ANALYTICAL REPORT

Job Number: 410-15232-1

Job Description: fYNOP Surface Water Monthly Sampling

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

Attention: Christopher O'Neil

Approved for release.
Marrissa C Williams
Project Manager
10/8/2020 2:59 PM

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10/08/2020

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
^c	CCV Recovery is outside acceptance limits.
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.
¤	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
410-15232-1

Comments
No additional comments.

Receipt
The samples were received on 9/25/2020 7:52 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was -1.2º C.

GC/MS VOA
Method 8260C LL: The continuing calibration verification (CCV) associated with batch 410-50506 recovered above the upper control limit for 2-Butanone (MEK), 2-Hexanone, 4-Methyl-2-pentanone (MIBK) and Acrylonitrile. Non-detections of the affected analytes are reported. Any detections are considered estimated.

Method 8260C LL: The preservative used in the sample containers provided is not compatible with one of the Method 8260 analytes requested. The following samples were received preserved with hydrochloric acid: HD-COD-SW-29-0/1-0 (410-15232-1), HD-COD-SW-8-0/1-0 (410-15232-2), HD-COD-SW-13-0/1-0 (410-15232-3), HD-COD-SW-16-0/1-0 (410-15232-4), HD-COD-SW-17-0/1-0 (410-15232-5), HD-COD-SW-6-0/1-0 (410-15232-6), HD-COD-SW-26-0/1-0 (410-15232-7), HD-COD-SW-7-0/1-0 (410-15232-8) and HD-COD-SW-27-0/1-0 (410-15232-9). The requested target analyte list includes Acrylonitrile, an acid-labile compound that degrades in an acidic medium.

Method 8260C LL: The continuing calibration verification (CCV) associated with batch 410-50813 recovered above the upper control limit for Acetone and Bromoform. Non-detections of the affected analytes are reported. Any detections are considered estimated.

Method 8260C LL: The preservative used in the sample containers provided is not compatible with one of the Method 8260 analytes requested. The following samples were received preserved with hydrochloric acid: HD-COD-SW-15-0/1-0 (410-15232-10), HD-COD-SW-9-0/1-0 (410-15232-11), HD-COD-SW-28-0/1-0 (410-15232-12), HD-QC1-0/1-1 (410-15232-13) and HD-QC1-0/1-2 (410-15232-14). The requested target analyte list includes Acrylonitrile, an acid-labile compound that degrades in an acidic medium.

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

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

Detection Summary

Client: Groundwater Sciences Corporation
Job ID: 410-15232-1
Project/Site: fYNOP Surface Water Monthly Sampling

Client Sample ID: HD-COD-SW-29-0/1-0 — Lab Sample ID: 410-15232-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	0.93	J ^c	5.0	0.60	ug/L	1		8260C LL	Total/NA
Acetone	2.6	J	5.0	0.90	ug/L	1		8260C LL	Total/NA
Carbon disulfide	0.074	J	1.0	0.060	ug/L	1		8260C LL	Total/NA
Chloromethane	0.12	J	0.50	0.060	ug/L	1		8260C LL	Total/NA
cis-1,2-Dichloroethene	0.11	J	0.50	0.050	ug/L	1		8260C LL	Total/NA
Trichloroethene	0.11	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: 410-15232-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	1.3	J ^c	5.0	0.60	ug/L	1		8260C LL	Total/NA
Acetone	2.7	J	5.0	0.90	ug/L	1		8260C LL	Total/NA
Carbon disulfide	0.081	J	1.0	0.060	ug/L	1		8260C LL	Total/NA
Chloromethane	0.11	J	0.50	0.060	ug/L	1		8260C LL	Total/NA
cis-1,2-Dichloroethene	0.11	J	0.50	0.050	ug/L	1		8260C LL	Total/NA
Trichloroethene	0.11	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: 410-15232-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	1.1	J ^c	5.0	0.60	ug/L	1		8260C LL	Total/NA
Acetone	2.5	J	5.0	0.90	ug/L	1		8260C LL	Total/NA
Carbon disulfide	0.092	J	1.0	0.060	ug/L	1		8260C LL	Total/NA
Chloromethane	0.11	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
Trichloroethene	0.13	J	0.50	0.060	ug/L	1		8260C LL	Total/NA

Client Sample ID: HD-COD-SW-16-0/1-0 — Lab Sample ID: 410-15232-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	1.0	J ^c	5.0	0.60	ug/L	1		8260C LL	Total/NA
Acetone	3.0	J	5.0	0.90	ug/L	1		8260C LL	Total/NA
Carbon disulfide	0.11	J	1.0	0.060	ug/L	1		8260C LL	Total/NA
Chloromethane	0.13	J	0.50	0.060	ug/L	1		8260C LL	Total/NA
cis-1,2-Dichloroethene	0.11	J	0.50	0.050	ug/L	1		8260C LL	Total/NA
Tetrachloroethene	0.068	J	0.50	0.060	ug/L	1		8260C LL	Total/NA
Trichloroethene	0.11	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: 410-15232-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.11	J	0.50	0.060	ug/L	1		8260C LL	Total/NA
1,1-Dichloroethene	0.061	J	0.50	0.060	ug/L	1		8260C LL	Total/NA
Chloroform	0.33	J	0.50	0.090	ug/L	1		8260C LL	Total/NA
cis-1,2-Dichloroethene	0.78		0.50	0.050	ug/L	1		8260C LL	Total/NA
Tetrachloroethene	2.3		0.50	0.060	ug/L	1		8260C LL	Total/NA
Trichloroethene	1.0		0.50	0.060	ug/L	1		8260C LL	Total/NA

Client Sample ID: HD-COD-SW-6-0/1-0 — Lab Sample ID: 410-15232-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	2.2	J	5.0	0.90	ug/L	1		8260C LL	Total/NA
Carbon disulfide	0.089	J	1.0	0.060	ug/L	1		8260C LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: HD-COD-SW-6-0/1-0 (Continued) — Lab Sample ID: 410-15232-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloromethane	0.10	J	0.50	0.060	ug/L	1		8260C LL	Total/NA
cis-1,2-Dichloroethene	0.099	J	0.50	0.050	ug/L	1		8260C LL	Total/NA
Trichloroethene	0.098	J	0.50	0.060	ug/L	1		8260C LL	Total/NA

Client Sample ID: HD-COD-SW-26-0/1-0 — Lab Sample ID: 410-15232-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	0.17	J	0.50	0.060	ug/L	1		8260C LL	Total/NA
Acetone	0.95	J	5.0	0.90	ug/L	1		8260C LL	Total/NA
Chloroform	0.86		0.50	0.090	ug/L	1		8260C LL	Total/NA
cis-1,2-Dichloroethene	0.083	J	0.50	0.050	ug/L	1		8260C LL	Total/NA
Tetrachloroethene	3.7		0.50	0.060	ug/L	1		8260C LL	Total/NA
Trichloroethene	0.20	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: 410-15232-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	2.2	J	5.0	0.90	ug/L	1		8260C LL	Total/NA
Carbon disulfide	0.12	J	1.0	0.060	ug/L	1		8260C LL	Total/NA
Chloromethane	0.12	J	0.50	0.060	ug/L	1		8260C LL	Total/NA
Trichloroethene	0.15	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: 410-15232-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	0.66	J ^c	5.0	0.60	ug/L	1		8260C LL	Total/NA
Acetone	2.8	J	5.0	0.90	ug/L	1		8260C LL	Total/NA
Carbon disulfide	0.12	J	1.0	0.060	ug/L	1		8260C LL	Total/NA
cis-1,2-Dichloroethene	0.11	J	0.50	0.050	ug/L	1		8260C LL	Total/NA
Trichloroethene	0.11	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: 410-15232-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.094	J	0.50	0.060	ug/L	1		8260C LL	Total/NA
1,1-Dichloroethene	0.067	J	0.50	0.060	ug/L	1		8260C LL	Total/NA
Chloroform	0.31	J	0.50	0.090	ug/L	1		8260C LL	Total/NA
cis-1,2-Dichloroethene	0.70		0.50	0.050	ug/L	1		8260C LL	Total/NA
Methyl tert-butyl ether	0.050	J	0.50	0.050	ug/L	1		8260C LL	Total/NA
Tetrachloroethene	2.2		0.50	0.060	ug/L	1		8260C LL	Total/NA
Trichloroethene	0.86		0.50	0.060	ug/L	1		8260C LL	Total/NA

Client Sample ID: HD-COD-SW-9-0/1-0 — Lab Sample ID: 410-15232-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	0.96	J	5.0	0.60	ug/L	1		8260C LL	Total/NA
Acetone	6.1	^c	5.0	0.90	ug/L	1		8260C LL	Total/NA
Carbon disulfide	0.091	J	1.0	0.060	ug/L	1		8260C LL	Total/NA
Chloromethane	0.091	J	0.50	0.060	ug/L	1		8260C LL	Total/NA
cis-1,2-Dichloroethene	0.061	J	0.50	0.050	ug/L	1		8260C LL	Total/NA
Tetrachloroethene	0.084	J	0.50	0.060	ug/L	1		8260C LL	Total/NA
Toluene	0.078	J	0.50	0.070	ug/L	1		8260C LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Groundwater Sciences Corporation
Job ID: 410-15232-1
Project/Site: fYNOP Surface Water Monthly Sampling

Client Sample ID: HD-COD-SW-28-0/1-0
Lab Sample ID: 410-15232-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	6.8	^c	5.0	0.90	ug/L	1		8260C LL	Total/NA
Carbon disulfide	0.085	J	1.0	0.060	ug/L	1		8260C LL	Total/NA
Methylene Chloride	0.075	J	0.50	0.070	ug/L	1		8260C LL	Total/NA
Tetrachloroethene	0.078	J	0.50	0.060	ug/L	1		8260C LL	Total/NA

Client Sample ID: HD-QC1-0/1-1
Lab Sample ID: 410-15232-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.11	J	0.50	0.060	ug/L	1		8260C LL	Total/NA
1,1-Dichloroethene	0.075	J	0.50	0.060	ug/L	1		8260C LL	Total/NA
Carbon disulfide	0.069	J	1.0	0.060	ug/L	1		8260C LL	Total/NA
Chloroform	0.30	J	0.50	0.090	ug/L	1		8260C LL	Total/NA
cis-1,2-Dichloroethene	0.82		0.50	0.050	ug/L	1		8260C LL	Total/NA
Tetrachloroethene	2.4		0.50	0.060	ug/L	1		8260C LL	Total/NA
Toluene	0.10	J	0.50	0.070	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-QC1-0/1-2
Lab Sample ID: 410-15232-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	1.2	J ^c	5.0	0.90	ug/L	1		8260C LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: HD-COD-SW-29-0/1-0
Lab Sample ID: 410-15232-1

Date Collected: 09/25/20 09:50
Matrix: Water
Date Received: 09/25/20 19:52

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			10/03/20 12:38	1
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			10/03/20 12:38	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			10/03/20 12:38	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			10/03/20 12:38	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			10/03/20 12:38	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			10/03/20 12:38	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			10/03/20 12:38	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			10/03/20 12:38	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			10/03/20 12:38	1
2-Butanone (MEK)	**0.93**	**J ^c**	5.0	0.60	ug/L			10/03/20 12:38	1
2-Hexanone	ND	^c	5.0	0.60	ug/L			10/03/20 12:38	1
4-Methyl-2-pentanone (MIBK)	ND	^c	5.0	0.70	ug/L			10/03/20 12:38	1
Acetone	**2.6**	**J**	5.0	0.90	ug/L			10/03/20 12:38	1
Acrylonitrile	ND	^c	5.0	0.40	ug/L			10/03/20 12:38	1
Benzene	ND		0.50	0.050	ug/L			10/03/20 12:38	1
Bromochloromethane	ND		0.50	0.050	ug/L			10/03/20 12:38	1
Bromodichloromethane	ND		0.50	0.050	ug/L			10/03/20 12:38	1
Bromoform	ND		1.0	0.30	ug/L			10/03/20 12:38	1
Bromomethane	ND		0.50	0.070	ug/L			10/03/20 12:38	1
Carbon disulfide	**0.074**	**J**	1.0	0.060	ug/L			10/03/20 12:38	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			10/03/20 12:38	1
Chlorobenzene	ND		0.50	0.060	ug/L			10/03/20 12:38	1
Chloroethane	ND		0.50	0.070	ug/L			10/03/20 12:38	1
Chloroform	ND		0.50	0.090	ug/L			10/03/20 12:38	1
Chloromethane	**0.12**	**J**	0.50	0.060	ug/L			10/03/20 12:38	1
cis-1,2-Dichloroethene	**0.11**	**J**	0.50	0.050	ug/L			10/03/20 12:38	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			10/03/20 12:38	1
Dibromochloromethane	ND		0.50	0.070	ug/L			10/03/20 12:38	1
Ethylbenzene	ND		0.50	0.060	ug/L			10/03/20 12:38	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			10/03/20 12:38	1
Methylene Chloride	ND		0.50	0.070	ug/L			10/03/20 12:38	1
Styrene	ND		0.50	0.050	ug/L			10/03/20 12:38	1
Tetrachloroethene	ND		0.50	0.060	ug/L			10/03/20 12:38	1
Toluene	ND		0.50	0.070	ug/L			10/03/20 12:38	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			10/03/20 12:38	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			10/03/20 12:38	1
Trichloroethene	**0.11**	**J**	0.50	0.060	ug/L			10/03/20 12:38	1
Vinyl chloride	ND		0.50	0.10	ug/L			10/03/20 12:38	1
Xylenes, Total	ND		1.0	0.15	ug/L			10/03/20 12:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 120*		*10/03/20 12:38*	*1*
Dibromofluoromethane (Surr)	*97*		*80 - 120*		*10/03/20 12:38*	*1*
Toluene-d8 (Surr)	*108*		*80 - 120*		*10/03/20 12:38*	*1*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*10/03/20 12:38*	*1*

Client Sample ID: HD-COD-SW-8-0/1-0
Lab Sample ID: 410-15232-2

Date Collected: 09/25/20 10:05
Matrix: Water
Date Received: 09/25/20 19:52

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			10/03/20 13:00	1
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			10/03/20 13:00	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			10/03/20 13:00	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			10/03/20 13:00	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			10/03/20 13:00	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			10/03/20 13:00	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			10/03/20 13:00	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			10/03/20 13:00	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			10/03/20 13:00	1
2-Butanone (MEK)	**1.3**	**J ^c**	5.0	0.60	ug/L			10/03/20 13:00	1
2-Hexanone	ND	^c	5.0	0.60	ug/L			10/03/20 13:00	1
4-Methyl-2-pentanone (MIBK)	ND	^c	5.0	0.70	ug/L			10/03/20 13:00	1
Acetone	**2.7**	**J**	5.0	0.90	ug/L			10/03/20 13:00	1
Acrylonitrile	ND	^c	5.0	0.40	ug/L			10/03/20 13:00	1
Benzene	ND		0.50	0.050	ug/L			10/03/20 13:00	1
Bromochloromethane	ND		0.50	0.050	ug/L			10/03/20 13:00	1
Bromodichloromethane	ND		0.50	0.050	ug/L			10/03/20 13:00	1
Bromoform	ND		1.0	0.30	ug/L			10/03/20 13:00	1
Bromomethane	ND		0.50	0.070	ug/L			10/03/20 13:00	1
Carbon disulfide	**0.081**	**J**	1.0	0.060	ug/L			10/03/20 13:00	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			10/03/20 13:00	1
Chlorobenzene	ND		0.50	0.060	ug/L			10/03/20 13:00	1
Chloroethane	ND		0.50	0.070	ug/L			10/03/20 13:00	1
Chloroform	ND		0.50	0.090	ug/L			10/03/20 13:00	1
Chloromethane	**0.11**	**J**	0.50	0.060	ug/L			10/03/20 13:00	1
cis-1,2-Dichloroethene	**0.11**	**J**	0.50	0.050	ug/L			10/03/20 13:00	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			10/03/20 13:00	1
Dibromochloromethane	ND		0.50	0.070	ug/L			10/03/20 13:00	1
Ethylbenzene	ND		0.50	0.060	ug/L			10/03/20 13:00	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			10/03/20 13:00	1
Methylene Chloride	ND		0.50	0.070	ug/L			10/03/20 13:00	1
Styrene	ND		0.50	0.050	ug/L			10/03/20 13:00	1
Tetrachloroethene	ND		0.50	0.060	ug/L			10/03/20 13:00	1
Toluene	ND		0.50	0.070	ug/L			10/03/20 13:00	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			10/03/20 13:00	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			10/03/20 13:00	1
Trichloroethene	**0.11**	**J**	0.50	0.060	ug/L			10/03/20 13:00	1
Vinyl chloride	ND		0.50	0.10	ug/L			10/03/20 13:00	1
Xylenes, Total	ND		1.0	0.15	ug/L			10/03/20 13:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*80 - 120*		*10/03/20 13:00*	*1*
Dibromofluoromethane (Surr)	*95*		*80 - 120*		*10/03/20 13:00*	*1*
Toluene-d8 (Surr)	*108*		*80 - 120*		*10/03/20 13:00*	*1*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*10/03/20 13:00*	*1*

Client Sample ID: HD-COD-SW-13-0/1-0
Lab Sample ID: 410-15232-3

Date Collected: 09/25/20 10:20
Matrix: Water
Date Received: 09/25/20 19:52

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			10/03/20 13:21	1
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			10/03/20 13:21	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			10/03/20 13:21	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			10/03/20 13:21	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			10/03/20 13:21	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			10/03/20 13:21	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			10/03/20 13:21	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			10/03/20 13:21	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			10/03/20 13:21	1
2-Butanone (MEK)	**1.1**	**J ^c**	5.0	0.60	ug/L			10/03/20 13:21	1
2-Hexanone	ND	^c	5.0	0.60	ug/L			10/03/20 13:21	1
4-Methyl-2-pentanone (MIBK)	ND	^c	5.0	0.70	ug/L			10/03/20 13:21	1
Acetone	**2.5**	**J**	5.0	0.90	ug/L			10/03/20 13:21	1
Acrylonitrile	ND	^c	5.0	0.40	ug/L			10/03/20 13:21	1
Benzene	ND		0.50	0.050	ug/L			10/03/20 13:21	1
Bromochloromethane	ND		0.50	0.050	ug/L			10/03/20 13:21	1
Bromodichloromethane	ND		0.50	0.050	ug/L			10/03/20 13:21	1
Bromoform	ND		1.0	0.30	ug/L			10/03/20 13:21	1
Bromomethane	ND		0.50	0.070	ug/L			10/03/20 13:21	1
Carbon disulfide	**0.092**	**J**	1.0	0.060	ug/L			10/03/20 13:21	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			10/03/20 13:21	1
Chlorobenzene	ND		0.50	0.060	ug/L			10/03/20 13:21	1
Chloroethane	ND		0.50	0.070	ug/L			10/03/20 13:21	1
Chloroform	ND		0.50	0.090	ug/L			10/03/20 13:21	1
Chloromethane	**0.11**	**J**	0.50	0.060	ug/L			10/03/20 13:21	1
cis-1,2-Dichloroethene	**0.12**	**J**	0.50	0.050	ug/L			10/03/20 13:21	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			10/03/20 13:21	1
Dibromochloromethane	ND		0.50	0.070	ug/L			10/03/20 13:21	1
Ethylbenzene	ND		0.50	0.060	ug/L			10/03/20 13:21	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			10/03/20 13:21	1
Methylene Chloride	ND		0.50	0.070	ug/L			10/03/20 13:21	1
Styrene	ND		0.50	0.050	ug/L			10/03/20 13:21	1
Tetrachloroethene	ND		0.50	0.060	ug/L			10/03/20 13:21	1
Toluene	ND		0.50	0.070	ug/L			10/03/20 13:21	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			10/03/20 13:21	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			10/03/20 13:21	1
Trichloroethene	**0.13**	**J**	0.50	0.060	ug/L			10/03/20 13:21	1
Vinyl chloride	ND		0.50	0.10	ug/L			10/03/20 13:21	1
Xylenes, Total	ND		1.0	0.15	ug/L			10/03/20 13:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 120*		*10/03/20 13:21*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 120*		*10/03/20 13:21*	*1*
Toluene-d8 (Surr)	*107*		*80 - 120*		*10/03/20 13:21*	*1*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*		*10/03/20 13:21*	*1*

Client Sample ID: HD-COD-SW-16-0/1-0
Lab Sample ID: 410-15232-4

Date Collected: 09/25/20 10:40
Matrix: Water
Date Received: 09/25/20 19:52

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			10/03/20 13:43	1
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			10/03/20 13:43	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			10/03/20 13:43	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			10/03/20 13:43	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			10/03/20 13:43	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			10/03/20 13:43	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			10/03/20 13:43	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			10/03/20 13:43	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			10/03/20 13:43	1
2-Butanone (MEK)	**1.0**	**J ^c**	5.0	0.60	ug/L			10/03/20 13:43	1
2-Hexanone	ND	^c	5.0	0.60	ug/L			10/03/20 13:43	1
4-Methyl-2-pentanone (MIBK)	ND	^c	5.0	0.70	ug/L			10/03/20 13:43	1
Acetone	**3.0**	**J**	5.0	0.90	ug/L			10/03/20 13:43	1
Acrylonitrile	ND	^c	5.0	0.40	ug/L			10/03/20 13:43	1
Benzene	ND		0.50	0.050	ug/L			10/03/20 13:43	1
Bromochloromethane	ND		0.50	0.050	ug/L			10/03/20 13:43	1
Bromodichloromethane	ND		0.50	0.050	ug/L			10/03/20 13:43	1
Bromoform	ND		1.0	0.30	ug/L			10/03/20 13:43	1
Bromomethane	ND		0.50	0.070	ug/L			10/03/20 13:43	1
Carbon disulfide	**0.11**	**J**	1.0	0.060	ug/L			10/03/20 13:43	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			10/03/20 13:43	1
Chlorobenzene	ND		0.50	0.060	ug/L			10/03/20 13:43	1
Chloroethane	ND		0.50	0.070	ug/L			10/03/20 13:43	1
Chloroform	ND		0.50	0.090	ug/L			10/03/20 13:43	1
Chloromethane	**0.13**	**J**	0.50	0.060	ug/L			10/03/20 13:43	1
cis-1,2-Dichloroethene	**0.11**	**J**	0.50	0.050	ug/L			10/03/20 13:43	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			10/03/20 13:43	1
Dibromochloromethane	ND		0.50	0.070	ug/L			10/03/20 13:43	1
Ethylbenzene	ND		0.50	0.060	ug/L			10/03/20 13:43	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			10/03/20 13:43	1
Methylene Chloride	ND		0.50	0.070	ug/L			10/03/20 13:43	1
Styrene	ND		0.50	0.050	ug/L			10/03/20 13:43	1
Tetrachloroethene	**0.068**	**J**	0.50	0.060	ug/L			10/03/20 13:43	1
Toluene	ND		0.50	0.070	ug/L			10/03/20 13:43	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			10/03/20 13:43	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			10/03/20 13:43	1
Trichloroethene	**0.11**	**J**	0.50	0.060	ug/L			10/03/20 13:43	1
Vinyl chloride	ND		0.50	0.10	ug/L			10/03/20 13:43	1
Xylenes, Total	ND		1.0	0.15	ug/L			10/03/20 13:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*80 - 120*		*10/03/20 13:43*	*1*
Dibromofluoromethane (Surr)	*97*		*80 - 120*		*10/03/20 13:43*	*1*
Toluene-d8 (Surr)	*107*		*80 - 120*		*10/03/20 13:43*	*1*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*10/03/20 13:43*	*1*

Client Sample ID: HD-COD-SW-17-0/1-0
Lab Sample ID: 410-15232-5

Date Collected: 09/25/20 10:50
Matrix: Water
Date Received: 09/25/20 19:52

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			10/03/20 14:04	1
1,1,1-Trichloroethane	**0.11**	**J**	0.50	0.060	ug/L			10/03/20 14:04	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			10/03/20 14:04	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			10/03/20 14:04	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			10/03/20 14:04	1
1,1-Dichloroethene	**0.061**	**J**	0.50	0.060	ug/L			10/03/20 14:04	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			10/03/20 14:04	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			10/03/20 14:04	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			10/03/20 14:04	1
2-Butanone (MEK)	ND	^c	5.0	0.60	ug/L			10/03/20 14:04	1
2-Hexanone	ND	^c	5.0	0.60	ug/L			10/03/20 14:04	1
4-Methyl-2-pentanone (MIBK)	ND	^c	5.0	0.70	ug/L			10/03/20 14:04	1
Acetone	ND		5.0	0.90	ug/L			10/03/20 14:04	1
Acrylonitrile	ND	^c	5.0	0.40	ug/L			10/03/20 14:04	1
Benzene	ND		0.50	0.050	ug/L			10/03/20 14:04	1
Bromochloromethane	ND		0.50	0.050	ug/L			10/03/20 14:04	1
Bromodichloromethane	ND		0.50	0.050	ug/L			10/03/20 14:04	1
Bromoform	ND		1.0	0.30	ug/L			10/03/20 14:04	1
Bromomethane	ND		0.50	0.070	ug/L			10/03/20 14:04	1
Carbon disulfide	ND		1.0	0.060	ug/L			10/03/20 14:04	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			10/03/20 14:04	1
Chlorobenzene	ND		0.50	0.060	ug/L			10/03/20 14:04	1
Chloroethane	ND		0.50	0.070	ug/L			10/03/20 14:04	1
Chloroform	**0.33**	**J**	0.50	0.090	ug/L			10/03/20 14:04	1
Chloromethane	ND		0.50	0.060	ug/L			10/03/20 14:04	1
cis-1,2-Dichloroethene	**0.78**		0.50	0.050	ug/L			10/03/20 14:04	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			10/03/20 14:04	1
Dibromochloromethane	ND		0.50	0.070	ug/L			10/03/20 14:04	1
Ethylbenzene	ND		0.50	0.060	ug/L			10/03/20 14:04	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			10/03/20 14:04	1
Methylene Chloride	ND		0.50	0.070	ug/L			10/03/20 14:04	1
Styrene	ND		0.50	0.050	ug/L			10/03/20 14:04	1
Tetrachloroethene	**2.3**		0.50	0.060	ug/L			10/03/20 14:04	1
Toluene	ND		0.50	0.070	ug/L			10/03/20 14:04	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			10/03/20 14:04	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			10/03/20 14:04	1
Trichloroethene	**1.0**		0.50	0.060	ug/L			10/03/20 14:04	1
Vinyl chloride	ND		0.50	0.10	ug/L			10/03/20 14:04	1
Xylenes, Total	ND		1.0	0.15	ug/L			10/03/20 14:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*80 - 120*		*10/03/20 14:04*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 120*		*10/03/20 14:04*	*1*
Toluene-d8 (Surr)	*108*		*80 - 120*		*10/03/20 14:04*	*1*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*10/03/20 14:04*	*1*

Client Sample ID: HD-COD-SW-6-0/1-0
Lab Sample ID: 410-15232-6

Date Collected: 09/25/20 11:15
Matrix: Water
Date Received: 09/25/20 19:52

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			10/03/20 14:26	1
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			10/03/20 14:26	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			10/03/20 14:26	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			10/03/20 14:26	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			10/03/20 14:26	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			10/03/20 14:26	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			10/03/20 14:26	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			10/03/20 14:26	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			10/03/20 14:26	1
2-Butanone (MEK)	ND	^c	5.0	0.60	ug/L			10/03/20 14:26	1
2-Hexanone	ND	^c	5.0	0.60	ug/L			10/03/20 14:26	1
4-Methyl-2-pentanone (MIBK)	ND	^c	5.0	0.70	ug/L			10/03/20 14:26	1
Acetone	**2.2**	**J**	5.0	0.90	ug/L			10/03/20 14:26	1
Acrylonitrile	ND	^c	5.0	0.40	ug/L			10/03/20 14:26	1
Benzene	ND		0.50	0.050	ug/L			10/03/20 14:26	1
Bromochloromethane	ND		0.50	0.050	ug/L			10/03/20 14:26	1
Bromodichloromethane	ND		0.50	0.050	ug/L			10/03/20 14:26	1
Bromoform	ND		1.0	0.30	ug/L			10/03/20 14:26	1
Bromomethane	ND		0.50	0.070	ug/L			10/03/20 14:26	1
Carbon disulfide	**0.089**	**J**	1.0	0.060	ug/L			10/03/20 14:26	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			10/03/20 14:26	1
Chlorobenzene	ND		0.50	0.060	ug/L			10/03/20 14:26	1
Chloroethane	ND		0.50	0.070	ug/L			10/03/20 14:26	1
Chloroform	ND		0.50	0.090	ug/L			10/03/20 14:26	1
Chloromethane	**0.10**	**J**	0.50	0.060	ug/L			10/03/20 14:26	1
cis-1,2-Dichloroethene	**0.099**	**J**	0.50	0.050	ug/L			10/03/20 14:26	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			10/03/20 14:26	1
Dibromochloromethane	ND		0.50	0.070	ug/L			10/03/20 14:26	1
Ethylbenzene	ND		0.50	0.060	ug/L			10/03/20 14:26	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			10/03/20 14:26	1
Methylene Chloride	ND		0.50	0.070	ug/L			10/03/20 14:26	1
Styrene	ND		0.50	0.050	ug/L			10/03/20 14:26	1
Tetrachloroethene	ND		0.50	0.060	ug/L			10/03/20 14:26	1
Toluene	ND		0.50	0.070	ug/L			10/03/20 14:26	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			10/03/20 14:26	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			10/03/20 14:26	1
Trichloroethene	**0.098**	**J**	0.50	0.060	ug/L			10/03/20 14:26	1
Vinyl chloride	ND		0.50	0.10	ug/L			10/03/20 14:26	1
Xylenes, Total	ND		1.0	0.15	ug/L			10/03/20 14:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 120*		*10/03/20 14:26*	*1*
Dibromofluoromethane (Surr)	*97*		*80 - 120*		*10/03/20 14:26*	*1*
Toluene-d8 (Surr)	*108*		*80 - 120*		*10/03/20 14:26*	*1*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*10/03/20 14:26*	*1*

Client Sample ID: HD-COD-SW-26-0/1-0
Lab Sample ID: 410-15232-7

Date Collected: 09/25/20 11:45
Matrix: Water
Date Received: 09/25/20 19:52

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			10/03/20 14:47	1
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			10/03/20 14:47	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			10/03/20 14:47	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			10/03/20 14:47	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			10/03/20 14:47	1
1,1-Dichloroethene	**0.17**	**J**	0.50	0.060	ug/L			10/03/20 14:47	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			10/03/20 14:47	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			10/03/20 14:47	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			10/03/20 14:47	1
2-Butanone (MEK)	ND	^c	5.0	0.60	ug/L			10/03/20 14:47	1
2-Hexanone	ND	^c	5.0	0.60	ug/L			10/03/20 14:47	1
4-Methyl-2-pentanone (MIBK)	ND	^c	5.0	0.70	ug/L			10/03/20 14:47	1
Acetone	**0.95**	**J**	5.0	0.90	ug/L			10/03/20 14:47	1
Acrylonitrile	ND	^c	5.0	0.40	ug/L			10/03/20 14:47	1
Benzene	ND		0.50	0.050	ug/L			10/03/20 14:47	1
Bromochloromethane	ND		0.50	0.050	ug/L			10/03/20 14:47	1
Bromodichloromethane	ND		0.50	0.050	ug/L			10/03/20 14:47	1
Bromoform	ND		1.0	0.30	ug/L			10/03/20 14:47	1
Bromomethane	ND		0.50	0.070	ug/L			10/03/20 14:47	1
Carbon disulfide	ND		1.0	0.060	ug/L			10/03/20 14:47	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			10/03/20 14:47	1
Chlorobenzene	ND		0.50	0.060	ug/L			10/03/20 14:47	1
Chloroethane	ND		0.50	0.070	ug/L			10/03/20 14:47	1
Chloroform	**0.86**		0.50	0.090	ug/L			10/03/20 14:47	1
Chloromethane	ND		0.50	0.060	ug/L			10/03/20 14:47	1
cis-1,2-Dichloroethene	**0.083**	**J**	0.50	0.050	ug/L			10/03/20 14:47	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			10/03/20 14:47	1
Dibromochloromethane	ND		0.50	0.070	ug/L			10/03/20 14:47	1
Ethylbenzene	ND		0.50	0.060	ug/L			10/03/20 14:47	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			10/03/20 14:47	1
Methylene Chloride	ND		0.50	0.070	ug/L			10/03/20 14:47	1
Styrene	ND		0.50	0.050	ug/L			10/03/20 14:47	1
Tetrachloroethene	**3.7**		0.50	0.060	ug/L			10/03/20 14:47	1
Toluene	ND		0.50	0.070	ug/L			10/03/20 14:47	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			10/03/20 14:47	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			10/03/20 14:47	1
Trichloroethene	**0.20**	**J**	0.50	0.060	ug/L			10/03/20 14:47	1
Vinyl chloride	ND		0.50	0.10	ug/L			10/03/20 14:47	1
Xylenes, Total	ND		1.0	0.15	ug/L			10/03/20 14:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*80 - 120*		*10/03/20 14:47*	*1*
Dibromofluoromethane (Surr)	*97*		*80 - 120*		*10/03/20 14:47*	*1*
Toluene-d8 (Surr)	*109*		*80 - 120*		*10/03/20 14:47*	*1*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*		*10/03/20 14:47*	*1*

Client Sample ID: HD-COD-SW-7-0/1-0
Lab Sample ID: 410-15232-8

Date Collected: 09/25/20 12:10
Matrix: Water
Date Received: 09/25/20 19:52

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			10/03/20 15:08	1
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			10/03/20 15:08	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			10/03/20 15:08	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			10/03/20 15:08	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			10/03/20 15:08	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			10/03/20 15:08	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			10/03/20 15:08	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			10/03/20 15:08	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			10/03/20 15:08	1
2-Butanone (MEK)	ND	^c	5.0	0.60	ug/L			10/03/20 15:08	1
2-Hexanone	ND	^c	5.0	0.60	ug/L			10/03/20 15:08	1
4-Methyl-2-pentanone (MIBK)	ND	^c	5.0	0.70	ug/L			10/03/20 15:08	1
Acetone	**2.2**	**J**	5.0	0.90	ug/L			10/03/20 15:08	1
Acrylonitrile	ND	^c	5.0	0.40	ug/L			10/03/20 15:08	1
Benzene	ND		0.50	0.050	ug/L			10/03/20 15:08	1
Bromochloromethane	ND		0.50	0.050	ug/L			10/03/20 15:08	1
Bromodichloromethane	ND		0.50	0.050	ug/L			10/03/20 15:08	1
Bromoform	ND		1.0	0.30	ug/L			10/03/20 15:08	1
Bromomethane	ND		0.50	0.070	ug/L			10/03/20 15:08	1
Carbon disulfide	**0.12**	**J**	1.0	0.060	ug/L			10/03/20 15:08	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			10/03/20 15:08	1
Chlorobenzene	ND		0.50	0.060	ug/L			10/03/20 15:08	1
Chloroethane	ND		0.50	0.070	ug/L			10/03/20 15:08	1
Chloroform	ND		0.50	0.090	ug/L			10/03/20 15:08	1
Chloromethane	**0.12**	**J**	0.50	0.060	ug/L			10/03/20 15:08	1
cis-1,2-Dichloroethene	ND		0.50	0.050	ug/L			10/03/20 15:08	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			10/03/20 15:08	1
Dibromochloromethane	ND		0.50	0.070	ug/L			10/03/20 15:08	1
Ethylbenzene	ND		0.50	0.060	ug/L			10/03/20 15:08	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			10/03/20 15:08	1
Methylene Chloride	ND		0.50	0.070	ug/L			10/03/20 15:08	1
Styrene	ND		0.50	0.050	ug/L			10/03/20 15:08	1
Tetrachloroethene	ND		0.50	0.060	ug/L			10/03/20 15:08	1
Toluene	ND		0.50	0.070	ug/L			10/03/20 15:08	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			10/03/20 15:08	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			10/03/20 15:08	1
Trichloroethene	**0.15**	**J**	0.50	0.060	ug/L			10/03/20 15:08	1
Vinyl chloride	ND		0.50	0.10	ug/L			10/03/20 15:08	1
Xylenes, Total	ND		1.0	0.15	ug/L			10/03/20 15:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*80 - 120*		*10/03/20 15:08*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 120*		*10/03/20 15:08*	*1*
Toluene-d8 (Surr)	*107*		*80 - 120*		*10/03/20 15:08*	*1*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*		*10/03/20 15:08*	*1*

Client Sample ID: HD-COD-SW-27-0/1-0
Lab Sample ID: 410-15232-9

Date Collected: 09/25/20 12:20
Matrix: Water
Date Received: 09/25/20 19:52

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			10/03/20 15:30	1
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			10/03/20 15:30	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			10/03/20 15:30	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			10/03/20 15:30	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			10/03/20 15:30	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			10/03/20 15:30	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			10/03/20 15:30	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			10/03/20 15:30	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			10/03/20 15:30	1
2-Butanone (MEK)	**0.66**	**J ^c**	5.0	0.60	ug/L			10/03/20 15:30	1
2-Hexanone	ND	^c	5.0	0.60	ug/L			10/03/20 15:30	1
4-Methyl-2-pentanone (MIBK)	ND	^c	5.0	0.70	ug/L			10/03/20 15:30	1
Acetone	**2.8**	**J**	5.0	0.90	ug/L			10/03/20 15:30	1
Acrylonitrile	ND	^c	5.0	0.40	ug/L			10/03/20 15:30	1
Benzene	ND		0.50	0.050	ug/L			10/03/20 15:30	1
Bromochloromethane	ND		0.50	0.050	ug/L			10/03/20 15:30	1
Bromodichloromethane	ND		0.50	0.050	ug/L			10/03/20 15:30	1
Bromoform	ND		1.0	0.30	ug/L			10/03/20 15:30	1
Bromomethane	ND		0.50	0.070	ug/L			10/03/20 15:30	1
Carbon disulfide	**0.12**	**J**	1.0	0.060	ug/L			10/03/20 15:30	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			10/03/20 15:30	1
Chlorobenzene	ND		0.50	0.060	ug/L			10/03/20 15:30	1
Chloroethane	ND		0.50	0.070	ug/L			10/03/20 15:30	1
Chloroform	ND		0.50	0.090	ug/L			10/03/20 15:30	1
Chloromethane	ND		0.50	0.060	ug/L			10/03/20 15:30	1
cis-1,2-Dichloroethene	**0.11**	**J**	0.50	0.050	ug/L			10/03/20 15:30	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			10/03/20 15:30	1
Dibromochloromethane	ND		0.50	0.070	ug/L			10/03/20 15:30	1
Ethylbenzene	ND		0.50	0.060	ug/L			10/03/20 15:30	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			10/03/20 15:30	1
Methylene Chloride	ND		0.50	0.070	ug/L			10/03/20 15:30	1
Styrene	ND		0.50	0.050	ug/L			10/03/20 15:30	1
Tetrachloroethene	ND		0.50	0.060	ug/L			10/03/20 15:30	1
Toluene	ND		0.50	0.070	ug/L			10/03/20 15:30	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			10/03/20 15:30	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			10/03/20 15:30	1
Trichloroethene	**0.11**	**J**	0.50	0.060	ug/L			10/03/20 15:30	1
Vinyl chloride	ND		0.50	0.10	ug/L			10/03/20 15:30	1
Xylenes, Total	ND		1.0	0.15	ug/L			10/03/20 15:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*80 - 120*		*10/03/20 15:30*	*1*
Dibromofluoromethane (Surr)	*96*		*80 - 120*		*10/03/20 15:30*	*1*
Toluene-d8 (Surr)	*107*		*80 - 120*		*10/03/20 15:30*	*1*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*		*10/03/20 15:30*	*1*

Client Sample ID: HD-COD-SW-15-0/1-0
Lab Sample ID: 410-15232-10

Date Collected: 09/25/20 12:30
Matrix: Water
Date Received: 09/25/20 19:52

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			10/05/20 13:00	1
1,1,1-Trichloroethane	**0.094**	**J**	0.50	0.060	ug/L			10/05/20 13:00	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			10/05/20 13:00	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			10/05/20 13:00	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			10/05/20 13:00	1
1,1-Dichloroethene	**0.067**	**J**	0.50	0.060	ug/L			10/05/20 13:00	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			10/05/20 13:00	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			10/05/20 13:00	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			10/05/20 13:00	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			10/05/20 13:00	1
2-Hexanone	ND		5.0	0.60	ug/L			10/05/20 13:00	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			10/05/20 13:00	1
Acetone	ND	^c	5.0	0.90	ug/L			10/05/20 13:00	1
Acrylonitrile	ND		5.0	0.40	ug/L			10/05/20 13:00	1
Benzene	ND		0.50	0.050	ug/L			10/05/20 13:00	1
Bromochloromethane	ND		0.50	0.050	ug/L			10/05/20 13:00	1
Bromodichloromethane	ND		0.50	0.050	ug/L			10/05/20 13:00	1
Bromoform	ND	^c	1.0	0.30	ug/L			10/05/20 13:00	1
Bromomethane	ND		0.50	0.070	ug/L			10/05/20 13:00	1
Carbon disulfide	ND		1.0	0.060	ug/L			10/05/20 13:00	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			10/05/20 13:00	1
Chlorobenzene	ND		0.50	0.060	ug/L			10/05/20 13:00	1
Chloroethane	ND		0.50	0.070	ug/L			10/05/20 13:00	1
Chloroform	**0.31**	**J**	0.50	0.090	ug/L			10/05/20 13:00	1
Chloromethane	ND	FH	0.50	0.060	ug/L			10/05/20 13:00	1
cis-1,2-Dichloroethene	**0.70**		0.50	0.050	ug/L			10/05/20 13:00	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			10/05/20 13:00	1
Dibromochloromethane	ND		0.50	0.070	ug/L			10/05/20 13:00	1
Ethylbenzene	ND		0.50	0.060	ug/L			10/05/20 13:00	1
Methyl tert-butyl ether	**0.050**	**J**	0.50	0.050	ug/L			10/05/20 13:00	1
Methylene Chloride	ND		0.50	0.070	ug/L			10/05/20 13:00	1
Styrene	ND		0.50	0.050	ug/L			10/05/20 13:00	1
Tetrachloroethene	**2.2**		0.50	0.060	ug/L			10/05/20 13:00	1
Toluene	ND		0.50	0.070	ug/L			10/05/20 13:00	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			10/05/20 13:00	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			10/05/20 13:00	1
Trichloroethene	**0.86**		0.50	0.060	ug/L			10/05/20 13:00	1
Vinyl chloride	ND	FH	0.50	0.10	ug/L			10/05/20 13:00	1
Xylenes, Total	ND		1.0	0.15	ug/L			10/05/20 13:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*112*		*80 - 120*		*10/05/20 13:00*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 120*		*10/05/20 13:00*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*10/05/20 13:00*	*1*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*		*10/05/20 13:00*	*1*

Client Sample ID: HD-COD-SW-9-0/1-0
Lab Sample ID: 410-15232-11

Date Collected: 09/25/20 13:05
Matrix: Water
Date Received: 09/25/20 19:52

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			10/05/20 14:29	1
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			10/05/20 14:29	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			10/05/20 14:29	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			10/05/20 14:29	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			10/05/20 14:29	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			10/05/20 14:29	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			10/05/20 14:29	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			10/05/20 14:29	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			10/05/20 14:29	1
2-Butanone (MEK)	**0.96**	**J**	5.0	0.60	ug/L			10/05/20 14:29	1
2-Hexanone	ND		5.0	0.60	ug/L			10/05/20 14:29	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			10/05/20 14:29	1
Acetone	**6.1**	**^c**	5.0	0.90	ug/L			10/05/20 14:29	1
Acrylonitrile	ND		5.0	0.40	ug/L			10/05/20 14:29	1
Benzene	ND		0.50	0.050	ug/L			10/05/20 14:29	1
Bromochloromethane	ND		0.50	0.050	ug/L			10/05/20 14:29	1
Bromodichloromethane	ND		0.50	0.050	ug/L			10/05/20 14:29	1
Bromoform	ND	^c	1.0	0.30	ug/L			10/05/20 14:29	1
Bromomethane	ND		0.50	0.070	ug/L			10/05/20 14:29	1
Carbon disulfide	**0.091**	**J**	1.0	0.060	ug/L			10/05/20 14:29	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			10/05/20 14:29	1
Chlorobenzene	ND		0.50	0.060	ug/L			10/05/20 14:29	1
Chloroethane	ND		0.50	0.070	ug/L			10/05/20 14:29	1
Chloroform	ND		0.50	0.090	ug/L			10/05/20 14:29	1
Chloromethane	**0.091**	**J**	0.50	0.060	ug/L			10/05/20 14:29	1
cis-1,2-Dichloroethene	**0.061**	**J**	0.50	0.050	ug/L			10/05/20 14:29	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			10/05/20 14:29	1
Dibromochloromethane	ND		0.50	0.070	ug/L			10/05/20 14:29	1
Ethylbenzene	ND		0.50	0.060	ug/L			10/05/20 14:29	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			10/05/20 14:29	1
Methylene Chloride	ND		0.50	0.070	ug/L			10/05/20 14:29	1
Styrene	ND		0.50	0.050	ug/L			10/05/20 14:29	1
Tetrachloroethene	**0.084**	**J**	0.50	0.060	ug/L			10/05/20 14:29	1
Toluene	**0.078**	**J**	0.50	0.070	ug/L			10/05/20 14:29	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			10/05/20 14:29	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			10/05/20 14:29	1
Trichloroethene	ND		0.50	0.060	ug/L			10/05/20 14:29	1
Vinyl chloride	ND		0.50	0.10	ug/L			10/05/20 14:29	1
Xylenes, Total	ND		1.0	0.15	ug/L			10/05/20 14:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*112*		*80 - 120*		*10/05/20 14:29*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*		*10/05/20 14:29*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*10/05/20 14:29*	*1*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*		*10/05/20 14:29*	*1*

Client Sample ID: HD-COD-SW-28-0/1-0
Lab Sample ID: 410-15232-12

Date Collected: 09/25/20 13:20
Matrix: Water
Date Received: 09/25/20 19:52

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			10/05/20 14:51	1
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			10/05/20 14:51	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			10/05/20 14:51	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			10/05/20 14:51	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			10/05/20 14:51	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			10/05/20 14:51	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			10/05/20 14:51	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			10/05/20 14:51	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			10/05/20 14:51	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			10/05/20 14:51	1
2-Hexanone	ND		5.0	0.60	ug/L			10/05/20 14:51	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			10/05/20 14:51	1
Acetone	**6.8**	**^c**	5.0	0.90	ug/L			10/05/20 14:51	1
Acrylonitrile	ND		5.0	0.40	ug/L			10/05/20 14:51	1
Benzene	ND		0.50	0.050	ug/L			10/05/20 14:51	1
Bromochloromethane	ND		0.50	0.050	ug/L			10/05/20 14:51	1
Bromodichloromethane	ND		0.50	0.050	ug/L			10/05/20 14:51	1
Bromoform	ND	^c	1.0	0.30	ug/L			10/05/20 14:51	1
Bromomethane	ND		0.50	0.070	ug/L			10/05/20 14:51	1
Carbon disulfide	**0.085**	**J**	1.0	0.060	ug/L			10/05/20 14:51	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			10/05/20 14:51	1
Chlorobenzene	ND		0.50	0.060	ug/L			10/05/20 14:51	1
Chloroethane	ND		0.50	0.070	ug/L			10/05/20 14:51	1
Chloroform	ND		0.50	0.090	ug/L			10/05/20 14:51	1
Chloromethane	ND		0.50	0.060	ug/L			10/05/20 14:51	1
cis-1,2-Dichloroethene	ND		0.50	0.050	ug/L			10/05/20 14:51	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			10/05/20 14:51	1
Dibromochloromethane	ND		0.50	0.070	ug/L			10/05/20 14:51	1
Ethylbenzene	ND		0.50	0.060	ug/L			10/05/20 14:51	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			10/05/20 14:51	1
Methylene Chloride	**0.075**	**J**	0.50	0.070	ug/L			10/05/20 14:51	1
Styrene	ND		0.50	0.050	ug/L			10/05/20 14:51	1
Tetrachloroethene	**0.078**	**J**	0.50	0.060	ug/L			10/05/20 14:51	1
Toluene	ND		0.50	0.070	ug/L			10/05/20 14:51	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			10/05/20 14:51	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			10/05/20 14:51	1
Trichloroethene	ND		0.50	0.060	ug/L			10/05/20 14:51	1
Vinyl chloride	ND		0.50	0.10	ug/L			10/05/20 14:51	1
Xylenes, Total	ND		1.0	0.15	ug/L			10/05/20 14:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*80 - 120*		*10/05/20 14:51*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 120*		*10/05/20 14:51*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*10/05/20 14:51*	*1*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*		*10/05/20 14:51*	*1*

Client Sample ID: HD-QC1-0/1-1
Date Collected: 09/25/20 12:00
Date Received: 09/25/20 19:52

Lab Sample ID: 410-15232-13
Matrix: Water

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			10/05/20 12:15	1
1,1,1-Trichloroethane	**0.11**	**J**	0.50	0.060	ug/L			10/05/20 12:15	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			10/05/20 12:15	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			10/05/20 12:15	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			10/05/20 12:15	1
1,1-Dichloroethene	**0.075**	**J**	0.50	0.060	ug/L			10/05/20 12:15	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			10/05/20 12:15	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			10/05/20 12:15	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			10/05/20 12:15	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			10/05/20 12:15	1
2-Hexanone	ND		5.0	0.60	ug/L			10/05/20 12:15	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			10/05/20 12:15	1
Acetone	ND	^c	5.0	0.90	ug/L			10/05/20 12:15	1
Acrylonitrile	ND		5.0	0.40	ug/L			10/05/20 12:15	1
Benzene	ND		0.50	0.050	ug/L			10/05/20 12:15	1
Bromochloromethane	ND		0.50	0.050	ug/L			10/05/20 12:15	1
Bromodichloromethane	ND		0.50	0.050	ug/L			10/05/20 12:15	1
Bromoform	ND	^c	1.0	0.30	ug/L			10/05/20 12:15	1
Bromomethane	ND		0.50	0.070	ug/L			10/05/20 12:15	1
Carbon disulfide	**0.069**	**J**	1.0	0.060	ug/L			10/05/20 12:15	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			10/05/20 12:15	1
Chlorobenzene	ND		0.50	0.060	ug/L			10/05/20 12:15	1
Chloroethane	ND		0.50	0.070	ug/L			10/05/20 12:15	1
Chloroform	**0.30**	**J**	0.50	0.090	ug/L			10/05/20 12:15	1
Chloromethane	ND		0.50	0.060	ug/L			10/05/20 12:15	1
cis-1,2-Dichloroethene	**0.82**		0.50	0.050	ug/L			10/05/20 12:15	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			10/05/20 12:15	1
Dibromochloromethane	ND		0.50	0.070	ug/L			10/05/20 12:15	1
Ethylbenzene	ND		0.50	0.060	ug/L			10/05/20 12:15	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			10/05/20 12:15	1
Methylene Chloride	ND		0.50	0.070	ug/L			10/05/20 12:15	1
Styrene	ND		0.50	0.050	ug/L			10/05/20 12:15	1
Tetrachloroethene	**2.4**		0.50	0.060	ug/L			10/05/20 12:15	1
Toluene	**0.10**	**J**	0.50	0.070	ug/L			10/05/20 12:15	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			10/05/20 12:15	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			10/05/20 12:15	1
Trichloroethene	**1.1**		0.50	0.060	ug/L			10/05/20 12:15	1
Vinyl chloride	ND		0.50	0.10	ug/L			10/05/20 12:15	1
Xylenes, Total	ND		1.0	0.15	ug/L			10/05/20 12:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*80 - 120*		*10/05/20 12:15*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 120*		*10/05/20 12:15*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*10/05/20 12:15*	*1*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*		*10/05/20 12:15*	*1*

Client Sample ID: HD-QC1-0/1-2
Date Collected: 09/25/20 00:00
Date Received: 09/25/20 19:52

Lab Sample ID: 410-15232-14
Matrix: Water

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			10/05/20 12:38	1
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			10/05/20 12:38	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			10/05/20 12:38	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			10/05/20 12:38	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			10/05/20 12:38	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			10/05/20 12:38	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			10/05/20 12:38	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			10/05/20 12:38	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			10/05/20 12:38	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			10/05/20 12:38	1
2-Hexanone	ND		5.0	0.60	ug/L			10/05/20 12:38	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			10/05/20 12:38	1
Acetone	**1.2**	**J ^c**	5.0	0.90	ug/L			10/05/20 12:38	1
Acrylonitrile	ND		5.0	0.40	ug/L			10/05/20 12:38	1
Benzene	ND		0.50	0.050	ug/L			10/05/20 12:38	1
Bromochloromethane	ND		0.50	0.050	ug/L			10/05/20 12:38	1
Bromodichloromethane	ND		0.50	0.050	ug/L			10/05/20 12:38	1
Bromoform	ND	^c	1.0	0.30	ug/L			10/05/20 12:38	1
Bromomethane	ND		0.50	0.070	ug/L			10/05/20 12:38	1
Carbon disulfide	ND		1.0	0.060	ug/L			10/05/20 12:38	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			10/05/20 12:38	1
Chlorobenzene	ND		0.50	0.060	ug/L			10/05/20 12:38	1
Chloroethane	ND		0.50	0.070	ug/L			10/05/20 12:38	1
Chloroform	ND		0.50	0.090	ug/L			10/05/20 12:38	1
Chloromethane	ND		0.50	0.060	ug/L			10/05/20 12:38	1
cis-1,2-Dichloroethene	ND		0.50	0.050	ug/L			10/05/20 12:38	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			10/05/20 12:38	1
Dibromochloromethane	ND		0.50	0.070	ug/L			10/05/20 12:38	1
Ethylbenzene	ND		0.50	0.060	ug/L			10/05/20 12:38	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			10/05/20 12:38	1
Methylene Chloride	ND		0.50	0.070	ug/L			10/05/20 12:38	1
Styrene	ND		0.50	0.050	ug/L			10/05/20 12:38	1
Tetrachloroethene	ND		0.50	0.060	ug/L			10/05/20 12:38	1
Toluene	ND		0.50	0.070	ug/L			10/05/20 12:38	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			10/05/20 12:38	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			10/05/20 12:38	1
Trichloroethene	ND		0.50	0.060	ug/L			10/05/20 12:38	1
Vinyl chloride	ND		0.50	0.10	ug/L			10/05/20 12:38	1
Xylenes, Total	ND		1.0	0.15	ug/L			10/05/20 12:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*110*		*80 - 120*		*10/05/20 12:38*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 120*		*10/05/20 12:38*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*10/05/20 12:38*	*1*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*		*10/05/20 12:38*	*1*

Default Detection Limits

Client: Groundwater Sciences Corporation
Job ID: 410-15232-1
Project/Site: fYNOP Surface Water Monthly Sampling

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
Job ID: 410-15232-1
Project/Site: fYNOP Surface Water Monthly Sampling

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	DBFM	TOL	BFB
Lab Sample ID	Client Sample ID	(80-120)	(80-120)	(80-120)	(80-120)
410-15232-1	HD-COD-SW-29-0/1-0	102	97	108	105
410-15232-2	HD-COD-SW-8-0/1-0	98	95	108	105
410-15232-3	HD-COD-SW-13-0/1-0	102	96	107	104
410-15232-4	HD-COD-SW-16-0/1-0	98	97	107	105
410-15232-5	HD-COD-SW-17-0/1-0	98	98	108	105
410-15232-6	HD-COD-SW-6-0/1-0	102	97	108	105
410-15232-7	HD-COD-SW-26-0/1-0	95	97	109	106
410-15232-8	HD-COD-SW-7-0/1-0	103	98	107	104
410-15232-9	HD-COD-SW-27-0/1-0	99	96	107	106
410-15232-10	HD-COD-SW-15-0/1-0	112	106	97	97
410-15232-10 MS	HD-COD-SW-15-0/1-0 MS	109	104	99	101
410-15232-10 MSD	HD-COD-SW-15-0/1-0 MSD	111	105	98	100
410-15232-11	HD-COD-SW-9-0/1-0	112	105	98	98
410-15232-12	HD-COD-SW-28-0/1-0	111	106	98	98
410-15232-13	HD-QC1-0/1-1	111	106	98	99
410-15232-14	HD-QC1-0/1-2	110	106	98	98
LCS 410-50506/4	Lab Control Sample	96	98	100	105
LCS 410-50813/4	Lab Control Sample	111	105	98	100
MB 410-50506/6	Method Blank	98	97	107	108
MB 410-50813/6	Method Blank	111	105	98	98

Surrogate Legend

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

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

Lab Sample ID: MB 410-50506/6
Matrix: Water
Analysis Batch: 50506

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			10/03/20 08:39	1
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			10/03/20 08:39	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			10/03/20 08:39	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			10/03/20 08:39	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			10/03/20 08:39	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			10/03/20 08:39	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			10/03/20 08:39	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			10/03/20 08:39	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			10/03/20 08:39	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			10/03/20 08:39	1
2-Hexanone	ND		5.0	0.60	ug/L			10/03/20 08:39	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			10/03/20 08:39	1
Acetone	ND		5.0	0.90	ug/L			10/03/20 08:39	1
Acrylonitrile	ND		5.0	0.40	ug/L			10/03/20 08:39	1
Benzene	ND		0.50	0.050	ug/L			10/03/20 08:39	1
Bromochloromethane	ND		0.50	0.050	ug/L			10/03/20 08:39	1
Bromodichloromethane	ND		0.50	0.050	ug/L			10/03/20 08:39	1
Bromoform	ND		1.0	0.30	ug/L			10/03/20 08:39	1
Bromomethane	ND		0.50	0.070	ug/L			10/03/20 08:39	1
Carbon disulfide	ND		1.0	0.060	ug/L			10/03/20 08:39	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			10/03/20 08:39	1
Chlorobenzene	ND		0.50	0.060	ug/L			10/03/20 08:39	1
Chloroethane	ND		0.50	0.070	ug/L			10/03/20 08:39	1
Chloroform	ND		0.50	0.090	ug/L			10/03/20 08:39	1
Chloromethane	ND		0.50	0.060	ug/L			10/03/20 08:39	1
cis-1,2-Dichloroethene	ND		0.50	0.050	ug/L			10/03/20 08:39	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			10/03/20 08:39	1
Dibromochloromethane	ND		0.50	0.070	ug/L			10/03/20 08:39	1
Ethylbenzene	ND		0.50	0.060	ug/L			10/03/20 08:39	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			10/03/20 08:39	1
Methylene Chloride	ND		0.50	0.070	ug/L			10/03/20 08:39	1
Styrene	ND		0.50	0.050	ug/L			10/03/20 08:39	1
Tetrachloroethene	ND		0.50	0.060	ug/L			10/03/20 08:39	1
Toluene	ND		0.50	0.070	ug/L			10/03/20 08:39	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			10/03/20 08:39	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			10/03/20 08:39	1
Trichloroethene	ND		0.50	0.060	ug/L			10/03/20 08:39	1
Vinyl chloride	ND		0.50	0.10	ug/L			10/03/20 08:39	1
Xylenes, Total	ND		1.0	0.15	ug/L			10/03/20 08:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*80 - 120*		*10/03/20 08:39*	*1*
Dibromofluoromethane (Surr)	*97*		*80 - 120*		*10/03/20 08:39*	*1*
Toluene-d8 (Surr)	*107*		*80 - 120*		*10/03/20 08:39*	*1*
4-Bromofluorobenzene (Surr)	*108*		*80 - 120*		*10/03/20 08:39*	*1*

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

Lab Sample ID: LCS 410-50506/4
Matrix: Water
Analysis Batch: 50506

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,1,1,2-Tetrachloroethane			5.00	4.82		ug/L		96	71 - 134		
1,1,1-Trichloroethane			5.00	4.85		ug/L		97	78 - 126		
1,1,2,2-Tetrachloroethane			5.00	5.17		ug/L		103	75 - 123		
1,1,2-Trichloroethane			5.00	5.37		ug/L		107	80 - 120		
1,1-Dichloroethane			5.00	5.28		ug/L		106	74 - 120		
1,1-Dichloroethene			5.00	4.80		ug/L		96	80 - 131		
1,2-Dibromoethane (EDB)			5.00	4.98		ug/L		100	80 - 120		
1,2-Dichloroethane			5.00	5.32		ug/L		106	69 - 122		
1,2-Dichloropropane			5.00	5.31		ug/L		106	80 - 120		
2-Butanone (MEK)			37.5	45.3		ug/L		121	59 - 141		
2-Hexanone			25.0	31.6		ug/L		126	52 - 140		
4-Methyl-2-pentanone (MIBK)			25.0	30.5		ug/L		122	55 - 140		
Acetone			37.5	33.4		ug/L		89	60 - 146		
Acrylonitrile			25.0	30.0		ug/L		120	64 - 139		
Benzene			5.00	5.00		ug/L		100	80 - 120		
Bromochloromethane			5.00	4.79		ug/L		96	80 - 120		
Bromodichloromethane			5.00	5.28		ug/L		106	73 - 124		
Bromoform			5.00	4.37		ug/L		87	49 - 144		
Bromomethane			5.00	4.77		ug/L		95	60 - 136		
Carbon disulfide			5.00	4.46		ug/L		89	67 - 130		
Carbon tetrachloride			5.00	4.71		ug/L		94	64 - 141		
Chlorobenzene			5.00	4.90		ug/L		98	80 - 120		
Chloroethane			5.00	4.91		ug/L		98	63 - 120		
Chloroform			5.00	5.23		ug/L		105	80 - 120		
Chloromethane			5.00	4.83		ug/L		97	56 - 124		
cis-1,2-Dichloroethene			5.00	5.25		ug/L		105	80 - 122		
cis-1,3-Dichloropropene			5.00	5.06		ug/L		101	67 - 121		
Dibromochloromethane			5.00	5.15		ug/L		103	64 - 138		
Ethylbenzene			5.00	5.11		ug/L		102	80 - 120		
Methyl tert-butyl ether			5.00	4.88		ug/L		98	69 - 120		
Methylene Chloride			5.00	5.10		ug/L		102	80 - 120		
Styrene			5.00	5.04		ug/L		101	80 - 120		
Tetrachloroethene			5.00	4.61		ug/L		92	80 - 120		
Toluene			5.00	5.00		ug/L		100	80 - 120		
trans-1,2-Dichloroethene			5.00	4.91		ug/L		98	80 - 122		
trans-1,3-Dichloropropene			5.00	5.20		ug/L		104	61 - 129		
Trichloroethene			5.00	4.83		ug/L		97	80 - 120		
Vinyl chloride			5.00	5.19		ug/L		104	60 - 125		
Xylenes, Total			15.0	15.0		ug/L		100	80 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*80 - 120*
Dibromofluoromethane (Surr)	*98*		*80 - 120*
Toluene-d8 (Surr)	*100*		*80 - 120*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*

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

Lab Sample ID: MB 410-50813/6
Matrix: Water
Analysis Batch: 50813

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			10/05/20 11:10	1
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			10/05/20 11:10	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			10/05/20 11:10	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			10/05/20 11:10	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			10/05/20 11:10	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			10/05/20 11:10	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			10/05/20 11:10	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			10/05/20 11:10	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			10/05/20 11:10	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			10/05/20 11:10	1
2-Hexanone	ND		5.0	0.60	ug/L			10/05/20 11:10	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			10/05/20 11:10	1
Acetone	ND		5.0	0.90	ug/L			10/05/20 11:10	1
Acrylonitrile	ND		5.0	0.40	ug/L			10/05/20 11:10	1
Benzene	ND		0.50	0.050	ug/L			10/05/20 11:10	1
Bromochloromethane	ND		0.50	0.050	ug/L			10/05/20 11:10	1
Bromodichloromethane	ND		0.50	0.050	ug/L			10/05/20 11:10	1
Bromoform	ND		1.0	0.30	ug/L			10/05/20 11:10	1
Bromomethane	ND		0.50	0.070	ug/L			10/05/20 11:10	1
Carbon disulfide	ND		1.0	0.060	ug/L			10/05/20 11:10	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			10/05/20 11:10	1
Chlorobenzene	ND		0.50	0.060	ug/L			10/05/20 11:10	1
Chloroethane	ND		0.50	0.070	ug/L			10/05/20 11:10	1
Chloroform	ND		0.50	0.090	ug/L			10/05/20 11:10	1
Chloromethane	ND		0.50	0.060	ug/L			10/05/20 11:10	1
cis-1,2-Dichloroethene	ND		0.50	0.050	ug/L			10/05/20 11:10	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			10/05/20 11:10	1
Dibromochloromethane	ND		0.50	0.070	ug/L			10/05/20 11:10	1
Ethylbenzene	ND		0.50	0.060	ug/L			10/05/20 11:10	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			10/05/20 11:10	1
Methylene Chloride	ND		0.50	0.070	ug/L			10/05/20 11:10	1
Styrene	ND		0.50	0.050	ug/L			10/05/20 11:10	1
Tetrachloroethene	ND		0.50	0.060	ug/L			10/05/20 11:10	1
Toluene	ND		0.50	0.070	ug/L			10/05/20 11:10	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			10/05/20 11:10	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			10/05/20 11:10	1
Trichloroethene	ND		0.50	0.060	ug/L			10/05/20 11:10	1
Vinyl chloride	ND		0.50	0.10	ug/L			10/05/20 11:10	1
Xylenes, Total	ND		1.0	0.15	ug/L			10/05/20 11:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*111*		*80 - 120*		*10/05/20 11:10*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*		*10/05/20 11:10*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*10/05/20 11:10*	*1*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*		*10/05/20 11:10*	*1*

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

Lab Sample ID: LCS 410-50813/4
Matrix: Water
Analysis Batch: 50813

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	5.00	4.88		ug/L		98	71 - 134
1,1,1-Trichloroethane	5.00	4.75		ug/L		95	78 - 126
1,1,2,2-Tetrachloroethane	5.00	5.30		ug/L		106	75 - 123
1,1,2-Trichloroethane	5.00	5.45		ug/L		109	80 - 120
1,1-Dichloroethane	5.00	5.06		ug/L		101	74 - 120
1,1-Dichloroethene	5.00	5.07		ug/L		101	80 - 131
1,2-Dibromoethane (EDB)	5.00	5.40		ug/L		108	80 - 120
1,2-Dichloroethane	5.00	5.05		ug/L		101	69 - 122
1,2-Dichloropropane	5.00	5.35		ug/L		107	80 - 120
2-Butanone (MEK)	37.5	40.7		ug/L		109	59 - 141
2-Hexanone	25.0	25.3		ug/L		101	52 - 140
4-Methyl-2-pentanone (MIBK)	25.0	24.2		ug/L		97	55 - 140
Acetone	37.5	47.4		ug/L		126	60 - 146
Acrylonitrile	25.0	27.8		ug/L		111	64 - 139
Benzene	5.00	5.09		ug/L		102	80 - 120
Bromochloromethane	5.00	5.40		ug/L		108	80 - 120
Bromodichloromethane	5.00	5.25		ug/L		105	73 - 124
Bromoform	5.00	5.71		ug/L		114	49 - 144
Bromomethane	5.00	5.25		ug/L		105	60 - 136
Carbon disulfide	5.00	4.99		ug/L		100	67 - 130
Carbon tetrachloride	5.00	4.85		ug/L		97	64 - 141
Chlorobenzene	5.00	4.85		ug/L		97	80 - 120
Chloroethane	5.00	5.12		ug/L		102	63 - 120
Chloroform	5.00	5.06		ug/L		101	80 - 120
Chloromethane	5.00	5.57		ug/L		111	56 - 124
cis-1,2-Dichloroethene	5.00	5.34		ug/L		107	80 - 122
cis-1,3-Dichloropropene	5.00	5.00		ug/L		100	67 - 121
Dibromochloromethane	5.00	5.53		ug/L		111	64 - 138
Ethylbenzene	5.00	4.70		ug/L		94	80 - 120
Methyl tert-butyl ether	5.00	4.90		ug/L		98	69 - 120
Methylene Chloride	5.00	5.47		ug/L		109	80 - 120
Styrene	5.00	4.84		ug/L		97	80 - 120
Tetrachloroethene	5.00	4.74		ug/L		95	80 - 120
Toluene	5.00	4.77		ug/L		95	80 - 120
trans-1,2-Dichloroethene	5.00	5.01		ug/L		100	80 - 122
trans-1,3-Dichloropropene	5.00	4.77		ug/L		95	61 - 129
Trichloroethene	5.00	5.06		ug/L		101	80 - 120
Vinyl chloride	5.00	5.53		ug/L		111	60 - 125
Xylenes, Total	15.0	14.4		ug/L		96	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*111*		*80 - 120*
Dibromofluoromethane (Surr)	*105*		*80 - 120*
Toluene-d8 (Surr)	*98*		*80 - 120*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*

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

Lab Sample ID: 410-15232-10 MS
Matrix: Water
Analysis Batch: 50813

Client Sample ID: HD-COD-SW-15-0/1-0 MS
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	ND		5.00	5.14		ug/L		103	71 - 134
1,1,1-Trichloroethane	0.094	J	5.00	5.37		ug/L		105	78 - 126
1,1,2,2-Tetrachloroethane	ND		5.00	5.35		ug/L		107	75 - 123
1,1,2-Trichloroethane	ND		5.00	5.71		ug/L		114	80 - 120
1,1-Dichloroethane	ND		5.00	5.49		ug/L		110	74 - 120
1,1-Dichloroethene	0.067	J	5.00	5.69		ug/L		112	80 - 131
1,2-Dibromoethane (EDB)	ND		5.00	5.47		ug/L		109	80 - 120
1,2-Dichloroethane	ND		5.00	5.25		ug/L		105	69 - 122
1,2-Dichloropropane	ND		5.00	5.63		ug/L		112	80 - 120
2-Butanone (MEK)	ND		37.5	36.2		ug/L		97	59 - 141
2-Hexanone	ND		25.0	22.4		ug/L		90	52 - 140
4-Methyl-2-pentanone (MIBK)	ND		25.0	21.4		ug/L		85	55 - 140
Acetone	ND	^c	37.5	38.2		ug/L		102	60 - 146
Acrylonitrile	ND		25.0	24.8		ug/L		99	64 - 139
Benzene	ND		5.00	5.51		ug/L		110	80 - 120
Bromochloromethane	ND		5.00	5.47		ug/L		109	80 - 120
Bromodichloromethane	ND		5.00	5.57		ug/L		111	73 - 124
Bromoform	ND	^c	5.00	5.94		ug/L		119	49 - 144
Bromomethane	ND		5.00	5.42		ug/L		108	60 - 136
Carbon disulfide	ND		5.00	5.52		ug/L		110	67 - 130
Carbon tetrachloride	ND		5.00	5.61		ug/L		112	64 - 141
Chlorobenzene	ND		5.00	5.26		ug/L		105	80 - 120
Chloroethane	ND		5.00	5.35		ug/L		107	63 - 120
Chloroform	0.31	J	5.00	5.72		ug/L		108	80 - 120
Chloromethane	ND	FH	5.00	6.13	FH	ug/L		122	80 - 120
cis-1,2-Dichloroethene	0.70		5.00	6.43		ug/L		115	80 - 122
cis-1,3-Dichloropropene	ND		5.00	5.29		ug/L		106	67 - 121
Dibromochloromethane	ND		5.00	5.74		ug/L		115	64 - 138
Ethylbenzene	ND		5.00	5.18		ug/L		103	80 - 120
Methyl tert-butyl ether	0.050	J	5.00	4.92		ug/L		97	69 - 120
Methylene Chloride	ND		5.00	5.72		ug/L		114	80 - 120
Styrene	ND		5.00	5.22		ug/L		104	80 - 120
Tetrachloroethene	2.2		5.00	7.49		ug/L		106	80 - 120
Toluene	ND		5.00	5.24		ug/L		105	80 - 120
trans-1,2-Dichloroethene	ND		5.00	5.53		ug/L		110	80 - 122
trans-1,3-Dichloropropene	ND		5.00	4.98		ug/L		100	61 - 129
Trichloroethene	0.86		5.00	6.41		ug/L		111	80 - 120
Vinyl chloride	ND	FH	5.00	6.16		ug/L		123	60 - 125
Xylenes, Total	ND		15.0	15.6		ug/L		104	80 - 120

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*109*		*80 - 120*
Dibromofluoromethane (Surr)	*104*		*80 - 120*
Toluene-d8 (Surr)	*99*		*80 - 120*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*

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

Lab Sample ID: 410-15232-10 MSD
Client Sample ID: HD-COD-SW-15-0/1-0 MSD
Matrix: Water
Prep Type: Total/NA
Analysis Batch: 50813

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	ND		5.00	5.30		ug/L		106	71 - 134	3	30
1,1,1-Trichloroethane	0.094	J	5.00	5.50		ug/L		108	78 - 126	2	30
1,1,2,2-Tetrachloroethane	ND		5.00	5.56		ug/L		111	75 - 123	4	30
1,1,2-Trichloroethane	ND		5.00	5.77		ug/L		115	80 - 120	1	30
1,1-Dichloroethane	ND		5.00	5.63		ug/L		112	74 - 120	2	30
1,1-Dichloroethene	0.067	J	5.00	5.90		ug/L		117	80 - 131	4	30
1,2-Dibromoethane (EDB)	ND		5.00	5.66		ug/L		113	80 - 120	3	30
1,2-Dichloroethane	ND		5.00	5.37		ug/L		107	69 - 122	2	30
1,2-Dichloropropane	ND		5.00	5.85		ug/L		117	80 - 120	4	30
2-Butanone (MEK)	ND		37.5	37.3		ug/L		99	59 - 141	3	30
2-Hexanone	ND		25.0	23.0		ug/L		92	52 - 140	3	30
4-Methyl-2-pentanone (MIBK)	ND		25.0	21.8		ug/L		87	55 - 140	2	30
Acetone	ND	^c	37.5	43.1		ug/L		115	60 - 146	12	30
Acrylonitrile	ND		25.0	25.6		ug/L		102	64 - 139	3	30
Benzene	ND		5.00	5.67		ug/L		113	80 - 120	3	30
Bromochloromethane	ND		5.00	5.66		ug/L		113	80 - 120	3	30
Bromodichloromethane	ND		5.00	5.66		ug/L		113	73 - 124	2	30
Bromoform	ND	^c	5.00	6.08		ug/L		121	49 - 144	2	30
Bromomethane	ND		5.00	5.85		ug/L		117	60 - 136	8	30
Carbon disulfide	ND		5.00	5.72		ug/L		114	67 - 130	4	30
Carbon tetrachloride	ND		5.00	5.69		ug/L		114	64 - 141	1	30
Chlorobenzene	ND		5.00	5.34		ug/L		107	80 - 120	1	30
Chloroethane	ND		5.00	5.90		ug/L		118	63 - 120	10	30
Chloroform	0.31	J	5.00	5.85		ug/L		111	80 - 120	2	30
Chloromethane	ND	FH	5.00	6.51	FH	ug/L		130	80 - 120	6	30
cis-1,2-Dichloroethene	0.70		5.00	6.60		ug/L		118	80 - 122	3	30
cis-1,3-Dichloropropene	ND		5.00	5.39		ug/L		108	67 - 121	2	30
Dibromochloromethane	ND		5.00	5.86		ug/L		117	64 - 138	2	30
Ethylbenzene	ND		5.00	5.30		ug/L		106	80 - 120	2	30
Methyl tert-butyl ether	0.050	J	5.00	5.14		ug/L		102	69 - 120	4	30
Methylene Chloride	ND		5.00	5.87		ug/L		117	80 - 120	3	30
Styrene	ND		5.00	5.35		ug/L		107	80 - 120	2	30
Tetrachloroethene	2.2		5.00	7.59		ug/L		108	80 - 120	1	30
Toluene	ND		5.00	5.34		ug/L		107	80 - 120	2	30
trans-1,2-Dichloroethene	ND		5.00	5.65		ug/L		113	80 - 122	2	30
trans-1,3-Dichloropropene	ND		5.00	5.17		ug/L		103	61 - 129	4	30
Trichloroethene	0.86		5.00	6.50		ug/L		113	80 - 120	1	30
Vinyl chloride	ND	FH	5.00	6.48	FH	ug/L		130	60 - 125	5	30
Xylenes, Total	ND		15.0	16.0		ug/L		107	80 - 120	2	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*111*		*80 - 120*
Dibromofluoromethane (Surr)	*105*		*80 - 120*
Toluene-d8 (Surr)	*98*		*80 - 120*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*

GC/MS VOA

Analysis Batch: 50506

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-15232-1	HD-COD-SW-29-0/1-0	Total/NA	Water	8260C LL	
410-15232-2	HD-COD-SW-8-0/1-0	Total/NA	Water	8260C LL	
410-15232-3	HD-COD-SW-13-0/1-0	Total/NA	Water	8260C LL	
410-15232-4	HD-COD-SW-16-0/1-0	Total/NA	Water	8260C LL	
410-15232-5	HD-COD-SW-17-0/1-0	Total/NA	Water	8260C LL	
410-15232-6	HD-COD-SW-6-0/1-0	Total/NA	Water	8260C LL	
410-15232-7	HD-COD-SW-26-0/1-0	Total/NA	Water	8260C LL	
410-15232-8	HD-COD-SW-7-0/1-0	Total/NA	Water	8260C LL	
410-15232-9	HD-COD-SW-27-0/1-0	Total/NA	Water	8260C LL	
MB 410-50506/6	Method Blank	Total/NA	Water	8260C LL	
LCS 410-50506/4	Lab Control Sample	Total/NA	Water	8260C LL	

Analysis Batch: 50813

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-15232-10	HD-COD-SW-15-0/1-0	Total/NA	Water	8260C LL	
410-15232-11	HD-COD-SW-9-0/1-0	Total/NA	Water	8260C LL	
410-15232-12	HD-COD-SW-28-0/1-0	Total/NA	Water	8260C LL	
410-15232-13	HD-QC1-0/1-1	Total/NA	Water	8260C LL	
410-15232-14	HD-QC1-0/1-2	Total/NA	Water	8260C LL	
MB 410-50813/6	Method Blank	Total/NA	Water	8260C LL	
LCS 410-50813/4	Lab Control Sample	Total/NA	Water	8260C LL	
410-15232-10 MS	HD-COD-SW-15-0/1-0 MS	Total/NA	Water	8260C LL	
410-15232-10 MSD	HD-COD-SW-15-0/1-0 MSD	Total/NA	Water	8260C LL	

Client Sample ID: HD-COD-SW-29-0/1-0
Lab Sample ID: 410-15232-1
Date Collected: 09/25/20 09:50
Matrix: Water
Date Received: 09/25/20 19:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C LL		1	50506	10/03/20 12:38	R64Z	ELLE

Client Sample ID: HD-COD-SW-8-0/1-0
Lab Sample ID: 410-15232-2
Date Collected: 09/25/20 10:05
Matrix: Water
Date Received: 09/25/20 19:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C LL		1	50506	10/03/20 13:00	R64Z	ELLE

Client Sample ID: HD-COD-SW-13-0/1-0
Lab Sample ID: 410-15232-3
Date Collected: 09/25/20 10:20
Matrix: Water
Date Received: 09/25/20 19:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C LL		1	50506	10/03/20 13:21	R64Z	ELLE

Client Sample ID: HD-COD-SW-16-0/1-0
Lab Sample ID: 410-15232-4
Date Collected: 09/25/20 10:40
Matrix: Water
Date Received: 09/25/20 19:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C LL		1	50506	10/03/20 13:43	R64Z	ELLE

Client Sample ID: HD-COD-SW-17-0/1-0
Lab Sample ID: 410-15232-5
Date Collected: 09/25/20 10:50
Matrix: Water
Date Received: 09/25/20 19:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C LL		1	50506	10/03/20 14:04	R64Z	ELLE

Client Sample ID: HD-COD-SW-6-0/1-0
Lab Sample ID: 410-15232-6
Date Collected: 09/25/20 11:15
Matrix: Water
Date Received: 09/25/20 19:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C LL		1	50506	10/03/20 14:26	R64Z	ELLE

Client Sample ID: HD-COD-SW-26-0/1-0
Lab Sample ID: 410-15232-7
Date Collected: 09/25/20 11:45
Matrix: Water
Date Received: 09/25/20 19:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C LL		1	50506	10/03/20 14:47	R64Z	ELLE

Client Sample ID: HD-COD-SW-7-0/1-0
Lab Sample ID: 410-15232-8

Date Collected: 09/25/20 12:10
Matrix: Water
Date Received: 09/25/20 19:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C LL		1	50506	10/03/20 15:08	R64Z	ELLE

Client Sample ID: HD-COD-SW-27-0/1-0
Lab Sample ID: 410-15232-9

Date Collected: 09/25/20 12:20
Matrix: Water
Date Received: 09/25/20 19:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C LL		1	50506	10/03/20 15:30	R64Z	ELLE

Client Sample ID: HD-COD-SW-15-0/1-0
Lab Sample ID: 410-15232-10

Date Collected: 09/25/20 12:30
Matrix: Water
Date Received: 09/25/20 19:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C LL		1	50813	10/05/20 13:00	UKAD	ELLE

Client Sample ID: HD-COD-SW-9-0/1-0
Lab Sample ID: 410-15232-11

Date Collected: 09/25/20 13:05
Matrix: Water
Date Received: 09/25/20 19:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C LL		1	50813	10/05/20 14:29	UKAD	ELLE

Client Sample ID: HD-COD-SW-28-0/1-0
Lab Sample ID: 410-15232-12

Date Collected: 09/25/20 13:20
Matrix: Water
Date Received: 09/25/20 19:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C LL		1	50813	10/05/20 14:51	UKAD	ELLE

Client Sample ID: HD-QC1-0/1-1
Lab Sample ID: 410-15232-13

Date Collected: 09/25/20 12:00
Matrix: Water
Date Received: 09/25/20 19:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C LL		1	50813	10/05/20 12:15	UKAD	ELLE

Client Sample ID: HD-QC1-0/1-2
Lab Sample ID: 410-15232-14

Date Collected: 09/25/20 00:00
Matrix: Water
Date Received: 09/25/20 19:52

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C LL		1	50813	10/05/20 12:38	UKAD	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
Job ID: 410-15232-1
Project/Site: fYNOP Surface Water Monthly Sampling

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
Job ID: 410-15232-1
Project/Site: fYNOP Surface Water Monthly Sampling

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
Job ID: 410-15232-1
Project/Site: fYNOP Surface Water Monthly Sampling

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
410-15232-1	HD-COD-SW-29-0/1-0	Water	09/25/20 09:50	09/25/20 19:52	
410-15232-2	HD-COD-SW-8-0/1-0	Water	09/25/20 10:05	09/25/20 19:52	
410-15232-3	HD-COD-SW-13-0/1-0	Water	09/25/20 10:20	09/25/20 19:52	
410-15232-4	HD-COD-SW-16-0/1-0	Water	09/25/20 10:40	09/25/20 19:52	
410-15232-5	HD-COD-SW-17-0/1-0	Water	09/25/20 10:50	09/25/20 19:52	
410-15232-6	HD-COD-SW-6-0/1-0	Water	09/25/20 11:15	09/25/20 19:52	
410-15232-7	HD-COD-SW-26-0/1-0	Water	09/25/20 11:45	09/25/20 19:52	
410-15232-8	HD-COD-SW-7-0/1-0	Water	09/25/20 12:10	09/25/20 19:52	
410-15232-9	HD-COD-SW-27-0/1-0	Water	09/25/20 12:20	09/25/20 19:52	
410-15232-10	HD-COD-SW-15-0/1-0	Water	09/25/20 12:30	09/25/20 19:52	
410-15232-11	HD-COD-SW-9-0/1-0	Water	09/25/20 13:05	09/25/20 19:52	
410-15232-12	HD-COD-SW-28-0/1-0	Water	09/25/20 13:20	09/25/20 19:52	
410-15232-13	HD-QC1-0/1-1	Water	09/25/20 12:00	09/25/20 19:52	
410-15232-14	HD-QC1-0/1-2	Water	09/25/20 00:00	09/25/20 19:52	

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laborator Job No.: 410-15232-1

SDG No.:

Instrument ID: 10193 Analysis Batch Number: 39724

Lab Sample ID: IC 410-39724/3 Client Sample ID:

Date Analyzed: 09/01/20 13:35 Lab File ID: CS01I01.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methyl acetate	3.86	Baseline	campbellme	09/01/20 16:54
Propionitrile	6.05	Incomplete Integration	campbellme	09/01/20 16:54
1,4-Dioxane	8.49	Incomplete Integration	campbellme	09/01/20 16:55

Lab Sample ID: ICIS 410-39724/4 Client Sample ID:

Date Analyzed: 09/01/20 13:57 Lab File ID: CS01I02.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.92	Incomplete Integration	campbellme	09/01/20 16:56
Methyl acetate	3.87	Baseline	campbellme	09/01/20 16:56
n-Butanol	7.98	Incomplete Integration	campbellme	09/01/20 17:14
1,4-Dioxane	8.51	Incomplete Integration	campbellme	09/01/20 16:57

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laborator Job No.: 410-15232-1

SDG No.:

Instrument ID: 10193 Analysis Batch Number: 39724

Lab Sample ID: IC 410-39724/5 Client Sample ID:

Date Analyzed: 09/01/20 14:19 Lab File ID: CS01I03.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.91	Incomplete Integration	campbellme	09/01/20 16:58
Propionitrile	6.04	Incomplete Integration	campbellme	09/01/20 16:58
n-Butanol	7.98	Incomplete Integration	campbellme	09/01/20 17:15
1,4-Dioxane	8.50	Incomplete Integration	campbellme	09/01/20 16:59

Lab Sample ID: IC 410-39724/6 Client Sample ID:

Date Analyzed: 09/01/20 14:42 Lab File ID: CS01I04.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.91	Incomplete Integration	campbellme	09/01/20 17:00
Propionitrile	6.05	Incomplete Integration	campbellme	09/01/20 17:00
n-Butanol	7.98	Incomplete Integration	campbellme	09/01/20 17:15
1,4-Dioxane	8.51	Incomplete Integration	campbellme	09/01/20 17:00

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laborator Job No.: 410-15232-1

SDG No.:

Instrument ID: 10193 Analysis Batch Number: 39724

Lab Sample ID: IC 410-39724/7 Client Sample ID:

Date Analyzed: 09/01/20 15:04 Lab File ID: CS01I05.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.91	Incomplete Integration	campbellme	09/01/20 17:01
Chloromethane	2.09	Baseline	campbellme	09/01/20 17:01
Acrylonitrile	4.41	Incomplete Integration	campbellme	09/01/20 17:02
Ethyl t-butyl ether	5.73	Incomplete Integration	campbellme	09/01/20 17:02
Propionitrile	6.04	Incomplete Integration	campbellme	09/01/20 17:03
Methacrylonitrile	6.26	Incomplete Integration	campbellme	09/01/20 17:02
n-Butanol	7.98	Incomplete Integration	campbellme	09/01/20 17:16
1,4-Dioxane	8.51	Incomplete Integration	campbellme	09/01/20 17:03

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laborator Job No.: 410-15232-1

SDG No.:

Instrument ID: 10193 Analysis Batch Number: 39724

Lab Sample ID: IC 410-39724/8 Client Sample ID:

Date Analyzed: 09/01/20 15:26 Lab File ID: CS01I06.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3-Butadiene	2.21	Baseline	campbellme	09/01/20 17:04
Acetone	3.48	Baseline	campbellme	09/01/20 17:04
Methyl acetate	3.89	Incomplete Integration	campbellme	09/01/20 17:04
Methylene Chloride	4.08	Incomplete Integration	campbellme	09/01/20 17:04
Propionitrile	6.05	Incomplete Integration	campbellme	09/01/20 17:05
n-Butanol	7.98	Incomplete Integration	campbellme	09/01/20 17:16
1,4-Dioxane	8.56	Incomplete Integration	campbellme	09/01/20 17:05

Lab Sample ID: IC 410-39724/9 Client Sample ID:

Date Analyzed: 09/01/20 15:48 Lab File ID: CS01I07.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3-Butadiene	2.20	Baseline	campbellme	09/01/20 17:06
Isobutyl alcohol	7.09	Incomplete Integration	campbellme	09/01/20 17:06
n-Butanol	8.00	Incomplete Integration	campbellme	09/01/20 17:17
1,4-Dioxane	8.51	Incomplete Integration	campbellme	09/01/20 17:06

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laborator Job No.: 410-15232-1

SDG No.:

Instrument ID: 10193 Analysis Batch Number: 39724

Lab Sample ID: ICV 410-39724/10 Client Sample ID:

Date Analyzed: 09/01/20 16:10 Lab File ID: CS01V01.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.92	Incomplete Integration	campbellme	09/01/20 17:26
1,3-Butadiene	2.21	Baseline	campbellme	09/01/20 17:30
Freon 113	3.46	Incomplete Integration	campbellme	09/01/20 17:31
t-Butyl alcohol-d10 (IS)	4.11	Incomplete Integration	campbellme	09/01/20 17:26
Propionitrile	6.05	Incomplete Integration	campbellme	09/01/20 17:27
n-Butanol	7.98	Incomplete Integration	campbellme	09/01/20 17:28
1,4-Dioxane	8.51	Incomplete Integration	campbellme	09/01/20 17:26

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laborator Job No.: 410-15232-1

SDG No.:

Instrument ID: 10193 Analysis Batch Number: 50813

Lab Sample ID: CCVIS 410-50813/3 Client Sample ID:

Date Analyzed: 10/05/20 10:03 Lab File ID: CC05C01.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methyl acetate	3.85	Other	virayd	10/05/20 11:09
t-Butyl alcohol-d10 (IS)	4.08	Other	virayd	10/05/20 11:09
1,4-Dioxane	8.47	Other	virayd	10/05/20 11:10

Lab Sample ID: LCS 410-50813/4 Client Sample ID:

Date Analyzed: 10/05/20 10:25 Lab File ID: CC05L01.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
t-Butyl alcohol-d10 (IS)	4.09	Other	virayd	10/05/20 11:14

Lab Sample ID: MB 410-50813/6 Client Sample ID:

Date Analyzed: 10/05/20 11:10 Lab File ID: CC05B01.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Carbon disulfide	3.69	Other	virayd	10/05/20 11:36

Lab Sample ID: 410-15232-13 Client Sample ID: HD-QC1-0/1-1

Date Analyzed: 10/05/20 12:15 Lab File ID: CC05S02.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Carbon disulfide	3.70	Incomplete Integration	spositok	10/06/20 12:10
Acetone		Invalid Compound ID	spositok	10/06/20 12:10
Methyl tert-butyl ether		Invalid Compound ID	spositok	10/06/20 12:10

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laborator Job No.: 410-15232-1

SDG No.:

Instrument ID: 10193 Analysis Batch Number: 50813

Lab Sample ID: 410-15232-14 Client Sample ID: HD-QC1-0/1-2

Date Analyzed: 10/05/20 12:38 Lab File ID: CC05S03.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Carbon disulfide		Invalid Compound ID	spositok	10/06/20 12:12

Lab Sample ID: 410-15232-10 Client Sample ID: HD-COD-SW-15-0/1-0

Date Analyzed: 10/05/20 13:00 Lab File ID: CC05S04.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Carbon disulfide		Invalid Compound ID	spositok	10/06/20 12:13

Lab Sample ID: 410-15232-11 Client Sample ID: HD-COD-SW-9-0/1-0

Date Analyzed: 10/05/20 14:29 Lab File ID: CC05S08.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
cis-1,2-Dichloroethene	5.97	Incomplete Integration	spositok	10/06/20 12:21
Methylene Chloride		Invalid Compound ID	spositok	10/06/20 12:21

Lab Sample ID: 410-15232-12 Client Sample ID: HD-COD-SW-28-0/1-0

Date Analyzed: 10/05/20 14:51 Lab File ID: CC05S09.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Carbon disulfide	3.70	Incomplete Integration	spositok	10/06/20 12:22
Methylene Chloride	4.05	Incomplete Integration	spositok	10/06/20 12:22

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laborator Job No.: 410-15232-1

SDG No.:

Instrument ID: 19930 Analysis Batch Number: 42158

Lab Sample ID: IC 410-42158/3 Client Sample ID:

Date Analyzed: 09/09/20 15:55 Lab File ID: IS09I01.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.98	Incomplete Integration	campbellme	09/09/20 22:07
Acetone	3.62	Incomplete Integration	campbellme	09/09/20 22:22
Methyl acetate	4.04	Incomplete Integration	campbellme	09/09/20 22:08
Propionitrile	6.23	Incomplete Integration	campbellme	09/09/20 22:08
1,4-Dioxane	8.64	Split Peak	campbellme	09/09/20 22:09

Lab Sample ID: ICIS 410-42158/4 Client Sample ID:

Date Analyzed: 09/09/20 16:16 Lab File ID: IS09I02.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.62	Incomplete Integration	campbellme	09/09/20 22:22
Methyl acetate	4.05	Incomplete Integration	campbellme	09/09/20 22:10
n-Butanol	8.10	Incomplete Integration	campbellme	09/09/20 22:10
1,4-Dioxane	8.65	Split Peak	campbellme	09/09/20 22:11

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laborator Job No.: 410-15232-1

SDG No.:

Instrument ID: 19930 Analysis Batch Number: 42158

Lab Sample ID: IC 410-42158/5 Client Sample ID:

Date Analyzed: 09/09/20 16:37 Lab File ID: IS09I03.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.62	Incomplete Integration	campbellme	09/09/20 22:23
Methyl acetate	4.05	Incomplete Integration	campbellme	09/09/20 22:12
Propionitrile	6.23	Incomplete Integration	campbellme	09/09/20 22:12
n-Butanol	8.10	Incomplete Integration	campbellme	09/09/20 22:12

Lab Sample ID: IC 410-42158/6 Client Sample ID:

Date Analyzed: 09/09/20 16:58 Lab File ID: IS09I04.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichlorofluoromethane	3.01	Incomplete Integration	campbellme	09/09/20 22:13
Acetone	3.62	Incomplete Integration	campbellme	09/09/20 22:24
Propionitrile	6.23	Incomplete Integration	campbellme	09/09/20 22:14
t-Amyl methyl ether	7.54	Incomplete Integration	campbellme	09/09/20 22:14
n-Butanol	8.11	Incomplete Integration	campbellme	09/09/20 22:14
1,4-Dioxane	8.64	Incomplete Integration	campbellme	09/09/20 22:14

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laborator Job No.: 410-15232-1

SDG No.:

Instrument ID: 19930 Analysis Batch Number: 42158

Lab Sample ID: IC 410-42158/7 Client Sample ID:

Date Analyzed: 09/09/20 17:20 Lab File ID: IS09I05.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3-Butadiene	2.30	Baseline	campbellme	09/09/20 22:15
Vinyl chloride	2.31	Incomplete Integration	campbellme	09/09/20 22:15
Trichlorofluoromethane	3.03	Incomplete Integration	campbellme	09/09/20 22:15
Acetone	3.63	Incomplete Integration	campbellme	09/09/20 22:16
Methyl acetate	4.06	Incomplete Integration	campbellme	09/09/20 22:16
t-Butyl alcohol-d10 (IS)	4.29	Incomplete Integration	campbellme	09/09/20 22:16
Propionitrile	6.24	Incomplete Integration	campbellme	09/09/20 22:17
1,2-Dichloroethane	7.43	Incomplete Integration	campbellme	09/09/20 22:17
n-Butanol	8.11	Incomplete Integration	campbellme	09/09/20 22:17
1,4-Dioxane	8.65	Incomplete Integration	campbellme	09/09/20 22:17

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laborator Job No.: 410-15232-1

SDG No.:

Instrument ID: 19930 Analysis Batch Number: 42158

Lab Sample ID: IC 410-42158/8 Client Sample ID:

Date Analyzed: 09/09/20 17:41 Lab File ID: IS09I06.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloromethane	2.18	Incomplete Integration	campbellme	09/09/20 22:18
Acetone	3.63	Incomplete Integration	campbellme	09/09/20 22:18
Ethyl bromide	3.83	Incomplete Integration	campbellme	09/09/20 22:18
Methyl acetate	4.06	Incomplete Integration	campbellme	09/09/20 22:18
Acrylonitrile	4.62	Incomplete Integration	campbellme	09/09/20 22:19
n-Butanol	8.11	Incomplete Integration	campbellme	09/09/20 22:19
1,4-Dioxane	8.65	Incomplete Integration	campbellme	09/09/20 22:19

Lab Sample ID: IC 410-42158/9 Client Sample ID:

Date Analyzed: 09/09/20 18:02 Lab File ID: IS09I07.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.61	Incomplete Integration	campbellme	09/09/20 22:20
t-Butyl alcohol	4.43	Incomplete Integration	campbellme	09/09/20 22:20
n-Butanol	8.11	Incomplete Integration	campbellme	09/09/20 22:20
1,4-Dioxane	8.65	Incomplete Integration	campbellme	09/09/20 22:20

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laborator Job No.: 410-15232-1

SDG No.:

Instrument ID: 19930 Analysis Batch Number: 42158

Lab Sample ID: ICV 410-42158/10 Client Sample ID:

Date Analyzed: 09/09/20 18:23 Lab File ID: IS09V01.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloromethane	2.17	Incomplete Integration	beckerk	09/11/20 18:22
1,3-Butadiene	2.29	Incomplete Integration	beckerk	09/11/20 18:22
Trichlorofluoromethane	3.01	Incomplete Integration	campbellme	09/09/20 22:37
Methyl acetate	4.04	Incomplete Integration	campbellme	09/09/20 22:37
Propionitrile	6.23	Baseline	beckerk	09/11/20 18:24
n-Butanol	8.10	Incomplete Integration	campbellme	09/09/20 22:38
1,4-Dioxane	8.65	Incomplete Integration	campbellme	09/09/20 22:38

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laborator Job No.: 410-15232-1

SDG No.:

Instrument ID: 19930 Analysis Batch Number: 50506

Lab Sample ID: CCVIS 410-50506/3 Client Sample ID:

Date Analyzed: 10/03/20 07:35 Lab File ID: IS21X02.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,3-Butadiene	2.28	Other	howej	10/03/20 08:09
Trichlorofluoromethane	3.01	Other	howej	10/03/20 08:09
Methyl acetate	4.03	Other	howej	10/03/20 08:10
t-Butyl alcohol-d10 (IS)	4.26	Other	howej	10/03/20 08:11
1,2-Dichloroethane	7.42	Other	howej	10/03/20 08:10
1,4-Dioxane	8.64	Other	howej	10/03/20 08:11

Lab Sample ID: LCS 410-50506/4 Client Sample ID:

Date Analyzed: 10/03/20 07:56 Lab File ID: IS21X04.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
t-Butyl alcohol-d10 (IS)	4.27	Other	howej	10/03/20 08:42
Acrylonitrile	4.62	Other	howej	10/03/20 08:42
1,2-Dichloroethane	7.42	Other	howej	10/03/20 08:43

Lab Sample ID: MB 410-50506/6 Client Sample ID:

Date Analyzed: 10/03/20 08:39 Lab File ID: IS21X07.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
t-Butyl alcohol-d10 (IS)	4.29	Other	howej	10/03/20 09:03

Lab Sample ID: 410-15232-1 Client Sample ID:

Date Analyzed: 10/03/20 12:38 Lab File ID: Io03s11.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
t-Butyl alcohol-d10 (IS)	4.28	Other	howej	10/03/20 13:14

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laborator Job No.: 410-15232-1

SDG No.:

Instrument ID: 19930 Analysis Batch Number: 50506

Lab Sample ID: 410-15232-2 Client Sample ID: HD-COD-SW-8-0/1-0

Date Analyzed: 10/03/20 13:00 Lab File ID: Io03s12.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Butanone (MEK)	6.15	Other	howej	10/03/20 13:41

Lab Sample ID: 410-15232-3 Client Sample ID: HD-COD-SW-13-0/1-0

Date Analyzed: 10/03/20 13:21 Lab File ID: Io03s13.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Carbon disulfide	3.90	Other	howej	10/03/20 13:59
t-Butyl alcohol-d10 (IS)	4.28	Other	howej	10/03/20 13:59

Lab Sample ID: 410-15232-4 Client Sample ID:

Date Analyzed: 10/03/20 13:43 Lab File ID: Io03s14.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
t-Butyl alcohol-d10 (IS)	4.26	Incomplete Integration	mellinger c	10/05/20 13:47
Trichloroethene	8.22	Incomplete Integration	mellinger c	10/05/20 13:47

Lab Sample ID: 410-15232-5 Client Sample ID: HD-COD-SW-17-0/1-0

Date Analyzed: 10/03/20 14:04 Lab File ID: Io03s15.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloromethane	2.18	Incomplete Integration	mellinger c	10/05/20 13:48
t-Butyl alcohol-d10 (IS)	4.29	Incomplete Integration	mellinger c	10/05/20 13:48

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laborator Job No.: 410-15232-1

SDG No.:

Instrument ID: 19930 Analysis Batch Number: 50506

Lab Sample ID: 410-15232-6 Client Sample ID: HD-COD-SW-6-0/1-0

Date Analyzed: 10/03/20 14:26 Lab File ID: Io03s16.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Carbon disulfide	3.89	Incomplete Integration	mellingerc	10/05/20 13:50
t-Butyl alcohol-d10 (IS)	4.27	Incomplete Integration	mellingerc	10/05/20 13:49
2-Butanone (MEK)	6.14	Incomplete Integration	mellingerc	10/05/20 13:50
cis-1,2-Dichloroethene	6.16	Incomplete Integration	mellingerc	10/05/20 13:50
Trichloroethene	8.22	Incomplete Integration	mellingerc	10/05/20 13:50

Lab Sample ID: 410-15232-7 Client Sample ID:

Date Analyzed: 10/03/20 14:47 Lab File ID: Io03s17.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
t-Butyl alcohol-d10 (IS)	4.29	Incomplete Integration	mellingerc	10/05/20 13:51
1,1,1-Trichloroethane	6.88	Incomplete Integration	mellingerc	10/05/20 13:51

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laborator Job No.: 410-15232-1

SDG No.:

Instrument ID: 19930 Analysis Batch Number: 50506

Lab Sample ID: 410-15232-8 Client Sample ID: HD-COD-SW-7-0/1-0

Date Analyzed: 10/03/20 15:08 Lab File ID: Io03s18.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloromethane	2.16	Incomplete Integration	mellingerc	10/05/20 13:52
t-Butyl alcohol-d10 (IS)	4.28	Incomplete Integration	mellingerc	10/05/20 13:52
Trichloroethene	8.23	Incomplete Integration	mellingerc	10/05/20 13:53
Bromoform		Invalid Compound ID	mellingerc	10/05/20 13:53
Tetrachloroethene	10.37	Incomplete Integration	mellingerc	10/05/20 13:53

Lab Sample ID: 410-15232-9 Client Sample ID:

Date Analyzed: 10/03/20 15:30 Lab File ID: Io03s19.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
t-Butyl alcohol-d10 (IS)	4.28	Incomplete Integration	mellingerc	10/05/20 13:53
Trichloroethene	8.24	Incomplete Integration	mellingerc	10/05/20 13:54

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-15232-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
MSV_25_826ISS_00001	03/03/21	08/31/20	Methanol, Lot DX212	10 mL	MSV_8260_SS_00189	1 mL	1,2-Dichloroethane-d4 (Surr)	250 ug/mL
							4-Bromofluorobenzene (Surr)	250 ug/mL
							Dibromofluoromethane (Surr)	250 ug/mL
							Toluene-d8 (Surr)	250 ug/mL
					MSV_Cus826_IS_00118	1 mL	1,4-Dichlorobenzene-d4	250 ug/mL
							Chlorobenzene-d5 (IS)	250 ug/mL
							Fluorobenzene (IS)	250 ug/mL
							t-Butyl alcohol-d10 (IS)	1250 ug/mL
.MSV_8260_SS_00189	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_00118	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_31_826ISS_00003	01/27/21	07/27/20	Methanol, Lot DX212	50 mL	MSV_8260_SS_00160	1 mL	1,2-Dichloroethane-d4 (Surr)	50 ug/mL
							4-Bromofluorobenzene (Surr)	50 ug/mL
							Dibromofluoromethane (Surr)	50 ug/mL
							Toluene-d8 (Surr)	50 ug/mL
					MSV_Cus826_IS_00099	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_00160	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_00099	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_HP25_ISSS_00014	03/30/21	09/30/20	Methanol, Lot DX212	10 mL	MSV_Cus826_IS_00131	1 mL	1,4-Dichlorobenzene-d4	250 ug/mL
							Chlorobenzene-d5 (IS)	250 ug/mL
							Fluorobenzene (IS)	250 ug/mL
							t-Butyl alcohol-d10 (IS)	1250 ug/mL
.MSV_Cus826_IS_00131	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_HP25_ISSS_00014	03/30/21	09/30/20	Methanol, Lot DX212	10 mL	MSV_8260_SS_00215	1 mL	1,2-Dichloroethane-d4 (Surr)	250 ug/mL
							4-Bromofluorobenzene (Surr)	250 ug/mL
							Dibromofluoromethane (Surr)	250 ug/mL
							Toluene-d8 (Surr)	250 ug/mL
.MSV_8260_SS_00215	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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-15232-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Toluene-d8 (Surr)	2500 ug/mL
MSV_Q_QVOA1_00044	10/01/20	09/01/20	Methanol, Lot DX212	25 mL	MSV_Q#1B_00053	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_00046	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_00052	1 mL	Carbon disulfide	40 mg/L
							Methyl tert-butyl ether	40 mg/L
.MSV_Q#1B_00053	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

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-15232-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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_00046	09/30/21		Restek, Lot A0158722		(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_00052	03/31/21		Restek, Lot A0158704		(Purchased Reagent)		Carbon disulfide	1000 ug/mL
							Methyl tert-butyl ether	1000 ug/mL
MSV_Q_QVOA1_00045	10/08/20	09/08/20	Methanol, Lot DX212	25 mL	MSV_Q#1B_00055	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_00045	1 mL	2-Butanone (MEK)	300 mg/L

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-15232-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							2-Hexanone	200 mg/L
							4-Methyl-2-pentanone (MIBK)	200 mg/L
							Acetone	300 mg/L
							Acrylonitrile	200 mg/L
					MSV_Q#4C_00053	1 mL	Carbon disulfide	40 mg/L
							Methyl tert-butyl ether	40 mg/L
.MSV_Q#1B_00055	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_00045	09/30/21		Restek, Lot A0158722		(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_00053	03/31/21		Restek, Lot A0158704		(Purchased Reagent)		Carbon disulfide	1000 ug/mL
							Methyl tert-butyl ether	1000 ug/mL
MSV_Q_QVOA1_00048	10/28/20	09/28/20	Methanol, Lot DX212	25 mL	MSV_Q#1B_00060	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

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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_00052	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_00057	1 mL	Carbon disulfide	40 mg/L
							Methyl tert-butyl ether	40 mg/L
.MSV_Q#1B_00060	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

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							trans-1,2-Dichloroethene	1000 ug/mL
							trans-1,3-Dichloropropene	1000 ug/mL
							Trichloroethene	1000 ug/mL
.MSV_Q#3B_00052	09/30/21		Restek, Lot A0158722		(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_00057	03/31/21		Restek, Lot A0158704		(Purchased Reagent)		Carbon disulfide	1000 ug/mL
							Methyl tert-butyl ether	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_Q_QVOA6_00042	10/03/20	09/03/20	Methanol, Lot DX212	25 mL	MSV_QCS#6Std_00050	1 mL	Bromochloromethane	40 ug/mL
.MSV_QCS#6Std_00050	09/30/21		Restek, Lot A0158906		(Purchased Reagent)		Bromochloromethane	1000 ug/mL
MSV_Q_QVOA6_00046	10/31/20	10/01/20	Methanol, Lot DX212	25 mL	MSV_QCS#6Std_00056	1 mL	Bromochloromethane	40 ug/mL
.MSV_QCS#6Std_00056	09/30/21		Restek, Lot A0158906		(Purchased Reagent)		Bromochloromethane	1000 ug/mL
MSV_QGAS_826_00069	09/08/20	09/01/20	Methanol, Lot DX212	1 mL	MSV_502QGas_00091	20 uL	Bromomethane	40 ug/mL
							Chloroethane	40 ug/mL
							Chloromethane	40 ug/mL
							Vinyl chloride	40 ug/mL
.MSV_502QGas_00091	09/08/20		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_00072	09/16/20	09/09/20	Methanol, Lot DX212	1 mL	MSV_502QGas_00094	20 uL	Bromomethane	40 ug/mL
							Chloroethane	40 ug/mL
							Chloromethane	40 ug/mL
							Vinyl chloride	40 ug/mL
.MSV_502QGas_00094	09/16/20		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_00078	10/08/20	10/01/20	Methanol, Lot DX212	1 mL	MSV_502QGas_00102	20 uL	Bromomethane	40 ug/mL
							Chloroethane	40 ug/mL
							Chloromethane	40 ug/mL
							Vinyl chloride	40 ug/mL
.MSV_502QGas_00102	10/08/20		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_00079	10/12/20	10/05/20	Methanol, Lot DX212	1 mL	MSV_502QGas_00103	20 uL	Bromomethane	40 ug/mL
							Chloroethane	40 ug/mL
							Chloromethane	40 ug/mL
							Vinyl chloride	40 ug/mL
.MSV_502QGas_00103	10/12/20		Restek, Lot A0155823		(Purchased Reagent)		Bromomethane	2000 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chloroethane	2000 ug/mL
							Chloromethane	2000 ug/mL
							Vinyl chloride	2000 ug/mL
MSV_RV1_826_00022	09/19/20	09/01/20	Methanol, Lot DX212	1 mL	MSV_V#1B_00101	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
							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

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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_00121	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
							trans-1,4-Dichloro-2-butene	500 ug/mL
					MSV_V#4C_00082	10 uL	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_00047	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
							trans-1,4-Dichloro-2-butene	500 ug/mL
					MSV_V_VOA3_00043	100 uL	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

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Tetrahydrofuran	500 ug/mL
							Acrolein	2499.91 ug/mL
.MSV_V#1B_00101	10/01/20		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
							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

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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_00121	10/01/20		Restek, Lot A0159694		(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#4C_00082	10/01/20		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_00047	10/01/20	09/01/20	Methanol, Lot DX212	5 mL	MSV_V#2B_00121	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_00121	10/01/20		Restek, Lot A0159694		(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_00043	09/19/20	09/01/20	Methanol, Lot DX212	5 mL	MSV_V#3B_00050	1 mL	2-Butanone (MEK)	5000 ug/mL

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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
							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_00010	1 mL	Acrolein	24999.1 ug/mL
..MSV_V#3B_00050	10/01/20	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_00010	09/19/20	07/21/20	Methanol, Lot DX212	10 mL	MSV_VACR_STK_00009	9.149 mL	Acrolein	124995 ug/mL
...MSV_VACR_STK_00009	09/19/20	07/21/20	Methanol, Lot DX212	10 mL	MSV_ACROLEIN_00006	1.4488 g	Acrolein	136622 ug/mL
....MSV_ACROLEIN_00006	12/31/20	Chem Service, Lot 9717000			(Purchased Reagent)		Acrolein	0.943 g/g
MSV_RV1_826_00023	09/19/20	09/09/20	Methanol, Lot DX212	1 mL	MSV_V#1B_00103	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
							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

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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_00124	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
							trans-1,4-Dichloro-2-butene	500 ug/mL
					MSV_V#4C_00084	10 uL	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

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-15232-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Tert-butyl ethyl ether	50 ug/mL
					MSV_V_VOA2_00048	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
							trans-1,4-Dichloro-2-butene	500 ug/mL
					MSV_V_VOA3_00044	100 uL	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	2499.91 ug/mL
.MSV_V#1B_00103	10/08/20		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
							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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-15232-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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_00124	10/08/20		Restek, Lot A0159694		(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#4C_00084	10/08/20		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_00048	10/08/20	09/08/20	Methanol, Lot DX212	5 mL	MSV_V#2B_00124	1 mL	1,4-Dioxane	12500 ug/mL

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-15232-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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_00124	10/08/20		Restek, Lot A0159694		(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_00044	09/19/20	09/08/20	Methanol, Lot DX212	5 mL	MSV_V#3B_00051	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_00010	1 mL	Acrolein	24999.1 ug/mL
..MSV_V#3B_00051	10/08/20		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_00010	09/19/20	07/21/20	Methanol, Lot DX212	10 mL	MSV_VACR_STK_00009	9.149 mL	Acrolein	124995 ug/mL
...MSV_VACR_STK_00009	09/19/20	07/21/20	Methanol, Lot DX212	10 mL	MSV_ACROLEIN_00006	1.4488 g	Acrolein	136622 ug/mL
....MSV_ACROLEIN_00006	12/31/20		Chem Service, Lot 9717000		(Purchased Reagent)		Acrolein	0.943 g/g
MSV_RV1_826_00024	10/14/20	09/14/20	Methanol, Lot DX212	1 mL	MSV_V#1B_00105	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

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-15232-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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_00086	10 uL	Carbon disulfide	50 ug/mL
							Methyl tert-butyl ether	50 ug/mL
					MSV_V_VOA3_00046	100 uL	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_00105	10/14/20		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
							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_00086	10/14/20		Restek, Lot A0158660		(Purchased Reagent)		Carbon disulfide	5000 ug/mL
							Methyl tert-butyl ether	5000 ug/mL
.MSV_V_VOA3_00046	10/14/20	09/14/20	Methanol, Lot DX212	5 mL	MSV_V#3B_00052	1 mL	2-Butanone (MEK)	5000 ug/mL
							2-Hexanone	5000 ug/mL
							4-Methyl-2-pentanone (MIBK)	5000 ug/mL

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-15232-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acetone	5000 ug/mL
							Acrylonitrile	2500 ug/mL
..MSV_V#3B_00052	10/14/20		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_00024	09/25/20	09/01/20	Methanol, Lot DX212	1 mL	MSV_BCE_00015	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_00050	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_00015	09/25/20		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_00050	09/25/20	08/26/20	Methanol, Lot DX212	5 mL	MSV_V#6_00032	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
							Pentachloroethane	1000 ug/mL
..MSV_V#6_00032	09/25/20		Restek, Lot A0158625		(Purchased Reagent)		1,2,3-Trimethylbenzene	5000 ug/mL
							3-Chloro-1-propene	5000 ug/mL
							Bromochloromethane	5000 ug/mL
							Methyl acetate	5000 ug/mL
							Methylcyclohexane	5000 ug/mL
							Pentachloroethane	5000 ug/mL
MSV_RV4_826_00025	09/25/20	09/09/20	Methanol, Lot DX212	1 mL	MSV_BCE_00015	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_00051	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_00015	09/25/20		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

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-15232-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
...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_00051	10/03/20	09/03/20	Methanol, Lot DX212	5 mL	MSV_V#6_00033	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
							Pentachloroethane	1000 ug/mL
..MSV_V#6_00033	10/03/20	Restek, Lot A0158625			(Purchased Reagent)		1,2,3-Trimethylbenzene	5000 ug/mL
							3-Chloro-1-propene	5000 ug/mL
							Bromochloromethane	5000 ug/mL
							Methyl acetate	5000 ug/mL
							Methylcyclohexane	5000 ug/mL
							Pentachloroethane	5000 ug/mL
MSV_RV4_826_00028	10/22/20	09/24/20	Methanol, Lot DX212	1 mL	MSV_V_VOA6_00054	50 uL	Bromochloromethane	50 ug/mL
.MSV_V_VOA6_00054	10/24/20	09/24/20	Methanol, Lot DX212	5 mL	MSV_V#6_00036	1 mL	Bromochloromethane	1000 ug/mL
..MSV_V#6_00036	10/24/20	Restek, Lot A0158625			(Purchased Reagent)		Bromochloromethane	5000 ug/mL
MSV_RV4GAS826_00072	09/08/20	09/01/20	Methanol, Lot DX212	1 mL	MSV_DCFM_00019	25 uL	Dichlorofluoromethane	50 ug/mL
					MSV_V_Gas_00136	25 uL	Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
.MSV_DCFM_00019	09/12/20	AccuStandard, Lot 219051360			(Purchased Reagent)		Dichlorofluoromethane	2000 ug/mL
.MSV_V_Gas_00136	09/08/20	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
							Vinyl chloride	2000 ug/mL
MSV_RV4GAS826_00075	09/16/20	09/09/20	Methanol, Lot DX212	1 mL	MSV_DCFM_00021	25 uL	Dichlorofluoromethane	50 ug/mL
					MSV_V_Gas_00141	25 uL	Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
.MSV_DCFM_00021	10/01/20	AccuStandard, Lot 219051360			(Purchased Reagent)		Dichlorofluoromethane	2000 ug/mL
.MSV_V_Gas_00141	09/16/20	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
							Vinyl chloride	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-15232-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
MSV_RV4GAS826_00081	10/05/20	09/28/20	Methanol, Lot DX212	1 mL	MSV_V_Gas_00150	25 uL	Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
.MSV_V_Gas_00150	10/05/20		Restek, Lot A0159812		(Purchased Reagent)		Bromomethane	2000 ug/mL
							Chloroethane	2000 ug/mL
							Chloromethane	2000 ug/mL
							Vinyl chloride	2000 ug/mL
MSV_RV4GAS826_00083	10/12/20	10/05/20	Methanol, Lot DX212	1 mL	MSV_V_Gas_00153	25 uL	Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
.MSV_V_Gas_00153	10/12/20		Restek, Lot A0159812		(Purchased Reagent)		Bromomethane	2000 ug/mL
							Chloroethane	2000 ug/mL
							Chloromethane	2000 ug/mL
							Vinyl chloride	2000 ug/mL
MSV_V_BFB_00003							1,2-Dichloroethene, Total	
							1,3-Dichloropropene, Total	
							Tentatively Identified Compound	
							Xylenes, Total	
					MSV_VBFB_STK_00004	0.117 mL	BFB	50.0245 ug/mL
.MSV_VBFB_STK_00004	01/22/21	07/22/20	Methanol, Lot DX212	10 mL	MSV_4BFB_NEAT_00002	1.0689 g	BFB	106890 ug/mL
..MSV_4BFB_NEAT_00002	01/31/21		Chem Service, Lot 8601300		(Purchased Reagent)		BFB	1 g/g

Reagent

MSV_4BFB_NEAT_00002

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

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

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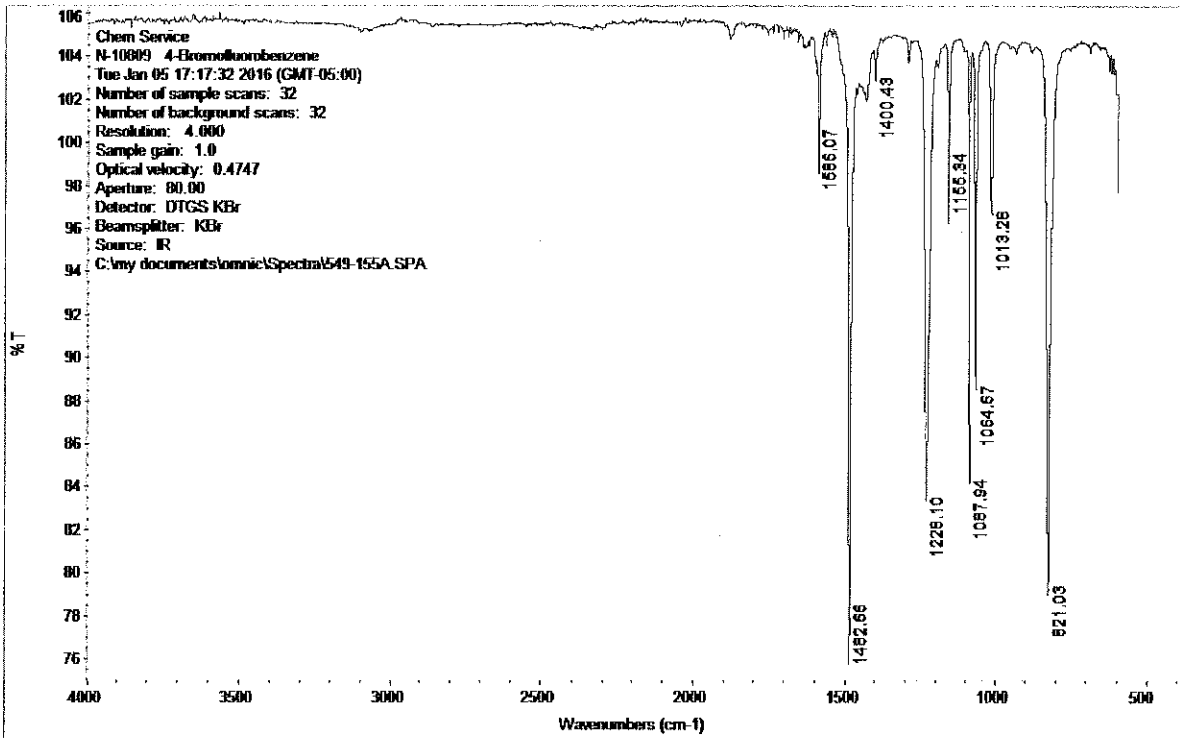
CERTIFICATE OF ANALYSIS

Analysis Method: FTIR- Spectroscopy

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



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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

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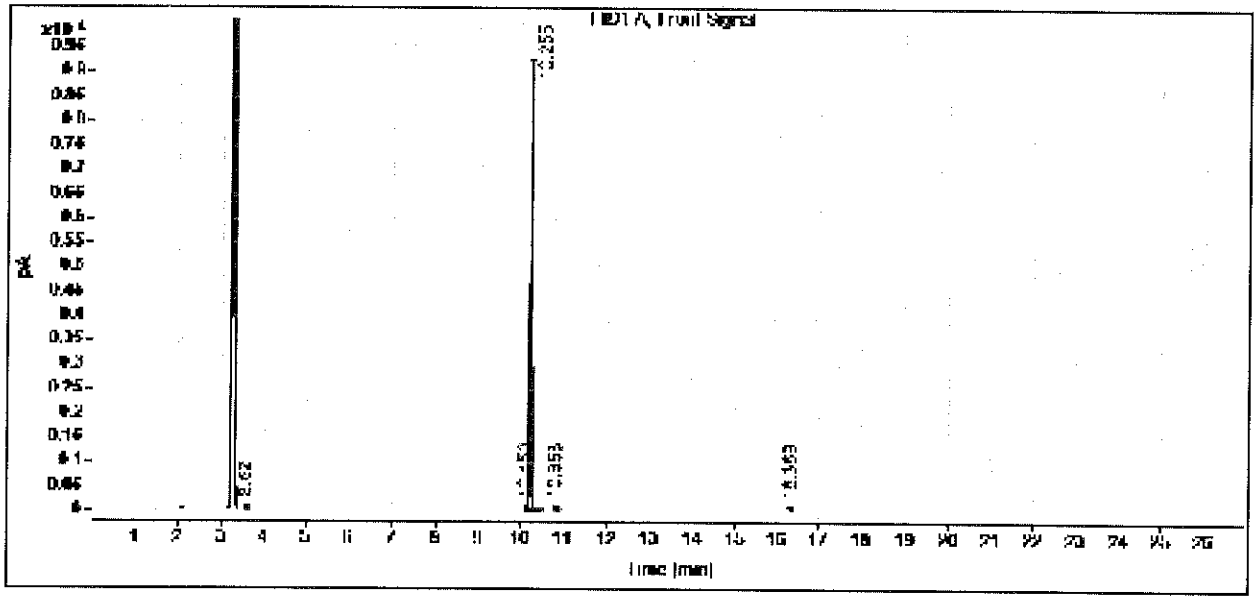
CERTIFICATE OF ANALYSIS

Gas Chromatography / Flame Ionization Detector (GC/FID)

Data file: C:\CHEM32\1\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 5
Acq. method:	MIX1.M	**Injection volume:**	1.0uL
Column name:	DB-624 (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	0.4869	0.0028
10.255	VB S	0.0437	26687.6328	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	26746.5968		

Reagent

MSV_502QGas_00091

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Certificate #3222.01

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Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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)

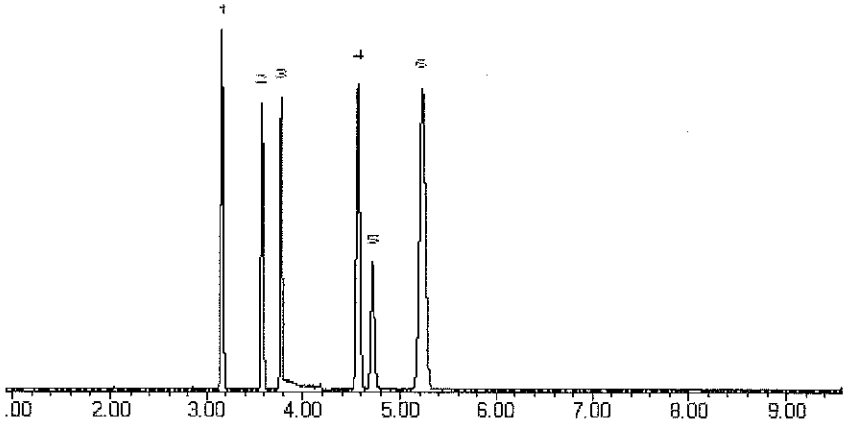
Carrier Gas:
helium-constant flow 2.0 mL/min.

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:

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_502QGas_00094

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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)

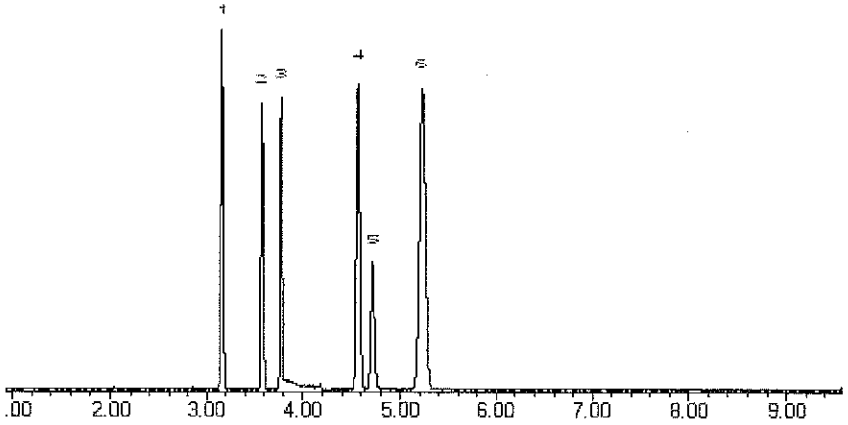
Carrier Gas:
helium-constant flow 2.0 mL/min.

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:

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_502QGas_00102

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Certificate #3222.01

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Testing Laboratory
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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)

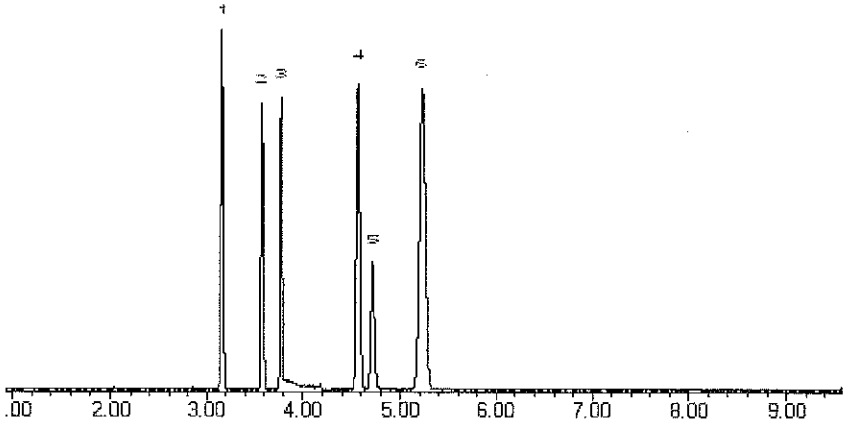
Carrier Gas:
helium-constant flow 2.0 mL/min.

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:

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

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- 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_00103

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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)

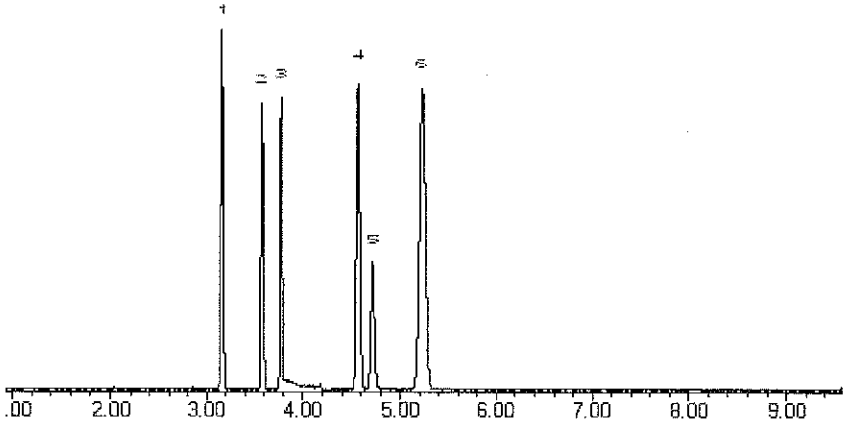
Carrier Gas:
helium-constant flow 2.0 mL/min.

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:

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_8260_SS_00160

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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)

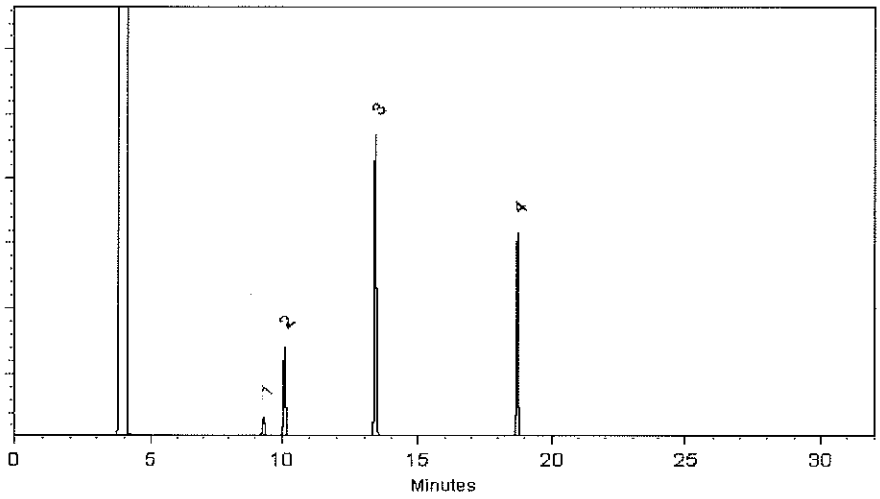
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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/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.
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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_8260_SS_00189

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
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Certificate #3222.01

ACCREDITED
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Certificate #3222.02

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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)

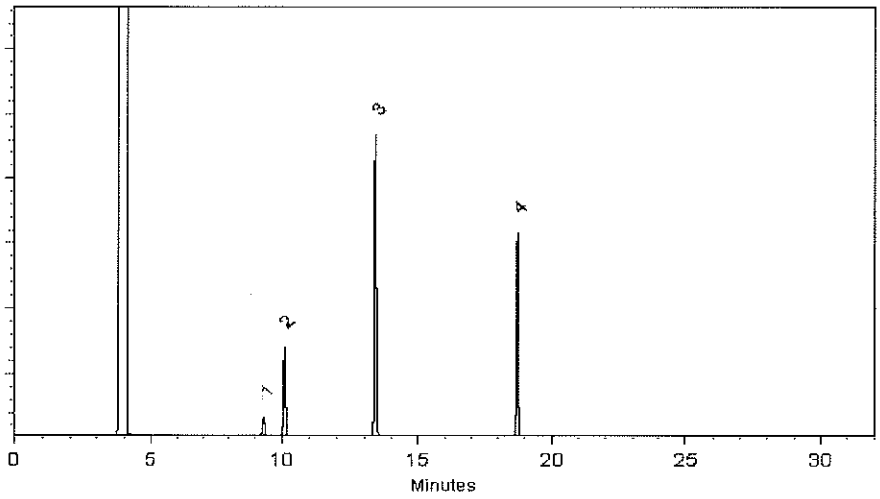
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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



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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.

