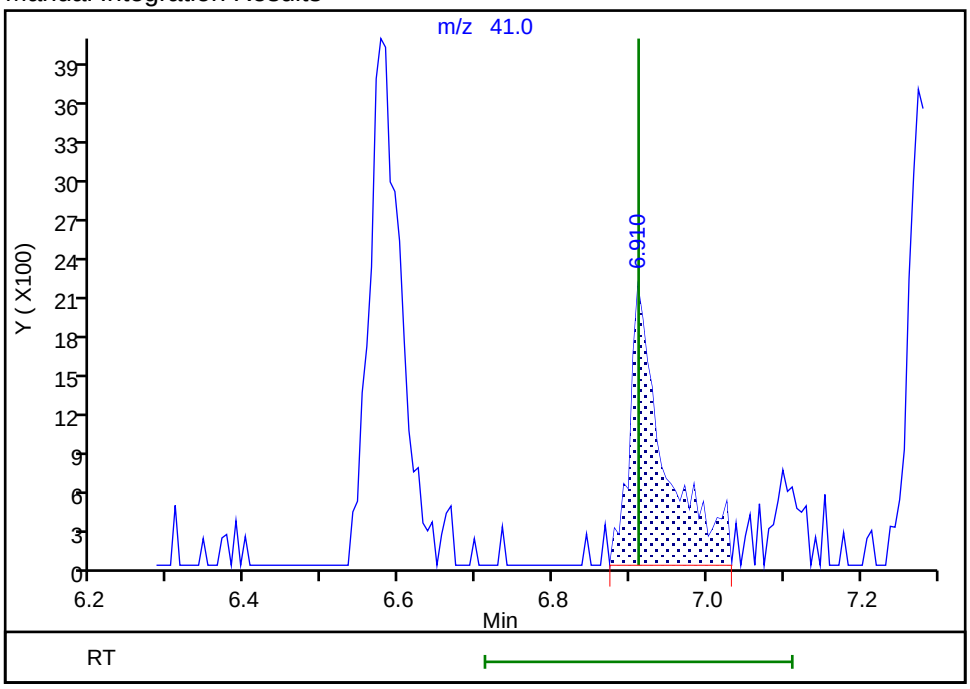
Processing Integration Results

RT: 6.58
Area: 11626
Amount: 125.0000
Amount Units: ng



Manual Integration Results

RT: 6.91
Area: 6812
Amount: 125.9045
Amount Units: ng



Reviewer: gordonk, 03-Mar-2020 10:20:53
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030305.D
Lims ID: IC VSTD5
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 03-Mar-2020 10:19:30 ALS Bottle#: 5 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-0031016-005
Operator ID: 10099 Instrument ID: CHHP6
Sublist: chrom-MSVOA_LL_CHHP6*sub121

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 04-Mar-2020 07:28:44 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0334

First Level Reviewer: gordonk Date: 03-Mar-2020 10:50:39

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.259	4.259	0.000	94	119815	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.265	7.264	0.001	100	504018	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.379	10.379	0.000	87	108832	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.721	12.721	0.000	97	129380	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.541	6.534	0.007	92	56333	25.0	27.5	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.906	6.911	-0.005	94	71990	25.0	27.1	
$ 7 Toluene-d8 (Surr)	98	8.919	8.919	0.000	93	291438	25.0	28.1	
$ 8 4-Bromofluorobenzene (Surr	95	11.560	11.559	0.001	0	93317	25.0	26.0	
11 Dichlorodifluoromethane	85	1.613	1.613	0.000	99	73332	25.0	27.1	
12 Chloromethane	50	1.820	1.820	0.000	99	71391	25.0	27.3	
14 Butadiene	39	1.935	1.935	0.000	92	72535	25.0	28.1	
13 Vinyl chloride	62	1.935	1.935	0.000	62	75072	25.0	26.7	
15 Bromomethane	94	2.252	2.245	0.007	91	56149	25.0	26.7	
16 Chloroethane	64	2.380	2.373	0.007	99	55574	25.0	27.2	
17 Dichlorofluoromethane	67	2.653	2.659	-0.006	94	142017	25.0	27.8	
18 Trichlorofluoromethane	101	2.672	2.677	-0.005	88	145994	25.0	29.1	
20 Ethyl ether	59	3.037	3.030	0.007	86	33755	25.0	25.2	
21 Acrolein	56	3.213	3.213	0.000	98	38606	125.0	144.1	
22 1,1-Dichloroethene	96	3.335	3.328	0.007	97	39536	25.0	27.2	
23 1,1,2-Trichloro-1,2,2-trif	101	3.402	3.389	0.013	94	43430	25.0	26.4	
24 Acetone	43	3.420	3.426	-0.006	99	35160	50.0	54.4	
25 Iodomethane	142	3.523	3.511	0.012	96	47360	25.0	26.2	
26 Carbon disulfide	76	3.621	3.626	-0.005	99	70133	25.0	24.2	
29 3-Chloro-1-propene	76	3.900	3.888	0.012	87	18786	25.0	24.4	
30 Methyl acetate	43	3.919	3.918	0.001	95	49266	50.0	47.8	
31 Methylene Chloride	84	4.126	4.113	0.013	84	68103	25.0	27.2	
32 2-Methyl-2-propanol	59	4.375	4.393	-0.018	96	34220	250.0	232.9	
33 Acrylonitrile	53	4.503	4.502	0.001	99	153083	250.0	247.4	
34 trans-1,2-Dichloroethene	96	4.527	4.533	-0.006	84	48343	25.0	26.0	
35 Methyl tert-butyl ether	73	4.551	4.557	-0.006	94	102963	25.0	24.6	
36 Hexane	57	4.953	4.953	0.000	88	59967	25.0	27.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
37 1,1-Dichloroethane	63	5.172	5.172	0.000	96	78680	25.0	25.8	
38 Vinyl acetate	43	5.227	5.226	0.001	97	75611	25.0	23.5	a
42 2,2-Dichloropropane	97	5.926	5.914	0.012	78	8523	25.0	25.0	
43 cis-1,2-Dichloroethene	96	5.926	5.926	0.000	79	61248	25.0	25.1	
44 2-Butanone (MEK)	43	5.938	5.938	0.000	98	48516	50.0	52.0	
48 Chlorobromomethane	128	6.206	6.206	0.000	95	23500	25.0	25.7	
49 Tetrahydrofuran	42	6.236	6.224	0.012	0	23116	50.0	47.3	
50 Chloroform	83	6.358	6.352	0.006	93	114167	25.0	25.0	
51 1,1,1-Trichloroethane	97	6.510	6.510	0.000	98	59162	25.0	24.7	
52 Cyclohexane	56	6.583	6.583	0.000	85	79633	25.0	27.3	a
53 Carbon tetrachloride	117	6.681	6.680	0.001	92	35415	25.0	24.3	
54 1,1-Dichloropropene	75	6.699	6.705	-0.006	98	72162	25.0	26.0	
55 Isobutyl alcohol	41	6.918	6.911	0.007	37	26110	625.0	508.3	a
56 Benzene	78	6.918	6.917	0.001	96	236633	25.0	25.9	
57 1,2-Dichloroethane	62	6.997	6.997	0.000	98	71740	25.0	25.7	
59 n-Heptane	43	7.283	7.283	0.001	88	48500	25.0	27.2	
61 Trichloroethene	130	7.648	7.654	-0.006	95	54447	25.0	25.7	
63 Methylcyclohexane	83	7.885	7.885	0.000	82	93754	25.0	26.4	
64 1,2-Dichloropropane	63	7.928	7.927	0.001	92	55729	25.0	24.5	
65 1,4-Dioxane	88	8.019	8.019	0.000	51	16097	500.0	511.9	
67 Dibromomethane	93	8.013	8.019	-0.006	90	32804	25.0	24.1	
68 Dichlorobromomethane	83	8.208	8.213	-0.005	98	58623	25.0	21.9	
71 cis-1,3-Dichloropropene	75	8.658	8.657	0.001	95	65203	25.0	20.4	
72 4-Methyl-2-pentanone (MIBK	43	8.816	8.816	0.000	94	94371	50.0	50.9	
73 Toluene	91	8.986	8.986	0.000	99	328682	25.0	25.7	
74 trans-1,3-Dichloropropene	75	9.236	9.241	-0.005	91	52444	25.0	19.2	
75 Ethyl methacrylate	69	9.303	9.302	0.001	85	61714	25.0	20.3	
76 1,1,2-Trichloroethane	97	9.430	9.430	0.000	88	67886	25.0	25.5	
77 Tetrachloroethene	164	9.497	9.497	0.000	94	45375	25.0	26.7	
78 1,3-Dichloropropane	76	9.588	9.588	0.000	87	113523	25.0	25.4	
79 2-Hexanone	43	9.655	9.655	0.000	93	66567	50.0	50.8	
81 Chlorodibromomethane	129	9.807	9.807	0.000	89	29565	25.0	21.1	
82 Ethylene Dibromide	107	9.917	9.917	0.000	97	53162	25.0	23.4	
84 Chlorobenzene	112	10.404	10.403	0.001	95	225694	25.0	25.3	
86 1,1,1,2-Tetrachloroethane	131	10.495	10.501	-0.006	82	36526	25.0	21.3	
87 Ethylbenzene	106	10.507	10.507	0.000	98	132035	25.0	25.5	
88 m-Xylene & p-Xylene	106	10.635	10.634	0.001	99	163378	25.0	25.8	
89 o-Xylene	106	11.018	11.018	0.000	96	153674	25.0	24.7	
90 Styrene	104	11.036	11.042	-0.006	94	245377	25.0	23.5	
91 Bromoform	173	11.225	11.219	0.007	88	11157	25.0	19.7	
93 Isopropylbenzene	105	11.383	11.389	-0.006	95	409806	25.0	25.2	
96 1,1,2,2-Tetrachloroethane	83	11.699	11.699	0.000	73	77514	25.0	24.3	
95 Bromobenzene	156	11.699	11.699	0.000	93	71159	25.0	26.1	
97 trans-1,4-Dichloro-2-buten	53	11.736	11.742	-0.006	69	13181	25.0	22.8	
98 1,2,3-Trichloropropane	110	11.754	11.754	0.000	86	25735	25.0	25.2	
99 N-Propylbenzene	120	11.803	11.803	0.001	99	104811	25.0	26.7	
100 2-Chlorotoluene	126	11.894	11.888	0.006	95	79231	25.0	25.7	
102 1,3,5-Trimethylbenzene	105	11.985	11.985	0.000	93	306123	25.0	25.6	
103 4-Chlorotoluene	126	12.016	12.015	0.001	97	83919	25.0	25.6	
104 tert-Butylbenzene	119	12.302	12.301	0.001	92	256361	25.0	26.6	
106 1,2,4-Trimethylbenzene	105	12.363	12.362	0.001	97	300770	25.0	25.0	
108 sec-Butylbenzene	105	12.527	12.526	0.001	94	389436	25.0	26.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
109 1,3-Dichlorobenzene	146	12.642	12.642	0.000	94	131088	25.0	25.1	
110 4-Isopropyltoluene	119	12.679	12.679	0.000	97	291357	25.0	25.8	
111 1,4-Dichlorobenzene	146	12.746	12.745	0.001	91	136876	25.0	25.1	
116 n-Butylbenzene	91	13.086	13.086	0.000	99	260663	25.0	25.5	
117 1,2-Dichlorobenzene	146	13.105	13.104	0.001	92	128110	25.0	25.5	
118 1,2-Dibromo-3-Chloropropan	75	13.896	13.895	0.001	67	5009	25.0	20.8	
122 1,2,4-Trichlorobenzene	180	14.717	14.717	0.001	92	42937	25.0	24.4	
123 Hexachlorobutadiene	225	14.857	14.856	0.001	92	17898	25.0	28.3	
124 Naphthalene	128	14.978	14.978	0.000	97	102548	25.0	20.8	
125 1,2,3-Trichlorobenzene	180	15.210	15.203	0.007	92	29541	25.0	23.4	
S 131 Xylenes, Total	106				0		50.0	50.6	
S 130 1,2-Dichloroethene, Total	96				0		50.0	51.1	
S 154 Total BTEX	1				0		125.0	127.7	
S 132 1,3-Dichloropropene, Total	1				0		50.0	39.6	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

VOA8260SURR_00104	Amount Added:	1.00	Units: uL	
VOA8260VOAPRI_00392	Amount Added:	1.00	Units: uL	
VOAACRPRI_00025	Amount Added:	5.00	Units: uL	
voaWKetmix1st_00023	Amount Added:	1.00	Units: uL	
VOAVAPRI_00034	Amount Added:	1.00	Units: uL	
VOA8260INT_00104	Amount Added:	2.00	Units: uL	Run Reagent

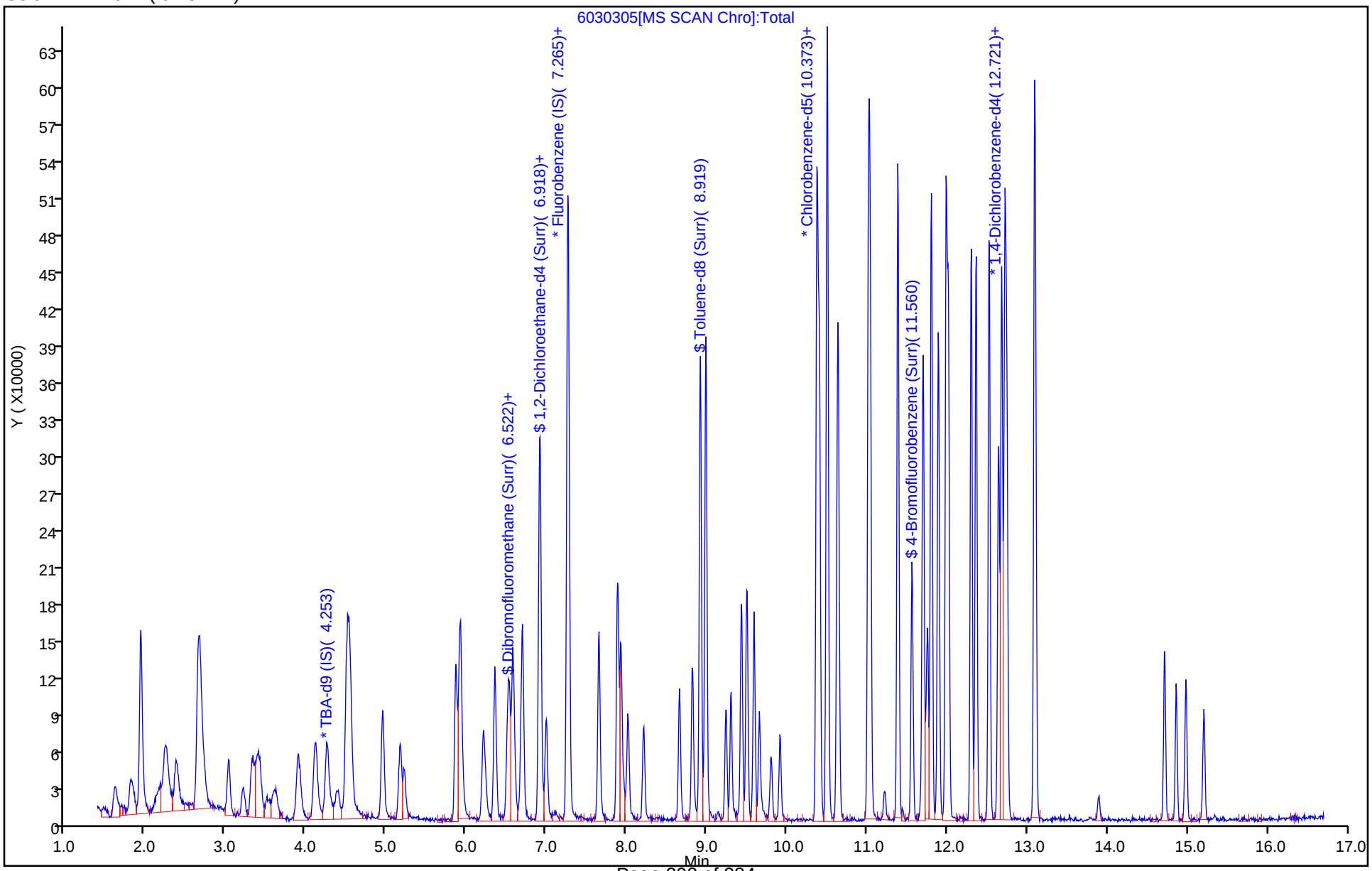
Report Date: 04-Mar-2020 07:28:45 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030305.D

Injection Date:	03-Mar-2020 10:19:30	Instrument ID:	CHHP6	Operator ID:	10099
Lims ID:	IC VSTD5			Worklist Smp#:	5
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Pittsburgh

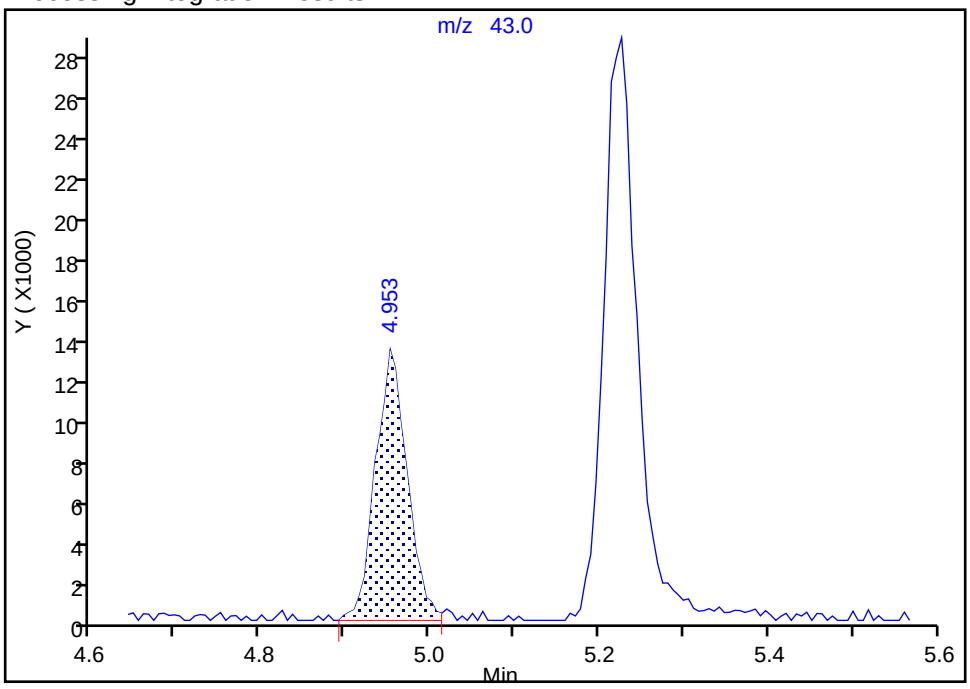
Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030305.D				
Injection Date:	03-Mar-2020 10:19:30	Instrument ID:	CHHP6		
Lims ID:	IC VSTD5				
Client ID:					
Operator ID:	10099	ALS Bottle#:	5	Worklist Smp#:	5
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

38 Vinyl acetate, CAS: 108-05-4

Signal: 1

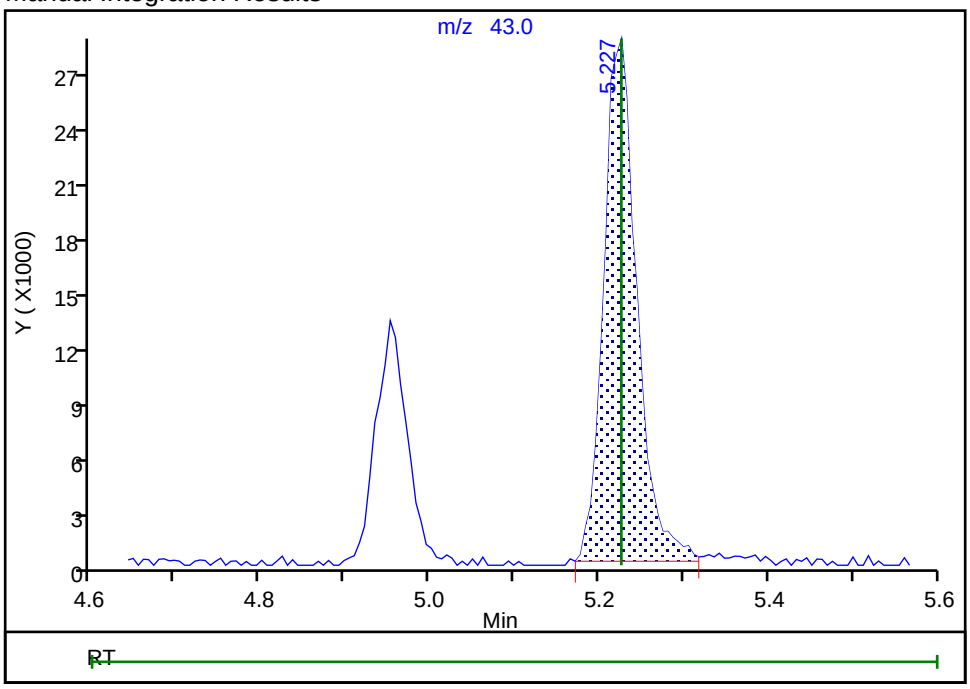
Processing Integration Results

RT: 4.95
Area: 33947
Amount: 16.713437
Amount Units: ng



Manual Integration Results

RT: 5.23
Area: 75611
Amount: 23.520135
Amount Units: ng



Reviewer: gordonk, 03-Mar-2020 10:49:46

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Pittsburgh

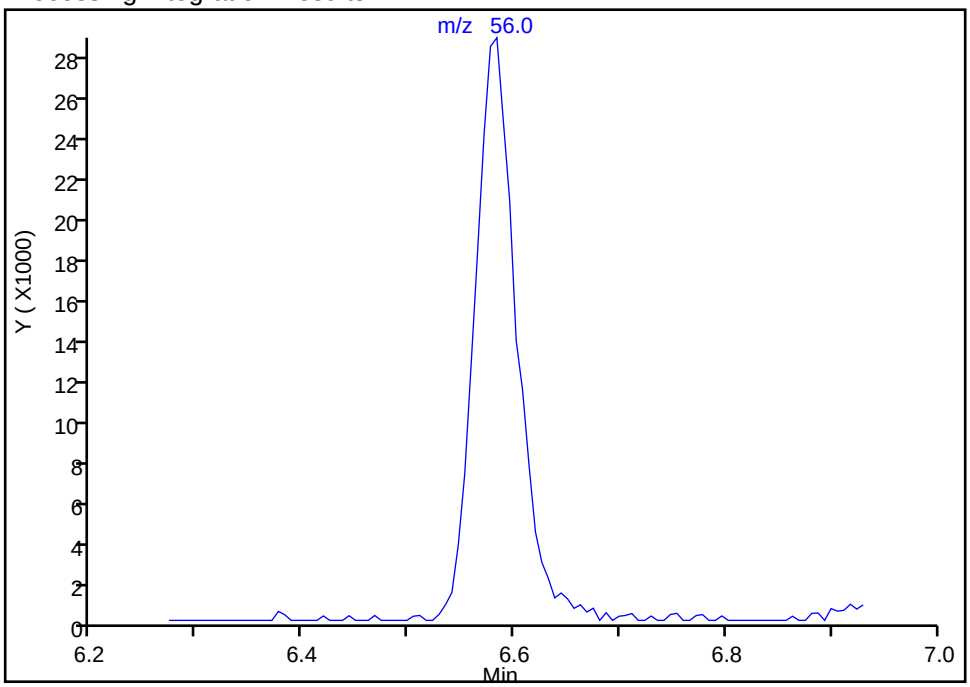
Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030305.D				
Injection Date:	03-Mar-2020 10:19:30	Instrument ID:	CHHP6		
Lims ID:	IC VSTD5				
Client ID:					
Operator ID:	10099	ALS Bottle#:	5	Worklist Smp#:	5
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

52 Cyclohexane, CAS: 110-82-7

Signal: 1

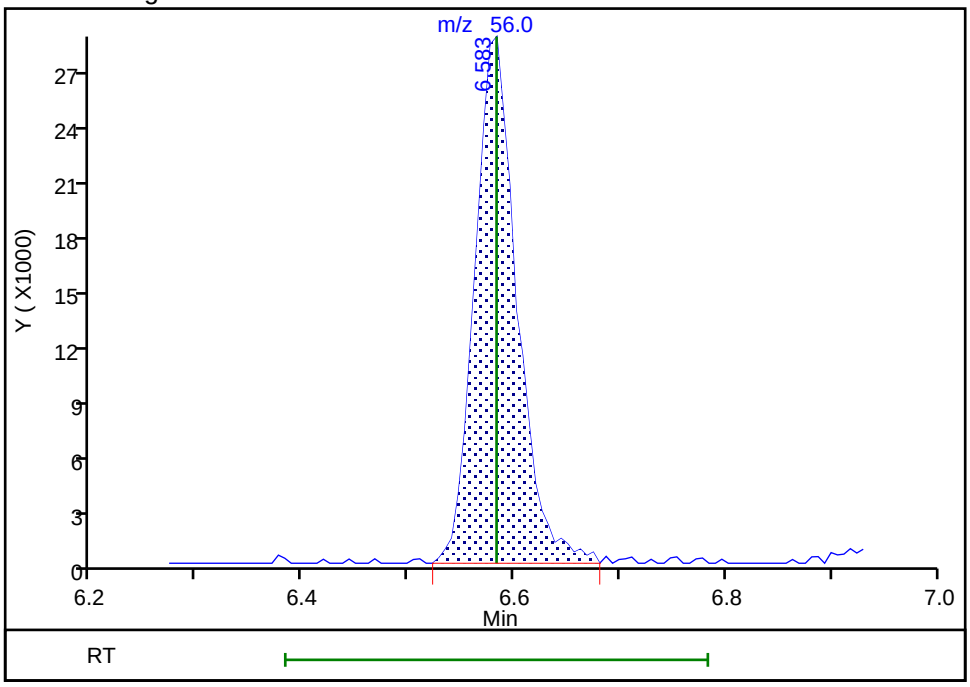
Not Detected
Expected RT: 6.58

Processing Integration Results



Manual Integration Results

RT: 6.58
Area: 79633
Amount: 27.278645
Amount Units: ng



Reviewer: gordonk, 03-Mar-2020 10:50:02
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Pittsburgh

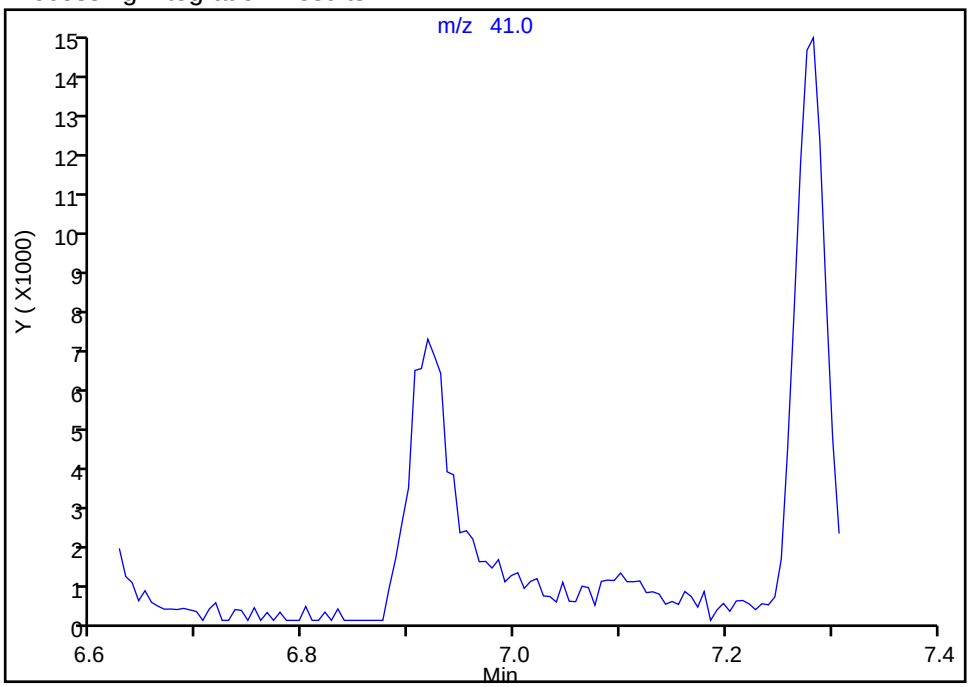
Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030305.D				
Injection Date:	03-Mar-2020 10:19:30	Instrument ID:	CHHP6		
Lims ID:	IC VSTD5				
Client ID:					
Operator ID:	10099	ALS Bottle#:	5	Worklist Smp#:	5
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

55 Isobutyl alcohol, CAS: 78-83-1

Signal: 1

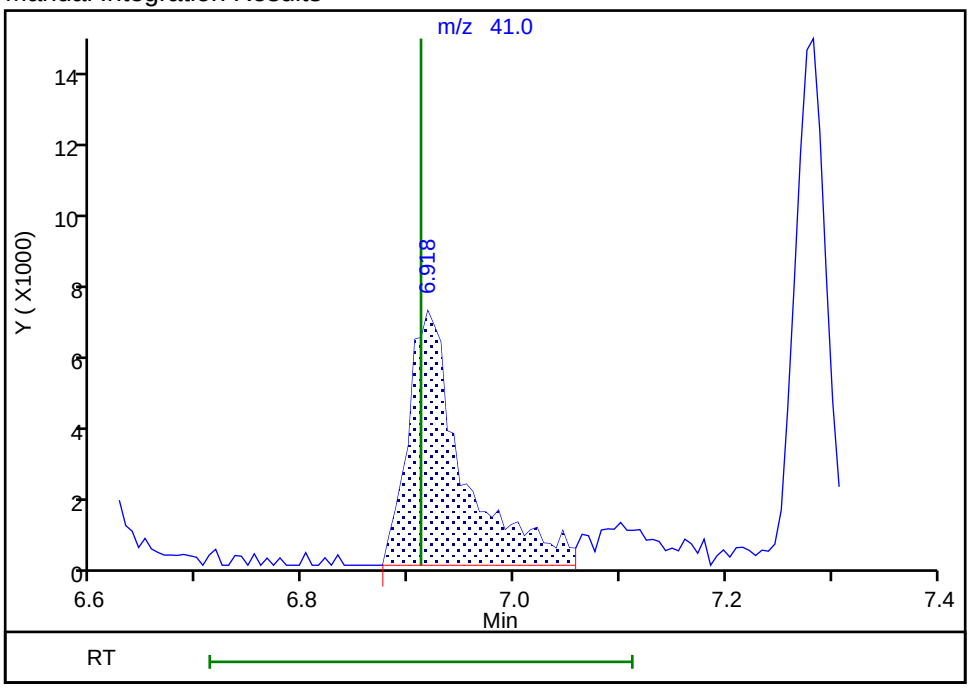
Not Detected
Expected RT: 6.91

Processing Integration Results



Manual Integration Results

RT: 6.92
Area: 26110
Amount: 508.2881
Amount Units: ng



Reviewer: gordonk, 03-Mar-2020 10:50:10
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030306.D
Lims ID: ICIS VSTD10
Client ID:
Sample Type: ICIS Calib Level: 3
Inject. Date: 03-Mar-2020 10:47:30 ALS Bottle#: 6 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-0031016-006
Operator ID: 10099 Instrument ID: CHHP6
Sublist: chrom-MSVOA_LL_CHHP6*sub121

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 04-Mar-2020 07:28:50 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0334

