

ANALYTICAL REPORT

Job Number: 410-11876-1

Job Description: fYNOP Monthly Surface Water

For:

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

Attention: Christopher O'Neil



Approved for release.
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Project Manager
9/11/2020 8:45 AM

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09/11/2020

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Definitions/Glossary

Client: Groundwater Sciences Corporation
Project/Site: fYNOP Monthly Surface Water

Job ID: 410-11876-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
FH	MS and/or MSD recovery above control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
1C	Result is from the primary column on a dual-column method.
2C	Result is from the confirmation column on a dual-column method.
CFL	Contains Free Liquid
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)
TNTC	Too Numerous To Count

Job Narrative
410-11876-1

Receipt

The samples were received on 8/25/2020 6:30 PM; the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.9°C

GC/MS VOA

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

Detection Summary

Client: Groundwater Sciences Corporation
Project/Site: fYNOP Monthly Surface Water

Job ID: 410-11876-1

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

Lab Sample ID: 410-11876-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	1.3	J	5.0	0.90	ug/L	1		8260C LL	Total/NA
Chloromethane	0.24	J	0.50	0.060	ug/L	1		8260C LL	Total/NA
Trichloroethene	0.063	J	0.50	0.060	ug/L	1		8260C LL	Total/NA

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

Lab Sample ID: 410-11876-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	1.7	J	5.0	0.90	ug/L	1		8260C LL	Total/NA
Chloroform	0.098	J	0.50	0.090	ug/L	1		8260C LL	Total/NA
Chloromethane	0.29	J	0.50	0.060	ug/L	1		8260C LL	Total/NA
cis-1,2-Dichloroethene	0.097	J	0.50	0.050	ug/L	1		8260C LL	Total/NA
Methylene Chloride	0.089	J	0.50	0.070	ug/L	1		8260C LL	Total/NA
Tetrachloroethene	0.065	J	0.50	0.060	ug/L	1		8260C LL	Total/NA
Trichloroethene	0.10	J	0.50	0.060	ug/L	1		8260C LL	Total/NA

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

Lab Sample ID: 410-11876-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	1.0	J	5.0	0.90	ug/L	1		8260C LL	Total/NA
Chloromethane	1.1	J	0.50	0.060	ug/L	1		8260C LL	Total/NA
cis-1,2-Dichloroethene	0.12	J	0.50	0.050	ug/L	1		8260C LL	Total/NA
Methylene Chloride	0.072	J	0.50	0.070	ug/L	1		8260C LL	Total/NA
Tetrachloroethene	0.064	J	0.50	0.060	ug/L	1		8260C LL	Total/NA
Trichloroethene	0.12	J	0.50	0.060	ug/L	1		8260C LL	Total/NA

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

Lab Sample ID: 410-11876-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.4	J	5.0	0.90	ug/L	1		8260C LL	Total/NA
Chloroform	0.098	J	0.50	0.090	ug/L	1		8260C LL	Total/NA
Chloromethane	0.53	J	0.50	0.060	ug/L	1		8260C LL	Total/NA
Methylene Chloride	0.10	J	0.50	0.070	ug/L	1		8260C LL	Total/NA
Tetrachloroethene	0.076	J	0.50	0.060	ug/L	1		8260C LL	Total/NA
Toluene	0.14	J	0.50	0.070	ug/L	1		8260C LL	Total/NA
Trichloroethene	0.074	J	0.50	0.060	ug/L	1		8260C LL	Total/NA

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

Lab Sample ID: 410-11876-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	1.8	J	5.0	0.90	ug/L	1		8260C LL	Total/NA
Chloromethane	0.48	J	0.50	0.060	ug/L	1		8260C LL	Total/NA
cis-1,2-Dichloroethene	0.12	J	0.50	0.050	ug/L	1		8260C LL	Total/NA
Methylene Chloride	0.072	J	0.50	0.070	ug/L	1		8260C LL	Total/NA
Tetrachloroethene	0.064	J	0.50	0.060	ug/L	1		8260C LL	Total/NA
Trichloroethene	0.13	J	0.50	0.060	ug/L	1		8260C LL	Total/NA

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

Lab Sample ID: 410-11876-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.14	J	0.50	0.060	ug/L	1		8260C LL	Total/NA
1,1-Dichloroethane	0.073	J FH	0.50	0.070	ug/L	1		8260C LL	Total/NA
1,1-Dichloroethene	0.092	J	0.50	0.060	ug/L	1		8260C LL	Total/NA
Chloroform	0.36	J	0.50	0.090	ug/L	1		8260C LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Groundwater Sciences Corporation
Project/Site: fYNOP Monthly Surface Water

Job ID: 410-11876-1

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

Lab Sample ID: 410-11876-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloromethane	0.57	FH	0.50	0.060	ug/L	1		8260C LL	Total/NA
cis-1,2-Dichloroethene	0.85		0.50	0.050	ug/L	1		8260C LL	Total/NA
Methyl tert-butyl ether	0.054	J	0.50	0.050	ug/L	1		8260C LL	Total/NA
Methylene Chloride	0.11	J	0.50	0.070	ug/L	1		8260C LL	Total/NA
Tetrachloroethene	3.0		0.50	0.060	ug/L	1		8260C LL	Total/NA
Trichloroethene	1.1		0.50	0.060	ug/L	1		8260C LL	Total/NA

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

Lab Sample ID: 410-11876-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	1.7	J	5.0	0.90	ug/L	1		8260C LL	Total/NA
Chloromethane	0.21	J	0.50	0.060	ug/L	1		8260C LL	Total/NA
cis-1,2-Dichloroethene	0.12	J	0.50	0.050	ug/L	1		8260C LL	Total/NA
Methylene Chloride	0.12	J	0.50	0.070	ug/L	1		8260C LL	Total/NA
Tetrachloroethene	0.072	J	0.50	0.060	ug/L	1		8260C LL	Total/NA
Trichloroethene	0.13	J	0.50	0.060	ug/L	1		8260C LL	Total/NA

Client Sample ID: HD-COD-SW-17-0/1-0

Lab Sample ID: 410-11876-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.27	J	0.50	0.060	ug/L	1		8260C LL	Total/NA
1,1-Dichloroethane	0.16	J	0.50	0.070	ug/L	1		8260C LL	Total/NA
1,1-Dichloroethene	0.15	J	0.50	0.060	ug/L	1		8260C LL	Total/NA
Acetone	1.3	J	5.0	0.90	ug/L	1		8260C LL	Total/NA
Chloroform	0.29	J	0.50	0.090	ug/L	1		8260C LL	Total/NA
Chloromethane	1.2		0.50	0.060	ug/L	1		8260C LL	Total/NA
cis-1,2-Dichloroethene	1.6		0.50	0.050	ug/L	1		8260C LL	Total/NA
Methylene Chloride	0.12	J	0.50	0.070	ug/L	1		8260C LL	Total/NA
Tetrachloroethene	7.1		0.50	0.060	ug/L	1		8260C LL	Total/NA
Trichloroethene	2.8		0.50	0.060	ug/L	1		8260C LL	Total/NA

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

Lab Sample ID: 410-11876-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	0.18	J	0.50	0.060	ug/L	1		8260C LL	Total/NA
Acetone	1.8	J	5.0	0.90	ug/L	1		8260C LL	Total/NA
Chloroform	0.76		0.50	0.090	ug/L	1		8260C LL	Total/NA
Chloromethane	0.43	J	0.50	0.060	ug/L	1		8260C LL	Total/NA
cis-1,2-Dichloroethene	0.075	J	0.50	0.050	ug/L	1		8260C LL	Total/NA
Methylene Chloride	0.14	J	0.50	0.070	ug/L	1		8260C LL	Total/NA
Tetrachloroethene	3.9		0.50	0.060	ug/L	1		8260C LL	Total/NA
Trichloroethene	0.19	J	0.50	0.060	ug/L	1		8260C LL	Total/NA

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

Lab Sample ID: 410-11876-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.8	J	5.0	0.90	ug/L	1		8260C LL	Total/NA
Chloromethane	0.63		0.50	0.060	ug/L	1		8260C LL	Total/NA
cis-1,2-Dichloroethene	0.090	J	0.50	0.050	ug/L	1		8260C LL	Total/NA
Methylene Chloride	0.11	J	0.50	0.070	ug/L	1		8260C LL	Total/NA
Trichloroethene	0.089	J	0.50	0.060	ug/L	1		8260C LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Groundwater Sciences Corporation
Project/Site: fYNOP Monthly Surface Water

Job ID: 410-11876-1

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

Lab Sample ID: 410-11876-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.1	J	5.0	0.90	ug/L	1		8260C LL	Total/NA
Chloroform	0.10	J	0.50	0.090	ug/L	1		8260C LL	Total/NA
Chloromethane	0.56		0.50	0.060	ug/L	1		8260C LL	Total/NA
cis-1,2-Dichloroethene	0.098	J	0.50	0.050	ug/L	1		8260C LL	Total/NA
Methylene Chloride	0.14	J	0.50	0.070	ug/L	1		8260C LL	Total/NA
Tetrachloroethene	0.11	J	0.50	0.060	ug/L	1		8260C LL	Total/NA
Trichloroethene	0.097	J	0.50	0.060	ug/L	1		8260C LL	Total/NA

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

Lab Sample ID: 410-11876-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	2.1	J	5.0	0.90	ug/L	1		8260C LL	Total/NA
Chloromethane	0.36	J	0.50	0.060	ug/L	1		8260C LL	Total/NA
cis-1,2-Dichloroethene	0.097	J	0.50	0.050	ug/L	1		8260C LL	Total/NA
Methylene Chloride	0.095	J	0.50	0.070	ug/L	1		8260C LL	Total/NA
Tetrachloroethene	0.074	J	0.50	0.060	ug/L	1		8260C LL	Total/NA
Trichloroethene	0.12	J	0.50	0.060	ug/L	1		8260C LL	Total/NA

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

Lab Sample ID: 410-11876-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.27	J	0.50	0.060	ug/L	1		8260C LL	Total/NA
1,1-Dichloroethane	0.14	J	0.50	0.070	ug/L	1		8260C LL	Total/NA
1,1-Dichloroethene	0.14	J	0.50	0.060	ug/L	1		8260C LL	Total/NA
Chloroform	0.29	J	0.50	0.090	ug/L	1		8260C LL	Total/NA
Chloromethane	0.58		0.50	0.060	ug/L	1		8260C LL	Total/NA
cis-1,2-Dichloroethene	1.6		0.50	0.050	ug/L	1		8260C LL	Total/NA
Methylene Chloride	0.087	J	0.50	0.070	ug/L	1		8260C LL	Total/NA
Tetrachloroethene	6.9		0.50	0.060	ug/L	1		8260C LL	Total/NA
Trichloroethene	2.7		0.50	0.060	ug/L	1		8260C LL	Total/NA

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

Lab Sample ID: 410-11876-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	1.6	J	5.0	0.90	ug/L	1		8260C LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP Monthly Surface Water

Job ID: 410-11876-1

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

Lab Sample ID: 410-11876-1

Date Collected: 08/25/20 10:15

Matrix: Water

Date Received: 08/25/20 18:30

Method: 8260C LL - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			08/30/20 22:46	1
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			08/30/20 22:46	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			08/30/20 22:46	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			08/30/20 22:46	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			08/30/20 22:46	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			08/30/20 22:46	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			08/30/20 22:46	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			08/30/20 22:46	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			08/30/20 22:46	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			08/30/20 22:46	1
2-Hexanone	ND		5.0	0.60	ug/L			08/30/20 22:46	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			08/30/20 22:46	1
Acetone	1.3	J	5.0	0.90	ug/L			08/30/20 22:46	1
Acrylonitrile	ND		5.0	0.40	ug/L			08/30/20 22:46	1
Benzene	ND		0.50	0.050	ug/L			08/30/20 22:46	1
Bromochloromethane	ND		0.50	0.050	ug/L			08/30/20 22:46	1
Bromodichloromethane	ND		0.50	0.050	ug/L			08/30/20 22:46	1
Bromoform	ND		1.0	0.30	ug/L			08/30/20 22:46	1
Bromomethane	ND		0.50	0.070	ug/L			08/30/20 22:46	1
Carbon disulfide	ND		1.0	0.060	ug/L			08/30/20 22:46	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			08/30/20 22:46	1
Chlorobenzene	ND		0.50	0.060	ug/L			08/30/20 22:46	1
Chloroethane	ND		0.50	0.070	ug/L			08/30/20 22:46	1
Chloroform	ND		0.50	0.090	ug/L			08/30/20 22:46	1
Chloromethane	0.24	J	0.50	0.060	ug/L			08/30/20 22:46	1
cis-1,2-Dichloroethene	ND		0.50	0.050	ug/L			08/30/20 22:46	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			08/30/20 22:46	1
Dibromochloromethane	ND		0.50	0.070	ug/L			08/30/20 22:46	1
Ethylbenzene	ND		0.50	0.060	ug/L			08/30/20 22:46	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			08/30/20 22:46	1
Methylene Chloride	ND		0.50	0.070	ug/L			08/30/20 22:46	1
Styrene	ND		0.50	0.050	ug/L			08/30/20 22:46	1
Tetrachloroethene	ND		0.50	0.060	ug/L			08/30/20 22:46	1
Toluene	ND		0.50	0.070	ug/L			08/30/20 22:46	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			08/30/20 22:46	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			08/30/20 22:46	1
Trichloroethene	0.063	J	0.50	0.060	ug/L			08/30/20 22:46	1
Vinyl chloride	ND		0.50	0.10	ug/L			08/30/20 22:46	1
Xylenes, Total	ND		1.0	0.15	ug/L			08/30/20 22:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		80 - 120		08/30/20 22:46	1
Dibromofluoromethane (Surr)	107		80 - 120		08/30/20 22:46	1
Toluene-d8 (Surr)	101		80 - 120		08/30/20 22:46	1
4-Bromofluorobenzene (Surr)	96		80 - 120		08/30/20 22:46	1

Client Sample Results

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP Monthly Surface Water

Job ID: 410-11876-1

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

Lab Sample ID: 410-11876-2

Date Collected: 08/25/20 11:00

Matrix: Water

Date Received: 08/25/20 18:30

Method: 8260C LL - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			08/30/20 23:08	1
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			08/30/20 23:08	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			08/30/20 23:08	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			08/30/20 23:08	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			08/30/20 23:08	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			08/30/20 23:08	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			08/30/20 23:08	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			08/30/20 23:08	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			08/30/20 23:08	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			08/30/20 23:08	1
2-Hexanone	ND		5.0	0.60	ug/L			08/30/20 23:08	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			08/30/20 23:08	1
Acetone	1.7	J	5.0	0.90	ug/L			08/30/20 23:08	1
Acrylonitrile	ND		5.0	0.40	ug/L			08/30/20 23:08	1
Benzene	ND		0.50	0.050	ug/L			08/30/20 23:08	1
Bromochloromethane	ND		0.50	0.050	ug/L			08/30/20 23:08	1
Bromodichloromethane	ND		0.50	0.050	ug/L			08/30/20 23:08	1
Bromoform	ND		1.0	0.30	ug/L			08/30/20 23:08	1
Bromomethane	ND		0.50	0.070	ug/L			08/30/20 23:08	1
Carbon disulfide	ND		1.0	0.060	ug/L			08/30/20 23:08	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			08/30/20 23:08	1
Chlorobenzene	ND		0.50	0.060	ug/L			08/30/20 23:08	1
Chloroethane	ND		0.50	0.070	ug/L			08/30/20 23:08	1
Chloroform	0.098	J	0.50	0.090	ug/L			08/30/20 23:08	1
Chloromethane	0.29	J	0.50	0.060	ug/L			08/30/20 23:08	1
cis-1,2-Dichloroethene	0.097	J	0.50	0.050	ug/L			08/30/20 23:08	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			08/30/20 23:08	1
Dibromochloromethane	ND		0.50	0.070	ug/L			08/30/20 23:08	1
Ethylbenzene	ND		0.50	0.060	ug/L			08/30/20 23:08	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			08/30/20 23:08	1
Methylene Chloride	0.089	J	0.50	0.070	ug/L			08/30/20 23:08	1
Styrene	ND		0.50	0.050	ug/L			08/30/20 23:08	1
Tetrachloroethene	0.065	J	0.50	0.060	ug/L			08/30/20 23:08	1
Toluene	ND		0.50	0.070	ug/L			08/30/20 23:08	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			08/30/20 23:08	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			08/30/20 23:08	1
Trichloroethene	0.10	J	0.50	0.060	ug/L			08/30/20 23:08	1
Vinyl chloride	ND		0.50	0.10	ug/L			08/30/20 23:08	1
Xylenes, Total	ND		1.0	0.15	ug/L			08/30/20 23:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		80 - 120		08/30/20 23:08	1
Dibromofluoromethane (Surr)	108		80 - 120		08/30/20 23:08	1
Toluene-d8 (Surr)	100		80 - 120		08/30/20 23:08	1
4-Bromofluorobenzene (Surr)	96		80 - 120		08/30/20 23:08	1

Client Sample Results

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP Monthly Surface Water

Job ID: 410-11876-1

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

Lab Sample ID: 410-11876-3

Date Collected: 08/25/20 08:20

Matrix: Water

Date Received: 08/25/20 18:30

Method: 8260C LL - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			08/30/20 23:30	1
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			08/30/20 23:30	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			08/30/20 23:30	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			08/30/20 23:30	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			08/30/20 23:30	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			08/30/20 23:30	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			08/30/20 23:30	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			08/30/20 23:30	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			08/30/20 23:30	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			08/30/20 23:30	1
2-Hexanone	ND		5.0	0.60	ug/L			08/30/20 23:30	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			08/30/20 23:30	1
Acetone	1.0	J	5.0	0.90	ug/L			08/30/20 23:30	1
Acrylonitrile	ND		5.0	0.40	ug/L			08/30/20 23:30	1
Benzene	ND		0.50	0.050	ug/L			08/30/20 23:30	1
Bromochloromethane	ND		0.50	0.050	ug/L			08/30/20 23:30	1
Bromodichloromethane	ND		0.50	0.050	ug/L			08/30/20 23:30	1
Bromoform	ND		1.0	0.30	ug/L			08/30/20 23:30	1
Bromomethane	ND		0.50	0.070	ug/L			08/30/20 23:30	1
Carbon disulfide	ND		1.0	0.060	ug/L			08/30/20 23:30	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			08/30/20 23:30	1
Chlorobenzene	ND		0.50	0.060	ug/L			08/30/20 23:30	1
Chloroethane	ND		0.50	0.070	ug/L			08/30/20 23:30	1
Chloroform	ND		0.50	0.090	ug/L			08/30/20 23:30	1
Chloromethane	1.1		0.50	0.060	ug/L			08/30/20 23:30	1
cis-1,2-Dichloroethene	0.12	J	0.50	0.050	ug/L			08/30/20 23:30	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			08/30/20 23:30	1
Dibromochloromethane	ND		0.50	0.070	ug/L			08/30/20 23:30	1
Ethylbenzene	ND		0.50	0.060	ug/L			08/30/20 23:30	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			08/30/20 23:30	1
Methylene Chloride	0.072	J	0.50	0.070	ug/L			08/30/20 23:30	1
Styrene	ND		0.50	0.050	ug/L			08/30/20 23:30	1
Tetrachloroethene	0.064	J	0.50	0.060	ug/L			08/30/20 23:30	1
Toluene	ND		0.50	0.070	ug/L			08/30/20 23:30	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			08/30/20 23:30	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			08/30/20 23:30	1
Trichloroethene	0.12	J	0.50	0.060	ug/L			08/30/20 23:30	1
Vinyl chloride	ND		0.50	0.10	ug/L			08/30/20 23:30	1
Xylenes, Total	ND		1.0	0.15	ug/L			08/30/20 23:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	110		80 - 120		08/30/20 23:30	1
Dibromofluoromethane (Surr)	108		80 - 120		08/30/20 23:30	1
Toluene-d8 (Surr)	100		80 - 120		08/30/20 23:30	1
4-Bromofluorobenzene (Surr)	96		80 - 120		08/30/20 23:30	1

Client Sample Results

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP Monthly Surface Water

Job ID: 410-11876-1

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

Lab Sample ID: 410-11876-4

Date Collected: 08/25/20 11:50

Matrix: Water

Date Received: 08/25/20 18:30

Method: 8260C LL - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			08/30/20 23:52	1
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			08/30/20 23:52	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			08/30/20 23:52	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			08/30/20 23:52	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			08/30/20 23:52	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			08/30/20 23:52	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			08/30/20 23:52	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			08/30/20 23:52	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			08/30/20 23:52	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			08/30/20 23:52	1
2-Hexanone	ND		5.0	0.60	ug/L			08/30/20 23:52	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			08/30/20 23:52	1
Acetone	3.4	J	5.0	0.90	ug/L			08/30/20 23:52	1
Acrylonitrile	ND		5.0	0.40	ug/L			08/30/20 23:52	1
Benzene	ND		0.50	0.050	ug/L			08/30/20 23:52	1
Bromochloromethane	ND		0.50	0.050	ug/L			08/30/20 23:52	1
Bromodichloromethane	ND		0.50	0.050	ug/L			08/30/20 23:52	1
Bromoform	ND		1.0	0.30	ug/L			08/30/20 23:52	1
Bromomethane	ND		0.50	0.070	ug/L			08/30/20 23:52	1
Carbon disulfide	ND		1.0	0.060	ug/L			08/30/20 23:52	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			08/30/20 23:52	1
Chlorobenzene	ND		0.50	0.060	ug/L			08/30/20 23:52	1
Chloroethane	ND		0.50	0.070	ug/L			08/30/20 23:52	1
Chloroform	0.098	J	0.50	0.090	ug/L			08/30/20 23:52	1
Chloromethane	0.53		0.50	0.060	ug/L			08/30/20 23:52	1
cis-1,2-Dichloroethene	ND		0.50	0.050	ug/L			08/30/20 23:52	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			08/30/20 23:52	1
Dibromochloromethane	ND		0.50	0.070	ug/L			08/30/20 23:52	1
Ethylbenzene	ND		0.50	0.060	ug/L			08/30/20 23:52	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			08/30/20 23:52	1
Methylene Chloride	0.10	J	0.50	0.070	ug/L			08/30/20 23:52	1
Styrene	ND		0.50	0.050	ug/L			08/30/20 23:52	1
Tetrachloroethene	0.076	J	0.50	0.060	ug/L			08/30/20 23:52	1
Toluene	0.14	J	0.50	0.070	ug/L			08/30/20 23:52	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			08/30/20 23:52	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			08/30/20 23:52	1
Trichloroethene	0.074	J	0.50	0.060	ug/L			08/30/20 23:52	1
Vinyl chloride	ND		0.50	0.10	ug/L			08/30/20 23:52	1
Xylenes, Total	ND		1.0	0.15	ug/L			08/30/20 23:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	113		80 - 120		08/30/20 23:52	1
Dibromofluoromethane (Surr)	110		80 - 120		08/30/20 23:52	1
Toluene-d8 (Surr)	99		80 - 120		08/30/20 23:52	1
4-Bromofluorobenzene (Surr)	96		80 - 120		08/30/20 23:52	1

Client Sample Results

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP Monthly Surface Water

Job ID: 410-11876-1

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

Lab Sample ID: 410-11876-5

Date Collected: 08/25/20 08:50

Matrix: Water

Date Received: 08/25/20 18:30

Method: 8260C LL - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			08/31/20 00:14	1
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			08/31/20 00:14	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			08/31/20 00:14	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			08/31/20 00:14	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			08/31/20 00:14	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			08/31/20 00:14	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			08/31/20 00:14	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			08/31/20 00:14	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			08/31/20 00:14	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			08/31/20 00:14	1
2-Hexanone	ND		5.0	0.60	ug/L			08/31/20 00:14	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			08/31/20 00:14	1
Acetone	1.8	J	5.0	0.90	ug/L			08/31/20 00:14	1
Acrylonitrile	ND		5.0	0.40	ug/L			08/31/20 00:14	1
Benzene	ND		0.50	0.050	ug/L			08/31/20 00:14	1
Bromochloromethane	ND		0.50	0.050	ug/L			08/31/20 00:14	1
Bromodichloromethane	ND		0.50	0.050	ug/L			08/31/20 00:14	1
Bromoform	ND		1.0	0.30	ug/L			08/31/20 00:14	1
Bromomethane	ND		0.50	0.070	ug/L			08/31/20 00:14	1
Carbon disulfide	ND		1.0	0.060	ug/L			08/31/20 00:14	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			08/31/20 00:14	1
Chlorobenzene	ND		0.50	0.060	ug/L			08/31/20 00:14	1
Chloroethane	ND		0.50	0.070	ug/L			08/31/20 00:14	1
Chloroform	ND		0.50	0.090	ug/L			08/31/20 00:14	1
Chloromethane	0.48	J	0.50	0.060	ug/L			08/31/20 00:14	1
cis-1,2-Dichloroethene	0.12	J	0.50	0.050	ug/L			08/31/20 00:14	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			08/31/20 00:14	1
Dibromochloromethane	ND		0.50	0.070	ug/L			08/31/20 00:14	1
Ethylbenzene	ND		0.50	0.060	ug/L			08/31/20 00:14	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			08/31/20 00:14	1
Methylene Chloride	0.072	J	0.50	0.070	ug/L			08/31/20 00:14	1
Styrene	ND		0.50	0.050	ug/L			08/31/20 00:14	1
Tetrachloroethene	0.064	J	0.50	0.060	ug/L			08/31/20 00:14	1
Toluene	ND		0.50	0.070	ug/L			08/31/20 00:14	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			08/31/20 00:14	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			08/31/20 00:14	1
Trichloroethene	0.13	J	0.50	0.060	ug/L			08/31/20 00:14	1
Vinyl chloride	ND		0.50	0.10	ug/L			08/31/20 00:14	1
Xylenes, Total	ND		1.0	0.15	ug/L			08/31/20 00:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	113		80 - 120		08/31/20 00:14	1
Dibromofluoromethane (Surr)	111		80 - 120		08/31/20 00:14	1
Toluene-d8 (Surr)	100		80 - 120		08/31/20 00:14	1
4-Bromofluorobenzene (Surr)	96		80 - 120		08/31/20 00:14	1

Client Sample Results

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP Monthly Surface Water

Job ID: 410-11876-1

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

Lab Sample ID: 410-11876-6

Date Collected: 08/25/20 11:25

Matrix: Water

Date Received: 08/25/20 18:30

Method: 8260C LL - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			08/30/20 21:19	1
1,1,1-Trichloroethane	0.14	J	0.50	0.060	ug/L			08/30/20 21:19	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			08/30/20 21:19	1
1,1,2-Trichloroethane	ND	FH	0.50	0.060	ug/L			08/30/20 21:19	1
1,1-Dichloroethane	0.073	J FH	0.50	0.070	ug/L			08/30/20 21:19	1
1,1-Dichloroethene	0.092	J	0.50	0.060	ug/L			08/30/20 21:19	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			08/30/20 21:19	1
1,2-Dichloroethane	ND	FH	0.50	0.050	ug/L			08/30/20 21:19	1
1,2-Dichloropropane	ND	FH	0.50	0.060	ug/L			08/30/20 21:19	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			08/30/20 21:19	1
2-Hexanone	ND		5.0	0.60	ug/L			08/30/20 21:19	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			08/30/20 21:19	1
Acetone	ND		5.0	0.90	ug/L			08/30/20 21:19	1
Acrylonitrile	ND		5.0	0.40	ug/L			08/30/20 21:19	1
Benzene	ND		0.50	0.050	ug/L			08/30/20 21:19	1
Bromochloromethane	ND		0.50	0.050	ug/L			08/30/20 21:19	1
Bromodichloromethane	ND		0.50	0.050	ug/L			08/30/20 21:19	1
Bromoform	ND		1.0	0.30	ug/L			08/30/20 21:19	1
Bromomethane	ND		0.50	0.070	ug/L			08/30/20 21:19	1
Carbon disulfide	ND	FH	1.0	0.060	ug/L			08/30/20 21:19	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			08/30/20 21:19	1
Chlorobenzene	ND		0.50	0.060	ug/L			08/30/20 21:19	1
Chloroethane	ND		0.50	0.070	ug/L			08/30/20 21:19	1
Chloroform	0.36	J	0.50	0.090	ug/L			08/30/20 21:19	1
Chloromethane	0.57	FH	0.50	0.060	ug/L			08/30/20 21:19	1
cis-1,2-Dichloroethene	0.85		0.50	0.050	ug/L			08/30/20 21:19	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			08/30/20 21:19	1
Dibromochloromethane	ND		0.50	0.070	ug/L			08/30/20 21:19	1
Ethylbenzene	ND		0.50	0.060	ug/L			08/30/20 21:19	1
Methyl tert-butyl ether	0.054	J	0.50	0.050	ug/L			08/30/20 21:19	1
Methylene Chloride	0.11	J	0.50	0.070	ug/L			08/30/20 21:19	1
Styrene	ND		0.50	0.050	ug/L			08/30/20 21:19	1
Tetrachloroethene	3.0		0.50	0.060	ug/L			08/30/20 21:19	1
Toluene	ND		0.50	0.070	ug/L			08/30/20 21:19	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			08/30/20 21:19	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			08/30/20 21:19	1
Trichloroethene	1.1		0.50	0.060	ug/L			08/30/20 21:19	1
Vinyl chloride	ND	FH	0.50	0.10	ug/L			08/30/20 21:19	1
Xylenes, Total	ND		1.0	0.15	ug/L			08/30/20 21:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	119		80 - 120		08/30/20 21:19	1
Dibromofluoromethane (Surr)	111		80 - 120		08/30/20 21:19	1
Toluene-d8 (Surr)	97		80 - 120		08/30/20 21:19	1
4-Bromofluorobenzene (Surr)	95		80 - 120		08/30/20 21:19	1

Client Sample Results

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP Monthly Surface Water

Job ID: 410-11876-1

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

Lab Sample ID: 410-11876-7

Date Collected: 08/25/20 09:35

Matrix: Water

Date Received: 08/25/20 18:30

Method: 8260C LL - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			08/31/20 00:35	1
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			08/31/20 00:35	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			08/31/20 00:35	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			08/31/20 00:35	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			08/31/20 00:35	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			08/31/20 00:35	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			08/31/20 00:35	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			08/31/20 00:35	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			08/31/20 00:35	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			08/31/20 00:35	1
2-Hexanone	ND		5.0	0.60	ug/L			08/31/20 00:35	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			08/31/20 00:35	1
Acetone	1.7	J	5.0	0.90	ug/L			08/31/20 00:35	1
Acrylonitrile	ND		5.0	0.40	ug/L			08/31/20 00:35	1
Benzene	ND		0.50	0.050	ug/L			08/31/20 00:35	1
Bromochloromethane	ND		0.50	0.050	ug/L			08/31/20 00:35	1
Bromodichloromethane	ND		0.50	0.050	ug/L			08/31/20 00:35	1
Bromoform	ND		1.0	0.30	ug/L			08/31/20 00:35	1
Bromomethane	ND		0.50	0.070	ug/L			08/31/20 00:35	1
Carbon disulfide	ND		1.0	0.060	ug/L			08/31/20 00:35	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			08/31/20 00:35	1
Chlorobenzene	ND		0.50	0.060	ug/L			08/31/20 00:35	1
Chloroethane	ND		0.50	0.070	ug/L			08/31/20 00:35	1
Chloroform	ND		0.50	0.090	ug/L			08/31/20 00:35	1
Chloromethane	0.21	J	0.50	0.060	ug/L			08/31/20 00:35	1
cis-1,2-Dichloroethene	0.12	J	0.50	0.050	ug/L			08/31/20 00:35	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			08/31/20 00:35	1
Dibromochloromethane	ND		0.50	0.070	ug/L			08/31/20 00:35	1
Ethylbenzene	ND		0.50	0.060	ug/L			08/31/20 00:35	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			08/31/20 00:35	1
Methylene Chloride	0.12	J	0.50	0.070	ug/L			08/31/20 00:35	1
Styrene	ND		0.50	0.050	ug/L			08/31/20 00:35	1
Tetrachloroethene	0.072	J	0.50	0.060	ug/L			08/31/20 00:35	1
Toluene	ND		0.50	0.070	ug/L			08/31/20 00:35	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			08/31/20 00:35	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			08/31/20 00:35	1
Trichloroethene	0.13	J	0.50	0.060	ug/L			08/31/20 00:35	1
Vinyl chloride	ND		0.50	0.10	ug/L			08/31/20 00:35	1
Xylenes, Total	ND		1.0	0.15	ug/L			08/31/20 00:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	111		80 - 120		08/31/20 00:35	1
Dibromofluoromethane (Surr)	112		80 - 120		08/31/20 00:35	1
Toluene-d8 (Surr)	99		80 - 120		08/31/20 00:35	1
4-Bromofluorobenzene (Surr)	95		80 - 120		08/31/20 00:35	1

Client Sample Results

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP Monthly Surface Water

Job ID: 410-11876-1

Client Sample ID: HD-COD-SW-17-0/1-0

Lab Sample ID: 410-11876-8

Date Collected: 08/25/20 09:45

Matrix: Water

Date Received: 08/25/20 18:30

Method: 8260C LL - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			08/31/20 00:57	1
1,1,1-Trichloroethane	0.27	J	0.50	0.060	ug/L			08/31/20 00:57	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			08/31/20 00:57	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			08/31/20 00:57	1
1,1-Dichloroethane	0.16	J	0.50	0.070	ug/L			08/31/20 00:57	1
1,1-Dichloroethene	0.15	J	0.50	0.060	ug/L			08/31/20 00:57	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			08/31/20 00:57	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			08/31/20 00:57	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			08/31/20 00:57	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			08/31/20 00:57	1
2-Hexanone	ND		5.0	0.60	ug/L			08/31/20 00:57	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			08/31/20 00:57	1
Acetone	1.3	J	5.0	0.90	ug/L			08/31/20 00:57	1
Acrylonitrile	ND		5.0	0.40	ug/L			08/31/20 00:57	1
Benzene	ND		0.50	0.050	ug/L			08/31/20 00:57	1
Bromochloromethane	ND		0.50	0.050	ug/L			08/31/20 00:57	1
Bromodichloromethane	ND		0.50	0.050	ug/L			08/31/20 00:57	1
Bromoform	ND		1.0	0.30	ug/L			08/31/20 00:57	1
Bromomethane	ND		0.50	0.070	ug/L			08/31/20 00:57	1
Carbon disulfide	ND		1.0	0.060	ug/L			08/31/20 00:57	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			08/31/20 00:57	1
Chlorobenzene	ND		0.50	0.060	ug/L			08/31/20 00:57	1
Chloroethane	ND		0.50	0.070	ug/L			08/31/20 00:57	1
Chloroform	0.29	J	0.50	0.090	ug/L			08/31/20 00:57	1
Chloromethane	1.2		0.50	0.060	ug/L			08/31/20 00:57	1
cis-1,2-Dichloroethene	1.6		0.50	0.050	ug/L			08/31/20 00:57	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			08/31/20 00:57	1
Dibromochloromethane	ND		0.50	0.070	ug/L			08/31/20 00:57	1
Ethylbenzene	ND		0.50	0.060	ug/L			08/31/20 00:57	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			08/31/20 00:57	1
Methylene Chloride	0.12	J	0.50	0.070	ug/L			08/31/20 00:57	1
Styrene	ND		0.50	0.050	ug/L			08/31/20 00:57	1
Tetrachloroethene	7.1		0.50	0.060	ug/L			08/31/20 00:57	1
Toluene	ND		0.50	0.070	ug/L			08/31/20 00:57	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			08/31/20 00:57	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			08/31/20 00:57	1
Trichloroethene	2.8		0.50	0.060	ug/L			08/31/20 00:57	1
Vinyl chloride	ND		0.50	0.10	ug/L			08/31/20 00:57	1
Xylenes, Total	ND		1.0	0.15	ug/L			08/31/20 00:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	114		80 - 120		08/31/20 00:57	1
Dibromofluoromethane (Surr)	111		80 - 120		08/31/20 00:57	1
Toluene-d8 (Surr)	98		80 - 120		08/31/20 00:57	1
4-Bromofluorobenzene (Surr)	95		80 - 120		08/31/20 00:57	1

Client Sample Results

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP Monthly Surface Water

Job ID: 410-11876-1

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

Lab Sample ID: 410-11876-9

Date Collected: 08/25/20 10:35

Matrix: Water

Date Received: 08/25/20 18:30

Method: 8260C LL - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			08/31/20 01:18	1
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			08/31/20 01:18	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			08/31/20 01:18	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			08/31/20 01:18	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			08/31/20 01:18	1
1,1-Dichloroethene	0.18	J	0.50	0.060	ug/L			08/31/20 01:18	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			08/31/20 01:18	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			08/31/20 01:18	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			08/31/20 01:18	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			08/31/20 01:18	1
2-Hexanone	ND		5.0	0.60	ug/L			08/31/20 01:18	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			08/31/20 01:18	1
Acetone	1.8	J	5.0	0.90	ug/L			08/31/20 01:18	1
Acrylonitrile	ND		5.0	0.40	ug/L			08/31/20 01:18	1
Benzene	ND		0.50	0.050	ug/L			08/31/20 01:18	1
Bromochloromethane	ND		0.50	0.050	ug/L			08/31/20 01:18	1
Bromodichloromethane	ND		0.50	0.050	ug/L			08/31/20 01:18	1
Bromoform	ND		1.0	0.30	ug/L			08/31/20 01:18	1
Bromomethane	ND		0.50	0.070	ug/L			08/31/20 01:18	1
Carbon disulfide	ND		1.0	0.060	ug/L			08/31/20 01:18	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			08/31/20 01:18	1
Chlorobenzene	ND		0.50	0.060	ug/L			08/31/20 01:18	1
Chloroethane	ND		0.50	0.070	ug/L			08/31/20 01:18	1
Chloroform	0.76		0.50	0.090	ug/L			08/31/20 01:18	1
Chloromethane	0.43	J	0.50	0.060	ug/L			08/31/20 01:18	1
cis-1,2-Dichloroethene	0.075	J	0.50	0.050	ug/L			08/31/20 01:18	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			08/31/20 01:18	1
Dibromochloromethane	ND		0.50	0.070	ug/L			08/31/20 01:18	1
Ethylbenzene	ND		0.50	0.060	ug/L			08/31/20 01:18	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			08/31/20 01:18	1
Methylene Chloride	0.14	J	0.50	0.070	ug/L			08/31/20 01:18	1
Styrene	ND		0.50	0.050	ug/L			08/31/20 01:18	1
Tetrachloroethene	3.9		0.50	0.060	ug/L			08/31/20 01:18	1
Toluene	ND		0.50	0.070	ug/L			08/31/20 01:18	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			08/31/20 01:18	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			08/31/20 01:18	1
Trichloroethene	0.19	J	0.50	0.060	ug/L			08/31/20 01:18	1
Vinyl chloride	ND		0.50	0.10	ug/L			08/31/20 01:18	1
Xylenes, Total	ND		1.0	0.15	ug/L			08/31/20 01:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	112		80 - 120		08/31/20 01:18	1
Dibromofluoromethane (Surr)	112		80 - 120		08/31/20 01:18	1
Toluene-d8 (Surr)	98		80 - 120		08/31/20 01:18	1
4-Bromofluorobenzene (Surr)	96		80 - 120		08/31/20 01:18	1

Client Sample Results

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP Monthly Surface Water

Job ID: 410-11876-1

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

Lab Sample ID: 410-11876-10

Date Collected: 08/25/20 11:15

Matrix: Water

Date Received: 08/25/20 18:30

Method: 8260C LL - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			08/31/20 01:40	1
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			08/31/20 01:40	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			08/31/20 01:40	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			08/31/20 01:40	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			08/31/20 01:40	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			08/31/20 01:40	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			08/31/20 01:40	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			08/31/20 01:40	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			08/31/20 01:40	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			08/31/20 01:40	1
2-Hexanone	ND		5.0	0.60	ug/L			08/31/20 01:40	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			08/31/20 01:40	1
Acetone	3.8	J	5.0	0.90	ug/L			08/31/20 01:40	1
Acrylonitrile	ND		5.0	0.40	ug/L			08/31/20 01:40	1
Benzene	ND		0.50	0.050	ug/L			08/31/20 01:40	1
Bromochloromethane	ND		0.50	0.050	ug/L			08/31/20 01:40	1
Bromodichloromethane	ND		0.50	0.050	ug/L			08/31/20 01:40	1
Bromoform	ND		1.0	0.30	ug/L			08/31/20 01:40	1
Bromomethane	ND		0.50	0.070	ug/L			08/31/20 01:40	1
Carbon disulfide	ND		1.0	0.060	ug/L			08/31/20 01:40	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			08/31/20 01:40	1
Chlorobenzene	ND		0.50	0.060	ug/L			08/31/20 01:40	1
Chloroethane	ND		0.50	0.070	ug/L			08/31/20 01:40	1
Chloroform	ND		0.50	0.090	ug/L			08/31/20 01:40	1
Chloromethane	0.63		0.50	0.060	ug/L			08/31/20 01:40	1
cis-1,2-Dichloroethene	0.090	J	0.50	0.050	ug/L			08/31/20 01:40	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			08/31/20 01:40	1
Dibromochloromethane	ND		0.50	0.070	ug/L			08/31/20 01:40	1
Ethylbenzene	ND		0.50	0.060	ug/L			08/31/20 01:40	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			08/31/20 01:40	1
Methylene Chloride	0.11	J	0.50	0.070	ug/L			08/31/20 01:40	1
Styrene	ND		0.50	0.050	ug/L			08/31/20 01:40	1
Tetrachloroethene	ND		0.50	0.060	ug/L			08/31/20 01:40	1
Toluene	ND		0.50	0.070	ug/L			08/31/20 01:40	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			08/31/20 01:40	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			08/31/20 01:40	1
Trichloroethene	0.089	J	0.50	0.060	ug/L			08/31/20 01:40	1
Vinyl chloride	ND		0.50	0.10	ug/L			08/31/20 01:40	1
Xylenes, Total	ND		1.0	0.15	ug/L			08/31/20 01:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	114		80 - 120		08/31/20 01:40	1
Dibromofluoromethane (Surr)	112		80 - 120		08/31/20 01:40	1
Toluene-d8 (Surr)	100		80 - 120		08/31/20 01:40	1
4-Bromofluorobenzene (Surr)	95		80 - 120		08/31/20 01:40	1

Client Sample Results

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP Monthly Surface Water

Job ID: 410-11876-1

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

Lab Sample ID: 410-11876-11

Date Collected: 08/25/20 12:10

Matrix: Water

Date Received: 08/25/20 18:30

Method: 8260C LL - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			08/31/20 02:02	1
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			08/31/20 02:02	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			08/31/20 02:02	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			08/31/20 02:02	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			08/31/20 02:02	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			08/31/20 02:02	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			08/31/20 02:02	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			08/31/20 02:02	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			08/31/20 02:02	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			08/31/20 02:02	1
2-Hexanone	ND		5.0	0.60	ug/L			08/31/20 02:02	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			08/31/20 02:02	1
Acetone	3.1	J	5.0	0.90	ug/L			08/31/20 02:02	1
Acrylonitrile	ND		5.0	0.40	ug/L			08/31/20 02:02	1
Benzene	ND		0.50	0.050	ug/L			08/31/20 02:02	1
Bromochloromethane	ND		0.50	0.050	ug/L			08/31/20 02:02	1
Bromodichloromethane	ND		0.50	0.050	ug/L			08/31/20 02:02	1
Bromoform	ND		1.0	0.30	ug/L			08/31/20 02:02	1
Bromomethane	ND		0.50	0.070	ug/L			08/31/20 02:02	1
Carbon disulfide	ND		1.0	0.060	ug/L			08/31/20 02:02	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			08/31/20 02:02	1
Chlorobenzene	ND		0.50	0.060	ug/L			08/31/20 02:02	1
Chloroethane	ND		0.50	0.070	ug/L			08/31/20 02:02	1
Chloroform	0.10	J	0.50	0.090	ug/L			08/31/20 02:02	1
Chloromethane	0.56		0.50	0.060	ug/L			08/31/20 02:02	1
cis-1,2-Dichloroethene	0.098	J	0.50	0.050	ug/L			08/31/20 02:02	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			08/31/20 02:02	1
Dibromochloromethane	ND		0.50	0.070	ug/L			08/31/20 02:02	1
Ethylbenzene	ND		0.50	0.060	ug/L			08/31/20 02:02	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			08/31/20 02:02	1
Methylene Chloride	0.14	J	0.50	0.070	ug/L			08/31/20 02:02	1
Styrene	ND		0.50	0.050	ug/L			08/31/20 02:02	1
Tetrachloroethene	0.11	J	0.50	0.060	ug/L			08/31/20 02:02	1
Toluene	ND		0.50	0.070	ug/L			08/31/20 02:02	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			08/31/20 02:02	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			08/31/20 02:02	1
Trichloroethene	0.097	J	0.50	0.060	ug/L			08/31/20 02:02	1
Vinyl chloride	ND		0.50	0.10	ug/L			08/31/20 02:02	1
Xylenes, Total	ND		1.0	0.15	ug/L			08/31/20 02:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	116		80 - 120		08/31/20 02:02	1
Dibromofluoromethane (Surr)	112		80 - 120		08/31/20 02:02	1
Toluene-d8 (Surr)	98		80 - 120		08/31/20 02:02	1
4-Bromofluorobenzene (Surr)	95		80 - 120		08/31/20 02:02	1

Client Sample Results

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP Monthly Surface Water

Job ID: 410-11876-1

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

Lab Sample ID: 410-11876-12

Date Collected: 08/25/20 08:10

Matrix: Water

Date Received: 08/25/20 18:30

Method: 8260C LL - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			08/31/20 02:23	1
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			08/31/20 02:23	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			08/31/20 02:23	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			08/31/20 02:23	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			08/31/20 02:23	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			08/31/20 02:23	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			08/31/20 02:23	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			08/31/20 02:23	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			08/31/20 02:23	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			08/31/20 02:23	1
2-Hexanone	ND		5.0	0.60	ug/L			08/31/20 02:23	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			08/31/20 02:23	1
Acetone	2.1	J	5.0	0.90	ug/L			08/31/20 02:23	1
Acrylonitrile	ND		5.0	0.40	ug/L			08/31/20 02:23	1
Benzene	ND		0.50	0.050	ug/L			08/31/20 02:23	1
Bromochloromethane	ND		0.50	0.050	ug/L			08/31/20 02:23	1
Bromodichloromethane	ND		0.50	0.050	ug/L			08/31/20 02:23	1
Bromoform	ND		1.0	0.30	ug/L			08/31/20 02:23	1
Bromomethane	ND		0.50	0.070	ug/L			08/31/20 02:23	1
Carbon disulfide	ND		1.0	0.060	ug/L			08/31/20 02:23	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			08/31/20 02:23	1
Chlorobenzene	ND		0.50	0.060	ug/L			08/31/20 02:23	1
Chloroethane	ND		0.50	0.070	ug/L			08/31/20 02:23	1
Chloroform	ND		0.50	0.090	ug/L			08/31/20 02:23	1
Chloromethane	0.36	J	0.50	0.060	ug/L			08/31/20 02:23	1
cis-1,2-Dichloroethene	0.097	J	0.50	0.050	ug/L			08/31/20 02:23	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			08/31/20 02:23	1
Dibromochloromethane	ND		0.50	0.070	ug/L			08/31/20 02:23	1
Ethylbenzene	ND		0.50	0.060	ug/L			08/31/20 02:23	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			08/31/20 02:23	1
Methylene Chloride	0.095	J	0.50	0.070	ug/L			08/31/20 02:23	1
Styrene	ND		0.50	0.050	ug/L			08/31/20 02:23	1
Tetrachloroethene	0.074	J	0.50	0.060	ug/L			08/31/20 02:23	1
Toluene	ND		0.50	0.070	ug/L			08/31/20 02:23	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			08/31/20 02:23	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			08/31/20 02:23	1
Trichloroethene	0.12	J	0.50	0.060	ug/L			08/31/20 02:23	1
Vinyl chloride	ND		0.50	0.10	ug/L			08/31/20 02:23	1
Xylenes, Total	ND		1.0	0.15	ug/L			08/31/20 02:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		80 - 120		08/31/20 02:23	1
Dibromofluoromethane (Surr)	110		80 - 120		08/31/20 02:23	1
Toluene-d8 (Surr)	100		80 - 120		08/31/20 02:23	1
4-Bromofluorobenzene (Surr)	94		80 - 120		08/31/20 02:23	1

Client Sample Results

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP Monthly Surface Water

Job ID: 410-11876-1

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

Lab Sample ID: 410-11876-13

Date Collected: 08/25/20 12:00

Matrix: Water

Date Received: 08/25/20 18:30

Method: 8260C LL - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			08/30/20 20:36	1
1,1,1-Trichloroethane	0.27	J	0.50	0.060	ug/L			08/30/20 20:36	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			08/30/20 20:36	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			08/30/20 20:36	1
1,1-Dichloroethane	0.14	J	0.50	0.070	ug/L			08/30/20 20:36	1
1,1-Dichloroethene	0.14	J	0.50	0.060	ug/L			08/30/20 20:36	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			08/30/20 20:36	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			08/30/20 20:36	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			08/30/20 20:36	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			08/30/20 20:36	1
2-Hexanone	ND		5.0	0.60	ug/L			08/30/20 20:36	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			08/30/20 20:36	1
Acetone	ND		5.0	0.90	ug/L			08/30/20 20:36	1
Acrylonitrile	ND		5.0	0.40	ug/L			08/30/20 20:36	1
Benzene	ND		0.50	0.050	ug/L			08/30/20 20:36	1
Bromochloromethane	ND		0.50	0.050	ug/L			08/30/20 20:36	1
Bromodichloromethane	ND		0.50	0.050	ug/L			08/30/20 20:36	1
Bromoform	ND		1.0	0.30	ug/L			08/30/20 20:36	1
Bromomethane	ND		0.50	0.070	ug/L			08/30/20 20:36	1
Carbon disulfide	ND		1.0	0.060	ug/L			08/30/20 20:36	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			08/30/20 20:36	1
Chlorobenzene	ND		0.50	0.060	ug/L			08/30/20 20:36	1
Chloroethane	ND		0.50	0.070	ug/L			08/30/20 20:36	1
Chloroform	0.29	J	0.50	0.090	ug/L			08/30/20 20:36	1
Chloromethane	0.58		0.50	0.060	ug/L			08/30/20 20:36	1
cis-1,2-Dichloroethene	1.6		0.50	0.050	ug/L			08/30/20 20:36	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			08/30/20 20:36	1
Dibromochloromethane	ND		0.50	0.070	ug/L			08/30/20 20:36	1
Ethylbenzene	ND		0.50	0.060	ug/L			08/30/20 20:36	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			08/30/20 20:36	1
Methylene Chloride	0.087	J	0.50	0.070	ug/L			08/30/20 20:36	1
Styrene	ND		0.50	0.050	ug/L			08/30/20 20:36	1
Tetrachloroethene	6.9		0.50	0.060	ug/L			08/30/20 20:36	1
Toluene	ND		0.50	0.070	ug/L			08/30/20 20:36	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			08/30/20 20:36	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			08/30/20 20:36	1
Trichloroethene	2.7		0.50	0.060	ug/L			08/30/20 20:36	1
Vinyl chloride	ND		0.50	0.10	ug/L			08/30/20 20:36	1
Xylenes, Total	ND		1.0	0.15	ug/L			08/30/20 20:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	120		80 - 120		08/30/20 20:36	1
Dibromofluoromethane (Surr)	111		80 - 120		08/30/20 20:36	1
Toluene-d8 (Surr)	98		80 - 120		08/30/20 20:36	1
4-Bromofluorobenzene (Surr)	97		80 - 120		08/30/20 20:36	1

Client Sample Results

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP Monthly Surface Water

Job ID: 410-11876-1

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

Lab Sample ID: 410-11876-14

Date Collected: 08/25/20 00:00

Matrix: Water

Date Received: 08/25/20 18:30

Method: 8260C LL - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			08/31/20 20:38	1
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			08/31/20 20:38	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			08/31/20 20:38	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			08/31/20 20:38	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			08/31/20 20:38	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			08/31/20 20:38	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			08/31/20 20:38	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			08/31/20 20:38	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			08/31/20 20:38	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			08/31/20 20:38	1
2-Hexanone	ND		5.0	0.60	ug/L			08/31/20 20:38	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			08/31/20 20:38	1
Acetone	1.6	J	5.0	0.90	ug/L			08/31/20 20:38	1
Acrylonitrile	ND		5.0	0.40	ug/L			08/31/20 20:38	1
Benzene	ND		0.50	0.050	ug/L			08/31/20 20:38	1
Bromochloromethane	ND		0.50	0.050	ug/L			08/31/20 20:38	1
Bromodichloromethane	ND		0.50	0.050	ug/L			08/31/20 20:38	1
Bromoform	ND		1.0	0.30	ug/L			08/31/20 20:38	1
Bromomethane	ND		0.50	0.070	ug/L			08/31/20 20:38	1
Carbon disulfide	ND		1.0	0.060	ug/L			08/31/20 20:38	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			08/31/20 20:38	1
Chlorobenzene	ND		0.50	0.060	ug/L			08/31/20 20:38	1
Chloroethane	ND		0.50	0.070	ug/L			08/31/20 20:38	1
Chloroform	ND		0.50	0.090	ug/L			08/31/20 20:38	1
Chloromethane	ND		0.50	0.060	ug/L			08/31/20 20:38	1
cis-1,2-Dichloroethene	ND		0.50	0.050	ug/L			08/31/20 20:38	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			08/31/20 20:38	1
Dibromochloromethane	ND		0.50	0.070	ug/L			08/31/20 20:38	1
Ethylbenzene	ND		0.50	0.060	ug/L			08/31/20 20:38	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			08/31/20 20:38	1
Methylene Chloride	ND		0.50	0.070	ug/L			08/31/20 20:38	1
Styrene	ND		0.50	0.050	ug/L			08/31/20 20:38	1
Tetrachloroethene	ND		0.50	0.060	ug/L			08/31/20 20:38	1
Toluene	ND		0.50	0.070	ug/L			08/31/20 20:38	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			08/31/20 20:38	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			08/31/20 20:38	1
Trichloroethene	ND		0.50	0.060	ug/L			08/31/20 20:38	1
Vinyl chloride	ND		0.50	0.10	ug/L			08/31/20 20:38	1
Xylenes, Total	ND		1.0	0.15	ug/L			08/31/20 20:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	111		80 - 120		08/31/20 20:38	1
Dibromofluoromethane (Surr)	111		80 - 120		08/31/20 20:38	1
Toluene-d8 (Surr)	98		80 - 120		08/31/20 20:38	1
4-Bromofluorobenzene (Surr)	94		80 - 120		08/31/20 20:38	1

Default Detection Limits

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP Monthly Surface Water

Job ID: 410-11876-1

Method: 8260C LL - Volatile Organic Compounds by GC/MS

Analyte	RL	MDL	Units
1,1,1,2-Tetrachloroethane	0.50	0.070	ug/L
1,1,1-Trichloroethane	0.50	0.060	ug/L
1,1,2,2-Tetrachloroethane	0.50	0.070	ug/L
1,1,2-Trichloroethane	0.50	0.060	ug/L
1,1-Dichloroethane	0.50	0.070	ug/L
1,1-Dichloroethene	0.50	0.060	ug/L
1,2-Dibromoethane (EDB)	0.50	0.060	ug/L
1,2-Dichloroethane	0.50	0.050	ug/L
1,2-Dichloropropane	0.50	0.060	ug/L
2-Butanone (MEK)	5.0	0.60	ug/L
2-Hexanone	5.0	0.60	ug/L
4-Methyl-2-pentanone (MIBK)	5.0	0.70	ug/L
Acetone	5.0	0.90	ug/L
Acrylonitrile	5.0	0.40	ug/L
Benzene	0.50	0.050	ug/L
Bromochloromethane	0.50	0.050	ug/L
Bromodichloromethane	0.50	0.050	ug/L
Bromoform	1.0	0.30	ug/L
Bromomethane	0.50	0.070	ug/L
Carbon disulfide	1.0	0.060	ug/L
Carbon tetrachloride	0.50	0.070	ug/L
Chlorobenzene	0.50	0.060	ug/L
Chloroethane	0.50	0.070	ug/L
Chloroform	0.50	0.090	ug/L
Chloromethane	0.50	0.060	ug/L
cis-1,2-Dichloroethene	0.50	0.050	ug/L
cis-1,3-Dichloropropene	0.50	0.050	ug/L
Dibromochloromethane	0.50	0.070	ug/L
Ethylbenzene	0.50	0.060	ug/L
Methyl tert-butyl ether	0.50	0.050	ug/L
Methylene Chloride	0.50	0.070	ug/L
Styrene	0.50	0.050	ug/L
Tetrachloroethene	0.50	0.060	ug/L
Toluene	0.50	0.070	ug/L
trans-1,2-Dichloroethene	0.50	0.060	ug/L
trans-1,3-Dichloropropene	0.50	0.060	ug/L
Trichloroethene	0.50	0.060	ug/L
Vinyl chloride	0.50	0.10	ug/L
Xylenes, Total	1.0	0.15	ug/L

Surrogate Summary

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP Monthly Surface Water

Job ID: 410-11876-1

Method: 8260C LL - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (80-120)	DBFM (80-120)	TOL (80-120)	BFB (80-120)
410-11876-1	HD-COD-SW-6-0/1-0	105	107	101	96
410-11876-2	HD-COD-SW-7-0/1-0	107	108	100	96
410-11876-3	HD-COD-SW-8-0/1-0	110	108	100	96
410-11876-4	HD-COD-SW-9-0/1-0	113	110	99	96
410-11876-5	HD-COD-SW-13-0/1-0	113	111	100	96
410-11876-6	HD-COD-SW-15-0/1-0	119	111	97	95
410-11876-6 MS	HD-COD-SW-15-0/1-0 MS	109	106	100	99
410-11876-6 MSD	HD-COD-SW-15-0/1-0 MSD	107	104	101	100
410-11876-7	HD-COD-SW-16-0/1-0	111	112	99	95
410-11876-8	HD-COD-SW-17-0/1-0	114	111	98	95
410-11876-9	HD-COD-SW-26-0/1-0	112	112	98	96
410-11876-10	HD-COD-SW-27-0/1-0	114	112	100	95
410-11876-11	HD-COD-SW-28-0/1-0	116	112	98	95
410-11876-12	HD-COD-SW-29-0/1-0	107	110	100	94
410-11876-13	HD-QC1-0/1-1	120	111	98	97
410-11876-14	HD-QC1-0/1-2	111	111	98	94
LCS 410-38982/4	Lab Control Sample	105	102	101	100
LCS 410-39389/4	Lab Control Sample	104	105	100	99
LCSD 410-39389/5	Lab Control Sample Dup	102	105	101	100
MB 410-38982/7	Method Blank	108	106	100	96
MB 410-39389/7	Method Blank	111	111	98	96

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

QC Sample Results

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP Monthly Surface Water

Job ID: 410-11876-1

Method: 8260C LL - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 410-38982/7
 Matrix: Water
 Analysis Batch: 38982

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			08/30/20 19:05	1
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			08/30/20 19:05	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			08/30/20 19:05	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			08/30/20 19:05	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			08/30/20 19:05	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			08/30/20 19:05	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			08/30/20 19:05	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			08/30/20 19:05	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			08/30/20 19:05	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			08/30/20 19:05	1
2-Hexanone	ND		5.0	0.60	ug/L			08/30/20 19:05	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			08/30/20 19:05	1
Acetone	ND		5.0	0.90	ug/L			08/30/20 19:05	1
Acrylonitrile	ND		5.0	0.40	ug/L			08/30/20 19:05	1
Benzene	ND		0.50	0.050	ug/L			08/30/20 19:05	1
Bromochloromethane	ND		0.50	0.050	ug/L			08/30/20 19:05	1
Bromodichloromethane	ND		0.50	0.050	ug/L			08/30/20 19:05	1
Bromoform	ND		1.0	0.30	ug/L			08/30/20 19:05	1
Bromomethane	ND		0.50	0.070	ug/L			08/30/20 19:05	1
Carbon disulfide	ND		1.0	0.060	ug/L			08/30/20 19:05	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			08/30/20 19:05	1
Chlorobenzene	ND		0.50	0.060	ug/L			08/30/20 19:05	1
Chloroethane	ND		0.50	0.070	ug/L			08/30/20 19:05	1
Chloroform	ND		0.50	0.090	ug/L			08/30/20 19:05	1
Chloromethane	ND		0.50	0.060	ug/L			08/30/20 19:05	1
cis-1,2-Dichloroethene	ND		0.50	0.050	ug/L			08/30/20 19:05	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			08/30/20 19:05	1
Dibromochloromethane	ND		0.50	0.070	ug/L			08/30/20 19:05	1
Ethylbenzene	ND		0.50	0.060	ug/L			08/30/20 19:05	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			08/30/20 19:05	1
Methylene Chloride	ND		0.50	0.070	ug/L			08/30/20 19:05	1
Styrene	ND		0.50	0.050	ug/L			08/30/20 19:05	1
Tetrachloroethene	ND		0.50	0.060	ug/L			08/30/20 19:05	1
Toluene	ND		0.50	0.070	ug/L			08/30/20 19:05	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			08/30/20 19:05	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			08/30/20 19:05	1
Trichloroethene	ND		0.50	0.060	ug/L			08/30/20 19:05	1
Vinyl chloride	ND		0.50	0.10	ug/L			08/30/20 19:05	1
Xylenes, Total	ND		1.0	0.15	ug/L			08/30/20 19:05	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,2-Dichloroethane-d4 (Surr)	108		80 - 120		08/30/20 19:05	1
Dibromofluoromethane (Surr)	106		80 - 120		08/30/20 19:05	1
Toluene-d8 (Surr)	100		80 - 120		08/30/20 19:05	1
4-Bromofluorobenzene (Surr)	96		80 - 120		08/30/20 19:05	1

QC Sample Results

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP Monthly Surface Water

Job ID: 410-11876-1

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

Lab Sample ID: LCS 410-38982/4
Matrix: Water
Analysis Batch: 38982

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

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.
	Added	Result	Qualifier				
1,1,1,2-Tetrachloroethane	5.00	4.93		ug/L		99	71 - 134
1,1,1-Trichloroethane	5.00	4.86		ug/L		97	78 - 126
1,1,2,2-Tetrachloroethane	5.00	5.49		ug/L		110	75 - 123
1,1,2-Trichloroethane	5.00	5.39		ug/L		108	80 - 120
1,1-Dichloroethane	5.00	5.13		ug/L		103	74 - 120
1,1-Dichloroethene	5.00	4.96		ug/L		99	80 - 131
1,2-Dibromoethane (EDB)	5.00	5.40		ug/L		108	80 - 120
1,2-Dichloroethane	5.00	5.62		ug/L		112	69 - 122
1,2-Dichloropropane	5.00	5.30		ug/L		106	80 - 120
2-Butanone (MEK)	37.5	35.3		ug/L		94	59 - 141
2-Hexanone	25.0	22.1		ug/L		88	52 - 140
4-Methyl-2-pentanone (MIBK)	25.0	21.5		ug/L		86	55 - 140
Acetone	37.5	32.2		ug/L		86	60 - 146
Acrylonitrile	25.0	22.7		ug/L		91	64 - 139
Benzene	5.00	4.89		ug/L		98	80 - 120
Bromochloromethane	5.00	4.69		ug/L		94	80 - 120
Bromodichloromethane	5.00	5.26		ug/L		105	73 - 124
Bromoform	5.00	5.27		ug/L		105	49 - 144
Bromomethane	5.00	4.82		ug/L		96	60 - 136
Carbon disulfide	5.00	5.07		ug/L		101	67 - 130
Carbon tetrachloride	5.00	4.82		ug/L		96	64 - 141
Chlorobenzene	5.00	4.98		ug/L		100	80 - 120
Chloroethane	5.00	4.94		ug/L		99	63 - 120
Chloroform	5.00	5.16		ug/L		103	80 - 120
Chloromethane	5.00	4.98		ug/L		100	56 - 124
cis-1,2-Dichloroethene	5.00	5.07		ug/L		101	80 - 122
cis-1,3-Dichloropropene	5.00	4.94		ug/L		99	67 - 121
Dibromochloromethane	5.00	5.39		ug/L		108	64 - 138
Ethylbenzene	5.00	4.84		ug/L		97	80 - 120
Methyl tert-butyl ether	5.00	4.72		ug/L		94	69 - 120
Methylene Chloride	5.00	5.06		ug/L		101	80 - 120
Styrene	5.00	4.92		ug/L		98	80 - 120
Tetrachloroethene	5.00	4.70		ug/L		94	80 - 120
Toluene	5.00	4.86		ug/L		97	80 - 120
trans-1,2-Dichloroethene	5.00	4.87		ug/L		97	80 - 122
trans-1,3-Dichloropropene	5.00	5.04		ug/L		101	61 - 129
Trichloroethene	5.00	4.82		ug/L		96	80 - 120
Vinyl chloride	5.00	4.88		ug/L		98	60 - 125
Xylenes, Total	15.0	14.5		ug/L		97	80 - 120

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	105		80 - 120
Dibromofluoromethane (Surr)	102		80 - 120
Toluene-d8 (Surr)	101		80 - 120
4-Bromofluorobenzene (Surr)	100		80 - 120

QC Sample Results

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP Monthly Surface Water

Job ID: 410-11876-1

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

Lab Sample ID: 410-11876-6 MS

Matrix: Water

Analysis Batch: 38982

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

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier	Added	Result	Qualifier			Limits	
1,1,1,2-Tetrachloroethane	ND		5.00	5.53		ug/L		111	71 - 134
1,1,1-Trichloroethane	0.14	J	5.00	5.91		ug/L		115	78 - 126
1,1,2,2-Tetrachloroethane	ND		5.00	6.05		ug/L		121	75 - 123
1,1,2-Trichloroethane	ND	FH	5.00	6.21	FH	ug/L		124	80 - 120
1,1-Dichloroethane	0.073	J FH	5.00	6.13	FH	ug/L		121	74 - 120
1,1-Dichloroethene	0.092	J	5.00	6.36		ug/L		125	80 - 131
1,2-Dibromoethane (EDB)	ND		5.00	5.99		ug/L		120	80 - 120
1,2-Dichloroethane	ND	FH	5.00	6.34	FH	ug/L		127	69 - 122
1,2-Dichloropropane	ND	FH	5.00	6.06	FH	ug/L		121	80 - 120
2-Butanone (MEK)	ND		37.5	33.7		ug/L		90	59 - 141
2-Hexanone	ND		25.0	21.0		ug/L		84	52 - 140
4-Methyl-2-pentanone (MIBK)	ND		25.0	20.4		ug/L		82	55 - 140
Acetone	ND		37.5	33.7		ug/L		90	60 - 146
Acrylonitrile	ND		25.0	21.6		ug/L		86	64 - 139
Benzene	ND		5.00	5.76		ug/L		115	80 - 120
Bromochloromethane	ND		5.00	5.39		ug/L		108	80 - 120
Bromodichloromethane	ND		5.00	6.02		ug/L		120	73 - 124
Bromoform	ND		5.00	5.82		ug/L		116	49 - 144
Bromomethane	ND		5.00	5.93		ug/L		119	60 - 136
Carbon disulfide	ND	FH	5.00	6.57	FH	ug/L		131	67 - 130
Carbon tetrachloride	ND		5.00	5.97		ug/L		119	64 - 141
Chlorobenzene	ND		5.00	5.71		ug/L		114	80 - 120
Chloroethane	ND		5.00	6.00		ug/L		120	63 - 120
Chloroform	0.36	J	5.00	6.32		ug/L		119	80 - 120
Chloromethane	0.57	FH	5.00	7.89	FH	ug/L		146	80 - 120
cis-1,2-Dichloroethene	0.85		5.00	6.90		ug/L		121	80 - 122
cis-1,3-Dichloropropene	ND		5.00	5.49		ug/L		110	67 - 121
Dibromochloromethane	ND		5.00	5.97		ug/L		119	64 - 138
Ethylbenzene	ND		5.00	5.57		ug/L		111	80 - 120
Methyl tert-butyl ether	0.054	J	5.00	5.33		ug/L		105	69 - 120
Methylene Chloride	0.11	J	5.00	5.98		ug/L		117	80 - 120
Styrene	ND		5.00	5.49		ug/L		110	80 - 120
Tetrachloroethene	3.0		5.00	8.66		ug/L		114	80 - 120
Toluene	ND		5.00	5.68		ug/L		114	80 - 120
trans-1,2-Dichloroethene	ND		5.00	5.89		ug/L		118	80 - 122
trans-1,3-Dichloropropene	ND		5.00	5.66		ug/L		113	61 - 129
Trichloroethene	1.1		5.00	6.89		ug/L		115	80 - 120
Vinyl chloride	ND	FH	5.00	6.30	FH	ug/L		126	60 - 125
Xylenes, Total	ND		15.0	16.6		ug/L		111	80 - 120
		MS MS							
Surrogate	%Recovery	Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	109		80 - 120						
Dibromofluoromethane (Surr)	106		80 - 120						
Toluene-d8 (Surr)	100		80 - 120						
4-Bromofluorobenzene (Surr)	99		80 - 120						

QC Sample Results

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP Monthly Surface Water

Job ID: 410-11876-1

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

Lab Sample ID: 410-11876-6 MSD

Matrix: Water

Analysis Batch: 38982

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

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits		Limit
1,1,1,2-Tetrachloroethane	ND		5.00	5.35		ug/L		107	71 - 134	3	30
1,1,1-Trichloroethane	0.14	J	5.00	5.88		ug/L		115	78 - 126	1	30
1,1,2,2-Tetrachloroethane	ND		5.00	6.03		ug/L		120	75 - 123	0	30
1,1,2-Trichloroethane	ND	FH	5.00	6.08	FH	ug/L		121	80 - 120	2	30
1,1-Dichloroethane	0.073	J FH	5.00	5.92		ug/L		117	74 - 120	3	30
1,1-Dichloroethene	0.092	J	5.00	6.22		ug/L		122	80 - 131	2	30
1,2-Dibromoethane (EDB)	ND		5.00	5.75		ug/L		115	80 - 120	4	30
1,2-Dichloroethane	ND	FH	5.00	6.24	FH	ug/L		125	69 - 122	2	30
1,2-Dichloropropane	ND	FH	5.00	5.95		ug/L		119	80 - 120	2	30
2-Butanone (MEK)	ND		37.5	32.9		ug/L		88	59 - 141	2	30
2-Hexanone	ND		25.0	21.0		ug/L		84	52 - 140	0	30
4-Methyl-2-pentanone (MIBK)	ND		25.0	20.1		ug/L		80	55 - 140	2	30
Acetone	ND		37.5	32.2		ug/L		86	60 - 146	5	30
Acrylonitrile	ND		25.0	21.5		ug/L		86	64 - 139	0	30
Benzene	ND		5.00	5.60		ug/L		112	80 - 120	3	30
Bromochloromethane	ND		5.00	5.22		ug/L		104	80 - 120	3	30
Bromodichloromethane	ND		5.00	5.84		ug/L		117	73 - 124	3	30
Bromoform	ND		5.00	5.74		ug/L		115	49 - 144	1	30
Bromomethane	ND		5.00	5.57		ug/L		111	60 - 136	6	30
Carbon disulfide	ND	FH	5.00	6.36		ug/L		127	67 - 130	3	30
Carbon tetrachloride	ND		5.00	5.80		ug/L		116	64 - 141	3	30
Chlorobenzene	ND		5.00	5.59		ug/L		112	80 - 120	2	30
Chloroethane	ND		5.00	5.78		ug/L		115	63 - 120	4	30
Chloroform	0.36	J	5.00	6.24		ug/L		118	80 - 120	1	30
Chloromethane	0.57	FH	5.00	5.97		ug/L		108	80 - 120	28	30
cis-1,2-Dichloroethene	0.85		5.00	6.77		ug/L		118	80 - 122	2	30
cis-1,3-Dichloropropene	ND		5.00	5.40		ug/L		108	67 - 121	2	30
Dibromochloromethane	ND		5.00	5.90		ug/L		118	64 - 138	1	30
Ethylbenzene	ND		5.00	5.58		ug/L		111	80 - 120	0	30
Methyl tert-butyl ether	0.054	J	5.00	5.28		ug/L		104	69 - 120	1	30
Methylene Chloride	0.11	J	5.00	5.74		ug/L		113	80 - 120	4	30
Styrene	ND		5.00	5.43		ug/L		109	80 - 120	1	30
Tetrachloroethene	3.0		5.00	8.61		ug/L		112	80 - 120	1	30
Toluene	ND		5.00	5.61		ug/L		112	80 - 120	1	30
trans-1,2-Dichloroethene	ND		5.00	5.90		ug/L		118	80 - 122	0	30
trans-1,3-Dichloropropene	ND		5.00	5.48		ug/L		109	61 - 129	3	30
Trichloroethene	1.1		5.00	6.82		ug/L		114	80 - 120	1	30
Vinyl chloride	ND	FH	5.00	5.99		ug/L		120	60 - 125	5	30
Xylenes, Total	ND		15.0	16.5		ug/L		110	80 - 120	0	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	107		80 - 120
Dibromofluoromethane (Surr)	104		80 - 120
Toluene-d8 (Surr)	101		80 - 120
4-Bromofluorobenzene (Surr)	100		80 - 120

QC Sample Results

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP Monthly Surface Water

Job ID: 410-11876-1

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

Lab Sample ID: MB 410-39389/7

Matrix: Water

Analysis Batch: 39389

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			08/31/20 19:45	1
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			08/31/20 19:45	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			08/31/20 19:45	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			08/31/20 19:45	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			08/31/20 19:45	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			08/31/20 19:45	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			08/31/20 19:45	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			08/31/20 19:45	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			08/31/20 19:45	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			08/31/20 19:45	1
2-Hexanone	ND		5.0	0.60	ug/L			08/31/20 19:45	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			08/31/20 19:45	1
Acetone	ND		5.0	0.90	ug/L			08/31/20 19:45	1
Acrylonitrile	ND		5.0	0.40	ug/L			08/31/20 19:45	1
Benzene	ND		0.50	0.050	ug/L			08/31/20 19:45	1
Bromochloromethane	ND		0.50	0.050	ug/L			08/31/20 19:45	1
Bromodichloromethane	ND		0.50	0.050	ug/L			08/31/20 19:45	1
Bromoform	ND		1.0	0.30	ug/L			08/31/20 19:45	1
Bromomethane	ND		0.50	0.070	ug/L			08/31/20 19:45	1
Carbon disulfide	ND		1.0	0.060	ug/L			08/31/20 19:45	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			08/31/20 19:45	1
Chlorobenzene	ND		0.50	0.060	ug/L			08/31/20 19:45	1
Chloroethane	ND		0.50	0.070	ug/L			08/31/20 19:45	1
Chloroform	ND		0.50	0.090	ug/L			08/31/20 19:45	1
Chloromethane	ND		0.50	0.060	ug/L			08/31/20 19:45	1
cis-1,2-Dichloroethene	ND		0.50	0.050	ug/L			08/31/20 19:45	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			08/31/20 19:45	1
Dibromochloromethane	ND		0.50	0.070	ug/L			08/31/20 19:45	1
Ethylbenzene	ND		0.50	0.060	ug/L			08/31/20 19:45	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			08/31/20 19:45	1
Methylene Chloride	ND		0.50	0.070	ug/L			08/31/20 19:45	1
Styrene	ND		0.50	0.050	ug/L			08/31/20 19:45	1
Tetrachloroethene	ND		0.50	0.060	ug/L			08/31/20 19:45	1
Toluene	ND		0.50	0.070	ug/L			08/31/20 19:45	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			08/31/20 19:45	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			08/31/20 19:45	1
Trichloroethene	ND		0.50	0.060	ug/L			08/31/20 19:45	1
Vinyl chloride	ND		0.50	0.10	ug/L			08/31/20 19:45	1
Xylenes, Total	ND		1.0	0.15	ug/L			08/31/20 19:45	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	111		80 - 120		08/31/20 19:45	1
Dibromofluoromethane (Surr)	111		80 - 120		08/31/20 19:45	1
Toluene-d8 (Surr)	98		80 - 120		08/31/20 19:45	1
4-Bromofluorobenzene (Surr)	96		80 - 120		08/31/20 19:45	1

QC Sample Results

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP Monthly Surface Water

Job ID: 410-11876-1

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

Lab Sample ID: LCS 410-39389/4

Matrix: Water

Analysis Batch: 39389

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.
	Added	Result	Qualifier			Limits	
1,1,1,2-Tetrachloroethane	5.00	5.02		ug/L		100	71 - 134
1,1,1-Trichloroethane	5.00	4.85		ug/L		97	78 - 126
1,1,2,2-Tetrachloroethane	5.00	5.81		ug/L		116	75 - 123
1,1,2-Trichloroethane	5.00	5.65		ug/L		113	80 - 120
1,1-Dichloroethane	5.00	5.27		ug/L		105	74 - 120
1,1-Dichloroethene	5.00	4.98		ug/L		100	80 - 131
1,2-Dibromoethane (EDB)	5.00	5.38		ug/L		108	80 - 120
1,2-Dichloroethane	5.00	5.74		ug/L		115	69 - 122
1,2-Dichloropropane	5.00	5.52		ug/L		110	80 - 120
2-Butanone (MEK)	37.5	34.2		ug/L		91	59 - 141
2-Hexanone	25.0	21.8		ug/L		87	52 - 140
4-Methyl-2-pentanone (MIBK)	25.0	21.0		ug/L		84	55 - 140
Acetone	37.5	34.4		ug/L		92	60 - 146
Acrylonitrile	25.0	22.7		ug/L		91	64 - 139
Benzene	5.00	4.93		ug/L		99	80 - 120
Bromochloromethane	5.00	4.89		ug/L		98	80 - 120
Bromodichloromethane	5.00	5.50		ug/L		110	73 - 124
Bromoform	5.00	5.36		ug/L		107	49 - 144
Bromomethane	5.00	4.99		ug/L		100	60 - 136
Carbon disulfide	5.00	5.13		ug/L		103	67 - 130
Carbon tetrachloride	5.00	4.78		ug/L		96	64 - 141
Chlorobenzene	5.00	4.94		ug/L		99	80 - 120
Chloroethane	5.00	4.97		ug/L		99	63 - 120
Chloroform	5.00	5.36		ug/L		107	80 - 120
Chloromethane	5.00	5.09		ug/L		102	56 - 124
cis-1,2-Dichloroethene	5.00	5.25		ug/L		105	80 - 122
cis-1,3-Dichloropropene	5.00	5.01		ug/L		100	67 - 121
Dibromochloromethane	5.00	5.43		ug/L		109	64 - 138
Ethylbenzene	5.00	4.77		ug/L		95	80 - 120
Methyl tert-butyl ether	5.00	4.89		ug/L		98	69 - 120
Methylene Chloride	5.00	5.20		ug/L		104	80 - 120
Styrene	5.00	4.90		ug/L		98	80 - 120
Tetrachloroethene	5.00	4.71		ug/L		94	80 - 120
Toluene	5.00	4.88		ug/L		98	80 - 120
trans-1,2-Dichloroethene	5.00	4.90		ug/L		98	80 - 122
trans-1,3-Dichloropropene	5.00	5.09		ug/L		102	61 - 129
Trichloroethene	5.00	4.99		ug/L		100	80 - 120
Vinyl chloride	5.00	5.00		ug/L		100	60 - 125
Xylenes, Total	15.0	14.5		ug/L		97	80 - 120

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	104		80 - 120
Dibromofluoromethane (Surr)	105		80 - 120
Toluene-d8 (Surr)	100		80 - 120
4-Bromofluorobenzene (Surr)	99		80 - 120

QC Sample Results

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP Monthly Surface Water

Job ID: 410-11876-1

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

Lab Sample ID: LCSD 410-39389/5
Matrix: Water
Analysis Batch: 39389

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

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	%Rec.	RPD	RPD
	Added	Result	Qualifier				Limits		Limit
1,1,1,2-Tetrachloroethane	5.00	4.98		ug/L		100	71 - 134	1	30
1,1,1-Trichloroethane	5.00	4.79		ug/L		96	78 - 126	1	30
1,1,2,2-Tetrachloroethane	5.00	5.63		ug/L		113	75 - 123	3	30
1,1,2-Trichloroethane	5.00	5.64		ug/L		113	80 - 120	0	30
1,1-Dichloroethane	5.00	5.18		ug/L		104	74 - 120	2	30
1,1-Dichloroethene	5.00	4.86		ug/L		97	80 - 131	2	30
1,2-Dibromoethane (EDB)	5.00	5.47		ug/L		109	80 - 120	2	30
1,2-Dichloroethane	5.00	5.56		ug/L		111	69 - 122	3	30
1,2-Dichloropropane	5.00	5.27		ug/L		105	80 - 120	5	30
2-Butanone (MEK)	37.5	33.7		ug/L		90	59 - 141	1	30
2-Hexanone	25.0	21.0		ug/L		84	52 - 140	4	30
4-Methyl-2-pentanone (MIBK)	25.0	20.3		ug/L		81	55 - 140	3	30
Acetone	37.5	33.9		ug/L		90	60 - 146	1	30
Acrylonitrile	25.0	21.9		ug/L		88	64 - 139	3	30
Benzene	5.00	4.83		ug/L		97	80 - 120	2	30
Bromochloromethane	5.00	4.77		ug/L		95	80 - 120	2	30
Bromodichloromethane	5.00	5.37		ug/L		107	73 - 124	2	30
Bromoform	5.00	5.27		ug/L		105	49 - 144	2	30
Bromomethane	5.00	4.85		ug/L		97	60 - 136	3	30
Carbon disulfide	5.00	5.01		ug/L		100	67 - 130	2	30
Carbon tetrachloride	5.00	4.66		ug/L		93	64 - 141	3	30
Chlorobenzene	5.00	4.98		ug/L		100	80 - 120	1	30
Chloroethane	5.00	4.82		ug/L		96	63 - 120	3	30
Chloroform	5.00	5.26		ug/L		105	80 - 120	2	30
Chloromethane	5.00	4.90		ug/L		98	56 - 124	4	30
cis-1,2-Dichloroethene	5.00	5.20		ug/L		104	80 - 122	1	30
cis-1,3-Dichloropropene	5.00	4.89		ug/L		98	67 - 121	2	30
Dibromochloromethane	5.00	5.44		ug/L		109	64 - 138	0	30
Ethylbenzene	5.00	4.77		ug/L		95	80 - 120	0	30
Methyl tert-butyl ether	5.00	4.80		ug/L		96	69 - 120	2	30
Methylene Chloride	5.00	4.94		ug/L		99	80 - 120	5	30
Styrene	5.00	4.88		ug/L		98	80 - 120	0	30
Tetrachloroethene	5.00	4.66		ug/L		93	80 - 120	1	30
Toluene	5.00	4.85		ug/L		97	80 - 120	1	30
trans-1,2-Dichloroethene	5.00	4.85		ug/L		97	80 - 122	1	30
trans-1,3-Dichloropropene	5.00	5.05		ug/L		101	61 - 129	1	30
Trichloroethene	5.00	4.90		ug/L		98	80 - 120	2	30
Vinyl chloride	5.00	4.86		ug/L		97	60 - 125	3	30
Xylenes, Total	15.0	14.2		ug/L		95	80 - 120	2	30

Surrogate	LCSD	LCSD	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	102		80 - 120
Dibromofluoromethane (Surr)	105		80 - 120
Toluene-d8 (Surr)	101		80 - 120
4-Bromofluorobenzene (Surr)	100		80 - 120

QC Association Summary

Client: Groundwater Sciences Corporation
 Project/Site: fYNOP Monthly Surface Water

Job ID: 410-11876-1

GC/MS VOA

Analysis Batch: 38982

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-11876-1	HD-COD-SW-6-0/1-0	Total/NA	Water	8260C LL	
410-11876-2	HD-COD-SW-7-0/1-0	Total/NA	Water	8260C LL	
410-11876-3	HD-COD-SW-8-0/1-0	Total/NA	Water	8260C LL	
410-11876-4	HD-COD-SW-9-0/1-0	Total/NA	Water	8260C LL	
410-11876-5	HD-COD-SW-13-0/1-0	Total/NA	Water	8260C LL	
410-11876-6	HD-COD-SW-15-0/1-0	Total/NA	Water	8260C LL	
410-11876-7	HD-COD-SW-16-0/1-0	Total/NA	Water	8260C LL	
410-11876-8	HD-COD-SW-17-0/1-0	Total/NA	Water	8260C LL	
410-11876-9	HD-COD-SW-26-0/1-0	Total/NA	Water	8260C LL	
410-11876-10	HD-COD-SW-27-0/1-0	Total/NA	Water	8260C LL	
410-11876-11	HD-COD-SW-28-0/1-0	Total/NA	Water	8260C LL	
410-11876-12	HD-COD-SW-29-0/1-0	Total/NA	Water	8260C LL	
410-11876-13	HD-QC1-0/1-1	Total/NA	Water	8260C LL	
MB 410-38982/7	Method Blank	Total/NA	Water	8260C LL	
LCS 410-38982/4	Lab Control Sample	Total/NA	Water	8260C LL	
410-11876-6 MS	HD-COD-SW-15-0/1-0 MS	Total/NA	Water	8260C LL	
410-11876-6 MSD	HD-COD-SW-15-0/1-0 MSD	Total/NA	Water	8260C LL	

Analysis Batch: 39389

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-11876-14	HD-QC1-0/1-2	Total/NA	Water	8260C LL	
MB 410-39389/7	Method Blank	Total/NA	Water	8260C LL	
LCS 410-39389/4	Lab Control Sample	Total/NA	Water	8260C LL	
LCSD 410-39389/5	Lab Control Sample Dup	Total/NA	Water	8260C LL	

Lab Chronicle

Client: Groundwater Sciences Corporation
Project/Site: fYNOP Monthly Surface Water

Job ID: 410-11876-1

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

Lab Sample ID: 410-11876-1

Date Collected: 08/25/20 10:15

Matrix: Water

Date Received: 08/25/20 18:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C LL		1	38982	08/30/20 22:46	MJ8R	ELLE

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

Lab Sample ID: 410-11876-2

Date Collected: 08/25/20 11:00

Matrix: Water

Date Received: 08/25/20 18:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C LL		1	38982	08/30/20 23:08	MJ8R	ELLE

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

Lab Sample ID: 410-11876-3

Date Collected: 08/25/20 08:20

Matrix: Water

Date Received: 08/25/20 18:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C LL		1	38982	08/30/20 23:30	MJ8R	ELLE

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

Lab Sample ID: 410-11876-4

Date Collected: 08/25/20 11:50

Matrix: Water

Date Received: 08/25/20 18:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C LL		1	38982	08/30/20 23:52	MJ8R	ELLE

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

Lab Sample ID: 410-11876-5

Date Collected: 08/25/20 08:50

Matrix: Water

Date Received: 08/25/20 18:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C LL		1	38982	08/31/20 00:14	MJ8R	ELLE

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

Lab Sample ID: 410-11876-6

Date Collected: 08/25/20 11:25

Matrix: Water

Date Received: 08/25/20 18:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C LL		1	38982	08/30/20 21:19	MJ8R	ELLE

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

Lab Sample ID: 410-11876-7

Date Collected: 08/25/20 09:35

Matrix: Water

Date Received: 08/25/20 18:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C LL		1	38982	08/31/20 00:35	MJ8R	ELLE

Lab Chronicle

Client: Groundwater Sciences Corporation
Project/Site: fYNOP Monthly Surface Water

Job ID: 410-11876-1

Client Sample ID: HD-COD-SW-17-0/1-0

Lab Sample ID: 410-11876-8

Date Collected: 08/25/20 09:45

Matrix: Water

Date Received: 08/25/20 18:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C LL		1	38982	08/31/20 00:57	MJ8R	ELLE

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

Lab Sample ID: 410-11876-9

Date Collected: 08/25/20 10:35

Matrix: Water

Date Received: 08/25/20 18:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C LL		1	38982	08/31/20 01:18	MJ8R	ELLE

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

Lab Sample ID: 410-11876-10

Date Collected: 08/25/20 11:15

Matrix: Water

Date Received: 08/25/20 18:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C LL		1	38982	08/31/20 01:40	MJ8R	ELLE

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

Lab Sample ID: 410-11876-11

Date Collected: 08/25/20 12:10

Matrix: Water

Date Received: 08/25/20 18:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C LL		1	38982	08/31/20 02:02	MJ8R	ELLE

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

Lab Sample ID: 410-11876-12

Date Collected: 08/25/20 08:10

Matrix: Water

Date Received: 08/25/20 18:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C LL		1	38982	08/31/20 02:23	MJ8R	ELLE

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

Lab Sample ID: 410-11876-13

Date Collected: 08/25/20 12:00

Matrix: Water

Date Received: 08/25/20 18:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C LL		1	38982	08/30/20 20:36	MJ8R	ELLE

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

Lab Sample ID: 410-11876-14

Date Collected: 08/25/20 00:00

Matrix: Water

Date Received: 08/25/20 18:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C LL		1	39389	08/31/20 20:38	K4WN	ELLE

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: Groundwater Sciences Corporation
Project/Site: fYNOP Monthly Surface Water

Job ID: 410-11876-1

Laboratory: Eurofins Lancaster Laboratories Env, LLC

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

Authority	Program	Identification Number	Expiration Date
Pennsylvania	NELAP	36-00037	01-31-21

Method Summary

Client: Groundwater Sciences Corporation
Project/Site: fYNOP Monthly Surface Water

Job ID: 410-11876-1

Method	Method Description	Protocol	Laboratory
8260C LL	Volatile Organic Compounds by GC/MS	SW846	ELLE
5030C	Purge and Trap	SW846	ELLE

Protocol References:

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

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Sample Summary

Client: Groundwater Sciences Corporation
Project/Site: fYNOP Monthly Surface Water

Job ID: 410-11876-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
410-11876-1	HD-COD-SW-6-0/1-0	Water	08/25/20 10:15	08/25/20 18:30	
410-11876-2	HD-COD-SW-7-0/1-0	Water	08/25/20 11:00	08/25/20 18:30	
410-11876-3	HD-COD-SW-8-0/1-0	Water	08/25/20 08:20	08/25/20 18:30	
410-11876-4	HD-COD-SW-9-0/1-0	Water	08/25/20 11:50	08/25/20 18:30	
410-11876-5	HD-COD-SW-13-0/1-0	Water	08/25/20 08:50	08/25/20 18:30	
410-11876-6	HD-COD-SW-15-0/1-0	Water	08/25/20 11:25	08/25/20 18:30	
410-11876-7	HD-COD-SW-16-0/1-0	Water	08/25/20 09:35	08/25/20 18:30	
410-11876-8	HD-COD-SW-17-0/1-0	Water	08/25/20 09:45	08/25/20 18:30	
410-11876-9	HD-COD-SW-26-0/1-0	Water	08/25/20 10:35	08/25/20 18:30	
410-11876-10	HD-COD-SW-27-0/1-0	Water	08/25/20 11:15	08/25/20 18:30	
410-11876-11	HD-COD-SW-28-0/1-0	Water	08/25/20 12:10	08/25/20 18:30	
410-11876-12	HD-COD-SW-29-0/1-0	Water	08/25/20 08:10	08/25/20 18:30	
410-11876-13	HD-QC1-0/1-1	Water	08/25/20 12:00	08/25/20 18:30	
410-11876-14	HD-QC1-0/1-2	Water	08/25/20 00:00	08/25/20 18:30	

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-11876-1

SDG No.: _____

Instrument ID: 19094 Analysis Batch Number: 11163Lab Sample ID: IC 410-11163/12 Client Sample ID: _____Date Analyzed: 06/08/20 16:46 Lab File ID: hu08i01.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	2.08	Incomplete Integration	campbellme	06/08/20 19:19
Chloroethane	2.83	Split Peak	campbellme	06/08/20 19:20
Freon 123a	3.50	Split Peak	campbellme	06/08/20 19:21
Methyl iodide	3.96	Incomplete Integration	campbellme	06/08/20 19:21
Methyl acetate	4.22	Baseline	campbellme	06/08/20 19:22
Fluorobenzene (IS)	7.96	Incomplete Integration	campbellme	06/08/20 19:56
1,4-Dioxane	8.86	Split Peak	campbellme	06/08/20 19:55

Lab Sample ID: ICIS 410-11163/13 Client Sample ID: _____Date Analyzed: 06/08/20 17:08 Lab File ID: hu08i02.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	2.08	Incomplete Integration	campbellme	06/08/20 20:11
Acetone	3.79	Baseline	campbellme	06/08/20 20:11
t-Butyl alcohol-d10 (IS)	4.46	Split Peak	campbellme	06/08/20 19:58
n-Butanol	8.30	Baseline	campbellme	06/08/20 20:12
1,4-Dioxane	8.86	Split Peak	campbellme	06/08/20 19:58

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-11876-1

SDG No.: _____

Instrument ID: 19094 Analysis Batch Number: 11163Lab Sample ID: IC 410-11163/14 Client Sample ID: _____Date Analyzed: 06/08/20 17:29 Lab File ID: hu08i03.D GC Column: R-624SilMS 30m ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	2.08	Incomplete Integration	campbellme	06/08/20 20:13
1,3-Butadiene	2.39	Baseline	campbellme	06/08/20 20:13
n-Butanol	8.30	Baseline	campbellme	06/08/20 20:14

Lab Sample ID: IC 410-11163/15 Client Sample ID: _____Date Analyzed: 06/08/20 17:51 Lab File ID: hu08i04.D GC Column: R-624SilMS 30m ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	2.07	Incomplete Integration	campbellme	06/08/20 19:27
Chloromethane	2.26	Baseline	campbellme	06/08/20 19:28
1,3-Butadiene	2.39	Baseline	campbellme	06/08/20 19:28
Acetone	3.79	Baseline	campbellme	06/08/20 19:28
1,4-Dioxane	8.85	Split Peak	campbellme	06/08/20 19:29

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-11876-1

SDG No.: _____

Instrument ID: 19094 Analysis Batch Number: 11163Lab Sample ID: IC 410-11163/16 Client Sample ID: _____Date Analyzed: 06/08/20 18:13 Lab File ID: hu08i05.D GC Column: R-624SilMS 30m ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	2.08	Incomplete Integration	campbellme	06/08/20 19:30
1,3-Butadiene	2.40	Baseline	campbellme	06/08/20 19:30
Acetone	3.79	Split Peak	campbellme	06/08/20 19:31
Isobutyl alcohol	7.42	Baseline	campbellme	06/08/20 19:31
1,4-Dioxane	8.85	Incomplete Integration	campbellme	06/08/20 19:32
2-Nitropropane	9.37	Incomplete Integration	campbellme	06/08/20 19:32

Lab Sample ID: IC 410-11163/17 Client Sample ID: _____Date Analyzed: 06/08/20 18:35 Lab File ID: hu08i06.D GC Column: R-624SilMS 30m ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	2.07	Incomplete Integration	campbellme	06/08/20 19:32
Acetone	3.79	Incomplete Integration	campbellme	06/08/20 19:33
2-Butanone (MEK)	6.33	Split Peak	campbellme	06/08/20 19:33
cis-1,2-Dichloroethene	6.36	Split Peak	campbellme	06/08/20 19:35
Isobutyl alcohol	7.42	Incomplete Integration	campbellme	06/08/20 19:35
1,4-Dioxane	8.86	Incomplete Integration	campbellme	06/08/20 19:36
Dibromomethane	8.89	Incomplete Integration	campbellme	06/08/20 19:38

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-11876-1

SDG No.: _____

Instrument ID: 19094 Analysis Batch Number: 11163Lab Sample ID: IC 410-11163/18 Client Sample ID: _____Date Analyzed: 06/08/20 18:56 Lab File ID: hu08i07.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	2.08	Incomplete Integration	campbellme	06/08/20 19:40
Vinyl chloride	2.39	Incomplete Integration	campbellme	06/08/20 19:40
Acetone	3.79	Incomplete Integration	campbellme	06/08/20 19:45
Methyl acetate	4.23	Incomplete Integration	campbellme	06/08/20 19:40
2-Chloro-1,3-butadiene	5.65	Incomplete Integration	campbellme	06/08/20 19:41
2-Butanone (MEK)	6.33	Split Peak	campbellme	06/08/20 19:41
Methyl methacrylate	8.84	Incomplete Integration	campbellme	06/08/20 19:42

Lab Sample ID: ICV 410-11163/19 Client Sample ID: _____Date Analyzed: 06/08/20 19:18 Lab File ID: hu08v01.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	2.09	Incomplete Integration	campbellme	06/08/20 20:34
Chloromethane	2.27	Baseline	campbellme	06/08/20 20:34
1,3-Butadiene	2.40	Split Peak	campbellme	06/08/20 20:38
Acetone	3.79	Baseline	campbellme	06/08/20 20:35
1,4-Dioxane	8.86	Split Peak	campbellme	06/08/20 20:35

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-11876-1

SDG No.: _____

Instrument ID: 19094 Analysis Batch Number: 38982Lab Sample ID: CCVIS 410-38982/3 Client Sample ID: _____Date Analyzed: 08/30/20 17:38 Lab File ID: HG30C01.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	2.07	Incomplete Integration	campbellme	08/30/20 18:04
Acetone	3.79	Incomplete Integration	campbellme	08/30/20 18:04

Lab Sample ID: MB 410-38982/7 Client Sample ID: _____Date Analyzed: 08/30/20 19:05 Lab File ID: HG30B01.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Carbon disulfide	4.11	Incomplete Integration	campbellme	08/30/20 19:28

Lab Sample ID: 410-11876-13 Client Sample ID: HD-QC1-0/1-1Date Analyzed: 08/30/20 20:36 Lab File ID: HG30S04.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.82	Other	virayd	08/31/20 13:04
Carbon disulfide	4.08	Other	virayd	08/31/20 13:04
trans-1,2-Dichloroethene	4.90	Other	virayd	08/31/20 13:04
1,1,1-Trichloroethane	7.10	Other	virayd	08/31/20 13:04
1,2-Dichloroethane	7.64	Other	virayd	08/31/20 13:04

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-11876-1

SDG No.: _____

Instrument ID: 19094 Analysis Batch Number: 38982Lab Sample ID: 410-11876-6 Client Sample ID: HD-COD-SW-15-0/1-0Date Analyzed: 08/30/20 21:19 Lab File ID: HG30S06.D GC Column: R-624SilMS 30m ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Carbon disulfide	4.09	Other	virayd	08/31/20 13:09
Methylene Chloride	4.48	Other	virayd	08/31/20 13:09
1,1-Dichloroethane	5.56	Other	virayd	08/31/20 13:09
Chloroform	6.85	Other	virayd	08/31/20 13:10
1,2-Dichloroethane	7.63	Other	virayd	08/31/20 13:10

Lab Sample ID: 410-11876-6 MS Client Sample ID: HD-COD-SW-15-0/1-0 MS MSDate Analyzed: 08/30/20 21:41 Lab File ID: HG30S07.D GC Column: R-624SilMS 30m ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.79	Other	virayd	08/31/20 13:11
1,2-Dichloroethane	7.63	Other	virayd	08/31/20 13:11

Lab Sample ID: 410-11876-6 MSD Client Sample ID: HD-COD-SW-15-0/1-0 MSD MSDDate Analyzed: 08/30/20 22:03 Lab File ID: HG30S08.D GC Column: R-624SilMS 30m ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.79	Other	virayd	08/31/20 13:12

Lab Sample ID: 410-11876-1 Client Sample ID: HD-COD-SW-6-0/1-0Date Analyzed: 08/30/20 22:46 Lab File ID: HG30S10.D GC Column: R-624SilMS 30m ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methylene Chloride	4.46	Peak assignment corrected	virayd	08/31/20 13:14
1,2-Dichloroethane	7.63	Peak assignment corrected	virayd	08/31/20 13:14
Trichloroethene	8.43	Other	virayd	08/31/20 13:14

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-11876-1

SDG No.: _____

Instrument ID: 19094 Analysis Batch Number: 38982Lab Sample ID: 410-11876-2 Client Sample ID: HD-COD-SW-7-0/1-0Date Analyzed: 08/30/20 23:08 Lab File ID: HG30S11.D GC Column: R-624SilMS 30m ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Carbon disulfide	4.09	Other	virayd	08/31/20 13:15
Methylene Chloride	4.48	Other	virayd	08/31/20 13:15
1,2-Dichloroethane	7.63	Other	virayd	08/31/20 13:15
Trichloroethene	8.44	Other	virayd	08/31/20 13:15

Lab Sample ID: 410-11876-3 Client Sample ID: HD-COD-SW-8-0/1-0Date Analyzed: 08/30/20 23:30 Lab File ID: HG30S12.D GC Column: R-624SilMS 30m ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Carbon disulfide	4.09	Other	virayd	08/31/20 13:16
Benzene	7.56	Other	virayd	08/31/20 13:16
1,2-Dichloroethane	7.63	Other	virayd	08/31/20 13:16

Lab Sample ID: 410-11876-4 Client Sample ID: HD-COD-SW-9-0/1-0Date Analyzed: 08/30/20 23:52 Lab File ID: HG30S13.D GC Column: R-624SilMS 30m ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.79	Other	virayd	08/31/20 13:17
Carbon disulfide	4.07	Other	virayd	08/31/20 13:17
Methylene Chloride	4.46	Other	virayd	08/31/20 13:17
Trichloroethene	8.44	Other	virayd	08/31/20 13:17
Tetrachloroethene	10.54	Other	virayd	08/31/20 13:17

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-11876-1

SDG No.: _____

Instrument ID: 19094 Analysis Batch Number: 38982Lab Sample ID: 410-11876-5 Client Sample ID: HD-COD-SW-13-0/1-0Date Analyzed: 08/31/20 00:14 Lab File ID: HG30S14.D GC Column: R-624SilMS 30m ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.80	Other	virayd	08/31/20 13:17
Carbon disulfide	4.10	Other	virayd	08/31/20 13:17
Methylene Chloride	4.48	Other	virayd	08/31/20 13:18
Benzene	7.55	Other	virayd	08/31/20 13:18

Lab Sample ID: 410-11876-7 Client Sample ID: HD-COD-SW-16-0/1-0Date Analyzed: 08/31/20 00:35 Lab File ID: HG30S15.D GC Column: R-624SilMS 30m ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Carbon disulfide	4.11	Other	virayd	08/31/20 13:18
Methylene Chloride	4.49	Other	virayd	08/31/20 13:18
1,2-Dichloroethane	7.62	Other	virayd	08/31/20 13:18
Trichloroethene	8.42	Other	virayd	08/31/20 13:19

Lab Sample ID: 410-11876-8 Client Sample ID: HD-COD-SW-17-0/1-0Date Analyzed: 08/31/20 00:57 Lab File ID: HG30S16.D GC Column: R-624SilMS 30m ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.80	Other	virayd	08/31/20 13:19
Carbon disulfide	4.09	Other	virayd	08/31/20 13:19
Methylene Chloride	4.46	Other	virayd	08/31/20 13:19

Lab Sample ID: 410-11876-9 Client Sample ID: HD-COD-SW-26-0/1-0Date Analyzed: 08/31/20 01:18 Lab File ID: HG30S17.D GC Column: R-624SilMS 30m ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
cis-1,2-Dichloroethene	6.38	Other	virayd	08/31/20 13:20

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-11876-1

SDG No.: _____

Instrument ID: 19094 Analysis Batch Number: 38982Lab Sample ID: 410-11876-10 Client Sample ID: HD-COD-SW-27-0/1-0Date Analyzed: 08/31/20 01:40 Lab File ID: HG30S18.D GC Column: R-624SilMS 30m ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.81	Other	virayd	08/31/20 13:21
Carbon disulfide	4.09	Other	virayd	08/31/20 13:21
2-Butanone (MEK)	6.33	Other	virayd	08/31/20 13:21
cis-1,2-Dichloroethene	6.39	Other	virayd	08/31/20 13:21
1,2-Dichloroethane	7.63	Other	virayd	08/31/20 13:21
Trichloroethene	8.43	Other	virayd	08/31/20 13:22
Tetrachloroethene	10.54	Other	virayd	08/31/20 13:22

Lab Sample ID: 410-11876-11 Client Sample ID: HD-COD-SW-28-0/1-0Date Analyzed: 08/31/20 02:02 Lab File ID: HG30S19.D GC Column: R-624SilMS 30m ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.80	Other	virayd	08/31/20 13:22
Carbon disulfide	4.07	Other	virayd	08/31/20 13:22
Methylene Chloride	4.45	Other	virayd	08/31/20 13:22
1,2-Dichloroethane	7.62	Other	virayd	08/31/20 13:22

Lab Sample ID: 410-11876-12 Client Sample ID: HD-COD-SW-29-0/1-0Date Analyzed: 08/31/20 02:23 Lab File ID: HG30S20.D GC Column: R-624SilMS 30m ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.81	Other	virayd	08/31/20 13:23
cis-1,2-Dichloroethene	6.39	Other	virayd	08/31/20 13:23
1,2-Dichloroethane	7.63	Other	virayd	08/31/20 13:23

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-11876-1

SDG No.: _____

Instrument ID: 19094 Analysis Batch Number: 39389

Lab Sample ID: CCVIS 410-39389/3 Client Sample ID: _____

Date Analyzed: 08/31/20 18:18 Lab File ID: HG31C01.D GC Column: R-624SilMS 30m ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	2.08	Incomplete Integration	campbellme	08/31/20 18:50
Acetone	3.79	Incomplete Integration	campbellme	08/31/20 18:50
t-Butyl alcohol-d10 (IS)	4.49	Incomplete Integration	campbellme	08/31/20 18:50

Lab Sample ID: LCS 410-39389/4 Client Sample ID: _____

Date Analyzed: 08/31/20 18:40 Lab File ID: HG31L01.D GC Column: R-624SilMS 30m ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.79	Incomplete Integration	campbellme	08/31/20 19:19

Lab Sample ID: LCSD 410-39389/5 Client Sample ID: _____

Date Analyzed: 08/31/20 19:02 Lab File ID: HG31L02.D GC Column: R-624SilMS 30m ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.79	Incomplete Integration	campbellme	08/31/20 19:30

Lab Sample ID: MB 410-39389/7 Client Sample ID: _____

Date Analyzed: 08/31/20 19:45 Lab File ID: HG31B01.D GC Column: R-624SilMS 30m ID: 0.25 (mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Carbon disulfide	4.07	Incomplete Integration	campbellme	08/31/20 20:11

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration					
					Reagent ID	Volume Added							
MSV_30_826ISS_00005	11/27/20	05/27/20	Methanol, Lot DX212	50 mL	MSV_8260_SS_00120	1 mL	1,2-Dichloroethane-d4 (Surr)	50 ug/mL					
							4-Bromofluorobenzene (Surr)	50 ug/mL					
							Dibromofluoromethane (Surr)	50 ug/mL					
					MSV_Cus826_IS_00076						1 mL	1,4-Dichlorobenzene-d4	50 ug/mL
												Chlorobenzene-d5 (IS)	50 ug/mL
												Fluorobenzene (IS)	50 ug/mL
												t-Butyl alcohol-d10 (IS)	250 ug/mL
.MSV_8260_SS_00120	03/31/22		Restek, Lot A0146938		(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					
.MSV_Cus826_IS_00076	05/31/21		Restek, Lot A0138205		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2500 ug/mL					
							Chlorobenzene-d5 (IS)	2500 ug/mL					
							Fluorobenzene (IS)	2500 ug/mL					
							t-Butyl alcohol-d10 (IS)	12500 ug/mL					
MSV_Q_QVOA1_00032	07/08/20	06/08/20	Methanol, Lot DX212	25 mL	MSV_Q#1B_00038	1 mL	1,1,1,2-Tetrachloroethane	40 mg/L					
							1,1,1-Trichloroethane	40 mg/L					
							1,1,2,2-Tetrachloroethane	40 mg/L					
							1,1,2-Trichloroethane	40 mg/L					
							1,1-Dichloroethane	40 mg/L					
							1,1-Dichloroethene	40 mg/L					
							1,2-Dibromoethane (EDB)	40 mg/L					
							1,2-Dichloroethane	40 mg/L					
							1,2-Dichloropropane	40 mg/L					
							Benzene	40 mg/L					
							Bromodichloromethane	40 mg/L					
							Bromoform	40 mg/L					
							Carbon tetrachloride	40 mg/L					
							Chlorobenzene	40 mg/L					
							Chloroform	40 mg/L					
					cis-1,2-Dichloroethene	40 mg/L							
					cis-1,3-Dichloropropene	40 mg/L							
					Dibromochloromethane	40 mg/L							
					Ethylbenzene	40 mg/L							
					Methylene Chloride	40 mg/L							
					Styrene	40 mg/L							
					Tetrachloroethene	40 mg/L							
					Toluene	40 mg/L							
					trans-1,2-Dichloroethene	40 mg/L							
					trans-1,3-Dichloropropene	40 mg/L							
					Trichloroethene	40 mg/L							
					MSV_Q#3B_00032						1 mL	2-Butanone (MEK)	300 mg/L
2-Hexanone	200 mg/L												
4-Methyl-2-pentanone (MIBK)	200 mg/L												
Acetone	300 mg/L												
Acrylonitrile	200 mg/L												

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					MSV_Q#4C_00036	1 mL	Carbon disulfide	40 mg/L
							Methyl tert-butyl ether	40 mg/L
.MSV_Q#1B_00038	04/30/22		Restek, Lot A0148625		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	1000 ug/mL
							1,1,1-Trichloroethane	1000 ug/mL
							1,1,2,2-Tetrachloroethane	1000 ug/mL
							1,1,2-Trichloroethane	1000 ug/mL
							1,1-Dichloroethane	1000 ug/mL
							1,1-Dichloroethene	1000 ug/mL
							1,2-Dibromoethane (EDB)	1000 ug/mL
							1,2-Dichloroethane	1000 ug/mL
							1,2-Dichloropropane	1000 ug/mL
							Benzene	1000 ug/mL
							Bromodichloromethane	1000 ug/mL
							Bromoform	1000 ug/mL
							Carbon tetrachloride	1000 ug/mL
							Chlorobenzene	1000 ug/mL
							Chloroform	1000 ug/mL
							cis-1,2-Dichloroethene	1000 ug/mL
							cis-1,3-Dichloropropene	1000 ug/mL
							Dibromochloromethane	1000 ug/mL
							Ethylbenzene	1000 ug/mL
							Methylene Chloride	1000 ug/mL
							Styrene	1000 ug/mL
							Tetrachloroethene	1000 ug/mL
							Toluene	1000 ug/mL
							trans-1,2-Dichloroethene	1000 ug/mL
							trans-1,3-Dichloropropene	1000 ug/mL
							Trichloroethene	1000 ug/mL
.MSV_Q#3B_00032	09/30/20		Restek, Lot A0147509		(Purchased Reagent)		2-Butanone (MEK)	7500 ug/mL
							2-Hexanone	5000 ug/mL
							4-Methyl-2-pentanone (MIBK)	5000 ug/mL
							Acetone	7500 ug/mL
							Acrylonitrile	5000 ug/mL
.MSV_Q#4C_00036	03/31/21		Restek, Lot A0158704		(Purchased Reagent)		Carbon disulfide	1000 ug/mL
							Methyl tert-butyl ether	1000 ug/mL
MSV_Q_QVOA1_00043	09/23/20	08/24/20	Methanol, Lot DX212	25 mL	MSV_Q#1B_00052	1 mL	1,1,1,2-Tetrachloroethane	40 mg/L
							1,1,1-Trichloroethane	40 mg/L
							1,1,2,2-Tetrachloroethane	40 mg/L
							1,1,2-Trichloroethane	40 mg/L
							1,1-Dichloroethane	40 mg/L
							1,1-Dichloroethene	40 mg/L
							1,2-Dibromoethane (EDB)	40 mg/L
							1,2-Dichloroethane	40 mg/L
							1,2-Dichloropropane	40 mg/L
							Benzene	40 mg/L
							Bromodichloromethane	40 mg/L
							Bromoform	40 mg/L

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration		
					Reagent ID	Volume Added				
							Carbon tetrachloride	40 mg/L		
							Chlorobenzene	40 mg/L		
							Chloroform	40 mg/L		
							cis-1,2-Dichloroethene	40 mg/L		
							cis-1,3-Dichloropropene	40 mg/L		
							Dibromochloromethane	40 mg/L		
							Ethylbenzene	40 mg/L		
							Methylene Chloride	40 mg/L		
							Styrene	40 mg/L		
							Tetrachloroethene	40 mg/L		
							Toluene	40 mg/L		
							trans-1,2-Dichloroethene	40 mg/L		
							trans-1,3-Dichloropropene	40 mg/L		
							Trichloroethene	40 mg/L		
							MSV_Q#3B_00047	1 mL	2-Butanone (MEK)	300 mg/L
									2-Hexanone	200 mg/L
									4-Methyl-2-pentanone (MIBK)	200 mg/L
									Acetone	300 mg/L
									Acrylonitrile	200 mg/L
		MSV_Q#4C_00051	1 mL	Carbon disulfide	40 mg/L					
				Methyl tert-butyl ether	40 mg/L					
.MSV_Q#1B_00052	04/30/22		Restek, Lot A0148625			(Purchased Reagent)	1,1,1,2-Tetrachloroethane	1000 ug/mL		
							1,1,1-Trichloroethane	1000 ug/mL		
							1,1,2,2-Tetrachloroethane	1000 ug/mL		
							1,1,2-Trichloroethane	1000 ug/mL		
							1,1-Dichloroethane	1000 ug/mL		
							1,1-Dichloroethene	1000 ug/mL		
							1,2-Dibromoethane (EDB)	1000 ug/mL		
							1,2-Dichloroethane	1000 ug/mL		
							1,2-Dichloropropane	1000 ug/mL		
							Benzene	1000 ug/mL		
							Bromodichloromethane	1000 ug/mL		
							Bromoform	1000 ug/mL		
							Carbon tetrachloride	1000 ug/mL		
							Chlorobenzene	1000 ug/mL		
							Chloroform	1000 ug/mL		
							cis-1,2-Dichloroethene	1000 ug/mL		
							cis-1,3-Dichloropropene	1000 ug/mL		
							Dibromochloromethane	1000 ug/mL		
							Ethylbenzene	1000 ug/mL		
							Methylene Chloride	1000 ug/mL		
							Styrene	1000 ug/mL		
							Tetrachloroethene	1000 ug/mL		
							Toluene	1000 ug/mL		
trans-1,2-Dichloroethene	1000 ug/mL									
trans-1,3-Dichloropropene	1000 ug/mL									
Trichloroethene	1000 ug/mL									
.MSV_Q#3B_00047	09/30/21		Restek, Lot A0158722			(Purchased Reagent)	2-Butanone (MEK)	7500 ug/mL		

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Hexanone	5000 ug/mL
							4-Methyl-2-pentanone (MIBK)	5000 ug/mL
							Acetone	7500 ug/mL
							Acrylonitrile	5000 ug/mL
.MSV_Q#4C_00051	03/31/21		Restek, Lot A0158704			(Purchased Reagent)	Carbon disulfide	1000 ug/mL
							Methyl tert-butyl ether	1000 ug/mL
MSV_Q_QVOA6_00029	07/04/20	06/04/20	Methanol, Lot DX212	25 mL	MSV_QCS#6Std_00032	1 mL	Bromochloromethane	40 ug/mL
.MSV_QCS#6Std_00032	09/30/21		Restek, Lot A0158906			(Purchased Reagent)	Bromochloromethane	1000 ug/mL
MSV_Q_QVOA6_00041	09/25/20	08/26/20	Methanol, Lot DX212	25 mL	MSV_QCS#6Std_00049	1 mL	Bromochloromethane	40 ug/mL
.MSV_QCS#6Std_00049	09/30/21		Restek, Lot A0158906			(Purchased Reagent)	Bromochloromethane	1000 ug/mL
MSV_QGAS_826_00044	06/15/20	06/08/20	Methanol, Lot DX212	1 mL	MSV_502QGas_00060	20 uL	Bromomethane	40 ug/mL
							Chloroethane	40 ug/mL
							Chloromethane	40 ug/mL
							Vinyl chloride	40 ug/mL
.MSV_502QGas_00060	06/15/20		Restek, Lot A0155823			(Purchased Reagent)	Bromomethane	2000 ug/mL
							Chloroethane	2000 ug/mL
							Chloromethane	2000 ug/mL
							Vinyl chloride	2000 ug/mL
MSV_QGAS_826_00067	09/03/20	08/27/20	Methanol, Lot DX212	1 mL	MSV_502QGas_00089	20 uL	Bromomethane	40 ug/mL
							Chloroethane	40 ug/mL
							Chloromethane	40 ug/mL
							Vinyl chloride	40 ug/mL
.MSV_502QGas_00089	09/03/20		Restek, Lot A0155823			(Purchased Reagent)	Bromomethane	2000 ug/mL
							Chloroethane	2000 ug/mL
							Chloromethane	2000 ug/mL
							Vinyl chloride	2000 ug/mL
MSV_QGAS_826_00068	09/07/20	08/31/20	Methanol, Lot DX212	1 mL	MSV_502QGas_00090	20 uL	Bromomethane	40 ug/mL
							Chloroethane	40 ug/mL
							Chloromethane	40 ug/mL
							Vinyl chloride	40 ug/mL
.MSV_502QGas_00090	09/07/20		Restek, Lot A0155823			(Purchased Reagent)	Bromomethane	2000 ug/mL
							Chloroethane	2000 ug/mL
							Chloromethane	2000 ug/mL
							Vinyl chloride	2000 ug/mL
MSV_RV1_826_00015	07/08/20	06/08/20	Methanol, Lot DX212	1 mL	MSV_V#1B_00071	10 uL	1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Dibromoethane (EDB)	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3,5-Trichlorobenzene	50 ug/mL
							1,3,5-Trimethylbenzene	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							1-Chlorohexane	50 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							4-Isopropyltoluene	50 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Dibromochloromethane	50 ug/mL
							Dibromomethane	50 ug/mL
							Ethylbenzene	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	100 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							Trichloroethene	50 ug/mL
					MSV_V#2B_00083	10 uL	1,4-Dioxane	2500 ug/mL
							2-Methyl-2-propanol	1000 ug/mL
							Isobutyl alcohol	2500 ug/mL
							Methacrylonitrile	500 ug/mL
							n-Butanol	5000 ug/mL
							Propionitrile	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
					MSV_V#4C_00058	10 uL	trans-1,4-Dichloro-2-butene	500 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,2-Dichloro-1,1,2-trifluoroethane	50 ug/mL
							2-Chloro-1,3-butadiene	50 ug/mL
							Benzyl chloride	50 ug/mL
							Butadiene	50 ug/mL
							Carbon disulfide	50 ug/mL
							Cyclohexane	50 ug/mL
							Ethyl methacrylate	50 ug/mL
							Hexane	50 ug/mL
							Iodomethane	50 ug/mL
							Isopropyl ether	50 ug/mL
							Methyl methacrylate	50 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							n-Heptane	50 ug/mL
					Tert-amyl methyl ether	50 ug/mL		
					Tert-butyl ethyl ether	50 ug/mL		
					MSV_V_VOA2_00034	150 uL	1,4-Dioxane	2500 ug/mL
							2-Methyl-2-propanol	1000 ug/mL
							Isobutyl alcohol	2500 ug/mL
							Methacrylonitrile	500 ug/mL
							n-Butanol	5000 ug/mL
							Propionitrile	1000 ug/mL
					MSV_V_VOA3_00031	100 uL	trans-1,4-Dichloro-2-butene	500 ug/mL
							2-Butanone (MEK)	500 ug/mL
							2-Hexanone	500 ug/mL
							2-Nitropropane	500 ug/mL
4-Methyl-2-pentanone (MIBK)	500 ug/mL							
Acetone	500 ug/mL							
Acrylonitrile	250 ug/mL							
Tetrahydrofuran	500 ug/mL							
Acrolein	2499.96 ug/mL							
.MSV_V#1B_00071	07/08/20	Restek, Lot A0158586	(Purchased Reagent)	1,1,1,2-Tetrachloroethane	5000 ug/mL			
				1,1,1-Trichloroethane	5000 ug/mL			
				1,1,2,2-Tetrachloroethane	5000 ug/mL			
				1,1,2-Trichloroethane	5000 ug/mL			
				1,1-Dichloroethane	5000 ug/mL			
				1,1-Dichloroethene	5000 ug/mL			
				1,1-Dichloropropene	5000 ug/mL			
				1,2,3-Trichlorobenzene	5000 ug/mL			
				1,2,3-Trichloropropane	5000 ug/mL			
				1,2,4-Trichlorobenzene	5000 ug/mL			
				1,2,4-Trimethylbenzene	5000 ug/mL			
				1,2-Dibromo-3-Chloropropane	5000 ug/mL			
				1,2-Dibromoethane (EDB)	5000 ug/mL			
				1,2-Dichlorobenzene	5000 ug/mL			

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Dichloroethane	5000 ug/mL
							1,2-Dichloropropane	5000 ug/mL
							1,3,5-Trichlorobenzene	5000 ug/mL
							1,3,5-Trimethylbenzene	5000 ug/mL
							1,3-Dichlorobenzene	5000 ug/mL
							1,3-Dichloropropane	5000 ug/mL
							1,4-Dichlorobenzene	5000 ug/mL
							1-Chlorohexane	5000 ug/mL
							2,2-Dichloropropane	5000 ug/mL
							2-Chlorotoluene	5000 ug/mL
							4-Chlorotoluene	5000 ug/mL
							4-Isopropyltoluene	5000 ug/mL
							Benzene	5000 ug/mL
							Bromobenzene	5000 ug/mL
							Bromodichloromethane	5000 ug/mL
							Bromoform	5000 ug/mL
							Carbon tetrachloride	5000 ug/mL
							Chlorobenzene	5000 ug/mL
							Chloroform	5000 ug/mL
							cis-1,2-Dichloroethene	5000 ug/mL
							cis-1,3-Dichloropropene	5000 ug/mL
							Dibromochloromethane	5000 ug/mL
							Dibromomethane	5000 ug/mL
							Ethylbenzene	5000 ug/mL
							Hexachlorobutadiene	5000 ug/mL
							Isopropylbenzene	5000 ug/mL
							m-Xylene & p-Xylene	10000 ug/mL
							Methylene Chloride	5000 ug/mL
							n-Butylbenzene	5000 ug/mL
							N-Propylbenzene	5000 ug/mL
							Naphthalene	5000 ug/mL
							o-Xylene	5000 ug/mL
							sec-Butylbenzene	5000 ug/mL
							Styrene	5000 ug/mL
							tert-Butylbenzene	5000 ug/mL
							Tetrachloroethene	5000 ug/mL
							Toluene	5000 ug/mL
							trans-1,2-Dichloroethene	5000 ug/mL
							trans-1,3-Dichloropropene	5000 ug/mL
							Trichloroethene	5000 ug/mL
.MSV_V#2B_00083	07/08/20		Restek, Lot A0147800			(Purchased Reagent)	1,4-Dioxane	62500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Methacrylonitrile	12500 ug/mL
							n-Butanol	125000 ug/mL
							Propionitrile	25000 ug/mL
							trans-1,4-Dichloro-2-butene	12500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration							
					Reagent ID	Volume Added									
.MSV_V#4C_00058	07/08/20		Restek, Lot A0158660			(Purchased Reagent)	1,1,2-Trichloro-1,2,2-trifluoroethane	5000 ug/mL							
							1,2-Dichloro-1,1,2-trifluoroethane	5000 ug/mL							
							2-Chloro-1,3-butadiene	5000 ug/mL							
							Benzyl chloride	5000 ug/mL							
							Butadiene	5000 ug/mL							
							Carbon disulfide	5000 ug/mL							
							Cyclohexane	5000 ug/mL							
							Ethyl methacrylate	5000 ug/mL							
							Hexane	5000 ug/mL							
							Iodomethane	5000 ug/mL							
							Isopropyl ether	5000 ug/mL							
							Methyl methacrylate	5000 ug/mL							
							Methyl tert-butyl ether	5000 ug/mL							
							n-Heptane	5000 ug/mL							
Tert-amyl methyl ether	5000 ug/mL														
Tert-butyl ethyl ether	5000 ug/mL														
.MSV_V_VOA2_00034	07/08/20	06/08/20	Methanol, Lot DX212	5 mL	MSV_V#2B_00083	1 mL	1,4-Dioxane	12500 ug/mL							
							2-Methyl-2-propanol	5000 ug/mL							
							Isobutyl alcohol	12500 ug/mL							
							Methacrylonitrile	2500 ug/mL							
							n-Butanol	25000 ug/mL							
							Propionitrile	5000 ug/mL							
							trans-1,4-Dichloro-2-butene	2500 ug/mL							
..MSV_V#2B_00083	07/08/20		Restek, Lot A0147800			(Purchased Reagent)	1,4-Dioxane	62500 ug/mL							
							2-Methyl-2-propanol	25000 ug/mL							
							Isobutyl alcohol	62500 ug/mL							
							Methacrylonitrile	12500 ug/mL							
							n-Butanol	125000 ug/mL							
							Propionitrile	25000 ug/mL							
							trans-1,4-Dichloro-2-butene	12500 ug/mL							
.MSV_V_VOA3_00031	07/08/20	06/08/20	Methanol, Lot DX212	5 mL	MSV_V#3B_00037	1 mL	2-Butanone (MEK)	5000 ug/mL							
							2-Hexanone	5000 ug/mL							
							2-Nitropropane	5000 ug/mL							
							4-Methyl-2-pentanone (MIBK)	5000 ug/mL							
							Acetone	5000 ug/mL							
							Acrylonitrile	2500 ug/mL							
							Tetrahydrofuran	5000 ug/mL							
							MSV_VACR_00008	1 mL	Acrolein	24999.6 ug/mL					
							..MSV_V#3B_00037	07/08/20		Restek, Lot A0158677			(Purchased Reagent)	2-Butanone (MEK)	25000 ug/mL
														2-Hexanone	25000 ug/mL
2-Nitropropane	25000 ug/mL														
4-Methyl-2-pentanone (MIBK)	25000 ug/mL														
Acetone	25000 ug/mL														
Acrylonitrile	12500 ug/mL														
Tetrahydrofuran	25000 ug/mL														
..MSV_VACR_00008	08/01/20	06/02/20	Methanol, Lot DX212	10 mL	MSV_VACR_STK_00008	9.079 mL	Acrolein	124998 ug/mL							

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...MSV_VACR_STK_00008	08/01/20	06/02/20	Methanol, Lot DX212	10 mL	MSV_ACROLEIN_00005	1.46 g	Acrolein	137678 ug/mL
...MSV_ACROLEIN_00005	12/31/20		Chem Service, Lot 97170000		(Purchased Reagent)		Acrolein	0.943 g/g
MSV_RV1_826_00021	09/16/20	08/17/20	Methanol, Lot DX212	1 mL	MSV_V#1B_00097	10 uL	1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,2-Dibromoethane (EDB)	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							Benzene	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Dibromochloromethane	50 ug/mL
							Ethylbenzene	50 ug/mL
							Methylene Chloride	50 ug/mL
							Styrene	50 ug/mL
					Tetrachloroethene	50 ug/mL		
					Toluene	50 ug/mL		
					trans-1,2-Dichloroethene	50 ug/mL		
					trans-1,3-Dichloropropene	50 ug/mL		
					Trichloroethene	50 ug/mL		
					MSV_V#4C_00078	10 uL	Carbon disulfide	50 ug/mL
					MSV_V_VOA3_00041	100 uL	Methyl tert-butyl ether	50 ug/mL
							2-Butanone (MEK)	500 ug/mL
							2-Hexanone	500 ug/mL
							4-Methyl-2-pentanone (MIBK)	500 ug/mL
							Acetone	500 ug/mL
						Acrylonitrile	250 ug/mL	
.MSV_V#1B_00097	09/16/20		Restek, Lot A0158586		(Purchased Reagent)	1,1,1,2-Tetrachloroethane	5000 ug/mL	
						1,1,1-Trichloroethane	5000 ug/mL	
						1,1,2,2-Tetrachloroethane	5000 ug/mL	
						1,1,2-Trichloroethane	5000 ug/mL	
						1,1-Dichloroethane	5000 ug/mL	
						1,1-Dichloroethene	5000 ug/mL	
						1,2-Dibromoethane (EDB)	5000 ug/mL	
						1,2-Dichloroethane	5000 ug/mL	
						1,2-Dichloropropane	5000 ug/mL	
						Benzene	5000 ug/mL	
						Bromodichloromethane	5000 ug/mL	
						Bromoform	5000 ug/mL	

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Carbon tetrachloride	5000 ug/mL
							Chlorobenzene	5000 ug/mL
							Chloroform	5000 ug/mL
							cis-1,2-Dichloroethene	5000 ug/mL
							cis-1,3-Dichloropropene	5000 ug/mL
							Dibromochloromethane	5000 ug/mL
							Ethylbenzene	5000 ug/mL
							Methylene Chloride	5000 ug/mL
							Styrene	5000 ug/mL
							Tetrachloroethene	5000 ug/mL
							Toluene	5000 ug/mL
							trans-1,2-Dichloroethene	5000 ug/mL
							trans-1,3-Dichloropropene	5000 ug/mL
							Trichloroethene	5000 ug/mL
.MSV_V#4C_00078	09/16/20		Restek, Lot A0158660			(Purchased Reagent)	Carbon disulfide	5000 ug/mL
							Methyl tert-butyl ether	5000 ug/mL
.MSV_V_VOA3_00041	09/16/20	08/17/20	Methanol, Lot DX212	5 mL	MSV_V#3B_00048	1 mL	2-Butanone (MEK)	5000 ug/mL
							2-Hexanone	5000 ug/mL
							4-Methyl-2-pentanone (MIBK)	5000 ug/mL
							Acetone	5000 ug/mL
							Acrylonitrile	2500 ug/mL
..MSV_V#3B_00048	09/16/20		Restek, Lot A0158677			(Purchased Reagent)	2-Butanone (MEK)	25000 ug/mL
							2-Hexanone	25000 ug/mL
							4-Methyl-2-pentanone (MIBK)	25000 ug/mL
							Acetone	25000 ug/mL
							Acrylonitrile	12500 ug/mL
MSV_RV4_826_00016	06/27/20	06/08/20	Methanol, Lot DX212	1 mL	MSV_BCE_00010	25 uL	1-Bromo-2-chloroethane	50 ug/mL
					MSV_V_EE_00003	50 uL	Ethyl ether	49.9925 ug/mL
					MSV_V_ETBR_00005	50 uL	Ethyl bromide	50.0256 ug/mL
					MSV_V_VOA6_00038	50 uL	1,2,3-Trimethylbenzene	50 ug/mL
							3-Chloro-1-propene	50 ug/mL
							Bromochloromethane	50 ug/mL
							Methyl acetate	50 ug/mL
							Methylcyclohexane	50 ug/mL
							Pentachloroethane	50 ug/mL
.MSV_BCE_00010	06/27/20		Restek, Lot A0149919			(Purchased Reagent)	1-Bromo-2-chloroethane	2000 ug/mL
.MSV_V_EE_00003	10/28/20	04/28/20	Methanol, Lot DX212	100 mL	MSV_EE_MISCSK_00004	2.059 mL	Ethyl ether	999.85 ug/mL
..MSV_EE_MISCSK_00004	10/28/20	04/28/20	Methanol, Lot DX212	10 mL	MSV_EE_Neat_00002	0.4856 g	Ethyl ether	48560 ug/mL
...MSV_EE_Neat_00002	11/30/21		Chem Service, Lot 7967000			(Purchased Reagent)	Ethyl ether	1 g/g
.MSV_V_ETBR_00005	10/22/20	04/22/20	Methanol, Lot DX212	10 mL	MSV_VETBR_STK_00005	0.576 mL	Ethyl bromide	1000.51 ug/mL
..MSV_VETBR_STK_00005	10/22/20	04/22/20	Methanol, Lot DX212	10 mL	MSV_EtBr_Neat_00001	0.1737 g	Ethyl bromide	17370 ug/mL
...MSV_EtBr_Neat_00001	12/31/20		Chem Service, Lot 7832000			(Purchased Reagent)	Ethyl bromide	1 g/g
.MSV_V_VOA6_00038	07/04/20	06/04/20	Methanol, Lot DX212	5 mL	MSV_V#6_00020	1 mL	1,2,3-Trimethylbenzene	1000 ug/mL
							3-Chloro-1-propene	1000 ug/mL
							Bromochloromethane	1000 ug/mL
							Methyl acetate	1000 ug/mL
							Methylcyclohexane	1000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
..MSV_V#6_00020	07/04/20		Restek, Lot A0158625			(Purchased Reagent)	Pentachloroethane	1000 ug/mL
							1,2,3-Trimethylbenzene	5000 ug/mL
							3-Chloro-1-propene	5000 ug/mL
							Bromochloromethane	5000 ug/mL
							Methyl acetate	5000 ug/mL
..MSV_V#6_00032	09/25/20		Restek, Lot A0158625			(Purchased Reagent)	Methylcyclohexane	5000 ug/mL
MSV_RV4_826_00023	09/25/20	08/26/20	Methanol, Lot DX212	1 mL	MSV_V_VOA6_00050	50 uL	Pentachloroethane	5000 ug/mL
.MSV_V_VOA6_00050	09/25/20	08/26/20	Methanol, Lot DX212	5 mL	MSV_V#6_00032	1 mL	Bromochloromethane	1000 ug/mL
MSV_RV4GAS826_00046	06/15/20	06/08/20	Methanol, Lot DX212	1 mL	MSV_DCFM_00015	25 uL	Bromochloromethane	5000 ug/mL
.MSV_DCFM_00015	06/25/20		AccuStandard, Lot 219051360			(Purchased Reagent)	Dichlorofluoromethane	50 ug/mL
							Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
.MSV_V_Gas_00089	06/15/20		Restek, Lot A0150705			(Purchased Reagent)	Vinyl chloride	50 ug/mL
MSV_RV4GAS826_00069	08/31/20	08/24/20	Methanol, Lot DX212	1 mL	MSV_V_Gas_00132	25 uL	Dichlorofluoromethane	2000 ug/mL
.MSV_V_Gas_00132	08/31/20		Restek, Lot A0159812			(Purchased Reagent)	Bromomethane	2000 ug/mL
							Chloroethane	2000 ug/mL
							Chloromethane	2000 ug/mL
							Dichlorodifluoromethane	2000 ug/mL
							Trichlorofluoromethane	2000 ug/mL
MSV_RV4GAS826_00071	09/07/20	08/31/20	Methanol, Lot DX212	1 mL	MSV_V_Gas_00135	25 uL	Vinyl chloride	2000 ug/mL
.MSV_V_Gas_00135	09/07/20		Restek, Lot A0159812			(Purchased Reagent)	Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
MSV_V_BFB_00002							Bromomethane	2000 ug/mL
MSV_VBFB_STK_00002							Chloroethane	2000 ug/mL
							Chloromethane	2000 ug/mL
							Vinyl chloride	2000 ug/mL
							1,2-Dichloroethene, Total	
							1,3-Dichloropropene, Total	
							Tentatively Identified Compound	
							Xylenes, Total	
					MSV_VBFB_STK_00002	0.117 mL	BFB	49.8701 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1

SDG No.: _____

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MSV VBFB_STK_00002	07/28/20	01/28/20	Methanol, Lot DX212	10 mL	MSV_4BFB_NEAT_00001	1.0656 g	BFB	106560 ug/mL
..MSV_4BFB_NEAT_00001	01/31/21		Chem Service, Lot 8995800		(Purchased Reagent)		BFB	1 g/g
MSV_V_BFB_00003							1,2-Dichloroethene, Total	
							1,3-Dichloropropene, Total	
							Tentatively Identified Compound	
							Xylenes, Total	
.MSV VBFB_STK_00004	01/22/21	07/22/20	Methanol, Lot DX212	10 mL	MSV_VBFB_STK_00004	0.117 mL	BFB	50.0245 ug/mL
..MSV_4BFB_NEAT_00002	01/31/21		Chem Service, Lot 8601300		MSV_4BFB_NEAT_00002	1.0689 g	BFB	106890 ug/mL
					(Purchased Reagent)		BFB	1 g/g

Reagent

MSV_4BFB_NEAT_00002

CERTIFICATE OF ANALYSIS

4-Bromofluorobenzene

CATALOG NUMBER N-10809-1G ✓✓
LOT NUMBER 8601300 ✓✓
DATE CERTIFIED 01/06/16 ✓
EXPIRATION DATE 01/31/21 ✓✓
CAS NUMBER 460-00-4
MOLECULAR FORMULA C₆H₄BrF
MOLECULAR WEIGHT 175.00
STORAGE Store in a cool dry place.
HANDLING See Safety Data Sheet
INTENDED USE For laboratory use only.
ISO GUIDE 34 CERTIFIED []

Analytical Test	Value
FT-IR SPECTROSCOPY	CONFORMS TO STRUCTURE
PHYSICAL APPEARANCE	COLORLESS LIQUID ✓✓
% PURITY (GC/FID)	99.5 ✓✓

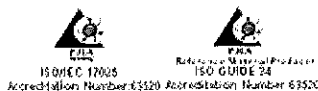
Chem Service, Inc. guarantees the purity to be +/- 0.5% deviation prior to the expiration date shown on the label and exclusive of any customer contamination.

Certified By:

Mary Beth O'Donnell

Mary Beth O'Donnell
CSM/TC

Chem Service, Inc. is accredited to ISO Guide 34:2009, ISO/IEC 17025:2005 and certified to ISO 9001:2008

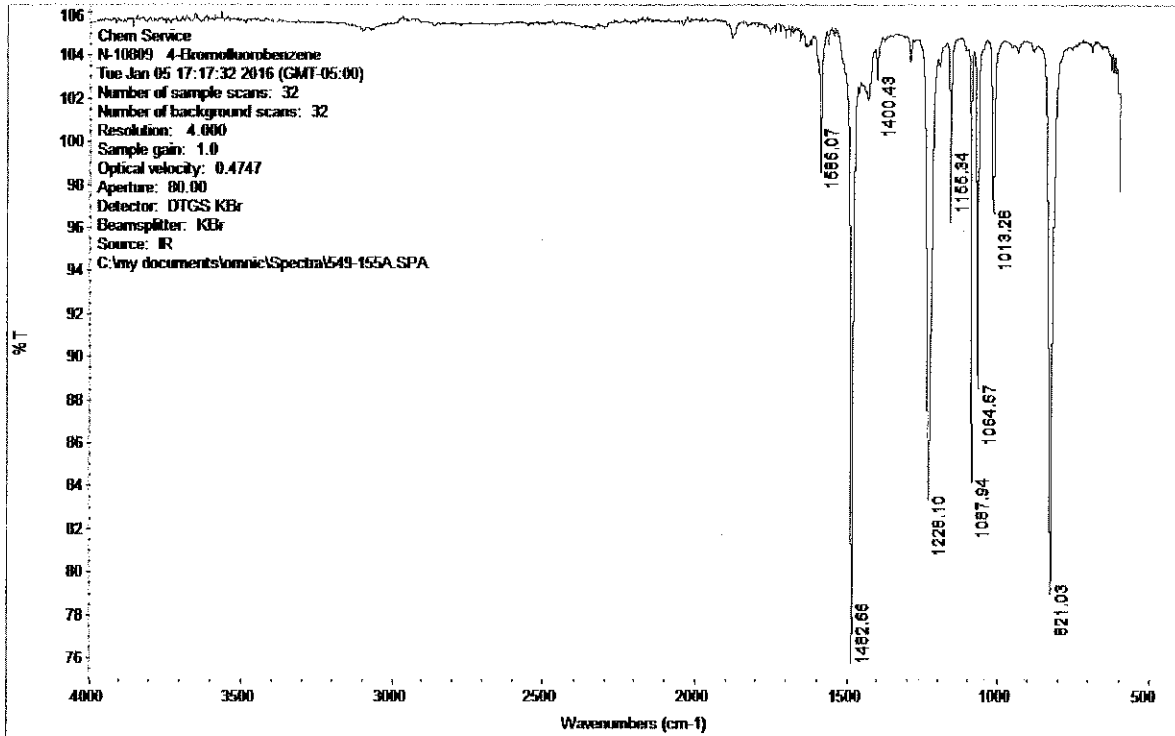


660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

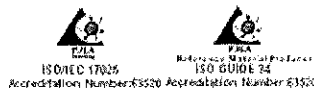
CERTIFICATE OF ANALYSIS

Analysis Method: FTIR- Spectroscopy

Catalog Number: N-10809-1G
Description: 4-Bromofluorobenzene
Lot Number: 8601300
Expiration Date: 01/31/21



Chem Service, Inc. is accredited to ISO Guide 34:2009, ISO/IEC 17025:2005 and certified to ISO 9001:2008





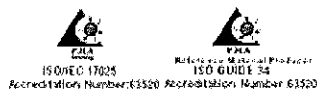
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1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Analysis Method:

Catalog Number:	N-10809-1G
Description:	4-Bromofluorobenzene
Lot Number:	8601300
Expiration Date:	01/31/21

Chem Service, Inc. is accredited to ISO Guide 34:2009, ISO/IEC 17025:2005 and certified to ISO 9001:2008

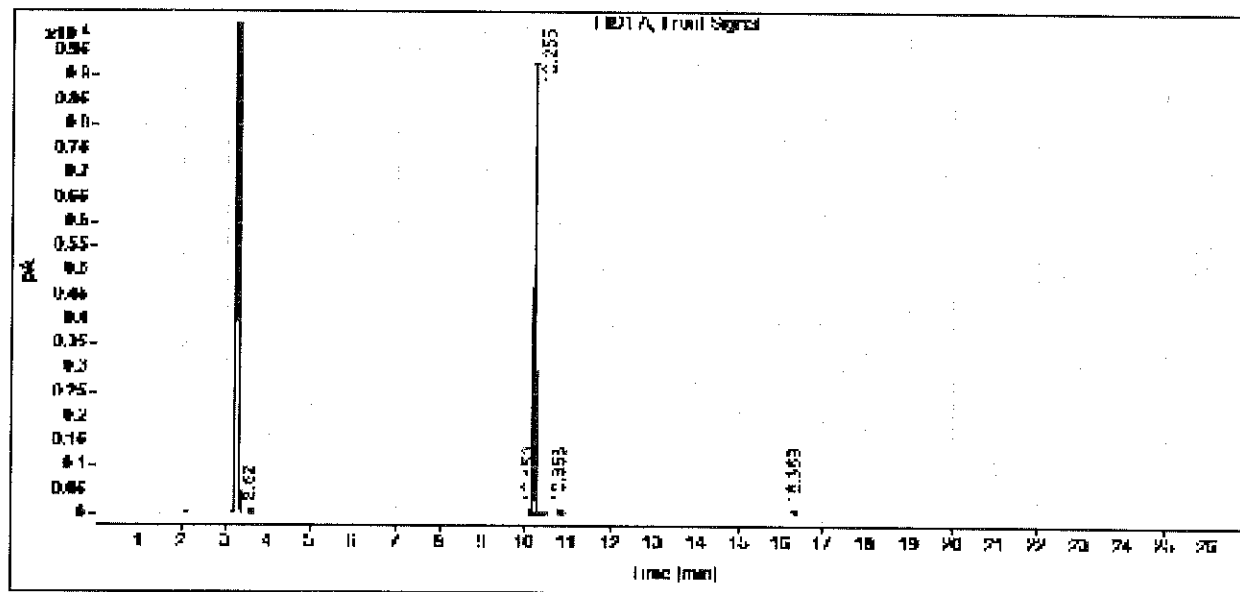


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info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Gas Chromatography / Flame Ionization Detector (GC/FID)

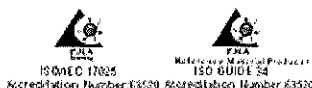
Data file: C:\CHEM321\DATA\1215\SIG1007347.D
Sample name: N-10809/CH2CL2
Instrument: GC 1 **Sample type:** Sample
Injection date: 1/5/2016 4:20:37 PM **Location:** Vial 6
Acq. method: MIX1.M **Injection volume:** 1.0uL
Column name: DB-824 (30m x 0.53mm x 3.0um)



Signal: FID1 A, Front Signal

RT [min]	Type	Width [min]	Area	Height	Area%
3.620	BB	0.0403	3.8748	1.1723	0.0145
10.156	BV	0.0195	0.7424	0.4889	0.0028
10.255	VB S	0.0437	26687.8328	9172.4229	99.7795
10.853	BB	0.0583	54.3345	12.3602	0.2031
16.369	BB	0.0034	0.0123	0.0605	0.0000
Sum			26748.5988		

Chem Service, Inc. is accredited to ISO Guide 34:2009, ISO/IEC 17025:2005 and certified to ISO 9001:2008



Reagent

MSV_502QGas_00060



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 55669.SEC **Lot No.:** A0155823
Description : Custom 502.2 "Q" Gas Mix
Custom 502.2 "Q" Gas Mix 2,000µg/mL, P&T Methanol, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : January 31, 2027 **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)	2,016.5 µg/mL	+/-	19.3550	µg/mL	Gravimetric
	CAS # 75-71-8.SEC (Lot 26165)		+/-	114.1077	µg/mL	Unstressed
	Purity 99%		+/-	116.7296	µg/mL	Stressed
2	Chloromethane (methyl chloride)	2,005.6 µg/mL	+/-	18.7428	µg/mL	Gravimetric
	CAS # 74-87-3.SEC (Lot 18343)		+/-	113.4037	µg/mL	Unstressed
	Purity 99%		+/-	116.0133	µg/mL	Stressed
3	Vinyl chloride	2,004.4 µg/mL	+/-	15.4000	µg/mL	Gravimetric
	CAS # 75-01-4.SEC (Lot MKBK6872V)		+/-	112.8325	µg/mL	Unstressed
	Purity 99%		+/-	115.4519	µg/mL	Stressed
4	Bromomethane (methyl bromide)	2,022.0 µg/mL	+/-	18.0735	µg/mL	Gravimetric
	CAS # 74-83-9.SEC (Lot Q119-46)		+/-	114.2018	µg/mL	Unstressed
	Purity 99%		+/-	116.8358	µg/mL	Stressed
5	Chloroethane (ethyl chloride)	2,013.1 µg/mL	+/-	20.5181	µg/mL	Gravimetric
	CAS # 75-00-3.SEC (Lot 00004202)		+/-	114.1209	µg/mL	Unstressed
	Purity 99%		+/-	116.7336	µg/mL	Stressed
6	Trichlorofluoromethane (CFC-11)	2,001.1 µg/mL	+/-	17.4531	µg/mL	Gravimetric
	CAS # 75-69-4.SEC (Lot 253600)		+/-	112.9531	µg/mL	Unstressed
	Purity 99%		+/-	115.5613	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)

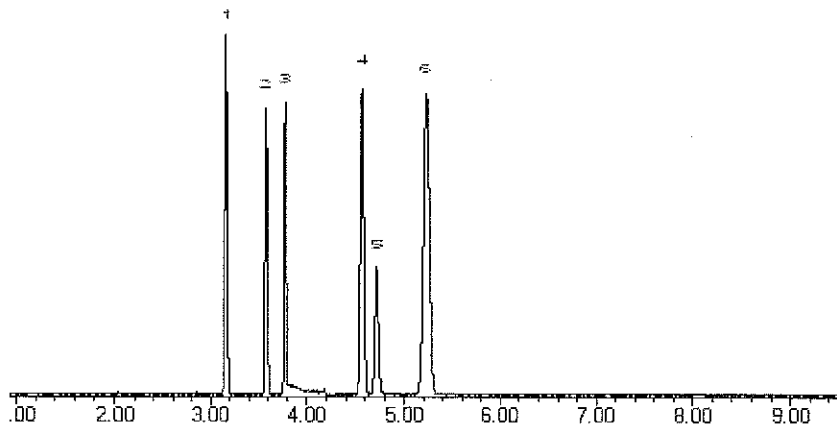
Carrier Gas:
helium-constant flow 2.0 mL/min.

Temp. Program:
40°C (hold 6 min.) to 100°C
@ 6°C/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: 16-Dec-2019 **Balance:** 1127510105


Amanda Miller - Operations Tech-ARM QC

Date Passed: 27-Dec-2019

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_502QGas_00089



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 55669.SEC **Lot No.:** A0155823
Description : Custom 502.2 "Q" Gas Mix
Custom 502.2 "Q" Gas Mix 2,000µg/mL, P&T Methanol, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : January 31, 2027 **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)	2,016.5 µg/mL	+/-	19.3550	µg/mL	Gravimetric
	CAS # 75-71-8.SEC (Lot 26165)		+/-	114.1077	µg/mL	Unstressed
	Purity 99%		+/-	116.7296	µg/mL	Stressed
2	Chloromethane (methyl chloride)	2,005.6 µg/mL	+/-	18.7428	µg/mL	Gravimetric
	CAS # 74-87-3.SEC (Lot 18343)		+/-	113.4037	µg/mL	Unstressed
	Purity 99%		+/-	116.0133	µg/mL	Stressed
3	Vinyl chloride	2,004.4 µg/mL	+/-	15.4000	µg/mL	Gravimetric
	CAS # 75-01-4.SEC (Lot MKBK6872V)		+/-	112.8325	µg/mL	Unstressed
	Purity 99%		+/-	115.4519	µg/mL	Stressed
4	Bromomethane (methyl bromide)	2,022.0 µg/mL	+/-	18.0735	µg/mL	Gravimetric
	CAS # 74-83-9.SEC (Lot Q119-46)		+/-	114.2018	µg/mL	Unstressed
	Purity 99%		+/-	116.8358	µg/mL	Stressed
5	Chloroethane (ethyl chloride)	2,013.1 µg/mL	+/-	20.5181	µg/mL	Gravimetric
	CAS # 75-00-3.SEC (Lot 00004202)		+/-	114.1209	µg/mL	Unstressed
	Purity 99%		+/-	116.7336	µg/mL	Stressed
6	Trichlorofluoromethane (CFC-11)	2,001.1 µg/mL	+/-	17.4531	µg/mL	Gravimetric
	CAS # 75-69-4.SEC (Lot 253600)		+/-	112.9531	µg/mL	Unstressed
	Purity 99%		+/-	115.5613	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)

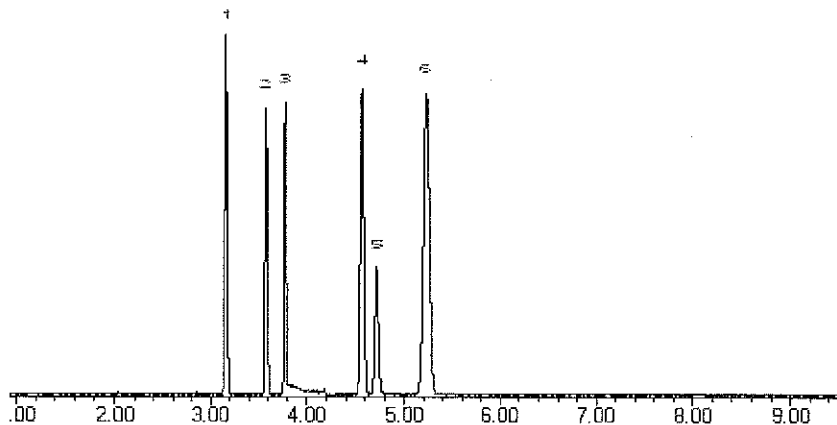
Carrier Gas:
helium-constant flow 2.0 mL/min.

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

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



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

Lane Kibe
Lane Kibe - Mix Technician

Date Mixed: 16-Dec-2019 **Balance:** 1127510105

Amanda Miller
Amanda Miller - Operations Tech-ARM QC

Date Passed: 27-Dec-2019

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_502QGas_00090



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 55669.SEC **Lot No.:** A0155823
Description : Custom 502.2 "Q" Gas Mix
Custom 502.2 "Q" Gas Mix 2,000µg/mL, P&T Methanol, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : January 31, 2027 **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)	2,016.5 µg/mL	+/-	19.3550	µg/mL	Gravimetric
	CAS # 75-71-8.SEC (Lot 26165)		+/-	114.1077	µg/mL	Unstressed
	Purity 99%		+/-	116.7296	µg/mL	Stressed
2	Chloromethane (methyl chloride)	2,005.6 µg/mL	+/-	18.7428	µg/mL	Gravimetric
	CAS # 74-87-3.SEC (Lot 18343)		+/-	113.4037	µg/mL	Unstressed
	Purity 99%		+/-	116.0133	µg/mL	Stressed
3	Vinyl chloride	2,004.4 µg/mL	+/-	15.4000	µg/mL	Gravimetric
	CAS # 75-01-4.SEC (Lot MKBK6872V)		+/-	112.8325	µg/mL	Unstressed
	Purity 99%		+/-	115.4519	µg/mL	Stressed
4	Bromomethane (methyl bromide)	2,022.0 µg/mL	+/-	18.0735	µg/mL	Gravimetric
	CAS # 74-83-9.SEC (Lot Q119-46)		+/-	114.2018	µg/mL	Unstressed
	Purity 99%		+/-	116.8358	µg/mL	Stressed
5	Chloroethane (ethyl chloride)	2,013.1 µg/mL	+/-	20.5181	µg/mL	Gravimetric
	CAS # 75-00-3.SEC (Lot 00004202)		+/-	114.1209	µg/mL	Unstressed
	Purity 99%		+/-	116.7336	µg/mL	Stressed
6	Trichlorofluoromethane (CFC-11)	2,001.1 µg/mL	+/-	17.4531	µg/mL	Gravimetric
	CAS # 75-69-4.SEC (Lot 253600)		+/-	112.9531	µg/mL	Unstressed
	Purity 99%		+/-	115.5613	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)

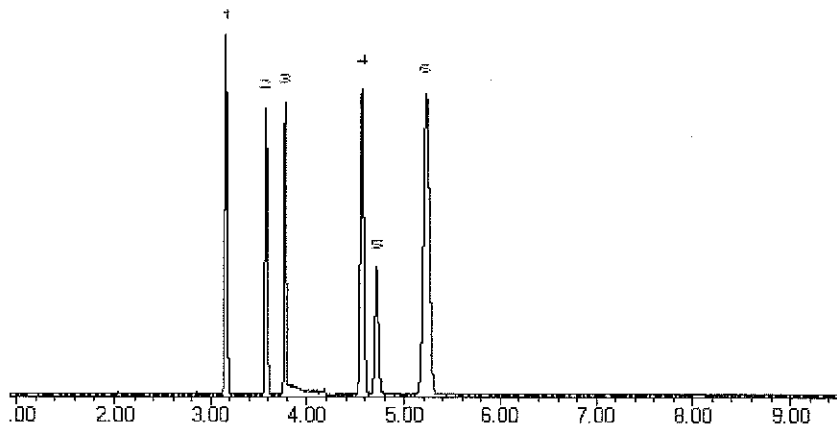
Carrier Gas:
helium-constant flow 2.0 mL/min.

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

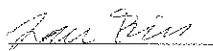
Inj. Temp:
200°C

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: 16-Dec-2019 **Balance:** 1127510105


Amanda Miller - Operations Tech-ARM QC

Date Passed: 27-Dec-2019

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_8260_SS_00120



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 55671 **Lot No.:** A0146938
Description : 8260A Surrogate Mix
8260A Surrogate Mix 2,500µg/mL, P&T Methanol, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : March 31, 2022 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Dibromofluoromethane	2,505.2 µg/mL	+/-	14.5653	µg/mL Gravimetric
	CAS # 1868-53-7 (Lot 0012016)		+/-	140.4622	µg/mL Unstressed
	Purity 99%		+/-	143.7488	µg/mL Stressed
2	1,2-Dichloroethane-d4	2,517.2 µg/mL	+/-	14.6350	µg/mL Gravimetric
	CAS # 17060-07-0 (Lot PR-26748)		+/-	141.1350	µg/mL Unstressed
	Purity 99%		+/-	144.4374	µg/mL Stressed
3	Toluene-d8	2,507.7 µg/mL	+/-	14.5798	µg/mL Gravimetric
	CAS # 2037-26-5 (Lot PR-27311)		+/-	140.6024	µg/mL Unstressed
	Purity 99%		+/-	143.8923	µg/mL Stressed
4	1-Bromo-4-fluorobenzene (BFB)	2,507.7 µg/mL	+/-	14.5798	µg/mL Gravimetric
	CAS # 460-00-4 (Lot 20401KO)		+/-	140.6024	µg/mL Unstressed
	Purity 99%		+/-	143.8923	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:

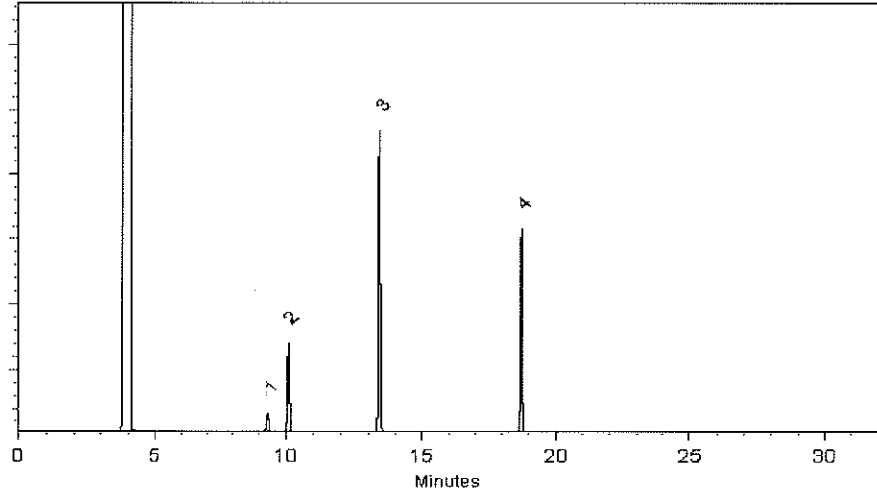
200°C

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.

Maggie Wang

Maggie Wang - Operations Technician I

Date Mixed: 12-Mar-2019

Balance: 1128342314

Jennifer J Pollino

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 15-Mar-2019

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_BCE_00010



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 30469 Lot No.: A0149919

Description : 1-Bromo-2-chloroethane Standard
1-Bromo-2-Chloroethane Std, 2000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL Pkg Amt: > 1 mL

Expiration Date : June 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-2-chloroethane CAS # 107-04-0 Purity 99% (Lot BCBQ8054V)	2,006.0 µg/mL	+/- 11.7723	µg/mL	Gravimetric
			+/- 112.4858	µg/mL	Unstressed
			+/- 115.1173	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:

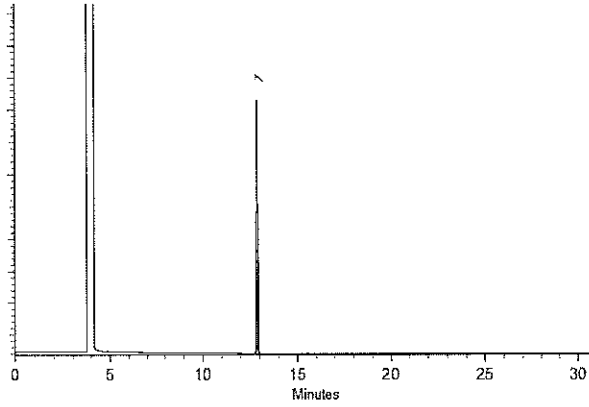
200°C

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.

Jessica McClenahan

Jessica McClenahan - Operations Technician I

Date Mixed: 07-Jun-2019

Balance: B251644995

Judith Albertson
Judith Albertson - Operations Tech-ARM QC

Date Passed: 10-Jun-2019

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_Cus826_IS_00076



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 558267 **Lot No.:** A0138205
Description : Custom 8260A IS Mix
Custom 8260A IS Mix 2,500-12,500µg/mL, P&T Methanol, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : May 31, 2021 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	tert-Butyl Alcohol-d10	12,613.8 µg/mL	+/-	73.3376	µg/mL	Gravimetric
	CAS # 53001-22-2 (Lot PR-29485)		+/-	270.0624	µg/mL	Unstressed
	Purity 98%		+/-	277.9136	µg/mL	Stressed
2	Fluorobenzene	2,517.8 µg/mL	+/-	14.6387	µg/mL	Gravimetric
	CAS # 462-06-6 (Lot BCBK8171V)		+/-	53.9064	µg/mL	Unstressed
	Purity 99%		+/-	55.4736	µg/mL	Stressed
3	Chlorobenzene-d5	2,518.8 µg/mL	+/-	14.6445	µg/mL	Gravimetric
	CAS # 3114-55-4 (Lot PR-22736)		+/-	53.9278	µg/mL	Unstressed
	Purity 99%		+/-	55.4956	µg/mL	Stressed
4	1,4-Dichlorobenzene-d4	2,511.0 µg/mL	+/-	14.5992	µg/mL	Gravimetric
	CAS # 3855-82-1 (Lot PR-18488)		+/-	53.7608	µg/mL	Unstressed
	Purity 99%		+/-	55.3237	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)

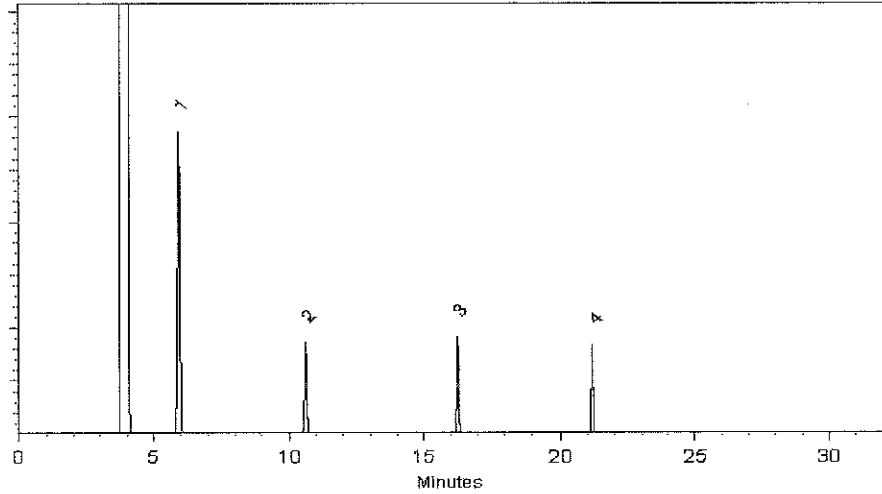
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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.

Tom Suckar - Mix Technician

Date Mixed: 21-May-2018 Balance: 1128342314

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 23-May-2018

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
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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

MSV_EtBr_Neat_00001



660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Ethyl bromide

CATALOG NUMBER N-11888-1G
LOT NUMBER 7832000
DATE CERTIFIED 12/01/17
EXPIRATION DATE 12/31/20
CAS NUMBER 74-96-4
MOLECULAR FORMULA C₂H₅Br
MOLECULAR WEIGHT 108.97
STORAGE Store in a cool dry place.
HANDLING See Safety Data Sheet
INTENDED USE For laboratory use only.

Analytical Test	Value
% PURITY (GC/FID)	99.5

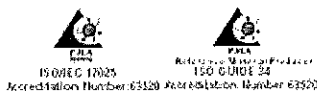
Chem Service, Inc. guarantees the purity to be +/- 0.5% deviation prior to the expiration date shown on the label and exclusive of any customer contamination.

Certified By:

Mary Beth O'Donnell

Mary Beth O'Donnell
CSM/TC

Chem Service, Inc. is accredited to ISO Guide 34:2009, ISO/IEC 17025:2005 and certified to ISO 9001:2008



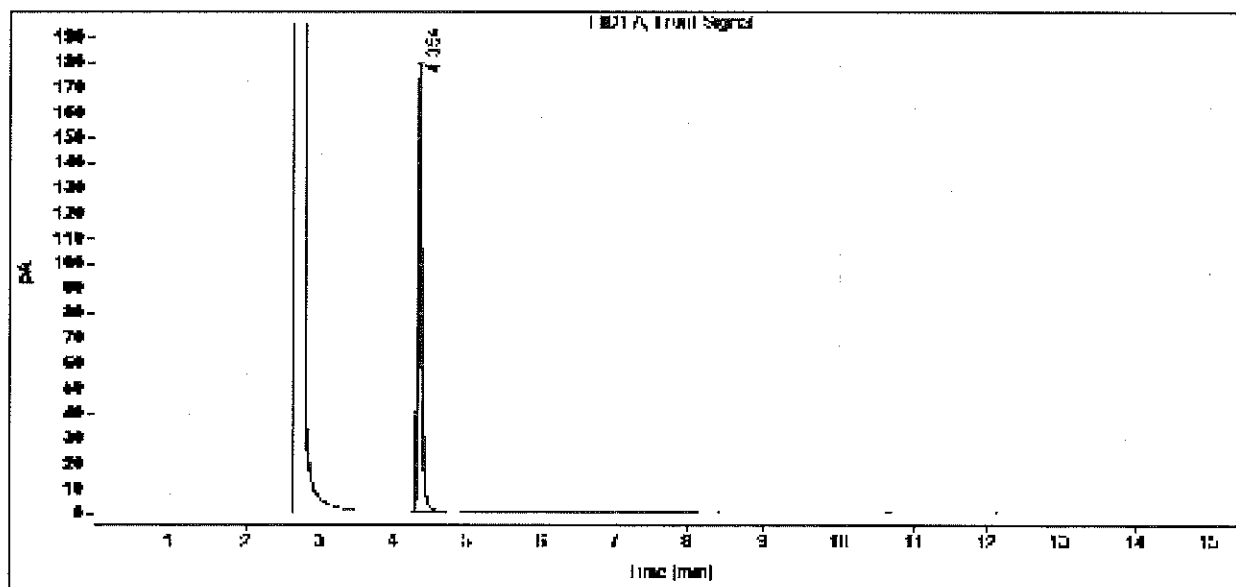
COA Form
Revision 3 (3/2015)

660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Gas Chromatography / Flame Ionization Detector (GC/FID)

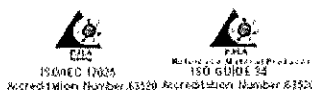
Data file: C:\CHEM32\1\DATA\2017 DATA\1117\SIG1009529.D
Sample name: Bromoethane
Instrument: GC 1
Injection date: 12/1/2017 9:30:43 AM
Acq. method: MIX1.M
Column name: DB-624 (30m x 0.53mm x 3.0um)
Sample type: Sample
Location: Vial 21
Injection volume: 1.0uL



Signal: FID1 A, Front Signal

RT [min]	Type	Width [min]	Area	Height	Area%
4.354	BB	0.0547	648.4102	176.9945	100.0000
Sum			648.4102		

Chem Service, Inc. is accredited to ISO Guide 34:2009, ISO/IEC 17025:2005 and certified to ISO 9001:2008



Reagent

MSV_Q#1B_00038



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 569936-1.sec **Lot No.:** A0148625
Description : Custom Revised Q #1B Standard
Custom Revised Q #1B Standard 1,000µg/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	1,1-Dichloroethene	1,005.5 µg/mL	+/-	7.1750	µg/mL	Gravimetric	
	CAS # 75-35-4.SEC (Lot 5111300)		+/-	56.5279	µg/mL	Unstressed	
	Purity 99%		+/-	57.8435	µg/mL	Stressed	
2	Methylene chloride (dichloromethane)	1,004.5 µg/mL	+/-	7.1682	µg/mL	Gravimetric	
	CAS # 75-09-2.SEC (Lot FGM02)		+/-	56.4745	µg/mL	Unstressed	
	Purity 99%		+/-	57.7888	µg/mL	Stressed	
3	trans-1,2-Dichloroethene	1,002.8 µg/mL	+/-	7.1558	µg/mL	Gravimetric	
	CAS # 156-60-5.SEC (Lot TSSUB)		+/-	56.3767	µg/mL	Unstressed	
	Purity 97%		+/-	57.6888	µg/mL	Stressed	
4	1,1-Dichloroethane	1,006.8 µg/mL	+/-	7.1846	µg/mL	Gravimetric	
	CAS # 75-34-3.SEC (Lot 5379000)		+/-	56.6038	µg/mL	Unstressed	
	Purity 99%		+/-	57.9211	µg/mL	Stressed	
5	2,2-Dichloropropane	1,003.2 µg/mL	+/-	7.7659	µg/mL	Gravimetric	
	CAS # 594-20-7.SEC (Lot I7E8E)		+/-	56.4820	µg/mL	Unstressed	
	Purity 98%		+/-	57.7928	µg/mL	Stressed	
6	cis-1,2-Dichloroethene	1,001.2 µg/mL	+/-	7.7507	µg/mL	Gravimetric	
	CAS # 156-59-2.SEC (Lot HGC01-BLKT)		+/-	56.3716	µg/mL	Unstressed	
	Purity 98%		+/-	57.6799	µg/mL	Stressed	
7	Chloroform	1,004.5 µg/mL	+/-	7.1684	µg/mL	Gravimetric	
	CAS # 67-66-3.SEC (Lot 1297547)		+/-	56.4759	µg/mL	Unstressed	
	Purity 99%		+/-	57.7903	µg/mL	Stressed	

8	1,1,1-trichloroethane		1,000.9	µg/mL	+/-	7.1427	µg/mL	Gravimetric
	CAS # 71-55-6 *	(Lot B15W12061)			+/-	56.2735	µg/mL	Unstressed
	Purity 99%				+/-	57.5832	µg/mL	Stressed
9	1,1-Dichloropropene		1,005.1	µg/mL	+/-	7.7804	µg/mL	Gravimetric
	CAS # 563-58-6.SEC	(Lot 4672600)			+/-	56.5876	µg/mL	Unstressed
	Purity 96%				+/-	57.9008	µg/mL	Stressed
10	Carbon tetrachloride		1,006.6	µg/mL	+/-	7.1828	µg/mL	Gravimetric
	CAS # 56-23-5.SEC	(Lot 11466)			+/-	56.5897	µg/mL	Unstressed
	Purity 99%				+/-	57.9068	µg/mL	Stressed
11	1,2-Dichloroethane		1,003.3	µg/mL	+/-	7.1598	µg/mL	Gravimetric
	CAS # 107-06-2.SEC	(Lot FO6PK)			+/-	56.4084	µg/mL	Unstressed
	Purity 99%				+/-	57.7212	µg/mL	Stressed
12	Benzene		1,003.5	µg/mL	+/-	7.7683	µg/mL	Gravimetric
	CAS # 71-43-2.SEC	(Lot B28Y008)			+/-	56.4996	µg/mL	Unstressed
	Purity 99%				+/-	57.8109	µg/mL	Stressed
13	Trichloroethene		1,005.6	µg/mL	+/-	7.1760	µg/mL	Gravimetric
	CAS # 79-01-6.SEC	(Lot H04X050)			+/-	56.5363	µg/mL	Unstressed
	Purity 99%				+/-	57.8521	µg/mL	Stressed
14	1,2-Dichloropropane		1,004.3	µg/mL	+/-	7.1666	µg/mL	Gravimetric
	CAS # 78-87-5.SEC	(Lot OGG01)			+/-	56.4618	µg/mL	Unstressed
	Purity 99%				+/-	57.7759	µg/mL	Stressed
15	Bromodichloromethane		1,006.2	µg/mL	+/-	7.1801	µg/mL	Gravimetric
	CAS # 75-27-4.SEC	(Lot 10171168)			+/-	56.5686	µg/mL	Unstressed
	Purity 99%				+/-	57.8852	µg/mL	Stressed
16	Dibromomethane		1,006.1	µg/mL	+/-	7.7881	µg/mL	Gravimetric
	CAS # 74-95-3.SEC	(Lot FGI01-OICH)			+/-	56.6438	µg/mL	Unstressed
	Purity 99%				+/-	57.9584	µg/mL	Stressed
17	cis-1,3-Dichloropropene		1,001.9	µg/mL	+/-	7.1498	µg/mL	Gravimetric
	CAS # 10061-01-5.SEC	(Lot 4870A)			+/-	56.3297	µg/mL	Unstressed
	Purity 99%				+/-	57.6407	µg/mL	Stressed
18	Toluene		1,004.8	µg/mL	+/-	7.7782	µg/mL	Gravimetric
	CAS # 108-88-3.SEC	(Lot YND2B-BD)			+/-	56.5717	µg/mL	Unstressed
	Purity 99%				+/-	57.8846	µg/mL	Stressed
19	trans-1,3-Dichloropropene		1,002.6	µg/mL	+/-	7.1548	µg/mL	Gravimetric
	CAS # 10061-02-6.SEC	(Lot ZDMSL)			+/-	56.3691	µg/mL	Unstressed
	Purity 99%				+/-	57.6810	µg/mL	Stressed
20	1,1,2-Trichloroethane		1,007.8	µg/mL	+/-	7.1920	µg/mL	Gravimetric
	CAS # 79-00-5.SEC	(Lot 3440900)			+/-	56.6618	µg/mL	Unstressed
	Purity 98%				+/-	57.9805	µg/mL	Stressed
21	1,3-Dichloropropane		1,003.8	µg/mL	+/-	7.7708	µg/mL	Gravimetric
	CAS # 142-28-9.SEC	(Lot AGN01-EFPC)			+/-	56.5177	µg/mL	Unstressed
	Purity 99%				+/-	57.8293	µg/mL	Stressed
22	Tetrachloroethene		1,004.1	µg/mL	+/-	7.1652	µg/mL	Gravimetric
	CAS # 127-18-4.SEC	(Lot F09W014)			+/-	56.4506	µg/mL	Unstressed
	Purity 99%				+/-	57.7644	µg/mL	Stressed
23	Dibromochloromethane		1,009.5	µg/mL	+/-	7.2035	µg/mL	Gravimetric
	CAS # 124-48-1.SEC	(Lot 10181507)			+/-	56.7530	µg/mL	Unstressed
	Purity 97%				+/-	58.0739	µg/mL	Stressed

24	1,2-Dibromoethane (EDB)		1,007.8	µg/mL	+/-	7.8017	µg/mL	Gravimetric
	CAS # 106-93-4.SEC	(Lot 3505900)			+/-	56.7429	µg/mL	Unstressed
	Purity 99%				+/-	58.0598	µg/mL	Stressed
25	1-Chlorohexane		1,001.0	µg/mL	+/-	5.8744	µg/mL	Gravimetric
	CAS # 544-10-5.SEC	(Lot 8171700)			+/-	56.1308	µg/mL	Unstressed
	Purity 99%				+/-	57.4439	µg/mL	Stressed
26	Chlorobenzene		1,004.8	µg/mL	+/-	7.1703	µg/mL	Gravimetric
	CAS # 108-90-7.SEC	(Lot 1161936)			+/-	56.4913	µg/mL	Unstressed
	Purity 99%				+/-	57.8061	µg/mL	Stressed
27	1,1,1,2-Tetrachloroethane		1,003.4	µg/mL	+/-	7.7677	µg/mL	Gravimetric
	CAS # 630-20-6.SEC	(Lot GC01)			+/-	56.4951	µg/mL	Unstressed
	Purity 99%				+/-	57.8063	µg/mL	Stressed
28	Ethylbenzene		1,003.4	µg/mL	+/-	7.7677	µg/mL	Gravimetric
	CAS # 100-41-4.SEC	(Lot PI4SE)			+/-	56.4951	µg/mL	Unstressed
	Purity 99%				+/-	57.8063	µg/mL	Stressed
29	m-Xylene		1,005.9	µg/mL	+/-	7.7869	µg/mL	Gravimetric
	CAS # 108-38-3.SEC	(Lot OUKMG-GB)			+/-	56.6348	µg/mL	Unstressed
	Purity 99%				+/-	57.9491	µg/mL	Stressed
30	p-Xylene		1,008.3	µg/mL	+/-	7.8054	µg/mL	Gravimetric
	CAS # 106-42-3.SEC	(Lot GM01)			+/-	56.7699	µg/mL	Unstressed
	Purity 99%				+/-	58.0874	µg/mL	Stressed
31	o-Xylene		1,005.8	µg/mL	+/-	7.7862	µg/mL	Gravimetric
	CAS # 95-47-6.SEC	(Lot FGL01)			+/-	56.6303	µg/mL	Unstressed
	Purity 99%				+/-	57.9445	µg/mL	Stressed
32	Styrene		1,001.1	µg/mL	+/-	7.7497	µg/mL	Gravimetric
	CAS # 100-42-5.SEC	(Lot QGQ7F)			+/-	56.3645	µg/mL	Unstressed
	Purity 99%				+/-	57.6726	µg/mL	Stressed
33	Isopropylbenzene (cumene)		1,004.3	µg/mL	+/-	7.7745	µg/mL	Gravimetric
	CAS # 98-82-8.SEC	(Lot WVREC)			+/-	56.5447	µg/mL	Unstressed
	Purity 99%				+/-	57.8570	µg/mL	Stressed
34	Bromoform		1,005.7	µg/mL	+/-	7.1764	µg/mL	Gravimetric
	CAS # 75-25-2.SEC	(Lot 5197400)			+/-	56.5392	µg/mL	Unstressed
	Purity 98%				+/-	57.8551	µg/mL	Stressed
35	1,1,2,2-Tetrachloroethane		1,006.8	µg/mL	+/-	7.1848	µg/mL	Gravimetric
	CAS # 79-34-5.SEC	(Lot CFA4D-AQ)			+/-	56.6052	µg/mL	Unstressed
	Purity 99%				+/-	57.9226	µg/mL	Stressed
36	1,2,3-Trichloropropane		1,002.4	µg/mL	+/-	7.7598	µg/mL	Gravimetric
	CAS # 96-18-4.SEC	(Lot OGI01)			+/-	56.4378	µg/mL	Unstressed
	Purity 98%				+/-	57.7477	µg/mL	Stressed
37	n-Propylbenzene		1,007.8	µg/mL	+/-	7.8011	µg/mL	Gravimetric
	CAS # 103-65-1.SEC	(Lot T2HFC)			+/-	56.7384	µg/mL	Unstressed
	Purity 99%				+/-	58.0551	µg/mL	Stressed
38	Bromobenzene		1,004.8	µg/mL	+/-	7.7782	µg/mL	Gravimetric
	CAS # 108-86-1.SEC	(Lot 2FUHG-EM)			+/-	56.5717	µg/mL	Unstressed
	Purity 99%				+/-	57.8846	µg/mL	Stressed
39	1,3,5-Trichlorobenzene		1,002.0	µg/mL	+/-	5.8803	µg/mL	Gravimetric
	CAS # 108-70-3.SEC	(Lot I28U021)			+/-	56.1868	µg/mL	Unstressed
	Purity 99%				+/-	57.5013	µg/mL	Stressed

40	2-Chlorotoluene CAS # 95-49-8.SEC Purity 99%	(Lot SW8QG-AO)	1,008.1	µg/mL	+/-	7.8036 56.7564 58.0736	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	4-Chlorotoluene CAS # 106-43-4.SEC Purity 99%	(Lot P4XHJ-AO)	1,002.1	µg/mL	+/-	7.7571 56.4186 57.7279	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	tert-Butylbenzene CAS # 98-06-6.SEC Purity 99%	(Lot D6OHC)	1,004.2	µg/mL	+/-	7.7732 56.5357 57.8478	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	1,2,4-Trimethylbenzene CAS # 95-63-6.SEC Purity 99%	(Lot SC7LO-QA)	1,009.5	µg/mL	+/-	7.8147 56.8374 58.1565	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	sec-Butylbenzene CAS # 135-98-8.SEC Purity 99%	(Lot O4HRF)	1,006.9	µg/mL	+/-	7.7943 56.6888 58.0044	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	4-Isopropyltoluene (p-cymene) CAS # 99-87-6.SEC Purity 96%	(Lot 1195000)	1,000.0	µg/mL	+/-	7.7410 56.3015 57.6081	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	1,3-Dichlorobenzene CAS # 541-73-1.SEC Purity 99%	(Lot FMDFD)	1,003.3	µg/mL	+/-	7.1593 56.4042 57.7169	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	1,4-Dichlorobenzene CAS # 106-46-7.SEC Purity 99%	(Lot 4Y5DC)	1,008.5	µg/mL	+/-	7.1967 56.6994 58.0189	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	n-Butylbenzene CAS # 104-51-8.SEC Purity 99%	(Lot MMPGA)	1,005.4	µg/mL	+/-	7.7825 56.6032 57.9169	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	1,2-Dichlorobenzene CAS # 95-50-1.SEC Purity 99%	(Lot 4NRGF-OT)	1,006.8	µg/mL	+/-	7.1842 56.6010 57.9183	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	1,2-Dibromo-3-chloropropane CAS # 96-12-8.SEC Purity 98%	(Lot LC00408V)	1,002.7	µg/mL	+/-	7.7616 56.4511 57.7612	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	1,3,5-Trimethylbenzene CAS # 108-67-8.SEC Purity 99%	(Lot FGH02-CMLN)	1,002.2	µg/mL	+/-	7.7584 56.4276 57.7371	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	1,2,4-Trichlorobenzene CAS # 120-82-1.SEC Purity 99%	(Lot 3LYYC)	1,007.2	µg/mL	+/-	7.7968 56.7068 58.0229	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	Hexachlorobutadiene CAS # 87-68-3.SEC Purity 97%	(Lot 5526800)	1,005.8	µg/mL	+/-	7.7857 56.6265 57.9407	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	Naphthalene CAS # 91-20-3.SEC Purity 99%	(Lot SKZ5N)	1,001.8	µg/mL	+/-	7.7553 56.4050 57.7141	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	1,2,3-Trichlorobenzene CAS # 87-61-6.SEC Purity 98%	(Lot A0043055)	1,005.9	µg/mL	+/-	7.7865 56.6321 57.9464	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

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

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

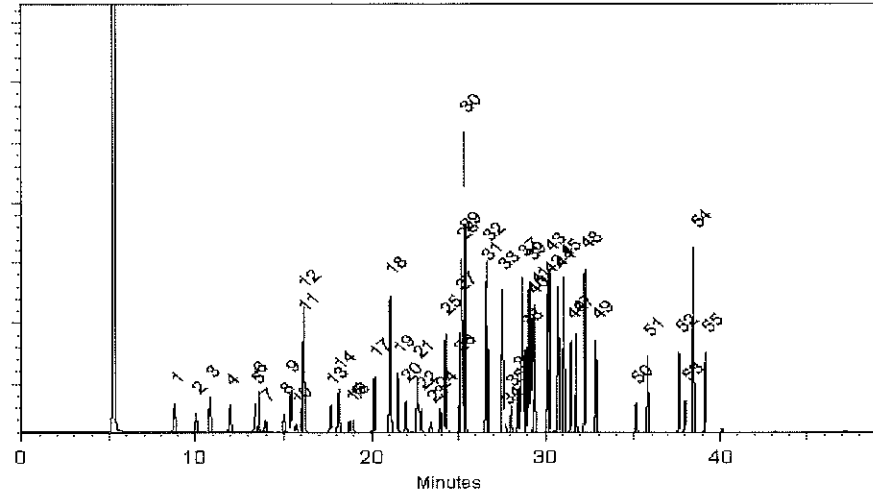
Carrier Gas:
hydrogen-constant pressure 8.0 psi.

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:
FID



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

Michael Mage

Date Mixed: 26-Apr-2019 Balance: 1127510105

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

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_Q#1B_00052



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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 569936-1.sec **Lot No.:** A0148625
Description : Custom Revised Q #1B Standard
Custom Revised Q #1B Standard 1,000µg/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	1,1-Dichloroethene	1,005.5 µg/mL	+/-	7.1750	µg/mL	Gravimetric
	CAS # 75-35-4.SEC (Lot 5111300)		+/-	56.5279	µg/mL	Unstressed
	Purity 99%		+/-	57.8435	µg/mL	Stressed
2	Methylene chloride (dichloromethane)	1,004.5 µg/mL	+/-	7.1682	µg/mL	Gravimetric
	CAS # 75-09-2.SEC (Lot FGM02)		+/-	56.4745	µg/mL	Unstressed
	Purity 99%		+/-	57.7888	µg/mL	Stressed
3	trans-1,2-Dichloroethene	1,002.8 µg/mL	+/-	7.1558	µg/mL	Gravimetric
	CAS # 156-60-5.SEC (Lot TSSUB)		+/-	56.3767	µg/mL	Unstressed
	Purity 97%		+/-	57.6888	µg/mL	Stressed
4	1,1-Dichloroethane	1,006.8 µg/mL	+/-	7.1846	µg/mL	Gravimetric
	CAS # 75-34-3.SEC (Lot 5379000)		+/-	56.6038	µg/mL	Unstressed
	Purity 99%		+/-	57.9211	µg/mL	Stressed
5	2,2-Dichloropropane	1,003.2 µg/mL	+/-	7.7659	µg/mL	Gravimetric
	CAS # 594-20-7.SEC (Lot I7E8E)		+/-	56.4820	µg/mL	Unstressed
	Purity 98%		+/-	57.7928	µg/mL	Stressed
6	cis-1,2-Dichloroethene	1,001.2 µg/mL	+/-	7.7507	µg/mL	Gravimetric
	CAS # 156-59-2.SEC (Lot HGC01-BLKT)		+/-	56.3716	µg/mL	Unstressed
	Purity 98%		+/-	57.6799	µg/mL	Stressed
7	Chloroform	1,004.5 µg/mL	+/-	7.1684	µg/mL	Gravimetric
	CAS # 67-66-3.SEC (Lot 1297547)		+/-	56.4759	µg/mL	Unstressed
	Purity 99%		+/-	57.7903	µg/mL	Stressed

8	1,1,1-trichloroethane		1,000.9	µg/mL	+/-	7.1427	µg/mL	Gravimetric
	CAS # 71-55-6 *	(Lot B15W12061)			+/-	56.2735	µg/mL	Unstressed
	Purity 99%				+/-	57.5832	µg/mL	Stressed
9	1,1-Dichloropropene		1,005.1	µg/mL	+/-	7.7804	µg/mL	Gravimetric
	CAS # 563-58-6.SEC	(Lot 4672600)			+/-	56.5876	µg/mL	Unstressed
	Purity 96%				+/-	57.9008	µg/mL	Stressed
10	Carbon tetrachloride		1,006.6	µg/mL	+/-	7.1828	µg/mL	Gravimetric
	CAS # 56-23-5.SEC	(Lot 11466)			+/-	56.5897	µg/mL	Unstressed
	Purity 99%				+/-	57.9068	µg/mL	Stressed
11	1,2-Dichloroethane		1,003.3	µg/mL	+/-	7.1598	µg/mL	Gravimetric
	CAS # 107-06-2.SEC	(Lot FO6PK)			+/-	56.4084	µg/mL	Unstressed
	Purity 99%				+/-	57.7212	µg/mL	Stressed
12	Benzene		1,003.5	µg/mL	+/-	7.7683	µg/mL	Gravimetric
	CAS # 71-43-2.SEC	(Lot B28Y008)			+/-	56.4996	µg/mL	Unstressed
	Purity 99%				+/-	57.8109	µg/mL	Stressed
13	Trichloroethene		1,005.6	µg/mL	+/-	7.1760	µg/mL	Gravimetric
	CAS # 79-01-6.SEC	(Lot H04X050)			+/-	56.5363	µg/mL	Unstressed
	Purity 99%				+/-	57.8521	µg/mL	Stressed
14	1,2-Dichloropropane		1,004.3	µg/mL	+/-	7.1666	µg/mL	Gravimetric
	CAS # 78-87-5.SEC	(Lot OGG01)			+/-	56.4618	µg/mL	Unstressed
	Purity 99%				+/-	57.7759	µg/mL	Stressed
15	Bromodichloromethane		1,006.2	µg/mL	+/-	7.1801	µg/mL	Gravimetric
	CAS # 75-27-4.SEC	(Lot 10171168)			+/-	56.5686	µg/mL	Unstressed
	Purity 99%				+/-	57.8852	µg/mL	Stressed
16	Dibromomethane		1,006.1	µg/mL	+/-	7.7881	µg/mL	Gravimetric
	CAS # 74-95-3.SEC	(Lot FGI01-OICH)			+/-	56.6438	µg/mL	Unstressed
	Purity 99%				+/-	57.9584	µg/mL	Stressed
17	cis-1,3-Dichloropropene		1,001.9	µg/mL	+/-	7.1498	µg/mL	Gravimetric
	CAS # 10061-01-5.SEC	(Lot 4870A)			+/-	56.3297	µg/mL	Unstressed
	Purity 99%				+/-	57.6407	µg/mL	Stressed
18	Toluene		1,004.8	µg/mL	+/-	7.7782	µg/mL	Gravimetric
	CAS # 108-88-3.SEC	(Lot YND2B-BD)			+/-	56.5717	µg/mL	Unstressed
	Purity 99%				+/-	57.8846	µg/mL	Stressed
19	trans-1,3-Dichloropropene		1,002.6	µg/mL	+/-	7.1548	µg/mL	Gravimetric
	CAS # 10061-02-6.SEC	(Lot ZDMSL)			+/-	56.3691	µg/mL	Unstressed
	Purity 99%				+/-	57.6810	µg/mL	Stressed
20	1,1,2-Trichloroethane		1,007.8	µg/mL	+/-	7.1920	µg/mL	Gravimetric
	CAS # 79-00-5.SEC	(Lot 3440900)			+/-	56.6618	µg/mL	Unstressed
	Purity 98%				+/-	57.9805	µg/mL	Stressed
21	1,3-Dichloropropane		1,003.8	µg/mL	+/-	7.7708	µg/mL	Gravimetric
	CAS # 142-28-9.SEC	(Lot AGN01-EFPC)			+/-	56.5177	µg/mL	Unstressed
	Purity 99%				+/-	57.8293	µg/mL	Stressed
22	Tetrachloroethene		1,004.1	µg/mL	+/-	7.1652	µg/mL	Gravimetric
	CAS # 127-18-4.SEC	(Lot F09W014)			+/-	56.4506	µg/mL	Unstressed
	Purity 99%				+/-	57.7644	µg/mL	Stressed
23	Dibromochloromethane		1,009.5	µg/mL	+/-	7.2035	µg/mL	Gravimetric
	CAS # 124-48-1.SEC	(Lot 10181507)			+/-	56.7530	µg/mL	Unstressed
	Purity 97%				+/-	58.0739	µg/mL	Stressed

24	1,2-Dibromoethane (EDB)		1,007.8	µg/mL	+/-	7.8017	µg/mL	Gravimetric
	CAS # 106-93-4.SEC	(Lot 3505900)			+/-	56.7429	µg/mL	Unstressed
	Purity 99%				+/-	58.0598	µg/mL	Stressed
25	1-Chlorohexane		1,001.0	µg/mL	+/-	5.8744	µg/mL	Gravimetric
	CAS # 544-10-5.SEC	(Lot 8171700)			+/-	56.1308	µg/mL	Unstressed
	Purity 99%				+/-	57.4439	µg/mL	Stressed
26	Chlorobenzene		1,004.8	µg/mL	+/-	7.1703	µg/mL	Gravimetric
	CAS # 108-90-7.SEC	(Lot 1161936)			+/-	56.4913	µg/mL	Unstressed
	Purity 99%				+/-	57.8061	µg/mL	Stressed
27	1,1,1,2-Tetrachloroethane		1,003.4	µg/mL	+/-	7.7677	µg/mL	Gravimetric
	CAS # 630-20-6.SEC	(Lot GC01)			+/-	56.4951	µg/mL	Unstressed
	Purity 99%				+/-	57.8063	µg/mL	Stressed
28	Ethylbenzene		1,003.4	µg/mL	+/-	7.7677	µg/mL	Gravimetric
	CAS # 100-41-4.SEC	(Lot PI4SE)			+/-	56.4951	µg/mL	Unstressed
	Purity 99%				+/-	57.8063	µg/mL	Stressed
29	m-Xylene		1,005.9	µg/mL	+/-	7.7869	µg/mL	Gravimetric
	CAS # 108-38-3.SEC	(Lot OUKMG-GB)			+/-	56.6348	µg/mL	Unstressed
	Purity 99%				+/-	57.9491	µg/mL	Stressed
30	p-Xylene		1,008.3	µg/mL	+/-	7.8054	µg/mL	Gravimetric
	CAS # 106-42-3.SEC	(Lot GM01)			+/-	56.7699	µg/mL	Unstressed
	Purity 99%				+/-	58.0874	µg/mL	Stressed
31	o-Xylene		1,005.8	µg/mL	+/-	7.7862	µg/mL	Gravimetric
	CAS # 95-47-6.SEC	(Lot FGL01)			+/-	56.6303	µg/mL	Unstressed
	Purity 99%				+/-	57.9445	µg/mL	Stressed
32	Styrene		1,001.1	µg/mL	+/-	7.7497	µg/mL	Gravimetric
	CAS # 100-42-5.SEC	(Lot QGQ7F)			+/-	56.3645	µg/mL	Unstressed
	Purity 99%				+/-	57.6726	µg/mL	Stressed
33	Isopropylbenzene (cumene)		1,004.3	µg/mL	+/-	7.7745	µg/mL	Gravimetric
	CAS # 98-82-8.SEC	(Lot WVREC)			+/-	56.5447	µg/mL	Unstressed
	Purity 99%				+/-	57.8570	µg/mL	Stressed
34	Bromoform		1,005.7	µg/mL	+/-	7.1764	µg/mL	Gravimetric
	CAS # 75-25-2.SEC	(Lot 5197400)			+/-	56.5392	µg/mL	Unstressed
	Purity 98%				+/-	57.8551	µg/mL	Stressed
35	1,1,2,2-Tetrachloroethane		1,006.8	µg/mL	+/-	7.1848	µg/mL	Gravimetric
	CAS # 79-34-5.SEC	(Lot CFA4D-AQ)			+/-	56.6052	µg/mL	Unstressed
	Purity 99%				+/-	57.9226	µg/mL	Stressed
36	1,2,3-Trichloropropane		1,002.4	µg/mL	+/-	7.7598	µg/mL	Gravimetric
	CAS # 96-18-4.SEC	(Lot OGI01)			+/-	56.4378	µg/mL	Unstressed
	Purity 98%				+/-	57.7477	µg/mL	Stressed
37	n-Propylbenzene		1,007.8	µg/mL	+/-	7.8011	µg/mL	Gravimetric
	CAS # 103-65-1.SEC	(Lot T2HFC)			+/-	56.7384	µg/mL	Unstressed
	Purity 99%				+/-	58.0551	µg/mL	Stressed
38	Bromobenzene		1,004.8	µg/mL	+/-	7.7782	µg/mL	Gravimetric
	CAS # 108-86-1.SEC	(Lot 2FUHG-EM)			+/-	56.5717	µg/mL	Unstressed
	Purity 99%				+/-	57.8846	µg/mL	Stressed
39	1,3,5-Trichlorobenzene		1,002.0	µg/mL	+/-	5.8803	µg/mL	Gravimetric
	CAS # 108-70-3.SEC	(Lot I28U021)			+/-	56.1868	µg/mL	Unstressed
	Purity 99%				+/-	57.5013	µg/mL	Stressed

40	2-Chlorotoluene CAS # 95-49-8.SEC Purity 99%	(Lot SW8QG-AO)	1,008.1	µg/mL	+/-	7.8036 56.7564 58.0736	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	4-Chlorotoluene CAS # 106-43-4.SEC Purity 99%	(Lot P4XHJ-AO)	1,002.1	µg/mL	+/-	7.7571 56.4186 57.7279	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	tert-Butylbenzene CAS # 98-06-6.SEC Purity 99%	(Lot D6OHC)	1,004.2	µg/mL	+/-	7.7732 56.5357 57.8478	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	1,2,4-Trimethylbenzene CAS # 95-63-6.SEC Purity 99%	(Lot SC7LO-QA)	1,009.5	µg/mL	+/-	7.8147 56.8374 58.1565	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	sec-Butylbenzene CAS # 135-98-8.SEC Purity 99%	(Lot O4HRF)	1,006.9	µg/mL	+/-	7.7943 56.6888 58.0044	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	4-Isopropyltoluene (p-cymene) CAS # 99-87-6.SEC Purity 96%	(Lot 1195000)	1,000.0	µg/mL	+/-	7.7410 56.3015 57.6081	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	1,3-Dichlorobenzene CAS # 541-73-1.SEC Purity 99%	(Lot FMDFD)	1,003.3	µg/mL	+/-	7.1593 56.4042 57.7169	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	1,4-Dichlorobenzene CAS # 106-46-7.SEC Purity 99%	(Lot 4Y5DC)	1,008.5	µg/mL	+/-	7.1967 56.6994 58.0189	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
48	n-Butylbenzene CAS # 104-51-8.SEC Purity 99%	(Lot MMPGA)	1,005.4	µg/mL	+/-	7.7825 56.6032 57.9169	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
49	1,2-Dichlorobenzene CAS # 95-50-1.SEC Purity 99%	(Lot 4NRGF-OT)	1,006.8	µg/mL	+/-	7.1842 56.6010 57.9183	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
50	1,2-Dibromo-3-chloropropane CAS # 96-12-8.SEC Purity 98%	(Lot LC00408V)	1,002.7	µg/mL	+/-	7.7616 56.4511 57.7612	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
51	1,3,5-Trimethylbenzene CAS # 108-67-8.SEC Purity 99%	(Lot FGH02-CMLN)	1,002.2	µg/mL	+/-	7.7584 56.4276 57.7371	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
52	1,2,4-Trichlorobenzene CAS # 120-82-1.SEC Purity 99%	(Lot 3LYYC)	1,007.2	µg/mL	+/-	7.7968 56.7068 58.0229	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
53	Hexachlorobutadiene CAS # 87-68-3.SEC Purity 97%	(Lot 5526800)	1,005.8	µg/mL	+/-	7.7857 56.6265 57.9407	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
54	Naphthalene CAS # 91-20-3.SEC Purity 99%	(Lot SKZ5N)	1,001.8	µg/mL	+/-	7.7553 56.4050 57.7141	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
55	1,2,3-Trichlorobenzene CAS # 87-61-6.SEC Purity 98%	(Lot A0043055)	1,005.9	µg/mL	+/-	7.7865 56.6321 57.9464	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

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

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

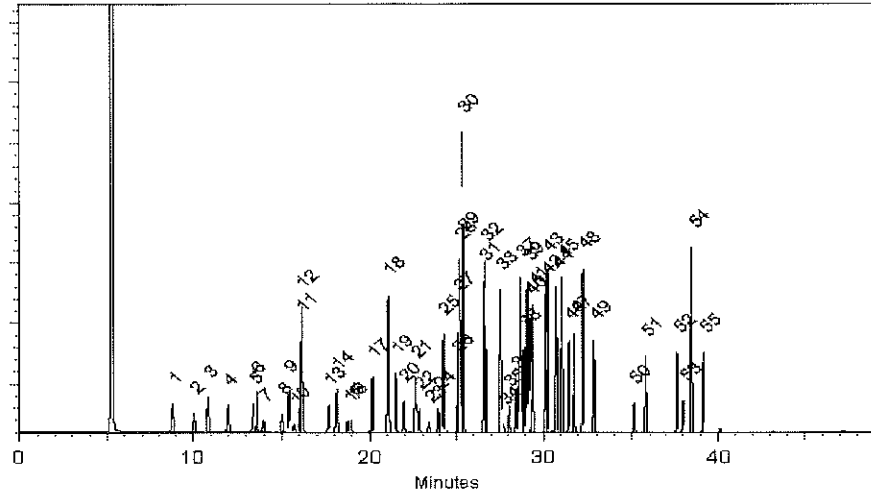
Carrier Gas:
hydrogen-constant pressure 8.0 psi.

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:
FID



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

Michael Mage

Date Mixed: 26-Apr-2019 Balance: 1127510105

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

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_Q#3B_00032



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 56736.SEC **Lot No.:** A0147509
Description : Custom Q #3B Standard
Custom Q #3B Standard 1,000-7,500µg/mL, P&T Methanol/Water (90:10), 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : September 30, 2020 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	Acetone	7,515.3 µg/mL	+/-	44.0039	µg/mL	Gravimetric
	CAS # 67-64-1.SEC (Lot U13B039)		+/-	371.8038	µg/mL	Unstressed
	Purity 99%		+/-	381.0473	µg/mL	Stressed
2	Acrylonitrile	5,028.0 µg/mL	+/-	29.5071	µg/mL	Gravimetric
	CAS # 107-13-1.SEC (Lot V54AD)		+/-	248.7567	µg/mL	Unstressed
	Purity 99%		+/-	254.9406	µg/mL	Stressed
3	2-Butanone (MEK)	7,514.0 µg/mL	+/-	43.9961	µg/mL	Gravimetric
	CAS # 78-93-3.SEC (Lot RGZ2A)		+/-	371.7379	µg/mL	Unstressed
	Purity 99%		+/-	380.9797	µg/mL	Stressed
4	Tetrahydrofuran	5,040.7 µg/mL	+/-	29.5815	µg/mL	Gravimetric
	CAS # 109-99-9.SEC (Lot 8DAOJ)		+/-	249.3834	µg/mL	Unstressed
	Purity 99%		+/-	255.5829	µg/mL	Stressed
5	2-Nitropropane	995.7 µg/mL	+/-	5.9140	µg/mL	Gravimetric
	CAS # 79-46-9.SEC (Lot Y4YWD)		+/-	49.2690	µg/mL	Unstressed
	Purity 98%		+/-	50.4934	µg/mL	Stressed
6	4-Methyl-2-pentanone (MIBK)	5,044.0 µg/mL	+/-	29.6010	µg/mL	Gravimetric
	CAS # 108-10-1.SEC (Lot E29T040)		+/-	249.5483	µg/mL	Unstressed
	Purity 99%		+/-	255.7519	µg/mL	Stressed
7	2-Hexanone	5,018.9 µg/mL	+/-	29.4538	µg/mL	Gravimetric
	CAS # 591-78-6.SEC (Lot Y3TUO)		+/-	248.3068	µg/mL	Unstressed
	Purity 98%		+/-	254.4796	µg/mL	Stressed

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

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

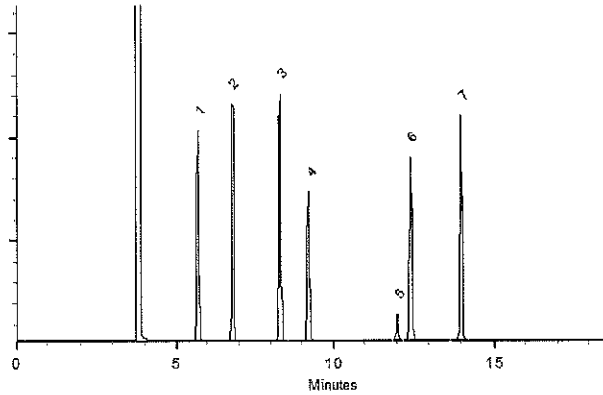
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



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

Brandon Reish - Mix Technician

Date Mixed: 27-Mar-2019

Balance: 1128342314

Justine Albertson - Operations Tech-ARM QC

Date Passed: 28-Mar-2019

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_Q#3B_00047



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 56736.SEC **Lot No.:** A0158722
Description : Custom Q #3B Standard
Custom Q #3B Standard 1,000-7,500µg/mL, P&T Methanol/Water (90:10), 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : September 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	7,550.0 µg/mL (Lot U13B039)	+/-	44.3076	µg/mL Gravimetric
	CAS # 67-64-1.SEC		+/-	373.5308	µg/mL Unstressed
	Purity 99%		+/-	382.8166	µg/mL Stressed
2	Acrylonitrile	5,003.0 µg/mL (Lot CCFKL-GL)	+/-	29.3604	µg/mL Gravimetric
	CAS # 107-13-1.SEC		+/-	247.5198	µg/mL Unstressed
	Purity 99%		+/-	253.6730	µg/mL Stressed
3	2-Butanone (MEK)	7,517.0 µg/mL (Lot RGZ2A)	+/-	44.1140	µg/mL Gravimetric
	CAS # 78-93-3.SEC		+/-	371.8982	µg/mL Unstressed
	Purity 99%		+/-	381.1434	µg/mL Stressed
4	Tetrahydrofuran	5,023.0 µg/mL (Lot 8DAOJ)	+/-	29.4778	µg/mL Gravimetric
	CAS # 109-99-9.SEC		+/-	248.5093	µg/mL Unstressed
	Purity 99%		+/-	254.6871	µg/mL Stressed
5	2-Nitropropane	1,000.6 µg/mL (Lot Y4YWD)	+/-	5.9431	µg/mL Gravimetric
	CAS # 79-46-9.SEC		+/-	49.5115	µg/mL Unstressed
	Purity 98%		+/-	50.7419	µg/mL Stressed
6	4-Methyl-2-pentanone (MIBK)	5,032.0 µg/mL (Lot E29T040)	+/-	29.5306	µg/mL Gravimetric
	CAS # 108-10-1.SEC		+/-	248.9546	µg/mL Unstressed
	Purity 99%		+/-	255.1435	µg/mL Stressed
7	2-Hexanone	5,036.2 µg/mL (Lot Y3TUO)	+/-	29.5554	µg/mL Gravimetric
	CAS # 591-78-6.SEC		+/-	249.1634	µg/mL Unstressed
	Purity 98%		+/-	255.3574	µg/mL Stressed

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

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

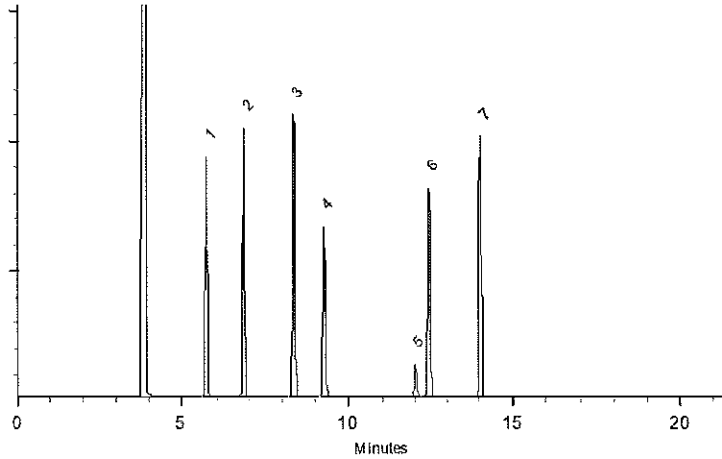
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



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

Brandon Reish - Mix Technician

Date Mixed: 11-Mar-2020 Balance: 1127510105

Justine Albaraton - Operations Tech-ARM QC

Date Passed: 19-Mar-2020

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_Q#4C_00051



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 572312.SEC **Lot No.:** A0158704
Description : Custom Q #4C (Rev 3) Standard
Custom Q #4C (Rev 3) Standard 1,000µg/mL, P&T Methanol,
1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : March 31, 2021 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	1,3-Butadiene	999.8 µg/mL	+/- 9.3559	µg/mL	Gravimetric
	CAS # 106-99-0.SEC (Lot 24033)		+/- 60.7686	µg/mL	Unstressed
	Purity 99%		+/- 60.9107	µg/mL	Stressed
2	1,2-Dichloro-1,1,2-trifluoroethane (CFC-123a)	998.8 µg/mL	+/- 17.4916	µg/mL	Gravimetric
	CAS # 354-23-4 * (Lot Q9B-64)		+/- 62.4823	µg/mL	Unstressed
	Purity 99%		+/- 62.6203	µg/mL	Stressed
3	n-Pentane (C5)	1,002.5 µg/mL	+/- 5.8832	µg/mL	Gravimetric
	CAS # 109-66-0.SEC (Lot FGH02)		+/- 60.4906	µg/mL	Unstressed
	Purity 99%		+/- 60.6341	µg/mL	Stressed
4	1,1,2-Trichlorotrifluoroethane (CFC-113)	1,003.5 µg/mL	+/- 5.8891	µg/mL	Gravimetric
	CAS # 76-13-1.SEC (Lot 18342)		+/- 60.5509	µg/mL	Unstressed
	Purity 99%		+/- 60.6946	µg/mL	Stressed
5	Iodomethane (methyl iodide)	1,008.0 µg/mL	+/- 5.9155	µg/mL	Gravimetric
	CAS # 74-88-4.SEC (Lot Y25A027)		+/- 60.8224	µg/mL	Unstressed
	Purity 99%		+/- 60.9668	µg/mL	Stressed
6	Carbon disulfide	1,005.0 µg/mL	+/- 5.8979	µg/mL	Gravimetric
	CAS # 75-15-0.SEC (Lot MKBL1376V)		+/- 60.6414	µg/mL	Unstressed
	Purity 99%		+/- 60.7854	µg/mL	Stressed
7	Methyl-tert-butyl ether (MTBE)	1,002.0 µg/mL	+/- 5.8803	µg/mL	Gravimetric
	CAS # 1634-04-4.SEC (Lot ZHKYA)		+/- 60.4604	µg/mL	Unstressed
	Purity 99%		+/- 60.6039	µg/mL	Stressed

8	n-Hexane (C6)		1,002.0	µg/mL	+/-	5.8803	µg/mL	Gravimetric
	CAS #	110-54-3.SEC (Lot 10188491)			+/-	60.4604	µg/mL	Unstressed
	Purity	99%			+/-	60.6039	µg/mL	Stressed
9	Diisopropyl ether (DIPE)		1,003.0	µg/mL	+/-	5.8862	µg/mL	Gravimetric
	CAS #	108-20-3.SEC (Lot LL7TN-SH)			+/-	60.5207	µg/mL	Unstressed
	Purity	99%			+/-	60.6644	µg/mL	Stressed
10	Chloroprene (2-chloro-1,3-butadiene)		1,001.5	µg/mL	+/-	5.8774	µg/mL	Gravimetric
	CAS #	126-99-8 * (Lot 191204JLM)			+/-	60.4302	µg/mL	Unstressed
	Purity	99%			+/-	60.5737	µg/mL	Stressed
11	Ethyl-tert-butyl ether (ETBE)		1,001.0	µg/mL	+/-	5.8744	µg/mL	Gravimetric
	CAS #	637-92-3.SEC (Lot MHBjG-QK)			+/-	60.4000	µg/mL	Unstressed
	Purity	99%			+/-	60.5434	µg/mL	Stressed
12	Cyclohexane		1,001.5	µg/mL	+/-	5.8774	µg/mL	Gravimetric
	CAS #	110-82-7.SEC (Lot YADRA)			+/-	60.4302	µg/mL	Unstressed
	Purity	99%			+/-	60.5737	µg/mL	Stressed
13	tert-Amyl methyl ether (TAME)		1,006.0	µg/mL	+/-	5.9038	µg/mL	Gravimetric
	CAS #	994-05-8.SEC (Lot 8471400)			+/-	60.7017	µg/mL	Unstressed
	Purity	99%			+/-	60.8458	µg/mL	Stressed
14	n-Heptane (C7)		1,006.0	µg/mL	+/-	5.9038	µg/mL	Gravimetric
	CAS #	142-82-5.SEC (Lot OGM01)			+/-	60.7017	µg/mL	Unstressed
	Purity	99%			+/-	60.8458	µg/mL	Stressed
15	tert-Amyl ethyl ether (TAEE)		1,006.0	µg/mL	+/-	5.9038	µg/mL	Gravimetric
	CAS #	919-94-8.SEC (Lot 6455100)			+/-	60.7017	µg/mL	Unstressed
	Purity	99%			+/-	60.8458	µg/mL	Stressed
16	Methyl methacrylate		1,006.0	µg/mL	+/-	5.9038	µg/mL	Gravimetric
	CAS #	80-62-6.SEC (Lot G01X021)			+/-	60.7017	µg/mL	Unstressed
	Purity	99%			+/-	60.8458	µg/mL	Stressed
17	Ethyl methacrylate		1,004.5	µg/mL	+/-	5.8950	µg/mL	Gravimetric
	CAS #	97-63-2.SEC (Lot MLWYK-LS)			+/-	60.6112	µg/mL	Unstressed
	Purity	99%			+/-	60.7551	µg/mL	Stressed
18	Benzyl chloride		1,003.5	µg/mL	+/-	5.8891	µg/mL	Gravimetric
	CAS #	100-44-7.SEC (Lot H29N03)			+/-	60.5509	µg/mL	Unstressed
	Purity	99%			+/-	60.6946	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)

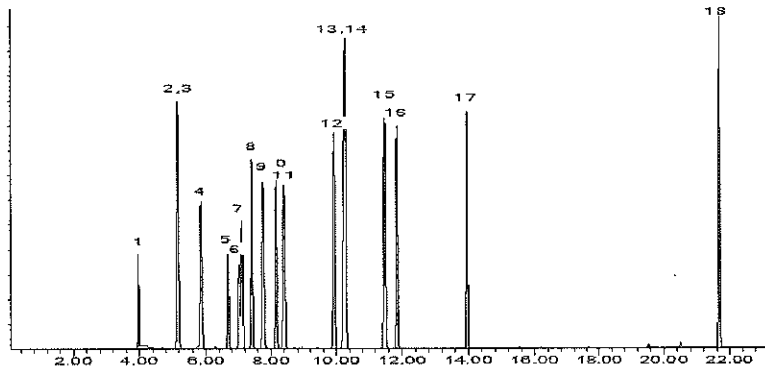
Carrier Gas:
helium-constant pressure 30 psi

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.


Matt Fragassi - Mix Technician

Date Mixed: 11-Mar-2020 Balance: 1128342314


Feng-Yun Lo - GC Analyst

Date Passed: 25-Mar-2020

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_QCS#6Std_00049



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 558268.SEC Lot No.: A0158906
 Description : Custom QCS #6 Standard
Custom QCS #6 Standard 1,000µg/mL, P&T Methanol, 1mL/ampul
 Container Size : 2 mL Pkg Amt: > 1 mL
 Expiration Date : September 30, 2021 Storage: 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	Methyl acetate	1,005.3 µg/mL (Lot 6WOXM-KD)	+/-	5.9714	µg/mL	Gravimetric
	CAS # 79-20-9.SEC		+/-	60.6685	µg/mL	Unstressed
	Purity 99%		+/-	60.8125	µg/mL	Stressed
2	Allyl chloride (3-chloropropene)	1,001.3 µg/mL (Lot H3HGC)	+/-	5.9476	µg/mL	Gravimetric
	CAS # 107-05-1.SEC		+/-	60.4271	µg/mL	Unstressed
	Purity 99%		+/-	60.5705	µg/mL	Stressed
3	Bromochloromethane	1,002.0 µg/mL (Lot 8529200)	+/-	5.9516	µg/mL	Gravimetric
	CAS # 74-97-5.SEC		+/-	60.4674	µg/mL	Unstressed
	Purity 99%		+/-	60.6109	µg/mL	Stressed
4	Methylcyclohexane	1,004.7 µg/mL (Lot 24MSD-CD)	+/-	5.9674	µg/mL	Gravimetric
	CAS # 108-87-2.SEC		+/-	60.6283	µg/mL	Unstressed
	Purity 99%		+/-	60.7722	µg/mL	Stressed
5	Pentachloroethane	1,004.7 µg/mL (Lot 8170200)	+/-	5.9674	µg/mL	Gravimetric
	CAS # 76-01-7.SEC		+/-	60.6283	µg/mL	Unstressed
	Purity 99%		+/-	60.7722	µg/mL	Stressed
6	1,2,3-Trimethylbenzene	1,004.6 µg/mL (Lot 7110200)	+/-	5.9673	µg/mL	Gravimetric
	CAS # 526-73-8.SEC		+/-	60.6267	µg/mL	Unstressed
	Purity 92%		+/-	60.7706	µg/mL	Stressed
7	1,3-Diethylbenzene	1,006.0 µg/mL (Lot 113566-1)	+/-	5.9753	µg/mL	Gravimetric
	CAS # 141-93-5.SEC		+/-	60.7087	µg/mL	Unstressed
	Purity 99%		+/-	60.8528	µg/mL	Stressed

8	1,4-Diethylbenzene CAS # 105-05-5.SEC Purity 98%	(Lot FBQ02)	1,006.1 µg/mL	+/- 5.9761 +/- 60.7168 +/- 60.8609	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	1,2-Diethylbenzene CAS # 135-01-3.SEC Purity 99%	(Lot BCBF3667V)	1,008.7 µg/mL	+/- 5.9912 +/- 60.8697 +/- 61.0141	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	2-Methylnaphthalene CAS # 91-57-6.SEC Purity 99%	(Lot 76023-1)	1,006.0 µg/mL	+/- 5.9753 +/- 60.7087 +/- 60.8528	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

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

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

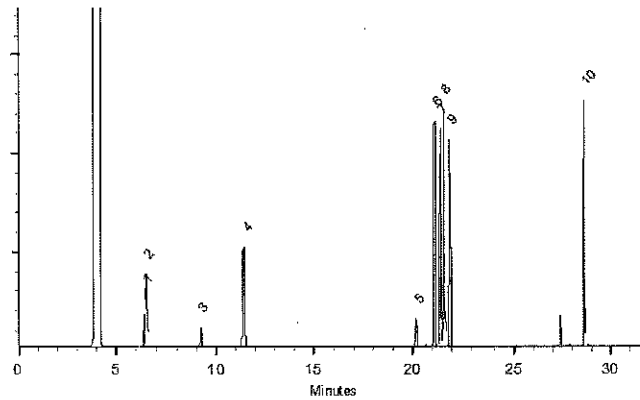
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



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

Dalton Stover
Dalton Stover - Operations Technician I

Date Mixed: 17-Mar-2020 Balance: 1128342314

Feng-Yun Lo
Feng-Yun Lo - QC Analyst

Date Passed: 20-Mar-2020

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_V#1B_00071



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 569936-1 **Lot No.:** A0158586

Description : Custom Revised V #1B Standard

Custom Revised V #1B Standard 5,000µg/mL, P&T Methanol, 1mL/ampul

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

Expiration Date : March 31, 2023 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	1,1-dichloroethene CAS # 75-35-4 Purity 99% (Lot SHBK2437)	5,011.4 µg/mL	+/- 31.9644	µg/mL	Gravimetric	
			+/- 281.2901	µg/mL	Unstressed	
			+/- 287.8577	µg/mL	Stressed	
2	Methylene chloride (dichloromethane) CAS # 75-09-2 Purity 99% (Lot SHBL3107)	5,004.6 µg/mL	+/- 31.9213	µg/mL	Gravimetric	
			+/- 280.9112	µg/mL	Unstressed	
			+/- 287.4700	µg/mL	Stressed	
3	trans-1,2-Dichloroethene CAS # 156-60-5 Purity 99% (Lot MKBH9850V)	5,017.5 µg/mL	+/- 32.0035	µg/mL	Gravimetric	
			+/- 281.6339	µg/mL	Unstressed	
			+/- 288.2096	µg/mL	Stressed	
4	1,1-Dichloroethane CAS # 75-34-3 Purity 99% (Lot 580900)	5,020.4 µg/mL	+/- 32.0218	µg/mL	Gravimetric	
			+/- 281.7953	µg/mL	Unstressed	
			+/- 288.3747	µg/mL	Stressed	
5	2,2-Dichloropropane CAS # 594-20-7 Purity 99% (Lot BCBT5124)	5,050.0 µg/mL	+/- 32.0202	µg/mL	Gravimetric	
			+/- 283.4366	µg/mL	Unstressed	
			+/- 290.0553	µg/mL	Stressed	
6	cis-1,2-Dichloroethene CAS # 156-59-2 Purity 99% (Lot MKBX5945V)	5,046.5 µg/mL	+/- 31.9980	µg/mL	Gravimetric	
			+/- 283.2401	µg/mL	Unstressed	
			+/- 289.8543	µg/mL	Stressed	
7	chloroform CAS # 67-66-3 Purity 99% (Lot SHBJ9076)	5,034.3 µg/mL	+/- 32.1103	µg/mL	Gravimetric	
			+/- 282.5741	µg/mL	Unstressed	
			+/- 289.1717	µg/mL	Stressed	

8	1,1,1-trichloroethane		5,001.3	µg/mL	+/-	31.9002	µg/mL	Gravimetric
	CAS # 71-55-6	(Lot 190123CG)			+/-	280.7250	µg/mL	Unstressed
	Purity 98%				+/-	287.2795	µg/mL	Stressed
9	1,1-Dichloropropene		5,048.9	µg/mL	+/-	32.0131	µg/mL	Gravimetric
	CAS # 563-58-6	(Lot 170301JLM)			+/-	283.3734	µg/mL	Unstressed
	Purity 99%				+/-	289.9907	µg/mL	Stressed
10	carbon tetrachloride		5,022.9	µg/mL	+/-	32.0378	µg/mL	Gravimetric
	CAS # 56-23-5	(Lot SHBG8938V)			+/-	281.9356	µg/mL	Unstressed
	Purity 99%				+/-	288.5183	µg/mL	Stressed
11	1,2-Dichloroethane		5,007.9	µg/mL	+/-	31.9421	µg/mL	Gravimetric
	CAS # 107-06-2	(Lot MKCH9948)			+/-	281.0937	µg/mL	Unstressed
	Purity 99%				+/-	287.6567	µg/mL	Stressed
12	Benzene		5,042.9	µg/mL	+/-	31.9750	µg/mL	Gravimetric
	CAS # 71-43-2	(Lot SHBG7317V)			+/-	283.0367	µg/mL	Unstressed
	Purity 99%				+/-	289.6461	µg/mL	Stressed
13	Trichloroethene		5,012.9	µg/mL	+/-	31.9740	µg/mL	Gravimetric
	CAS # 79-01-6	(Lot SHBJ4611)			+/-	281.3743	µg/mL	Unstressed
	Purity 99%				+/-	287.9439	µg/mL	Stressed
14	1,2-Dichloropropane		5,012.6	µg/mL	+/-	31.9724	µg/mL	Gravimetric
	CAS # 78-87-5	(Lot BCBR0882V)			+/-	281.3603	µg/mL	Unstressed
	Purity 99%				+/-	287.9295	µg/mL	Stressed
15	bromodichloromethane		5,039.1	µg/mL	+/-	32.1414	µg/mL	Gravimetric
	CAS # 75-27-4	(Lot MKCJ0238)			+/-	282.8477	µg/mL	Unstressed
	Purity 99%				+/-	289.4517	µg/mL	Stressed
16	Dibromomethane		5,047.3	µg/mL	+/-	32.0027	µg/mL	Gravimetric
	CAS # 74-95-3	(Lot 10201030)			+/-	283.2822	µg/mL	Unstressed
	Purity 99%				+/-	289.8973	µg/mL	Stressed
17	cis-1,3-Dichloropropene		5,015.1	µg/mL	+/-	31.9883	µg/mL	Gravimetric
	CAS # 10061-01-5	(Lot 200107JLM)			+/-	281.5006	µg/mL	Unstressed
	Purity 99%				+/-	288.0731	µg/mL	Stressed
18	Toluene		5,031.9	µg/mL	+/-	31.9053	µg/mL	Gravimetric
	CAS # 108-88-3	(Lot SHBH9895)			+/-	282.4193	µg/mL	Unstressed
	Purity 99%				+/-	289.0143	µg/mL	Stressed
19	trans-1,3-Dichloropropene		5,003.8	µg/mL	+/-	31.9158	µg/mL	Gravimetric
	CAS # 10061-02-6	(Lot 19420164-D1219)			+/-	280.8621	µg/mL	Unstressed
	Purity 99%				+/-	287.4198	µg/mL	Stressed
20	1,1,2-Trichloroethane		5,015.4	µg/mL	+/-	31.9899	µg/mL	Gravimetric
	CAS # 79-00-5	(Lot FGB01)			+/-	281.5146	µg/mL	Unstressed
	Purity 99%				+/-	288.0875	µg/mL	Stressed
21	1,3-Dichloropropane		5,042.4	µg/mL	+/-	31.9718	µg/mL	Gravimetric
	CAS # 142-28-9	(Lot BCBG2162V)			+/-	283.0086	µg/mL	Unstressed
	Purity 99%				+/-	289.6173	µg/mL	Stressed
22	Tetrachloroethene		5,014.3	µg/mL	+/-	31.9827	µg/mL	Gravimetric
	CAS # 127-18-4	(Lot SHBJ7422)			+/-	281.4515	µg/mL	Unstressed
	Purity 99%				+/-	288.0229	µg/mL	Stressed
23	dibromochloromethane		5,016.1	µg/mL	+/-	31.9947	µg/mL	Gravimetric
	CAS # 124-48-1	(Lot MKCK6472)			+/-	281.5567	µg/mL	Unstressed
	Purity 99%				+/-	288.1306	µg/mL	Stressed

24	1,2-Dibromoethane (EDB)	(Lot BCBP2268V)	5,037.4	$\mu\text{g/mL}$	+/-	31.9401	$\mu\text{g/mL}$	Gravimetric	
	CAS # 106-93-4				+/-	282.7280			Unstressed
	Purity 99%				+/-	289.3302			
25	1-Chlorohexane	(Lot BCBS3368V)	5,010.7	$\mu\text{g/mL}$	+/-	29.3390	$\mu\text{g/mL}$	Gravimetric	
	CAS # 544-10-5				+/-	280.9687			Unstressed
	Purity 98%				+/-	287.5420			
26	Chlorobenzene	(Lot SHBJ0839)	5,009.0	$\mu\text{g/mL}$	+/-	31.9493	$\mu\text{g/mL}$	Gravimetric	
	CAS # 108-90-7				+/-	281.1568			Unstressed
	Purity 99%				+/-	287.7213			
27	1,1,1,2-Tetrachloroethane	(Lot MKBS3769V)	5,038.6	$\mu\text{g/mL}$	+/-	31.9481	$\mu\text{g/mL}$	Gravimetric	
	CAS # 630-20-6				+/-	282.7981			Unstressed
	Purity 99%				+/-	289.4020			
28	Ethylbenzene	(Lot SHBJ3183)	5,029.3	$\mu\text{g/mL}$	+/-	31.8886	$\mu\text{g/mL}$	Gravimetric	
	CAS # 100-41-4				+/-	282.2719			Unstressed
	Purity 99%				+/-	288.8635			
29	m-Xylene	(Lot SHBH8323)	5,038.4	$\mu\text{g/mL}$	+/-	31.9465	$\mu\text{g/mL}$	Gravimetric	
	CAS # 108-38-3				+/-	282.7841			Unstressed
	Purity 99%				+/-	289.3876			
30	p-Xylene	(Lot SHBJ0052)	5,038.0	$\mu\text{g/mL}$	+/-	31.9441	$\mu\text{g/mL}$	Gravimetric	
	CAS # 106-42-3				+/-	282.7630			Unstressed
	Purity 99%				+/-	289.3661			
31	o-Xylene	(Lot SHBH3432V)	5,046.4	$\mu\text{g/mL}$	+/-	31.9972	$\mu\text{g/mL}$	Gravimetric	
	CAS # 95-47-6				+/-	283.2331			Unstressed
	Purity 99%				+/-	289.8471			
32	Styrene	(Lot MKBV4061V)	5,047.0	$\mu\text{g/mL}$	+/-	32.0012	$\mu\text{g/mL}$	Gravimetric	
	CAS # 100-42-5				+/-	283.2682			Unstressed
	Purity 99%				+/-	289.8830			
33	Isopropylbenzene (cumene)	(Lot 10185056)	5,035.3	$\mu\text{g/mL}$	+/-	31.9267	$\mu\text{g/mL}$	Gravimetric	
	CAS # 98-82-8				+/-	282.6087			Unstressed
	Purity 99%				+/-	289.2081			
34	bromoform	(Lot SHBJ4835)	5,013.0	$\mu\text{g/mL}$	+/-	31.9748	$\mu\text{g/mL}$	Gravimetric	
	CAS # 75-25-2				+/-	281.3813			Unstressed
	Purity 99%				+/-	287.9511			
35	1,1,2,2-Tetrachloroethane	(Lot CFA4D)	5,016.0	$\mu\text{g/mL}$	+/-	31.9939	$\mu\text{g/mL}$	Gravimetric	
	CAS # 79-34-5				+/-	281.5497			Unstressed
	Purity 99%				+/-	288.1234			
36	1,2,3-Trichloropropane	(Lot BCBH8722V)	5,033.4	$\mu\text{g/mL}$	+/-	31.9148	$\mu\text{g/mL}$	Gravimetric	
	CAS # 96-18-4				+/-	282.5035			Unstressed
	Purity 99%				+/-	289.1004			
37	n-Propylbenzene	(Lot MKBJ0332V)	5,032.4	$\mu\text{g/mL}$	+/-	31.9084	$\mu\text{g/mL}$	Gravimetric	
	CAS # 103-65-1				+/-	282.4473			Unstressed
	Purity 99%				+/-	289.0430			
38	Bromobenzene	(Lot WXBC5147V)	5,035.5	$\mu\text{g/mL}$	+/-	31.9282	$\mu\text{g/mL}$	Gravimetric	
	CAS # 108-86-1				+/-	282.6227			Unstressed
	Purity 99%				+/-	289.2225			
39	1,3,5-Trimethylbenzene	(Lot BCBS7648V)	5,029.8	$\mu\text{g/mL}$	+/-	31.8918	$\mu\text{g/mL}$	Gravimetric	
	CAS # 108-67-8				+/-	282.3000			Unstressed
	Purity 99%				+/-	288.8922			

40	2-Chlorotoluene		5,037.5	µg/mL	+/-	31.9409	µg/mL	Gravimetric	
	CAS #	95-49-8	(Lot MKBW5554V)			+/-	282.7350	µg/mL	Unstressed
	Purity	99%				+/-	289.3373	µg/mL	Stressed
41	4-Chlorotoluene		5,039.1	µg/mL	+/-	31.9512	µg/mL	Gravimetric	
	CAS #	106-43-4	(Lot MKBL7753V)			+/-	282.8262	µg/mL	Unstressed
	Purity	99%				+/-	289.4307	µg/mL	Stressed
42	tert-Butylbenzene		5,049.8	µg/mL	+/-	32.0186	µg/mL	Gravimetric	
	CAS #	98-06-6	(Lot STBD6954V)			+/-	283.4225	µg/mL	Unstressed
	Purity	99%				+/-	290.0409	µg/mL	Stressed
43	1,2,4-Trimethylbenzene		5,046.8	µg/mL	+/-	31.9996	µg/mL	Gravimetric	
	CAS #	95-63-6	(Lot MKBJ6229V)			+/-	283.2544	µg/mL	Unstressed
	Purity	98%				+/-	289.8689	µg/mL	Stressed
44	sec-Butylbenzene		5,042.8	µg/mL	+/-	31.9742	µg/mL	Gravimetric	
	CAS #	135-98-8	(Lot MKBR9260V)			+/-	283.0296	µg/mL	Unstressed
	Purity	99%				+/-	289.6389	µg/mL	Stressed
45	p-Isopropyltoluene (p-Cymene)		5,038.4	µg/mL	+/-	31.9465	µg/mL	Gravimetric	
	CAS #	99-87-6	(Lot MKBV3556V)			+/-	282.7841	µg/mL	Unstressed
	Purity	99%				+/-	289.3876	µg/mL	Stressed
46	1,3-Dichlorobenzene		5,017.6	µg/mL	+/-	32.0043	µg/mL	Gravimetric	
	CAS #	541-73-1	(Lot BCBQ7100V)			+/-	281.6409	µg/mL	Unstressed
	Purity	99%				+/-	288.2167	µg/mL	Stressed
47	1,4-Dichlorobenzene		5,023.8	µg/mL	+/-	32.0433	µg/mL	Gravimetric	
	CAS #	106-46-7	(Lot MKBS4401V)			+/-	281.9847	µg/mL	Unstressed
	Purity	99%				+/-	288.5686	µg/mL	Stressed
48	n-Butylbenzene		5,024.8	µg/mL	+/-	31.8601	µg/mL	Gravimetric	
	CAS #	104-51-8	(Lot 09804AE)			+/-	282.0194	µg/mL	Unstressed
	Purity	99%				+/-	288.6050	µg/mL	Stressed
49	1,2-Dichlorobenzene		5,024.5	µg/mL	+/-	32.0481	µg/mL	Gravimetric	
	CAS #	95-50-1	(Lot SHBG3111V)			+/-	282.0268	µg/mL	Unstressed
	Purity	99%				+/-	288.6117	µg/mL	Stressed
50	1,2-Dibromo-3-chloropropane		5,036.4	µg/mL	+/-	31.9338	µg/mL	Gravimetric	
	CAS #	96-12-8	(Lot FBL01)			+/-	282.6718	µg/mL	Unstressed
	Purity	99%				+/-	289.2727	µg/mL	Stressed
51	1,3,5-Trichlorobenzene		5,034.0	µg/mL	+/-	29.4752	µg/mL	Gravimetric	
	CAS #	108-70-3	(Lot 11319AS)			+/-	282.2729	µg/mL	Unstressed
	Purity	99%				+/-	288.8768	µg/mL	Stressed
52	1,2,4-Trichlorobenzene		5,036.5	µg/mL	+/-	31.9346	µg/mL	Gravimetric	
	CAS #	120-82-1	(Lot SHBJ0905)			+/-	282.6789	µg/mL	Unstressed
	Purity	99%				+/-	289.2799	µg/mL	Stressed
53	Hexachlorobutadiene		5,033.6	µg/mL	+/-	31.9164	µg/mL	Gravimetric	
	CAS #	87-68-3	(Lot J31X013)			+/-	282.5175	µg/mL	Unstressed
	Purity	99%				+/-	289.1148	µg/mL	Stressed
54	Naphthalene		5,033.6	µg/mL	+/-	31.9164	µg/mL	Gravimetric	
	CAS #	91-20-3	(Lot MKBW2603V)			+/-	282.5175	µg/mL	Unstressed
	Purity	99%				+/-	289.1148	µg/mL	Stressed
55	1,2,3-Trichlorobenzene		5,016.0	µg/mL	+/-	31.8046	µg/mL	Gravimetric	
	CAS #	87-61-6	(Lot MKBS4859V)			+/-	281.5283	µg/mL	Unstressed
	Purity	99%				+/-	288.1024	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)

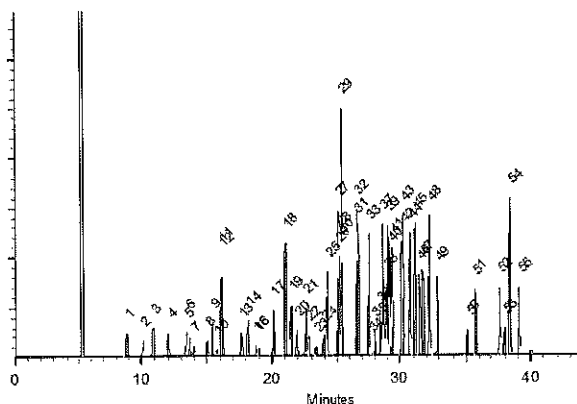
Carrier Gas:
hydrogen-constant pressure 8.0 psi.

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:
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.