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Manufacturing Notes:

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Reagent

MSV_8260_SS_00215

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

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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)		
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	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
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	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:
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Rtx-502.2 (cat.#10910)

Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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Inj. Temp:
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Det. Temp:
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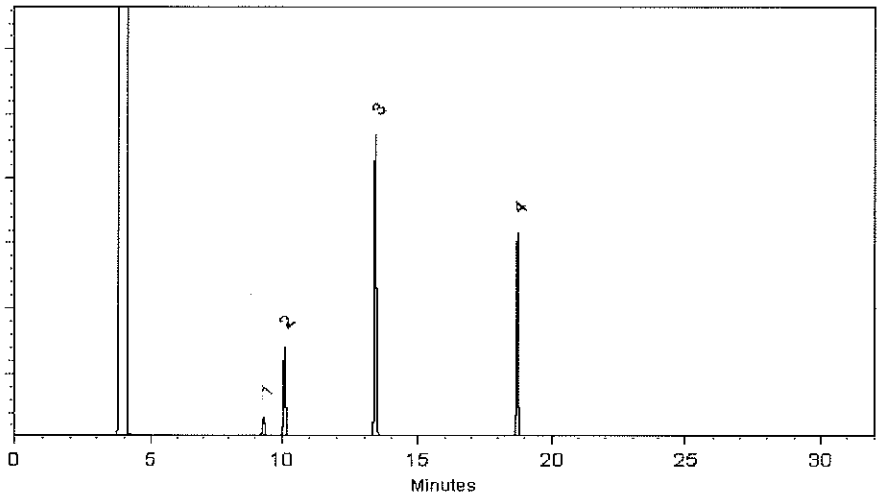
Det. Type:
FID



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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

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Reagent

MSV_ACROLEIN_00006

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

410-83906

CERTIFICATE OF ANALYSIS

Acrolein

CATALOG NUMBER	RPN-11030-1G
LOT NUMBER	9717000
DATE CERTIFIED	12/06/19
EXPIRATION DATE	12/31/20
CAS NUMBER	107-02-8
MOLECULAR FORMULA	C3H4O
MOLECULAR WEIGHT	56.06
STORAGE	Store under refrigeration
HANDLING	See Safety Data Sheet
INTENDED USE	For laboratory use only.
NOTES	Contains water and hydroquinone as an inhibitor.

Analytical Test	Value
% PURITY (GC/TCD)	94.3
% WATER (KARL FISCHER)	1 9

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

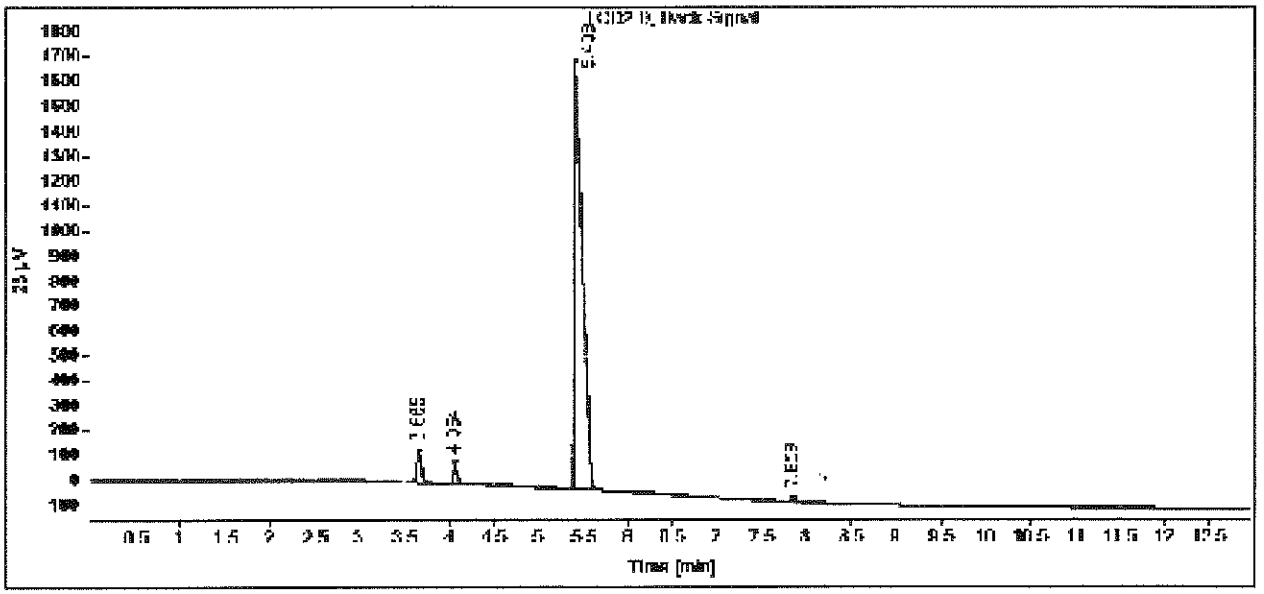
COA Form
Revision 3 (3/2015)

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 / Thermal Conductivity Detector (GC/TCD)

Data file:	C:\CHEM32\1\DATA\2019 DATA\1219\SIG2022667.D		
Sample name:	Acrolein		
Instrument:	GC 1	**Sample type:**	Sample
Injection date:	12/6/2019 10:34:12 AM	**Location:**	Vial 11
Acq. method:	GASBOMB_TCD.M	**Injection volume:**	1.0uL
Column name:	DB-624 (30m x 0.53mm x 3.0um)		



Signal: TCD2 B, Back Signal

Peak	Type	Width [min]	Area	Height	Area %
3.685	BB	0.0554	405.7875	114.3327	3.5675
4.084	BB	0.0475	217.2787	71.5037	1.9102
5.405	BV	0.0795	10720.3574	1725.6987	94.2472
7.559	BB	0.1249	31.2959	3.7885	0.2751
		Sum	11374.7176		

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:

Catalog Number:	RPN-11030-1G
Description:	Acrolein
Lot Number:	9717000
Expiration Date:	12/31/20

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410-83907

CERTIFICATE OF ANALYSIS

Acrolein

CATALOG NUMBER	RPN-11030-1G
LOT NUMBER	9717000
DATE CERTIFIED	12/06/19
EXPIRATION DATE	12/31/20
CAS NUMBER	107-02-8
MOLECULAR FORMULA	C3H4O
MOLECULAR WEIGHT	56.06
STORAGE	Store under refrigeration.
HANDLING	See Safety Data Sheet
INTENDED USE	For laboratory use only.
NOTES	Contains water and hydroquinone as an inhibitor

Analytical Test	Value
% PURITY (GC/TCD)	94.3
% WATER (KARL FISCHER)	1.9

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

COA Form
Revision 3 (3/2015)

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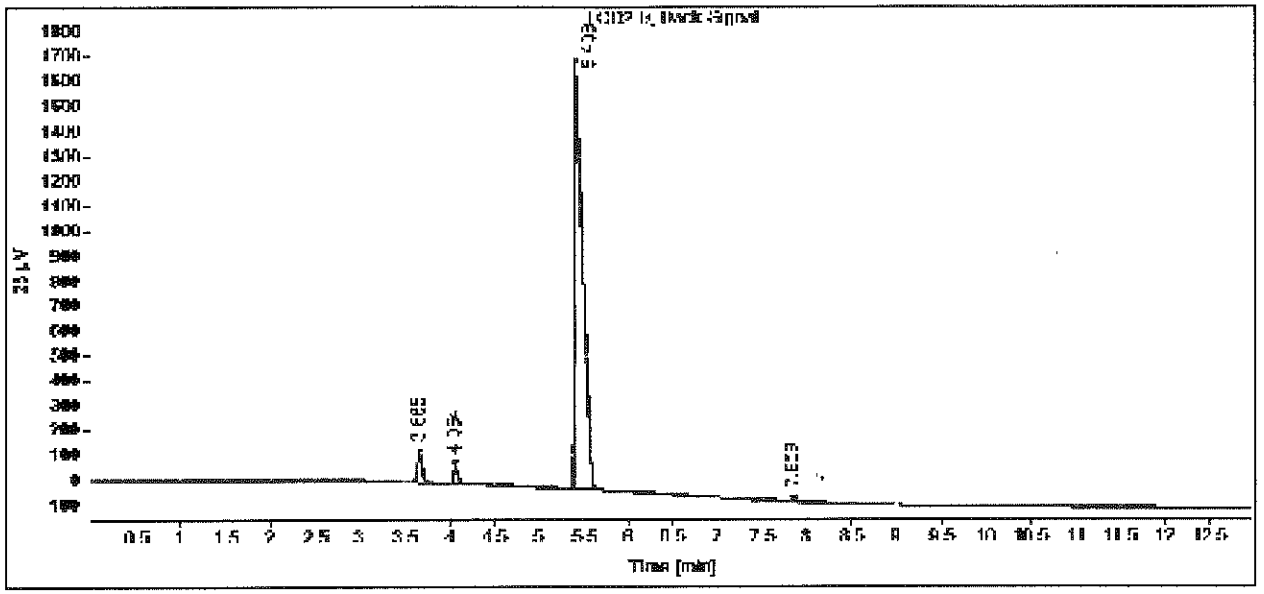
CERTIFICATE OF ANALYSIS

Gas Chromatography / Thermal Conductivity Detector (GC/TCD)

Data file:	C:\CHEM32\1\DATA\2019 DATA\1219\SIG2022887.D		
Sample name:	Acrolein		
Instrument:	GC 1	**Sample type:**	Sample
Injection date:	12/6/2019 10:34:12 AM	**Location:**	Vial 11
Acq. method:	GASBOMB_TCD.M	**Injection volume:**	1.0uL
Column name:	DB-624 (30m x 0.53mm x 3.0um)		



Signal: TCD2 B, Back Signal

RT [min]	Type	Width [min]	Area	Height	Area %
3.685	BB	0.0554	405.7875	114.3327	3.5675
4.084	BB	0.0475	217.2787	71.5037	1.9102
5.408	BV	0.0795	10720.3574	1725.6987	94.2472
7.859	BB	0.1249	31.2959	3.7665	0.2751
		Sum	11374.7176		

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CERTIFICATE OF ANALYSIS

Analysis Method:

Catalog Number:	RPN-11030-1G
Description	Acrolein
Lot Number.	9717000
Expiration Date:	12/31/20

Reagent

MSV_BCE_00015

RESTEK®
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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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	2,006.0 µg/mL	+/- 11.7723 µg/mL	Gravimetric
	CAS # 107-04-0 (Lot BCBQ8054V)		+/- 112.4858 µg/mL	Unstressed
	Purity 99%		+/- 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)

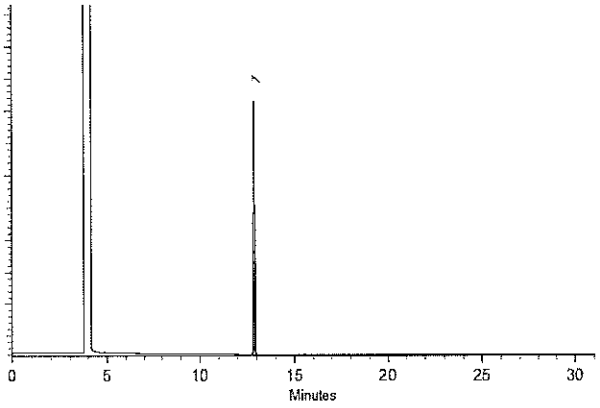
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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 - Operations Technician I

Date Mixed: 07-Jun-2019 **Balance:** B251644995

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

Certified Uncertainty Value Notes:

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

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_Cus826_IS_00099

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Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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)

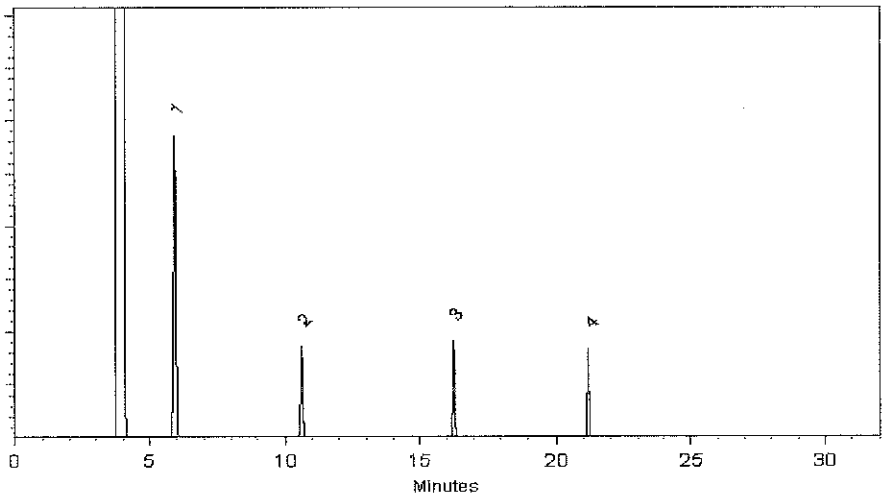
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

Certified Uncertainty Value Notes:

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

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_Cus826_IS_00118

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CERTIFIED REFERENCE MATERIAL

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Reference Material Producer
Certificate #3222.01

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ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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)

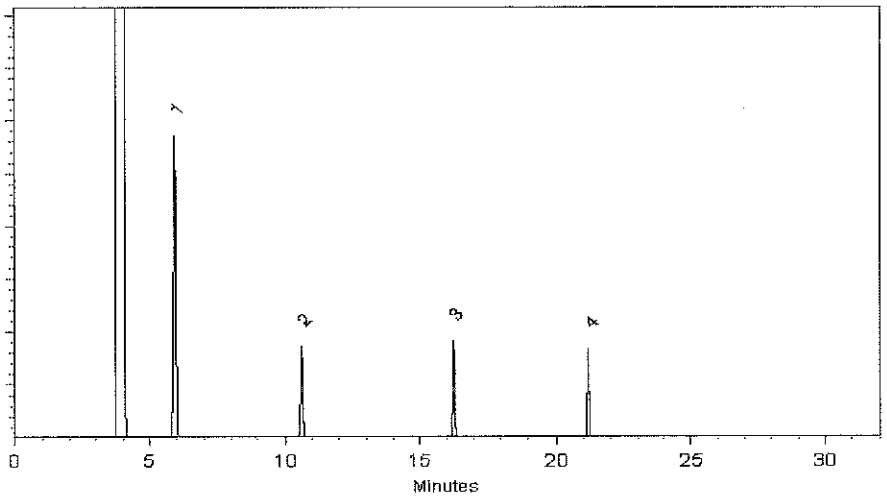
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

Certified Uncertainty Value Notes:

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

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

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Label Conditions	Standard Conditions	Non-Standard Conditions
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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

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Fax: (814)353-1309

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Certificate #3222.01

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Testing Laboratory
Certificate #3222.02

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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)

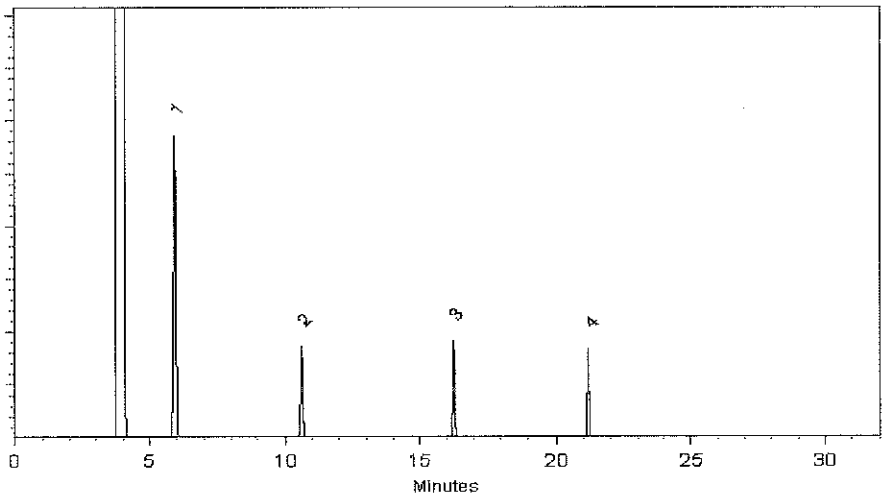
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

Certified Uncertainty Value Notes:

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

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_DCFM_00019

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

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Fax (203)786-5287
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CERTIFICATE OF ANALYSIS

Catalog No: M-502-61-10X
Description: Dichlorofluoromethane
Lot: 219051360
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: May 13, 2019
Expiration: May 13, 2029
Sample Size: 1 mL
Components: 1
Storage Condition: Refrig (0-5 °C)

Certified Reference Material

ANAB ACCREDITED AR-1463 ANAB ACCREDITED AT-1339 ilac-MRA

Component	CAS #	Purity % (GC/FID)	Prepared Concentration[2] (µg/mL)	Certified Analyte Concentration[1] (µg/mL)
Dichlorofluoromethane	75-43-4	98.0	2000	1960

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[2] All weights are traceable through NIST, Test No. 684/289871-17

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

1. **Quality Standards:**

   ISO 17034 – General Requirements for the Competence of Reference Material Producers ANAB Certificate Number AR-1463

   ISO/IEC 17025 – General Requirements for the Competence of Testing And Calibration Laboratories ANAB Certificate Number AT-1339

   ISO 9001:2015 – Quality Management System – Requirements Eagle Registrations Certificate Number 3774

2. **Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side. This product can be used for quantification and/or identification. This product can also be used as a reference material to validate analytical procedures, subject to the conditions under Section 7.

3. **Manufacturing:** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST. The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory. Please refer to the NIST test number listed on the front of this certificate. Class A glassware is used in the manufacture and quality control of all standards and calibrated using an in-house procedure. Good Laboratory Practices have been used throughout the preparation of this Standard.

4. **Homogeneity:** This product is sufficiently homogeneous and any sample size would be within the uncertainty budget.

5. **Stability:** The manufacturer guarantees the stability of this solution through the expiration date stated on the label, when handled and stored according to the conditions stated on the label

6. **Uncertainty:** The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide. We report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula: $u_a = \sqrt{(u(\mathrm{V}))^2 + (u(\mathrm{m}))^2 + (u(\mathrm{IV}))^2 + (u(\mathrm{RO}))^2}$ This formula represents uncertainty components from the mass, volume, short-term stability, long-term stability and homogeneity factors associated with the production of this product. The expanded uncertainty, assumes a normal distribution and a coverage factor of k=2 is chosen using approximately a 95% confidence level.

7. **Legal Notice and Limit of Liability:** This product is for routine laboratory analysis and research purposes only. The company's liability will be limited to replacement of product or refund of purchase price. Notice of claims must be made within thirty (30) days from date of delivery.

Reagent

MSV_DCFM_00021

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AccuStandard®

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CERTIFICATE OF ANALYSIS

Catalog No: M-502-61-10X
Description: Dichlorofluoromethane
Lot: 219051360
Solvent: Methanol
Hazards: *Refer to SDS for complete safety information*

Signal Word: Danger

Date Certified: May 13, 2019
Expiration: May 13, 2029
Sample Size: 1 mL
Components: 1
Storage Condition: Refrig (0-5 °C)

Certified Reference Material

ANAB ACCREDITED AR-1463 ANAB ACCREDITED AT-1339 ilac-MRA

Component	CAS #	Purity % (GC/FID)	Prepared Concentration[2] (µg/mL)	Certified Analyte Concentration[1] (µg/mL)
Dichlorofluoromethane	75-43-4	98.0	2000	1960

A product with a suffix (-1A, -2B, etc. or -01, -02, etc.) on its lot number has had its expiration date extended and is identical to the same lot number without the suffix.

[2] All weights are traceable through NIST, Test No. 684/289871-17

[1] Certified Analyte Concentration = Purity x Prepared Concentration.

The Uncertainty associated with the certified concentration reported on this certificate is ±2.4%. This value is the combined expanded uncertainty and represents an estimated standard deviation equal to the positive square root of the total variation of the uncertainty of components. A normal distribution is assumed and a coverage factor of K=2 is chosen using approximately a 95% confidence level.

Labels and certificates follow U.S. Conventions in reporting numerical values: A comma (,) is used to separate units of one-thousand or greater. A period (.) is used as a decimal place marker.

Certified By: Larry Decker, Organic QC Manager

For use in routine laboratory analysis.

1. **Quality Standards:**

   ISO 17034 – General Requirements for the Competence of Reference Material Producers ANAB Certificate Number AR-1463

   ISO/IEC 17025 – General Requirements for the Competence of Testing And Calibration Laboratories ANAB Certificate Number AT-1339

   ISO 9001:2015 – Quality Management System – Requirements Eagle Registrations Certificate Number 3774

2. **Intended Use:** The product covered by this certificate is designed for calibration or for use in quality control procedures for the specified chemical compounds listed on the reverse side. This product can be used for quantification and/or identification. This product can also be used as a reference material to validate analytical procedures, subject to the conditions under Section 7.

3. **Manufacturing:** All balances are calibrated daily using an in-house procedure with weights that are compared annually to master weights and traceable to NIST. The balances are also calibrated annually by an ISO/IEC 17025 accredited calibration laboratory. Please refer to the NIST test number listed on the front of this certificate. Class A glassware is used in the manufacture and quality control of all standards and calibrated using an in-house procedure. Good Laboratory Practices have been used throughout the preparation of this Standard.

4. **Homogeneity:** This product is sufficiently homogeneous and any sample size would be within the uncertainty budget.

5. **Stability:** The manufacturer guarantees the stability of this solution through the expiration date stated on the label, when handled and stored according to the conditions stated on the label

6. **Uncertainty:** The uncertainty values as stated on the face of this certificate have been determined using the EURACHEM/CITAC Guide. We report a combined expanded uncertainty equal to the positive square root of the total variance of the uncertainty of the components using the following formula: $u_a = \sqrt{(u(\mathrm{V}))^2 + (u(\mathrm{m}))^2 + (u(\mathrm{IV}))^2 + (u(\mathrm{RO}))^2}$ This formula represents uncertainty components from the mass, volume, short-term stability, long-term stability and homogeneity factors associated with the production of this product. The expanded uncertainty, assumes a normal distribution and a coverage factor of k=2 is chosen using approximately a 95% confidence level.

7. **Legal Notice and Limit of Liability:** This product is for routine laboratory analysis and research purposes only. The company's liability will be limited to replacement of product or refund of purchase price. Notice of claims must be made within thirty (30) days from date of delivery.

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

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
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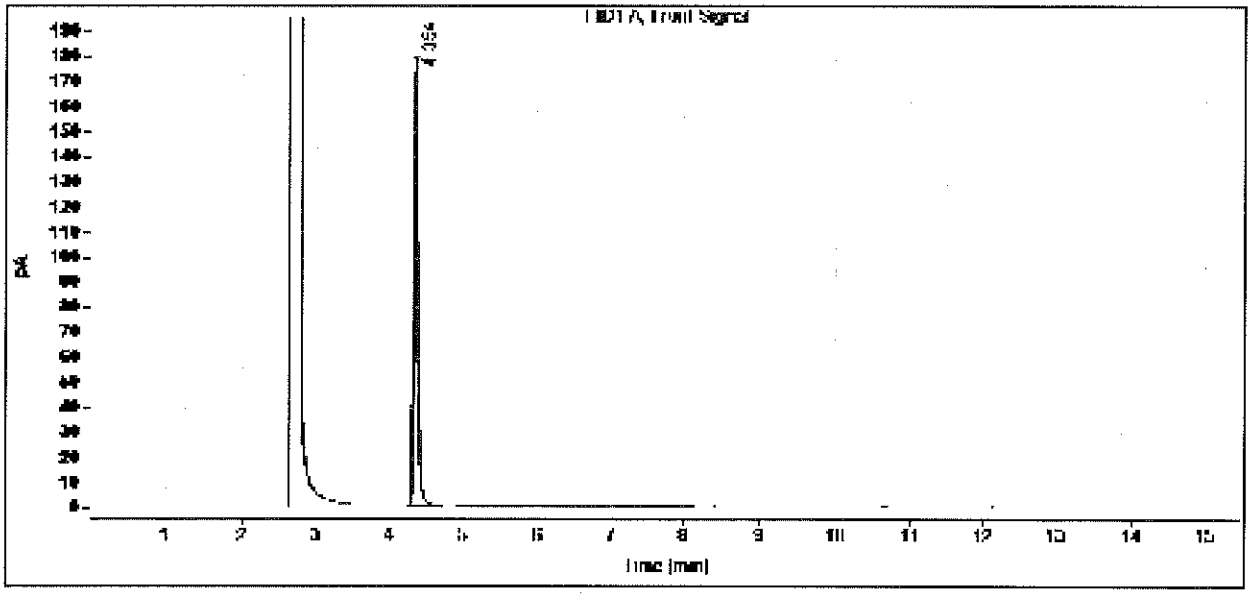
CERTIFICATE OF ANALYSIS

Gas Chromatography / Flame Ionization Detector (GC/FID)

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



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		

Reagent

MSV_Q#1B_00053

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

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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 TS5UB)		+/- 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		1,008.1	µg/mL	+/-	7.8036	µg/mL	Gravimetric
	CAS # 95-49-8.SEC	(Lot SW8QG-AO)			+/-	56.7564	µg/mL	Unstressed
	Purity 99%				+/-	58.0736	µg/mL	Stressed
41	4-Chlorotoluene		1,002.1	µg/mL	+/-	7.7571	µg/mL	Gravimetric
	CAS # 106-43-4.SEC	(Lot P4XHJ-AO)			+/-	56.4186	µg/mL	Unstressed
	Purity 99%				+/-	57.7279	µg/mL	Stressed
42	tert-Butylbenzene		1,004.2	µg/mL	+/-	7.7732	µg/mL	Gravimetric
	CAS # 98-06-6.SEC	(Lot D6OHC)			+/-	56.5357	µg/mL	Unstressed
	Purity 99%				+/-	57.8478	µg/mL	Stressed
43	1,2,4-Trimethylbenzene		1,009.5	µg/mL	+/-	7.8147	µg/mL	Gravimetric
	CAS # 95-63-6.SEC	(Lot SC7LO-QA)			+/-	56.8374	µg/mL	Unstressed
	Purity 99%				+/-	58.1565	µg/mL	Stressed
44	sec-Butylbenzene		1,006.9	µg/mL	+/-	7.7943	µg/mL	Gravimetric
	CAS # 135-98-8.SEC	(Lot O4HRF)			+/-	56.6888	µg/mL	Unstressed
	Purity 99%				+/-	58.0044	µg/mL	Stressed
45	4-Isopropyltoluene (p-cymene)		1,000.0	µg/mL	+/-	7.7410	µg/mL	Gravimetric
	CAS # 99-87-6.SEC	(Lot 1195000)			+/-	56.3015	µg/mL	Unstressed
	Purity 96%				+/-	57.6081	µg/mL	Stressed
46	1,3-Dichlorobenzene		1,003.3	µg/mL	+/-	7.1593	µg/mL	Gravimetric
	CAS # 541-73-1.SEC	(Lot FMDFD)			+/-	56.4042	µg/mL	Unstressed
	Purity 99%				+/-	57.7169	µg/mL	Stressed
47	1,4-Dichlorobenzene		1,008.5	µg/mL	+/-	7.1967	µg/mL	Gravimetric
	CAS # 106-46-7.SEC	(Lot 4Y5DC)			+/-	56.6994	µg/mL	Unstressed
	Purity 99%				+/-	58.0189	µg/mL	Stressed
48	n-Butylbenzene		1,005.4	µg/mL	+/-	7.7825	µg/mL	Gravimetric
	CAS # 104-51-8.SEC	(Lot MMPGA)			+/-	56.6032	µg/mL	Unstressed
	Purity 99%				+/-	57.9169	µg/mL	Stressed
49	1,2-Dichlorobenzene		1,006.8	µg/mL	+/-	7.1842	µg/mL	Gravimetric
	CAS # 95-50-1.SEC	(Lot 4NRGF-OT)			+/-	56.6010	µg/mL	Unstressed
	Purity 99%				+/-	57.9183	µg/mL	Stressed
50	1,2-Dibromo-3-chloropropane		1,002.7	µg/mL	+/-	7.7616	µg/mL	Gravimetric
	CAS # 96-12-8.SEC	(Lot LC00408V)			+/-	56.4511	µg/mL	Unstressed
	Purity 98%				+/-	57.7612	µg/mL	Stressed
51	1,3,5-Trimethylbenzene		1,002.2	µg/mL	+/-	7.7584	µg/mL	Gravimetric
	CAS # 108-67-8.SEC	(Lot FGH02-CMLN)			+/-	56.4276	µg/mL	Unstressed
	Purity 99%				+/-	57.7371	µg/mL	Stressed
52	1,2,4-Trichlorobenzene		1,007.2	µg/mL	+/-	7.7968	µg/mL	Gravimetric
	CAS # 120-82-1.SEC	(Lot 3LYYC)			+/-	56.7068	µg/mL	Unstressed
	Purity 99%				+/-	58.0229	µg/mL	Stressed
53	Hexachlorobutadiene		1,005.8	µg/mL	+/-	7.7857	µg/mL	Gravimetric
	CAS # 87-68-3.SEC	(Lot 5526800)			+/-	56.6265	µg/mL	Unstressed
	Purity 97%				+/-	57.9407	µg/mL	Stressed
54	Naphthalene		1,001.8	µg/mL	+/-	7.7553	µg/mL	Gravimetric
	CAS # 91-20-3.SEC	(Lot SKZ5N)			+/-	56.4050	µg/mL	Unstressed
	Purity 99%				+/-	57.7141	µg/mL	Stressed
55	1,2,3-Trichlorobenzene		1,005.9	µg/mL	+/-	7.7865	µg/mL	Gravimetric
	CAS # 87-61-6.SEC	(Lot A0043055)			+/-	56.6321	µg/mL	Unstressed
	Purity 98%				+/-	57.9464	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)

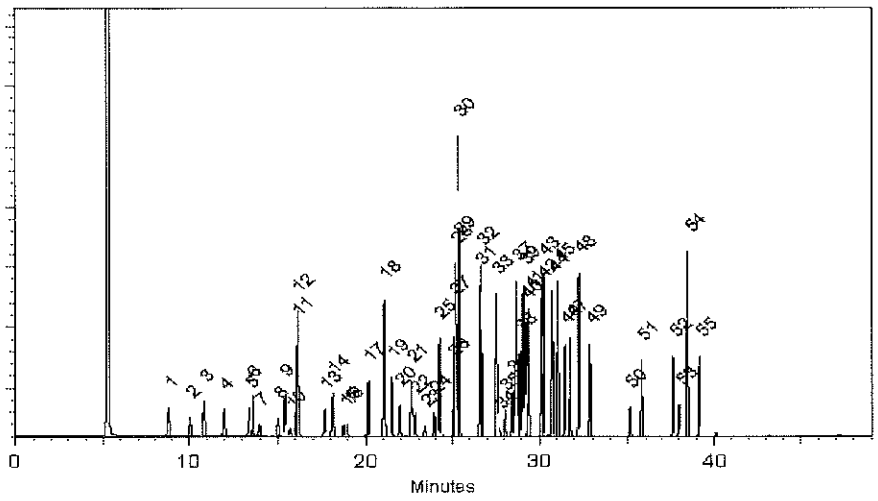
Carrier Gas:
hydrogen-constant pressure 8.0 psi.

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.

Michael J Maye

Date Mixed: 26-Apr-2019 **Balance:** 1127510105

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_Q#1B_00055

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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 TS5UB)		+/- 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		1,008.1	µg/mL	+/-	7.8036	µg/mL	Gravimetric
	CAS # 95-49-8.SEC	(Lot SW8QG-AO)			+/-	56.7564	µg/mL	Unstressed
	Purity 99%				+/-	58.0736	µg/mL	Stressed
41	4-Chlorotoluene		1,002.1	µg/mL	+/-	7.7571	µg/mL	Gravimetric
	CAS # 106-43-4.SEC	(Lot P4XHJ-AO)			+/-	56.4186	µg/mL	Unstressed
	Purity 99%				+/-	57.7279	µg/mL	Stressed
42	tert-Butylbenzene		1,004.2	µg/mL	+/-	7.7732	µg/mL	Gravimetric
	CAS # 98-06-6.SEC	(Lot D6OHC)			+/-	56.5357	µg/mL	Unstressed
	Purity 99%				+/-	57.8478	µg/mL	Stressed
43	1,2,4-Trimethylbenzene		1,009.5	µg/mL	+/-	7.8147	µg/mL	Gravimetric
	CAS # 95-63-6.SEC	(Lot SC7LO-QA)			+/-	56.8374	µg/mL	Unstressed
	Purity 99%				+/-	58.1565	µg/mL	Stressed
44	sec-Butylbenzene		1,006.9	µg/mL	+/-	7.7943	µg/mL	Gravimetric
	CAS # 135-98-8.SEC	(Lot O4HRF)			+/-	56.6888	µg/mL	Unstressed
	Purity 99%				+/-	58.0044	µg/mL	Stressed
45	4-Isopropyltoluene (p-cymene)		1,000.0	µg/mL	+/-	7.7410	µg/mL	Gravimetric
	CAS # 99-87-6.SEC	(Lot 1195000)			+/-	56.3015	µg/mL	Unstressed
	Purity 96%				+/-	57.6081	µg/mL	Stressed
46	1,3-Dichlorobenzene		1,003.3	µg/mL	+/-	7.1593	µg/mL	Gravimetric
	CAS # 541-73-1.SEC	(Lot FMDFD)			+/-	56.4042	µg/mL	Unstressed
	Purity 99%				+/-	57.7169	µg/mL	Stressed
47	1,4-Dichlorobenzene		1,008.5	µg/mL	+/-	7.1967	µg/mL	Gravimetric
	CAS # 106-46-7.SEC	(Lot 4Y5DC)			+/-	56.6994	µg/mL	Unstressed
	Purity 99%				+/-	58.0189	µg/mL	Stressed
48	n-Butylbenzene		1,005.4	µg/mL	+/-	7.7825	µg/mL	Gravimetric
	CAS # 104-51-8.SEC	(Lot MMPGA)			+/-	56.6032	µg/mL	Unstressed
	Purity 99%				+/-	57.9169	µg/mL	Stressed
49	1,2-Dichlorobenzene		1,006.8	µg/mL	+/-	7.1842	µg/mL	Gravimetric
	CAS # 95-50-1.SEC	(Lot 4NRGF-OT)			+/-	56.6010	µg/mL	Unstressed
	Purity 99%				+/-	57.9183	µg/mL	Stressed
50	1,2-Dibromo-3-chloropropane		1,002.7	µg/mL	+/-	7.7616	µg/mL	Gravimetric
	CAS # 96-12-8.SEC	(Lot LC00408V)			+/-	56.4511	µg/mL	Unstressed
	Purity 98%				+/-	57.7612	µg/mL	Stressed
51	1,3,5-Trimethylbenzene		1,002.2	µg/mL	+/-	7.7584	µg/mL	Gravimetric
	CAS # 108-67-8.SEC	(Lot FGH02-CMLN)			+/-	56.4276	µg/mL	Unstressed
	Purity 99%				+/-	57.7371	µg/mL	Stressed
52	1,2,4-Trichlorobenzene		1,007.2	µg/mL	+/-	7.7968	µg/mL	Gravimetric
	CAS # 120-82-1.SEC	(Lot 3LYYC)			+/-	56.7068	µg/mL	Unstressed
	Purity 99%				+/-	58.0229	µg/mL	Stressed
53	Hexachlorobutadiene		1,005.8	µg/mL	+/-	7.7857	µg/mL	Gravimetric
	CAS # 87-68-3.SEC	(Lot 5526800)			+/-	56.6265	µg/mL	Unstressed
	Purity 97%				+/-	57.9407	µg/mL	Stressed
54	Naphthalene		1,001.8	µg/mL	+/-	7.7553	µg/mL	Gravimetric
	CAS # 91-20-3.SEC	(Lot SKZ5N)			+/-	56.4050	µg/mL	Unstressed
	Purity 99%				+/-	57.7141	µg/mL	Stressed
55	1,2,3-Trichlorobenzene		1,005.9	µg/mL	+/-	7.7865	µg/mL	Gravimetric
	CAS # 87-61-6.SEC	(Lot A0043055)			+/-	56.6321	µg/mL	Unstressed
	Purity 98%				+/-	57.9464	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)

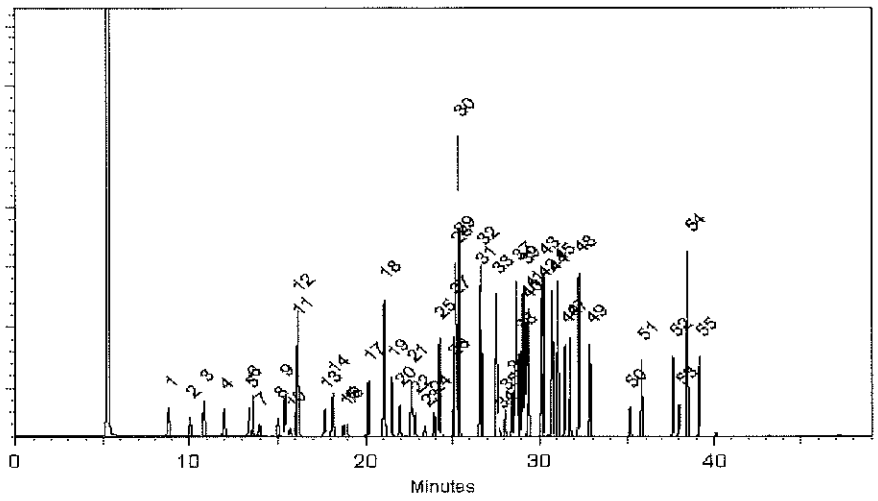
Carrier Gas:
hydrogen-constant pressure 8.0 psi.

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.

Michael J Maye

Date Mixed: 26-Apr-2019 **Balance:** 1127510105

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_Q#1B_00060

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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 TS5UB)		+/- 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		1,008.1	µg/mL	+/-	7.8036	µg/mL	Gravimetric
	CAS # 95-49-8.SEC	(Lot SW8QG-AO)			+/-	56.7564	µg/mL	Unstressed
	Purity 99%				+/-	58.0736	µg/mL	Stressed
41	4-Chlorotoluene		1,002.1	µg/mL	+/-	7.7571	µg/mL	Gravimetric
	CAS # 106-43-4.SEC	(Lot P4XHJ-AO)			+/-	56.4186	µg/mL	Unstressed
	Purity 99%				+/-	57.7279	µg/mL	Stressed
42	tert-Butylbenzene		1,004.2	µg/mL	+/-	7.7732	µg/mL	Gravimetric
	CAS # 98-06-6.SEC	(Lot D6OHC)			+/-	56.5357	µg/mL	Unstressed
	Purity 99%				+/-	57.8478	µg/mL	Stressed
43	1,2,4-Trimethylbenzene		1,009.5	µg/mL	+/-	7.8147	µg/mL	Gravimetric
	CAS # 95-63-6.SEC	(Lot SC7LO-QA)			+/-	56.8374	µg/mL	Unstressed
	Purity 99%				+/-	58.1565	µg/mL	Stressed
44	sec-Butylbenzene		1,006.9	µg/mL	+/-	7.7943	µg/mL	Gravimetric
	CAS # 135-98-8.SEC	(Lot O4HRF)			+/-	56.6888	µg/mL	Unstressed
	Purity 99%				+/-	58.0044	µg/mL	Stressed
45	4-Isopropyltoluene (p-cymene)		1,000.0	µg/mL	+/-	7.7410	µg/mL	Gravimetric
	CAS # 99-87-6.SEC	(Lot 1195000)			+/-	56.3015	µg/mL	Unstressed
	Purity 96%				+/-	57.6081	µg/mL	Stressed
46	1,3-Dichlorobenzene		1,003.3	µg/mL	+/-	7.1593	µg/mL	Gravimetric
	CAS # 541-73-1.SEC	(Lot FMDFD)			+/-	56.4042	µg/mL	Unstressed
	Purity 99%				+/-	57.7169	µg/mL	Stressed
47	1,4-Dichlorobenzene		1,008.5	µg/mL	+/-	7.1967	µg/mL	Gravimetric
	CAS # 106-46-7.SEC	(Lot 4Y5DC)			+/-	56.6994	µg/mL	Unstressed
	Purity 99%				+/-	58.0189	µg/mL	Stressed
48	n-Butylbenzene		1,005.4	µg/mL	+/-	7.7825	µg/mL	Gravimetric
	CAS # 104-51-8.SEC	(Lot MMPGA)			+/-	56.6032	µg/mL	Unstressed
	Purity 99%				+/-	57.9169	µg/mL	Stressed
49	1,2-Dichlorobenzene		1,006.8	µg/mL	+/-	7.1842	µg/mL	Gravimetric
	CAS # 95-50-1.SEC	(Lot 4NRGF-OT)			+/-	56.6010	µg/mL	Unstressed
	Purity 99%				+/-	57.9183	µg/mL	Stressed
50	1,2-Dibromo-3-chloropropane		1,002.7	µg/mL	+/-	7.7616	µg/mL	Gravimetric
	CAS # 96-12-8.SEC	(Lot LC00408V)			+/-	56.4511	µg/mL	Unstressed
	Purity 98%				+/-	57.7612	µg/mL	Stressed
51	1,3,5-Trimethylbenzene		1,002.2	µg/mL	+/-	7.7584	µg/mL	Gravimetric
	CAS # 108-67-8.SEC	(Lot FGH02-CMLN)			+/-	56.4276	µg/mL	Unstressed
	Purity 99%				+/-	57.7371	µg/mL	Stressed
52	1,2,4-Trichlorobenzene		1,007.2	µg/mL	+/-	7.7968	µg/mL	Gravimetric
	CAS # 120-82-1.SEC	(Lot 3LYYC)			+/-	56.7068	µg/mL	Unstressed
	Purity 99%				+/-	58.0229	µg/mL	Stressed
53	Hexachlorobutadiene		1,005.8	µg/mL	+/-	7.7857	µg/mL	Gravimetric
	CAS # 87-68-3.SEC	(Lot 5526800)			+/-	56.6265	µg/mL	Unstressed
	Purity 97%				+/-	57.9407	µg/mL	Stressed
54	Naphthalene		1,001.8	µg/mL	+/-	7.7553	µg/mL	Gravimetric
	CAS # 91-20-3.SEC	(Lot SKZ5N)			+/-	56.4050	µg/mL	Unstressed
	Purity 99%				+/-	57.7141	µg/mL	Stressed
55	1,2,3-Trichlorobenzene		1,005.9	µg/mL	+/-	7.7865	µg/mL	Gravimetric
	CAS # 87-61-6.SEC	(Lot A0043055)			+/-	56.6321	µg/mL	Unstressed
	Purity 98%				+/-	57.9464	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)

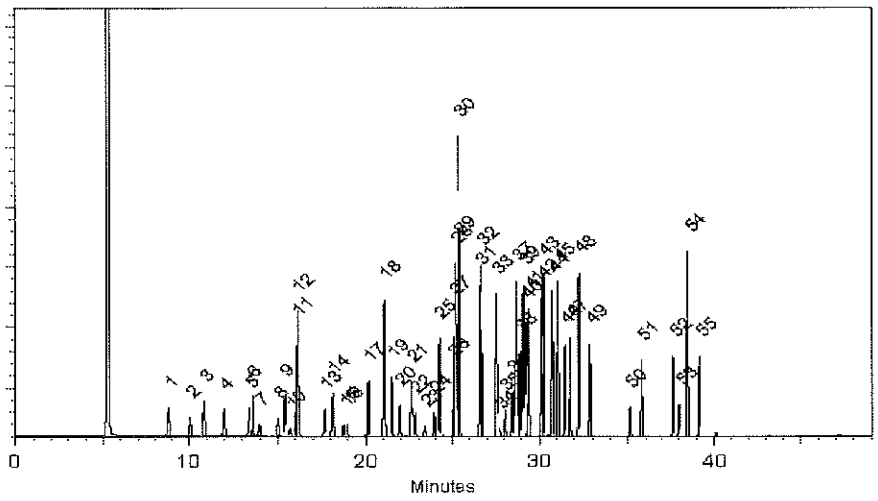
Carrier Gas:
hydrogen-constant pressure 8.0 psi.

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.

Michael J Maye

Date Mixed: 26-Apr-2019 **Balance:** 1127510105

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

Certified Uncertainty Value Notes:

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

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

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

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

Label Conditions	Standard Conditions	Non-Standard Conditions
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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_00045

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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	+/- 44.3076 µg/mL	Gravimetric
	CAS # 67-64-1.SEC (Lot U13B039)		+/- 373.5308 µg/mL	Unstressed
	Purity 99%		+/- 382.8166 µg/mL	Stressed
2	Acrylonitrile	5,003.0 µg/mL	+/- 29.3604 µg/mL	Gravimetric
	CAS # 107-13-1.SEC (Lot CCFKL-GL)		+/- 247.5198 µg/mL	Unstressed
	Purity 99%		+/- 253.6730 µg/mL	Stressed
3	2-Butanone (MEK)	7,517.0 µg/mL	+/- 44.1140 µg/mL	Gravimetric
	CAS # 78-93-3.SEC (Lot RGZ2A)		+/- 371.8982 µg/mL	Unstressed
	Purity 99%		+/- 381.1434 µg/mL	Stressed
4	Tetrahydrofuran	5,023.0 µg/mL	+/- 29.4778 µg/mL	Gravimetric
	CAS # 109-99-9.SEC (Lot 8DAOJ)		+/- 248.5093 µg/mL	Unstressed
	Purity 99%		+/- 254.6871 µg/mL	Stressed
5	2-Nitropropane	1,000.6 µg/mL	+/- 5.9431 µg/mL	Gravimetric
	CAS # 79-46-9.SEC (Lot Y4YWD)		+/- 49.5115 µg/mL	Unstressed
	Purity 98%		+/- 50.7419 µg/mL	Stressed
6	4-Methyl-2-pentanone (MIBK)	5,032.0 µg/mL	+/- 29.5306 µg/mL	Gravimetric
	CAS # 108-10-1.SEC (Lot E29T040)		+/- 248.9546 µg/mL	Unstressed
	Purity 99%		+/- 255.1435 µg/mL	Stressed
7	2-Hexanone	5,036.2 µg/mL	+/- 29.5554 µg/mL	Gravimetric
	CAS # 591-78-6.SEC (Lot Y3TUO)		+/- 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)

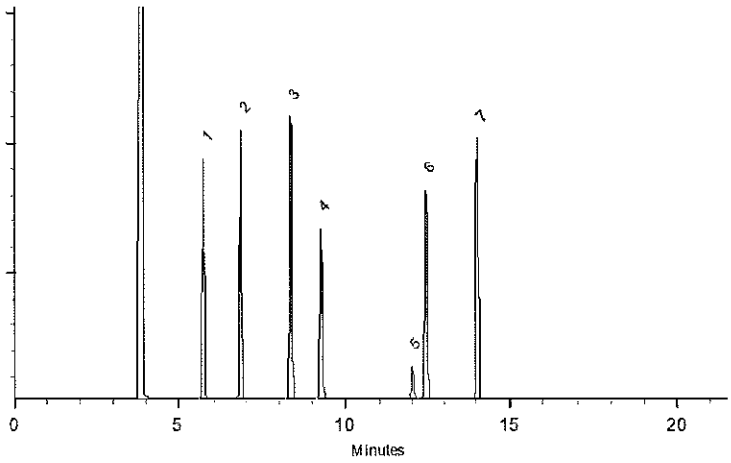
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

Certified Uncertainty Value Notes:

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

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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	+/- 44.3076 µg/mL	Gravimetric
	CAS # 67-64-1.SEC (Lot U13B039)		+/- 373.5308 µg/mL	Unstressed
	Purity 99%		+/- 382.8166 µg/mL	Stressed
2	Acrylonitrile	5,003.0 µg/mL	+/- 29.3604 µg/mL	Gravimetric
	CAS # 107-13-1.SEC (Lot CCFKL-GL)		+/- 247.5198 µg/mL	Unstressed
	Purity 99%		+/- 253.6730 µg/mL	Stressed
3	2-Butanone (MEK)	7,517.0 µg/mL	+/- 44.1140 µg/mL	Gravimetric
	CAS # 78-93-3.SEC (Lot RGZ2A)		+/- 371.8982 µg/mL	Unstressed
	Purity 99%		+/- 381.1434 µg/mL	Stressed
4	Tetrahydrofuran	5,023.0 µg/mL	+/- 29.4778 µg/mL	Gravimetric
	CAS # 109-99-9.SEC (Lot 8DAOJ)		+/- 248.5093 µg/mL	Unstressed
	Purity 99%		+/- 254.6871 µg/mL	Stressed
5	2-Nitropropane	1,000.6 µg/mL	+/- 5.9431 µg/mL	Gravimetric
	CAS # 79-46-9.SEC (Lot Y4YWD)		+/- 49.5115 µg/mL	Unstressed
	Purity 98%		+/- 50.7419 µg/mL	Stressed
6	4-Methyl-2-pentanone (MIBK)	5,032.0 µg/mL	+/- 29.5306 µg/mL	Gravimetric
	CAS # 108-10-1.SEC (Lot E29T040)		+/- 248.9546 µg/mL	Unstressed
	Purity 99%		+/- 255.1435 µg/mL	Stressed
7	2-Hexanone	5,036.2 µg/mL	+/- 29.5554 µg/mL	Gravimetric
	CAS # 591-78-6.SEC (Lot Y3TUO)		+/- 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)

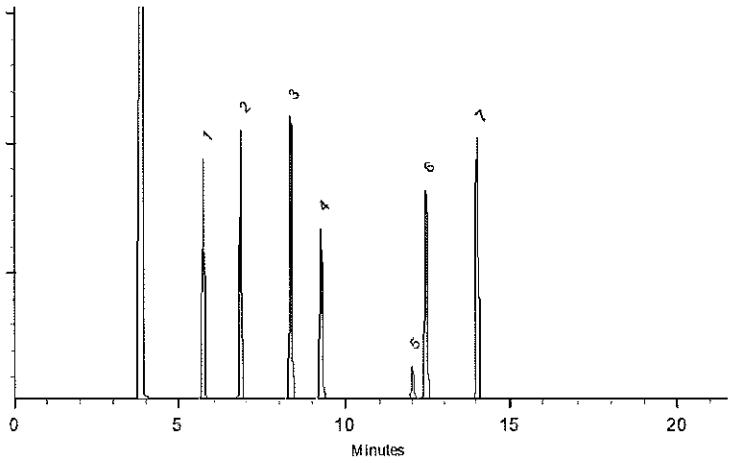
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

Certified Uncertainty Value Notes:

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

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
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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_Q#3B_00052

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Fax: (814)353-1309

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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Reference Material Producer
Certificate #3222.01

ACCREDITED
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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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	+/- 44.3076 µg/mL	Gravimetric
	CAS # 67-64-1.SEC (Lot U13B039)		+/- 373.5308 µg/mL	Unstressed
	Purity 99%		+/- 382.8166 µg/mL	Stressed
2	Acrylonitrile	5,003.0 µg/mL	+/- 29.3604 µg/mL	Gravimetric
	CAS # 107-13-1.SEC (Lot CCFKL-GL)		+/- 247.5198 µg/mL	Unstressed
	Purity 99%		+/- 253.6730 µg/mL	Stressed
3	2-Butanone (MEK)	7,517.0 µg/mL	+/- 44.1140 µg/mL	Gravimetric
	CAS # 78-93-3.SEC (Lot RGZ2A)		+/- 371.8982 µg/mL	Unstressed
	Purity 99%		+/- 381.1434 µg/mL	Stressed
4	Tetrahydrofuran	5,023.0 µg/mL	+/- 29.4778 µg/mL	Gravimetric
	CAS # 109-99-9.SEC (Lot 8DAOJ)		+/- 248.5093 µg/mL	Unstressed
	Purity 99%		+/- 254.6871 µg/mL	Stressed
5	2-Nitropropane	1,000.6 µg/mL	+/- 5.9431 µg/mL	Gravimetric
	CAS # 79-46-9.SEC (Lot Y4YWD)		+/- 49.5115 µg/mL	Unstressed
	Purity 98%		+/- 50.7419 µg/mL	Stressed
6	4-Methyl-2-pentanone (MIBK)	5,032.0 µg/mL	+/- 29.5306 µg/mL	Gravimetric
	CAS # 108-10-1.SEC (Lot E29T040)		+/- 248.9546 µg/mL	Unstressed
	Purity 99%		+/- 255.1435 µg/mL	Stressed
7	2-Hexanone	5,036.2 µg/mL	+/- 29.5554 µg/mL	Gravimetric
	CAS # 591-78-6.SEC (Lot Y3TUO)		+/- 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)

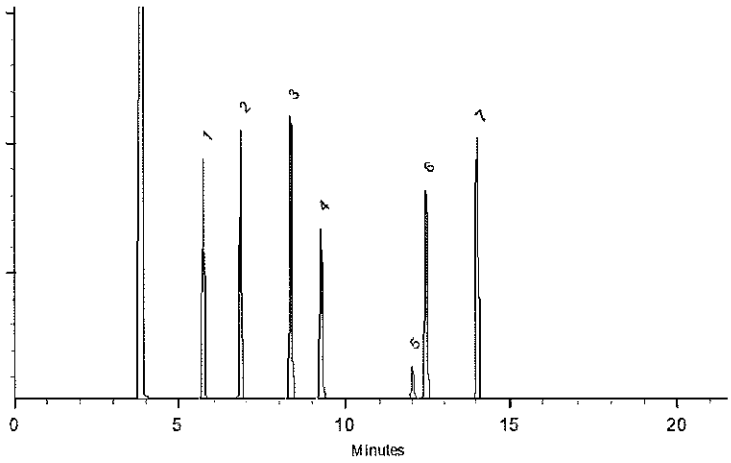
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

Certified Uncertainty Value Notes:

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

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

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- 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

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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)

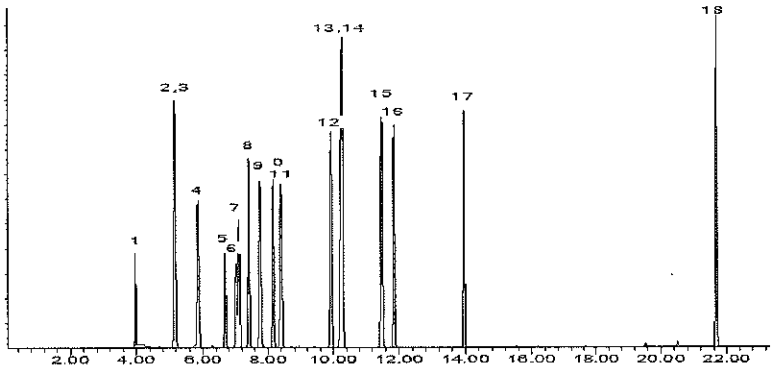
Carrier Gas:
helium-constant pressure 30 psi

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_Q#4C_00053

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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)

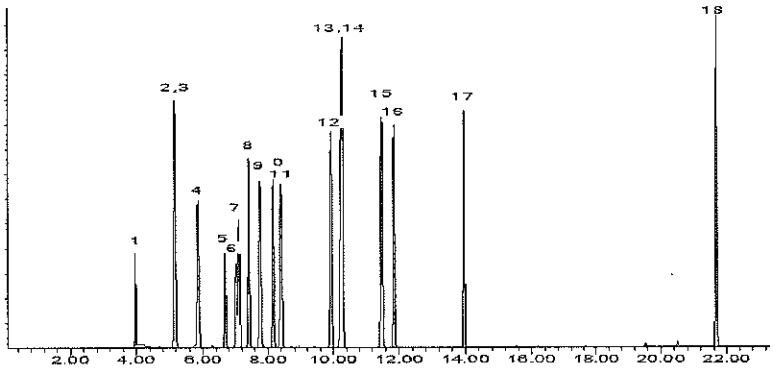
Carrier Gas:
helium-constant pressure 30 psi

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

Certified Uncertainty Value Notes:

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

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

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

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- 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_Q#4C_00057

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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
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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)

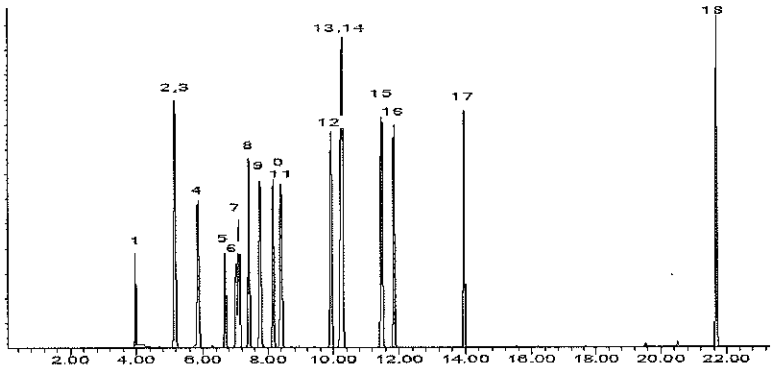
Carrier Gas:
helium-constant pressure 30 psi

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



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Matt Fragassi - Mix Technician

Date Mixed: 11-Mar-2020 **Balance:** 1128342314

Feng-Yun Lo – QC 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/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.
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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

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

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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	+/- 5.9714 µg/mL	Gravimetric
	CAS # 79-20-9.SEC	(Lot 6WOXM-KD)		+/- 60.6685 µg/mL	Unstressed
	Purity 99%			+/- 60.8125 µg/mL	Stressed
2	Allyl chloride (3-chloropropene)		1,001.3 µg/mL	+/- 5.9476 µg/mL	Gravimetric
	CAS # 107-05-1.SEC	(Lot H3HGC)		+/- 60.4271 µg/mL	Unstressed
	Purity 99%			+/- 60.5705 µg/mL	Stressed
3	Bromochloromethane		1,002.0 µg/mL	+/- 5.9516 µg/mL	Gravimetric
	CAS # 74-97-5.SEC	(Lot 8529200)		+/- 60.4674 µg/mL	Unstressed
	Purity 99%			+/- 60.6109 µg/mL	Stressed
4	Methylcyclohexane		1,004.7 µg/mL	+/- 5.9674 µg/mL	Gravimetric
	CAS # 108-87-2.SEC	(Lot 24MSD-CD)		+/- 60.6283 µg/mL	Unstressed
	Purity 99%			+/- 60.7722 µg/mL	Stressed
5	Pentachloroethane		1,004.7 µg/mL	+/- 5.9674 µg/mL	Gravimetric
	CAS # 76-01-7.SEC	(Lot 8170200)		+/- 60.6283 µg/mL	Unstressed
	Purity 99%			+/- 60.7722 µg/mL	Stressed
6	1,2,3-Trimethylbenzene		1,004.6 µg/mL	+/- 5.9673 µg/mL	Gravimetric
	CAS # 526-73-8.SEC	(Lot 7110200)		+/- 60.6267 µg/mL	Unstressed
	Purity 92%			+/- 60.7706 µg/mL	Stressed
7	1,3-Diethylbenzene		1,006.0 µg/mL	+/- 5.9753 µg/mL	Gravimetric
	CAS # 141-93-5.SEC	(Lot 113566-1)		+/- 60.7087 µg/mL	Unstressed
	Purity 99%			+/- 60.8528 µg/mL	Stressed

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

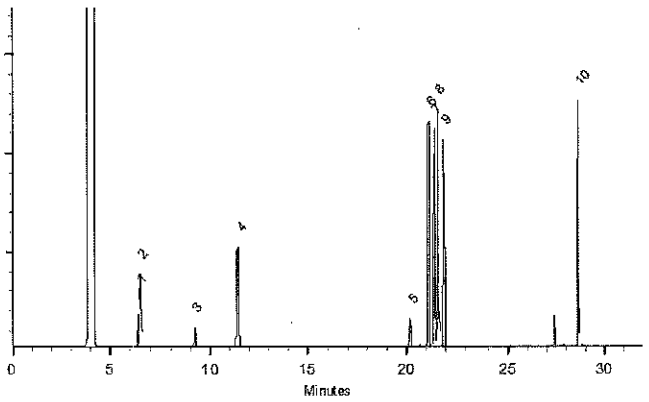
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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.

Dalton Stover - Operations Technician I

Date Mixed: 17-Mar-2020 **Balance:** 1128342314

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

Certified Uncertainty Value Notes:

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

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

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

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- 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:

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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_00050

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

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

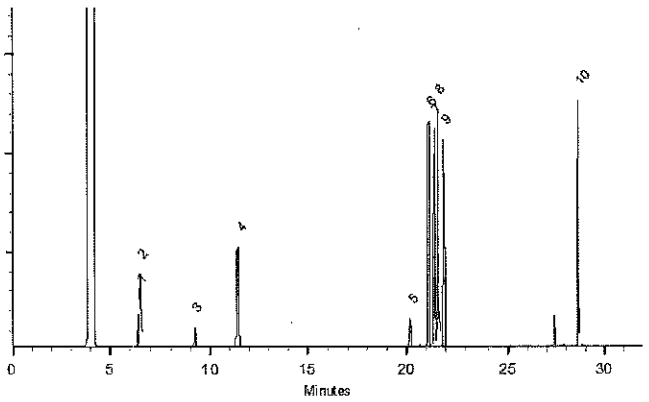
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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.

Dalton Stover - Operations Technician I

Date Mixed: 17-Mar-2020 **Balance:** 1128342314

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/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:

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

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

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- 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:

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- If any undissolved material is visible inside the ampul, sonicate the unopened ampul until the material is completely dissolved.

Reagent

MSV_QCS#6Std_00056

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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	+/- 5.9714	µg/mL	Gravimetric
	CAS # 79-20-9.SEC	(Lot 6WOXM-KD)		+/- 60.6685	µg/mL	Unstressed
	Purity 99%			+/- 60.8125	µg/mL	Stressed
2	Allyl chloride (3-chloropropene)		1,001.3 µg/mL	+/- 5.9476	µg/mL	Gravimetric
	CAS # 107-05-1.SEC	(Lot H3HGC)		+/- 60.4271	µg/mL	Unstressed
	Purity 99%			+/- 60.5705	µg/mL	Stressed
3	Bromochloromethane		1,002.0 µg/mL	+/- 5.9516	µg/mL	Gravimetric
	CAS # 74-97-5.SEC	(Lot 8529200)		+/- 60.4674	µg/mL	Unstressed
	Purity 99%			+/- 60.6109	µg/mL	Stressed
4	Methylcyclohexane		1,004.7 µg/mL	+/- 5.9674	µg/mL	Gravimetric
	CAS # 108-87-2.SEC	(Lot 24MSD-CD)		+/- 60.6283	µg/mL	Unstressed
	Purity 99%			+/- 60.7722	µg/mL	Stressed
5	Pentachloroethane		1,004.7 µg/mL	+/- 5.9674	µg/mL	Gravimetric
	CAS # 76-01-7.SEC	(Lot 8170200)		+/- 60.6283	µg/mL	Unstressed
	Purity 99%			+/- 60.7722	µg/mL	Stressed
6	1,2,3-Trimethylbenzene		1,004.6 µg/mL	+/- 5.9673	µg/mL	Gravimetric
	CAS # 526-73-8.SEC	(Lot 7110200)		+/- 60.6267	µg/mL	Unstressed
	Purity 92%			+/- 60.7706	µg/mL	Stressed
7	1,3-Diethylbenzene		1,006.0 µg/mL	+/- 5.9753	µg/mL	Gravimetric
	CAS # 141-93-5.SEC	(Lot 113566-1)		+/- 60.7087	µg/mL	Unstressed
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8	1,4-Diethylbenzene		1,006.1 µg/mL	+/-	5.9761	µg/mL	Gravimetric
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	CAS # 135-01-3.SEC	(Lot BCBF3667V)		+/-	60.8697	µg/mL	Unstressed
	Purity 99%			+/-	61.0141	µg/mL	Stressed
10	2-Methylnaphthalene		1,006.0 µg/mL	+/-	5.9753	µg/mL	Gravimetric
	CAS # 91-57-6.SEC	(Lot 76023-1)		+/-	60.7087	µg/mL	Unstressed
	Purity 99%			+/-	60.8528	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:
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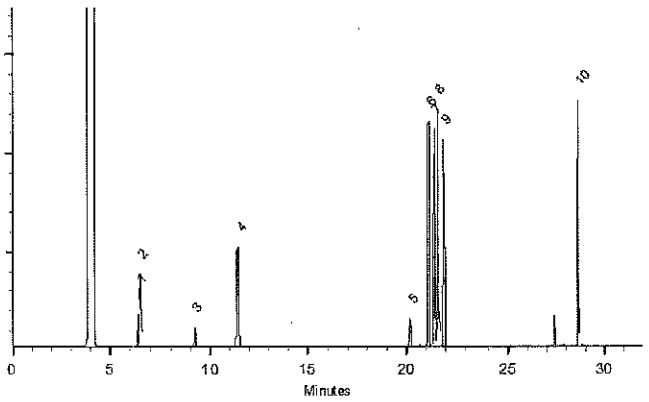
Det. Temp:
250°C

Det. Type:
FID



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Dalton Stover - Operations Technician I

Date Mixed: 17-Mar-2020 **Balance:** 1128342314

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:

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Reagent

MSV_V#1B_00101

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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 (Lot SHBK2437) **Purity** 99%	5,011.4 µg/mL	+/- 31.9644 µg/mL +/- 281.2901 µg/mL +/- 287.8577 µg/mL	Gravimetric Unstressed Stressed
2	Methylene chloride (dichloromethane) **CAS #** 75-09-2 (Lot SHBL3107) **Purity** 99%	5,004.6 µg/mL	+/- 31.9213 µg/mL +/- 280.9112 µg/mL +/- 287.4700 µg/mL	Gravimetric Unstressed Stressed
3	trans-1,2-Dichloroethene **CAS #** 156-60-5 (Lot MKBH9850V) **Purity** 99%	5,017.5 µg/mL	+/- 32.0035 µg/mL +/- 281.6339 µg/mL +/- 288.2096 µg/mL	Gravimetric Unstressed Stressed
4	1,1-Dichloroethane **CAS #** 75-34-3 (Lot 580900) **Purity** 99%	5,020.4 µg/mL	+/- 32.0218 µg/mL +/- 281.7953 µg/mL +/- 288.3747 µg/mL	Gravimetric Unstressed Stressed
5	2,2-Dichloropropane **CAS #** 594-20-7 (Lot BCBT5124) **Purity** 99%	5,050.0 µg/mL	+/- 32.0202 µg/mL +/- 283.4366 µg/mL +/- 290.0553 µg/mL	Gravimetric Unstressed Stressed
6	cis-1,2-Dichloroethene **CAS #** 156-59-2 (Lot MKBX5945V) **Purity** 99%	5,046.5 µg/mL	+/- 31.9980 µg/mL +/- 283.2401 µg/mL +/- 289.8543 µg/mL	Gravimetric Unstressed Stressed
7	chloroform **CAS #** 67-66-3 (Lot SHBJ9076) **Purity** 99%	5,034.3 µg/mL	+/- 32.1103 µg/mL +/- 282.5741 µg/mL +/- 289.1717 µg/mL	Gravimetric Unstressed 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) **CAS #** 106-93-4 **Purity** 99%	(Lot BCBP2268V)	5,037.4	µg/mL	+/- 31.9401 +/- 282.7280 +/- 289.3302	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	1-Chlorohexane **CAS #** 544-10-5 **Purity** 98%	(Lot BCBS3368V)	5,010.7	µg/mL	+/- 29.3390 +/- 280.9687 +/- 287.5420	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	Chlorobenzene **CAS #** 108-90-7 **Purity** 99%	(Lot SHBJ0839)	5,009.0	µg/mL	+/- 31.9493 +/- 281.1568 +/- 287.7213	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	1,1,1,2-Tetrachloroethane **CAS #** 630-20-6 **Purity** 99%	(Lot MKBS3769V)	5,038.6	µg/mL	+/- 31.9481 +/- 282.7981 +/- 289.4020	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	Ethylbenzene **CAS #** 100-41-4 **Purity** 99%	(Lot SHBJ3183)	5,029.3	µg/mL	+/- 31.8886 +/- 282.2719 +/- 288.8635	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	m-Xylene **CAS #** 108-38-3 **Purity** 99%	(Lot SHBH8323)	5,038.4	µg/mL	+/- 31.9465 +/- 282.7841 +/- 289.3876	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	p-Xylene **CAS #** 106-42-3 **Purity** 99%	(Lot SHBJ0052)	5,038.0	µg/mL	+/- 31.9441 +/- 282.7630 +/- 289.3661	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	o-Xylene **CAS #** 95-47-6 **Purity** 99%	(Lot SHBH3432V)	5,046.4	µg/mL	+/- 31.9972 +/- 283.2331 +/- 289.8471	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	Styrene **CAS #** 100-42-5 **Purity** 99%	(Lot MKBV4061V)	5,047.0	µg/mL	+/- 32.0012 +/- 283.2682 +/- 289.8830	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	Isopropylbenzene (cumene) **CAS #** 98-82-8 **Purity** 99%	(Lot 10185056)	5,035.3	µg/mL	+/- 31.9267 +/- 282.6087 +/- 289.2081	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	bromoform **CAS #** 75-25-2 **Purity** 99%	(Lot SHBJ4835)	5,013.0	µg/mL	+/- 31.9748 +/- 281.3813 +/- 287.9511	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	1,1,2,2-Tetrachloroethane **CAS #** 79-34-5 **Purity** 99%	(Lot CFA4D)	5,016.0	µg/mL	+/- 31.9939 +/- 281.5497 +/- 288.1234	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	1,2,3-Trichloropropane **CAS #** 96-18-4 **Purity** 99%	(Lot BCBH8722V)	5,033.4	µg/mL	+/- 31.9148 +/- 282.5035 +/- 289.1004	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	n-Propylbenzene **CAS #** 103-65-1 **Purity** 99%	(Lot MKBJ0332V)	5,032.4	µg/mL	+/- 31.9084 +/- 282.4473 +/- 289.0430	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	Bromobenzene **CAS #** 108-86-1 **Purity** 99%	(Lot WXBC5147V)	5,035.5	µg/mL	+/- 31.9282 +/- 282.6227 +/- 289.2225	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	1,3,5-Trimethylbenzene **CAS #** 108-67-8 **Purity** 99%	(Lot BCBS7648V)	5,029.8	µg/mL	+/- 31.8918 +/- 282.3000 +/- 288.8922	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

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

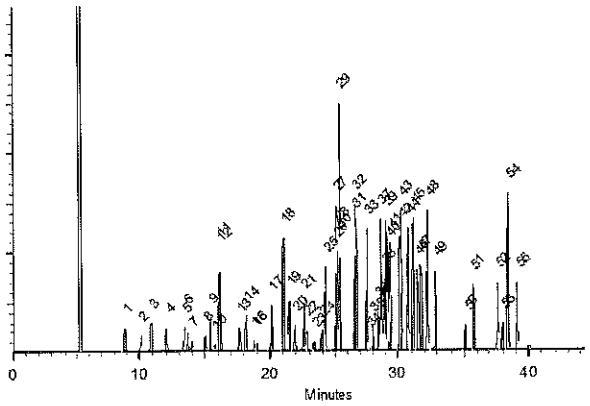
Carrier Gas:
hydrogen-constant pressure 8.0 psi.

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.

Cydnei L. Crust - Mix Technician

Date Mixed: 09-Mar-2020 **Balance:** B251644995

Feng-Yun Lo - QC 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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_V#1B_00103

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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 (Lot SHBK2437) **Purity** 99%	5,011.4 µg/mL	+/- 31.9644 µg/mL +/- 281.2901 µg/mL +/- 287.8577 µg/mL	Gravimetric Unstressed Stressed
2	Methylene chloride (dichloromethane) **CAS #** 75-09-2 (Lot SHBL3107) **Purity** 99%	5,004.6 µg/mL	+/- 31.9213 µg/mL +/- 280.9112 µg/mL +/- 287.4700 µg/mL	Gravimetric Unstressed Stressed
3	trans-1,2-Dichloroethene **CAS #** 156-60-5 (Lot MKBH9850V) **Purity** 99%	5,017.5 µg/mL	+/- 32.0035 µg/mL +/- 281.6339 µg/mL +/- 288.2096 µg/mL	Gravimetric Unstressed Stressed
4	1,1-Dichloroethane **CAS #** 75-34-3 (Lot 580900) **Purity** 99%	5,020.4 µg/mL	+/- 32.0218 µg/mL +/- 281.7953 µg/mL +/- 288.3747 µg/mL	Gravimetric Unstressed Stressed
5	2,2-Dichloropropane **CAS #** 594-20-7 (Lot BCBT5124) **Purity** 99%	5,050.0 µg/mL	+/- 32.0202 µg/mL +/- 283.4366 µg/mL +/- 290.0553 µg/mL	Gravimetric Unstressed Stressed
6	cis-1,2-Dichloroethene **CAS #** 156-59-2 (Lot MKBX5945V) **Purity** 99%	5,046.5 µg/mL	+/- 31.9980 µg/mL +/- 283.2401 µg/mL +/- 289.8543 µg/mL	Gravimetric Unstressed Stressed
7	chloroform **CAS #** 67-66-3 (Lot SHBJ9076) **Purity** 99%	5,034.3 µg/mL	+/- 32.1103 µg/mL +/- 282.5741 µg/mL +/- 289.1717 µg/mL	Gravimetric Unstressed 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) **CAS #** 106-93-4 **Purity** 99%	(Lot BCBP2268V)	5,037.4	µg/mL	+/- 31.9401 +/- 282.7280 +/- 289.3302	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	1-Chlorohexane **CAS #** 544-10-5 **Purity** 98%	(Lot BCBS3368V)	5,010.7	µg/mL	+/- 29.3390 +/- 280.9687 +/- 287.5420	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	Chlorobenzene **CAS #** 108-90-7 **Purity** 99%	(Lot SHBJ0839)	5,009.0	µg/mL	+/- 31.9493 +/- 281.1568 +/- 287.7213	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	1,1,1,2-Tetrachloroethane **CAS #** 630-20-6 **Purity** 99%	(Lot MKBS3769V)	5,038.6	µg/mL	+/- 31.9481 +/- 282.7981 +/- 289.4020	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	Ethylbenzene **CAS #** 100-41-4 **Purity** 99%	(Lot SHBJ3183)	5,029.3	µg/mL	+/- 31.8886 +/- 282.2719 +/- 288.8635	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	m-Xylene **CAS #** 108-38-3 **Purity** 99%	(Lot SHBH8323)	5,038.4	µg/mL	+/- 31.9465 +/- 282.7841 +/- 289.3876	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	p-Xylene **CAS #** 106-42-3 **Purity** 99%	(Lot SHBJ0052)	5,038.0	µg/mL	+/- 31.9441 +/- 282.7630 +/- 289.3661	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	o-Xylene **CAS #** 95-47-6 **Purity** 99%	(Lot SHBH3432V)	5,046.4	µg/mL	+/- 31.9972 +/- 283.2331 +/- 289.8471	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	Styrene **CAS #** 100-42-5 **Purity** 99%	(Lot MKBV4061V)	5,047.0	µg/mL	+/- 32.0012 +/- 283.2682 +/- 289.8830	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	Isopropylbenzene (cumene) **CAS #** 98-82-8 **Purity** 99%	(Lot 10185056)	5,035.3	µg/mL	+/- 31.9267 +/- 282.6087 +/- 289.2081	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	bromoform **CAS #** 75-25-2 **Purity** 99%	(Lot SHBJ4835)	5,013.0	µg/mL	+/- 31.9748 +/- 281.3813 +/- 287.9511	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	1,1,2,2-Tetrachloroethane **CAS #** 79-34-5 **Purity** 99%	(Lot CFA4D)	5,016.0	µg/mL	+/- 31.9939 +/- 281.5497 +/- 288.1234	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	1,2,3-Trichloropropane **CAS #** 96-18-4 **Purity** 99%	(Lot BCBH8722V)	5,033.4	µg/mL	+/- 31.9148 +/- 282.5035 +/- 289.1004	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	n-Propylbenzene **CAS #** 103-65-1 **Purity** 99%	(Lot MKBJ0332V)	5,032.4	µg/mL	+/- 31.9084 +/- 282.4473 +/- 289.0430	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	Bromobenzene **CAS #** 108-86-1 **Purity** 99%	(Lot WXBC5147V)	5,035.5	µg/mL	+/- 31.9282 +/- 282.6227 +/- 289.2225	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	1,3,5-Trimethylbenzene **CAS #** 108-67-8 **Purity** 99%	(Lot BCBS7648V)	5,029.8	µg/mL	+/- 31.8918 +/- 282.3000 +/- 288.8922	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

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

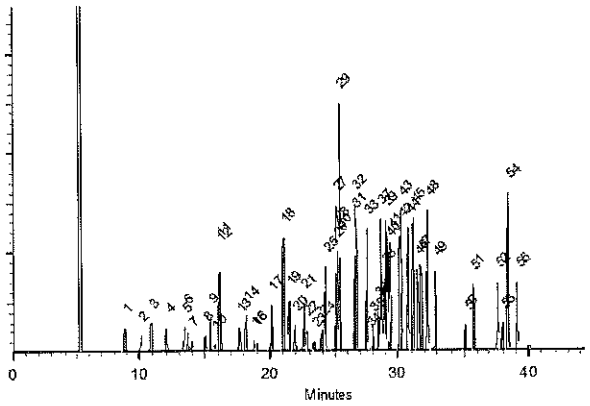
Carrier Gas:
hydrogen-constant pressure 8.0 psi.

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.

Cydnei L. Crust - Mix Technician

Date Mixed: 09-Mar-2020 **Balance:** B251644995

Feng-Yun Lo - QC 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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_V#1B_00105

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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 (Lot SHBK2437) **Purity** 99%	5,011.4 µg/mL	+/- 31.9644 µg/mL +/- 281.2901 µg/mL +/- 287.8577 µg/mL	Gravimetric Unstressed Stressed
2	Methylene chloride (dichloromethane) **CAS #** 75-09-2 (Lot SHBL3107) **Purity** 99%	5,004.6 µg/mL	+/- 31.9213 µg/mL +/- 280.9112 µg/mL +/- 287.4700 µg/mL	Gravimetric Unstressed Stressed
3	trans-1,2-Dichloroethene **CAS #** 156-60-5 (Lot MKBH9850V) **Purity** 99%	5,017.5 µg/mL	+/- 32.0035 µg/mL +/- 281.6339 µg/mL +/- 288.2096 µg/mL	Gravimetric Unstressed Stressed
4	1,1-Dichloroethane **CAS #** 75-34-3 (Lot 580900) **Purity** 99%	5,020.4 µg/mL	+/- 32.0218 µg/mL +/- 281.7953 µg/mL +/- 288.3747 µg/mL	Gravimetric Unstressed Stressed
5	2,2-Dichloropropane **CAS #** 594-20-7 (Lot BCBT5124) **Purity** 99%	5,050.0 µg/mL	+/- 32.0202 µg/mL +/- 283.4366 µg/mL +/- 290.0553 µg/mL	Gravimetric Unstressed Stressed
6	cis-1,2-Dichloroethene **CAS #** 156-59-2 (Lot MKBX5945V) **Purity** 99%	5,046.5 µg/mL	+/- 31.9980 µg/mL +/- 283.2401 µg/mL +/- 289.8543 µg/mL	Gravimetric Unstressed Stressed
7	chloroform **CAS #** 67-66-3 (Lot SHBJ9076) **Purity** 99%	5,034.3 µg/mL	+/- 32.1103 µg/mL +/- 282.5741 µg/mL +/- 289.1717 µg/mL	Gravimetric Unstressed 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) **CAS #** 106-93-4 **Purity** 99%	(Lot BCBP2268V)	5,037.4	µg/mL	+/- 31.9401 +/- 282.7280 +/- 289.3302	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
25	1-Chlorohexane **CAS #** 544-10-5 **Purity** 98%	(Lot BCBS3368V)	5,010.7	µg/mL	+/- 29.3390 +/- 280.9687 +/- 287.5420	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
26	Chlorobenzene **CAS #** 108-90-7 **Purity** 99%	(Lot SHBJ0839)	5,009.0	µg/mL	+/- 31.9493 +/- 281.1568 +/- 287.7213	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
27	1,1,1,2-Tetrachloroethane **CAS #** 630-20-6 **Purity** 99%	(Lot MKBS3769V)	5,038.6	µg/mL	+/- 31.9481 +/- 282.7981 +/- 289.4020	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
28	Ethylbenzene **CAS #** 100-41-4 **Purity** 99%	(Lot SHBJ3183)	5,029.3	µg/mL	+/- 31.8886 +/- 282.2719 +/- 288.8635	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
29	m-Xylene **CAS #** 108-38-3 **Purity** 99%	(Lot SHBH8323)	5,038.4	µg/mL	+/- 31.9465 +/- 282.7841 +/- 289.3876	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	p-Xylene **CAS #** 106-42-3 **Purity** 99%	(Lot SHBJ0052)	5,038.0	µg/mL	+/- 31.9441 +/- 282.7630 +/- 289.3661	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	o-Xylene **CAS #** 95-47-6 **Purity** 99%	(Lot SHBH3432V)	5,046.4	µg/mL	+/- 31.9972 +/- 283.2331 +/- 289.8471	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	Styrene **CAS #** 100-42-5 **Purity** 99%	(Lot MKBV4061V)	5,047.0	µg/mL	+/- 32.0012 +/- 283.2682 +/- 289.8830	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	Isopropylbenzene (cumene) **CAS #** 98-82-8 **Purity** 99%	(Lot 10185056)	5,035.3	µg/mL	+/- 31.9267 +/- 282.6087 +/- 289.2081	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	bromoform **CAS #** 75-25-2 **Purity** 99%	(Lot SHBJ4835)	5,013.0	µg/mL	+/- 31.9748 +/- 281.3813 +/- 287.9511	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	1,1,2,2-Tetrachloroethane **CAS #** 79-34-5 **Purity** 99%	(Lot CFA4D)	5,016.0	µg/mL	+/- 31.9939 +/- 281.5497 +/- 288.1234	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	1,2,3-Trichloropropane **CAS #** 96-18-4 **Purity** 99%	(Lot BCBH8722V)	5,033.4	µg/mL	+/- 31.9148 +/- 282.5035 +/- 289.1004	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	n-Propylbenzene **CAS #** 103-65-1 **Purity** 99%	(Lot MKBJ0332V)	5,032.4	µg/mL	+/- 31.9084 +/- 282.4473 +/- 289.0430	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	Bromobenzene **CAS #** 108-86-1 **Purity** 99%	(Lot WXBC5147V)	5,035.5	µg/mL	+/- 31.9282 +/- 282.6227 +/- 289.2225	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	1,3,5-Trimethylbenzene **CAS #** 108-67-8 **Purity** 99%	(Lot BCBS7648V)	5,029.8	µg/mL	+/- 31.8918 +/- 282.3000 +/- 288.8922	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

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

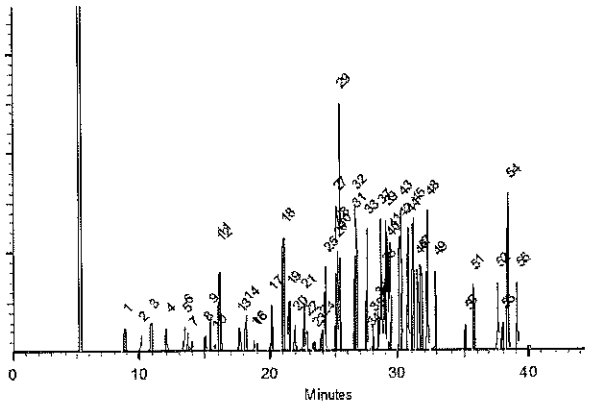
Carrier Gas:
hydrogen-constant pressure 8.0 psi.

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.

Cydnei L. Crust - Mix Technician

Date Mixed: 09-Mar-2020 **Balance:** B251644995

Feng-Yun Lo - QC 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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_V#2B_00121

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. : 56734 **Lot No.:** A0159694

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, 2022 **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%	25,019.2 µg/mL	+/- 146.4929 µg/mL
2	tert-Butanol (TBA)	75-65-0	99%	25,022.4 µg/mL	+/- 146.5117 µg/mL
3	Propionitrile	107-12-0	99%	25,020.0 µg/mL	+/- 146.4976 µg/mL
4	Methacrylonitrile	126-98-7	99%	12,533.6 µg/mL	+/- 73.3870 µg/mL
5	Isobutanol (2-Methyl-1-propanol)	78-83-1	99%	62,702.0 µg/mL	+/- 367.1151 µg/mL
6	1-Butanol	71-36-3	99%	125,150.0 µg/mL	+/- 732.7430 µg/mL
7	1,4-Dioxane	123-91-1	99%	62,550.0 µg/mL	+/- 366.2251 µg/mL
8	trans-1,4-dichloro-2-butene	110-57-6	95%	12,549.5 µg/mL	+/- 73.4801 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)

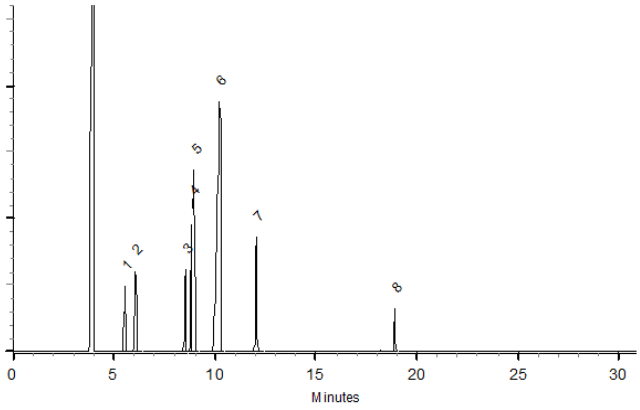
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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 Windle - Operations Technician I

Date Mixed: 07-Apr-2020 **Balance:** B251644995

Fang-Yun Lo - QC Analyst

Date Passed: 10-Apr-2020

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/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.

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#2B_00124

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. : 56734 **Lot No.:** A0159694

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, 2022 **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%	25,019.2 µg/mL	+/- 146.4929 µg/mL
2	tert-Butanol (TBA)	75-65-0	99%	25,022.4 µg/mL	+/- 146.5117 µg/mL
3	Propionitrile	107-12-0	99%	25,020.0 µg/mL	+/- 146.4976 µg/mL
4	Methacrylonitrile	126-98-7	99%	12,533.6 µg/mL	+/- 73.3870 µg/mL
5	Isobutanol (2-Methyl-1-propanol)	78-83-1	99%	62,702.0 µg/mL	+/- 367.1151 µg/mL
6	1-Butanol	71-36-3	99%	125,150.0 µg/mL	+/- 732.7430 µg/mL
7	1,4-Dioxane	123-91-1	99%	62,550.0 µg/mL	+/- 366.2251 µg/mL
8	trans-1,4-dichloro-2-butene	110-57-6	95%	12,549.5 µg/mL	+/- 73.4801 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)

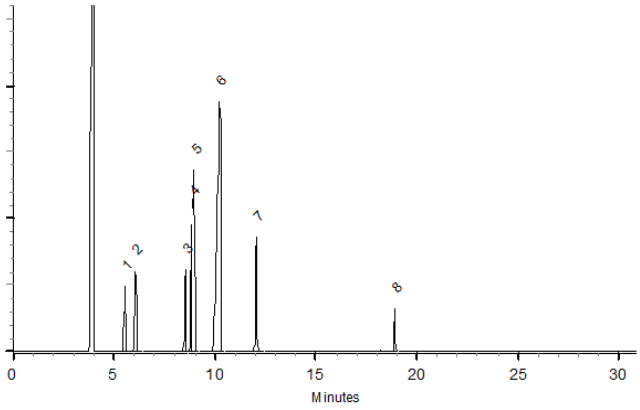
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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 Windle - Operations Technician I

Date Mixed: 07-Apr-2020 **Balance:** B251644995

Fang-Yun Lo - QC Analyst

Date Passed: 10-Apr-2020

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/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.

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_00050

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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		25,001.0 µg/mL	+/- 146.3864 µg/mL	Gravimetric
	CAS # 67-64-1	(Lot MKCK2598)		+/- 1,236.8670 µg/mL	Unstressed
	Purity 99%			+/- 1,267.6168 µg/mL	Stressed
2	Acrylonitrile		12,511.0 µg/mL	+/- 73.2547 µg/mL	Gravimetric
	CAS # 107-13-1	(Lot A0387097)		+/- 618.9529 µg/mL	Unstressed
	Purity 99%			+/- 634.3408 µg/mL	Stressed
3	2-Butanone (MEK)		25,007.0 µg/mL	+/- 146.4215 µg/mL	Gravimetric
	CAS # 78-93-3	(Lot SHBK9603)		+/- 1,237.1638 µg/mL	Unstressed
	Purity 99%			+/- 1,267.9210 µg/mL	Stressed
4	Tetrahydrofuran		25,049.0 µg/mL	+/- 146.6674 µg/mL	Gravimetric
	CAS # 109-99-9	(Lot SHBK8926)		+/- 1,239.2417 µg/mL	Unstressed
	Purity 99%			+/- 1,270.0505 µg/mL	Stressed
5	2-Nitropropane		24,758.3 µg/mL	+/- 144.9652 µg/mL	Gravimetric
	CAS # 79-46-9	(Lot BCCB9352)		+/- 1,224.8589 µg/mL	Unstressed
	Purity 97%			+/- 1,255.3102 µg/mL	Stressed
6	4-Methyl-2-pentanone (MIBK)		25,014.0 µg/mL	+/- 146.4625 µg/mL	Gravimetric
	CAS # 108-10-1	(Lot SHBL5515)		+/- 1,237.5101 µg/mL	Unstressed
	Purity 99%			+/- 1,268.2759 µg/mL	Stressed
7	2-Hexanone		25,016.0 µg/mL	+/- 146.4742 µg/mL	Gravimetric
	CAS # 591-78-6	(Lot MKCL1599)		+/- 1,237.6091 µg/mL	Unstressed
	Purity 99%			+/- 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)

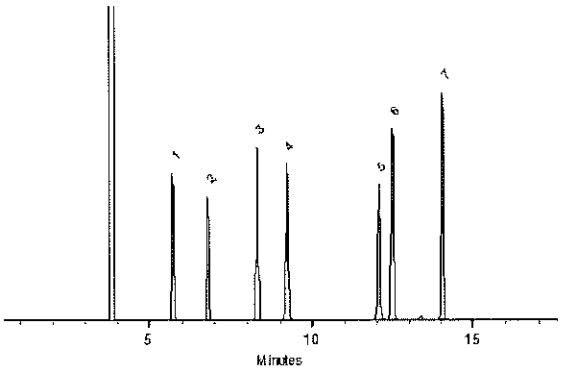
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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.

Kylie Struble - Operations Technician I

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

Feng-Yen 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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_V#3B_00051

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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		25,001.0 µg/mL	+/- 146.3864 µg/mL	Gravimetric
	CAS # 67-64-1	(Lot MKCK2598)		+/- 1,236.8670 µg/mL	Unstressed
	Purity 99%			+/- 1,267.6168 µg/mL	Stressed
2	Acrylonitrile		12,511.0 µg/mL	+/- 73.2547 µg/mL	Gravimetric
	CAS # 107-13-1	(Lot A0387097)		+/- 618.9529 µg/mL	Unstressed
	Purity 99%			+/- 634.3408 µg/mL	Stressed
3	2-Butanone (MEK)		25,007.0 µg/mL	+/- 146.4215 µg/mL	Gravimetric
	CAS # 78-93-3	(Lot SHBK9603)		+/- 1,237.1638 µg/mL	Unstressed
	Purity 99%			+/- 1,267.9210 µg/mL	Stressed
4	Tetrahydrofuran		25,049.0 µg/mL	+/- 146.6674 µg/mL	Gravimetric
	CAS # 109-99-9	(Lot SHBK8926)		+/- 1,239.2417 µg/mL	Unstressed
	Purity 99%			+/- 1,270.0505 µg/mL	Stressed
5	2-Nitropropane		24,758.3 µg/mL	+/- 144.9652 µg/mL	Gravimetric
	CAS # 79-46-9	(Lot BCCB9352)		+/- 1,224.8589 µg/mL	Unstressed
	Purity 97%			+/- 1,255.3102 µg/mL	Stressed
6	4-Methyl-2-pentanone (MIBK)		25,014.0 µg/mL	+/- 146.4625 µg/mL	Gravimetric
	CAS # 108-10-1	(Lot SHBL5515)		+/- 1,237.5101 µg/mL	Unstressed
	Purity 99%			+/- 1,268.2759 µg/mL	Stressed
7	2-Hexanone		25,016.0 µg/mL	+/- 146.4742 µg/mL	Gravimetric
	CAS # 591-78-6	(Lot MKCL1599)		+/- 1,237.6091 µg/mL	Unstressed
	Purity 99%			+/- 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)

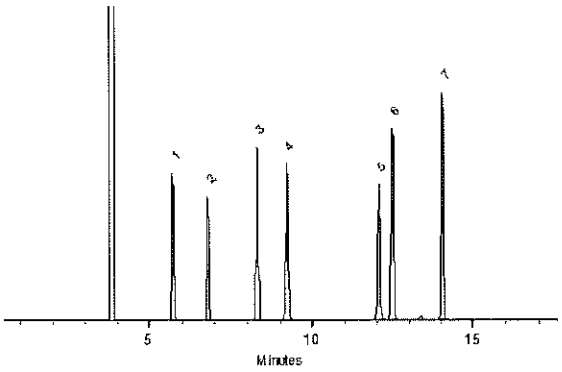
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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.

Kylie 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:

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_V#3B_00052

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

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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Reference Material Producer
Certificate #3222.01

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ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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	25,001.0 µg/mL	+/- 146.3864 µg/mL	Gravimetric
	CAS # 67-64-1 (Lot MKCK2598)		+/- 1,236.8670 µg/mL	Unstressed
	Purity 99%		+/- 1,267.6168 µg/mL	Stressed
2	Acrylonitrile	12,511.0 µg/mL	+/- 73.2547 µg/mL	Gravimetric
	CAS # 107-13-1 (Lot A0387097)		+/- 618.9529 µg/mL	Unstressed
	Purity 99%		+/- 634.3408 µg/mL	Stressed
3	2-Butanone (MEK)	25,007.0 µg/mL	+/- 146.4215 µg/mL	Gravimetric
	CAS # 78-93-3 (Lot SHBK9603)		+/- 1,237.1638 µg/mL	Unstressed
	Purity 99%		+/- 1,267.9210 µg/mL	Stressed
4	Tetrahydrofuran	25,049.0 µg/mL	+/- 146.6674 µg/mL	Gravimetric
	CAS # 109-99-9 (Lot SHBK8926)		+/- 1,239.2417 µg/mL	Unstressed
	Purity 99%		+/- 1,270.0505 µg/mL	Stressed
5	2-Nitropropane	24,758.3 µg/mL	+/- 144.9652 µg/mL	Gravimetric
	CAS # 79-46-9 (Lot BCCB9352)		+/- 1,224.8589 µg/mL	Unstressed
	Purity 97%		+/- 1,255.3102 µg/mL	Stressed
6	4-Methyl-2-pentanone (MIBK)	25,014.0 µg/mL	+/- 146.4625 µg/mL	Gravimetric
	CAS # 108-10-1 (Lot SHBL5515)		+/- 1,237.5101 µg/mL	Unstressed
	Purity 99%		+/- 1,268.2759 µg/mL	Stressed
7	2-Hexanone	25,016.0 µg/mL	+/- 146.4742 µg/mL	Gravimetric
	CAS # 591-78-6 (Lot MKCL1599)		+/- 1,237.6091 µg/mL	Unstressed
	Purity 99%		+/- 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)

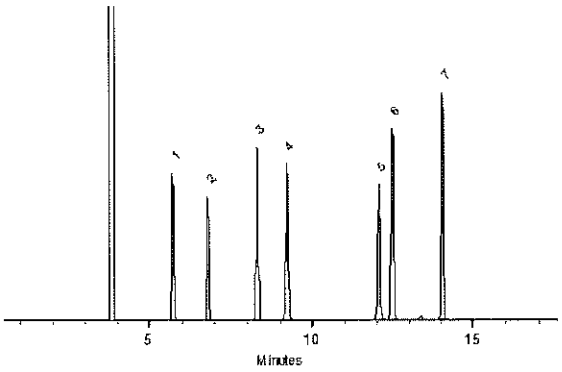
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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.

Kylie 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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_V#4C_00082

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Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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)

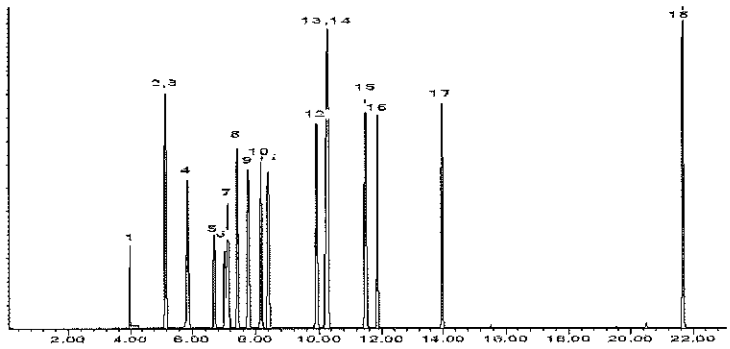
Carrier Gas:
helium-constant pressure 30 psi

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 Suckar - Mix Technician

Date Mixed: 10-Mar-2020 **Balance:** B707717271

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_V#4C_00084

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CERTIFIED REFERENCE MATERIAL

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Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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)

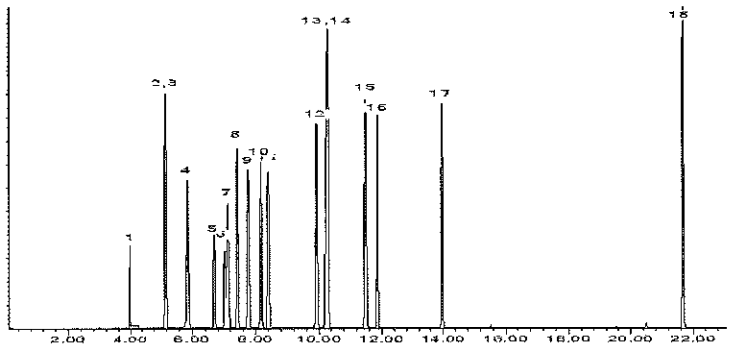
Carrier Gas:
helium-constant pressure 30 psi

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 Suckar - Mix Technician

Date Mixed: 10-Mar-2020 **Balance:** B707717271

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_V#4C_00086

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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)

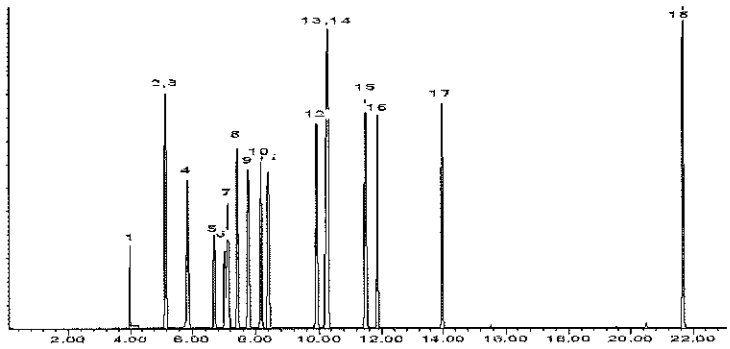
Carrier Gas:
helium-constant pressure 30 psi

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 Suckar - Mix Technician

Date Mixed: 10-Mar-2020 **Balance:** B707717271

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_V#6_00032

RESTEK® CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
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Certificate of Analysis

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ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

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ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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		5,039.0	µg/mL	+/- 29.5717	µg/mL	Gravimetric
	CAS # 79-20-9	(Lot SHBK5436)			+/- 304.0518	µg/mL	Unstressed
	Purity 99%				+/- 304.7735	µg/mL	Stressed
2	Allyl chloride (3-chloropropene)		5,046.0	µg/mL	+/- 29.6128	µg/mL	Gravimetric
	CAS # 107-05-1	(Lot 191118KJ)			+/- 304.4742	µg/mL	Unstressed
	Purity 99%				+/- 305.1969	µg/mL	Stressed
3	Bromochloromethane		5,040.1	µg/mL	+/- 29.5784	µg/mL	Gravimetric
	CAS # 74-97-5	(Lot 00008541)			+/- 304.1206	µg/mL	Unstressed
	Purity 98%				+/- 304.8425	µg/mL	Stressed
4	Methylcyclohexane		5,041.0	µg/mL	+/- 29.5834	µg/mL	Gravimetric
	CAS # 108-87-2	(Lot SHBJ0457)			+/- 304.1725	µg/mL	Unstressed
	Purity 99%				+/- 304.8945	µg/mL	Stressed
5	Pentachloroethane		5,035.0	µg/mL	+/- 29.5482	µg/mL	Gravimetric
	CAS # 76-01-7	(Lot 8866000)			+/- 303.8104	µg/mL	Unstressed
	Purity 99%				+/- 304.5316	µg/mL	Stressed
6	1,2,3-Trimethylbenzene		5,012.0	µg/mL	+/- 29.4132	µg/mL	Gravimetric
	CAS # 526-73-8	(Lot 8766.05-14)			+/- 302.4226	µg/mL	Unstressed
	Purity 99%				+/- 303.1405	µg/mL	Stressed
7	1,3-Diethylbenzene		5,041.1	µg/mL	+/- 29.5841	µg/mL	Gravimetric
	CAS # 141-93-5	(Lot BCBT8967)			+/- 304.1797	µg/mL	Unstressed
	Purity 98%				+/- 304.9017	µg/mL	Stressed

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

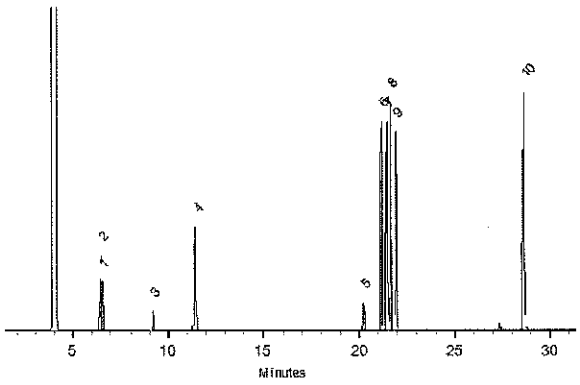
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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: 09-Mar-2020 **Balance:** B707717271

Feng-Yue Lu - 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:

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_V#6_00033

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Certificate #3222.01

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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		5,039.0 µg/mL	+/- 29.5717	µg/mL	Gravimetric
	CAS # 79-20-9	(Lot SHBK5436)		+/- 304.0518	µg/mL	Unstressed
	Purity 99%			+/- 304.7735	µg/mL	Stressed
2	Allyl chloride (3-chloropropene)		5,046.0 µg/mL	+/- 29.6128	µg/mL	Gravimetric
	CAS # 107-05-1	(Lot 191118KJ)		+/- 304.4742	µg/mL	Unstressed
	Purity 99%			+/- 305.1969	µg/mL	Stressed
3	Bromochloromethane		5,040.1 µg/mL	+/- 29.5784	µg/mL	Gravimetric
	CAS # 74-97-5	(Lot 00008541)		+/- 304.1206	µg/mL	Unstressed
	Purity 98%			+/- 304.8425	µg/mL	Stressed
4	Methylcyclohexane		5,041.0 µg/mL	+/- 29.5834	µg/mL	Gravimetric
	CAS # 108-87-2	(Lot SHBJ0457)		+/- 304.1725	µg/mL	Unstressed
	Purity 99%			+/- 304.8945	µg/mL	Stressed
5	Pentachloroethane		5,035.0 µg/mL	+/- 29.5482	µg/mL	Gravimetric
	CAS # 76-01-7	(Lot 8866000)		+/- 303.8104	µg/mL	Unstressed
	Purity 99%			+/- 304.5316	µg/mL	Stressed
6	1,2,3-Trimethylbenzene		5,012.0 µg/mL	+/- 29.4132	µg/mL	Gravimetric
	CAS # 526-73-8	(Lot 8766.05-14)		+/- 302.4226	µg/mL	Unstressed
	Purity 99%			+/- 303.1405	µg/mL	Stressed
7	1,3-Diethylbenzene		5,041.1 µg/mL	+/- 29.5841	µg/mL	Gravimetric
	CAS # 141-93-5	(Lot BCBT8967)		+/- 304.1797	µg/mL	Unstressed
	Purity 98%			+/- 304.9017	µg/mL	Stressed

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

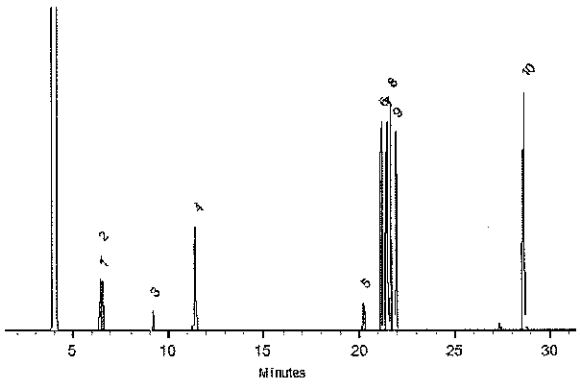
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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: 09-Mar-2020 **Balance:** B707717271

Feng-Yue Lu - 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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

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

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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		5,039.0 µg/mL	+/- 29.5717	µg/mL	Gravimetric
	CAS # 79-20-9	(Lot SHBK5436)		+/- 304.0518	µg/mL	Unstressed
	Purity 99%			+/- 304.7735	µg/mL	Stressed
2	Allyl chloride (3-chloropropene)		5,046.0 µg/mL	+/- 29.6128	µg/mL	Gravimetric
	CAS # 107-05-1	(Lot 191118KJ)		+/- 304.4742	µg/mL	Unstressed
	Purity 99%			+/- 305.1969	µg/mL	Stressed
3	Bromochloromethane		5,040.1 µg/mL	+/- 29.5784	µg/mL	Gravimetric
	CAS # 74-97-5	(Lot 00008541)		+/- 304.1206	µg/mL	Unstressed
	Purity 98%			+/- 304.8425	µg/mL	Stressed
4	Methylcyclohexane		5,041.0 µg/mL	+/- 29.5834	µg/mL	Gravimetric
	CAS # 108-87-2	(Lot SHBJ0457)		+/- 304.1725	µg/mL	Unstressed
	Purity 99%			+/- 304.8945	µg/mL	Stressed
5	Pentachloroethane		5,035.0 µg/mL	+/- 29.5482	µg/mL	Gravimetric
	CAS # 76-01-7	(Lot 8866000)		+/- 303.8104	µg/mL	Unstressed
	Purity 99%			+/- 304.5316	µg/mL	Stressed
6	1,2,3-Trimethylbenzene		5,012.0 µg/mL	+/- 29.4132	µg/mL	Gravimetric
	CAS # 526-73-8	(Lot 8766.05-14)		+/- 302.4226	µg/mL	Unstressed
	Purity 99%			+/- 303.1405	µg/mL	Stressed
7	1,3-Diethylbenzene		5,041.1 µg/mL	+/- 29.5841	µg/mL	Gravimetric
	CAS # 141-93-5	(Lot BCBT8967)		+/- 304.1797	µg/mL	Unstressed
	Purity 98%			+/- 304.9017	µg/mL	Stressed

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

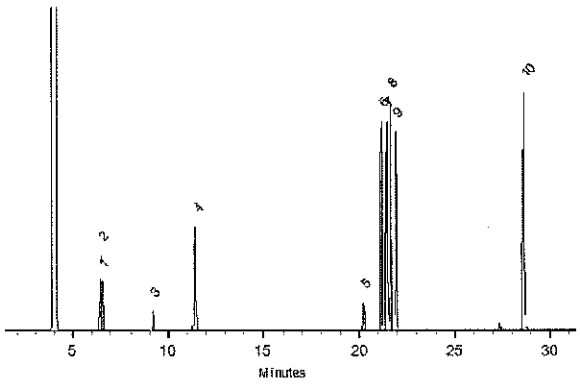
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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: 09-Mar-2020 **Balance:** B707717271

Feng-Yue Lu - 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:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- It is important to note that the shipping stability uncertainty was obtained under temperature extremes for specific time intervals; therefore, the certified combined stressed uncertainty value should only be applied to the product if it was stored at non-standard temperature conditions up to and including 7 days. Contact Restek Technical Service at www.restek.com/Contact-Us for use recommendations if your shipment was in-transit for more than 7 days at non-standard temperature conditions.
- Apply the certified combined unstressed uncertainty value if the product was received under standard shipping conditions. Apply the certified combined stressed uncertainty value if the product was received under non-standard conditions as specified below.

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

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ISO/IEC 17025 Accredited
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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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

C E R T I F I E D V A L U E S

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)

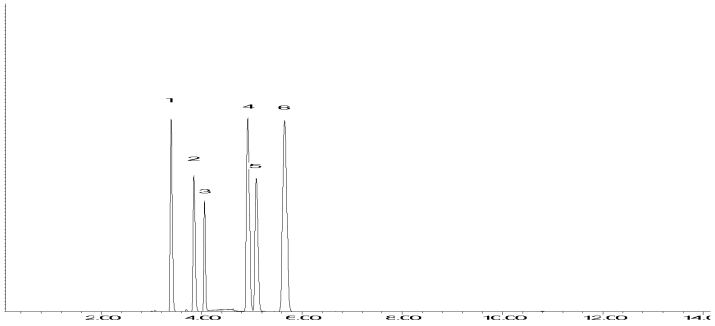
Carrier Gas:
helium-constant flow 2.0 mL/min.

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:

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

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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

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CERTIFIED REFERENCE MATERIAL

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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)

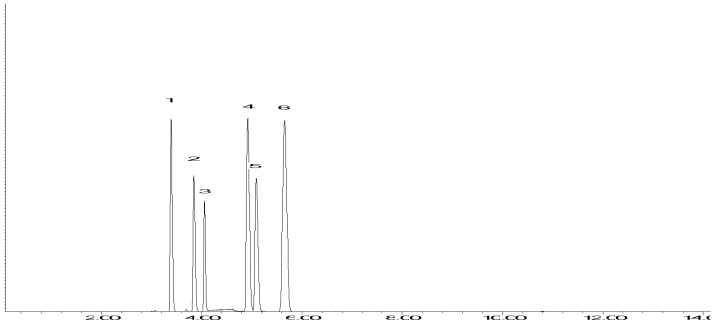
Carrier Gas:
helium-constant flow 2.0 mL/min.

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:

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_V_Gas_00150

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 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)

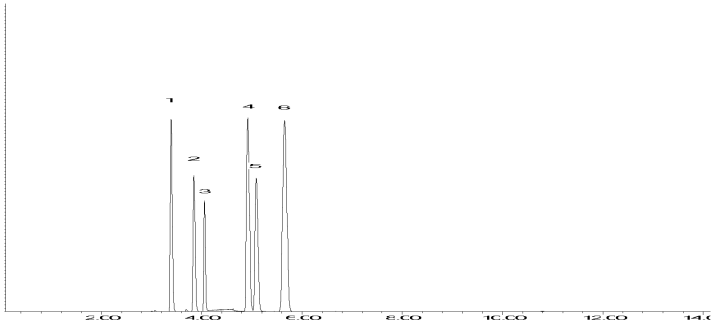
Carrier Gas:
helium-constant flow 2.0 mL/min.

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.

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Reagent

MSV_V_Gas_00153

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Inj. Temp:
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Det. Temp:
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Det. Type:
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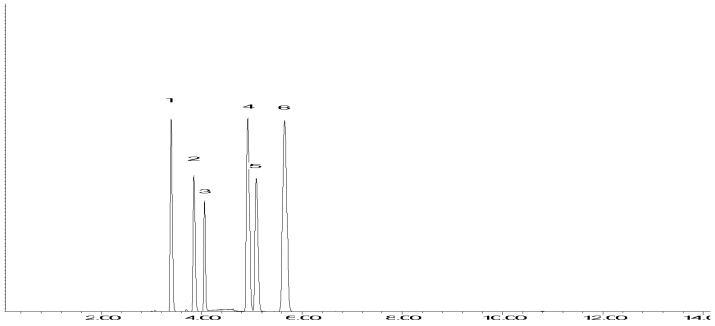

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Tom Suckar - Mix Technician

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

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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 Job No.: 410-15232-1

SDG No.:

Matrix: Water Level: Low

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

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
HD-COD-SW-29-0/1-0	410-15232-1	97	102	108	105
HD-COD-SW-8-0/1-0	410-15232-2	95	98	108	105
HD-COD-SW-13-0/1-0	410-15232-3	96	102	107	104
HD-COD-SW-16-0/1-0	410-15232-4	97	98	107	105
HD-COD-SW-17-0/1-0	410-15232-5	98	98	108	105
HD-COD-SW-6-0/1-0	410-15232-6	97	102	108	105
HD-COD-SW-26-0/1-0	410-15232-7	97	95	109	106
HD-COD-SW-7-0/1-0	410-15232-8	98	103	107	104
HD-COD-SW-27-0/1-0	410-15232-9	96	99	107	106
HD-COD-SW-15-0/1-0	410-15232-10	106	112	97	97
HD-COD-SW-9-0/1-0	410-15232-11	105	112	98	98
HD-COD-SW-28-0/1-0	410-15232-12	106	111	98	98
HD-QC1-0/1-1	410-15232-13	106	111	98	99
HD-QC1-0/1-2	410-15232-14	106	110	98	98
	MB 410-50506/6	97	98	107	108
	MB 410-50813/6	105	111	98	98
	LCS 410-50506/4	98	96	100	105
	LCS 410-50813/4	105	111	98	100
HD-COD-SW-15-0/1-0 MS MS	410-15232-10 MS	104	109	99	101
HD-COD-SW-15-0/1-0 MSD MSD	410-15232-10 MSD	105	111	98	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 II 8260C LL

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-15232-1

SDG No.:

Matrix: Water Level: Low Lab File ID: IS21X04.D

Lab ID: LCS 410-50506/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	5.00	4.82	96	71-134	
1,1,1-Trichloroethane	5.00	4.85	97	78-126	
1,1,2,2-Tetrachloroethane	5.00	5.17	103	75-123	
1,1,2-Trichloroethane	5.00	5.37	107	80-120	
1,1-Dichloroethane	5.00	5.28	106	74-120	
1,1-Dichloroethene	5.00	4.80	96	80-131	
1,2-Dibromoethane (EDB)	5.00	4.98	100	80-120	
1,2-Dichloroethane	5.00	5.32	106	69-122	
1,2-Dichloropropane	5.00	5.31	106	80-120	
2-Butanone (MEK)	37.5	45.3	121	59-141	
2-Hexanone	25.0	31.6	126	52-140	
4-Methyl-2-pentanone (MIBK)	25.0	30.5	122	55-140	
Acetone	37.5	33.4	89	60-146	
Acrylonitrile	25.0	30.0	120	64-139	
Benzene	5.00	5.00	100	80-120	
Bromochloromethane	5.00	4.79	96	80-120	
Bromodichloromethane	5.00	5.28	106	73-124	
Bromoform	5.00	4.37	87	49-144	
Bromomethane	5.00	4.77	95	60-136	
Carbon disulfide	5.00	4.46	89	67-130	
Carbon tetrachloride	5.00	4.71	94	64-141	
Chlorobenzene	5.00	4.90	98	80-120	
Chloroethane	5.00	4.91	98	63-120	
Chloroform	5.00	5.23	105	80-120	
Chloromethane	5.00	4.83	97	56-124	
cis-1,2-Dichloroethene	5.00	5.25	105	80-122	
cis-1,3-Dichloropropene	5.00	5.06	101	67-121	
Dibromochloromethane	5.00	5.15	103	64-138	
Ethylbenzene	5.00	5.11	102	80-120	
Methyl tert-butyl ether	5.00	4.88	98	69-120	
Methylene Chloride	5.00	5.10	102	80-120	
Styrene	5.00	5.04	101	80-120	
Tetrachloroethene	5.00	4.61	92	80-120	
Toluene	5.00	5.00	100	80-120	
trans-1,2-Dichloroethene	5.00	4.91	98	80-122	
trans-1,3-Dichloropropene	5.00	5.20	104	61-129	
Trichloroethene	5.00	4.83	97	80-120	
Vinyl chloride	5.00	5.19	104	60-125	
Xylenes, Total	15.0	15.0	100	80-120	

Column to be used to flag recovery and RPD values

FORM III 8260C LL

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-15232-1

SDG No.:

Matrix: Water Level: Low Lab File ID: CC05L01.D

Lab ID: LCS 410-50813/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	5.00	4.88	98	71-134	
1,1,1-Trichloroethane	5.00	4.75	95	78-126	
1,1,2,2-Tetrachloroethane	5.00	5.30	106	75-123	
1,1,2-Trichloroethane	5.00	5.45	109	80-120	
1,1-Dichloroethane	5.00	5.06	101	74-120	
1,1-Dichloroethene	5.00	5.07	101	80-131	
1,2-Dibromoethane (EDB)	5.00	5.40	108	80-120	
1,2-Dichloroethane	5.00	5.05	101	69-122	
1,2-Dichloropropane	5.00	5.35	107	80-120	
2-Butanone (MEK)	37.5	40.7	109	59-141	
2-Hexanone	25.0	25.3	101	52-140	
4-Methyl-2-pentanone (MIBK)	25.0	24.2	97	55-140	
Acetone	37.5	47.4	126	60-146	
Acrylonitrile	25.0	27.8	111	64-139	
Benzene	5.00	5.09	102	80-120	
Bromochloromethane	5.00	5.40	108	80-120	
Bromodichloromethane	5.00	5.25	105	73-124	
Bromoform	5.00	5.71	114	49-144	
Bromomethane	5.00	5.25	105	60-136	
Carbon disulfide	5.00	4.99	100	67-130	
Carbon tetrachloride	5.00	4.85	97	64-141	
Chlorobenzene	5.00	4.85	97	80-120	
Chloroethane	5.00	5.12	102	63-120	
Chloroform	5.00	5.06	101	80-120	
Chloromethane	5.00	5.57	111	56-124	
cis-1,2-Dichloroethene	5.00	5.34	107	80-122	
cis-1,3-Dichloropropene	5.00	5.00	100	67-121	
Dibromochloromethane	5.00	5.53	111	64-138	
Ethylbenzene	5.00	4.70	94	80-120	
Methyl tert-butyl ether	5.00	4.90	98	69-120	
Methylene Chloride	5.00	5.47	109	80-120	
Styrene	5.00	4.84	97	80-120	
Tetrachloroethene	5.00	4.74	95	80-120	
Toluene	5.00	4.77	95	80-120	
trans-1,2-Dichloroethene	5.00	5.01	100	80-122	
trans-1,3-Dichloropropene	5.00	4.77	95	61-129	
Trichloroethene	5.00	5.06	101	80-120	
Vinyl chloride	5.00	5.53	111	60-125	
Xylenes, Total	15.0	14.4	96	80-120	

Column to be used to flag recovery and RPD values

FORM III 8260C LL

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-15232-1

SDG No.:

Matrix: Water Level: Low Lab File ID: CC05S05.D

Lab ID: 410-15232-10 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	5.14	103	71-134	
1,1,1-Trichloroethane	5.00	0.094 J	5.37	105	78-126	
1,1,2,2-Tetrachloroethane	5.00	ND	5.35	107	75-123	
1,1,2-Trichloroethane	5.00	ND	5.71	114	80-120	
1,1-Dichloroethane	5.00	ND	5.49	110	74-120	
1,1-Dichloroethene	5.00	0.067 J	5.69	112	80-131	
1,2-Dibromoethane (EDB)	5.00	ND	5.47	109	80-120	
1,2-Dichloroethane	5.00	ND	5.25	105	69-122	
1,2-Dichloropropane	5.00	ND	5.63	112	80-120	
2-Butanone (MEK)	37.5	ND	36.2	97	59-141	
2-Hexanone	25.0	ND	22.4	90	52-140	
4-Methyl-2-pentanone (MIBK)	25.0	ND	21.4	85	55-140	
Acetone	37.5	ND	38.2	102	60-146	
Acrylonitrile	25.0	ND	24.8	99	64-139	
Benzene	5.00	ND	5.51	110	80-120	
Bromochloromethane	5.00	ND	5.47	109	80-120	
Bromodichloromethane	5.00	ND	5.57	111	73-124	
Bromoform	5.00	ND	5.94	119	49-144	
Bromomethane	5.00	ND	5.42	108	60-136	
Carbon disulfide	5.00	ND	5.52	110	67-130	
Carbon tetrachloride	5.00	ND	5.61	112	64-141	
Chlorobenzene	5.00	ND	5.26	105	80-120	
Chloroethane	5.00	ND	5.35	107	63-120	
Chloroform	5.00	0.31 J	5.72	108	80-120	
Chloromethane	5.00	ND	6.13	122	80-120	FH
cis-1,2-Dichloroethene	5.00	0.70	6.43	115	80-122	
cis-1,3-Dichloropropene	5.00	ND	5.29	106	67-121	
Dibromochloromethane	5.00	ND	5.74	115	64-138	
Ethylbenzene	5.00	ND	5.18	103	80-120	
Methyl tert-butyl ether	5.00	0.050 J	4.92	97	69-120	
Methylene Chloride	5.00	ND	5.72	114	80-120	
Styrene	5.00	ND	5.22	104	80-120	
Tetrachloroethene	5.00	2.2	7.49	106	80-120	
Toluene	5.00	ND	5.24	105	80-120	
trans-1,2-Dichloroethene	5.00	ND	5.53	110	80-122	
trans-1,3-Dichloropropene	5.00	ND	4.98	100	61-129	
Trichloroethene	5.00	0.86	6.41	111	80-120	
Vinyl chloride	5.00	ND	6.16	123	60-125	
Xylenes, Total	15.0	ND	15.6	104	80-120	

Column to be used to flag recovery and RPD values

FORM III 8260C LL

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-15232-1

SDG No.:

Matrix: Water Level: Low Lab File ID: CC05S06.D

Lab ID: 410-15232-10 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	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	5.00	5.30	106	3	30	71-134	
1,1,1-Trichloroethane	5.00	5.50	108	2	30	78-126	
1,1,2,2-Tetrachloroethane	5.00	5.56	111	4	30	75-123	
1,1,2-Trichloroethane	5.00	5.77	115	1	30	80-120	
1,1-Dichloroethane	5.00	5.63	112	2	30	74-120	
1,1-Dichloroethene	5.00	5.90	117	4	30	80-131	
1,2-Dibromoethane (EDB)	5.00	5.66	113	3	30	80-120	
1,2-Dichloroethane	5.00	5.37	107	2	30	69-122	
1,2-Dichloropropane	5.00	5.85	117	4	30	80-120	
2-Butanone (MEK)	37.5	37.3	99	3	30	59-141	
2-Hexanone	25.0	23.0	92	3	30	52-140	
4-Methyl-2-pentanone (MIBK)	25.0	21.8	87	2	30	55-140	
Acetone	37.5	43.1	115	12	30	60-146	
Acrylonitrile	25.0	25.6	102	3	30	64-139	
Benzene	5.00	5.67	113	3	30	80-120	
Bromochloromethane	5.00	5.66	113	3	30	80-120	
Bromodichloromethane	5.00	5.66	113	2	30	73-124	
Bromoform	5.00	6.08	121	2	30	49-144	
Bromomethane	5.00	5.85	117	8	30	60-136	
Carbon disulfide	5.00	5.72	114	4	30	67-130	
Carbon tetrachloride	5.00	5.69	114	1	30	64-141	
Chlorobenzene	5.00	5.34	107	1	30	80-120	
Chloroethane	5.00	5.90	118	10	30	63-120	
Chloroform	5.00	5.85	111	2	30	80-120	
Chloromethane	5.00	6.51	130	6	30	80-120	FH
cis-1,2-Dichloroethene	5.00	6.60	118	3	30	80-122	
cis-1,3-Dichloropropene	5.00	5.39	108	2	30	67-121	
Dibromochloromethane	5.00	5.86	117	2	30	64-138	
Ethylbenzene	5.00	5.30	106	2	30	80-120	
Methyl tert-butyl ether	5.00	5.14	102	4	30	69-120	
Methylene Chloride	5.00	5.87	117	3	30	80-120	
Styrene	5.00	5.35	107	2	30	80-120	
Tetrachloroethene	5.00	7.59	108	1	30	80-120	
Toluene	5.00	5.34	107	2	30	80-120	
trans-1,2-Dichloroethene	5.00	5.65	113	2	30	80-122	
trans-1,3-Dichloropropene	5.00	5.17	103	4	30	61-129	
Trichloroethene	5.00	6.50	113	1	30	80-120	
Vinyl chloride	5.00	6.48	130	5	30	60-125	FH
Xylenes, Total	15.0	16.0	107	2	30	80-120	

Column to be used to flag recovery and RPD values

FORM III 8260C LL

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-15232-1

SDG No.:

Lab File ID: IS21X07.D Lab Sample ID: MB 410-50506/6

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

Instrument ID: 19930 Date Analyzed: 10/03/2020 08:39

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 410-50506/4	IS21X04.D	10/03/2020 07:56
HD-COD-SW-29-0/1-0	410-15232-1	Io03s11.D	10/03/2020 12:38
HD-COD-SW-8-0/1-0	410-15232-2	Io03s12.D	10/03/2020 13:00
HD-COD-SW-13-0/1-0	410-15232-3	Io03s13.D	10/03/2020 13:21
HD-COD-SW-16-0/1-0	410-15232-4	Io03s14.D	10/03/2020 13:43
HD-COD-SW-17-0/1-0	410-15232-5	Io03s15.D	10/03/2020 14:04
HD-COD-SW-6-0/1-0	410-15232-6	Io03s16.D	10/03/2020 14:26
HD-COD-SW-26-0/1-0	410-15232-7	Io03s17.D	10/03/2020 14:47
HD-COD-SW-7-0/1-0	410-15232-8	Io03s18.D	10/03/2020 15:08
HD-COD-SW-27-0/1-0	410-15232-9	Io03s19.D	10/03/2020 15:30

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-15232-1

SDG No.:

Lab File ID: CC05B01.D Lab Sample ID: MB 410-50813/6

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

Instrument ID: 10193 Date Analyzed: 10/05/2020 11:10

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 410-50813/4	CC05L01.D	10/05/2020 10:25
HD-QC1-0/1-1	410-15232-13	CC05S02.D	10/05/2020 12:15
HD-QC1-0/1-2	410-15232-14	CC05S03.D	10/05/2020 12:38
HD-COD-SW-15-0/1-0	410-15232-10	CC05S04.D	10/05/2020 13:00
HD-COD-SW-15-0/1-0 MS MS	410-15232-10 MS	CC05S05.D	10/05/2020 13:23
HD-COD-SW-15-0/1-0 MSD MSD	410-15232-10 MSD	CC05S06.D	10/05/2020 13:45
HD-COD-SW-9-0/1-0	410-15232-11	CC05S08.D	10/05/2020 14:29
HD-COD-SW-28-0/1-0	410-15232-12	CC05S09.D	10/05/2020 14:51

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

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-15232-1

SDG No.:

Lab File ID: CS01T01.D BFB Injection Date: 09/01/2020

Instrument ID: 10193 BFB Injection Time: 12:45

Analysis Batch No.: 39724

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	20.4	
75	30.0 - 60.0 % of mass 95	49.9	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.5	
173	Less than 2.0 % of mass 174	1.3	(1.5) 1
174	Greater than 50% of mass 95	82.8	
175	5.0 - 9.0 % of mass 174	6.2	(7.5) 1
176	95.0 - 101.0 % of mass 174	82.5	(99.6) 1
177	5.0 - 9.0 % of mass 176	5.3	(6.4) 2

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

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

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 410-39724/3	CS01I01.D	09/01/2020	13:35
	ICIS 410-39724/4	CS01I02.D	09/01/2020	13:57
	IC 410-39724/5	CS01I03.D	09/01/2020	14:19
	IC 410-39724/6	CS01I04.D	09/01/2020	14:42
	IC 410-39724/7	CS01I05.D	09/01/2020	15:04
	IC 410-39724/8	CS01I06.D	09/01/2020	15:26
	IC 410-39724/9	CS01I07.D	09/01/2020	15:48
	ICV 410-39724/10	CS01V01.D	09/01/2020	16:10

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

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-15232-1

SDG No.:

Lab File ID: CC05T01.D BFB Injection Date: 10/05/2020

Instrument ID: 10193 BFB Injection Time: 09:26

Analysis Batch No.: 50813

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0 % of mass 95	19.2
75	30.0 - 60.0 % of mass 95	48.5
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0 % of mass 95	5.8
173	Less than 2.0 % of mass 174	1.2 (1.3) 1
174	Greater than 50% of mass 95	90.5
175	5.0 - 9.0 % of mass 174	7.2 (8.0) 1
176	95.0 - 101.0 % of mass 174	88.3 (97.6) 1
177	5.0 - 9.0 % of mass 176	6.4 (7.2) 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 410-50813/3	CC05C01.D	10/05/2020	10:03
	LCS 410-50813/4	CC05L01.D	10/05/2020	10:25
	MB 410-50813/6	CC05B01.D	10/05/2020	11:10
HD-QC1-0/1-1	410-15232-13	CC05S02.D	10/05/2020	12:15
HD-QC1-0/1-2	410-15232-14	CC05S03.D	10/05/2020	12:38
HD-COD-SW-15-0/1-0	410-15232-10	CC05S04.D	10/05/2020	13:00
HD-COD-SW-15-0/1-0 MS MS	410-15232-10 MS	CC05S05.D	10/05/2020	13:23
HD-COD-SW-15-0/1-0 MSD MSD	410-15232-10 MSD	CC05S06.D	10/05/2020	13:45
HD-COD-SW-9-0/1-0	410-15232-11	CC05S08.D	10/05/2020	14:29
HD-COD-SW-28-0/1-0	410-15232-12	CC05S09.D	10/05/2020	14:51

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

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-15232-1

SDG No.:

Lab File ID: IS09T01.D BFB Injection Date: 09/09/2020

Instrument ID: 19930 BFB Injection Time: 15:02

Analysis Batch No.: 42158

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	15.4	
75	30.0 - 60.0 % of mass 95	47.8	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	1.1	(1.3) 1
174	Greater than 50% of mass 95	84.2	
175	5.0 - 9.0 % of mass 174	6.4	(7.6) 1
176	95.0 - 101.0 % of mass 174	82.2	(97.6) 1
177	5.0 - 9.0 % of mass 176	5.4	(6.6) 2

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

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

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 410-42158/3	IS09I01.D	09/09/2020	15:55
	ICIS 410-42158/4	IS09I02.D	09/09/2020	16:16
	IC 410-42158/5	IS09I03.D	09/09/2020	16:37
	IC 410-42158/6	IS09I04.D	09/09/2020	16:58
	IC 410-42158/7	IS09I05.D	09/09/2020	17:20
	IC 410-42158/8	IS09I06.D	09/09/2020	17:41
	IC 410-42158/9	IS09I07.D	09/09/2020	18:02
	ICV 410-42158/10	IS09V01.D	09/09/2020	18:23

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

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-15232-1

SDG No.:

Lab File ID: IO03T01.D BFB Injection Date: 10/03/2020

Instrument ID: 19930 BFB Injection Time: 06:57

Analysis Batch No.: 50506

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.0	
75	30.0 - 60.0 % of mass 95	51.3	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	1.3	(1.7) 1
174	Greater than 50% of mass 95	75.9	
175	5.0 - 9.0 % of mass 174	6.5	(8.6) 1
176	95.0 - 101.0 % of mass 174	73.2	(96.3) 1
177	5.0 - 9.0 % of mass 176	4.7	(6.5) 2

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

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

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 410-50506/3	IS21X02.D	10/03/2020	7:35
	LCS 410-50506/4	IS21X04.D	10/03/2020	7:56
	MB 410-50506/6	IS21X07.D	10/03/2020	8:39
HD-COD-SW-29-0/1-0	410-15232-1	Io03s11.D	10/03/2020	12:38
HD-COD-SW-8-0/1-0	410-15232-2	Io03s12.D	10/03/2020	13:00
HD-COD-SW-13-0/1-0	410-15232-3	Io03s13.D	10/03/2020	13:21
HD-COD-SW-16-0/1-0	410-15232-4	Io03s14.D	10/03/2020	13:43
HD-COD-SW-17-0/1-0	410-15232-5	Io03s15.D	10/03/2020	14:04
HD-COD-SW-6-0/1-0	410-15232-6	Io03s16.D	10/03/2020	14:26
HD-COD-SW-26-0/1-0	410-15232-7	Io03s17.D	10/03/2020	14:47
HD-COD-SW-7-0/1-0	410-15232-8	Io03s18.D	10/03/2020	15:08
HD-COD-SW-27-0/1-0	410-15232-9	Io03s19.D	10/03/2020	15:30

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

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-15232-1

SDG No.:

Sample No.: ICIS 410-39724/4 Date Analyzed: 09/01/2020 13:57

Instrument ID: 10193 GC Column: R-624SilMS 30m ID: 0.25(mm)

Lab File ID (Standard): CS01I02.D Heated Purge: (Y/N) N

Calibration ID: 10281

		TBAd10		FB		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		148289	4.11	2062892	7.57	1569631	11.10
UPPER LIMIT		296578	4.61	4125784	8.07	3139262	11.60
LOWER LIMIT		74145	3.61	1031446	7.07	784816	10.60
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 410-39724/10		148288	4.11	1991070	7.57	1511072	11.10
CCVIS 410-50813/3		176637	4.08	1919653	7.56	1552890	11.09

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 8260C LL

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

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-15232-1

SDG No.:

Sample No.: ICIS 410-39724/4 Date Analyzed: 09/01/2020 13:57

Instrument ID: 10193 GC Column: R-624SilMS 30m ID: 0.25(mm)