First Level Reviewer: gordonk Date: 03-Mar-2020 11:12:36

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.259	4.259	0.000	94	135334	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.264	7.264	0.000	99	610813	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.379	10.379	0.000	86	133428	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.721	12.721	0.000	97	156192	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.534	6.534	0.000	91	119016	50.0	48.0	a
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.911	6.911	0.000	97	157168	50.0	48.9	
$ 7 Toluene-d8 (Surr)	98	8.919	8.919	0.000	92	625923	50.0	49.2	
$ 8 4-Bromofluorobenzene (Surr	95	11.559	11.559	0.000	0	209424	50.0	47.5	
11 Dichlorodifluoromethane	85	1.606	1.606	0.000	98	149932	50.0	45.8	
12 Chloromethane	50	1.819	1.819	0.000	98	144909	50.0	48.0	
14 Butadiene	39	1.935	1.935	0.000	89	145308	50.0	48.8	
13 Vinyl chloride	62	1.935	1.935	0.000	59	159769	50.0	46.9	
15 Bromomethane	94	2.239	2.239	0.000	92	120289	50.0	49.8	
16 Chloroethane	64	2.379	2.379	0.000	100	115689	50.0	46.8	
17 Dichlorofluoromethane	67	2.659	2.659	0.000	96	288470	50.0	46.6	
18 Trichlorofluoromethane	101	2.677	2.677	0.000	84	283238	50.0	48.4	
20 Ethyl ether	59	3.030	3.030	0.000	87	73667	50.0	45.3	
21 Acrolein	56	3.206	3.206	0.000	97	48411	150.0	149.1	
22 1,1-Dichloroethene	96	3.322	3.322	0.000	95	80621	50.0	48.2	
23 1,1,2-Trichloro-1,2,2-trif	101	3.395	3.395	0.000	94	91014	50.0	48.3	
24 Acetone	43	3.431	3.431	0.000	100	70998	100.0	90.7	
25 Iodomethane	142	3.516	3.516	0.000	97	98720	50.0	45.1	
26 Carbon disulfide	76	3.614	3.614	0.000	99	147253	50.0	41.9	
29 3-Chloro-1-propene	76	3.888	3.888	0.000	88	40212	50.0	43.2	
30 Methyl acetate	43	3.924	3.924	0.000	97	111028	100.0	89.0	
31 Methylene Chloride	84	4.113	4.113	0.000	83	125718	50.0	47.0	
32 2-Methyl-2-propanol	59	4.386	4.386	0.000	93	75246	500.0	453.5	
33 Acrylonitrile	53	4.502	4.502	0.000	98	336214	500.0	448.4	
34 trans-1,2-Dichloroethene	96	4.532	4.532	0.000	95	103974	50.0	46.1	
35 Methyl tert-butyl ether	73	4.551	4.551	0.000	95	233948	50.0	46.1	
36 Hexane	57	4.952	4.952	0.000	94	125040	50.0	49.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
37 1,1-Dichloroethane	63	5.165	5.165	0.000	96	170218	50.0	46.0	
38 Vinyl acetate	43	5.220	5.220	0.000	97	178772	50.0	45.9	a
42 2,2-Dichloropropane	97	5.913	5.913	0.000	57	17854	50.0	43.3	
43 cis-1,2-Dichloroethene	96	5.919	5.919	0.000	77	136007	50.0	46.1	
44 2-Butanone (MEK)	43	5.938	5.938	0.000	97	96968	100.0	85.8	
48 Chlorobromomethane	128	6.205	6.205	0.000	97	48659	50.0	43.9	
49 Tetrahydrofuran	42	6.230	6.230	0.000	0	54162	100.0	91.4	
50 Chloroform	83	6.351	6.351	0.000	93	233886	50.0	46.2	
51 1,1,1-Trichloroethane	97	6.510	6.510	0.000	98	128327	50.0	44.3	
52 Cyclohexane	56	6.576	6.576	0.000	85	167688	50.0	49.6	
53 Carbon tetrachloride	117	6.680	6.680	0.000	91	75770	50.0	43.0	
54 1,1-Dichloropropene	75	6.698	6.698	0.000	98	157358	50.0	46.8	
55 Isobutyl alcohol	41	6.911	6.911	0.000	39	61893	1250.0	994.2	a
56 Benzene	78	6.917	6.917	0.000	96	502088	50.0	45.3	
57 1,2-Dichloroethane	62	6.996	6.996	0.000	98	152774	50.0	45.2	
59 n-Heptane	43	7.276	7.276	0.000	86	105656	50.0	51.9	
61 Trichloroethene	130	7.653	7.653	0.000	93	116932	50.0	45.6	
63 Methylcyclohexane	83	7.884	7.884	0.000	83	203886	50.0	47.4	
64 1,2-Dichloropropane	63	7.927	7.927	0.000	92	123788	50.0	44.9	
67 Dibromomethane	93	8.012	8.012	0.000	87	76673	50.0	46.5	
65 1,4-Dioxane	88	8.018	8.018	0.000	49	32744	1000.0	859.3	
68 Dichlorobromomethane	83	8.213	8.213	0.000	99	138688	50.0	42.8	
71 cis-1,3-Dichloropropene	75	8.657	8.657	0.000	96	162956	50.0	42.1	
72 4-Methyl-2-pentanone (MIBK	43	8.821	8.821	0.000	93	192541	100.0	84.7	
73 Toluene	91	8.986	8.986	0.000	99	724871	50.0	46.3	
74 trans-1,3-Dichloropropene	75	9.241	9.241	0.000	92	136449	50.0	40.7	
75 Ethyl methacrylate	69	9.302	9.302	0.000	87	158519	50.0	42.6	
76 1,1,2-Trichloroethane	97	9.430	9.430	0.000	89	149014	50.0	45.6	
77 Tetrachloroethene	164	9.503	9.503	0.000	93	98498	50.0	49.9	
78 1,3-Dichloropropane	76	9.594	9.594	0.000	87	250773	50.0	45.8	
79 2-Hexanone	43	9.655	9.655	0.000	93	138885	100.0	86.5	
81 Chlorodibromomethane	129	9.807	9.807	0.000	91	70094	50.0	40.8	
82 Ethylene Dibromide	107	9.916	9.916	0.000	96	121636	50.0	43.7	
84 Chlorobenzene	112	10.403	10.403	0.000	95	500202	50.0	45.7	
86 1,1,1,2-Tetrachloroethane	131	10.500	10.500	0.000	84	87914	50.0	41.8	
87 Ethylbenzene	106	10.506	10.506	0.000	98	291817	50.0	46.1	
88 m-Xylene & p-Xylene	106	10.640	10.640	0.000	99	364811	50.0	47.1	
89 o-Xylene	106	11.017	11.017	0.000	96	342855	50.0	45.0	
90 Styrene	104	11.042	11.042	0.000	95	582237	50.0	45.4	
91 Bromoform	173	11.218	11.218	0.000	90	30495	50.0	44.0	
93 Isopropylbenzene	105	11.388	11.388	0.000	95	917716	50.0	46.1	
95 Bromobenzene	156	11.699	11.699	0.000	92	158593	50.0	48.2	
96 1,1,2,2-Tetrachloroethane	83	11.705	11.705	0.000	94	175511	50.0	44.8	
97 trans-1,4-Dichloro-2-buten	53	11.741	11.741	0.000	61	30095	50.0	43.1	
98 1,2,3-Trichloropropane	110	11.753	11.753	0.000	85	60075	50.0	48.7	
99 N-Propylbenzene	120	11.802	11.802	0.000	99	231367	50.0	48.8	
100 2-Chlorotoluene	126	11.887	11.887	0.000	95	180278	50.0	48.4	
102 1,3,5-Trimethylbenzene	105	11.991	11.991	0.000	94	694998	50.0	48.2	
103 4-Chlorotoluene	126	12.015	12.015	0.000	98	190691	50.0	48.2	
104 tert-Butylbenzene	119	12.301	12.301	0.000	92	567894	50.0	48.7	
106 1,2,4-Trimethylbenzene	105	12.362	12.362	0.000	97	706633	50.0	48.6	
108 sec-Butylbenzene	105	12.526	12.526	0.000	94	877169	50.0	49.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
109 1,3-Dichlorobenzene	146	12.642	12.642	0.000	94	303550	50.0	48.2	
110 4-Isopropyltoluene	119	12.678	12.678	0.000	97	659287	50.0	48.4	
111 1,4-Dichlorobenzene	146	12.745	12.745	0.000	90	316526	50.0	48.1	
116 n-Butylbenzene	91	13.086	13.086	0.000	98	605452	50.0	49.1	
117 1,2-Dichlorobenzene	146	13.104	13.104	0.000	92	284728	50.0	47.0	
118 1,2-Dibromo-3-Chloropropan	75	13.889	13.901	-0.012	67	12145	50.0	41.8	
122 1,2,4-Trichlorobenzene	180	14.716	14.716	0.000	93	99760	50.0	47.0	
123 Hexachlorobutadiene	225	14.862	14.862	0.000	92	38633	50.0	50.7	
124 Naphthalene	128	14.978	14.978	0.000	97	264411	50.0	44.4	
125 1,2,3-Trichlorobenzene	180	15.203	15.203	0.000	93	69049	50.0	45.3	
S 131 Xylenes, Total	106				0		100.0	92.1	
S 130 1,2-Dichloroethene, Total	96				0		100.0	92.1	
S 154 Total BTEX	1				0		250.0	229.7	
S 132 1,3-Dichloropropene, Total	1				0		100.0	82.8	

QC Flag Legend

Review Flags

a - User Assigned ID

Reagents:

voaWKetmix1st_00023	Amount Added:	2.00	Units: uL	
VOA8260SURR_00104	Amount Added:	2.00	Units: uL	
VOA8260VOAPRI_00392	Amount Added:	2.00	Units: uL	
VOAACRPRI_00025	Amount Added:	6.00	Units: uL	
VOAVAPRI_00034	Amount Added:	2.00	Units: uL	
VOA8260INT_00104	Amount Added:	2.00	Units: uL	Run Reagent

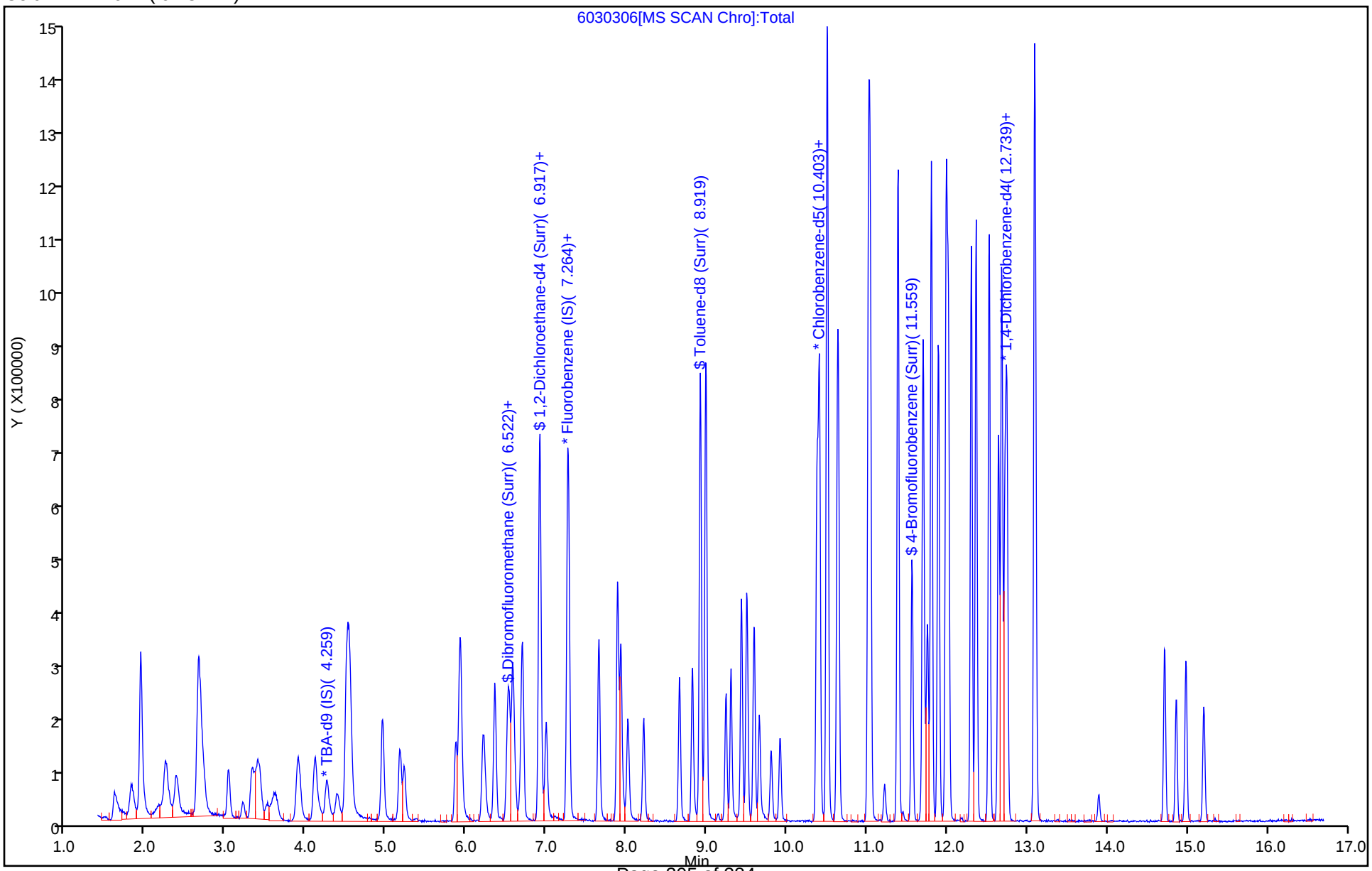
Report Date: 04-Mar-2020 07:28:51 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030306.D

Injection Date:	03-Mar-2020 10:47:30	Instrument ID:	CHHP6	Operator ID:	10099
Lims ID:	ICIS VSTD10			Worklist Smp#:	6
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Pittsburgh

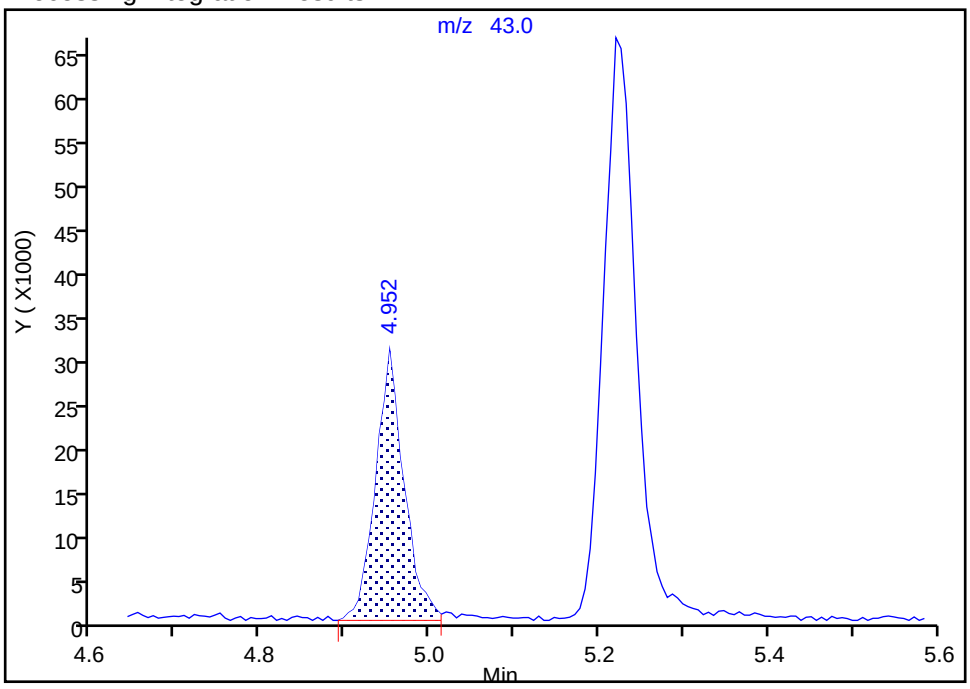
Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030306.D				
Injection Date:	03-Mar-2020 10:47:30	Instrument ID:	CHHP6		
Lims ID:	ICIS VSTD10				
Client ID:					
Operator ID:	10099	ALS Bottle#:	6	Worklist Smp#:	6
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

38 Vinyl acetate, CAS: 108-05-4

Signal: 1

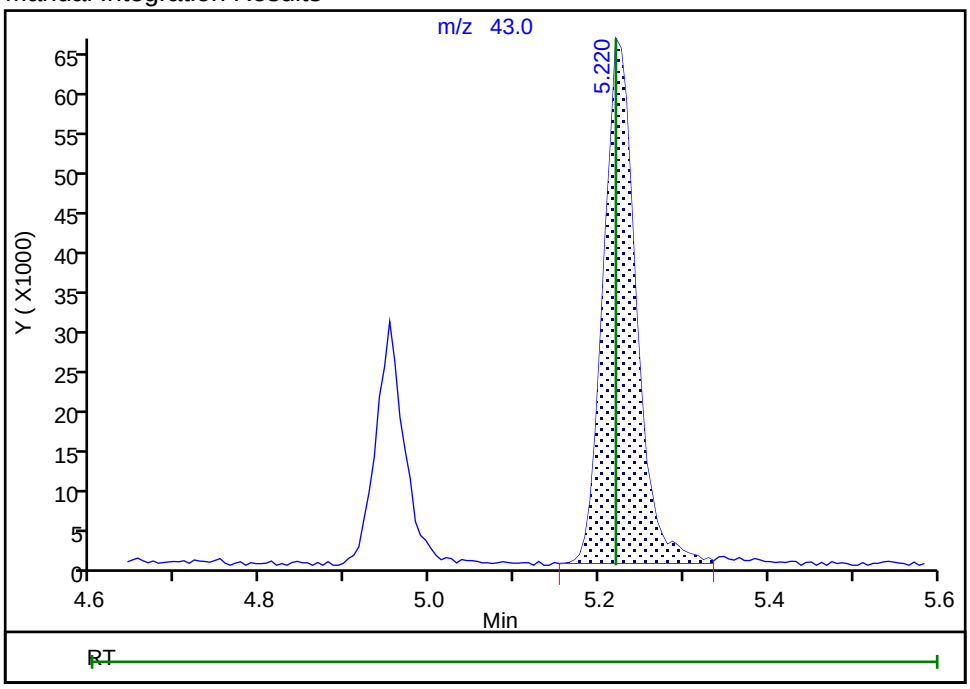
Processing Integration Results

RT: 4.95
Area: 71942
Amount: 25.750282
Amount Units: ng



Manual Integration Results

RT: 5.22
Area: 178772
Amount: 45.887257
Amount Units: ng



Reviewer: gordonk, 03-Mar-2020 11:11:46
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Pittsburgh

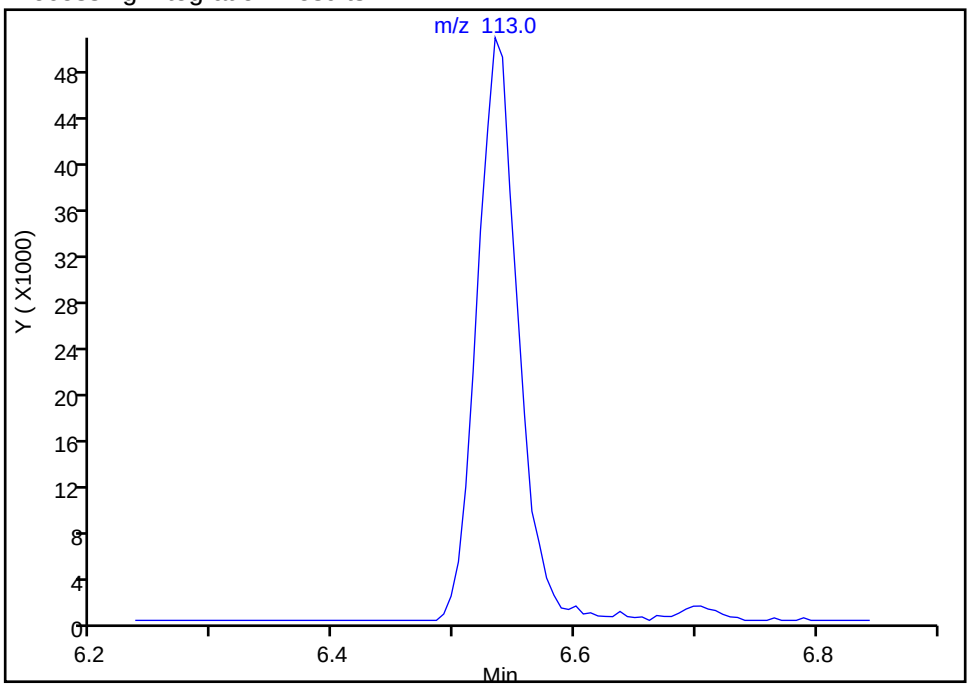
Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030306.D				
Injection Date:	03-Mar-2020 10:47:30	Instrument ID:	CHHP6		
Lims ID:	ICIS VSTD10				
Client ID:					
Operator ID:	10099	ALS Bottle#:	6	Worklist Smp#:	6
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

$ 5 Dibromofluoromethane (Surr), CAS: 1868-53-7

Signal: 1

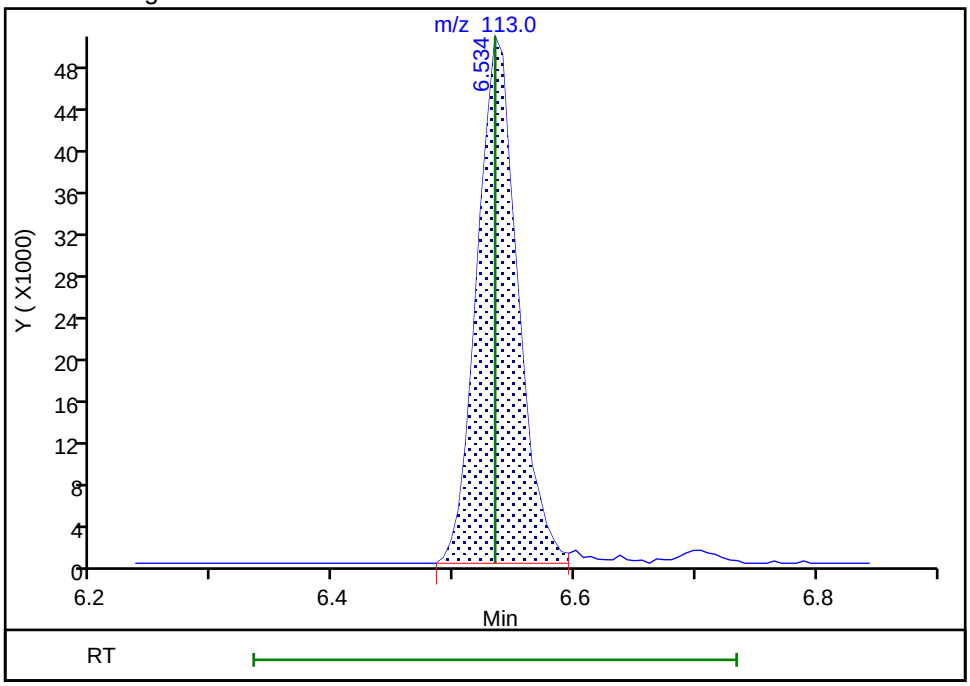
Not Detected
Expected RT: 6.53

Processing Integration Results



Manual Integration Results

RT: 6.53
Area: 119016
Amount: 47.973677
Amount Units: ng



Reviewer: gordonk, 03-Mar-2020 11:11:36
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

Eurofins TestAmerica, Pittsburgh

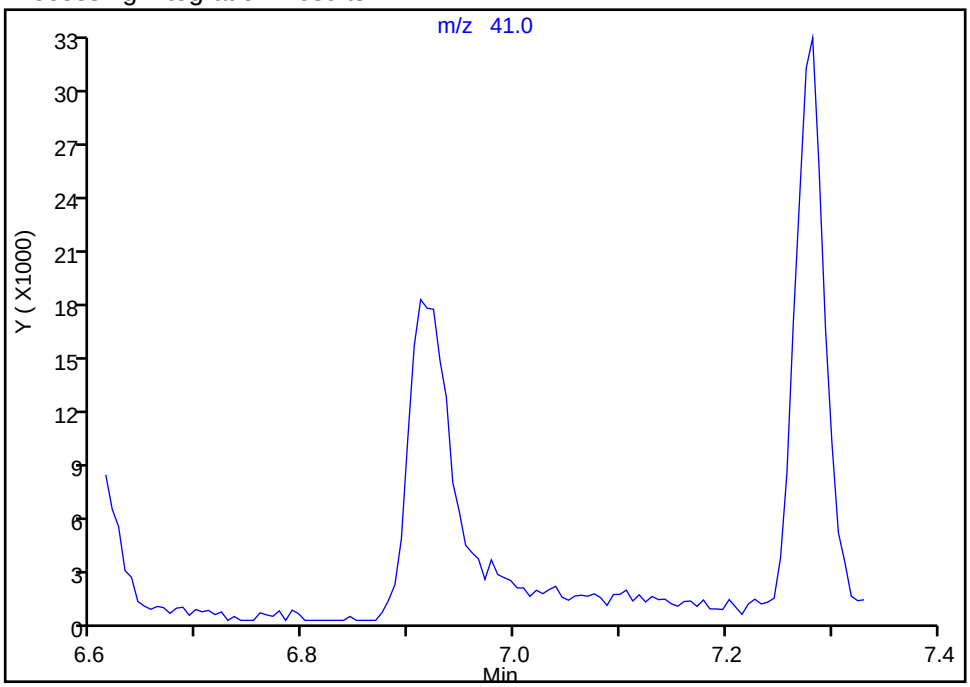
Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030306.D				
Injection Date:	03-Mar-2020 10:47:30	Instrument ID:	CHHP6		
Lims ID:	ICIS VSTD10				
Client ID:					
Operator ID:	10099	ALS Bottle#:	6	Worklist Smp#:	6
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

55 Isobutyl alcohol, CAS: 78-83-1

Signal: 1

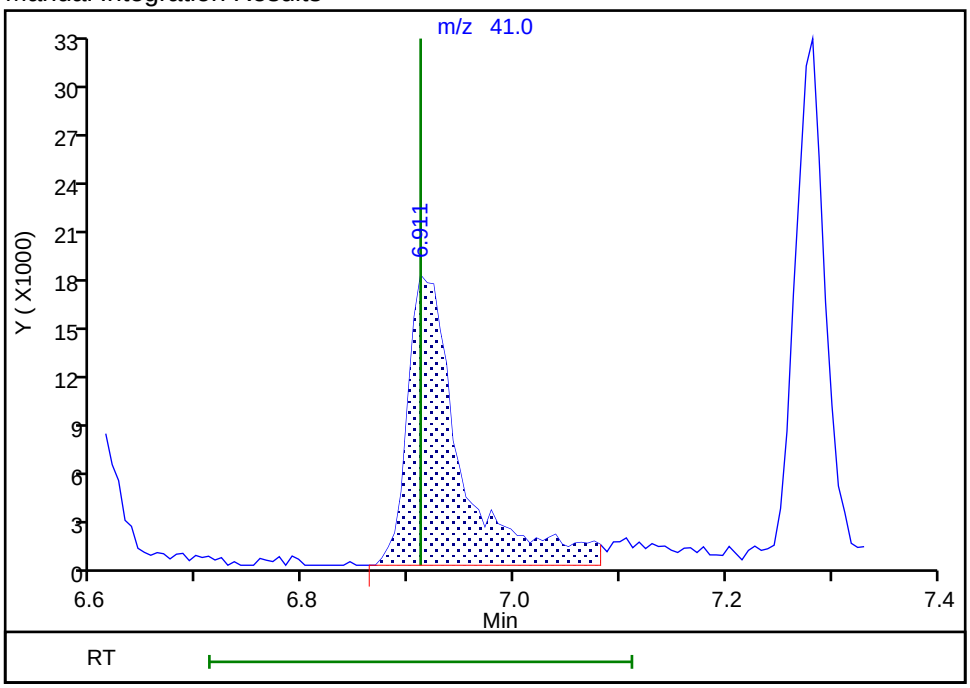
Not Detected
Expected RT: 6.91

Processing Integration Results



Manual Integration Results

RT: 6.91
Area: 61893
Amount: 994.2197
Amount Units: ng



Reviewer: gordonk, 03-Mar-2020 11:11:55
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030307.D
Lims ID: IC VSTD15
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 03-Mar-2020 11:15:30 ALS Bottle#: 7 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-0031016-007
Operator ID: 10099 Instrument ID: CHHP6
Sublist: chrom-MSVOA_LL_CHHP6*sub121

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 04-Mar-2020 07:28:56 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0334

First Level Reviewer: gordonk Date: 03-Mar-2020 11:43:54

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.259	4.259	0.000	94	146129	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.264	7.264	0.000	100	630234	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.379	10.379	0.000	86	139702	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.721	12.721	0.000	96	174905	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.534	6.534	0.000	92	178733	75.0	69.8	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.911	6.911	0.000	99	231280	75.0	69.7	
$ 7 Toluene-d8 (Surr)	98	8.919	8.919	0.000	92	923482	75.0	69.4	
$ 8 4-Bromofluorobenzene (Surr	95	11.559	11.559	0.000	0	325463	75.0	70.5	
11 Dichlorodifluoromethane	85	1.613	1.613	0.000	99	221624	75.0	65.6	
12 Chloromethane	50	1.820	1.820	0.000	99	208339	75.0	68.2	
14 Butadiene	39	1.935	1.935	0.000	91	215806	75.0	71.9	
13 Vinyl chloride	62	1.935	1.935	0.000	74	230020	75.0	65.5	
15 Bromomethane	94	2.245	2.245	0.000	91	177597	75.0	72.7	
16 Chloroethane	64	2.373	2.373	0.000	99	174152	75.0	68.2	
17 Dichlorofluoromethane	67	2.659	2.659	0.000	97	441182	75.0	69.0	
18 Trichlorofluoromethane	101	2.677	2.677	0.000	97	427579	75.0	72.2	
20 Ethyl ether	59	3.030	3.030	0.000	88	109380	75.0	65.2	
21 Acrolein	56	3.213	3.213	0.000	98	53091	175.0	158.5	
22 1,1-Dichloroethene	96	3.328	3.328	0.000	95	116112	75.0	68.7	
23 1,1,2-Trichloro-1,2,2-trif	101	3.389	3.389	0.000	95	135033	75.0	71.1	
24 Acetone	43	3.426	3.426	0.000	100	106383	150.0	131.7	
25 Iodomethane	142	3.511	3.511	0.000	100	145090	75.0	64.3	
26 Carbon disulfide	76	3.626	3.626	0.000	99	229697	75.0	63.3	
29 3-Chloro-1-propene	76	3.888	3.888	0.000	88	63829	75.0	66.4	
30 Methyl acetate	43	3.918	3.918	0.000	95	166226	150.0	129.1	
31 Methylene Chloride	84	4.113	4.113	0.000	84	173911	75.0	66.7	
32 2-Methyl-2-propanol	59	4.393	4.393	0.000	96	119872	750.0	669.1	
33 Acrylonitrile	53	4.502	4.502	0.000	98	508188	750.0	656.8	
34 trans-1,2-Dichloroethene	96	4.533	4.533	0.000	95	151324	75.0	65.0	
35 Methyl tert-butyl ether	73	4.557	4.557	0.000	94	350306	75.0	66.9	
36 Hexane	57	4.953	4.953	0.000	90	173873	75.0	68.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
37 1,1-Dichloroethane	63	5.172	5.172	0.000	96	248602	75.0	65.1	
38 Vinyl acetate	43	5.226	5.226	0.000	97	258794	75.0	64.4	
42 2,2-Dichloropropane	97	5.914	5.914	0.000	69	29607	75.0	69.5	
43 cis-1,2-Dichloroethene	96	5.926	5.926	0.000	77	195934	75.0	64.3	
44 2-Butanone (MEK)	43	5.938	5.938	0.000	97	158082	150.0	135.6	
48 Chlorobromomethane	128	6.206	6.206	0.000	95	75331	75.0	65.9	
49 Tetrahydrofuran	42	6.224	6.224	0.000	0	73830	150.0	120.7	
50 Chloroform	83	6.352	6.352	0.000	93	339059	75.0	67.3	
51 1,1,1-Trichloroethane	97	6.510	6.510	0.000	98	192748	75.0	64.5	
52 Cyclohexane	56	6.583	6.583	0.000	85	235556	75.0	68.6	
53 Carbon tetrachloride	117	6.680	6.680	0.000	96	114533	75.0	63.0	
54 1,1-Dichloropropene	75	6.705	6.705	0.000	98	226863	75.0	65.4	
55 Isobutyl alcohol	41	6.911	6.911	0.000	46	99825	1875.0	1554.1	
56 Benzene	78	6.917	6.917	0.000	96	741587	75.0	64.8	
57 1,2-Dichloroethane	62	6.997	6.997	0.000	97	229408	75.0	65.7	
59 n-Heptane	43	7.283	7.283	0.000	87	134257	75.0	64.7	
61 Trichloroethene	130	7.654	7.654	0.000	93	176736	75.0	66.8	
63 Methylcyclohexane	83	7.885	7.885	0.000	83	287050	75.0	64.7	
64 1,2-Dichloropropane	63	7.927	7.927	0.000	94	189183	75.0	66.4	
67 Dibromomethane	93	8.019	8.019	0.000	89	113209	75.0	66.6	
65 1,4-Dioxane	88	8.019	8.019	0.000	51	52913	1500.0	1345.7	
68 Dichlorobromomethane	83	8.213	8.213	0.000	98	212726	75.0	63.7	
71 cis-1,3-Dichloropropene	75	8.657	8.657	0.000	96	258150	75.0	64.6	
72 4-Methyl-2-pentanone (MIBK	43	8.816	8.816	0.000	94	321115	150.0	134.9	
73 Toluene	91	8.986	8.986	0.000	98	1051400	75.0	64.1	
74 trans-1,3-Dichloropropene	75	9.241	9.241	0.000	92	223553	75.0	63.7	
75 Ethyl methacrylate	69	9.302	9.302	0.000	87	264486	75.0	67.9	
76 1,1,2-Trichloroethane	97	9.430	9.430	0.000	89	225190	75.0	65.8	
77 Tetrachloroethene	164	9.497	9.497	0.000	93	141699	75.0	69.9	
78 1,3-Dichloropropane	76	9.588	9.588	0.000	87	377684	75.0	65.9	
79 2-Hexanone	43	9.655	9.655	0.000	93	225508	150.0	134.1	
81 Chlorodibromomethane	129	9.807	9.807	0.000	90	116517	75.0	64.8	
82 Ethylene Dibromide	107	9.917	9.917	0.000	98	195437	75.0	67.1	
84 Chlorobenzene	112	10.403	10.403	0.000	95	740158	75.0	64.6	
86 1,1,1,2-Tetrachloroethane	131	10.501	10.501	0.000	85	143375	75.0	65.1	
87 Ethylbenzene	106	10.507	10.507	0.000	98	431499	75.0	65.0	
88 m-Xylene & p-Xylene	106	10.634	10.634	0.000	99	530035	75.0	65.3	
89 o-Xylene	106	11.018	11.018	0.000	96	523775	75.0	65.7	
90 Styrene	104	11.042	11.042	0.000	95	900558	75.0	67.1	
91 Bromoform	173	11.219	11.219	0.000	90	50419	75.0	69.5	
93 Isopropylbenzene	105	11.389	11.389	0.000	95	1360474	75.0	65.3	
95 Bromobenzene	156	11.699	11.699	0.000	93	237526	75.0	64.5	
96 1,1,2,2-Tetrachloroethane	83	11.699	11.699	0.000	93	271467	75.0	66.2	
97 trans-1,4-Dichloro-2-buten	53	11.742	11.742	0.000	63	50214	75.0	64.2	
98 1,2,3-Trichloropropane	110	11.754	11.754	0.000	86	89366	75.0	64.6	
99 N-Propylbenzene	120	11.803	11.803	0.000	99	350026	75.0	65.9	
100 2-Chlorotoluene	126	11.888	11.888	0.000	95	275729	75.0	66.1	
102 1,3,5-Trimethylbenzene	105	11.985	11.985	0.000	94	1057595	75.0	65.5	
103 4-Chlorotoluene	126	12.015	12.015	0.000	98	292051	75.0	66.0	
104 tert-Butylbenzene	119	12.301	12.301	0.000	92	839926	75.0	64.4	
106 1,2,4-Trimethylbenzene	105	12.362	12.362	0.000	97	1066444	75.0	65.4	
108 sec-Butylbenzene	105	12.526	12.526	0.000	94	1289094	75.0	64.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
109 1,3-Dichlorobenzene	146	12.642	12.642	0.000	95	451104	75.0	64.0	
110 4-Isopropyltoluene	119	12.679	12.679	0.000	97	997146	75.0	65.4	
111 1,4-Dichlorobenzene	146	12.745	12.745	0.000	90	465462	75.0	63.2	
116 n-Butylbenzene	91	13.086	13.086	0.000	99	891983	75.0	64.6	
117 1,2-Dichlorobenzene	146	13.104	13.104	0.000	93	435550	75.0	64.2	
118 1,2-Dibromo-3-Chloropropan	75	13.895	13.895	0.000	70	20412	75.0	62.7	
122 1,2,4-Trichlorobenzene	180	14.717	14.717	0.000	92	143722	75.0	60.5	
123 Hexachlorobutadiene	225	14.856	14.856	0.000	92	53921	75.0	63.1	
124 Naphthalene	128	14.978	14.978	0.000	97	397421	75.0	59.7	
125 1,2,3-Trichlorobenzene	180	15.203	15.203	0.000	93	97654	75.0	57.2	
S 131 Xylenes, Total	106				0		150.0	131.0	
S 130 1,2-Dichloroethene, Total	96				0		150.0	129.3	
S 154 Total BTEX	1				0		375.0	324.9	
S 132 1,3-Dichloropropene, Total	1				0		150.0	128.4	