Cyndee L. Crust
Cyndee L. Crust - Mix Technician

Date Mixed: 09-Mar-2020 Balance: B251644995

Feng-Yan Lo
Feng-Yan Lo - GC Analyst

Date Passed: 11-Mar-2020

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_V#1B_00097



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 569936-1 **Lot No.:** A0158586

Description : Custom Revised V #1B Standard

Custom Revised V #1B Standard 5,000µg/mL, P&T Methanol, 1mL/ampul

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

Expiration Date : March 31, 2023 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)			
1	1,1-dichloroethene	5,011.4 µg/mL	+/-	31.9644	µg/mL	Gravimetric
	CAS # 75-35-4 (Lot SHBK2437)		+/-	281.2901	µg/mL	Unstressed
	Purity 99%		+/-	287.8577	µg/mL	Stressed
2	Methylene chloride (dichloromethane)	5,004.6 µg/mL	+/-	31.9213	µg/mL	Gravimetric
	CAS # 75-09-2 (Lot SHBL3107)		+/-	280.9112	µg/mL	Unstressed
	Purity 99%		+/-	287.4700	µg/mL	Stressed
3	trans-1,2-Dichloroethene	5,017.5 µg/mL	+/-	32.0035	µg/mL	Gravimetric
	CAS # 156-60-5 (Lot MKBH9850V)		+/-	281.6339	µg/mL	Unstressed
	Purity 99%		+/-	288.2096	µg/mL	Stressed
4	1,1-Dichloroethane	5,020.4 µg/mL	+/-	32.0218	µg/mL	Gravimetric
	CAS # 75-34-3 (Lot 580900)		+/-	281.7953	µg/mL	Unstressed
	Purity 99%		+/-	288.3747	µg/mL	Stressed
5	2,2-Dichloropropane	5,050.0 µg/mL	+/-	32.0202	µg/mL	Gravimetric
	CAS # 594-20-7 (Lot BCBT5124)		+/-	283.4366	µg/mL	Unstressed
	Purity 99%		+/-	290.0553	µg/mL	Stressed
6	cis-1,2-Dichloroethene	5,046.5 µg/mL	+/-	31.9980	µg/mL	Gravimetric
	CAS # 156-59-2 (Lot MKBX5945V)		+/-	283.2401	µg/mL	Unstressed
	Purity 99%		+/-	289.8543	µg/mL	Stressed
7	chloroform	5,034.3 µg/mL	+/-	32.1103	µg/mL	Gravimetric
	CAS # 67-66-3 (Lot SHBJ9076)		+/-	282.5741	µg/mL	Unstressed
	Purity 99%		+/-	289.1717	µg/mL	Stressed

8	1,1,1-trichloroethane		5,001.3	µg/mL	+/-	31.9002	µg/mL	Gravimetric
	CAS # 71-55-6	(Lot 190123CG)			+/-	280.7250	µg/mL	Unstressed
	Purity 98%				+/-	287.2795	µg/mL	Stressed
9	1,1-Dichloropropene		5,048.9	µg/mL	+/-	32.0131	µg/mL	Gravimetric
	CAS # 563-58-6	(Lot 170301JLM)			+/-	283.3734	µg/mL	Unstressed
	Purity 99%				+/-	289.9907	µg/mL	Stressed
10	carbon tetrachloride		5,022.9	µg/mL	+/-	32.0378	µg/mL	Gravimetric
	CAS # 56-23-5	(Lot SHBG8938V)			+/-	281.9356	µg/mL	Unstressed
	Purity 99%				+/-	288.5183	µg/mL	Stressed
11	1,2-Dichloroethane		5,007.9	µg/mL	+/-	31.9421	µg/mL	Gravimetric
	CAS # 107-06-2	(Lot MKCH9948)			+/-	281.0937	µg/mL	Unstressed
	Purity 99%				+/-	287.6567	µg/mL	Stressed
12	Benzene		5,042.9	µg/mL	+/-	31.9750	µg/mL	Gravimetric
	CAS # 71-43-2	(Lot SHBG7317V)			+/-	283.0367	µg/mL	Unstressed
	Purity 99%				+/-	289.6461	µg/mL	Stressed
13	Trichloroethene		5,012.9	µg/mL	+/-	31.9740	µg/mL	Gravimetric
	CAS # 79-01-6	(Lot SHBJ4611)			+/-	281.3743	µg/mL	Unstressed
	Purity 99%				+/-	287.9439	µg/mL	Stressed
14	1,2-Dichloropropane		5,012.6	µg/mL	+/-	31.9724	µg/mL	Gravimetric
	CAS # 78-87-5	(Lot BCBR0882V)			+/-	281.3603	µg/mL	Unstressed
	Purity 99%				+/-	287.9295	µg/mL	Stressed
15	bromodichloromethane		5,039.1	µg/mL	+/-	32.1414	µg/mL	Gravimetric
	CAS # 75-27-4	(Lot MKCJ0238)			+/-	282.8477	µg/mL	Unstressed
	Purity 99%				+/-	289.4517	µg/mL	Stressed
16	Dibromomethane		5,047.3	µg/mL	+/-	32.0027	µg/mL	Gravimetric
	CAS # 74-95-3	(Lot 10201030)			+/-	283.2822	µg/mL	Unstressed
	Purity 99%				+/-	289.8973	µg/mL	Stressed
17	cis-1,3-Dichloropropene		5,015.1	µg/mL	+/-	31.9883	µg/mL	Gravimetric
	CAS # 10061-01-5	(Lot 200107JLM)			+/-	281.5006	µg/mL	Unstressed
	Purity 99%				+/-	288.0731	µg/mL	Stressed
18	Toluene		5,031.9	µg/mL	+/-	31.9053	µg/mL	Gravimetric
	CAS # 108-88-3	(Lot SHBH9895)			+/-	282.4193	µg/mL	Unstressed
	Purity 99%				+/-	289.0143	µg/mL	Stressed
19	trans-1,3-Dichloropropene		5,003.8	µg/mL	+/-	31.9158	µg/mL	Gravimetric
	CAS # 10061-02-6	(Lot 19420164-D1219)			+/-	280.8621	µg/mL	Unstressed
	Purity 99%				+/-	287.4198	µg/mL	Stressed
20	1,1,2-Trichloroethane		5,015.4	µg/mL	+/-	31.9899	µg/mL	Gravimetric
	CAS # 79-00-5	(Lot FGB01)			+/-	281.5146	µg/mL	Unstressed
	Purity 99%				+/-	288.0875	µg/mL	Stressed
21	1,3-Dichloropropane		5,042.4	µg/mL	+/-	31.9718	µg/mL	Gravimetric
	CAS # 142-28-9	(Lot BCBG2162V)			+/-	283.0086	µg/mL	Unstressed
	Purity 99%				+/-	289.6173	µg/mL	Stressed
22	Tetrachloroethene		5,014.3	µg/mL	+/-	31.9827	µg/mL	Gravimetric
	CAS # 127-18-4	(Lot SHBJ7422)			+/-	281.4515	µg/mL	Unstressed
	Purity 99%				+/-	288.0229	µg/mL	Stressed
23	dibromochloromethane		5,016.1	µg/mL	+/-	31.9947	µg/mL	Gravimetric
	CAS # 124-48-1	(Lot MKCK6472)			+/-	281.5567	µg/mL	Unstressed
	Purity 99%				+/-	288.1306	µg/mL	Stressed

24	1,2-Dibromoethane (EDB)		5,037.4	µg/mL	+/-	31.9401	µg/mL	Gravimetric
	CAS #	106-93-4	(Lot BCBP2268V)		+/-	282.7280	µg/mL	Unstressed
	Purity	99%			+/-	289.3302	µg/mL	Stressed
25	1-Chlorohexane		5,010.7	µg/mL	+/-	29.3390	µg/mL	Gravimetric
	CAS #	544-10-5	(Lot BCBS3368V)		+/-	280.9687	µg/mL	Unstressed
	Purity	98%			+/-	287.5420	µg/mL	Stressed
26	Chlorobenzene		5,009.0	µg/mL	+/-	31.9493	µg/mL	Gravimetric
	CAS #	108-90-7	(Lot SHBJ0839)		+/-	281.1568	µg/mL	Unstressed
	Purity	99%			+/-	287.7213	µg/mL	Stressed
27	1,1,1,2-Tetrachloroethane		5,038.6	µg/mL	+/-	31.9481	µg/mL	Gravimetric
	CAS #	630-20-6	(Lot MKBS3769V)		+/-	282.7981	µg/mL	Unstressed
	Purity	99%			+/-	289.4020	µg/mL	Stressed
28	Ethylbenzene		5,029.3	µg/mL	+/-	31.8886	µg/mL	Gravimetric
	CAS #	100-41-4	(Lot SHBJ3183)		+/-	282.2719	µg/mL	Unstressed
	Purity	99%			+/-	288.8635	µg/mL	Stressed
29	m-Xylene		5,038.4	µg/mL	+/-	31.9465	µg/mL	Gravimetric
	CAS #	108-38-3	(Lot SHBH8323)		+/-	282.7841	µg/mL	Unstressed
	Purity	99%			+/-	289.3876	µg/mL	Stressed
30	p-Xylene		5,038.0	µg/mL	+/-	31.9441	µg/mL	Gravimetric
	CAS #	106-42-3	(Lot SHBJ0052)		+/-	282.7630	µg/mL	Unstressed
	Purity	99%			+/-	289.3661	µg/mL	Stressed
31	o-Xylene		5,046.4	µg/mL	+/-	31.9972	µg/mL	Gravimetric
	CAS #	95-47-6	(Lot SHBH3432V)		+/-	283.2331	µg/mL	Unstressed
	Purity	99%			+/-	289.8471	µg/mL	Stressed
32	Styrene		5,047.0	µg/mL	+/-	32.0012	µg/mL	Gravimetric
	CAS #	100-42-5	(Lot MKBV4061V)		+/-	283.2682	µg/mL	Unstressed
	Purity	99%			+/-	289.8830	µg/mL	Stressed
33	Isopropylbenzene (cumene)		5,035.3	µg/mL	+/-	31.9267	µg/mL	Gravimetric
	CAS #	98-82-8	(Lot 10185056)		+/-	282.6087	µg/mL	Unstressed
	Purity	99%			+/-	289.2081	µg/mL	Stressed
34	bromoform		5,013.0	µg/mL	+/-	31.9748	µg/mL	Gravimetric
	CAS #	75-25-2	(Lot SHBJ4835)		+/-	281.3813	µg/mL	Unstressed
	Purity	99%			+/-	287.9511	µg/mL	Stressed
35	1,1,2,2-Tetrachloroethane		5,016.0	µg/mL	+/-	31.9939	µg/mL	Gravimetric
	CAS #	79-34-5	(Lot CFA4D)		+/-	281.5497	µg/mL	Unstressed
	Purity	99%			+/-	288.1234	µg/mL	Stressed
36	1,2,3-Trichloropropane		5,033.4	µg/mL	+/-	31.9148	µg/mL	Gravimetric
	CAS #	96-18-4	(Lot BCBH8722V)		+/-	282.5035	µg/mL	Unstressed
	Purity	99%			+/-	289.1004	µg/mL	Stressed
37	n-Propylbenzene		5,032.4	µg/mL	+/-	31.9084	µg/mL	Gravimetric
	CAS #	103-65-1	(Lot MKBJ0332V)		+/-	282.4473	µg/mL	Unstressed
	Purity	99%			+/-	289.0430	µg/mL	Stressed
38	Bromobenzene		5,035.5	µg/mL	+/-	31.9282	µg/mL	Gravimetric
	CAS #	108-86-1	(Lot WXBC5147V)		+/-	282.6227	µg/mL	Unstressed
	Purity	99%			+/-	289.2225	µg/mL	Stressed
39	1,3,5-Trimethylbenzene		5,029.8	µg/mL	+/-	31.8918	µg/mL	Gravimetric
	CAS #	108-67-8	(Lot BCBS7648V)		+/-	282.3000	µg/mL	Unstressed
	Purity	99%			+/-	288.8922	µg/mL	Stressed

40	2-Chlorotoluene		5,037.5	µg/mL	+/-	31.9409	µg/mL	Gravimetric	
	CAS #	95-49-8	(Lot MKBW5554V)			+/-	282.7350	µg/mL	Unstressed
	Purity	99%				+/-	289.3373	µg/mL	Stressed
41	4-Chlorotoluene		5,039.1	µg/mL	+/-	31.9512	µg/mL	Gravimetric	
	CAS #	106-43-4	(Lot MKBL7753V)			+/-	282.8262	µg/mL	Unstressed
	Purity	99%				+/-	289.4307	µg/mL	Stressed
42	tert-Butylbenzene		5,049.8	µg/mL	+/-	32.0186	µg/mL	Gravimetric	
	CAS #	98-06-6	(Lot STBD6954V)			+/-	283.4225	µg/mL	Unstressed
	Purity	99%				+/-	290.0409	µg/mL	Stressed
43	1,2,4-Trimethylbenzene		5,046.8	µg/mL	+/-	31.9996	µg/mL	Gravimetric	
	CAS #	95-63-6	(Lot MKBJ6229V)			+/-	283.2544	µg/mL	Unstressed
	Purity	98%				+/-	289.8689	µg/mL	Stressed
44	sec-Butylbenzene		5,042.8	µg/mL	+/-	31.9742	µg/mL	Gravimetric	
	CAS #	135-98-8	(Lot MKBR9260V)			+/-	283.0296	µg/mL	Unstressed
	Purity	99%				+/-	289.6389	µg/mL	Stressed
45	p-Isopropyltoluene (p-Cymene)		5,038.4	µg/mL	+/-	31.9465	µg/mL	Gravimetric	
	CAS #	99-87-6	(Lot MKBV3556V)			+/-	282.7841	µg/mL	Unstressed
	Purity	99%				+/-	289.3876	µg/mL	Stressed
46	1,3-Dichlorobenzene		5,017.6	µg/mL	+/-	32.0043	µg/mL	Gravimetric	
	CAS #	541-73-1	(Lot BCBQ7100V)			+/-	281.6409	µg/mL	Unstressed
	Purity	99%				+/-	288.2167	µg/mL	Stressed
47	1,4-Dichlorobenzene		5,023.8	µg/mL	+/-	32.0433	µg/mL	Gravimetric	
	CAS #	106-46-7	(Lot MKBS4401V)			+/-	281.9847	µg/mL	Unstressed
	Purity	99%				+/-	288.5686	µg/mL	Stressed
48	n-Butylbenzene		5,024.8	µg/mL	+/-	31.8601	µg/mL	Gravimetric	
	CAS #	104-51-8	(Lot 09804AE)			+/-	282.0194	µg/mL	Unstressed
	Purity	99%				+/-	288.6050	µg/mL	Stressed
49	1,2-Dichlorobenzene		5,024.5	µg/mL	+/-	32.0481	µg/mL	Gravimetric	
	CAS #	95-50-1	(Lot SHBG3111V)			+/-	282.0268	µg/mL	Unstressed
	Purity	99%				+/-	288.6117	µg/mL	Stressed
50	1,2-Dibromo-3-chloropropane		5,036.4	µg/mL	+/-	31.9338	µg/mL	Gravimetric	
	CAS #	96-12-8	(Lot FBL01)			+/-	282.6718	µg/mL	Unstressed
	Purity	99%				+/-	289.2727	µg/mL	Stressed
51	1,3,5-Trichlorobenzene		5,034.0	µg/mL	+/-	29.4752	µg/mL	Gravimetric	
	CAS #	108-70-3	(Lot 11319AS)			+/-	282.2729	µg/mL	Unstressed
	Purity	99%				+/-	288.8768	µg/mL	Stressed
52	1,2,4-Trichlorobenzene		5,036.5	µg/mL	+/-	31.9346	µg/mL	Gravimetric	
	CAS #	120-82-1	(Lot SHBJ0905)			+/-	282.6789	µg/mL	Unstressed
	Purity	99%				+/-	289.2799	µg/mL	Stressed
53	Hexachlorobutadiene		5,033.6	µg/mL	+/-	31.9164	µg/mL	Gravimetric	
	CAS #	87-68-3	(Lot J31X013)			+/-	282.5175	µg/mL	Unstressed
	Purity	99%				+/-	289.1148	µg/mL	Stressed
54	Naphthalene		5,033.6	µg/mL	+/-	31.9164	µg/mL	Gravimetric	
	CAS #	91-20-3	(Lot MKBW2603V)			+/-	282.5175	µg/mL	Unstressed
	Purity	99%				+/-	289.1148	µg/mL	Stressed
55	1,2,3-Trichlorobenzene		5,016.0	µg/mL	+/-	31.8046	µg/mL	Gravimetric	
	CAS #	87-61-6	(Lot MKBS4859V)			+/-	281.5283	µg/mL	Unstressed
	Purity	99%				+/-	288.1024	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)

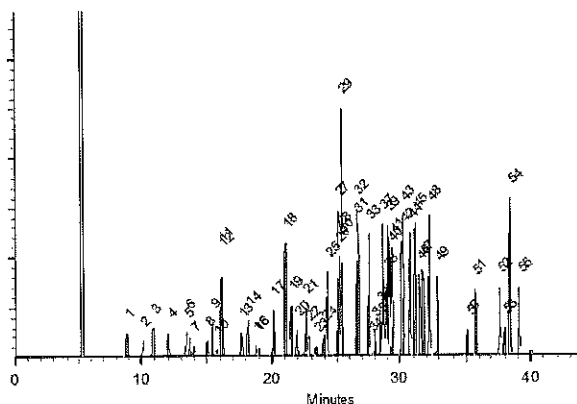
Carrier Gas:
hydrogen-constant pressure 8.0 psi.

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:
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.

Cyndee L. Crust
Cyndee L. Crust - Mix Technician

Date Mixed: 09-Mar-2020 Balance: B251644995

Feng-Yan Lo
Feng-Yan Lo - GC Analyst

Date Passed: 11-Mar-2020

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_V#2B_00083



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

Certificate of Analysis

www.restek.com

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. : 56734 **Lot No.:** A0147800
Description : Custom V # 2B Standard
Custom V #2B Standard 12,500-125,000µg/mL, P&T Methanol, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : April 30, 2021 **Storage:** 0°C or colder

Elution Order	Compound	CAS #	Percent Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	2-Propanol (isopropanol)	67-63-0	99%	25,038.8 µg/mL	+/- 146.6077 µg/mL
2	tert-Butanol (TBA)	75-65-0	99%	25,051.6 µg/mL	+/- 146.6826 µg/mL
3	Propionitrile	107-12-0	99%	25,036.8 µg/mL	+/- 146.5960 µg/mL
4	Methacrylonitrile	126-98-7	99%	12,531.6 µg/mL	+/- 73.3753 µg/mL
5	Isobutanol (2-Methyl-1-propanol)	78-83-1	99%	62,524.0 µg/mL	+/- 366.0729 µg/mL
6	1-Butanol	71-36-3	99%	125,066.8 µg/mL	+/- 732.2559 µg/mL
7	1,4-Dioxane	123-91-1	99%	62,523.6 µg/mL	+/- 366.0705 µg/mL
8	trans-1,4-dichloro-2-butene	110-57-6	94%	12,530.6 µg/mL	+/- 73.3693 µg/mL
Solvent:	P&T Methanol	67-56-1	99%		

Specific Reference Material Notes:

This RM (Reference Material) is not a CRM (Certified Reference Material) due to the 1-butanol concentration exceeding the maximum concentration on Restek's ISO Guide 34 scope of accreditation.

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:

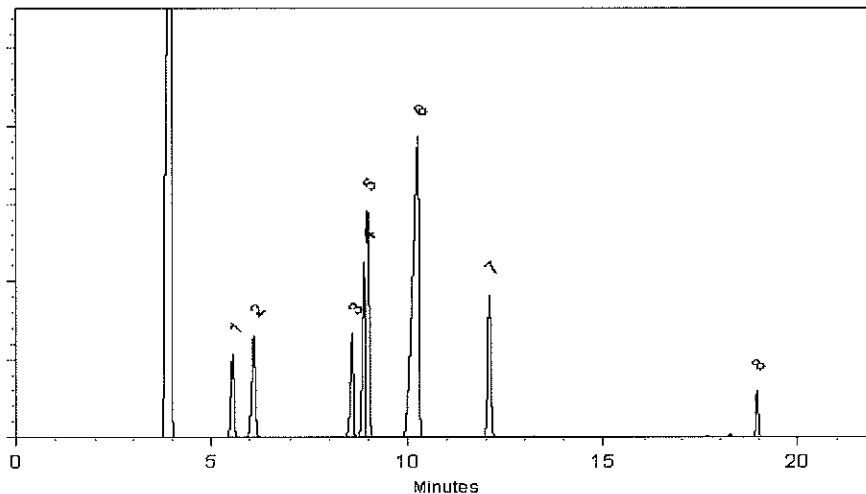
200°C

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.

Clara Winkle

Clara Winkle - Operations Technician I

Date Mixed: 03-Apr-2019

Balance: B251644995

Jennifer L Pollino

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 10-Apr-2019

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

General Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Uncertainty Value Notes:

- Uncertainties are determined using data from balances and glassware, raw material purity, and, when significant, equipment tolerances or calibration results.

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

MSV_V#3B_00037



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 56736 **Lot No.:** A0158677
Description : Custom V # 3B Standard
Custom V #3B Standard 12,500-25,000µg/mL, P&T Methanol/Water (90:10), 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : March 31, 2023 **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 (Lot MKCK2598) Purity 99%	25,001.0 µg/mL	+/- 146.3864 µg/mL	+/- 1,236.8670 µg/mL	+/- 1,267.6168 µg/mL	Gravimetric Unstressed Stressed
2	Acrylonitrile CAS # 107-13-1 (Lot A0387097) Purity 99%	12,511.0 µg/mL	+/- 73.2547 µg/mL	+/- 618.9529 µg/mL	+/- 634.3408 µg/mL	Gravimetric Unstressed Stressed
3	2-Butanone (MEK) CAS # 78-93-3 (Lot SHBK9603) Purity 99%	25,007.0 µg/mL	+/- 146.4215 µg/mL	+/- 1,237.1638 µg/mL	+/- 1,267.9210 µg/mL	Gravimetric Unstressed Stressed
4	Tetrahydrofuran CAS # 109-99-9 (Lot SHBK8926) Purity 99%	25,049.0 µg/mL	+/- 146.6674 µg/mL	+/- 1,239.2417 µg/mL	+/- 1,270.0505 µg/mL	Gravimetric Unstressed Stressed
5	2-Nitropropane CAS # 79-46-9 (Lot BCCB9352) Purity 97%	24,758.3 µg/mL	+/- 144.9652 µg/mL	+/- 1,224.8589 µg/mL	+/- 1,255.3102 µg/mL	Gravimetric Unstressed Stressed
6	4-Methyl-2-pentanone (MIBK) CAS # 108-10-1 (Lot SHBL5515) Purity 99%	25,014.0 µg/mL	+/- 146.4625 µg/mL	+/- 1,237.5101 µg/mL	+/- 1,268.2759 µg/mL	Gravimetric Unstressed Stressed
7	2-Hexanone CAS # 591-78-6 (Lot MKCL1599) Purity 99%	25,016.0 µg/mL	+/- 146.4742 µg/mL	+/- 1,237.6091 µg/mL	+/- 1,268.3773 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)

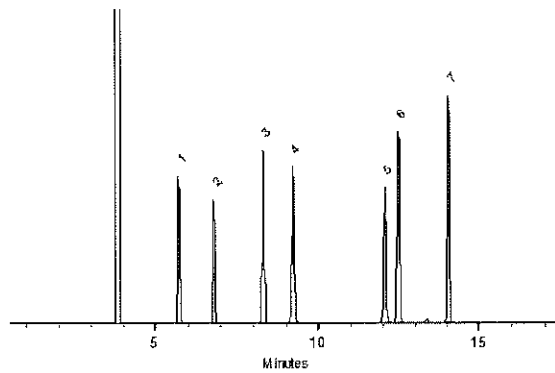
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

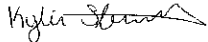
Inj. Temp:
200°C

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.


Kyle Struble - Operations Technician I

Date Mixed: 10-Mar-2020 **Balance:** B251644995


Feng-Yun Lo - QC Analyst

Date Passed: 12-Mar-2020

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_V#3B_00048



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 56736 **Lot No.:** A0158677
Description : Custom V # 3B Standard
Custom V #3B Standard 12,500-25,000µg/mL, P&T Methanol/Water (90:10), 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : March 31, 2023 **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 (Lot MKCK2598) Purity 99%	25,001.0 µg/mL	+/- 146.3864	µg/mL	Gravimetric
			+/- 1,236.8670	µg/mL	Unstressed
			+/- 1,267.6168	µg/mL	Stressed
2	Acrylonitrile CAS # 107-13-1 (Lot A0387097) Purity 99%	12,511.0 µg/mL	+/- 73.2547	µg/mL	Gravimetric
			+/- 618.9529	µg/mL	Unstressed
			+/- 634.3408	µg/mL	Stressed
3	2-Butanone (MEK) CAS # 78-93-3 (Lot SHBK9603) Purity 99%	25,007.0 µg/mL	+/- 146.4215	µg/mL	Gravimetric
			+/- 1,237.1638	µg/mL	Unstressed
			+/- 1,267.9210	µg/mL	Stressed
4	Tetrahydrofuran CAS # 109-99-9 (Lot SHBK8926) Purity 99%	25,049.0 µg/mL	+/- 146.6674	µg/mL	Gravimetric
			+/- 1,239.2417	µg/mL	Unstressed
			+/- 1,270.0505	µg/mL	Stressed
5	2-Nitropropane CAS # 79-46-9 (Lot BCCB9352) Purity 97%	24,758.3 µg/mL	+/- 144.9652	µg/mL	Gravimetric
			+/- 1,224.8589	µg/mL	Unstressed
			+/- 1,255.3102	µg/mL	Stressed
6	4-Methyl-2-pentanone (MIBK) CAS # 108-10-1 (Lot SHBL5515) Purity 99%	25,014.0 µg/mL	+/- 146.4625	µg/mL	Gravimetric
			+/- 1,237.5101	µg/mL	Unstressed
			+/- 1,268.2759	µg/mL	Stressed
7	2-Hexanone CAS # 591-78-6 (Lot MKCL1599) Purity 99%	25,016.0 µg/mL	+/- 146.4742	µg/mL	Gravimetric
			+/- 1,237.6091	µg/mL	Unstressed
			+/- 1,268.3773	µg/mL	Stressed

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

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

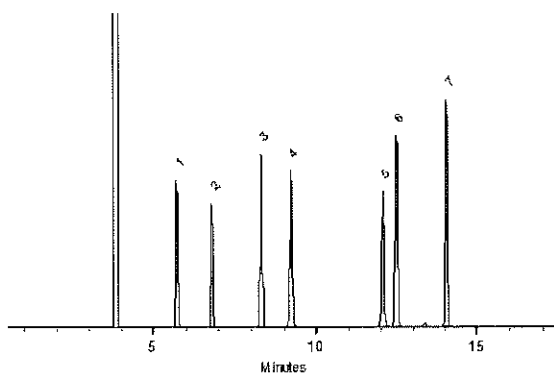
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

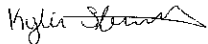
Inj. Temp:
200°C

Det. Temp:
250°C

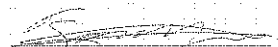
Det. Type:
FID



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


Kyle Struble - Operations Technician I

Date Mixed: 10-Mar-2020 **Balance:** B251644995


Feng-Yun Lo - QC Analyst

Date Passed: 12-Mar-2020

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_V#4C_00058



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 572312 **Lot No.:** A0158660
Description : Custom V #4C (Rev 3) Standard
Custom V #4C (Rev 3) Standard 5,000µg/mL, P&T Methanol, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : March 31, 2021 **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	1,3-Butadiene	5,002.1 µg/mL	+/-	39.8717	µg/mL	Gravimetric
	CAS # 106-99-0 (Lot SHBK2299)		+/-	303.0271	µg/mL	Unstressed
	Purity 99%		+/-	303.7407	µg/mL	Stressed
2	1,2-Dichloro-1,1,2-trifluoroethane (CFC-123a)	5,001.4 µg/mL	+/-	47.3932	µg/mL	Gravimetric
	CAS # 354-23-4 (Lot Q9B-64)		+/-	304.0702	µg/mL	Unstressed
	Purity 99%		+/-	304.7812	µg/mL	Stressed
3	n-Pentane (C5)	5,025.0 µg/mL	+/-	29.4225	µg/mL	Gravimetric
	CAS # 109-66-0 (Lot SHBL0400)		+/-	303.2005	µg/mL	Unstressed
	Purity 99%		+/-	303.9203	µg/mL	Stressed
4	1,1,2-Trichlorotrifluoroethane (CFC-113)	5,024.0 µg/mL	+/-	29.4166	µg/mL	Gravimetric
	CAS # 76-13-1 (Lot 00016133)		+/-	303.1402	µg/mL	Unstressed
	Purity 99%		+/-	303.8598	µg/mL	Stressed
5	Iodomethane (methyl iodide)	5,035.0 µg/mL	+/-	29.4810	µg/mL	Gravimetric
	CAS # 74-88-4 (Lot D4406-0122JM)		+/-	303.8039	µg/mL	Unstressed
	Purity 99%		+/-	304.5251	µg/mL	Stressed
6	Carbon disulfide	5,046.0 µg/mL	+/-	29.5454	µg/mL	Gravimetric
	CAS # 75-15-0 (Lot U22D706)		+/-	304.4676	µg/mL	Unstressed
	Purity 99%		+/-	305.1904	µg/mL	Stressed
7	Methyl-tert-butyl ether (MTBE)	5,025.0 µg/mL	+/-	29.4225	µg/mL	Gravimetric
	CAS # 1634-04-4 (Lot SHBK4806)		+/-	303.2005	µg/mL	Unstressed
	Purity 99%		+/-	303.9203	µg/mL	Stressed

8	n-Hexane (C6)		5,025.5	µg/mL	+/-	29.4254	µg/mL	Gravimetric
	CAS #	110-54-3 (Lot SHBL0924)			+/-	303.2307	µg/mL	Unstressed
	Purity	99%			+/-	303.9505	µg/mL	Stressed
9	Diisopropyl ether (DIPE)		5,015.0	µg/mL	+/-	29.3639	µg/mL	Gravimetric
	CAS #	108-20-3 (Lot SHBH1927V)			+/-	302.5971	µg/mL	Unstressed
	Purity	99%			+/-	303.3154	µg/mL	Stressed
10	Chloroprene (2-chloro-1,3-butadiene)		5,046.5	µg/mL	+/-	29.5484	µg/mL	Gravimetric
	CAS #	126-99-8 (Lot 191204JLM)			+/-	304.4978	µg/mL	Unstressed
	Purity	99%			+/-	305.2206	µg/mL	Stressed
11	Ethyl-tert-butyl ether (ETBE)		5,026.5	µg/mL	+/-	29.4313	µg/mL	Gravimetric
	CAS #	637-92-3 (Lot MKCJ3589)			+/-	303.2910	µg/mL	Unstressed
	Purity	99%			+/-	304.0110	µg/mL	Stressed
12	Cyclohexane		5,028.5	µg/mL	+/-	29.4430	µg/mL	Gravimetric
	CAS #	110-82-7 (Lot MKCF5831)			+/-	303.4117	µg/mL	Unstressed
	Purity	99%			+/-	304.1319	µg/mL	Stressed
13	tert-Amyl methyl ether (TAME)		5,021.0	µg/mL	+/-	29.3991	µg/mL	Gravimetric
	CAS #	994-05-8 (Lot HMBG6382V)			+/-	302.9592	µg/mL	Unstressed
	Purity	99%			+/-	303.6783	µg/mL	Stressed
14	n-Heptane (C7)		5,044.1	µg/mL	+/-	29.5341	µg/mL	Gravimetric
	CAS #	142-82-5 (Lot SHBK8626)			+/-	304.3506	µg/mL	Unstressed
	Purity	98%			+/-	305.0730	µg/mL	Stressed
15	tert-Amyl ethyl ether (TAEE)		5,018.5	µg/mL	+/-	29.3844	µg/mL	Gravimetric
	CAS #	919-94-8 (Lot IKVYB)			+/-	302.8083	µg/mL	Unstressed
	Purity	99%			+/-	303.5271	µg/mL	Stressed
16	Methyl methacrylate		5,028.0	µg/mL	+/-	29.4400	µg/mL	Gravimetric
	CAS #	80-62-6 (Lot MKCG6589)			+/-	303.3815	µg/mL	Unstressed
	Purity	99%			+/-	304.1017	µg/mL	Stressed
17	Ethyl methacrylate		5,043.0	µg/mL	+/-	29.5279	µg/mL	Gravimetric
	CAS #	97-63-2 (Lot SHBF9649V)			+/-	304.2866	µg/mL	Unstressed
	Purity	99%			+/-	305.0089	µg/mL	Stressed
18	Benzyl chloride		5,019.5	µg/mL	+/-	29.3903	µg/mL	Gravimetric
	CAS #	100-44-7 (Lot SHBH2102V)			+/-	302.8686	µg/mL	Unstressed
	Purity	99%			+/-	303.5876	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-S02.2 (cat.#10916)

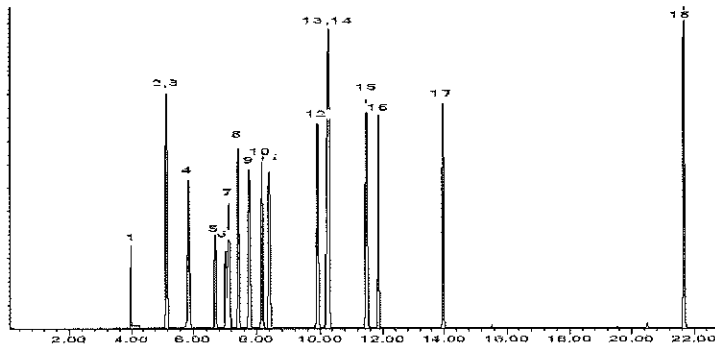
Carrier Gas:
helium-constant pressure 30 psi

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

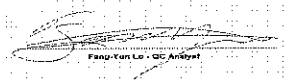


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


Tom Sucka - Mix Technician

Date Mixed: 10-Mar-2020

Balance: B707717271


Fang-tun, Lo - GC Analyst

Date Passed: 25-Mar-2020

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_V#4C_00078



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 572312 **Lot No.:** A0158660
Description : Custom V #4C (Rev 3) Standard
Custom V #4C (Rev 3) Standard 5,000µg/mL, P&T Methanol, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : March 31, 2021 **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	1,3-Butadiene	5,002.1 µg/mL	+/-	39.8717	µg/mL	Gravimetric
	CAS # 106-99-0 (Lot SHBK2299)		+/-	303.0271	µg/mL	Unstressed
	Purity 99%		+/-	303.7407	µg/mL	Stressed
2	1,2-Dichloro-1,1,2-trifluoroethane (CFC-123a)	5,001.4 µg/mL	+/-	47.3932	µg/mL	Gravimetric
	CAS # 354-23-4 (Lot Q9B-64)		+/-	304.0702	µg/mL	Unstressed
	Purity 99%		+/-	304.7812	µg/mL	Stressed
3	n-Pentane (C5)	5,025.0 µg/mL	+/-	29.4225	µg/mL	Gravimetric
	CAS # 109-66-0 (Lot SHBL0400)		+/-	303.2005	µg/mL	Unstressed
	Purity 99%		+/-	303.9203	µg/mL	Stressed
4	1,1,2-Trichlorotrifluoroethane (CFC-113)	5,024.0 µg/mL	+/-	29.4166	µg/mL	Gravimetric
	CAS # 76-13-1 (Lot 00016133)		+/-	303.1402	µg/mL	Unstressed
	Purity 99%		+/-	303.8598	µg/mL	Stressed
5	Iodomethane (methyl iodide)	5,035.0 µg/mL	+/-	29.4810	µg/mL	Gravimetric
	CAS # 74-88-4 (Lot D4406-0122JM)		+/-	303.8039	µg/mL	Unstressed
	Purity 99%		+/-	304.5251	µg/mL	Stressed
6	Carbon disulfide	5,046.0 µg/mL	+/-	29.5454	µg/mL	Gravimetric
	CAS # 75-15-0 (Lot U22D706)		+/-	304.4676	µg/mL	Unstressed
	Purity 99%		+/-	305.1904	µg/mL	Stressed
7	Methyl-tert-butyl ether (MTBE)	5,025.0 µg/mL	+/-	29.4225	µg/mL	Gravimetric
	CAS # 1634-04-4 (Lot SHBK4806)		+/-	303.2005	µg/mL	Unstressed
	Purity 99%		+/-	303.9203	µg/mL	Stressed

8	n-Hexane (C6)		5,025.5	µg/mL	+/-	29.4254	µg/mL	Gravimetric
	CAS #	110-54-3 (Lot SHBL0924)			+/-	303.2307	µg/mL	Unstressed
	Purity	99%			+/-	303.9505	µg/mL	Stressed
9	Diisopropyl ether (DIPE)		5,015.0	µg/mL	+/-	29.3639	µg/mL	Gravimetric
	CAS #	108-20-3 (Lot SHBH1927V)			+/-	302.5971	µg/mL	Unstressed
	Purity	99%			+/-	303.3154	µg/mL	Stressed
10	Chloroprene (2-chloro-1,3-butadiene)		5,046.5	µg/mL	+/-	29.5484	µg/mL	Gravimetric
	CAS #	126-99-8 (Lot 191204JLM)			+/-	304.4978	µg/mL	Unstressed
	Purity	99%			+/-	305.2206	µg/mL	Stressed
11	Ethyl-tert-butyl ether (ETBE)		5,026.5	µg/mL	+/-	29.4313	µg/mL	Gravimetric
	CAS #	637-92-3 (Lot MKCJ3589)			+/-	303.2910	µg/mL	Unstressed
	Purity	99%			+/-	304.0110	µg/mL	Stressed
12	Cyclohexane		5,028.5	µg/mL	+/-	29.4430	µg/mL	Gravimetric
	CAS #	110-82-7 (Lot MKCF5831)			+/-	303.4117	µg/mL	Unstressed
	Purity	99%			+/-	304.1319	µg/mL	Stressed
13	tert-Amyl methyl ether (TAME)		5,021.0	µg/mL	+/-	29.3991	µg/mL	Gravimetric
	CAS #	994-05-8 (Lot HMBG6382V)			+/-	302.9592	µg/mL	Unstressed
	Purity	99%			+/-	303.6783	µg/mL	Stressed
14	n-Heptane (C7)		5,044.1	µg/mL	+/-	29.5341	µg/mL	Gravimetric
	CAS #	142-82-5 (Lot SHBK8626)			+/-	304.3506	µg/mL	Unstressed
	Purity	98%			+/-	305.0730	µg/mL	Stressed
15	tert-Amyl ethyl ether (TAEE)		5,018.5	µg/mL	+/-	29.3844	µg/mL	Gravimetric
	CAS #	919-94-8 (Lot IKVYB)			+/-	302.8083	µg/mL	Unstressed
	Purity	99%			+/-	303.5271	µg/mL	Stressed
16	Methyl methacrylate		5,028.0	µg/mL	+/-	29.4400	µg/mL	Gravimetric
	CAS #	80-62-6 (Lot MKCG6589)			+/-	303.3815	µg/mL	Unstressed
	Purity	99%			+/-	304.1017	µg/mL	Stressed
17	Ethyl methacrylate		5,043.0	µg/mL	+/-	29.5279	µg/mL	Gravimetric
	CAS #	97-63-2 (Lot SHBF9649V)			+/-	304.2866	µg/mL	Unstressed
	Purity	99%			+/-	305.0089	µg/mL	Stressed
18	Benzyl chloride		5,019.5	µg/mL	+/-	29.3903	µg/mL	Gravimetric
	CAS #	100-44-7 (Lot SHBH2102V)			+/-	302.8686	µg/mL	Unstressed
	Purity	99%			+/-	303.5876	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)

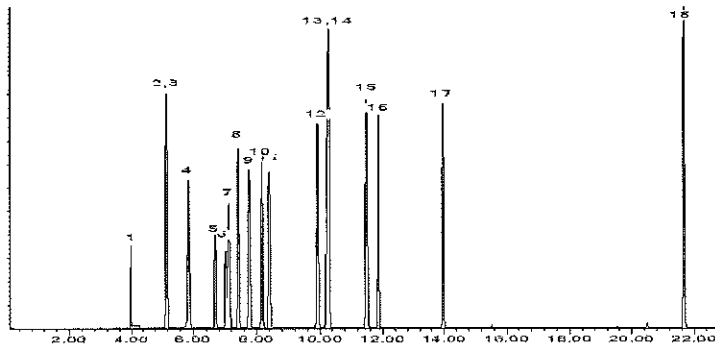
Carrier Gas:
helium-constant pressure 30 psi

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

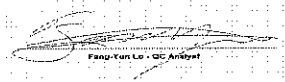


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


Tom Suckal - Mix Technician

Date Mixed: 10-Mar-2020

Balance: B707717271



Date Passed: 25-Mar-2020

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_V#6_00020



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 558268 **Lot No.:** A0158625
Description : Custom CS#6 Standard
Custom CS#6 Standard 5,000µg/mL, P&T Methanol, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : September 30, 2021 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L., K=2)		
1	Methyl acetate CAS # 79-20-9 (Lot SHBK5436) Purity 99%	5,039.0 µg/mL	+/- 29.5717 µg/mL +/- 304.0518 µg/mL +/- 304.7735 µg/mL	Gravimetric Unstressed Stressed	
2	Allyl chloride (3-chloropropene) CAS # 107-05-1 (Lot 191118KJ) Purity 99%	5,046.0 µg/mL	+/- 29.6128 µg/mL +/- 304.4742 µg/mL +/- 305.1969 µg/mL	Gravimetric Unstressed Stressed	
3	Bromochloromethane CAS # 74-97-5 (Lot 00008541) Purity 98%	5,040.1 µg/mL	+/- 29.5784 µg/mL +/- 304.1206 µg/mL +/- 304.8425 µg/mL	Gravimetric Unstressed Stressed	
4	Methylcyclohexane CAS # 108-87-2 (Lot SHBJ0457) Purity 99%	5,041.0 µg/mL	+/- 29.5834 µg/mL +/- 304.1725 µg/mL +/- 304.8945 µg/mL	Gravimetric Unstressed Stressed	
5	Pentachloroethane CAS # 76-01-7 (Lot 8866000) Purity 99%	5,035.0 µg/mL	+/- 29.5482 µg/mL +/- 303.8104 µg/mL +/- 304.5316 µg/mL	Gravimetric Unstressed Stressed	
6	1,2,3-Trimethylbenzene CAS # 526-73-8 (Lot 8766.05-14) Purity 99%	5,012.0 µg/mL	+/- 29.4132 µg/mL +/- 302.4226 µg/mL +/- 303.1405 µg/mL	Gravimetric Unstressed Stressed	
7	1,3-Diethylbenzene CAS # 141-93-5 (Lot BCBT8967) Purity 98%	5,041.1 µg/mL	+/- 29.5841 µg/mL +/- 304.1797 µg/mL +/- 304.9017 µg/mL	Gravimetric Unstressed Stressed	

8	1,4-Diethylbenzene CAS # 105-05-5 Purity 98%	(Lot RLHJK)	5,035.2 µg/mL	+/- 29.5496 +/- 303.8249 +/- 304.5461	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	1,2-Diethylbenzene CAS # 135-01-3 Purity 99%	(Lot ECH2970181)	5,011.0 µg/mL	+/- 29.4074 +/- 302.3623 +/- 303.0800	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	2-Methylnaphthalene CAS # 91-57-6 Purity 96%	(Lot STBG8884)	5,023.7 µg/mL	+/- 29.4818 +/- 303.1274 +/- 303.8469	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

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

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

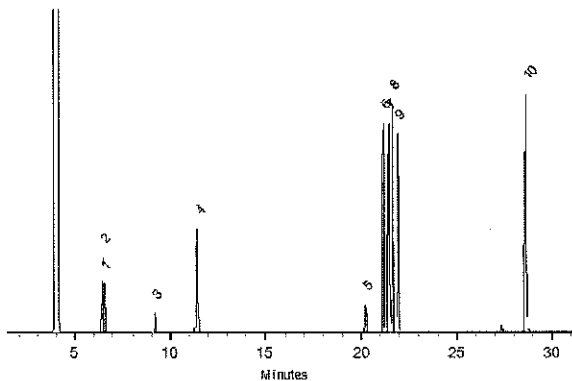
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

Inj. Temp:
200°C

Det. Temp:
250°C


Det. Type:
FID



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


Tom Suckar - Mix Technician

Date Mixed: 09-Mar-2020 Balance: B707717271


Tom Suckar - QC Analyst

Date Passed: 12-Mar-2020

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
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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

MSV_V#6_00032



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 558268 **Lot No.:** A0158625
Description : Custom CS#6 Standard
Custom CS#6 Standard 5,000µg/mL, P&T Methanol, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : September 30, 2021 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L., K=2)			
1	Methyl acetate CAS # 79-20-9 Purity 99% (Lot SHBK5436)	5,039.0 µg/mL	+/- 29.5717	µg/mL	Gravimetric	
			+/- 304.0518	µg/mL	Unstressed	
			+/- 304.7735	µg/mL	Stressed	
2	Allyl chloride (3-chloropropene) CAS # 107-05-1 Purity 99% (Lot 191118KJ)	5,046.0 µg/mL	+/- 29.6128	µg/mL	Gravimetric	
			+/- 304.4742	µg/mL	Unstressed	
			+/- 305.1969	µg/mL	Stressed	
3	Bromochloromethane CAS # 74-97-5 Purity 98% (Lot 00008541)	5,040.1 µg/mL	+/- 29.5784	µg/mL	Gravimetric	
			+/- 304.1206	µg/mL	Unstressed	
			+/- 304.8425	µg/mL	Stressed	
4	Methylcyclohexane CAS # 108-87-2 Purity 99% (Lot SHBJ0457)	5,041.0 µg/mL	+/- 29.5834	µg/mL	Gravimetric	
			+/- 304.1725	µg/mL	Unstressed	
			+/- 304.8945	µg/mL	Stressed	
5	Pentachloroethane CAS # 76-01-7 Purity 99% (Lot 8866000)	5,035.0 µg/mL	+/- 29.5482	µg/mL	Gravimetric	
			+/- 303.8104	µg/mL	Unstressed	
			+/- 304.5316	µg/mL	Stressed	
6	1,2,3-Trimethylbenzene CAS # 526-73-8 Purity 99% (Lot 8766.05-14)	5,012.0 µg/mL	+/- 29.4132	µg/mL	Gravimetric	
			+/- 302.4226	µg/mL	Unstressed	
			+/- 303.1405	µg/mL	Stressed	
7	1,3-Diethylbenzene CAS # 141-93-5 Purity 98% (Lot BCBT8967)	5,041.1 µg/mL	+/- 29.5841	µg/mL	Gravimetric	
			+/- 304.1797	µg/mL	Unstressed	
			+/- 304.9017	µg/mL	Stressed	

8	1,4-Diethylbenzene CAS # 105-05-5 Purity 98%	(Lot RLHJK)	5,035.2 µg/mL	+/- 29.5496 +/- 303.8249 +/- 304.5461	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	1,2-Diethylbenzene CAS # 135-01-3 Purity 99%	(Lot ECH2970181)	5,011.0 µg/mL	+/- 29.4074 +/- 302.3623 +/- 303.0800	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
10	2-Methylnaphthalene CAS # 91-57-6 Purity 96%	(Lot STBG8884)	5,023.7 µg/mL	+/- 29.4818 +/- 303.1274 +/- 303.8469	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

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

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

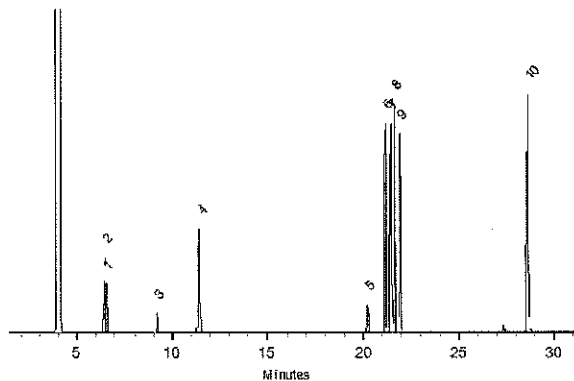
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

Inj. Temp:
200°C

Det. Temp:
250°C


Det. Type:
FID



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


Tom Suckar - Mix Technician

Date Mixed: 09-Mar-2020 Balance: B707717271


Tom Suckar - QC Analyst

Date Passed: 12-Mar-2020

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_V_Gas_00089



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 55669 **Lot No.:** A0150705
Description : Custom 502.2 "V" Gas Mix
Custom 502.2 "V" Gas Mix 2,000µg/mL, P&T Methanol, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : August 31, 2026 **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%	2,001.7 µg/mL	+/- 16.1239	µg/mL	Gravimetric	
			+/- 112.7879	µg/mL	Unstressed	
			+/- 115.4014	µg/mL	Stressed	
2	Chloromethane (methyl chloride) CAS # 74-87-3 (Lot SHBK6571) Purity 99%	2,000.3 µg/mL	+/- 18.7162	µg/mL	Gravimetric	
			+/- 113.1078	µg/mL	Unstressed	
			+/- 115.7104	µg/mL	Stressed	
3	Vinyl chloride CAS # 75-01-4 (Lot 00015559) Purity 99%	2,006.5 µg/mL	+/- 18.3560	µg/mL	Gravimetric	
			+/- 113.3921	µg/mL	Unstressed	
			+/- 116.0044	µg/mL	Stressed	
4	Bromomethane (methyl bromide) CAS # 74-83-9 (Lot 101604) Purity 99%	1,999.6 µg/mL	+/- 20.0741	µg/mL	Gravimetric	
			+/- 113.3042	µg/mL	Unstressed	
			+/- 115.9007	µg/mL	Stressed	
5	Chloroethane (ethyl chloride) CAS # 75-00-3 (Lot 107-401039114-1) Purity 99%	1,998.5 µg/mL	+/- 16.7167	µg/mL	Gravimetric	
			+/- 112.6955	µg/mL	Unstressed	
			+/- 115.3027	µg/mL	Stressed	
6	Trichlorofluoromethane (CFC-11) CAS # 75-69-4 (Lot SHBH4155V) Purity 99%	2,000.0 µg/mL	+/- 14.1138	µg/mL	Gravimetric	
			+/- 112.4230	µg/mL	Unstressed	
			+/- 115.0403	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)

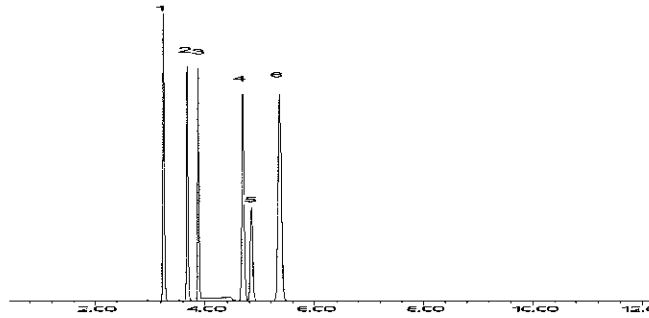
Carrier Gas:
helium-constant flow 2.0 ml/min.

Temp. Program:
40°C (hold 6 min.) to 100°C
@ 5°C/min.

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD

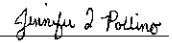


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


Tom Suckar - Mix Technician

Date Mixed: 10-Jul-2019

Balance: B251644995


Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 16-Jul-2019

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_V_Gas_00132



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 55669 **Lot No.:** A0159812

Description : Custom 502.2 "V" Gas Mix
Custom 502.2 "V" Gas Mix 2,000µg/mL, P&T Methanol, 1mL/ampul

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

Expiration Date : May 31, 2027 **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)	2,005.1 µg/mL	+/-	16.8576	µg/mL	Gravimetric
	CAS # 75-71-8 (Lot 00012554)		+/-	113.0809	µg/mL	Unstressed
	Purity 99%		+/-	115.6966	µg/mL	Stressed
2	Chloromethane (methyl chloride)	2,003.5 µg/mL	+/-	19.3327	µg/mL	Gravimetric
	CAS # 74-87-3 (Lot SHBK6571)		+/-	113.3884	µg/mL	Unstressed
	Purity 99%		+/-	115.9929	µg/mL	Stressed
3	Vinyl chloride	2,001.1 µg/mL	+/-	18.1213	µg/mL	Gravimetric
	CAS # 75-01-4 (Lot 00015559)		+/-	113.0560	µg/mL	Unstressed
	Purity 99%		+/-	115.6619	µg/mL	Stressed
4	Bromomethane (methyl bromide)	1,998.8 µg/mL	+/-	17.7535	µg/mL	Gravimetric
	CAS # 74-83-9 (Lot 101604)		+/-	112.8737	µg/mL	Unstressed
	Purity 99%		+/-	115.4779	µg/mL	Stressed
5	Chloroethane (ethyl chloride)	2,002.3 µg/mL	+/-	17.1357	µg/mL	Gravimetric
	CAS # 75-00-3 (Lot 107-401039114-1)		+/-	112.9711	µg/mL	Unstressed
	Purity 99%		+/-	115.5821	µg/mL	Stressed
6	Trichlorofluoromethane (CFC-11)	2,020.0 µg/mL	+/-	11.7716	µg/mL	Gravimetric
	CAS # 75-69-4 (Lot 25931)		+/-	113.2622	µg/mL	Unstressed
	Purity 99%		+/-	115.9123	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)

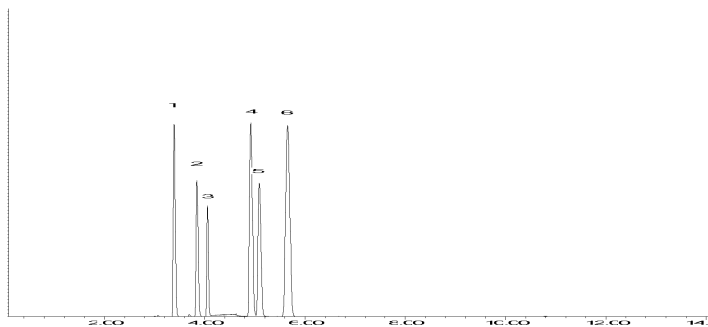
Carrier Gas:
helium-constant flow 2.0 mL/min.

Temp. Program:
40°C (hold 6 min.) to 100°C
@ 6°C/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: 10-Apr-2020

Balance: B707717271

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 06-May-2020

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_V_Gas_00135



CERTIFIED REFERENCE MATERIAL

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

www.restek.com

Certificate of Analysis



FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 55669 **Lot No.:** A0159812

Description : Custom 502.2 "V" Gas Mix
Custom 502.2 "V" Gas Mix 2,000µg/mL, P&T Methanol, 1mL/ampul

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

Expiration Date : May 31, 2027 **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)	2,005.1 µg/mL	+/-	16.8576	µg/mL	Gravimetric
	CAS # 75-71-8 (Lot 00012554)		+/-	113.0809	µg/mL	Unstressed
	Purity 99%		+/-	115.6966	µg/mL	Stressed
2	Chloromethane (methyl chloride)	2,003.5 µg/mL	+/-	19.3327	µg/mL	Gravimetric
	CAS # 74-87-3 (Lot SHBK6571)		+/-	113.3884	µg/mL	Unstressed
	Purity 99%		+/-	115.9929	µg/mL	Stressed
3	Vinyl chloride	2,001.1 µg/mL	+/-	18.1213	µg/mL	Gravimetric
	CAS # 75-01-4 (Lot 00015559)		+/-	113.0560	µg/mL	Unstressed
	Purity 99%		+/-	115.6619	µg/mL	Stressed
4	Bromomethane (methyl bromide)	1,998.8 µg/mL	+/-	17.7535	µg/mL	Gravimetric
	CAS # 74-83-9 (Lot 101604)		+/-	112.8737	µg/mL	Unstressed
	Purity 99%		+/-	115.4779	µg/mL	Stressed
5	Chloroethane (ethyl chloride)	2,002.3 µg/mL	+/-	17.1357	µg/mL	Gravimetric
	CAS # 75-00-3 (Lot 107-401039114-1)		+/-	112.9711	µg/mL	Unstressed
	Purity 99%		+/-	115.5821	µg/mL	Stressed
6	Trichlorofluoromethane (CFC-11)	2,020.0 µg/mL	+/-	11.7716	µg/mL	Gravimetric
	CAS # 75-69-4 (Lot 25931)		+/-	113.2622	µg/mL	Unstressed
	Purity 99%		+/-	115.9123	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)

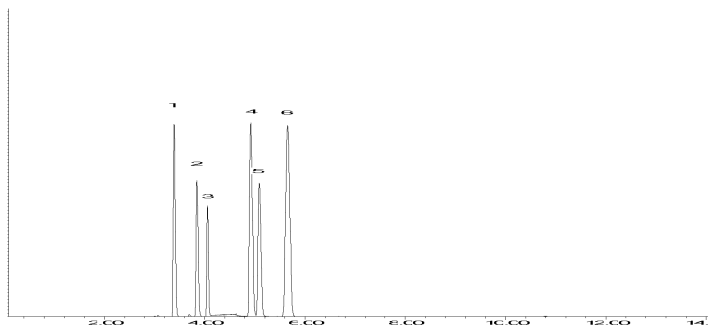
Carrier Gas:
helium-constant flow 2.0 mL/min.

Temp. Program:
40°C (hold 6 min.) to 100°C
@ 6°C/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: 10-Apr-2020

Balance: B707717271

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 06-May-2020

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Method 8260C Low Level

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

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: Eurofins Lancaster Laboratories En Job No.: 410-11876-1

SDG No.: _____

Matrix: Water Level: Low

GC Column (1): R-624SilMS 3 ID: 0.25 (mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
HD-COD-SW-6-0/1-0	410-11876-1	107	105	101	96
HD-COD-SW-7-0/1-0	410-11876-2	108	107	100	96
HD-COD-SW-8-0/1-0	410-11876-3	108	110	100	96
HD-COD-SW-9-0/1-0	410-11876-4	110	113	99	96
HD-COD-SW-13-0/1-0	410-11876-5	111	113	100	96
HD-COD-SW-15-0/1-0	410-11876-6	111	119	97	95
HD-COD-SW-16-0/1-0	410-11876-7	112	111	99	95
HD-COD-SW-17-0/1-0	410-11876-8	111	114	98	95
HD-COD-SW-26-0/1-0	410-11876-9	112	112	98	96
HD-COD-SW-27-0/1-0	410-11876-10	112	114	100	95
HD-COD-SW-28-0/1-0	410-11876-11	112	116	98	95
HD-COD-SW-29-0/1-0	410-11876-12	110	107	100	94
HD-QC1-0/1-1	410-11876-13	111	120	98	97
HD-QC1-0/1-2	410-11876-14	111	111	98	94
	MB 410-38982/7	106	108	100	96
	MB 410-39389/7	111	111	98	96
	LCS 410-38982/4	102	105	101	100
	LCS 410-39389/4	105	104	100	99
	LCSD 410-39389/5	105	102	101	100
HD-COD-SW-15-0/1-0 MS MS	410-11876-6 MS	106	109	100	99
HD-COD-SW-15-0/1-0 MSD MSD	410-11876-6 MSD	104	107	101	100

QC LIMITS

DBFM = Dibromofluoromethane (Surr)	80-120
DCA = 1,2-Dichloroethane-d4 (Surr)	80-120
TOL = Toluene-d8 (Surr)	80-120
BFB = 4-Bromofluorobenzene (Surr)	80-120

Column to be used to flag recovery values

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Lancaster Laboratories En Job No.: 410-11876-1

SDG No.: _____

Matrix: Water Level: Low Lab File ID: HG30L02.D

Lab ID: LCS 410-38982/4 Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	5.00	4.93	99	71-134	
1,1,1-Trichloroethane	5.00	4.86	97	78-126	
1,1,2,2-Tetrachloroethane	5.00	5.49	110	75-123	
1,1,2-Trichloroethane	5.00	5.39	108	80-120	
1,1-Dichloroethane	5.00	5.13	103	74-120	
1,1-Dichloroethene	5.00	4.96	99	80-131	
1,2-Dibromoethane (EDB)	5.00	5.40	108	80-120	
1,2-Dichloroethane	5.00	5.62	112	69-122	
1,2-Dichloropropane	5.00	5.30	106	80-120	
2-Butanone (MEK)	37.5	35.3	94	59-141	
2-Hexanone	25.0	22.1	88	52-140	
4-Methyl-2-pentanone (MIBK)	25.0	21.5	86	55-140	
Acetone	37.5	32.2	86	60-146	
Acrylonitrile	25.0	22.7	91	64-139	
Benzene	5.00	4.89	98	80-120	
Bromochloromethane	5.00	4.69	94	80-120	
Bromodichloromethane	5.00	5.26	105	73-124	
Bromoform	5.00	5.27	105	49-144	
Bromomethane	5.00	4.82	96	60-136	
Carbon disulfide	5.00	5.07	101	67-130	
Carbon tetrachloride	5.00	4.82	96	64-141	
Chlorobenzene	5.00	4.98	100	80-120	
Chloroethane	5.00	4.94	99	63-120	
Chloroform	5.00	5.16	103	80-120	
Chloromethane	5.00	4.98	100	56-124	
cis-1,2-Dichloroethene	5.00	5.07	101	80-122	
cis-1,3-Dichloropropene	5.00	4.94	99	67-121	
Dibromochloromethane	5.00	5.39	108	64-138	
Ethylbenzene	5.00	4.84	97	80-120	
Methyl tert-butyl ether	5.00	4.72	94	69-120	
Methylene Chloride	5.00	5.06	101	80-120	
Styrene	5.00	4.92	98	80-120	
Tetrachloroethene	5.00	4.70	94	80-120	
Toluene	5.00	4.86	97	80-120	
trans-1,2-Dichloroethene	5.00	4.87	97	80-122	
trans-1,3-Dichloropropene	5.00	5.04	101	61-129	
Trichloroethene	5.00	4.82	96	80-120	
Vinyl chloride	5.00	4.88	98	60-125	
Xylenes, Total	15.0	14.5	97	80-120	

Column to be used to flag recovery and RPD values

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Lancaster Laboratories En Job No.: 410-11876-1

SDG No.: _____

Matrix: Water Level: Low Lab File ID: HG31L01.D

Lab ID: LCS 410-39389/4 Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	5.00	5.02	100	71-134	
1,1,1-Trichloroethane	5.00	4.85	97	78-126	
1,1,2,2-Tetrachloroethane	5.00	5.81	116	75-123	
1,1,2-Trichloroethane	5.00	5.65	113	80-120	
1,1-Dichloroethane	5.00	5.27	105	74-120	
1,1-Dichloroethene	5.00	4.98	100	80-131	
1,2-Dibromoethane (EDB)	5.00	5.38	108	80-120	
1,2-Dichloroethane	5.00	5.74	115	69-122	
1,2-Dichloropropane	5.00	5.52	110	80-120	
2-Butanone (MEK)	37.5	34.2	91	59-141	
2-Hexanone	25.0	21.8	87	52-140	
4-Methyl-2-pentanone (MIBK)	25.0	21.0	84	55-140	
Acetone	37.5	34.4	92	60-146	
Acrylonitrile	25.0	22.7	91	64-139	
Benzene	5.00	4.93	99	80-120	
Bromochloromethane	5.00	4.89	98	80-120	
Bromodichloromethane	5.00	5.50	110	73-124	
Bromoform	5.00	5.36	107	49-144	
Bromomethane	5.00	4.99	100	60-136	
Carbon disulfide	5.00	5.13	103	67-130	
Carbon tetrachloride	5.00	4.78	96	64-141	
Chlorobenzene	5.00	4.94	99	80-120	
Chloroethane	5.00	4.97	99	63-120	
Chloroform	5.00	5.36	107	80-120	
Chloromethane	5.00	5.09	102	56-124	
cis-1,2-Dichloroethene	5.00	5.25	105	80-122	
cis-1,3-Dichloropropene	5.00	5.01	100	67-121	
Dibromochloromethane	5.00	5.43	109	64-138	
Ethylbenzene	5.00	4.77	95	80-120	
Methyl tert-butyl ether	5.00	4.89	98	69-120	
Methylene Chloride	5.00	5.20	104	80-120	
Styrene	5.00	4.90	98	80-120	
Tetrachloroethene	5.00	4.71	94	80-120	
Toluene	5.00	4.88	98	80-120	
trans-1,2-Dichloroethene	5.00	4.90	98	80-122	
trans-1,3-Dichloropropene	5.00	5.09	102	61-129	
Trichloroethene	5.00	4.99	100	80-120	
Vinyl chloride	5.00	5.00	100	60-125	
Xylenes, Total	15.0	14.5	97	80-120	

Column to be used to flag recovery and RPD values

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Lancaster Laboratories En Job No.: 410-11876-1

SDG No.: _____

Matrix: Water Level: Low Lab File ID: HG31L02.D

Lab ID: LCSD 410-39389/5 Client ID: _____

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
1,1,1,2-Tetrachloroethane	5.00	4.98	100	1	30	71-134	
1,1,1-Trichloroethane	5.00	4.79	96	1	30	78-126	
1,1,2,2-Tetrachloroethane	5.00	5.63	113	3	30	75-123	
1,1,2-Trichloroethane	5.00	5.64	113	0	30	80-120	
1,1-Dichloroethane	5.00	5.18	104	2	30	74-120	
1,1-Dichloroethene	5.00	4.86	97	2	30	80-131	
1,2-Dibromoethane (EDB)	5.00	5.47	109	2	30	80-120	
1,2-Dichloroethane	5.00	5.56	111	3	30	69-122	
1,2-Dichloropropane	5.00	5.27	105	5	30	80-120	
2-Butanone (MEK)	37.5	33.7	90	1	30	59-141	
2-Hexanone	25.0	21.0	84	4	30	52-140	
4-Methyl-2-pentanone (MIBK)	25.0	20.3	81	3	30	55-140	
Acetone	37.5	33.9	90	1	30	60-146	
Acrylonitrile	25.0	21.9	88	3	30	64-139	
Benzene	5.00	4.83	97	2	30	80-120	
Bromochloromethane	5.00	4.77	95	2	30	80-120	
Bromodichloromethane	5.00	5.37	107	2	30	73-124	
Bromoform	5.00	5.27	105	2	30	49-144	
Bromomethane	5.00	4.85	97	3	30	60-136	
Carbon disulfide	5.00	5.01	100	2	30	67-130	
Carbon tetrachloride	5.00	4.66	93	3	30	64-141	
Chlorobenzene	5.00	4.98	100	1	30	80-120	
Chloroethane	5.00	4.82	96	3	30	63-120	
Chloroform	5.00	5.26	105	2	30	80-120	
Chloromethane	5.00	4.90	98	4	30	56-124	
cis-1,2-Dichloroethene	5.00	5.20	104	1	30	80-122	
cis-1,3-Dichloropropene	5.00	4.89	98	2	30	67-121	
Dibromochloromethane	5.00	5.44	109	0	30	64-138	
Ethylbenzene	5.00	4.77	95	0	30	80-120	
Methyl tert-butyl ether	5.00	4.80	96	2	30	69-120	
Methylene Chloride	5.00	4.94	99	5	30	80-120	
Styrene	5.00	4.88	98	0	30	80-120	
Tetrachloroethene	5.00	4.66	93	1	30	80-120	
Toluene	5.00	4.85	97	1	30	80-120	
trans-1,2-Dichloroethene	5.00	4.85	97	1	30	80-122	
trans-1,3-Dichloropropene	5.00	5.05	101	1	30	61-129	
Trichloroethene	5.00	4.90	98	2	30	80-120	
Vinyl chloride	5.00	4.86	97	3	30	60-125	
Xylenes, Total	15.0	14.2	95	2	30	80-120	

Column to be used to flag recovery and RPD values

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: Eurofins Lancaster Laboratories En Job No.: 410-11876-1
 SDG No.: _____
 Matrix: Water Level: Low Lab File ID: HG30S07.D
 Lab ID: 410-11876-6 MS Client ID: HD-COD-SW-15-0/1-0 MS MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	5.00	ND	5.53	111	71-134	
1,1,1-Trichloroethane	5.00	0.14 J	5.91	115	78-126	
1,1,2,2-Tetrachloroethane	5.00	ND	6.05	121	75-123	
1,1,2-Trichloroethane	5.00	ND	6.21	124	80-120	FH
1,1-Dichloroethane	5.00	0.073 J	6.13	121	74-120	FH
1,1-Dichloroethene	5.00	0.092 J	6.36	125	80-131	
1,2-Dibromoethane (EDB)	5.00	ND	5.99	120	80-120	
1,2-Dichloroethane	5.00	ND	6.34	127	69-122	FH
1,2-Dichloropropane	5.00	ND	6.06	121	80-120	FH
2-Butanone (MEK)	37.5	ND	33.7	90	59-141	
2-Hexanone	25.0	ND	21.0	84	52-140	
4-Methyl-2-pentanone (MIBK)	25.0	ND	20.4	82	55-140	
Acetone	37.5	ND	33.7	90	60-146	
Acrylonitrile	25.0	ND	21.6	86	64-139	
Benzene	5.00	ND	5.76	115	80-120	
Bromochloromethane	5.00	ND	5.39	108	80-120	
Bromodichloromethane	5.00	ND	6.02	120	73-124	
Bromoform	5.00	ND	5.82	116	49-144	
Bromomethane	5.00	ND	5.93	119	60-136	
Carbon disulfide	5.00	ND	6.57	131	67-130	FH
Carbon tetrachloride	5.00	ND	5.97	119	64-141	
Chlorobenzene	5.00	ND	5.71	114	80-120	
Chloroethane	5.00	ND	6.00	120	63-120	
Chloroform	5.00	0.36 J	6.32	119	80-120	
Chloromethane	5.00	0.57	7.89	146	80-120	FH
cis-1,2-Dichloroethene	5.00	0.85	6.90	121	80-122	
cis-1,3-Dichloropropene	5.00	ND	5.49	110	67-121	
Dibromochloromethane	5.00	ND	5.97	119	64-138	
Ethylbenzene	5.00	ND	5.57	111	80-120	
Methyl tert-butyl ether	5.00	0.054 J	5.33	105	69-120	
Methylene Chloride	5.00	0.11 J	5.98	117	80-120	
Styrene	5.00	ND	5.49	110	80-120	
Tetrachloroethene	5.00	3.0	8.66	114	80-120	
Toluene	5.00	ND	5.68	114	80-120	
trans-1,2-Dichloroethene	5.00	ND	5.89	118	80-122	
trans-1,3-Dichloropropene	5.00	ND	5.66	113	61-129	
Trichloroethene	5.00	1.1	6.89	115	80-120	
Vinyl chloride	5.00	ND	6.30	126	60-125	FH
Xylenes, Total	15.0	ND	16.6	111	80-120	

Column to be used to flag recovery and RPD values

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins Lancaster Laboratories En Job No.: 410-11876-1
 SDG No.: _____
 Matrix: Water Level: Low Lab File ID: HG30S08.D
 Lab ID: 410-11876-6 MSD Client ID: HD-COD-SW-15-0/1-0 MSD MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS		#
					RPD	REC	
1,1,1,2-Tetrachloroethane	5.00	5.35	107	3	30	71-134	
1,1,1-Trichloroethane	5.00	5.88	115	1	30	78-126	
1,1,2,2-Tetrachloroethane	5.00	6.03	120	0	30	75-123	
1,1,2-Trichloroethane	5.00	6.08	121	2	30	80-120	FH
1,1-Dichloroethane	5.00	5.92	117	3	30	74-120	
1,1-Dichloroethene	5.00	6.22	122	2	30	80-131	
1,2-Dibromoethane (EDB)	5.00	5.75	115	4	30	80-120	
1,2-Dichloroethane	5.00	6.24	125	2	30	69-122	FH
1,2-Dichloropropane	5.00	5.95	119	2	30	80-120	
2-Butanone (MEK)	37.5	32.9	88	2	30	59-141	
2-Hexanone	25.0	21.0	84	0	30	52-140	
4-Methyl-2-pentanone (MIBK)	25.0	20.1	80	2	30	55-140	
Acetone	37.5	32.2	86	5	30	60-146	
Acrylonitrile	25.0	21.5	86	0	30	64-139	
Benzene	5.00	5.60	112	3	30	80-120	
Bromochloromethane	5.00	5.22	104	3	30	80-120	
Bromodichloromethane	5.00	5.84	117	3	30	73-124	
Bromoform	5.00	5.74	115	1	30	49-144	
Bromomethane	5.00	5.57	111	6	30	60-136	
Carbon disulfide	5.00	6.36	127	3	30	67-130	
Carbon tetrachloride	5.00	5.80	116	3	30	64-141	
Chlorobenzene	5.00	5.59	112	2	30	80-120	
Chloroethane	5.00	5.78	115	4	30	63-120	
Chloroform	5.00	6.24	118	1	30	80-120	
Chloromethane	5.00	5.97	108	28	30	80-120	
cis-1,2-Dichloroethene	5.00	6.77	118	2	30	80-122	
cis-1,3-Dichloropropene	5.00	5.40	108	2	30	67-121	
Dibromochloromethane	5.00	5.90	118	1	30	64-138	
Ethylbenzene	5.00	5.58	111	0	30	80-120	
Methyl tert-butyl ether	5.00	5.28	104	1	30	69-120	
Methylene Chloride	5.00	5.74	113	4	30	80-120	
Styrene	5.00	5.43	109	1	30	80-120	
Tetrachloroethene	5.00	8.61	112	1	30	80-120	
Toluene	5.00	5.61	112	1	30	80-120	
trans-1,2-Dichloroethene	5.00	5.90	118	0	30	80-122	
trans-1,3-Dichloropropene	5.00	5.48	109	3	30	61-129	
Trichloroethene	5.00	6.82	114	1	30	80-120	
Vinyl chloride	5.00	5.99	120	5	30	60-125	
Xylenes, Total	15.0	16.5	110	0	30	80-120	

Column to be used to flag recovery and RPD values

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins Lancaster Laboratories En Job No.: 410-11876-1
 SDG No.: _____
 Lab File ID: HG30B01.D Lab Sample ID: MB 410-38982/7
 Matrix: Water Heated Purge: (Y/N) N
 Instrument ID: 19094 Date Analyzed: 08/30/2020 19:05
 GC Column: R-624SilMS 30m ID: 0.25 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 410-38982/4	HG30L02.D	08/30/2020 18:22
HD-QC1-0/1-1	410-11876-13	HG30S04.D	08/30/2020 20:36
HD-COD-SW-15-0/1-0	410-11876-6	HG30S06.D	08/30/2020 21:19
HD-COD-SW-15-0/1-0 MS MS	410-11876-6 MS	HG30S07.D	08/30/2020 21:41
HD-COD-SW-15-0/1-0 MSD MSD	410-11876-6 MSD	HG30S08.D	08/30/2020 22:03
HD-COD-SW-6-0/1-0	410-11876-1	HG30S10.D	08/30/2020 22:46
HD-COD-SW-7-0/1-0	410-11876-2	HG30S11.D	08/30/2020 23:08
HD-COD-SW-8-0/1-0	410-11876-3	HG30S12.D	08/30/2020 23:30
HD-COD-SW-9-0/1-0	410-11876-4	HG30S13.D	08/30/2020 23:52
HD-COD-SW-13-0/1-0	410-11876-5	HG30S14.D	08/31/2020 00:14
HD-COD-SW-16-0/1-0	410-11876-7	HG30S15.D	08/31/2020 00:35
HD-COD-SW-17-0/1-0	410-11876-8	HG30S16.D	08/31/2020 00:57
HD-COD-SW-26-0/1-0	410-11876-9	HG30S17.D	08/31/2020 01:18
HD-COD-SW-27-0/1-0	410-11876-10	HG30S18.D	08/31/2020 01:40
HD-COD-SW-28-0/1-0	410-11876-11	HG30S19.D	08/31/2020 02:02
HD-COD-SW-29-0/1-0	410-11876-12	HG30S20.D	08/31/2020 02:23

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins Lancaster Laboratories En Job No.: 410-11876-1
 SDG No.: _____
 Lab File ID: HG31B01.D Lab Sample ID: MB 410-39389/7
 Matrix: Water Heated Purge: (Y/N) N
 Instrument ID: 19094 Date Analyzed: 08/31/2020 19:45
 GC Column: R-624SilMS 30m ID: 0.25 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 410-39389/4	HG31L01.D	08/31/2020 18:40
	LCSD 410-39389/5	HG31L02.D	08/31/2020 19:02
HD-QC1-0/1-2	410-11876-14	HG31S02.D	08/31/2020 20:38

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

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Lab File ID: BFB.D BFB Injection Date: 06/08/2020
 Instrument ID: 19094 BFB Injection Time: 12:43
 Analysis Batch No.: 11163

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	17.2	
75	30.0 - 60.0 % of mass 95	45.7	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.1	
173	Less than 2.0 % of mass 174	1.3	(1.5) 1
174	Greater than 50% of mass 95	82.3	
175	5.0 - 9.0 % of mass 174	6.1	(7.4) 1
176	95.0 - 101.0 % of mass 174	80.6	(97.9) 1
177	5.0 - 9.0 % of mass 176	5.8	(7.1) 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 410-11163/12	hu08i01.D	06/08/2020	16:46
	ICIS 410-11163/13	hu08i02.D	06/08/2020	17:08
	IC 410-11163/14	hu08i03.D	06/08/2020	17:29
	IC 410-11163/15	hu08i04.D	06/08/2020	17:51
	IC 410-11163/16	hu08i05.D	06/08/2020	18:13
	IC 410-11163/17	hu08i06.D	06/08/2020	18:35
	IC 410-11163/18	hu08i07.D	06/08/2020	18:56
	ICV 410-11163/19	hu08v01.D	06/08/2020	19:18

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

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1

SDG No.: _____

Lab File ID: HG30T02.D BFB Injection Date: 08/30/2020

Instrument ID: 19094 BFB Injection Time: 17:05

Analysis Batch No.: 38982

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	19.9
75	30.0 - 60.0 % of mass 95	50.7
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	7.2
173	Less than 2.0 % of mass 174	0.6 (0.7) 1
174	Greater than 50% of mass 95	83.1
175	5.0 - 9.0 % of mass 174	6.6 (8.0) 1
176	95.0 - 101.0 % of mass 174	82.6 (99.4) 1
177	5.0 - 9.0 % of mass 176	5.6 (6.7) 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 410-38982/3	HG30C01.D	08/30/2020	17:38
	LCS 410-38982/4	HG30L02.D	08/30/2020	18:22
	MB 410-38982/7	HG30B01.D	08/30/2020	19:05
HD-QC1-0/1-1	410-11876-13	HG30S04.D	08/30/2020	20:36
HD-COD-SW-15-0/1-0	410-11876-6	HG30S06.D	08/30/2020	21:19
HD-COD-SW-15-0/1-0 MS MS	410-11876-6 MS	HG30S07.D	08/30/2020	21:41
HD-COD-SW-15-0/1-0 MSD MSD	410-11876-6 MSD	HG30S08.D	08/30/2020	22:03
HD-COD-SW-6-0/1-0	410-11876-1	HG30S10.D	08/30/2020	22:46
HD-COD-SW-7-0/1-0	410-11876-2	HG30S11.D	08/30/2020	23:08
HD-COD-SW-8-0/1-0	410-11876-3	HG30S12.D	08/30/2020	23:30
HD-COD-SW-9-0/1-0	410-11876-4	HG30S13.D	08/30/2020	23:52
HD-COD-SW-13-0/1-0	410-11876-5	HG30S14.D	08/31/2020	0:14
HD-COD-SW-16-0/1-0	410-11876-7	HG30S15.D	08/31/2020	0:35
HD-COD-SW-17-0/1-0	410-11876-8	HG30S16.D	08/31/2020	0:57
HD-COD-SW-26-0/1-0	410-11876-9	HG30S17.D	08/31/2020	1:18
HD-COD-SW-27-0/1-0	410-11876-10	HG30S18.D	08/31/2020	1:40
HD-COD-SW-28-0/1-0	410-11876-11	HG30S19.D	08/31/2020	2:02
HD-COD-SW-29-0/1-0	410-11876-12	HG30S20.D	08/31/2020	2:23

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

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1

SDG No.: _____

Lab File ID: HG31T02.D BFB Injection Date: 08/31/2020

Instrument ID: 19094 BFB Injection Time: 17:44

Analysis Batch No.: 39389

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.4	
75	30.0 - 60.0 % of mass 95	50.8	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.6	
173	Less than 2.0 % of mass 174	0.8	(1.0) 1
174	Greater than 50% of mass 95	82.1	
175	5.0 - 9.0 % of mass 174	6.3	(7.6) 1
176	95.0 - 101.0 % of mass 174	80.8	(98.5) 1
177	5.0 - 9.0 % of mass 176	5.4	(6.7) 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 410-39389/3	HG31C01.D	08/31/2020	18:18
	LCS 410-39389/4	HG31L01.D	08/31/2020	18:40
	LCSD 410-39389/5	HG31L02.D	08/31/2020	19:02
	MB 410-39389/7	HG31B01.D	08/31/2020	19:45
HD-QC1-0/1-2	410-11876-14	HG31S02.D	08/31/2020	20:38

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

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Sample No.: ICIS 410-11163/13 Date Analyzed: 06/08/2020 17:08
 Instrument ID: 19094 GC Column: R-624SilMS 30m ID: 0.25(mm)
 Lab File ID (Standard): hu08i02.D Heated Purge: (Y/N) N
 Calibration ID: 5854

	TBAd10		FB		CBZd5	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT	101074	4.46	2109462	7.96	1527695	11.38
UPPER LIMIT	202148	4.96	4218924	8.46	3055390	11.88
LOWER LIMIT	50537	3.96	1054731	7.46	763848	10.88
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 410-11163/19	109374	4.48	2119828	7.96	1520824	11.38
CCVIS 410-38982/3	125604	4.48	2028279	7.95	1448837	11.37
CCVIS 410-39389/3	129667	4.49	2044687	7.96	1462366	11.37

TBAd10 = t-Butyl alcohol-d10 (IS)
 FB = Fluorobenzene (IS)
 CBZd5 = Chlorobenzene-d5 (IS)

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

Column used to flag values outside QC limits

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

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Sample No.: ICIS 410-11163/13 Date Analyzed: 06/08/2020 17:08
 Instrument ID: 19094 GC Column: R-624SilMS 30m ID: 0.25 (mm)
 Lab File ID (Standard): hu08i02.D Heated Purge: (Y/N) N
 Calibration ID: 5854

	DCBd4		#	RT #	#	RT #
	AREA #	RT #				
INITIAL CALIBRATION MID-POINT	768750	13.24				
UPPER LIMIT	1537500	13.74				
LOWER LIMIT	384375	12.74				
LAB SAMPLE ID	CLIENT SAMPLE ID					
ICV 410-11163/19		767783	13.24			
CCVIS 410-38982/3		730794	13.23			
CCVIS 410-39389/3		735293	13.23			

DCBd4 = 1,4-Dichlorobenzene-d4

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

Column used to flag values outside QC limits

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

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Sample No.: CCVIS 410-38982/3 Date Analyzed: 08/30/2020 17:38
 Instrument ID: 19094 GC Column: R-624SilMS 30m ID: 0.25 (mm)
 Lab File ID (Standard): HG30C01.D Heated Purge: (Y/N) N
 Calibration ID: 5854

	TBAd10		FB		CBZd5			
	AREA #	RT #	AREA #	RT #	AREA #	RT #		
12/24 HOUR STD	125604	4.48	2028279	7.95	1448837	11.37		
UPPER LIMIT	251208	4.98	4056558	8.45	2897674	11.87		
LOWER LIMIT	62802	3.98	1014140	7.45	724419	10.87		
LAB SAMPLE ID	CLIENT SAMPLE ID							
LCS 410-38982/4			136780	4.47	2170829	7.95	1538499	11.37
MB 410-38982/7			128983	4.48	1891822	7.96	1352594	11.37
410-11876-13		HD-QC1-0/1-1	135045	4.49	1567988	7.96	1144011	11.37
410-11876-6		HD-COD-SW-15-0/1-0	133106	4.50	1554922	7.96	1140305	11.37
410-11876-6 MS		HD-COD-SW-15-0/1-0 MS	135130	4.50	1752540	7.95	1266005	11.37
410-11876-6 MSD		HD-COD-SW-15-0/1-0 MSD MSD	142646	4.47	1936570	7.95	1377997	11.37
410-11876-1		HD-COD-SW-6-0/1-0	132378	4.49	2016622	7.96	1440249	11.37
410-11876-2		HD-COD-SW-7-0/1-0	137685	4.48	2023071	7.96	1457141	11.37
410-11876-3		HD-COD-SW-8-0/1-0	129708	4.46	1939977	7.95	1403884	11.37
410-11876-4		HD-COD-SW-9-0/1-0	127163	4.46	1703278	7.95	1247767	11.37
410-11876-5		HD-COD-SW-13-0/1-0	124089	4.48	1709827	7.96	1243126	11.37
410-11876-7		HD-COD-SW-16-0/1-0	128352	4.47	1700471	7.96	1248720	11.37
410-11876-8		HD-COD-SW-17-0/1-0	127247	4.47	1646975	7.96	1204981	11.37
410-11876-9		HD-COD-SW-26-0/1-0	129545	4.48	1731559	7.96	1275911	11.37
410-11876-10		HD-COD-SW-27-0/1-0	122623	4.48	1645218	7.96	1205106	11.37
410-11876-11		HD-COD-SW-28-0/1-0	124308	4.49	1564044	7.95	1156082	11.37
410-11876-12		HD-COD-SW-29-0/1-0	119190	4.49	1865904	7.96	1355265	11.37

TBAd10 = t-Butyl alcohol-d10 (IS)
 FB = Fluorobenzene (IS)
 CBZd5 = Chlorobenzene-d5 (IS)

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

Column used to flag values outside QC limits

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

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Sample No.: CCVIS 410-38982/3 Date Analyzed: 08/30/2020 17:38
 Instrument ID: 19094 GC Column: R-624SilMS 30m ID: 0.25 (mm)
 Lab File ID (Standard): HG30C01.D Heated Purge: (Y/N) N
 Calibration ID: 5854

		DCBd4					
		AREA #	RT #	#	RT #	#	RT #
12/24 HOUR STD		730794	13.23				
UPPER LIMIT		1461588	13.73				
LOWER LIMIT		365397	12.73				
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 410-38982/4		781864	13.23				
MB 410-38982/7		678041	13.23				
410-11876-13	HD-QC1-0/1-1	573793	13.23				
410-11876-6	HD-COD-SW-15-0/1-0	568970	13.23				
410-11876-6 MS	HD-COD-SW-15-0/1-0 MS	667033	13.23				
410-11876-6 MSD	HD-COD-SW-15-0/1-0 MSD MSD	704879	13.23				
410-11876-1	HD-COD-SW-6-0/1-0	723578	13.23				
410-11876-2	HD-COD-SW-7-0/1-0	734277	13.23				
410-11876-3	HD-COD-SW-8-0/1-0	697901	13.23				
410-11876-4	HD-COD-SW-9-0/1-0	628441	13.23				
410-11876-5	HD-COD-SW-13-0/1-0	619511	13.23				
410-11876-7	HD-COD-SW-16-0/1-0	621539	13.23				
410-11876-8	HD-COD-SW-17-0/1-0	601317	13.23				
410-11876-9	HD-COD-SW-26-0/1-0	638104	13.23				
410-11876-10	HD-COD-SW-27-0/1-0	608913	13.23				
410-11876-11	HD-COD-SW-28-0/1-0	576596	13.23				
410-11876-12	HD-COD-SW-29-0/1-0	671202	13.23				

DCBd4 = 1,4-Dichlorobenzene-d4

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

Column used to flag values outside QC limits

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

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Sample No.: CCVIS 410-39389/3 Date Analyzed: 08/31/2020 18:18
 Instrument ID: 19094 GC Column: R-624SilMS 30m ID: 0.25(mm)
 Lab File ID (Standard): HG31C01.D Heated Purge: (Y/N) N
 Calibration ID: 5854

	TBAd10		FB		CBZd5		
	AREA #	RT #	AREA #	RT #	AREA #	RT #	
12/24 HOUR STD	129667	4.49	2044687	7.96	1462366	11.37	
UPPER LIMIT	259334	4.99	4089374	8.46	2924732	11.87	
LOWER LIMIT	64834	3.99	1022344	7.46	731183	10.87	
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 410-39389/4	137678	4.48	2031105	7.95	1468188	11.37	
LCSD 410-39389/5	143264	4.48	2102420	7.95	1503903	11.37	
MB 410-39389/7	128059	4.48	1733752	7.96	1263902	11.37	
410-11876-14	HD-QC1-0/1-2	131552	4.48	1754452	7.96	1284640	11.37

TBAd10 = t-Butyl alcohol-d10 (IS)
 FB = Fluorobenzene (IS)
 CBZd5 = Chlorobenzene-d5 (IS)

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

Column used to flag values outside QC limits

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

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Sample No.: CCVIS 410-39389/3 Date Analyzed: 08/31/2020 18:18
 Instrument ID: 19094 GC Column: R-624SilMS 30m ID: 0.25 (mm)
 Lab File ID (Standard): HG31C01.D Heated Purge: (Y/N) N
 Calibration ID: 5854

	DCBd4		#	RT #	#	RT #
	AREA #	RT #				
12/24 HOUR STD	735293	13.23				
UPPER LIMIT	1470586	13.73				
LOWER LIMIT	367647	12.73				
LAB SAMPLE ID	CLIENT SAMPLE ID					
LCS 410-39389/4		743961	13.23			
LCSD 410-39389/5		765517	13.23			
MB 410-39389/7		630941	13.23			
410-11876-14	HD-QC1-0/1-2	639767	13.23			

DCBd4 = 1,4-Dichlorobenzene-d4

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

Column used to flag values outside QC limits

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-6-0/1-0 Lab Sample ID: 410-11876-1
 Matrix: Water Lab File ID: HG30S10.D
 Analysis Method: 8260C LL Date Collected: 08/25/2020 10:15
 Sample wt/vol: 25 (mL) Date Analyzed: 08/30/2020 22:46
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 38982 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.50	0.070
71-55-6	1,1,1-Trichloroethane	ND		0.50	0.060
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.50	0.070
79-00-5	1,1,2-Trichloroethane	ND		0.50	0.060
75-34-3	1,1-Dichloroethane	ND		0.50	0.070
75-35-4	1,1-Dichloroethene	ND		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	ND		0.50	0.060
107-06-2	1,2-Dichloroethane	ND		0.50	0.050
78-87-5	1,2-Dichloropropane	ND		0.50	0.060
78-93-3	2-Butanone (MEK)	ND		5.0	0.60
591-78-6	2-Hexanone	ND		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70
67-64-1	Acetone	1.3	J	5.0	0.90
107-13-1	Acrylonitrile	ND		5.0	0.40
71-43-2	Benzene	ND		0.50	0.050
74-97-5	Bromochloromethane	ND		0.50	0.050
75-27-4	Bromodichloromethane	ND		0.50	0.050
75-25-2	Bromoform	ND		1.0	0.30
74-83-9	Bromomethane	ND		0.50	0.070
75-15-0	Carbon disulfide	ND		1.0	0.060
56-23-5	Carbon tetrachloride	ND		0.50	0.070
108-90-7	Chlorobenzene	ND		0.50	0.060
75-00-3	Chloroethane	ND		0.50	0.070
67-66-3	Chloroform	ND		0.50	0.090
74-87-3	Chloromethane	0.24	J	0.50	0.060
156-59-2	cis-1,2-Dichloroethene	ND		0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	ND		0.50	0.050
124-48-1	Dibromochloromethane	ND		0.50	0.070
100-41-4	Ethylbenzene	ND		0.50	0.060
1634-04-4	Methyl tert-butyl ether	ND		0.50	0.050
75-09-2	Methylene Chloride	ND		0.50	0.070
100-42-5	Styrene	ND		0.50	0.050
127-18-4	Tetrachloroethene	ND		0.50	0.060
108-88-3	Toluene	ND		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	ND		0.50	0.060
10061-02-6	trans-1,3-Dichloropropene	ND		0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-6-0/1-0 Lab Sample ID: 410-11876-1
 Matrix: Water Lab File ID: HG30S10.D
 Analysis Method: 8260C LL Date Collected: 08/25/2020 10:15
 Sample wt/vol: 25 (mL) Date Analyzed: 08/30/2020 22:46
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 38982 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	0.063	J	0.50	0.060
75-01-4	Vinyl chloride	ND		0.50	0.10
1330-20-7	Xylenes, Total	ND		1.0	0.15

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	105		80-120
1868-53-7	Dibromofluoromethane (Surr)	107		80-120
2037-26-5	Toluene-d8 (Surr)	101		80-120
460-00-4	4-Bromofluorobenzene (Surr)	96		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S10.D
 Lims ID: 410-11876-A-1
 Client ID: HD-COD-SW-6-0/1-0
 Sample Type: Client
 Inject. Date: 30-Aug-2020 22:46:30 ALS Bottle#: 16 Worklist Smp#: 17
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: 410-11876-A-1
 Misc. Info.: 410-0009349-017
 Operator ID: mec29284 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 31-Aug-2020 13:23:49 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1008

First Level Reviewer: virayd Date: 31-Aug-2020 13:14:51

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
6 Chloromethane	50	2.282	2.276	0.006	96	20311	0.2389	
7 Vinyl chloride	62		2.385				ND	
9 Bromomethane	94		2.745				ND	
10 Chloroethane	64		2.837				ND	
18 1,1-Dichloroethene	96		3.757				ND	
19 Acetone	43	3.800	3.788	0.012	66	12525	1.34	
24 Carbon disulfide	76		4.086				ND	
29 Methylene Chloride	84	4.464	4.464	0.000	36	3558	0.0674	a
* 28 t-Butyl alcohol-d10 (IS)	65	4.489	4.477	0.013	0	132378	50.0	
31 Acrylonitrile	53		4.806				ND	
32 Methyl tert-butyl ether	73		4.873				ND	
33 trans-1,2-Dichloroethene	96		4.891				ND	
35 1,1-Dichloroethane	63		5.549				ND	
41 2-Butanone (MEK)	43		6.330				ND	
42 cis-1,2-Dichloroethene	96		6.372				ND	
48 Chlorobromomethane	128		6.702				ND	
50 Chloroform	83	6.860	6.854	0.006	60	4321	0.0476	
\$ 51 Dibromofluoromethane (Surr)	113	7.067	7.061	0.006	93	510128	10.7	
52 1,1,1-Trichloroethane	97		7.086				ND	
56 Carbon tetrachloride	117		7.293				ND	
\$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.531	7.519	0.012	0	102276	10.5	
59 Benzene	78		7.555				ND	
60 1,2-Dichloroethane	62	7.634	7.622	0.012	0	2125	0.0409	a
* 65 Fluorobenzene (IS)	96	7.957	7.951	0.006	98	2016622	10.0	
67 Trichloroethene	95	8.433	8.433	0.000	92	3437	0.0631	Ma
70 1,2-Dichloropropane	63		8.768				ND	
75 Dichlorobromomethane	83		9.110				ND	
80 cis-1,3-Dichloropropene	75		9.634				ND	
81 4-Methyl-2-pentanone (MIBK)	43		9.793				ND	
\$ 82 Toluene-d8 (Surr)	98	9.933	9.933	0.000	94	1954948	10.1	
83 Toluene	92	10.012	10.012	0.000	96	4312	0.0320	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
85 trans-1,3-Dichloropropene	75		10.256				ND	
87 1,1,2-Trichloroethane	97		10.457				ND	
88 Tetrachloroethene	166	10.542	10.542	0.000	88	1488	0.0260	
91 2-Hexanone	43		10.658				ND	
93 Chlorodibromomethane	129		10.829				ND	
94 Ethylene Dibromide	107		10.945				ND	
S 95 Xylenes, Total	106		11.245				ND	
* 97 Chlorobenzene-d5 (IS)	117	11.365	11.365	0.000	88	1440249	10.0	
98 Chlorobenzene	112		11.390				ND	
99 1,1,1,2-Tetrachloroethane	131		11.469				ND	
100 Ethylbenzene	91		11.475				ND	
101 m-Xylene & p-Xylene	106		11.585				ND	
102 o-Xylene	106		11.914				ND	
103 Styrene	104		11.926				ND	
104 Bromoform	173		12.091				ND	
\$ 108 4-Bromofluorobenzene (Surr)	95	12.353	12.353	0.000	88	677803	9.61	
109 1,1,2,2-Tetrachloroethane	83		12.451				ND	
* 124 1,4-Dichlorobenzene-d4	152	13.231	13.231	0.000	96	723578	10.0	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_30_826ISS_00005

Amount Added: 5.00

Units: uL

Run Reagent

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S10.D

Injection Date: 30-Aug-2020 22:46:30

Instrument ID: 19094

Operator ID: mec29284

Lims ID: 410-11876-A-1

Lab Sample ID: 410-11876-1

Worklist Smp#: 17

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

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

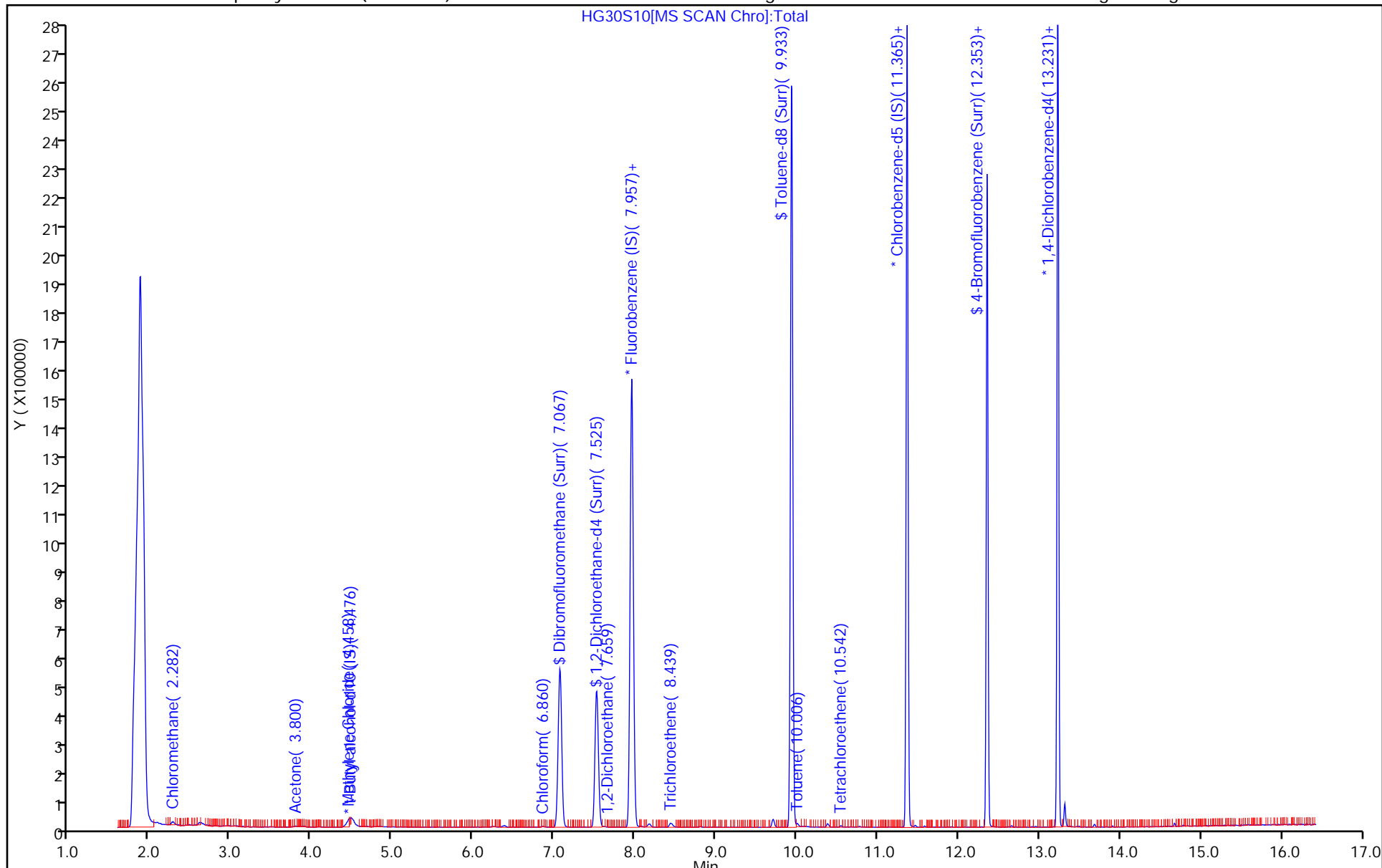
ALS Bottle#: 16

Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S10.D
 Lims ID: 410-11876-A-1
 Client ID: HD-COD-SW-6-0/1-0
 Sample Type: Client
 Inject. Date: 30-Aug-2020 22:46:30 ALS Bottle#: 16 Worklist Smp#: 17
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: 410-11876-A-1
 Misc. Info.: 410-0009349-017
 Operator ID: mec29284 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 31-Aug-2020 13:23:49 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1008

First Level Reviewer: virayd

Date: 31-Aug-2020 13:14:51

Compound	Amount Added	Amount Recovered	% Rec.
\$ 51 Dibromofluoromethane (Surr)	10.0	10.7	107.00
\$ 58 1,2-Dichloroethane-d4 (Surr)	10.0	10.5	105.31
\$ 82 Toluene-d8 (Surr)	10.0	10.1	101.15
\$ 108 4-Bromofluorobenzene (Surr)	10.0	9.61	96.13

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S10.D

Injection Date: 30-Aug-2020 22:46:30

Instrument ID: 19094

Lims ID: 410-11876-A-1

Lab Sample ID: 410-11876-1

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

Operator ID: mec29284

ALS Bottle#: 16

Worklist Smp#: 17

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

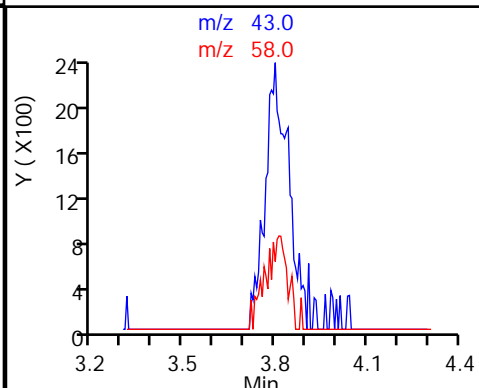
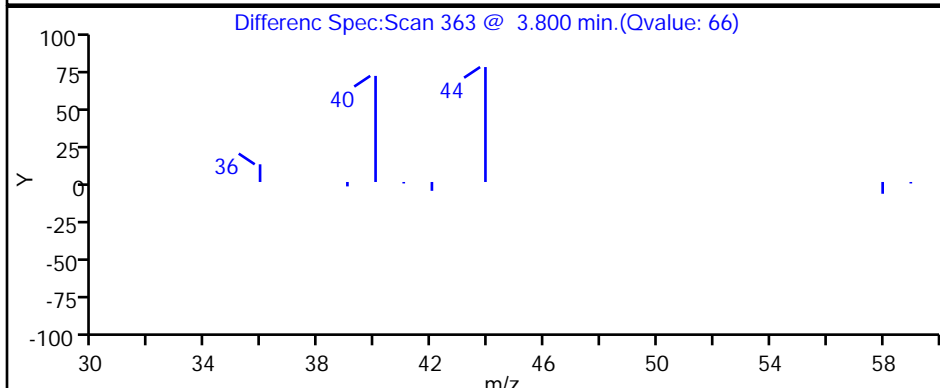
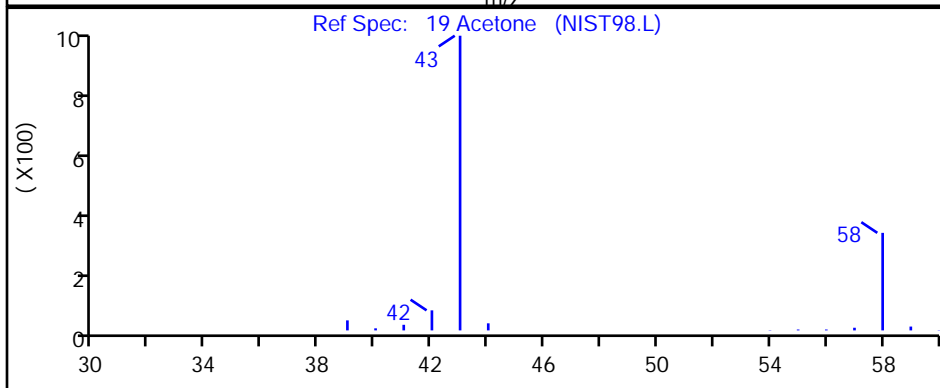
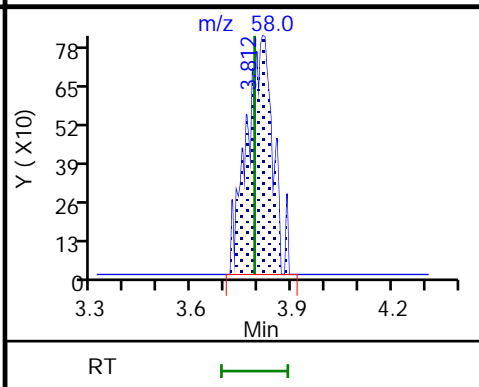
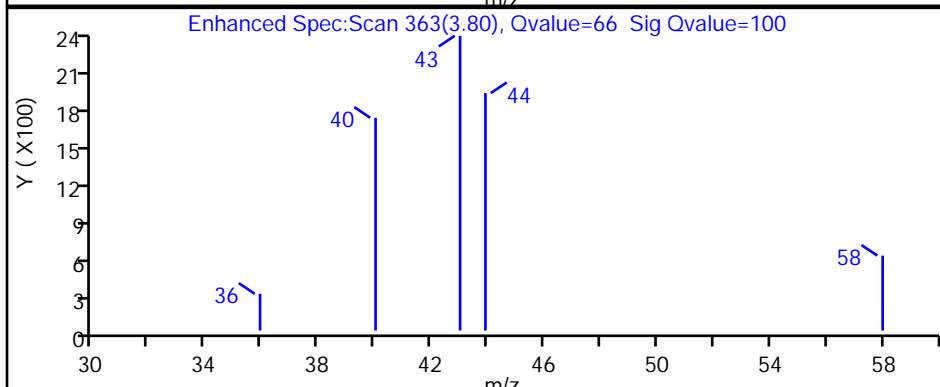
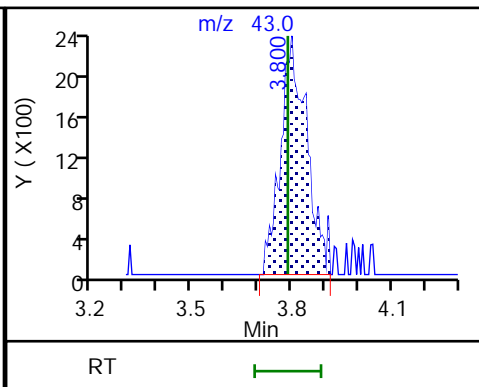
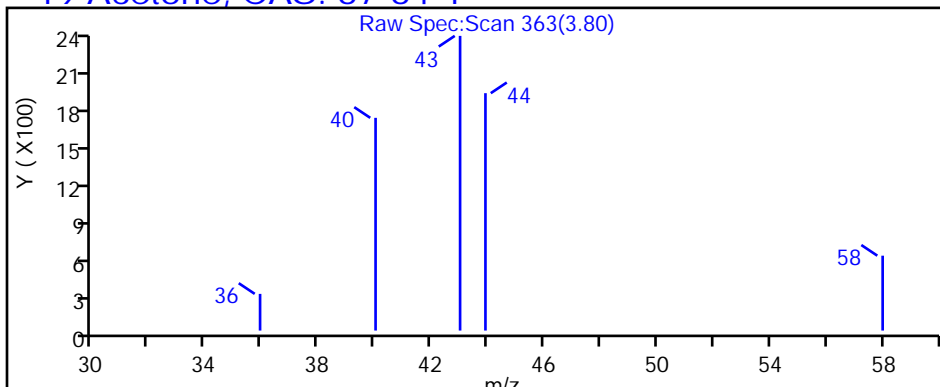
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

19 Acetone, CAS: 67-64-1



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S10.D

Injection Date: 30-Aug-2020 22:46:30

Instrument ID: 19094

Lims ID: 410-11876-A-1

Lab Sample ID: 410-11876-1

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

Operator ID: mec29284

ALS Bottle#: 16

Worklist Smp#: 17

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

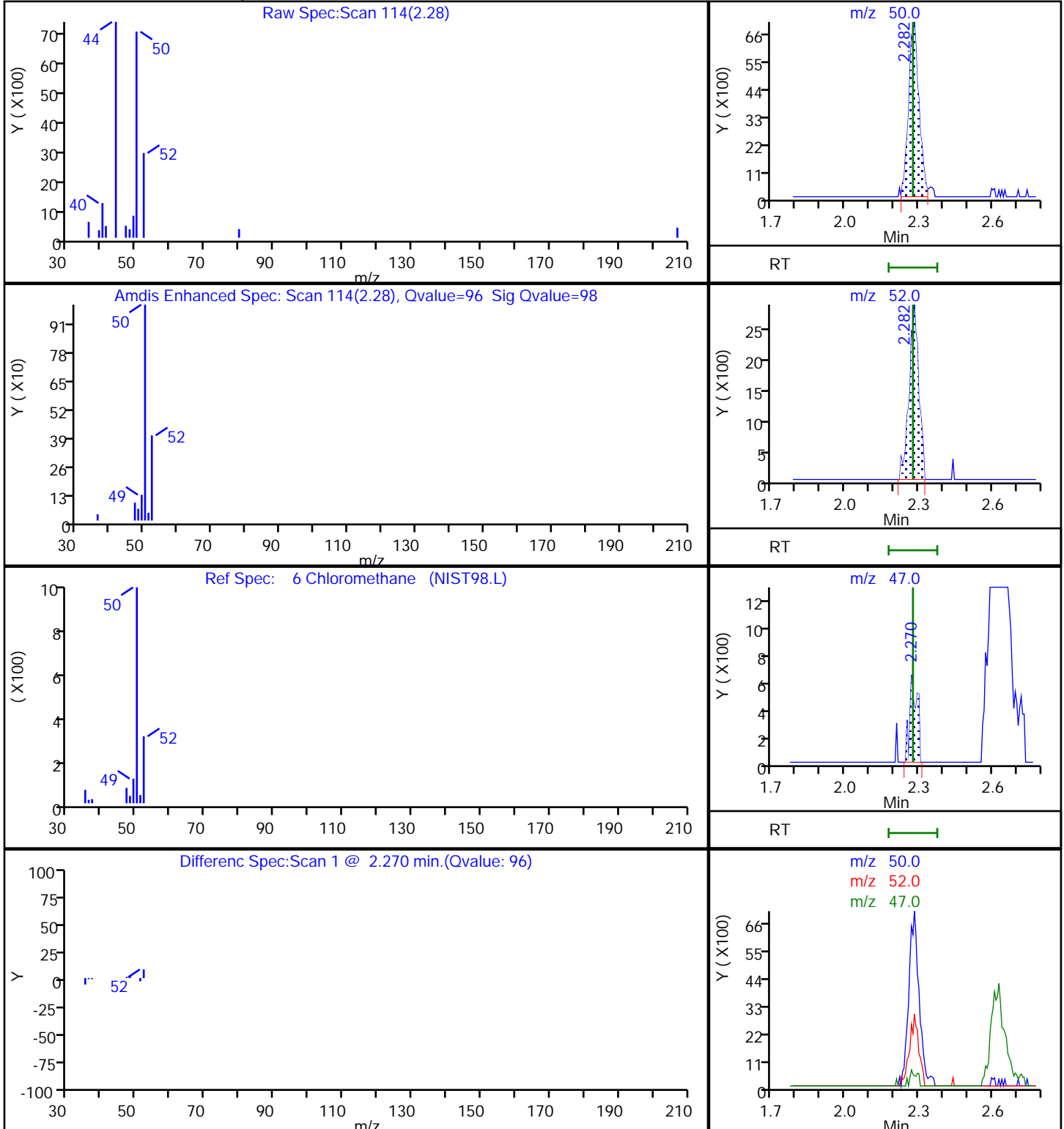
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

6 Chloromethane, CAS: 74-87-3



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S10.D

Injection Date: 30-Aug-2020 22:46:30

Instrument ID: 19094

Lims ID: 410-11876-A-1

Lab Sample ID: 410-11876-1

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

Operator ID: mec29284

ALS Bottle#: 16

Worklist Smp#: 17

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

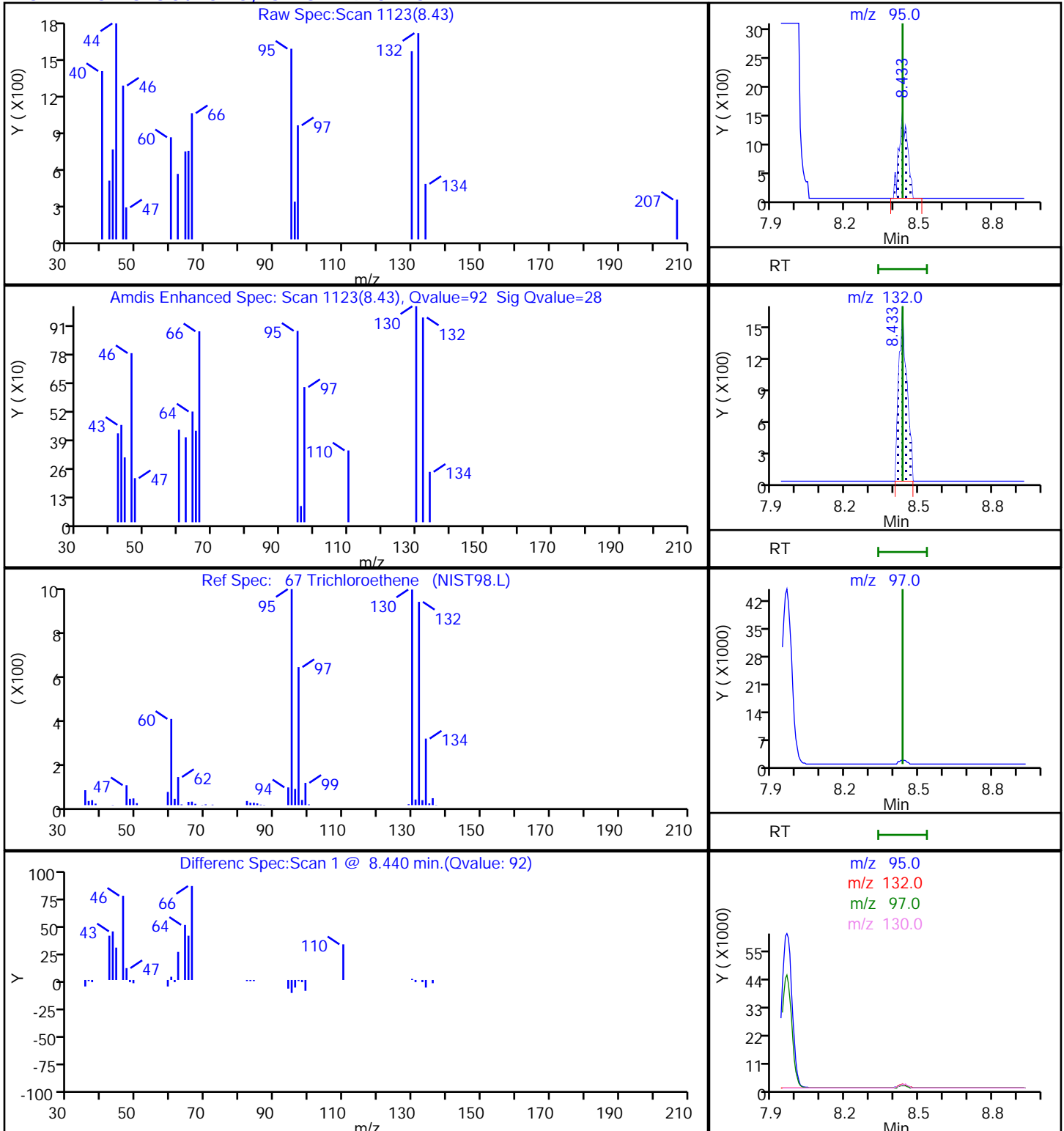
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

67 Trichloroethene, CAS: 79-01-6



Eurofins Lancaster Laboratories Env, LLC

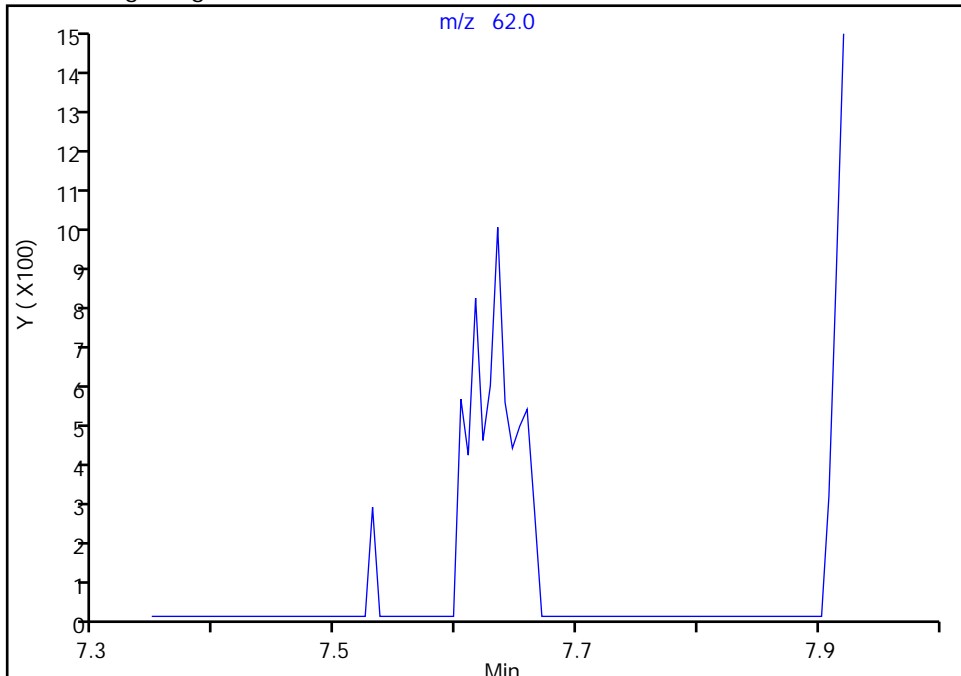
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Injection Date: 30-Aug-2020 22:46:30 Instrument ID: 19094
Lims ID: 410-11876-A-1 Lab Sample ID: 410-11876-1
Client ID: HD-COD-SW-6-0/1-0
Operator ID: mec29284 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

60 1,2-Dichloroethane, CAS: 107-06-2

Signal: 1

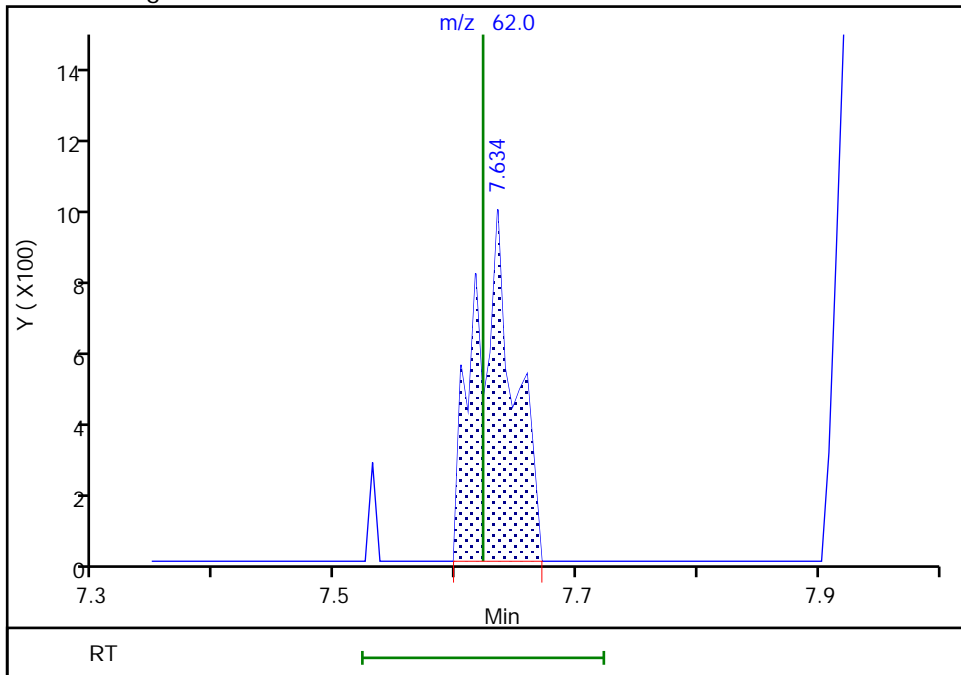
Not Detected
Expected RT: 7.62

Processing Integration Results



Manual Integration Results

RT: 7.63
Area: 2125
Amount: 0.040867
Amount Units: ug/l



Reviewer: virayd, 31-Aug-2020 13:14:31
Audit Action: Assigned Compound ID

Audit Reason: Peak assignment corrected

Eurofins Lancaster Laboratories Env, LLC

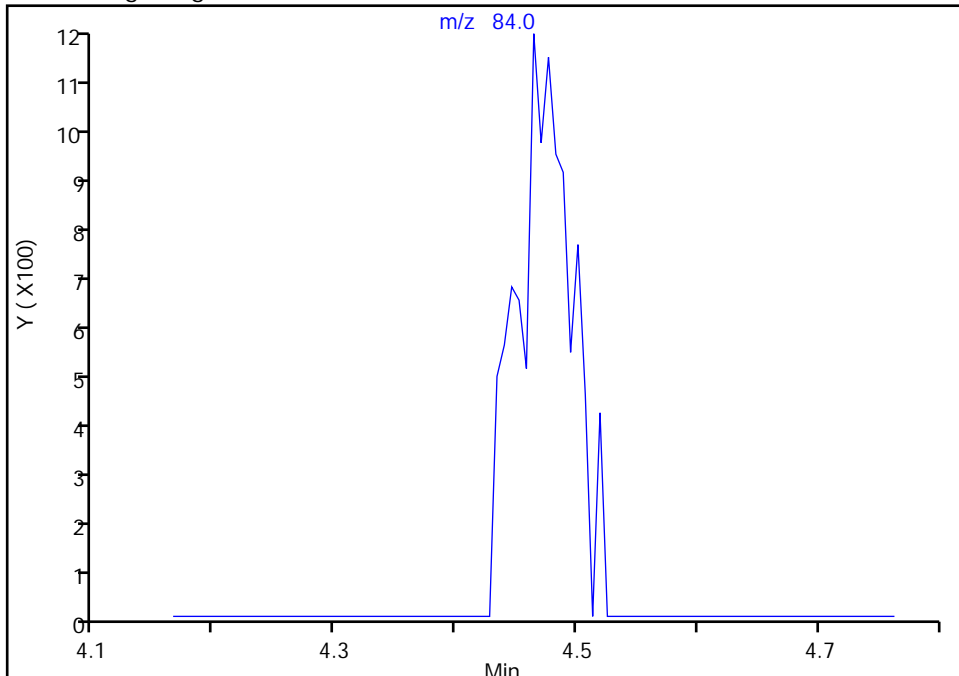
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Injection Date: 30-Aug-2020 22:46:30 Instrument ID: 19094
Lims ID: 410-11876-A-1 Lab Sample ID: 410-11876-1
Client ID: HD-COD-SW-6-0/1-0
Operator ID: mec29284 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

29 Methylene Chloride, CAS: 75-09-2

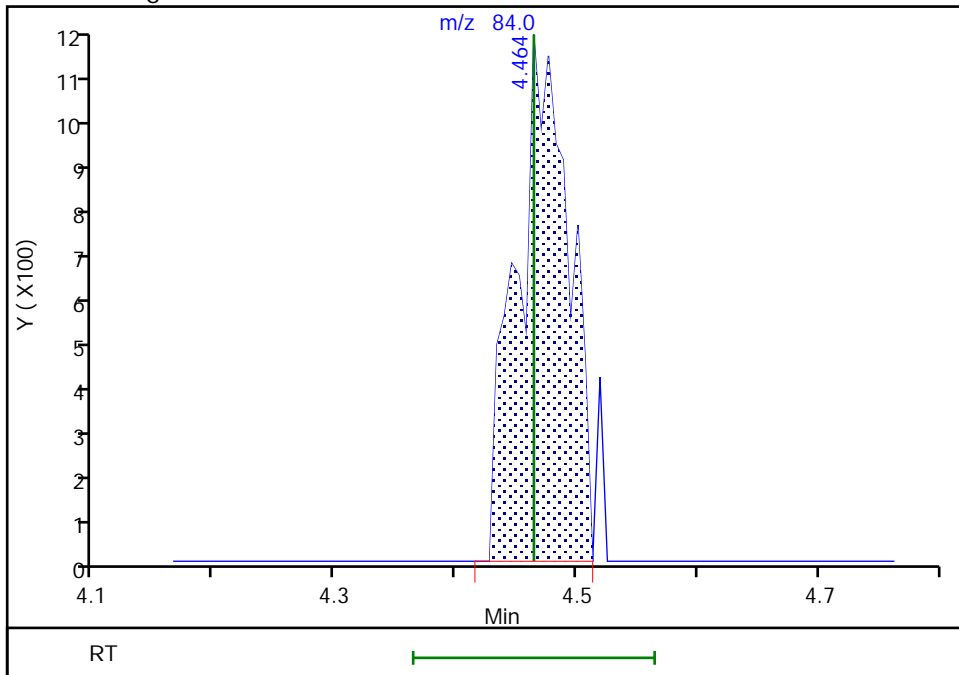
Signal: 1

Not Detected
Expected RT: 4.46

Processing Integration Results



Manual Integration Results



RT: 4.46
Area: 3558
Amount: 0.067378
Amount Units: ug/l

Eurofins Lancaster Laboratories Env, LLC

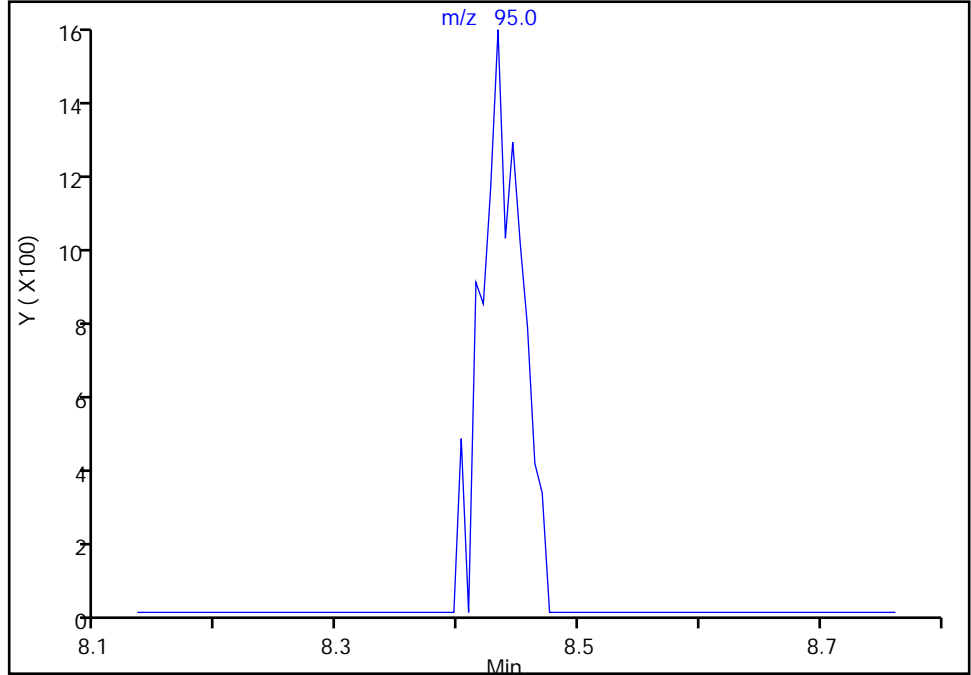
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Injection Date: 30-Aug-2020 22:46:30 Instrument ID: 19094
Lims ID: 410-11876-A-1 Lab Sample ID: 410-11876-1
Client ID: HD-COD-SW-6-0/1-0
Operator ID: mec29284 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

67 Trichloroethene, CAS: 79-01-6

Signal: 1

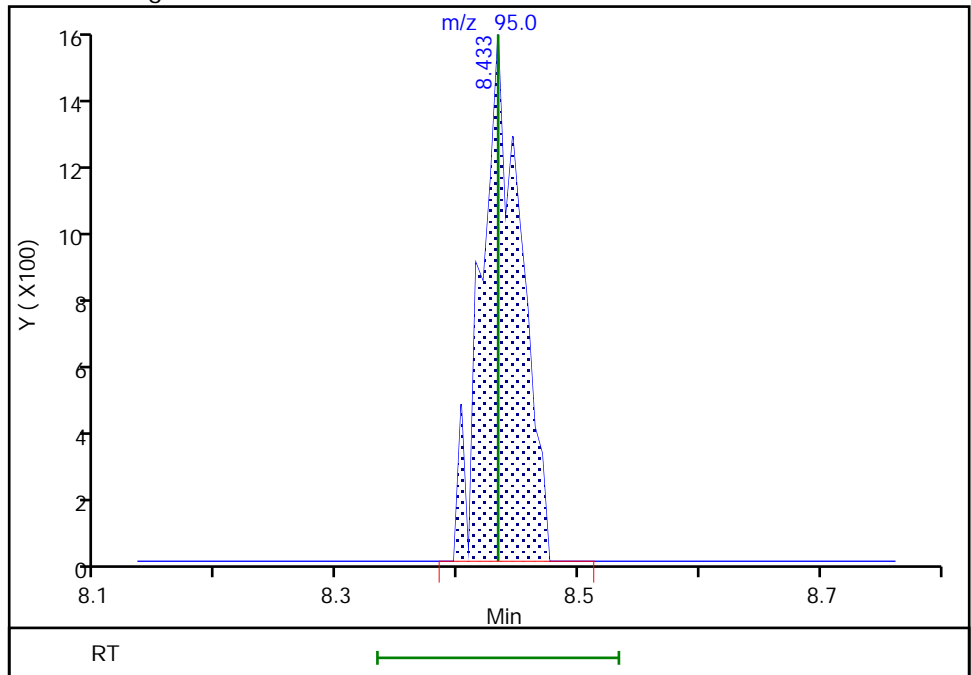
Not Detected
Expected RT: 8.43

Processing Integration Results



Manual Integration Results

RT: 8.43
Area: 3437
Amount: 0.063085
Amount Units: ug/l



Reviewer: virayd, 31-Aug-2020 13:14:40
Audit Action: Manually Integrated

Audit Reason: Other

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-7-0/1-0 Lab Sample ID: 410-11876-2
 Matrix: Water Lab File ID: HG30S11.D
 Analysis Method: 8260C LL Date Collected: 08/25/2020 11:00
 Sample wt/vol: 25 (mL) Date Analyzed: 08/30/2020 23:08
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 38982 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.50	0.070
71-55-6	1,1,1-Trichloroethane	ND		0.50	0.060
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.50	0.070
79-00-5	1,1,2-Trichloroethane	ND		0.50	0.060
75-34-3	1,1-Dichloroethane	ND		0.50	0.070
75-35-4	1,1-Dichloroethene	ND		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	ND		0.50	0.060
107-06-2	1,2-Dichloroethane	ND		0.50	0.050
78-87-5	1,2-Dichloropropane	ND		0.50	0.060
78-93-3	2-Butanone (MEK)	ND		5.0	0.60
591-78-6	2-Hexanone	ND		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70
67-64-1	Acetone	1.7	J	5.0	0.90
107-13-1	Acrylonitrile	ND		5.0	0.40
71-43-2	Benzene	ND		0.50	0.050
74-97-5	Bromochloromethane	ND		0.50	0.050
75-27-4	Bromodichloromethane	ND		0.50	0.050
75-25-2	Bromoform	ND		1.0	0.30
74-83-9	Bromomethane	ND		0.50	0.070
75-15-0	Carbon disulfide	ND		1.0	0.060
56-23-5	Carbon tetrachloride	ND		0.50	0.070
108-90-7	Chlorobenzene	ND		0.50	0.060
75-00-3	Chloroethane	ND		0.50	0.070
67-66-3	Chloroform	0.098	J	0.50	0.090
74-87-3	Chloromethane	0.29	J	0.50	0.060
156-59-2	cis-1,2-Dichloroethene	0.097	J	0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	ND		0.50	0.050
124-48-1	Dibromochloromethane	ND		0.50	0.070
100-41-4	Ethylbenzene	ND		0.50	0.060
1634-04-4	Methyl tert-butyl ether	ND		0.50	0.050
75-09-2	Methylene Chloride	0.089	J	0.50	0.070
100-42-5	Styrene	ND		0.50	0.050
127-18-4	Tetrachloroethene	0.065	J	0.50	0.060
108-88-3	Toluene	ND		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	ND		0.50	0.060
10061-02-6	trans-1,3-Dichloropropene	ND		0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-7-0/1-0 Lab Sample ID: 410-11876-2
 Matrix: Water Lab File ID: HG30S11.D
 Analysis Method: 8260C LL Date Collected: 08/25/2020 11:00
 Sample wt/vol: 25 (mL) Date Analyzed: 08/30/2020 23:08
 Soil Aliquot Vol.: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 38982 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	0.10	J	0.50	0.060
75-01-4	Vinyl chloride	ND		0.50	0.10
1330-20-7	Xylenes, Total	ND		1.0	0.15

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	107		80-120
1868-53-7	Dibromofluoromethane (Surr)	108		80-120
2037-26-5	Toluene-d8 (Surr)	100		80-120
460-00-4	4-Bromofluorobenzene (Surr)	96		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S11.D
 Lims ID: 410-11876-A-2
 Client ID: HD-COD-SW-7-0/1-0
 Sample Type: Client
 Inject. Date: 30-Aug-2020 23:08:30 ALS Bottle#: 17 Worklist Smp#: 18
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: 410-11876-A-2
 Misc. Info.: 410-0009349-018
 Operator ID: mec29284 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 31-Aug-2020 13:23:49 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1008

First Level Reviewer: virayd

Date: 31-Aug-2020 13:15:40

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
6 Chloromethane	50	2.276	2.276	0.000	96	24315	0.2851	
7 Vinyl chloride	62		2.385				ND	
9 Bromomethane	94		2.745				ND	
10 Chloroethane	64		2.837				ND	
18 1,1-Dichloroethene	96		3.757				ND	
19 Acetone	43	3.818	3.788	0.030	98	16745	1.72	
24 Carbon disulfide	76	4.093	4.086	0.007	85	5235	0.0354	M
29 Methylene Chloride	84	4.483	4.464	0.019	12	4725	0.0892	M
* 28 t-Butyl alcohol-d10 (IS)	65	4.483	4.477	0.007	0	137685	50.0	
31 Acrylonitrile	53		4.806				ND	
32 Methyl tert-butyl ether	73		4.873				ND	
33 trans-1,2-Dichloroethene	96		4.891				ND	
35 1,1-Dichloroethane	63		5.549				ND	
41 2-Butanone (MEK)	43		6.330				ND	
42 cis-1,2-Dichloroethene	96	6.379	6.372	0.007	80	5603	0.0966	
48 Chlorobromomethane	128		6.702				ND	
50 Chloroform	83	6.848	6.854	-0.006	92	8931	0.0981	
\$ 51 Dibromofluoromethane (Surr)	113	7.068	7.061	0.007	93	518196	10.8	
52 1,1,1-Trichloroethane	97		7.086				ND	
56 Carbon tetrachloride	117		7.293				ND	
\$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.519	7.519	0.000	0	103788	10.7	
59 Benzene	78		7.555				ND	
60 1,2-Dichloroethane	62	7.628	7.622	0.006	1	2022	0.0388	a
* 65 Fluorobenzene (IS)	96	7.958	7.951	0.007	98	2023071	10.0	
67 Trichloroethene	95	8.439	8.433	0.006	92	5718	0.1046	M
70 1,2-Dichloropropane	63		8.768				ND	
75 Dichlorobromomethane	83		9.110				ND	
80 cis-1,3-Dichloropropene	75		9.634				ND	
81 4-Methyl-2-pentanone (MIBK)	43		9.793				ND	
\$ 82 Toluene-d8 (Surr)	98	9.933	9.933	0.000	94	1956299	10.0	
83 Toluene	92	10.006	10.012	-0.006	97	5811	0.0426	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
85 trans-1,3-Dichloropropene	75		10.256				ND	
87 1,1,2-Trichloroethane	97		10.457				ND	
88 Tetrachloroethene	166	10.543	10.542	0.001	93	3768	0.0650	
91 2-Hexanone	43		10.658				ND	
93 Chlorodibromomethane	129		10.829				ND	
94 Ethylene Dibromide	107		10.945				ND	
S 95 Xylenes, Total	106		11.245				ND	
* 97 Chlorobenzene-d5 (IS)	117	11.366	11.365	0.001	87	1457141	10.0	
98 Chlorobenzene	112		11.390				ND	
99 1,1,1,2-Tetrachloroethane	131		11.469				ND	
100 Ethylbenzene	91		11.475				ND	
101 m-Xylene & p-Xylene	106		11.585				ND	
102 o-Xylene	106		11.914				ND	
103 Styrene	104		11.926				ND	
104 Bromoform	173		12.091				ND	
\$ 108 4-Bromofluorobenzene (Surr)	95	12.353	12.353	0.000	88	687968	9.64	
109 1,1,2,2-Tetrachloroethane	83		12.451				ND	
* 124 1,4-Dichlorobenzene-d4	152	13.231	13.231	0.000	97	734277	10.0	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_30_826ISS_00005

Amount Added: 5.00

Units: uL

Run Reagent

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S11.D

Injection Date: 30-Aug-2020 23:08:30

Instrument ID: 19094

Operator ID: mec29284

Lims ID: 410-11876-A-2

Lab Sample ID: 410-11876-2

Worklist Smp#: 18

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

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

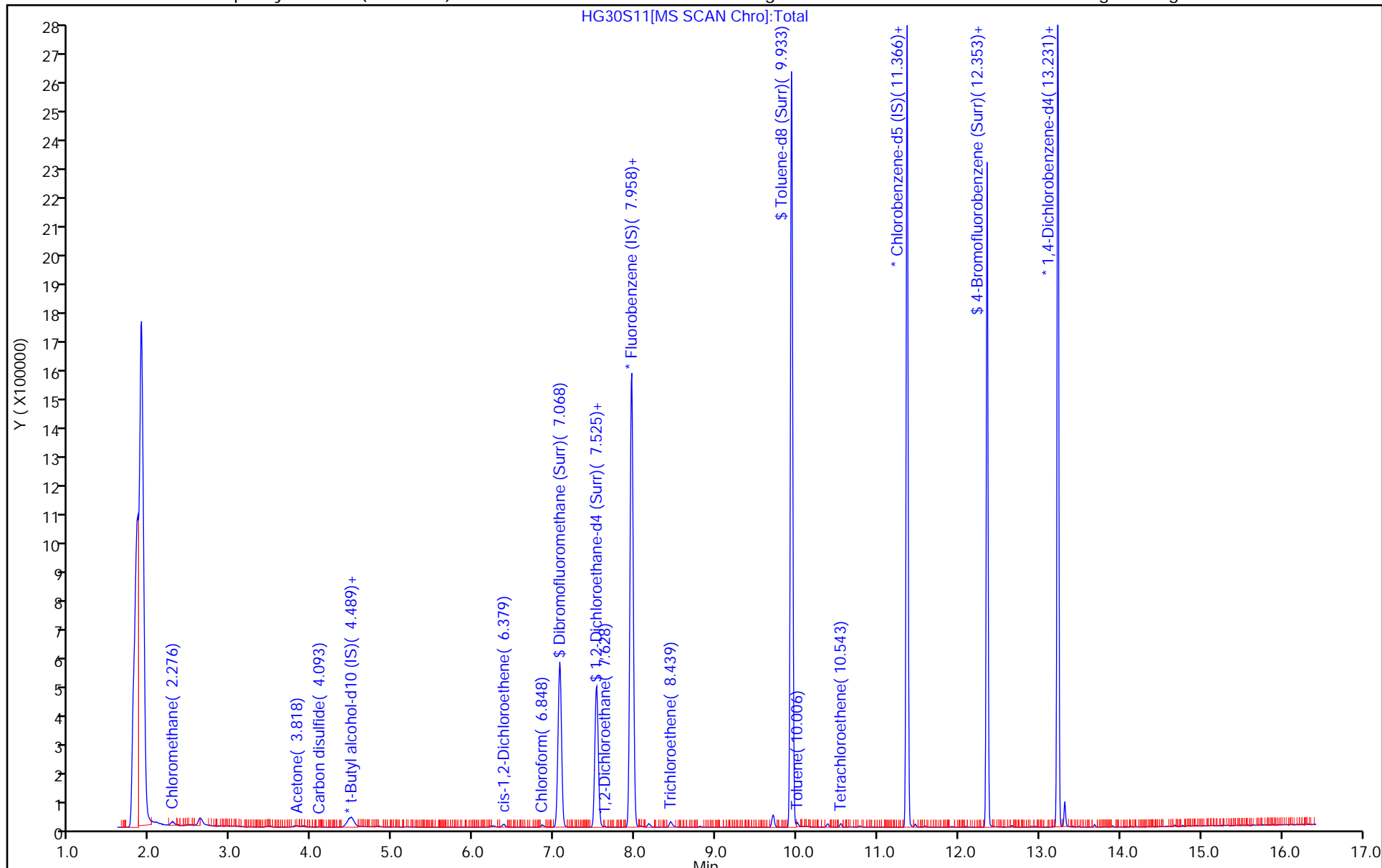
ALS Bottle#: 17

Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S11.D
 Lims ID: 410-11876-A-2
 Client ID: HD-COD-SW-7-0/1-0
 Sample Type: Client
 Inject. Date: 30-Aug-2020 23:08:30 ALS Bottle#: 17 Worklist Smp#: 18
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: 410-11876-A-2
 Misc. Info.: 410-0009349-018
 Operator ID: mec29284 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 31-Aug-2020 13:23:49 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1008

First Level Reviewer: virayd Date: 31-Aug-2020 13:15:40

Compound	Amount Added	Amount Recovered	% Rec.
\$ 51 Dibromofluoromethane (Surr)	10.0	10.8	108.34
\$ 58 1,2-Dichloroethane-d4 (Surr)	10.0	10.7	106.52
\$ 82 Toluene-d8 (Surr)	10.0	10.0	100.05
\$ 108 4-Bromofluorobenzene (Surr)	10.0	9.64	96.44

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S11.D

Injection Date: 30-Aug-2020 23:08:30

Instrument ID: 19094

Lims ID: 410-11876-A-2

Lab Sample ID: 410-11876-2

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

Operator ID: mec29284

ALS Bottle#: 17

Worklist Smp#: 18

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

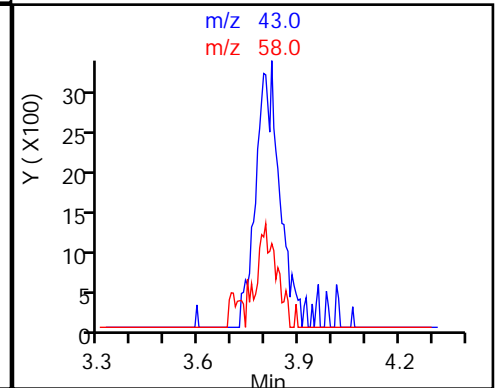
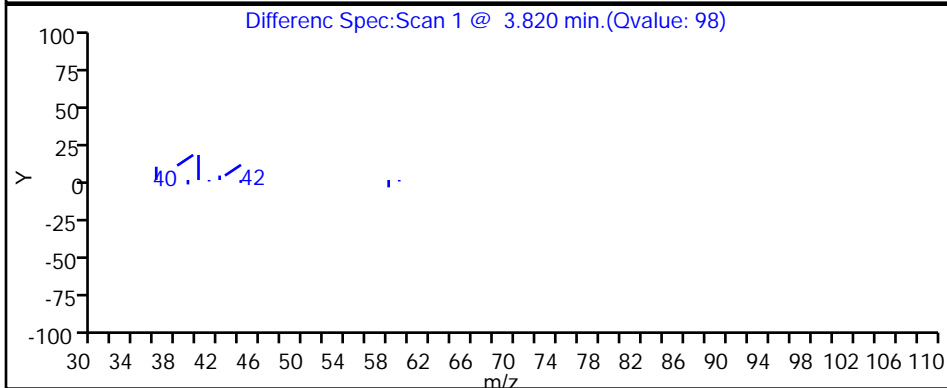
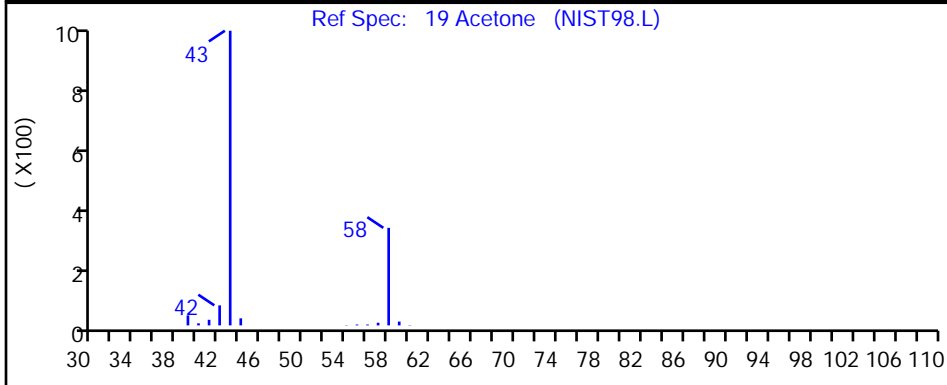
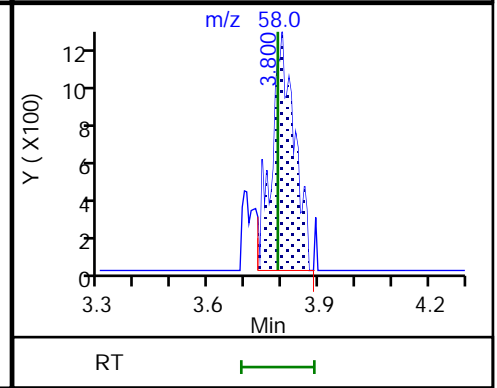
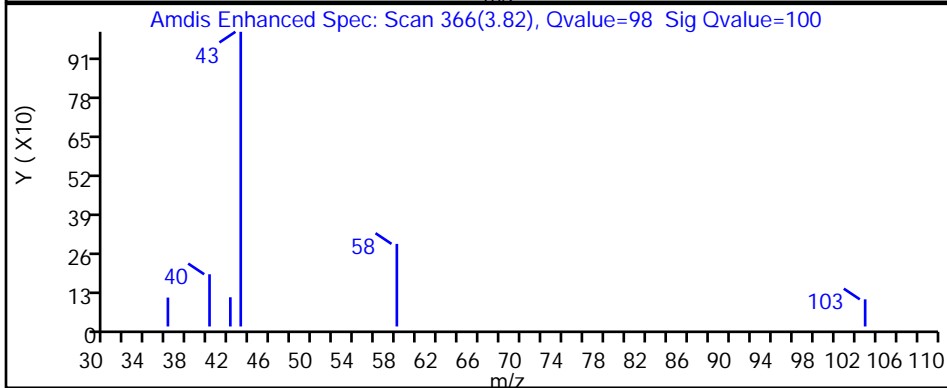
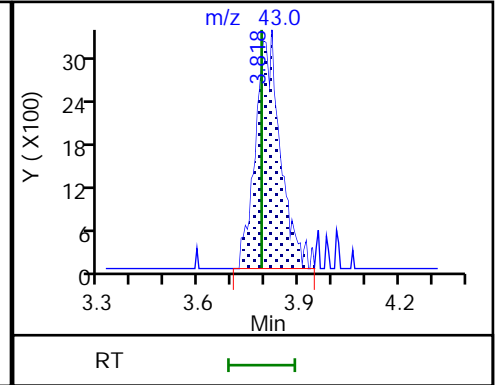
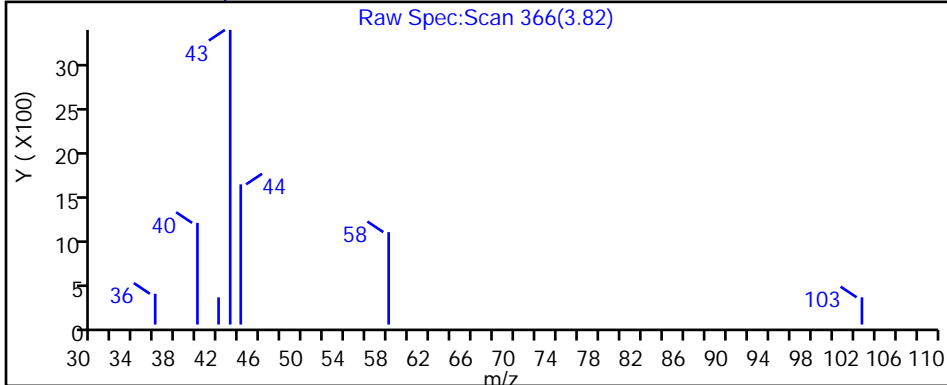
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

19 Acetone, CAS: 67-64-1



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S11.D

Injection Date: 30-Aug-2020 23:08:30

Instrument ID: 19094

Lims ID: 410-11876-A-2

Lab Sample ID: 410-11876-2

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

Operator ID: mec29284

ALS Bottle#: 17

Worklist Smp#: 18

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

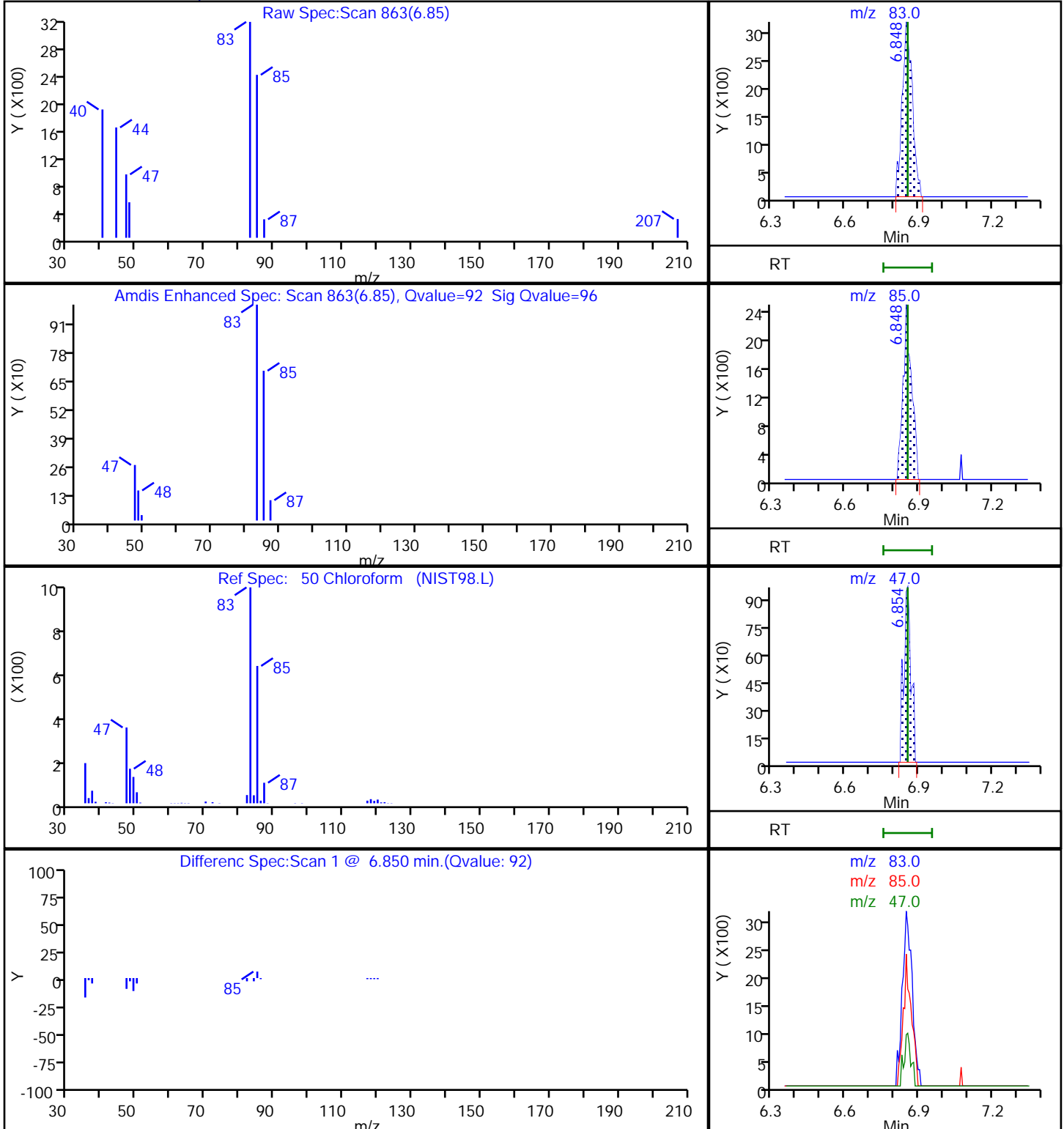
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

50 Chloroform, CAS: 67-66-3



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S11.D

Injection Date: 30-Aug-2020 23:08:30

Instrument ID: 19094

Lims ID: 410-11876-A-2

Lab Sample ID: 410-11876-2

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

Operator ID: mec29284

ALS Bottle#: 17

Worklist Smp#: 18

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

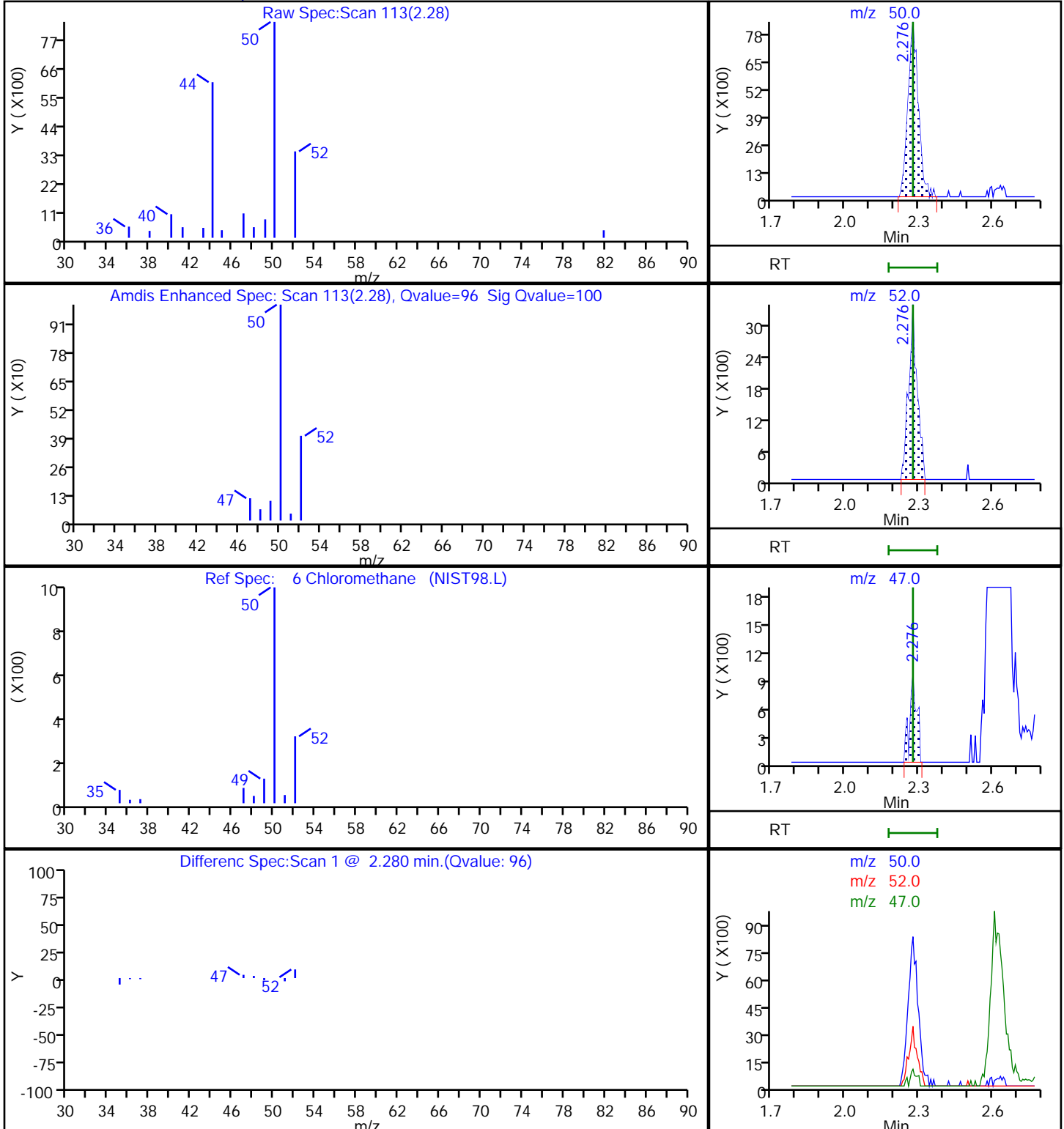
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID) x 30m

MS Quad

6 Chloromethane, CAS: 74-87-3



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S11.D

Injection Date: 30-Aug-2020 23:08:30

Instrument ID: 19094

Lims ID: 410-11876-A-2

Lab Sample ID: 410-11876-2

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

Operator ID: mec29284

ALS Bottle#: 17

Worklist Smp#: 18

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

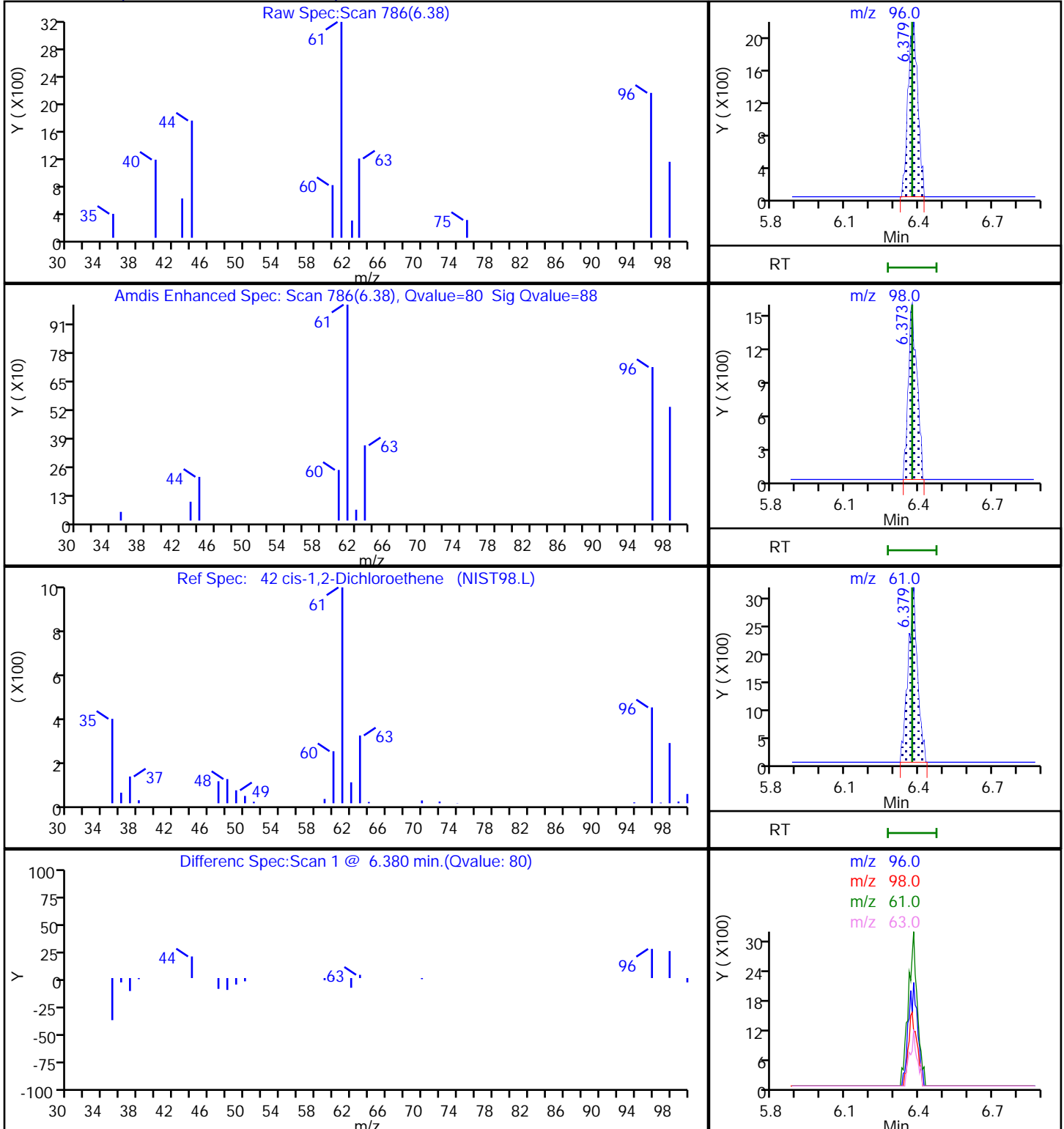
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

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



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S11.D

Injection Date: 30-Aug-2020 23:08:30

Instrument ID: 19094

Lims ID: 410-11876-A-2

Lab Sample ID: 410-11876-2

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

Operator ID: mec29284

ALS Bottle#: 17

Worklist Smp#: 18

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

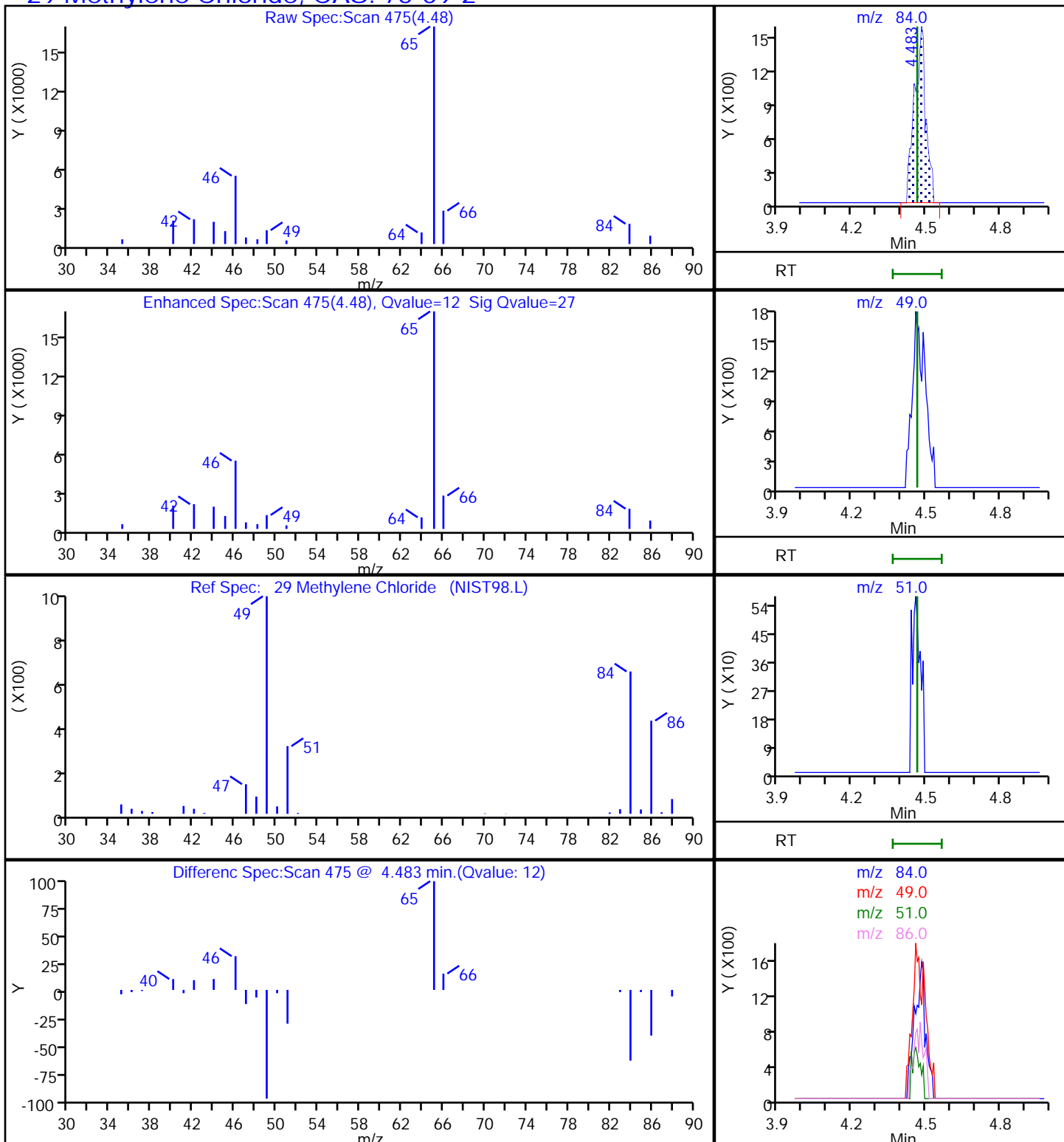
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

29 Methylene Chloride, CAS: 75-09-2



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S11.D

Injection Date: 30-Aug-2020 23:08:30

Instrument ID: 19094

Lims ID: 410-11876-A-2

Lab Sample ID: 410-11876-2

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

Operator ID: mec29284

ALS Bottle#: 17

Worklist Smp#: 18

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

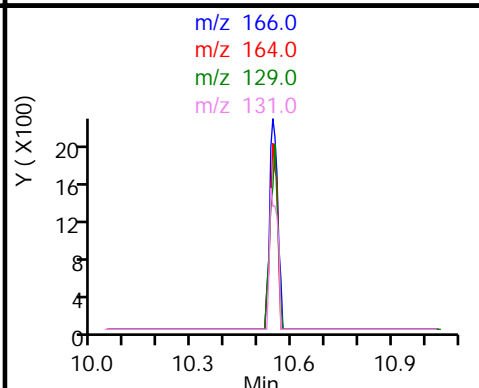
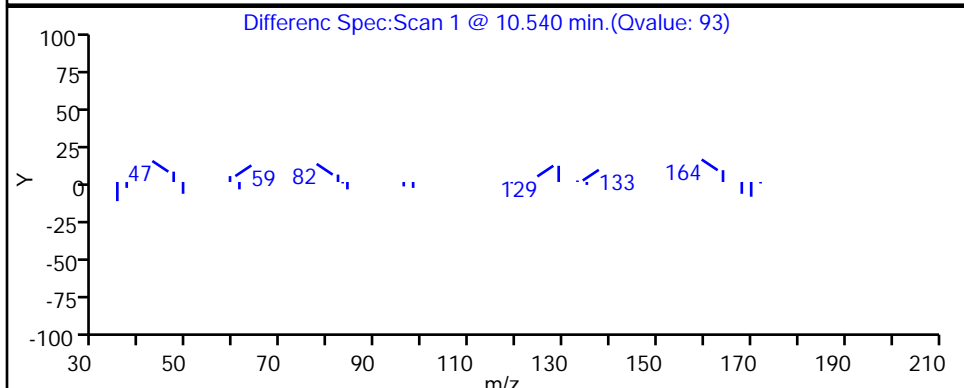
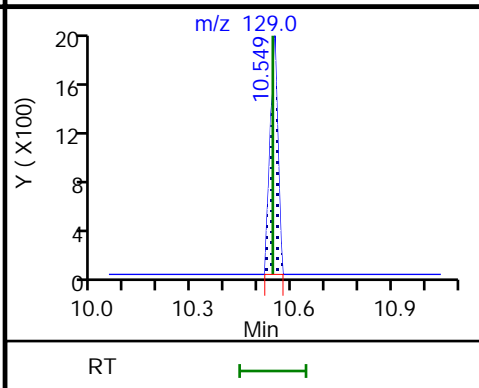
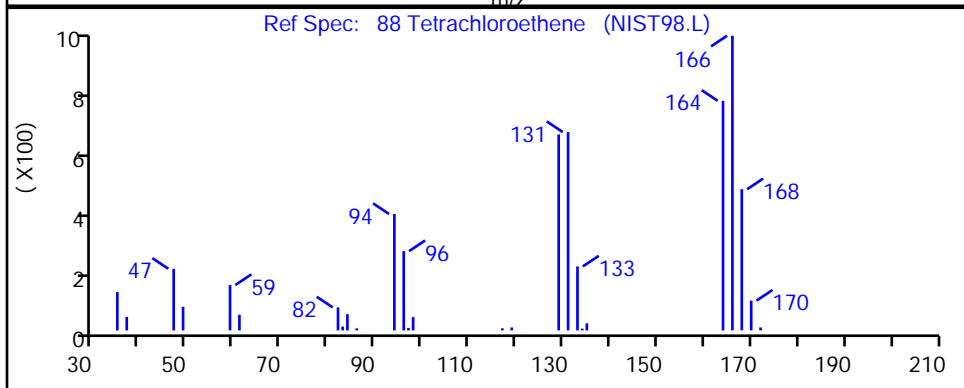
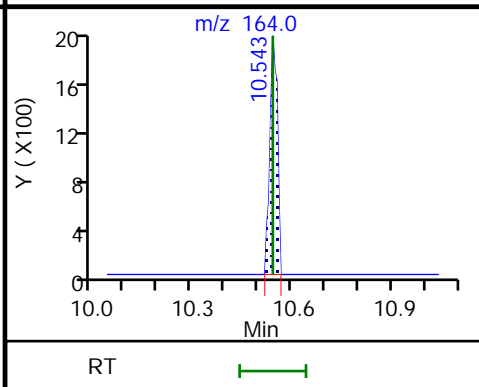
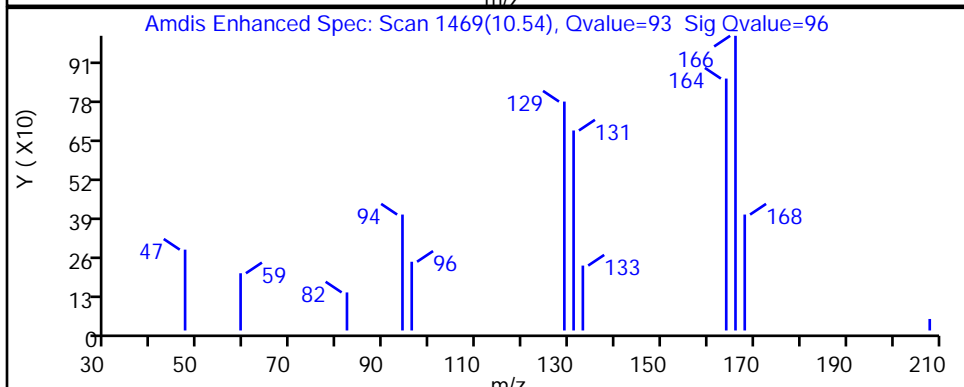
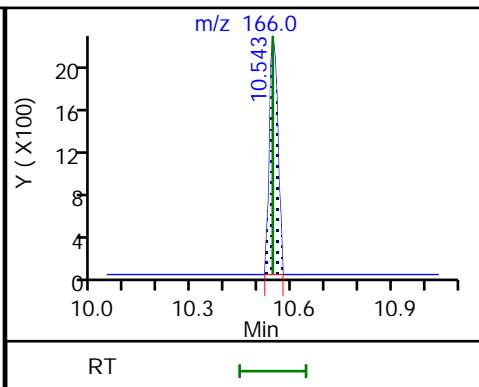
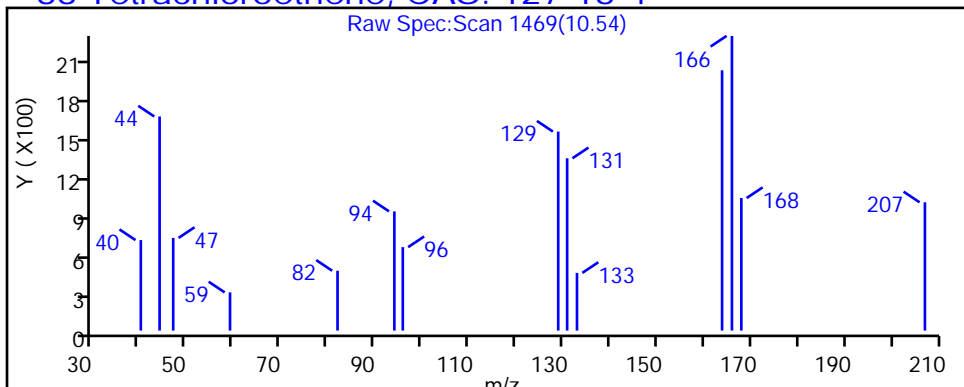
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

88 Tetrachloroethene, CAS: 127-18-4



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S11.D

Injection Date: 30-Aug-2020 23:08:30

Instrument ID: 19094

Lims ID: 410-11876-A-2

Lab Sample ID: 410-11876-2

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

Operator ID: mec29284

ALS Bottle#: 17

Worklist Smp#: 18

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

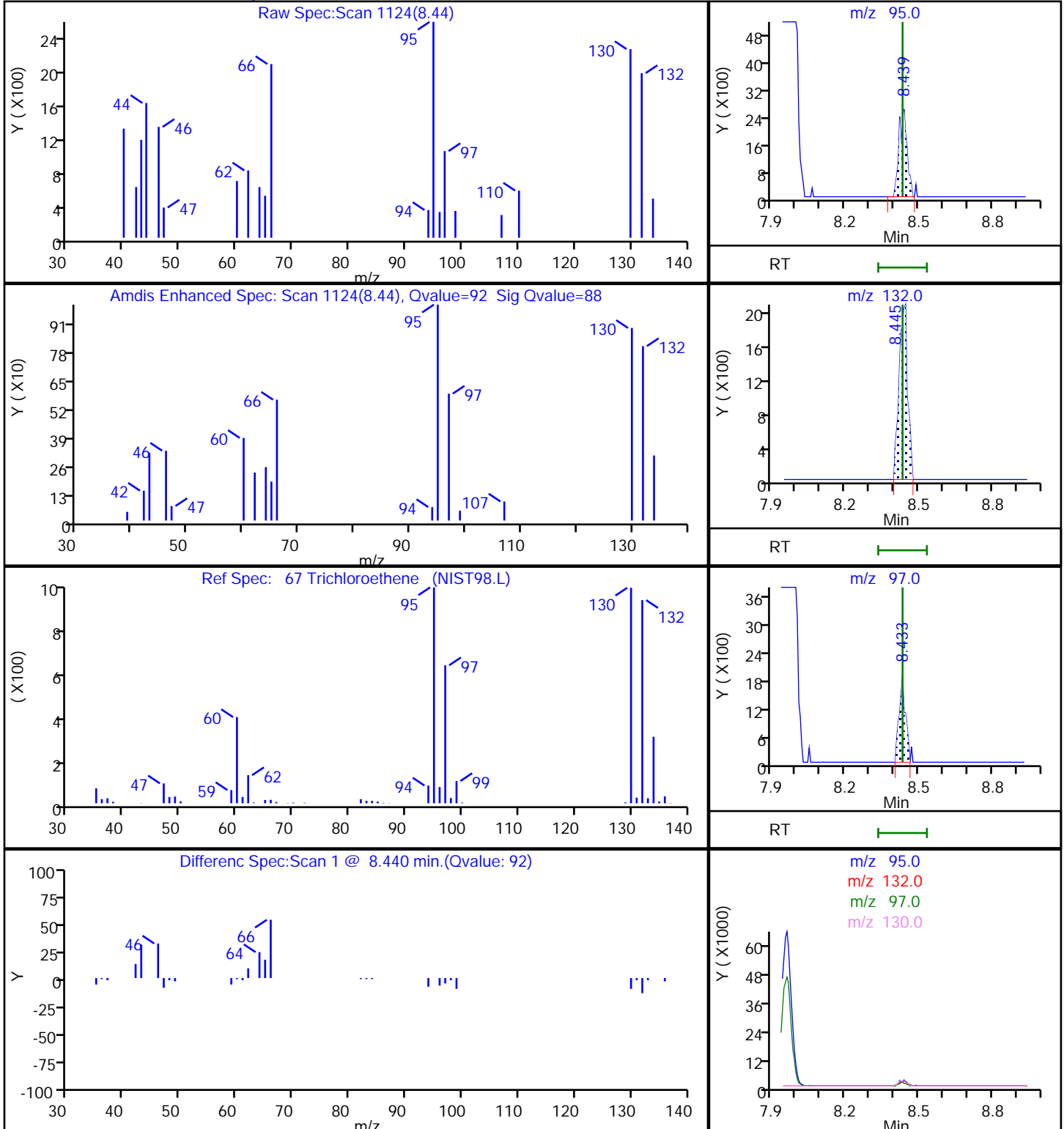
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

67 Trichloroethene, CAS: 79-01-6



Eurofins Lancaster Laboratories Env, LLC

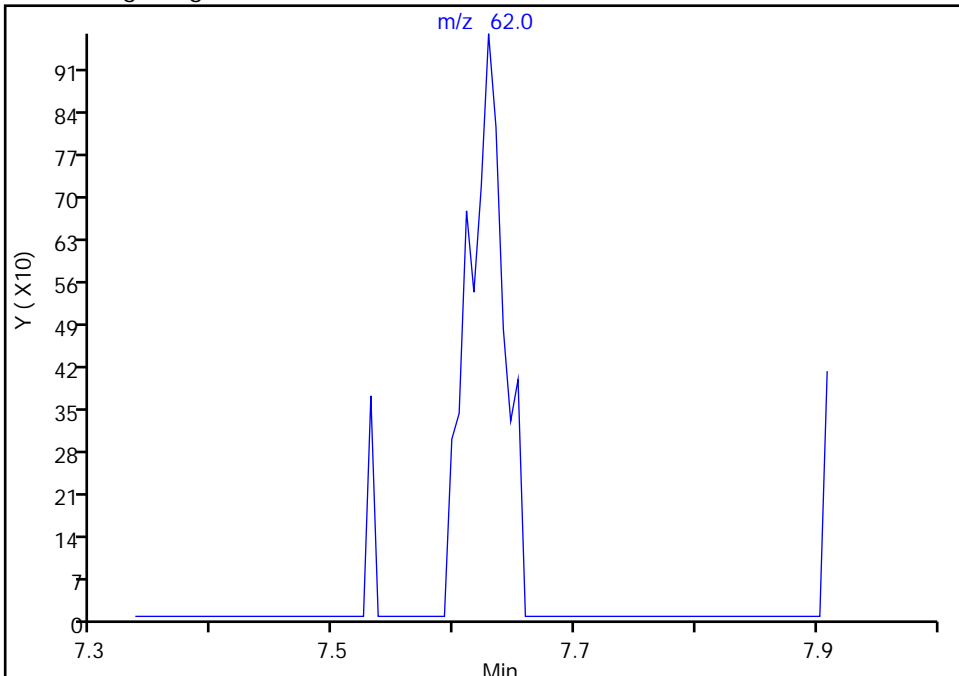
Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S11.D
Injection Date: 30-Aug-2020 23:08:30 Instrument ID: 19094
Lims ID: 410-11876-A-2 Lab Sample ID: 410-11876-2
Client ID: HD-COD-SW-7-0/1-0
Operator ID: mec29284 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

60 1,2-Dichloroethane, CAS: 107-06-2

Signal: 1

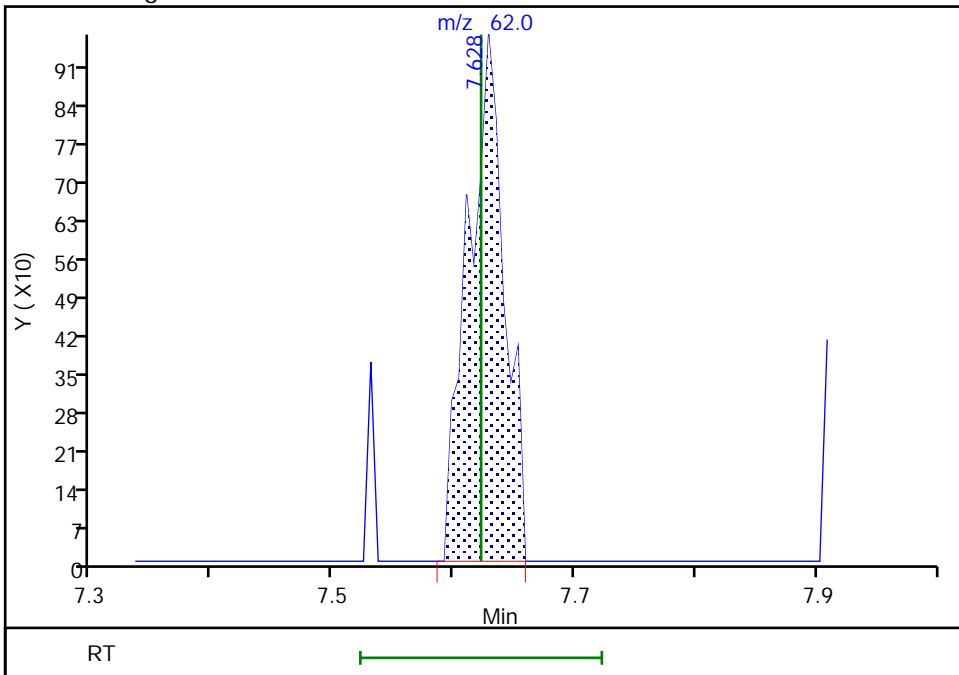
Not Detected
Expected RT: 7.62

Processing Integration Results



Manual Integration Results

RT: 7.63
Area: 2022
Amount: 0.038762
Amount Units: ug/l



Reviewer: virayd, 31-Aug-2020 13:15:25
Audit Action: Assigned Compound ID

Audit Reason: Other

Eurofins Lancaster Laboratories Env, LLC

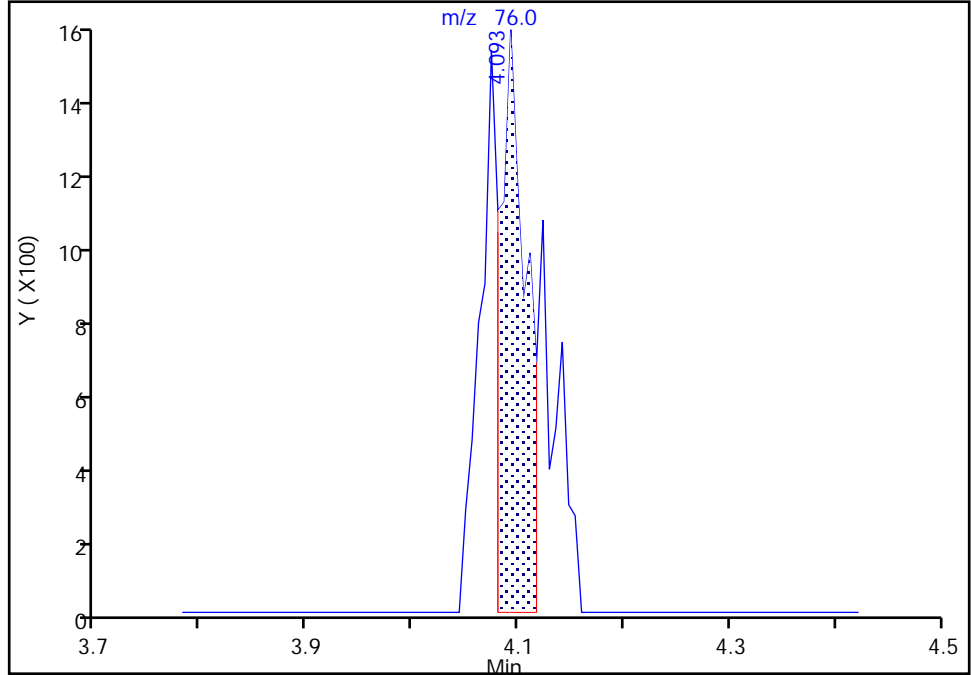
Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S11.D
Injection Date: 30-Aug-2020 23:08:30 Instrument ID: 19094
Lims ID: 410-11876-A-2 Lab Sample ID: 410-11876-2
Client ID: HD-COD-SW-7-0/1-0
Operator ID: mec29284 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

24 Carbon disulfide, CAS: 75-15-0

Signal: 1

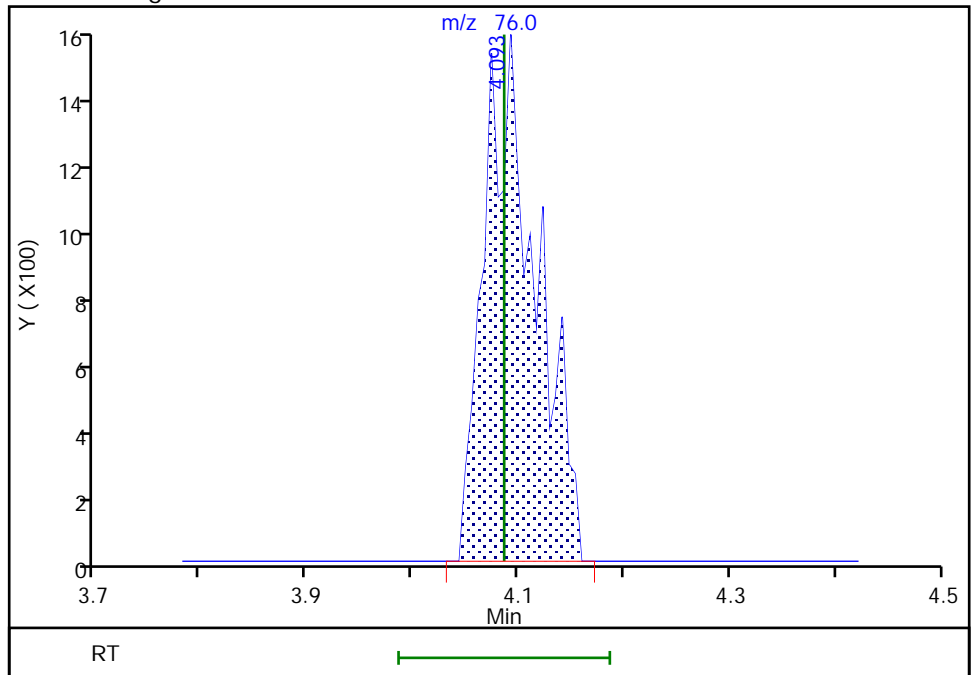
RT: 4.09
Area: 2667
Amount: 0.018059
Amount Units: ug/l

Processing Integration Results



RT: 4.09
Area: 5235
Amount: 0.035447
Amount Units: ug/l

Manual Integration Results



Reviewer: virayd, 31-Aug-2020 13:15:13
Audit Action: Manually Integrated

Audit Reason: Other

Eurofins Lancaster Laboratories Env, LLC

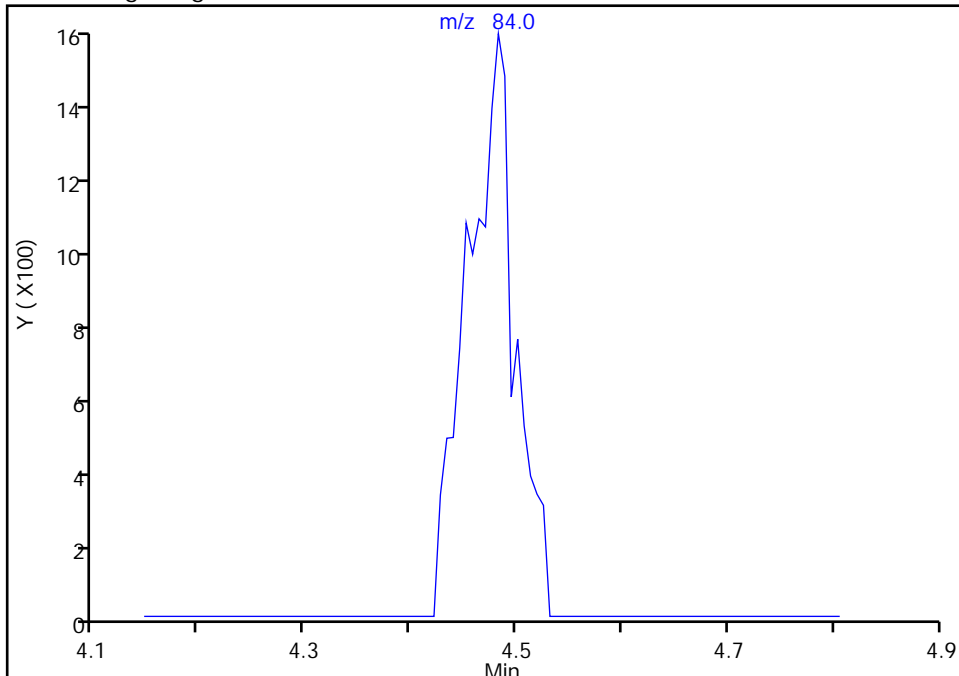
Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S11.D
Injection Date: 30-Aug-2020 23:08:30 Instrument ID: 19094
Lims ID: 410-11876-A-2 Lab Sample ID: 410-11876-2
Client ID: HD-COD-SW-7-0/1-0
Operator ID: mec29284 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

29 Methylene Chloride, CAS: 75-09-2

Signal: 1

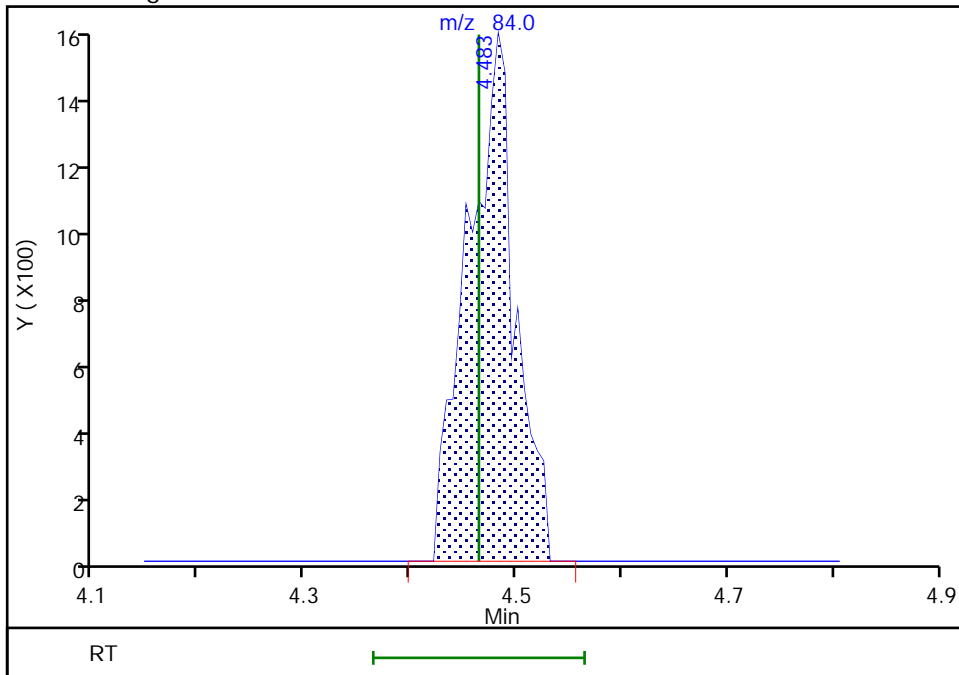
Not Detected
Expected RT: 4.46

Processing Integration Results



Manual Integration Results

RT: 4.48
Area: 4725
Amount: 0.089192
Amount Units: ug/l



Reviewer: virayd, 31-Aug-2020 13:15:15
Audit Action: Manually Integrated

Audit Reason: Other

Eurofins Lancaster Laboratories Env, LLC

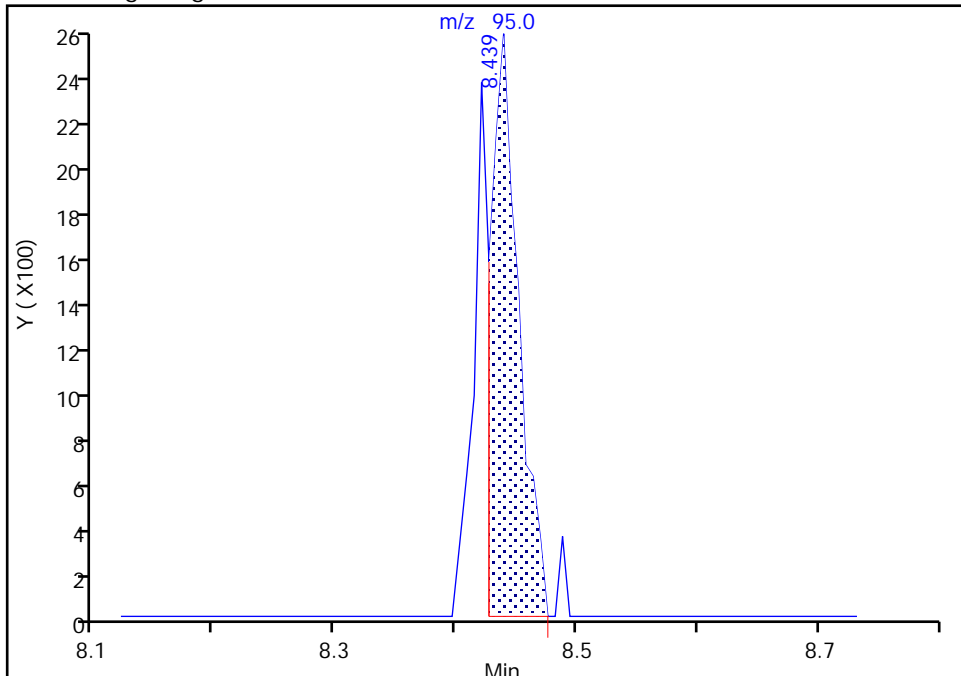
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Injection Date: 30-Aug-2020 23:08:30 Instrument ID: 19094
Lims ID: 410-11876-A-2 Lab Sample ID: 410-11876-2
Client ID: HD-COD-SW-7-0/1-0
Operator ID: mec29284 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

67 Trichloroethene, CAS: 79-01-6

Signal: 1

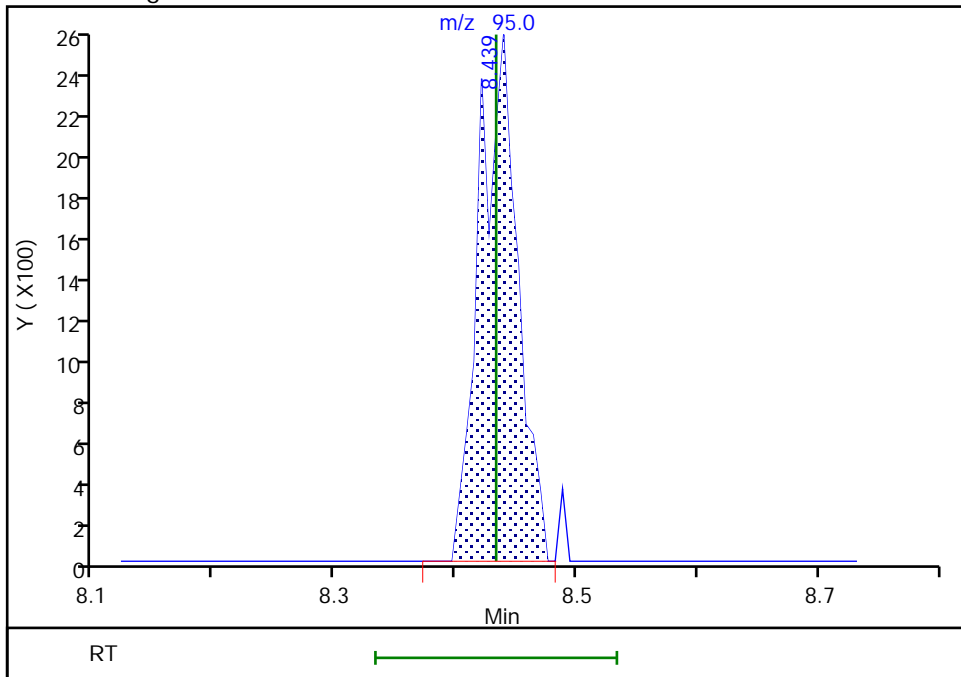
RT: 8.44
Area: 4137
Amount: 0.075691
Amount Units: ug/l

Processing Integration Results



RT: 8.44
Area: 5718
Amount: 0.104617
Amount Units: ug/l

Manual Integration Results



Reviewer: virayd, 31-Aug-2020 13:15:30
Audit Action: Manually Integrated

Audit Reason: Other

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-8-0/1-0 Lab Sample ID: 410-11876-3
 Matrix: Water Lab File ID: HG30S12.D
 Analysis Method: 8260C LL Date Collected: 08/25/2020 08:20
 Sample wt/vol: 25 (mL) Date Analyzed: 08/30/2020 23:30
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 38982 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.50	0.070
71-55-6	1,1,1-Trichloroethane	ND		0.50	0.060
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.50	0.070
79-00-5	1,1,2-Trichloroethane	ND		0.50	0.060
75-34-3	1,1-Dichloroethane	ND		0.50	0.070
75-35-4	1,1-Dichloroethene	ND		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	ND		0.50	0.060
107-06-2	1,2-Dichloroethane	ND		0.50	0.050
78-87-5	1,2-Dichloropropane	ND		0.50	0.060
78-93-3	2-Butanone (MEK)	ND		5.0	0.60
591-78-6	2-Hexanone	ND		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70
67-64-1	Acetone	1.0	J	5.0	0.90
107-13-1	Acrylonitrile	ND		5.0	0.40
71-43-2	Benzene	ND		0.50	0.050
74-97-5	Bromochloromethane	ND		0.50	0.050
75-27-4	Bromodichloromethane	ND		0.50	0.050
75-25-2	Bromoform	ND		1.0	0.30
74-83-9	Bromomethane	ND		0.50	0.070
75-15-0	Carbon disulfide	ND		1.0	0.060
56-23-5	Carbon tetrachloride	ND		0.50	0.070
108-90-7	Chlorobenzene	ND		0.50	0.060
75-00-3	Chloroethane	ND		0.50	0.070
67-66-3	Chloroform	ND		0.50	0.090
74-87-3	Chloromethane	1.1		0.50	0.060
156-59-2	cis-1,2-Dichloroethene	0.12	J	0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	ND		0.50	0.050
124-48-1	Dibromochloromethane	ND		0.50	0.070
100-41-4	Ethylbenzene	ND		0.50	0.060
1634-04-4	Methyl tert-butyl ether	ND		0.50	0.050
75-09-2	Methylene Chloride	0.072	J	0.50	0.070
100-42-5	Styrene	ND		0.50	0.050
127-18-4	Tetrachloroethene	0.064	J	0.50	0.060
108-88-3	Toluene	ND		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	ND		0.50	0.060
10061-02-6	trans-1,3-Dichloropropene	ND		0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-8-0/1-0 Lab Sample ID: 410-11876-3
 Matrix: Water Lab File ID: HG30S12.D
 Analysis Method: 8260C LL Date Collected: 08/25/2020 08:20
 Sample wt/vol: 25 (mL) Date Analyzed: 08/30/2020 23:30
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 38982 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	0.12	J	0.50	0.060
75-01-4	Vinyl chloride	ND		0.50	0.10
1330-20-7	Xylenes, Total	ND		1.0	0.15

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	110		80-120
1868-53-7	Dibromofluoromethane (Surr)	108		80-120
2037-26-5	Toluene-d8 (Surr)	100		80-120
460-00-4	4-Bromofluorobenzene (Surr)	96		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S12.D
 Lims ID: 410-11876-A-3
 Client ID: HD-COD-SW-8-0/1-0
 Sample Type: Client
 Inject. Date: 30-Aug-2020 23:30:30 ALS Bottle#: 18 Worklist Smp#: 19
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: 410-11876-A-3
 Misc. Info.: 410-0009349-019
 Operator ID: mec29284 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 31-Aug-2020 13:23:49 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1008

First Level Reviewer: virayd

Date: 31-Aug-2020 13:16:43

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
6 Chloromethane	50	2.276	2.276	0.000	99	90446	1.11	
7 Vinyl chloride	62		2.385				ND	
9 Bromomethane	94		2.745				ND	
10 Chloroethane	64		2.837				ND	
18 1,1-Dichloroethene	96		3.757				ND	
19 Acetone	43	3.818	3.788	0.030	66	9614	1.05	
24 Carbon disulfide	76	4.086	4.086	0.000	95	7126	0.0503	M
29 Methylene Chloride	84	4.464	4.464	0.000	37	3680	0.0724	
* 28 t-Butyl alcohol-d10 (IS)	65	4.464	4.477	-0.012	0	129708	50.0	
31 Acrylonitrile	53		4.806				ND	
32 Methyl tert-butyl ether	73		4.873				ND	
33 trans-1,2-Dichloroethene	96		4.891				ND	
35 1,1-Dichloroethane	63		5.549				ND	
41 2-Butanone (MEK)	43		6.330				ND	
42 cis-1,2-Dichloroethene	96	6.378	6.372	0.006	76	6826	0.1227	
48 Chlorobromomethane	128		6.702				ND	
50 Chloroform	83	6.860	6.854	0.006	88	5170	0.0592	
\$ 51 Dibromofluoromethane (Surr)	113	7.067	7.061	0.006	93	496117	10.8	
52 1,1,1-Trichloroethane	97		7.086				ND	
56 Carbon tetrachloride	117		7.293				ND	
\$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.525	7.519	0.006	0	102367	11.0	
59 Benzene	78	7.555	7.555	0.000	43	1604	0.007507	7Ma
60 1,2-Dichloroethane	62	7.628	7.622	0.006	1	1773	0.0354	a
* 65 Fluorobenzene (IS)	96	7.951	7.951	0.000	98	1939977	10.0	
67 Trichloroethene	95	8.427	8.433	-0.006	90	6305	0.1203	
70 1,2-Dichloropropane	63		8.768				ND	
75 Dichlorobromomethane	83		9.110				ND	
80 cis-1,3-Dichloropropene	75		9.634				ND	
81 4-Methyl-2-pentanone (MIBK)	43		9.793				ND	
\$ 82 Toluene-d8 (Surr)	98	9.933	9.933	0.000	94	1883842	10.0	
83 Toluene	92	10.012	10.012	0.000	97	5310	0.0404	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
85 trans-1,3-Dichloropropene	75		10.256				ND	
87 1,1,2-Trichloroethane	97		10.457				ND	
88 Tetrachloroethene	166	10.542	10.542	0.000	91	3558	0.0637	
91 2-Hexanone	43		10.658				ND	
93 Chlorodibromomethane	129		10.829				ND	
94 Ethylene Dibromide	107		10.945				ND	
S 95 Xylenes, Total	106		11.245				ND	
* 97 Chlorobenzene-d5 (IS)	117	11.365	11.365	0.000	87	1403884	10.0	
98 Chlorobenzene	112		11.390				ND	
99 1,1,1,2-Tetrachloroethane	131		11.469				ND	
100 Ethylbenzene	91		11.475				ND	
101 m-Xylene & p-Xylene	106		11.585				ND	
102 o-Xylene	106		11.914				ND	
103 Styrene	104		11.926				ND	
104 Bromoform	173		12.091				ND	
\$ 108 4-Bromofluorobenzene (Surr)	95	12.353	12.353	0.000	87	657935	9.57	
109 1,1,2,2-Tetrachloroethane	83		12.451				ND	
* 124 1,4-Dichlorobenzene-d4	152	13.231	13.231	0.000	97	697901	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_30_826ISS_00005

Amount Added: 5.00

Units: uL

Run Reagent

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S12.D

Injection Date: 30-Aug-2020 23:30:30

Instrument ID: 19094

Operator ID: mec29284

Lims ID: 410-11876-A-3

Lab Sample ID: 410-11876-3

Worklist Smp#: 19

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

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

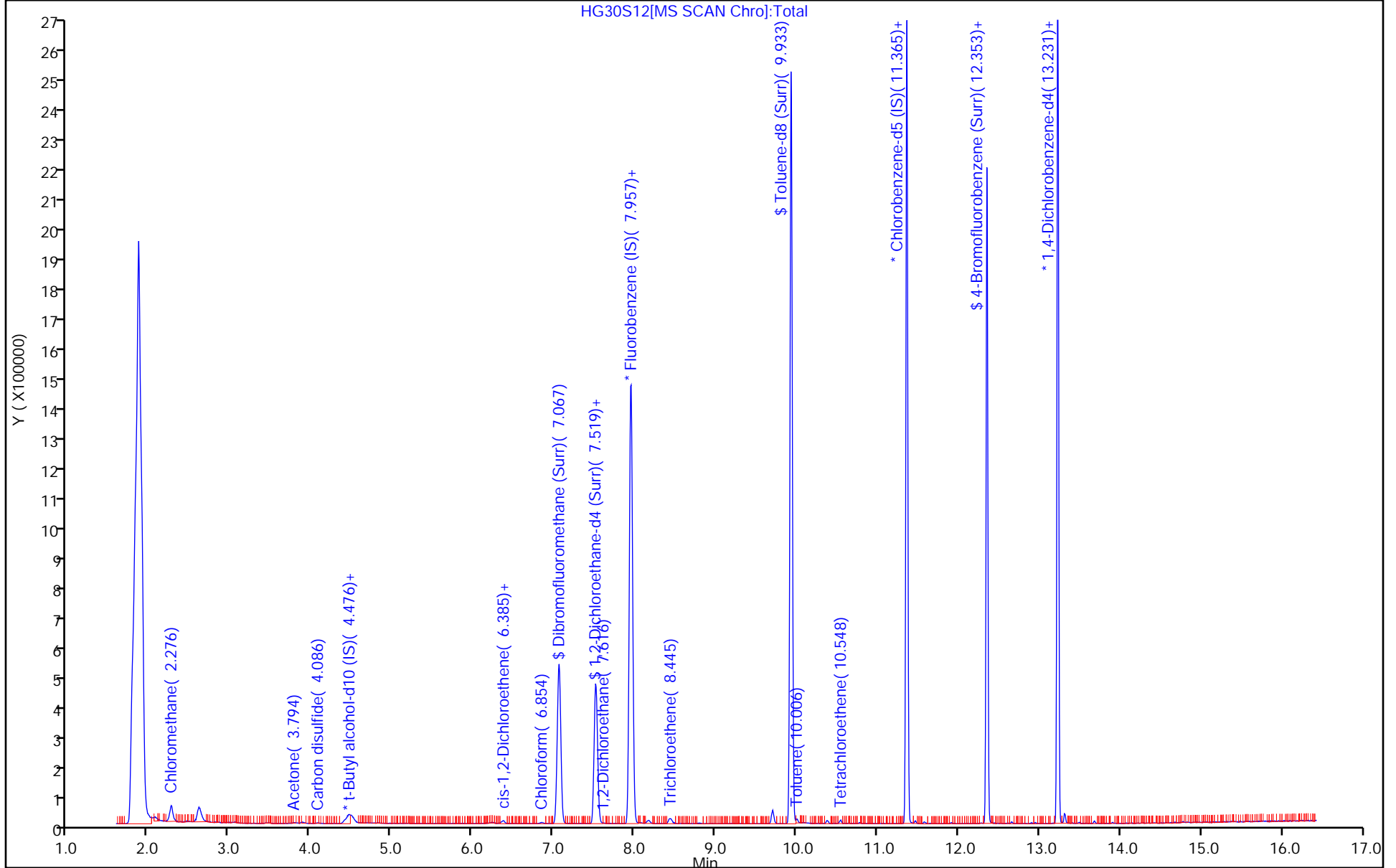
ALS Bottle#: 18

Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S12.D
 Lims ID: 410-11876-A-3
 Client ID: HD-COD-SW-8-0/1-0
 Sample Type: Client
 Inject. Date: 30-Aug-2020 23:30:30 ALS Bottle#: 18 Worklist Smp#: 19
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: 410-11876-A-3
 Misc. Info.: 410-0009349-019
 Operator ID: mec29284 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 31-Aug-2020 13:23:49 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1008

First Level Reviewer: virayd

Date: 31-Aug-2020 13:16:43

Compound	Amount Added	Amount Recovered	% Rec.
\$ 51 Dibromofluoromethane (Surr)	10.0	10.8	108.17
\$ 58 1,2-Dichloroethane-d4 (Surr)	10.0	11.0	109.57
\$ 82 Toluene-d8 (Surr)	10.0	10.0	100.00
\$ 108 4-Bromofluorobenzene (Surr)	10.0	9.57	95.73

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S12.D

Injection Date: 30-Aug-2020 23:30:30

Instrument ID: 19094

Lims ID: 410-11876-A-3

Lab Sample ID: 410-11876-3

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

Operator ID: mec29284

ALS Bottle#: 18

Worklist Smp#: 19

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

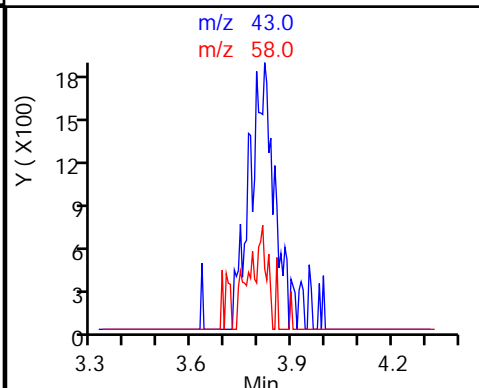
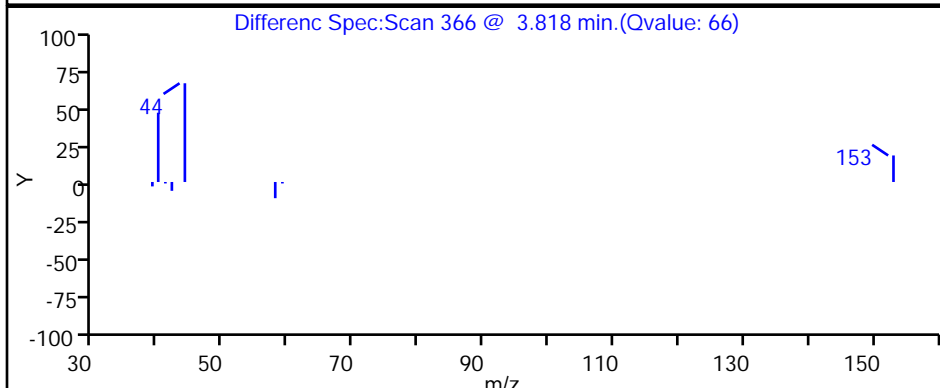
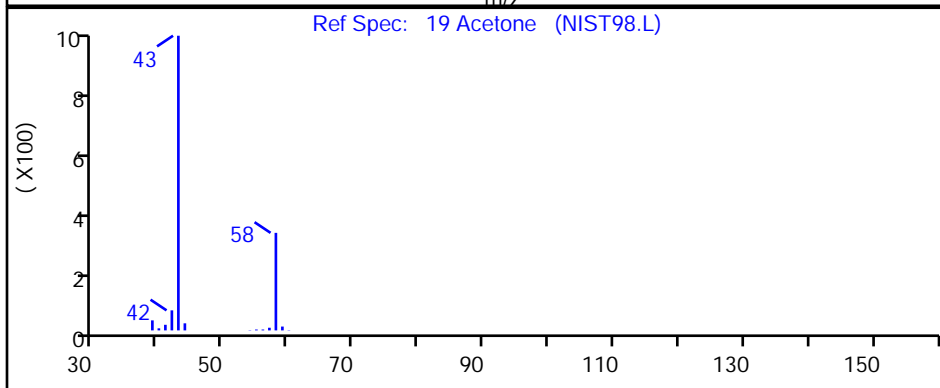
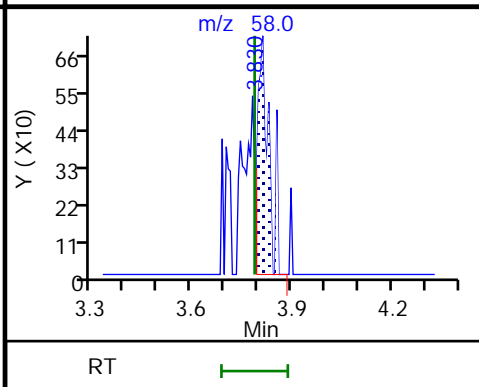
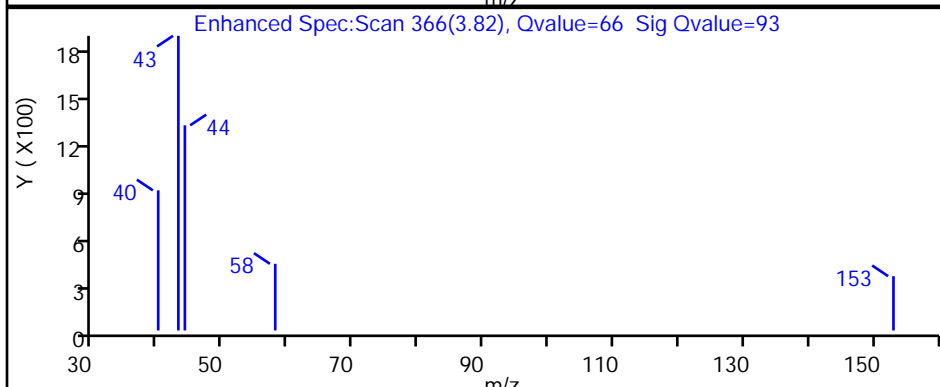
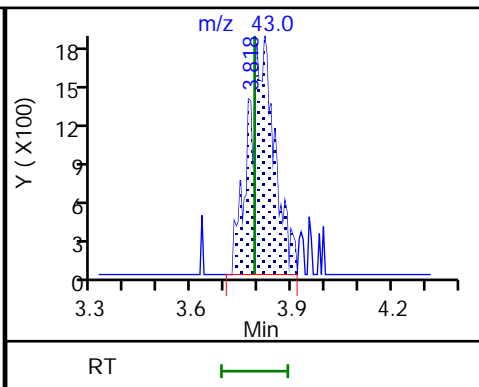
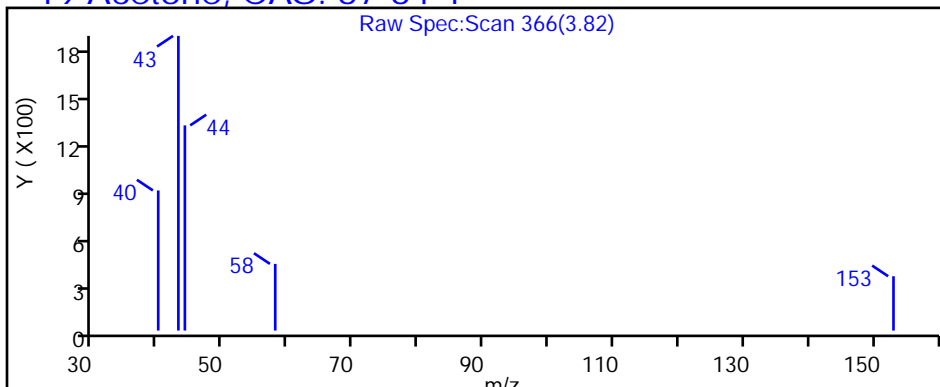
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID) x 30m

MS Quad

19 Acetone, CAS: 67-64-1



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S12.D

Injection Date: 30-Aug-2020 23:30:30

Instrument ID: 19094

Lims ID: 410-11876-A-3

Lab Sample ID: 410-11876-3

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

Operator ID: mec29284

ALS Bottle#: 18

Worklist Smp#: 19

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

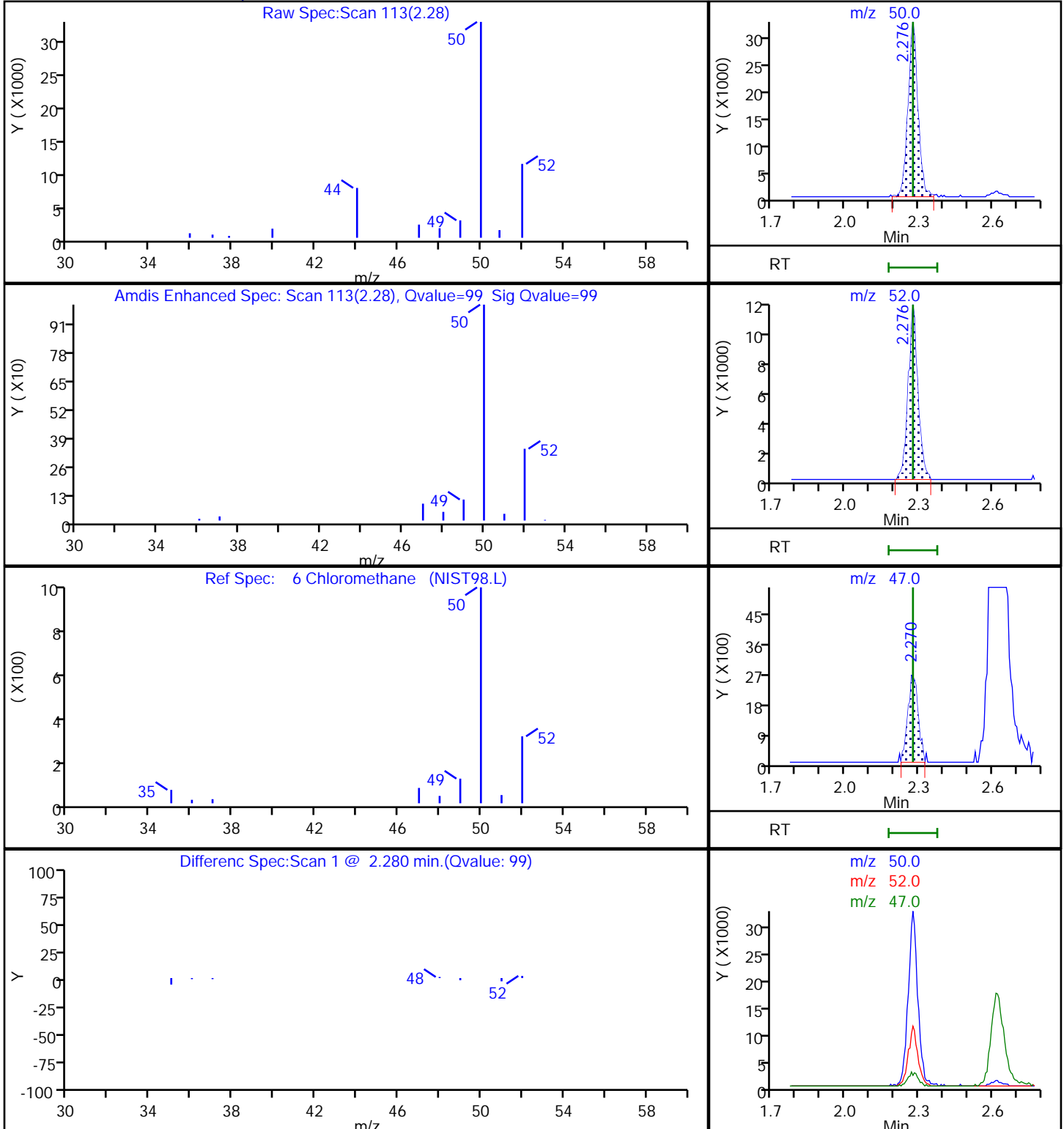
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

6 Chloromethane, CAS: 74-87-3



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S12.D

Injection Date: 30-Aug-2020 23:30:30

Instrument ID: 19094

Lims ID: 410-11876-A-3

Lab Sample ID: 410-11876-3

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

Operator ID: mec29284

ALS Bottle#: 18

Worklist Smp#: 19

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

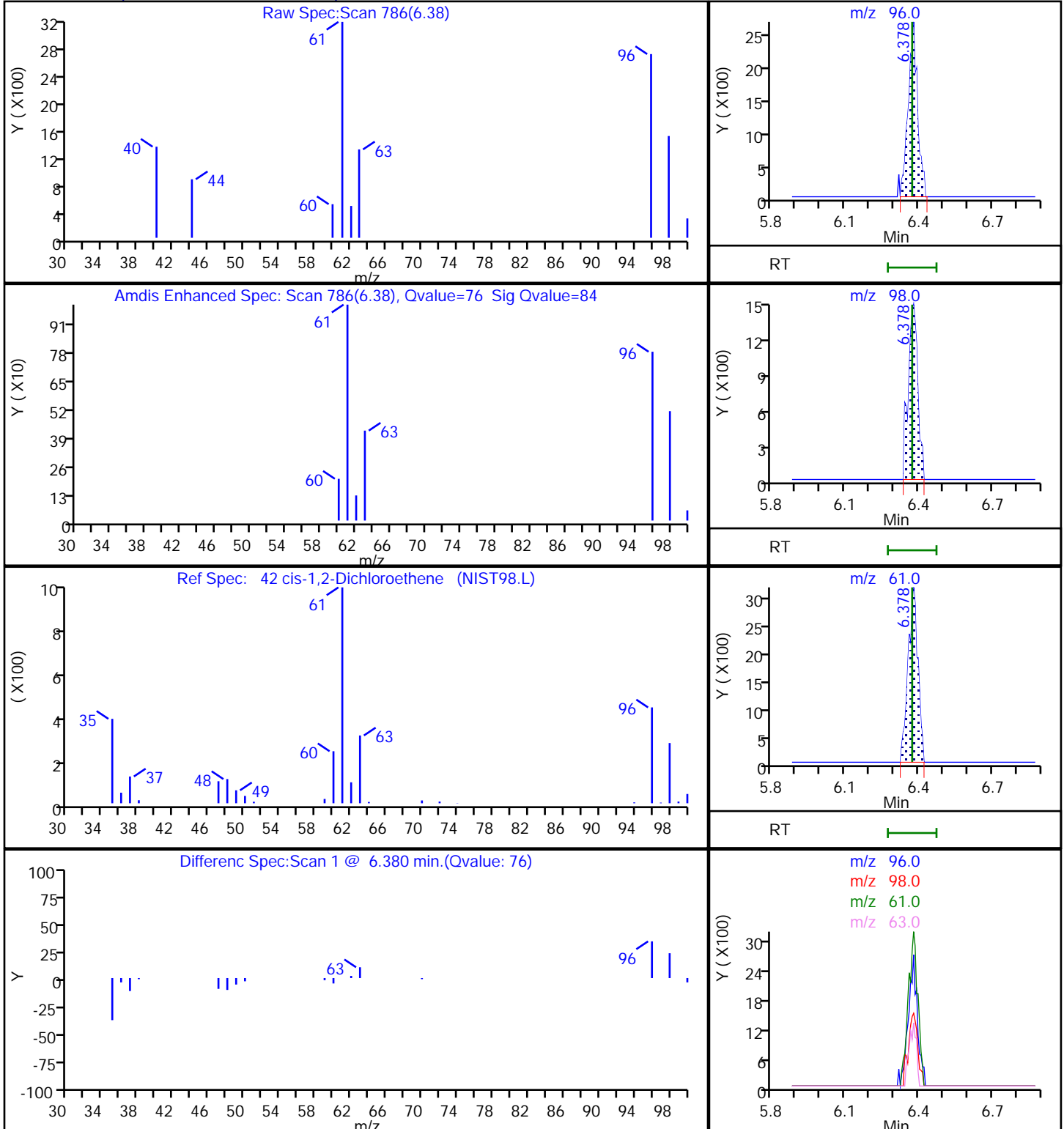
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID) x 30m

MS Quad

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



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S12.D

Injection Date: 30-Aug-2020 23:30:30

Instrument ID: 19094

Lims ID: 410-11876-A-3

Lab Sample ID: 410-11876-3

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

Operator ID: mec29284

ALS Bottle#: 18

Worklist Smp#: 19

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

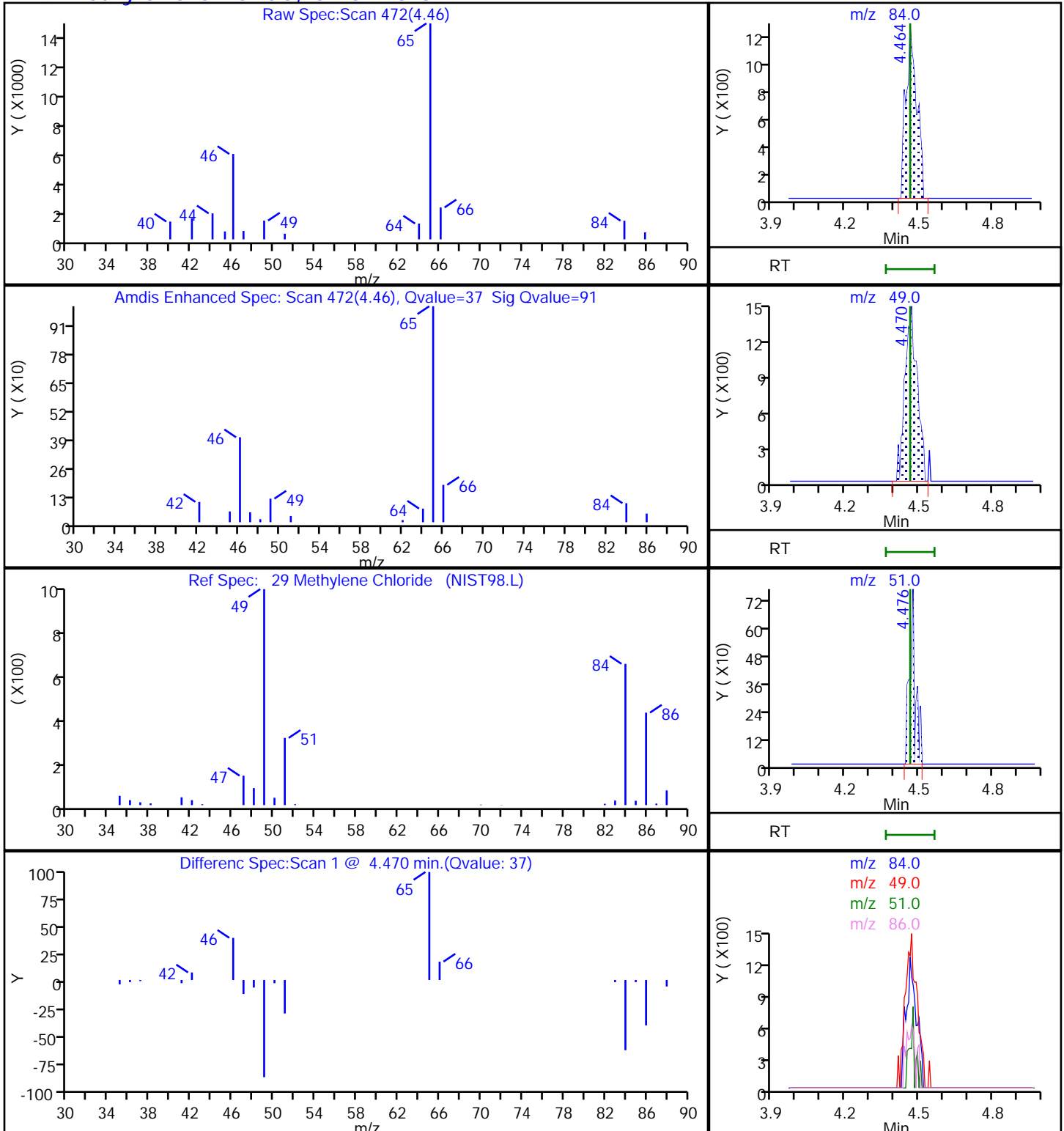
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

29 Methylene Chloride, CAS: 75-09-2



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S12.D

Injection Date: 30-Aug-2020 23:30:30

Instrument ID: 19094

Lims ID: 410-11876-A-3

Lab Sample ID: 410-11876-3

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

Operator ID: mec29284

ALS Bottle#: 18

Worklist Smp#: 19

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

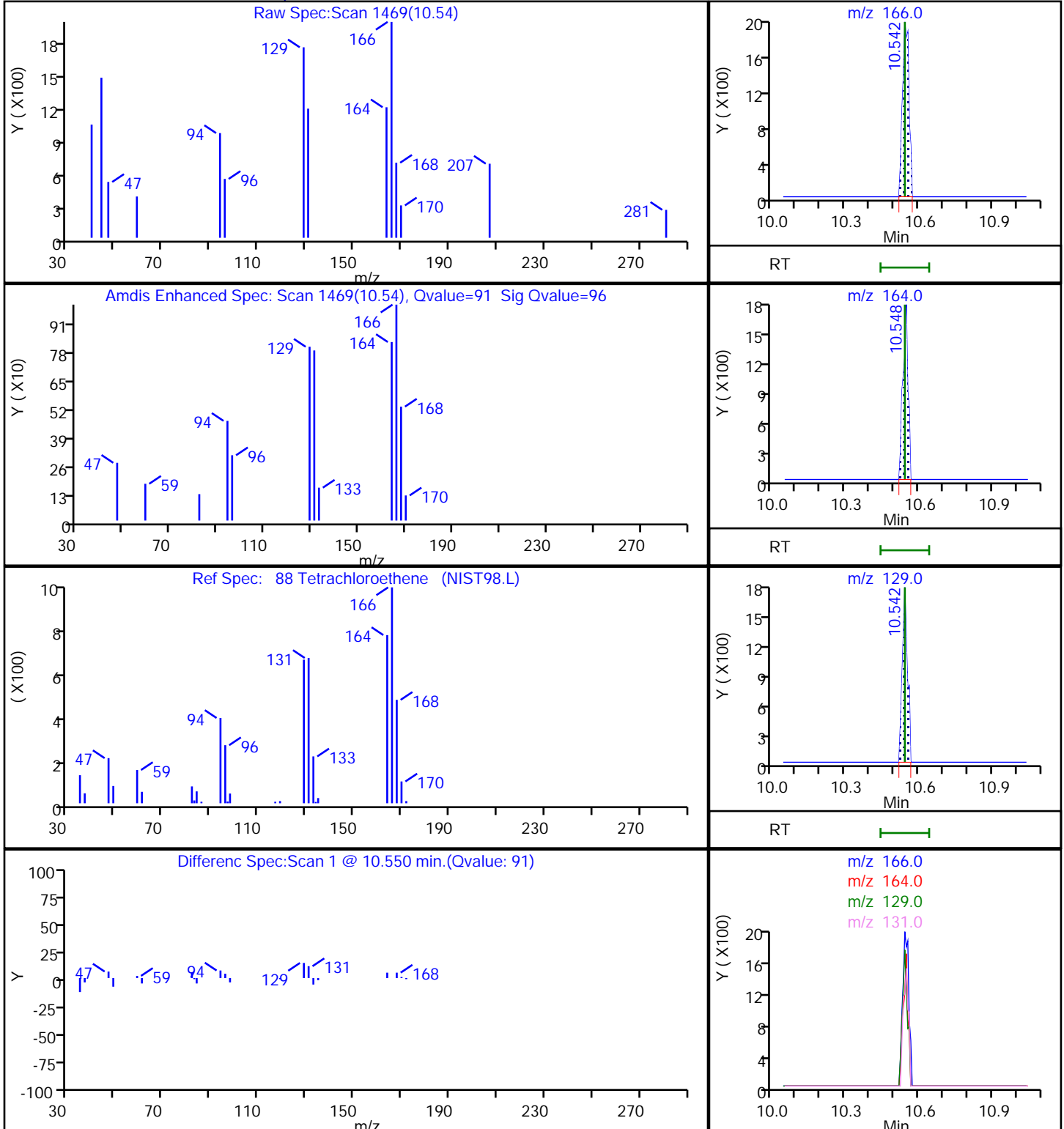
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID) x 30m

MS Quad

88 Tetrachloroethene, CAS: 127-18-4



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S12.D

Injection Date: 30-Aug-2020 23:30:30

Instrument ID: 19094

Lims ID: 410-11876-A-3

Lab Sample ID: 410-11876-3

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

Operator ID: mec29284

ALS Bottle#: 18

Worklist Smp#: 19

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

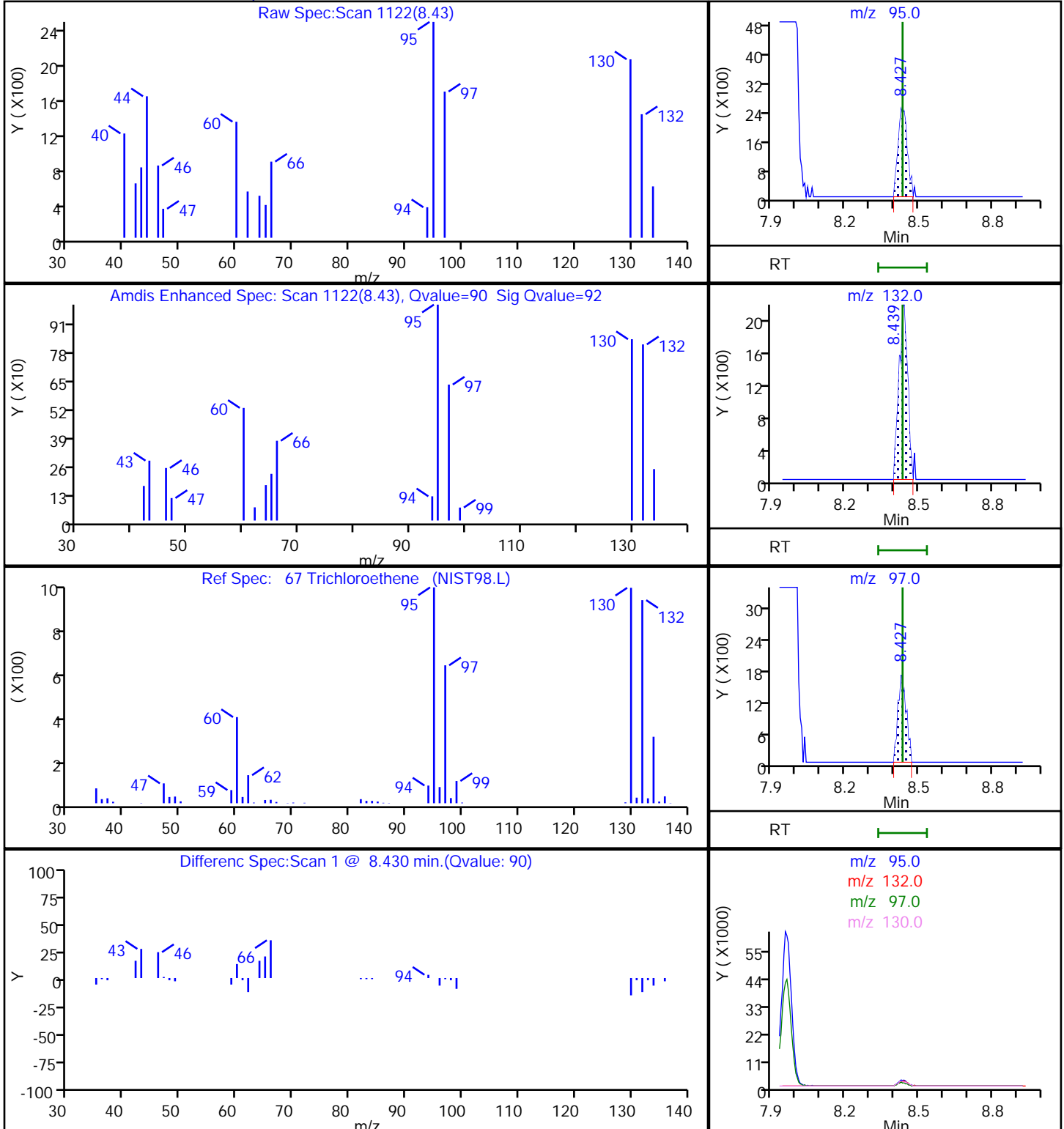
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

67 Trichloroethene, CAS: 79-01-6



Euofins Lancaster Laboratories Env, LLC

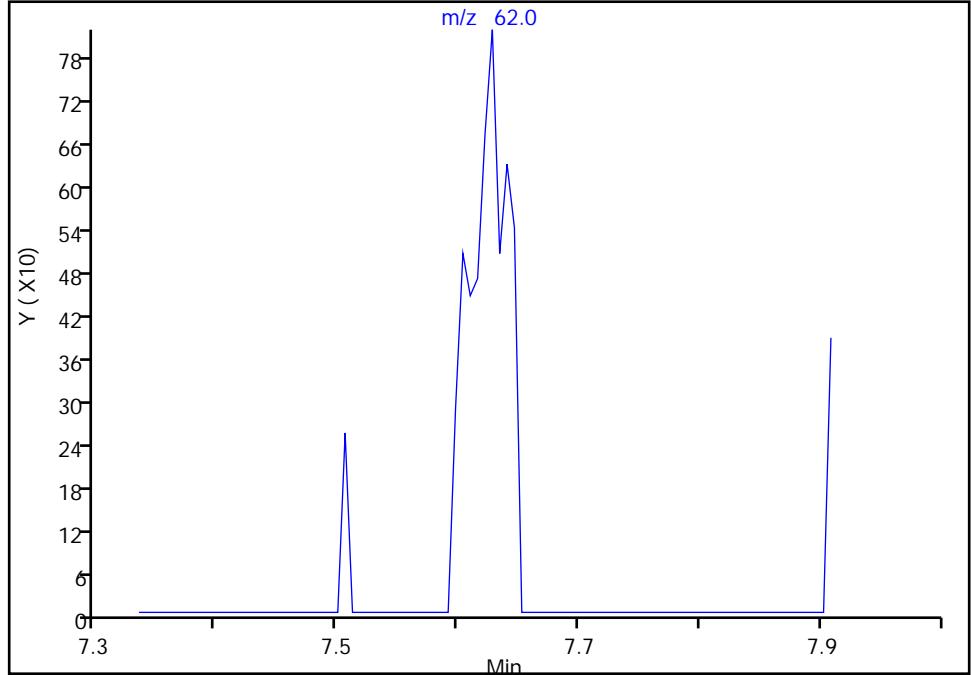
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Injection Date: 30-Aug-2020 23:30:30 Instrument ID: 19094
Lims ID: 410-11876-A-3 Lab Sample ID: 410-11876-3
Client ID: HD-COD-SW-8-0/1-0
Operator ID: mec29284 ALS Bottle#: 18 Worklist Smp#: 19
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