Lab File ID (Standard): CS01I02.D Heated Purge: (Y/N) N

Calibration ID: 10281

		DCBd4					
		AREA #	RT #	#	RT #	#	RT #
INITIAL CALIBRATION MID-POINT		920484	13.00				
UPPER LIMIT		1840968	13.50				
LOWER LIMIT		460242	12.50				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 410-39724/10		880960	13.00				
CCVIS 410-50813/3		901265	12.99				

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 8260C LL

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

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-15232-1

SDG No.:

Sample No.: CCVIS 410-50813/3 Date Analyzed: 10/05/2020 10:03

Instrument ID: 10193 GC Column: R-624SilMS 30m ID: 0.25(mm)

Lab File ID (Standard): CC05C01.D Heated Purge: (Y/N) N

Calibration ID: 10281

		TBAd10		FB		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		176637	4.08	1919653	7.56	1552890	11.09
UPPER LIMIT		353274	4.58	3839306	8.06	3105780	11.59
LOWER LIMIT		88319	3.58	959827	7.06	776445	10.59
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 410-50813/4		172610	4.09	1908686	7.56	1531251	11.09
MB 410-50813/6		192320	4.08	1853516	7.55	1472454	11.09
410-15232-13	HD-QC1-0/1-1	188331	4.08	1818122	7.56	1458263	11.09
410-15232-14	HD-QC1-0/1-2	181312	4.08	1804975	7.56	1440137	11.09
410-15232-10	HD-COD-SW-15-0/1-0	191617	4.07	1811897	7.55	1457011	11.09
410-15232-10 MS	HD-COD-SW-15-0/1-0 MS MS	193880	4.08	1874501	7.56	1498977	11.09
410-15232-10 MSD	HD-COD-SW-15-0/1-0 MSD MSD	194253	4.08	1883199	7.56	1505112	11.09
410-15232-11	HD-COD-SW-9-0/1-0	179397	4.07	1759568	7.56	1413627	11.09
410-15232-12	HD-COD-SW-28-0/1-0	179061	4.09	1775465	7.56	1419013	11.09

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 8260C LL

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

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-15232-1

SDG No.:

Sample No.: CCVIS 410-50813/3 Date Analyzed: 10/05/2020 10:03

Instrument ID: 10193 GC Column: R-624SilMS 30m ID: 0.25(mm)

Lab File ID (Standard): CC05C01.D Heated Purge: (Y/N) N

Calibration ID: 10281

		DCBd4					
		AREA #	RT #	#	RT #	#	RT #
12/24 HOUR STD		901265	12.99				
UPPER LIMIT		1802530	13.49				
LOWER LIMIT		450633	12.49				
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 410-50813/4		882696	12.99				
MB 410-50813/6		814311	12.99				
410-15232-13	HD-QC1-0/1-1	808881	12.99				
410-15232-14	HD-QC1-0/1-2	802466	12.99				
410-15232-10	HD-COD-SW-15-0/1-0	801686	12.99				
410-15232-10 MS	HD-COD-SW-15-0/1-0 MS MS	875784	12.99				
410-15232-10 MSD	HD-COD-SW-15-0/1-0 MSD MSD	872727	12.99				
410-15232-11	HD-COD-SW-9-0/1-0	792533	12.99				
410-15232-12	HD-COD-SW-28-0/1-0	786789	12.99				

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 8260C LL

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

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-15232-1

SDG No.:

Sample No.: ICIS 410-42158/4 Date Analyzed: 09/09/2020 16:16

Instrument ID: 19930 GC Column: R-624SilMS 30m ID: 0.25(mm)

Lab File ID (Standard): IS09I02.D Heated Purge: (Y/N) N

Calibration ID: 10758

		TBAd10		FB		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		200302	4.28	2413420	7.75	2045553	11.19
UPPER LIMIT		400604	4.78	4826840	8.25	4091106	11.69
LOWER LIMIT		100151	3.78	1206710	7.25	1022777	10.69
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 410-42158/10		194436	4.27	2241008	7.75	1872080	11.19
CCVIS 410-50506/3		155839	4.26	2370744	7.74	2019788	11.19

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 8260C LL

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

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-15232-1

SDG No.:

Sample No.: ICIS 410-42158/4 Date Analyzed: 09/09/2020 16:16

Instrument ID: 19930 GC Column: R-624SilMS 30m ID: 0.25(mm)

Lab File ID (Standard): IS09I02.D Heated Purge: (Y/N) N

Calibration ID: 10758

		DCBd4					
		AREA #	RT #	#	RT #	#	RT #
INITIAL CALIBRATION MID-POINT		1220848	13.07				
UPPER LIMIT		2441696	13.57				
LOWER LIMIT		610424	12.57				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 410-42158/10		1085585	13.07				
CCVIS 410-50506/3		1242080	13.07				

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 8260C LL

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

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-15232-1

SDG No.:

Sample No.: CCVIS 410-50506/3 Date Analyzed: 10/03/2020 07:35

Instrument ID: 19930 GC Column: R-624SilMS 30m ID: 0.25(mm)

Lab File ID (Standard): IS21X02.D Heated Purge: (Y/N) N

Calibration ID: 10758

		TBAd10		FB		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		155839	4.26	2370744	7.74	2019788	11.19
UPPER LIMIT		311678	4.76	4741488	8.24	4039576	11.69
LOWER LIMIT		77920	3.76	1185372	7.24	1009894	10.69
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 410-50506/4		187254	4.27	2335168	7.75	1937745	11.19
MB 410-50506/6		188211	4.29	2037611	7.75	1635165	11.19
410-15232-1	HD-COD-SW-29-0/1-0	166403	4.28	1993942	7.75	1588442	11.19
410-15232-2	HD-COD-SW-8-0/1-0	164289	4.26	1933732	7.74	1523729	11.19
410-15232-3	HD-COD-SW-13-0/1-0	154575	4.28	1980526	7.74	1587143	11.19
410-15232-4	HD-COD-SW-16-0/1-0	166356	4.26	1959233	7.75	1566287	11.19
410-15232-5	HD-COD-SW-17-0/1-0	178953	4.29	1976061	7.75	1568612	11.19
410-15232-6	HD-COD-SW-6-0/1-0	165194	4.27	1948835	7.75	1549958	11.19
410-15232-7	HD-COD-SW-26-0/1-0	166425	4.29	1877849	7.75	1483519	11.19
410-15232-8	HD-COD-SW-7-0/1-0	165082	4.28	1920841	7.74	1546842	11.19
410-15232-9	HD-COD-SW-27-0/1-0	170006	4.28	1941449	7.74	1545962	11.19

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 8260C LL

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

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-15232-1

SDG No.:

Sample No.: CCVIS 410-50506/3 Date Analyzed: 10/03/2020 07:35

Instrument ID: 19930 GC Column: R-624SilMS 30m ID: 0.25(mm)

Lab File ID (Standard): IS21X02.D Heated Purge: (Y/N) N

Calibration ID: 10758

		DCBd4					
		AREA #	RT #	#	RT #	#	RT #
12/24 HOUR STD		1242080	13.07				
UPPER LIMIT		2484160	13.57				
LOWER LIMIT		621040	12.57				
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 410-50506/4		1162577	13.07				
MB 410-50506/6		866950	13.07				
410-15232-1	HD-COD-SW-29-0/1-0	829031	13.07				
410-15232-2	HD-COD-SW-8-0/1-0	804069	13.07				
410-15232-3	HD-COD-SW-13-0/1-0	829904	13.07				
410-15232-4	HD-COD-SW-16-0/1-0	815485	13.07				
410-15232-5	HD-COD-SW-17-0/1-0	834825	13.07				
410-15232-6	HD-COD-SW-6-0/1-0	831929	13.07				
410-15232-7	HD-COD-SW-26-0/1-0	794124	13.07				
410-15232-8	HD-COD-SW-7-0/1-0	811532	13.07				
410-15232-9	HD-COD-SW-27-0/1-0	813684	13.07				

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 8260C LL

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-15232-1

SDG No.:

Client Sample ID: HD-COD-SW-29-0/1-0 Lab Sample ID: 410-15232-1

Matrix: Water Lab File ID: Io03s11.D

Analysis Method: 8260C LL Date Collected: 09/25/2020 09:50

Sample wt/vol: 25(mL) Date Analyzed: 10/03/2020 12:38

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.: 50506 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)	0.93	J ^c	5.0	0.60
591-78-6	2-Hexanone	ND	^c	5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	^c	5.0	0.70
67-64-1	Acetone	2.6	J	5.0	0.90
107-13-1	Acrylonitrile	ND	^c	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	0.074	J	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	0.12	J	0.50	0.060
156-59-2	cis-1,2-Dichloroethene	0.11	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	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 E Job No.: 410-15232-1

SDG No.:

Client Sample ID: HD-COD-SW-29-0/1-0 Lab Sample ID: 410-15232-1

Matrix: Water Lab File ID: Io03s11.D

Analysis Method: 8260C LL Date Collected: 09/25/2020 09:50

Sample wt/vol: 25(mL) Date Analyzed: 10/03/2020 12:38

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.: 50506 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	0.11	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)	102		80-120
1868-53-7	Dibromofluoromethane (Surr)	97		80-120
2037-26-5	Toluene-d8 (Surr)	108		80-120
460-00-4	4-Bromofluorobenzene (Surr)	105		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\Io03s11.D
Lims ID: 410-15232-A-1
Client ID: HD-COD-SW-29-0/1-0
Sample Type: Client
Inject. Date: 03-Oct-2020 12:38:30 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0011975-017
Misc. Info.: 410-15232-A-1
Operator ID: jkh09052 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 03-Oct-2020 13:41:57 Calib Date: 09-Sep-2020 21:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1015

First Level Reviewer: howej Date: 03-Oct-2020 13:15:16

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
4 Chloromethane	50	2.178	2.172	0.006	97	9895	0.1225	
5 Vinyl chloride	62		2.288				ND	7
7 Bromomethane	94		2.617				ND	7
8 Chloroethane	64		2.703				ND	
14 1,1-Dichloroethene	96		3.580				ND	
15 Acetone	43	3.629	3.599	0.030	97	21738	2.61	
19 Carbon disulfide	76	3.897	3.885	0.012	94	10504	0.0744	
23 Methylene Chloride	84		4.251				ND	
* 24 t-Butyl alcohol-d10 (IS)	65	4.281	4.257	0.024	0	166403	50.0	M
26 Acrylonitrile	53		4.599				ND	
27 Methyl tert-butyl ether	73		4.660				ND	
28 trans-1,2-Dichloroethene	96		4.678				ND	
31 1,1-Dichloroethane	63		5.330				ND	
36 2-Butanone (MEK)	43	6.129	6.129	0.000	97	11572	0.9297	
37 cis-1,2-Dichloroethene	96	6.177	6.159	0.018	37	7678	0.1133	
43 Chlorobromomethane	128		6.495				ND	
45 Chloroform	83		6.647				ND	
$ 46 Dibromofluoromethane (Surr)	113	6.866	6.860	0.006	92	522555	9.70	
47 1,1,1-Trichloroethane	97		6.872				ND	
50 Carbon tetrachloride	117		7.080				ND	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.311	7.311	0.000	0	100638	10.2	
54 Benzene	78		7.342				ND	
56 1,2-Dichloroethane	62		7.415				ND	
* 58 Fluorobenzene (IS)	96	7.750	7.744	0.006	99	1993942	10.0	
61 Trichloroethene	95	8.226	8.220	0.006	91	7742	0.1129	
63 1,2-Dichloropropane	63		8.555				ND	
68 Dichlorobromomethane	83		8.896				ND	
73 cis-1,3-Dichloropropene	75		9.439				ND	
74 4-Methyl-2-pentanone (MIBK)	43		9.604				ND	7
$ 75 Toluene-d8 (Surr)	98	9.750	9.744	0.006	94	2110915	10.8	
76 Toluene	92	9.823	9.823	0.000	98	9483	0.0611	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
78 trans-1,3-Dichloropropene	75		10.073				ND	
80 1,1,2-Trichloroethane	97		10.274				ND	
81 Tetrachloroethene	166	10.366	10.366	0.000	89	4268	0.0544	
83 2-Hexanone	43		10.488				ND	7
85 Chlorodibromomethane	129		10.652				ND	
86 Ethylene Dibromide	107		10.762				ND	
* 87 Chlorobenzene-d5 (IS)	117	11.189	11.189	0.000	87	1588442	10.0	
90 Chlorobenzene	112		11.219				ND	7
S 89 Xylenes, Total	106		11.245				ND	7
91 1,1,1,2-Tetrachloroethane	131		11.298				ND	
92 Ethylbenzene	91		11.305				ND	7
93 m-Xylene & p-Xylene	106		11.414				ND	7
94 o-Xylene	106		11.743				ND	7
95 Styrene	104		11.756				ND	7
96 Bromoform	173		11.920				ND	
$ 100 4-Bromofluorobenzene (Surr)	95	12.188	12.189	-0.001	87	791238	10.5	
101 1,1,2,2-Tetrachloroethane	83		12.286				ND	
* 115 1,4-Dichlorobenzene-d4	152	13.066	13.066	0.000	97	829031	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

Reagents:

MSV_31_826ISS_00003 Amount Added: 5.00 Units: uL Run Reagent

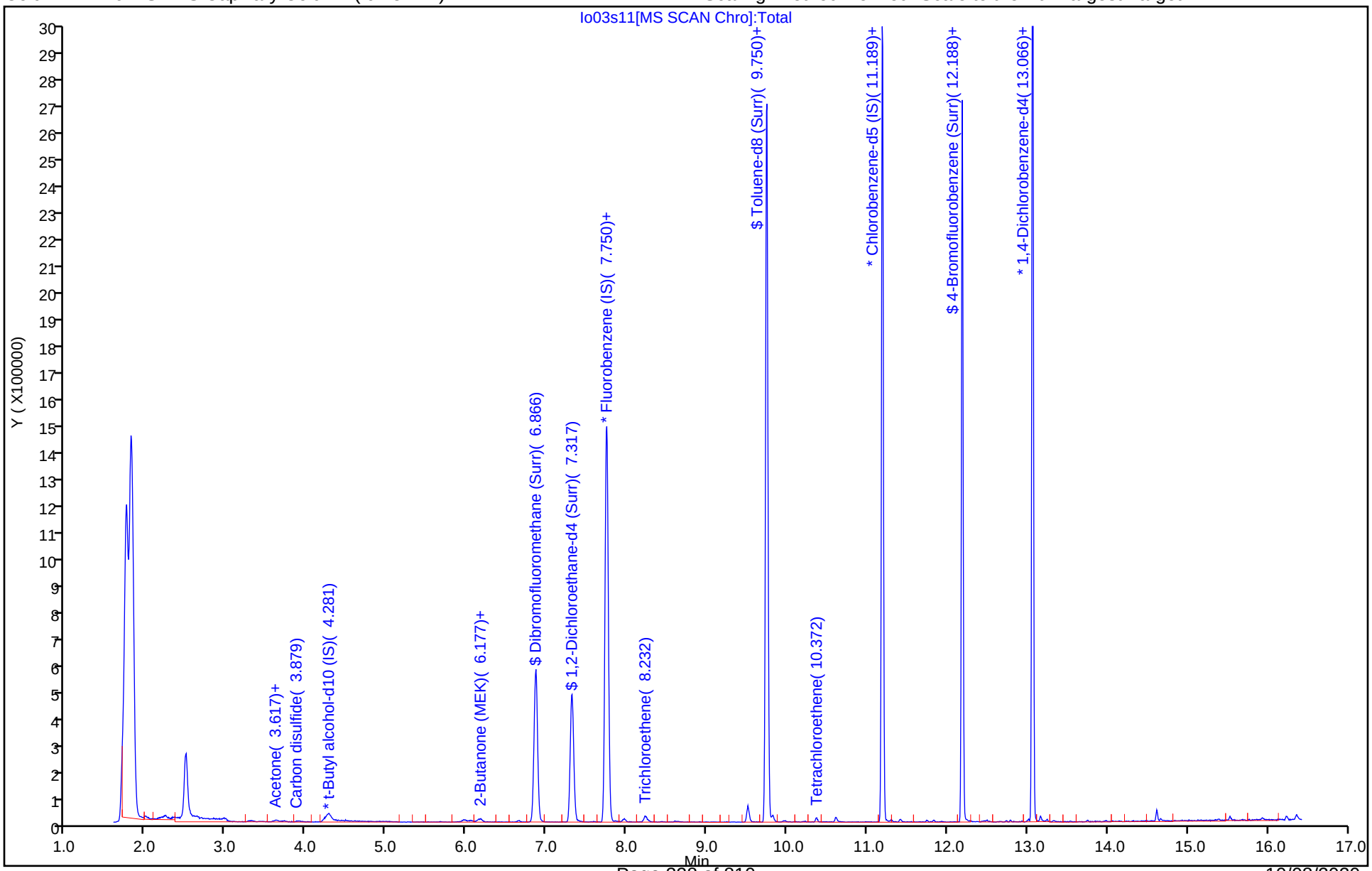
Report Date: 03-Oct-2020 13:42:15 Chrom Revision: 2.3 24-Sep-2020 19:22:38

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\Io03s11.D

Injection Date:	03-Oct-2020 12:38:30	Instrument ID:	19930	Operator ID:	jkh09052
Lims ID:	410-15232-A-1	Lab Sample ID:	410-15232-1	Worklist Smp#:	17
Client ID:	HD-COD-SW-29-0/1-0				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	8260 25ml HP31	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\19930\20201003-11975.b\Io03s11.D
Lims ID: 410-15232-A-1
Client ID: HD-COD-SW-29-0/1-0
Sample Type: Client
Inject. Date: 03-Oct-2020 12:38:30 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0011975-017
Misc. Info.: 410-15232-A-1
Operator ID: jkh09052 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 03-Oct-2020 13:41:57 Calib Date: 09-Sep-2020 21:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1015

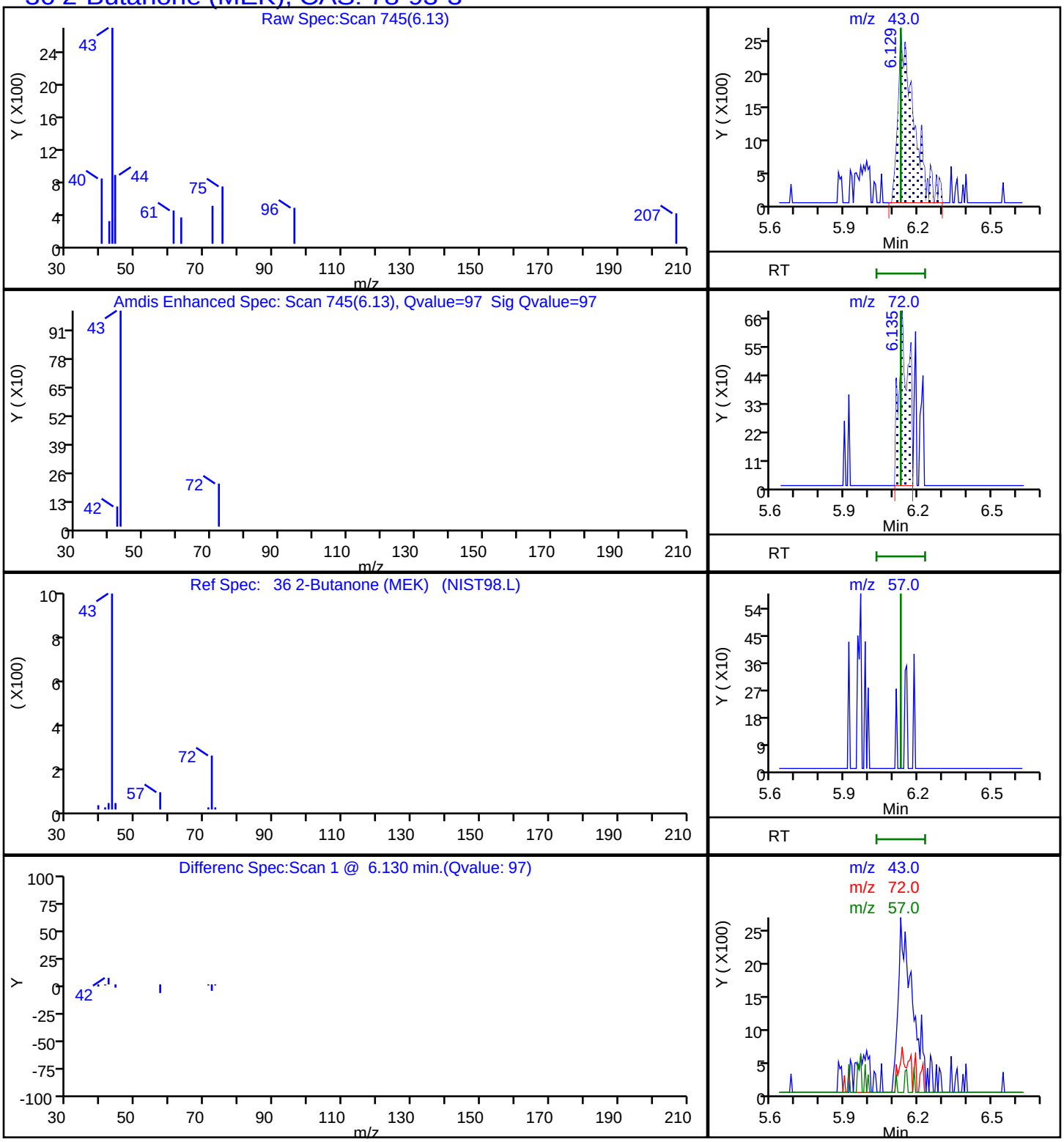
First Level Reviewer: howej Date: 03-Oct-2020 13:15:16

Compound	Amount Added	Amount Recovered	% Rec.
$ 46 Dibromofluoromethane (Surr)	10.0	9.70	96.96
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.2	101.87
$ 75 Toluene-d8 (Surr)	10.0	10.8	108.40
$ 100 4-Bromofluorobenzene (Surr)	10.0	10.5	104.78

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s11.D				
Injection Date:	03-Oct-2020 12:38:30	Instrument ID:	19930		
Lims ID:	410-15232-A-1	Lab Sample ID:	410-15232-1		
Client ID:	HD-COD-SW-29-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	16	Worklist Smp#:	17
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

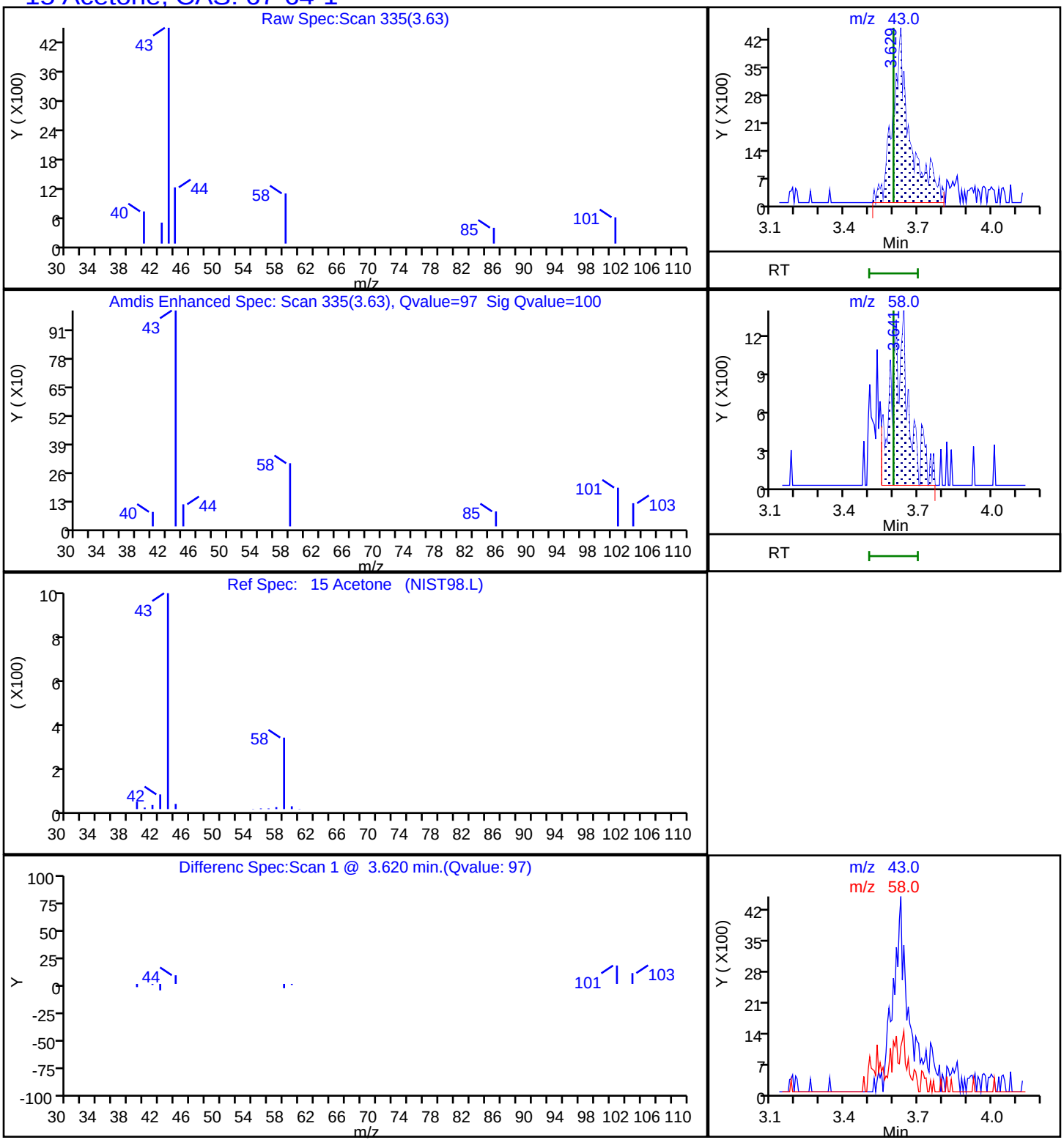
36 2-Butanone (MEK), CAS: 78-93-3



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s11.D				
Injection Date:	03-Oct-2020 12:38:30	Instrument ID:	19930		
Lims ID:	410-15232-A-1	Lab Sample ID:	410-15232-1		
Client ID:	HD-COD-SW-29-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	16	Worklist Smp#:	17
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

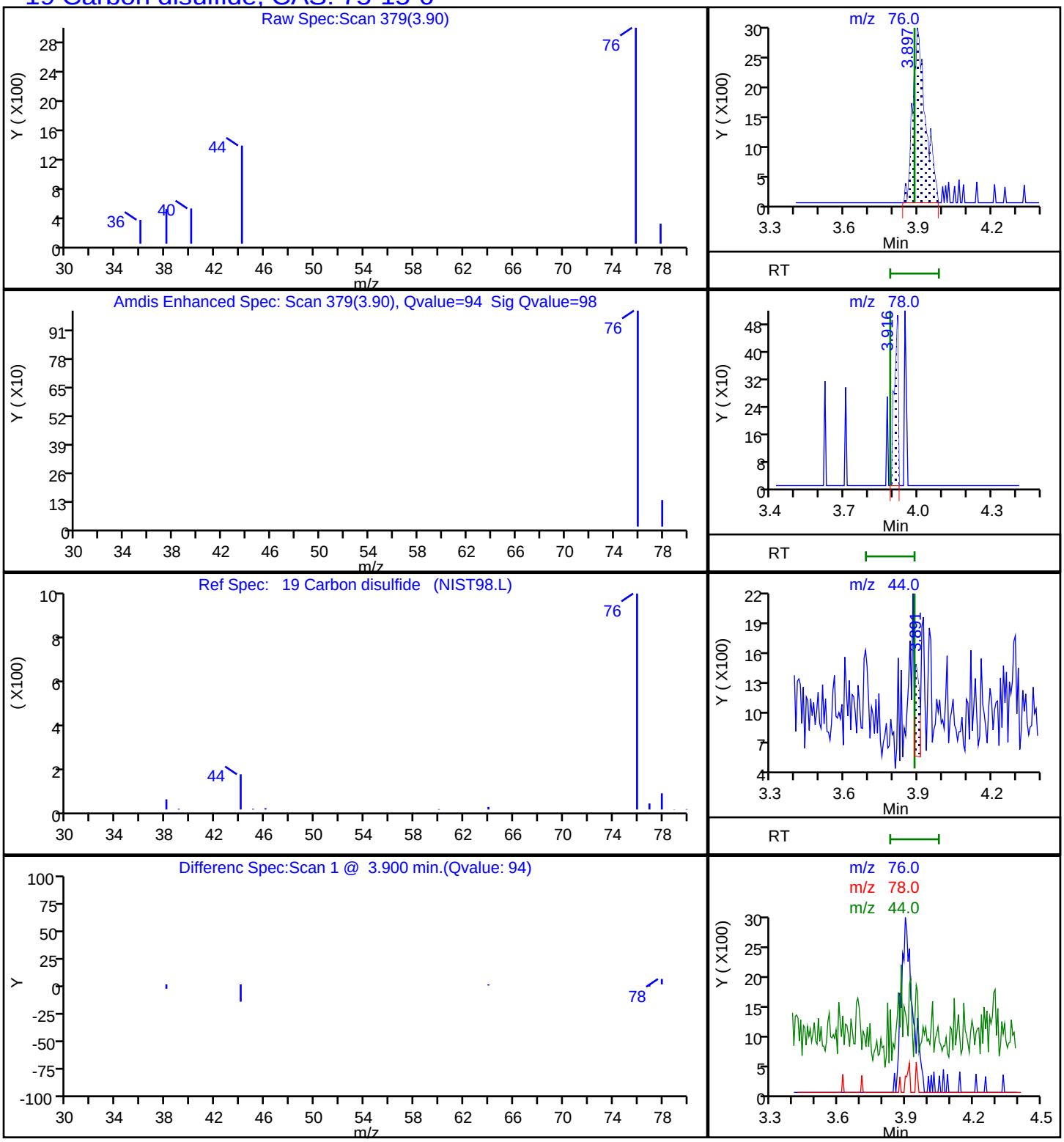
15 Acetone, CAS: 67-64-1



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s11.D		
Injection Date:	03-Oct-2020 12:38:30	Instrument ID:	19930
Lims ID:	410-15232-A-1	Lab Sample ID:	410-15232-1
Client ID:	HD-COD-SW-29-0/1-0		
Operator ID:	jkh09052	ALS Bottle#:	16 Worklist Smp#: 17
Purge Vol:	25.000 mL	Dil. Factor:	1.0000
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad

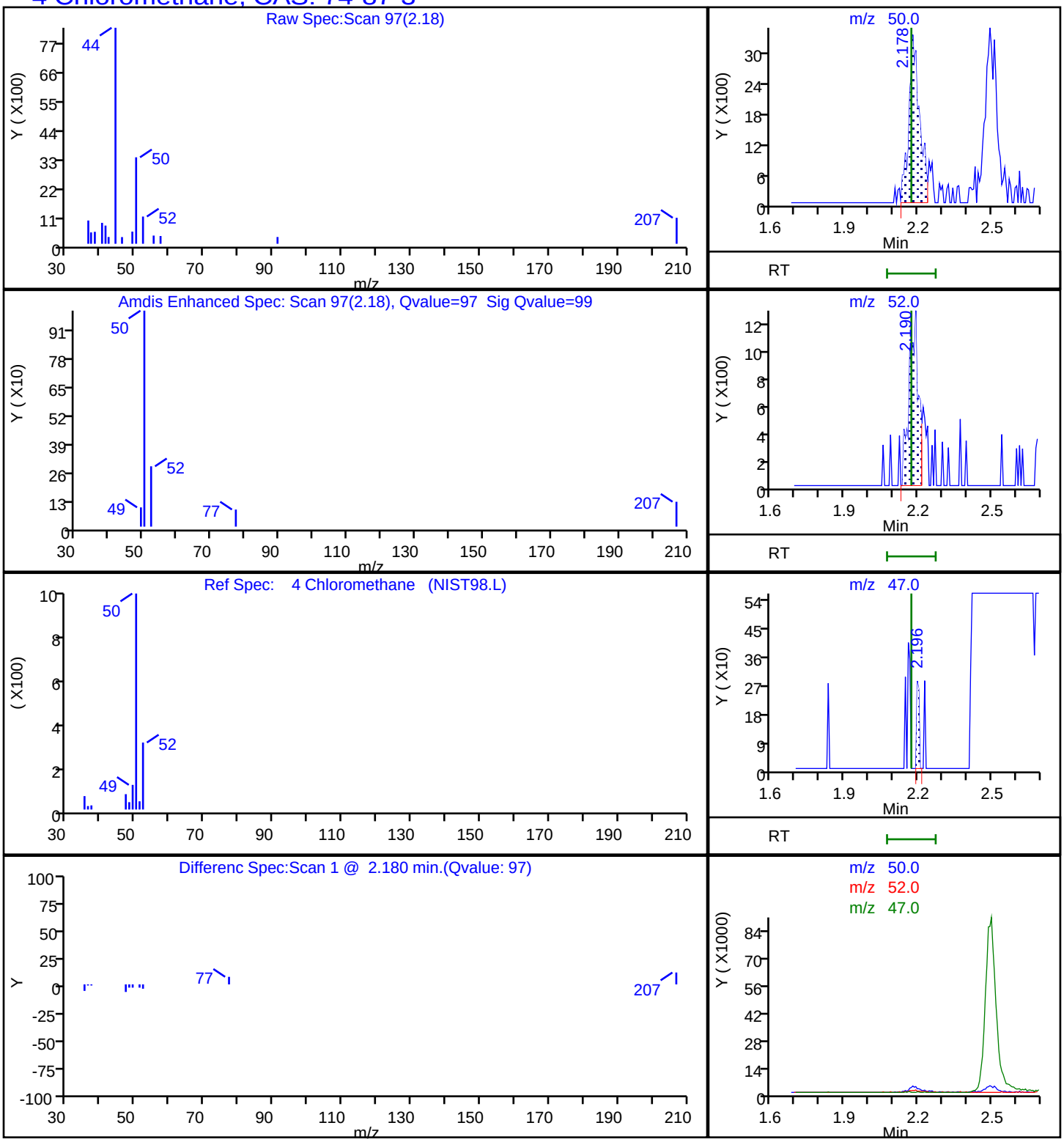
19 Carbon disulfide, CAS: 75-15-0



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s11.D				
Injection Date:	03-Oct-2020 12:38:30	Instrument ID:	19930		
Lims ID:	410-15232-A-1	Lab Sample ID:	410-15232-1		
Client ID:	HD-COD-SW-29-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	16	Worklist Smp#:	17
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

4 Chloromethane, CAS: 74-87-3



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s11.D				
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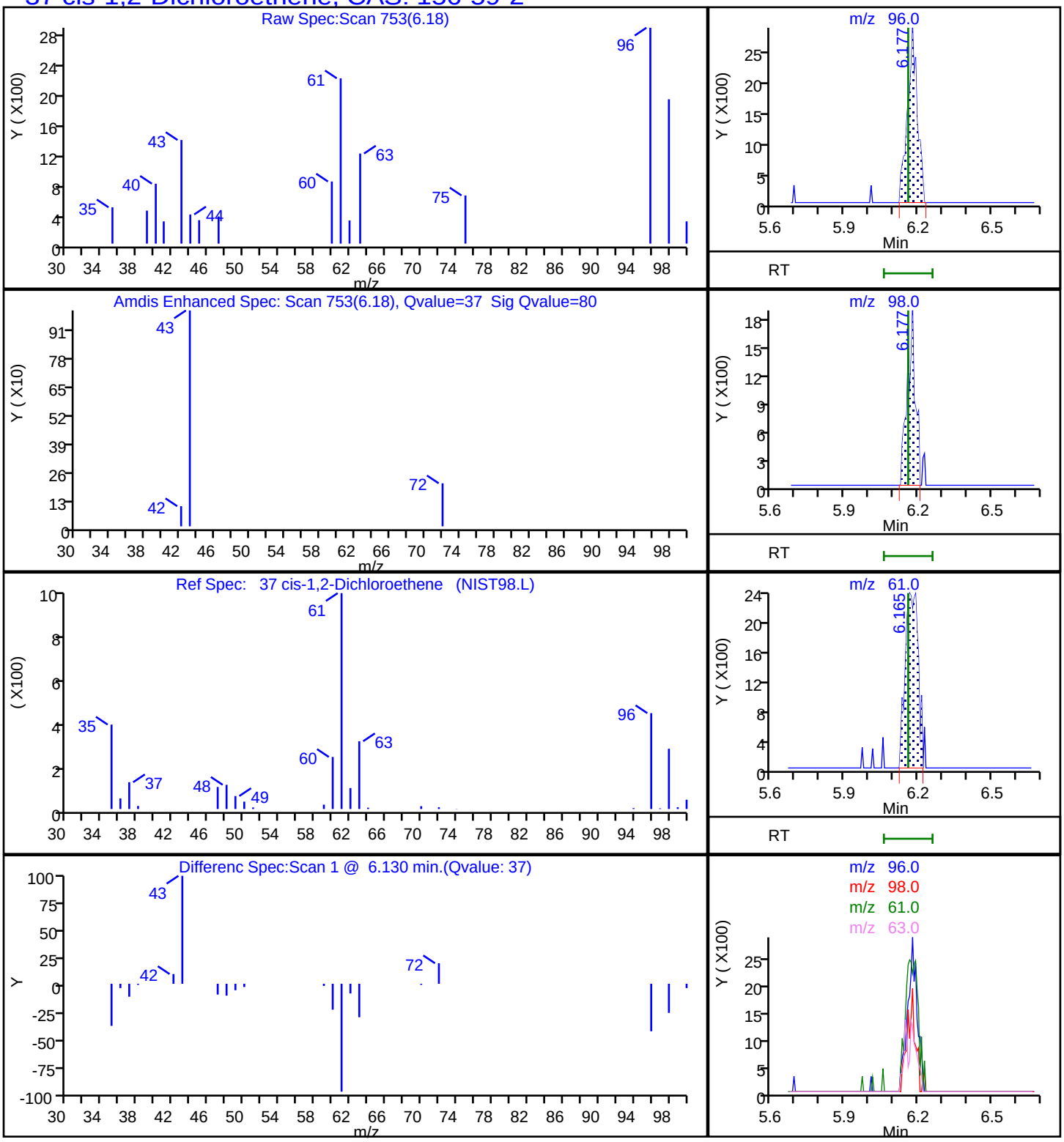
Lims ID:	410-15232-A-1	Lab Sample ID:	410-15232-1		
Client ID:	HD-COD-SW-29-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	16	Worklist Smp#:	17
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

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



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s11.D				
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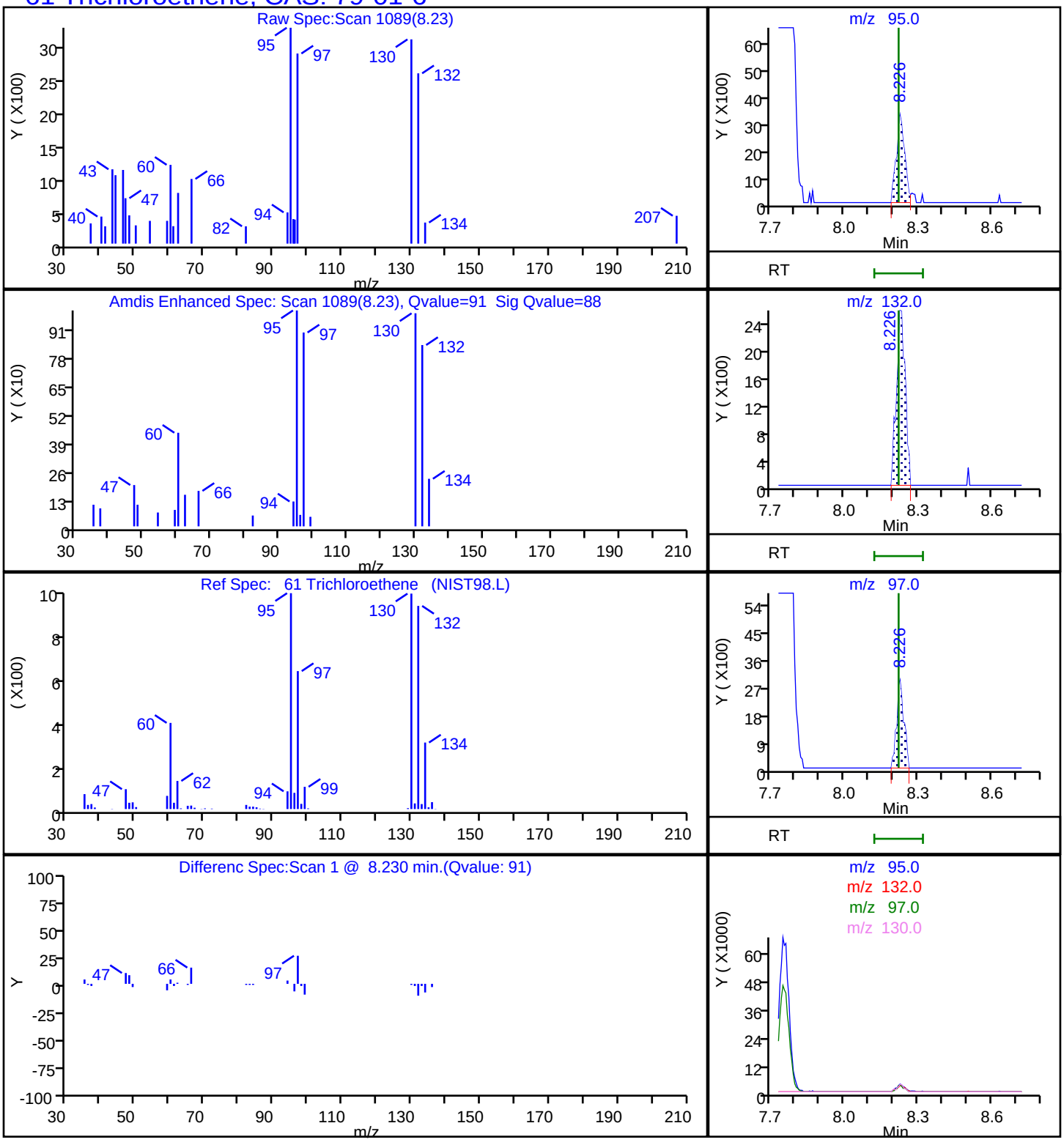
Lims ID:	410-15232-A-1	Lab Sample ID:	410-15232-1		
Client ID:	HD-COD-SW-29-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	16	Worklist Smp#:	17
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

61 Trichloroethene, CAS: 79-01-6



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

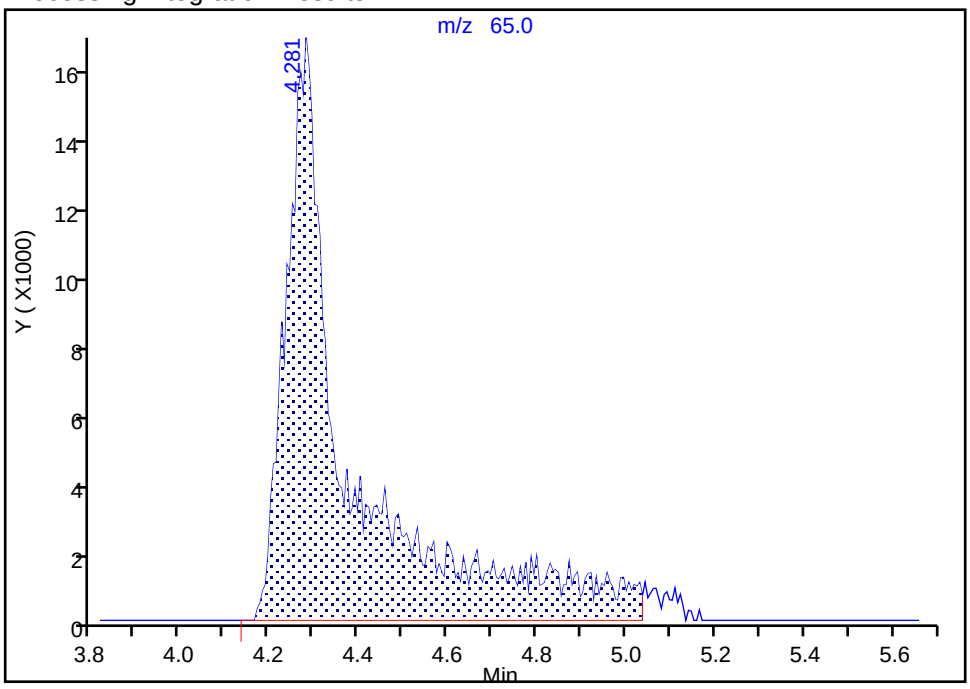
Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s11.D				
Injection Date:	03-Oct-2020 12:38:30	Instrument ID:	19930		
Lims ID:	410-15232-A-1	Lab Sample ID:	410-15232-1		
Client ID:	HD-COD-SW-29-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	16	Worklist Smp#:	17
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

* 24 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

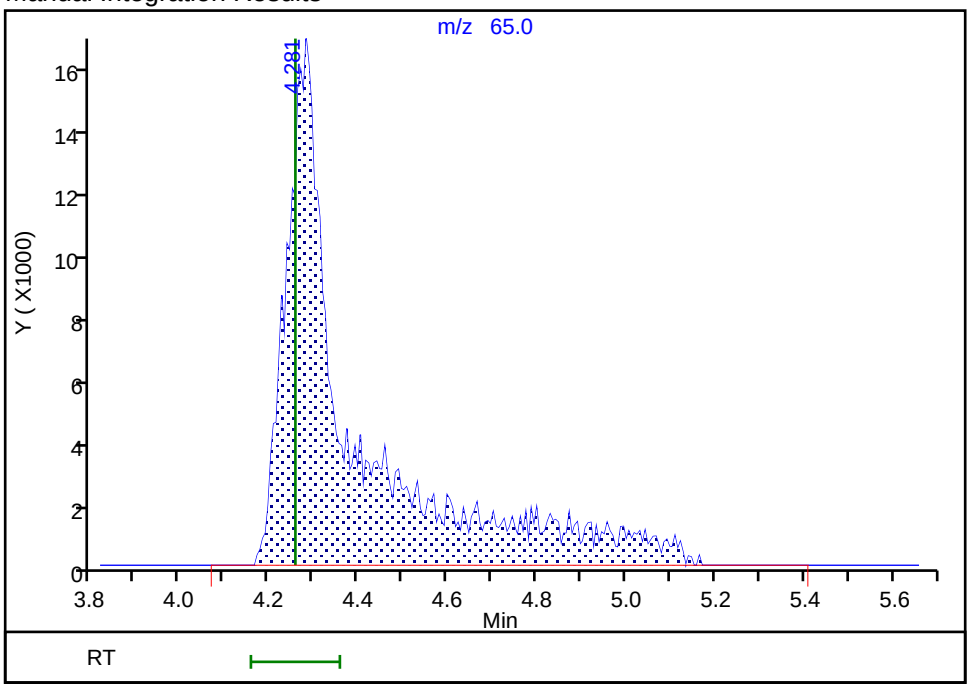
Processing Integration Results

RT: 4.28
Area: 162192
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 4.28
Area: 166403
Amount: 50.000000
Amount Units: ug/l



Reviewer: howej, 03-Oct-2020 13:14:52
Audit Action: Manually Integrated Audit Reason: Other

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-15232-1

SDG No.:

Client Sample ID: HD-COD-SW-8-0/1-0 Lab Sample ID: 410-15232-2

Matrix: Water Lab File ID: Io03s12.D

Analysis Method: 8260C LL Date Collected: 09/25/2020 10:05

Sample wt/vol: 25(mL) Date Analyzed: 10/03/2020 13:00

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.: 50506 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)	1.3	J ^c	5.0	0.60
591-78-6	2-Hexanone	ND	^c	5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	^c	5.0	0.70
67-64-1	Acetone	2.7	J	5.0	0.90
107-13-1	Acrylonitrile	ND	^c	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	0.081	J	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	0.11	J	0.50	0.060
156-59-2	cis-1,2-Dichloroethene	0.11	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	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 E Job No.: 410-15232-1

SDG No.:

Client Sample ID: HD-COD-SW-8-0/1-0 Lab Sample ID: 410-15232-2

Matrix: Water Lab File ID: Io03s12.D

Analysis Method: 8260C LL Date Collected: 09/25/2020 10:05

Sample wt/vol: 25(mL) Date Analyzed: 10/03/2020 13:00

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.: 50506 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	0.11	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)	98		80-120
1868-53-7	Dibromofluoromethane (Surr)	95		80-120
2037-26-5	Toluene-d8 (Surr)	108		80-120
460-00-4	4-Bromofluorobenzene (Surr)	105		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\Io03s12.D
Lims ID: 410-15232-A-2
Client ID: HD-COD-SW-8-0/1-0
Sample Type: Client
Inject. Date: 03-Oct-2020 13:00:30 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0011975-018
Misc. Info.: 410-15232-A-2
Operator ID: jkh09052 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 03-Oct-2020 13:41:57 Calib Date: 09-Sep-2020 21:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1015

First Level Reviewer: howej Date: 03-Oct-2020 13:41:57

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
4 Chloromethane	50	2.166	2.172	-0.006	91	8465	0.1080	
5 Vinyl chloride	62		2.288				ND	7
7 Bromomethane	94		2.617				ND	7
8 Chloroethane	64		2.703				ND	7
14 1,1-Dichloroethene	96		3.580				ND	
15 Acetone	43	3.611	3.599	0.012	87	22098	2.69	
19 Carbon disulfide	76	3.879	3.885	-0.006	53	11146	0.0814	
23 Methylene Chloride	84		4.251				ND	
* 24 t-Butyl alcohol-d10 (IS)	65	4.263	4.257	0.006	0	164289	50.0	
26 Acrylonitrile	53		4.599				ND	
27 Methyl tert-butyl ether	73		4.660				ND	7
28 trans-1,2-Dichloroethene	96		4.678				ND	
31 1,1-Dichloroethane	63		5.330				ND	
36 2-Butanone (MEK)	43	6.147	6.129	0.018	90	15813	1.29	M
37 cis-1,2-Dichloroethene	96	6.165	6.159	0.006	80	6909	0.1051	
43 Chlorobromomethane	128		6.495				ND	
45 Chloroform	83		6.647				ND	
$ 46 Dibromofluoromethane (Surr)	113	6.860	6.860	0.000	92	497691	9.52	
47 1,1,1-Trichloroethane	97		6.872				ND	
50 Carbon tetrachloride	117		7.080				ND	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.305	7.311	-0.006	0	93888	9.80	
54 Benzene	78		7.342				ND	7
56 1,2-Dichloroethane	62		7.415				ND	
* 58 Fluorobenzene (IS)	96	7.744	7.744	0.000	99	1933732	10.0	
61 Trichloroethene	95	8.232	8.220	0.012	91	7457	0.1122	
63 1,2-Dichloropropane	63		8.555				ND	
68 Dichlorobromomethane	83		8.896				ND	
73 cis-1,3-Dichloropropene	75		9.439				ND	
74 4-Methyl-2-pentanone (MIBK)	43		9.604				ND	7
$ 75 Toluene-d8 (Surr)	98	9.744	9.744	0.000	94	2013624	10.8	
76 Toluene	92	9.823	9.823	0.000	95	9496	0.0638	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
78 trans-1,3-Dichloropropene	75		10.073				ND	
80 1,1,2-Trichloroethane	97		10.274				ND	
81 Tetrachloroethene	166	10.372	10.366	0.006	85	4160	0.0553	
83 2-Hexanone	43		10.488				ND	7
85 Chlorodibromomethane	129		10.652				ND	
86 Ethylene Dibromide	107		10.762				ND	
* 87 Chlorobenzene-d5 (IS)	117	11.188	11.189	-0.001	88	1523729	10.0	
90 Chlorobenzene	112		11.219				ND	
S 89 Xylenes, Total	106		11.245				ND	7
91 1,1,1,2-Tetrachloroethane	131		11.298				ND	
92 Ethylbenzene	91		11.305				ND	7
93 m-Xylene & p-Xylene	106		11.414				ND	7
94 o-Xylene	106		11.743				ND	7
95 Styrene	104		11.756				ND	7
96 Bromoform	173		11.920				ND	
$ 100 4-Bromofluorobenzene (Surr)	95	12.188	12.189	-0.001	85	764100	10.5	
101 1,1,2,2-Tetrachloroethane	83		12.286				ND	
* 115 1,4-Dichlorobenzene-d4	152	13.066	13.066	0.000	97	804069	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

Reagents:

MSV_31_826ISS_00003 Amount Added: 5.00 Units: uL Run Reagent

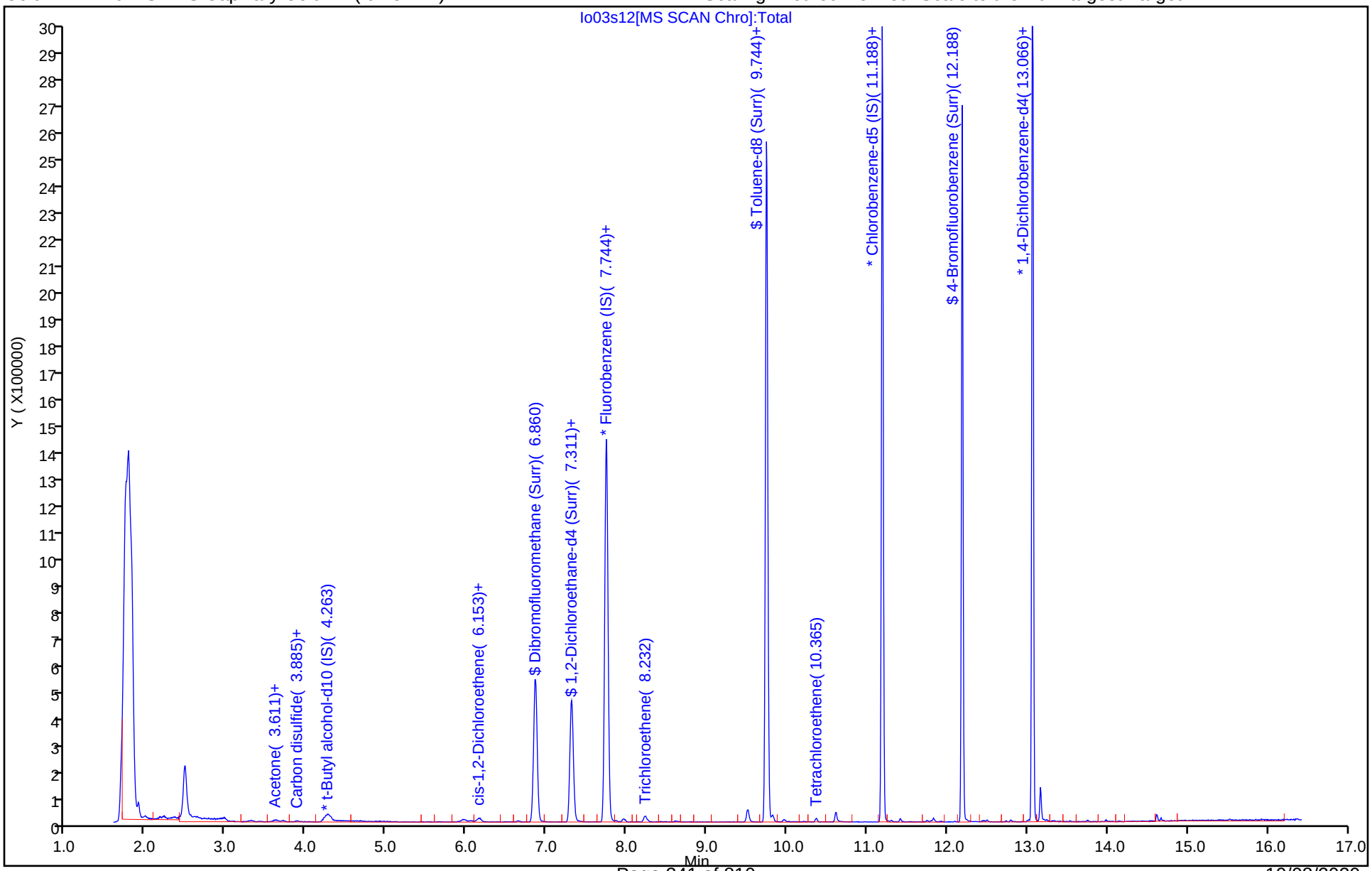
Report Date: 03-Oct-2020 13:42:16 Chrom Revision: 2.3 24-Sep-2020 19:22:38

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\Io03s12.D

Injection Date:	03-Oct-2020 13:00:30	Instrument ID:	19930	Operator ID:	jkh09052
Lims ID:	410-15232-A-2	Lab Sample ID:	410-15232-2	Worklist Smp#:	18
Client ID:	HD-COD-SW-8-0/1-0				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	8260 25ml HP31	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\19930\20201003-11975.b\Io03s12.D
Lims ID: 410-15232-A-2
Client ID: HD-COD-SW-8-0/1-0
Sample Type: Client
Inject. Date: 03-Oct-2020 13:00:30 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0011975-018
Misc. Info.: 410-15232-A-2
Operator ID: jkh09052 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 03-Oct-2020 13:41:57 Calib Date: 09-Sep-2020 21:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1015

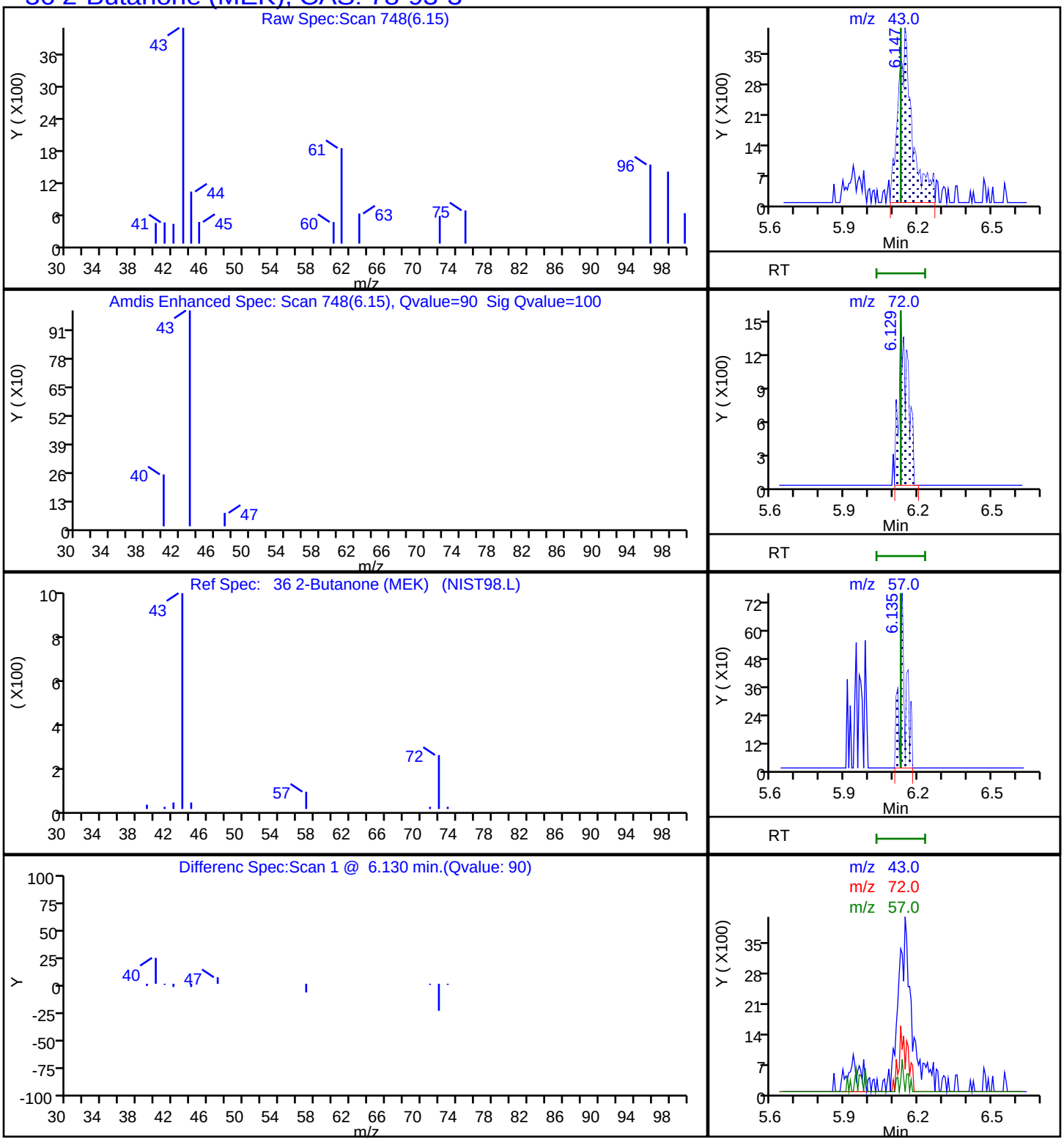
First Level Reviewer: howej Date: 03-Oct-2020 13:41:57

Compound	Amount Added	Amount Recovered	% Rec.
$ 46 Dibromofluoromethane (Surr)	10.0	9.52	95.22
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	9.80	98.00
$ 75 Toluene-d8 (Surr)	10.0	10.8	107.80
$ 100 4-Bromofluorobenzene (Surr)	10.0	10.5	105.48

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s12.D				
Injection Date:	03-Oct-2020 13:00:30	Instrument ID:	19930		
Lims ID:	410-15232-A-2	Lab Sample ID:	410-15232-2		
Client ID:	HD-COD-SW-8-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

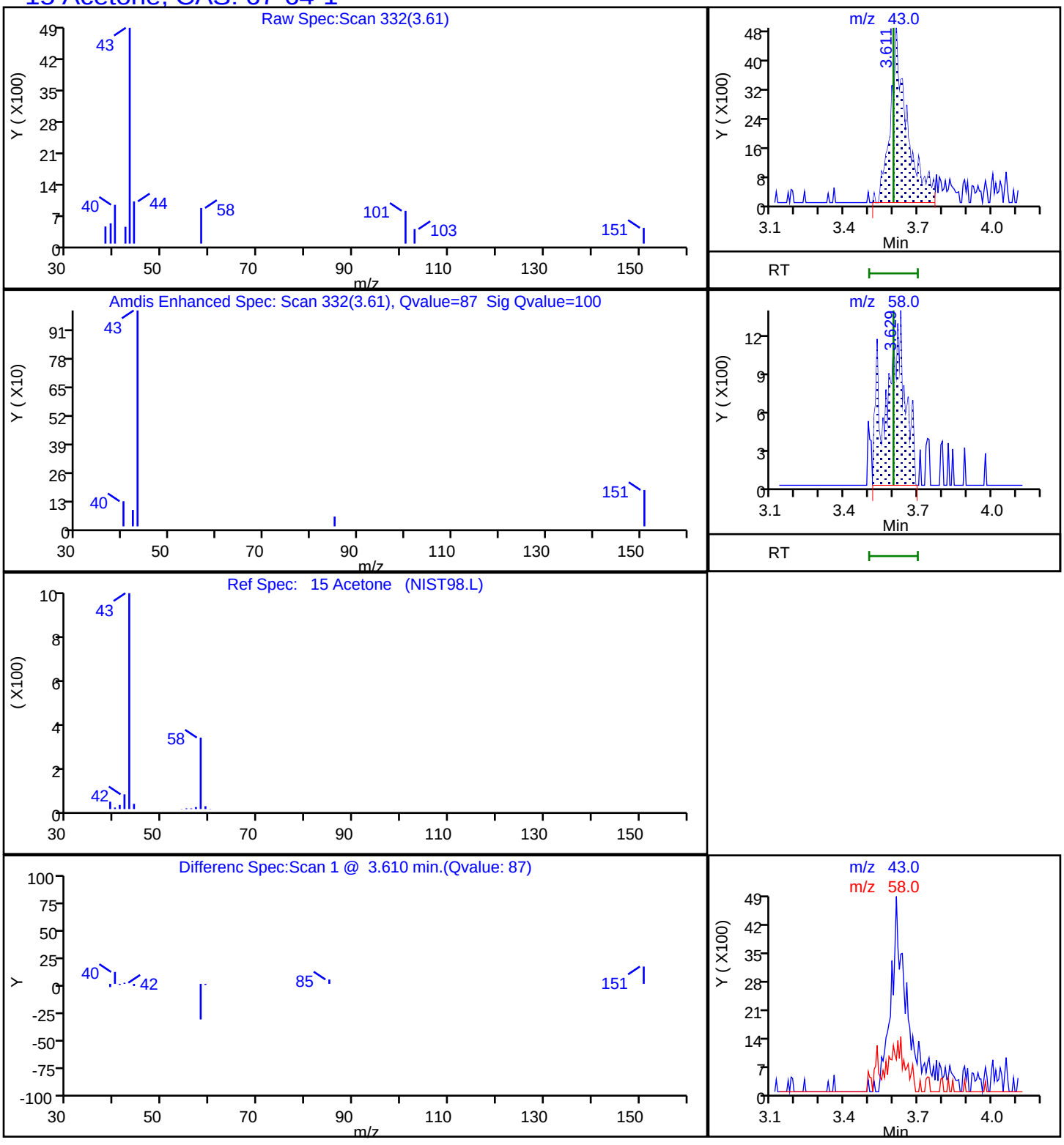
36 2-Butanone (MEK), CAS: 78-93-3



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s12.D				
Injection Date:	03-Oct-2020 13:00:30	Instrument ID:	19930		
Lims ID:	410-15232-A-2	Lab Sample ID:	410-15232-2		
Client ID:	HD-COD-SW-8-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

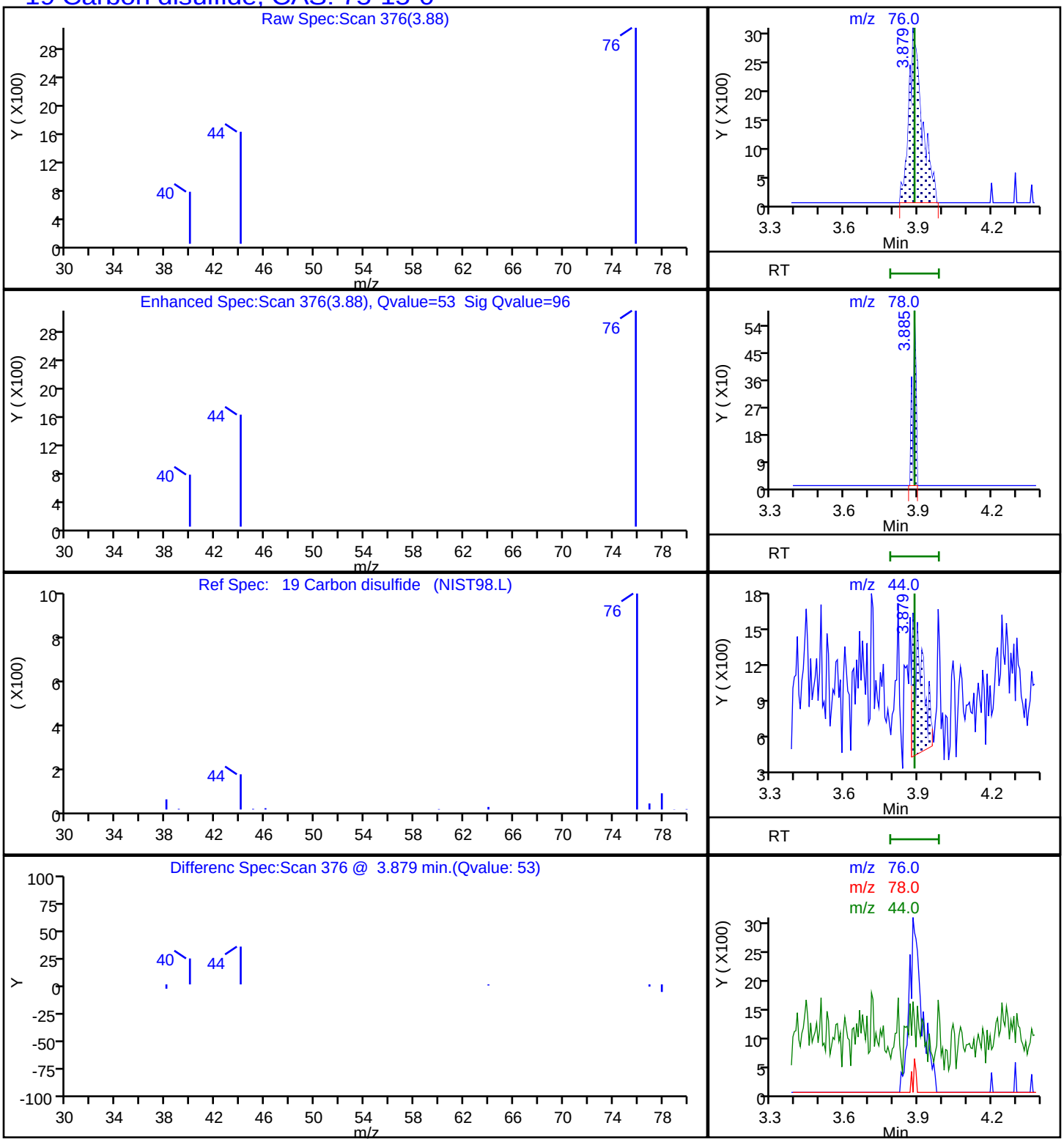
15 Acetone, CAS: 67-64-1



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s12.D				
Injection Date:	03-Oct-2020 13:00:30	Instrument ID:	19930		
Lims ID:	410-15232-A-2	Lab Sample ID:	410-15232-2		
Client ID:	HD-COD-SW-8-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

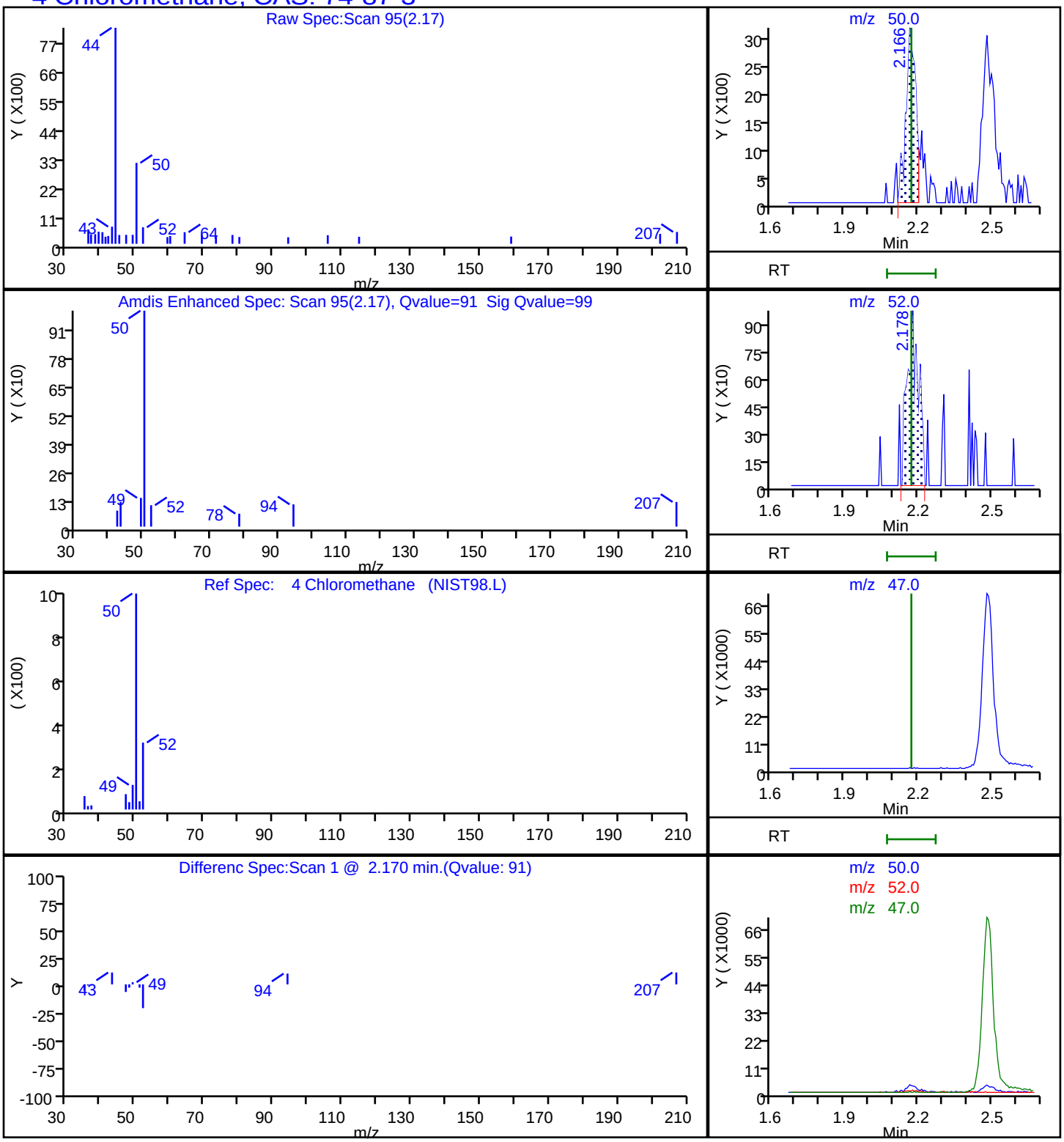
19 Carbon disulfide, CAS: 75-15-0



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s12.D				
Injection Date:	03-Oct-2020 13:00:30	Instrument ID:	19930		
Lims ID:	410-15232-A-2	Lab Sample ID:	410-15232-2		
Client ID:	HD-COD-SW-8-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

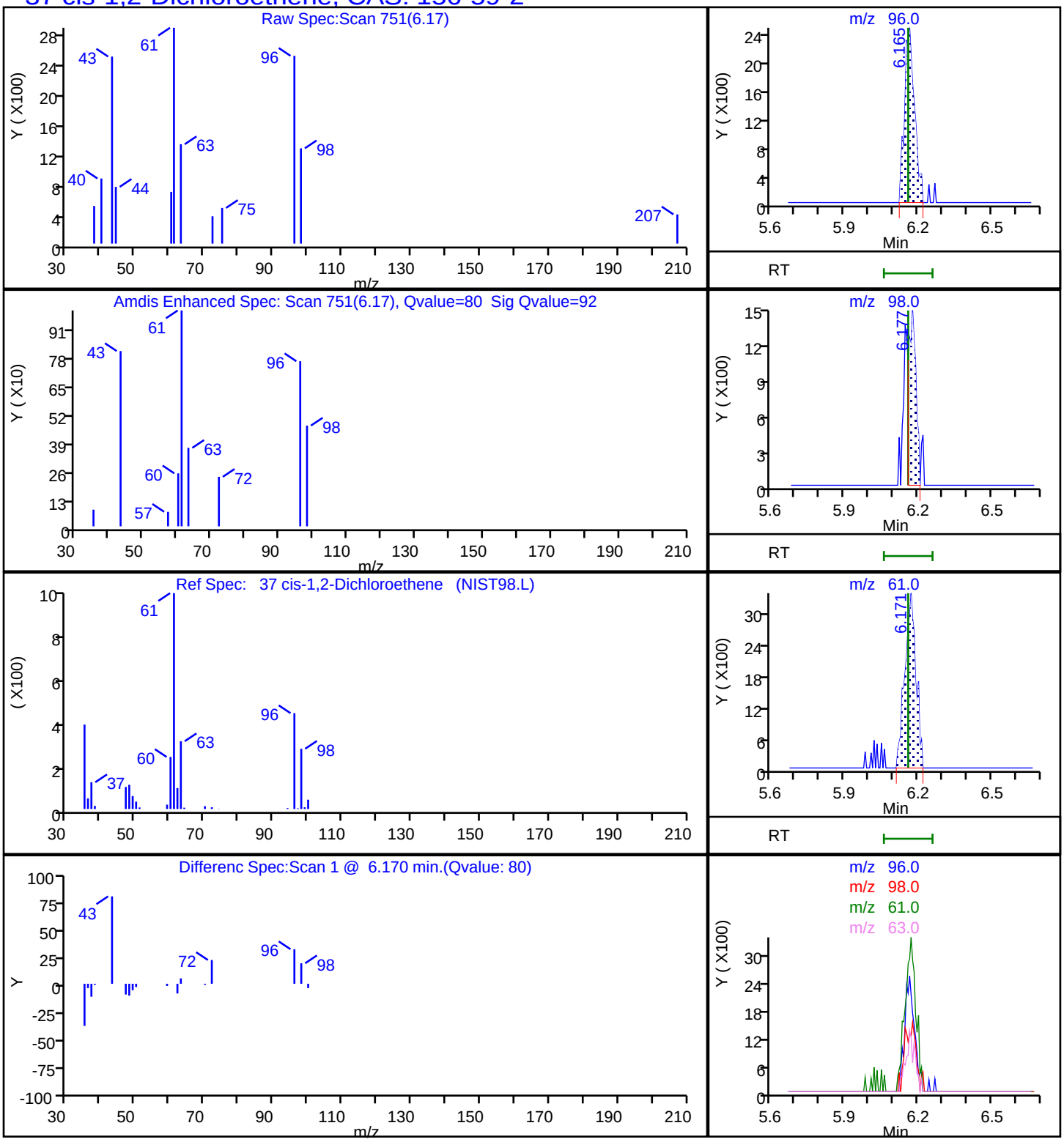
4 Chloromethane, CAS: 74-87-3



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s12.D				
Injection Date:	03-Oct-2020 13:00:30	Instrument ID:	19930		
Lims ID:	410-15232-A-2	Lab Sample ID:	410-15232-2		
Client ID:	HD-COD-SW-8-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

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



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s12.D				
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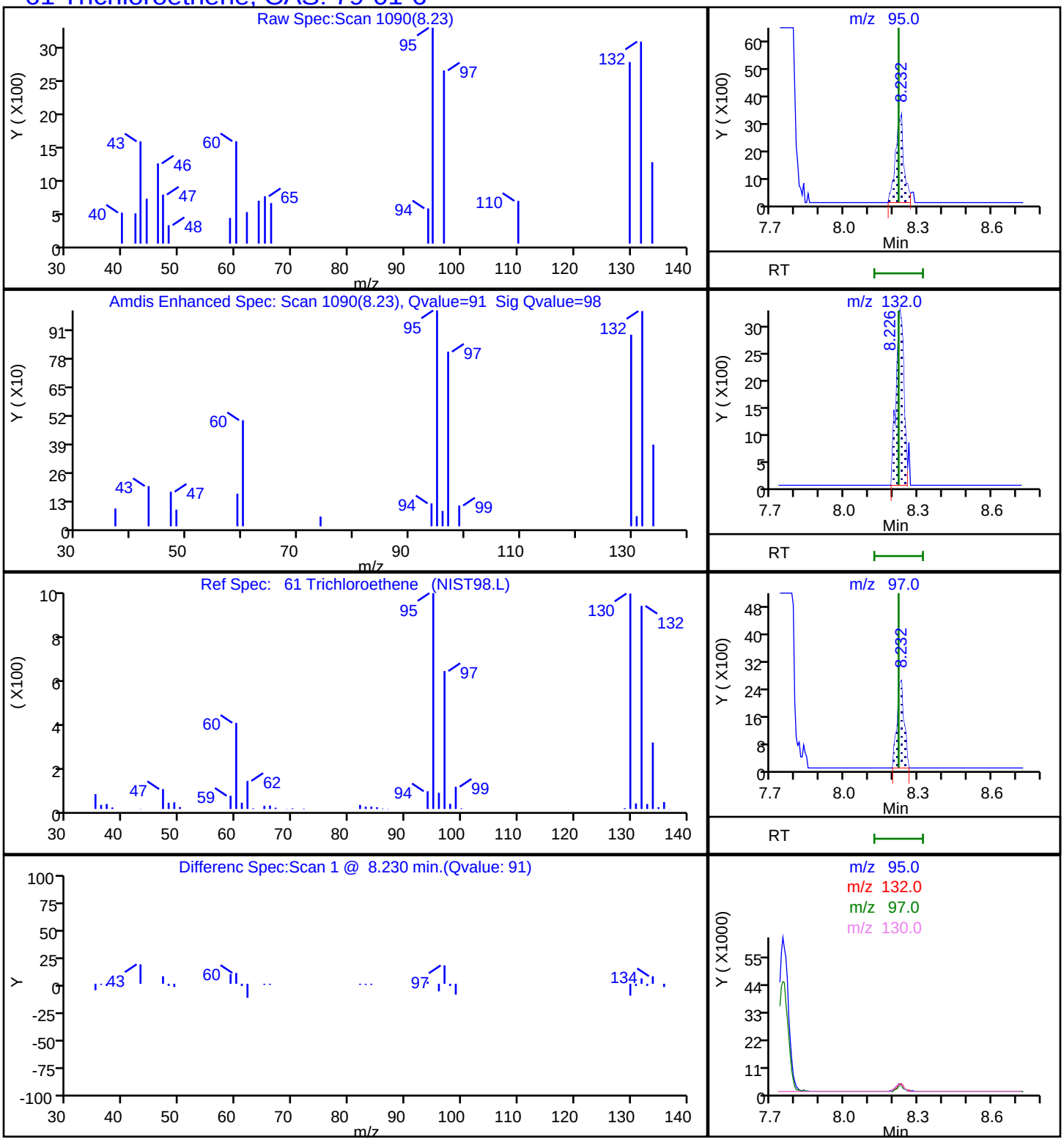
Lims ID:	410-15232-A-2	Lab Sample ID:	410-15232-2		
Client ID:	HD-COD-SW-8-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

61 Trichloroethene, CAS: 79-01-6



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

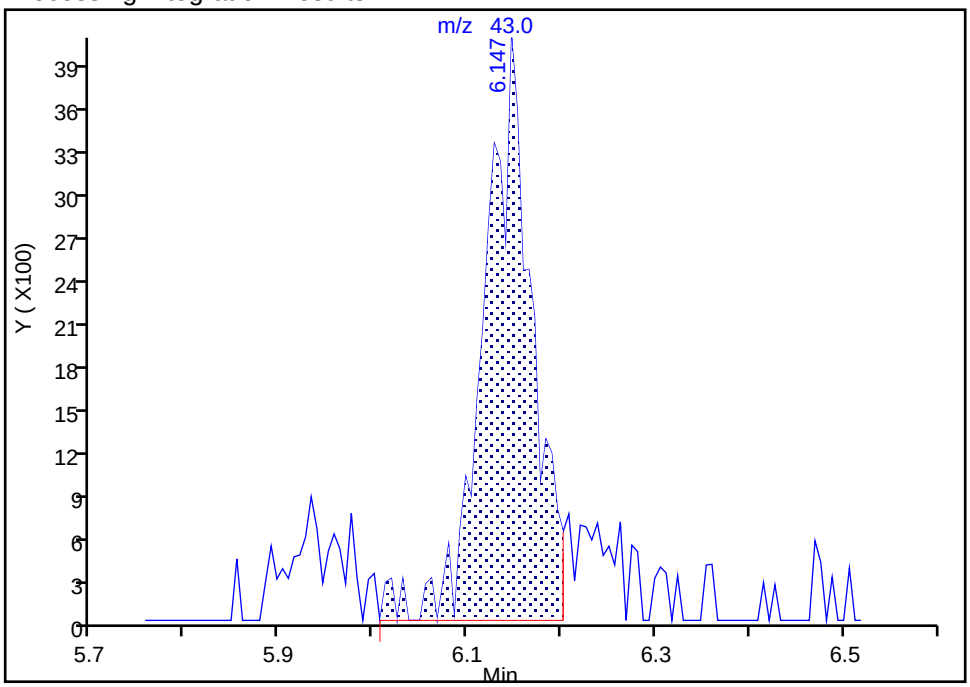
Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s12.D				
Injection Date:	03-Oct-2020 13:00:30	Instrument ID:	19930		
Lims ID:	410-15232-A-2	Lab Sample ID:	410-15232-2		
Client ID:	HD-COD-SW-8-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

36 2-Butanone (MEK), CAS: 78-93-3

Signal: 1

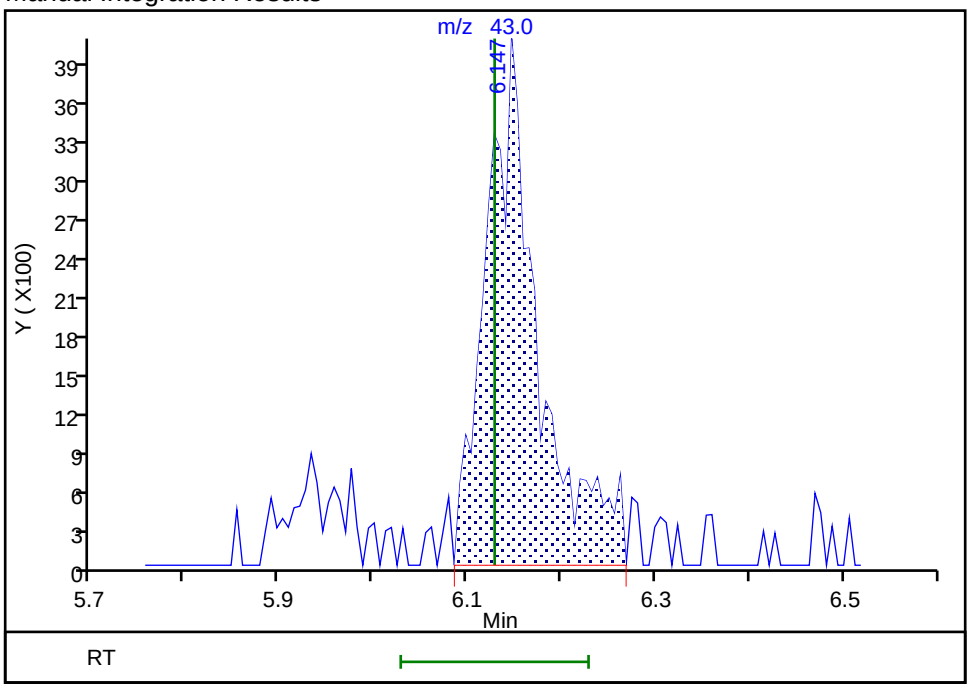
Processing Integration Results

RT: 6.15
Area: 14544
Amount: 1.183453
Amount Units: ug/l



Manual Integration Results

RT: 6.15
Area: 15813
Amount: 1.286713
Amount Units: ug/l



Reviewer: howej, 03-Oct-2020 13:41:37
Audit Action: Manually Integrated Audit Reason: Other

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-15232-1

SDG No.:

Client Sample ID: HD-COD-SW-13-0/1-0 Lab Sample ID: 410-15232-3

Matrix: Water Lab File ID: Io03s13.D

Analysis Method: 8260C LL Date Collected: 09/25/2020 10:20

Sample wt/vol: 25(mL) Date Analyzed: 10/03/2020 13:21

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.: 50506 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)	1.1	J ^c	5.0	0.60
591-78-6	2-Hexanone	ND	^c	5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	^c	5.0	0.70
67-64-1	Acetone	2.5	J	5.0	0.90
107-13-1	Acrylonitrile	ND	^c	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	0.092	J	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	0.11	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	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 E Job No.: 410-15232-1

SDG No.:

Client Sample ID: HD-COD-SW-13-0/1-0 Lab Sample ID: 410-15232-3

Matrix: Water Lab File ID: Io03s13.D

Analysis Method: 8260C LL Date Collected: 09/25/2020 10:20

Sample wt/vol: 25(mL) Date Analyzed: 10/03/2020 13:21

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.: 50506 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)	102		80-120
1868-53-7	Dibromofluoromethane (Surr)	96		80-120
2037-26-5	Toluene-d8 (Surr)	107		80-120
460-00-4	4-Bromofluorobenzene (Surr)	104		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\Io03s13.D
Lims ID: 410-15232-A-3
Client ID: HD-COD-SW-13-0/1-0
Sample Type: Client
Inject. Date: 03-Oct-2020 13:21:30 ALS Bottle#: 18 Worklist Smp#: 19
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0011975-019
Misc. Info.: 410-15232-A-3
Operator ID: jkh09052 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 03-Oct-2020 13:59:41 Calib Date: 09-Sep-2020 21:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1015

First Level Reviewer: howej Date: 03-Oct-2020 13:59:41

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
4 Chloromethane	50	2.178	2.172	0.006	93	9170	0.1143	
5 Vinyl chloride	62		2.288				ND	7
7 Bromomethane	94		2.617				ND	7
8 Chloroethane	64		2.703				ND	
14 1,1-Dichloroethene	96		3.580				ND	
15 Acetone	43	3.617	3.599	0.018	94	19132	2.48	
19 Carbon disulfide	76	3.897	3.885	0.012	98	12892	0.0920	M
23 Methylene Chloride	84		4.251				ND	
* 24 t-Butyl alcohol-d10 (IS)	65	4.275	4.257	0.018	0	154575	50.0	M
26 Acrylonitrile	53		4.599				ND	
27 Methyl tert-butyl ether	73		4.660				ND	
28 trans-1,2-Dichloroethene	96		4.678				ND	
31 1,1-Dichloroethane	63		5.330				ND	
36 2-Butanone (MEK)	43	6.141	6.129	0.012	86	12529	1.08	
37 cis-1,2-Dichloroethene	96	6.159	6.159	0.000	82	8051	0.1196	
43 Chlorobromomethane	128		6.495				ND	
45 Chloroform	83	6.659	6.647	0.012	67	5465	0.0511	
$ 46 Dibromofluoromethane (Surr)	113	6.860	6.860	0.000	91	516249	9.64	
47 1,1,1-Trichloroethane	97		6.872				ND	
50 Carbon tetrachloride	117		7.080				ND	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.311	7.311	0.000	0	100309	10.2	
54 Benzene	78		7.342				ND	7
56 1,2-Dichloroethane	62		7.415				ND	
* 58 Fluorobenzene (IS)	96	7.744	7.744	0.000	99	1980526	10.0	
61 Trichloroethene	95	8.226	8.220	0.006	91	8980	0.1319	
63 1,2-Dichloropropane	63		8.555				ND	
68 Dichlorobromomethane	83		8.896				ND	
73 cis-1,3-Dichloropropene	75		9.439				ND	
74 4-Methyl-2-pentanone (MIBK)	43		9.604				ND	7
$ 75 Toluene-d8 (Surr)	98	9.750	9.744	0.006	95	2073641	10.7	
76 Toluene	92	9.817	9.823	-0.006	96	9059	0.0585	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
78 trans-1,3-Dichloropropene	75		10.073				ND	
80 1,1,2-Trichloroethane	97		10.274				ND	
81 Tetrachloroethene	166	10.366	10.366	0.000	89	4425	0.0564	
83 2-Hexanone	43		10.488				ND	7
85 Chlorodibromomethane	129		10.652				ND	
86 Ethylene Dibromide	107		10.762				ND	
* 87 Chlorobenzene-d5 (IS)	117	11.189	11.189	0.000	87	1587143	10.0	
90 Chlorobenzene	112		11.219				ND	
S 89 Xylenes, Total	106		11.245				ND	7
91 1,1,1,2-Tetrachloroethane	131		11.298				ND	
92 Ethylbenzene	91		11.305				ND	7
93 m-Xylene & p-Xylene	106		11.414				ND	7
94 o-Xylene	106		11.743				ND	7
95 Styrene	104		11.756				ND	
96 Bromoform	173		11.920				ND	
$ 100 4-Bromofluorobenzene (Surr)	95	12.188	12.189	-0.001	86	785006	10.4	
101 1,1,2,2-Tetrachloroethane	83		12.286				ND	
* 115 1,4-Dichlorobenzene-d4	152	13.066	13.066	0.000	97	829904	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

Reagents:

MSV_31_826ISS_00003 Amount Added: 5.00 Units: uL Run Reagent

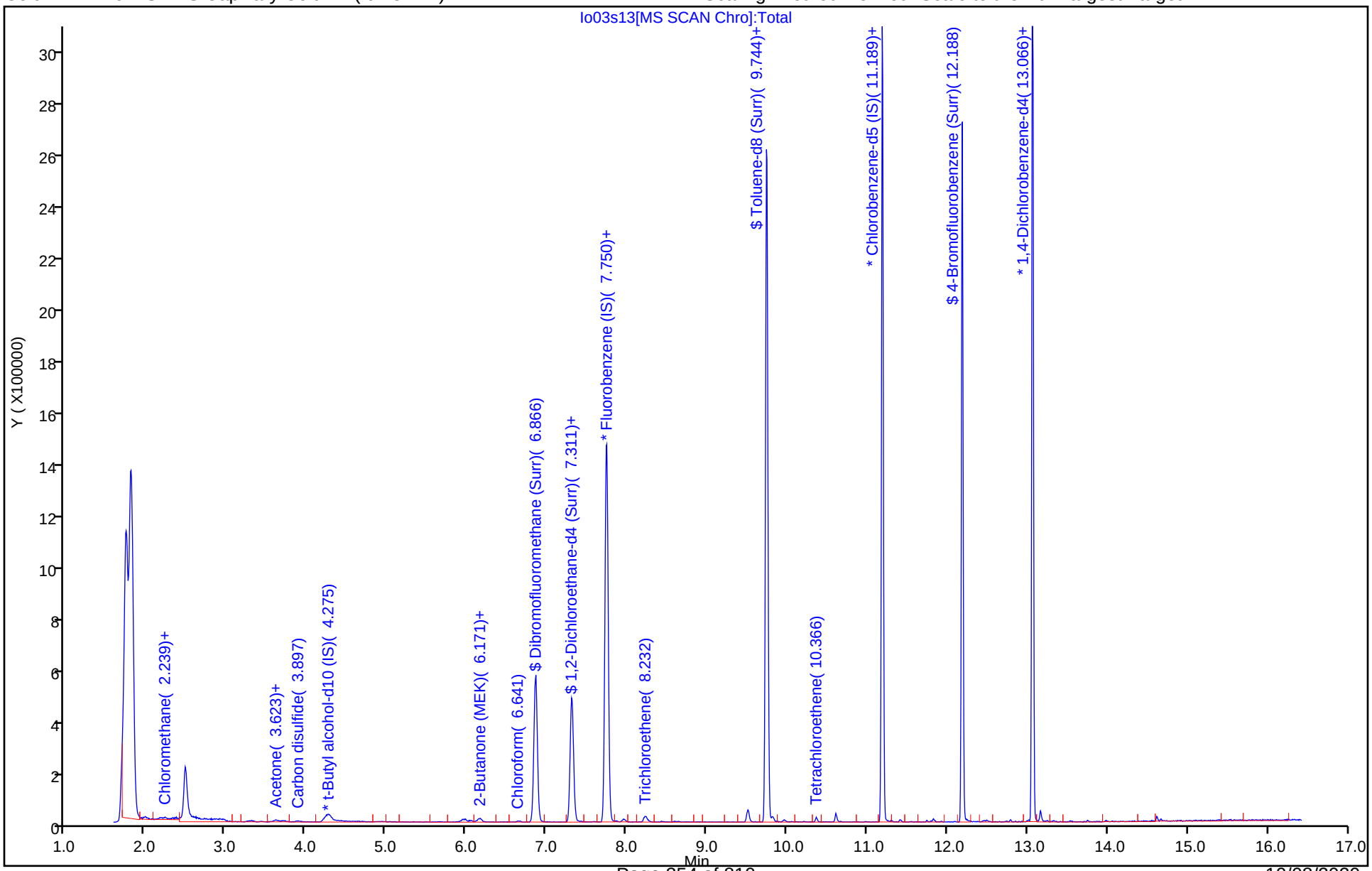
Report Date: 03-Oct-2020 13:59:47 Chrom Revision: 2.3 24-Sep-2020 19:22:38

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\Io03s13.D

Injection Date:	03-Oct-2020 13:21:30	Instrument ID:	19930	Operator ID:	jkh09052
Lims ID:	410-15232-A-3	Lab Sample ID:	410-15232-3	Worklist Smp#:	19
Client ID:	HD-COD-SW-13-0/1-0				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	8260 25ml HP31	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\19930\20201003-11975.b\Io03s13.D
Lims ID: 410-15232-A-3
Client ID: HD-COD-SW-13-0/1-0
Sample Type: Client
Inject. Date: 03-Oct-2020 13:21:30 ALS Bottle#: 18 Worklist Smp#: 19
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0011975-019
Misc. Info.: 410-15232-A-3
Operator ID: jkh09052 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 03-Oct-2020 13:59:41 Calib Date: 09-Sep-2020 21:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1015

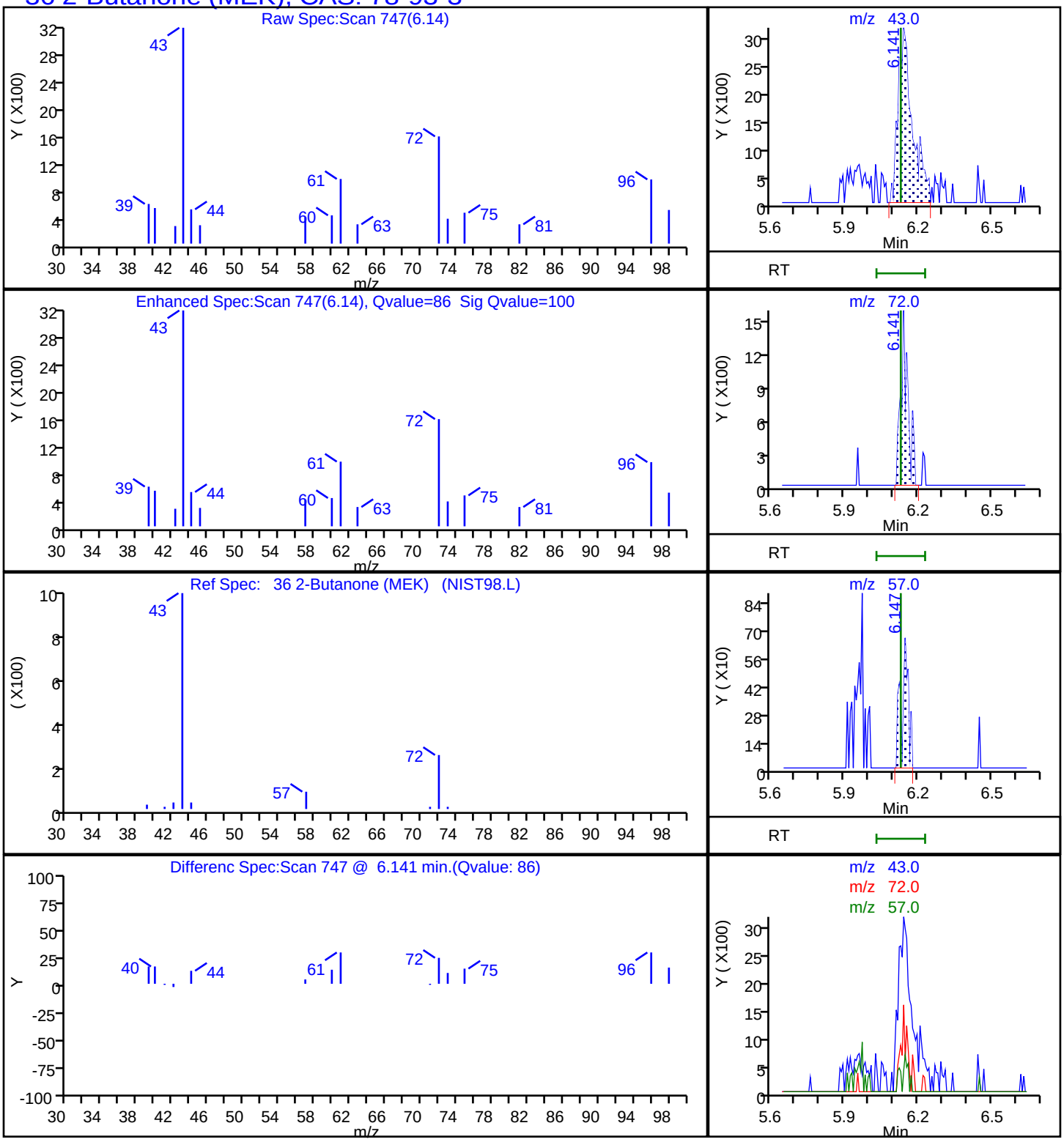
First Level Reviewer: howej Date: 03-Oct-2020 13:59:41

Compound	Amount Added	Amount Recovered	% Rec.
$ 46 Dibromofluoromethane (Surr)	10.0	9.64	96.44
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.2	102.23
$ 75 Toluene-d8 (Surr)	10.0	10.7	106.57
$ 100 4-Bromofluorobenzene (Surr)	10.0	10.4	104.04

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s13.D				
Injection Date:	03-Oct-2020 13:21:30	Instrument ID:	19930		
Lims ID:	410-15232-A-3	Lab Sample ID:	410-15232-3		
Client ID:	HD-COD-SW-13-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

36 2-Butanone (MEK), CAS: 78-93-3



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s13.D				
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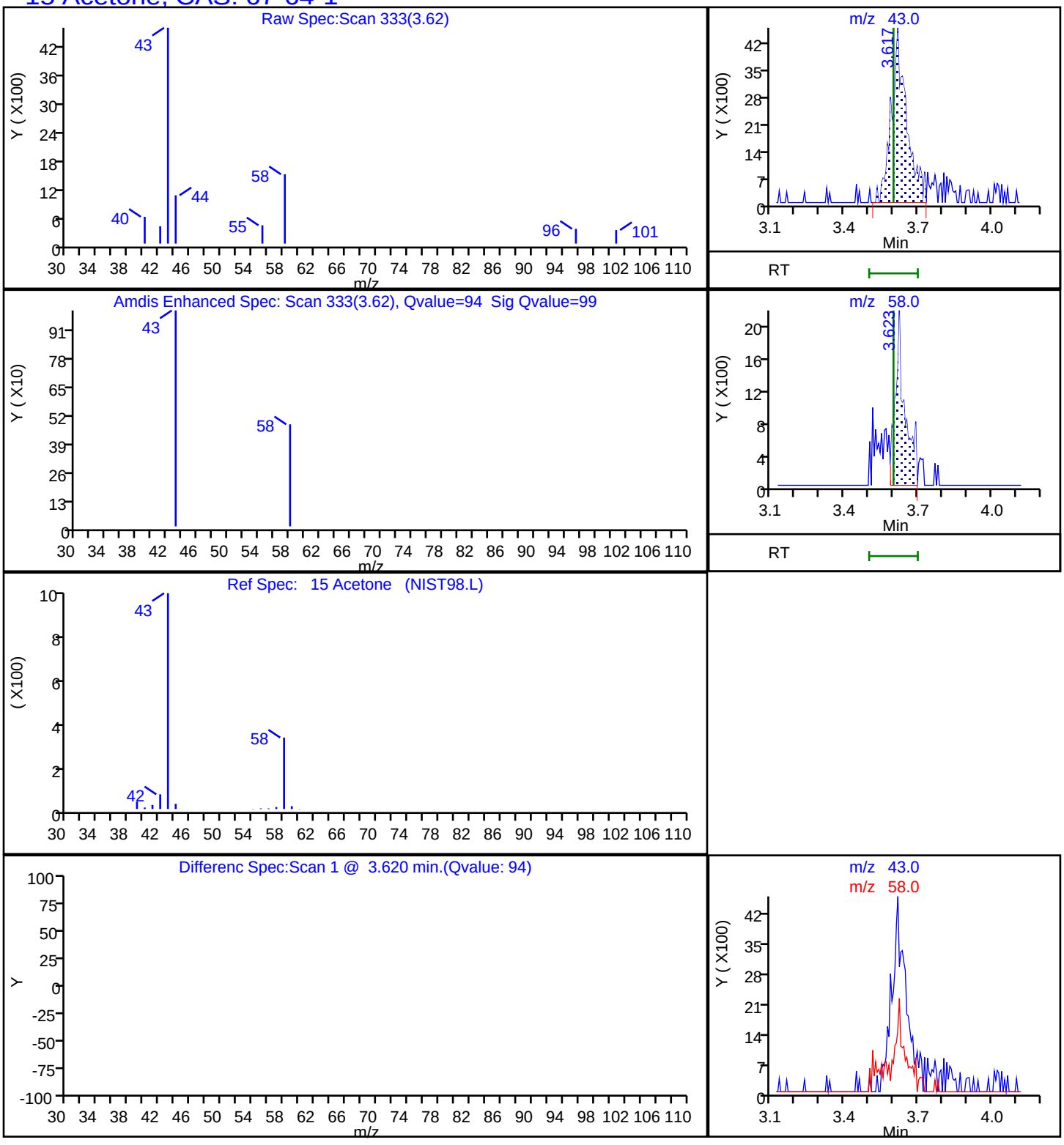
Lims ID:	410-15232-A-3	Lab Sample ID:	410-15232-3		
Client ID:	HD-COD-SW-13-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

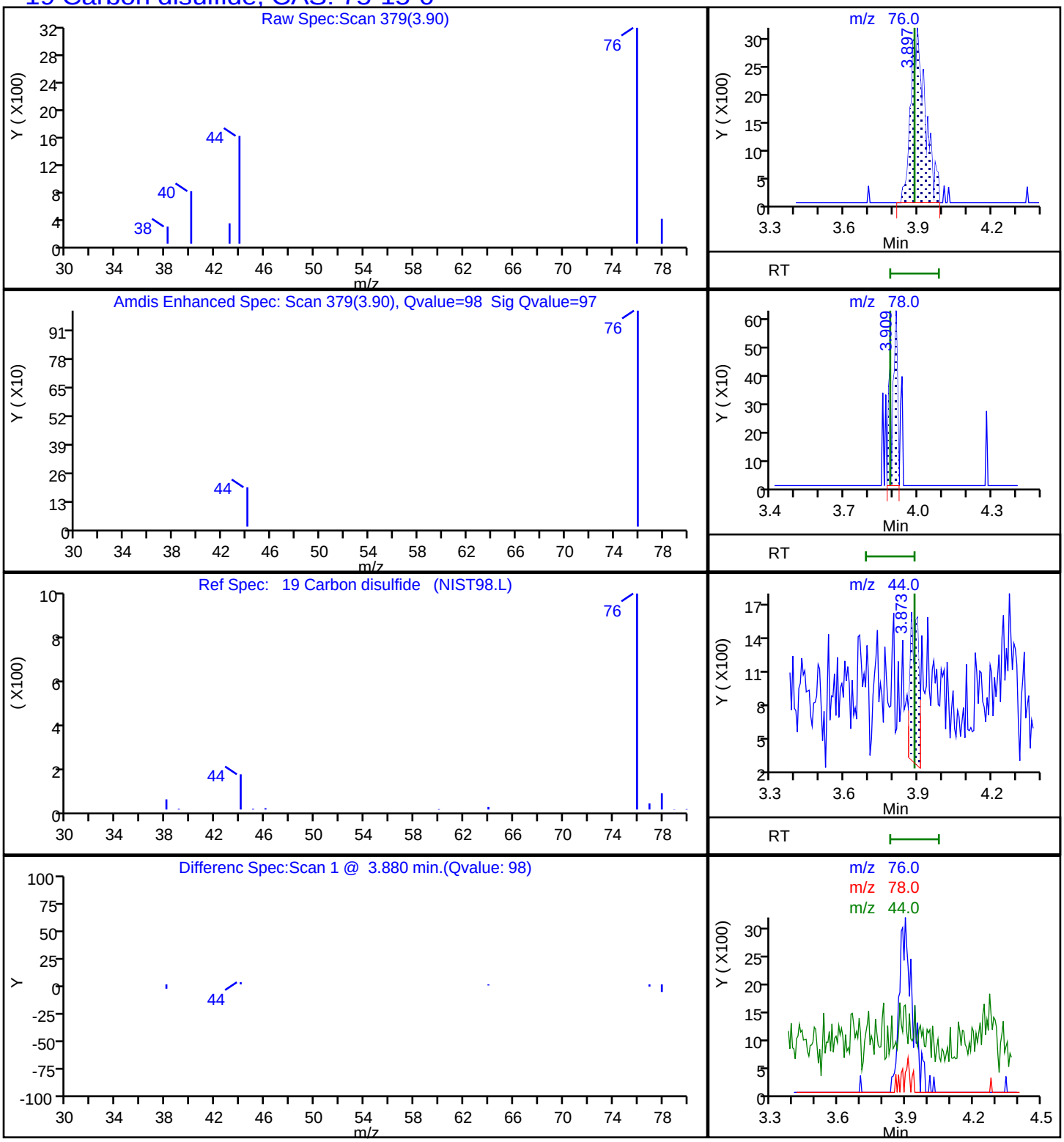
15 Acetone, CAS: 67-64-1



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s13.D				
Injection Date:	03-Oct-2020 13:21:30	Instrument ID:	19930		
Lims ID:	410-15232-A-3	Lab Sample ID:	410-15232-3		
Client ID:	HD-COD-SW-13-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

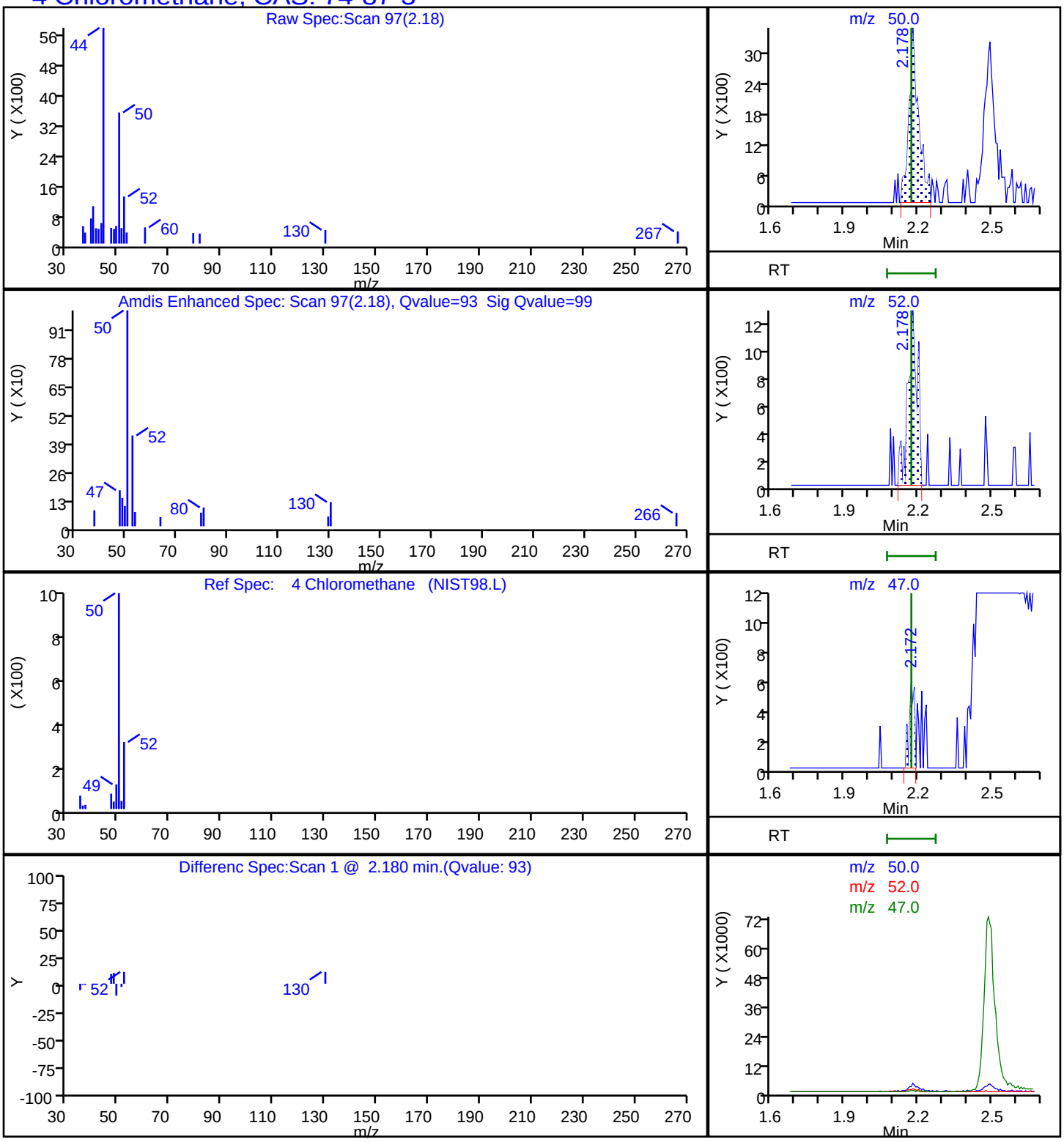
19 Carbon disulfide, CAS: 75-15-0



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s13.D				
Injection Date:	03-Oct-2020 13:21:30	Instrument ID:	19930		
Lims ID:	410-15232-A-3	Lab Sample ID:	410-15232-3		
Client ID:	HD-COD-SW-13-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

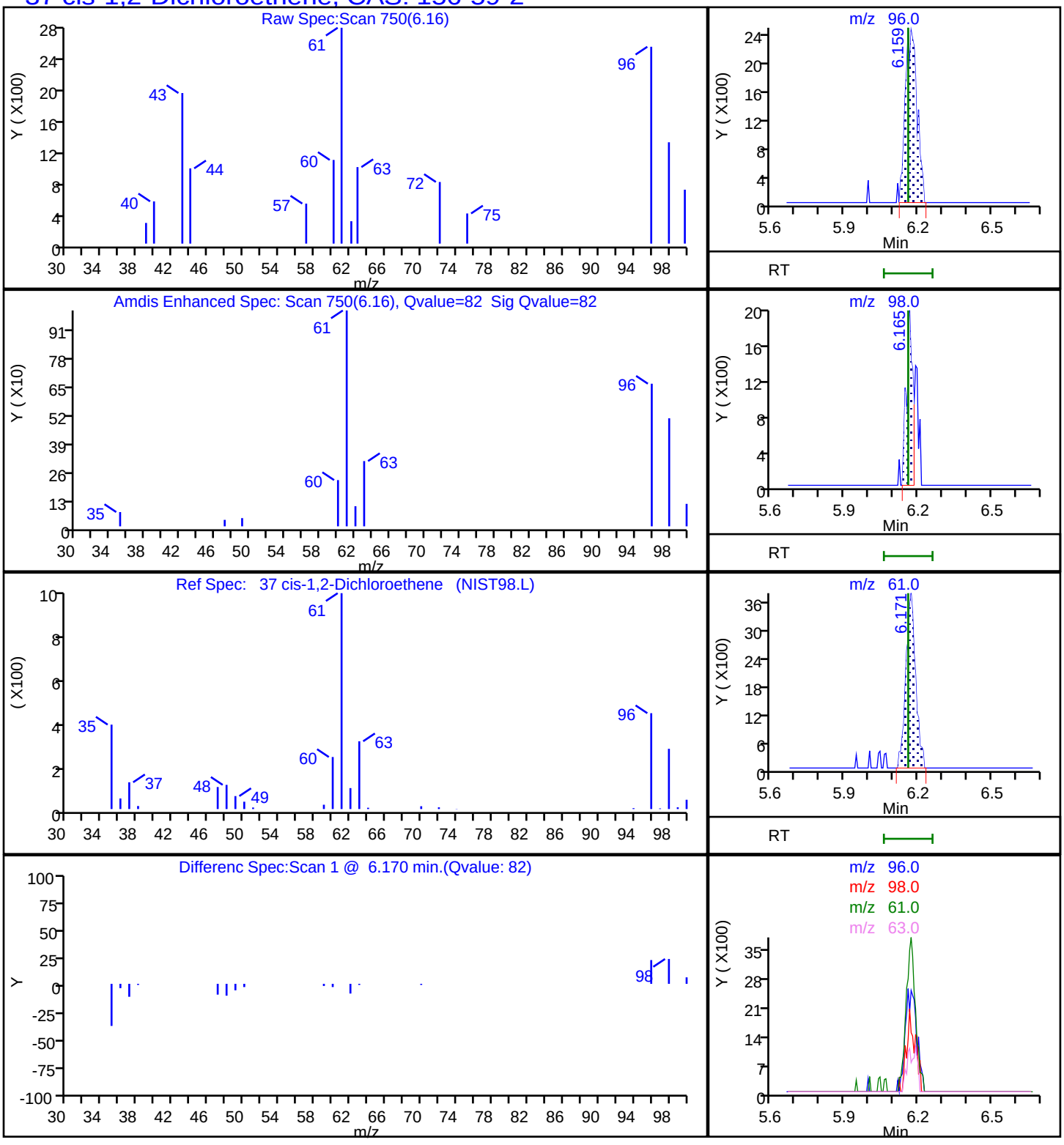
4 Chloromethane, CAS: 74-87-3



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s13.D				
Injection Date:	03-Oct-2020 13:21:30	Instrument ID:	19930		
Lims ID:	410-15232-A-3	Lab Sample ID:	410-15232-3		
Client ID:	HD-COD-SW-13-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

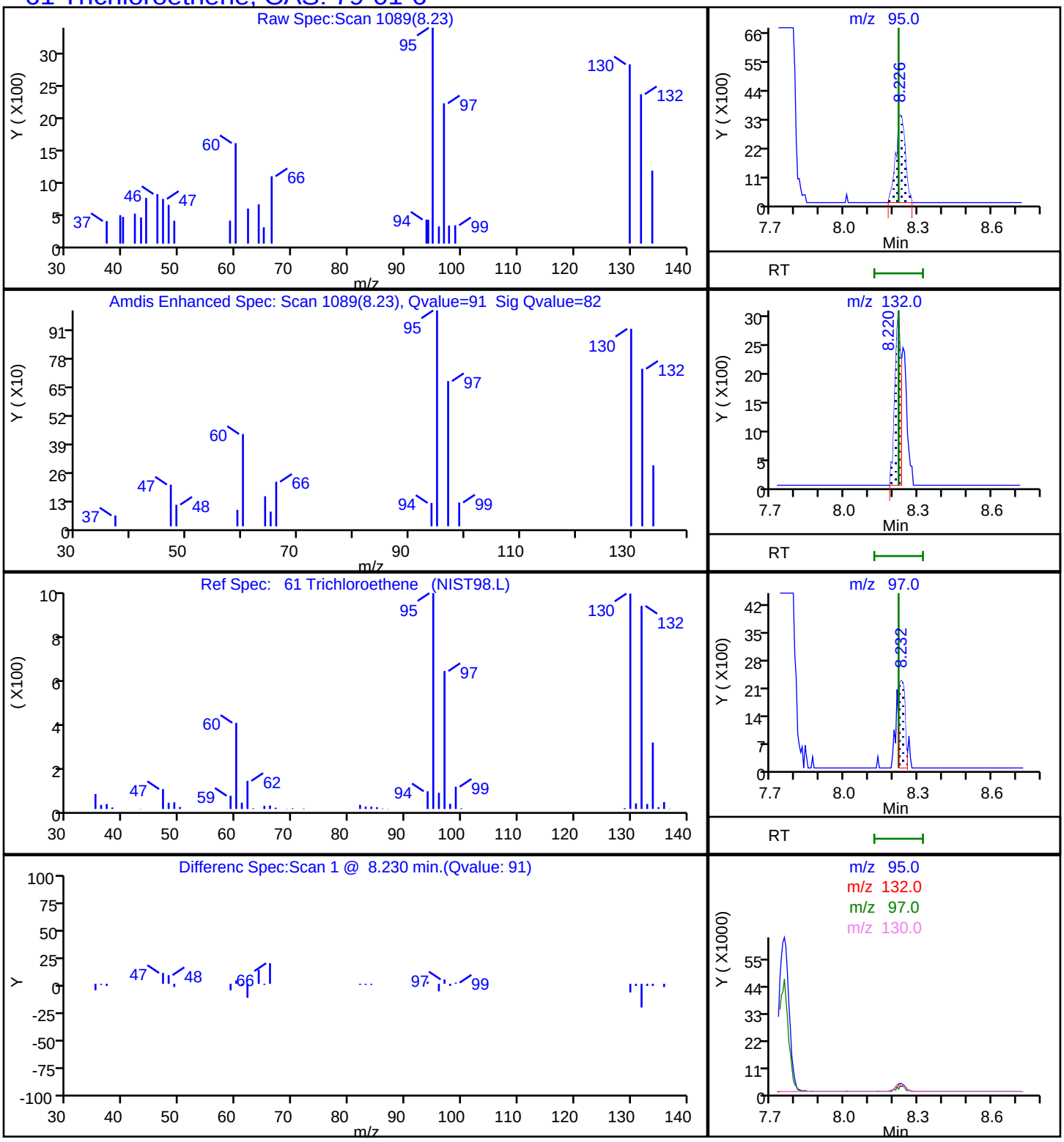
37 cis-1,2-Dichloroethene, CAS: 156-59-2



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s13.D				
Injection Date:	03-Oct-2020 13:21:30	Instrument ID:	19930		
Lims ID:	410-15232-A-3	Lab Sample ID:	410-15232-3		
Client ID:	HD-COD-SW-13-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

61 Trichloroethene, CAS: 79-01-6



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

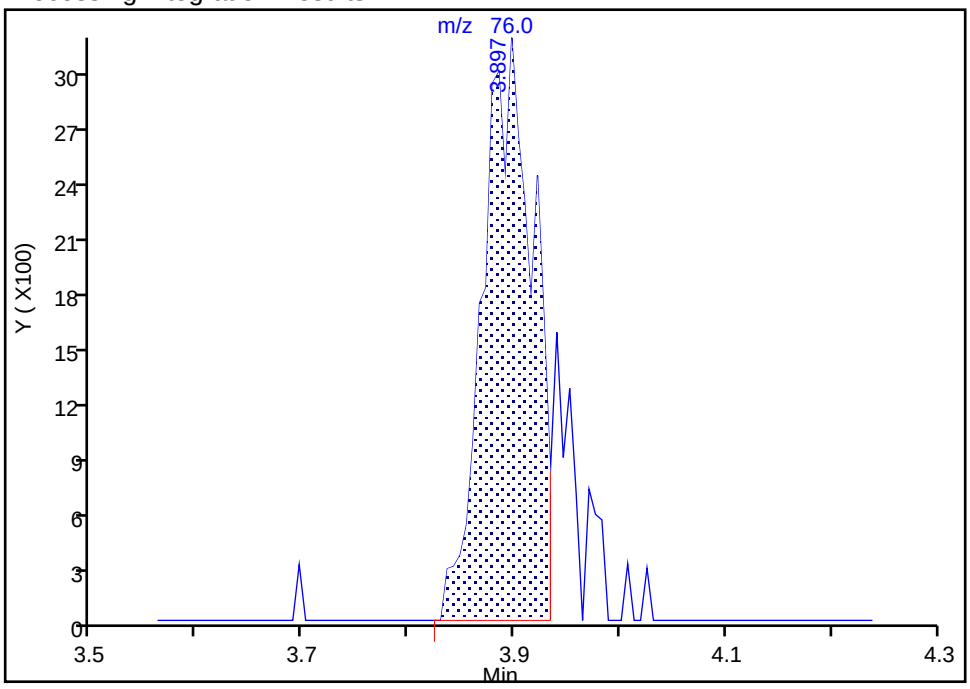
Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\Io03s13.D				
Injection Date:	03-Oct-2020 13:21:30	Instrument ID:	19930		
Lims ID:	410-15232-A-3	Lab Sample ID:	410-15232-3		
Client ID:	HD-COD-SW-13-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

19 Carbon disulfide, CAS: 75-15-0

Signal: 1

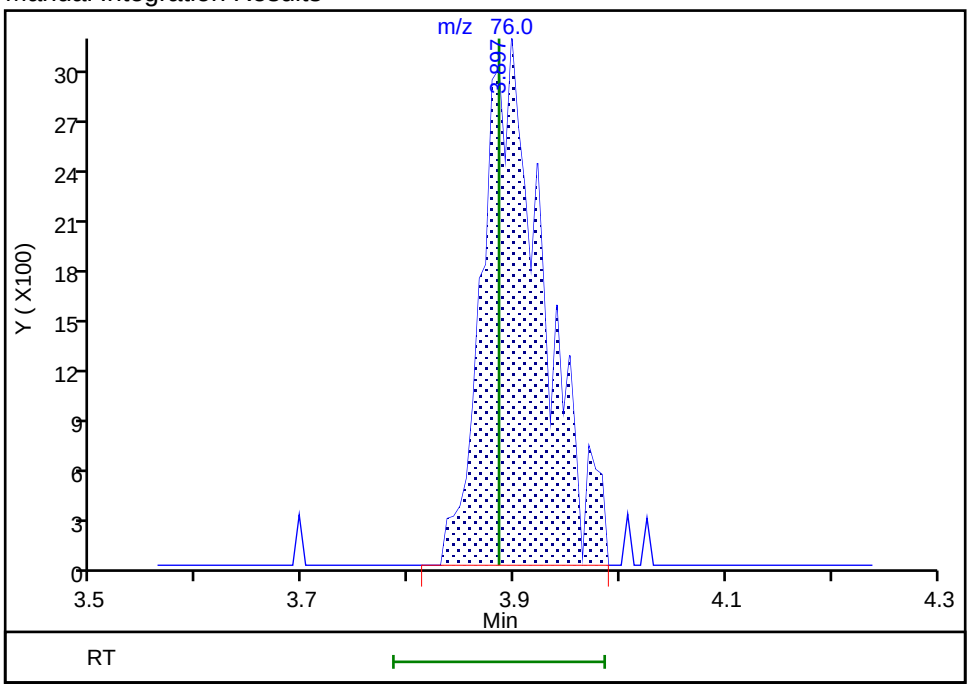
Processing Integration Results

RT: 3.90
Area: 10606
Amount: 0.075652
Amount Units: ug/l



Manual Integration Results

RT: 3.90
Area: 12892
Amount: 0.091957
Amount Units: ug/l



Reviewer: howej, 03-Oct-2020 13:59:16
Audit Action: Manually Integrated Audit Reason: Other

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

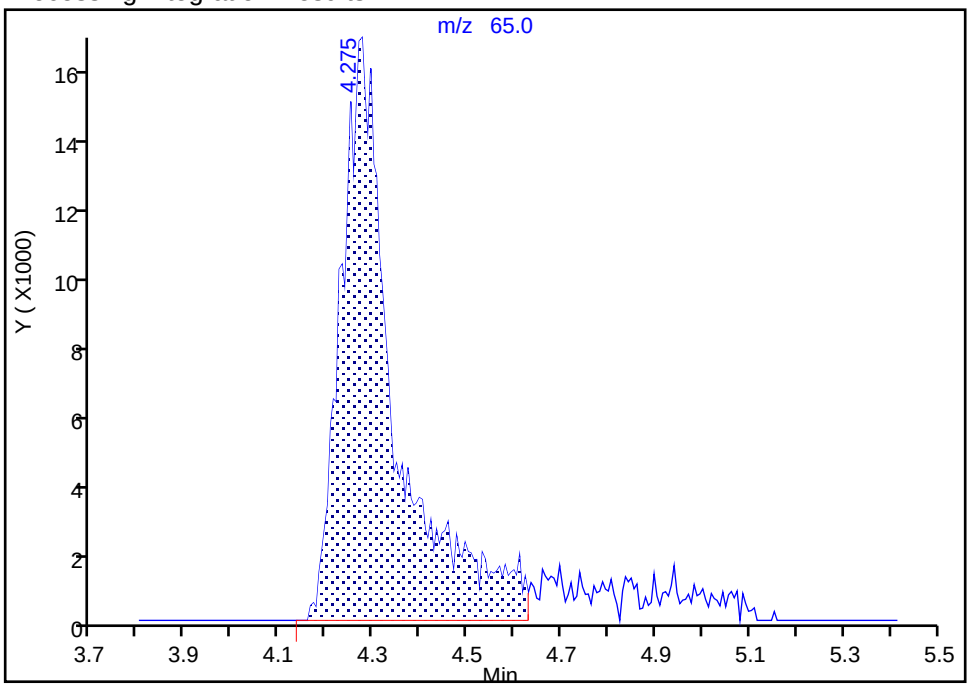
Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s13.D				
Injection Date:	03-Oct-2020 13:21:30	Instrument ID:	19930		
Lims ID:	410-15232-A-3	Lab Sample ID:	410-15232-3		
Client ID:	HD-COD-SW-13-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

* 24 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

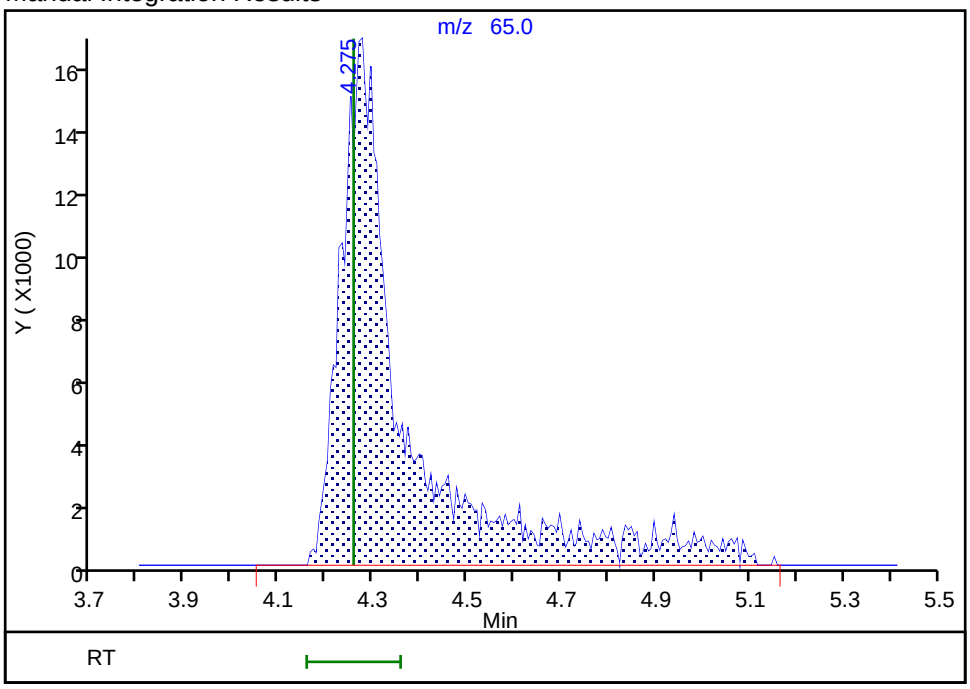
Processing Integration Results

RT: 4.28
Area: 132104
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 4.28
Area: 154575
Amount: 50.000000
Amount Units: ug/l



Reviewer: howej, 03-Oct-2020 13:59:25

Audit Action: Manually Integrated Audit Reason: Other

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-15232-1

SDG No.:

Client Sample ID: HD-COD-SW-16-0/1-0 Lab Sample ID: 410-15232-4

Matrix: Water Lab File ID: Io03s14.D

Analysis Method: 8260C LL Date Collected: 09/25/2020 10:40

Sample wt/vol: 25(mL) Date Analyzed: 10/03/2020 13:43

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.: 50506 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)	1.0	J ^c	5.0	0.60
591-78-6	2-Hexanone	ND	^c	5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	^c	5.0	0.70
67-64-1	Acetone	3.0	J	5.0	0.90
107-13-1	Acrylonitrile	ND	^c	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	0.11	J	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	0.13	J	0.50	0.060
156-59-2	cis-1,2-Dichloroethene	0.11	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	ND		0.50	0.070
100-42-5	Styrene	ND		0.50	0.050
127-18-4	Tetrachloroethene	0.068	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 E Job No.: 410-15232-1

SDG No.:

Client Sample ID: HD-COD-SW-16-0/1-0 Lab Sample ID: 410-15232-4

Matrix: Water Lab File ID: Io03s14.D

Analysis Method: 8260C LL Date Collected: 09/25/2020 10:40

Sample wt/vol: 25(mL) Date Analyzed: 10/03/2020 13:43

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.: 50506 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	0.11	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)	98		80-120
1868-53-7	Dibromofluoromethane (Surr)	97		80-120
2037-26-5	Toluene-d8 (Surr)	107		80-120
460-00-4	4-Bromofluorobenzene (Surr)	105		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\Io03s14.D
Lims ID: 410-15232-A-4
Client ID: HD-COD-SW-16-0/1-0
Sample Type: Client
Inject. Date: 03-Oct-2020 13:43:30 ALS Bottle#: 19 Worklist Smp#: 20
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0011975-020
Misc. Info.: 410-15232-A-4
Operator ID: jkh09052 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 05-Oct-2020 14:04:24 Calib Date: 09-Sep-2020 21:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1036