Reagents:

VOAACRPRI_00025	Amount Added:	7.00	Units: uL		
voaWKetmix1st_00023	Amount Added:	3.00	Units: uL		
VOAVAPRI_00034	Amount Added:	3.00	Units: uL		
VOA8260SURR_00104	Amount Added:	3.00	Units: uL		
VOA8260VOAPRI_00392	Amount Added:	3.00	Units: uL		
VOA8260INT_00104	Amount Added:	2.00	Units: uL	Run Reagent	

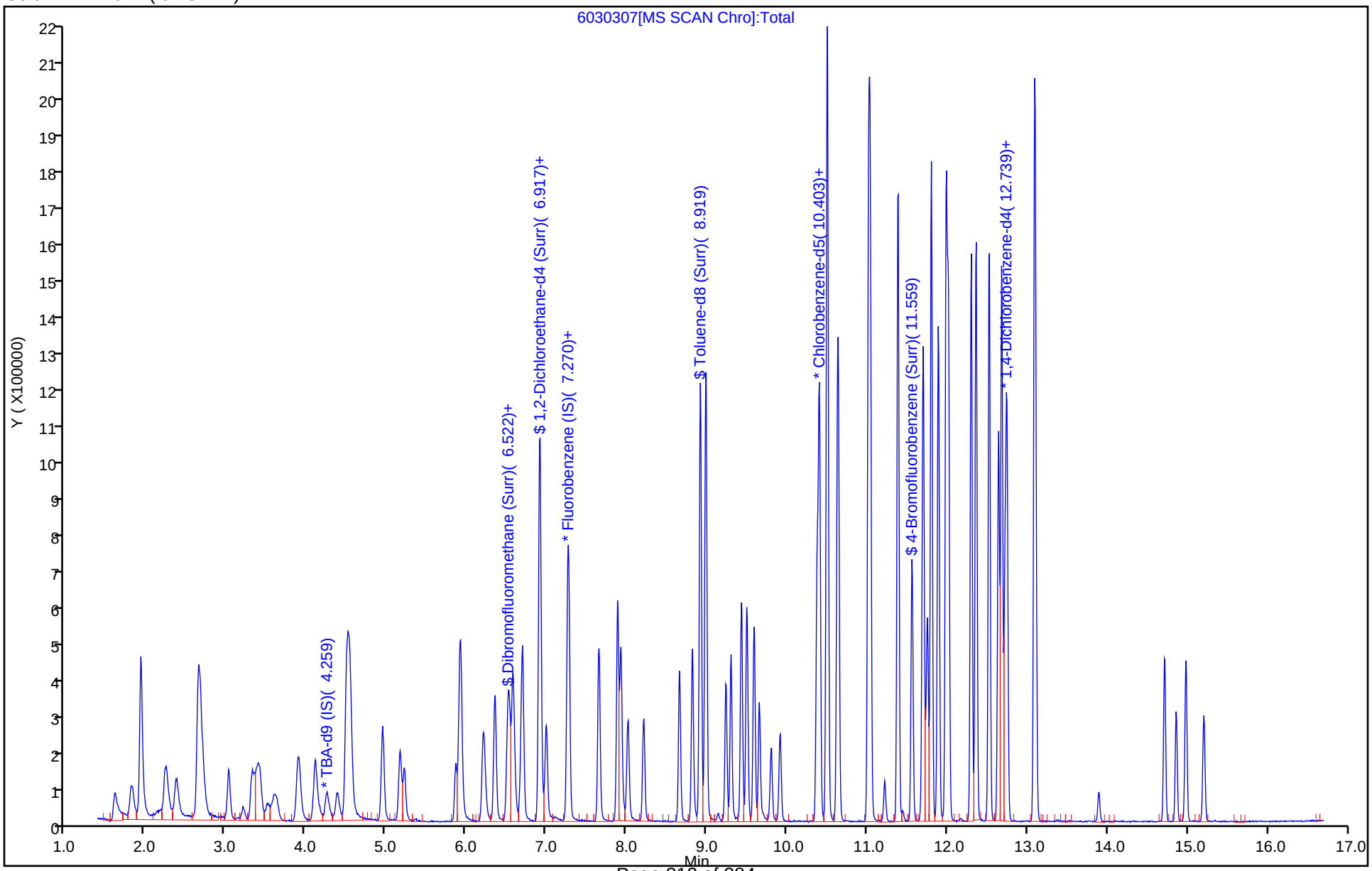
Report Date: 04-Mar-2020 07:28:58 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030307.D

Injection Date:	03-Mar-2020 11:15:30	Instrument ID:	CHHP6	Operator ID:	10099
Lims ID:	IC VSTD15			Worklist Smp#:	7
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030308.D
Lims ID: IC VSTD20
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 03-Mar-2020 11:43:30 ALS Bottle#: 8 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-0031016-008
Operator ID: 10099 Instrument ID: CHHP6
Sublist: chrom-MSVOA_LL_CHHP6*sub121

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 04-Mar-2020 07:29:05 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0334

First Level Reviewer: gordonk Date: 03-Mar-2020 12:05:18

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.254	4.259	-0.005	95	141740	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.265	7.264	0.001	99	595669	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.374	10.379	-0.005	86	134524	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.722	12.721	0.001	95	173571	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.535	6.534	0.001	92	260098	100.0	107.5	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.906	6.911	-0.005	97	329708	100.0	105.1	
$ 7 Toluene-d8 (Surr)	98	8.920	8.919	0.001	92	1316240	100.0	102.7	
$ 8 4-Bromofluorobenzene (Surr	95	11.560	11.559	0.001	0	461153	100.0	103.8	
11 Dichlorodifluoromethane	85	1.619	1.613	0.006	99	288358	100.0	90.3	
12 Chloromethane	50	1.826	1.820	0.006	99	287294	100.0	101.2	
14 Butadiene	39	1.936	1.935	0.001	91	279587	100.0	100.0	
13 Vinyl chloride	62	1.936	1.935	0.001	65	310518	100.0	93.5	
15 Bromomethane	94	2.252	2.245	0.007	91	226600	100.0	99.3	
16 Chloroethane	64	2.380	2.373	0.007	99	228070	100.0	94.5	
17 Dichlorofluoromethane	67	2.660	2.659	0.001	97	572917	100.0	94.9	
18 Trichlorofluoromethane	101	2.684	2.677	0.007	97	546887	100.0	98.8	
20 Ethyl ether	59	3.031	3.030	0.001	88	153520	100.0	96.9	
21 Acrolein	56	3.219	3.213	0.006	97	56187	200.0	177.4	
22 1,1-Dichloroethene	96	3.317	3.328	-0.011	95	156565	100.0	99.6	
23 1,1,2-Trichloro-1,2,2-trif	101	3.396	3.389	0.007	93	178258	100.0	100.7	
24 Acetone	43	3.426	3.426	0.000	100	155909	200.0	204.2	
25 Iodomethane	142	3.518	3.511	0.007	99	203445	100.0	95.4	
26 Carbon disulfide	76	3.615	3.626	-0.011	99	314671	100.0	91.8	
29 3-Chloro-1-propene	76	3.889	3.888	0.001	90	85448	100.0	94.0	
30 Methyl acetate	43	3.919	3.918	0.001	95	237882	200.0	195.5	
31 Methylene Chloride	84	4.108	4.113	-0.005	84	236979	100.0	100.8	
32 2-Methyl-2-propanol	59	4.394	4.393	0.001	94	176272	1000.0	1014.3	
33 Acrylonitrile	53	4.503	4.502	0.001	99	727887	1000.0	995.4	
34 trans-1,2-Dichloroethene	96	4.527	4.533	-0.006	96	213989	100.0	97.3	
35 Methyl tert-butyl ether	73	4.558	4.557	0.001	94	486380	100.0	98.3	
36 Hexane	57	4.953	4.953	0.000	90	234223	100.0	98.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
37 1,1-Dichloroethane	63	5.172	5.172	0.000	96	349549	100.0	96.8	
38 Vinyl acetate	43	5.221	5.226	-0.005	97	372719	100.0	98.1	
42 2,2-Dichloropropane	97	5.920	5.914	0.006	57	40544	100.0	100.8	
43 cis-1,2-Dichloroethene	96	5.920	5.926	-0.006	80	282089	100.0	97.9	
44 2-Butanone (MEK)	43	5.939	5.938	0.001	97	225766	200.0	204.8	
48 Chlorobromomethane	128	6.206	6.206	0.000	95	107517	100.0	99.5	
49 Tetrahydrofuran	42	6.225	6.224	0.001	0	115646	200.0	200.1	
50 Chloroform	83	6.352	6.352	0.000	93	471239	100.0	101.7	
51 1,1,1-Trichloroethane	97	6.511	6.510	0.001	98	270534	100.0	95.7	
52 Cyclohexane	56	6.584	6.583	0.001	86	315371	100.0	98.4	
53 Carbon tetrachloride	117	6.681	6.680	0.001	95	160228	100.0	93.2	
54 1,1-Dichloropropene	75	6.699	6.705	-0.006	98	311352	100.0	95.0	
55 Isobutyl alcohol	41	6.918	6.911	0.007	42	169689	2500.0	2795.1	
56 Benzene	78	6.918	6.917	0.001	96	1044964	100.0	96.7	
57 1,2-Dichloroethane	62	6.997	6.997	0.000	97	325530	100.0	98.7	
59 n-Heptane	43	7.277	7.283	-0.005	87	189229	100.0	98.4	
61 Trichloroethene	130	7.654	7.654	0.000	95	244595	100.0	97.8	
63 Methylcyclohexane	83	7.892	7.885	0.007	82	390697	100.0	93.2	
64 1,2-Dichloropropane	63	7.928	7.927	0.001	94	265611	100.0	98.7	
67 Dibromomethane	93	8.013	8.019	-0.006	87	163760	100.0	101.9	
65 1,4-Dioxane	88	8.019	8.019	0.000	59	73350	2000.0	1973.7	
68 Dichlorobromomethane	83	8.214	8.213	0.001	99	316890	100.0	100.3	
71 cis-1,3-Dichloropropene	75	8.658	8.657	0.001	96	397297	100.0	105.2	
72 4-Methyl-2-pentanone (MIBK	43	8.816	8.816	0.000	94	461866	200.0	201.5	
73 Toluene	91	8.987	8.986	0.001	98	1480372	100.0	93.7	
74 trans-1,3-Dichloropropene	75	9.236	9.241	-0.005	92	346309	100.0	102.5	
75 Ethyl methacrylate	69	9.303	9.302	0.001	87	391640	100.0	104.4	
76 1,1,2-Trichloroethane	97	9.431	9.430	0.001	90	318818	100.0	96.7	
77 Tetrachloroethene	164	9.504	9.497	0.007	92	191768	100.0	99.6	
78 1,3-Dichloropropane	76	9.589	9.588	0.001	87	549367	100.0	99.5	
79 2-Hexanone	43	9.656	9.655	0.001	94	331489	200.0	204.7	
81 Chlorodibromomethane	129	9.802	9.807	-0.005	91	174562	100.0	100.8	
82 Ethylene Dibromide	107	9.917	9.917	0.000	97	276566	100.0	98.7	
84 Chlorobenzene	112	10.404	10.403	0.001	96	1035801	100.0	93.9	
86 1,1,1,2-Tetrachloroethane	131	10.495	10.501	-0.006	87	210723	100.0	99.4	
87 Ethylbenzene	106	10.507	10.507	0.000	98	605941	100.0	94.8	
88 m-Xylene & p-Xylene	106	10.635	10.634	0.001	99	750251	100.0	96.0	
89 o-Xylene	106	11.018	11.018	0.000	96	735906	100.0	95.8	
90 Styrene	104	11.037	11.042	-0.005	95	1286325	100.0	99.5	
91 Bromoform	173	11.219	11.219	0.001	88	73823	100.0	105.6	
93 Isopropylbenzene	105	11.383	11.389	-0.006	95	1879858	100.0	93.6	
95 Bromobenzene	156	11.700	11.699	0.001	93	340586	100.0	93.2	
96 1,1,2,2-Tetrachloroethane	83	11.700	11.699	0.001	93	396136	100.0	100.4	
97 trans-1,4-Dichloro-2-buten	53	11.736	11.742	-0.006	72	71828	100.0	92.5	
98 1,2,3-Trichloropropane	110	11.755	11.754	0.001	85	131346	100.0	95.7	
99 N-Propylbenzene	120	11.803	11.803	0.001	99	481682	100.0	91.3	
100 2-Chlorotoluene	126	11.888	11.888	0.000	95	383283	100.0	92.6	
102 1,3,5-Trimethylbenzene	105	11.986	11.985	0.001	94	1480585	100.0	92.5	
103 4-Chlorotoluene	126	12.016	12.015	0.001	98	404869	100.0	92.2	
104 tert-Butylbenzene	119	12.302	12.301	0.001	92	1180741	100.0	91.2	
106 1,2,4-Trimethylbenzene	105	12.363	12.362	0.001	97	1532783	100.0	94.8	
108 sec-Butylbenzene	105	12.527	12.526	0.001	94	1811384	100.0	91.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
109 1,3-Dichlorobenzene	146	12.643	12.642	0.001	95	652410	100.0	93.2	
110 4-Isopropyltoluene	119	12.679	12.679	0.000	97	1389976	100.0	91.8	
111 1,4-Dichlorobenzene	146	12.746	12.745	0.001	91	673328	100.0	92.1	
116 n-Butylbenzene	91	13.087	13.086	0.001	98	1260590	100.0	92.0	
117 1,2-Dichlorobenzene	146	13.099	13.104	-0.005	96	630765	100.0	93.7	
118 1,2-Dibromo-3-Chloropropan	75	13.896	13.895	0.001	74	32607	100.0	101.0	
122 1,2,4-Trichlorobenzene	180	14.717	14.717	0.001	92	233626	100.0	99.0	
123 Hexachlorobutadiene	225	14.863	14.856	0.007	92	77589	100.0	91.6	
124 Naphthalene	128	14.979	14.978	0.001	97	678735	100.0	102.7	
125 1,2,3-Trichlorobenzene	180	15.204	15.203	0.001	93	165414	100.0	97.6	
S 131 Xylenes, Total	106				0		200.0	191.8	
S 130 1,2-Dichloroethene, Total	96				0		200.0	195.2	
S 154 Total BTEX	1				0		500.0	477.0	
S 132 1,3-Dichloropropene, Total	1				0		200.0	207.8	

Reagents:

VOAVAPRI_00034	Amount Added:	4.00	Units: uL		
voaWKetmix1st_00023	Amount Added:	4.00	Units: uL		
VOA8260SURR_00104	Amount Added:	4.00	Units: uL		
VOA8260VOAPRI_00392	Amount Added:	4.00	Units: uL		
VOAACRPRI_00025	Amount Added:	8.00	Units: uL		
VOA8260INT_00104	Amount Added:	2.00	Units: uL	Run Reagent	

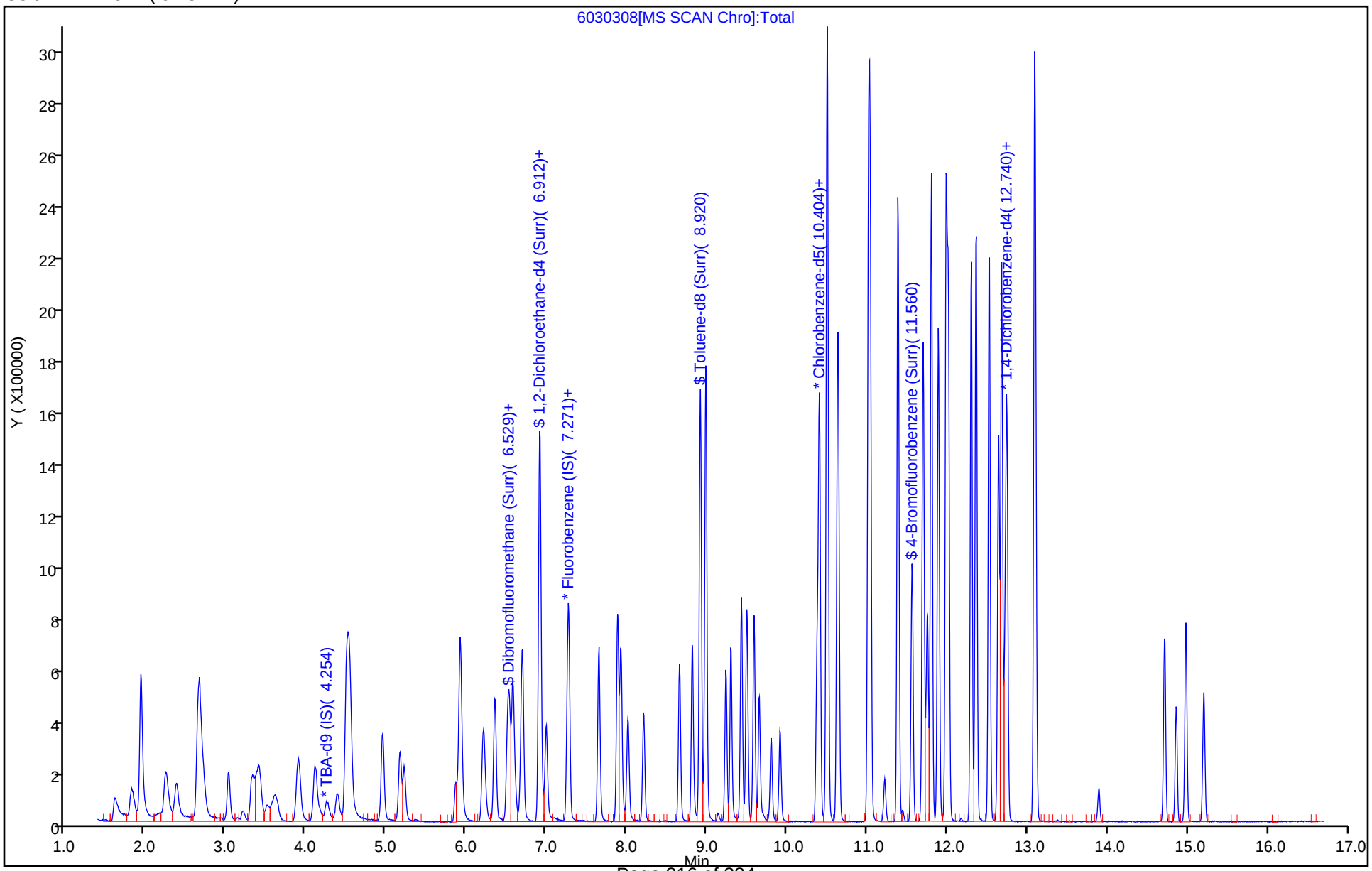
Report Date: 04-Mar-2020 07:29:06 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030308.D

Injection Date:	03-Mar-2020 11:43:30	Instrument ID:	CHHP6	Operator ID:	10099
Lims ID:	IC VSTD20			Worklist Smp#:	8
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030309.D
Lims ID: IC VSTD35
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 03-Mar-2020 12:10:30 ALS Bottle#: 9 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-0031016-009
Operator ID: 10099 Instrument ID: CHHP6
Sublist: chrom-MSVOA_LL_CHHP6*sub121

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 04-Mar-2020 07:29:11 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0334

First Level Reviewer: gordonk Date: 03-Mar-2020 12:37:18

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.256	4.259	-0.003	95	148146	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.261	7.264	-0.003	99	626547	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.376	10.379	-0.003	86	140333	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.724	12.721	0.003	93	181130	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.537	6.534	0.003	91	453811	175.0	178.3	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.908	6.911	-0.003	97	573454	175.0	173.8	
$ 7 Toluene-d8 (Surr)	98	8.922	8.919	0.003	93	2349551	175.0	175.7	
$ 8 4-Bromofluorobenzene (Surr	95	11.562	11.559	0.003	0	822313	175.0	177.4	
11 Dichlorodifluoromethane	85	1.609	1.613	-0.004	99	516424	175.0	153.8	
12 Chloromethane	50	1.822	1.820	0.002	99	525786	175.0	178.6	
14 Butadiene	39	1.938	1.935	0.003	91	522980	175.0	180.7	
13 Vinyl chloride	62	1.944	1.935	0.009	59	581910	175.0	166.6	
15 Bromomethane	94	2.248	2.245	0.003	91	419562	175.0	177.5	
16 Chloroethane	64	2.376	2.373	0.003	99	407873	175.0	160.8	
17 Dichlorofluoromethane	67	2.656	2.659	-0.003	98	1022737	175.0	161.0	
18 Trichlorofluoromethane	101	2.680	2.677	0.003	98	951211	175.0	165.4	
20 Ethyl ether	59	3.027	3.030	-0.003	87	271821	175.0	163.0	
21 Acrolein	56	3.209	3.213	-0.004	99	71190	225.0	213.7	
22 1,1-Dichloroethene	96	3.319	3.328	-0.009	95	292445	175.0	179.7	
23 1,1,2-Trichloro-1,2,2-trif	101	3.398	3.389	0.009	95	335946	175.0	183.3	
24 Acetone	43	3.422	3.426	-0.004	94	249241	350.0	310.4	
25 Iodomethane	142	3.513	3.511	0.002	97	374102	175.0	166.8	
26 Carbon disulfide	76	3.623	3.626	-0.003	99	639102	175.0	177.3	
29 3-Chloro-1-propene	76	3.884	3.888	-0.004	89	160763	175.0	168.2	
30 Methyl acetate	43	3.915	3.918	-0.003	96	436124	350.0	340.7	
31 Methylene Chloride	84	4.110	4.113	-0.003	85	416243	175.0	175.5	
32 2-Methyl-2-propanol	59	4.389	4.393	-0.004	94	311247	1750.0	1713.6	
33 Acrylonitrile	53	4.505	4.502	0.003	99	1299156	1750.0	1689.1	
34 trans-1,2-Dichloroethene	96	4.529	4.533	-0.004	95	391717	175.0	169.3	
35 Methyl tert-butyl ether	73	4.554	4.557	-0.003	94	876765	175.0	168.5	
36 Hexane	57	4.949	4.953	-0.004	90	448175	175.0	182.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
37 1,1-Dichloroethane	63	5.168	5.172	-0.004	96	647389	175.0	170.4	
38 Vinyl acetate	43	5.229	5.226	0.003	97	691830	175.0	173.1	
42 2,2-Dichloropropane	97	5.922	5.914	0.008	91	75696	175.0	178.8	
43 cis-1,2-Dichloroethene	96	5.922	5.926	-0.004	79	510018	175.0	168.4	
44 2-Butanone (MEK)	43	5.941	5.938	0.003	99	372167	350.0	321.0	
48 Chlorobromomethane	128	6.208	6.206	0.002	96	194570	175.0	171.2	
49 Tetrahydrofuran	42	6.227	6.224	0.003	0	198545	350.0	326.5	
50 Chloroform	83	6.354	6.352	0.002	93	857447	175.0	180.2	
51 1,1,1-Trichloroethane	97	6.512	6.510	0.002	97	528458	175.0	177.8	
52 Cyclohexane	56	6.579	6.583	-0.004	84	600540	175.0	180.5	
53 Carbon tetrachloride	117	6.683	6.680	0.003	94	328811	175.0	181.8	
54 1,1-Dichloropropene	75	6.701	6.705	-0.004	98	588978	175.0	170.8	
55 Isobutyl alcohol	41	6.914	6.911	0.003	44	321103	4375.0	5028.5	
56 Benzene	78	6.920	6.917	0.003	96	1904735	175.0	167.5	
57 1,2-Dichloroethane	62	6.993	6.997	-0.004	98	585442	175.0	168.7	
59 n-Heptane	43	7.279	7.283	-0.003	87	362566	175.0	182.2	
61 Trichloroethene	130	7.656	7.654	0.002	94	448350	175.0	170.4	
63 Methylcyclohexane	83	7.887	7.885	0.002	83	733977	175.0	166.5	
64 1,2-Dichloropropane	63	7.924	7.927	-0.003	94	480435	175.0	169.7	
65 1,4-Dioxane	88	8.015	8.019	-0.004	52	129785	3500.0	3320.2	
67 Dibromomethane	93	8.015	8.019	-0.004	87	290225	175.0	171.8	
68 Dichlorobromomethane	83	8.210	8.213	-0.003	99	619003	175.0	186.4	
71 cis-1,3-Dichloropropene	75	8.660	8.657	0.003	96	776740	175.0	195.6	
72 4-Methyl-2-pentanone (MIBK	43	8.818	8.816	0.002	94	798628	350.0	334.0	
73 Toluene	91	8.988	8.986	0.002	98	2758131	175.0	167.4	
74 trans-1,3-Dichloropropene	75	9.238	9.241	-0.003	92	706128	175.0	200.4	
75 Ethyl methacrylate	69	9.299	9.302	-0.003	87	752027	175.0	192.1	
76 1,1,2-Trichloroethane	97	9.433	9.430	0.003	90	575581	175.0	167.4	
77 Tetrachloroethene	164	9.499	9.497	0.002	92	355294	175.0	179.5	
78 1,3-Dichloropropane	76	9.591	9.588	0.003	88	978648	175.0	170.0	
79 2-Hexanone	43	9.652	9.655	-0.003	94	577569	350.0	341.8	
81 Chlorodibromomethane	129	9.804	9.807	-0.003	92	344614	175.0	190.7	
82 Ethylene Dibromide	107	9.913	9.917	-0.004	97	518154	175.0	177.2	
84 Chlorobenzene	112	10.406	10.403	0.003	95	1929867	175.0	167.8	
86 1,1,1,2-Tetrachloroethane	131	10.497	10.501	-0.004	88	435475	175.0	196.9	
87 Ethylbenzene	106	10.503	10.507	-0.004	98	1131681	175.0	169.8	
88 m-Xylene & p-Xylene	106	10.637	10.634	0.003	99	1378638	175.0	169.1	
89 o-Xylene	106	11.020	11.018	0.002	96	1377729	175.0	171.9	
90 Styrene	104	11.039	11.042	-0.003	95	2439781	175.0	180.9	
91 Bromoform	173	11.221	11.219	0.003	90	166943	175.0	229.0	
93 Isopropylbenzene	105	11.385	11.389	-0.004	94	3645532	175.0	174.1	
96 1,1,2,2-Tetrachloroethane	83	11.702	11.699	0.003	93	729474	175.0	177.2	
95 Bromobenzene	156	11.702	11.699	0.003	93	624084	175.0	163.7	
97 trans-1,4-Dichloro-2-buten	53	11.738	11.742	-0.004	80	140497	175.0	173.4	
98 1,2,3-Trichloropropane	110	11.756	11.754	0.002	83	233113	175.0	162.8	
99 N-Propylbenzene	120	11.805	11.803	0.003	99	923232	175.0	167.8	
100 2-Chlorotoluene	126	11.890	11.888	0.002	95	711506	175.0	164.7	
102 1,3,5-Trimethylbenzene	105	11.988	11.985	0.003	93	2865616	175.0	171.5	
103 4-Chlorotoluene	126	12.012	12.015	-0.003	97	770867	175.0	168.2	
104 tert-Butylbenzene	119	12.304	12.301	0.003	92	2231146	175.0	165.1	
106 1,2,4-Trimethylbenzene	105	12.359	12.362	-0.003	97	2906548	175.0	172.2	
108 sec-Butylbenzene	105	12.523	12.526	-0.003	94	3495469	175.0	168.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
109 1,3-Dichlorobenzene	146	12.645	12.642	0.003	95	1227714	175.0	168.1	
110 4-Isopropyltoluene	119	12.681	12.679	0.002	97	2698779	175.0	170.9	
111 1,4-Dichlorobenzene	146	12.748	12.745	0.003	91	1262284	175.0	165.5	
116 n-Butylbenzene	91	13.089	13.086	0.003	99	2453322	175.0	171.5	
117 1,2-Dichlorobenzene	146	13.101	13.104	-0.003	95	1159340	175.0	165.0	
118 1,2-Dibromo-3-Chloropropan	75	13.892	13.895	-0.003	73	72467	175.0	215.1	
122 1,2,4-Trichlorobenzene	180	14.713	14.717	-0.003	92	408187	175.0	165.8	
123 Hexachlorobutadiene	225	14.859	14.856	0.003	92	140323	175.0	158.7	
124 Naphthalene	128	14.981	14.978	0.003	97	1205995	175.0	174.8	
125 1,2,3-Trichlorobenzene	180	15.206	15.203	0.003	93	283547	175.0	160.4	
S 131 Xylenes, Total	106				0		350.0	341.0	
S 130 1,2-Dichloroethene, Total	96				0		350.0	337.6	
S 154 Total BTEX	1				0		875.0	845.7	
S 132 1,3-Dichloropropene, Total	1				0		350.0	396.0	

Reagents:

VOAACRPRI_00025	Amount Added:	9.00	Units: uL		
voaWKetmix1st_00023	Amount Added:	7.00	Units: uL		
VOAVAPRI_00034	Amount Added:	7.00	Units: uL		
VOA8260SURR_00104	Amount Added:	7.00	Units: uL		
VOA8260VOAPRI_00392	Amount Added:	7.00	Units: uL		
VOA8260INT_00104	Amount Added:	2.00	Units: uL	Run Reagent	

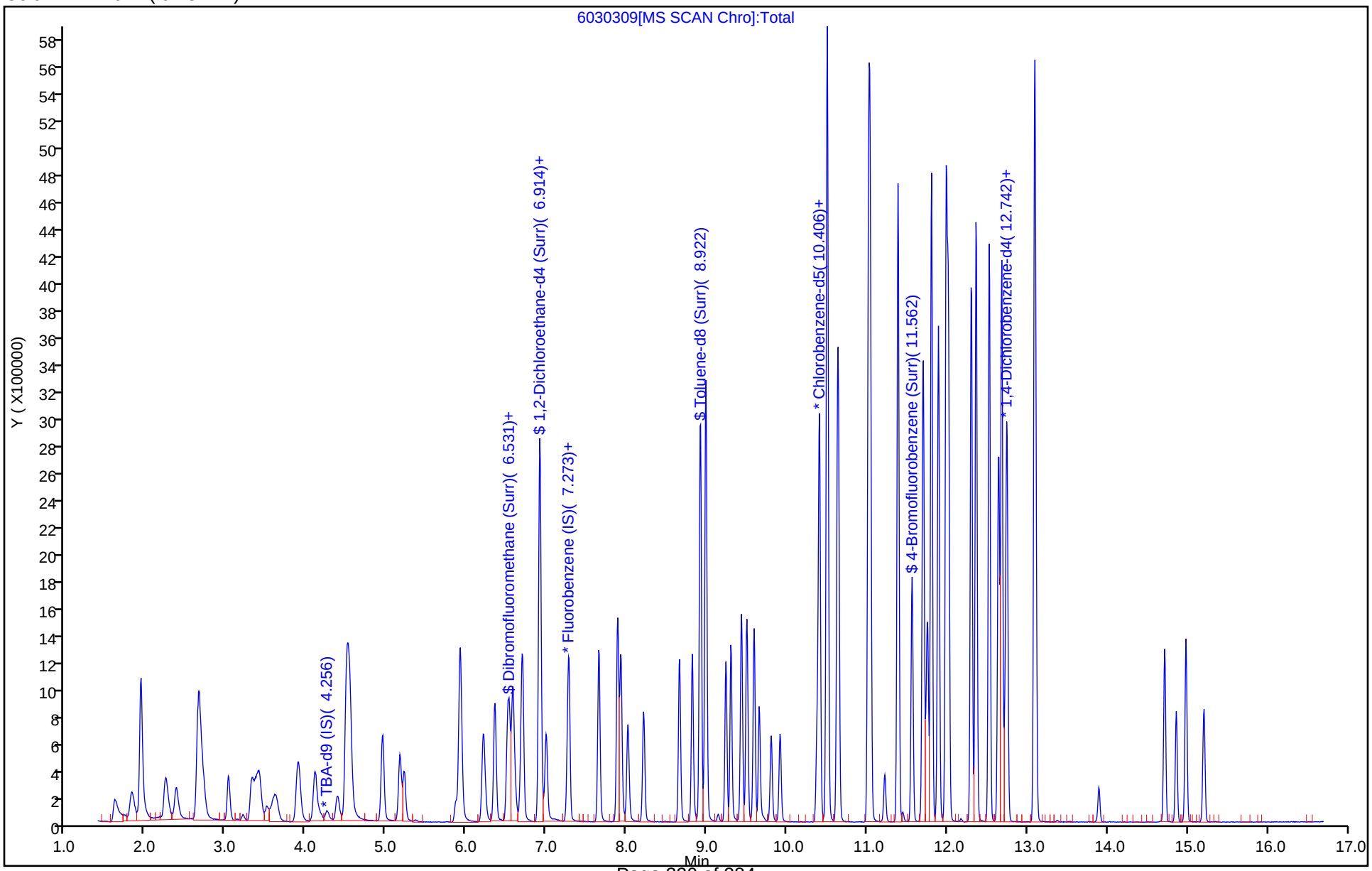
Report Date: 04-Mar-2020 07:29:13 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030309.D