60 1,2-Dichloroethane, CAS: 107-06-2

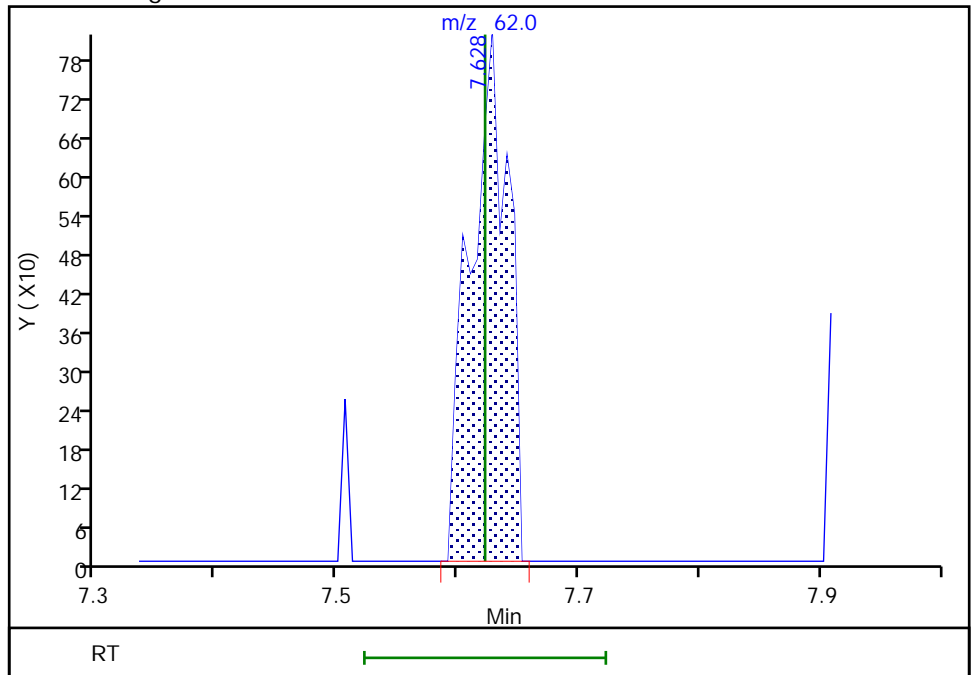
Signal: 1

Not Detected
Expected RT: 7.62

Processing Integration Results



Manual Integration Results



RT: 7.63
Area: 1773
Amount: 0.035444
Amount Units: ug/l

Reviewer: virayd, 31-Aug-2020 13:16:33
Audit Action: Assigned Compound ID

Audit Reason: Other

Eurofins Lancaster Laboratories Env, LLC

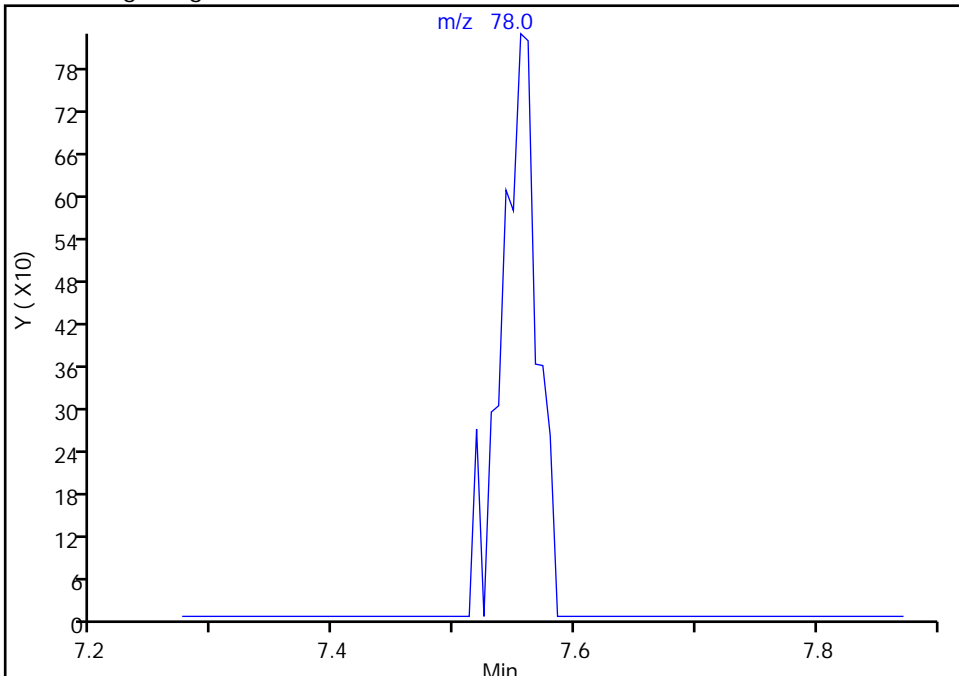
Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S12.D
Injection Date: 30-Aug-2020 23:30:30 Instrument ID: 19094
Lims ID: 410-11876-A-3 Lab Sample ID: 410-11876-3
Client ID: HD-COD-SW-8-0/1-0
Operator ID: mec29284 ALS Bottle#: 18 Worklist Smp#: 19
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

59 Benzene, CAS: 71-43-2

Signal: 1

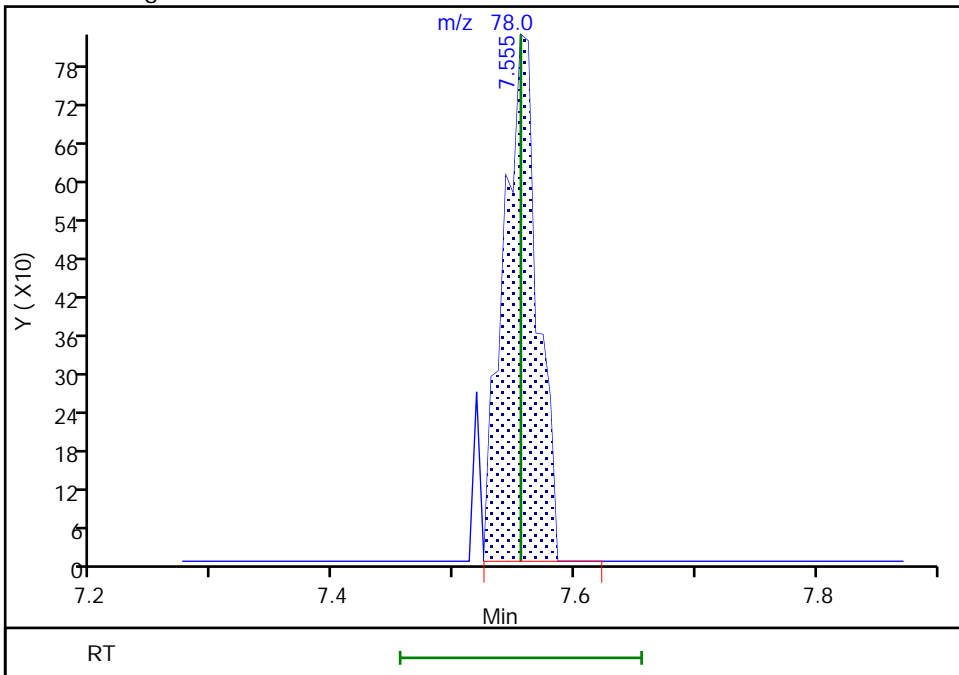
Not Detected
Expected RT: 7.56

Processing Integration Results



Manual Integration Results

RT: 7.56
Area: 1604
Amount: 0.007507
Amount Units: ug/l



Reviewer: virayd, 31-Aug-2020 13:16:30
Audit Action: Manually Integrated

Audit Reason: Other

Eurofins Lancaster Laboratories Env, LLC

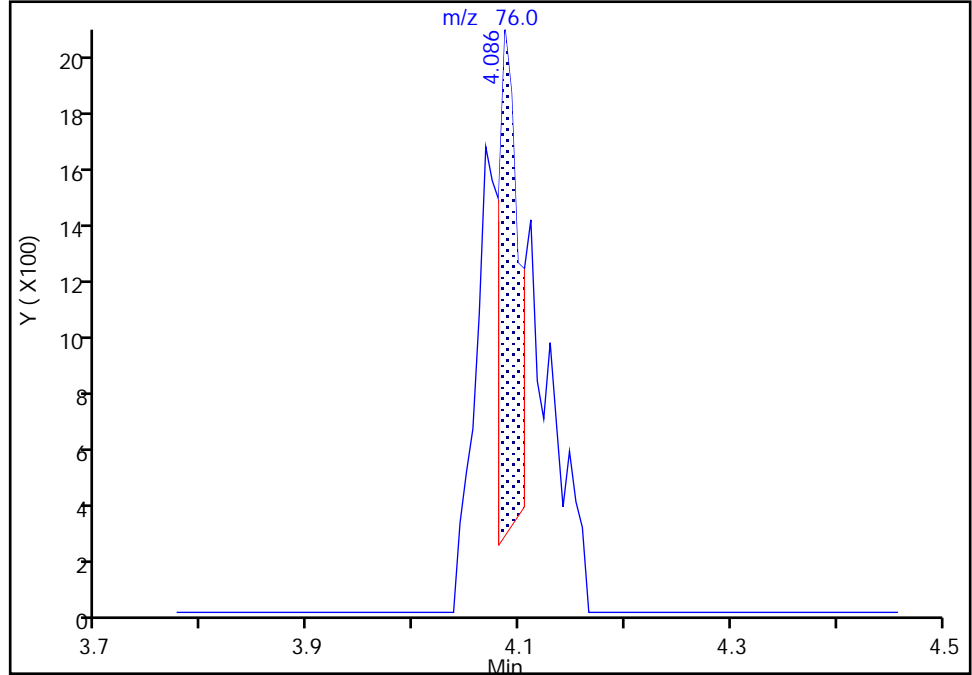
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Injection Date: 30-Aug-2020 23:30:30 Instrument ID: 19094
Lims ID: 410-11876-A-3 Lab Sample ID: 410-11876-3
Client ID: HD-COD-SW-8-0/1-0
Operator ID: mec29284 ALS Bottle#: 18 Worklist Smp#: 19
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

24 Carbon disulfide, CAS: 75-15-0

Signal: 1

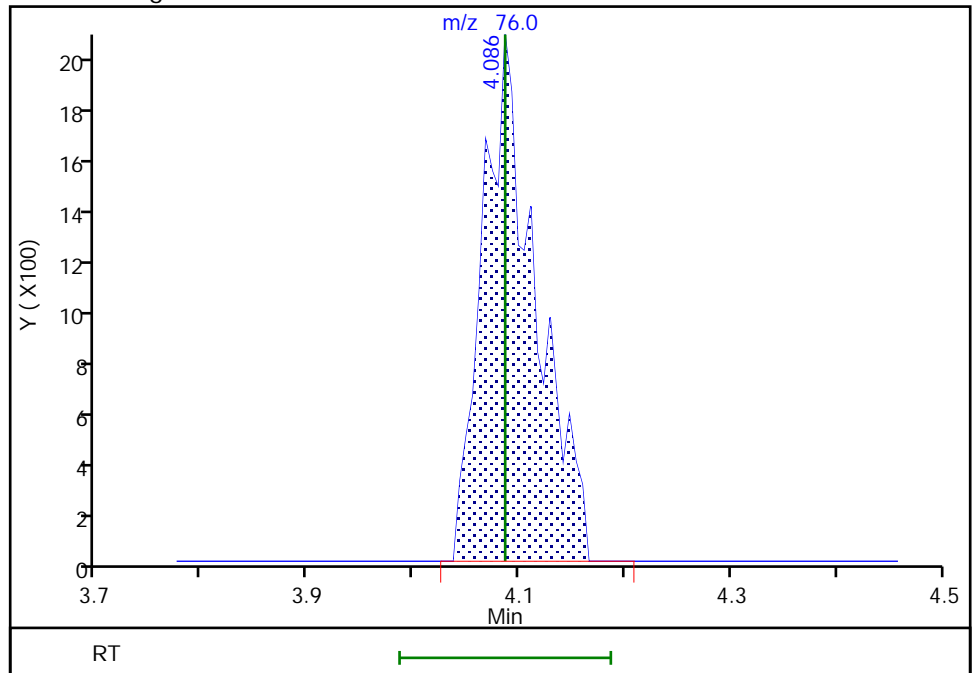
RT: 4.09
Area: 2280
Amount: 0.016099
Amount Units: ug/l

Processing Integration Results



RT: 4.09
Area: 7126
Amount: 0.050318
Amount Units: ug/l

Manual Integration Results



Reviewer: virayd, 31-Aug-2020 13:16:17
Audit Action: Manually Integrated

Audit Reason: Other

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-9-0/1-0 Lab Sample ID: 410-11876-4
 Matrix: Water Lab File ID: HG30S13.D
 Analysis Method: 8260C LL Date Collected: 08/25/2020 11:50
 Sample wt/vol: 25 (mL) Date Analyzed: 08/30/2020 23:52
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 38982 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.50	0.070
71-55-6	1,1,1-Trichloroethane	ND		0.50	0.060
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.50	0.070
79-00-5	1,1,2-Trichloroethane	ND		0.50	0.060
75-34-3	1,1-Dichloroethane	ND		0.50	0.070
75-35-4	1,1-Dichloroethene	ND		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	ND		0.50	0.060
107-06-2	1,2-Dichloroethane	ND		0.50	0.050
78-87-5	1,2-Dichloropropane	ND		0.50	0.060
78-93-3	2-Butanone (MEK)	ND		5.0	0.60
591-78-6	2-Hexanone	ND		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70
67-64-1	Acetone	3.4	J	5.0	0.90
107-13-1	Acrylonitrile	ND		5.0	0.40
71-43-2	Benzene	ND		0.50	0.050
74-97-5	Bromochloromethane	ND		0.50	0.050
75-27-4	Bromodichloromethane	ND		0.50	0.050
75-25-2	Bromoform	ND		1.0	0.30
74-83-9	Bromomethane	ND		0.50	0.070
75-15-0	Carbon disulfide	ND		1.0	0.060
56-23-5	Carbon tetrachloride	ND		0.50	0.070
108-90-7	Chlorobenzene	ND		0.50	0.060
75-00-3	Chloroethane	ND		0.50	0.070
67-66-3	Chloroform	0.098	J	0.50	0.090
74-87-3	Chloromethane	0.53		0.50	0.060
156-59-2	cis-1,2-Dichloroethene	ND		0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	ND		0.50	0.050
124-48-1	Dibromochloromethane	ND		0.50	0.070
100-41-4	Ethylbenzene	ND		0.50	0.060
1634-04-4	Methyl tert-butyl ether	ND		0.50	0.050
75-09-2	Methylene Chloride	0.10	J	0.50	0.070
100-42-5	Styrene	ND		0.50	0.050
127-18-4	Tetrachloroethene	0.076	J	0.50	0.060
108-88-3	Toluene	0.14	J	0.50	0.070
156-60-5	trans-1,2-Dichloroethene	ND		0.50	0.060
10061-02-6	trans-1,3-Dichloropropene	ND		0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-9-0/1-0 Lab Sample ID: 410-11876-4
 Matrix: Water Lab File ID: HG30S13.D
 Analysis Method: 8260C LL Date Collected: 08/25/2020 11:50
 Sample wt/vol: 25 (mL) Date Analyzed: 08/30/2020 23:52
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 38982 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	0.074	J	0.50	0.060
75-01-4	Vinyl chloride	ND		0.50	0.10
1330-20-7	Xylenes, Total	ND		1.0	0.15

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	113		80-120
1868-53-7	Dibromofluoromethane (Surr)	110		80-120
2037-26-5	Toluene-d8 (Surr)	99		80-120
460-00-4	4-Bromofluorobenzene (Surr)	96		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S13.D
 Lims ID: 410-11876-A-4
 Client ID: HD-COD-SW-9-0/1-0
 Sample Type: Client
 Inject. Date: 30-Aug-2020 23:52:30 ALS Bottle#: 19 Worklist Smp#: 20
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: 410-11876-A-4
 Misc. Info.: 410-0009349-020
 Operator ID: mec29284 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 31-Aug-2020 13:23:49 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1008

First Level Reviewer: virayd Date: 31-Aug-2020 13:17:33

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
6 Chloromethane	50	2.270	2.276	-0.006	99	38014	0.5293	
7 Vinyl chloride	62		2.385				ND	
9 Bromomethane	94		2.745				ND	
10 Chloroethane	64		2.837				ND	
18 1,1-Dichloroethene	96		3.757				ND	
19 Acetone	43	3.788	3.788	0.000	97	30858	3.44	M
24 Carbon disulfide	76	4.074	4.086	-0.012	26	3290	0.0265	7M
29 Methylene Chloride	84	4.458	4.464	-0.006	52	4675	0.1048	a
* 28 t-Butyl alcohol-d10 (IS)	65	4.464	4.477	-0.012	0	127163	50.0	
31 Acrylonitrile	53		4.806				ND	
32 Methyl tert-butyl ether	73		4.873				ND	
33 trans-1,2-Dichloroethene	96		4.891				ND	
35 1,1-Dichloroethane	63		5.549				ND	
41 2-Butanone (MEK)	43	6.330	6.330	0.000	61	6497	0.4329	
42 cis-1,2-Dichloroethene	96	6.366	6.372	-0.006	79	2097	0.0429	
48 Chlorobromomethane	128		6.702				ND	
50 Chloroform	83	6.842	6.854	-0.012	92	7548	0.0984	
\$ 51 Dibromofluoromethane (Surr)	113	7.067	7.061	0.006	93	442683	11.0	
52 1,1,1-Trichloroethane	97		7.086				ND	
56 Carbon tetrachloride	117		7.293				ND	
\$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.519	7.519	0.000	0	92737	11.3	
59 Benzene	78		7.555				ND	
60 1,2-Dichloroethane	62		7.622				ND	
* 65 Fluorobenzene (IS)	96	7.951	7.951	0.000	98	1703278	10.0	
67 Trichloroethene	95	8.439	8.433	0.006	90	3399	0.0739	Ma
70 1,2-Dichloropropane	63		8.768				ND	
75 Dichlorobromomethane	83		9.110				ND	
80 cis-1,3-Dichloropropene	75		9.634				ND	
81 4-Methyl-2-pentanone (MIBK)	43		9.793				ND	
\$ 82 Toluene-d8 (Surr)	98	9.933	9.933	0.000	94	1658285	9.90	
83 Toluene	92	10.012	10.012	0.000	97	15887	0.1360	

Compound	Sig	RT (min.)	Exp RT (min.)	Diff RT (min.)	Q	Response	OnCol Amt ug/l	Flags
85 trans-1,3-Dichloropropene	75		10.256				ND	
87 1,1,2-Trichloroethane	97		10.457				ND	
88 Tetrachloroethene	166	10.536	10.542	-0.006	87	3787	0.0763	a
91 2-Hexanone	43		10.658				ND	
93 Chlorodibromomethane	129		10.829				ND	
94 Ethylene Dibromide	107		10.945				ND	
S 95 Xylenes, Total	106		11.245				ND	
* 97 Chlorobenzene-d5 (IS)	117	11.365	11.365	0.000	87	1247767	10.0	
98 Chlorobenzene	112		11.390				ND	
99 1,1,1,2-Tetrachloroethane	131		11.469				ND	
100 Ethylbenzene	91		11.475				ND	
101 m-Xylene & p-Xylene	106	11.579	11.585	-0.006	0	4332	0.0508	
102 o-Xylene	106		11.914				ND	
103 Styrene	104		11.926				ND	
104 Bromoform	173		12.091				ND	
\$ 108 4-Bromofluorobenzene (Surr)	95	12.353	12.353	0.000	88	585166	9.58	
109 1,1,2,2-Tetrachloroethane	83		12.451				ND	
* 124 1,4-Dichlorobenzene-d4	152	13.231	13.231	0.000	96	628441	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_30_826ISS_00005

Amount Added: 5.00

Units: uL

Run Reagent

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S13.D

Injection Date: 30-Aug-2020 23:52:30

Instrument ID: 19094

Operator ID: mec29284

Lims ID: 410-11876-A-4

Lab Sample ID: 410-11876-4

Worklist Smp#: 20

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

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

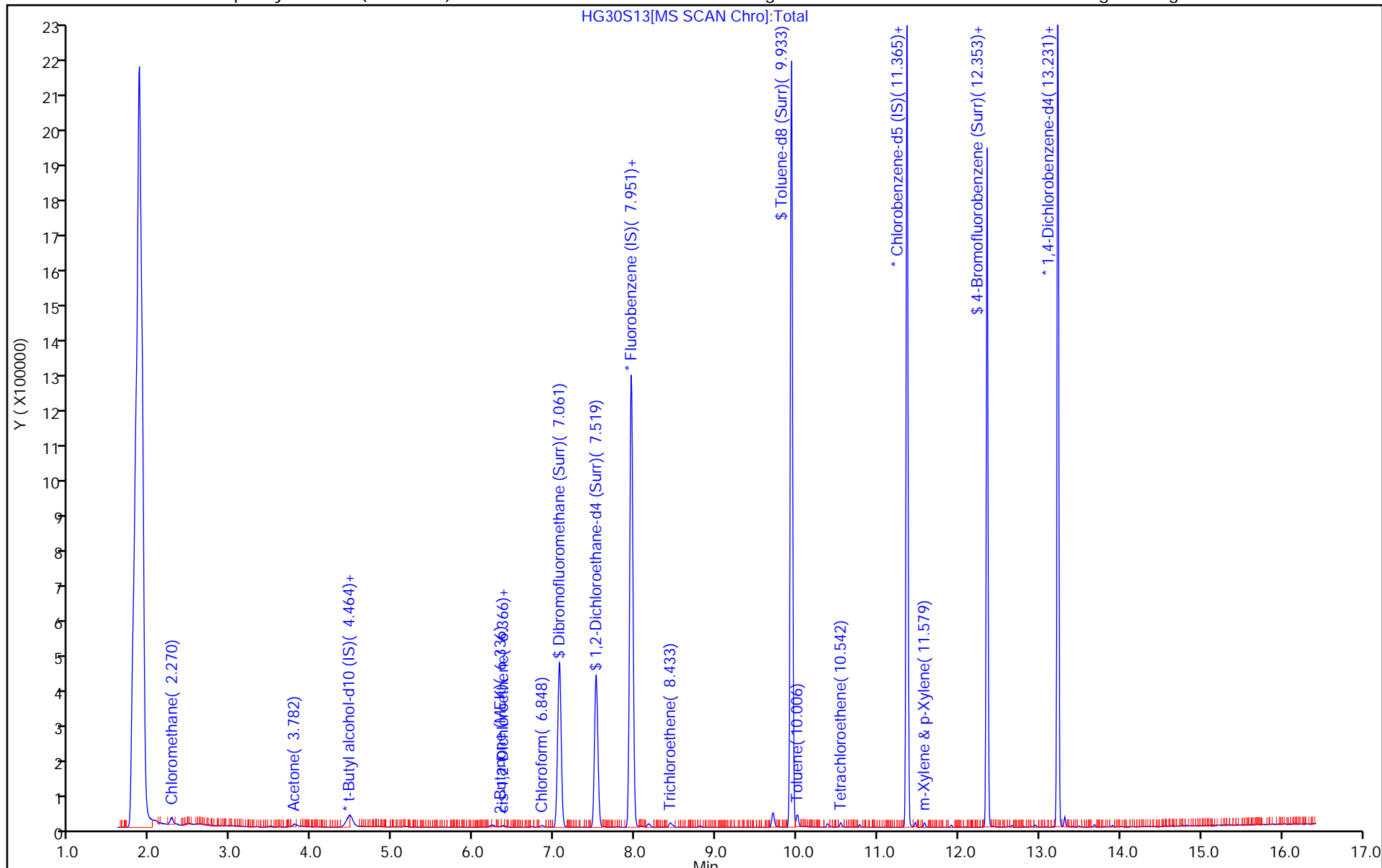
ALS Bottle#: 19

Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S13.D
 Lims ID: 410-11876-A-4
 Client ID: HD-COD-SW-9-0/1-0
 Sample Type: Client
 Inject. Date: 30-Aug-2020 23:52:30 ALS Bottle#: 19 Worklist Smp#: 20
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: 410-11876-A-4
 Misc. Info.: 410-0009349-020
 Operator ID: mec29284 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 31-Aug-2020 13:23:49 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1008

First Level Reviewer: virayd Date: 31-Aug-2020 13:17:33

Compound	Amount Added	Amount Recovered	% Rec.
\$ 51 Dibromofluoromethane (Surr)	10.0	11.0	109.93
\$ 58 1,2-Dichloroethane-d4 (Surr)	10.0	11.3	113.05
\$ 82 Toluene-d8 (Surr)	10.0	9.90	99.04
\$ 108 4-Bromofluorobenzene (Surr)	10.0	9.58	95.79

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S13.D

Injection Date: 30-Aug-2020 23:52:30

Instrument ID: 19094

Lims ID: 410-11876-A-4

Lab Sample ID: 410-11876-4

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

Operator ID: mec29284

ALS Bottle#: 19

Worklist Smp#: 20

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

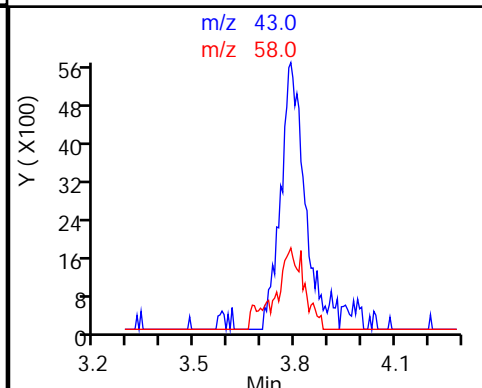
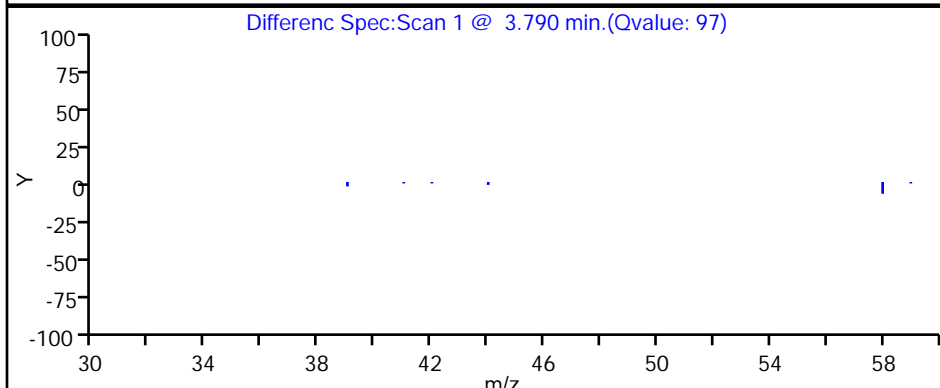
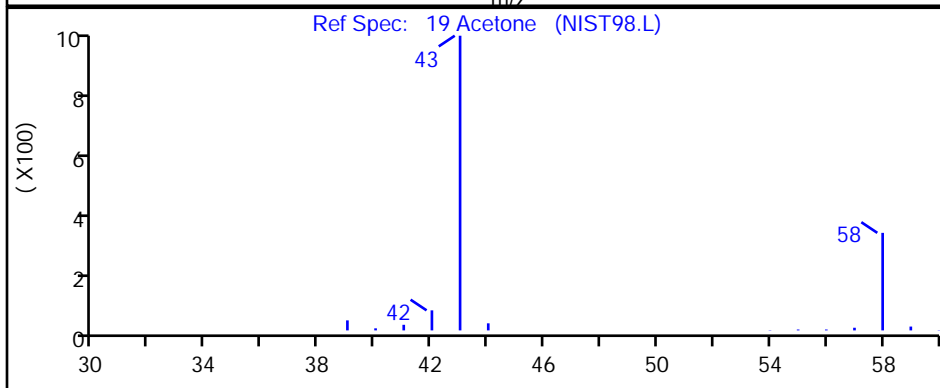
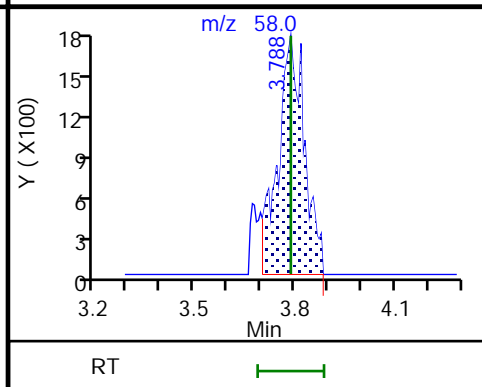
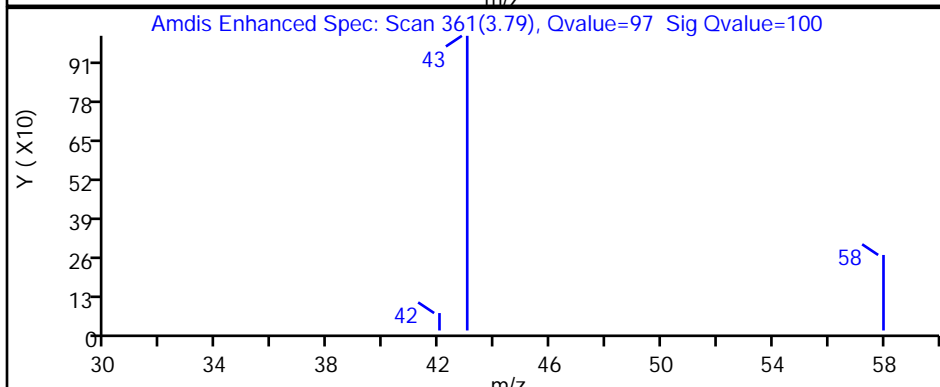
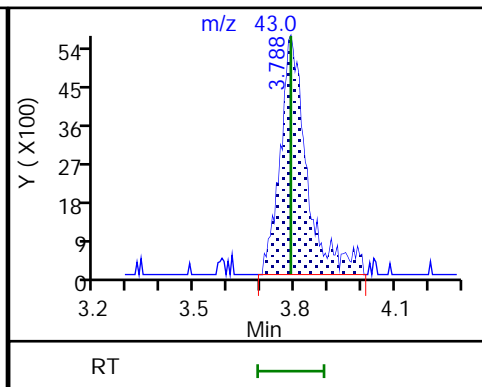
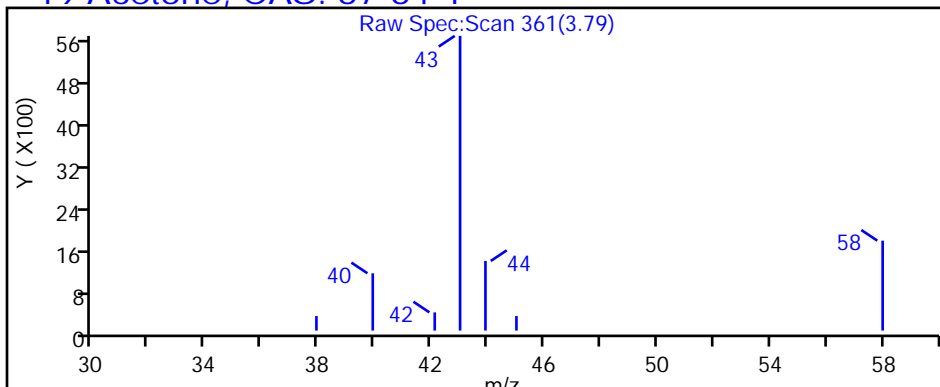
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID) x 30m

MS Quad

19 Acetone, CAS: 67-64-1



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S13.D

Injection Date: 30-Aug-2020 23:52:30

Instrument ID: 19094

Lims ID: 410-11876-A-4

Lab Sample ID: 410-11876-4

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

Operator ID: mec29284

ALS Bottle#: 19

Worklist Smp#: 20

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

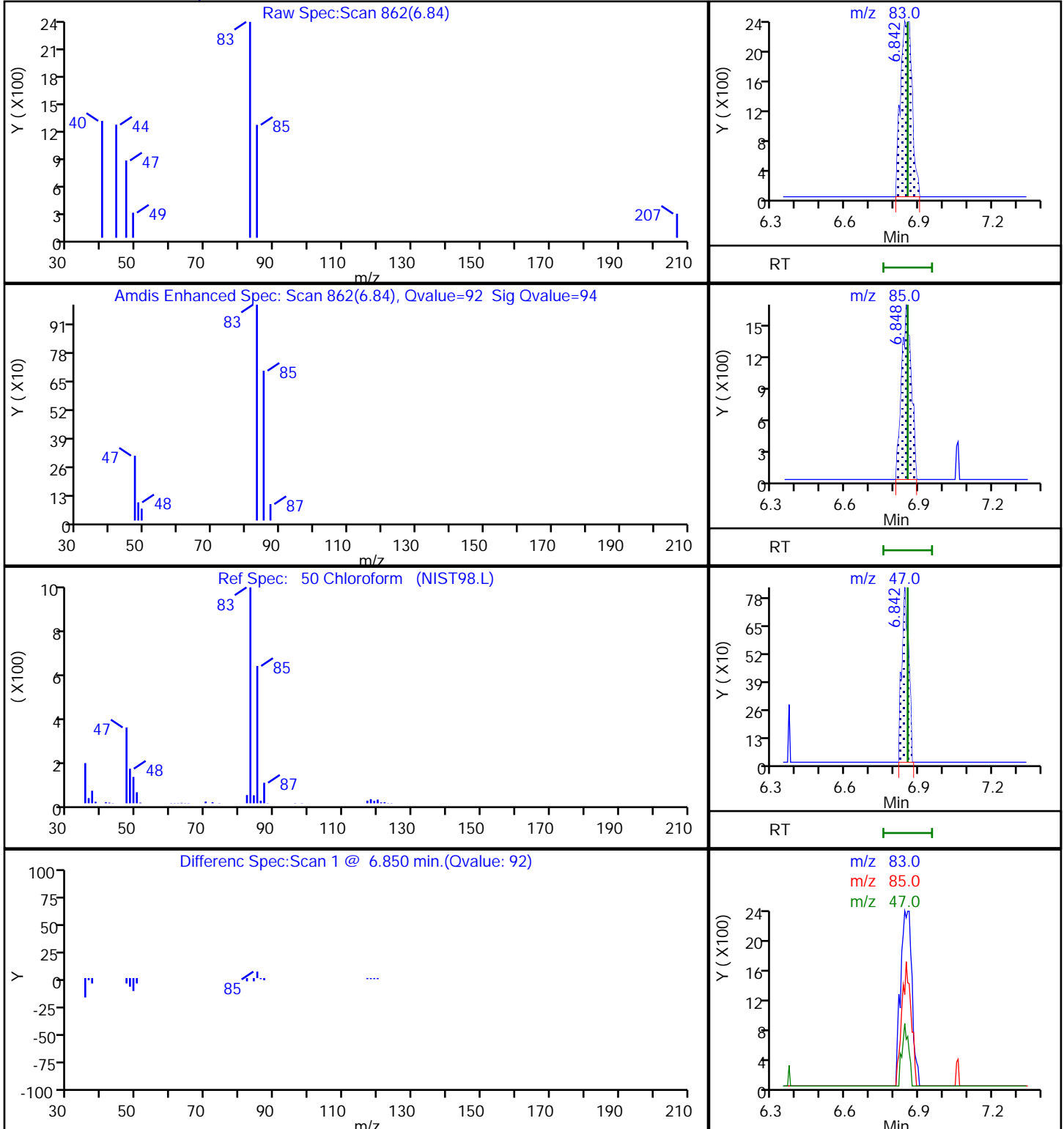
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID) x 30m

MS Quad

50 Chloroform, CAS: 67-66-3



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S13.D

Injection Date: 30-Aug-2020 23:52:30

Instrument ID: 19094

Lims ID: 410-11876-A-4

Lab Sample ID: 410-11876-4

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

Operator ID: mec29284

ALS Bottle#: 19

Worklist Smp#: 20

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

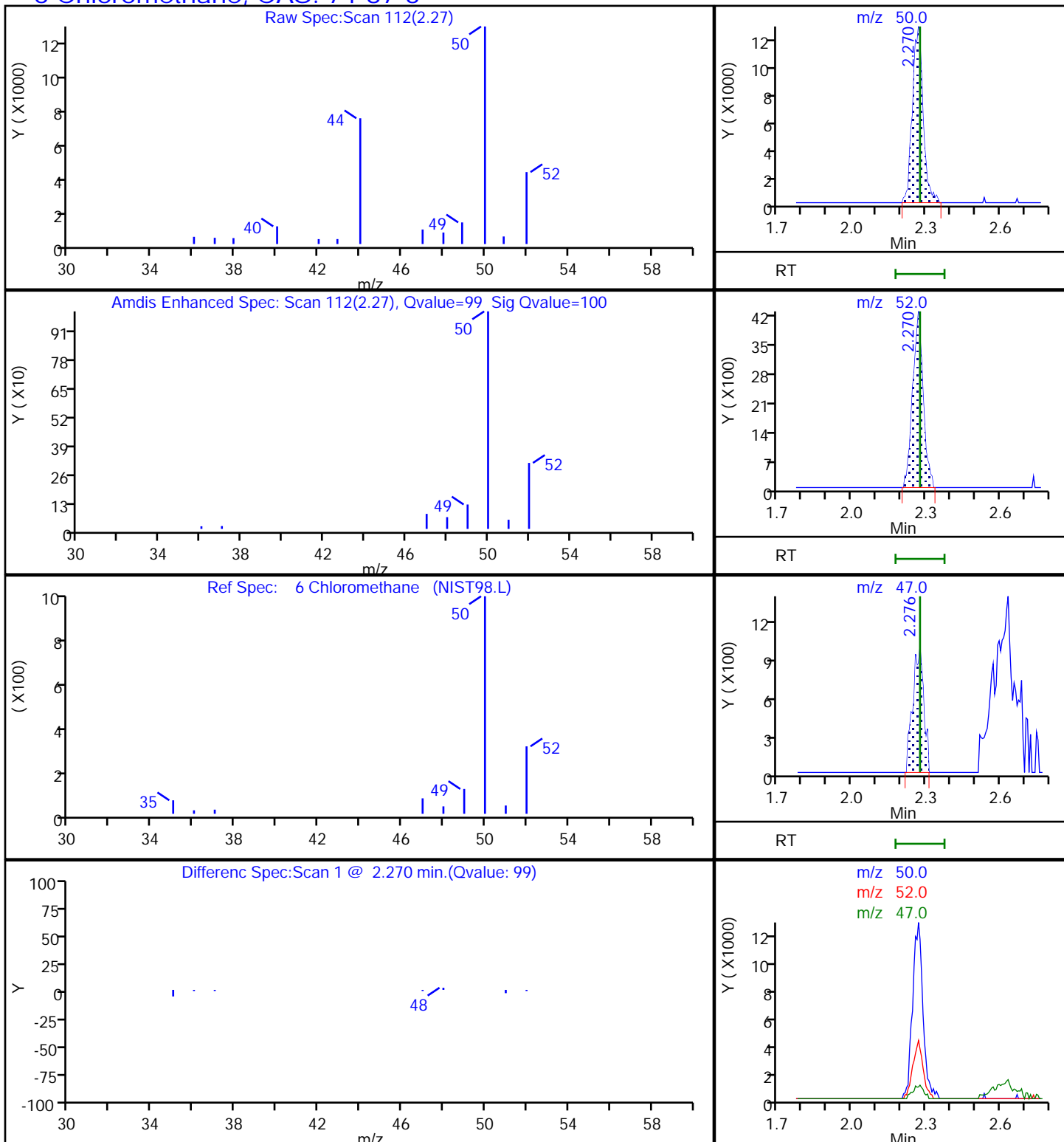
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

6 Chloromethane, CAS: 74-87-3



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S13.D

Injection Date: 30-Aug-2020 23:52:30

Instrument ID: 19094

Lims ID: 410-11876-A-4

Lab Sample ID: 410-11876-4

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

Operator ID: mec29284

ALS Bottle#: 19

Worklist Smp#: 20

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

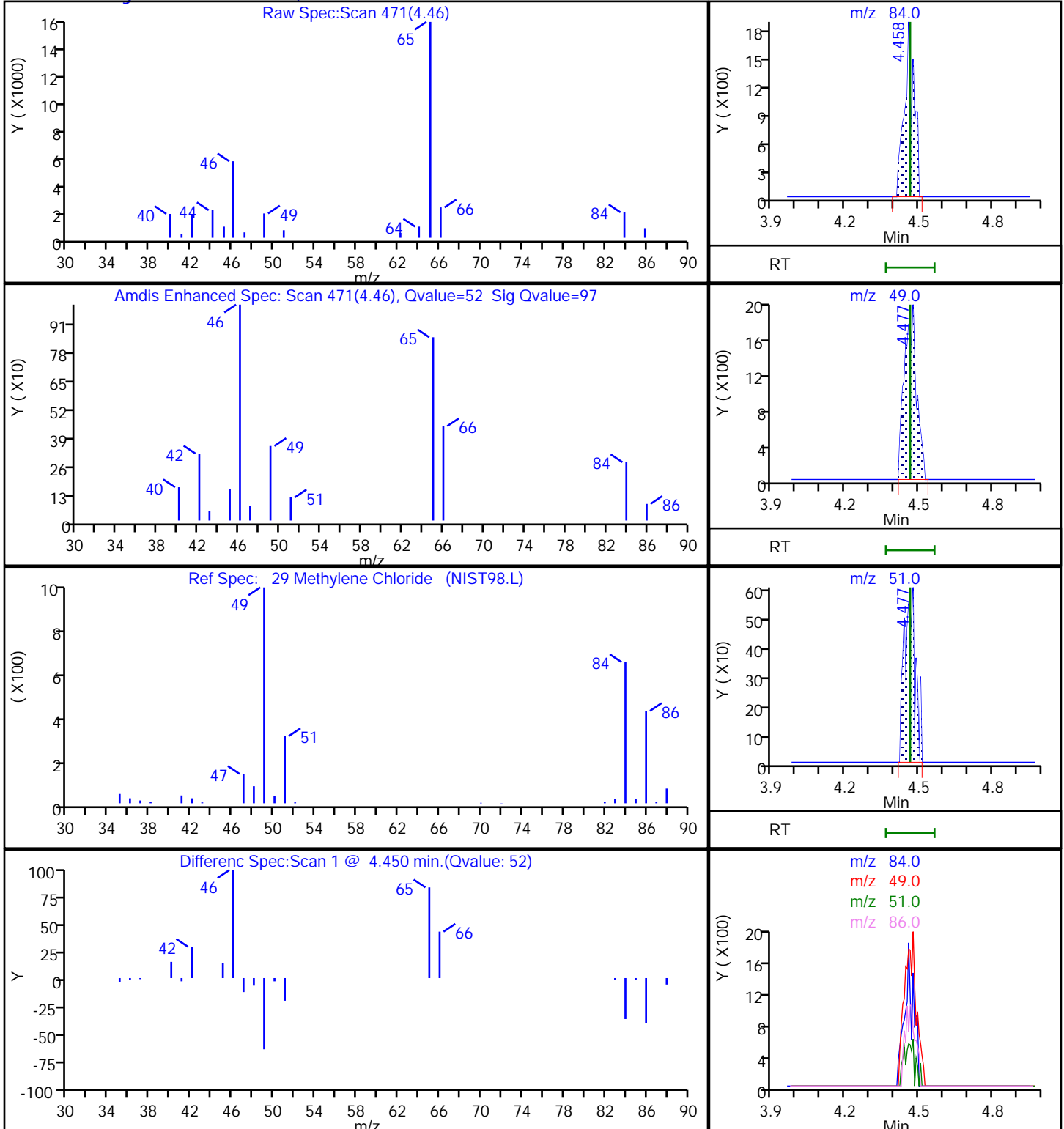
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

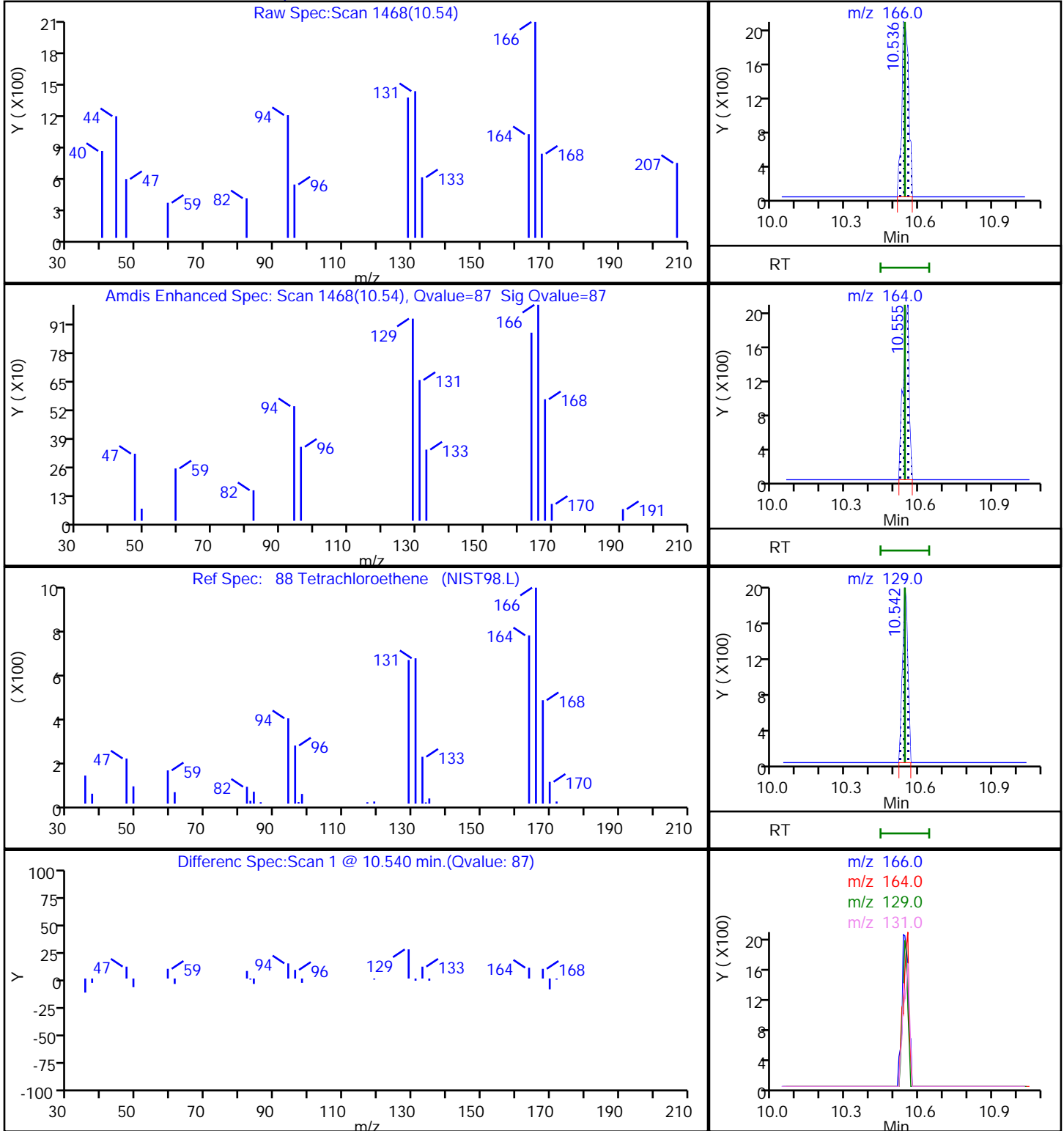
29 Methylene Chloride, CAS: 75-09-2



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S13.D
Injection Date: 30-Aug-2020 23:52:30 Instrument ID: 19094
Lims ID: 410-11876-A-4 Lab Sample ID: 410-11876-4
Client ID: HD-COD-SW-9-0/1-0
Operator ID: mec29284 ALS Bottle#: 19 Worklist Smp#: 20
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

88 Tetrachloroethene, CAS: 127-18-4



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S13.D

Injection Date: 30-Aug-2020 23:52:30

Instrument ID: 19094

Lims ID: 410-11876-A-4

Lab Sample ID: 410-11876-4

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

Operator ID: mec29284

ALS Bottle#: 19

Worklist Smp#: 20

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

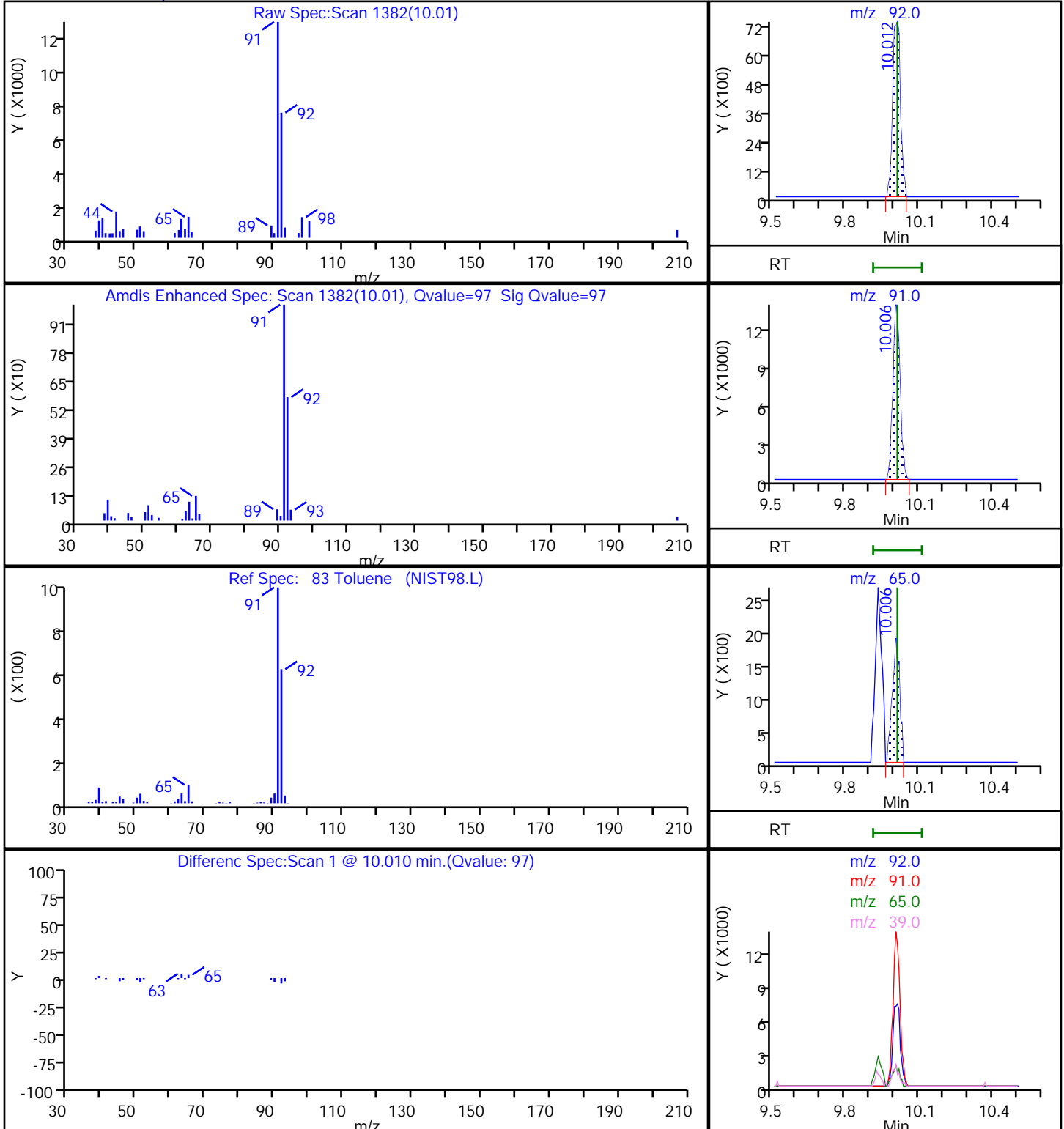
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID) x 30m

MS Quad

83 Toluene, CAS: 108-88-3



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S13.D

Injection Date: 30-Aug-2020 23:52:30

Instrument ID: 19094

Lims ID: 410-11876-A-4

Lab Sample ID: 410-11876-4

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

Operator ID: mec29284

ALS Bottle#: 19

Worklist Smp#: 20

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

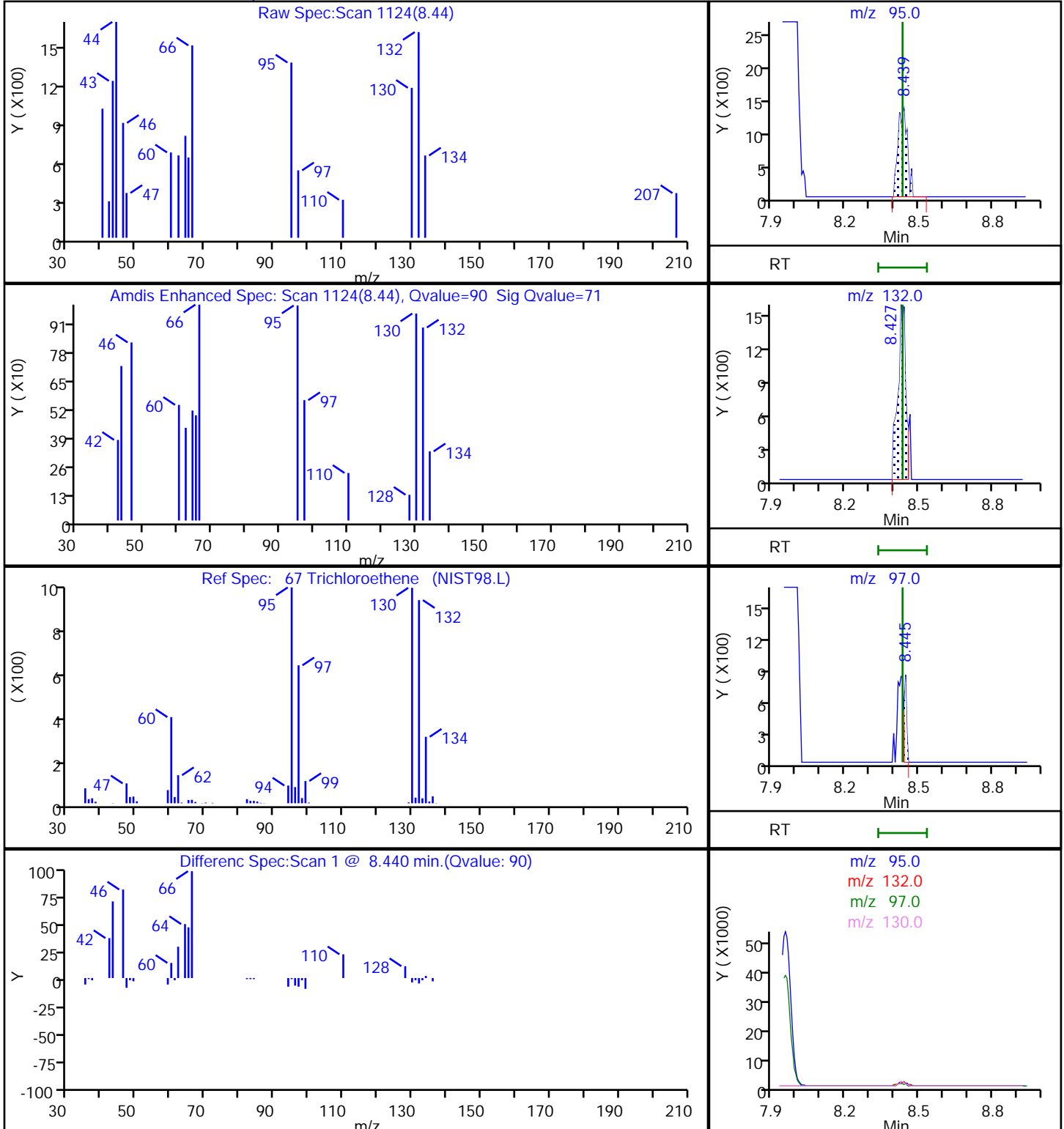
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

67 Trichloroethene, CAS: 79-01-6



Euofins Lancaster Laboratories Env, LLC

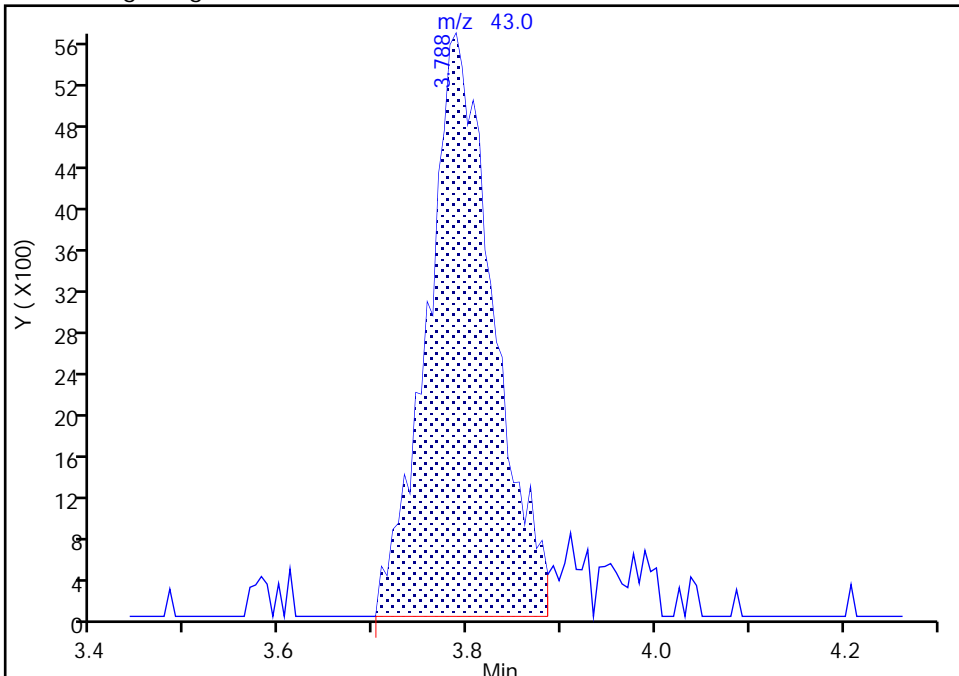
Data File:	\\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S13.D		
Injection Date:	30-Aug-2020 23:52:30	Instrument ID:	19094
Lims ID:	410-11876-A-4	Lab Sample ID:	410-11876-4
Client ID:	HD-COD-SW-9-0/1-0		
Operator ID:	mec29284	ALS Bottle#:	19
Purge Vol:	25.000 mL	Dil. Factor:	1.0000
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D
Column:	Rxi-624Sil MS Capillary Column (0.25mm ID)	Detector:	MS Quad
		Worklist Smp#:	20

19 Acetone, CAS: 67-64-1

Signal: 1

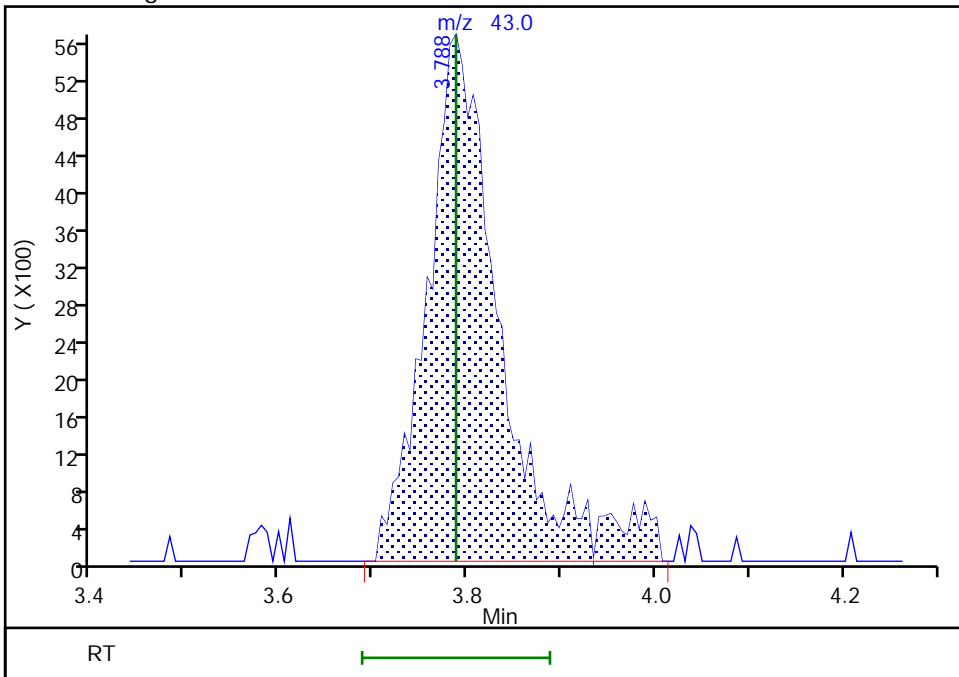
RT: 3.79
 Area: 27669
 Amount: 3.081396
 Amount Units: ug/l

Processing Integration Results



RT: 3.79
 Area: 30858
 Amount: 3.436544
 Amount Units: ug/l

Manual Integration Results



Reviewer: virayd, 31-Aug-2020 13:17:03
 Audit Action: Manually Integrated

Audit Reason: Other

Eurofins Lancaster Laboratories Env, LLC

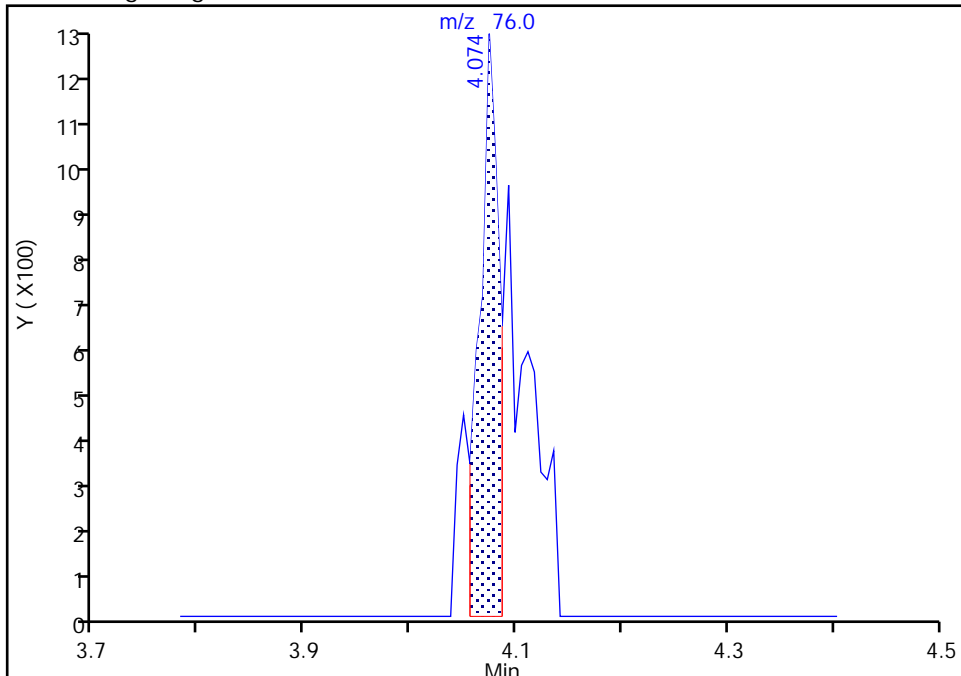
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Injection Date: 30-Aug-2020 23:52:30 Instrument ID: 19094
Lims ID: 410-11876-A-4 Lab Sample ID: 410-11876-4
Client ID: HD-COD-SW-9-0/1-0
Operator ID: mec29284 ALS Bottle#: 19 Worklist Smp#: 20
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

24 Carbon disulfide, CAS: 75-15-0

Signal: 1

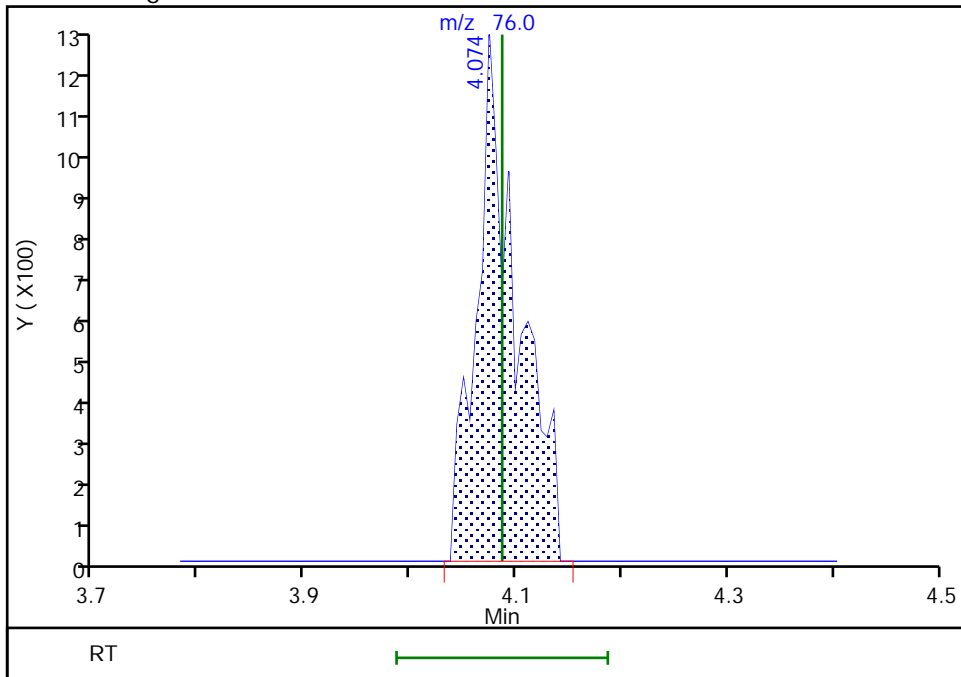
RT: 4.07
Area: 1603
Amount: 0.012892
Amount Units: ug/l

Processing Integration Results



RT: 4.07
Area: 3290
Amount: 0.026460
Amount Units: ug/l

Manual Integration Results



Reviewer: virayd, 31-Aug-2020 13:17:05
Audit Action: Manually Integrated

Audit Reason: Other

Eurofins Lancaster Laboratories Env, LLC

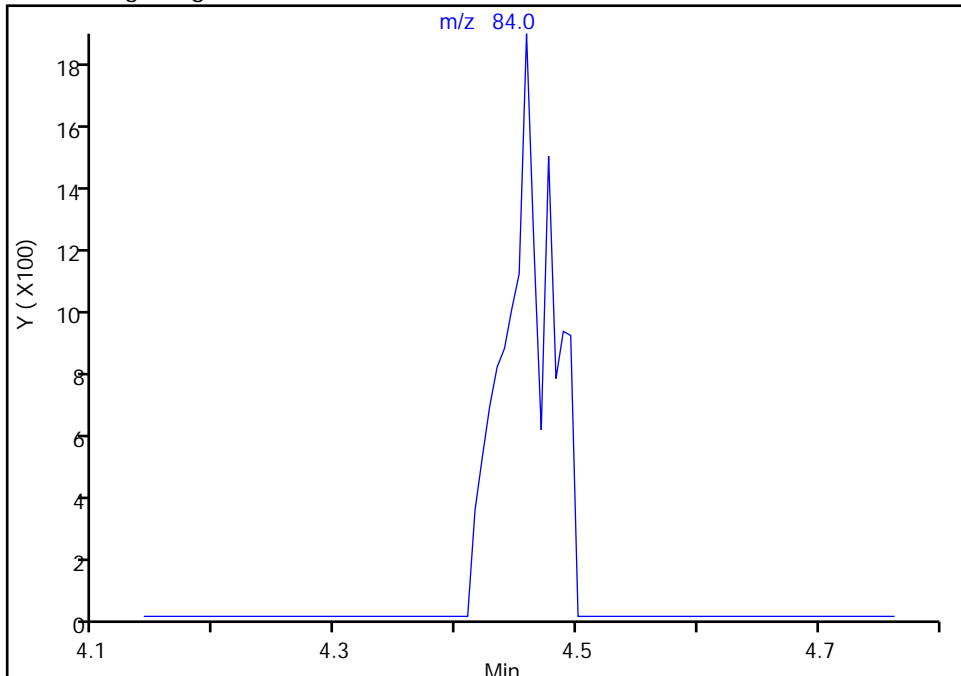
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Injection Date: 30-Aug-2020 23:52:30 Instrument ID: 19094
Lims ID: 410-11876-A-4 Lab Sample ID: 410-11876-4
Client ID: HD-COD-SW-9-0/1-0
Operator ID: mec29284 ALS Bottle#: 19 Worklist Smp#: 20
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

29 Methylene Chloride, CAS: 75-09-2

Signal: 1

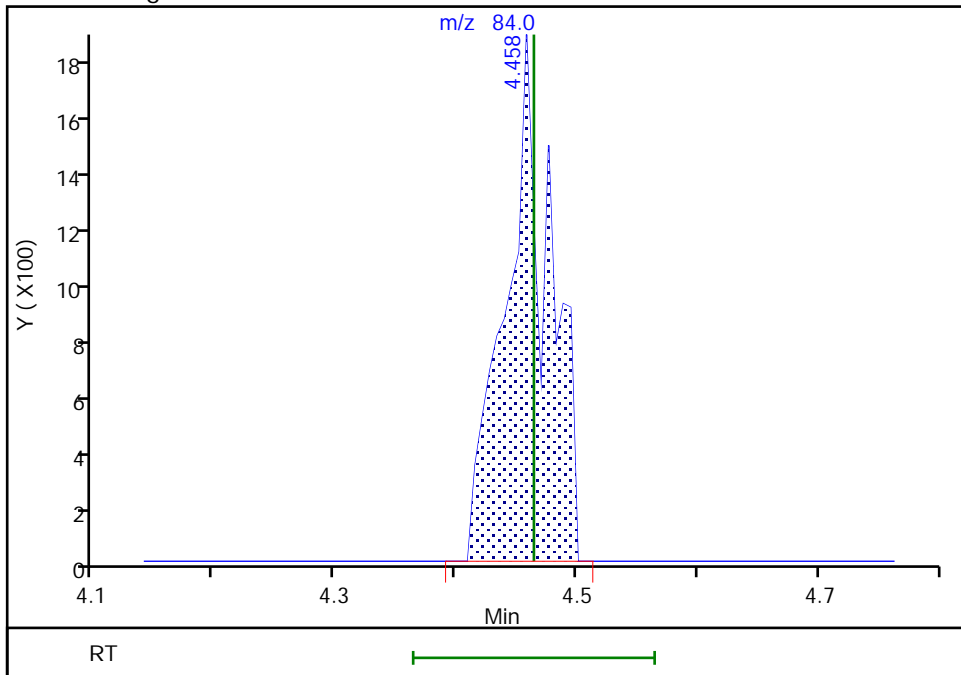
Not Detected
Expected RT: 4.46

Processing Integration Results



Manual Integration Results

RT: 4.46
Area: 4675
Amount: 0.104817
Amount Units: ug/l



Eurofins Lancaster Laboratories Env, LLC

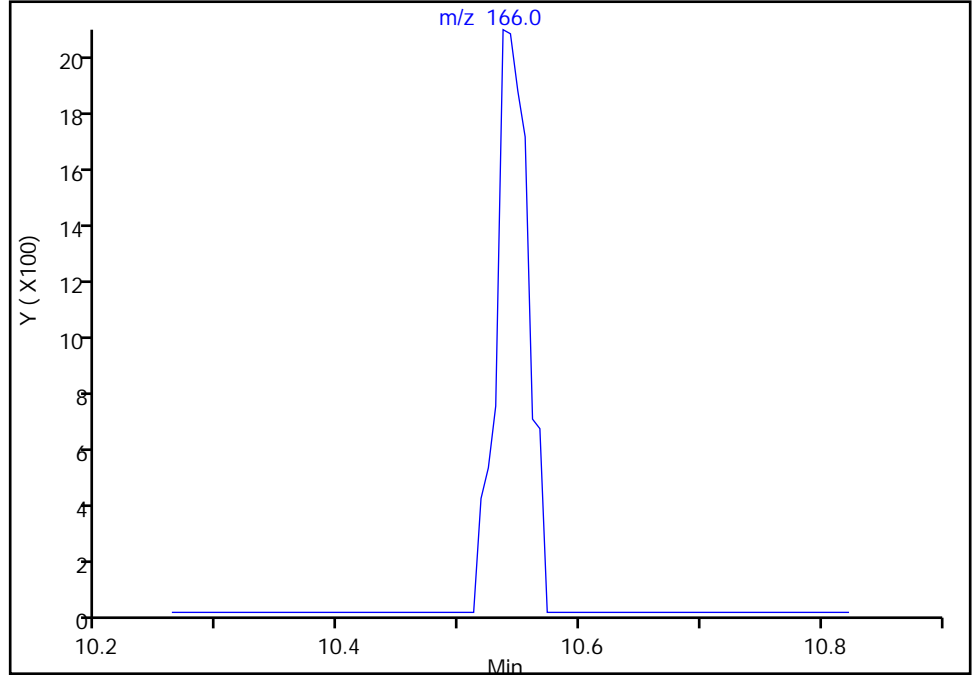
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Injection Date: 30-Aug-2020 23:52:30 Instrument ID: 19094
Lims ID: 410-11876-A-4 Lab Sample ID: 410-11876-4
Client ID: HD-COD-SW-9-0/1-0
Operator ID: mec29284 ALS Bottle#: 19 Worklist Smp#: 20
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

88 Tetrachloroethene, CAS: 127-18-4

Signal: 1

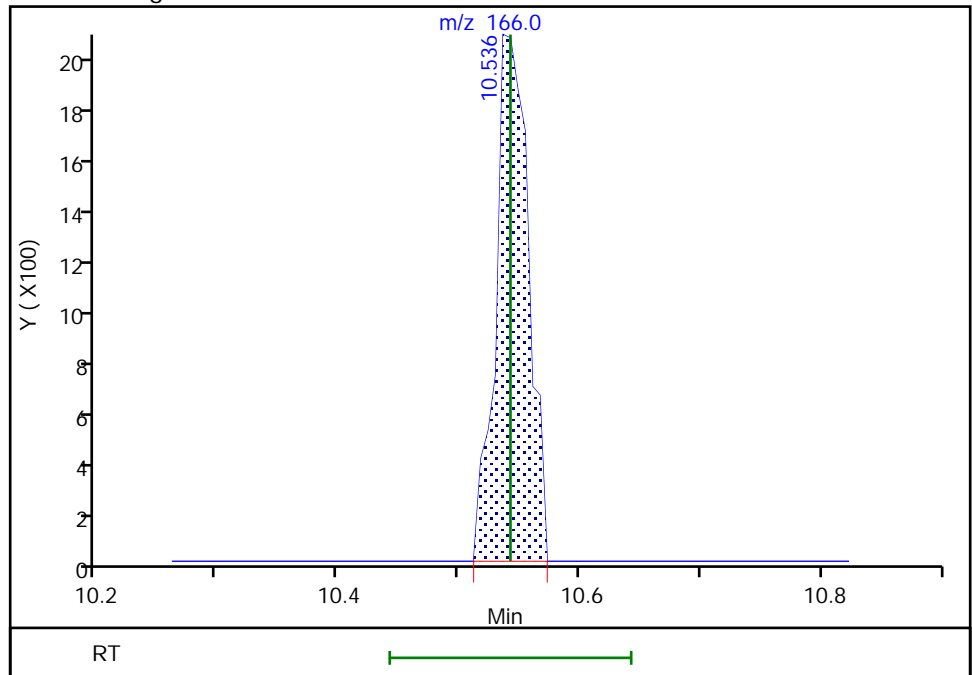
Not Detected
Expected RT: 10.54

Processing Integration Results



Manual Integration Results

RT: 10.54
Area: 3787
Amount: 0.076252
Amount Units: ug/l



Reviewer: virayd, 31-Aug-2020 13:17:25
Audit Action: Assigned Compound ID

Audit Reason: Other

Euofins Lancaster Laboratories Env, LLC

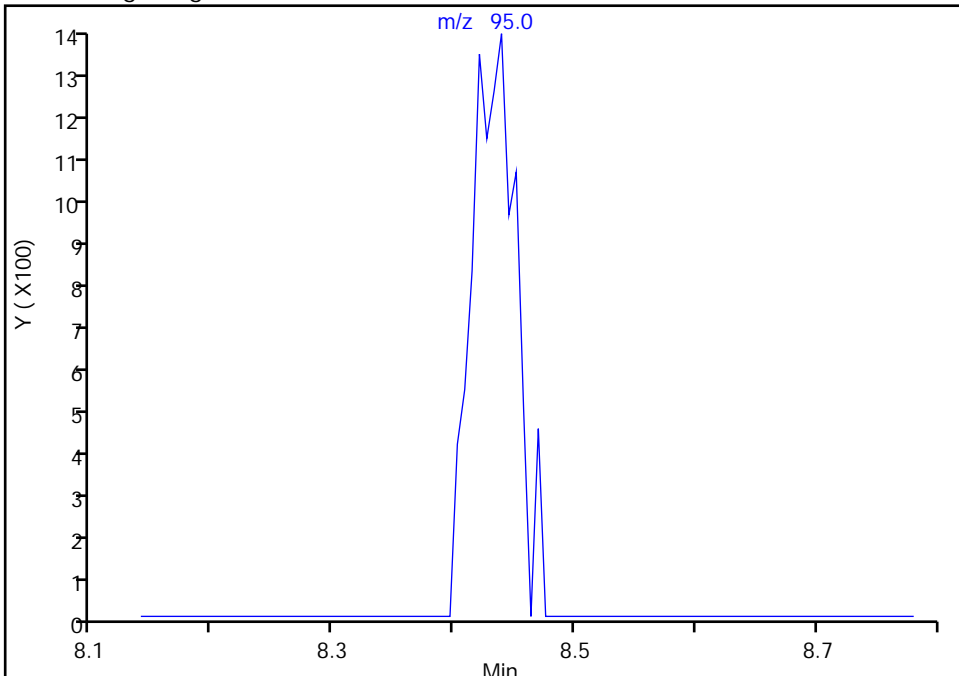
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Injection Date: 30-Aug-2020 23:52:30 Instrument ID: 19094
Lims ID: 410-11876-A-4 Lab Sample ID: 410-11876-4
Client ID: HD-COD-SW-9-0/1-0
Operator ID: mec29284 ALS Bottle#: 19 Worklist Smp#: 20
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

67 Trichloroethene, CAS: 79-01-6

Signal: 1

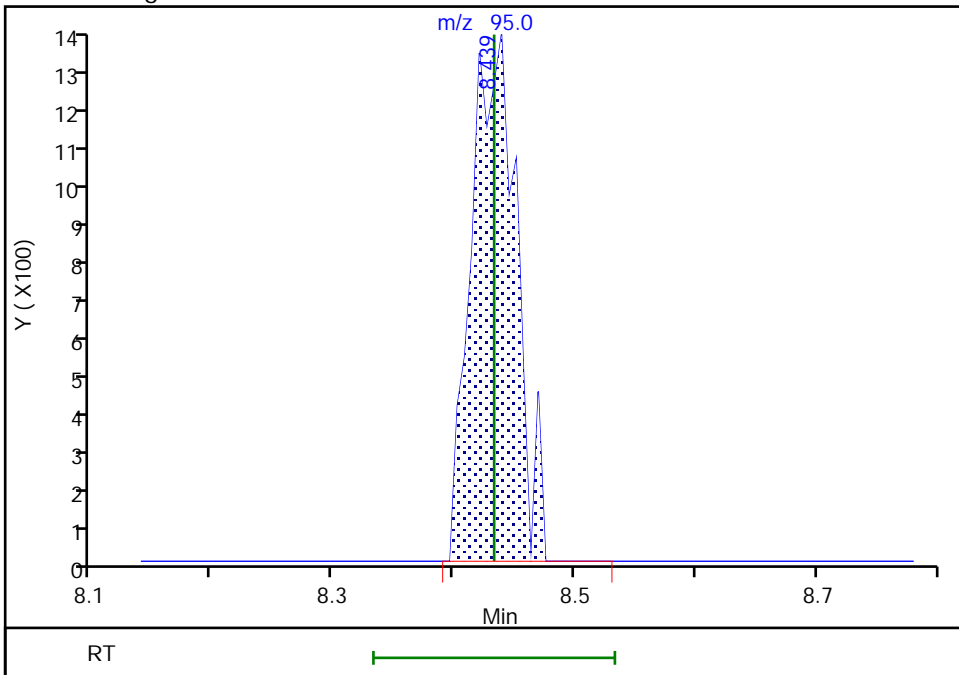
Not Detected
Expected RT: 8.43

Processing Integration Results



Manual Integration Results

RT: 8.44
Area: 3399
Amount: 0.073865
Amount Units: ug/l



Reviewer: virayd, 31-Aug-2020 13:17:20
Audit Action: Manually Integrated

Audit Reason: Other

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-13-0/1-0 Lab Sample ID: 410-11876-5
 Matrix: Water Lab File ID: HG30S14.D
 Analysis Method: 8260C LL Date Collected: 08/25/2020 08:50
 Sample wt/vol: 25 (mL) Date Analyzed: 08/31/2020 00:14
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 38982 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.50	0.070
71-55-6	1,1,1-Trichloroethane	ND		0.50	0.060
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.50	0.070
79-00-5	1,1,2-Trichloroethane	ND		0.50	0.060
75-34-3	1,1-Dichloroethane	ND		0.50	0.070
75-35-4	1,1-Dichloroethene	ND		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	ND		0.50	0.060
107-06-2	1,2-Dichloroethane	ND		0.50	0.050
78-87-5	1,2-Dichloropropane	ND		0.50	0.060
78-93-3	2-Butanone (MEK)	ND		5.0	0.60
591-78-6	2-Hexanone	ND		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70
67-64-1	Acetone	1.8	J	5.0	0.90
107-13-1	Acrylonitrile	ND		5.0	0.40
71-43-2	Benzene	ND		0.50	0.050
74-97-5	Bromochloromethane	ND		0.50	0.050
75-27-4	Bromodichloromethane	ND		0.50	0.050
75-25-2	Bromoform	ND		1.0	0.30
74-83-9	Bromomethane	ND		0.50	0.070
75-15-0	Carbon disulfide	ND		1.0	0.060
56-23-5	Carbon tetrachloride	ND		0.50	0.070
108-90-7	Chlorobenzene	ND		0.50	0.060
75-00-3	Chloroethane	ND		0.50	0.070
67-66-3	Chloroform	ND		0.50	0.090
74-87-3	Chloromethane	0.48	J	0.50	0.060
156-59-2	cis-1,2-Dichloroethene	0.12	J	0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	ND		0.50	0.050
124-48-1	Dibromochloromethane	ND		0.50	0.070
100-41-4	Ethylbenzene	ND		0.50	0.060
1634-04-4	Methyl tert-butyl ether	ND		0.50	0.050
75-09-2	Methylene Chloride	0.072	J	0.50	0.070
100-42-5	Styrene	ND		0.50	0.050
127-18-4	Tetrachloroethene	0.064	J	0.50	0.060
108-88-3	Toluene	ND		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	ND		0.50	0.060
10061-02-6	trans-1,3-Dichloropropene	ND		0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-13-0/1-0 Lab Sample ID: 410-11876-5
 Matrix: Water Lab File ID: HG30S14.D
 Analysis Method: 8260C LL Date Collected: 08/25/2020 08:50
 Sample wt/vol: 25 (mL) Date Analyzed: 08/31/2020 00:14
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 38982 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	0.13	J	0.50	0.060
75-01-4	Vinyl chloride	ND		0.50	0.10
1330-20-7	Xylenes, Total	ND		1.0	0.15

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	113		80-120
1868-53-7	Dibromofluoromethane (Surr)	111		80-120
2037-26-5	Toluene-d8 (Surr)	100		80-120
460-00-4	4-Bromofluorobenzene (Surr)	96		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S14.D
 Lims ID: 410-11876-A-5
 Client ID: HD-COD-SW-13-0/1-0
 Sample Type: Client
 Inject. Date: 31-Aug-2020 00:14:30 ALS Bottle#: 20 Worklist Smp#: 21
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: 410-11876-A-5
 Misc. Info.: 410-0009349-021
 Operator ID: mec29284 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 31-Aug-2020 13:23:49 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1008

First Level Reviewer: virayd Date: 31-Aug-2020 13:18:22

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
6 Chloromethane	50	2.288	2.276	0.012	99	34449	0.4778	
7 Vinyl chloride	62		2.385				ND	
9 Bromomethane	94		2.745				ND	
10 Chloroethane	64		2.837				ND	
18 1,1-Dichloroethene	96		3.757				ND	
19 Acetone	43	3.800	3.788	0.012	96	15496	1.77	M
24 Carbon disulfide	76	4.098	4.086	0.012	3	3217	0.0258	7M
29 Methylene Chloride	84	4.482	4.464	0.018	5	3219	0.0719	M
* 28 t-Butyl alcohol-d10 (IS)	65	4.476	4.477	0.000	0	124089	50.0	
31 Acrylonitrile	53		4.806				ND	
32 Methyl tert-butyl ether	73		4.873				ND	
33 trans-1,2-Dichloroethene	96		4.891				ND	
35 1,1-Dichloroethane	63		5.549				ND	
41 2-Butanone (MEK)	43		6.330				ND	
42 cis-1,2-Dichloroethene	96	6.385	6.372	0.013	79	5843	0.1191	
48 Chlorobromomethane	128		6.702				ND	
50 Chloroform	83	6.866	6.854	0.012	78	4795	0.0623	
\$ 51 Dibromofluoromethane (Surr)	113	7.067	7.061	0.006	93	448233	11.1	
52 1,1,1-Trichloroethane	97		7.086				ND	
56 Carbon tetrachloride	117		7.293				ND	
\$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.525	7.519	0.006	0	93171	11.3	
59 Benzene	78	7.549	7.555	-0.006	41	1828	0.009707	7Ma
60 1,2-Dichloroethane	62		7.622				ND	
* 65 Fluorobenzene (IS)	96	7.957	7.951	0.006	98	1709827	10.0	
67 Trichloroethene	95	8.433	8.433	0.000	90	5784	0.1252	
70 1,2-Dichloropropane	63		8.768				ND	
75 Dichlorobromomethane	83		9.110				ND	
80 cis-1,3-Dichloropropene	75		9.634				ND	
81 4-Methyl-2-pentanone (MIBK)	43		9.793				ND	
\$ 82 Toluene-d8 (Surr)	98	9.933	9.933	0.000	94	1669880	10.0	
83 Toluene	92	10.012	10.012	0.000	94	4879	0.0419	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
85 trans-1,3-Dichloropropene	75		10.256				ND	
87 1,1,2-Trichloroethane	97		10.457				ND	
88 Tetrachloroethene	166	10.542	10.542	0.000	91	3174	0.0641	
91 2-Hexanone	43		10.658				ND	
93 Chlorodibromomethane	129		10.829				ND	
94 Ethylene Dibromide	107		10.945				ND	
S 95 Xylenes, Total	106		11.245				ND	
* 97 Chlorobenzene-d5 (IS)	117	11.365	11.365	0.000	87	1243126	10.0	
98 Chlorobenzene	112		11.390				ND	
99 1,1,1,2-Tetrachloroethane	131		11.469				ND	
100 Ethylbenzene	91		11.475				ND	
101 m-Xylene & p-Xylene	106		11.585				ND	
102 o-Xylene	106		11.914				ND	
103 Styrene	104		11.926				ND	
104 Bromoform	173		12.091				ND	
\$ 108 4-Bromofluorobenzene (Surr)	95	12.353	12.353	0.000	88	585659	9.62	
109 1,1,2,2-Tetrachloroethane	83		12.451				ND	
* 124 1,4-Dichlorobenzene-d4	152	13.231	13.231	0.000	97	619511	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_30_826ISS_00005

Amount Added: 5.00

Units: uL

Run Reagent

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S14.D

Injection Date: 31-Aug-2020 00:14:30

Instrument ID: 19094

Operator ID: mec29284

Lims ID: 410-11876-A-5

Lab Sample ID: 410-11876-5

Worklist Smp#: 21

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

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

ALS Bottle#: 20

Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S14.D
 Lims ID: 410-11876-A-5
 Client ID: HD-COD-SW-13-0/1-0
 Sample Type: Client
 Inject. Date: 31-Aug-2020 00:14:30 ALS Bottle#: 20 Worklist Smp#: 21
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: 410-11876-A-5
 Misc. Info.: 410-0009349-021
 Operator ID: mec29284 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 31-Aug-2020 13:23:49 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1008

First Level Reviewer: virayd Date: 31-Aug-2020 13:18:22

Compound	Amount Added	Amount Recovered	% Rec.
\$ 51 Dibromofluoromethane (Surr)	10.0	11.1	110.88
\$ 58 1,2-Dichloroethane-d4 (Surr)	10.0	11.3	113.15
\$ 82 Toluene-d8 (Surr)	10.0	10.0	100.10
\$ 108 4-Bromofluorobenzene (Surr)	10.0	9.62	96.23

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S14.D

Injection Date: 31-Aug-2020 00:14:30

Instrument ID: 19094

Lims ID: 410-11876-A-5

Lab Sample ID: 410-11876-5

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

Operator ID: mec29284

ALS Bottle#: 20

Worklist Smp#: 21

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

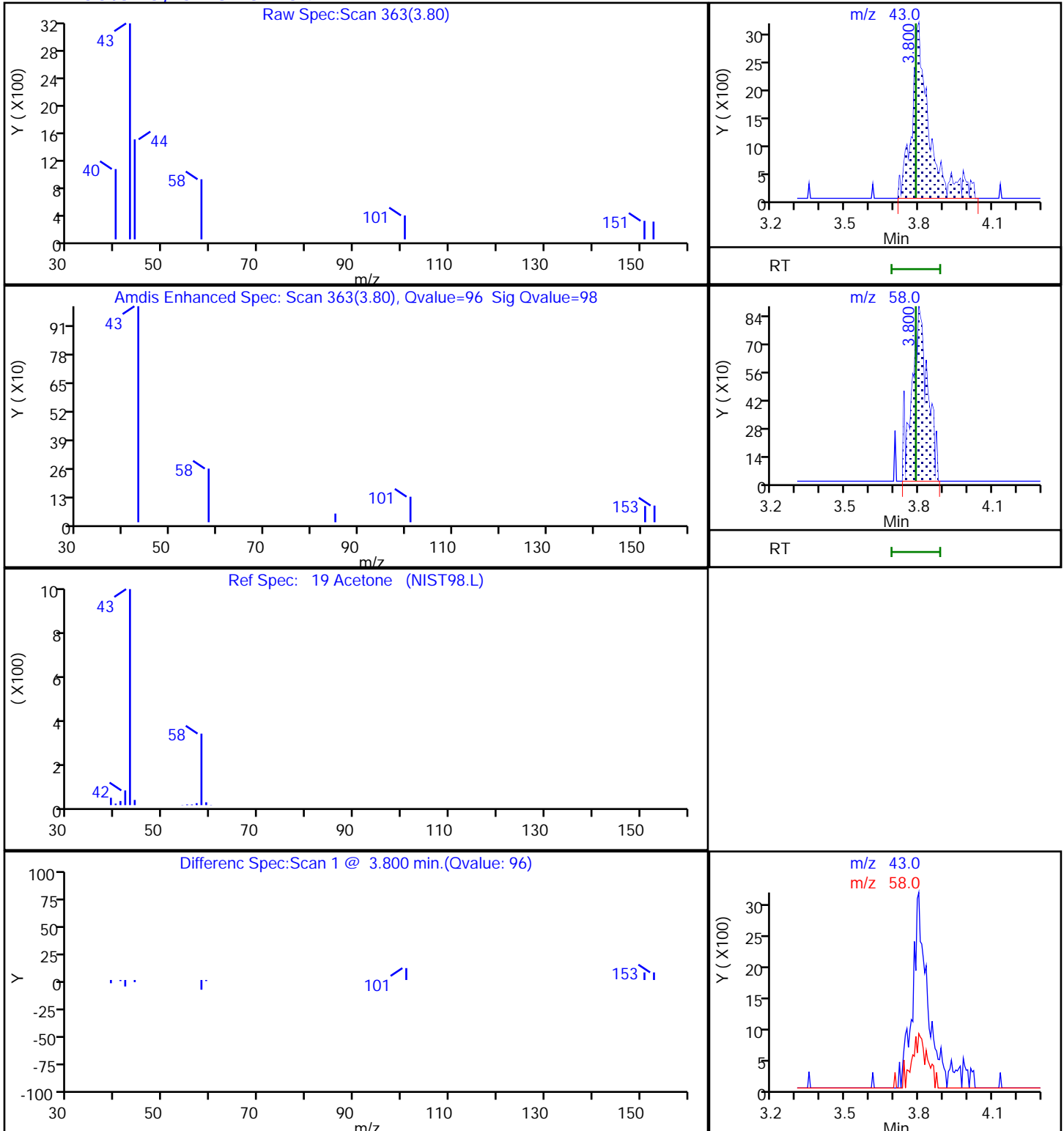
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

19 Acetone, CAS: 67-64-1



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S14.D

Injection Date: 31-Aug-2020 00:14:30

Instrument ID: 19094

Lims ID: 410-11876-A-5

Lab Sample ID: 410-11876-5

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

Operator ID: mec29284

ALS Bottle#: 20

Worklist Smp#: 21

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

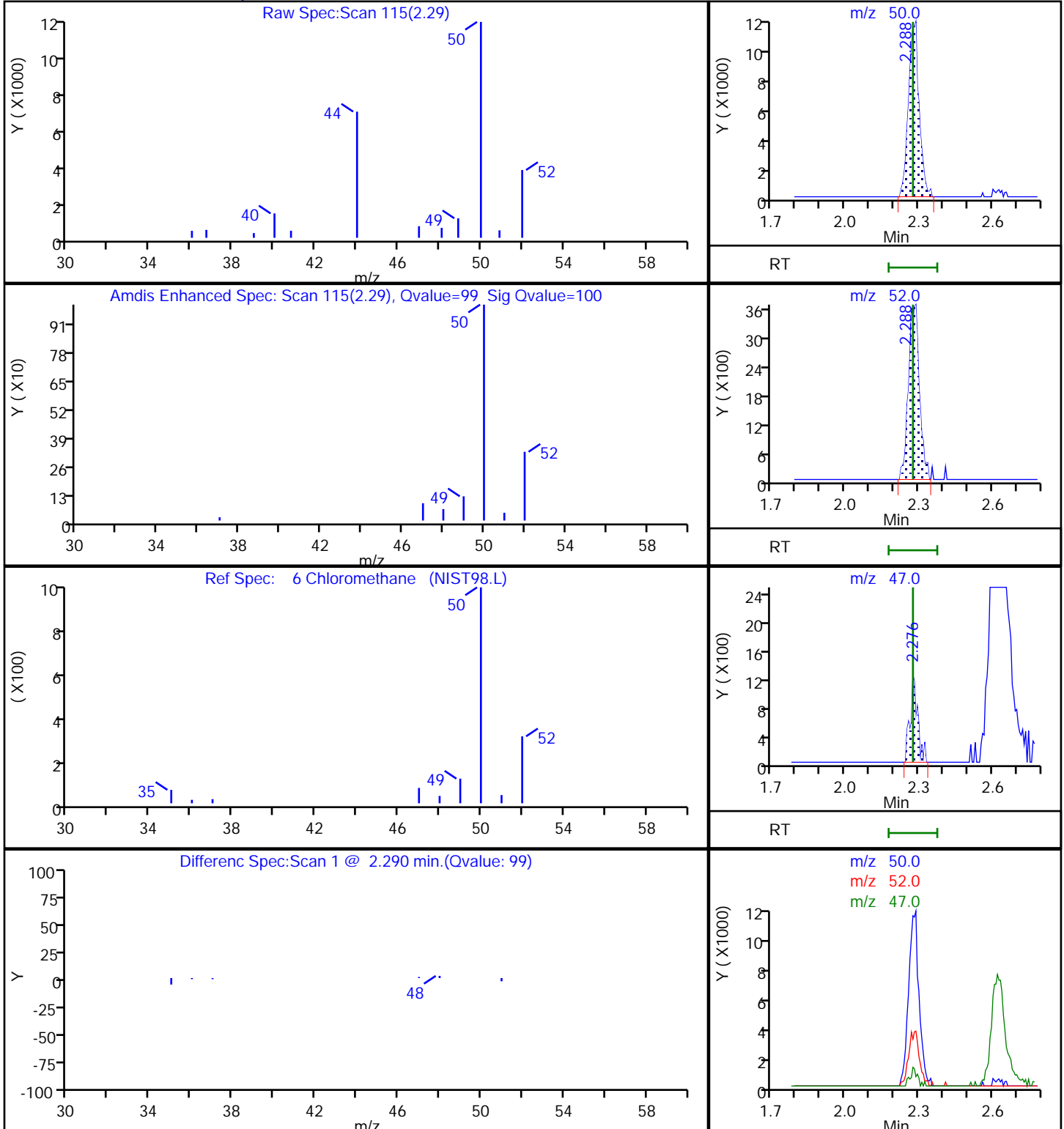
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector

MS Quad

6 Chloromethane, CAS: 74-87-3



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S14.D

Injection Date: 31-Aug-2020 00:14:30

Instrument ID: 19094

Lims ID: 410-11876-A-5

Lab Sample ID: 410-11876-5

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

Operator ID: mec29284

ALS Bottle#: 20

Worklist Smp#: 21

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

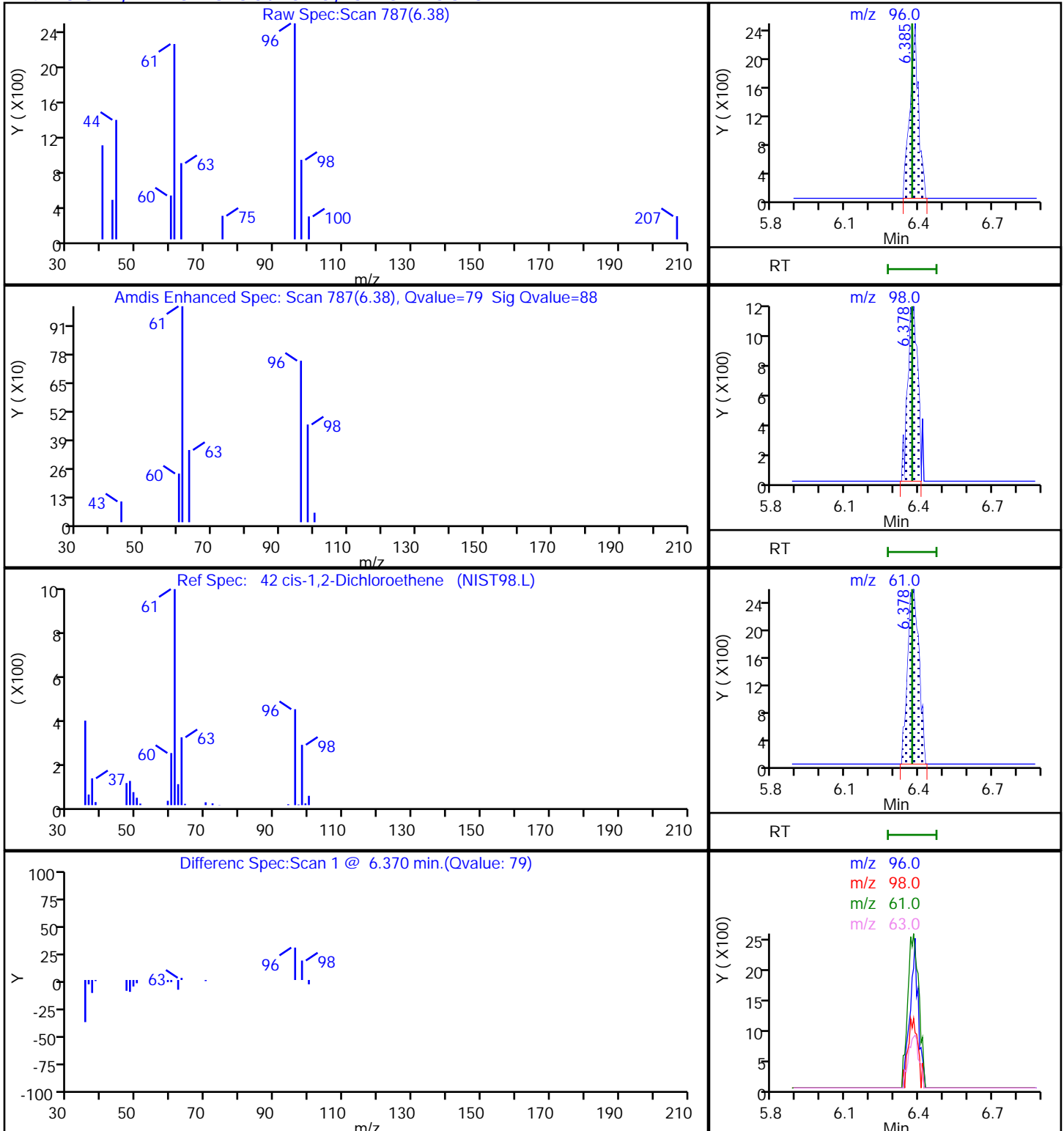
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

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



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S14.D

Injection Date: 31-Aug-2020 00:14:30

Instrument ID: 19094

Lims ID: 410-11876-A-5

Lab Sample ID: 410-11876-5

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

Operator ID: mec29284

ALS Bottle#: 20

Worklist Smp#: 21

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

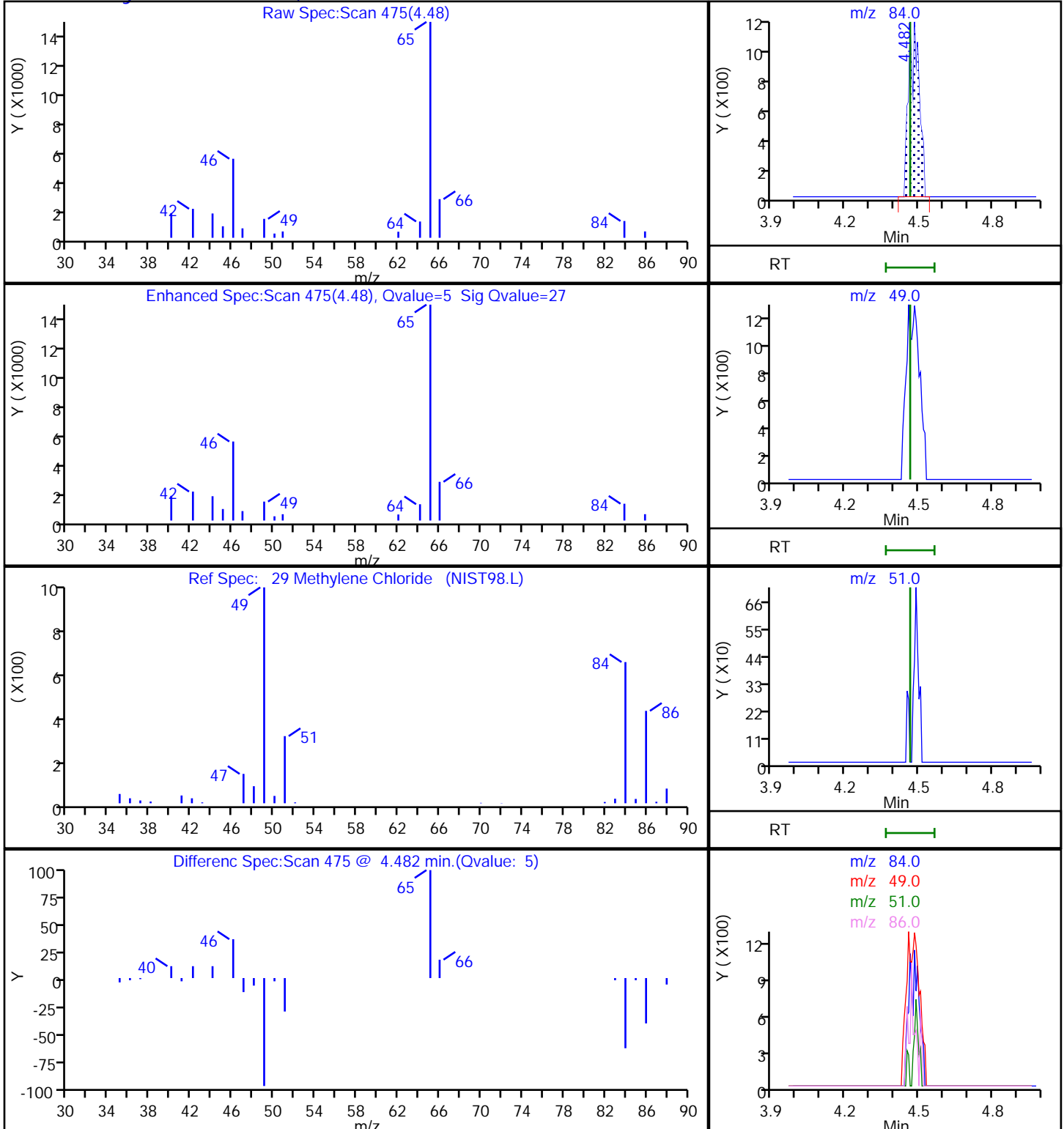
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

29 Methylene Chloride, CAS: 75-09-2



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S14.D

Injection Date: 31-Aug-2020 00:14:30

Instrument ID: 19094

Lims ID: 410-11876-A-5

Lab Sample ID: 410-11876-5

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

Operator ID: mec29284

ALS Bottle#: 20

Worklist Smp#: 21

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

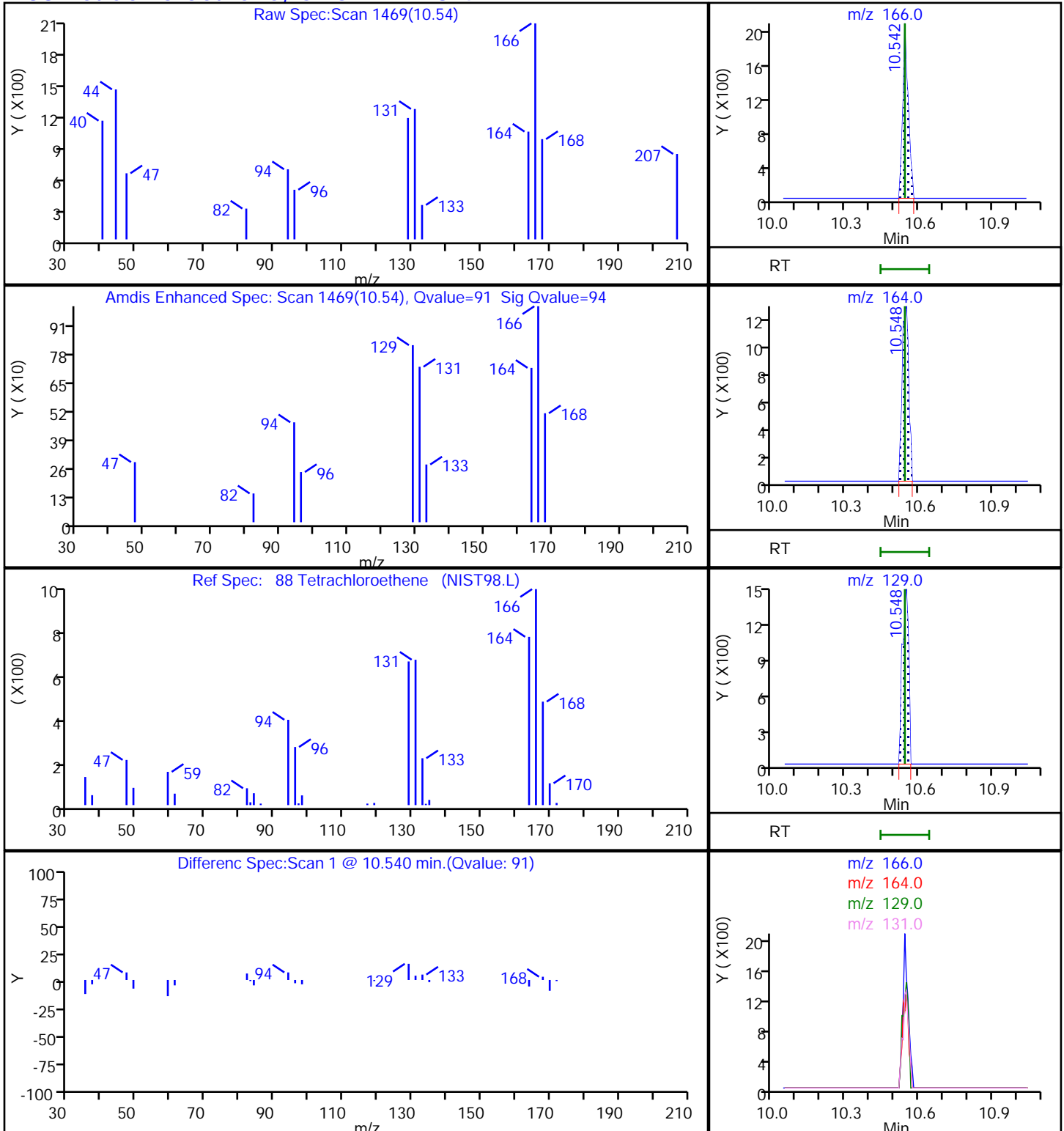
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

88 Tetrachloroethene, CAS: 127-18-4



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S14.D

Injection Date: 31-Aug-2020 00:14:30

Instrument ID: 19094

Lims ID: 410-11876-A-5

Lab Sample ID: 410-11876-5

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

Operator ID: mec29284

ALS Bottle#: 20

Worklist Smp#: 21

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

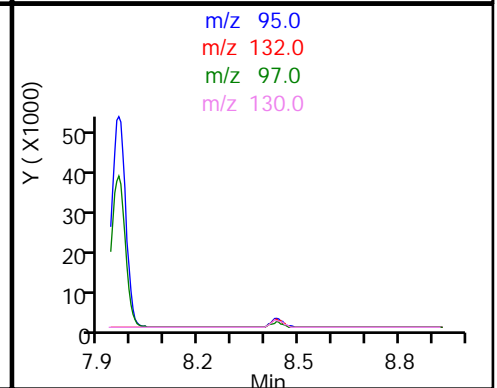
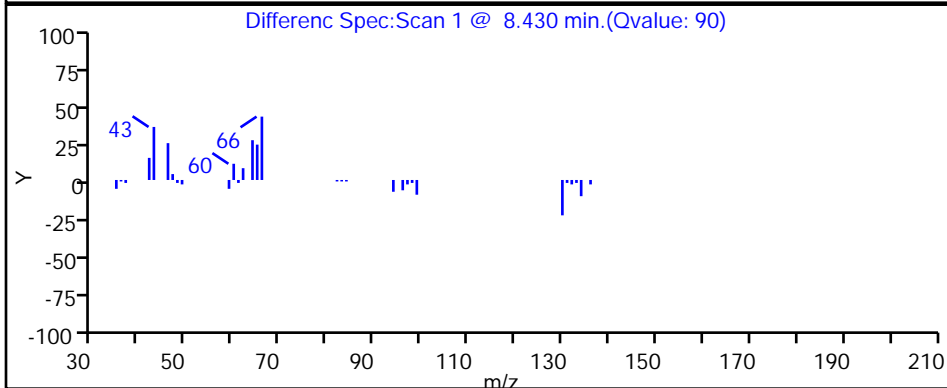
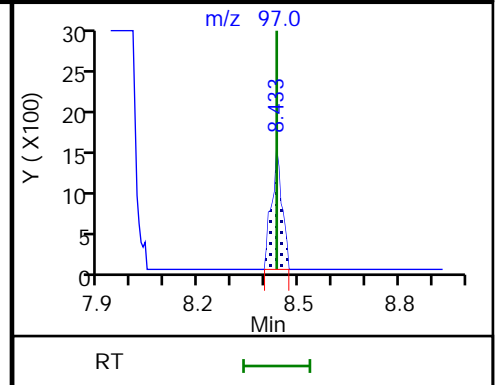
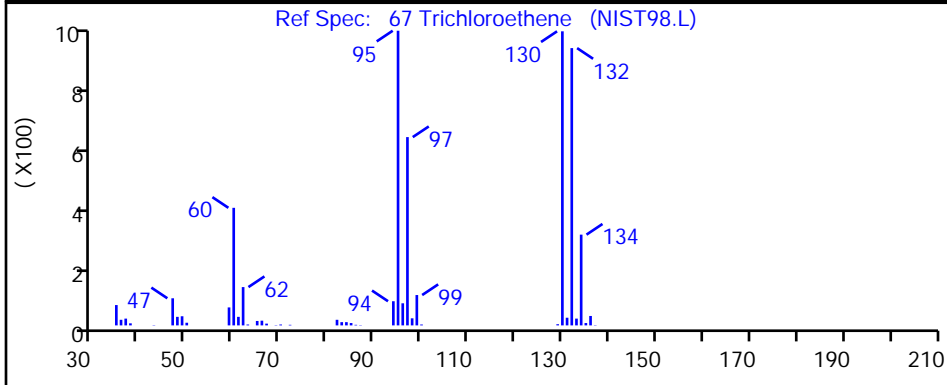
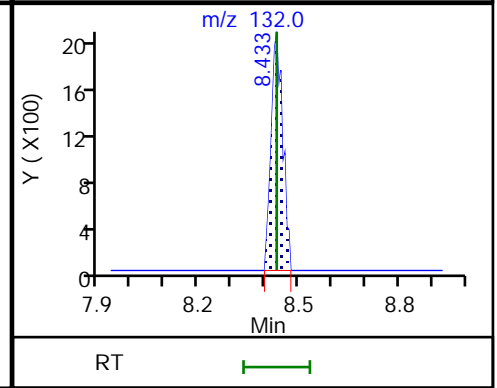
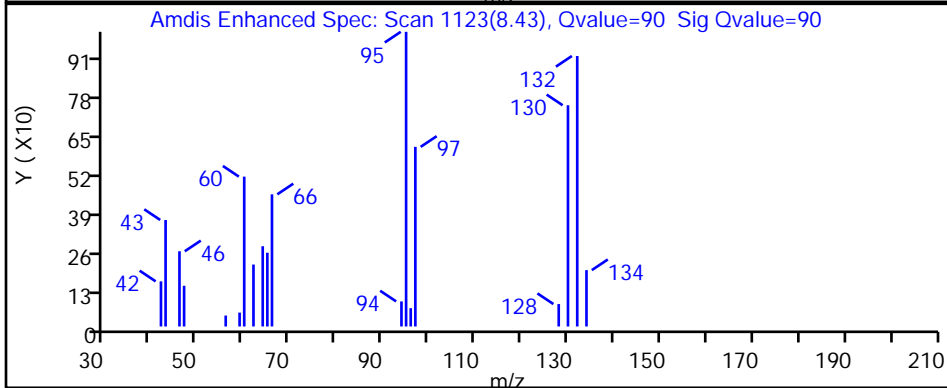
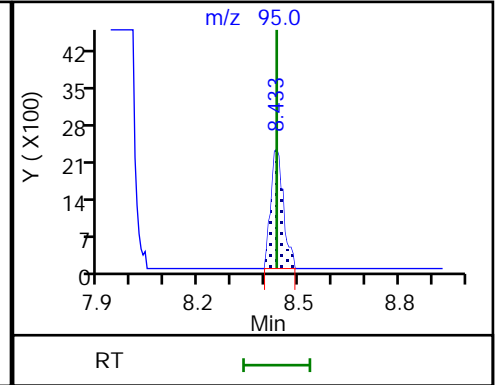
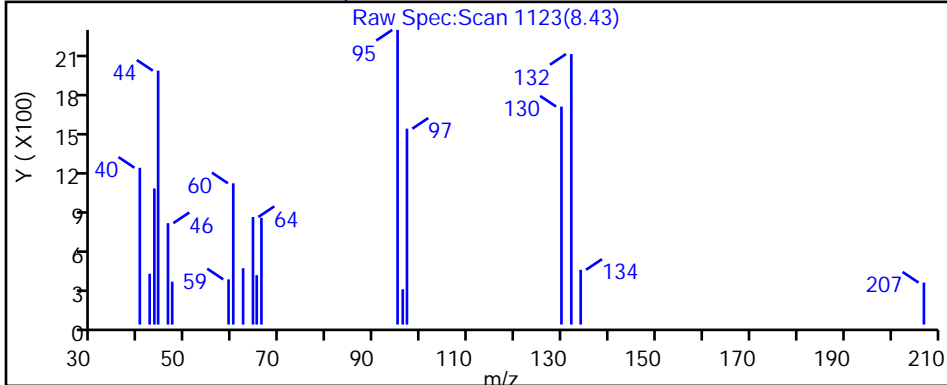
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID) x 30m

MS Quad

67 Trichloroethene, CAS: 79-01-6



Eurofins Lancaster Laboratories Env, LLC

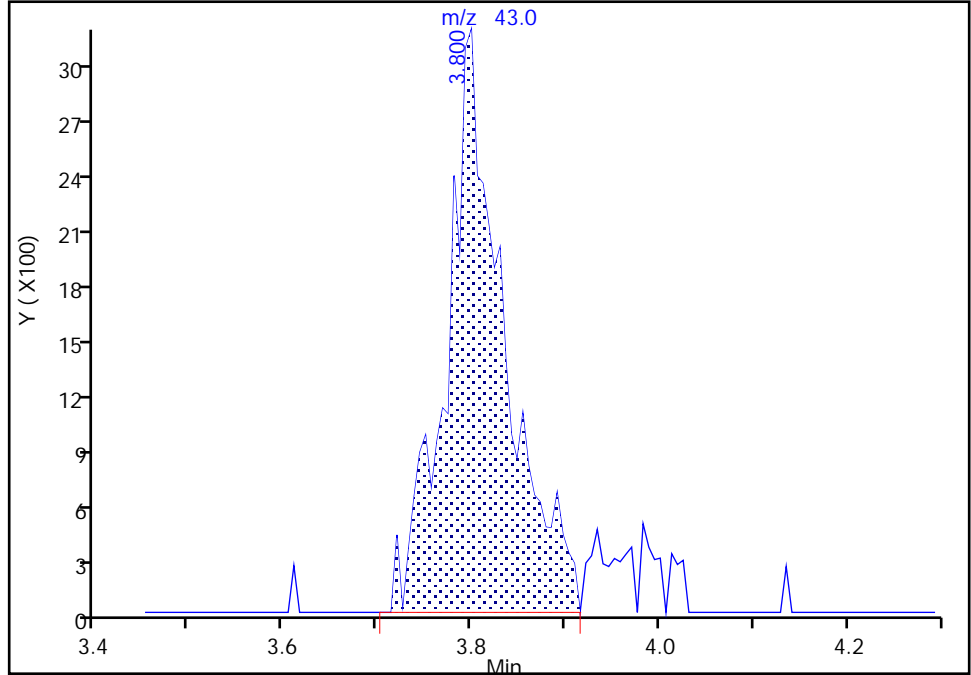
Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S14.D
Injection Date: 31-Aug-2020 00:14:30 Instrument ID: 19094
Lims ID: 410-11876-A-5 Lab Sample ID: 410-11876-5
Client ID: HD-COD-SW-13-0/1-0
Operator ID: mec29284 ALS Bottle#: 20 Worklist Smp#: 21
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

19 Acetone, CAS: 67-64-1

Signal: 1

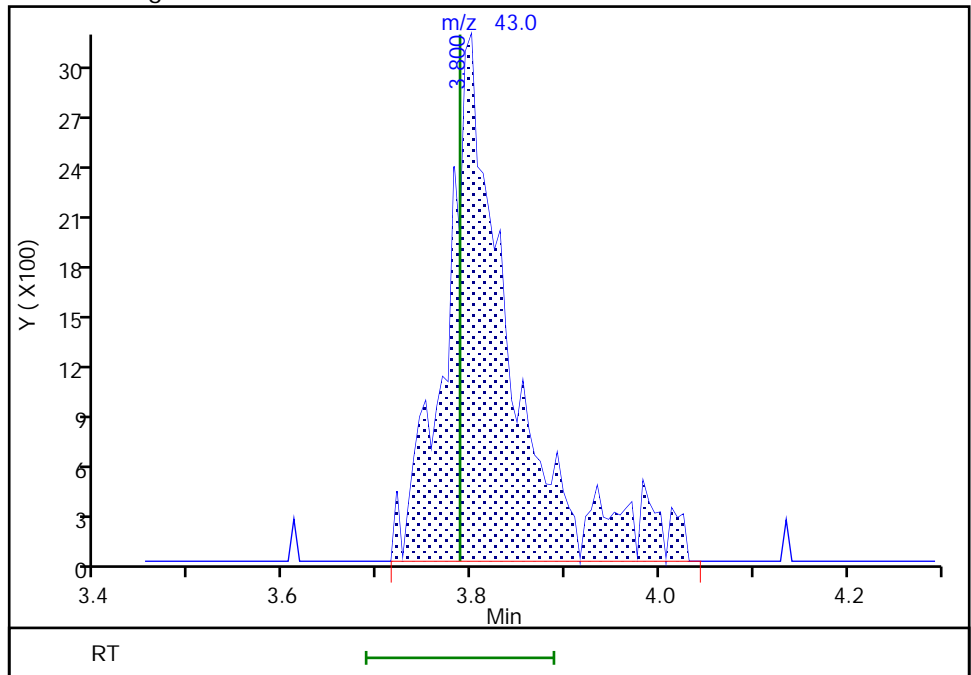
RT: 3.80
Area: 13634
Amount: 1.555983
Amount Units: ug/l

Processing Integration Results



RT: 3.80
Area: 15496
Amount: 1.768484
Amount Units: ug/l

Manual Integration Results



Reviewer: virayd, 31-Aug-2020 13:17:54
Audit Action: Manually Integrated

Audit Reason: Other

Eurofins Lancaster Laboratories Env, LLC

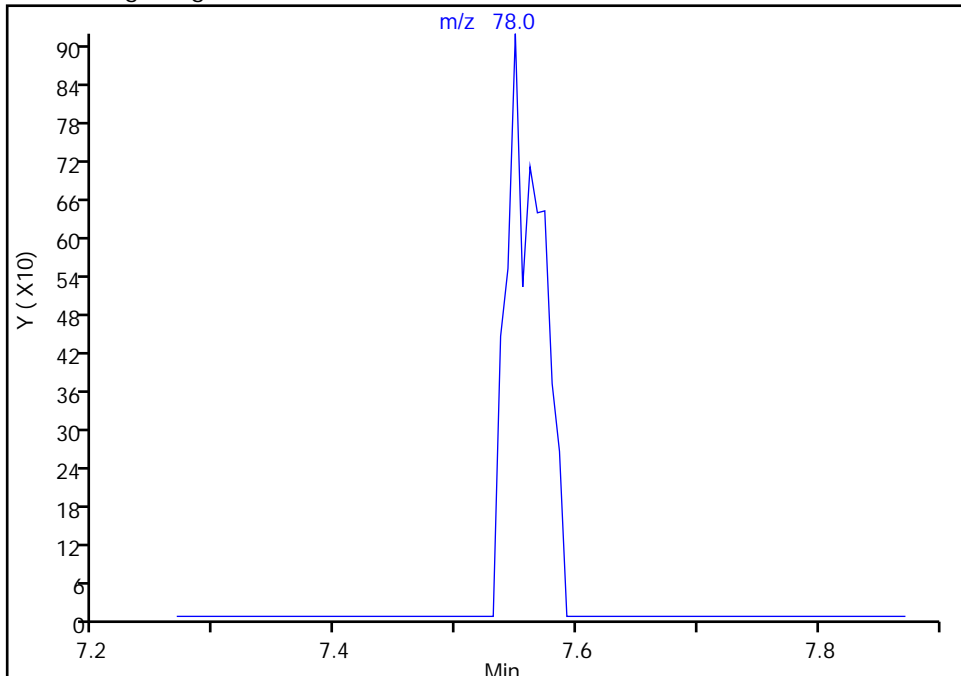
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Injection Date: 31-Aug-2020 00:14:30 Instrument ID: 19094
Lims ID: 410-11876-A-5 Lab Sample ID: 410-11876-5
Client ID: HD-COD-SW-13-0/1-0
Operator ID: mec29284 ALS Bottle#: 20 Worklist Smp#: 21
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

59 Benzene, CAS: 71-43-2

Signal: 1

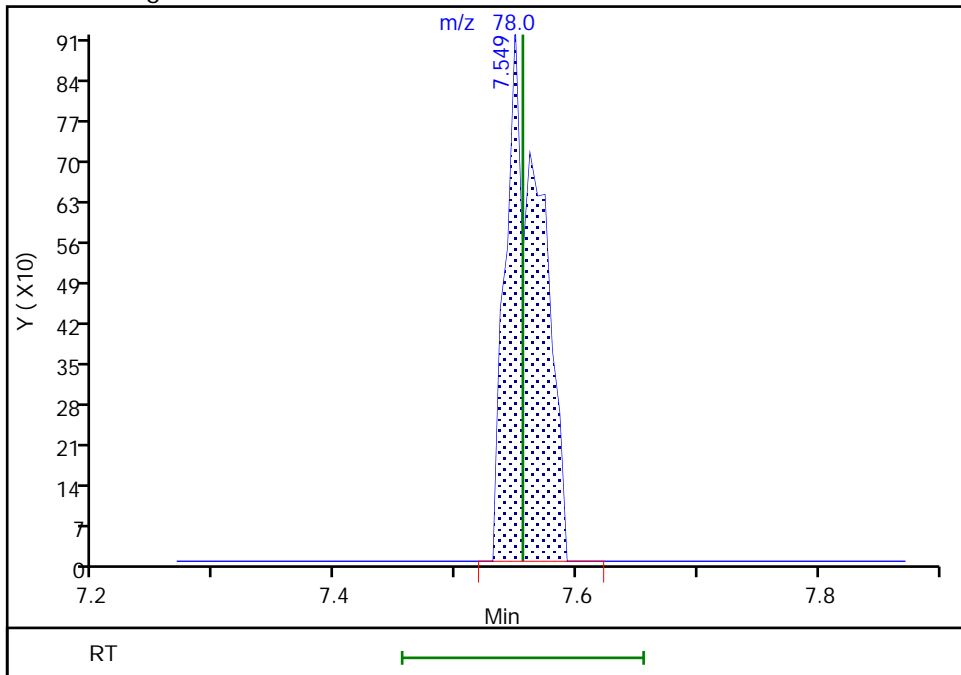
Not Detected
Expected RT: 7.56

Processing Integration Results



Manual Integration Results

RT: 7.55
Area: 1828
Amount: 0.009707
Amount Units: ug/l



Reviewer: virayd, 31-Aug-2020 13:18:09
Audit Action: Manually Integrated

Audit Reason: Other

Eurofins Lancaster Laboratories Env, LLC

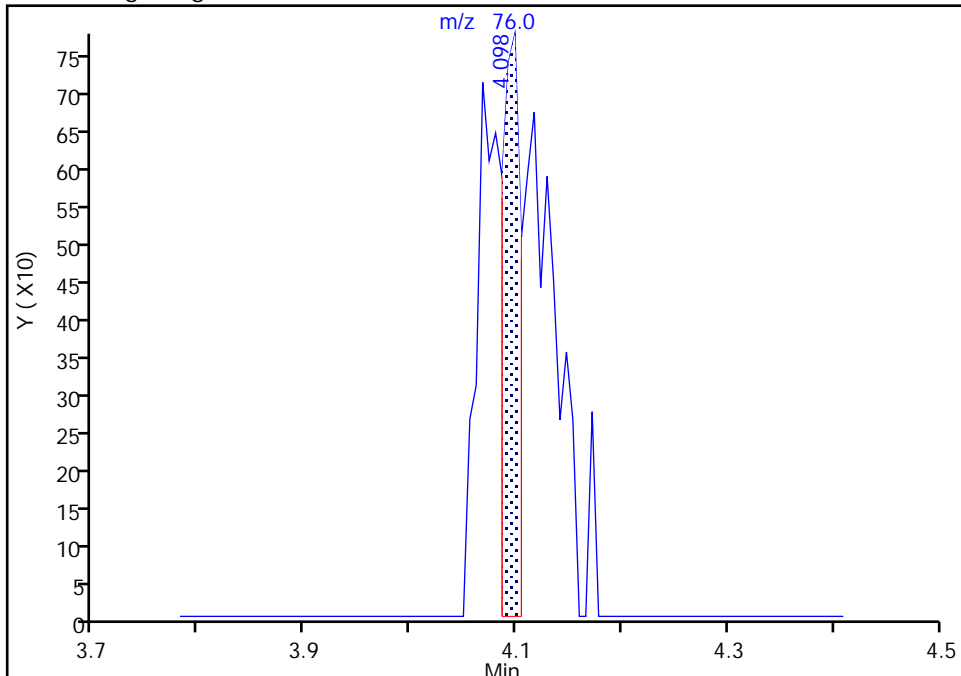
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Injection Date: 31-Aug-2020 00:14:30 Instrument ID: 19094
Lims ID: 410-11876-A-5 Lab Sample ID: 410-11876-5
Client ID: HD-COD-SW-13-0/1-0
Operator ID: mec29284 ALS Bottle#: 20 Worklist Smp#: 21
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

24 Carbon disulfide, CAS: 75-15-0

Signal: 1

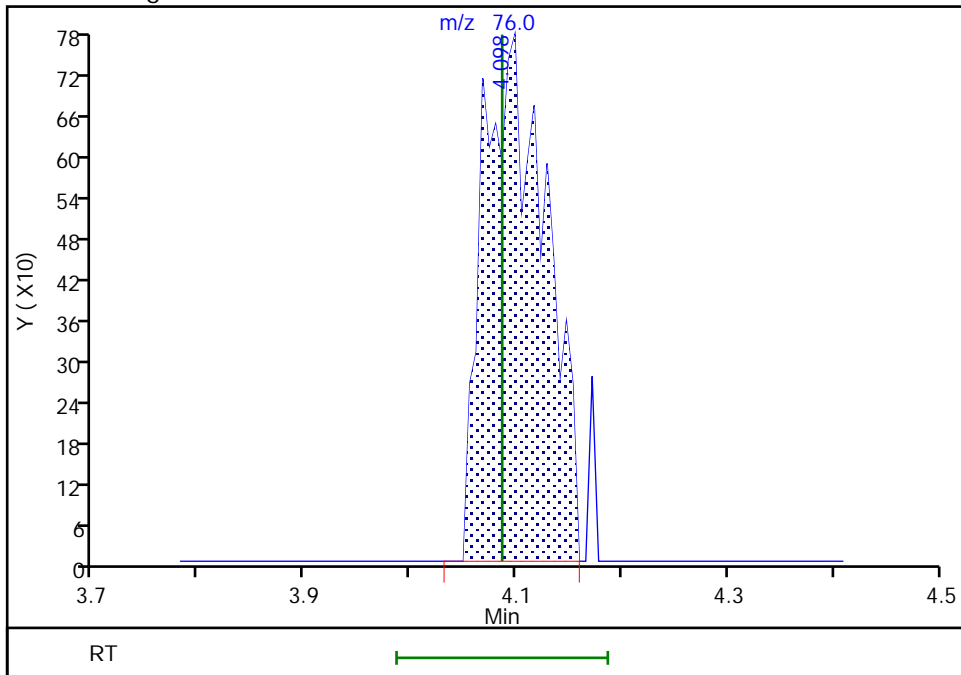
RT: 4.10
Area: 958
Amount: 0.007675
Amount Units: ug/l

Processing Integration Results



RT: 4.10
Area: 3217
Amount: 0.025773
Amount Units: ug/l

Manual Integration Results



Reviewer: virayd, 31-Aug-2020 13:17:58
Audit Action: Manually Integrated

Audit Reason: Other

Eurofins Lancaster Laboratories Env, LLC

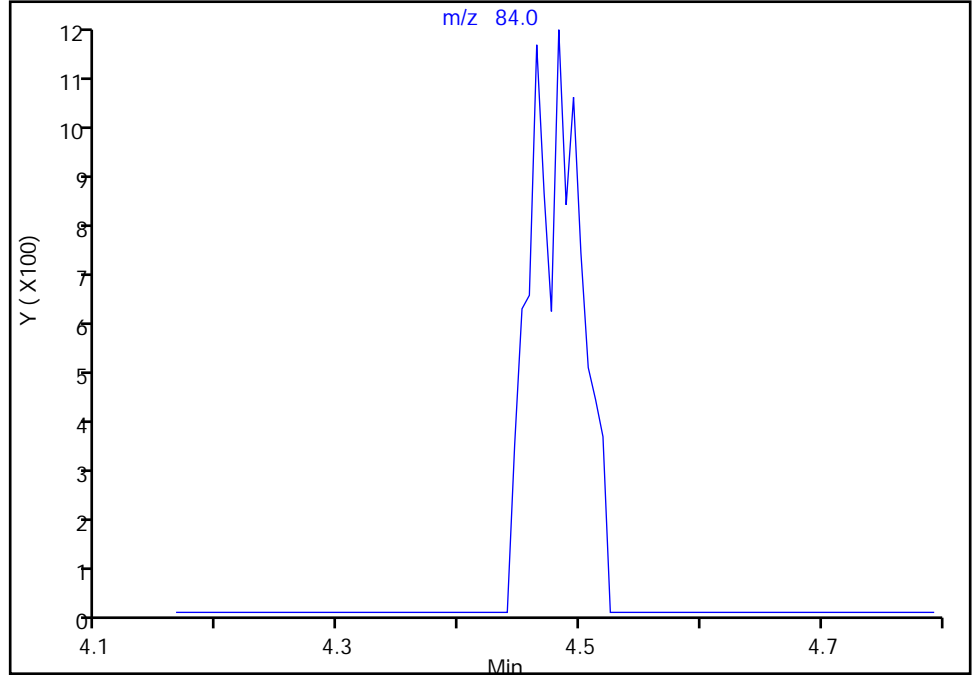
Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S14.D
Injection Date: 31-Aug-2020 00:14:30 Instrument ID: 19094
Lims ID: 410-11876-A-5 Lab Sample ID: 410-11876-5
Client ID: HD-COD-SW-13-0/1-0
Operator ID: mec29284 ALS Bottle#: 20 Worklist Smp#: 21
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

29 Methylene Chloride, CAS: 75-09-2

Signal: 1

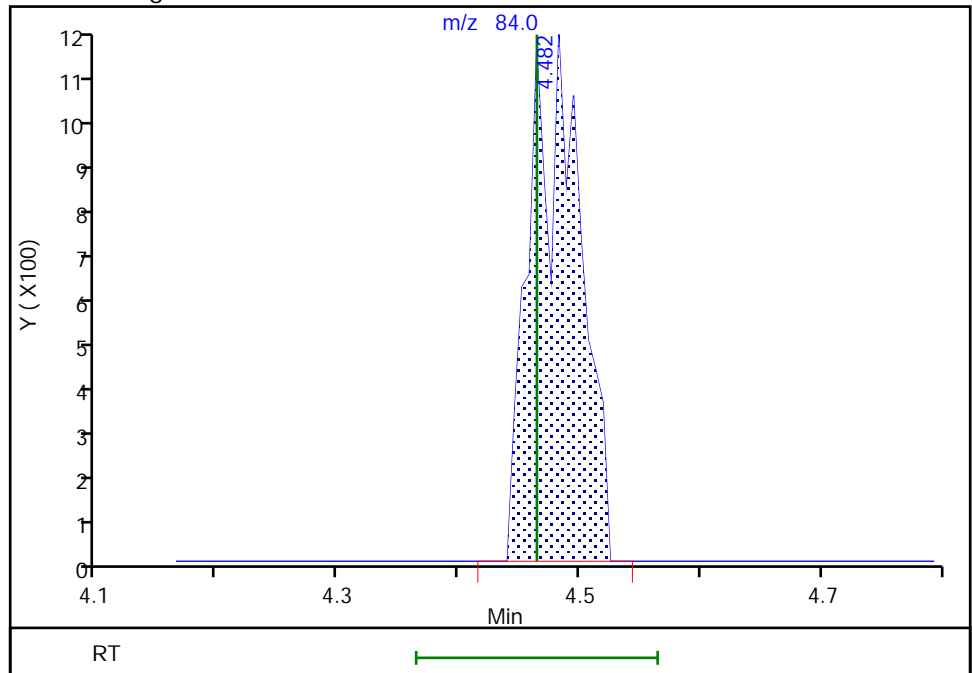
Not Detected
Expected RT: 4.46

Processing Integration Results



Manual Integration Results

RT: 4.48
Area: 3219
Amount: 0.071896
Amount Units: ug/l



Reviewer: virayd, 31-Aug-2020 13:18:01
Audit Action: Manually Integrated

Audit Reason: Other

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-15-0/1-0 Lab Sample ID: 410-11876-6
 Matrix: Water Lab File ID: HG30S06.D
 Analysis Method: 8260C LL Date Collected: 08/25/2020 11:25
 Sample wt/vol: 25 (mL) Date Analyzed: 08/30/2020 21:19
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 38982 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.50	0.070
71-55-6	1,1,1-Trichloroethane	0.14	J	0.50	0.060
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.50	0.070
79-00-5	1,1,2-Trichloroethane	ND	FH	0.50	0.060
75-34-3	1,1-Dichloroethane	0.073	J FH	0.50	0.070
75-35-4	1,1-Dichloroethene	0.092	J	0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	ND		0.50	0.060
107-06-2	1,2-Dichloroethane	ND	FH	0.50	0.050
78-87-5	1,2-Dichloropropane	ND	FH	0.50	0.060
78-93-3	2-Butanone (MEK)	ND		5.0	0.60
591-78-6	2-Hexanone	ND		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70
67-64-1	Acetone	ND		5.0	0.90
107-13-1	Acrylonitrile	ND		5.0	0.40
71-43-2	Benzene	ND		0.50	0.050
74-97-5	Bromochloromethane	ND		0.50	0.050
75-27-4	Bromodichloromethane	ND		0.50	0.050
75-25-2	Bromoform	ND		1.0	0.30
74-83-9	Bromomethane	ND		0.50	0.070
75-15-0	Carbon disulfide	ND	FH	1.0	0.060
56-23-5	Carbon tetrachloride	ND		0.50	0.070
108-90-7	Chlorobenzene	ND		0.50	0.060
75-00-3	Chloroethane	ND		0.50	0.070
67-66-3	Chloroform	0.36	J	0.50	0.090
74-87-3	Chloromethane	0.57	FH	0.50	0.060
156-59-2	cis-1,2-Dichloroethene	0.85		0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	ND		0.50	0.050
124-48-1	Dibromochloromethane	ND		0.50	0.070
100-41-4	Ethylbenzene	ND		0.50	0.060
1634-04-4	Methyl tert-butyl ether	0.054	J	0.50	0.050
75-09-2	Methylene Chloride	0.11	J	0.50	0.070
100-42-5	Styrene	ND		0.50	0.050
127-18-4	Tetrachloroethene	3.0		0.50	0.060
108-88-3	Toluene	ND		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	ND		0.50	0.060
10061-02-6	trans-1,3-Dichloropropene	ND		0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-15-0/1-0 Lab Sample ID: 410-11876-6
 Matrix: Water Lab File ID: HG30S06.D
 Analysis Method: 8260C LL Date Collected: 08/25/2020 11:25
 Sample wt/vol: 25 (mL) Date Analyzed: 08/30/2020 21:19
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 38982 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	1.1		0.50	0.060
75-01-4	Vinyl chloride	ND	FH	0.50	0.10
1330-20-7	Xylenes, Total	ND		1.0	0.15

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	119		80-120
1868-53-7	Dibromofluoromethane (Surr)	111		80-120
2037-26-5	Toluene-d8 (Surr)	97		80-120
460-00-4	4-Bromofluorobenzene (Surr)	95		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S06.D
 Lims ID: 410-11876-A-6
 Client ID: HD-COD-SW-15-0/1-0
 Sample Type: Client
 Inject. Date: 30-Aug-2020 21:19:30 ALS Bottle#: 12 Worklist Smp#: 13
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: 410-11876-A-6
 Misc. Info.: 410-0009349-013
 Operator ID: mec29284 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 31-Aug-2020 13:23:49 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1008

First Level Reviewer: virayd Date: 31-Aug-2020 13:10:46

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
1 Chlorotrifluoroethene	116		1.885				ND	
3 Dichlorodifluoromethane	85		2.068				ND	
2 Chlorodifluoromethane	51		2.093				ND	
4 Dimethyl ether	45		2.154				ND	
5 2-Chloro-1,1,1-Trifluoroethane	118		2.233				ND	
6 Chloromethane	50	2.276	2.276	0.000	99	37472	0.5716	
7 Vinyl chloride	62		2.385				ND	
8 Butadiene	39		2.404				ND	
9 Bromomethane	94		2.745				ND	
10 Chloroethane	64		2.837				ND	
11 Dichlorofluoromethane	67		3.087				ND	
12 Ethanol	45		3.111				ND	
13 Trichlorofluoromethane	101		3.154				ND	
T 184 Ethanol TIC	1		3.410				ND	
15 Ethyl ether	59		3.422				ND	
16 1,2-Dichloro-1,1,2-trifluoroetha	67		3.513				ND	
17 Acrolein	56		3.611				ND	
18 1,1-Dichloroethene	96	3.775	3.757	0.018	95	3152	0.0921	
19 Acetone	43	3.806	3.788	0.018	67	8242	0.8769	
20 112TCTFE	101		3.788				ND	
21 Isopropyl alcohol	45	3.983	3.964	0.019	1	4243	6.86	M
22 Iodomethane	142		3.971				ND	
23 Ethyl bromide	108		4.001				ND	
24 Carbon disulfide	76	4.092	4.086	0.006	7	3819	0.0336	M
25 Acetonitrile	41		4.196				ND	
26 Methyl acetate	43		4.233				ND	
27 3-Chloro-1-propene	41		4.263				ND	
29 Methylene Chloride	84	4.476	4.464	0.012	1	4349	0.1068	M
* 28 t-Butyl alcohol-d10 (IS)	65	4.501	4.477	0.025	0	133106	50.0	
30 2-Methyl-2-propanol	59		4.605				ND	
31 Acrylonitrile	53		4.806				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
32 Methyl tert-butyl ether	73	4.867	4.873	-0.006	1	4431	0.0542	
33 trans-1,2-Dichloroethene	96		4.891				ND	
34 Hexane	57		5.306				ND	
36 Vinyl acetate	43		5.525				ND	
35 1,1-Dichloroethane	63	5.555	5.549	0.006	91	5469	0.0730	a
37 Isopropyl ether	45		5.598				ND	
38 2-Chloro-1,3-butadiene	53		5.653				ND	
39 Tert-butyl ethyl ether	59		6.129				ND	
S 40 1,2-Dichloroethene, Total	100				0		0.8526	
41 2-Butanone (MEK)	43		6.330				ND	
42 cis-1,2-Dichloroethene	96	6.378	6.372	0.006	81	38025	0.8526	
43 2,2-Dichloropropane	77		6.391				ND	
44 Ethyl acetate	43		6.403				ND	
45 Propionitrile	54		6.427				ND	
46 Methyl acrylate	55		6.464				ND	
47 Methacrylonitrile	67		6.641				ND	
48 Chlorobromomethane	128		6.702				ND	
49 Tetrahydrofuran	71		6.714				ND	
50 Chloroform	83	6.848	6.854	-0.006	93	25105	0.3587	a
\$ 51 Dibromofluoromethane (Surr)	113	7.073	7.061	0.012	93	408720	11.1	
52 1,1,1-Trichloroethane	97	7.086	7.086	0.000	35	8572	0.1427	
53 Cyclohexane	56		7.183				ND	
54 1-Chlorobutane	56		7.232				ND	
55 1,1-Dichloropropene	75		7.287				ND	
56 Carbon tetrachloride	117	7.293	7.293	0.000	1	1586	0.0306	
57 Isobutyl alcohol	41		7.421				ND	
\$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.525	7.519	0.006	0	89314	11.9	
59 Benzene	78		7.555				ND	
60 1,2-Dichloroethane	62	7.628	7.622	0.006	1	1745	0.0435	a
61 Isopropyl acetate	43		7.622				ND	
62 Tert-amyl methyl ether	73		7.738				ND	
63 t-Amyl alcohol	73		7.842				ND	
* 65 Fluorobenzene (IS)	96	7.957	7.951	0.006	99	1554922	10.0	
64 n-Heptane	43		7.958				ND	
66 n-Butanol	56		8.293				ND	
67 Trichloroethene	95	8.433	8.433	0.000	97	46772	1.11	
68 Methylcyclohexane	83		8.744				ND	
69 2-ethoxy-2-methyl butane	87		8.762				ND	
70 1,2-Dichloropropane	63		8.768				ND	
71 Methyl methacrylate	69		8.835				ND	
72 1,4-Dioxane	88		8.848				ND	
73 Dibromomethane	93		8.878				ND	
74 n-Propyl acetate	61		8.921				ND	
75 Dichlorobromomethane	83		9.110				ND	
76 2-Nitropropane	41		9.366				ND	
77 Chloroacetonitrile	75		9.433				ND	
78 2-Chloroethyl vinyl ether	63		9.457				ND	
79 1-Bromo-2-chloroethane	63		9.494				ND	
80 cis-1,3-Dichloropropene	75		9.634				ND	
81 4-Methyl-2-pentanone (MIBK)	43		9.793				ND	
\$ 82 Toluene-d8 (Surr)	98	9.939	9.933	0.006	94	1489791	9.74	
83 Toluene	92		10.012				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
S 84 1,3-Dichloropropene, Total	100		10.060				ND	
85 trans-1,3-Dichloropropene	75		10.256				ND	
86 Ethyl methacrylate	69		10.305				ND	
87 1,1,2-Trichloroethane	97		10.457				ND	
88 Tetrachloroethene	166	10.548	10.542	0.006	95	135077	2.98	
89 1,3-Dichloropropane	76		10.616				ND	
91 2-Hexanone	43		10.658				ND	
92 n-Butyl acetate	43		10.786				ND	U
93 Chlorodibromomethane	129		10.829				ND	
94 Ethylene Dibromide	107		10.945				ND	
S 95 Xylenes, Total	106		11.245				ND	
* 97 Chlorobenzene-d5 (IS)	117	11.365	11.365	0.000	87	1140305	10.0	
96 1-Chlorohexane	91		11.365				ND	
98 Chlorobenzene	112		11.390				ND	
99 1,1,1,2-Tetrachloroethane	131		11.469				ND	
100 Ethylbenzene	91		11.475				ND	
101 m-Xylene & p-Xylene	106		11.585				ND	
102 o-Xylene	106		11.914				ND	
103 Styrene	104		11.926				ND	
104 Bromoform	173		12.091				ND	
105 Isopropylbenzene	105		12.207				ND	
106 cis-1,4-Dichloro-2-butene	88		12.268				ND	U
107 Cyclohexanone	55		12.298				ND	
\$ 108 4-Bromofluorobenzene (Surr)	95	12.353	12.353	0.000	88	530367	9.50	
109 1,1,2,2-Tetrachloroethane	83		12.451				ND	
111 Bromobenzene	156		12.475				ND	
110 trans-1,4-Dichloro-2-butene	53		12.475				ND	
112 1,2,3-Trichloropropane	110		12.499				ND	
113 N-Propylbenzene	91		12.536				ND	
114 2-Chlorotoluene	126		12.615				ND	
115 1,3,5-Trimethylbenzene	105		12.670				ND	
116 4-Chlorotoluene	126		12.707				ND	
118 tert-Butylbenzene	134		12.908				ND	
119 Pentachloroethane	167		12.944				ND	
120 1,2,4-Trimethylbenzene	105		12.950				ND	
121 sec-Butylbenzene	105		13.072				ND	
122 1,3-Dichlorobenzene	146		13.176				ND	
123 4-Isopropyltoluene	119		13.176				ND	
* 124 1,4-Dichlorobenzene-d4	152	13.231	13.231	0.000	97	568970	10.0	
125 1,4-Dichlorobenzene	146		13.249				ND	
126 1,2,3-Trimethylbenzene	120		13.255				ND	
127 Benzyl chloride	126		13.322				ND	
129 p-Diethylbenzene	119		13.450				ND	
130 n-Butylbenzene	92		13.469				ND	
131 1,2-Dichlorobenzene	146		13.505				ND	
133 Hexachloroethane	201		13.725				ND	
134 1,2-Dibromo-3-Chloropropane	155		14.048				ND	
135 1,3,5-Trichlorobenzene	180		14.170				ND	
136 1,2,4-Trichlorobenzene	180		14.596				ND	
137 Hexachlorobutadiene	225		14.676				ND	
138 Naphthalene	128		14.779				ND	
139 1,2,3-Trichlorobenzene	180		14.926				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
140 2-Methylnaphthalene	142		15.572				ND	
151 tert-Butyl Formate	1		0.000				ND	
152 Dodecane	57		0.000				ND	
157 Methylal	1		0.000				ND	
142 1,1-Dichloro-1-fluoroethane	1		0.000				ND	
150 Propene oxide	1		0.000				ND	
175 2-Chloroethanol TIC	1		0.000				ND	
162 1-Chloropropane	1		0.000				ND	
163 1-Bromo-3-Chloropropane	1		0.000				ND	
172 2,3-Dibromo-1-propanol TIC	1		0.000				ND	
174 Monochloroacetic acid TIC	1		0.000				ND	
160 n-Decane	57		0.000				ND	
176 Epibromohydrin TIC	1		0.000				ND	
183 3-Chloro-1,2-propanediol TIC	1		0.000				ND	
177 Chloroacetaldehyde TIC	1		0.000				ND	
178 Vinyl bromide TIC	1		0.000				ND	
179 Epichlorohydrin TIC	1		0.000				ND	
180 2-Bromo-3-chloropropene TIC	1		0.000				ND	
181 Ethylene oxide TIC	1		0.000				ND	
182 2,3-Dibromopropene TIC	1		0.000				ND	
161 2-Bromo-1-chloropropane	1		0.000				ND	
173 2-Bromoethanol TIC	1		0.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Reagents:

MSV_30_826ISS_00005

Amount Added: 5.00

Units: uL

Run Reagent

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S06.D

Injection Date: 30-Aug-2020 21:19:30

Instrument ID: 19094

Operator ID: mec29284

Lims ID: 410-11876-A-6

Lab Sample ID: 410-11876-6

Worklist Smp#: 13

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

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

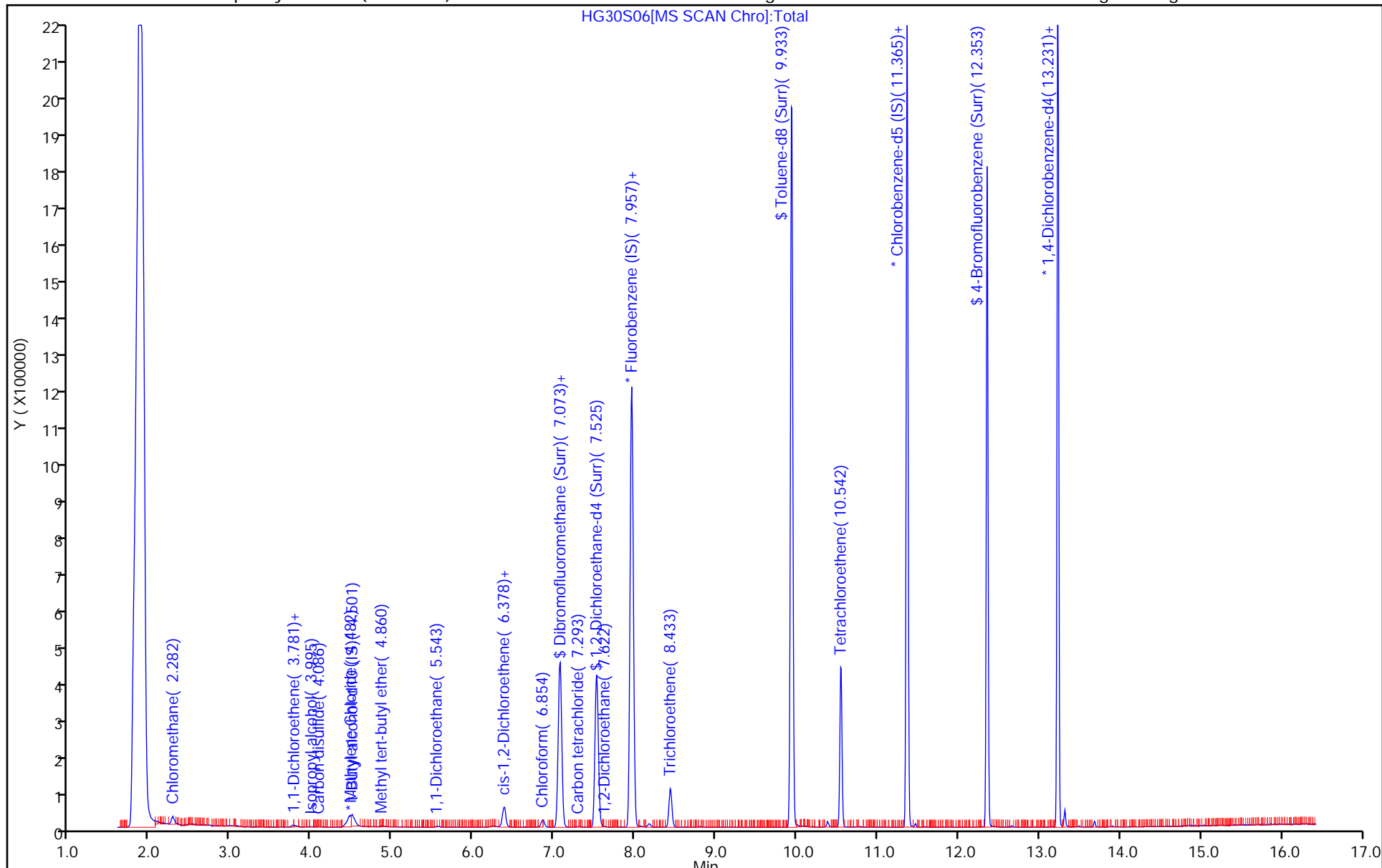
ALS Bottle#: 12

Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S06.D
 Lims ID: 410-11876-A-6
 Client ID: HD-COD-SW-15-0/1-0
 Sample Type: Client
 Inject. Date: 30-Aug-2020 21:19:30 ALS Bottle#: 12 Worklist Smp#: 13
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: 410-11876-A-6
 Misc. Info.: 410-0009349-013
 Operator ID: mec29284 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 31-Aug-2020 13:23:49 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1008

First Level Reviewer: virayd Date: 31-Aug-2020 13:10:46

Compound	Amount Added	Amount Recovered	% Rec.
\$ 51 Dibromofluoromethane (Surr)	10.0	11.1	111.18
\$ 58 1,2-Dichloroethane-d4 (Surr)	10.0	11.9	119.27
\$ 82 Toluene-d8 (Surr)	10.0	9.74	97.36
\$ 108 4-Bromofluorobenzene (Surr)	10.0	9.50	95.00

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S06.D

Injection Date: 30-Aug-2020 21:19:30

Instrument ID: 19094

Lims ID: 410-11876-A-6

Lab Sample ID: 410-11876-6

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

Operator ID: mec29284

ALS Bottle#: 12

Worklist Smp#: 13

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

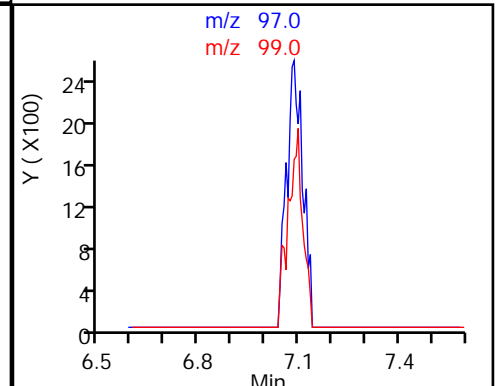
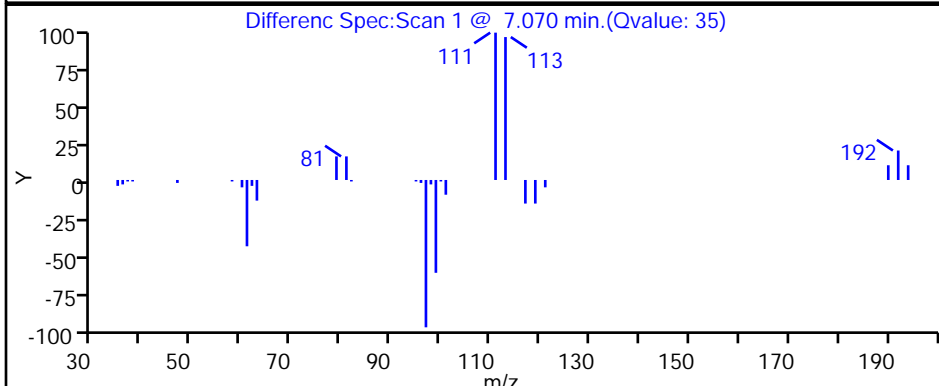
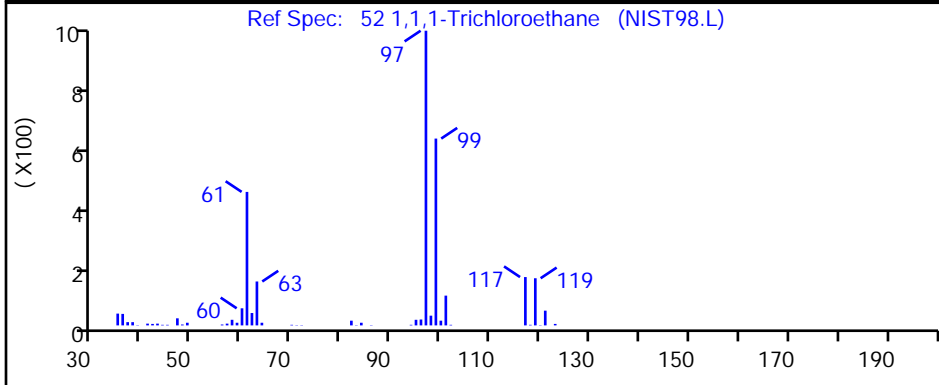
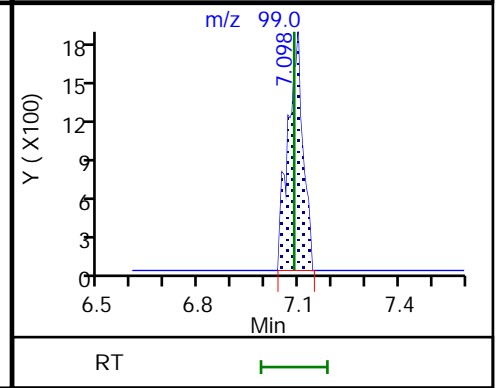
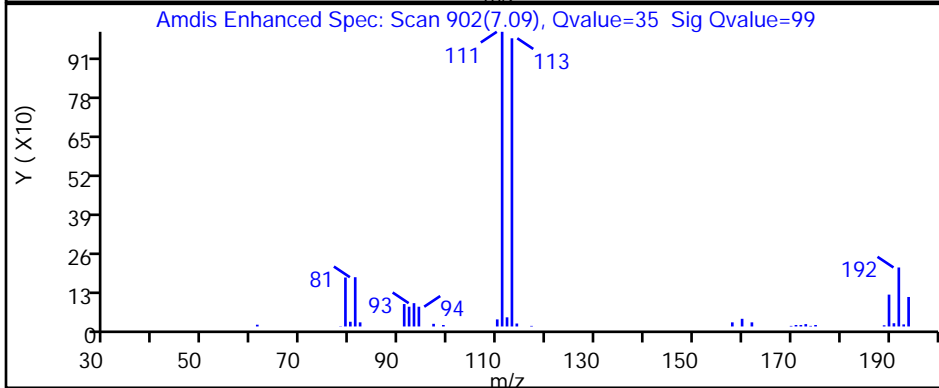
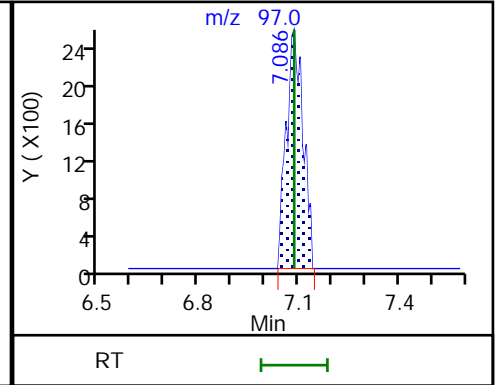
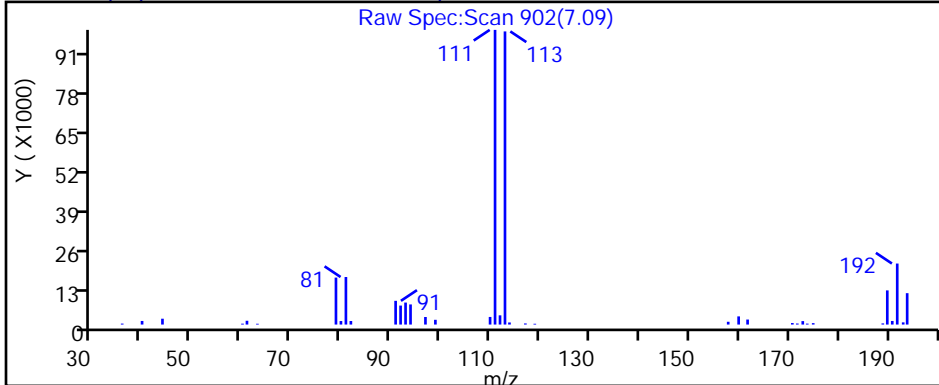
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

52 1,1,1-Trichloroethane, CAS: 71-55-6



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S06.D

Injection Date: 30-Aug-2020 21:19:30

Instrument ID: 19094

Lims ID: 410-11876-A-6

Lab Sample ID: 410-11876-6

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

Operator ID: mec29284

ALS Bottle#: 12

Worklist Smp#: 13

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

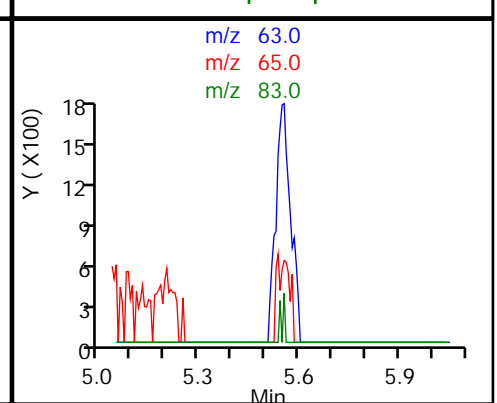
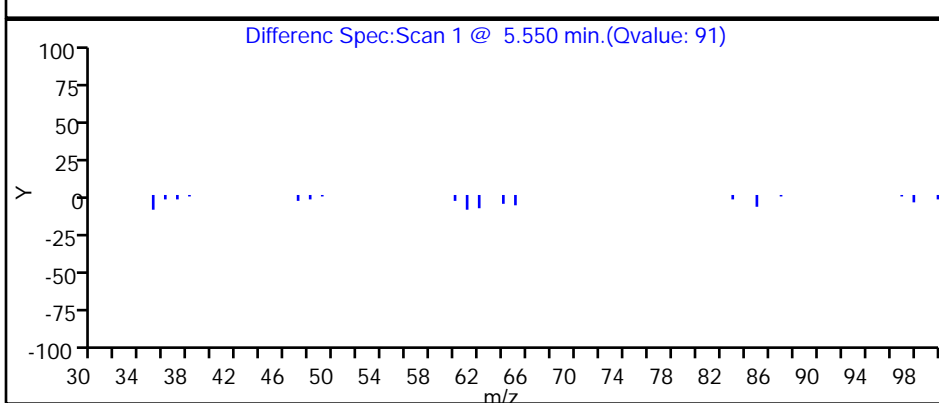
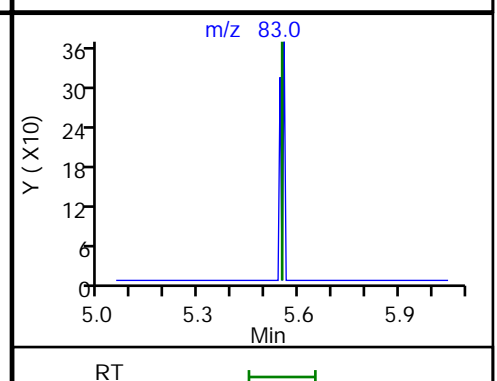
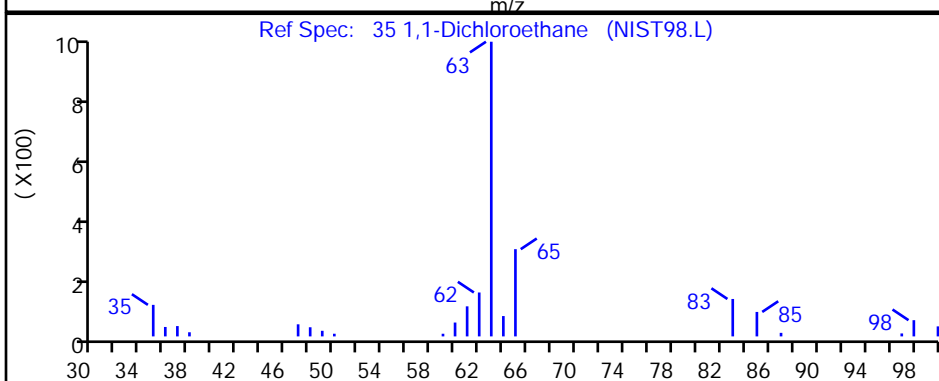
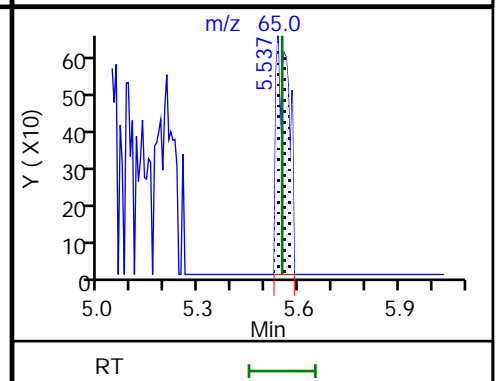
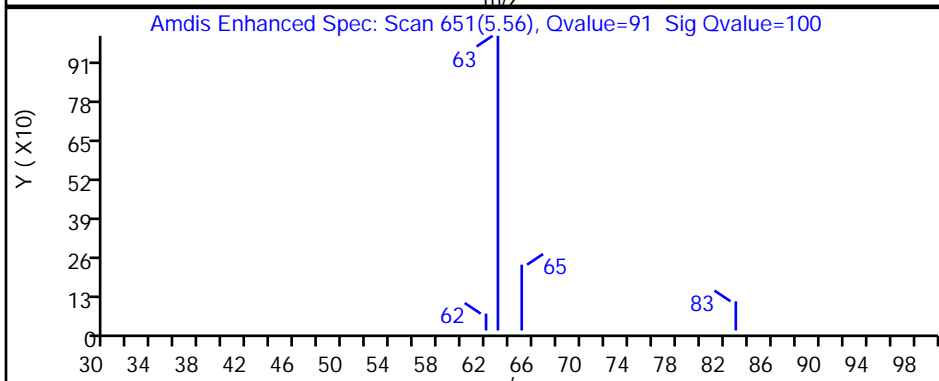
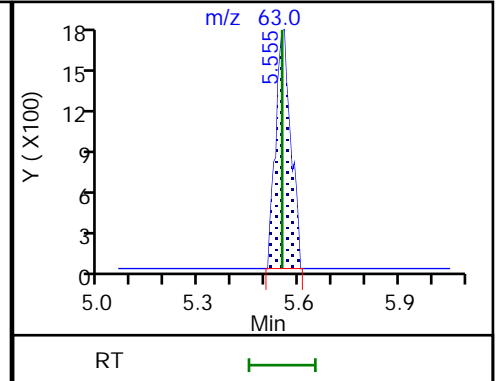
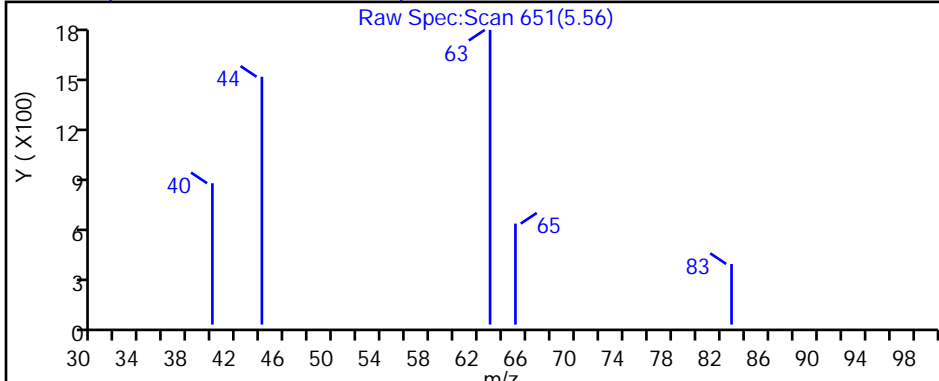
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

35 1,1-Dichloroethane, CAS: 75-34-3



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S06.D

Injection Date: 30-Aug-2020 21:19:30

Instrument ID: 19094

Lims ID: 410-11876-A-6

Lab Sample ID: 410-11876-6

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

Operator ID: mec29284

ALS Bottle#: 12

Worklist Smp#: 13

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

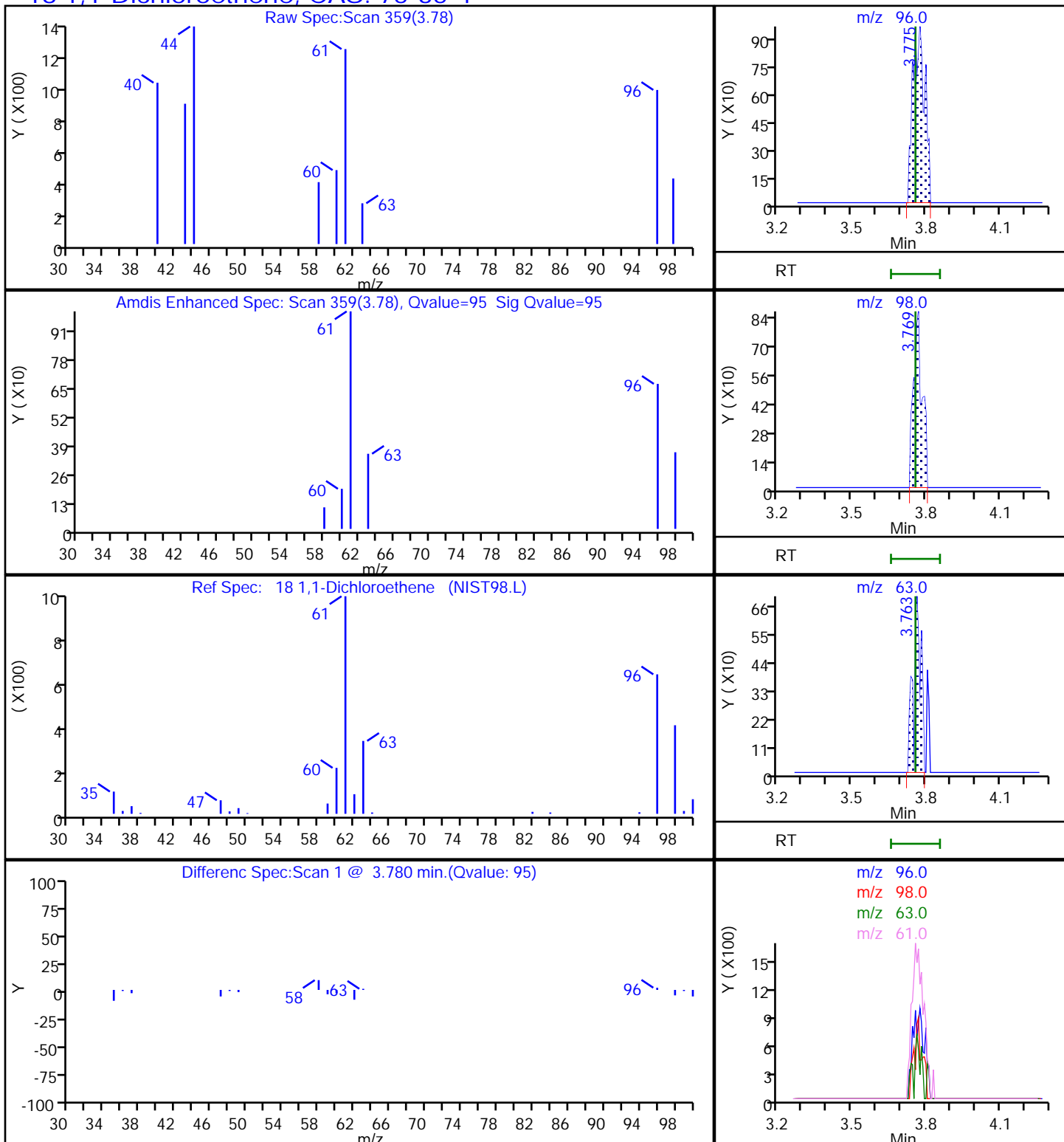
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector

MS Quad

18 1,1-Dichloroethene, CAS: 75-35-4



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S06.D

Injection Date: 30-Aug-2020 21:19:30

Instrument ID: 19094

Lims ID: 410-11876-A-6

Lab Sample ID: 410-11876-6

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

Operator ID: mec29284

ALS Bottle#: 12

Worklist Smp#: 13

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

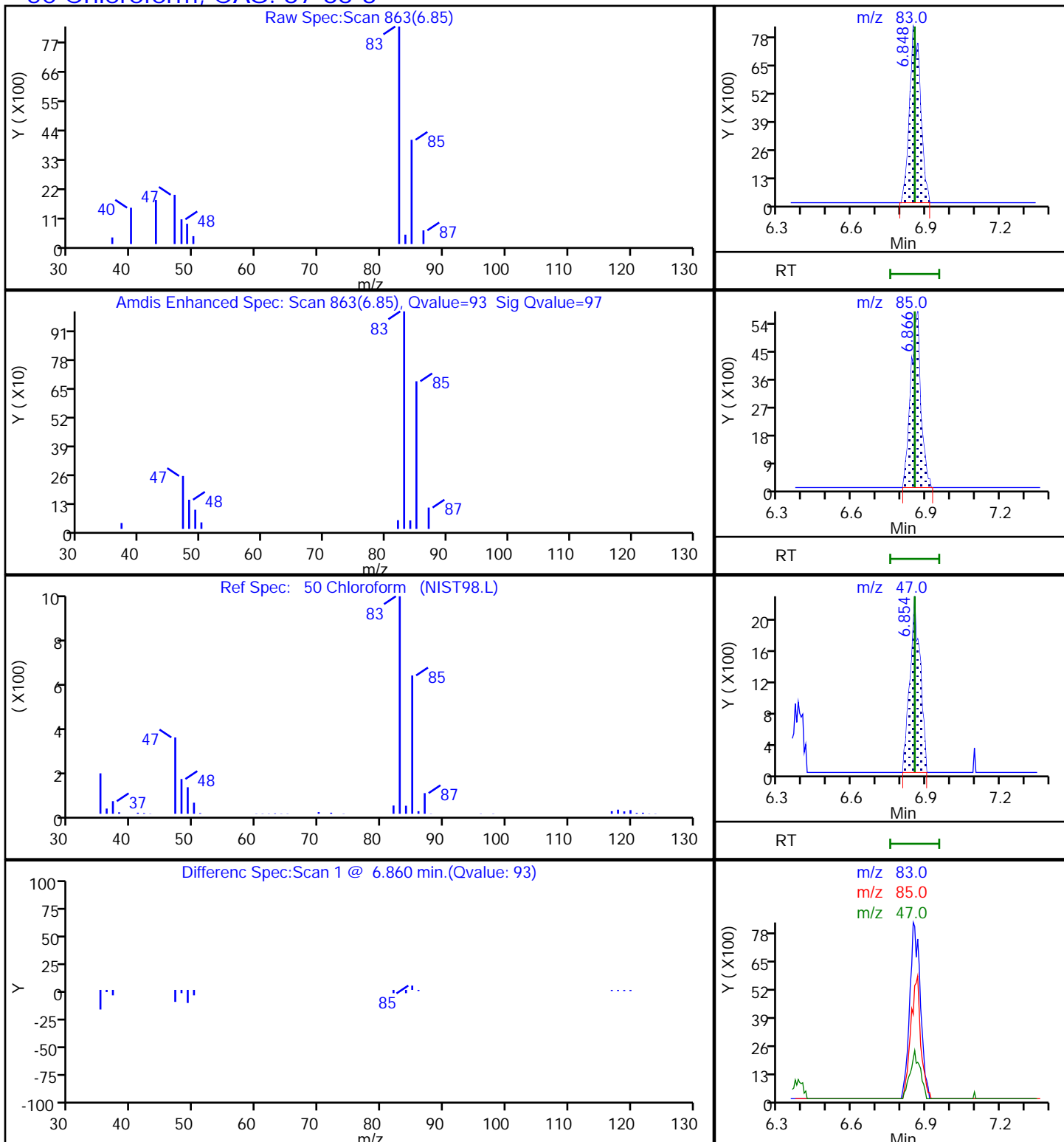
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

50 Chloroform, CAS: 67-66-3



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S06.D

Injection Date: 30-Aug-2020 21:19:30

Instrument ID: 19094

Lims ID: 410-11876-A-6

Lab Sample ID: 410-11876-6

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

Operator ID: mec29284

ALS Bottle#: 12

Worklist Smp#: 13

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

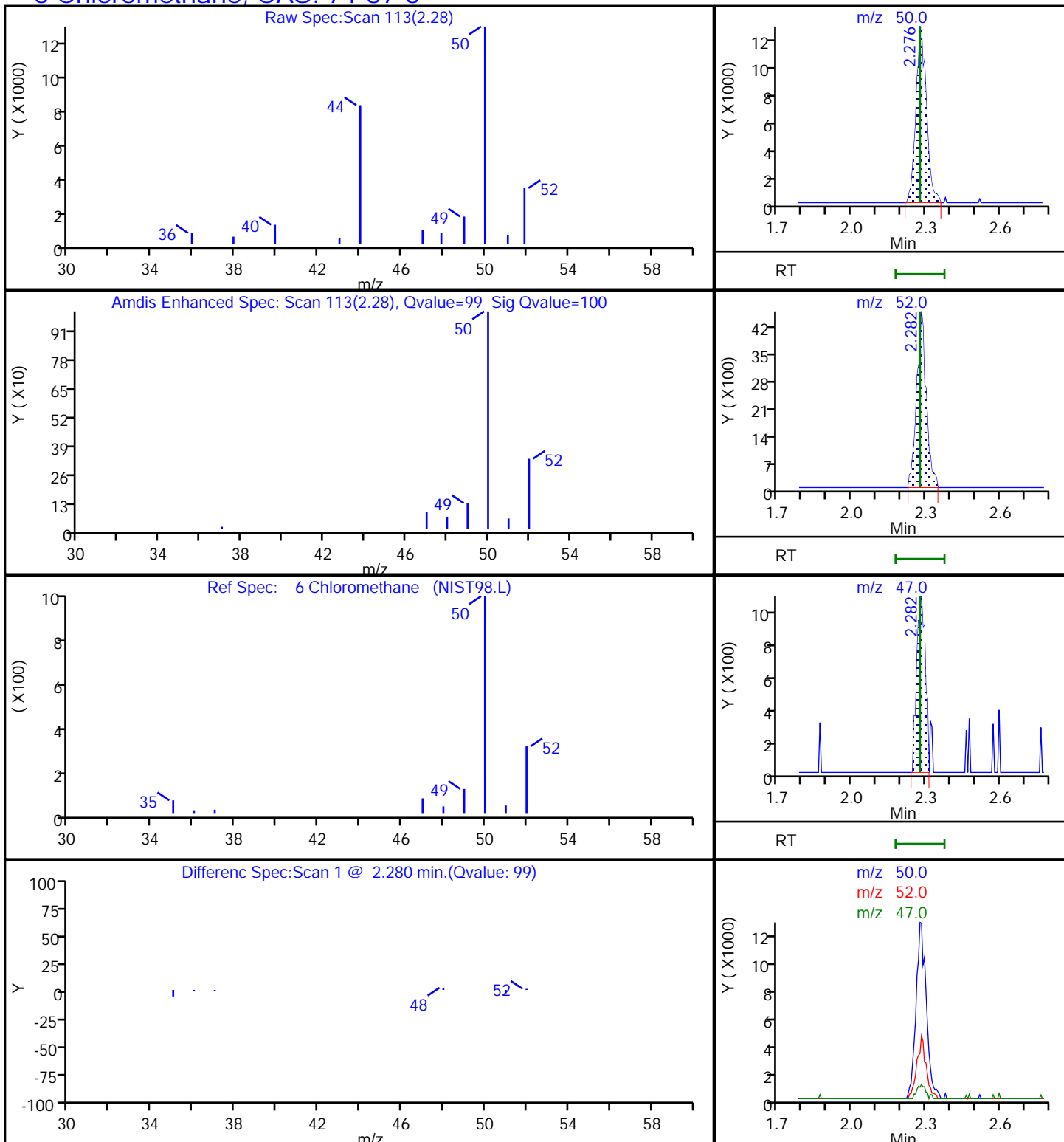
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

6 Chloromethane, CAS: 74-87-3



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S06.D

Injection Date: 30-Aug-2020 21:19:30

Instrument ID: 19094

Lims ID: 410-11876-A-6

Lab Sample ID: 410-11876-6

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

Operator ID: mec29284

ALS Bottle#: 12

Worklist Smp#: 13

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

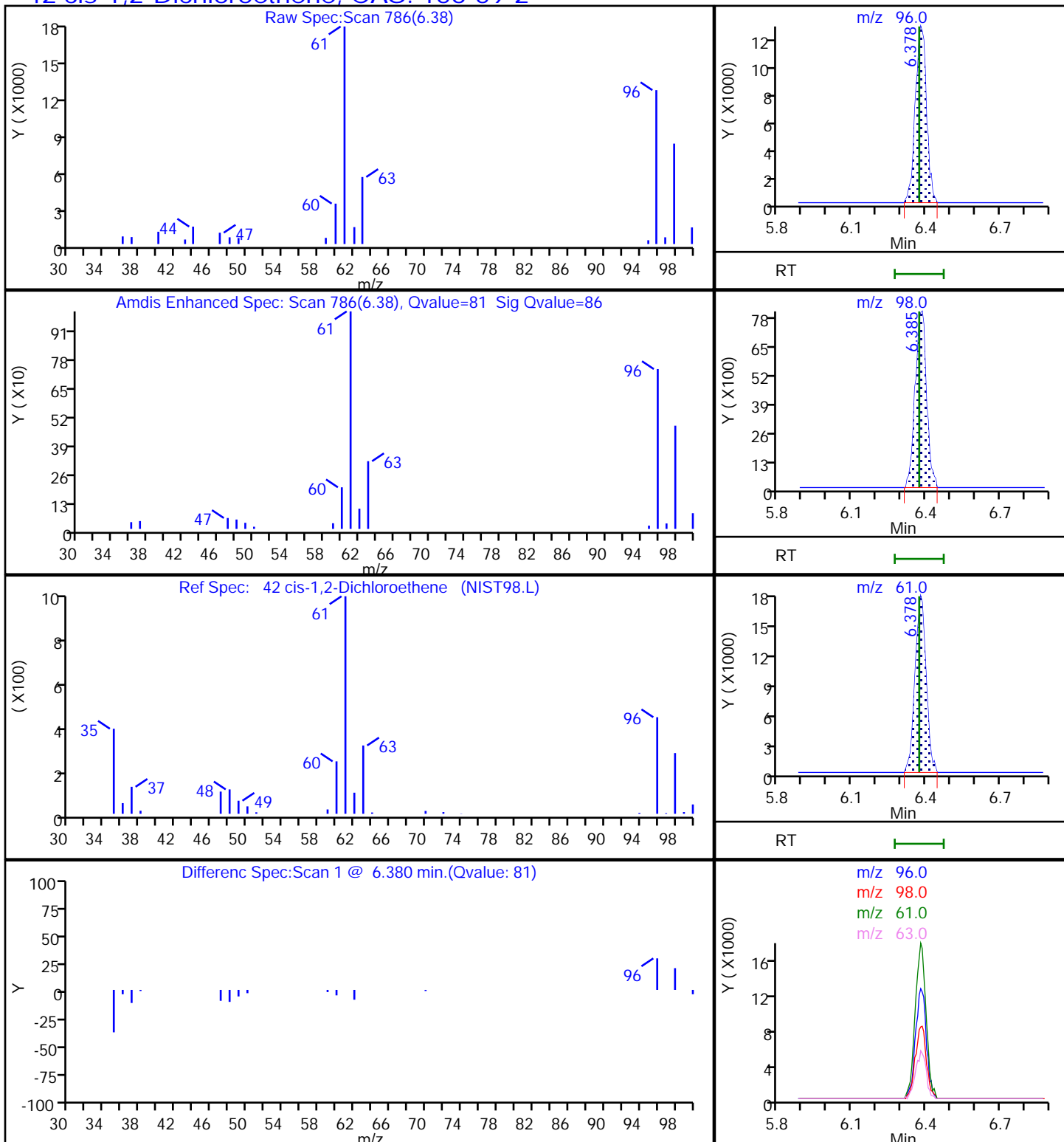
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID) x 30m

MS Quad

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



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S06.D

Injection Date: 30-Aug-2020 21:19:30

Instrument ID: 19094

Lims ID: 410-11876-A-6

Lab Sample ID: 410-11876-6

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

Operator ID: mec29284

ALS Bottle#: 12

Worklist Smp#: 13

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

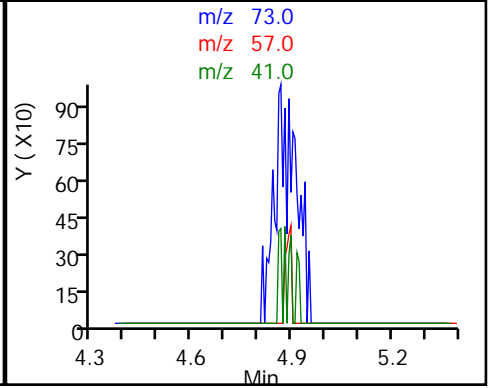
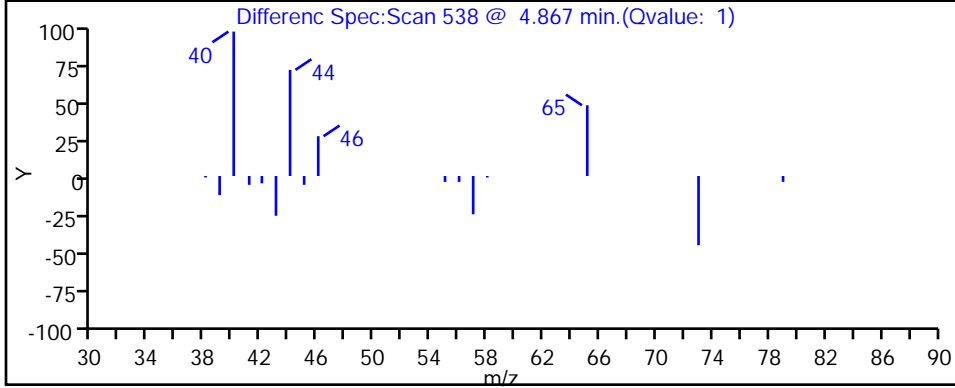
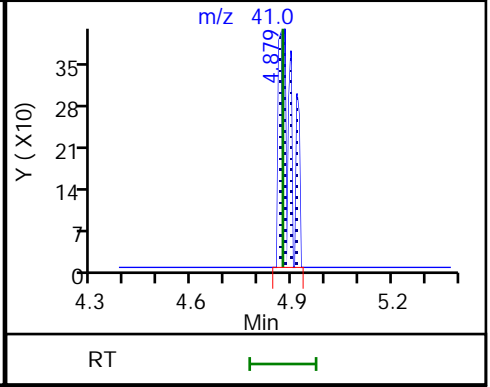
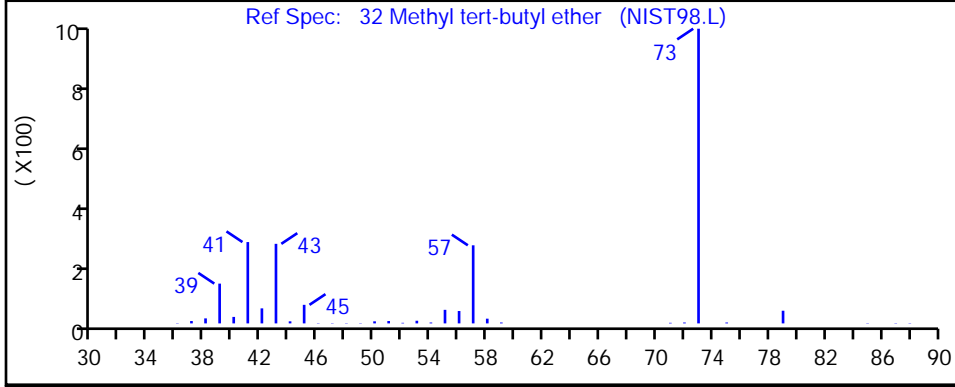
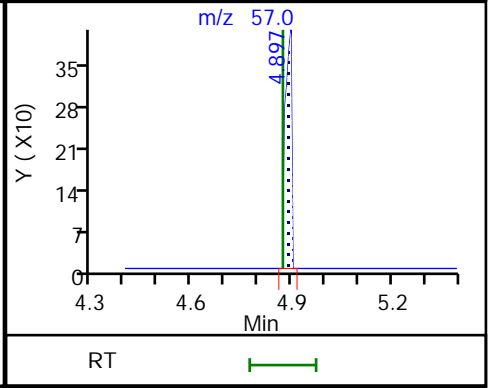
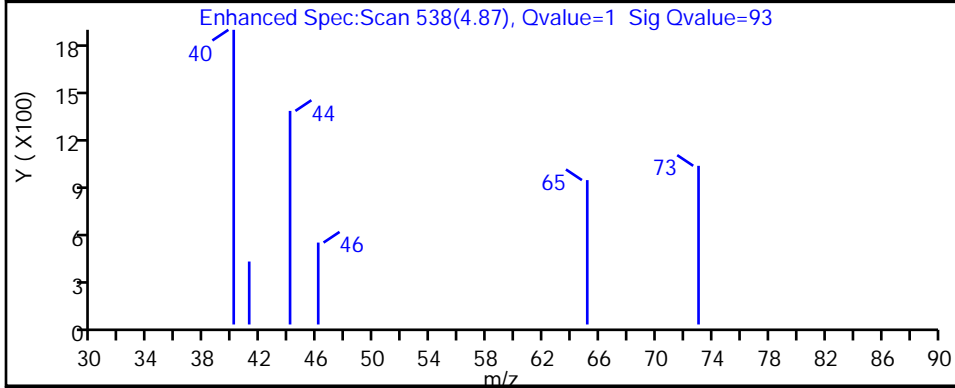
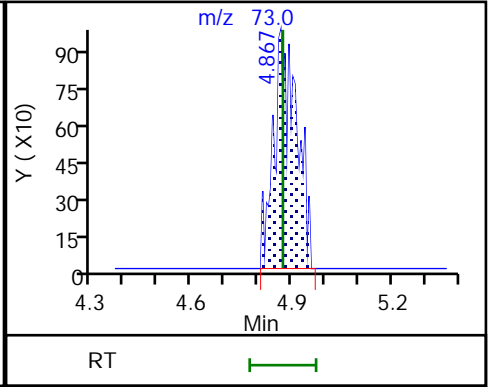
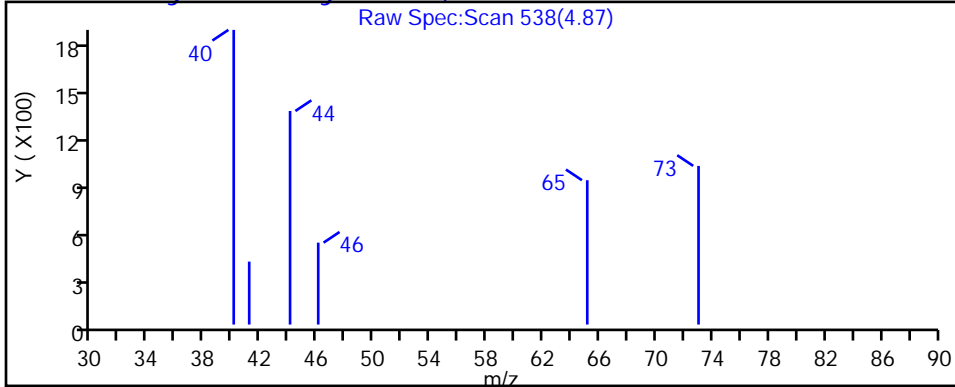
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

32 Methyl tert-butyl ether, CAS: 1634-04-4



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S06.D

Injection Date: 30-Aug-2020 21:19:30

Instrument ID: 19094

Lims ID: 410-11876-A-6

Lab Sample ID: 410-11876-6

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

Operator ID: mec29284

ALS Bottle#: 12

Worklist Smp#: 13

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

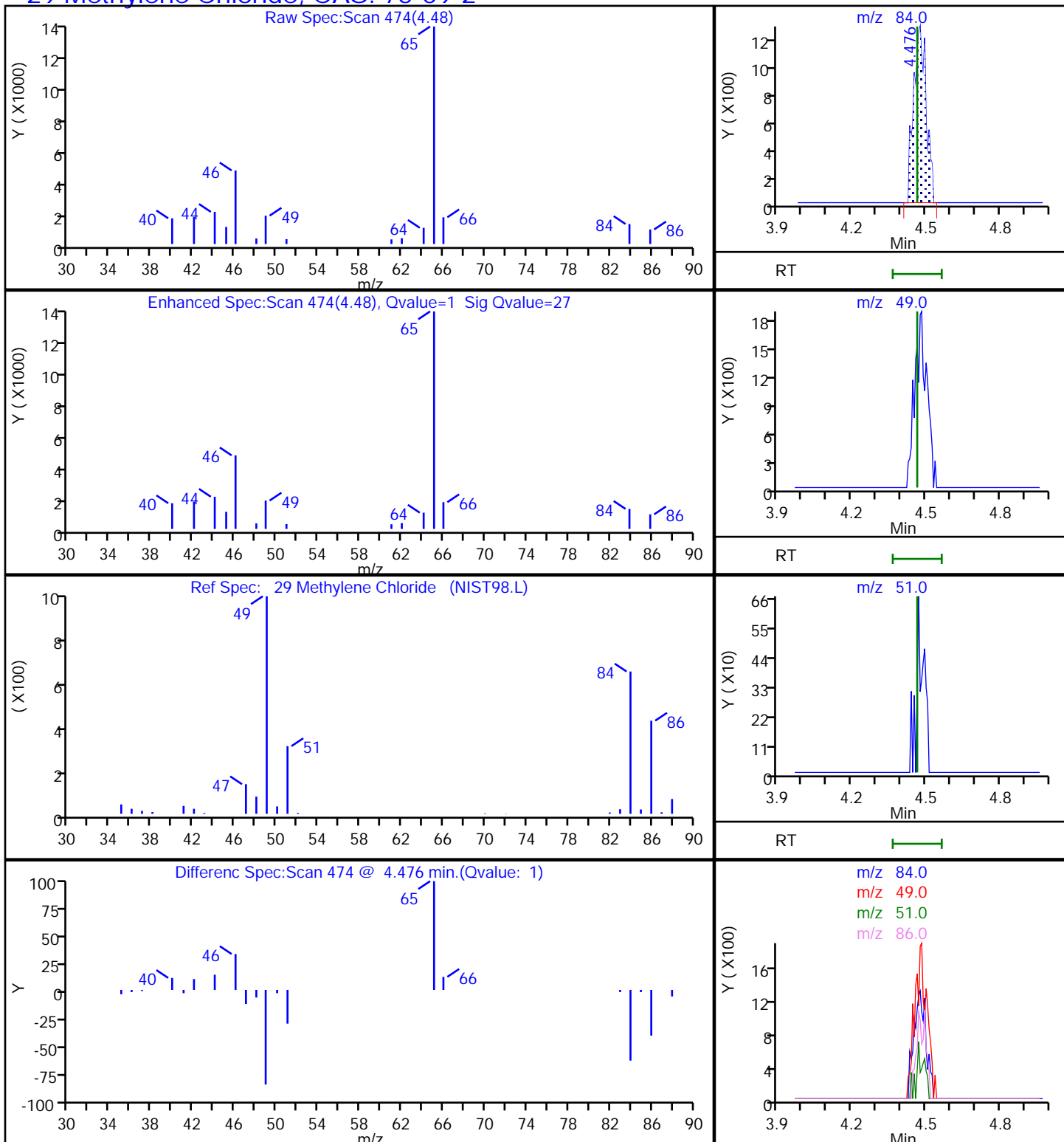
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

29 Methylene Chloride, CAS: 75-09-2



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S06.D

Injection Date: 30-Aug-2020 21:19:30

Instrument ID: 19094

Lims ID: 410-11876-A-6

Lab Sample ID: 410-11876-6

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

Operator ID: mec29284

ALS Bottle#: 12

Worklist Smp#: 13

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

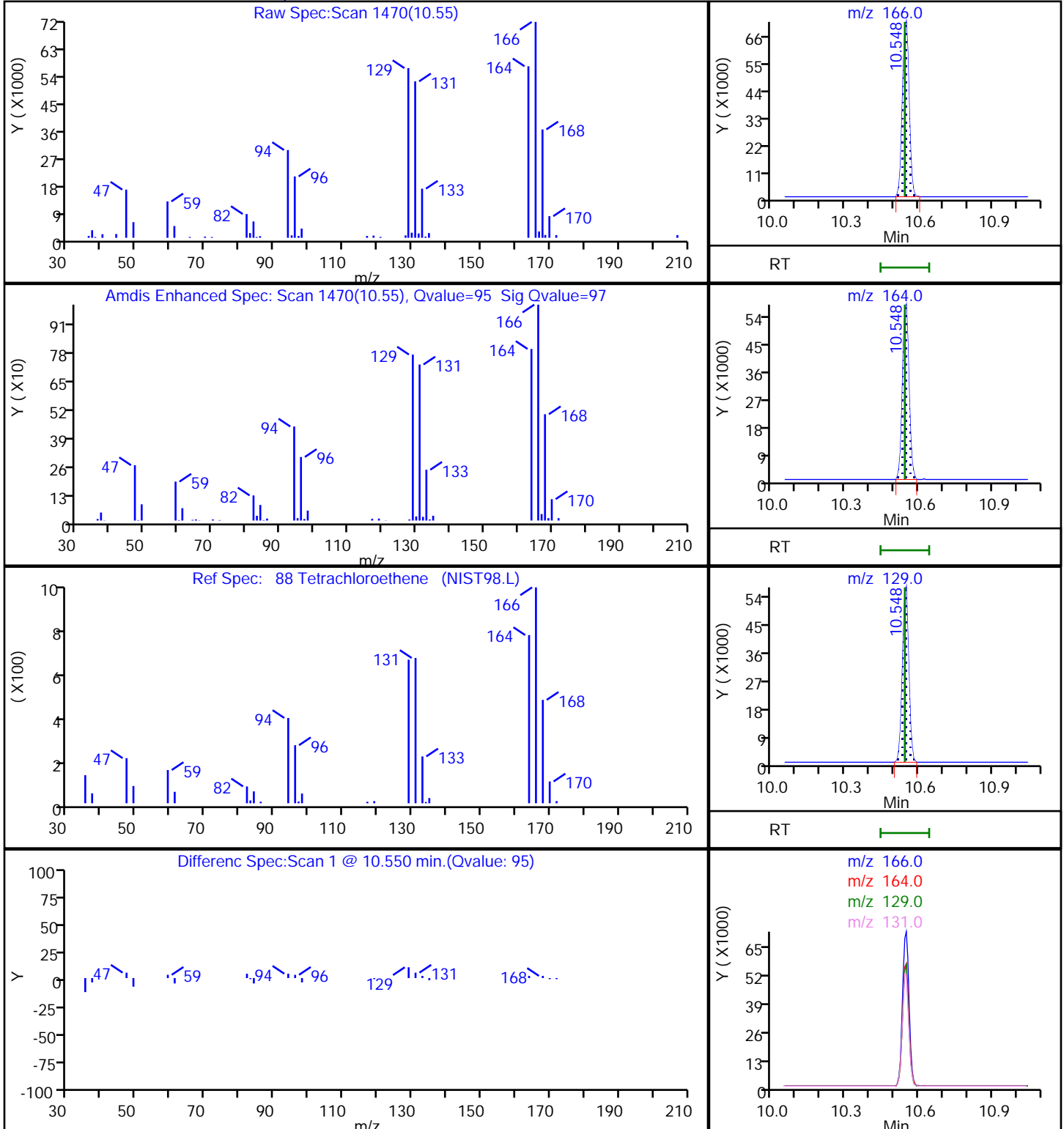
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

88 Tetrachloroethene, CAS: 127-18-4



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S06.D

Injection Date: 30-Aug-2020 21:19:30

Instrument ID: 19094

Lims ID: 410-11876-A-6

Lab Sample ID: 410-11876-6

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

Operator ID: mec29284

ALS Bottle#: 12

Worklist Smp#: 13

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

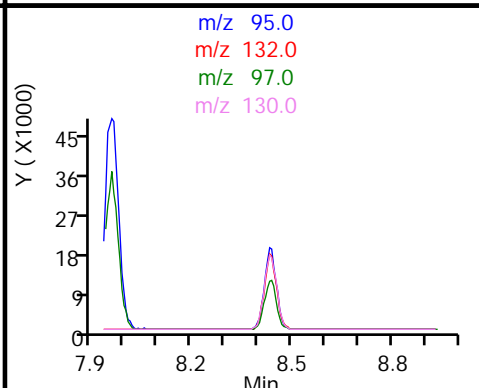
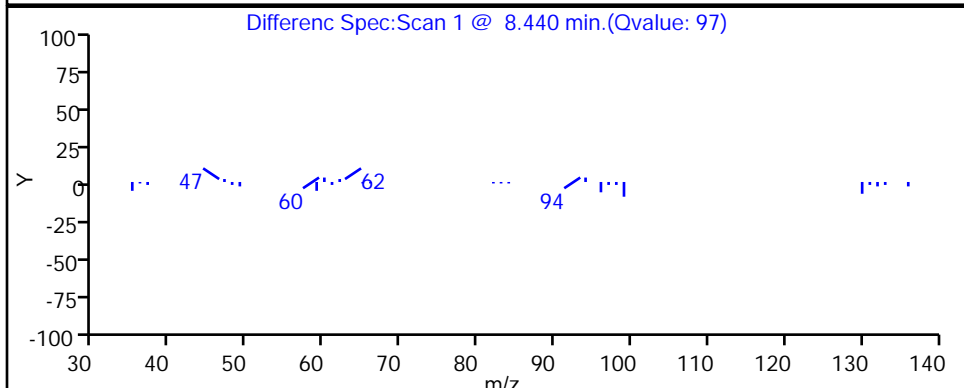
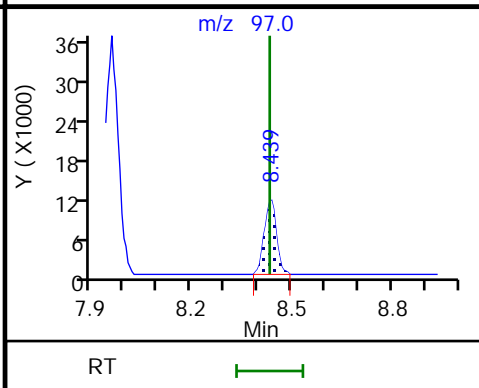
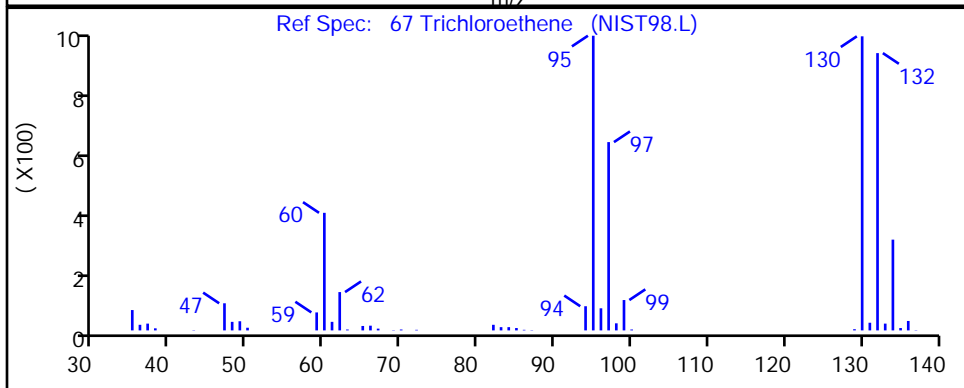
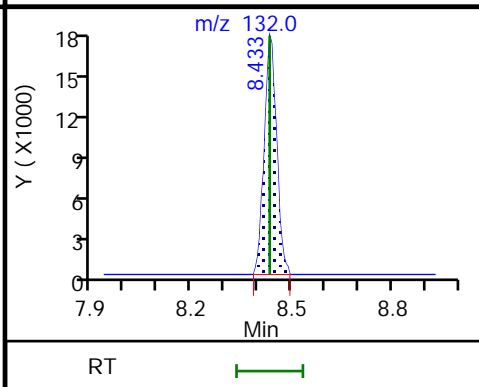
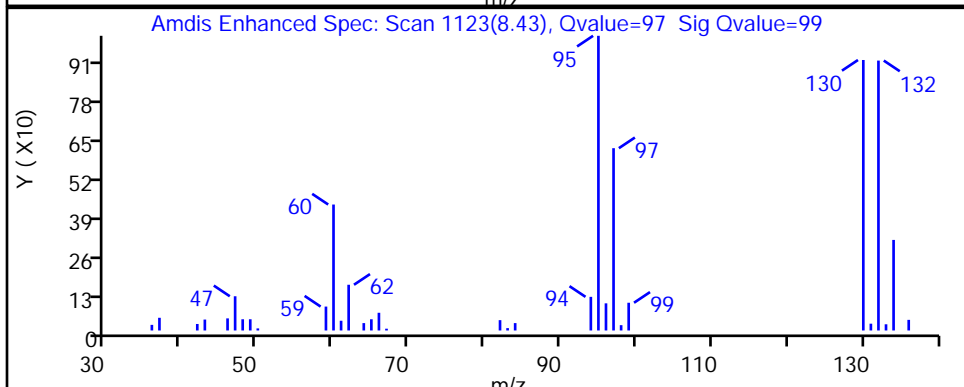
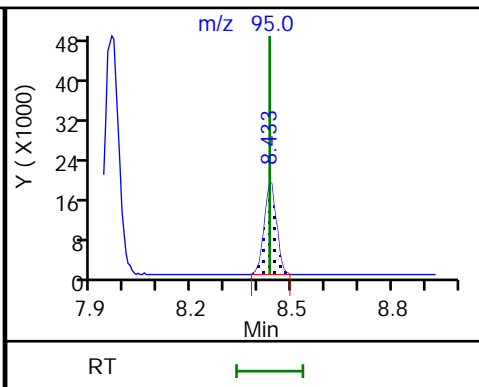
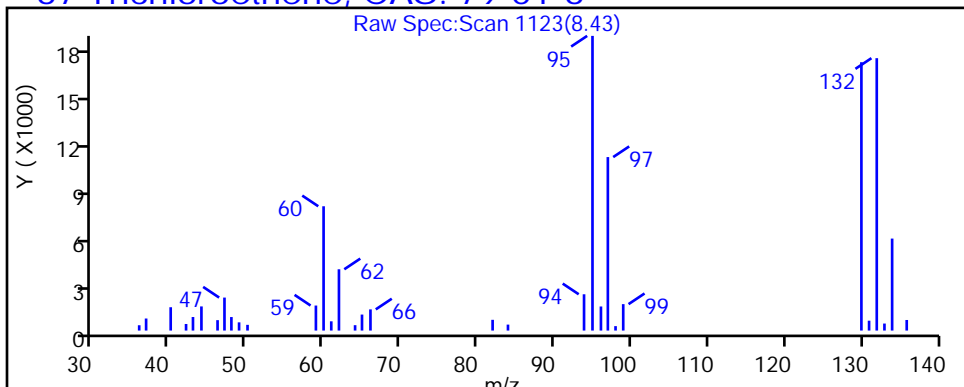
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

67 Trichloroethene, CAS: 79-01-6



Eurofins Lancaster Laboratories Env, LLC

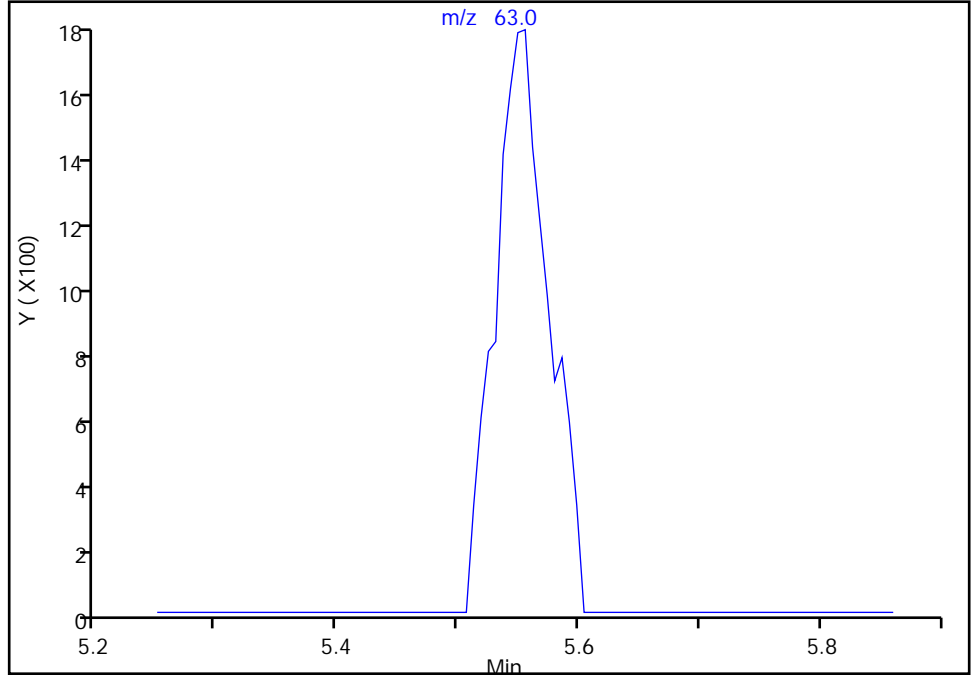
Data File:	\\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S06.D				
Injection Date:	30-Aug-2020 21:19:30	Instrument ID:	19094		
Lims ID:	410-11876-A-6	Lab Sample ID:	410-11876-6		
Client ID:	HD-COD-SW-15-0/1-0				
Operator ID:	mec29284	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm ID)	Detector:	MS Quad		

35 1,1-Dichloroethane, CAS: 75-34-3

Signal: 1

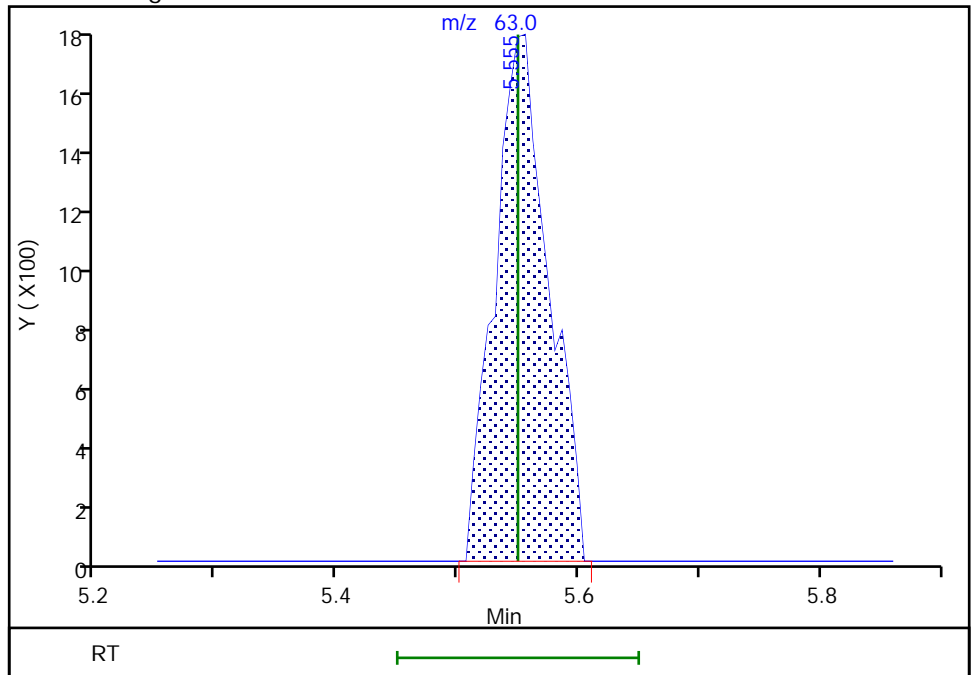
Not Detected
Expected RT: 5.55

Processing Integration Results



Manual Integration Results

RT: 5.56
Area: 5469
Amount: 0.073029
Amount Units: ug/l



Reviewer: virayd, 31-Aug-2020 13:09:54
Audit Action: Assigned Compound ID

Audit Reason: Other

Eurofins Lancaster Laboratories Env, LLC

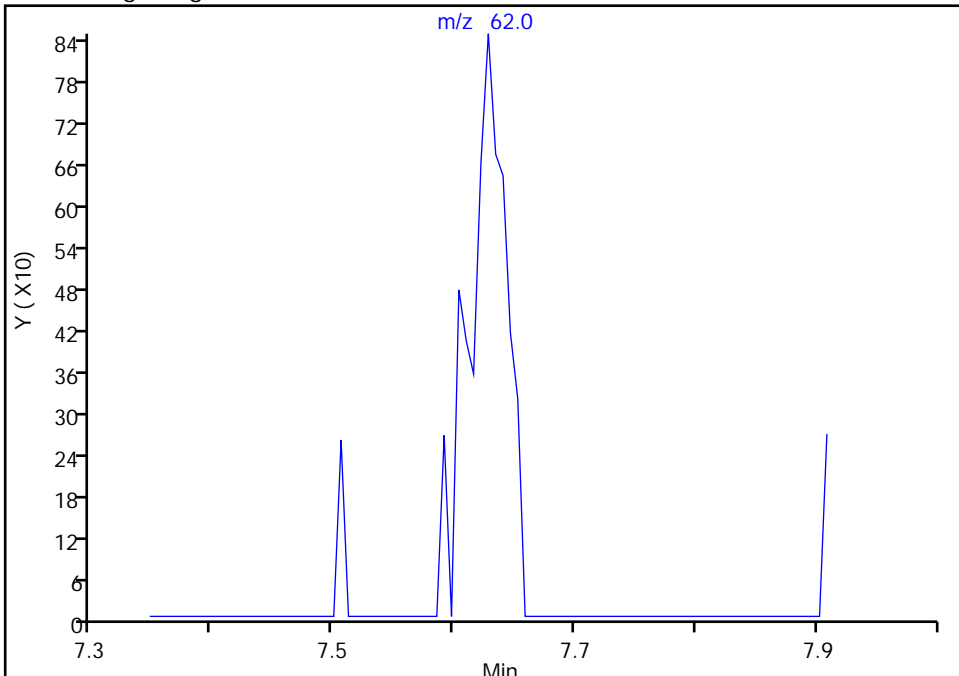
Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S06.D
Injection Date: 30-Aug-2020 21:19:30 Instrument ID: 19094
Lims ID: 410-11876-A-6 Lab Sample ID: 410-11876-6
Client ID: HD-COD-SW-15-0/1-0
Operator ID: mec29284 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

60 1,2-Dichloroethane, CAS: 107-06-2

Signal: 1

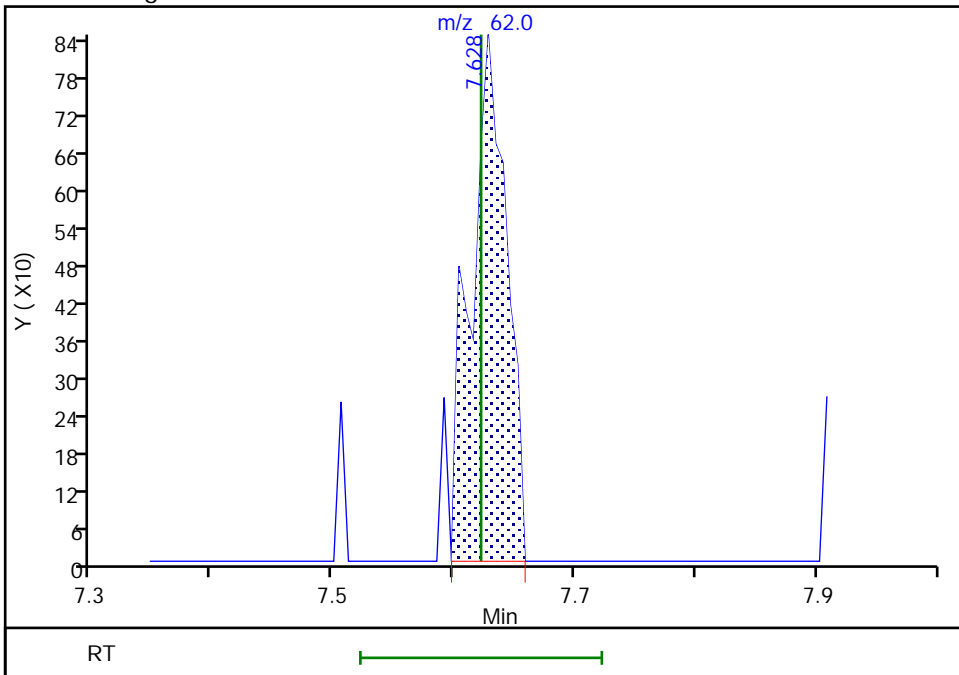
Not Detected
Expected RT: 7.62

Processing Integration Results



Manual Integration Results

RT: 7.63
Area: 1745
Amount: 0.043523
Amount Units: ug/l



Reviewer: virayd, 31-Aug-2020 13:10:08
Audit Action: Assigned Compound ID

Audit Reason: Other

Eurofins Lancaster Laboratories Env, LLC

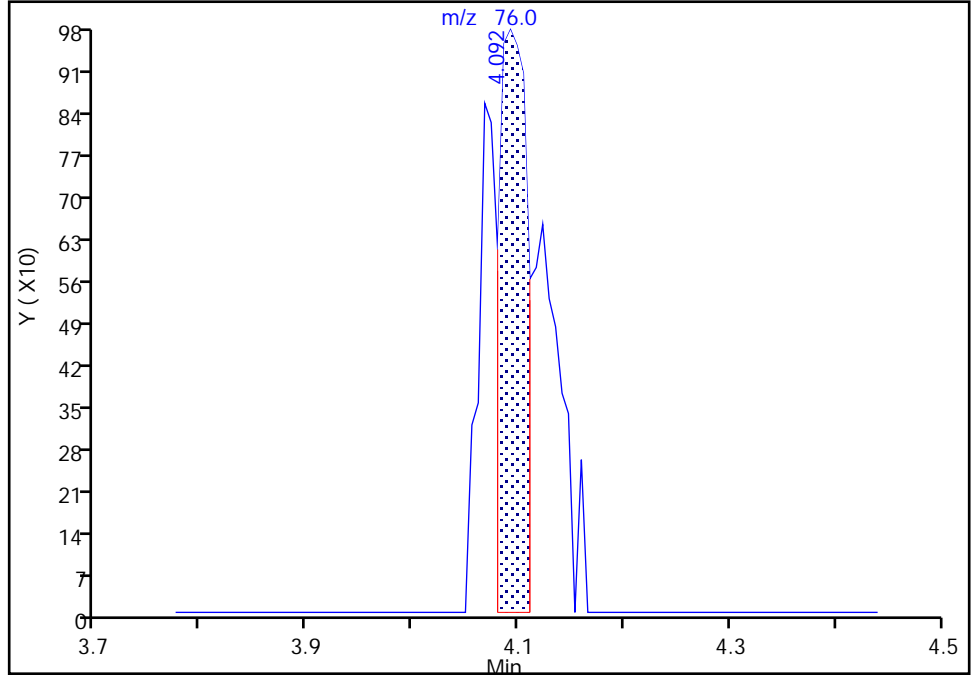
Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S06.D
Injection Date: 30-Aug-2020 21:19:30 Instrument ID: 19094
Lims ID: 410-11876-A-6 Lab Sample ID: 410-11876-6
Client ID: HD-COD-SW-15-0/1-0
Operator ID: mec29284 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

24 Carbon disulfide, CAS: 75-15-0

Signal: 1

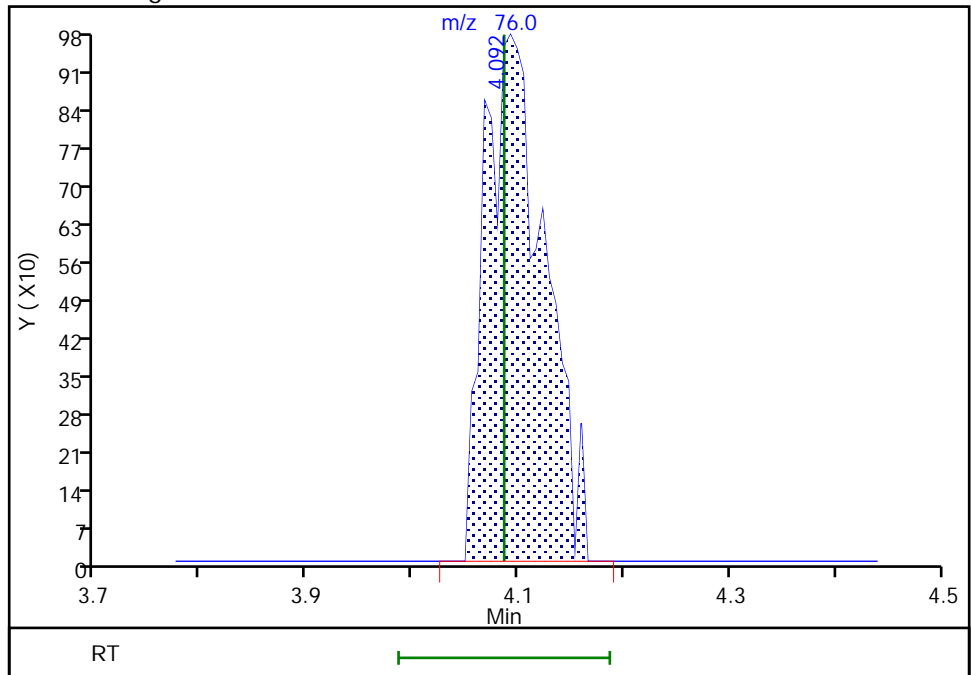
RT: 4.09
Area: 1804
Amount: 0.015893
Amount Units: ug/l

Processing Integration Results



RT: 4.09
Area: 3819
Amount: 0.033644
Amount Units: ug/l

Manual Integration Results



Reviewer: virayd, 31-Aug-2020 13:09:44
Audit Action: Manually Integrated

Audit Reason: Other

Eurofins Lancaster Laboratories Env, LLC

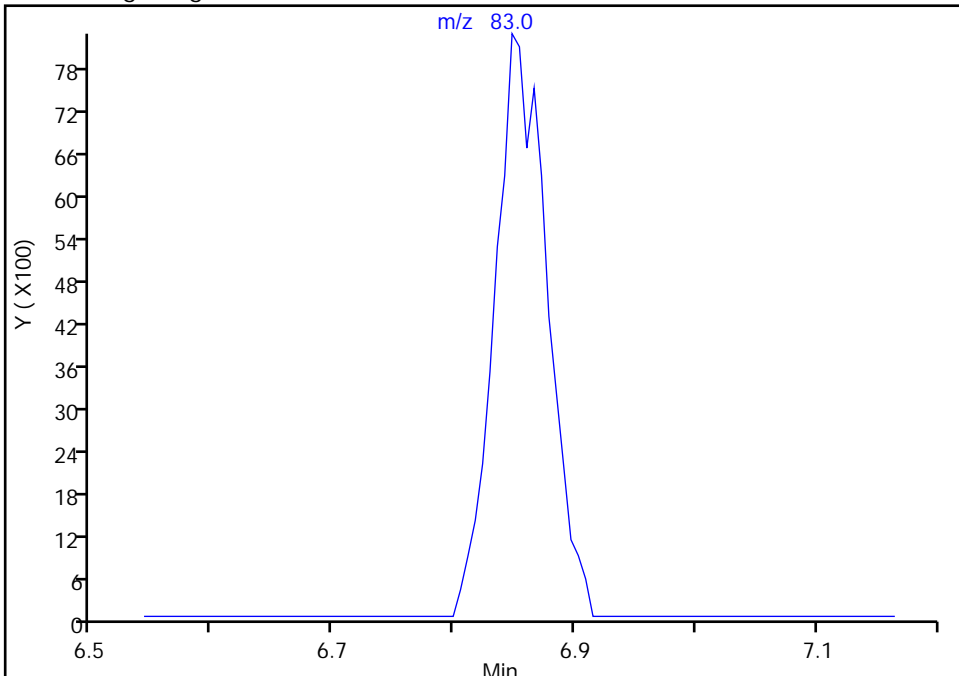
Data File:	\\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S06.D				
Injection Date:	30-Aug-2020 21:19:30	Instrument ID:	19094		
Lims ID:	410-11876-A-6	Lab Sample ID:	410-11876-6		
Client ID:	HD-COD-SW-15-0/1-0				
Operator ID:	mec29284	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm ID)	Detector:	MS Quad		

50 Chloroform, CAS: 67-66-3

Signal: 1

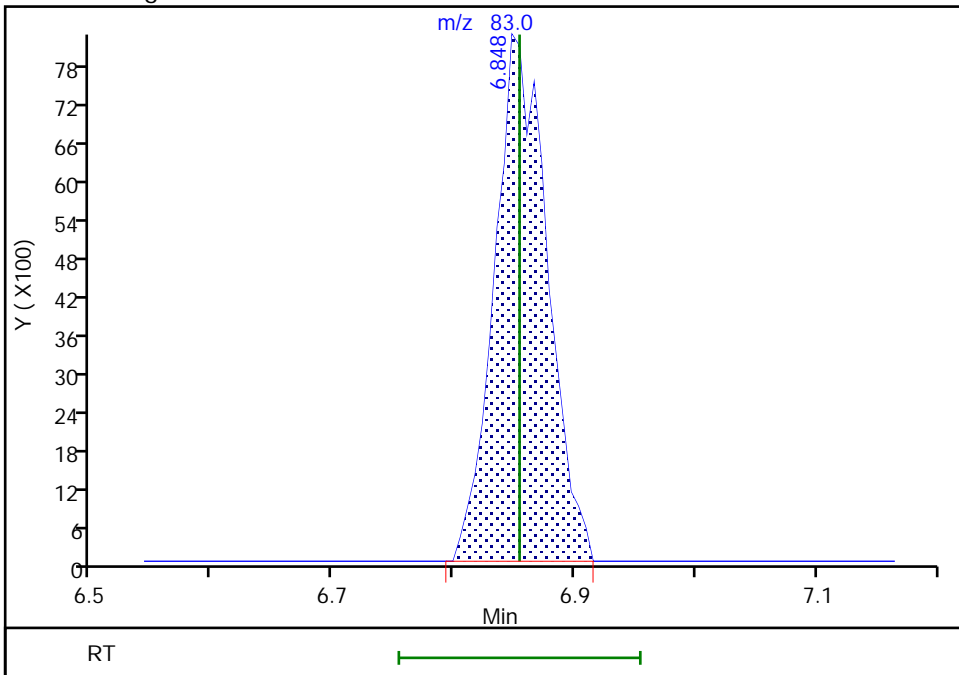
Not Detected
Expected RT: 6.85

Processing Integration Results



Manual Integration Results

RT: 6.85
Area: 25105
Amount: 0.358653
Amount Units: ug/l



Reviewer: virayd, 31-Aug-2020 13:10:02
Audit Action: Assigned Compound ID

Audit Reason: Other

Eurofins Lancaster Laboratories Env, LLC

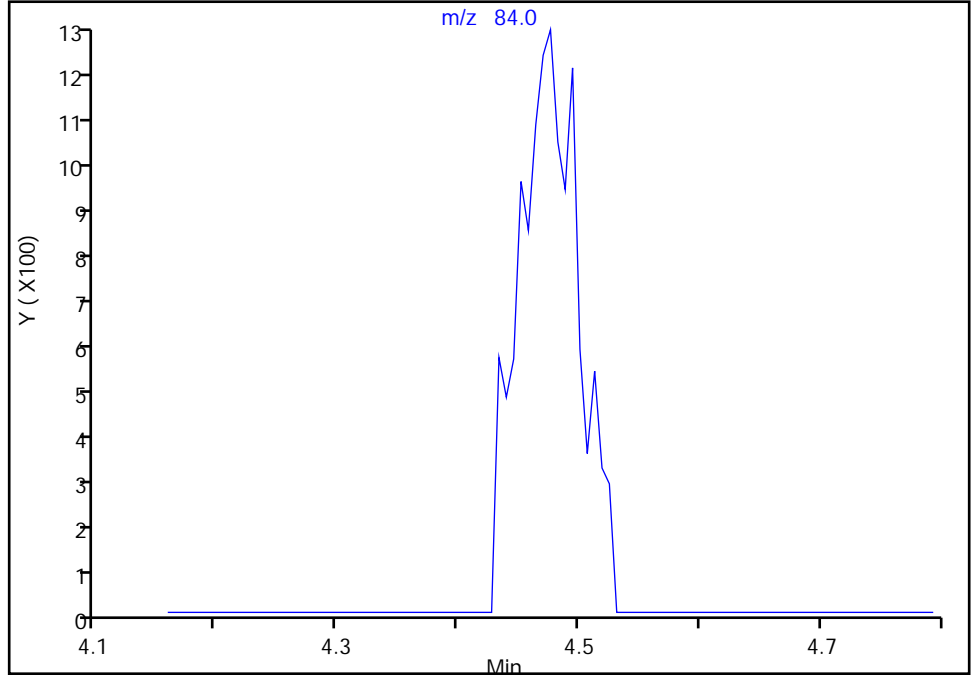
Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S06.D
Injection Date: 30-Aug-2020 21:19:30 Instrument ID: 19094
Lims ID: 410-11876-A-6 Lab Sample ID: 410-11876-6
Client ID: HD-COD-SW-15-0/1-0
Operator ID: mec29284 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

29 Methylene Chloride, CAS: 75-09-2

Signal: 1

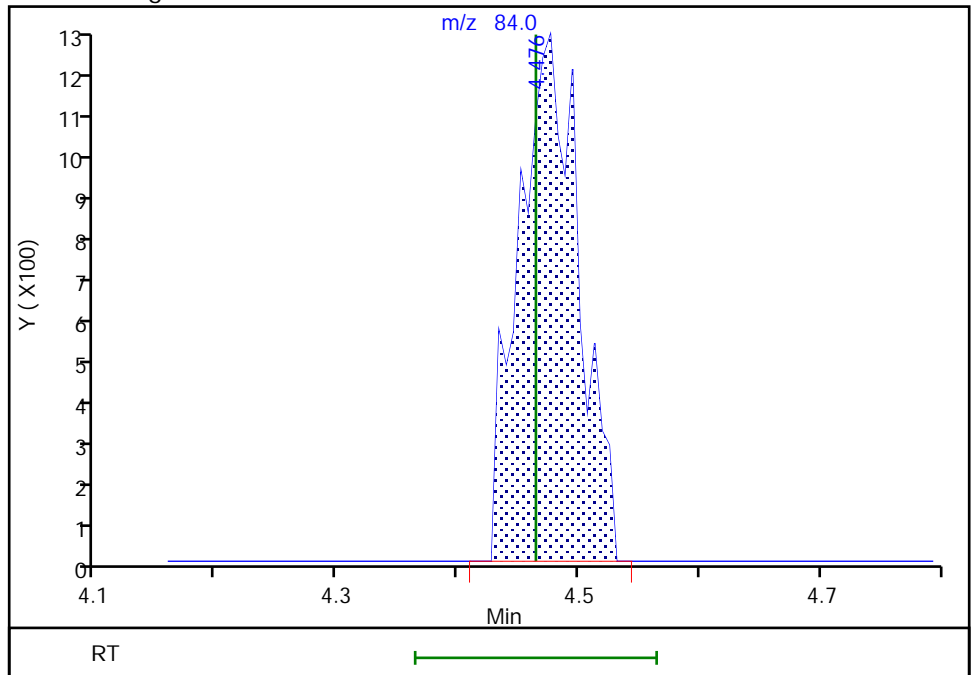
Not Detected
Expected RT: 4.46

Processing Integration Results



Manual Integration Results

RT: 4.48
Area: 4349
Amount: 0.106811
Amount Units: ug/l



Reviewer: virayd, 31-Aug-2020 13:09:49
Audit Action: Manually Integrated

Audit Reason: Other

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-16-0/1-0 Lab Sample ID: 410-11876-7
 Matrix: Water Lab File ID: HG30S15.D
 Analysis Method: 8260C LL Date Collected: 08/25/2020 09:35
 Sample wt/vol: 25 (mL) Date Analyzed: 08/31/2020 00:35
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 38982 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.50	0.070
71-55-6	1,1,1-Trichloroethane	ND		0.50	0.060
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.50	0.070
79-00-5	1,1,2-Trichloroethane	ND		0.50	0.060
75-34-3	1,1-Dichloroethane	ND		0.50	0.070
75-35-4	1,1-Dichloroethene	ND		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	ND		0.50	0.060
107-06-2	1,2-Dichloroethane	ND		0.50	0.050
78-87-5	1,2-Dichloropropane	ND		0.50	0.060
78-93-3	2-Butanone (MEK)	ND		5.0	0.60
591-78-6	2-Hexanone	ND		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70
67-64-1	Acetone	1.7	J	5.0	0.90
107-13-1	Acrylonitrile	ND		5.0	0.40
71-43-2	Benzene	ND		0.50	0.050
74-97-5	Bromochloromethane	ND		0.50	0.050
75-27-4	Bromodichloromethane	ND		0.50	0.050
75-25-2	Bromoform	ND		1.0	0.30
74-83-9	Bromomethane	ND		0.50	0.070
75-15-0	Carbon disulfide	ND		1.0	0.060
56-23-5	Carbon tetrachloride	ND		0.50	0.070
108-90-7	Chlorobenzene	ND		0.50	0.060
75-00-3	Chloroethane	ND		0.50	0.070
67-66-3	Chloroform	ND		0.50	0.090
74-87-3	Chloromethane	0.21	J	0.50	0.060
156-59-2	cis-1,2-Dichloroethene	0.12	J	0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	ND		0.50	0.050
124-48-1	Dibromochloromethane	ND		0.50	0.070
100-41-4	Ethylbenzene	ND		0.50	0.060
1634-04-4	Methyl tert-butyl ether	ND		0.50	0.050
75-09-2	Methylene Chloride	0.12	J	0.50	0.070
100-42-5	Styrene	ND		0.50	0.050
127-18-4	Tetrachloroethene	0.072	J	0.50	0.060
108-88-3	Toluene	ND		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	ND		0.50	0.060
10061-02-6	trans-1,3-Dichloropropene	ND		0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-16-0/1-0 Lab Sample ID: 410-11876-7
 Matrix: Water Lab File ID: HG30S15.D
 Analysis Method: 8260C LL Date Collected: 08/25/2020 09:35
 Sample wt/vol: 25 (mL) Date Analyzed: 08/31/2020 00:35
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 38982 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	0.13	J	0.50	0.060
75-01-4	Vinyl chloride	ND		0.50	0.10
1330-20-7	Xylenes, Total	ND		1.0	0.15

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	111		80-120
1868-53-7	Dibromofluoromethane (Surr)	112		80-120
2037-26-5	Toluene-d8 (Surr)	99		80-120
460-00-4	4-Bromofluorobenzene (Surr)	95		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S15.D
 Lims ID: 410-11876-A-7
 Client ID: HD-COD-SW-16-0/1-0
 Sample Type: Client
 Inject. Date: 31-Aug-2020 00:35:30 ALS Bottle#: 21 Worklist Smp#: 22
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: 410-11876-A-7
 Misc. Info.: 410-0009349-022
 Operator ID: mec29284 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 31-Aug-2020 13:23:49 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1008

First Level Reviewer: virayd Date: 31-Aug-2020 13:19:23

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
6 Chloromethane	50	2.282	2.276	0.006	97	14980	0.2089	
7 Vinyl chloride	62		2.385				ND	
9 Bromomethane	94		2.745				ND	
10 Chloroethane	64		2.837				ND	
18 1,1-Dichloroethene	96		3.757				ND	
19 Acetone	43	3.806	3.788	0.018	99	15170	1.67	
24 Carbon disulfide	76	4.111	4.086	0.025	15	4756	0.0383	M
29 Methylene Chloride	84	4.489	4.464	0.025	52	5212	0.1171	a
* 28 t-Butyl alcohol-d10 (IS)	65	4.470	4.477	-0.006	0	128352	50.0	
31 Acrylonitrile	53		4.806				ND	
32 Methyl tert-butyl ether	73		4.873				ND	
33 trans-1,2-Dichloroethene	96		4.891				ND	
35 1,1-Dichloroethane	63		5.549				ND	
41 2-Butanone (MEK)	43		6.330				ND	
42 cis-1,2-Dichloroethene	96	6.385	6.372	0.013	82	5649	0.1158	
48 Chlorobromomethane	128		6.702				ND	
50 Chloroform	83	6.860	6.854	0.006	71	5132	0.0670	
\$ 51 Dibromofluoromethane (Surr)	113	7.074	7.061	0.013	93	448525	11.2	
52 1,1,1-Trichloroethane	97		7.086				ND	
56 Carbon tetrachloride	117		7.293				ND	
\$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.519	7.519	0.000	0	91079	11.1	
59 Benzene	78		7.555				ND	
60 1,2-Dichloroethane	62	7.616	7.622	-0.006	1	1878	0.0428	a
* 65 Fluorobenzene (IS)	96	7.958	7.951	0.007	99	1700471	10.0	
67 Trichloroethene	95	8.421	8.433	-0.012	93	5882	0.1280	Ma
70 1,2-Dichloropropane	63		8.768				ND	
75 Dichlorobromomethane	83		9.110				ND	
80 cis-1,3-Dichloropropene	75		9.634				ND	
81 4-Methyl-2-pentanone (MIBK)	43		9.793				ND	
\$ 82 Toluene-d8 (Surr)	98	9.933	9.933	0.000	94	1656364	9.88	
83 Toluene	92	10.012	10.012	0.000	98	6635	0.0567	