First Level Reviewer: mellingerc Date: 05-Oct-2020 13:47:45

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
4 Chloromethane	50	2.196	2.172	0.024	99	10424	0.1313	
5 Vinyl chloride	62		2.288				ND	7
7 Bromomethane	94		2.617				ND	7
8 Chloroethane	64		2.703				ND	7
14 1,1-Dichloroethene	96		3.580				ND	
15 Acetone	43	3.641	3.599	0.042	97	25150	3.03	
19 Carbon disulfide	76	3.910	3.885	0.025	98	14745	0.1063	
23 Methylene Chloride	84		4.251				ND	7
* 24 t-Butyl alcohol-d10 (IS)	65	4.263	4.257	0.006	0	166356	50.0	M
26 Acrylonitrile	53		4.599				ND	
27 Methyl tert-butyl ether	73		4.660				ND	
28 trans-1,2-Dichloroethene	96		4.678				ND	
31 1,1-Dichloroethane	63		5.330				ND	
36 2-Butanone (MEK)	43	6.147	6.129	0.018	96	12410	1.00	
37 cis-1,2-Dichloroethene	96	6.177	6.159	0.018	77	7340	0.1102	
43 Chlorobromomethane	128		6.495				ND	
45 Chloroform	83	6.659	6.647	0.012	93	5440	0.0514	
$ 46 Dibromofluoromethane (Surr)	113	6.866	6.860	0.006	92	514928	9.72	
47 1,1,1-Trichloroethane	97		6.872				ND	
50 Carbon tetrachloride	117		7.080				ND	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.317	7.311	0.006	0	95261	9.81	
54 Benzene	78		7.342				ND	7
56 1,2-Dichloroethane	62		7.415				ND	
* 58 Fluorobenzene (IS)	96	7.750	7.744	0.006	98	1959233	10.0	
61 Trichloroethene	95	8.220	8.220	0.000	90	7549	0.1121	M
63 1,2-Dichloropropane	63		8.555				ND	
68 Dichlorobromomethane	83		8.896				ND	
73 cis-1,3-Dichloropropene	75		9.439				ND	
74 4-Methyl-2-pentanone (MIBK)	43		9.604				ND	7
$ 75 Toluene-d8 (Surr)	98	9.750	9.744	0.006	94	2048825	10.7	
76 Toluene	92	9.823	9.823	0.000	96	9423	0.0616	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
78 trans-1,3-Dichloropropene	75		10.073				ND	
80 1,1,2-Trichloroethane	97		10.274				ND	
81 Tetrachloroethene	166	10.372	10.366	0.006	92	5243	0.0677	
83 2-Hexanone	43		10.488				ND	7
85 Chlorodibromomethane	129		10.652				ND	
86 Ethylene Dibromide	107		10.762				ND	
* 87 Chlorobenzene-d5 (IS)	117	11.189	11.189	0.000	87	1566287	10.0	
90 Chlorobenzene	112		11.219				ND	7
S 89 Xylenes, Total	106		11.245				ND	7
91 1,1,1,2-Tetrachloroethane	131		11.298				ND	
92 Ethylbenzene	91		11.305				ND	7
93 m-Xylene & p-Xylene	106		11.414				ND	7
94 o-Xylene	106		11.743				ND	7
95 Styrene	104		11.756				ND	7
96 Bromoform	173		11.920				ND	
$ 100 4-Bromofluorobenzene (Surr)	95	12.188	12.189	-0.001	85	782974	10.5	
101 1,1,2,2-Tetrachloroethane	83		12.286				ND	
* 115 1,4-Dichlorobenzene-d4	152	13.066	13.066	0.000	97	815485	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

Reagents:

MSV_31_826ISS_00003 Amount Added: 5.00 Units: uL Run Reagent

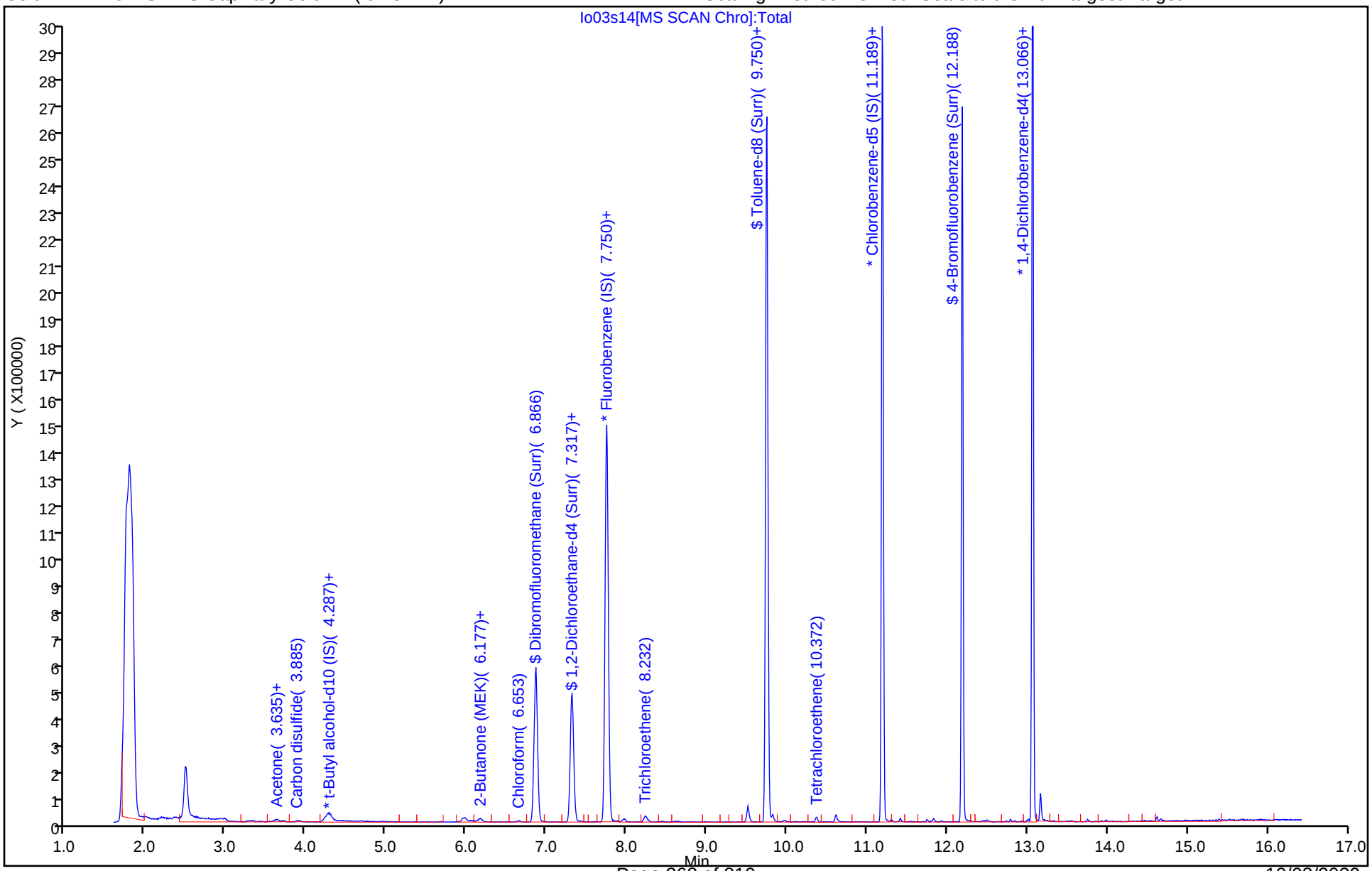
Report Date: 05-Oct-2020 14:04:51 Chrom Revision: 2.3 24-Sep-2020 19:22:38

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\Io03s14.D

Injection Date:	03-Oct-2020 13:43:30	Instrument ID:	19930	Operator ID:	jkh09052
Lims ID:	410-15232-A-4	Lab Sample ID:	410-15232-4	Worklist Smp#:	20
Client ID:	HD-COD-SW-16-0/1-0				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	8260 25ml HP31	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\19930\20201003-11975.b\Io03s14.D
Lims ID: 410-15232-A-4
Client ID: HD-COD-SW-16-0/1-0
Sample Type: Client
Inject. Date: 03-Oct-2020 13:43:30 ALS Bottle#: 19 Worklist Smp#: 20
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0011975-020
Misc. Info.: 410-15232-A-4
Operator ID: jkh09052 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 05-Oct-2020 14:04:24 Calib Date: 09-Sep-2020 21:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1036

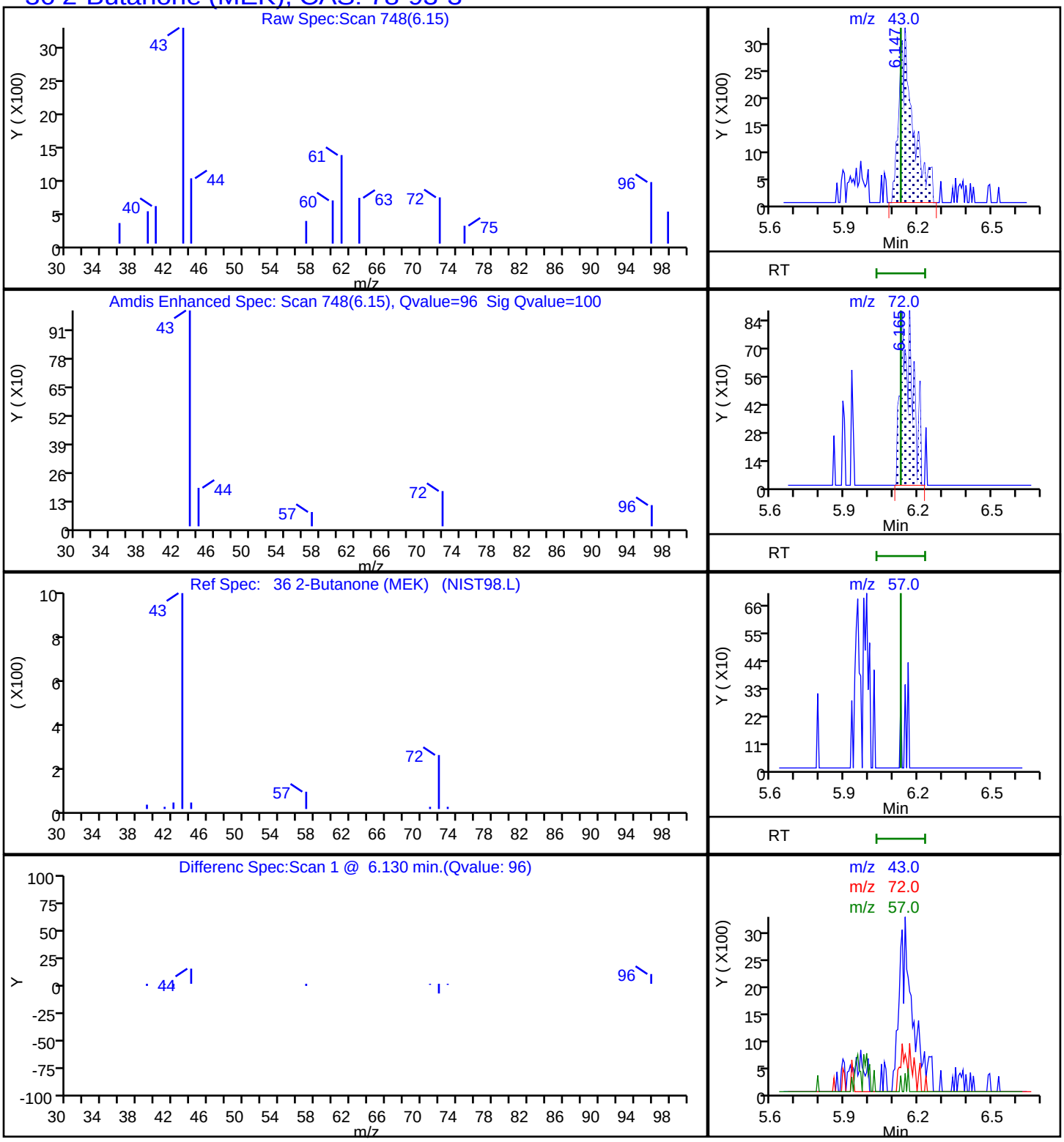
First Level Reviewer: mellingerc Date: 05-Oct-2020 13:47:45

Compound	Amount Added	Amount Recovered	% Rec.
$ 46 Dibromofluoromethane (Surr)	10.0	9.72	97.23
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	9.81	98.14
$ 75 Toluene-d8 (Surr)	10.0	10.7	106.70
$ 100 4-Bromofluorobenzene (Surr)	10.0	10.5	105.15

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s14.D				
Injection Date:	03-Oct-2020 13:43:30	Instrument ID:	19930		
Lims ID:	410-15232-A-4	Lab Sample ID:	410-15232-4		
Client ID:	HD-COD-SW-16-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	19	Worklist Smp#:	20
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

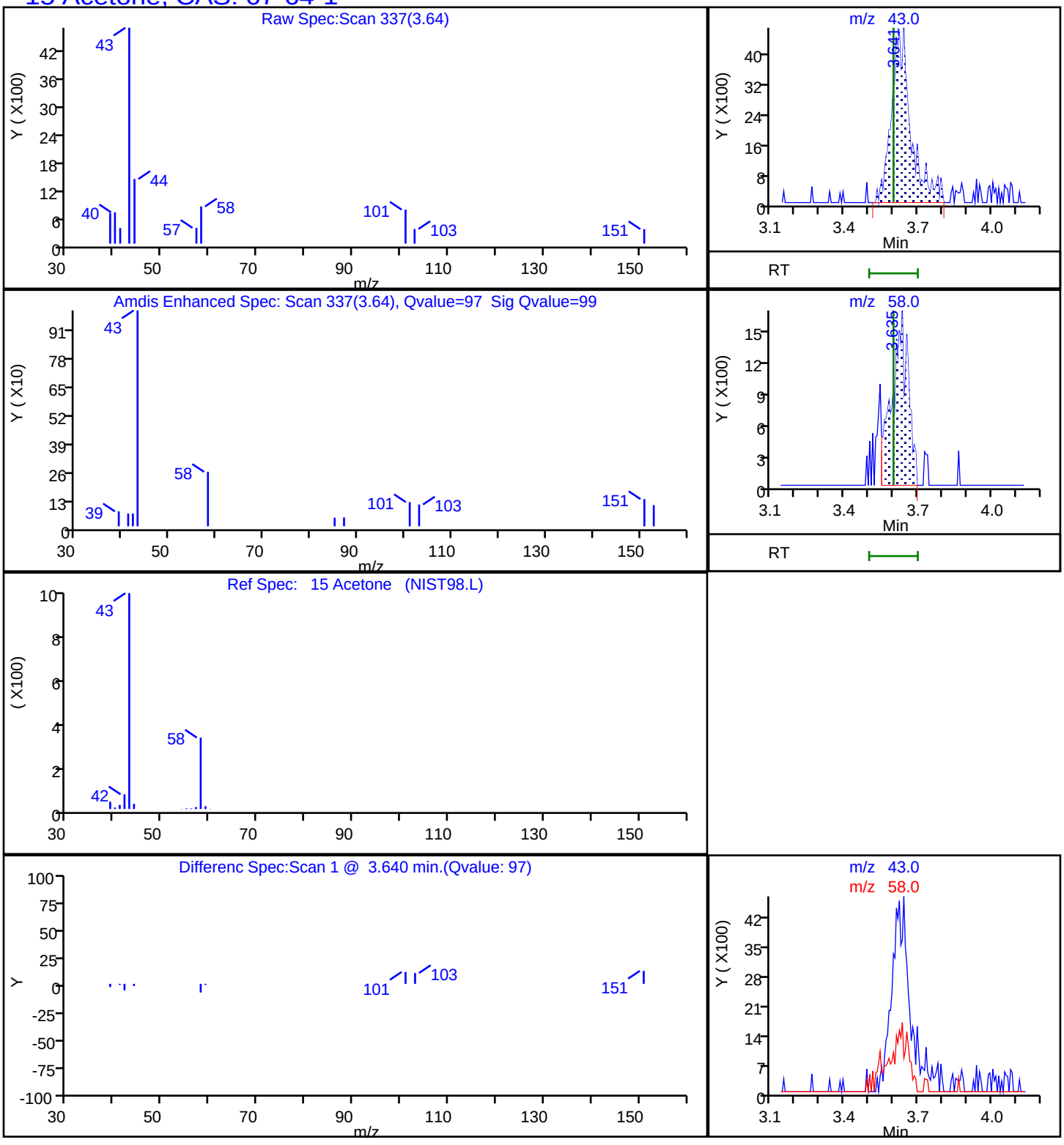
36 2-Butanone (MEK), CAS: 78-93-3



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s14.D				
Injection Date:	03-Oct-2020 13:43:30	Instrument ID:	19930		
Lims ID:	410-15232-A-4	Lab Sample ID:	410-15232-4		
Client ID:	HD-COD-SW-16-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	19	Worklist Smp#:	20
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

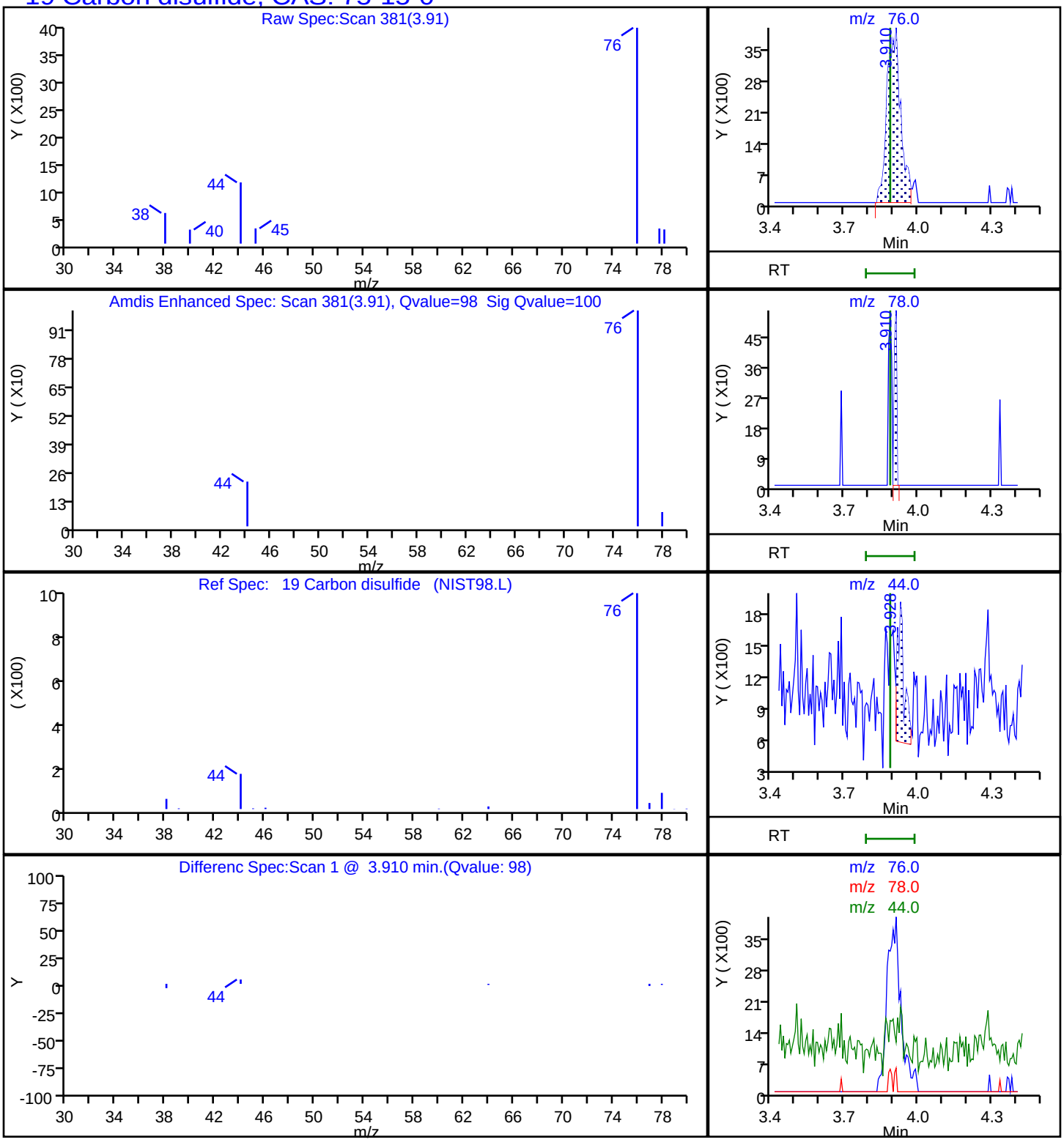
15 Acetone, CAS: 67-64-1



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s14.D				
Injection Date:	03-Oct-2020 13:43:30	Instrument ID:	19930		
Lims ID:	410-15232-A-4	Lab Sample ID:	410-15232-4		
Client ID:	HD-COD-SW-16-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	19	Worklist Smp#:	20
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

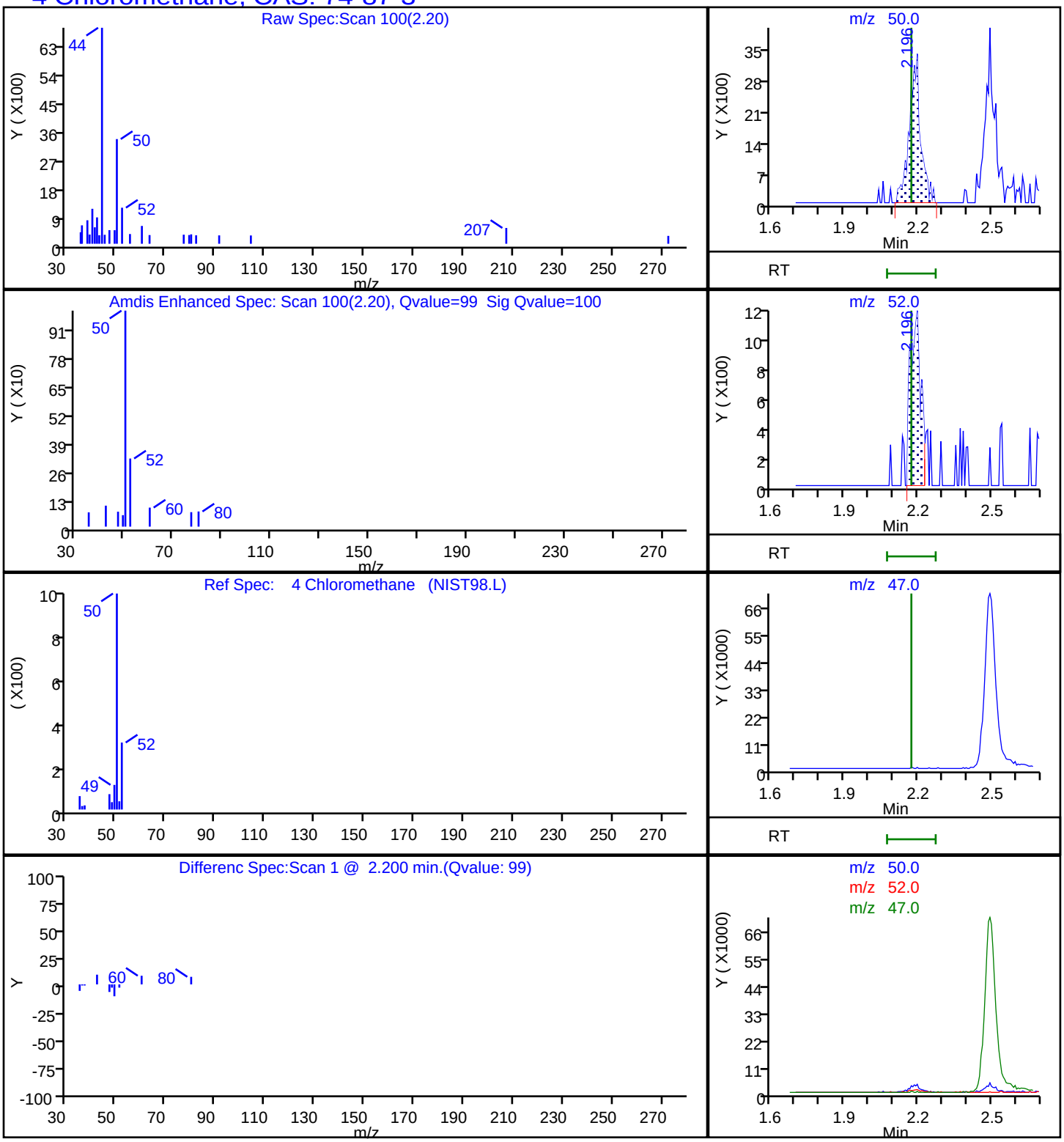
19 Carbon disulfide, CAS: 75-15-0



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s14.D				
Injection Date:	03-Oct-2020 13:43:30	Instrument ID:	19930		
Lims ID:	410-15232-A-4	Lab Sample ID:	410-15232-4		
Client ID:	HD-COD-SW-16-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	19	Worklist Smp#:	20
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

4 Chloromethane, CAS: 74-87-3



Report Date: 05-Oct-2020 14:04:51 Chrom Revision: 2.3 24-Sep-2020 19:22:38

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s14.D

Injection Date: 03-Oct-2020 13:43:30 Instrument ID: 19930

Lims ID: 410-15232-A-4 Lab Sample ID: 410-15232-4

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

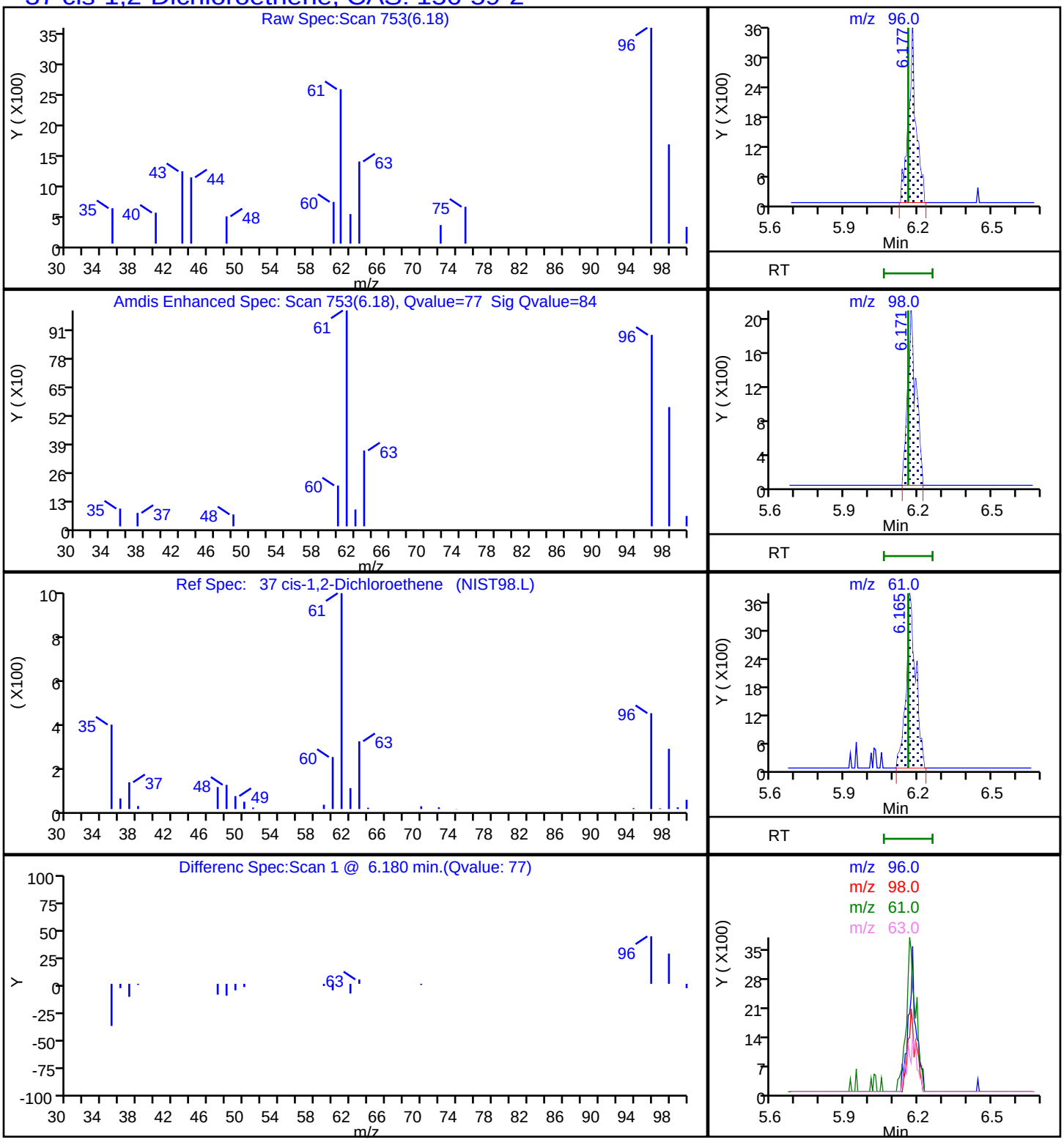
Operator ID: jkh09052 ALS Bottle#: 19 Worklist Smp#: 20

Purge Vol: 25.000 mL Dil. Factor: 1.0000

Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

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



Report Date: 05-Oct-2020 14:04:51 Chrom Revision: 2.3 24-Sep-2020 19:22:38

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s14.D

Injection Date: 03-Oct-2020 13:43:30 Instrument ID: 19930

Lims ID: 410-15232-A-4 Lab Sample ID: 410-15232-4

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

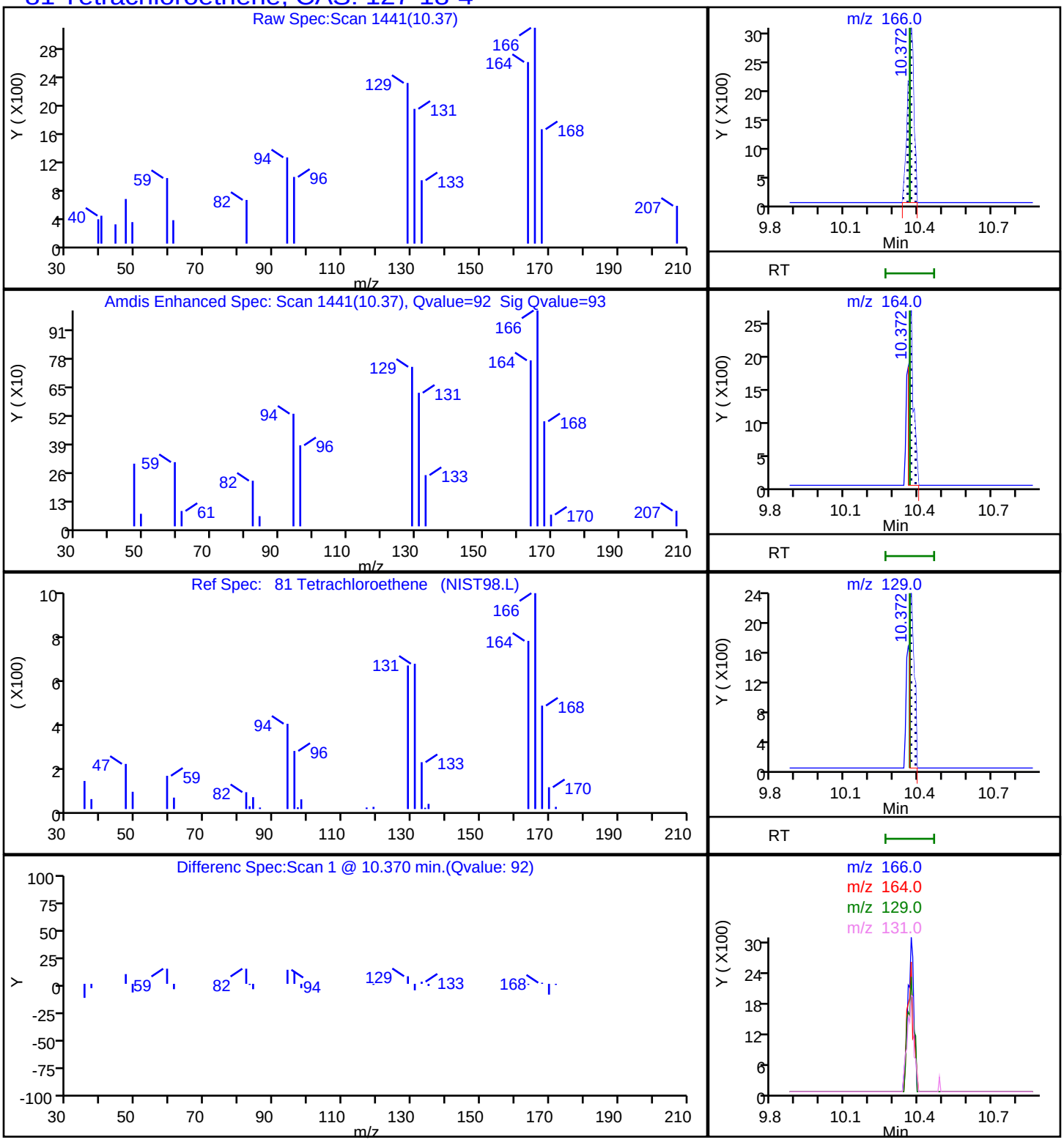
Operator ID: jkh09052 ALS Bottle#: 19 Worklist Smp#: 20

Purge Vol: 25.000 mL Dil. Factor: 1.0000

Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

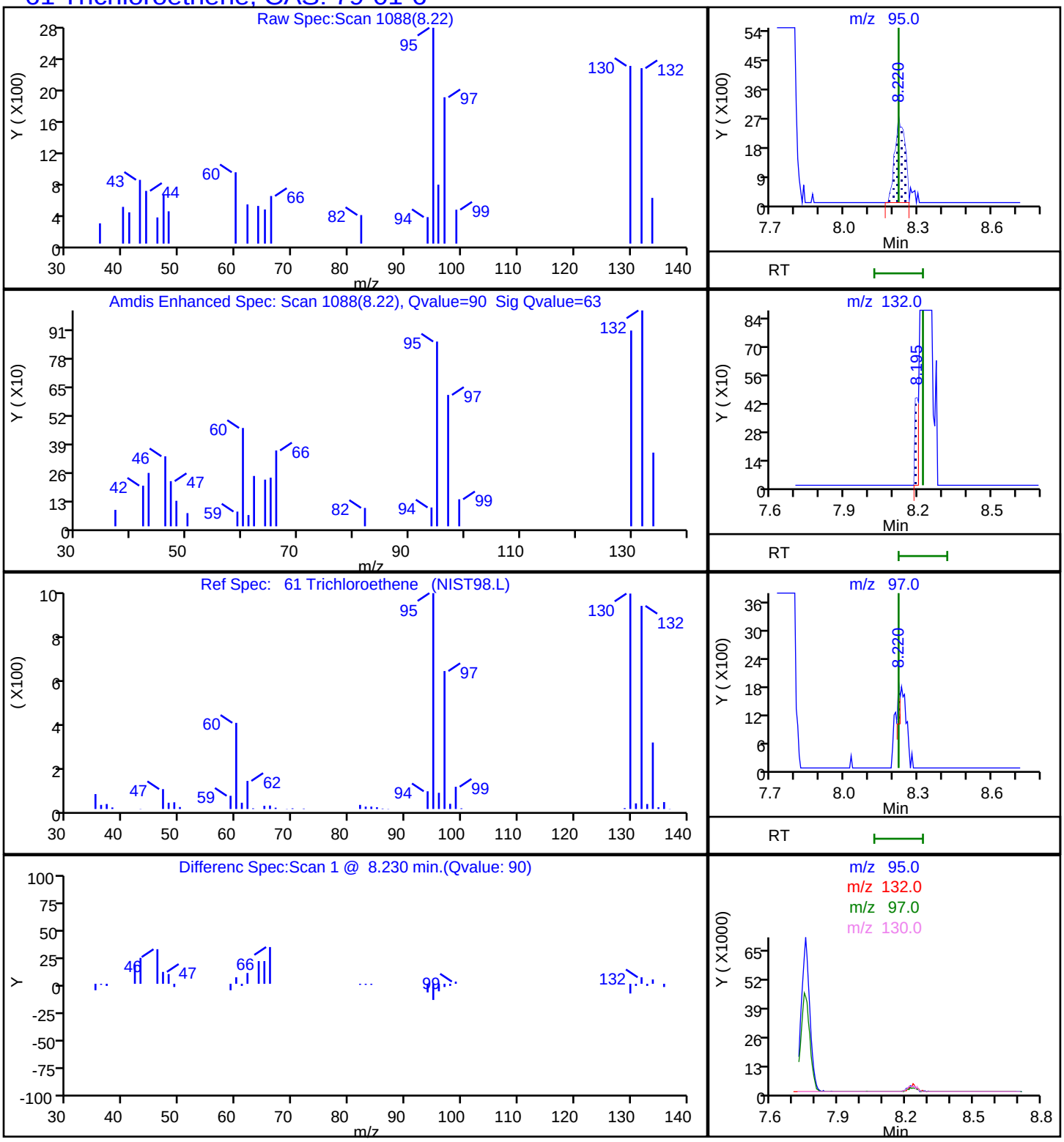
81 Tetrachloroethene, CAS: 127-18-4



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s14.D				
Injection Date:	03-Oct-2020 13:43:30	Instrument ID:	19930		
Lims ID:	410-15232-A-4	Lab Sample ID:	410-15232-4		
Client ID:	HD-COD-SW-16-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	19	Worklist Smp#:	20
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

61 Trichloroethene, CAS: 79-01-6



Eurofins Lancaster Laboratories Env, LLC

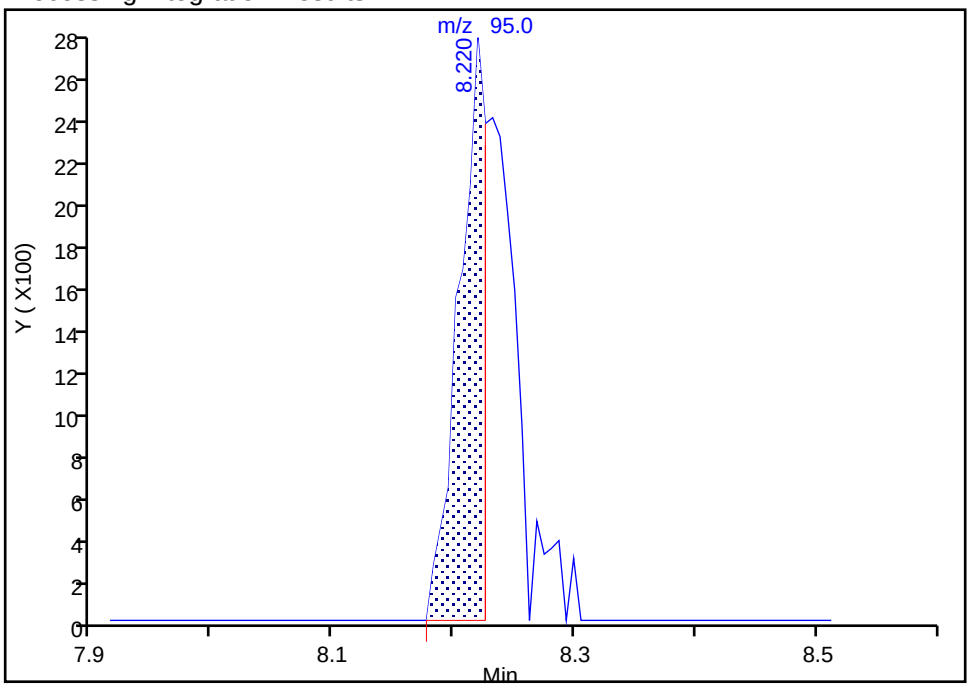
Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s14.D				
Injection Date:	03-Oct-2020 13:43:30	Instrument ID:	19930		
Lims ID:	410-15232-A-4	Lab Sample ID:	410-15232-4		
Client ID:	HD-COD-SW-16-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	19	Worklist Smp#:	20
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

61 Trichloroethene, CAS: 79-01-6

Signal: 1

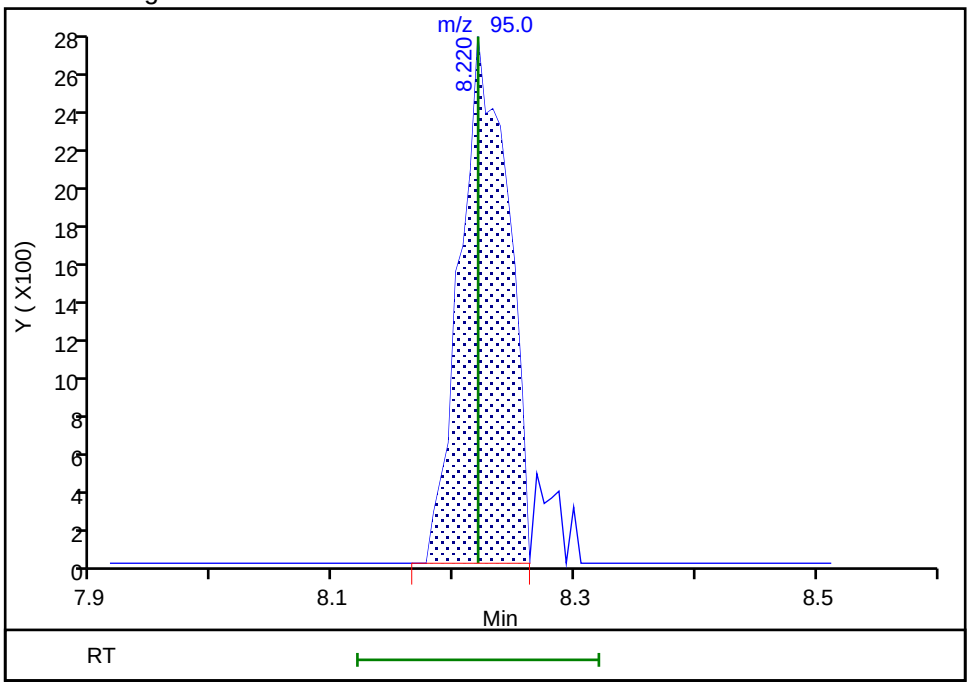
Processing Integration Results

RT: 8.22
Area: 4254
Amount: 0.063158
Amount Units: ug/l



Manual Integration Results

RT: 8.22
Area: 7549
Amount: 0.112078
Amount Units: ug/l



Reviewer: mellingerc, 05-Oct-2020 13:47:32
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

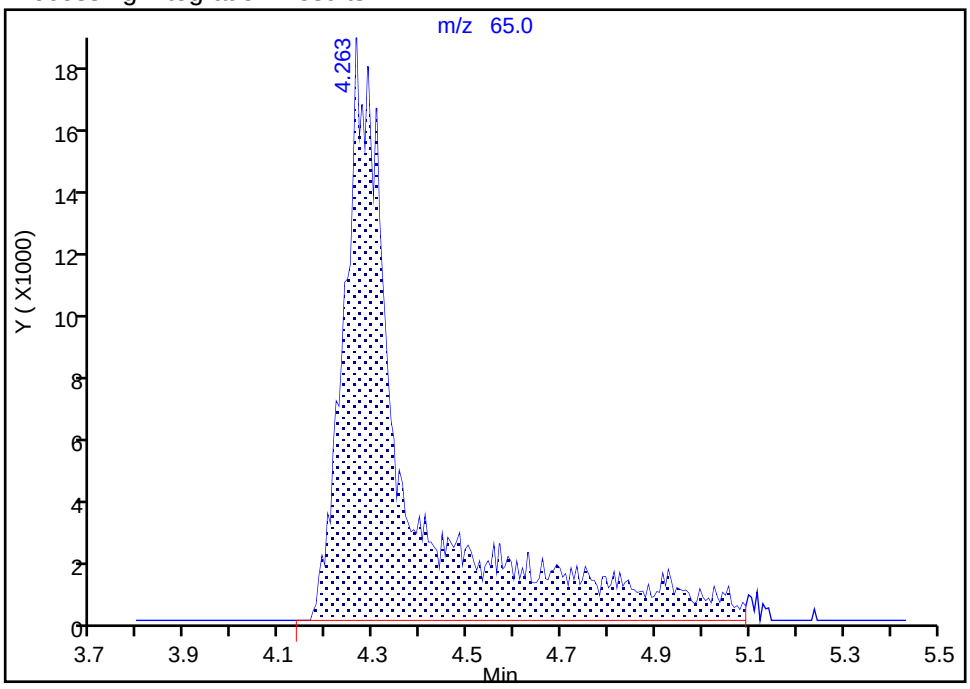
Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s14.D				
Injection Date:	03-Oct-2020 13:43:30	Instrument ID:	19930		
Lims ID:	410-15232-A-4	Lab Sample ID:	410-15232-4		
Client ID:	HD-COD-SW-16-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	19	Worklist Smp#:	20
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

* 24 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

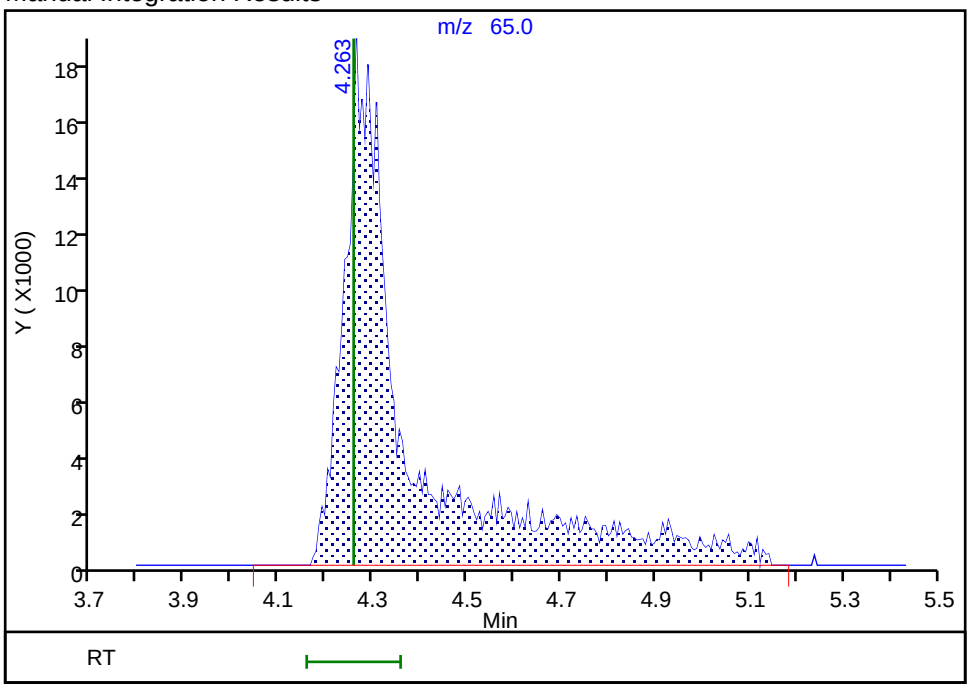
Processing Integration Results

RT: 4.26
Area: 164889
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 4.26
Area: 166356
Amount: 50.000000
Amount Units: ug/l



Reviewer: mellingerc, 05-Oct-2020 13:47:03

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-15232-1

SDG No.:

Client Sample ID: HD-COD-SW-17-0/1-0 Lab Sample ID: 410-15232-5

Matrix: Water Lab File ID: Io03s15.D

Analysis Method: 8260C LL Date Collected: 09/25/2020 10:50

Sample wt/vol: 25(mL) Date Analyzed: 10/03/2020 14:04

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.: 50506 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	0.11	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	ND		0.50	0.070
75-35-4	1,1-Dichloroethene	0.061	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	^c	5.0	0.60
591-78-6	2-Hexanone	ND	^c	5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	^c	5.0	0.70
67-64-1	Acetone	ND		5.0	0.90
107-13-1	Acrylonitrile	ND	^c	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	0.33	J	0.50	0.090
74-87-3	Chloromethane	ND		0.50	0.060
156-59-2	cis-1,2-Dichloroethene	0.78		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	2.3		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 E Job No.: 410-15232-1

SDG No.:

Client Sample ID: HD-COD-SW-17-0/1-0 Lab Sample ID: 410-15232-5

Matrix: Water Lab File ID: Io03s15.D

Analysis Method: 8260C LL Date Collected: 09/25/2020 10:50

Sample wt/vol: 25(mL) Date Analyzed: 10/03/2020 14:04

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.: 50506 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	1.0		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)	98		80-120
1868-53-7	Dibromofluoromethane (Surr)	98		80-120
2037-26-5	Toluene-d8 (Surr)	108		80-120
460-00-4	4-Bromofluorobenzene (Surr)	105		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\Io03s15.D
Lims ID: 410-15232-A-5
Client ID: HD-COD-SW-17-0/1-0
Sample Type: Client
Inject. Date: 03-Oct-2020 14:04:30 ALS Bottle#: 20 Worklist Smp#: 21
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0011975-021
Misc. Info.: 410-15232-A-5
Operator ID: jkh09052 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 05-Oct-2020 14:04:24 Calib Date: 09-Sep-2020 21:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1036

First Level Reviewer: mellingerc Date: 05-Oct-2020 13:49:32

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
4 Chloromethane	50	2.184	2.172	0.012	1	3812	0.0476	M
5 Vinyl chloride	62		2.288				ND	7
7 Bromomethane	94		2.617				ND	7
8 Chloroethane	64		2.703				ND	7
14 1,1-Dichloroethene	96	3.599	3.580	0.019	92	3211	0.0614	
15 Acetone	43	3.623	3.599	0.024	71	6792	0.7596	
19 Carbon disulfide	76		3.885				ND	7
23 Methylene Chloride	84		4.251				ND	
* 24 t-Butyl alcohol-d10 (IS)	65	4.288	4.257	0.031	0	178953	50.0	M
26 Acrylonitrile	53		4.599				ND	
27 Methyl tert-butyl ether	73	4.659	4.660	-0.001	3	3482	0.0255	
28 trans-1,2-Dichloroethene	96		4.678				ND	
31 1,1-Dichloroethane	63	5.354	5.330	0.024	1	5432	0.0572	
36 2-Butanone (MEK)	43		6.129				ND	7
37 cis-1,2-Dichloroethene	96	6.171	6.159	0.012	80	52554	0.7822	
43 Chlorobromomethane	128		6.495				ND	
45 Chloroform	83	6.647	6.647	0.000	94	34810	0.3261	
$ 46 Dibromofluoromethane (Surr)	113	6.860	6.860	0.000	92	521223	9.76	
47 1,1,1-Trichloroethane	97	6.891	6.872	0.019	35	11601	0.1085	
50 Carbon tetrachloride	117		7.080				ND	7
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.317	7.311	0.006	0	96311	9.84	
54 Benzene	78		7.342				ND	
56 1,2-Dichloroethane	62		7.415				ND	
* 58 Fluorobenzene (IS)	96	7.750	7.744	0.006	98	1976061	10.0	
61 Trichloroethene	95	8.226	8.220	0.006	97	69467	1.02	
63 1,2-Dichloropropane	63		8.555				ND	
68 Dichlorobromomethane	83		8.896				ND	
73 cis-1,3-Dichloropropene	75		9.439				ND	
74 4-Methyl-2-pentanone (MIBK)	43		9.604				ND	7
$ 75 Toluene-d8 (Surr)	98	9.744	9.744	0.000	94	2078824	10.8	
76 Toluene	92		9.823				ND	7

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
78 trans-1,3-Dichloropropene	75		10.073				ND	
80 1,1,2-Trichloroethane	97		10.274				ND	
81 Tetrachloroethene	166	10.372	10.366	0.006	93	178366	2.30	
83 2-Hexanone	43		10.488				ND	7
85 Chlorodibromomethane	129		10.652				ND	
86 Ethylene Dibromide	107		10.762				ND	
* 87 Chlorobenzene-d5 (IS)	117	11.189	11.189	0.000	87	1568612	10.0	
90 Chlorobenzene	112		11.219				ND	7
S 89 Xylenes, Total	106		11.245				ND	7
91 1,1,1,2-Tetrachloroethane	131		11.298				ND	
92 Ethylbenzene	91		11.305				ND	
93 m-Xylene & p-Xylene	106		11.414				ND	7
94 o-Xylene	106		11.743				ND	
95 Styrene	104		11.756				ND	
96 Bromoform	173		11.920				ND	
$ 100 4-Bromofluorobenzene (Surr)	95	12.188	12.189	-0.001	86	782688	10.5	
101 1,1,2,2-Tetrachloroethane	83		12.286				ND	
* 115 1,4-Dichlorobenzene-d4	152	13.066	13.066	0.000	97	834825	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

Reagents:

MSV_31_826ISS_00003 Amount Added: 5.00 Units: uL Run Reagent

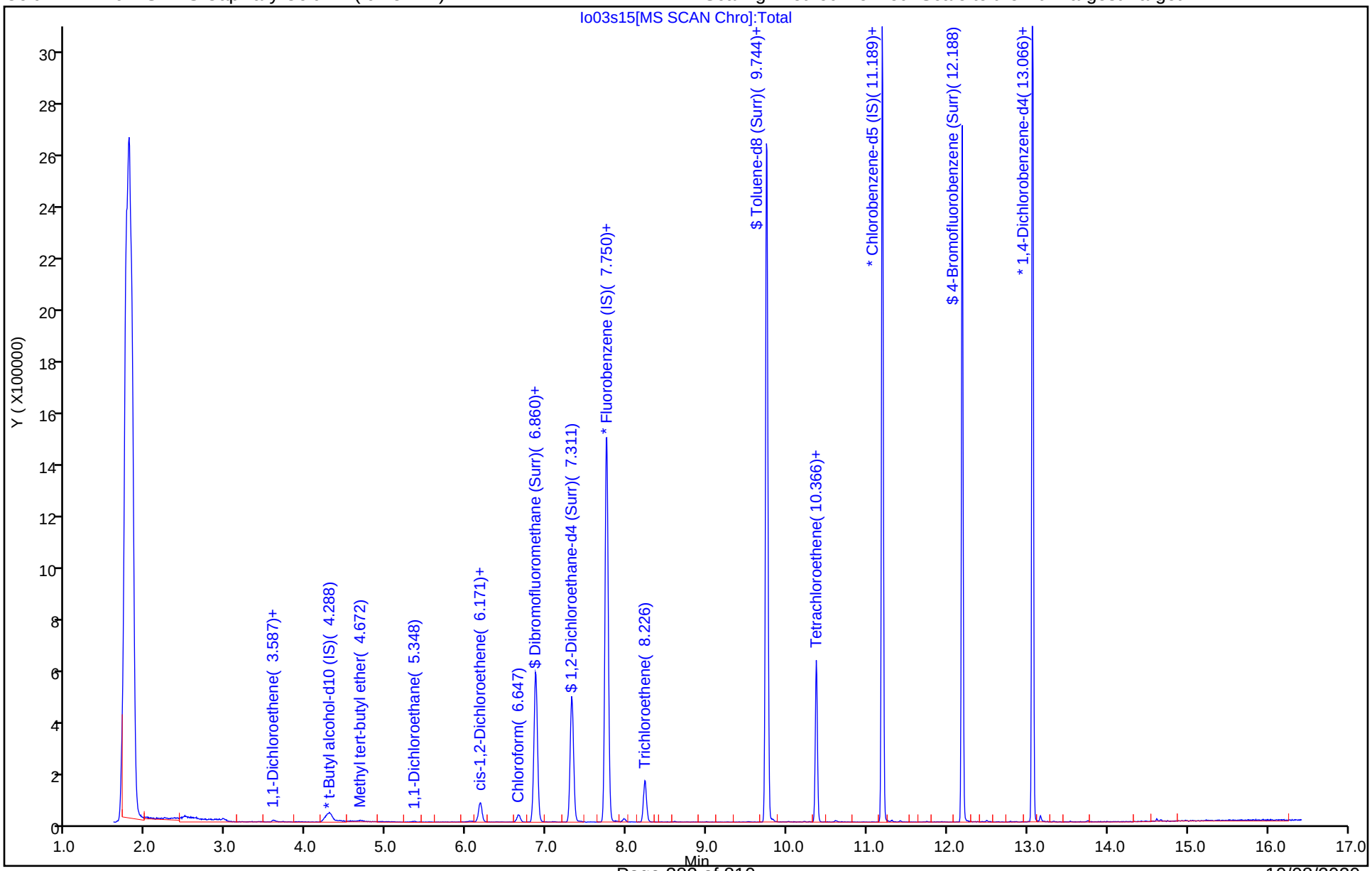
Report Date: 05-Oct-2020 14:05:06 Chrom Revision: 2.3 24-Sep-2020 19:22:38

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\Io03s15.D

Injection Date:	03-Oct-2020 14:04:30	Instrument ID:	19930	Operator ID:	jkh09052
Lims ID:	410-15232-A-5	Lab Sample ID:	410-15232-5	Worklist Smp#:	21
Client ID:	HD-COD-SW-17-0/1-0				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	8260 25ml HP31	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\19930\20201003-11975.b\Io03s15.D
Lims ID: 410-15232-A-5
Client ID: HD-COD-SW-17-0/1-0
Sample Type: Client
Inject. Date: 03-Oct-2020 14:04:30 ALS Bottle#: 20 Worklist Smp#: 21
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0011975-021
Misc. Info.: 410-15232-A-5
Operator ID: jkh09052 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 05-Oct-2020 14:04:24 Calib Date: 09-Sep-2020 21:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1036

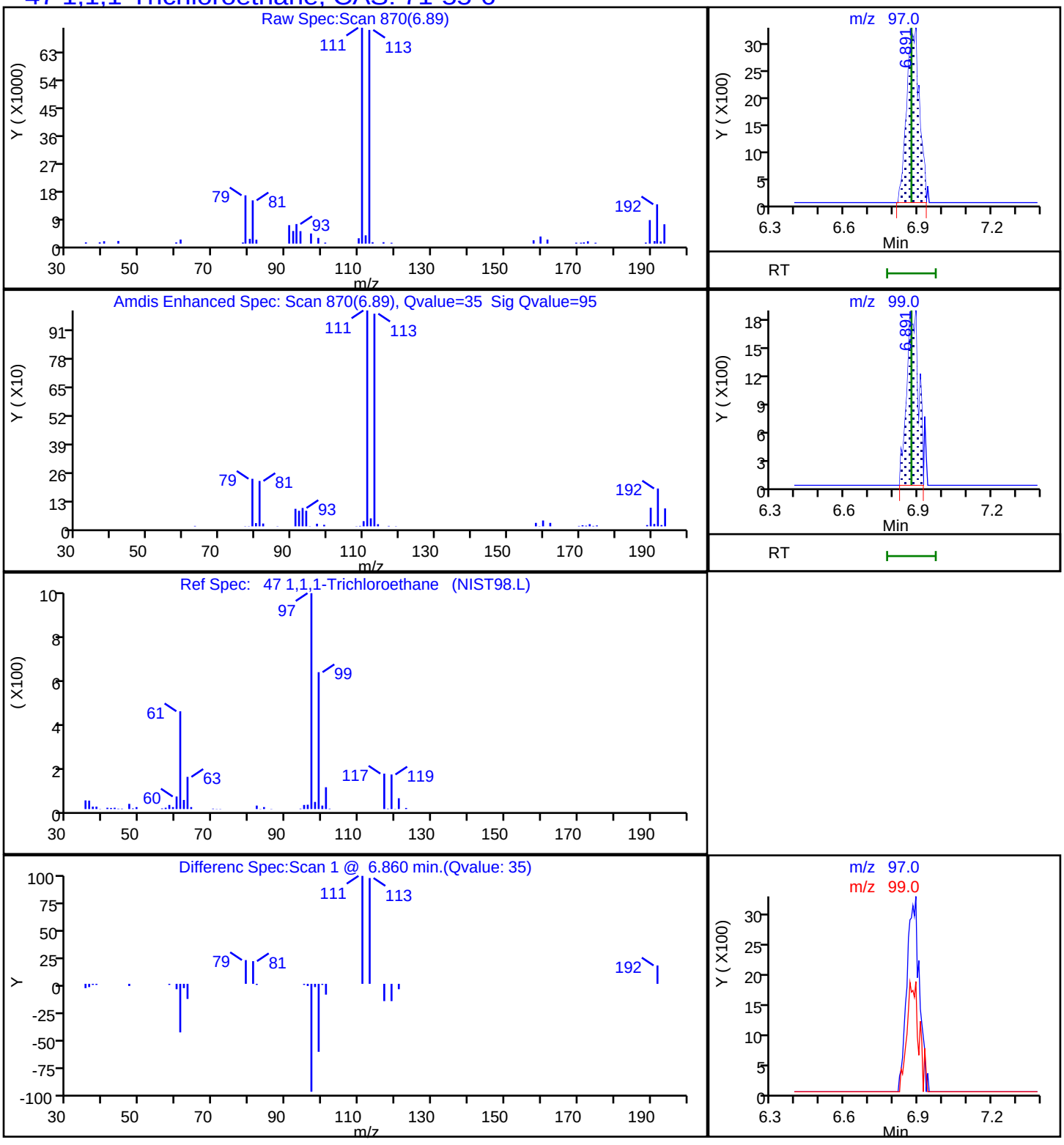
First Level Reviewer: mellingerc Date: 05-Oct-2020 13:49:32

Compound	Amount Added	Amount Recovered	% Rec.
$ 46 Dibromofluoromethane (Surr)	10.0	9.76	97.58
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	9.84	98.38
$ 75 Toluene-d8 (Surr)	10.0	10.8	108.10
$ 100 4-Bromofluorobenzene (Surr)	10.0	10.5	104.96

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s15.D				
Injection Date:	03-Oct-2020 14:04:30	Instrument ID:	19930		
Lims ID:	410-15232-A-5	Lab Sample ID:	410-15232-5		
Client ID:	HD-COD-SW-17-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	20	Worklist Smp#:	21
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

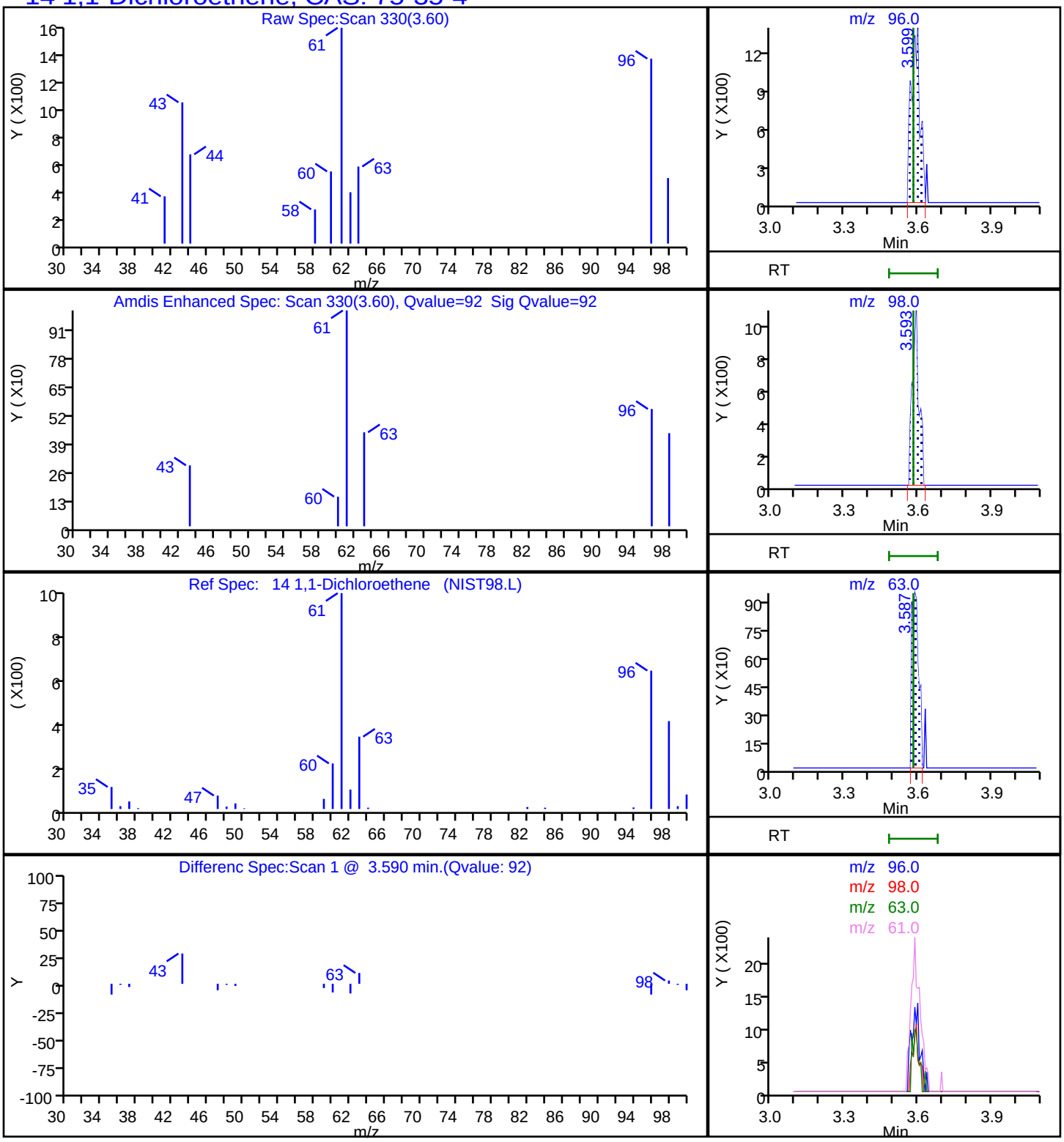
47 1,1,1-Trichloroethane, CAS: 71-55-6



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s15.D				
Injection Date:	03-Oct-2020 14:04:30	Instrument ID:	19930		
Lims ID:	410-15232-A-5	Lab Sample ID:	410-15232-5		
Client ID:	HD-COD-SW-17-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	20	Worklist Smp#:	21
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

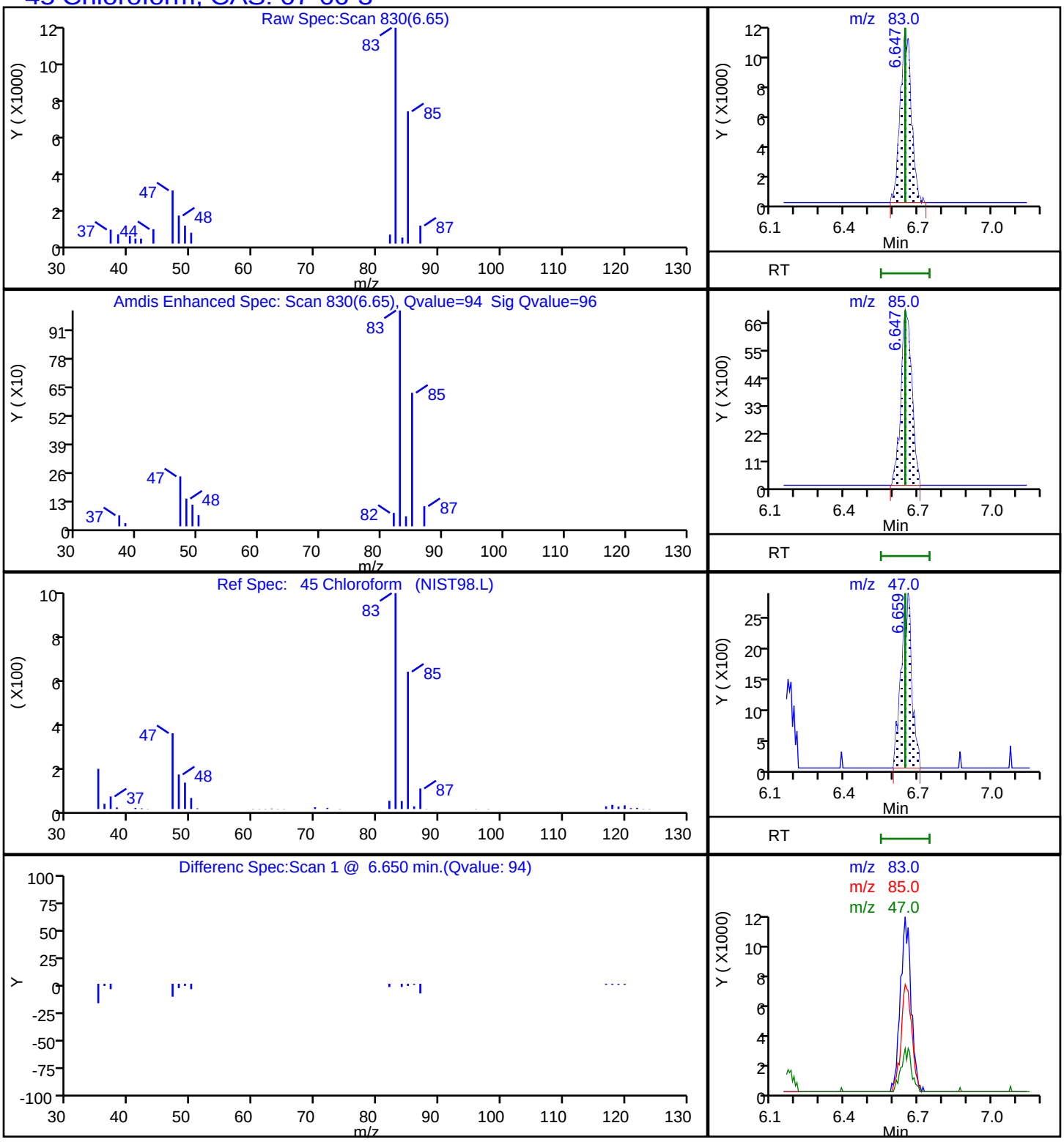
14 1,1-Dichloroethene, CAS: 75-35-4



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s15.D				
Injection Date:	03-Oct-2020 14:04:30	Instrument ID:	19930		
Lims ID:	410-15232-A-5	Lab Sample ID:	410-15232-5		
Client ID:	HD-COD-SW-17-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	20	Worklist Smp#:	21
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

45 Chloroform, CAS: 67-66-3

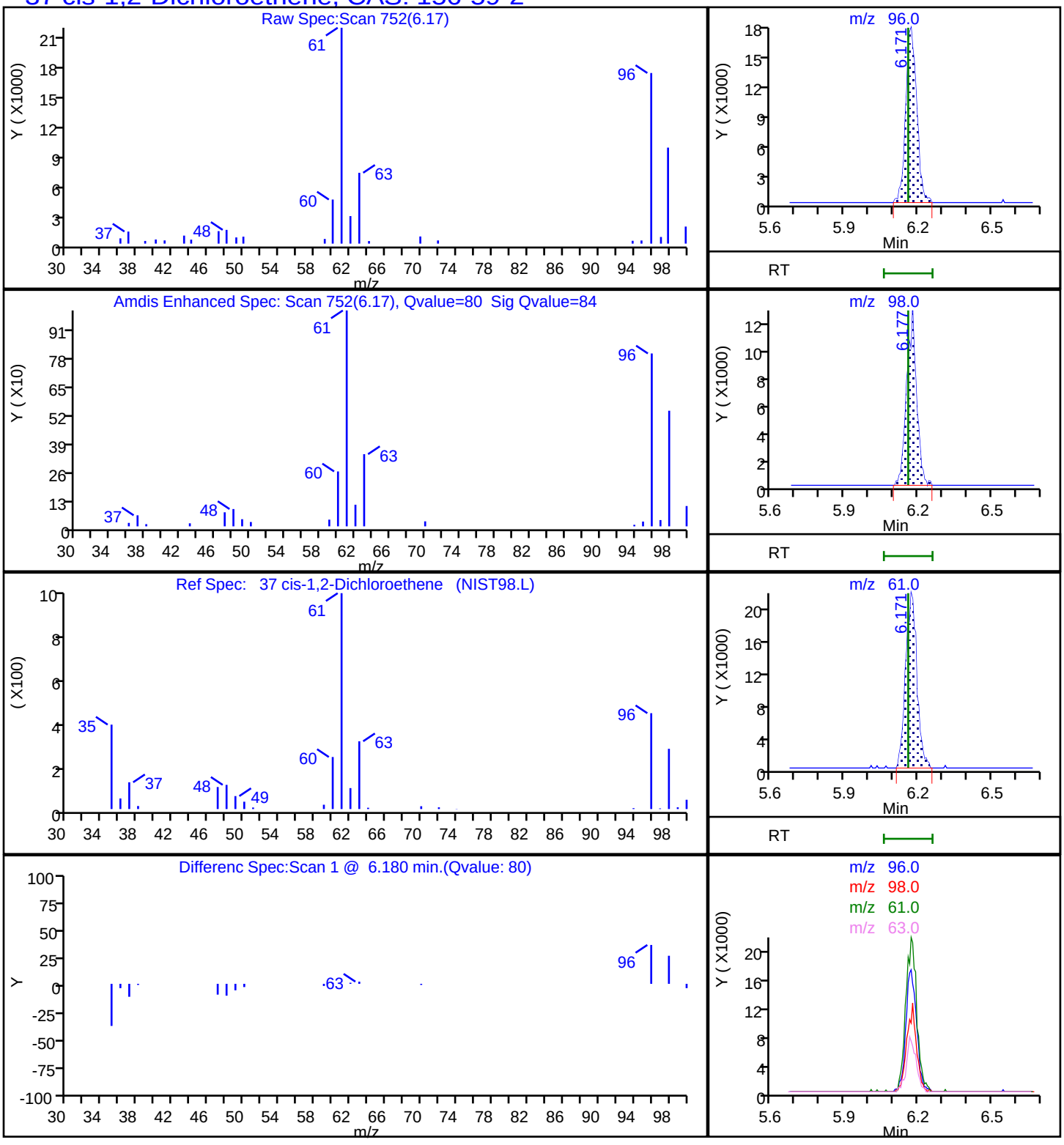


Report Date: 05-Oct-2020 14:05:07 Chrom Revision: 2.3 24-Sep-2020 19:22:38

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s15.D				
Injection Date:	03-Oct-2020 14:04:30	Instrument ID:	19930		
Lims ID:	410-15232-A-5	Lab Sample ID:	410-15232-5		
Client ID:	HD-COD-SW-17-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	20	Worklist Smp#:	21
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

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

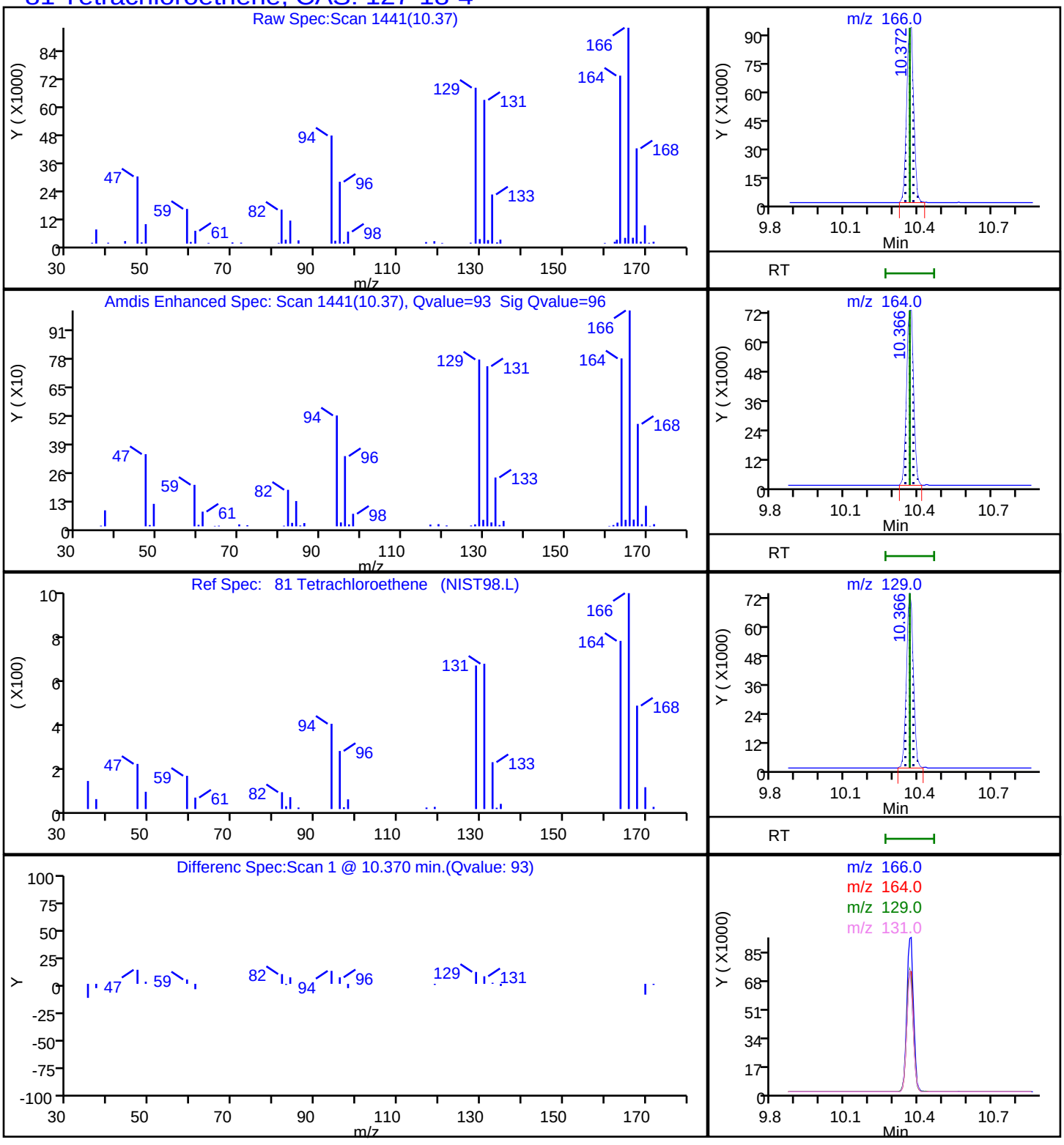


Report Date: 05-Oct-2020 14:05:07 Chrom Revision: 2.3 24-Sep-2020 19:22:38

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s15.D				
Injection Date:	03-Oct-2020 14:04:30	Instrument ID:	19930		
Lims ID:	410-15232-A-5	Lab Sample ID:	410-15232-5		
Client ID:	HD-COD-SW-17-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	20	Worklist Smp#:	21
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

81 Tetrachloroethene, CAS: 127-18-4



Report Date: 05-Oct-2020 14:05:07 Chrom Revision: 2.3 24-Sep-2020 19:22:38

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s15.D

Injection Date: 03-Oct-2020 14:04:30 Instrument ID: 19930

Lims ID: 410-15232-A-5 Lab Sample ID: 410-15232-5

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

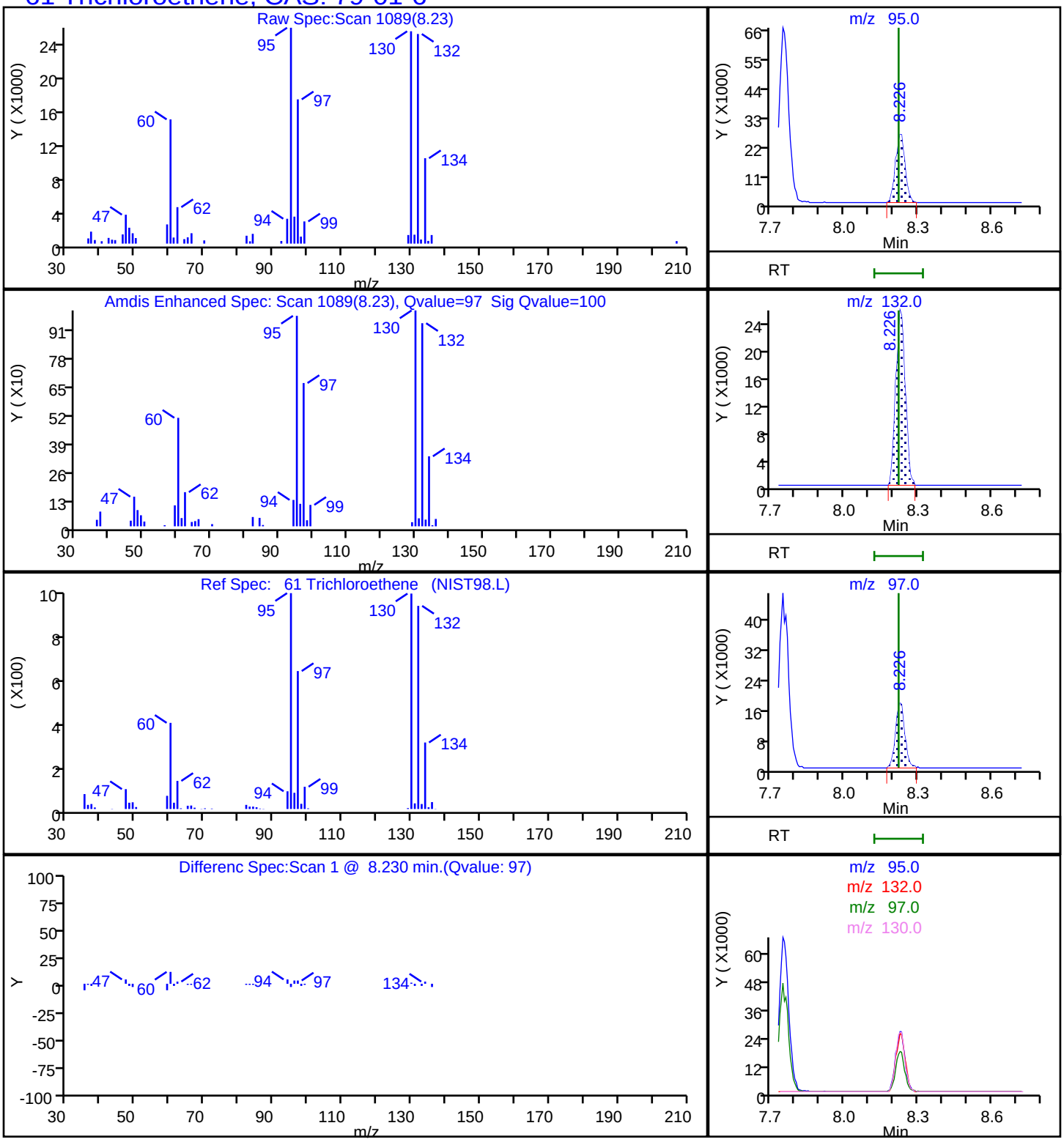
Operator ID: jkh09052 ALS Bottle#: 20 Worklist Smp#: 21

Purge Vol: 25.000 mL Dil. Factor: 1.0000

Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

61 Trichloroethene, CAS: 79-01-6



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

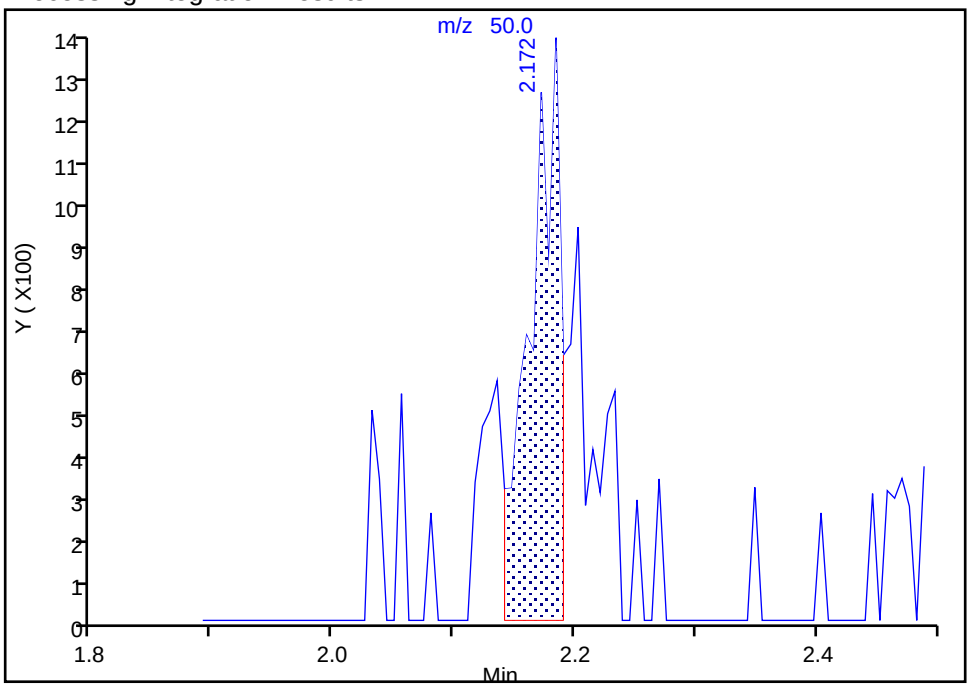
Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s15.D				
Injection Date:	03-Oct-2020 14:04:30	Instrument ID:	19930		
Lims ID:	410-15232-A-5	Lab Sample ID:	410-15232-5		
Client ID:	HD-COD-SW-17-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	20	Worklist Smp#:	21
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

4 Chloromethane, CAS: 74-87-3

Signal: 1

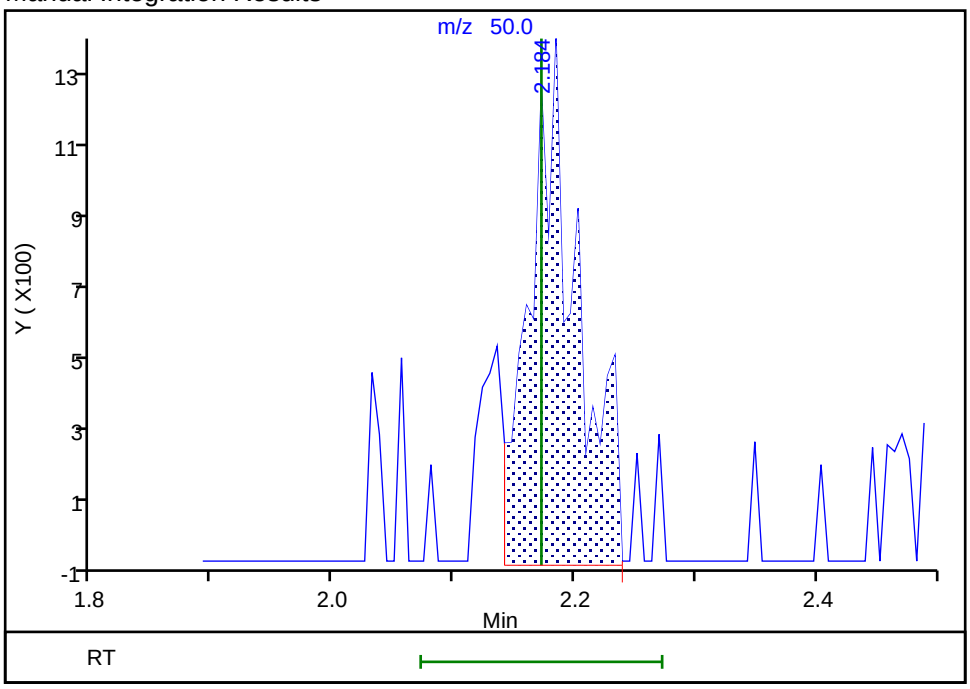
Processing Integration Results

RT: 2.17
Area: 2420
Amount: 0.030221
Amount Units: ug/l



Manual Integration Results

RT: 2.18
Area: 3812
Amount: 0.047604
Amount Units: ug/l



Reviewer: mellingerc, 05-Oct-2020 13:48:39
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

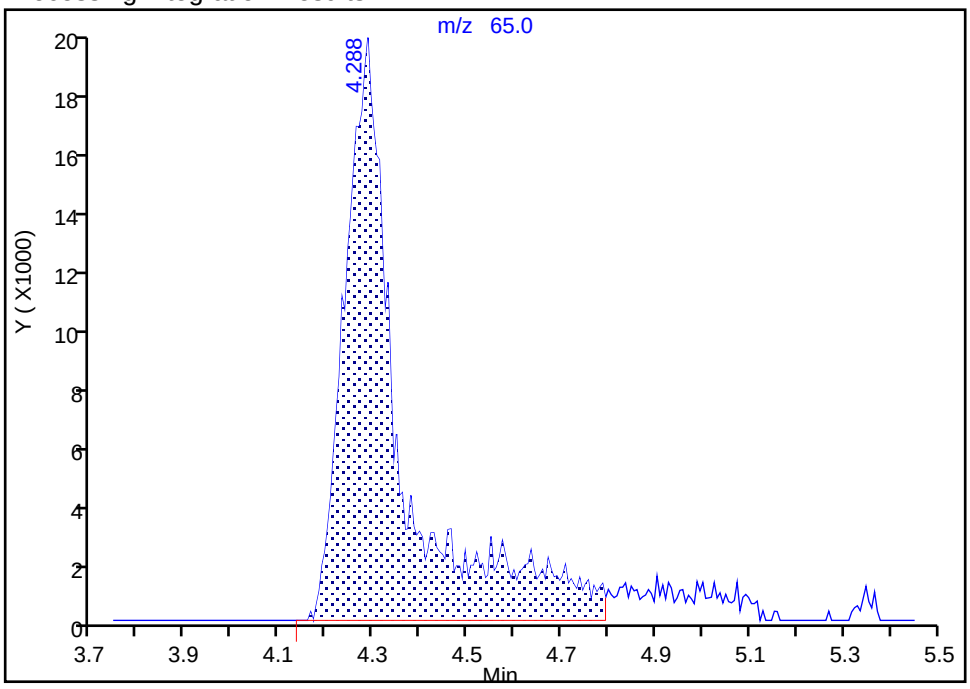
Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s15.D				
Injection Date:	03-Oct-2020 14:04:30	Instrument ID:	19930		
Lims ID:	410-15232-A-5	Lab Sample ID:	410-15232-5		
Client ID:	HD-COD-SW-17-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	20	Worklist Smp#:	21
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

* 24 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

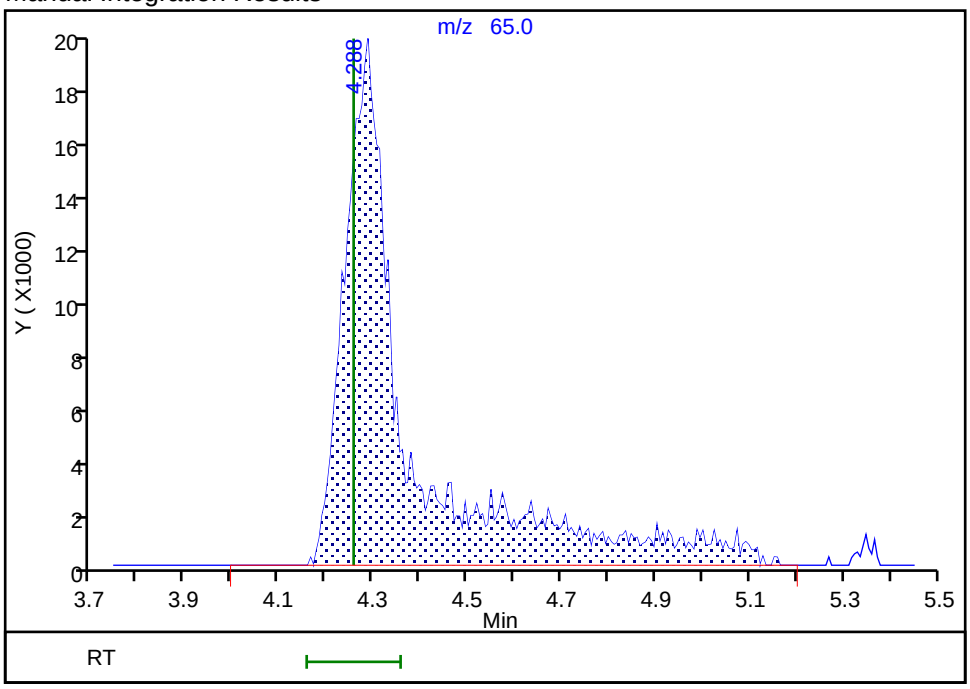
Processing Integration Results

RT: 4.29
Area: 161747
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 4.29
Area: 178953
Amount: 50.000000
Amount Units: ug/l



Reviewer: mellingerc, 05-Oct-2020 13:48:16

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-15232-1

SDG No.:

Client Sample ID: HD-COD-SW-6-0/1-0 Lab Sample ID: 410-15232-6

Matrix: Water Lab File ID: Io03s16.D

Analysis Method: 8260C LL Date Collected: 09/25/2020 11:15

Sample wt/vol: 25(mL) Date Analyzed: 10/03/2020 14:26

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.: 50506 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	^c	5.0	0.60
591-78-6	2-Hexanone	ND	^c	5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	^c	5.0	0.70
67-64-1	Acetone	2.2	J	5.0	0.90
107-13-1	Acrylonitrile	ND	^c	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	0.089	J	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	0.10	J	0.50	0.060
156-59-2	cis-1,2-Dichloroethene	0.099	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	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 E Job No.: 410-15232-1

SDG No.:

Client Sample ID: HD-COD-SW-6-0/1-0 Lab Sample ID: 410-15232-6

Matrix: Water Lab File ID: Io03s16.D

Analysis Method: 8260C LL Date Collected: 09/25/2020 11:15

Sample wt/vol: 25(mL) Date Analyzed: 10/03/2020 14:26

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.: 50506 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	0.098	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)	102		80-120
1868-53-7	Dibromofluoromethane (Surr)	97		80-120
2037-26-5	Toluene-d8 (Surr)	108		80-120
460-00-4	4-Bromofluorobenzene (Surr)	105		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\Io03s16.D
Lims ID: 410-15232-A-6
Client ID: HD-COD-SW-6-0/1-0
Sample Type: Client
Inject. Date: 03-Oct-2020 14:26:30 ALS Bottle#: 21 Worklist Smp#: 22
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0011975-022
Misc. Info.: 410-15232-A-6
Operator ID: jkh09052 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 05-Oct-2020 14:04:24 Calib Date: 09-Sep-2020 21:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1036

First Level Reviewer: mellingerc Date: 05-Oct-2020 13:50:52

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
	4 Chloromethane	50	2.184	2.172	0.012	43	7876	0.0997	
	5 Vinyl chloride	62		2.288				ND	
	7 Bromomethane	94		2.617				ND	7
	8 Chloroethane	64		2.703				ND	7
	14 1,1-Dichloroethene	96		3.580				ND	
	15 Acetone	43	3.617	3.599	0.018	98	17774	2.15	
	19 Carbon disulfide	76	3.885	3.885	0.000	99	12271	0.0890	M
	23 Methylene Chloride	84		4.251				ND	
*	24 t-Butyl alcohol-d10 (IS)	65	4.269	4.257	0.012	0	165194	50.0	M
	26 Acrylonitrile	53		4.599				ND	
	27 Methyl tert-butyl ether	73		4.660				ND	
	28 trans-1,2-Dichloroethene	96		4.678				ND	
	31 1,1-Dichloroethane	63		5.330				ND	
	36 2-Butanone (MEK)	43	6.141	6.129	0.012	30	6220	0.5034	M
	37 cis-1,2-Dichloroethene	96	6.159	6.159	0.000	0	6591	0.0995	M
	43 Chlorobromomethane	128		6.495				ND	
	45 Chloroform	83	6.653	6.647	0.006	91	5663	0.0538	
$	46 Dibromofluoromethane (Surr)	113	6.866	6.860	0.006	92	508443	9.65	
	47 1,1,1-Trichloroethane	97		6.872				ND	
	50 Carbon tetrachloride	117		7.080				ND	
$	53 1,2-Dichloroethane-d4 (Surr)	102	7.305	7.311	-0.006	0	98943	10.2	
	54 Benzene	78		7.342				ND	7
	56 1,2-Dichloroethane	62		7.415				ND	
*	58 Fluorobenzene (IS)	96	7.750	7.744	0.006	99	1948835	10.0	
	61 Trichloroethene	95	8.220	8.220	0.000	89	6556	0.0979	M
	63 1,2-Dichloropropane	63		8.555				ND	
	68 Dichlorobromomethane	83		8.896				ND	
	73 cis-1,3-Dichloropropene	75		9.439				ND	
	74 4-Methyl-2-pentanone (MIBK)	43		9.604				ND	7
$	75 Toluene-d8 (Surr)	98	9.744	9.744	0.000	95	2047373	10.8	
	76 Toluene	92	9.823	9.823	0.000	86	6228	0.0412	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
78 trans-1,3-Dichloropropene	75		10.073				ND	
80 1,1,2-Trichloroethane	97		10.274				ND	
81 Tetrachloroethene	166	10.366	10.366	0.000	83	2597	0.0339	
83 2-Hexanone	43		10.488				ND	7
85 Chlorodibromomethane	129		10.652				ND	
86 Ethylene Dibromide	107		10.762				ND	
* 87 Chlorobenzene-d5 (IS)	117	11.189	11.189	0.000	87	1549958	10.0	
90 Chlorobenzene	112		11.219				ND	
S 89 Xylenes, Total	106		11.245				ND	7
91 1,1,1,2-Tetrachloroethane	131		11.298				ND	
92 Ethylbenzene	91		11.305				ND	7
93 m-Xylene & p-Xylene	106		11.414				ND	7
94 o-Xylene	106		11.743				ND	7
95 Styrene	104		11.756				ND	7
96 Bromoform	173		11.920				ND	
$ 100 4-Bromofluorobenzene (Surr)	95	12.188	12.189	-0.001	85	773377	10.5	
101 1,1,2,2-Tetrachloroethane	83		12.286				ND	
* 115 1,4-Dichlorobenzene-d4	152	13.066	13.066	0.000	97	831929	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

Reagents:

MSV_31_826ISS_00003 Amount Added: 5.00 Units: uL Run Reagent

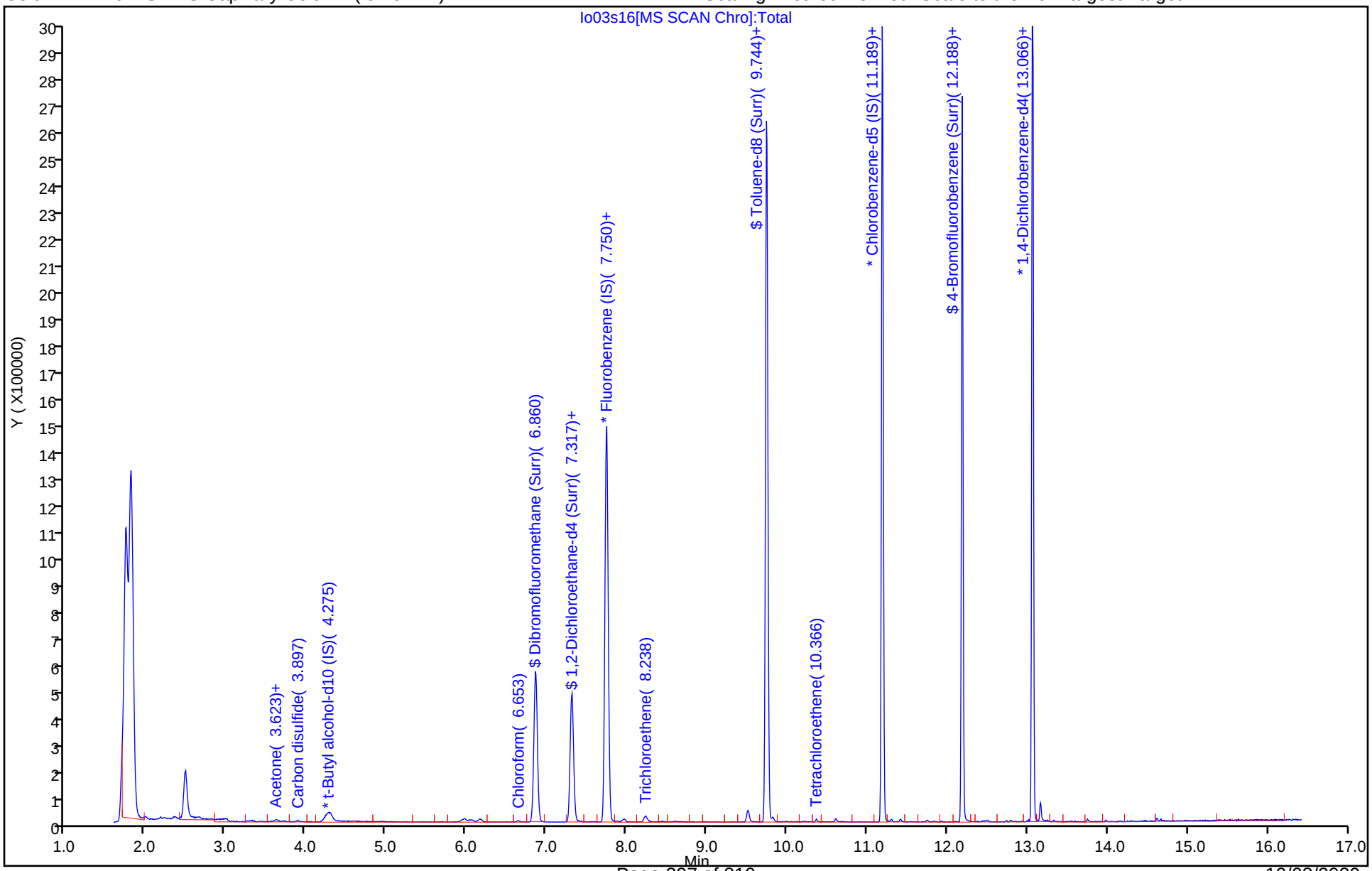
Report Date: 05-Oct-2020 14:05:11 Chrom Revision: 2.3 24-Sep-2020 19:22:38

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\Io03s16.D

Injection Date:	03-Oct-2020 14:26:30	Instrument ID:	19930	Operator ID:	jkh09052
Lims ID:	410-15232-A-6	Lab Sample ID:	410-15232-6	Worklist Smp#:	22
Client ID:	HD-COD-SW-6-0/1-0				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	21
Method:	8260 25ml HP31	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\19930\20201003-11975.b\Io03s16.D
Lims ID: 410-15232-A-6
Client ID: HD-COD-SW-6-0/1-0
Sample Type: Client
Inject. Date: 03-Oct-2020 14:26:30 ALS Bottle#: 21 Worklist Smp#: 22
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0011975-022
Misc. Info.: 410-15232-A-6
Operator ID: jkh09052 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 05-Oct-2020 14:04:24 Calib Date: 09-Sep-2020 21:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1036

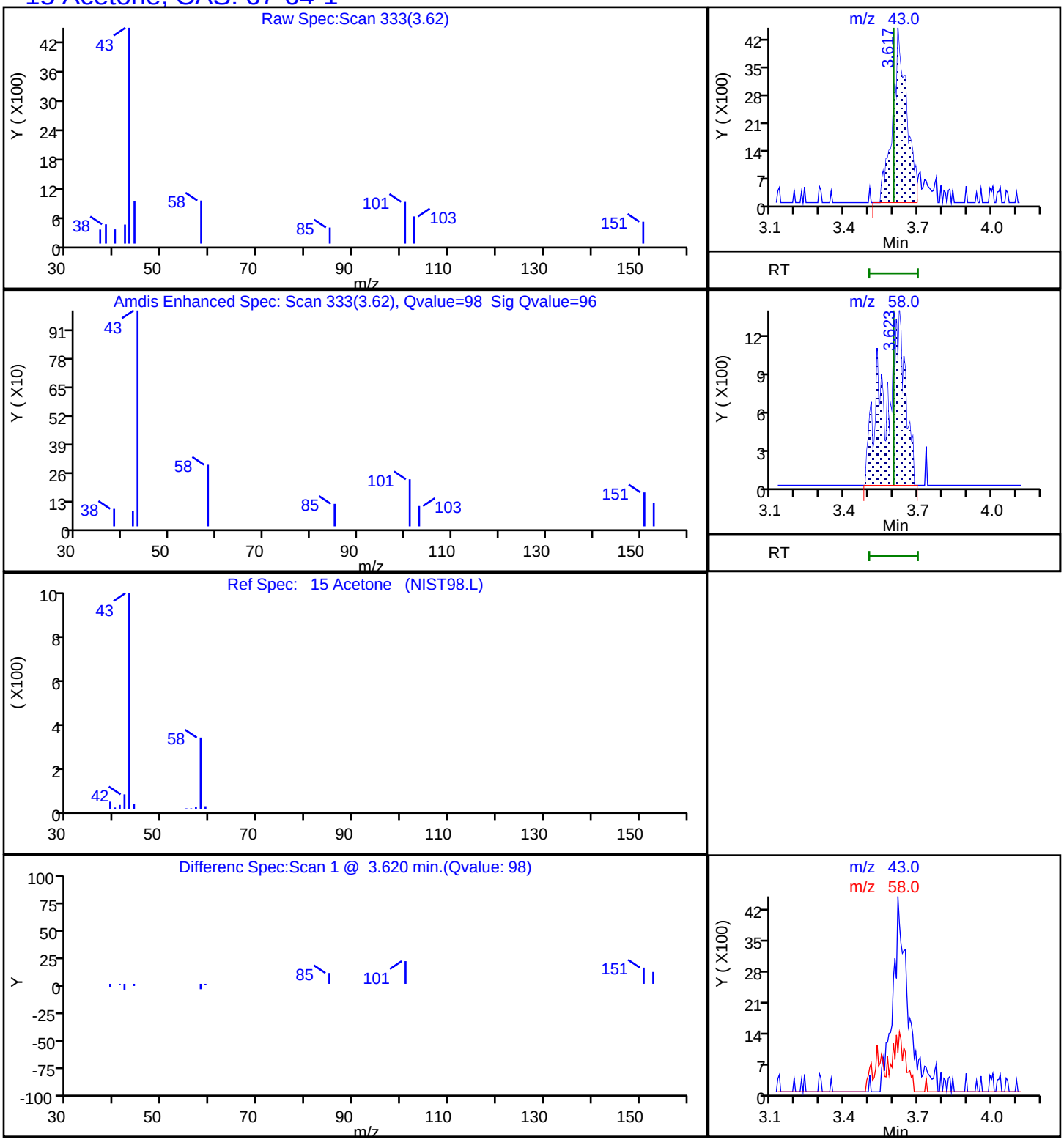
First Level Reviewer: mellingerc Date: 05-Oct-2020 13:50:52

Compound	Amount Added	Amount Recovered	% Rec.
$ 46 Dibromofluoromethane (Surr)	10.0	9.65	96.52
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.2	102.48
$ 75 Toluene-d8 (Surr)	10.0	10.8	107.75
$ 100 4-Bromofluorobenzene (Surr)	10.0	10.5	104.96

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s16.D				
Injection Date:	03-Oct-2020 14:26:30	Instrument ID:	19930		
Lims ID:	410-15232-A-6	Lab Sample ID:	410-15232-6		
Client ID:	HD-COD-SW-6-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	21	Worklist Smp#:	22
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

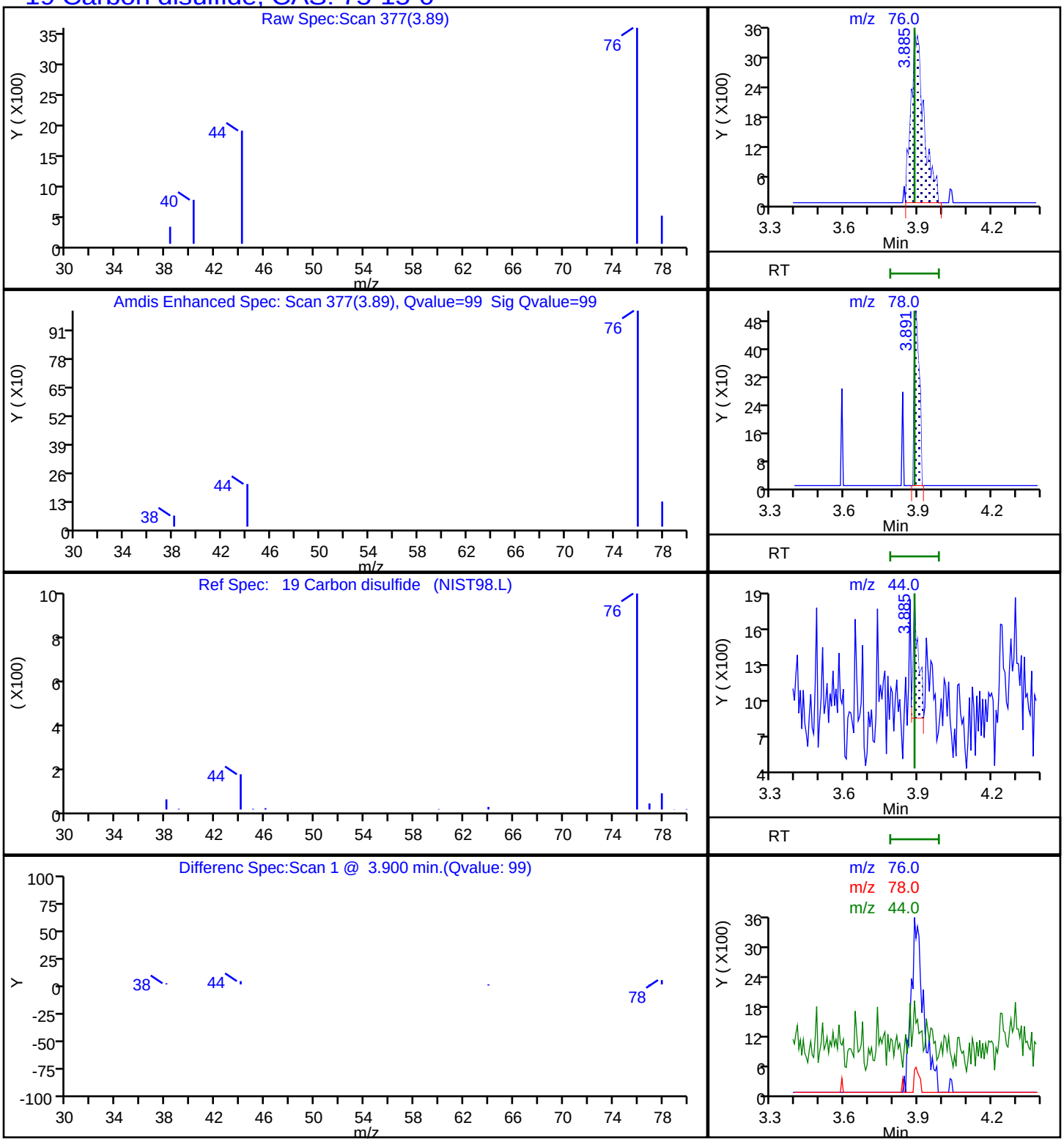
15 Acetone, CAS: 67-64-1



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s16.D
Injection Date: 03-Oct-2020 14:26:30 Instrument ID: 19930
Lims ID: 410-15232-A-6 Lab Sample ID: 410-15232-6
Client ID: HD-COD-SW-6-0/1-0
Operator ID: jkh09052 ALS Bottle#: 21 Worklist Smp#: 22
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

19 Carbon disulfide, CAS: 75-15-0



Report Date: 05-Oct-2020 14:05:11 Chrom Revision: 2.3 24-Sep-2020 19:22:38

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s16.D

Injection Date: 03-Oct-2020 14:26:30 Instrument ID: 19930

Lims ID: 410-15232-A-6 Lab Sample ID: 410-15232-6

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

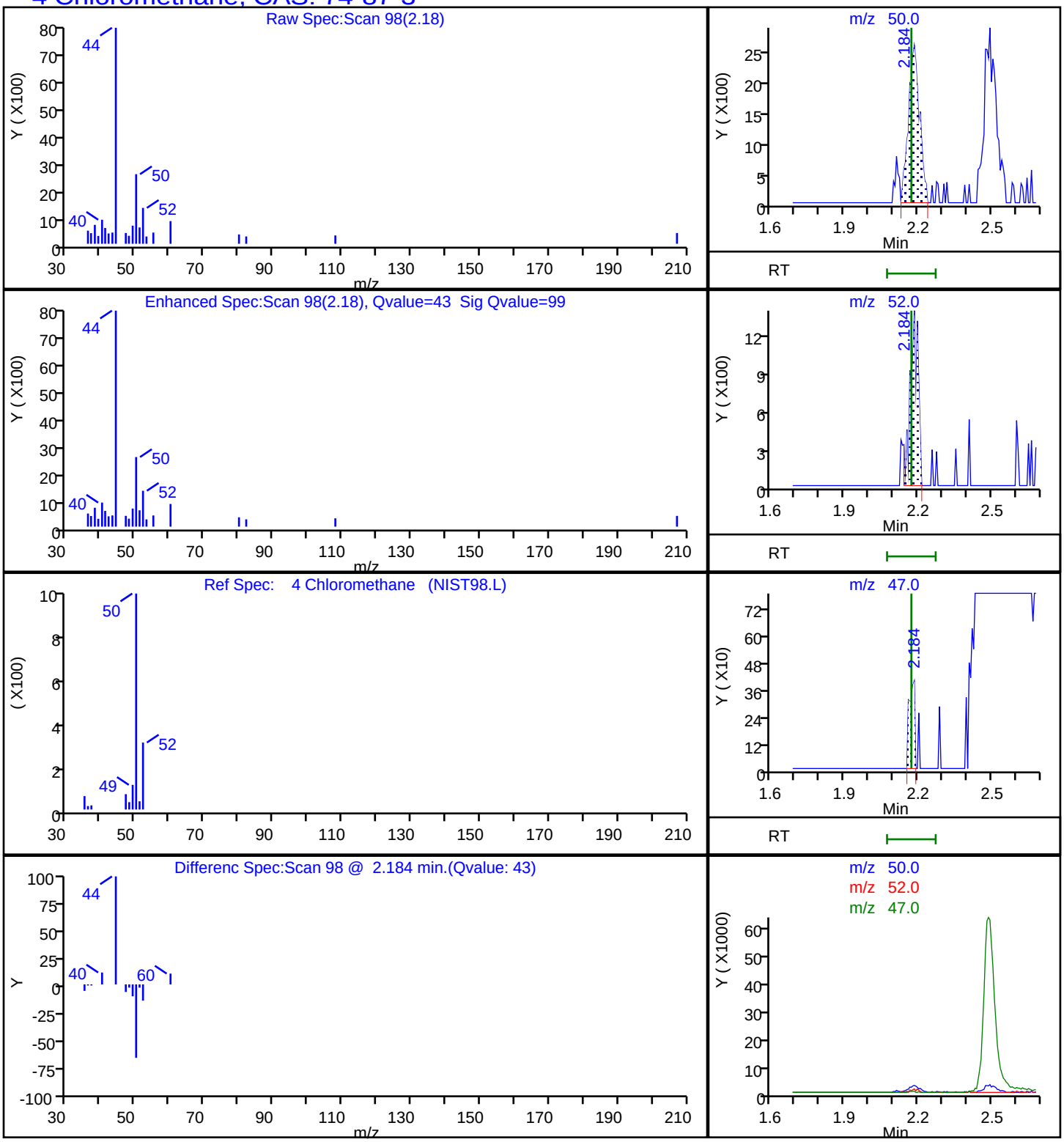
Operator ID: jkh09052 ALS Bottle#: 21 Worklist Smp#: 22

Purge Vol: 25.000 mL Dil. Factor: 1.0000

Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

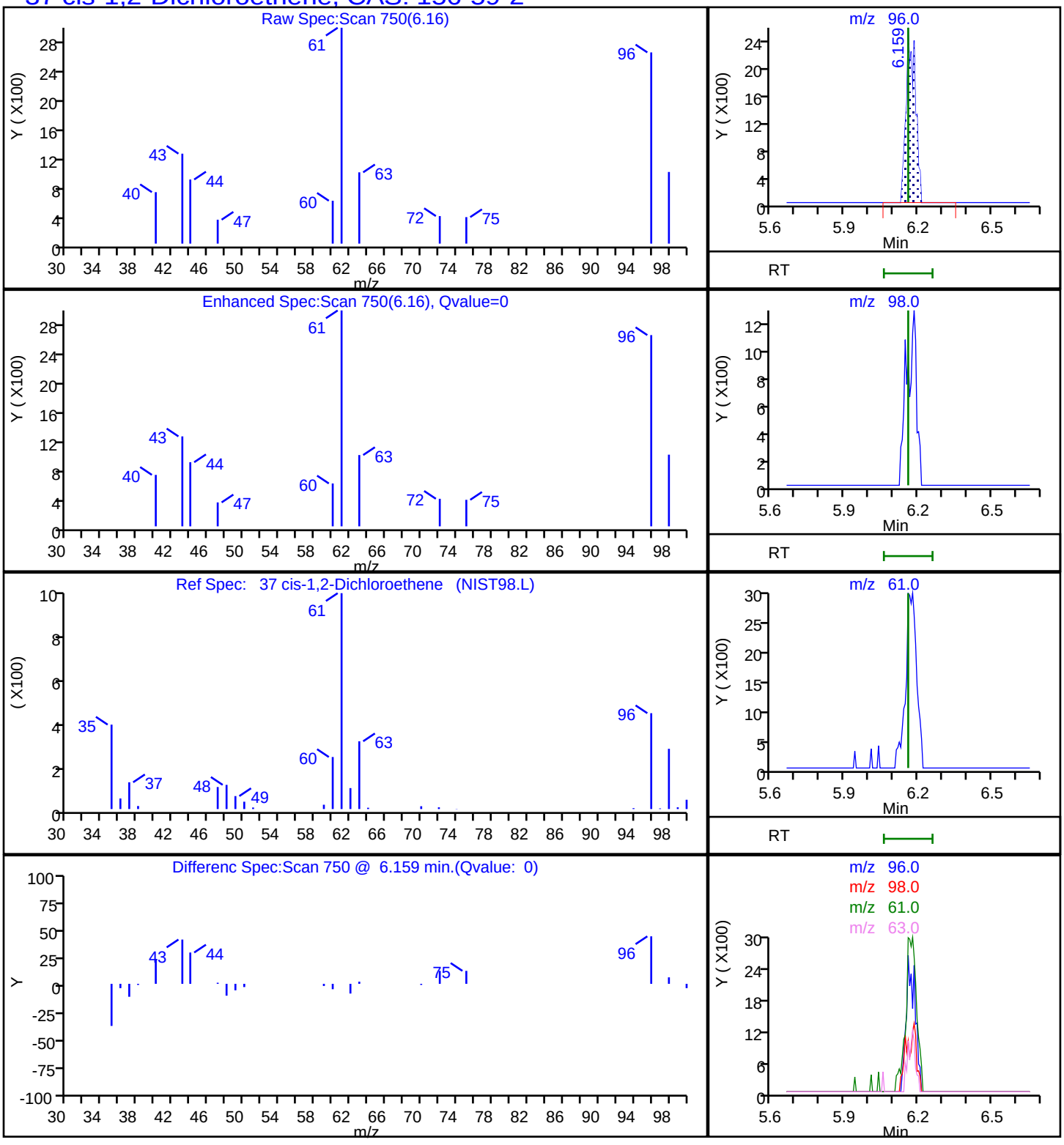
4 Chloromethane, CAS: 74-87-3



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s16.D				
Injection Date:	03-Oct-2020 14:26:30	Instrument ID:	19930		
Lims ID:	410-15232-A-6	Lab Sample ID:	410-15232-6		
Client ID:	HD-COD-SW-6-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	21	Worklist Smp#:	22
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

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



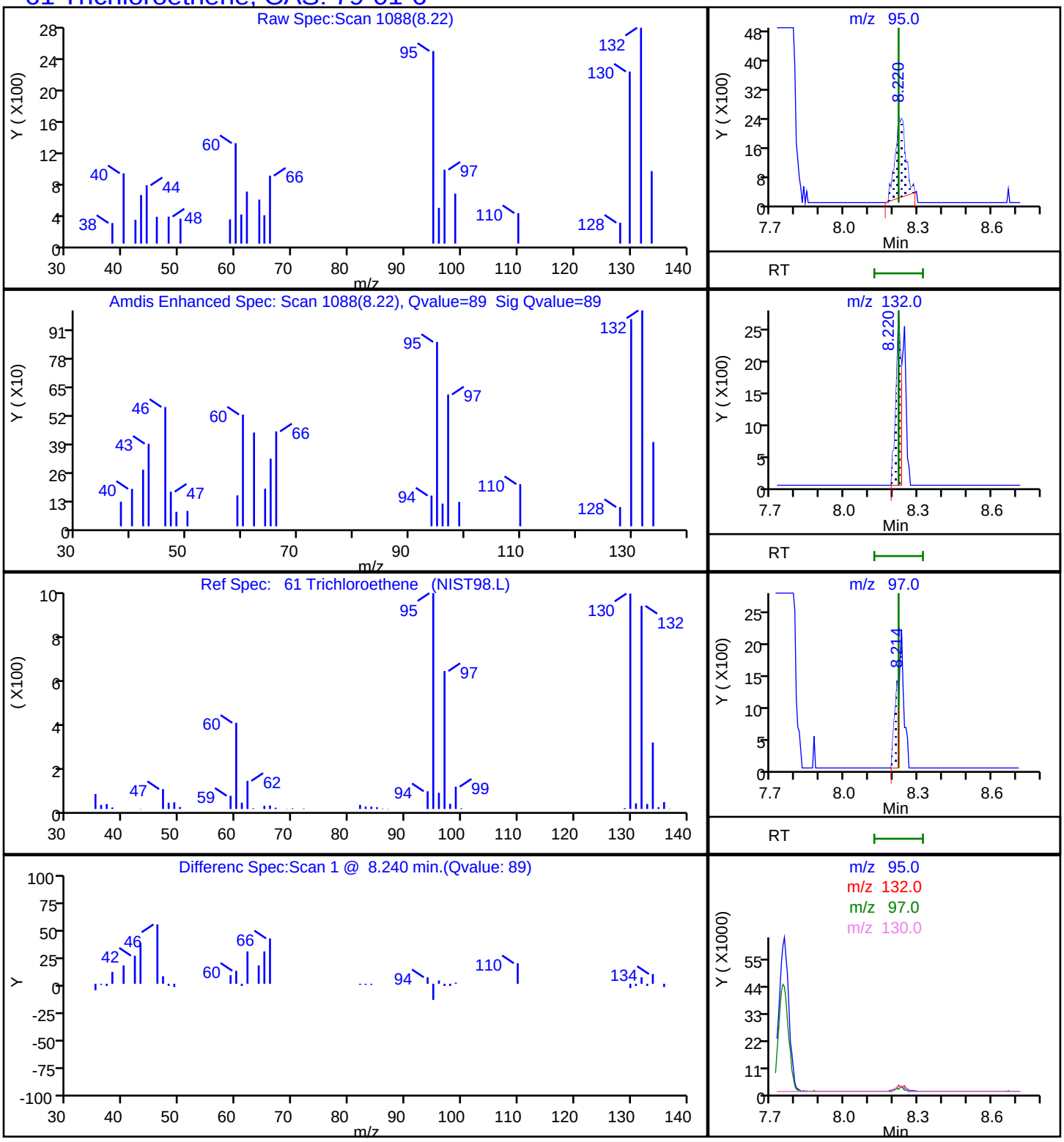
Report Date: 05-Oct-2020 14:05:11 Chrom Revision: 2.3 24-Sep-2020 19:22:38

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s16.D

Injection Date:	03-Oct-2020 14:26:30	Instrument ID:	19930		
Lims ID:	410-15232-A-6	Lab Sample ID:	410-15232-6		
Client ID:	HD-COD-SW-6-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	21	Worklist Smp#:	22
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

61 Trichloroethene, CAS: 79-01-6



Eurofins Lancaster Laboratories Env, LLC

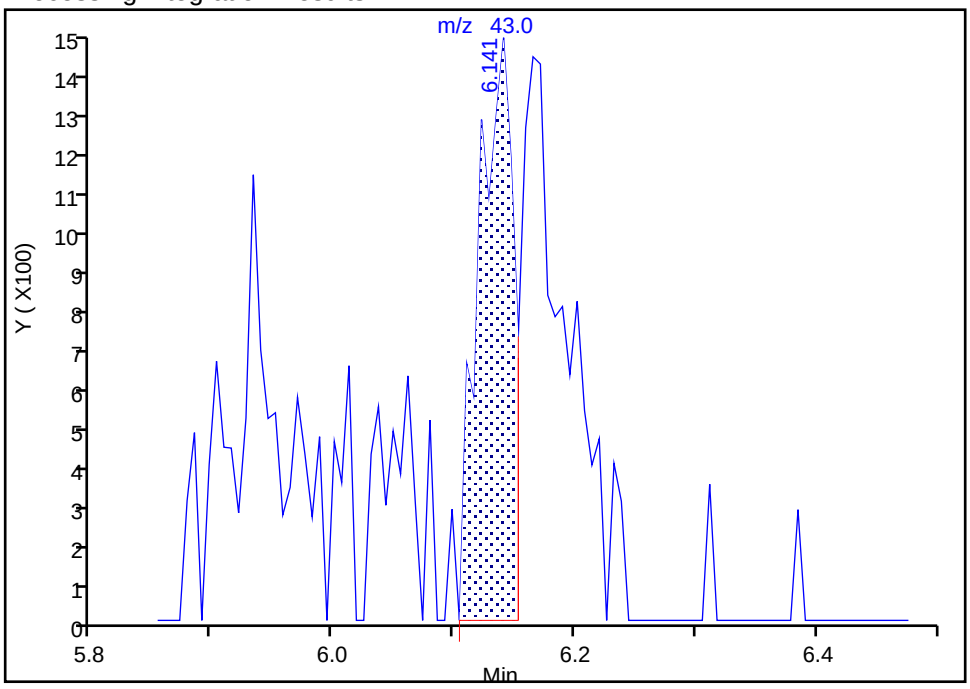
Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s16.D				
Injection Date:	03-Oct-2020 14:26:30	Instrument ID:	19930		
Lims ID:	410-15232-A-6	Lab Sample ID:	410-15232-6		
Client ID:	HD-COD-SW-6-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	21	Worklist Smp#:	22
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

36 2-Butanone (MEK), CAS: 78-93-3

Signal: 1

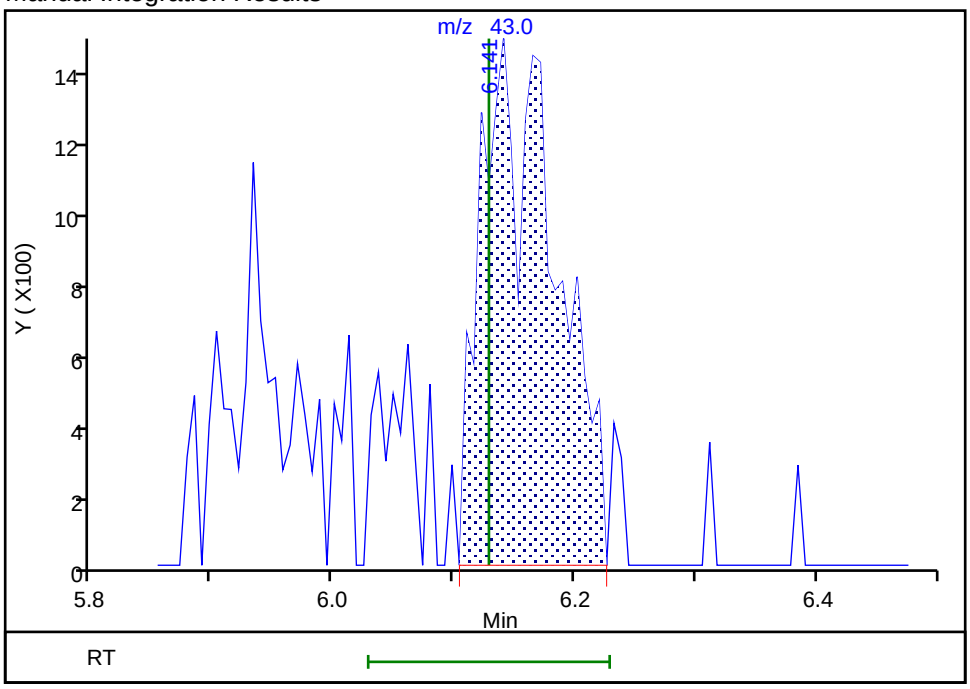
Processing Integration Results

RT: 6.14
Area: 2911
Amount: 0.235572
Amount Units: ug/l



Manual Integration Results

RT: 6.14
Area: 6220
Amount: 0.503352
Amount Units: ug/l



Reviewer: mellingerc, 05-Oct-2020 13:50:18
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

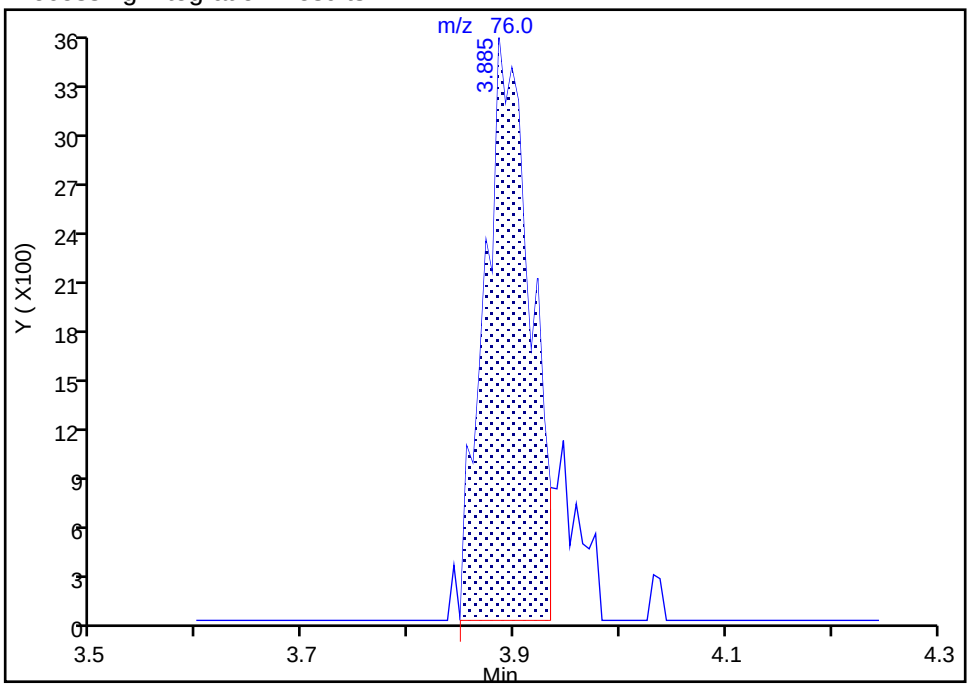
Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\Io03s16.D				
Injection Date:	03-Oct-2020 14:26:30	Instrument ID:	19930		
Lims ID:	410-15232-A-6	Lab Sample ID:	410-15232-6		
Client ID:	HD-COD-SW-6-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	21	Worklist Smp#:	22
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

19 Carbon disulfide, CAS: 75-15-0

Signal: 1

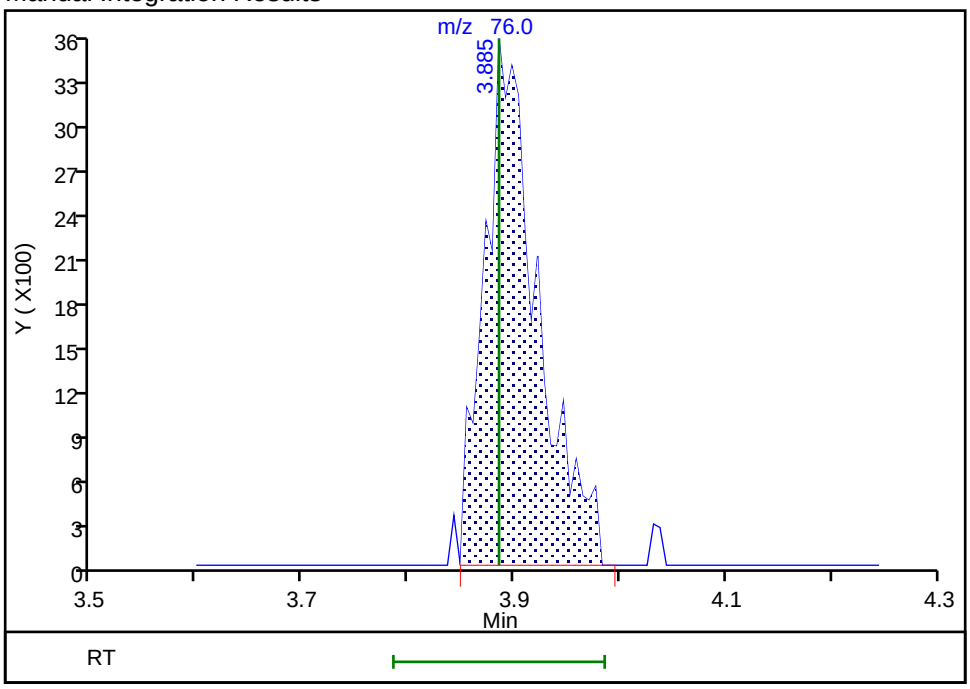
Processing Integration Results

RT: 3.89
Area: 10635
Amount: 0.077092
Amount Units: ug/l



Manual Integration Results

RT: 3.89
Area: 12271
Amount: 0.088951
Amount Units: ug/l



Reviewer: mellingerc, 05-Oct-2020 13:50:09

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

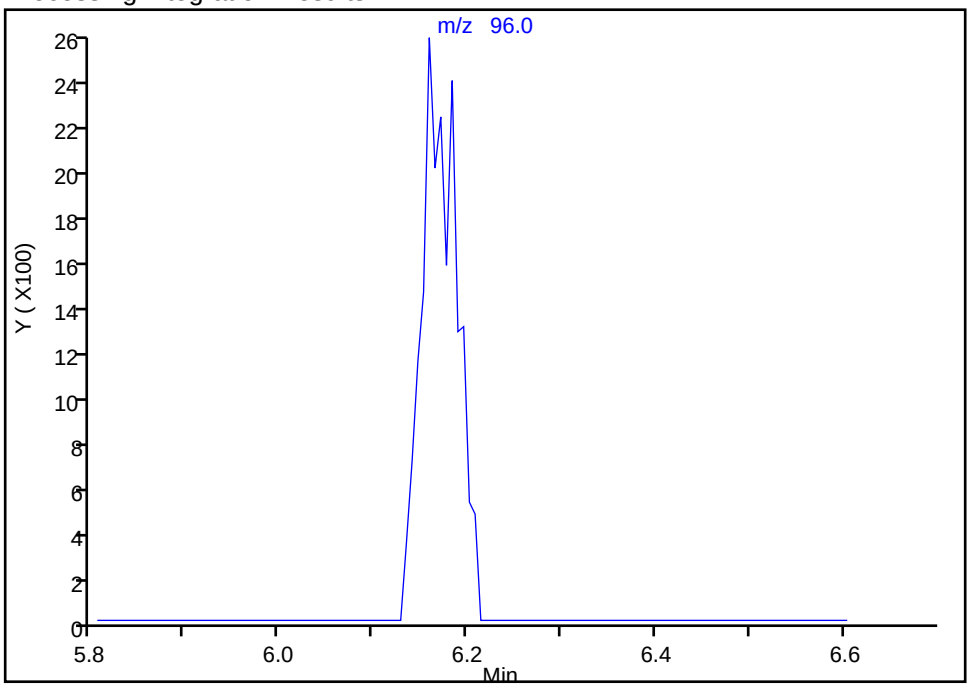
Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s16.D				
Injection Date:	03-Oct-2020 14:26:30	Instrument ID:	19930		
Lims ID:	410-15232-A-6	Lab Sample ID:	410-15232-6		
Client ID:	HD-COD-SW-6-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	21	Worklist Smp#:	22
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