Injection Date:	03-Mar-2020 12:10:30	Instrument ID:	CHHP6	Operator ID:	10099
Lims ID:	IC VSTD35			Worklist Smp#:	9
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030310.D
Lims ID: IC VSTD40
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 03-Mar-2020 12:38:30 ALS Bottle#: 10 Worklist Smp#: 10
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-0031016-010
Operator ID: 10099 Instrument ID: CHHP6
Sublist: chrom-MSVOA_LL_CHHP6*sub121

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 04-Mar-2020 07:29:18 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0334

First Level Reviewer: gordonk Date: 03-Mar-2020 13:15:51

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.262	4.259	0.003	95	151794	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.261	7.264	-0.003	100	597944	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.376	10.379	-0.003	85	137467	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.724	12.721	0.003	92	174743	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.537	6.534	0.003	92	497534	200.0	204.9	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.908	6.911	-0.003	97	642565	200.0	204.0	
$ 7 Toluene-d8 (Surr)	98	8.922	8.919	0.003	92	2520239	200.0	192.4	
$ 8 4-Bromofluorobenzene (Surr	95	11.562	11.559	0.003	0	921083	200.0	202.9	
11 Dichlorodifluoromethane	85	1.616	1.613	0.003	99	511642	200.0	159.6	
12 Chloromethane	50	1.823	1.820	0.003	99	554544	200.0	197.7	
14 Butadiene	39	1.932	1.935	-0.003	92	523772	200.0	189.8	
13 Vinyl chloride	62	1.944	1.935	0.009	63	602583	200.0	180.8	
15 Bromomethane	94	2.242	2.245	-0.003	91	443789	200.0	197.0	
16 Chloroethane	64	2.376	2.373	0.003	99	431296	200.0	178.1	
17 Dichlorofluoromethane	67	2.656	2.659	-0.003	97	1060741	200.0	174.9	
18 Trichlorofluoromethane	101	2.674	2.677	-0.003	97	941414	200.0	171.6	
20 Ethyl ether	59	3.027	3.030	-0.003	88	306238	200.0	192.5	
21 Acrolein	56	3.210	3.213	-0.003	97	75201	250.0	236.6	
22 1,1-Dichloroethene	96	3.319	3.328	-0.009	94	304142	200.0	196.2	
23 1,1,2-Trichloro-1,2,2-trif	101	3.398	3.389	0.009	94	341172	200.0	195.3	
24 Acetone	43	3.423	3.426	-0.003	100	279835	400.0	365.1	
25 Iodomethane	142	3.514	3.511	0.003	97	403300	200.0	188.4	
26 Carbon disulfide	76	3.611	3.626	-0.015	99	656311	200.0	190.8	
29 3-Chloro-1-propene	76	3.891	3.888	0.003	89	185220	200.0	203.1	
30 Methyl acetate	43	3.915	3.918	-0.003	96	497312	400.0	407.1	
31 Methylene Chloride	84	4.110	4.113	-0.003	85	456095	200.0	203.1	
32 2-Methyl-2-propanol	59	4.390	4.393	-0.003	94	390413	2000.0	2097.8	
33 Acrylonitrile	53	4.505	4.502	0.003	99	1540468	2000.0	2098.6	
34 trans-1,2-Dichloroethene	96	4.530	4.533	-0.003	95	414518	200.0	187.7	
35 Methyl tert-butyl ether	73	4.554	4.557	-0.003	94	1023677	200.0	206.1	
36 Hexane	57	4.950	4.953	-0.003	90	444698	200.0	189.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
37 1,1-Dichloroethane	63	5.169	5.172	-0.003	96	691716	200.0	190.8	
38 Vinyl acetate	43	5.223	5.226	-0.003	97	984145	200.0	258.0	
42 2,2-Dichloropropane	97	5.917	5.914	0.003	90	83861	200.0	207.6	
43 cis-1,2-Dichloroethene	96	5.923	5.926	-0.003	79	553176	200.0	191.3	
44 2-Butanone (MEK)	43	5.941	5.938	0.003	98	443740	400.0	401.1	
48 Chlorobromomethane	128	6.203	6.206	-0.003	96	218035	200.0	201.0	
49 Tetrahydrofuran	42	6.227	6.224	0.003	0	233077	400.0	401.7	
50 Chloroform	83	6.355	6.352	0.003	93	935865	200.0	206.9	
51 1,1,1-Trichloroethane	97	6.513	6.510	0.003	97	558181	200.0	196.7	
52 Cyclohexane	56	6.580	6.583	-0.003	83	597819	200.0	188.4	
53 Carbon tetrachloride	117	6.683	6.680	0.003	95	340723	200.0	197.4	
54 1,1-Dichloropropene	75	6.702	6.705	-0.003	98	601262	200.0	182.8	
55 Isobutyl alcohol	41	6.914	6.911	0.003	91	392414	5000.0	6439.2	
56 Benzene	78	6.921	6.917	0.004	96	2061934	200.0	190.0	
57 1,2-Dichloroethane	62	6.994	6.997	-0.003	98	665444	200.0	200.9	
59 n-Heptane	43	7.279	7.283	-0.003	87	362167	200.0	190.9	
61 Trichloroethene	130	7.651	7.654	-0.003	94	472132	200.0	188.0	
63 Methylcyclohexane	83	7.882	7.885	-0.003	83	750472	200.0	178.4	
64 1,2-Dichloropropane	63	7.924	7.927	-0.003	94	528860	200.0	195.7	
67 Dibromomethane	93	8.016	8.019	-0.003	87	333295	200.0	206.7	
65 1,4-Dioxane	88	8.016	8.019	-0.003	52	156995	4000.0	4208.4	
68 Dichlorobromomethane	83	8.210	8.213	-0.003	99	708282	200.0	223.4	
71 cis-1,3-Dichloropropene	75	8.654	8.657	-0.003	96	886136	200.0	233.8	
72 4-Methyl-2-pentanone (MIBK	43	8.819	8.816	0.003	94	1003209	400.0	428.3	
73 Toluene	91	8.989	8.986	0.003	98	2987170	200.0	185.1	
74 trans-1,3-Dichloropropene	75	9.238	9.241	-0.003	92	818855	200.0	237.3	
75 Ethyl methacrylate	69	9.299	9.302	-0.003	87	879513	200.0	229.3	
76 1,1,2-Trichloroethane	97	9.433	9.430	0.003	90	648080	200.0	192.4	
77 Tetrachloroethene	164	9.500	9.497	0.003	92	376941	200.0	194.7	
78 1,3-Dichloropropane	76	9.591	9.588	0.003	87	1104833	200.0	195.9	
79 2-Hexanone	43	9.652	9.655	-0.003	94	719058	400.0	434.5	
81 Chlorodibromomethane	129	9.804	9.807	-0.003	90	406332	200.0	229.5	
82 Ethylene Dibromide	107	9.914	9.917	-0.003	98	585723	200.0	204.5	
84 Chlorobenzene	112	10.406	10.403	0.003	95	2125219	200.0	188.6	
86 1,1,1,2-Tetrachloroethane	131	10.498	10.501	-0.003	89	485301	200.0	224.0	
87 Ethylbenzene	106	10.504	10.507	-0.003	98	1214459	200.0	186.0	
88 m-Xylene & p-Xylene	106	10.638	10.634	0.004	99	1503573	200.0	188.3	
89 o-Xylene	106	11.015	11.018	-0.003	96	1508533	200.0	192.2	
90 Styrene	104	11.039	11.042	-0.003	95	2737653	200.0	207.2	
91 Bromoform	173	11.222	11.219	0.004	89	194074	200.0	271.7	
93 Isopropylbenzene	105	11.386	11.389	-0.003	95	3944429	200.0	192.3	
95 Bromobenzene	156	11.702	11.699	0.003	93	700305	200.0	190.4	
96 1,1,2,2-Tetrachloroethane	83	11.702	11.699	0.003	93	867310	200.0	215.0	
97 trans-1,4-Dichloro-2-buten	53	11.739	11.742	-0.003	79	171889	200.0	219.9	
98 1,2,3-Trichloropropane	110	11.757	11.754	0.003	85	268565	200.0	194.4	
99 N-Propylbenzene	120	11.806	11.803	0.004	99	985660	200.0	185.6	
100 2-Chlorotoluene	126	11.891	11.888	0.003	95	789779	200.0	189.5	
102 1,3,5-Trimethylbenzene	105	11.988	11.985	0.003	93	3156226	200.0	195.8	
103 4-Chlorotoluene	126	12.012	12.015	-0.003	98	858144	200.0	194.0	
104 tert-Butylbenzene	119	12.298	12.301	-0.003	92	2452030	200.0	188.1	
106 1,2,4-Trimethylbenzene	105	12.359	12.362	-0.003	97	3259127	200.0	200.2	
108 sec-Butylbenzene	105	12.523	12.526	-0.003	94	3773354	200.0	188.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
109 1,3-Dichlorobenzene	146	12.645	12.642	0.003	95	1373217	200.0	194.9	
110 4-Isopropyltoluene	119	12.682	12.679	0.003	97	2952717	200.0	193.8	
111 1,4-Dichlorobenzene	146	12.749	12.745	0.004	91	1419293	200.0	192.9	
116 n-Butylbenzene	91	13.089	13.086	0.003	99	2666246	200.0	193.2	
117 1,2-Dichlorobenzene	146	13.101	13.104	-0.003	93	1333588	200.0	196.7	
118 1,2-Dibromo-3-Chloropropan	75	13.892	13.895	-0.003	89	89874	200.0	276.5	
122 1,2,4-Trichlorobenzene	180	14.713	14.717	-0.003	92	491327	200.0	206.9	
123 Hexachlorobutadiene	225	14.859	14.856	0.003	91	153176	200.0	179.5	
124 Naphthalene	128	14.981	14.978	0.003	97	1595203	200.0	239.7	
125 1,2,3-Trichlorobenzene	180	15.200	15.203	-0.003	93	364782	200.0	213.9	
S 131 Xylenes, Total	106				0		400.0	380.4	
S 130 1,2-Dichloroethene, Total	96				0		400.0	379.0	
S 154 Total BTEX	1				0		1000.0	941.6	
S 132 1,3-Dichloropropene, Total	1				0		400.0	471.1	

Reagents:

voaWKetmix1st_00023	Amount Added:	8.00	Units: uL	
VOAVAPRI_00034	Amount Added:	8.00	Units: uL	
VOA8260SURR_00104	Amount Added:	8.00	Units: uL	
VOA8260VOAPRI_00392	Amount Added:	8.00	Units: uL	
VOAACRPRI_00025	Amount Added:	10.00	Units: uL	
VOA8260INT_00104	Amount Added:	2.00	Units: uL	Run Reagent

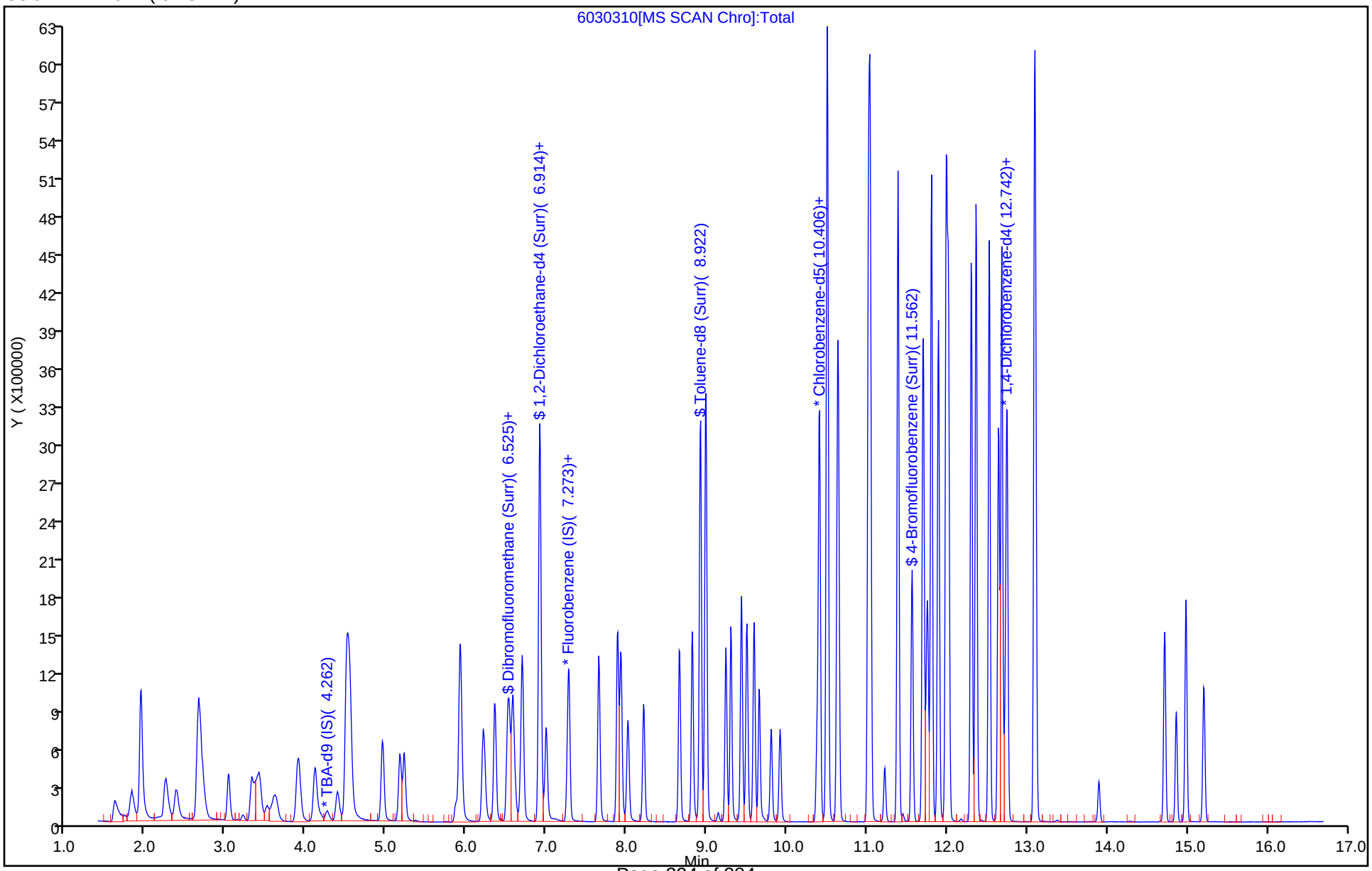
Report Date: 04-Mar-2020 07:29:19 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030310.D

Injection Date:	03-Mar-2020 12:38:30	Instrument ID:	CHHP6	Operator ID:	10099
Lims ID:	IC VSTD40			Worklist Smp#:	10
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D
Lims ID: IC VSTD50
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 03-Mar-2020 13:06:30 ALS Bottle#: 11 Worklist Smp#: 11
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-0031016-011
Operator ID: 10099 Instrument ID: CHHP6
Sublist: chrom-MSVOA_LL_CHHP6*sub121

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 04-Mar-2020 07:29:24 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0334

First Level Reviewer: gordonk Date: 04-Mar-2020 07:28:07

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.265	4.259	0.006	95	156017	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.264	7.264	0.000	99	562827	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.379	10.379	0.000	85	129494	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.721	12.721	0.000	95	170788	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.534	6.534	0.000	92	605190	250.0	264.7	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.912	6.911	0.001	97	772148	250.0	260.5	
$ 7 Toluene-d8 (Surr)	98	8.919	8.919	0.000	92	3092429	250.0	250.6	
$ 8 4-Bromofluorobenzene (Surr	95	11.559	11.559	0.000	0	1118294	250.0	261.4	
11 Dichlorodifluoromethane	85	1.607	1.613	-0.006	99	629663	250.0	208.7	
12 Chloromethane	50	1.820	1.820	0.000	99	676422	250.0	257.2	
14 Butadiene	39	1.935	1.935	0.000	91	632648	250.0	244.6	
13 Vinyl chloride	62	1.935	1.935	0.000	60	726087	250.0	231.4	
15 Bromomethane	94	2.233	2.245	-0.012	91	520542	250.0	246.4	
16 Chloroethane	64	2.373	2.373	0.000	99	515757	250.0	226.3	
17 Dichlorofluoromethane	67	2.653	2.659	-0.006	98	1301258	250.0	228.0	
18 Trichlorofluoromethane	101	2.677	2.677	0.000	94	1142495	250.0	222.1	
20 Ethyl ether	59	3.030	3.030	0.000	87	374319	250.0	249.9	
21 Acrolein	56	3.213	3.213	0.000	98	87444	275.0	292.2	
22 1,1-Dichloroethene	96	3.316	3.328	-0.012	95	376654	250.0	259.2	
23 1,1,2-Trichloro-1,2,2-trif	101	3.389	3.389	0.000	94	410947	250.0	250.9	
24 Acetone	43	3.426	3.426	0.000	100	406271	500.0	563.2	
25 Iodomethane	142	3.511	3.511	0.000	98	503355	250.0	249.8	
26 Carbon disulfide	76	3.620	3.626	-0.006	99	832575	250.0	257.1	
29 3-Chloro-1-propene	76	3.894	3.888	0.006	88	223447	250.0	260.2	
30 Methyl acetate	43	3.912	3.918	-0.006	96	632219	500.0	549.8	
31 Methylene Chloride	84	4.107	4.113	-0.006	84	554521	250.0	265.4	
32 2-Methyl-2-propanol	59	4.393	4.393	0.000	95	476469	2500.0	2490.9	
33 Acrylonitrile	53	4.503	4.502	0.000	99	1888050	2500.0	2732.6	
34 trans-1,2-Dichloroethene	96	4.527	4.533	-0.006	96	519580	250.0	249.9	
35 Methyl tert-butyl ether	73	4.551	4.557	-0.006	94	1280451	250.0	273.9	
36 Hexane	57	4.953	4.953	0.000	89	555185	250.0	252.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
37 1,1-Dichloroethane	63	5.166	5.172	-0.006	96	875196	250.0	256.5	
38 Vinyl acetate	43	5.220	5.226	-0.006	97	1060162	250.0	295.3	
42 2,2-Dichloropropane	97	5.914	5.914	0.000	92	105255	250.0	276.8	
43 cis-1,2-Dichloroethene	96	5.920	5.926	-0.006	78	694655	250.0	255.3	
44 2-Butanone (MEK)	43	5.938	5.938	0.000	97	584736	500.0	561.5	
48 Chlorobromomethane	128	6.206	6.206	0.000	96	267012	250.0	261.5	
49 Tetrahydrofuran	42	6.230	6.224	0.006	0	287893	500.0	527.1	
50 Chloroform	83	6.352	6.352	0.000	93	1150086	250.0	271.9	
51 1,1,1-Trichloroethane	97	6.510	6.510	0.000	98	696865	250.0	260.9	
52 Cyclohexane	56	6.577	6.583	-0.006	83	748133	250.0	251.4	
53 Carbon tetrachloride	117	6.680	6.680	0.000	95	438108	250.0	269.7	
54 1,1-Dichloropropene	75	6.699	6.705	-0.006	98	748162	250.0	241.6	
55 Isobutyl alcohol	41	6.918	6.911	0.007	93	466654	6250.0	8135.2	
56 Benzene	78	6.918	6.917	0.001	96	2570011	250.0	251.6	
57 1,2-Dichloroethane	62	6.991	6.997	-0.006	98	824825	250.0	264.6	
59 n-Heptane	43	7.277	7.283	-0.005	86	444103	250.0	249.8	
61 Trichloroethene	130	7.654	7.654	0.000	93	608542	250.0	257.4	
63 Methylcyclohexane	83	7.885	7.885	0.000	83	919870	250.0	232.3	
64 1,2-Dichloropropane	63	7.927	7.927	0.000	94	662345	250.0	260.4	
65 1,4-Dioxane	88	8.013	8.019	-0.006	52	184519	5000.0	5254.9	
67 Dibromomethane	93	8.013	8.019	-0.006	87	410041	250.0	270.1	
68 Dichlorobromomethane	83	8.213	8.213	0.000	99	885382	250.0	296.7	
71 cis-1,3-Dichloropropene	75	8.658	8.657	0.001	96	1128012	250.0	316.2	
72 4-Methyl-2-pentanone (MIBK	43	8.816	8.816	0.000	94	1277481	500.0	578.9	
73 Toluene	91	8.986	8.986	0.000	98	3725710	250.0	245.0	
74 trans-1,3-Dichloropropene	75	9.235	9.241	-0.006	93	1043353	250.0	320.9	
75 Ethyl methacrylate	69	9.302	9.302	0.000	87	1103822	250.0	305.6	
76 1,1,2-Trichloroethane	97	9.430	9.430	0.000	90	792966	250.0	249.9	
77 Tetrachloroethene	164	9.497	9.497	0.000	91	461328	250.0	254.0	
78 1,3-Dichloropropane	76	9.588	9.588	0.000	88	1358252	250.0	255.7	
79 2-Hexanone	43	9.655	9.655	0.000	93	914372	500.0	586.5	
81 Chlorodibromomethane	129	9.801	9.807	-0.006	91	512804	250.0	307.5	
82 Ethylene Dibromide	107	9.911	9.917	-0.006	97	734298	250.0	272.1	
84 Chlorobenzene	112	10.403	10.403	0.000	95	2656682	250.0	250.3	
86 1,1,1,2-Tetrachloroethane	131	10.501	10.501	0.000	90	612032	250.0	299.9	
87 Ethylbenzene	106	10.507	10.507	0.000	98	1537087	250.0	249.9	
88 m-Xylene & p-Xylene	106	10.635	10.634	0.001	99	1875357	250.0	249.3	
89 o-Xylene	106	11.018	11.018	0.000	96	1899467	250.0	256.9	
90 Styrene	104	11.042	11.042	0.000	95	3415686	250.0	274.4	
91 Bromoform	173	11.219	11.219	0.001	90	252916	250.0	375.9	
93 Isopropylbenzene	105	11.383	11.389	-0.006	95	4902648	250.0	253.7	
96 1,1,2,2-Tetrachloroethane	83	11.699	11.699	0.000	93	1022151	250.0	269.0	
95 Bromobenzene	156	11.699	11.699	0.000	93	871385	250.0	242.4	
97 trans-1,4-Dichloro-2-buten	53	11.742	11.742	0.000	82	213406	250.0	279.4	
98 1,2,3-Trichloropropane	110	11.760	11.754	0.006	85	334070	250.0	247.5	
99 N-Propylbenzene	120	11.803	11.803	0.001	99	1229284	250.0	236.9	
100 2-Chlorotoluene	126	11.894	11.888	0.006	95	982641	250.0	241.3	
102 1,3,5-Trimethylbenzene	105	11.985	11.985	0.000	93	3923988	250.0	249.0	
103 4-Chlorotoluene	126	12.016	12.015	0.001	97	1050952	250.0	243.1	
104 tert-Butylbenzene	119	12.302	12.301	0.001	92	3043416	250.0	238.9	
106 1,2,4-Trimethylbenzene	105	12.362	12.362	0.000	97	4009625	250.0	252.0	
108 sec-Butylbenzene	105	12.527	12.526	0.001	94	4701426	250.0	240.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
109 1,3-Dichlorobenzene	146	12.642	12.642	0.000	95	1693462	250.0	246.0	
110 4-Isopropyltoluene	119	12.679	12.679	0.000	97	3666082	250.0	246.2	
111 1,4-Dichlorobenzene	146	12.746	12.745	0.001	92	1747458	250.0	243.0	
116 n-Butylbenzene	91	13.086	13.086	0.000	99	3307039	250.0	245.2	
117 1,2-Dichlorobenzene	146	13.105	13.104	0.001	95	1629046	250.0	245.8	
118 1,2-Dibromo-3-Chloropropan	75	13.895	13.895	0.000	75	111508	250.0	351.1	
122 1,2,4-Trichlorobenzene	180	14.717	14.717	0.001	92	592210	250.0	255.1	
123 Hexachlorobutadiene	225	14.863	14.856	0.007	91	184941	250.0	221.8	
124 Naphthalene	128	14.978	14.978	0.000	97	1921840	250.0	295.5	
125 1,2,3-Trichlorobenzene	180	15.203	15.203	0.000	95	432098	250.0	259.2	
S 131 Xylenes, Total	106				0		500.0	506.2	
S 130 1,2-Dichloroethene, Total	96				0		500.0	505.2	
S 154 Total BTEX	1				0		1250.0	1252.8	
S 132 1,3-Dichloropropene, Total	1				0		500.0	637.1	

Reagents:

VOAACRPRI_00025	Amount Added:	11.00	Units: uL	
voaWKetmix1st_00023	Amount Added:	10.00	Units: uL	
VOAVAPRI_00034	Amount Added:	10.00	Units: uL	
VOA8260SURR_00104	Amount Added:	10.00	Units: uL	
VOA8260VOAPRI_00392	Amount Added:	10.00	Units: uL	
VOA8260INT_00104	Amount Added:	2.00	Units: uL	Run Reagent

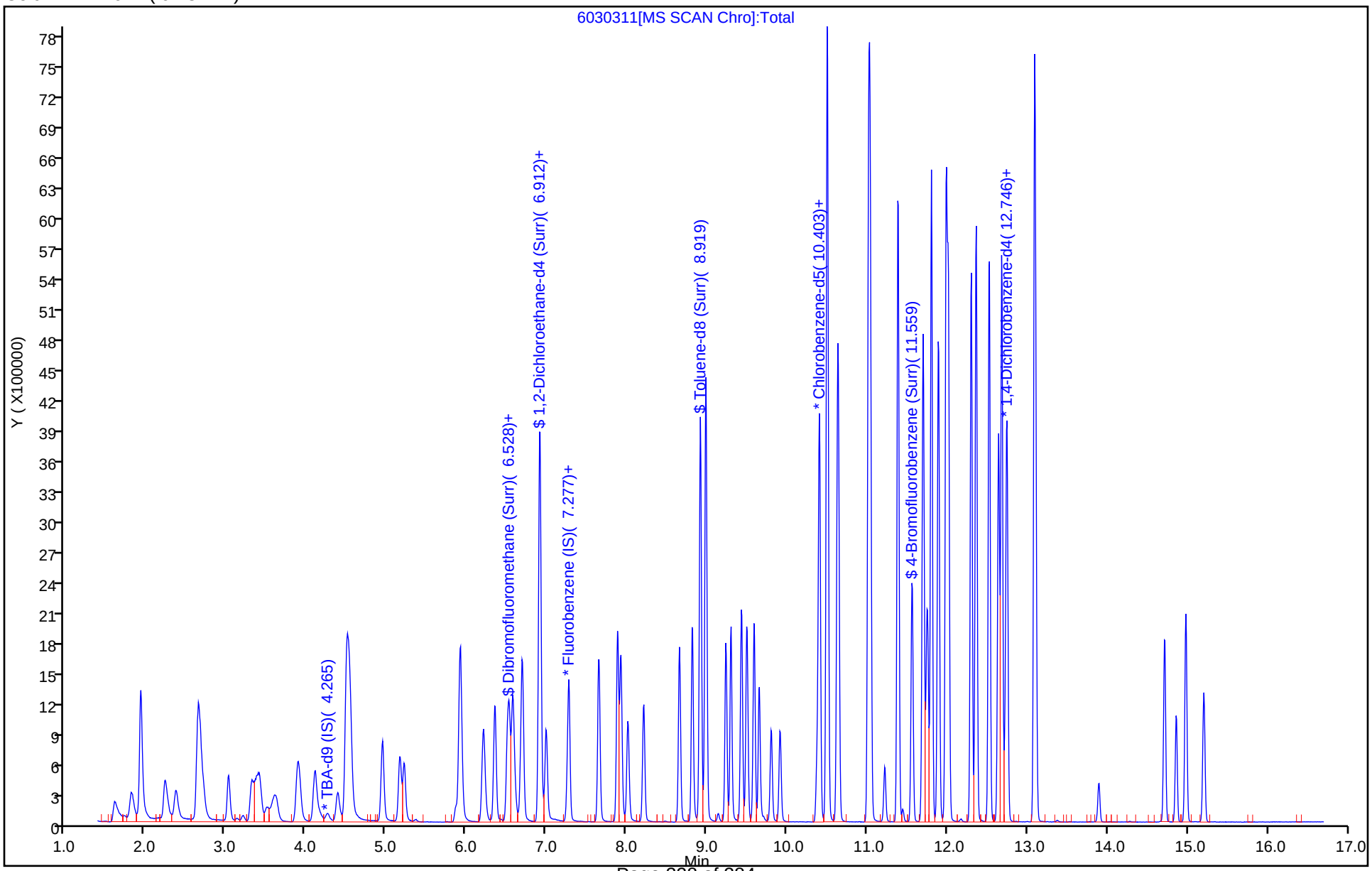
Report Date: 04-Mar-2020 07:29:25 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Injection Date:	03-Mar-2020 13:06:30	Instrument ID:	CHHP6	Operator ID:	10099
Lims ID:	IC VSTD50			Worklist Smp#:	11
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	MSVOA_LL_CHHP6	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.: 180-102790-1

SDG No.:

Lab Sample ID: CCVIS 180-309079/2 Calibration Date: 03/06/2020 07:32

Instrument ID: CHHP6 Calib Start Date: 03/03/2020 09:52

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 03/03/2020 13:06

Lab File ID: 6030602.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	0.2680	0.2951	0.1000	11.0	10.0	10.1	20.0
Chloromethane	Lin2		0.2451	0.1000	9.94	10.0	-0.6	20.0
1,3-Butadiene	Lin2		0.2509	0.0100	10.3	10.0	3.5	20.0
Vinyl chloride	Ave	0.2787	0.2663	0.1000	9.56	10.0	-4.4	20.0
Bromomethane	Lin2		0.1981	0.0500	10.0	10.0	0.2	20.0
Chloroethane	Ave	0.2025	0.1956	0.0500	9.66	10.0	-3.4	20.0
Dichlorofluoromethane	Ave	0.5070	0.4805	0.0100	9.48	10.0	-5.2	20.0
Trichlorofluoromethane	Lin2		0.4951	0.1000	10.4	10.0	3.7	20.0
Ethyl ether	Ave	0.1330	0.1076	0.0100	8.09	10.0	-19.1	20.0
1,1-Dichloroethene	Lin2		0.1371	0.1000	10.0	10.0	0.5	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Lin2		0.1553	0.1000	10.1	10.0	1.0	20.0
Acetone	Ave	0.0641	0.0511	0.0500	16.0	20.0	-20.2*	20.0
Iodomethane	Ave	0.1790	0.1537	0.0100	8.59	10.0	-14.1	20.0
Carbon disulfide	Ave	0.2877	0.2835	0.1000	9.85	10.0	-1.5	20.0
Allyl chloride	Ave	0.0763	0.0691	0.0100	9.06	10.0	-9.4	20.0
Methyl acetate	Ave	0.1022	0.0739*	0.1000	14.5	20.0	-27.7*	20.0
Methylene Chloride	Lin2		0.1819	0.1000	8.06	10.0	-19.4	20.0
tert-Butyl alcohol	Ave	1.226	1.086	0.0100	88.6	100	-11.4	20.0
Acrylonitrile	Ave	0.0614	0.0494	0.0100	80.4	100	-19.6	20.0
trans-1,2-Dichloroethene	Ave	0.1847	0.1679	0.1000	9.09	10.0	-9.1	20.0
Methyl tert-butyl ether	Ave	0.4153	0.3183	0.1000	7.67	10.0	-23.3*	20.0
Hexane	Lin2		0.1928	0.0100	9.28	10.0	-7.2	20.0
1,1-Dichloroethane	Ave	0.3031	0.2712	0.2000	8.95	10.0	-10.5	20.0
2,2-Dichloropropane	Ave	0.0338	0.0289	0.0100	8.55	10.0	-14.5	20.0
cis-1,2-Dichloroethene	Ave	0.2417	0.2009	0.1000	8.31	10.0	-16.9	20.0
2-Butanone (MEK)	Ave	0.0925	0.0801	0.0500	17.3	20.0	-13.4	20.0
Bromochloromethane	Ave	0.0907	0.0754	0.0100	8.31	10.0	-16.9	20.0
Tetrahydrofuran	Ave	0.0485	0.0378	0.0100	15.6	20.0	-22.0*	20.0
Chloroform	Lin2		0.3574	0.2000	8.55	10.0	-14.5	20.0
1,1,1-Trichloroethane	Ave	0.2372	0.2170	0.1000	9.15	10.0	-8.5	20.0
Cyclohexane	Lin2		0.2552	0.1000	9.18	10.0	-8.2	20.0
Carbon tetrachloride	Ave	0.1443	0.1415	0.1000	9.80	10.0	-2.0	20.0
1,1-Dichloropropene	Ave	0.2751	0.2531	0.0100	9.20	10.0	-8.0	20.0
Isobutyl alcohol	Ave	0.0051	0.0037*	0.0100	179	250	-28.3*	20.0
Benzene	Ave	0.9073	0.7947	0.5000	8.76	10.0	-12.4	20.0
1,2-Dichloroethane	Ave	0.2769	0.2255	0.1000	8.14	10.0	-18.6	20.0
n-Heptane	Lin2		0.1611	0.0100	9.61	10.0	-3.9	20.0
Trichloroethene	Ave	0.2100	0.1848*	0.2000	8.80	10.0	-12.0	20.0
Methylcyclohexane	Ave	0.3518	0.3112	0.1000	8.85	10.0	-11.5	20.0
1,2-Dichloropropane	Ave	0.2259	0.1855	0.1000	8.21	10.0	-17.9	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-102790-1

SDG No.:

Lab Sample ID: CCVIS 180-309079/2 Calibration Date: 03/06/2020 07:32

Instrument ID: CHHP6 Calib Start Date: 03/03/2020 09:52

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 03/03/2020 13:06

Lab File ID: 6030602.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
Dibromomethane	Ave	0.1348	0.1083	0.0100	8.03	10.0	-19.7	20.0
1,4-Dioxane	Ave	0.0031	0.0027*	0.0100	173	200	-13.4	20.0
Bromodichloromethane	Ave	0.2651	0.2233	0.2000	8.43	10.0	-15.7	20.0
cis-1,3-Dichloropropene	Ave	0.3169	0.2487	0.2000	7.85	10.0	-21.5*	20.0
4-Methyl-2-pentanone (MIBK)	Ave	0.8520	0.7655	0.1000	18.0	20.0	-10.2	20.0
Toluene	Ave	5.871	5.244	0.4000	8.93	10.0	-10.7	20.0
trans-1,3-Dichloropropene	Ave	1.255	0.9867	0.1000	7.86	10.0	-21.4*	20.0
Ethyl methacrylate	Ave	1.395	1.070	0.0100	7.67	10.0	-23.3*	20.0
1,1,2-Trichloroethane	Ave	1.225	1.034	0.1000	8.44	10.0	-15.6	20.0
Tetrachloroethene	Lin2		0.7230	0.2000	9.76	10.0	-2.4	20.0
1,3-Dichloropropane	Ave	2.051	1.742	0.0100	8.49	10.0	-15.1	20.0
2-Hexanone	Ave	0.6020	0.5374	0.1000	17.9	20.0	-10.7	20.0
Dibromochloromethane	Ave	0.6439	0.5752	0.1000	8.93	10.0	-10.7	20.0
1,2-Dibromoethane (EDB)	Ave	1.042	0.8670	0.1000	8.32	10.0	-16.8	20.0
Chlorobenzene	Ave	4.098	3.533	0.5000	8.62	10.0	-13.8	20.0
1,1,1,2-Tetrachloroethane	Ave	0.7879	0.7303	0.0100	9.27	10.0	-7.3	20.0
Ethylbenzene	Ave	2.375	2.091	0.1000	8.80	10.0	-12.0	20.0
m-Xylene & p-Xylene	Ave	2.905	2.585	0.1000	8.90	10.0	-11.0	20.0
o-Xylene	Ave	2.855	2.429	0.3000	8.51	10.0	-14.9	20.0
Styrene	Ave	4.806	4.157	0.3000	8.65	10.0	-13.5	20.0
Bromoform	Ave	0.2598	0.2562	0.1000	9.86	10.0	-1.4	20.0
Isopropylbenzene	Ave	7.462	6.559	0.1000	8.79	10.0	-12.1	20.0
Bromobenzene	Ave	1.052	0.8978	0.0100	8.53	10.0	-14.7	20.0
1,1,2,2-Tetrachloroethane	Ave	1.467	1.244	0.3000	8.48	10.0	-15.2	20.0
trans-1,4-Dichloro-2-butene	Ave	0.2236	0.1687	0.0100	7.54	10.0	-24.6*	20.0
1,2,3-Trichloropropane	Ave	0.3952	0.3423	0.0100	8.66	10.0	-13.4	20.0
N-Propylbenzene	Ave	1.519	1.372	0.0100	9.03	10.0	-9.7	20.0
2-Chlorotoluene	Ave	1.192	1.049	0.0100	8.80	10.0	-12.0	20.0
1,3,5-Trimethylbenzene	Ave	4.613	4.064	0.0100	8.81	10.0	-11.9	20.0
4-Chlorotoluene	Ave	1.265	1.085	0.0100	8.57	10.0	-14.3	20.0
tert-Butylbenzene	Ave	3.730	3.309	0.0100	8.87	10.0	-11.3	20.0
1,2,4-Trimethylbenzene	Ave	4.658	4.067	0.0100	8.73	10.0	-12.7	20.0
sec-Butylbenzene	Ave	5.723	5.248	0.0100	9.17	10.0	-8.3	20.0
1,3-Dichlorobenzene	Ave	2.016	1.698	0.6000	8.43	10.0	-15.7	20.0
4-Isopropyltoluene	Ave	4.360	3.985	0.0100	9.14	10.0	-8.6	20.0
1,4-Dichlorobenzene	Ave	2.105	1.741	0.5000	8.27	10.0	-17.3	20.0
n-Butylbenzene	Ave	3.948	3.681	0.0100	9.32	10.0	-6.8	20.0
1,2-Dichlorobenzene	Ave	1.940	1.554	0.4000	8.01	10.0	-19.9	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0930	0.0844	0.0500	9.07	10.0	-9.3	20.0
1,2,4-Trichlorobenzene	Ave	0.6796	0.5091	0.2000	7.49	10.0	-25.1*	20.0
Hexachlorobutadiene	Ave	0.2441	0.2598	0.0100	10.6	10.0	6.4	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-102790-1

SDG No.:

Lab Sample ID: CCVIS 180-309079/2 Calibration Date: 03/06/2020 07:32

Instrument ID: CHHP6 Calib Start Date: 03/03/2020 09:52

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 03/03/2020 13:06

Lab File ID: 6030602.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	Ave	1.904	1.176	0.0100	6.18	10.0	-38.2*	20.0
1,2,3-Trichlorobenzene	Ave	0.4881	0.3212	0.0100	6.58	10.0	-34.2*	20.0
Dibromofluoromethane (Surr)	Ave	0.2031	0.1682		8.28	10.0	-17.2	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2634	0.2042		7.75	10.0	-22.5*	20.0
Toluene-d8 (Surr)	Ave	4.766	4.202		8.82	10.0	-11.8	20.0
4-Bromofluorobenzene (Surr)	Ave	1.652	1.371		8.30	10.0	-17.0	20.0

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030602.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 06-Mar-2020 07:32:30 ALS Bottle#: 2 Worklist Smp#: 2
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCVIS
Operator ID: 10099 Instrument ID: CHHP6
Sublist: chrom-MSVOA_LL_CHHP6*sub133

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 06-Mar-2020 10:25:23 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0335

First Level Reviewer: gordonk Date: 06-Mar-2020 07:52:19

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.249	4.249	0.000	96	121218	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.261	7.261	0.000	99	592876	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.375	10.375	0.000	86	121172	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.717	12.717	0.000	96	146108	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.537	6.537	0.000	90	99707	50.0	41.4	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.908	6.908	0.000	96	121065	50.0	38.8	
$ 7 Toluene-d8 (Surr)	98	8.915	8.915	0.000	93	509164	50.0	44.1	
$ 8 4-Bromofluorobenzene (Surr	95	11.562	11.562	0.000	0	166087	50.0	41.5	
11 Dichlorodifluoromethane	85	1.615	1.615	0.000	99	174963	50.0	55.1	
12 Chloromethane	50	1.828	1.828	0.000	98	145292	50.0	49.7	
14 Butadiene	39	1.938	1.938	0.000	90	148769	50.0	51.7	
13 Vinyl chloride	62	1.938	1.938	0.000	64	157894	50.0	47.8	
15 Bromomethane	94	2.260	2.260	0.000	92	117426	50.0	50.1	
16 Chloroethane	64	2.382	2.382	0.000	99	115985	50.0	48.3	
17 Dichlorofluoromethane	67	2.661	2.661	0.000	97	284892	50.0	47.4	
18 Trichlorofluoromethane	101	2.686	2.686	0.000	98	293532	50.0	51.8	
20 Ethyl ether	59	3.027	3.027	0.000	86	63807	50.0	40.4	
22 1,1-Dichloroethene	96	3.325	3.325	0.000	95	81298	50.0	50.2	
23 1,1,2-Trichloro-1,2,2-trif	101	3.392	3.392	0.000	93	92051	50.0	50.5	
24 Acetone	43	3.422	3.422	0.000	100	60642	100.0	79.8	
25 Iodomethane	142	3.519	3.519	0.000	94	91116	50.0	42.9	
26 Carbon disulfide	76	3.617	3.617	0.000	99	168060	50.0	49.3	
29 3-Chloro-1-propene	76	3.896	3.896	0.000	89	40994	50.0	45.3	
30 Methyl acetate	43	3.921	3.921	0.000	95	87571	100.0	72.3	
31 Methylene Chloride	84	4.115	4.115	0.000	86	107822	50.0	40.3	
32 2-Methyl-2-propanol	59	4.389	4.389	0.000	94	65808	500.0	442.8	
33 Acrylonitrile	53	4.505	4.505	0.000	99	292718	500.0	402.2	
34 trans-1,2-Dichloroethene	96	4.529	4.529	0.000	95	99514	50.0	45.4	
35 Methyl tert-butyl ether	73	4.553	4.553	0.000	95	188734	50.0	38.3	
36 Hexane	57	4.955	4.955	0.000	89	114322	50.0	46.4	
37 1,1-Dichloroethane	63	5.168	5.168	0.000	97	160797	50.0	44.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
42 2,2-Dichloropropane	97	5.916	5.916	0.000	54	17131	50.0	42.8	
43 cis-1,2-Dichloroethene	96	5.922	5.922	0.000	78	119121	50.0	41.6	
44 2-Butanone (MEK)	43	5.940	5.940	0.000	97	94968	100.0	86.6	
48 Chlorobromomethane	128	6.208	6.208	0.000	94	44674	50.0	41.5	
49 Tetrahydrofuran	42	6.226	6.226	0.000	0	44867	100.0	78.0	
50 Chloroform	83	6.354	6.354	0.000	92	211892	50.0	42.8	
51 1,1,1-Trichloroethane	97	6.512	6.512	0.000	97	128652	50.0	45.7	
52 Cyclohexane	56	6.579	6.579	0.000	83	151314	50.0	45.9	
53 Carbon tetrachloride	117	6.689	6.689	0.000	59	83868	50.0	49.0	
54 1,1-Dichloropropene	75	6.701	6.701	0.000	98	150072	50.0	46.0	
55 Isobutyl alcohol	41	6.908	6.908	0.000	39	54167	1250.0	896.4	
56 Benzene	78	6.914	6.914	0.000	96	471168	50.0	43.8	
57 1,2-Dichloroethane	62	6.993	6.993	0.000	98	133703	50.0	40.7	
59 n-Heptane	43	7.279	7.279	0.000	82	95532	50.0	48.0	
61 Trichloroethene	130	7.650	7.650	0.000	94	109574	50.0	44.0	
63 Methylcyclohexane	83	7.887	7.887	0.000	83	184517	50.0	44.2	
64 1,2-Dichloropropane	63	7.924	7.924	0.000	92	109970	50.0	41.0	
67 Dibromomethane	93	8.015	8.015	0.000	88	64179	50.0	40.1	
65 1,4-Dioxane	88	8.021	8.021	0.000	52	32018	1000.0	865.6	
68 Dichlorobromomethane	83	8.210	8.210	0.000	98	132409	50.0	42.1	
71 cis-1,3-Dichloropropene	75	8.660	8.660	0.000	96	147430	50.0	39.2	
72 4-Methyl-2-pentanone (MIBK	43	8.818	8.818	0.000	94	185503	100.0	89.8	
73 Toluene	91	8.988	8.988	0.000	98	635366	50.0	44.7	
74 trans-1,3-Dichloropropene	75	9.238	9.238	0.000	92	119565	50.0	39.3	
75 Ethyl methacrylate	69	9.299	9.299	0.000	86	129636	50.0	38.4	
76 1,1,2-Trichloroethane	97	9.432	9.432	0.000	89	125330	50.0	42.2	
77 Tetrachloroethene	164	9.499	9.499	0.000	92	87607	50.0	48.8	
78 1,3-Dichloropropane	76	9.591	9.591	0.000	88	211022	50.0	42.5	
79 2-Hexanone	43	9.651	9.651	0.000	93	130238	100.0	89.3	
81 Chlorodibromomethane	129	9.803	9.803	0.000	92	69701	50.0	44.7	
82 Ethylene Dibromide	107	9.913	9.913	0.000	98	105060	50.0	41.6	
84 Chlorobenzene	112	10.406	10.406	0.000	94	428061	50.0	43.1	
86 1,1,1,2-Tetrachloroethane	131	10.497	10.497	0.000	84	88492	50.0	46.3	
87 Ethylbenzene	106	10.503	10.503	0.000	98	253326	50.0	44.0	
88 m-Xylene & p-Xylene	106	10.637	10.637	0.000	99	313181	50.0	44.5	
89 o-Xylene	106	11.020	11.020	0.000	96	294352	50.0	42.5	
90 Styrene	104	11.038	11.038	0.000	95	503707	50.0	43.2	
91 Bromoform	173	11.221	11.221	0.000	90	31042	50.0	49.3	
93 Isopropylbenzene	105	11.385	11.385	0.000	95	794778	50.0	44.0	
95 Bromobenzene	156	11.695	11.695	0.000	92	131171	50.0	42.7	
96 1,1,2,2-Tetrachloroethane	83	11.702	11.702	0.000	93	150746	50.0	42.4	
97 trans-1,4-Dichloro-2-buten	53	11.738	11.738	0.000	71	24644	50.0	37.7	
98 1,2,3-Trichloropropane	110	11.756	11.756	0.000	86	50016	50.0	43.3	
99 N-Propylbenzene	120	11.805	11.805	0.000	99	200434	50.0	45.1	
100 2-Chlorotoluene	126	11.890	11.890	0.000	95	153338	50.0	44.0	
102 1,3,5-Trimethylbenzene	105	11.987	11.987	0.000	93	593720	50.0	44.0	
103 4-Chlorotoluene	126	12.012	12.012	0.000	98	158517	50.0	42.9	
104 tert-Butylbenzene	119	12.298	12.298	0.000	92	483429	50.0	44.4	
106 1,2,4-Trimethylbenzene	105	12.359	12.359	0.000	97	594185	50.0	43.7	
108 sec-Butylbenzene	105	12.523	12.523	0.000	94	766844	50.0	45.9	
109 1,3-Dichlorobenzene	146	12.638	12.638	0.000	94	248113	50.0	42.1	
110 4-Isopropyltoluene	119	12.681	12.681	0.000	97	582233	50.0	45.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
111 1,4-Dichlorobenzene	146	12.742	12.742	0.000	91	254348	50.0	41.3	
116 n-Butylbenzene	91	13.089	13.089	0.000	98	537786	50.0	46.6	
117 1,2-Dichlorobenzene	146	13.101	13.101	0.000	93	226992	50.0	40.0	
118 1,2-Dibromo-3-Chloropropan	75	13.892	13.892	0.000	70	12330	50.0	45.4	
122 1,2,4-Trichlorobenzene	180	14.713	14.713	0.000	92	74379	50.0	37.5	
123 Hexachlorobutadiene	225	14.853	14.853	0.000	93	37954	50.0	53.2	
124 Naphthalene	128	14.981	14.981	0.000	98	171881	50.0	30.9	
125 1,2,3-Trichlorobenzene	180	15.200	15.200	0.000	93	46932	50.0	32.9	
S 131 Xylenes, Total	106				0		100.0	87.0	
S 130 1,2-Dichloroethene, Total	96				0		100.0	87.0	
S 154 Total BTEX	1				0		250.0	219.5	
S 132 1,3-Dichloropropene, Total	1				0		100.0	78.5	

Reagents:

VOA8260VOA2ND_00395	Amount Added:	2.00	Units: uL	
voaWKet2ndRes_00049	Amount Added:	2.00	Units: uL	
VOA8260INT_00104	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00104	Amount Added:	2.00	Units: uL	Run Reagent

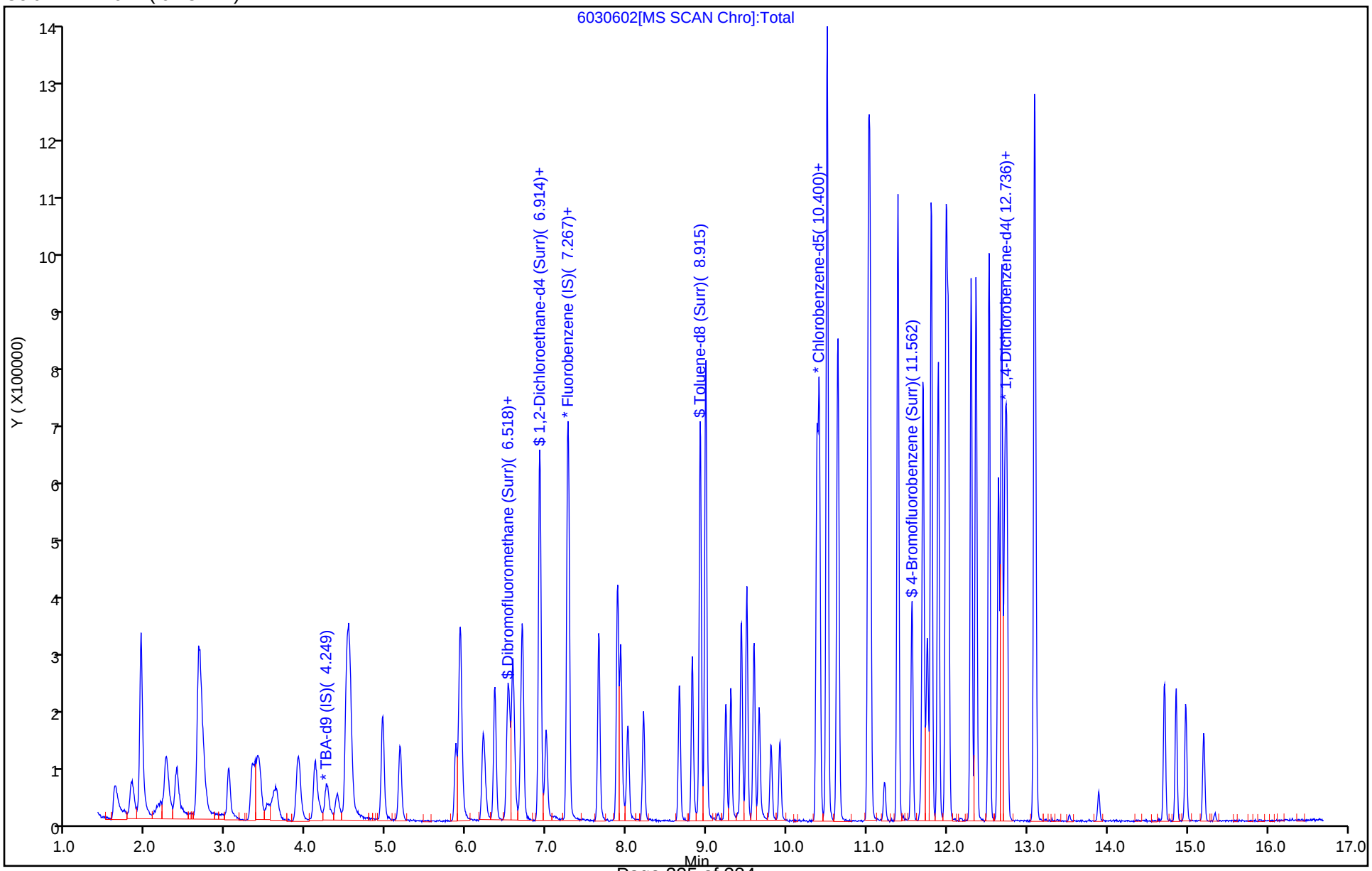
Report Date: 06-Mar-2020 10:25:24 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030602.D

Injection Date:	06-Mar-2020 07:32:30	Instrument ID:	CHHP6	Operator ID:	10099
Lims ID:	CCVIS			Worklist Smp#:	2
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030301A.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	03-Mar-2020 08:18:30	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	5.0 mL	Dil. Factor:	1.0000		
Sample Info:	BFB				
Misc. Info.:	bfb				
Operator ID:	10099	Instrument ID:	CHHP6		
Method:	\\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\MSVOA_LL_CHHP6.m				
Limit Group:	VOA 8260C_D ICAL				
Last Update:	04-Mar-2020 07:29:40	Calib Date:	03-Mar-2020 13:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D				
Column 1 :	DB-624 (0.18 mm)		Det: MS SCAN		
Process Host:	CTX0334				
First Level Reviewer: gordonk		Date:	03-Mar-2020 08:53:31		

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
$ 10 BFB	95	8.358	8.358	0.000	0	168556	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

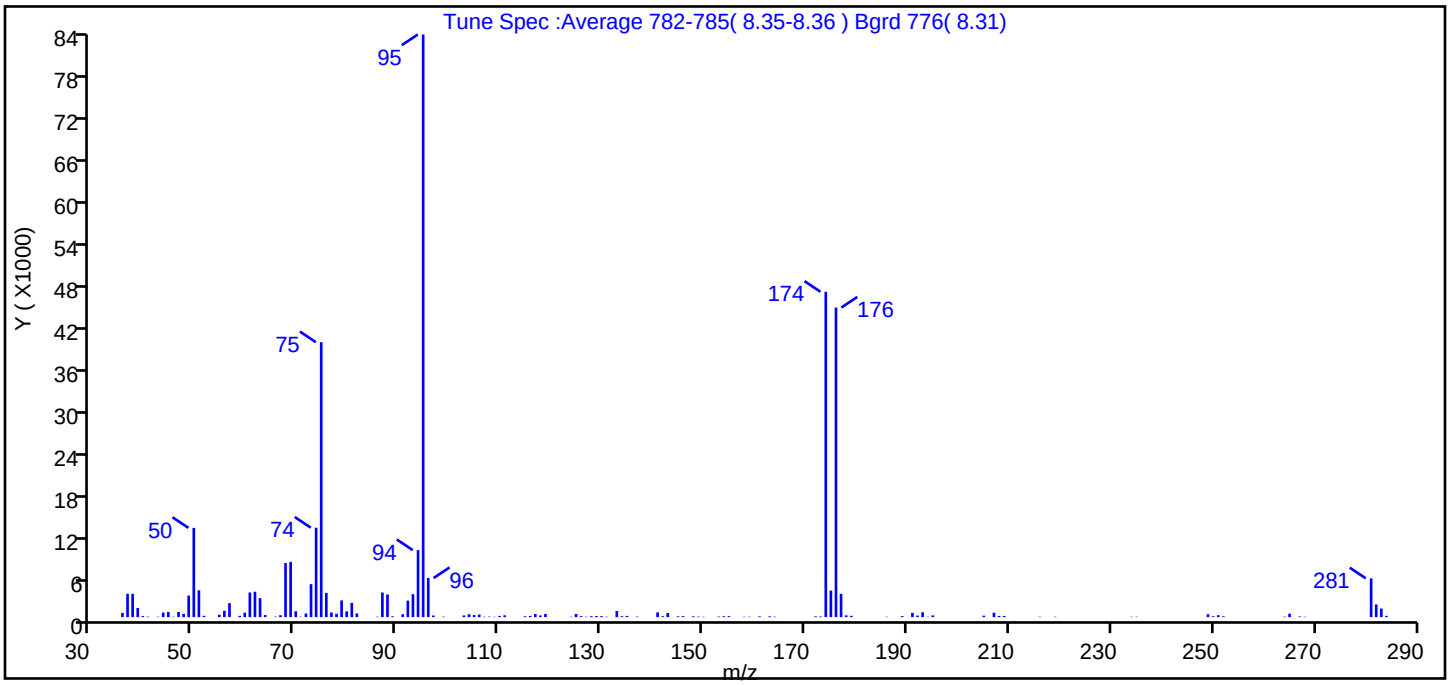
VOA BFB25_00007 Amount Added: 1.00 Units: uL

MS Tune Report

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030301A.D
Injection Date: 03-Mar-2020 08:18:30 Instrument ID: CHHP6
Lims ID: BFB
Client ID:
Operator ID: 10099 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP6 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	15.3
75	30 to 60% of m/z 95	47.2
96	5 to 9% of m/z 95	6.7
173	Less than 2% of m/z 174	0.1 (0.2)
174	50 to 120% of m/z 95	55.8
175	5 to 9% of m/z 174	4.6 (8.2)
176	Greater than 95% but less than 101% of m/z 174	53.1 (95.1)
177	5 to 9% of m/z 176	4.0 (7.5)

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030301A.D\MSVOA_LL_CHHP6.rslt\spectr
Injection Date: 03-Mar-2020 08:18:30
Spectrum: Tune Spec :Average 782-785(8.35-8.36) Bgrd 776(8.31)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 131

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	609	74.00	12871	118.00	236	175.00	3830
37.00	3365	75.00	39560	119.00	461	176.00	44544
38.00	3350	76.00	3486	124.00	59	177.00	3349
39.00	1324	77.00	670	125.00	463	178.00	257
40.00	152	78.00	489	126.00	133	179.00	194
41.00	66	79.00	2405	127.00	63	186.00	55
43.00	60	80.00	827	128.00	132	189.00	153
44.00	664	81.00	2058	129.00	160	191.00	620
45.00	758	82.00	527	130.00	139	192.00	229
46.00	58	86.00	55	131.00	59	193.00	700
47.00	739	87.00	3538	133.00	892	194.00	56
48.00	471	88.00	3262	134.00	136	195.00	250
49.00	3098	89.00	120	135.00	181	205.00	213
50.00	12842	91.00	414	137.00	75	207.00	634
51.00	3859	92.00	2379	141.00	681	208.00	171
52.00	186	93.00	3305	142.00	132	209.00	164
55.00	349	94.00	9648	143.00	595	216.00	58
56.00	919	95.00	83840	145.00	120	219.00	56
57.00	2018	96.00	5623	146.00	146	234.00	50
59.00	179	97.00	234	148.00	121	235.00	54
60.00	642	99.00	68	149.00	73	249.00	422
61.00	3547	103.00	245	150.00	53	250.00	125
62.00	3656	104.00	413	153.00	79	251.00	280
63.00	2732	105.00	301	154.00	126	252.00	119
64.00	301	106.00	371	155.00	141	264.00	65
66.00	71	107.00	57	158.00	58	265.00	497
67.00	275	108.00	76	159.00	61	267.00	92
68.00	7786	109.00	51	161.00	112	268.00	55
69.00	7944	110.00	180	163.00	115	281.00	5579
70.00	841	111.00	261	164.00	61	282.00	1827
71.00	60	115.00	124	172.00	115	283.00	1240
72.00	524	116.00	165	173.00	97	284.00	185
73.00	4749	117.00	452	174.00	46816		

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	609	74.00	12871	118.00	236	175.00	3830
37.00	3365	75.00	39560	119.00	461	176.00	44544
38.00	3350	76.00	3486	124.00	59	177.00	3349
39.00	1324	77.00	670	125.00	463	178.00	257
40.00	152	78.00	489	126.00	133	179.00	194
41.00	66	79.00	2405	127.00	63	186.00	55
43.00	60	80.00	827	128.00	132	189.00	153
44.00	664	81.00	2058	129.00	160	191.00	620
45.00	758	82.00	527	130.00	139	192.00	229
46.00	58	86.00	55	131.00	59	193.00	700
47.00	739	87.00	3538	133.00	892	194.00	56
48.00	471	88.00	3262	134.00	136	195.00	250
49.00	3098	89.00	120	135.00	181	205.00	213
50.00	12842	91.00	414	137.00	75	207.00	634
51.00	3859	92.00	2379	141.00	681	208.00	171
52.00	186	93.00	3305	142.00	132	209.00	164
55.00	349	94.00	9648	143.00	595	216.00	58
56.00	919	95.00	83840	145.00	120	219.00	56
57.00	2018	96.00	5623	146.00	146	234.00	50
59.00	179	97.00	234	148.00	121	235.00	54
60.00	642	99.00	68	149.00	73	249.00	422
61.00	3547	103.00	245	150.00	53	250.00	125
62.00	3656	104.00	413	153.00	79	251.00	280
63.00	2732	105.00	301	154.00	126	252.00	119
64.00	301	106.00	371	155.00	141	264.00	65
66.00	71	107.00	57	158.00	58	265.00	497
67.00	275	108.00	76	159.00	61	267.00	92
68.00	7786	109.00	51	161.00	112	268.00	55
69.00	7944	110.00	180	163.00	115	281.00	5579
70.00	841	111.00	261	164.00	61	282.00	1827
71.00	60	115.00	124	172.00	115	283.00	1240
72.00	524	116.00	165	173.00	97	284.00	185
73.00	4749	117.00	452	174.00	46816		

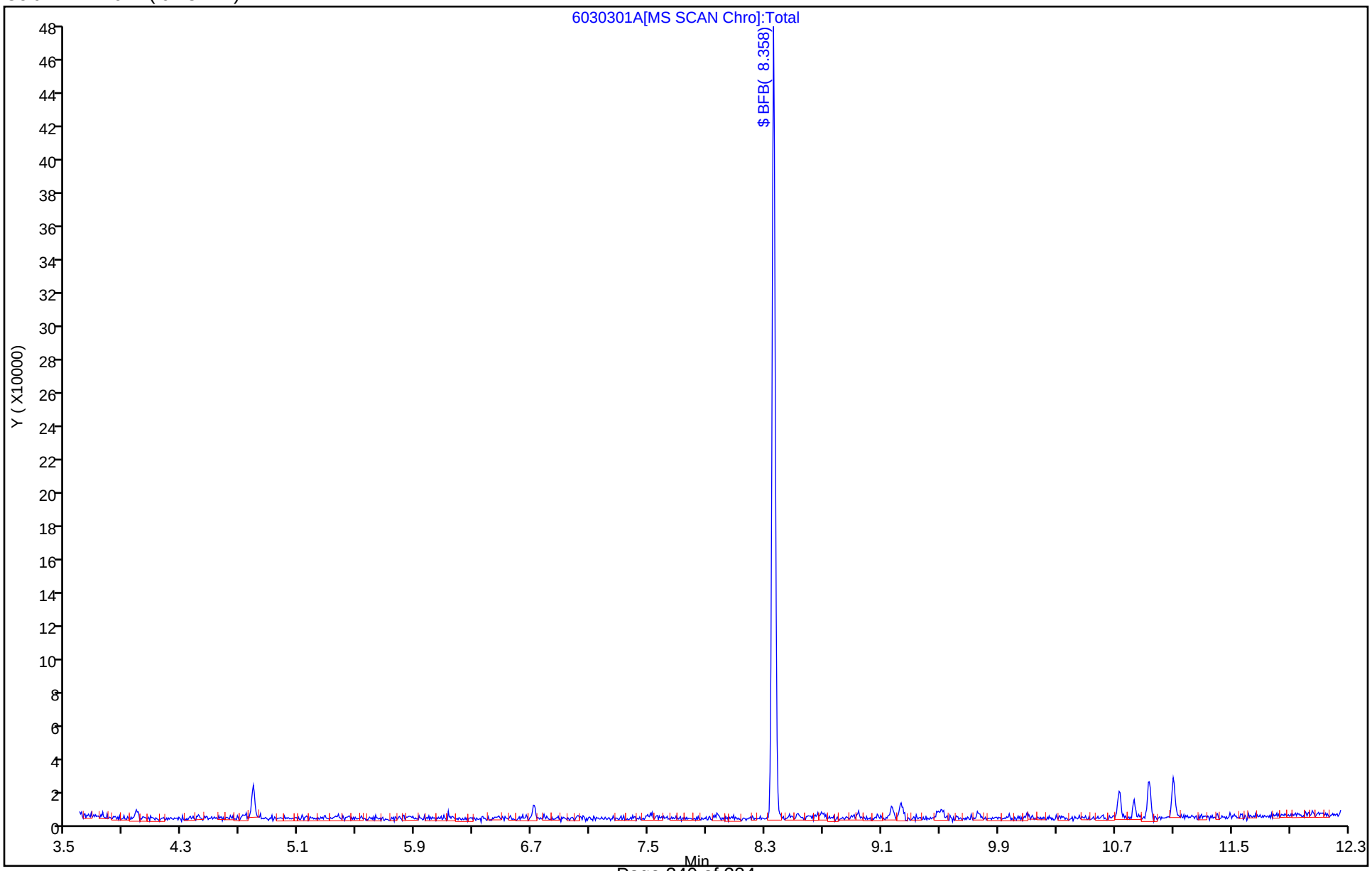
Report Date: 04-Mar-2020 07:29:40 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030301A.D

Injection Date:	03-Mar-2020 08:18:30	Instrument ID:	CHHP6	Operator ID:	10099
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030601A.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 06-Mar-2020 07:00:30 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: BFB
Operator ID: 10099 Instrument ID: CHHP6

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 06-Mar-2020 10:25:21 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0335

First Level Reviewer: gordonk Date: 06-Mar-2020 07:14:16

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
$ 10 BFB	95	8.357	8.357	0.000	0	171952	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

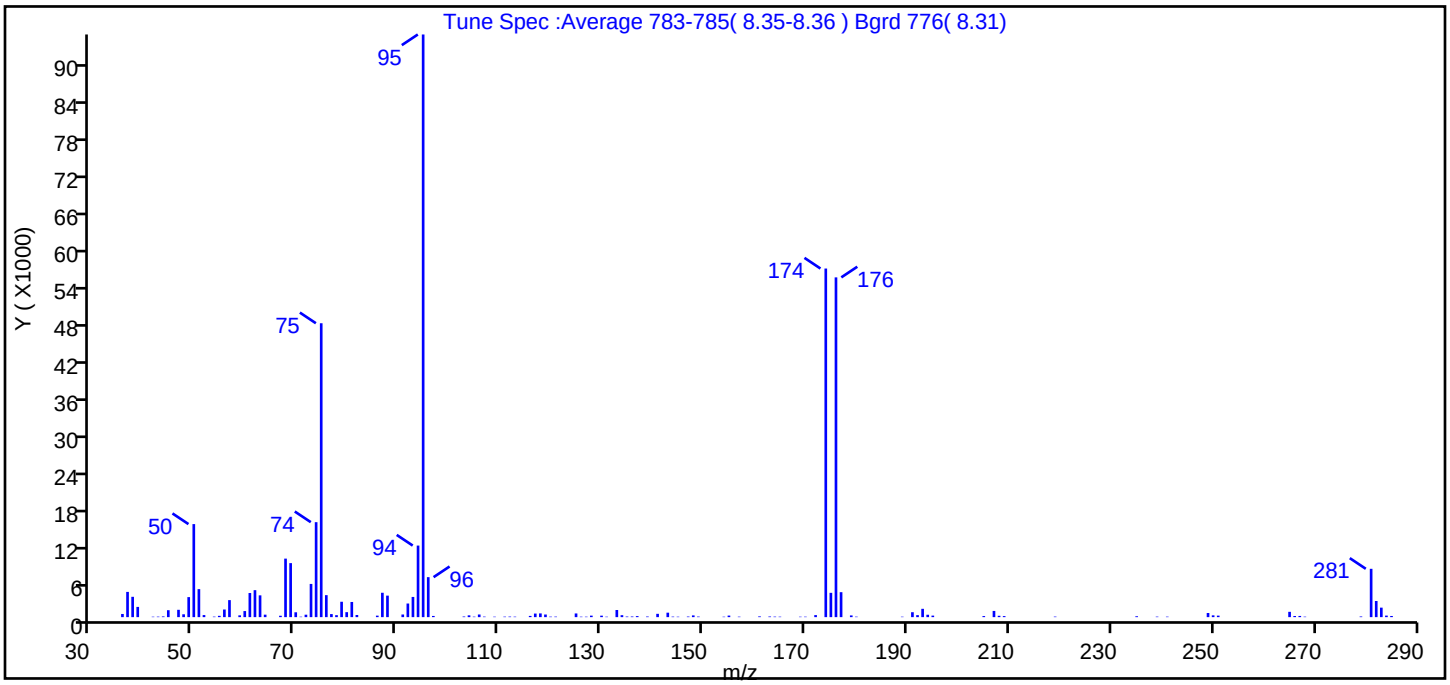
VOA BFB25_00007 Amount Added: 1.00 Units: uL