Compound	Sig	RT (min.)	Exp RT (min.)	Diff RT (min.)	Q	Response	OnCol Amt ug/l	Flags
85 trans-1,3-Dichloropropene	75		10.256				ND	
87 1,1,2-Trichloroethane	97		10.457				ND	
88 Tetrachloroethene	166	10.536	10.542	-0.006	86	3585	0.0721	
91 2-Hexanone	43		10.658				ND	
93 Chlorodibromomethane	129		10.829				ND	
94 Ethylene Dibromide	107		10.945				ND	
S 95 Xylenes, Total	106		11.245				ND	
* 97 Chlorobenzene-d5 (IS)	117	11.365	11.365	0.000	87	1248720	10.0	
98 Chlorobenzene	112		11.390				ND	
99 1,1,1,2-Tetrachloroethane	131		11.469				ND	
100 Ethylbenzene	91		11.475				ND	
101 m-Xylene & p-Xylene	106		11.585				ND	
102 o-Xylene	106		11.914				ND	
103 Styrene	104		11.926				ND	
104 Bromoform	173		12.091				ND	
\$ 108 4-Bromofluorobenzene (Surr)	95	12.353	12.353	0.000	88	579639	9.48	
109 1,1,2,2-Tetrachloroethane	83		12.451				ND	
* 124 1,4-Dichlorobenzene-d4	152	13.231	13.231	0.000	96	621539	10.0	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_30_826ISS_00005

Amount Added: 5.00

Units: uL

Run Reagent

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S15.D

Injection Date: 31-Aug-2020 00:35:30

Instrument ID: 19094

Operator ID: mec29284

Lims ID: 410-11876-A-7

Lab Sample ID: 410-11876-7

Worklist Smp#: 22

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

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

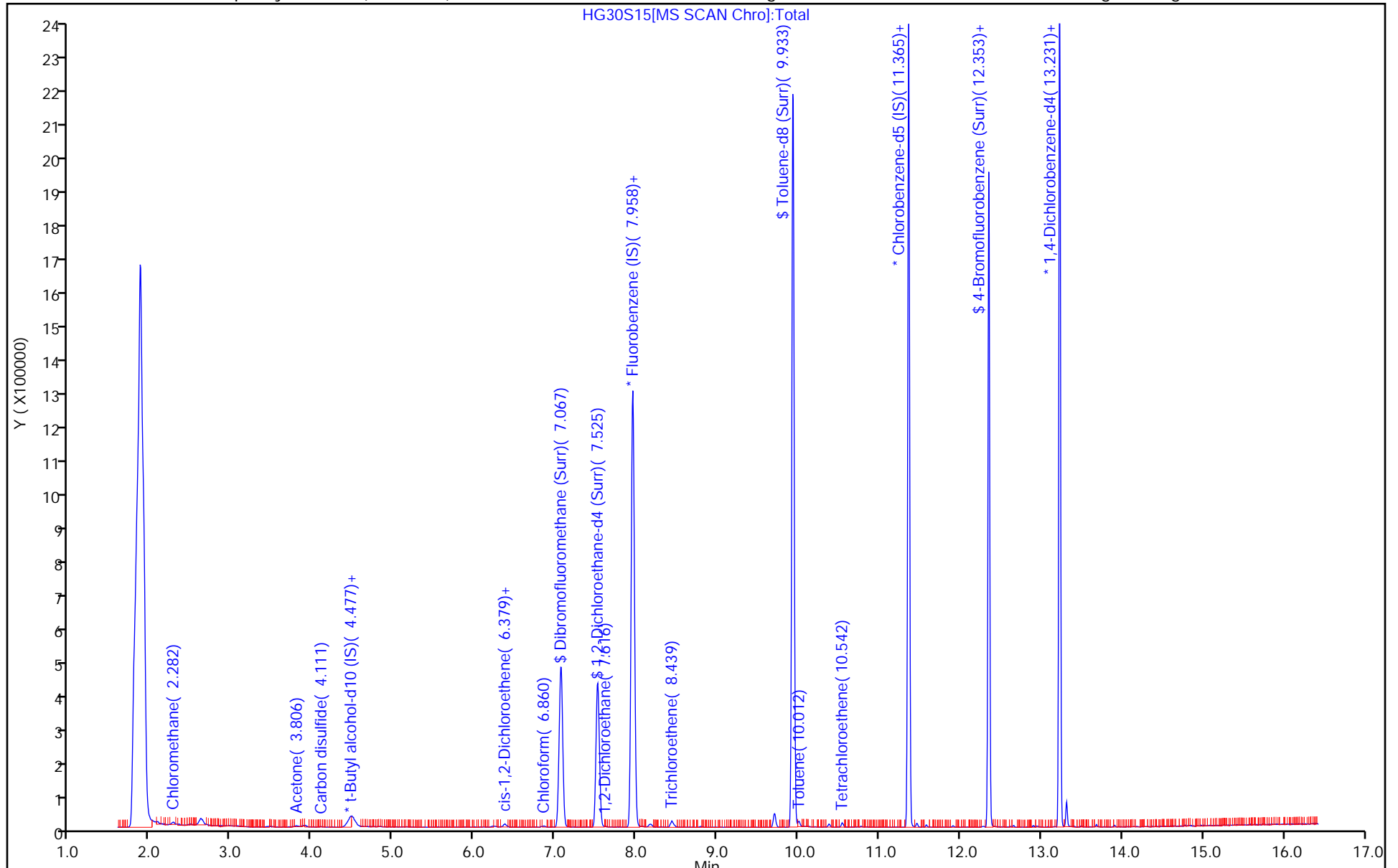
ALS Bottle#: 21

Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S15.D
 Lims ID: 410-11876-A-7
 Client ID: HD-COD-SW-16-0/1-0
 Sample Type: Client
 Inject. Date: 31-Aug-2020 00:35:30 ALS Bottle#: 21 Worklist Smp#: 22
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: 410-11876-A-7
 Misc. Info.: 410-0009349-022
 Operator ID: mec29284 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 31-Aug-2020 13:23:49 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1008

First Level Reviewer: virayd Date: 31-Aug-2020 13:19:23

Compound	Amount Added	Amount Recovered	% Rec.
\$ 51 Dibromofluoromethane (Surr)	10.0	11.2	111.57
\$ 58 1,2-Dichloroethane-d4 (Surr)	10.0	11.1	111.21
\$ 82 Toluene-d8 (Surr)	10.0	9.88	98.85
\$ 108 4-Bromofluorobenzene (Surr)	10.0	9.48	94.82

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S15.D

Injection Date: 31-Aug-2020 00:35:30

Instrument ID: 19094

Lims ID: 410-11876-A-7

Lab Sample ID: 410-11876-7

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

Operator ID: mec29284

ALS Bottle#: 21

Worklist Smp#: 22

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

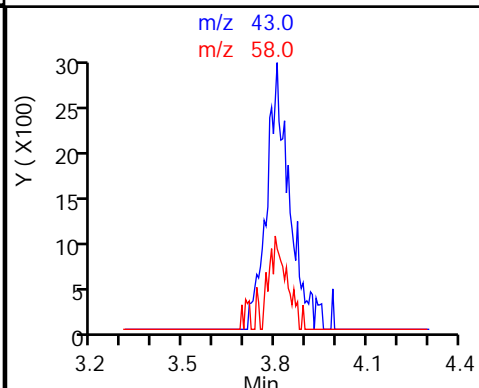
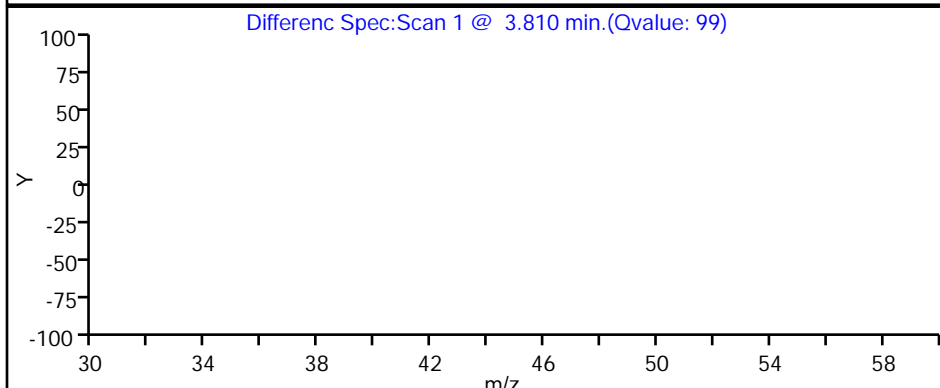
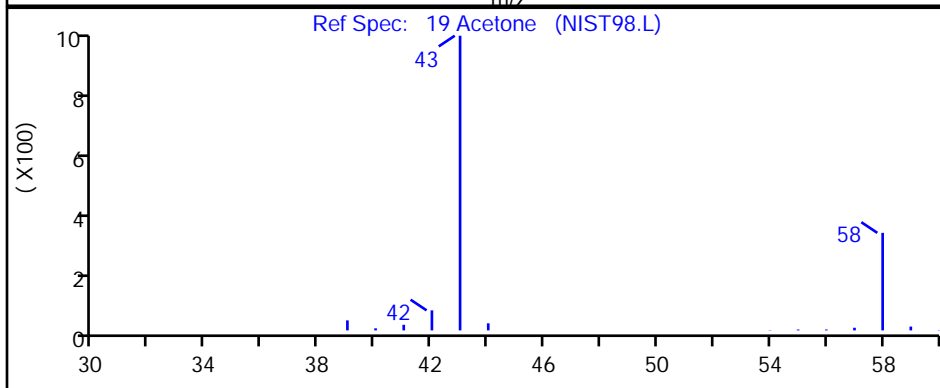
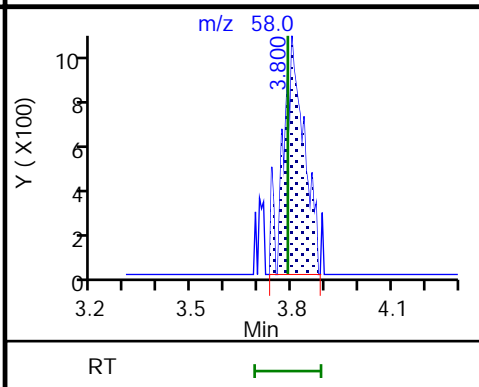
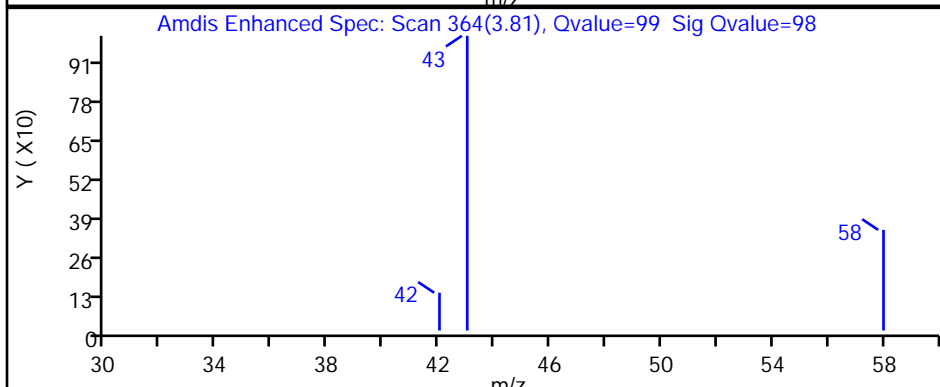
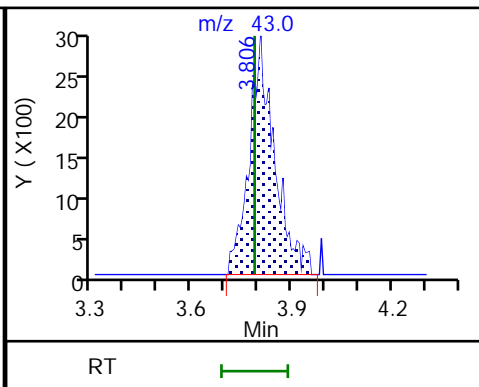
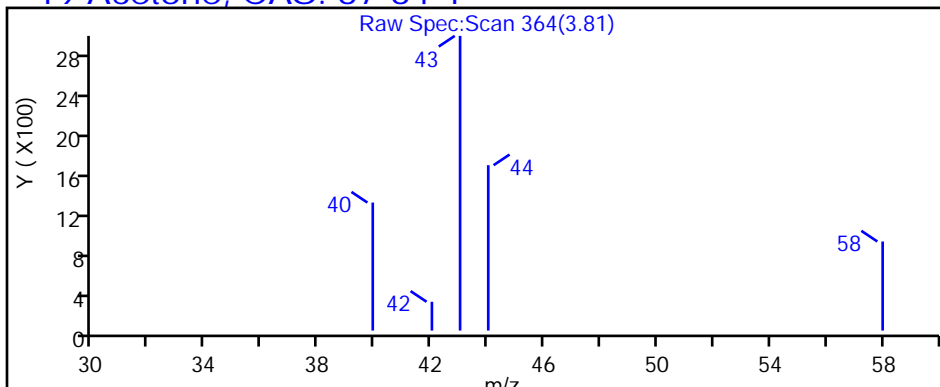
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

19 Acetone, CAS: 67-64-1



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S15.D

Injection Date: 31-Aug-2020 00:35:30

Instrument ID: 19094

Lims ID: 410-11876-A-7

Lab Sample ID: 410-11876-7

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

Operator ID: mec29284

ALS Bottle#: 21

Worklist Smp#: 22

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

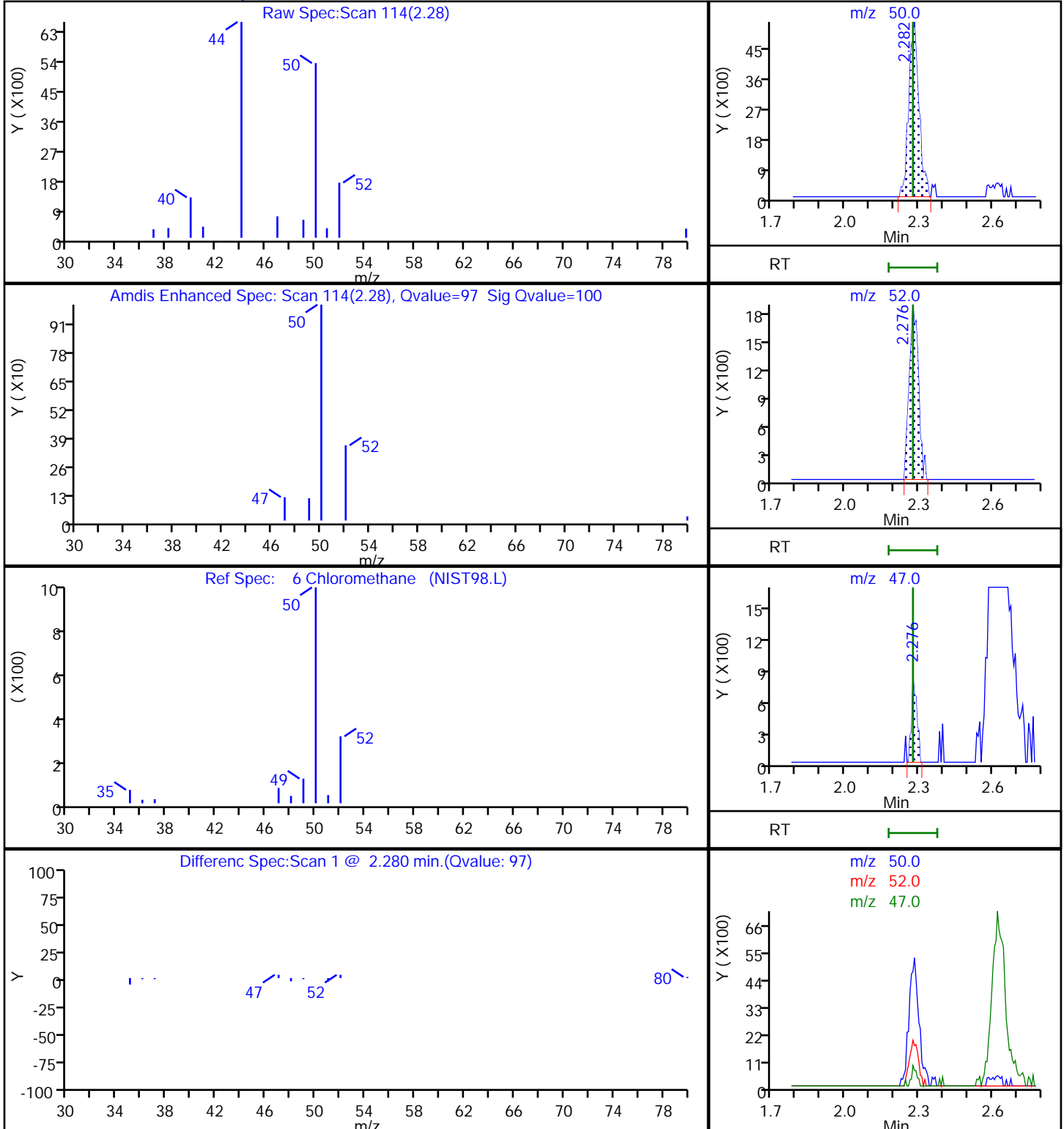
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector

MS Quad

6 Chloromethane, CAS: 74-87-3



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S15.D

Injection Date: 31-Aug-2020 00:35:30

Instrument ID: 19094

Lims ID: 410-11876-A-7

Lab Sample ID: 410-11876-7

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

Operator ID: mec29284

ALS Bottle#: 21

Worklist Smp#: 22

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

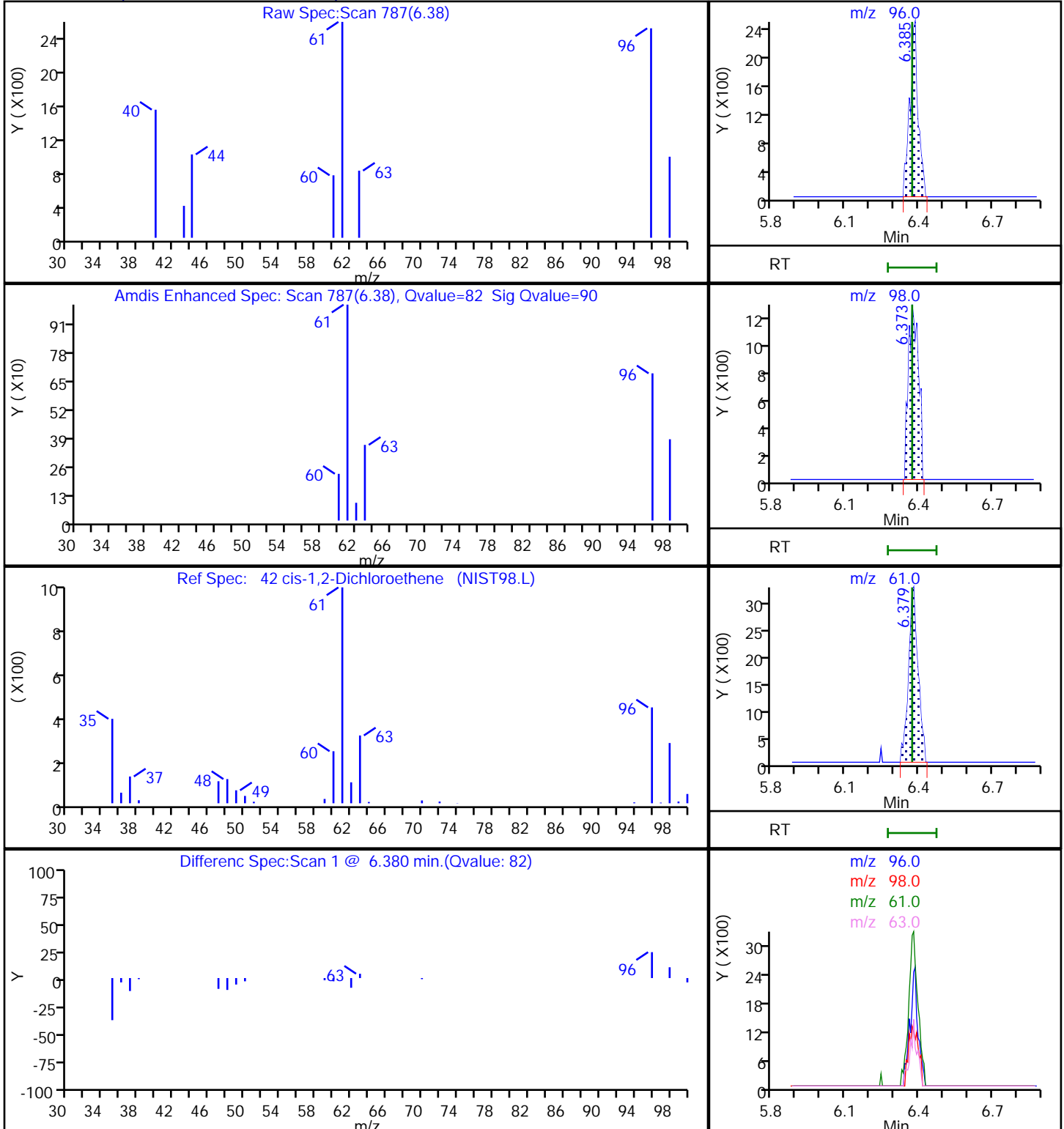
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID) x 30m

MS Quad

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



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S15.D

Injection Date: 31-Aug-2020 00:35:30

Instrument ID: 19094

Lims ID: 410-11876-A-7

Lab Sample ID: 410-11876-7

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

Operator ID: mec29284

ALS Bottle#: 21

Worklist Smp#: 22

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

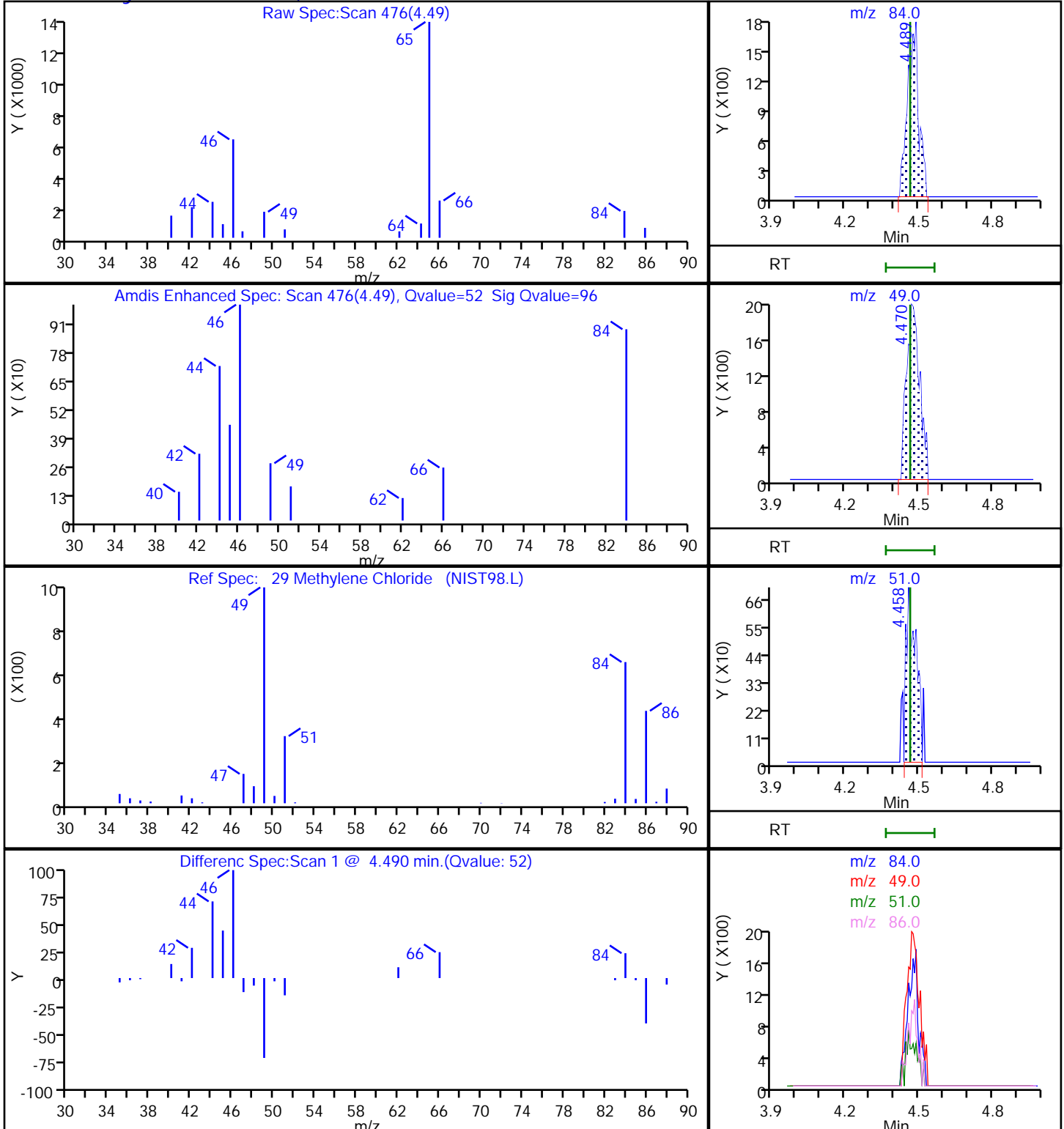
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

29 Methylene Chloride, CAS: 75-09-2



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S15.D

Injection Date: 31-Aug-2020 00:35:30

Instrument ID: 19094

Lims ID: 410-11876-A-7

Lab Sample ID: 410-11876-7

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

Operator ID: mec29284

ALS Bottle#: 21

Worklist Smp#: 22

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

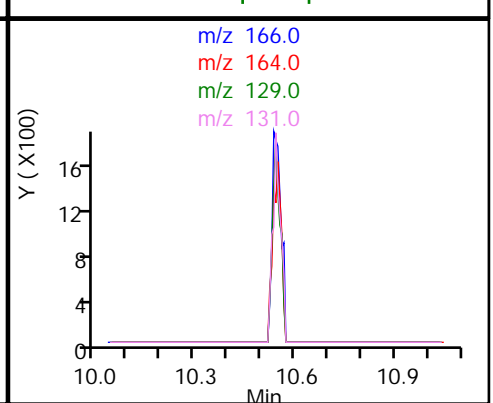
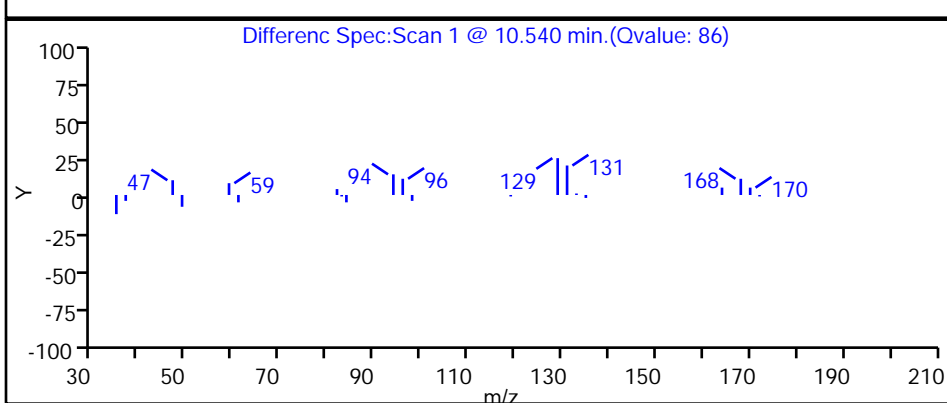
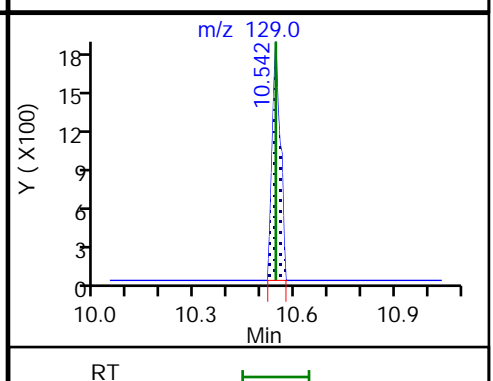
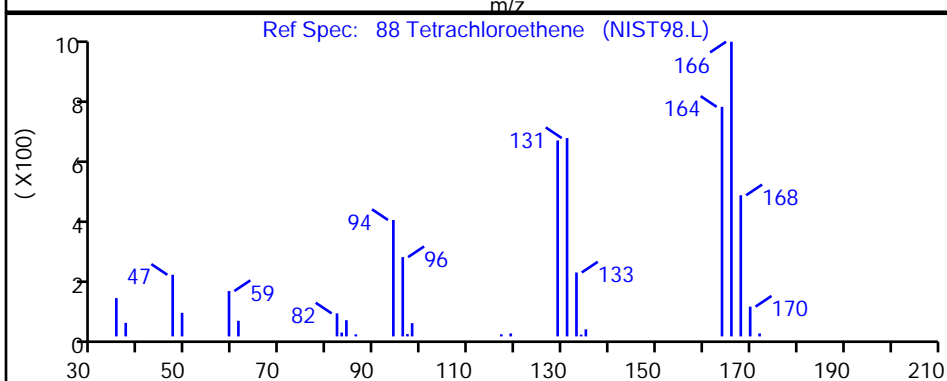
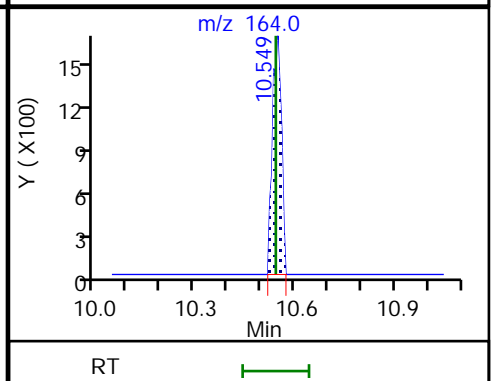
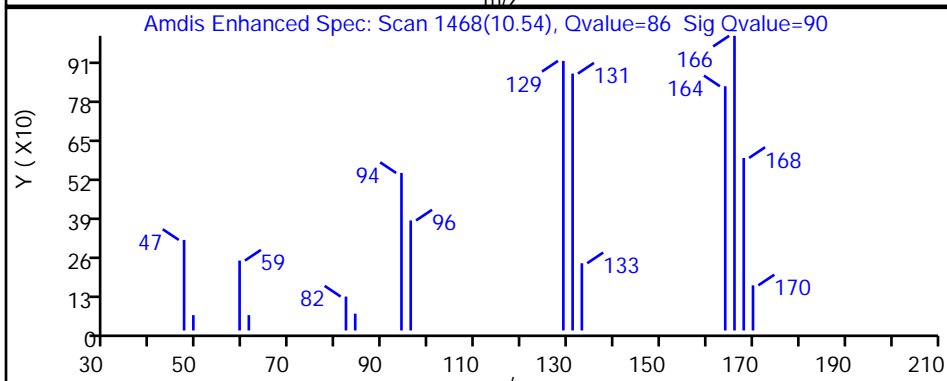
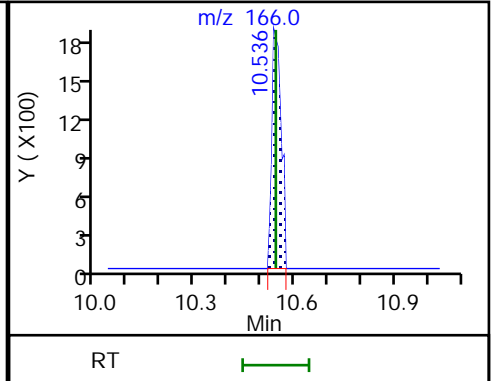
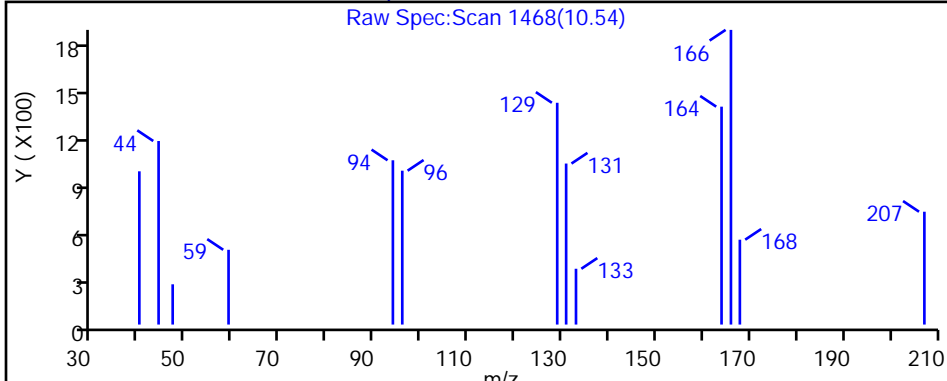
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

88 Tetrachloroethene, CAS: 127-18-4



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S15.D

Injection Date: 31-Aug-2020 00:35:30

Instrument ID: 19094

Lims ID: 410-11876-A-7

Lab Sample ID: 410-11876-7

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

Operator ID: mec29284

ALS Bottle#: 21

Worklist Smp#: 22

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

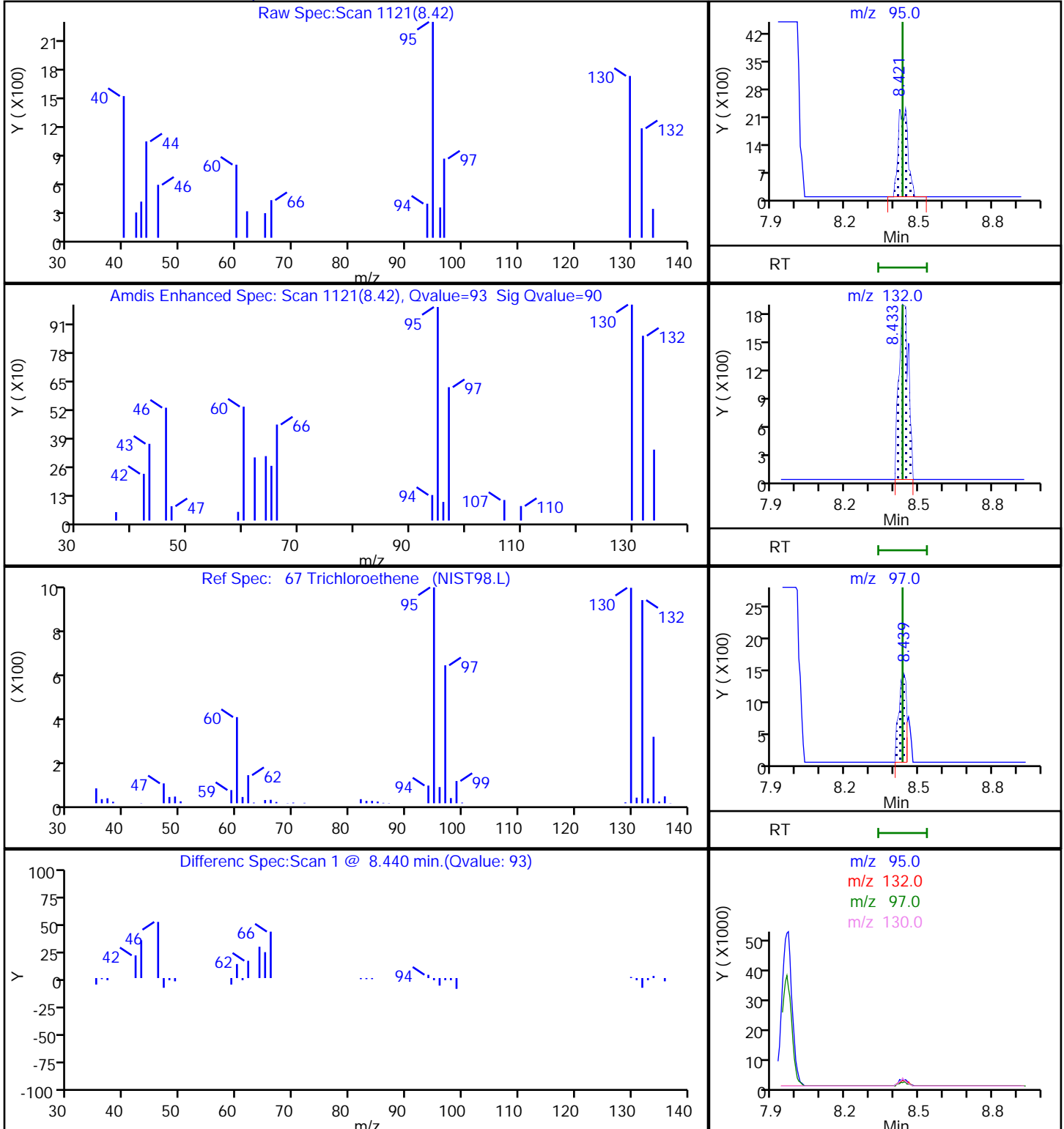
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

67 Trichloroethene, CAS: 79-01-6



Eurofins Lancaster Laboratories Env, LLC

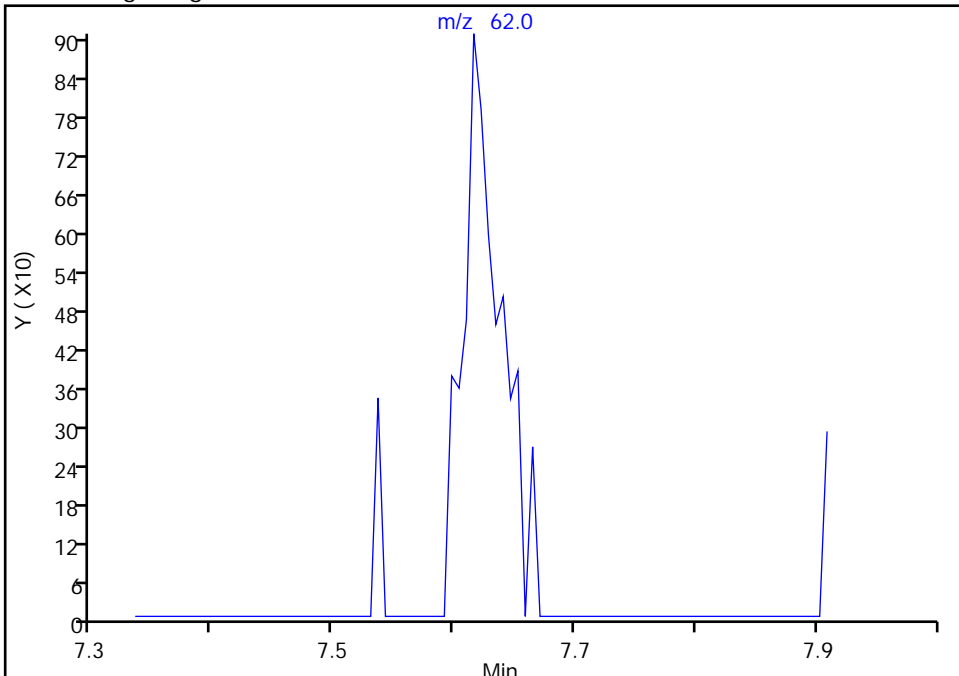
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Injection Date: 31-Aug-2020 00:35:30 Instrument ID: 19094
Lims ID: 410-11876-A-7 Lab Sample ID: 410-11876-7
Client ID: HD-COD-SW-16-0/1-0
Operator ID: mec29284 ALS Bottle#: 21 Worklist Smp#: 22
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

60 1,2-Dichloroethane, CAS: 107-06-2

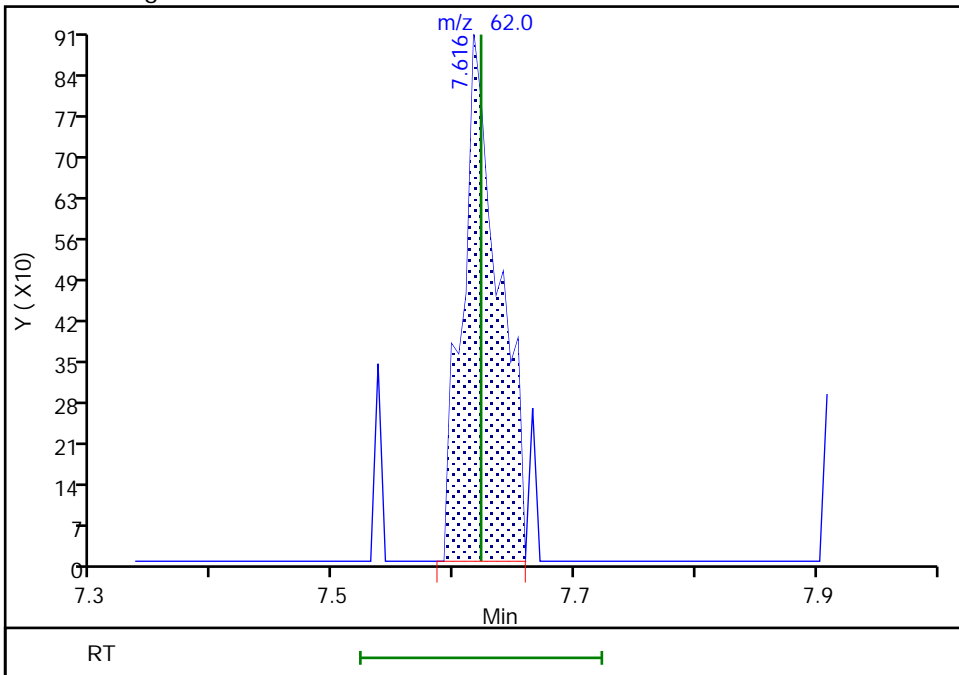
Signal: 1

Not Detected
Expected RT: 7.62

Processing Integration Results



Manual Integration Results



RT: 7.62
Area: 1878
Amount: 0.042831
Amount Units: ug/l

Eurofins Lancaster Laboratories Env, LLC

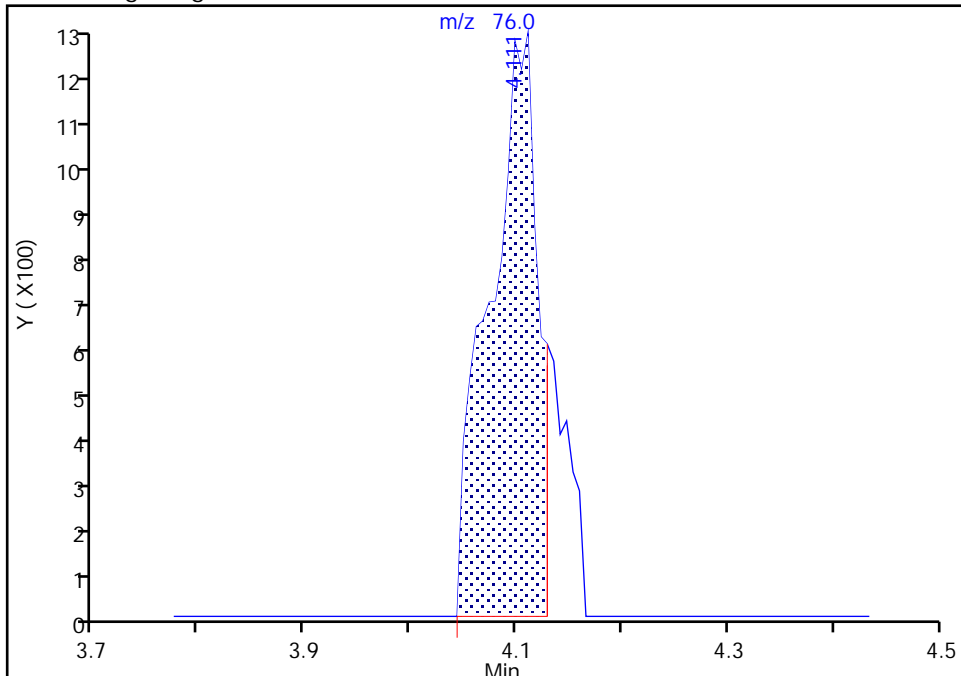
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Injection Date: 31-Aug-2020 00:35:30 Instrument ID: 19094
Lims ID: 410-11876-A-7 Lab Sample ID: 410-11876-7
Client ID: HD-COD-SW-16-0/1-0
Operator ID: mec29284 ALS Bottle#: 21 Worklist Smp#: 22
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

24 Carbon disulfide, CAS: 75-15-0

Signal: 1

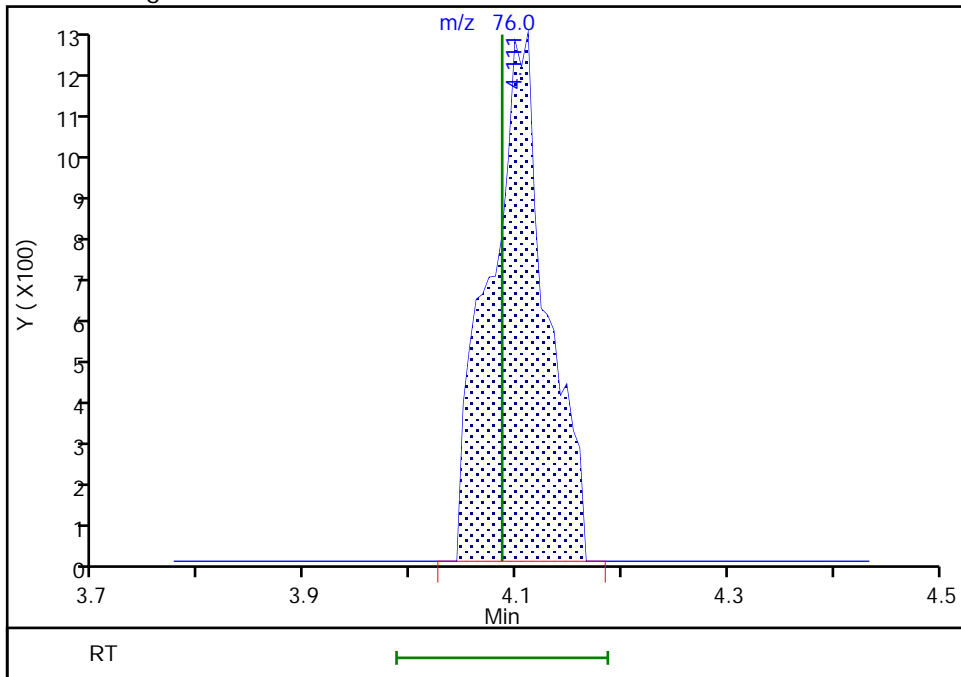
RT: 4.11
Area: 4038
Amount: 0.032529
Amount Units: ug/l

Processing Integration Results



RT: 4.11
Area: 4756
Amount: 0.038313
Amount Units: ug/l

Manual Integration Results



Reviewer: virayd, 31-Aug-2020 13:18:47
Audit Action: Manually Integrated

Audit Reason: Other

Eurofins Lancaster Laboratories Env, LLC

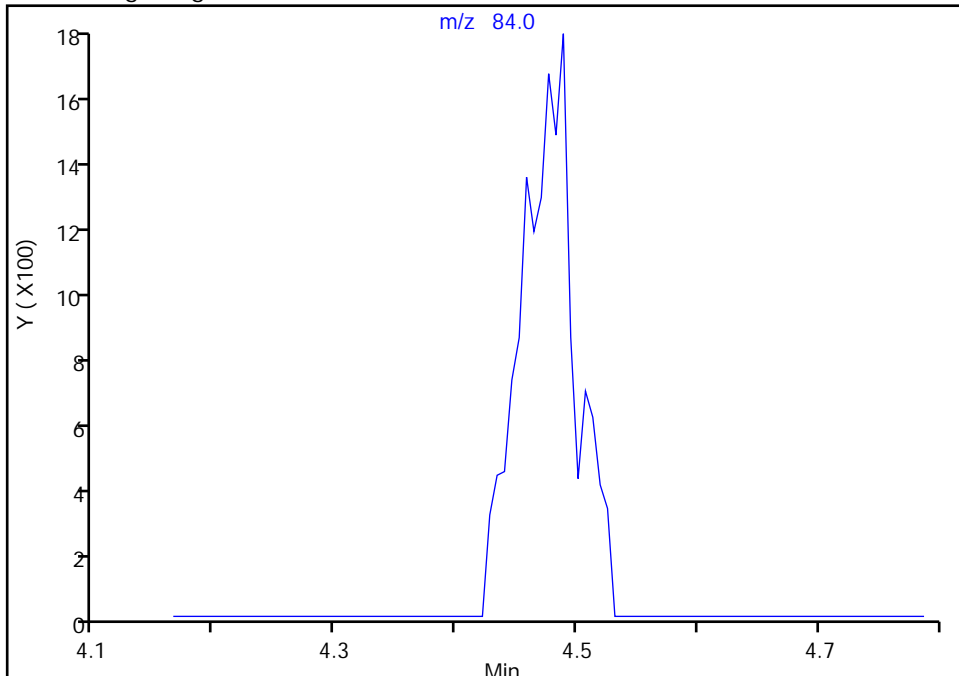
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Injection Date: 31-Aug-2020 00:35:30 Instrument ID: 19094
Lims ID: 410-11876-A-7 Lab Sample ID: 410-11876-7
Client ID: HD-COD-SW-16-0/1-0
Operator ID: mec29284 ALS Bottle#: 21 Worklist Smp#: 22
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

29 Methylene Chloride, CAS: 75-09-2

Signal: 1

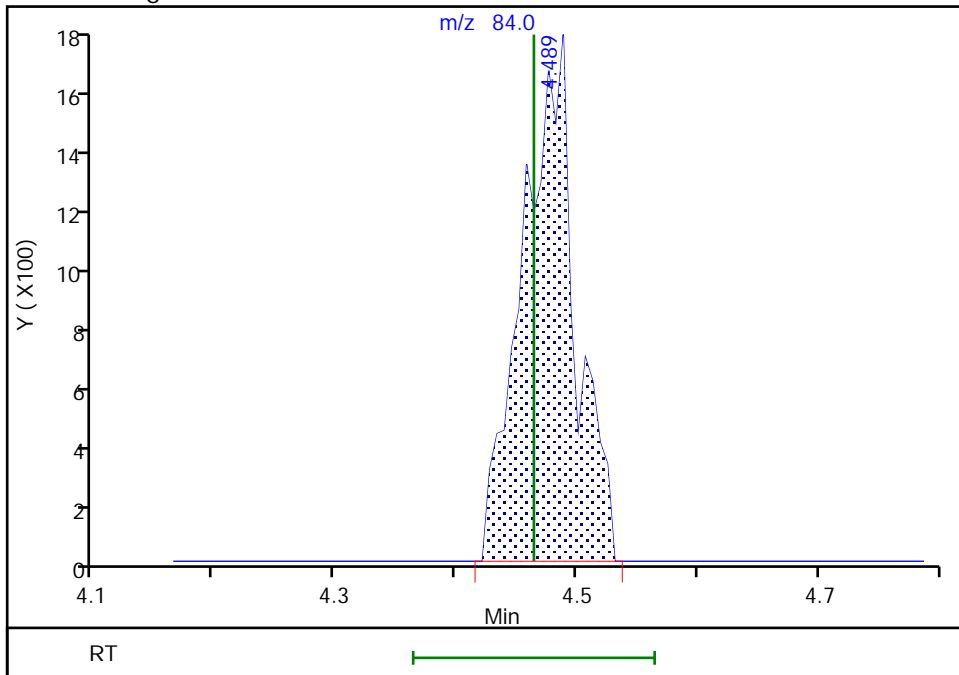
Not Detected
Expected RT: 4.46

Processing Integration Results



Manual Integration Results

RT: 4.49
Area: 5212
Amount: 0.117050
Amount Units: ug/l



Reviewer: virayd, 31-Aug-2020 13:18:49
Audit Action: Assigned Compound ID

Audit Reason: Other

Euofins Lancaster Laboratories Env, LLC

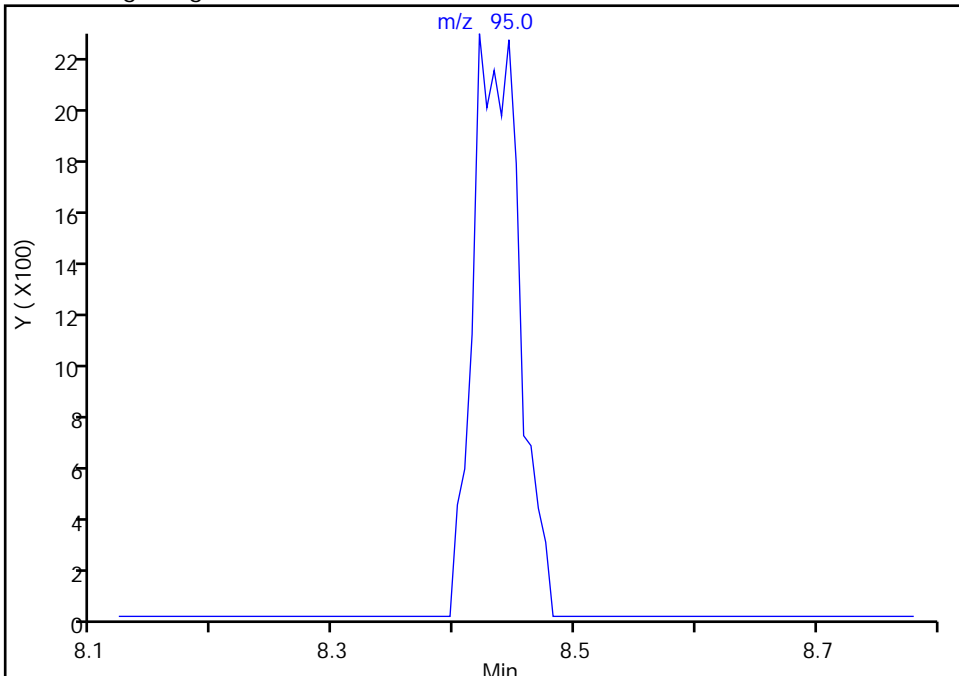
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Injection Date: 31-Aug-2020 00:35:30 Instrument ID: 19094
Lims ID: 410-11876-A-7 Lab Sample ID: 410-11876-7
Client ID: HD-COD-SW-16-0/1-0
Operator ID: mec29284 ALS Bottle#: 21 Worklist Smp#: 22
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

67 Trichloroethene, CAS: 79-01-6

Signal: 1

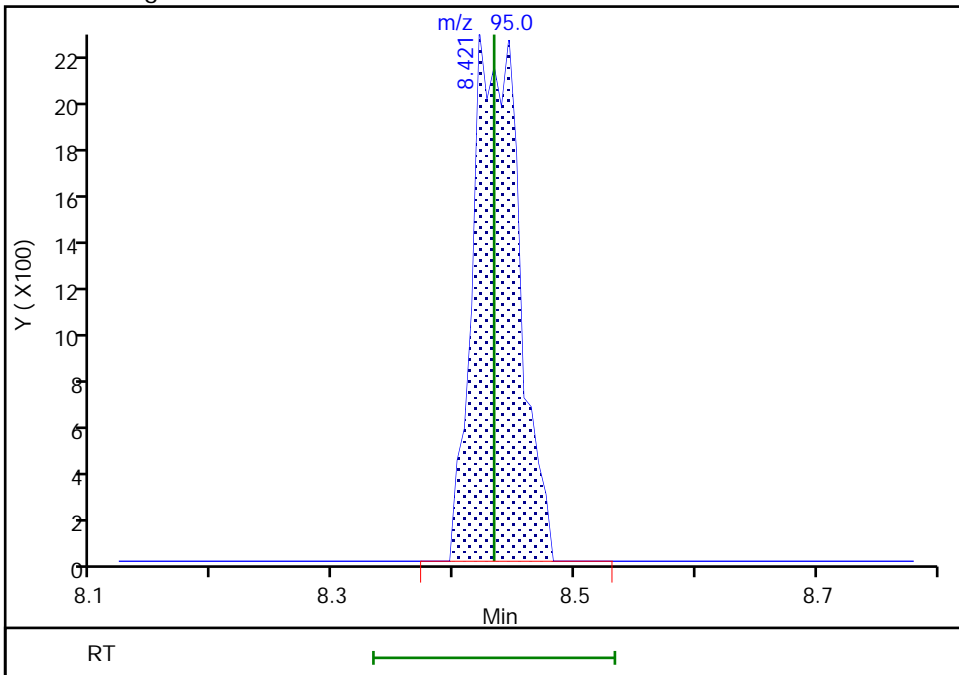
Not Detected
Expected RT: 8.43

Processing Integration Results



Manual Integration Results

RT: 8.42
Area: 5882
Amount: 0.128034
Amount Units: ug/l



Reviewer: virayd, 31-Aug-2020 13:19:05
Audit Action: Manually Integrated

Audit Reason: Other

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-17-0/1-0 Lab Sample ID: 410-11876-8
 Matrix: Water Lab File ID: HG30S16.D
 Analysis Method: 8260C LL Date Collected: 08/25/2020 09:45
 Sample wt/vol: 25 (mL) Date Analyzed: 08/31/2020 00:57
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 38982 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.50	0.070
71-55-6	1,1,1-Trichloroethane	0.27	J	0.50	0.060
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.50	0.070
79-00-5	1,1,2-Trichloroethane	ND		0.50	0.060
75-34-3	1,1-Dichloroethane	0.16	J	0.50	0.070
75-35-4	1,1-Dichloroethene	0.15	J	0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	ND		0.50	0.060
107-06-2	1,2-Dichloroethane	ND		0.50	0.050
78-87-5	1,2-Dichloropropane	ND		0.50	0.060
78-93-3	2-Butanone (MEK)	ND		5.0	0.60
591-78-6	2-Hexanone	ND		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70
67-64-1	Acetone	1.3	J	5.0	0.90
107-13-1	Acrylonitrile	ND		5.0	0.40
71-43-2	Benzene	ND		0.50	0.050
74-97-5	Bromochloromethane	ND		0.50	0.050
75-27-4	Bromodichloromethane	ND		0.50	0.050
75-25-2	Bromoform	ND		1.0	0.30
74-83-9	Bromomethane	ND		0.50	0.070
75-15-0	Carbon disulfide	ND		1.0	0.060
56-23-5	Carbon tetrachloride	ND		0.50	0.070
108-90-7	Chlorobenzene	ND		0.50	0.060
75-00-3	Chloroethane	ND		0.50	0.070
67-66-3	Chloroform	0.29	J	0.50	0.090
74-87-3	Chloromethane	1.2		0.50	0.060
156-59-2	cis-1,2-Dichloroethene	1.6		0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	ND		0.50	0.050
124-48-1	Dibromochloromethane	ND		0.50	0.070
100-41-4	Ethylbenzene	ND		0.50	0.060
1634-04-4	Methyl tert-butyl ether	ND		0.50	0.050
75-09-2	Methylene Chloride	0.12	J	0.50	0.070
100-42-5	Styrene	ND		0.50	0.050
127-18-4	Tetrachloroethene	7.1		0.50	0.060
108-88-3	Toluene	ND		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	ND		0.50	0.060
10061-02-6	trans-1,3-Dichloropropene	ND		0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-17-0/1-0 Lab Sample ID: 410-11876-8
 Matrix: Water Lab File ID: HG30S16.D
 Analysis Method: 8260C LL Date Collected: 08/25/2020 09:45
 Sample wt/vol: 25 (mL) Date Analyzed: 08/31/2020 00:57
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 38982 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	2.8		0.50	0.060
75-01-4	Vinyl chloride	ND		0.50	0.10
1330-20-7	Xylenes, Total	ND		1.0	0.15

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	114		80-120
1868-53-7	Dibromofluoromethane (Surr)	111		80-120
2037-26-5	Toluene-d8 (Surr)	98		80-120
460-00-4	4-Bromofluorobenzene (Surr)	95		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S16.D
 Lims ID: 410-11876-A-8
 Client ID: HD-COD-SW-17-0/1-0
 Sample Type: Client
 Inject. Date: 31-Aug-2020 00:57:30 ALS Bottle#: 22 Worklist Smp#: 23
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: 410-11876-A-8
 Misc. Info.: 410-0009349-023
 Operator ID: mec29284 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 31-Aug-2020 13:23:49 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1008

First Level Reviewer: virayd

Date: 31-Aug-2020 13:20:09

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
6 Chloromethane	50	2.276	2.276	0.000	98	80217	1.16	
7 Vinyl chloride	62		2.385				ND	
9 Bromomethane	94		2.745				ND	
10 Chloroethane	64		2.837				ND	
18 1,1-Dichloroethene	96	3.763	3.757	0.006	96	5293	0.1460	
19 Acetone	43	3.800	3.788	0.012	95	11580	1.29	M
24 Carbon disulfide	76	4.092	4.086	0.006	1	2322	0.0193	7M
29 Methylene Chloride	84	4.458	4.464	-0.006	65	5228	0.1212	a
* 28 t-Butyl alcohol-d10 (IS)	65	4.470	4.477	-0.006	0	127247	50.0	
31 Acrylonitrile	53		4.806				ND	
32 Methyl tert-butyl ether	73	4.873	4.873	0.000	9	3464	0.0400	
33 trans-1,2-Dichloroethene	96		4.891				ND	
35 1,1-Dichloroethane	63	5.556	5.549	0.007	94	12484	0.1574	
41 2-Butanone (MEK)	43		6.330				ND	
42 cis-1,2-Dichloroethene	96	6.379	6.372	0.007	81	77367	1.64	
48 Chlorobromomethane	128		6.702				ND	
50 Chloroform	83	6.854	6.854	0.000	93	21640	0.2919	
\$ 51 Dibromofluoromethane (Surr)	113	7.067	7.061	0.006	93	431350	11.1	
52 1,1,1-Trichloroethane	97	7.080	7.086	-0.006	48	17378	0.2732	
56 Carbon tetrachloride	117		7.293				ND	
\$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.525	7.519	0.006	0	90514	11.4	
59 Benzene	78		7.555				ND	
60 1,2-Dichloroethane	62		7.622				ND	
* 65 Fluorobenzene (IS)	96	7.958	7.951	0.007	98	1646975	10.0	
67 Trichloroethene	95	8.433	8.433	0.000	97	123645	2.78	
70 1,2-Dichloropropane	63		8.768				ND	
75 Dichlorobromomethane	83		9.110				ND	
80 cis-1,3-Dichloropropene	75		9.634				ND	
81 4-Methyl-2-pentanone (MIBK)	43		9.793				ND	
\$ 82 Toluene-d8 (Surr)	98	9.933	9.933	0.000	94	1579251	9.77	
83 Toluene	92	10.012	10.012	0.000	98	3124	0.0277	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
85 trans-1,3-Dichloropropene	75		10.256				ND	
87 1,1,2-Trichloroethane	97	10.536	10.457	0.079	11	1279	0.0465	
88 Tetrachloroethene	166	10.549	10.542	0.006	96	342166	7.13	
91 2-Hexanone	43		10.658				ND	
93 Chlorodibromomethane	129		10.829				ND	
94 Ethylene Dibromide	107		10.945				ND	
S 95 Xylenes, Total	106		11.245				ND	
* 97 Chlorobenzene-d5 (IS)	117	11.365	11.365	0.000	87	1204981	10.0	
98 Chlorobenzene	112		11.390				ND	
99 1,1,1,2-Tetrachloroethane	131		11.469				ND	
100 Ethylbenzene	91		11.475				ND	
101 m-Xylene & p-Xylene	106		11.585				ND	
102 o-Xylene	106		11.914				ND	
103 Styrene	104		11.926				ND	
104 Bromoform	173		12.091				ND	
\$ 108 4-Bromofluorobenzene (Surr)	95	12.353	12.353	0.000	88	559980	9.49	
109 1,1,2,2-Tetrachloroethane	83		12.451				ND	
* 124 1,4-Dichlorobenzene-d4	152	13.231	13.231	0.000	96	601317	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_30_826ISS_00005

Amount Added: 5.00

Units: uL

Run Reagent

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S16.D

Injection Date: 31-Aug-2020 00:57:30

Instrument ID: 19094

Operator ID: mec29284

Lims ID: 410-11876-A-8

Lab Sample ID: 410-11876-8

Worklist Smp#: 23

Client ID: HD-COD-SW-17-0/1-0

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

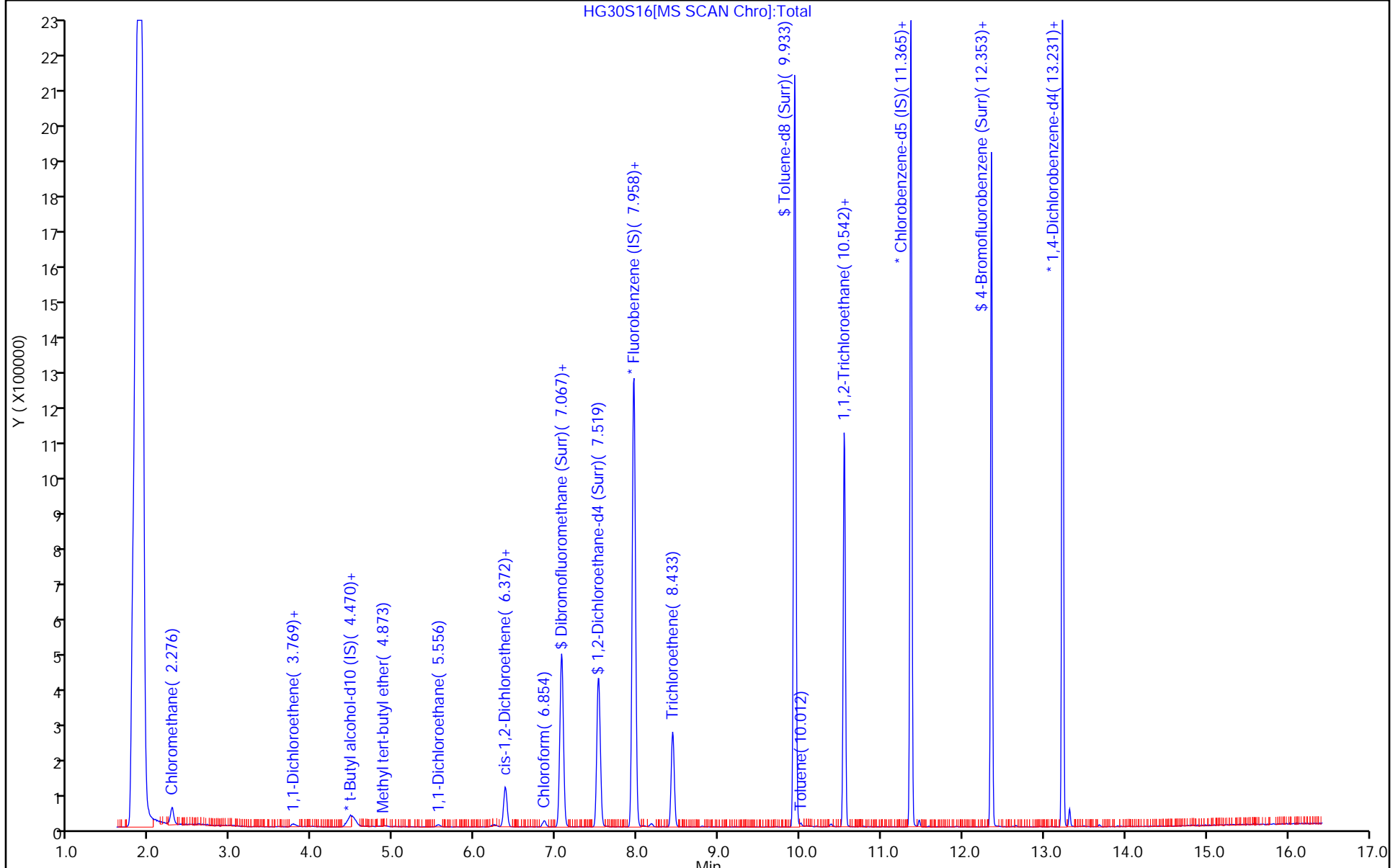
ALS Bottle#: 22

Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S16.D
 Lims ID: 410-11876-A-8
 Client ID: HD-COD-SW-17-0/1-0
 Sample Type: Client
 Inject. Date: 31-Aug-2020 00:57:30 ALS Bottle#: 22 Worklist Smp#: 23
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: 410-11876-A-8
 Misc. Info.: 410-0009349-023
 Operator ID: mec29284 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 31-Aug-2020 13:23:49 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1008

First Level Reviewer: virayd Date: 31-Aug-2020 13:20:09

Compound	Amount Added	Amount Recovered	% Rec.
\$ 51 Dibromofluoromethane (Surr)	10.0	11.1	110.78
\$ 58 1,2-Dichloroethane-d4 (Surr)	10.0	11.4	114.11
\$ 82 Toluene-d8 (Surr)	10.0	9.77	97.67
\$ 108 4-Bromofluorobenzene (Surr)	10.0	9.49	94.93

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S16.D

Injection Date: 31-Aug-2020 00:57:30

Instrument ID: 19094

Lims ID: 410-11876-A-8

Lab Sample ID: 410-11876-8

Client ID: HD-COD-SW-17-0/1-0

Operator ID: mec29284

ALS Bottle#: 22

Worklist Smp#: 23

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

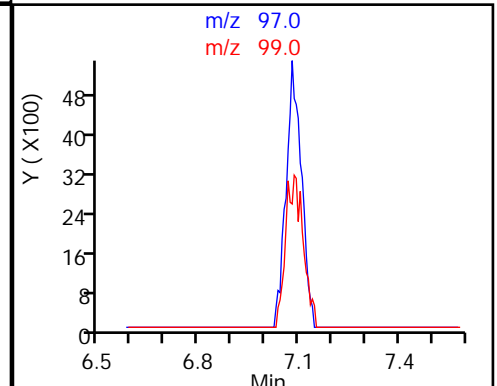
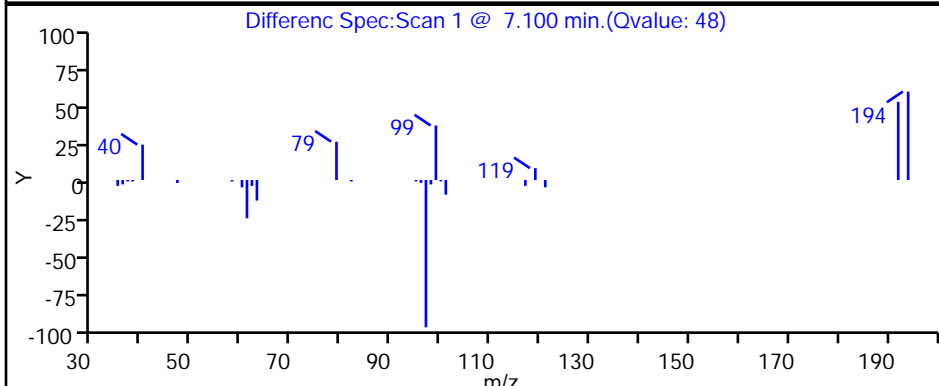
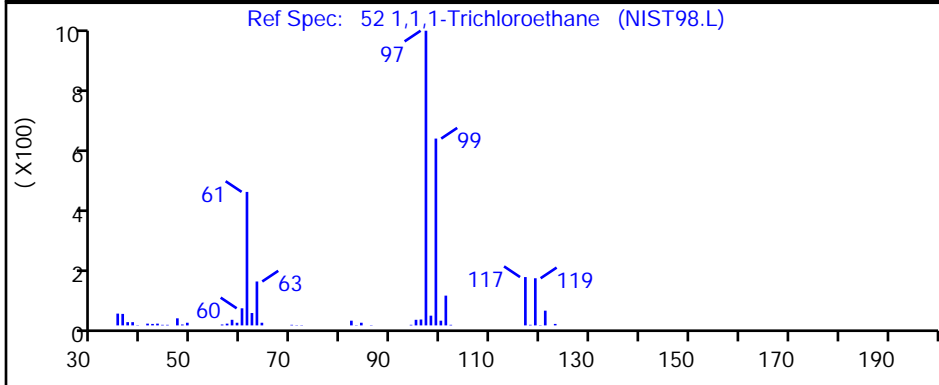
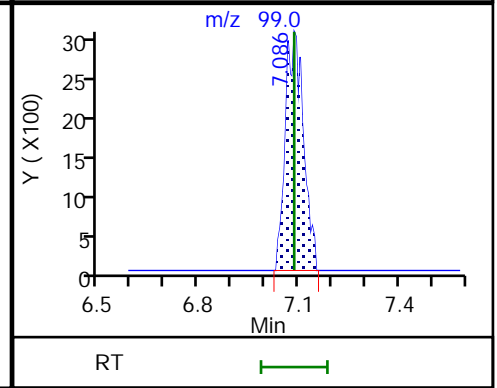
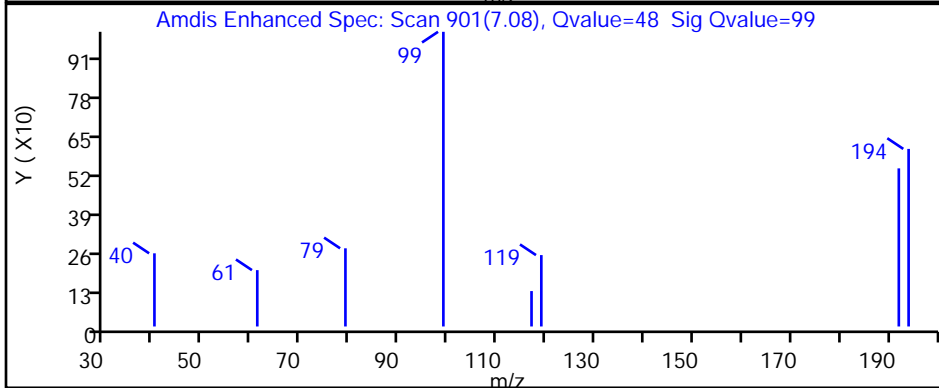
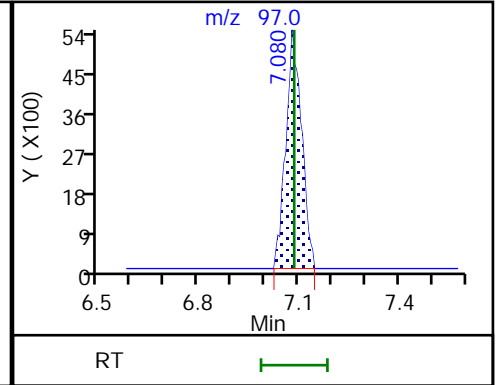
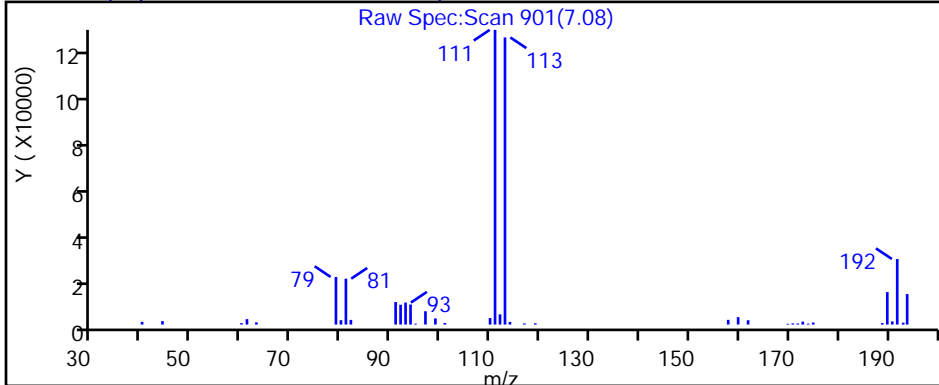
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

52 1,1,1-Trichloroethane, CAS: 71-55-6



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S16.D

Injection Date: 31-Aug-2020 00:57:30

Instrument ID: 19094

Lims ID: 410-11876-A-8

Lab Sample ID: 410-11876-8

Client ID: HD-COD-SW-17-0/1-0

Operator ID: mec29284

ALS Bottle#: 22

Worklist Smp#: 23

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

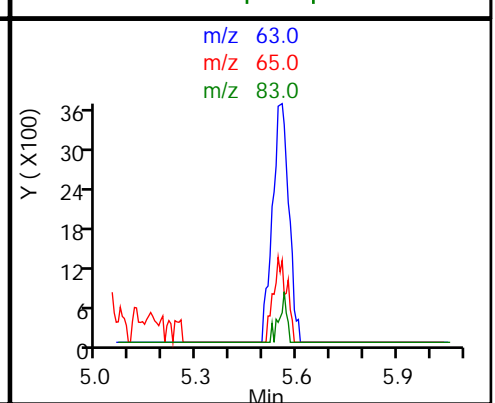
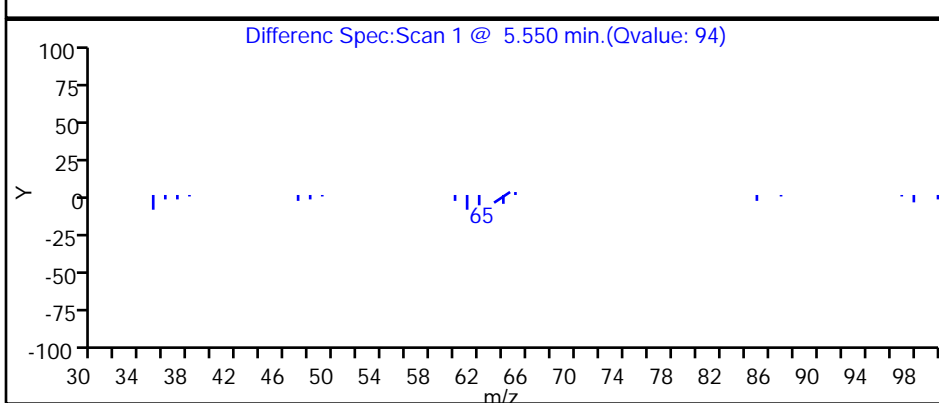
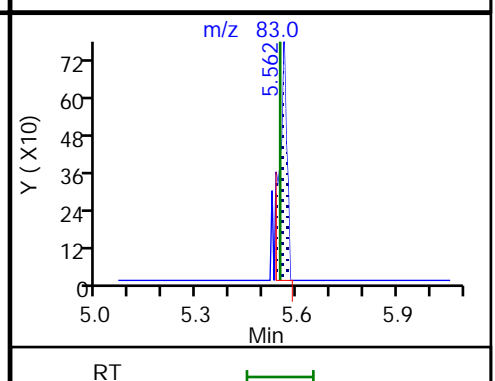
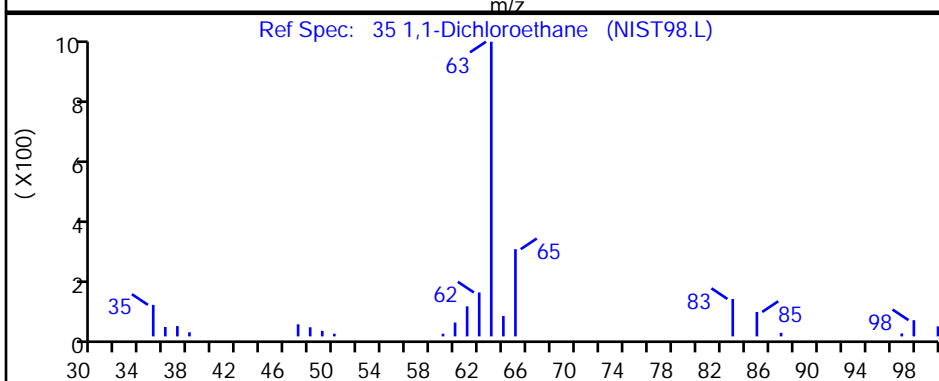
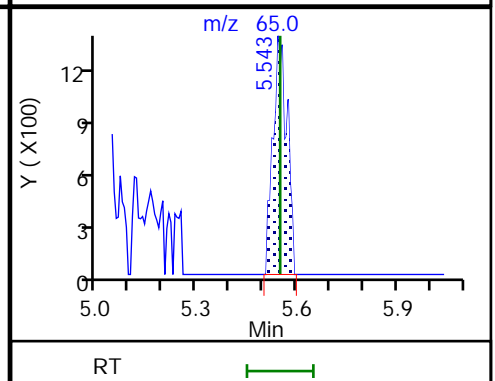
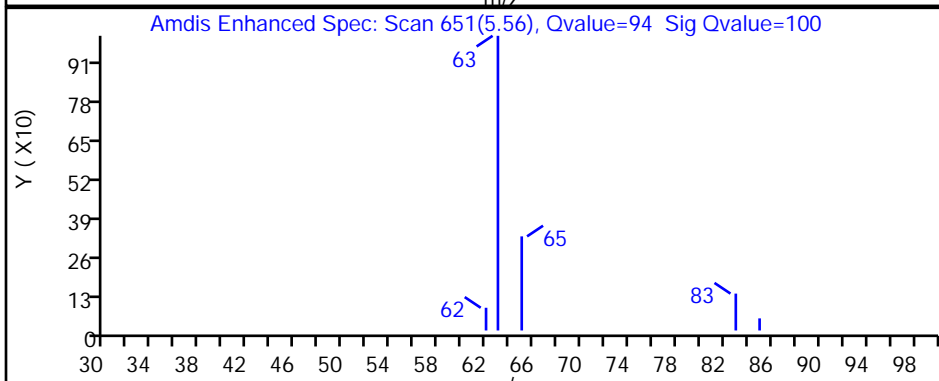
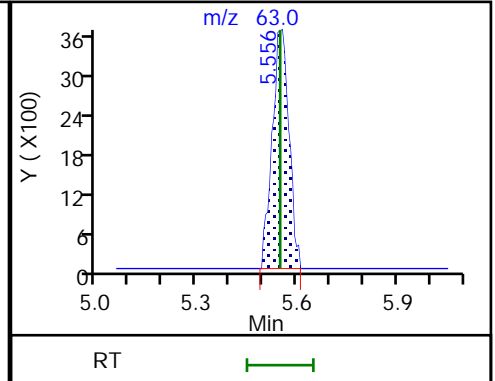
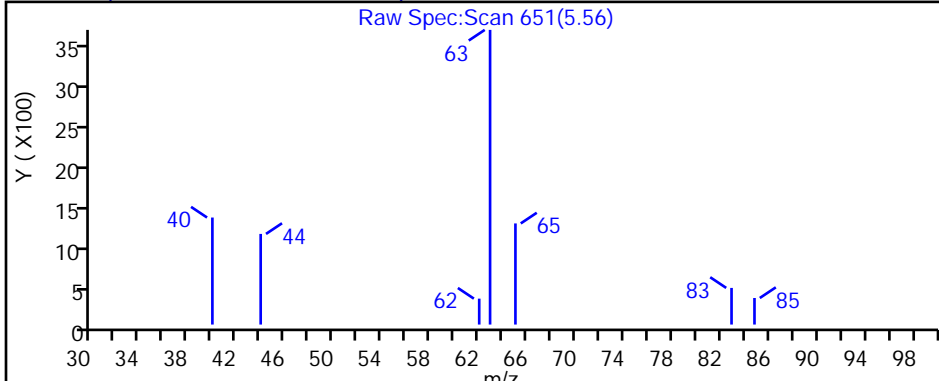
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

35 1,1-Dichloroethane, CAS: 75-34-3



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S16.D

Injection Date: 31-Aug-2020 00:57:30

Instrument ID: 19094

Lims ID: 410-11876-A-8

Lab Sample ID: 410-11876-8

Client ID: HD-COD-SW-17-0/1-0

Operator ID: mec29284

ALS Bottle#: 22

Worklist Smp#: 23

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

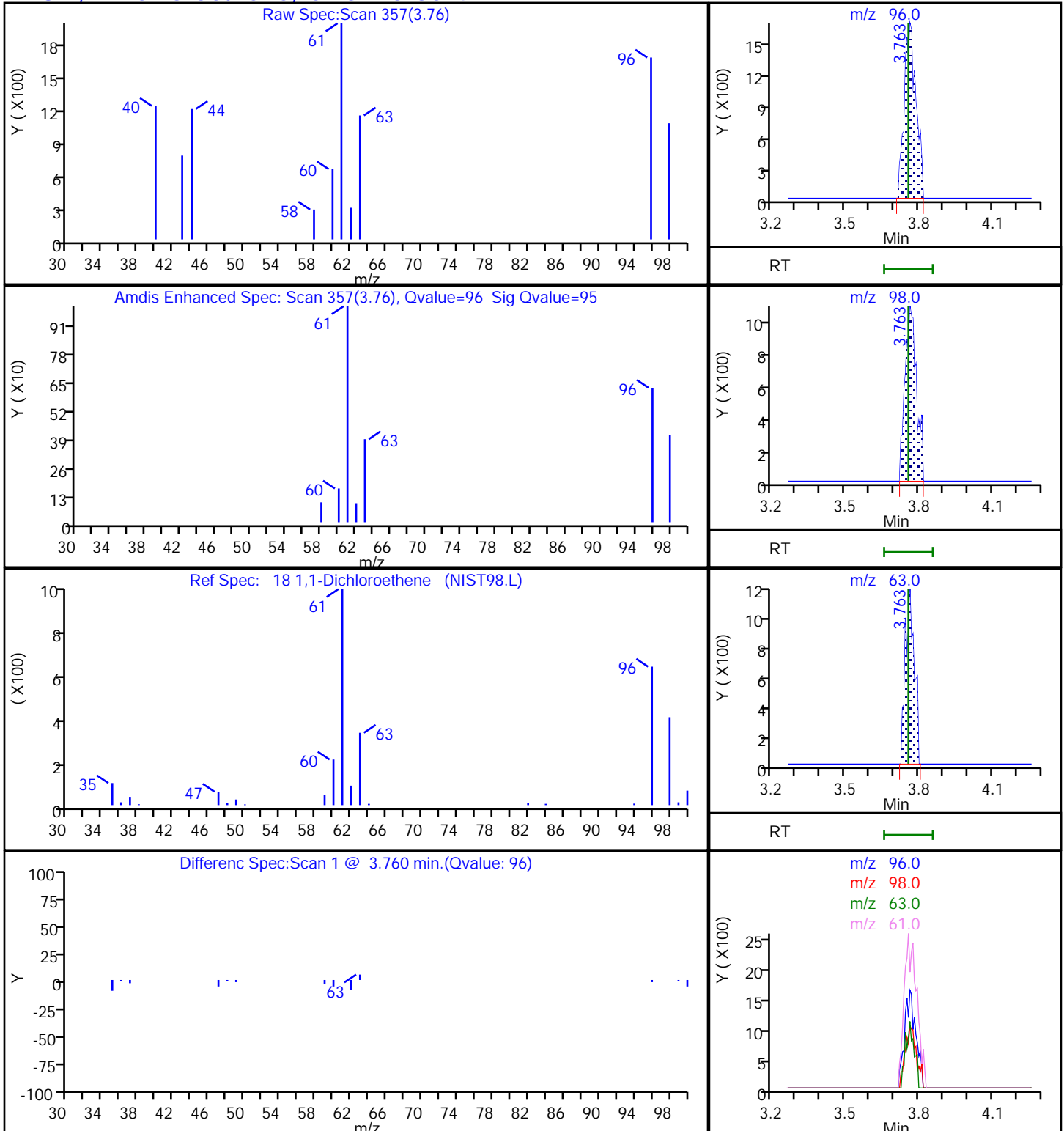
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector

MS Quad

18 1,1-Dichloroethene, CAS: 75-35-4



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S16.D

Injection Date: 31-Aug-2020 00:57:30

Instrument ID: 19094

Lims ID: 410-11876-A-8

Lab Sample ID: 410-11876-8

Client ID: HD-COD-SW-17-0/1-0

Operator ID: mec29284

ALS Bottle#: 22

Worklist Smp#: 23

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

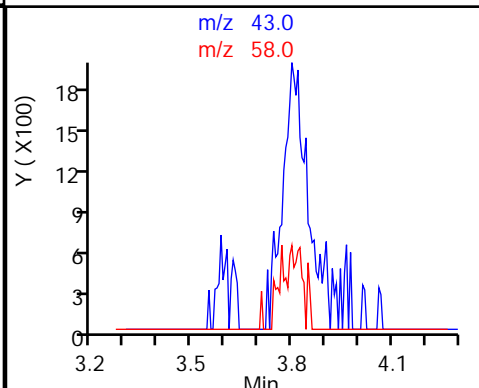
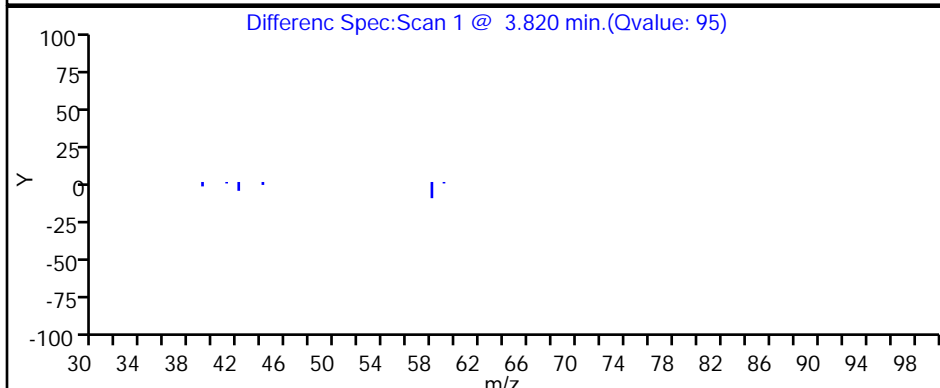
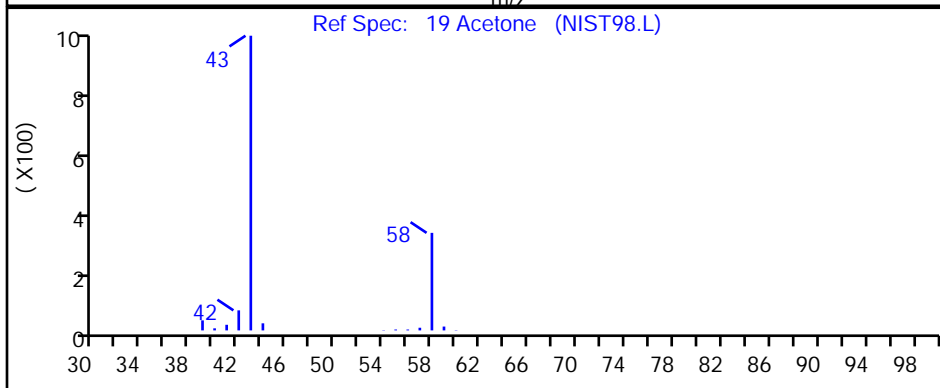
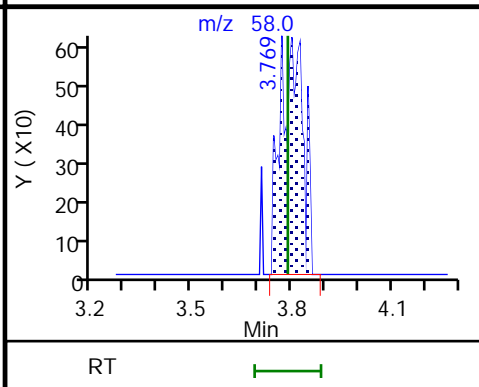
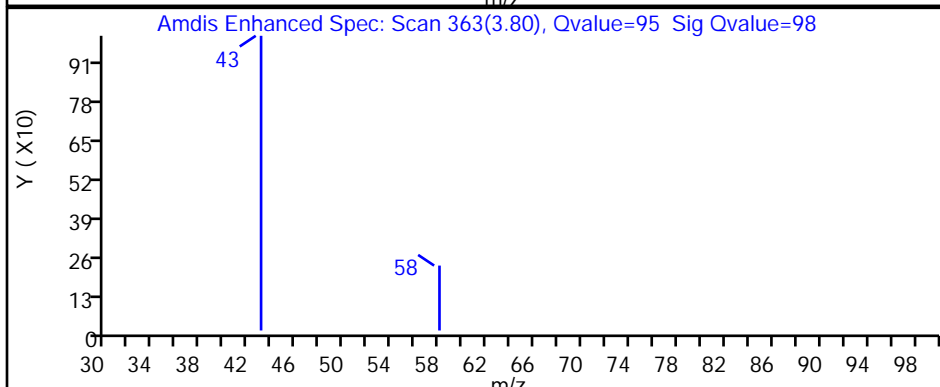
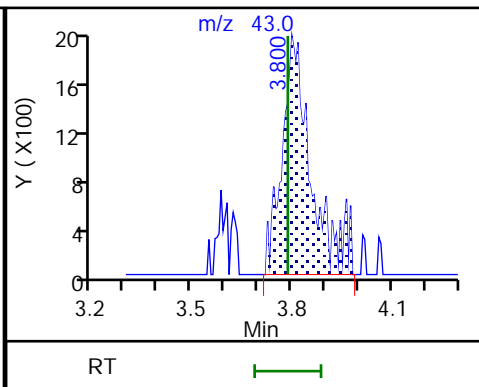
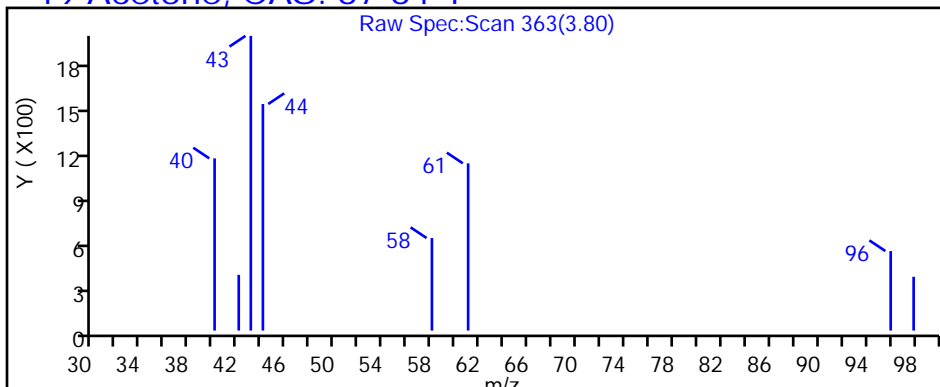
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

19 Acetone, CAS: 67-64-1



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S16.D

Injection Date: 31-Aug-2020 00:57:30

Instrument ID: 19094

Lims ID: 410-11876-A-8

Lab Sample ID: 410-11876-8

Client ID: HD-COD-SW-17-0/1-0

Operator ID: mec29284

ALS Bottle#: 22

Worklist Smp#: 23

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

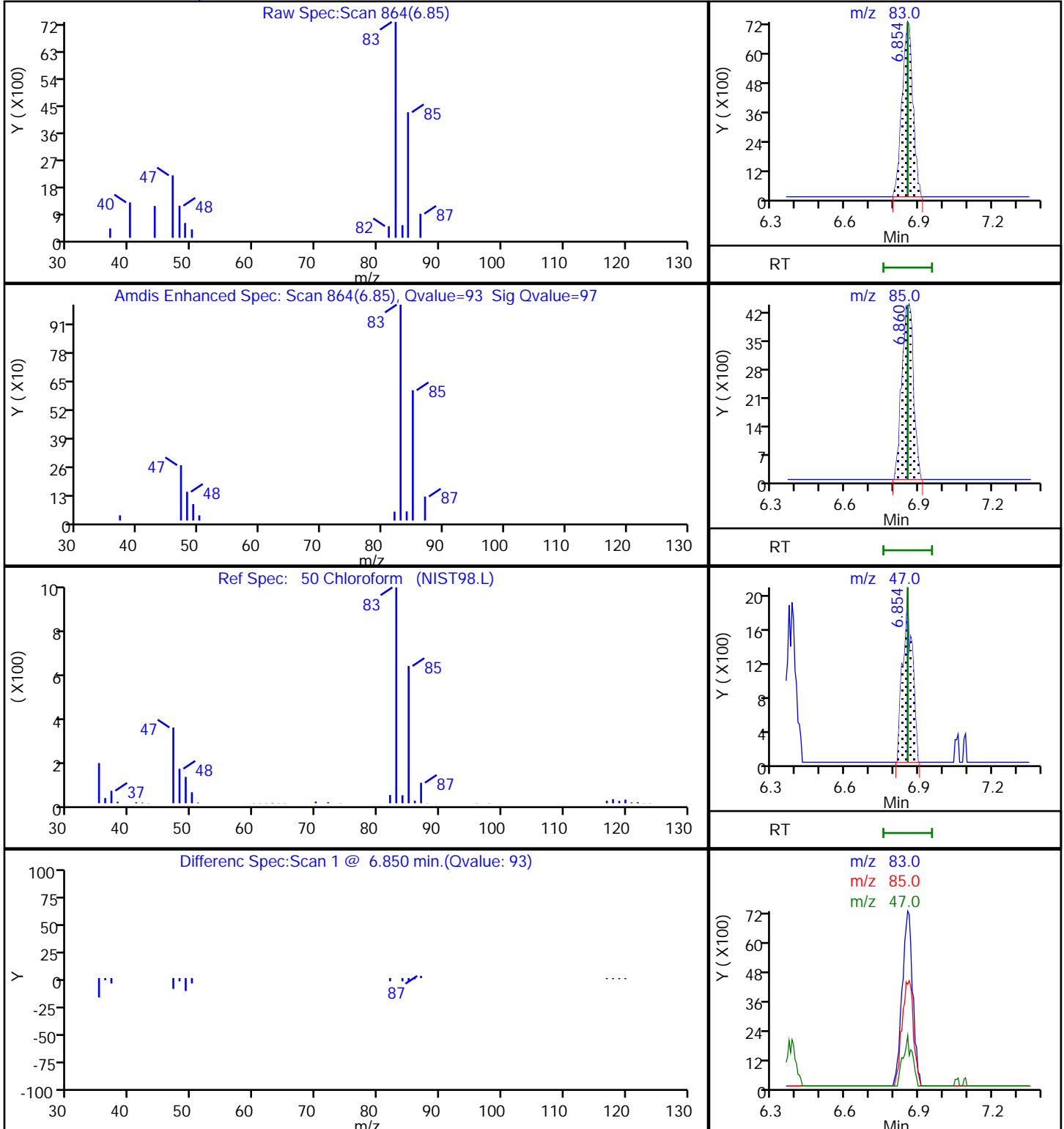
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

50 Chloroform, CAS: 67-66-3



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S16.D

Injection Date: 31-Aug-2020 00:57:30

Instrument ID: 19094

Lims ID: 410-11876-A-8

Lab Sample ID: 410-11876-8

Client ID: HD-COD-SW-17-0/1-0

Operator ID: mec29284

ALS Bottle#: 22

Worklist Smp#: 23

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

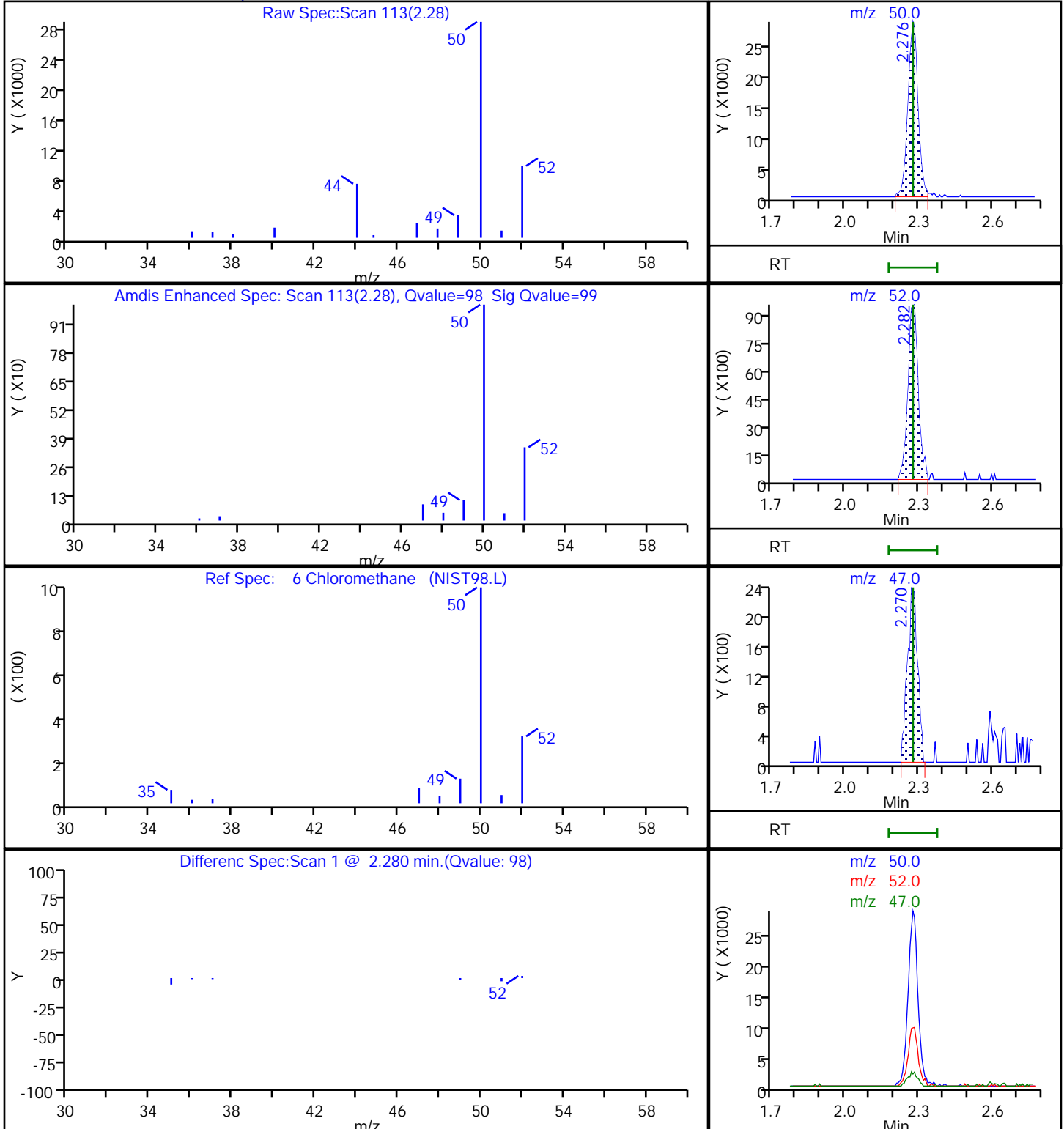
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

6 Chloromethane, CAS: 74-87-3



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S16.D

Injection Date: 31-Aug-2020 00:57:30

Instrument ID: 19094

Lims ID: 410-11876-A-8

Lab Sample ID: 410-11876-8

Client ID: HD-COD-SW-17-0/1-0

Operator ID: mec29284

ALS Bottle#: 22

Worklist Smp#: 23

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

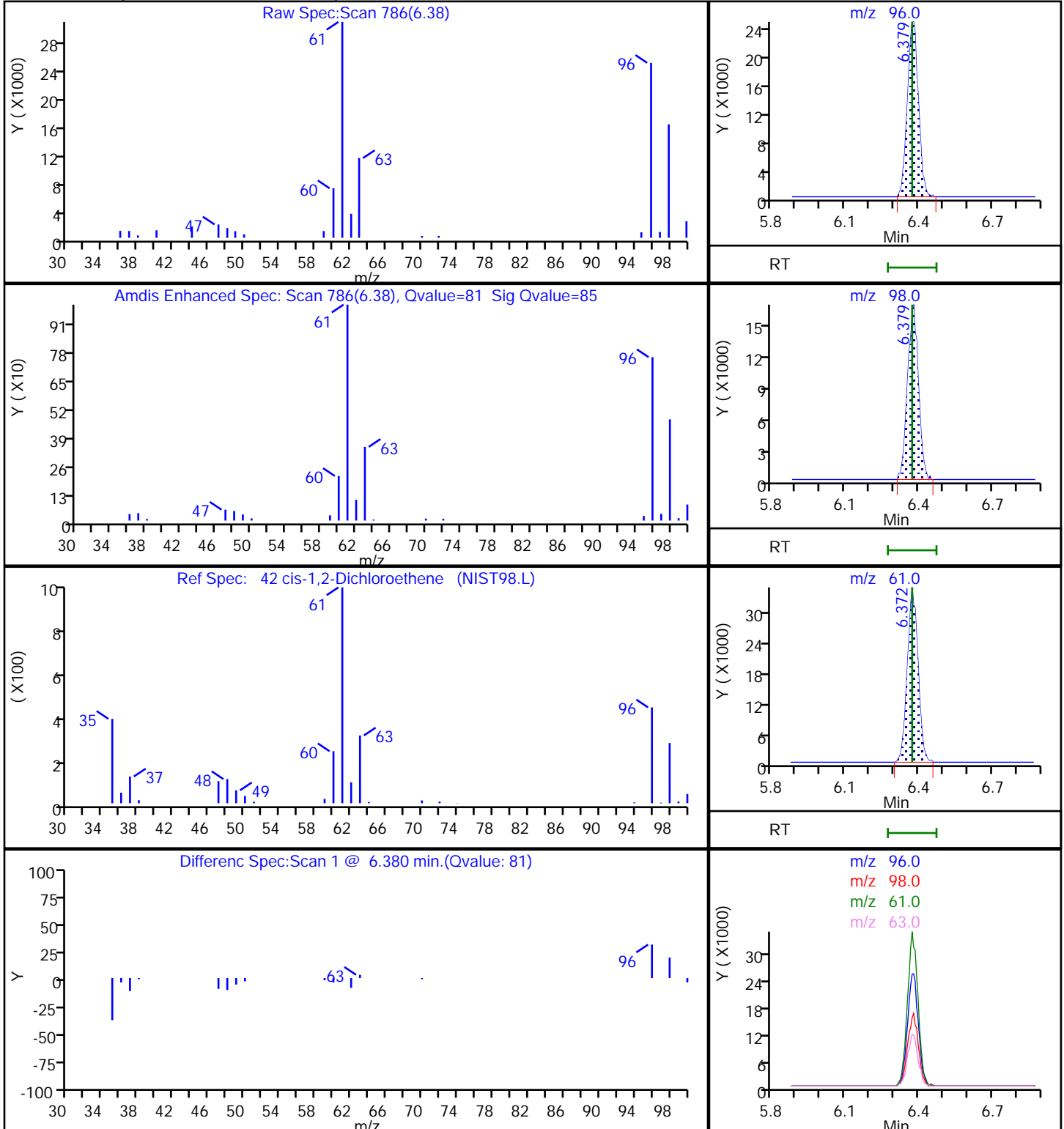
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

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



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S16.D

Injection Date: 31-Aug-2020 00:57:30

Instrument ID: 19094

Lims ID: 410-11876-A-8

Lab Sample ID: 410-11876-8

Client ID: HD-COD-SW-17-0/1-0

Operator ID: mec29284

ALS Bottle#: 22

Worklist Smp#: 23

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

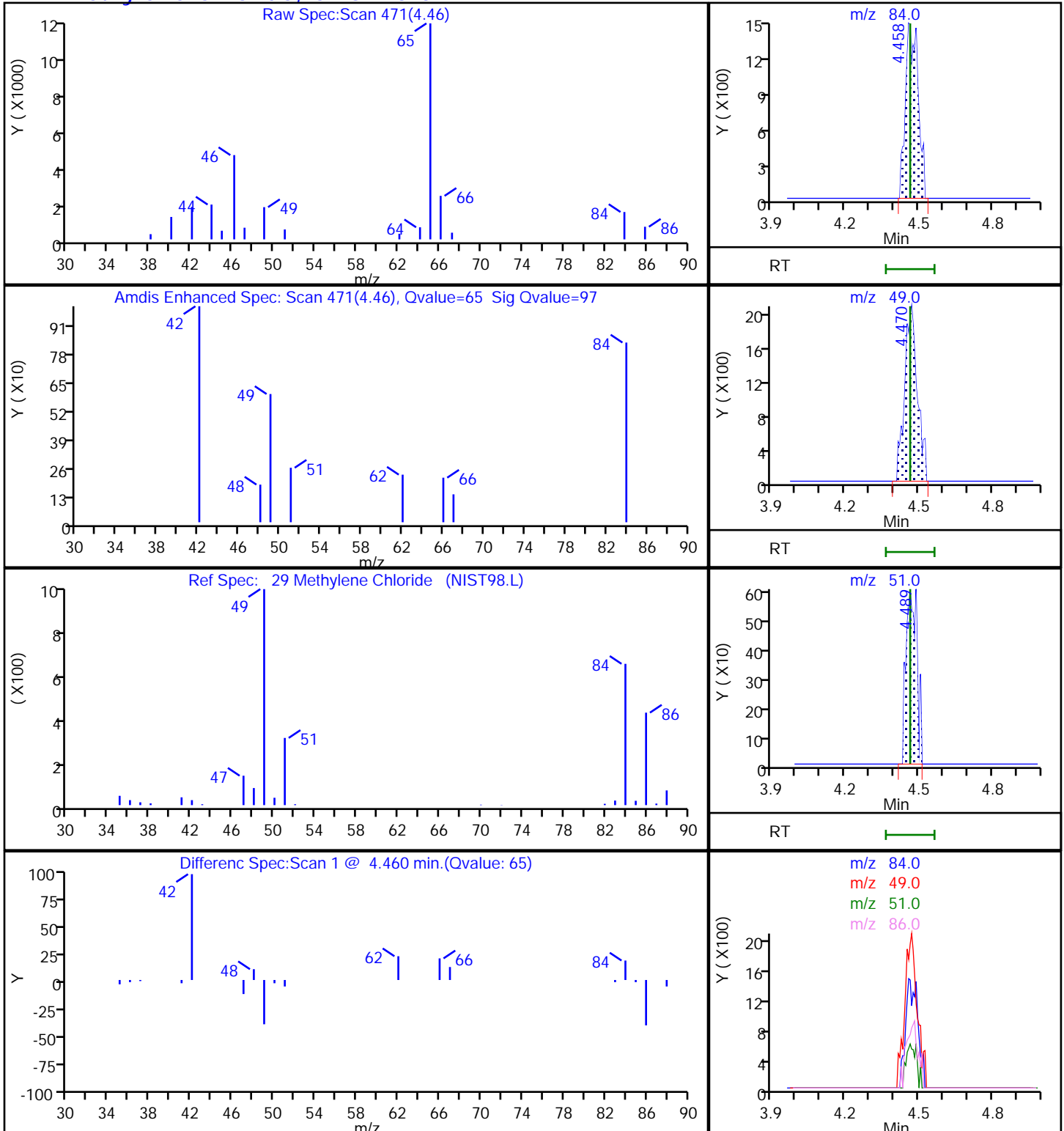
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

29 Methylene Chloride, CAS: 75-09-2



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S16.D

Injection Date: 31-Aug-2020 00:57:30

Instrument ID: 19094

Lims ID: 410-11876-A-8

Lab Sample ID: 410-11876-8

Client ID: HD-COD-SW-17-0/1-0

Operator ID: mec29284

ALS Bottle#: 22

Worklist Smp#: 23

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

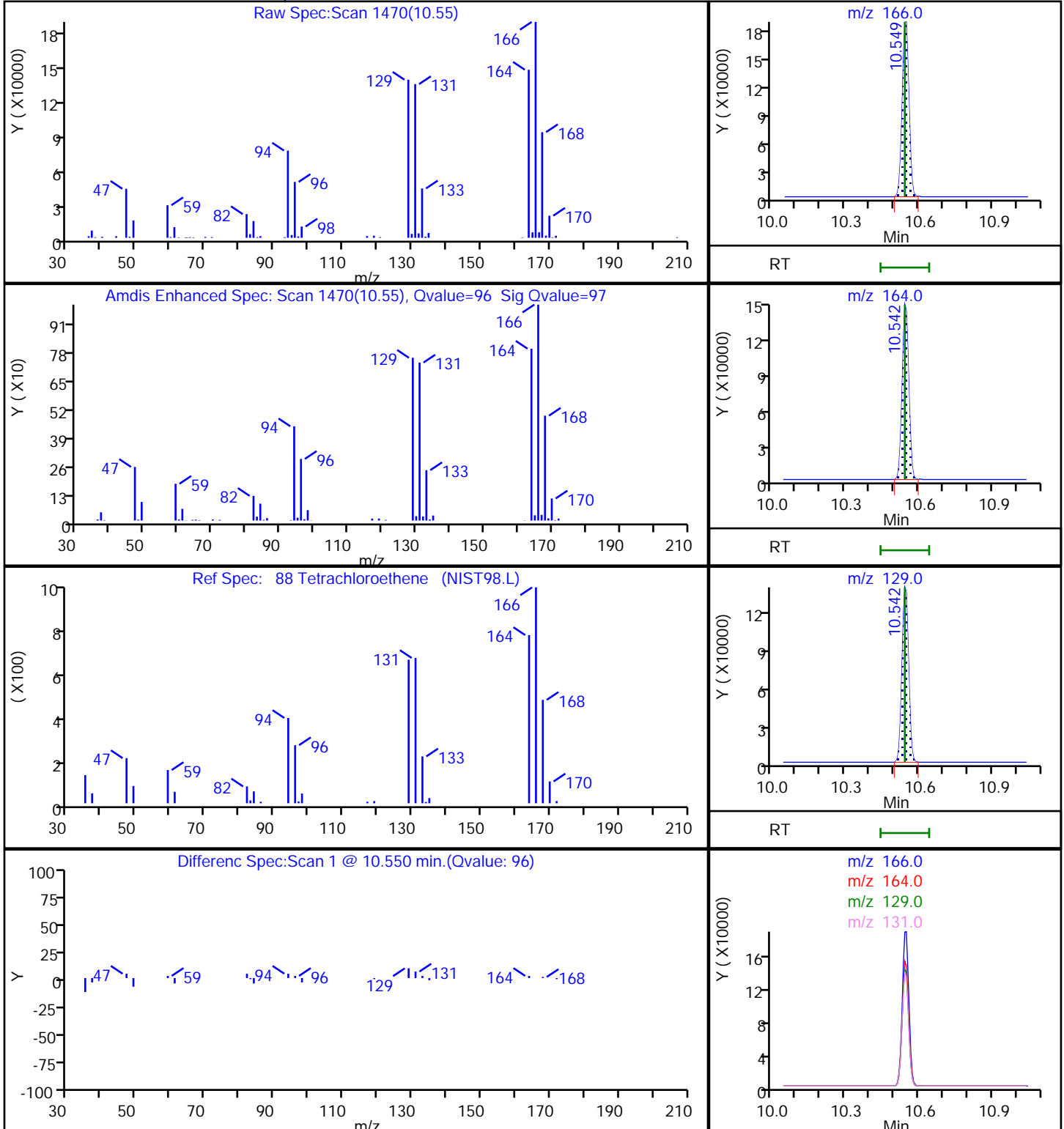
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

88 Tetrachloroethene, CAS: 127-18-4



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S16.D

Injection Date: 31-Aug-2020 00:57:30

Instrument ID: 19094

Lims ID: 410-11876-A-8

Lab Sample ID: 410-11876-8

Client ID: HD-COD-SW-17-0/1-0

Operator ID: mec29284

ALS Bottle#: 22

Worklist Smp#: 23

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

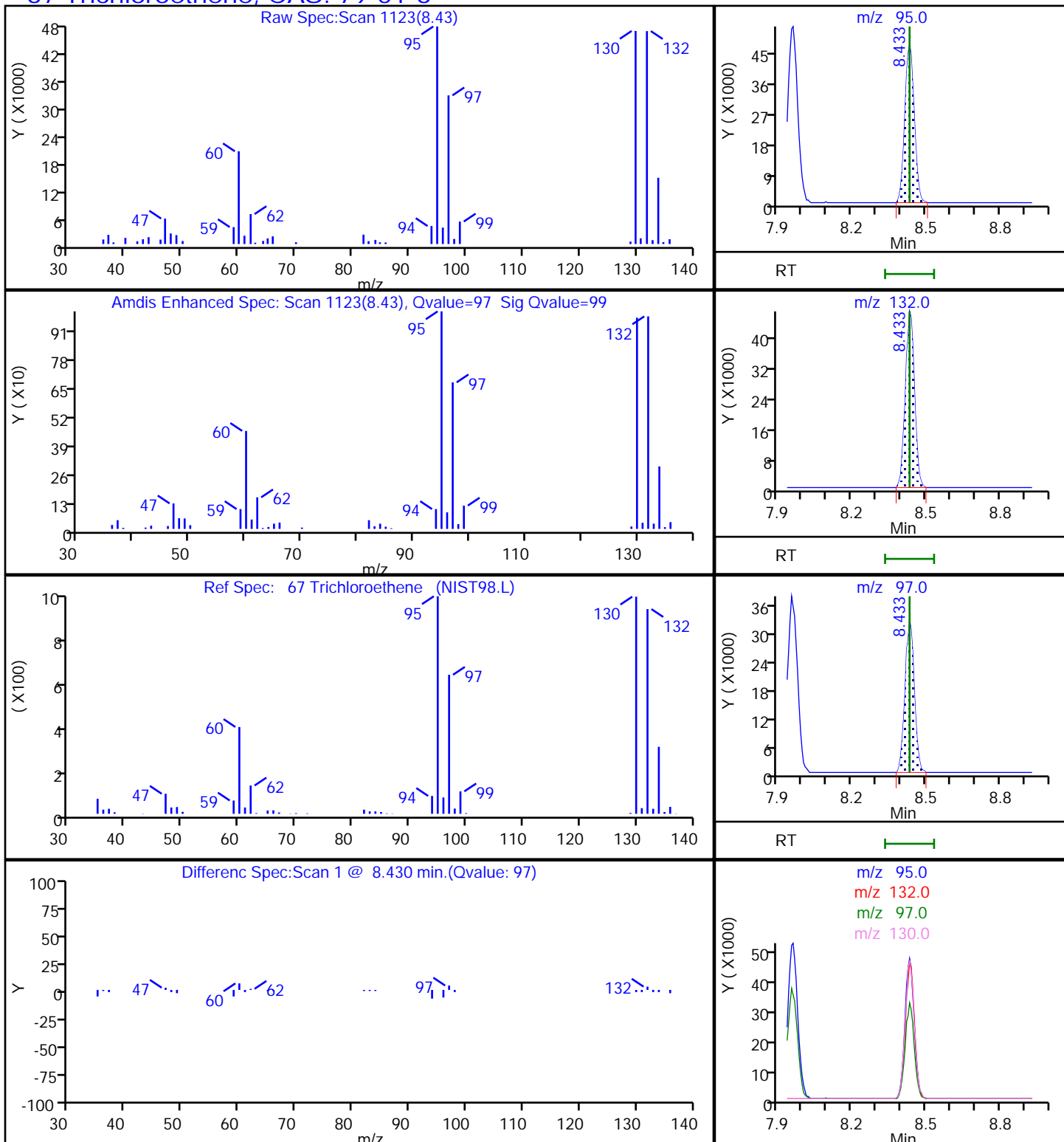
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

67 Trichloroethene, CAS: 79-01-6



Eurofins Lancaster Laboratories Env, LLC

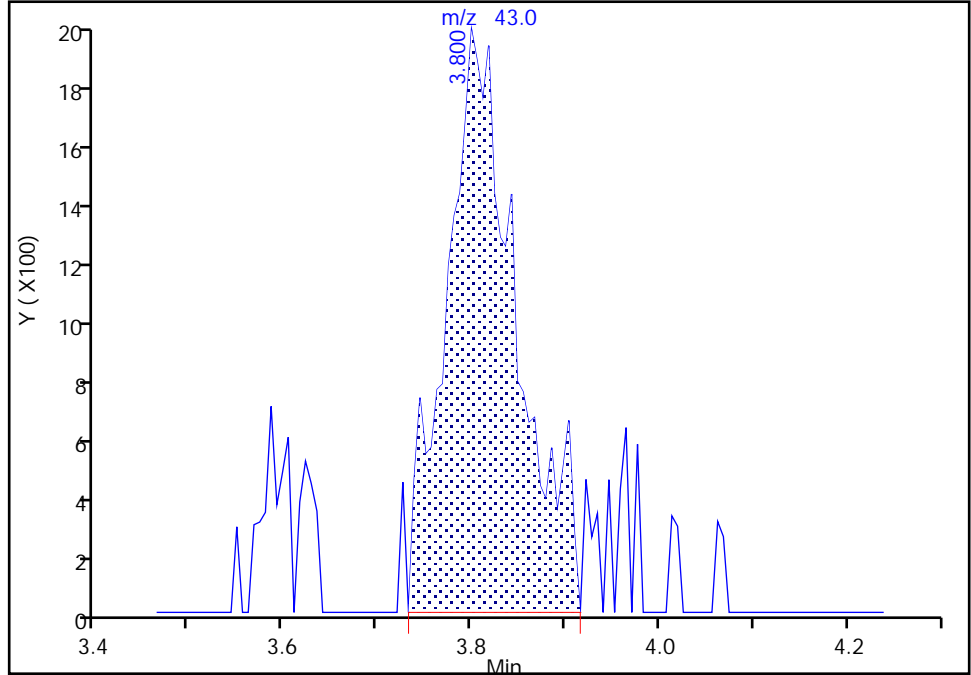
Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S16.D
Injection Date: 31-Aug-2020 00:57:30 Instrument ID: 19094
Lims ID: 410-11876-A-8 Lab Sample ID: 410-11876-8
Client ID: HD-COD-SW-17-0/1-0
Operator ID: mec29284 ALS Bottle#: 22 Worklist Smp#: 23
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

19 Acetone, CAS: 67-64-1

Signal: 1

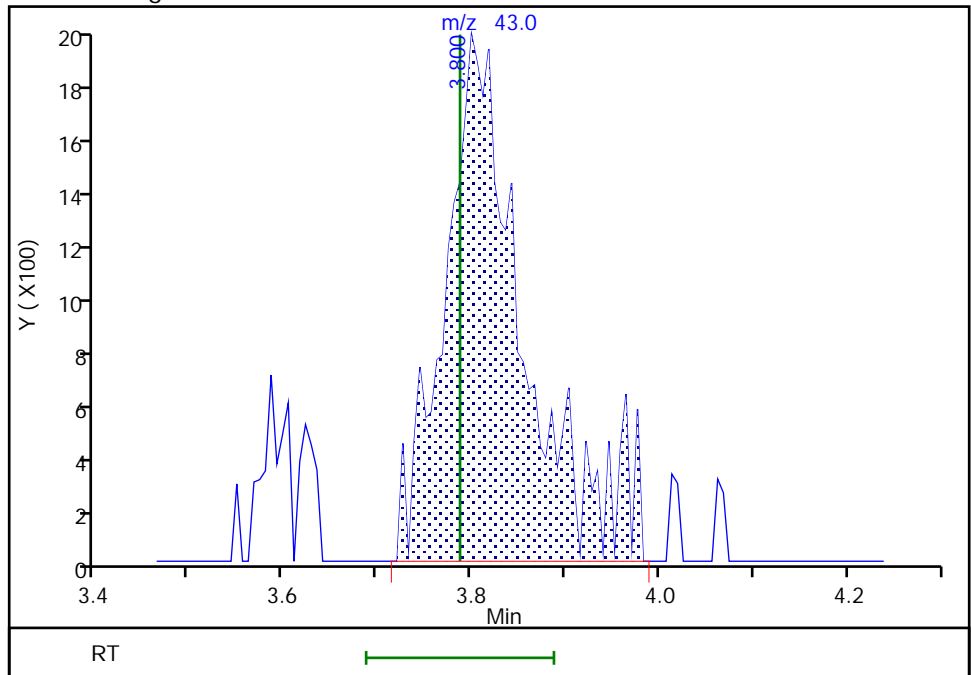
RT: 3.80
Area: 10286
Amount: 1.144758
Amount Units: ug/l

Processing Integration Results



RT: 3.80
Area: 11580
Amount: 1.288771
Amount Units: ug/l

Manual Integration Results



Reviewer: virayd, 31-Aug-2020 13:19:42
Audit Action: Manually Integrated

Audit Reason: Other

Eurofins Lancaster Laboratories Env, LLC

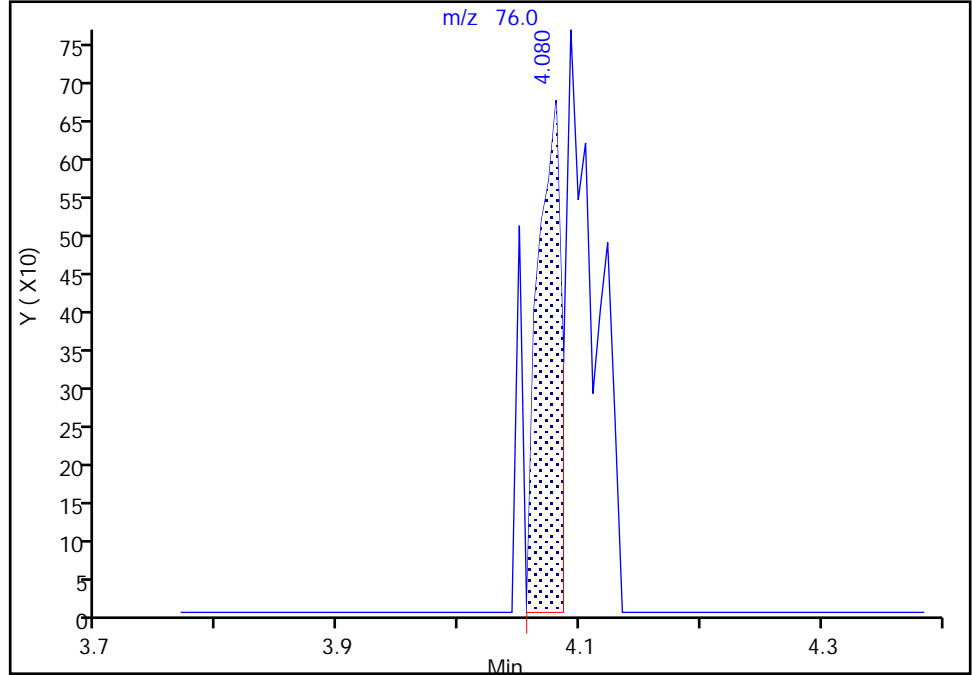
Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S16.D
Injection Date: 31-Aug-2020 00:57:30 Instrument ID: 19094
Lims ID: 410-11876-A-8 Lab Sample ID: 410-11876-8
Client ID: HD-COD-SW-17-0/1-0
Operator ID: mec29284 ALS Bottle#: 22 Worklist Smp#: 23
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

24 Carbon disulfide, CAS: 75-15-0

Signal: 1

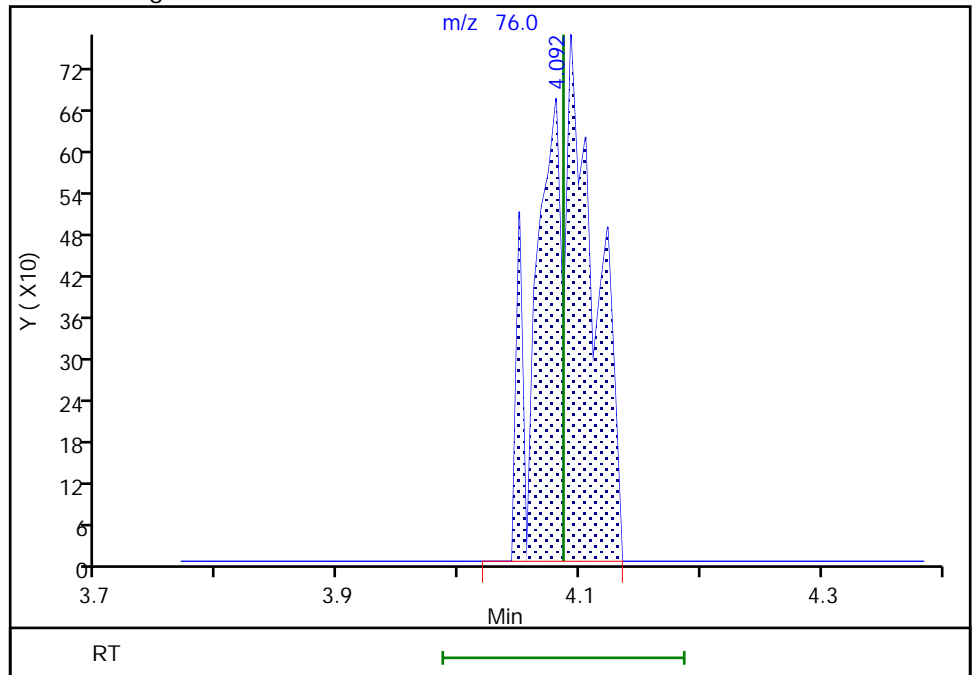
RT: 4.08
Area: 909
Amount: 0.007560
Amount Units: ug/l

Processing Integration Results



RT: 4.09
Area: 2322
Amount: 0.019313
Amount Units: ug/l

Manual Integration Results



Reviewer: virayd, 31-Aug-2020 13:19:45
Audit Action: Manually Integrated

Audit Reason: Other

Eurofins Lancaster Laboratories Env, LLC

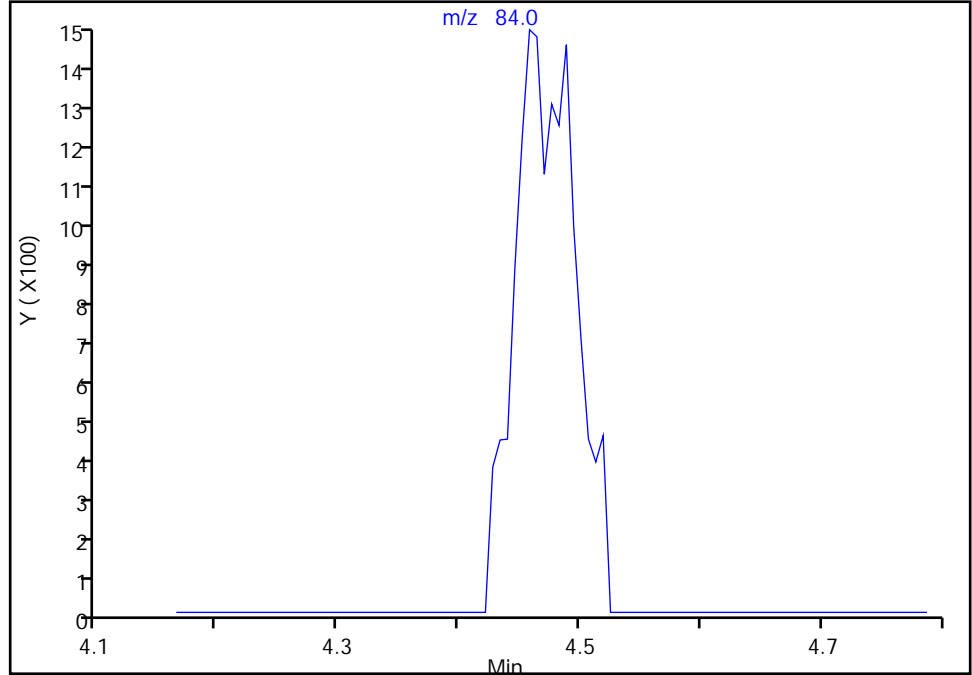
Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S16.D
Injection Date: 31-Aug-2020 00:57:30 Instrument ID: 19094
Lims ID: 410-11876-A-8 Lab Sample ID: 410-11876-8
Client ID: HD-COD-SW-17-0/1-0
Operator ID: mec29284 ALS Bottle#: 22 Worklist Smp#: 23
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

29 Methylene Chloride, CAS: 75-09-2

Signal: 1

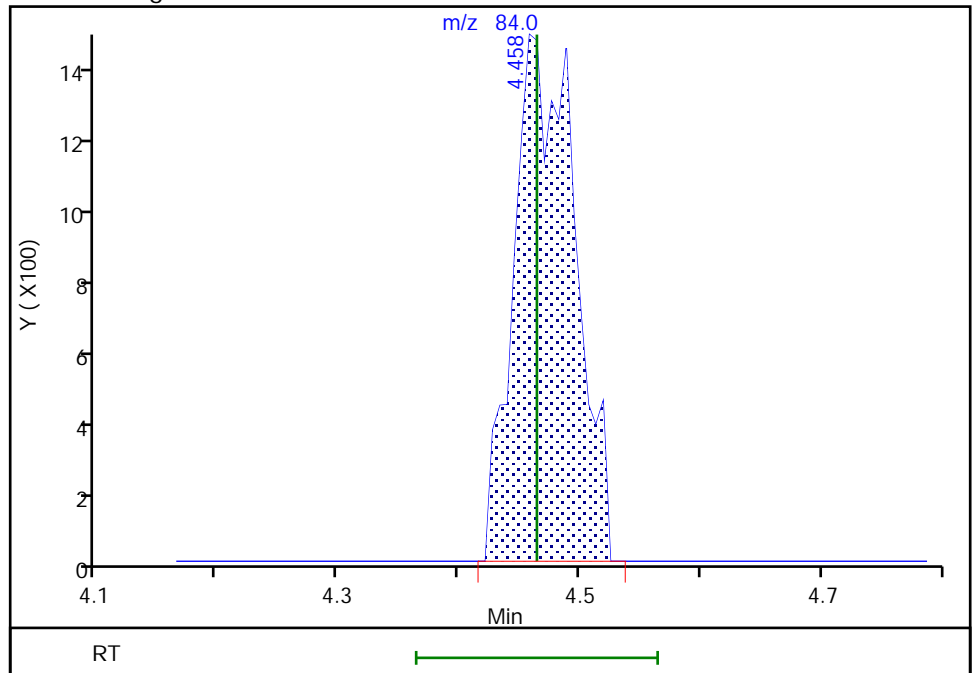
Not Detected
Expected RT: 4.46

Processing Integration Results



Manual Integration Results

RT: 4.46
Area: 5228
Amount: 0.121223
Amount Units: ug/l



Reviewer: virayd, 31-Aug-2020 13:19:50
Audit Action: Assigned Compound ID

Audit Reason: Other

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-26-0/1-0 Lab Sample ID: 410-11876-9
 Matrix: Water Lab File ID: HG30S17.D
 Analysis Method: 8260C LL Date Collected: 08/25/2020 10:35
 Sample wt/vol: 25 (mL) Date Analyzed: 08/31/2020 01:18
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 38982 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.50	0.070
71-55-6	1,1,1-Trichloroethane	ND		0.50	0.060
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.50	0.070
79-00-5	1,1,2-Trichloroethane	ND		0.50	0.060
75-34-3	1,1-Dichloroethane	ND		0.50	0.070
75-35-4	1,1-Dichloroethene	0.18	J	0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	ND		0.50	0.060
107-06-2	1,2-Dichloroethane	ND		0.50	0.050
78-87-5	1,2-Dichloropropane	ND		0.50	0.060
78-93-3	2-Butanone (MEK)	ND		5.0	0.60
591-78-6	2-Hexanone	ND		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70
67-64-1	Acetone	1.8	J	5.0	0.90
107-13-1	Acrylonitrile	ND		5.0	0.40
71-43-2	Benzene	ND		0.50	0.050
74-97-5	Bromochloromethane	ND		0.50	0.050
75-27-4	Bromodichloromethane	ND		0.50	0.050
75-25-2	Bromoform	ND		1.0	0.30
74-83-9	Bromomethane	ND		0.50	0.070
75-15-0	Carbon disulfide	ND		1.0	0.060
56-23-5	Carbon tetrachloride	ND		0.50	0.070
108-90-7	Chlorobenzene	ND		0.50	0.060
75-00-3	Chloroethane	ND		0.50	0.070
67-66-3	Chloroform	0.76		0.50	0.090
74-87-3	Chloromethane	0.43	J	0.50	0.060
156-59-2	cis-1,2-Dichloroethene	0.075	J	0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	ND		0.50	0.050
124-48-1	Dibromochloromethane	ND		0.50	0.070
100-41-4	Ethylbenzene	ND		0.50	0.060
1634-04-4	Methyl tert-butyl ether	ND		0.50	0.050
75-09-2	Methylene Chloride	0.14	J	0.50	0.070
100-42-5	Styrene	ND		0.50	0.050
127-18-4	Tetrachloroethene	3.9		0.50	0.060
108-88-3	Toluene	ND		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	ND		0.50	0.060
10061-02-6	trans-1,3-Dichloropropene	ND		0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-26-0/1-0 Lab Sample ID: 410-11876-9
 Matrix: Water Lab File ID: HG30S17.D
 Analysis Method: 8260C LL Date Collected: 08/25/2020 10:35
 Sample wt/vol: 25 (mL) Date Analyzed: 08/31/2020 01:18
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 38982 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	0.19	J	0.50	0.060
75-01-4	Vinyl chloride	ND		0.50	0.10
1330-20-7	Xylenes, Total	ND		1.0	0.15

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	112		80-120
1868-53-7	Dibromofluoromethane (Surr)	112		80-120
2037-26-5	Toluene-d8 (Surr)	98		80-120
460-00-4	4-Bromofluorobenzene (Surr)	96		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S17.D
 Lims ID: 410-11876-A-9
 Client ID: HD-COD-SW-26-0/1-0
 Sample Type: Client
 Inject. Date: 31-Aug-2020 01:18:30 ALS Bottle#: 23 Worklist Smp#: 24
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: 410-11876-A-9
 Misc. Info.: 410-0009349-024
 Operator ID: mec29284 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 31-Aug-2020 13:23:49 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1008

First Level Reviewer: virayd Date: 31-Aug-2020 13:21:14

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
6 Chloromethane	50	2.282	2.276	0.006	98	31247	0.4280	
7 Vinyl chloride	62		2.385				ND	
9 Bromomethane	94		2.745				ND	
10 Chloroethane	64		2.837				ND	
18 1,1-Dichloroethene	96	3.757	3.757	0.000	95	6789	0.1782	
19 Acetone	43	3.794	3.788	0.006	98	16154	1.77	
24 Carbon disulfide	76		4.086				ND	
29 Methylene Chloride	84	4.464	4.464	0.000	87	6381	0.1407	
* 28 t-Butyl alcohol-d10 (IS)	65	4.477	4.477	0.001	0	129545	50.0	
31 Acrylonitrile	53		4.806				ND	
32 Methyl tert-butyl ether	73		4.873				ND	
33 trans-1,2-Dichloroethene	96		4.891				ND	
35 1,1-Dichloroethane	63		5.549				ND	
41 2-Butanone (MEK)	43		6.330				ND	
42 cis-1,2-Dichloroethene	96	6.379	6.372	0.007	74	3705	0.0746	Ma
48 Chlorobromomethane	128		6.702				ND	
50 Chloroform	83	6.854	6.854	0.000	93	59252	0.7601	
\$ 51 Dibromofluoromethane (Surr)	113	7.068	7.061	0.007	93	457251	11.2	
52 1,1,1-Trichloroethane	97	7.086	7.086	0.000	35	2717	0.0406	
56 Carbon tetrachloride	117		7.293				ND	
\$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.525	7.519	0.006	0	93436	11.2	
59 Benzene	78		7.555				ND	
60 1,2-Dichloroethane	62		7.622				ND	
* 65 Fluorobenzene (IS)	96	7.958	7.951	0.007	98	1731559	10.0	
67 Trichloroethene	95	8.433	8.433	0.000	94	8739	0.1868	
70 1,2-Dichloropropane	63		8.768				ND	
75 Dichlorobromomethane	83	9.104	9.110	-0.006	1	1762	0.0325	
80 cis-1,3-Dichloropropene	75		9.634				ND	
81 4-Methyl-2-pentanone (MIBK)	43		9.793				ND	
\$ 82 Toluene-d8 (Surr)	98	9.933	9.933	0.000	94	1677415	9.80	
83 Toluene	92	10.006	10.012	-0.006	96	3660	0.0306	

Compound	Sig	RT (min.)	Exp RT (min.)	Diff RT (min.)	Q	Response	OnCol Amt ug/l	Flags
85 trans-1,3-Dichloropropene	75		10.256				ND	
87 1,1,2-Trichloroethane	97		10.457				ND	
88 Tetrachloroethene	166	10.549	10.542	0.007	96	200561	3.95	
91 2-Hexanone	43		10.658				ND	
93 Chlorodibromomethane	129		10.829				ND	
94 Ethylene Dibromide	107		10.945				ND	
S 95 Xylenes, Total	106		11.245				ND	
* 97 Chlorobenzene-d5 (IS)	117	11.365	11.365	0.000	87	1275911	10.0	
98 Chlorobenzene	112		11.390				ND	
99 1,1,1,2-Tetrachloroethane	131		11.469				ND	
100 Ethylbenzene	91		11.475				ND	
101 m-Xylene & p-Xylene	106		11.585				ND	
102 o-Xylene	106		11.914				ND	
103 Styrene	104		11.926				ND	
104 Bromoform	173		12.091				ND	
\$ 108 4-Bromofluorobenzene (Surr)	95	12.353	12.353	0.000	88	598632	9.58	
109 1,1,2,2-Tetrachloroethane	83		12.451				ND	
* 124 1,4-Dichlorobenzene-d4	152	13.231	13.231	0.000	96	638104	10.0	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_30_826ISS_00005

Amount Added: 5.00

Units: uL

Run Reagent

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S17.D

Injection Date: 31-Aug-2020 01:18:30

Instrument ID: 19094

Operator ID: mec29284

Lims ID: 410-11876-A-9

Lab Sample ID: 410-11876-9

Worklist Smp#: 24

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

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

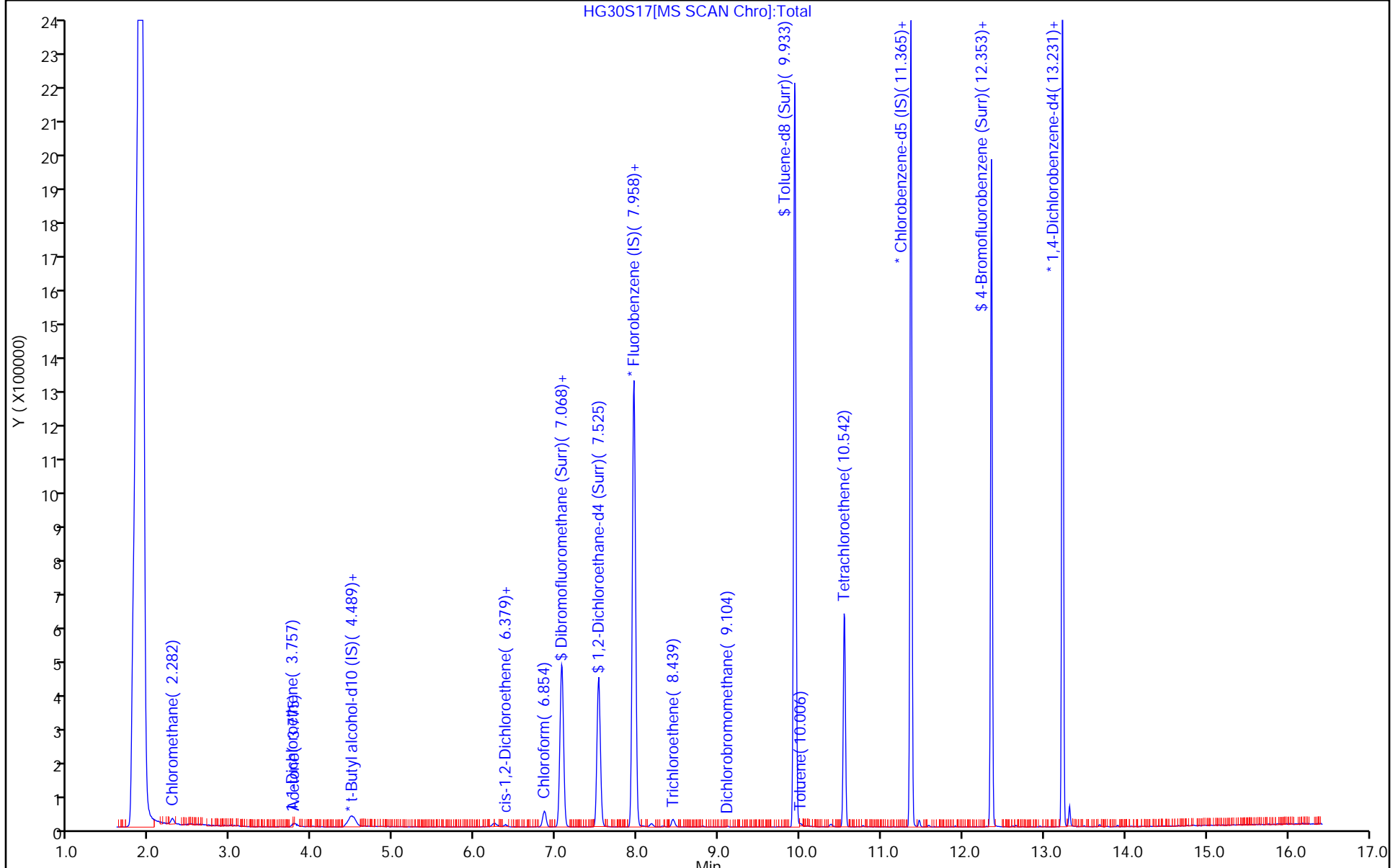
ALS Bottle#: 23

Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S17.D
 Lims ID: 410-11876-A-9
 Client ID: HD-COD-SW-26-0/1-0
 Sample Type: Client
 Inject. Date: 31-Aug-2020 01:18:30 ALS Bottle#: 23 Worklist Smp#: 24
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: 410-11876-A-9
 Misc. Info.: 410-0009349-024
 Operator ID: mec29284 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 31-Aug-2020 13:23:49 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1008

First Level Reviewer: virayd

Date: 31-Aug-2020 13:21:14

Compound	Amount Added	Amount Recovered	% Rec.
\$ 51 Dibromofluoromethane (Surr)	10.0	11.2	111.70
\$ 58 1,2-Dichloroethane-d4 (Surr)	10.0	11.2	112.04
\$ 82 Toluene-d8 (Surr)	10.0	9.80	97.97
\$ 108 4-Bromofluorobenzene (Surr)	10.0	9.58	95.84

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S17.D

Injection Date: 31-Aug-2020 01:18:30

Instrument ID: 19094

Lims ID: 410-11876-A-9

Lab Sample ID: 410-11876-9

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

Operator ID: mec29284

ALS Bottle#: 23

Worklist Smp#: 24

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

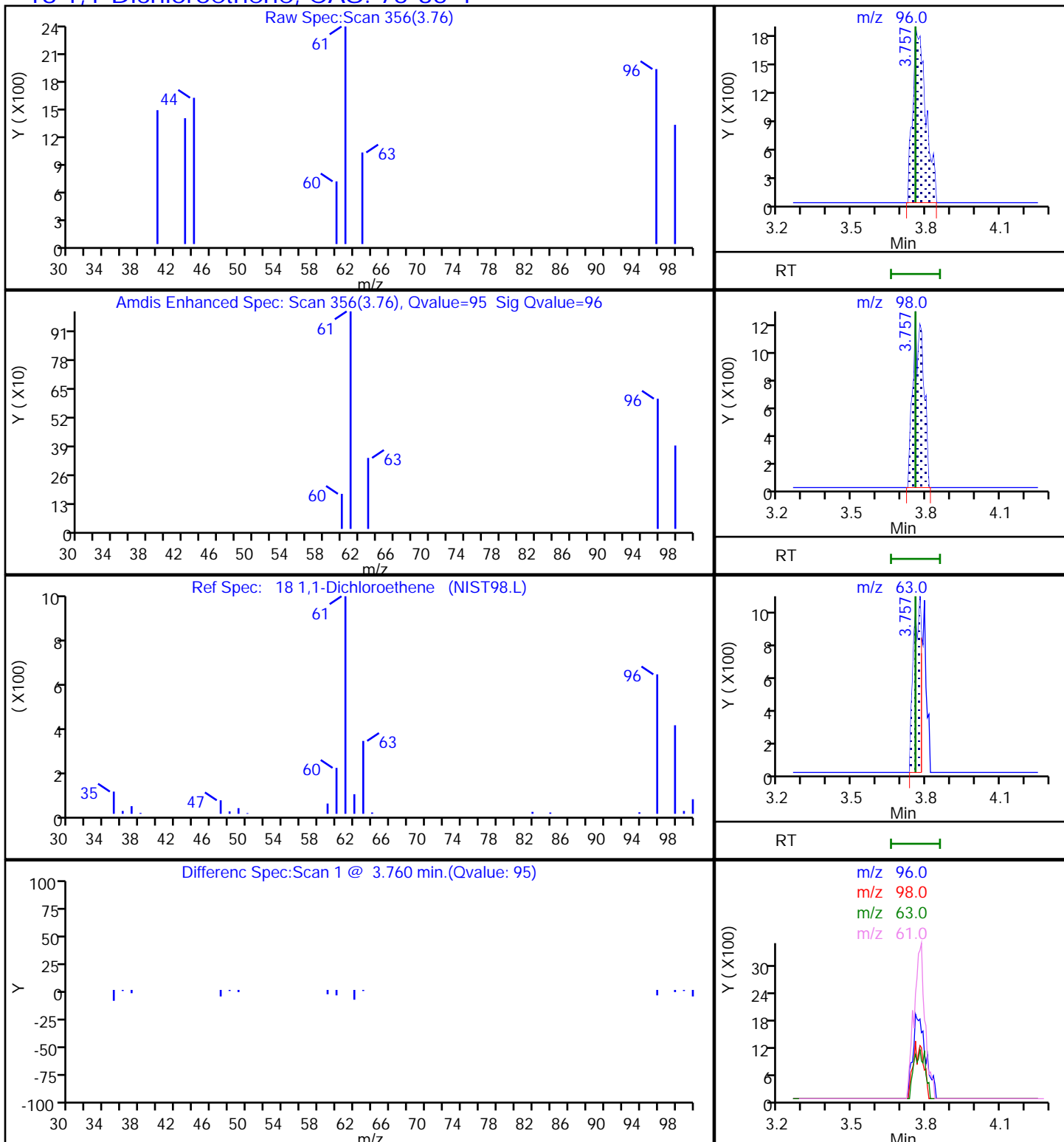
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

18 1,1-Dichloroethene, CAS: 75-35-4



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S17.D

Injection Date: 31-Aug-2020 01:18:30

Instrument ID: 19094

Lims ID: 410-11876-A-9

Lab Sample ID: 410-11876-9

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

Operator ID: mec29284

ALS Bottle#: 23

Worklist Smp#: 24

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

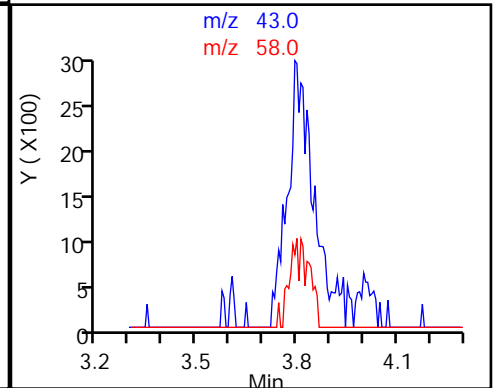
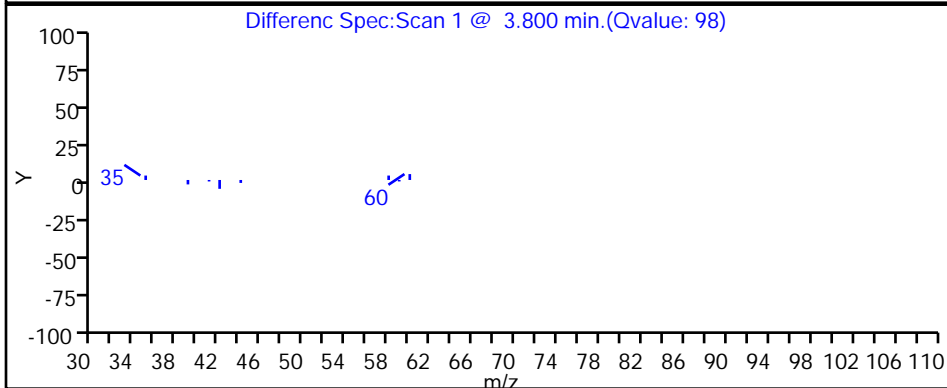
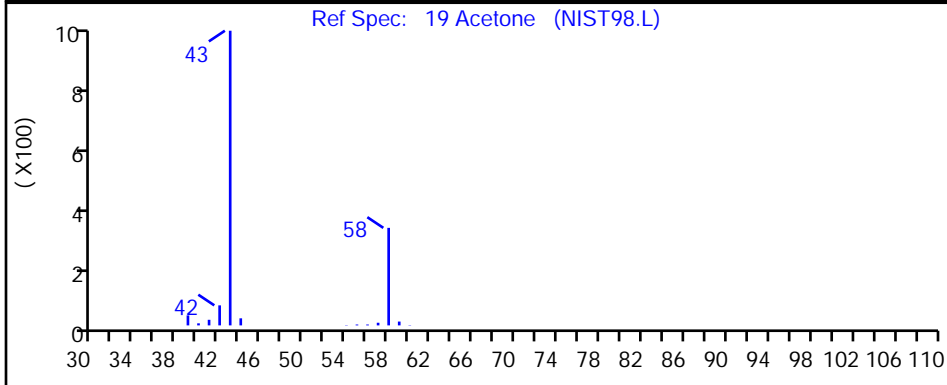
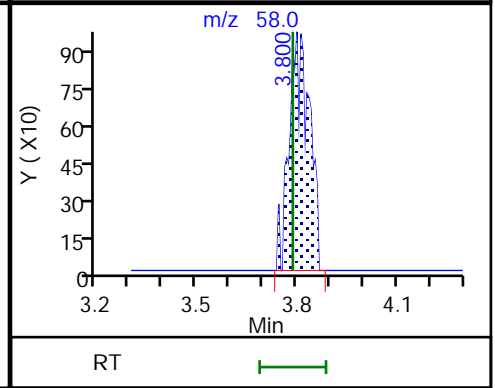
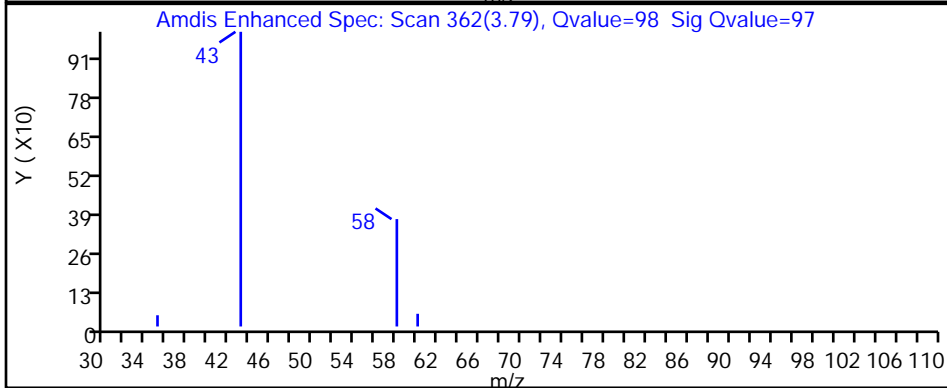
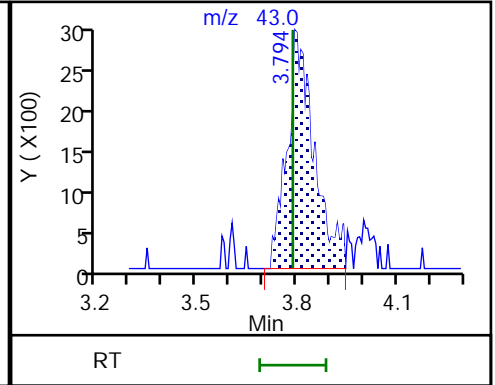
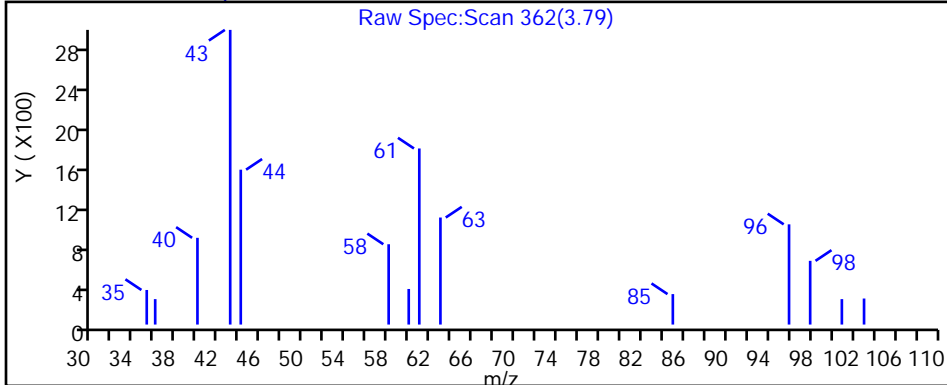
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

19 Acetone, CAS: 67-64-1



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S17.D

Injection Date: 31-Aug-2020 01:18:30

Instrument ID: 19094

Lims ID: 410-11876-A-9

Lab Sample ID: 410-11876-9

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

Operator ID: mec29284

ALS Bottle#: 23

Worklist Smp#: 24

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

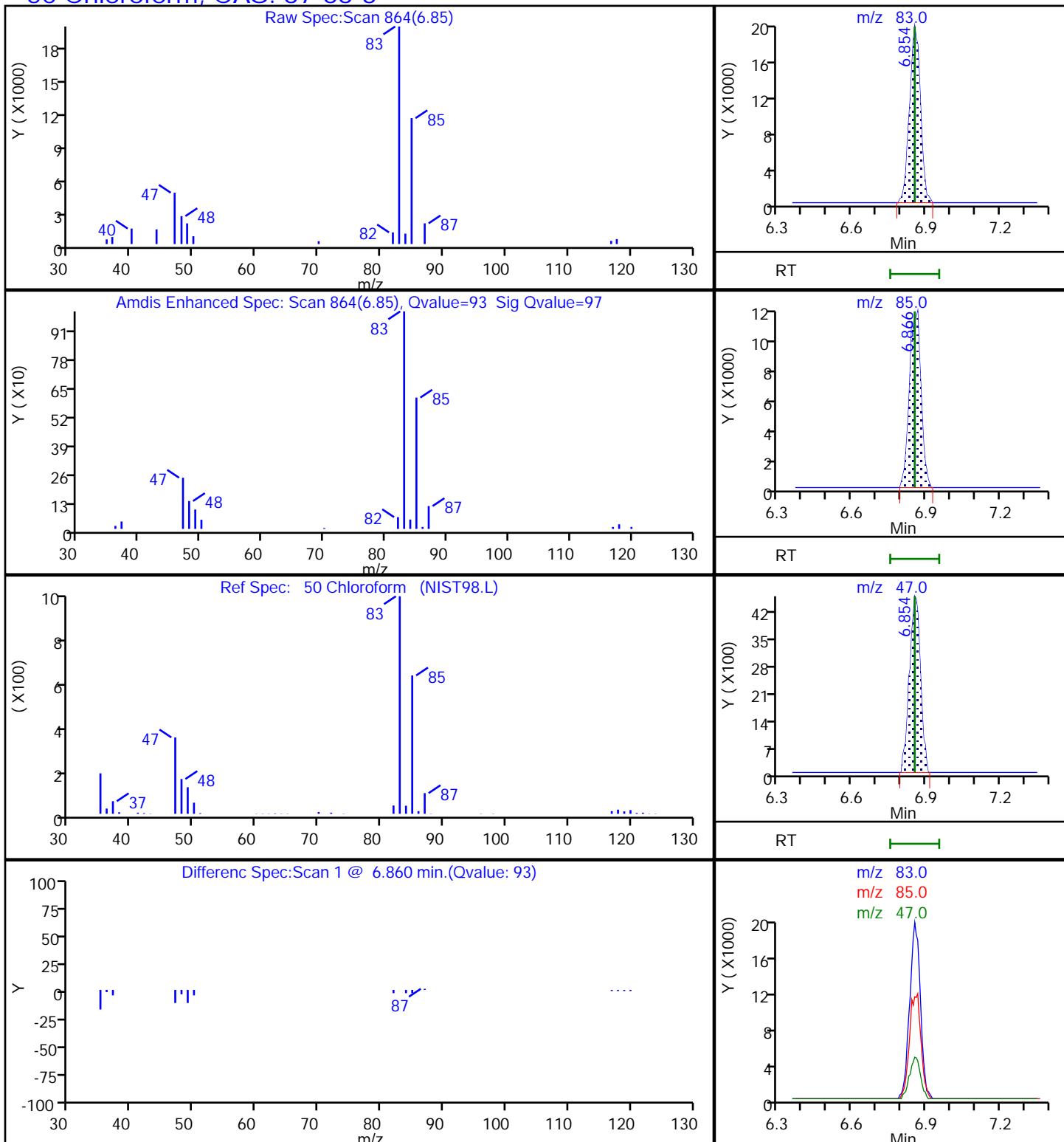
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

50 Chloroform, CAS: 67-66-3



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S17.D

Injection Date: 31-Aug-2020 01:18:30

Instrument ID: 19094

Lims ID: 410-11876-A-9

Lab Sample ID: 410-11876-9

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

Operator ID: mec29284

ALS Bottle#: 23

Worklist Smp#: 24

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

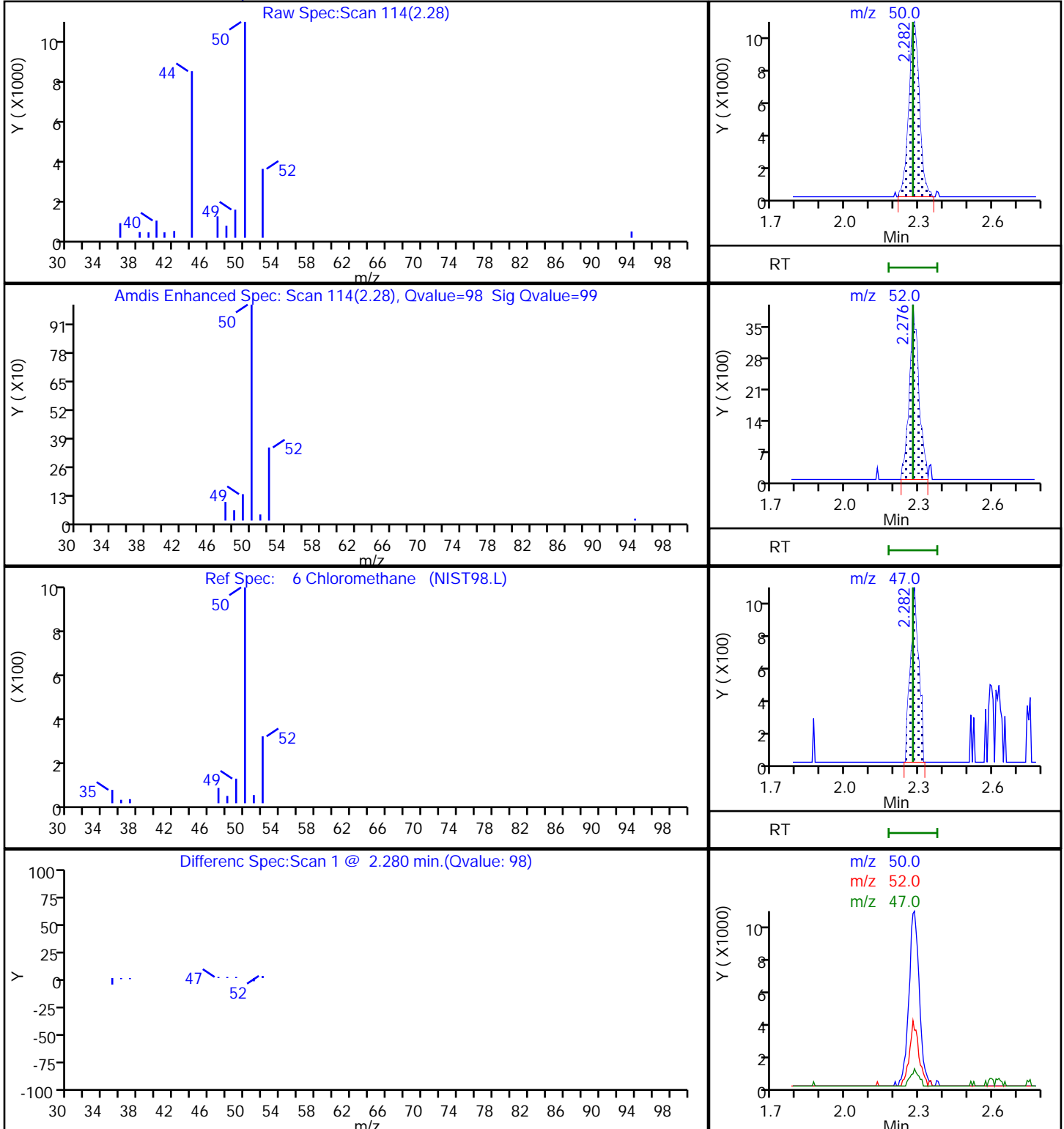
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

6 Chloromethane, CAS: 74-87-3



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S17.D

Injection Date: 31-Aug-2020 01:18:30

Instrument ID: 19094

Lims ID: 410-11876-A-9

Lab Sample ID: 410-11876-9

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

Operator ID: mec29284

ALS Bottle#: 23

Worklist Smp#: 24

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

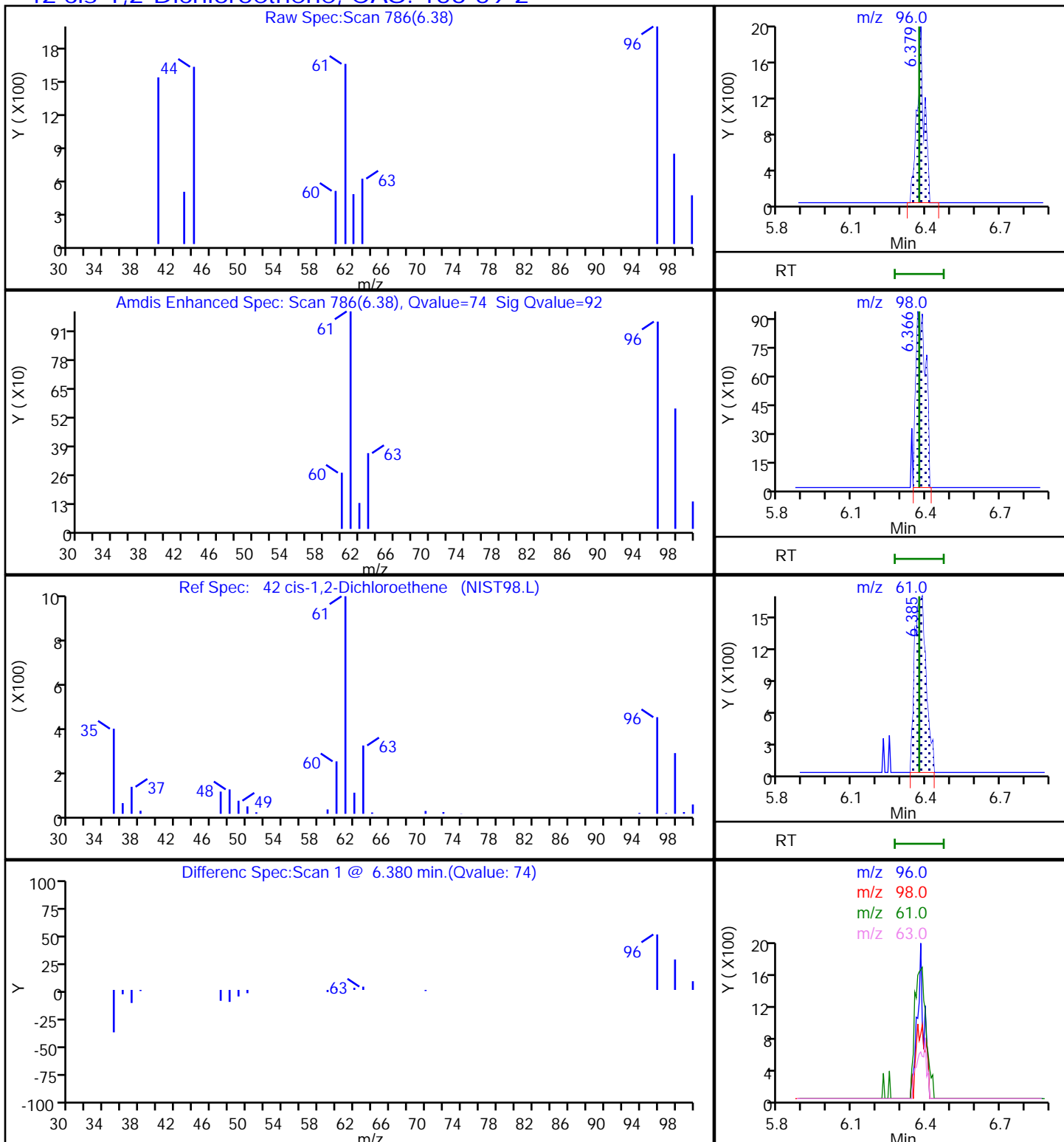
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID) x 30m

MS Quad

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



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S17.D

Injection Date: 31-Aug-2020 01:18:30

Instrument ID: 19094

Lims ID: 410-11876-A-9

Lab Sample ID: 410-11876-9

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

Operator ID: mec29284

ALS Bottle#: 23

Worklist Smp#: 24

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

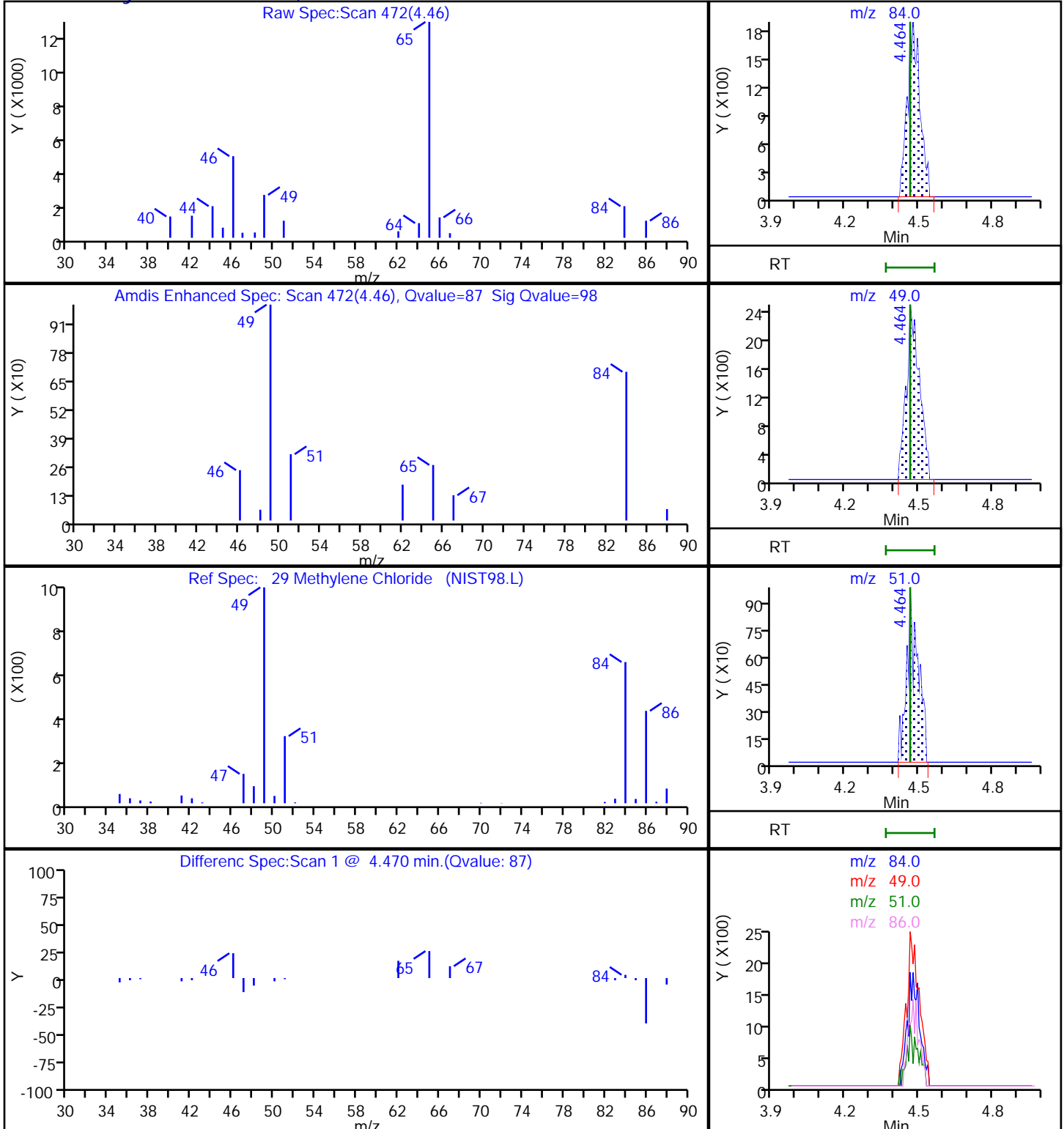
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

29 Methylene Chloride, CAS: 75-09-2



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S17.D

Injection Date: 31-Aug-2020 01:18:30

Instrument ID: 19094

Lims ID: 410-11876-A-9

Lab Sample ID: 410-11876-9

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

Operator ID: mec29284

ALS Bottle#: 23

Worklist Smp#: 24

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

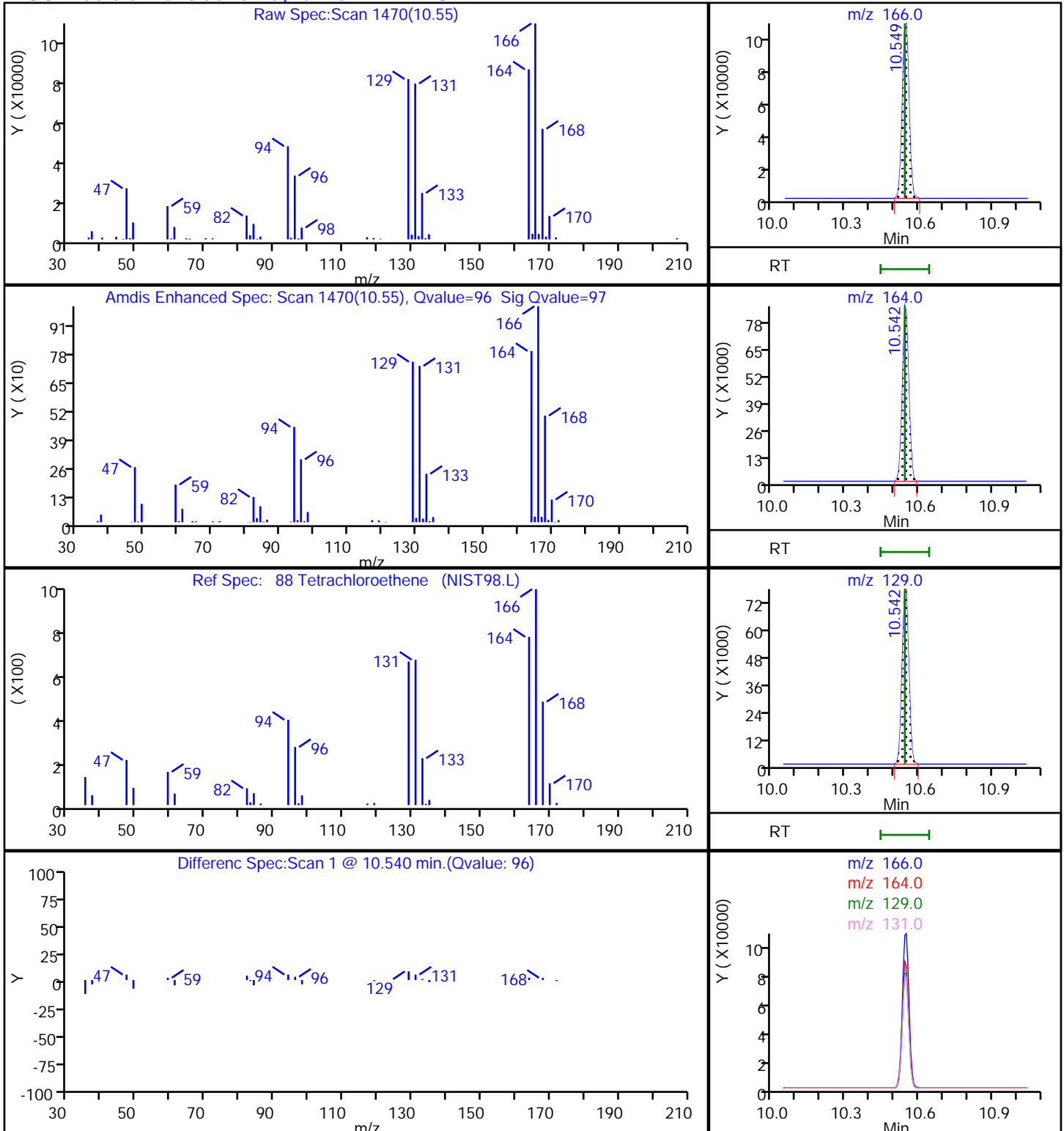
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

88 Tetrachloroethene, CAS: 127-18-4



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S17.D

Injection Date: 31-Aug-2020 01:18:30

Instrument ID: 19094

Lims ID: 410-11876-A-9

Lab Sample ID: 410-11876-9

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

Operator ID: mec29284

ALS Bottle#: 23

Worklist Smp#: 24

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

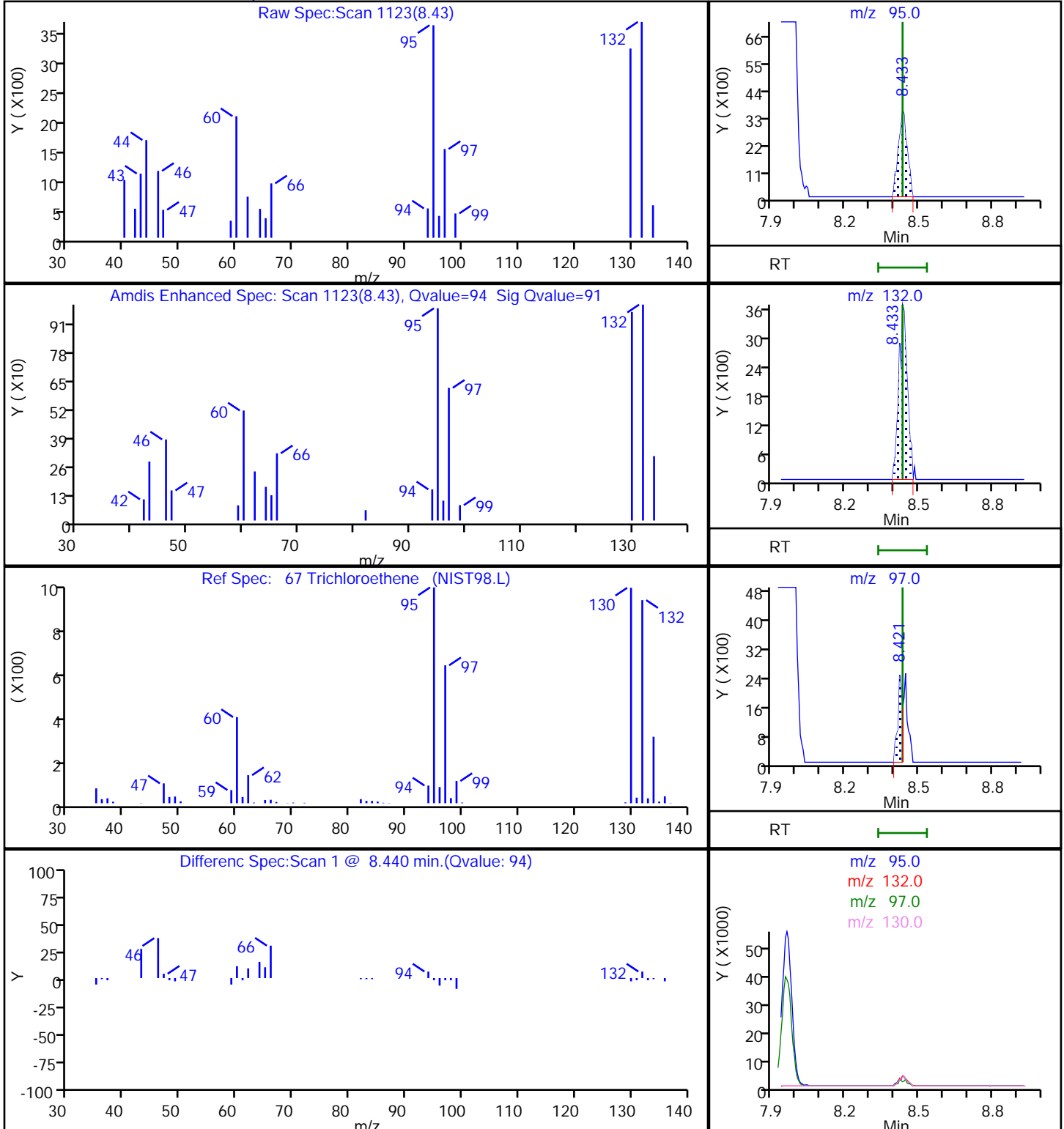
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

67 Trichloroethene, CAS: 79-01-6



Eurofins Lancaster Laboratories Env, LLC

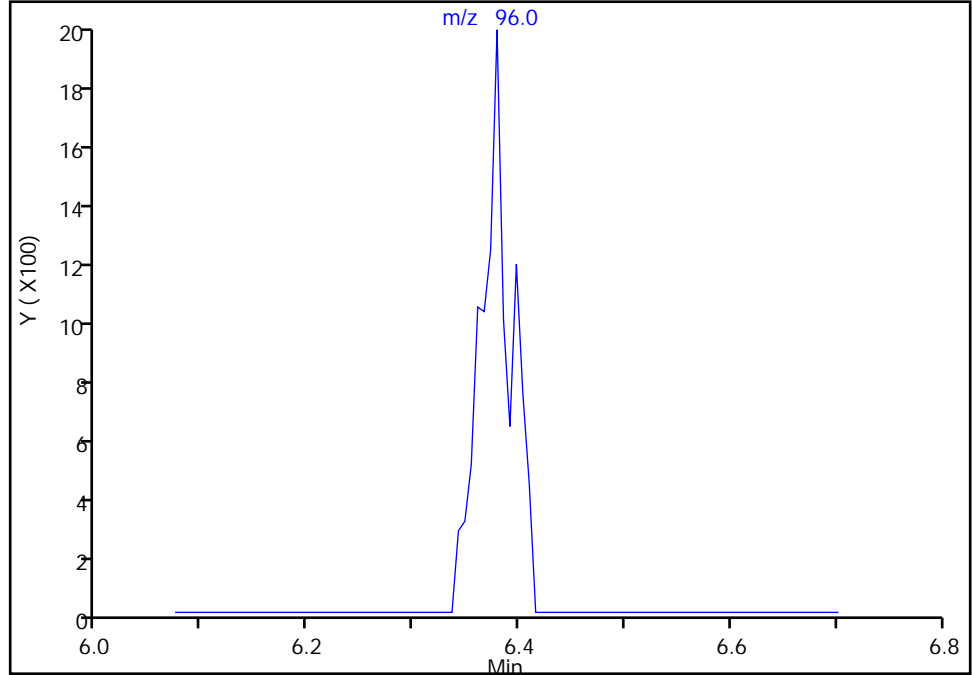
Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S17.D
Injection Date: 31-Aug-2020 01:18:30 Instrument ID: 19094
Lims ID: 410-11876-A-9 Lab Sample ID: 410-11876-9
Client ID: HD-COD-SW-26-0/1-0
Operator ID: mec29284 ALS Bottle#: 23 Worklist Smp#: 24
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

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

Signal: 1

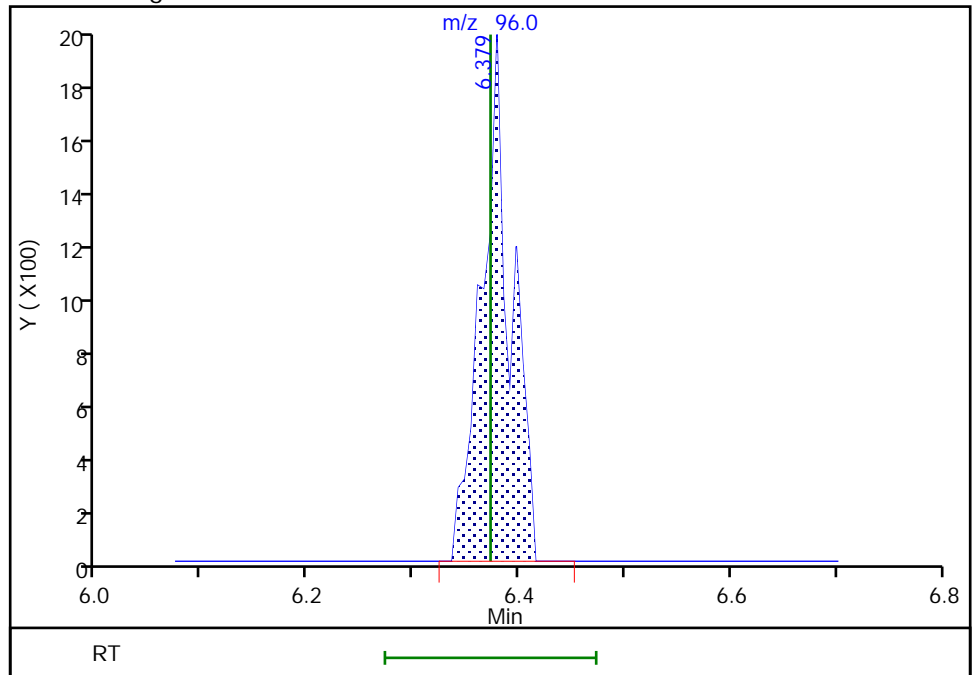
Not Detected
Expected RT: 6.37

Processing Integration Results



Manual Integration Results

RT: 6.38
Area: 3705
Amount: 0.074595
Amount Units: ug/l



Reviewer: virayd, 31-Aug-2020 13:20:56
Audit Action: Manually Integrated

Audit Reason: Other

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-27-0/1-0 Lab Sample ID: 410-11876-10
 Matrix: Water Lab File ID: HG30S18.D
 Analysis Method: 8260C LL Date Collected: 08/25/2020 11:15
 Sample wt/vol: 25 (mL) Date Analyzed: 08/31/2020 01:40
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 38982 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.50	0.070
71-55-6	1,1,1-Trichloroethane	ND		0.50	0.060
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.50	0.070
79-00-5	1,1,2-Trichloroethane	ND		0.50	0.060
75-34-3	1,1-Dichloroethane	ND		0.50	0.070
75-35-4	1,1-Dichloroethene	ND		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	ND		0.50	0.060
107-06-2	1,2-Dichloroethane	ND		0.50	0.050
78-87-5	1,2-Dichloropropane	ND		0.50	0.060
78-93-3	2-Butanone (MEK)	ND		5.0	0.60
591-78-6	2-Hexanone	ND		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70
67-64-1	Acetone	3.8	J	5.0	0.90
107-13-1	Acrylonitrile	ND		5.0	0.40
71-43-2	Benzene	ND		0.50	0.050
74-97-5	Bromochloromethane	ND		0.50	0.050
75-27-4	Bromodichloromethane	ND		0.50	0.050
75-25-2	Bromoform	ND		1.0	0.30
74-83-9	Bromomethane	ND		0.50	0.070
75-15-0	Carbon disulfide	ND		1.0	0.060
56-23-5	Carbon tetrachloride	ND		0.50	0.070
108-90-7	Chlorobenzene	ND		0.50	0.060
75-00-3	Chloroethane	ND		0.50	0.070
67-66-3	Chloroform	ND		0.50	0.090
74-87-3	Chloromethane	0.63		0.50	0.060
156-59-2	cis-1,2-Dichloroethene	0.090	J	0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	ND		0.50	0.050
124-48-1	Dibromochloromethane	ND		0.50	0.070
100-41-4	Ethylbenzene	ND		0.50	0.060
1634-04-4	Methyl tert-butyl ether	ND		0.50	0.050
75-09-2	Methylene Chloride	0.11	J	0.50	0.070
100-42-5	Styrene	ND		0.50	0.050
127-18-4	Tetrachloroethene	ND		0.50	0.060
108-88-3	Toluene	ND		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	ND		0.50	0.060
10061-02-6	trans-1,3-Dichloropropene	ND		0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-27-0/1-0 Lab Sample ID: 410-11876-10
 Matrix: Water Lab File ID: HG30S18.D
 Analysis Method: 8260C LL Date Collected: 08/25/2020 11:15
 Sample wt/vol: 25 (mL) Date Analyzed: 08/31/2020 01:40
 Soil Aliquot Vol.: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 38982 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	0.089	J	0.50	0.060
75-01-4	Vinyl chloride	ND		0.50	0.10
1330-20-7	Xylenes, Total	ND		1.0	0.15

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	114		80-120
1868-53-7	Dibromofluoromethane (Surr)	112		80-120
2037-26-5	Toluene-d8 (Surr)	100		80-120
460-00-4	4-Bromofluorobenzene (Surr)	95		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S18.D
 Lims ID: 410-11876-A-10
 Client ID: HD-COD-SW-27-0/1-0
 Sample Type: Client
 Inject. Date: 31-Aug-2020 01:40:30 ALS Bottle#: 24 Worklist Smp#: 25
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: 410-11876-A-10
 Misc. Info.: 410-0009349-026
 Operator ID: mec29284 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 31-Aug-2020 13:23:49 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1008

First Level Reviewer: virayd

Date: 31-Aug-2020 13:22:15

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
6 Chloromethane	50	2.276	2.276	0.000	99	43955	0.6336	
7 Vinyl chloride	62		2.385				ND	
9 Bromomethane	94		2.745				ND	
10 Chloroethane	64		2.837				ND	
18 1,1-Dichloroethene	96		3.757				ND	
19 Acetone	43	3.806	3.788	0.018	99	32613	3.77	M
24 Carbon disulfide	76	4.092	4.086	0.006	41	5168	0.0430	M
29 Methylene Chloride	84	4.470	4.464	0.006	71	4533	0.1052	
* 28 t-Butyl alcohol-d10 (IS)	65	4.483	4.477	0.007	0	122623	50.0	
31 Acrylonitrile	53		4.806				ND	
32 Methyl tert-butyl ether	73		4.873				ND	
33 trans-1,2-Dichloroethene	96		4.891				ND	
35 1,1-Dichloroethane	63		5.549				ND	
41 2-Butanone (MEK)	43	6.330	6.330	0.000	44	5732	0.3960	a
42 cis-1,2-Dichloroethene	96	6.385	6.372	0.013	82	4239	0.0898	a
48 Chlorobromomethane	128		6.702				ND	
50 Chloroform	83	6.860	6.854	0.006	90	5925	0.0800	
\$ 51 Dibromofluoromethane (Surr)	113	7.067	7.061	0.006	93	434141	11.2	
52 1,1,1-Trichloroethane	97		7.086				ND	
56 Carbon tetrachloride	117		7.293				ND	
\$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.519	7.519	0.000	0	90443	11.4	
59 Benzene	78		7.555				ND	
60 1,2-Dichloroethane	62	7.628	7.622	0.006	1	1495	0.0352	a
* 65 Fluorobenzene (IS)	96	7.958	7.951	0.007	99	1645218	10.0	
67 Trichloroethene	95	8.427	8.433	-0.006	90	3946	0.0888	Ma
70 1,2-Dichloropropane	63		8.768				ND	
75 Dichlorobromomethane	83		9.110				ND	
80 cis-1,3-Dichloropropene	75		9.634				ND	
81 4-Methyl-2-pentanone (MIBK)	43		9.793				ND	
\$ 82 Toluene-d8 (Surr)	98	9.933	9.933	0.000	94	1613405	9.98	
83 Toluene	92	10.012	10.012	0.000	98	6114	0.0542	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
85 trans-1,3-Dichloropropene	75		10.256				ND	
87 1,1,2-Trichloroethane	97		10.457				ND	
88 Tetrachloroethene	166	10.542	10.542	0.000	86	2742	0.0572	M
91 2-Hexanone	43		10.658				ND	
93 Chlorodibromomethane	129		10.829				ND	
94 Ethylene Dibromide	107		10.945				ND	
S 95 Xylenes, Total	106		11.245				ND	
* 97 Chlorobenzene-d5 (IS)	117	11.365	11.365	0.000	87	1205106	10.0	
98 Chlorobenzene	112		11.390				ND	
99 1,1,1,2-Tetrachloroethane	131		11.469				ND	
100 Ethylbenzene	91		11.475				ND	
101 m-Xylene & p-Xylene	106		11.585				ND	
102 o-Xylene	106		11.914				ND	
103 Styrene	104		11.926				ND	
104 Bromoform	173		12.091				ND	
\$ 108 4-Bromofluorobenzene (Surr)	95	12.353	12.353	0.000	87	563073	9.54	
109 1,1,2,2-Tetrachloroethane	83		12.451				ND	
* 124 1,4-Dichlorobenzene-d4	152	13.231	13.231	0.000	96	608913	10.0	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_30_826ISS_00005

Amount Added: 5.00

Units: uL

Run Reagent

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S18.D

Injection Date: 31-Aug-2020 01:40:30

Instrument ID: 19094

Operator ID: mec29284

Lims ID: 410-11876-A-10

Lab Sample ID: 410-11876-10

Worklist Smp#: 25

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

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

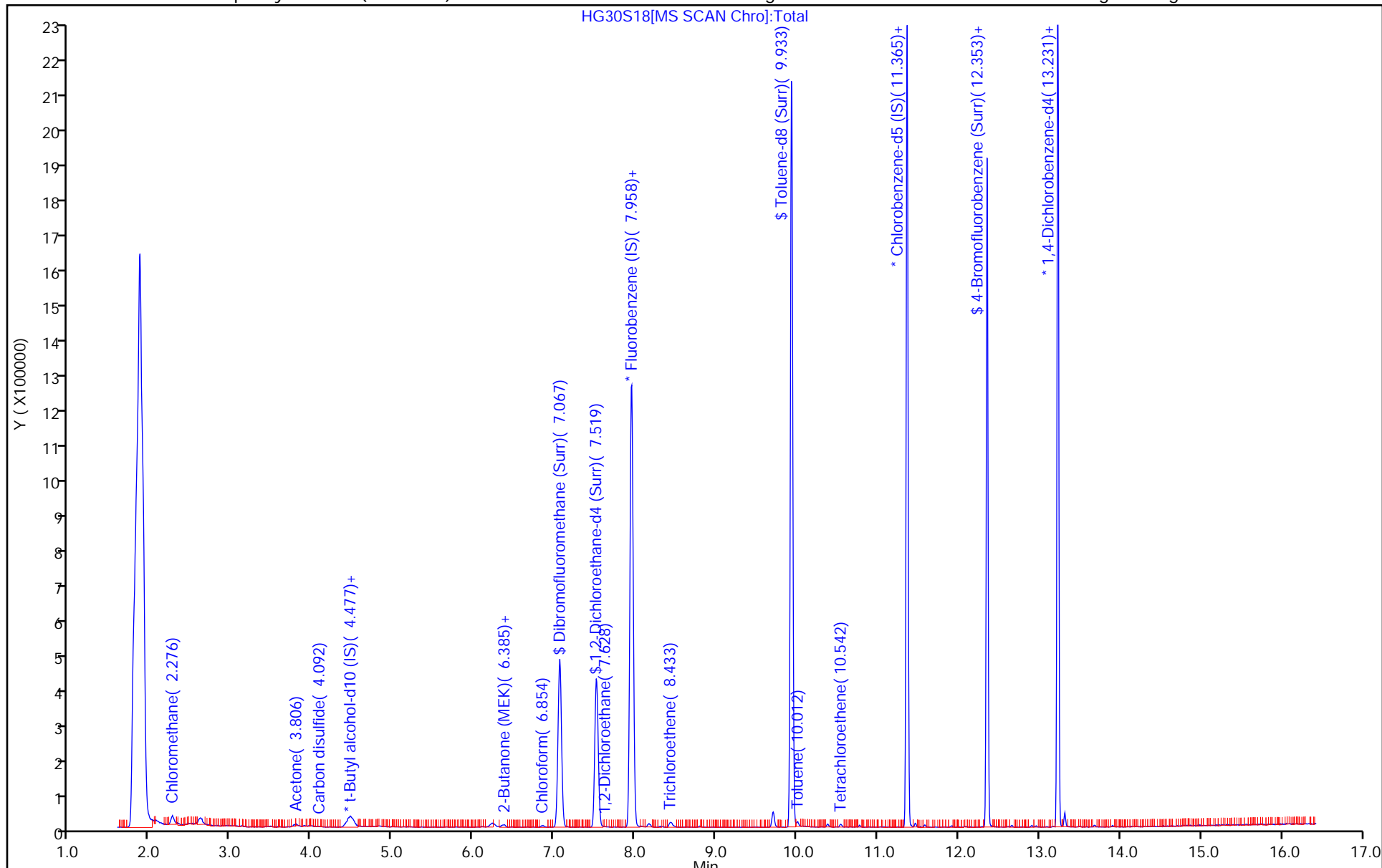
ALS Bottle#: 24

Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S18.D
 Lims ID: 410-11876-A-10
 Client ID: HD-COD-SW-27-0/1-0
 Sample Type: Client
 Inject. Date: 31-Aug-2020 01:40:30 ALS Bottle#: 24 Worklist Smp#: 25
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: 410-11876-A-10
 Misc. Info.: 410-0009349-026
 Operator ID: mec29284 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 31-Aug-2020 13:23:49 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1008

First Level Reviewer: virayd Date: 31-Aug-2020 13:22:15

Compound	Amount Added	Amount Recovered	% Rec.
\$ 51 Dibromofluoromethane (Surr)	10.0	11.2	111.62
\$ 58 1,2-Dichloroethane-d4 (Surr)	10.0	11.4	114.15
\$ 82 Toluene-d8 (Surr)	10.0	9.98	99.77
\$ 108 4-Bromofluorobenzene (Surr)	10.0	9.54	95.44

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S18.D

Injection Date: 31-Aug-2020 01:40:30

Instrument ID: 19094

Lims ID: 410-11876-A-10

Lab Sample ID: 410-11876-10

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

Operator ID: mec29284

ALS Bottle#: 24

Worklist Smp#: 25

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

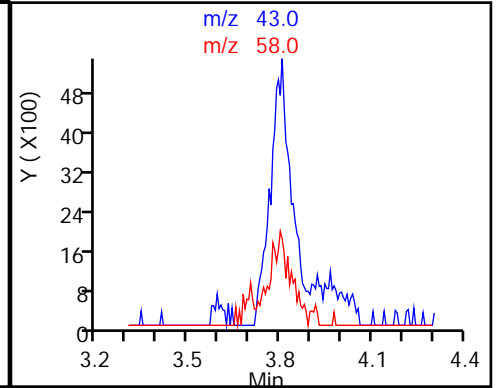
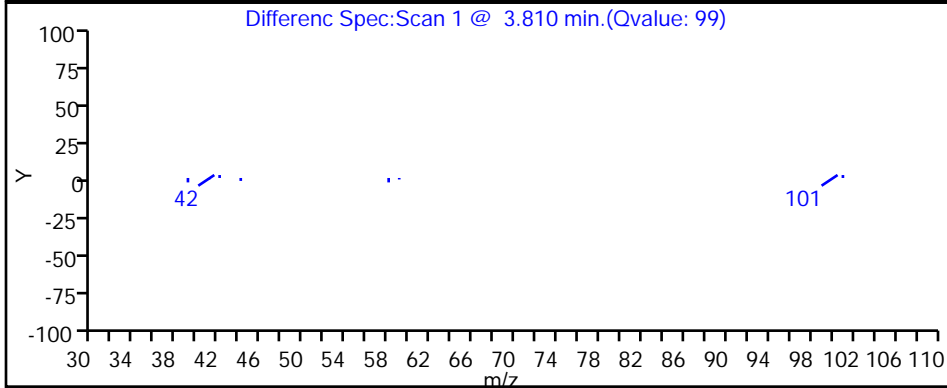
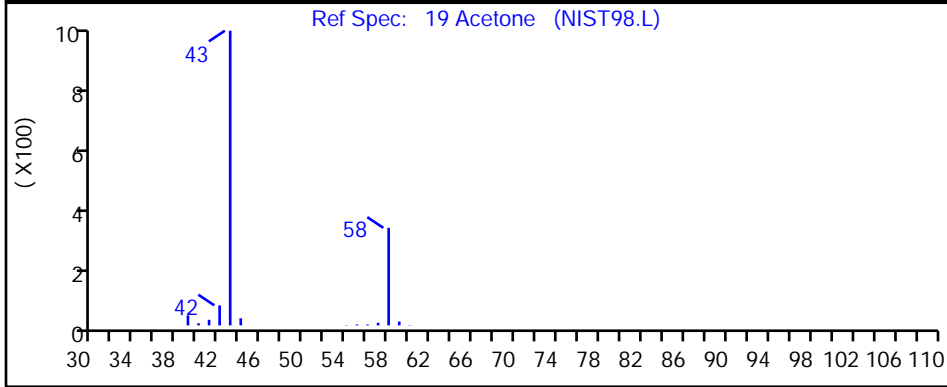
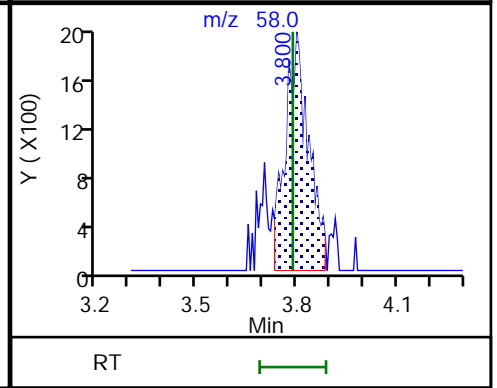
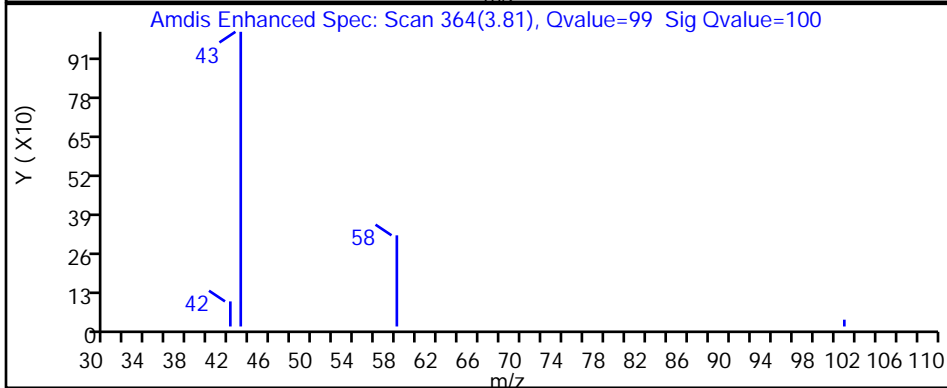
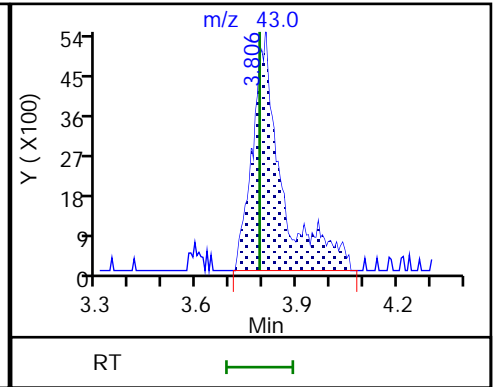
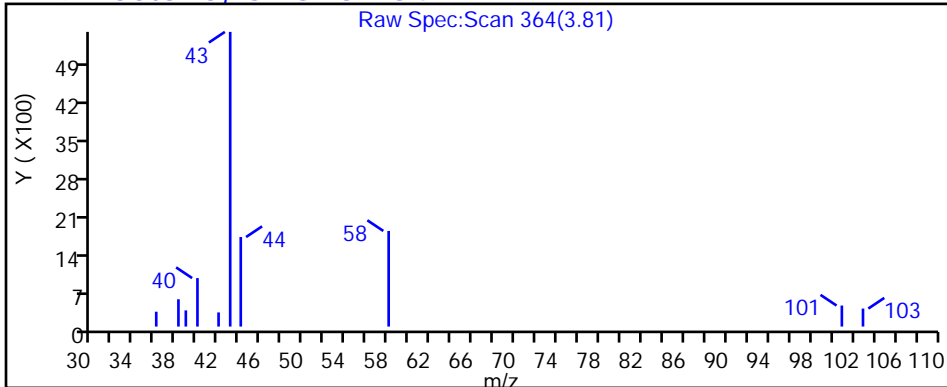
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

19 Acetone, CAS: 67-64-1



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S18.D

Injection Date: 31-Aug-2020 01:40:30

Instrument ID: 19094

Lims ID: 410-11876-A-10

Lab Sample ID: 410-11876-10

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

Operator ID: mec29284

ALS Bottle#: 24

Worklist Smp#: 25

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

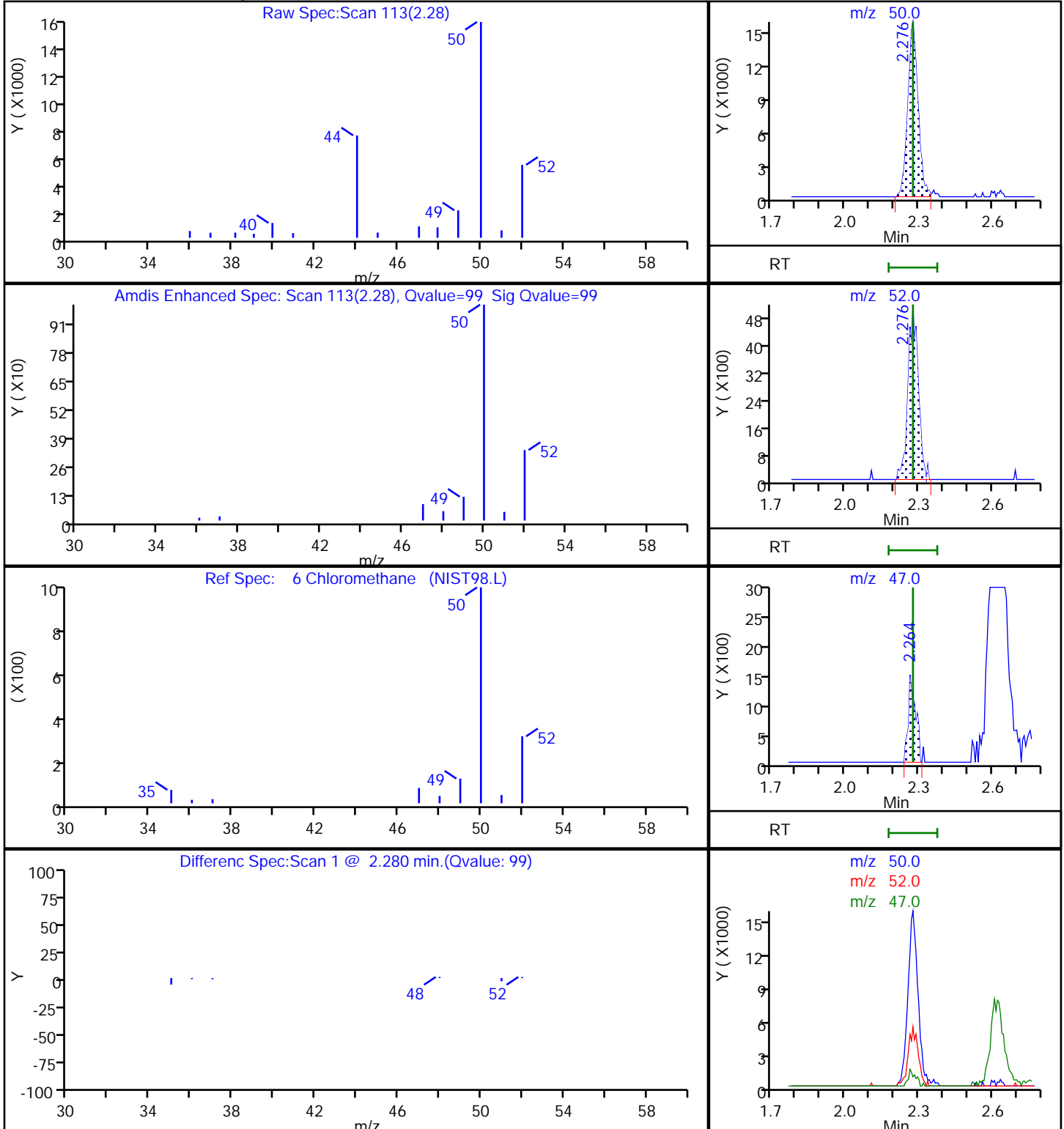
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector

MS Quad

6 Chloromethane, CAS: 74-87-3



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S18.D

Injection Date: 31-Aug-2020 01:40:30

Instrument ID: 19094

Lims ID: 410-11876-A-10

Lab Sample ID: 410-11876-10

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

Operator ID: mec29284

ALS Bottle#: 24

Worklist Smp#: 25

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

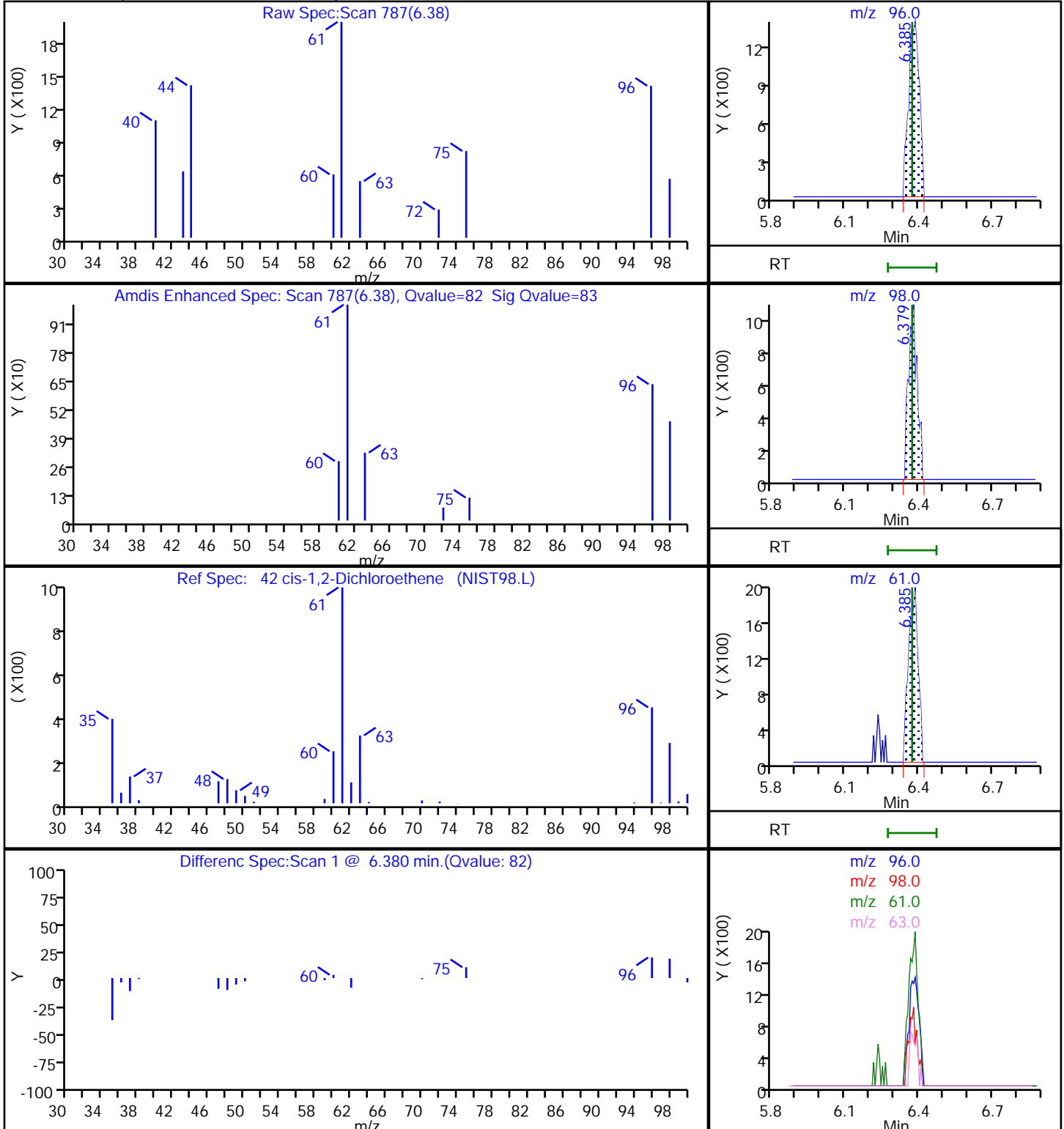
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

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



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S18.D

Injection Date: 31-Aug-2020 01:40:30

Instrument ID: 19094

Lims ID: 410-11876-A-10

Lab Sample ID: 410-11876-10

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

Operator ID: mec29284

ALS Bottle#: 24

Worklist Smp#: 25

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

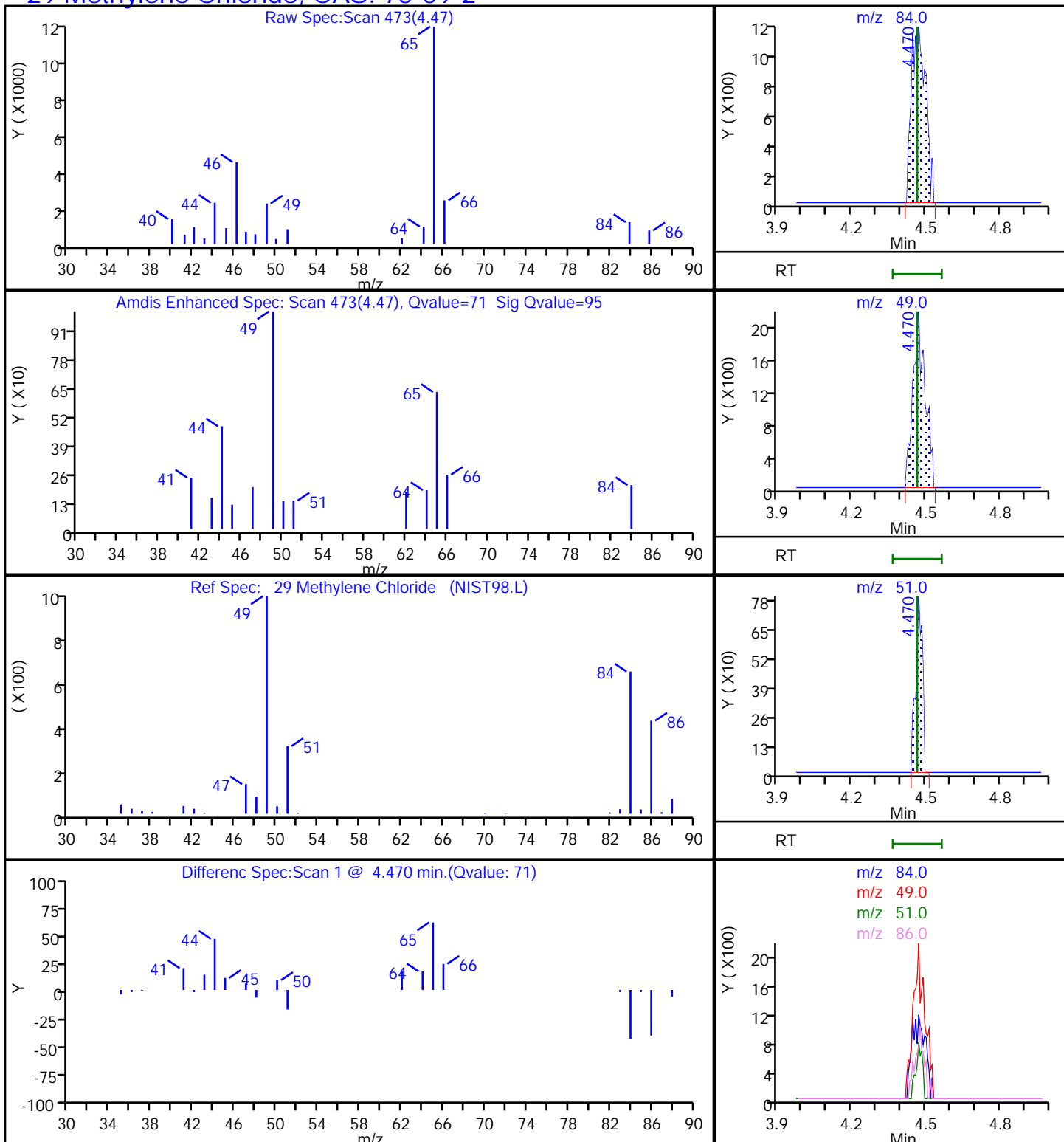
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

29 Methylene Chloride, CAS: 75-09-2



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S18.D

Injection Date: 31-Aug-2020 01:40:30

Instrument ID: 19094

Lims ID: 410-11876-A-10

Lab Sample ID: 410-11876-10

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

Operator ID: mec29284

ALS Bottle#: 24

Worklist Smp#: 25

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

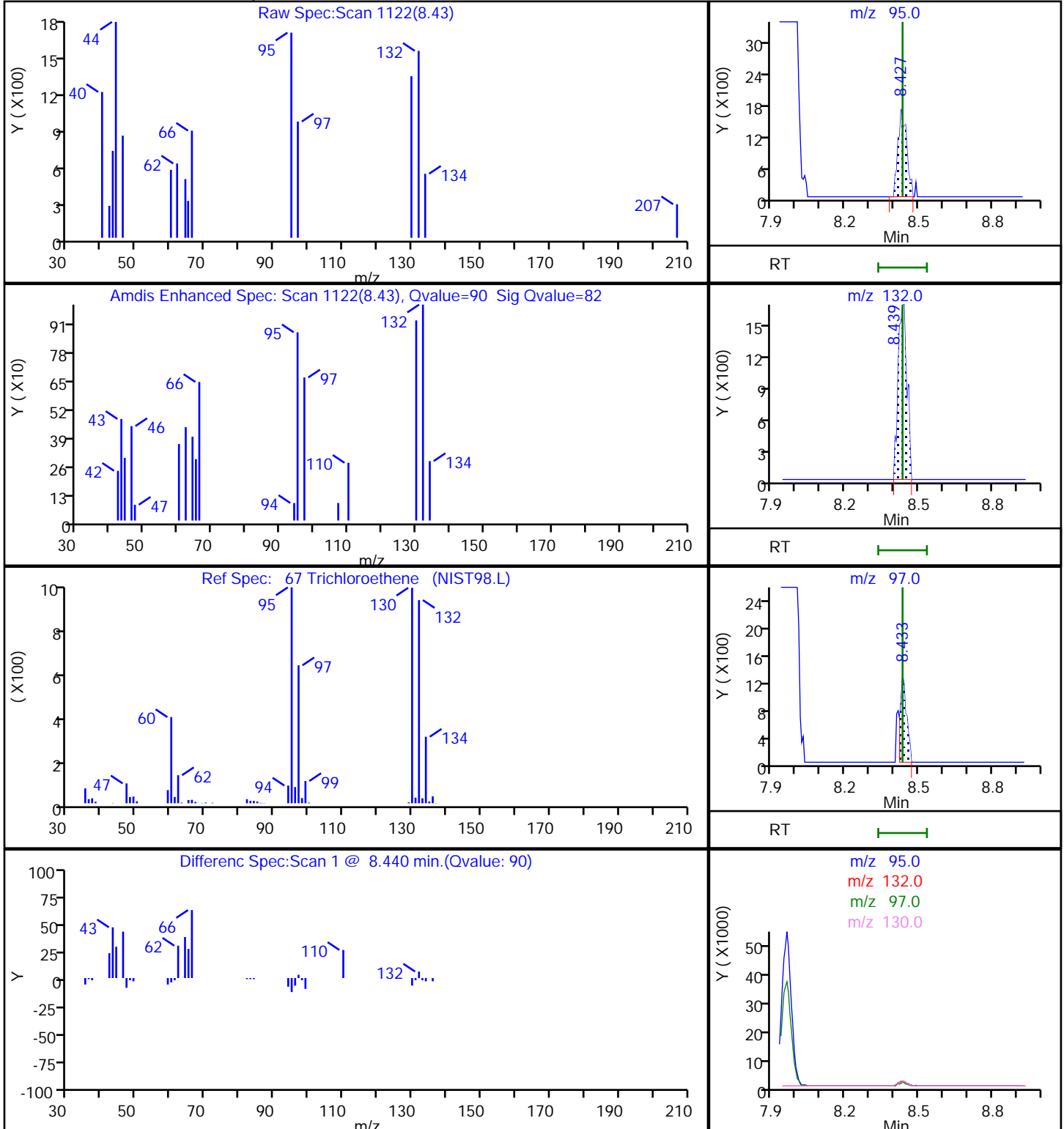
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

67 Trichloroethene, CAS: 79-01-6



Eurofins Lancaster Laboratories Env, LLC

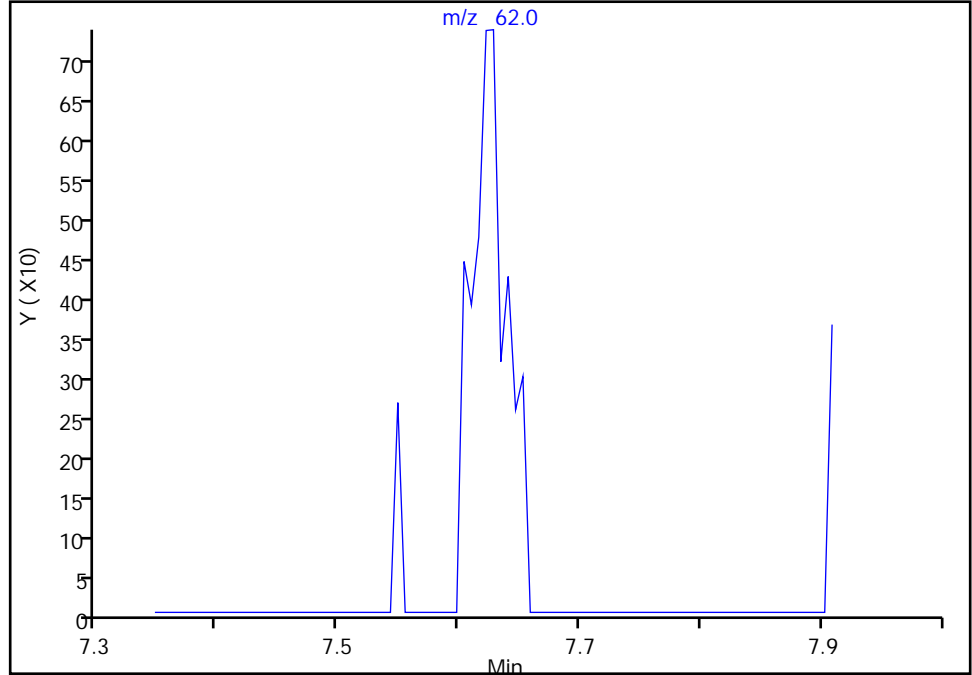
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Injection Date: 31-Aug-2020 01:40:30 Instrument ID: 19094
Lims ID: 410-11876-A-10 Lab Sample ID: 410-11876-10
Client ID: HD-COD-SW-27-0/1-0
Operator ID: mec29284 ALS Bottle#: 24 Worklist Smp#: 25
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

60 1,2-Dichloroethane, CAS: 107-06-2

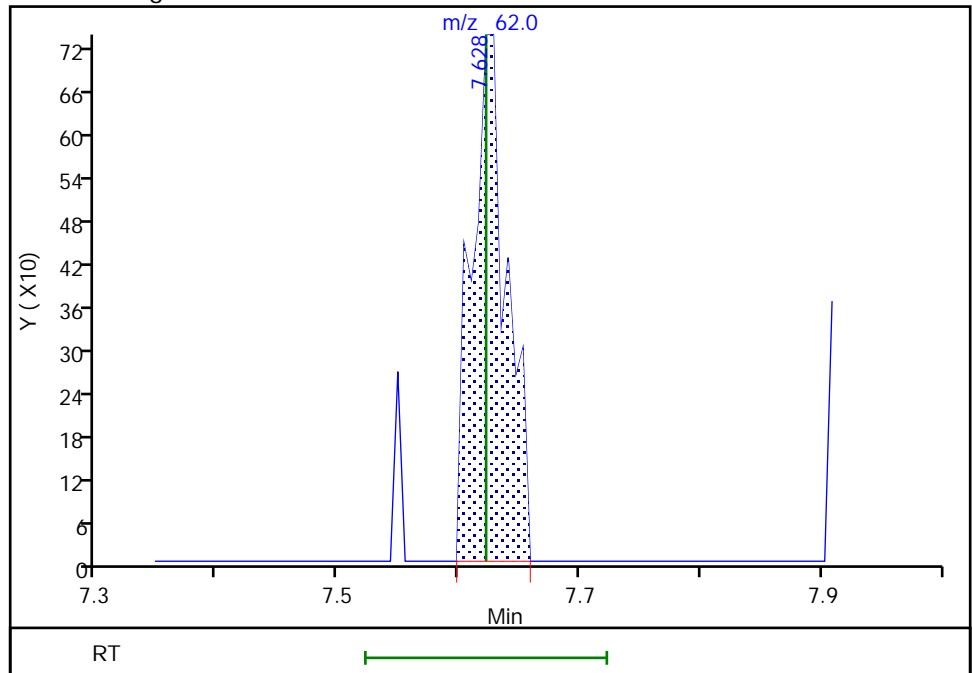
Signal: 1

Not Detected
Expected RT: 7.62

Processing Integration Results



Manual Integration Results



RT: 7.63
Area: 1495
Amount: 0.035241
Amount Units: ug/l

Eurofins Lancaster Laboratories Env, LLC

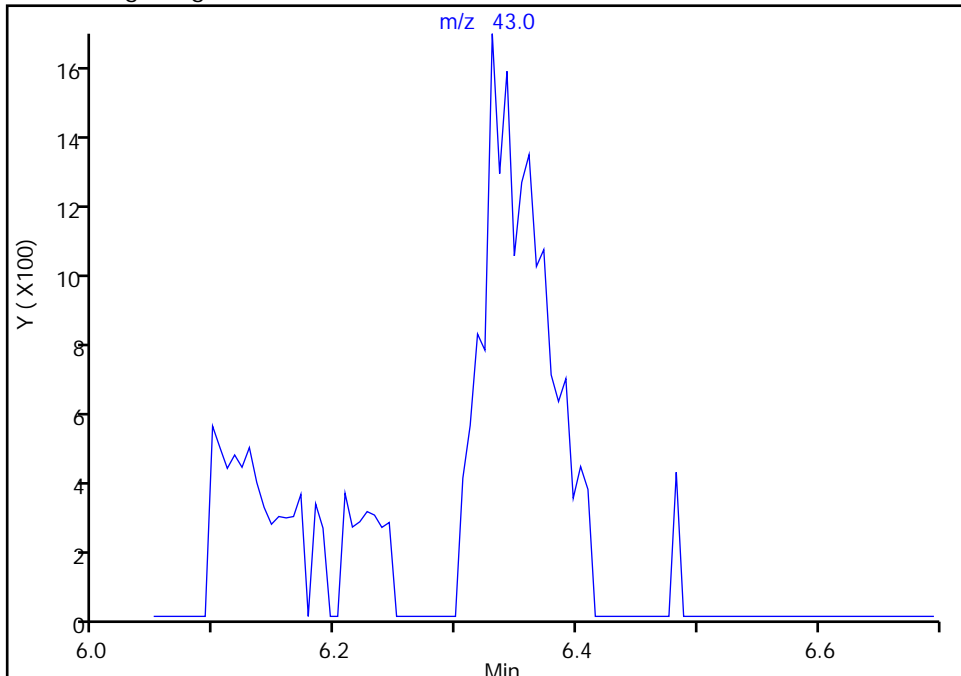
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Injection Date: 31-Aug-2020 01:40:30 Instrument ID: 19094
Lims ID: 410-11876-A-10 Lab Sample ID: 410-11876-10
Client ID: HD-COD-SW-27-0/1-0
Operator ID: mec29284 ALS Bottle#: 24 Worklist Smp#: 25
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

41 2-Butanone (MEK), CAS: 78-93-3

Signal: 1

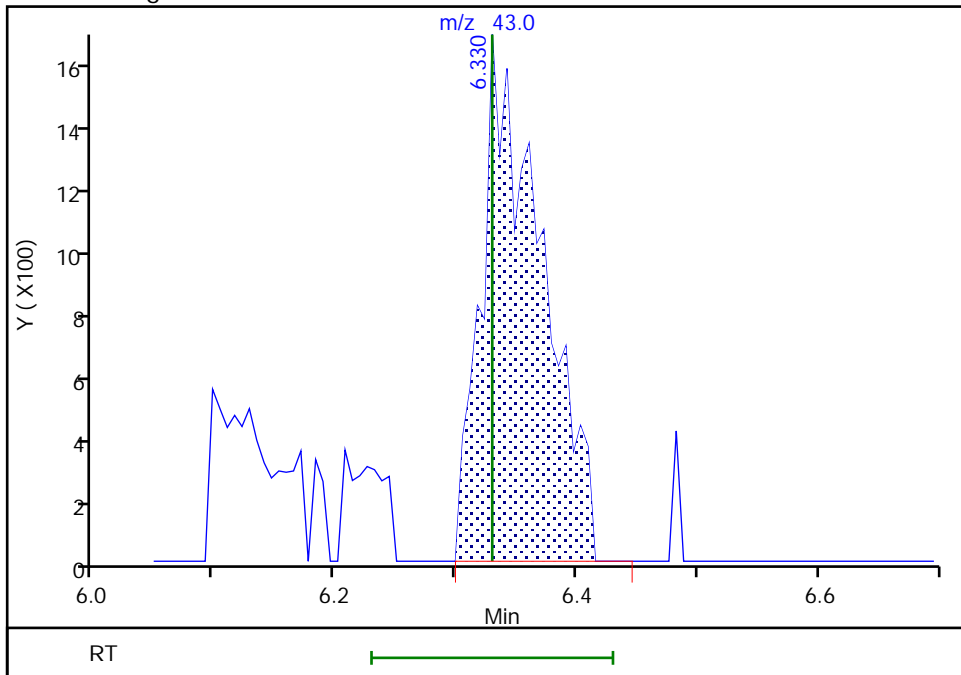
Not Detected
Expected RT: 6.33

Processing Integration Results



Manual Integration Results

RT: 6.33
Area: 5732
Amount: 0.396034
Amount Units: ug/l



Reviewer: virayd, 31-Aug-2020 13:21:49
Audit Action: Assigned Compound ID

Audit Reason: Other

Euofins Lancaster Laboratories Env, LLC

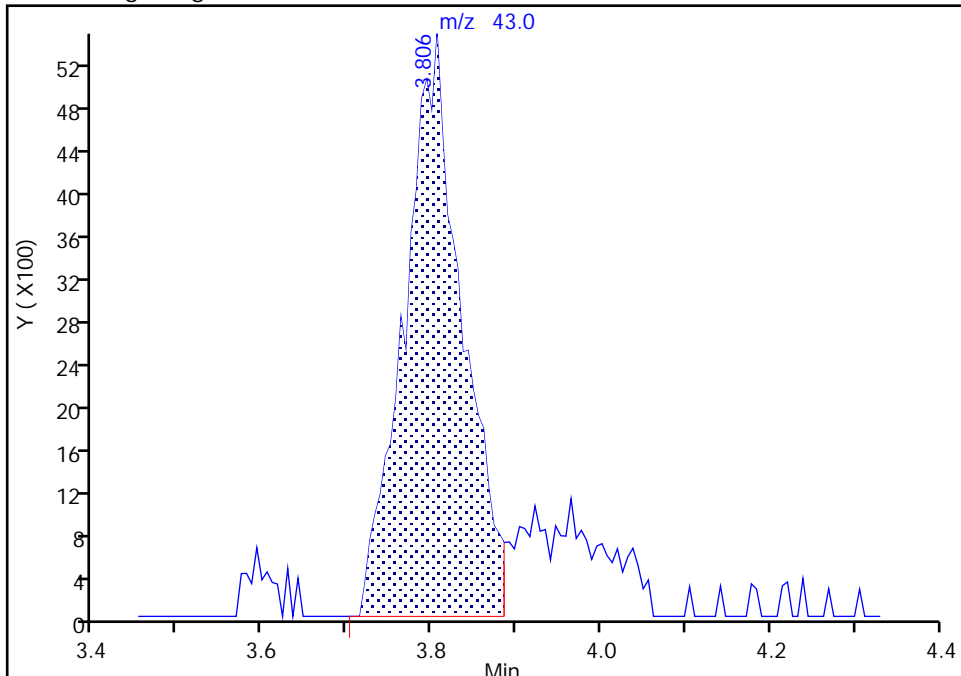
Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S18.D
Injection Date: 31-Aug-2020 01:40:30 Instrument ID: 19094
Lims ID: 410-11876-A-10 Lab Sample ID: 410-11876-10
Client ID: HD-COD-SW-27-0/1-0
Operator ID: mec29284 ALS Bottle#: 24 Worklist Smp#: 25
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

19 Acetone, CAS: 67-64-1

Signal: 1

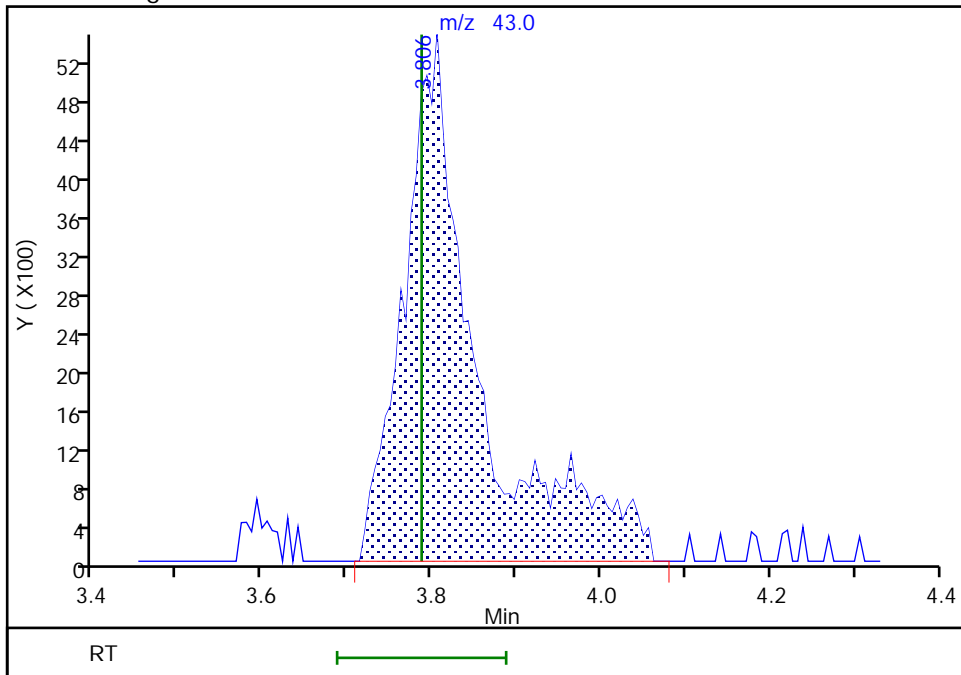
RT: 3.81
Area: 25728
Amount: 2.971317
Amount Units: ug/l