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

Signal: 1

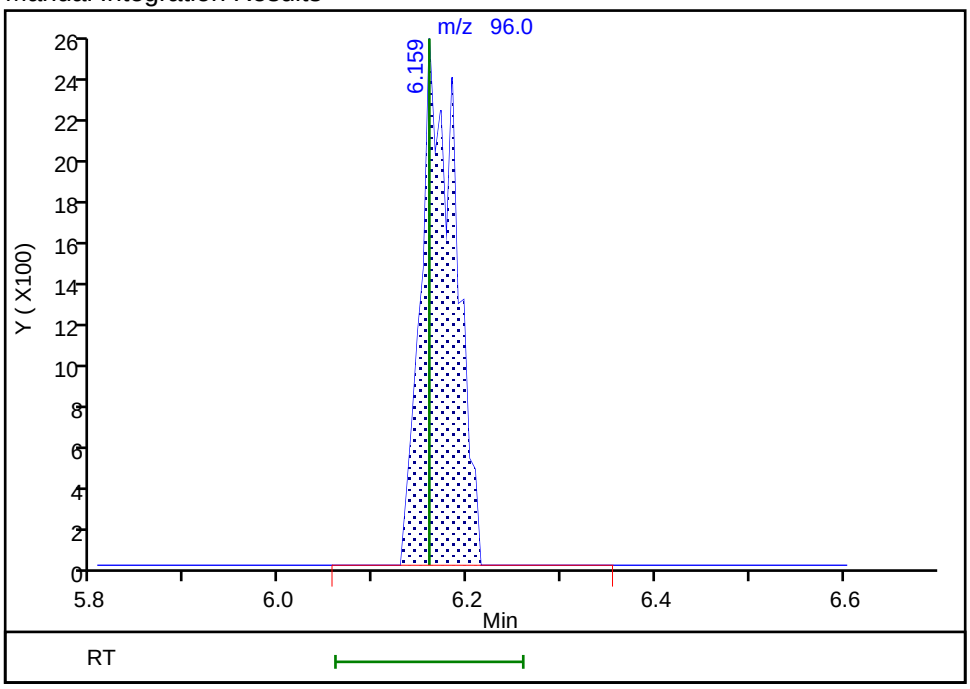
Not Detected
Expected RT: 6.16

Processing Integration Results



Manual Integration Results

RT: 6.16
Area: 6591
Amount: 0.099472
Amount Units: ug/l



Reviewer: mellingerc, 05-Oct-2020 13:50:23
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

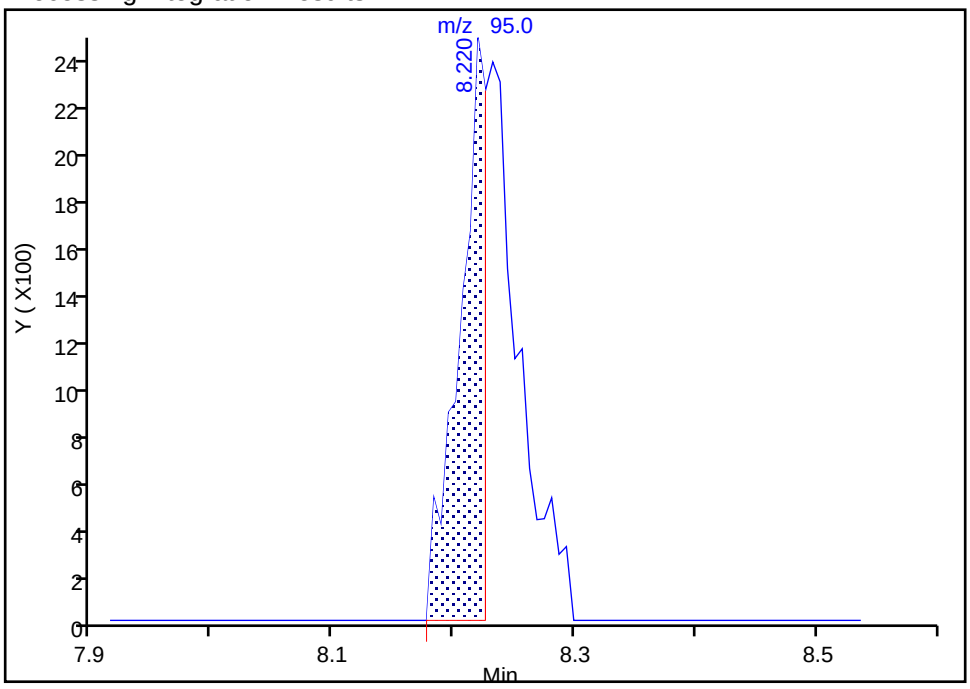
Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s16.D				
Injection Date:	03-Oct-2020 14:26:30	Instrument ID:	19930		
Lims ID:	410-15232-A-6	Lab Sample ID:	410-15232-6		
Client ID:	HD-COD-SW-6-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	21	Worklist Smp#:	22
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

61 Trichloroethene, CAS: 79-01-6

Signal: 1

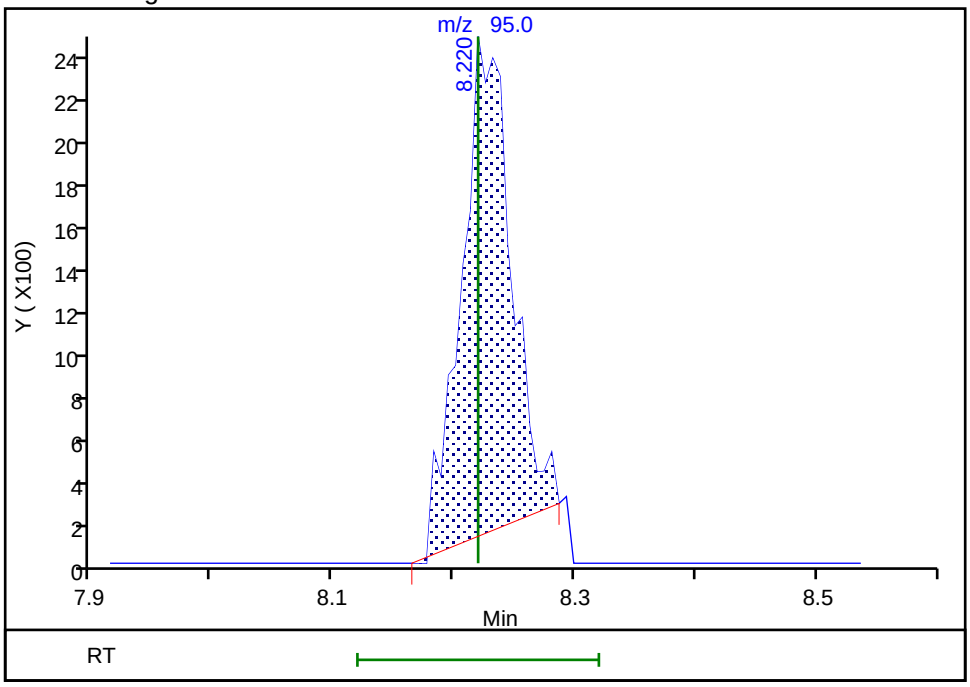
Processing Integration Results

RT: 8.22
Area: 3769
Amount: 0.056256
Amount Units: ug/l



Manual Integration Results

RT: 8.22
Area: 6556
Amount: 0.097854
Amount Units: ug/l



Reviewer: mellingerc, 05-Oct-2020 13:50:36
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

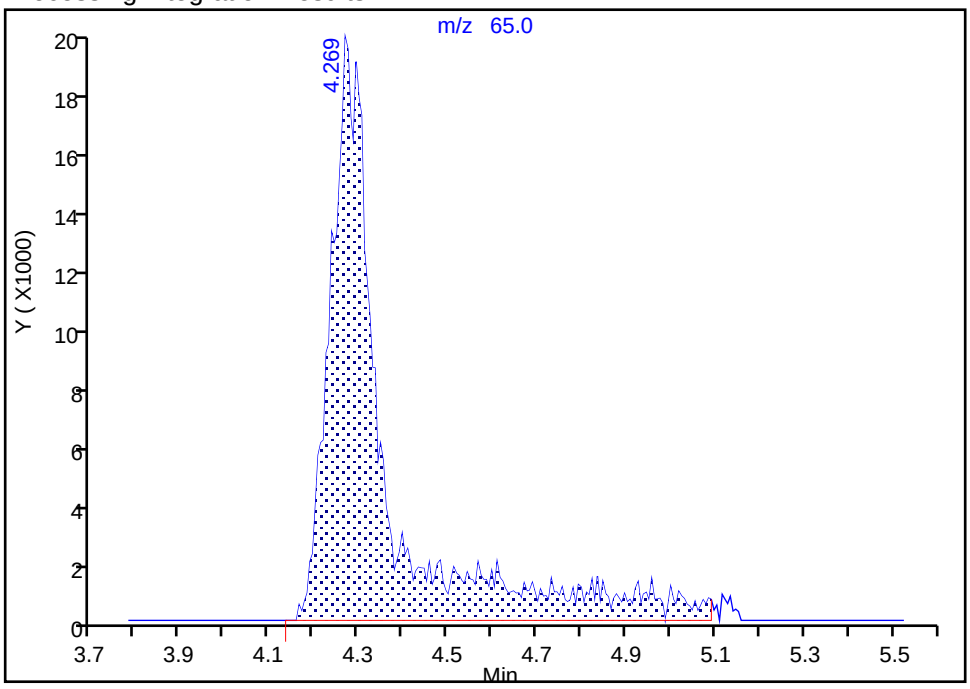
Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s16.D				
Injection Date:	03-Oct-2020 14:26:30	Instrument ID:	19930		
Lims ID:	410-15232-A-6	Lab Sample ID:	410-15232-6		
Client ID:	HD-COD-SW-6-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	21	Worklist Smp#:	22
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

* 24 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

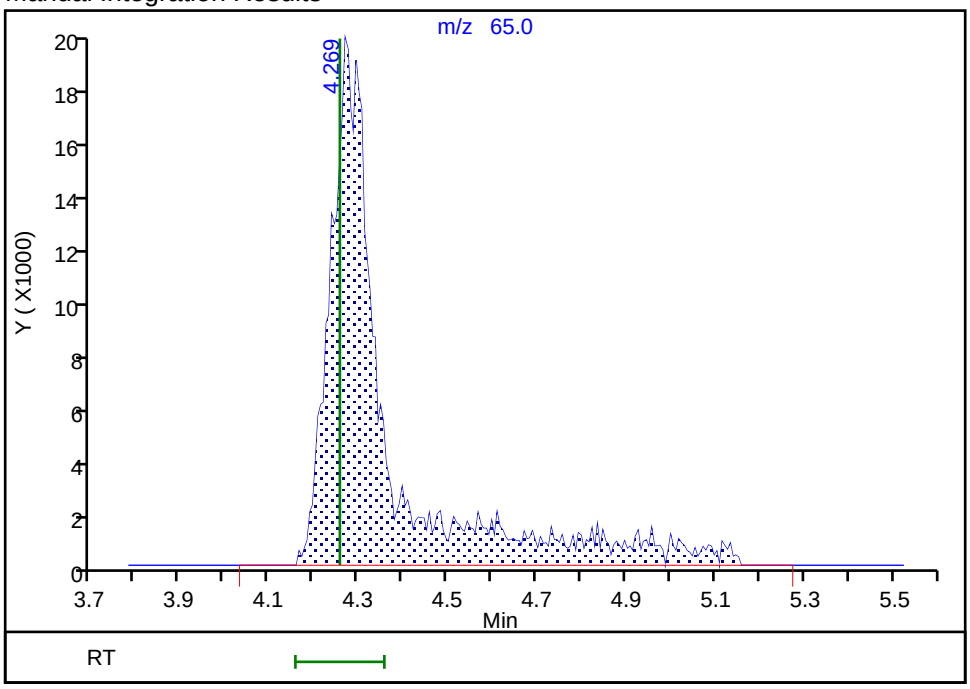
Processing Integration Results

RT: 4.27
Area: 163428
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 4.27
Area: 165194
Amount: 50.000000
Amount Units: ug/l



Reviewer: mellingerc, 05-Oct-2020 13:49:57

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-15232-1

SDG No.:

Client Sample ID: HD-COD-SW-26-0/1-0 Lab Sample ID: 410-15232-7

Matrix: Water Lab File ID: Io03s17.D

Analysis Method: 8260C LL Date Collected: 09/25/2020 11:45

Sample wt/vol: 25(mL) Date Analyzed: 10/03/2020 14:47

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.: 50506 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	0.17	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	^c	5.0	0.60
591-78-6	2-Hexanone	ND	^c	5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	^c	5.0	0.70
67-64-1	Acetone	0.95	J	5.0	0.90
107-13-1	Acrylonitrile	ND	^c	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	0.86		0.50	0.090
74-87-3	Chloromethane	ND		0.50	0.060
156-59-2	cis-1,2-Dichloroethene	0.083	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	ND		0.50	0.070
100-42-5	Styrene	ND		0.50	0.050
127-18-4	Tetrachloroethene	3.7		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 E Job No.: 410-15232-1

SDG No.:

Client Sample ID: HD-COD-SW-26-0/1-0 Lab Sample ID: 410-15232-7

Matrix: Water Lab File ID: Io03s17.D

Analysis Method: 8260C LL Date Collected: 09/25/2020 11:45

Sample wt/vol: 25(mL) Date Analyzed: 10/03/2020 14:47

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.: 50506 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	0.20	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)	95		80-120
1868-53-7	Dibromofluoromethane (Surr)	97		80-120
2037-26-5	Toluene-d8 (Surr)	109		80-120
460-00-4	4-Bromofluorobenzene (Surr)	106		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\Io03s17.D
Lims ID: 410-15232-A-7
Client ID: HD-COD-SW-26-0/1-0
Sample Type: Client
Inject. Date: 03-Oct-2020 14:47:30 ALS Bottle#: 22 Worklist Smp#: 23
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0011975-023
Misc. Info.: 410-15232-A-7
Operator ID: jkh09052 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 05-Oct-2020 14:04:24 Calib Date: 09-Sep-2020 21:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1036

First Level Reviewer: mellingerc Date: 05-Oct-2020 13:52:04

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
4 Chloromethane	50		2.172				ND	7
5 Vinyl chloride	62		2.288				ND	
7 Bromomethane	94		2.617				ND	7
8 Chloroethane	64		2.703				ND	7
14 1,1-Dichloroethene	96	3.586	3.580	0.006	94	8603	0.1731	
15 Acetone	43	3.623	3.599	0.024	78	7941	0.9549	
19 Carbon disulfide	76		3.885				ND	7
23 Methylene Chloride	84		4.251				ND	
* 24 t-Butyl alcohol-d10 (IS)	65	4.294	4.257	0.037	0	166425	50.0	M
26 Acrylonitrile	53		4.599				ND	
27 Methyl tert-butyl ether	73		4.660				ND	7
28 trans-1,2-Dichloroethene	96		4.678				ND	
31 1,1-Dichloroethane	63		5.330				ND	
36 2-Butanone (MEK)	43		6.129				ND	7
37 cis-1,2-Dichloroethene	96	6.177	6.159	0.018	79	5317	0.0833	
43 Chlorobromomethane	128		6.495				ND	
45 Chloroform	83	6.653	6.647	0.006	94	86942	0.8570	
$ 46 Dibromofluoromethane (Surr)	113	6.860	6.860	0.000	92	490697	9.67	
47 1,1,1-Trichloroethane	97	6.878	6.872	0.006	35	4323	0.0425	M
50 Carbon tetrachloride	117		7.080				ND	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.305	7.311	-0.006	0	88472	9.51	
54 Benzene	78		7.342				ND	
56 1,2-Dichloroethane	62		7.415				ND	
* 58 Fluorobenzene (IS)	96	7.750	7.744	0.006	99	1877849	10.0	
61 Trichloroethene	95	8.220	8.220	0.000	92	12700	0.1967	
63 1,2-Dichloropropane	63		8.555				ND	
68 Dichlorobromomethane	83		8.896				ND	7
73 cis-1,3-Dichloropropene	75		9.439				ND	
74 4-Methyl-2-pentanone (MIBK)	43		9.604				ND	
$ 75 Toluene-d8 (Surr)	98	9.744	9.744	0.000	95	1985608	10.9	
76 Toluene	92		9.823				ND	7

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
78 trans-1,3-Dichloropropene	75		10.073				ND	
80 1,1,2-Trichloroethane	97		10.274				ND	
81 Tetrachloroethene	166	10.366	10.366	0.000	93	273827	3.74	
83 2-Hexanone	43		10.488				ND	7
85 Chlorodibromomethane	129		10.652				ND	
86 Ethylene Dibromide	107		10.762				ND	
* 87 Chlorobenzene-d5 (IS)	117	11.189	11.189	0.000	88	1483519	10.0	
90 Chlorobenzene	112		11.219				ND	
S 89 Xylenes, Total	106		11.245				ND	7
91 1,1,1,2-Tetrachloroethane	131		11.298				ND	
92 Ethylbenzene	91		11.305				ND	7
93 m-Xylene & p-Xylene	106		11.414				ND	7
94 o-Xylene	106		11.743				ND	
95 Styrene	104		11.756				ND	7
96 Bromoform	173		11.920				ND	
$ 100 4-Bromofluorobenzene (Surr)	95	12.188	12.189	-0.001	85	747113	10.6	
101 1,1,2,2-Tetrachloroethane	83		12.286				ND	
* 115 1,4-Dichlorobenzene-d4	152	13.066	13.066	0.000	97	794124	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

Reagents:

MSV_31_826ISS_00003 Amount Added: 5.00 Units: uL Run Reagent

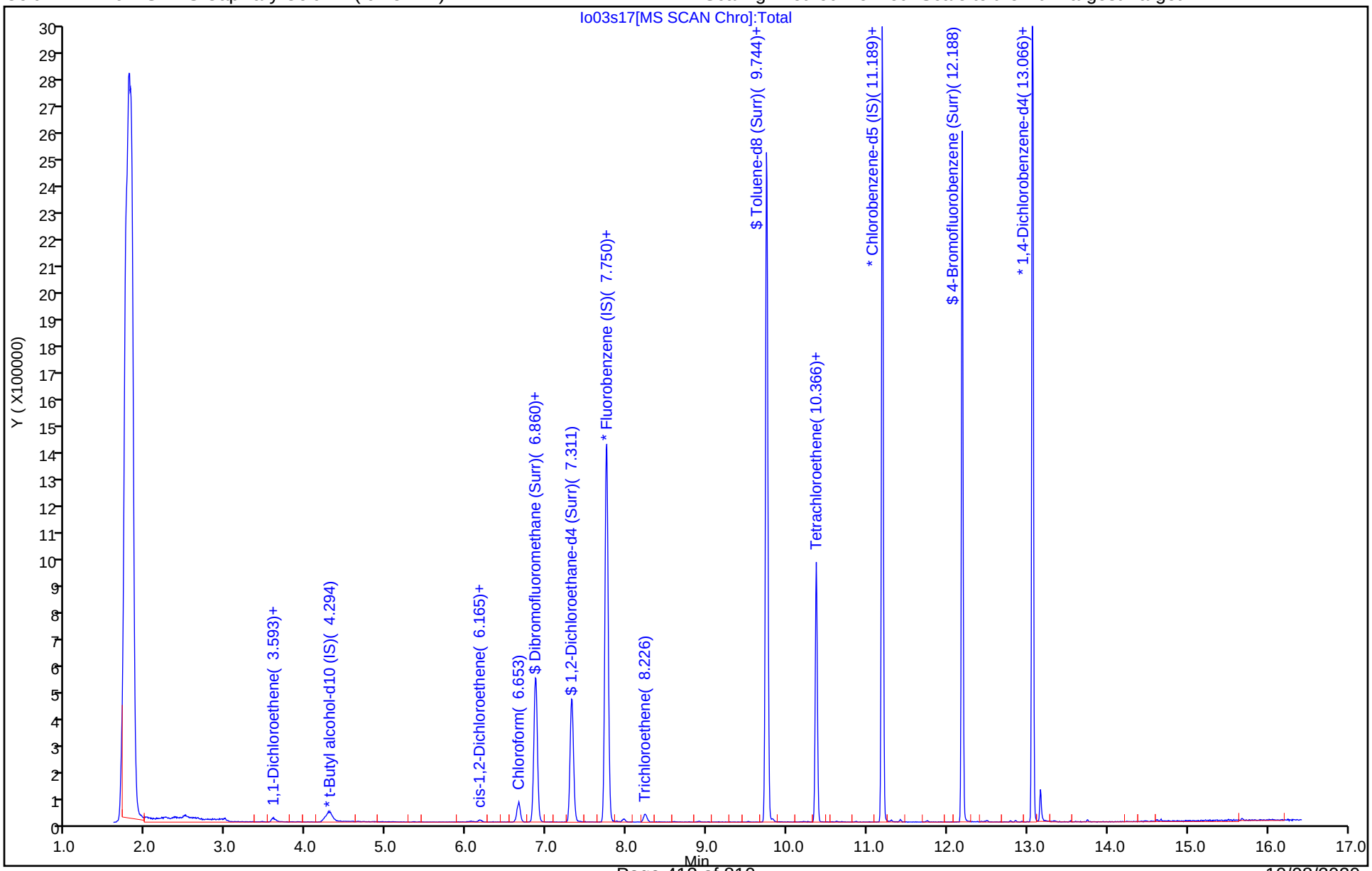
Report Date: 05-Oct-2020 14:05:15 Chrom Revision: 2.3 24-Sep-2020 19:22:38

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\Io03s17.D

Injection Date:	03-Oct-2020 14:47:30	Instrument ID:	19930	Operator ID:	jkh09052
Lims ID:	410-15232-A-7	Lab Sample ID:	410-15232-7	Worklist Smp#:	23
Client ID:	HD-COD-SW-26-0/1-0				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	22
Method:	8260 25ml HP31	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\19930\20201003-11975.b\Io03s17.D
Lims ID: 410-15232-A-7
Client ID: HD-COD-SW-26-0/1-0
Sample Type: Client
Inject. Date: 03-Oct-2020 14:47:30 ALS Bottle#: 22 Worklist Smp#: 23
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0011975-023
Misc. Info.: 410-15232-A-7
Operator ID: jkh09052 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 05-Oct-2020 14:04:24 Calib Date: 09-Sep-2020 21:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1036

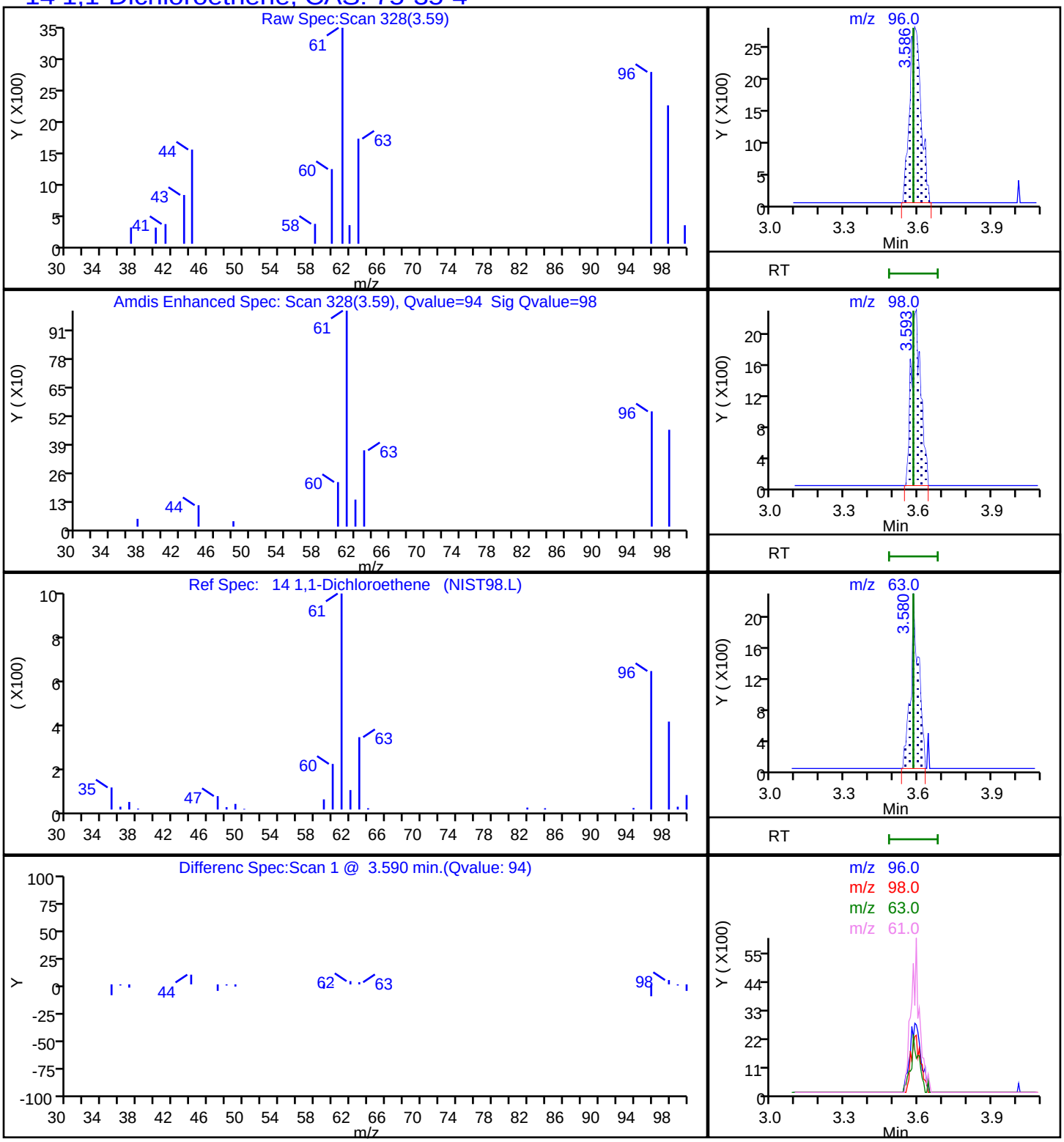
First Level Reviewer: mellingerc Date: 05-Oct-2020 13:52:04

Compound	Amount Added	Amount Recovered	% Rec.
$ 46 Dibromofluoromethane (Surr)	10.0	9.67	96.67
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	9.51	95.10
$ 75 Toluene-d8 (Surr)	10.0	10.9	109.18
$ 100 4-Bromofluorobenzene (Surr)	10.0	10.6	105.93

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s17.D				
Injection Date:	03-Oct-2020 14:47:30	Instrument ID:	19930		
Lims ID:	410-15232-A-7	Lab Sample ID:	410-15232-7		
Client ID:	HD-COD-SW-26-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	22	Worklist Smp#:	23
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

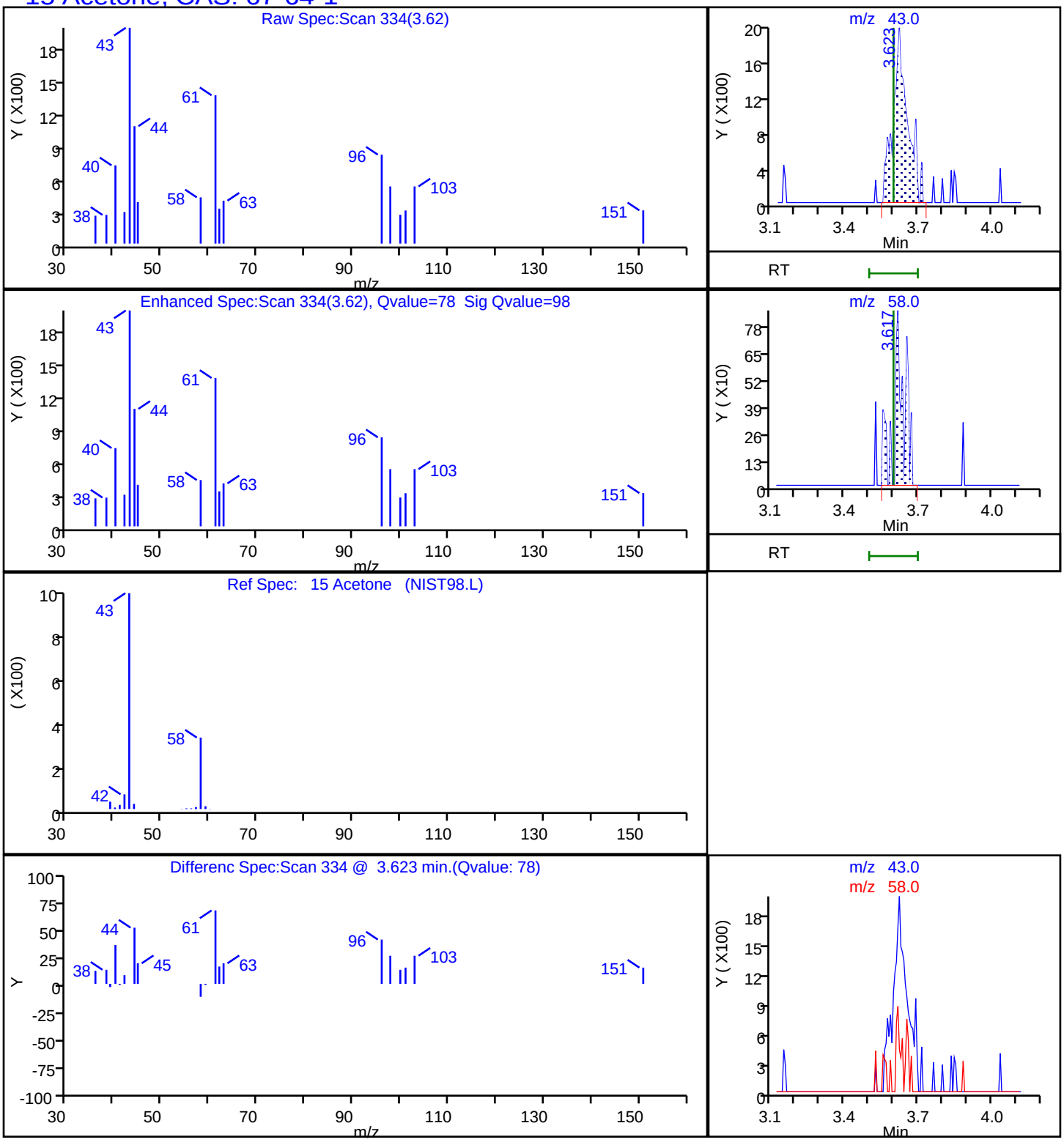
14 1,1-Dichloroethene, CAS: 75-35-4



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s17.D				
Injection Date:	03-Oct-2020 14:47:30	Instrument ID:	19930		
Lims ID:	410-15232-A-7	Lab Sample ID:	410-15232-7		
Client ID:	HD-COD-SW-26-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	22	Worklist Smp#:	23
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

15 Acetone, CAS: 67-64-1



Report Date: 05-Oct-2020 14:05:15 Chrom Revision: 2.3 24-Sep-2020 19:22:38

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s17.D

Injection Date: 03-Oct-2020 14:47:30 Instrument ID: 19930

Lims ID: 410-15232-A-7 Lab Sample ID: 410-15232-7

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

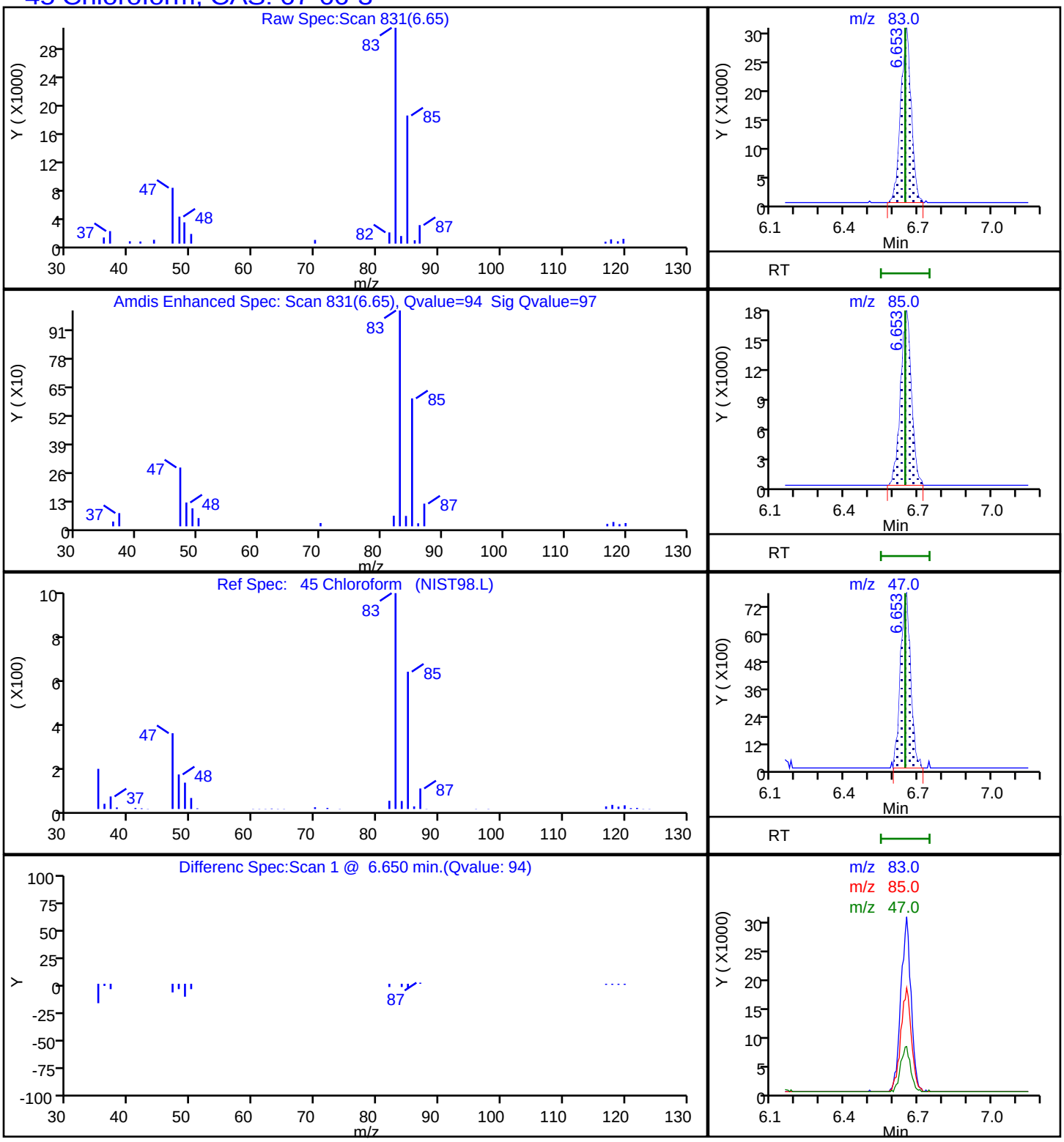
Operator ID: jkh09052 ALS Bottle#: 22 Worklist Smp#: 23

Purge Vol: 25.000 mL Dil. Factor: 1.0000

Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

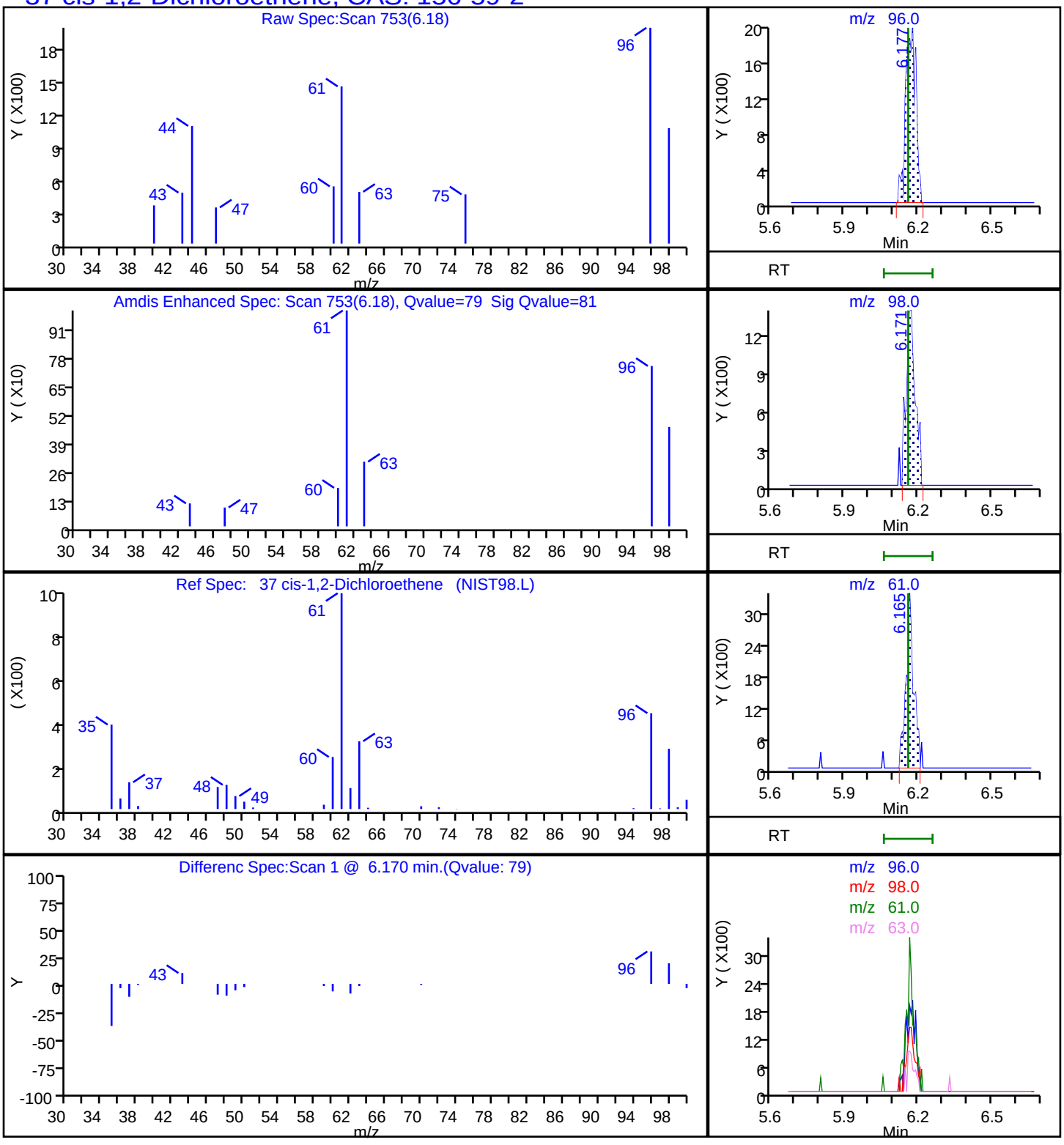
45 Chloroform, CAS: 67-66-3



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s17.D				
Injection Date:	03-Oct-2020 14:47:30	Instrument ID:	19930		
Lims ID:	410-15232-A-7	Lab Sample ID:	410-15232-7		
Client ID:	HD-COD-SW-26-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	22	Worklist Smp#:	23
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

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



Report Date: 05-Oct-2020 14:05:15 Chrom Revision: 2.3 24-Sep-2020 19:22:38

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s17.D

Injection Date: 03-Oct-2020 14:47:30 Instrument ID: 19930

Lims ID: 410-15232-A-7 Lab Sample ID: 410-15232-7

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

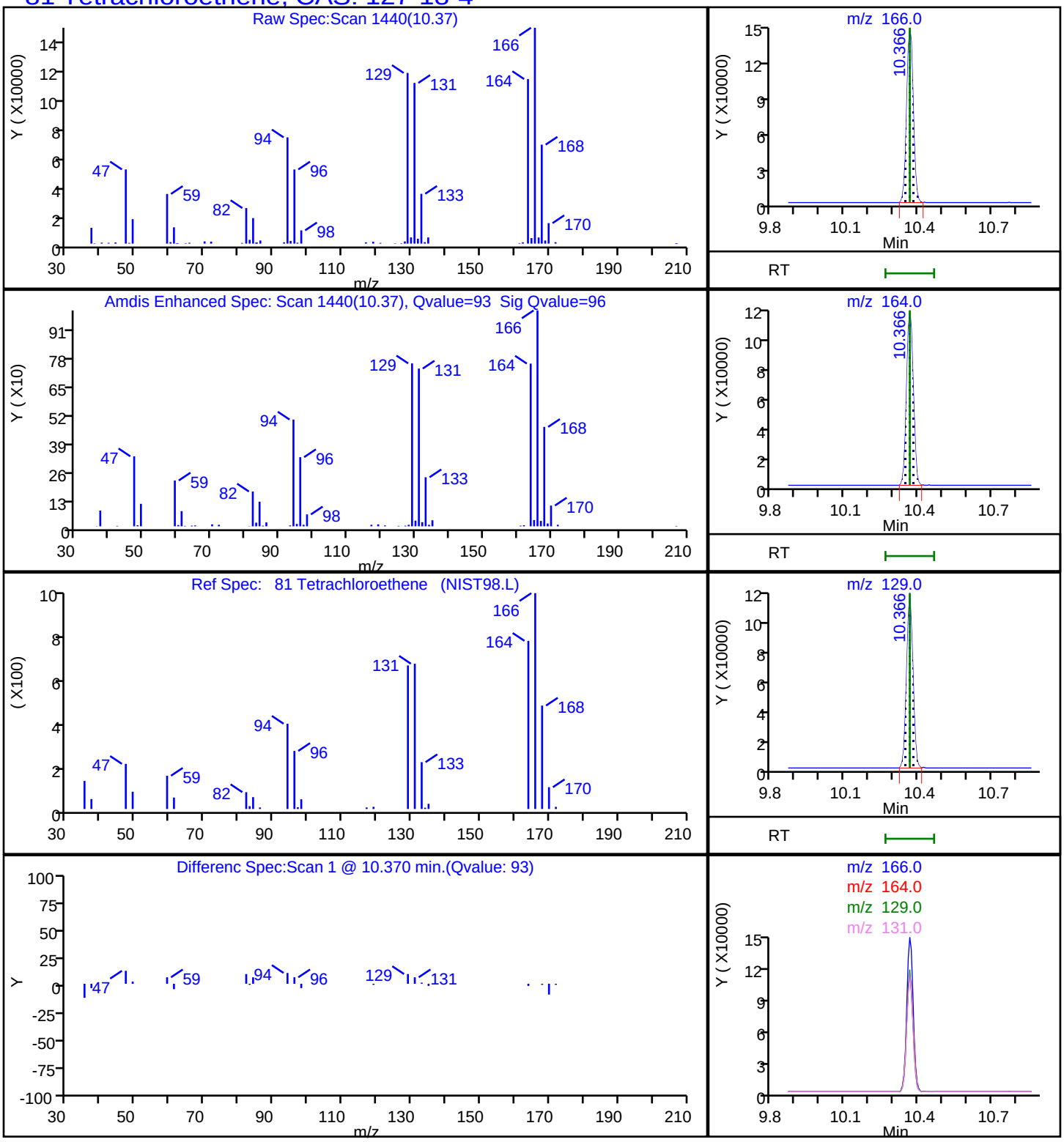
Operator ID: jkh09052 ALS Bottle#: 22 Worklist Smp#: 23

Purge Vol: 25.000 mL Dil. Factor: 1.0000

Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

81 Tetrachloroethene, CAS: 127-18-4



Report Date: 05-Oct-2020 14:05:15 Chrom Revision: 2.3 24-Sep-2020 19:22:38

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s17.D

Injection Date: 03-Oct-2020 14:47:30 Instrument ID: 19930

Lims ID: 410-15232-A-7 Lab Sample ID: 410-15232-7

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

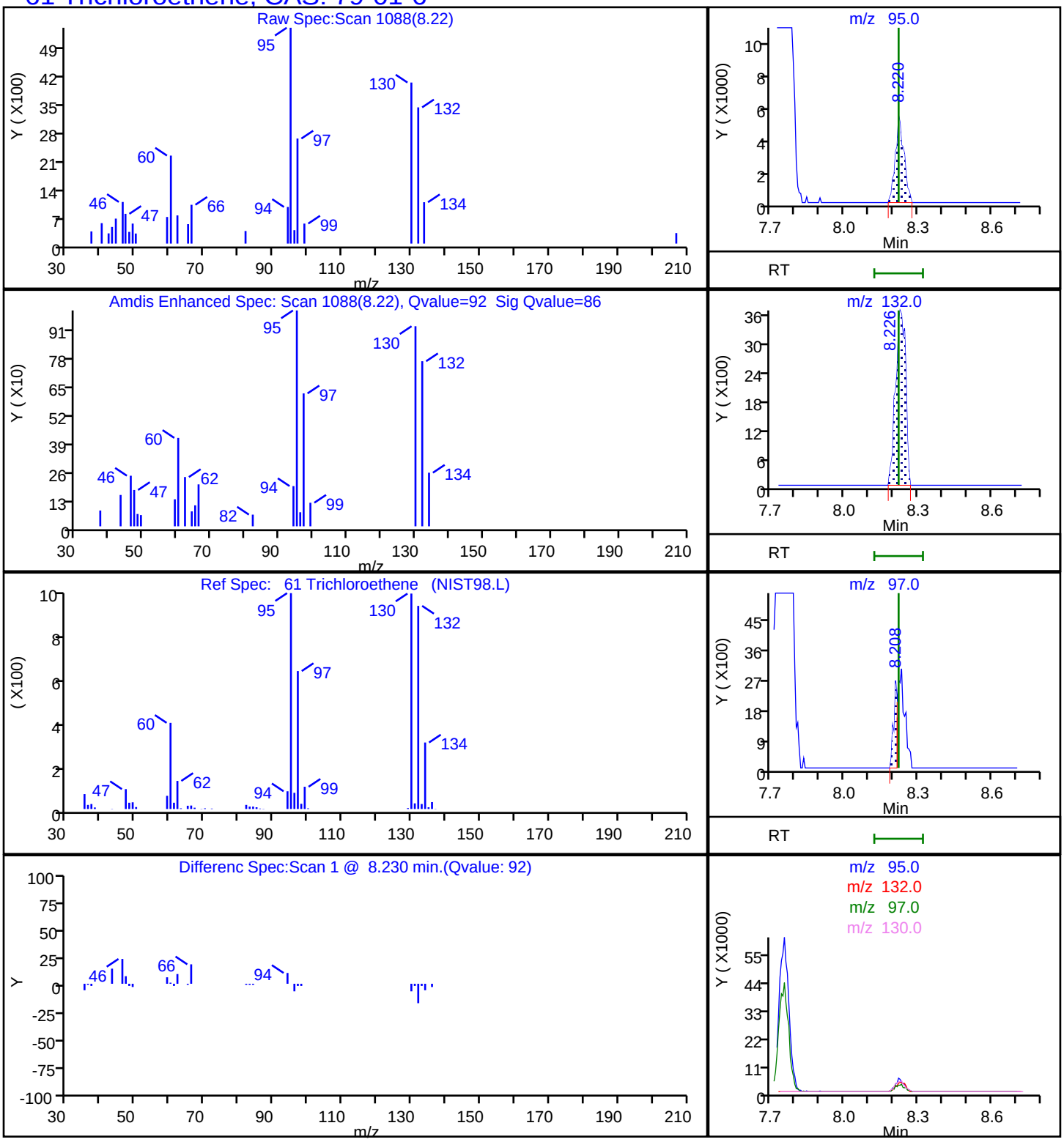
Operator ID: jkh09052 ALS Bottle#: 22 Worklist Smp#: 23

Purge Vol: 25.000 mL Dil. Factor: 1.0000

Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

61 Trichloroethene, CAS: 79-01-6



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

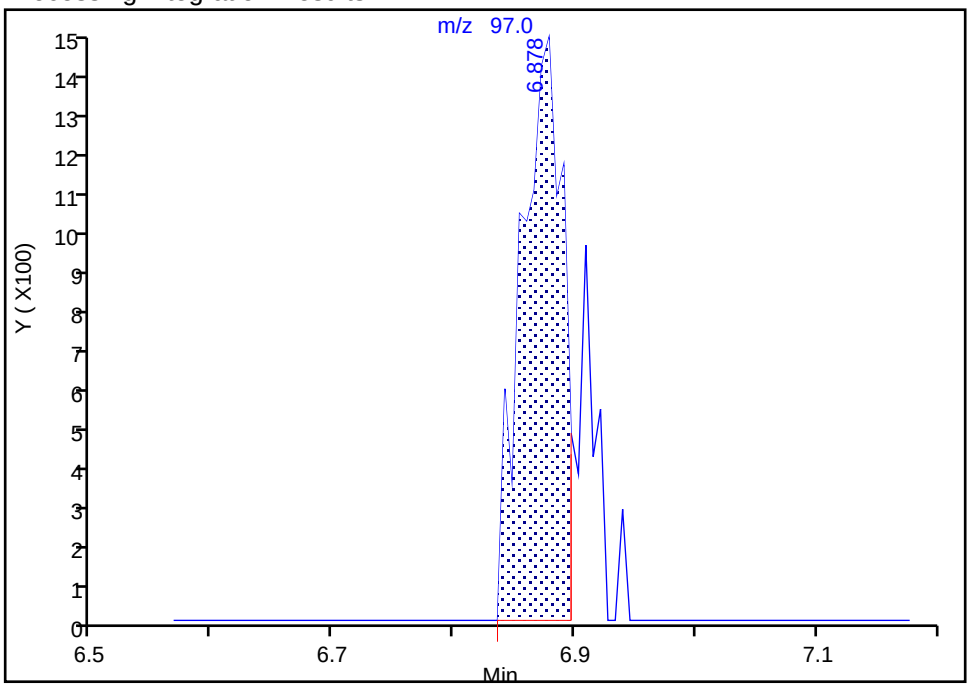
Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s17.D				
Injection Date:	03-Oct-2020 14:47:30	Instrument ID:	19930		
Lims ID:	410-15232-A-7	Lab Sample ID:	410-15232-7		
Client ID:	HD-COD-SW-26-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	22	Worklist Smp#:	23
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

47 1,1,1-Trichloroethane, CAS: 71-55-6

Signal: 1

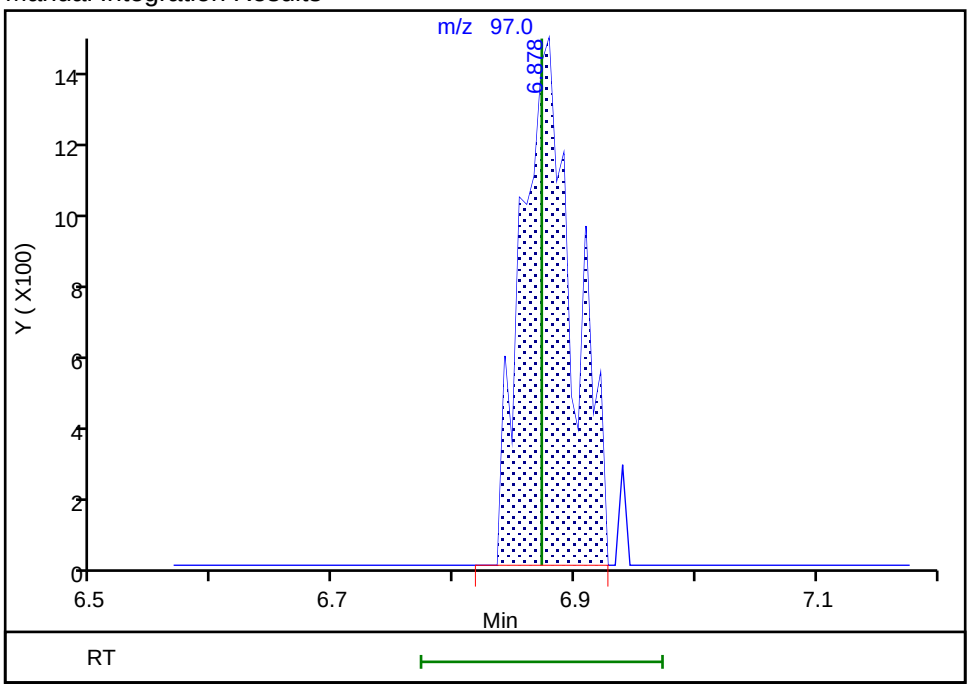
Processing Integration Results

RT: 6.88
Area: 3496
Amount: 0.034391
Amount Units: ug/l



Manual Integration Results

RT: 6.88
Area: 4323
Amount: 0.042526
Amount Units: ug/l



Reviewer: mellingerc, 05-Oct-2020 13:51:49

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

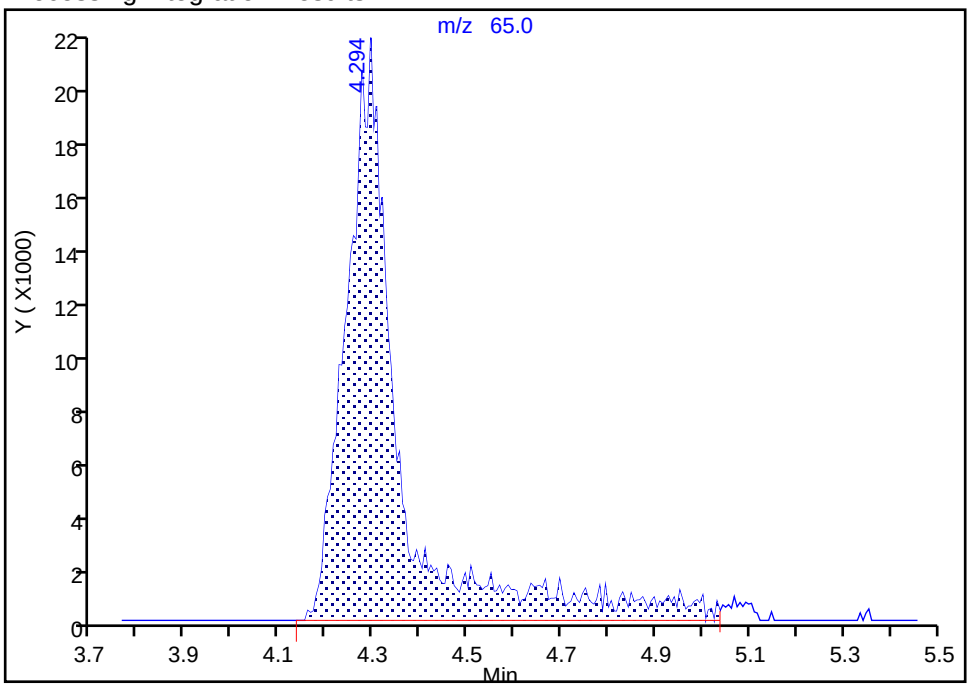
Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s17.D				
Injection Date:	03-Oct-2020 14:47:30	Instrument ID:	19930		
Lims ID:	410-15232-A-7	Lab Sample ID:	410-15232-7		
Client ID:	HD-COD-SW-26-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	22	Worklist Smp#:	23
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

* 24 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

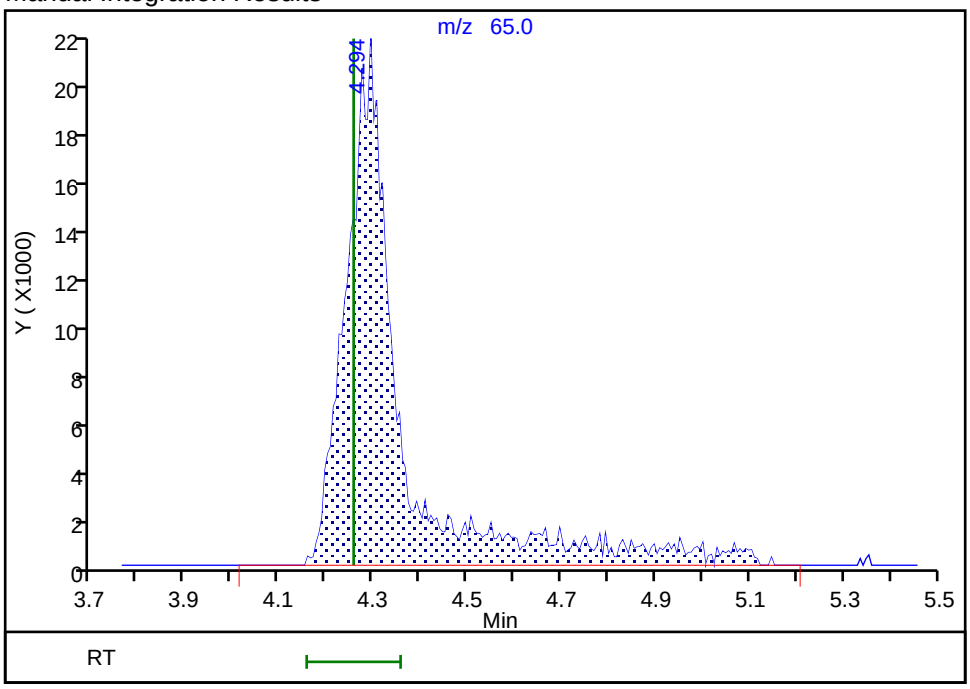
Processing Integration Results

RT: 4.29
Area: 163729
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 4.29
Area: 166425
Amount: 50.000000
Amount Units: ug/l



Reviewer: mellingerc, 05-Oct-2020 13:51:28

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-15232-1

SDG No.:

Client Sample ID: HD-COD-SW-7-0/1-0 Lab Sample ID: 410-15232-8

Matrix: Water Lab File ID: Io03s18.D

Analysis Method: 8260C LL Date Collected: 09/25/2020 12:10

Sample wt/vol: 25(mL) Date Analyzed: 10/03/2020 15:08

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.: 50506 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	^c	5.0	0.60
591-78-6	2-Hexanone	ND	^c	5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	^c	5.0	0.70
67-64-1	Acetone	2.2	J	5.0	0.90
107-13-1	Acrylonitrile	ND	^c	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	0.12	J	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	0.12	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 E Job No.: 410-15232-1

SDG No.:

Client Sample ID: HD-COD-SW-7-0/1-0 Lab Sample ID: 410-15232-8

Matrix: Water Lab File ID: Io03s18.D

Analysis Method: 8260C LL Date Collected: 09/25/2020 12:10

Sample wt/vol: 25(mL) Date Analyzed: 10/03/2020 15:08

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.: 50506 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	0.15	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)	103		80-120
1868-53-7	Dibromofluoromethane (Surr)	98		80-120
2037-26-5	Toluene-d8 (Surr)	107		80-120
460-00-4	4-Bromofluorobenzene (Surr)	104		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\Io03s18.D
Lims ID: 410-15232-A-8
Client ID: HD-COD-SW-7-0/1-0
Sample Type: Client
Inject. Date: 03-Oct-2020 15:08:30 ALS Bottle#: 23 Worklist Smp#: 24
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0011975-024
Misc. Info.: 410-15232-A-8
Operator ID: jkh09052 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 05-Oct-2020 14:04:24 Calib Date: 09-Sep-2020 21:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1036

First Level Reviewer: mellingerc Date: 05-Oct-2020 13:53:27

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
4 Chloromethane	50	2.160	2.172	-0.012	41	9534	0.1225	M
5 Vinyl chloride	62		2.288				ND	7
7 Bromomethane	94		2.617				ND	7
8 Chloroethane	64		2.703				ND	7
14 1,1-Dichloroethene	96		3.580				ND	
15 Acetone	43	3.617	3.599	0.018	98	18542	2.25	
19 Carbon disulfide	76	3.891	3.885	0.006	99	16108	0.1185	
23 Methylene Chloride	84		4.251				ND	7
* 24 t-Butyl alcohol-d10 (IS)	65	4.275	4.257	0.018	0	165082	50.0	M
26 Acrylonitrile	53		4.599				ND	
27 Methyl tert-butyl ether	73		4.660				ND	
28 trans-1,2-Dichloroethene	96		4.678				ND	
31 1,1-Dichloroethane	63		5.330				ND	
36 2-Butanone (MEK)	43	6.141	6.129	0.012	60	4838	0.3918	
37 cis-1,2-Dichloroethene	96		6.159				ND	
43 Chlorobromomethane	128		6.495				ND	
45 Chloroform	83	6.653	6.647	0.006	88	8023	0.0773	
$ 46 Dibromofluoromethane (Surr)	113	6.860	6.860	0.000	91	509953	9.82	
47 1,1,1-Trichloroethane	97		6.872				ND	
50 Carbon tetrachloride	117		7.080				ND	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.311	7.311	0.000	0	97574	10.3	
54 Benzene	78		7.342				ND	7
56 1,2-Dichloroethane	62		7.415				ND	
* 58 Fluorobenzene (IS)	96	7.744	7.744	0.000	99	1920841	10.0	
61 Trichloroethene	95	8.226	8.220	0.006	94	9757	0.1478	M
63 1,2-Dichloropropane	63		8.555				ND	
68 Dichlorobromomethane	83		8.896				ND	
73 cis-1,3-Dichloropropene	75		9.439				ND	
74 4-Methyl-2-pentanone (MIBK)	43		9.604				ND	7
$ 75 Toluene-d8 (Surr)	98	9.744	9.744	0.000	94	2038482	10.7	
76 Toluene	92	9.823	9.823	0.000	93	7104	0.0470	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
78 trans-1,3-Dichloropropene	75		10.073				ND	
80 1,1,2-Trichloroethane	97		10.274				ND	
81 Tetrachloroethene	166	10.372	10.366	0.006	89	4055	0.0531	M
83 2-Hexanone	43		10.488				ND	7
85 Chlorodibromomethane	129		10.652				ND	
86 Ethylene Dibromide	107		10.762				ND	
* 87 Chlorobenzene-d5 (IS)	117	11.189	11.189	0.000	87	1546842	10.0	
90 Chlorobenzene	112		11.219				ND	
S 89 Xylenes, Total	106		11.245				ND	7
91 1,1,1,2-Tetrachloroethane	131		11.298				ND	
92 Ethylbenzene	91		11.305				ND	7
93 m-Xylene & p-Xylene	106		11.414				ND	7
94 o-Xylene	106		11.743				ND	7
95 Styrene	104		11.756				ND	7
96 Bromoform	173		11.920				ND	U
$ 100 4-Bromofluorobenzene (Surr)	95	12.188	12.189	-0.001	86	768090	10.4	
101 1,1,2,2-Tetrachloroethane	83		12.286				ND	
* 115 1,4-Dichlorobenzene-d4	152	13.066	13.066	0.000	97	811532	10.0	

QC Flag Legend

Processing Flags
7 - Failed Limit of Detection
Review Flags
M - Manually Integrated
U - Marked Undetected

Reagents:

MSV_31_826ISS_00003 Amount Added: 5.00 Units: uL Run Reagent

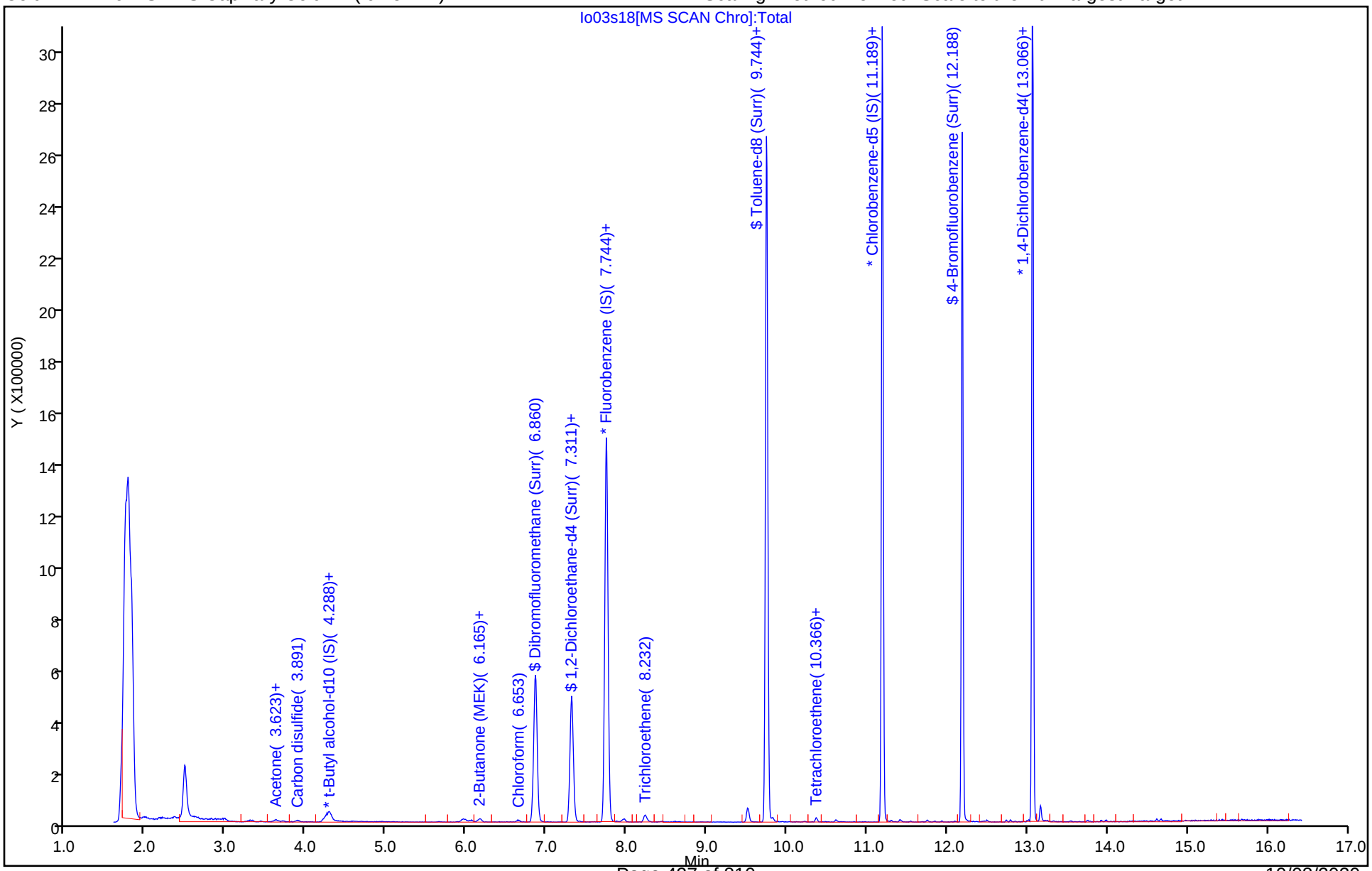
Report Date: 05-Oct-2020 14:05:17 Chrom Revision: 2.3 24-Sep-2020 19:22:38

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\Io03s18.D

Injection Date:	03-Oct-2020 15:08:30	Instrument ID:	19930	Operator ID:	jkh09052
Lims ID:	410-15232-A-8	Lab Sample ID:	410-15232-8	Worklist Smp#:	24
Client ID:	HD-COD-SW-7-0/1-0				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	23
Method:	8260 25ml HP31	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\19930\20201003-11975.b\Io03s18.D
Lims ID: 410-15232-A-8
Client ID: HD-COD-SW-7-0/1-0
Sample Type: Client
Inject. Date: 03-Oct-2020 15:08:30 ALS Bottle#: 23 Worklist Smp#: 24
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0011975-024
Misc. Info.: 410-15232-A-8
Operator ID: jkh09052 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 05-Oct-2020 14:04:24 Calib Date: 09-Sep-2020 21:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1036

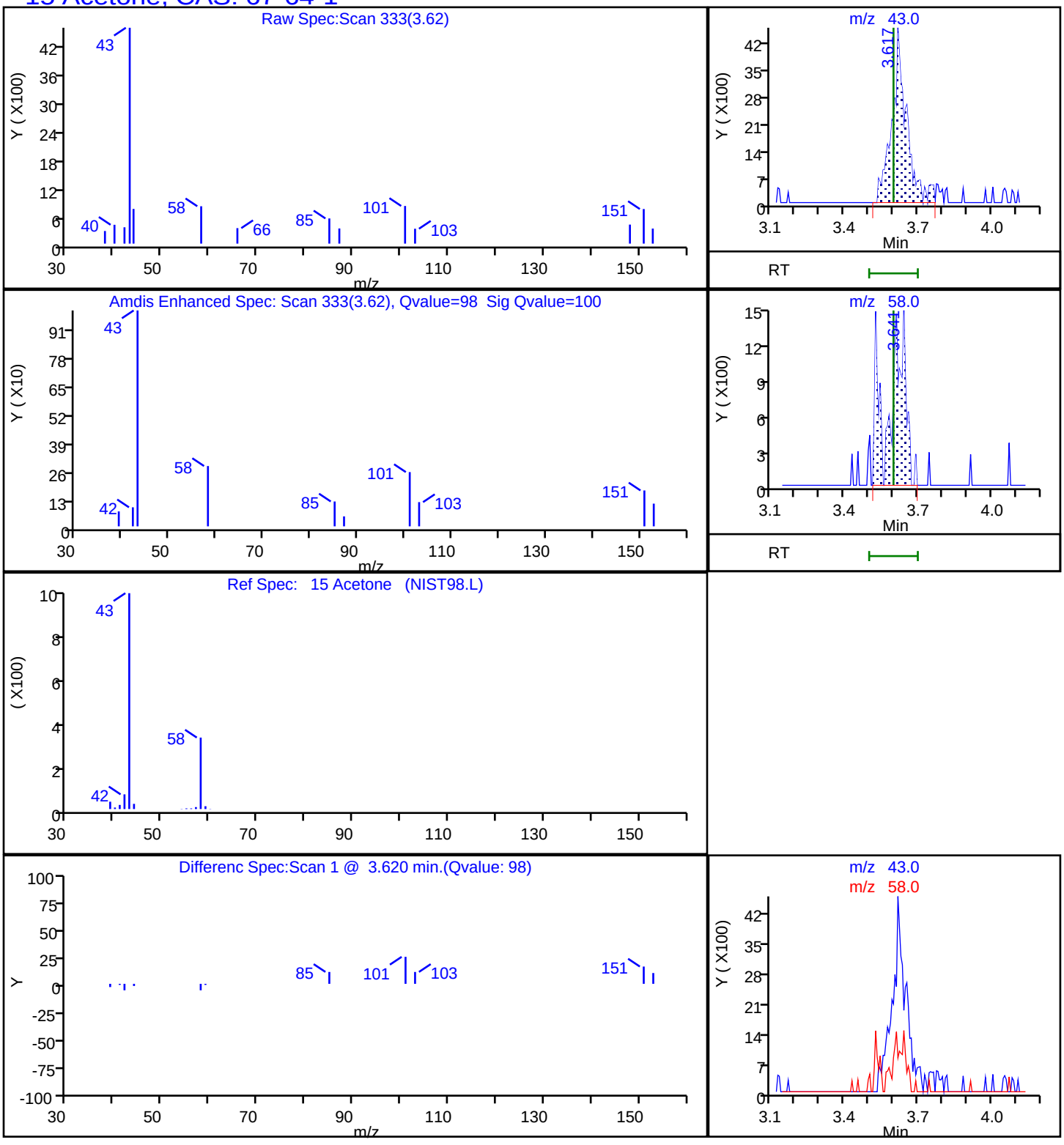
First Level Reviewer: mellingerc Date: 05-Oct-2020 13:53:27

Compound	Amount Added	Amount Recovered	% Rec.
$ 46 Dibromofluoromethane (Surr)	10.0	9.82	98.22
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.3	102.53
$ 75 Toluene-d8 (Surr)	10.0	10.7	107.50
$ 100 4-Bromofluorobenzene (Surr)	10.0	10.4	104.45

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s18.D				
Injection Date:	03-Oct-2020 15:08:30	Instrument ID:	19930		
Lims ID:	410-15232-A-8	Lab Sample ID:	410-15232-8		
Client ID:	HD-COD-SW-7-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	23	Worklist Smp#:	24
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

15 Acetone, CAS: 67-64-1



Report Date: 05-Oct-2020 14:05:17 Chrom Revision: 2.3 24-Sep-2020 19:22:38

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s18.D

Injection Date: 03-Oct-2020 15:08:30 Instrument ID: 19930

Lims ID: 410-15232-A-8 Lab Sample ID: 410-15232-8

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

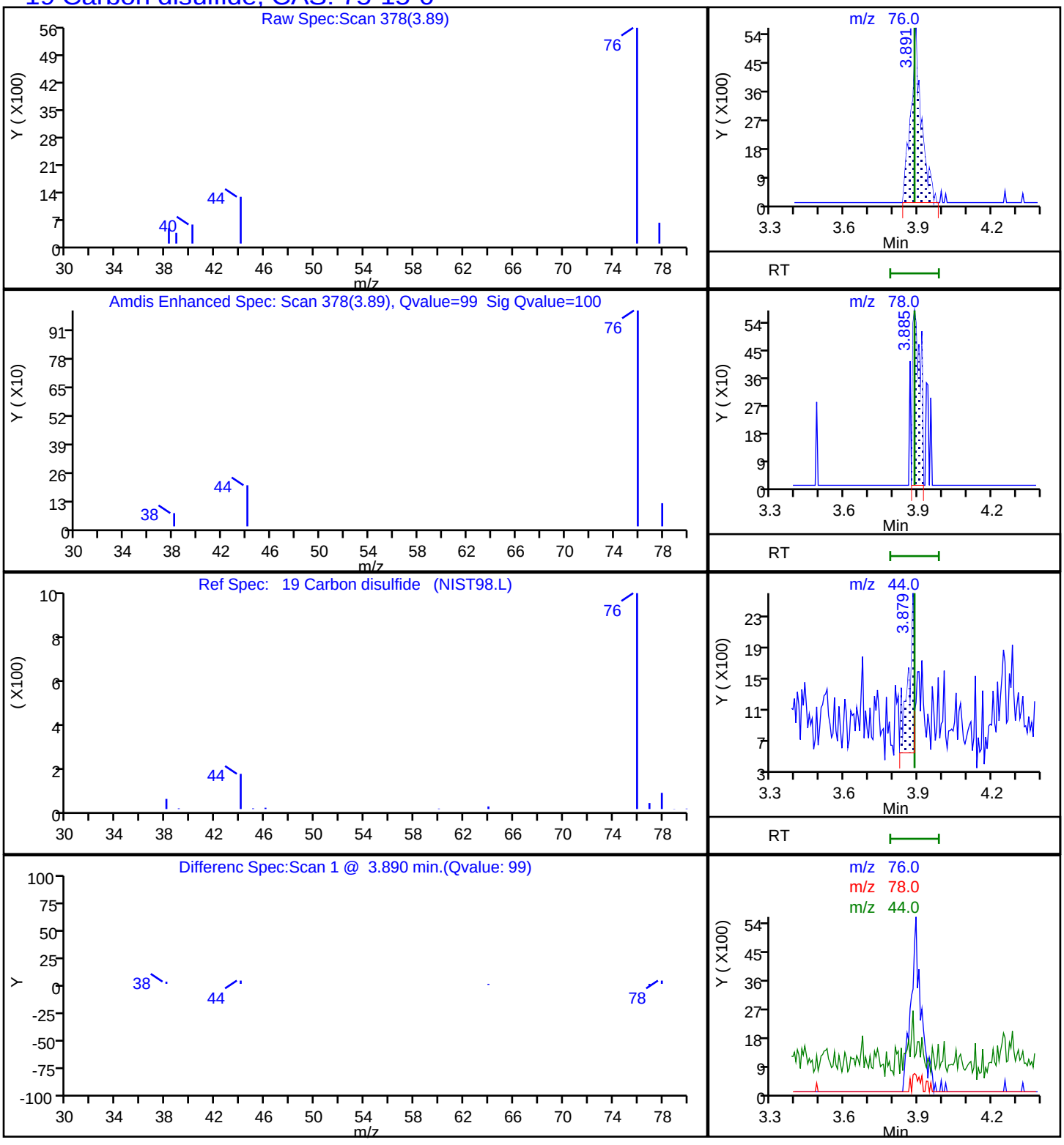
Operator ID: jkh09052 ALS Bottle#: 23 Worklist Smp#: 24

Purge Vol: 25.000 mL Dil. Factor: 1.0000

Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

19 Carbon disulfide, CAS: 75-15-0



Report Date: 05-Oct-2020 14:05:17 Chrom Revision: 2.3 24-Sep-2020 19:22:38

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s18.D

Injection Date: 03-Oct-2020 15:08:30 Instrument ID: 19930

Lims ID: 410-15232-A-8 Lab Sample ID: 410-15232-8

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

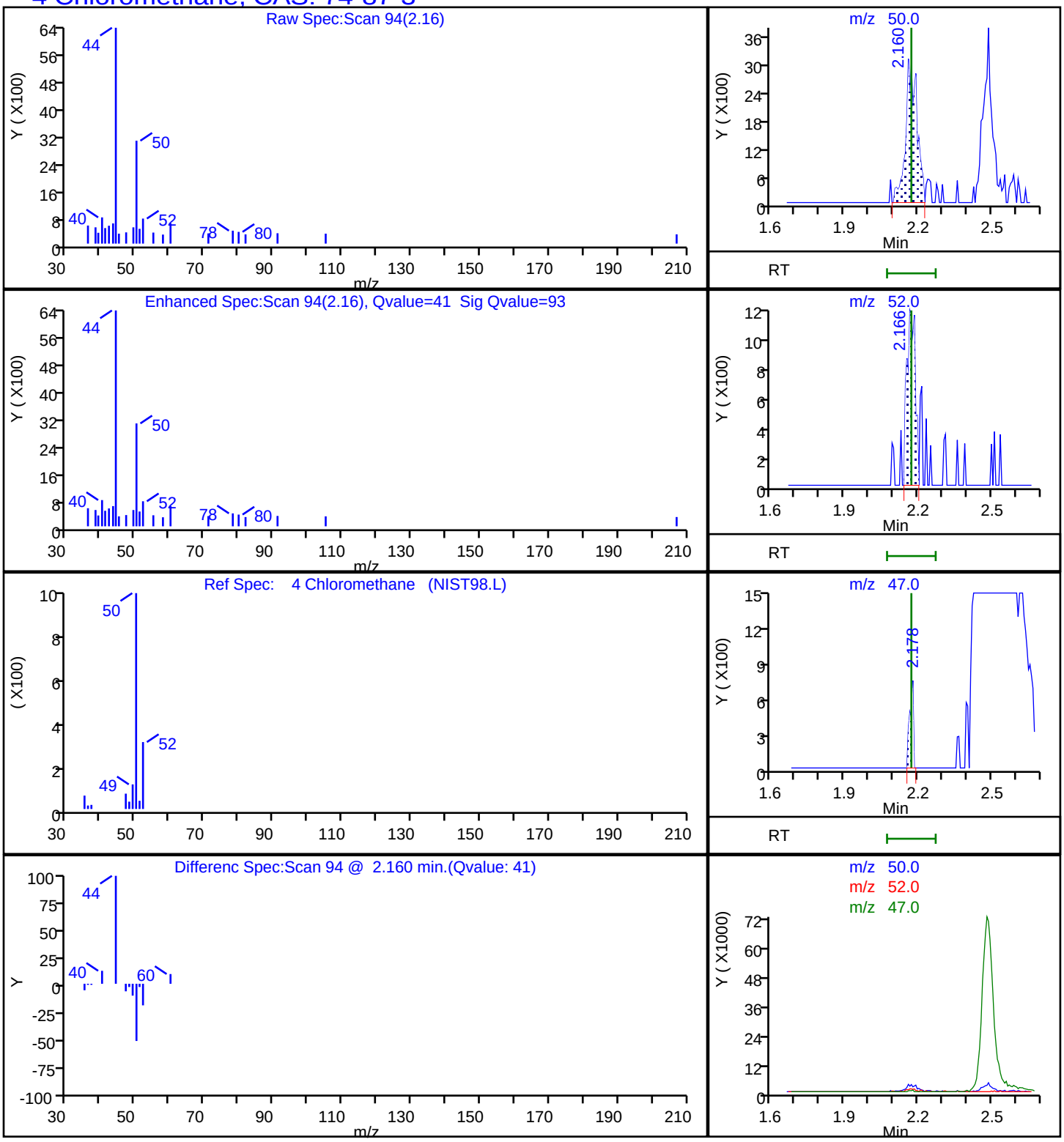
Operator ID: jkh09052 ALS Bottle#: 23 Worklist Smp#: 24

Purge Vol: 25.000 mL Dil. Factor: 1.0000

Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

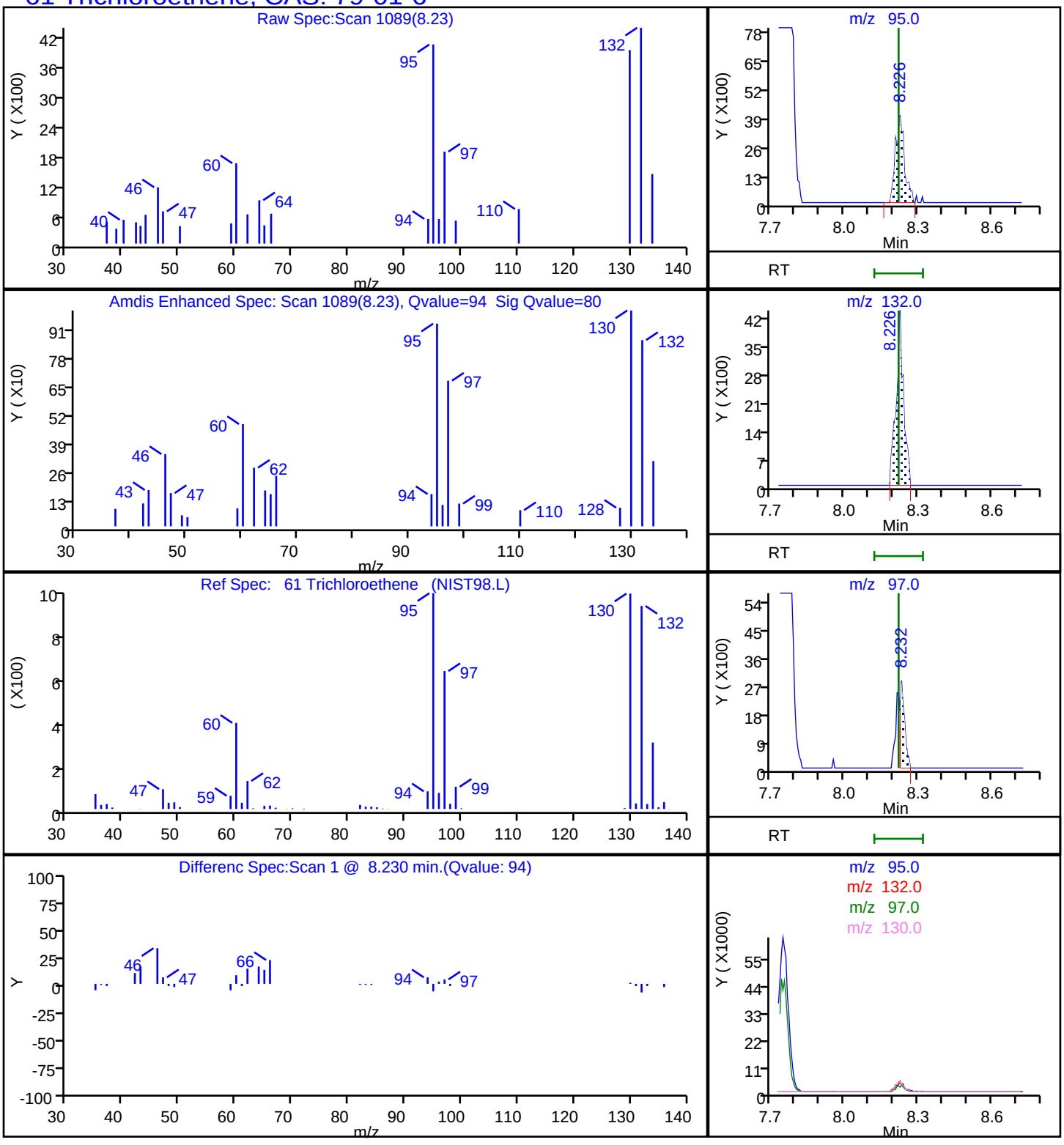
4 Chloromethane, CAS: 74-87-3



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s18.D				
Injection Date:	03-Oct-2020 15:08:30	Instrument ID:	19930		
Lims ID:	410-15232-A-8	Lab Sample ID:	410-15232-8		
Client ID:	HD-COD-SW-7-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	23	Worklist Smp#:	24
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

61 Trichloroethene, CAS: 79-01-6



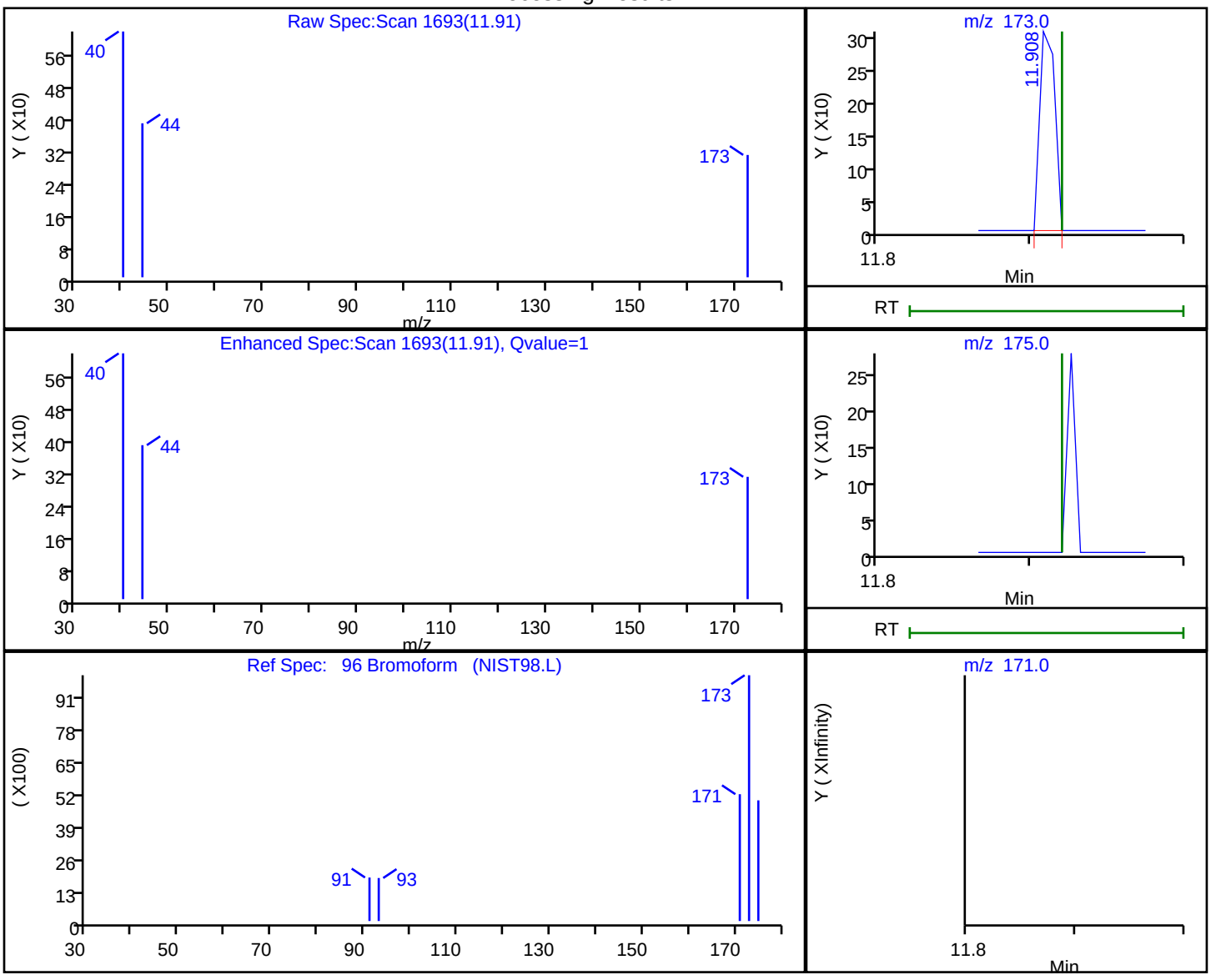
User Disabled Compound Report

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\Io03s18.D				
Injection Date:	03-Oct-2020 15:08:30	Instrument ID:	19930		
Lims ID:	410-15232-A-8	Lab Sample ID:	410-15232-8		
Client ID:	HD-COD-SW-7-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	23	Worklist Smp#:	24
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

96 Bromoform, CAS: 75-25-2

Processing Results



RT	Mass	Response	Amount
11.91	173.00	210	0.522856
11.92	175.00	0	
11.92	171.00	0	
11.92	252.00	0	

Reviewer: mellingerc, 05-Oct-2020 13:53:23

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

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

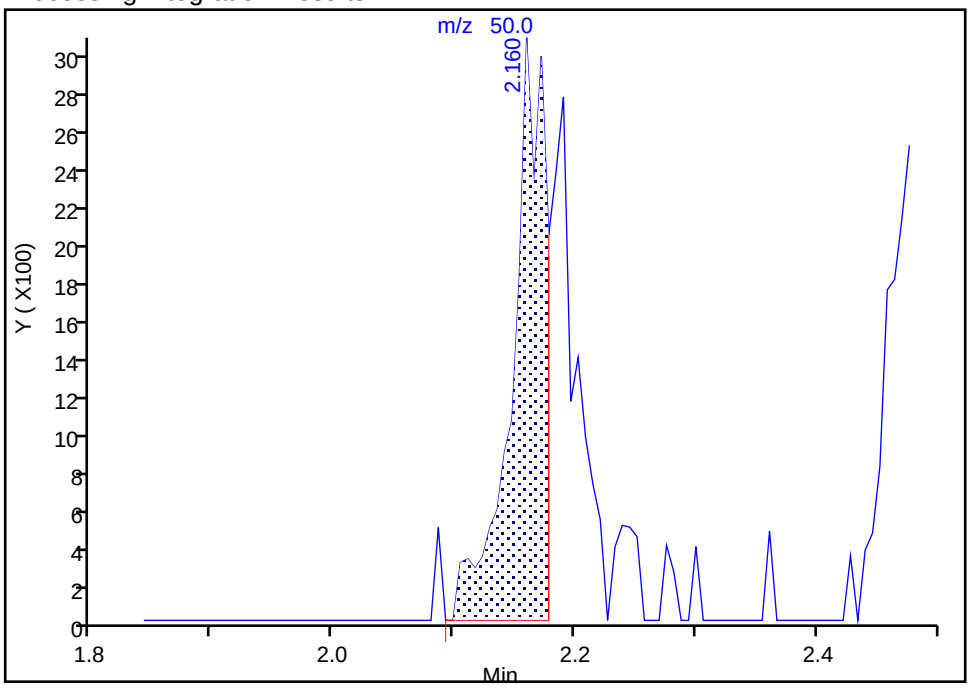
Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s18.D				
Injection Date:	03-Oct-2020 15:08:30	Instrument ID:	19930		
Lims ID:	410-15232-A-8	Lab Sample ID:	410-15232-8		
Client ID:	HD-COD-SW-7-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	23	Worklist Smp#:	24
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

4 Chloromethane, CAS: 74-87-3

Signal: 1

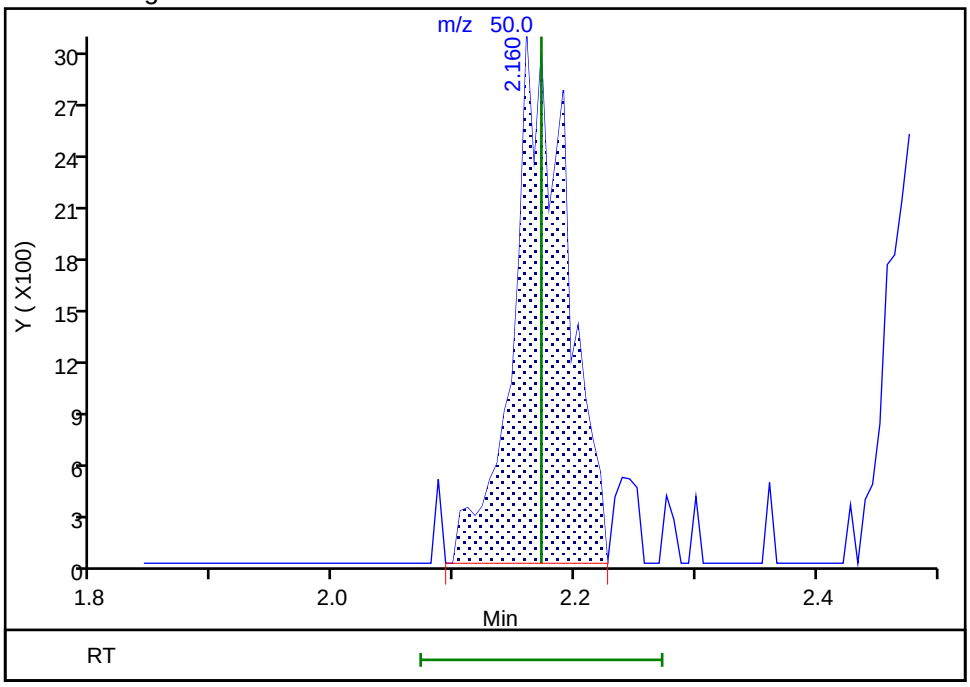
Processing Integration Results

RT: 2.16
Area: 5954
Amount: 0.076491
Amount Units: ug/l



Manual Integration Results

RT: 2.16
Area: 9534
Amount: 0.122484
Amount Units: ug/l



Reviewer: mellingerc, 05-Oct-2020 13:52:45

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

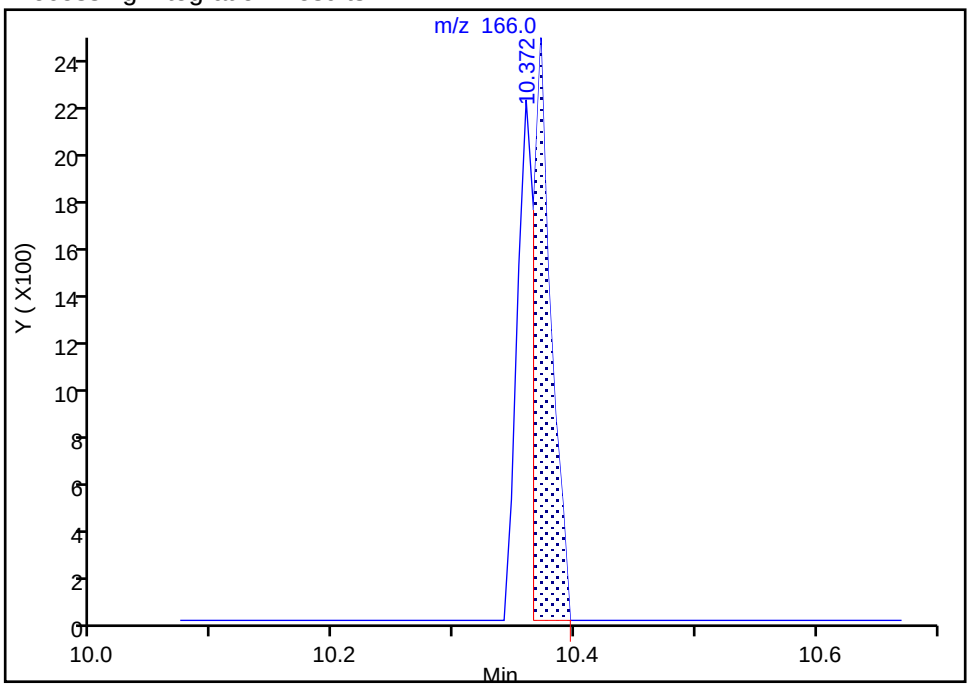
Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s18.D				
Injection Date:	03-Oct-2020 15:08:30	Instrument ID:	19930		
Lims ID:	410-15232-A-8	Lab Sample ID:	410-15232-8		
Client ID:	HD-COD-SW-7-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	23	Worklist Smp#:	24
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

81 Tetrachloroethene, CAS: 127-18-4

Signal: 1

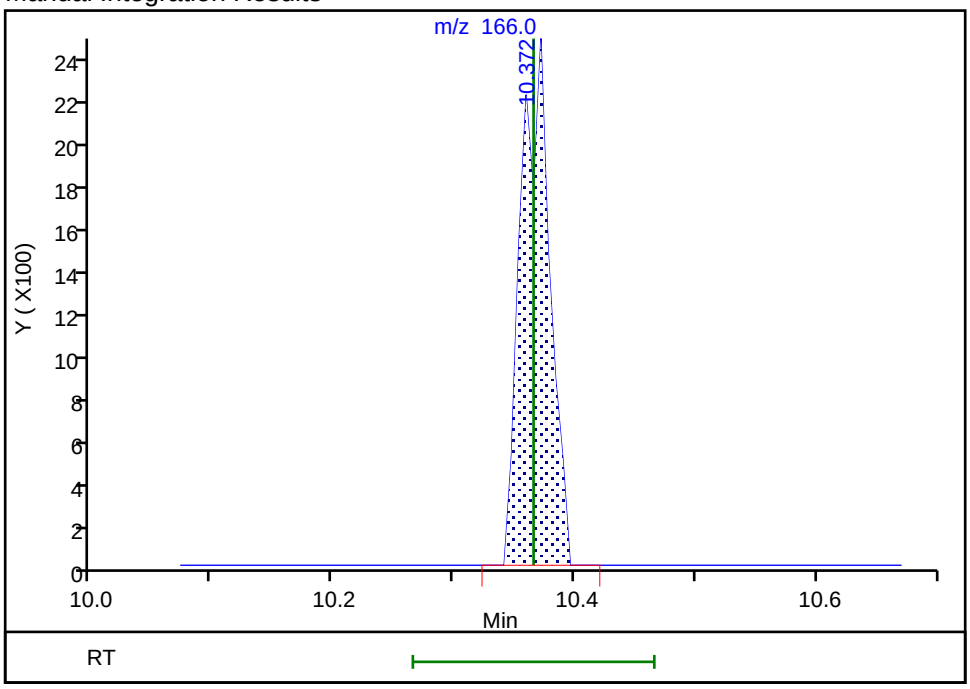
Processing Integration Results

RT: 10.37
Area: 2536
Amount: 0.033182
Amount Units: ug/l



Manual Integration Results

RT: 10.37
Area: 4055
Amount: 0.053057
Amount Units: ug/l



Reviewer: mellingerc, 05-Oct-2020 13:53:08

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

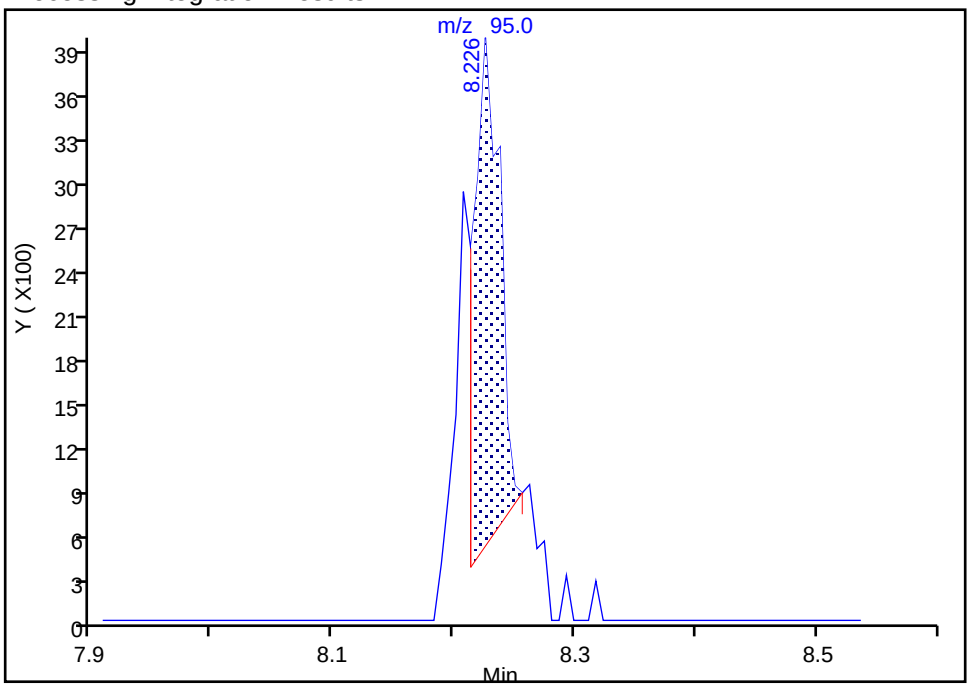
Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s18.D				
Injection Date:	03-Oct-2020 15:08:30	Instrument ID:	19930		
Lims ID:	410-15232-A-8	Lab Sample ID:	410-15232-8		
Client ID:	HD-COD-SW-7-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	23	Worklist Smp#:	24
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

61 Trichloroethene, CAS: 79-01-6

Signal: 1

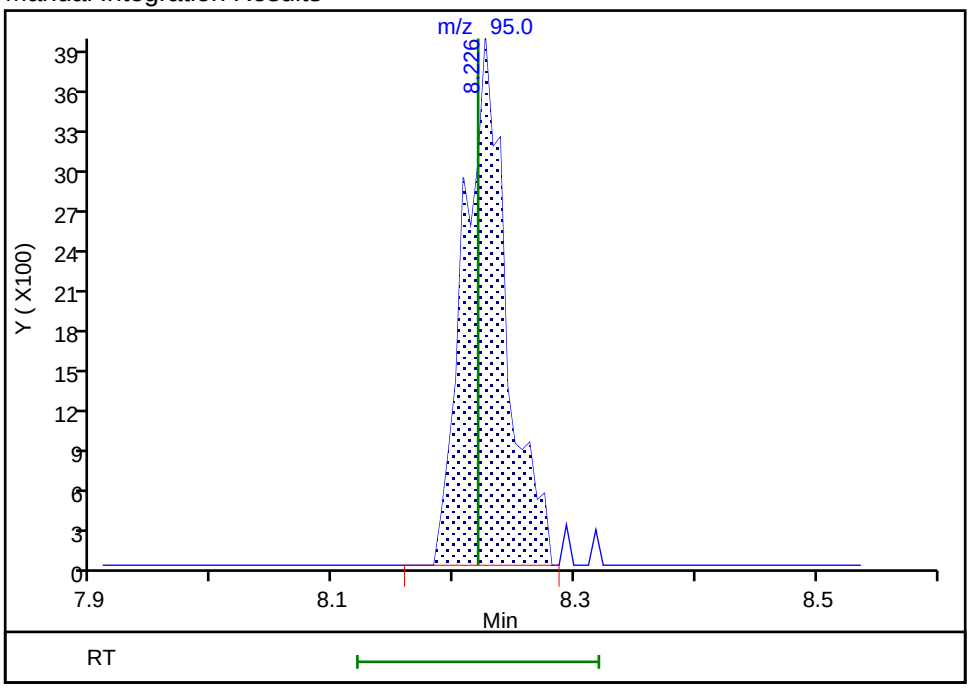
Processing Integration Results

RT: 8.23
Area: 5185
Amount: 0.078519
Amount Units: ug/l



Manual Integration Results

RT: 8.23
Area: 9757
Amount: 0.147754
Amount Units: ug/l



Reviewer: mellingerc, 05-Oct-2020 13:53:00
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

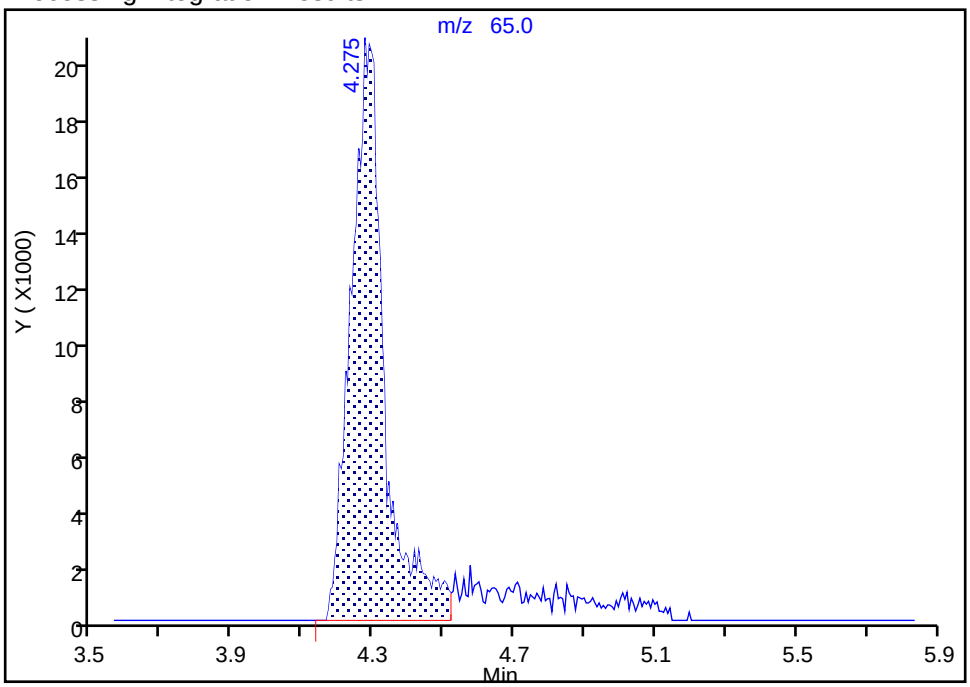
Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s18.D				
Injection Date:	03-Oct-2020 15:08:30	Instrument ID:	19930		
Lims ID:	410-15232-A-8	Lab Sample ID:	410-15232-8		
Client ID:	HD-COD-SW-7-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	23	Worklist Smp#:	24
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

* 24 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

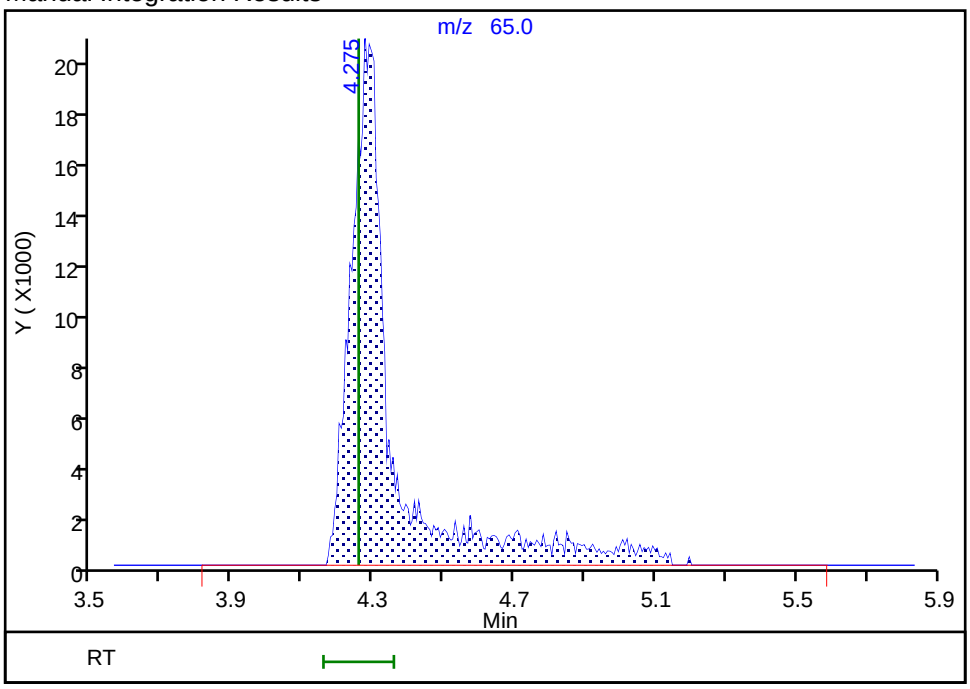
Processing Integration Results

RT: 4.28
Area: 135022
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 4.28
Area: 165082
Amount: 50.000000
Amount Units: ug/l



Reviewer: mellingerc, 05-Oct-2020 13:52:30

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-15232-1

SDG No.:

Client Sample ID: HD-COD-SW-27-0/1-0 Lab Sample ID: 410-15232-9

Matrix: Water Lab File ID: Io03s19.D

Analysis Method: 8260C LL Date Collected: 09/25/2020 12:20

Sample wt/vol: 25(mL) Date Analyzed: 10/03/2020 15:30

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.: 50506 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)	0.66	J ^c	5.0	0.60
591-78-6	2-Hexanone	ND	^c	5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	^c	5.0	0.70
67-64-1	Acetone	2.8	J	5.0	0.90
107-13-1	Acrylonitrile	ND	^c	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	0.12	J	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	0.11	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	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 E Job No.: 410-15232-1

SDG No.:

Client Sample ID: HD-COD-SW-27-0/1-0 Lab Sample ID: 410-15232-9

Matrix: Water Lab File ID: Io03s19.D

Analysis Method: 8260C LL Date Collected: 09/25/2020 12:20

Sample wt/vol: 25(mL) Date Analyzed: 10/03/2020 15:30

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.: 50506 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	0.11	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)	99		80-120
1868-53-7	Dibromofluoromethane (Surr)	96		80-120
2037-26-5	Toluene-d8 (Surr)	107		80-120
460-00-4	4-Bromofluorobenzene (Surr)	106		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\Io03s19.D
Lims ID: 410-15232-A-9
Client ID: HD-COD-SW-27-0/1-0
Sample Type: Client
Inject. Date: 03-Oct-2020 15:30:30 ALS Bottle#: 24 Worklist Smp#: 25
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0011975-025
Misc. Info.: 410-15232-A-9
Operator ID: jkh09052 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 05-Oct-2020 14:04:24 Calib Date: 09-Sep-2020 21:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1036

First Level Reviewer: mellingerc Date: 05-Oct-2020 13:54:30

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
4 Chloromethane	50		2.172				ND	
5 Vinyl chloride	62		2.288				ND	7
7 Bromomethane	94		2.617				ND	7
8 Chloroethane	64		2.703				ND	7
14 1,1-Dichloroethene	96		3.580				ND	
15 Acetone	43	3.605	3.599	0.006	98	23817	2.80	
19 Carbon disulfide	76	3.879	3.885	-0.006	96	17014	0.1238	
23 Methylene Chloride	84		4.251				ND	
* 24 t-Butyl alcohol-d10 (IS)	65	4.281	4.257	0.024	0	170006	50.0	M
26 Acrylonitrile	53		4.599				ND	
27 Methyl tert-butyl ether	73		4.660				ND	
28 trans-1,2-Dichloroethene	96		4.678				ND	
31 1,1-Dichloroethane	63		5.330				ND	
36 2-Butanone (MEK)	43	6.153	6.129	0.024	37	8355	0.6570	
37 cis-1,2-Dichloroethene	96	6.165	6.159	0.006	78	7214	0.1093	
43 Chlorobromomethane	128		6.495				ND	
45 Chloroform	83	6.647	6.647	0.000	93	7401	0.0706	
$ 46 Dibromofluoromethane (Surr)	113	6.860	6.860	0.000	91	503357	9.59	
47 1,1,1-Trichloroethane	97		6.872				ND	
50 Carbon tetrachloride	117		7.080				ND	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.317	7.311	0.006	0	95348	9.91	
54 Benzene	78		7.342				ND	7
56 1,2-Dichloroethane	62		7.415				ND	
* 58 Fluorobenzene (IS)	96	7.744	7.744	0.000	99	1941449	10.0	
61 Trichloroethene	95	8.244	8.220	0.024	92	7500	0.1124	M
63 1,2-Dichloropropane	63		8.555				ND	
68 Dichlorobromomethane	83		8.896				ND	7
73 cis-1,3-Dichloropropene	75		9.439				ND	
74 4-Methyl-2-pentanone (MIBK)	43		9.604				ND	7
$ 75 Toluene-d8 (Surr)	98	9.750	9.744	0.006	94	2030795	10.7	
76 Toluene	92	9.823	9.823	0.000	95	6326	0.0419	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
78 trans-1,3-Dichloropropene	75		10.073				ND	
80 1,1,2-Trichloroethane	97		10.274				ND	
81 Tetrachloroethene	166	10.366	10.366	0.000	78	4033	0.0528	
83 2-Hexanone	43		10.488				ND	7
85 Chlorodibromomethane	129		10.652				ND	
86 Ethylene Dibromide	107		10.762				ND	
* 87 Chlorobenzene-d5 (IS)	117	11.189	11.189	0.000	88	1545962	10.0	
90 Chlorobenzene	112		11.219				ND	7
S 89 Xylenes, Total	106		11.245				ND	7
91 1,1,1,2-Tetrachloroethane	131		11.298				ND	
92 Ethylbenzene	91		11.305				ND	7
93 m-Xylene & p-Xylene	106		11.414				ND	7
94 o-Xylene	106		11.743				ND	7
95 Styrene	104		11.756				ND	7
96 Bromoform	173		11.920				ND	
$ 100 4-Bromofluorobenzene (Surr)	95	12.188	12.189	-0.001	85	782291	10.6	
101 1,1,2,2-Tetrachloroethane	83		12.286				ND	
* 115 1,4-Dichlorobenzene-d4	152	13.066	13.066	0.000	97	813684	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

Reagents:

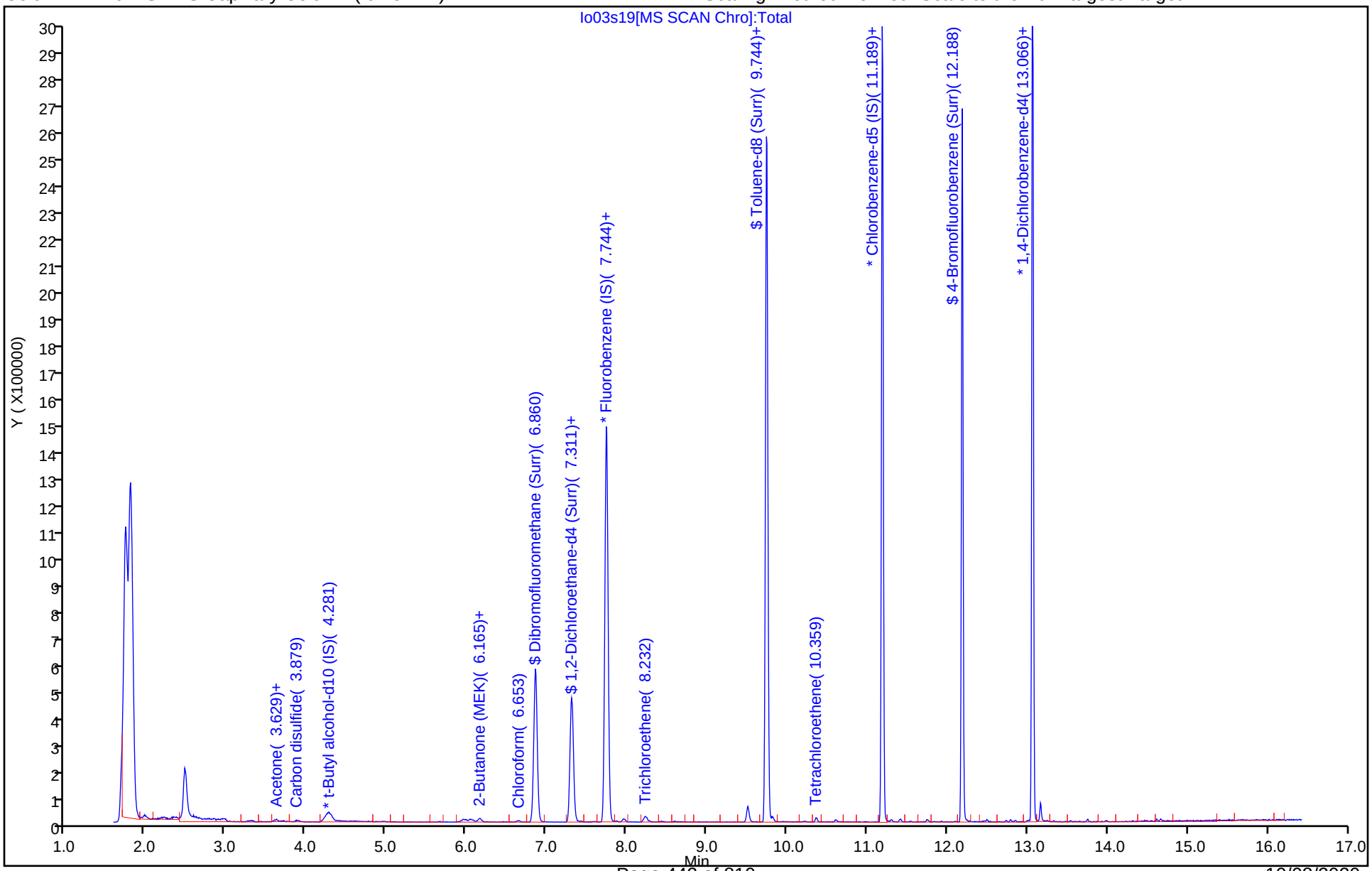
MSV_31_826ISS_00003 Amount Added: 5.00 Units: uL Run Reagent

Report Date: 05-Oct-2020 14:05:23 Chrom Revision: 2.3 24-Sep-2020 19:22:38

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\Io03s19.D				
Injection Date:	03-Oct-2020 15:30:30	Instrument ID:	19930	Operator ID:	jkh09052
Lims ID:	410-15232-A-9	Lab Sample ID:	410-15232-9	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:	8260 25ml HP31	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\19930\20201003-11975.b\Io03s19.D
Lims ID: 410-15232-A-9
Client ID: HD-COD-SW-27-0/1-0
Sample Type: Client
Inject. Date: 03-Oct-2020 15:30:30 ALS Bottle#: 24 Worklist Smp#: 25
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0011975-025
Misc. Info.: 410-15232-A-9
Operator ID: jkh09052 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 05-Oct-2020 14:04:24 Calib Date: 09-Sep-2020 21:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1036

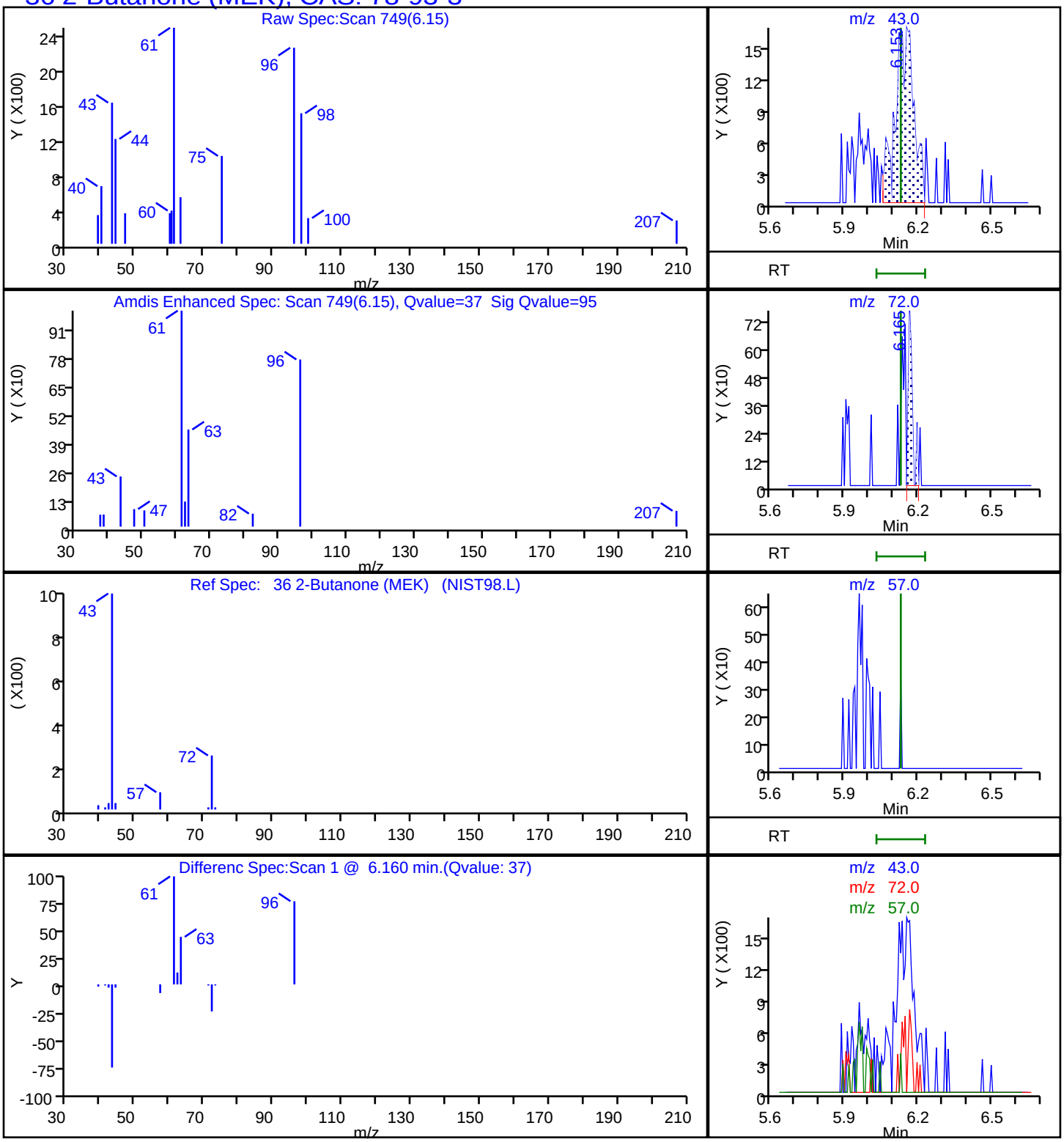
First Level Reviewer: mellingerc Date: 05-Oct-2020 13:54:30

Compound	Amount Added	Amount Recovered	% Rec.
$ 46 Dibromofluoromethane (Surr)	10.0	9.59	95.92
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	9.91	99.13
$ 75 Toluene-d8 (Surr)	10.0	10.7	107.15
$ 100 4-Bromofluorobenzene (Surr)	10.0	10.6	106.44

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s19.D				
Injection Date:	03-Oct-2020 15:30:30	Instrument ID:	19930		
Lims ID:	410-15232-A-9	Lab Sample ID:	410-15232-9		
Client ID:	HD-COD-SW-27-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	24	Worklist Smp#:	25
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

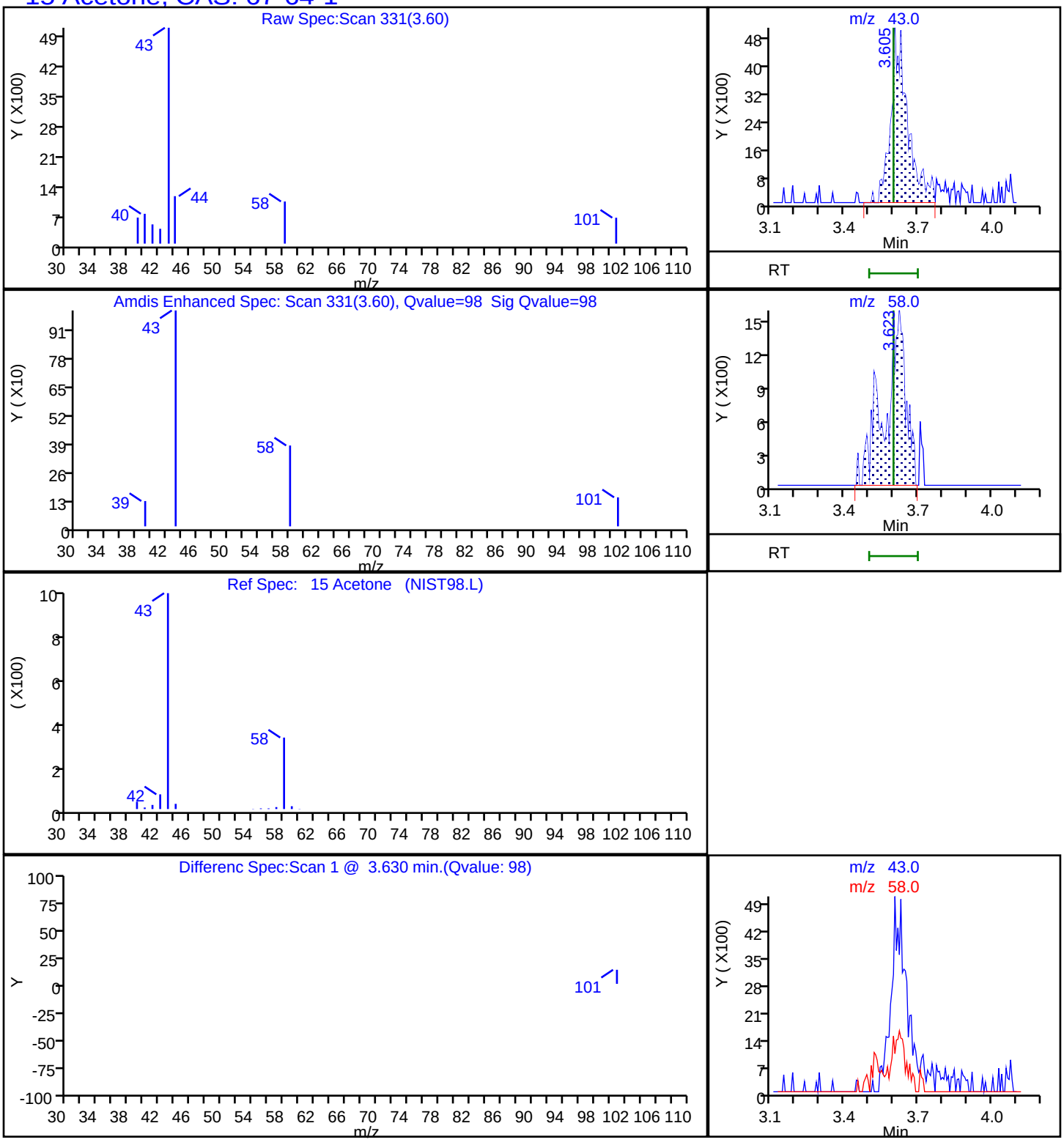
36 2-Butanone (MEK), CAS: 78-93-3



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s19.D				
Injection Date:	03-Oct-2020 15:30:30	Instrument ID:	19930		
Lims ID:	410-15232-A-9	Lab Sample ID:	410-15232-9		
Client ID:	HD-COD-SW-27-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	24	Worklist Smp#:	25
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

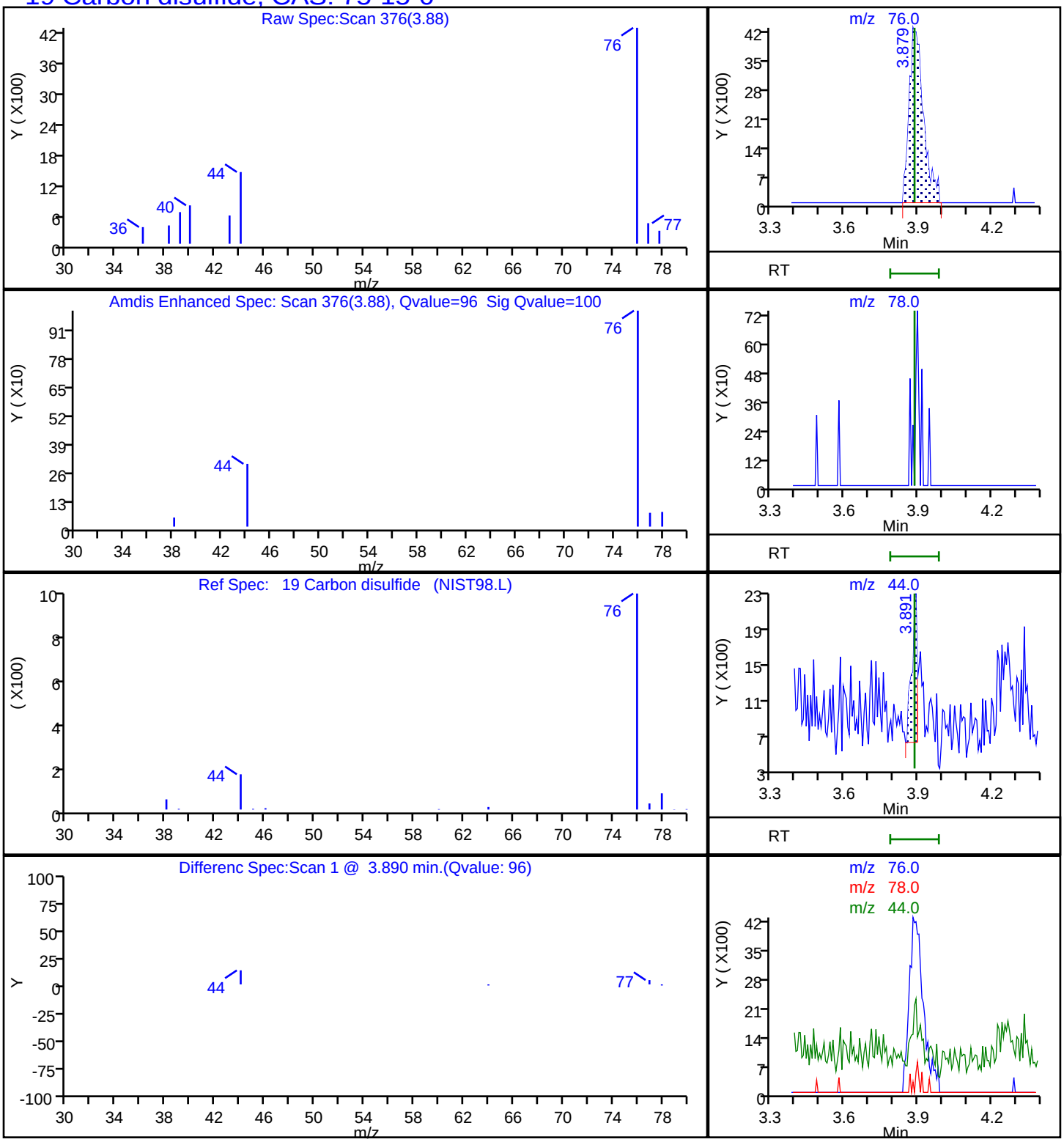
15 Acetone, CAS: 67-64-1



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s19.D				
Injection Date:	03-Oct-2020 15:30:30	Instrument ID:	19930		
Lims ID:	410-15232-A-9	Lab Sample ID:	410-15232-9		
Client ID:	HD-COD-SW-27-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	24	Worklist Smp#:	25
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