MS Tune Report

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030601A.D
Injection Date: 06-Mar-2020 07:00:30 Instrument ID: CHHP6
Lims ID: BFB
Client ID:
Operator ID: 10099 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP6 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	16.0
75	30 to 60% of m/z 95	50.4
96	5 to 9% of m/z 95	6.9
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	59.8
175	5 to 9% of m/z 174	4.2 (7.0)
176	Greater than 95% but less than 101% of m/z 174	58.3 (97.5)
177	5 to 9% of m/z 176	4.3 (7.3)

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030601A.D\MSVOA_LL_CHHP6.rslt\spectr
Injection Date: 06-Mar-2020 07:00:30
Spectrum: Tune Spec :Average 783-785(8.35-8.36) Bgrd 776(8.31)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 127

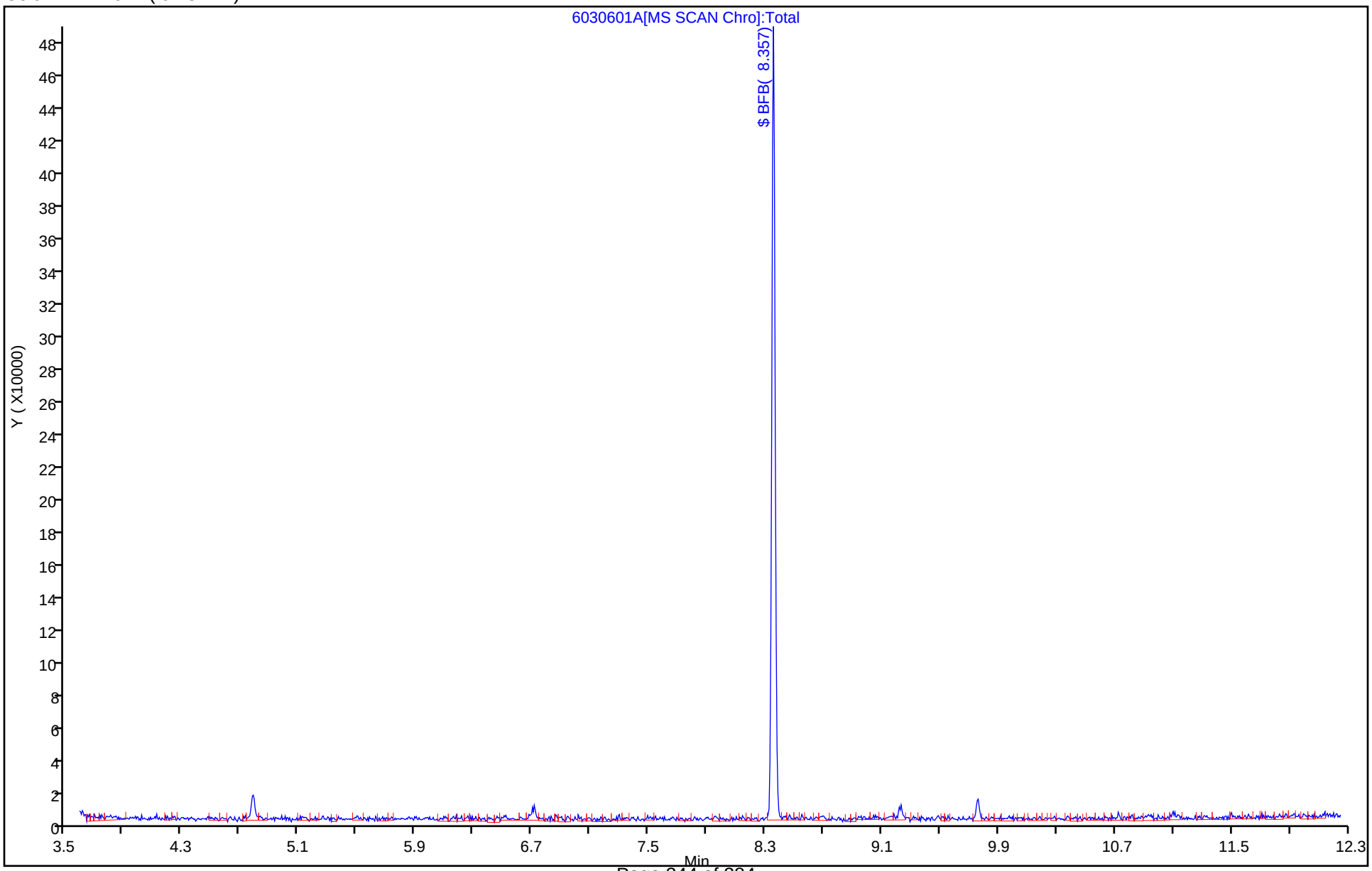
m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	513	75.00	47576	121.00	85	176.00	55000
37.00	4085	76.00	3560	125.00	598	177.00	4040
38.00	3291	77.00	495	126.00	75	179.00	277
39.00	1656	78.00	321	127.00	75	180.00	78
42.00	71	79.00	2491	128.00	244	189.00	72
43.00	82	80.00	805	130.00	240	191.00	798
44.00	114	81.00	2455	131.00	71	192.00	324
45.00	1123	82.00	349	133.00	1156	193.00	1348
47.00	1188	86.00	243	134.00	317	194.00	387
48.00	463	87.00	3946	135.00	97	195.00	248
49.00	3242	88.00	3482	136.00	105	205.00	172
50.00	15062	91.00	429	137.00	170	207.00	1005
51.00	4535	92.00	2205	139.00	101	208.00	220
52.00	336	93.00	3271	141.00	538	209.00	168
54.00	83	94.00	11586	143.00	722	219.00	87
55.00	212	95.00	94320	144.00	86	235.00	144
56.00	1237	96.00	6473	145.00	73	239.00	84
57.00	2756	97.00	193	147.00	96	241.00	79
59.00	290	103.00	102	148.00	281	249.00	670
60.00	984	104.00	292	149.00	91	250.00	291
61.00	3906	105.00	78	154.00	69	251.00	246
62.00	4367	106.00	427	155.00	253	265.00	861
63.00	3528	107.00	85	157.00	78	266.00	185
64.00	401	109.00	73	161.00	122	267.00	193
67.00	225	111.00	81	163.00	104	268.00	77
68.00	9474	112.00	91	164.00	84	279.00	108
69.00	8746	113.00	78	165.00	76	281.00	7824
70.00	786	116.00	199	169.00	71	282.00	2613
71.00	71	117.00	580	170.00	75	283.00	1539
72.00	396	118.00	606	172.00	330	284.00	251
73.00	5376	119.00	426	174.00	56432	285.00	189
74.00	15374	120.00	81	175.00	3935		

Report Date: 06-Mar-2020 10:25:21 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Pittsburgh

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030601A.D				
Injection Date:	06-Mar-2020 07:00:30	Instrument ID:	CHHP6	Operator ID:	10099
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MSVOA_LL_CHHP6	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.: 180-102790-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 180-309079/7

Matrix: Water Lab File ID: 6030606.D

Analysis Method: EPA 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 03/06/2020 10:20

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.: 309079 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	0.40
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	0.31
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.: 180-102790-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 180-309079/7

Matrix: Water Lab File ID: 6030606.D

Analysis Method: EPA 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 03/06/2020 10:20

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.: 309079 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)	105		78-128
460-00-4	4-Bromofluorobenzene (Surr)	90		64-123
1868-53-7	Dibromofluoromethane (Surr)	94		75-147

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030606.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 06-Mar-2020 10:20:30 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-0031064-007
Operator ID: 10099 Instrument ID: CHHP6

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 06-Mar-2020 10:38:36 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0335

First Level Reviewer: gordonk Date: 06-Mar-2020 10:38:36

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.245	4.249	-0.004	95	152954	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.263	7.261	0.002	99	675663	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.372	10.375	-0.003	87	140005	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.720	12.717	0.003	98	159621	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.539	6.537	0.002	89	128307	50.0	46.8	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.910	6.908	0.002	97	174033	50.0	48.9	
$ 7 Toluene-d8 (Surr)	98	8.918	8.915	0.003	93	698902	50.0	52.4	
$ 8 4-Bromofluorobenzene (Surr	95	11.558	11.562	-0.004	0	209041	50.0	45.2	
11 Dichlorodifluoromethane	85		1.615					ND	
12 Chloromethane	50		1.828					ND	
14 Butadiene	39		1.938					ND	
13 Vinyl chloride	62		1.938					ND	
15 Bromomethane	94		2.260					ND	
16 Chloroethane	64		2.382					ND	
17 Dichlorofluoromethane	67		2.661					ND	
18 Trichlorofluoromethane	101		2.686					ND	
19 Ethanol	45	2.907	2.909	-0.002	0	729		NC	
20 Ethyl ether	59		3.027					ND	
21 Acrolein	56		3.213					ND	
22 1,1-Dichloroethene	96		3.325					ND	
23 1,1,2-Trichloro-1,2,2-trif	101		3.392					ND	
24 Acetone	43		3.422					ND	U
25 Iodomethane	142		3.519					ND	
27 Isopropyl alcohol	45		3.597					ND	
26 Carbon disulfide	76		3.617					ND	
29 3-Chloro-1-propene	76		3.896					ND	
30 Methyl acetate	43		3.921					ND	
28 Acetonitrile	41		4.113					ND	U
31 Methylene Chloride	84		4.115					ND	
32 2-Methyl-2-propanol	59		4.389					ND	U
33 Acrylonitrile	53		4.505					ND	
34 trans-1,2-Dichloroethene	96		4.529					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
35 Methyl tert-butyl ether	73		4.553					ND	
36 Hexane	57		4.955					ND	
37 1,1-Dichloroethane	63		5.168					ND	
38 Vinyl acetate	43		5.226					ND	
39 2-Chloro-1,3-butadiene	53		5.318					ND	
41 Tert-butyl ethyl ether	59		5.324					ND	
40 Isopropyl ether	45		5.324					ND	
45 Propionitrile	54		5.871					ND	U
42 2,2-Dichloropropane	97		5.916					ND	
43 cis-1,2-Dichloroethene	96		5.922					ND	
44 2-Butanone (MEK)	43		5.940					ND	
46 Ethyl acetate	43		5.955					ND	
48 Chlorobromomethane	128		6.208					ND	
49 Tetrahydrofuran	42		6.226					ND	U
47 Methacrylonitrile	41		6.236					ND	
50 Chloroform	83		6.354					ND	
51 1,1,1-Trichloroethane	97		6.512					ND	
52 Cyclohexane	56		6.579					ND	
53 Carbon tetrachloride	117		6.689					ND	
54 1,1-Dichloropropene	75		6.701					ND	
55 Isobutyl alcohol	41		6.908					ND	U
56 Benzene	78		6.914					ND	
57 1,2-Dichloroethane	62		6.993					ND	
148 Isooctane	57		7.112					ND	
58 Tert-amyl methyl ether	73		7.264					ND	U
59 n-Heptane	43		7.279					ND	
61 Trichloroethene	130		7.650					ND	
60 n-Butanol	56		7.702					ND	U
62 Ethyl acrylate	55		7.818					ND	
63 Methylcyclohexane	83		7.887					ND	
64 1,2-Dichloropropane	63		7.924					ND	
67 Dibromomethane	93		8.015					ND	
65 1,4-Dioxane	88		8.021					ND	
66 Methyl methacrylate	69		8.055					ND	
68 Dichlorobromomethane	83		8.210					ND	
70 2-Chloroethyl vinyl ether	63		8.511					ND	
71 cis-1,3-Dichloropropene	75		8.660					ND	
72 4-Methyl-2-pentanone (MIBK	43		8.818					ND	U
73 Toluene	91		8.988					ND	
74 trans-1,3-Dichloropropene	75		9.238					ND	
75 Ethyl methacrylate	69		9.299					ND	
76 1,1,2-Trichloroethane	97		9.432					ND	
77 Tetrachloroethene	164		9.499					ND	
78 1,3-Dichloropropane	76		9.591					ND	
79 2-Hexanone	43		9.651					ND	
81 Chlorodibromomethane	129		9.803					ND	
80 n-Butyl acetate	43		9.813					ND	
82 Ethylene Dibromide	107		9.913					ND	
83 3-Chlorobenzotrifluoride	180		10.196					ND	
85 4-Chlorobenzotrifluoride	180		10.363					ND	
84 Chlorobenzene	112		10.406					ND	
86 1,1,1,2-Tetrachloroethane	131		10.497					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
87 Ethylbenzene	106		10.503					ND	
88 m-Xylene & p-Xylene	106		10.637					ND	
89 o-Xylene	106		11.020					ND	
90 Styrene	104		11.038					ND	
91 Bromoform	173		11.221					ND	
92 2-Chlorobenzotrifluoride	180		11.288					ND	
93 Isopropylbenzene	105		11.385					ND	
94 Cyclohexanone	55		11.517					ND	
95 Bromobenzene	156		11.695					ND	
96 1,1,2,2-Tetrachloroethane	83		11.702					ND	
97 trans-1,4-Dichloro-2-buten	53		11.738					ND	
98 1,2,3-Trichloropropane	110		11.756					ND	
99 N-Propylbenzene	120		11.805					ND	
100 2-Chlorotoluene	126		11.890					ND	
102 1,3,5-Trimethylbenzene	105		11.987					ND	
101 3-Chlorotoluene	126	12.014	12.010	0.004	1	211		NC	
103 4-Chlorotoluene	126		12.012					ND	
104 tert-Butylbenzene	119		12.298					ND	
106 1,2,4-Trimethylbenzene	105		12.359					ND	
107 1,2-dichloro-4-(trifluorom	214		12.468					ND	
108 sec-Butylbenzene	105		12.523					ND	
113 2,4-Dichloro-1-(triflourom	214		12.568					ND	
109 1,3-Dichlorobenzene	146		12.638					ND	U
114 2,5-Dichlorobenzotrifluori	214		12.645					ND	
110 4-Isopropyltoluene	119		12.681					ND	
111 1,4-Dichlorobenzene	146		12.742					ND	U
112 1,2,3-Trimethylbenzene	105		12.806					ND	
115 Benzyl chloride	91		12.898					ND	
116 n-Butylbenzene	91		13.089					ND	U
117 1,2-Dichlorobenzene	146		13.101					ND	
118 1,2-Dibromo-3-Chloropropan	75		13.892					ND	
119 2,4- & 2,5- & 2,6- Dichlor	125		13.995					ND	
120 1,3,5-Trichlorobenzene	180		14.120					ND	
121 2,3- & 3,4- Dichlorotoluen	125		14.190					ND	
122 1,2,4-Trichlorobenzene	180	14.715	14.713	0.002	87	3281		1.51	
123 Hexachlorobutadiene	225	14.867	14.853	0.014	69	452		0.5799	
124 Naphthalene	128	14.977	14.981	-0.004	97	12835		2.11	
125 1,2,3-Trichlorobenzene	180	15.202	15.200	0.002	88	4776		3.07	
127 2,3,6-Trichlorotoluene	159		15.759					ND	
126 2,4,5-Trichlorotoluene	159		15.759					ND	
S 131 Xylenes, Total	106		1.000					ND	
S 130 1,2-Dichloroethene, Total	96		1.000					ND	
S 154 Total BTEX	1		0.000					ND	
S 132 1,3-Dichloropropene, Total	1		0.000					ND	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Review Flags
U - Marked Undetected

Reagents:

VOA8260INT_00104	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00104	Amount Added:	2.00	Units: uL	Run Reagent

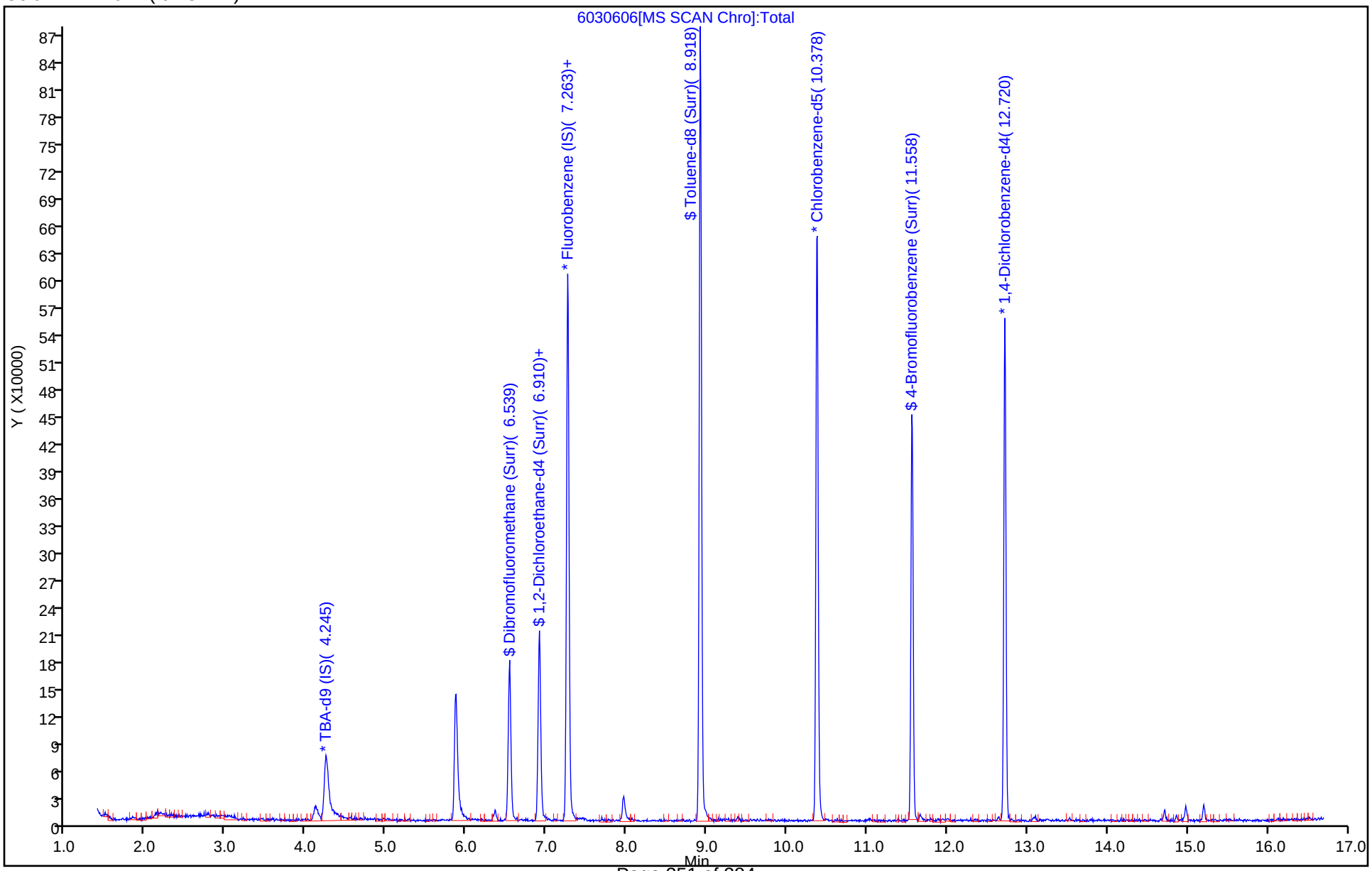
Report Date: 06-Mar-2020 10:38:37 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030606.D

Injection Date:	06-Mar-2020 10:20:30	Instrument ID:	CHHP6	Operator ID:	10099
Lims ID:	MB			Worklist Smp#:	7
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Recovery Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030606.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 06-Mar-2020 10:20:30 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-0031064-007
Operator ID: 10099 Instrument ID: CHHP6

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 06-Mar-2020 10:38:36 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0335

First Level Reviewer: gordonk Date: 06-Mar-2020 10:38:36

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	50.0	46.8	93.51
$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	48.9	97.80
$ 7 Toluene-d8 (Surr)	50.0	52.4	104.75
$ 8 4-Bromofluorobenzene (Surr)	50.0	45.2	90.41

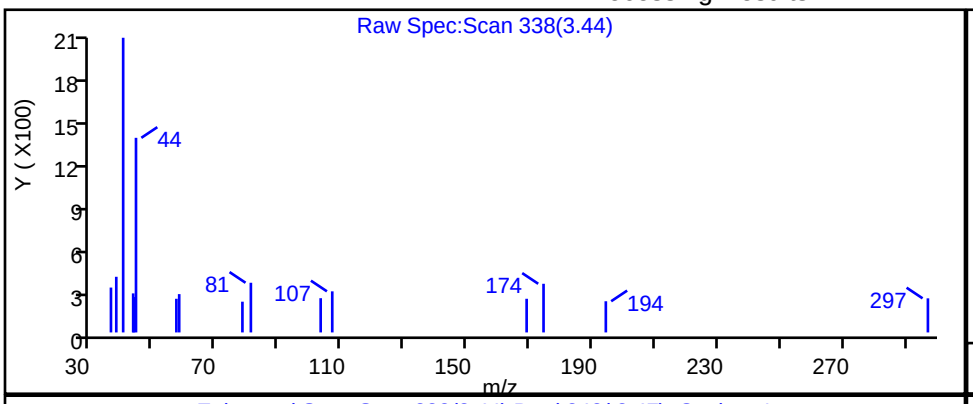
User Disabled Compound Report

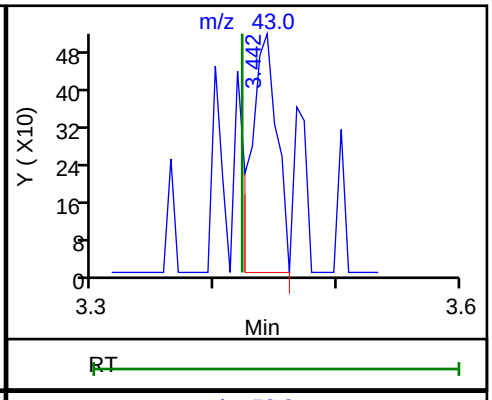
Eurofins TestAmerica, Pittsburgh

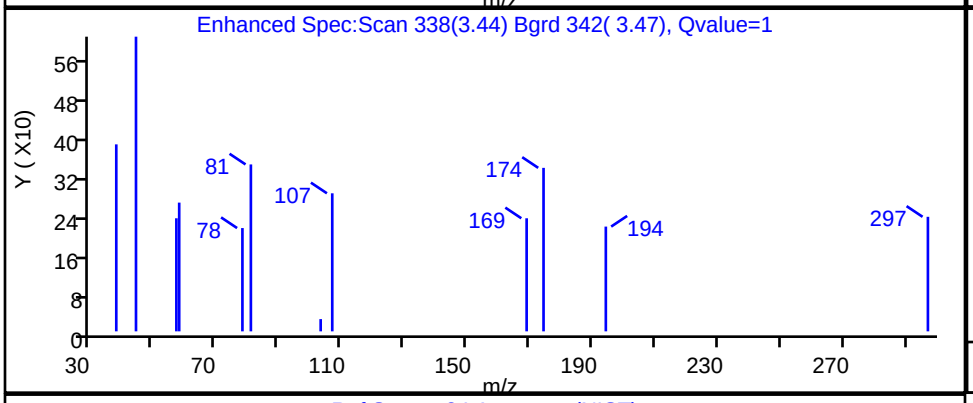
Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030606.D
Injection Date: 06-Mar-2020 10:20:30 Instrument ID: CHHP6
Lims ID: MB
Client ID:
Operator ID: 10099 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP6 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

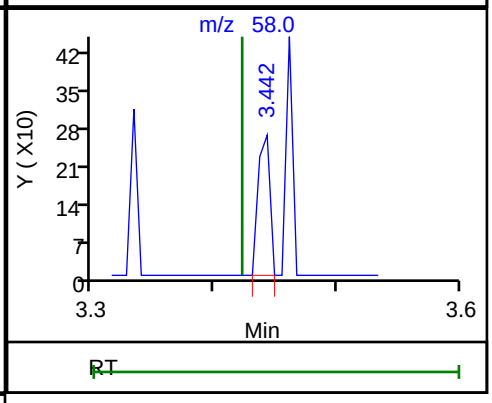
24 Acetone, CAS: 67-64-1

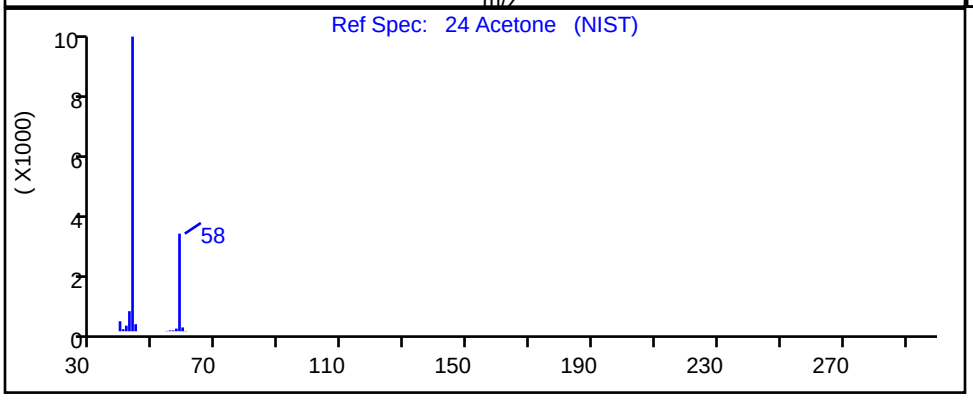
Processing Results











RT	Mass	Response	Amount
3.44	43.00	738	0.852146
3.44	58.00	177	

Reviewer: gordonk, 06-Mar-2020 10:37:54
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

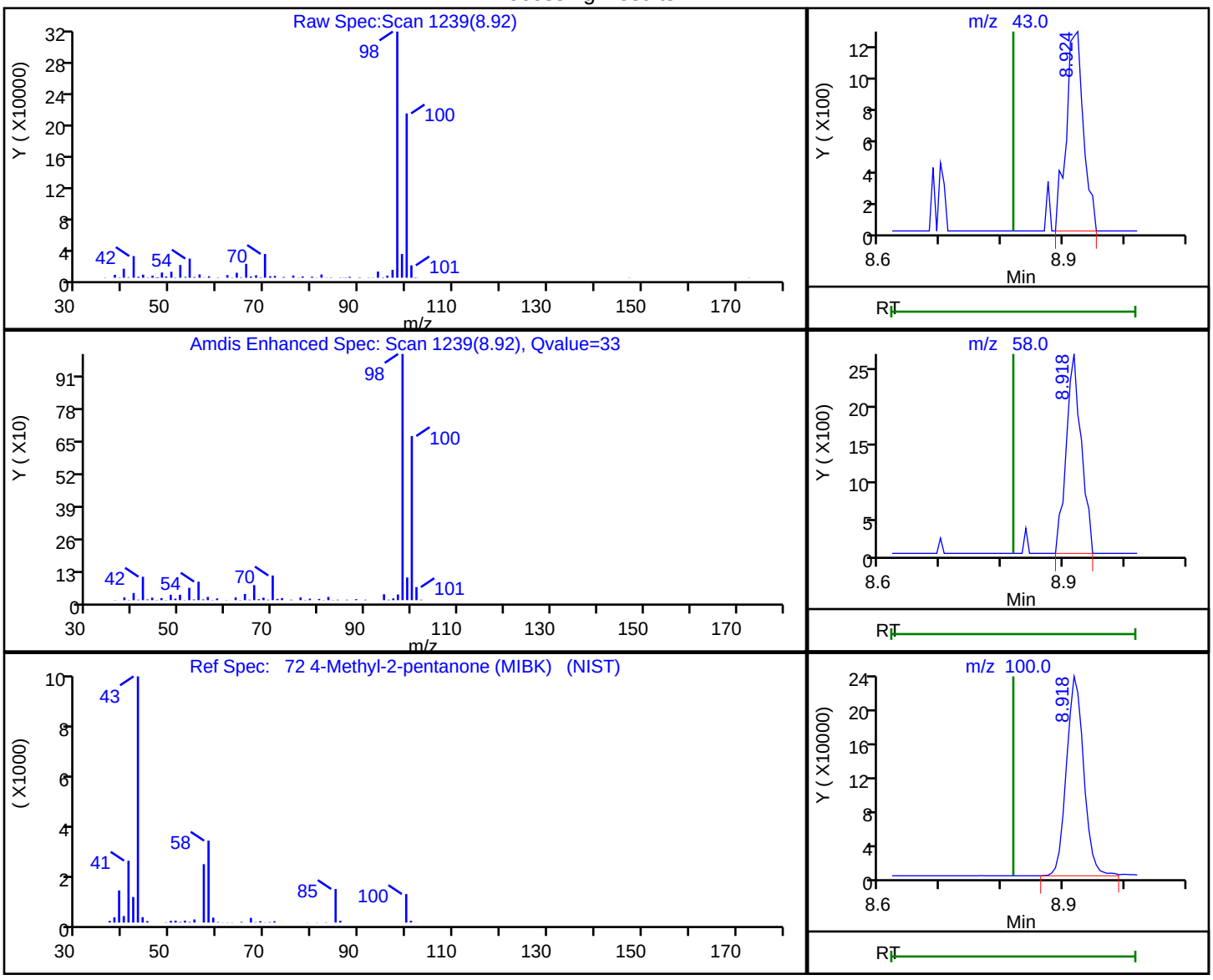
User Disabled Compound Report

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030606.D
Injection Date: 06-Mar-2020 10:20:30 Instrument ID: CHHP6
Lims ID: MB
Client ID:
Operator ID: 10099 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP6 Limit Group: VOA 8260C_D ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

72 4-Methyl-2-pentanone (MIBK), CAS: 108-10-1

Processing Results



RT	Mass	Response	Amount
8.92	43.00	2444	1.024410
8.92	58.00	4480	
8.92	100.00	456815	

Reviewer: gordonk, 06-Mar-2020 10:38:12
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.: 180-102790-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 180-309079/3

Matrix: Water Lab File ID: 6030603A.D

Analysis Method: EPA 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 03/06/2020 08:47

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.: 309079 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	12.9		1.0	0.90
75-01-4	Vinyl chloride	12.7		1.0	0.40
74-83-9	Bromomethane	12.5		1.0	0.89
75-00-3	Chloroethane	12.1		1.0	0.90
75-35-4	1,1-Dichloroethene	12.8		1.0	0.55
67-64-1	Acetone	14.5		5.0	3.4
75-15-0	Carbon disulfide	11.5		1.0	0.88
75-09-2	Methylene Chloride	10.3		1.0	0.89
156-60-5	trans-1,2-Dichloroethene	11.1		1.0	0.67
1634-04-4	Methyl tert-butyl ether	9.80		1.0	0.59
75-34-3	1,1-Dichloroethane	11.0		1.0	0.31
156-59-2	cis-1,2-Dichloroethene	10.6		1.0	0.71
74-97-5	Bromochloromethane	10.5		1.0	0.63
78-93-3	2-Butanone (MEK)	15.7		5.0	2.6
67-66-3	Chloroform	10.7		1.0	0.60
71-55-6	1,1,1-Trichloroethane	11.2		1.0	0.60
56-23-5	Carbon tetrachloride	12.1		1.0	0.88
71-43-2	Benzene	10.9		1.0	0.60
107-06-2	1,2-Dichloroethane	10.3		1.0	0.57
79-01-6	Trichloroethene	11.0		1.0	0.69
78-87-5	1,2-Dichloropropane	10.3		1.0	0.66
75-27-4	Bromodichloromethane	10.4		1.0	0.64
10061-01-5	cis-1,3-Dichloropropene	9.72		1.0	0.59
108-10-1	4-Methyl-2-pentanone (MIBK)	14.8		5.0	3.1
108-88-3	Toluene	11.6		1.0	0.46
10061-02-6	trans-1,3-Dichloropropene	10.1		1.0	0.58
79-00-5	1,1,2-Trichloroethane	10.8		1.0	0.45
127-18-4	Tetrachloroethene	13.4		1.0	0.47
591-78-6	2-Hexanone	15.3		5.0	3.3
124-48-1	Dibromochloromethane	10.9		1.0	0.84
106-93-4	1,2-Dibromoethane (EDB)	10.8		1.0	0.50
108-90-7	Chlorobenzene	11.3		1.0	0.50
630-20-6	1,1,1,2-Tetrachloroethane	11.1		1.0	0.57
100-41-4	Ethylbenzene	11.6		1.0	0.51
1330-20-7	Xylenes, Total	23.3		2.0	0.89
100-42-5	Styrene	11.5		1.0	0.47

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-102790-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 180-309079/3

Matrix: Water Lab File ID: 6030603A.D

Analysis Method: EPA 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 03/06/2020 08:47

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.: 309079 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	11.8		1.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	11.1		1.0	0.60
107-13-1	Acrylonitrile	103		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)	112		78-128
460-00-4	4-Bromofluorobenzene (Surr)	106		64-123
1868-53-7	Dibromofluoromethane (Surr)	103		75-147

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030603A.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 06-Mar-2020 08:47:30 ALS Bottle#: 3 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCS
Operator ID: 10099 Instrument ID: CHHP6

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 06-Mar-2020 10:25:23 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0335