Processing Integration Results



RT: 3.81
Area: 32613
Amount: 3.766463
Amount Units: ug/l

Manual Integration Results



Reviewer: virayd, 31-Aug-2020 13:21:38
Audit Action: Manually Integrated

Audit Reason: Other

Eurofins Lancaster Laboratories Env, LLC

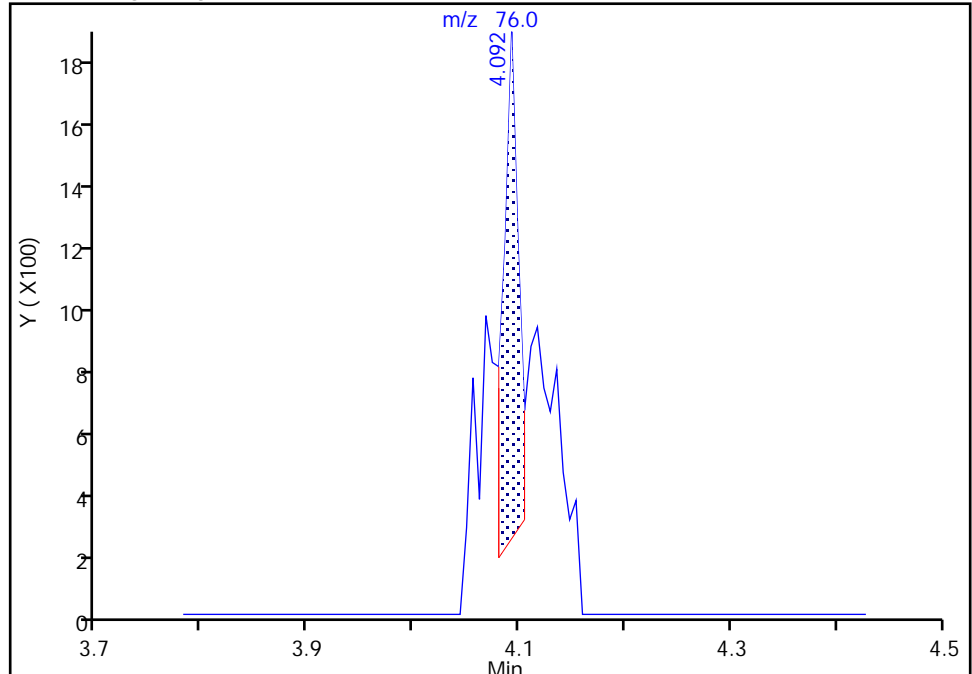
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Injection Date: 31-Aug-2020 01:40:30 Instrument ID: 19094
Lims ID: 410-11876-A-10 Lab Sample ID: 410-11876-10
Client ID: HD-COD-SW-27-0/1-0
Operator ID: mec29284 ALS Bottle#: 24 Worklist Smp#: 25
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

24 Carbon disulfide, CAS: 75-15-0

Signal: 1

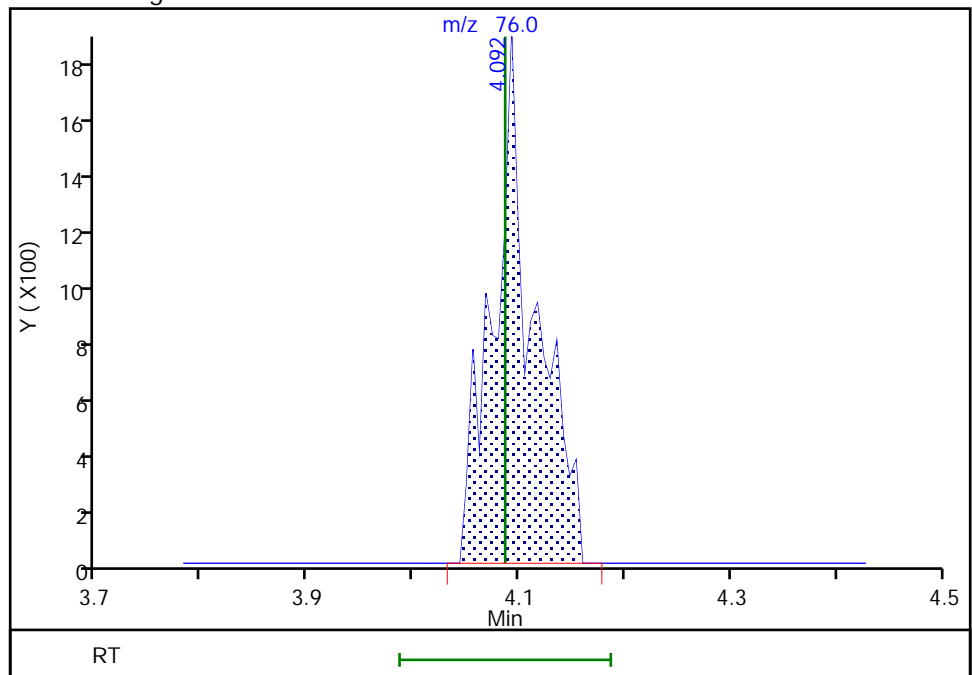
RT: 4.09
Area: 1662
Amount: 0.013838
Amount Units: ug/l

Processing Integration Results



RT: 4.09
Area: 5168
Amount: 0.043030
Amount Units: ug/l

Manual Integration Results



Reviewer: virayd, 31-Aug-2020 13:21:40
Audit Action: Manually Integrated

Audit Reason: Other

Eurofins Lancaster Laboratories Env, LLC

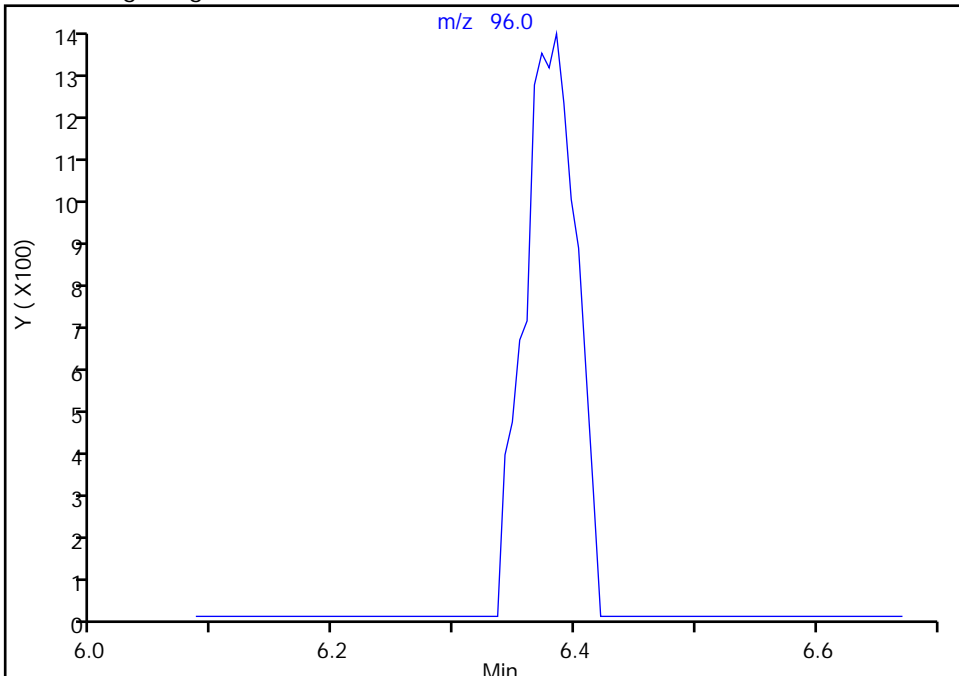
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Injection Date: 31-Aug-2020 01:40:30 Instrument ID: 19094
Lims ID: 410-11876-A-10 Lab Sample ID: 410-11876-10
Client ID: HD-COD-SW-27-0/1-0
Operator ID: mec29284 ALS Bottle#: 24 Worklist Smp#: 25
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

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

Signal: 1

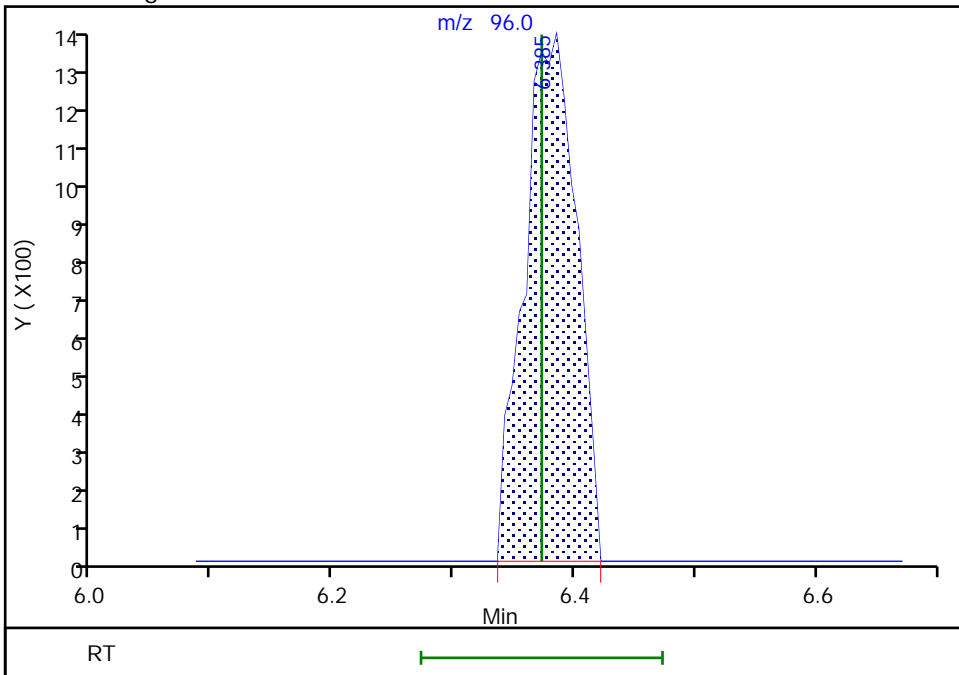
Not Detected
Expected RT: 6.37

Processing Integration Results



Manual Integration Results

RT: 6.38
Area: 4239
Amount: 0.089826
Amount Units: ug/l



Reviewer: virayd, 31-Aug-2020 13:21:51
Audit Action: Assigned Compound ID

Audit Reason: Other

Eurofins Lancaster Laboratories Env, LLC

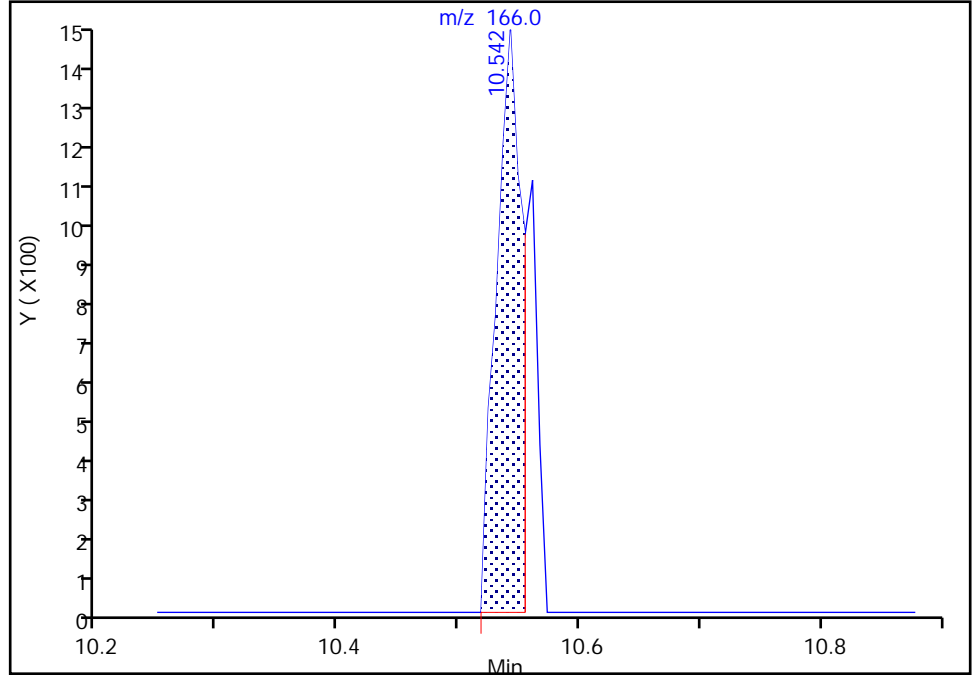
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Injection Date: 31-Aug-2020 01:40:30 Instrument ID: 19094
Lims ID: 410-11876-A-10 Lab Sample ID: 410-11876-10
Client ID: HD-COD-SW-27-0/1-0
Operator ID: mec29284 ALS Bottle#: 24 Worklist Smp#: 25
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

88 Tetrachloroethene, CAS: 127-18-4

Signal: 1

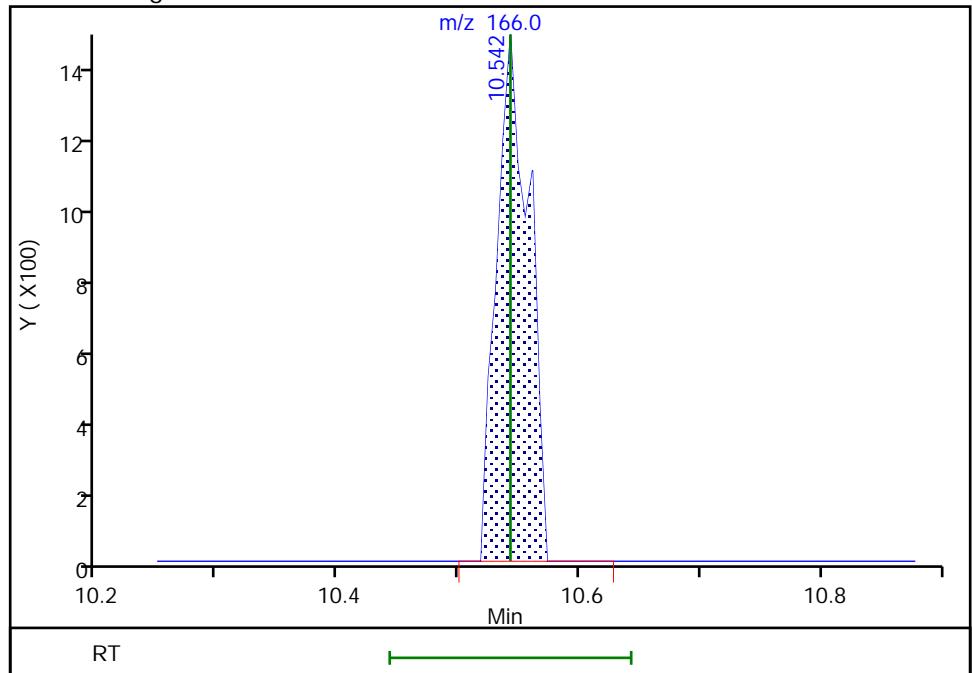
RT: 10.54
Area: 2188
Amount: 0.045615
Amount Units: ug/l

Processing Integration Results



RT: 10.54
Area: 2742
Amount: 0.057165
Amount Units: ug/l

Manual Integration Results



Reviewer: virayd, 31-Aug-2020 13:22:07
Audit Action: Manually Integrated

Audit Reason: Other

Euofins Lancaster Laboratories Env, LLC

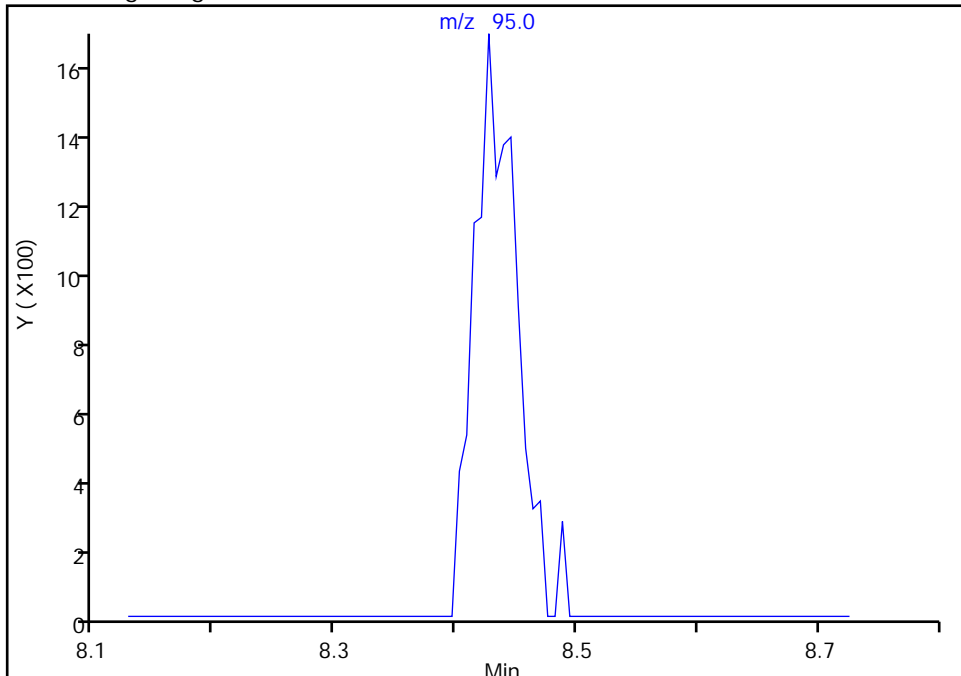
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Injection Date: 31-Aug-2020 01:40:30 Instrument ID: 19094
Lims ID: 410-11876-A-10 Lab Sample ID: 410-11876-10
Client ID: HD-COD-SW-27-0/1-0
Operator ID: mec29284 ALS Bottle#: 24 Worklist Smp#: 25
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

67 Trichloroethene, CAS: 79-01-6

Signal: 1

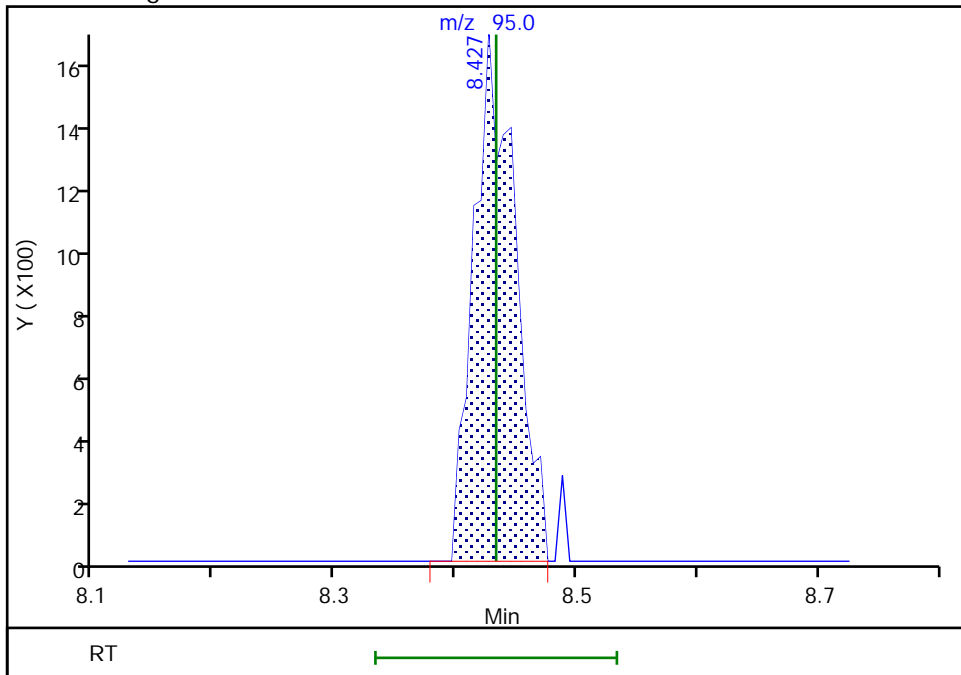
Not Detected
Expected RT: 8.43

Processing Integration Results



Manual Integration Results

RT: 8.43
Area: 3946
Amount: 0.088778
Amount Units: ug/l



Reviewer: virayd, 31-Aug-2020 13:22:02
Audit Action: Manually Integrated

Audit Reason: Other

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-28-0/1-0 Lab Sample ID: 410-11876-11
 Matrix: Water Lab File ID: HG30S19.D
 Analysis Method: 8260C LL Date Collected: 08/25/2020 12:10
 Sample wt/vol: 25 (mL) Date Analyzed: 08/31/2020 02:02
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 38982 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.50	0.070
71-55-6	1,1,1-Trichloroethane	ND		0.50	0.060
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.50	0.070
79-00-5	1,1,2-Trichloroethane	ND		0.50	0.060
75-34-3	1,1-Dichloroethane	ND		0.50	0.070
75-35-4	1,1-Dichloroethene	ND		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	ND		0.50	0.060
107-06-2	1,2-Dichloroethane	ND		0.50	0.050
78-87-5	1,2-Dichloropropane	ND		0.50	0.060
78-93-3	2-Butanone (MEK)	ND		5.0	0.60
591-78-6	2-Hexanone	ND		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70
67-64-1	Acetone	3.1	J	5.0	0.90
107-13-1	Acrylonitrile	ND		5.0	0.40
71-43-2	Benzene	ND		0.50	0.050
74-97-5	Bromochloromethane	ND		0.50	0.050
75-27-4	Bromodichloromethane	ND		0.50	0.050
75-25-2	Bromoform	ND		1.0	0.30
74-83-9	Bromomethane	ND		0.50	0.070
75-15-0	Carbon disulfide	ND		1.0	0.060
56-23-5	Carbon tetrachloride	ND		0.50	0.070
108-90-7	Chlorobenzene	ND		0.50	0.060
75-00-3	Chloroethane	ND		0.50	0.070
67-66-3	Chloroform	0.10	J	0.50	0.090
74-87-3	Chloromethane	0.56		0.50	0.060
156-59-2	cis-1,2-Dichloroethene	0.098	J	0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	ND		0.50	0.050
124-48-1	Dibromochloromethane	ND		0.50	0.070
100-41-4	Ethylbenzene	ND		0.50	0.060
1634-04-4	Methyl tert-butyl ether	ND		0.50	0.050
75-09-2	Methylene Chloride	0.14	J	0.50	0.070
100-42-5	Styrene	ND		0.50	0.050
127-18-4	Tetrachloroethene	0.11	J	0.50	0.060
108-88-3	Toluene	ND		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	ND		0.50	0.060
10061-02-6	trans-1,3-Dichloropropene	ND		0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-28-0/1-0 Lab Sample ID: 410-11876-11
 Matrix: Water Lab File ID: HG30S19.D
 Analysis Method: 8260C LL Date Collected: 08/25/2020 12:10
 Sample wt/vol: 25 (mL) Date Analyzed: 08/31/2020 02:02
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 38982 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	0.097	J	0.50	0.060
75-01-4	Vinyl chloride	ND		0.50	0.10
1330-20-7	Xylenes, Total	ND		1.0	0.15

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	116		80-120
1868-53-7	Dibromofluoromethane (Surr)	112		80-120
2037-26-5	Toluene-d8 (Surr)	98		80-120
460-00-4	4-Bromofluorobenzene (Surr)	95		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S19.D
 Lims ID: 410-11876-A-11
 Client ID: HD-COD-SW-28-0/1-0
 Sample Type: Client
 Inject. Date: 31-Aug-2020 02:02:30 ALS Bottle#: 25 Worklist Smp#: 26
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: 410-11876-A-10
 Misc. Info.: 410-0009349-026
 Operator ID: mec29284 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 31-Aug-2020 13:23:49 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1008

First Level Reviewer: virayd

Date: 31-Aug-2020 13:23:03

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
6 Chloromethane	50	2.270	2.276	-0.006	99	37142	0.5632	
7 Vinyl chloride	62		2.385				ND	
9 Bromomethane	94		2.745				ND	
10 Chloroethane	64		2.837				ND	
18 1,1-Dichloroethene	96		3.757				ND	
19 Acetone	43	3.800	3.788	0.012	97	27463	3.13	M
24 Carbon disulfide	76	4.068	4.086	-0.018	16	3839	0.0336	M
29 Methylene Chloride	84	4.452	4.464	-0.012	41	5671	0.1385	a
* 28 t-Butyl alcohol-d10 (IS)	65	4.489	4.477	0.013	0	124308	50.0	
31 Acrylonitrile	53		4.806				ND	
32 Methyl tert-butyl ether	73		4.873				ND	
33 trans-1,2-Dichloroethene	96		4.891				ND	
35 1,1-Dichloroethane	63		5.549				ND	
41 2-Butanone (MEK)	43	6.330	6.330	0.000	93	6381	0.4349	
42 cis-1,2-Dichloroethene	96	6.385	6.372	0.013	82	4400	0.0981	
48 Chlorobromomethane	128		6.702				ND	
50 Chloroform	83	6.854	6.854	0.000	91	7103	0.1009	
\$ 51 Dibromofluoromethane (Surr)	113	7.067	7.061	0.006	93	415264	11.2	
52 1,1,1-Trichloroethane	97		7.086				ND	
56 Carbon tetrachloride	117		7.293				ND	
\$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.519	7.519	0.000	0	87379	11.6	
59 Benzene	78		7.555				ND	
60 1,2-Dichloroethane	62	7.622	7.622	0.000	1	1474	0.0365	a
* 65 Fluorobenzene (IS)	96	7.951	7.951	0.000	98	1564044	10.0	
67 Trichloroethene	95	8.433	8.433	0.000	93	4101	0.0971	
70 1,2-Dichloropropane	63		8.768				ND	
75 Dichlorobromomethane	83		9.110				ND	
80 cis-1,3-Dichloropropene	75		9.634				ND	
81 4-Methyl-2-pentanone (MIBK)	43		9.793				ND	
\$ 82 Toluene-d8 (Surr)	98	9.933	9.933	0.000	94	1523928	9.82	
83 Toluene	92	10.006	10.012	-0.006	97	5811	0.0537	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
85 trans-1,3-Dichloropropene	75		10.256				ND	
87 1,1,2-Trichloroethane	97		10.457				ND	
88 Tetrachloroethene	166	10.542	10.542	0.000	88	5080	0.1104	
91 2-Hexanone	43		10.658				ND	
93 Chlorodibromomethane	129		10.829				ND	
94 Ethylene Dibromide	107		10.945				ND	
S 95 Xylenes, Total	106				0		0.1140	
* 97 Chlorobenzene-d5 (IS)	117	11.365	11.365	0.000	87	1156082	10.0	
98 Chlorobenzene	112		11.390				ND	
99 1,1,1,2-Tetrachloroethane	131		11.469				ND	
100 Ethylbenzene	91		11.475				ND	
101 m-Xylene & p-Xylene	106	11.585	11.585	0.000	0	6333	0.0802	
102 o-Xylene	106	11.914	11.914	0.000	96	2611	0.0339	
103 Styrene	104		11.926				ND	
104 Bromoform	173		12.091				ND	
\$ 108 4-Bromofluorobenzene (Surr)	95	12.353	12.353	0.000	88	537996	9.51	
109 1,1,2,2-Tetrachloroethane	83		12.451				ND	
* 124 1,4-Dichlorobenzene-d4	152	13.231	13.231	0.000	97	576596	10.0	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_30_826ISS_00005

Amount Added: 5.00

Units: uL

Run Reagent

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S19.D

Injection Date: 31-Aug-2020 02:02:30

Instrument ID: 19094

Operator ID: mec29284

Lims ID: 410-11876-A-11

Lab Sample ID: 410-11876-11

Worklist Smp#: 26

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

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

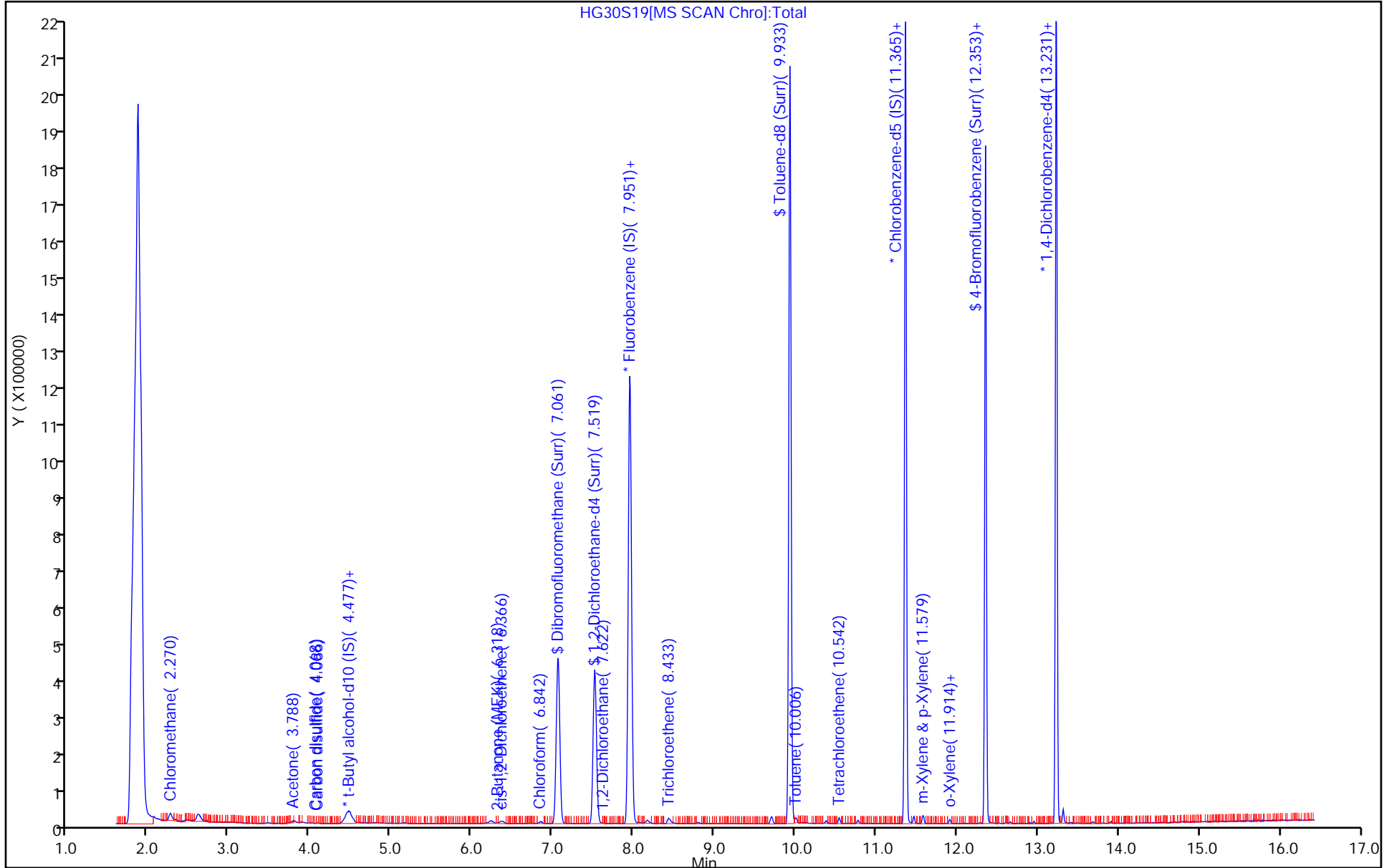
ALS Bottle#: 25

Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S19.D
 Lims ID: 410-11876-A-11
 Client ID: HD-COD-SW-28-0/1-0
 Sample Type: Client
 Inject. Date: 31-Aug-2020 02:02:30 ALS Bottle#: 25 Worklist Smp#: 26
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: 410-11876-A-10
 Misc. Info.: 410-0009349-026
 Operator ID: mec29284 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 31-Aug-2020 13:23:49 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1008

First Level Reviewer: virayd Date: 31-Aug-2020 13:23:03

Compound	Amount Added	Amount Recovered	% Rec.
\$ 51 Dibromofluoromethane (Surr)	10.0	11.2	112.30
\$ 58 1,2-Dichloroethane-d4 (Surr)	10.0	11.6	116.00
\$ 82 Toluene-d8 (Surr)	10.0	9.82	98.23
\$ 108 4-Bromofluorobenzene (Surr)	10.0	9.51	95.06

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S19.D

Injection Date: 31-Aug-2020 02:02:30

Instrument ID: 19094

Lims ID: 410-11876-A-11

Lab Sample ID: 410-11876-11

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

Operator ID: mec29284

ALS Bottle#: 25

Worklist Smp#: 26

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

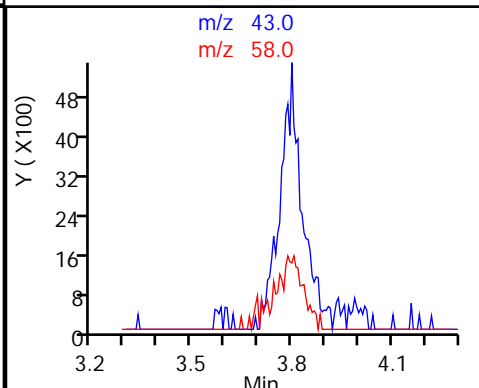
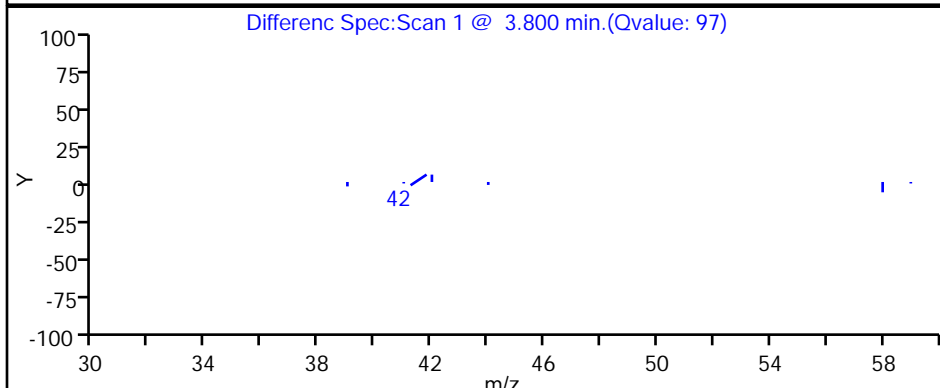
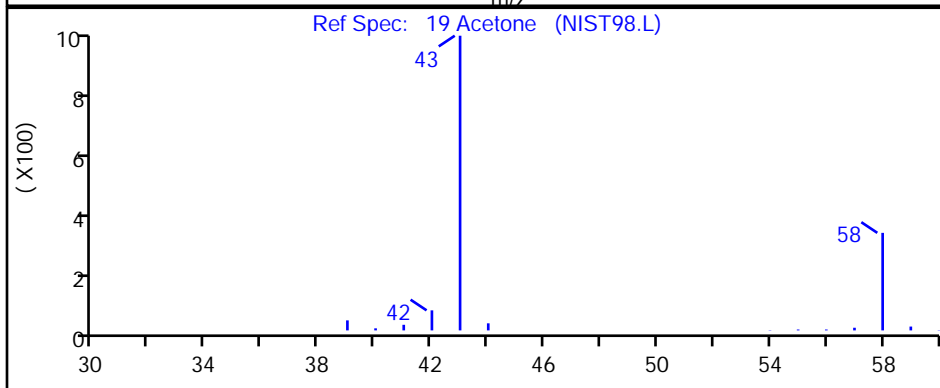
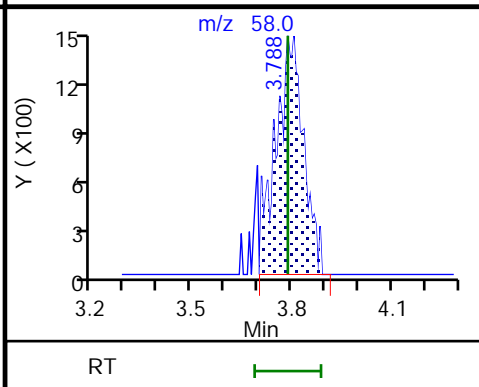
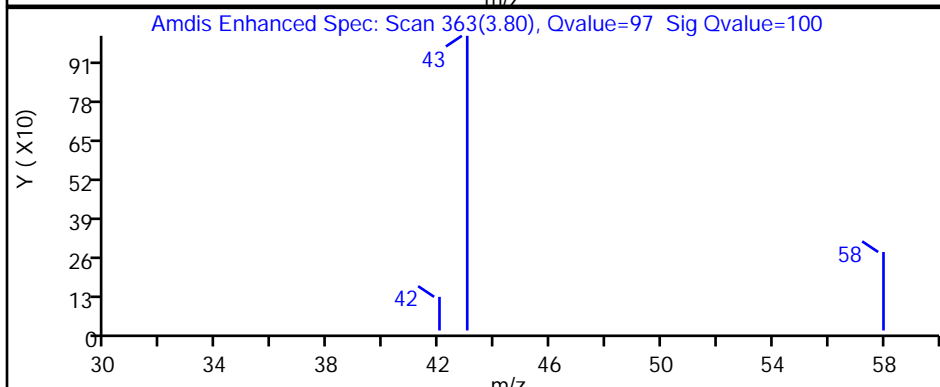
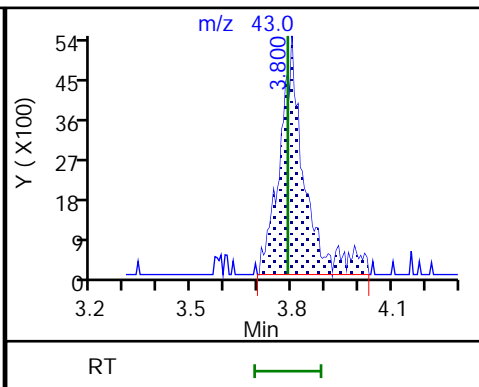
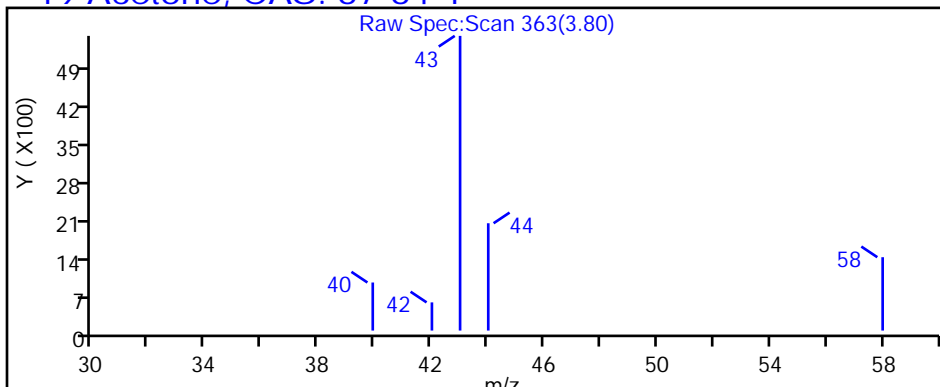
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

19 Acetone, CAS: 67-64-1



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S19.D

Injection Date: 31-Aug-2020 02:02:30

Instrument ID: 19094

Lims ID: 410-11876-A-11

Lab Sample ID: 410-11876-11

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

Operator ID: mec29284

ALS Bottle#: 25

Worklist Smp#: 26

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

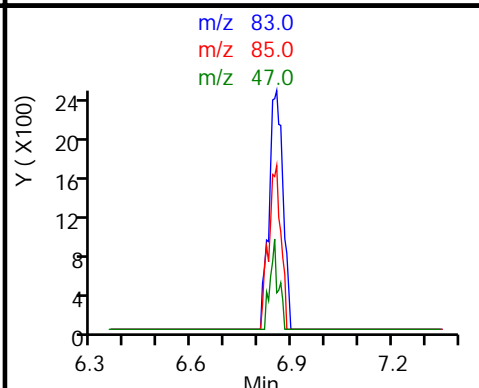
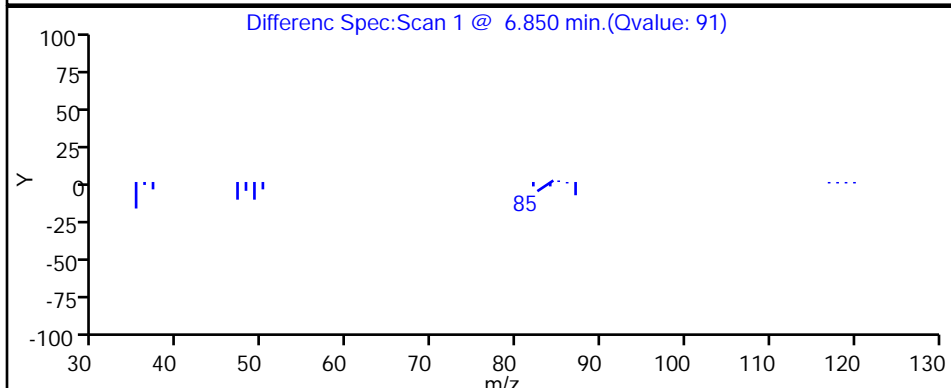
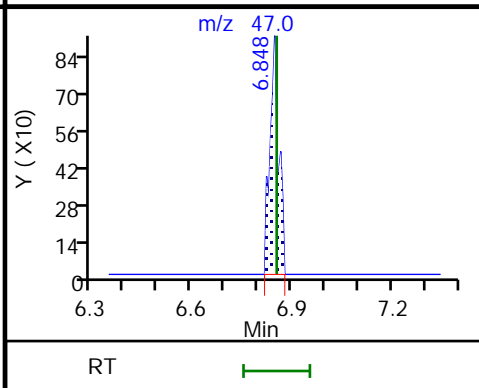
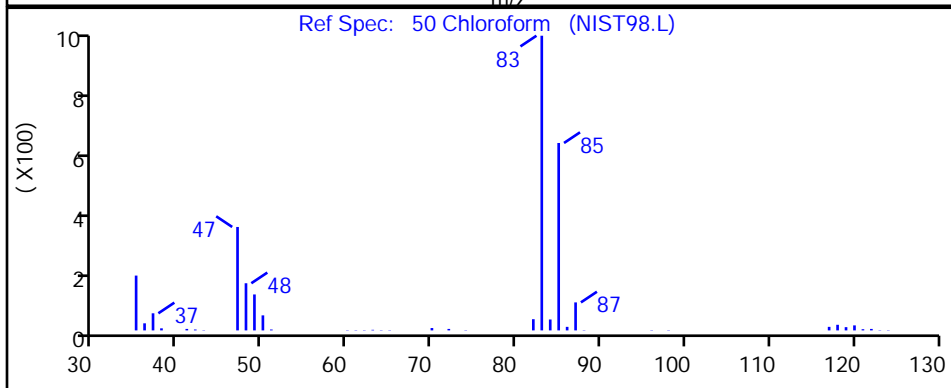
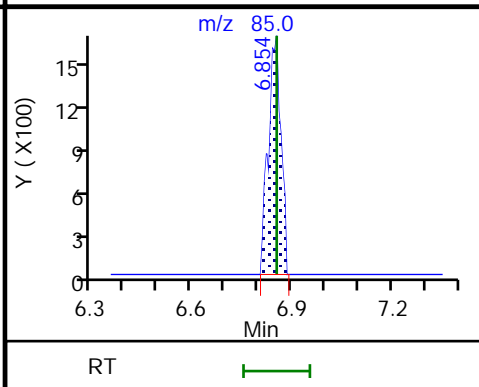
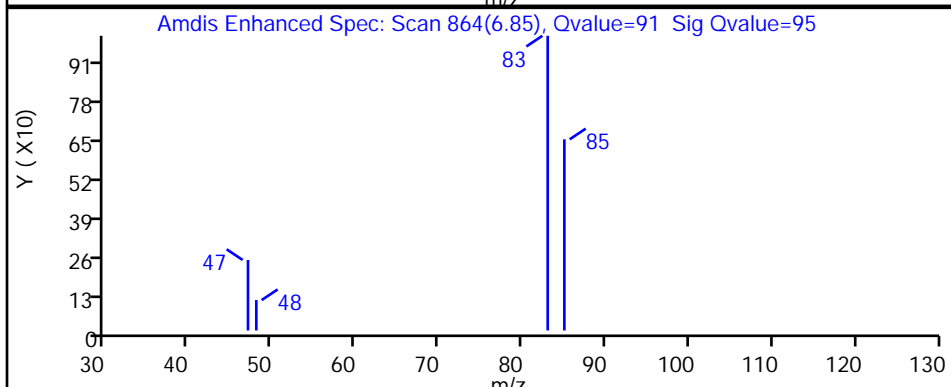
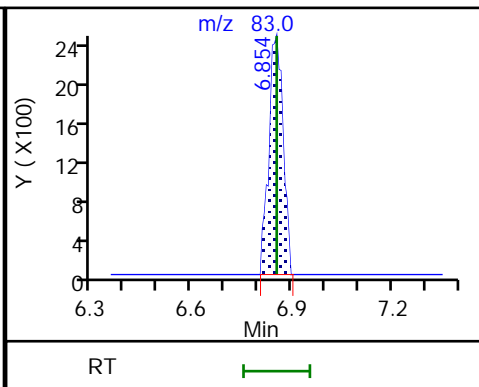
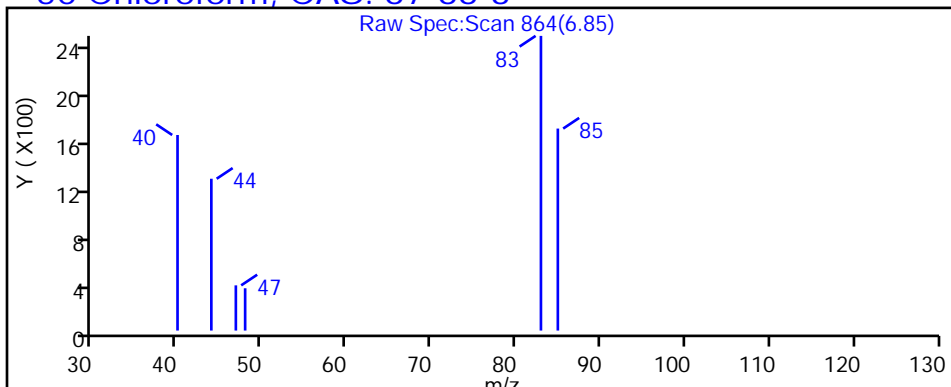
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID) x 30m

MS Quad

50 Chloroform, CAS: 67-66-3



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S19.D

Injection Date: 31-Aug-2020 02:02:30

Instrument ID: 19094

Lims ID: 410-11876-A-11

Lab Sample ID: 410-11876-11

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

Operator ID: mec29284

ALS Bottle#: 25

Worklist Smp#: 26

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

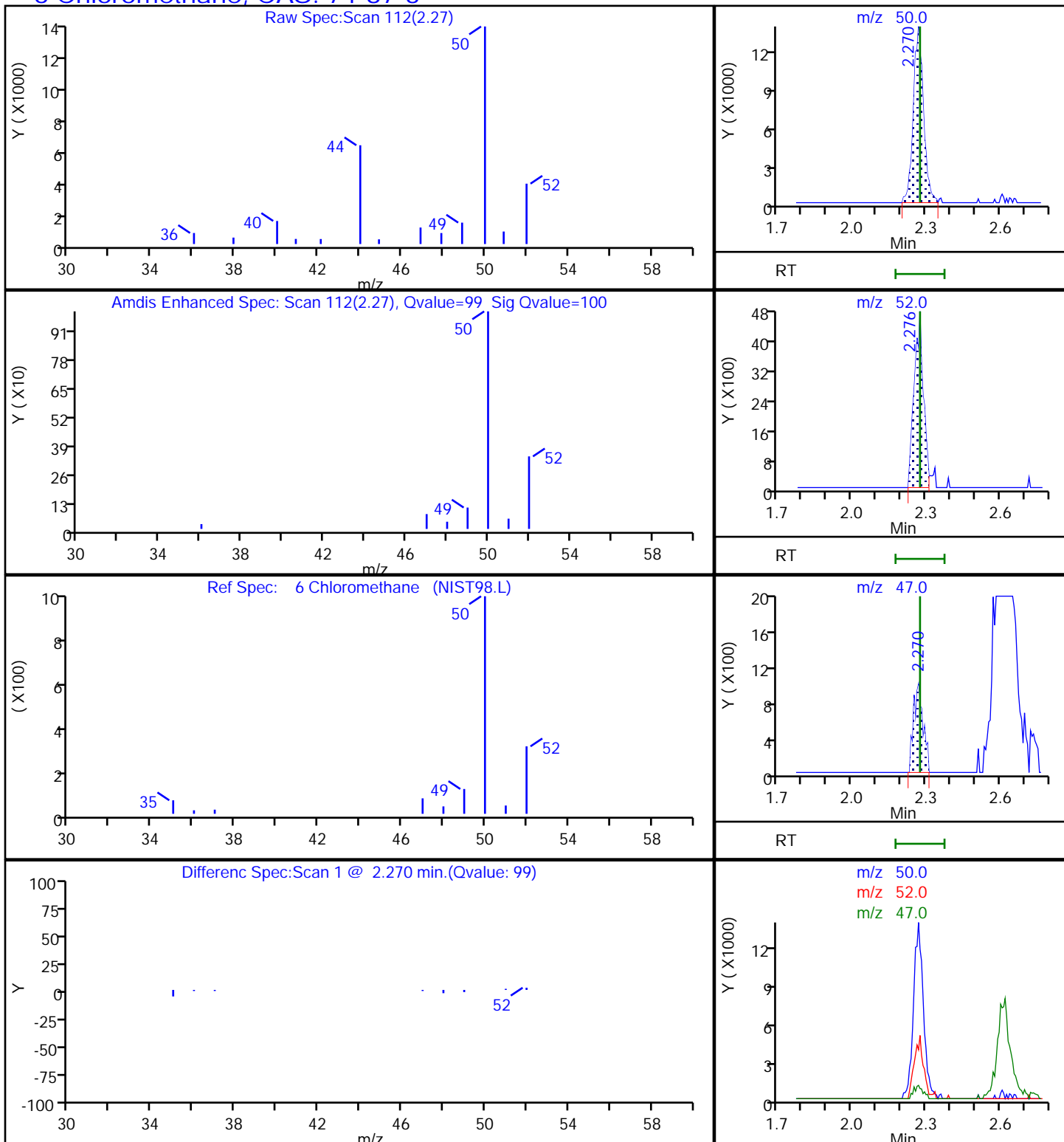
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector

MS Quad

6 Chloromethane, CAS: 74-87-3



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S19.D

Injection Date: 31-Aug-2020 02:02:30

Instrument ID: 19094

Lims ID: 410-11876-A-11

Lab Sample ID: 410-11876-11

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

Operator ID: mec29284

ALS Bottle#: 25

Worklist Smp#: 26

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

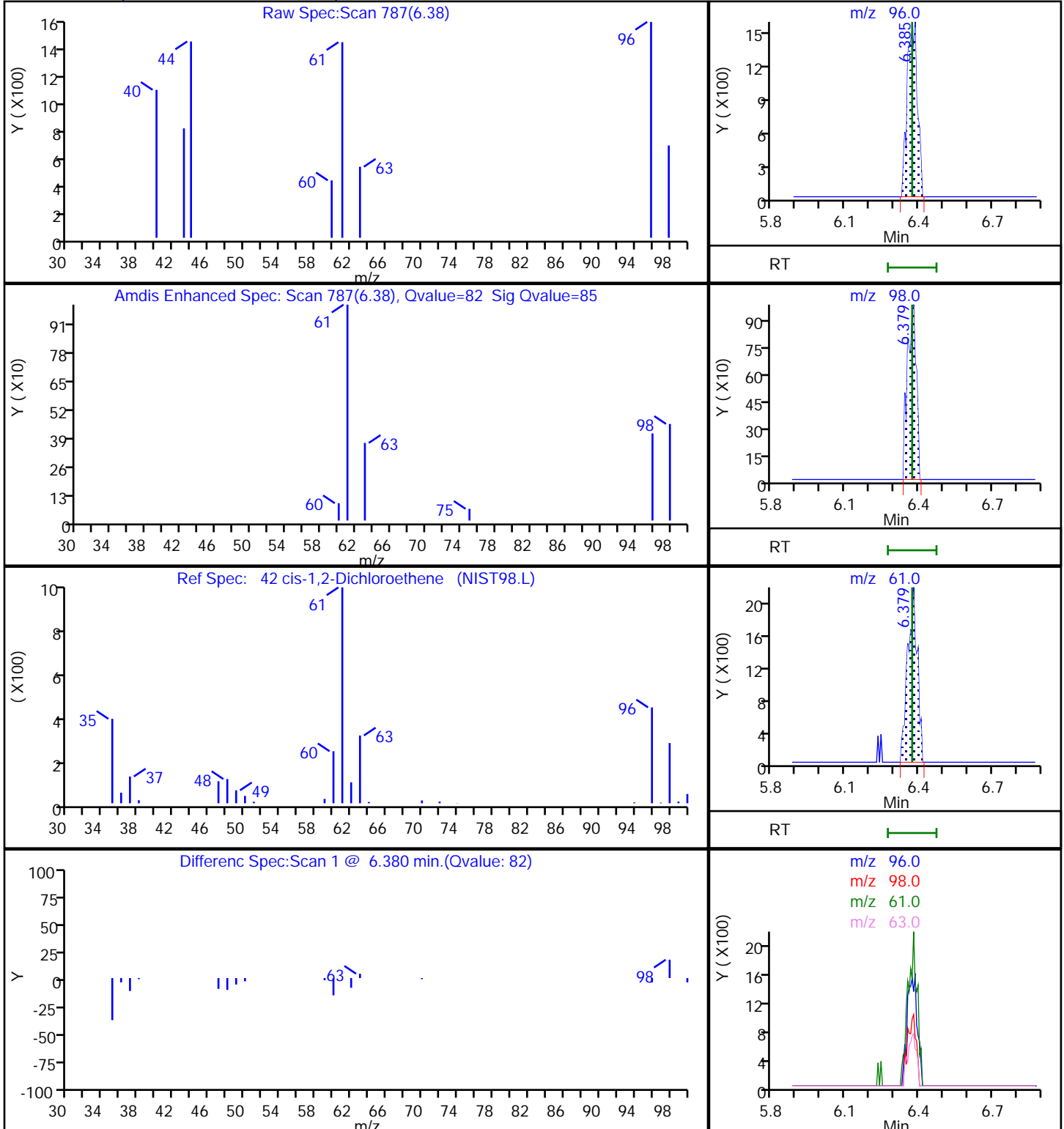
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

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



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S19.D

Injection Date: 31-Aug-2020 02:02:30

Instrument ID: 19094

Lims ID: 410-11876-A-11

Lab Sample ID: 410-11876-11

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

Operator ID: mec29284

ALS Bottle#: 25

Worklist Smp#: 26

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

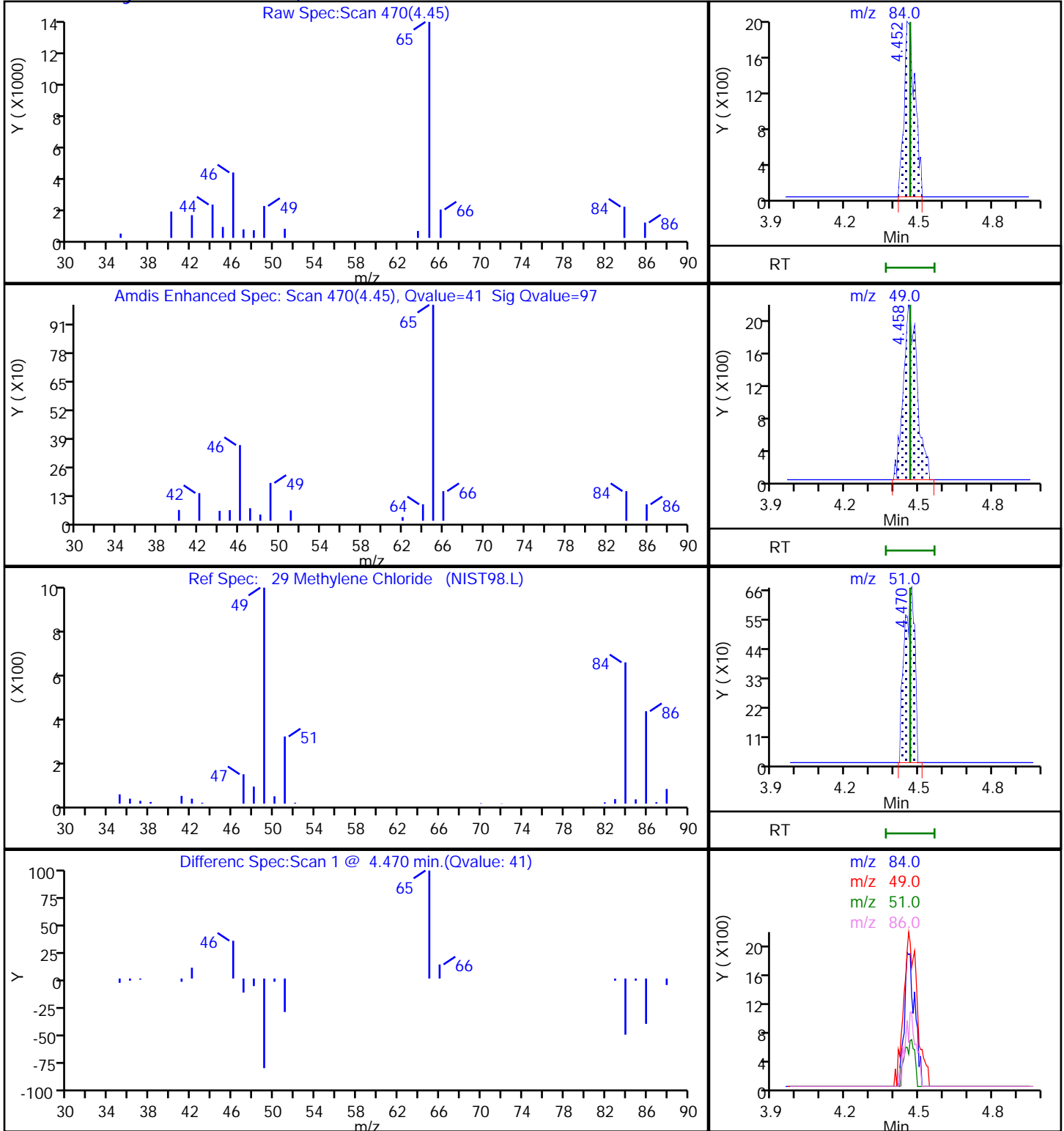
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

29 Methylene Chloride, CAS: 75-09-2



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S19.D

Injection Date: 31-Aug-2020 02:02:30

Instrument ID: 19094

Lims ID: 410-11876-A-11

Lab Sample ID: 410-11876-11

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

Operator ID: mec29284

ALS Bottle#: 25

Worklist Smp#: 26

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

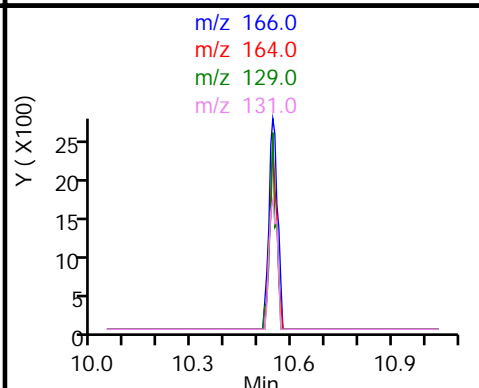
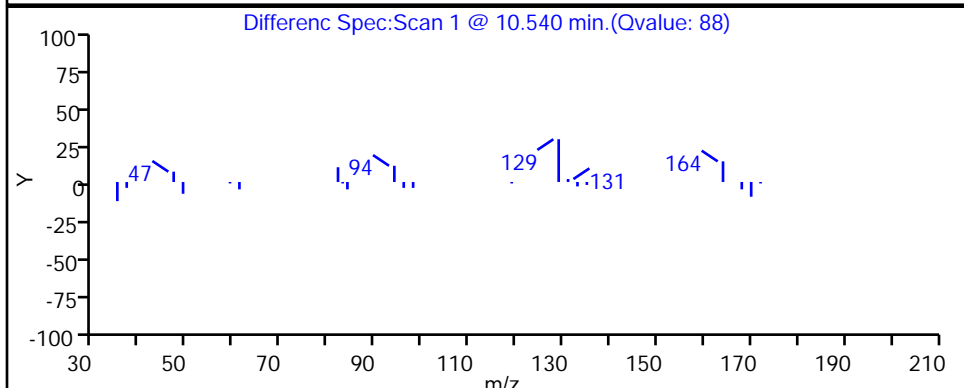
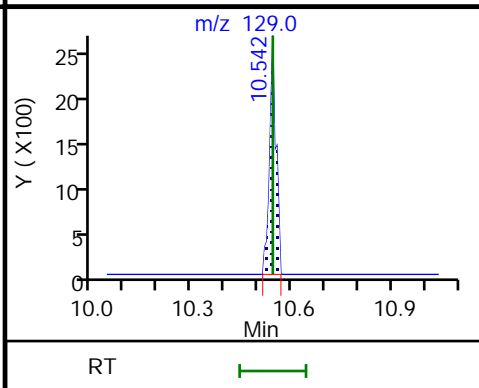
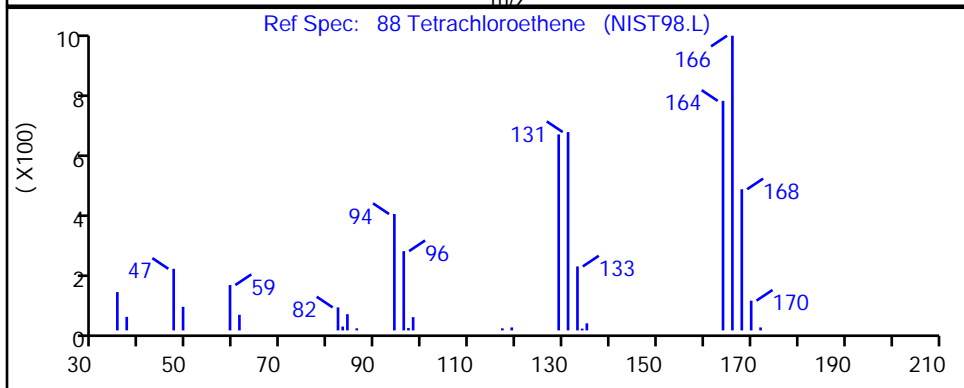
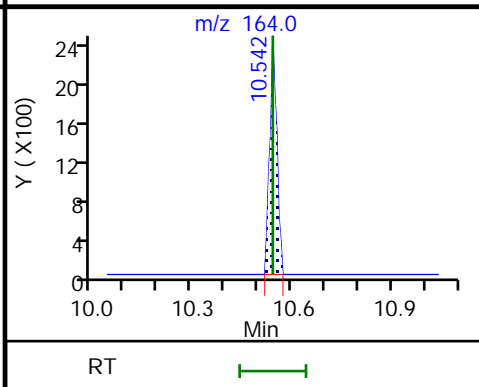
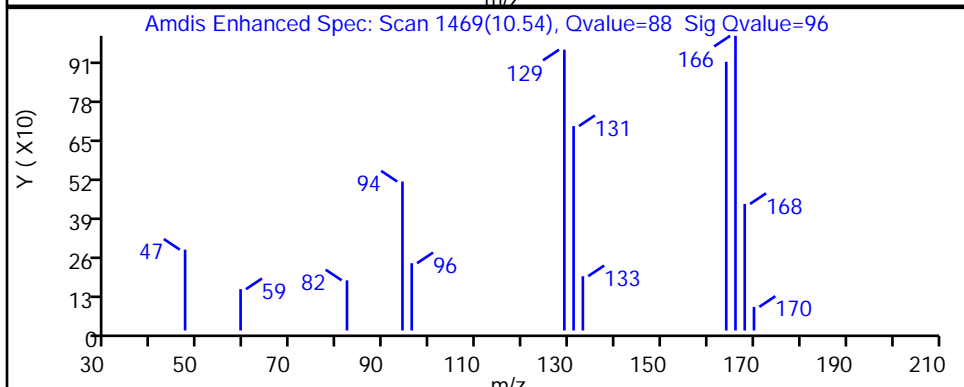
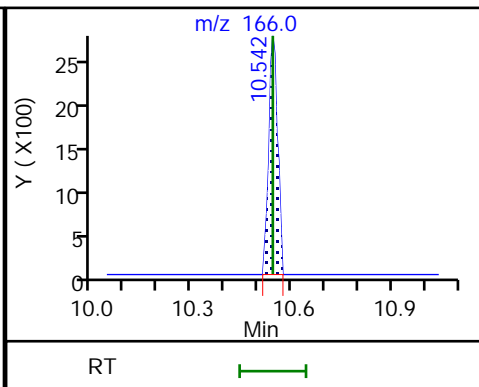
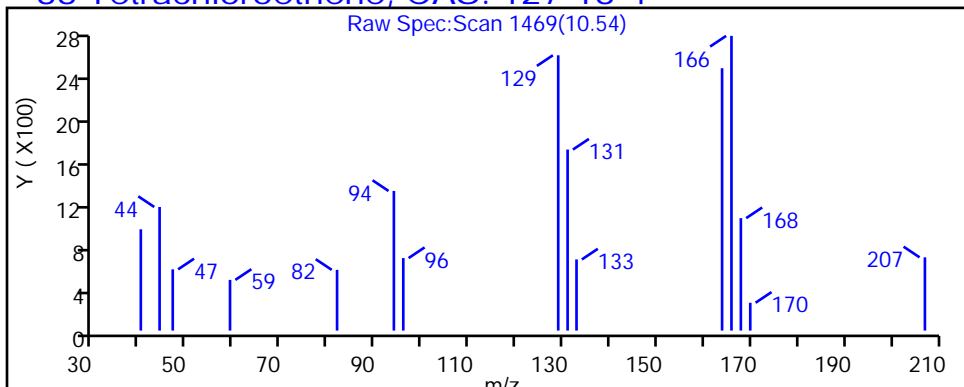
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

88 Tetrachloroethene, CAS: 127-18-4



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S19.D

Injection Date: 31-Aug-2020 02:02:30

Instrument ID: 19094

Lims ID: 410-11876-A-11

Lab Sample ID: 410-11876-11

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

Operator ID: mec29284

ALS Bottle#: 25

Worklist Smp#: 26

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

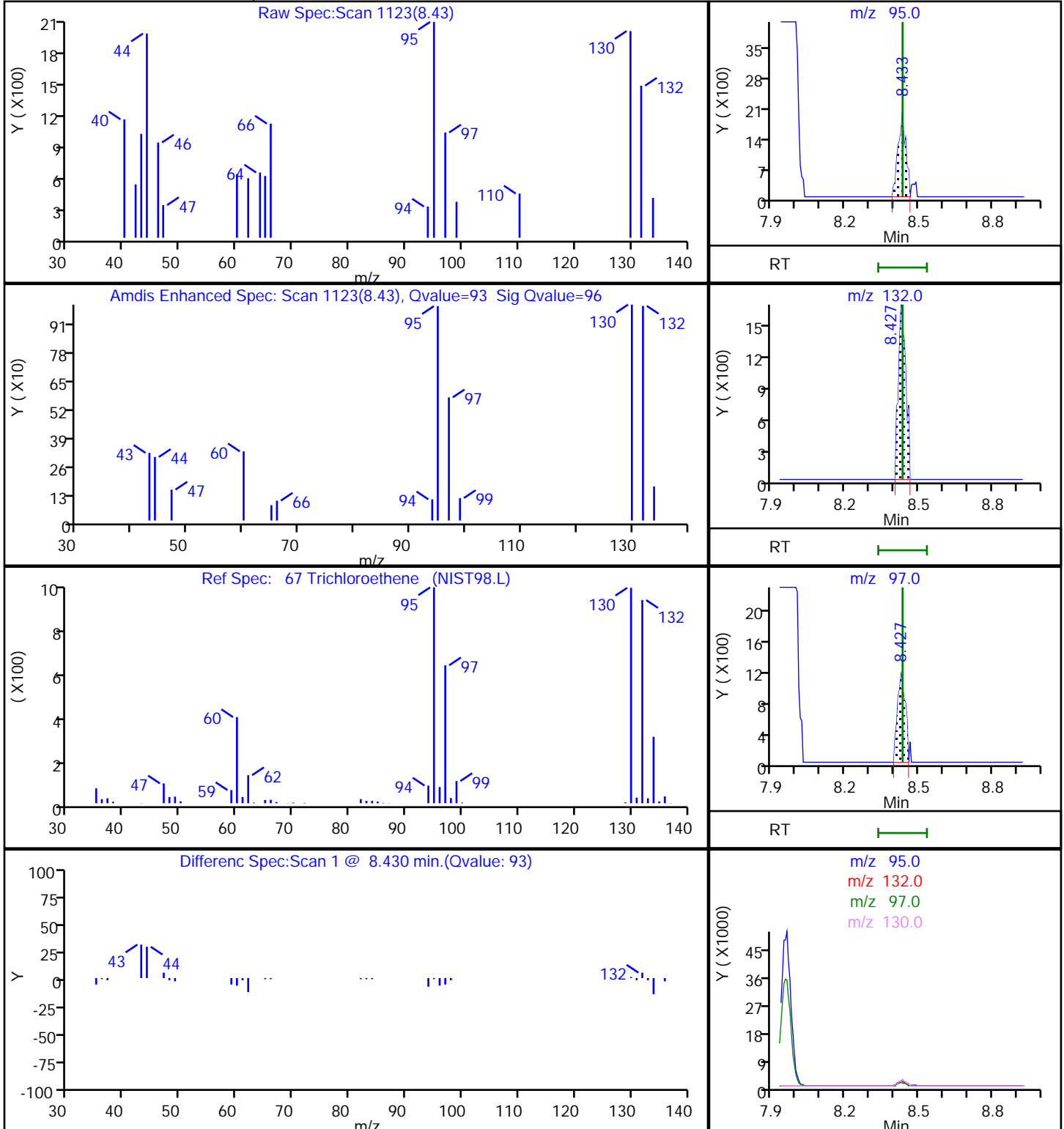
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector

MS Quad

67 Trichloroethene, CAS: 79-01-6



Eurofins Lancaster Laboratories Env, LLC

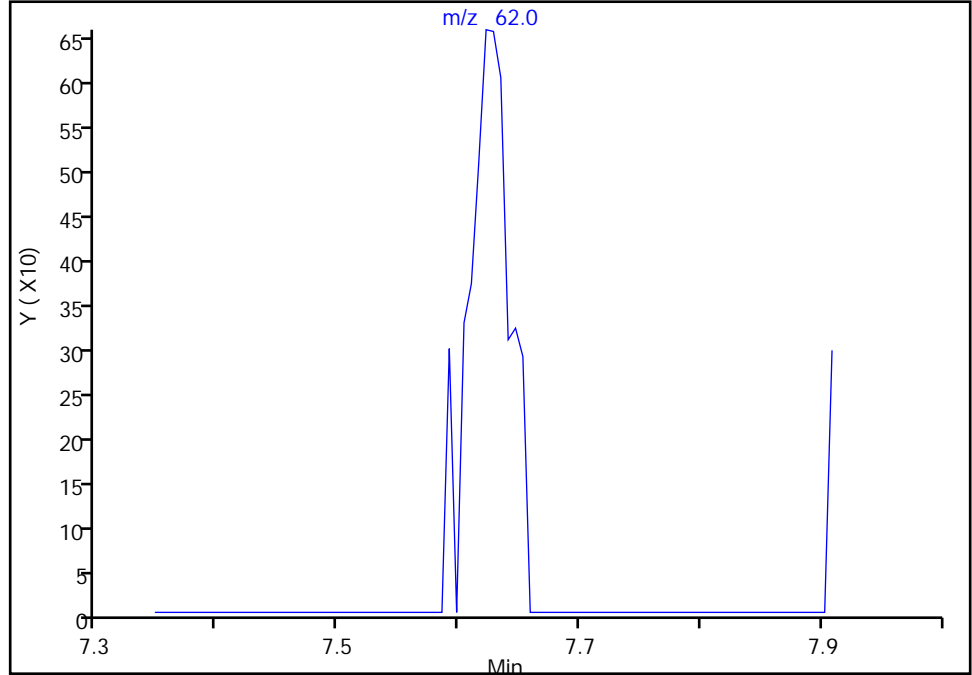
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Injection Date: 31-Aug-2020 02:02:30 Instrument ID: 19094
Lims ID: 410-11876-A-11 Lab Sample ID: 410-11876-11
Client ID: HD-COD-SW-28-0/1-0
Operator ID: mec29284 ALS Bottle#: 25 Worklist Smp#: 26
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

60 1,2-Dichloroethane, CAS: 107-06-2

Signal: 1

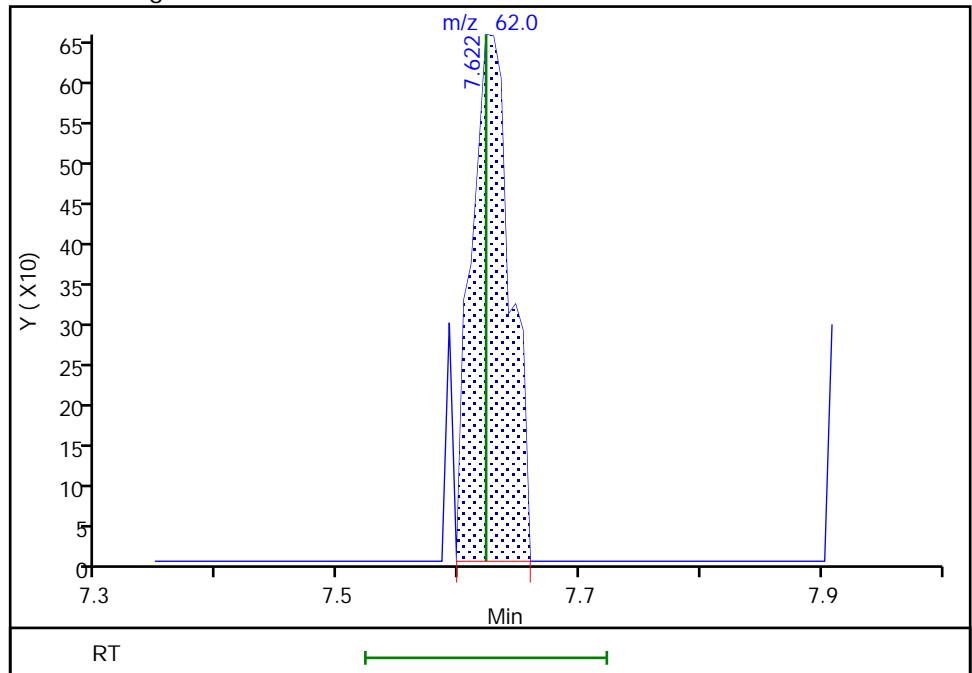
Not Detected
Expected RT: 7.62

Processing Integration Results



Manual Integration Results

RT: 7.62
Area: 1474
Amount: 0.036550
Amount Units: ug/l



Euofins Lancaster Laboratories Env, LLC

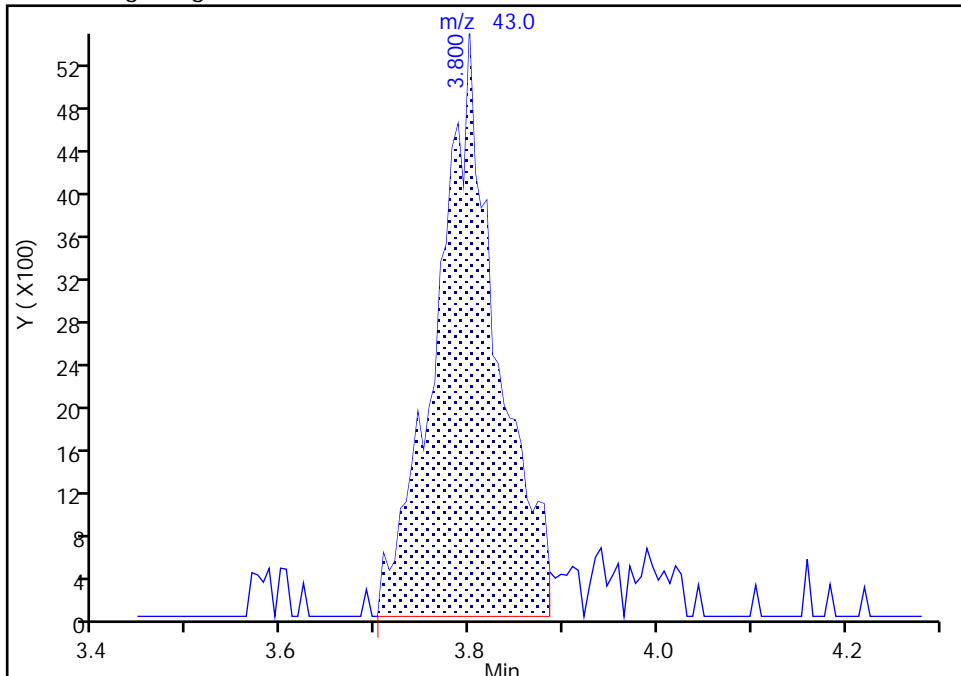
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Injection Date: 31-Aug-2020 02:02:30 Instrument ID: 19094
Lims ID: 410-11876-A-11 Lab Sample ID: 410-11876-11
Client ID: HD-COD-SW-28-0/1-0
Operator ID: mec29284 ALS Bottle#: 25 Worklist Smp#: 26
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

19 Acetone, CAS: 67-64-1

Signal: 1

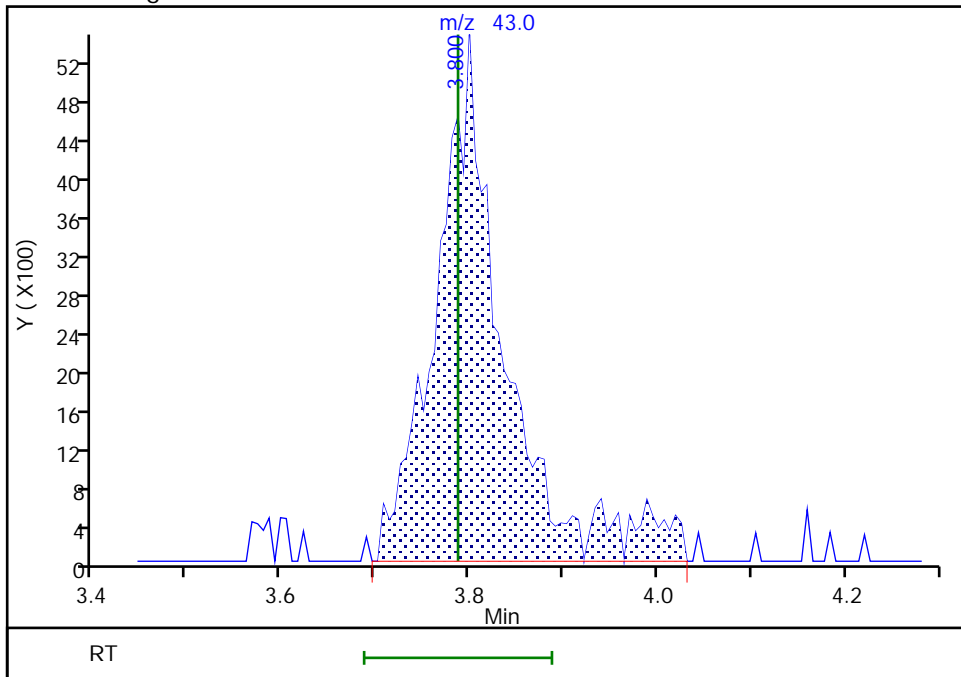
RT: 3.80
Area: 24223
Amount: 2.759585
Amount Units: ug/l

Processing Integration Results



RT: 3.80
Area: 27463
Amount: 3.128699
Amount Units: ug/l

Manual Integration Results



Reviewer: virayd, 31-Aug-2020 13:22:34
Audit Action: Manually Integrated

Audit Reason: Other

Eurofins Lancaster Laboratories Env, LLC

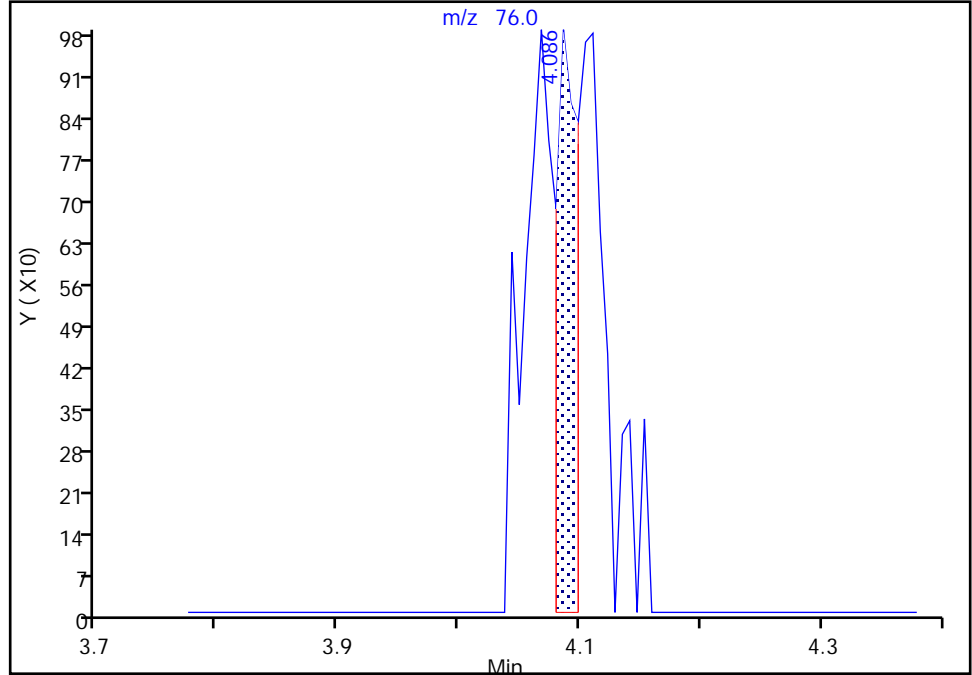
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Injection Date: 31-Aug-2020 02:02:30 Instrument ID: 19094
Lims ID: 410-11876-A-11 Lab Sample ID: 410-11876-11
Client ID: HD-COD-SW-28-0/1-0
Operator ID: mec29284 ALS Bottle#: 25 Worklist Smp#: 26
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

24 Carbon disulfide, CAS: 75-15-0

Signal: 1

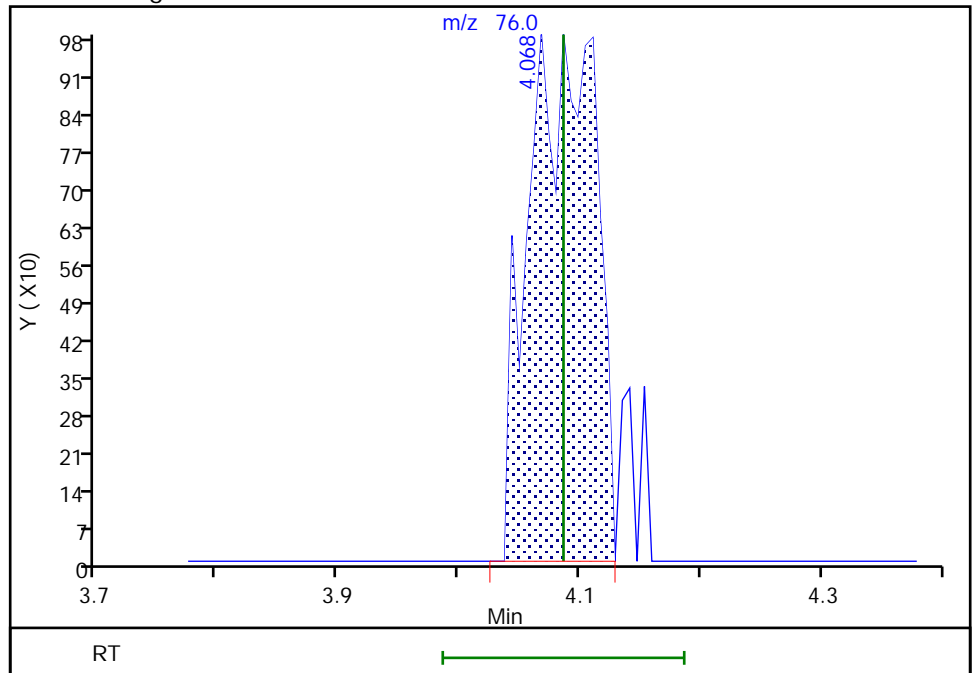
RT: 4.09
Area: 1227
Amount: 0.010747
Amount Units: ug/l

Processing Integration Results



RT: 4.07
Area: 3839
Amount: 0.033623
Amount Units: ug/l

Manual Integration Results



Reviewer: virayd, 31-Aug-2020 13:22:38
Audit Action: Manually Integrated

Audit Reason: Other

Eurofins Lancaster Laboratories Env, LLC

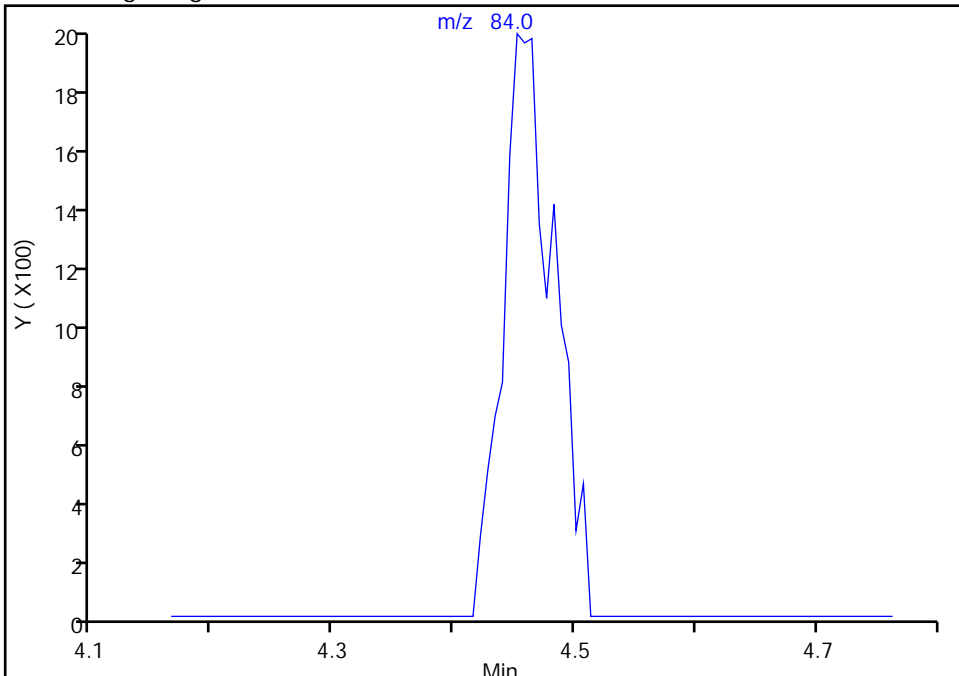
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Injection Date: 31-Aug-2020 02:02:30 Instrument ID: 19094
Lims ID: 410-11876-A-11 Lab Sample ID: 410-11876-11
Client ID: HD-COD-SW-28-0/1-0
Operator ID: mec29284 ALS Bottle#: 25 Worklist Smp#: 26
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

29 Methylene Chloride, CAS: 75-09-2

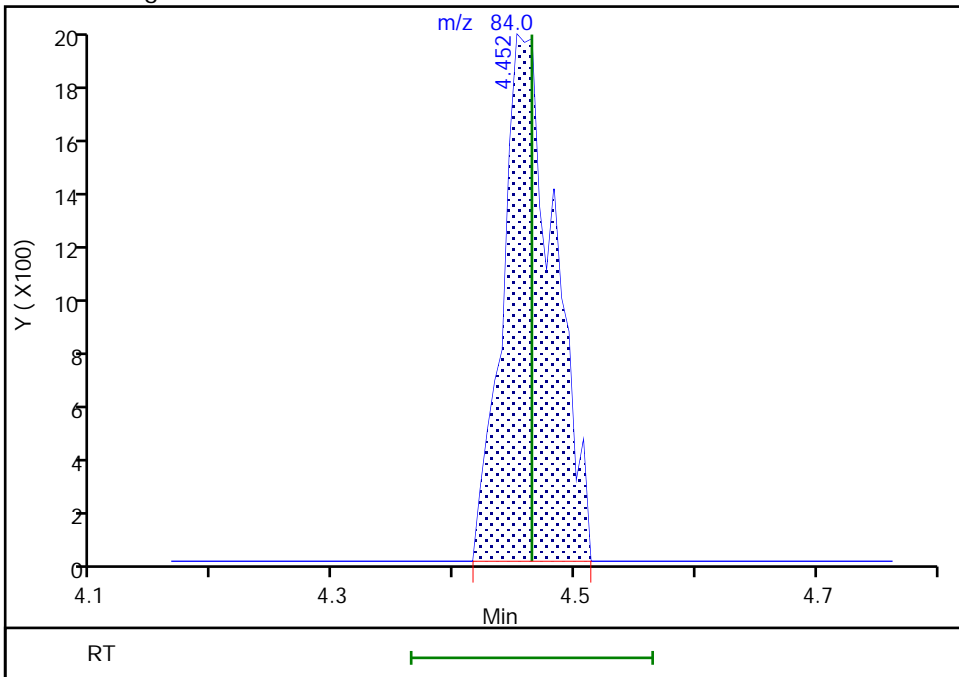
Signal: 1

Not Detected
Expected RT: 4.46

Processing Integration Results



Manual Integration Results



RT: 4.45
Area: 5671
Amount: 0.138467
Amount Units: ug/l

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-29-0/1-0 Lab Sample ID: 410-11876-12
 Matrix: Water Lab File ID: HG30S20.D
 Analysis Method: 8260C LL Date Collected: 08/25/2020 08:10
 Sample wt/vol: 25 (mL) Date Analyzed: 08/31/2020 02:23
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 38982 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.50	0.070
71-55-6	1,1,1-Trichloroethane	ND		0.50	0.060
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.50	0.070
79-00-5	1,1,2-Trichloroethane	ND		0.50	0.060
75-34-3	1,1-Dichloroethane	ND		0.50	0.070
75-35-4	1,1-Dichloroethene	ND		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	ND		0.50	0.060
107-06-2	1,2-Dichloroethane	ND		0.50	0.050
78-87-5	1,2-Dichloropropane	ND		0.50	0.060
78-93-3	2-Butanone (MEK)	ND		5.0	0.60
591-78-6	2-Hexanone	ND		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70
67-64-1	Acetone	2.1	J	5.0	0.90
107-13-1	Acrylonitrile	ND		5.0	0.40
71-43-2	Benzene	ND		0.50	0.050
74-97-5	Bromochloromethane	ND		0.50	0.050
75-27-4	Bromodichloromethane	ND		0.50	0.050
75-25-2	Bromoform	ND		1.0	0.30
74-83-9	Bromomethane	ND		0.50	0.070
75-15-0	Carbon disulfide	ND		1.0	0.060
56-23-5	Carbon tetrachloride	ND		0.50	0.070
108-90-7	Chlorobenzene	ND		0.50	0.060
75-00-3	Chloroethane	ND		0.50	0.070
67-66-3	Chloroform	ND		0.50	0.090
74-87-3	Chloromethane	0.36	J	0.50	0.060
156-59-2	cis-1,2-Dichloroethene	0.097	J	0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	ND		0.50	0.050
124-48-1	Dibromochloromethane	ND		0.50	0.070
100-41-4	Ethylbenzene	ND		0.50	0.060
1634-04-4	Methyl tert-butyl ether	ND		0.50	0.050
75-09-2	Methylene Chloride	0.095	J	0.50	0.070
100-42-5	Styrene	ND		0.50	0.050
127-18-4	Tetrachloroethene	0.074	J	0.50	0.060
108-88-3	Toluene	ND		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	ND		0.50	0.060
10061-02-6	trans-1,3-Dichloropropene	ND		0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-29-0/1-0 Lab Sample ID: 410-11876-12
 Matrix: Water Lab File ID: HG30S20.D
 Analysis Method: 8260C LL Date Collected: 08/25/2020 08:10
 Sample wt/vol: 25 (mL) Date Analyzed: 08/31/2020 02:23
 Soil Aliquot Vol.: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 38982 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	0.12	J	0.50	0.060
75-01-4	Vinyl chloride	ND		0.50	0.10
1330-20-7	Xylenes, Total	ND		1.0	0.15

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	107		80-120
1868-53-7	Dibromofluoromethane (Surr)	110		80-120
2037-26-5	Toluene-d8 (Surr)	100		80-120
460-00-4	4-Bromofluorobenzene (Surr)	94		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S20.D
 Lims ID: 410-11876-A-12
 Client ID: HD-COD-SW-29-0/1-0
 Sample Type: Client
 Inject. Date: 31-Aug-2020 02:23:30 ALS Bottle#: 26 Worklist Smp#: 27
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: 410-11876-A-12
 Misc. Info.: 410-0009349-027
 Operator ID: mec29284 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 31-Aug-2020 13:23:49 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1008

First Level Reviewer: virayd

Date: 31-Aug-2020 13:23:49

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
6 Chloromethane	50	2.276	2.276	0.000	97	28594	0.3635	
7 Vinyl chloride	62		2.385				ND	
9 Bromomethane	94		2.745				ND	
10 Chloroethane	64		2.837				ND	
18 1,1-Dichloroethene	96		3.757				ND	
19 Acetone	43	3.806	3.788	0.018	98	17974	2.14	M
24 Carbon disulfide	76		4.086				ND	
29 Methylene Chloride	84	4.470	4.464	0.006	41	4629	0.0947	
* 28 t-Butyl alcohol-d10 (IS)	65	4.489	4.477	0.013	0	119190	50.0	
31 Acrylonitrile	53		4.806				ND	
32 Methyl tert-butyl ether	73		4.873				ND	
33 trans-1,2-Dichloroethene	96		4.891				ND	
35 1,1-Dichloroethane	63		5.549				ND	
41 2-Butanone (MEK)	43		6.330				ND	
42 cis-1,2-Dichloroethene	96	6.385	6.372	0.013	80	5180	0.0968	a
48 Chlorobromomethane	128		6.702				ND	
50 Chloroform	83	6.860	6.854	0.006	87	5675	0.0676	
\$ 51 Dibromofluoromethane (Surr)	113	7.068	7.061	0.007	93	485944	11.0	
52 1,1,1-Trichloroethane	97		7.086				ND	
56 Carbon tetrachloride	117		7.293				ND	
\$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.519	7.519	0.000	0	95757	10.7	
59 Benzene	78		7.555				ND	
60 1,2-Dichloroethane	62	7.628	7.622	0.006	19	2006	0.0417	a
* 65 Fluorobenzene (IS)	96	7.958	7.951	0.007	98	1865904	10.0	
67 Trichloroethene	95	8.421	8.433	-0.012	92	6022	0.1195	
70 1,2-Dichloropropane	63		8.768				ND	
75 Dichlorobromomethane	83		9.110				ND	
80 cis-1,3-Dichloropropene	75		9.634				ND	
81 4-Methyl-2-pentanone (MIBK)	43		9.793				ND	
\$ 82 Toluene-d8 (Surr)	98	9.933	9.933	0.000	94	1814039	9.97	
83 Toluene	92	10.006	10.012	-0.006	96	5589	0.0440	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
85 trans-1,3-Dichloropropene	75		10.256				ND	
87 1,1,2-Trichloroethane	97		10.457				ND	
88 Tetrachloroethene	166	10.536	10.542	-0.006	91	3971	0.0736	
91 2-Hexanone	43		10.658				ND	
93 Chlorodibromomethane	129		10.829				ND	
94 Ethylene Dibromide	107		10.945				ND	
S 95 Xylenes, Total	106		11.245				ND	
* 97 Chlorobenzene-d5 (IS)	117	11.365	11.365	0.000	87	1355265	10.0	
98 Chlorobenzene	112		11.390				ND	
99 1,1,1,2-Tetrachloroethane	131		11.469				ND	
100 Ethylbenzene	91		11.475				ND	
101 m-Xylene & p-Xylene	106		11.585				ND	
102 o-Xylene	106		11.914				ND	
103 Styrene	104		11.926				ND	
104 Bromoform	173		12.091				ND	
\$ 108 4-Bromofluorobenzene (Surr)	95	12.353	12.353	0.000	88	626512	9.44	
109 1,1,2,2-Tetrachloroethane	83		12.451				ND	
* 124 1,4-Dichlorobenzene-d4	152	13.231	13.231	0.000	96	671202	10.0	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_30_826ISS_00005

Amount Added: 5.00

Units: uL

Run Reagent

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S20.D

Injection Date: 31-Aug-2020 02:23:30

Instrument ID: 19094

Operator ID: mec29284

Lims ID: 410-11876-A-12

Lab Sample ID: 410-11876-12

Worklist Smp#: 27

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

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

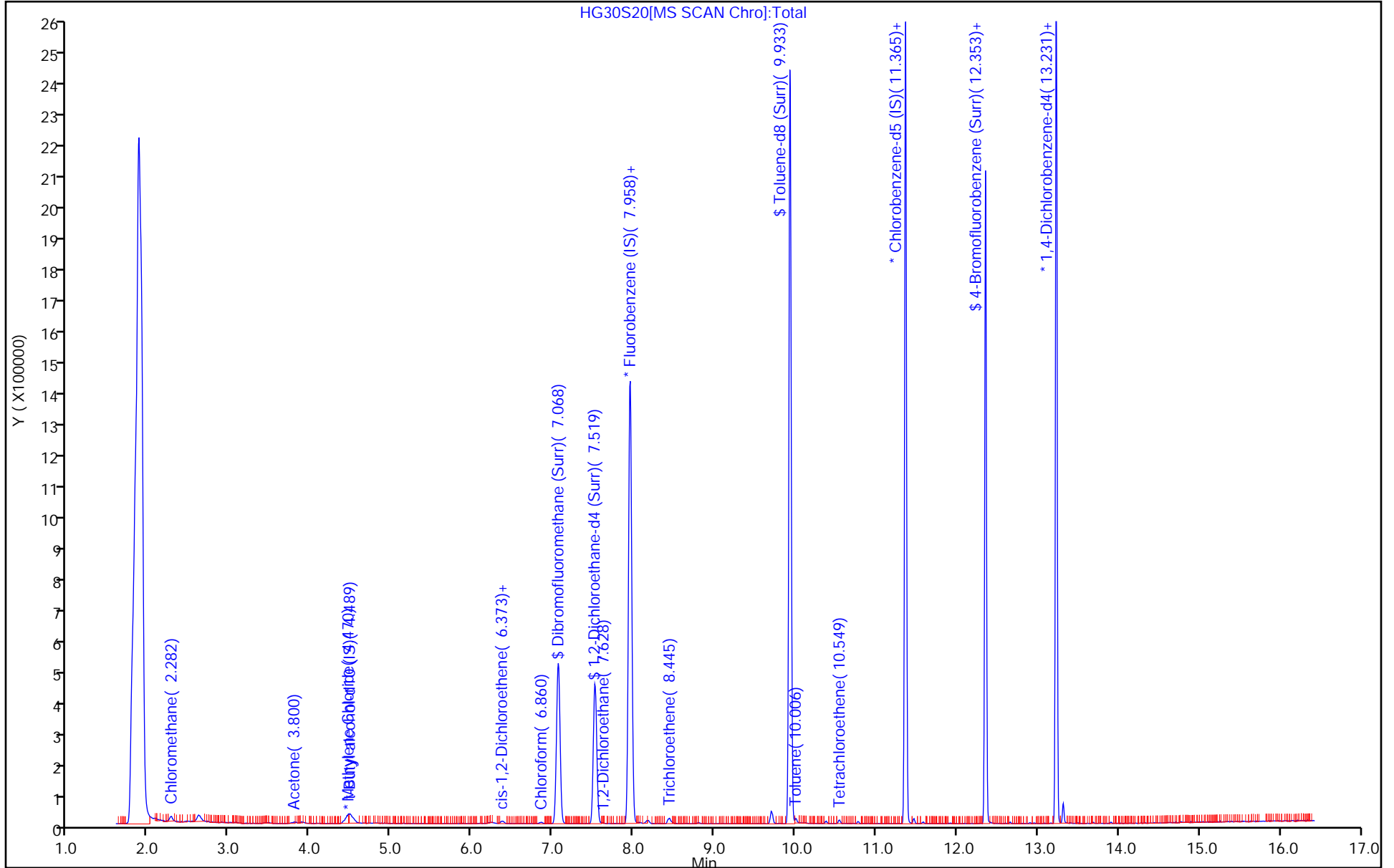
ALS Bottle#: 26

Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S20.D
 Lims ID: 410-11876-A-12
 Client ID: HD-COD-SW-29-0/1-0
 Sample Type: Client
 Inject. Date: 31-Aug-2020 02:23:30 ALS Bottle#: 26 Worklist Smp#: 27
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: 410-11876-A-12
 Misc. Info.: 410-0009349-027
 Operator ID: mec29284 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 31-Aug-2020 13:23:49 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1008

First Level Reviewer: virayd

Date: 31-Aug-2020 13:23:49

Compound	Amount Added	Amount Recovered	% Rec.
\$ 51 Dibromofluoromethane (Surr)	10.0	11.0	110.16
\$ 58 1,2-Dichloroethane-d4 (Surr)	10.0	10.7	106.56
\$ 82 Toluene-d8 (Surr)	10.0	9.97	99.75
\$ 108 4-Bromofluorobenzene (Surr)	10.0	9.44	94.43

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S20.D

Injection Date: 31-Aug-2020 02:23:30

Instrument ID: 19094

Lims ID: 410-11876-A-12

Lab Sample ID: 410-11876-12

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

Operator ID: mec29284

ALS Bottle#: 26

Worklist Smp#: 27

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

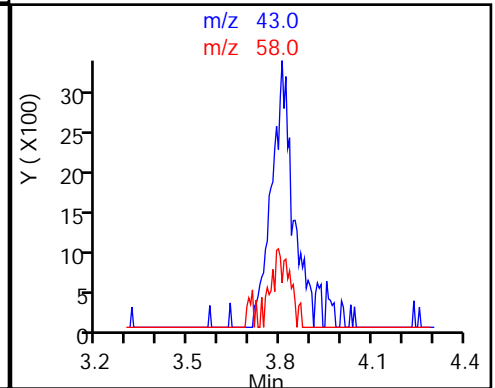
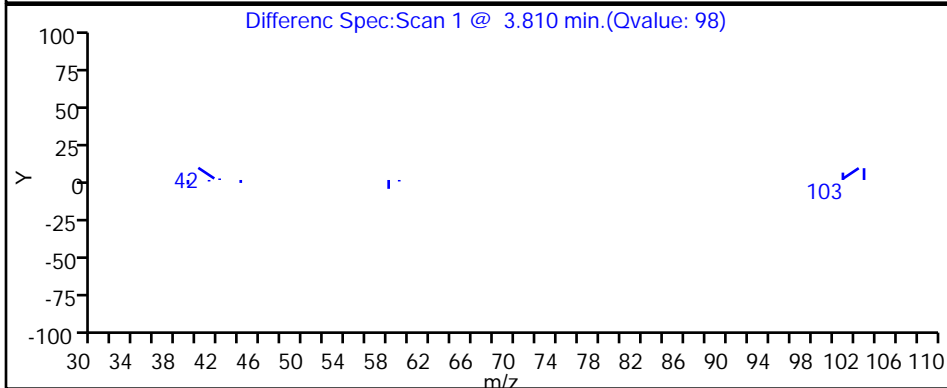
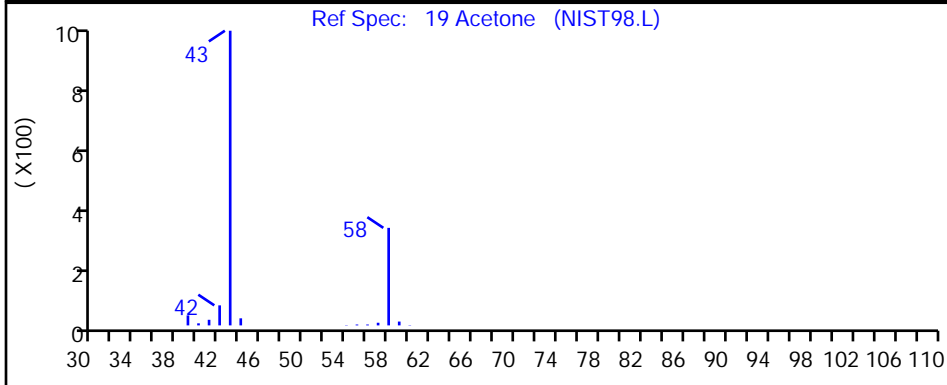
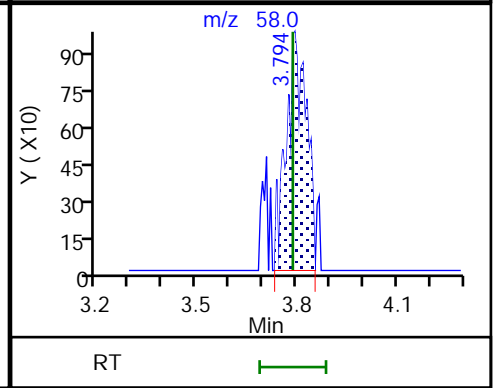
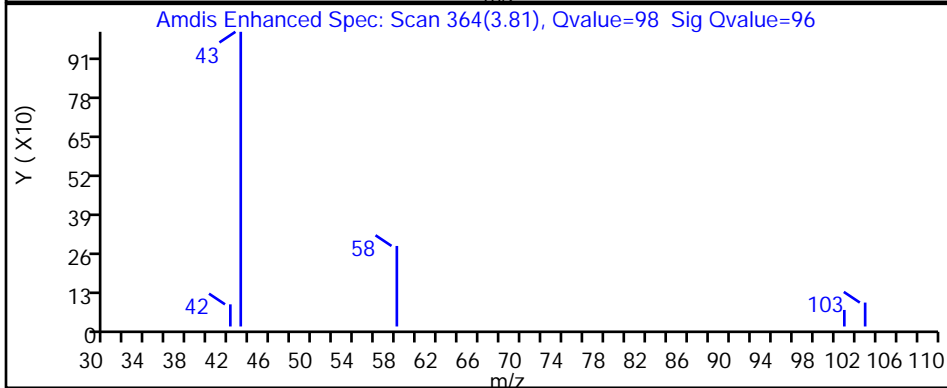
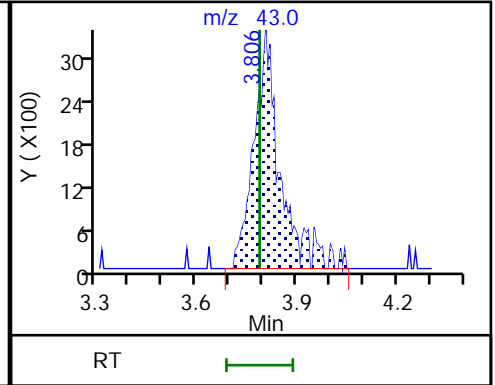
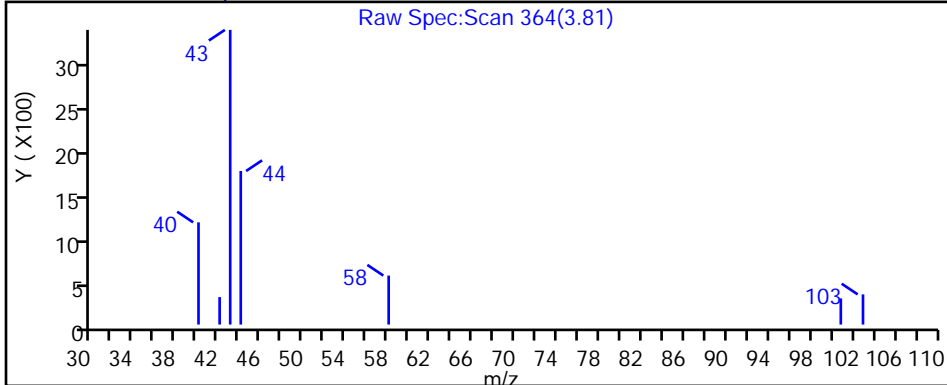
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector

MS Quad

19 Acetone, CAS: 67-64-1



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S20.D

Injection Date: 31-Aug-2020 02:23:30

Instrument ID: 19094

Lims ID: 410-11876-A-12

Lab Sample ID: 410-11876-12

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

Operator ID: mec29284

ALS Bottle#: 26

Worklist Smp#: 27

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

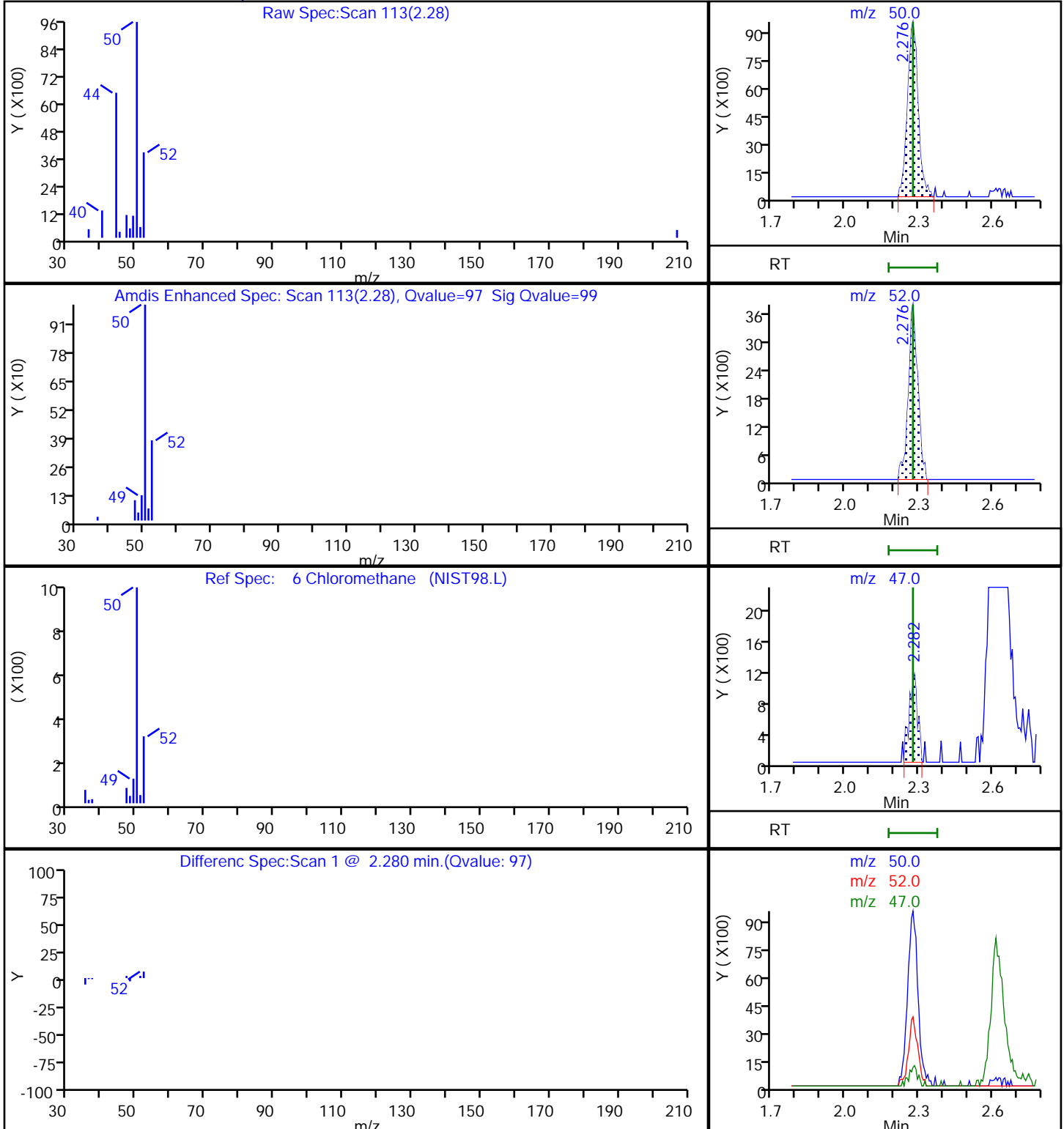
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

6 Chloromethane, CAS: 74-87-3



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S20.D

Injection Date: 31-Aug-2020 02:23:30

Instrument ID: 19094

Lims ID: 410-11876-A-12

Lab Sample ID: 410-11876-12

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

Operator ID: mec29284

ALS Bottle#: 26

Worklist Smp#: 27

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

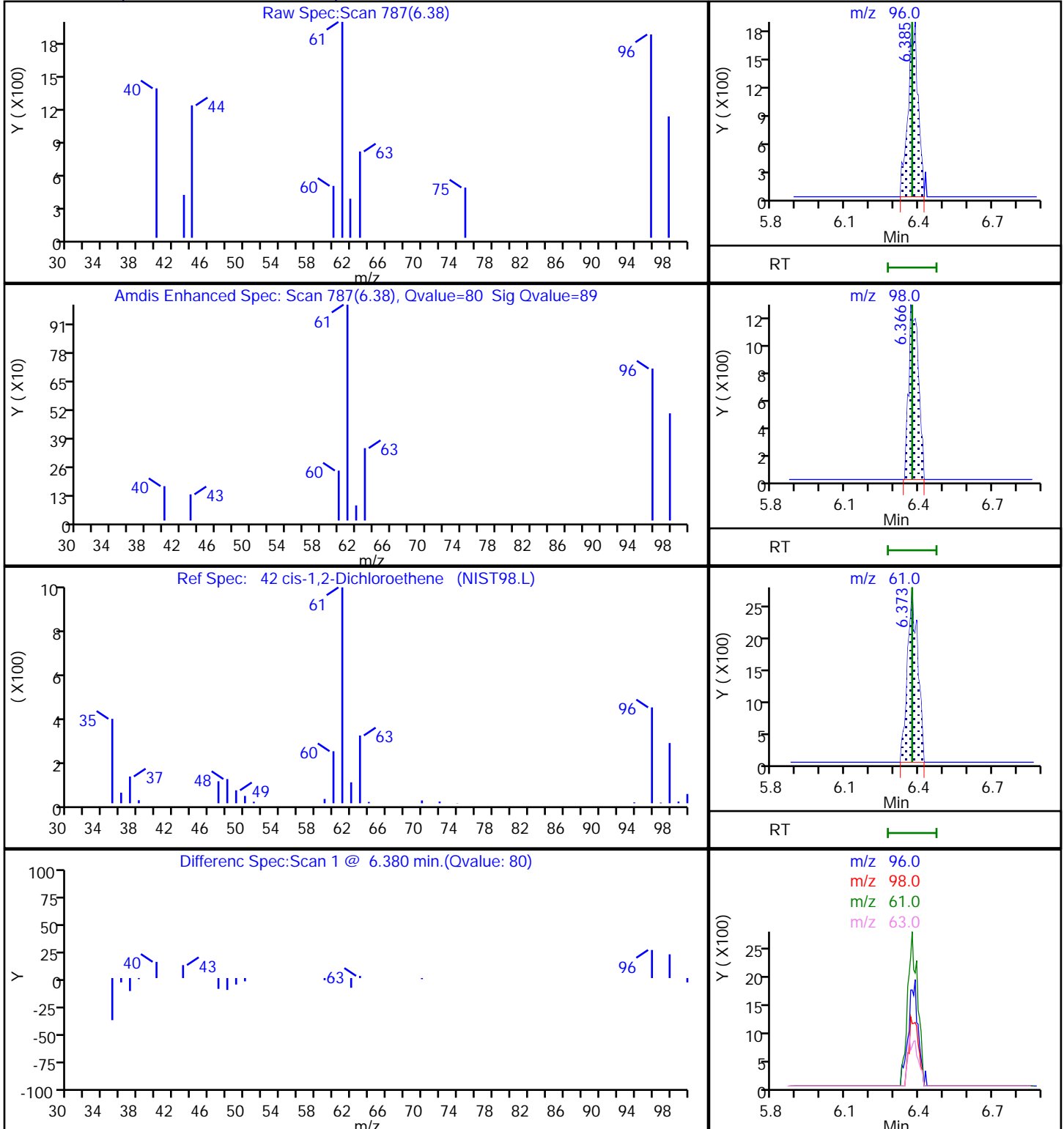
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

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



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S20.D

Injection Date: 31-Aug-2020 02:23:30

Instrument ID: 19094

Lims ID: 410-11876-A-12

Lab Sample ID: 410-11876-12

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

Operator ID: mec29284

ALS Bottle#: 26

Worklist Smp#: 27

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

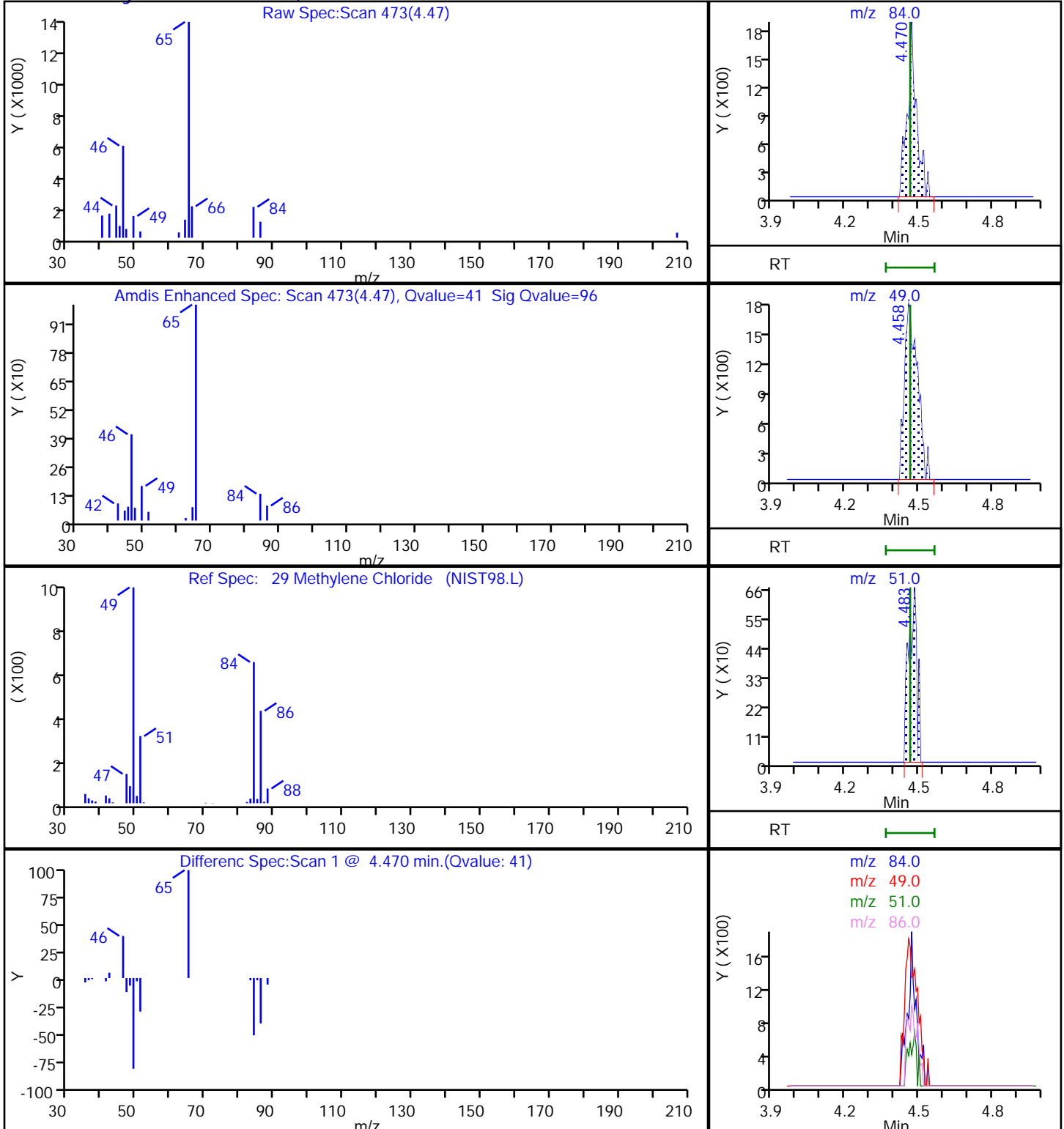
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

29 Methylene Chloride, CAS: 75-09-2



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S20.D

Injection Date: 31-Aug-2020 02:23:30

Instrument ID: 19094

Lims ID: 410-11876-A-12

Lab Sample ID: 410-11876-12

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

Operator ID: mec29284

ALS Bottle#: 26

Worklist Smp#: 27

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

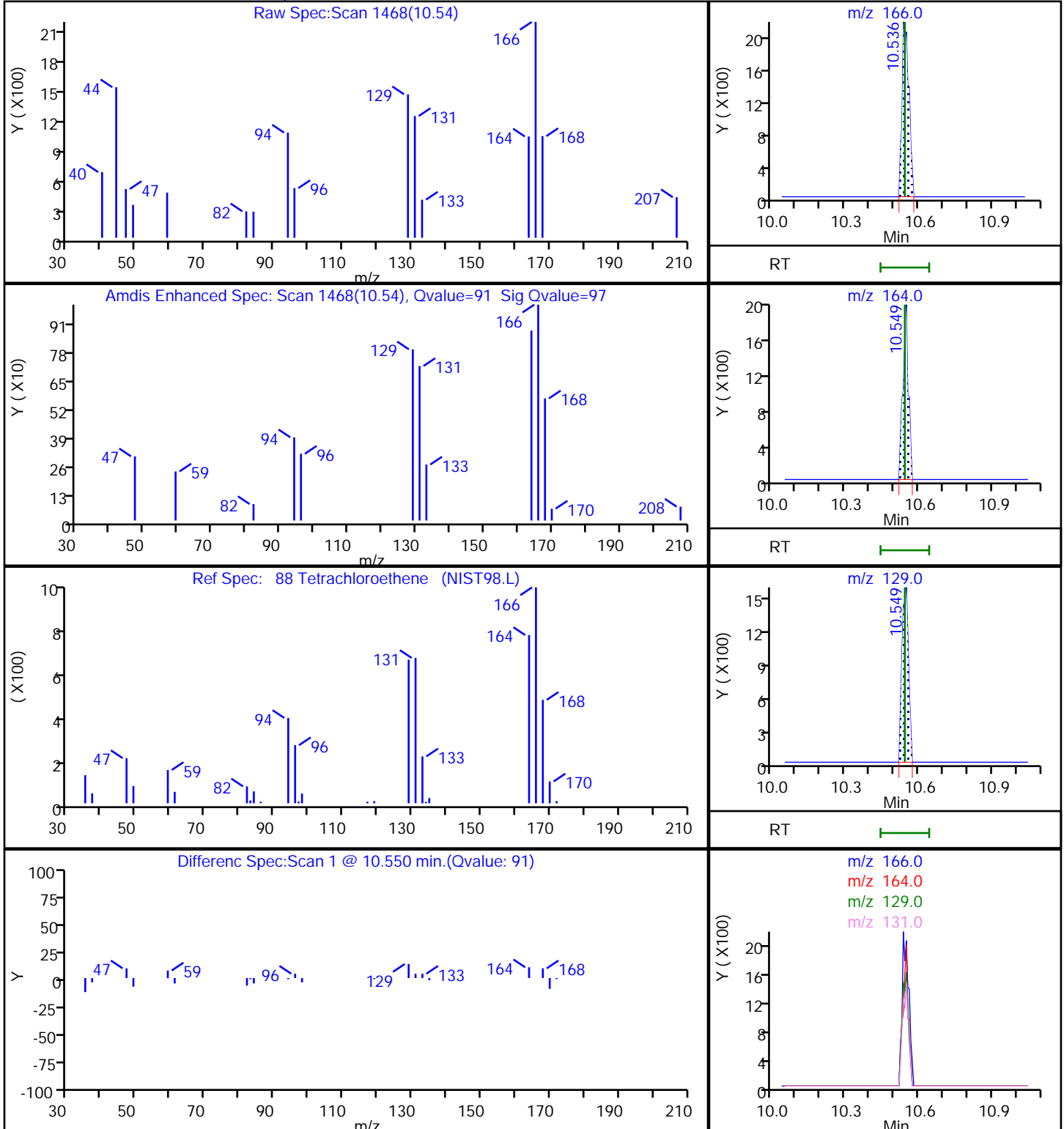
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

88 Tetrachloroethene, CAS: 127-18-4



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S20.D

Injection Date: 31-Aug-2020 02:23:30

Instrument ID: 19094

Lims ID: 410-11876-A-12

Lab Sample ID: 410-11876-12

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

Operator ID: mec29284

ALS Bottle#: 26

Worklist Smp#: 27

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

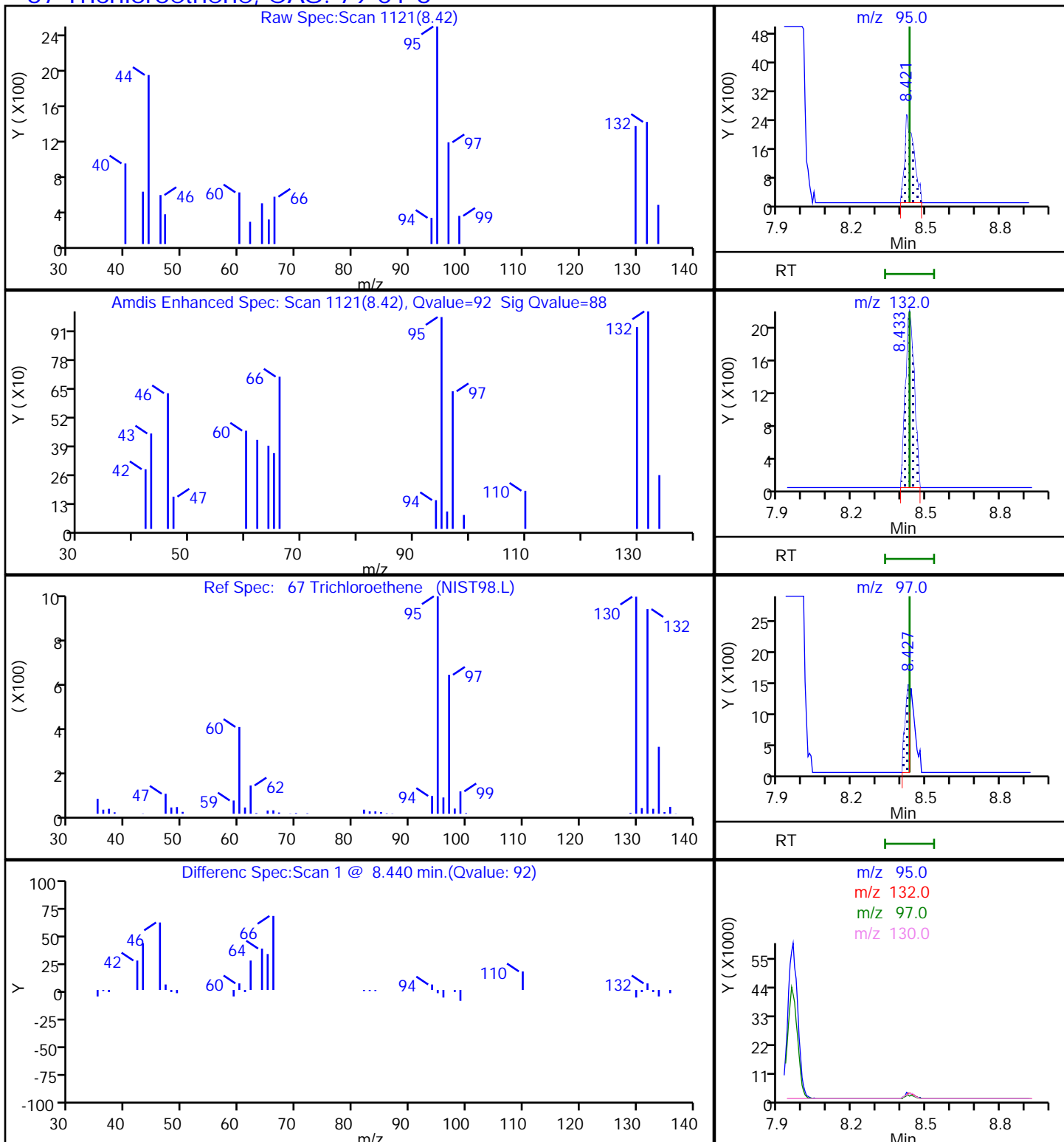
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

67 Trichloroethene, CAS: 79-01-6



Eurofins Lancaster Laboratories Env, LLC

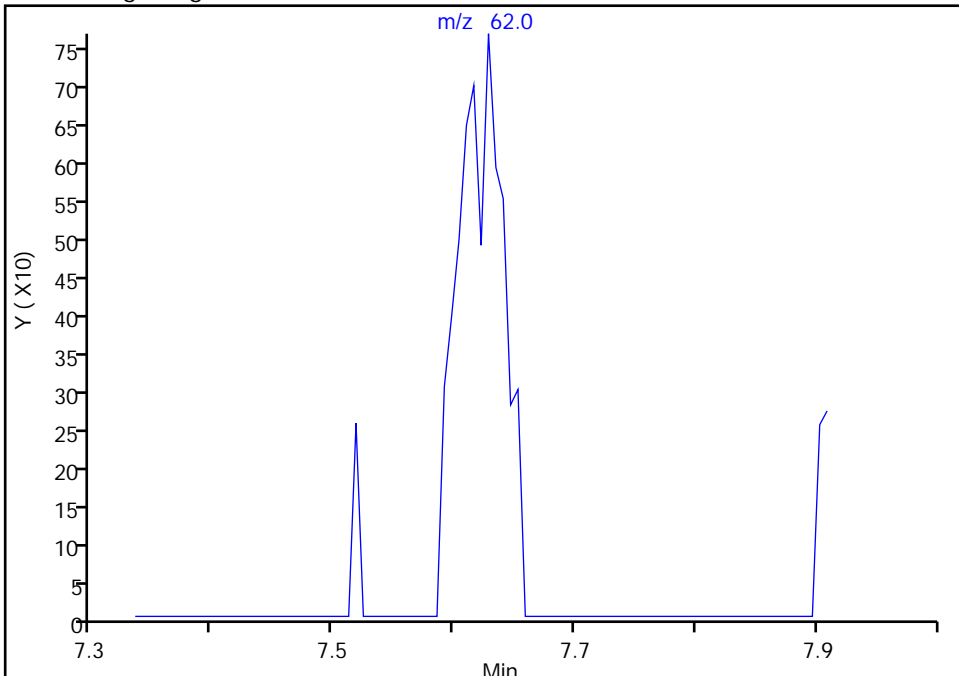
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Injection Date: 31-Aug-2020 02:23:30 Instrument ID: 19094
Lims ID: 410-11876-A-12 Lab Sample ID: 410-11876-12
Client ID: HD-COD-SW-29-0/1-0
Operator ID: mec29284 ALS Bottle#: 26 Worklist Smp#: 27
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

60 1,2-Dichloroethane, CAS: 107-06-2

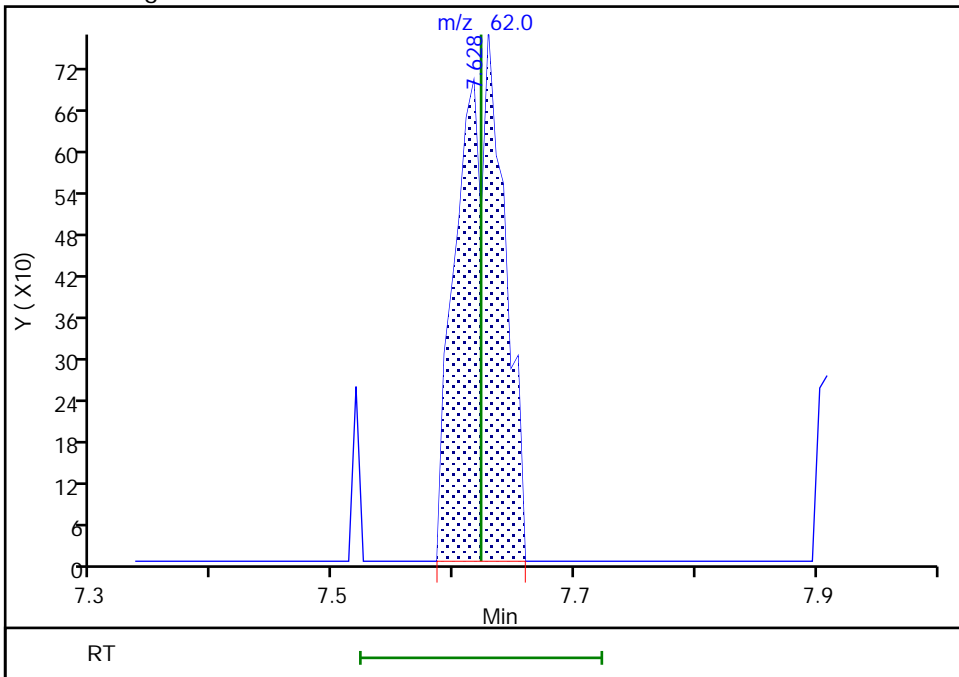
Signal: 1

Not Detected
Expected RT: 7.62

Processing Integration Results



Manual Integration Results



RT: 7.63
Area: 2006
Amount: 0.041694
Amount Units: ug/l

Euofins Lancaster Laboratories Env, LLC

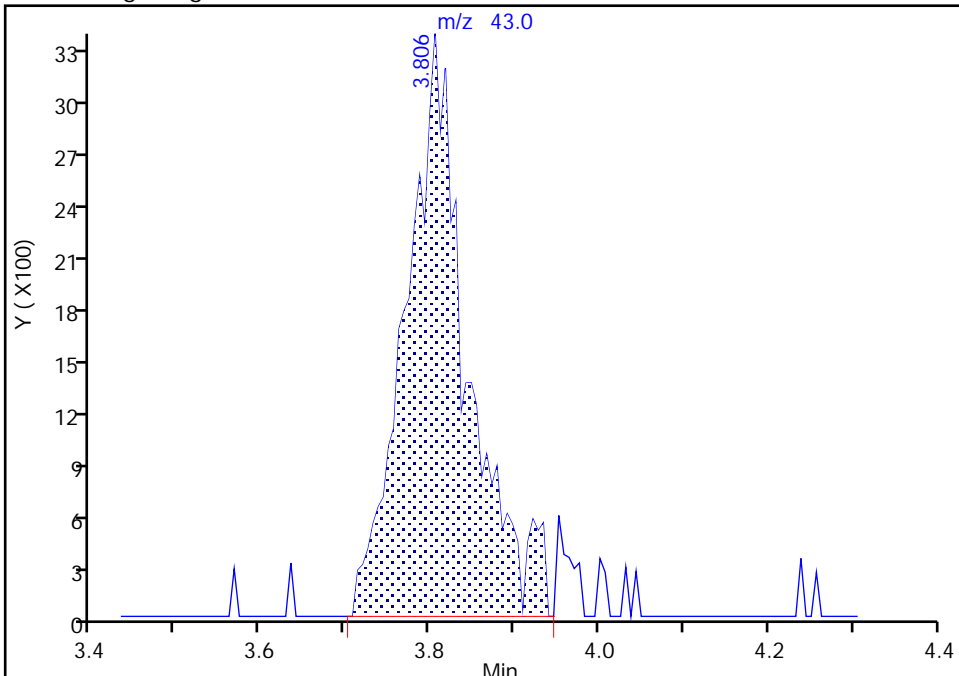
Data File:	\\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S20.D		
Injection Date:	31-Aug-2020 02:23:30	Instrument ID:	19094
Lims ID:	410-11876-A-12	Lab Sample ID:	410-11876-12
Client ID:	HD-COD-SW-29-0/1-0		
Operator ID:	mec29284	ALS Bottle#:	26
Purge Vol:	25.000 mL	Dil. Factor:	1.0000
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D
Column:	Rxi-624Sil MS Capillary Column (0.25mm ID)	Detector:	MS Quad
		Worklist Smp#:	27

19 Acetone, CAS: 67-64-1

Signal: 1

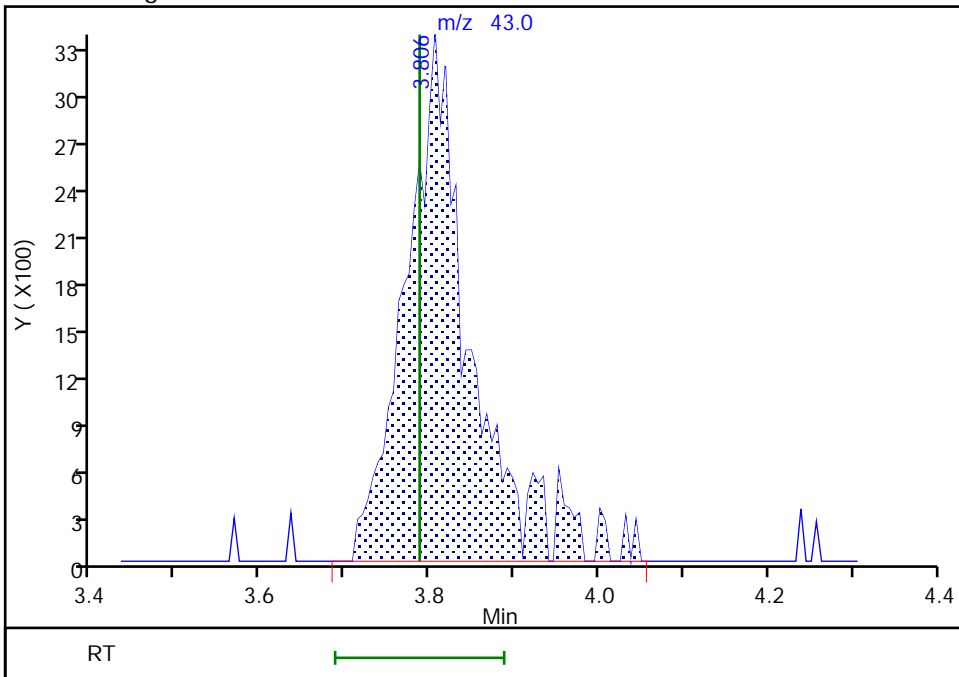
RT: 3.81
 Area: 16886
 Amount: 2.006327
 Amount Units: ug/l

Processing Integration Results



RT: 3.81
 Area: 17974
 Amount: 2.135599
 Amount Units: ug/l

Manual Integration Results



Reviewer: virayd, 31-Aug-2020 13:23:24
 Audit Action: Manually Integrated

Audit Reason: Other

Eurofins Lancaster Laboratories Env, LLC

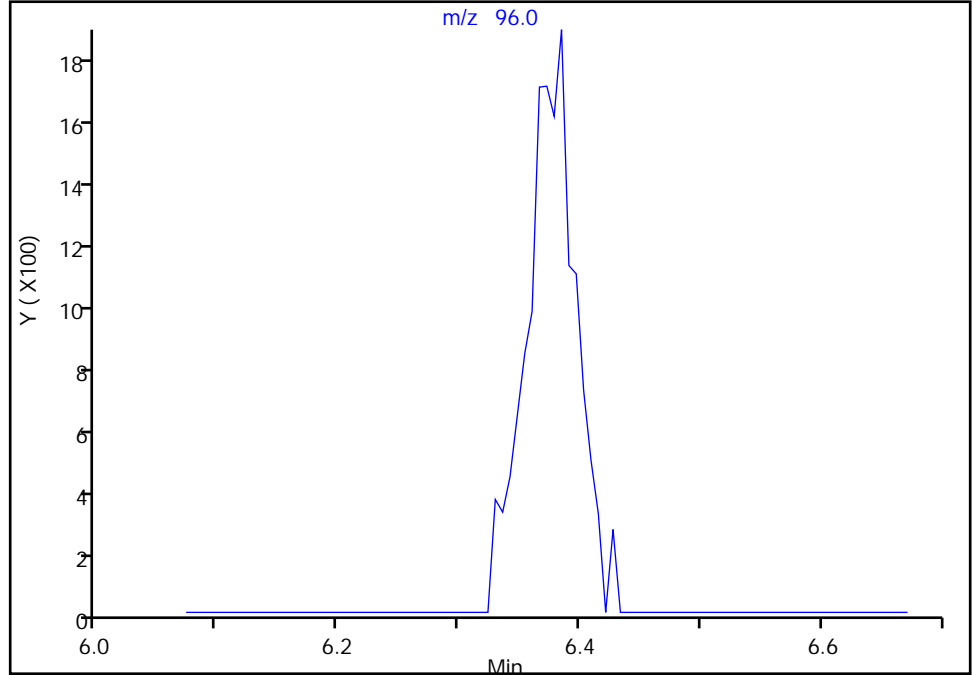
Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S20.D
Injection Date: 31-Aug-2020 02:23:30 Instrument ID: 19094
Lims ID: 410-11876-A-12 Lab Sample ID: 410-11876-12
Client ID: HD-COD-SW-29-0/1-0
Operator ID: mec29284 ALS Bottle#: 26 Worklist Smp#: 27
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

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

Signal: 1

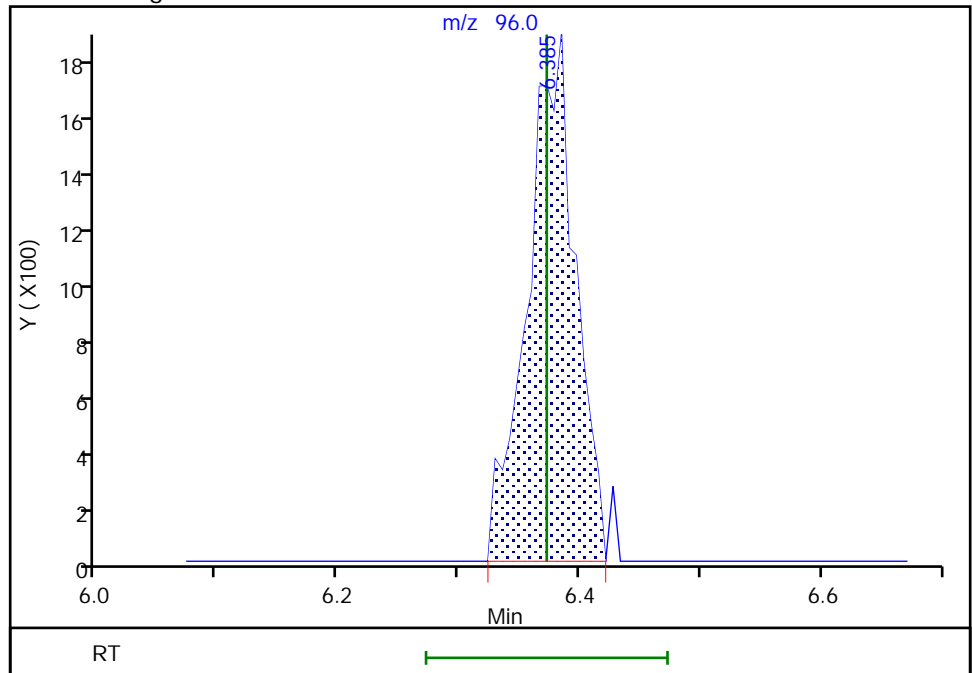
Not Detected
Expected RT: 6.37

Processing Integration Results



Manual Integration Results

RT: 6.38
Area: 5180
Amount: 0.096783
Amount Units: ug/l



Reviewer: virayd, 31-Aug-2020 13:23:33
Audit Action: Assigned Compound ID

Audit Reason: Other

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Client Sample ID: HD-QC1-0/1-1 Lab Sample ID: 410-11876-13
 Matrix: Water Lab File ID: HG30S04.D
 Analysis Method: 8260C LL Date Collected: 08/25/2020 12:00
 Sample wt/vol: 25 (mL) Date Analyzed: 08/30/2020 20:36
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 38982 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.50	0.070
71-55-6	1,1,1-Trichloroethane	0.27	J	0.50	0.060
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.50	0.070
79-00-5	1,1,2-Trichloroethane	ND		0.50	0.060
75-34-3	1,1-Dichloroethane	0.14	J	0.50	0.070
75-35-4	1,1-Dichloroethene	0.14	J	0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	ND		0.50	0.060
107-06-2	1,2-Dichloroethane	ND		0.50	0.050
78-87-5	1,2-Dichloropropane	ND		0.50	0.060
78-93-3	2-Butanone (MEK)	ND		5.0	0.60
591-78-6	2-Hexanone	ND		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70
67-64-1	Acetone	ND		5.0	0.90
107-13-1	Acrylonitrile	ND		5.0	0.40
71-43-2	Benzene	ND		0.50	0.050
74-97-5	Bromochloromethane	ND		0.50	0.050
75-27-4	Bromodichloromethane	ND		0.50	0.050
75-25-2	Bromoform	ND		1.0	0.30
74-83-9	Bromomethane	ND		0.50	0.070
75-15-0	Carbon disulfide	ND		1.0	0.060
56-23-5	Carbon tetrachloride	ND		0.50	0.070
108-90-7	Chlorobenzene	ND		0.50	0.060
75-00-3	Chloroethane	ND		0.50	0.070
67-66-3	Chloroform	0.29	J	0.50	0.090
74-87-3	Chloromethane	0.58		0.50	0.060
156-59-2	cis-1,2-Dichloroethene	1.6		0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	ND		0.50	0.050
124-48-1	Dibromochloromethane	ND		0.50	0.070
100-41-4	Ethylbenzene	ND		0.50	0.060
1634-04-4	Methyl tert-butyl ether	ND		0.50	0.050
75-09-2	Methylene Chloride	0.087	J	0.50	0.070
100-42-5	Styrene	ND		0.50	0.050
127-18-4	Tetrachloroethene	6.9		0.50	0.060
108-88-3	Toluene	ND		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	ND		0.50	0.060
10061-02-6	trans-1,3-Dichloropropene	ND		0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Client Sample ID: HD-QC1-0/1-1 Lab Sample ID: 410-11876-13
 Matrix: Water Lab File ID: HG30S04.D
 Analysis Method: 8260C LL Date Collected: 08/25/2020 12:00
 Sample wt/vol: 25 (mL) Date Analyzed: 08/30/2020 20:36
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 38982 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	2.7		0.50	0.060
75-01-4	Vinyl chloride	ND		0.50	0.10
1330-20-7	Xylenes, Total	ND		1.0	0.15

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	120		80-120
1868-53-7	Dibromofluoromethane (Surr)	111		80-120
2037-26-5	Toluene-d8 (Surr)	98		80-120
460-00-4	4-Bromofluorobenzene (Surr)	97		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S04.D
 Lims ID: 410-11876-A-13
 Client ID: HD-QC1-0/1-1
 Sample Type: Client
 Inject. Date: 30-Aug-2020 20:36:30 ALS Bottle#: 10 Worklist Smp#: 11
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: 410-11876-A-13
 Misc. Info.: 410-0009349-011
 Operator ID: mec29284 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 31-Aug-2020 13:23:49 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1008

First Level Reviewer: virayd Date: 31-Aug-2020 13:05:13

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
6 Chloromethane	50	2.276	2.276	0.000	99	38540	0.5829	
7 Vinyl chloride	62		2.385				ND	
9 Bromomethane	94		2.745				ND	
10 Chloroethane	64		2.837				ND	
18 1,1-Dichloroethene	96	3.769	3.757	0.012	90	4982	0.1444	
19 Acetone	43	3.818	3.788	0.030	20	8279	0.8682	M
24 Carbon disulfide	76	4.080	4.086	-0.006	4	1651	0.0144	7M
29 Methylene Chloride	84	4.464	4.464	0.000	39	3560	0.0867	
* 28 t-Butyl alcohol-d10 (IS)	65	4.489	4.477	0.013	0	135045	50.0	
31 Acrylonitrile	53		4.806				ND	
32 Methyl tert-butyl ether	73	4.873	4.873	0.000	1	2532	0.0307	
33 trans-1,2-Dichloroethene	96	4.897	4.891	0.006	1	991	0.0252	M
35 1,1-Dichloroethane	63	5.549	5.549	0.000	93	10914	0.1445	
41 2-Butanone (MEK)	43		6.330				ND	
42 cis-1,2-Dichloroethene	96	6.379	6.372	0.007	80	71283	1.58	
48 Chlorobromomethane	128		6.702				ND	
50 Chloroform	83	6.848	6.854	-0.006	94	20730	0.2937	
\$ 51 Dibromofluoromethane (Surr)	113	7.067	7.061	0.006	93	412845	11.1	
52 1,1,1-Trichloroethane	97	7.098	7.086	0.012	7	16358	0.2701	M
56 Carbon tetrachloride	117		7.293				ND	
\$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.525	7.519	0.006	0	90503	12.0	
59 Benzene	78		7.555				ND	
60 1,2-Dichloroethane	62	7.641	7.622	0.018	1	1755	0.0434	a
* 65 Fluorobenzene (IS)	96	7.958	7.951	0.007	98	1567988	10.0	
67 Trichloroethene	95	8.433	8.433	0.000	98	114648	2.71	
70 1,2-Dichloropropane	63		8.768				ND	
75 Dichlorobromomethane	83		9.110				ND	
80 cis-1,3-Dichloropropene	75		9.634				ND	
81 4-Methyl-2-pentanone (MIBK)	43		9.793				ND	
\$ 82 Toluene-d8 (Surr)	98	9.933	9.933	0.000	94	1503823	9.80	
83 Toluene	92		10.012				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
85 trans-1,3-Dichloropropene	75		10.256				ND	
87 1,1,2-Trichloroethane	97		10.457				ND	
88 Tetrachloroethene	166	10.542	10.542	0.000	96	316227	6.94	
91 2-Hexanone	43		10.658				ND	
93 Chlorodibromomethane	129		10.829				ND	
94 Ethylene Dibromide	107		10.945				ND	
S 95 Xylenes, Total	106		11.245				ND	
* 97 Chlorobenzene-d5 (IS)	117	11.365	11.365	0.000	87	1144011	10.0	
98 Chlorobenzene	112		11.390				ND	
99 1,1,1,2-Tetrachloroethane	131		11.469				ND	
100 Ethylbenzene	91		11.475				ND	
101 m-Xylene & p-Xylene	106		11.585				ND	
102 o-Xylene	106		11.914				ND	
103 Styrene	104		11.926				ND	
104 Bromoform	173		12.091				ND	
\$ 108 4-Bromofluorobenzene (Surr)	95	12.353	12.353	0.000	88	542532	9.69	
109 1,1,2,2-Tetrachloroethane	83		12.451				ND	
* 124 1,4-Dichlorobenzene-d4	152	13.231	13.231	0.000	97	573793	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_30_826ISS_00005

Amount Added: 5.00

Units: uL

Run Reagent

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S04.D

Injection Date: 30-Aug-2020 20:36:30

Instrument ID: 19094

Operator ID: mec29284

Lims ID: 410-11876-A-13

Lab Sample ID: 410-11876-13

Worklist Smp#: 11

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

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

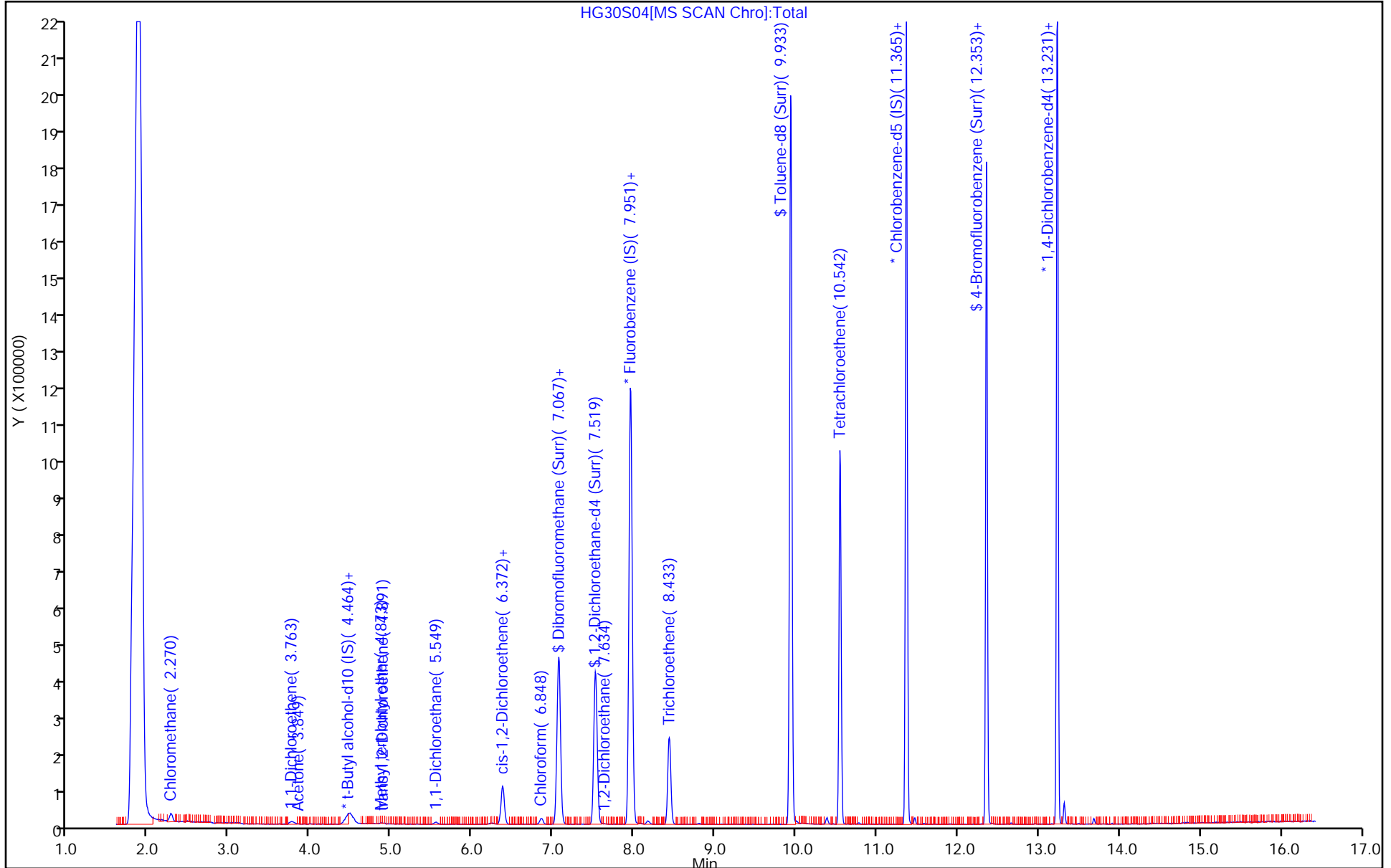
ALS Bottle#: 10

Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S04.D
 Lims ID: 410-11876-A-13
 Client ID: HD-QC1-0/1-1
 Sample Type: Client
 Inject. Date: 30-Aug-2020 20:36:30 ALS Bottle#: 10 Worklist Smp#: 11
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: 410-11876-A-13
 Misc. Info.: 410-0009349-011
 Operator ID: mec29284 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 31-Aug-2020 13:23:49 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1008

First Level Reviewer: virayd Date: 31-Aug-2020 13:05:13

Compound	Amount Added	Amount Recovered	% Rec.
\$ 51 Dibromofluoromethane (Surr)	10.0	11.1	111.37
\$ 58 1,2-Dichloroethane-d4 (Surr)	10.0	12.0	119.85
\$ 82 Toluene-d8 (Surr)	10.0	9.80	97.96
\$ 108 4-Bromofluorobenzene (Surr)	10.0	9.69	96.87

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S04.D

Injection Date: 30-Aug-2020 20:36:30

Instrument ID: 19094

Lims ID: 410-11876-A-13

Lab Sample ID: 410-11876-13

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

Operator ID: mec29284

ALS Bottle#: 10

Worklist Smp#: 11

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

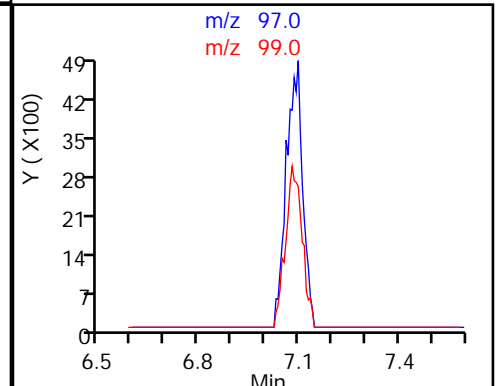
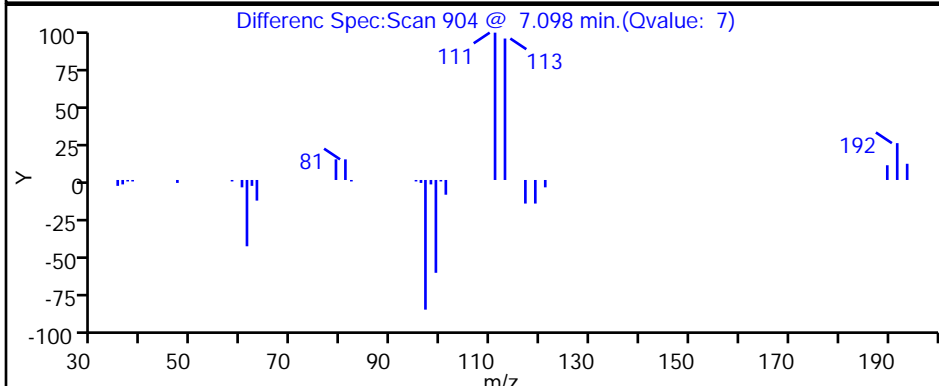
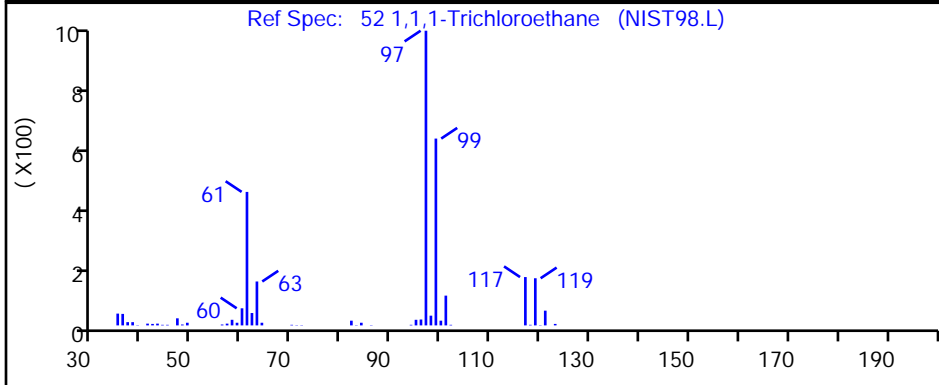
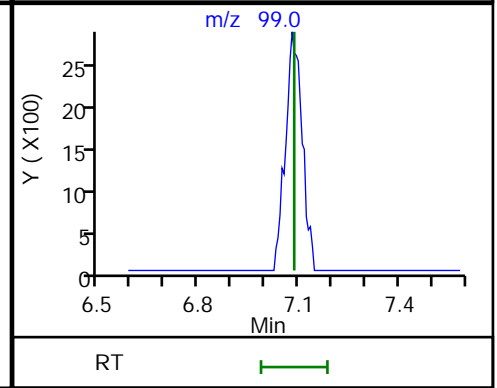
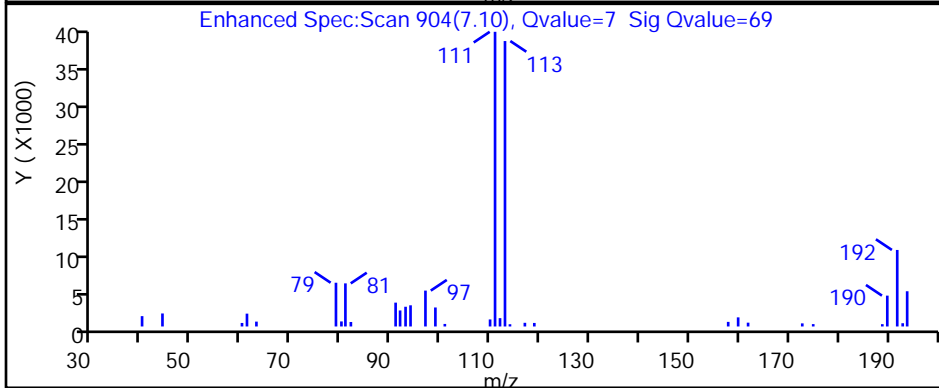
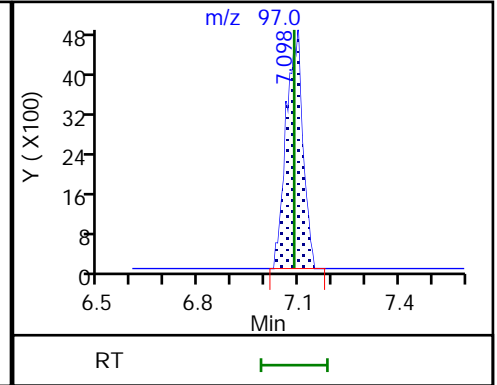
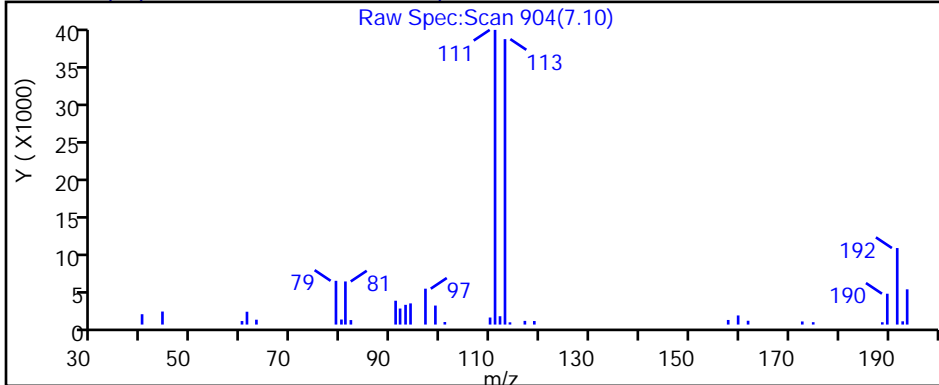
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector

MS Quad

52 1,1,1-Trichloroethane, CAS: 71-55-6



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S04.D

Injection Date: 30-Aug-2020 20:36:30

Instrument ID: 19094

Lims ID: 410-11876-A-13

Lab Sample ID: 410-11876-13

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

Operator ID: mec29284

ALS Bottle#: 10

Worklist Smp#: 11

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

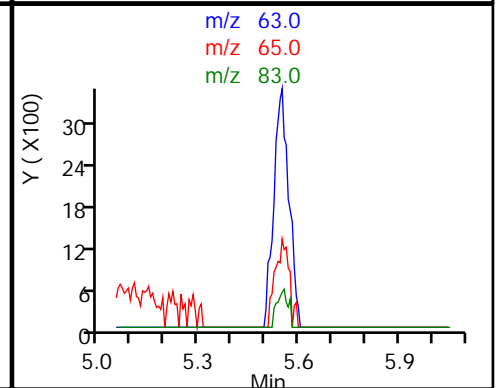
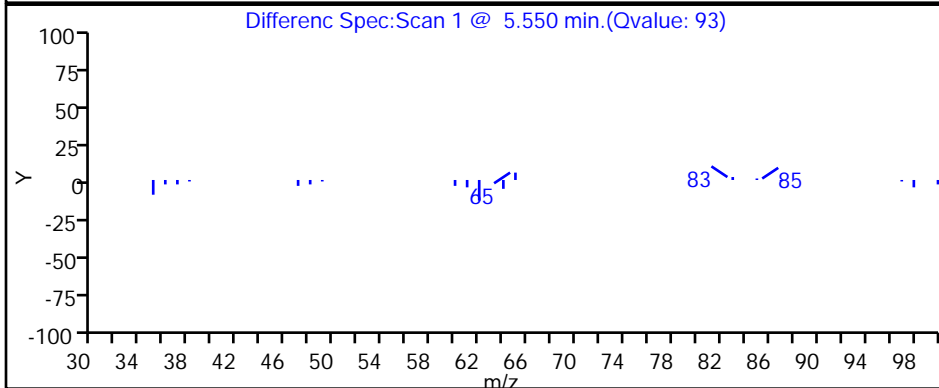
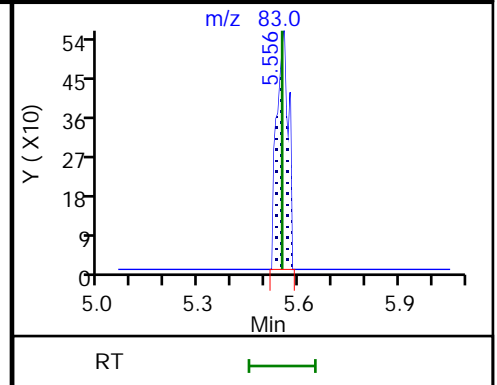
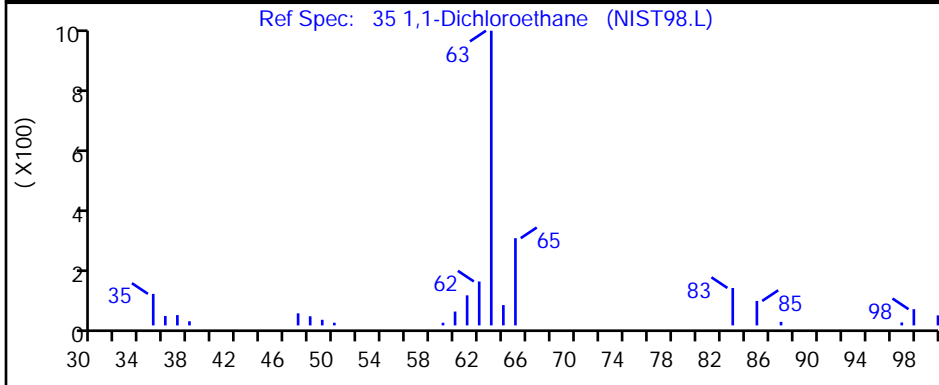
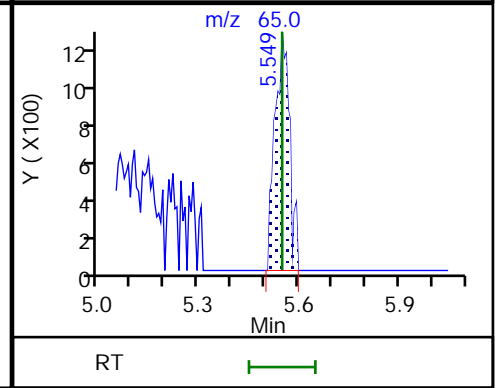
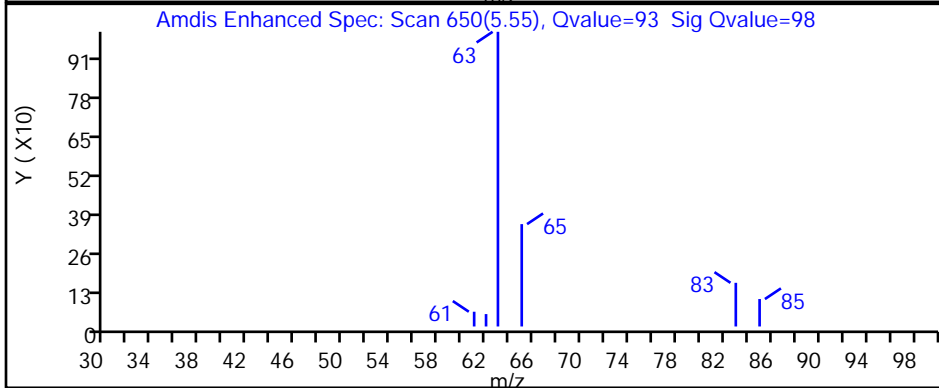
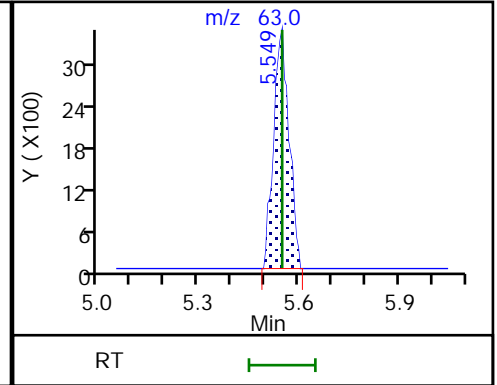
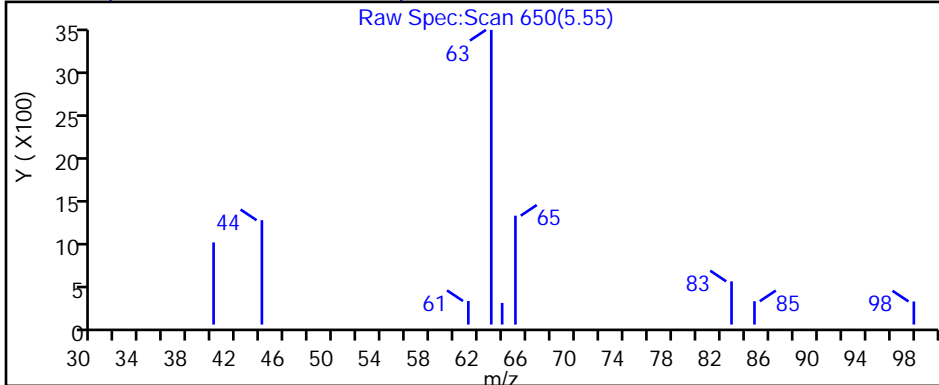
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

35 1,1-Dichloroethane, CAS: 75-34-3



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S04.D

Injection Date: 30-Aug-2020 20:36:30

Instrument ID: 19094

Lims ID: 410-11876-A-13

Lab Sample ID: 410-11876-13

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

Operator ID: mec29284

ALS Bottle#: 10

Worklist Smp#: 11

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

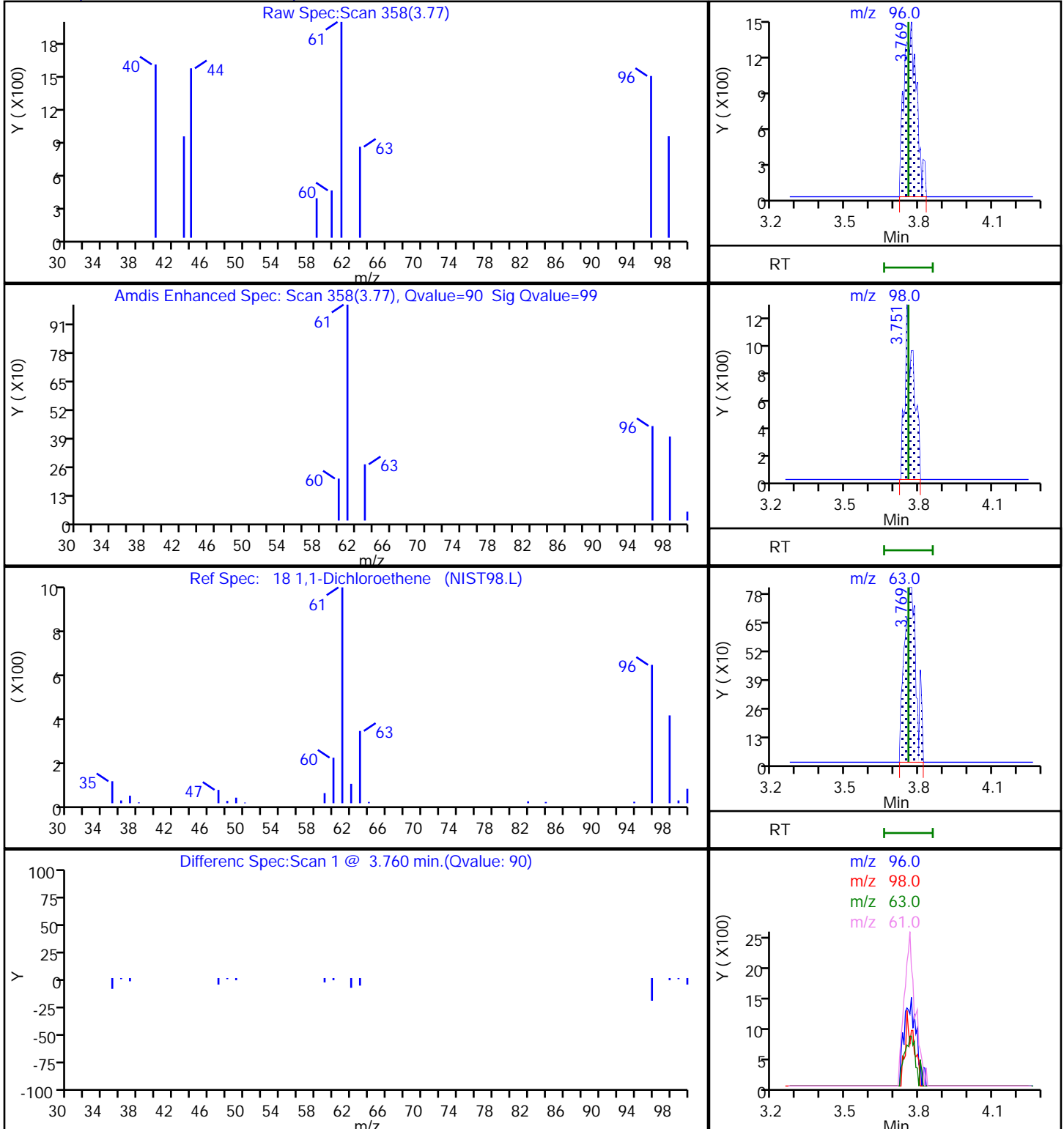
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

18 1,1-Dichloroethene, CAS: 75-35-4



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S04.D

Injection Date: 30-Aug-2020 20:36:30

Instrument ID: 19094

Lims ID: 410-11876-A-13

Lab Sample ID: 410-11876-13

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

Operator ID: mec29284

ALS Bottle#: 10

Worklist Smp#: 11

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

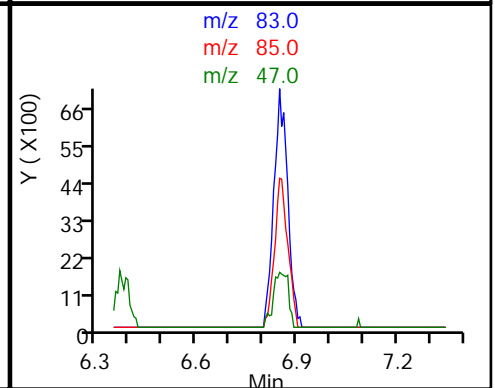
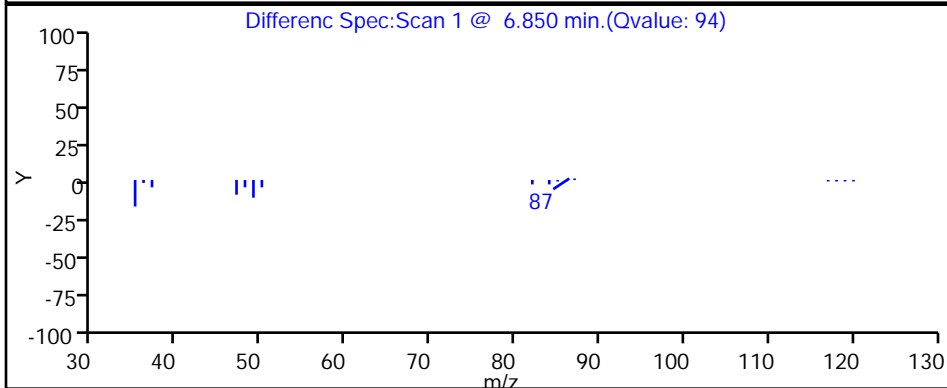
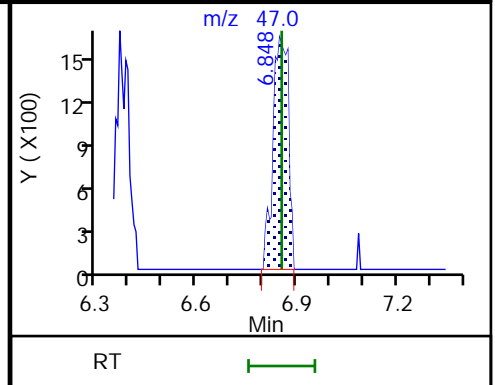
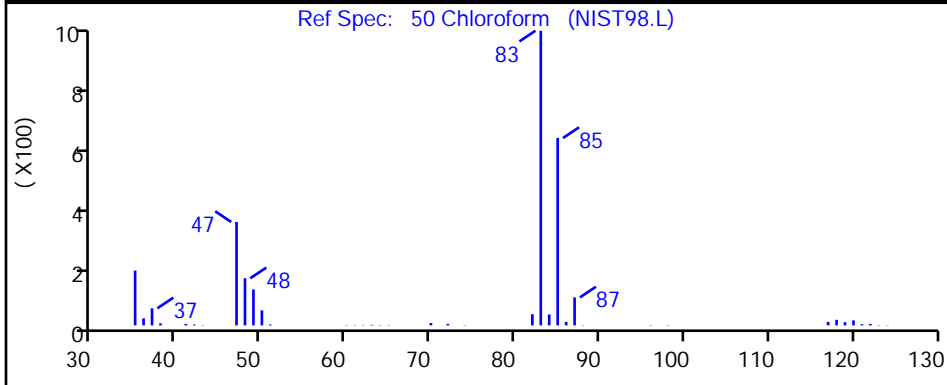
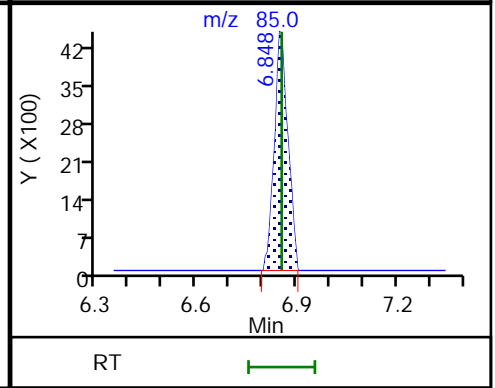
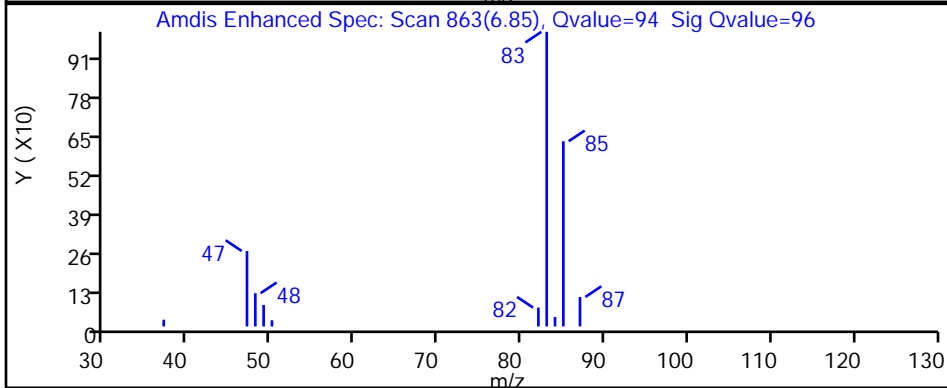
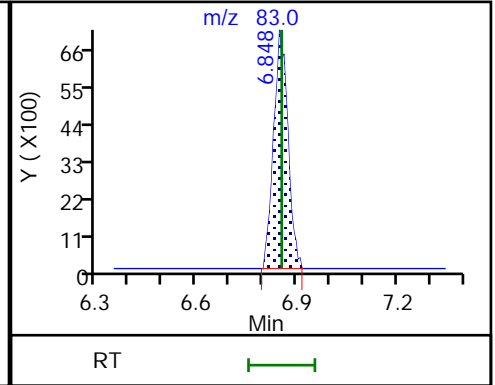
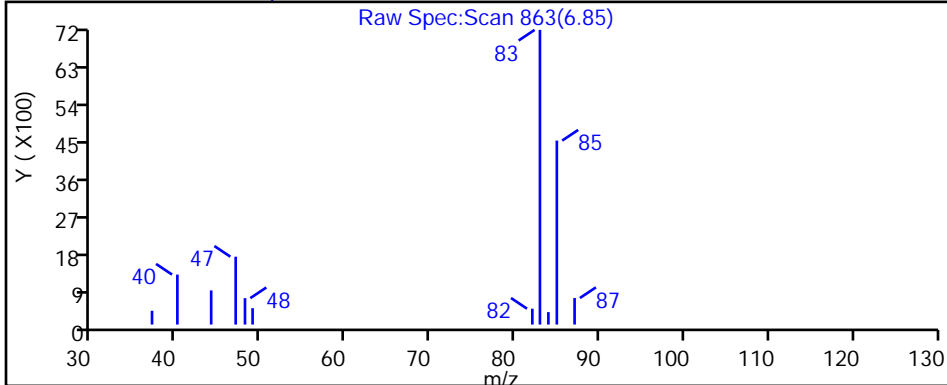
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID) x 30m

MS Quad

50 Chloroform, CAS: 67-66-3



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S04.D

Injection Date: 30-Aug-2020 20:36:30

Instrument ID: 19094

Lims ID: 410-11876-A-13

Lab Sample ID: 410-11876-13

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

Operator ID: mec29284

ALS Bottle#: 10

Worklist Smp#: 11

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

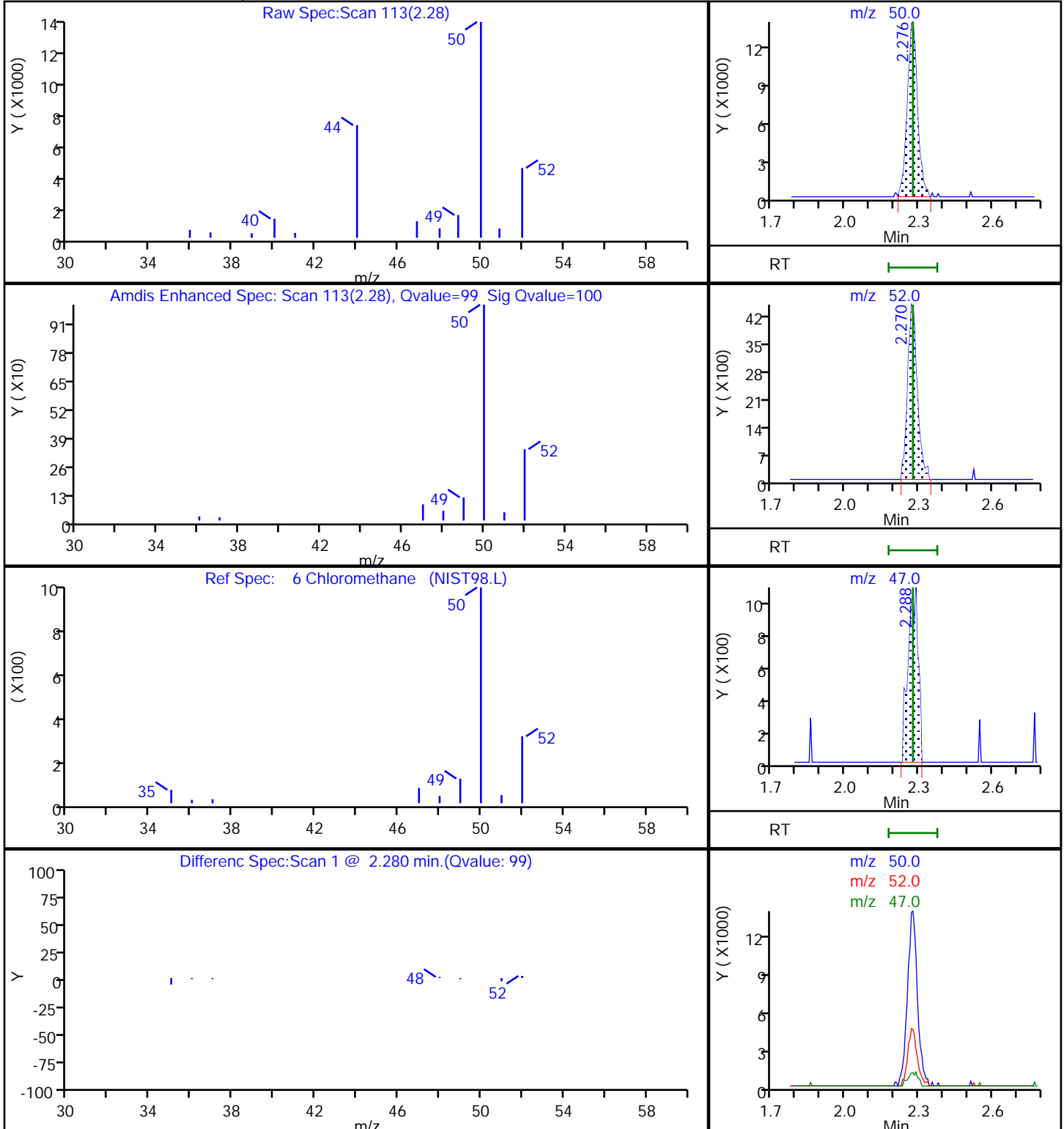
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector

MS Quad

6 Chloromethane, CAS: 74-87-3



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S04.D

Injection Date: 30-Aug-2020 20:36:30

Instrument ID: 19094

Lims ID: 410-11876-A-13

Lab Sample ID: 410-11876-13

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

Operator ID: mec29284

ALS Bottle#: 10

Worklist Smp#: 11

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

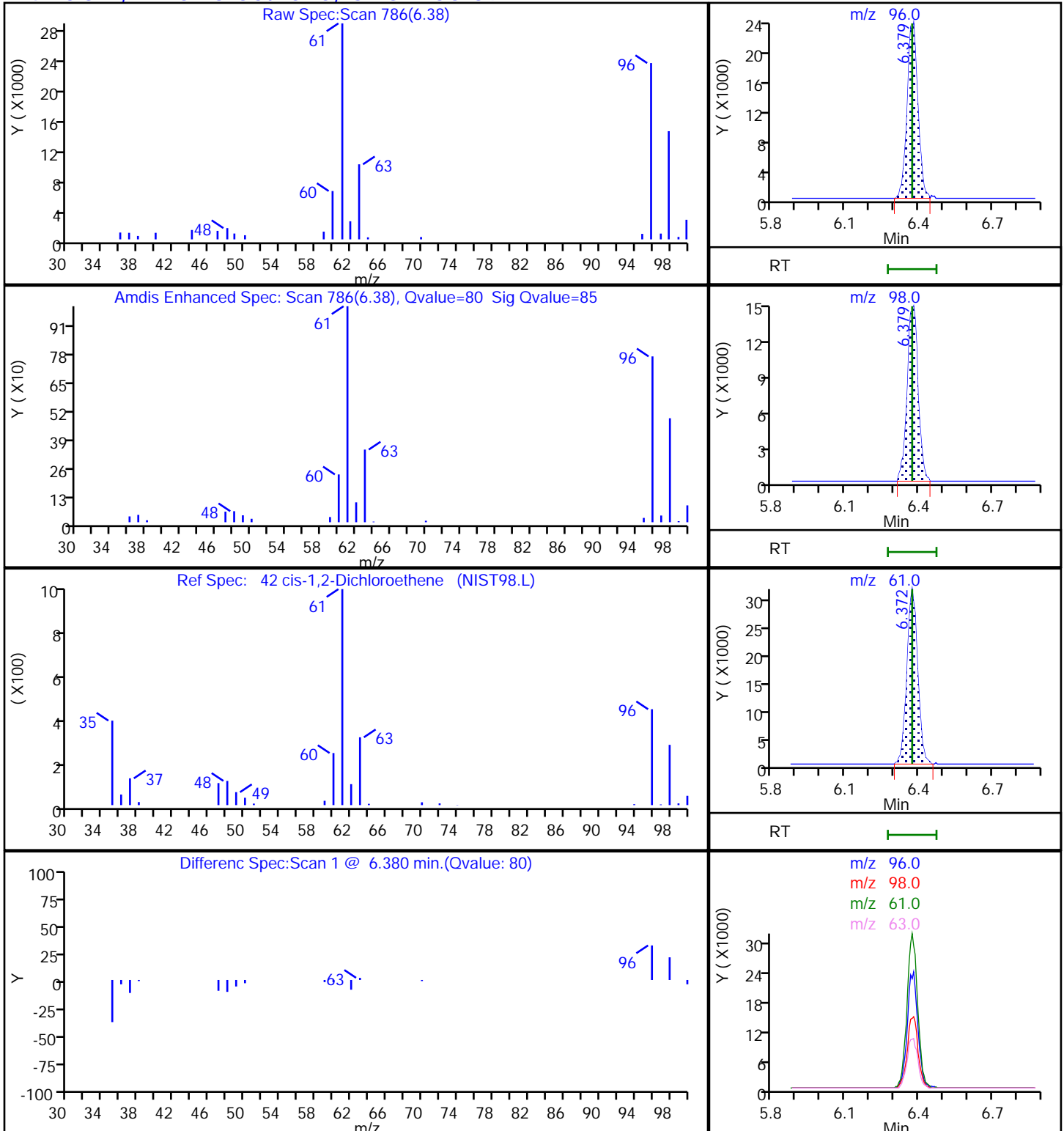
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

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



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S04.D

Injection Date: 30-Aug-2020 20:36:30

Instrument ID: 19094

Lims ID: 410-11876-A-13

Lab Sample ID: 410-11876-13

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

Operator ID: mec29284

ALS Bottle#: 10

Worklist Smp#: 11

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

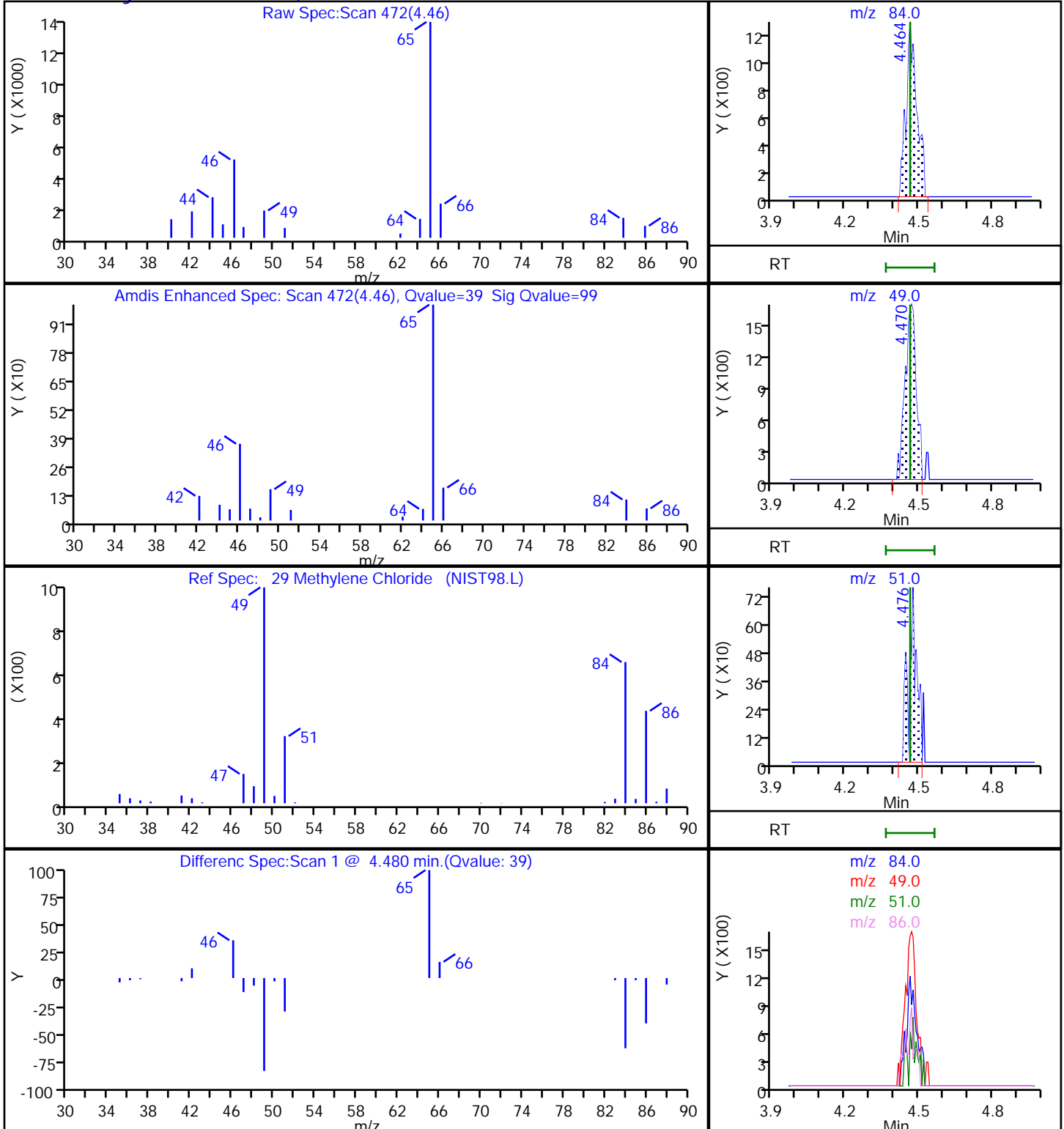
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

29 Methylene Chloride, CAS: 75-09-2



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S04.D

Injection Date: 30-Aug-2020 20:36:30

Instrument ID: 19094

Lims ID: 410-11876-A-13

Lab Sample ID: 410-11876-13

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

Operator ID: mec29284

ALS Bottle#: 10

Worklist Smp#: 11

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

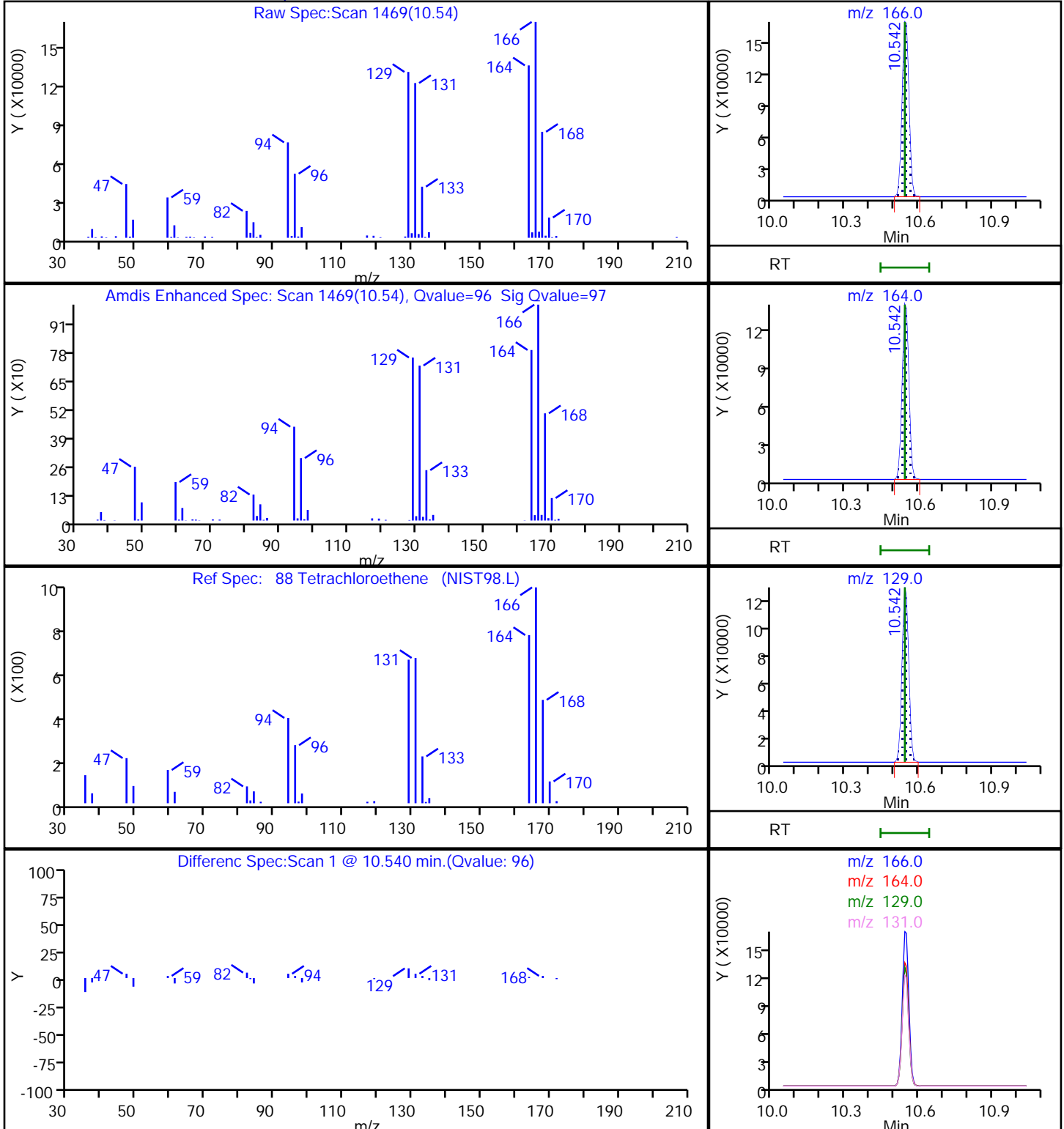
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

88 Tetrachloroethene, CAS: 127-18-4



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S04.D

Injection Date: 30-Aug-2020 20:36:30

Instrument ID: 19094

Lims ID: 410-11876-A-13

Lab Sample ID: 410-11876-13

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

Operator ID: mec29284

ALS Bottle#: 10

Worklist Smp#: 11

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

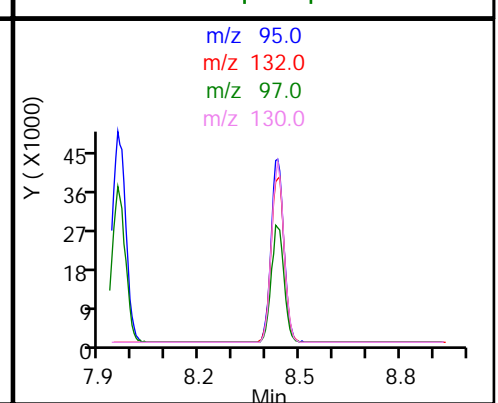
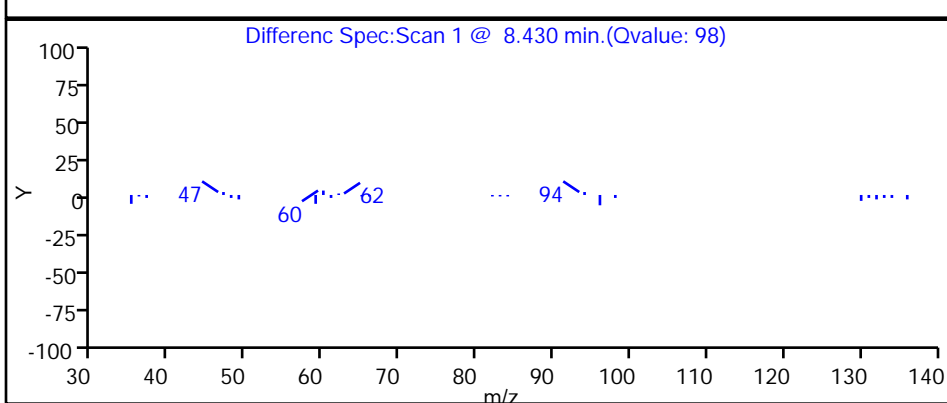
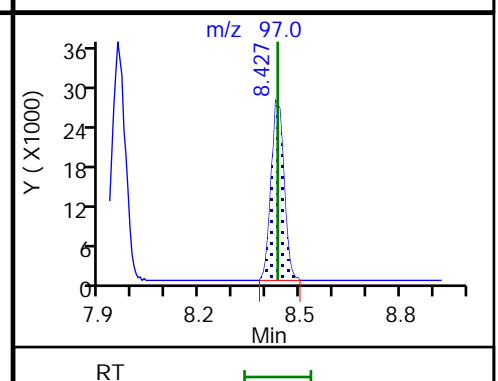
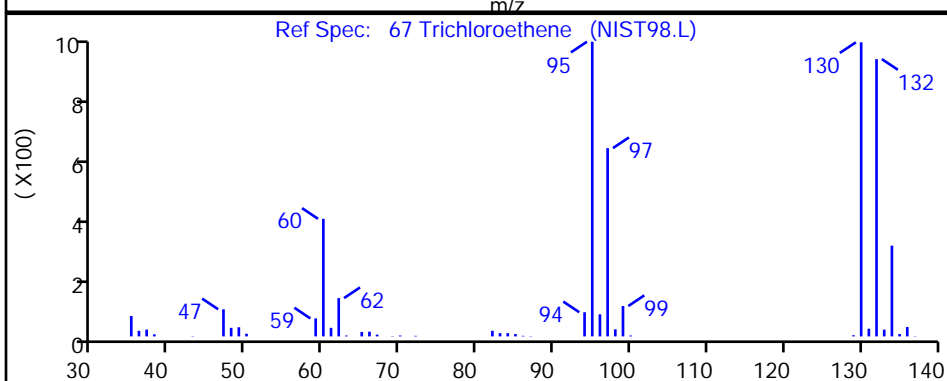
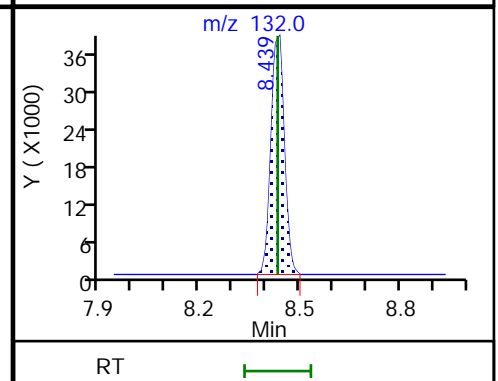
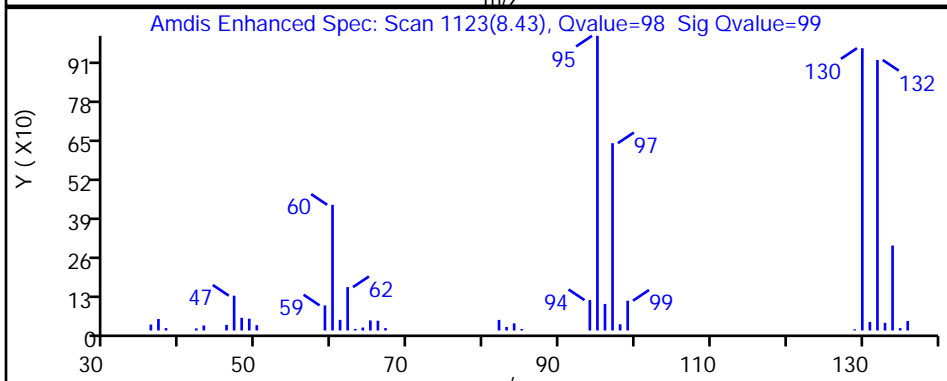
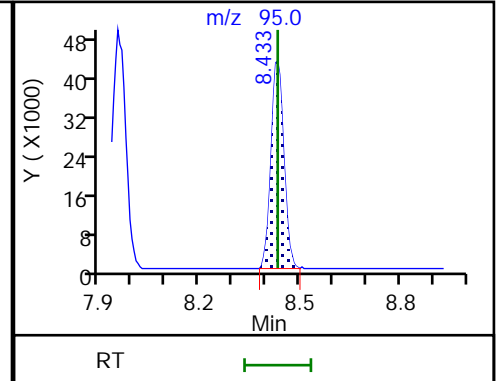
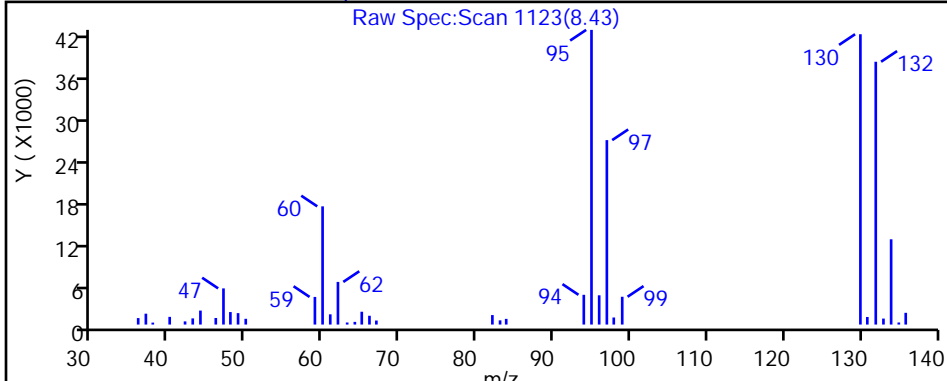
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

67 Trichloroethene, CAS: 79-01-6



Eurofins Lancaster Laboratories Env, LLC

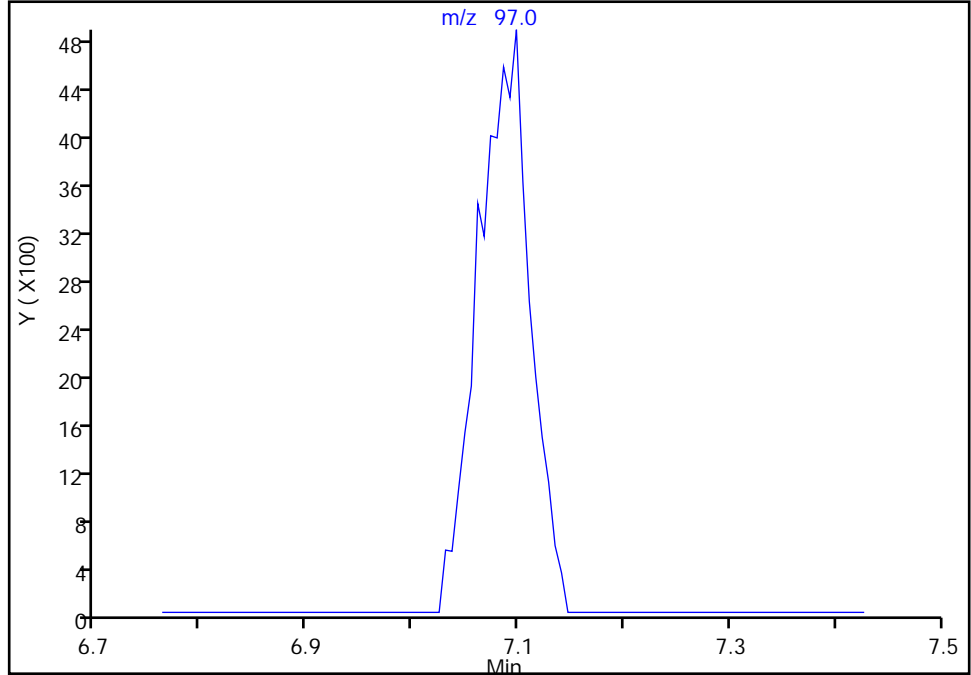
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Injection Date: 30-Aug-2020 20:36:30 Instrument ID: 19094
Lims ID: 410-11876-A-13 Lab Sample ID: 410-11876-13
Client ID: HD-QC1-0/1-1
Operator ID: mec29284 ALS Bottle#: 10 Worklist Smp#: 11
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

52 1,1,1-Trichloroethane, CAS: 71-55-6

Signal: 1

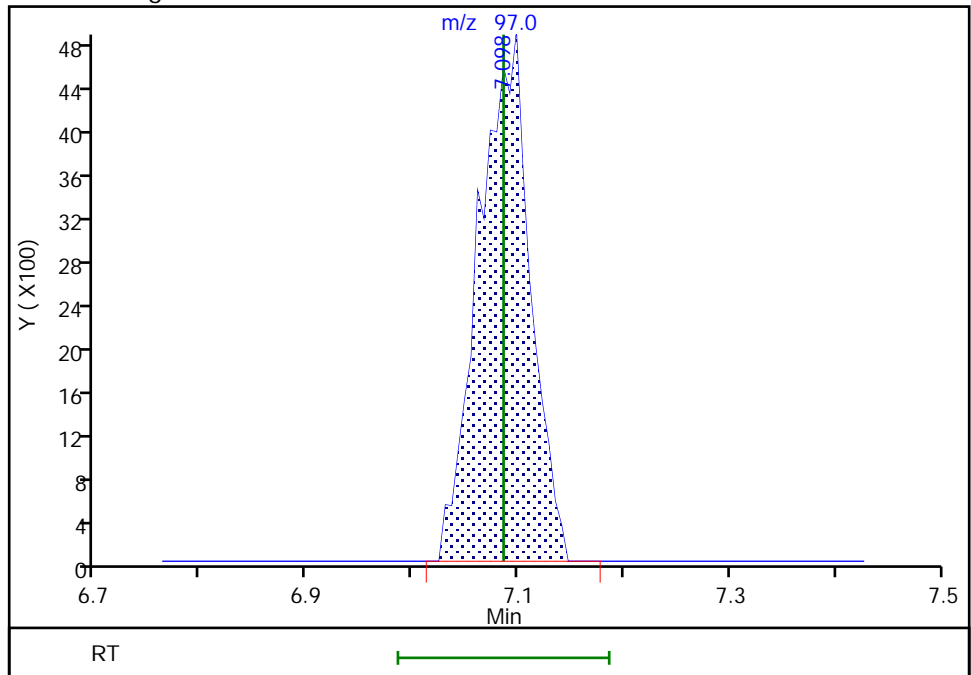
Not Detected
Expected RT: 7.09

Processing Integration Results



Manual Integration Results

RT: 7.10
Area: 16358
Amount: 0.270120
Amount Units: ug/l



Reviewer: virayd, 31-Aug-2020 13:04:54
Audit Action: Manually Integrated

Audit Reason: Other

Eurofins Lancaster Laboratories Env, LLC

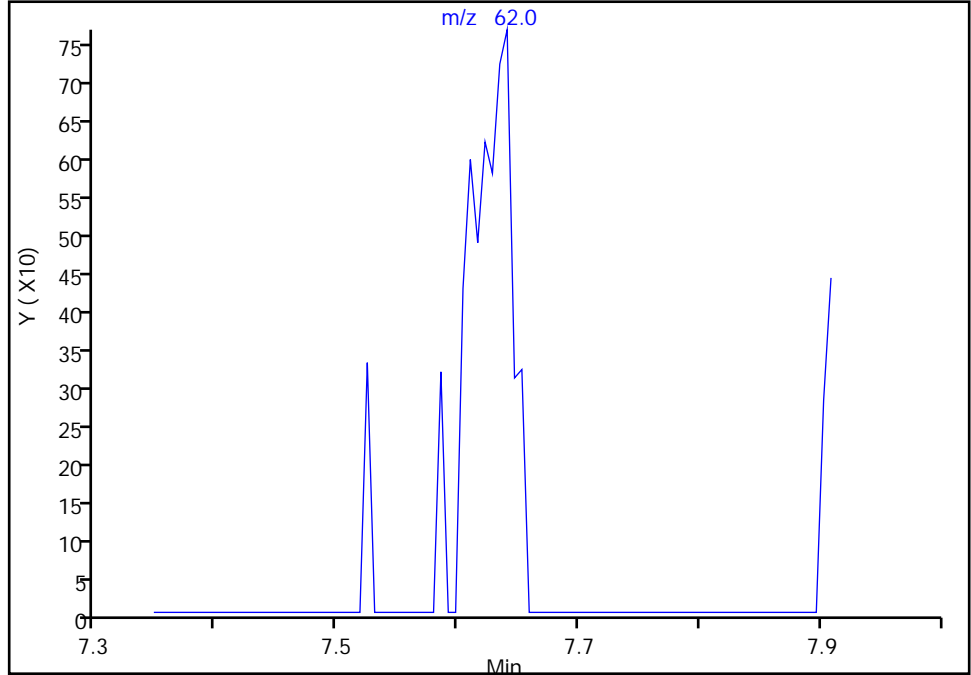
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Injection Date: 30-Aug-2020 20:36:30 Instrument ID: 19094
Lims ID: 410-11876-A-13 Lab Sample ID: 410-11876-13
Client ID: HD-QC1-0/1-1
Operator ID: mec29284 ALS Bottle#: 10 Worklist Smp#: 11
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

60 1,2-Dichloroethane, CAS: 107-06-2

Signal: 1

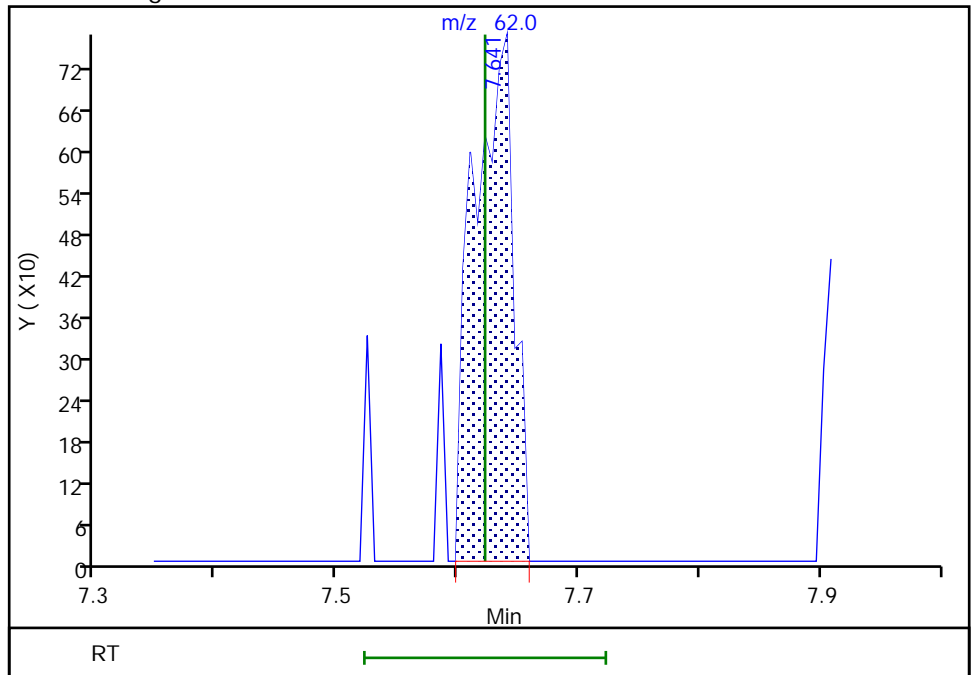
Not Detected
Expected RT: 7.62

Processing Integration Results



Manual Integration Results

RT: 7.64
Area: 1755
Amount: 0.043408
Amount Units: ug/l



Eurofins Lancaster Laboratories Env, LLC

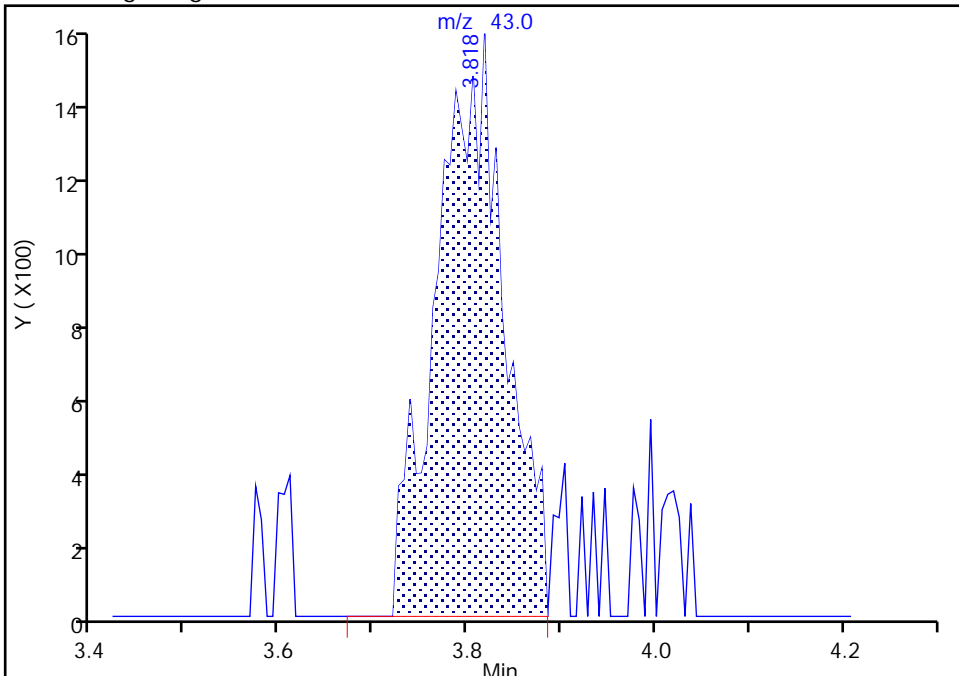
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Injection Date: 30-Aug-2020 20:36:30 Instrument ID: 19094
Lims ID: 410-11876-A-13 Lab Sample ID: 410-11876-13
Client ID: HD-QC1-0/1-1
Operator ID: mec29284 ALS Bottle#: 10 Worklist Smp#: 11
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

19 Acetone, CAS: 67-64-1

Signal: 1

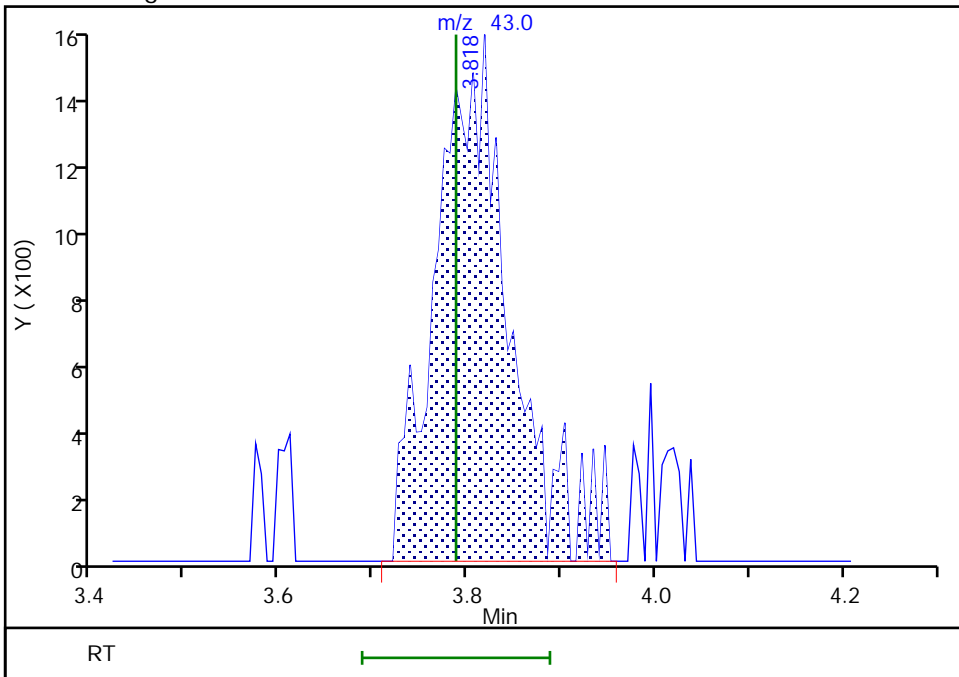
RT: 3.82
Area: 7588
Amount: 0.795726
Amount Units: ug/l

Processing Integration Results



RT: 3.82
Area: 8279
Amount: 0.868189
Amount Units: ug/l

Manual Integration Results



Reviewer: virayd, 31-Aug-2020 13:04:34
Audit Action: Manually Integrated

Audit Reason: Other

Eurofins Lancaster Laboratories Env, LLC

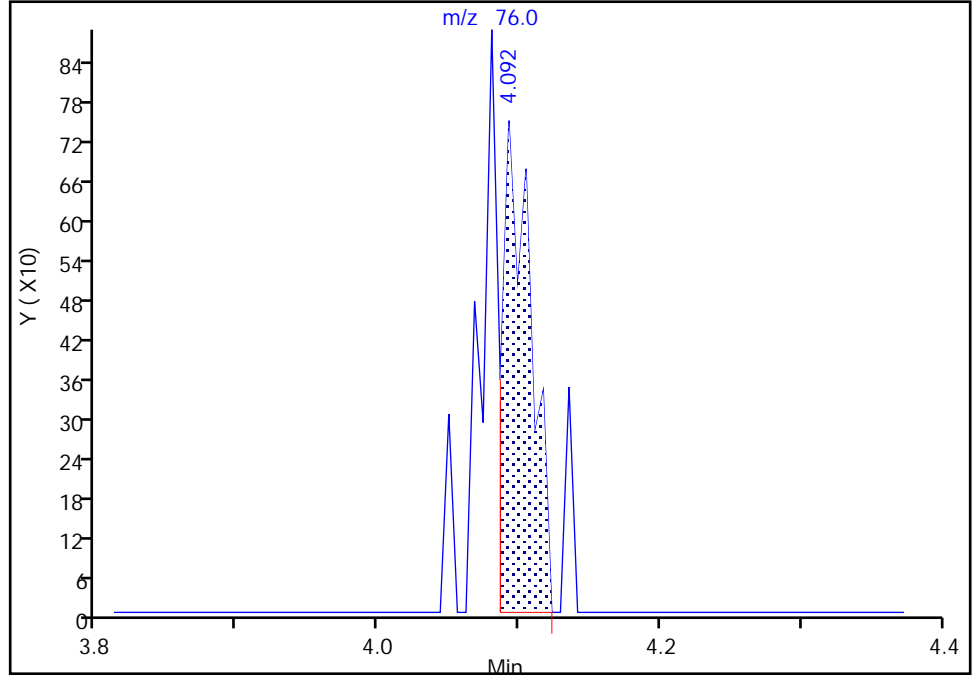
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Injection Date: 30-Aug-2020 20:36:30 Instrument ID: 19094
Lims ID: 410-11876-A-13 Lab Sample ID: 410-11876-13
Client ID: HD-QC1-0/1-1
Operator ID: mec29284 ALS Bottle#: 10 Worklist Smp#: 11
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

24 Carbon disulfide, CAS: 75-15-0

Signal: 1

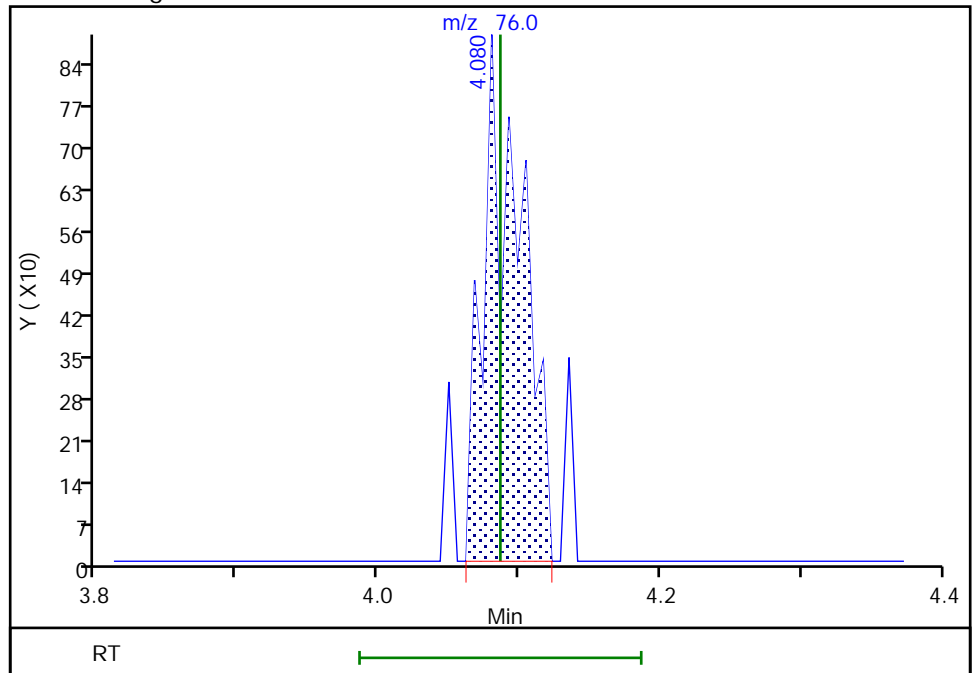
RT: 4.09
Area: 1049
Amount: 0.009164
Amount Units: ug/l

Processing Integration Results



RT: 4.08
Area: 1651
Amount: 0.014424
Amount Units: ug/l

Manual Integration Results



Reviewer: virayd, 31-Aug-2020 13:04:39
Audit Action: Manually Integrated

Audit Reason: Other

Eurofins Lancaster Laboratories Env, LLC

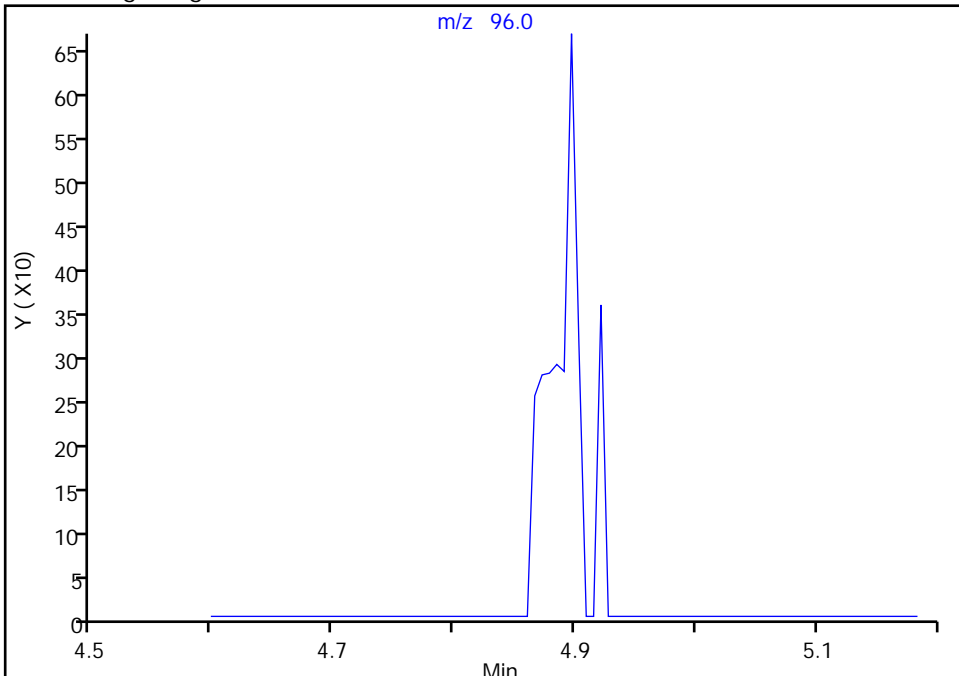
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Injection Date: 30-Aug-2020 20:36:30 Instrument ID: 19094
Lims ID: 410-11876-A-13 Lab Sample ID: 410-11876-13
Client ID: HD-QC1-0/1-1
Operator ID: mec29284 ALS Bottle#: 10 Worklist Smp#: 11
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

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

Signal: 1

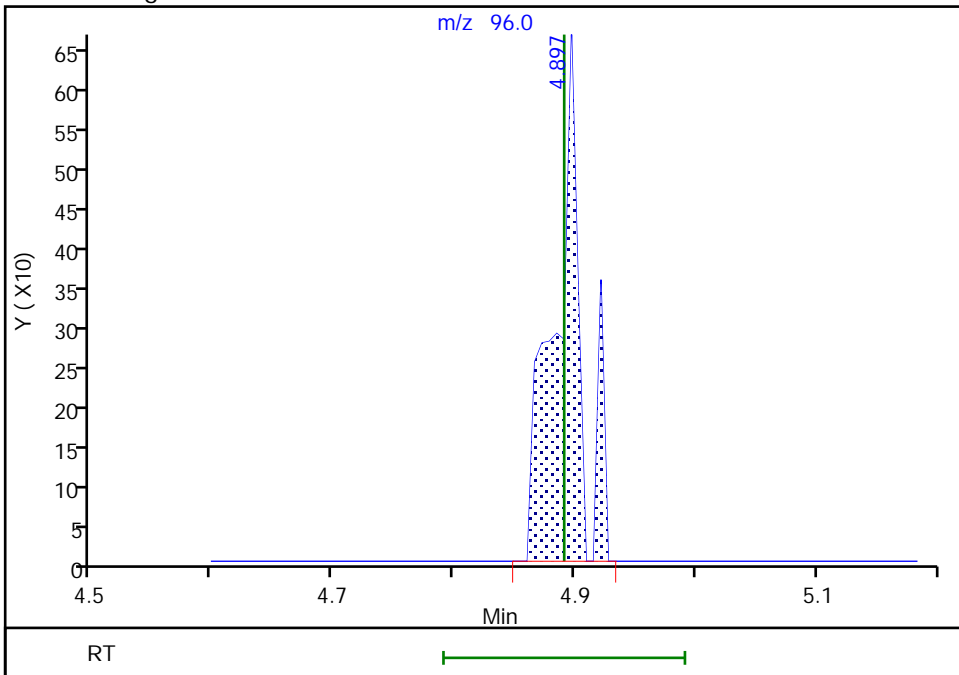
Not Detected
Expected RT: 4.89

Processing Integration Results



Manual Integration Results

RT: 4.90
Area: 991
Amount: 0.025248
Amount Units: ug/l



Reviewer: virayd, 31-Aug-2020 13:04:48
Audit Action: Manually Integrated

Audit Reason: Other
Page 436 of 638

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Client Sample ID: HD-QC1-0/1-2 Lab Sample ID: 410-11876-14
 Matrix: Water Lab File ID: HG31S02.D
 Analysis Method: 8260C LL Date Collected: 08/25/2020 00:00
 Sample wt/vol: 25 (mL) Date Analyzed: 08/31/2020 20:38
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 39389 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.50	0.070
71-55-6	1,1,1-Trichloroethane	ND		0.50	0.060
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.50	0.070
79-00-5	1,1,2-Trichloroethane	ND		0.50	0.060
75-34-3	1,1-Dichloroethane	ND		0.50	0.070
75-35-4	1,1-Dichloroethene	ND		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	ND		0.50	0.060
107-06-2	1,2-Dichloroethane	ND		0.50	0.050
78-87-5	1,2-Dichloropropane	ND		0.50	0.060
78-93-3	2-Butanone (MEK)	ND		5.0	0.60
591-78-6	2-Hexanone	ND		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70
67-64-1	Acetone	1.6	J	5.0	0.90
107-13-1	Acrylonitrile	ND		5.0	0.40
71-43-2	Benzene	ND		0.50	0.050
74-97-5	Bromochloromethane	ND		0.50	0.050
75-27-4	Bromodichloromethane	ND		0.50	0.050
75-25-2	Bromoform	ND		1.0	0.30
74-83-9	Bromomethane	ND		0.50	0.070
75-15-0	Carbon disulfide	ND		1.0	0.060
56-23-5	Carbon tetrachloride	ND		0.50	0.070
108-90-7	Chlorobenzene	ND		0.50	0.060
75-00-3	Chloroethane	ND		0.50	0.070
67-66-3	Chloroform	ND		0.50	0.090
74-87-3	Chloromethane	ND		0.50	0.060
156-59-2	cis-1,2-Dichloroethene	ND		0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	ND		0.50	0.050
124-48-1	Dibromochloromethane	ND		0.50	0.070
100-41-4	Ethylbenzene	ND		0.50	0.060
1634-04-4	Methyl tert-butyl ether	ND		0.50	0.050
75-09-2	Methylene Chloride	ND		0.50	0.070
100-42-5	Styrene	ND		0.50	0.050
127-18-4	Tetrachloroethene	ND		0.50	0.060
108-88-3	Toluene	ND		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	ND		0.50	0.060
10061-02-6	trans-1,3-Dichloropropene	ND		0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Client Sample ID: HD-QC1-0/1-2 Lab Sample ID: 410-11876-14
 Matrix: Water Lab File ID: HG31S02.D
 Analysis Method: 8260C LL Date Collected: 08/25/2020 00:00
 Sample wt/vol: 25 (mL) Date Analyzed: 08/31/2020 20:38
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 39389 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	ND		0.50	0.060
75-01-4	Vinyl chloride	ND		0.50	0.10
1330-20-7	Xylenes, Total	ND		1.0	0.15

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	111		80-120
1868-53-7	Dibromofluoromethane (Surr)	111		80-120
2037-26-5	Toluene-d8 (Surr)	98		80-120
460-00-4	4-Bromofluorobenzene (Surr)	94		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200831-9437.b\HG31S02.D
 Lims ID: 410-11876-B-14
 Client ID: HD-QC1-0/1-2
 Sample Type: Client
 Inject. Date: 31-Aug-2020 20:38:30 ALS Bottle#: 8 Worklist Smp#: 9
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: 410-11876-B-14
 Misc. Info.: 410-0009437-009
 Operator ID: mec29284 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200831-9437.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 31-Aug-2020 22:34:45 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1022

First Level Reviewer: campbellme

Date: 31-Aug-2020 22:29:49

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
6 Chloromethane	50		2.276				ND	
7 Vinyl chloride	62		2.392				ND	
9 Bromomethane	94		2.745				ND	
10 Chloroethane	64		2.849				ND	
18 1,1-Dichloroethene	96		3.763				ND	
19 Acetone	43	3.806	3.794	0.012	80	14557	1.57	
24 Carbon disulfide	76		4.086				ND	
29 Methylene Chloride	84		4.464				ND	
* 28 t-Butyl alcohol-d10 (IS)	65	4.477	4.489	-0.012	0	131552	50.0	
31 Acrylonitrile	53		4.818				ND	
32 Methyl tert-butyl ether	73		4.879				ND	
33 trans-1,2-Dichloroethene	96		4.897				ND	
35 1,1-Dichloroethane	63		5.549				ND	
41 2-Butanone (MEK)	43		6.336				ND	
42 cis-1,2-Dichloroethene	96		6.372				ND	
48 Chlorobromomethane	128		6.708				ND	
50 Chloroform	83		6.854				ND	
\$ 51 Dibromofluoromethane (Surr)	113	7.068	7.067	0.001	93	461931	11.1	
52 1,1,1-Trichloroethane	97		7.086				ND	
56 Carbon tetrachloride	117		7.299				ND	
\$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.519	7.525	-0.006	0	94117	11.1	
59 Benzene	78		7.555				ND	
60 1,2-Dichloroethane	62		7.628				ND	
* 65 Fluorobenzene (IS)	96	7.958	7.958	0.000	98	1754452	10.0	
67 Trichloroethene	95		8.433				ND	
70 1,2-Dichloropropane	63		8.768				ND	
75 Dichlorobromomethane	83		9.110				ND	
80 cis-1,3-Dichloropropene	75		9.634				ND	
81 4-Methyl-2-pentanone (MIBK)	43		9.793				ND	
\$ 82 Toluene-d8 (Surr)	98	9.933	9.933	0.000	94	1697765	9.85	
83 Toluene	92		10.012				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Diff RT (min.)	Q	Response	OnCol Amt ug/l	Flags
85 trans-1,3-Dichloropropene	75		10.256				ND	
87 1,1,2-Trichloroethane	97		10.457				ND	
88 Tetrachloroethene	166		10.549				ND	
91 2-Hexanone	43		10.658				ND	
93 Chlorodibromomethane	129		10.829				ND	
94 Ethylene Dibromide	107		10.945				ND	
S 95 Xylenes, Total	106		11.245				ND	
* 97 Chlorobenzene-d5 (IS)	117	11.366	11.365	0.001	87	1284640	10.0	
98 Chlorobenzene	112		11.390				ND	
99 1,1,1,2-Tetrachloroethane	131		11.469				ND	
100 Ethylbenzene	91		11.475				ND	
101 m-Xylene & p-Xylene	106		11.585				ND	
102 o-Xylene	106		11.914				ND	
103 Styrene	104		11.926				ND	
104 Bromoform	173		12.085				ND	
\$ 108 4-Bromofluorobenzene (Surr)	95	12.353	12.353	0.000	88	593950	9.44	
109 1,1,2,2-Tetrachloroethane	83		12.451				ND	
* 124 1,4-Dichlorobenzene-d4	152	13.231	13.231	0.000	97	639767	10.0	

Reagents:

MSV_30_826ISS_00005

Amount Added: 5.00

Units: uL

Run Reagent

Data File: \\chromfs\Lancaster\ChromData\19094\20200831-9437.b\HG31S02.D

Injection Date: 31-Aug-2020 20:38:30

Instrument ID: 19094

Operator ID: mec29284

Lims ID: 410-11876-B-14

Lab Sample ID: 410-11876-14

Worklist Smp#: 9

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

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

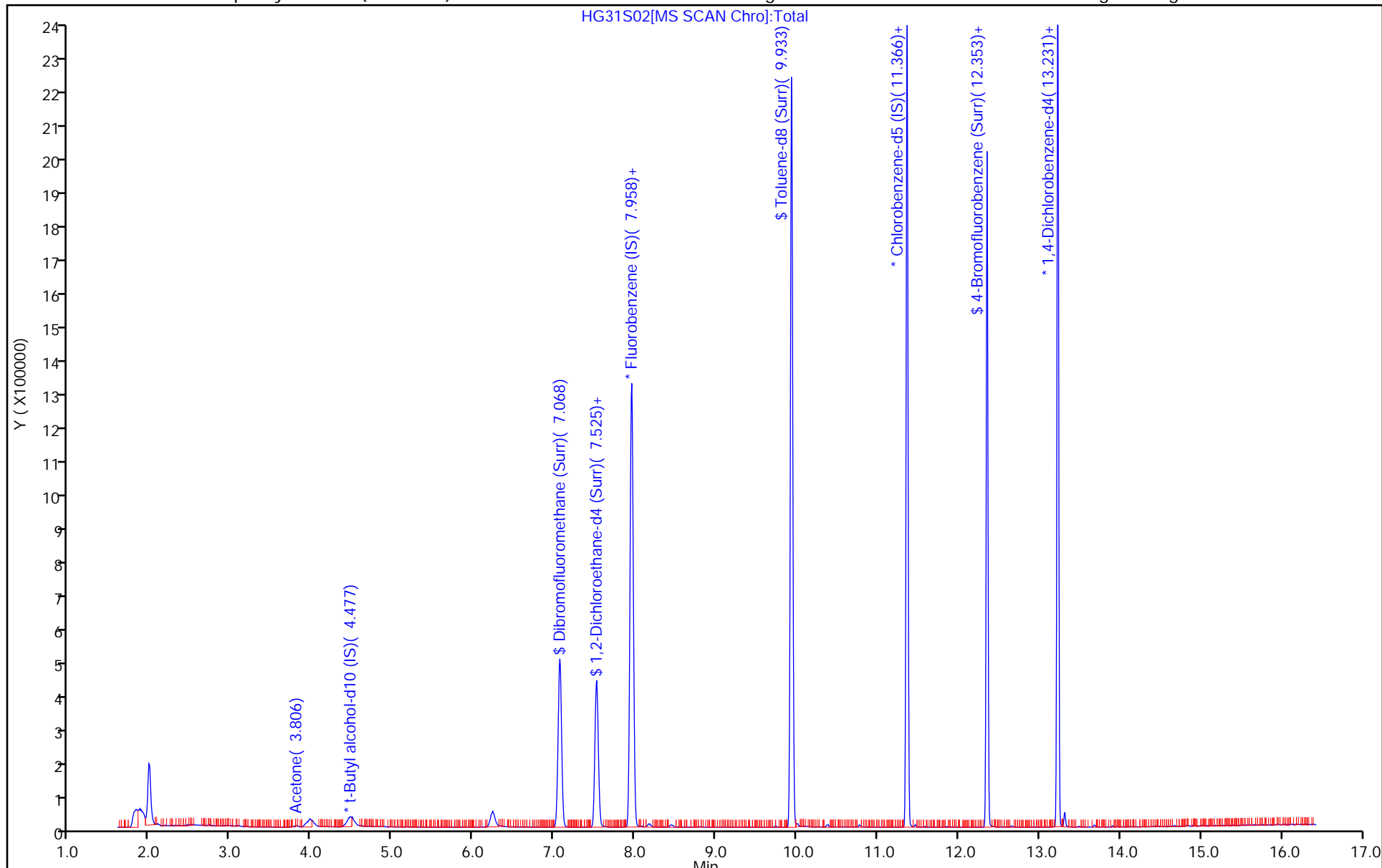
ALS Bottle#: 8

Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200831-9437.b\HG31S02.D
 Lims ID: 410-11876-B-14
 Client ID: HD-QC1-0/1-2
 Sample Type: Client
 Inject. Date: 31-Aug-2020 20:38:30 ALS Bottle#: 8 Worklist Smp#: 9
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: 410-11876-B-14
 Misc. Info.: 410-0009437-009
 Operator ID: mec29284 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200831-9437.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 31-Aug-2020 22:34:45 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1022

First Level Reviewer: campbellme

Date: 31-Aug-2020 22:29:49

Compound	Amount Added	Amount Recovered	% Rec.
\$ 51 Dibromofluoromethane (Surr)	10.0	11.1	111.37
\$ 58 1,2-Dichloroethane-d4 (Surr)	10.0	11.1	111.39
\$ 82 Toluene-d8 (Surr)	10.0	9.85	98.49
\$ 108 4-Bromofluorobenzene (Surr)	10.0	9.44	94.44

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200831-9437.b\HG31S02.D

Injection Date: 31-Aug-2020 20:38:30

Instrument ID: 19094

Lims ID: 410-11876-B-14

Lab Sample ID: 410-11876-14

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

Operator ID: mec29284

ALS Bottle#: 8

Worklist Smp#: 9

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

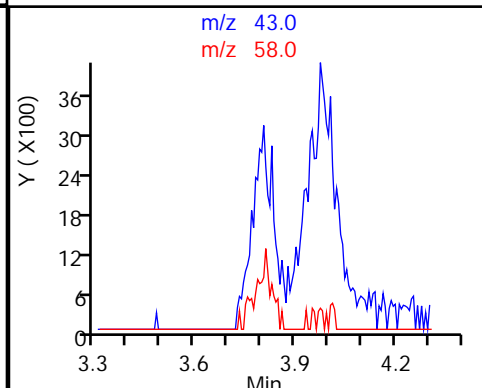
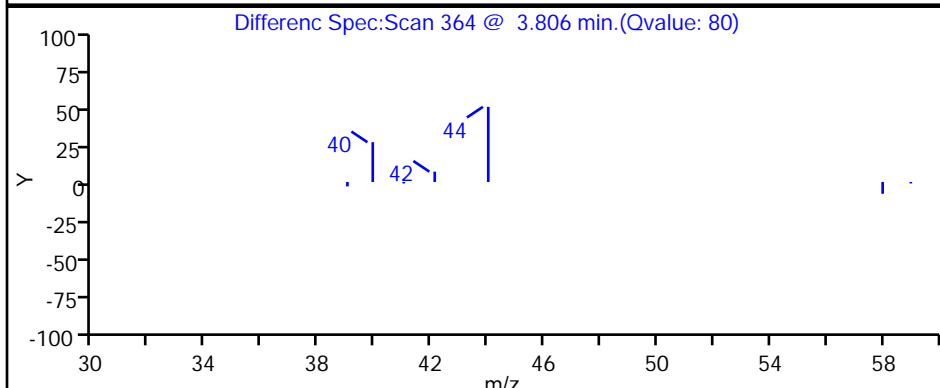
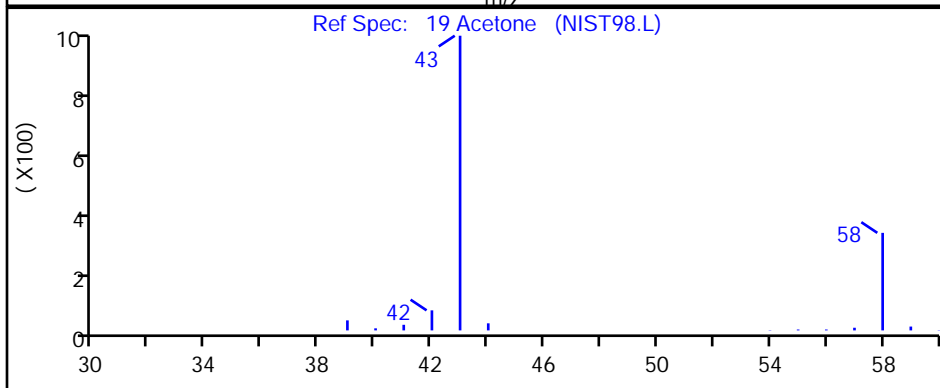
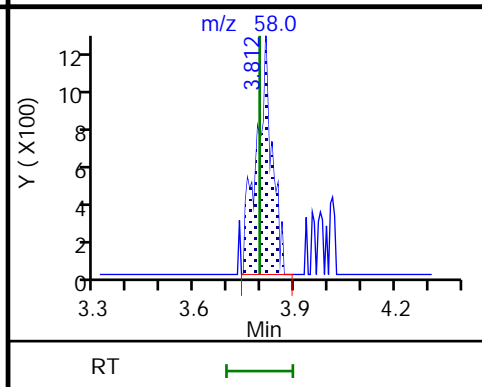
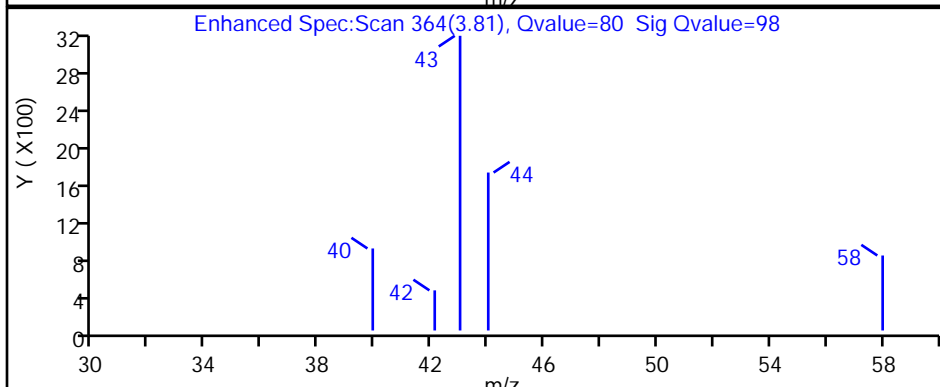
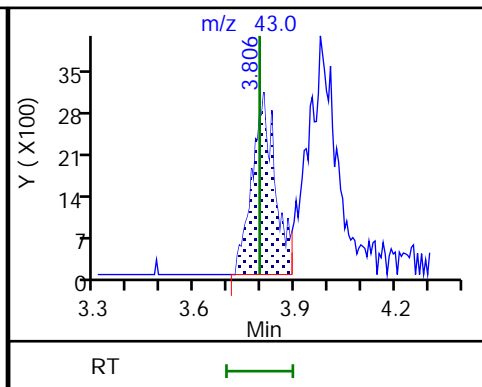
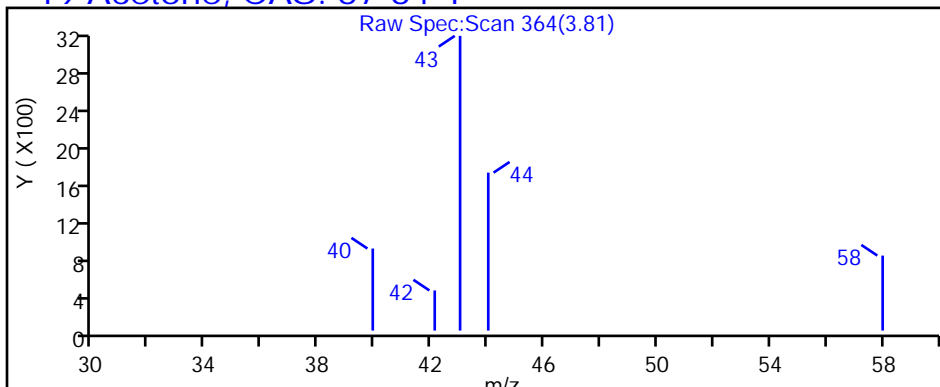
Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

MS Quad

19 Acetone, CAS: 67-64-1



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

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1 Analy Batch No.: 11163

SDG No.: _____

Instrument ID: 19094 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2020 16:46 Calibration End Date: 06/08/2020 18:56 Calibration ID: 5854

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-11163/18	hu08i07.D
Level 2	IC 410-11163/17	hu08i06.D
Level 3	IC 410-11163/16	hu08i05.D
Level 4	IC 410-11163/15	hu08i04.D
Level 5	IC 410-11163/14	hu08i03.D
Level 6	ICIS 410-11163/13	hu08i02.D
Level 7	IC 410-11163/12	hu08i01.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7															
Dichlorodifluoromethane	0.2851 0.3719	0.3421 0.3721	0.3601	0.3644	0.3825	Ave	0.3540			0.1000	9.3		20.0				
Chloromethane	0.4402 0.4200	0.4137 0.4188	0.4245	0.4101	0.4242	Ave	0.4216			0.1000	2.3		20.0				
Vinyl chloride	0.3425 0.3822	0.3725 0.3843	0.3895	0.3761	0.3966	Ave	0.3777			0.1000	4.6		20.0				
1,3-Butadiene	0.3997 0.3604	0.3747 0.3342	0.3509	0.3606	0.3644	Ave	0.3636				5.6		20.0				
Bromomethane	0.2538 0.2572	0.2489 0.2561	0.2532	0.2563	0.2665	Ave	0.2560			0.1000	2.1		20.0				
Chloroethane	0.2368 0.2235	0.2376 0.2276	0.2274	0.2273	0.2375	Ave	0.2311			0.1000	2.6		20.0				
Dichlorofluoromethane	0.5105 0.4904	0.4923 0.4921	0.4876	0.4936	0.5085	Ave	0.4964			0.1000	1.8		20.0				
Trichlorofluoromethane	0.3350 0.4046	0.3734 0.4021	0.4043	0.3971	0.4243	Ave	0.3915			0.1000	7.4		20.0				
Ethyl ether	0.1866 0.1964	0.1888 0.1967	0.1933	0.1941	0.2033	Ave	0.1942				2.8		20.0				
Freon 123a	0.2787 0.3275	0.2952 0.3043	0.3008	0.3126	0.3305	Ave	0.3071				5.9		20.0				
Acrolein	2.7963 2.9840	2.8205 2.9418	2.7406	2.8928	2.8870	Ave	2.8661				3.0		20.0				
1,1-Dichloroethene	0.1942 0.2385	0.2006 0.2202	0.2199	0.2288	0.2382	Ave	0.2200			0.1000	7.8		20.0				
Acetone	4.5919 3.1463	3.9685 2.9287	3.4306	3.3908	3.2578	Ave	3.5307			0.1000	16.1		20.0				
Freon 113	0.1987 0.2664	0.2063 0.2447	0.2404	0.2545	0.2682	Ave	0.2399			0.1000	11.5		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 Lancaster Laboratories Env Job No.: 410-11876-1 Analy Batch No.: 11163

SDG No.: _____

Instrument ID: 19094 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2020 16:46 Calibration End Date: 06/08/2020 18:56 Calibration ID: 5854

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R ² OR COD	#	MIN R ² OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7															
Methyl iodide	0.3762 0.4536	0.4102 0.4281	0.4211	0.4405	0.4624	Ave		0.4274			6.8		20.0				
Ethyl bromide	0.1713 0.2098	0.1920 0.2053	0.2017	0.2062	0.2146	Ave		0.2001			7.3		20.0				
Carbon disulfide	0.6925 0.7715	0.6991 0.7176	0.7139	0.7462	0.7692	Ave		0.7300		0.1000	4.4		20.0				
Methyl acetate	++++ 8.9260	13.202 10.385	9.8286	9.0952	9.7230	Ave		10.193		0.1000	15.4		20.0				
Allyl chloride	0.4282 0.4505	0.4616 0.4433	0.4289	0.4555	0.4614	Ave		0.4470			3.2		20.0				
Methylene Chloride	0.2856 0.2609	0.2658 0.2477	0.2524	0.2571	0.2636	Ave		0.2619		0.1000	4.7		20.0				
t-Butyl alcohol	0.9670 1.0028	1.0820 0.7680	0.9313	1.1217	1.0609	Ave		0.9905			12.0		20.0				
Acrylonitrile	4.8465 4.9049	4.5548 4.8312	4.4545	4.8371	4.7550	Ave		4.7406			3.6		20.0				
Methyl tert-butyl ether	0.5012 0.5428	0.5146 0.5158	0.5175	0.5362	0.5544	Ave		0.5260		0.1000	3.6		20.0				
trans-1,2-Dichloroethene	0.2419 0.2620	0.2369 0.2478	0.2435	0.2555	0.2646	Ave		0.2503		0.1000	4.2		20.0				
n-Hexane	0.3419 0.4355	0.3458 0.4013	0.4005	0.4174	0.4392	Ave		0.3974			9.9		20.0				
1,1-Dichloroethane	0.4322 0.5164	0.4663 0.4787	0.4634	0.4964	0.5180	Ave		0.4816		0.2000	6.4		20.0				
di-Isopropyl ether	0.8579 0.9339	0.8837 0.8893	0.8709	0.9197	0.9535	Ave		0.9013			3.9		20.0				
2-Chloro-1,3-butadiene	0.3781 0.4513	0.4042 0.4227	0.4084	0.4446	0.4547	Ave		0.4234			6.7		20.0				
Ethyl t-butyl ether	0.7608 0.7811	0.7719 0.7426	0.7282	0.7672	0.8050	Ave		0.7653			3.3		20.0				
2-Butanone (MEK)	5.9145 5.9947	6.1210 5.8891	5.5660	5.9129	5.9132	Ave		5.9016		0.1000	2.9		20.0				
cis-1,2-Dichloroethene	0.2624 0.2975	0.2874 0.2824	0.2870	0.2930	0.2981	Ave		0.2868		0.1000	4.3		20.0				
2,2-Dichloropropane	0.3425 0.3975	0.3556 0.3709	0.3670	0.3825	0.3996	Ave		0.3736			5.6		20.0				
Propionitrile	1.4373 1.5322	1.5321 1.5112	1.4556	1.5994	1.5331	Ave		1.5144			3.6		20.0				
Methacrylonitrile	5.6340 6.2854	5.7170 6.2299	5.7075	5.9811	5.9761	Ave		5.9330			4.4		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 Lancaster Laboratories Env Job No.: 410-11876-1 Analy Batch No.: 11163

SDG No.: _____

Instrument ID: 19094 GC Column: R-624SilMS 3 ID: 0.25 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2020 16:46 Calibration End Date: 06/08/2020 18:56 Calibration ID: 5854

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7															
Tetrahydrofuran	1.6068 1.6268	1.5644 1.5898	1.4705	1.5609	1.5622	Ave		1.5688			3.2		20.0				
Bromochloromethane	0.1185 0.1209	0.1125 0.1193	0.1224	0.1218	0.1255	Ave		0.1201			3.4		20.0				
Chloroform	0.4255 0.4738	0.4278 0.4477	0.4445	0.4567	0.4752	Ave		0.4502		0.2000	4.4		20.0				
1,1,1-Trichloroethane	0.3645 0.4107	0.3616 0.3874	0.3668	0.3988	0.4136	Ave		0.3862		0.1000	5.8		20.0				
Cyclohexane	0.4575 0.5287	0.4398 0.4854	0.5028	0.5220	0.5284	Ave		0.4949		0.1000	7.2		20.0				
1,1-Dichloropropene	0.3068 0.3860	0.3515 0.3611	0.3540	0.3660	0.3837	Ave		0.3584			7.4		20.0				
Carbon tetrachloride	0.2947 0.3582	0.3124 0.3348	0.3271	0.3399	0.3636	Ave		0.3329		0.1000	7.3		20.0				
Isobutyl alcohol	0.4834 0.3928	0.4543 0.2914	0.3779	0.3905	0.3882	Ave		0.3969			15.4		20.0				
Benzene	1.0324 1.1468	1.0730 1.0861	1.0730	1.1308	1.1681	Ave		1.1014		0.5000	4.4		20.0				
1,2-Dichloroethane	0.2883 0.2602	0.2490 0.2458	0.2387	0.2614	0.2615	Ave		0.2578		0.1000	6.2		20.0				
t-Amyl methyl ether	0.5928 0.6573	0.6025 0.6331	0.6243	0.6370	0.6692	Ave		0.6309			4.3		20.0				
n-Heptane	0.4280 0.4822	0.4051 0.4394	0.4654	0.4757	0.4853	Ave		0.4544			6.8		20.0				
n-Butanol	0.3618 0.4110	0.3188 0.2348	0.3268	0.3856	0.3836	Ave		0.3461			17.1		20.0				
Trichloroethene	0.2431 0.2861	0.2608 0.2725	0.2659	0.2770	0.2857	Ave		0.2702		0.2000	5.6		20.0				
Methylcyclohexane	0.3602 0.5179	0.4553 0.4953	0.4928	0.5176	0.5315	Ave		0.4815		0.1000	12.2		20.0				
1,2-Dichloropropane	0.2537 0.2913	0.2722 0.2790	0.2727	0.2858	0.2940	Ave		0.2784		0.1000	5.0		20.0				
Methyl methacrylate	10.330 12.423	11.415 12.199	11.341	11.555	11.458	Ave		11.531			5.9		20.0				
1,4-Dioxane	0.0756 0.1044	0.1027 0.0342	0.1166	0.1269	0.1069	Ave		0.0953		0.0050	32.8	*	20.0				
Dibromomethane	0.1132 0.1194	0.1185 0.1162	0.1122	0.1169	0.1225	Ave		0.1170			3.0		20.0				
Bromodichloromethane	0.2896 0.3298	0.3087 0.3235	0.2989	0.3155	0.3284	Ave		0.3135		0.2000	4.9		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 Lancaster Laboratories Env Job No.: 410-11876-1 Analy Batch No.: 11163

SDG No.: _____

Instrument ID: 19094 GC Column: R-624SilMS 3 ID: 0.25 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2020 16:46 Calibration End Date: 06/08/2020 18:56 Calibration ID: 5854

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R ² OR COD	#	MIN R ² OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7															
2-Nitropropane	3.0100 3.3750	3.0063 3.4008	3.1511	3.1489	3.1361	Ave		3.1755			5.0		20.0				
1-Bromo-2-chloroethane	0.2632 0.2808	0.2749 0.2796	0.2683	0.2761	0.2891	Ave		0.2760			3.1		20.0				
cis-1,3-Dichloropropene	0.3258 0.4165	0.3607 0.4056	0.3700	0.3995	0.4188	Ave		0.3853		0.2000	8.9		20.0				
4-Methyl-2-pentanone (MIBK)	14.353 16.370	14.928 16.265	14.942	15.621	15.429	Ave		15.415		0.1000	4.8		20.0				
Toluene	0.8713 0.9757	0.9067 0.9307	0.9176	0.9621	0.9911	Ave		0.9364		0.4000	4.5		20.0				
trans-1,3-Dichloropropene	0.3795 0.4473	0.4022 0.4412	0.4061	0.4388	0.4503	Ave		0.4236		0.1000	6.5		20.0				
Ethyl methacrylate	0.3205 0.3643	0.3377 0.3607	0.3216	0.3569	0.3656	Ave		0.3467			5.7		20.0				
1,1,2-Trichloroethane	0.2170 0.2379	0.2175 0.2296	0.2221	0.2345	0.2390	Ave		0.2282		0.1000	4.1		20.0				
Tetrachloroethene	0.3711 0.4135	0.3758 0.3938	0.3964	0.4155	0.4200	Ave		0.3980		0.2000	4.9		20.0				
1,3-Dichloropropane	0.4192 0.4234	0.4005 0.4158	0.4011	0.4316	0.4373	Ave		0.4184			3.4		20.0				
2-Hexanone	9.7040 11.157	10.071 11.040	9.8529	10.471	10.528	Ave		10.404		0.1000	5.4		20.0				
Dibromochloromethane	0.2431 0.2925	0.2582 0.2893	0.2603	0.2826	0.2990	Ave		0.2750			7.7		20.0				
1,2-Dibromoethane (EDB)	0.1877 0.2301	0.2113 0.2216	0.2090	0.2256	0.2336	Ave		0.2170		0.1000	7.3		20.0				
1-Chlorohexane	0.5731 0.5783	0.5471 0.5429	0.5380	0.5706	0.5812	Ave		0.5616			3.2		20.0				
Chlorobenzene	0.9561 1.0333	0.9508 0.9898	0.9761	1.0338	1.0429	Ave		0.9975		0.5000	3.9		20.0				
1,1,1,2-Tetrachloroethane	0.3062 0.3594	0.3152 0.3473	0.3224	0.3448	0.3637	Ave		0.3370			6.7		20.0				
Ethylbenzene	1.6910 1.9009	1.7541 1.7991	1.7832	1.9004	1.9353	Ave		1.8234		0.1000	5.0		20.0				
m&p-Xylene	0.6298 0.7126	0.6598 0.6726	0.6736	0.7101	0.7254	Ave		0.6834		0.1000	5.0		20.0				
o-Xylene	0.6111 0.6990	0.6442 0.6704	0.6492	0.6877	0.7083	Ave		0.6671		0.3000	5.2		20.0				
Styrene	0.9817 1.1744	1.0535 1.1271	1.0777	1.1555	1.1946	Ave		1.1092		0.3000	6.8		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 Lancaster Laboratories Env Job No.: 410-11876-1 Analy Batch No.: 11163

SDG No.: _____

Instrument ID: 19094 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2020 16:46 Calibration End Date: 06/08/2020 18:56 Calibration ID: 5854

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R ² OR COD	#	MIN R ² OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7															
Bromoform	0.1391 0.1678	0.1456 0.1685	0.1428	0.1613	0.1672	Ave		0.1560		0.1000	8.3		20.0				
Isopropylbenzene	1.6183 1.8987	1.7007 1.7866	1.7558	1.8674	1.9120	Ave		1.7913		0.1000	6.1		20.0				
1,1,2,2-Tetrachloroethane	0.5214 0.5669	0.5253 0.5680	0.5338	0.5542	0.5801	Ave		0.5500		0.3000	4.2		20.0				
Bromobenzene	0.7017 0.8029	0.7401 0.7814	0.7262	0.7925	0.8117	Ave		0.7652			5.5		20.0				
trans-1,4-Dichloro-2-butene	4.2936 5.6631	4.6629 5.6669	4.8556	5.2329	5.2479	Ave		5.0890			10.1		20.0				
1,2,3-Trichloropropane	0.1264 0.1371	0.1392 0.1384	0.1315	0.1435	0.1425	Ave		0.1369			4.4		20.0				
N-Propylbenzene	3.9455 4.4709	4.0842 4.2143	4.1847	4.3691	4.5106	Ave		4.2542			4.9		20.0				
2-Chlorotoluene	0.7574 0.8607	0.7720 0.8238	0.7745	0.8315	0.8597	Ave		0.8113			5.3		20.0				
1,3,5-Trimethylbenzene	2.6019 3.1191	2.8241 2.9762	2.8423	3.0225	3.1382	Ave		2.9320			6.5		20.0				
4-Chlorotoluene	0.6920 0.8653	0.8095 0.8292	0.7846	0.8506	0.8732	Ave		0.8149			7.7		20.0				
tert-Butylbenzene	0.5860 0.6671	0.6155 0.6409	0.6250	0.6424	0.6777	Ave		0.6364			4.9		20.0				
Pentachloroethane	0.4166 0.5241	0.4649 0.5358	0.4797	0.5029	0.5309	Ave		0.4936			8.7		20.0				
1,2,4-Trimethylbenzene	2.6544 3.2025	2.8317 3.0302	2.8845	3.1107	3.1967	Ave		2.9872			6.9		20.0				
sec-Butylbenzene	3.4899 4.1459	3.6478 3.9133	3.7282	3.9911	4.1461	Ave		3.8661			6.5		20.0				
1,3-Dichlorobenzene	1.3902 1.6173	1.4591 1.5583	1.4557	1.5580	1.6120	Ave		1.5215		0.6000	5.7		20.0				
p-Isopropyltoluene	2.8902 3.5182	3.0539 3.3211	3.1200	3.3716	3.5109	Ave		3.2551			7.4		20.0				
1,4-Dichlorobenzene	1.3517 1.5801	1.4344 1.5295	1.4421	1.5369	1.6030	Ave		1.4968		0.5000	6.0		20.0				
1,2,3-Trimethylbenzene	1.2144 1.3461	1.2677 1.3248	1.3161	1.2999	1.3489	Ave		1.3026			3.7		20.0				
Benzyl chloride	0.1847 0.2353	0.1797 0.2408	0.1986	0.2215	0.2336	Ave		0.2135			11.9		20.0				
n-Butylbenzene	1.4723 1.8120	1.5403 1.7171	1.6016	1.7287	1.8028	Ave		1.6678			7.9		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 Lancaster Laboratories Env Job No.: 410-11876-1 Analy Batch No.: 11163

SDG No.: _____

Instrument ID: 19094 GC Column: R-624SilMS 3 ID: 0.25 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2020 16:46 Calibration End Date: 06/08/2020 18:56 Calibration ID: 5854

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
	LVL 6	LVL 7															
1,2-Dichlorobenzene	1.3010 1.3959	1.3068 1.3649	1.2972	1.3774	1.4284	Ave		1.3531		0.4000	3.8		20.0				
1,2-Dibromo-3-Chloropropane	0.0601 0.0782	0.0607 0.0767	0.0630	0.0753	0.0756	Ave		0.0699		0.0500	11.7		20.0				
1,3,5-Trichlorobenzene	1.0146 1.2605	1.0807 1.2142	1.0748	1.1561	1.2136	Ave		1.1449			7.9		20.0				
1,2,4-Trichlorobenzene	0.7824 1.0260	0.8411 1.0014	0.8625	0.9053	0.9866	Ave		0.9150		0.2000	10.1		20.0				
Hexachlorobutadiene	0.5337 0.5324	0.4655 0.5053	0.4621	0.4996	0.5157	Ave		0.5021			5.8		20.0				
Naphthalene	1.5558 1.7685	1.4811 1.7065	1.5216	1.6383	1.7155	Ave		1.6268			6.7		20.0				
1,2,3-Trichlorobenzene	0.6951 0.8486	0.6816 0.8178	0.7176	0.7597	0.8196	Ave		0.7628			8.8		20.0				
Dibromofluoromethane (Surr)	0.2365 0.2362	0.2352 0.2350	0.2365	0.2358	0.2398	Ave		0.2364			0.7		20.0				
1,2-Dichloroethane-d4 (Surr)	0.0479 0.0483	0.0481 0.0480	0.0481	0.0485	0.0482	Ave		0.0482			0.4		20.0				
Toluene-d8 (Surr)	1.3424 1.3421	1.3329 1.3306	1.3397	1.3560	1.3495	Ave		1.3419			0.7		20.0				
4-Bromofluorobenzene (Surr)	0.4929 0.4823	0.4896 0.4853	0.4891	0.4986	0.4891	Ave		0.4896			1.1		20.0				

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

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

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1 Analy Batch No.: 11163

SDG No.: _____

Instrument ID: 19094 GC Column: R-624SilMS 3 ID: 0.25 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2020 16:46 Calibration End Date: 06/08/2020 18:56 Calibration ID: 5854

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-11163/18	hu08i07.D
Level 2	IC 410-11163/17	hu08i06.D
Level 3	IC 410-11163/16	hu08i05.D
Level 4	IC 410-11163/15	hu08i04.D
Level 5	IC 410-11163/14	hu08i03.D
Level 6	ICIS 410-11163/13	hu08i02.D
Level 7	IC 410-11163/12	hu08i01.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	11992 784554	36004 1950114	75647	153361	402318	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Chloromethane	FB	Ave	18515 885882	43537 2194711	89175	172584	446165	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Vinyl chloride	FB	Ave	14407 806165	39203 2013784	81821	158284	417058	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3-Butadiene	FB	Ave	16812 760291	39436 1751483	73724	151736	383275	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Bromomethane	FB	Ave	10675 542530	26196 1342180	53196	107837	280328	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Chloroethane	FB	Ave	9960 471369	25009 1192838	47777	95643	249751	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Dichlorofluoromethane	FB	Ave	21471 1034402	51811 2579017	102432	207730	534811	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Trichlorofluoromethane	FB	Ave	14090 853466	39300 2107493	84929	167089	446217	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethyl ether	FB	Ave	7845 414172	19868 1030526	40609	81658	213795	0.200 10.0	0.500 25.0	1.000	2.00	5.00
Freon 123a	FB	Ave	11723 690890	31066 1594684	63189	131544	347634	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Acrolein	TBAd 10	Ave	59473 3016024	151365 7292592	288759	615641	1606689	10.00 500	25.0 1250	50.0	100.0	250
1,1-Dichloroethene	FB	Ave	8169 503091	21111 1154006	46197	96271	250474	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Acetone	TBAd 10	Ave	19533 636012	42595 1452041	72293	144329	362620	2.00 100	5.00 250	10.0	20.0	50.0
Freon 113	FB	Ave	8356 561947	21712 1282398	50494	107085	282105	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methyl iodide	FB	Ave	15821 956860	43170 2243796	88458	185379	486285	0.200 10.0	0.500 25.0	1.00	2.00	5.00

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

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1 Analy Batch No.: 11163

SDG No.: _____

Instrument ID: 19094 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2020 16:46 Calibration End Date: 06/08/2020 18:56 Calibration ID: 5854

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Ethyl bromide	FB	Ave	7209 442714	20222 1076722	42403	86822	225794	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Carbon disulfide	FB	Ave	29125 1627512	73573 3760982	149974	314026	808966	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methyl acetate	TBAd 10	Ave	++++ 180437	14170 514889	20712	38713	108224	++++ 10.0	0.500 25.0	1.00	2.00	5.00
Allyl chloride	FB	Ave	18011 950283	48576 2323126	90102	191692	485214	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methylene Chloride	FB	Ave	12012 550318	27973 1297975	53019	108187	277211	0.200 10.0	0.500 25.0	1.00	2.00	5.00
t-Butyl alcohol	TBAd 10	Ave	8227 405436	23226 761528	39250	95490	236175	4.00 200	10.0 500	20.0	40.0	100
Acrylonitrile	TBAd 10	Ave	10308 495758	24444 1197651	46935	102944	264631	1.00 50.0	2.50 125	5.00	10.0	25.0
Methyl tert-butyl ether	FB	Ave	21078 1144919	54155 2703045	108704	225630	583088	0.200 10.0	0.500 25.0	1.00	2.00	5.00
trans-1,2-Dichloroethene	FB	Ave	10172 552781	24937 1298879	51146	107518	278331	0.200 10.0	0.500 25.0	1.00	2.00	5.00
n-Hexane	FB	Ave	14379 918728	36394 2103096	84135	175631	461882	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1-Dichloroethane	FB	Ave	18178 1089322	49072 2508699	97346	208913	544736	0.200 10.0	0.500 25.0	1.00	2.00	5.00
di-Isopropyl ether	FB	Ave	36083 1970041	93006 4660712	182961	387034	1002817	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Chloro-1,3-butadiene	FB	Ave	15903 951918	42544 2215107	85805	187090	478226	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethyl t-butyl ether	FB	Ave	31999 1647759	81237 3891862	152986	322851	846636	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Butanone (MEK)	TBAd 10	Ave	25159 1211822	65698 2919824	117293	251677	658186	2.00 100	5.00 250	10.0	20.0	50.0
cis-1,2-Dichloroethene	FB	Ave	11036 627601	30244 1480230	60302	123280	313564	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2,2-Dichloropropane	FB	Ave	14403 838443	37421 1943918	77094	160943	420278	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Propionitrile	TBAd 10	Ave	12228 619481	32890 1498543	61347	136153	341285	4.00 200	10.0 500	20.0	40.0	100
Methacrylonitrile	TBAd 10	Ave	23966 1270581	61362 3088771	120275	254581	665185	2.00 100	5.00 250	10.0	20.0	50.0
Tetrahydrofuran	TBAd 10	Ave	6835 328845	16791 788223	30989	66440	173885	2.00 100	5.00 250	10.0	20.0	50.0
Bromochloromethane	FB	Ave	4982 255050	11842 625403	25710	51244	131966	0.200 10.0	0.500 25.0	1.00	2.00	5.00

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

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1 Analy Batch No.: 11163

SDG No.: _____

Instrument ID: 19094 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2020 16:46 Calibration End Date: 06/08/2020 18:56 Calibration ID: 5854

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Chloroform	FB	Ave	17894 999567	45023 2346458	93377	192183	499751	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1,1-Trichloroethane	FB	Ave	15329 866350	38058 2030447	77061	167836	435025	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Cyclohexane	FB	Ave	19243 1115374	46285 2543734	105631	219649	555708	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1-Dichloropropene	FB	Ave	12904 814231	36997 1892657	74358	154020	403522	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Carbon tetrachloride	FB	Ave	12393 755568	32876 1754598	68708	143042	382450	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Isobutyl alcohol	TBAd 10	Ave	10282 397042	24382 722309	39813	83116	216048	10.0 500	25.0 1250	50.0	100	250
Benzene	FB	Ave	43419 2419038	112927 5691952	225407	475852	1228522	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dichloroethane	FB	Ave	12126 548859	26204 1288068	50154	110016	275027	0.200 10.0	0.500 25.0	1.00	2.00	5.00
t-Amyl methyl ether	FB	Ave	24933 1386575	63408 3318017	131142	268058	703801	0.200 10.0	0.500 25.0	1.00	2.00	5.00
n-Heptane	FB	Ave	18001 1017148	42638 2302817	97769	200190	510349	0.200 10.0	0.500 25.0	1.00	2.00	5.00
n-Butanol	TBAd 10	Ave	15390 830802	34215 1164076	68874	164127	427016	20.0 1000	50.0 2500	100	200	500
Trichloroethene	FB	Ave	10224 603518	27452 1428151	55853	116569	300513	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methylcyclohexane	FB	Ave	15149 1092583	47915 2595806	103521	217796	558938	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dichloropropane	FB	Ave	10671 614544	28652 1461985	57285	120262	309162	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methyl methacrylate	TBAd 10	Ave	4394 251134	12252 604803	23899	49184	127534	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,4-Dioxane	TBAd 10	Ave	1607 105482	5511 84717	12285	27013	59501	10.0 500	25.0 1250	50.0	100	250
Dibromomethane	FB	Ave	4763 251782	12468 608883	23579	49206	128865	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Bromodichloromethane	FB	Ave	12182 695787	32489 1695155	62786	132775	345424	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Nitropropane	TBAd 10	Ave	12804 682256	32268 1686098	66403	134030	349069	2.00 100	5.00 250	10.0	20.0	50.0
1-Bromo-2-chloroethane	FB	Ave	11071 592324	28930 1465205	56365	116192	304034	0.200 10.0	0.500 25.0	1.00	2.00	5.00
cis-1,3-Dichloropropene	FB	Ave	13704 878653	37959 2125657	77727	168102	440458	0.200 10.0	0.500 25.0	1.00	2.00	5.00

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

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1 Analy Batch No.: 11163

SDG No.: _____

Instrument ID: 19094 GC Column: R-624SilMS 3 ID: 0.25 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2020 16:46 Calibration End Date: 06/08/2020 18:56 Calibration ID: 5854

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
4-Methyl-2-pentanone (MIBK)	TBA 10	Ave	61055 3309148	160231 8063951	314877	664915	1717352	2.00 100	5.00 250	10.0	20.0	50.0
Toluene	CBZ 5	Ave	26235 1490531	68638 3532325	138580	286849	749212	0.200 10.0	0.500 25.0	1.00	2.00	5.00
trans-1,3-Dichloropropene	CBZ 5	Ave	11427 683390	30447 1674664	61326	130837	340435	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethyl methacrylate	CBZ 5	Ave	9650 556590	25567 1368908	48564	106402	276343	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1,2-Trichloroethane	CBZ 5	Ave	6534 363447	16468 871597	33544	69907	180684	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Tetrachloroethene	CBZ 5	Ave	11175 631649	28451 1494574	59869	123881	317527	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3-Dichloropropane	CBZ 5	Ave	12622 646833	30316 1578214	60568	128669	330554	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Hexanone	TBA 10	Ave	41279 2255377	108090 5473822	207632	445712	1171886	2.00 100	5.00 250	10.0	20.0	50.0
Dibromochloromethane	CBZ 5	Ave	7320 446807	19544 1097914	39307	84265	226015	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dibromoethane (EDB)	CBZ 5	Ave	5653 351513	15992 841076	31563	67269	176554	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1-Chlorohexane	CBZ 5	Ave	17257 883405	41417 2060561	81247	170135	439322	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Chlorobenzene	CBZ 5	Ave	28788 1578596	71973 3756962	147408	308224	788388	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1,1,2-Tetrachloroethane	CBZ 5	Ave	9220 549041	23864 1318232	48683	102790	274967	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethylbenzene	CBZ 5	Ave	50918 2904043	132788 6828453	269299	566606	1462975	0.200 10.0	0.500 25.0	1.00	2.00	5.00
m&p-Xylene	CBZ 5	Ave	37928 2177169	99900 5105598	203446	423433	1096751	0.400 20.0	1.00 50.0	2.00	4.00	10.0
o-Xylene	CBZ 5	Ave	18402 1067907	48764 2544686	98039	205047	535400	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Styrene	CBZ 5	Ave	29559 1794152	79750 4277864	162751	344505	903046	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Bromoform	CBZ 5	Ave	4189 256281	11020 639652	21569	48098	126404	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Isopropylbenzene	CBZ 5	Ave	48730 2900596	128741 6781034	265152	556767	1445359	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1,2,2-Tetrachloroethane	DCB 4	Ave	8079 435803	20454 1082912	41152	85367	223182	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Bromobenzene	DCB 4	Ave	10873 617262	28817 1489879	55978	122070	312288	0.200 10.0	0.500 25.0	1.00	2.00	5.00

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

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1 Analy Batch No.: 11163

SDG No.: _____

Instrument ID: 19094 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2020 16:46 Calibration End Date: 06/08/2020 18:56 Calibration ID: 5854

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
trans-1,4-Dichloro-2-butene	TBAd 10	Ave	18264 1144793	50048 2809656	102324	222736	584125	2.00 100	5.00 250	10.0	20.0	50.0
1,2,3-Trichloropropane	DCBd 4	Ave	1959 105399	5418 263888	10137	22107	54829	0.200 10.0	0.500 25.0	1.00	2.00	5.00
N-Propylbenzene	DCBd 4	Ave	61139 3436979	159019 8035215	322588	672962	1735317	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Chlorotoluene	DCBd 4	Ave	11736 661625	30058 1570651	59702	128071	330741	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3,5-Trimethylbenzene	DCBd 4	Ave	40319 2397839	109955 5674637	219105	465543	1207335	0.200 10.0	0.500 25.0	1.00	2.00	5.00
4-Chlorotoluene	DCBd 4	Ave	10724 665205	31517 1580904	60481	131014	335946	0.200 10.0	0.500 25.0	1.00	2.00	5.00
tert-Butylbenzene	DCBd 4	Ave	9081 512822	23966 1221893	48177	98951	260716	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Pentachloroethane	DCBd 4	Ave	6456 402898	18101 1021621	36977	77464	204251	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2,4-Trimethylbenzene	DCBd 4	Ave	41133 2461905	110251 5777515	222355	479126	1229837	0.200 10.0	0.500 25.0	1.00	2.00	5.00
sec-Butylbenzene	DCBd 4	Ave	54080 3187195	142029 7461208	287397	614738	1595115	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3-Dichlorobenzene	DCBd 4	Ave	21543 1243271	56811 2971062	112217	239968	620173	0.200 10.0	0.500 25.0	1.00	2.00	5.00
p-Isopropyltoluene	DCBd 4	Ave	44786 2704585	118906 6332261	240509	519317	1350739	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,4-Dichlorobenzene	DCBd 4	Ave	20946 1214669	55848 2916251	111170	236716	616717	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2,3-Trimethylbenzene	DCBd 4	Ave	18819 1034784	49357 2525875	101457	200220	518951	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Benzyl chloride	DCBd 4	Ave	2862 180923	6998 459140	15312	34122	89852	0.200 10.0	0.500 25.0	1.00	2.00	5.00
n-Butylbenzene	DCBd 4	Ave	22815 1392996	59973 3273918	123464	266267	693566	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dichlorobenzene	DCBd 4	Ave	20160 1073103	50879 2602474	100001	212157	549539	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dibromo-3-Chloropropane	DCBd 4	Ave	932 60114	2365 146150	4858	11594	29071	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3,5-Trichlorobenzene	DCBd 4	Ave	15723 968989	42078 2315146	82856	178071	466886	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2,4-Trichlorobenzene	DCBd 4	Ave	12124 788764	32747 1909361	66485	139441	379561	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Hexachlorobutadiene	DCBd 4	Ave	8270 409281	18126 963373	35624	76958	198405	0.200 10.0	0.500 25.0	1.00	2.00	5.00

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

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1 Analy Batch No.: 11163

SDG No.: _____

Instrument ID: 19094 GC Column: R-624SilMS 3 ID: 0.25 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/08/2020 16:46 Calibration End Date: 06/08/2020 18:56 Calibration ID: 5854

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
			LVL 6	LVL 7				LVL 6	LVL 7			
Naphthalene	DCBd 4	Ave	24109 1359519	57668 3253775	117293	252337	659983	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2,3-Trichlorobenzene	DCBd 4	Ave	10771 652333	26537 1559239	55318	117014	315303	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Dibromofluoromethane (Surr)	FB	Ave	497272 498258	494977 492670	496799	496161	504366	10.0 10.0	10.0 10.0	10.0	10.0	10.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	100643 101935	101182 100692	101030	102089	101442	10.0 10.0	10.0 10.0	10.0	10.0	10.0
Toluene-d8 (Surr)	CBZd 5	Ave	2021092 2050335	2017988 2020188	2023108	2021565	2040205	10.0 10.0	10.0 10.0	10.0	10.0	10.0
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	742087 736861	741240 736850	738623	743254	739487	10.0 10.0	10.0 10.0	10.0	10.0	10.0

Curve Type Legend:

Ave = Average ISTD

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i01.D
 Lims ID: IC std7 25
 Client ID:
 Sample Type: IC Calib Level: 7
 Inject. Date: 08-Jun-2020 16:46:30 ALS Bottle#: 11 Worklist Smp#: 12
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: 410-0002918-012
 Misc. Info.: IC STD7 25
 Operator ID: jkh09052 Instrument ID: 19094
 Sublist: chrom-MSV_19094_25mL*sub1
 Method: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 22-Jun-2020 11:01:10 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1020

First Level Reviewer: campbellme

Date: 08-Jun-2020 19:23:37

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
3 Dichlorodifluoromethane	85	2.075	2.069	0.006	99	1950114	25.0	26.3	M
6 Chloromethane	50	2.264	2.264	0.000	99	2194711	25.0	24.8	
7 Vinyl chloride	62	2.385	2.386	-0.001	98	2013784	25.0	25.4	
8 Butadiene	39	2.392	2.392	0.000	92	1751483	25.0	23.0	
9 Bromomethane	94	2.733	2.733	0.000	91	1342180	25.0	25.0	
10 Chloroethane	64	2.831	2.831	-0.001	100	1192838	25.0	24.6	M
11 Dichlorofluoromethane	67	3.080	3.074	0.006	97	2579017	25.0	24.8	
13 Trichlorofluoromethane	101	3.141	3.129	0.012	97	2107493	25.0	25.7	
15 Ethyl ether	59	3.422	3.422	0.000	93	1030526	25.0	25.3	
16 1,2-Dichloro-1,1,2-trifluoroetha	67	3.501	3.495	0.006	94	1594684	25.0	24.8	M
17 Acrolein	56	3.599	3.605	-0.006	100	7292592	1250.0	1283.0	
18 1,1-Dichloroethene	96	3.751	3.745	0.006	98	1154006	25.0	25.0	
20 112TCTFE	101	3.782	3.782	0.000	93	1282398	25.0	25.5	
19 Acetone	43	3.775	3.788	-0.013	100	1452041	250.0	207.4	
22 Iodomethane	142	3.958	3.952	0.006	98	2243796	25.0	25.0	M
21 Isopropyl alcohol	45	3.916	3.971	-0.055	97	335537	500.0	355.0	
23 Ethyl bromide	108	3.989	3.989	0.000	98	1076722	25.0	25.7	
24 Carbon disulfide	76	4.068	4.068	0.000	99	3760982	25.0	24.6	
26 Methyl acetate	43	4.220	4.221	-0.001	99	514889	25.0	25.5	M
27 3-Chloro-1-propene	41	4.257	4.257	0.000	93	2323126	25.0	24.8	
29 Methylene Chloride	84	4.452	4.446	0.006	93	1297975	25.0	23.6	
* 28 t-Butyl alcohol-d10 (IS)	65	4.458	4.470	-0.012	0	99160	50.0	50.0	
30 2-Methyl-2-propanol	59	4.586	4.599	-0.013	100	761528	500.0	387.7	
31 Acrylonitrile	53	4.800	4.800	0.000	99	1197651	125.0	127.4	
32 Methyl tert-butyl ether	73	4.861	4.861	0.000	96	2703045	25.0	24.5	
33 trans-1,2-Dichloroethene	96	4.885	4.879	0.006	99	1298879	25.0	24.8	
34 Hexane	57	5.300	5.300	0.000	93	2103096	25.0	25.2	
35 1,1-Dichloroethane	63	5.543	5.543	0.000	96	2508699	25.0	24.8	
37 Isopropyl ether	45	5.592	5.580	0.012	96	4660712	25.0	24.7	
38 2-Chloro-1,3-butadiene	53	5.653	5.647	0.006	91	2215107	25.0	25.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
39 Tert-butyl ethyl ether	59	6.123	6.117	0.006	99	3891862	25.0	24.3	
S 40 1,2-Dichloroethene, Total	100				0			49.4	
41 2-Butanone (MEK)	43	6.324	6.324	0.000	100	2919824	250.0	249.5	
42 cis-1,2-Dichloroethene	96	6.366	6.366	0.000	83	1480230	25.0	24.6	
43 2,2-Dichloropropane	77	6.391	6.385	0.006	87	1943918	25.0	24.8	
45 Propionitrile	54	6.415	6.415	0.000	99	1498543	500.0	498.9	
47 Methacrylonitrile	67	6.635	6.629	0.006	92	3088771	250.0	262.5	
48 Chlorobromomethane	128	6.702	6.702	0.000	96	625403	25.0	24.8	
49 Tetrahydrofuran	71	6.708	6.702	0.006	89	788223	250.0	253.4	
50 Chloroform	83	6.848	6.848	0.000	93	2346458	25.0	24.9	
\$ 51 Dibromofluoromethane (Surr)	113	7.067	7.061	0.006	93	492670	10.0	9.94	
52 1,1,1-Trichloroethane	97	7.086	7.080	0.006	98	2030447	25.0	25.1	
53 Cyclohexane	56	7.183	7.183	0.000	91	2543734	25.0	24.5	
55 1,1-Dichloropropene	75	7.293	7.293	0.000	96	1892657	25.0	25.2	
56 Carbon tetrachloride	117	7.293	7.293	0.000	85	1754598	25.0	25.1	
57 Isobutyl alcohol	41	7.415	7.427	-0.012	95	722309	1250.0	917.6	
\$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.525	7.519	0.006	0	100692	10.0	9.97	
59 Benzene	78	7.555	7.549	0.006	96	5691952	25.0	24.7	
60 1,2-Dichloroethane	62	7.628	7.622	0.006	97	1288068	25.0	23.8	
62 Tert-amyl methyl ether	73	7.738	7.732	0.006	99	3318017	25.0	25.1	
* 65 Fluorobenzene (IS)	96	7.958	7.958	0.000	99	2096320	10.0	10.0	M
64 n-Heptane	43	7.958	7.958	0.000	93	2302817	25.0	24.2	
66 n-Butanol	56	8.293	8.299	-0.006	88	1164076	2500.0	1696.2	
67 Trichloroethene	95	8.439	8.433	0.006	99	1428151	25.0	25.2	
68 Methylcyclohexane	83	8.750	8.744	0.006	96	2595806	25.0	25.7	
69 2-ethoxy-2-methyl butane	87	8.768	8.768	0.000	90	2054661	25.0	25.3	
70 1,2-Dichloropropane	63	8.774	8.768	0.006	87	1461985	25.0	25.1	
71 Methyl methacrylate	69	8.842	8.842	0.000	93	604803	25.0	26.4	
72 1,4-Dioxane	88	8.860	8.854	0.006	94	84717	1250.0	448.2	M
73 Dibromomethane	93	8.884	8.878	0.006	97	608883	25.0	24.8	
75 Dichlorobromomethane	83	9.116	9.110	0.006	100	1695155	25.0	25.8	
76 2-Nitropropane	41	9.372	9.372	0.000	97	1686098	250.0	267.7	
79 1-Bromo-2-chloroethane	63	9.500	9.494	0.006	99	1465205	25.0	25.3	
80 cis-1,3-Dichloropropene	75	9.640	9.640	0.000	96	2125657	25.0	26.3	
81 4-Methyl-2-pentanone (MIBK)	43	9.805	9.799	0.006	97	8063951	250.0	263.8	
\$ 82 Toluene-d8 (Surr)	98	9.945	9.939	0.006	94	2020188	10.0	9.92	
83 Toluene	92	10.018	10.018	0.000	98	3532325	25.0	24.8	
S 84 1,3-Dichloropropene, Total	100				0			52.4	
85 trans-1,3-Dichloropropene	75	10.262	10.262	0.000	92	1674664	25.0	26.0	
86 Ethyl methacrylate	69	10.317	10.317	0.000	90	1368908	25.0	26.0	
87 1,1,2-Trichloroethane	97	10.469	10.463	0.006	90	871597	25.0	25.2	
88 Tetrachloroethene	166	10.555	10.555	0.000	98	1494574	25.0	24.7	
89 1,3-Dichloropropane	76	10.628	10.628	0.000	90	1578214	25.0	24.8	
91 2-Hexanone	43	10.670	10.671	-0.001	97	5473822	250.0	265.3	
93 Chlorodibromomethane	129	10.841	10.841	0.000	90	1097914	25.0	26.3	
94 Ethylene Dibromide	107	10.957	10.951	0.006	99	841076	25.0	25.5	
S 95 Xylenes, Total	106				0			74.3	
* 97 Chlorobenzene-d5 (IS)	117	11.378	11.378	0.000	87	1518210	10.0	10.0	
96 1-Chlorohexane	91	11.378	11.378	0.000	98	2060561	25.0	24.2	
98 Chlorobenzene	112	11.402	11.402	0.000	94	3756962	25.0	24.8	
99 1,1,1,2-Tetrachloroethane	131	11.481	11.481	0.000	97	1318232	25.0	25.8	
100 Ethylbenzene	91	11.481	11.481	0.000	99	6828453	25.0	24.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
101 m-Xylene & p-Xylene	106	11.597	11.597	0.000	0	5105598	50.0	49.2	
102 o-Xylene	106	11.926	11.926	0.000	97	2544686	25.0	25.1	
103 Styrene	104	11.938	11.939	-0.001	95	4277864	25.0	25.4	
104 Bromoform	173	12.103	12.103	0.000	97	639652	25.0	27.0	
105 Isopropylbenzene	105	12.219	12.219	0.000	96	6781034	25.0	24.9	
\$ 108 4-Bromofluorobenzene (Surr)	95	12.365	12.365	0.000	88	736850	10.0	9.91	
109 1,1,2,2-Tetrachloroethane	83	12.463	12.463	0.000	92	1082912	25.0	25.8	
111 Bromobenzene	156	12.487	12.487	0.000	91	1489879	25.0	25.5	
110 trans-1,4-Dichloro-2-butene	53	12.487	12.487	0.000	89	2809656	250.0	278.4	
112 1,2,3-Trichloropropane	110	12.512	12.512	0.000	81	263888	25.0	25.3	
113 N-Propylbenzene	91	12.548	12.548	0.000	99	8035215	25.0	24.8	
114 2-Chlorotoluene	126	12.627	12.627	0.000	96	1570651	25.0	25.4	
115 1,3,5-Trimethylbenzene	105	12.682	12.682	0.000	94	5674637	25.0	25.4	
116 4-Chlorotoluene	126	12.719	12.719	0.000	98	1580904	25.0	25.4	
118 tert-Butylbenzene	134	12.926	12.926	0.000	93	1221893	25.0	25.2	
119 Pentachloroethane	167	12.963	12.963	0.000	94	1021621	25.0	27.1	
120 1,2,4-Trimethylbenzene	105	12.969	12.963	0.006	97	5777515	25.0	25.4	
121 sec-Butylbenzene	105	13.091	13.085	0.006	94	7461208	25.0	25.3	
122 1,3-Dichlorobenzene	146	13.188	13.188	0.000	98	2971062	25.0	25.6	
123 4-Isopropyltoluene	119	13.194	13.194	0.000	97	6332261	25.0	25.5	
* 124 1,4-Dichlorobenzene-d4	152	13.243	13.243	0.000	95	762659	10.0	10.0	
125 1,4-Dichlorobenzene	146	13.261	13.261	0.000	95	2916251	25.0	25.5	
126 1,2,3-Trimethylbenzene	120	13.274	13.268	0.006	99	2525875	25.0	25.4	
127 Benzyl chloride	126	13.341	13.335	0.006	99	459140	25.0	28.2	
129 p-Diethylbenzene	119	13.463	13.463	0.000	95	4198986	25.0	26.2	
130 n-Butylbenzene	92	13.487	13.487	0.000	98	3273918	25.0	25.7	
131 1,2-Dichlorobenzene	146	13.524	13.524	0.000	98	2602474	25.0	25.2	
134 1,2-Dibromo-3-Chloropropane	155	14.066	14.060	0.006	87	146150	25.0	27.4	
135 1,3,5-Trichlorobenzene	180	14.188	14.188	0.000	97	2315146	25.0	26.5	
136 1,2,4-Trichlorobenzene	180	14.615	14.615	0.000	94	1909361	25.0	27.4	
137 Hexachlorobutadiene	225	14.694	14.694	0.000	97	963373	25.0	25.2	
138 Naphthalene	128	14.798	14.798	0.000	97	3253775	25.0	26.2	
139 1,2,3-Trichlorobenzene	180	14.944	14.944	0.000	96	1559239	25.0	26.8	
140 2-Methylnaphthalene	142	15.596	15.596	0.000	93	2017223	25.0	27.2	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MSV_RV4_826_00016

Amount Added: 25.00

Units: uL

MSV_RV1_826_00015

Amount Added: 25.00

Units: uL

MSV_RV4GAS826_00046

Amount Added: 25.00

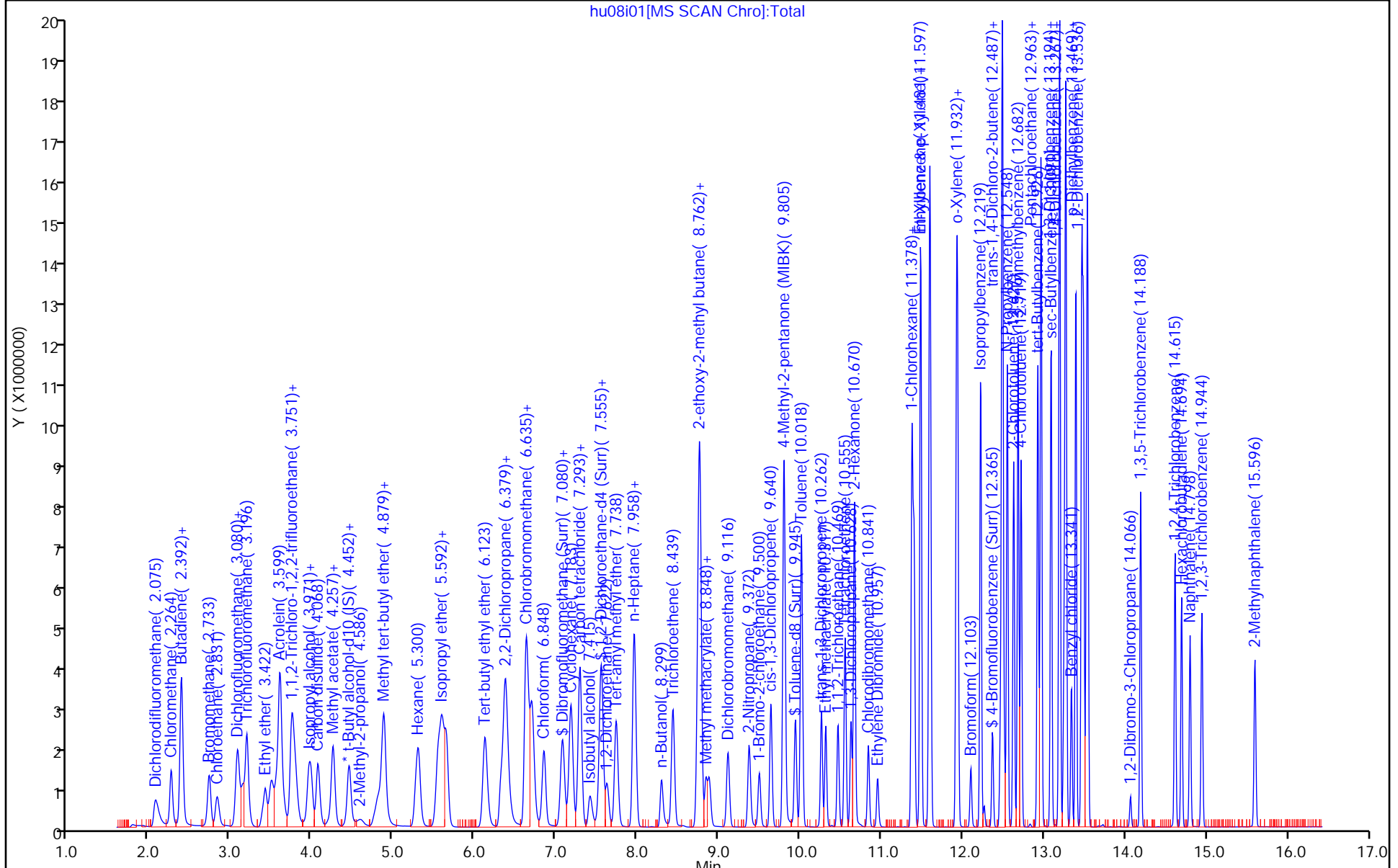
Units: uL

MSV_30_826ISS_00005

Amount Added: 5.00

Units: uL

Run Reagent



hu08i01[MS SCAN Chro]:Total

Eurofins Lancaster Laboratories Env, LLC

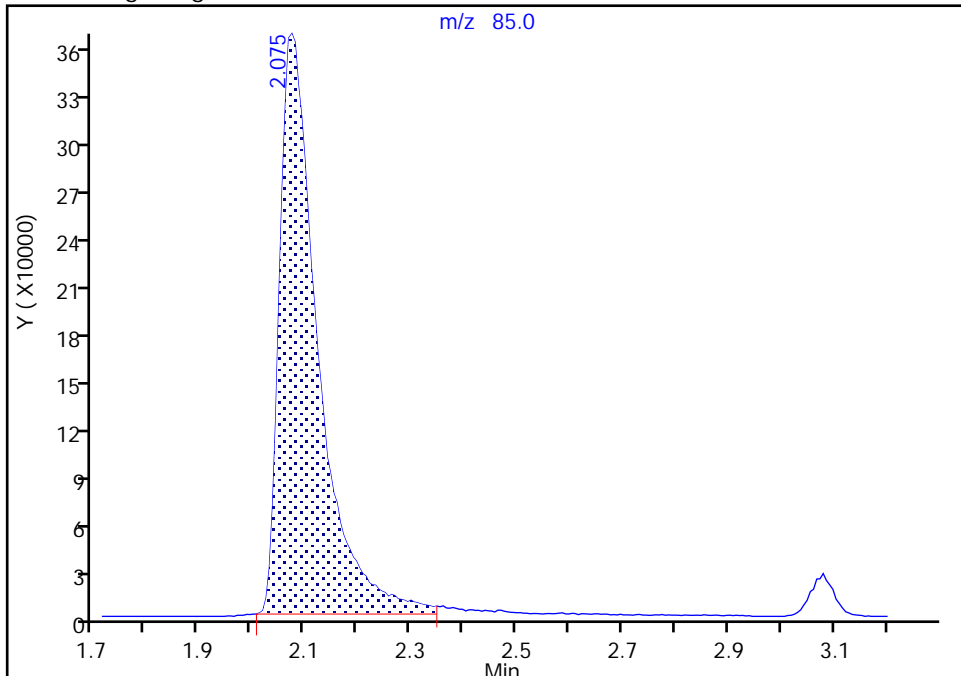
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Injection Date: 08-Jun-2020 16:46:30 Instrument ID: 19094
Lims ID: IC std7 25
Client ID:
Operator ID: jkh09052 ALS Bottle#: 11 Worklist Smp#: 12
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm i.d.) Detector: MS Quad

3 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

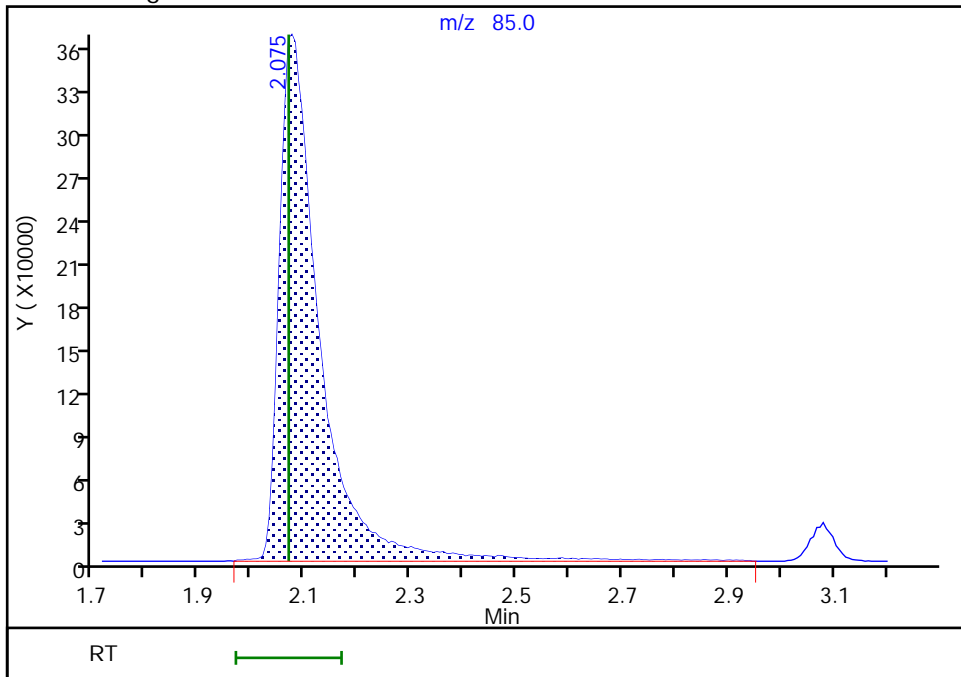
RT: 2.07
Area: 1850945
Amount: 27.022420
Amount Units: ug/l

Processing Integration Results



RT: 2.07
Area: 1950114
Amount: 26.274985
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 08-Jun-2020 19:19:57

Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC

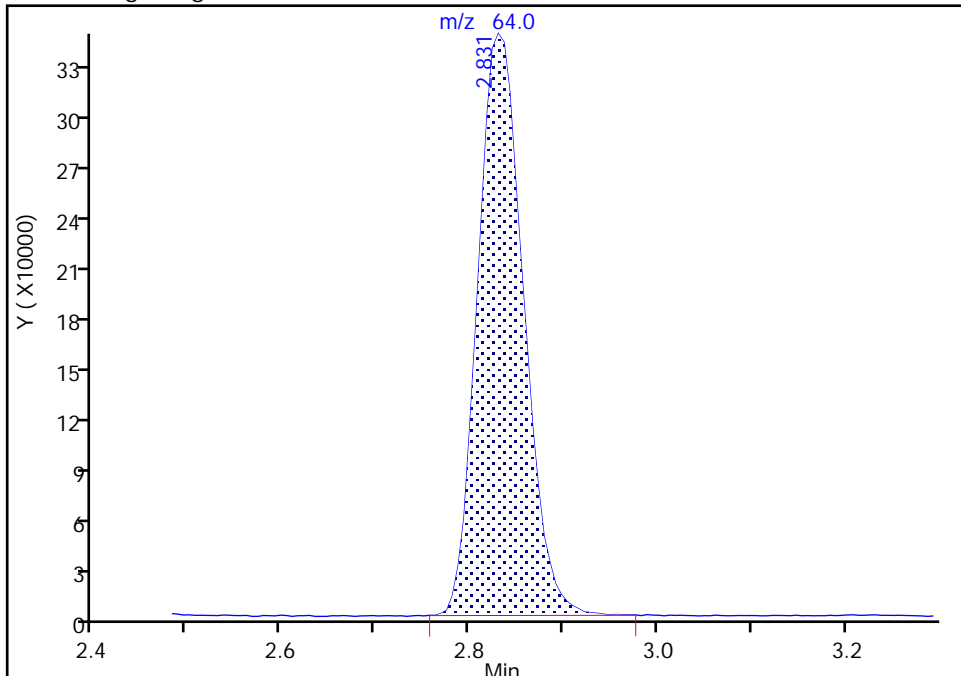
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Injection Date: 08-Jun-2020 16:46:30 Instrument ID: 19094
Lims ID: IC std7 25
Client ID:
Operator ID: jkh09052 ALS Bottle#: 11 Worklist Smp#: 12
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

10 Chloroethane, CAS: 75-00-3

Signal: 1

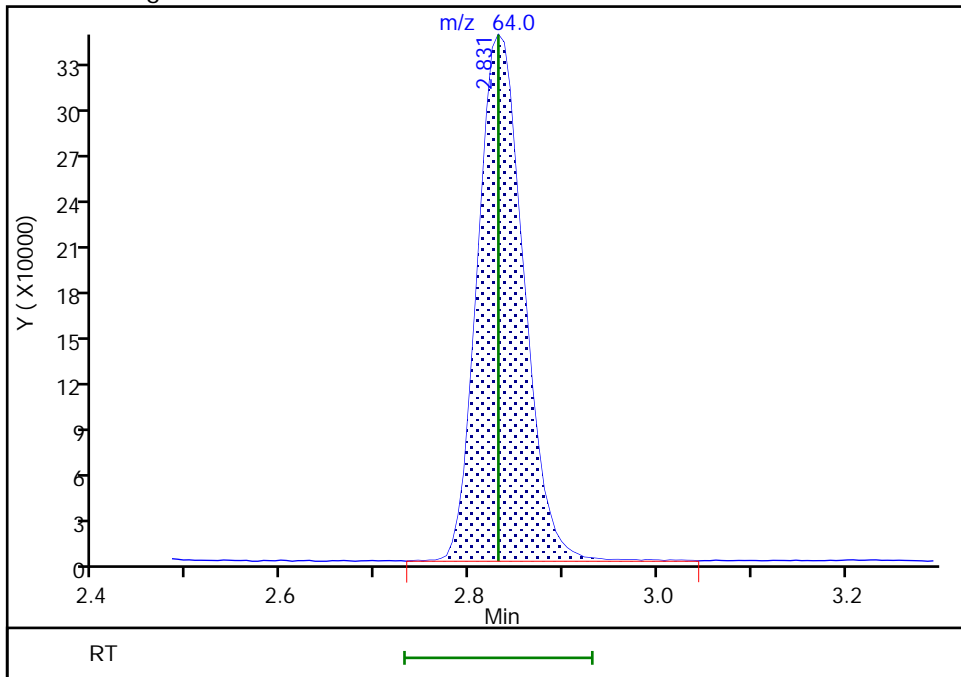
RT: 2.83
Area: 1182444
Amount: 24.345329
Amount Units: ug/l

Processing Integration Results



RT: 2.83
Area: 1192838
Amount: 24.622271
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 08-Jun-2020 19:20:33
Audit Action: Split an Integrated Peak

Audit Reason: Split Peak

Eurofins Lancaster Laboratories Env, LLC

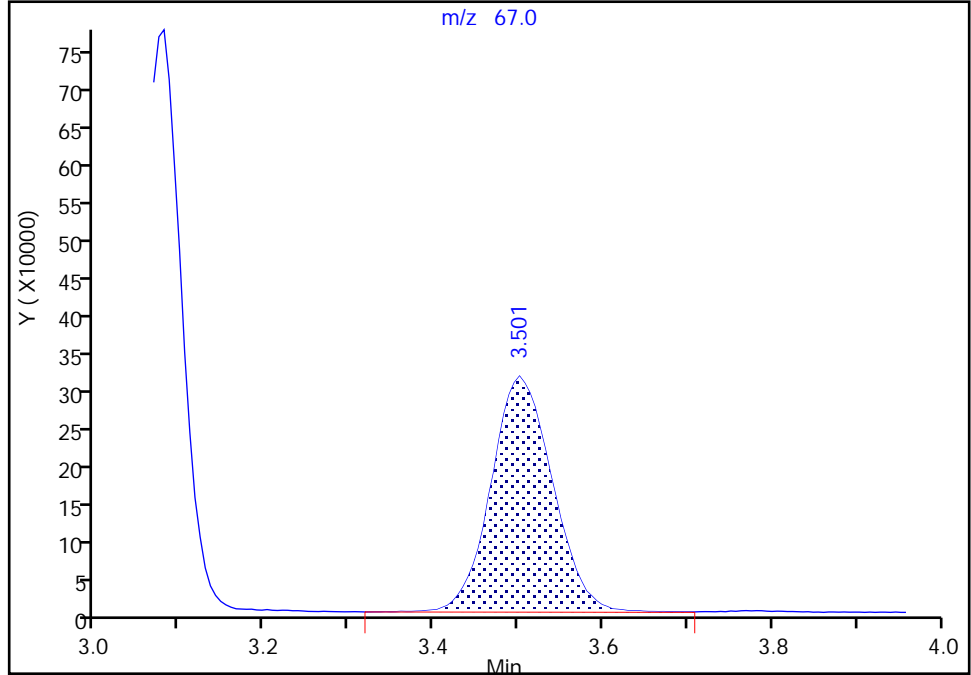
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Lims ID: IC std7 25
Client ID:
Operator ID: jkh09052 ALS Bottle#: 11 Worklist Smp#: 12
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

16 1,2-Dichloro-1,1,2-trifluoroetha, CAS: 354-23-4

Signal: 1

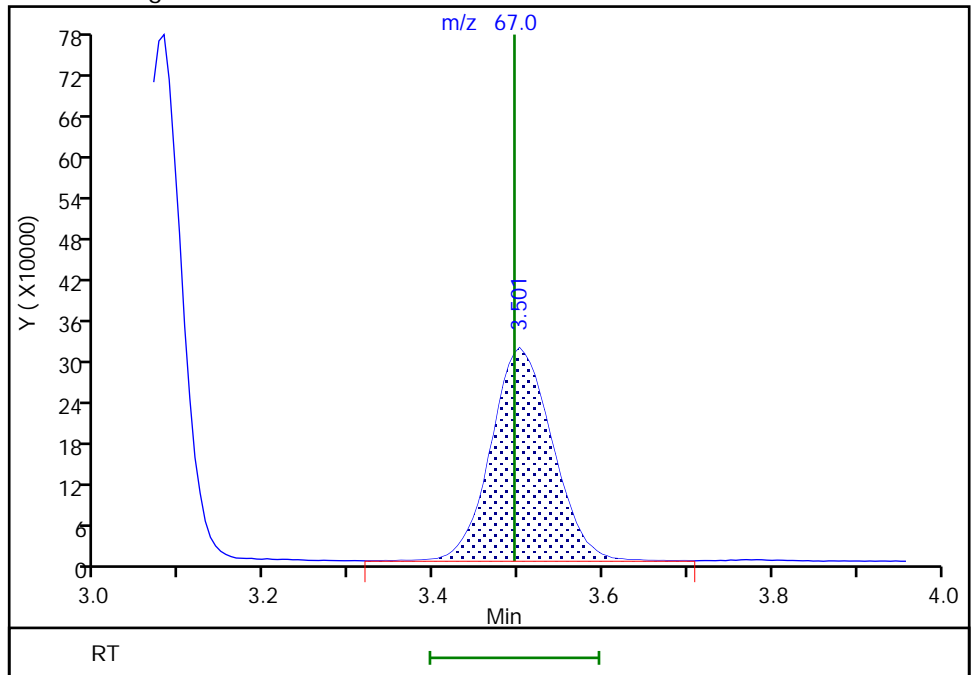
RT: 3.50
Area: 1588039
Amount: 24.999615
Amount Units: ug/l

Processing Integration Results



RT: 3.50
Area: 1594684
Amount: 24.771290
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 08-Jun-2020 19:21:36
Audit Action: Split an Integrated Peak

Audit Reason: Split Peak
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Eurofins Lancaster Laboratories Env, LLC

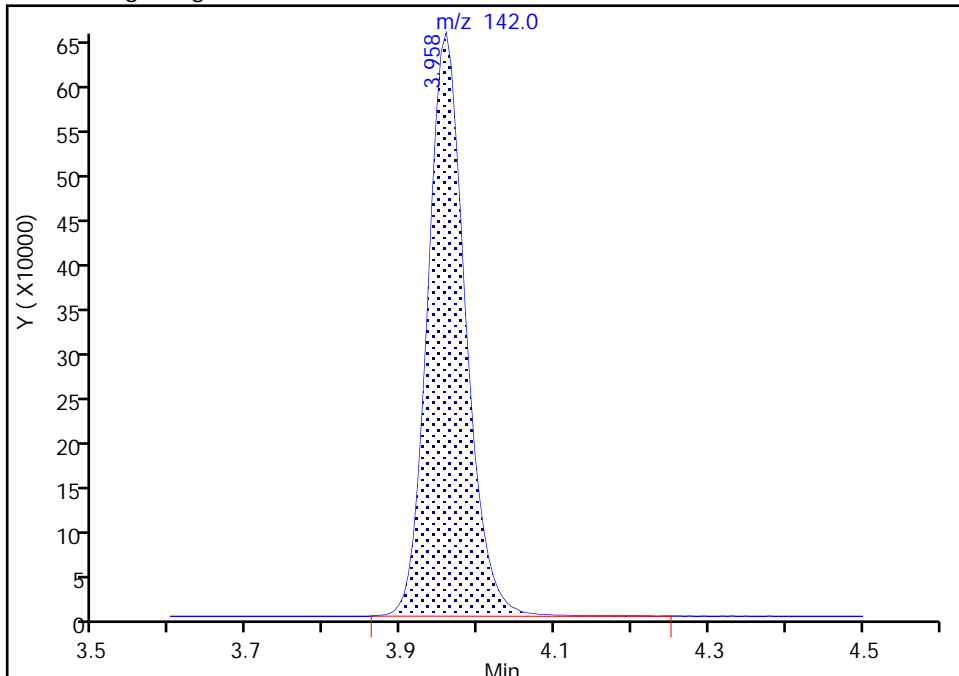
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Injection Date: 08-Jun-2020 16:46:30 Instrument ID: 19094
Lims ID: IC std7 25
Client ID:
Operator ID: jkh09052 ALS Bottle#: 11 Worklist Smp#: 12
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

22 Iodomethane, CAS: 74-88-4

Signal: 1

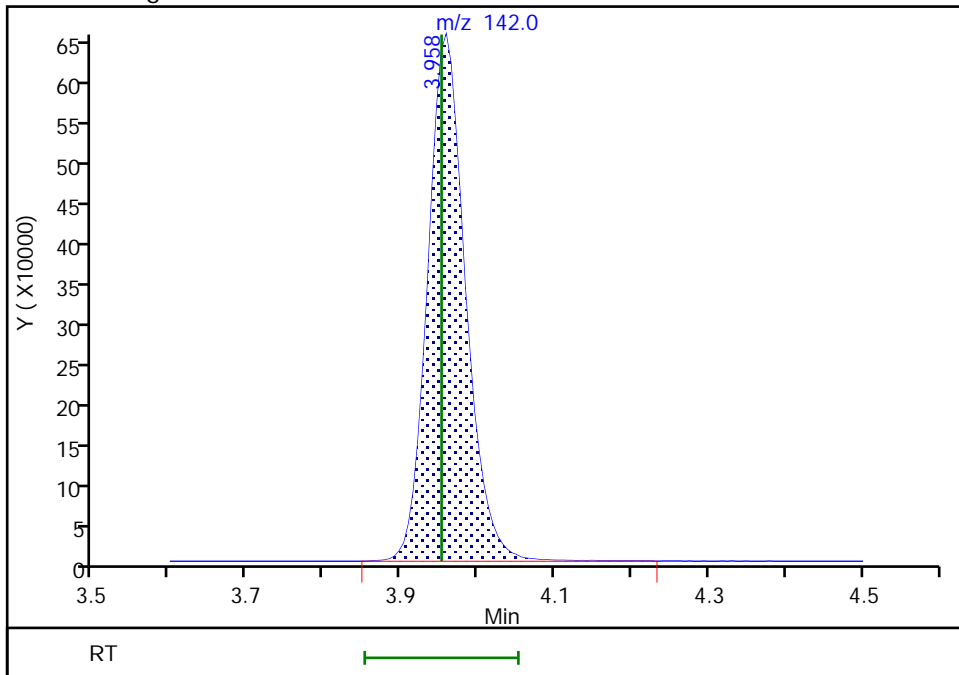
RT: 3.96
Area: 2240504
Amount: 25.305939
Amount Units: ug/l

Processing Integration Results



RT: 3.96
Area: 2243796
Amount: 25.040934
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 08-Jun-2020 19:21:52
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC

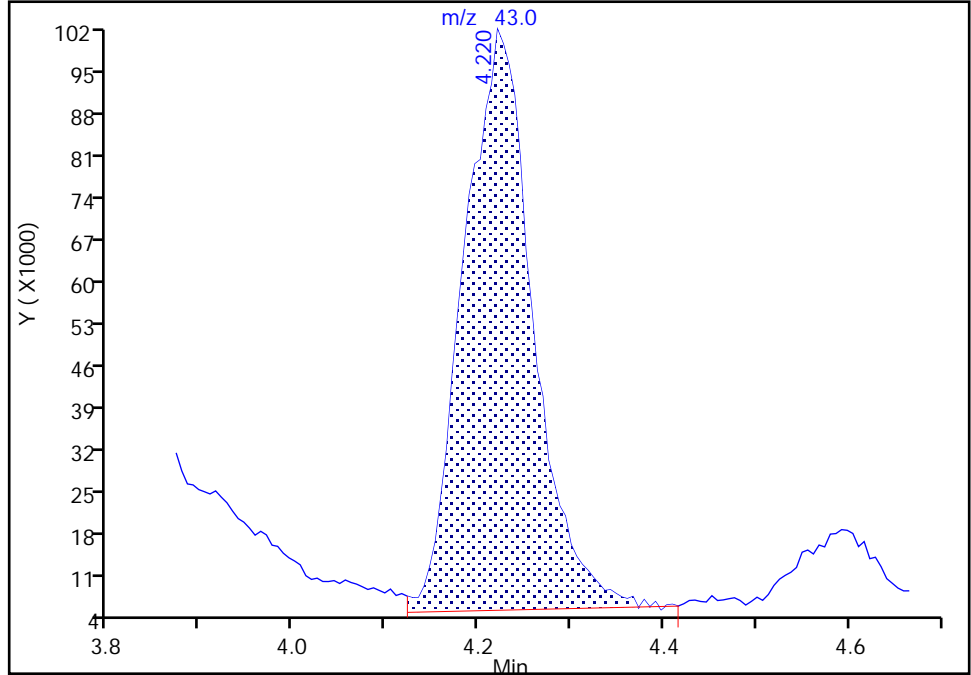
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Injection Date: 08-Jun-2020 16:46:30 Instrument ID: 19094
Lims ID: IC std7 25
Client ID:
Operator ID: jkh09052 ALS Bottle#: 11 Worklist Smp#: 12
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

26 Methyl acetate, CAS: 79-20-9

Signal: 1

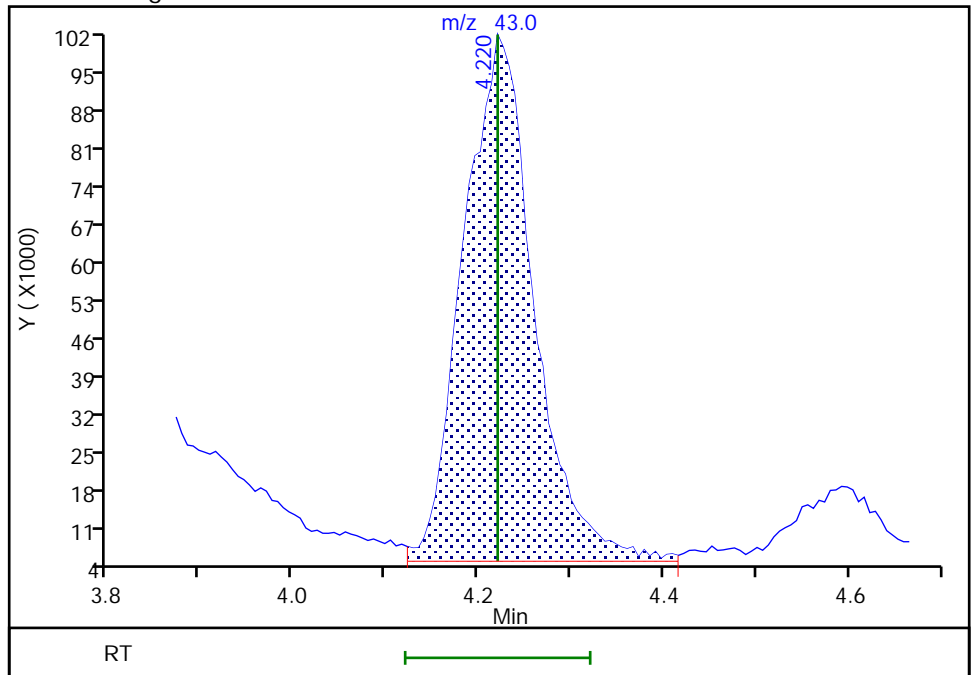
RT: 4.22
Area: 505229
Amount: 25.007074
Amount Units: ug/l

Processing Integration Results



RT: 4.22
Area: 514889
Amount: 25.453063
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 08-Jun-2020 19:22:24
Audit Action: Assigned New Baseline

Audit Reason: Baseline
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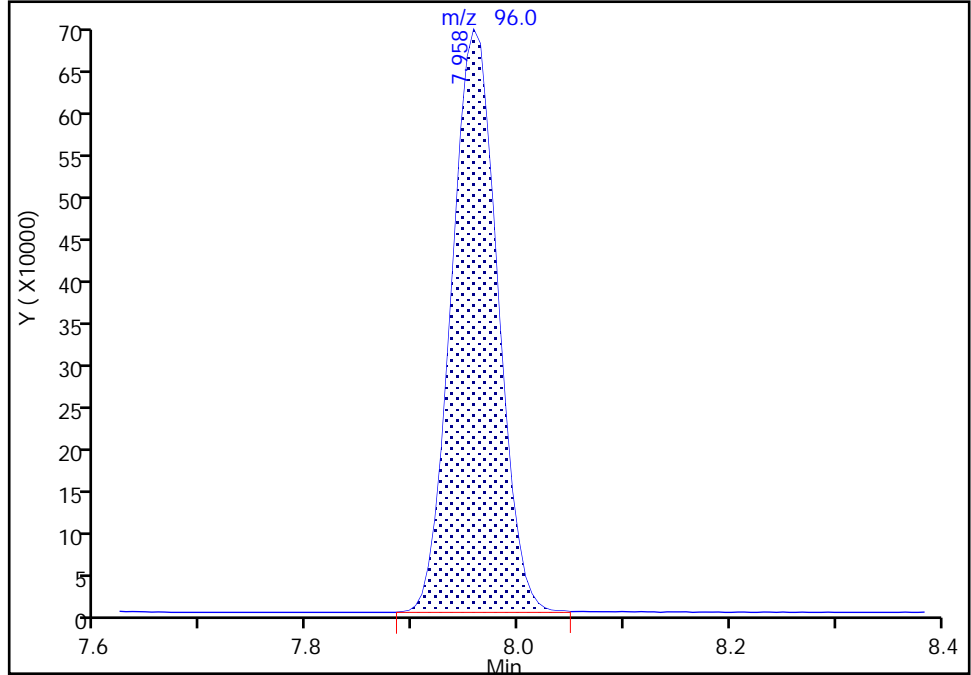
Eurofins Lancaster Laboratories Env, LLC

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Injection Date: 08-Jun-2020 16:46:30 Instrument ID: 19094
Lims ID: IC std7 25
Client ID:
Operator ID: jkh09052 ALS Bottle#: 11 Worklist Smp#: 12
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

* 65 Fluorobenzene (IS), CAS: 462-06-6
Signal: 1

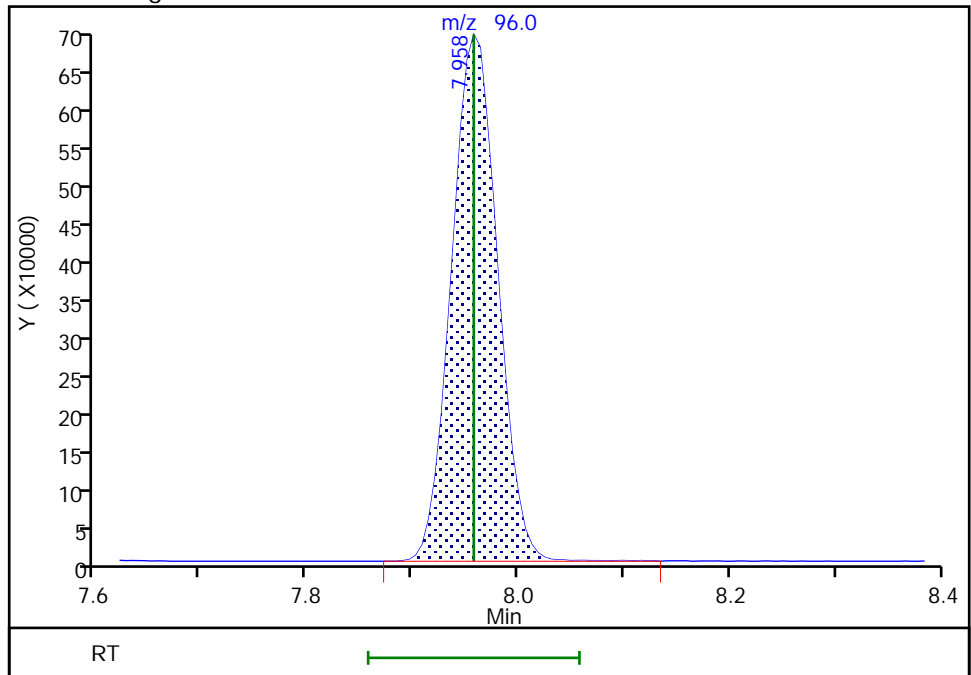
RT: 7.96
Area: 2092535
Amount: 10.000000
Amount Units: ug/l

Processing Integration Results



RT: 7.96
Area: 2096320
Amount: 10.000000
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 08-Jun-2020 19:56:30
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration
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Eurofins Lancaster Laboratories Env, LLC

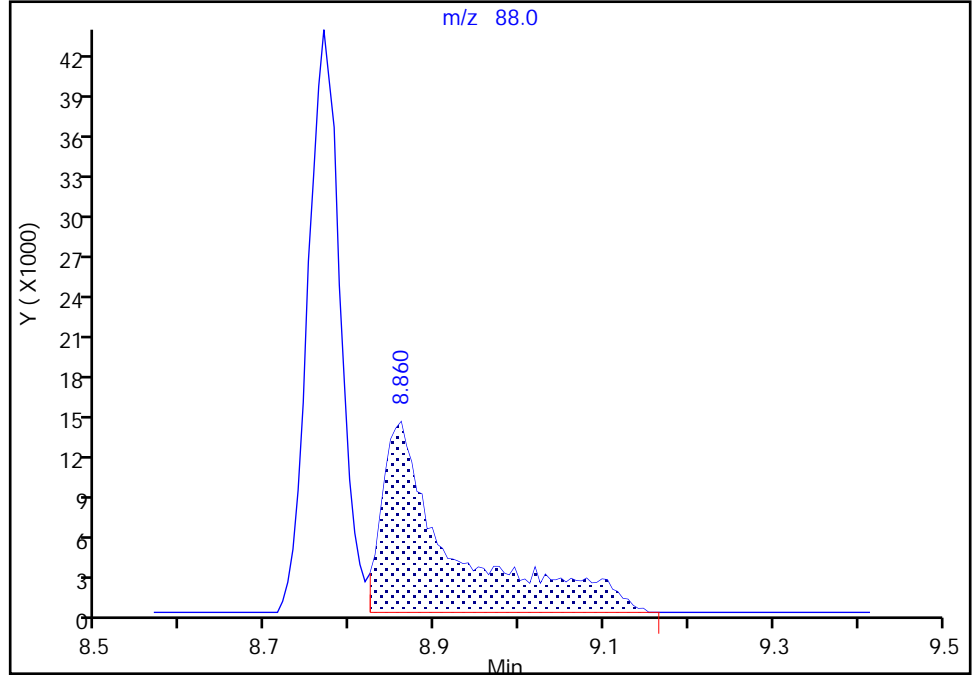
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Injection Date: 08-Jun-2020 16:46:30 Instrument ID: 19094
Lims ID: IC std7 25
Client ID:
Operator ID: jkh09052 ALS Bottle#: 11 Worklist Smp#: 12
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

72 1,4-Dioxane, CAS: 123-91-1

Signal: 1

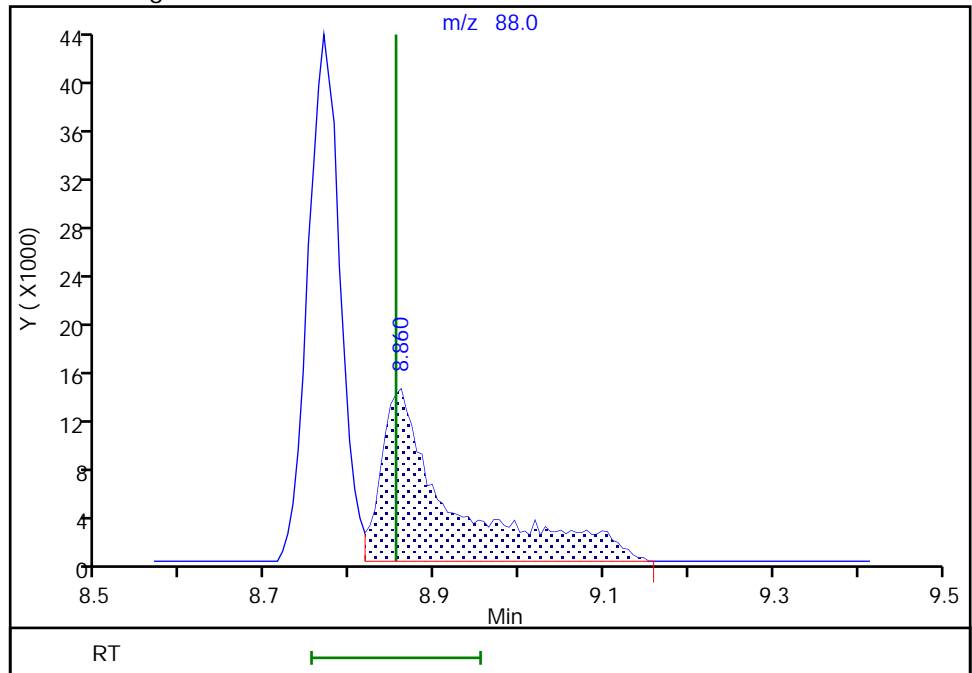
RT: 8.86
Area: 83871
Amount: 450.9101
Amount Units: ug/l

Processing Integration Results



RT: 8.86
Area: 84717
Amount: 448.1631
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 08-Jun-2020 19:55:41
Audit Action: Split an Integrated Peak

Audit Reason: Split Peak

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i02.D
 Lims ID: ICIS 10
 Client ID:
 Sample Type: ICIS Calib Level: 6
 Inject. Date: 08-Jun-2020 17:08:30 ALS Bottle#: 12 Worklist Smp#: 13
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: 410-0002918-013
 Misc. Info.: ICIS 10
 Operator ID: jkh09052 Instrument ID: 19094
 Sublist: chrom-MSV_19094_25mL*sub1
 Method: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 22-Jun-2020 11:01:26 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1020

First Level Reviewer: campbellme

Date: 08-Jun-2020 19:26:09

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
3 Dichlorodifluoromethane	85	2.081	2.081	0.000	100	784554	10.0	10.5	M
6 Chloromethane	50	2.270	2.270	0.000	99	885882	10.0	9.96	
7 Vinyl chloride	62	2.392	2.392	0.000	98	806165	10.0	10.1	
8 Butadiene	39	2.398	2.398	0.000	94	760291	10.0	9.91	
9 Bromomethane	94	2.739	2.739	0.000	90	542530	10.0	10.0	
10 Chloroethane	64	2.837	2.837	0.000	100	471369	10.0	9.67	
11 Dichlorofluoromethane	67	3.087	3.087	0.000	97	1034402	10.0	9.88	
13 Trichlorofluoromethane	101	3.148	3.148	0.000	96	853466	10.0	10.3	
15 Ethyl ether	59	3.428	3.428	0.000	93	414172	10.0	10.1	
16 1,2-Dichloro-1,1,2-trifluoroetha	67	3.507	3.507	0.000	94	690890	10.0	10.7	
17 Acrolein	56	3.611	3.611	0.000	100	3016024	500.0	520.6	
18 1,1-Dichloroethene	96	3.751	3.751	0.000	98	503091	10.0	10.8	
20 112TCTFE	101	3.788	3.788	0.000	93	561947	10.0	11.1	
19 Acetone	43	3.788	3.788	0.000	87	636012	100.0	89.1	M
22 Iodomethane	142	3.965	3.965	0.000	99	956860	10.0	10.6	
21 Isopropyl alcohol	45	3.965	3.965	0.000	99	252864	200.0	206.2	
23 Ethyl bromide	108	3.995	3.995	0.000	98	442714	10.0	10.5	
24 Carbon disulfide	76	4.074	4.074	0.000	99	1627512	10.0	10.6	
26 Methyl acetate	43	4.227	4.227	0.000	97	180437	10.0	8.88	
27 3-Chloro-1-propene	41	4.263	4.263	0.000	93	950283	10.0	10.1	
29 Methylene Chloride	84	4.458	4.458	0.000	93	550318	10.0	9.96	
* 28 t-Butyl alcohol-d10 (IS)	65	4.458	4.458	0.000	0	101074	50.0	50.0	M
30 2-Methyl-2-propanol	59	4.599	4.599	0.000	100	405436	200.0	202.5	
31 Acrylonitrile	53	4.812	4.812	0.000	99	495758	50.0	51.7	
32 Methyl tert-butyl ether	73	4.873	4.873	0.000	95	1144919	10.0	10.3	
33 trans-1,2-Dichloroethene	96	4.891	4.891	0.000	100	552781	10.0	10.5	
34 Hexane	57	5.306	5.306	0.000	93	918728	10.0	11.0	
35 1,1-Dichloroethane	63	5.543	5.543	0.000	96	1089322	10.0	10.7	
37 Isopropyl ether	45	5.598	5.598	0.000	96	1970041	10.0	10.4	
38 2-Chloro-1,3-butadiene	53	5.653	5.653	0.000	91	951918	10.0	10.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
39 Tert-butyl ethyl ether	59	6.129	6.129	0.000	99	1647759	10.0	10.2	
41 2-Butanone (MEK)	43	6.330	6.330	0.000	100	1211822	100.0	101.6	
42 cis-1,2-Dichloroethene	96	6.373	6.373	0.000	83	627601	10.0	10.4	
43 2,2-Dichloropropane	77	6.385	6.385	0.000	88	838443	10.0	10.6	
45 Propionitrile	54	6.415	6.415	0.000	99	619481	200.0	202.4	
47 Methacrylonitrile	67	6.635	6.635	0.000	93	1270581	100.0	105.9	
48 Chlorobromomethane	128	6.708	6.708	0.000	92	255050	10.0	10.1	
49 Tetrahydrofuran	71	6.708	6.708	0.000	89	328845	100.0	103.7	
50 Chloroform	83	6.848	6.848	0.000	93	999567	10.0	10.5	
\$ 51 Dibromofluoromethane (Surr)	113	7.068	7.068	0.000	94	498258	10.0	10.0	
52 1,1,1-Trichloroethane	97	7.086	7.086	0.000	98	866350	10.0	10.6	
53 Cyclohexane	56	7.183	7.183	0.000	92	1115374	10.0	10.7	
55 1,1-Dichloropropene	75	7.293	7.293	0.000	96	814231	10.0	10.8	
56 Carbon tetrachloride	117	7.299	7.299	0.000	96	755568	10.0	10.8	
57 Isobutyl alcohol	41	7.415	7.415	0.000	95	397042	500.0	494.8	
\$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.531	7.531	0.000	0	101935	10.0	10.0	
59 Benzene	78	7.555	7.555	0.000	97	2419038	10.0	10.4	
60 1,2-Dichloroethane	62	7.622	7.622	0.000	97	548859	10.0	10.1	
62 Tert-amyl methyl ether	73	7.738	7.738	0.000	98	1386575	10.0	10.4	
* 65 Fluorobenzene (IS)	96	7.958	7.958	0.000	98	2109462	10.0	10.0	
64 n-Heptane	43	7.964	7.964	0.000	95	1017148	10.0	10.6	
66 n-Butanol	56	8.299	8.299	0.000	88	830802	1000.0	1187.6	M
67 Trichloroethene	95	8.439	8.439	0.000	99	603518	10.0	10.6	
68 Methylcyclohexane	83	8.750	8.750	0.000	96	1092583	10.0	10.8	
69 2-ethoxy-2-methyl butane	87	8.768	8.768	0.000	89	859280	10.0	10.5	
70 1,2-Dichloropropane	63	8.775	8.775	0.000	88	614544	10.0	10.5	
71 Methyl methacrylate	69	8.842	8.842	0.000	92	251134	10.0	10.8	
72 1,4-Dioxane	88	8.860	8.860	0.000	32	105482	500.0	547.4	M
73 Dibromomethane	93	8.884	8.884	0.000	98	251782	10.0	10.2	
75 Dichlorobromomethane	83	9.116	9.116	0.000	99	695787	10.0	10.5	
76 2-Nitropropane	41	9.372	9.372	0.000	98	682256	100.0	106.3	
79 1-Bromo-2-chloroethane	63	9.500	9.500	0.000	99	592324	10.0	10.2	
80 cis-1,3-Dichloropropene	75	9.640	9.640	0.000	96	878653	10.0	10.8	
81 4-Methyl-2-pentanone (MIBK)	43	9.805	9.805	0.000	97	3309148	100.0	106.2	
\$ 82 Toluene-d8 (Surr)	98	9.945	9.945	0.000	94	2050335	10.0	10.0	
83 Toluene	92	10.018	10.018	0.000	98	1490531	10.0	10.4	
85 trans-1,3-Dichloropropene	75	10.262	10.262	0.000	92	683390	10.0	10.6	
86 Ethyl methacrylate	69	10.317	10.317	0.000	90	556590	10.0	10.5	
87 1,1,2-Trichloroethane	97	10.463	10.463	0.000	89	363447	10.0	10.4	
88 Tetrachloroethene	166	10.555	10.555	0.000	97	631649	10.0	10.4	
89 1,3-Dichloropropane	76	10.628	10.628	0.000	90	646833	10.0	10.1	
91 2-Hexanone	43	10.671	10.671	0.000	97	2255377	100.0	107.2	
93 Chlorodibromomethane	129	10.841	10.841	0.000	90	446807	10.0	10.6	
94 Ethylene Dibromide	107	10.951	10.951	0.000	98	351513	10.0	10.6	
* 97 Chlorobenzene-d5 (IS)	117	11.378	11.378	0.000	87	1527695	10.0	10.0	
96 1-Chlorohexane	91	11.378	11.378	0.000	97	883405	10.0	10.3	
98 Chlorobenzene	112	11.402	11.402	0.000	95	1578596	10.0	10.4	
99 1,1,1,2-Tetrachloroethane	131	11.481	11.481	0.000	96	549041	10.0	10.7	
100 Ethylbenzene	91	11.481	11.481	0.000	99	2904043	10.0	10.4	
101 m-Xylene & p-Xylene	106	11.597	11.597	0.000	0	2177169	20.0	20.9	
102 o-Xylene	106	11.926	11.926	0.000	97	1067907	10.0	10.5	
103 Styrene	104	11.939	11.939	0.000	95	1794152	10.0	10.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
104 Bromoform	173	12.103	12.103	0.000	97	256281	10.0	10.8	
105 Isopropylbenzene	105	12.219	12.219	0.000	96	2900596	10.0	10.6	
\$ 108 4-Bromofluorobenzene (Surr)	95	12.365	12.365	0.000	89	736861	10.0	9.85	
109 1,1,2,2-Tetrachloroethane	83	12.463	12.463	0.000	93	435803	10.0	10.3	
111 Bromobenzene	156	12.487	12.487	0.000	91	617262	10.0	10.5	
110 trans-1,4-Dichloro-2-butene	53	12.487	12.487	0.000	89	1144793	100.0	111.3	
112 1,2,3-Trichloropropane	110	12.512	12.512	0.000	81	105399	10.0	10.0	
113 N-Propylbenzene	91	12.548	12.548	0.000	99	3436979	10.0	10.5	
114 2-Chlorotoluene	126	12.627	12.627	0.000	96	661625	10.0	10.6	
115 1,3,5-Trimethylbenzene	105	12.682	12.682	0.000	94	2397839	10.0	10.6	
116 4-Chlorotoluene	126	12.719	12.719	0.000	98	665205	10.0	10.6	
118 tert-Butylbenzene	134	12.926	12.926	0.000	93	512822	10.0	10.5	
119 Pentachloroethane	167	12.963	12.963	0.000	93	402898	10.0	10.6	
120 1,2,4-Trimethylbenzene	105	12.969	12.969	0.000	97	2461905	10.0	10.7	
121 sec-Butylbenzene	105	13.085	13.085	0.000	94	3187195	10.0	10.7	
122 1,3-Dichlorobenzene	146	13.188	13.188	0.000	97	1243271	10.0	10.6	
123 4-Isopropyltoluene	119	13.194	13.194	0.000	97	2704585	10.0	10.8	
* 124 1,4-Dichlorobenzene-d4	152	13.243	13.243	0.000	95	768750	10.0	10.0	
125 1,4-Dichlorobenzene	146	13.261	13.261	0.000	95	1214669	10.0	10.6	
126 1,2,3-Trimethylbenzene	120	13.274	13.274	0.000	98	1034784	10.0	10.3	
127 Benzyl chloride	126	13.341	13.341	0.000	98	180923	10.0	11.0	
129 p-Diethylbenzene	119	13.463	13.463	0.000	95	1715316	10.0	10.6	
130 n-Butylbenzene	92	13.487	13.487	0.000	96	1392996	10.0	10.9	
131 1,2-Dichlorobenzene	146	13.524	13.524	0.000	97	1073103	10.0	10.3	
134 1,2-Dibromo-3-Chloropropane	155	14.066	14.066	0.000	85	60114	10.0	11.2	
135 1,3,5-Trichlorobenzene	180	14.188	14.188	0.000	98	968989	10.0	11.0	
136 1,2,4-Trichlorobenzene	180	14.615	14.615	0.000	94	788764	10.0	11.2	
137 Hexachlorobutadiene	225	14.694	14.694	0.000	96	409281	10.0	10.6	
138 Naphthalene	128	14.798	14.798	0.000	97	1359519	10.0	10.9	
139 1,2,3-Trichlorobenzene	180	14.944	14.944	0.000	96	652333	10.0	11.1	
140 2-Methylnaphthalene	142	15.596	15.596	0.000	93	859219	10.0	11.5	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MSV_RV1_826_00015	Amount Added: 10.00	Units: uL	
MSV_RV4_826_00016	Amount Added: 10.00	Units: uL	
MSV_RV4GAS826_00046	Amount Added: 10.00	Units: uL	
MSV_30_826ISS_00005	Amount Added: 5.00	Units: uL	Run Reagent

Data File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i02.D

Injection Date: 08-Jun-2020 17:08:30

Instrument ID: 19094

Operator ID: jkh09052

Lims ID: ICIS 10

Worklist Smp#: 13

Client ID:

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

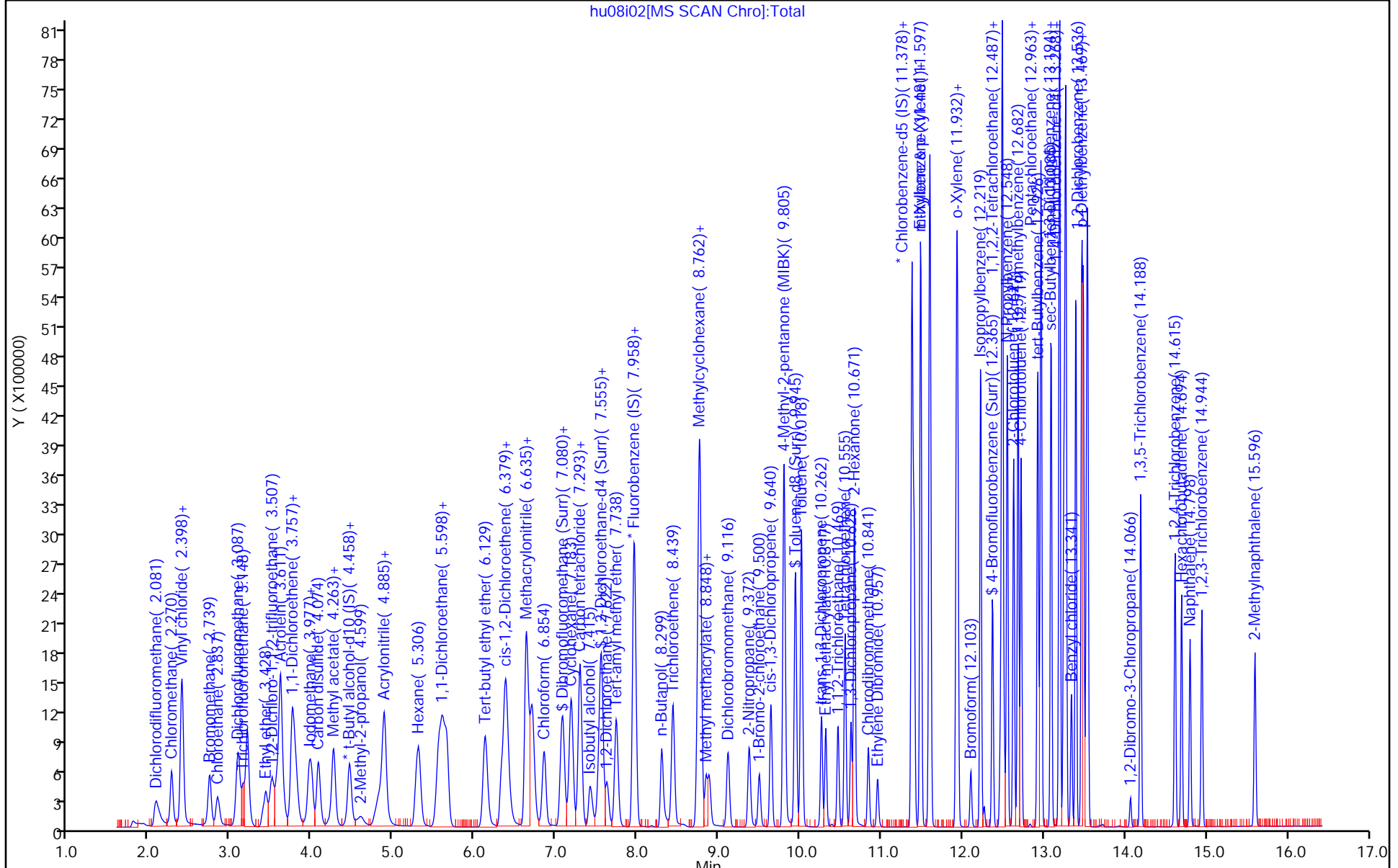
ALS Bottle#: 12

Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



hu08i02[MS SCAN Chro]:Total

Y (X100000)

Min

Eurofins Lancaster Laboratories Env, LLC

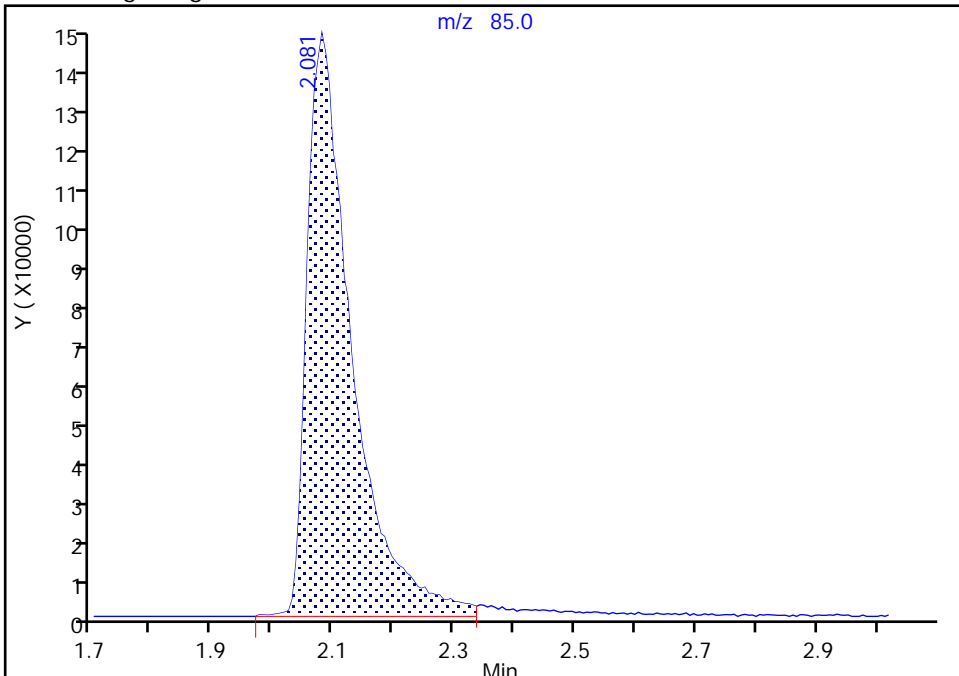
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Injection Date: 08-Jun-2020 17:08:30 Instrument ID: 19094
Lims ID: ICIS 10
Client ID:
Operator ID: jkh09052 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

3 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

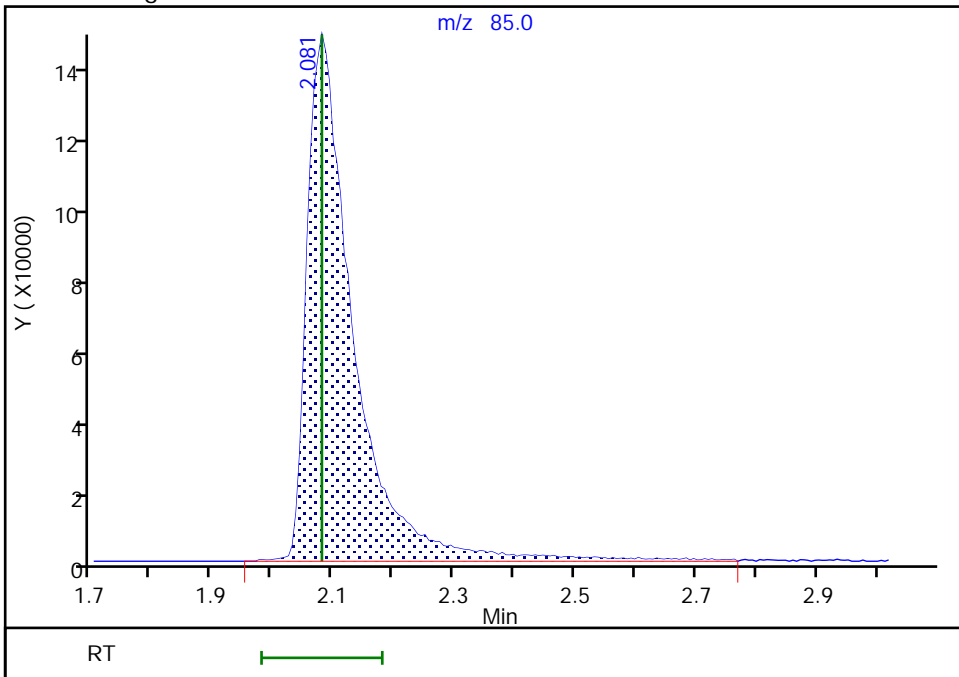
RT: 2.08
Area: 757103
Amount: 10.297640
Amount Units: ug/l

Processing Integration Results



RT: 2.08
Area: 784554
Amount: 10.504882
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 08-Jun-2020 20:11:36
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC

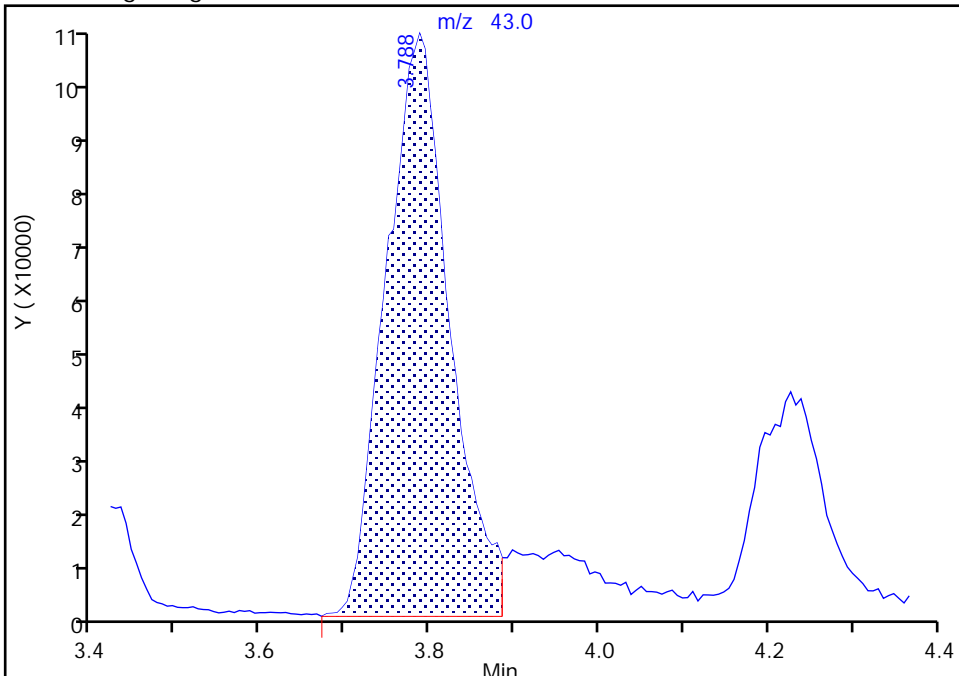
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Injection Date: 08-Jun-2020 17:08:30 Instrument ID: 19094
Lims ID: ICIS 10
Client ID:
Operator ID: jkh09052 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

19 Acetone, CAS: 67-64-1

Signal: 1

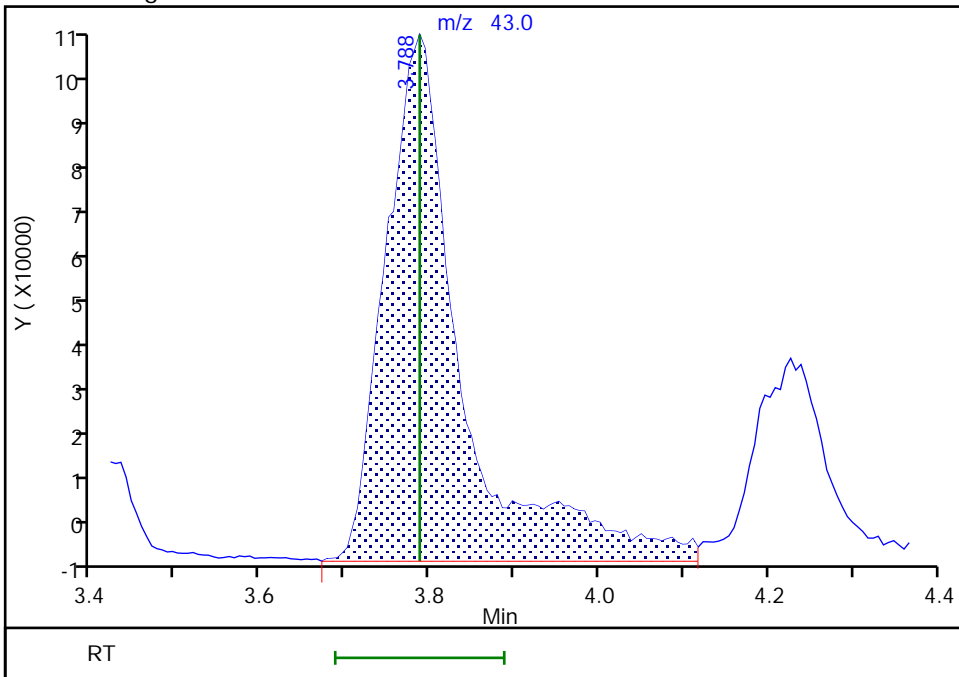
RT: 3.79
Area: 534133
Amount: 80.809229
Amount Units: ug/l

Processing Integration Results



RT: 3.79
Area: 636012
Amount: 89.112927
Amount Units: ug/l

Manual Integration Results



Eurofins Lancaster Laboratories Env, LLC

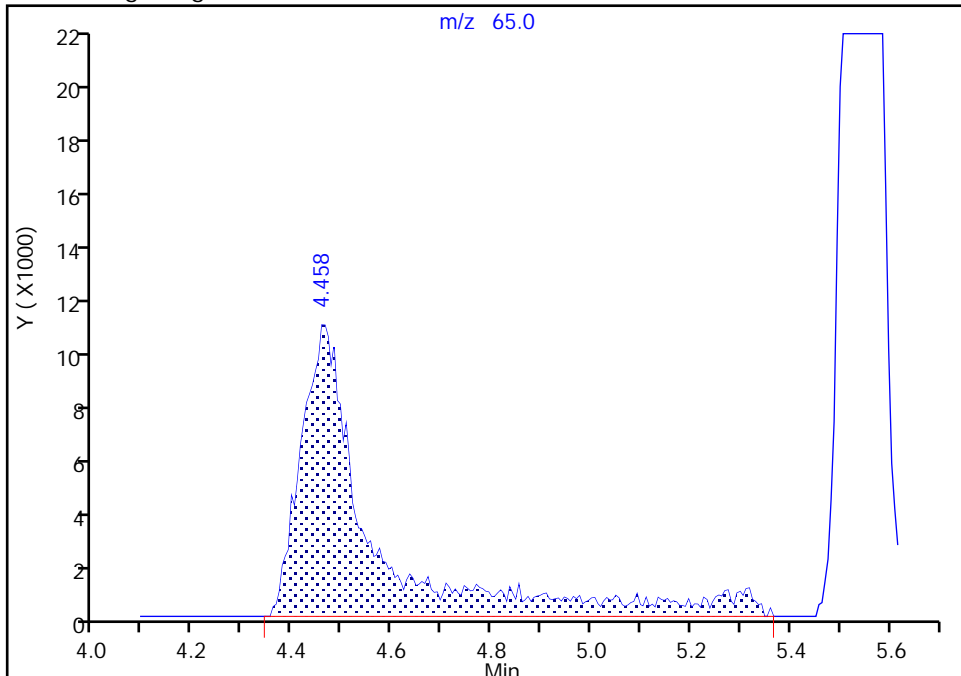
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Lims ID: ICIS 10
Client ID:
Operator ID: jkh09052 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

* 28 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

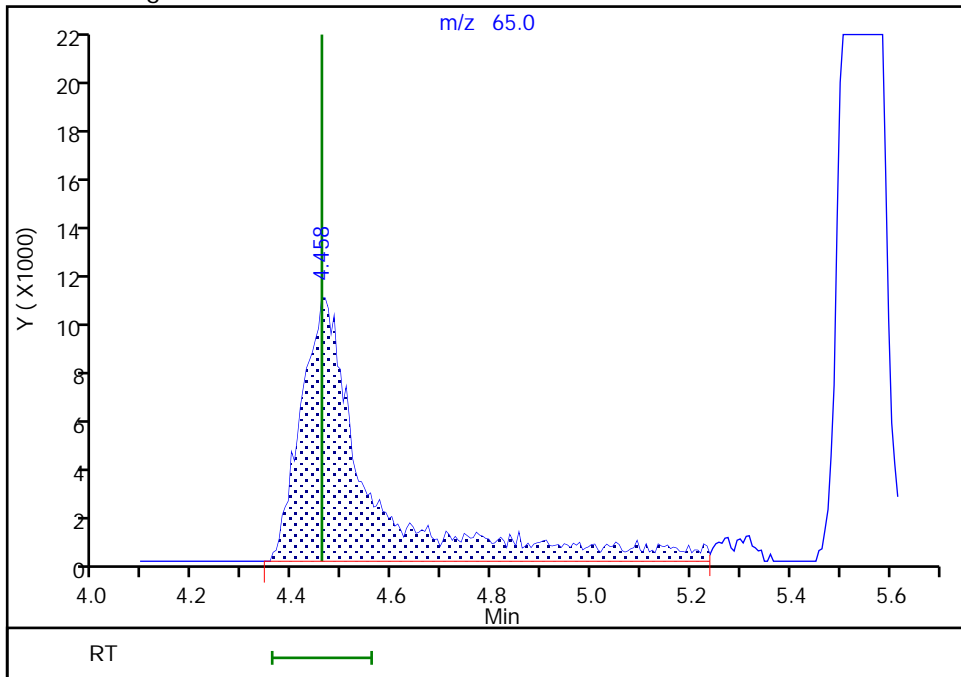
RT: 4.46
Area: 105605
Amount: 50.000000
Amount Units: ug/l

Processing Integration Results



RT: 4.46
Area: 101074
Amount: 50.000000
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 08-Jun-2020 19:58:20
Audit Action: Split an Integrated Peak

Audit Reason: Split Peak
Page 473 of 638

Euofins Lancaster Laboratories Env, LLC

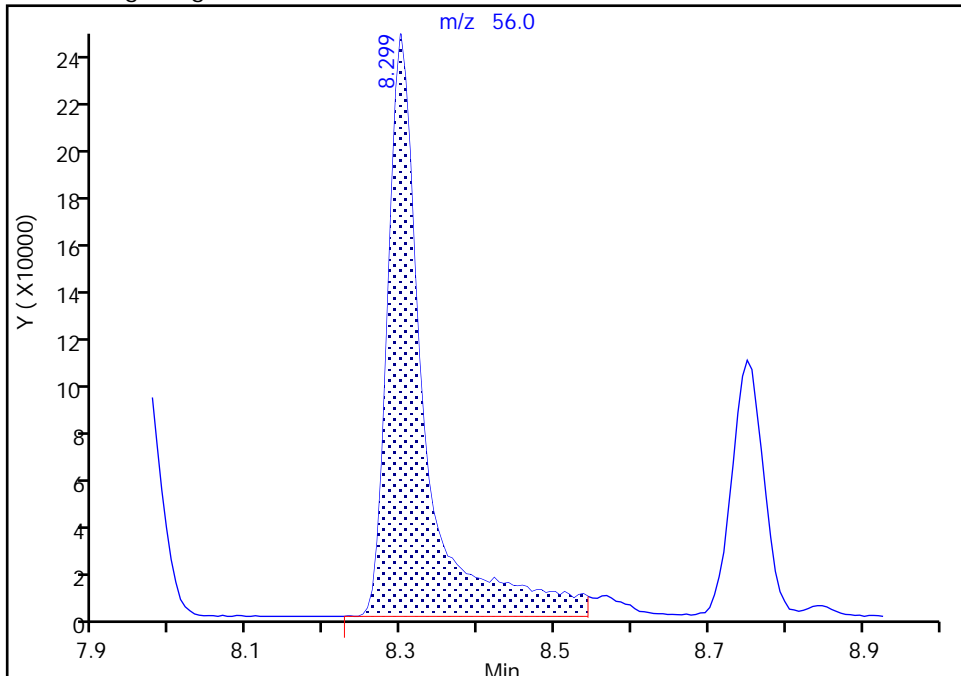
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Injection Date: 08-Jun-2020 17:08:30 Instrument ID: 19094
Lims ID: ICIS 10
Client ID:
Operator ID: jkh09052 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

66 n-Butanol, CAS: 71-36-3

Signal: 1

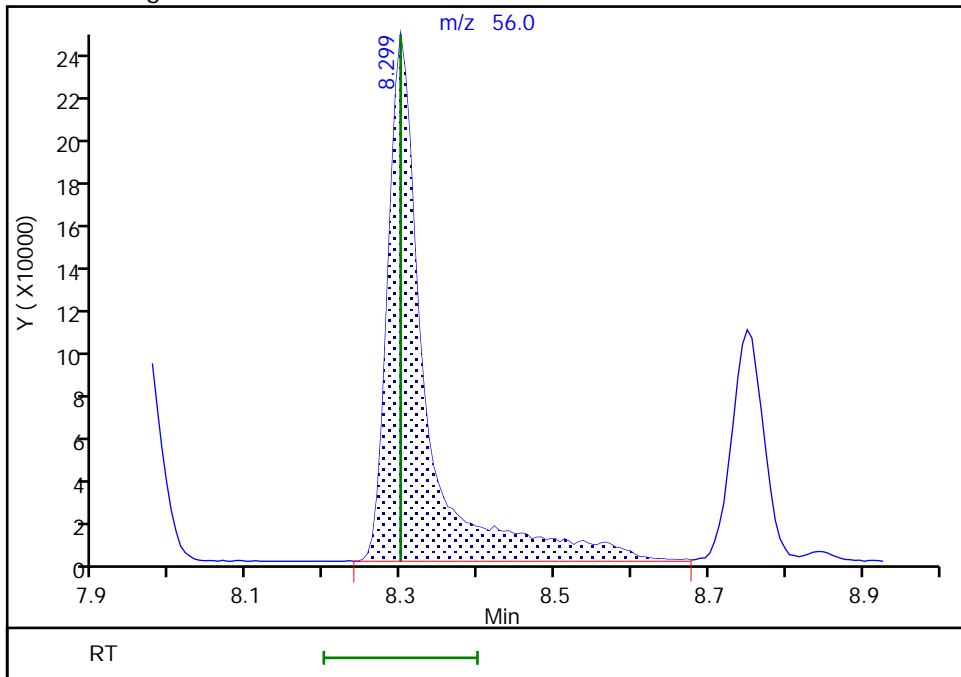
RT: 8.30
Area: 802377
Amount: 1106.5509
Amount Units: ug/l

Processing Integration Results



RT: 8.30
Area: 830802
Amount: 1187.6227
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 08-Jun-2020 20:12:42
Audit Action: Assigned New Baseline

Audit Reason: Baseline

Eurofins Lancaster Laboratories Env, LLC

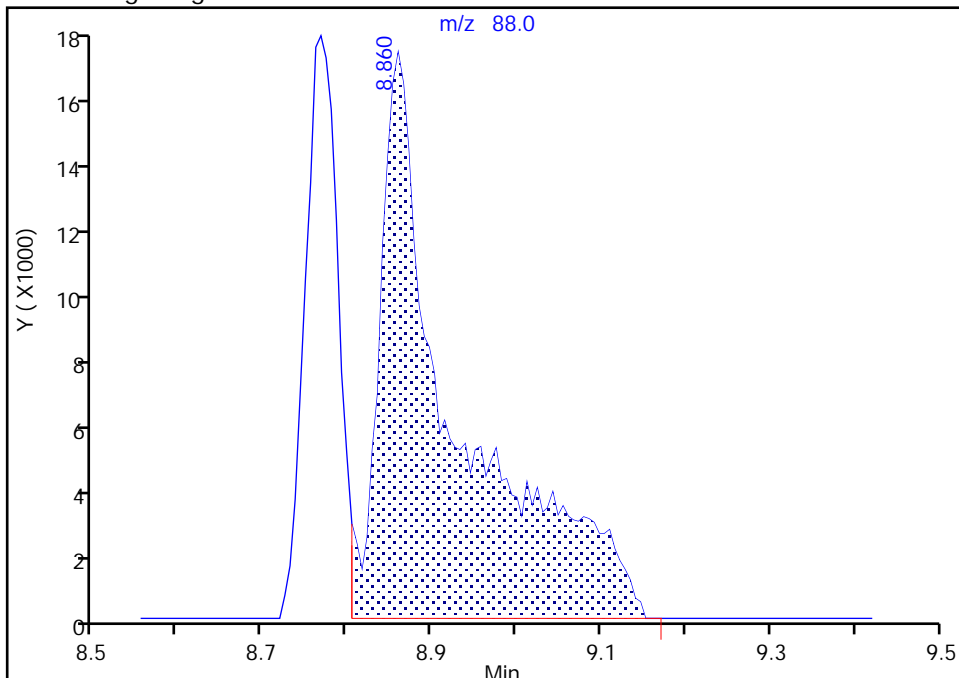
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Injection Date: 08-Jun-2020 17:08:30 Instrument ID: 19094
Lims ID: ICIS 10
Client ID:
Operator ID: jkh09052 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

72 1,4-Dioxane, CAS: 123-91-1

Signal: 1

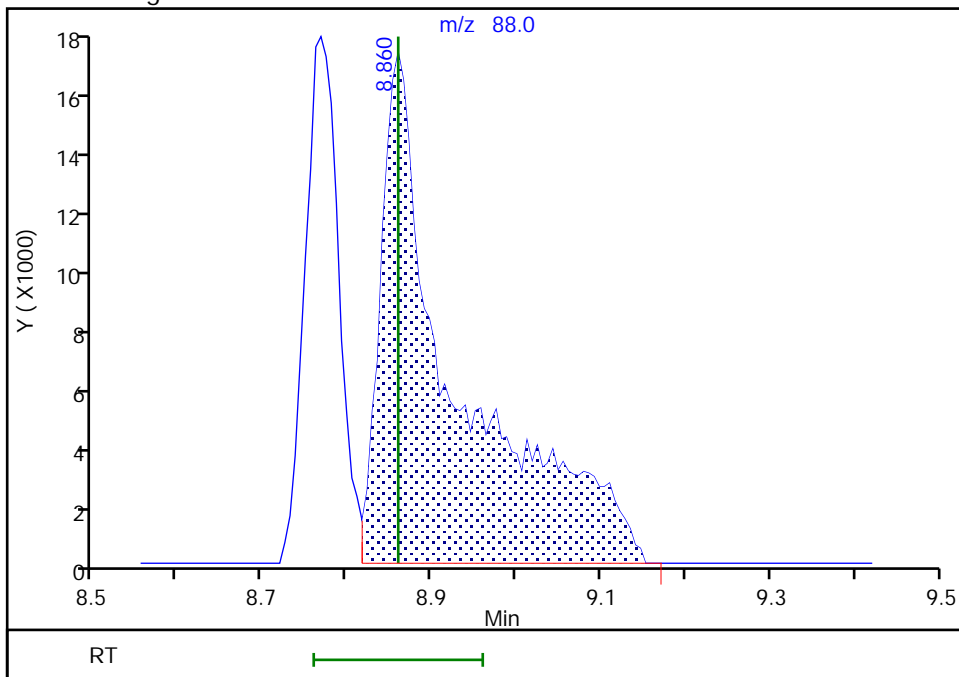
RT: 8.86
Area: 107320
Amount: 555.4708
Amount Units: ug/l

Processing Integration Results



RT: 8.86
Area: 105482
Amount: 547.4456
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 08-Jun-2020 19:58:35
Audit Action: Split an Integrated Peak

Audit Reason: Split Peak

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i03.D
 Lims ID: IC std5 5
 Client ID:
 Sample Type: IC Calib Level: 5
 Inject. Date: 08-Jun-2020 17:29:30 ALS Bottle#: 13 Worklist Smp#: 14
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: 410-0002918-014
 Misc. Info.: IC STD5 5
 Operator ID: jkh09052 Instrument ID: 19094
 Sublist: chrom-MSV_19094_25mL*sub1

Method: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 22-Jun-2020 11:01:38 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1020

First Level Reviewer: campbellme

Date: 08-Jun-2020 19:27:32

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
3 Dichlorodifluoromethane	85	2.081	2.081	0.000	99	402318	5.00	5.40	M
6 Chloromethane	50	2.264	2.270	-0.006	99	446165	5.00	5.03	
7 Vinyl chloride	62	2.392	2.392	0.000	98	417058	5.00	5.25	
8 Butadiene	39	2.392	2.398	-0.006	92	383275	5.00	5.01	M
9 Bromomethane	94	2.733	2.739	-0.006	90	280328	5.00	5.21	
10 Chloroethane	64	2.837	2.837	0.000	99	249751	5.00	5.14	
11 Dichlorofluoromethane	67	3.081	3.087	-0.006	97	534811	5.00	5.12	
13 Trichlorofluoromethane	101	3.135	3.148	-0.013	97	446217	5.00	5.42	
15 Ethyl ether	59	3.422	3.428	-0.006	93	213795	5.00	5.23	
16 1,2-Dichloro-1,1,2-trifluoroetha	67	3.507	3.507	0.000	94	347634	5.00	5.38	
17 Acrolein	56	3.605	3.611	-0.006	100	1606689	250.0	251.8	
18 1,1-Dichloroethene	96	3.745	3.751	-0.006	98	250474	5.00	5.41	
20 112TCTFE	101	3.782	3.788	-0.006	93	282105	5.00	5.59	
19 Acetone	43	3.788	3.788	0.000	99	362620	50.0	46.1	
22 Iodomethane	142	3.958	3.965	-0.007	99	486285	5.00	5.41	
21 Isopropyl alcohol	45	3.965	3.965	-0.001	34	132894	100.0	94.5	
23 Ethyl bromide	108	3.989	3.995	-0.006	98	225794	5.00	5.36	
24 Carbon disulfide	76	4.074	4.074	0.000	99	808966	5.00	5.27	
26 Methyl acetate	43	4.221	4.227	-0.006	97	108224	5.00	4.92	
27 3-Chloro-1-propene	41	4.263	4.263	0.000	93	485214	5.00	5.16	
29 Methylene Chloride	84	4.458	4.458	0.000	93	277211	5.00	5.03	
* 28 t-Butyl alcohol-d10 (IS)	65	4.464	4.458	0.006	0	111307	50.0	50.0	
30 2-Methyl-2-propanol	59	4.599	4.599	0.000	100	236175	100.0	107.1	
31 Acrylonitrile	53	4.806	4.812	-0.006	100	264631	25.0	25.1	
32 Methyl tert-butyl ether	73	4.867	4.873	-0.006	96	583088	5.00	5.27	
33 trans-1,2-Dichloroethene	96	4.885	4.891	-0.006	99	278331	5.00	5.29	
34 Hexane	57	5.300	5.306	-0.006	93	461882	5.00	5.53	
35 1,1-Dichloroethane	63	5.543	5.543	0.000	96	544736	5.00	5.38	
37 Isopropyl ether	45	5.592	5.598	-0.006	96	1002817	5.00	5.29	
38 2-Chloro-1,3-butadiene	53	5.653	5.653	0.000	91	478226	5.00	5.37	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
39 Tert-butyl ethyl ether	59	6.123	6.129	-0.006	99	846636	5.00	5.26	
S 40 1,2-Dichloroethene, Total	100				0			10.5	
41 2-Butanone (MEK)	43	6.324	6.330	-0.006	100	658186	50.0	50.1	
42 cis-1,2-Dichloroethene	96	6.373	6.373	0.000	83	313564	5.00	5.20	
43 2,2-Dichloropropane	77	6.385	6.385	0.000	89	420278	5.00	5.35	
45 Propionitrile	54	6.415	6.415	0.000	99	341285	100.0	101.2	
47 Methacrylonitrile	67	6.629	6.635	-0.006	93	665185	50.0	50.4	
48 Chlorobromomethane	128	6.702	6.708	-0.006	71	131966	5.00	5.22	
49 Tetrahydrofuran	71	6.702	6.708	-0.006	84	173885	50.0	49.8	
50 Chloroform	83	6.848	6.848	0.000	93	499751	5.00	5.28	
\$ 51 Dibromofluoromethane (Surr)	113	7.061	7.068	-0.007	94	504366	10.0	10.1	
52 1,1,1-Trichloroethane	97	7.080	7.086	-0.006	98	435025	5.00	5.36	
53 Cyclohexane	56	7.183	7.183	0.000	92	555708	5.00	5.34	
55 1,1-Dichloropropene	75	7.287	7.293	-0.006	96	403522	5.00	5.35	
56 Carbon tetrachloride	117	7.299	7.299	0.000	95	382450	5.00	5.46	
57 Isobutyl alcohol	41	7.415	7.415	0.000	94	216048	250.0	244.5	
\$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.525	7.531	-0.006	0	101442	10.0	10.0	
59 Benzene	78	7.555	7.555	0.000	96	1228522	5.00	5.30	
60 1,2-Dichloroethane	62	7.622	7.622	0.000	97	275027	5.00	5.07	
62 Tert-amyl methyl ether	73	7.738	7.738	0.000	99	703801	5.00	5.30	
* 65 Fluorobenzene (IS)	96	7.958	7.958	0.000	99	2103408	10.0	10.0	
64 n-Heptane	43	7.958	7.964	-0.006	90	510349	5.00	5.34	
66 n-Butanol	56	8.299	8.299	0.000	88	427016	500.0	554.3	M
67 Trichloroethene	95	8.433	8.439	-0.006	98	300513	5.00	5.29	
68 Methylcyclohexane	83	8.750	8.750	0.000	96	558938	5.00	5.52	
69 2-ethoxy-2-methyl butane	87	8.768	8.768	0.000	88	433226	5.00	5.31	
70 1,2-Dichloropropane	63	8.775	8.775	0.000	84	309162	5.00	5.28	
71 Methyl methacrylate	69	8.842	8.842	0.000	92	127534	5.00	4.97	
72 1,4-Dioxane	88	8.854	8.860	-0.006	40	59501	250.0	280.4	
73 Dibromomethane	93	8.878	8.884	-0.006	97	128865	5.00	5.24	
75 Dichlorobromomethane	83	9.116	9.116	0.000	99	345424	5.00	5.24	
76 2-Nitropropane	41	9.372	9.372	0.000	97	349069	50.0	49.4	
79 1-Bromo-2-chloroethane	63	9.494	9.500	-0.006	99	304034	5.00	5.24	
80 cis-1,3-Dichloropropene	75	9.640	9.640	0.000	96	440458	5.00	5.44	
81 4-Methyl-2-pentanone (MIBK)	43	9.799	9.805	-0.006	97	1717352	50.0	50.0	
\$ 82 Toluene-d8 (Surr)	98	9.939	9.945	-0.006	94	2040205	10.0	10.1	
83 Toluene	92	10.018	10.018	0.000	98	749212	5.00	5.29	
S 84 1,3-Dichloropropene, Total	100				0			10.8	
85 trans-1,3-Dichloropropene	75	10.262	10.262	0.000	93	340435	5.00	5.32	
86 Ethyl methacrylate	69	10.317	10.317	0.000	91	276343	5.00	5.27	
87 1,1,2-Trichloroethane	97	10.469	10.463	0.006	90	180684	5.00	5.24	
88 Tetrachloroethene	166	10.555	10.555	0.000	97	317527	5.00	5.28	
89 1,3-Dichloropropane	76	10.628	10.628	0.000	91	330554	5.00	5.23	
91 2-Hexanone	43	10.671	10.671	0.000	98	1171886	50.0	50.6	
93 Chlorodibromomethane	129	10.841	10.841	0.000	90	226015	5.00	5.44	
94 Ethylene Dibromide	107	10.951	10.951	0.000	98	176554	5.00	5.38	
S 95 Xylenes, Total	106				0			15.9	
* 97 Chlorobenzene-d5 (IS)	117	11.378	11.378	0.000	86	1511875	10.0	10.0	
96 1-Chlorohexane	91	11.378	11.378	0.000	97	439322	5.00	5.17	
98 Chlorobenzene	112	11.402	11.402	0.000	94	788388	5.00	5.23	
99 1,1,1,2-Tetrachloroethane	131	11.481	11.481	0.000	95	274967	5.00	5.40	
100 Ethylbenzene	91	11.481	11.481	0.000	99	1462975	5.00	5.31	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
101 m-Xylene & p-Xylene	106	11.597	11.597	0.000	0	1096751	10.0	10.6	
102 o-Xylene	106	11.926	11.926	0.000	97	535400	5.00	5.31	
103 Styrene	104	11.939	11.939	0.000	94	903046	5.00	5.38	
104 Bromoform	173	12.103	12.103	0.000	97	126404	5.00	5.36	
105 Isopropylbenzene	105	12.219	12.219	0.000	96	1445359	5.00	5.34	
\$ 108 4-Bromofluorobenzene (Surr)	95	12.365	12.365	0.000	89	739487	10.0	10.0	
109 1,1,2,2-Tetrachloroethane	83	12.463	12.463	0.000	93	223182	5.00	5.27	
111 Bromobenzene	156	12.487	12.487	0.000	92	312288	5.00	5.30	
110 trans-1,4-Dichloro-2-butene	53	12.487	12.487	0.000	93	584125	50.0	51.6	
112 1,2,3-Trichloropropane	110	12.512	12.512	0.000	82	54829	5.00	5.20	
113 N-Propylbenzene	91	12.548	12.548	0.000	99	1735317	5.00	5.30	
114 2-Chlorotoluene	126	12.627	12.627	0.000	96	330741	5.00	5.30	
115 1,3,5-Trimethylbenzene	105	12.682	12.682	0.000	94	1207335	5.00	5.35	
116 4-Chlorotoluene	126	12.719	12.719	0.000	98	335946	5.00	5.36	
118 tert-Butylbenzene	134	12.926	12.926	0.000	93	260716	5.00	5.32	
119 Pentachloroethane	167	12.957	12.963	-0.006	92	204251	5.00	5.38	
120 1,2,4-Trimethylbenzene	105	12.963	12.969	-0.006	97	1229837	5.00	5.35	
121 sec-Butylbenzene	105	13.085	13.085	0.000	94	1595115	5.00	5.36	
122 1,3-Dichlorobenzene	146	13.188	13.188	0.000	97	620173	5.00	5.30	
123 4-Isopropyltoluene	119	13.194	13.194	0.000	97	1350739	5.00	5.39	
* 124 1,4-Dichlorobenzene-d4	152	13.243	13.243	0.000	95	769444	10.0	10.0	
125 1,4-Dichlorobenzene	146	13.261	13.261	0.000	94	616717	5.00	5.35	
126 1,2,3-Trimethylbenzene	120	13.274	13.274	0.000	98	518951	5.00	5.18	
127 Benzyl chloride	126	13.341	13.341	0.000	99	89852	5.00	5.47	
129 p-Diethylbenzene	119	13.463	13.463	0.000	95	861547	5.00	5.33	
130 n-Butylbenzene	92	13.487	13.487	0.000	98	693566	5.00	5.40	
131 1,2-Dichlorobenzene	146	13.524	13.524	0.000	98	549539	5.00	5.28	
134 1,2-Dibromo-3-Chloropropane	155	14.066	14.066	0.000	85	29071	5.00	5.40	
135 1,3,5-Trichlorobenzene	180	14.188	14.188	0.000	98	466886	5.00	5.30	
136 1,2,4-Trichlorobenzene	180	14.615	14.615	0.000	94	379561	5.00	5.39	
137 Hexachlorobutadiene	225	14.694	14.694	0.000	96	198405	5.00	5.14	
138 Naphthalene	128	14.798	14.798	0.000	97	659983	5.00	5.27	
139 1,2,3-Trichlorobenzene	180	14.944	14.944	0.000	96	315303	5.00	5.37	
140 2-Methylnaphthalene	142	15.596	15.596	0.000	93	400111	5.00	5.35	

QC Flag Legend

Review Flags

M - Manually Integrated

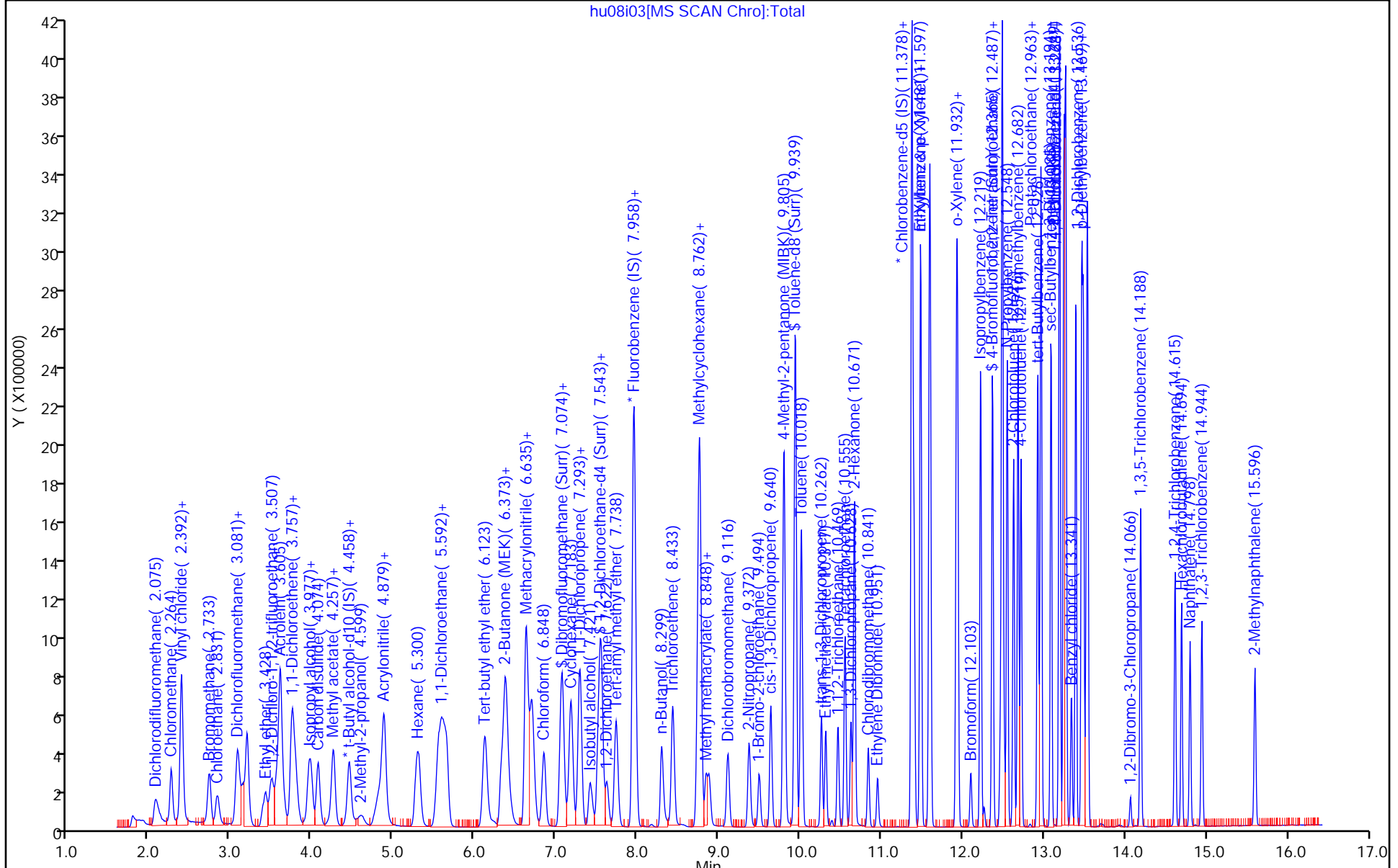
Reagents:

MSV_RV1_826_00015
MSV_RV4_826_00016
MSV_RV4GAS826_00046
MSV_30_826ISS_00005

Amount Added: 5.00
Amount Added: 5.00
Amount Added: 5.00
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Units: uL
Units: uL
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Units: uL

Run Reagent



Eurofins Lancaster Laboratories Env, LLC

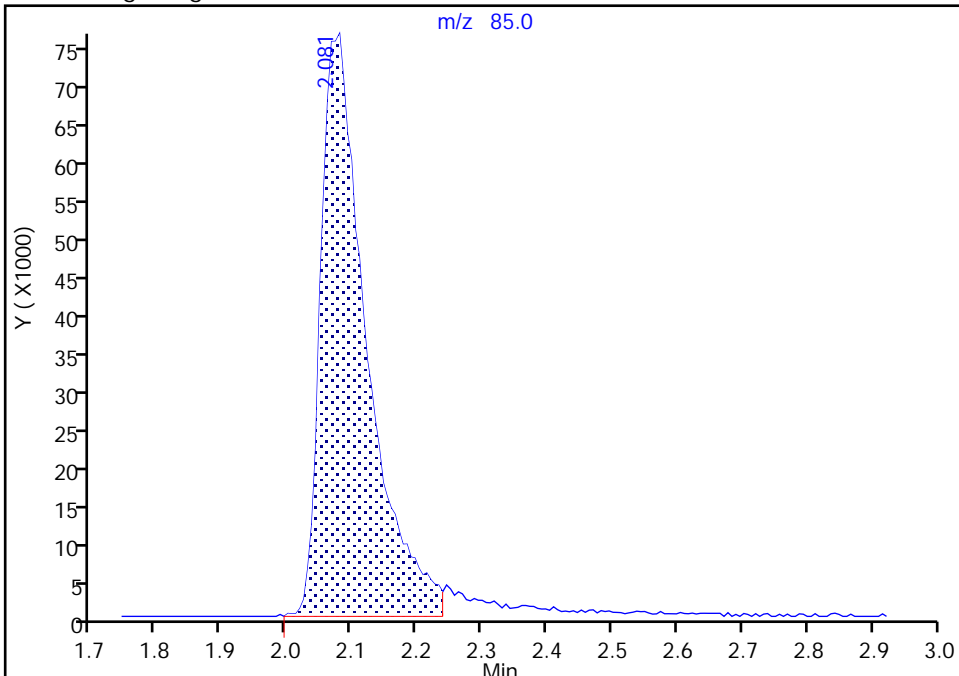
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Injection Date: 08-Jun-2020 17:29:30 Instrument ID: 19094
Lims ID: IC std5 5
Client ID:
Operator ID: jkh09052 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

3 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

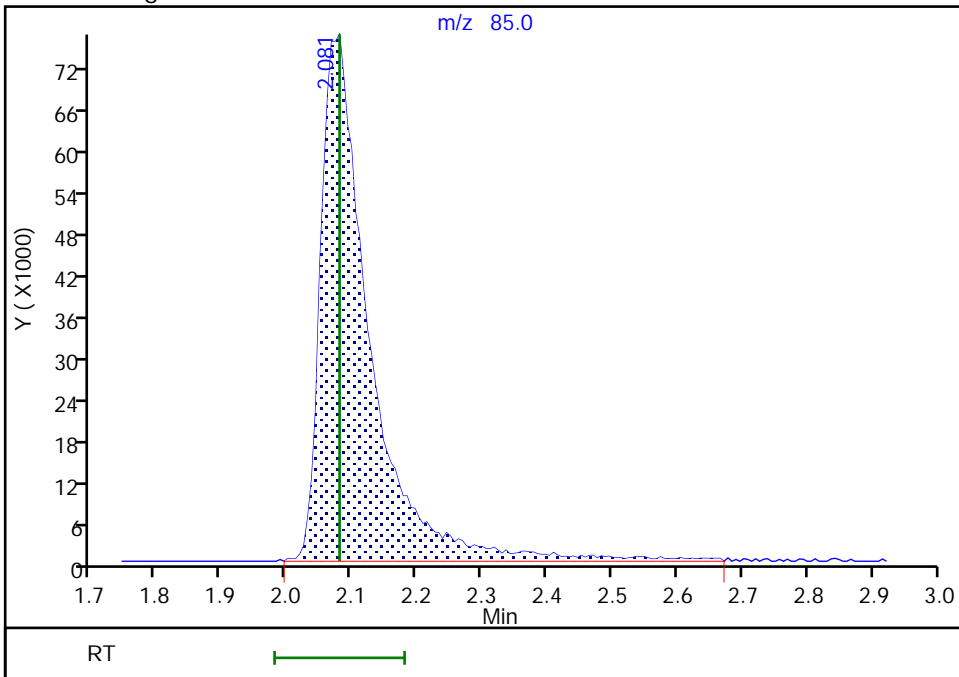
RT: 2.08
Area: 375426
Amount: 5.093836
Amount Units: ug/l

Processing Integration Results



RT: 2.08
Area: 402318
Amount: 5.402391
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 08-Jun-2020 20:13:33
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Euofins Lancaster Laboratories Env, LLC

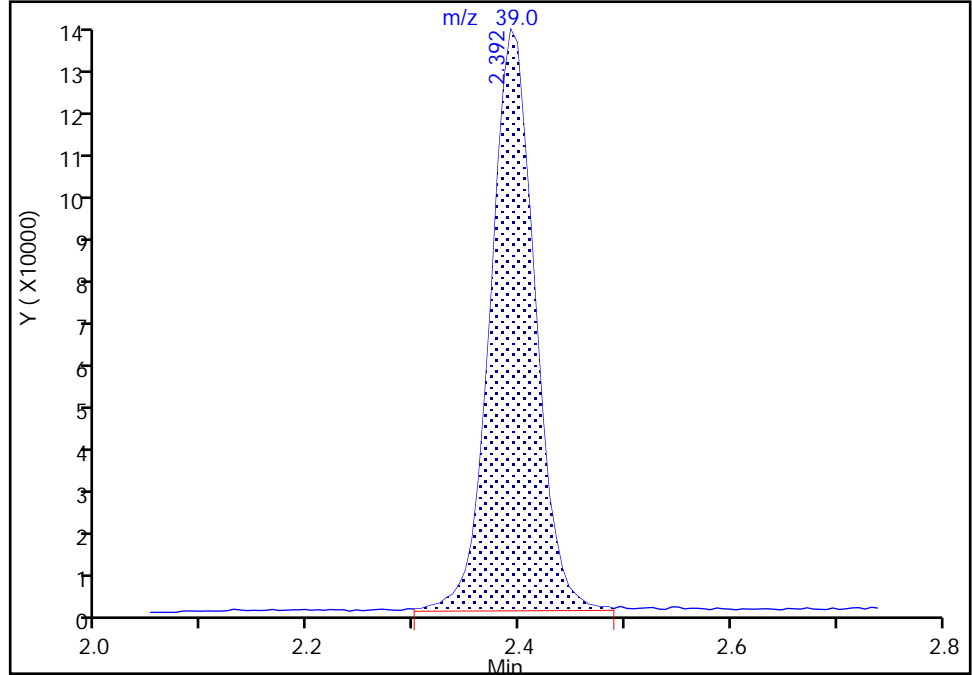
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Injection Date: 08-Jun-2020 17:29:30 Instrument ID: 19094
Lims ID: IC std5 5
Client ID:
Operator ID: jkh09052 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

8 Butadiene, CAS: 106-99-0

Signal: 1

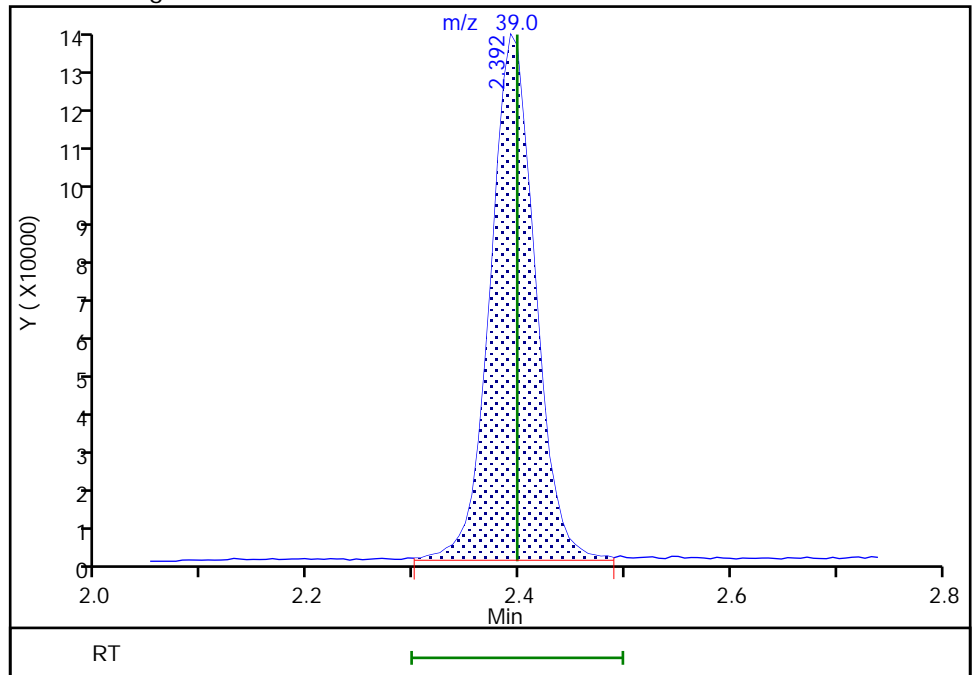
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Area: 382087
Amount: 4.998502
Amount Units: ug/l

Processing Integration Results



RT: 2.39
Area: 383275
Amount: 5.011818
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 08-Jun-2020 20:13:48
Audit Action: Assigned New Baseline

Audit Reason: Baseline

Eurofins Lancaster Laboratories Env, LLC

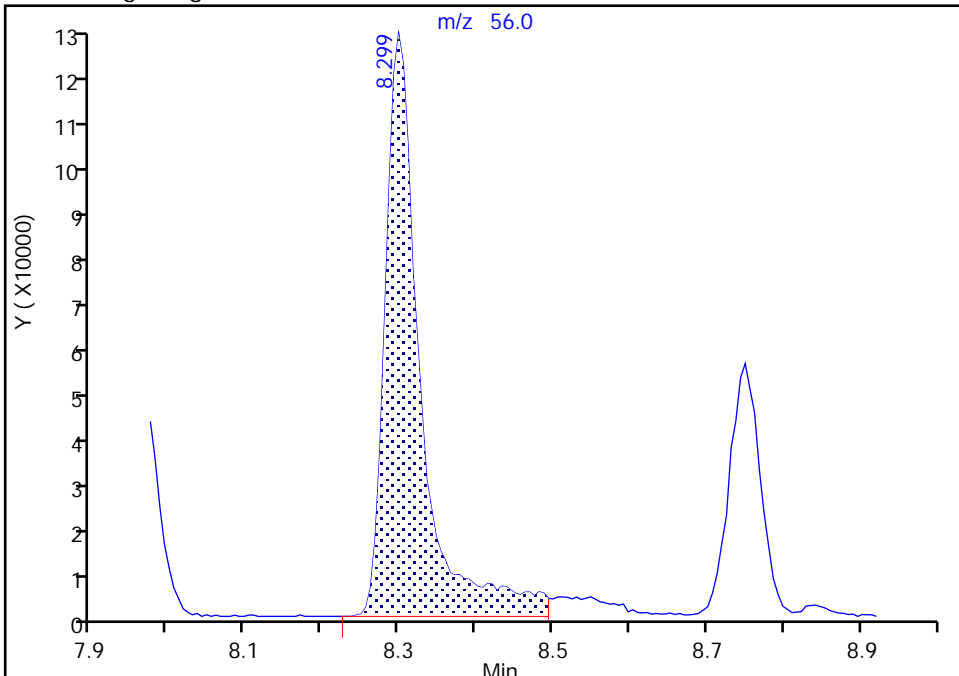
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Injection Date: 08-Jun-2020 17:29:30 Instrument ID: 19094
Lims ID: IC std5 5
Client ID:
Operator ID: jkh09052 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

66 n-Butanol, CAS: 71-36-3

Signal: 1

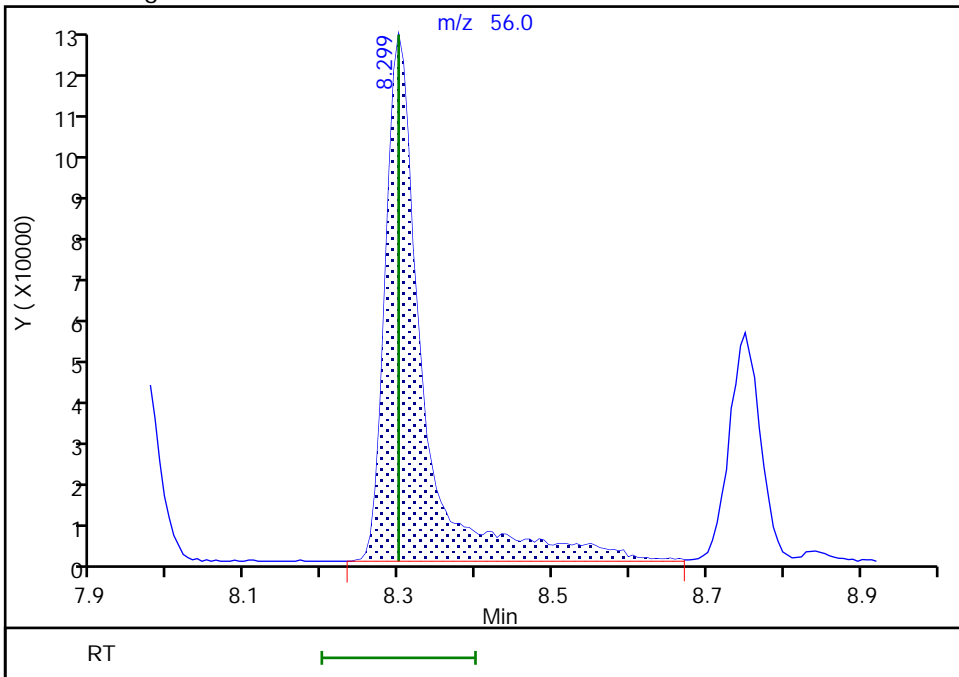
RT: 8.30
Area: 403274
Amount: 501.7437
Amount Units: ug/l

Processing Integration Results



RT: 8.30
Area: 427016
Amount: 554.2964
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 08-Jun-2020 20:14:40
Audit Action: Assigned New Baseline

Audit Reason: Baseline

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i04.D
 Lims ID: IC std4 2
 Client ID:
 Sample Type: IC Calib Level: 4
 Inject. Date: 08-Jun-2020 17:51:30 ALS Bottle#: 14 Worklist Smp#: 15
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: 410-0002918-015
 Misc. Info.: IC STD4 2
 Operator ID: jkh09052 Instrument ID: 19094
 Sublist: chrom-MSV_19094_25mL*sub1
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 Limit Group: MSV - 8260C_D
 Last Update: 22-Jun-2020 11:01:50 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1020

First Level Reviewer: campbellme

Date: 08-Jun-2020 19:29:50

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
3 Dichlorodifluoromethane	85	2.069	2.069	0.000	99	153361	2.00	2.06	M
6 Chloromethane	50	2.264	2.264	0.000	99	172584	2.00	1.95	M
7 Vinyl chloride	62	2.386	2.386	0.000	97	158284	2.00	1.99	
8 Butadiene	39	2.392	2.392	0.000	94	151736	2.00	1.98	M
9 Bromomethane	94	2.733	2.733	0.000	91	107837	2.00	2.00	
10 Chloroethane	64	2.831	2.831	0.000	100	95643	2.00	1.97	
11 Dichlorofluoromethane	67	3.074	3.074	0.000	97	207730	2.00	1.99	
13 Trichlorofluoromethane	101	3.129	3.129	0.000	99	167089	2.00	2.03	
15 Ethyl ether	59	3.422	3.422	0.000	93	81658	2.00	2.00	
16 1,2-Dichloro-1,1,2-trifluoroethane	67	3.495	3.495	0.000	95	131544	2.00	2.04	
17 Acrolein	56	3.605	3.605	0.000	99	615641	100.0	100.9	
18 1,1-Dichloroethene	96	3.745	3.745	0.000	98	96271	2.00	2.08	
20 112TCTFE	101	3.782	3.782	0.000	92	107085	2.00	2.12	
19 Acetone	43	3.788	3.788	0.000	86	144329	20.0	19.2	M
22 Iodomethane	142	3.952	3.952	0.000	98	185379	2.00	2.06	
21 Isopropyl alcohol	45	3.971	3.971	0.000	33	56242	40.0	39.3	
23 Ethyl bromide	108	3.989	3.989	0.000	97	86822	2.00	2.06	
24 Carbon disulfide	76	4.068	4.068	0.000	99	314026	2.00	2.04	
26 Methyl acetate	43	4.221	4.221	0.000	95	38713	2.00	1.96	
27 3-Chloro-1-propene	41	4.257	4.257	0.000	93	191692	2.00	2.04	
29 Methylene Chloride	84	4.446	4.446	0.000	94	108187	2.00	1.96	
* 28 t-Butyl alcohol-d10 (IS)	65	4.458	4.458	0.000	0	106411	50.0	50.0	
30 2-Methyl-2-propanol	59	4.599	4.599	0.000	98	95490	40.0	45.3	
31 Acrylonitrile	53	4.800	4.800	0.000	98	102944	10.0	10.2	
32 Methyl tert-butyl ether	73	4.861	4.861	0.000	97	225630	2.00	2.04	
33 trans-1,2-Dichloroethene	96	4.879	4.879	0.000	98	107518	2.00	2.04	
34 Hexane	57	5.300	5.300	0.000	93	175631	2.00	2.10	
35 1,1-Dichloroethane	63	5.543	5.543	0.000	96	208913	2.00	2.06	
37 Isopropyl ether	45	5.580	5.580	0.000	96	387034	2.00	2.04	
38 2-Chloro-1,3-butadiene	53	5.647	5.647	0.000	91	187090	2.00	2.10	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
39 Tert-butyl ethyl ether	59	6.117	6.117	0.000	98	322851	2.00	2.01	
S 40 1,2-Dichloroethene, Total	100				0			4.08	
41 2-Butanone (MEK)	43	6.324	6.324	0.000	99	251677	20.0	20.0	
42 cis-1,2-Dichloroethene	96	6.366	6.366	0.000	83	123280	2.00	2.04	
43 2,2-Dichloropropane	77	6.385	6.385	0.000	91	160943	2.00	2.05	
45 Propionitrile	54	6.415	6.415	0.000	99	136153	40.0	42.2	
47 Methacrylonitrile	67	6.629	6.629	0.000	93	254581	20.0	20.2	
48 Chlorobromomethane	128	6.702	6.702	0.000	74	51244	2.00	2.03	
49 Tetrahydrofuran	71	6.702	6.702	0.000	81	66440	20.0	19.9	
50 Chloroform	83	6.848	6.848	0.000	93	192183	2.00	2.03	
\$ 51 Dibromofluoromethane (Surr)	113	7.061	7.061	0.000	93	496161	10.0	9.97	
52 1,1,1-Trichloroethane	97	7.080	7.080	0.000	98	167836	2.00	2.07	
53 Cyclohexane	56	7.183	7.183	0.000	92	219649	2.00	2.11	
55 1,1-Dichloropropene	75	7.293	7.293	0.000	95	154020	2.00	2.04	
56 Carbon tetrachloride	117	7.293	7.293	0.000	86	143042	2.00	2.04	
57 Isobutyl alcohol	41	7.427	7.427	0.000	96	83116	100.0	98.4	
\$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.519	7.519	0.000	0	102089	10.0	10.1	
59 Benzene	78	7.549	7.549	0.000	96	475852	2.00	2.05	
60 1,2-Dichloroethane	62	7.622	7.622	0.000	97	110016	2.00	2.03	
62 Tert-amyl methyl ether	73	7.732	7.732	0.000	99	268058	2.00	2.02	
* 65 Fluorobenzene (IS)	96	7.952	7.952	0.000	98	2104085	10.0	10.0	
64 n-Heptane	43	7.958	7.958	0.000	90	200190	2.00	2.09	
66 n-Butanol	56	8.299	8.299	0.000	89	164127	200.0	222.9	
67 Trichloroethene	95	8.433	8.433	0.000	99	116569	2.00	2.05	
68 Methylcyclohexane	83	8.744	8.744	0.000	97	217796	2.00	2.15	
69 2-ethoxy-2-methyl butane	87	8.768	8.768	0.000	89	164392	2.00	2.01	
70 1,2-Dichloropropane	63	8.768	8.768	0.000	85	120262	2.00	2.05	
71 Methyl methacrylate	69	8.842	8.842	0.000	94	49184	2.00	2.00	
72 1,4-Dioxane	88	8.854	8.854	0.000	93	27013	100.0	133.2	M
73 Dibromomethane	93	8.878	8.878	0.000	97	49206	2.00	2.00	
75 Dichlorobromomethane	83	9.110	9.110	0.000	99	132775	2.00	2.01	
76 2-Nitropropane	41	9.372	9.372	0.000	98	134030	20.0	19.8	
79 1-Bromo-2-chloroethane	63	9.494	9.494	0.000	98	116192	2.00	2.00	
80 cis-1,3-Dichloropropene	75	9.640	9.640	0.000	96	168102	2.00	2.07	
81 4-Methyl-2-pentanone (MIBK)	43	9.799	9.799	0.000	97	664915	20.0	20.3	
\$ 82 Toluene-d8 (Surr)	98	9.939	9.939	0.000	94	2021565	10.0	10.1	
83 Toluene	92	10.018	10.018	0.000	98	286849	2.00	2.05	
S 84 1,3-Dichloropropene, Total	100				0			4.15	
85 trans-1,3-Dichloropropene	75	10.262	10.262	0.000	93	130837	2.00	2.07	
86 Ethyl methacrylate	69	10.317	10.317	0.000	90	106402	2.00	2.06	
87 1,1,2-Trichloroethane	97	10.463	10.463	0.000	90	69907	2.00	2.05	
88 Tetrachloroethene	166	10.555	10.555	0.000	98	123881	2.00	2.09	
89 1,3-Dichloropropane	76	10.628	10.628	0.000	90	128669	2.00	2.06	
91 2-Hexanone	43	10.671	10.671	0.000	98	445712	20.0	20.1	
93 Chlorodibromomethane	129	10.841	10.841	0.000	91	84265	2.00	2.06	
94 Ethylene Dibromide	107	10.951	10.951	0.000	100	67269	2.00	2.08	
S 95 Xylenes, Total	106				0			6.22	
* 97 Chlorobenzene-d5 (IS)	117	11.372	11.372	0.000	87	1490777	10.0	10.0	
96 1-Chlorohexane	91	11.378	11.378	0.000	95	170135	2.00	2.03	
98 Chlorobenzene	112	11.402	11.402	0.000	95	308224	2.00	2.07	
99 1,1,1,2-Tetrachloroethane	131	11.481	11.481	0.000	95	102790	2.00	2.05	
100 Ethylbenzene	91	11.481	11.481	0.000	99	566606	2.00	2.08	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
101 m-Xylene & p-Xylene	106	11.597	11.597	0.000	0	423433	4.00	4.16	
102 o-Xylene	106	11.926	11.926	0.000	97	205047	2.00	2.06	
103 Styrene	104	11.939	11.939	0.000	94	344505	2.00	2.08	
104 Bromoform	173	12.103	12.103	0.000	96	48098	2.00	2.07	
105 Isopropylbenzene	105	12.219	12.219	0.000	96	556767	2.00	2.08	
\$ 108 4-Bromofluorobenzene (Surr)	95	12.365	12.365	0.000	89	743254	10.0	10.2	
109 1,1,2,2-Tetrachloroethane	83	12.463	12.463	0.000	92	85367	2.00	2.02	
111 Bromobenzene	156	12.487	12.487	0.000	94	122070	2.00	2.07	
110 trans-1,4-Dichloro-2-butene	53	12.487	12.487	0.000	91	222736	20.0	20.6	
112 1,2,3-Trichloropropane	110	12.512	12.512	0.000	82	22107	2.00	2.10	
113 N-Propylbenzene	91	12.548	12.548	0.000	99	672962	2.00	2.05	
114 2-Chlorotoluene	126	12.627	12.627	0.000	96	128071	2.00	2.05	
115 1,3,5-Trimethylbenzene	105	12.682	12.682	0.000	94	465543	2.00	2.06	
116 4-Chlorotoluene	126	12.719	12.719	0.000	98	131014	2.00	2.09	
118 tert-Butylbenzene	134	12.926	12.926	0.000	93	98951	2.00	2.02	
119 Pentachloroethane	167	12.963	12.963	0.000	89	77464	2.00	2.04	
120 1,2,4-Trimethylbenzene	105	12.963	12.963	0.000	97	479126	2.00	2.08	
121 sec-Butylbenzene	105	13.085	13.085	0.000	94	614738	2.00	2.06	
122 1,3-Dichlorobenzene	146	13.188	13.188	0.000	97	239968	2.00	2.05	
123 4-Isopropyltoluene	119	13.194	13.194	0.000	97	519317	2.00	2.07	
* 124 1,4-Dichlorobenzene-d4	152	13.243	13.243	0.000	96	770133	10.0	10.0	
125 1,4-Dichlorobenzene	146	13.261	13.261	0.000	95	236716	2.00	2.05	
126 1,2,3-Trimethylbenzene	120	13.268	13.268	0.000	98	200220	2.00	2.00	
127 Benzyl chloride	126	13.335	13.335	0.000	99	34122	2.00	2.08	
129 p-Diethylbenzene	119	13.463	13.463	0.000	95	332422	2.00	2.06	
130 n-Butylbenzene	92	13.487	13.487	0.000	98	266267	2.00	2.07	
131 1,2-Dichlorobenzene	146	13.524	13.524	0.000	97	212157	2.00	2.04	
134 1,2-Dibromo-3-Chloropropane	155	14.060	14.060	0.000	86	11594	2.00	2.15	
135 1,3,5-Trichlorobenzene	180	14.188	14.188	0.000	97	178071	2.00	2.02	
136 1,2,4-Trichlorobenzene	180	14.615	14.615	0.000	94	139441	2.00	1.98	
137 Hexachlorobutadiene	225	14.694	14.694	0.000	96	76958	2.00	1.99	
138 Naphthalene	128	14.798	14.798	0.000	97	252337	2.00	2.01	
139 1,2,3-Trichlorobenzene	180	14.944	14.944	0.000	95	117014	2.00	1.99	
140 2-Methylnaphthalene	142	15.596	15.596	0.000	93	146807	2.00	1.96	

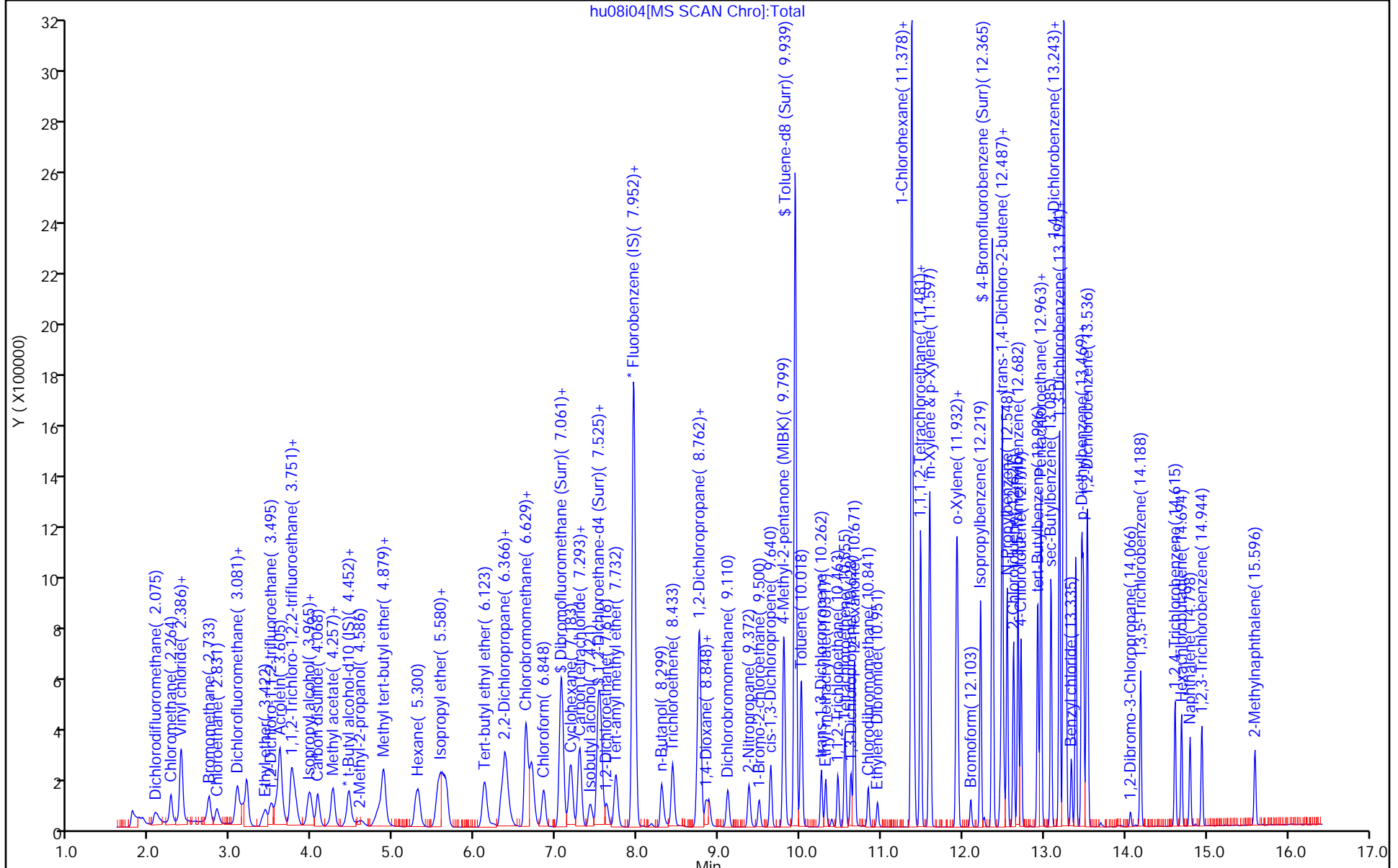
QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MSV_RV1_826_00015	Amount Added: 2.00	Units: uL	
MSV_RV4_826_00016	Amount Added: 2.00	Units: uL	
MSV_RV4GAS826_00046	Amount Added: 2.00	Units: uL	
MSV_30_826ISS_00005	Amount Added: 5.00	Units: uL	Run Reagent



hu08i04[MS SCAN Chrom]:Total

Y (X100000)

Min

Eurofins Lancaster Laboratories Env, LLC

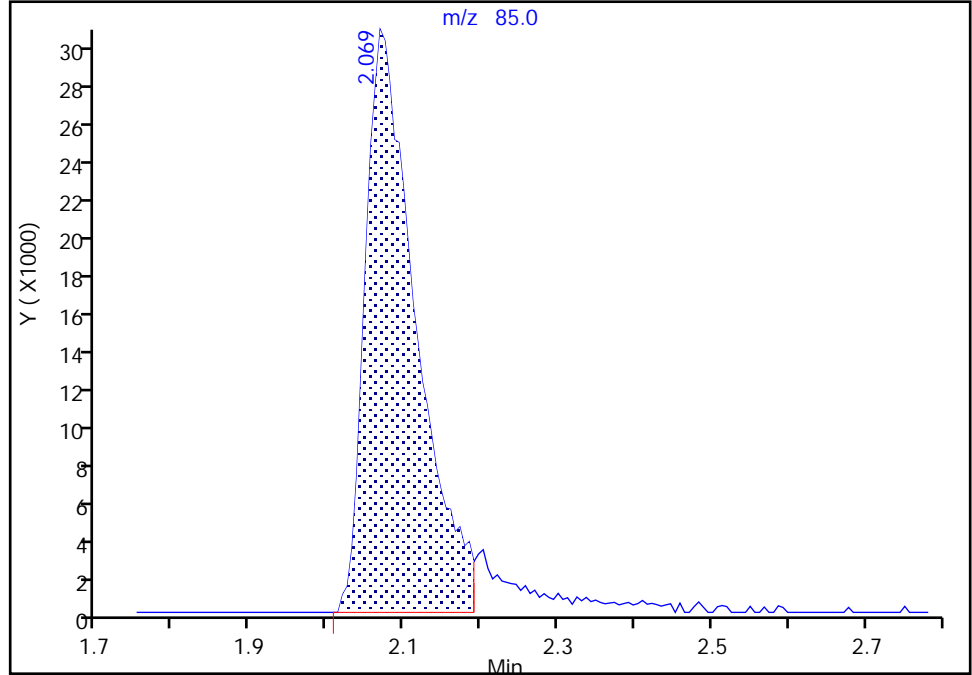
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Injection Date: 08-Jun-2020 17:51:30 Instrument ID: 19094
Lims ID: IC std4 2
Client ID:
Operator ID: jkh09052 ALS Bottle#: 14 Worklist Smp#: 15
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

3 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

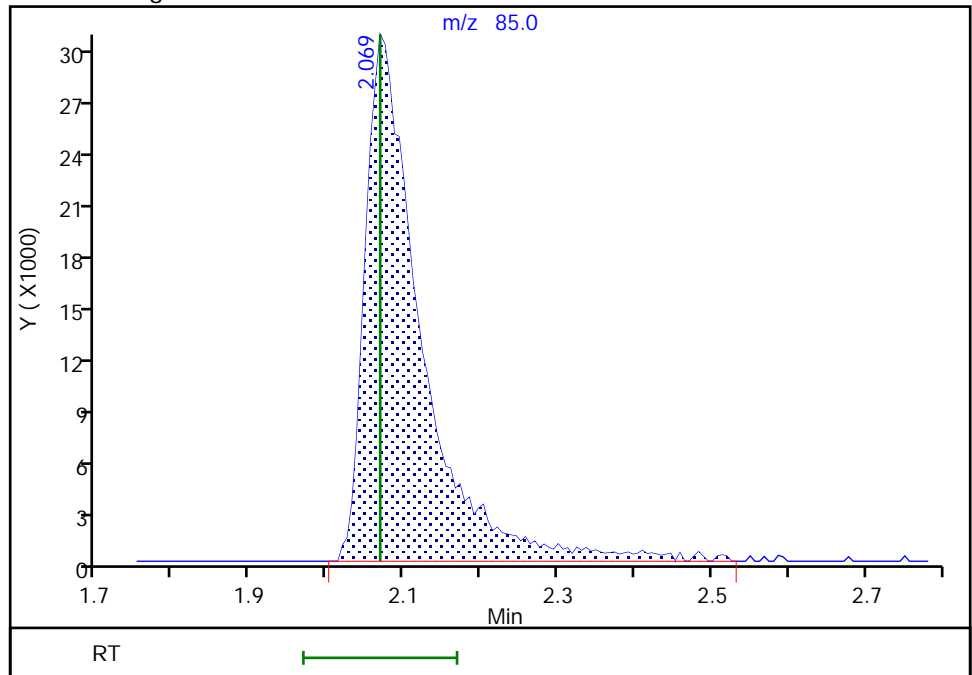
RT: 2.07
Area: 137955
Amount: 1.927410
Amount Units: ug/l

Processing Integration Results



RT: 2.07
Area: 153361
Amount: 2.058694
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 08-Jun-2020 19:27:55
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC

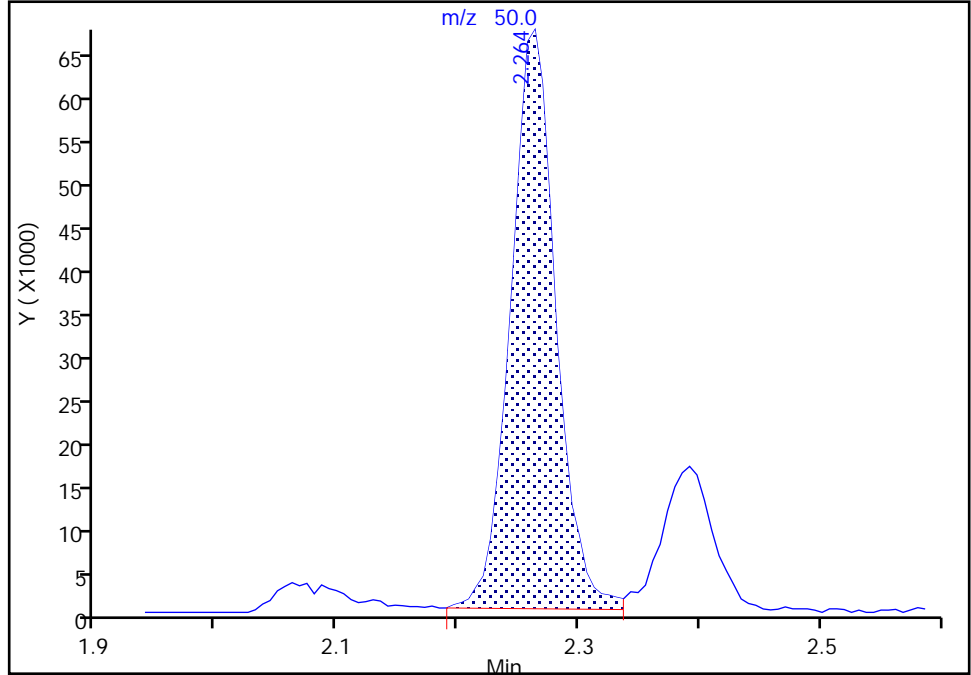
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Injection Date: 08-Jun-2020 17:51:30 Instrument ID: 19094
Lims ID: IC std4 2
Client ID:
Operator ID: jkh09052 ALS Bottle#: 14 Worklist Smp#: 15
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

6 Chloromethane, CAS: 74-87-3

Signal: 1

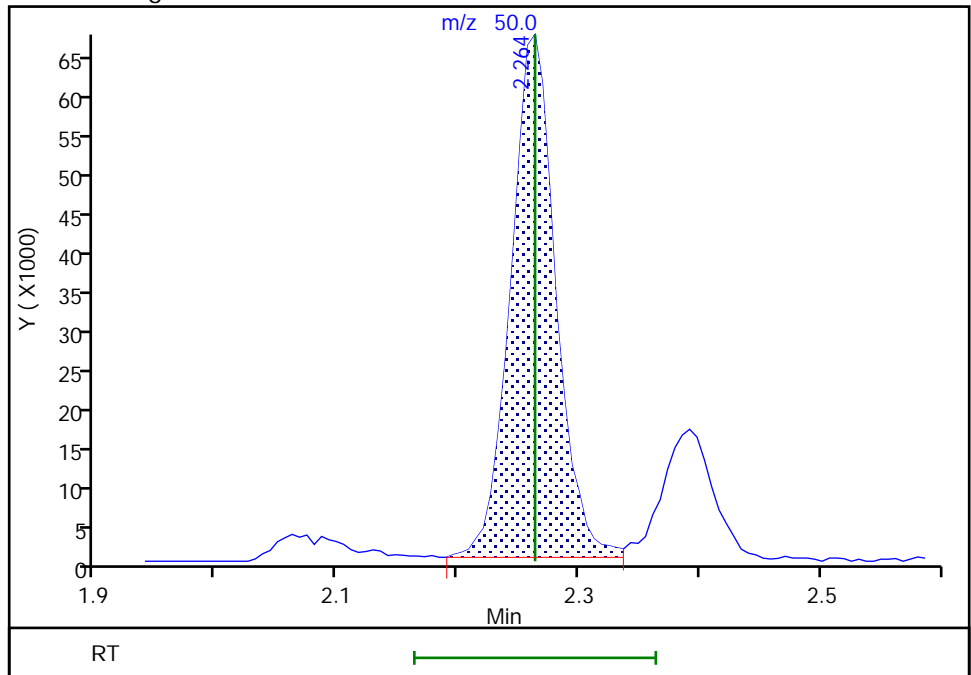
RT: 2.26
Area: 173348
Amount: 1.952257
Amount Units: ug/l

Processing Integration Results



RT: 2.26
Area: 172584
Amount: 1.945347
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 08-Jun-2020 19:28:12
Audit Action: Assigned New Baseline

Audit Reason: Baseline

Eurofins Lancaster Laboratories Env, LLC

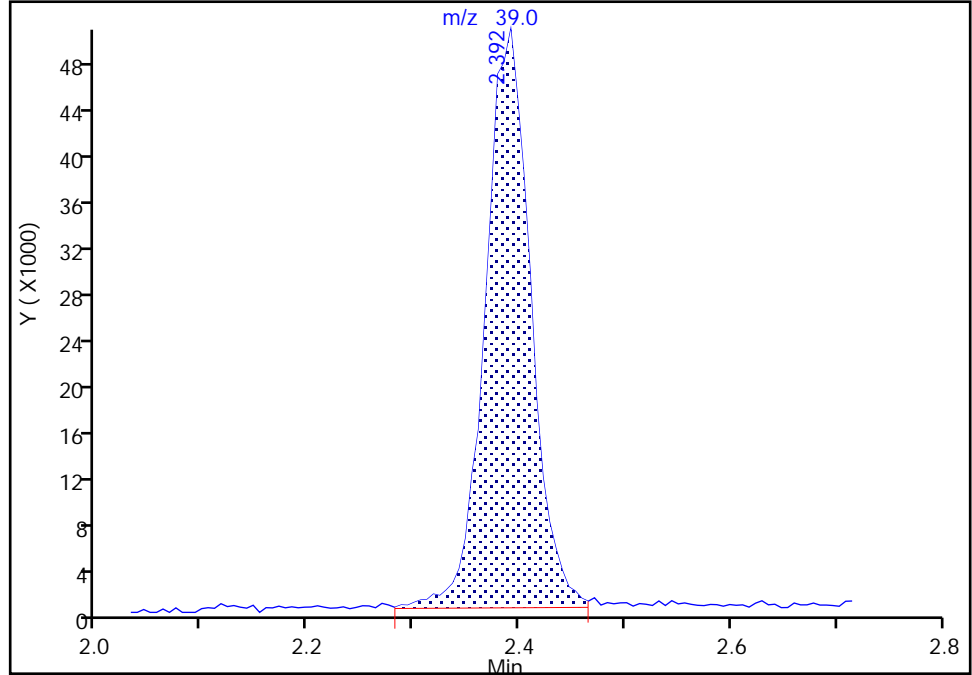
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Injection Date: 08-Jun-2020 17:51:30 Instrument ID: 19094
Lims ID: IC std4 2
Client ID:
Operator ID: jkh09052 ALS Bottle#: 14 Worklist Smp#: 15
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

8 Butadiene, CAS: 106-99-0

Signal: 1

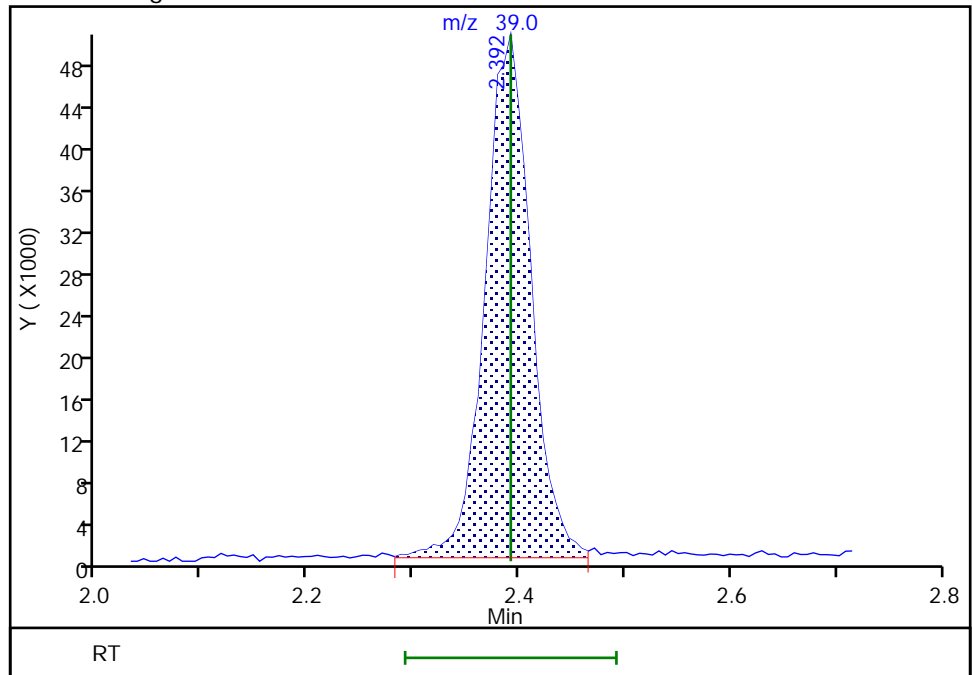
RT: 2.39
Area: 151164
Amount: 1.979628
Amount Units: ug/l

Processing Integration Results



RT: 2.39
Area: 151736
Amount: 1.983507
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 08-Jun-2020 19:28:24
Audit Action: Assigned New Baseline

Audit Reason: Baseline
Page 489 of 638

Eurofins Lancaster Laboratories Env, LLC

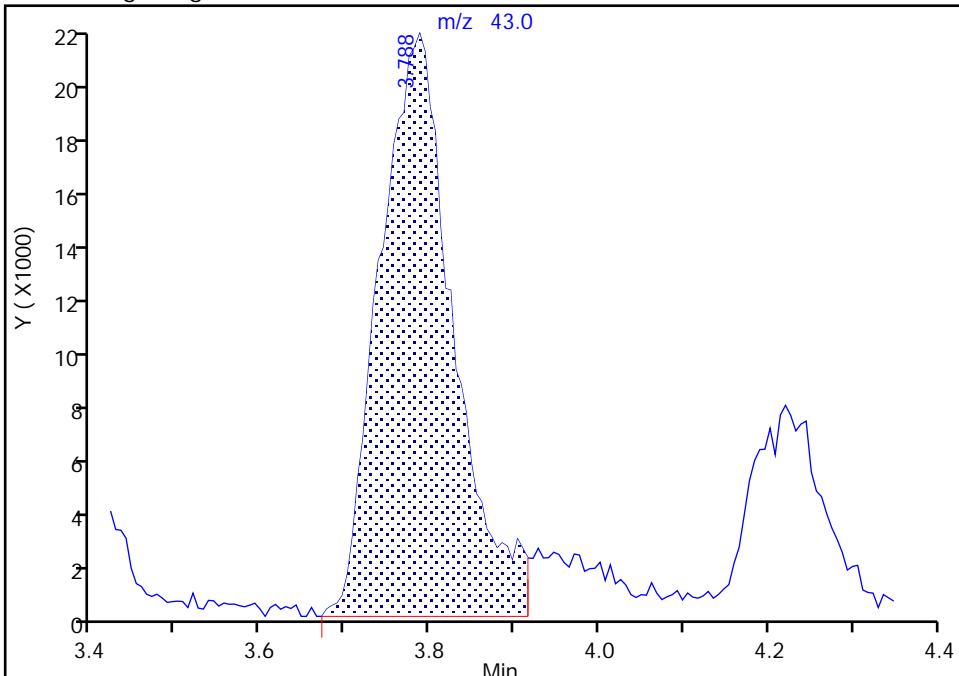
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Injection Date: 08-Jun-2020 17:51:30 Instrument ID: 19094
Lims ID: IC std4 2
Client ID:
Operator ID: jkh09052 ALS Bottle#: 14 Worklist Smp#: 15
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

19 Acetone, CAS: 67-64-1

Signal: 1

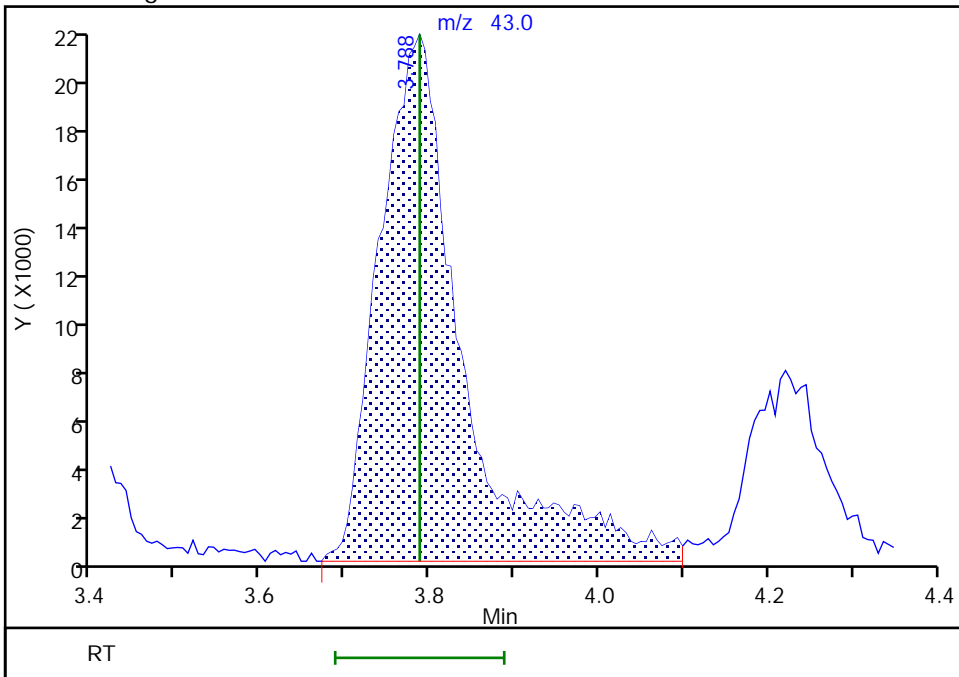
RT: 3.79
Area: 128180
Amount: 19.543196
Amount Units: ug/l

Processing Integration Results



RT: 3.79
Area: 144329
Amount: 19.207990
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 08-Jun-2020 19:28:52
Audit Action: Assigned New Baseline

Audit Reason: Baseline
Page 490 of 638

Euofins Lancaster Laboratories Env, LLC

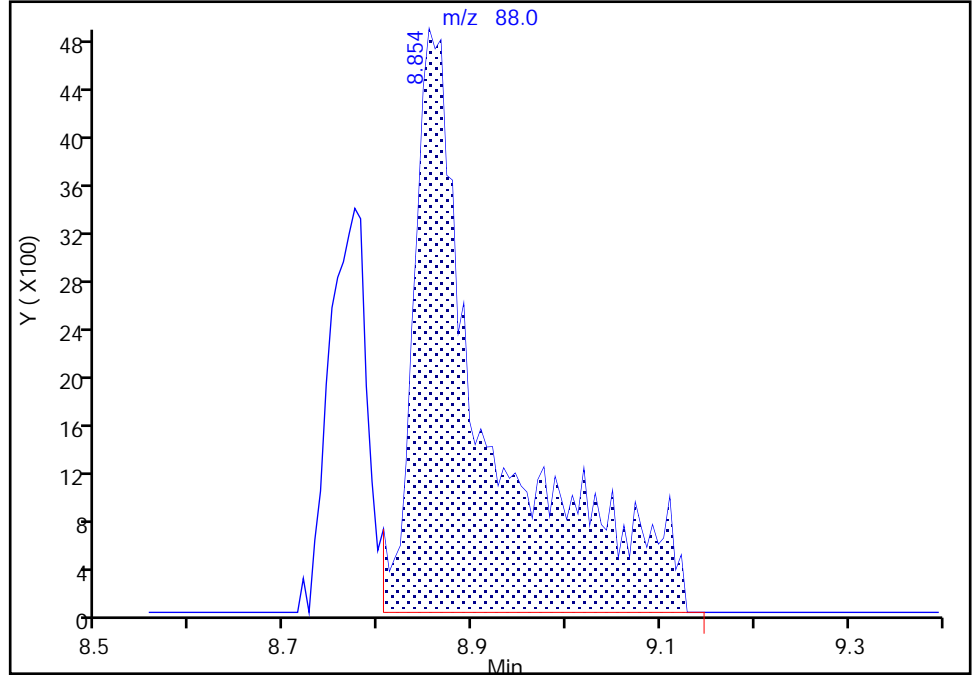
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Injection Date: 08-Jun-2020 17:51:30 Instrument ID: 19094
Lims ID: IC std4 2
Client ID:
Operator ID: jkh09052 ALS Bottle#: 14 Worklist Smp#: 15
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

72 1,4-Dioxane, CAS: 123-91-1

Signal: 1

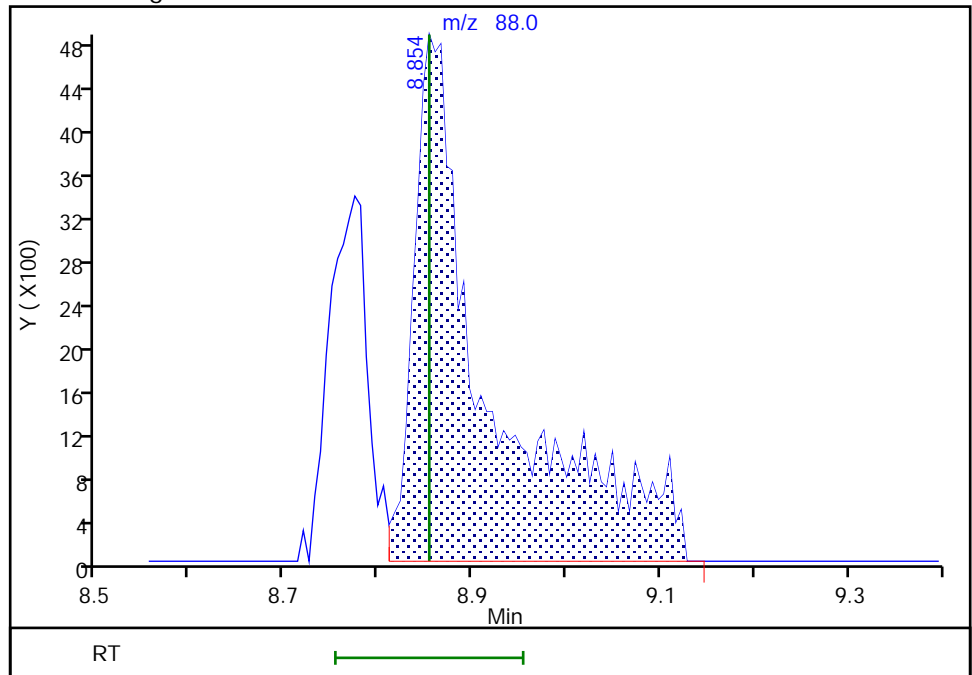
RT: 8.85
Area: 27267
Amount: 140.1004
Amount Units: ug/l

Processing Integration Results



RT: 8.85
Area: 27013
Amount: 133.1645
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 08-Jun-2020 19:29:26
Audit Action: Split an Integrated Peak

Audit Reason: Split Peak

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i05.D
 Lims ID: IC std3 1
 Client ID:
 Sample Type: IC Calib Level: 3
 Inject. Date: 08-Jun-2020 18:13:30 ALS Bottle#: 15 Worklist Smp#: 16
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: 410-0002918-016
 Misc. Info.: IC STD3 1
 Operator ID: jkh09052 Instrument ID: 19094
 Sublist: chrom-MSV_19094_25mL*sub1

Method: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 22-Jun-2020 11:02:03 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1020

First Level Reviewer: campbellme

Date: 08-Jun-2020 19:32:33

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
3 Dichlorodifluoromethane	85	2.081	2.069	0.012	98	75647	1.00	1.02	M
6 Chloromethane	50	2.270	2.264	0.006	99	89175	1.00	1.01	
7 Vinyl chloride	62	2.392	2.386	0.006	98	81821	1.00	1.03	
8 Butadiene	39	2.398	2.392	0.006	84	73724	1.00	0.9653	M
9 Bromomethane	94	2.733	2.733	0.000	91	53196	1.00	0.9891	
10 Chloroethane	64	2.843	2.831	0.012	98	47777	1.00	0.9841	
11 Dichlorofluoromethane	67	3.080	3.074	0.006	97	102432	1.00	0.9822	
13 Trichlorofluoromethane	101	3.135	3.129	0.006	97	84929	1.00	1.03	
15 Ethyl ether	59	3.434	3.422	0.012	92	40609	1.00	1.00	
16 1,2-Dichloro-1,1,2-trifluoroetha	67	3.501	3.495	0.006	94	63189	1.00	0.9795	
17 Acrolein	56	3.611	3.605	0.006	100	288759	50.0	47.8	
18 1,1-Dichloroethene	96	3.745	3.745	0.000	98	46197	1.00	1.00	
20 112TCTFE	101	3.794	3.782	0.012	94	50494	1.00	1.00	
19 Acetone	43	3.794	3.788	0.006	96	72293	10.0	9.72	M
22 Iodomethane	142	3.964	3.952	0.012	98	88458	1.00	0.9851	
21 Isopropyl alcohol	45	3.971	3.971	0.000	30	22020	20.0	17.1	
23 Ethyl bromide	108	3.995	3.989	0.006	98	42403	1.00	1.01	
24 Carbon disulfide	76	4.074	4.068	0.006	100	149974	1.00	0.9779	
26 Methyl acetate	43	4.227	4.221	0.006	60	20712	1.00	1.15	
27 3-Chloro-1-propene	41	4.263	4.257	0.006	93	90102	1.00	0.9594	
29 Methylene Chloride	84	4.464	4.446	0.018	93	53019	1.00	0.9638	
* 28 t-Butyl alcohol-d10 (IS)	65	4.470	4.458	0.012	0	105366	50.0	50.0	
30 2-Methyl-2-propanol	59	4.605	4.599	0.006	99	39250	20.0	18.8	
31 Acrylonitrile	53	4.800	4.800	0.000	99	46935	5.00	4.70	
32 Methyl tert-butyl ether	73	4.879	4.861	0.018	96	108704	1.00	0.9837	
33 trans-1,2-Dichloroethene	96	4.897	4.879	0.018	98	51146	1.00	0.9726	
34 Hexane	57	5.306	5.300	0.006	95	84135	1.00	1.01	
35 1,1-Dichloroethane	63	5.543	5.543	0.000	96	97346	1.00	0.9621	
37 Isopropyl ether	45	5.598	5.580	0.018	96	182961	1.00	0.9663	
38 2-Chloro-1,3-butadiene	53	5.647	5.647	0.000	91	85805	1.00	0.9646	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
39 Tert-butyl ethyl ether	59	6.123	6.117	0.006	98	152986	1.00	0.9516	
S 40 1,2-Dichloroethene, Total	100				0			1.97	
41 2-Butanone (MEK)	43	6.330	6.324	0.006	100	117293	10.0	9.43	
42 cis-1,2-Dichloroethene	96	6.373	6.366	0.007	82	60302	1.00	1.00	
43 2,2-Dichloropropane	77	6.385	6.385	0.000	85	77094	1.00	0.9822	
45 Propionitrile	54	6.415	6.415	0.000	98	61347	20.0	19.2	
47 Methacrylonitrile	67	6.635	6.629	0.006	92	120275	10.0	9.62	
48 Chlorobromomethane	128	6.702	6.702	0.000	95	25710	1.00	1.02	
49 Tetrahydrofuran	71	6.702	6.702	0.000	86	30989	10.0	9.37	
50 Chloroform	83	6.848	6.848	0.000	93	93377	1.00	0.9874	
\$ 51 Dibromofluoromethane (Surr)	113	7.061	7.061	0.000	93	496799	10.0	10.0	
52 1,1,1-Trichloroethane	97	7.086	7.080	0.006	99	77061	1.00	0.9498	
53 Cyclohexane	56	7.183	7.183	0.000	91	105631	1.00	1.02	
55 1,1-Dichloropropene	75	7.287	7.293	-0.006	93	74358	1.00	0.9875	
56 Carbon tetrachloride	117	7.293	7.293	0.000	81	68708	1.00	0.9823	
57 Isobutyl alcohol	41	7.415	7.427	-0.012	96	39813	50.0	47.6	M
\$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.525	7.519	0.006	0	101030	10.0	9.99	
59 Benzene	78	7.555	7.549	0.006	96	225407	1.00	0.9742	
60 1,2-Dichloroethane	62	7.628	7.622	0.006	96	50154	1.00	0.9259	
62 Tert-amyl methyl ether	73	7.738	7.732	0.006	98	131142	1.00	0.9895	
* 65 Fluorobenzene (IS)	96	7.958	7.952	0.006	98	2100757	10.0	10.0	
64 n-Heptane	43	7.964	7.958	0.006	81	97769	1.00	1.02	
66 n-Butanol	56	8.299	8.299	0.000	88	68874	100.0	94.4	
67 Trichloroethene	95	8.439	8.433	0.006	99	55853	1.00	0.9841	
68 Methylcyclohexane	83	8.750	8.744	0.006	96	103521	1.00	1.02	
69 2-ethoxy-2-methyl butane	87	8.762	8.768	-0.006	88	78033	1.00	0.9571	
70 1,2-Dichloropropane	63	8.768	8.768	0.000	78	57285	1.00	0.9795	
71 Methyl methacrylate	69	8.842	8.842	0.000	94	23899	1.00	0.9835	
72 1,4-Dioxane	88	8.854	8.854	0.000	43	12285	50.0	61.2	M
73 Dibromomethane	93	8.884	8.878	0.006	97	23579	1.00	0.9594	
75 Dichlorobromomethane	83	9.110	9.110	0.000	99	62786	1.00	0.9534	
76 2-Nitropropane	41	9.372	9.372	0.000	98	66403	10.0	9.92	M
79 1-Bromo-2-chloroethane	63	9.500	9.494	0.006	99	56365	1.00	0.9721	
80 cis-1,3-Dichloropropene	75	9.640	9.640	0.000	96	77727	1.00	0.9603	
81 4-Methyl-2-pentanone (MIBK)	43	9.805	9.799	0.006	97	314877	10.0	9.69	
\$ 82 Toluene-d8 (Surr)	98	9.939	9.939	0.000	93	2023108	10.0	9.98	
83 Toluene	92	10.018	10.018	0.000	97	138580	1.00	0.9799	
S 84 1,3-Dichloropropene, Total	100				0			1.92	
85 trans-1,3-Dichloropropene	75	10.262	10.262	0.000	93	61326	1.00	0.9586	
86 Ethyl methacrylate	69	10.317	10.317	0.000	92	48564	1.00	0.9274	
87 1,1,2-Trichloroethane	97	10.469	10.463	0.006	90	33544	1.00	0.9732	
88 Tetrachloroethene	166	10.555	10.555	0.000	97	59869	1.00	1.00	
89 1,3-Dichloropropane	76	10.628	10.628	0.000	87	60568	1.00	0.9586	
91 2-Hexanone	43	10.670	10.671	-0.001	98	207632	10.0	9.47	
93 Chlorodibromomethane	129	10.841	10.841	0.000	90	39307	1.00	0.9465	
94 Ethylene Dibromide	107	10.957	10.951	0.006	96	31563	1.00	0.9632	
S 95 Xylenes, Total	106				0			2.94	
* 97 Chlorobenzene-d5 (IS)	117	11.378	11.372	0.006	88	1510167	10.0	10.0	
96 1-Chlorohexane	91	11.378	11.378	0.000	91	81247	1.00	0.9580	
98 Chlorobenzene	112	11.402	11.402	0.000	95	147408	1.00	0.9785	
99 1,1,1,2-Tetrachloroethane	131	11.481	11.481	0.000	43	48683	1.00	0.9566	
100 Ethylbenzene	91	11.481	11.481	0.000	99	269299	1.00	0.9780	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
101 m-Xylene & p-Xylene	106	11.597	11.597	0.000	0	203446	2.00	1.97	
102 o-Xylene	106	11.926	11.926	0.000	97	98039	1.00	0.9731	
103 Styrene	104	11.939	11.939	0.000	95	162751	1.00	0.9716	
104 Bromoform	173	12.097	12.103	-0.006	96	21569	1.00	0.9153	
105 Isopropylbenzene	105	12.219	12.219	0.000	96	265152	1.00	0.9801	
\$ 108 4-Bromofluorobenzene (Surr)	95	12.365	12.365	0.000	89	738623	10.0	10.0	
109 1,1,2,2-Tetrachloroethane	83	12.463	12.463	0.000	92	41152	1.00	0.9707	
111 Bromobenzene	156	12.487	12.487	0.000	90	55978	1.00	0.9490	
110 trans-1,4-Dichloro-2-butene	53	12.487	12.487	0.000	91	102324	10.0	9.54	
112 1,2,3-Trichloropropane	110	12.512	12.512	0.000	82	10137	1.00	0.9602	
113 N-Propylbenzene	91	12.548	12.548	0.000	99	322588	1.00	0.9837	
114 2-Chlorotoluene	126	12.627	12.627	0.000	96	59702	1.00	0.9546	
115 1,3,5-Trimethylbenzene	105	12.682	12.682	0.000	94	219105	1.00	0.9694	
116 4-Chlorotoluene	126	12.719	12.719	0.000	98	60481	1.00	0.9628	
118 tert-Butylbenzene	134	12.926	12.926	0.000	94	48177	1.00	0.9821	
119 Pentachloroethane	167	12.963	12.963	0.000	84	36977	1.00	0.9719	
120 1,2,4-Trimethylbenzene	105	12.969	12.963	0.006	97	222355	1.00	0.9656	
121 sec-Butylbenzene	105	13.085	13.085	0.000	94	287397	1.00	0.9643	
122 1,3-Dichlorobenzene	146	13.188	13.188	0.000	98	112217	1.00	0.9568	
123 4-Isopropyltoluene	119	13.194	13.194	0.000	97	240509	1.00	0.9585	
* 124 1,4-Dichlorobenzene-d4	152	13.243	13.243	0.000	96	770873	10.0	10.0	
125 1,4-Dichlorobenzene	146	13.261	13.261	0.000	93	111170	1.00	0.9635	
126 1,2,3-Trimethylbenzene	120	13.268	13.268	0.000	97	101457	1.00	1.01	
127 Benzyl chloride	126	13.341	13.335	0.006	98	15312	1.00	0.9305	
129 p-Diethylbenzene	119	13.463	13.463	0.000	97	159711	1.00	0.9865	
130 n-Butylbenzene	92	13.487	13.487	0.000	96	123464	1.00	0.9603	
131 1,2-Dichlorobenzene	146	13.524	13.524	0.000	98	100001	1.00	0.9587	
134 1,2-Dibromo-3-Chloropropane	155	14.066	14.060	0.006	81	4858	1.00	0.9010	
135 1,3,5-Trichlorobenzene	180	14.188	14.188	0.000	97	82856	1.00	0.9388	
136 1,2,4-Trichlorobenzene	180	14.615	14.615	0.000	94	66485	1.00	0.9425	
137 Hexachlorobutadiene	225	14.694	14.694	0.000	97	35624	1.00	0.9205	
138 Naphthalene	128	14.798	14.798	0.000	97	117293	1.00	0.9353	
139 1,2,3-Trichlorobenzene	180	14.944	14.944	0.000	95	55318	1.00	0.9407	
140 2-Methylnaphthalene	142	15.596	15.596	0.000	92	69976	1.00	0.9347	

QC Flag Legend

Review Flags

M - Manually Integrated

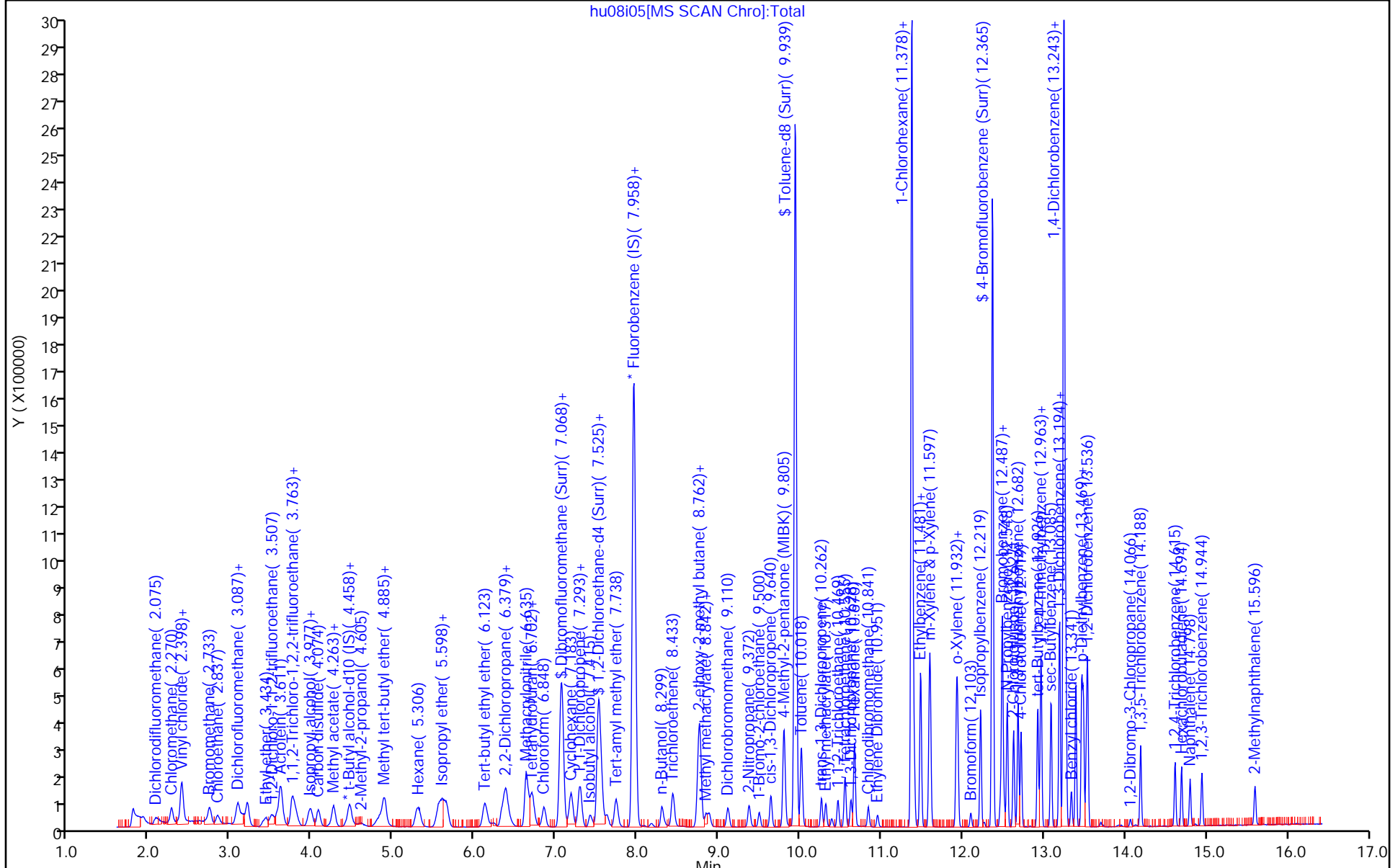
Reagents:

MSV_RV1_826_00015
 MSV_RV4_826_00016
 MSV_RV4GAS826_00046
 MSV_30_826ISS_00005

Amount Added: 2.00
 Amount Added: 2.00
 Amount Added: 2.00
 Amount Added: 5.00

Units: uL
 Units: uL
 Units: uL
 Units: uL

Run Reagent



Eurofins Lancaster Laboratories Env, LLC

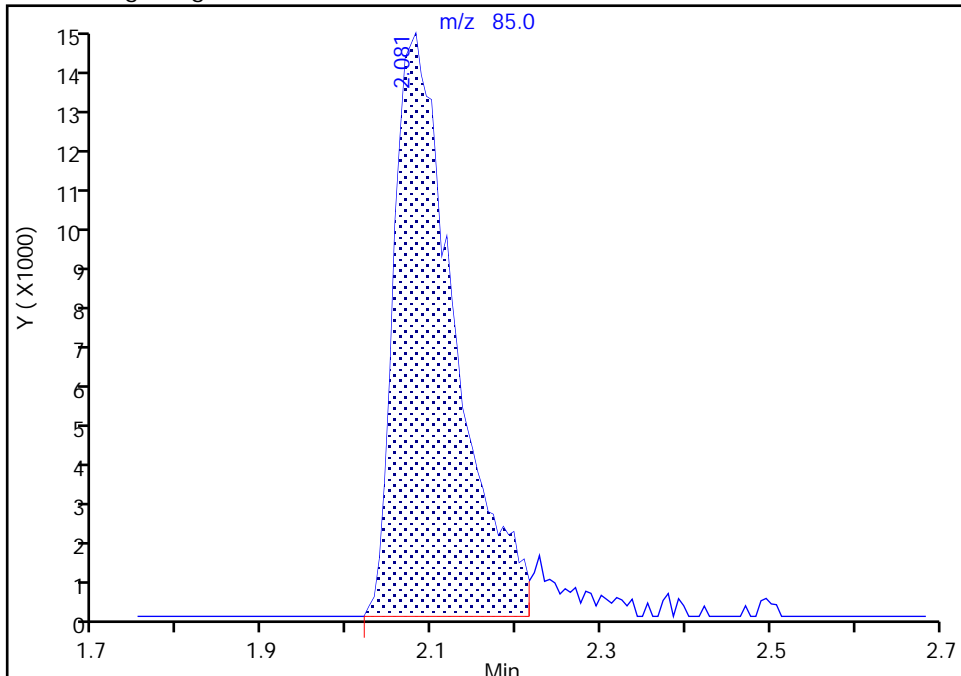
Data File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i05.D
Injection Date: 08-Jun-2020 18:13:30 Instrument ID: 19094
Lims ID: IC std3 1
Client ID:
Operator ID: jkh09052 ALS Bottle#: 15 Worklist Smp#: 16
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

3 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

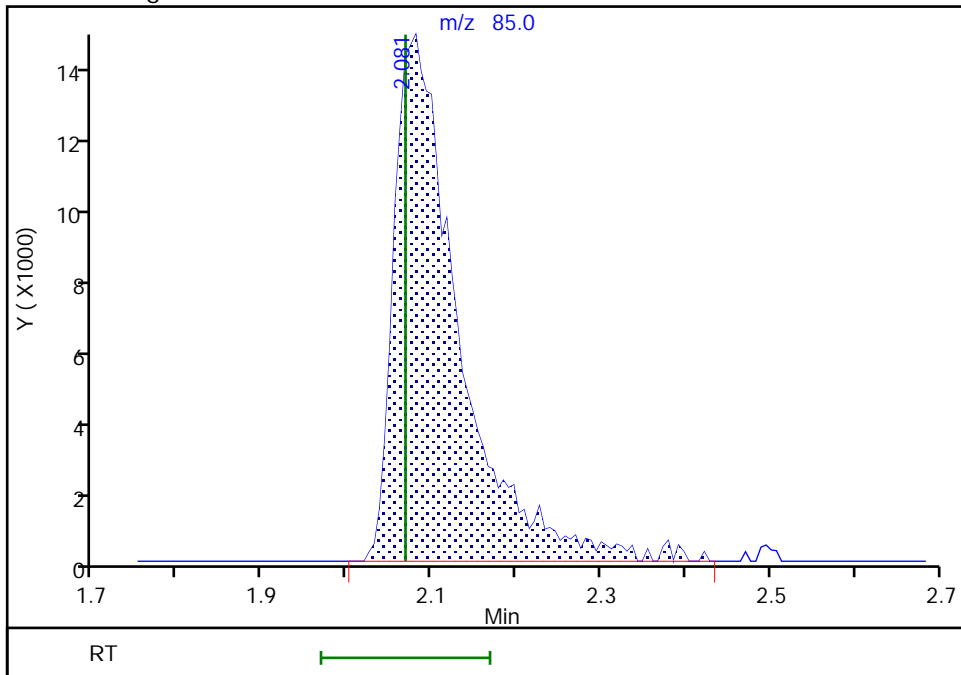
RT: 2.08
Area: 70401
Amount: 0.970235
Amount Units: ug/l

Processing Integration Results



RT: 2.08
Area: 75647
Amount: 1.017082
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 08-Jun-2020 19:30:17
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC

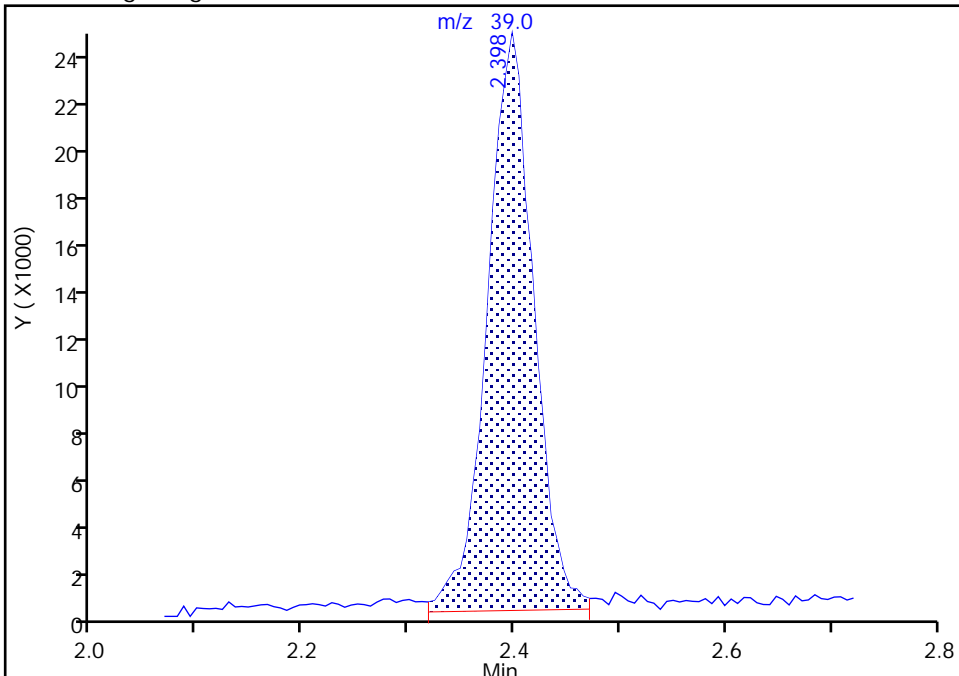
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Injection Date: 08-Jun-2020 18:13:30 Instrument ID: 19094
Lims ID: IC std3 1
Client ID:
Operator ID: jkh09052 ALS Bottle#: 15 Worklist Smp#: 16
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

8 Butadiene, CAS: 106-99-0

Signal: 1

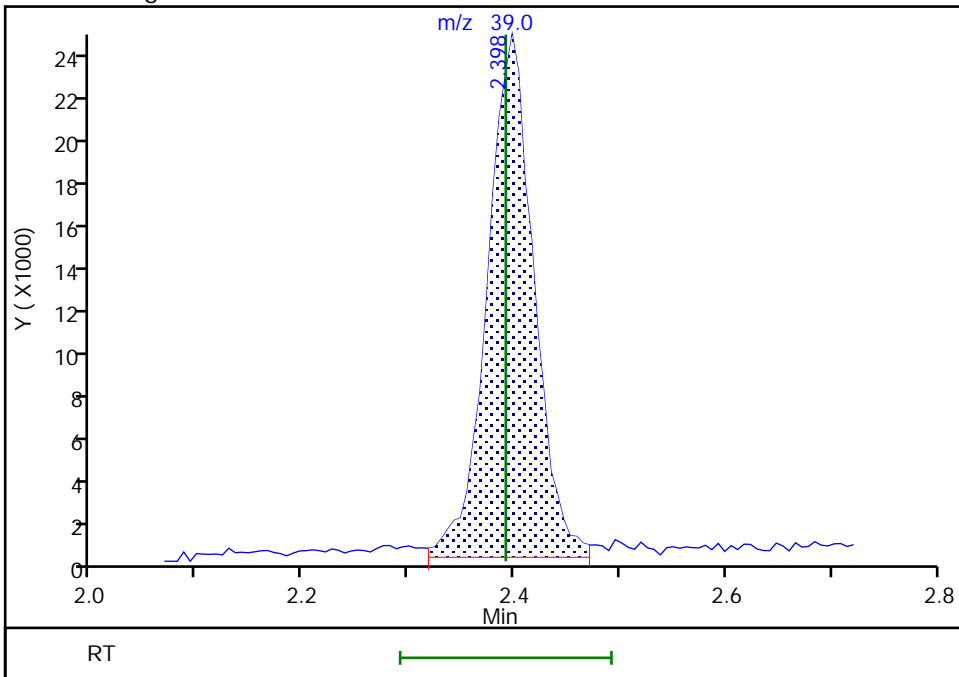
RT: 2.40
Area: 73148
Amount: 0.958943
Amount Units: ug/l

Processing Integration Results



RT: 2.40
Area: 73724
Amount: 0.965253
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 08-Jun-2020 19:30:31
Audit Action: Assigned New Baseline

Audit Reason: Baseline
Page 497 of 638

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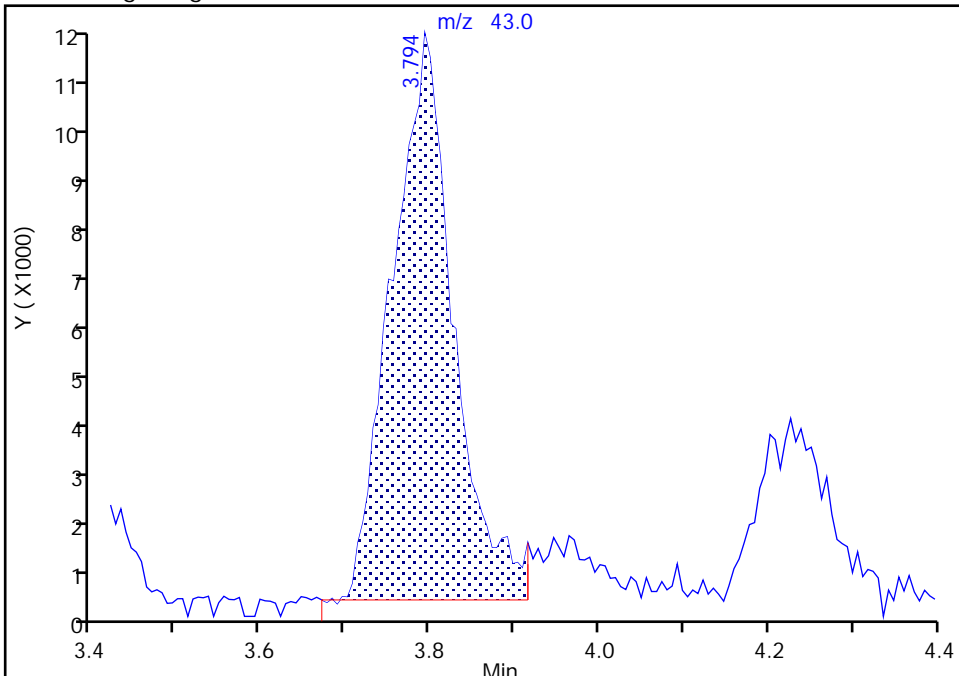
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Injection Date: 08-Jun-2020 18:13:30 Instrument ID: 19094
Lims ID: IC std3 1
Client ID:
Operator ID: jkh09052 ALS Bottle#: 15 Worklist Smp#: 16
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

19 Acetone, CAS: 67-64-1

Signal: 1

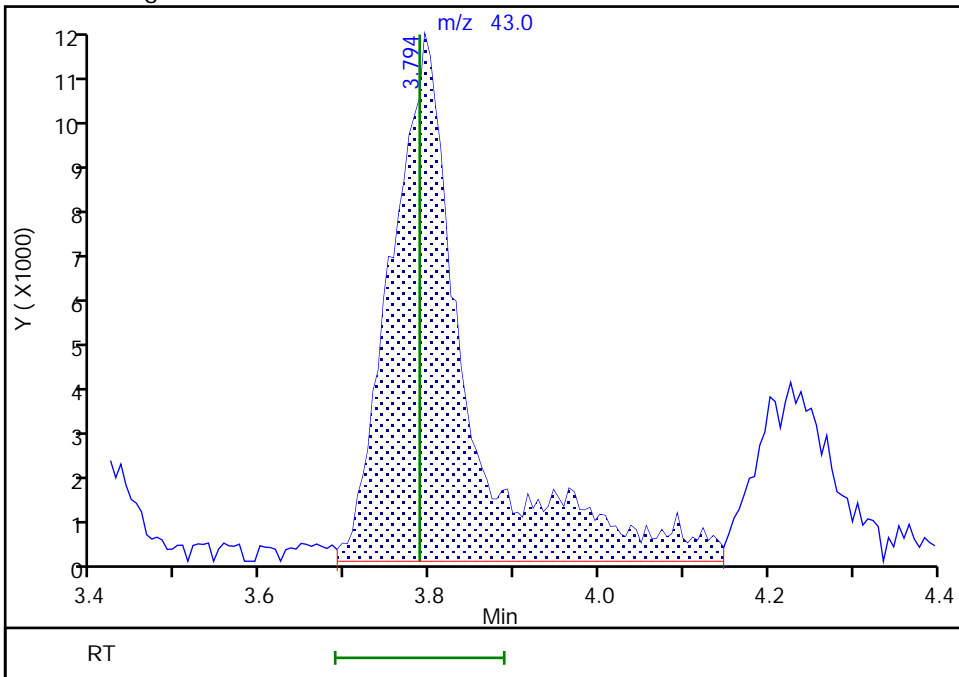
RT: 3.79
Area: 56274
Amount: 7.741053
Amount Units: ug/l

Processing Integration Results



RT: 3.79
Area: 72293
Amount: 9.716517
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 08-Jun-2020 19:31:10
Audit Action: Split an Integrated Peak

Audit Reason: Split Peak

Eurofins Lancaster Laboratories Env, LLC

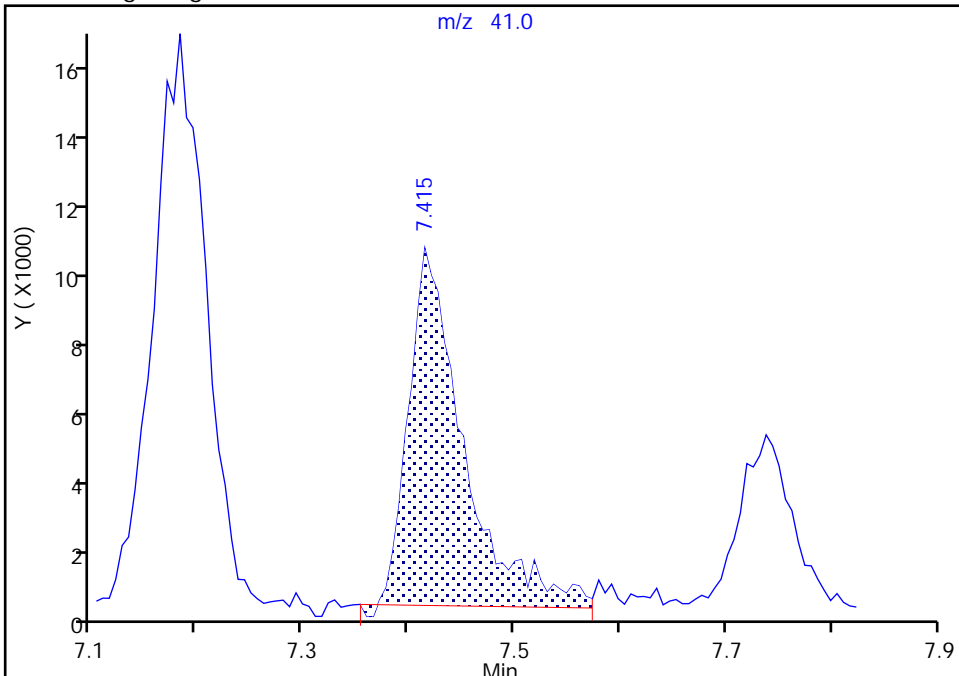
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Injection Date: 08-Jun-2020 18:13:30 Instrument ID: 19094
Lims ID: IC std3 1
Client ID:
Operator ID: jkh09052 ALS Bottle#: 15 Worklist Smp#: 16
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