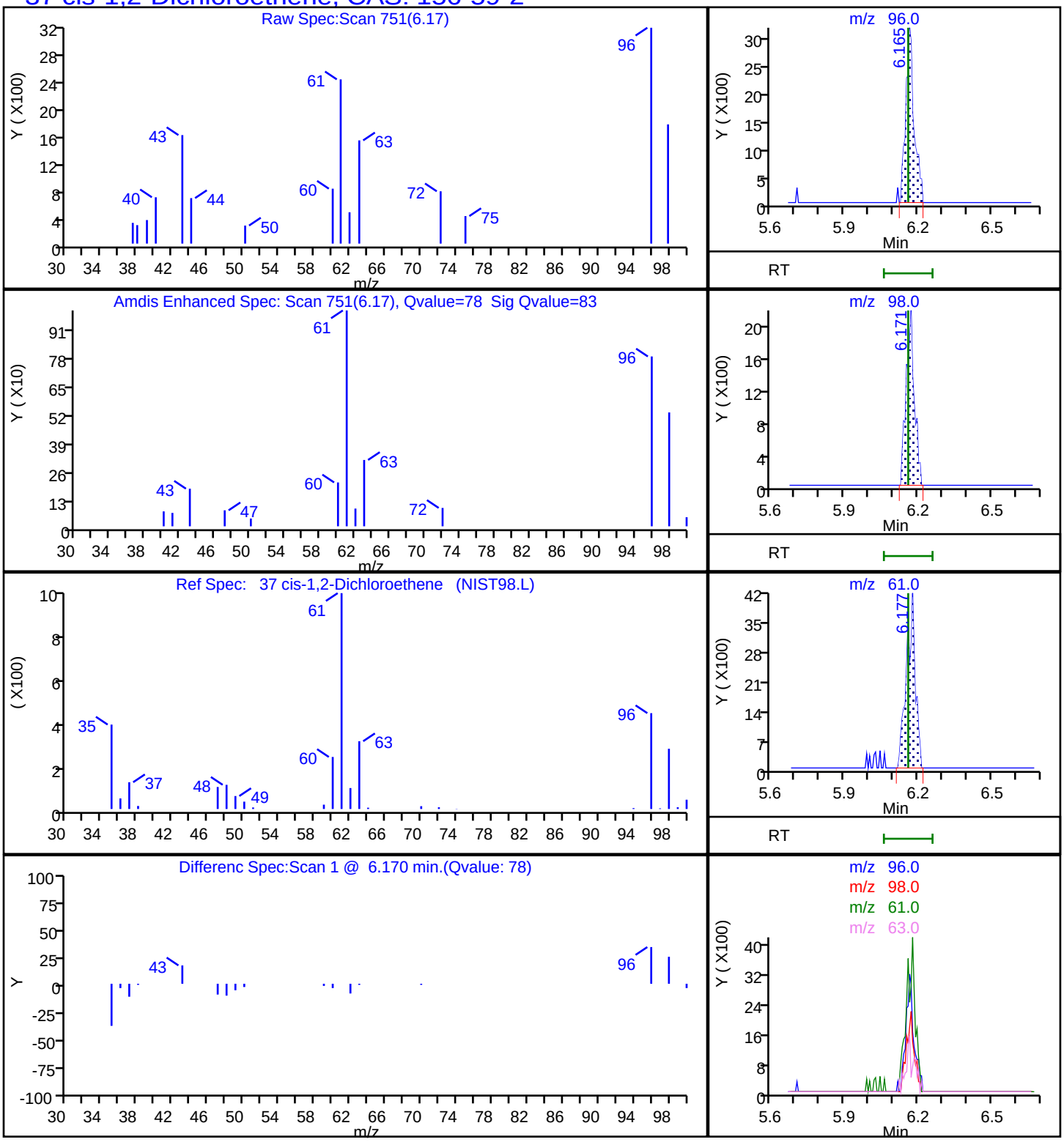
19 Carbon disulfide, CAS: 75-15-0



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s19.D				
Injection Date:	03-Oct-2020 15:30:30	Instrument ID:	19930		
Lims ID:	410-15232-A-9	Lab Sample ID:	410-15232-9		
Client ID:	HD-COD-SW-27-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	24	Worklist Smp#:	25
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

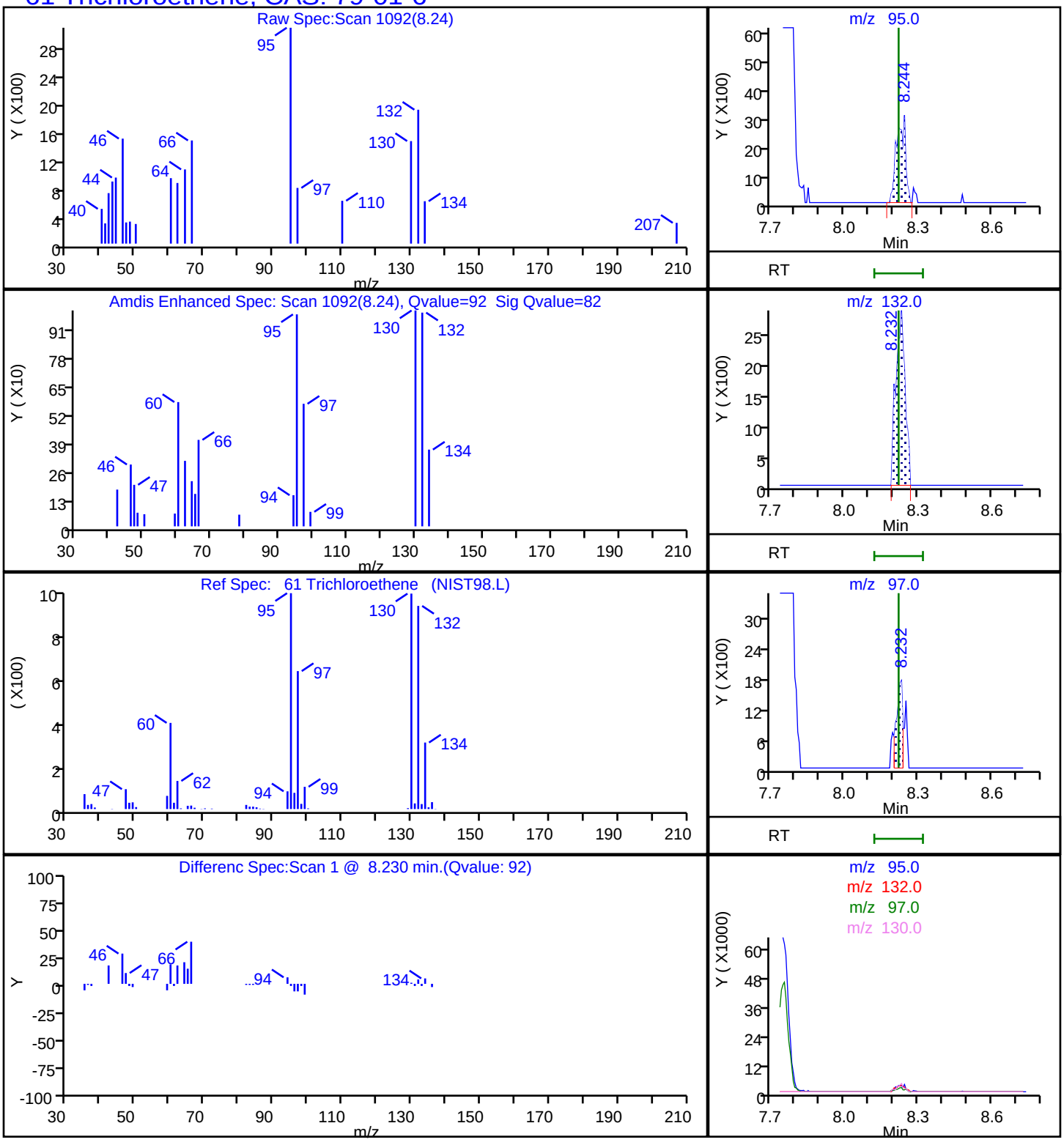
37 cis-1,2-Dichloroethene, CAS: 156-59-2



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s19.D
Injection Date: 03-Oct-2020 15:30:30 Instrument ID: 19930
Lims ID: 410-15232-A-9 Lab Sample ID: 410-15232-9
Client ID: HD-COD-SW-27-0/1-0
Operator ID: jkh09052 ALS Bottle#: 24 Worklist Smp#: 25
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

61 Trichloroethene, CAS: 79-01-6



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

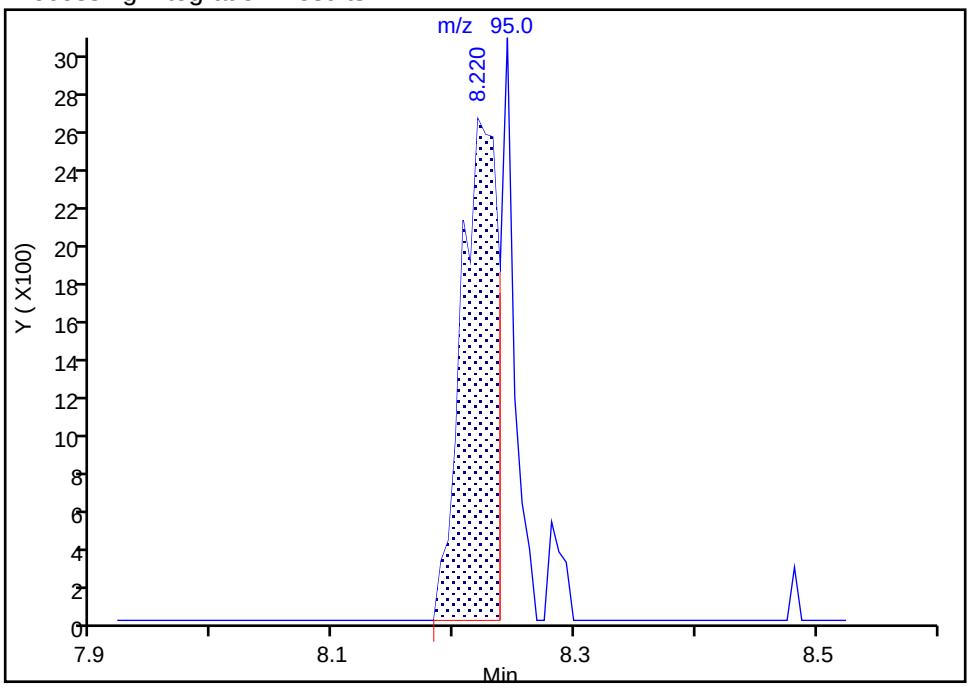
Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s19.D				
Injection Date:	03-Oct-2020 15:30:30	Instrument ID:	19930		
Lims ID:	410-15232-A-9	Lab Sample ID:	410-15232-9		
Client ID:	HD-COD-SW-27-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	24	Worklist Smp#:	25
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

61 Trichloroethene, CAS: 79-01-6

Signal: 1

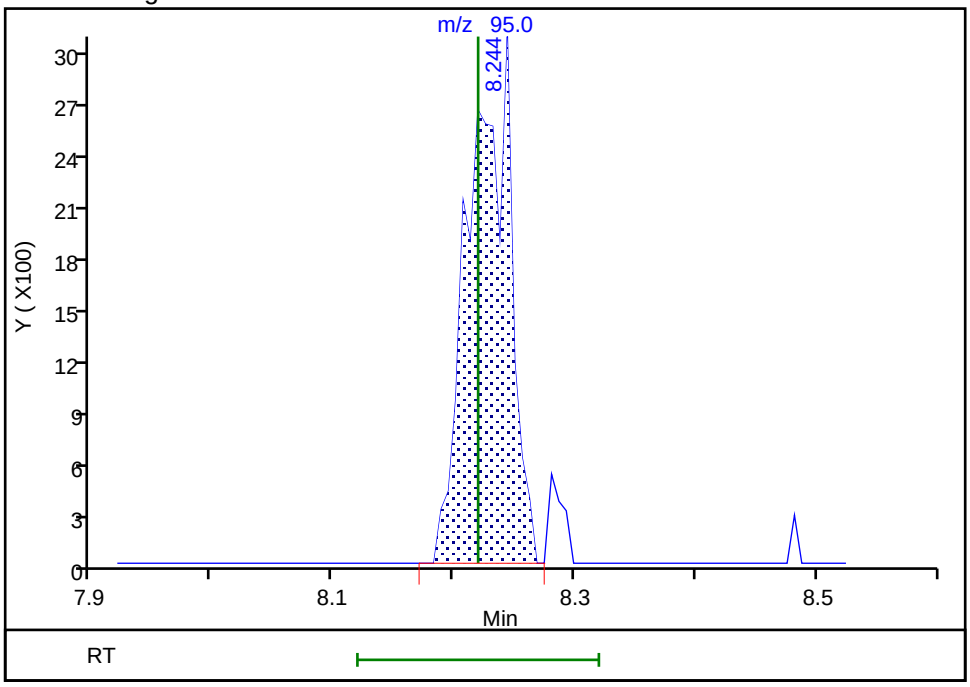
Processing Integration Results

RT: 8.22
Area: 5583
Amount: 0.083648
Amount Units: ug/l



Manual Integration Results

RT: 8.24
Area: 7500
Amount: 0.112370
Amount Units: ug/l



Reviewer: mellingerc, 05-Oct-2020 13:54:16

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

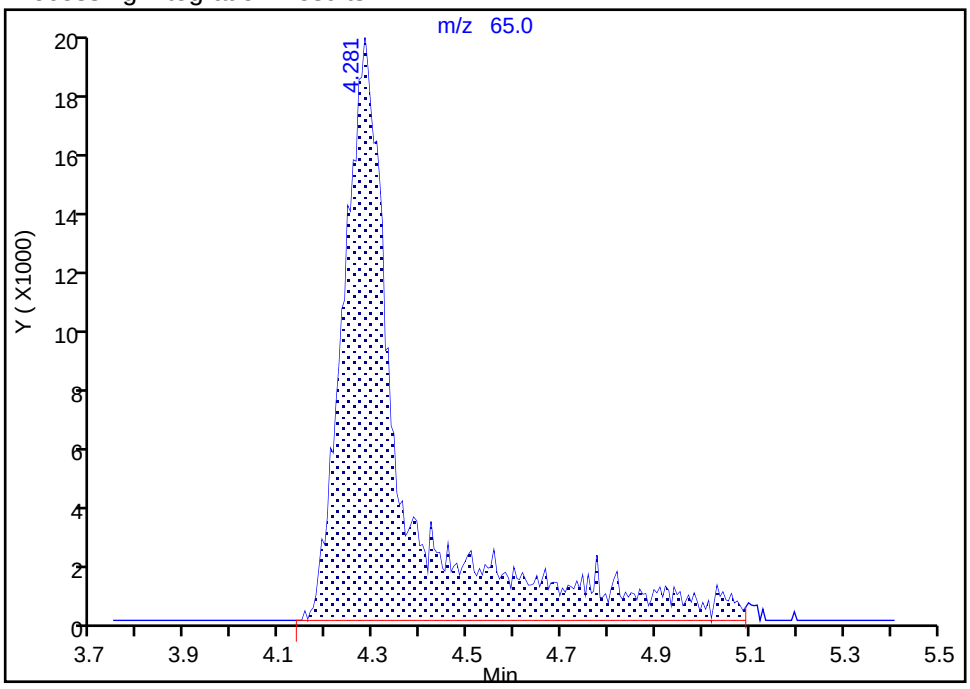
Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\lo03s19.D				
Injection Date:	03-Oct-2020 15:30:30	Instrument ID:	19930		
Lims ID:	410-15232-A-9	Lab Sample ID:	410-15232-9		
Client ID:	HD-COD-SW-27-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	24	Worklist Smp#:	25
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

* 24 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

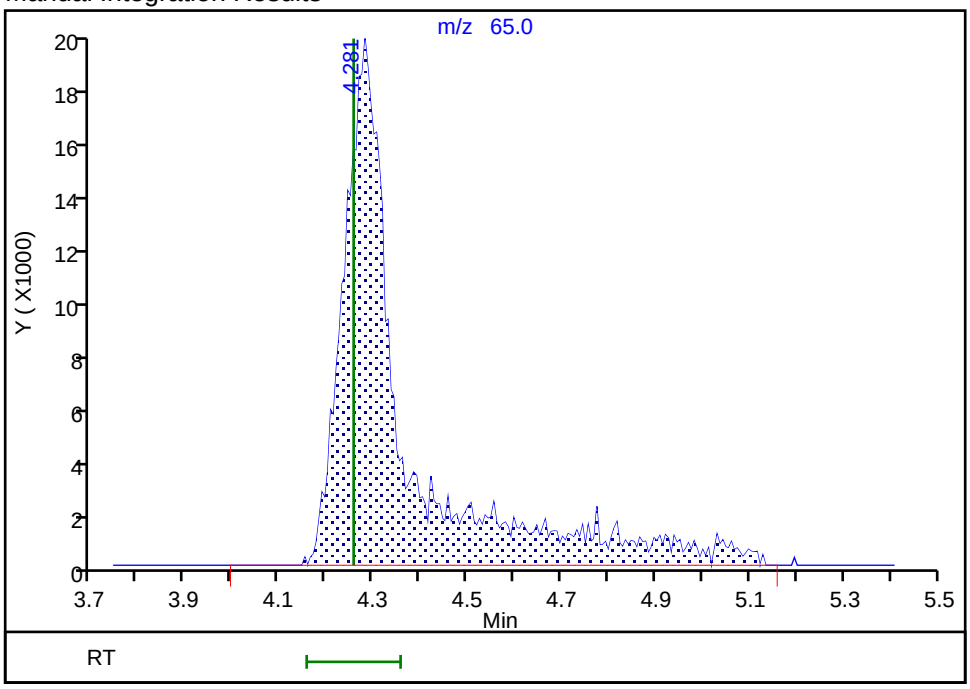
Processing Integration Results

RT: 4.28
Area: 169112
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 4.28
Area: 170006
Amount: 50.000000
Amount Units: ug/l



Reviewer: mellingerc, 05-Oct-2020 13:53:54

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-15232-1

SDG No.:

Client Sample ID: HD-COD-SW-15-0/1-0 Lab Sample ID: 410-15232-10

Matrix: Water Lab File ID: CC05S04.D

Analysis Method: 8260C LL Date Collected: 09/25/2020 12:30

Sample wt/vol: 25(mL) Date Analyzed: 10/05/2020 13:00

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.: 50813 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	0.094	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	ND		0.50	0.070
75-35-4	1,1-Dichloroethene	0.067	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	^c	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	^c	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	0.31	J	0.50	0.090
74-87-3	Chloromethane	ND	FH	0.50	0.060
156-59-2	cis-1,2-Dichloroethene	0.70		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	0.050	J	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	2.2		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 E Job No.: 410-15232-1

SDG No.:

Client Sample ID: HD-COD-SW-15-0/1-0 Lab Sample ID: 410-15232-10

Matrix: Water Lab File ID: CC05S04.D

Analysis Method: 8260C LL Date Collected: 09/25/2020 12:30

Sample wt/vol: 25(mL) Date Analyzed: 10/05/2020 13:00

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.: 50813 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	0.86		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)	112		80-120
1868-53-7	Dibromofluoromethane (Surr)	106		80-120
2037-26-5	Toluene-d8 (Surr)	97		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\10193\20201005-12055.b\CC05S04.D
Lims ID: 410-15232-A-10
Client ID: HD-COD-SW-15-0/1-0
Sample Type: Client
Inject. Date: 05-Oct-2020 13:00:30 ALS Bottle#: 9 Worklist Smp#: 10
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0012055-010
Misc. Info.: 410-15232-A-10
Operator ID: dvv10203 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20201005-12055.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 06-Oct-2020 12:41:33 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1013

First Level Reviewer: spositok Date: 06-Oct-2020 12:15:01

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85		1.910				ND	
1 Chlorodifluoromethane	51		1.928				ND	7
140 Dimethyl ether	45		1.993				ND	7
3 Chloromethane	50		2.099				ND	7
4 Butadiene	39		2.203				ND	7
5 Vinyl chloride	62		2.209				ND	7
6 Bromomethane	94		2.514				ND	
7 Chloroethane	64		2.599				ND	
8 Dichlorofluoromethane	67		2.831				ND	7
9 Trichlorofluoromethane	101		2.885				ND	
T 219 Ethanol TIC	45		3.123				ND	7
11 Ethyl ether	59		3.123				ND	
12 1,2-Dichloro-1,1,2-trifluoroetha	67		3.209				ND	7
13 Acrolein	56		3.294				ND	7
14 1,1-Dichloroethene	96	3.410	3.422	-0.012	93	2827	0.0675	
15 112TCTFE	101		3.452				ND	
16 Acetone	43	3.452	3.459	-0.007	22	4070	0.4997	
17 Iodomethane	142		3.605				ND	
18 Isopropyl alcohol	45	3.641	3.623	0.018	28	3160	7.19	
19 Ethyl bromide	108		3.635				ND	
20 Carbon disulfide	76		3.702				ND	U
21 Acetonitrile	41		3.836				ND	7
22 Methyl acetate	43		3.849				ND	7
23 3-Chloro-1-propene	41		3.879				ND	
24 Methylene Chloride	84		4.056				ND	7
* 25 t-Butyl alcohol-d10 (IS)	65	4.068	4.080	-0.012	0	191617	50.0	
26 2-Methyl-2-propanol	59		4.202				ND	7
27 Acrylonitrile	53		4.397				ND	
28 Methyl tert-butyl ether	73	4.434	4.446	-0.012	79	6844	0.0505	
29 trans-1,2-Dichloroethene	96		4.452				ND	
30 Hexane	57		4.873				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
32 1,1-Dichloroethane	63	5.123	5.123	0.000	8	4794	0.0532	
31 Vinyl acetate	43		5.135				ND	
33 Isopropyl ether	45		5.178				ND	
34 2-Chloro-1,3-butadiene	53		5.226				ND	
35 Tert-butyl ethyl ether	59		5.714				ND	7
36 2-Butanone (MEK)	43		5.934				ND	
37 cis-1,2-Dichloroethene	96	5.952	5.958	-0.006	82	38962	0.7017	
38 2,2-Dichloropropane	77		5.970				ND	
39 Ethyl acetate	43	6.037	6.013	0.024	14	1937	0.0516	
40 Propionitrile	54		6.031				ND	
41 Methyl acrylate	55		6.074				ND	
S 42 1,2-Dichloroethene, Total	100				0		0.7017	
43 Methacrylonitrile	67		6.245				ND	
44 Chlorobromomethane	128		6.293				ND	
45 Tetrahydrofuran	71		6.299				ND	
46 Chloroform	83	6.440	6.446	-0.006	94	27814	0.3113	
$ 47 Dibromofluoromethane (Surr)	113	6.659	6.659	0.000	94	455910	10.6	
48 1,1,1-Trichloroethane	97	6.665	6.665	0.000	36	7527	0.0935	
49 Cyclohexane	56		6.757				ND	
145 1-Chlorobutane	56		6.842				ND	7
50 Carbon tetrachloride	117		6.873				ND	7
51 1,1-Dichloropropene	75		6.885				ND	
52 Isobutyl alcohol	41		7.061				ND	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.110	7.116	-0.006	0	97890	11.2	
54 Benzene	78		7.147				ND	
55 1,2-Dichloroethane	62		7.220				ND	7
152 Isopropyl acetate	43		7.257				ND	U
56 Tert-amyl methyl ether	73		7.342				ND	
* 57 Fluorobenzene (IS)	96	7.549	7.561	-0.012	99	1811897	10.0	
58 n-Heptane	43		7.561				ND	7
59 n-Butanol	56		7.952				ND	
60 Trichloroethene	95	8.031	8.037	-0.006	97	45895	0.8556	
61 Methylcyclohexane	83		8.336				ND	
62 1,2-Dichloropropane	63		8.372				ND	
63 2-ethoxy-2-methyl butane	87		8.384				ND	
64 Methyl methacrylate	69		8.470				ND	
65 1,4-Dioxane	88		8.470				ND	
66 Dibromomethane	93		8.488				ND	
160 n-Propyl acetate	61		8.561				ND	
67 Dichlorobromomethane	83		8.726				ND	7
68 2-Nitropropane	41		9.012				ND	7
69 2-Chloroethyl vinyl ether	63		9.116				ND	7
70 Chloroacetonitrile	75		9.116				ND	
71 1-Bromo-2-chloroethane	63		9.116				ND	
72 cis-1,3-Dichloropropene	75		9.281				ND	
73 4-Methyl-2-pentanone (MIBK)	43		9.470				ND	7
$ 74 Toluene-d8 (Surr)	98	9.597	9.598	-0.001	94	1847246	9.71	
75 Toluene	92		9.677				ND	7
76 trans-1,3-Dichloropropene	75		9.945				ND	
T 207 2,3-Dibromo-1-propanol TIC	57		10.000				ND	
T 217 2,3-Dibromopropene TIC	119		10.000				ND	U
T 215 2-Bromo-3-chloropropene TIC	75		10.000				ND	U

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
T 214 Epichlorohydrin TIC	57		10.000				ND	U
T 213 Vinyl bromide TIC	106		10.000				ND	U
T 216 Ethylene oxide TIC	44		10.000				ND	U
T 211 Epibromohydrin TIC	57		10.000				ND	
T 210 2-Chloroethanol TIC	44		10.000				ND	
T 209 Monochloroacetic acid TIC	50		10.000				ND	U
T 212 Chloroacetaldehyde TIC	50		10.000				ND	
T 208 2-Bromoethanol TIC	45		10.000				ND	U
T 218 3-Chloro-1,2-propanediol TIC	44		10.000				ND	U
78 Ethyl methacrylate	69		10.012				ND	7
S 77 1,3-Dichloropropene, Total	100		10.060				ND	7
79 1,1,2-Trichloroethane	97		10.152				ND	
80 Tetrachloroethene	166	10.231	10.232	-0.001	98	139198	2.18	
81 1,3-Dichloropropane	76		10.317				ND	
82 2-Hexanone	43		10.378				ND	7
161 n-Butyl acetate	43	10.518	10.512	0.006	1	60	0.000842	
83 Chlorodibromomethane	129		10.536				ND	
84 Ethylene Dibromide	107		10.646				ND	
* 85 Chlorobenzene-d5 (IS)	117	11.085	11.085	0.000	86	1457011	10.0	
86 1-Chlorohexane	91		11.097				ND	7
87 Chlorobenzene	112		11.109				ND	7
89 1,1,1,2-Tetrachloroethane	131		11.201				ND	
90 Ethylbenzene	91		11.201				ND	7
S 88 Xylenes, Total	106		11.245				ND	7
91 m-Xylene & p-Xylene	106		11.317				ND	7
92 o-Xylene	106		11.652				ND	7
93 Styrene	104		11.664				ND	7
94 Bromoform	173		11.823				ND	
95 Isopropylbenzene	105		11.957				ND	
96 cis-1,4-Dichloro-2-butene	88		12.018				ND	U
97 Cyclohexanone	55		12.048				ND	
$ 98 4-Bromofluorobenzene (Surr)	95	12.097	12.097	0.000	93	696329	9.74	
99 1,1,2,2-Tetrachloroethane	83		12.207				ND	
100 Bromobenzene	156		12.219				ND	
101 trans-1,4-Dichloro-2-butene	53		12.231				ND	
102 1,2,3-Trichloropropane	110		12.256				ND	
103 N-Propylbenzene	91		12.286				ND	
104 2-Chlorotoluene	126		12.365				ND	
105 1,3,5-Trimethylbenzene	105		12.426				ND	7
106 4-Chlorotoluene	126		12.457				ND	
107 tert-Butylbenzene	134		12.670				ND	
108 Pentachloroethane	167		12.701				ND	
109 1,2,4-Trimethylbenzene	105		12.713				ND	7
110 sec-Butylbenzene	105		12.835				ND	
111 1,3-Dichlorobenzene	146		12.932				ND	7
112 4-Isopropyltoluene	119		12.944				ND	7
* 113 1,4-Dichlorobenzene-d4	152	12.993	12.993	0.000	95	801686	10.0	
114 1,4-Dichlorobenzene	146		13.005				ND	7
115 1,2,3-Trimethylbenzene	120		13.018				ND	7
116 Benzyl chloride	126		13.091				ND	7
119 n-Butylbenzene	92		13.237				ND	
120 1,2-Dichlorobenzene	146		13.274				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
118 p-Diethylbenzene	119		13.292				ND	
122 Hexachloroethane	117		13.475				ND	
123 1,2-Dibromo-3-Chloropropane	155		13.822				ND	
124 1,3,5-Trichlorobenzene	180		13.944				ND	
125 1,2,4-Trichlorobenzene	180		14.371				ND	
126 Hexachlorobutadiene	225		14.456				ND	
127 Naphthalene	128		14.554				ND	7
128 1,2,3-Trichlorobenzene	180		14.700				ND	
129 2-Methylnaphthalene	142		15.322				ND	
130 Dodecane	57		0.000				ND	
159 tert-Butyl Formate	1		0.000				ND	
131 2-Bromo-1-chloropropane	1		0.000				ND	
133 1-Chloropropane	1		0.000				ND	
136 Methylal	1		0.000				ND	
138 n-Decane	57		0.000				ND	
142 1-Bromo-3-Chloropropane	1		0.000				ND	
155 2-Chloro-1,1,1-Trifluoroethane	1		0.000				ND	
149 Chlorotrifluoroethene	1		0.000				ND	
151 Propene oxide	1		0.000				ND	
157 t-Amyl alcohol	1		0.000				ND	
158 1,1-Dichloro-1-fluoroethane	1		0.000				ND	
162 Ethanol	45		0.000				ND	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

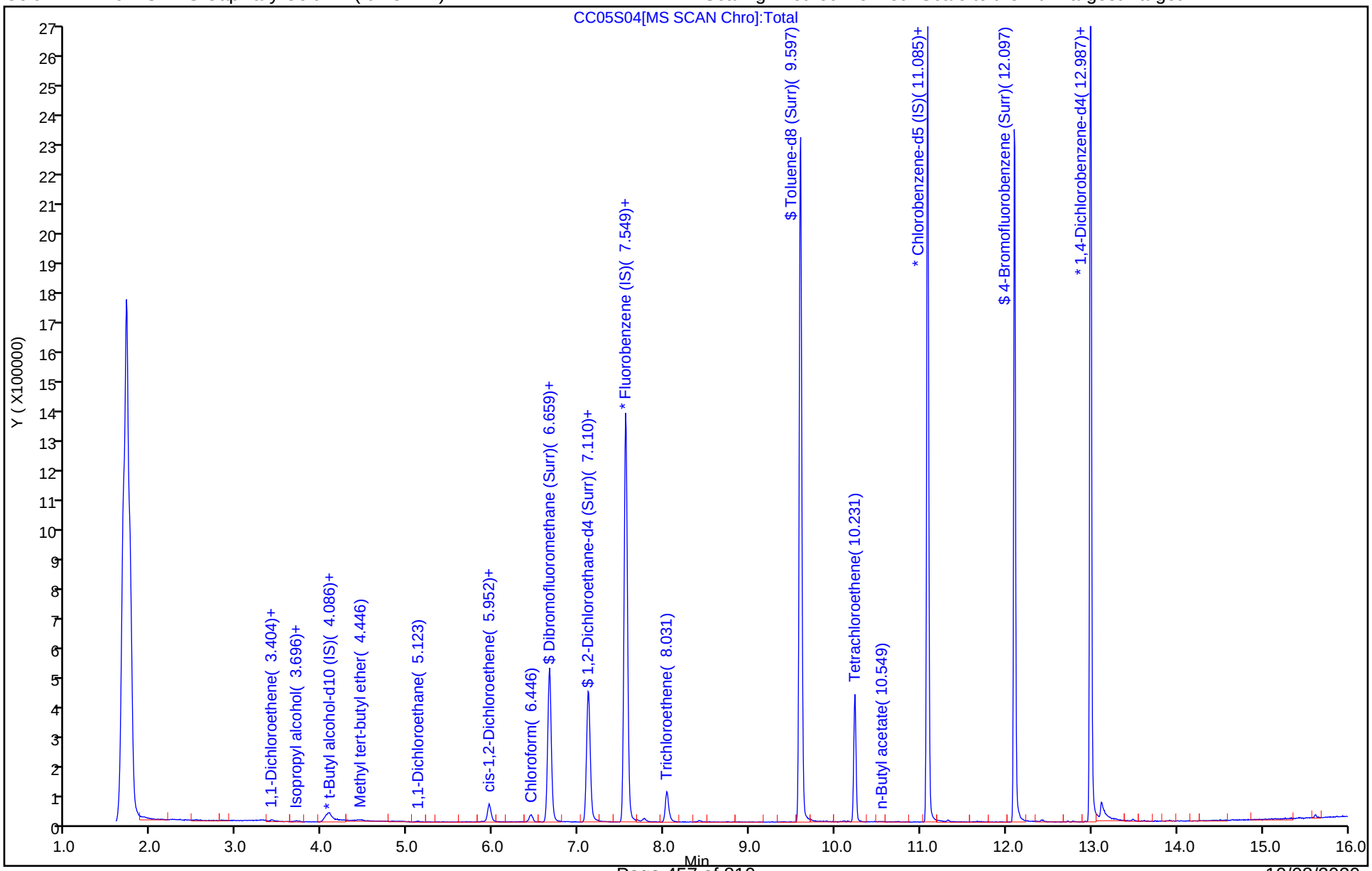
MSV_HP25_ISSS_00014 Amount Added: 1.00 Units: uL Run Reagent

Report Date: 06-Oct-2020 12:47:18 Chrom Revision: 2.3 05-Oct-2020 16:17:16

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S04.D				
Injection Date:	05-Oct-2020 13:00:30	Instrument ID:	10193	Operator ID:	dvv10203
Lims ID:	410-15232-A-10	Lab Sample ID:	410-15232-10	Worklist Smp#:	10
Client ID:	HD-COD-SW-15-0/1-0				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MSV_10193_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\10193\20201005-12055.b\CC05S04.D
Lims ID: 410-15232-A-10
Client ID: HD-COD-SW-15-0/1-0
Sample Type: Client
Inject. Date: 05-Oct-2020 13:00:30 ALS Bottle#: 9 Worklist Smp#: 10
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0012055-010
Misc. Info.: 410-15232-A-10
Operator ID: dvv10203 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20201005-12055.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 06-Oct-2020 12:41:33 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1013

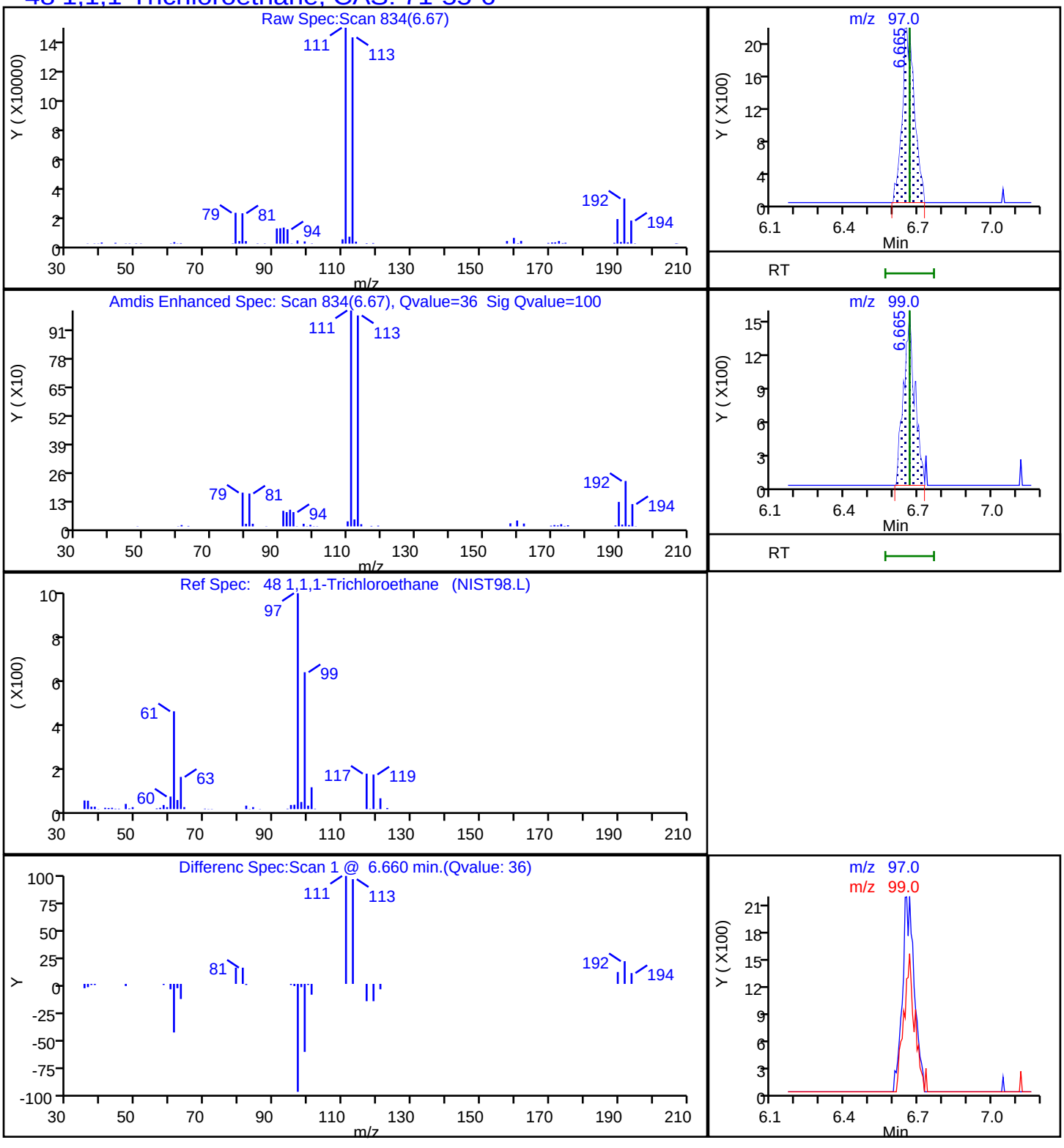
First Level Reviewer: spositok Date: 06-Oct-2020 12:15:01

Compound	Amount Added	Amount Recovered	% Rec.
$ 47 Dibromofluoromethane (Surr)	10.0	10.6	105.89
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	11.2	111.61
$ 74 Toluene-d8 (Surr)	10.0	9.71	97.07
$ 98 4-Bromofluorobenzene (Surr)	10.0	9.74	97.36

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S04.D				
Injection Date:	05-Oct-2020 13:00:30	Instrument ID:	10193		
Lims ID:	410-15232-A-10	Lab Sample ID:	410-15232-10		
Client ID:	HD-COD-SW-15-0/1-0				
Operator ID:	dvv10203	ALS Bottle#:	9	Worklist Smp#:	10
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

48 1,1,1-Trichloroethane, CAS: 71-55-6

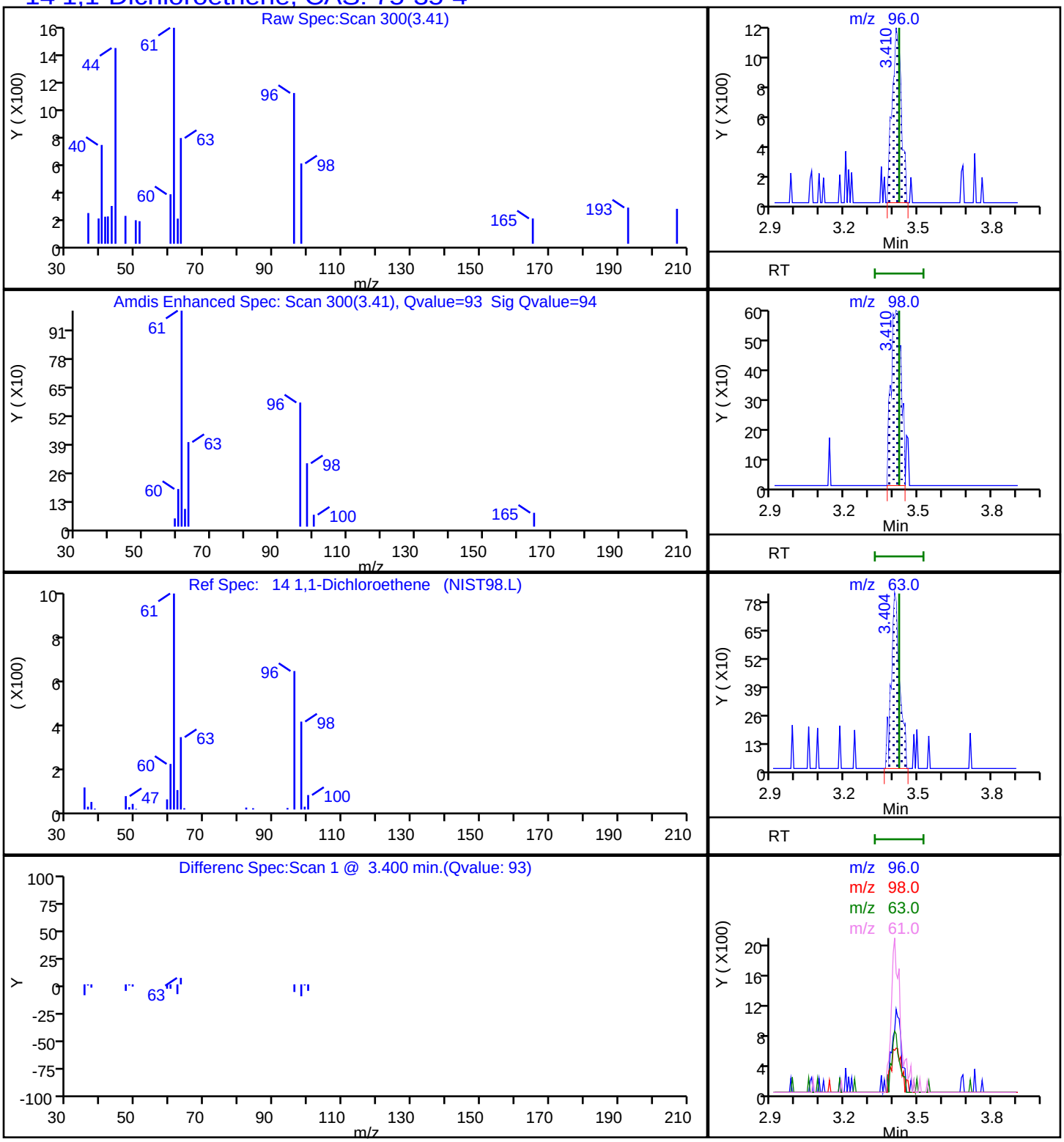


Report Date: 06-Oct-2020 12:47:18 Chrom Revision: 2.3 05-Oct-2020 16:17:16

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S04.D		
Injection Date:	05-Oct-2020 13:00:30	Instrument ID:	10193
Lims ID:	410-15232-A-10	Lab Sample ID:	410-15232-10
Client ID:	HD-COD-SW-15-0/1-0		
Operator ID:	dvv10203	ALS Bottle#:	9 Worklist Smp#: 10
Purge Vol:	25.000 mL	Dil. Factor:	1.0000
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad

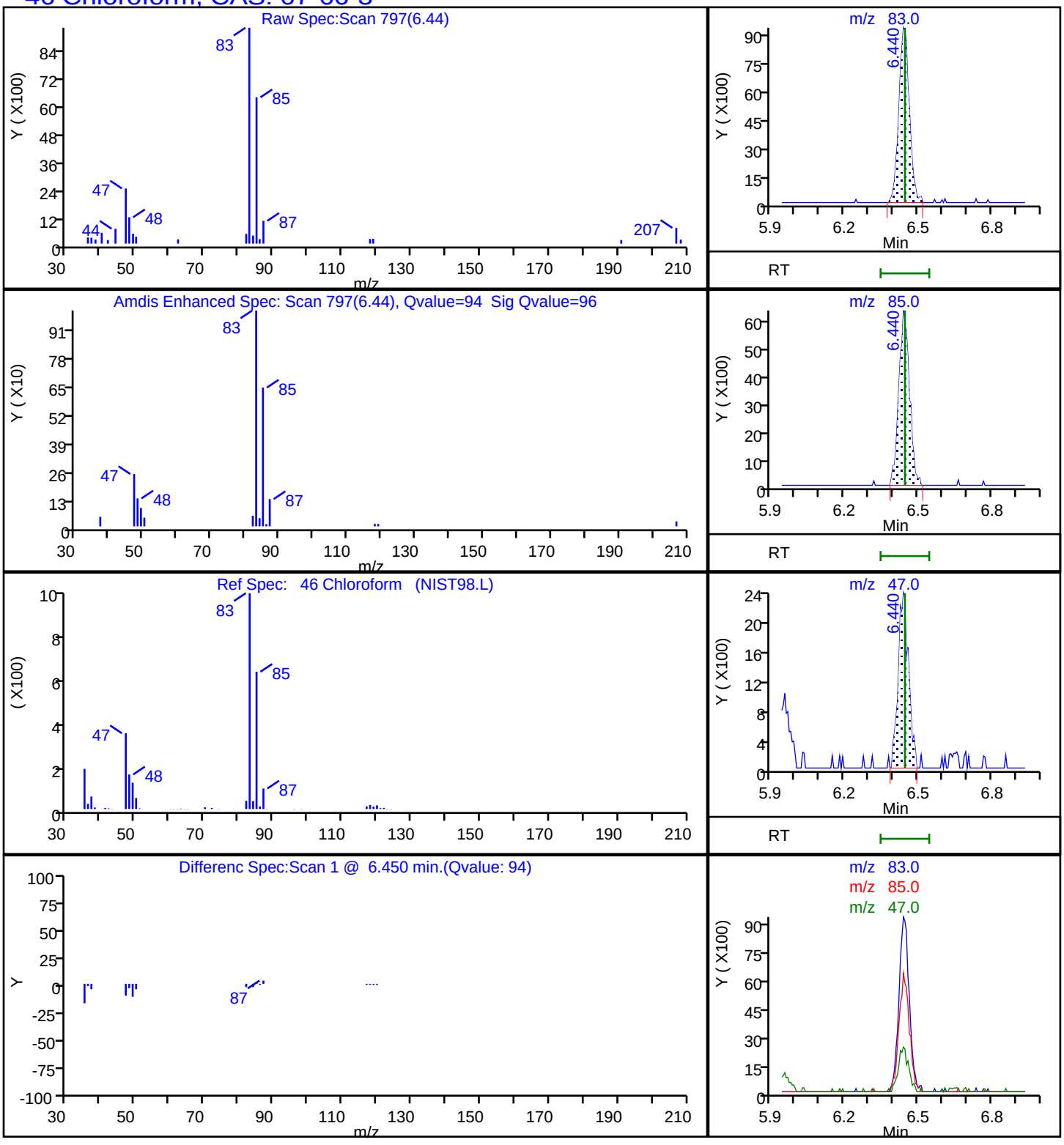
14 1,1-Dichloroethene, CAS: 75-35-4



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S04.D				
Injection Date:	05-Oct-2020 13:00:30	Instrument ID:	10193		
Lims ID:	410-15232-A-10	Lab Sample ID:	410-15232-10		
Client ID:	HD-COD-SW-15-0/1-0				
Operator ID:	dvv10203	ALS Bottle#:	9	Worklist Smp#:	10
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

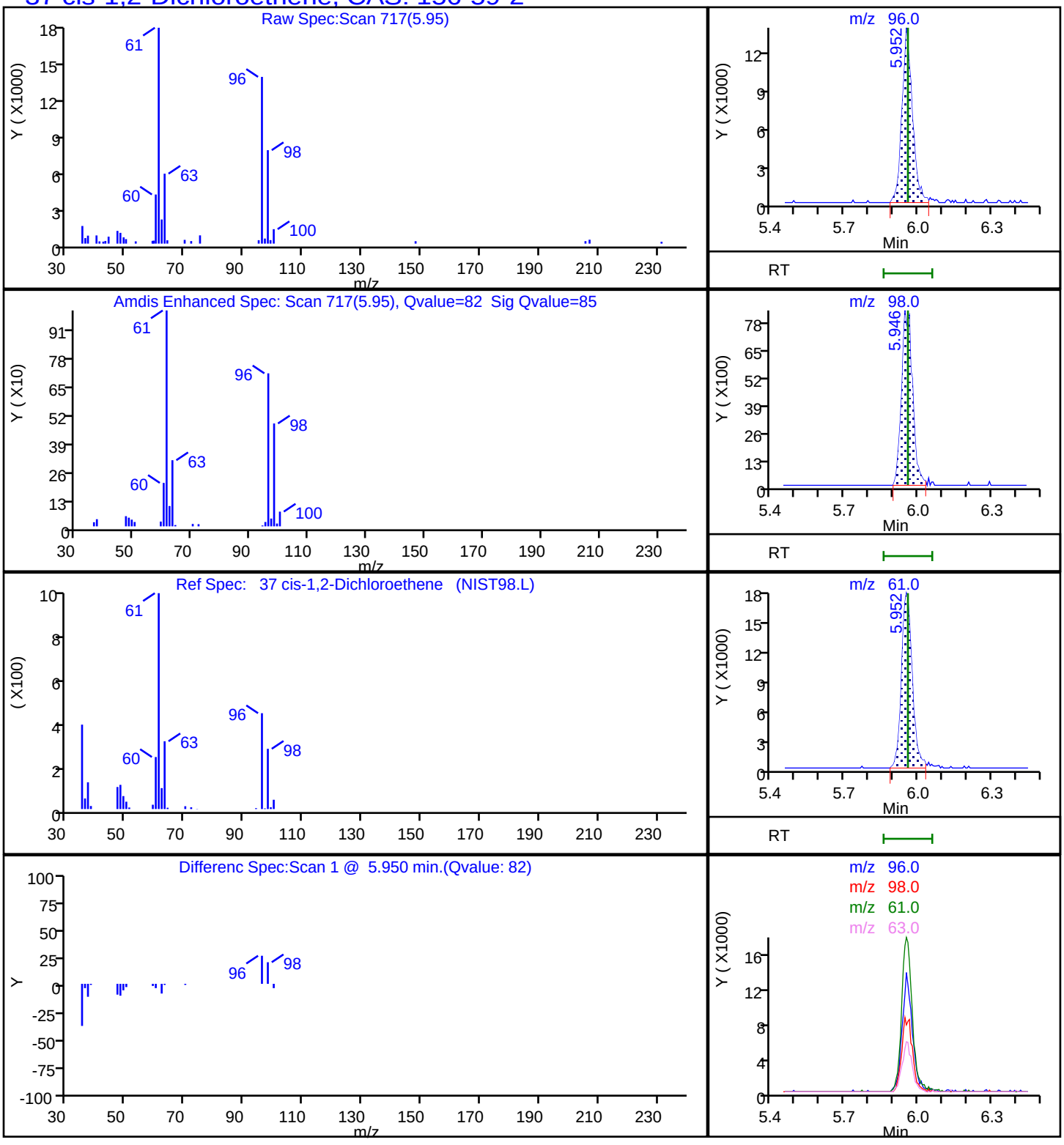
46 Chloroform, CAS: 67-66-3



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S04.D				
Injection Date:	05-Oct-2020 13:00:30	Instrument ID:	10193		
Lims ID:	410-15232-A-10	Lab Sample ID:	410-15232-10		
Client ID:	HD-COD-SW-15-0/1-0				
Operator ID:	dvv10203	ALS Bottle#:	9	Worklist Smp#:	10
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

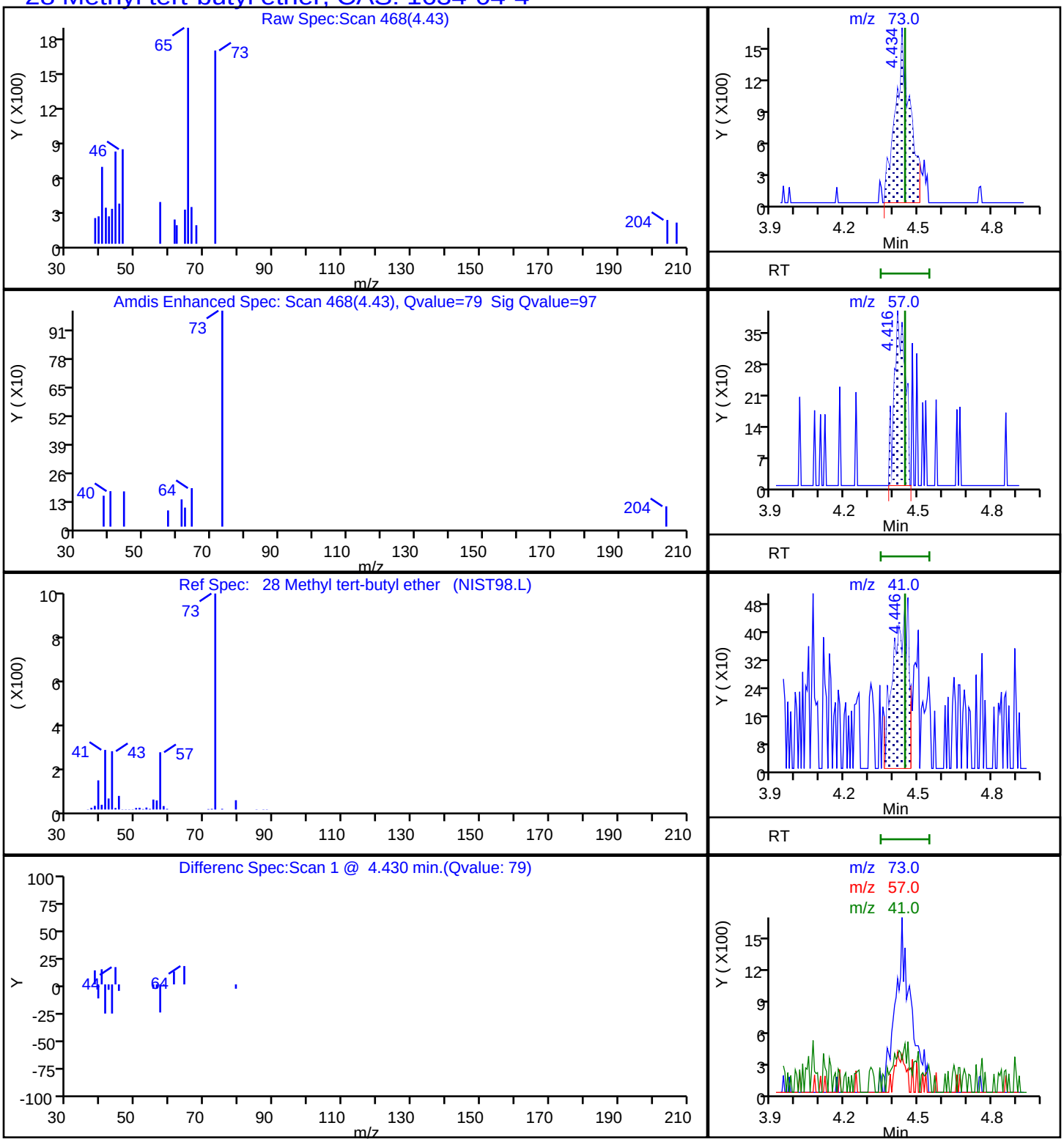
37 cis-1,2-Dichloroethene, CAS: 156-59-2



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S04.D				
Injection Date:	05-Oct-2020 13:00:30	Instrument ID:	10193		
Lims ID:	410-15232-A-10	Lab Sample ID:	410-15232-10		
Client ID:	HD-COD-SW-15-0/1-0				
Operator ID:	dvv10203	ALS Bottle#:	9	Worklist Smp#:	10
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

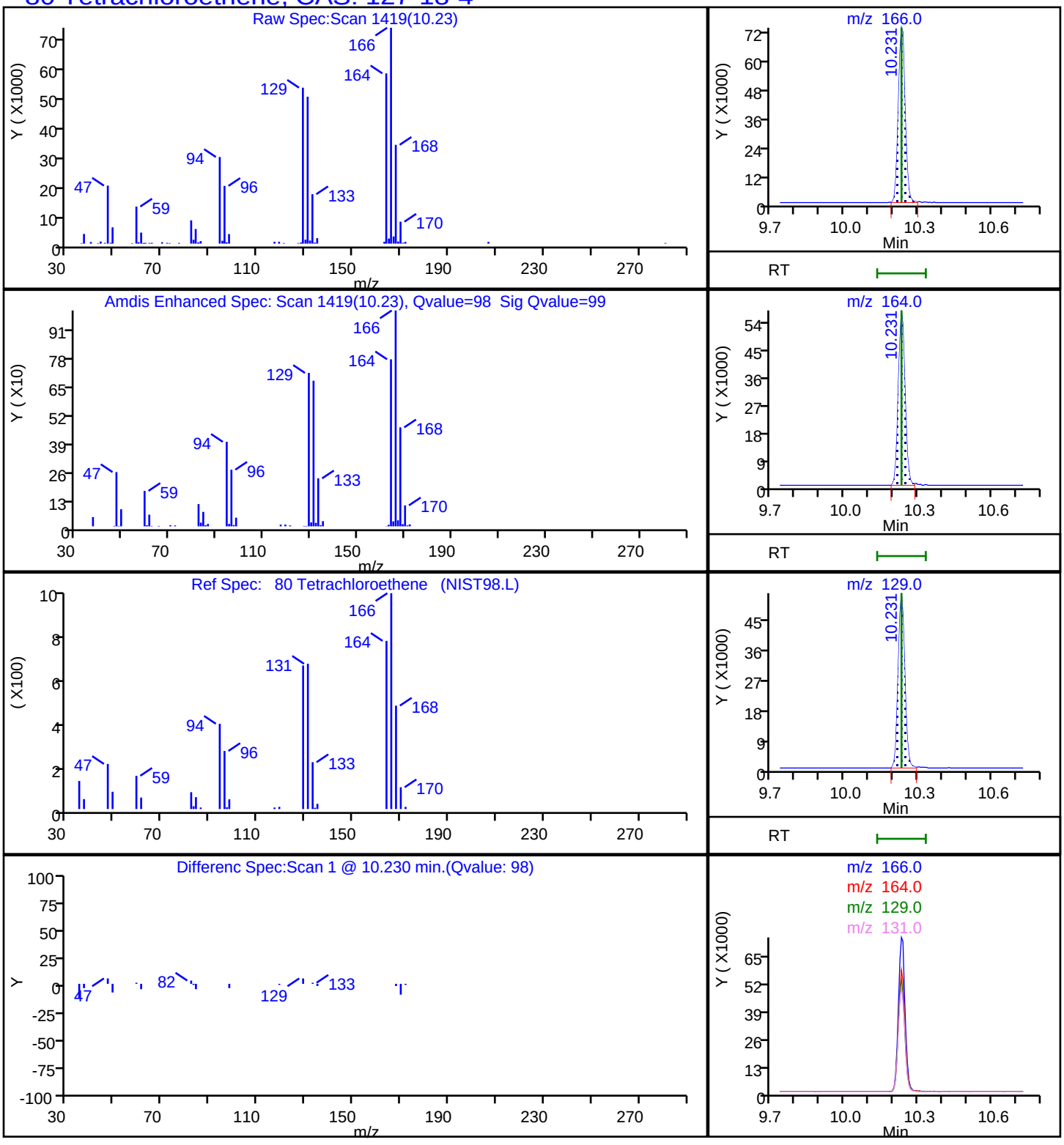
28 Methyl tert-butyl ether, CAS: 1634-04-4



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S04.D				
Injection Date:	05-Oct-2020 13:00:30	Instrument ID:	10193		
Lims ID:	410-15232-A-10	Lab Sample ID:	410-15232-10		
Client ID:	HD-COD-SW-15-0/1-0				
Operator ID:	dvv10203	ALS Bottle#:	9	Worklist Smp#:	10
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

80 Tetrachloroethene, CAS: 127-18-4



Report Date: 06-Oct-2020 12:47:18 Chrom Revision: 2.3 05-Oct-2020 16:17:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S04.D

Injection Date: 05-Oct-2020 13:00:30 Instrument ID: 10193

Lims ID: 410-15232-A-10 Lab Sample ID: 410-15232-10

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

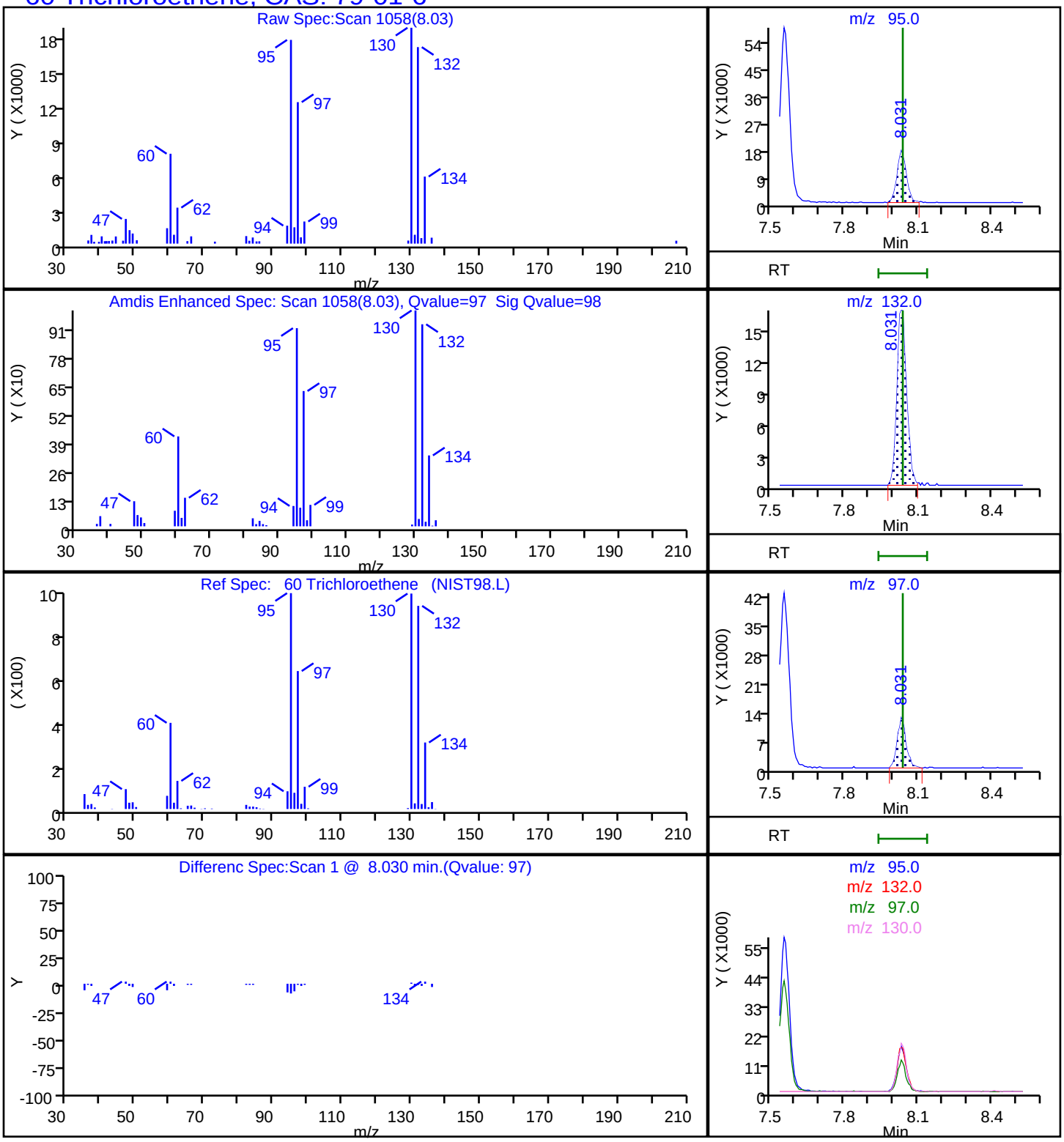
Operator ID: dvv10203 ALS Bottle#: 9 Worklist Smp#: 10

Purge Vol: 25.000 mL Dil. Factor: 1.0000

Method: MSV_10193_25mL Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

60 Trichloroethene, CAS: 79-01-6



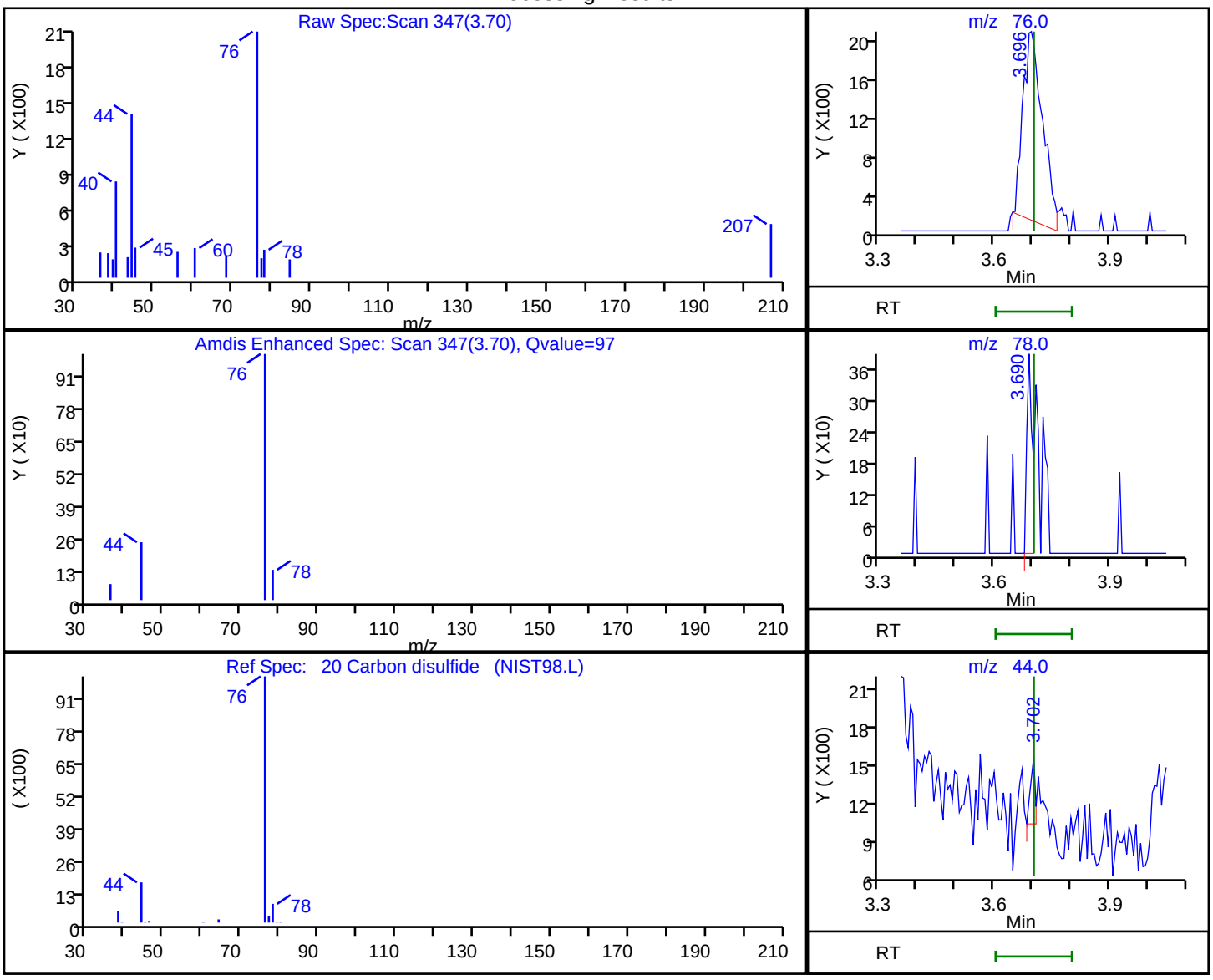
User Disabled Compound Report

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S04.D				
Injection Date:	05-Oct-2020 13:00:30	Instrument ID:	10193		
Lims ID:	410-15232-A-10	Lab Sample ID:	410-15232-10		
Client ID:	HD-COD-SW-15-0/1-0				
Operator ID:	dvv10203	ALS Bottle#:	9	Worklist Smp#:	10
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

20 Carbon disulfide, CAS: 75-15-0

Processing Results



RT	Mass	Response	Amount
3.70	76.00	7104	0.048007
3.69	78.00	375	
3.70	44.00	417	

Reviewer: spositok, 06-Oct-2020 12:13:30

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

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-15232-1

SDG No.:

Client Sample ID: HD-COD-SW-9-0/1-0 Lab Sample ID: 410-15232-11

Matrix: Water Lab File ID: CC05S08.D

Analysis Method: 8260C LL Date Collected: 09/25/2020 13:05

Sample wt/vol: 25(mL) Date Analyzed: 10/05/2020 14:29

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.: 50813 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)	0.96	J	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	6.1	^c	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	^c	1.0	0.30
74-83-9	Bromomethane	ND		0.50	0.070
75-15-0	Carbon disulfide	0.091	J	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	0.091	J	0.50	0.060
156-59-2	cis-1,2-Dichloroethene	0.061	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	ND		0.50	0.070
100-42-5	Styrene	ND		0.50	0.050
127-18-4	Tetrachloroethene	0.084	J	0.50	0.060
108-88-3	Toluene	0.078	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 E Job No.: 410-15232-1

SDG No.:

Client Sample ID: HD-COD-SW-9-0/1-0 Lab Sample ID: 410-15232-11

Matrix: Water Lab File ID: CC05S08.D

Analysis Method: 8260C LL Date Collected: 09/25/2020 13:05

Sample wt/vol: 25(mL) Date Analyzed: 10/05/2020 14:29

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.: 50813 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)	112		80-120
1868-53-7	Dibromofluoromethane (Surr)	105		80-120
2037-26-5	Toluene-d8 (Surr)	98		80-120
460-00-4	4-Bromofluorobenzene (Surr)	98		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S08.D
Lims ID: 410-15232-A-11
Client ID: HD-COD-SW-9-0/1-0
Sample Type: Client
Inject. Date: 05-Oct-2020 14:29:30 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0012055-014
Misc. Info.: 410-15232-A-11
Operator ID: dvv10203 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20201005-12055.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 06-Oct-2020 12:41:33 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1013

First Level Reviewer: spositok Date: 06-Oct-2020 12:22:18

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
3 Chloromethane	50	2.087	2.099	-0.012	93	6066	0.0906	
5 Vinyl chloride	62		2.209				ND	7
6 Bromomethane	94		2.514				ND	7
7 Chloroethane	64		2.599				ND	
14 1,1-Dichloroethene	96		3.422				ND	
16 Acetone	43	3.471	3.459	0.012	99	46462	6.09	
20 Carbon disulfide	76	3.696	3.702	-0.006	100	13056	0.0909	
24 Methylene Chloride	84		4.056				ND	U
* 25 t-Butyl alcohol-d10 (IS)	65	4.074	4.080	-0.006	0	179397	50.0	
27 Acrylonitrile	53		4.397				ND	
28 Methyl tert-butyl ether	73		4.446				ND	7
29 trans-1,2-Dichloroethene	96		4.452				ND	
32 1,1-Dichloroethane	63		5.123				ND	
36 2-Butanone (MEK)	43	5.958	5.934	0.024	98	17200	0.9618	
37 cis-1,2-Dichloroethene	96	5.970	5.958	0.012	77	3268	0.0606	M
44 Chlorobromomethane	128		6.293				ND	
46 Chloroform	83	6.446	6.446	0.000	94	7637	0.0880	
$ 47 Dibromofluoromethane (Surr)	113	6.659	6.659	0.000	94	440491	10.5	
48 1,1,1-Trichloroethane	97		6.665				ND	
50 Carbon tetrachloride	117		6.873				ND	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.116	7.116	0.000	0	95733	11.2	
54 Benzene	78		7.147				ND	7
55 1,2-Dichloroethane	62		7.220				ND	7
* 57 Fluorobenzene (IS)	96	7.555	7.561	-0.006	99	1759568	10.0	
60 Trichloroethene	95		8.037				ND	
62 1,2-Dichloropropane	63		8.372				ND	
67 Dichlorobromomethane	83		8.726				ND	7
72 cis-1,3-Dichloropropene	75		9.281				ND	
73 4-Methyl-2-pentanone (MIBK)	43		9.470				ND	7
$ 74 Toluene-d8 (Surr)	98	9.597	9.598	-0.001	94	1809147	9.80	
75 Toluene	92	9.671	9.677	-0.006	99	10792	0.0777	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
76 trans-1,3-Dichloropropene	75		9.945				ND	
79 1,1,2-Trichloroethane	97		10.152				ND	
80 Tetrachloroethene	166	10.238	10.232	0.006	95	5225	0.0842	
82 2-Hexanone	43		10.378				ND	7
83 Chlorodibromomethane	129		10.536				ND	
84 Ethylene Dibromide	107		10.646				ND	
* 85 Chlorobenzene-d5 (IS)	117	11.085	11.085	0.000	87	1413627	10.0	
87 Chlorobenzene	112		11.109				ND	7
89 1,1,1,2-Tetrachloroethane	131		11.201				ND	
90 Ethylbenzene	91		11.201				ND	7
S 88 Xylenes, Total	106		11.245				ND	7
91 m-Xylene & p-Xylene	106	11.310	11.317	-0.007	0	4384	0.0408	
92 o-Xylene	106		11.652				ND	7
93 Styrene	104		11.664				ND	
94 Bromoform	173		11.823				ND	
$ 98 4-Bromofluorobenzene (Surr)	95	12.103	12.097	0.006	95	680346	9.80	
99 1,1,2,2-Tetrachloroethane	83		12.207				ND	
* 113 1,4-Dichlorobenzene-d4	152	12.987	12.993	-0.006	95	792533	10.0	

QC Flag Legend

Processing Flags
7 - Failed Limit of Detection
Review Flags
M - Manually Integrated
U - Marked Undetected

Reagents:

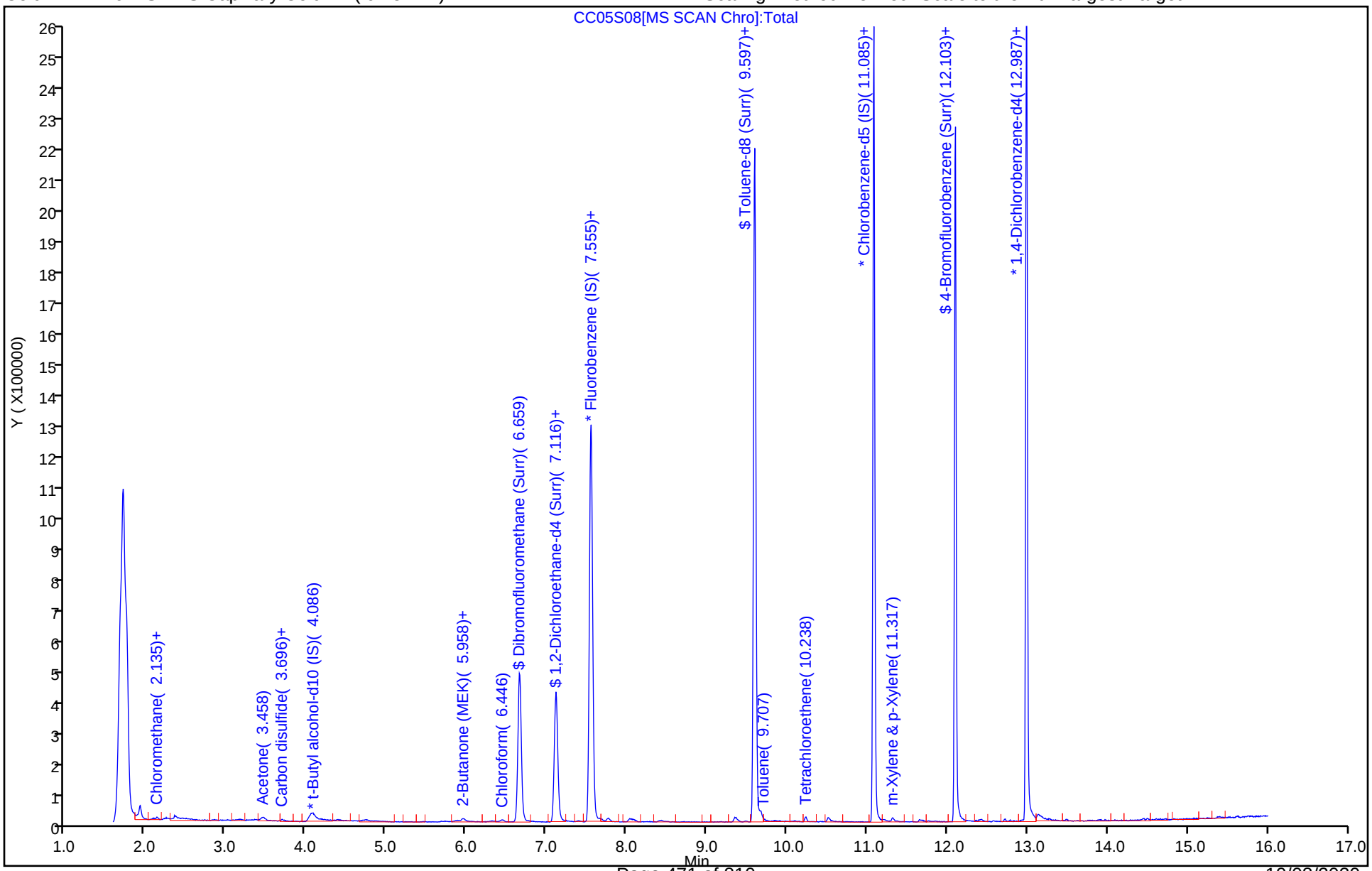
MSV_HP25_ISSS_00014 Amount Added: 1.00 Units: uL Run Reagent

Report Date: 06-Oct-2020 12:46:17 Chrom Revision: 2.3 05-Oct-2020 16:17:16

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S08.D				
Injection Date:	05-Oct-2020 14:29:30	Instrument ID:	10193	Operator ID:	dvv10203
Lims ID:	410-15232-A-11	Lab Sample ID:	410-15232-11	Worklist Smp#:	14
Client ID:	HD-COD-SW-9-0/1-0				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	MSV_10193_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\10193\20201005-12055.b\CC05S08.D				
Lims ID:	410-15232-A-11				
Client ID:	HD-COD-SW-9-0/1-0				
Sample Type:	Client				
Inject. Date:	05-Oct-2020 14:29:30	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0012055-014				
Misc. Info.:	410-15232-A-11				
Operator ID:	dvv10203	Instrument ID:	10193		
Method:	\\chromfs\Lancaster\ChromData\10193\20201005-12055.b\MSV_10193_25mL.m				
Limit Group:	MSV - 8260C_D				
Last Update:	06-Oct-2020 12:41:33	Calib Date:	01-Sep-2020 19:09:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1013				
First Level Reviewer: spositok		Date:	06-Oct-2020 12:22:18		

Compound	Amount Added	Amount Recovered	% Rec.
$ 47 Dibromofluoromethane (Surr)	10.0	10.5	105.35
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	11.2	112.39
$ 74 Toluene-d8 (Surr)	10.0	9.80	97.99
$ 98 4-Bromofluorobenzene (Surr)	10.0	9.80	98.04

Report Date: 06-Oct-2020 12:46:17 Chrom Revision: 2.3 05-Oct-2020 16:17:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S08.D

Injection Date: 05-Oct-2020 14:29:30 Instrument ID: 10193

Lims ID: 410-15232-A-11 Lab Sample ID: 410-15232-11

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

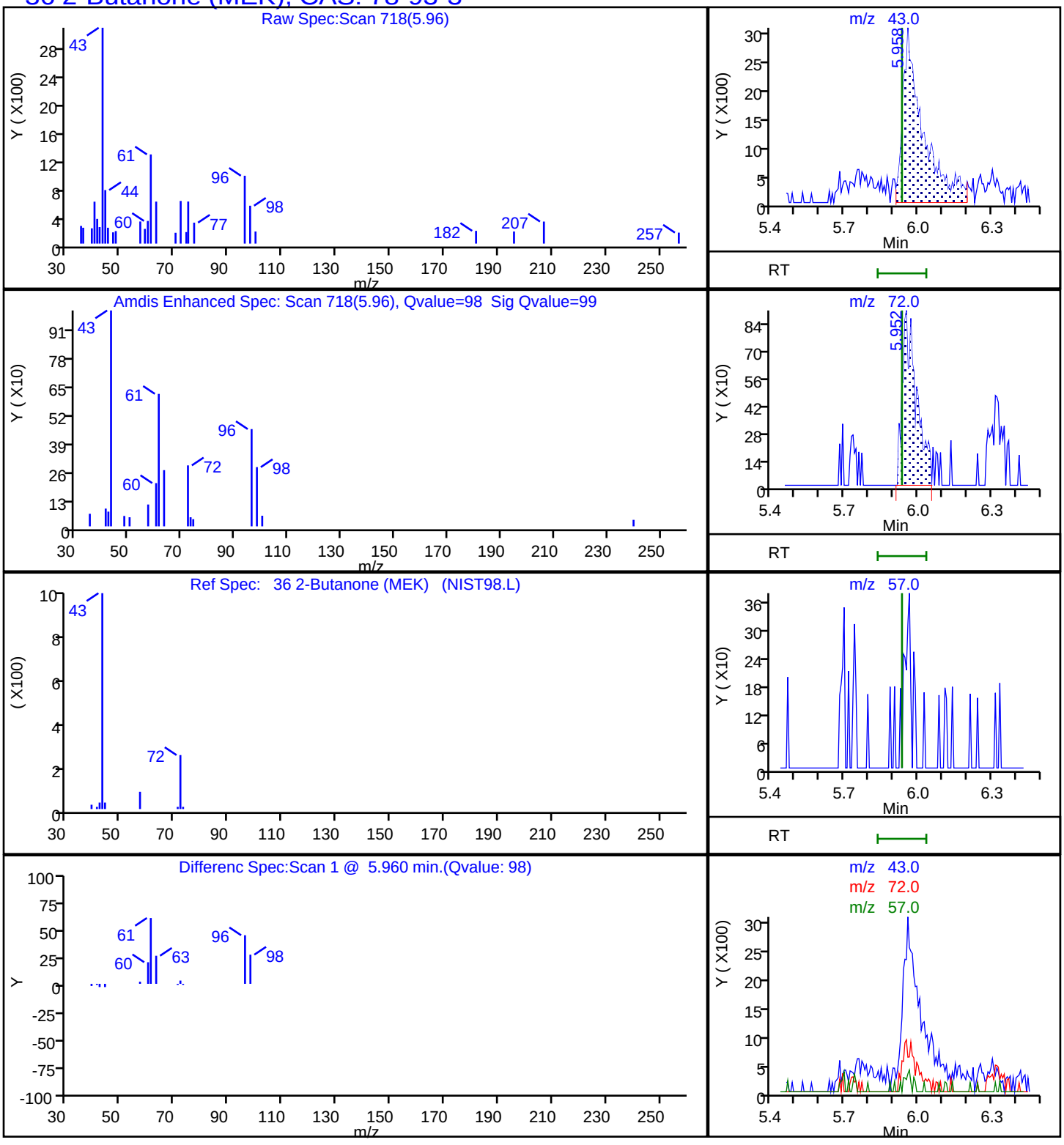
Operator ID: dvv10203 ALS Bottle#: 13 Worklist Smp#: 14

Purge Vol: 25.000 mL Dil. Factor: 1.0000

Method: MSV_10193_25mL Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

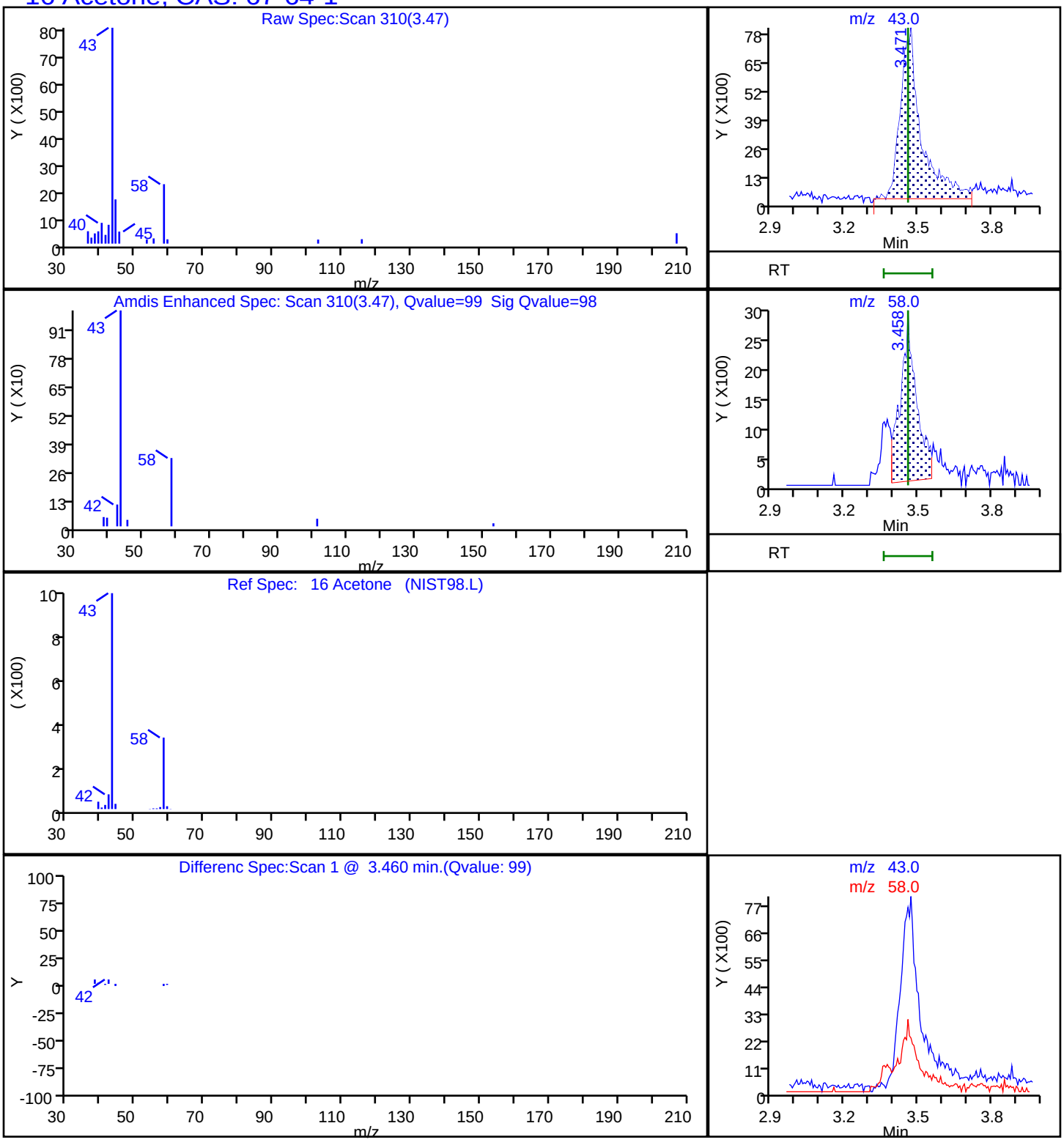
36 2-Butanone (MEK), CAS: 78-93-3



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S08.D				
Injection Date:	05-Oct-2020 14:29:30	Instrument ID:	10193		
Lims ID:	410-15232-A-11	Lab Sample ID:	410-15232-11		
Client ID:	HD-COD-SW-9-0/1-0				
Operator ID:	dvv10203	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

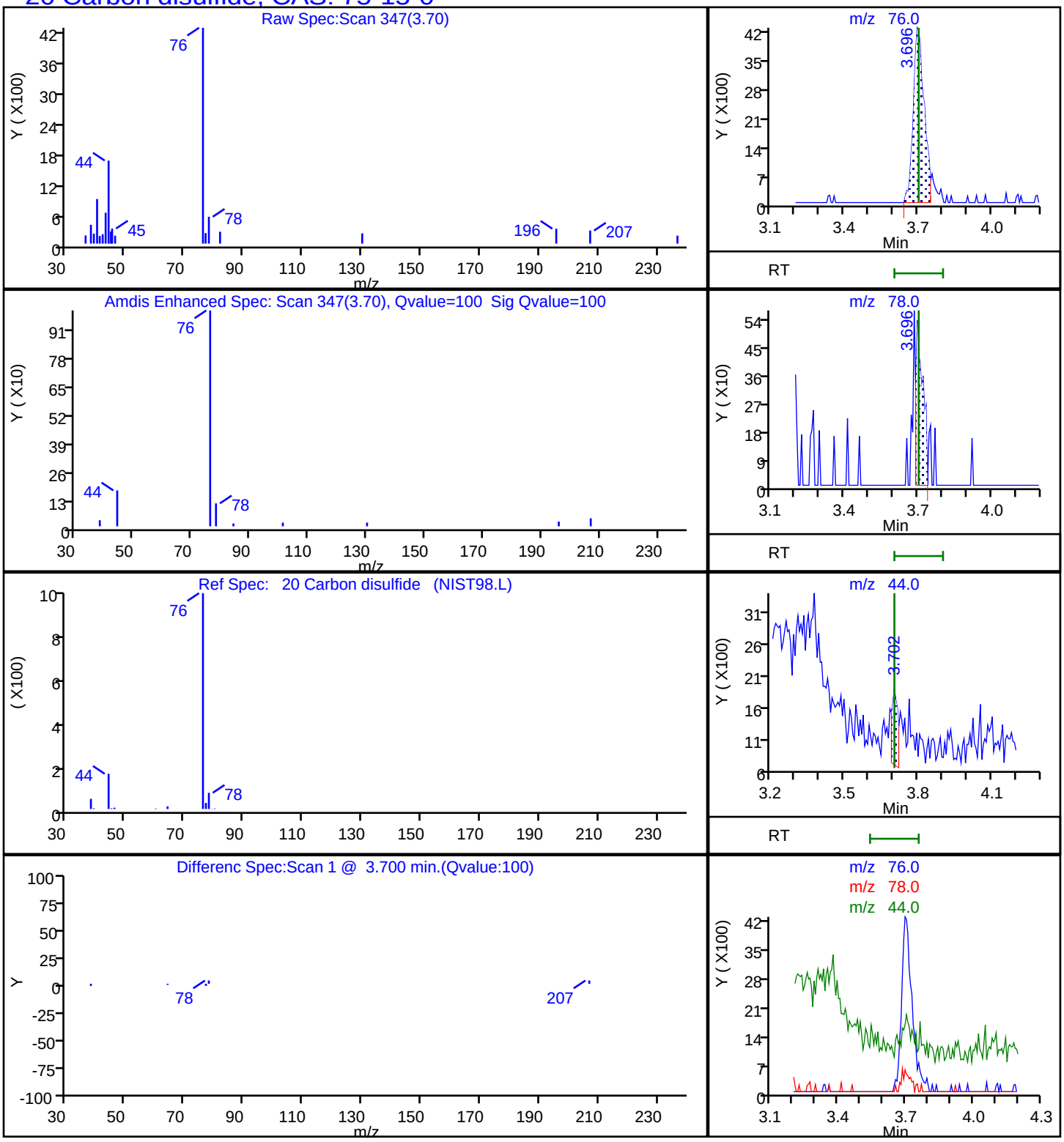
16 Acetone, CAS: 67-64-1



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S08.D				
Injection Date:	05-Oct-2020 14:29:30	Instrument ID:	10193		
Lims ID:	410-15232-A-11	Lab Sample ID:	410-15232-11		
Client ID:	HD-COD-SW-9-0/1-0				
Operator ID:	dvv10203	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

20 Carbon disulfide, CAS: 75-15-0

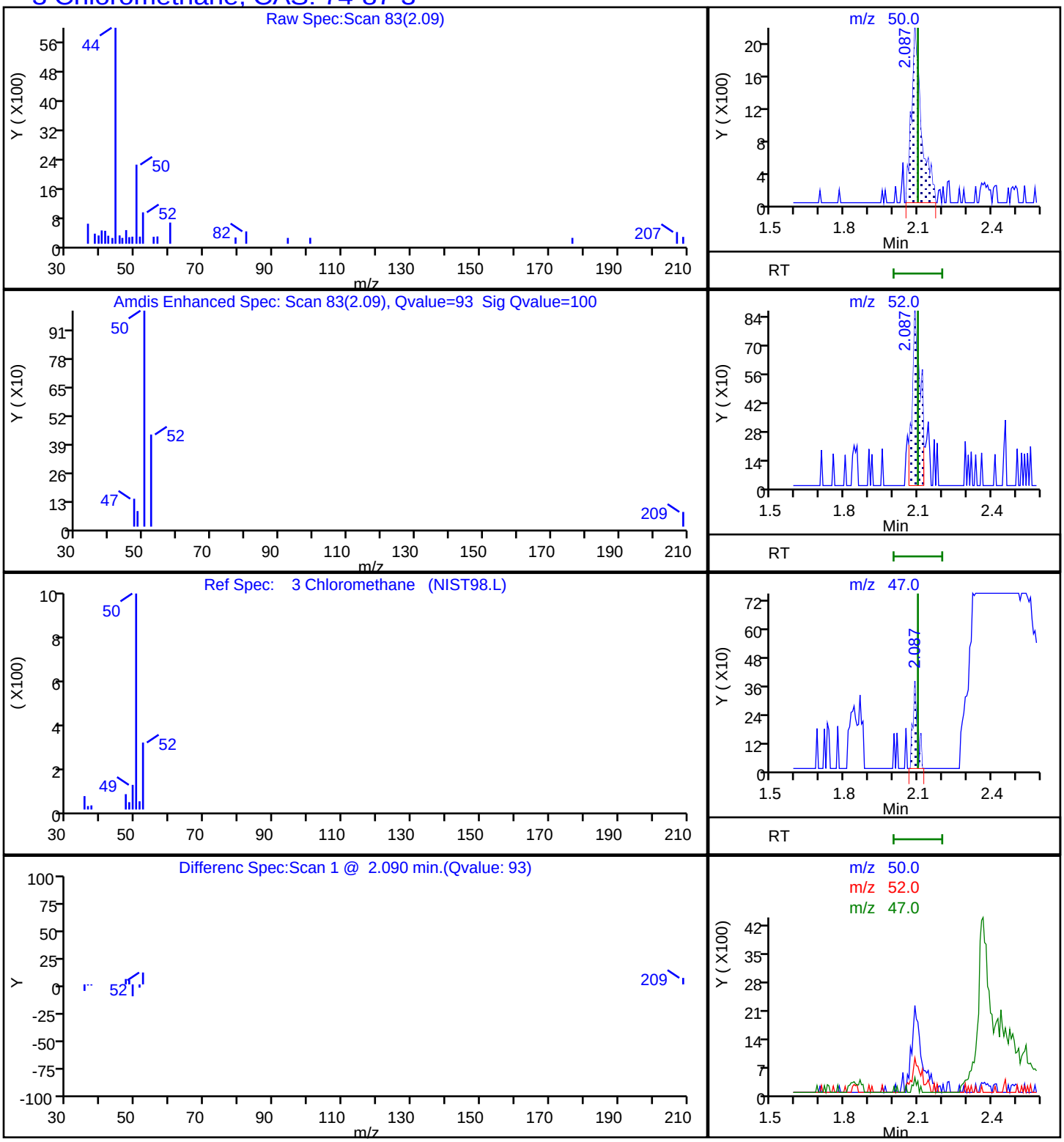


Report Date: 06-Oct-2020 12:46:17 Chrom Revision: 2.3 05-Oct-2020 16:17:16

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S08.D				
Injection Date:	05-Oct-2020 14:29:30	Instrument ID:	10193		
Lims ID:	410-15232-A-11	Lab Sample ID:	410-15232-11		
Client ID:	HD-COD-SW-9-0/1-0				
Operator ID:	dvv10203	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

3 Chloromethane, CAS: 74-87-3

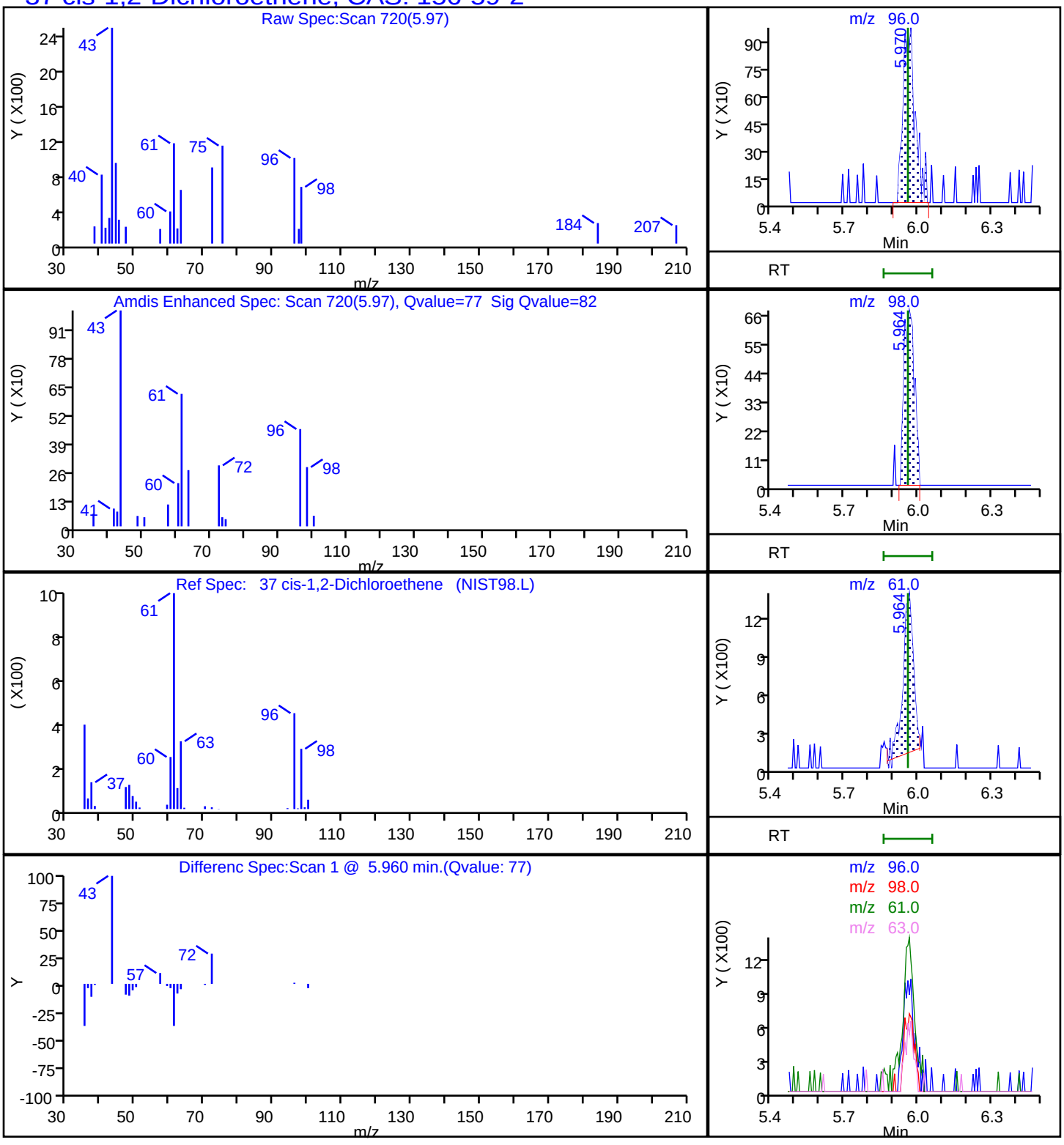


Report Date: 06-Oct-2020 12:46:17 Chrom Revision: 2.3 05-Oct-2020 16:17:16

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S08.D				
Injection Date:	05-Oct-2020 14:29:30	Instrument ID:	10193		
Lims ID:	410-15232-A-11	Lab Sample ID:	410-15232-11		
Client ID:	HD-COD-SW-9-0/1-0				
Operator ID:	dvv10203	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

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

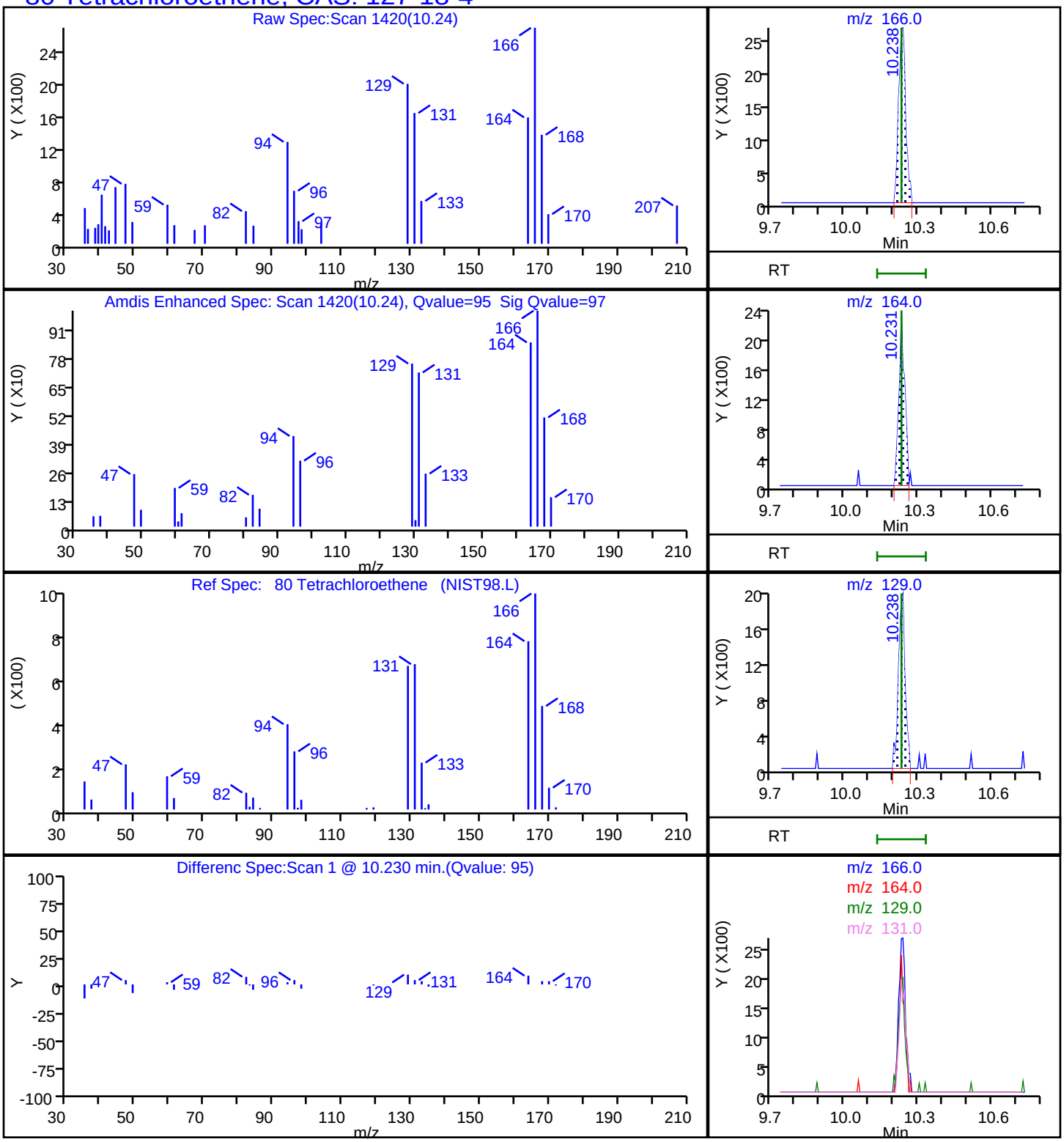


Report Date: 06-Oct-2020 12:46:17 Chrom Revision: 2.3 05-Oct-2020 16:17:16

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S08.D				
Injection Date:	05-Oct-2020 14:29:30	Instrument ID:	10193		
Lims ID:	410-15232-A-11	Lab Sample ID:	410-15232-11		
Client ID:	HD-COD-SW-9-0/1-0				
Operator ID:	dvv10203	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

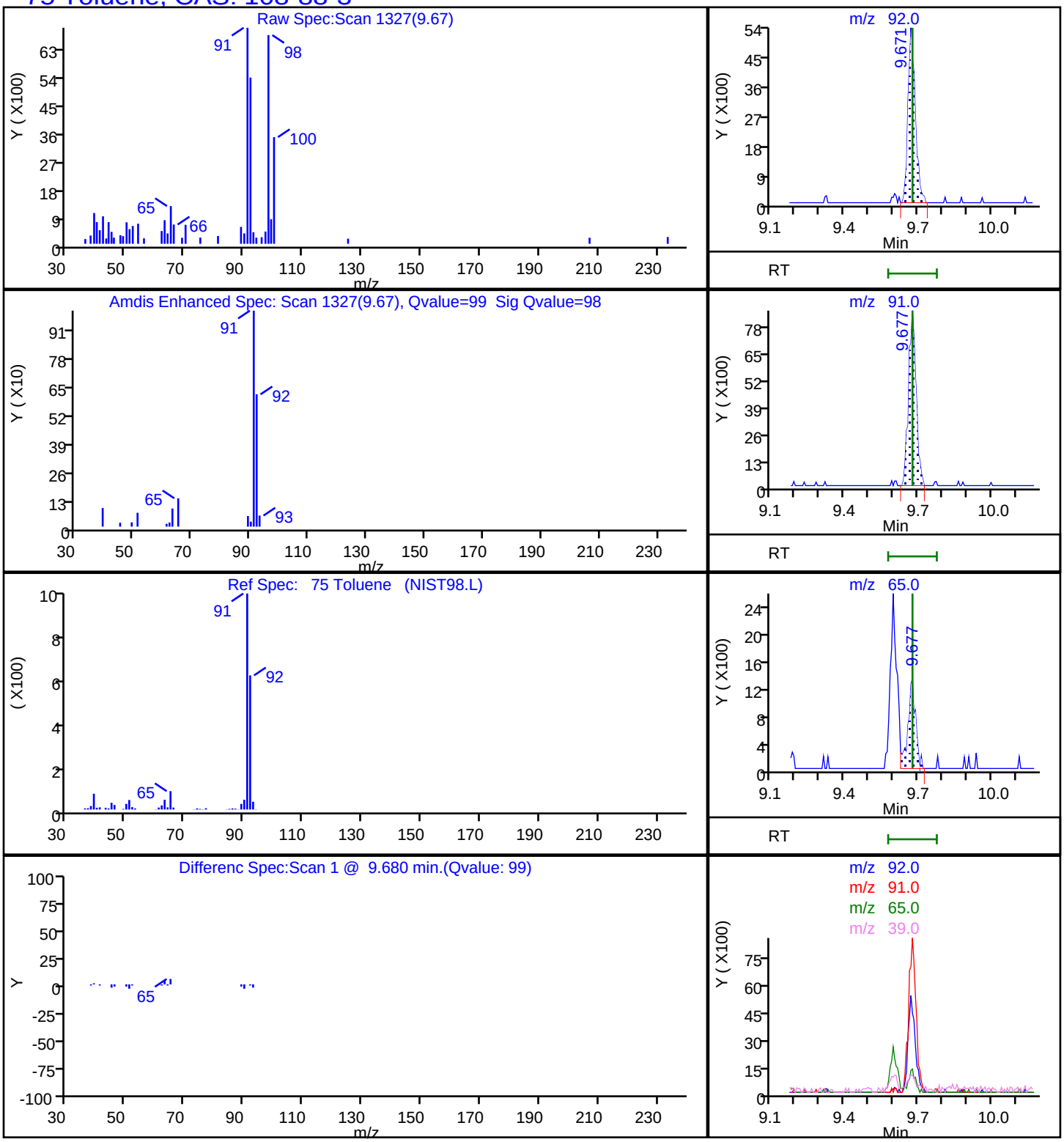
80 Tetrachloroethene, CAS: 127-18-4



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S08.D				
Injection Date:	05-Oct-2020 14:29:30	Instrument ID:	10193		
Lims ID:	410-15232-A-11	Lab Sample ID:	410-15232-11		
Client ID:	HD-COD-SW-9-0/1-0				
Operator ID:	dvv10203	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

75 Toluene, CAS: 108-88-3



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

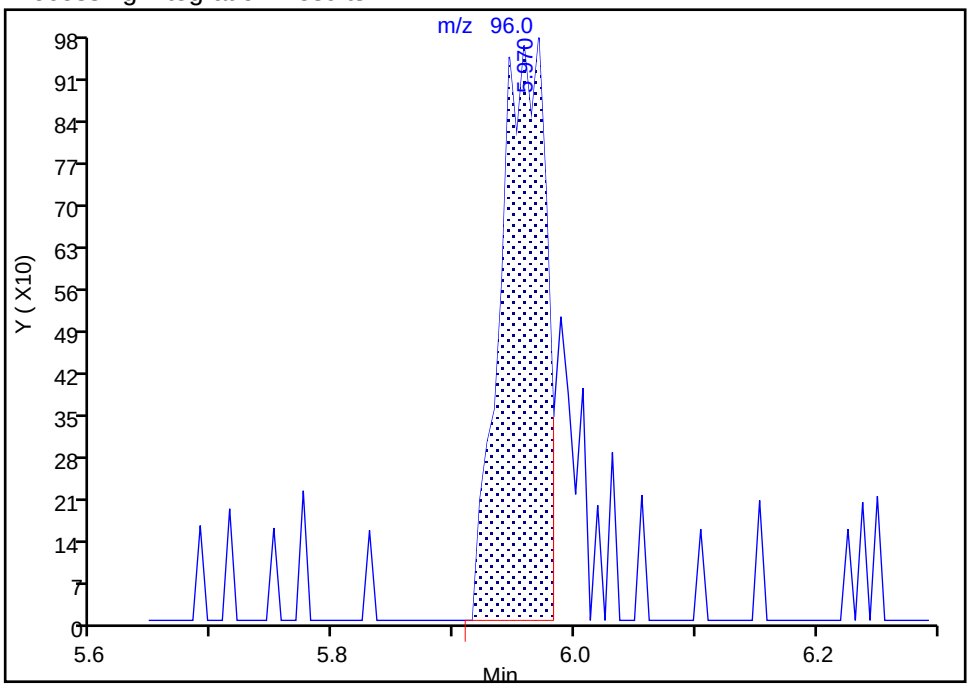
Data File:	\\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S08.D				
Injection Date:	05-Oct-2020 14:29:30	Instrument ID:	10193		
Lims ID:	410-15232-A-11	Lab Sample ID:	410-15232-11		
Client ID:	HD-COD-SW-9-0/1-0				
Operator ID:	dvv10203	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

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

Signal: 1

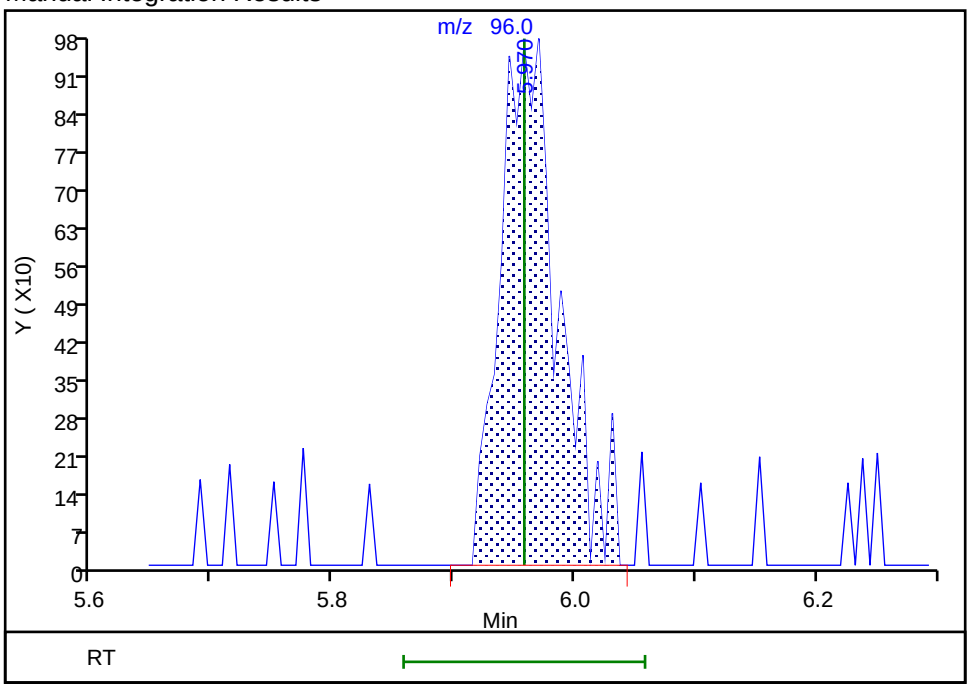
Processing Integration Results

RT: 5.97
Area: 2554
Amount: 0.047366
Amount Units: ug/l



Manual Integration Results

RT: 5.97
Area: 3268
Amount: 0.060607
Amount Units: ug/l



Reviewer: spositok, 06-Oct-2020 12:21:56

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

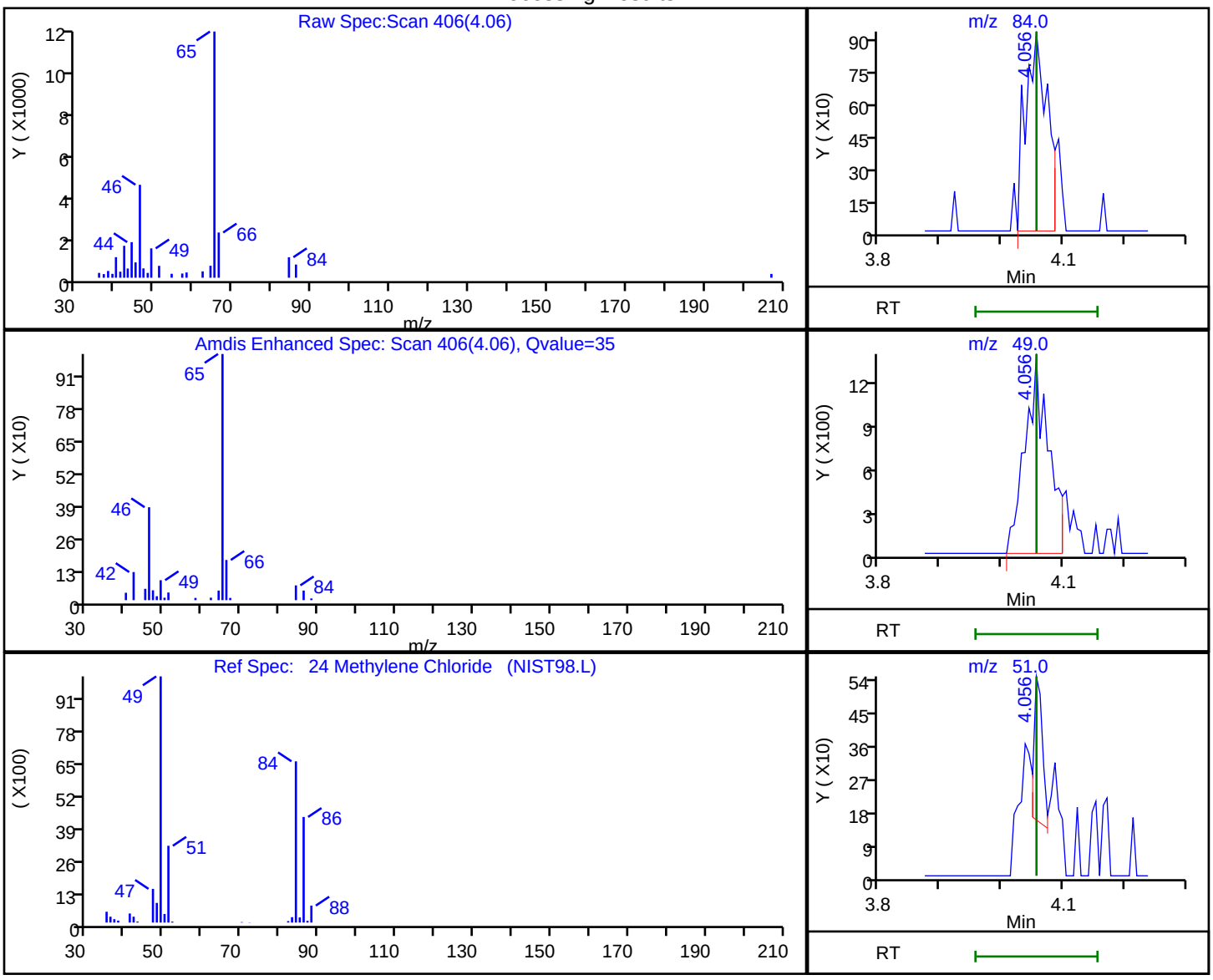
User Disabled Compound Report

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S08.D				
Injection Date:	05-Oct-2020 14:29:30	Instrument ID:	10193		
Lims ID:	410-15232-A-11	Lab Sample ID:	410-15232-11		
Client ID:	HD-COD-SW-9-0/1-0				
Operator ID:	dvv10203	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

24 Methylene Chloride, CAS: 75-09-2

Processing Results



RT	Mass	Response	Amount
4.06	84.00	2310	0.051027
4.06	49.00	3554	
4.06	51.00	383	
4.06	86.00	876	

Reviewer: spositok, 06-Oct-2020 12:21:38

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

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-15232-1

SDG No.:

Client Sample ID: HD-COD-SW-28-0/1-0 Lab Sample ID: 410-15232-12

Matrix: Water Lab File ID: CC05S09.D

Analysis Method: 8260C LL Date Collected: 09/25/2020 13:20

Sample wt/vol: 25(mL) Date Analyzed: 10/05/2020 14:51

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.: 50813 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	6.8	^c	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	^c	1.0	0.30
74-83-9	Bromomethane	ND		0.50	0.070
75-15-0	Carbon disulfide	0.085	J	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	0.075	J	0.50	0.070
100-42-5	Styrene	ND		0.50	0.050
127-18-4	Tetrachloroethene	0.078	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 E Job No.: 410-15232-1

SDG No.:

Client Sample ID: HD-COD-SW-28-0/1-0 Lab Sample ID: 410-15232-12

Matrix: Water Lab File ID: CC05S09.D

Analysis Method: 8260C LL Date Collected: 09/25/2020 13:20

Sample wt/vol: 25(mL) Date Analyzed: 10/05/2020 14:51

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.: 50813 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)	106		80-120
2037-26-5	Toluene-d8 (Surr)	98		80-120
460-00-4	4-Bromofluorobenzene (Surr)	98		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S09.D
Lims ID: 410-15232-A-12
Client ID: HD-COD-SW-28-0/1-0
Sample Type: Client
Inject. Date: 05-Oct-2020 14:51:30 ALS Bottle#: 14 Worklist Smp#: 15
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0012055-015
Misc. Info.: 410-15232-A-12
Operator ID: dvv10203 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20201005-12055.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 06-Oct-2020 12:41:33 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1013

First Level Reviewer: spositok Date: 06-Oct-2020 12:23:02

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
	3 Chloromethane	50	2.087	2.099	-0.012	93	2846	0.0421	
	5 Vinyl chloride	62		2.209				ND	7
	6 Bromomethane	94		2.514				ND	
	7 Chloroethane	64		2.599				ND	7
	14 1,1-Dichloroethene	96		3.422				ND	
	16 Acetone	43	3.452	3.459	-0.007	98	51534	6.77	
	20 Carbon disulfide	76	3.696	3.702	-0.006	98	12267	0.0846	M
	24 Methylene Chloride	84	4.050	4.056	-0.006	95	3434	0.0752	M
*	25 t-Butyl alcohol-d10 (IS)	65	4.086	4.080	0.006	0	179061	50.0	
	27 Acrylonitrile	53		4.397				ND	
	28 Methyl tert-butyl ether	73		4.446				ND	
	29 trans-1,2-Dichloroethene	96		4.452				ND	
	32 1,1-Dichloroethane	63		5.123				ND	
	36 2-Butanone (MEK)	43		5.934				ND	
	37 cis-1,2-Dichloroethene	96		5.958				ND	
	44 Chlorobromomethane	128		6.293				ND	
	46 Chloroform	83		6.446				ND	
$	47 Dibromofluoromethane (Surr)	113	6.665	6.659	0.006	94	448020	10.6	
	48 1,1,1-Trichloroethane	97		6.665				ND	
	50 Carbon tetrachloride	117		6.873				ND	
$	53 1,2-Dichloroethane-d4 (Surr)	102	7.122	7.116	0.006	0	95129	11.1	
	54 Benzene	78		7.147				ND	7
	55 1,2-Dichloroethane	62		7.220				ND	
*	57 Fluorobenzene (IS)	96	7.555	7.561	-0.006	99	1775465	10.0	
	60 Trichloroethene	95		8.037				ND	
	62 1,2-Dichloropropane	63		8.372				ND	
	67 Dichlorobromomethane	83		8.726				ND	7
	72 cis-1,3-Dichloropropene	75		9.281				ND	
	73 4-Methyl-2-pentanone (MIBK)	43		9.470				ND	7
$	74 Toluene-d8 (Surr)	98	9.598	9.598	0.000	94	1816105	9.80	
	75 Toluene	92	9.683	9.677	0.006	98	9620	0.0690	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
76 trans-1,3-Dichloropropene	75		9.945				ND	
79 1,1,2-Trichloroethane	97		10.152				ND	
80 Tetrachloroethene	166	10.232	10.232	0.000	94	4867	0.0782	
82 2-Hexanone	43		10.378				ND	7
83 Chlorodibromomethane	129		10.536				ND	
84 Ethylene Dibromide	107		10.646				ND	
* 85 Chlorobenzene-d5 (IS)	117	11.085	11.085	0.000	87	1419013	10.0	
87 Chlorobenzene	112		11.109				ND	
89 1,1,1,2-Tetrachloroethane	131		11.201				ND	
90 Ethylbenzene	91		11.201				ND	7
S 88 Xylenes, Total	106		11.245				ND	7
91 m-Xylene & p-Xylene	106		11.317				ND	7
92 o-Xylene	106		11.652				ND	7
93 Styrene	104		11.664				ND	7
94 Bromoform	173		11.823				ND	
$ 98 4-Bromofluorobenzene (Surr)	95	12.103	12.097	0.006	93	683241	9.81	
99 1,1,2,2-Tetrachloroethane	83		12.207				ND	
* 113 1,4-Dichlorobenzene-d4	152	12.993	12.993	0.000	95	786789	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

Reagents:

MSV_HP25_ISSS_00014 Amount Added: 1.00 Units: uL Run Reagent

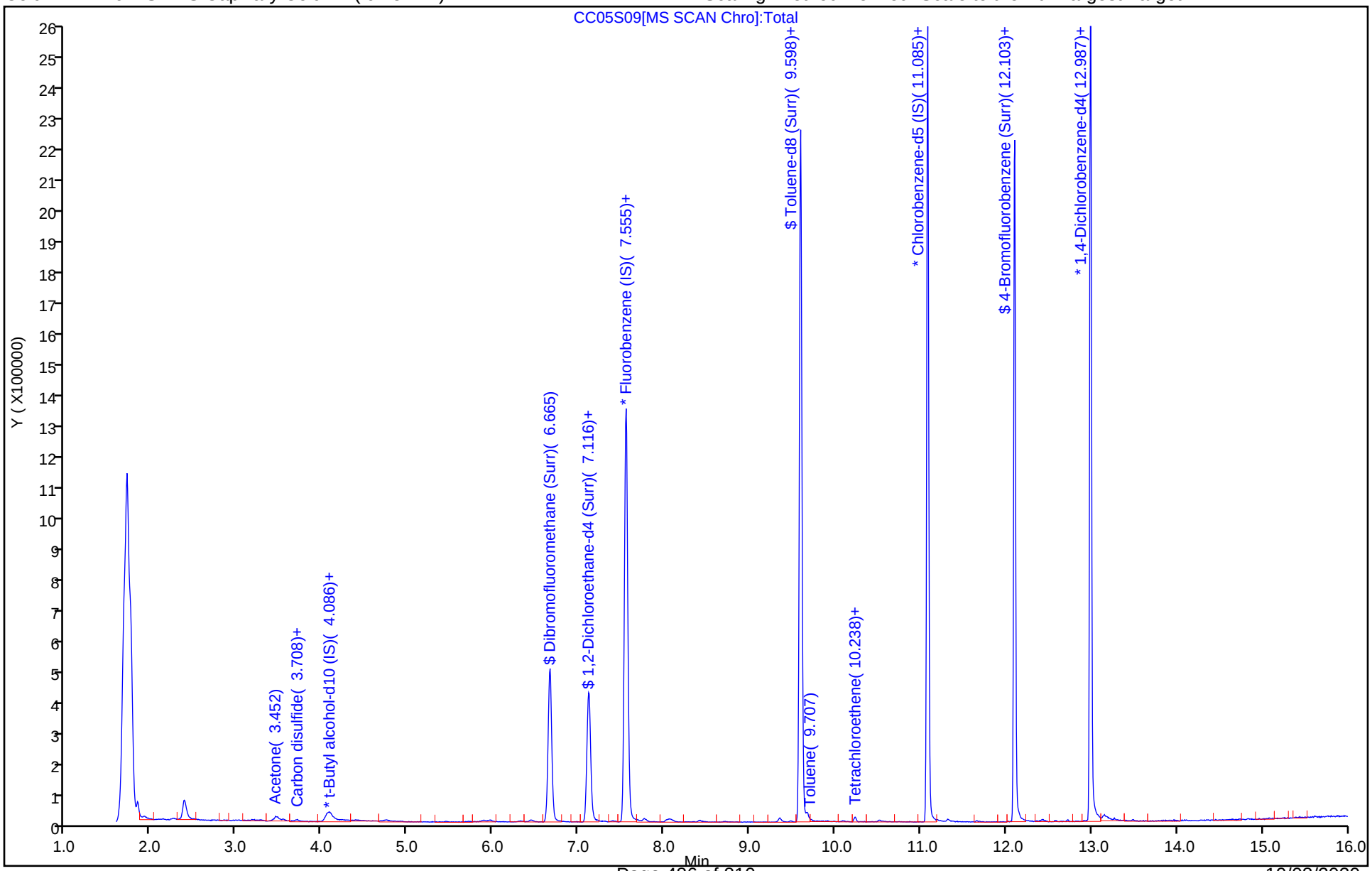
Report Date: 06-Oct-2020 12:46:21 Chrom Revision: 2.3 05-Oct-2020 16:17:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S09.D

Injection Date:	05-Oct-2020 14:51:30	Instrument ID:	10193	Operator ID:	dvv10203
Lims ID:	410-15232-A-12	Lab Sample ID:	410-15232-12	Worklist Smp#:	15
Client ID:	HD-COD-SW-28-0/1-0				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	MSV_10193_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\10193\20201005-12055.b\CC05S09.D
Lims ID: 410-15232-A-12
Client ID: HD-COD-SW-28-0/1-0
Sample Type: Client
Inject. Date: 05-Oct-2020 14:51:30 ALS Bottle#: 14 Worklist Smp#: 15
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0012055-015
Misc. Info.: 410-15232-A-12
Operator ID: dvv10203 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20201005-12055.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 06-Oct-2020 12:41:33 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1013

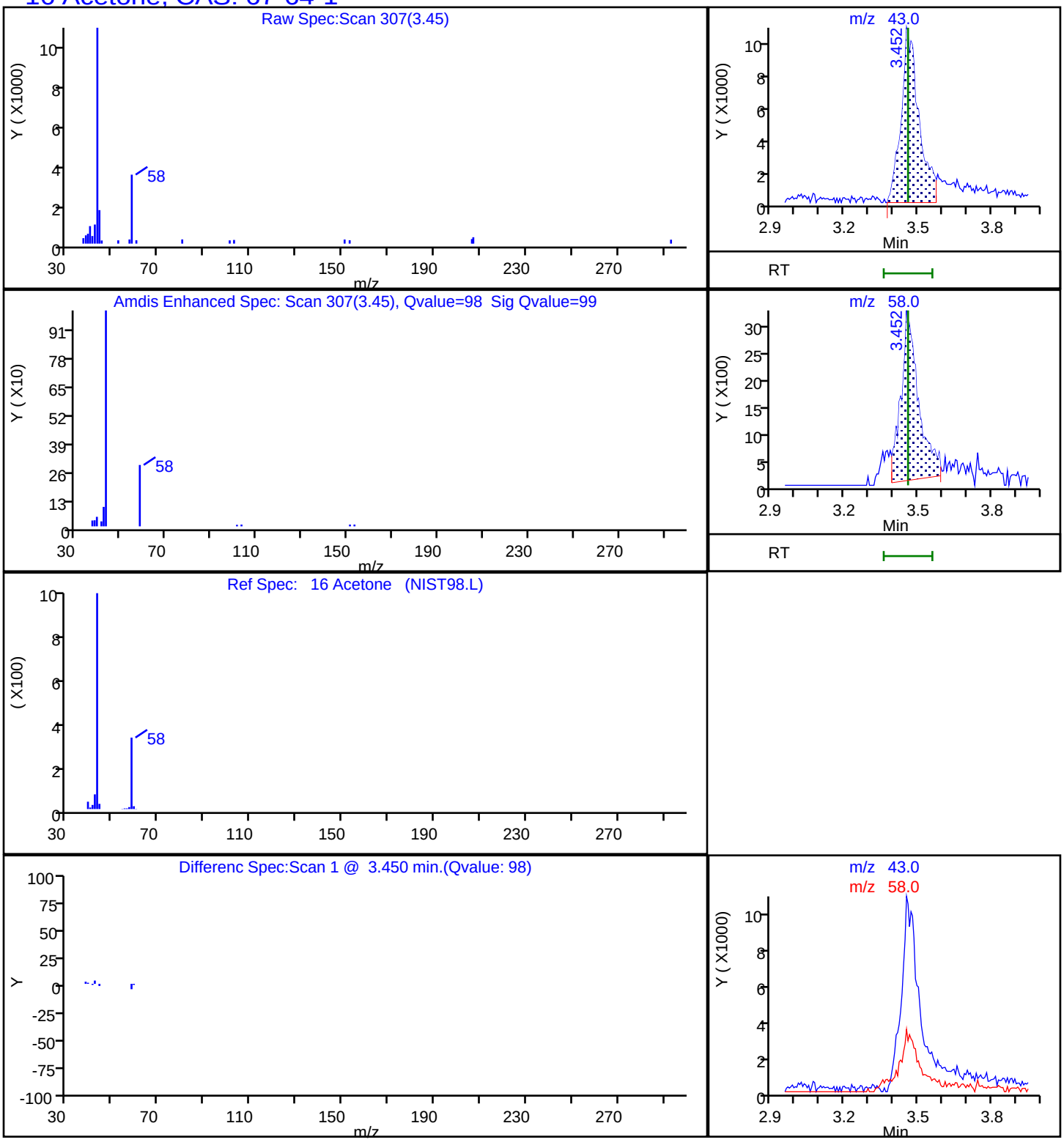
First Level Reviewer: spositok Date: 06-Oct-2020 12:23:02

Compound	Amount Added	Amount Recovered	% Rec.
$ 47 Dibromofluoromethane (Surr)	10.0	10.6	106.19
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	11.1	110.68
$ 74 Toluene-d8 (Surr)	10.0	9.80	97.99
$ 98 4-Bromofluorobenzene (Surr)	10.0	9.81	98.08

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S09.D				
Injection Date:	05-Oct-2020 14:51:30	Instrument ID:	10193		
Lims ID:	410-15232-A-12	Lab Sample ID:	410-15232-12		
Client ID:	HD-COD-SW-28-0/1-0				
Operator ID:	dvv10203	ALS Bottle#:	14	Worklist Smp#:	15
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

16 Acetone, CAS: 67-64-1



Report Date: 06-Oct-2020 12:46:21 Chrom Revision: 2.3 05-Oct-2020 16:17:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S09.D