First Level Reviewer: gordonk Date: 06-Mar-2020 09:11:41

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.248	4.249	-0.001	94	121378	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.259	7.261	-0.002	99	640781	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.374	10.375	-0.001	86	130229	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.722	12.717	0.005	95	154271	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.535	6.537	-0.002	92	133398	50.0	51.3	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.906	6.908	-0.002	97	165088	50.0	48.9	
$ 7 Toluene-d8 (Surr)	98	8.920	8.915	0.005	93	694375	50.0	55.9	
$ 8 4-Bromofluorobenzene (Surr	95	11.560	11.562	-0.002	0	228418	50.0	53.1	
11 Dichlorodifluoromethane	85	1.613	1.615	-0.002	99	240797	50.0	70.1	
12 Chloromethane	50	1.826	1.828	-0.002	99	200420	50.0	64.4	
14 Butadiene	39	1.936	1.938	-0.002	90	204848	50.0	66.9	
13 Vinyl chloride	62	1.942	1.938	0.004	56	225948	50.0	63.3	
15 Bromomethane	94	2.246	2.260	-0.014	92	156708	50.0	62.6	
16 Chloroethane	64	2.380	2.382	-0.002	99	156939	50.0	60.5	
17 Dichlorofluoromethane	67	2.660	2.661	-0.001	96	380154	50.0	58.5	
18 Trichlorofluoromethane	101	2.678	2.686	-0.008	96	399378	50.0	66.1	
20 Ethyl ether	59	3.025	3.027	-0.001	88	87156	50.0	51.1	
22 1,1-Dichloroethene	96	3.317	3.325	-0.008	95	109997	50.0	63.8	
23 1,1,2-Trichloro-1,2,2-trif	101	3.396	3.392	0.004	95	124789	50.0	64.3	
24 Acetone	43	3.420	3.422	-0.002	100	59370	100.0	72.3	
25 Iodomethane	142	3.548	3.519	0.029	98	125168	50.0	54.6	
26 Carbon disulfide	76	3.615	3.617	-0.002	99	212746	50.0	57.7	
29 3-Chloro-1-propene	76	3.882	3.896	-0.014	89	55389	50.0	56.7	
30 Methyl acetate	43	3.919	3.921	-0.002	96	120575	100.0	92.1	
31 Methylene Chloride	84	4.120	4.115	0.005	84	141935	50.0	51.4	
32 2-Methyl-2-propanol	59	4.387	4.389	-0.002	93	85750	500.0	576.2	
33 Acrylonitrile	53	4.503	4.505	-0.002	99	406834	500.0	517.2	
34 trans-1,2-Dichloroethene	96	4.527	4.529	-0.002	96	131743	50.0	55.7	
35 Methyl tert-butyl ether	73	4.552	4.553	-0.001	94	260774	50.0	49.0	
36 Hexane	57	4.953	4.955	-0.002	90	175316	50.0	67.4	
37 1,1-Dichloroethane	63	5.172	5.168	0.004	96	213281	50.0	54.9	
42 2,2-Dichloropropane	97	5.920	5.916	0.004	54	23840	50.0	55.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
43 cis-1,2-Dichloroethene	96	5.920	5.922	-0.002	81	164453	50.0	53.1	
44 2-Butanone (MEK)	43	5.945	5.940	0.005	98	92894	100.0	78.4	
48 Chlorobromomethane	128	6.206	6.208	-0.002	95	61114	50.0	52.6	
49 Tetrahydrofuran	42	6.231	6.226	0.005	0	61840	100.0	99.4	
50 Chloroform	83	6.352	6.354	-0.002	92	278920	50.0	53.3	
51 1,1,1-Trichloroethane	97	6.511	6.512	-0.001	97	170920	50.0	56.2	
52 Cyclohexane	56	6.577	6.579	-0.002	85	226300	50.0	64.6	
53 Carbon tetrachloride	117	6.681	6.689	-0.008	95	111602	50.0	60.3	
54 1,1-Dichloropropene	75	6.693	6.701	-0.008	99	211109	50.0	59.9	
55 Isobutyl alcohol	41	6.918	6.908	0.010	39	76078	1250.0	1164.9	
56 Benzene	78	6.918	6.914	0.004	96	631094	50.0	54.3	
57 1,2-Dichloroethane	62	6.991	6.993	-0.002	97	182724	50.0	51.5	
59 n-Heptane	43	7.277	7.279	-0.002	86	146960	50.0	70.0	
61 Trichloroethene	130	7.654	7.650	0.004	94	147574	50.0	54.8	
63 Methylcyclohexane	83	7.885	7.887	-0.002	83	283409	50.0	62.9	
64 1,2-Dichloropropane	63	7.928	7.924	0.004	93	149429	50.0	51.6	
67 Dibromomethane	93	8.013	8.015	-0.002	88	87191	50.0	50.5	
65 1,4-Dioxane	88	8.013	8.021	-0.008	51	40061	1000.0	1002.1	
68 Dichlorobromomethane	83	8.208	8.210	-0.002	99	176472	50.0	51.9	
71 cis-1,3-Dichloropropene	75	8.658	8.660	-0.002	97	197377	50.0	48.6	
72 4-Methyl-2-pentanone (MIBK	43	8.816	8.818	-0.002	95	164671	100.0	74.2	
73 Toluene	91	8.987	8.988	-0.001	99	883897	50.0	57.8	
74 trans-1,3-Dichloropropene	75	9.236	9.238	-0.002	92	165230	50.0	50.5	
75 Ethyl methacrylate	69	9.303	9.299	0.004	87	188337	50.0	51.8	
76 1,1,2-Trichloroethane	97	9.431	9.432	-0.001	89	172073	50.0	53.9	
77 Tetrachloroethene	164	9.498	9.499	-0.001	92	127132	50.0	67.1	
78 1,3-Dichloropropane	76	9.589	9.591	-0.002	87	289488	50.0	54.2	
79 2-Hexanone	43	9.650	9.651	-0.001	94	119979	100.0	76.5	
81 Chlorodibromomethane	129	9.802	9.803	-0.001	91	91402	50.0	54.5	
82 Ethylene Dibromide	107	9.911	9.913	-0.002	98	145936	50.0	53.8	
84 Chlorobenzene	112	10.404	10.406	-0.002	95	605367	50.0	56.7	
86 1,1,1,2-Tetrachloroethane	131	10.495	10.497	-0.002	86	113913	50.0	55.5	
87 Ethylbenzene	106	10.501	10.503	-0.002	98	360090	50.0	58.2	
88 m-Xylene & p-Xylene	106	10.635	10.637	-0.002	99	447900	50.0	59.2	
89 o-Xylene	106	11.018	11.020	-0.002	96	426722	50.0	57.4	
90 Styrene	104	11.037	11.038	-0.001	94	720532	50.0	57.6	
91 Bromoform	173	11.219	11.221	-0.002	90	39842	50.0	58.9	
93 Isopropylbenzene	105	11.383	11.385	-0.002	95	1182008	50.0	60.8	
95 Bromobenzene	156	11.700	11.695	0.005	93	188687	50.0	58.1	
96 1,1,2,2-Tetrachloroethane	83	11.700	11.702	-0.002	95	211219	50.0	55.3	
97 trans-1,4-Dichloro-2-buten	53	11.736	11.738	-0.002	73	36102	50.0	52.3	
98 1,2,3-Trichloropropane	110	11.754	11.756	-0.002	85	70716	50.0	58.0	
99 N-Propylbenzene	120	11.803	11.805	-0.002	99	304561	50.0	65.0	
100 2-Chlorotoluene	126	11.888	11.890	-0.002	95	229334	50.0	62.3	
102 1,3,5-Trimethylbenzene	105	11.986	11.987	-0.001	93	914294	50.0	64.2	
103 4-Chlorotoluene	126	12.016	12.012	0.004	98	239315	50.0	61.3	
104 tert-Butylbenzene	119	12.302	12.298	0.004	92	733911	50.0	63.8	
106 1,2,4-Trimethylbenzene	105	12.357	12.359	-0.002	97	914147	50.0	63.6	
108 sec-Butylbenzene	105	12.527	12.523	0.004	94	1178461	50.0	66.7	
109 1,3-Dichlorobenzene	146	12.643	12.638	0.005	95	389411	50.0	62.6	
110 4-Isopropyltoluene	119	12.679	12.681	-0.002	97	889805	50.0	66.1	
111 1,4-Dichlorobenzene	146	12.746	12.742	0.004	91	385663	50.0	59.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
116 n-Butylbenzene	91	13.087	13.089	-0.002	99	837972	50.0	68.8	
117 1,2-Dichlorobenzene	146	13.099	13.101	-0.002	92	360534	50.0	60.2	
118 1,2-Dibromo-3-Chloropropan	75	13.896	13.892	0.004	72	17194	50.0	59.9	
122 1,2,4-Trichlorobenzene	180	14.711	14.713	-0.002	92	132854	50.0	63.4	
123 Hexachlorobutadiene	225	14.863	14.853	0.010	94	53499	50.0	71.0	
124 Naphthalene	128	14.979	14.981	-0.002	97	356140	50.0	60.6	
125 1,2,3-Trichlorobenzene	180	15.204	15.200	0.004	93	91200	50.0	60.6	
S 131 Xylenes, Total	106				0		100.0	116.6	
S 130 1,2-Dichloroethene, Total	96				0		100.0	108.7	
S 154 Total BTEX	1				0		250.0	286.9	
S 132 1,3-Dichloropropene, Total	1				0		100.0	99.1	

Reagents:

VOA8260VOA2ND_00395	Amount Added:	2.00	Units: uL	
voaWKet2ndRes_00049	Amount Added:	2.00	Units: uL	
VOA8260INT_00104	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00104	Amount Added:	2.00	Units: uL	Run Reagent

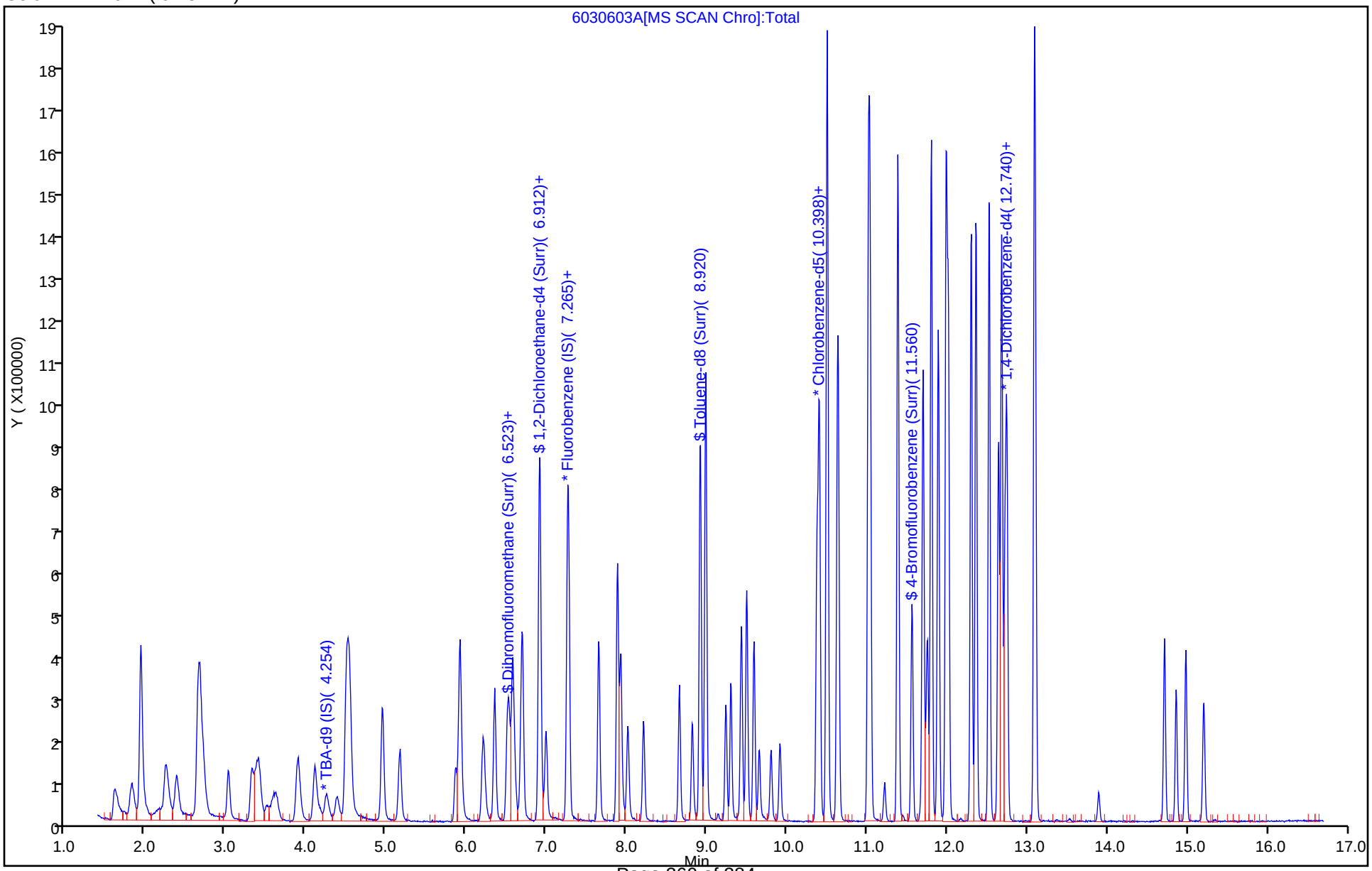
Report Date: 06-Mar-2020 10:25:27 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030603A.D

Injection Date:	06-Mar-2020 08:47:30	Instrument ID:	CHHP6	Operator ID:	10099
Lims ID:	LCS			Worklist Smp#:	3
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Recovery Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030603A.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 06-Mar-2020 08:47:30 ALS Bottle#: 3 Worklist Smp#: 3
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCS
Operator ID: 10099 Instrument ID: CHHP6

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 06-Mar-2020 10:25:23 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0335

First Level Reviewer: gordonk Date: 06-Mar-2020 09:11:41

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	50.0	51.3	102.51
$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	48.9	97.83
$ 7 Toluene-d8 (Surr)	50.0	55.9	111.89
$ 8 4-Bromofluorobenzene (Surr)	50.0	53.1	106.20

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-102790-1

SDG No.:

Client Sample ID: HD-COD-SW-26-0/1-0 MS Lab Sample ID: 180-102790-9 MS

Matrix: Water Lab File ID: 6030609.D

Analysis Method: EPA 8260C Date Collected: 02/24/2020 12:25

Sample wt/vol: 5(mL) Date Analyzed: 03/06/2020 11:42

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.: 309079 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	16.4		1.0	0.90
75-01-4	Vinyl chloride	16.0		1.0	0.40
74-83-9	Bromomethane	16.2		1.0	0.89
75-00-3	Chloroethane	15.9		1.0	0.90
75-35-4	1,1-Dichloroethene	16.4		1.0	0.55
67-64-1	Acetone	20.1		5.0	3.4
75-15-0	Carbon disulfide	13.6		1.0	0.88
75-09-2	Methylene Chloride	12.7		1.0	0.89
156-60-5	trans-1,2-Dichloroethene	14.8		1.0	0.67
1634-04-4	Methyl tert-butyl ether	13.1		1.0	0.59
75-34-3	1,1-Dichloroethane	13.9		1.0	0.31
156-59-2	cis-1,2-Dichloroethene	13.8		1.0	0.71
74-97-5	Bromochloromethane	13.6		1.0	0.63
78-93-3	2-Butanone (MEK)	24.0		5.0	2.6
67-66-3	Chloroform	13.9		1.0	0.60
71-55-6	1,1,1-Trichloroethane	13.8		1.0	0.60
56-23-5	Carbon tetrachloride	13.8		1.0	0.88
71-43-2	Benzene	14.1		1.0	0.60
107-06-2	1,2-Dichloroethane	13.7		1.0	0.57
79-01-6	Trichloroethene	14.2		1.0	0.69
78-87-5	1,2-Dichloropropane	13.7		1.0	0.66
75-27-4	Bromodichloromethane	12.7		1.0	0.64
10061-01-5	cis-1,3-Dichloropropene	12.5		1.0	0.59
108-10-1	4-Methyl-2-pentanone (MIBK)	24.9		5.0	3.1
108-88-3	Toluene	14.2		1.0	0.46
10061-02-6	trans-1,3-Dichloropropene	11.8		1.0	0.58
79-00-5	1,1,2-Trichloroethane	13.3		1.0	0.45
127-18-4	Tetrachloroethene	17.0		1.0	0.47
591-78-6	2-Hexanone	24.7		5.0	3.3
124-48-1	Dibromochloromethane	12.3		1.0	0.84
106-93-4	1,2-Dibromoethane (EDB)	13.1		1.0	0.50
108-90-7	Chlorobenzene	13.9		1.0	0.50
630-20-6	1,1,1,2-Tetrachloroethane	12.7		1.0	0.57
100-41-4	Ethylbenzene	14.3		1.0	0.51
1330-20-7	Xylenes, Total	28.5		2.0	0.89
100-42-5	Styrene	13.9		1.0	0.47

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-102790-1

SDG No.:

Client Sample ID: HD-COD-SW-26-0/1-0 MS Lab Sample ID: 180-102790-9 MS

Matrix: Water Lab File ID: 6030609.D

Analysis Method: EPA 8260C Date Collected: 02/24/2020 12:25

Sample wt/vol: 5(mL) Date Analyzed: 03/06/2020 11:42

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.: 309079 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	13.4		1.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	13.2		1.0	0.60
107-13-1	Acrylonitrile	124		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)	110		78-128
460-00-4	4-Bromofluorobenzene (Surr)	105		64-123
1868-53-7	Dibromofluoromethane (Surr)	106		75-147

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030609.D
Lims ID: 180-102790-A-9 MS
Client ID: HD-COD-SW-26-0/1-0
Sample Type: MS
Inject. Date: 06-Mar-2020 11:42:30 ALS Bottle#: 9 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-0031064-009
Operator ID: 10099 Instrument ID: CHHP6

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 06-Mar-2020 10:05:34 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0335

First Level Reviewer: gordonk Date: 06-Mar-2020 12:06:26

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.249	4.249	0.000	92	95071	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.261	7.261	0.000	99	510306	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.375	10.375	0.000	87	109177	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.717	12.717	0.000	97	121626	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.537	6.537	0.000	91	109869	50.0	53.0	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.908	6.908	0.000	98	138488	50.0	51.5	
$ 7 Toluene-d8 (Surr)	98	8.915	8.915	0.000	92	570626	50.0	54.8	
$ 8 4-Bromofluorobenzene (Surr	95	11.562	11.562	0.000	0	188454	50.0	52.3	
11 Dichlorodifluoromethane	85	1.615	1.615	0.000	99	240529	50.0	87.9	
12 Chloromethane	50	1.822	1.828	-0.006	100	201467	50.0	82.2	
14 Butadiene	39	1.931	1.938	-0.007	91	203203	50.0	84.3	
13 Vinyl chloride	62	1.944	1.938	0.006	84	227706	50.0	80.0	
15 Bromomethane	94	2.260	2.260	0.000	92	159540	50.0	81.0	
16 Chloroethane	64	2.382	2.382	0.000	99	163895	50.0	79.3	
17 Dichlorofluoromethane	67	2.655	2.661	-0.006	97	404955	50.0	78.3	
18 Trichlorofluoromethane	101	2.686	2.686	0.000	97	407079	50.0	85.4	
20 Ethyl ether	59	3.026	3.027	0.000	93	92924	50.0	68.4	
22 1,1-Dichloroethene	96	3.331	3.325	0.006	95	110945	50.0	81.8	
23 1,1,2-Trichloro-1,2,2-trif	101	3.385	3.392	-0.007	95	127974	50.0	83.8	
24 Acetone	43	3.422	3.422	0.000	100	65879	100.0	100.7	
25 Iodomethane	142	3.538	3.519	0.019	98	125336	50.0	68.6	
26 Carbon disulfide	76	3.629	3.617	0.012	99	199843	50.0	68.1	
29 3-Chloro-1-propene	76	3.890	3.896	-0.006	88	57021	50.0	73.2	
30 Methyl acetate	43	3.915	3.921	-0.006	95	115440	100.0	110.7	
31 Methylene Chloride	84	4.115	4.115	0.000	86	134876	50.0	63.4	
32 2-Methyl-2-propanol	59	4.383	4.389	-0.006	92	81779	500.0	701.6	
33 Acrylonitrile	53	4.499	4.505	-0.006	100	389399	500.0	621.6	
34 trans-1,2-Dichloroethene	96	4.529	4.529	0.000	95	139471	50.0	74.0	
35 Methyl tert-butyl ether	73	4.553	4.553	0.000	94	277569	50.0	65.5	
36 Hexane	57	4.949	4.955	-0.006	90	161571	50.0	78.6	
37 1,1-Dichloroethane	63	5.174	5.168	0.006	96	215253	50.0	69.6	
42 2,2-Dichloropropane	97	5.910	5.916	-0.006	86	23280	50.0	67.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
43 cis-1,2-Dichloroethene	96	5.922	5.922	0.000	79	170476	50.0	69.1	
44 2-Butanone (MEK)	43	5.940	5.940	0.000	98	113270	100.0	120.0	
48 Chlorobromomethane	128	6.208	6.208	0.000	96	62767	50.0	67.8	
49 Tetrahydrofuran	42	6.226	6.226	0.000	0	64487	100.0	130.2	
50 Chloroform	83	6.354	6.354	0.000	94	282458	50.0	69.4	
51 1,1,1-Trichloroethane	97	6.512	6.512	0.000	98	167618	50.0	69.2	
52 Cyclohexane	56	6.579	6.579	0.000	85	224457	50.0	81.2	
53 Carbon tetrachloride	117	6.683	6.689	-0.006	94	101364	50.0	68.8	
54 1,1-Dichloropropene	75	6.701	6.701	0.000	98	208502	50.0	74.3	
55 Isobutyl alcohol	41	6.914	6.908	0.006	39	73511	1250.0	1413.4	
56 Benzene	78	6.914	6.914	0.000	97	651843	50.0	70.4	
57 1,2-Dichloroethane	62	6.993	6.993	0.000	98	193115	50.0	68.3	
59 n-Heptane	43	7.279	7.279	0.000	84	132812	50.0	79.9	
61 Trichloroethene	130	7.650	7.650	0.000	93	151995	50.0	70.9	
63 Methylcyclohexane	83	7.881	7.887	-0.006	84	263144	50.0	73.3	
64 1,2-Dichloropropane	63	7.924	7.924	0.000	94	158234	50.0	68.6	
67 Dibromomethane	93	8.015	8.015	0.000	89	91490	50.0	66.5	
65 1,4-Dioxane	88	8.015	8.021	-0.006	49	37468	1000.0	1176.9	
68 Dichlorobromomethane	83	8.210	8.210	0.000	99	172409	50.0	63.7	
71 cis-1,3-Dichloropropene	75	8.660	8.660	0.000	96	201794	50.0	62.4	
72 4-Methyl-2-pentanone (MIBK	43	8.818	8.818	0.000	94	231273	100.0	124.3	
73 Toluene	91	8.988	8.988	0.000	99	911152	50.0	71.1	
74 trans-1,3-Dichloropropene	75	9.238	9.238	0.000	93	161274	50.0	58.8	
75 Ethyl methacrylate	69	9.299	9.299	0.000	86	199388	50.0	65.5	
76 1,1,2-Trichloroethane	97	9.426	9.432	-0.006	89	177285	50.0	66.3	
77 Tetrachloroethene	164	9.499	9.499	0.000	91	133866	50.0	85.2	
78 1,3-Dichloropropane	76	9.591	9.591	0.000	87	309828	50.0	69.2	
79 2-Hexanone	43	9.651	9.651	0.000	93	162257	100.0	123.4	
81 Chlorodibromomethane	129	9.803	9.803	0.000	91	86310	50.0	61.4	
82 Ethylene Dibromide	107	9.913	9.913	0.000	98	148729	50.0	65.4	
84 Chlorobenzene	112	10.406	10.406	0.000	96	623761	50.0	69.7	
86 1,1,1,2-Tetrachloroethane	131	10.497	10.497	0.000	85	109621	50.0	63.7	
87 Ethylbenzene	106	10.503	10.503	0.000	98	370953	50.0	71.5	
88 m-Xylene & p-Xylene	106	10.637	10.637	0.000	99	455287	50.0	71.8	
89 o-Xylene	106	11.020	11.020	0.000	96	441514	50.0	70.8	
90 Styrene	104	11.038	11.038	0.000	95	731919	50.0	69.7	
91 Bromoform	173	11.221	11.221	0.000	90	37949	50.0	66.9	
93 Isopropylbenzene	105	11.385	11.385	0.000	95	1162818	50.0	71.4	
95 Bromobenzene	156	11.702	11.695	0.007	91	192774	50.0	75.3	
96 1,1,2,2-Tetrachloroethane	83	11.695	11.702	-0.007	72	211462	50.0	66.0	
97 trans-1,4-Dichloro-2-buten	53	11.738	11.738	0.000	69	37852	50.0	69.6	
98 1,2,3-Trichloropropane	110	11.756	11.756	0.000	86	70150	50.0	73.0	
99 N-Propylbenzene	120	11.799	11.805	-0.006	99	296454	50.0	80.2	
100 2-Chlorotoluene	126	11.890	11.890	0.000	95	222642	50.0	76.8	
102 1,3,5-Trimethylbenzene	105	11.987	11.987	0.000	94	870404	50.0	77.6	
103 4-Chlorotoluene	126	12.012	12.012	0.000	98	231134	50.0	75.1	
104 tert-Butylbenzene	119	12.298	12.298	0.000	92	708246	50.0	78.1	
106 1,2,4-Trimethylbenzene	105	12.359	12.359	0.000	97	872821	50.0	77.0	
108 sec-Butylbenzene	105	12.523	12.523	0.000	94	1086577	50.0	78.1	
109 1,3-Dichlorobenzene	146	12.638	12.638	0.000	94	355716	50.0	72.6	
110 4-Isopropyltoluene	119	12.681	12.681	0.000	97	816701	50.0	77.0	
111 1,4-Dichlorobenzene	146	12.742	12.742	0.000	91	365496	50.0	71.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
116 n-Butylbenzene	91	13.089	13.089	0.000	99	740006	50.0	77.1	
117 1,2-Dichlorobenzene	146	13.101	13.101	0.000	93	323257	50.0	68.5	
118 1,2-Dibromo-3-Chloropropan	75	13.898	13.892	0.006	69	11765	50.0	52.0	
122 1,2,4-Trichlorobenzene	180	14.713	14.713	0.000	91	77879	50.0	47.1	
123 Hexachlorobutadiene	225	14.859	14.853	0.006	91	34653	50.0	58.4	
124 Naphthalene	128	14.981	14.981	-0.001	98	183251	50.0	39.6	
125 1,2,3-Trichlorobenzene	180	15.206	15.200	0.006	92	47122	50.0	39.7	
S 131 Xylenes, Total	106				0		100.0	142.6	
S 130 1,2-Dichloroethene, Total	96				0		100.0	143.1	
S 154 Total BTEX	1				0		250.0	355.6	
S 132 1,3-Dichloropropene, Total	1				0		100.0	121.2	

Reagents:

VOA8260VOA2ND_00395	Amount Added:	2.00	Units: uL	
voaWKet2ndRes_00049	Amount Added:	2.00	Units: uL	
VOA8260INT_00104	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00104	Amount Added:	2.00	Units: uL	Run Reagent

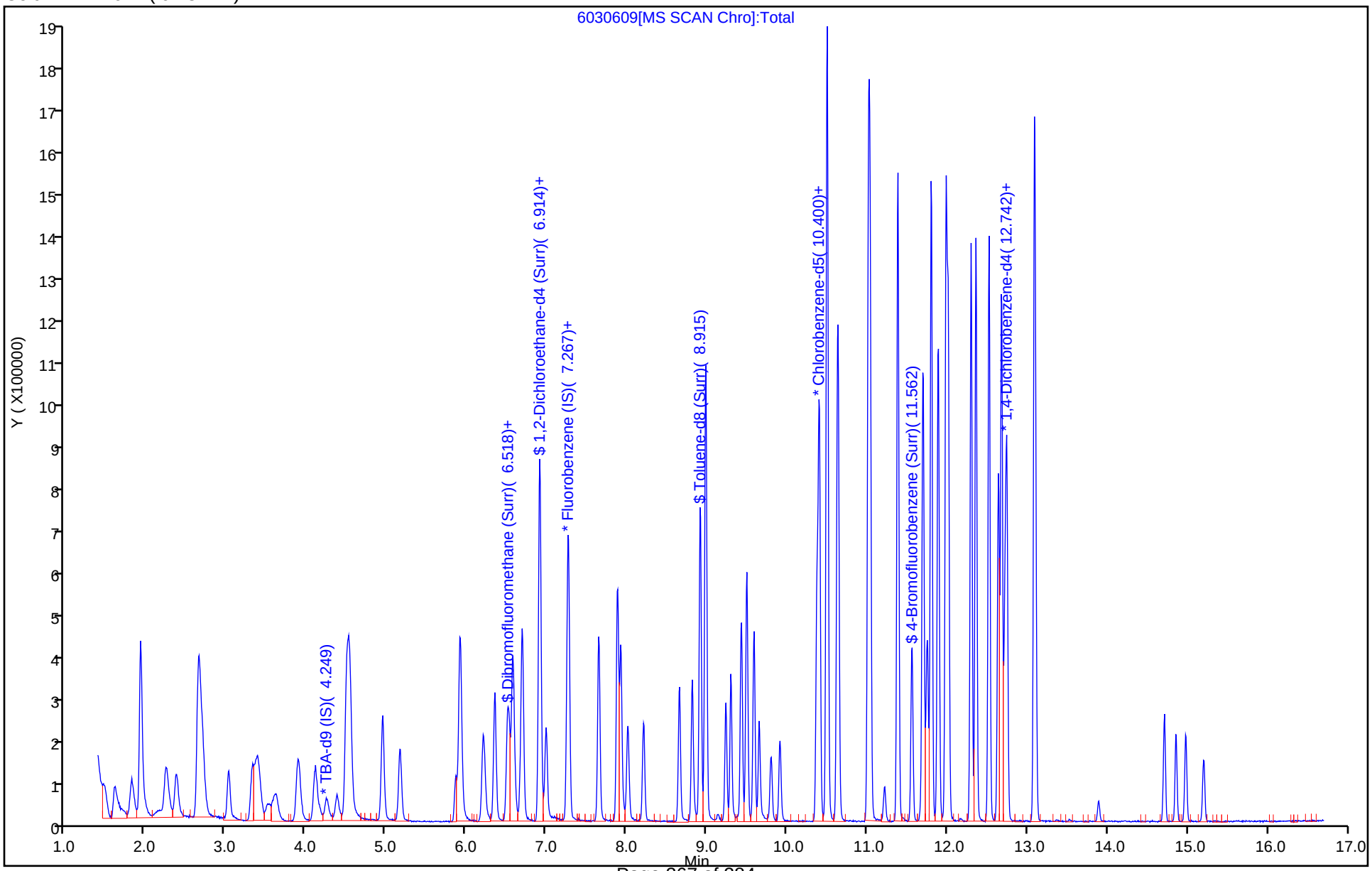
Report Date: 06-Mar-2020 12:06:27 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030609.D

Injection Date:	06-Mar-2020 11:42:30	Instrument ID:	CHHP6	Operator ID:	10099
Lims ID:	180-102790-A-9 MS			Worklist Smp#:	9
Client ID:	HD-COD-SW-26-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh

Recovery Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030609.D
Lims ID: 180-102790-A-9 MS
Client ID: HD-COD-SW-26-0/1-0
Sample Type: MS
Inject. Date: 06-Mar-2020 11:42:30 ALS Bottle#: 9 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-0031064-009
Operator ID: 10099 Instrument ID: CHHP6

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 06-Mar-2020 10:05:34 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0335

First Level Reviewer: gordonk Date: 06-Mar-2020 12:06:26

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	50.0	53.0	106.02
$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	51.5	103.05
$ 7 Toluene-d8 (Surr)	50.0	54.8	109.68
$ 8 4-Bromofluorobenzene (Surr)	50.0	52.3	104.52

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-102790-1

SDG No.:

Client Sample ID: HD-COD-SW-26-0/1-0 MSD Lab Sample ID: 180-102790-9 MSD

Matrix: Water Lab File ID: 6030610.D

Analysis Method: EPA 8260C Date Collected: 02/24/2020 12:25

Sample wt/vol: 5(mL) Date Analyzed: 03/06/2020 12:10

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.: 309079 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	14.3		1.0	0.90
75-01-4	Vinyl chloride	14.1		1.0	0.40
74-83-9	Bromomethane	15.0		1.0	0.89
75-00-3	Chloroethane	14.0		1.0	0.90
75-35-4	1,1-Dichloroethene	14.0		1.0	0.55
67-64-1	Acetone	18.2		5.0	3.4
75-15-0	Carbon disulfide	12.0		1.0	0.88
75-09-2	Methylene Chloride	10.9		1.0	0.89
156-60-5	trans-1,2-Dichloroethene	12.8		1.0	0.67
1634-04-4	Methyl tert-butyl ether	11.2		1.0	0.59
75-34-3	1,1-Dichloroethane	12.3		1.0	0.31
156-59-2	cis-1,2-Dichloroethene	11.7		1.0	0.71
74-97-5	Bromochloromethane	11.4		1.0	0.63
78-93-3	2-Butanone (MEK)	21.4		5.0	2.6
67-66-3	Chloroform	11.7		1.0	0.60
71-55-6	1,1,1-Trichloroethane	12.3		1.0	0.60
56-23-5	Carbon tetrachloride	11.7		1.0	0.88
71-43-2	Benzene	12.1		1.0	0.60
107-06-2	1,2-Dichloroethane	11.6		1.0	0.57
79-01-6	Trichloroethene	12.2		1.0	0.69
78-87-5	1,2-Dichloropropane	11.7		1.0	0.66
75-27-4	Bromodichloromethane	11.0		1.0	0.64
10061-01-5	cis-1,3-Dichloropropene	10.5		1.0	0.59
108-10-1	4-Methyl-2-pentanone (MIBK)	23.4		5.0	3.1
108-88-3	Toluene	13.0		1.0	0.46
10061-02-6	trans-1,3-Dichloropropene	10.6		1.0	0.58
79-00-5	1,1,2-Trichloroethane	12.4		1.0	0.45
127-18-4	Tetrachloroethene	16.4		1.0	0.47
591-78-6	2-Hexanone	24.2		5.0	3.3
124-48-1	Dibromochloromethane	11.2		1.0	0.84
106-93-4	1,2-Dibromoethane (EDB)	12.0		1.0	0.50
108-90-7	Chlorobenzene	12.5		1.0	0.50
630-20-6	1,1,1,2-Tetrachloroethane	11.5		1.0	0.57
100-41-4	Ethylbenzene	13.1		1.0	0.51
1330-20-7	Xylenes, Total	25.4		2.0	0.89
100-42-5	Styrene	12.7		1.0	0.47