57 Isobutyl alcohol, CAS: 78-83-1

Signal: 1

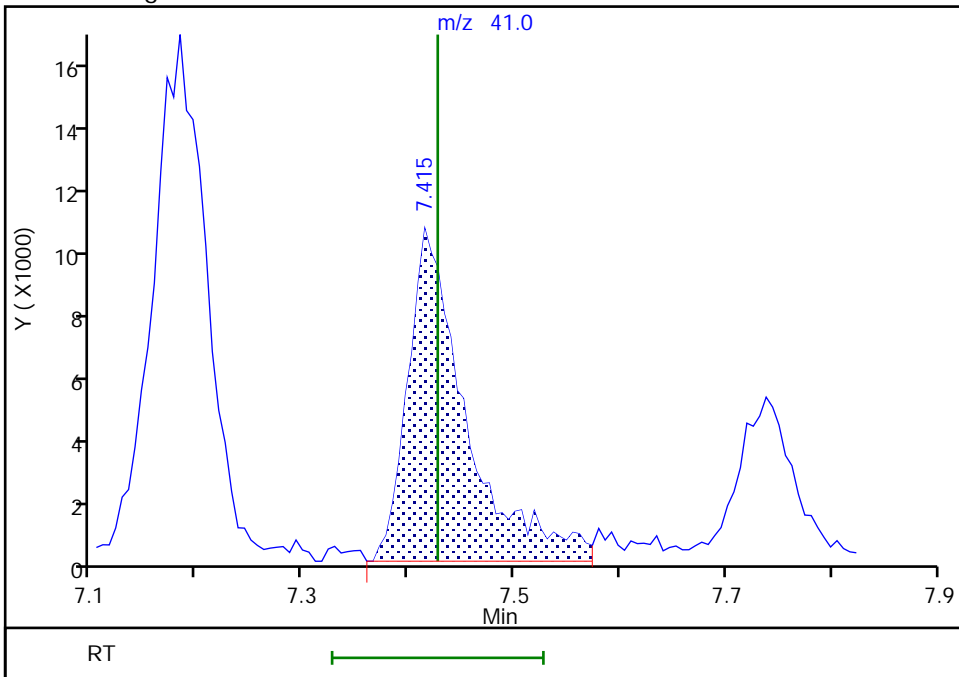
RT: 7.42
Area: 36076
Amount: 45.753634
Amount Units: ug/l

Processing Integration Results



RT: 7.42
Area: 39813
Amount: 47.596520
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 08-Jun-2020 19:31:48
Audit Action: Assigned New Baseline

Audit Reason: Baseline
Page 499 of 638

Eurofins Lancaster Laboratories Env, LLC

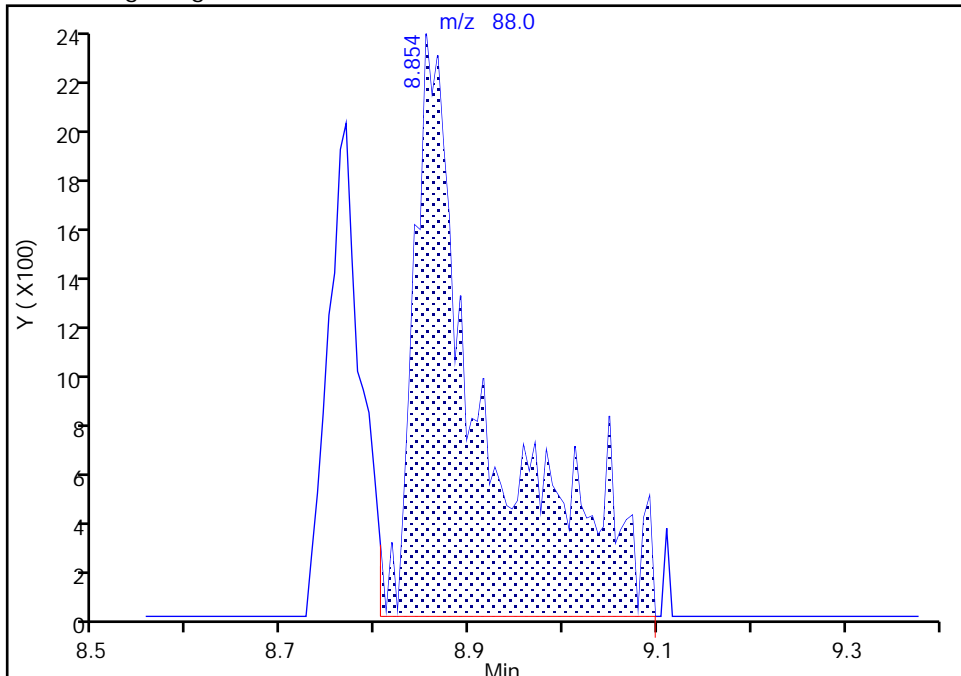
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Injection Date: 08-Jun-2020 18:13:30 Instrument ID: 19094
Lims ID: IC std3 1
Client ID:
Operator ID: jkh09052 ALS Bottle#: 15 Worklist Smp#: 16
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

72 1,4-Dioxane, CAS: 123-91-1

Signal: 1

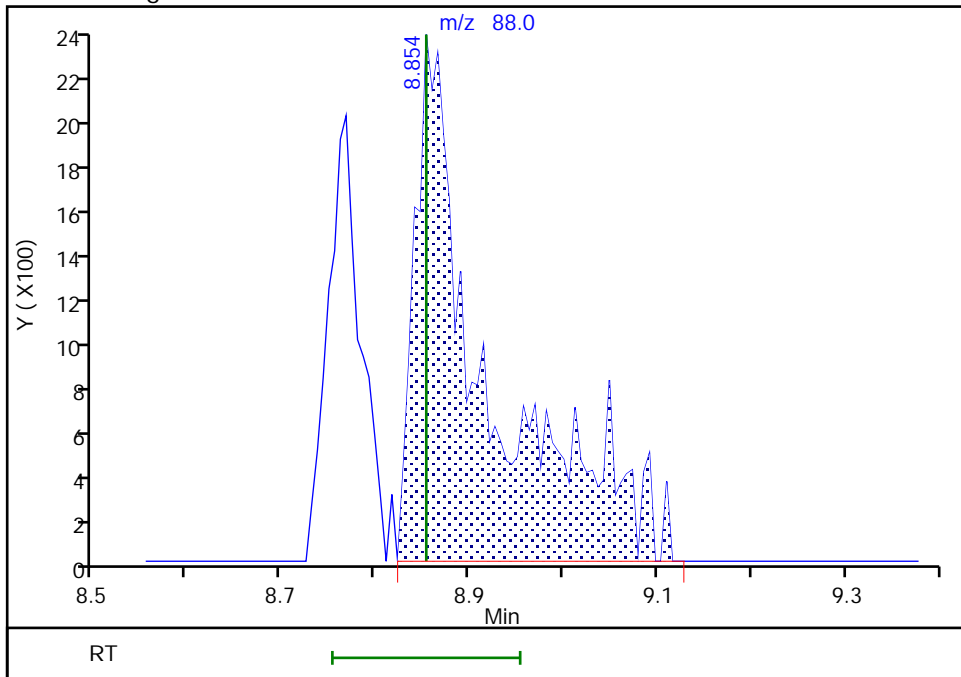
RT: 8.85
Area: 12368
Amount: 64.298065
Amount Units: ug/l

Processing Integration Results



RT: 8.85
Area: 12285
Amount: 61.161299
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 08-Jun-2020 19:32:04
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC

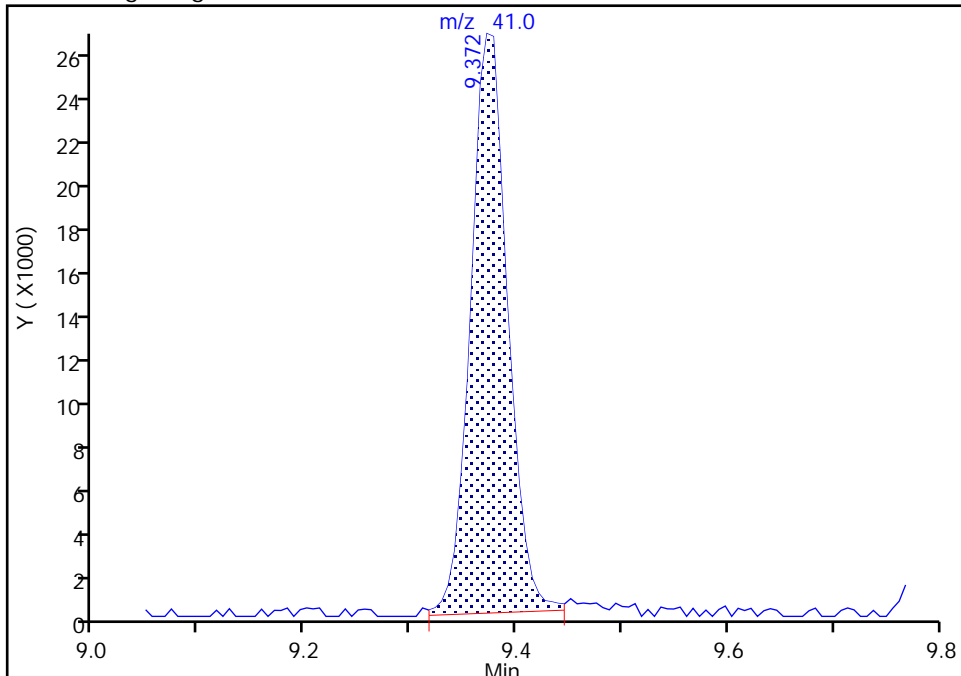
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Injection Date: 08-Jun-2020 18:13:30 Instrument ID: 19094
Lims ID: IC std3 1
Client ID:
Operator ID: jkh09052 ALS Bottle#: 15 Worklist Smp#: 16
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

76 2-Nitropropane, CAS: 79-46-9

Signal: 1

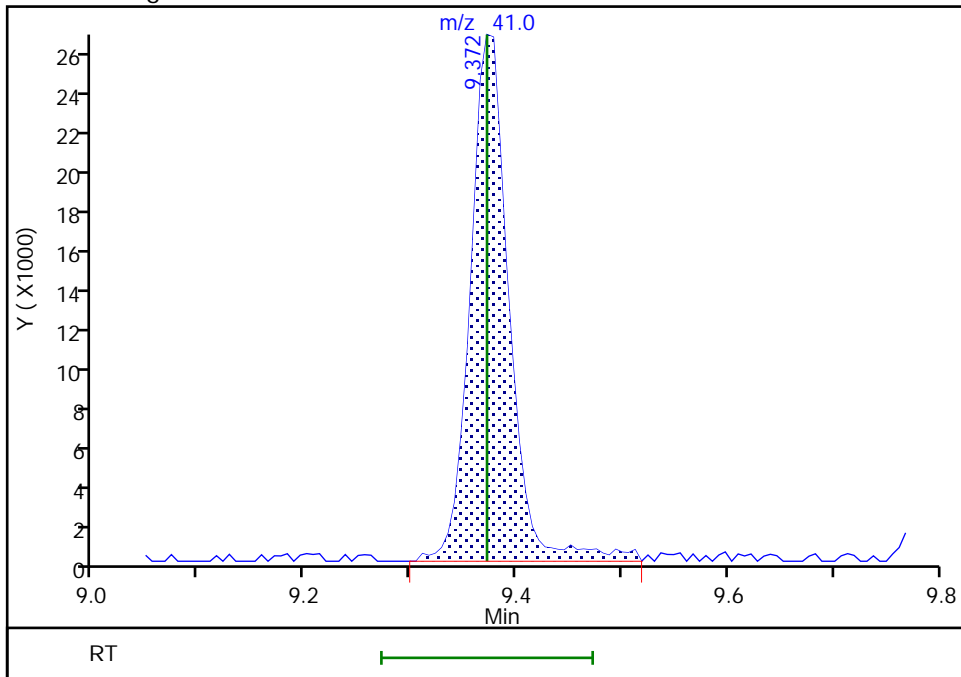
RT: 9.37
Area: 62843
Amount: 9.553574
Amount Units: ug/l

Processing Integration Results



RT: 9.37
Area: 66403
Amount: 9.923188
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 08-Jun-2020 19:32:14
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i06.D
 Lims ID: IC std2 0.5
 Client ID:
 Sample Type: IC Calib Level: 2
 Inject. Date: 08-Jun-2020 18:35:30 ALS Bottle#: 16 Worklist Smp#: 17
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: 410-0002918-017
 Misc. Info.: IC STD2 0.5
 Operator ID: jkh09052 Instrument ID: 19094
 Sublist: chrom-MSV_19094_25mL*sub1
 Method: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 22-Jun-2020 11:02:16 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1020

First Level Reviewer: campbellme

Date: 08-Jun-2020 19:38:41

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
3 Dichlorodifluoromethane	85	2.074	2.069	0.005	98	36004	0.5000	0.4831	M
6 Chloromethane	50	2.263	2.264	-0.001	98	43537	0.5000	0.4906	
7 Vinyl chloride	62	2.385	2.386	-0.001	97	39203	0.5000	0.4932	
8 Butadiene	39	2.391	2.392	-0.001	92	39436	0.5000	0.5153	
9 Bromomethane	94	2.727	2.733	-0.006	89	26196	0.5000	0.4861	
10 Chloroethane	64	2.843	2.831	0.012	99	25009	0.5000	0.5141	
11 Dichlorofluoromethane	67	3.086	3.074	0.012	97	51811	0.5000	0.4958	
13 Trichlorofluoromethane	101	3.141	3.129	0.012	95	39300	0.5000	0.4769	
15 Ethyl ether	59	3.422	3.422	0.000	96	19868	0.4999	0.4861	
16 1,2-Dichloro-1,1,2-trifluoroetha	67	3.489	3.495	-0.006	92	31066	0.5000	0.4806	
17 Acrolein	56	3.605	3.605	0.000	99	151365	25.0	24.6	
18 1,1-Dichloroethene	96	3.751	3.745	0.006	98	21111	0.5000	0.4558	
20 112TCTFE	101	3.800	3.782	0.018	76	21712	0.5000	0.4300	
19 Acetone	43	3.794	3.788	0.006	40	42595	5.00	5.62	M
22 Iodomethane	142	3.964	3.952	0.012	99	43170	0.5000	0.4798	
21 Isopropyl alcohol	45	3.940	3.971	-0.031	30	13471	10.0	11.7	M
23 Ethyl bromide	108	3.995	3.989	0.006	96	20222	0.5003	0.4800	
24 Carbon disulfide	76	4.080	4.068	0.012	96	73573	0.5000	0.4788	
26 Methyl acetate	43	4.214	4.221	-0.007	72	14170	0.5000	0.8339	
27 3-Chloro-1-propene	41	4.257	4.257	0.000	94	48576	0.5000	0.5162	
29 Methylene Chloride	84	4.458	4.446	0.012	92	27973	0.5000	0.5075	
* 28 t-Butyl alcohol-d10 (IS)	65	4.458	4.458	0.000	0	107333	50.0	50.0	
30 2-Methyl-2-propanol	59	4.598	4.599	-0.001	97	23226	10.0	10.9	
31 Acrylonitrile	53	4.806	4.800	0.006	100	24444	2.50	2.40	
32 Methyl tert-butyl ether	73	4.860	4.861	-0.001	96	54155	0.5000	0.4891	
33 trans-1,2-Dichloroethene	96	4.891	4.879	0.012	98	24937	0.5000	0.4733	
34 Hexane	57	5.299	5.300	-0.001	95	36394	0.5000	0.4351	
35 1,1-Dichloroethane	63	5.537	5.543	-0.006	95	49072	0.5000	0.4841	
37 Isopropyl ether	45	5.592	5.580	0.012	96	93006	0.5000	0.4903	
38 2-Chloro-1,3-butadiene	53	5.647	5.647	0.000	91	42544	0.5000	0.4773	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
39 Tert-butyl ethyl ether	59	6.116	6.117	-0.001	99	81237	0.5000	0.5043	
S 40 1,2-Dichloroethene, Total	100				0			0.9742	
41 2-Butanone (MEK)	43	6.330	6.324	0.006	100	65698	5.00	5.19	M
42 cis-1,2-Dichloroethene	96	6.360	6.366	-0.006	82	30244	0.5000	0.5009	a
43 2,2-Dichloropropane	77	6.378	6.385	-0.007	87	37421	0.5000	0.4758	
45 Propionitrile	54	6.421	6.415	0.006	99	32890	10.0	10.1	
47 Methacrylonitrile	67	6.628	6.629	-0.001	92	61362	5.00	4.82	
48 Chlorobromomethane	128	6.708	6.702	0.006	78	11842	0.5000	0.4684	
49 Tetrahydrofuran	71	6.695	6.702	-0.007	79	16791	5.00	4.99	
50 Chloroform	83	6.854	6.848	0.006	93	45023	0.5000	0.4752	
\$ 51 Dibromofluoromethane (Surr)	113	7.061	7.061	0.000	94	494977	10.0	9.95	
52 1,1,1-Trichloroethane	97	7.073	7.080	-0.007	81	38058	0.5000	0.4682	
53 Cyclohexane	56	7.177	7.183	-0.006	90	46285	0.5000	0.4443	
55 1,1-Dichloropropene	75	7.299	7.293	0.006	96	36997	0.5000	0.4904	
56 Carbon tetrachloride	117	7.281	7.293	-0.012	83	32876	0.5000	0.4691	
57 Isobutyl alcohol	41	7.421	7.427	-0.006	92	24382	25.0	28.6	M
\$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.525	7.519	0.006	0	101182	10.0	9.98	
59 Benzene	78	7.555	7.549	0.006	93	112927	0.5000	0.4871	
60 1,2-Dichloroethane	62	7.622	7.622	0.000	94	26204	0.5000	0.4828	
62 Tert-amyl methyl ether	73	7.738	7.732	0.006	98	63408	0.5000	0.4775	
* 65 Fluorobenzene (IS)	96	7.951	7.952	-0.001	98	2104869	10.0	10.0	
64 n-Heptane	43	7.963	7.958	0.005	48	42638	0.5000	0.4458	
66 n-Butanol	56	8.299	8.299	0.000	90	34215	50.0	46.1	
67 Trichloroethene	95	8.433	8.433	0.000	98	27452	0.5000	0.4827	
68 Methylcyclohexane	83	8.750	8.744	0.006	94	47915	0.5000	0.4728	
69 2-ethoxy-2-methyl butane	87	8.768	8.768	0.000	90	39794	0.5000	0.4872	
70 1,2-Dichloropropane	63	8.774	8.768	0.006	70	28652	0.5000	0.4890	
71 Methyl methacrylate	69	8.841	8.842	-0.001	92	12252	0.5000	0.4949	
72 1,4-Dioxane	88	8.860	8.854	0.006	42	5511	25.0	26.9	M
73 Dibromomethane	93	8.890	8.878	0.012	93	12468	0.5000	0.5063	Ma
75 Dichlorobromomethane	83	9.116	9.110	0.006	98	32489	0.5000	0.4924	
76 2-Nitropropane	41	9.366	9.372	-0.006	99	32268	5.00	4.73	
79 1-Bromo-2-chloroethane	63	9.494	9.494	0.000	98	28930	0.5000	0.4980	
80 cis-1,3-Dichloropropene	75	9.640	9.640	0.000	96	37959	0.5000	0.4681	
81 4-Methyl-2-pentanone (MIBK)	43	9.798	9.799	-0.001	97	160231	5.00	4.84	
\$ 82 Toluene-d8 (Surr)	98	9.939	9.939	0.000	94	2017988	10.0	9.93	
83 Toluene	92	10.018	10.018	0.000	99	68638	0.5000	0.4841	
S 84 1,3-Dichloropropene, Total	100				0			0.9428	
85 trans-1,3-Dichloropropene	75	10.262	10.262	0.000	93	30447	0.5000	0.4747	
86 Ethyl methacrylate	69	10.317	10.317	0.000	90	25567	0.5000	0.4870	
87 1,1,2-Trichloroethane	97	10.469	10.463	0.006	89	16468	0.5000	0.4766	
88 Tetrachloroethene	166	10.554	10.555	-0.001	97	28451	0.5000	0.4721	
89 1,3-Dichloropropane	76	10.628	10.628	0.000	93	30316	0.5000	0.4786	
91 2-Hexanone	43	10.670	10.671	-0.001	98	108090	5.00	4.84	
93 Chlorodibromomethane	129	10.841	10.841	0.000	90	19544	0.5000	0.4694	
94 Ethylene Dibromide	107	10.951	10.951	0.000	99	15992	0.5000	0.4868	
S 95 Xylenes, Total	106				0			1.45	
* 97 Chlorobenzene-d5 (IS)	117	11.377	11.372	0.005	86	1514008	10.0	10.0	
96 1-Chlorohexane	91	11.377	11.378	-0.001	35	41417	0.5000	0.4871	
98 Chlorobenzene	112	11.402	11.402	0.000	95	71973	0.5000	0.4766	
99 1,1,1,2-Tetrachloroethane	131	11.481	11.481	0.000	94	23864	0.5000	0.4677	
100 Ethylbenzene	91	11.481	11.481	0.000	99	132788	0.5000	0.4810	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
101 m-Xylene & p-Xylene	106	11.597	11.597	0.000	0	99900	1.00	0.9655	
102 o-Xylene	106	11.920	11.926	-0.006	96	48764	0.5000	0.4828	
103 Styrene	104	11.938	11.939	-0.001	95	79750	0.5000	0.4749	
104 Bromoform	173	12.103	12.103	0.000	95	11020	0.5000	0.4664	
105 Isopropylbenzene	105	12.219	12.219	0.000	96	128741	0.5000	0.4747	
\$ 108 4-Bromofluorobenzene (Surr)	95	12.365	12.365	0.000	89	741240	10.0	10.0	
109 1,1,2,2-Tetrachloroethane	83	12.463	12.463	0.000	92	20454	0.5000	0.4776	
111 Bromobenzene	156	12.487	12.487	0.000	81	28817	0.5000	0.4836	
110 trans-1,4-Dichloro-2-butene	53	12.487	12.487	0.000	92	50048	5.00	4.58	
112 1,2,3-Trichloropropane	110	12.511	12.512	-0.001	77	5418	0.5000	0.5081	
113 N-Propylbenzene	91	12.548	12.548	0.000	99	159019	0.5000	0.4800	
114 2-Chlorotoluene	126	12.627	12.627	0.000	96	30058	0.5000	0.4758	
115 1,3,5-Trimethylbenzene	105	12.682	12.682	0.000	94	109955	0.5000	0.4816	
116 4-Chlorotoluene	126	12.719	12.719	0.000	97	31517	0.5000	0.4967	
118 tert-Butylbenzene	134	12.926	12.926	0.000	94	23966	0.5000	0.4836	
119 Pentachloroethane	167	12.963	12.963	-0.001	81	18101	0.5000	0.4710	
120 1,2,4-Trimethylbenzene	105	12.969	12.963	0.006	97	110251	0.5000	0.4740	
121 sec-Butylbenzene	105	13.084	13.085	-0.001	94	142029	0.5000	0.4718	
122 1,3-Dichlorobenzene	146	13.188	13.188	0.000	98	56811	0.5000	0.4795	
123 4-Isopropyltoluene	119	13.194	13.194	0.000	97	118906	0.5000	0.4691	
* 124 1,4-Dichlorobenzene-d4	152	13.243	13.243	0.000	96	778704	10.0	10.0	
125 1,4-Dichlorobenzene	146	13.261	13.261	0.000	93	55848	0.5000	0.4791	
126 1,2,3-Trimethylbenzene	120	13.273	13.268	0.005	98	49357	0.5000	0.4866	
127 Benzyl chloride	126	13.334	13.335	-0.001	99	6998	0.5000	0.4210	
129 p-Diethylbenzene	119	13.462	13.463	-0.001	96	79115	0.5000	0.4838	
130 n-Butylbenzene	92	13.487	13.487	0.000	98	59973	0.5000	0.4618	
131 1,2-Dichlorobenzene	146	13.523	13.524	-0.001	96	50879	0.5000	0.4829	
134 1,2-Dibromo-3-Chloropropane	155	14.066	14.060	0.006	83	2365	0.5000	0.4342	
135 1,3,5-Trichlorobenzene	180	14.188	14.188	0.000	97	42078	0.5000	0.4720	
136 1,2,4-Trichlorobenzene	180	14.615	14.615	0.000	94	32747	0.5000	0.4596	
137 Hexachlorobutadiene	225	14.694	14.694	0.000	97	18126	0.5000	0.4636	
138 Naphthalene	128	14.798	14.798	0.000	97	57668	0.5000	0.4552	
139 1,2,3-Trichlorobenzene	180	14.944	14.944	0.000	95	26537	0.5000	0.4467	
140 2-Methylnaphthalene	142	15.596	15.596	0.000	94	33560	0.5000	0.4438	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

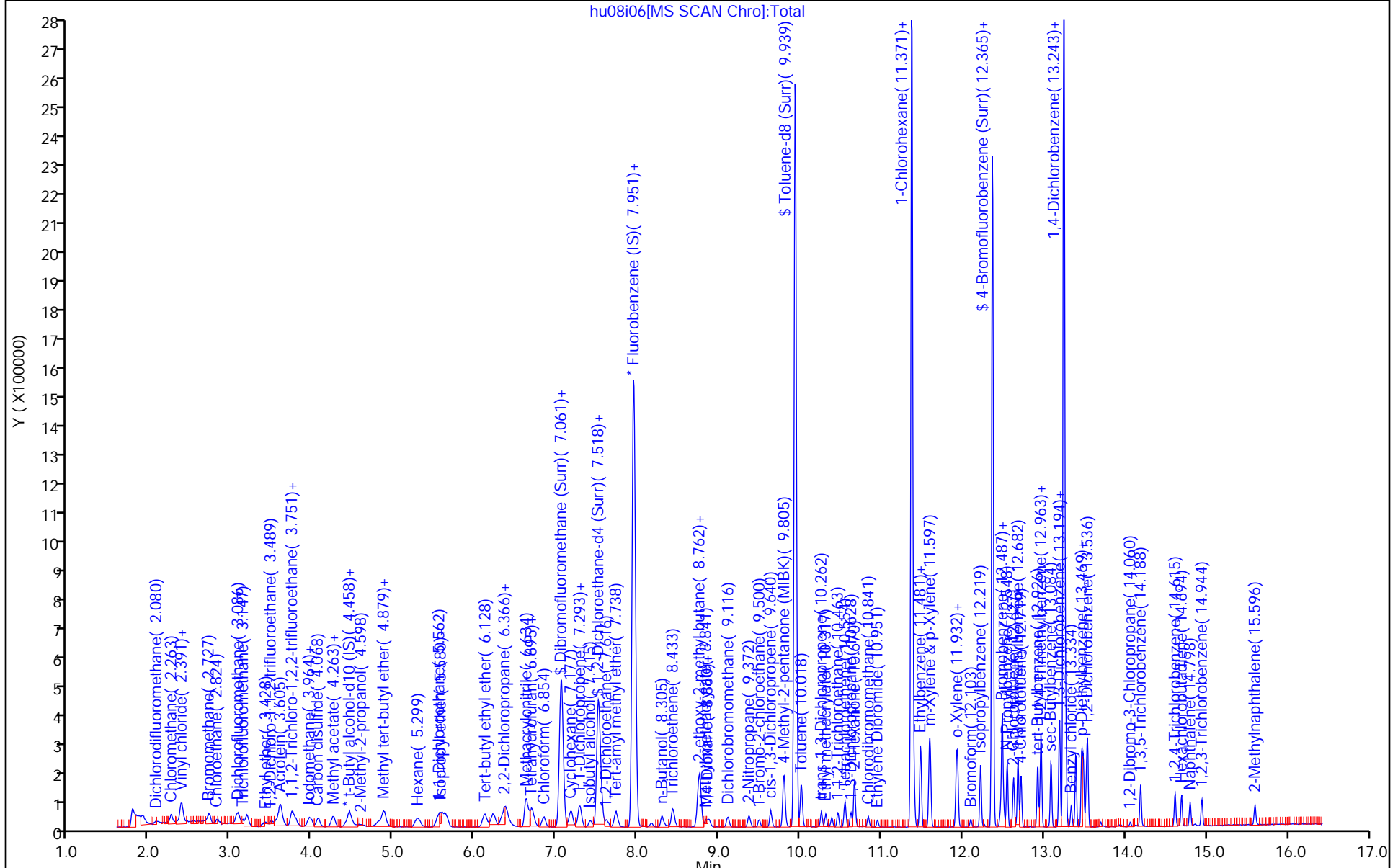
Reagents:

MSV_RV1_826_00015
MSV_RV4_826_00016
MSV_RV4GAS826_00046
MSV_30_826ISS_00005

Amount Added: 2.00
Amount Added: 2.00
Amount Added: 2.00
Amount Added: 5.00

Units: uL
Units: uL
Units: uL
Units: uL

Run Reagent



hu08i06[MS SCAN Chro]:Total

Y (X100000)

Min

Eurofins Lancaster Laboratories Env, LLC

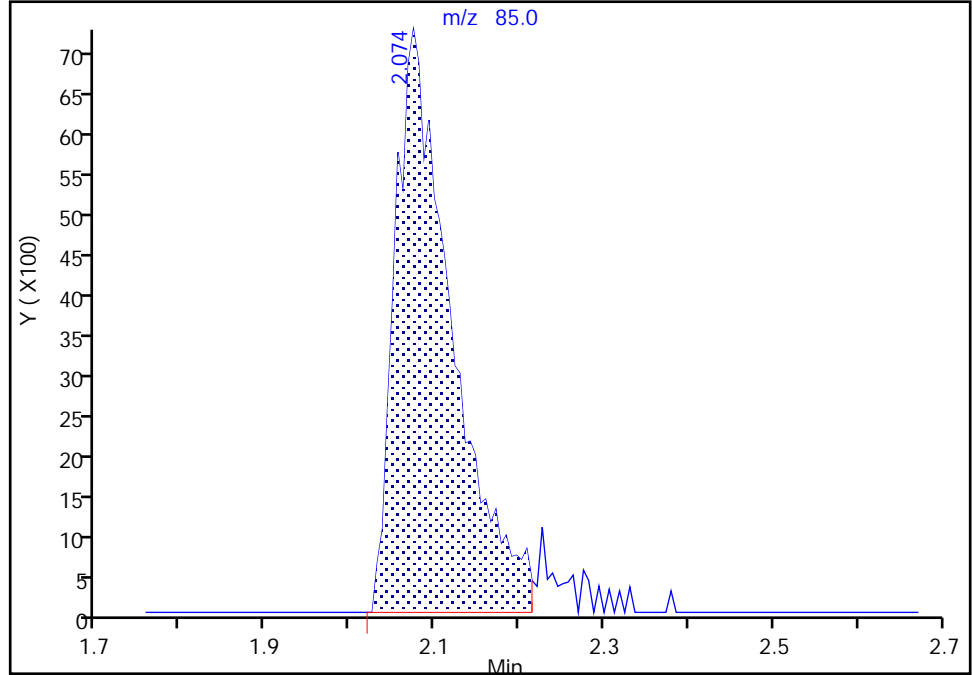
Data File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i06.D
Injection Date: 08-Jun-2020 18:35:30 Instrument ID: 19094
Lims ID: IC std2 0.5
Client ID:
Operator ID: jkh09052 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

3 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

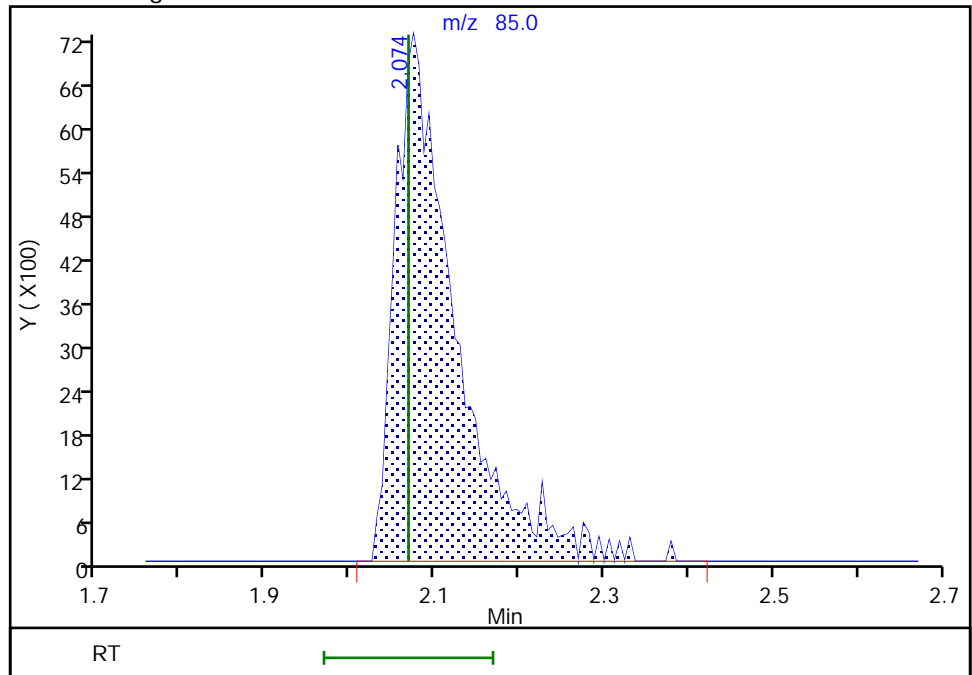
RT: 2.07
Area: 33743
Amount: 0.459378
Amount Units: ug/l

Processing Integration Results



RT: 2.07
Area: 36004
Amount: 0.483132
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 08-Jun-2020 19:32:56
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC

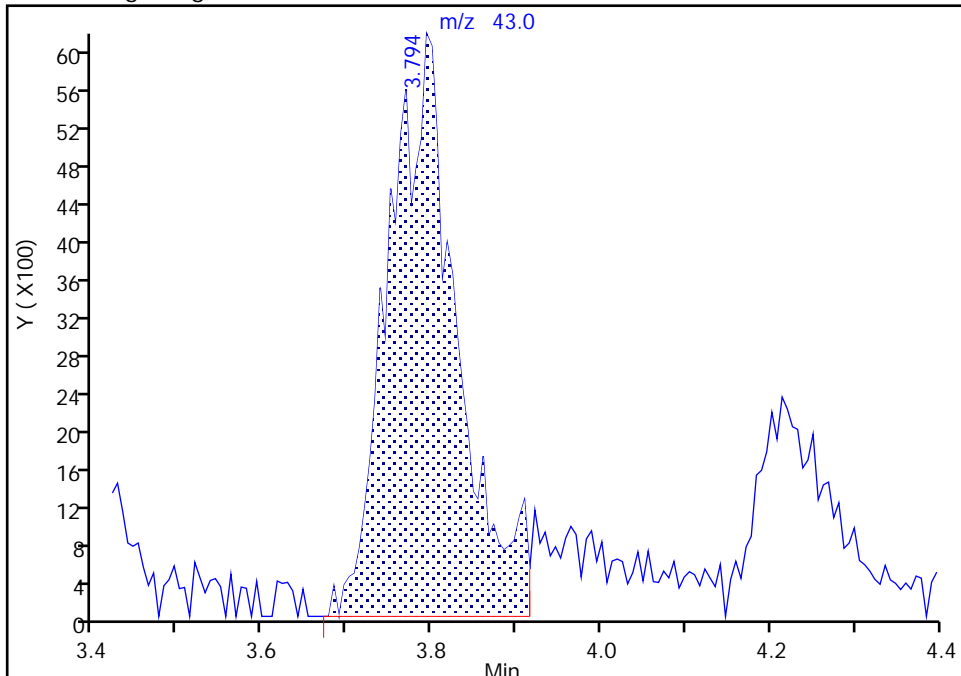
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Injection Date: 08-Jun-2020 18:35:30 Instrument ID: 19094
Lims ID: IC std2 0.5
Client ID:
Operator ID: jkh09052 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

19 Acetone, CAS: 67-64-1

Signal: 1

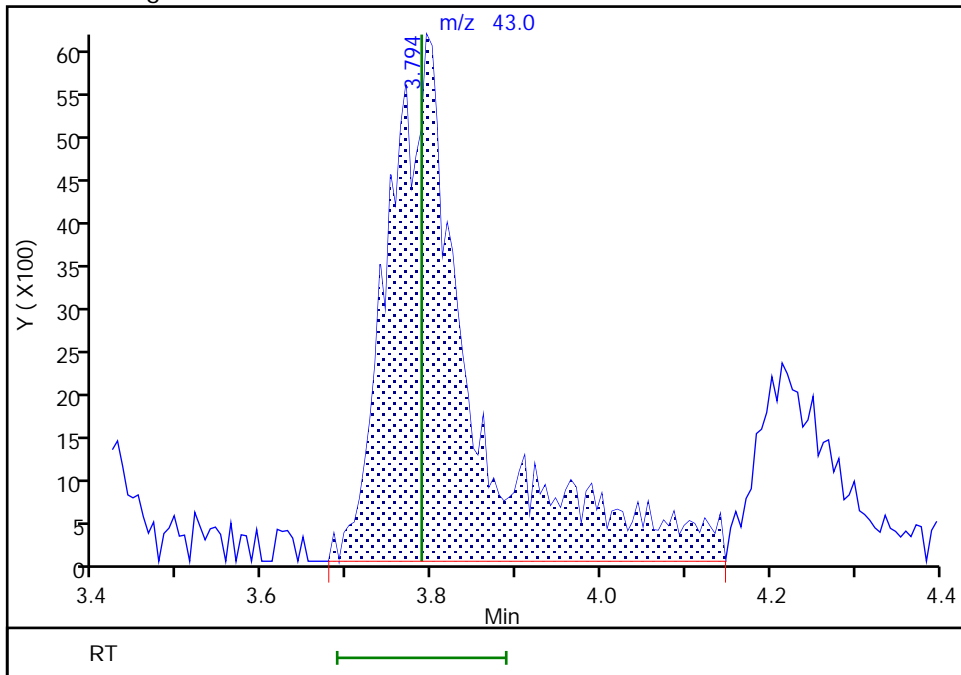
RT: 3.79
Area: 34703
Amount: 4.834135
Amount Units: ug/l

Processing Integration Results



RT: 3.79
Area: 42595
Amount: 5.620050
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 08-Jun-2020 19:33:11
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC

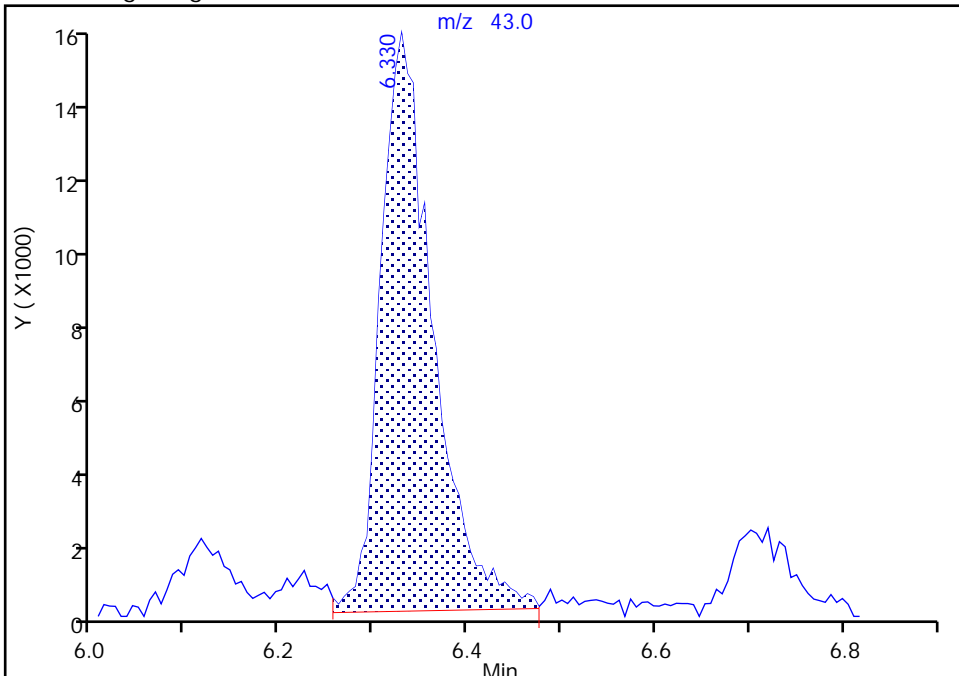
Data File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i06.D
Injection Date: 08-Jun-2020 18:35:30 Instrument ID: 19094
Lims ID: IC std2 0.5
Client ID:
Operator ID: jkh09052 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

41 2-Butanone (MEK), CAS: 78-93-3

Signal: 1

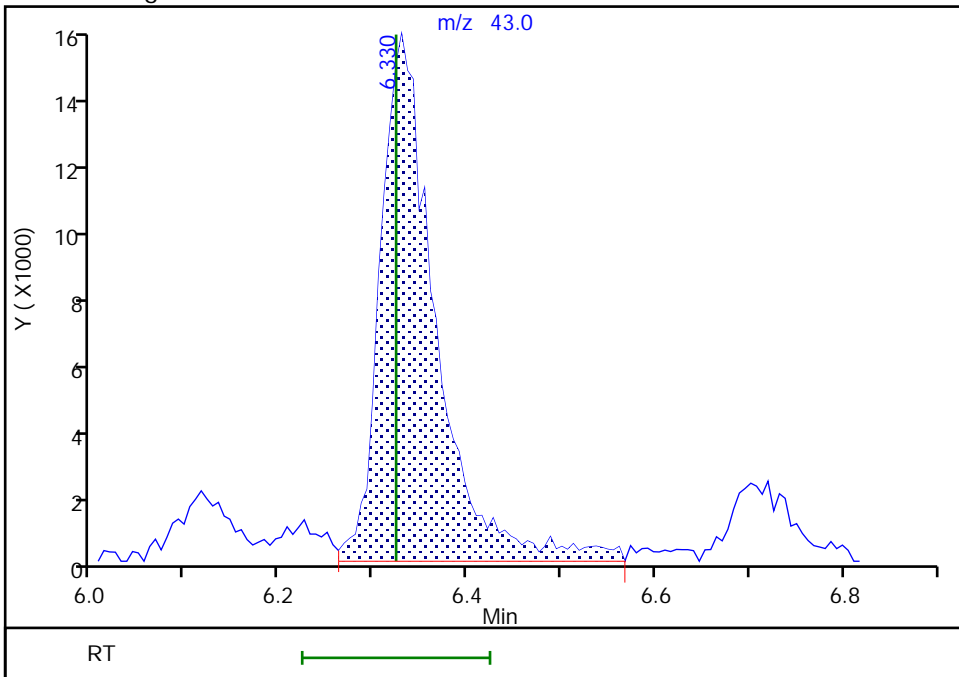
RT: 6.33
Area: 61515
Amount: 4.962946
Amount Units: ug/l

Processing Integration Results



RT: 6.33
Area: 65698
Amount: 5.185821
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 08-Jun-2020 19:33:44
Audit Action: Split an Integrated Peak

Audit Reason: Split Peak

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i06.D
Injection Date: 08-Jun-2020 18:35:30 Instrument ID: 19094
Lims ID: IC std2 0.5
Client ID:
Operator ID: jkh09052
Purge Vol: 25.000 mL
Method: MSV_19094_25mL
Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

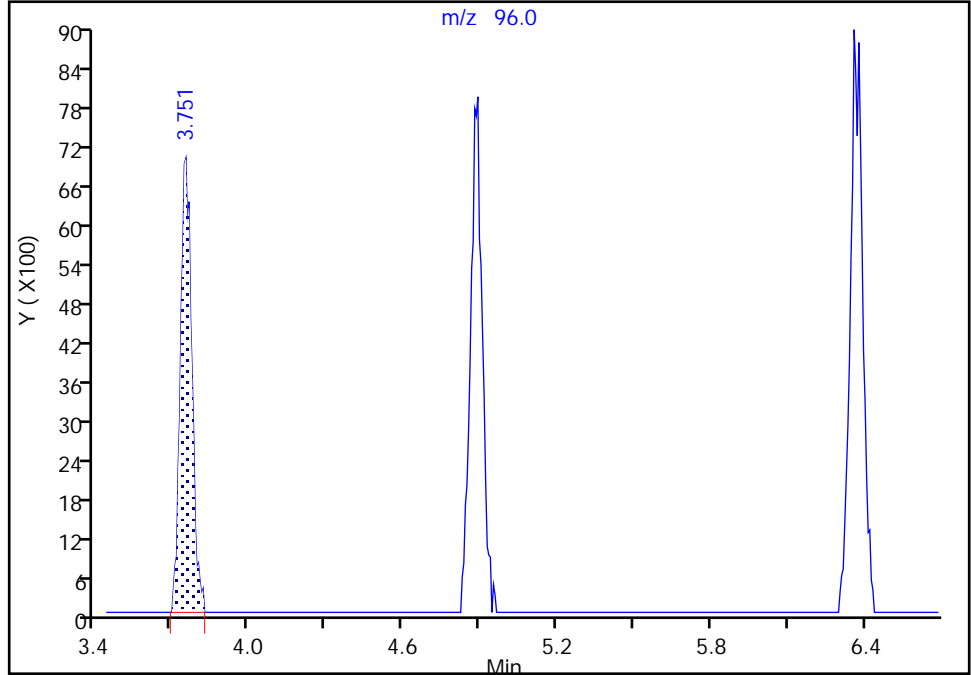
ALS Bottle#: 16 Worklist Smp#: 17
Dil. Factor: 1.0000
Limit Group: MSV - 8260C_D
Detector: MS Quad

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

Signal: 1

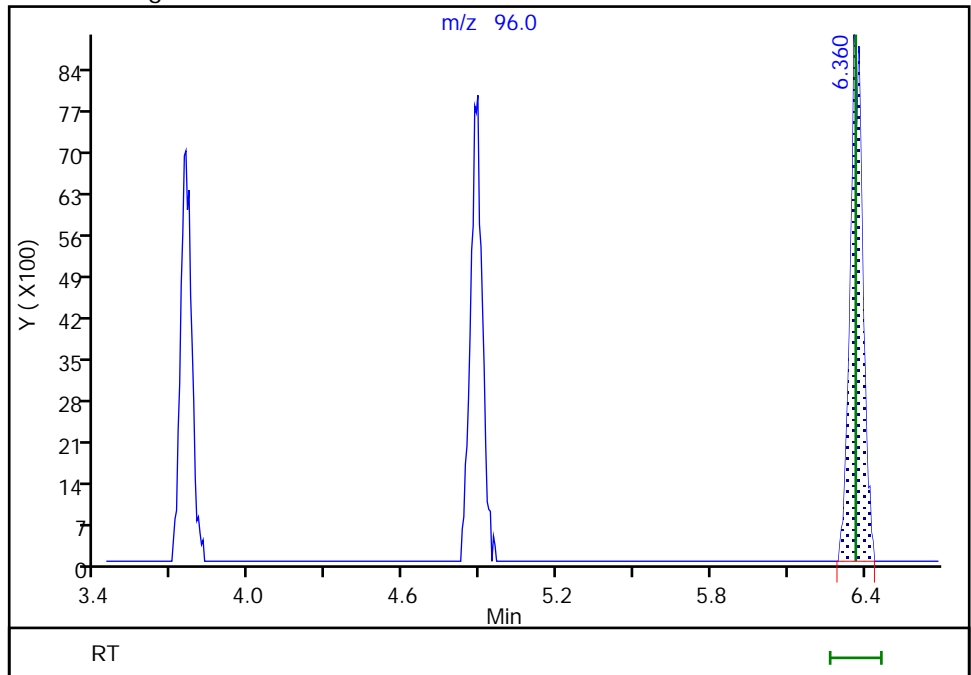
RT: 3.75
Area: 21346
Amount: 0.368994
Amount Units: ug/l

Processing Integration Results



RT: 6.36
Area: 30244
Amount: 0.500927
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 08-Jun-2020 19:35:15
Audit Action: Assigned Compound ID

Audit Reason: Split Peak

Eurofins Lancaster Laboratories Env, LLC

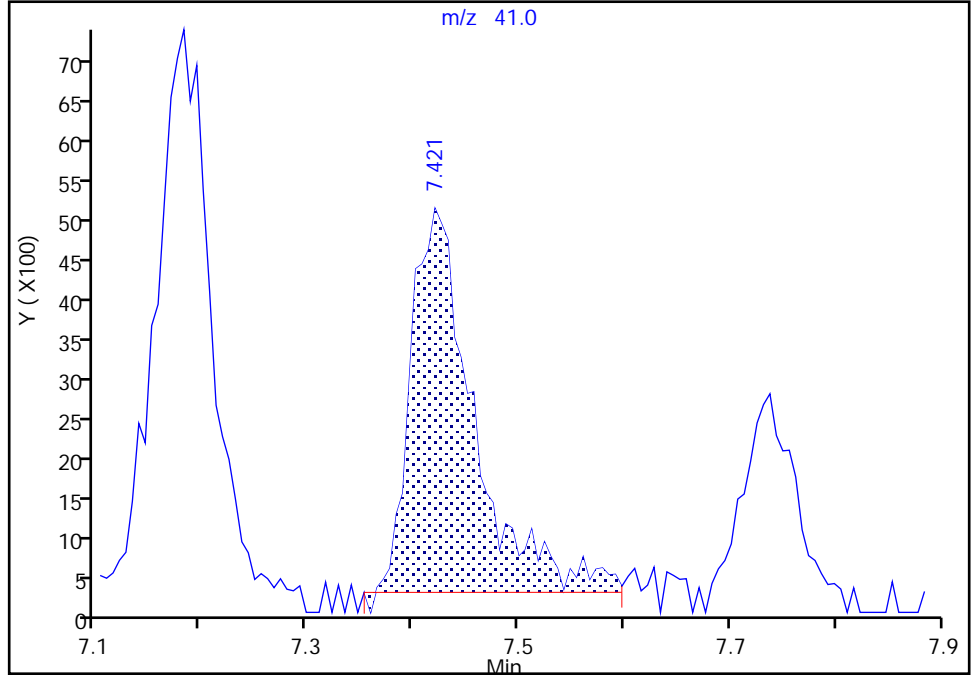
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Injection Date: 08-Jun-2020 18:35:30 Instrument ID: 19094
Lims ID: IC std2 0.5
Client ID:
Operator ID: jkh09052 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

57 Isobutyl alcohol, CAS: 78-83-1

Signal: 1

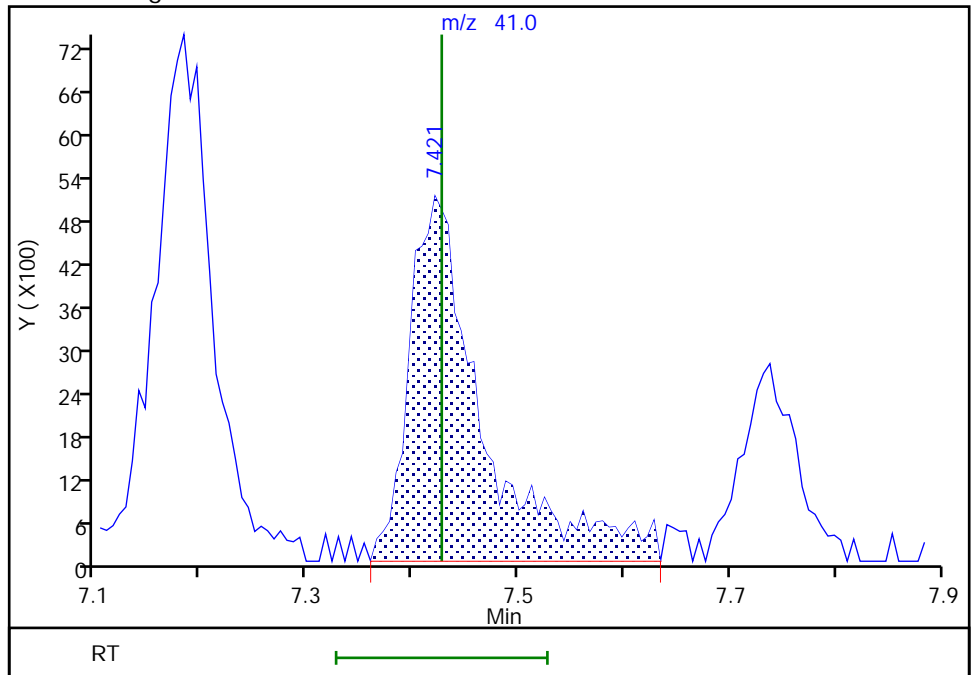
RT: 7.42
Area: 19904
Amount: 24.318115
Amount Units: ug/l

Processing Integration Results



RT: 7.42
Area: 24382
Amount: 28.614545
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 08-Jun-2020 19:35:58
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC

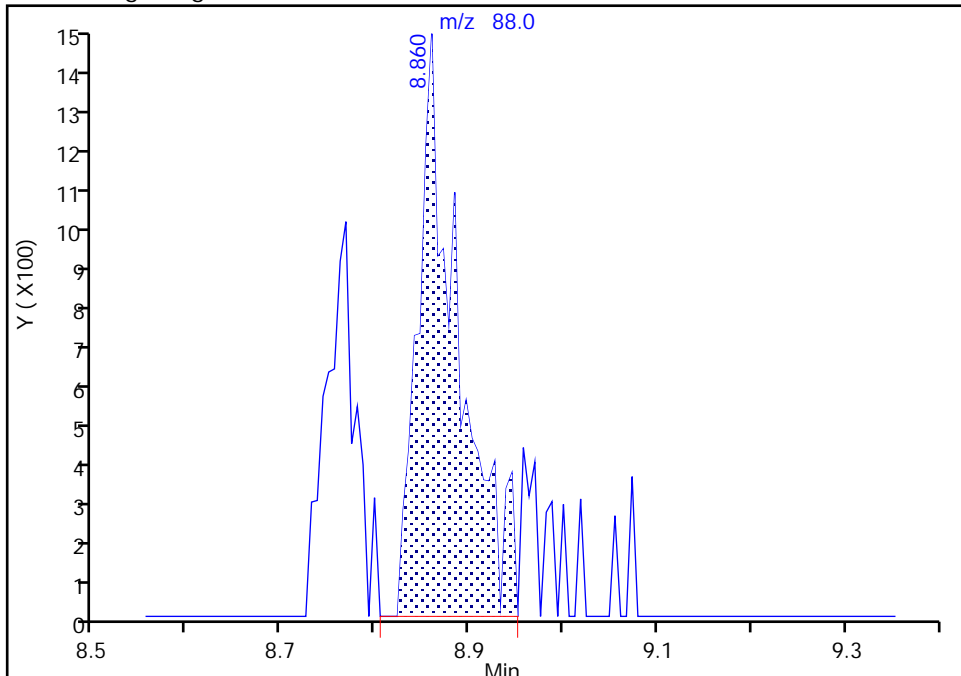
Data File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i06.D
 Injection Date: 08-Jun-2020 18:35:30 Instrument ID: 19094
 Lims ID: IC std2 0.5
 Client ID:
 Operator ID: jkh09052 ALS Bottle#: 16 Worklist Smp#: 17
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
 Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

72 1,4-Dioxane, CAS: 123-91-1

Signal: 1

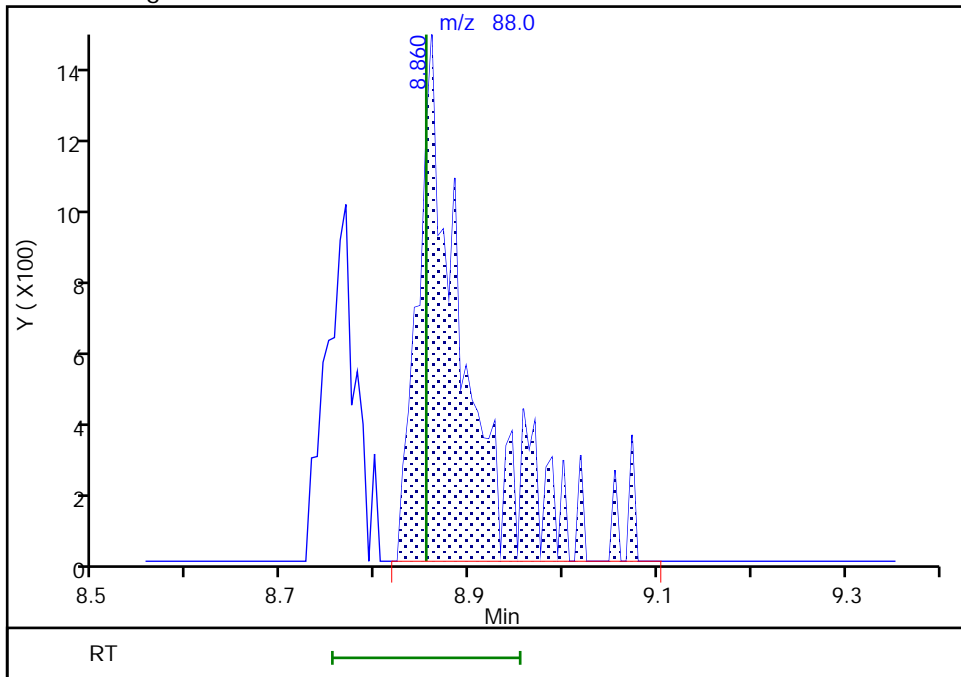
RT: 8.86
 Area: 4453
 Amount: 22.753808
 Amount Units: ug/l

Processing Integration Results



RT: 8.86
 Area: 5511
 Amount: 26.933896
 Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 08-Jun-2020 19:36:09
 Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Euofins Lancaster Laboratories Env, LLC

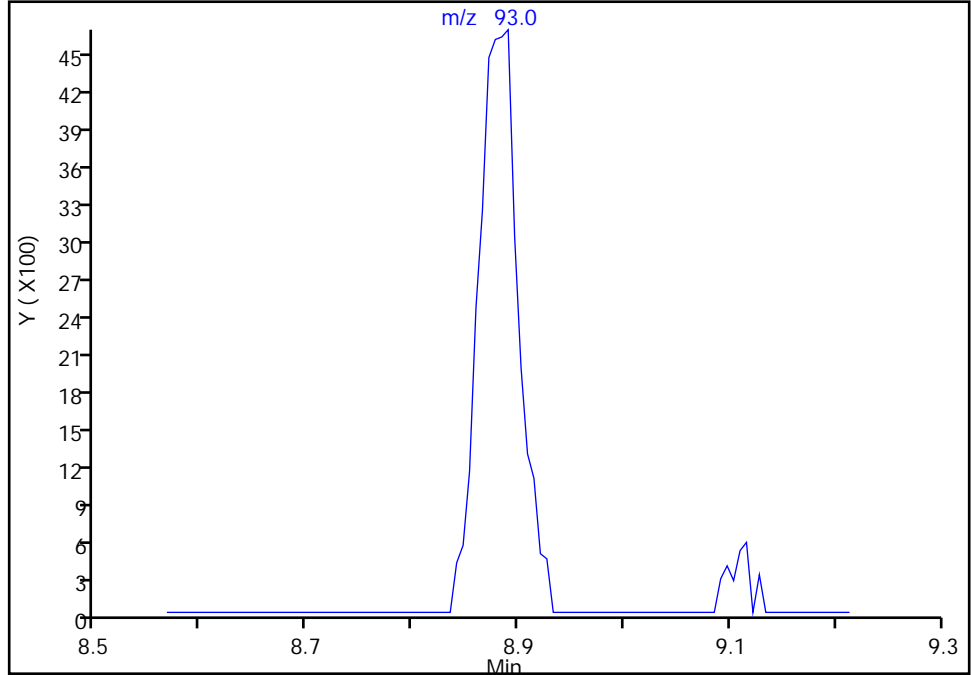
Data File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i06.D
Injection Date: 08-Jun-2020 18:35:30 Instrument ID: 19094
Lims ID: IC std2 0.5
Client ID:
Operator ID: jkh09052 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

73 Dibromomethane, CAS: 74-95-3

Signal: 1

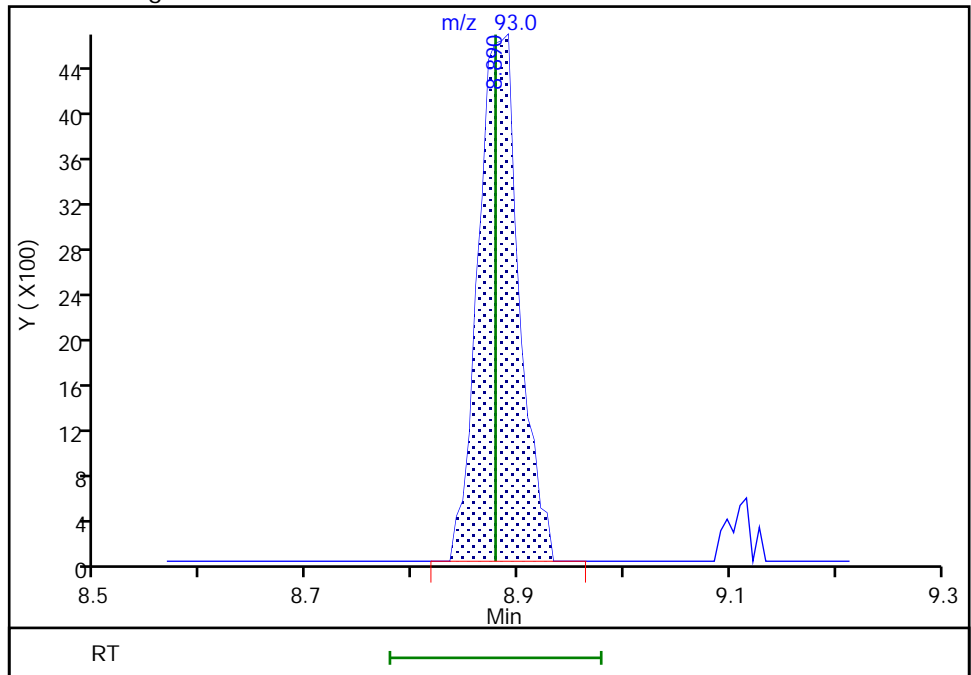
Not Detected
Expected RT: 8.88

Processing Integration Results



Manual Integration Results

RT: 8.89
Area: 12468
Amount: 0.506302
Amount Units: ug/l



Reviewer: campbellme, 08-Jun-2020 19:38:30
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Lims ID: IC std1 0.2
 Client ID:
 Sample Type: IC Calib Level: 1
 Inject. Date: 08-Jun-2020 18:56:30 ALS Bottle#: 17 Worklist Smp#: 18
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: 410-0002918-018
 Misc. Info.: IC STD1 0.2
 Operator ID: jkh09052 Instrument ID: 19094
 Sublist: chrom-MSV_19094_25mL*sub1

Method: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 22-Jun-2020 11:02:29 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1020

First Level Reviewer: campbellme

Date: 08-Jun-2020 19:46:00

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
3 Dichlorodifluoromethane	85	2.075	2.069	0.006	64	11992	0.2000	0.1611	M
6 Chloromethane	50	2.270	2.264	0.006	99	18515	0.2000	0.2088	
7 Vinyl chloride	62	2.392	2.386	0.006	97	14407	0.2000	0.1814	M
8 Butadiene	39	2.398	2.392	0.006	87	16812	0.2000	0.2199	
9 Bromomethane	94	2.733	2.733	0.000	89	10675	0.2000	0.1983	
10 Chloroethane	64	2.831	2.831	0.000	43	9960	0.2000	0.2049	
11 Dichlorofluoromethane	67	3.087	3.074	0.013	97	21471	0.2000	0.2057	
13 Trichlorofluoromethane	101	3.148	3.129	0.019	92	14090	0.2000	0.1711	
15 Ethyl ether	59	3.428	3.422	0.006	76	7845	0.2000	0.1921	
16 1,2-Dichloro-1,1,2-trifluoroetha	67	3.526	3.495	0.031	35	11723	0.2000	0.1815	
17 Acrolein	56	3.617	3.605	0.012	100	59473	10.0	9.76	
18 1,1-Dichloroethene	96	3.751	3.745	0.006	97	8169	0.2000	0.1765	
20 112TCTFE	101	3.794	3.782	0.012	57	8356	0.2000	0.1656	
19 Acetone	43	3.794	3.788	0.006	46	19533	2.00	2.60	M
22 Iodomethane	142	3.958	3.952	0.006	97	15821	0.2000	0.1760	
21 Isopropyl alcohol	45	3.995	3.971	0.024	34	6348	4.00	7.24	M
23 Ethyl bromide	108	3.995	3.989	0.006	96	7209	0.2001	0.1713	
24 Carbon disulfide	76	4.086	4.068	0.018	98	29125	0.2000	0.1897	
26 Methyl acetate	43	4.233	4.221	0.012	25	6858	0.2000	0.3163	M
27 3-Chloro-1-propene	41	4.263	4.257	0.006	90	18011	0.2000	0.1916	
29 Methylene Chloride	84	4.458	4.446	0.012	80	12012	0.2000	0.2181	
* 28 t-Butyl alcohol-d10 (IS)	65	4.471	4.458	0.013	0	106345	50.0	50.0	
30 2-Methyl-2-propanol	59	4.599	4.599	0.000	55	8227	4.00	3.91	
31 Acrylonitrile	53	4.812	4.800	0.012	93	10308	1.00	1.02	
32 Methyl tert-butyl ether	73	4.867	4.861	0.006	95	21078	0.2000	0.1905	
33 trans-1,2-Dichloroethene	96	4.885	4.879	0.006	98	10172	0.2000	0.1932	
34 Hexane	57	5.300	5.300	0.000	94	14379	0.2000	0.1721	
35 1,1-Dichloroethane	63	5.543	5.543	0.000	95	18178	0.2000	0.1795	
37 Isopropyl ether	45	5.592	5.580	0.012	94	36083	0.2000	0.1904	
38 2-Chloro-1,3-butadiene	53	5.647	5.647	0.000	90	15903	0.2000	0.1786	M

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
39 Tert-butyl ethyl ether	59	6.123	6.117	0.006	97	31999	0.2000	0.1988	
S 40 1,2-Dichloroethene, Total	100				0			0.3762	
41 2-Butanone (MEK)	43	6.330	6.324	0.006	98	25159	2.00	2.00	M
42 cis-1,2-Dichloroethene	96	6.373	6.366	0.007	82	11036	0.2000	0.1830	
43 2,2-Dichloropropane	77	6.379	6.385	-0.006	65	14403	0.2000	0.1833	
45 Propionitrile	54	6.427	6.415	0.012	80	12228	4.00	3.80	
47 Methacrylonitrile	67	6.629	6.629	0.000	92	23966	2.00	1.90	
48 Chlorobromomethane	128	6.714	6.702	0.012	79	4982	0.2000	0.1972	
49 Tetrahydrofuran	71	6.720	6.702	0.018	86	6835	2.00	2.05	
50 Chloroform	83	6.854	6.848	0.006	92	17894	0.2000	0.1890	
\$ 51 Dibromofluoromethane (Surr)	113	7.061	7.061	0.000	93	497272	10.0	10.0	
52 1,1,1-Trichloroethane	97	7.086	7.080	0.006	85	15329	0.2000	0.1887	
53 Cyclohexane	56	7.190	7.183	0.007	92	19243	0.2000	0.1849	
55 1,1-Dichloropropene	75	7.293	7.293	0.000	92	12904	0.2000	0.1712	
56 Carbon tetrachloride	117	7.305	7.293	0.012	88	12393	0.2000	0.1770	
57 Isobutyl alcohol	41	7.433	7.427	0.006	94	10282	10.0	12.2	
\$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.525	7.519	0.006	0	100643	10.0	9.94	
59 Benzene	78	7.555	7.549	0.006	93	43419	0.2000	0.1875	
60 1,2-Dichloroethane	62	7.635	7.622	0.013	95	12126	0.2000	0.2236	
62 Tert-amyl methyl ether	73	7.738	7.732	0.006	98	24933	0.2000	0.1879	
* 65 Fluorobenzene (IS)	96	7.958	7.952	0.006	98	2102914	10.0	10.0	
64 n-Heptane	43	7.970	7.958	0.012	37	18001	0.2000	0.1884	
66 n-Butanol	56	8.305	8.299	0.006	90	15390	20.0	20.9	
67 Trichloroethene	95	8.433	8.433	0.000	93	10224	0.2000	0.1800	
68 Methylcyclohexane	83	8.756	8.744	0.012	78	15149	0.2000	0.1496	
69 2-ethoxy-2-methyl butane	87	8.768	8.768	0.000	87	15353	0.2000	0.1881	
70 1,2-Dichloropropane	63	8.768	8.768	0.000	69	10671	0.2000	0.1823	
71 Methyl methacrylate	69	8.836	8.842	-0.006	92	4394	0.2000	0.1792	M
72 1,4-Dioxane	88	8.896	8.854	0.042	44	1607	10.0	7.93	
73 Dibromomethane	93	8.884	8.878	0.006	93	4763	0.2000	0.1936	
75 Dichlorobromomethane	83	9.116	9.110	0.006	99	12182	0.2000	0.1848	
76 2-Nitropropane	41	9.372	9.372	0.000	96	12804	2.00	1.90	
79 1-Bromo-2-chloroethane	63	9.494	9.494	0.000	96	11071	0.2000	0.1907	
80 cis-1,3-Dichloropropene	75	9.646	9.640	0.006	93	13704	0.2000	0.1691	
81 4-Methyl-2-pentanone (MIBK)	43	9.805	9.799	0.006	98	61055	2.00	1.86	
\$ 82 Toluene-d8 (Surr)	98	9.945	9.939	0.006	94	2021092	10.0	10.0	
83 Toluene	92	10.012	10.018	-0.006	97	26235	0.2000	0.1861	
S 84 1,3-Dichloropropene, Total	100				0			0.3483	
85 trans-1,3-Dichloropropene	75	10.262	10.262	0.000	91	11427	0.2000	0.1792	
86 Ethyl methacrylate	69	10.317	10.317	0.000	90	9650	0.2000	0.1848	
87 1,1,2-Trichloroethane	97	10.463	10.463	0.000	88	6534	0.2000	0.1901	
88 Tetrachloroethene	166	10.555	10.555	0.000	96	11175	0.2000	0.1865	
89 1,3-Dichloropropane	76	10.628	10.628	0.000	90	12622	0.2000	0.2004	
91 2-Hexanone	43	10.671	10.671	0.000	98	41279	2.00	1.87	
93 Chlorodibromomethane	129	10.835	10.841	-0.006	91	7320	0.2000	0.1768	
94 Ethylene Dibromide	107	10.951	10.951	0.000	97	5653	0.2000	0.1730	
S 95 Xylenes, Total	106				0			0.5518	
* 97 Chlorobenzene-d5 (IS)	117	11.378	11.372	0.006	86	1505559	10.0	10.0	
96 1-Chlorohexane	91	11.378	11.378	0.000	34	17257	0.2000	0.2041	
98 Chlorobenzene	112	11.402	11.402	0.000	95	28788	0.2000	0.1917	
99 1,1,1,2-Tetrachloroethane	131	11.481	11.481	0.000	84	9220	0.2000	0.1817	
100 Ethylbenzene	91	11.487	11.481	0.006	99	50918	0.2000	0.1855	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
101 m-Xylene & p-Xylene	106	11.597	11.597	0.000	0	37928	0.4000	0.3686	
102 o-Xylene	106	11.926	11.926	0.000	96	18402	0.2000	0.1832	
103 Styrene	104	11.939	11.939	0.000	95	29559	0.2000	0.1770	
104 Bromoform	173	12.103	12.103	0.000	94	4189	0.2000	0.1783	
105 Isopropylbenzene	105	12.219	12.219	0.000	96	48730	0.2000	0.1807	
\$ 108 4-Bromofluorobenzene (Surr)	95	12.365	12.365	0.000	89	742087	10.0	10.1	
109 1,1,2,2-Tetrachloroethane	83	12.463	12.463	0.000	90	8079	0.2000	0.1896	
111 Bromobenzene	156	12.487	12.487	0.000	82	10873	0.2000	0.1834	
110 trans-1,4-Dichloro-2-butene	53	12.487	12.487	0.000	92	18264	2.00	1.69	
112 1,2,3-Trichloropropane	110	12.512	12.512	0.000	71	1959	0.2000	0.1846	
113 N-Propylbenzene	91	12.548	12.548	0.000	99	61139	0.2000	0.1855	
114 2-Chlorotoluene	126	12.627	12.627	0.000	97	11736	0.2000	0.1867	
115 1,3,5-Trimethylbenzene	105	12.682	12.682	0.000	95	40319	0.2000	0.1775	
116 4-Chlorotoluene	126	12.719	12.719	0.000	97	10724	0.2000	0.1698	
118 tert-Butylbenzene	134	12.920	12.926	-0.006	92	9081	0.2000	0.1842	
119 Pentachloroethane	167	12.957	12.963	-0.006	81	6456	0.2000	0.1688	
120 1,2,4-Trimethylbenzene	105	12.963	12.963	0.000	97	41133	0.2000	0.1777	
121 sec-Butylbenzene	105	13.091	13.085	0.006	94	54080	0.2000	0.1805	
122 1,3-Dichlorobenzene	146	13.188	13.188	0.000	95	21543	0.2000	0.1827	
123 4-Isopropyltoluene	119	13.194	13.194	0.000	97	44786	0.2000	0.1776	
* 124 1,4-Dichlorobenzene-d4	152	13.243	13.243	0.000	96	774800	10.0	10.0	
125 1,4-Dichlorobenzene	146	13.268	13.261	0.007	61	20946	0.2000	0.1806	
126 1,2,3-Trimethylbenzene	120	13.274	13.268	0.006	96	18819	0.2000	0.1865	
127 Benzyl chloride	126	13.347	13.335	0.012	98	2862	0.2000	0.1730	
129 p-Diethylbenzene	119	13.463	13.463	0.000	94	27370	0.2000	0.1682	
130 n-Butylbenzene	92	13.487	13.487	0.000	97	22815	0.2000	0.1766	
131 1,2-Dichlorobenzene	146	13.524	13.524	0.000	96	20160	0.2000	0.1923	
134 1,2-Dibromo-3-Chloropropane	155	14.066	14.060	0.006	71	932	0.2000	0.1720	
135 1,3,5-Trichlorobenzene	180	14.188	14.188	0.000	97	15723	0.2000	0.1772	
136 1,2,4-Trichlorobenzene	180	14.615	14.615	0.000	92	12124	0.2000	0.1710	
137 Hexachlorobutadiene	225	14.694	14.694	0.000	96	8270	0.2000	0.2126	
138 Naphthalene	128	14.798	14.798	0.000	96	24109	0.2000	0.1913	
139 1,2,3-Trichlorobenzene	180	14.944	14.944	0.000	95	10771	0.2000	0.1822	
140 2-Methylnaphthalene	142	15.596	15.596	0.000	94	13321	0.2000	0.1770	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MSV_RV1_826_00015
MSV_RV4_826_00016
MSV_RV4GAS826_00046
MSV_30_826ISS_00005

Amount Added: 2.00
Amount Added: 2.00
Amount Added: 2.00
Amount Added: 5.00

Units: uL
Units: uL
Units: uL
Units: uL

Run Reagent

Data File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D

Injection Date: 08-Jun-2020 18:56:30

Instrument ID: 19094

Operator ID: jkh09052

Lims ID: IC std1 0.2

Worklist Smp#: 18

Client ID:

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

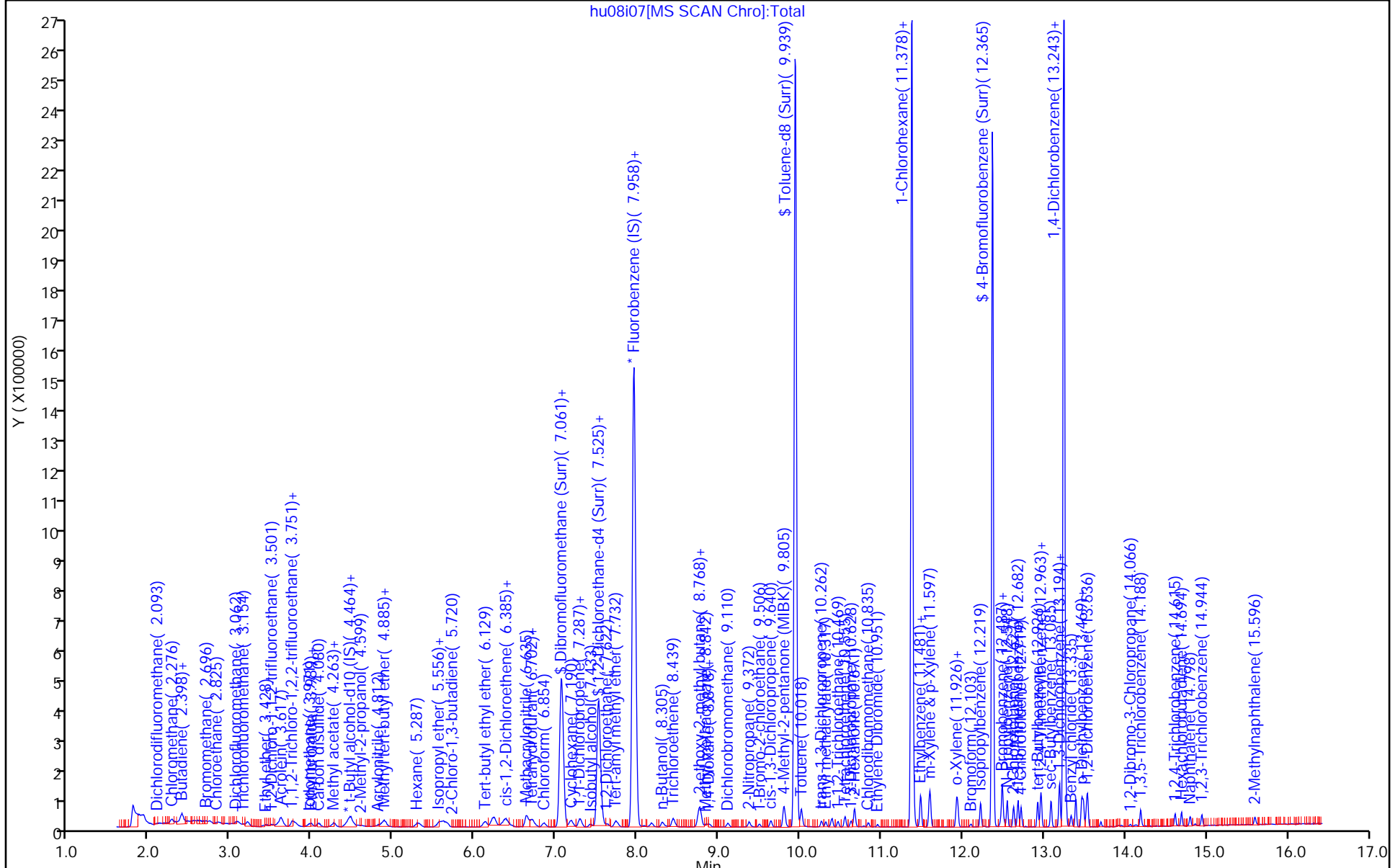
ALS Bottle#: 17

Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



hu08i07[MS SCAN Chro]:Total

Y (X100000)

Min

Euofins Lancaster Laboratories Env, LLC

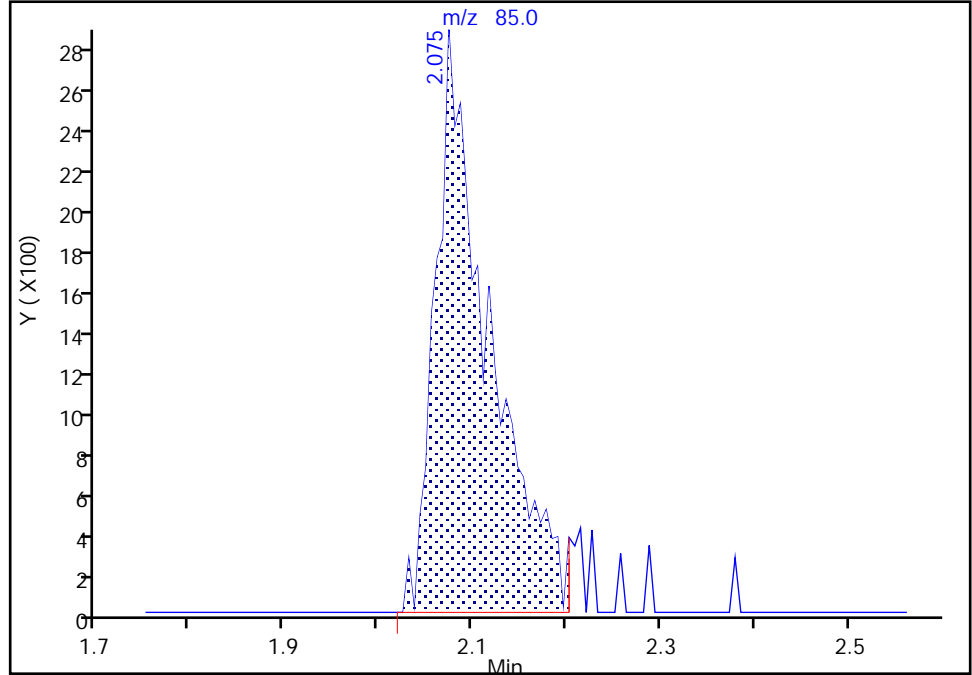
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Injection Date: 08-Jun-2020 18:56:30 Instrument ID: 19094
Lims ID: IC std1 0.2
Client ID:
Operator ID: jkh09052 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

3 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

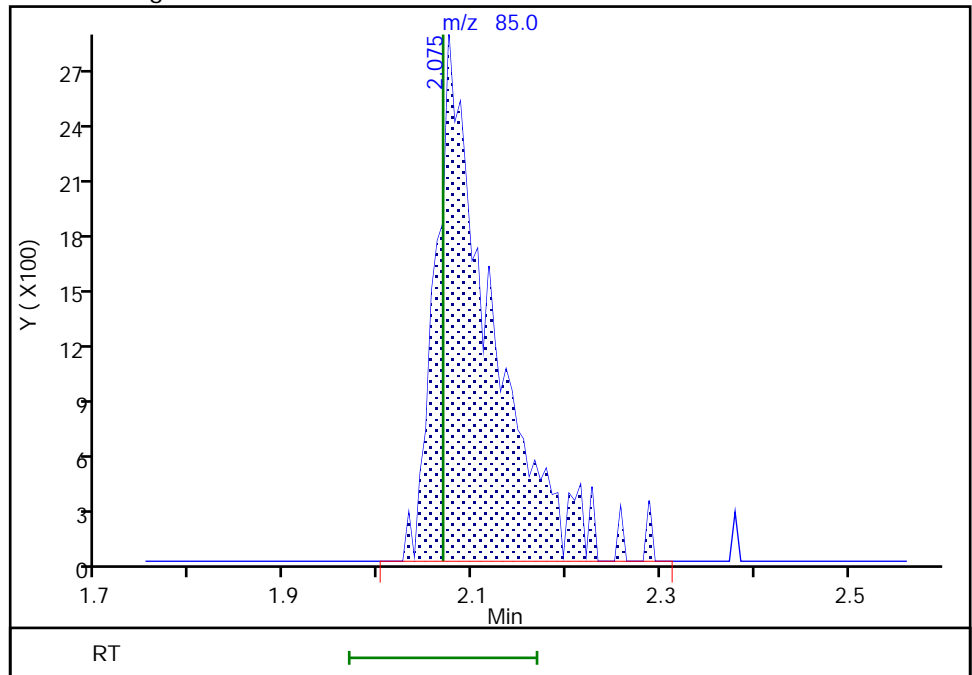
RT: 2.07
Area: 11342
Amount: 0.153206
Amount Units: ug/l

Processing Integration Results



RT: 2.07
Area: 11992
Amount: 0.161068
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 08-Jun-2020 19:40:09
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC

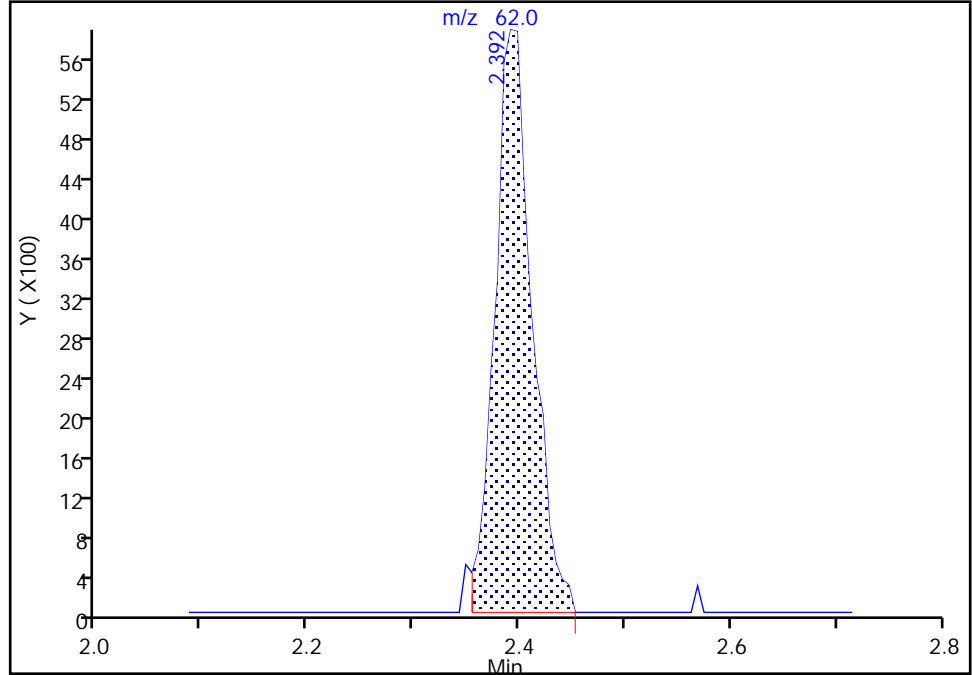
Data File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
Injection Date: 08-Jun-2020 18:56:30 Instrument ID: 19094
Lims ID: IC std1 0.2
Client ID:
Operator ID: jkh09052 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

7 Vinyl chloride, CAS: 75-01-4

Signal: 1

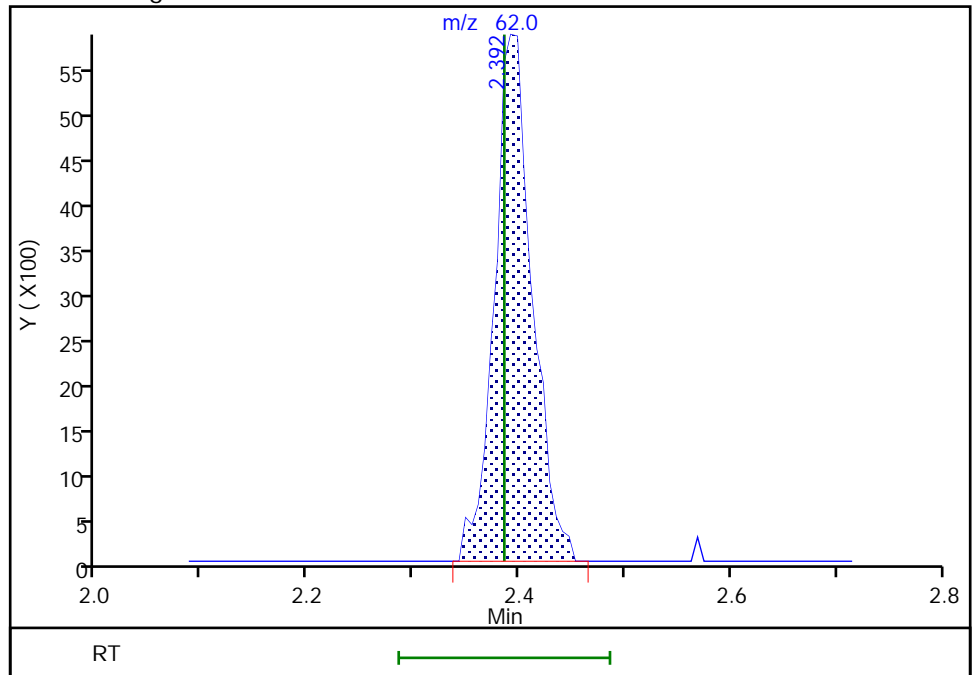
RT: 2.39
Area: 14234
Amount: 0.179458
Amount Units: ug/l

Processing Integration Results



RT: 2.39
Area: 14407
Amount: 0.181405
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 08-Jun-2020 19:40:16
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC

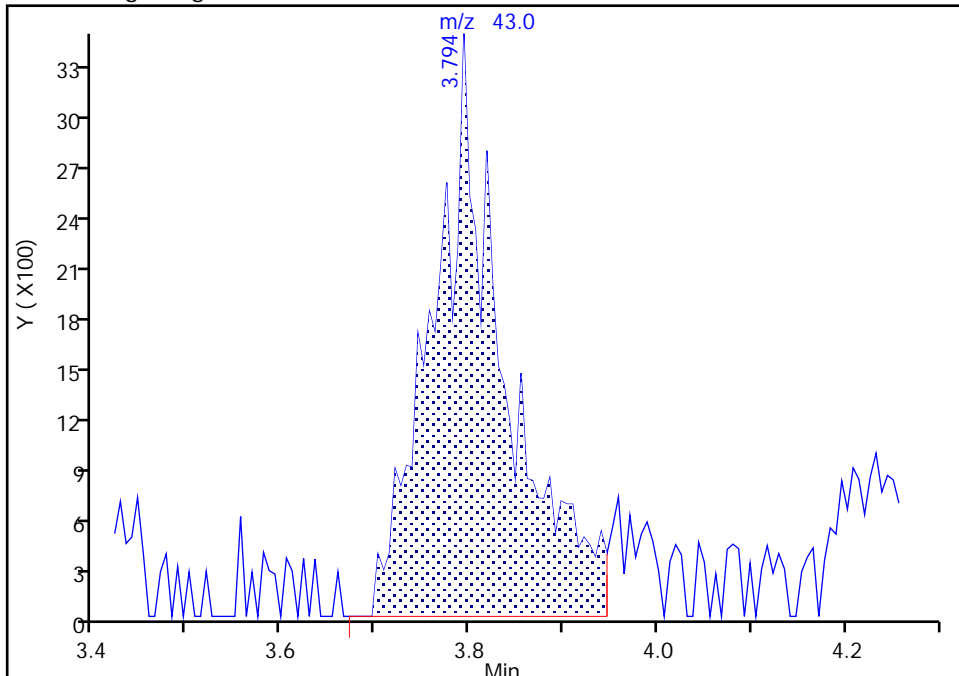
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Injection Date: 08-Jun-2020 18:56:30 Instrument ID: 19094
Lims ID: IC std1 0.2
Client ID:
Operator ID: jkh09052 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

19 Acetone, CAS: 67-64-1

Signal: 1

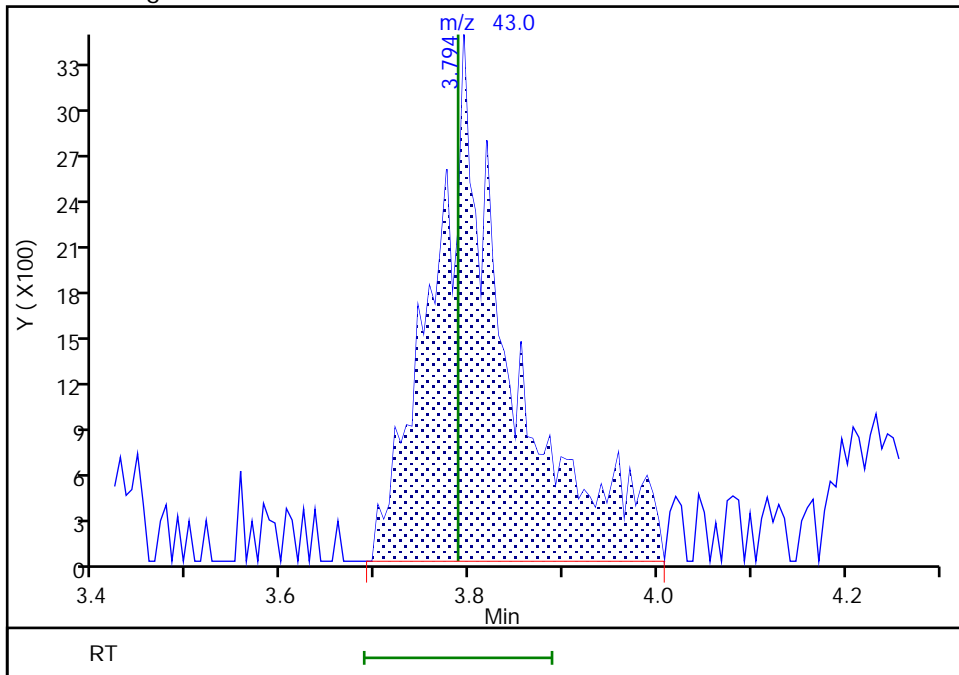
RT: 3.79
Area: 17997
Amount: 2.453221
Amount Units: ug/l

Processing Integration Results



RT: 3.79
Area: 19533
Amount: 2.601158
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 08-Jun-2020 19:45:19
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC

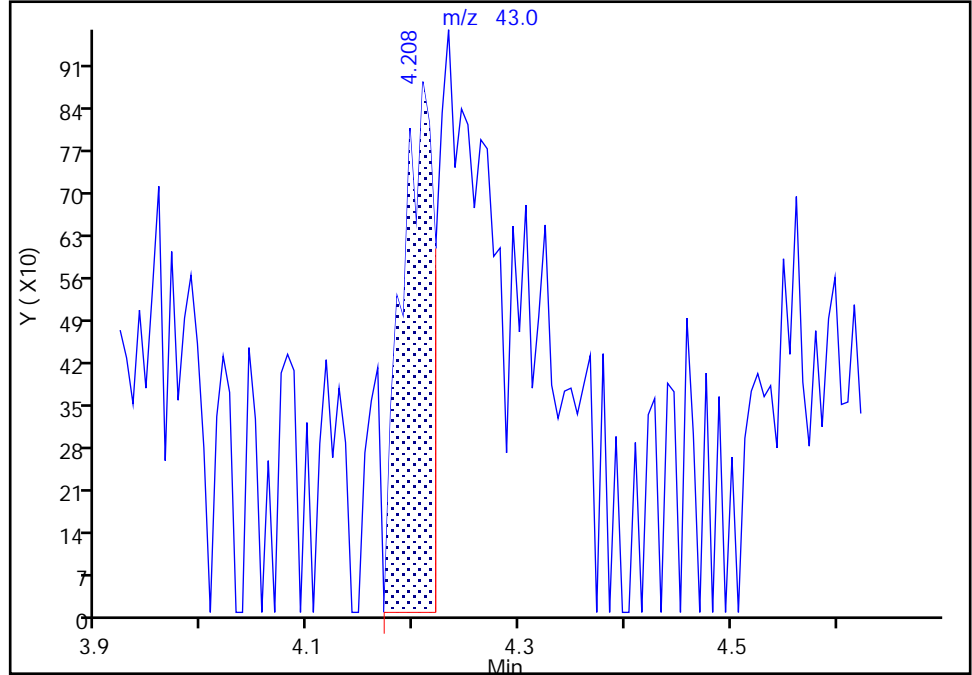
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Injection Date: 08-Jun-2020 18:56:30 Instrument ID: 19094
Lims ID: IC std1 0.2
Client ID:
Operator ID: jkh09052 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

26 Methyl acetate, CAS: 79-20-9

Signal: 1

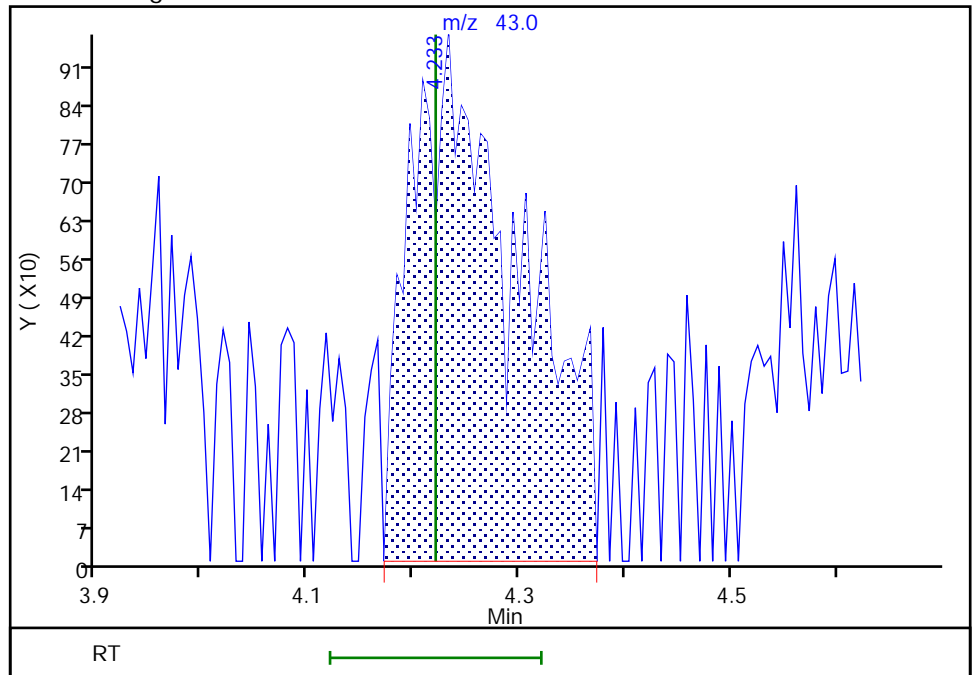
RT: 4.21
Area: 1853
Amount: 0.332875
Amount Units: ug/l

Processing Integration Results



RT: 4.23
Area: 6858
Amount: 0.316327
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 08-Jun-2020 19:40:43
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC

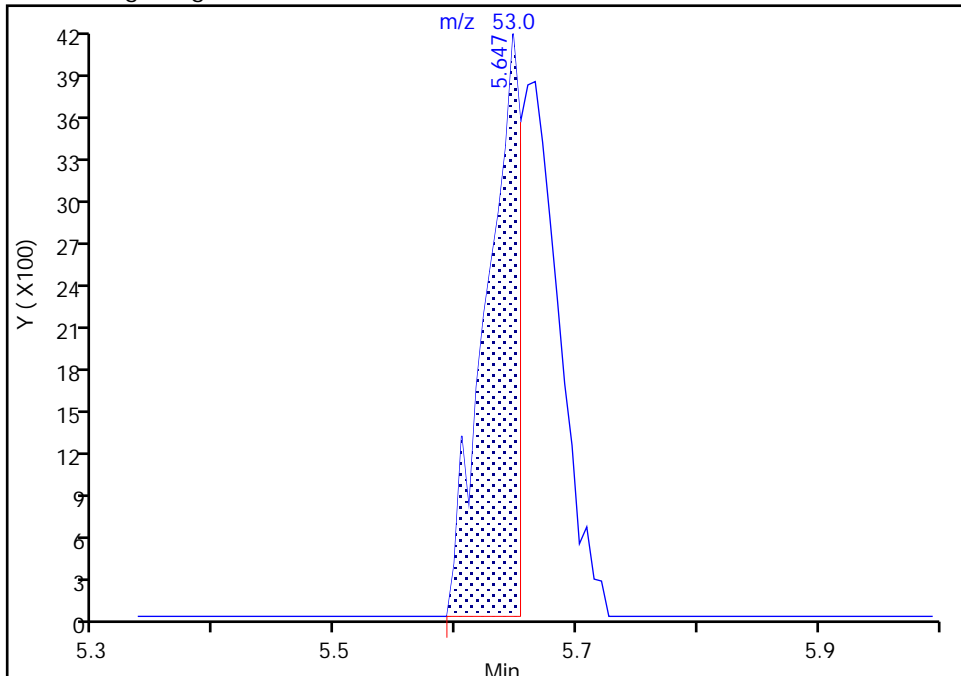
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Injection Date: 08-Jun-2020 18:56:30 Instrument ID: 19094
Lims ID: IC std1 0.2
Client ID:
Operator ID: jkh09052 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

38 2-Chloro-1,3-butadiene, CAS: 126-99-8

Signal: 1

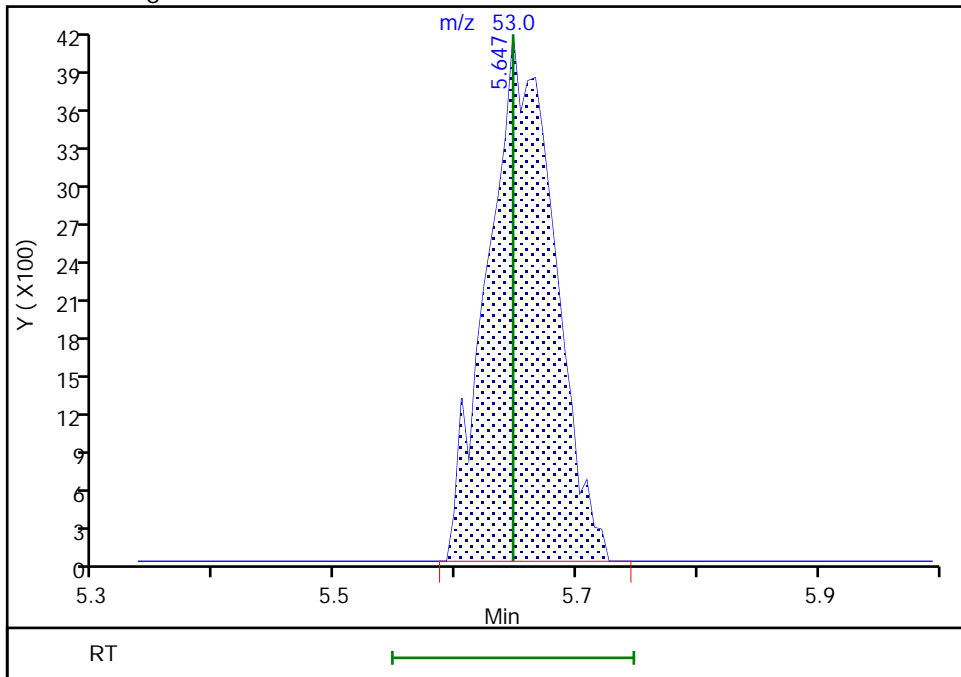
RT: 5.65
Area: 8319
Amount: 0.192440
Amount Units: ug/l

Processing Integration Results



RT: 5.65
Area: 15903
Amount: 0.178596
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 08-Jun-2020 19:41:22
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC

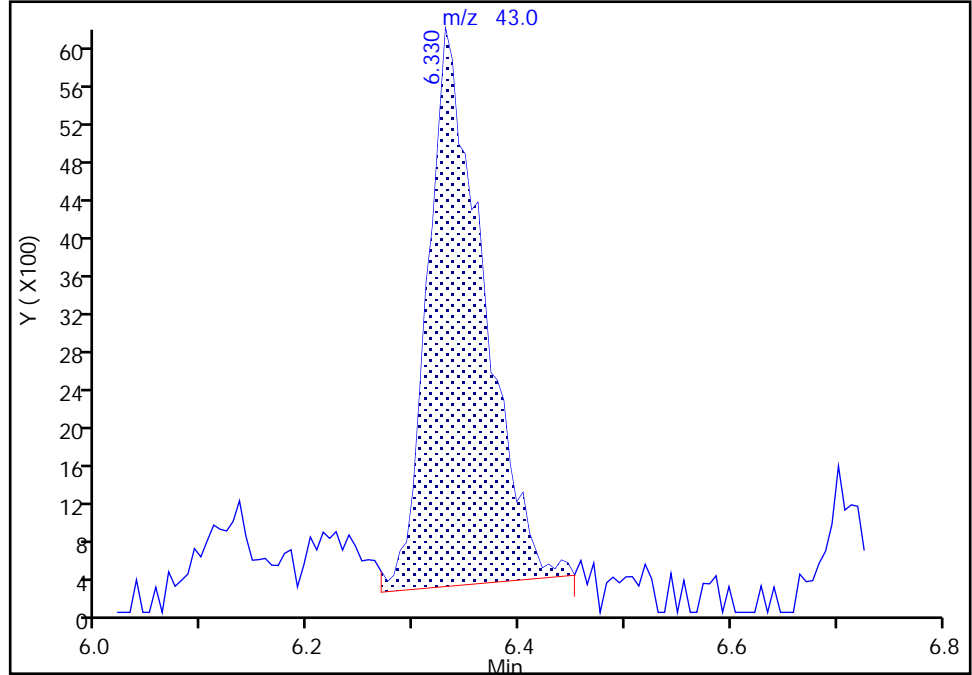
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Injection Date: 08-Jun-2020 18:56:30 Instrument ID: 19094
Lims ID: IC std1 0.2
Client ID:
Operator ID: jkh09052 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

41 2-Butanone (MEK), CAS: 78-93-3

Signal: 1

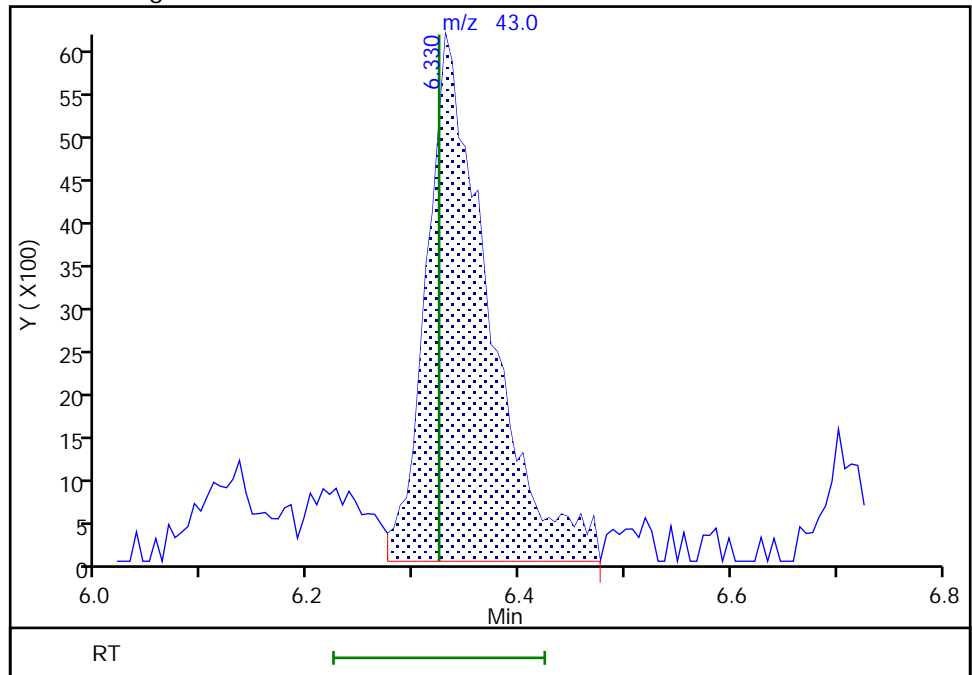
RT: 6.33
Area: 21408
Amount: 1.758513
Amount Units: ug/l

Processing Integration Results



RT: 6.33
Area: 25159
Amount: 2.004356
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 08-Jun-2020 19:41:57
Audit Action: Split an Integrated Peak

Audit Reason: Split Peak

Eurofins Lancaster Laboratories Env, LLC

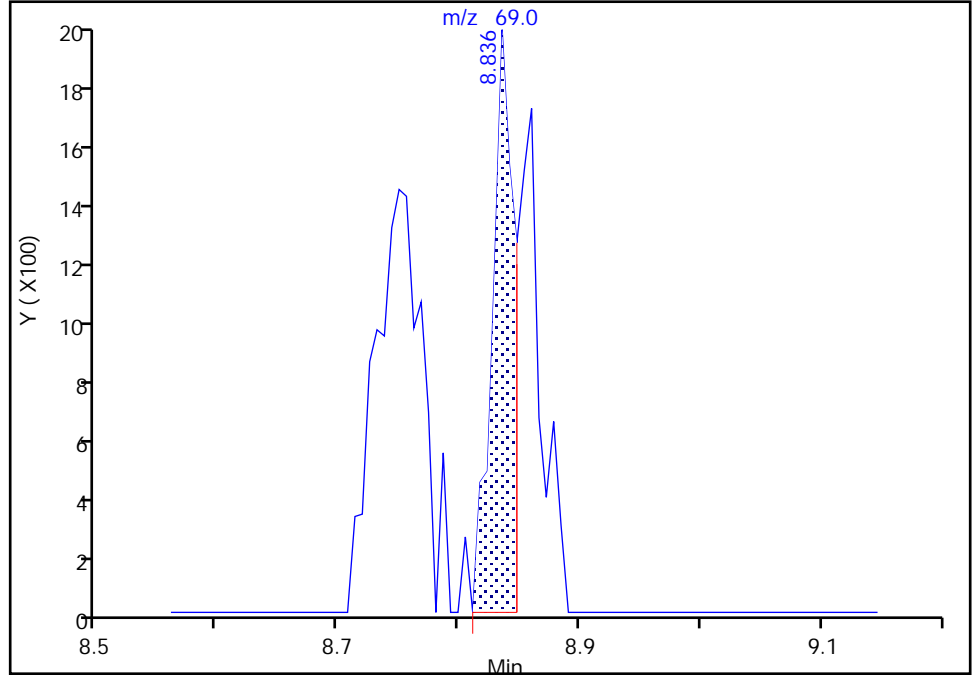
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Injection Date: 08-Jun-2020 18:56:30 Instrument ID: 19094
Lims ID: IC std1 0.2
Client ID:
Operator ID: jkh09052 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

71 Methyl methacrylate, CAS: 80-62-6

Signal: 1

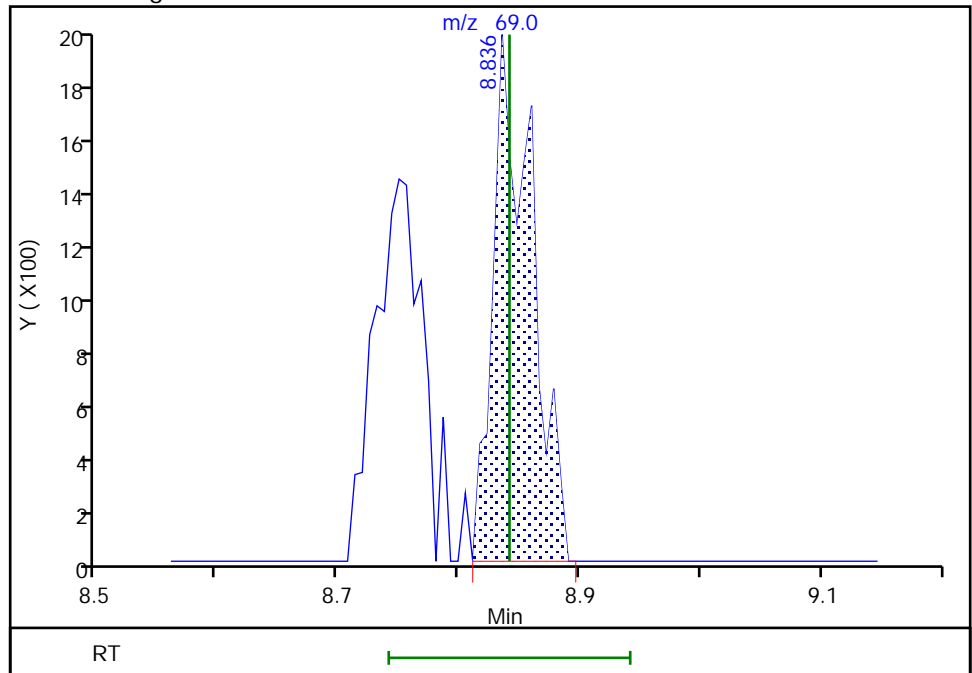
RT: 8.84
Area: 2499
Amount: 0.285465
Amount Units: ug/l

Processing Integration Results



RT: 8.84
Area: 4394
Amount: 0.179155
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 08-Jun-2020 19:42:28
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Lab Sample ID: ICV 410-11163/19 Calibration Date: 06/08/2020 19:18
 Instrument ID: 19094 Calib Start Date: 06/08/2020 16:46
 GC Column: R-624SilMS 30m ID: 0.25 (mm) Calib End Date: 06/08/2020 18:56
 Lab File ID: hu08v01.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	0.3540	0.2681	0.1000	3.79	5.00	-24.3	30.0
Chloromethane	Ave	0.4216	0.3663	0.1000	4.34	5.00	-13.1	30.0
Vinyl chloride	Ave	0.3777	0.3444	0.1000	4.56	5.00	-8.8	30.0
1,3-Butadiene	Ave	0.3636	0.2480		3.41	5.00	-31.8*	30.0
Bromomethane	Ave	0.2560	0.2368	0.1000	4.62	5.00	-7.5	30.0
Chloroethane	Ave	0.2311	0.2168	0.1000	4.69	5.00	-6.2	30.0
Dichlorofluoromethane	Ave	0.4964	0.4668		4.70	5.00	-6.0	30.0
Trichlorofluoromethane	Ave	0.3915	0.4069	0.1000	5.20	5.00	3.9	30.0
Ethyl ether	Ave	0.1942	0.1912		4.93	5.01	-1.5	30.0
Freon 123a	Ave	0.3071	0.2930		4.77	5.00	-4.6	30.0
Acrolein	Ave	2.866	2.495		32.6	37.5	-13.0	30.0
1,1-Dichloroethene	Ave	0.2200	0.2002	0.1000	4.55	5.00	-9.0	30.0
Freon 113	Ave	0.2399	0.2068	0.1000	4.31	5.00	-13.8	30.0
Acetone	Ave	3.531	2.895	0.1000	30.8	37.5	-18.0	30.0
Methyl iodide	Ave	0.4274	0.3710		4.34	5.00	-13.2	30.0
Ethyl bromide	Ave	0.2001	0.2022		4.98	4.93	1.0	30.0
Carbon disulfide	Ave	0.7300	0.5962	0.1000	4.08	5.00	-18.3	30.0
Methyl acetate	Ave	10.19	8.346	0.1000	4.09	5.00	-18.1	30.0
Allyl chloride	Ave	0.4470	0.4003		4.48	5.00	-10.5	30.0
Methylene Chloride	Ave	0.2619	0.2442	0.1000	4.66	5.00	-6.7	30.0
t-Butyl alcohol	Ave	0.9905	0.8496		42.9	50.0	-14.2	30.0
Acrylonitrile	Ave	4.741	4.387		23.1	25.0	-7.5	30.0
Methyl tert-butyl ether	Ave	0.5260	0.4916	0.1000	4.67	5.00	-6.5	30.0
trans-1,2-Dichloroethene	Ave	0.2503	0.2362	0.1000	4.72	5.00	-5.7	30.0
n-Hexane	Ave	0.3974	0.3467		4.36	5.00	-12.8	30.0
1,1-Dichloroethane	Ave	0.4816	0.4618	0.2000	4.79	5.00	-4.1	30.0
di-Isopropyl ether	Ave	0.9013	0.8564		4.75	5.00	-5.0	30.0
2-Chloro-1,3-butadiene	Ave	0.4234	0.3920		4.63	5.00	-7.4	30.0
Ethyl t-butyl ether	Ave	0.7653	0.7278		4.75	5.00	-4.9	30.0
2-Butanone (MEK)	Ave	5.902	5.552	0.1000	35.3	37.5	-5.9	30.0
cis-1,2-Dichloroethene	Ave	0.2868	0.2909	0.1000	5.07	5.00	1.4	30.0
2,2-Dichloropropane	Ave	0.3736	0.3647		4.88	5.00	-2.4	30.0
Propionitrile	Ave	1.514	1.375		34.1	37.5	-9.2	30.0
Methacrylonitrile	Ave	5.933	5.740		36.3	37.5	-3.3	30.0
Tetrahydrofuran	Ave	1.569	1.479		23.6	25.0	-5.7	30.0
Bromochloromethane	Ave	0.1201	0.1096		4.56	5.00	-8.8	30.0
Chloroform	Ave	0.4502	0.4512	0.2000	5.01	5.00	0.2	30.0
1,1,1-Trichloroethane	Ave	0.3862	0.3753	0.1000	4.86	5.00	-2.8	30.0
Cyclohexane	Ave	0.4949	0.4467	0.1000	4.51	5.00	-9.8	30.0
1,1-Dichloropropene	Ave	0.3584	0.3519		4.91	5.00	-1.8	30.0
Carbon tetrachloride	Ave	0.3329	0.3288	0.1000	4.94	5.00	-1.3	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Lab Sample ID: ICV 410-11163/19 Calibration Date: 06/08/2020 19:18
 Instrument ID: 19094 Calib Start Date: 06/08/2020 16:46
 GC Column: R-624SilMS 30m ID: 0.25 (mm) Calib End Date: 06/08/2020 18:56
 Lab File ID: hu08v01.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
Isobutyl alcohol	Ave	0.3969	0.2990		94.2	125	-24.7	30.0
Benzene	Ave	1.101	1.067	0.5000	4.84	5.00	-3.1	30.0
1,2-Dichloroethane	Ave	0.2578	0.2477	0.1000	4.80	5.00	-3.9	30.0
t-Amyl methyl ether	Ave	0.6309	0.6186		4.90	5.00	-1.9	30.0
n-Heptane	Ave	0.4544	0.4073		4.48	5.00	-10.4	30.0
n-Butanol	Ave	0.3461	0.2722		197	250	-21.3	30.0
Trichloroethene	Ave	0.2702	0.2637	0.2000	4.88	5.00	-2.4	30.0
Methylcyclohexane	Ave	0.4815	0.4553	0.1000	4.73	5.00	-5.4	30.0
1,2-Dichloropropane	Ave	0.2784	0.2788	0.1000	5.01	5.00	0.1	30.0
Methyl methacrylate	Ave	11.53	10.97		4.76	5.00	-4.9	30.0
1,4-Dioxane	Ave	0.0953	0.0521	0.0050	68.4	125	-45.3*	30.0
Dibromomethane	Ave	0.1170	0.1160		4.96	5.00	-0.9	30.0
Bromodichloromethane	Ave	0.3135	0.3215	0.2000	5.13	5.00	2.5	30.0
2-Nitropropane	Ave	3.175	3.028		4.77	5.00	-4.6	30.0
1-Bromo-2-chloroethane	Ave	0.2760	0.2692		4.88	5.00	-2.5	30.0
cis-1,3-Dichloropropene	Ave	0.3853	0.3862	0.2000	5.01	5.00	0.2	30.0
4-Methyl-2-pentanone (MIBK)	Ave	15.42	14.57	0.1000	23.6	25.0	-5.5	30.0
Toluene	Ave	0.9364	0.9257	0.4000	4.94	5.00	-1.1	30.0
trans-1,3-Dichloropropene	Ave	0.4236	0.4214	0.1000	4.97	5.00	-0.5	30.0
Ethyl methacrylate	Ave	0.3467	0.3448		4.97	5.00	-0.6	30.0
1,1,2-Trichloroethane	Ave	0.2282	0.2364	0.1000	5.18	5.00	3.6	30.0
Tetrachloroethene	Ave	0.3980	0.3979	0.2000	5.00	5.00	-0.0	30.0
1,3-Dichloropropane	Ave	0.4184	0.4116		4.92	5.00	-1.6	30.0
2-Hexanone	Ave	10.40	10.30	0.1000	24.8	25.0	-1.0	30.0
Dibromochloromethane	Ave	0.2750	0.2883		5.24	5.00	4.8	30.0
1,2-Dibromoethane (EDB)	Ave	0.2170	0.2203	0.1000	5.08	5.00	1.5	30.0
1-Chlorohexane	Ave	0.5616	0.5335		4.75	5.00	-5.0	30.0
Chlorobenzene	Ave	0.998	1.007	0.5000	5.05	5.00	0.9	30.0
1,1,1,2-Tetrachloroethane	Ave	0.3370	0.3387		5.02	5.00	0.5	30.0
Ethylbenzene	Ave	1.823	1.813	0.1000	4.97	5.00	-0.6	30.0
m&p-Xylene	Ave	0.6834	0.6835	0.1000	10.0	10.0	0.0	30.0
o-Xylene	Ave	0.6671	0.6714	0.3000	5.03	5.00	0.6	30.0
Styrene	Ave	1.109	1.125	0.3000	5.07	5.00	1.4	30.0
Bromoform	Ave	0.1560	0.1579	0.1000	5.06	5.00	1.2	30.0
Isopropylbenzene	Ave	1.791	1.809	0.1000	5.05	5.00	1.0	30.0
1,1,2,2-Tetrachloroethane	Ave	0.5500	0.5700	0.3000	5.18	5.00	3.6	30.0
Bromobenzene	Ave	0.7652	0.7801		5.10	5.00	1.9	30.0
trans-1,4-Dichloro-2-butene	Ave	5.089	4.946		24.3	25.0	-2.8	30.0
1,2,3-Trichloropropane	Ave	0.1369	0.1420		5.18	5.00	3.7	30.0
N-Propylbenzene	Ave	4.254	4.332		5.09	5.00	1.8	30.0
2-Chlorotoluene	Ave	0.8113	0.8213		5.06	5.00	1.2	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Lab Sample ID: ICV 410-11163/19 Calibration Date: 06/08/2020 19:18
 Instrument ID: 19094 Calib Start Date: 06/08/2020 16:46
 GC Column: R-624SilMS 30m ID: 0.25 (mm) Calib End Date: 06/08/2020 18:56
 Lab File ID: hu08v01.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,3,5-Trimethylbenzene	Ave	2.932	2.999		5.11	5.00	2.3	30.0
4-Chlorotoluene	Ave	0.8149	0.8295		5.09	5.00	1.8	30.0
tert-Butylbenzene	Ave	0.6364	0.6327		4.97	5.00	-0.6	30.0
1,2,4-Trimethylbenzene	Ave	2.987	3.025		5.06	5.00	1.3	30.0
Pentachloroethane	Ave	0.4936	0.5053		5.12	5.00	2.4	30.0
sec-Butylbenzene	Ave	3.866	3.890		5.03	5.00	0.6	30.0
1,3-Dichlorobenzene	Ave	1.522	1.548	0.6000	5.09	5.00	1.8	30.0
p-Isopropyltoluene	Ave	3.255	3.332		5.12	5.00	2.4	30.0
1,4-Dichlorobenzene	Ave	1.497	1.525	0.5000	5.10	5.00	1.9	30.0
1,2,3-Trimethylbenzene	Ave	1.303	1.337		5.13	5.00	2.6	30.0
Benzyl chloride	Ave	0.2135	0.2225		5.21	5.00	4.2	30.0
n-Butylbenzene	Ave	1.668	1.702		5.10	5.00	2.1	30.0
1,2-Dichlorobenzene	Ave	1.353	1.378	0.4000	5.09	5.00	1.8	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.0699	0.0797	0.0500	5.70	5.00	14.0	30.0
1,3,5-Trichlorobenzene	Ave	1.145	1.143		4.99	5.00	-0.2	30.0
1,2,4-Trichlorobenzene	Ave	0.9150	0.9440	0.2000	5.16	5.00	3.2	30.0
Hexachlorobutadiene	Ave	0.5021	0.4818		4.80	5.00	-4.0	30.0
Naphthalene	Ave	1.627	1.669		5.13	5.00	2.6	30.0
1,2,3-Trichlorobenzene	Ave	0.7628	0.7781		5.10	5.00	2.0	30.0
Dibromofluoromethane (Surr)	Ave	0.2364	0.2362		9.99	10.0	-0.0	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.0482	0.0475		9.87	10.0	-1.3	30.0
Toluene-d8 (Surr)	Ave	1.342	1.345		10.0	10.0	0.3	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4896	0.4875		9.96	10.0	-0.4	30.0

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08v01.D
 Lims ID: ICV
 Client ID:
 Sample Type: ICV
 Inject. Date: 08-Jun-2020 19:18:30 ALS Bottle#: 18 Worklist Smp#: 19
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: 410-0002918-019
 Misc. Info.: ICV
 Operator ID: jkh09052 Instrument ID: 19094
 Sublist:

Method: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 22-Jun-2020 11:03:03 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1020

First Level Reviewer: campbellme Date: 08-Jun-2020 20:40:43

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
3 Dichlorodifluoromethane	85	2.093	2.069	0.024	99	284127	5.00	3.79	M
6 Chloromethane	50	2.270	2.264	0.006	99	388238	5.00	4.34	M
7 Vinyl chloride	62	2.398	2.386	0.012	98	365040	5.00	4.56	
8 Butadiene	39	2.404	2.392	0.012	91	262812	5.00	3.41	M
9 Bromomethane	94	2.739	2.733	0.006	90	250964	5.00	4.62	
10 Chloroethane	64	2.837	2.831	0.006	100	229821	5.00	4.69	
11 Dichlorofluoromethane	67	3.081	3.074	0.007	97	494718	5.00	4.70	
13 Trichlorofluoromethane	101	3.148	3.129	0.019	97	431271	5.00	5.20	
15 Ethyl ether	59	3.434	3.422	0.012	94	202852	5.01	4.93	
16 1,2-Dichloro-1,1,2-trifluoroetha	67	3.507	3.495	0.012	95	310508	5.00	4.77	
17 Acrolein	56	3.617	3.605	0.012	99	204623	37.5	32.6	
18 1,1-Dichloroethene	96	3.757	3.745	0.012	98	212144	5.00	4.55	
20 112TCTFE	101	3.782	3.782	0.000	93	219170	5.00	4.31	
19 Acetone	43	3.794	3.788	0.006	99	237503	37.5	30.8	M
22 Iodomethane	142	3.971	3.952	0.019	98	393177	5.00	4.34	
21 Isopropyl alcohol	45	3.971	3.971	0.000	95	41269	37.5	29.2	M
23 Ethyl bromide	108	3.995	3.989	0.006	99	211446	4.93	4.98	
24 Carbon disulfide	76	4.080	4.068	0.012	99	631895	5.00	4.08	
26 Methyl acetate	43	4.233	4.221	0.012	99	91283	5.00	4.09	
27 3-Chloro-1-propene	41	4.263	4.257	0.006	94	424288	5.00	4.48	
29 Methylene Chloride	84	4.464	4.446	0.018	95	258847	5.00	4.66	
* 28 t-Butyl alcohol-d10 (IS)	65	4.477	4.458	0.019	0	109374	50.0	50.0	
30 2-Methyl-2-propanol	59	4.611	4.599	0.012	99	92920	50.0	42.9	
31 Acrylonitrile	53	4.812	4.800	0.012	99	239922	25.0	23.1	
32 Methyl tert-butyl ether	73	4.879	4.861	0.018	96	521081	5.00	4.67	
33 trans-1,2-Dichloroethene	96	4.891	4.879	0.012	99	250329	5.00	4.72	
34 Hexane	57	5.312	5.300	0.012	94	367429	5.00	4.36	
35 1,1-Dichloroethane	63	5.550	5.543	0.007	96	489473	5.00	4.79	
37 Isopropyl ether	45	5.598	5.580	0.018	96	907711	5.00	4.75	
38 2-Chloro-1,3-butadiene	53	5.659	5.647	0.012	91	415452	5.00	4.63	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
39 Tert-butyl ethyl ether	59	6.123	6.117	0.006	99	771355	5.00	4.75	
41 2-Butanone (MEK)	43	6.330	6.324	0.006	100	455413	37.5	35.3	
42 cis-1,2-Dichloroethene	96	6.373	6.366	0.007	83	308345	5.00	5.07	
43 2,2-Dichloropropane	77	6.391	6.385	0.006	87	386586	5.00	4.88	
45 Propionitrile	54	6.421	6.415	0.006	99	112804	37.5	34.1	
47 Methacrylonitrile	67	6.635	6.629	0.006	92	470845	37.5	36.3	
48 Chlorobromomethane	128	6.714	6.702	0.012	95	116157	5.00	4.56	
49 Tetrahydrofuran	71	6.708	6.702	0.006	82	80898	25.0	23.6	
50 Chloroform	83	6.854	6.848	0.006	93	478246	5.00	5.01	
\$ 51 Dibromofluoromethane (Surr)	113	7.068	7.061	0.007	93	500751	10.0	10.0	
52 1,1,1-Trichloroethane	97	7.086	7.080	0.006	98	397778	5.00	4.86	
53 Cyclohexane	56	7.183	7.183	0.000	92	473428	5.00	4.51	
55 1,1-Dichloropropene	75	7.293	7.293	0.000	96	372951	5.00	4.91	
56 Carbon tetrachloride	117	7.299	7.293	0.006	96	348471	5.00	4.94	
57 Isobutyl alcohol	41	7.427	7.427	0.000	95	81765	125.0	94.2	
\$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.525	7.519	0.006	0	100716	10.0	9.87	
59 Benzene	78	7.555	7.549	0.006	98	1130825	5.00	4.84	
60 1,2-Dichloroethane	62	7.622	7.622	0.000	97	262560	5.00	4.80	
62 Tert-amyl methyl ether	73	7.744	7.732	0.012	99	655714	5.00	4.90	
* 65 Fluorobenzene (IS)	96	7.958	7.952	0.006	99	2119828	10.0	10.0	
64 n-Heptane	43	7.964	7.958	0.006	92	431672	5.00	4.48	
66 n-Butanol	56	8.305	8.299	0.006	88	148857	250.0	196.6	
67 Trichloroethene	95	8.433	8.433	0.000	99	279482	5.00	4.88	
68 Methylcyclohexane	83	8.750	8.744	0.006	95	482545	5.00	4.73	
69 2-ethoxy-2-methyl butane	87	8.775	8.768	0.007	88	405893	5.00	4.93	
70 1,2-Dichloropropane	63	8.775	8.768	0.007	85	295463	5.00	5.01	
71 Methyl methacrylate	69	8.842	8.842	0.000	91	119988	5.00	4.76	
72 1,4-Dioxane	88	8.860	8.854	0.006	28	14258	125.0	68.4	M
73 Dibromomethane	93	8.884	8.878	0.006	96	122918	5.00	4.96	
75 Dichlorobromomethane	83	9.116	9.110	0.006	100	340734	5.00	5.13	
76 2-Nitropropane	41	9.372	9.372	0.000	98	33117	5.00	4.77	
78 2-Chloroethyl vinyl ether	63		9.457				ND	ND	
79 1-Bromo-2-chloroethane	63	9.500	9.494	0.006	98	285352	5.00	4.88	
80 cis-1,3-Dichloropropene	75	9.640	9.640	0.000	96	409311	5.00	5.01	
81 4-Methyl-2-pentanone (MIBK)	43	9.805	9.799	0.006	97	796674	25.0	23.6	
\$ 82 Toluene-d8 (Surr)	98	9.945	9.939	0.006	94	2046247	10.0	10.0	
83 Toluene	92	10.018	10.018	0.000	98	703905	5.00	4.94	
85 trans-1,3-Dichloropropene	75	10.262	10.262	0.000	93	320456	5.00	4.97	
86 Ethyl methacrylate	69	10.317	10.317	0.000	91	262165	5.00	4.97	
87 1,1,2-Trichloroethane	97	10.469	10.463	0.006	90	179780	5.00	5.18	
88 Tetrachloroethene	166	10.555	10.555	0.000	98	302561	5.00	5.00	
89 1,3-Dichloropropane	76	10.628	10.628	0.000	90	312961	5.00	4.92	
91 2-Hexanone	43	10.671	10.671	0.000	98	563276	25.0	24.8	
93 Chlorodibromomethane	129	10.841	10.841	0.000	90	219233	5.00	5.24	
94 Ethylene Dibromide	107	10.951	10.951	0.000	98	167492	5.00	5.08	
* 97 Chlorobenzene-d5 (IS)	117	11.378	11.372	0.006	87	1520824	10.0	10.0	
96 1-Chlorohexane	91	11.378	11.378	0.000	98	405642	5.00	4.75	
98 Chlorobenzene	112	11.402	11.402	0.000	94	765457	5.00	5.05	
99 1,1,1,2-Tetrachloroethane	131	11.481	11.481	0.000	43	257520	5.00	5.02	
100 Ethylbenzene	91	11.481	11.481	0.000	99	1378578	5.00	4.97	
101 m-Xylene & p-Xylene	106	11.597	11.597	0.000	0	1039448	10.0	10.0	
102 o-Xylene	106	11.926	11.926	0.000	97	510519	5.00	5.03	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
103 Styrene	104	11.939	11.939	0.000	95	855478	5.00	5.07	
104 Bromoform	173	12.103	12.103	0.000	96	120039	5.00	5.06	
105 Isopropylbenzene	105	12.219	12.219	0.000	96	1375925	5.00	5.05	
\$ 108 4-Bromofluorobenzene (Surr)	95	12.365	12.365	0.000	89	741401	10.0	9.96	
109 1,1,2,2-Tetrachloroethane	83	12.463	12.463	0.000	92	218802	5.00	5.18	
111 Bromobenzene	156	12.487	12.487	0.000	94	299465	5.00	5.10	
110 trans-1,4-Dichloro-2-butene	53	12.487	12.487	0.000	86	270486	25.0	24.3	
112 1,2,3-Trichloropropane	110	12.512	12.512	0.000	83	54517	5.00	5.18	
113 N-Propylbenzene	91	12.548	12.548	0.000	99	1663153	5.00	5.09	
114 2-Chlorotoluene	126	12.627	12.627	0.000	96	315286	5.00	5.06	
115 1,3,5-Trimethylbenzene	105	12.682	12.682	0.000	95	1151170	5.00	5.11	
116 4-Chlorotoluene	126	12.719	12.719	0.000	97	318434	5.00	5.09	
118 tert-Butylbenzene	134	12.926	12.926	0.000	93	242906	5.00	4.97	
119 Pentachloroethane	167	12.963	12.963	0.000	93	193991	5.00	5.12	
120 1,2,4-Trimethylbenzene	105	12.963	12.963	0.000	97	1161420	5.00	5.06	
121 sec-Butylbenzene	105	13.085	13.085	0.000	94	1493281	5.00	5.03	
122 1,3-Dichlorobenzene	146	13.188	13.188	0.000	97	594347	5.00	5.09	
123 4-Isopropyltoluene	119	13.194	13.194	0.000	97	1279298	5.00	5.12	
* 124 1,4-Dichlorobenzene-d4	152	13.243	13.243	0.000	96	767783	10.0	10.0	
125 1,4-Dichlorobenzene	146	13.261	13.261	0.000	94	585567	5.00	5.10	
126 1,2,3-Trimethylbenzene	120	13.274	13.268	0.006	99	513273	5.00	5.13	
127 Benzyl chloride	126	13.341	13.335	0.006	99	85403	5.00	5.21	
129 p-Diethylbenzene	119	13.463	13.463	0.000	95	817850	5.00	5.07	
130 n-Butylbenzene	92	13.487	13.487	0.000	98	653531	5.00	5.10	
131 1,2-Dichlorobenzene	146	13.524	13.524	0.000	97	528892	5.00	5.09	
134 1,2-Dibromo-3-Chloropropane	155	14.066	14.060	0.006	84	30615	5.00	5.70	
135 1,3,5-Trichlorobenzene	180	14.188	14.188	0.000	98	438842	5.00	4.99	
136 1,2,4-Trichlorobenzene	180	14.615	14.615	0.000	94	362384	5.00	5.16	
137 Hexachlorobutadiene	225	14.694	14.694	0.000	96	184946	5.00	4.80	
138 Naphthalene	128	14.798	14.798	0.000	97	640801	5.00	5.13	
139 1,2,3-Trichlorobenzene	180	14.944	14.944	0.000	96	298692	5.00	5.10	
140 2-Methylnaphthalene	142	15.596	15.596	0.000	93	337109	5.00	4.52	

QC Flag Legend

Processing Flags

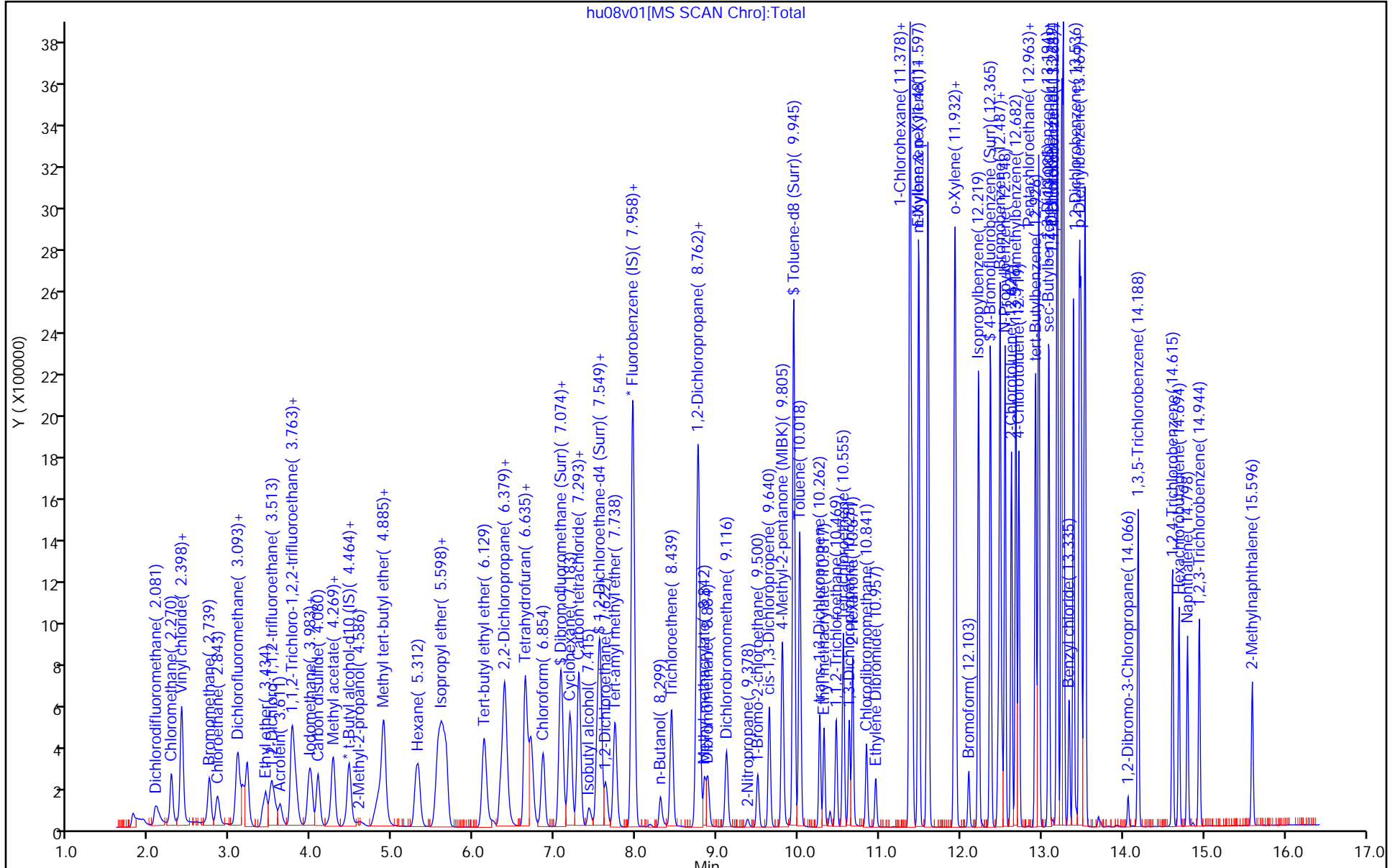
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Review Flags

M - Manually Integrated

Reagents:

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MSV_Q_QVOA1_00032	Amount Added: 12.50	Units: uL	
MSV_Q_ETBR_00003	Amount Added: 12.50	Units: uL	
MSV_Q_EE_00002	Amount Added: 12.50	Units: uL	
MSV_QGAS_826_00044	Amount Added: 12.50	Units: uL	
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hu08v01[MS SCAN Chrom]:Total

Eurofins Lancaster Laboratories Env, LLC

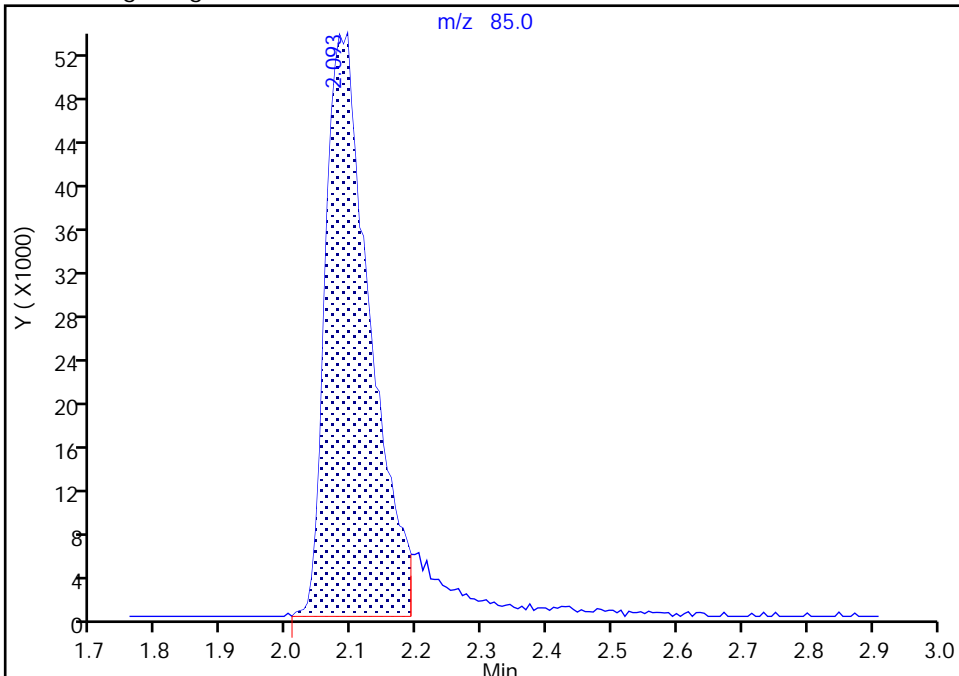
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Injection Date: 08-Jun-2020 19:18:30 Instrument ID: 19094
Lims ID: ICV
Client ID:
Operator ID: jkh09052 ALS Bottle#: 18 Worklist Smp#: 19
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

3 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

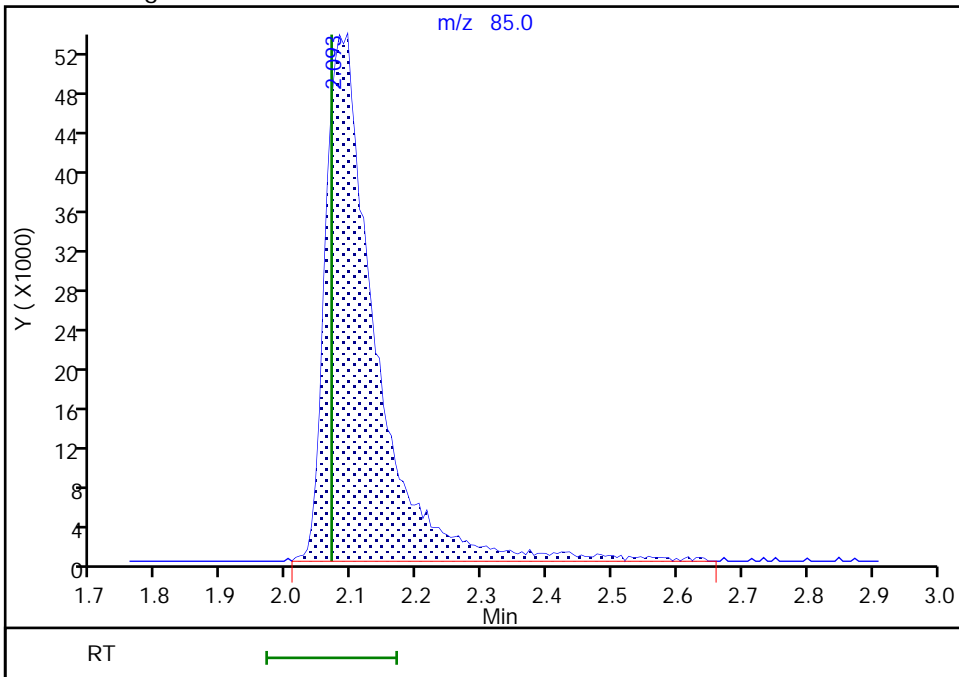
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Area: 252402
Amount: 3.363041
Amount Units: ug/l

Processing Integration Results



RT: 2.09
Area: 284127
Amount: 3.785750
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 08-Jun-2020 20:34:25
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC

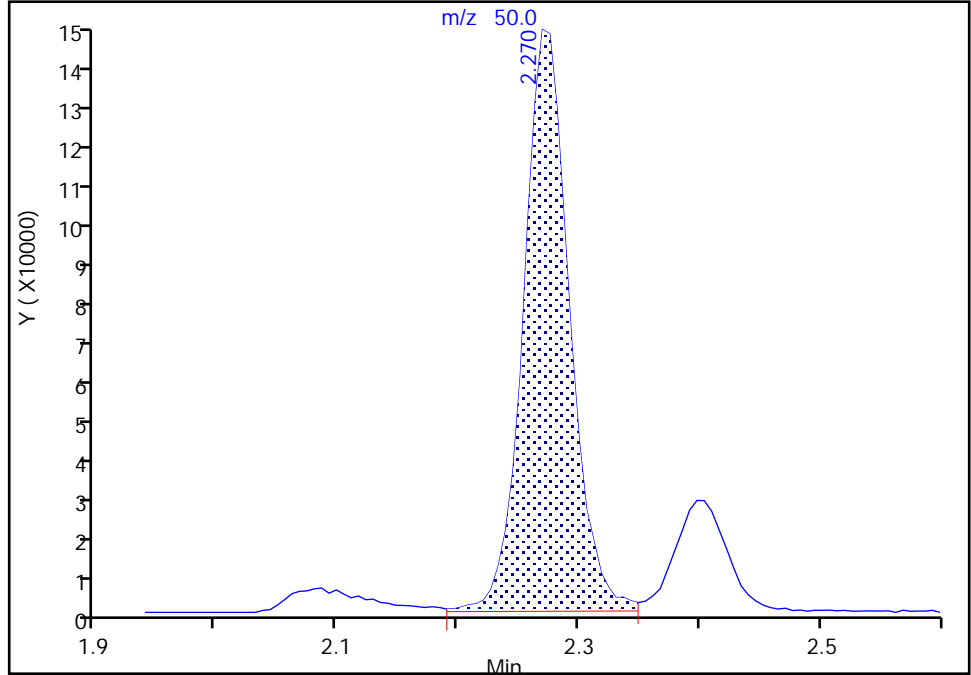
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Injection Date: 08-Jun-2020 19:18:30 Instrument ID: 19094
Lims ID: ICV
Client ID:
Operator ID: jkh09052 ALS Bottle#: 18 Worklist Smp#: 19
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

6 Chloromethane, CAS: 74-87-3

Signal: 1

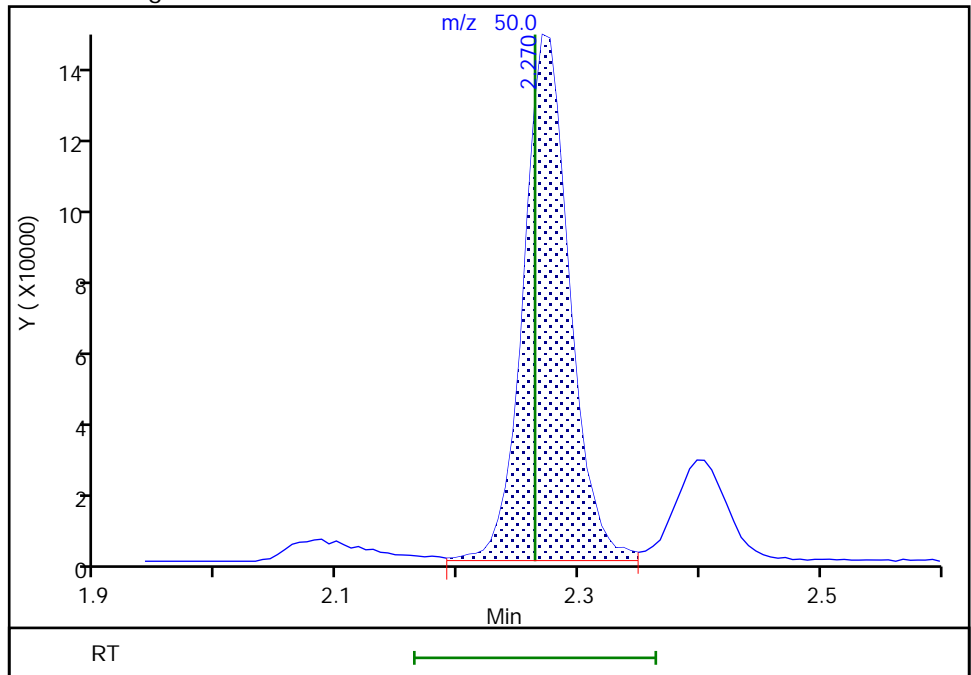
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Amount: 4.333728
Amount Units: ug/l

Processing Integration Results



RT: 2.27
Area: 388238
Amount: 4.343674
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 08-Jun-2020 20:34:36
Audit Action: Assigned New Baseline

Audit Reason: Baseline

Euofins Lancaster Laboratories Env, LLC

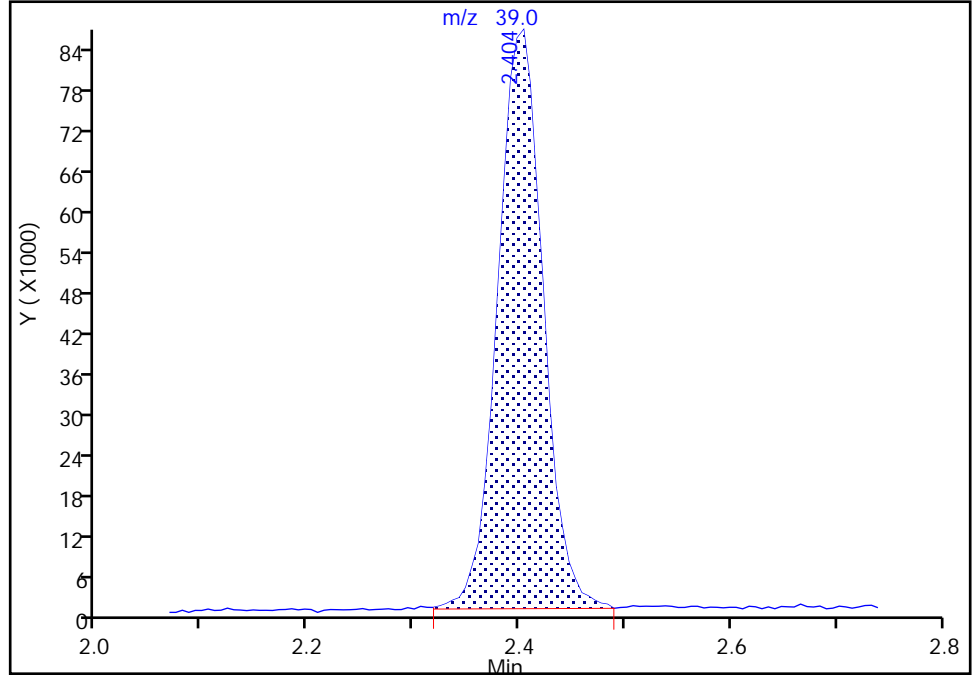
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Injection Date: 08-Jun-2020 19:18:30 Instrument ID: 19094
Lims ID: ICV
Client ID:
Operator ID: jkh09052 ALS Bottle#: 18 Worklist Smp#: 19
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

8 Butadiene, CAS: 106-99-0

Signal: 1

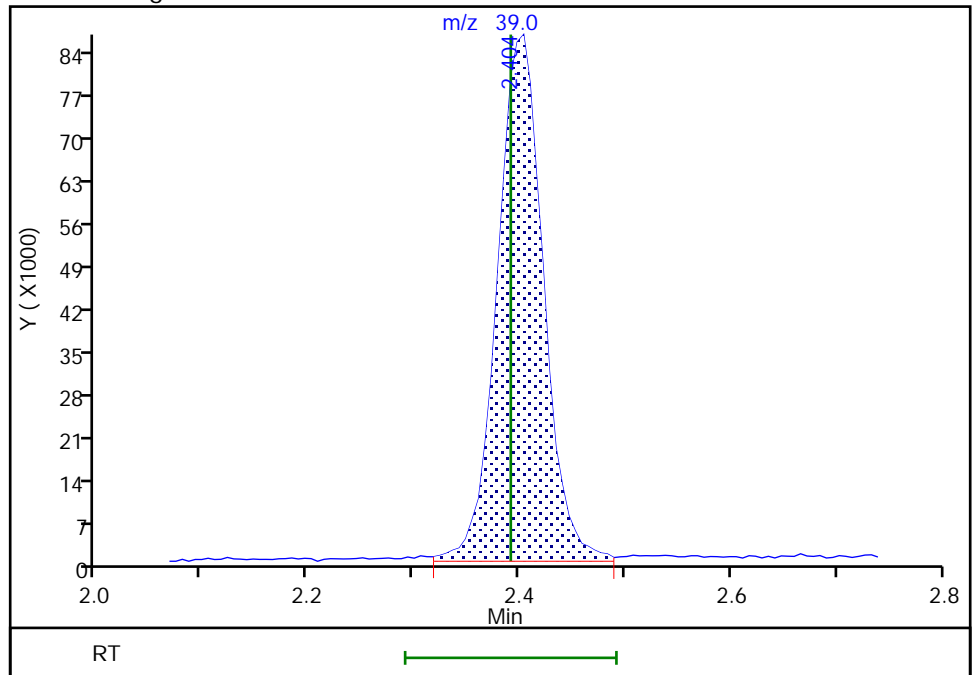
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Amount: 3.334552
Amount Units: ug/l

Processing Integration Results



RT: 2.40
Area: 262812
Amount: 3.409988
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 08-Jun-2020 20:38:08
Audit Action: Split an Integrated Peak

Audit Reason: Split Peak

Eurofins Lancaster Laboratories Env, LLC

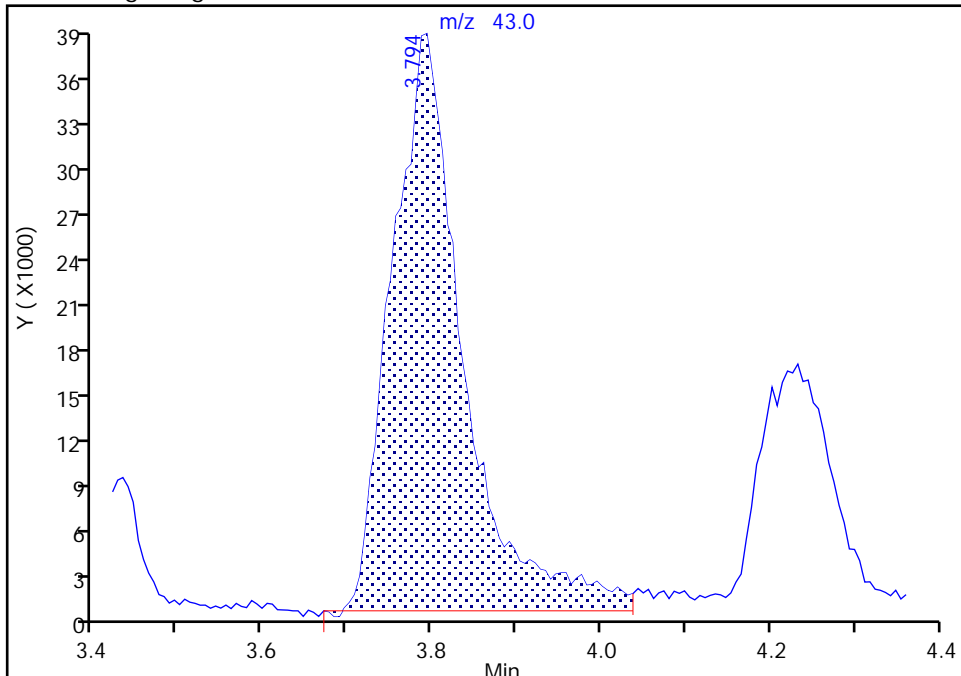
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Injection Date: 08-Jun-2020 19:18:30 Instrument ID: 19094
Lims ID: ICV
Client ID:
Operator ID: jkh09052 ALS Bottle#: 18 Worklist Smp#: 19
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

19 Acetone, CAS: 67-64-1

Signal: 1

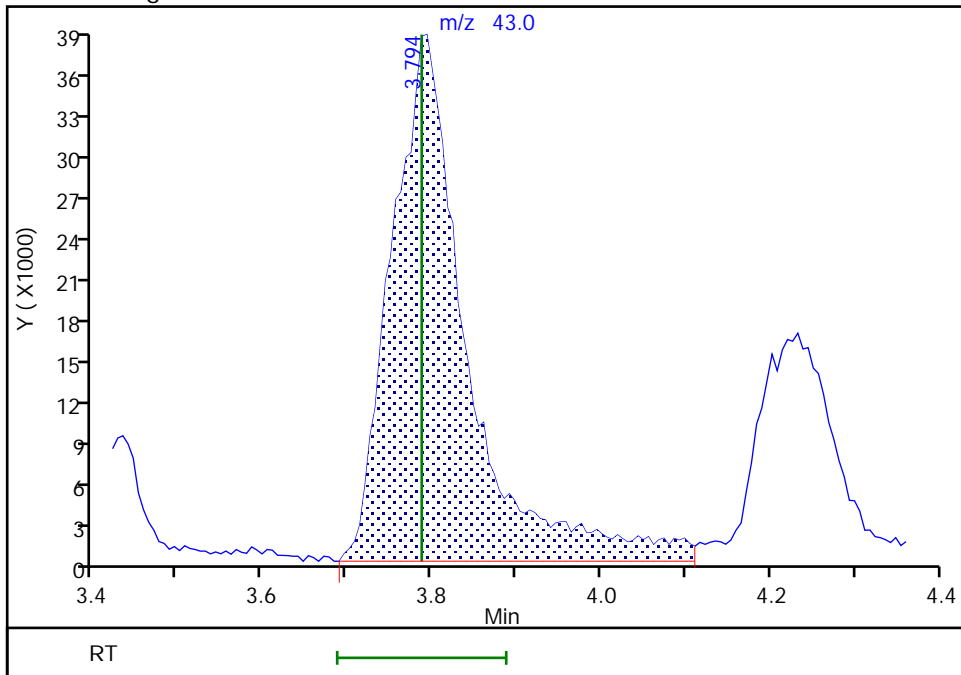
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Amount: 28.898901
Amount Units: ug/l

Processing Integration Results



RT: 3.79
Area: 237503
Amount: 30.751752
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 08-Jun-2020 20:35:05
Audit Action: Assigned New Baseline

Audit Reason: Baseline

Eurofins Lancaster Laboratories Env, LLC

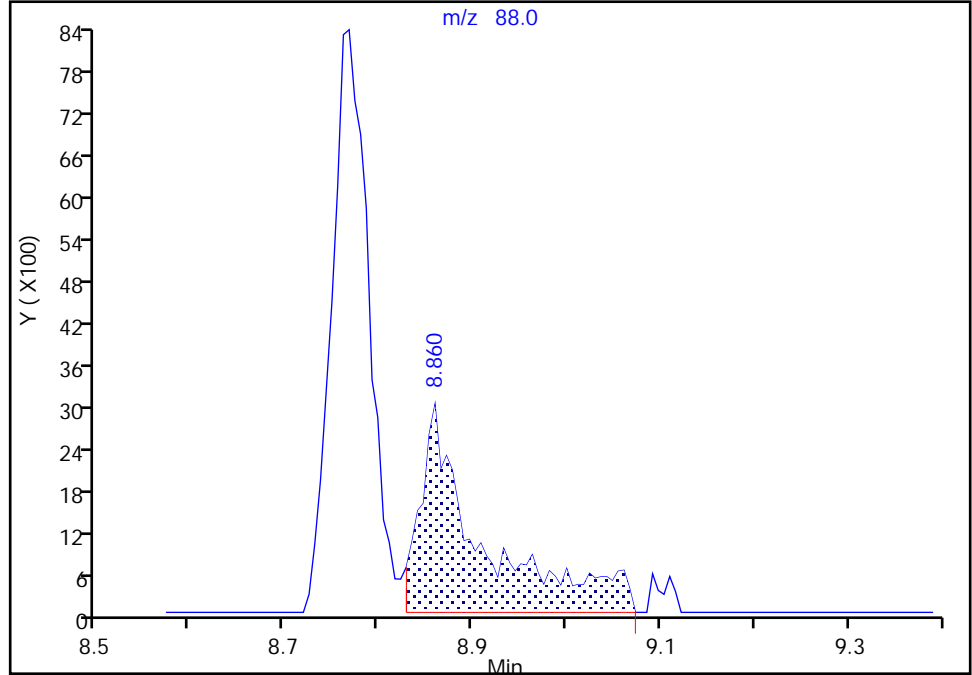
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Injection Date: 08-Jun-2020 19:18:30 Instrument ID: 19094
Lims ID: ICV
Client ID:
Operator ID: jkh09052 ALS Bottle#: 18 Worklist Smp#: 19
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

72 1,4-Dioxane, CAS: 123-91-1

Signal: 1

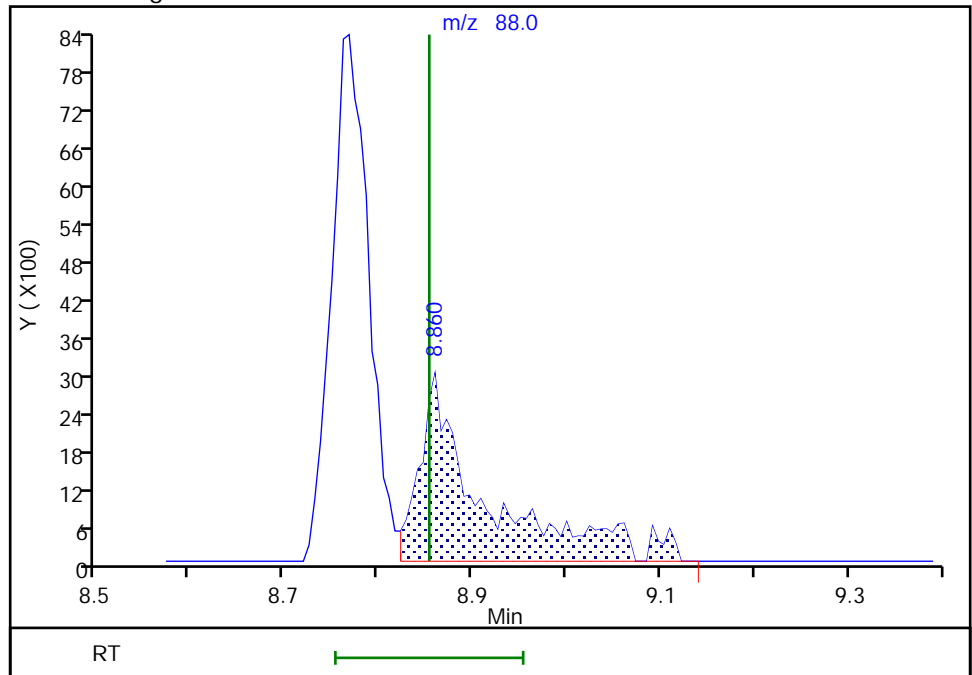
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Area: 13376
Amount: 57.956382
Amount Units: ug/l

Processing Integration Results



RT: 8.86
Area: 14258
Amount: 68.382748
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 08-Jun-2020 20:35:54
Audit Action: Split an Integrated Peak

Audit Reason: Split Peak

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Lab Sample ID: CCVIS 410-38982/3 Calibration Date: 08/30/2020 17:38
 Instrument ID: 19094 Calib Start Date: 06/08/2020 16:46
 GC Column: R-624SilMS 30m ID: 0.25 (mm) Calib End Date: 06/08/2020 18:56
 Lab File ID: HG30C01.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	0.3540	0.3543	0.1000	12.5	12.5	0.0	20.0
Chloromethane	Ave	0.4216	0.4268	0.1000	12.7	12.5	1.2	20.0
Vinyl chloride	Ave	0.3777	0.3706	0.1000	12.3	12.5	-1.9	20.0
1,3-Butadiene	Ave	0.3636	0.3713		12.8	12.5	2.1	20.0
Bromomethane	Ave	0.2560	0.2495	0.1000	12.2	12.5	-2.5	20.0
Chloroethane	Ave	0.2311	0.2389	0.1000	12.9	12.5	3.4	20.0
Dichlorofluoromethane	Ave	0.4964	0.4749		12.0	12.5	-4.3	20.0
Trichlorofluoromethane	Ave	0.3915	0.4412	0.1000	14.1	12.5	12.7	20.0
Ethyl ether	Ave	0.1942	0.2038		13.1	12.5	4.9	20.0
Freon 123a	Ave	0.3071	0.3117		12.7	12.5	1.5	20.0
Acrolein	Ave	2.866	2.149		469	625	-25.0*	20.0
1,1-Dichloroethene	Ave	0.2200	0.2196	0.1000	12.5	12.5	-0.2	20.0
Acetone	Ave	3.531	3.231	0.1000	114	125	-8.5	20.0
Freon 113	Ave	0.2399	0.2387	0.1000	12.4	12.5	-0.5	20.0
Methyl iodide	Ave	0.4274	0.4024		11.8	12.5	-5.9	20.0
Ethyl bromide	Ave	0.2001	0.1911		11.9	12.5	-4.5	20.0
Carbon disulfide	Ave	0.7300	0.7395	0.1000	12.7	12.5	1.3	20.0
Methyl acetate	Ave	10.19	9.554	0.1000	11.7	12.5	-6.3	20.0
Allyl chloride	Ave	0.4470	0.4239		11.9	12.5	-5.2	20.0
Methylene Chloride	Ave	0.2619	0.2540	0.1000	12.1	12.5	-3.0	20.0
t-Butyl alcohol	Ave	0.9905	0.8482		214	250	-14.4	20.0
Acrylonitrile	Ave	4.741	4.444		58.6	62.5	-6.2	20.0
Methyl tert-butyl ether	Ave	0.5260	0.5035	0.1000	12.0	12.5	-4.3	20.0
trans-1,2-Dichloroethene	Ave	0.2503	0.2453	0.1000	12.2	12.5	-2.0	20.0
n-Hexane	Ave	0.3974	0.4082		12.8	12.5	2.7	20.0
1,1-Dichloroethane	Ave	0.4816	0.5041	0.2000	13.1	12.5	4.7	20.0
di-Isopropyl ether	Ave	0.9013	0.8758		12.1	12.5	-2.8	20.0
2-Chloro-1,3-butadiene	Ave	0.4234	0.4312		12.7	12.5	1.8	20.0
Ethyl t-butyl ether	Ave	0.7653	0.6968		11.4	12.5	-8.9	20.0
2-Butanone (MEK)	Ave	5.902	5.619	0.1000	119	125	-4.8	20.0
cis-1,2-Dichloroethene	Ave	0.2868	0.2868	0.1000	12.5	12.5	-0.0	20.0
2,2-Dichloropropane	Ave	0.3736	0.3721		12.5	12.5	-0.4	20.0
Propionitrile	Ave	1.514	1.588		262	250	4.9	20.0
Methacrylonitrile	Ave	5.933	5.312		112	125	-10.5	20.0
Bromochloromethane	Ave	0.1201	0.1204		12.5	12.5	0.2	20.0
Tetrahydrofuran	Ave	1.569	1.429		114	125	-8.9	20.0
Chloroform	Ave	0.4502	0.4728	0.2000	13.1	12.5	5.0	20.0
1,1,1-Trichloroethane	Ave	0.3862	0.3926	0.1000	12.7	12.5	1.7	20.0
Cyclohexane	Ave	0.4949	0.5004	0.1000	12.6	12.5	1.1	20.0
1,1-Dichloropropene	Ave	0.3584	0.3827		13.3	12.5	6.8	20.0
Carbon tetrachloride	Ave	0.3329	0.3382	0.1000	12.7	12.5	1.6	20.0

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 Instrument ID: 19094 Calib Start Date: 06/08/2020 16:46
 GC Column: R-624SilMS 30m ID: 0.25 (mm) Calib End Date: 06/08/2020 18:56
 Lab File ID: HG30C01.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
Isobutyl alcohol	Ave	0.3969	0.3663		577	625	-7.7	20.0
Benzene	Ave	1.101	1.127	0.5000	12.8	12.5	2.3	20.0
1,2-Dichloroethane	Ave	0.2578	0.2852	0.1000	13.8	12.5	10.6	20.0
t-Amyl methyl ether	Ave	0.6309	0.6071		12.0	12.5	-3.8	20.0
n-Heptane	Ave	0.4544	0.4961		13.6	12.5	9.2	20.0
n-Butanol	Ave	0.3461	0.3324		1200	1250	-3.9	20.0
Trichloroethene	Ave	0.2702	0.2804	0.2000	13.0	12.5	3.8	20.0
Methylcyclohexane	Ave	0.4815	0.5024	0.1000	13.0	12.5	4.3	20.0
1,2-Dichloropropane	Ave	0.2784	0.2972	0.1000	13.3	12.5	6.8	20.0
Methyl methacrylate	Ave	11.53	9.775		10.6	12.5	-15.2	20.0
1,4-Dioxane	Ave	0.0953	0.0730	0.0050	479	625	-23.4*	20.0
Dibromomethane	Ave	0.1170	0.1268		13.5	12.5	8.3	20.0
Bromodichloromethane	Ave	0.3135	0.3414	0.2000	13.6	12.5	8.9	20.0
2-Nitropropane	Ave	3.175	3.111		122	125	-2.0	20.0
1-Bromo-2-chloroethane	Ave	0.2760	0.3091		14.0	12.5	12.0	20.0
cis-1,3-Dichloropropene	Ave	0.3853	0.4116	0.2000	13.4	12.5	6.8	20.0
4-Methyl-2-pentanone (MIBK)	Ave	15.42	14.45	0.1000	117	125	-6.3	20.0
Toluene	Ave	0.9364	0.9585	0.4000	12.8	12.5	2.4	20.0
trans-1,3-Dichloropropene	Ave	0.4236	0.4576	0.1000	13.5	12.5	8.0	20.0
Ethyl methacrylate	Ave	0.3467	0.3587		12.9	12.5	3.4	20.0
1,1,2-Trichloroethane	Ave	0.2282	0.2482	0.1000	13.6	12.5	8.8	20.0
Tetrachloroethene	Ave	0.3980	0.3984	0.2000	12.5	12.5	0.1	20.0
1,3-Dichloropropane	Ave	0.4184	0.4577		13.7	12.5	9.4	20.0
2-Hexanone	Ave	10.40	9.768	0.1000	117	125	-6.1	20.0
Dibromochloromethane	Ave	0.2750	0.3001		13.6	12.5	9.1	20.0
1,2-Dibromoethane (EDB)	Ave	0.2170	0.2389	0.1000	13.8	12.5	10.1	20.0
1-Chlorohexane	Ave	0.5616	0.5559		12.4	12.5	-1.0	20.0
Chlorobenzene	Ave	0.998	1.019	0.5000	12.8	12.5	2.2	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3370	0.3478		12.9	12.5	3.2	20.0
Ethylbenzene	Ave	1.823	1.874	0.1000	12.8	12.5	2.8	20.0
m&p-Xylene	Ave	0.6834	0.6945	0.1000	25.4	25.0	1.6	20.0
o-Xylene	Ave	0.6671	0.6795	0.3000	12.7	12.5	1.9	20.0
Styrene	Ave	1.109	1.145	0.3000	12.9	12.5	3.3	20.0
Bromoform	Ave	0.1560	0.1731	0.1000	13.9	12.5	10.9	20.0
Isopropylbenzene	Ave	1.791	1.823	0.1000	12.7	12.5	1.8	20.0
1,1,2,2-Tetrachloroethane	Ave	0.5500	0.6267	0.3000	14.2	12.5	14.0	20.0
Bromobenzene	Ave	0.7652	0.7936		13.0	12.5	3.7	20.0
trans-1,4-Dichloro-2-butene	Ave	5.089	4.808		118	125	-5.5	20.0
1,2,3-Trichloropropane	Ave	0.1369	0.1522		13.9	12.5	11.2	20.0
N-Propylbenzene	Ave	4.254	4.490		13.2	12.5	5.5	20.0
2-Chlorotoluene	Ave	0.8113	0.8367		12.9	12.5	3.1	20.0

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 Lab File ID: HG30C01.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,3,5-Trimethylbenzene	Ave	2.932	3.069		13.1	12.5	4.7	20.0
4-Chlorotoluene	Ave	0.8149	0.8599		13.2	12.5	5.5	20.0
tert-Butylbenzene	Ave	0.6364	0.6533		12.8	12.5	2.7	20.0
Pentachloroethane	Ave	0.4936	0.5159		13.1	12.5	4.5	20.0
1,2,4-Trimethylbenzene	Ave	2.987	3.145		13.2	12.5	5.3	20.0
sec-Butylbenzene	Ave	3.866	4.106		13.3	12.5	6.2	20.0
1,3-Dichlorobenzene	Ave	1.522	1.602	0.6000	13.2	12.5	5.3	20.0
p-Isopropyltoluene	Ave	3.255	3.421		13.1	12.5	5.1	20.0
1,4-Dichlorobenzene	Ave	1.497	1.567	0.5000	13.1	12.5	4.7	20.0
1,2,3-Trimethylbenzene	Ave	1.303	1.326		12.7	12.5	1.8	20.0
Benzyl chloride	Ave	0.2135	0.2357		13.8	12.5	10.4	20.0
n-Butylbenzene	Ave	1.668	1.869		14.0	12.5	12.1	20.0
1,2-Dichlorobenzene	Ave	1.353	1.418	0.4000	13.1	12.5	4.8	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0699	0.0816	0.0500	14.6	12.5	16.7	20.0
1,3,5-Trichlorobenzene	Ave	1.145	1.240		13.5	12.5	8.3	20.0
1,2,4-Trichlorobenzene	Ave	0.9150	1.007	0.2000	13.8	12.5	10.0	20.0
Hexachlorobutadiene	Ave	0.5021	0.5419		13.5	12.5	7.9	20.0
Naphthalene	Ave	1.627	1.738		13.4	12.5	6.9	20.0
1,2,3-Trichlorobenzene	Ave	0.7628	0.8502		13.9	12.5	11.5	20.0
Dibromofluoromethane (Surr)	Ave	0.2364	0.2420		10.2	10.0	2.4	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.0482	0.0490		10.2	10.0	1.8	20.0
Toluene-d8 (Surr)	Ave	1.342	1.350		10.1	10.0	0.6	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4896	0.4806		9.82	10.0	-1.8	20.0

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30C01.D
 Lims ID: CCVIS VSTD12.5
 Client ID:
 Sample Type: CCVIS
 Inject. Date: 30-Aug-2020 17:38:30 ALS Bottle#: 2 Worklist Smp#: 3
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: CCVIS VSTD12.5
 Misc. Info.: 410-0009349-003
 Operator ID: mec29284 Instrument ID: 19094
 Sublist: chrom-MSV_19094_25mL*sub1
 Method: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 30-Aug-2020 18:52:31 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1035

First Level Reviewer: campbellme

Date: 30-Aug-2020 18:05:52

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
3 Dichlorodifluoromethane	85	2.068	2.068	0.000	100	898222	12.5	12.5	M
6 Chloromethane	50	2.276	2.276	0.000	99	1081999	12.5	12.7	
7 Vinyl chloride	62	2.385	2.385	0.000	97	939660	12.5	12.3	
8 Butadiene	39	2.404	2.404	0.000	93	941259	12.5	12.8	
9 Bromomethane	94	2.745	2.745	0.000	90	632678	12.5	12.2	
10 Chloroethane	64	2.837	2.837	0.000	100	605605	12.5	12.9	
11 Dichlorofluoromethane	67	3.087	3.087	0.000	98	1204105	12.5	12.0	
13 Trichlorofluoromethane	101	3.154	3.154	0.000	97	1118589	12.5	14.1	
15 Ethyl ether	59	3.422	3.422	0.000	94	516508	12.5	13.1	
16 1,2-Dichloro-1,1,2-trifluoroethane	67	3.513	3.513	0.000	95	790183	12.5	12.7	
17 Acrolein	56	3.611	3.611	0.000	99	3374154	625.0	468.6	
18 1,1-Dichloroethene	96	3.757	3.757	0.000	97	556776	12.5	12.5	
19 Acetone	43	3.788	3.788	0.000	99	1014720	125.0	114.4	M
20 112TCTFE	101	3.788	3.788	0.000	92	605181	12.5	12.4	
21 Isopropyl alcohol	45	3.964	3.964	0.000	40	286048	250.0	266.5	
22 Iodomethane	142	3.971	3.971	0.000	99	1020144	12.5	11.8	
23 Ethyl bromide	108	4.001	4.001	0.000	98	484836	12.5	11.9	
24 Carbon disulfide	76	4.086	4.086	0.000	99	1874785	12.5	12.7	
26 Methyl acetate	43	4.233	4.233	0.000	98	299997	12.5	11.7	
27 3-Chloro-1-propene	41	4.263	4.263	0.000	92	1074645	12.5	11.9	
29 Methylene Chloride	84	4.464	4.464	0.000	95	643941	12.5	12.1	
* 28 t-Butyl alcohol-d10 (IS)	65	4.477	4.477	0.000	0	125604	50.0	50.0	
30 2-Methyl-2-propanol	59	4.605	4.605	0.000	98	532684	250.0	214.1	
31 Acrylonitrile	53	4.806	4.806	0.000	100	697780	62.5	58.6	
32 Methyl tert-butyl ether	73	4.873	4.873	0.000	98	1276621	12.5	12.0	
33 trans-1,2-Dichloroethene	96	4.891	4.891	0.000	97	621945	12.5	12.2	
34 Hexane	57	5.306	5.306	0.000	94	1034858	12.5	12.8	
35 1,1-Dichloroethane	63	5.549	5.549	0.000	96	1277969	12.5	13.1	
37 Isopropyl ether	45	5.598	5.598	0.000	95	2220357	12.5	12.1	
38 2-Chloro-1,3-butadiene	53	5.653	5.653	0.000	92	1093173	12.5	12.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
39 Tert-butyl ethyl ether	59	6.129	6.129	0.000	98	1766755	12.5	11.4	
41 2-Butanone (MEK)	43	6.330	6.330	0.000	100	1764424	125.0	119.0	
42 cis-1,2-Dichloroethene	96	6.372	6.372	0.000	83	727201	12.5	12.5	
43 2,2-Dichloropropane	77	6.391	6.391	0.000	89	943516	12.5	12.5	
45 Propionitrile	54	6.427	6.427	0.000	99	997527	250.0	262.2	
47 Methacrylonitrile	67	6.641	6.641	0.000	93	1668035	125.0	111.9	
48 Chlorobromomethane	128	6.702	6.702	0.000	92	305235	12.5	12.5	
49 Tetrahydrofuran	71	6.714	6.714	0.000	90	448596	125.0	113.8	
50 Chloroform	83	6.854	6.854	0.000	94	1198829	12.5	13.1	
\$ 51 Dibromofluoromethane (Surr)	113	7.061	7.061	0.000	93	490942	10.0	10.2	
52 1,1,1-Trichloroethane	97	7.086	7.086	0.000	99	995401	12.5	12.7	
53 Cyclohexane	56	7.183	7.183	0.000	92	1268760	12.5	12.6	
55 1,1-Dichloropropene	75	7.287	7.287	0.000	96	970350	12.5	13.3	
56 Carbon tetrachloride	117	7.293	7.293	0.000	96	857470	12.5	12.7	
57 Isobutyl alcohol	41	7.421	7.421	0.000	94	575154	625.0	576.8	
\$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.519	7.519	0.000	0	99440	10.0	10.2	
59 Benzene	78	7.555	7.555	0.000	97	2856095	12.5	12.8	
60 1,2-Dichloroethane	62	7.622	7.622	0.000	97	723171	12.5	13.8	
62 Tert-amyl methyl ether	73	7.738	7.738	0.000	98	1539186	12.5	12.0	
* 65 Fluorobenzene (IS)	96	7.951	7.951	0.000	98	2028279	10.0	10.0	
64 n-Heptane	43	7.958	7.958	0.000	92	1257888	12.5	13.6	
66 n-Butanol	56	8.293	8.293	0.000	90	1043753	1250.0	1200.6	
67 Trichloroethene	95	8.433	8.433	0.000	98	710937	12.5	13.0	
68 Methylcyclohexane	83	8.744	8.744	0.000	96	1273872	12.5	13.0	
69 2-ethoxy-2-methyl butane	87	8.762	8.762	0.000	90	947791	12.5	12.0	
70 1,2-Dichloropropane	63	8.768	8.768	0.000	86	753548	12.5	13.3	
71 Methyl methacrylate	69	8.835	8.835	0.000	92	306945	12.5	10.6	
72 1,4-Dioxane	88	8.848	8.848	0.000	94	114615	625.0	478.7	
73 Dibromomethane	93	8.878	8.878	0.000	96	321370	12.5	13.5	
75 Dichlorobromomethane	83	9.110	9.110	0.000	99	865653	12.5	13.6	
76 2-Nitropropane	41	9.366	9.366	0.000	98	977038	125.0	122.5	
79 1-Bromo-2-chloroethane	63	9.494	9.494	0.000	99	783574	12.5	14.0	
80 cis-1,3-Dichloropropene	75	9.634	9.634	0.000	95	1043615	12.5	13.4	
81 4-Methyl-2-pentanone (MIBK)	43	9.793	9.793	0.000	97	4538017	125.0	117.2	
\$ 82 Toluene-d8 (Surr)	98	9.933	9.933	0.000	94	1955943	10.0	10.1	
83 Toluene	92	10.012	10.012	0.000	98	1735930	12.5	12.8	
85 trans-1,3-Dichloropropene	75	10.256	10.256	0.000	94	828678	12.5	13.5	
86 Ethyl methacrylate	69	10.305	10.305	0.000	91	649602	12.5	12.9	
87 1,1,2-Trichloroethane	97	10.457	10.457	0.000	91	449535	12.5	13.6	
88 Tetrachloroethene	166	10.542	10.542	0.000	96	721576	12.5	12.5	
89 1,3-Dichloropropane	76	10.616	10.616	0.000	92	828967	12.5	13.7	
91 2-Hexanone	43	10.658	10.658	0.000	98	3067262	125.0	117.4	
93 Chlorodibromomethane	129	10.829	10.829	0.000	90	543550	12.5	13.6	
94 Ethylene Dibromide	107	10.945	10.945	0.000	98	432645	12.5	13.8	
* 97 Chlorobenzene-d5 (IS)	117	11.365	11.365	0.000	88	1448837	10.0	10.0	
96 1-Chlorohexane	91	11.365	11.365	0.000	98	1006841	12.5	12.4	
98 Chlorobenzene	112	11.390	11.390	0.000	93	1846095	12.5	12.8	
99 1,1,1,2-Tetrachloroethane	131	11.469	11.469	0.000	95	629910	12.5	12.9	
100 Ethylbenzene	91	11.475	11.475	0.000	99	3394084	12.5	12.8	
101 m-Xylene & p-Xylene	106	11.585	11.585	0.000	0	2515689	25.0	25.4	
102 o-Xylene	106	11.914	11.914	0.000	97	1230610	12.5	12.7	
103 Styrene	104	11.926	11.926	0.000	95	2074306	12.5	12.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
104 Bromoform	173	12.091	12.091	0.000	96	313528	12.5	13.9	
105 Isopropylbenzene	105	12.207	12.207	0.000	96	3301507	12.5	12.7	
\$ 108 4-Bromofluorobenzene (Surr)	95	12.353	12.353	0.000	89	696339	10.0	9.82	
109 1,1,2,2-Tetrachloroethane	83	12.451	12.451	0.000	93	572482	12.5	14.2	
111 Bromobenzene	156	12.475	12.475	0.000	91	724979	12.5	13.0	
110 trans-1,4-Dichloro-2-butene	53	12.475	12.475	0.000	94	1509704	125.0	118.1	
112 1,2,3-Trichloropropane	110	12.499	12.499	0.000	83	139050	12.5	13.9	
113 N-Propylbenzene	91	12.536	12.536	0.000	99	4101371	12.5	13.2	
114 2-Chlorotoluene	126	12.615	12.615	0.000	96	764347	12.5	12.9	
115 1,3,5-Trimethylbenzene	105	12.670	12.670	0.000	94	2803602	12.5	13.1	
116 4-Chlorotoluene	126	12.707	12.707	0.000	98	785528	12.5	13.2	
118 tert-Butylbenzene	134	12.908	12.908	0.000	93	596807	12.5	12.8	
119 Pentachloroethane	167	12.944	12.944	0.000	93	471240	12.5	13.1	
120 1,2,4-Trimethylbenzene	105	12.950	12.950	0.000	98	2873093	12.5	13.2	
121 sec-Butylbenzene	105	13.072	13.072	0.000	95	3750626	12.5	13.3	
122 1,3-Dichlorobenzene	146	13.176	13.176	0.000	97	1463519	12.5	13.2	
123 4-Isopropyltoluene	119	13.176	13.176	0.000	97	3124926	12.5	13.1	
* 124 1,4-Dichlorobenzene-d4	152	13.231	13.231	0.000	95	730794	10.0	10.0	
125 1,4-Dichlorobenzene	146	13.249	13.249	0.000	92	1431802	12.5	13.1	
126 1,2,3-Trimethylbenzene	120	13.255	13.255	0.000	99	1211110	12.5	12.7	
127 Benzyl chloride	126	13.322	13.322	0.000	99	215284	12.5	13.8	
129 p-Diethylbenzene	119	13.450	13.450	0.000	93	2029932	12.5	13.2	
130 n-Butylbenzene	92	13.469	13.469	0.000	98	1707547	12.5	14.0	
131 1,2-Dichlorobenzene	146	13.505	13.505	0.000	97	1295036	12.5	13.1	
134 1,2-Dibromo-3-Chloropropane	155	14.048	14.048	0.000	83	74539	12.5	14.6	
135 1,3,5-Trichlorobenzene	180	14.170	14.170	0.000	97	1133175	12.5	13.5	
136 1,2,4-Trichlorobenzene	180	14.596	14.596	0.000	94	919854	12.5	13.8	
137 Hexachlorobutadiene	225	14.676	14.676	0.000	97	495034	12.5	13.5	
138 Naphthalene	128	14.779	14.779	0.000	97	1588070	12.5	13.4	
139 1,2,3-Trichlorobenzene	180	14.926	14.926	0.000	96	776691	12.5	13.9	
140 2-Methylnaphthalene	142	15.572	15.572	0.000	92	815099	12.5	11.5	

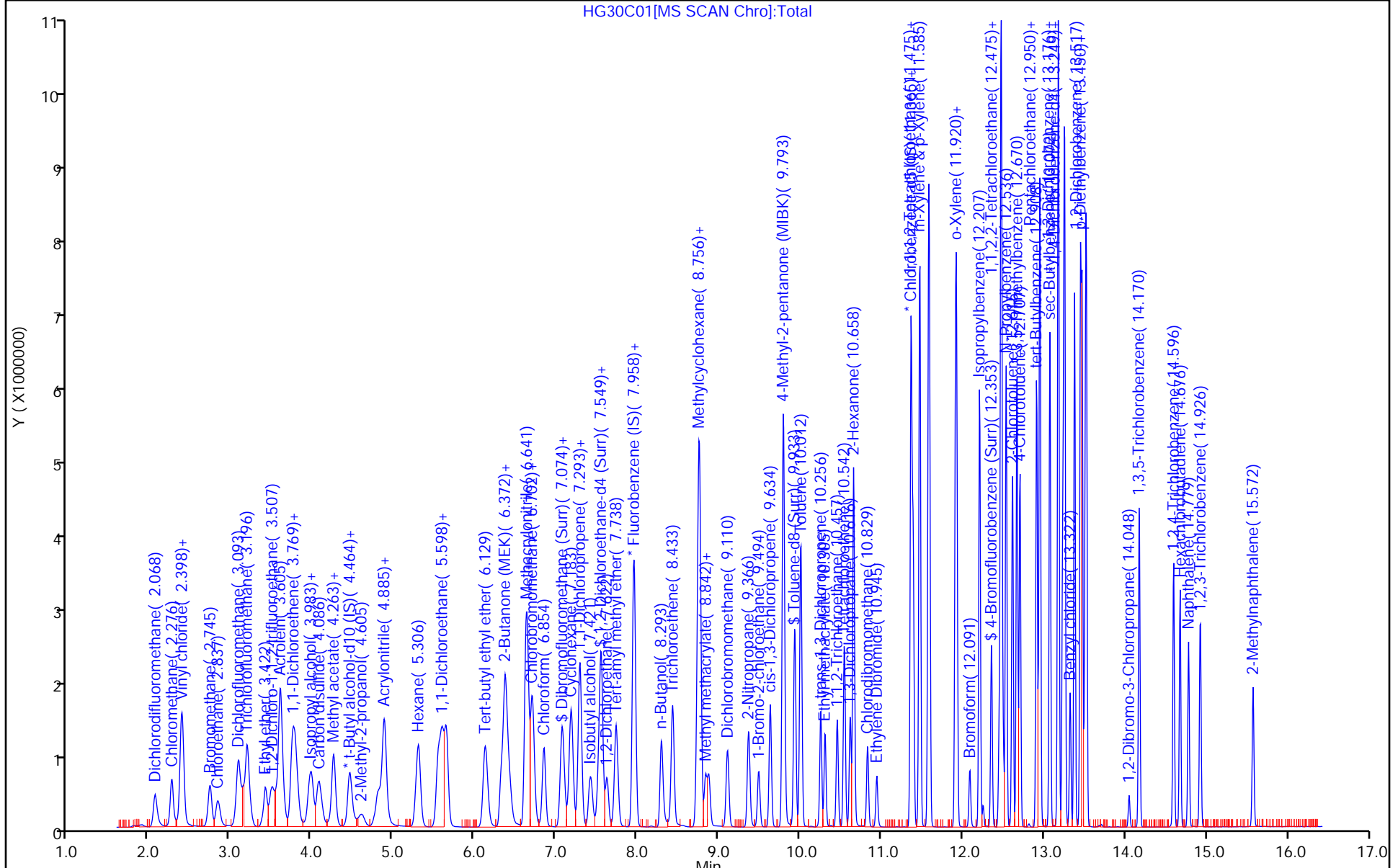
QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MSV_RV4_826_00023	Amount Added: 25.00	Units: uL	
MSV_RV1_826_00021	Amount Added: 25.00	Units: uL	
MSV_RV4GAS826_00069	Amount Added: 25.00	Units: uL	
MSV_30_826ISS_00005	Amount Added: 5.00	Units: uL	Run Reagent



HG30C01[MS SCAN Chrom]:Total

Eurofins Lancaster Laboratories Env, LLC

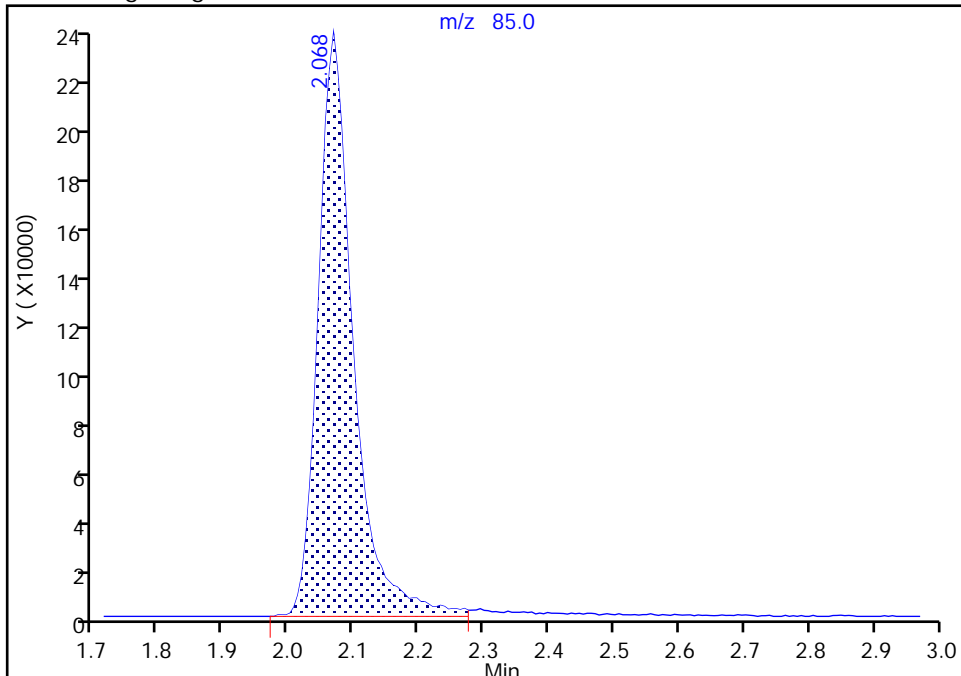
Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30C01.D
Injection Date: 30-Aug-2020 17:38:30 Instrument ID: 19094
Lims ID: CCVIS VSTD12.5
Client ID:
Operator ID: mec29284 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

3 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

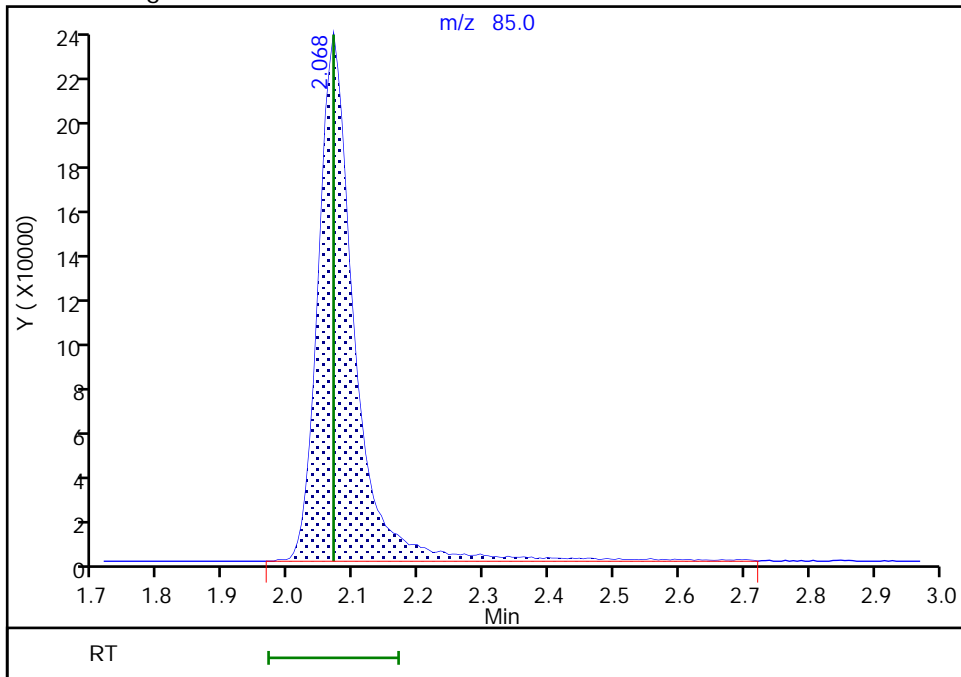
RT: 2.07
Area: 871270
Amount: 12.132914
Amount Units: ug/l

Processing Integration Results



RT: 2.07
Area: 898222
Amount: 12.508235
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 30-Aug-2020 18:04:17
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC

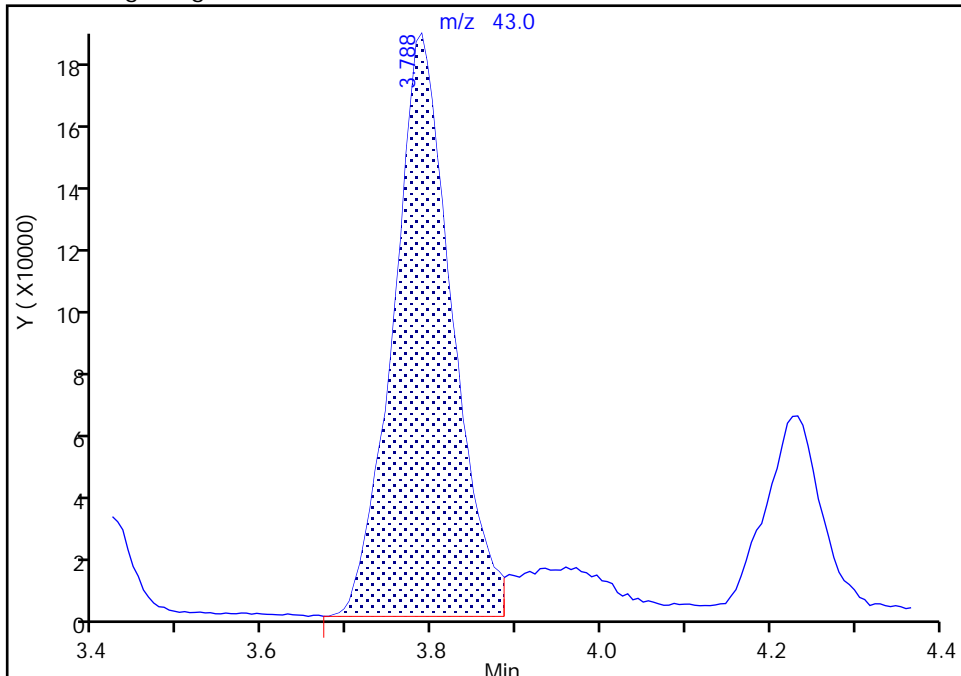
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Injection Date: 30-Aug-2020 17:38:30 Instrument ID: 19094
Lims ID: CCVIS VSTD12.5
Client ID:
Operator ID: mec29284 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

19 Acetone, CAS: 67-64-1

Signal: 1

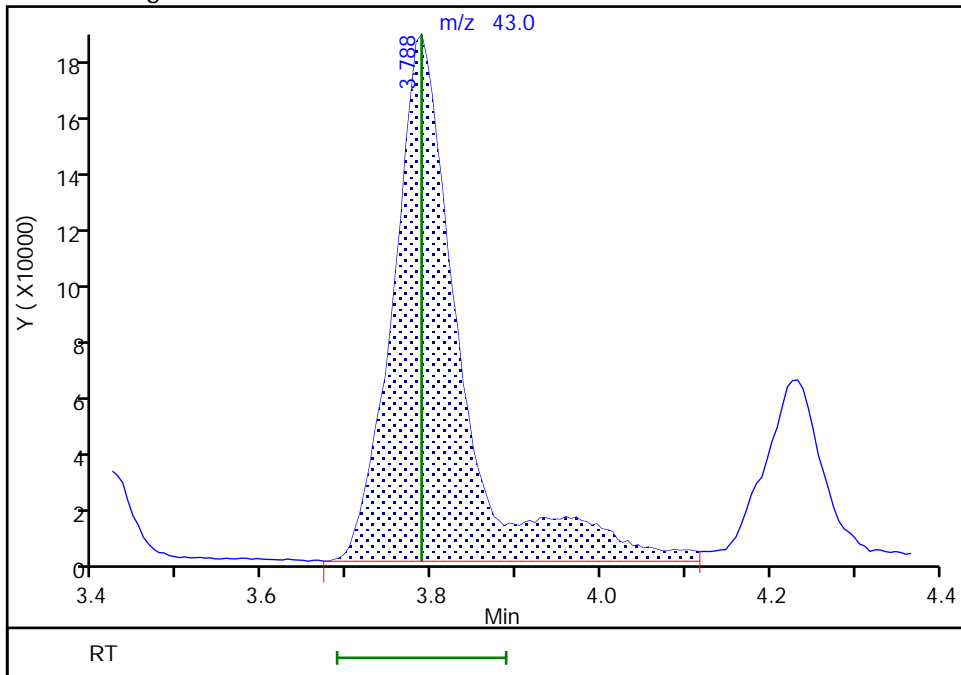
RT: 3.79
Area: 881579
Amount: 99.396850
Amount Units: ug/l

Processing Integration Results



RT: 3.79
Area: 1014720
Amount: 114.4083
Amount Units: ug/l

Manual Integration Results



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Lab Sample ID: CCVIS 410-39389/3 Calibration Date: 08/31/2020 18:18
 Instrument ID: 19094 Calib Start Date: 06/08/2020 16:46
 GC Column: R-624SilMS 30m ID: 0.25 (mm) Calib End Date: 06/08/2020 18:56
 Lab File ID: HG31C01.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	0.3540	0.3549	0.1000	12.5	12.5	0.3	20.0
Chloromethane	Ave	0.4216	0.4253	0.1000	12.6	12.5	0.9	20.0
Vinyl chloride	Ave	0.3777	0.3656	0.1000	12.1	12.5	-3.2	20.0
1,3-Butadiene	Ave	0.3636	0.3521		12.1	12.5	-3.1	20.0
Bromomethane	Ave	0.2560	0.2458	0.1000	12.0	12.5	-4.0	20.0
Chloroethane	Ave	0.2311	0.2343	0.1000	12.7	12.5	1.4	20.0
Dichlorofluoromethane	Ave	0.4964	0.4610		11.6	12.5	-7.1	20.0
Trichlorofluoromethane	Ave	0.3915	0.4328	0.1000	13.8	12.5	10.5	20.0
Ethyl ether	Ave	0.1942	0.2026		13.0	12.5	4.3	20.0
Freon 123a	Ave	0.3071	0.3083		12.6	12.5	0.4	20.0
Acrolein	Ave	2.866	2.130		464	625	-25.7*	20.0
1,1-Dichloroethene	Ave	0.2200	0.2126	0.1000	12.1	12.5	-3.4	20.0
Acetone	Ave	3.531	3.223	0.1000	114	125	-8.7	20.0
Freon 113	Ave	0.2399	0.2364	0.1000	12.3	12.5	-1.4	20.0
Isopropyl alcohol	Qua		0.0071			250		20.0
Methyl iodide	Ave	0.4274	0.3976		11.6	12.5	-7.0	20.0
Ethyl bromide	Ave	0.2001	0.1886		11.8	12.5	-5.8	20.0
Carbon disulfide	Ave	0.7300	0.7216	0.1000	12.4	12.5	-1.2	20.0
Methyl acetate	Ave	10.19	9.202	0.1000	11.3	12.5	-9.7	20.0
Allyl chloride	Ave	0.4470	0.4207		11.8	12.5	-5.9	20.0
Methylene Chloride	Ave	0.2619	0.2506	0.1000	12.0	12.5	-4.3	20.0
t-Butyl alcohol	Ave	0.9905	0.9622		243	250	-2.9	20.0
Acrylonitrile	Ave	4.741	4.319		56.9	62.5	-8.9	20.0
Methyl tert-butyl ether	Ave	0.5260	0.4955	0.1000	11.8	12.5	-5.8	20.0
trans-1,2-Dichloroethene	Ave	0.2503	0.2444	0.1000	12.2	12.5	-2.3	20.0
n-Hexane	Ave	0.3974	0.3923		12.3	12.5	-1.3	20.0
1,1-Dichloroethane	Ave	0.4816	0.4949	0.2000	12.8	12.5	2.8	20.0
di-Isopropyl ether	Ave	0.9013	0.8612		11.9	12.5	-4.5	20.0
2-Chloro-1,3-butadiene	Ave	0.4234	0.4227		12.5	12.5	-0.2	20.0
Ethyl t-butyl ether	Ave	0.7653	0.6809		11.1	12.5	-11.0	20.0
2-Butanone (MEK)	Ave	5.902	5.470	0.1000	116	125	-7.3	20.0
cis-1,2-Dichloroethene	Ave	0.2868	0.2810	0.1000	12.2	12.5	-2.0	20.0
2,2-Dichloropropane	Ave	0.3736	0.3663		12.3	12.5	-2.0	20.0
Propionitrile	Ave	1.514	1.558		257	250	2.8	20.0
Methacrylonitrile	Ave	5.933	5.204		110	125	-12.3	20.0
Bromochloromethane	Ave	0.1201	0.1208		12.6	12.5	0.5	20.0
Tetrahydrofuran	Ave	1.569	1.369		109	125	-12.7	20.0
Chloroform	Ave	0.4502	0.4713	0.2000	13.1	12.5	4.7	20.0
1,1,1-Trichloroethane	Ave	0.3862	0.3869	0.1000	12.5	12.5	0.2	20.0
Cyclohexane	Ave	0.4949	0.4759	0.1000	12.0	12.5	-3.9	20.0
1,1-Dichloropropene	Ave	0.3584	0.3717		13.0	12.5	3.7	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Lab Sample ID: CCVIS 410-39389/3 Calibration Date: 08/31/2020 18:18
 Instrument ID: 19094 Calib Start Date: 06/08/2020 16:46
 GC Column: R-624SilMS 30m ID: 0.25 (mm) Calib End Date: 06/08/2020 18:56
 Lab File ID: HG31C01.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
Carbon tetrachloride	Ave	0.3329	0.3337	0.1000	12.5	12.5	0.2	20.0
Isobutyl alcohol	Ave	0.3969	0.4042		637	625	1.8	20.0
Benzene	Ave	1.101	1.115	0.5000	12.7	12.5	1.2	20.0
1,2-Dichloroethane	Ave	0.2578	0.2910	0.1000	14.1	12.5	12.8	20.0
t-Amyl methyl ether	Ave	0.6309	0.5945		11.8	12.5	-5.8	20.0
n-Heptane	Ave	0.4544	0.4789		13.2	12.5	5.4	20.0
n-Butanol	Ave	0.3461	0.3412		1230	1250	-1.4	20.0
Trichloroethene	Ave	0.2702	0.2785	0.2000	12.9	12.5	3.1	20.0
Methylcyclohexane	Ave	0.4815	0.4857	0.1000	12.6	12.5	0.9	20.0
1,2-Dichloropropane	Ave	0.2784	0.2978	0.1000	13.4	12.5	7.0	20.0
Methyl methacrylate	Ave	11.53	9.449		10.2	12.5	-18.1	20.0
1,4-Dioxane	Ave	0.0953	0.0777	0.0050	510	625	-18.5	20.0
Dibromomethane	Ave	0.1170	0.1271		13.6	12.5	8.6	20.0
Bromodichloromethane	Ave	0.3135	0.3397	0.2000	13.5	12.5	8.4	20.0
2-Nitropropane	Ave	3.175	3.087		122	125	-2.8	20.0
1-Bromo-2-chloroethane	Ave	0.2760	0.3064		13.9	12.5	11.0	20.0
cis-1,3-Dichloropropene	Ave	0.3853	0.4026	0.2000	13.1	12.5	4.5	20.0
4-Methyl-2-pentanone (MIBK)	Ave	15.42	14.07	0.1000	114	125	-8.7	20.0
Toluene	Ave	0.9364	0.9408	0.4000	12.6	12.5	0.5	20.0
trans-1,3-Dichloropropene	Ave	0.4236	0.4485	0.1000	13.2	12.5	5.9	20.0
Ethyl methacrylate	Ave	0.3467	0.3448		12.4	12.5	-0.6	20.0
1,1,2-Trichloroethane	Ave	0.2282	0.2477	0.1000	13.6	12.5	8.5	20.0
Tetrachloroethene	Ave	0.3980	0.3928	0.2000	12.3	12.5	-1.3	20.0
1,3-Dichloropropane	Ave	0.4184	0.4531		13.5	12.5	8.3	20.0
2-Hexanone	Ave	10.40	9.595	0.1000	115	125	-7.8	20.0
Dibromochloromethane	Ave	0.2750	0.2967		13.5	12.5	7.9	20.0
1,2-Dibromoethane (EDB)	Ave	0.2170	0.2347	0.1000	13.5	12.5	8.2	20.0
1-Chlorohexane	Ave	0.5616	0.5364		11.9	12.5	-4.5	20.0
Chlorobenzene	Ave	0.998	1.023	0.5000	12.8	12.5	2.5	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3370	0.3447		12.8	12.5	2.3	20.0
Ethylbenzene	Ave	1.823	1.844	0.1000	12.6	12.5	1.1	20.0
m&p-Xylene	Ave	0.6834	0.6875	0.1000	25.2	25.0	0.6	20.0
o-Xylene	Ave	0.6671	0.6628	0.3000	12.4	12.5	-0.7	20.0
Styrene	Ave	1.109	1.135	0.3000	12.8	12.5	2.3	20.0
Bromoform	Ave	0.1560	0.1738	0.1000	13.9	12.5	11.4	20.0
Isopropylbenzene	Ave	1.791	1.760	0.1000	12.3	12.5	-1.8	20.0
1,1,2,2-Tetrachloroethane	Ave	0.5500	0.6322	0.3000	14.4	12.5	14.9	20.0
Bromobenzene	Ave	0.7652	0.8011		13.1	12.5	4.7	20.0
trans-1,4-Dichloro-2-butene	Ave	5.089	4.770		117	125	-6.3	20.0
1,2,3-Trichloropropane	Ave	0.1369	0.1548		14.1	12.5	13.0	20.0
N-Propylbenzene	Ave	4.254	4.434		13.0	12.5	4.2	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Lab Sample ID: CCVIS 410-39389/3 Calibration Date: 08/31/2020 18:18
 Instrument ID: 19094 Calib Start Date: 06/08/2020 16:46
 GC Column: R-624SilMS 30m ID: 0.25 (mm) Calib End Date: 06/08/2020 18:56
 Lab File ID: HG31C01.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chlorotoluene	Ave	0.8113	0.8307		12.8	12.5	2.4	20.0
1,3,5-Trimethylbenzene	Ave	2.932	3.017		12.9	12.5	2.9	20.0
4-Chlorotoluene	Ave	0.8149	0.8590		13.2	12.5	5.4	20.0
tert-Butylbenzene	Ave	0.6364	0.6356		12.5	12.5	-0.1	20.0
Pentachloroethane	Ave	0.4936	0.5157		13.1	12.5	4.5	20.0
1,2,4-Trimethylbenzene	Ave	2.987	3.128		13.1	12.5	4.7	20.0
sec-Butylbenzene	Ave	3.866	4.048		13.1	12.5	4.7	20.0
1,3-Dichlorobenzene	Ave	1.522	1.613	0.6000	13.2	12.5	6.0	20.0
p-Isopropyltoluene	Ave	3.255	3.371		12.9	12.5	3.6	20.0
1,4-Dichlorobenzene	Ave	1.497	1.581	0.5000	13.2	12.5	5.7	20.0
1,2,3-Trimethylbenzene	Ave	1.303	1.331		12.8	12.5	2.2	20.0
Benzyl chloride	Ave	0.2135	0.2337		13.7	12.5	9.5	20.0
n-Butylbenzene	Ave	1.668	1.857		13.9	12.5	11.3	20.0
1,2-Dichlorobenzene	Ave	1.353	1.423	0.4000	13.1	12.5	5.2	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0699	0.0808	0.0500	14.4	12.5	15.5	20.0
1,3,5-Trichlorobenzene	Ave	1.145	1.232		13.5	12.5	7.6	20.0
1,2,4-Trichlorobenzene	Ave	0.9150	1.003	0.2000	13.7	12.5	9.6	20.0
Hexachlorobutadiene	Ave	0.5021	0.5351		13.3	12.5	6.6	20.0
Naphthalene	Ave	1.627	1.720		13.2	12.5	5.7	20.0
1,2,3-Trichlorobenzene	Ave	0.7628	0.8554		14.0	12.5	12.1	20.0
Dibromofluoromethane (Surr)	Ave	0.2364	0.2452		10.4	10.0	3.7	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.0482	0.0494		10.3	10.0	2.7	20.0
Toluene-d8 (Surr)	Ave	1.342	1.347		10.0	10.0	0.4	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4896	0.4769		9.74	10.0	-2.6	20.0

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200831-9437.b\HG31C01.D
 Lims ID: CCVIS VSTD12.5
 Client ID:
 Sample Type: CCVIS
 Inject. Date: 31-Aug-2020 18:18:30 ALS Bottle#: 2 Worklist Smp#: 3
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: CCVIS VSTD12.5
 Misc. Info.: 410-0009437-003
 Operator ID: mec29284 Instrument ID: 19094
 Sublist: chrom-MSV_19094_25mL*sub1

Method: \\chromfs\Lancaster\ChromData\19094\20200831-9437.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 31-Aug-2020 18:52:57 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1022

First Level Reviewer: campbellme

Date: 31-Aug-2020 18:52:21

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
3 Dichlorodifluoromethane	85	2.075	2.075	0.000	99	907197	12.5	12.5	M
6 Chloromethane	50	2.276	2.276	0.000	99	1086943	12.5	12.6	
7 Vinyl chloride	62	2.392	2.392	0.000	98	934329	12.5	12.1	
8 Butadiene	39	2.404	2.404	0.000	93	899971	12.5	12.1	
9 Bromomethane	94	2.745	2.745	0.000	91	628188	12.5	12.0	
10 Chloroethane	64	2.849	2.849	0.000	100	598836	12.5	12.7	
11 Dichlorofluoromethane	67	3.093	3.093	0.000	98	1178169	12.5	11.6	
13 Trichlorofluoromethane	101	3.154	3.154	0.000	97	1106226	12.5	13.8	
15 Ethyl ether	59	3.428	3.428	0.000	94	517624	12.5	13.0	
16 1,2-Dichloro-1,1,2-trifluoroetha	67	3.519	3.519	0.000	95	788062	12.5	12.6	
17 Acrolein	56	3.611	3.611	0.000	100	3451595	625.0	464.4	
18 1,1-Dichloroethene	96	3.763	3.763	0.000	96	543258	12.5	12.1	
19 Acetone	43	3.794	3.794	0.000	100	1044752	125.0	114.1	M
20 112TCTFE	101	3.794	3.794	0.000	77	604242	12.5	12.3	
21 Isopropyl alcohol	45	3.977	3.977	0.000	44	362301	250.0	NQ	E
22 Iodomethane	142	3.977	3.977	0.000	99	1016303	12.5	11.6	
23 Ethyl bromide	108	4.001	4.001	0.000	99	482293	12.5	11.8	
24 Carbon disulfide	76	4.086	4.086	0.000	99	1844268	12.5	12.4	
26 Methyl acetate	43	4.239	4.239	0.000	98	298306	12.5	11.3	
27 3-Chloro-1-propene	41	4.269	4.269	0.000	92	1075225	12.5	11.8	
29 Methylene Chloride	84	4.464	4.464	0.000	96	640616	12.5	12.0	
* 28 t-Butyl alcohol-d10 (IS)	65	4.489	4.489	0.000	0	129667	50.0	50.0	M
30 2-Methyl-2-propanol	59	4.611	4.611	0.000	97	623851	250.0	242.9	
31 Acrylonitrile	53	4.818	4.818	0.000	99	700113	62.5	56.9	
32 Methyl tert-butyl ether	73	4.879	4.879	0.000	97	1266481	12.5	11.8	
33 trans-1,2-Dichloroethene	96	4.897	4.897	0.000	98	624778	12.5	12.2	
34 Hexane	57	5.312	5.312	0.000	94	1002570	12.5	12.3	
35 1,1-Dichloroethane	63	5.549	5.549	0.000	96	1264965	12.5	12.8	
37 Isopropyl ether	45	5.598	5.598	0.000	95	2201049	12.5	11.9	
38 2-Chloro-1,3-butadiene	53	5.659	5.659	0.000	92	1080351	12.5	12.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
39 Tert-butyl ethyl ether	59	6.135	6.135	0.000	98	1740202	12.5	11.1	
41 2-Butanone (MEK)	43	6.336	6.336	0.000	100	1773117	125.0	115.9	
42 cis-1,2-Dichloroethene	96	6.372	6.372	0.000	84	718156	12.5	12.2	
43 2,2-Dichloropropane	77	6.397	6.397	0.000	90	936155	12.5	12.3	
45 Propionitrile	54	6.433	6.433	0.000	99	1009836	250.0	257.1	
47 Methacrylonitrile	67	6.641	6.641	0.000	93	1686949	125.0	109.6	
48 Chlorobromomethane	128	6.708	6.708	0.000	94	308639	12.5	12.6	
49 Tetrahydrofuran	71	6.714	6.714	0.000	91	443823	125.0	109.1	
50 Chloroform	83	6.854	6.854	0.000	94	1204700	12.5	13.1	
\$ 51 Dibromofluoromethane (Surr)	113	7.067	7.067	0.000	93	501456	10.0	10.4	
52 1,1,1-Trichloroethane	97	7.086	7.086	0.000	98	988960	12.5	12.5	
53 Cyclohexane	56	7.189	7.189	0.000	93	1216224	12.5	12.0	
55 1,1-Dichloropropene	75	7.293	7.293	0.000	94	949950	12.5	13.0	
56 Carbon tetrachloride	117	7.299	7.299	0.000	78	852925	12.5	12.5	
57 Isobutyl alcohol	41	7.427	7.427	0.000	94	655213	625.0	636.5	
\$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.525	7.525	0.000	0	101101	10.0	10.3	
59 Benzene	78	7.555	7.555	0.000	97	2849493	12.5	12.7	
60 1,2-Dichloroethane	62	7.628	7.628	0.000	97	743695	12.5	14.1	
62 Tert-amyl methyl ether	73	7.744	7.744	0.000	97	1519459	12.5	11.8	
* 65 Fluorobenzene (IS)	96	7.958	7.958	0.000	98	2044687	10.0	10.0	
64 n-Heptane	43	7.964	7.964	0.000	94	1223901	12.5	13.2	
66 n-Butanol	56	8.299	8.299	0.000	91	1105910	1250.0	1232.3	
67 Trichloroethene	95	8.433	8.433	0.000	99	711731	12.5	12.9	
68 Methylcyclohexane	83	8.750	8.750	0.000	96	1241446	12.5	12.6	
69 2-ethoxy-2-methyl butane	87	8.762	8.762	0.000	85	943337	12.5	11.9	
70 1,2-Dichloropropane	63	8.768	8.768	0.000	84	761120	12.5	13.4	
71 Methyl methacrylate	69	8.835	8.835	0.000	92	306306	12.5	10.2	
72 1,4-Dioxane	88	8.854	8.854	0.000	97	125949	625.0	509.5	
73 Dibromomethane	93	8.878	8.878	0.000	96	324733	12.5	13.6	
75 Dichlorobromomethane	83	9.110	9.110	0.000	99	868249	12.5	13.5	
76 2-Nitropropane	41	9.366	9.366	0.000	99	1000749	125.0	121.5	
79 1-Bromo-2-chloroethane	63	9.494	9.494	0.000	99	783142	12.5	13.9	
80 cis-1,3-Dichloropropene	75	9.634	9.634	0.000	95	1029062	12.5	13.1	
81 4-Methyl-2-pentanone (MIBK)	43	9.793	9.793	0.000	98	4562084	125.0	114.1	
\$ 82 Toluene-d8 (Surr)	98	9.933	9.933	0.000	94	1969583	10.0	10.0	
83 Toluene	92	10.012	10.012	0.000	97	1719814	12.5	12.6	
85 trans-1,3-Dichloropropene	75	10.256	10.256	0.000	94	819847	12.5	13.2	
86 Ethyl methacrylate	69	10.311	10.311	0.000	91	630298	12.5	12.4	
87 1,1,2-Trichloroethane	97	10.457	10.457	0.000	91	452789	12.5	13.6	
88 Tetrachloroethene	166	10.549	10.549	0.000	97	717943	12.5	12.3	
89 1,3-Dichloropropane	76	10.616	10.616	0.000	93	828251	12.5	13.5	
91 2-Hexanone	43	10.658	10.658	0.000	99	3110285	125.0	115.3	
93 Chlorodibromomethane	129	10.829	10.829	0.000	90	542444	12.5	13.5	
94 Ethylene Dibromide	107	10.945	10.945	0.000	99	429072	12.5	13.5	
* 97 Chlorobenzene-d5 (IS)	117	11.365	11.365	0.000	88	1462366	10.0	10.0	
96 1-Chlorohexane	91	11.365	11.365	0.000	96	980505	12.5	11.9	
98 Chlorobenzene	112	11.390	11.390	0.000	93	1869544	12.5	12.8	
99 1,1,1,2-Tetrachloroethane	131	11.469	11.469	0.000	96	630107	12.5	12.8	
100 Ethylbenzene	91	11.475	11.475	0.000	99	3370355	12.5	12.6	
101 m-Xylene & p-Xylene	106	11.585	11.585	0.000	0	2513527	25.0	25.2	
102 o-Xylene	106	11.914	11.914	0.000	97	1211481	12.5	12.4	
103 Styrene	104	11.926	11.926	0.000	95	2075043	12.5	12.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
104 Bromoform	173	12.085	12.085	0.000	95	317664	12.5	13.9	
105 Isopropylbenzene	105	12.207	12.207	0.000	96	3216583	12.5	12.3	
\$ 108 4-Bromofluorobenzene (Surr)	95	12.353	12.353	0.000	88	697454	10.0	9.74	
109 1,1,2,2-Tetrachloroethane	83	12.451	12.451	0.000	93	581043	12.5	14.4	
111 Bromobenzene	156	12.469	12.469	0.000	91	736283	12.5	13.1	
110 trans-1,4-Dichloro-2-butene	53	12.475	12.475	0.000	92	1546349	125.0	117.2	
112 1,2,3-Trichloropropane	110	12.499	12.499	0.000	84	142257	12.5	14.1	
113 N-Propylbenzene	91	12.536	12.536	0.000	99	4075571	12.5	13.0	
114 2-Chlorotoluene	126	12.615	12.615	0.000	96	763552	12.5	12.8	
115 1,3,5-Trimethylbenzene	105	12.664	12.664	0.000	94	2772886	12.5	12.9	
116 4-Chlorotoluene	126	12.707	12.707	0.000	98	789483	12.5	13.2	
118 tert-Butylbenzene	134	12.908	12.908	0.000	93	584166	12.5	12.5	
119 Pentachloroethane	167	12.944	12.944	0.000	87	474029	12.5	13.1	
120 1,2,4-Trimethylbenzene	105	12.950	12.950	0.000	98	2875201	12.5	13.1	
121 sec-Butylbenzene	105	13.072	13.072	0.000	95	3720879	12.5	13.1	
122 1,3-Dichlorobenzene	146	13.176	13.176	0.000	96	1482245	12.5	13.2	
123 4-Isopropyltoluene	119	13.176	13.176	0.000	97	3098635	12.5	12.9	
* 124 1,4-Dichlorobenzene-d4	152	13.231	13.231	0.000	95	735293	10.0	10.0	
125 1,4-Dichlorobenzene	146	13.249	13.249	0.000	92	1453519	12.5	13.2	
126 1,2,3-Trimethylbenzene	120	13.255	13.255	0.000	99	1223416	12.5	12.8	
127 Benzyl chloride	126	13.322	13.322	0.000	99	214778	12.5	13.7	
129 p-Diethylbenzene	119	13.450	13.450	0.000	93	2007942	12.5	13.0	
130 n-Butylbenzene	92	13.469	13.469	0.000	98	1706484	12.5	13.9	
131 1,2-Dichlorobenzene	146	13.505	13.505	0.000	97	1307774	12.5	13.1	
134 1,2-Dibromo-3-Chloropropane	155	14.048	14.048	0.000	82	74235	12.5	14.4	
135 1,3,5-Trichlorobenzene	180	14.170	14.170	0.000	97	1132438	12.5	13.5	
136 1,2,4-Trichlorobenzene	180	14.597	14.597	0.000	94	921456	12.5	13.7	
137 Hexachlorobutadiene	225	14.676	14.676	0.000	97	491820	12.5	13.3	
138 Naphthalene	128	14.779	14.779	0.000	97	1580964	12.5	13.2	
139 1,2,3-Trichlorobenzene	180	14.920	14.920	0.000	95	786255	12.5	14.0	
140 2-Methylnaphthalene	142	15.572	15.572	0.000	92	822589	12.5	11.5	

QC Flag Legend

Processing Flags

NQ - Not Quantifiable

E - Exceeded Maximum Amount

Review Flags

M - Manually Integrated

Reagents:

MSV_RV4_826_00023

Amount Added: 25.00

Units: uL

MSV_RV1_826_00021

Amount Added: 25.00

Units: uL

MSV_RV4GAS826_00071

Amount Added: 25.00

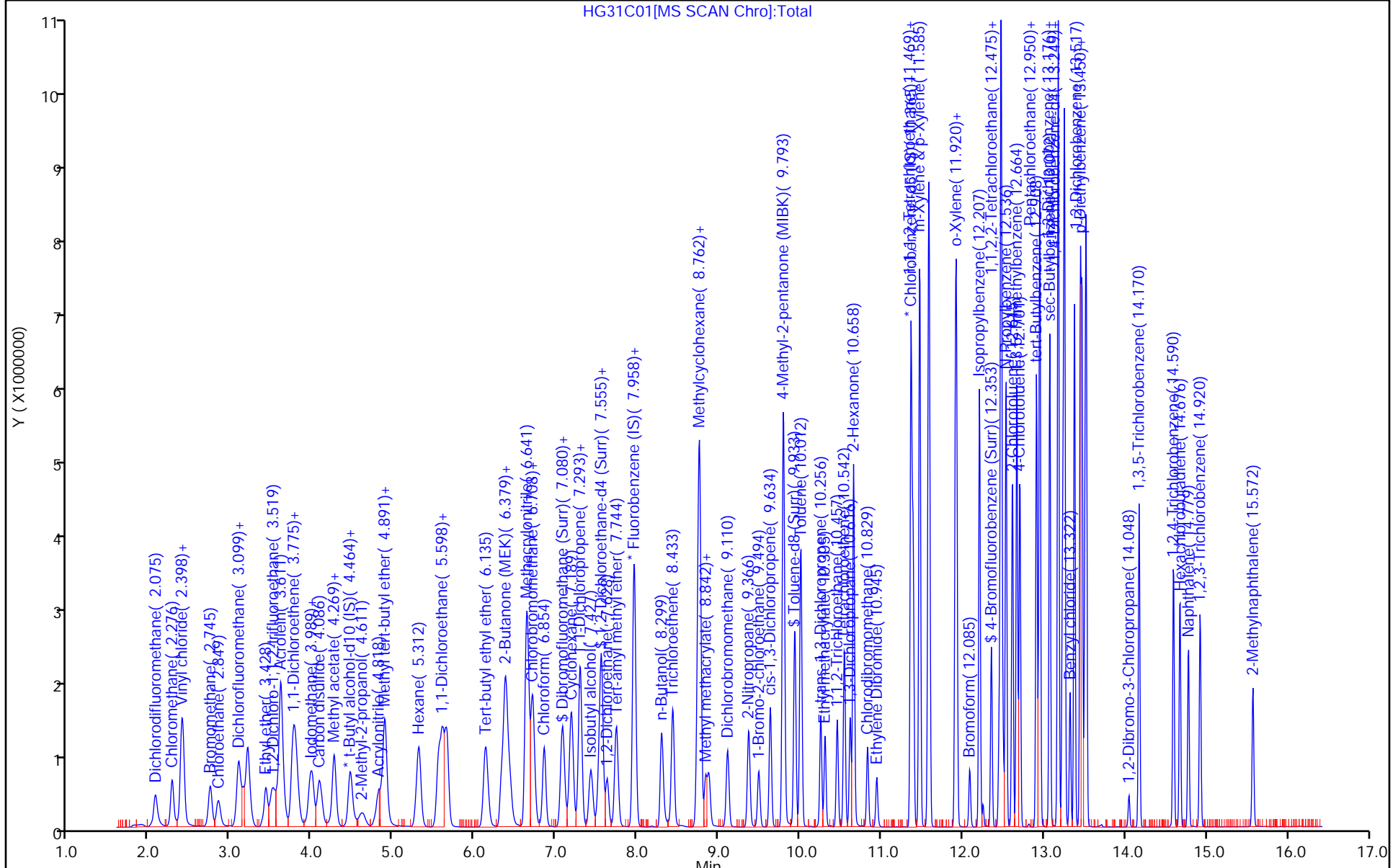
Units: uL

MSV_30_826ISS_00005

Amount Added: 5.00

Units: uL

Run Reagent



HG31C01[MS SCAN Chrom]:Total

Eurofins Lancaster Laboratories Env, LLC

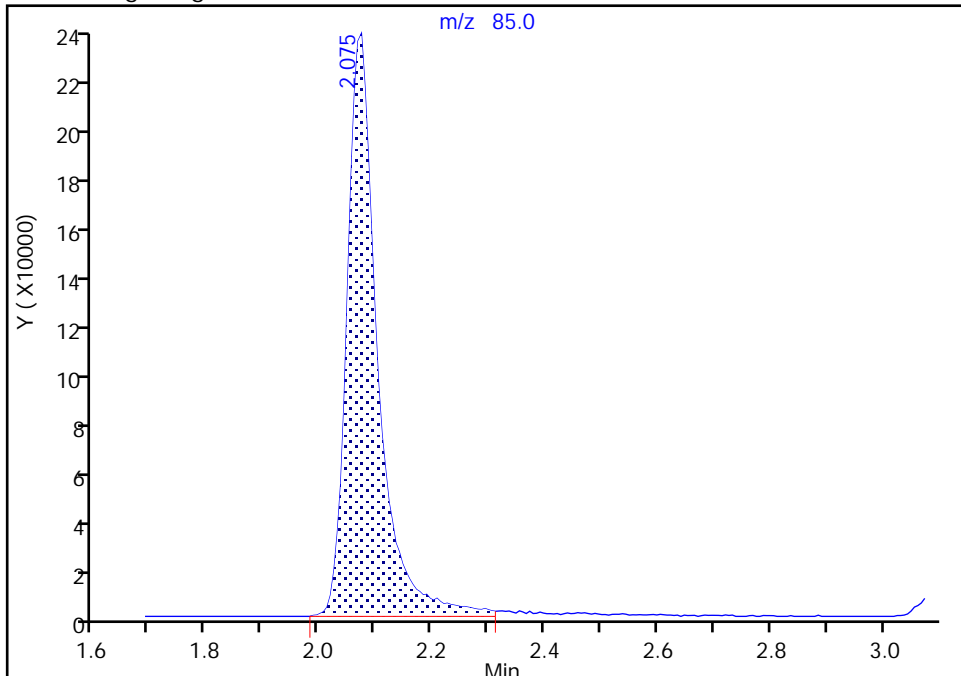
Data File: \\chromfs\Lancaster\ChromData\19094\20200831-9437.b\HG31C01.D
Injection Date: 31-Aug-2020 18:18:30 Instrument ID: 19094
Lims ID: CCVIS VSTD12.5
Client ID:
Operator ID: mec29284 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

3 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

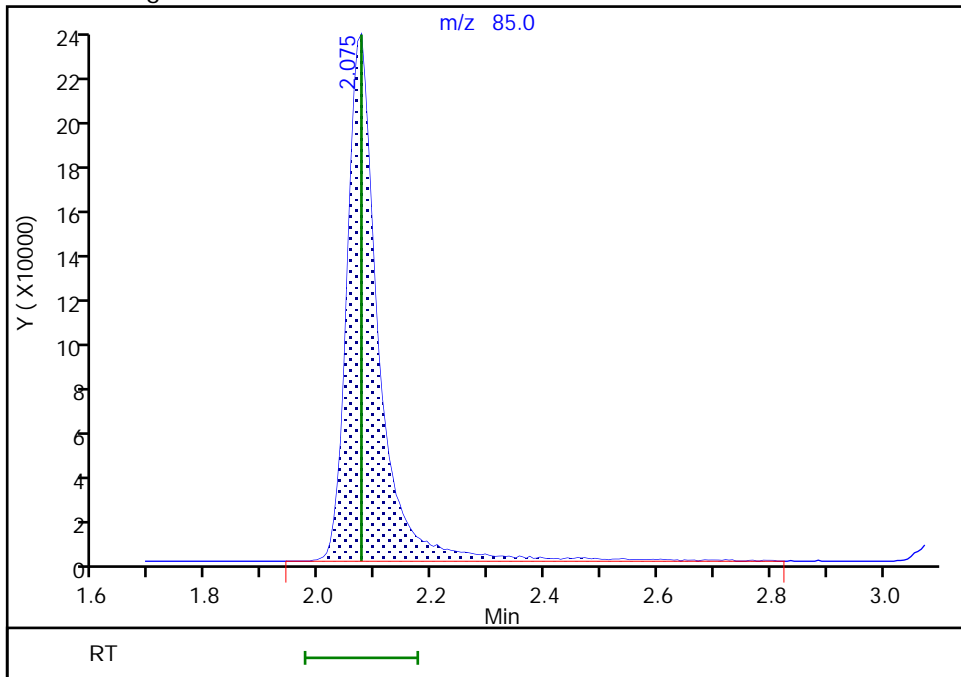
RT: 2.07
Area: 883292
Amount: 12.201621
Amount Units: ug/l

Processing Integration Results



RT: 2.07
Area: 907197
Amount: 12.531839
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 31-Aug-2020 18:50:12
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

Euofins Lancaster Laboratories Env, LLC

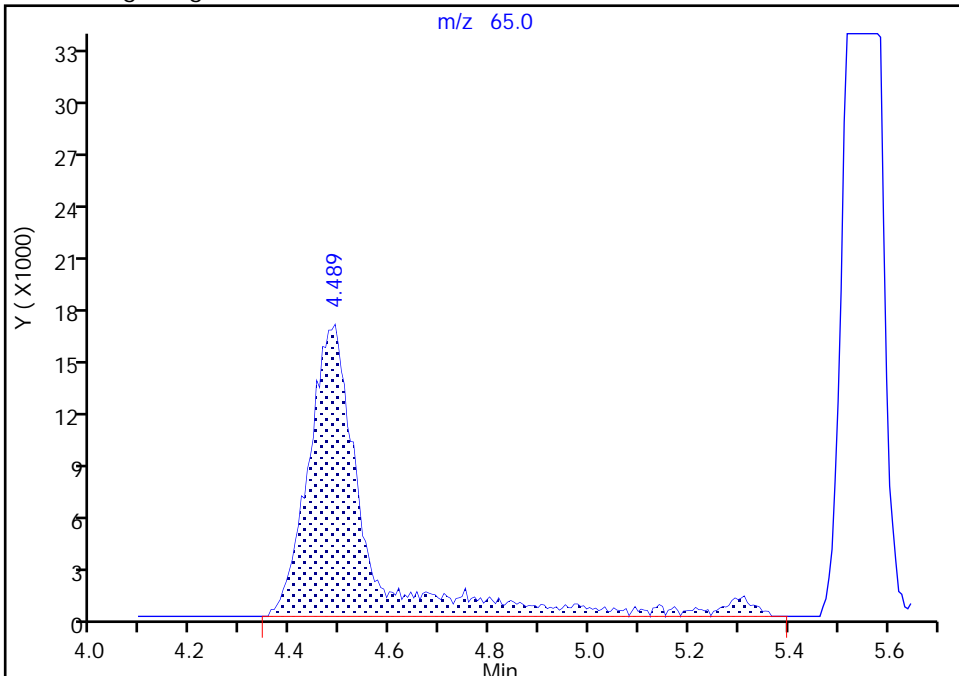
Data File: \\chromfs\Lancaster\ChromData\19094\20200831-9437.b\HG31C01.D
Injection Date: 31-Aug-2020 18:18:30 Instrument ID: 19094
Lims ID: CCVIS VSTD12.5
Client ID:
Operator ID: mec29284 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