Injection Date: 05-Oct-2020 14:51:30 Instrument ID: 10193

Lims ID: 410-15232-A-12 Lab Sample ID: 410-15232-12

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

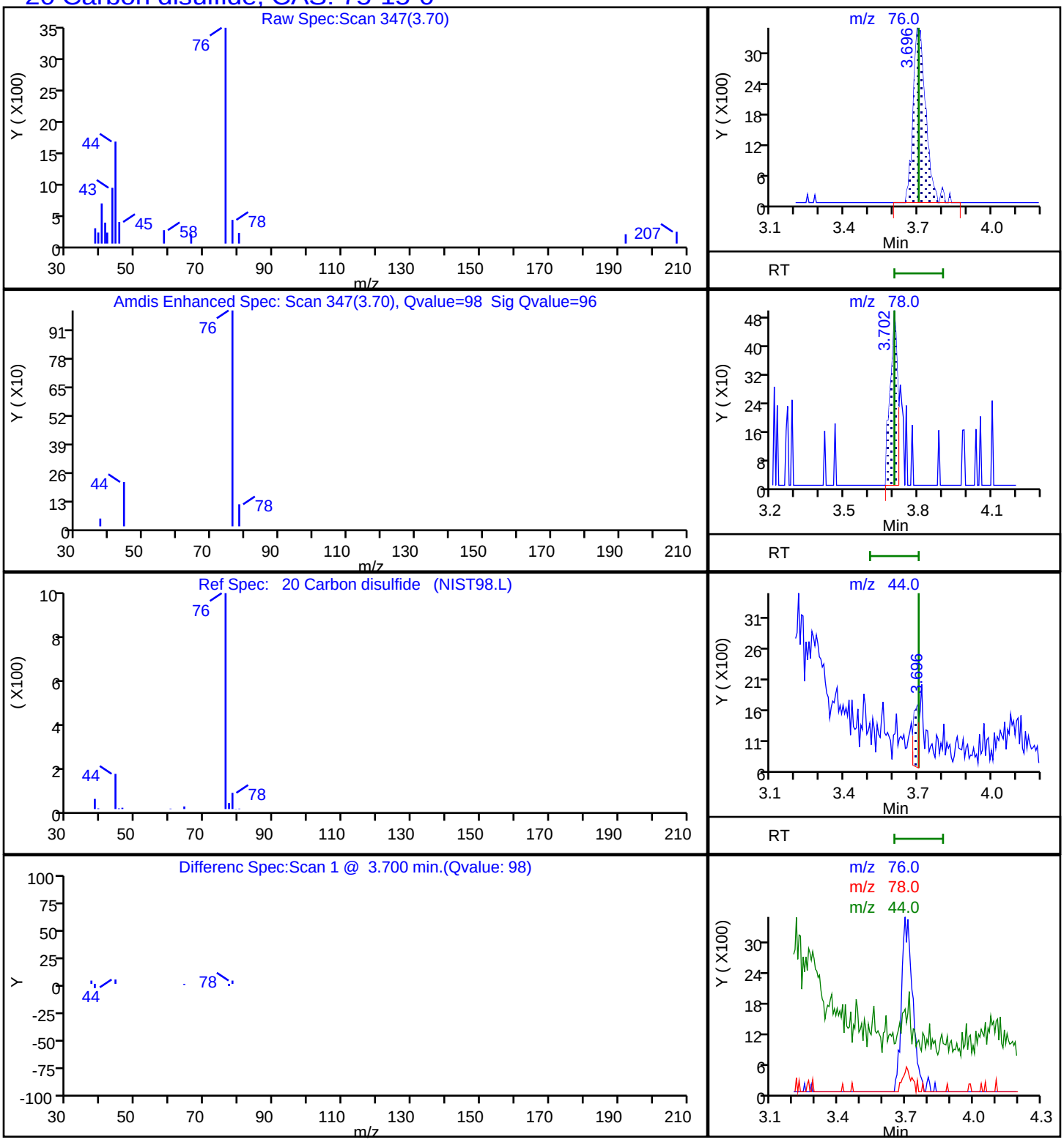
Operator ID: dvv10203 ALS Bottle#: 14 Worklist Smp#: 15

Purge Vol: 25.000 mL Dil. Factor: 1.0000

Method: MSV_10193_25mL Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

20 Carbon disulfide, CAS: 75-15-0



Report Date: 06-Oct-2020 12:46:21 Chrom Revision: 2.3 05-Oct-2020 16:17:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S09.D

Injection Date: 05-Oct-2020 14:51:30 Instrument ID: 10193

Lims ID: 410-15232-A-12 Lab Sample ID: 410-15232-12

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

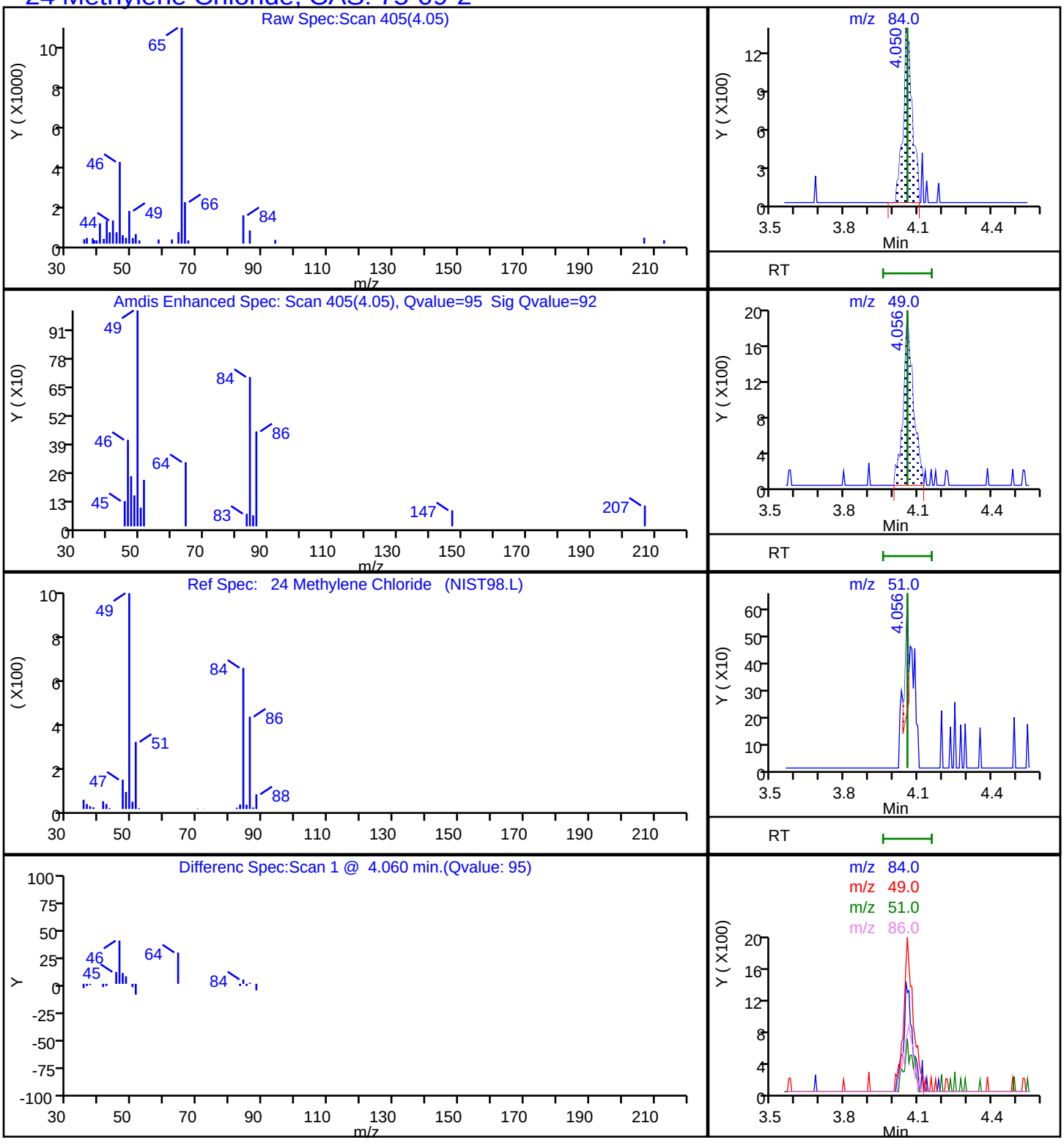
Operator ID: dvv10203 ALS Bottle#: 14 Worklist Smp#: 15

Purge Vol: 25.000 mL Dil. Factor: 1.0000

Method: MSV_10193_25mL Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

24 Methylene Chloride, CAS: 75-09-2

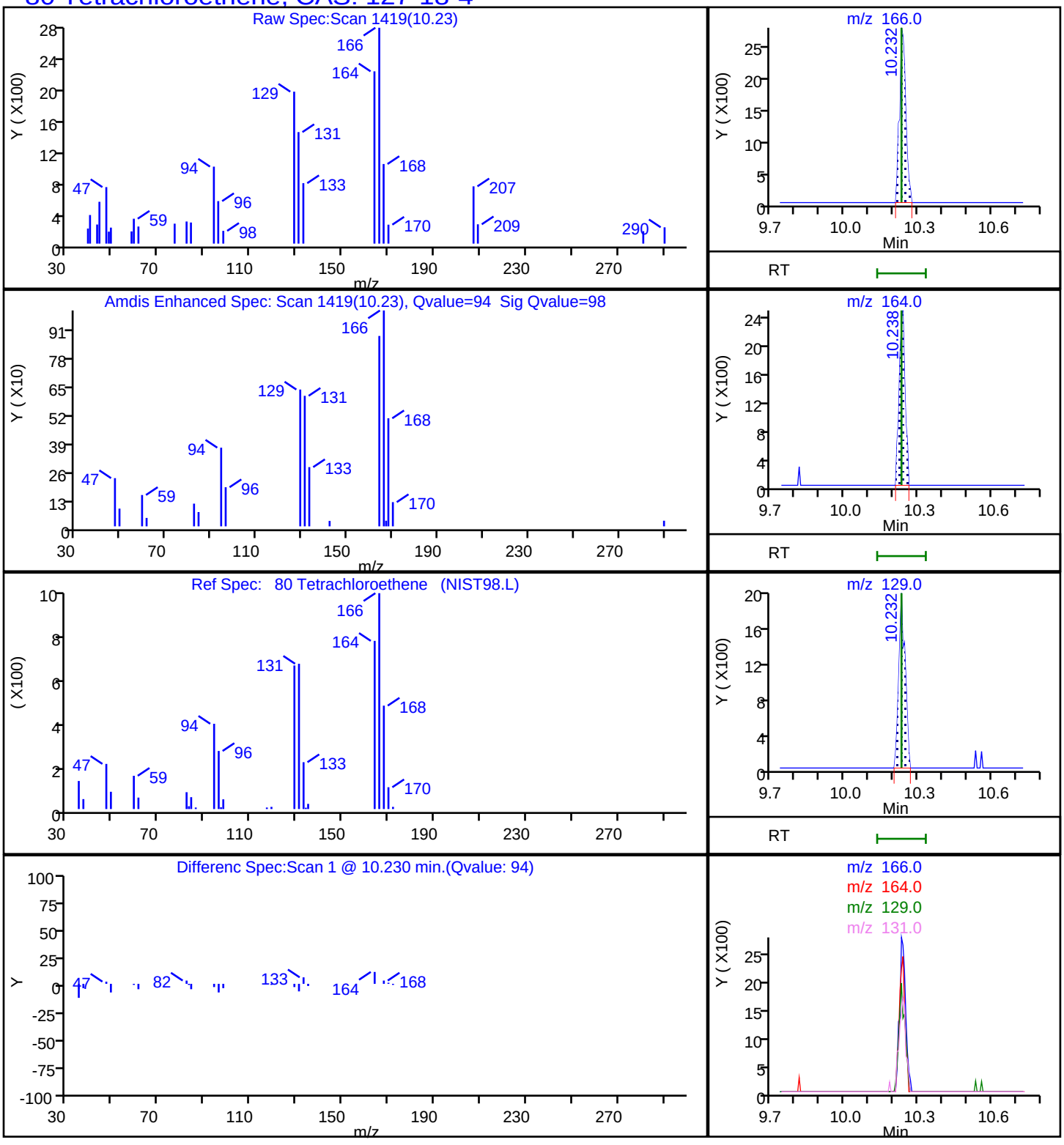


Report Date: 06-Oct-2020 12:46:21 Chrom Revision: 2.3 05-Oct-2020 16:17:16

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S09.D				
Injection Date:	05-Oct-2020 14:51:30	Instrument ID:	10193		
Lims ID:	410-15232-A-12	Lab Sample ID:	410-15232-12		
Client ID:	HD-COD-SW-28-0/1-0				
Operator ID:	dvv10203	ALS Bottle#:	14	Worklist Smp#:	15
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

80 Tetrachloroethene, CAS: 127-18-4



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

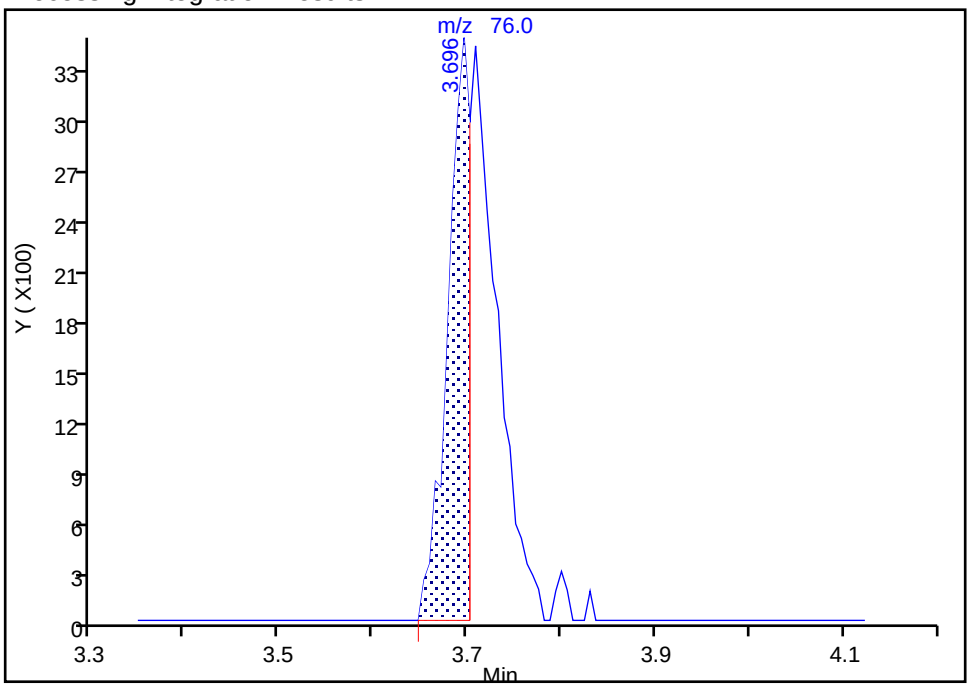
Data File:	\\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S09.D				
Injection Date:	05-Oct-2020 14:51:30	Instrument ID:	10193		
Lims ID:	410-15232-A-12	Lab Sample ID:	410-15232-12		
Client ID:	HD-COD-SW-28-0/1-0				
Operator ID:	dvv10203	ALS Bottle#:	14	Worklist Smp#:	15
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

20 Carbon disulfide, CAS: 75-15-0

Signal: 1

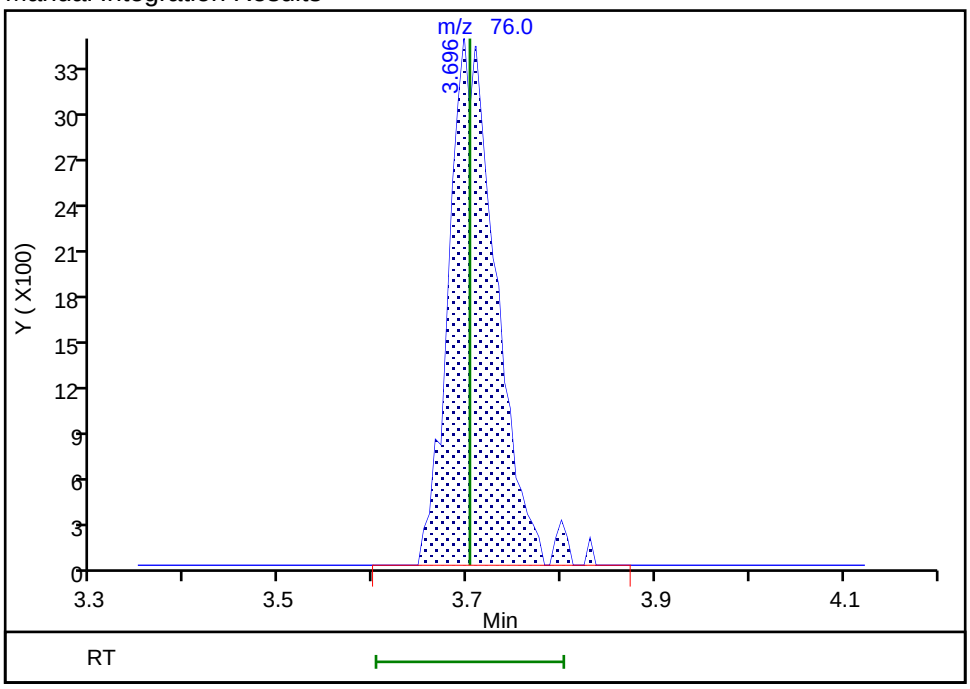
Processing Integration Results

RT: 3.70
Area: 5803
Amount: 0.040020
Amount Units: ug/l



Manual Integration Results

RT: 3.70
Area: 12267
Amount: 0.084598
Amount Units: ug/l



Reviewer: spositok, 06-Oct-2020 12:22:33

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC

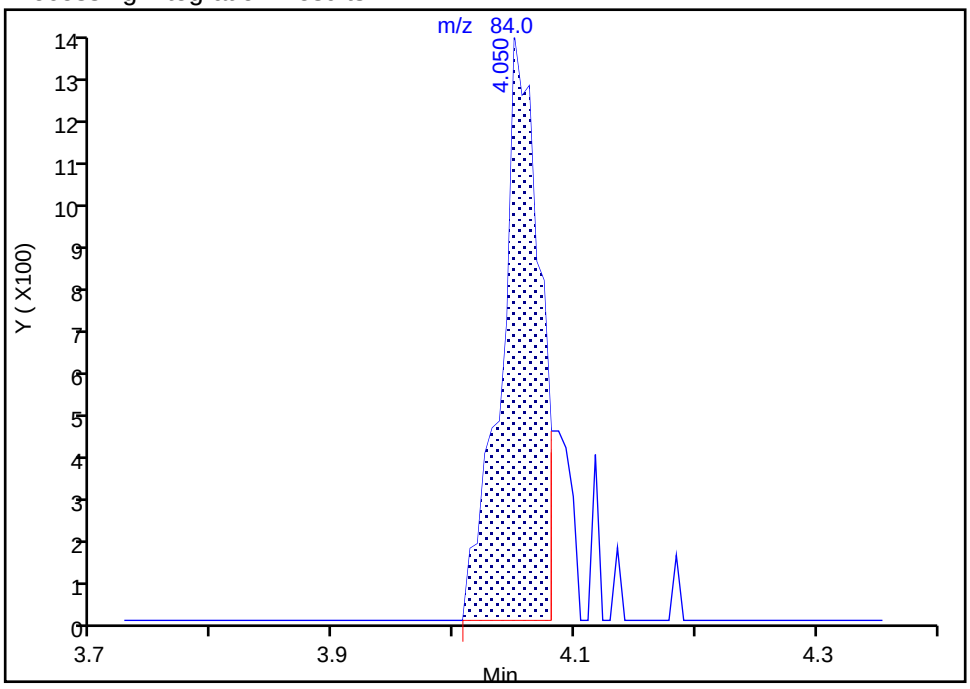
Data File:	\\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S09.D				
Injection Date:	05-Oct-2020 14:51:30	Instrument ID:	10193		
Lims ID:	410-15232-A-12	Lab Sample ID:	410-15232-12		
Client ID:	HD-COD-SW-28-0/1-0				
Operator ID:	dvv10203	ALS Bottle#:	14	Worklist Smp#:	15
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

24 Methylene Chloride, CAS: 75-09-2

Signal: 1

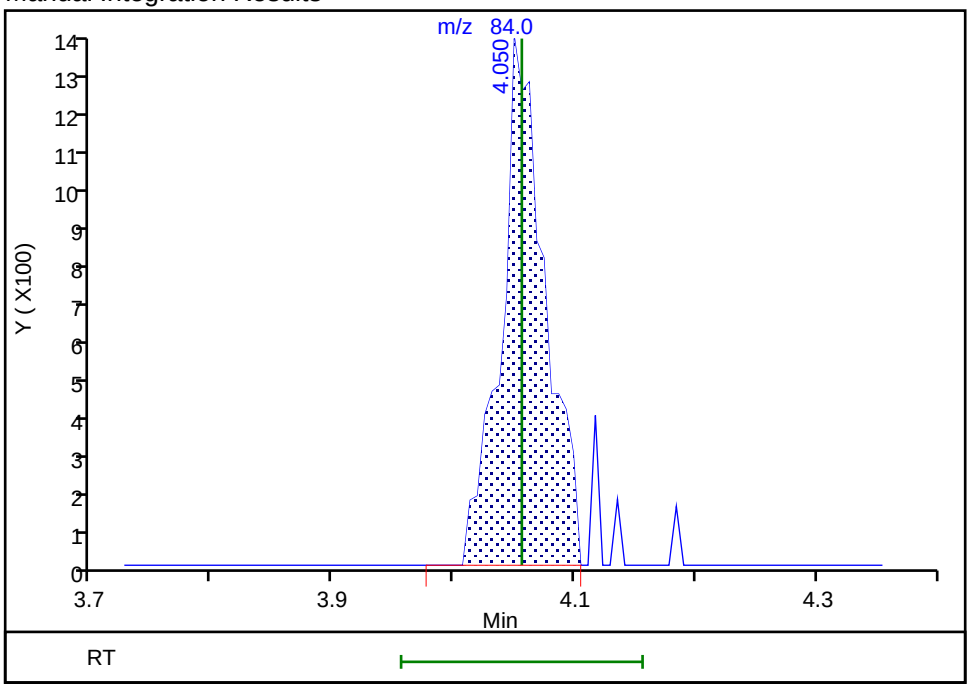
Processing Integration Results

RT: 4.05
Area: 3020
Amount: 0.066113
Amount Units: ug/l



Manual Integration Results

RT: 4.05
Area: 3434
Amount: 0.075176
Amount Units: ug/l



Reviewer: spositok, 06-Oct-2020 12:22:41
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-15232-1

SDG No.:

Client Sample ID: HD-QC1-0/1-1 Lab Sample ID: 410-15232-13

Matrix: Water Lab File ID: CC05S02.D

Analysis Method: 8260C LL Date Collected: 09/25/2020 12:00

Sample wt/vol: 25(mL) Date Analyzed: 10/05/2020 12:15

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.: 50813 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	0.11	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	ND		0.50	0.070
75-35-4	1,1-Dichloroethene	0.075	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	^c	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	^c	1.0	0.30
74-83-9	Bromomethane	ND		0.50	0.070
75-15-0	Carbon disulfide	0.069	J	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	0.30	J	0.50	0.090
74-87-3	Chloromethane	ND		0.50	0.060
156-59-2	cis-1,2-Dichloroethene	0.82		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	2.4		0.50	0.060
108-88-3	Toluene	0.10	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 E Job No.: 410-15232-1

SDG No.:

Client Sample ID: HD-QC1-0/1-1 Lab Sample ID: 410-15232-13

Matrix: Water Lab File ID: CC05S02.D

Analysis Method: 8260C LL Date Collected: 09/25/2020 12:00

Sample wt/vol: 25(mL) Date Analyzed: 10/05/2020 12:15

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.: 50813 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		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)	106		80-120
2037-26-5	Toluene-d8 (Surr)	98		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\10193\20201005-12055.b\CC05S02.D
Lims ID: 410-15232-A-13
Client ID: HD-QC1-0/1-1
Sample Type: Client
Inject. Date: 05-Oct-2020 12:15:30 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0012055-008
Misc. Info.: 410-15232-A-13
Operator ID: dvv10203 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20201005-12055.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 06-Oct-2020 12:41:33 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1013

First Level Reviewer: spositok Date: 06-Oct-2020 12:12:00

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
3 Chloromethane	50		2.099				ND	7
5 Vinyl chloride	62		2.209				ND	7
6 Bromomethane	94		2.514				ND	
7 Chloroethane	64		2.599				ND	7
14 1,1-Dichloroethene	96	3.428	3.422	0.006	96	3166	0.0753	
16 Acetone	43		3.459				ND	U
20 Carbon disulfide	76	3.696	3.702	-0.006	95	10295	0.0693	M
24 Methylene Chloride	84		4.056				ND	7
* 25 t-Butyl alcohol-d10 (IS)	65	4.080	4.080	0.000	0	188331	50.0	
27 Acrylonitrile	53		4.397				ND	
28 Methyl tert-butyl ether	73		4.446				ND	MU
29 trans-1,2-Dichloroethene	96		4.452				ND	
32 1,1-Dichloroethane	63	5.117	5.123	-0.006	94	5297	0.0586	
36 2-Butanone (MEK)	43		5.934				ND	
37 cis-1,2-Dichloroethene	96	5.958	5.958	0.000	80	45818	0.8224	
44 Chlorobromomethane	128		6.293				ND	
46 Chloroform	83	6.446	6.446	0.000	95	27005	0.3013	
$ 47 Dibromofluoromethane (Surr)	113	6.659	6.659	0.000	94	456732	10.6	
48 1,1,1-Trichloroethane	97	6.671	6.665	0.006	36	8609	0.1066	
50 Carbon tetrachloride	117		6.873				ND	7
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.122	7.116	0.006	0	97952	11.1	
54 Benzene	78		7.147				ND	7
55 1,2-Dichloroethane	62	7.220	7.220	0.000	19	2130	0.0338	
* 57 Fluorobenzene (IS)	96	7.555	7.561	-0.006	99	1818122	10.0	
60 Trichloroethene	95	8.037	8.037	0.000	98	57463	1.07	
62 1,2-Dichloropropane	63		8.372				ND	
67 Dichlorobromomethane	83		8.726				ND	
72 cis-1,3-Dichloropropene	75		9.281				ND	
73 4-Methyl-2-pentanone (MIBK)	43		9.470				ND	7
$ 74 Toluene-d8 (Surr)	98	9.597	9.598	-0.001	94	1857292	9.75	
75 Toluene	92	9.671	9.677	-0.006	96	14574	0.1017	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
76 trans-1,3-Dichloropropene	75		9.945				ND	
79 1,1,2-Trichloroethane	97		10.152				ND	7
80 Tetrachloroethene	166	10.231	10.232	-0.001	98	155055	2.42	
82 2-Hexanone	43		10.378				ND	7
83 Chlorodibromomethane	129		10.536				ND	
84 Ethylene Dibromide	107		10.646				ND	
* 85 Chlorobenzene-d5 (IS)	117	11.085	11.085	0.000	86	1458263	10.0	
87 Chlorobenzene	112		11.109				ND	7
89 1,1,1,2-Tetrachloroethane	131		11.201				ND	
90 Ethylbenzene	91		11.201				ND	7
S 88 Xylenes, Total	106		11.245				ND	7
91 m-Xylene & p-Xylene	106		11.317				ND	7
92 o-Xylene	106		11.652				ND	7
93 Styrene	104		11.664				ND	7
94 Bromoform	173		11.823				ND	
$ 98 4-Bromofluorobenzene (Surr)	95	12.103	12.097	0.006	93	705841	9.86	
99 1,1,2,2-Tetrachloroethane	83		12.207				ND	
* 113 1,4-Dichlorobenzene-d4	152	12.993	12.993	0.000	95	808881	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

U - Marked Undetected

Reagents:

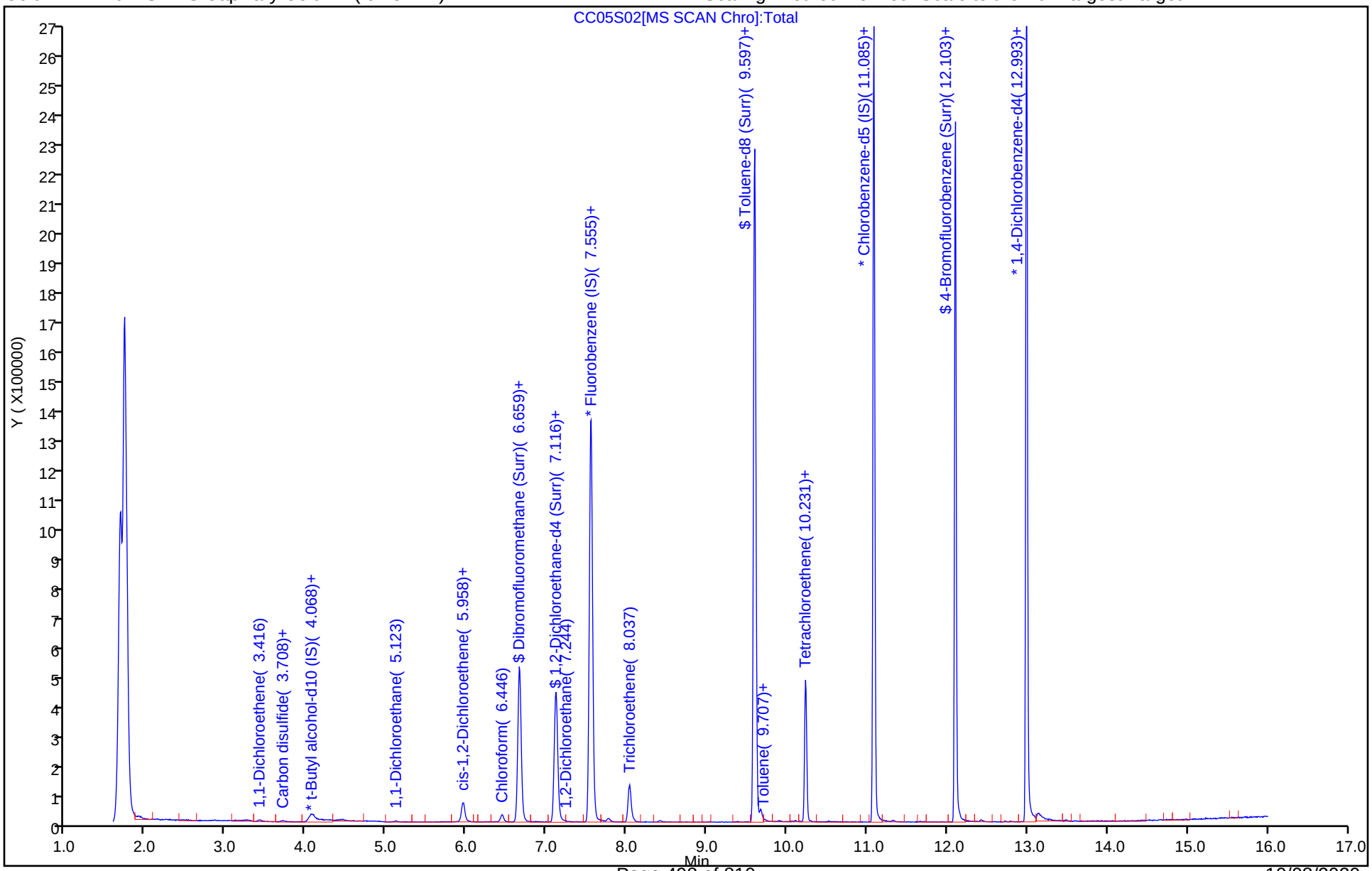
MSV_HP25_ISSS_00014 Amount Added: 1.00 Units: uL Run Reagent

Report Date: 06-Oct-2020 12:47:10 Chrom Revision: 2.3 05-Oct-2020 16:17:16

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S02.D				
Injection Date:	05-Oct-2020 12:15:30	Instrument ID:	10193	Operator ID:	dvv10203
Lims ID:	410-15232-A-13	Lab Sample ID:	410-15232-13	Worklist Smp#:	8
Client ID:	HD-QC1-0/1-1				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MSV_10193_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\10193\20201005-12055.b\CC05S02.D
Lims ID: 410-15232-A-13
Client ID: HD-QC1-0/1-1
Sample Type: Client
Inject. Date: 05-Oct-2020 12:15:30 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0012055-008
Misc. Info.: 410-15232-A-13
Operator ID: dvv10203 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20201005-12055.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 06-Oct-2020 12:41:33 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1013

First Level Reviewer: spositok Date: 06-Oct-2020 12:12:00

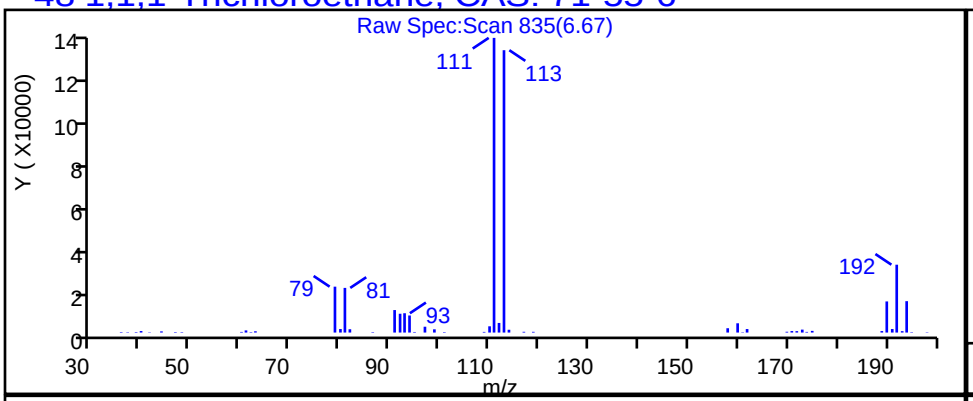
Compound	Amount Added	Amount Recovered	% Rec.
$ 47 Dibromofluoromethane (Surr)	10.0	10.6	105.72
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	11.1	111.29
$ 74 Toluene-d8 (Surr)	10.0	9.75	97.52
$ 98 4-Bromofluorobenzene (Surr)	10.0	9.86	98.60

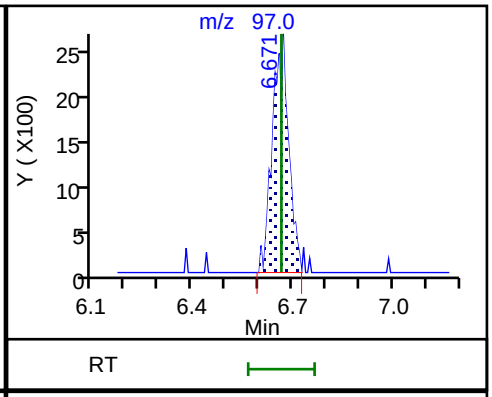
Report Date: 06-Oct-2020 12:47:10 Chrom Revision: 2.3 05-Oct-2020 16:17:16

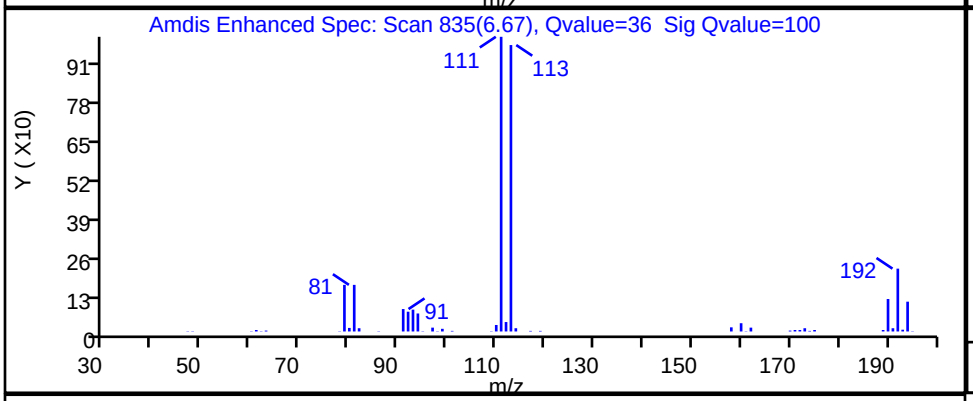
Eurofins Lancaster Laboratories Env, LLC

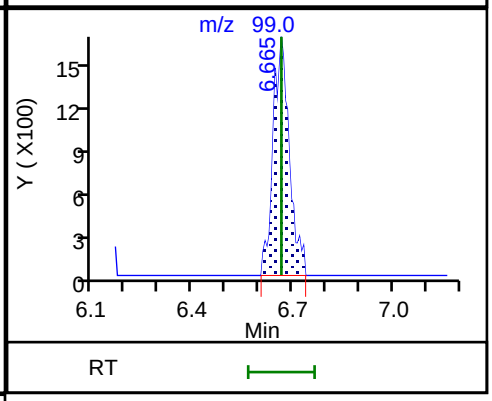
Data File:	\\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S02.D				
Injection Date:	05-Oct-2020 12:15:30	Instrument ID:	10193		
Lims ID:	410-15232-A-13	Lab Sample ID:	410-15232-13		
Client ID:	HD-QC1-0/1-1				
Operator ID:	dvv10203	ALS Bottle#:	7	Worklist Smp#:	8
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

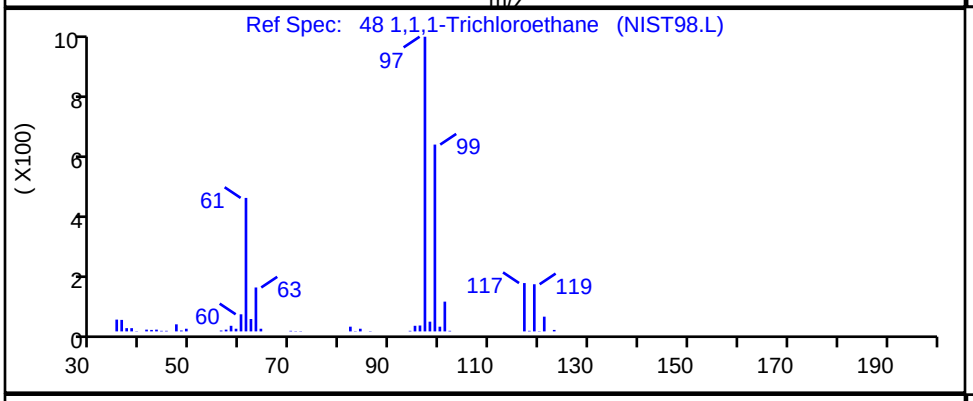
48 1,1,1-Trichloroethane, CAS: 71-55-6

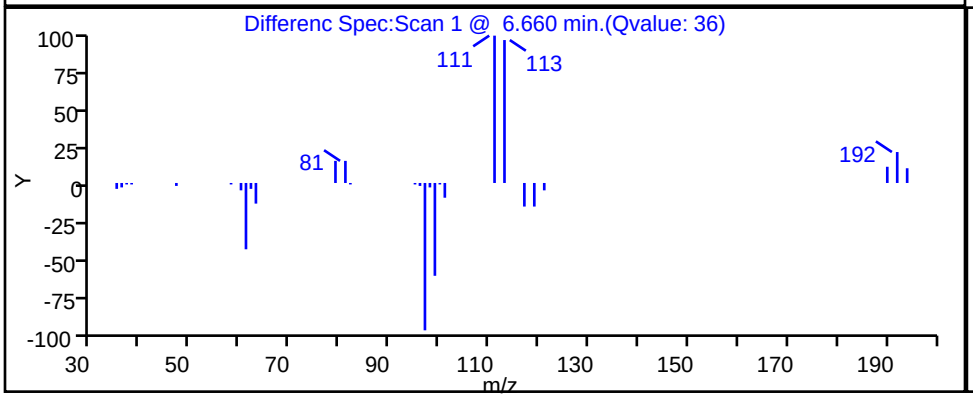


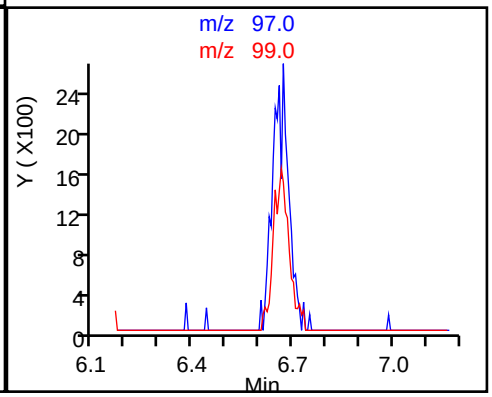








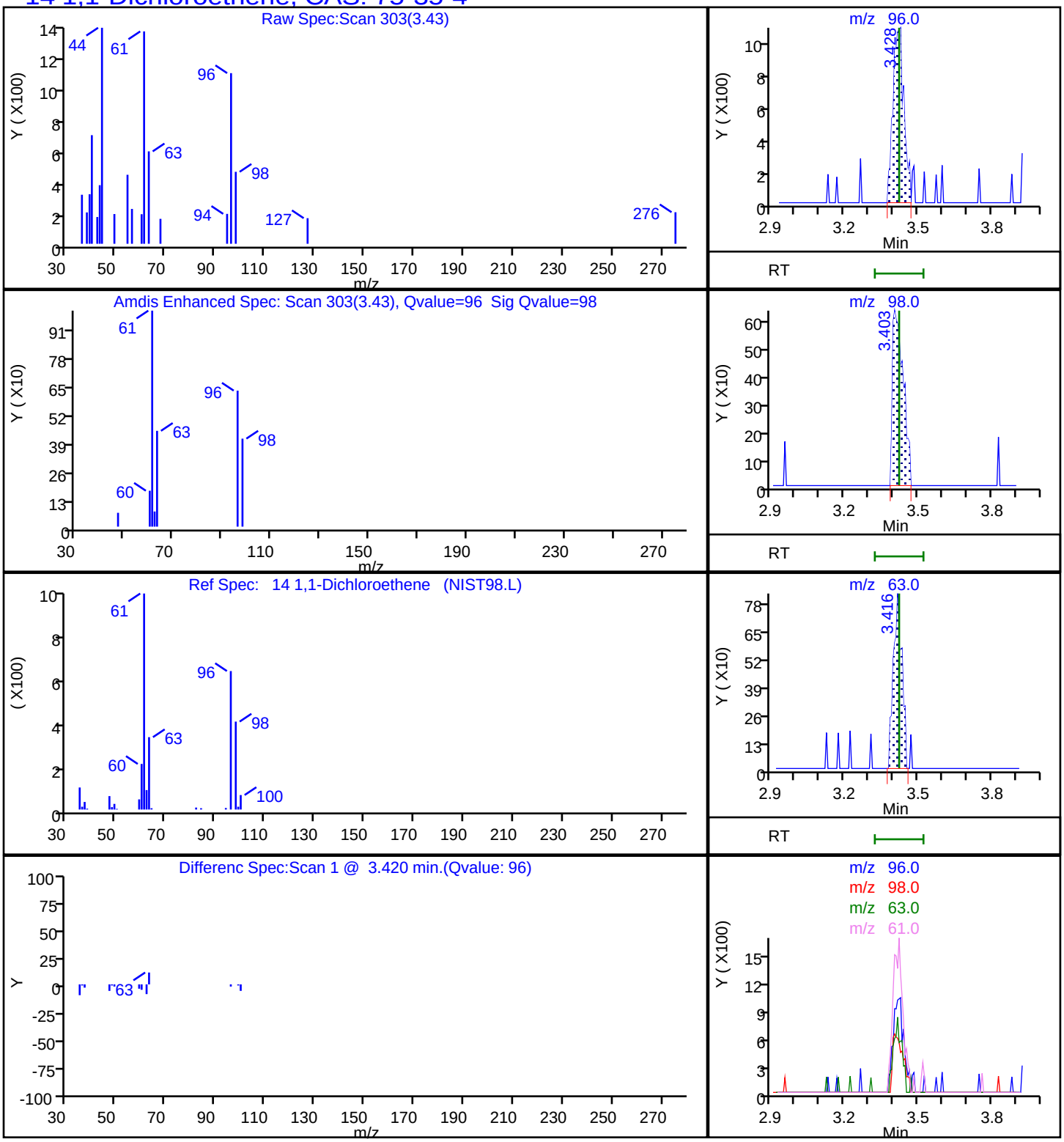




Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S02.D				
Injection Date:	05-Oct-2020 12:15:30	Instrument ID:	10193		
Lims ID:	410-15232-A-13	Lab Sample ID:	410-15232-13		
Client ID:	HD-QC1-0/1-1				
Operator ID:	dvv10203	ALS Bottle#:	7	Worklist Smp#:	8
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

14 1,1-Dichloroethene, CAS: 75-35-4

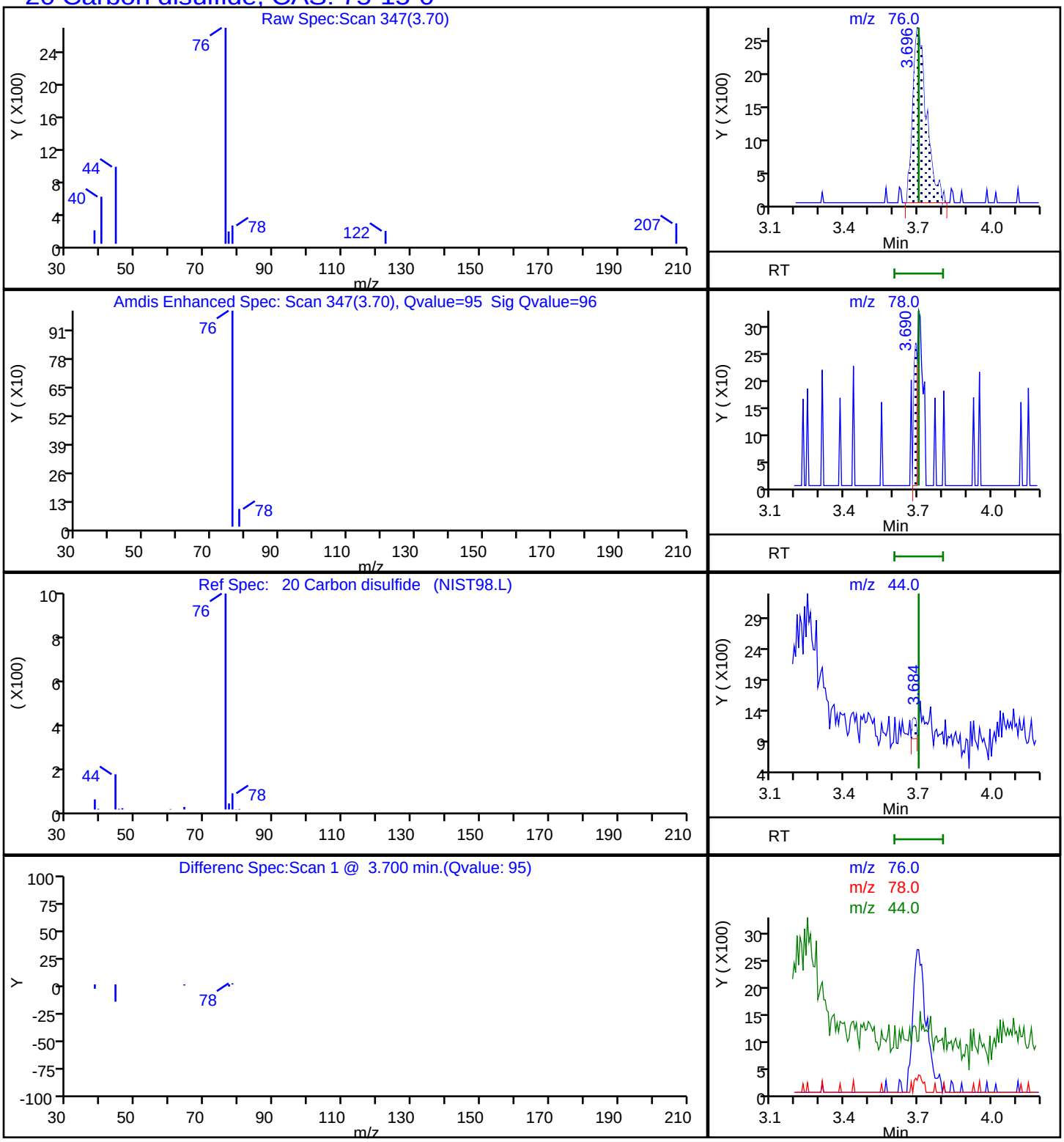


Report Date: 06-Oct-2020 12:47:10 Chrom Revision: 2.3 05-Oct-2020 16:17:16

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S02.D				
Injection Date:	05-Oct-2020 12:15:30	Instrument ID:	10193		
Lims ID:	410-15232-A-13	Lab Sample ID:	410-15232-13		
Client ID:	HD-QC1-0/1-1				
Operator ID:	dvv10203	ALS Bottle#:	7	Worklist Smp#:	8
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

20 Carbon disulfide, CAS: 75-15-0



Report Date: 06-Oct-2020 12:47:10 Chrom Revision: 2.3 05-Oct-2020 16:17:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S02.D

Injection Date: 05-Oct-2020 12:15:30 Instrument ID: 10193

Lims ID: 410-15232-A-13 Lab Sample ID: 410-15232-13

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

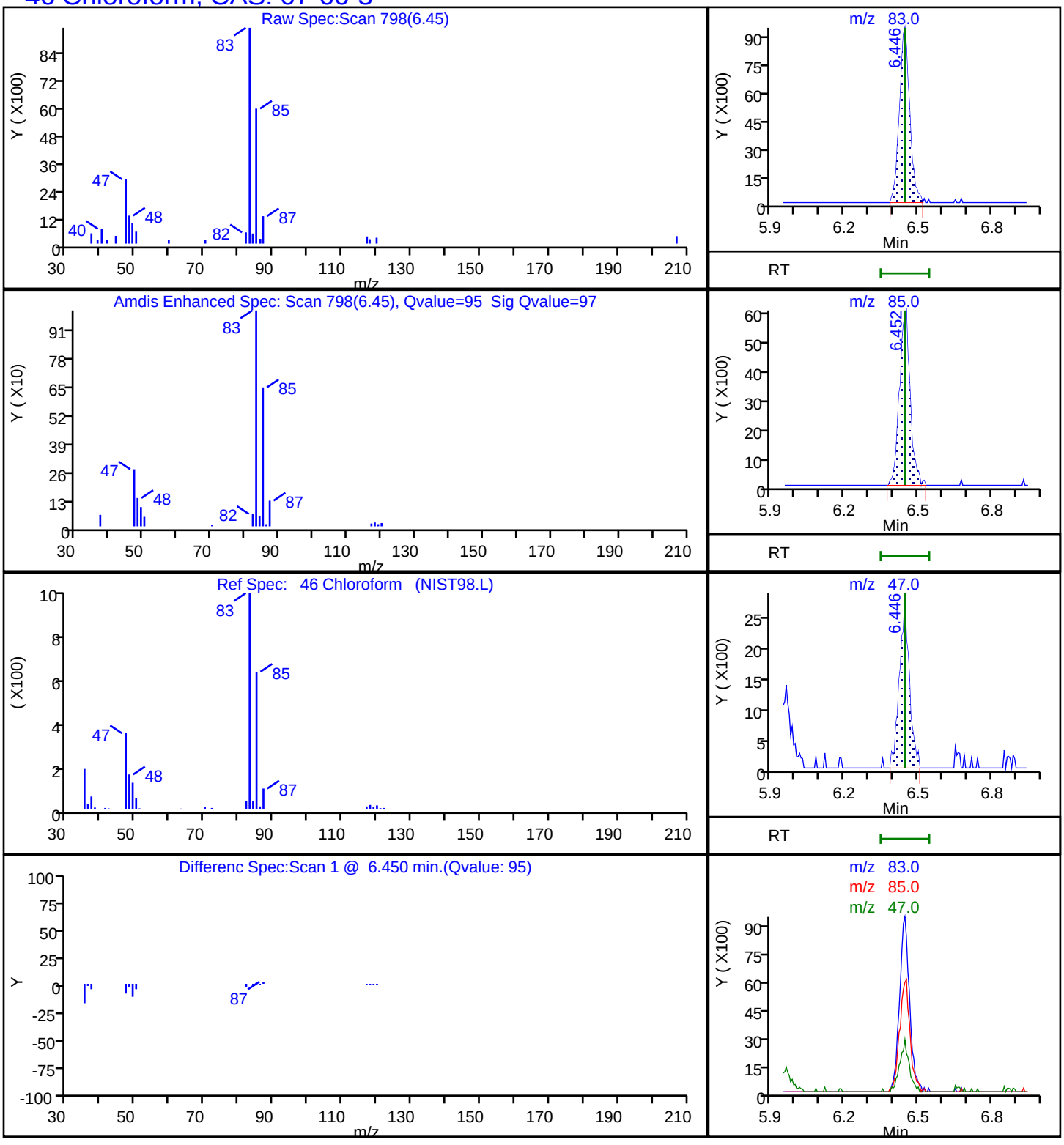
Operator ID: dvv10203 ALS Bottle#: 7 Worklist Smp#: 8

Purge Vol: 25.000 mL Dil. Factor: 1.0000

Method: MSV_10193_25mL Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

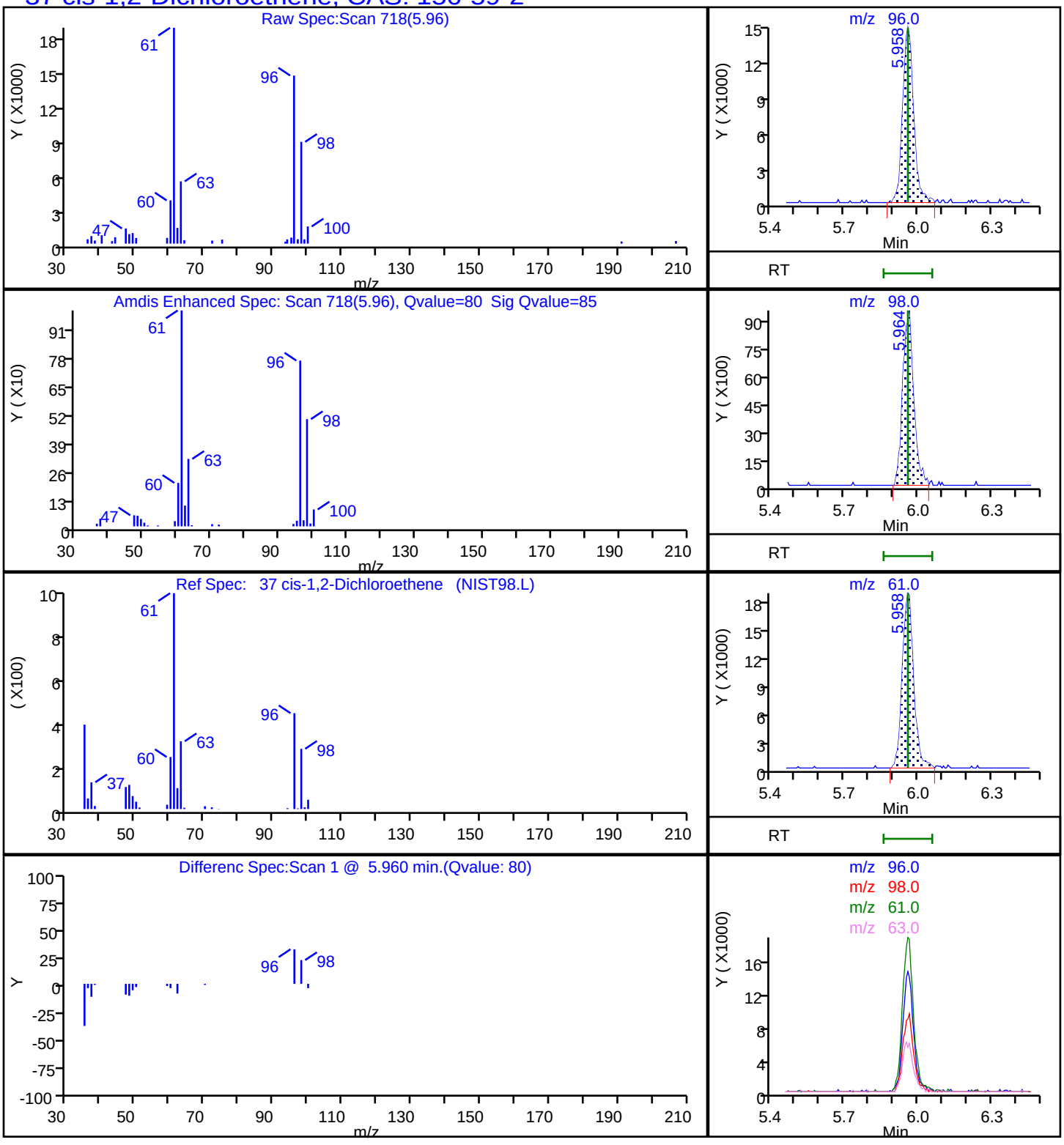
46 Chloroform, CAS: 67-66-3



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S02.D				
Injection Date:	05-Oct-2020 12:15:30	Instrument ID:	10193		
Lims ID:	410-15232-A-13	Lab Sample ID:	410-15232-13		
Client ID:	HD-QC1-0/1-1				
Operator ID:	dvv10203	ALS Bottle#:	7	Worklist Smp#:	8
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

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



Report Date: 06-Oct-2020 12:47:10 Chrom Revision: 2.3 05-Oct-2020 16:17:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S02.D

Injection Date: 05-Oct-2020 12:15:30 Instrument ID: 10193

Lims ID: 410-15232-A-13 Lab Sample ID: 410-15232-13

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

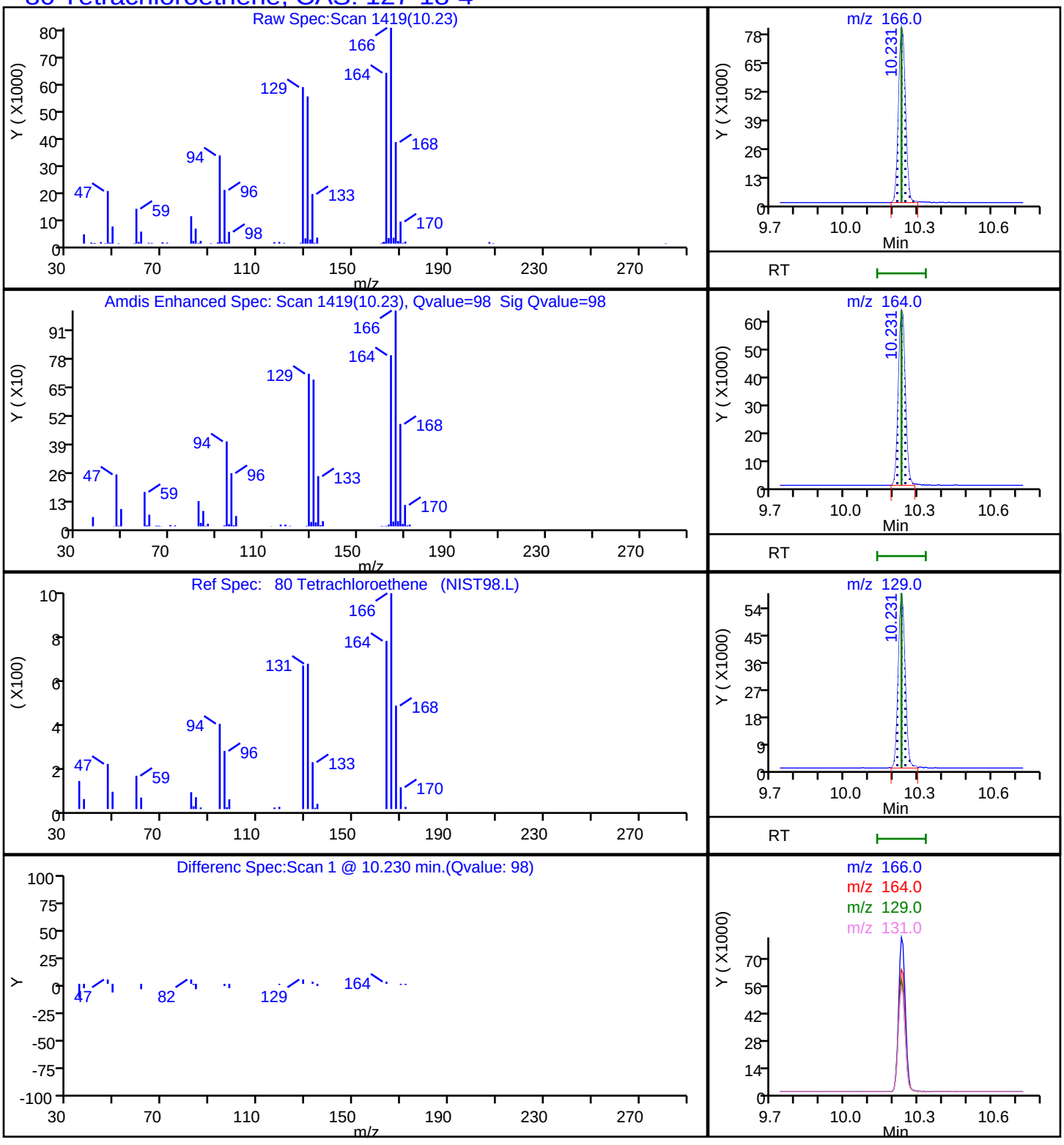
Operator ID: dvv10203 ALS Bottle#: 7 Worklist Smp#: 8

Purge Vol: 25.000 mL Dil. Factor: 1.0000

Method: MSV_10193_25mL Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

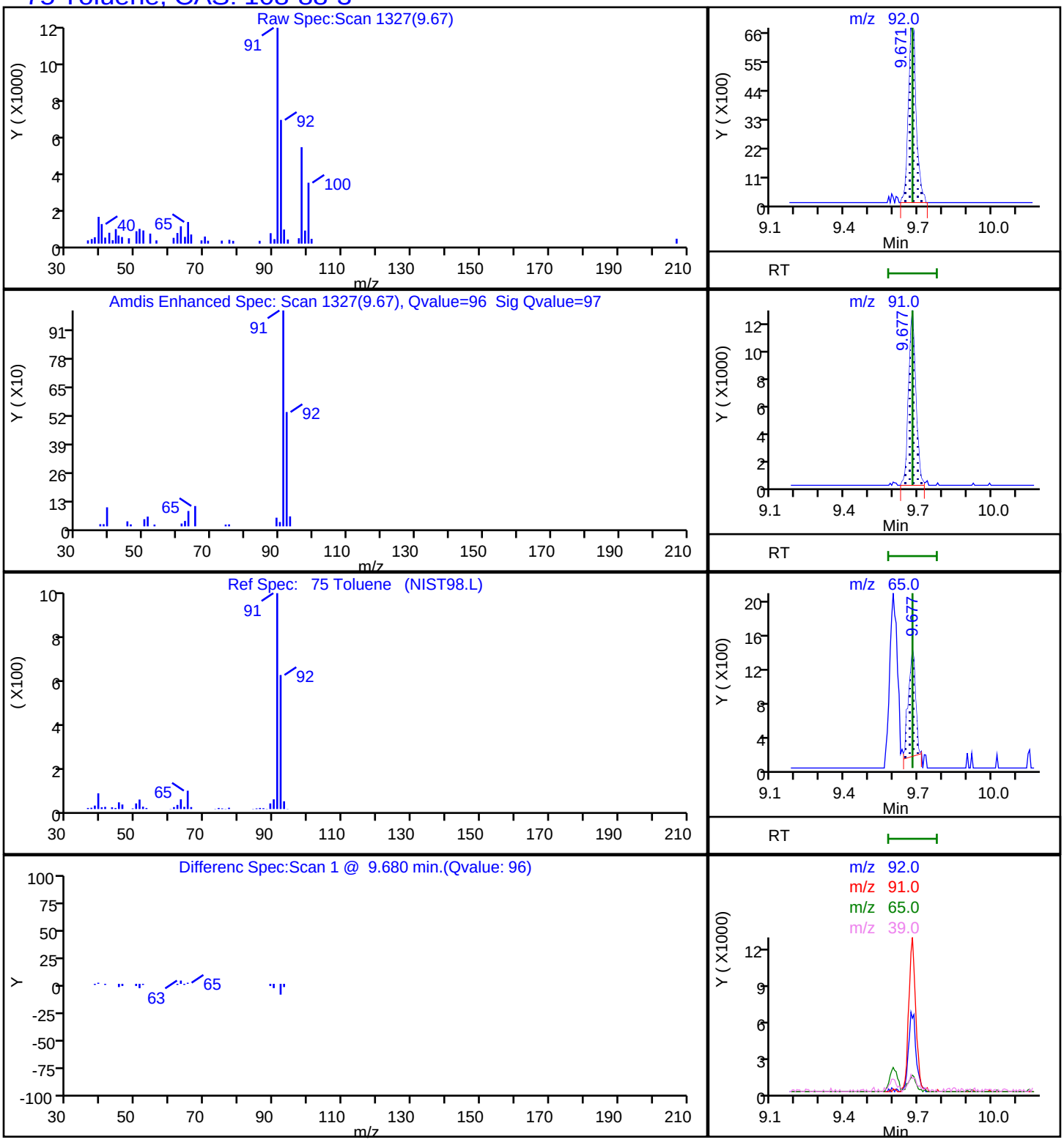
80 Tetrachloroethene, CAS: 127-18-4



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S02.D				
Injection Date:	05-Oct-2020 12:15:30	Instrument ID:	10193		
Lims ID:	410-15232-A-13	Lab Sample ID:	410-15232-13		
Client ID:	HD-QC1-0/1-1				
Operator ID:	dvv10203	ALS Bottle#:	7	Worklist Smp#:	8
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

75 Toluene, CAS: 108-88-3

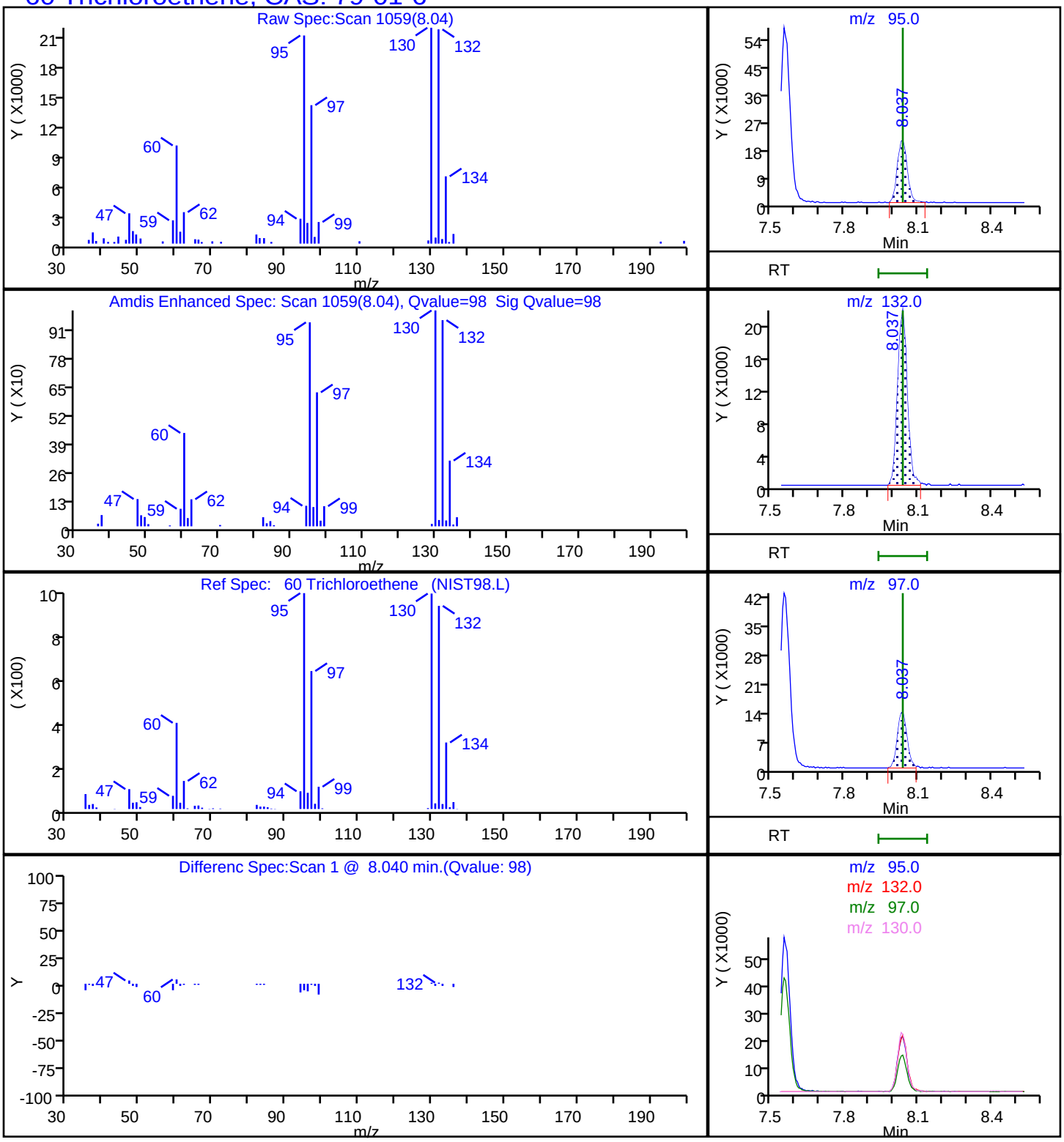


Report Date: 06-Oct-2020 12:47:10 Chrom Revision: 2.3 05-Oct-2020 16:17:16

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S02.D				
Injection Date:	05-Oct-2020 12:15:30	Instrument ID:	10193		
Lims ID:	410-15232-A-13	Lab Sample ID:	410-15232-13		
Client ID:	HD-QC1-0/1-1				
Operator ID:	dvv10203	ALS Bottle#:	7	Worklist Smp#:	8
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

60 Trichloroethene, CAS: 79-01-6



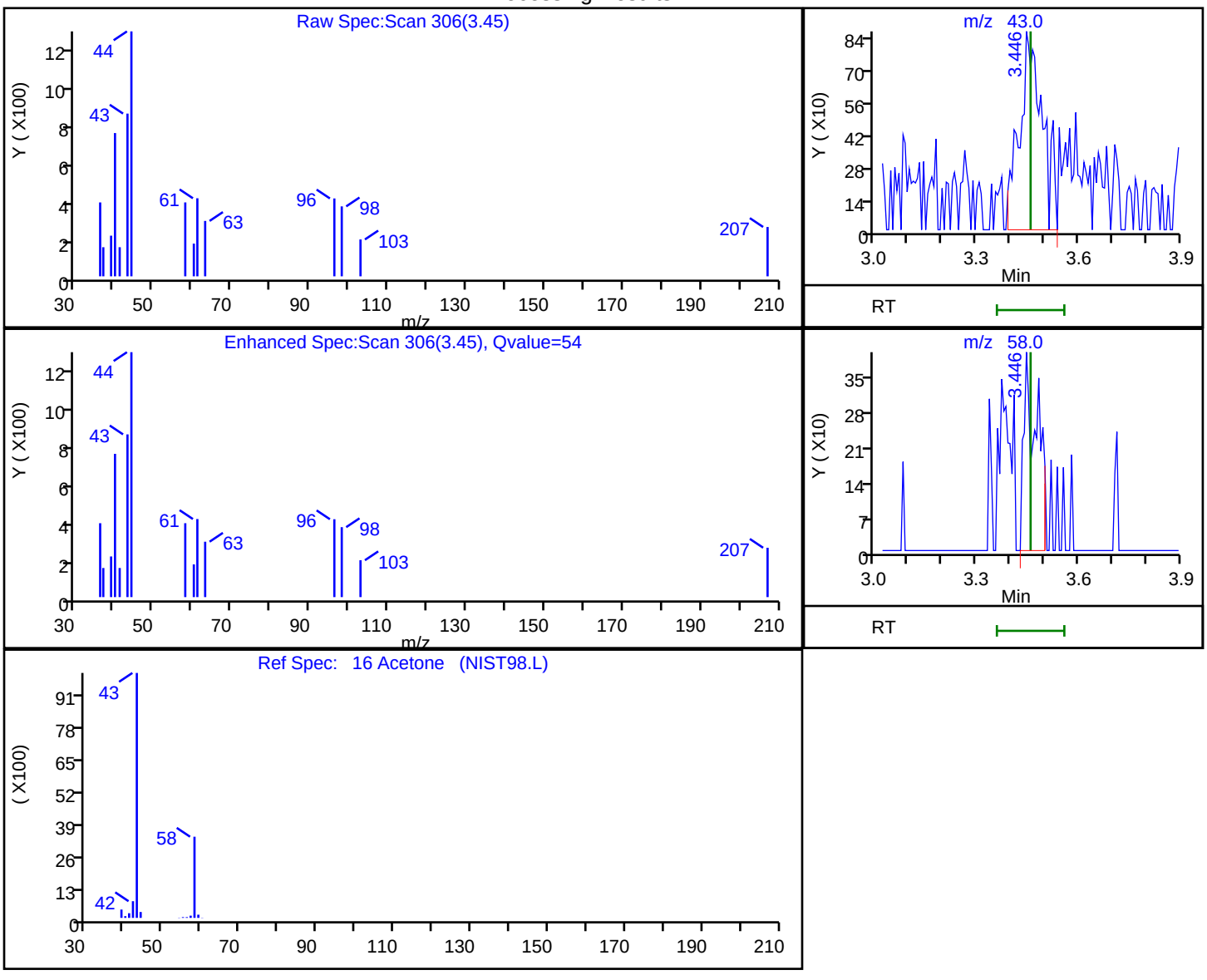
User Disabled Compound Report

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S02.D				
Injection Date:	05-Oct-2020 12:15:30	Instrument ID:	10193		
Lims ID:	410-15232-A-13	Lab Sample ID:	410-15232-13		
Client ID:	HD-QC1-0/1-1				
Operator ID:	dvv10203	ALS Bottle#:	7	Worklist Smp#:	8
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

16 Acetone, CAS: 67-64-1

Processing Results



RT	Mass	Response	Amount
3.45	43.00	4081	0.509838
3.45	58.00	1072	

Reviewer: spositok, 06-Oct-2020 12:10:22

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

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

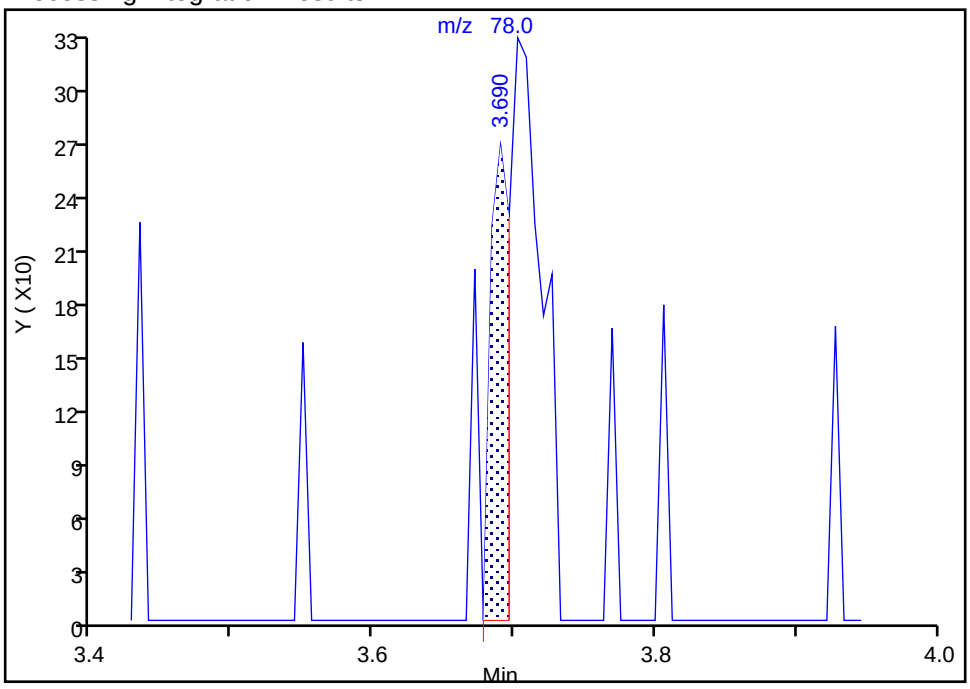
Data File:	\\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S02.D				
Injection Date:	05-Oct-2020 12:15:30	Instrument ID:	10193		
Lims ID:	410-15232-A-13	Lab Sample ID:	410-15232-13		
Client ID:	HD-QC1-0/1-1				
Operator ID:	dvv10203	ALS Bottle#:	7	Worklist Smp#:	8
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

20 Carbon disulfide, CAS: 75-15-0

Signal: 2

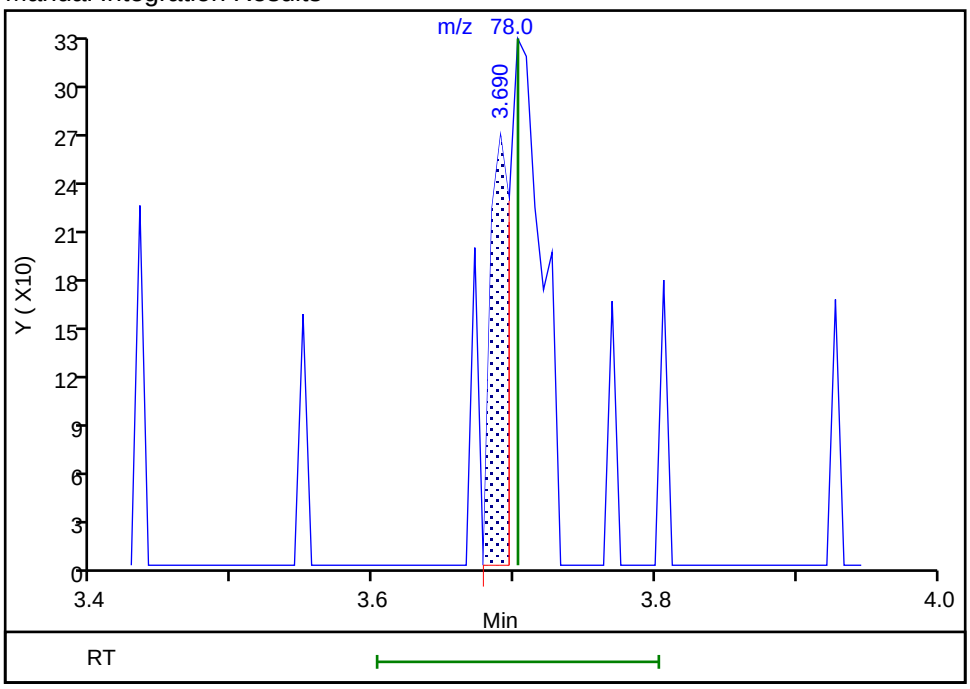
Processing Integration Results

RT: 3.69
Area: 260
Amount: 0.055359
Amount Units: ug/l



Manual Integration Results

RT: 3.69
Area: 260
Amount: 0.069333
Amount Units: ug/l



Reviewer: spositok, 06-Oct-2020 12:10:28
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

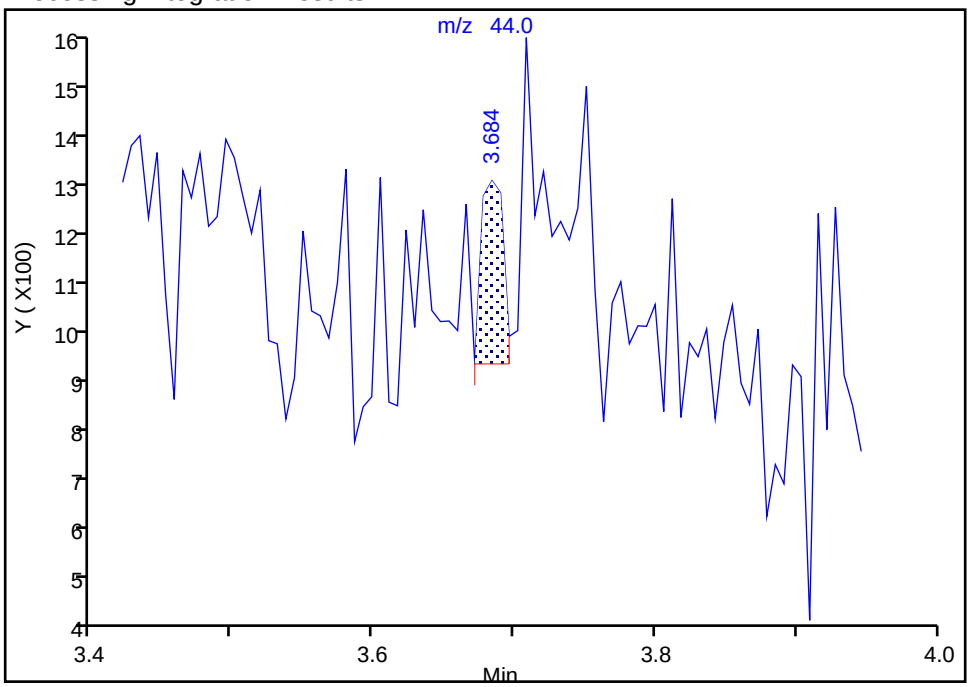
Data File:	\\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S02.D				
Injection Date:	05-Oct-2020 12:15:30	Instrument ID:	10193		
Lims ID:	410-15232-A-13	Lab Sample ID:	410-15232-13		
Client ID:	HD-QC1-0/1-1				
Operator ID:	dvv10203	ALS Bottle#:	7	Worklist Smp#:	8
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

20 Carbon disulfide, CAS: 75-15-0

Signal: 3

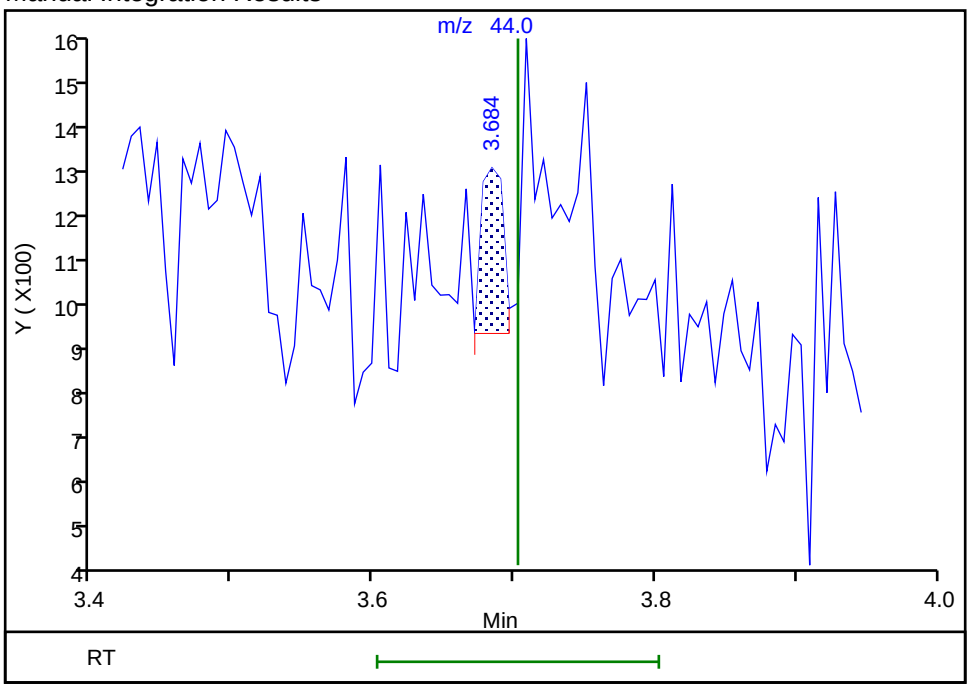
Processing Integration Results

RT: 3.68
Area: 380
Amount: 0.055359
Amount Units: ug/l



Manual Integration Results

RT: 3.68
Area: 380
Amount: 0.069333
Amount Units: ug/l



Reviewer: spositok, 06-Oct-2020 12:10:28
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

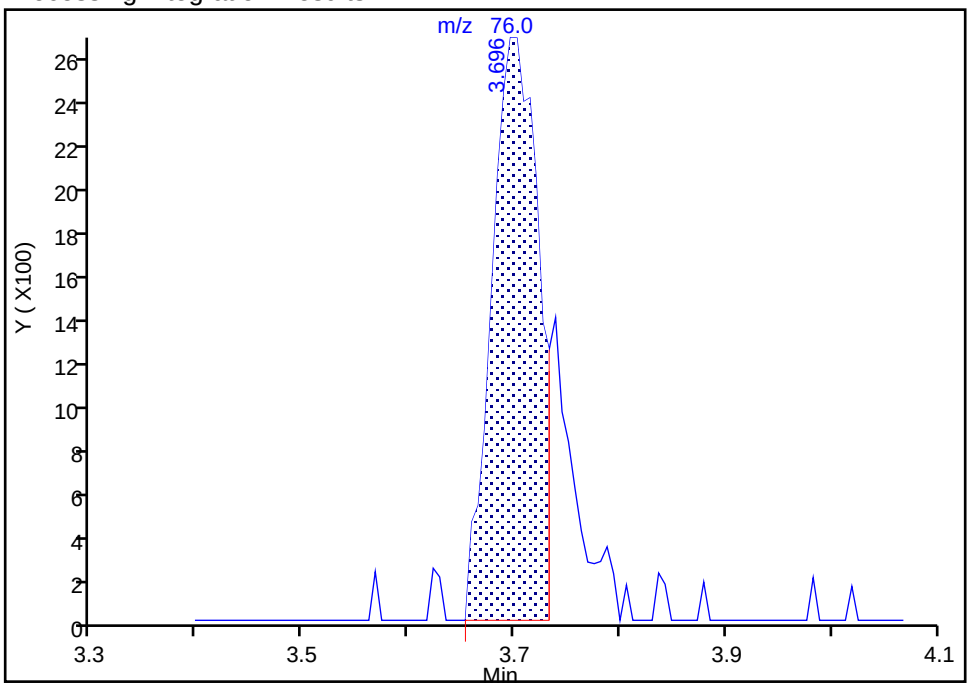
Data File:	\\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S02.D				
Injection Date:	05-Oct-2020 12:15:30	Instrument ID:	10193		
Lims ID:	410-15232-A-13	Lab Sample ID:	410-15232-13		
Client ID:	HD-QC1-0/1-1				
Operator ID:	dvv10203	ALS Bottle#:	7	Worklist Smp#:	8
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

20 Carbon disulfide, CAS: 75-15-0

Signal: 1

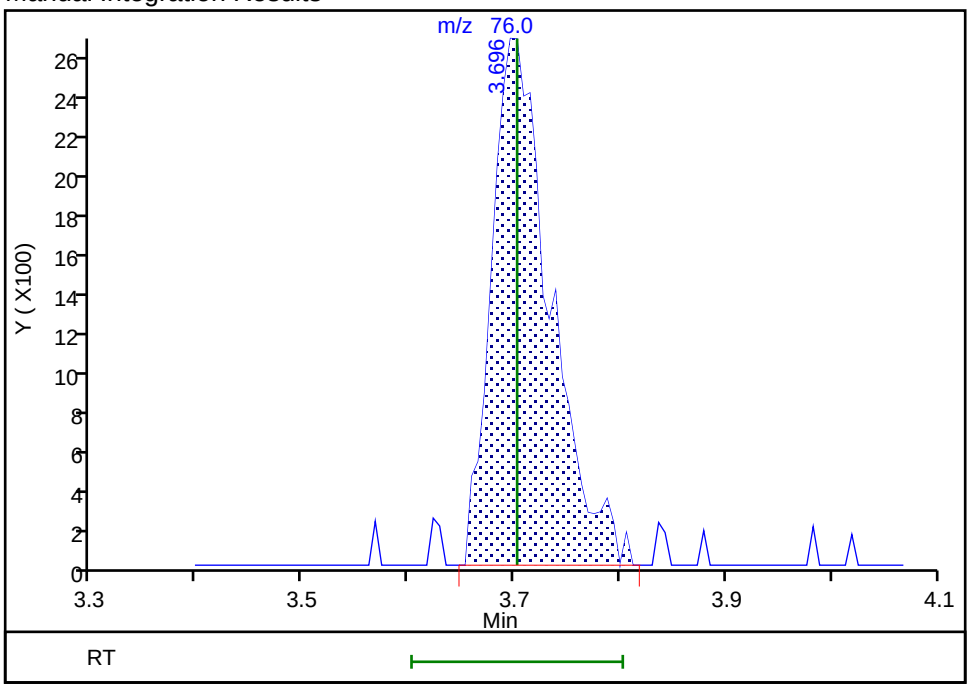
Processing Integration Results

RT: 3.70
Area: 8220
Amount: 0.055359
Amount Units: ug/l



Manual Integration Results

RT: 3.70
Area: 10295
Amount: 0.069333
Amount Units: ug/l



Reviewer: spositok, 06-Oct-2020 12:10:38
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

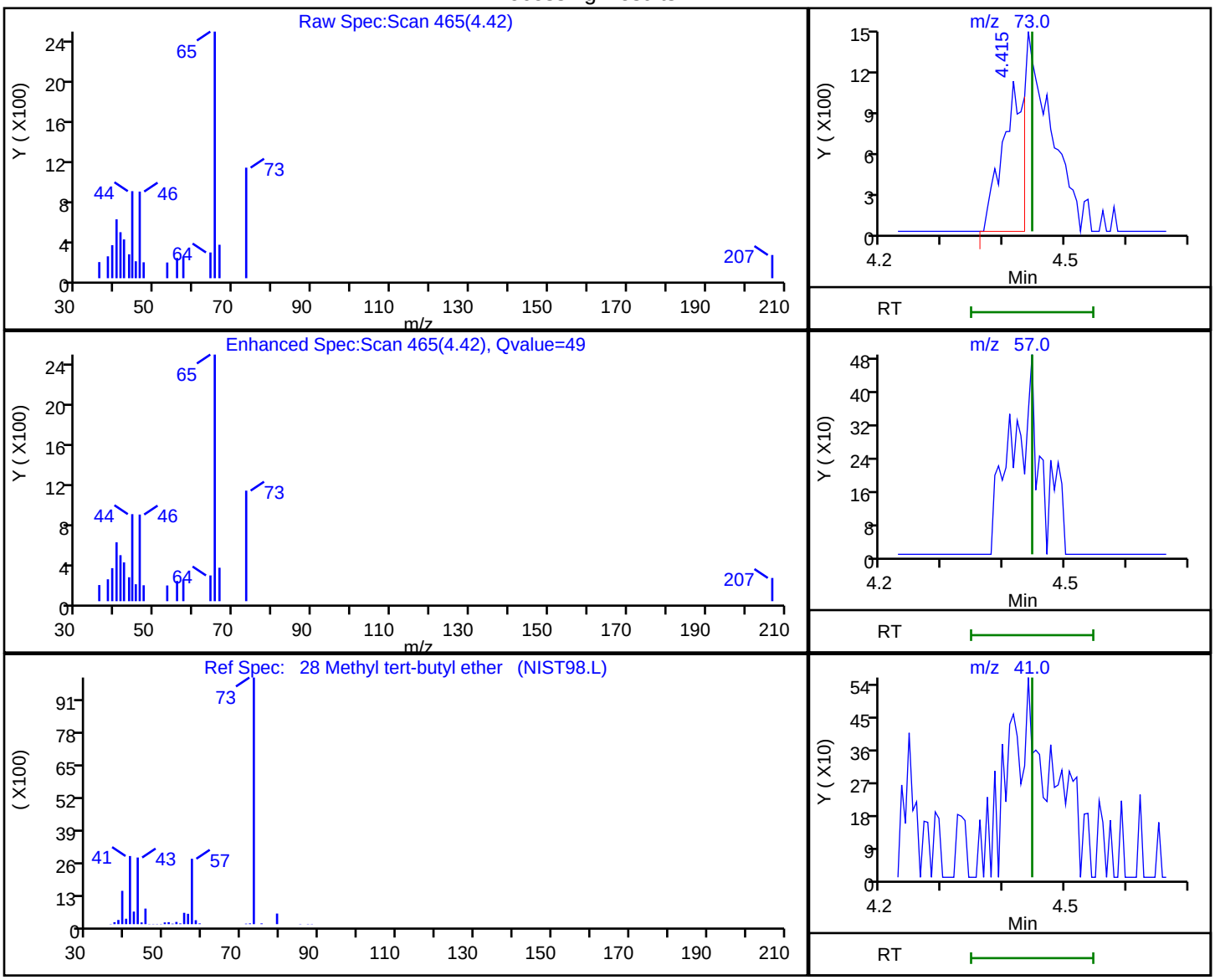
User Disabled Compound Report

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S02.D				
Injection Date:	05-Oct-2020 12:15:30	Instrument ID:	10193		
Lims ID:	410-15232-A-13	Lab Sample ID:	410-15232-13		
Client ID:	HD-QC1-0/1-1				
Operator ID:	dvv10203	ALS Bottle#:	7	Worklist Smp#:	8
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

28 Methyl tert-butyl ether, CAS: 1634-04-4

Processing Results



RT	Mass	Response	Amount
4.42	73.00	2622	0.019269
4.45	57.00	0	
4.45	41.00	0	

Reviewer: spositok, 06-Oct-2020 12:10:56

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

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-15232-1

SDG No.:

Client Sample ID: HD-QC1-0/1-2 Lab Sample ID: 410-15232-14

Matrix: Water Lab File ID: CC05S03.D

Analysis Method: 8260C LL Date Collected: 09/25/2020 00:00

Sample wt/vol: 25(mL) Date Analyzed: 10/05/2020 12:38

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.: 50813 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	1.2	J ^c	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	^c	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 E Job No.: 410-15232-1

SDG No.:

Client Sample ID: HD-QC1-0/1-2 Lab Sample ID: 410-15232-14

Matrix: Water Lab File ID: CC05S03.D

Analysis Method: 8260C LL Date Collected: 09/25/2020 00:00

Sample wt/vol: 25(mL) Date Analyzed: 10/05/2020 12:38

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.: 50813 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)	110		80-120
1868-53-7	Dibromofluoromethane (Surr)	106		80-120
2037-26-5	Toluene-d8 (Surr)	98		80-120
460-00-4	4-Bromofluorobenzene (Surr)	98		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S03.D
Lims ID: 410-15232-A-14
Client ID: HD-QC1-0/1-2
Sample Type: Client
Inject. Date: 05-Oct-2020 12:38:30 ALS Bottle#: 8 Worklist Smp#: 9
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0012055-009
Misc. Info.: 410-15232-A-14
Operator ID: dvv10203 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20201005-12055.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 06-Oct-2020 12:41:33 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1013

First Level Reviewer: spositok Date: 06-Oct-2020 12:13:02

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
3 Chloromethane	50		2.099				ND	
5 Vinyl chloride	62		2.209				ND	
6 Bromomethane	94		2.514				ND	
7 Chloroethane	64		2.599				ND	
14 1,1-Dichloroethene	96		3.422				ND	
16 Acetone	43	3.464	3.459	0.005	90	9290	1.21	
20 Carbon disulfide	76		3.702				ND	U
24 Methylene Chloride	84		4.056				ND	7
* 25 t-Butyl alcohol-d10 (IS)	65	4.080	4.080	0.000	0	181312	50.0	
27 Acrylonitrile	53		4.397				ND	
28 Methyl tert-butyl ether	73		4.446				ND	
29 trans-1,2-Dichloroethene	96		4.452				ND	
32 1,1-Dichloroethane	63		5.123				ND	
36 2-Butanone (MEK)	43		5.934				ND	
37 cis-1,2-Dichloroethene	96		5.958				ND	
44 Chlorobromomethane	128		6.293				ND	
46 Chloroform	83		6.446				ND	
$ 47 Dibromofluoromethane (Surr)	113	6.665	6.659	0.006	94	455782	10.6	
48 1,1,1-Trichloroethane	97		6.665				ND	
50 Carbon tetrachloride	117		6.873				ND	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.110	7.116	-0.006	0	96167	11.0	
54 Benzene	78		7.147				ND	7
55 1,2-Dichloroethane	62		7.220				ND	
* 57 Fluorobenzene (IS)	96	7.555	7.561	-0.006	99	1804975	10.0	
60 Trichloroethene	95		8.037				ND	
62 1,2-Dichloropropane	63		8.372				ND	
67 Dichlorobromomethane	83		8.726				ND	
72 cis-1,3-Dichloropropene	75		9.281				ND	
73 4-Methyl-2-pentanone (MIBK)	43		9.470				ND	7
$ 74 Toluene-d8 (Surr)	98	9.597	9.598	-0.001	94	1839711	9.78	
75 Toluene	92		9.677				ND	7

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
76 trans-1,3-Dichloropropene	75		9.945				ND	
79 1,1,2-Trichloroethane	97		10.152				ND	
80 Tetrachloroethene	166		10.232				ND	
82 2-Hexanone	43		10.378				ND	
83 Chlorodibromomethane	129		10.536				ND	
84 Ethylene Dibromide	107		10.646				ND	
* 85 Chlorobenzene-d5 (IS)	117	11.085	11.085	0.000	86	1440137	10.0	
87 Chlorobenzene	112		11.109				ND	
89 1,1,1,2-Tetrachloroethane	131		11.201				ND	
90 Ethylbenzene	91		11.201				ND	
S 88 Xylenes, Total	106		11.245				ND	7
91 m-Xylene & p-Xylene	106		11.317				ND	7
92 o-Xylene	106		11.652				ND	
93 Styrene	104		11.664				ND	
94 Bromoform	173		11.823				ND	
$ 98 4-Bromofluorobenzene (Surr)	95	12.103	12.097	0.006	93	692420	9.79	
99 1,1,2,2-Tetrachloroethane	83		12.207				ND	
* 113 1,4-Dichlorobenzene-d4	152	12.993	12.993	0.000	95	802466	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

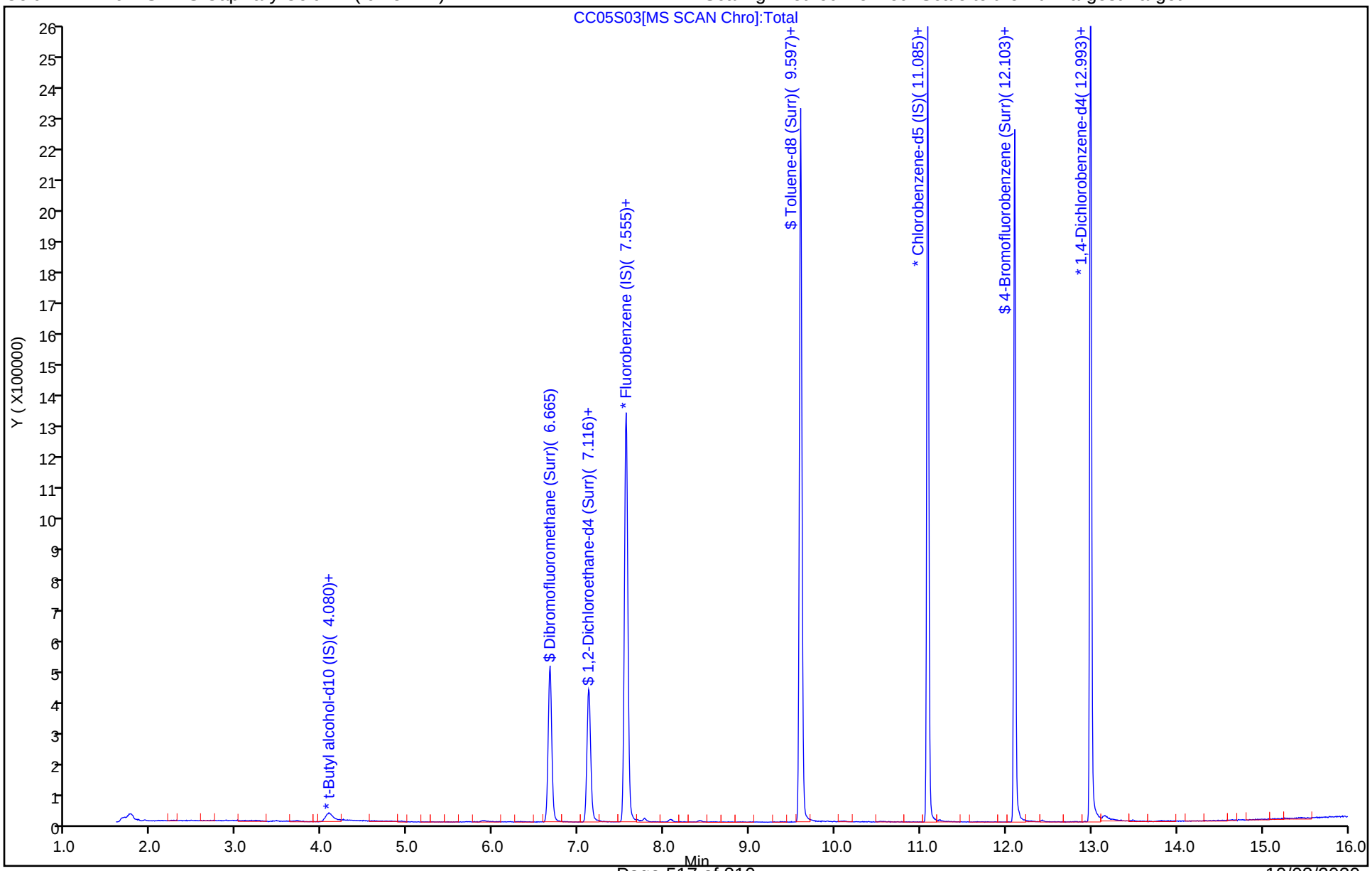
MSV_HP25_ISSS_00014 Amount Added: 1.00 Units: uL Run Reagent

Report Date: 06-Oct-2020 12:47:14 Chrom Revision: 2.3 05-Oct-2020 16:17:16

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S03.D				
Injection Date:	05-Oct-2020 12:38:30	Instrument ID:	10193	Operator ID:	dvv10203
Lims ID:	410-15232-A-14	Lab Sample ID:	410-15232-14	Worklist Smp#:	9
Client ID:	HD-QC1-0/1-2				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MSV_10193_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\10193\20201005-12055.b\CC05S03.D
Lims ID: 410-15232-A-14
Client ID: HD-QC1-0/1-2
Sample Type: Client
Inject. Date: 05-Oct-2020 12:38:30 ALS Bottle#: 8 Worklist Smp#: 9
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0012055-009
Misc. Info.: 410-15232-A-14
Operator ID: dvv10203 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20201005-12055.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 06-Oct-2020 12:41:33 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1013

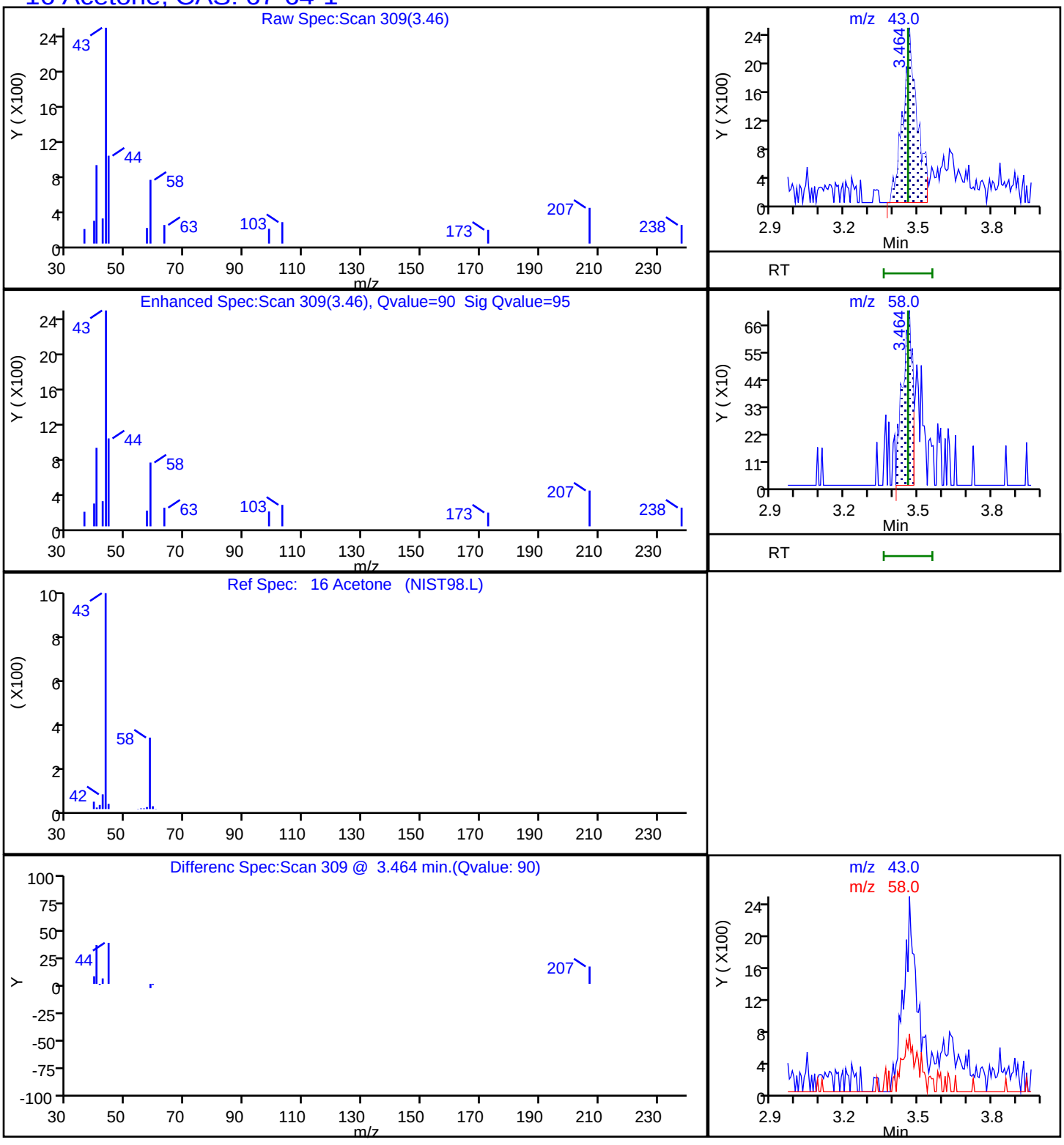
First Level Reviewer: spositok Date: 06-Oct-2020 12:13:02

Compound	Amount Added	Amount Recovered	% Rec.
$ 47 Dibromofluoromethane (Surr)	10.0	10.6	106.27
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	11.0	110.06
$ 74 Toluene-d8 (Surr)	10.0	9.78	97.81
$ 98 4-Bromofluorobenzene (Surr)	10.0	9.79	97.94

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S03.D				
Injection Date:	05-Oct-2020 12:38:30	Instrument ID:	10193		
Lims ID:	410-15232-A-14	Lab Sample ID:	410-15232-14		
Client ID:	HD-QC1-0/1-2				
Operator ID:	dvv10203	ALS Bottle#:	8	Worklist Smp#:	9
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

16 Acetone, CAS: 67-64-1



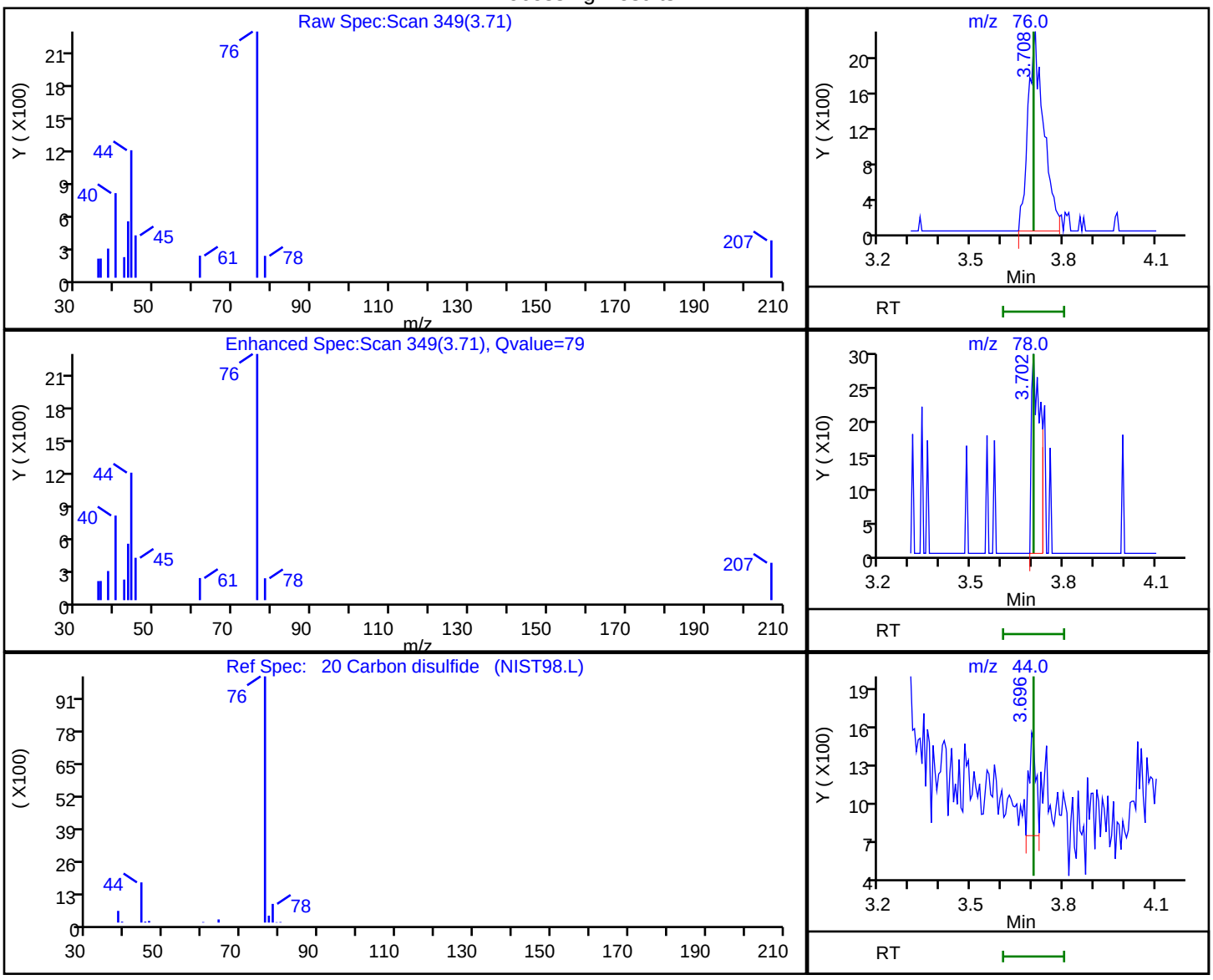
User Disabled Compound Report

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S03.D				
Injection Date:	05-Oct-2020 12:38:30	Instrument ID:	10193		
Lims ID:	410-15232-A-14	Lab Sample ID:	410-15232-14		
Client ID:	HD-QC1-0/1-2				
Operator ID:	dvv10203	ALS Bottle#:	8	Worklist Smp#:	9
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

20 Carbon disulfide, CAS: 75-15-0

Processing Results



RT	Mass	Response	Amount
3.71	76.00	8065	0.054710
3.70	78.00	577	
3.70	44.00	1163	

Reviewer: spositok, 06-Oct-2020 12:12:46

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

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

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-15232-1 Analy Batch No.: 39724

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/01/2020 13:35 Calibration End Date: 09/01/2020 15:48 Calibration ID: 10281

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-39724/9	CS01I07.D
Level 2	IC 410-39724/8	CS01I06.D
Level 3	IC 410-39724/7	CS01I05.D
Level 4	IC 410-39724/6	CS01I04.D
Level 5	IC 410-39724/5	CS01I03.D
Level 6	ICIS 410-39724/4	CS01I02.D
Level 7	IC 410-39724/3	CS01I01.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.2918 0.3266	0.3522 0.3000	0.3356	0.3227	0.3298	Ave		0.3227			0.1000	6.4		20.0			
Chloromethane	0.4118 0.3640	0.4166 0.3415	0.3845	0.3763	0.3682	Ave		0.3804			0.1000	7.0		20.0			
1,3-Butadiene	0.3706 0.3470	0.3831 0.3209	0.3964	0.3503	0.3364	Ave		0.3578				7.5		20.0			
Vinyl chloride	0.3710 0.3447	0.3769 0.3205	0.3532	0.3491	0.3465	Ave		0.3517			0.1000	5.3		20.0			
Bromomethane	0.2621 0.2463	0.2522 0.2334	0.2537	0.2470	0.2428	Ave		0.2482			0.1000	3.6		20.0			
Chloroethane	0.2420 0.2076	0.2296 0.1957	0.2204	0.2152	0.2103	Ave		0.2173			0.1000	7.0		20.0			
Dichlorofluoromethane	0.5002 0.4568	0.4862 0.4354	0.4850	0.4761	0.4597	Ave		0.4713			0.1000	4.7		20.0			
Trichlorofluoromethane	0.4605 0.4468	0.4890 0.4345	0.4635	0.4578	0.4502	Ave		0.4575			0.1000	3.7		20.0			
Ethyl ether	0.2424 0.2280	0.2388 0.2201	0.2351	0.2329	0.2252	Ave		0.2318				3.4		20.0			
Freon 123a	0.4017 0.3216	0.3602 0.3077	0.3604	0.3197	0.3068	Ave		0.3397				10.4		20.0			
Acrolein	2.0142 1.8940	1.9637 2.1651	2.0559	2.0043	1.9065	Ave		2.0005				4.6		20.0			
1,1-Dichloroethene	0.2418 0.2306	0.2426 0.2200	0.2361	0.2292	0.2178	Ave		0.2312			0.1000	4.2		20.0			
Freon 113	0.2203 0.2427	0.2333 0.2316	0.2529	0.2353	0.2301	Ave		0.2352			0.1000	4.4		20.0			
Acetone	2.4480 1.8275	2.3023 2.0458	1.9178	2.1806	2.1538	Ave		2.1251			0.1000	10.1		20.0			

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

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

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-15232-1 Analy Batch No.: 39724

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/01/2020 13:35 Calibration End Date: 09/01/2020 15:48 Calibration ID: 10281

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methyl iodide	0.4822 0.4629	0.4687 0.4378	0.4677	0.4453	0.4325	Ave		0.4567				4.0		20.0			
Ethyl bromide	0.1903 0.1935	0.1972 0.1891	0.1896	0.1927	0.1915	Ave		0.1920				1.5		20.0			
Carbon disulfide	0.8640 0.8277	0.8170 0.7933	0.8306	0.8071	0.7771	Ave		0.8167			0.1000	3.4		20.0			
Methyl acetate	9.4619 9.1956	7.3296 8.4904	6.2276	8.6421	9.1035	Ave		8.3501			0.1000	14.0		20.0			
Allyl chloride	0.4284 0.3952	0.4116 0.3911	0.4125	0.4004	0.3924	Ave		0.4045				3.4		20.0			
Methylene Chloride	0.2673 0.2596	0.2690 0.2450	0.2624	0.2530	0.2446	Ave		0.2573			0.1000	3.9		20.0			
t-Butyl alcohol	1.0786 0.9343	1.0895 0.9573	1.0217	0.9595	0.9311	Ave		0.9960				6.7		20.0			
Acrylonitrile	3.6060 3.1435	3.1763 3.4734	3.6610	3.3562	3.2079	Ave		3.3749				6.2		20.0			
Methyl tert-butyl ether	0.8080 0.7372	0.7726 0.6995	0.7701	0.7370	0.7146	Ave		0.7484			0.1000	5.0		20.0			
trans-1,2-Dichloroethene	0.2811 0.2736	0.2778 0.2609	0.2771	0.2631	0.2584	Ave		0.2703			0.1000	3.4		20.0			
n-Hexane	0.3770 0.3916	0.3611 0.3799	0.4016	0.3797	0.3767	Ave		0.3811				3.3		20.0			
1,1-Dichloroethane	0.5317 0.5021	0.5027 0.4713	0.5160	0.4888	0.4701	Ave		0.4975			0.2000	4.6		20.0			
di-Isopropyl ether	1.0024 0.9422	0.9815 0.8947	0.9734	0.9396	0.9047	Ave		0.9484				4.2		20.0			
2-Chloro-1,3-butadiene	0.5154 0.4645	0.4858 0.4485	0.4683	0.4604	0.4388	Ave		0.4688				5.4		20.0			
Ethyl t-butyl ether	0.9545 0.8964	0.9353 0.8421	0.9367	0.9013	0.8760	Ave		0.9061				4.3		20.0			
2-Butanone (MEK)	5.4466 4.7533	5.2332 4.9507	4.9134	4.9045	4.6863	Ave		4.9840			0.1000	5.4		20.0			
cis-1,2-Dichloroethene	0.3274 0.3030	0.3121 0.2918	0.3173	0.3033	0.2901	Ave		0.3064			0.1000	4.4		20.0			
2,2-Dichloropropane	0.4489 0.4318	0.4355 0.4139	0.4390	0.4295	0.4067	Ave		0.4293				3.4		20.0			
Propionitrile	1.1218 1.2317	1.3475 1.3330	1.3300	1.3001	1.1903	Ave		1.2649				6.8		20.0			
Methacrylonitrile	4.7767 4.8580	4.6120 5.3811	5.2269	4.8310	4.6272	Ave		4.9019				6.0		20.0			

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

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

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-15232-1 Analy Batch No.: 39724

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/01/2020 13:35 Calibration End Date: 09/01/2020 15:48 Calibration ID: 10281

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Bromochloromethane	0.1358 0.1353	0.1313 0.1355	0.1358	0.1372	0.1333	Ave		0.1349				1.4		20.0			
Tetrahydrofuran	1.3990 1.4024	1.4454 1.4410	1.4710	1.4167	1.2917	Ave		1.4096				4.1		20.0			
Chloroform	0.5202 0.4930	0.4959 0.4791	0.5003	0.4910	0.4717	Ave		0.4930			0.2000	3.2		20.0			
1,1,1-Trichloroethane	0.4505 0.4529	0.4491 0.4340	0.4484	0.4481	0.4266	Ave		0.4442			0.1000	2.2		20.0			
Cyclohexane	0.4761 0.4708	0.4666 0.4592	0.4977	0.4651	0.4526	Ave		0.4697			0.1000	3.1		20.0			
Carbon tetrachloride	0.3736 0.3825	0.3626 0.3735	0.3807	0.3709	0.3612	Ave		0.3722			0.1000	2.2		20.0			
1,1-Dichloropropene	0.4216 0.3987	0.4040 0.3841	0.4090	0.3942	0.3800	Ave		0.3988				3.6		20.0			
Isobutyl alcohol	0.3751 0.3074	0.3279 0.3354	0.3075	0.2990	0.3080	Ave		0.3229				8.2		20.0			
Benzene	1.2000 1.1470	1.1667 1.1118	1.1704	1.1462	1.0973	Ave		1.1485			0.5000	3.1		20.0			
1,2-Dichloroethane	0.4157 0.3201	0.3720 0.3103	0.3512	0.3372	0.3171	Ave		0.3462			0.1000	10.8		20.0			
t-Amyl methyl ether	0.8796 0.8203	0.8294 0.7843	0.8425	0.8248	0.7964	Ave		0.8253				3.8		20.0			
n-Heptane	0.4363 0.4299	0.3892 0.4305	0.4413	0.4327	0.4098	Ave		0.4242				4.3		20.0			
n-Butanol	0.2653 0.2713	0.2533 0.3015	0.2601	0.2624	0.2592	Ave		0.2676				6.0		20.0			
Trichloroethene	0.3060 0.2974	0.2973 0.2896	0.3050	0.2951	0.2821	Ave		0.2961			0.2000	2.8		20.0			
Methylcyclohexane	0.3921 0.4589	0.4558 0.4681	0.4649	0.4659	0.4686	Ave		0.4535			0.1000	6.1		20.0			
1,2-Dichloropropane	0.3163 0.2907	0.2966 0.2887	0.3017	0.2907	0.2801	Ave		0.2950			0.1000	3.9		20.0			
Methyl methacrylate	10.694 10.216	9.9010 11.465	10.664	10.304	9.9075	Ave		10.450				5.3		20.0			
Dibromomethane	0.1573 0.1425	0.1458 0.1389	0.1476	0.1402	0.1380	Ave		0.1443				4.7		20.0			
1,4-Dioxane	0.0383 0.0539	0.0522 0.0636	0.0577	0.0553	0.0521	Ave		0.0533			0.0050	14.4		20.0			
Bromodichloromethane	0.3687 0.3625	0.3552 0.3560	0.3573	0.3500	0.3429	Ave		0.3561			0.2000	2.3		20.0			

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

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

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-15232-1 Analy Batch No.: 39724

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/01/2020 13:35 Calibration End Date: 09/01/2020 15:48 Calibration ID: 10281

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
2-Nitropropane	3.1499 3.3581	2.9287 3.7715	3.2325	3.1838	3.0651	Ave		3.2414				8.3		20.0			
1-Bromo-2-chloroethane	0.3076 0.3019	0.3095 0.2997	0.3085	0.3109	0.2974	Ave		0.3051				1.7		20.0			
cis-1,3-Dichloropropene	0.4505 0.4574	0.4308 0.4504	0.4399	0.4366	0.4322	Ave		0.4426			0.2000	2.3		20.0			
4-Methyl-2-pentanone (MIBK)	14.016 14.367	13.957 16.290	14.759	14.207	13.754	Ave		14.478			0.1000	6.0		20.0			
Toluene	1.0004 0.9956	1.0051 0.9649	1.0017	0.9778	0.9307	Ave		0.9823			0.4000	2.8		20.0			
trans-1,3-Dichloropropene	0.4859 0.5150	0.4729 0.5037	0.4892	0.4888	0.4880	Ave		0.4919			0.1000	2.8		20.0			
Ethyl methacrylate	0.3832 0.4288	0.4119 0.4219	0.4250	0.4203	0.4148	Ave		0.4151				3.7		20.0			
1,1,2-Trichloroethane	0.2788 0.2711	0.2787 0.2614	0.2793	0.2703	0.2599	Ave		0.2713			0.1000	3.0		20.0			
Tetrachloroethene	0.4614 0.4409	0.4386 0.4283	0.4502	0.4359	0.4167	Ave		0.4389			0.2000	3.3		20.0			
1,3-Dichloropropane	0.5020 0.4753	0.4992 0.4587	0.4896	0.4663	0.4567	Ave		0.4783				3.9		20.0			
2-Hexanone	9.3232 10.451	9.3321 11.730	10.440	10.418	9.9066	Ave		10.229			0.1000	8.1		20.0			
Dibromochloromethane	0.2734 0.3437	0.3001 0.3401	0.3060	0.3197	0.3203	Ave		0.3148				7.7		20.0			
1,2-Dibromoethane (EDB)	0.2705 0.2751	0.2685 0.2647	0.2692	0.2658	0.2615	Ave		0.2679			0.1000	1.6		20.0			
1-Chlorohexane	0.6434 0.5456	0.5804 0.5365	0.5728	0.5308	0.5171	Ave		0.5609				7.6		20.0			
Chlorobenzene	1.1591 1.1088	1.1274 1.0823	1.1325	1.0960	1.0596	Ave		1.1094			0.5000	3.0		20.0			
1,1,1,2-Tetrachloroethane	0.3624 0.3937	0.3754 0.3864	0.3803	0.3722	0.3711	Ave		0.3774				2.8		20.0			
Ethylbenzene	2.0322 1.9609	1.9521 1.9374	1.9666	1.9197	1.8587	Ave		1.9468			0.1000	2.7		20.0			
m&p-Xylene	0.7470 0.7821	0.7660 0.7722	0.7743	0.7524	0.7314	Ave		0.7608			0.1000	2.4		20.0			
o-Xylene	0.7543 0.7626	0.7377 0.7544	0.7513	0.7404	0.7161	Ave		0.7453			0.3000	2.1		20.0			
Styrene	1.2097 1.3027	1.2218 1.3129	1.2422	1.2428	1.2248	Ave		1.2510			0.3000	3.2		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.: 410-15232-1 Analy Batch No.: 39724

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/01/2020 13:35 Calibration End Date: 09/01/2020 15:48 Calibration ID: 10281

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Bromoform	0.1392 0.2053	0.1476 0.2084	0.1657	0.1718	0.1858	Ave		0.1748			0.1000	15.3		20.0			
Isopropylbenzene	1.9458 2.0263	1.9681 2.0001	2.0184	1.9483	1.8930	Ave		1.9714			0.1000	2.4		20.0			
1,1,2,2-Tetrachloroethane	0.6444 0.6192	0.6459 0.5895	0.6379	0.6292	0.6052	Ave		0.6245			0.3000	3.4		20.0			
Bromobenzene	0.9259 0.8543	0.8582 0.8201	0.8786	0.8448	0.8202	Ave		0.8574				4.3		20.0			
trans-1,4-Dichloro-2-butene	0.1540 0.1855	0.1591 0.1839	0.1758	0.1743	0.1775	Ave		0.1729				6.9		20.0			
1,2,3-Trichloropropane	0.1803 0.1668	0.1805 0.1560	0.1726	0.1710	0.1625	Ave		0.1700				5.3		20.0			
N-Propylbenzene	4.1100 4.0800	4.0761 3.8615	4.1430	4.0328	3.8780	Ave		4.0259				2.8		20.0			
2-Chlorotoluene	0.8972 0.8148	0.8244 0.7752	0.8538	0.8098	0.7883	Ave		0.8233				5.0		20.0			
1,3,5-Trimethylbenzene	3.0659 3.0010	2.9965 2.8926	3.0966	2.9616	2.8629	Ave		2.9824				2.8		20.0			
4-Chlorotoluene	0.9181 0.8554	0.8621 0.8224	0.8670	0.8507	0.8152	Ave		0.8558				3.9		20.0			
tert-Butylbenzene	0.7365 0.6340	0.6164 0.6142	0.6484	0.6819	0.6078	Ave		0.6485				7.2		20.0			
Pentachloroethane	0.4131 0.5184	0.4535 0.5288	0.4768	0.4964	0.5026	Ave		0.4842				8.3		20.0			
1,2,4-Trimethylbenzene	2.9755 3.1351	3.1226 3.0397	3.1427	3.0238	2.9789	Ave		3.0598				2.4		20.0			
sec-Butylbenzene	3.9078 3.8805	3.8823 3.7594	3.9147	3.8335	3.7199	Ave		3.8426				2.0		20.0			
1,3-Dichlorobenzene	1.7283 1.7190	1.7498 1.6706	1.7559	1.7171	1.6487	Ave		1.7128			0.6000	2.3		20.0			
p-Isopropyltoluene	3.3272 3.4552	3.3258 3.3657	3.3764	3.3527	3.2540	Ave		3.3510				1.8		20.0			
1,4-Dichlorobenzene	1.8673 1.7552	1.8222 1.7031	1.7458	1.7522	1.6928	Ave		1.7627			0.5000	3.5		20.0			
1,2,3-Trimethylbenzene	1.3613 1.3406	1.3459 1.3335	1.3290	1.3729	1.3170	Ave		1.3429				1.4		20.0			
Benzyl chloride	0.2108 0.2769	0.2242 0.2729	0.2409	0.2506	0.2623	Ave		0.2484				9.9		20.0			
n-Butylbenzene	1.6207 1.7769	1.6365 1.7347	1.7004	1.7288	1.6881	Ave		1.6980				3.3		20.0			

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

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

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-15232-1 Analy Batch No.: 39724

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/01/2020 13:35 Calibration End Date: 09/01/2020 15:48 Calibration ID: 10281

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2-Dichlorobenzene	1.6515 1.6333	1.6237 1.5733	1.6481	1.6158	1.5674	Ave		1.6162			0.4000	2.1		20.0			
1,2-Dibromo-3-Chloropropane	0.0711 0.0942	0.0819 0.0878	0.0879	0.0890	0.0877	Ave		0.0856			0.0500	8.6		20.0			
1,3,5-Trichlorobenzene	1.4074 1.4110	1.4061 1.3656	1.4295	1.4062	1.3555	Ave		1.3973				1.9		20.0			
1,2,4-Trichlorobenzene	1.2990 1.2622	1.2785 1.2137	1.2629	1.2451	1.2149	Ave		1.2538			0.2000	2.5		20.0			
Hexachlorobutadiene	0.6553 0.6171	0.6168 0.5892	0.6150	0.6075	0.5846	Ave		0.6122				3.8		20.0			
Naphthalene	2.2291 2.2731	2.2713 2.0879	2.3270	2.2619	2.2049	Ave		2.2365				3.4		20.0			
1,2,3-Trichlorobenzene	1.1382 1.1080	1.1563 1.0364	1.1417	1.1153	1.0727	Ave		1.1098				3.8		20.0			
Dibromofluoromethane (Surr)	0.2372 0.2368	0.2372 0.2376	0.2382	0.2372	0.2391	Ave		0.2376				0.3		20.0			
1,2-Dichloroethane-d4 (Surr)	0.0480 0.0484	0.0476 0.0484	0.0485	0.0490	0.0490	Ave		0.0484				1.0		20.0			
Toluene-d8 (Surr)	1.3120 1.3054	1.3060 1.2984	1.3067	1.3058	1.3081	Ave		1.3061				0.3		20.0			
4-Bromofluorobenzene (Surr)	0.4846 0.4929	0.4884 0.4967	0.4890	0.4914	0.4931	Ave		0.4909				0.8		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
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-15232-1 Analy Batch No.: 39724

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/01/2020 13:35 Calibration End Date: 09/01/2020 15:48 Calibration ID: 10281

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-39724/9	CS01I07.D
Level 2	IC 410-39724/8	CS01I06.D
Level 3	IC 410-39724/7	CS01I05.D
Level 4	IC 410-39724/6	CS01I04.D
Level 5	IC 410-39724/5	CS01I03.D
Level 6	ICIS 410-39724/4	CS01I02.D
Level 7	IC 410-39724/3	CS01I01.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	11305 673806	34165 1551921	65583	129325	335623	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Chloromethane	FB	Ave	15951 750884	40412 1766636	75132	150814	374739	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3-Butadiene	FB	Ave	14355 715813	37166 1660055	77445	140385	342407	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Vinyl chloride	FB	Ave	14371 711167	36562 1657758	69005	139896	352685	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Bromomethane	FB	Ave	10152 508157	24464 1207360	49576	98967	247103	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Chloroethane	FB	Ave	9373 428295	22270 1012488	43065	86238	214069	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Dichlorofluoromethane	FB	Ave	19377 942431	47161 2252587	94758	190803	467823	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Trichlorofluoromethane	FB	Ave	17838 921738	47434 2247593	90570	183481	458162	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethyl ether	FB	Ave	9388 470167	23165 1138572	45936	93303	229113	0.200 10.00	0.500 25.0	1.000	2.00	5.00
Freon 123a	FB	Ave	15559 663506	34942 1591534	70413	128139	312190	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Acrolein	TBAd 10	Ave	57475 2808556	142874 7052881	288468	575443	1427897	10.00 500	25.0 1250	50.0	100.0	250
1,1-Dichloroethene	FB	Ave	9367 475627	23536 1138101	46141	91871	221612	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Freon 113	FB	Ave	8535 500744	22631 1197984	49416	94307	234166	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Acetone	TBAd 10	Ave	13971 541999	33503 1332893	53819	125222	322634	2.00 100	5.00 250	10.0	20.0	50.0
Methyl iodide	FB	Ave	18680 954840	45466 2264828	91381	178469	440171	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.: 410-15232-1 Analy Batch No.: 39724

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/01/2020 13:35 Calibration End Date: 09/01/2020 15:48 Calibration ID: 10281

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	7374 399370	19138 978776	37062	77273	194973	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Carbon disulfide	FB	Ave	33471 1707453	79256 4103979	162292	323433	790900	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methyl acetate	TBAd 10	Ave	5400 272722	10666 553177	17477	49627	136367	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Allyl chloride	FB	Ave	16597 815256	39926 2023275	80597	160482	399375	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methylene Chloride	FB	Ave	10355 535609	26091 1267299	51267	101409	248970	0.200 10.0	0.500 25.0	1.00	2.00	5.00
t-Butyl alcohol	TBAd 10	Ave	12311 554170	31710 1247393	57344	110192	278959	4.00 200	10.0 500	20.0	40.0	100
Acrylonitrile	TBAd 10	Ave	10290 466148	23111 1131501	51371	96365	240268	1.00 50.0	2.50 125	5.00	10.0	25.0
Methyl tert-butyl ether	FB	Ave	31299 1520759	74946 3618649	150474	295369	727225	0.200 10.0	0.500 25.0	1.00	2.00	5.00
trans-1,2-Dichloroethene	FB	Ave	10888 564465	26945 1349657	54149	105433	262964	0.200 10.0	0.500 25.0	1.00	2.00	5.00
n-Hexane	FB	Ave	14606 807784	35026 1965108	78465	152150	383350	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1-Dichloroethane	FB	Ave	20597 1035693	48762 2437799	100821	195904	478397	0.200 10.0	0.500 25.0	1.00	2.00	5.00
di-Isopropyl ether	FB	Ave	38832 1943658	95205 4628483	190197	376556	920754	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Chloro-1,3-butadiene	FB	Ave	19967 958306	47125 2319881	91500	184491	446582	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethyl t-butyl ether	FB	Ave	36977 1849075	90729 4356436	183026	361189	891552	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Butanone (MEK)	TBAd 10	Ave	31084 1409728	76154 3225526	137888	281636	701991	2.00 100	5.00 250	10.0	20.0	50.0
cis-1,2-Dichloroethene	FB	Ave	12683 625147	30278 1509697	62000	121548	295208	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2,2-Dichloropropane	FB	Ave	17391 890664	42244 2141366	85777	172113	413880	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Propionitrile	TBAd 10	Ave	12804 730594	39217 1736921	74651	149313	356593	4.00 200	10.0 500	20.0	40.0	100
Methacrylonitrile	TBAd 10	Ave	27261 1440762	67114 3505951	146687	277418	693145	2.00 100	5.00 250	10.0	20.0	50.0
Bromochloromethane	FB	Ave	5261 279022	12738 700885	26529	54981	135663	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Tetrahydrofuran	TBAd 10	Ave	7984 415910	21034 938881	41281	81352	193486	2.00 100	5.00 250	10.0	20.0	50.0