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-102790-1

SDG No.:

Client Sample ID: HD-COD-SW-26-0/1-0 MSD Lab Sample ID: 180-102790-9 MSD

Matrix: Water Lab File ID: 6030610.D

Analysis Method: EPA 8260C Date Collected: 02/24/2020 12:25

Sample wt/vol: 5(mL) Date Analyzed: 03/06/2020 12:10

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.: 309079 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	11.9		1.0	0.98
79-34-5	1,1,2,2-Tetrachloroethane	12.2		1.0	0.60
107-13-1	Acrylonitrile	114		20	7.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	123		70-150
2037-26-5	Toluene-d8 (Surr)	139	X	78-128
460-00-4	4-Bromofluorobenzene (Surr)	130	X	64-123
1868-53-7	Dibromofluoromethane (Surr)	123		75-147

Eurofins TestAmerica, Pittsburgh
Target Compound Quantitation Report

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030610.D
Lims ID: 180-102790-B-9 MSD
Client ID: HD-COD-SW-26-0/1-0
Sample Type: MSD
Inject. Date: 06-Mar-2020 12:10:30 ALS Bottle#: 10 Worklist Smp#: 10
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-0031064-010
Operator ID: 10099 Instrument ID: CHHP6

Method: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\MSVOA_LL_CHHP6.m
Limit Group: VOA 8260C_D ICAL
Last Update: 06-Mar-2020 10:29:12 Calib Date: 03-Mar-2020 13:06:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: CTX0335

First Level Reviewer: gordonk Date: 06-Mar-2020 12:32:04

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.254	4.249	0.005	94	102706	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.259	7.261	-0.002	99	505487	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.374	10.375	-0.001	86	102677	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.716	12.717	-0.001	97	116624	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.535	6.537	-0.002	92	126241	50.0	61.5	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.907	6.908	-0.001	98	163122	50.0	61.3	
$ 7 Toluene-d8 (Surr)	98	8.920	8.915	0.005	92	681506	50.0	69.6	
$ 8 4-Bromofluorobenzene (Surr	95	11.560	11.562	-0.002	0	221035	50.0	65.2	
11 Dichlorodifluoromethane	85	1.614	1.615	-0.001	98	215469	50.0	79.5	
12 Chloromethane	50	1.815	1.828	-0.013	99	174416	50.0	71.4	
14 Butadiene	39	1.930	1.938	-0.008	91	181260	50.0	75.5	
13 Vinyl chloride	62	1.930	1.938	-0.008	71	198035	50.0	70.3	
15 Bromomethane	94	2.253	2.260	-0.007	93	147168	50.0	75.2	
16 Chloroethane	64	2.387	2.382	0.005	99	143585	50.0	70.1	
17 Dichlorofluoromethane	67	2.654	2.661	-0.007	98	342044	50.0	66.7	
18 Trichlorofluoromethane	101	2.685	2.686	-0.001	99	349310	50.0	73.6	
20 Ethyl ether	59	3.031	3.027	0.005	87	77648	50.0	57.7	
22 1,1-Dichloroethene	96	3.323	3.325	-0.002	95	94707	50.0	70.0	
23 1,1,2-Trichloro-1,2,2-trif	101	3.390	3.392	-0.002	94	109797	50.0	72.1	
24 Acetone	43	3.421	3.422	-0.001	100	58895	100.0	90.9	
25 Iodomethane	142	3.536	3.519	0.017	99	107472	50.0	59.4	
26 Carbon disulfide	76	3.622	3.617	0.005	99	174508	50.0	60.0	
29 3-Chloro-1-propene	76	3.901	3.896	0.005	89	47550	50.0	61.7	
30 Methyl acetate	43	3.926	3.921	0.005	96	107517	100.0	104.1	
31 Methylene Chloride	84	4.120	4.115	0.005	84	117739	50.0	54.6	
32 2-Methyl-2-propanol	59	4.388	4.389	-0.001	92	81438	500.0	646.7	
33 Acrylonitrile	53	4.504	4.505	-0.001	99	355210	500.0	572.4	
34 trans-1,2-Dichloroethene	96	4.534	4.529	0.005	94	119477	50.0	64.0	
35 Methyl tert-butyl ether	73	4.552	4.553	-0.001	94	236093	50.0	56.2	
36 Hexane	57	4.954	4.955	-0.001	90	141155	50.0	68.9	
37 1,1-Dichloroethane	63	5.173	5.168	0.005	96	188764	50.0	61.6	
42 2,2-Dichloropropane	97	5.921	5.916	0.005	78	20633	50.0	60.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
43 cis-1,2-Dichloroethene	96	5.921	5.922	-0.001	77	142441	50.0	58.3	
44 2-Butanone (MEK)	43	5.945	5.940	0.005	95	100256	100.0	107.2	
48 Chlorobromomethane	128	6.207	6.208	-0.001	97	52267	50.0	57.0	
49 Tetrahydrofuran	42	6.231	6.226	0.005	0	56233	100.0	114.6	
50 Chloroform	83	6.353	6.354	-0.001	92	239710	50.0	58.6	
51 1,1,1-Trichloroethane	97	6.511	6.512	-0.001	98	147332	50.0	61.4	
52 Cyclohexane	56	6.578	6.579	-0.001	85	186430	50.0	67.6	
53 Carbon tetrachloride	117	6.681	6.689	-0.008	95	85366	50.0	58.5	
54 1,1-Dichloropropene	75	6.700	6.701	-0.001	99	184911	50.0	66.5	
55 Isobutyl alcohol	41	6.913	6.908	0.005	57	71963	1250.0	1396.8	
56 Benzene	78	6.919	6.914	0.005	96	554089	50.0	60.4	
57 1,2-Dichloroethane	62	6.992	6.993	-0.001	97	161944	50.0	57.8	
59 n-Heptane	43	7.278	7.279	-0.001	84	115234	50.0	69.5	
61 Trichloroethene	130	7.649	7.650	-0.001	91	129329	50.0	60.9	
63 Methylcyclohexane	83	7.886	7.887	-0.001	82	232417	50.0	65.4	
64 1,2-Dichloropropane	63	7.929	7.924	0.005	92	133610	50.0	58.5	
67 Dibromomethane	93	8.014	8.015	-0.001	86	80326	50.0	58.9	
65 1,4-Dioxane	88	8.020	8.021	-0.001	50	37665	1000.0	1194.3	
68 Dichlorobromomethane	83	8.215	8.210	0.005	99	147986	50.0	55.2	
71 cis-1,3-Dichloropropene	75	8.659	8.660	-0.001	96	168389	50.0	52.6	
72 4-Methyl-2-pentanone (MIBK	43	8.817	8.818	-0.001	94	204582	100.0	116.9	
73 Toluene	91	8.987	8.988	-0.001	99	782858	50.0	64.9	
74 trans-1,3-Dichloropropene	75	9.237	9.238	-0.001	92	136328	50.0	52.9	
75 Ethyl methacrylate	69	9.297	9.299	-0.002	87	172062	50.0	60.1	
76 1,1,2-Trichloroethane	97	9.431	9.432	-0.001	88	155721	50.0	61.9	
77 Tetrachloroethene	164	9.498	9.499	-0.001	94	121669	50.0	82.2	
78 1,3-Dichloropropane	76	9.589	9.591	-0.002	87	264059	50.0	62.7	
79 2-Hexanone	43	9.650	9.651	-0.001	95	149592	100.0	121.0	
81 Chlorodibromomethane	129	9.802	9.803	-0.001	90	74368	50.0	56.2	
82 Ethylene Dibromide	107	9.912	9.913	-0.001	99	128722	50.0	60.2	
84 Chlorobenzene	112	10.405	10.406	-0.001	95	525162	50.0	62.4	
86 1,1,1,2-Tetrachloroethane	131	10.496	10.497	-0.001	81	92852	50.0	57.4	
87 Ethylbenzene	106	10.502	10.503	-0.001	98	318397	50.0	65.3	
88 m-Xylene & p-Xylene	106	10.636	10.637	-0.001	99	383259	50.0	64.3	
89 o-Xylene	106	11.019	11.020	-0.001	96	369209	50.0	63.0	
90 Styrene	104	11.037	11.038	-0.001	95	624850	50.0	63.3	
91 Bromoform	173	11.220	11.221	-0.001	90	31714	50.0	59.4	
93 Isopropylbenzene	105	11.384	11.385	-0.001	95	992490	50.0	64.8	
95 Bromobenzene	156	11.694	11.695	-0.001	93	164634	50.0	67.1	
96 1,1,2,2-Tetrachloroethane	83	11.700	11.702	-0.002	92	183971	50.0	61.1	
97 trans-1,4-Dichloro-2-buten	53	11.737	11.738	-0.001	62	34223	50.0	65.6	
98 1,2,3-Trichloropropane	110	11.755	11.756	-0.001	85	61423	50.0	66.6	
99 N-Propylbenzene	120	11.804	11.805	-0.001	99	250513	50.0	70.7	
100 2-Chlorotoluene	126	11.889	11.890	-0.001	95	191417	50.0	68.8	
102 1,3,5-Trimethylbenzene	105	11.986	11.987	-0.001	94	742949	50.0	69.0	
103 4-Chlorotoluene	126	12.011	12.012	-0.001	98	201107	50.0	68.1	
104 tert-Butylbenzene	119	12.297	12.298	-0.001	92	611070	50.0	70.2	
106 1,2,4-Trimethylbenzene	105	12.357	12.359	-0.002	97	731491	50.0	67.3	
108 sec-Butylbenzene	105	12.522	12.523	-0.001	94	935297	50.0	70.1	
109 1,3-Dichlorobenzene	146	12.637	12.638	-0.001	94	300103	50.0	63.8	
110 4-Isopropyltoluene	119	12.680	12.681	-0.001	97	709950	50.0	69.8	
111 1,4-Dichlorobenzene	146	12.741	12.742	-0.001	90	309375	50.0	63.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
116 n-Butylbenzene	91	13.087	13.089	-0.002	99	624188	50.0	67.8	
117 1,2-Dichlorobenzene	146	13.100	13.101	-0.001	94	269928	50.0	59.6	
118 1,2-Dibromo-3-Chloropropan	75	13.896	13.892	0.004	65	11748	50.0	54.2	
122 1,2,4-Trichlorobenzene	180	14.718	14.713	0.005	92	78751	50.0	49.7	
123 Hexachlorobutadiene	225	14.858	14.853	0.005	92	32342	50.0	56.8	
124 Naphthalene	128	14.979	14.981	-0.002	97	226130	50.0	50.9	
125 1,2,3-Trichlorobenzene	180	15.198	15.200	-0.002	93	57131	50.0	50.2	
S 131 Xylenes, Total	106				0		100.0	127.2	
S 130 1,2-Dichloroethene, Total	96				0		100.0	122.3	
S 154 Total BTEX	1				0		250.0	317.9	
S 132 1,3-Dichloropropene, Total	1				0		100.0	105.4	

Reagents:

voaWKet2ndRes_00049	Amount Added:	2.00	Units: uL	
VOA8260VOA2ND_00395	Amount Added:	2.00	Units: uL	
VOA8260INT_00104	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00104	Amount Added:	2.00	Units: uL	Run Reagent

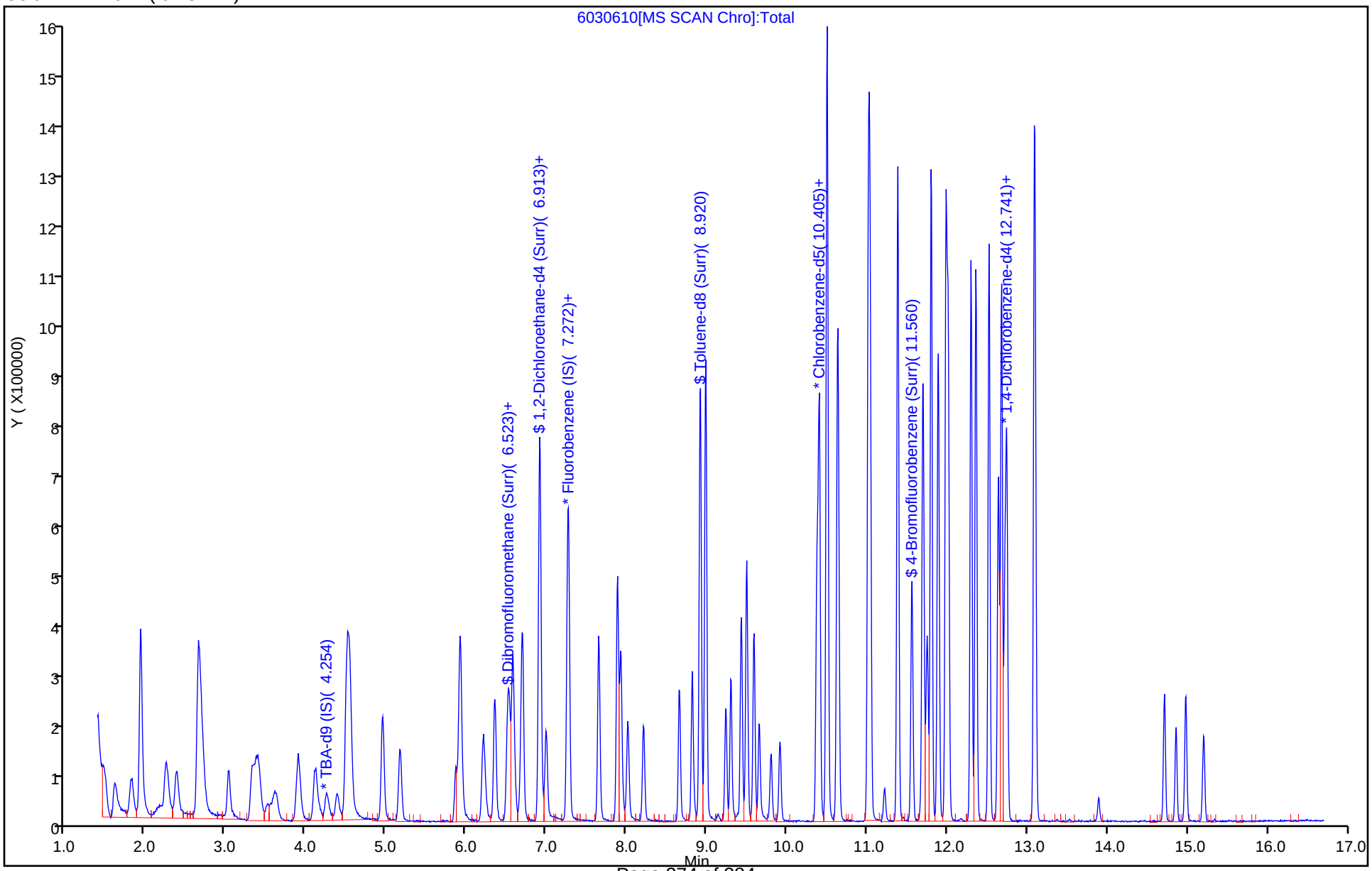
Report Date: 06-Mar-2020 12:32:05 Chrom Revision: 2.3 19-Feb-2020 16:45:46

Eurofins TestAmerica, Pittsburgh

Data File: \\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030610.D

Injection Date:	06-Mar-2020 12:10:30	Instrument ID:	CHHP6	Operator ID:	10099
Lims ID:	180-102790-B-9 MSD			Worklist Smp#:	10
Client ID:	HD-COD-SW-26-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	MSVOA_LL_CHHP6	Limit Group:	VOA 8260C_D ICAL		

Column: DB-624 (0.18 mm)



Eurofins TestAmerica, Pittsburgh
Recovery Report

Data File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\6030610.D				
Lims ID:	180-102790-B-9 MSD				
Client ID:	HD-COD-SW-26-0/1-0				
Sample Type:	MSD				
Inject. Date:	06-Mar-2020 12:10:30	ALS Bottle#:	10	Worklist Smp#:	10
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Sample Info:	180-0031064-010				
Operator ID:	10099	Instrument ID:	CHHP6		
Method:	\\chromna\Pittsburgh\ChromData\CHHP6\20200306-31064.b\MSVOA_LL_CHHP6.m				
Limit Group:	VOA 8260C_D ICAL				
Last Update:	06-Mar-2020 10:29:12	Calib Date:	03-Mar-2020 13:06:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromna\Pittsburgh\ChromData\CHHP6\20200303-31016.b\6030311.D				
Column 1 :	DB-624 (0.18 mm)		Det: MS SCAN		
Process Host:	CTX0335				

First Level Reviewer: gordonk Date: 06-Mar-2020 12:32:04

Compound	Amount Added	Amount Recovered	% Rec.
$ 5 Dibromofluoromethane (Surr)	50.0	61.5	122.98
$ 6 1,2-Dichloroethane-d4 (Surr)	50.0	61.3	122.53
$ 7 Toluene-d8 (Surr)	50.0	69.6	139.28
$ 8 4-Bromofluorobenzene (Surr)	50.0	65.2	130.35

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-102790-1

SDG No.:

Instrument ID: CHHP6 Start Date: 03/03/2020 08:18

Analysis Batch Number: 308714 End Date: 03/03/2020 15:52

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 180-308714/1		03/03/2020 08:18	1	6030301A.D	DB-624 0.18(mm)
IC 180-308714/4		03/03/2020 09:52	1	6030304.D	DB-624 0.18(mm)
IC 180-308714/5		03/03/2020 10:19	1	6030305.D	DB-624 0.18(mm)
ICIS 180-308714/6		03/03/2020 10:47	1	6030306.D	DB-624 0.18(mm)
IC 180-308714/7		03/03/2020 11:15	1	6030307.D	DB-624 0.18(mm)
IC 180-308714/8		03/03/2020 11:43	1	6030308.D	DB-624 0.18(mm)
IC 180-308714/9		03/03/2020 12:10	1	6030309.D	DB-624 0.18(mm)
IC 180-308714/10		03/03/2020 12:38	1	6030310.D	DB-624 0.18(mm)
IC 180-308714/11		03/03/2020 13:06	1	6030311.D	DB-624 0.18(mm)
ZZZZZ		03/03/2020 14:57	1		DB-624 0.18(mm)
ICV 180-308714/17		03/03/2020 15:52	1		DB-624 0.18(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins TestAmerica, Pittsburgh Job No.: 180-102790-1

SDG No.:

Instrument ID: CHHP6 Start Date: 03/06/2020 07:00

Analysis Batch Number: 309079 End Date: 03/06/2020 18:35

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 180-309079/1		03/06/2020 07:00	1	6030601A.D	DB-624 0.18(mm)
CCVIS 180-309079/2		03/06/2020 07:32	1	6030602.D	DB-624 0.18(mm)
LCS 180-309079/3		03/06/2020 08:47	1	6030603A.D	DB-624 0.18(mm)
ZZZZZ		03/06/2020 09:25	1		DB-624 0.18(mm)
MB 180-309079/7		03/06/2020 10:20	1	6030606.D	DB-624 0.18(mm)
180-102790-9		03/06/2020 10:47	1	6030607.D	DB-624 0.18(mm)
180-102790-9 MS		03/06/2020 11:42	1	6030609.D	DB-624 0.18(mm)
180-102790-9 MSD		03/06/2020 12:10	1	6030610.D	DB-624 0.18(mm)
180-102790-1		03/06/2020 13:03	1	6030612.D	DB-624 0.18(mm)
180-102790-2		03/06/2020 13:29	1	6030613.D	DB-624 0.18(mm)
180-102790-3		03/06/2020 13:57	1	6030614.D	DB-624 0.18(mm)
180-102790-4		03/06/2020 14:25	1	6030615.D	DB-624 0.18(mm)
180-102790-5		03/06/2020 14:52	1	6030616.D	DB-624 0.18(mm)
180-102790-6		03/06/2020 15:20	1	6030617.D	DB-624 0.18(mm)
180-102790-7		03/06/2020 15:48	1	6030618.D	DB-624 0.18(mm)
180-102790-8		03/06/2020 16:16	1	6030619.D	DB-624 0.18(mm)
180-102790-10		03/06/2020 16:44	1	6030620.D	DB-624 0.18(mm)
180-102790-11		03/06/2020 17:12	1	6030621.D	DB-624 0.18(mm)
180-102790-12		03/06/2020 17:40	1	6030622.D	DB-624 0.18(mm)
180-102790-13		03/06/2020 18:07	1	6030623.D	DB-624 0.18(mm)
180-102790-14		03/06/2020 18:35	1	6030624.D	DB-624 0.18(mm)

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins TestAmerica, Pittsbur Job No.: 180-102790-1

SDG No.:

Batch Number: 309079 Batch Start Date: 03/06/20 07:00 Batch Analyst: Gordon, Kathy L

Batch Method: EPA 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	VOA BFB25 00007	VOA8260INT 00104	VOA8260SURR 00104
BFB 180-309079/1		EPA 8260C		5 mL	5 mL		1 uL		
CCVIS 180-309079/2		EPA 8260C		5 mL	5 mL			2 uL	2 uL
LCS 180-309079/3		EPA 8260C		5 mL	5 mL			2 uL	2 uL
MB 180-309079/7		EPA 8260C		5 mL	5 mL			2 uL	2 uL
180-102790-A-9	HD-COD-SW-26-0/1-0	EPA 8260C	T	5 mL	5 mL	<2 SU		2 uL	2 uL
180-102790-A-9 MS	HD-COD-SW-26-0/1-0	EPA 8260C	T	5 mL	5 mL	<2 SU		2 uL	2 uL
180-102790-B-9 MSD	HD-COD-SW-26-0/1-0	EPA 8260C	T	5 mL	5 mL	<2 SU		2 uL	2 uL
180-102790-A-1	HD-COD-SW-6-0/1-0	EPA 8260C	T	5 mL	5 mL	<2 SU		2 uL	2 uL
180-102790-A-2	HD-COD-SW-7-0/1-0	EPA 8260C	T	5 mL	5 mL	<2 SU		2 uL	2 uL
180-102790-A-3	HD-COD-SW-8-0/1-0	EPA 8260C	T	5 mL	5 mL	<2 SU		2 uL	2 uL
180-102790-A-4	HD-COD-SW-9-0/1-0	EPA 8260C	T	5 mL	5 mL	<2 SU		2 uL	2 uL
180-102790-A-5	HD-COD-SW-13-0/1-0	EPA 8260C	T	5 mL	5 mL	<2 SU		2 uL	2 uL
180-102790-A-6	HD-COD-SW-15-0/1-0	EPA 8260C	T	5 mL	5 mL	<2 SU		2 uL	2 uL
180-102790-A-7	HD-COD-SW-16-0/1-0	EPA 8260C	T	5 mL	5 mL	<2 SU		2 uL	2 uL
180-102790-A-8	HD-COD-SW-17-0/1-0	EPA 8260C	T	5 mL	5 mL	<2 SU		2 uL	2 uL
180-102790-A-10	HD-COD-SW-27-0/1-0	EPA 8260C	T	5 mL	5 mL	<2 SU		2 uL	2 uL
180-102790-A-11	HD-COD-SW-28-0/1-0	EPA 8260C	T	5 mL	5 mL	<2 SU		2 uL	2 uL
180-102790-C-12	HD-COD-SW-29-0/1-0	EPA 8260C	T	5 mL	5 mL	<2 SU		2 uL	2 uL
180-102790-C-13	HD-QC1-0/1-1	EPA 8260C	T	5 mL	5 mL	<2 SU		2 uL	2 uL
180-102790-A-14	HD-QC1-0/1-2	EPA 8260C	T	5 mL	5 mL	<2 SU		2 uL	2 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	VOA8260VOA2ND 00395	voaWKet2ndRes 00049				

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.: 180-102790-1

SDG No.:

Batch Number: 309079 Batch Start Date: 03/06/20 07:00 Batch Analyst: Gordon, Kathy L

Batch Method: EPA 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	VOA8260VOA2ND 00395	voaWKet2ndRes 00049				
BFB 180-309079/1		EPA 8260C							
CCVIS 180-309079/2		EPA 8260C		2 uL	2 uL				
LCS 180-309079/3		EPA 8260C		2 uL	2 uL				
MB 180-309079/7		EPA 8260C							
180-102790-A-9	HD-COD-SW-26-0/1-0	EPA 8260C	T						
180-102790-A-9 MS	HD-COD-SW-26-0/1-0	EPA 8260C	T	2 uL	2 uL				
180-102790-B-9 MSD	HD-COD-SW-26-0/1-0	EPA 8260C	T	2 uL	2 uL				
180-102790-A-1	HD-COD-SW-6-0/1-0	EPA 8260C	T						
180-102790-A-2	HD-COD-SW-7-0/1-0	EPA 8260C	T						
180-102790-A-3	HD-COD-SW-8-0/1-0	EPA 8260C	T						
180-102790-A-4	HD-COD-SW-9-0/1-0	EPA 8260C	T						
180-102790-A-5	HD-COD-SW-13-0/1-0	EPA 8260C	T						
180-102790-A-6	HD-COD-SW-15-0/1-0	EPA 8260C	T						
180-102790-A-7	HD-COD-SW-16-0/1-0	EPA 8260C	T						
180-102790-A-8	HD-COD-SW-17-0/1-0	EPA 8260C	T						
180-102790-A-10	HD-COD-SW-27-0/1-0	EPA 8260C	T						
180-102790-A-11	HD-COD-SW-28-0/1-0	EPA 8260C	T						
180-102790-C-12	HD-COD-SW-29-0/1-0	EPA 8260C	T						
180-102790-C-13	HD-QC1-0/1-1	EPA 8260C	T						
180-102790-A-14	HD-QC1-0/1-2	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.: 180-102790-1

SDG No.:

Batch Number: 309079 Batch Start Date: 03/06/20 07:00 Batch Analyst: Gordon, Kathy L

Batch Method: EPA 8260C Batch End Date:

Batch Notes	
Batch Comment	Methanol ID 3167189
pH Indicator ID	HC902937

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

TestAmerica Pittsburgh
301 Alpha Drive
Pittsburgh, PA 15238
phone 412.963.7058 fax 412.963.2470

Chain of Custody Record

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Chris O'Neil	Site Contact: Casey Littlefield	DateSubmitted: 2/24/2020	COC No: TAP202002241
Groundwater Sciences Corporation	Tel/Fax: 717-901-8176 / (717) 756-1246	Lab Contact: Carrie Gamber	Carrier: FEDEX	1 of 1 COCs
2601 Market Place St. Suite 310	Analysis Turnaround Time			Job No. 10012.42
Harrisburg, PA 17110	Calendar (C) or Work Days (W) _____			
(717) 901-8180 Phone	TAT if different from Below: Standard			Container No. 1
(717) 657-1611 FAX	2 weeks			SDG No.
Project Name: Surface Water Monthly	1 week			
Site: fYNOP, York PA	2 days			
Quote # 18000557	1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	SW-846 Method VOCs via (8260C) Modified QAPP List	Sample Specific Notes:
HD-COD-SW-6-0/1-0	2/24/20	1325	Surface Water	Water	3	X	
HD-COD-SW-7-0/1-0		1245	Surface Water	Water	3	X	
HD-COD-SW-8-0/1-0		1040	Surface Water	Water	3	X	
HD-COD-SW-9-0/1-0		1345	Surface Water	Water	3	X	
HD-COD-SW-13-0/1-0		1055	Surface Water	Water	3	X	
HD-COD-SW-15-0/1-0		1310	Surface Water	Water	3	X	
HD-COD-SW-16-0/1-0		1120	Surface Water	Water	3	X	
HD-COD-SW-17-0/1-0		1145	Surface Water	Water	3	X	
HD-COD-SW-26-0/1-0		1225	Surface Water	Water	3	X	
HD-COD-SW-27-0/1-0		1300	Surface Water	Water	3	X	
HD-COD-SW-28-0/1-0		1405	Surface Water	Water	3	X	
HD-COD-SW-29-0/1-0		1025	Surface Water	Water	3	X	
HD-QC1-0/1-1		1200	Surface Water	Water	3	X	
HD-QC1-0/1-2		—	Trip Blank	Water	2	X	
				Number of Containers		41	
				Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Unpreserved 7=Na2S2O3		2	
				Field Filter		N	

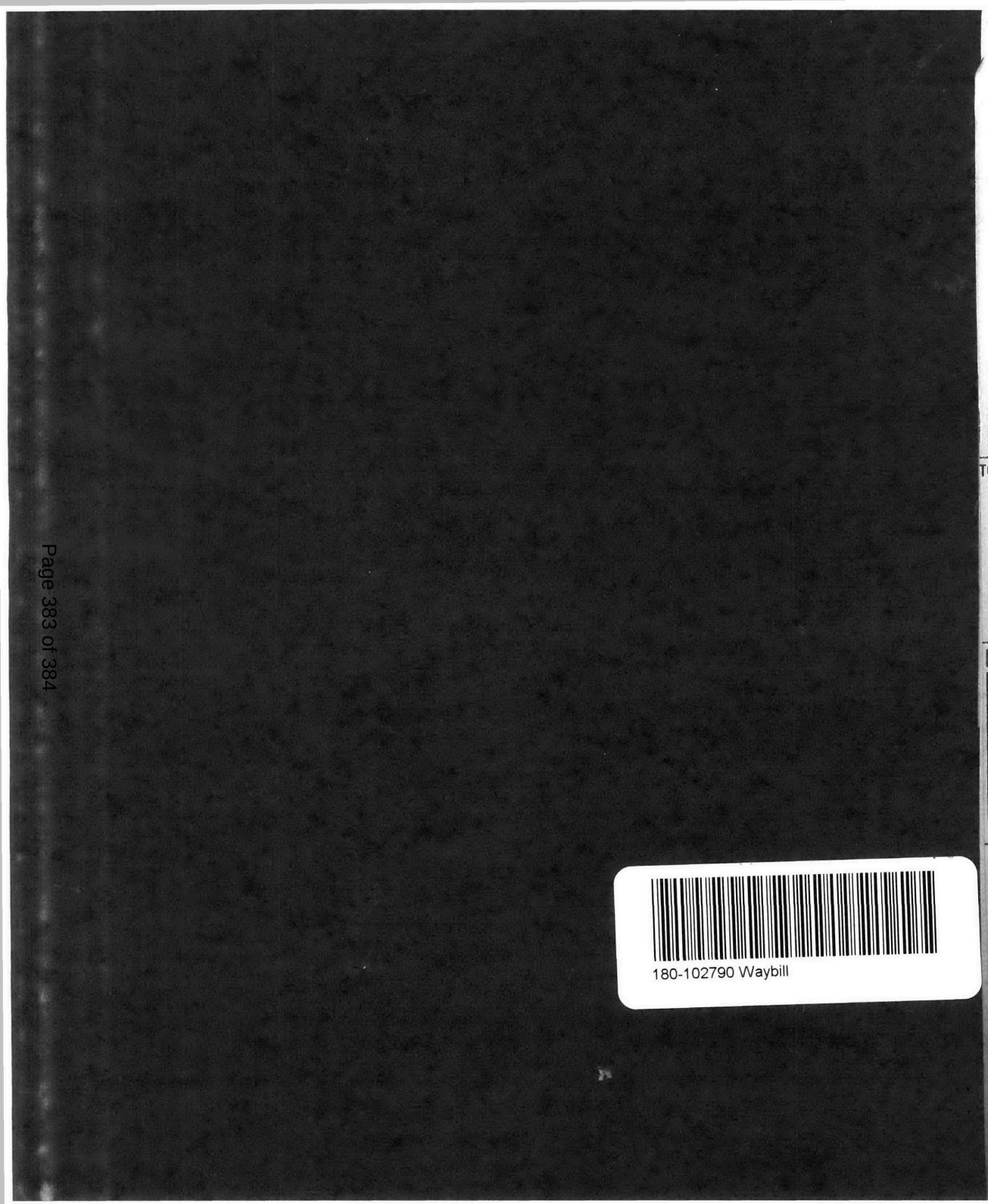
180-102790 Chain of Custody

Possible Hazard Identification
Non-Hazard *Flammable* *Skin Irritant* *Poison B* *Unknown*

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 & Comments: **CLP Like Deliverables, Project Specific Analyte Lists**

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Casey Littlefield	GSC	2/24/20 1510	Dennis Ram	ETA	2/24/2020 1510
	Company:	Date/Time:	Received by:	Company:	Date/Time:
	ETA	2/24/2020	FED EX		
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
				ETA	2/25/20 900



TestAme RT97

THE LEADER IN ENVIRONMEN ING

1 10:30 A 5444 02.25

EXP 11/18

551C2/049E/104C

ORIGIN ID:GTYA (717) 461-6245

TESTAMERICA HARRISBURG SC
5020 RITTER RD
SUITES 205/206
MECHANICSBURG, PA 170554837
UNITED STATES US

SHIP DATE: 24FEB20
ACTWGT: 45.00 LB MAN
CAD: 0129689/CAFE3211

BILL RECIPIENT

TO **SAMPLE RECEIVING**
TESTAMERICA PITTSBURGH
301 ALPHA DRIVE
RIDC PARK
PITTSBURGH PA 152382907

(412) 963-7058 REF:
INV:
PO: DEPT:

FedEx Express

J181180605011AV

TRK# 0201 **4690 5823 5444**

TUE - 25 FEB 10:30A
PRIORITY OVERNIGHT

NA AGCA

15238
PA-US **PIT**

Uncorrected temp 3.1 C
Thermometer ID 50
CF 0 Initials JJ
PT-WI-SR-001 effective 11/8/18

Login Sample Receipt Checklist

Client: Groundwater Sciences Corporation

Job Number: 180-102790-1

Login Number: 102790
List Number: 1
Creator: Say, Thomas C

List Source: Eurofins TestAmerica, Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
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 <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	