* 28 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

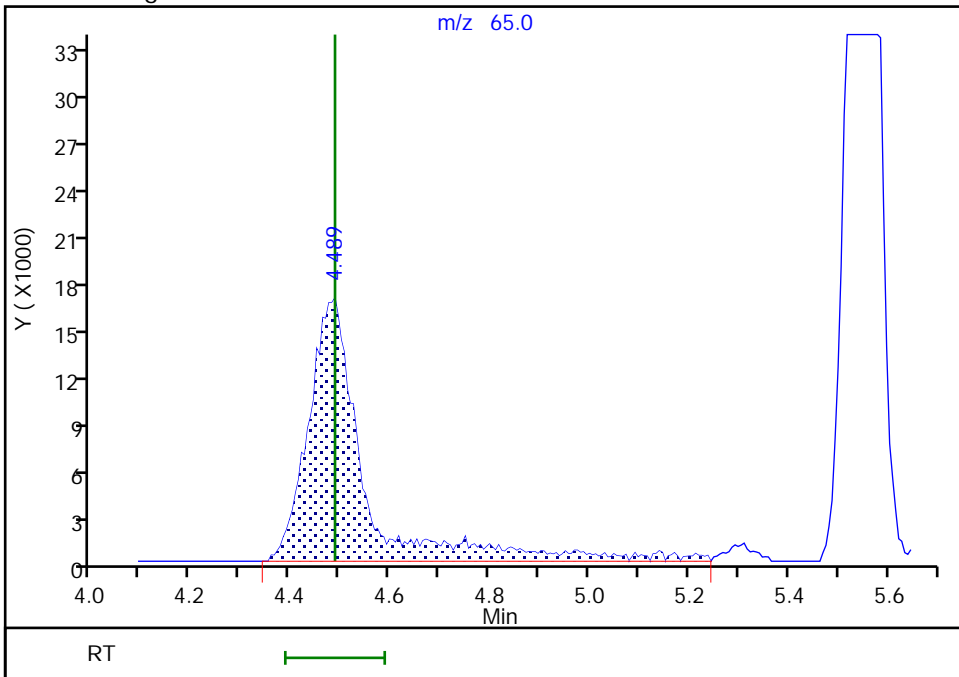
RT: 4.49
Area: 133971
Amount: 50.000000
Amount Units: ug/l

Processing Integration Results



RT: 4.49
Area: 129667
Amount: 50.000000
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 31-Aug-2020 18:50:51
Audit Action: Split an Integrated Peak

Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200831-9437.b\HG31C01.D

Injection Date: 31-Aug-2020 18:18:30

Instrument ID: 19094

Lims ID: CCVIS VSTD12.5

Client ID:

Operator ID: mec29284

ALS Bottle#: 2

Worklist Smp#: 3

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm ID)

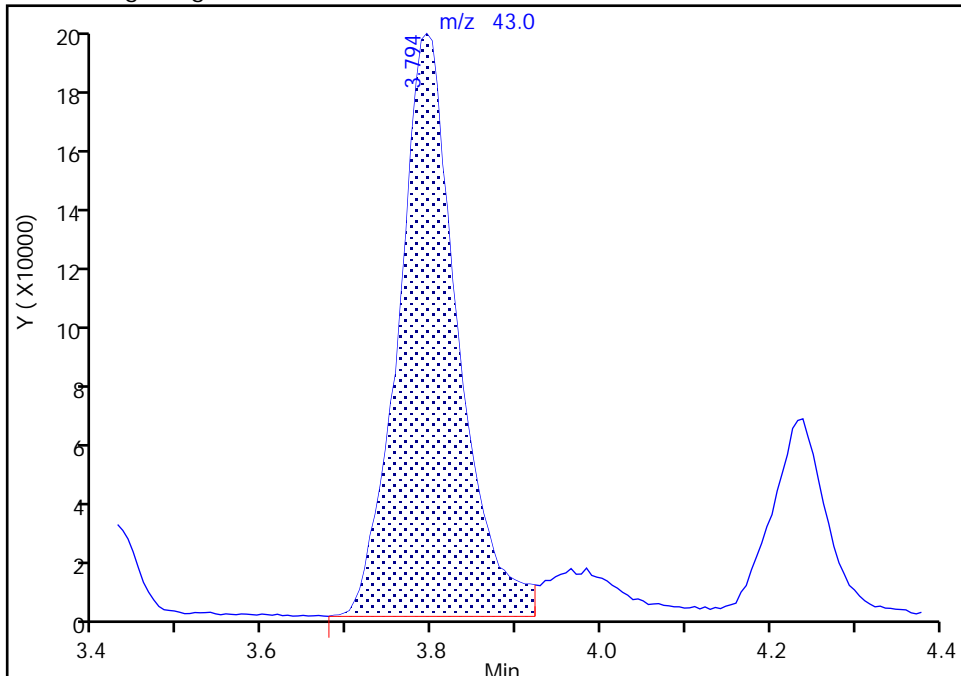
Detector: MS Quad

19 Acetone, CAS: 67-64-1

Signal: 1

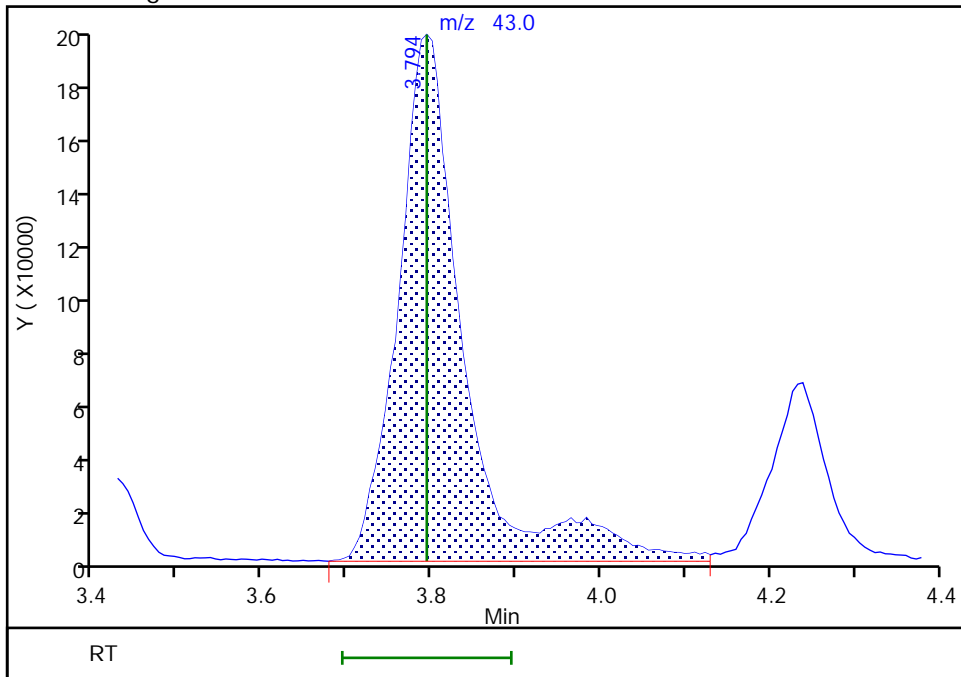
RT: 3.79
Area: 942312
Amount: 99.609045
Amount Units: ug/l

Processing Integration Results



RT: 3.79
Area: 1044752
Amount: 114.1034
Amount Units: ug/l

Manual Integration Results



Eurofins Lancaster Laboratories Env, LLC
 Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\BFB.D
 Lims ID: bfb
 Client ID:
 Sample Type: BFB
 Inject. Date: 08-Jun-2020 12:43:30 ALS Bottle#: 1 Worklist Smp#: 1
 Injection Vol: 1.0 uL Dil. Factor: 1.0000
 Sample Info: 410-0002918-001
 Operator ID: jkh09052 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 22-Jun-2020 11:03:03 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1020

First Level Reviewer: ilczyszynd Date: 22-Jun-2020 10:59:13

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
\$ 165 BFB	95	5.349	5.349	0.000	89	126891	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

MSV_V_BFB_00002

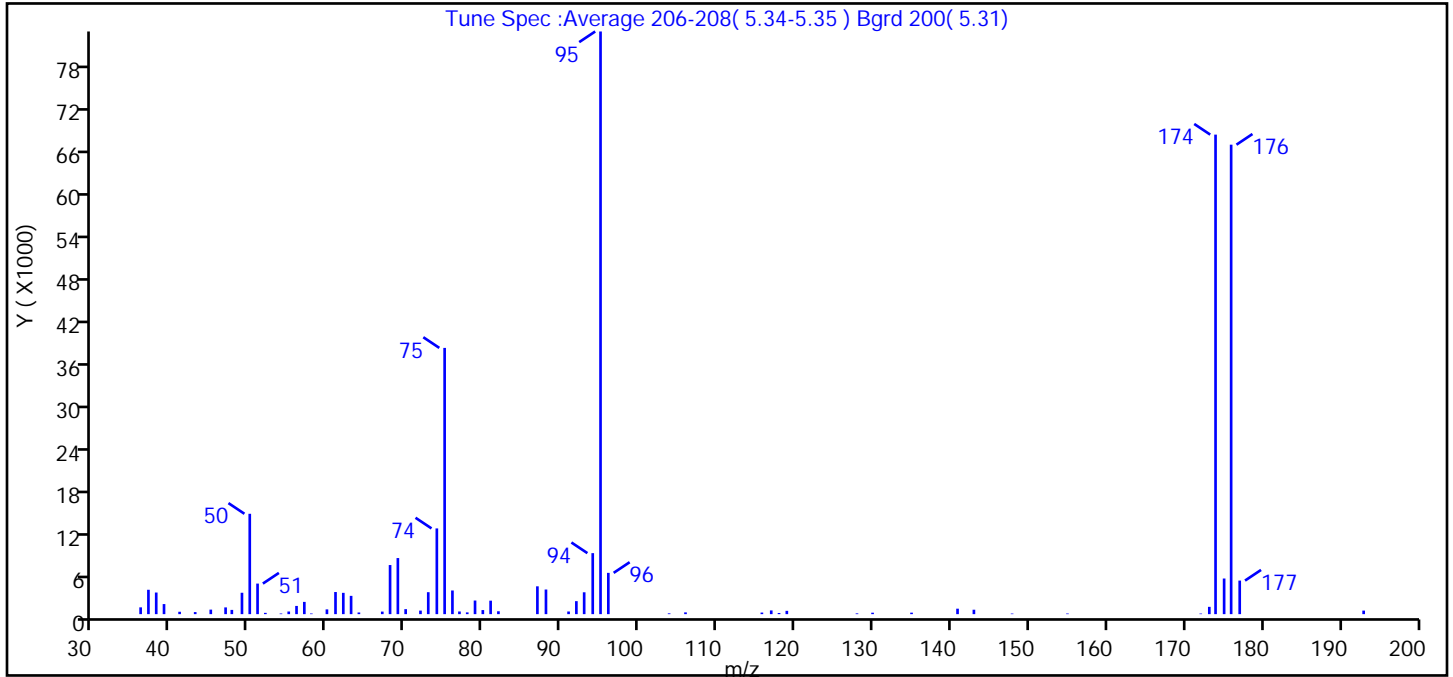
Amount Added: 1.00

Units: uL

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\BFB.D
 Injection Date: 08-Jun-2020 12:43:30 Instrument ID: 19094
 Lims ID: bfb
 Client ID:
 Operator ID: jkh09052 ALS Bottle#: 1 Worklist Smp#: 1
 Injection Vol: 1.0 uL Dil. Factor: 1.0000
 Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
 Tune Method: BFB Method 8260

\$ 165 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	17.2
75	30 to 60% of m/z 95	45.7
96	5 to 9% of m/z 95	7.1
173	Less than 2% of m/z 174	1.3 (1.5)
174	50 to 120% of m/z 95	82.3
175	5 to 9% of m/z 174	6.1 (7.4)
176	Greater than 95% but less than 101% of m/z 174	80.6 (97.9)
177	5 to 9% of m/z 176	5.8 (7.1)

Data File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\BFB.D\MSV_19094_25mL.rsl\spectra.d
Injection Date: 08-Jun-2020 12:43:30
Spectrum: Tune Spec :Average 206-208(5.34-5.35) Bgrd 200(5.31)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 66

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	961	58.00	92	79.00	1927	119.00	467
37.00	3450	60.00	674	80.00	577	128.00	108
38.00	3060	61.00	3131	81.00	1908	130.00	205
39.00	1425	62.00	3016	82.00	407	135.00	212
41.00	338	63.00	2588	87.00	3939	141.00	772
43.00	291	64.00	236	88.00	3486	143.00	626
45.00	640	67.00	362	91.00	375	148.00	83
47.00	954	68.00	6950	92.00	1840	155.00	89
48.00	601	69.00	7940	93.00	3094	172.00	83
49.00	3028	70.00	707	94.00	8635	173.00	1034
50.00	14207	72.00	503	95.00	82480	174.00	67880
51.00	4326	73.00	3108	96.00	5843	175.00	5044
52.00	183	74.00	12135	104.00	113	176.00	66456
54.00	91	75.00	37688	106.00	250	177.00	4750
55.00	373	76.00	3349	116.00	225	193.00	502
56.00	1162	77.00	376	117.00	525		
57.00	1734	78.00	249	118.00	162		

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\BFB.D

Injection Date: 08-Jun-2020 12:43:30

Instrument ID: 19094

Operator ID: jkh09052

Lims ID: bfb

Worklist Smp#: 1

Client ID:

Injection Vol: 1.0 uL

Dil. Factor: 1.0000

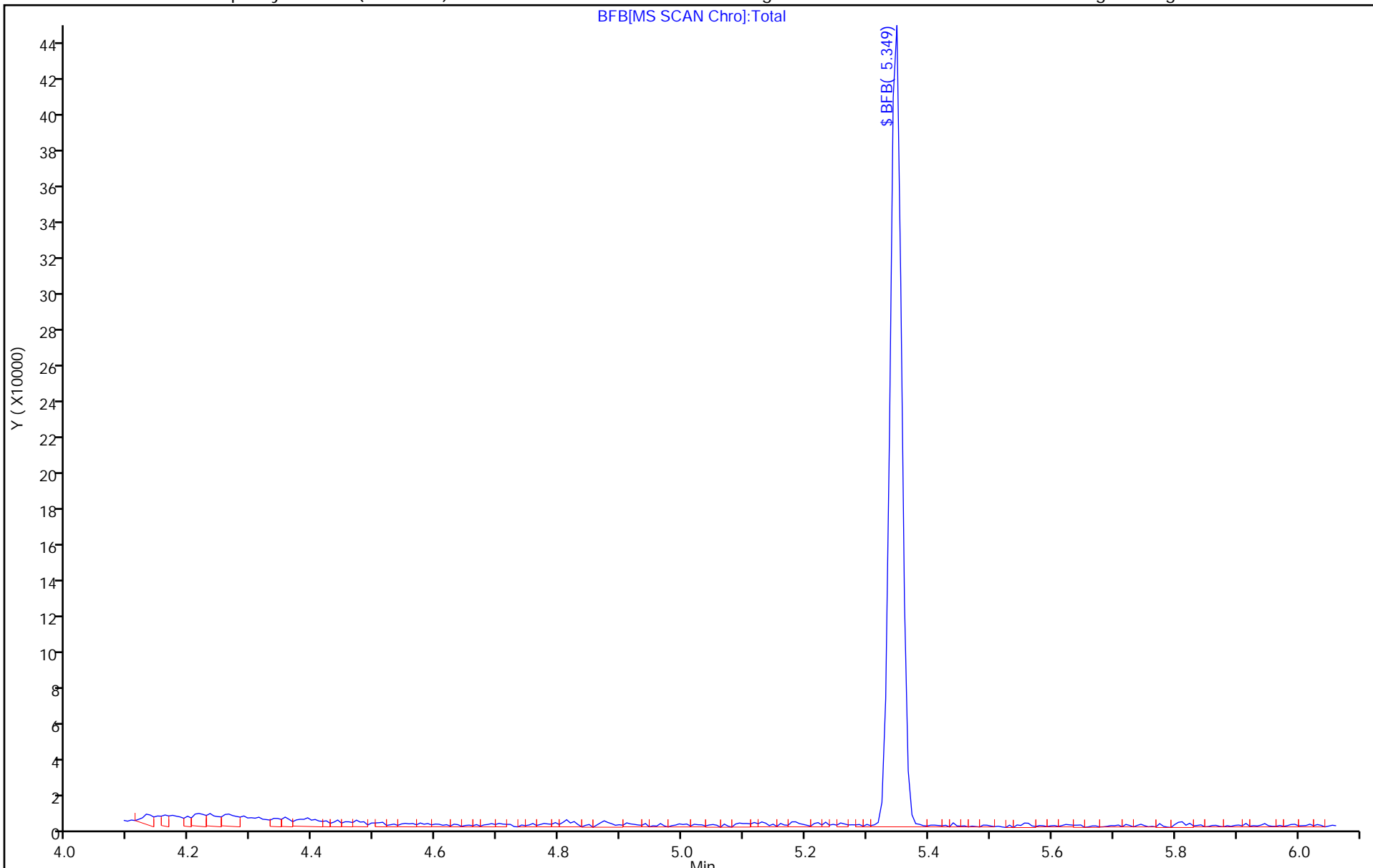
ALS Bottle#: 1

Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Env, LLC
 Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30T02.D
 Lims ID: BFB
 Client ID:
 Sample Type: BFB
 Inject. Date: 30-Aug-2020 17:05:30 ALS Bottle#: 1 Worklist Smp#: 1
 Injection Vol: 1.0 uL Dil. Factor: 1.0000
 Sample Info: BFB
 Misc. Info.: 410-0009349-001
 Operator ID: mec29284 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 30-Aug-2020 17:40:39 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1035

First Level Reviewer: campbellme Date: 30-Aug-2020 17:15:29

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
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\$ 165 BFB	95	5.337	5.337	0.000	89	128617	NR	NR	
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QC Flag Legend

Processing Flags

NR - Missing Quant Standard

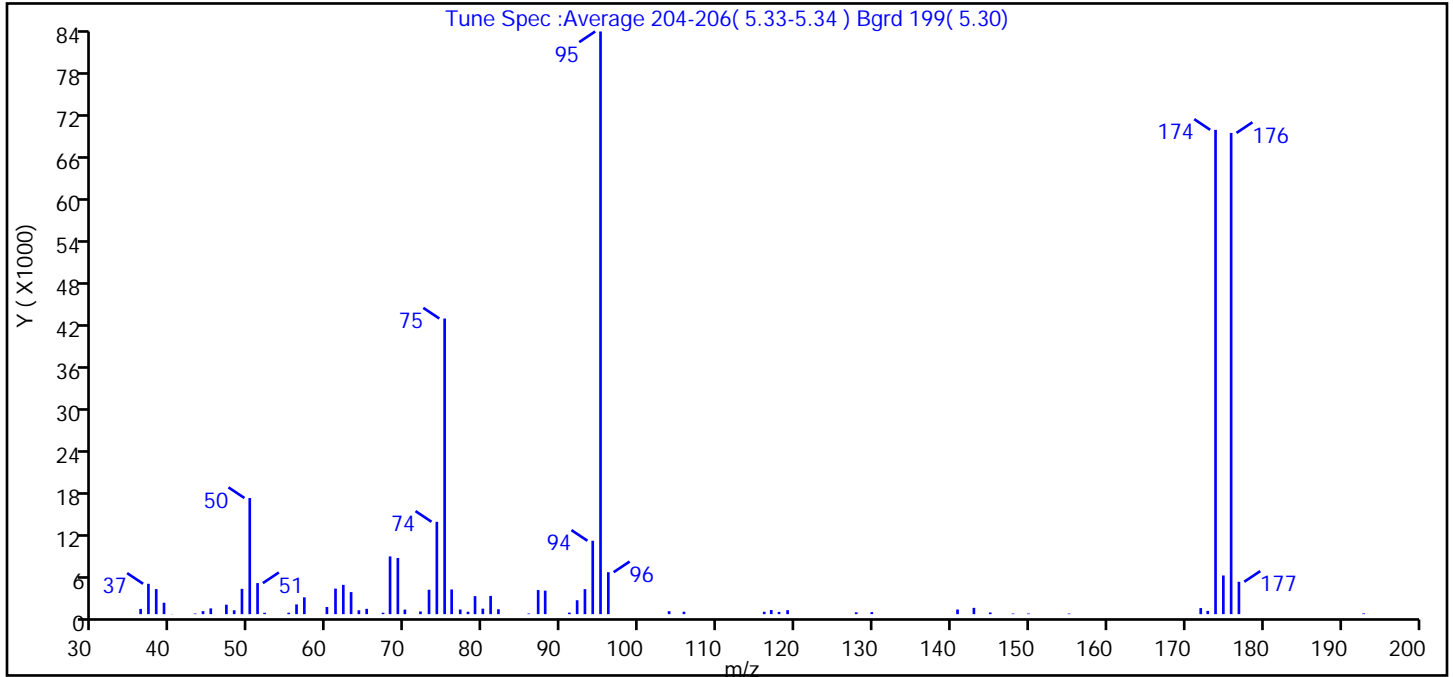
Reagents:

MSV_V_BFB_00003 Amount Added: 1.00 Units: uL

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30T02.D
 Injection Date: 30-Aug-2020 17:05:30 Instrument ID: 19094
 Lims ID: BFB
 Client ID:
 Operator ID: mec29284 ALS Bottle#: 1 Worklist Smp#: 1
 Injection Vol: 1.0 uL Dil. Factor: 1.0000
 Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
 Tune Method: BFB Method 8260

\$ 165 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	19.9
75	30 to 60% of m/z 95	50.7
96	5 to 9% of m/z 95	7.2
173	Less than 2% of m/z 174	0.6 (0.7)
174	50 to 120% of m/z 95	83.1
175	5 to 9% of m/z 174	6.6 (8.0)
176	Greater than 95% but less than 101% of m/z 174	82.6 (99.4)
177	5 to 9% of m/z 176	5.6 (6.7)

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30T02.D\MSV_19094_25mL.rsl\spectra.d
 Injection Date: 30-Aug-2020 17:05:30
 Spectrum: Tune Spec :Average 204-206(5.33-5.34) Bgrd 199(5.30)
 Base Peak: 95.00
 Minimum % Base Peak: 0
 Number of Points: 68

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	746	60.00	1026	79.00	2571	118.00	320
37.00	4332	61.00	3642	80.00	785	119.00	564
38.00	3572	62.00	4179	81.00	2602	128.00	263
39.00	1627	63.00	3145	82.00	699	130.00	292
40.00	26	64.00	554	86.00	93	141.00	661
43.00	88	65.00	758	87.00	3434	143.00	896
44.00	428	67.00	203	88.00	3354	145.00	237
45.00	822	68.00	8238	91.00	218	148.00	85
47.00	1348	69.00	8015	92.00	1983	150.00	92
48.00	550	70.00	653	93.00	3569	155.00	85
49.00	3607	72.00	383	94.00	10471	172.00	868
50.00	16568	73.00	3480	95.00	83128	173.00	459
51.00	4429	74.00	13177	96.00	5985	174.00	69096
52.00	199	75.00	42176	104.00	422	175.00	5514
55.00	201	76.00	3522	106.00	349	176.00	68656
56.00	1388	77.00	665	116.00	336	177.00	4620
57.00	2401	78.00	342	117.00	590	193.00	107

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30T02.D

Injection Date: 30-Aug-2020 17:05:30

Instrument ID: 19094

Operator ID: mec29284

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 1.0 uL

Dil. Factor: 1.0000

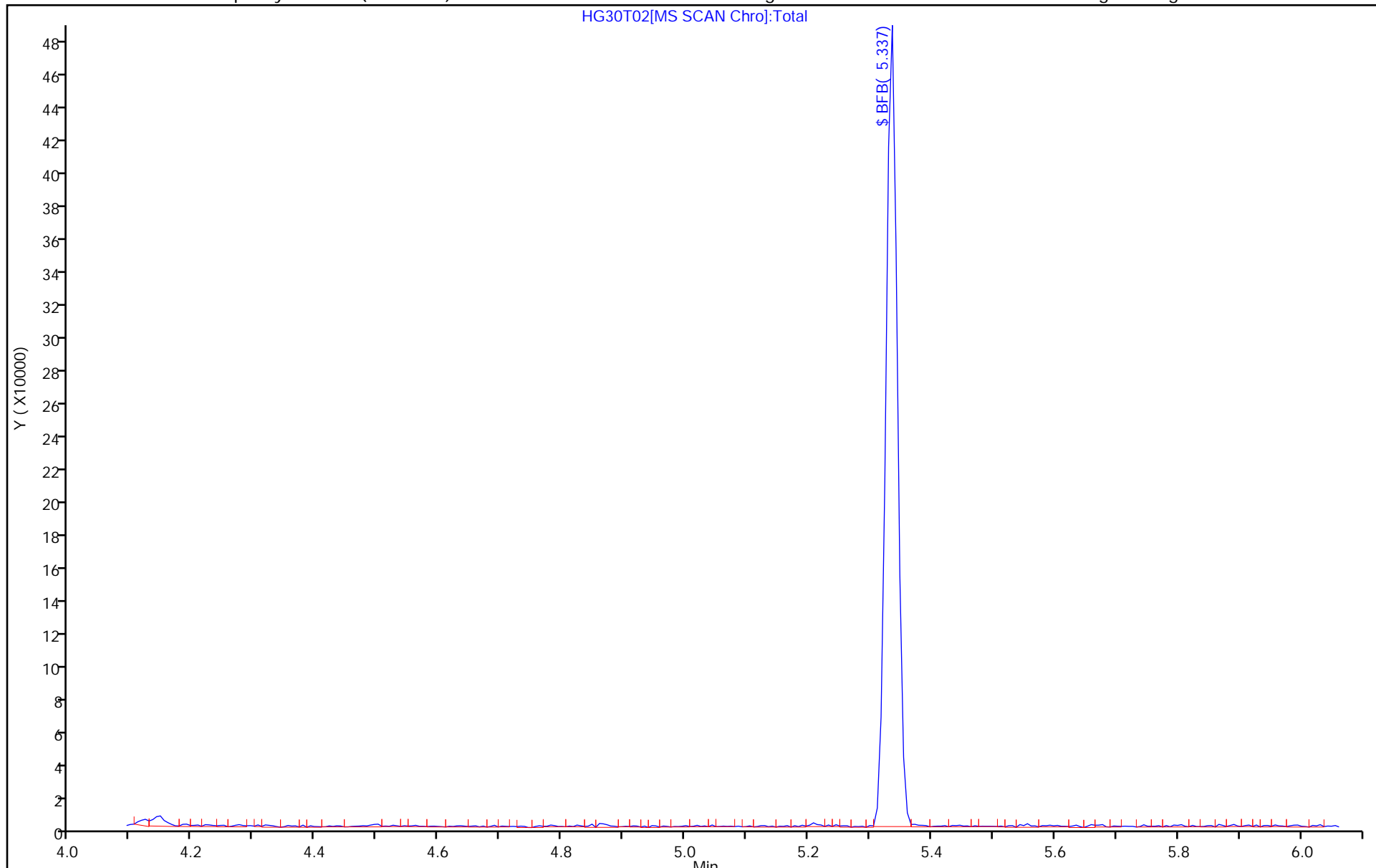
ALS Bottle#: 1

Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Env, LLC
 Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200831-9437.b\HG31T02.D
 Lims ID: BFB
 Client ID:
 Sample Type: BFB
 Inject. Date: 31-Aug-2020 17:44:30 ALS Bottle#: 1 Worklist Smp#: 1
 Injection Vol: 1.0 uL Dil. Factor: 1.0000
 Sample Info: BFB
 Misc. Info.: 410-0009437-001
 Operator ID: mec29284 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200831-9437.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 31-Aug-2020 17:55:37 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1022

First Level Reviewer: campbellme Date: 31-Aug-2020 17:55:26

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
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\$ 165 BFB	95	5.336	5.336	0.000	89	150120	NR	NR	
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QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

MSV_V_BFB_00003

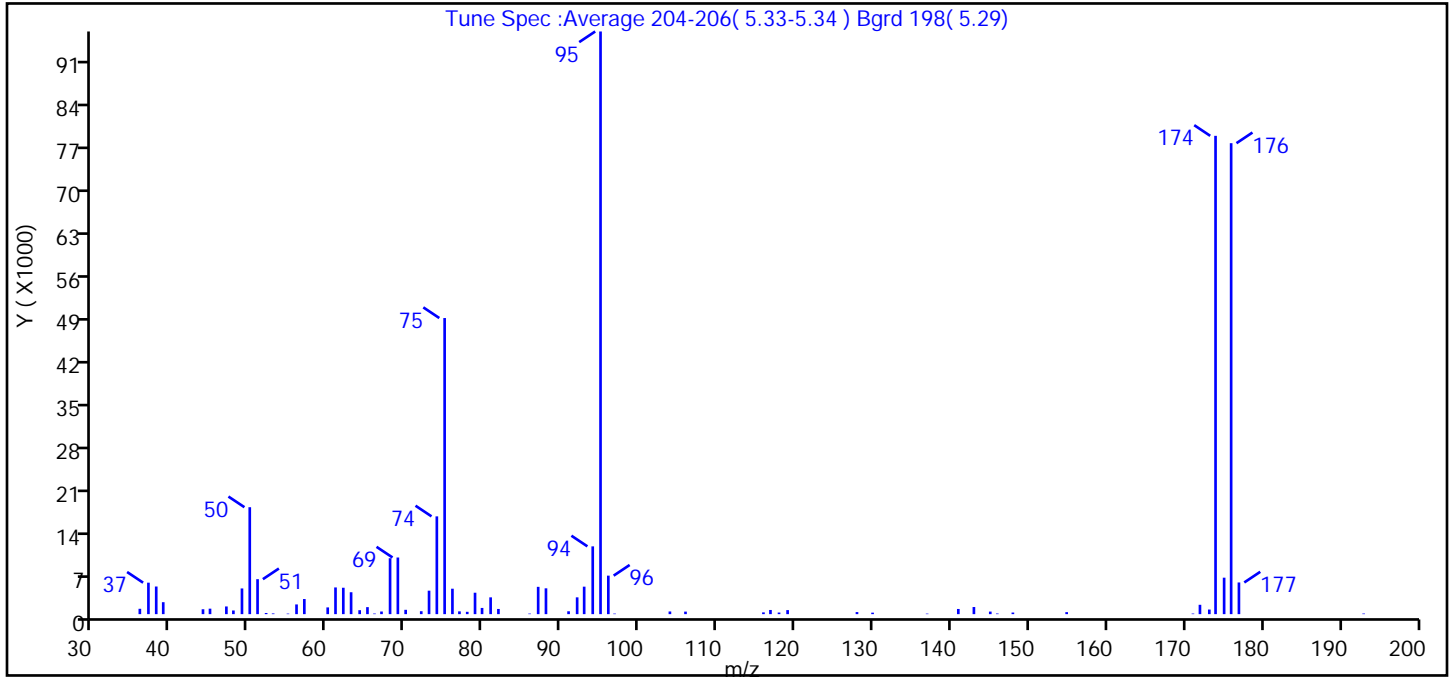
Amount Added: 1.00

Units: uL

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200831-9437.b\HG31T02.D
 Injection Date: 31-Aug-2020 17:44:30 Instrument ID: 19094
 Lims ID: BFB
 Client ID:
 Operator ID: mec29284 ALS Bottle#: 1 Worklist Smp#: 1
 Injection Vol: 1.0 uL Dil. Factor: 1.0000
 Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
 Tune Method: BFB Method 8260

\$ 165 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	18.4
75	30 to 60% of m/z 95	50.8
96	5 to 9% of m/z 95	6.6
173	Less than 2% of m/z 174	0.8 (1.0)
174	50 to 120% of m/z 95	82.1
175	5 to 9% of m/z 174	6.3 (7.6)
176	Greater than 95% but less than 101% of m/z 174	80.8 (98.5)
177	5 to 9% of m/z 176	5.4 (6.7)

Data File: \\chromfs\Lancaster\ChromData\19094\20200831-9437.b\HG31T02.D\MSV_19094_25mL.rsl\spectra.d
 Injection Date: 31-Aug-2020 17:44:30
 Spectrum: Tune Spec :Average 204-206(5.33-5.34) Bgrd 198(5.29)
 Base Peak: 95.00
 Minimum % Base Peak: 0
 Number of Points: 71

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	881	62.00	4341	81.00	2762	128.00	342
37.00	5175	63.00	3602	82.00	852	130.00	246
38.00	4543	64.00	649	86.00	92	137.00	85
39.00	1965	65.00	1152	87.00	4490	141.00	850
44.00	805	66.00	101	88.00	4245	143.00	1171
45.00	900	67.00	434	91.00	471	145.00	422
47.00	1264	68.00	9193	92.00	2762	146.00	105
48.00	603	69.00	9314	93.00	4518	148.00	264
49.00	4225	70.00	712	94.00	11145	155.00	330
50.00	17584	72.00	481	95.00	95808	171.00	98
51.00	5750	73.00	3858	96.00	6331	172.00	1538
52.00	190	74.00	16077	97.00	90	173.00	758
53.00	117	75.00	48688	104.00	440	174.00	78648
55.00	89	76.00	4183	106.00	417	175.00	5996
56.00	1598	77.00	458	116.00	290	176.00	77440
57.00	2485	78.00	384	117.00	685	177.00	5209
60.00	1108	79.00	3523	118.00	265	193.00	100
61.00	4391	80.00	1020	119.00	664		

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20200831-9437.b\HG31T02.D

Injection Date: 31-Aug-2020 17:44:30

Instrument ID: 19094

Operator ID: mec29284

Lims ID: BFB

Worklist Smp#: 1

Client ID:

Injection Vol: 1.0 uL

Dil. Factor: 1.0000

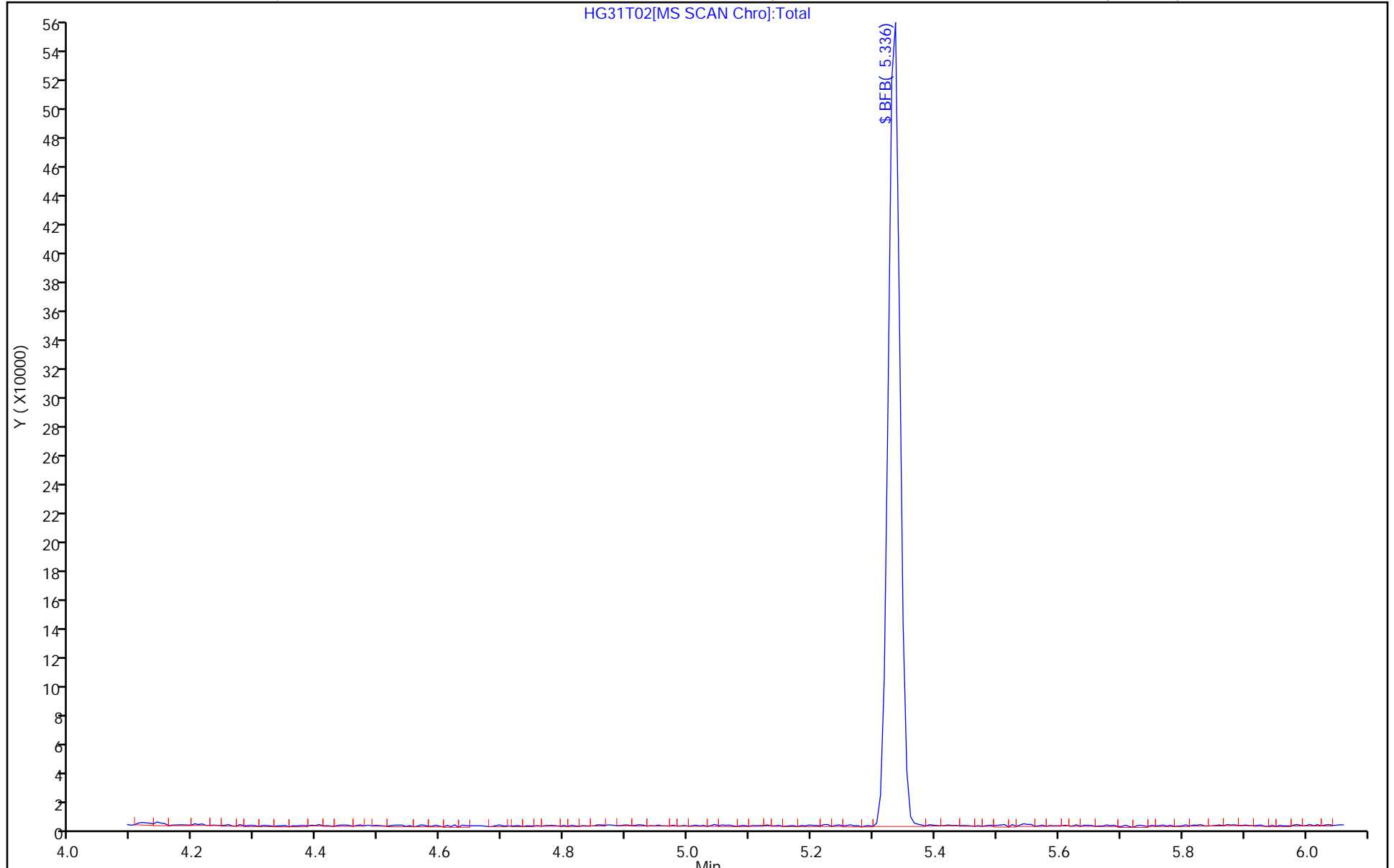
ALS Bottle#: 1

Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 410-38982/7
 Matrix: Water Lab File ID: HG30B01.D
 Analysis Method: 8260C LL Date Collected: _____
 Sample wt/vol: 25 (mL) Date Analyzed: 08/30/2020 19:05
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 38982 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.50	0.070
71-55-6	1,1,1-Trichloroethane	ND		0.50	0.060
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.50	0.070
79-00-5	1,1,2-Trichloroethane	ND		0.50	0.060
75-34-3	1,1-Dichloroethane	ND		0.50	0.070
75-35-4	1,1-Dichloroethene	ND		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	ND		0.50	0.060
107-06-2	1,2-Dichloroethane	ND		0.50	0.050
78-87-5	1,2-Dichloropropane	ND		0.50	0.060
78-93-3	2-Butanone (MEK)	ND		5.0	0.60
591-78-6	2-Hexanone	ND		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70
67-64-1	Acetone	ND		5.0	0.90
107-13-1	Acrylonitrile	ND		5.0	0.40
71-43-2	Benzene	ND		0.50	0.050
74-97-5	Bromochloromethane	ND		0.50	0.050
75-27-4	Bromodichloromethane	ND		0.50	0.050
75-25-2	Bromoform	ND		1.0	0.30
74-83-9	Bromomethane	ND		0.50	0.070
75-15-0	Carbon disulfide	ND		1.0	0.060
56-23-5	Carbon tetrachloride	ND		0.50	0.070
108-90-7	Chlorobenzene	ND		0.50	0.060
75-00-3	Chloroethane	ND		0.50	0.070
67-66-3	Chloroform	ND		0.50	0.090
74-87-3	Chloromethane	ND		0.50	0.060
156-59-2	cis-1,2-Dichloroethene	ND		0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	ND		0.50	0.050
124-48-1	Dibromochloromethane	ND		0.50	0.070
100-41-4	Ethylbenzene	ND		0.50	0.060
1634-04-4	Methyl tert-butyl ether	ND		0.50	0.050
75-09-2	Methylene Chloride	ND		0.50	0.070
100-42-5	Styrene	ND		0.50	0.050
127-18-4	Tetrachloroethene	ND		0.50	0.060
108-88-3	Toluene	ND		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	ND		0.50	0.060
10061-02-6	trans-1,3-Dichloropropene	ND		0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 410-38982/7
 Matrix: Water Lab File ID: HG30B01.D
 Analysis Method: 8260C LL Date Collected: _____
 Sample wt/vol: 25 (mL) Date Analyzed: 08/30/2020 19:05
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 38982 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	ND		0.50	0.060
75-01-4	Vinyl chloride	ND		0.50	0.10
1330-20-7	Xylenes, Total	ND		1.0	0.15

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	108		80-120
1868-53-7	Dibromofluoromethane (Surr)	106		80-120
2037-26-5	Toluene-d8 (Surr)	100		80-120
460-00-4	4-Bromofluorobenzene (Surr)	96		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30B01.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 30-Aug-2020 19:05:30 ALS Bottle#: 6 Worklist Smp#: 7
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: MB
 Misc. Info.: 410-0009349-007
 Operator ID: mec29284 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 30-Aug-2020 19:28:44 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1035

First Level Reviewer: campbellme Date: 30-Aug-2020 19:28:44

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Chlorotrifluoroethene	116		1.885					ND	
3 Dichlorodifluoromethane	85		2.068					ND	
2 Chlorodifluoromethane	51		2.093					ND	
4 Dimethyl ether	45		2.154					ND	
5 2-Chloro-1,1,1-Trifluoroethane	118		2.233					ND	
6 Chloromethane	50		2.276					ND	
7 Vinyl chloride	62		2.385					ND	
8 Butadiene	39		2.404					ND	
9 Bromomethane	94		2.745					ND	
10 Chloroethane	64		2.837					ND	
11 Dichlorofluoromethane	67		3.087					ND	
12 Ethanol	45	3.086	3.111	-0.025	1	157		NC	
13 Trichlorofluoromethane	101		3.154					ND	
15 Ethyl ether	59		3.422					ND	
16 1,2-Dichloro-1,1,2-trifluoroethane	67		3.513					ND	
17 Acrolein	56		3.611					ND	
18 1,1-Dichloroethene	96		3.757					ND	
19 Acetone	43		3.788					ND	
20 1,1,2,2-Tetrafluoroethane	101		3.788					ND	
21 Isopropyl alcohol	45		3.964					ND	
22 Iodomethane	142		3.971					ND	
23 Ethyl bromide	108		4.001					ND	
24 Carbon disulfide	76	4.111	4.086	0.025	1	2791		0.0202	7M
25 Acetonitrile	41		4.196					ND	
26 Methyl acetate	43		4.233					ND	
27 3-Chloro-1-propene	41		4.263					ND	
29 Methylene Chloride	84		4.464					ND	
* 28 t-Butyl alcohol-d10 (IS)	65	4.476	4.477	0.000	0	128983	50.0	50.0	
30 2-Methyl-2-propanol	59		4.605					ND	
31 Acrylonitrile	53		4.806					ND	
32 Methyl tert-butyl ether	73		4.873					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
33 trans-1,2-Dichloroethene	96		4.891					ND	
34 Hexane	57		5.306					ND	
36 Vinyl acetate	43		5.525					ND	
35 1,1-Dichloroethane	63		5.549					ND	
37 Isopropyl ether	45		5.598					ND	
38 2-Chloro-1,3-butadiene	53		5.653					ND	
39 Tert-butyl ethyl ether	59		6.129					ND	
S 40 1,2-Dichloroethene, Total	100		6.155					ND	
41 2-Butanone (MEK)	43		6.330					ND	
42 cis-1,2-Dichloroethene	96		6.372					ND	
43 2,2-Dichloropropane	77		6.391					ND	
44 Ethyl acetate	43		6.403					ND	
45 Propionitrile	54		6.427					ND	
46 Methyl acrylate	55		6.464					ND	
47 Methacrylonitrile	67		6.641					ND	
48 Chlorobromomethane	128		6.702					ND	
49 Tetrahydrofuran	71		6.714					ND	
50 Chloroform	83		6.854					ND	
\$ 51 Dibromofluoromethane (Surr)	113	7.067	7.061	0.006	93	474871	10.0	10.6	
52 1,1,1-Trichloroethane	97		7.086					ND	
53 Cyclohexane	56		7.183					ND	
54 1-Chlorobutane	56		7.232					ND	
55 1,1-Dichloropropene	75		7.287					ND	
56 Carbon tetrachloride	117		7.293					ND	
57 Isobutyl alcohol	41		7.421					ND	
\$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.525	7.519	0.006	0	98585	10.0	10.8	
59 Benzene	78		7.555					ND	
60 1,2-Dichloroethane	62		7.622					ND	
61 Isopropyl acetate	43		7.622					ND	
62 Tert-amyl methyl ether	73		7.738					ND	
63 t-Amyl alcohol	73		7.842					ND	
* 65 Fluorobenzene (IS)	96	7.957	7.951	0.006	99	1891822	10.0	10.0	
64 n-Heptane	43	7.957	7.958	-0.001	36	2871		0.0334	
66 n-Butanol	56		8.293					ND	
67 Trichloroethene	95		8.433					ND	
68 Methylcyclohexane	83		8.744					ND	
69 2-ethoxy-2-methyl butane	87		8.762					ND	
70 1,2-Dichloropropane	63		8.768					ND	
71 Methyl methacrylate	69		8.835					ND	
72 1,4-Dioxane	88		8.848					ND	
73 Dibromomethane	93		8.878					ND	
74 n-Propyl acetate	61		8.921					ND	
75 Dichlorobromomethane	83		9.110					ND	
76 2-Nitropropane	41		9.366					ND	
77 Chloroacetonitrile	75		9.433					ND	
78 2-Chloroethyl vinyl ether	63		9.457					ND	
79 1-Bromo-2-chloroethane	63		9.494					ND	
80 cis-1,3-Dichloropropene	75		9.634					ND	
81 4-Methyl-2-pentanone (MIBK)	43		9.793					ND	
\$ 82 Toluene-d8 (Surr)	98	9.933	9.933	0.000	94	1818686	10.0	10.0	
83 Toluene	92		10.012					ND	
S 84 1,3-Dichloropropene, Total	100		10.060					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
85 trans-1,3-Dichloropropene	75		10.256					ND	
86 Ethyl methacrylate	69		10.305					ND	
87 1,1,2-Trichloroethane	97		10.457					ND	
88 Tetrachloroethene	166		10.542					ND	
89 1,3-Dichloropropane	76		10.616					ND	
91 2-Hexanone	43		10.658					ND	
92 n-Butyl acetate	43	10.774	10.786	-0.012	8	774		0.0152	
93 Chlorodibromomethane	129		10.829					ND	
94 Ethylene Dibromide	107		10.945					ND	
S 95 Xylenes, Total	106		11.245					ND	
* 97 Chlorobenzene-d5 (IS)	117	11.365	11.365	0.000	87	1352594	10.0	10.0	
96 1-Chlorohexane	91		11.365					ND	
98 Chlorobenzene	112		11.390					ND	
99 1,1,1,2-Tetrachloroethane	131		11.469					ND	
100 Ethylbenzene	91		11.475					ND	
101 m-Xylene & p-Xylene	106		11.585					ND	
102 o-Xylene	106		11.914					ND	
103 Styrene	104		11.926					ND	
104 Bromoform	173		12.091					ND	
105 Isopropylbenzene	105		12.207					ND	
106 cis-1,4-Dichloro-2-butene	88		12.268					ND	U
107 Cyclohexanone	55		12.298					ND	
\$ 108 4-Bromofluorobenzene (Surr)	95	12.353	12.353	0.000	88	635540	10.0	9.60	
109 1,1,2,2-Tetrachloroethane	83		12.451					ND	
111 Bromobenzene	156		12.475					ND	
110 trans-1,4-Dichloro-2-butene	53		12.475					ND	
112 1,2,3-Trichloropropane	110		12.499					ND	
113 N-Propylbenzene	91		12.536					ND	
114 2-Chlorotoluene	126		12.615					ND	
115 1,3,5-Trimethylbenzene	105		12.670					ND	
116 4-Chlorotoluene	126		12.707					ND	
118 tert-Butylbenzene	134		12.908					ND	
119 Pentachloroethane	167		12.944					ND	
120 1,2,4-Trimethylbenzene	105		12.950					ND	
121 sec-Butylbenzene	105		13.072					ND	
122 1,3-Dichlorobenzene	146		13.176					ND	
123 4-Isopropyltoluene	119		13.176					ND	
* 124 1,4-Dichlorobenzene-d4	152	13.231	13.231	0.000	96	678041	10.0	10.0	
125 1,4-Dichlorobenzene	146		13.249					ND	
126 1,2,3-Trimethylbenzene	120		13.255					ND	
127 Benzyl chloride	126		13.322					ND	
129 p-Diethylbenzene	119	13.444	13.450	-0.006	1	682		0.004789	
130 n-Butylbenzene	92		13.469					ND	
131 1,2-Dichlorobenzene	146		13.505					ND	
133 Hexachloroethane	201		13.725					ND	
134 1,2-Dibromo-3-Chloropropane	155		14.048					ND	
135 1,3,5-Trichlorobenzene	180		14.170					ND	
136 1,2,4-Trichlorobenzene	180	14.596	14.596	0.000	1	668		0.0108	a
137 Hexachlorobutadiene	225	14.676	14.676	0.000	92	2968		0.0872	
138 Naphthalene	128		14.779					ND	
139 1,2,3-Trichlorobenzene	180	14.932	14.926	0.006	1	495		0.009570	a
140 2-Methylnaphthalene	142	15.578	15.572	0.006	92	2094		0.0318	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
151 tert-Butyl Formate	1		0.000					ND	
152 Dodecane	57		0.000					ND	
157 Methylal	1		0.000					ND	
142 1,1-Dichloro-1-fluoroethane	1		0.000					ND	
150 Propene oxide	1		0.000					ND	
175 2-Chloroethanol TIC	1		0.000					ND	
162 1-Chloropropane	1		0.000					ND	
163 1-Bromo-3-Chloropropane	1		0.000					ND	
172 2,3-Dibromo-1-propanol TIC	1		0.000					ND	
174 Monochloroacetic acid TIC	1		0.000					ND	
160 n-Decane	57		0.000					ND	
176 Epibromohydrin TIC	1		0.000					ND	
183 3-Chloro-1,2-propanediol TIC	1		0.000					ND	
177 Chloroacetaldehyde TIC	1		0.000					ND	
178 Vinyl bromide TIC	1		0.000					ND	
179 Epichlorohydrin TIC	1		0.000					ND	
180 2-Bromo-3-chloropropene TIC	1		0.000					ND	
181 Ethylene oxide TIC	1		0.000					ND	
182 2,3-Dibromopropene TIC	1		0.000					ND	
161 2-Bromo-1-chloropropane	1		0.000					ND	
173 2-Bromoethanol TIC	1		0.000					ND	

QC Flag Legend

Processing Flags

NC - Not Calibrated

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Reagents:

MSV_30_826ISS_00005

Amount Added: 5.00

Units: uL

Run Reagent

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30B01.D

Injection Date: 30-Aug-2020 19:05:30

Instrument ID: 19094

Operator ID: mec29284

Lims ID: MB

Worklist Smp#: 7

Client ID:

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

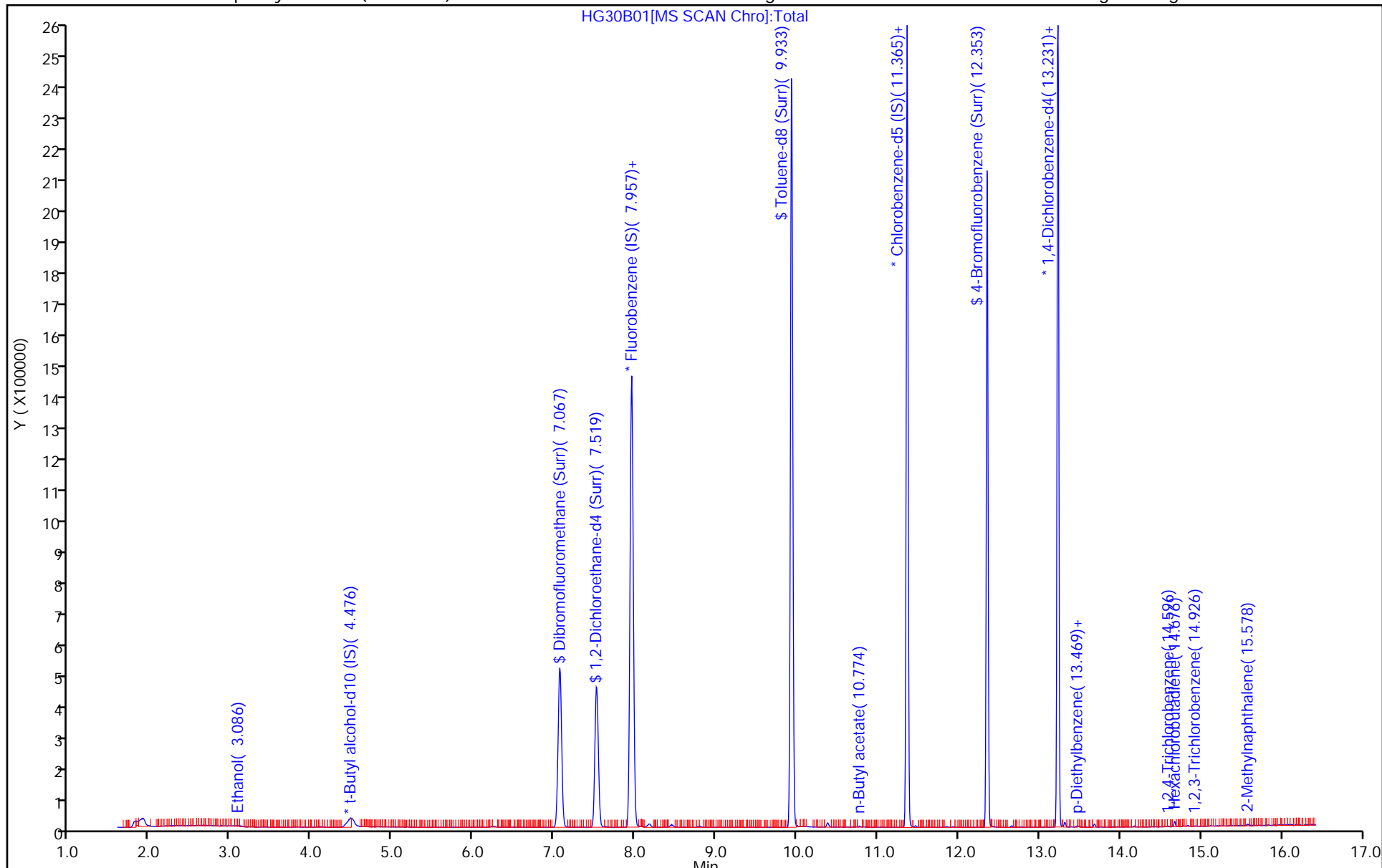
ALS Bottle#: 6

Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30B01.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 30-Aug-2020 19:05:30 ALS Bottle#: 6 Worklist Smp#: 7
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: MB
 Misc. Info.: 410-0009349-007
 Operator ID: mec29284 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 30-Aug-2020 19:28:44 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1035

First Level Reviewer: campbellme Date: 30-Aug-2020 19:28:44

Compound	Amount Added	Amount Recovered	% Rec.
\$ 51 Dibromofluoromethane (Surr)	10.0	10.6	106.17
\$ 58 1,2-Dichloroethane-d4 (Surr)	10.0	10.8	108.20
\$ 82 Toluene-d8 (Surr)	10.0	10.0	100.20
\$ 108 4-Bromofluorobenzene (Surr)	10.0	9.60	95.98

Eurofins Lancaster Laboratories Env, LLC

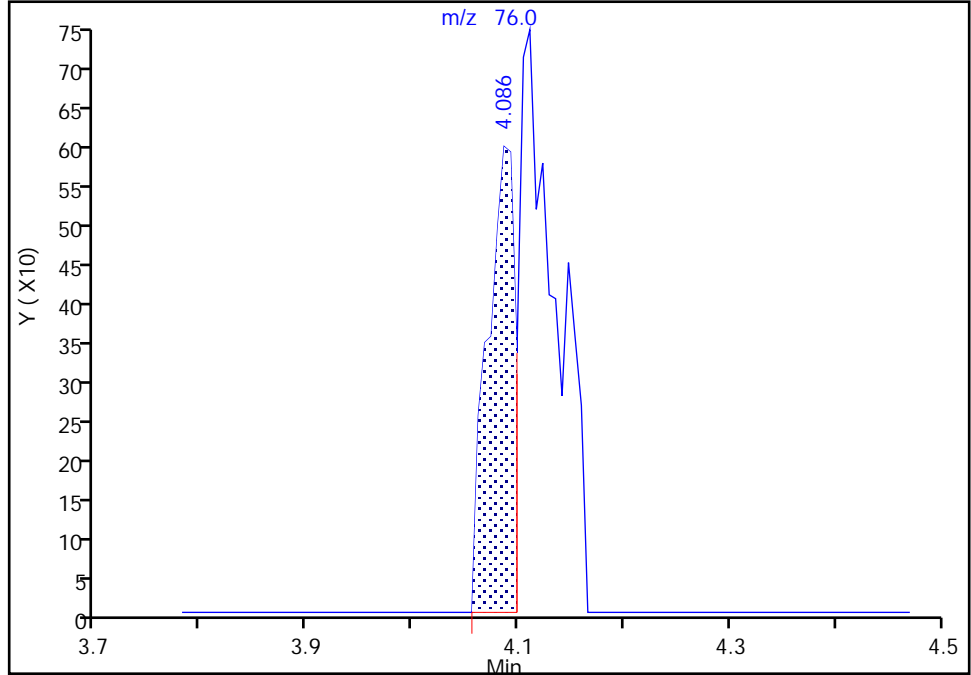
Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30B01.D
Injection Date: 30-Aug-2020 19:05:30 Instrument ID: 19094
Lims ID: MB
Client ID:
Operator ID: mec29284 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

24 Carbon disulfide, CAS: 75-15-0

Signal: 1

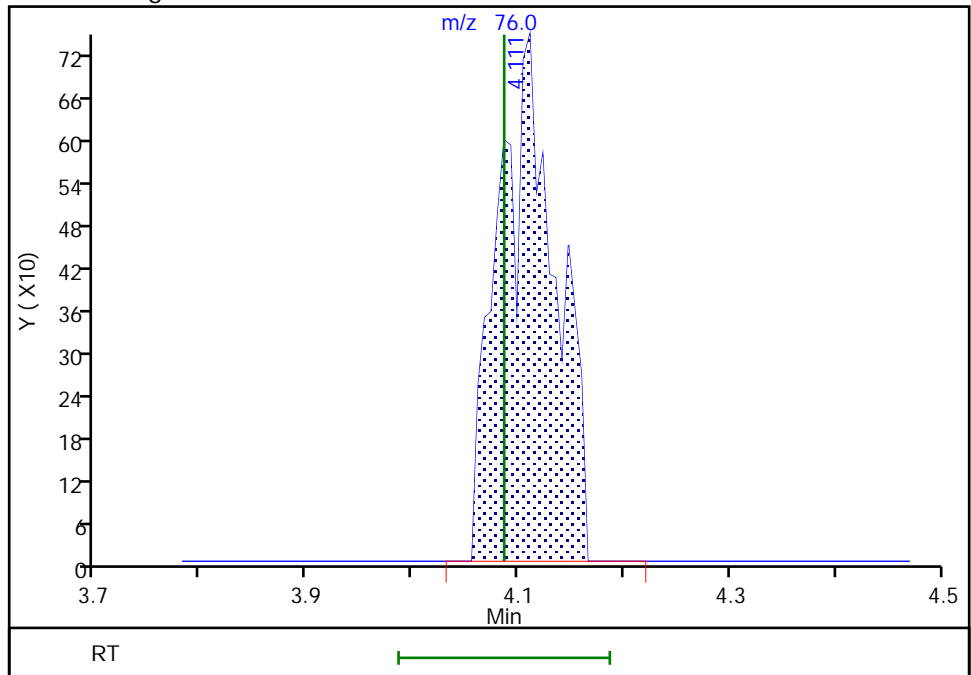
RT: 4.09
Area: 1078
Amount: 0.007806
Amount Units: ug/l

Processing Integration Results



RT: 4.11
Area: 2791
Amount: 0.020209
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 30-Aug-2020 19:28:04
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 410-39389/7
 Matrix: Water Lab File ID: HG31B01.D
 Analysis Method: 8260C LL Date Collected: _____
 Sample wt/vol: 25 (mL) Date Analyzed: 08/31/2020 19:45
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 39389 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.50	0.070
71-55-6	1,1,1-Trichloroethane	ND		0.50	0.060
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.50	0.070
79-00-5	1,1,2-Trichloroethane	ND		0.50	0.060
75-34-3	1,1-Dichloroethane	ND		0.50	0.070
75-35-4	1,1-Dichloroethene	ND		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	ND		0.50	0.060
107-06-2	1,2-Dichloroethane	ND		0.50	0.050
78-87-5	1,2-Dichloropropane	ND		0.50	0.060
78-93-3	2-Butanone (MEK)	ND		5.0	0.60
591-78-6	2-Hexanone	ND		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70
67-64-1	Acetone	ND		5.0	0.90
107-13-1	Acrylonitrile	ND		5.0	0.40
71-43-2	Benzene	ND		0.50	0.050
74-97-5	Bromochloromethane	ND		0.50	0.050
75-27-4	Bromodichloromethane	ND		0.50	0.050
75-25-2	Bromoform	ND		1.0	0.30
74-83-9	Bromomethane	ND		0.50	0.070
75-15-0	Carbon disulfide	ND		1.0	0.060
56-23-5	Carbon tetrachloride	ND		0.50	0.070
108-90-7	Chlorobenzene	ND		0.50	0.060
75-00-3	Chloroethane	ND		0.50	0.070
67-66-3	Chloroform	ND		0.50	0.090
74-87-3	Chloromethane	ND		0.50	0.060
156-59-2	cis-1,2-Dichloroethene	ND		0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	ND		0.50	0.050
124-48-1	Dibromochloromethane	ND		0.50	0.070
100-41-4	Ethylbenzene	ND		0.50	0.060
1634-04-4	Methyl tert-butyl ether	ND		0.50	0.050
75-09-2	Methylene Chloride	ND		0.50	0.070
100-42-5	Styrene	ND		0.50	0.050
127-18-4	Tetrachloroethene	ND		0.50	0.060
108-88-3	Toluene	ND		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	ND		0.50	0.060
10061-02-6	trans-1,3-Dichloropropene	ND		0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: MB 410-39389/7
 Matrix: Water Lab File ID: HG31B01.D
 Analysis Method: 8260C LL Date Collected: _____
 Sample wt/vol: 25 (mL) Date Analyzed: 08/31/2020 19:45
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 39389 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	ND		0.50	0.060
75-01-4	Vinyl chloride	ND		0.50	0.10
1330-20-7	Xylenes, Total	ND		1.0	0.15

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	111		80-120
1868-53-7	Dibromofluoromethane (Surr)	111		80-120
2037-26-5	Toluene-d8 (Surr)	98		80-120
460-00-4	4-Bromofluorobenzene (Surr)	96		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200831-9437.b\HG31B01.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 31-Aug-2020 19:45:30 ALS Bottle#: 6 Worklist Smp#: 7
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: MB
 Misc. Info.: 410-0009437-007
 Operator ID: mec29284 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200831-9437.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 31-Aug-2020 20:12:35 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1022

First Level Reviewer: campbellme Date: 31-Aug-2020 20:12:35

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Chlorotrifluoroethene	116		1.885					ND	
3 Dichlorodifluoromethane	85		2.075					ND	
2 Chlorodifluoromethane	51	2.032	2.093	-0.061	92	8635		0.2574	
4 Dimethyl ether	45		2.154					ND	
5 2-Chloro-1,1,1-Trifluoroethane	118		2.233					ND	
6 Chloromethane	50		2.276					ND	
7 Vinyl chloride	62		2.392					ND	
8 Butadiene	39		2.404					ND	
9 Bromomethane	94		2.745					ND	
10 Chloroethane	64		2.849					ND	
11 Dichlorofluoromethane	67		3.093					ND	
12 Ethanol	45	3.026	3.111	-0.085	1	214		NC	
13 Trichlorofluoromethane	101		3.154					ND	
15 Ethyl ether	59		3.428					ND	
16 1,2-Dichloro-1,1,2-trifluoroethane	67		3.519					ND	
17 Acrolein	56		3.611					ND	
18 1,1-Dichloroethene	96		3.763					ND	
19 Acetone	43	3.818	3.794	0.024	29	4498		0.4974	
20 112TCTFE	101		3.794					ND	
21 Isopropyl alcohol	45		3.977					ND	
22 Iodomethane	142		3.977					ND	
23 Ethyl bromide	108		4.001					ND	
24 Carbon disulfide	76	4.074	4.086	-0.012	1	1747		0.0138	7M
25 Acetonitrile	41		4.196					ND	
26 Methyl acetate	43		4.239					ND	
27 3-Chloro-1-propene	41		4.269					ND	
29 Methylene Chloride	84		4.464					ND	
* 28 t-Butyl alcohol-d10 (IS)	65	4.477	4.489	-0.012	0	128059	50.0	50.0	
30 2-Methyl-2-propanol	59		4.611					ND	
31 Acrylonitrile	53		4.818					ND	
32 Methyl tert-butyl ether	73		4.879					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
33 trans-1,2-Dichloroethene	96		4.897					ND	
34 Hexane	57		5.312					ND	
36 Vinyl acetate	43		5.525					ND	
35 1,1-Dichloroethane	63		5.549					ND	
37 Isopropyl ether	45		5.598					ND	
38 2-Chloro-1,3-butadiene	53		5.659					ND	
39 Tert-butyl ethyl ether	59		6.135					ND	
S 40 1,2-Dichloroethene, Total	100		6.155					ND	
41 2-Butanone (MEK)	43		6.336					ND	
42 cis-1,2-Dichloroethene	96		6.372					ND	
43 2,2-Dichloropropane	77		6.397					ND	
44 Ethyl acetate	43		6.403					ND	
45 Propionitrile	54		6.433					ND	
46 Methyl acrylate	55		6.464					ND	
47 Methacrylonitrile	67		6.641					ND	
48 Chlorobromomethane	128		6.708					ND	
49 Tetrahydrofuran	71		6.714					ND	
50 Chloroform	83		6.854					ND	
\$ 51 Dibromofluoromethane (Surr)	113	7.068	7.067	0.001	92	454480	10.0	11.1	
52 1,1,1-Trichloroethane	97		7.086					ND	
53 Cyclohexane	56		7.189					ND	
54 1-Chlorobutane	56		7.232					ND	
55 1,1-Dichloropropene	75		7.293					ND	
56 Carbon tetrachloride	117		7.299					ND	
57 Isobutyl alcohol	41		7.427					ND	
\$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.525	7.525	0.000	0	93095	10.0	11.1	
59 Benzene	78		7.555					ND	
61 Isopropyl acetate	43		7.622					ND	
60 1,2-Dichloroethane	62		7.628					ND	
62 Tert-amyl methyl ether	73		7.744					ND	
63 t-Amyl alcohol	73		7.842					ND	
* 65 Fluorobenzene (IS)	96	7.958	7.958	0.000	98	1733752	10.0	10.0	
64 n-Heptane	43	7.970	7.964	0.006	36	3192		0.0405	
66 n-Butanol	56		8.299					ND	
67 Trichloroethene	95		8.433					ND	
68 Methylcyclohexane	83		8.750					ND	
69 2-ethoxy-2-methyl butane	87		8.762					ND	
70 1,2-Dichloropropane	63		8.768					ND	
71 Methyl methacrylate	69		8.835					ND	
72 1,4-Dioxane	88		8.854					ND	
73 Dibromomethane	93		8.878					ND	
74 n-Propyl acetate	61		8.921					ND	
75 Dichlorobromomethane	83		9.110					ND	
76 2-Nitropropane	41		9.366					ND	
77 Chloroacetonitrile	75		9.433					ND	
78 2-Chloroethyl vinyl ether	63		9.457					ND	
79 1-Bromo-2-chloroethane	63		9.494					ND	
80 cis-1,3-Dichloropropene	75		9.634					ND	
81 4-Methyl-2-pentanone (MIBK)	43		9.793					ND	
\$ 82 Toluene-d8 (Surr)	98	9.933	9.933	0.000	94	1665103	10.0	9.82	
83 Toluene	92		10.012					ND	
S 84 1,3-Dichloropropene, Total	100		10.060					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
85 trans-1,3-Dichloropropene	75		10.256					ND	
86 Ethyl methacrylate	69		10.311					ND	
87 1,1,2-Trichloroethane	97		10.457					ND	
88 Tetrachloroethene	166		10.549					ND	
89 1,3-Dichloropropane	76		10.616					ND	
91 2-Hexanone	43		10.658					ND	
92 n-Butyl acetate	43	10.774	10.786	-0.012	1	357		0.007525	
93 Chlorodibromomethane	129		10.829					ND	
94 Ethylene Dibromide	107		10.945					ND	
S 95 Xylenes, Total	106		11.245					ND	
* 97 Chlorobenzene-d5 (IS)	117	11.366	11.365	0.001	87	1263902	10.0	10.0	
96 1-Chlorohexane	91		11.365					ND	
98 Chlorobenzene	112		11.390					ND	
99 1,1,1,2-Tetrachloroethane	131		11.469					ND	
100 Ethylbenzene	91		11.475					ND	
101 m-Xylene & p-Xylene	106		11.585					ND	
102 o-Xylene	106		11.914					ND	
103 Styrene	104		11.926					ND	
104 Bromoform	173		12.085					ND	
105 Isopropylbenzene	105		12.207					ND	
106 cis-1,4-Dichloro-2-butene	88		12.268					ND	U
107 Cyclohexanone	55		12.298					ND	
\$ 108 4-Bromofluorobenzene (Surr)	95	12.353	12.353	0.000	88	591119	10.0	9.55	
109 1,1,2,2-Tetrachloroethane	83		12.451					ND	
111 Bromobenzene	156		12.469					ND	
110 trans-1,4-Dichloro-2-butene	53		12.475					ND	
112 1,2,3-Trichloropropane	110		12.499					ND	
113 N-Propylbenzene	91		12.536					ND	
114 2-Chlorotoluene	126		12.615					ND	
115 1,3,5-Trimethylbenzene	105		12.664					ND	
116 4-Chlorotoluene	126		12.707					ND	
118 tert-Butylbenzene	134		12.908					ND	
119 Pentachloroethane	167		12.944					ND	
120 1,2,4-Trimethylbenzene	105		12.950					ND	
121 sec-Butylbenzene	105		13.072					ND	
122 1,3-Dichlorobenzene	146		13.176					ND	
123 4-Isopropyltoluene	119		13.176					ND	
* 124 1,4-Dichlorobenzene-d4	152	13.231	13.231	0.000	96	630941	10.0	10.0	
125 1,4-Dichlorobenzene	146		13.249					ND	
126 1,2,3-Trimethylbenzene	120		13.255					ND	
127 Benzyl chloride	126		13.322					ND	
129 p-Diethylbenzene	119	13.444	13.450	-0.006	1	424		0.003200	
130 n-Butylbenzene	92		13.469					ND	
131 1,2-Dichlorobenzene	146		13.505					ND	
133 Hexachloroethane	201		13.725					ND	
134 1,2-Dibromo-3-Chloropropane	155		14.048					ND	
135 1,3,5-Trichlorobenzene	180		14.170					ND	
136 1,2,4-Trichlorobenzene	180	14.597	14.597	0.001	1	821		0.0142	a
137 Hexachlorobutadiene	225	14.670	14.676	-0.006	86	2378		0.0751	
138 Naphthalene	128		14.779					ND	
139 1,2,3-Trichlorobenzene	180	14.920	14.920	0.000	1	421		0.008747	a
140 2-Methylnaphthalene	142	15.578	15.572	0.006	77	1864		0.0304	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
151 tert-Butyl Formate	1		0.000					ND	
152 Dodecane	57		0.000					ND	
157 Methylal	1		0.000					ND	
142 1,1-Dichloro-1-fluoroethane	1		0.000					ND	
150 Propene oxide	1		0.000					ND	
175 2-Chloroethanol TIC	1		0.000					ND	
162 1-Chloropropane	1		0.000					ND	
163 1-Bromo-3-Chloropropane	1		0.000					ND	
172 2,3-Dibromo-1-propanol TIC	1		0.000					ND	
174 Monochloroacetic acid TIC	1		0.000					ND	
160 n-Decane	57		0.000					ND	
176 Epibromohydrin TIC	1		0.000					ND	
183 3-Chloro-1,2-propanediol TIC	1		0.000					ND	
177 Chloroacetaldehyde TIC	1		0.000					ND	
178 Vinyl bromide TIC	1		0.000					ND	
179 Epichlorohydrin TIC	1		0.000					ND	
180 2-Bromo-3-chloropropene TIC	1		0.000					ND	
181 Ethylene oxide TIC	1		0.000					ND	
182 2,3-Dibromopropene TIC	1		0.000					ND	
161 2-Bromo-1-chloropropane	1		0.000					ND	
173 2-Bromoethanol TIC	1		0.000					ND	

QC Flag Legend

Processing Flags

NC - Not Calibrated

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Reagents:

MSV_30_826ISS_00005

Amount Added: 5.00

Units: uL

Run Reagent

Data File: \\chromfs\Lancaster\ChromData\19094\20200831-9437.b\HG31B01.D

Injection Date: 31-Aug-2020 19:45:30

Instrument ID: 19094

Operator ID: mec29284

Lims ID: MB

Worklist Smp#: 7

Client ID:

Purge Vol: 25.000 mL

Dil. Factor: 1.0000

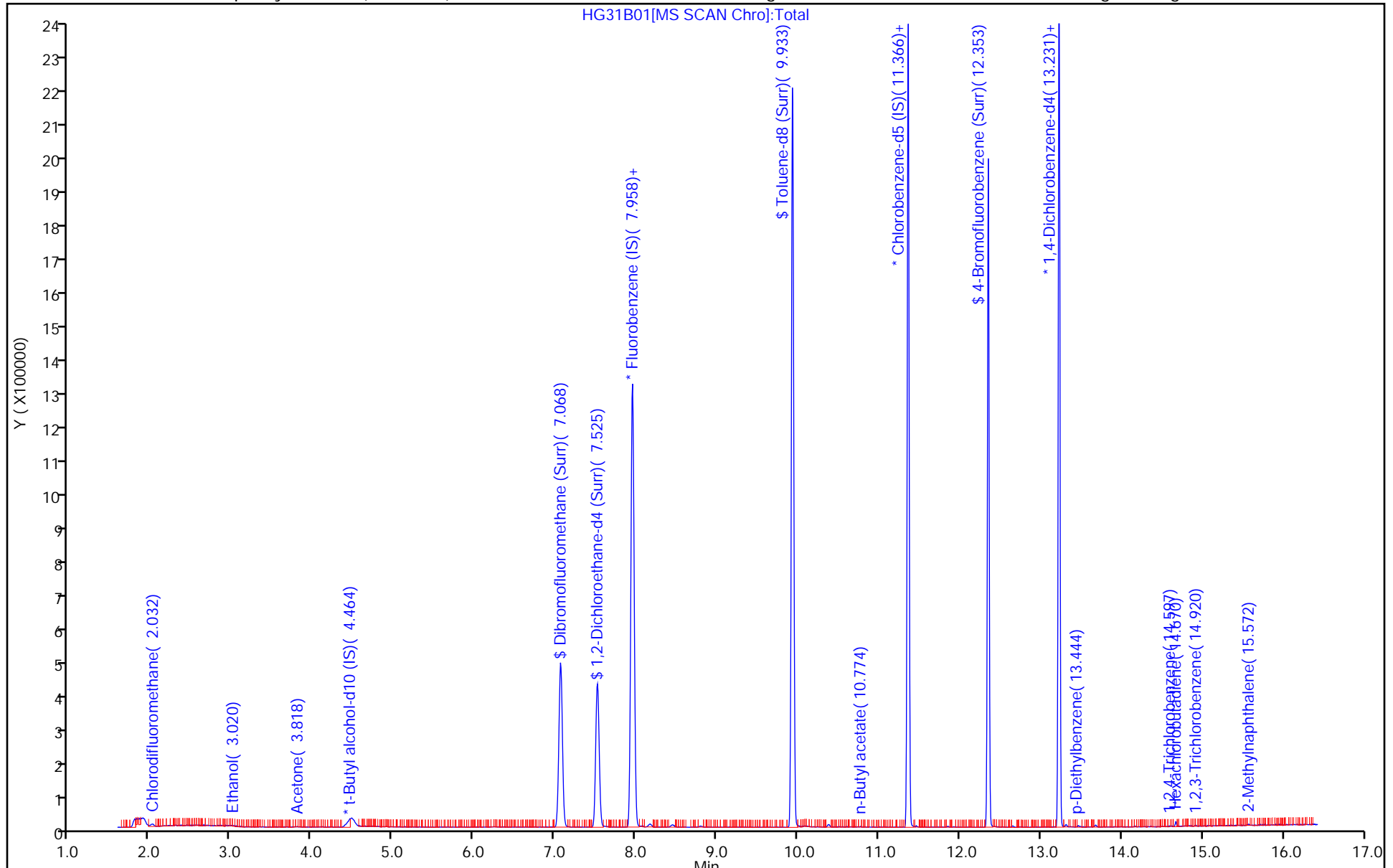
ALS Bottle#: 6

Method: MSV_19094_25mL

Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm)

Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200831-9437.b\HG31B01.D
 Lims ID: MB
 Client ID:
 Sample Type: MB
 Inject. Date: 31-Aug-2020 19:45:30 ALS Bottle#: 6 Worklist Smp#: 7
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: MB
 Misc. Info.: 410-0009437-007
 Operator ID: mec29284 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200831-9437.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 31-Aug-2020 20:12:35 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1022

First Level Reviewer: campbellme Date: 31-Aug-2020 20:12:35

Compound	Amount Added	Amount Recovered	% Rec.
\$ 51 Dibromofluoromethane (Surr)	10.0	11.1	110.88
\$ 58 1,2-Dichloroethane-d4 (Surr)	10.0	11.1	111.49
\$ 82 Toluene-d8 (Surr)	10.0	9.82	98.18
\$ 108 4-Bromofluorobenzene (Surr)	10.0	9.55	95.53

Eurofins Lancaster Laboratories Env, LLC

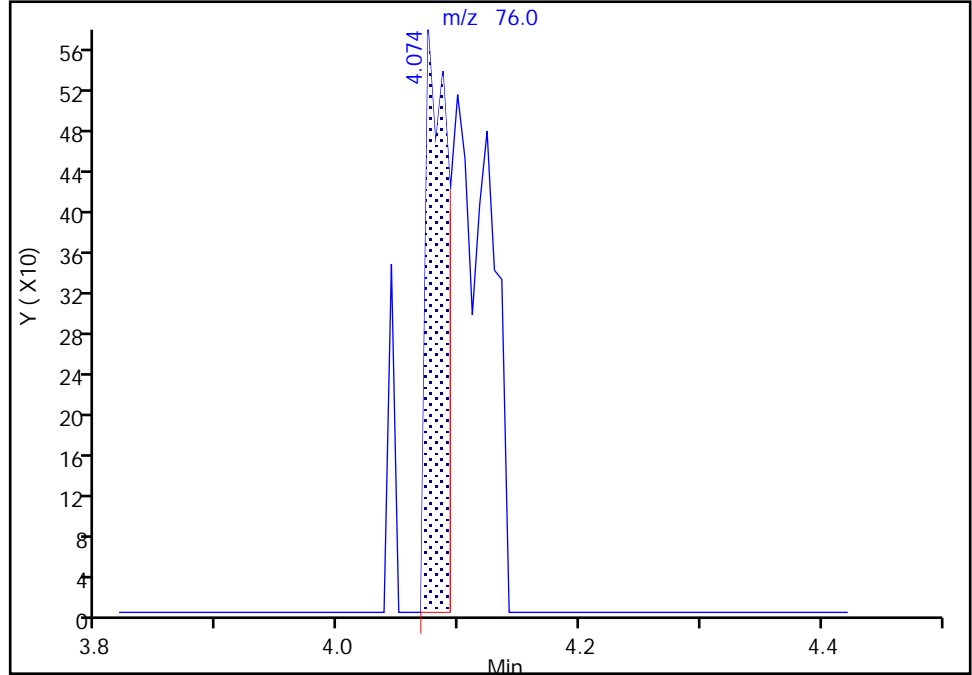
Data File: \\chromfs\Lancaster\ChromData\19094\20200831-9437.b\HG31B01.D
Injection Date: 31-Aug-2020 19:45:30 Instrument ID: 19094
Lims ID: MB
Client ID:
Operator ID: mec29284 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

24 Carbon disulfide, CAS: 75-15-0

Signal: 1

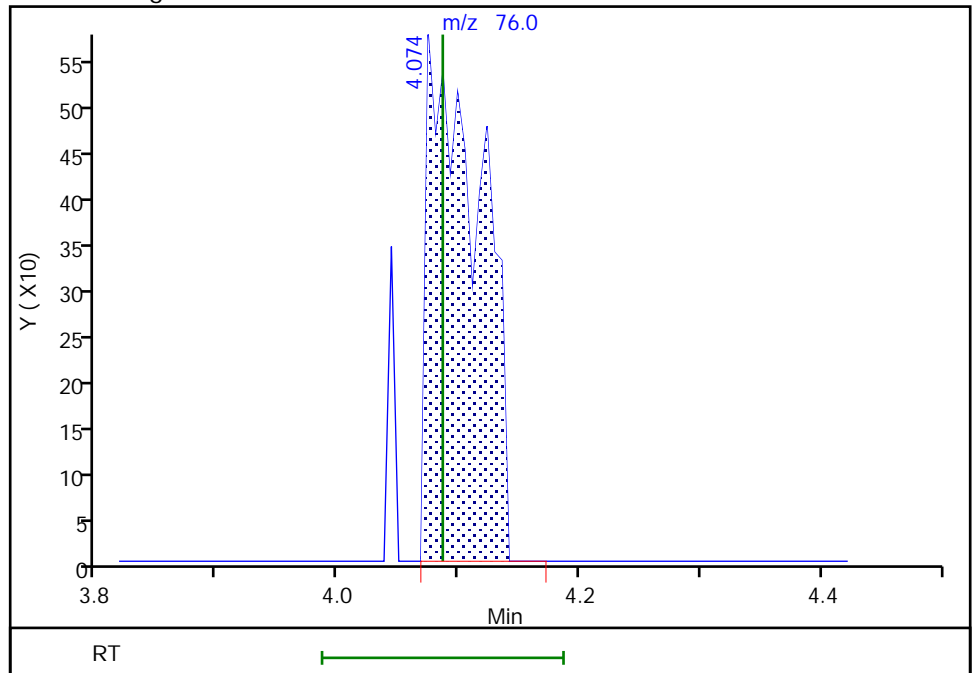
RT: 4.07
Area: 726
Amount: 0.005736
Amount Units: ug/l

Processing Integration Results



RT: 4.07
Area: 1747
Amount: 0.013803
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 31-Aug-2020 20:11:54
Audit Action: Manually Integrated

Audit Reason: Incomplete Integration

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 410-38982/4
 Matrix: Water Lab File ID: HG30L02.D
 Analysis Method: 8260C LL Date Collected: _____
 Sample wt/vol: 25 (mL) Date Analyzed: 08/30/2020 18:22
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 38982 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	4.93		0.50	0.070
71-55-6	1,1,1-Trichloroethane	4.86		0.50	0.060
79-34-5	1,1,2,2-Tetrachloroethane	5.49		0.50	0.070
79-00-5	1,1,2-Trichloroethane	5.39		0.50	0.060
75-34-3	1,1-Dichloroethane	5.13		0.50	0.070
75-35-4	1,1-Dichloroethene	4.96		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	5.40		0.50	0.060
107-06-2	1,2-Dichloroethane	5.62		0.50	0.050
78-87-5	1,2-Dichloropropane	5.30		0.50	0.060
78-93-3	2-Butanone (MEK)	35.3		5.0	0.60
591-78-6	2-Hexanone	22.1		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	21.5		5.0	0.70
67-64-1	Acetone	32.2		5.0	0.90
107-13-1	Acrylonitrile	22.7		5.0	0.40
71-43-2	Benzene	4.89		0.50	0.050
74-97-5	Bromochloromethane	4.69		0.50	0.050
75-27-4	Bromodichloromethane	5.26		0.50	0.050
75-25-2	Bromoform	5.27		1.0	0.30
74-83-9	Bromomethane	4.82		0.50	0.070
75-15-0	Carbon disulfide	5.07		1.0	0.060
56-23-5	Carbon tetrachloride	4.82		0.50	0.070
108-90-7	Chlorobenzene	4.98		0.50	0.060
75-00-3	Chloroethane	4.94		0.50	0.070
67-66-3	Chloroform	5.16		0.50	0.090
74-87-3	Chloromethane	4.98		0.50	0.060
156-59-2	cis-1,2-Dichloroethene	5.07		0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	4.94		0.50	0.050
124-48-1	Dibromochloromethane	5.39		0.50	0.070
100-41-4	Ethylbenzene	4.84		0.50	0.060
1634-04-4	Methyl tert-butyl ether	4.72		0.50	0.050
75-09-2	Methylene Chloride	5.06		0.50	0.070
100-42-5	Styrene	4.92		0.50	0.050
127-18-4	Tetrachloroethene	4.70		0.50	0.060
108-88-3	Toluene	4.86		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	4.87		0.50	0.060
10061-02-6	trans-1,3-Dichloropropene	5.04		0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 410-38982/4
 Matrix: Water Lab File ID: HG30L02.D
 Analysis Method: 8260C LL Date Collected: _____
 Sample wt/vol: 25 (mL) Date Analyzed: 08/30/2020 18:22
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 38982 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	4.82		0.50	0.060
75-01-4	Vinyl chloride	4.88		0.50	0.10
1330-20-7	Xylenes, Total	14.5		1.0	0.15

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	105		80-120
1868-53-7	Dibromofluoromethane (Surr)	102		80-120
2037-26-5	Toluene-d8 (Surr)	101		80-120
460-00-4	4-Bromofluorobenzene (Surr)	100		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30L02.D
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 30-Aug-2020 18:22:30 ALS Bottle#: 4 Worklist Smp#: 4
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: LCS
 Misc. Info.: 410-0009349-004
 Operator ID: mec29284 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 30-Aug-2020 18:52:31 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1035

First Level Reviewer: campbellme

Date: 30-Aug-2020 18:51:08

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
3 Dichlorodifluoromethane	85	2.068	2.068	0.000	99	337558	5.00	4.39	M
6 Chloromethane	50	2.276	2.276	0.000	99	456055	5.00	4.98	
7 Vinyl chloride	62	2.392	2.385	0.007	98	400333	5.00	4.88	
8 Butadiene	39	2.404	2.404	0.000	93	376790	5.00	4.77	
9 Bromomethane	94	2.745	2.745	0.000	91	267781	5.00	4.82	
10 Chloroethane	64	2.843	2.837	0.006	100	247679	5.00	4.94	
11 Dichlorofluoromethane	67	3.093	3.087	0.006	98	489729	5.00	4.54	
13 Trichlorofluoromethane	101	3.148	3.154	-0.006	96	451650	5.00	5.31	
15 Ethyl ether	59	3.428	3.422	0.006	94	192239	5.01	4.56	
16 1,2-Dichloro-1,1,2-trifluoroetha	67	3.507	3.513	-0.006	95	326165	5.00	4.89	
17 Acrolein	56	3.611	3.611	0.000	98	185498	37.5	23.7	
18 1,1-Dichloroethene	96	3.763	3.757	0.006	97	236851	5.00	4.96	
19 Acetone	43	3.794	3.788	0.006	100	311024	37.5	32.2	
20 112TCTFE	101	3.800	3.788	0.012	88	231934	5.00	4.45	
21 Isopropyl alcohol	45	3.977	3.964	0.013	28	39825	37.5	27.7	
22 Iodomethane	142	3.971	3.971	0.000	99	415708	5.00	4.48	
23 Ethyl bromide	108	4.001	4.001	0.000	98	169145	4.93	3.89	
24 Carbon disulfide	76	4.086	4.086	0.000	99	803624	5.00	5.07	
26 Methyl acetate	43	4.233	4.233	0.000	98	121285	5.00	4.35	
27 3-Chloro-1-propene	41	4.269	4.263	0.006	93	455745	5.00	4.70	
29 Methylene Chloride	84	4.470	4.464	0.006	95	287383	5.00	5.06	
* 28 t-Butyl alcohol-d10 (IS)	65	4.470	4.477	-0.006	0	136780	50.0	50.0	
30 2-Methyl-2-propanol	59	4.611	4.605	0.006	98	106046	50.0	39.1	
31 Acrylonitrile	53	4.806	4.806	0.000	99	294357	25.0	22.7	
32 Methyl tert-butyl ether	73	4.873	4.873	0.000	96	538862	5.00	4.72	
33 trans-1,2-Dichloroethene	96	4.891	4.891	0.000	98	264571	5.00	4.87	
34 Hexane	57	5.300	5.306	-0.006	94	404630	5.00	4.69	
35 1,1-Dichloroethane	63	5.549	5.549	0.000	96	536223	5.00	5.13	
37 Isopropyl ether	45	5.598	5.598	0.000	95	929565	5.00	4.75	
38 2-Chloro-1,3-butadiene	53	5.653	5.653	0.000	92	431348	5.00	4.69	
39 Tert-butyl ethyl ether	59	6.129	6.129	0.000	98	761569	5.00	4.58	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
41 2-Butanone (MEK)	43	6.330	6.330	0.000	99	569332	37.5	35.3	
42 cis-1,2-Dichloroethene	96	6.379	6.372	0.007	83	315484	5.00	5.07	
43 2,2-Dichloropropane	77	6.385	6.391	-0.006	89	394744	5.00	4.87	
45 Propionitrile	54	6.427	6.427	0.000	99	155045	37.5	37.4	
47 Methacrylonitrile	67	6.635	6.641	-0.006	93	532520	37.5	32.8	
48 Chlorobromomethane	128	6.702	6.702	0.000	98	122428	5.00	4.69	
49 Tetrahydrofuran	71	6.714	6.714	0.000	86	93095	25.0	21.7	
50 Chloroform	83	6.854	6.854	0.000	94	503882	5.00	5.16	
\$ 51 Dibromofluoromethane (Surr)	113	7.061	7.061	0.000	93	523417	10.0	10.2	
52 1,1,1-Trichloroethane	97	7.086	7.086	0.000	99	407822	5.00	4.86	
53 Cyclohexane	56	7.183	7.183	0.000	93	479632	5.00	4.46	
55 1,1-Dichloropropene	75	7.293	7.287	0.006	95	385825	5.00	4.96	
56 Carbon tetrachloride	117	7.293	7.293	0.000	77	348400	5.00	4.82	
57 Isobutyl alcohol	41	7.421	7.421	0.000	94	121694	125.0	112.1	
\$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.525	7.519	0.006	0	109782	10.0	10.5	
59 Benzene	78	7.555	7.555	0.000	97	1168313	5.00	4.89	
60 1,2-Dichloroethane	62	7.622	7.622	0.000	97	314624	5.00	5.62	
62 Tert-amyl methyl ether	73	7.744	7.738	0.006	97	648127	5.00	4.73	
* 65 Fluorobenzene (IS)	96	7.951	7.951	0.000	98	2170829	10.0	10.0	
64 n-Heptane	43	7.958	7.958	0.000	90	477400	5.00	4.84	
66 n-Butanol	56	8.299	8.293	0.006	91	192519	250.0	203.4	
67 Trichloroethene	95	8.433	8.433	0.000	98	282502	5.00	4.82	
68 Methylcyclohexane	83	8.744	8.744	0.000	96	475012	5.00	4.54	
69 2-ethoxy-2-methyl butane	87	8.762	8.762	0.000	88	392720	5.00	4.66	
70 1,2-Dichloropropane	63	8.768	8.768	0.000	83	320462	5.00	5.30	
71 Methyl methacrylate	69	8.842	8.835	0.007	92	128905	5.00	4.09	
72 1,4-Dioxane	88	8.854	8.848	0.006	35	24981	125.0	95.8	
73 Dibromomethane	93	8.878	8.878	0.000	96	136814	5.00	5.39	
75 Dichlorobromomethane	83	9.110	9.110	0.000	99	357843	5.00	5.26	
76 2-Nitropropane	41	9.366	9.366	0.000	98	37671	5.00	4.34	
78 2-Chloroethyl vinyl ether	63		9.457				ND	ND	
79 1-Bromo-2-chloroethane	63	9.494	9.494	0.000	99	311440	5.00	5.20	
80 cis-1,3-Dichloropropene	75	9.634	9.634	0.000	95	412824	5.00	4.94	
81 4-Methyl-2-pentanone (MIBK)	43	9.793	9.793	0.000	98	904976	25.0	21.5	
\$ 82 Toluene-d8 (Surr)	98	9.933	9.933	0.000	94	2090474	10.0	10.1	
83 Toluene	92	10.006	10.012	-0.006	98	700013	5.00	4.86	
85 trans-1,3-Dichloropropene	75	10.256	10.256	0.000	94	328577	5.00	5.04	
86 Ethyl methacrylate	69	10.311	10.305	0.006	91	251419	5.00	4.71	
87 1,1,2-Trichloroethane	97	10.457	10.457	0.000	91	189300	5.00	5.39	
88 Tetrachloroethene	166	10.549	10.542	0.006	96	287591	5.00	4.70	
89 1,3-Dichloropropane	76	10.616	10.616	0.000	93	334580	5.00	5.20	
91 2-Hexanone	43	10.658	10.658	0.000	98	629301	25.0	22.1	
93 Chlorodibromomethane	129	10.829	10.829	0.000	90	227959	5.00	5.39	
94 Ethylene Dibromide	107	10.945	10.945	0.000	97	180300	5.00	5.40	
* 97 Chlorobenzene-d5 (IS)	117	11.365	11.365	0.000	89	1538499	10.0	10.0	
96 1-Chlorohexane	91	11.365	11.365	0.000	92	377239	5.00	4.37	
98 Chlorobenzene	112	11.390	11.390	0.000	93	764957	5.00	4.98	
99 1,1,1,2-Tetrachloroethane	131	11.469	11.469	0.000	94	255614	5.00	4.93	
100 Ethylbenzene	91	11.475	11.475	0.000	99	1358949	5.00	4.84	
101 m-Xylene & p-Xylene	106	11.585	11.585	0.000	0	1024107	10.0	9.74	
102 o-Xylene	106	11.914	11.914	0.000	97	490987	5.00	4.78	
103 Styrene	104	11.926	11.926	0.000	95	838836	5.00	4.92	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
104 Bromoform	173	12.091	12.091	0.000	96	126548	5.00	5.27	
105 Isopropylbenzene	105	12.207	12.207	0.000	96	1289460	5.00	4.68	
\$ 108 4-Bromofluorobenzene (Surr)	95	12.353	12.353	0.000	88	751728	10.0	9.98	
109 1,1,2,2-Tetrachloroethane	83	12.451	12.451	0.000	93	236255	5.00	5.49	
111 Bromobenzene	156	12.475	12.475	0.000	94	298537	5.00	4.99	
110 trans-1,4-Dichloro-2-butene	53	12.475	12.475	0.000	92	297330	25.0	21.4	
112 1,2,3-Trichloropropane	110	12.499	12.499	0.000	84	58159	5.00	5.43	
113 N-Propylbenzene	91	12.536	12.536	0.000	99	1654617	5.00	4.97	
114 2-Chlorotoluene	126	12.615	12.615	0.000	96	311327	5.00	4.91	
115 1,3,5-Trimethylbenzene	105	12.670	12.670	0.000	94	1103228	5.00	4.81	
116 4-Chlorotoluene	126	12.707	12.707	0.000	98	313815	5.00	4.93	
118 tert-Butylbenzene	134	12.908	12.908	0.000	94	230814	5.00	4.64	
119 Pentachloroethane	167	12.944	12.944	0.000	90	183582	5.00	4.76	
120 1,2,4-Trimethylbenzene	105	12.950	12.950	0.000	97	1136604	5.00	4.87	
121 sec-Butylbenzene	105	13.072	13.072	0.000	95	1470031	5.00	4.86	
122 1,3-Dichlorobenzene	146	13.176	13.176	0.000	96	596697	5.00	5.02	
123 4-Isopropyltoluene	119	13.176	13.176	0.000	97	1230842	5.00	4.84	
* 124 1,4-Dichlorobenzene-d4	152	13.231	13.231	0.000	97	781864	10.0	10.0	
125 1,4-Dichlorobenzene	146	13.249	13.249	0.000	93	588128	5.00	5.03	
126 1,2,3-Trimethylbenzene	120	13.255	13.255	0.000	99	501236	5.00	4.92	
127 Benzyl chloride	126	13.322	13.322	0.000	99	83688	5.00	5.01	
129 p-Diethylbenzene	119	13.450	13.450	0.000	93	779315	5.00	4.75	
130 n-Butylbenzene	92	13.469	13.469	0.000	98	668825	5.00	5.13	
131 1,2-Dichlorobenzene	146	13.505	13.505	0.000	97	534202	5.00	5.05	
134 1,2-Dibromo-3-Chloropropane	155	14.048	14.048	0.000	83	29411	5.00	5.38	
135 1,3,5-Trichlorobenzene	180	14.170	14.170	0.000	97	441169	5.00	4.93	
136 1,2,4-Trichlorobenzene	180	14.596	14.596	0.000	94	367205	5.00	5.13	
137 Hexachlorobutadiene	225	14.676	14.676	0.000	97	197814	5.00	5.04	
138 Naphthalene	128	14.779	14.779	0.000	97	622468	5.00	4.89	
139 1,2,3-Trichlorobenzene	180	14.926	14.926	0.000	95	315574	5.00	5.29	
140 2-Methylnaphthalene	142	15.572	15.572	0.000	92	293226	5.00	3.86	

QC Flag Legend

Processing Flags

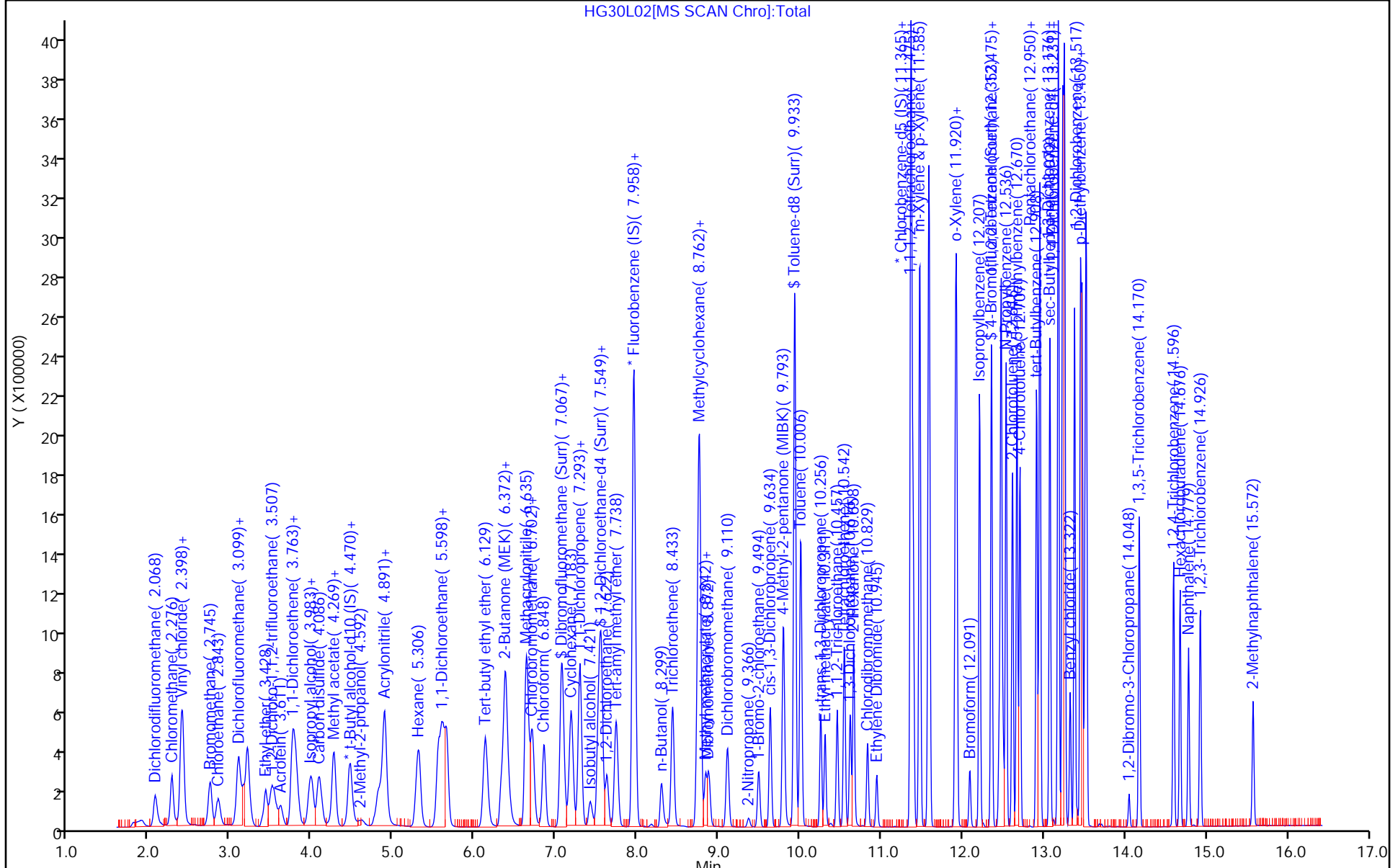
ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MSV_Q_QVOA1_00043	Amount Added: 12.50	Units: uL	
MSV_Q_QARC_00042	Amount Added: 12.50	Units: uL	
MSV_Q_QVOA6_00041	Amount Added: 12.50	Units: uL	
MSV_Q_ETBR_00003	Amount Added: 12.50	Units: uL	
MSV_Q_EE_00002	Amount Added: 12.50	Units: uL	
MSV_QGAS_826_00067	Amount Added: 12.50	Units: uL	
MSV_30_826ISS_00005	Amount Added: 5.00	Units: uL	Run Reagent



HG30L02[MS SCAN Chrom]:Total

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30L02.D
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 30-Aug-2020 18:22:30 ALS Bottle#: 4 Worklist Smp#: 4
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: LCS
 Misc. Info.: 410-0009349-004
 Operator ID: mec29284 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 30-Aug-2020 18:52:31 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1035

First Level Reviewer: campbellme Date: 30-Aug-2020 18:51:08

Compound	Amount Added	Amount Recovered	% Rec.
\$ 51 Dibromofluoromethane (Surr)	10.0	10.2	101.99
\$ 58 1,2-Dichloroethane-d4 (Surr)	10.0	10.5	105.01
\$ 82 Toluene-d8 (Surr)	10.0	10.1	101.26
\$ 108 4-Bromofluorobenzene (Surr)	10.0	9.98	99.81

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 410-39389/4
 Matrix: Water Lab File ID: HG31L01.D
 Analysis Method: 8260C LL Date Collected: _____
 Sample wt/vol: 25 (mL) Date Analyzed: 08/31/2020 18:40
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 39389 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	5.02		0.50	0.070
71-55-6	1,1,1-Trichloroethane	4.85		0.50	0.060
79-34-5	1,1,2,2-Tetrachloroethane	5.81		0.50	0.070
79-00-5	1,1,2-Trichloroethane	5.65		0.50	0.060
75-34-3	1,1-Dichloroethane	5.27		0.50	0.070
75-35-4	1,1-Dichloroethene	4.98		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	5.38		0.50	0.060
107-06-2	1,2-Dichloroethane	5.74		0.50	0.050
78-87-5	1,2-Dichloropropane	5.52		0.50	0.060
78-93-3	2-Butanone (MEK)	34.2		5.0	0.60
591-78-6	2-Hexanone	21.8		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	21.0		5.0	0.70
67-64-1	Acetone	34.4		5.0	0.90
107-13-1	Acrylonitrile	22.7		5.0	0.40
71-43-2	Benzene	4.93		0.50	0.050
74-97-5	Bromochloromethane	4.89		0.50	0.050
75-27-4	Bromodichloromethane	5.50		0.50	0.050
75-25-2	Bromoform	5.36		1.0	0.30
74-83-9	Bromomethane	4.99		0.50	0.070
75-15-0	Carbon disulfide	5.13		1.0	0.060
56-23-5	Carbon tetrachloride	4.78		0.50	0.070
108-90-7	Chlorobenzene	4.94		0.50	0.060
75-00-3	Chloroethane	4.97		0.50	0.070
67-66-3	Chloroform	5.36		0.50	0.090
74-87-3	Chloromethane	5.09		0.50	0.060
156-59-2	cis-1,2-Dichloroethene	5.25		0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	5.01		0.50	0.050
124-48-1	Dibromochloromethane	5.43		0.50	0.070
100-41-4	Ethylbenzene	4.77		0.50	0.060
1634-04-4	Methyl tert-butyl ether	4.89		0.50	0.050
75-09-2	Methylene Chloride	5.20		0.50	0.070
100-42-5	Styrene	4.90		0.50	0.050
127-18-4	Tetrachloroethene	4.71		0.50	0.060
108-88-3	Toluene	4.88		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	4.90		0.50	0.060
10061-02-6	trans-1,3-Dichloropropene	5.09		0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCS 410-39389/4
 Matrix: Water Lab File ID: HG31L01.D
 Analysis Method: 8260C LL Date Collected: _____
 Sample wt/vol: 25 (mL) Date Analyzed: 08/31/2020 18:40
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 39389 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	4.99		0.50	0.060
75-01-4	Vinyl chloride	5.00		0.50	0.10
1330-20-7	Xylenes, Total	14.5		1.0	0.15

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	104		80-120
1868-53-7	Dibromofluoromethane (Surr)	105		80-120
2037-26-5	Toluene-d8 (Surr)	100		80-120
460-00-4	4-Bromofluorobenzene (Surr)	99		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200831-9437.b\HG31L01.D
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 31-Aug-2020 18:40:30 ALS Bottle#: 3 Worklist Smp#: 4
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: LCS
 Misc. Info.: 410-0009437-004
 Operator ID: mec29284 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200831-9437.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 31-Aug-2020 19:20:16 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1022

First Level Reviewer: campbellme Date: 31-Aug-2020 19:20:16

Compound	Sig	RT (min.)	Exp RT (min.)	Diff RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
3 Dichlorodifluoromethane	85	2.062	2.075	-0.013	99	331209	5.00	4.61	M
6 Chloromethane	50	2.269	2.276	-0.007	99	436275	5.00	5.09	
7 Vinyl chloride	62	2.385	2.392	-0.007	98	383644	5.00	5.00	
8 Butadiene	39	2.398	2.404	-0.006	92	354911	5.00	4.81	
9 Bromomethane	94	2.739	2.745	-0.006	91	259630	5.00	4.99	
10 Chloroethane	64	2.843	2.849	-0.006	100	233352	5.00	4.97	
11 Dichlorofluoromethane	67	3.086	3.093	-0.007	98	460033	5.00	4.56	
13 Trichlorofluoromethane	101	3.147	3.154	-0.007	98	426992	5.00	5.37	
15 Ethyl ether	59	3.428	3.428	0.000	95	178564	5.01	4.53	
16 1,2-Dichloro-1,1,2-trifluoroethane	67	3.513	3.519	-0.006	95	312923	5.00	5.02	
17 Acrolein	56	3.605	3.611	-0.006	100	184972	37.5	23.4	
18 1,1-Dichloroethene	96	3.757	3.763	-0.006	98	222395	5.00	4.98	
19 Acetone	43	3.794	3.794	0.000	99	334171	37.5	34.4	M
20 112TCTFE	101	3.781	3.794	-0.013	80	218081	5.00	4.48	
21 Isopropyl alcohol	45	3.983	3.977	0.006	30	64606	37.5	46.5	
22 Iodomethane	142	3.964	3.977	-0.013	99	396914	5.00	4.57	
23 Ethyl bromide	108	3.995	4.001	-0.006	98	155660	4.93	3.83	
24 Carbon disulfide	76	4.080	4.086	-0.006	99	760084	5.00	5.13	
26 Methyl acetate	43	4.226	4.239	-0.013	98	118596	5.00	4.23	
27 3-Chloro-1-propene	41	4.263	4.269	-0.006	92	416518	5.00	4.59	
29 Methylene Chloride	84	4.458	4.464	-0.006	95	276647	5.00	5.20	
* 28 t-Butyl alcohol-d10 (IS)	65	4.476	4.489	-0.013	0	137678	50.0	50.0	
30 2-Methyl-2-propanol	59	4.610	4.611	-0.001	98	121328	50.0	44.5	
31 Acrylonitrile	53	4.812	4.818	-0.006	98	295847	25.0	22.7	
32 Methyl tert-butyl ether	73	4.867	4.879	-0.012	97	522333	5.00	4.89	
33 trans-1,2-Dichloroethene	96	4.885	4.897	-0.012	96	249045	5.00	4.90	
34 Hexane	57	5.305	5.312	-0.007	95	368568	5.00	4.57	
35 1,1-Dichloroethane	63	5.549	5.549	0.000	96	515657	5.00	5.27	
37 Isopropyl ether	45	5.598	5.598	0.000	95	880767	5.00	4.81	
38 2-Chloro-1,3-butadiene	53	5.653	5.659	-0.006	92	404463	5.00	4.70	
39 Tert-butyl ethyl ether	59	6.128	6.135	-0.007	98	711824	5.00	4.58	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
41 2-Butanone (MEK)	43	6.330	6.336	-0.006	100	555379	37.5	34.2	
42 cis-1,2-Dichloroethene	96	6.372	6.372	0.000	83	306114	5.00	5.25	
43 2,2-Dichloropropane	77	6.397	6.397	0.000	88	376830	5.00	4.97	
45 Propionitrile	54	6.427	6.433	-0.006	99	155897	37.5	37.4	
47 Methacrylonitrile	67	6.634	6.641	-0.007	92	518413	37.5	31.7	
48 Chlorobromomethane	128	6.702	6.708	-0.006	97	119240	5.00	4.89	
49 Tetrahydrofuran	71	6.714	6.714	0.000	86	93911	25.0	21.7	
50 Chloroform	83	6.848	6.854	-0.006	94	489864	5.00	5.36	
\$ 51 Dibromofluoromethane (Surr)	113	7.067	7.067	0.000	93	504300	10.0	10.5	
52 1,1,1-Trichloroethane	97	7.080	7.086	-0.006	99	380571	5.00	4.85	
53 Cyclohexane	56	7.183	7.189	-0.006	93	435508	5.00	4.33	
55 1,1-Dichloropropene	75	7.293	7.293	0.000	95	362595	5.00	4.98	
56 Carbon tetrachloride	117	7.293	7.299	-0.006	96	323291	5.00	4.78	
57 Isobutyl alcohol	41	7.427	7.427	0.000	93	129342	125.0	118.3	
\$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.518	7.525	-0.007	0	102052	10.0	10.4	
59 Benzene	78	7.555	7.555	0.000	98	1103353	5.00	4.93	
60 1,2-Dichloroethane	62	7.622	7.628	-0.006	97	300752	5.00	5.74	
62 Tert-amyl methyl ether	73	7.738	7.744	-0.006	97	614665	5.00	4.80	
* 65 Fluorobenzene (IS)	96	7.951	7.958	-0.007	98	2031105	10.0	10.0	
64 n-Heptane	43	7.957	7.964	-0.007	93	448591	5.00	4.86	
66 n-Butanol	56	8.299	8.299	0.000	92	228468	250.0	239.8	
67 Trichloroethene	95	8.427	8.433	-0.006	98	274000	5.00	4.99	
68 Methylcyclohexane	83	8.750	8.750	0.000	96	434478	5.00	4.44	
69 2-ethoxy-2-methyl butane	87	8.762	8.762	0.000	90	365854	5.00	4.64	
70 1,2-Dichloropropane	63	8.762	8.768	-0.006	84	312275	5.00	5.52	
71 Methyl methacrylate	69	8.841	8.835	0.006	97	126915	5.00	4.00	
72 1,4-Dioxane	88	8.866	8.854	0.012	32	31236	125.0	119.0	
73 Dibromomethane	93	8.878	8.878	0.000	97	134244	5.00	5.65	
75 Dichlorobromomethane	83	9.110	9.110	0.000	99	350114	5.00	5.50	
76 2-Nitropropane	41	9.366	9.366	0.000	98	37776	5.00	4.32	
78 2-Chloroethyl vinyl ether	63		9.457				ND	ND	
79 1-Bromo-2-chloroethane	63	9.488	9.494	-0.006	99	293480	5.00	5.24	
80 cis-1,3-Dichloropropene	75	9.634	9.634	0.000	94	392431	5.00	5.01	
81 4-Methyl-2-pentanone (MIBK)	43	9.792	9.793	-0.001	98	893099	25.0	21.0	
\$ 82 Toluene-d8 (Surr)	98	9.933	9.933	0.000	94	1979595	10.0	10.0	
83 Toluene	92	10.006	10.012	-0.006	98	670258	5.00	4.88	
85 trans-1,3-Dichloropropene	75	10.256	10.256	0.000	94	316746	5.00	5.09	
86 Ethyl methacrylate	69	10.311	10.311	0.000	90	241075	5.00	4.74	
87 1,1,2-Trichloroethane	97	10.457	10.457	0.000	91	189181	5.00	5.65	
88 Tetrachloroethene	166	10.542	10.549	-0.006	96	275323	5.00	4.71	
89 1,3-Dichloropropane	76	10.615	10.616	-0.001	92	332436	5.00	5.41	
91 2-Hexanone	43	10.658	10.658	0.000	98	624235	25.0	21.8	
93 Chlorodibromomethane	129	10.829	10.829	0.000	91	219275	5.00	5.43	
94 Ethylene Dibromide	107	10.945	10.945	0.000	98	171275	5.00	5.38	
* 97 Chlorobenzene-d5 (IS)	117	11.365	11.365	0.000	88	1468188	10.0	10.0	
96 1-Chlorohexane	91	11.365	11.365	0.000	94	345984	5.00	4.20	
98 Chlorobenzene	112	11.390	11.390	0.000	93	723041	5.00	4.94	
99 1,1,1,2-Tetrachloroethane	131	11.469	11.469	0.000	94	248210	5.00	5.02	
100 Ethylbenzene	91	11.475	11.475	0.000	99	1276287	5.00	4.77	
101 m-Xylene & p-Xylene	106	11.585	11.585	0.000	0	976960	10.0	9.74	
102 o-Xylene	106	11.914	11.914	0.000	98	464513	5.00	4.74	
103 Styrene	104	11.926	11.926	0.000	95	797838	5.00	4.90	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
104 Bromoform	173	12.085	12.085	0.000	96	122912	5.00	5.36	
105 Isopropylbenzene	105	12.207	12.207	0.000	96	1205461	5.00	4.58	
\$ 108 4-Bromofluorobenzene (Surr)	95	12.353	12.353	0.000	88	713850	10.0	9.93	
109 1,1,2,2-Tetrachloroethane	83	12.450	12.451	-0.001	93	237628	5.00	5.81	
111 Bromobenzene	156	12.469	12.469	0.000	96	294698	5.00	5.18	
110 trans-1,4-Dichloro-2-butene	53	12.475	12.475	0.000	87	305210	25.0	21.8	
112 1,2,3-Trichloropropane	110	12.499	12.499	0.000	84	58118	5.00	5.70	
113 N-Propylbenzene	91	12.536	12.536	0.000	99	1566261	5.00	4.95	
114 2-Chlorotoluene	126	12.615	12.615	0.000	96	297128	5.00	4.92	
115 1,3,5-Trimethylbenzene	105	12.670	12.664	0.006	94	1055291	5.00	4.84	
116 4-Chlorotoluene	126	12.706	12.707	-0.001	98	305096	5.00	5.03	
118 tert-Butylbenzene	134	12.908	12.908	0.000	93	215249	5.00	4.55	
119 Pentachloroethane	167	12.944	12.944	0.000	92	177957	5.00	4.85	
120 1,2,4-Trimethylbenzene	105	12.950	12.950	0.000	98	1087658	5.00	4.89	
121 sec-Butylbenzene	105	13.072	13.072	0.000	95	1388920	5.00	4.83	
122 1,3-Dichlorobenzene	146	13.176	13.176	0.000	96	584002	5.00	5.16	
123 4-Isopropyltoluene	119	13.176	13.176	0.000	97	1169388	5.00	4.83	
* 124 1,4-Dichlorobenzene-d4	152	13.231	13.231	0.000	96	743961	10.0	10.0	
125 1,4-Dichlorobenzene	146	13.249	13.249	0.000	93	575762	5.00	5.17	
126 1,2,3-Trimethylbenzene	120	13.255	13.255	0.000	99	480225	5.00	4.96	
127 Benzyl chloride	126	13.322	13.322	0.000	99	84319	5.00	5.31	
129 p-Diethylbenzene	119	13.450	13.450	0.000	94	758160	5.00	4.85	
130 n-Butylbenzene	92	13.469	13.469	0.000	98	646139	5.00	5.21	
131 1,2-Dichlorobenzene	146	13.505	13.505	0.000	97	521609	5.00	5.18	
134 1,2-Dibromo-3-Chloropropane	155	14.048	14.048	0.000	80	29983	5.00	5.76	
135 1,3,5-Trichlorobenzene	180	14.170	14.170	0.000	97	443418	5.00	5.21	
136 1,2,4-Trichlorobenzene	180	14.596	14.597	0.000	94	356146	5.00	5.23	
137 Hexachlorobutadiene	225	14.676	14.676	0.000	96	194027	5.00	5.19	
138 Naphthalene	128	14.779	14.779	0.000	98	598467	5.00	4.95	
139 1,2,3-Trichlorobenzene	180	14.919	14.920	-0.001	95	314497	5.00	5.54	
140 2-Methylnaphthalene	142	15.572	15.572	0.000	92	311363	5.00	4.31	

QC Flag Legend

Processing Flags

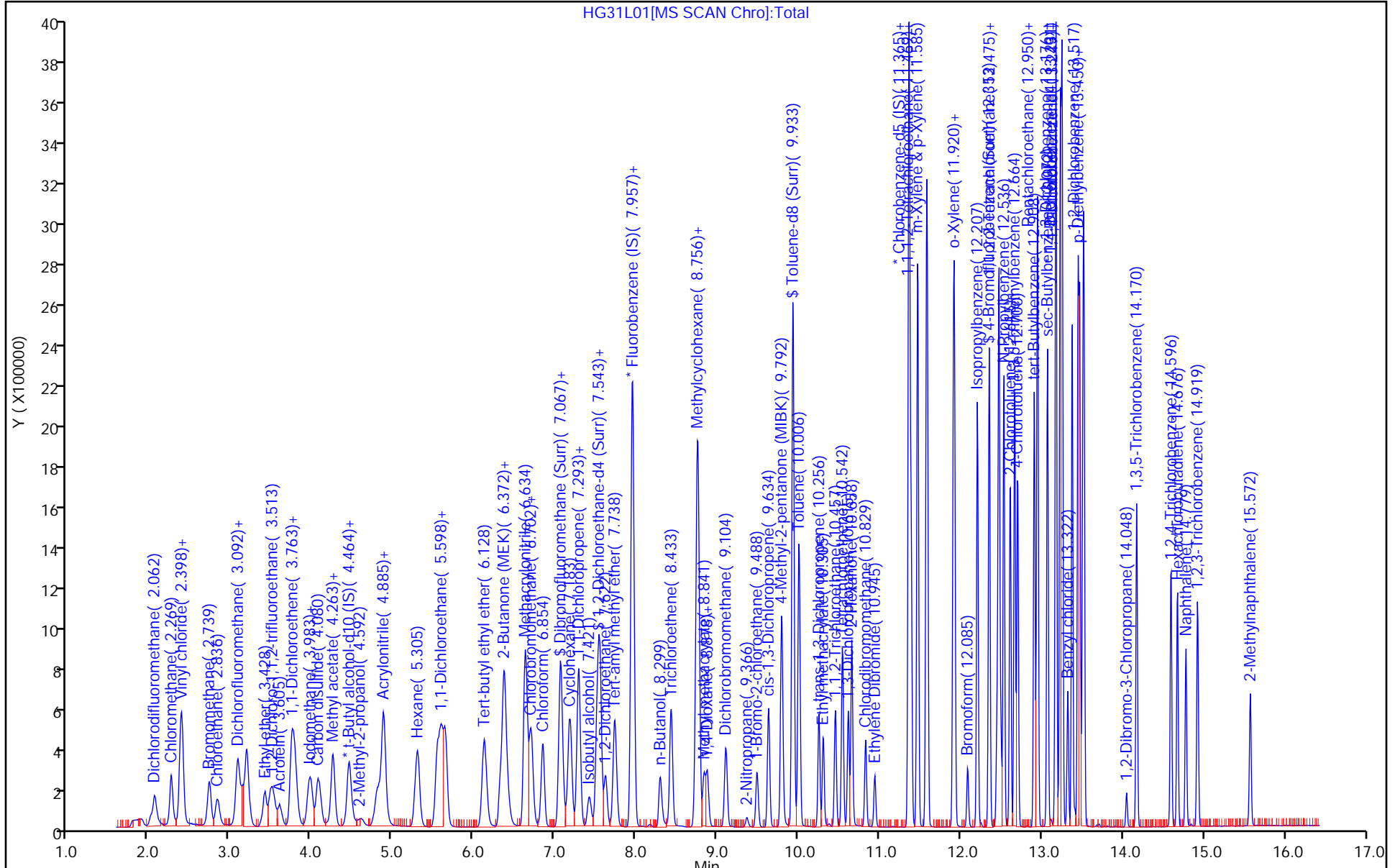
ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MSV_Q_QVOA1_00043	Amount Added: 12.50	Units: uL	
MSV_Q_QARC_00042	Amount Added: 12.50	Units: uL	
MSV_Q_QVOA6_00041	Amount Added: 12.50	Units: uL	
MSV_Q_ETBR_00003	Amount Added: 12.50	Units: uL	
MSV_Q_EE_00002	Amount Added: 12.50	Units: uL	
MSV_QGAS_826_00068	Amount Added: 12.50	Units: uL	
MSV_30_826ISS_00005	Amount Added: 5.00	Units: uL	Run Reagent



HG31L01[MS SCAN Chrom]:Total

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200831-9437.b\HG31L01.D
 Lims ID: LCS
 Client ID:
 Sample Type: LCS
 Inject. Date: 31-Aug-2020 18:40:30 ALS Bottle#: 3 Worklist Smp#: 4
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: LCS
 Misc. Info.: 410-0009437-004
 Operator ID: mec29284 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200831-9437.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 31-Aug-2020 19:20:16 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1022

First Level Reviewer: campbellme Date: 31-Aug-2020 19:20:16

Compound	Amount Added	Amount Recovered	% Rec.
\$ 51 Dibromofluoromethane (Surr)	10.0	10.5	105.02
\$ 58 1,2-Dichloroethane-d4 (Surr)	10.0	10.4	104.33
\$ 82 Toluene-d8 (Surr)	10.0	10.0	100.48
\$ 108 4-Bromofluorobenzene (Surr)	10.0	9.93	99.32

Eurofins Lancaster Laboratories Env, LLC

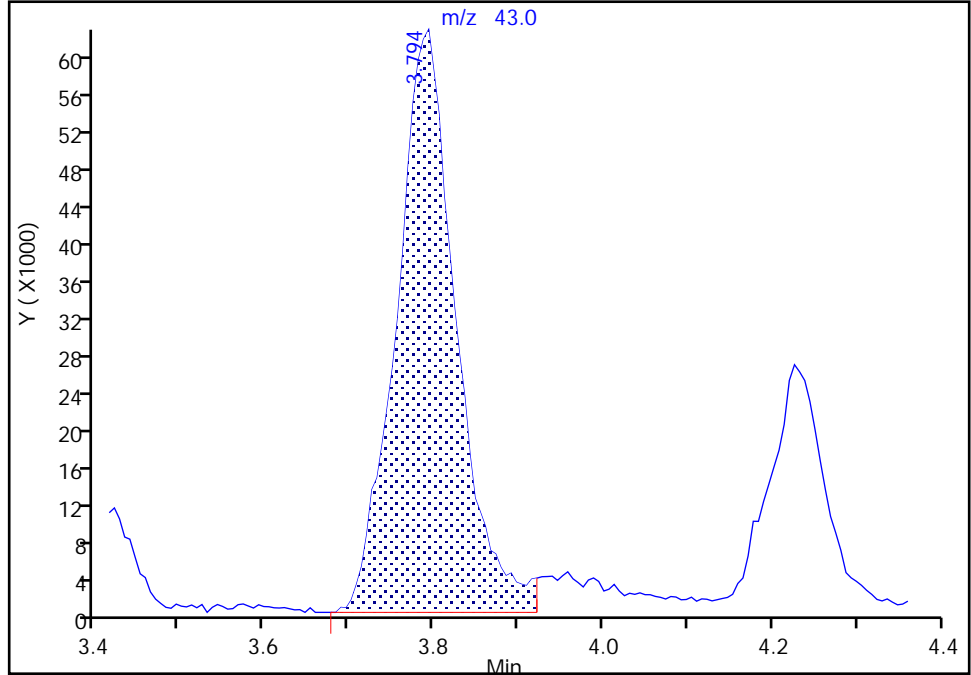
Data File: \\chromfs\Lancaster\ChromData\19094\20200831-9437.b\HG31L01.D
Injection Date: 31-Aug-2020 18:40:30 Instrument ID: 19094
Lims ID: LCS
Client ID:
Operator ID: mec29284 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

19 Acetone, CAS: 67-64-1

Signal: 1

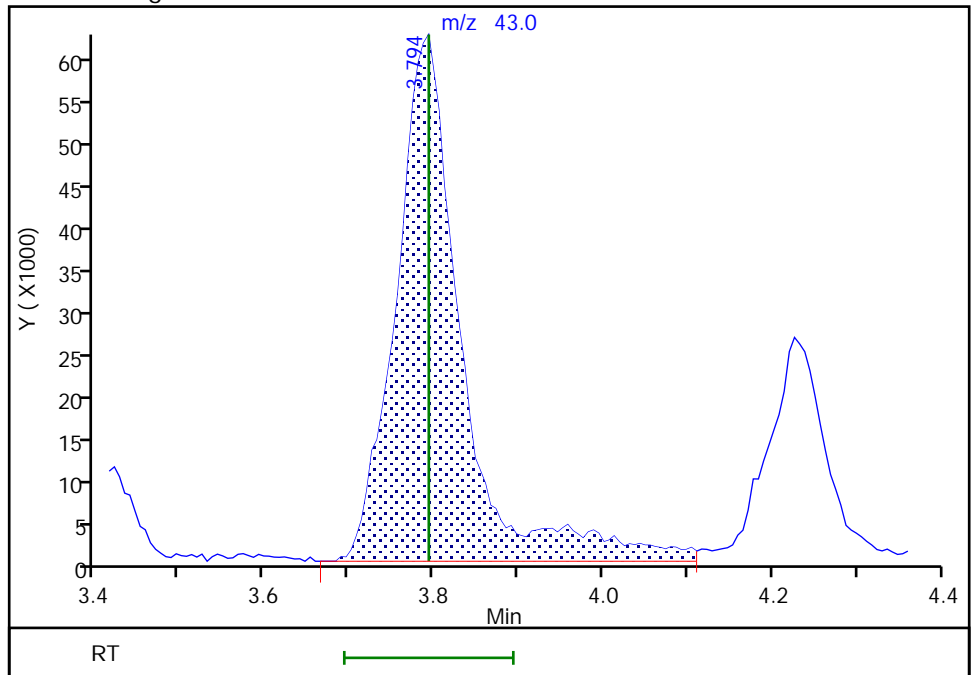
RT: 3.79
Area: 305509
Amount: 31.424930
Amount Units: ug/l

Processing Integration Results



RT: 3.79
Area: 334171
Amount: 34.373129
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 31-Aug-2020 19:19:48
Audit Action: Assigned New Baseline

Audit Reason: Incomplete Integration

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCSD 410-39389/5
 Matrix: Water Lab File ID: HG31L02.D
 Analysis Method: 8260C LL Date Collected: _____
 Sample wt/vol: 25 (mL) Date Analyzed: 08/31/2020 19:02
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 39389 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	4.98		0.50	0.070
71-55-6	1,1,1-Trichloroethane	4.79		0.50	0.060
79-34-5	1,1,2,2-Tetrachloroethane	5.63		0.50	0.070
79-00-5	1,1,2-Trichloroethane	5.64		0.50	0.060
75-34-3	1,1-Dichloroethane	5.18		0.50	0.070
75-35-4	1,1-Dichloroethene	4.86		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	5.47		0.50	0.060
107-06-2	1,2-Dichloroethane	5.56		0.50	0.050
78-87-5	1,2-Dichloropropane	5.27		0.50	0.060
78-93-3	2-Butanone (MEK)	33.7		5.0	0.60
591-78-6	2-Hexanone	21.0		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	20.3		5.0	0.70
67-64-1	Acetone	33.9		5.0	0.90
107-13-1	Acrylonitrile	21.9		5.0	0.40
71-43-2	Benzene	4.83		0.50	0.050
74-97-5	Bromochloromethane	4.77		0.50	0.050
75-27-4	Bromodichloromethane	5.37		0.50	0.050
75-25-2	Bromoform	5.27		1.0	0.30
74-83-9	Bromomethane	4.85		0.50	0.070
75-15-0	Carbon disulfide	5.01		1.0	0.060
56-23-5	Carbon tetrachloride	4.66		0.50	0.070
108-90-7	Chlorobenzene	4.98		0.50	0.060
75-00-3	Chloroethane	4.82		0.50	0.070
67-66-3	Chloroform	5.26		0.50	0.090
74-87-3	Chloromethane	4.90		0.50	0.060
156-59-2	cis-1,2-Dichloroethene	5.20		0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	4.89		0.50	0.050
124-48-1	Dibromochloromethane	5.44		0.50	0.070
100-41-4	Ethylbenzene	4.77		0.50	0.060
1634-04-4	Methyl tert-butyl ether	4.80		0.50	0.050
75-09-2	Methylene Chloride	4.94		0.50	0.070
100-42-5	Styrene	4.88		0.50	0.050
127-18-4	Tetrachloroethene	4.66		0.50	0.060
108-88-3	Toluene	4.85		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	4.85		0.50	0.060
10061-02-6	trans-1,3-Dichloropropene	5.05		0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Client Sample ID: _____ Lab Sample ID: LCSD 410-39389/5
 Matrix: Water Lab File ID: HG31L02.D
 Analysis Method: 8260C LL Date Collected: _____
 Sample wt/vol: 25 (mL) Date Analyzed: 08/31/2020 19:02
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 39389 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	4.90		0.50	0.060
75-01-4	Vinyl chloride	4.86		0.50	0.10
1330-20-7	Xylenes, Total	14.2		1.0	0.15

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		80-120
1868-53-7	Dibromofluoromethane (Surr)	105		80-120
2037-26-5	Toluene-d8 (Surr)	101		80-120
460-00-4	4-Bromofluorobenzene (Surr)	100		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200831-9437.b\HG31L02.D
 Lims ID: LCSD
 Client ID:
 Sample Type: LCSD
 Inject. Date: 31-Aug-2020 19:02:30 ALS Bottle#: 4 Worklist Smp#: 5
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: LCSD
 Misc. Info.: 410-0009437-005
 Operator ID: mec29284 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200831-9437.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 31-Aug-2020 19:31:08 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1022

First Level Reviewer: campbellme Date: 31-Aug-2020 19:31:08

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
3 Dichlorodifluoromethane	85	2.062	2.075	-0.013	99	332818	5.00	4.47	M
6 Chloromethane	50	2.270	2.276	-0.006	99	434474	5.00	4.90	
7 Vinyl chloride	62	2.379	2.392	-0.013	98	385771	5.00	4.86	
8 Butadiene	39	2.398	2.404	-0.006	93	352048	5.00	4.61	
9 Bromomethane	94	2.739	2.745	-0.006	92	260886	5.00	4.85	
10 Chloroethane	64	2.836	2.849	-0.013	100	234418	5.00	4.82	
11 Dichlorofluoromethane	67	3.080	3.093	-0.013	97	463942	5.00	4.45	
13 Trichlorofluoromethane	101	3.141	3.154	-0.013	97	419997	5.00	5.10	
15 Ethyl ether	59	3.422	3.428	-0.006	94	183175	5.01	4.49	
16 1,2-Dichloro-1,1,2-trifluoroetha	67	3.501	3.519	-0.018	96	313391	5.00	4.85	
17 Acrolein	56	3.611	3.611	0.000	99	180920	37.5	22.0	
18 1,1-Dichloroethene	96	3.751	3.763	-0.012	97	224773	5.00	4.86	
19 Acetone	43	3.794	3.794	0.000	99	343171	37.5	33.9	M
20 112TCTFE	101	3.794	3.794	0.000	80	219607	5.00	4.35	
21 Isopropyl alcohol	45	3.977	3.977	-0.001	32	60045	37.5	41.9	
22 Iodomethane	142	3.964	3.977	-0.013	99	400224	5.00	4.45	
23 Ethyl bromide	108	3.995	4.001	-0.006	98	155945	4.93	3.71	
24 Carbon disulfide	76	4.074	4.086	-0.012	99	768262	5.00	5.01	
26 Methyl acetate	43	4.233	4.239	-0.006	99	125668	5.00	4.30	
27 3-Chloro-1-propene	41	4.263	4.269	-0.006	92	431669	5.00	4.59	
29 Methylene Chloride	84	4.458	4.464	-0.006	96	271978	5.00	4.94	
* 28 t-Butyl alcohol-d10 (IS)	65	4.476	4.489	-0.013	0	143264	50.0	50.0	
30 2-Methyl-2-propanol	59	4.611	4.611	0.000	99	133314	50.0	47.0	
31 Acrylonitrile	53	4.800	4.818	-0.018	99	297889	25.0	21.9	
32 Methyl tert-butyl ether	73	4.873	4.879	-0.006	97	530432	5.00	4.80	
33 trans-1,2-Dichloroethene	96	4.891	4.897	-0.006	97	255333	5.00	4.85	
34 Hexane	57	5.299	5.312	-0.013	96	376048	5.00	4.50	
35 1,1-Dichloroethane	63	5.543	5.549	-0.006	96	524888	5.00	5.18	
37 Isopropyl ether	45	5.598	5.598	0.000	95	902821	5.00	4.76	
38 2-Chloro-1,3-butadiene	53	5.647	5.659	-0.012	92	409933	5.00	4.60	
39 Tert-butyl ethyl ether	59	6.122	6.135	-0.013	98	726212	5.00	4.51	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
41 2-Butanone (MEK)	43	6.330	6.336	-0.006	100	570372	37.5	33.7	
42 cis-1,2-Dichloroethene	96	6.372	6.372	0.000	83	313826	5.00	5.20	
43 2,2-Dichloropropane	77	6.385	6.397	-0.012	91	378598	5.00	4.82	
45 Propionitrile	54	6.421	6.433	-0.012	99	159649	37.5	36.8	
47 Methacrylonitrile	67	6.635	6.641	-0.006	93	525897	37.5	30.9	
48 Chlorobromomethane	128	6.702	6.708	-0.006	98	120527	5.00	4.77	
49 Tetrahydrofuran	71	6.714	6.714	0.000	85	94283	25.0	21.0	
50 Chloroform	83	6.848	6.854	-0.006	94	497629	5.00	5.26	
\$ 51 Dibromofluoromethane (Surr)	113	7.061	7.067	-0.006	93	522657	10.0	10.5	
52 1,1,1-Trichloroethane	97	7.080	7.086	-0.006	99	388830	5.00	4.79	
53 Cyclohexane	56	7.183	7.189	-0.006	93	449718	5.00	4.32	
55 1,1-Dichloropropene	75	7.293	7.293	0.000	95	366415	5.00	4.86	
56 Carbon tetrachloride	117	7.293	7.299	-0.006	96	325982	5.00	4.66	
57 Isobutyl alcohol	41	7.421	7.427	-0.006	94	132561	125.0	116.6	
\$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.512	7.525	-0.013	0	103734	10.0	10.2	
59 Benzene	78	7.549	7.555	-0.006	98	1119224	5.00	4.83	
60 1,2-Dichloroethane	62	7.628	7.628	0.000	97	301371	5.00	5.56	
62 Tert-amyl methyl ether	73	7.738	7.744	-0.006	97	621795	5.00	4.69	
* 65 Fluorobenzene (IS)	96	7.951	7.958	-0.007	98	2102420	10.0	10.0	
64 n-Heptane	43	7.957	7.964	-0.007	92	448439	5.00	4.69	
66 n-Butanol	56	8.293	8.299	-0.006	92	202419	250.0	204.1	
67 Trichloroethene	95	8.427	8.433	-0.006	98	278124	5.00	4.90	
68 Methylcyclohexane	83	8.744	8.750	-0.006	97	446513	5.00	4.41	
69 2-ethoxy-2-methyl butane	87	8.768	8.762	0.006	90	381466	5.00	4.68	
70 1,2-Dichloropropane	63	8.762	8.768	-0.006	82	308613	5.00	5.27	
71 Methyl methacrylate	69	8.835	8.835	0.000	92	129458	5.00	3.92	
72 1,4-Dioxane	88	8.854	8.854	0.000	34	28948	125.0	106.0	
73 Dibromomethane	93	8.878	8.878	0.000	96	136172	5.00	5.54	
75 Dichlorobromomethane	83	9.104	9.110	-0.006	99	353860	5.00	5.37	
76 2-Nitropropane	41	9.372	9.366	0.006	96	37671	5.00	4.14	
78 2-Chloroethyl vinyl ether	63		9.457				ND	ND	
79 1-Bromo-2-chloroethane	63	9.488	9.494	-0.006	99	300602	5.00	5.18	
80 cis-1,3-Dichloropropene	75	9.634	9.634	0.000	95	396230	5.00	4.89	
81 4-Methyl-2-pentanone (MIBK)	43	9.792	9.793	-0.001	98	897818	25.0	20.3	
\$ 82 Toluene-d8 (Surr)	98	9.933	9.933	0.000	94	2040302	10.0	10.1	
83 Toluene	92	10.006	10.012	-0.006	98	682342	5.00	4.85	
85 trans-1,3-Dichloropropene	75	10.256	10.256	0.000	95	321908	5.00	5.05	
86 Ethyl methacrylate	69	10.305	10.311	-0.006	91	250501	5.00	4.80	
87 1,1,2-Trichloroethane	97	10.457	10.457	0.000	91	193668	5.00	5.64	
88 Tetrachloroethene	166	10.542	10.549	-0.006	96	278758	5.00	4.66	
89 1,3-Dichloropropane	76	10.615	10.616	-0.001	92	334345	5.00	5.31	
91 2-Hexanone	43	10.658	10.658	0.000	98	626736	25.0	21.0	
93 Chlorodibromomethane	129	10.829	10.829	0.000	90	225053	5.00	5.44	
94 Ethylene Dibromide	107	10.945	10.945	0.000	98	178337	5.00	5.47	
* 97 Chlorobenzene-d5 (IS)	117	11.365	11.365	0.000	88	1503903	10.0	10.0	
96 1-Chlorohexane	91	11.365	11.365	0.000	95	354030	5.00	4.19	
98 Chlorobenzene	112	11.390	11.390	0.000	93	747349	5.00	4.98	
99 1,1,1,2-Tetrachloroethane	131	11.469	11.469	0.000	95	252434	5.00	4.98	
100 Ethylbenzene	91	11.475	11.475	0.000	99	1307249	5.00	4.77	
101 m-Xylene & p-Xylene	106	11.585	11.585	0.000	0	981357	10.0	9.55	
102 o-Xylene	106	11.914	11.914	0.000	98	470643	5.00	4.69	
103 Styrene	104	11.926	11.926	0.000	95	814021	5.00	4.88	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
104 Bromoform	173	12.085	12.085	0.000	95	123601	5.00	5.27	
105 Isopropylbenzene	105	12.207	12.207	0.000	97	1229994	5.00	4.57	
\$ 108 4-Bromofluorobenzene (Surr)	95	12.353	12.353	0.000	87	735460	10.0	9.99	
109 1,1,2,2-Tetrachloroethane	83	12.450	12.451	-0.001	93	237204	5.00	5.63	
111 Bromobenzene	156	12.469	12.469	0.000	94	296732	5.00	5.07	
110 trans-1,4-Dichloro-2-butene	53	12.475	12.475	0.000	86	304580	25.0	20.9	
112 1,2,3-Trichloropropane	110	12.499	12.499	0.000	84	60879	5.00	5.81	
113 N-Propylbenzene	91	12.536	12.536	0.000	99	1594736	5.00	4.90	
114 2-Chlorotoluene	126	12.615	12.615	0.000	96	299582	5.00	4.82	
115 1,3,5-Trimethylbenzene	105	12.664	12.664	0.000	94	1071967	5.00	4.78	
116 4-Chlorotoluene	126	12.707	12.707	0.000	98	310770	5.00	4.98	
118 tert-Butylbenzene	134	12.908	12.908	0.000	94	215172	5.00	4.42	
119 Pentachloroethane	167	12.944	12.944	0.000	89	181781	5.00	4.81	
120 1,2,4-Trimethylbenzene	105	12.950	12.950	0.000	98	1104921	5.00	4.83	
121 sec-Butylbenzene	105	13.072	13.072	0.000	95	1400763	5.00	4.73	
122 1,3-Dichlorobenzene	146	13.176	13.176	0.000	96	585741	5.00	5.03	
123 4-Isopropyltoluene	119	13.176	13.176	0.000	97	1181831	5.00	4.74	
* 124 1,4-Dichlorobenzene-d4	152	13.231	13.231	0.000	98	765517	10.0	10.0	
125 1,4-Dichlorobenzene	146	13.249	13.249	0.000	92	585954	5.00	5.11	
126 1,2,3-Trimethylbenzene	120	13.255	13.255	0.000	99	484691	5.00	4.86	
127 Benzyl chloride	126	13.322	13.322	0.000	99	84100	5.00	5.15	
129 p-Diethylbenzene	119	13.450	13.450	0.000	95	755753	5.00	4.70	
130 n-Butylbenzene	92	13.469	13.469	0.000	98	651015	5.00	5.10	
131 1,2-Dichlorobenzene	146	13.505	13.505	0.000	97	532801	5.00	5.14	
134 1,2-Dibromo-3-Chloropropane	155	14.048	14.048	0.000	82	28517	5.00	5.33	
135 1,3,5-Trichlorobenzene	180	14.170	14.170	0.000	97	441330	5.00	5.04	
136 1,2,4-Trichlorobenzene	180	14.596	14.597	0.000	94	362538	5.00	5.18	
137 Hexachlorobutadiene	225	14.676	14.676	0.000	97	191385	5.00	4.98	
138 Naphthalene	128	14.779	14.779	0.000	97	610033	5.00	4.90	
139 1,2,3-Trichlorobenzene	180	14.920	14.920	0.000	95	314395	5.00	5.38	
140 2-Methylnaphthalene	142	15.572	15.572	0.000	92	287360	5.00	3.87	

QC Flag Legend

Processing Flags

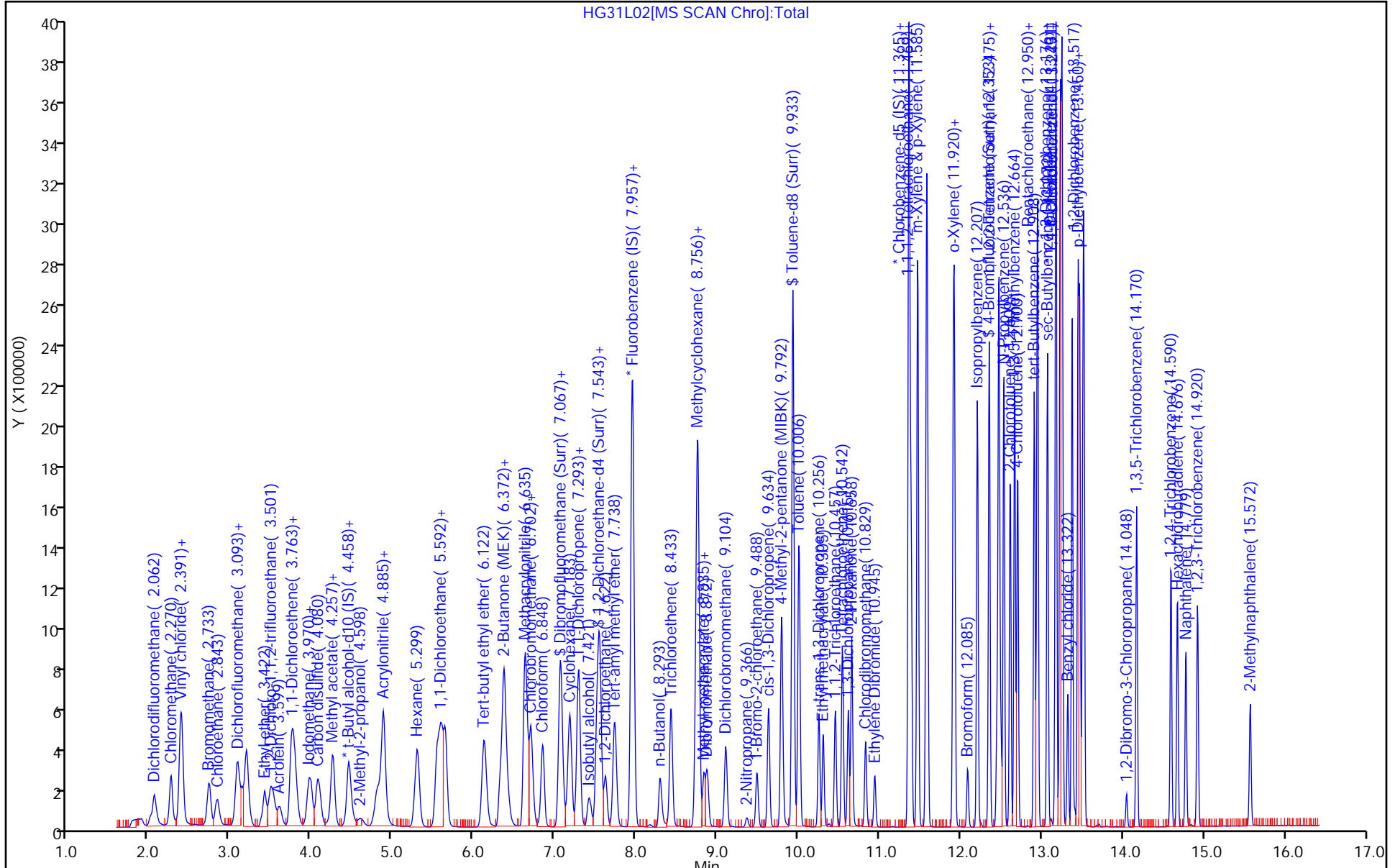
ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MSV_Q_QVOA1_00043	Amount Added: 12.50	Units: uL	
MSV_Q_QARC_00042	Amount Added: 12.50	Units: uL	
MSV_Q_QVOA6_00041	Amount Added: 12.50	Units: uL	
MSV_Q_ETBR_00003	Amount Added: 12.50	Units: uL	
MSV_Q_EE_00002	Amount Added: 12.50	Units: uL	
MSV_QGAS_826_00068	Amount Added: 12.50	Units: uL	
MSV_30_826ISS_00005	Amount Added: 5.00	Units: uL	Run Reagent



HG31L02[MS SCAN Chrom]:Total

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200831-9437.b\HG31L02.D
 Lims ID: LCSD
 Client ID:
 Sample Type: LCSD
 Inject. Date: 31-Aug-2020 19:02:30 ALS Bottle#: 4 Worklist Smp#: 5
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: LCSD
 Misc. Info.: 410-0009437-005
 Operator ID: mec29284 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200831-9437.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 31-Aug-2020 19:31:08 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1022

First Level Reviewer: campbellme Date: 31-Aug-2020 19:31:08

Compound	Amount Added	Amount Recovered	% Rec.
\$ 51 Dibromofluoromethane (Surr)	10.0	10.5	105.15
\$ 58 1,2-Dichloroethane-d4 (Surr)	10.0	10.2	102.45
\$ 82 Toluene-d8 (Surr)	10.0	10.1	101.10
\$ 108 4-Bromofluorobenzene (Surr)	10.0	9.99	99.89

Eurofins Lancaster Laboratories Env, LLC

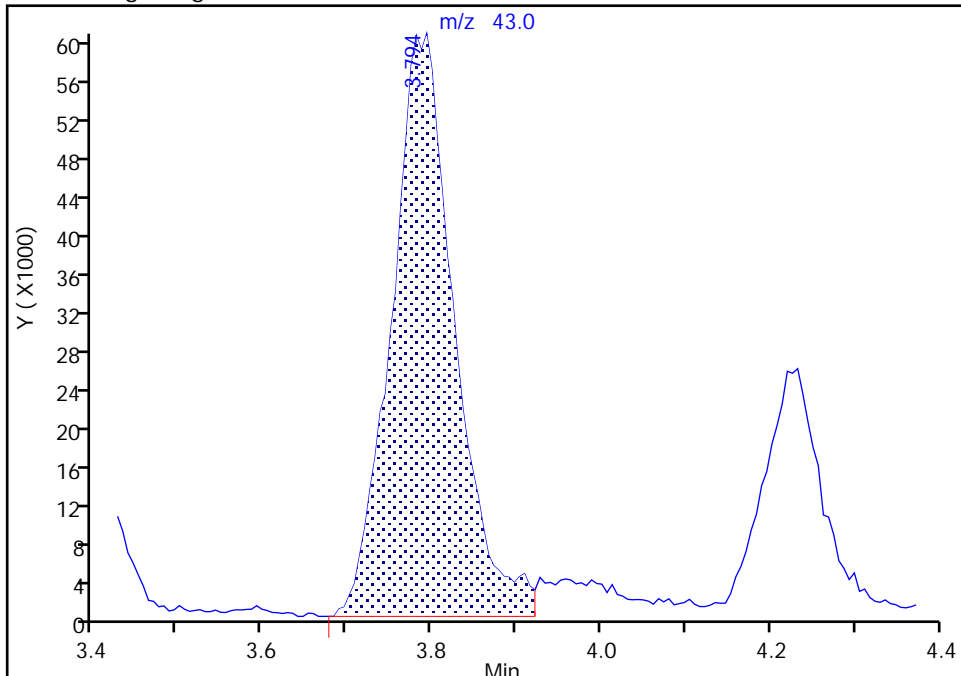
Data File: \\chromfs\Lancaster\ChromData\19094\20200831-9437.b\HG31L02.D
Injection Date: 31-Aug-2020 19:02:30 Instrument ID: 19094
Lims ID: LCSD
Client ID:
Operator ID: mec29284 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

19 Acetone, CAS: 67-64-1

Signal: 1

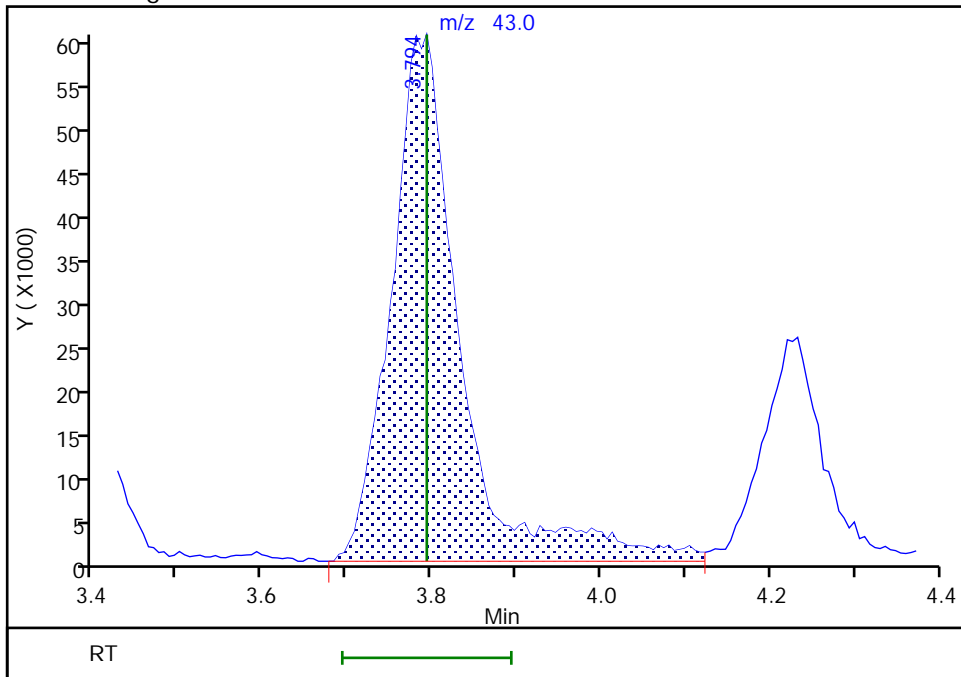
RT: 3.79
Area: 313705
Amount: 31.009818
Amount Units: ug/l

Processing Integration Results



RT: 3.79
Area: 343171
Amount: 33.922540
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 31-Aug-2020 19:30:35
Audit Action: Assigned New Baseline

Audit Reason: Incomplete Integration

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-15-0/1-0 MS MS Lab Sample ID: 410-11876-6 MS
 Matrix: Water Lab File ID: HG30S07.D
 Analysis Method: 8260C LL Date Collected: 08/25/2020 11:25
 Sample wt/vol: 25 (mL) Date Analyzed: 08/30/2020 21:41
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 38982 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	5.53		0.50	0.070
71-55-6	1,1,1-Trichloroethane	5.91		0.50	0.060
79-34-5	1,1,2,2-Tetrachloroethane	6.05		0.50	0.070
79-00-5	1,1,2-Trichloroethane	6.21		0.50	0.060
75-34-3	1,1-Dichloroethane	6.13		0.50	0.070
75-35-4	1,1-Dichloroethene	6.36		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	5.99		0.50	0.060
107-06-2	1,2-Dichloroethane	6.34		0.50	0.050
78-87-5	1,2-Dichloropropane	6.06		0.50	0.060
78-93-3	2-Butanone (MEK)	33.7		5.0	0.60
591-78-6	2-Hexanone	21.0		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	20.4		5.0	0.70
67-64-1	Acetone	33.7		5.0	0.90
107-13-1	Acrylonitrile	21.6		5.0	0.40
71-43-2	Benzene	5.76		0.50	0.050
74-97-5	Bromochloromethane	5.39		0.50	0.050
75-27-4	Bromodichloromethane	6.02		0.50	0.050
75-25-2	Bromoform	5.82		1.0	0.30
74-83-9	Bromomethane	5.93		0.50	0.070
75-15-0	Carbon disulfide	6.57		1.0	0.060
56-23-5	Carbon tetrachloride	5.97		0.50	0.070
108-90-7	Chlorobenzene	5.71		0.50	0.060
75-00-3	Chloroethane	6.00		0.50	0.070
67-66-3	Chloroform	6.32		0.50	0.090
74-87-3	Chloromethane	7.89		0.50	0.060
156-59-2	cis-1,2-Dichloroethene	6.90		0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	5.49		0.50	0.050
124-48-1	Dibromochloromethane	5.97		0.50	0.070
100-41-4	Ethylbenzene	5.57		0.50	0.060
1634-04-4	Methyl tert-butyl ether	5.33		0.50	0.050
75-09-2	Methylene Chloride	5.98		0.50	0.070
100-42-5	Styrene	5.49		0.50	0.050
127-18-4	Tetrachloroethene	8.66		0.50	0.060
108-88-3	Toluene	5.68		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	5.89		0.50	0.060
10061-02-6	trans-1,3-Dichloropropene	5.66		0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-15-0/1-0 MS MS Lab Sample ID: 410-11876-6 MS
 Matrix: Water Lab File ID: HG30S07.D
 Analysis Method: 8260C LL Date Collected: 08/25/2020 11:25
 Sample wt/vol: 25 (mL) Date Analyzed: 08/30/2020 21:41
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 38982 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	6.89		0.50	0.060
75-01-4	Vinyl chloride	6.30		0.50	0.10
1330-20-7	Xylenes, Total	16.6		1.0	0.15

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	109		80-120
1868-53-7	Dibromofluoromethane (Surr)	106		80-120
2037-26-5	Toluene-d8 (Surr)	100		80-120
460-00-4	4-Bromofluorobenzene (Surr)	99		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S07.D
 Lims ID: 410-11876-A-6 MS
 Client ID: HD-COD-SW-15-0/1-0 MS
 Sample Type: MS
 Inject. Date: 30-Aug-2020 21:41:30 ALS Bottle#: 13 Worklist Smp#: 14
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: 410-11876-A-6 MS
 Misc. Info.: 410-0009349-014
 Operator ID: mec29284 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 31-Aug-2020 13:23:49 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1008

First Level Reviewer: virayd Date: 31-Aug-2020 13:11:53

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
3 Dichlorodifluoromethane	85	2.069	2.068	0.001	99	343606	5.00	5.54	
6 Chloromethane	50	2.270	2.276	-0.006	99	583286	5.00	7.89	
7 Vinyl chloride	62	2.386	2.385	0.001	98	417225	5.00	6.30	
8 Butadiene	39	2.404	2.404	0.000	93	398408	5.00	6.25	
9 Bromomethane	94	2.745	2.745	0.000	91	266276	5.00	5.93	
10 Chloroethane	64	2.837	2.837	0.000	100	242960	5.00	6.00	
11 Dichlorofluoromethane	67	3.087	3.087	0.000	97	485106	5.00	5.58	
13 Trichlorofluoromethane	101	3.148	3.154	-0.006	98	468198	5.00	6.82	
15 Ethyl ether	59	3.428	3.422	0.006	95	174993	5.01	5.14	
16 1,2-Dichloro-1,1,2-trifluoroethane	67	3.513	3.513	0.000	96	341169	5.00	6.34	
17 Acrolein	56	3.617	3.611	0.006	98	176139	37.5	22.7	
18 1,1-Dichloroethene	96	3.757	3.757	0.000	97	245241	5.00	6.36	
19 Acetone	43	3.794	3.788	0.006	99	321529	37.5	33.7	M
20 112TCTFE	101	3.782	3.788	-0.006	91	248836	5.00	5.92	
21 Isopropyl alcohol	45	3.964	3.964	0.000	29	52873	37.5	44.2	
22 Iodomethane	142	3.964	3.971	-0.007	99	396216	5.00	5.29	
23 Ethyl bromide	108	4.001	4.001	0.000	99	159686	4.94	4.55	
24 Carbon disulfide	76	4.080	4.086	-0.006	99	840532	5.00	6.57	
26 Methyl acetate	43	4.227	4.233	-0.006	98	112672	5.00	4.09	
27 3-Chloro-1-propene	41	4.263	4.263	0.000	92	424182	5.00	5.41	
29 Methylene Chloride	84	4.458	4.464	-0.006	95	274370	5.00	5.98	
* 28 t-Butyl alcohol-d10 (IS)	65	4.495	4.477	0.019	0	135130	50.0	50.0	
30 2-Methyl-2-propanol	59	4.611	4.605	0.006	98	107691	50.0	40.2	
31 Acrylonitrile	53	4.806	4.806	0.000	99	276489	25.0	21.6	
32 Methyl tert-butyl ether	73	4.867	4.873	-0.006	97	491019	5.00	5.33	
33 trans-1,2-Dichloroethene	96	4.885	4.891	-0.006	97	258556	5.00	5.89	
34 Hexane	57	5.306	5.306	0.000	95	420672	5.00	6.04	
35 1,1-Dichloroethane	63	5.543	5.549	-0.006	96	517403	5.00	6.13	
37 Isopropyl ether	45	5.598	5.598	0.000	95	831292	5.00	5.26	
38 2-Chloro-1,3-butadiene	53	5.653	5.653	0.000	92	434520	5.00	5.86	
39 Tert-butyl ethyl ether	59	6.129	6.129	0.000	98	668653	5.00	4.99	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
41 2-Butanone (MEK)	43	6.330	6.330	0.000	100	537132	37.5	33.7	
42 cis-1,2-Dichloroethene	96	6.373	6.372	0.001	84	346800	5.00	6.90	
43 2,2-Dichloropropane	77	6.385	6.391	-0.006	90	387711	5.00	5.92	
45 Propionitrile	54	6.434	6.427	0.007	96	158026	37.5	38.6	
47 Methacrylonitrile	67	6.635	6.641	-0.006	94	500321	37.5	31.2	
48 Chlorobromomethane	128	6.708	6.702	0.006	97	113489	5.00	5.39	
49 Tetrahydrofuran	71	6.714	6.714	0.000	86	93301	25.0	22.0	
50 Chloroform	83	6.848	6.854	-0.006	93	498326	5.00	6.32	
\$ 51 Dibromofluoromethane (Surr)	113	7.068	7.061	0.007	93	437575	10.0	10.6	
52 1,1,1-Trichloroethane	97	7.086	7.086	0.000	98	400324	5.00	5.91	
53 Cyclohexane	56	7.183	7.183	0.000	93	491738	5.00	5.67	
55 1,1-Dichloropropene	75	7.293	7.287	0.006	95	383290	5.00	6.10	
56 Carbon tetrachloride	117	7.293	7.293	0.000	96	348134	5.00	5.97	
57 Isobutyl alcohol	41	7.427	7.421	0.006	95	108338	125.1	101.0	
\$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.519	7.519	0.000	0	92157	10.0	10.9	
59 Benzene	78	7.555	7.555	0.000	97	1111793	5.00	5.76	
60 1,2-Dichloroethane	62	7.628	7.622	0.006	97	286324	5.00	6.34	M
62 Tert-amyl methyl ether	73	7.738	7.738	0.000	97	566820	5.00	5.13	
* 65 Fluorobenzene (IS)	96	7.952	7.951	0.001	98	1752540	10.0	10.0	
64 n-Heptane	43	7.958	7.958	0.000	93	509925	5.00	6.40	
66 n-Butanol	56	8.293	8.293	0.000	92	204583	250.2	218.7	
67 Trichloroethene	95	8.433	8.433	0.000	98	326064	5.00	6.89	
68 Methylcyclohexane	83	8.744	8.744	0.000	96	480852	5.00	5.70	
69 2-ethoxy-2-methyl butane	87	8.762	8.762	0.000	84	346792	5.00	5.10	
70 1,2-Dichloropropane	63	8.768	8.768	0.000	85	295753	5.00	6.06	
71 Methyl methacrylate	69	8.835	8.835	0.000	91	118020	5.00	3.79	
72 1,4-Dioxane	88	8.860	8.848	0.012	93	25631	125.1	99.5	
73 Dibromomethane	93	8.878	8.878	0.000	96	125683	5.00	6.13	
75 Dichlorobromomethane	83	9.104	9.110	-0.006	99	330796	5.00	6.02	
76 2-Nitropropane	41	9.366	9.366	0.000	100	34969	5.00	4.07	
78 2-Chloroethyl vinyl ether	63		9.457				ND	ND	
79 1-Bromo-2-chloroethane	63	9.488	9.494	-0.006	99	294019	5.00	6.08	
80 cis-1,3-Dichloropropene	75	9.634	9.634	0.000	94	370844	5.00	5.49	
81 4-Methyl-2-pentanone (MIBK)	43	9.793	9.793	0.000	98	851668	25.0	20.4	
\$ 82 Toluene-d8 (Surr)	98	9.933	9.933	0.000	94	1703769	10.0	10.0	
83 Toluene	92	10.006	10.012	-0.006	98	673961	5.00	5.68	
85 trans-1,3-Dichloropropene	75	10.256	10.256	0.000	94	303594	5.00	5.66	
86 Ethyl methacrylate	69	10.311	10.305	0.006	91	232964	5.00	5.31	
87 1,1,2-Trichloroethane	97	10.457	10.457	0.000	91	179519	5.00	6.21	
88 Tetrachloroethene	166	10.549	10.542	0.007	96	436545	5.00	8.66	
89 1,3-Dichloropropane	76	10.616	10.616	0.000	91	314923	5.00	5.95	
91 2-Hexanone	43	10.658	10.658	0.000	98	590847	25.0	21.0	
93 Chlorodibromomethane	129	10.829	10.829	0.000	90	207979	5.00	5.97	
94 Ethylene Dibromide	107	10.945	10.945	0.000	99	164434	5.00	5.99	
* 97 Chlorobenzene-d5 (IS)	117	11.365	11.365	0.000	88	1266005	10.0	10.0	
96 1-Chlorohexane	91	11.365	11.365	0.000	96	376352	5.00	5.29	
98 Chlorobenzene	112	11.390	11.390	0.000	93	721292	5.00	5.71	
99 1,1,1,2-Tetrachloroethane	131	11.469	11.469	0.000	95	235974	5.00	5.53	
100 Ethylbenzene	91	11.475	11.475	0.000	99	1285917	5.00	5.57	
101 m-Xylene & p-Xylene	106	11.585	11.585	0.000	0	971633	10.0	11.2	
102 o-Xylene	106	11.914	11.914	0.000	97	456185	5.00	5.40	
103 Styrene	104	11.926	11.926	0.000	95	770660	5.00	5.49	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
104 Bromoform	173	12.091	12.091	0.000	95	114894	5.00	5.82	
105 Isopropylbenzene	105	12.207	12.207	0.000	96	1244285	5.00	5.49	
\$ 108 4-Bromofluorobenzene (Surr)	95	12.353	12.353	0.000	88	615042	10.0	9.92	
109 1,1,2,2-Tetrachloroethane	83	12.451	12.451	0.000	93	221803	5.00	6.05	
111 Bromobenzene	156	12.475	12.475	0.000	95	280682	5.00	5.50	
110 trans-1,4-Dichloro-2-butene	53	12.475	12.475	0.000	88	280900	25.0	20.4	
112 1,2,3-Trichloropropane	110	12.499	12.499	0.000	85	56931	5.00	6.23	
113 N-Propylbenzene	91	12.536	12.536	0.000	99	1613899	5.00	5.69	
114 2-Chlorotoluene	126	12.615	12.615	0.000	96	293127	5.00	5.42	
115 1,3,5-Trimethylbenzene	105	12.670	12.670	0.000	94	1069585	5.00	5.47	
116 4-Chlorotoluene	126	12.707	12.707	0.000	98	302876	5.00	5.57	
118 tert-Butylbenzene	134	12.908	12.908	0.000	94	217205	5.00	5.12	
119 Pentachloroethane	167	12.944	12.944	0.000	90	172237	5.00	5.23	
120 1,2,4-Trimethylbenzene	105	12.951	12.950	0.001	97	1106194	5.00	5.55	
121 sec-Butylbenzene	105	13.072	13.072	0.000	95	1483994	5.00	5.75	
122 1,3-Dichlorobenzene	146	13.176	13.176	0.000	96	571881	5.00	5.63	
123 4-Isopropyltoluene	119	13.176	13.176	0.000	97	1231999	5.00	5.67	
* 124 1,4-Dichlorobenzene-d4	152	13.231	13.231	0.000	96	667033	10.0	10.0	
125 1,4-Dichlorobenzene	146	13.249	13.249	0.000	93	570033	5.00	5.71	
126 1,2,3-Trimethylbenzene	120	13.255	13.255	0.000	99	471622	5.00	5.43	
127 Benzyl chloride	126	13.322	13.322	0.000	99	82085	5.00	5.76	
129 p-Diethylbenzene	119	13.450	13.450	0.000	93	784470	5.00	5.60	
130 n-Butylbenzene	92	13.469	13.469	0.000	98	698734	5.00	6.28	
131 1,2-Dichlorobenzene	146	13.505	13.505	0.000	97	512655	5.00	5.68	
134 1,2-Dibromo-3-Chloropropane	155	14.048	14.048	0.000	81	29611	5.00	6.35	
135 1,3,5-Trichlorobenzene	180	14.170	14.170	0.000	97	428631	5.00	5.61	
136 1,2,4-Trichlorobenzene	180	14.597	14.596	0.001	94	344608	5.00	5.65	
137 Hexachlorobutadiene	225	14.676	14.676	0.000	97	213677	5.00	6.38	
138 Naphthalene	128	14.779	14.779	0.000	98	573757	5.00	5.29	
139 1,2,3-Trichlorobenzene	180	14.926	14.926	0.000	95	298502	5.00	5.87	
140 2-Methylnaphthalene	142	15.572	15.572	0.000	92	252114	5.00	3.89	

QC Flag Legend

Processing Flags

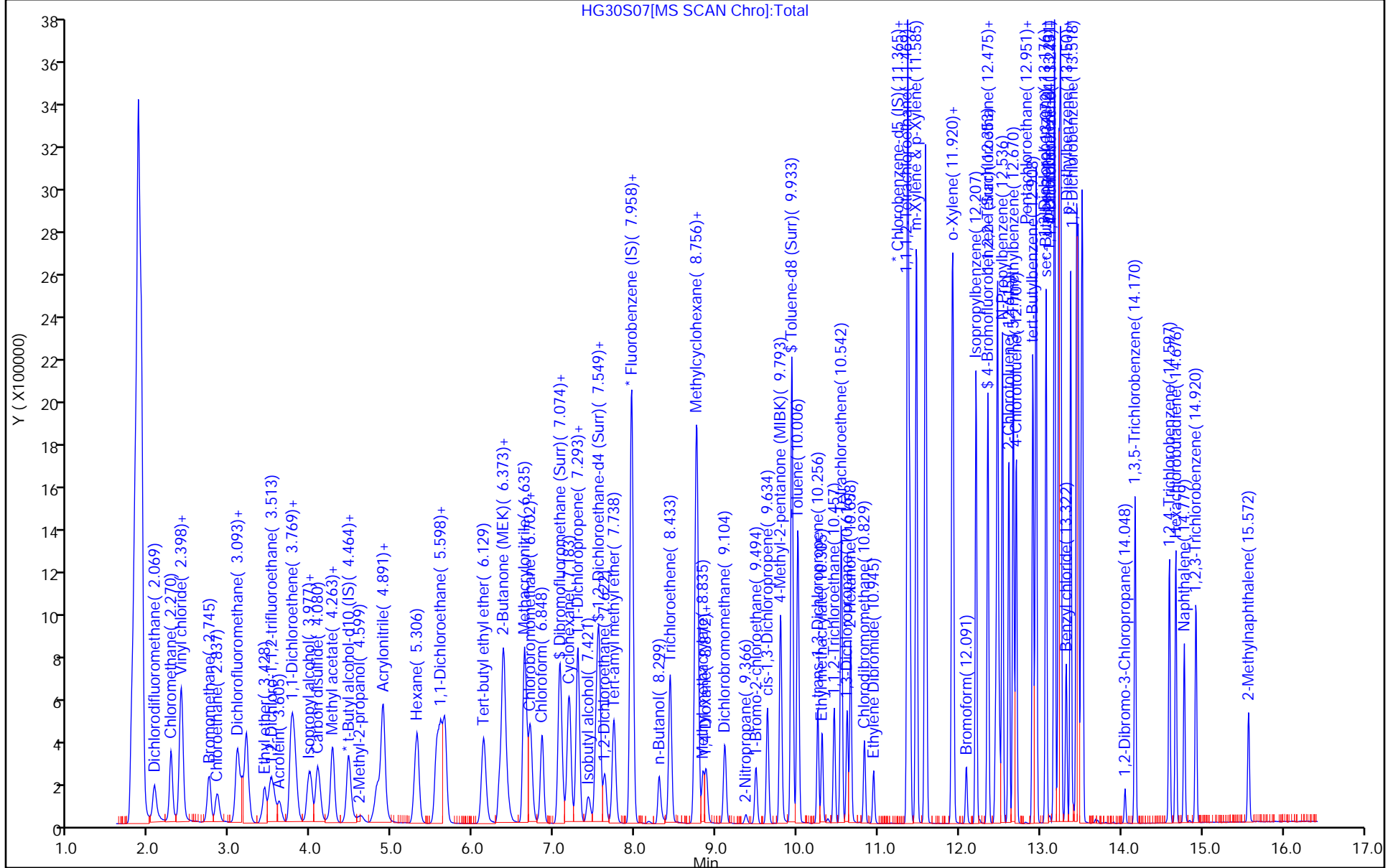
ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MSV_Q_QVOA1_00043	Amount Added: 5.38	Units: uL	
MSV_Q_QARC_00042	Amount Added: 5.38	Units: uL	
MSV_Q_QVOA6_00041	Amount Added: 5.38	Units: uL	
MSV_Q_ETBR_00003	Amount Added: 5.38	Units: uL	
MSV_Q_EE_00002	Amount Added: 5.38	Units: uL	
MSV_QGAS_826_00067	Amount Added: 5.38	Units: uL	
MSV_30_826ISS_00005	Amount Added: 5.00	Units: uL	Run Reagent



Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S07.D
 Lims ID: 410-11876-A-6 MS
 Client ID: HD-COD-SW-15-0/1-0 MS
 Sample Type: MS
 Inject. Date: 30-Aug-2020 21:41:30 ALS Bottle#: 13 Worklist Smp#: 14
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: 410-11876-A-6 MS
 Misc. Info.: 410-0009349-014
 Operator ID: mec29284 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 31-Aug-2020 13:23:49 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1008

First Level Reviewer: virayd Date: 31-Aug-2020 13:11:53

Compound	Amount Added	Amount Recovered	% Rec.
\$ 51 Dibromofluoromethane (Surr)	10.0	10.6	105.61
\$ 58 1,2-Dichloroethane-d4 (Surr)	10.0	10.9	109.19
\$ 82 Toluene-d8 (Surr)	10.0	10.0	100.29
\$ 108 4-Bromofluorobenzene (Surr)	10.0	9.92	99.23

Eurofins Lancaster Laboratories Env, LLC

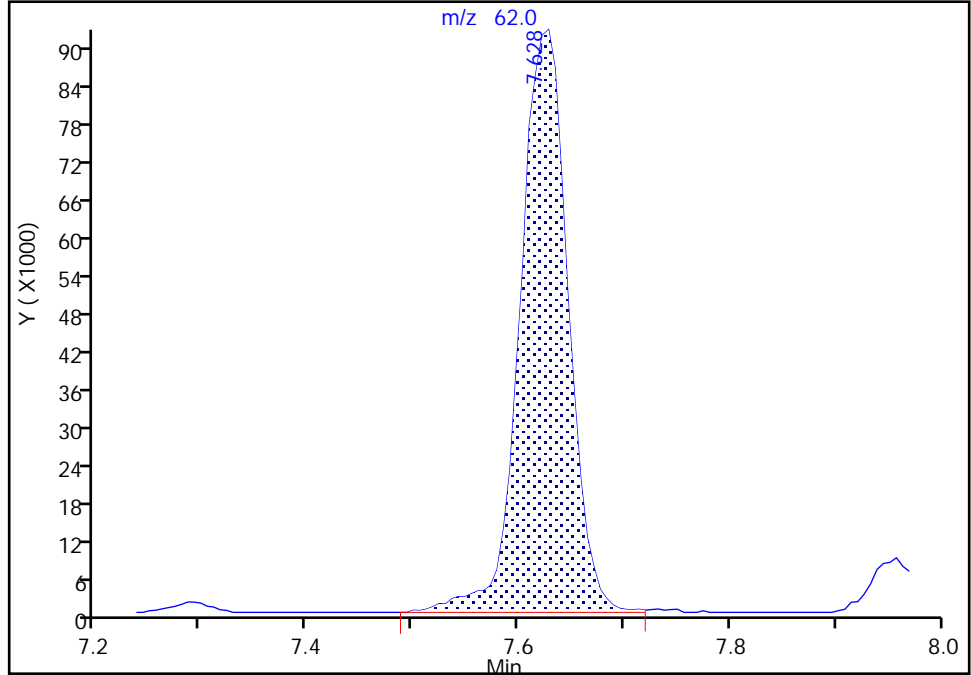
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Injection Date: 30-Aug-2020 21:41:30 Instrument ID: 19094
Lims ID: 410-11876-A-6 MS
Client ID: HD-COD-SW-15-0/1-0 MS
Operator ID: mec29284 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

60 1,2-Dichloroethane, CAS: 107-06-2

Signal: 1

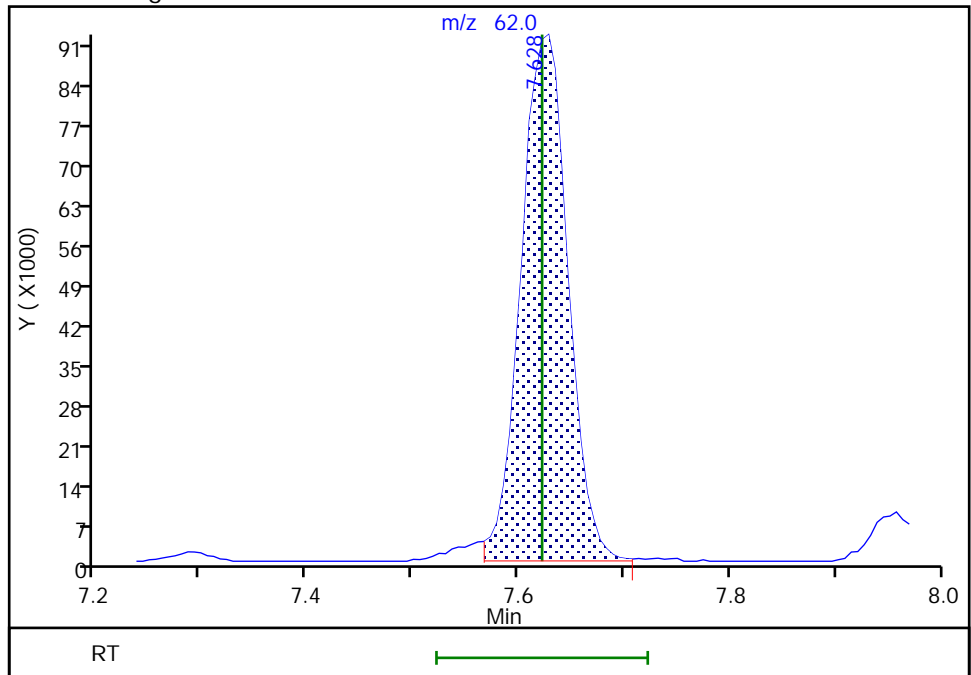
RT: 7.63
Area: 293813
Amount: 6.501843
Amount Units: ug/l

Processing Integration Results



RT: 7.63
Area: 286324
Amount: 6.336117
Amount Units: ug/l

Manual Integration Results



Reviewer: virayd, 31-Aug-2020 13:11:32
Audit Action: Manually Integrated

Audit Reason: Other

Euofins Lancaster Laboratories Env, LLC

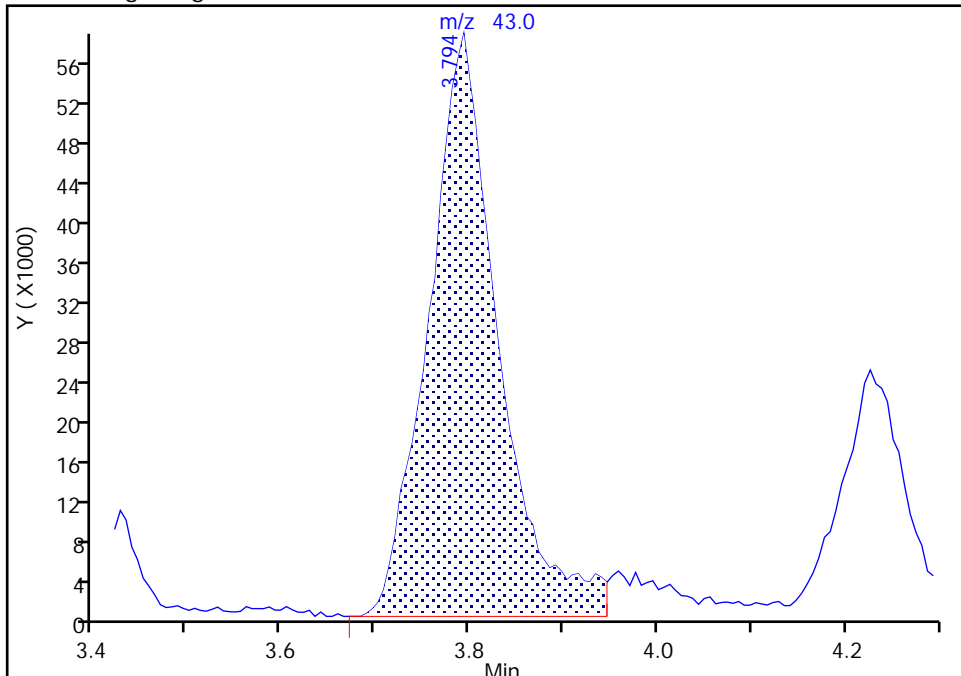
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Injection Date: 30-Aug-2020 21:41:30 Instrument ID: 19094
Lims ID: 410-11876-A-6 MS
Client ID: HD-COD-SW-15-0/1-0 MS
Operator ID: mec29284 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

19 Acetone, CAS: 67-64-1

Signal: 1

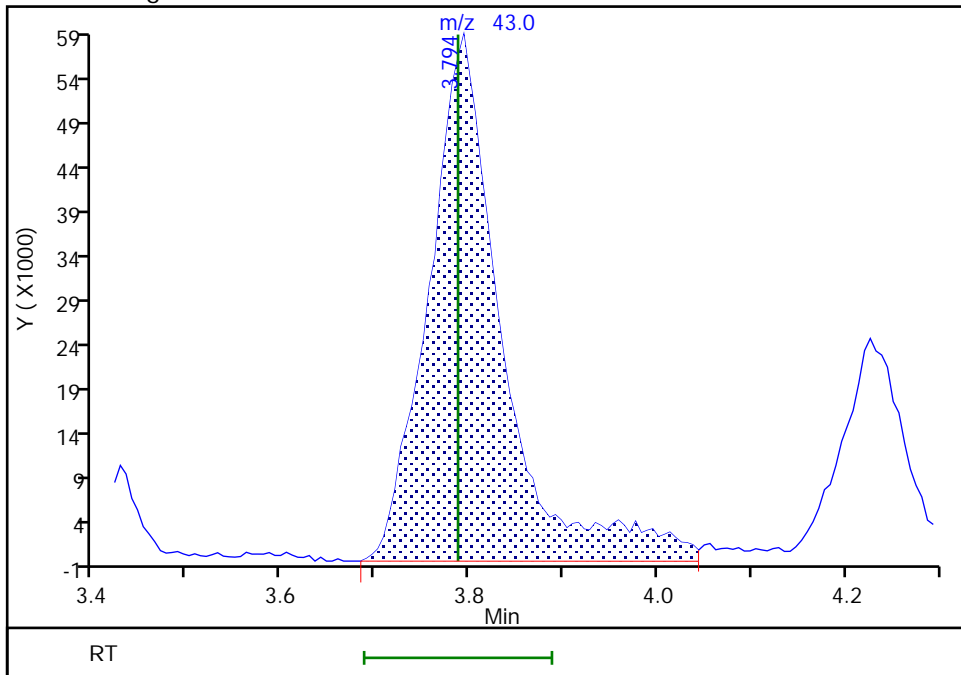
RT: 3.79
Area: 303377
Amount: 31.794041
Amount Units: ug/l

Processing Integration Results



RT: 3.79
Area: 321529
Amount: 33.696378
Amount Units: ug/l

Manual Integration Results



Reviewer: virayd, 31-Aug-2020 13:11:16
Audit Action: Manually Integrated

Audit Reason: Other

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-15-0/1-0 MSD Lab Sample ID: 410-11876-6 MSD
 MSD
 Matrix: Water Lab File ID: HG30S08.D
 Analysis Method: 8260C LL Date Collected: 08/25/2020 11:25
 Sample wt/vol: 25 (mL) Date Analyzed: 08/30/2020 22:03
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 38982 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	5.35		0.50	0.070
71-55-6	1,1,1-Trichloroethane	5.88		0.50	0.060
79-34-5	1,1,2,2-Tetrachloroethane	6.03		0.50	0.070
79-00-5	1,1,2-Trichloroethane	6.08		0.50	0.060
75-34-3	1,1-Dichloroethane	5.92		0.50	0.070
75-35-4	1,1-Dichloroethene	6.22		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	5.75		0.50	0.060
107-06-2	1,2-Dichloroethane	6.24		0.50	0.050
78-87-5	1,2-Dichloropropane	5.95		0.50	0.060
78-93-3	2-Butanone (MEK)	32.9		5.0	0.60
591-78-6	2-Hexanone	21.0		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	20.1		5.0	0.70
67-64-1	Acetone	32.2		5.0	0.90
107-13-1	Acrylonitrile	21.5		5.0	0.40
71-43-2	Benzene	5.60		0.50	0.050
74-97-5	Bromochloromethane	5.22		0.50	0.050
75-27-4	Bromodichloromethane	5.84		0.50	0.050
75-25-2	Bromoform	5.74		1.0	0.30
74-83-9	Bromomethane	5.57		0.50	0.070
75-15-0	Carbon disulfide	6.36		1.0	0.060
56-23-5	Carbon tetrachloride	5.80		0.50	0.070
108-90-7	Chlorobenzene	5.59		0.50	0.060
75-00-3	Chloroethane	5.78		0.50	0.070
67-66-3	Chloroform	6.24		0.50	0.090
74-87-3	Chloromethane	5.97		0.50	0.060
156-59-2	cis-1,2-Dichloroethene	6.77		0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	5.40		0.50	0.050
124-48-1	Dibromochloromethane	5.90		0.50	0.070
100-41-4	Ethylbenzene	5.58		0.50	0.060
1634-04-4	Methyl tert-butyl ether	5.28		0.50	0.050
75-09-2	Methylene Chloride	5.74		0.50	0.070
100-42-5	Styrene	5.43		0.50	0.050
127-18-4	Tetrachloroethene	8.61		0.50	0.060
108-88-3	Toluene	5.61		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	5.90		0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1
 SDG No.: _____
 Client Sample ID: HD-COD-SW-15-0/1-0 MSD Lab Sample ID: 410-11876-6 MSD
 MSD
 Matrix: Water Lab File ID: HG30S08.D
 Analysis Method: 8260C LL Date Collected: 08/25/2020 11:25
 Sample wt/vol: 25 (mL) Date Analyzed: 08/30/2020 22:03
 Soil Aliquot Vol: _____ Dilution Factor: 1
 Soil Extract Vol.: _____ GC Column: R-624SilMS 30m ID: 0.25 (mm)
 % Moisture: _____ Level: (low/med) Low
 Analysis Batch No.: 38982 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
10061-02-6	trans-1,3-Dichloropropene	5.48		0.50	0.060
79-01-6	Trichloroethene	6.82		0.50	0.060
75-01-4	Vinyl chloride	5.99		0.50	0.10
1330-20-7	Xylenes, Total	16.5		1.0	0.15

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	107		80-120
1868-53-7	Dibromofluoromethane (Surr)	104		80-120
2037-26-5	Toluene-d8 (Surr)	101		80-120
460-00-4	4-Bromofluorobenzene (Surr)	100		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S08.D
 Lims ID: 410-11876-A-6 MSD
 Client ID: HD-COD-SW-15-0/1-0 MSD
 Sample Type: MSD
 Inject. Date: 30-Aug-2020 22:03:30 ALS Bottle#: 14 Worklist Smp#: 15
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: 410-11876-A-6 MSD
 Misc. Info.: 410-0009349-015
 Operator ID: mec29284 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 31-Aug-2020 13:23:49 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1008

First Level Reviewer: virayd Date: 31-Aug-2020 13:13:17

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
3 Dichlorodifluoromethane	85	2.068	2.068	0.000	99	360866	5.00	5.26	
6 Chloromethane	50	2.270	2.276	-0.006	99	487723	5.00	5.97	
7 Vinyl chloride	62	2.385	2.385	0.000	98	437896	5.00	5.99	
8 Butadiene	39	2.398	2.404	-0.006	96	429286	5.00	6.10	
9 Bromomethane	94	2.733	2.745	-0.012	91	276390	5.00	5.57	
10 Chloroethane	64	2.837	2.837	0.000	100	258558	5.00	5.78	
11 Dichlorofluoromethane	67	3.086	3.087	-0.001	98	507122	5.00	5.27	
13 Trichlorofluoromethane	101	3.141	3.154	-0.013	97	496989	5.00	6.55	
15 Ethyl ether	59	3.422	3.422	0.000	94	189017	5.01	5.03	
16 1,2-Dichloro-1,1,2-trifluoroetha	67	3.507	3.513	-0.006	94	361044	5.00	6.07	
17 Acrolein	56	3.605	3.611	-0.006	98	183075	37.5	22.4	
18 1,1-Dichloroethene	96	3.751	3.757	-0.006	97	264991	5.00	6.22	
19 Acetone	43	3.794	3.788	0.006	100	324103	37.5	32.2	M
20 112TCTFE	101	3.788	3.788	0.000	91	265859	5.00	5.72	
21 Isopropyl alcohol	45	3.977	3.964	0.013	32	48400	37.5	36.9	
22 Iodomethane	142	3.964	3.971	-0.007	99	432125	5.00	5.22	
23 Ethyl bromide	108	3.995	4.001	-0.006	99	173665	4.94	4.48	
24 Carbon disulfide	76	4.080	4.086	-0.006	99	899820	5.00	6.36	
26 Methyl acetate	43	4.227	4.233	-0.007	98	124120	5.00	4.27	
27 3-Chloro-1-propene	41	4.263	4.263	0.000	92	456673	5.00	5.27	
29 Methylene Chloride	84	4.458	4.464	-0.006	97	291251	5.00	5.74	
* 28 t-Butyl alcohol-d10 (IS)	65	4.470	4.477	-0.006	0	142646	50.0	50.0	
30 2-Methyl-2-propanol	59	4.598	4.605	-0.007	98	126383	50.0	44.7	
31 Acrylonitrile	53	4.806	4.806	0.000	98	290934	25.0	21.5	
32 Methyl tert-butyl ether	73	4.867	4.873	-0.006	97	537609	5.00	5.28	
33 trans-1,2-Dichloroethene	96	4.885	4.891	-0.006	97	285852	5.00	5.90	
34 Hexane	57	5.306	5.306	0.000	94	457956	5.00	5.95	
35 1,1-Dichloroethane	63	5.543	5.549	-0.006	96	552438	5.00	5.92	
37 Isopropyl ether	45	5.598	5.598	0.000	95	902843	5.00	5.17	
38 2-Chloro-1,3-butadiene	53	5.647	5.653	-0.006	92	471910	5.00	5.75	
39 Tert-butyl ethyl ether	59	6.129	6.129	0.000	98	724856	5.00	4.89	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
41 2-Butanone (MEK)	43	6.330	6.330	0.000	100	553940	37.5	32.9	
42 cis-1,2-Dichloroethene	96	6.366	6.372	-0.006	83	376121	5.00	6.77	
43 2,2-Dichloropropane	77	6.391	6.391	0.000	89	423087	5.00	5.85	
45 Propionitrile	54	6.427	6.427	0.000	98	161836	37.5	37.5	
47 Methacrylonitrile	67	6.635	6.641	-0.006	93	524007	37.5	31.0	
48 Chlorobromomethane	128	6.702	6.702	0.000	97	121322	5.00	5.22	
49 Tetrahydrofuran	71	6.702	6.714	-0.012	83	91936	25.0	20.5	
50 Chloroform	83	6.848	6.854	-0.006	94	544074	5.00	6.24	
\$ 51 Dibromofluoromethane (Surr)	113	7.061	7.061	0.000	93	477882	10.0	10.4	
52 1,1,1-Trichloroethane	97	7.086	7.086	0.000	99	439751	5.00	5.88	
53 Cyclohexane	56	7.183	7.183	0.000	93	545661	5.00	5.69	
55 1,1-Dichloropropene	75	7.287	7.287	0.000	96	419983	5.00	6.05	
56 Carbon tetrachloride	117	7.293	7.293	0.000	96	374143	5.00	5.80	
57 Isobutyl alcohol	41	7.415	7.421	-0.006	93	126676	125.1	111.9	
\$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.519	7.519	0.000	0	99927	10.0	10.7	
59 Benzene	78	7.555	7.555	0.000	97	1194866	5.00	5.60	
60 1,2-Dichloroethane	62	7.622	7.622	0.000	97	311536	5.00	6.24	
62 Tert-amyl methyl ether	73	7.738	7.738	0.000	97	621975	5.00	5.09	
* 65 Fluorobenzene (IS)	96	7.951	7.951	0.000	98	1936570	10.0	10.0	
64 n-Heptane	43	7.957	7.958	-0.001	93	545327	5.00	6.20	
66 n-Butanol	56	8.293	8.293	0.000	91	200896	250.2	203.5	
67 Trichloroethene	95	8.433	8.433	0.000	99	356817	5.00	6.82	
68 Methylcyclohexane	83	8.750	8.744	0.006	94	526987	5.00	5.65	
69 2-ethoxy-2-methyl butane	87	8.762	8.762	0.000	89	374599	5.00	4.98	
70 1,2-Dichloropropane	63	8.768	8.768	0.000	87	320509	5.00	5.95	
71 Methyl methacrylate	69	8.835	8.835	0.000	93	124957	5.00	3.80	
72 1,4-Dioxane	88	8.848	8.848	0.000	88	28028	125.1	103.1	
73 Dibromomethane	93	8.872	8.878	-0.006	96	134182	5.00	5.92	
75 Dichlorobromomethane	83	9.104	9.110	-0.006	99	354374	5.00	5.84	
76 2-Nitropropane	41	9.366	9.366	0.000	97	37428	5.00	4.13	
78 2-Chloroethyl vinyl ether	63		9.457				ND	ND	
79 1-Bromo-2-chloroethane	63	9.488	9.494	-0.006	99	303887	5.00	5.69	
80 cis-1,3-Dichloropropene	75	9.634	9.634	0.000	95	403148	5.00	5.40	
81 4-Methyl-2-pentanone (MIBK)	43	9.792	9.793	-0.001	98	884343	25.0	20.1	
\$ 82 Toluene-d8 (Surr)	98	9.933	9.933	0.000	94	1864988	10.0	10.1	
83 Toluene	92	10.006	10.012	-0.006	98	723624	5.00	5.61	
85 trans-1,3-Dichloropropene	75	10.256	10.256	0.000	94	319895	5.00	5.48	
86 Ethyl methacrylate	69	10.305	10.305	0.000	91	252891	5.00	5.29	
87 1,1,2-Trichloroethane	97	10.457	10.457	0.000	90	191239	5.00	6.08	
88 Tetrachloroethene	166	10.542	10.542	0.000	96	472027	5.00	8.61	
89 1,3-Dichloropropane	76	10.616	10.616	0.000	92	334333	5.00	5.80	
91 2-Hexanone	43	10.658	10.658	0.000	99	623298	25.0	21.0	
93 Chlorodibromomethane	129	10.829	10.829	0.000	90	223758	5.00	5.90	
94 Ethylene Dibromide	107	10.945	10.945	0.000	98	171882	5.00	5.75	
* 97 Chlorobenzene-d5 (IS)	117	11.365	11.365	0.000	88	1377997	10.0	10.0	
96 1-Chlorohexane	91	11.365	11.365	0.000	95	407789	5.00	5.27	
98 Chlorobenzene	112	11.390	11.390	0.000	93	768333	5.00	5.59	
99 1,1,1,2-Tetrachloroethane	131	11.469	11.469	0.000	93	248304	5.00	5.35	
100 Ethylbenzene	91	11.475	11.475	0.000	99	1400852	5.00	5.58	
101 m-Xylene & p-Xylene	106	11.585	11.585	0.000	0	1053425	10.0	11.2	
102 o-Xylene	106	11.914	11.914	0.000	98	490417	5.00	5.33	
103 Styrene	104	11.926	11.926	0.000	93	830626	5.00	5.43	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
104 Bromoform	173	12.091	12.091	0.000	96	123379	5.00	5.74	
105 Isopropylbenzene	105	12.207	12.207	0.000	96	1339249	5.00	5.43	
\$ 108 4-Bromofluorobenzene (Surr)	95	12.353	12.353	0.000	88	675404	10.0	10.0	
109 1,1,2,2-Tetrachloroethane	83	12.451	12.451	-0.001	94	233695	5.00	6.03	
111 Bromobenzene	156	12.475	12.475	0.000	95	299750	5.00	5.56	
110 trans-1,4-Dichloro-2-butene	53	12.475	12.475	0.000	89	297441	25.0	20.5	
112 1,2,3-Trichloropropane	110	12.499	12.499	0.000	84	59816	5.00	6.20	
113 N-Propylbenzene	91	12.536	12.536	0.000	99	1740085	5.00	5.80	
114 2-Chlorotoluene	126	12.615	12.615	0.000	96	317867	5.00	5.56	
115 1,3,5-Trimethylbenzene	105	12.670	12.670	0.000	94	1146233	5.00	5.55	
116 4-Chlorotoluene	126	12.707	12.707	0.000	98	320492	5.00	5.58	
118 tert-Butylbenzene	134	12.908	12.908	0.000	94	241272	5.00	5.38	
119 Pentachloroethane	167	12.944	12.944	0.000	87	178273	5.00	5.12	
120 1,2,4-Trimethylbenzene	105	12.950	12.950	0.000	97	1152894	5.00	5.48	
121 sec-Butylbenzene	105	13.072	13.072	0.000	95	1553722	5.00	5.70	
122 1,3-Dichlorobenzene	146	13.176	13.176	0.000	96	598307	5.00	5.58	
123 4-Isopropyltoluene	119	13.176	13.176	0.000	97	1293643	5.00	5.64	
* 124 1,4-Dichlorobenzene-d4	152	13.231	13.231	0.000	96	704879	10.0	10.0	
125 1,4-Dichlorobenzene	146	13.249	13.249	0.000	92	593892	5.00	5.63	
126 1,2,3-Trimethylbenzene	120	13.255	13.255	0.000	98	493307	5.00	5.37	
127 Benzyl chloride	126	13.322	13.322	0.000	99	83354	5.00	5.54	
129 p-Diethylbenzene	119	13.450	13.450	0.000	93	817128	5.00	5.52	
130 n-Butylbenzene	92	13.469	13.469	0.000	98	715722	5.00	6.09	
131 1,2-Dichlorobenzene	146	13.505	13.505	0.000	97	537930	5.00	5.64	
134 1,2-Dibromo-3-Chloropropane	155	14.048	14.048	0.000	81	30283	5.00	6.14	
135 1,3,5-Trichlorobenzene	180	14.170	14.170	0.000	97	455973	5.00	5.65	
136 1,2,4-Trichlorobenzene	180	14.596	14.596	0.000	94	362261	5.00	5.62	
137 Hexachlorobutadiene	225	14.676	14.676	0.000	96	221386	5.00	6.26	
138 Naphthalene	128	14.779	14.779	0.000	97	609747	5.00	5.32	
139 1,2,3-Trichlorobenzene	180	14.926	14.926	0.000	95	314584	5.00	5.85	
140 2-Methylnaphthalene	142	15.572	15.572	0.000	92	278446	5.00	4.07	

QC Flag Legend

Processing Flags

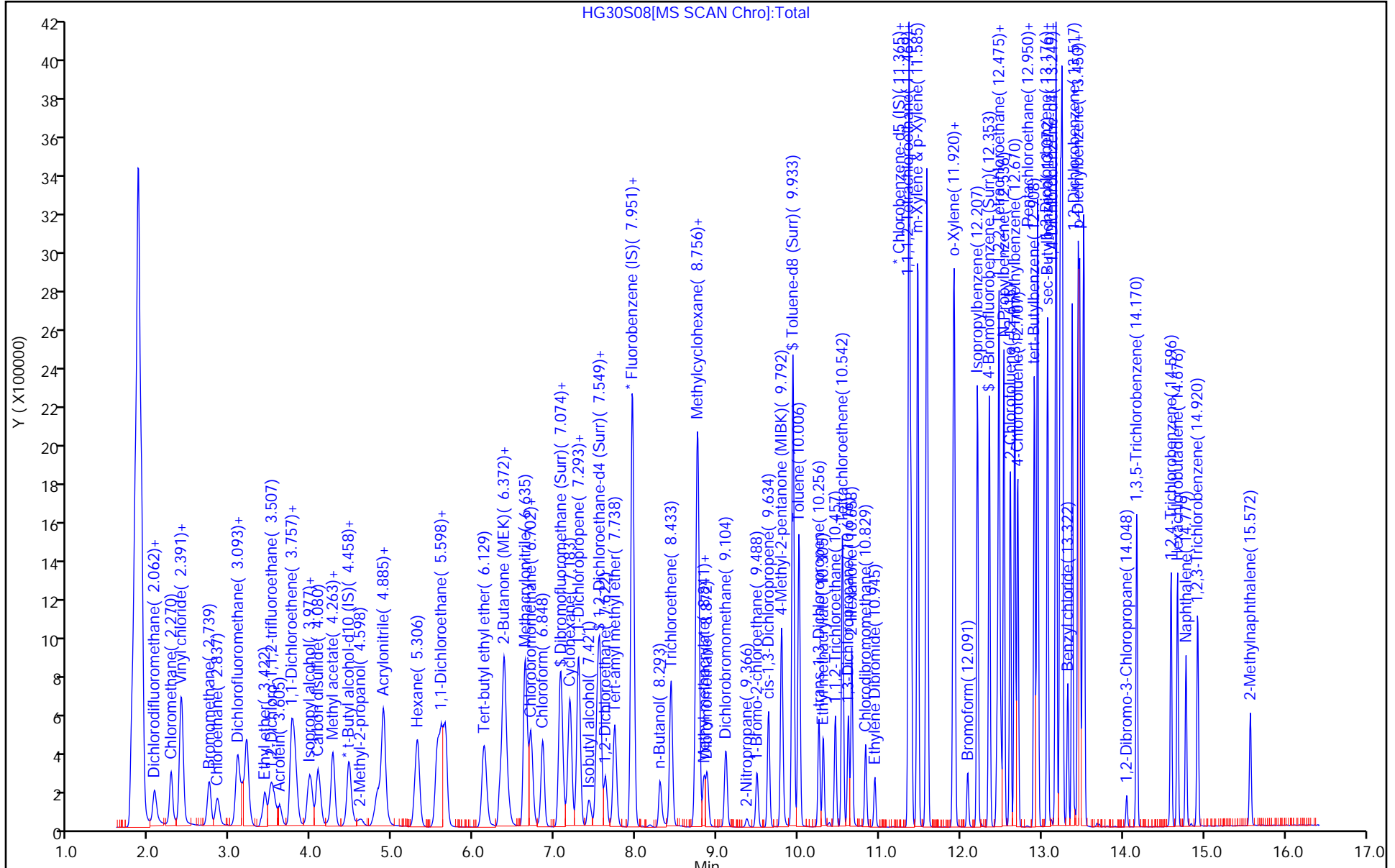
ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MSV_Q_QARC_00042	Amount Added: 5.38	Units: uL	
MSV_Q_QVOA6_00041	Amount Added: 5.38	Units: uL	
MSV_Q_ETBR_00003	Amount Added: 5.38	Units: uL	
MSV_Q_EE_00002	Amount Added: 5.38	Units: uL	
MSV_QGAS_826_00067	Amount Added: 5.38	Units: uL	
MSV_Q_QVOA1_00043	Amount Added: 5.38	Units: uL	
MSV_30_826ISS_00005	Amount Added: 5.00	Units: uL	Run Reagent



HG30S08[MS SCAN Chrom]:Total

Eurofins Lancaster Laboratories Env, LLC
Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S08.D
 Lims ID: 410-11876-A-6 MSD
 Client ID: HD-COD-SW-15-0/1-0 MSD
 Sample Type: MSD
 Inject. Date: 30-Aug-2020 22:03:30 ALS Bottle#: 14 Worklist Smp#: 15
 Purge Vol: 25.000 mL Dil. Factor: 1.0000
 Sample Info: 410-11876-A-6 MSD
 Misc. Info.: 410-0009349-015
 Operator ID: mec29284 Instrument ID: 19094
 Method: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\MSV_19094_25mL.m
 Limit Group: MSV - 8260C_D
 Last Update: 31-Aug-2020 13:23:49 Calib Date: 08-Jun-2020 18:56:30
 Integrator: RTE ID Type: Deconvolution ID
 Quant Method: Internal Standard Quant By: Initial Calibration
 Last ICal File: \\chromfs\Lancaster\ChromData\19094\20200608-2918.b\hu08i07.D
 Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
 Process Host: CTX1008

First Level Reviewer: virayd Date: 31-Aug-2020 13:13:17

Compound	Amount Added	Amount Recovered	% Rec.
\$ 51 Dibromofluoromethane (Surr)	10.0	10.4	104.38
\$ 58 1,2-Dichloroethane-d4 (Surr)	10.0	10.7	107.14
\$ 82 Toluene-d8 (Surr)	10.0	10.1	100.86
\$ 108 4-Bromofluorobenzene (Surr)	10.0	10.0	100.12

Euofins Lancaster Laboratories Env, LLC

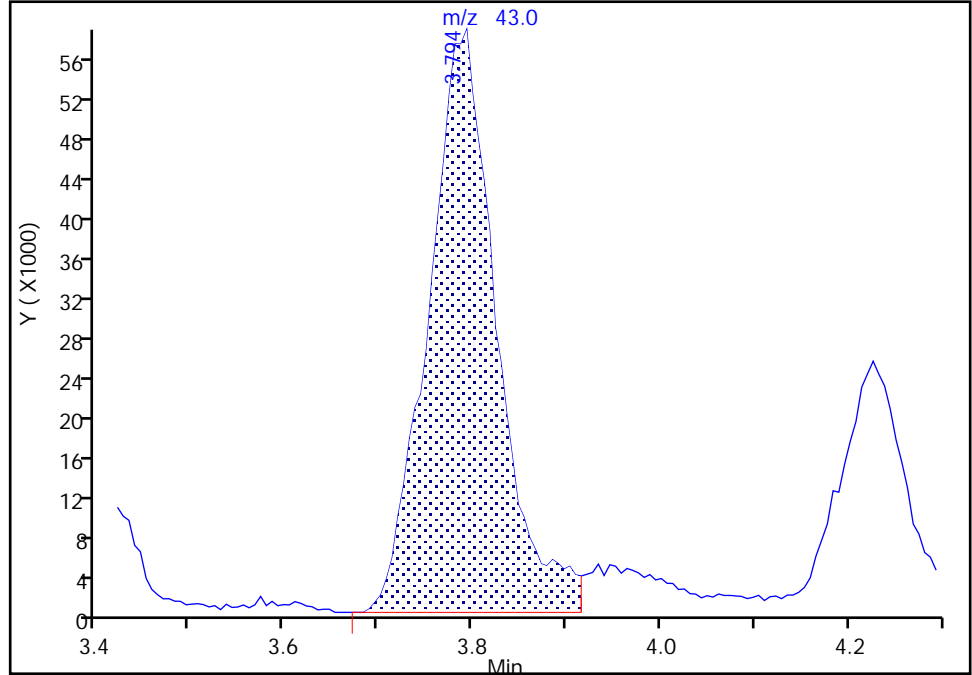
Data File: \\chromfs\Lancaster\ChromData\19094\20200830-9349.b\HG30S08.D
Injection Date: 30-Aug-2020 22:03:30 Instrument ID: 19094
Lims ID: 410-11876-A-6 MSD
Client ID: HD-COD-SW-15-0/1-0 MSD
Operator ID: mec29284 ALS Bottle#: 14 Worklist Smp#: 15
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm ID) Detector: MS Quad

19 Acetone, CAS: 67-64-1

Signal: 1

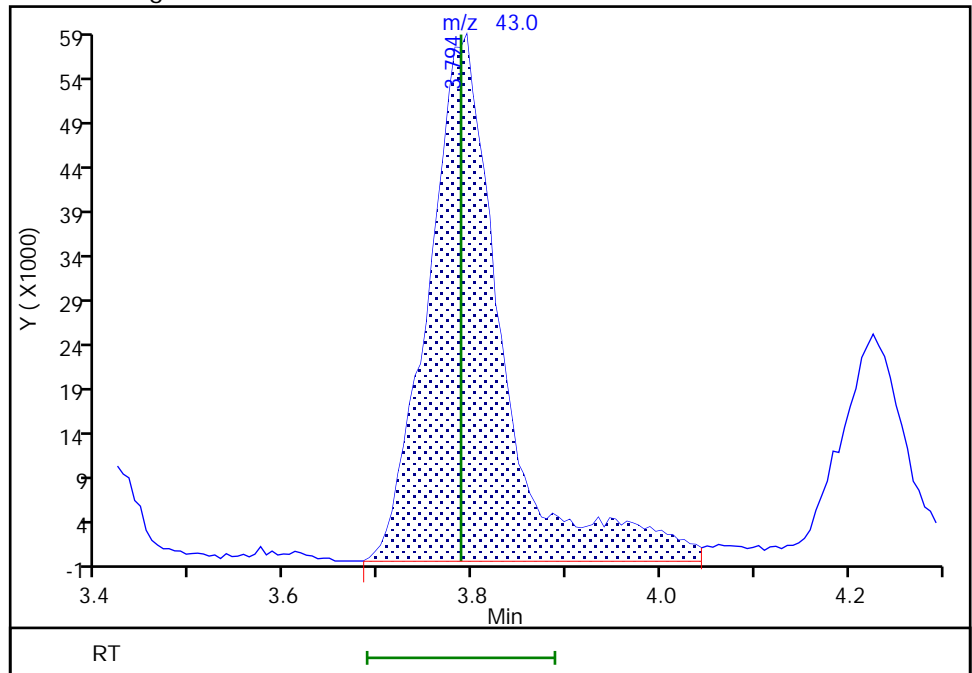
RT: 3.79
Area: 296997
Amount: 29.485420
Amount Units: ug/l

Processing Integration Results



RT: 3.79
Area: 324103
Amount: 32.176463
Amount Units: ug/l

Manual Integration Results



Reviewer: virayd, 31-Aug-2020 13:12:48
Audit Action: Manually Integrated

Audit Reason: Other

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1

SDG No.: _____

Instrument ID: 19094 Start Date: 06/08/2020 12:43Analysis Batch Number: 11163 End Date: 06/08/2020 19:40

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 410-11163/1		06/08/2020 12:43	1	BFB.D	R-624Si1MS 30m 0.25 (mm)
IC 410-11163/3		06/08/2020 13:31	1		R-624Si1MS 30m 0.25 (mm)
IC 410-11163/4		06/08/2020 13:52	1		R-624Si1MS 30m 0.25 (mm)
IC 410-11163/5		06/08/2020 14:14	1		R-624Si1MS 30m 0.25 (mm)
IC 410-11163/6		06/08/2020 14:36	1		R-624Si1MS 30m 0.25 (mm)
IC 410-11163/7		06/08/2020 14:57	1		R-624Si1MS 30m 0.25 (mm)
IC 410-11163/8		06/08/2020 15:19	1		R-624Si1MS 30m 0.25 (mm)
IC 410-11163/9		06/08/2020 15:41	1		R-624Si1MS 30m 0.25 (mm)
IC 410-11163/12		06/08/2020 16:46	1	hu08i01.D	R-624Si1MS 30m 0.25 (mm)
ICIS 410-11163/13		06/08/2020 17:08	1	hu08i02.D	R-624Si1MS 30m 0.25 (mm)
IC 410-11163/14		06/08/2020 17:29	1	hu08i03.D	R-624Si1MS 30m 0.25 (mm)
IC 410-11163/15		06/08/2020 17:51	1	hu08i04.D	R-624Si1MS 30m 0.25 (mm)
IC 410-11163/16		06/08/2020 18:13	1	hu08i05.D	R-624Si1MS 30m 0.25 (mm)
IC 410-11163/17		06/08/2020 18:35	1	hu08i06.D	R-624Si1MS 30m 0.25 (mm)
IC 410-11163/18		06/08/2020 18:56	1	hu08i07.D	R-624Si1MS 30m 0.25 (mm)
ICV 410-11163/19		06/08/2020 19:18	1	hu08v01.D	R-624Si1MS 30m 0.25 (mm)
ICV 410-11163/20		06/08/2020 19:40	1		R-624Si1MS 30m 0.25 (mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1

SDG No.: _____

Instrument ID: 19094 Start Date: 08/30/2020 17:05Analysis Batch Number: 38982 End Date: 08/31/2020 02:23

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 410-38982/1		08/30/2020 17:05	1	HG30T02.D	R-624Si1MS 30m 0.25 (mm)
CCVIS 410-38982/3		08/30/2020 17:38	1	HG30C01.D	R-624Si1MS 30m 0.25 (mm)
LCS 410-38982/4		08/30/2020 18:22	1	HG30L02.D	R-624Si1MS 30m 0.25 (mm)
MB 410-38982/7		08/30/2020 19:05	1	HG30B01.D	R-624Si1MS 30m 0.25 (mm)
ZZZZZ		08/30/2020 19:31	1		R-624Si1MS 30m 0.25 (mm)
ZZZZZ		08/30/2020 19:52	1		R-624Si1MS 30m 0.25 (mm)
ZZZZZ		08/30/2020 20:14	1		R-624Si1MS 30m 0.25 (mm)
410-11876-13	HD-QC1-0/1-1	08/30/2020 20:36	1	HG30S04.D	R-624Si1MS 30m 0.25 (mm)
ZZZZZ		08/30/2020 20:58	1		R-624Si1MS 30m 0.25 (mm)
410-11876-6	HD-COD-SW-15-0/1-0	08/30/2020 21:19	1	HG30S06.D	R-624Si1MS 30m 0.25 (mm)
410-11876-6 MS	HD-COD-SW-15-0/1-0 MS MS	08/30/2020 21:41	1	HG30S07.D	R-624Si1MS 30m 0.25 (mm)
410-11876-6 MSD	HD-COD-SW-15-0/1-0 MSD MSD	08/30/2020 22:03	1	HG30S08.D	R-624Si1MS 30m 0.25 (mm)
410-11876-1	HD-COD-SW-6-0/1-0	08/30/2020 22:46	1	HG30S10.D	R-624Si1MS 30m 0.25 (mm)
410-11876-2	HD-COD-SW-7-0/1-0	08/30/2020 23:08	1	HG30S11.D	R-624Si1MS 30m 0.25 (mm)
410-11876-3	HD-COD-SW-8-0/1-0	08/30/2020 23:30	1	HG30S12.D	R-624Si1MS 30m 0.25 (mm)
410-11876-4	HD-COD-SW-9-0/1-0	08/30/2020 23:52	1	HG30S13.D	R-624Si1MS 30m 0.25 (mm)
410-11876-5	HD-COD-SW-13-0/1-0	08/31/2020 00:14	1	HG30S14.D	R-624Si1MS 30m 0.25 (mm)
410-11876-7	HD-COD-SW-16-0/1-0	08/31/2020 00:35	1	HG30S15.D	R-624Si1MS 30m 0.25 (mm)
410-11876-8	HD-COD-SW-17-0/1-0	08/31/2020 00:57	1	HG30S16.D	R-624Si1MS 30m 0.25 (mm)
410-11876-9	HD-COD-SW-26-0/1-0	08/31/2020 01:18	1	HG30S17.D	R-624Si1MS 30m 0.25 (mm)
410-11876-10	HD-COD-SW-27-0/1-0	08/31/2020 01:40	1	HG30S18.D	R-624Si1MS 30m 0.25 (mm)
410-11876-11	HD-COD-SW-28-0/1-0	08/31/2020 02:02	1	HG30S19.D	R-624Si1MS 30m 0.25 (mm)
410-11876-12	HD-COD-SW-29-0/1-0	08/31/2020 02:23	1	HG30S20.D	R-624Si1MS 30m 0.25 (mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-11876-1

SDG No.: _____

Instrument ID: 19094 Start Date: 08/31/2020 17:44

Analysis Batch Number: 39389 End Date: 09/01/2020 05:19

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 410-39389/1		08/31/2020 17:44	1	HG31T02.D	R-624Si1MS 30m 0.25 (mm)
CCVIS 410-39389/3		08/31/2020 18:18	1	HG31C01.D	R-624Si1MS 30m 0.25 (mm)
LCS 410-39389/4		08/31/2020 18:40	1	HG31L01.D	R-624Si1MS 30m 0.25 (mm)
LCSD 410-39389/5		08/31/2020 19:02	1	HG31L02.D	R-624Si1MS 30m 0.25 (mm)
MB 410-39389/7		08/31/2020 19:45	1	HG31B01.D	R-624Si1MS 30m 0.25 (mm)
ZZZZZ		08/31/2020 20:16	100		R-624Si1MS 30m 0.25 (mm)
410-11876-14	HD-QC1-0/1-2	08/31/2020 20:38	1	HG31S02.D	R-624Si1MS 30m 0.25 (mm)
ZZZZZ		08/31/2020 21:00	100		R-624Si1MS 30m 0.25 (mm)
ZZZZZ		08/31/2020 21:21	100		R-624Si1MS 30m 0.25 (mm)
ZZZZZ		08/31/2020 21:43	100		R-624Si1MS 30m 0.25 (mm)
ZZZZZ		08/31/2020 22:05	1000		R-624Si1MS 30m 0.25 (mm)
ZZZZZ		08/31/2020 22:48	1		R-624Si1MS 30m 0.25 (mm)
ZZZZZ		08/31/2020 23:10	1		R-624Si1MS 30m 0.25 (mm)
ZZZZZ		08/31/2020 23:31	1		R-624Si1MS 30m 0.25 (mm)
ZZZZZ		08/31/2020 23:53	1		R-624Si1MS 30m 0.25 (mm)
ZZZZZ		09/01/2020 00:15	1		R-624Si1MS 30m 0.25 (mm)
ZZZZZ		09/01/2020 00:37	1		R-624Si1MS 30m 0.25 (mm)
ZZZZZ		09/01/2020 00:59	1		R-624Si1MS 30m 0.25 (mm)
ZZZZZ		09/01/2020 01:20	1		R-624Si1MS 30m 0.25 (mm)
ZZZZZ		09/01/2020 01:42	1		R-624Si1MS 30m 0.25 (mm)
ZZZZZ		09/01/2020 02:03	1		R-624Si1MS 30m 0.25 (mm)
ZZZZZ		09/01/2020 02:25	20		R-624Si1MS 30m 0.25 (mm)
ZZZZZ		09/01/2020 02:47	100		R-624Si1MS 30m 0.25 (mm)
ZZZZZ		09/01/2020 03:08	1000		R-624Si1MS 30m 0.25 (mm)
ZZZZZ		09/01/2020 03:30	100		R-624Si1MS 30m 0.25 (mm)
ZZZZZ		09/01/2020 03:52	1000		R-624Si1MS 30m 0.25 (mm)
ZZZZZ		09/01/2020 04:14	1		R-624Si1MS 30m 0.25 (mm)
ZZZZZ		09/01/2020 04:35	200		R-624Si1MS 30m 0.25 (mm)
ZZZZZ		09/01/2020 04:57	1		R-624Si1MS 30m 0.25 (mm)
ZZZZZ		09/01/2020 05:19	100		R-624Si1MS 30m 0.25 (mm)

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-11876-1

SDG No.: _____

Batch Number: 11163 Batch Start Date: 06/08/20 12:43 Batch Analyst: Campbell, Miranda E

Batch Method: 8260C LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MSV_30_826ISS 00005	MSV_Q_EE 00002	MSV_Q_ETBR 00003	MSV_Q_QARC 00031
BFB 410-11163/1		8260C LL		1 uL	1 uL				
IC 410-11163/12		8260C LL		25 mL	25 mL	5 uL			
ICIS 410-11163/13		8260C LL		25 mL	25 mL	5 uL			
IC 410-11163/14		8260C LL		25 mL	25 mL	5 uL			
IC 410-11163/15		8260C LL		25 mL	25 mL	5 uL			
IC 410-11163/16		8260C LL		25 mL	25 mL	5 uL			
IC 410-11163/17		8260C LL		25 mL	25 mL	5 uL			
IC 410-11163/18		8260C LL		25 mL	25 mL	5 uL			
ICV 410-11163/19		8260C LL		25 mL	25 mL	5 uL	12.5 uL	12.5 uL	12.5 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_Q_QVOA1 00032	MSV_Q_QVOA6 00029	MSV_QGAS_826 00044	MSV_RV1_826 00015	MSV_RV4_826 00016	MSV_RV4GAS826 00046
BFB 410-11163/1		8260C LL							
IC 410-11163/12		8260C LL					25 uL	25 uL	25 uL
ICIS 410-11163/13		8260C LL					10 uL	10 uL	10 uL
IC 410-11163/14		8260C LL					5 uL	5 uL	5 uL
IC 410-11163/15		8260C LL					2 uL	2 uL	2 uL
IC 410-11163/16		8260C LL					2 uL	2 uL	2 uL
IC 410-11163/17		8260C LL					2 uL	2 uL	2 uL
IC 410-11163/18		8260C LL					2 uL	2 uL	2 uL
ICV 410-11163/19		8260C LL		12.5 uL	12.5 uL	12.5 uL			

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_V_BFB 00002					
BFB 410-11163/1		8260C LL		1 uL					
IC 410-11163/12		8260C LL							
ICIS 410-11163/13		8260C LL							
IC 410-11163/14		8260C LL							
IC 410-11163/15		8260C LL							

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 Lancaster Laboratories Job No.: 410-11876-1

SDG No.: _____

Batch Number: 11163 Batch Start Date: 06/08/20 12:43 Batch Analyst: Campbell, Miranda E

Batch Method: 8260C LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_V_BFB 00002					
IC 410-11163/16		8260C LL							
IC 410-11163/17		8260C LL							
IC 410-11163/18		8260C LL							
ICV 410-11163/19		8260C LL							

Batch Notes	

Basis	Basis Description

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 Lancaster Laboratories Job No.: 410-11876-1

SDG No.: _____

Batch Number: 38982 Batch Start Date: 08/30/20 17:05 Batch Analyst: Viray, Don VBatch Method: 8260C LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	ResidualChloChe ck	Headspace	MSV_30_826ISS 00005
BFB 410-38982/1		8260C LL		1 uL	1 uL				
CCVIS 410-38982/3		8260C LL		25 mL	25 mL				5 uL
LCS 410-38982/4		8260C LL		25 mL	25 mL				5 uL
MB 410-38982/7		8260C LL		25 mL	25 mL				5 uL
410-11876-A-13	HD-QC1-0/1-1	8260C LL	T	25 mL	25 mL	<2 SU	N	N	5 uL
410-11876-A-6	HD-COD-SW-15-0/1 -0	8260C LL	T	25 mL	25 mL	<2 SU	N	N	5 uL
410-11876-A-6 MS	HD-COD-SW-15-0/1 -0 MS	8260C LL	T	25 mL	25 mL	<2 SU	N	N	5 uL
410-11876-A-6 MSD	HD-COD-SW-15-0/1 -0 MSD	8260C LL	T	25 mL	25 mL	<2 SU	N	N	5 uL
410-11876-A-1	HD-COD-SW-6-0/1- 0	8260C LL	T	25 mL	25 mL	<2 SU	N	N	5 uL
410-11876-A-2	HD-COD-SW-7-0/1- 0	8260C LL	T	25 mL	25 mL	<2 SU	N	N	5 uL
410-11876-A-3	HD-COD-SW-8-0/1- 0	8260C LL	T	25 mL	25 mL	<2 SU	N	N	5 uL
410-11876-A-4	HD-COD-SW-9-0/1- 0	8260C LL	T	25 mL	25 mL	<2 SU	N	N	5 uL
410-11876-A-5	HD-COD-SW-13-0/1 -0	8260C LL	T	25 mL	25 mL	<2 SU	N	N	5 uL
410-11876-A-7	HD-COD-SW-16-0/1 -0	8260C LL	T	25 mL	25 mL	<2 SU	N	N	5 uL
410-11876-A-8	HD-COD-SW-17-0/1 -0	8260C LL	T	25 mL	25 mL	<2 SU	N	N	5 uL
410-11876-A-9	HD-COD-SW-26-0/1 -0	8260C LL	T	25 mL	25 mL	<2 SU	N	N	5 uL
410-11876-A-10	HD-COD-SW-27-0/1 -0	8260C LL	T	25 mL	25 mL	<2 SU	N	N	5 uL
410-11876-A-11	HD-COD-SW-28-0/1 -0	8260C LL	T	25 mL	25 mL	<2 SU	N	N	5 uL
410-11876-A-12	HD-COD-SW-29-0/1 -0	8260C LL	T	25 mL	25 mL	<2 SU	N	N	5 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_Q_EE 00002	MSV_Q_ETBR 00003	MSV_Q_QARC 00042	MSV_Q_QVOA1 00043	MSV_Q_QVOA6 00041	MSV_QGAS_826 00067
BFB 410-38982/1		8260C LL							
CCVIS 410-38982/3		8260C LL							

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 Lancaster Laboratories Job No.: 410-11876-1

SDG No.: _____

Batch Number: 38982 Batch Start Date: 08/30/20 17:05 Batch Analyst: Viray, Don V

Batch Method: 8260C LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_Q_EE 00002	MSV_Q_ETBR 00003	MSV_Q_QARC 00042	MSV_Q_QVOA1 00043	MSV_Q_QVOA6 00041	MSV_QGAS_826 00067
LCS 410-38982/4		8260C LL		12.5 uL	12.5 uL	12.5 uL	12.5 uL	12.5 uL	12.5 uL
MB 410-38982/7		8260C LL							
410-11876-A-13	HD-QC1-0/1-1	8260C LL	T						
410-11876-A-6	HD-COD-SW-15-0/1-0	8260C LL	T						
410-11876-A-6 MS	HD-COD-SW-15-0/1-0 MS	8260C LL	T	5.38 uL	5.38 uL	5.38 uL	5.38 uL	5.38 uL	5.38 uL
410-11876-A-6 MSD	HD-COD-SW-15-0/1-0 MSD	8260C LL	T	5.38 uL	5.38 uL	5.38 uL	5.38 uL	5.38 uL	5.38 uL
410-11876-A-1	HD-COD-SW-6-0/1-0	8260C LL	T						
410-11876-A-2	HD-COD-SW-7-0/1-0	8260C LL	T						
410-11876-A-3	HD-COD-SW-8-0/1-0	8260C LL	T						
410-11876-A-4	HD-COD-SW-9-0/1-0	8260C LL	T						
410-11876-A-5	HD-COD-SW-13-0/1-0	8260C LL	T						
410-11876-A-7	HD-COD-SW-16-0/1-0	8260C LL	T						
410-11876-A-8	HD-COD-SW-17-0/1-0	8260C LL	T						
410-11876-A-9	HD-COD-SW-26-0/1-0	8260C LL	T						
410-11876-A-10	HD-COD-SW-27-0/1-0	8260C LL	T						
410-11876-A-11	HD-COD-SW-28-0/1-0	8260C LL	T						
410-11876-A-12	HD-COD-SW-29-0/1-0	8260C LL	T						

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_RV1_826 00021	MSV_RV4_826 00023	MSV_RV4GAS826 00069	MSV_V_BFB 00003		
BFB 410-38982/1		8260C LL					1 uL		
CCVIS 410-38982/3		8260C LL		25 uL	25 uL	25 uL			
LCS 410-38982/4		8260C LL							
MB 410-38982/7		8260C LL							

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 Lancaster Laboratories Job No.: 410-11876-1

SDG No.: _____

Batch Number: 38982 Batch Start Date: 08/30/20 17:05 Batch Analyst: Viray, Don V

Batch Method: 8260C LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_RV1_826 00021	MSV_RV4_826 00023	MSV_RV4GAS826 00069	MSV_V_BFB 00003		
410-11876-A-13	HD-QC1-0/1-1	8260C LL	T						
410-11876-A-6	HD-COD-SW-15-0/1-0	8260C LL	T						
410-11876-A-6 MS	HD-COD-SW-15-0/1-0 MS	8260C LL	T						
410-11876-A-6 MSD	HD-COD-SW-15-0/1-0 MSD	8260C LL	T						
410-11876-A-1	HD-COD-SW-6-0/1-0	8260C LL	T						
410-11876-A-2	HD-COD-SW-7-0/1-0	8260C LL	T						
410-11876-A-3	HD-COD-SW-8-0/1-0	8260C LL	T						
410-11876-A-4	HD-COD-SW-9-0/1-0	8260C LL	T						
410-11876-A-5	HD-COD-SW-13-0/1-0	8260C LL	T						
410-11876-A-7	HD-COD-SW-16-0/1-0	8260C LL	T						
410-11876-A-8	HD-COD-SW-17-0/1-0	8260C LL	T						
410-11876-A-9	HD-COD-SW-26-0/1-0	8260C LL	T						
410-11876-A-10	HD-COD-SW-27-0/1-0	8260C LL	T						
410-11876-A-11	HD-COD-SW-28-0/1-0	8260C LL	T						
410-11876-A-12	HD-COD-SW-29-0/1-0	8260C LL	T						

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-11876-1

SDG No.: _____

Batch Number: 39389 Batch Start Date: 08/31/20 17:44 Batch Analyst: Campbell, Miranda E

Batch Method: 8260C LL Batch End Date: _____

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	ResidualChloChe ck	Headspace	MSV_30_826ISS 00005
BFB 410-39389/1		8260C LL		1 uL	1 uL				
CCVIS 410-39389/3		8260C LL		25 mL	25 mL				5 uL
LCS 410-39389/4		8260C LL		25 mL	25 mL				5 uL
LCSD 410-39389/5		8260C LL		25 mL	25 mL				5 uL
MB 410-39389/7		8260C LL		25 mL	25 mL				5 uL
410-11876-B-14	HD-QC1-0/1-2	8260C LL	T	25 mL	25 mL	<2 SU	N	N	5 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_Q_EE 00002	MSV_Q_ETBR 00003	MSV_Q_QARC 00042	MSV_Q_QVOA1 00043	MSV_Q_QVOA6 00041	MSV_QGAS_826 00068
BFB 410-39389/1		8260C LL							
CCVIS 410-39389/3		8260C LL							
LCS 410-39389/4		8260C LL		12.5 uL	12.5 uL	12.5 uL	12.5 uL	12.5 uL	12.5 uL
LCSD 410-39389/5		8260C LL		12.5 uL	12.5 uL	12.5 uL	12.5 uL	12.5 uL	12.5 uL
MB 410-39389/7		8260C LL							
410-11876-B-14	HD-QC1-0/1-2	8260C LL	T						

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_RV1_826 00021	MSV_RV4_826 00023	MSV_RV4GAS826 00071	MSV_V_BFB 00003	AnalysisComment
BFB 410-39389/1		8260C LL					1 uL	
CCVIS 410-39389/3		8260C LL		25 uL	25 uL	25 uL		
LCS 410-39389/4		8260C LL						
LCSD 410-39389/5		8260C LL						
MB 410-39389/7		8260C LL						
410-11876-B-14	HD-QC1-0/1-2	8260C LL	T					surr came back in spec, made primary.

Batch Notes	

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 Lancaster Laboratories Job No.: 410-11876-1

SDG No.: _____

Batch Number: 39389 Batch Start Date: 08/31/20 17:44 Batch Analyst: Campbell, Miranda E

Batch Method: 8260C LL Batch End Date: _____

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



Lancaster Laboratories Environmental



410-11876 Chain of Custody

Water Analysis Request/Chain of Custody

Group # _____

Sample # _____

PAGE 1 of 2
TAP 20200825

Client: Groundwater Sciences Corporation				Matrix			Analyses Requested						For Lab Use Only		
Project Name#: FYNOP Monthly Surface Water		Site ID #: FYNOP, York PA		<input type="checkbox"/> Tissue	<input type="checkbox"/> Ground	<input checked="" type="checkbox"/> Surface	Preservation Codes						SF #: _____		
Project Manager: Chris O'Neil		P.O. #: 10012.42		<input type="checkbox"/> Potable	<input type="checkbox"/> NPDES								SCR #: _____		
Sampler: Casey Littlefield		PWSID #: N/A		<input type="checkbox"/> Water									Preservation Codes H = HCl T = Thiosulfate N = HNO ₃ B = NaOH S = H ₂ SO ₄ P = H ₃ PO ₄ O = Other		
Phone #: (717) 901-8176 / (717) 756-1246		Quote #:		<input type="checkbox"/> Sediment											
State where samples were collected: York, PA		For Compliance: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		<input type="checkbox"/> Other:									Remarks		
Sample Identification		Collection		Soil	Water	Other:	Total # of Containers	Aqueous VOCs via 8260C (low level - 25 ml purge)							
		Date	Time	Grab	Composite			H							
HD-COD-SW-6-0/1-0		8/25/20	1015	X			X	X							
HD-COD-SW-7-0/1-0			1100	X			X	X							
HD-COD-SW-8-0/1-0			0820	X			X	X							
HD-COD-SW-9-0/1-0			1150	X			X	X							
HD-COD-SW-13-0/1-0			0850	X			X	X							
HD-COD-SW-15-0/1-0			1125	X			X	X							
HD-COD-SW-15-0/1-0 MS			1125	X			X	X							
HD-COD-SW-15-0/1-0 MSD			1125	X			X	X							
HD-COD-SW-16-0/1-0			0935	X			X	X							
HD-COD-SW-17-0/1-0		✓	0945	X			X	X							
Turnaround Time Requested (TAT) (please check): Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/>				Relinquished by: <i>[Signature]</i>		Date	Time	Received by: <i>[Signature]</i>		Date	Time				
(Rush TAT is subject to laboratory approval and surcharges.)						8/25/20	1345	8/25/20		1345					
Date results are needed:				Relinquished by: <i>[Signature]</i>		Date	Time	Received by: <i>[Signature]</i>		Date	Time				
Rush results requested by (please check): E-Mail <input type="checkbox"/> Phone <input type="checkbox"/>						8/25/20	16:15	8/25/20		16:15					
E-mail Address:				Relinquished by: <i>[Signature]</i>		Date	Time	Received by: <i>[Signature]</i>		Date	Time				
Phone:						8/25/20	17:23								
Data Package Options (please check if required)				Relinquished by: <i>[Signature]</i>		Date	Time	Received by: <i>[Signature]</i>		Date	Time				
Type I (Validation/non-CLP) <input type="checkbox"/>	MA MCP <input type="checkbox"/>														
Type III (Reduced non-CLP) <input type="checkbox"/>	CT RCP <input type="checkbox"/>														
Type VI (Raw Data Only) <input type="checkbox"/>	TX TRRP-13 <input type="checkbox"/>														
NJ DKQP <input type="checkbox"/>	NYSDEC Category <input type="checkbox"/> A or <input type="checkbox"/> B														
EDD Required? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				Relinquished by Commercial Carrier:								Temperature upon receipt <u>4.9</u> °C			
If yes, format: _____ List				CLP Like Deliverables, Project Specific Analyte		UPS _____ FedEx _____ Other _____									

KAM

NP

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories
Environmental

Acct. # _____ Group # _____ Sample # _____

PAGE 2 of 2
TAP 2424 4825

Client: Groundwater Sciences Corporation				Matrix			Analyses Requested					For Lab Use Only	
Project Name/#: FYNOP Monthly Surface Water		Site ID #: FYNOP, York PA		<input type="checkbox"/> Tissue	<input type="checkbox"/> Ground	<input checked="" type="checkbox"/> Surface	Preservation Codes					SF #: _____	
Project Manager: Chris O'Neil		P.O. #: 10012.42		<input type="checkbox"/> Potable	<input type="checkbox"/> NPDES	<input type="checkbox"/> Trip Blank	H					SCR #: _____	
Sampler: Casey Littlefield		PWSID #: N/A		<input type="checkbox"/> Soil	<input type="checkbox"/> Sediment		Aqueous VOCs via 8260C (low level - 25 ml purge)					Preservation Codes H = HCl T = Thiosulfate N = HNO ₃ B = NaOH S = H ₂ SO ₄ P = H ₃ PO ₄ O = Other	
Phone #: (717) 901-8176 / (717) 756-1246		Quote #:		<input type="checkbox"/> Water									
State where samples were collected: York, PA			For Compliance: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			Total # of Containers						Remarks	
Sample Identification			Collection		Grab	Composite							
		Date	Time										
HD-COD-SW-26-0/1-0		8/25/20	1035	X			X						
HD-COD-SW-27-0/1-0			1115	X			X						
HD-COD-SW-28-0/1-0			1210	X			X						
HD-COD-SW-29-0/1-0			0810	X			X						
HD-QC1-0/1-1			1200	X			X						
HD-QC1-0/1-2		↙	—	X		X	3/54	X					Trip blanks received with air bubbles in all three vials
Turnaround Time Requested (TAT) (please check):				Standard <input checked="" type="checkbox"/> Rush <input type="checkbox"/>		Relinquished by: <i>[Signature]</i>		Date	Time	Received by: <i>[Signature]</i>		Date	Time
(Rush TAT is subject to laboratory approval and surcharges.)								8/25/20	1345			8/25/20	1345
Date results are needed:				E-Mail <input type="checkbox"/> Phone <input type="checkbox"/>		Relinquished by: <i>[Signature]</i>		Date	Time	Received by: <i>[Signature]</i>		Date	Time
Rush results requested by (please check):								8/25/20	1615			8/25/20	1415
E-mail Address:						Relinquished by: <i>[Signature]</i>		Date	Time	Received by: <i>[Signature]</i>		Date	Time
Phone:								8/25/20	1723				
Data Package Options (please check if required)						Relinquished by: <i>[Signature]</i>		Date	Time	Received by: <i>[Signature]</i>		Date	Time
Type I (Validation/non-CLP)	<input type="checkbox"/>	MA MCP	<input type="checkbox"/>										
Type III (Reduced non-CLP)	<input type="checkbox"/>	CT RCP	<input type="checkbox"/>			Relinquished by: <i>[Signature]</i>		Date	Time	Received by: <i>[Signature]</i>		Date	Time
Type VI (Raw Data Only)	<input type="checkbox"/>	TX TRRP-13	<input type="checkbox"/>									8-25-20	1830
NJ DKQP	<input type="checkbox"/>	NYSDEC Category	<input type="checkbox"/> A or <input type="checkbox"/> B			Relinquished by Commercial Carrier:							
EDD Required? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				If yes, format: _____ List		CLP Like Deliverables, Project Specific Analyte		Temperature upon receipt <u>4.9</u> °C					
						UPS _____ FedEx _____ Other _____							

Login Sample Receipt Checklist

Client: Groundwater Sciences Corporation

Job Number: 410-11876-1

Login Number: 11876
List Number: 1
Creator: Metzger, Katherine A

List Source: Eurofins Lancaster Laboratories Env

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal is intact.	N/A	
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 (≤ 6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable (≤ 6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	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	
There is sufficient vol. for all requested analyses.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	N/A	
Is the Field Sampler's name present on COC?	True	
Sample Preservation Verified.	N/A	
Residual Chlorine Checked.	N/A	
Sample custody seals are intact.	N/A	