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

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-15232-1 Analy Batch No.: 39724

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/01/2020 13:35 Calibration End Date: 09/01/2020 15:48 Calibration ID: 10281

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	20153 1017069	48103 2478178	97764	196768	480095	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1,1-Trichloroethane	FB	Ave	17452 934233	43566 2245085	87622	179578	434162	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Cyclohexane	FB	Ave	18443 971248	45257 2375325	97244	186390	460601	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Carbon tetrachloride	FB	Ave	14471 789037	35175 1932273	74393	148659	367580	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1-Dichloropropene	FB	Ave	16330 822564	39192 1986821	79910	157992	386758	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Isobutyl alcohol	TBAd 10	Ave	10703 455897	23860 1092722	43145	85837	230672	10.0 500	25.0 1250	50.0	100	250
Benzene	FB	Ave	46486 2366224	113177 5751371	228700	459354	1116708	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dichloroethane	FB	Ave	16105 660414	36081 1605051	68618	135129	322763	0.200 10.0	0.500 25.0	1.00	2.00	5.00
t-Amyl methyl ether	FB	Ave	34074 1692208	80450 4057198	164628	330560	810520	0.200 10.0	0.500 25.0	1.00	2.00	5.00
n-Heptane	FB	Ave	16903 886773	37755 2226987	86227	173398	417078	0.200 10.0	0.500 25.0	1.00	2.00	5.00
n-Butanol	TBAd 10	Ave	15142 804563	36853 1964301	73005	150691	388291	20.0 1000	50.0 2500	100	200	500
Trichloroethene	FB	Ave	11853 613428	28843 1497905	59588	118251	287079	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methylcyclohexane	FB	Ave	15190 946727	44211 2421507	90839	186709	476901	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dichloropropane	FB	Ave	12253 599777	28771 1493537	58951	116517	285051	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methyl methacrylate	TBAd 10	Ave	6103 302973	14408 746981	29926	59171	148411	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Dibromomethane	FB	Ave	6094 293984	14141 718764	28840	56166	140420	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,4-Dioxane	TBAd 10	Ave	1094 79862	3795 207069	8095	15868	39014	10.0 500	25.0 1250	50.0	100	250
Bromodichloromethane	FB	Ave	14281 747888	34459 1841851	69815	140278	348987	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Nitropropane	TBAd 10	Ave	17977 995940	42618 2457254	90715	182830	459149	2.00 100	5.00 250	10.0	20.0	50.0
1-Bromo-2-chloroethane	FB	Ave	11914 622797	30027 1550438	60281	124609	302656	0.200 10.0	0.500 25.0	1.00	2.00	5.00
cis-1,3-Dichloropropene	FB	Ave	17450 943666	41792 2329714	85955	174979	439884	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.: 410-15232-1 Analy Batch No.: 39724

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/01/2020 13:35 Calibration End Date: 09/01/2020 15:48 Calibration ID: 10281

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)	TBAd 10	Ave	79991 4260875	203096 10613666	414178	815838	2060281	2.00 100	5.00 250	10.0	20.0	50.0
Toluene	CBZd 5	Ave	29375 1562669	73639 3853589	148821	297381	721183	0.200 10.0	0.500 25.0	1.00	2.00	5.00
trans-1,3-Dichloropropene	CBZd 5	Ave	14266 808366	34646 2011642	72683	148652	378157	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethyl methacrylate	CBZd 5	Ave	11251 673046	30177 1684778	63147	127842	321458	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1,2-Trichloroethane	CBZd 5	Ave	8186 425508	20416 1044114	41496	82201	201374	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Tetrachloroethene	CBZd 5	Ave	13549 692046	32134 1710454	66888	132588	322909	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3-Dichloropropane	CBZd 5	Ave	14740 746124	36571 1831923	72739	141833	353883	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Hexanone	TBAd 10	Ave	53208 3099544	135801 7642331	292991	598268	1483984	2.00 100	5.00 250	10.0	20.0	50.0
Dibromochloromethane	CBZd 5	Ave	8028 539411	21989 1358246	45464	97240	248177	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dibromoethane (EDB)	CBZd 5	Ave	7944 431839	19670 1057340	40000	80851	202633	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1-Chlorohexane	CBZd 5	Ave	18891 856372	42522 2142701	85108	161444	400674	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Chlorobenzene	CBZd 5	Ave	34035 1740350	82597 4322456	168260	333345	821070	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1,1,2-Tetrachloroethane	CBZd 5	Ave	10641 617994	27504 1543073	56505	113207	287568	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethylbenzene	CBZd 5	Ave	59671 3077887	143018 7737357	292186	583876	1440317	0.200 10.0	0.500 25.0	1.00	2.00	5.00
m&p-Xylene	CBZd 5	Ave	43867 2455146	112244 6167767	230072	457654	1133528	0.400 20.0	1.00 50.0	2.00	4.00	10.0
o-Xylene	CBZd 5	Ave	22149 1197012	54046 3012741	111628	225199	554888	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Styrene	CBZd 5	Ave	35521 2044773	89517 5243447	184556	377982	949081	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Bromoform	CBZd 5	Ave	4087 322179	10815 832204	24617	52263	143999	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Isopropylbenzene	CBZd 5	Ave	57134 3180524	144191 7987853	299877	592584	1466907	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	10523 569960	26594 1416700	53769	109660	269440	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Bromobenzene	DCBd 4	Ave	15119 786388	35338 1970860	74061	147229	365172	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.: 410-15232-1 Analy Batch No.: 39724

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/01/2020 13:35 Calibration End Date: 09/01/2020 15:48 Calibration ID: 10281

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	DCBd 4	Ave	25153 1707722	65511 4418631	148178	303768	790342	2.00 100	5.00 250	10.0	20.0	50.0
1,2,3-Trichloropropane	DCBd 4	Ave	2945 153575	7433 374830	14553	29794	72364	0.200 10.0	0.500 25.0	1.00	2.00	5.00
N-Propylbenzene	DCBd 4	Ave	67115 3755554	167830 9279542	349239	702814	1726631	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Chlorotoluene	DCBd 4	Ave	14651 750019	33943 1862946	71969	141124	350978	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3,5-Trimethylbenzene	DCBd 4	Ave	50066 2762343	123379 6951334	261031	516140	1274650	0.200 10.0	0.500 25.0	1.00	2.00	5.00
4-Chlorotoluene	DCBd 4	Ave	14993 787376	35497 1976218	73083	148252	362949	0.200 10.0	0.500 25.0	1.00	2.00	5.00
tert-Butylbenzene	DCBd 4	Ave	12027 583616	25380 1475973	54654	118830	270627	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Pentachloroethane	DCBd 4	Ave	6746 477219	18671 1270655	40193	86508	223759	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2,4-Trimethylbenzene	DCBd 4	Ave	48590 2885821	128573 7304755	264914	526977	1326302	0.200 10.0	0.500 25.0	1.00	2.00	5.00
sec-Butylbenzene	DCBd 4	Ave	63813 3571893	159853 9034349	329993	668081	1656218	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3-Dichlorobenzene	DCBd 4	Ave	28222 1582324	72046 4014697	148017	299249	734044	0.200 10.0	0.500 25.0	1.00	2.00	5.00
p-Isopropyltoluene	DCBd 4	Ave	54332 3180481	136940 8088100	284614	584284	1448806	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,4-Dichlorobenzene	DCBd 4	Ave	30493 1615615	75027 4092757	147165	305373	753707	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2,3-Trimethylbenzene	DCBd 4	Ave	22229 1234014	55416 3204589	112026	239261	586354	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Benzyl chloride	DCBd 4	Ave	3443 254856	9231 655880	20304	43679	116794	0.200 10.0	0.500 25.0	1.00	2.00	5.00
n-Butylbenzene	DCBd 4	Ave	26466 1635579	67384 4168646	143333	301292	751620	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dichlorobenzene	DCBd 4	Ave	26969 1503472	66856 3780882	138925	281587	697848	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dibromo-3-Chloropropane	DCBd 4	Ave	1161 86753	3372 210885	7406	15503	39048	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3,5-Trichlorobenzene	DCBd 4	Ave	22982 1298817	57894 3281646	120502	245063	603506	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2,4-Trichlorobenzene	DCBd 4	Ave	21212 1161828	52641 2916702	106458	216994	540926	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Hexachlorobutadiene	DCBd 4	Ave	10701 568070	25396 1415792	51838	105865	260304	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.: 410-15232-1 Analy Batch No.: 39724

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/01/2020 13:35 Calibration End Date: 09/01/2020 15:48 Calibration ID: 10281

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
Naphthalene	DCBd 4	Ave	36400 2092386	93520 5017456	196158	394190	981719	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2,3-Trichlorobenzene	DCBd 4	Ave	18586 1019899	47610 2490582	96242	194367	477586	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Dibromofluoromethane (Surr)	FB	Ave	459388 488556	460223 491718	465395	475332	486623	10.0 10.0	10.0 10.0	10.0	10.0	10.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	92975 99744	92350 100134	94841	98150	99716	10.0 10.0	10.0 10.0	10.0	10.0	10.0
Toluene-d8 (Surr)	CBZd 5	Ave	1926152 2048995	1913735 2074244	1941329	1985750	2027327	10.0 10.0	10.0 10.0	10.0	10.0	10.0
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	711441 773730	715715 793546	726539	747277	764276	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\10193\20200901-9503.b\CS01I01.D
Lims ID: IC STD7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 01-Sep-2020 13:35:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: IC STD7
Misc. Info.: 410-0009503-003
Operator ID: dvv10203 Instrument ID: 10193
Sublist: chrom-MSV_10193_25mL*sub1

Method: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 01-Sep-2020 20:10:09 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1059

First Level Reviewer: virayd Date: 01-Sep-2020 15:49:38

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.910	1.910	0.000	99	1551921	25.0	23.2	
3 Chloromethane	50	2.099	2.099	0.000	99	1766636	25.0	22.4	
4 Butadiene	39	2.203	2.209	-0.006	95	1660055	25.0	22.4	
5 Vinyl chloride	62	2.209	2.215	-0.006	98	1657758	25.0	22.8	
6 Bromomethane	94	2.507	2.520	-0.013	91	1207360	25.0	23.5	
7 Chloroethane	64	2.599	2.605	-0.006	100	1012488	25.0	22.5	
8 Dichlorofluoromethane	67	2.831	2.837	-0.006	97	2252587	25.0	23.1	
9 Trichlorofluoromethane	101	2.892	2.898	-0.006	97	2247593	25.0	23.7	
11 Ethyl ether	59	3.129	3.135	-0.006	92	1138572	25.0	23.7	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.215	3.208	0.007	97	1591534	25.0	22.6	
13 Acrolein	56	3.300	3.306	-0.006	99	7052881	1250.0	1352.8	
14 1,1-Dichloroethene	96	3.422	3.428	-0.006	97	1138101	25.0	23.8	
15 112TCTFE	101	3.458	3.464	-0.006	92	1197984	25.0	24.6	
16 Acetone	43	3.458	3.471	-0.013	100	1332893	250.0	240.7	
17 Iodomethane	142	3.611	3.617	-0.006	99	2264828	25.0	24.0	
19 Ethyl bromide	108	3.641	3.641	0.000	99	978776	25.0	24.6	
18 Isopropyl alcohol	45	3.635	3.647	-0.012	41	563815	500.0	508.3	
20 Carbon disulfide	76	3.708	3.708	0.000	100	4103979	25.0	24.3	
22 Methyl acetate	43	3.855	3.867	-0.012	98	553177	25.0	25.4	M
23 3-Chloro-1-propene	41	3.885	3.891	-0.006	89	2023275	25.0	24.2	
24 Methylene Chloride	84	4.068	4.074	-0.006	94	1267299	25.0	23.8	
* 25 t-Butyl alcohol-d10 (IS)	65	4.092	4.117	-0.025	99	130306	50.0	50.0	
26 2-Methyl-2-propanol	59	4.214	4.227	-0.012	99	1247393	500.0	480.6	
27 Acrylonitrile	53	4.403	4.409	-0.006	98	1131501	125.0	128.6	
28 Methyl tert-butyl ether	73	4.452	4.464	-0.012	96	3618649	25.0	23.4	
29 trans-1,2-Dichloroethene	96	4.464	4.470	-0.006	97	1349657	25.0	24.1	
30 Hexane	57	4.885	4.897	-0.012	95	1965108	25.0	24.9	
32 1,1-Dichloroethane	63	5.129	5.135	-0.006	96	2437799	25.0	23.7	
33 Isopropyl ether	45	5.190	5.196	-0.006	93	4628483	25.0	23.6	
34 2-Chloro-1,3-butadiene	53	5.239	5.251	-0.012	93	2319881	25.0	23.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
35 Tert-butyl ethyl ether	59	5.732	5.732	0.000	98	4356436	25.0	23.2	
36 2-Butanone (MEK)	43	5.940	5.946	-0.006	100	3225526	250.0	248.3	
37 cis-1,2-Dichloroethene	96	5.970	5.970	0.000	83	1509697	25.0	23.8	
38 2,2-Dichloropropane	77	5.988	5.988	0.000	89	2141366	25.0	24.1	
40 Propionitrile	54	6.049	6.049	0.000	99	1736921	500.0	526.9	M
S 42 1,2-Dichloroethene, Total	100				0			47.9	
43 Methacrylonitrile	67	6.251	6.251	0.001	93	3505951	250.0	274.4	
44 Chlorobromomethane	128	6.305	6.305	0.000	96	700885	25.0	25.1	
45 Tetrahydrofuran	71	6.312	6.305	0.007	89	938881	250.0	255.6	
46 Chloroform	83	6.458	6.464	-0.006	94	2478178	25.0	24.3	
$ 47 Dibromofluoromethane (Surr)	113	6.677	6.683	-0.006	94	491718	10.0	10.0	
48 1,1,1-Trichloroethane	97	6.677	6.683	-0.006	99	2245085	25.0	24.4	
49 Cyclohexane	56	6.769	6.775	-0.006	93	2375325	25.0	24.4	
50 Carbon tetrachloride	117	6.891	6.891	0.000	96	1932273	25.0	25.1	
51 1,1-Dichloropropene	75	6.897	6.897	0.000	96	1986821	25.0	24.1	
52 Isobutyl alcohol	41	7.086	7.086	0.000	94	1092722	1250.0	1298.5	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.135	7.134	0.001	0	100134	10.0	10.0	
54 Benzene	78	7.165	7.159	0.006	97	5751371	25.0	24.2	
55 1,2-Dichloroethane	62	7.238	7.238	0.000	98	1605051	25.0	22.4	
56 Tert-amyl methyl ether	73	7.354	7.360	-0.006	98	4057198	25.0	23.8	
* 57 Fluorobenzene (IS)	96	7.574	7.567	0.007	99	2069205	10.0	10.0	
58 n-Heptane	43	7.580	7.580	0.000	92	2226987	25.0	25.4	
59 n-Butanol	56	7.970	7.976	-0.006	90	1964301	2500.0	2816.7	
60 Trichloroethene	95	8.049	8.049	0.000	98	1497905	25.0	24.5	
61 Methylcyclohexane	83	8.354	8.354	0.000	93	2421507	25.0	25.8	
62 1,2-Dichloropropane	63	8.390	8.390	0.000	94	1493537	25.0	24.5	
63 2-ethoxy-2-methyl butane	87	8.403	8.396	0.007	92	2353267	25.0	24.8	
64 Methyl methacrylate	69	8.482	8.482	0.000	91	746981	25.0	27.4	
66 Dibromomethane	93	8.500	8.494	0.006	94	718764	25.0	24.1	
65 1,4-Dioxane	88	8.494	8.506	-0.012	66	207069	1250.0	1491.3	M
67 Dichlorobromomethane	83	8.744	8.738	0.006	99	1841851	25.0	25.0	
68 2-Nitropropane	41	9.024	9.024	0.000	99	2457254	250.0	290.9	
71 1-Bromo-2-chloroethane	63	9.134	9.134	0.000	99	1550438	25.0	24.6	
72 cis-1,3-Dichloropropene	75	9.299	9.299	0.000	94	2329714	25.0	25.4	
73 4-Methyl-2-pentanone (MIBK)	43	9.488	9.488	0.000	98	10613666	250.0	281.3	
$ 74 Toluene-d8 (Surr)	98	9.610	9.610	0.000	94	2074244	10.0	9.94	
75 Toluene	92	9.689	9.689	0.000	98	3853589	25.0	24.6	
76 trans-1,3-Dichloropropene	75	9.963	9.957	0.006	96	2011642	25.0	25.6	
78 Ethyl methacrylate	69	10.024	10.024	0.000	90	1684778	25.0	25.4	
S 77 1,3-Dichloropropene, Total	100				0			51.0	
79 1,1,2-Trichloroethane	97	10.171	10.164	0.007	91	1044114	25.0	24.1	
80 Tetrachloroethene	166	10.250	10.250	0.000	97	1710454	25.0	24.4	
81 1,3-Dichloropropane	76	10.335	10.329	0.006	93	1831923	25.0	24.0	
82 2-Hexanone	43	10.390	10.396	-0.006	97	7642331	250.0	286.7	
83 Chlorodibromomethane	129	10.549	10.548	0.001	90	1358246	25.0	27.0	
84 Ethylene Dibromide	107	10.658	10.658	0.000	98	1057340	25.0	24.7	
* 85 Chlorobenzene-d5 (IS)	117	11.097	11.097	0.000	87	1597498	10.0	10.0	
86 1-Chlorohexane	91	11.109	11.109	0.000	98	2142701	25.0	23.9	
87 Chlorobenzene	112	11.122	11.122	0.000	98	4322456	25.0	24.4	
89 1,1,1,2-Tetrachloroethane	131	11.207	11.207	0.000	95	1543073	25.0	25.6	
90 Ethylbenzene	91	11.213	11.213	0.000	98	7737357	25.0	24.9	
S 88 Xylenes, Total	106				0			76.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
91 m-Xylene & p-Xylene	106	11.329	11.329	0.000	0	6167767	50.0	50.8	
92 o-Xylene	106	11.664	11.664	0.000	95	3012741	25.0	25.3	
93 Styrene	104	11.676	11.676	0.000	95	5243447	25.0	26.2	
94 Bromoform	173	11.835	11.835	0.000	97	832204	25.0	29.8	
95 Isopropylbenzene	105	11.969	11.969	0.000	96	7987853	25.0	25.4	
$ 98 4-Bromofluorobenzene (Surr)	95	12.109	12.109	0.000	91	793546	10.0	10.1	
99 1,1,2,2-Tetrachloroethane	83	12.219	12.219	0.000	93	1416700	25.0	23.6	
100 Bromobenzene	156	12.231	12.231	0.000	94	1970860	25.0	23.9	
101 trans-1,4-Dichloro-2-butene	53	12.243	12.243	0.000	96	4418631	250.0	265.9	
102 1,2,3-Trichloropropane	110	12.268	12.268	0.000	83	374830	25.0	22.9	
103 N-Propylbenzene	91	12.298	12.298	0.000	99	9279542	25.0	24.0	
104 2-Chlorotoluene	126	12.377	12.377	0.000	96	1862946	25.0	23.5	
105 1,3,5-Trimethylbenzene	105	12.438	12.438	0.000	94	6951334	25.0	24.2	
106 4-Chlorotoluene	126	12.469	12.469	0.000	98	1976218	25.0	24.0	
107 tert-Butylbenzene	134	12.682	12.682	0.000	94	1475973	25.0	23.7	
108 Pentachloroethane	167	12.713	12.713	0.000	93	1270655	25.0	27.3	
109 1,2,4-Trimethylbenzene	105	12.725	12.725	0.000	97	7304755	25.0	24.8	
110 sec-Butylbenzene	105	12.847	12.847	0.000	94	9034349	25.0	24.5	
111 1,3-Dichlorobenzene	146	12.944	12.944	0.000	98	4014697	25.0	24.4	
112 4-Isopropyltoluene	119	12.957	12.957	0.000	97	8088100	25.0	25.1	
* 113 1,4-Dichlorobenzene-d4	152	12.999	12.999	0.000	94	961243	10.0	10.0	
114 1,4-Dichlorobenzene	146	13.018	13.017	0.001	95	4092757	25.0	24.2	
115 1,2,3-Trimethylbenzene	120	13.030	13.030	0.000	99	3204589	25.0	24.8	
116 Benzyl chloride	126	13.097	13.103	-0.006	99	655880	25.0	27.5	
119 n-Butylbenzene	92	13.249	13.249	0.000	96	4168646	25.0	25.5	
120 1,2-Dichlorobenzene	146	13.280	13.286	-0.006	98	3780882	25.0	24.3	
118 p-Diethylbenzene	119	13.304	13.304	0.000	0	4145941	25.0	25.4	
123 1,2-Dibromo-3-Chloropropane	155	13.834	13.834	0.000	87	210885	25.0	25.6	
124 1,3,5-Trichlorobenzene	180	13.956	13.956	0.000	98	3281646	25.0	24.4	
125 1,2,4-Trichlorobenzene	180	14.383	14.383	0.000	94	2916702	25.0	24.2	
126 Hexachlorobutadiene	225	14.469	14.468	0.001	97	1415792	25.0	24.1	
127 Naphthalene	128	14.566	14.566	0.000	97	5017456	25.0	23.3	
128 1,2,3-Trichlorobenzene	180	14.712	14.712	0.000	96	2490582	25.0	23.3	
129 2-Methylnaphthalene	142	15.334	15.340	-0.006	0	3387149	25.0	23.3	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MSV_RV1_826_00022	Amount Added: 25.00	Units: uL	
MSV_RV4_826_00024	Amount Added: 25.00	Units: uL	
MSV_RV4GAS826_00072	Amount Added: 25.00	Units: uL	
MSV_25_826ISS_00001	Amount Added: 1.00	Units: uL	Run Reagent

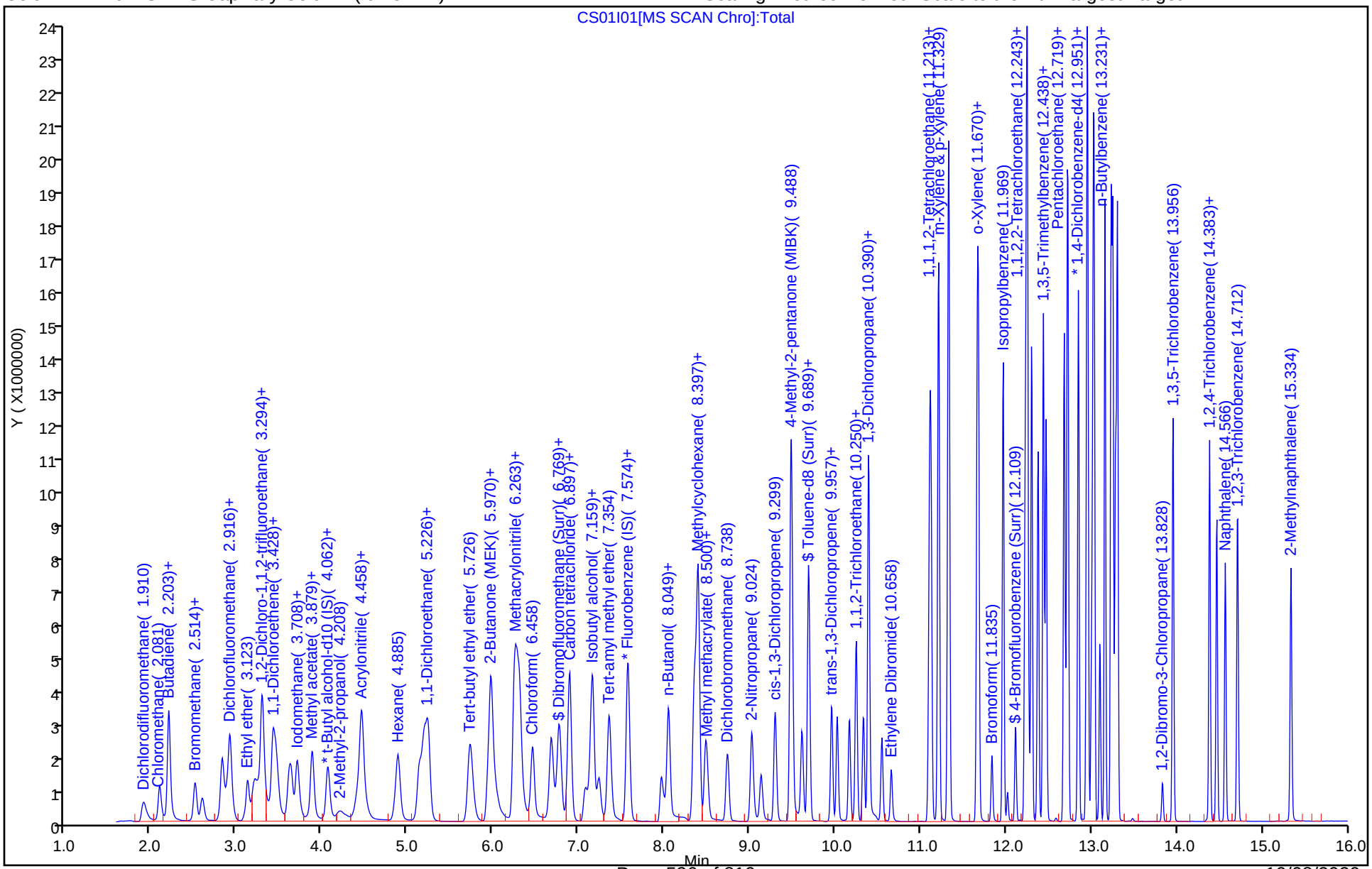
Report Date: 01-Sep-2020 20:10:10 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I01.D

Injection Date:	01-Sep-2020 13:35:30	Instrument ID:	10193	Operator ID:	dvv10203
Lims ID:	IC STD7			Worklist Smp#:	3
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MSV_10193_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



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

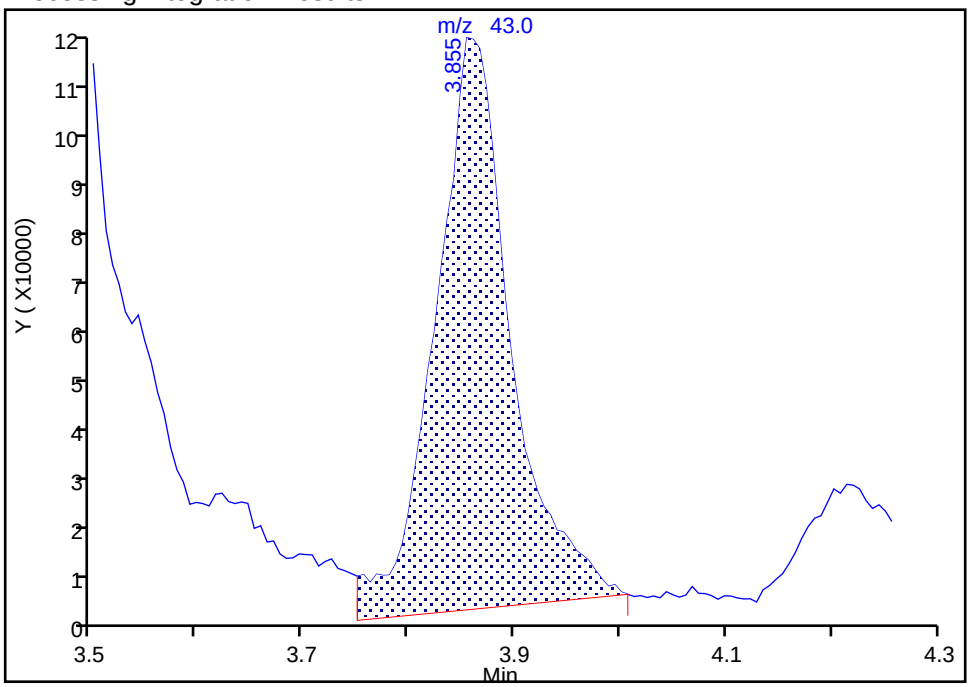
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I01.D
Injection Date: 01-Sep-2020 13:35:30 Instrument ID: 10193
Lims ID: IC STD7
Client ID:
Operator ID: dvv10203 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

22 Methyl acetate, CAS: 79-20-9

Signal: 1

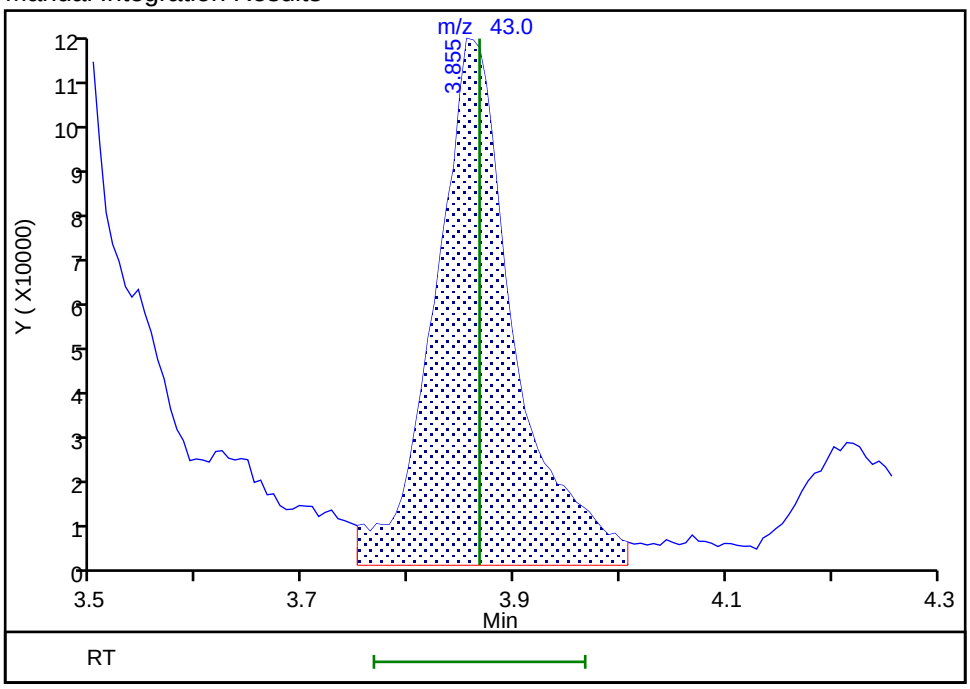
Processing Integration Results

RT: 3.85
Area: 517473
Amount: 24.896311
Amount Units: ug/l



Manual Integration Results

RT: 3.85
Area: 553177
Amount: 25.420101
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 16:54:24
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

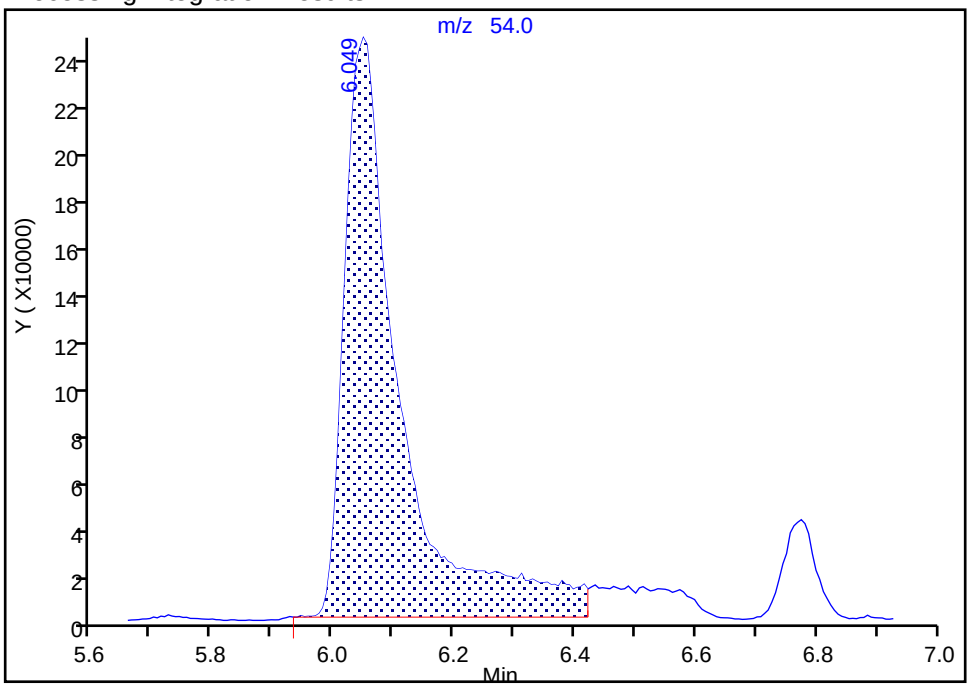
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I01.D
Injection Date: 01-Sep-2020 13:35:30 Instrument ID: 10193
Lims ID: IC STD7
Client ID:
Operator ID: dvv10203 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

40 Propionitrile, CAS: 107-12-0

Signal: 1

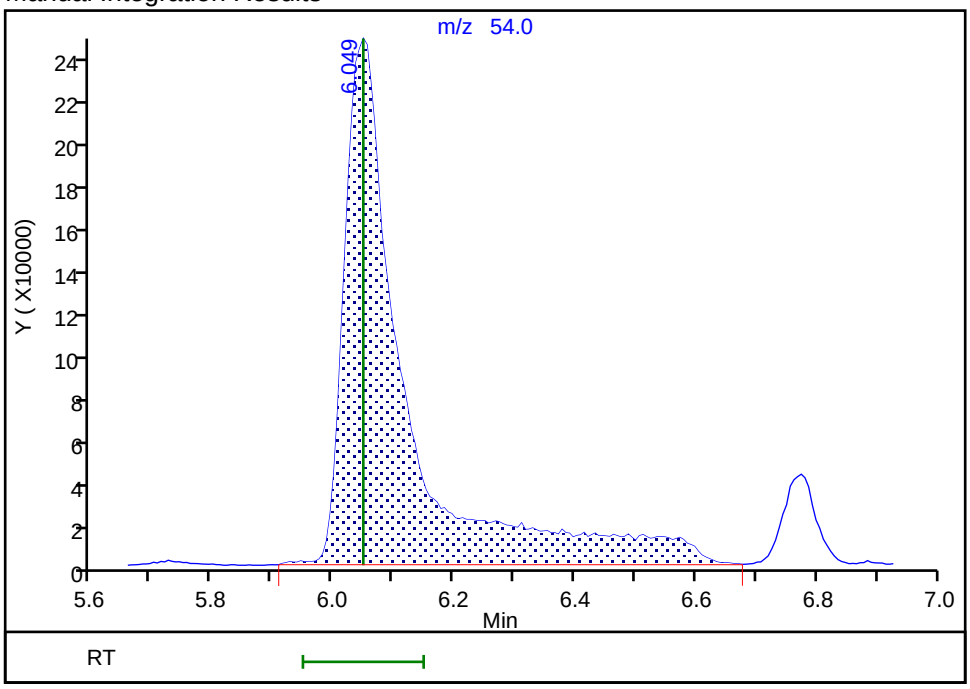
Processing Integration Results

RT: 6.05
Area: 1559949
Amount: 516.6274
Amount Units: ug/l



Manual Integration Results

RT: 6.05
Area: 1736921
Amount: 526.9031
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 16:54:59
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

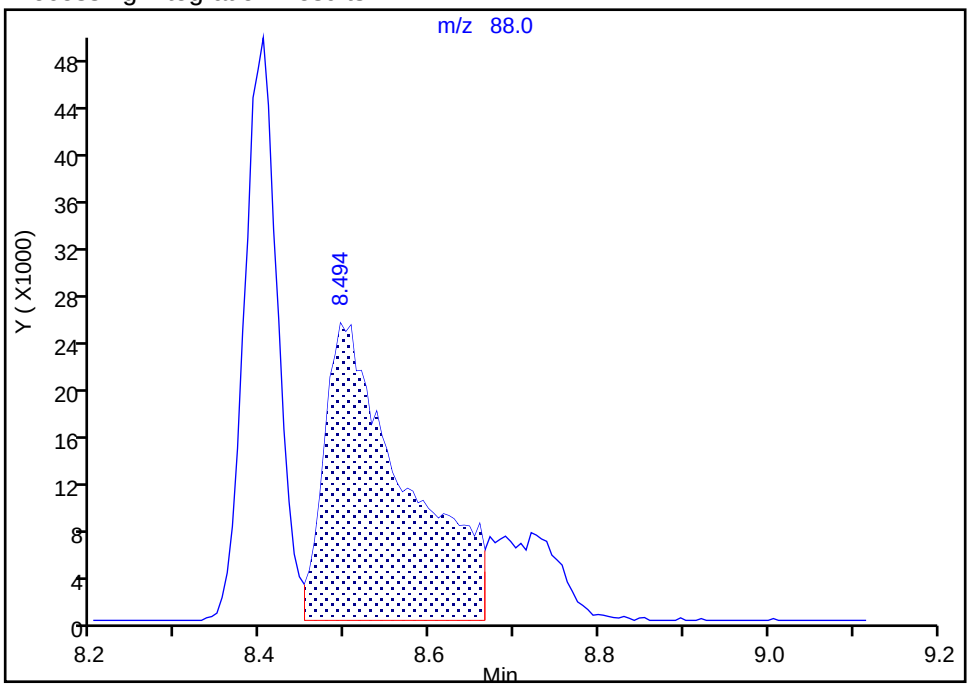
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I01.D
Injection Date: 01-Sep-2020 13:35:30 Instrument ID: 10193
Lims ID: IC STD7
Client ID:
Operator ID: dvv10203 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

65 1,4-Dioxane, CAS: 123-91-1

Signal: 1

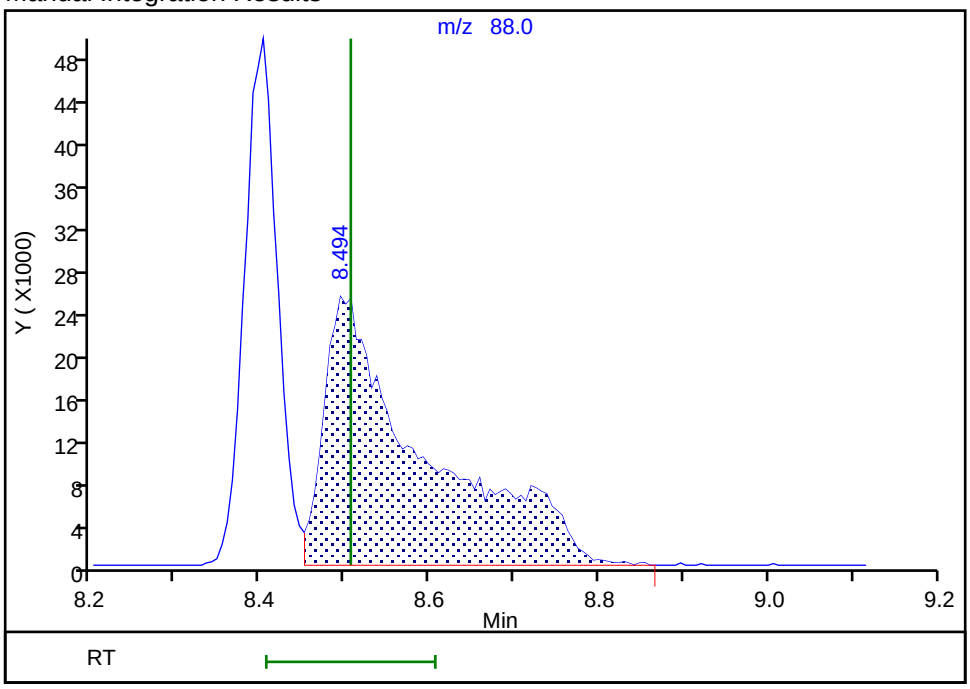
Processing Integration Results

RT: 8.49
Area: 167365
Amount: 1747.3259
Amount Units: ug/l



Manual Integration Results

RT: 8.49
Area: 207069
Amount: 1491.2668
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 16:55:25
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I02.D
Lims ID: ICIS
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 01-Sep-2020 13:57:30 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: ICIS
Misc. Info.: 410-0009503-004
Operator ID: dvv10203 Instrument ID: 10193
Sublist: chrom-MSV_10193_25mL*sub1

Method: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 01-Sep-2020 20:10:18 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1059

First Level Reviewer: virayd Date: 01-Sep-2020 15:34:31

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.916	1.916	0.000	99	673806	10.0	10.1	M
3 Chloromethane	50	2.105	2.105	0.000	89	750884	10.0	9.57	
4 Butadiene	39	2.215	2.215	0.000	93	715813	10.0	9.70	
5 Vinyl chloride	62	2.221	2.221	0.000	79	711167	10.0	9.80	
6 Bromomethane	94	2.526	2.526	0.000	91	508157	10.0	9.92	
7 Chloroethane	64	2.611	2.611	0.000	95	428295	10.0	9.56	
8 Dichlorofluoromethane	67	2.836	2.836	0.000	83	942431	10.0	9.69	
9 Trichlorofluoromethane	101	2.897	2.897	0.000	88	921738	10.0	9.77	
11 Ethyl ether	59	3.141	3.141	0.000	92	470167	10.0	9.83	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.227	3.227	0.000	85	663506	10.0	9.47	
13 Acrolein	56	3.306	3.306	0.000	99	2808556	500.0	473.4	
14 1,1-Dichloroethene	96	3.434	3.434	0.000	88	475627	10.0	9.97	
15 112TCTFE	101	3.470	3.470	0.000	84	500744	10.0	10.3	
16 Acetone	43	3.470	3.470	0.000	98	541999	100.0	86.0	
17 Iodomethane	142	3.623	3.623	0.000	98	954840	10.0	10.1	
19 Ethyl bromide	108	3.653	3.653	0.000	98	399370	10.0	10.1	
18 Isopropyl alcohol	45	3.641	3.641	0.000	38	228137	200.0	184.1	
20 Carbon disulfide	76	3.714	3.714	0.000	100	1707453	10.0	10.1	
22 Methyl acetate	43	3.873	3.873	0.000	98	272722	10.0	11.0	M
23 3-Chloro-1-propene	41	3.891	3.891	0.000	88	815256	10.0	9.77	
24 Methylene Chloride	84	4.080	4.080	0.000	89	535609	10.0	10.1	
* 25 t-Butyl alcohol-d10 (IS)	65	4.111	4.111	0.000	98	148289	50.0	50.0	
26 2-Methyl-2-propanol	59	4.226	4.226	0.000	98	554170	200.0	187.6	
27 Acrylonitrile	53	4.422	4.422	0.000	79	466148	50.0	46.6	
28 Methyl tert-butyl ether	73	4.464	4.464	0.000	96	1520759	10.0	9.85	
29 trans-1,2-Dichloroethene	96	4.476	4.476	0.000	93	564465	10.0	10.1	
30 Hexane	57	4.897	4.897	0.000	95	807784	10.0	10.3	
32 1,1-Dichloroethane	63	5.141	5.141	0.000	85	1035693	10.0	10.1	
33 Isopropyl ether	45	5.202	5.202	0.000	93	1943658	10.0	9.93	
34 2-Chloro-1,3-butadiene	53	5.251	5.251	0.000	90	958306	10.0	9.91	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
35 Tert-butyl ethyl ether	59	5.738	5.738	0.000	98	1849075	10.0	9.89	
36 2-Butanone (MEK)	43	5.952	5.952	0.000	99	1409728	100.0	95.4	
37 cis-1,2-Dichloroethene	96	5.976	5.976	0.000	71	625147	10.0	9.89	
38 2,2-Dichloropropane	77	5.988	5.988	0.000	69	890664	10.0	10.1	
40 Propionitrile	54	6.055	6.055	0.000	98	730594	200.0	194.8	
43 Methacrylonitrile	67	6.263	6.263	0.000	92	1440762	100.0	99.1	
44 Chlorobromomethane	128	6.311	6.311	0.000	69	279022	10.0	10.0	
45 Tetrahydrofuran	71	6.317	6.317	0.000	72	415910	100.0	99.5	
46 Chloroform	83	6.464	6.464	0.000	83	1017069	10.0	10.0	
$ 47 Dibromofluoromethane (Surr)	113	6.683	6.683	0.000	70	488556	10.0	9.97	
48 1,1,1-Trichloroethane	97	6.689	6.689	0.000	92	934233	10.0	10.2	
49 Cyclohexane	56	6.775	6.775	0.000	92	971248	10.0	10.0	
50 Carbon tetrachloride	117	6.891	6.891	0.000	83	789037	10.0	10.3	
51 1,1-Dichloropropene	75	6.903	6.903	0.000	92	822564	10.0	10.0	
52 Isobutyl alcohol	41	7.086	7.086	0.000	92	455897	500.0	476.1	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.141	7.141	0.000	0	99744	10.0	9.99	
54 Benzene	78	7.165	7.165	0.000	97	2366224	10.0	9.99	
55 1,2-Dichloroethane	62	7.238	7.238	0.000	91	660414	10.0	9.25	
56 Tert-amyl methyl ether	73	7.360	7.360	0.000	97	1692208	10.0	9.94	
* 57 Fluorobenzene (IS)	96	7.573	7.573	0.000	94	2062892	10.0	10.0	
58 n-Heptane	43	7.579	7.579	0.000	66	886773	10.0	10.1	
59 n-Butanol	56	7.976	7.976	0.000	89	804563	1000.0	1013.8	M
60 Trichloroethene	95	8.055	8.055	0.000	94	613428	10.0	10.0	
61 Methylcyclohexane	83	8.360	8.360	0.000	92	946727	10.0	10.1	
62 1,2-Dichloropropane	63	8.390	8.390	0.000	71	599777	10.0	9.86	
63 2-ethoxy-2-methyl butane	87	8.402	8.402	0.000	91	965317	10.0	10.2	
64 Methyl methacrylate	69	8.482	8.482	0.000	91	302973	10.0	9.78	
66 Dibromomethane	93	8.500	8.500	0.000	95	293984	10.0	9.87	
65 1,4-Dioxane	88	8.506	8.506	0.000	31	79862	500.0	505.4	M
67 Dichlorobromomethane	83	8.738	8.738	0.000	93	747888	10.0	10.2	
68 2-Nitropropane	41	9.024	9.024	0.000	99	995940	100.0	103.6	
71 1-Bromo-2-chloroethane	63	9.134	9.134	0.000	95	622797	10.0	9.90	
72 cis-1,3-Dichloropropene	75	9.299	9.299	0.000	92	943666	10.0	10.3	
73 4-Methyl-2-pentanone (MIBK)	43	9.488	9.488	0.000	98	4260875	100.0	99.2	
$ 74 Toluene-d8 (Surr)	98	9.616	9.616	0.000	94	2048995	10.0	10.0	
75 Toluene	92	9.689	9.689	0.000	97	1562669	10.0	10.1	
76 trans-1,3-Dichloropropene	75	9.957	9.957	0.000	92	808366	10.0	10.5	
78 Ethyl methacrylate	69	10.024	10.024	0.000	90	673046	10.0	10.3	
79 1,1,2-Trichloroethane	97	10.170	10.170	0.000	87	425508	10.0	10.0	
80 Tetrachloroethene	166	10.250	10.250	0.000	93	692046	10.0	10.0	
81 1,3-Dichloropropane	76	10.329	10.329	0.000	94	746124	10.0	9.94	
82 2-Hexanone	43	10.390	10.390	0.000	97	3099544	100.0	102.2	
83 Chlorodibromomethane	129	10.548	10.548	0.000	88	539411	10.0	10.9	
84 Ethylene Dibromide	107	10.658	10.658	0.000	99	431839	10.0	10.3	
* 85 Chlorobenzene-d5 (IS)	117	11.097	11.097	0.000	85	1569631	10.0	10.0	
86 1-Chlorohexane	91	11.109	11.109	0.000	96	856372	10.0	9.73	
87 Chlorobenzene	112	11.121	11.121	0.000	93	1740350	10.0	10.0	
89 1,1,1,2-Tetrachloroethane	131	11.207	11.207	0.000	41	617994	10.0	10.4	
90 Ethylbenzene	91	11.213	11.213	0.000	98	3077887	10.0	10.1	
91 m-Xylene & p-Xylene	106	11.329	11.329	0.000	0	2455146	20.0	20.6	
92 o-Xylene	106	11.664	11.664	0.000	95	1197012	10.0	10.2	
93 Styrene	104	11.676	11.676	0.000	93	2044773	10.0	10.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
94 Bromoform	173	11.835	11.835	0.000	96	322179	10.0	11.7	
95 Isopropylbenzene	105	11.969	11.969	0.000	96	3180524	10.0	10.3	
$ 98 4-Bromofluorobenzene (Surr)	95	12.109	12.109	0.000	89	773730	10.0	10.0	
99 1,1,2,2-Tetrachloroethane	83	12.219	12.219	0.000	72	569960	10.0	9.92	
100 Bromobenzene	156	12.231	12.231	0.000	92	786388	10.0	9.96	
101 trans-1,4-Dichloro-2-butene	53	12.243	12.243	0.000	93	1707722	100.0	107.3	
102 1,2,3-Trichloropropane	110	12.261	12.261	0.000	79	153575	10.0	9.82	
103 N-Propylbenzene	91	12.298	12.298	0.000	99	3755554	10.0	10.1	
104 2-Chlorotoluene	126	12.377	12.377	0.000	97	750019	10.0	9.90	
105 1,3,5-Trimethylbenzene	105	12.438	12.438	0.000	94	2762343	10.0	10.1	
106 4-Chlorotoluene	126	12.469	12.469	0.000	98	787376	10.0	10.0	
107 tert-Butylbenzene	134	12.682	12.682	0.000	88	583616	10.0	9.78	
108 Pentachloroethane	167	12.713	12.713	0.000	58	477219	10.0	10.7	
109 1,2,4-Trimethylbenzene	105	12.725	12.725	0.000	97	2885821	10.0	10.2	
110 sec-Butylbenzene	105	12.847	12.847	0.000	94	3571893	10.0	10.1	
111 1,3-Dichlorobenzene	146	12.944	12.944	0.000	97	1582324	10.0	10.0	
112 4-Isopropyltoluene	119	12.956	12.956	0.000	95	3180481	10.0	10.3	
* 113 1,4-Dichlorobenzene-d4	152	12.999	12.999	0.000	95	920484	10.0	10.0	
114 1,4-Dichlorobenzene	146	13.017	13.017	0.000	92	1615615	10.0	9.96	
115 1,2,3-Trimethylbenzene	120	13.030	13.030	0.000	99	1234014	10.0	9.98	
116 Benzyl chloride	126	13.097	13.097	0.000	99	254856	10.0	11.1	
119 n-Butylbenzene	92	13.249	13.249	0.000	97	1635579	10.0	10.5	
120 1,2-Dichlorobenzene	146	13.280	13.280	0.000	96	1503472	10.0	10.1	
118 p-Diethylbenzene	119	13.304	13.304	0.000	0	1569936	10.0	10.0	
123 1,2-Dibromo-3-Chloropropane	155	13.834	13.834	0.000	86	86753	10.0	11.0	
124 1,3,5-Trichlorobenzene	180	13.956	13.956	0.000	94	1298817	10.0	10.1	
125 1,2,4-Trichlorobenzene	180	14.383	14.383	0.000	90	1161828	10.0	10.1	
126 Hexachlorobutadiene	225	14.468	14.468	0.000	94	568070	10.0	10.1	
127 Naphthalene	128	14.566	14.566	0.000	97	2092386	10.0	10.2	
128 1,2,3-Trichlorobenzene	180	14.712	14.712	0.000	94	1019899	10.0	9.98	
129 2-Methylnaphthalene	142	15.334	15.334	0.000	0	1458971	10.0	10.5	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MSV_RV1_826_00022	Amount Added: 10.00	Units: uL	
MSV_RV4_826_00024	Amount Added: 10.00	Units: uL	
MSV_RV4GAS826_00072	Amount Added: 10.00	Units: uL	
MSV_25_826ISS_00001	Amount Added: 1.00	Units: uL	Run Reagent

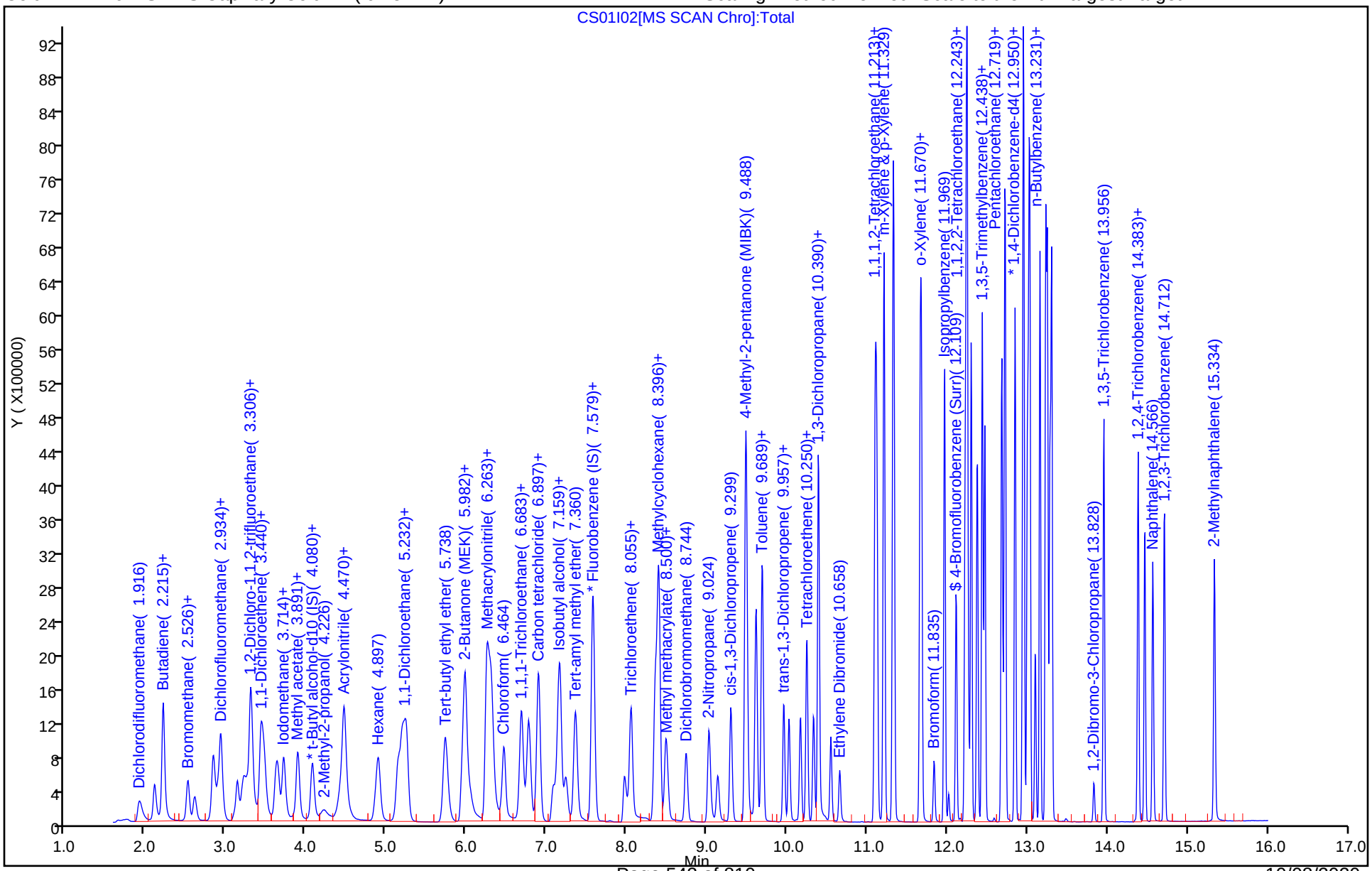
Report Date: 01-Sep-2020 20:10:19 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I02.D

Injection Date:	01-Sep-2020 13:57:30	Instrument ID:	10193	Operator ID:	dvv10203
Lims ID:	ICIS			Worklist Smp#:	4
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MSV_10193_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



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

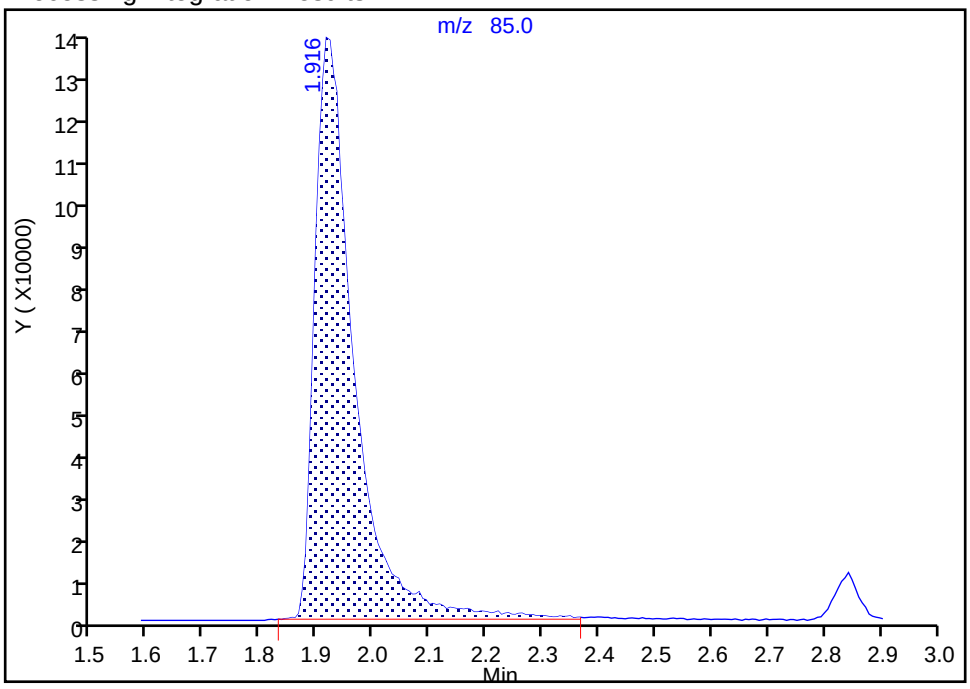
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I02.D
Injection Date: 01-Sep-2020 13:57:30 Instrument ID: 10193
Lims ID: ICIS
Client ID:
Operator ID: dvv10203 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

2 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

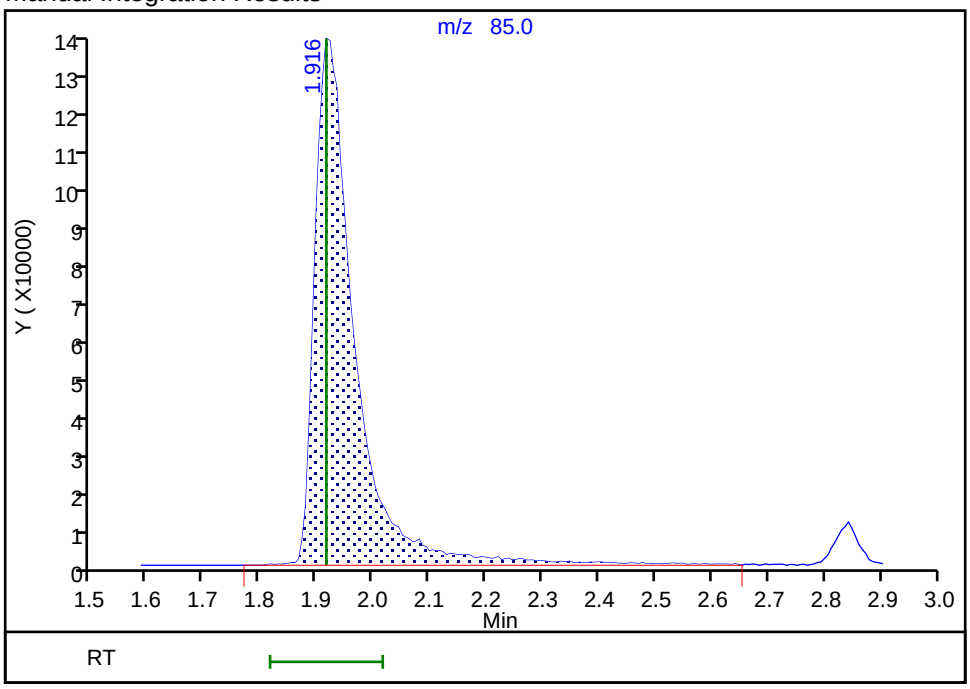
Processing Integration Results

RT: 1.92
Area: 657253
Amount: 9.998399
Amount Units: ug/l



Manual Integration Results

RT: 1.92
Area: 673806
Amount: 10.122260
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 16:56:25
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

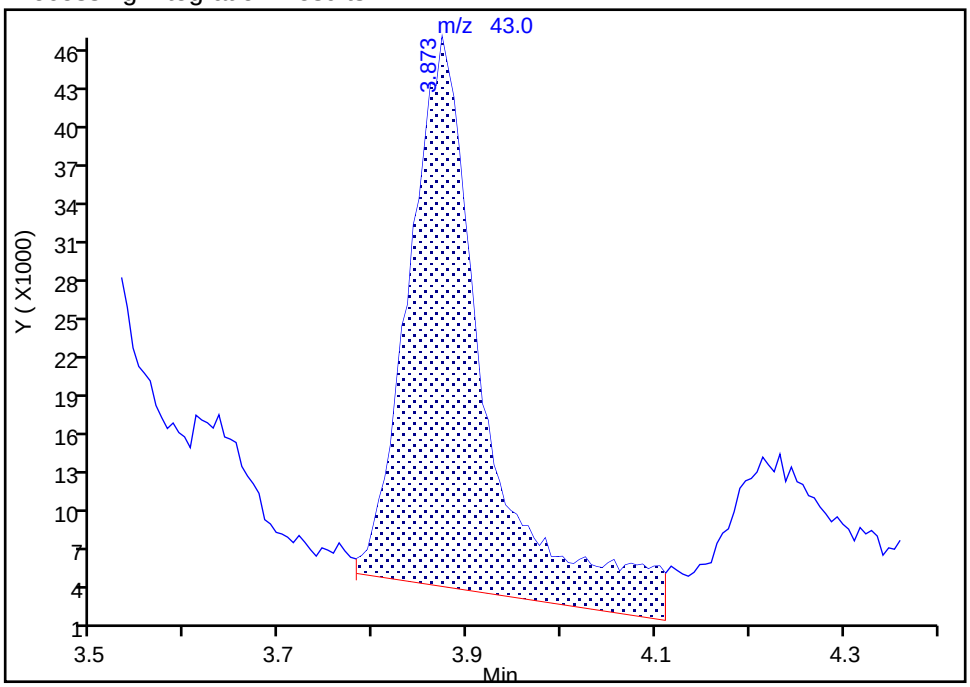
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I02.D
Injection Date: 01-Sep-2020 13:57:30 Instrument ID: 10193
Lims ID: ICIS
Client ID:
Operator ID: dvv10203 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

22 Methyl acetate, CAS: 79-20-9

Signal: 1

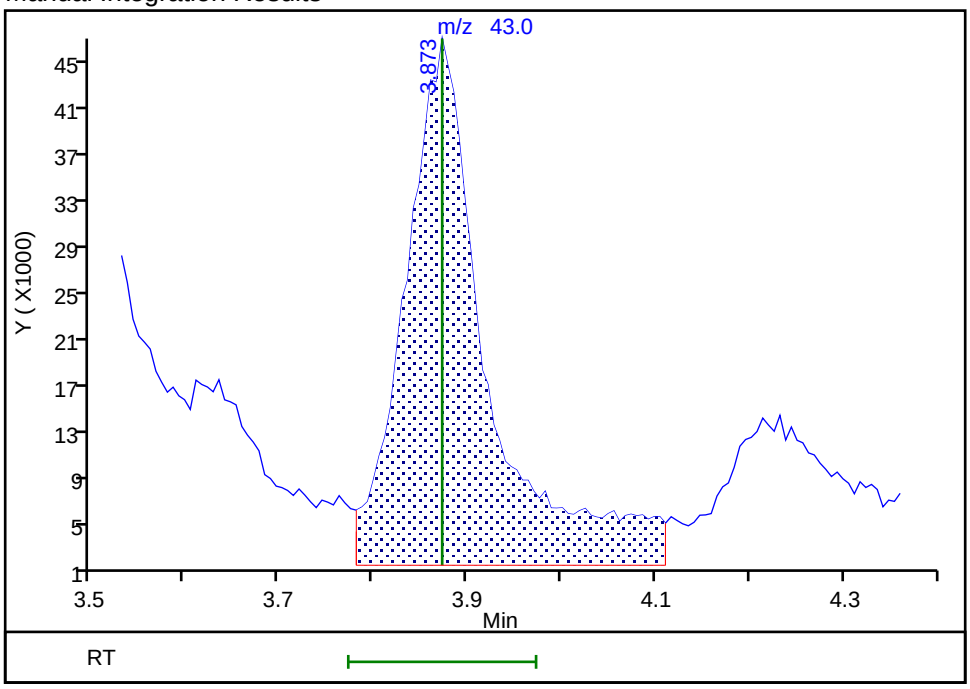
Processing Integration Results

RT: 3.87
Area: 237365
Amount: 9.508028
Amount Units: ug/l



Manual Integration Results

RT: 3.87
Area: 272722
Amount: 11.012573
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 16:56:51
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

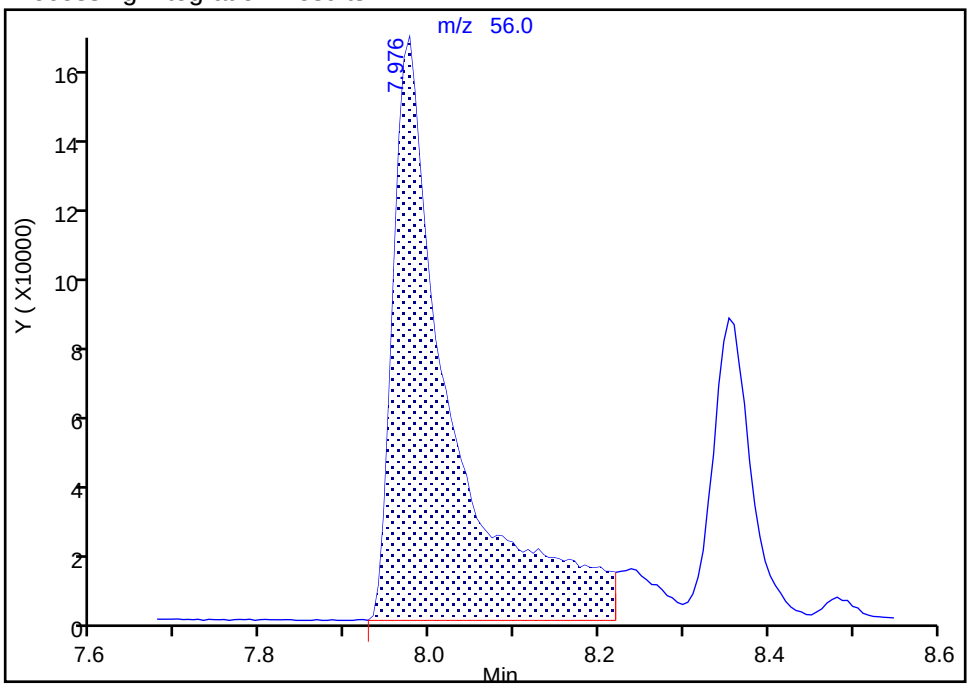
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I02.D
Injection Date: 01-Sep-2020 13:57:30 Instrument ID: 10193
Lims ID: ICIS
Client ID:
Operator ID: dvv10203 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

59 n-Butanol, CAS: 71-36-3

Signal: 1

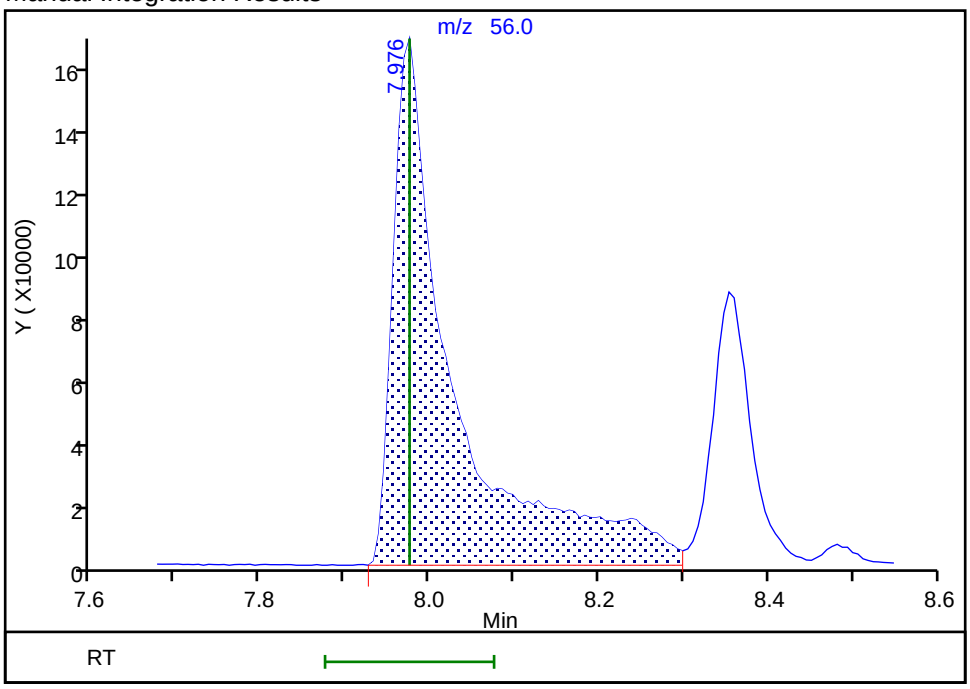
Processing Integration Results

RT: 7.98
Area: 757439
Amount: 899.3216
Amount Units: ug/l



Manual Integration Results

RT: 7.98
Area: 804563
Amount: 1013.8075
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:14:33
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

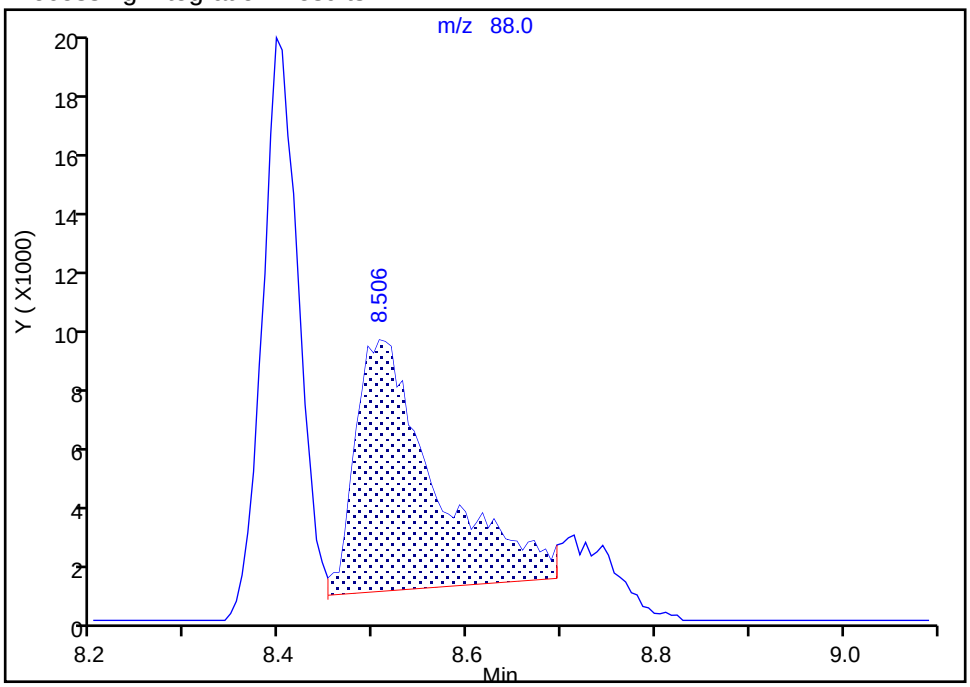
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I02.D
Injection Date: 01-Sep-2020 13:57:30 Instrument ID: 10193
Lims ID: ICIS
Client ID:
Operator ID: dvv10203 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

65 1,4-Dioxane, CAS: 123-91-1

Signal: 1

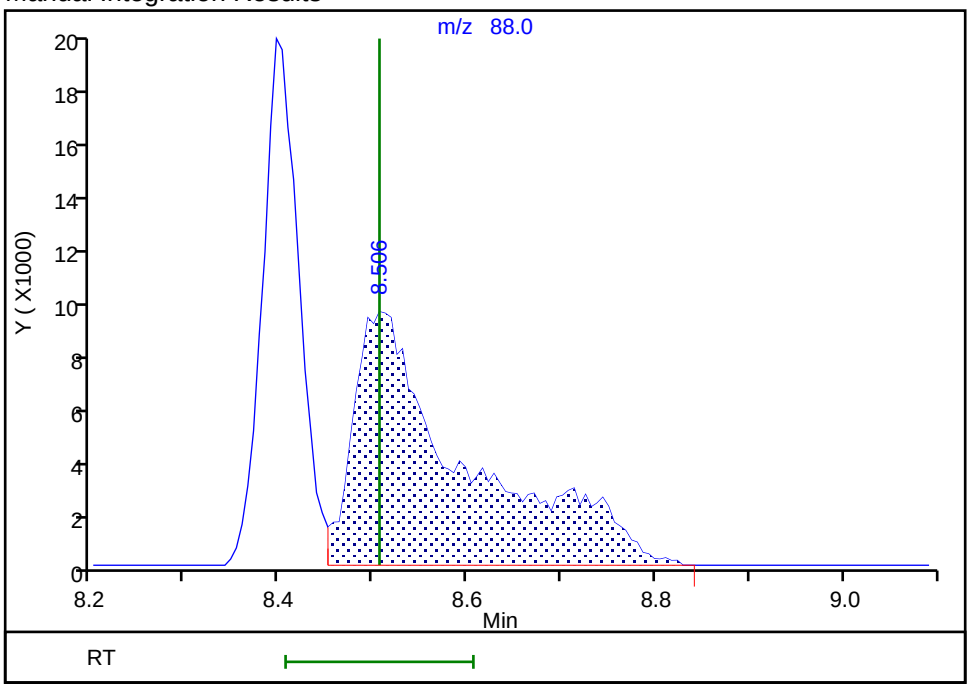
Processing Integration Results

RT: 8.51
Area: 51295
Amount: 445.9401
Amount Units: ug/l



Manual Integration Results

RT: 8.51
Area: 79862
Amount: 505.4008
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 16:57:29
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I03.D
Lims ID: IC STD5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 01-Sep-2020 14:19:30 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: IC STD5
Misc. Info.: 410-0009503-005
Operator ID: dvv10203 Instrument ID: 10193
Sublist: chrom-MSV_10193_25mL*sub1

Method: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 01-Sep-2020 20:10:27 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1059

First Level Reviewer: campbellme Date: 01-Sep-2020 16:59:24

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.910	1.916	-0.006	99	335623	5.00	5.11	M
3 Chloromethane	50	2.099	2.105	-0.006	99	374739	5.00	4.84	
4 Butadiene	39	2.203	2.215	-0.012	94	342407	5.00	4.70	
5 Vinyl chloride	62	2.215	2.221	-0.006	98	352685	5.00	4.93	
6 Bromomethane	94	2.513	2.526	-0.013	91	247103	5.00	4.89	
7 Chloroethane	64	2.605	2.611	-0.006	100	214069	5.00	4.84	
8 Dichlorofluoromethane	67	2.830	2.836	-0.006	97	467823	5.00	4.88	
9 Trichlorofluoromethane	101	2.898	2.897	0.001	97	458162	5.00	4.92	
11 Ethyl ether	59	3.135	3.141	-0.006	92	229113	5.00	4.86	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.215	3.227	-0.012	92	312190	5.00	4.51	
13 Acrolein	56	3.300	3.306	-0.006	99	1427897	250.0	238.2	
14 1,1-Dichloroethene	96	3.428	3.434	-0.006	96	221612	5.00	4.71	
15 112TCTFE	101	3.458	3.470	-0.012	92	234166	5.00	4.89	
16 Acetone	43	3.464	3.470	-0.006	98	322634	50.0	50.7	
17 Iodomethane	142	3.617	3.623	-0.006	99	440171	5.00	4.73	
18 Isopropyl alcohol	45	3.635	3.641	-0.006	40	106675	100.0	88.1	
19 Ethyl bromide	108	3.641	3.653	-0.012	98	194973	5.00	4.99	
20 Carbon disulfide	76	3.714	3.714	0.000	100	790900	5.00	4.76	
22 Methyl acetate	43	3.867	3.873	-0.006	97	136367	5.00	5.45	
23 3-Chloro-1-propene	41	3.885	3.891	-0.006	89	399375	5.00	4.85	
24 Methylene Chloride	84	4.068	4.080	-0.012	94	248970	5.00	4.75	
* 25 t-Butyl alcohol-d10 (IS)	65	4.111	4.111	0.000	98	149797	50.0	50.0	
26 2-Methyl-2-propanol	59	4.208	4.226	-0.018	99	278959	100.0	93.5	
27 Acrylonitrile	53	4.409	4.422	-0.013	99	240268	25.0	23.8	
28 Methyl tert-butyl ether	73	4.458	4.464	-0.006	91	727225	5.00	4.77	
29 trans-1,2-Dichloroethene	96	4.470	4.476	-0.006	97	262964	5.00	4.78	
30 Hexane	57	4.897	4.897	0.000	95	383350	5.00	4.94	
32 1,1-Dichloroethane	63	5.135	5.141	-0.006	96	478397	5.00	4.72	
33 Isopropyl ether	45	5.196	5.202	-0.006	93	920754	5.00	4.77	
34 2-Chloro-1,3-butadiene	53	5.245	5.251	-0.006	93	446582	5.00	4.68	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
35 Tert-butyl ethyl ether	59	5.726	5.738	-0.012	98	891552	5.00	4.83	
36 2-Butanone (MEK)	43	5.940	5.952	-0.012	100	701991	50.0	47.0	
37 cis-1,2-Dichloroethene	96	5.970	5.976	-0.006	83	295208	5.00	4.73	
38 2,2-Dichloropropane	77	5.988	5.988	0.000	88	413880	5.00	4.74	
40 Propionitrile	54	6.043	6.055	-0.012	99	356593	100.0	94.1	M
S 42 1,2-Dichloroethene, Total	100				0			9.51	
43 Methacrylonitrile	67	6.251	6.263	-0.013	93	693145	50.0	47.2	
44 Chlorobromomethane	128	6.311	6.311	0.000	78	135663	5.00	4.94	
45 Tetrahydrofuran	71	6.311	6.317	-0.006	86	193486	50.0	45.8	
46 Chloroform	83	6.464	6.464	0.000	95	480095	5.00	4.78	
$ 47 Dibromofluoromethane (Surr)	113	6.683	6.683	0.000	93	486623	10.0	10.1	
48 1,1,1-Trichloroethane	97	6.677	6.689	-0.012	98	434162	5.00	4.80	
49 Cyclohexane	56	6.769	6.775	-0.006	93	460601	5.00	4.82	
50 Carbon tetrachloride	117	6.891	6.891	0.000	96	367580	5.00	4.85	
51 1,1-Dichloropropene	75	6.897	6.903	-0.006	94	386758	5.00	4.76	
52 Isobutyl alcohol	41	7.080	7.086	-0.006	94	230672	250.0	238.4	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.134	7.141	-0.006	0	99716	10.0	10.1	
54 Benzene	78	7.159	7.165	-0.006	97	1116708	5.00	4.78	
55 1,2-Dichloroethane	62	7.238	7.238	0.000	98	322763	5.00	4.58	
56 Tert-amyl methyl ether	73	7.354	7.360	-0.006	97	810520	5.00	4.82	
* 57 Fluorobenzene (IS)	96	7.573	7.573	0.000	99	2035412	10.0	10.0	
58 n-Heptane	43	7.573	7.579	-0.006	90	417078	5.00	4.83	
59 n-Butanol	56	7.976	7.976	0.000	90	388291	500.0	484.3	M
60 Trichloroethene	95	8.049	8.055	-0.006	98	287079	5.00	4.76	
61 Methylcyclohexane	83	8.354	8.360	-0.006	92	476901	5.00	5.17	
62 1,2-Dichloropropane	63	8.390	8.390	0.000	86	285051	5.00	4.75	
63 2-ethoxy-2-methyl butane	87	8.396	8.402	-0.006	91	452593	5.00	4.84	
64 Methyl methacrylate	69	8.482	8.482	0.000	91	148411	5.00	4.74	
66 Dibromomethane	93	8.494	8.500	-0.006	96	140420	5.00	4.78	
65 1,4-Dioxane	88	8.500	8.506	-0.006	32	39014	250.0	244.4	M
67 Dichlorobromomethane	83	8.738	8.738	0.000	98	348987	5.00	4.81	
68 2-Nitropropane	41	9.024	9.024	0.000	99	459149	50.0	47.3	
71 1-Bromo-2-chloroethane	63	9.134	9.134	0.000	99	302656	5.00	4.87	
72 cis-1,3-Dichloropropene	75	9.299	9.299	0.000	94	439884	5.00	4.88	
73 4-Methyl-2-pentanone (MIBK)	43	9.482	9.488	-0.006	98	2060281	50.0	47.5	
$ 74 Toluene-d8 (Surr)	98	9.610	9.616	-0.006	94	2027327	10.0	10.0	
75 Toluene	92	9.689	9.689	0.000	98	721183	5.00	4.74	
76 trans-1,3-Dichloropropene	75	9.957	9.957	0.000	96	378157	5.00	4.96	
78 Ethyl methacrylate	69	10.024	10.024	0.000	89	321458	5.00	5.00	
S 77 1,3-Dichloropropene, Total	100				0			9.84	
79 1,1,2-Trichloroethane	97	10.164	10.170	-0.006	91	201374	5.00	4.79	
80 Tetrachloroethene	166	10.244	10.250	-0.006	97	322909	5.00	4.75	
81 1,3-Dichloropropane	76	10.329	10.329	0.000	94	353883	5.00	4.77	
82 2-Hexanone	43	10.390	10.390	0.000	97	1483984	50.0	48.4	
83 Chlorodibromomethane	129	10.548	10.548	0.000	90	248177	5.00	5.09	
84 Ethylene Dibromide	107	10.658	10.658	0.000	98	202633	5.00	4.88	
* 85 Chlorobenzene-d5 (IS)	117	11.097	11.097	0.000	87	1549814	10.0	10.0	
86 1-Chlorohexane	91	11.109	11.109	0.000	98	400674	5.00	4.61	
87 Chlorobenzene	112	11.122	11.121	0.001	94	821070	5.00	4.78	
89 1,1,1,2-Tetrachloroethane	131	11.207	11.207	0.000	94	287568	5.00	4.92	
90 Ethylbenzene	91	11.213	11.213	0.000	98	1440317	5.00	4.77	
S 88 Xylenes, Total	106				0			14.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
91 m-Xylene & p-Xylene	106	11.329	11.329	0.000	0	1133528	10.0	9.61	
92 o-Xylene	106	11.664	11.664	0.000	97	554888	5.00	4.80	
93 Styrene	104	11.676	11.676	0.000	95	949081	5.00	4.90	
94 Bromoform	173	11.835	11.835	0.000	97	143999	5.00	5.31	
95 Isopropylbenzene	105	11.969	11.969	0.000	96	1466907	5.00	4.80	
$ 98 4-Bromofluorobenzene (Surr)	95	12.109	12.109	0.000	91	764276	10.0	10.0	
99 1,1,2,2-Tetrachloroethane	83	12.219	12.219	0.000	93	269440	5.00	4.85	
100 Bromobenzene	156	12.231	12.231	0.000	94	365172	5.00	4.78	
101 trans-1,4-Dichloro-2-butene	53	12.243	12.243	0.000	93	790342	50.0	51.3	
102 1,2,3-Trichloropropane	110	12.268	12.261	0.007	83	72364	5.00	4.78	
103 N-Propylbenzene	91	12.298	12.298	0.000	99	1726631	5.00	4.82	
104 2-Chlorotoluene	126	12.377	12.377	0.000	97	350978	5.00	4.79	
105 1,3,5-Trimethylbenzene	105	12.438	12.438	0.000	94	1274650	5.00	4.80	
106 4-Chlorotoluene	126	12.469	12.469	0.000	98	362949	5.00	4.76	
107 tert-Butylbenzene	134	12.682	12.682	0.000	93	270627	5.00	4.69	
108 Pentachloroethane	167	12.713	12.713	0.000	92	223759	5.00	5.19	
109 1,2,4-Trimethylbenzene	105	12.725	12.725	0.000	97	1326302	5.00	4.87	
110 sec-Butylbenzene	105	12.847	12.847	0.000	94	1656218	5.00	4.84	
111 1,3-Dichlorobenzene	146	12.944	12.944	0.000	98	734044	5.00	4.81	
112 4-Isopropyltoluene	119	12.957	12.956	0.001	97	1448806	5.00	4.86	
* 113 1,4-Dichlorobenzene-d4	152	12.999	12.999	0.000	95	890471	10.0	10.0	
114 1,4-Dichlorobenzene	146	13.017	13.017	0.000	94	753707	5.00	4.80	
115 1,2,3-Trimethylbenzene	120	13.030	13.030	0.000	98	586354	5.00	4.90	
116 Benzyl chloride	126	13.103	13.097	0.006	99	116794	5.00	5.28	
119 n-Butylbenzene	92	13.249	13.249	0.000	97	751620	5.00	4.97	
120 1,2-Dichlorobenzene	146	13.280	13.280	0.000	98	697848	5.00	4.85	
118 p-Diethylbenzene	119	13.304	13.304	0.000	0	755567	5.00	4.99	
123 1,2-Dibromo-3-Chloropropane	155	13.834	13.834	0.000	84	39048	5.00	5.12	
124 1,3,5-Trichlorobenzene	180	13.956	13.956	0.000	98	603506	5.00	4.85	
125 1,2,4-Trichlorobenzene	180	14.383	14.383	0.000	94	540926	5.00	4.85	
126 Hexachlorobutadiene	225	14.468	14.468	0.000	97	260304	5.00	4.77	
127 Naphthalene	128	14.566	14.566	0.000	97	981719	5.00	4.93	
128 1,2,3-Trichlorobenzene	180	14.712	14.712	0.000	95	477586	5.00	4.83	
129 2-Methylnaphthalene	142	15.334	15.334	0.000	0	699145	5.00	5.19	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MSV_RV1_826_00022	Amount Added:	5.00	Units: uL	
MSV_RV4_826_00024	Amount Added:	5.00	Units: uL	
MSV_RV4GAS826_00072	Amount Added:	5.00	Units: uL	
MSV_25_826ISS_00001	Amount Added:	1.00	Units: uL	Run Reagent

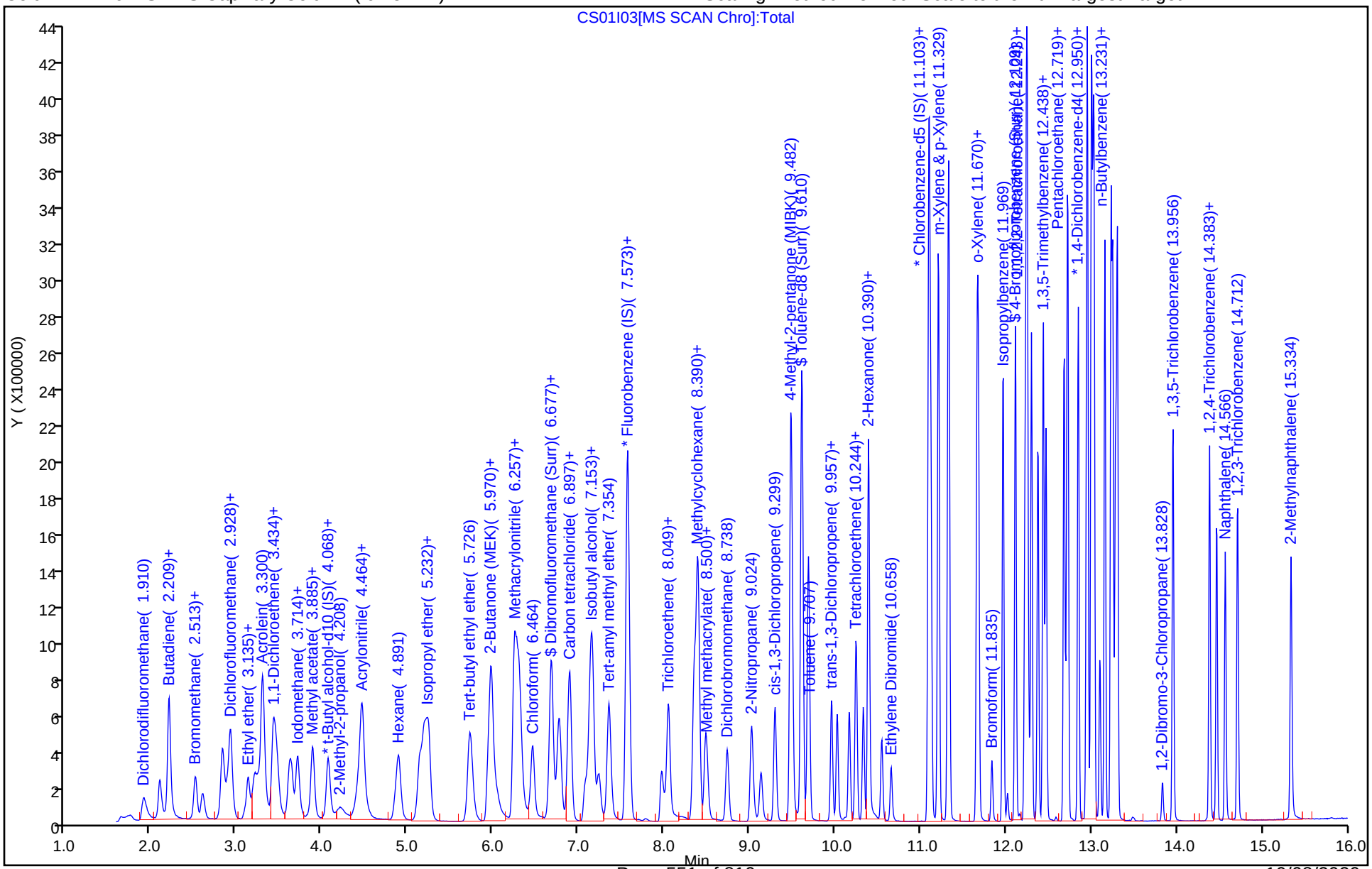
Report Date: 01-Sep-2020 20:10:29 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I03.D

Injection Date:	01-Sep-2020 14:19:30	Instrument ID:	10193	Operator ID:	dvv10203
Lims ID:	IC STD5			Worklist Smp#:	5
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	MSV_10193_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



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

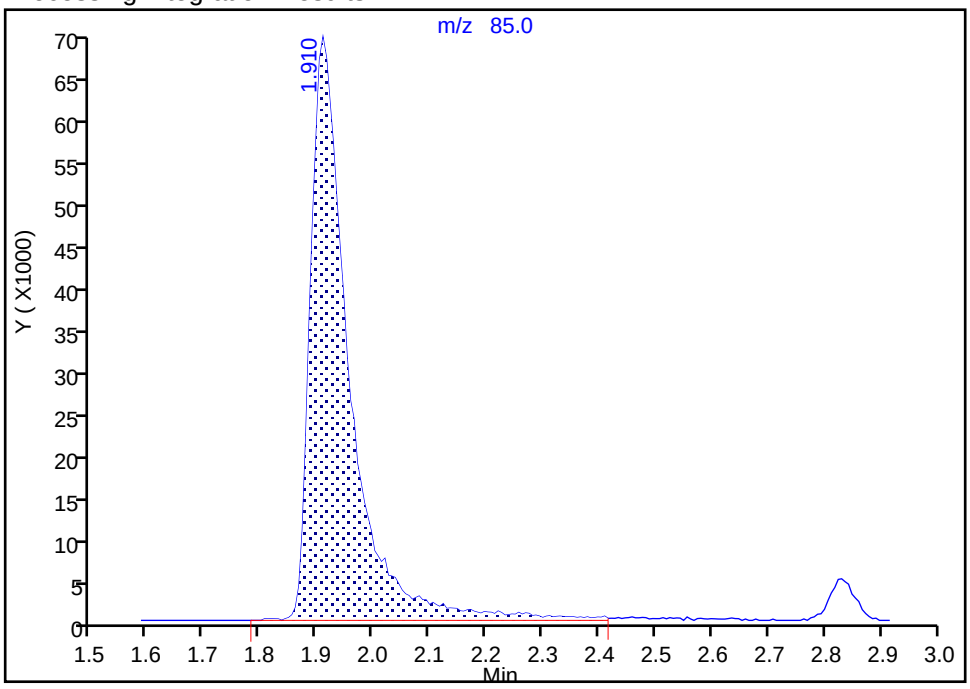
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I03.D
Injection Date: 01-Sep-2020 14:19:30 Instrument ID: 10193
Lims ID: IC STD5
Client ID:
Operator ID: dvv10203 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

2 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

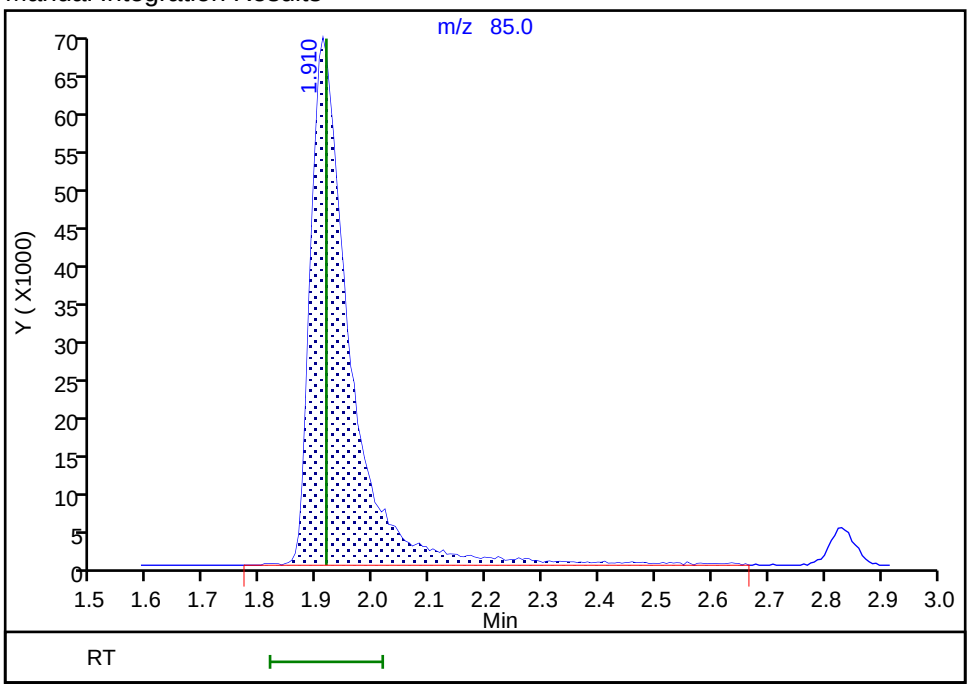
Processing Integration Results

RT: 1.91
Area: 332253
Amount: 5.104245
Amount Units: ug/l



Manual Integration Results

RT: 1.91
Area: 335623
Amount: 5.109972
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 16:58:04
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

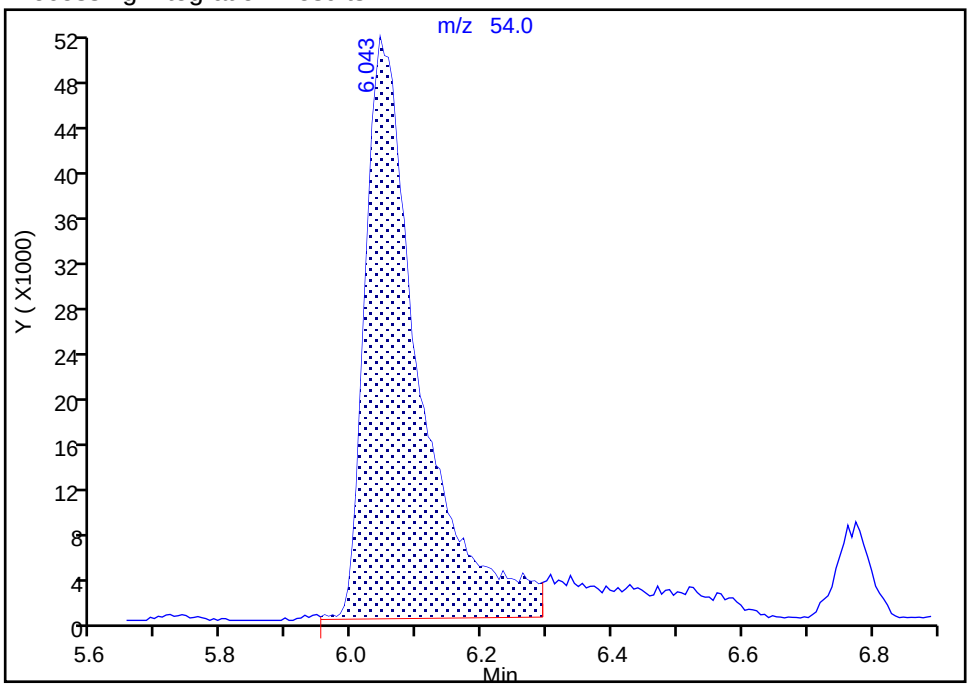
Data File:	\\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I03.D				
Injection Date:	01-Sep-2020 14:19:30	Instrument ID:	10193		
Lims ID:	IC STD5				
Client ID:					
Operator ID:	dvv10203	ALS Bottle#:	4	Worklist Smp#:	5
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

40 Propionitrile, CAS: 107-12-0

Signal: 1

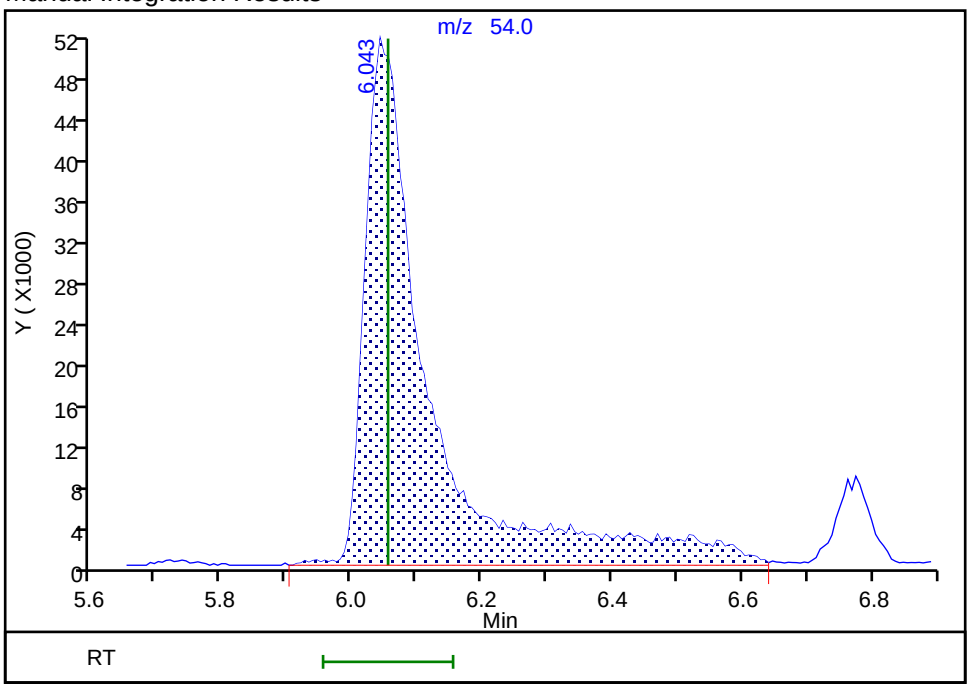
Processing Integration Results

RT: 6.04
Area: 300992
Amount: 85.284659
Amount Units: ug/l



Manual Integration Results

RT: 6.04
Area: 356593
Amount: 94.098949
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 16:58:42
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

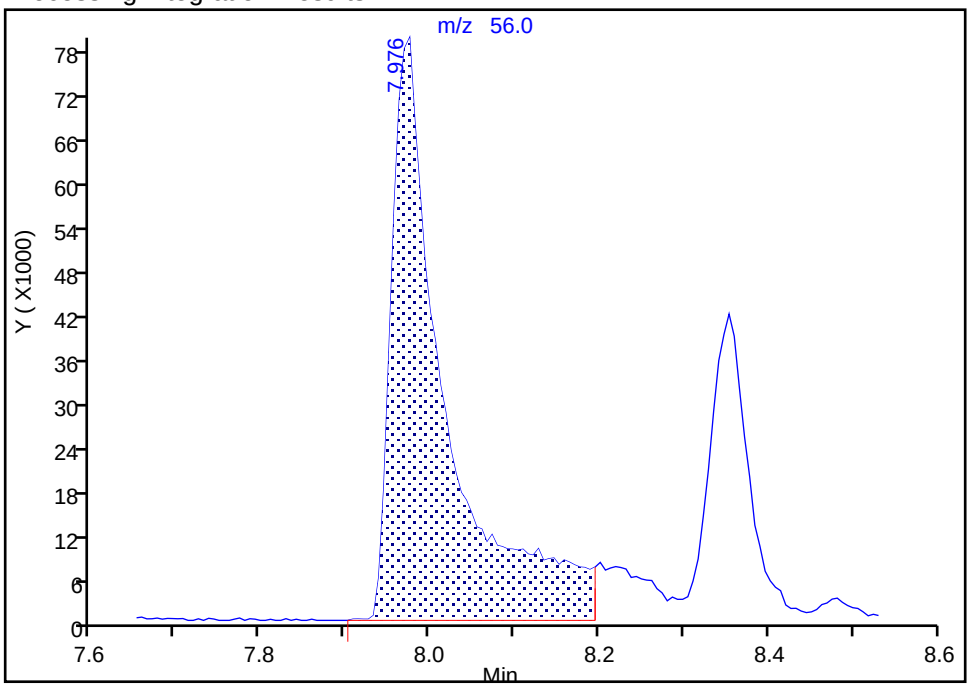
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I03.D
Injection Date: 01-Sep-2020 14:19:30 Instrument ID: 10193
Lims ID: IC STD5
Client ID:
Operator ID: dvv10203 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

59 n-Butanol, CAS: 71-36-3

Signal: 1

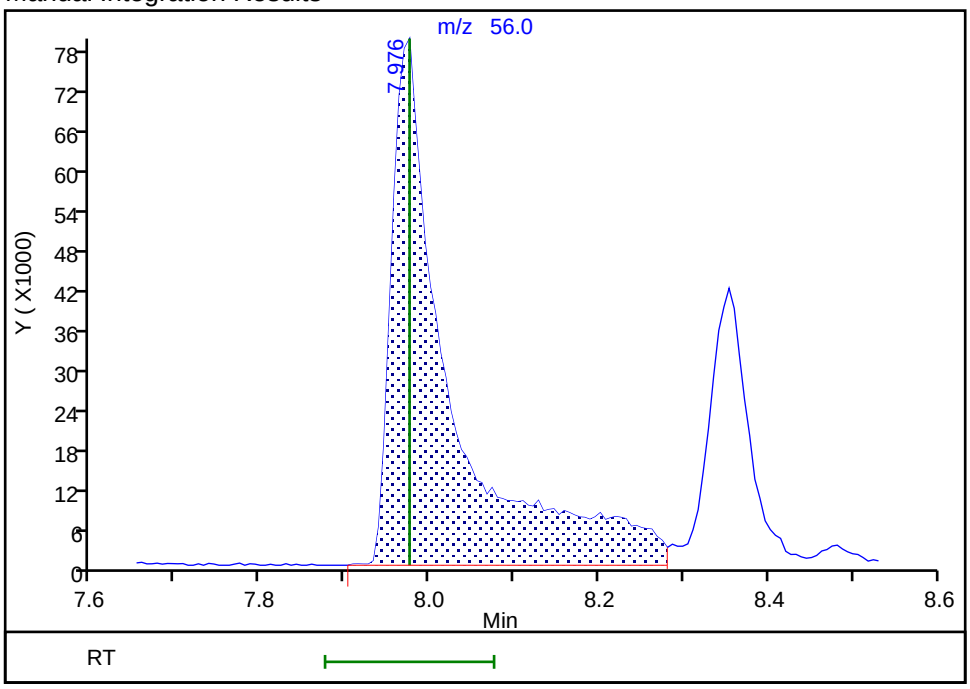
Processing Integration Results

RT: 7.98
Area: 357938
Amount: 442.7101
Amount Units: ug/l



Manual Integration Results

RT: 7.98
Area: 388291
Amount: 484.3492
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:15:09
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

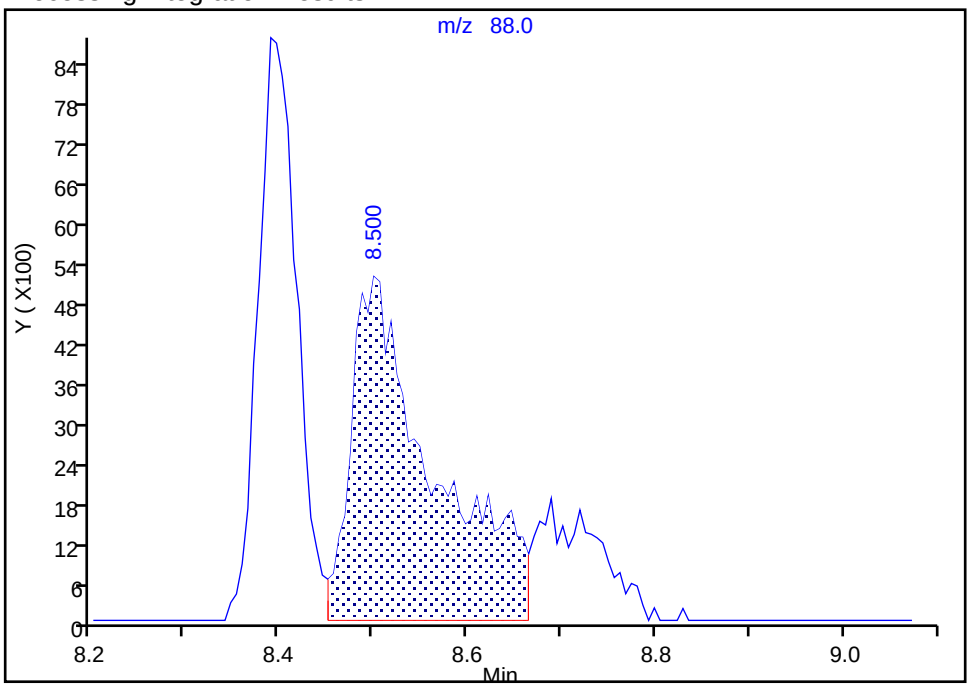
Data File:	\\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I03.D				
Injection Date:	01-Sep-2020 14:19:30	Instrument ID:	10193		
Lims ID:	IC STD5				
Client ID:					
Operator ID:	dvv10203	ALS Bottle#:	4	Worklist Smp#:	5
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

65 1,4-Dioxane, CAS: 123-91-1

Signal: 1

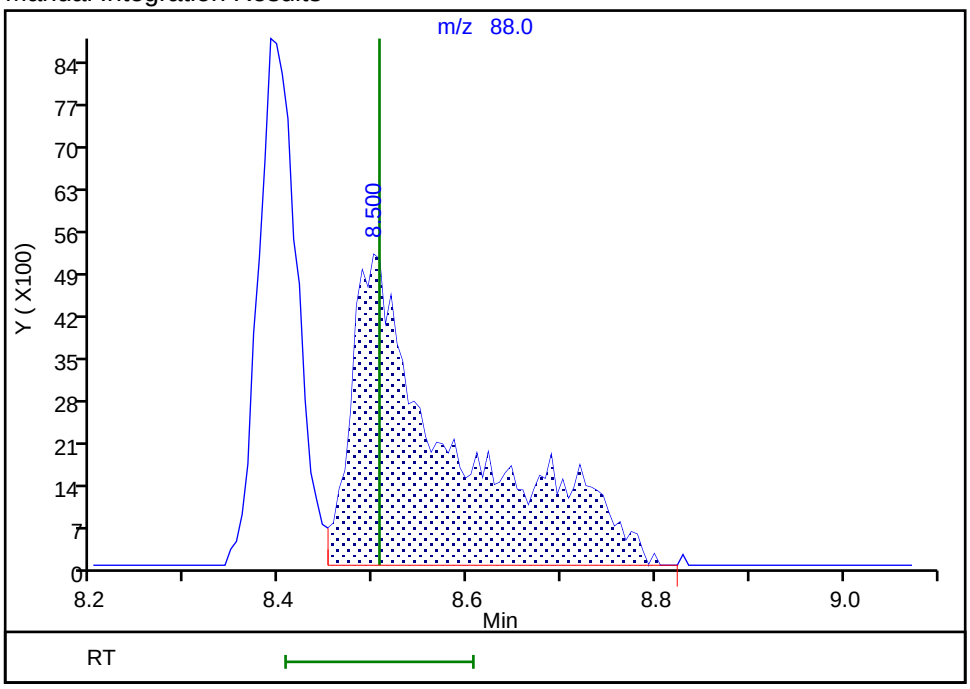
Processing Integration Results

RT: 8.50
Area: 31084
Amount: 247.0601
Amount Units: ug/l



Manual Integration Results

RT: 8.50
Area: 39014
Amount: 244.4117
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 16:59:05

Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I04.D
Lims ID: IC STD4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 01-Sep-2020 14:42:30 ALS Bottle#: 5 Worklist Smp#: 6
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: IC STD4
Misc. Info.: 410-0009503-006
Operator ID: dvv10203 Instrument ID: 10193
Sublist: chrom-MSV_10193_25mL*sub1

Method: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 01-Sep-2020 20:10:37 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1059

First Level Reviewer: campbellme Date: 01-Sep-2020 17:01:08

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.910	1.910	0.000	99	129325	2.00	2.00	M
3 Chloromethane	50	2.099	2.099	0.000	99	150814	2.00	1.98	
4 Butadiene	39	2.209	2.209	0.000	93	140385	2.00	1.96	
5 Vinyl chloride	62	2.215	2.215	0.000	98	139896	2.00	1.99	
6 Bromomethane	94	2.520	2.520	0.000	92	98967	2.00	1.99	
7 Chloroethane	64	2.605	2.605	0.000	99	86238	2.00	1.98	
8 Dichlorofluoromethane	67	2.837	2.837	0.000	98	190803	2.00	2.02	
9 Trichlorofluoromethane	101	2.898	2.898	0.000	97	183481	2.00	2.00	
11 Ethyl ether	59	3.135	3.135	0.000	92	93303	2.00	2.01	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.208	3.208	0.000	93	128139	2.00	1.88	
13 Acrolein	56	3.306	3.306	0.000	99	575443	100.0	100.2	
14 1,1-Dichloroethene	96	3.428	3.428	0.000	97	91871	2.00	1.98	
15 112TCTFE	101	3.464	3.464	0.000	92	94307	2.00	2.00	
16 Acetone	43	3.471	3.471	0.000	98	125222	20.0	20.5	
17 Iodomethane	142	3.617	3.617	0.000	99	178469	2.00	1.95	
18 Isopropyl alcohol	45	3.647	3.647	0.000	41	45049	40.0	41.8	
19 Ethyl bromide	108	3.641	3.641	0.000	99	77273	2.00	2.01	
20 Carbon disulfide	76	3.708	3.708	0.000	100	323433	2.00	1.98	
22 Methyl acetate	43	3.867	3.867	0.000	96	49627	2.00	2.07	
23 3-Chloro-1-propene	41	3.891	3.891	0.000	89	160482	2.00	1.98	
24 Methylene Chloride	84	4.074	4.074	0.000	94	101409	2.00	1.97	
* 25 t-Butyl alcohol-d10 (IS)	65	4.111	4.111	0.000	98	143561	50.0	50.0	
26 2-Methyl-2-propanol	59	4.227	4.227	0.000	98	110192	40.0	38.5	
27 Acrylonitrile	53	4.409	4.409	0.000	99	96365	10.0	9.94	
28 Methyl tert-butyl ether	73	4.464	4.464	0.000	94	295369	2.00	1.97	
29 trans-1,2-Dichloroethene	96	4.470	4.470	0.000	97	105433	2.00	1.95	
30 Hexane	57	4.897	4.897	0.000	95	152150	2.00	1.99	
32 1,1-Dichloroethane	63	5.135	5.135	0.000	96	195904	2.00	1.97	
33 Isopropyl ether	45	5.196	5.196	0.000	94	376556	2.00	1.98	
34 2-Chloro-1,3-butadiene	53	5.251	5.251	0.000	93	184491	2.00	1.96	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
35 Tert-butyl ethyl ether	59	5.732	5.732	0.000	98	361189	2.00	1.99	
36 2-Butanone (MEK)	43	5.946	5.946	0.000	100	281636	20.0	19.7	
37 cis-1,2-Dichloroethene	96	5.970	5.970	0.000	83	121548	2.00	1.98	
38 2,2-Dichloropropane	77	5.988	5.988	0.000	77	172113	2.00	2.00	
40 Propionitrile	54	6.049	6.049	0.000	99	149313	40.0	41.1	M
S 42 1,2-Dichloroethene, Total	100				0			3.93	
43 Methacrylonitrile	67	6.251	6.251	0.000	92	277418	20.0	19.7	
44 Chlorobromomethane	128	6.305	6.305	0.000	76	54981	2.00	2.03	
45 Tetrahydrofuran	71	6.305	6.305	0.000	80	81352	20.0	20.1	
46 Chloroform	83	6.464	6.464	0.000	95	196768	2.00	1.99	
$ 47 Dibromofluoromethane (Surr)	113	6.683	6.683	0.000	93	475332	10.0	9.98	
48 1,1,1-Trichloroethane	97	6.683	6.683	0.000	54	179578	2.00	2.02	
49 Cyclohexane	56	6.775	6.775	0.000	93	186390	2.00	1.98	
50 Carbon tetrachloride	117	6.891	6.891	0.000	95	148659	2.00	1.99	
51 1,1-Dichloropropene	75	6.897	6.897	0.000	95	157992	2.00	1.98	
52 Isobutyl alcohol	41	7.086	7.086	0.000	92	85837	100.0	92.6	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.134	7.134	0.000	0	98150	10.0	10.1	
54 Benzene	78	7.159	7.159	0.000	96	459354	2.00	2.00	
55 1,2-Dichloroethane	62	7.238	7.238	0.000	98	135129	2.00	1.95	
56 Tert-amyl methyl ether	73	7.360	7.360	0.000	98	330560	2.00	2.00	
* 57 Fluorobenzene (IS)	96	7.573	7.573	0.000	98	2003773	10.0	10.0	
58 n-Heptane	43	7.580	7.580	0.000	76	173398	2.00	2.04	
59 n-Butanol	56	7.976	7.976	0.000	89	150691	200.0	196.1	M
60 Trichloroethene	95	8.049	8.049	0.000	98	118251	2.00	1.99	
61 Methylcyclohexane	83	8.354	8.354	0.000	93	186709	2.00	2.05	
62 1,2-Dichloropropane	63	8.390	8.390	0.000	92	116517	2.00	1.97	
63 2-ethoxy-2-methyl butane	87	8.396	8.396	0.000	91	182044	2.00	1.98	
64 Methyl methacrylate	69	8.482	8.482	0.000	92	59171	2.00	1.97	
66 Dibromomethane	93	8.494	8.494	0.000	94	56166	2.00	1.94	
65 1,4-Dioxane	88	8.506	8.506	0.000	31	15868	100.0	103.7	M
67 Dichlorobromomethane	83	8.738	8.738	0.000	98	140278	2.00	1.97	
68 2-Nitropropane	41	9.024	9.024	0.000	99	182830	20.0	19.6	
71 1-Bromo-2-chloroethane	63	9.134	9.134	0.000	99	124609	2.00	2.04	
72 cis-1,3-Dichloropropene	75	9.299	9.299	0.000	94	174979	2.00	1.97	
73 4-Methyl-2-pentanone (MIBK)	43	9.488	9.488	0.000	98	815838	20.0	19.6	
$ 74 Toluene-d8 (Surr)	98	9.610	9.610	0.000	94	1985750	10.0	10.0	
75 Toluene	92	9.689	9.689	0.000	98	297381	2.00	1.99	
76 trans-1,3-Dichloropropene	75	9.957	9.957	0.000	96	148652	2.00	1.99	
78 Ethyl methacrylate	69	10.024	10.024	0.000	90	127842	2.00	2.03	
S 77 1,3-Dichloropropene, Total	100				0			3.96	
79 1,1,2-Trichloroethane	97	10.164	10.164	0.000	92	82201	2.00	1.99	
80 Tetrachloroethene	166	10.250	10.250	0.000	97	132588	2.00	1.99	
81 1,3-Dichloropropane	76	10.329	10.329	0.000	94	141833	2.00	1.95	
82 2-Hexanone	43	10.396	10.396	0.000	97	598268	20.0	20.4	
83 Chlorodibromomethane	129	10.548	10.548	0.000	90	97240	2.00	2.03	
84 Ethylene Dibromide	107	10.658	10.658	0.000	99	80851	2.00	1.98	
* 85 Chlorobenzene-d5 (IS)	117	11.097	11.097	0.000	87	1520735	10.0	10.0	
86 1-Chlorohexane	91	11.109	11.109	0.000	98	161444	2.00	1.89	
87 Chlorobenzene	112	11.122	11.122	0.000	95	333345	2.00	1.98	
89 1,1,1,2-Tetrachloroethane	131	11.207	11.207	0.000	91	113207	2.00	1.97	
90 Ethylbenzene	91	11.213	11.213	0.000	99	583876	2.00	1.97	
S 88 Xylenes, Total	106				0			5.94	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
91 m-Xylene & p-Xylene	106	11.329	11.329	0.000	0	457654	4.00	3.96	
92 o-Xylene	106	11.664	11.664	0.000	97	225199	2.00	1.99	
93 Styrene	104	11.676	11.676	0.000	95	377982	2.00	1.99	
94 Bromoform	173	11.835	11.835	0.000	96	52263	2.00	1.97	
95 Isopropylbenzene	105	11.969	11.969	0.000	96	592584	2.00	1.98	
$ 98 4-Bromofluorobenzene (Surr)	95	12.109	12.109	0.000	91	747277	10.0	10.0	
99 1,1,2,2-Tetrachloroethane	83	12.219	12.219	0.000	93	109660	2.00	2.02	
100 Bromobenzene	156	12.231	12.231	0.000	91	147229	2.00	1.97	
101 trans-1,4-Dichloro-2-butene	53	12.243	12.243	0.000	96	303768	20.0	20.2	
102 1,2,3-Trichloropropane	110	12.268	12.268	0.000	84	29794	2.00	2.01	
103 N-Propylbenzene	91	12.298	12.298	0.000	99	702814	2.00	2.00	
104 2-Chlorotoluene	126	12.377	12.377	0.000	96	141124	2.00	1.97	
105 1,3,5-Trimethylbenzene	105	12.438	12.438	0.000	94	516140	2.00	1.99	
106 4-Chlorotoluene	126	12.469	12.469	0.000	98	148252	2.00	1.99	
107 tert-Butylbenzene	134	12.682	12.682	0.000	93	118830	2.00	2.10	
108 Pentachloroethane	167	12.713	12.713	0.000	91	86508	2.00	2.05	
109 1,2,4-Trimethylbenzene	105	12.725	12.725	0.000	97	526977	2.00	1.98	
110 sec-Butylbenzene	105	12.847	12.847	0.000	94	668081	2.00	2.00	
111 1,3-Dichlorobenzene	146	12.944	12.944	0.000	99	299249	2.00	2.01	
112 4-Isopropyltoluene	119	12.957	12.957	0.000	97	584284	2.00	2.00	
* 113 1,4-Dichlorobenzene-d4	152	12.999	12.999	0.000	95	871376	10.0	10.0	
114 1,4-Dichlorobenzene	146	13.017	13.017	0.000	95	305373	2.00	1.99	
115 1,2,3-Trimethylbenzene	120	13.030	13.030	0.000	99	239261	2.00	2.04	
116 Benzyl chloride	126	13.103	13.103	0.000	99	43679	2.00	2.02	
119 n-Butylbenzene	92	13.249	13.249	0.000	98	301292	2.00	2.04	
120 1,2-Dichlorobenzene	146	13.286	13.286	0.000	98	281587	2.00	2.00	
118 p-Diethylbenzene	119	13.304	13.304	0.000	0	299228	2.00	2.02	
123 1,2-Dibromo-3-Chloropropane	155	13.834	13.834	0.000	84	15503	2.00	2.08	
124 1,3,5-Trichlorobenzene	180	13.956	13.956	0.000	97	245063	2.00	2.01	
125 1,2,4-Trichlorobenzene	180	14.383	14.383	0.000	94	216994	2.00	1.99	
126 Hexachlorobutadiene	225	14.468	14.468	0.000	97	105865	2.00	1.98	
127 Naphthalene	128	14.566	14.566	0.000	97	394190	2.00	2.02	
128 1,2,3-Trichlorobenzene	180	14.712	14.712	0.000	96	194367	2.00	2.01	
129 2-Methylnaphthalene	142	15.340	15.340	0.000	0	282956	2.00	2.15	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MSV_RV1_826_00022	Amount Added:	2.00	Units: uL	
MSV_RV4_826_00024	Amount Added:	2.00	Units: uL	
MSV_RV4GAS826_00072	Amount Added:	2.00	Units: uL	
MSV_25_826ISS_00001	Amount Added:	1.00	Units: uL	Run Reagent

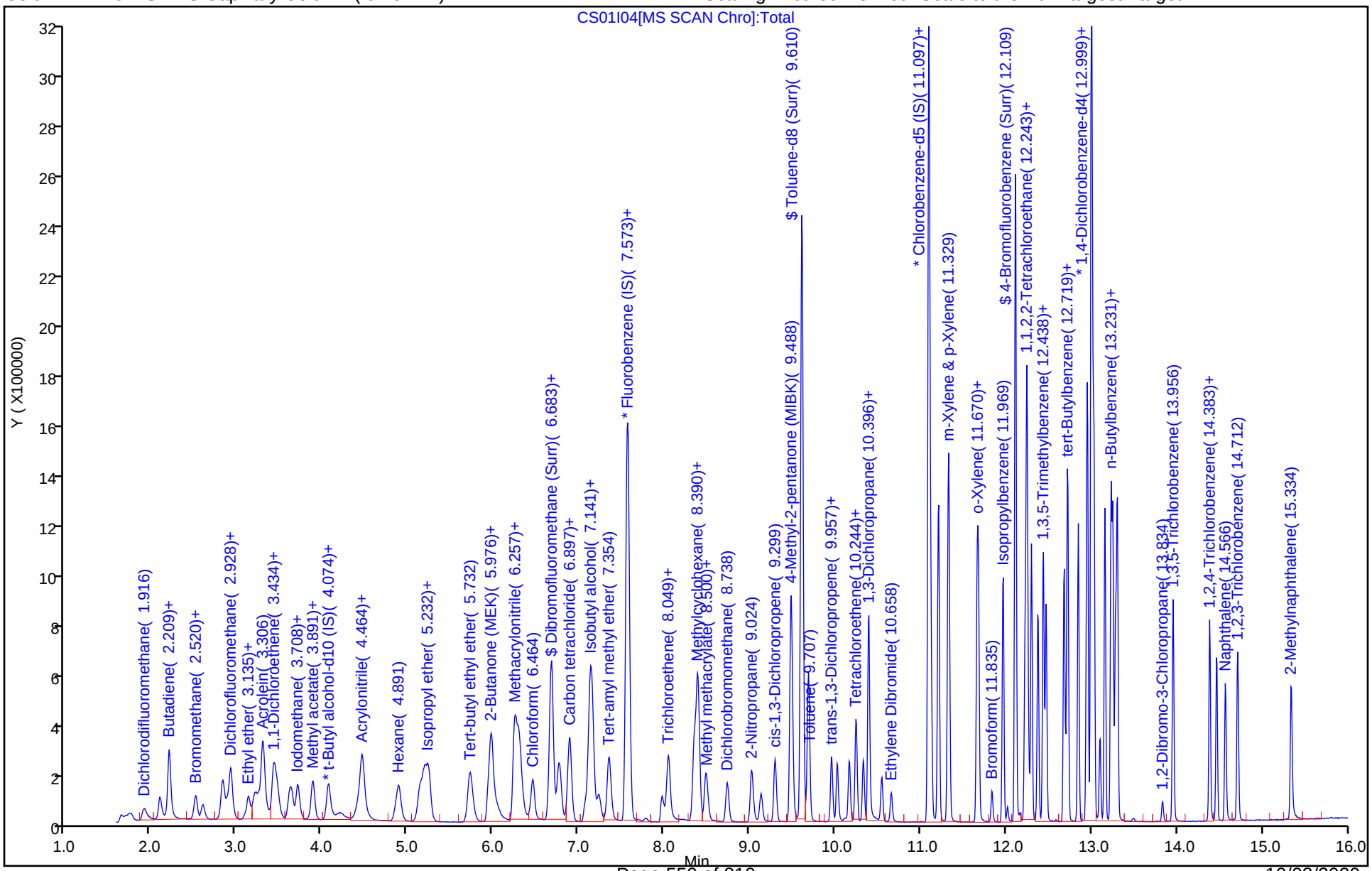
Report Date: 01-Sep-2020 20:10:39 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I04.D

Injection Date:	01-Sep-2020 14:42:30	Instrument ID:	10193	Operator ID:	dvv10203
Lims ID:	IC STD4			Worklist Smp#:	6
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MSV_10193_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

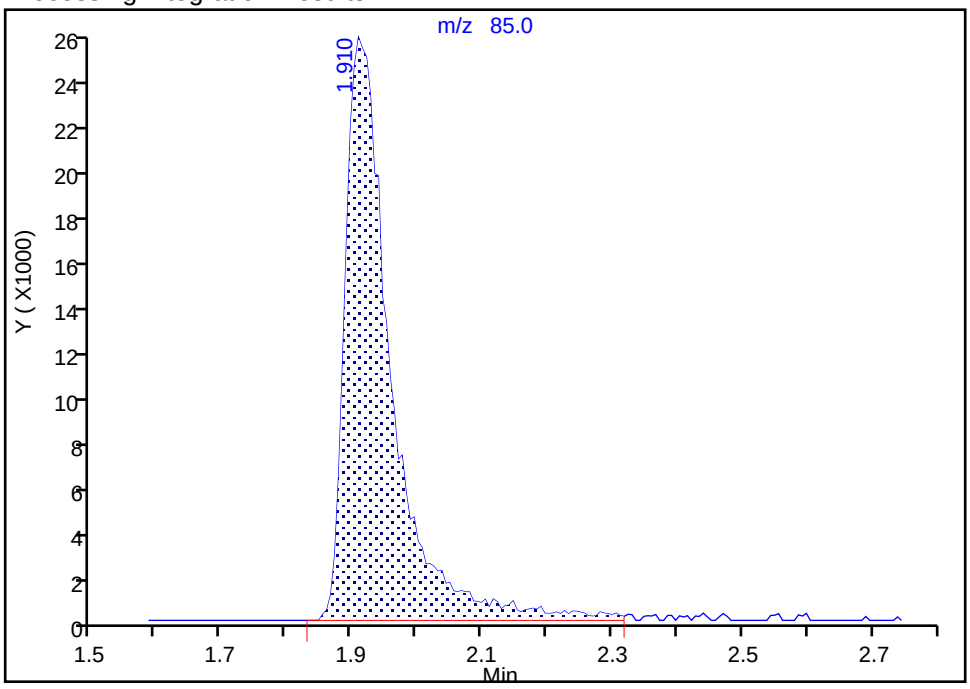
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I04.D
Injection Date: 01-Sep-2020 14:42:30 Instrument ID: 10193
Lims ID: IC STD4
Client ID:
Operator ID: dvv10203 ALS Bottle#: 5 Worklist Smp#: 6
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

2 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

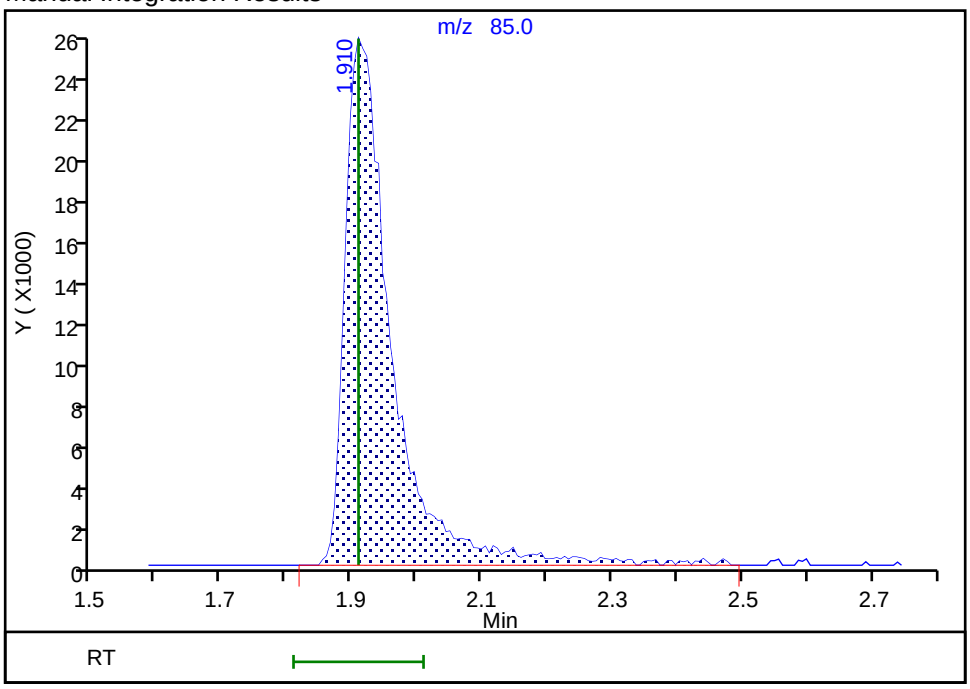
Processing Integration Results

RT: 1.91
Area: 127911
Amount: 1.993115
Amount Units: ug/l



Manual Integration Results

RT: 1.91
Area: 129325
Amount: 2.000106
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:00:09
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

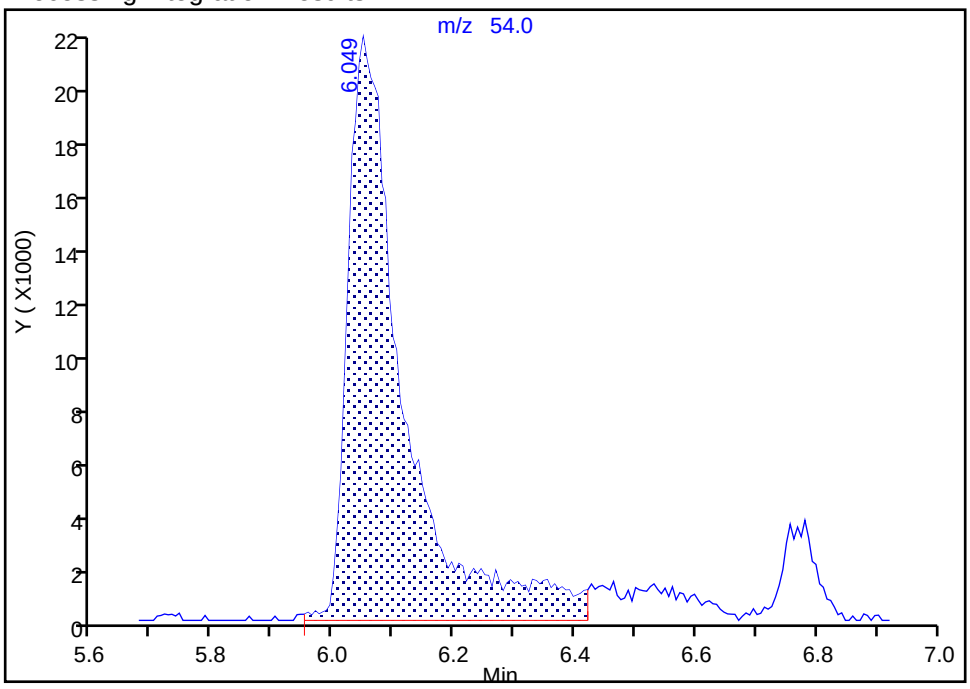
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I04.D
Injection Date: 01-Sep-2020 14:42:30 Instrument ID: 10193
Lims ID: IC STD4
Client ID:
Operator ID: dvv10203 ALS Bottle#: 5 Worklist Smp#: 6
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

40 Propionitrile, CAS: 107-12-0

Signal: 1

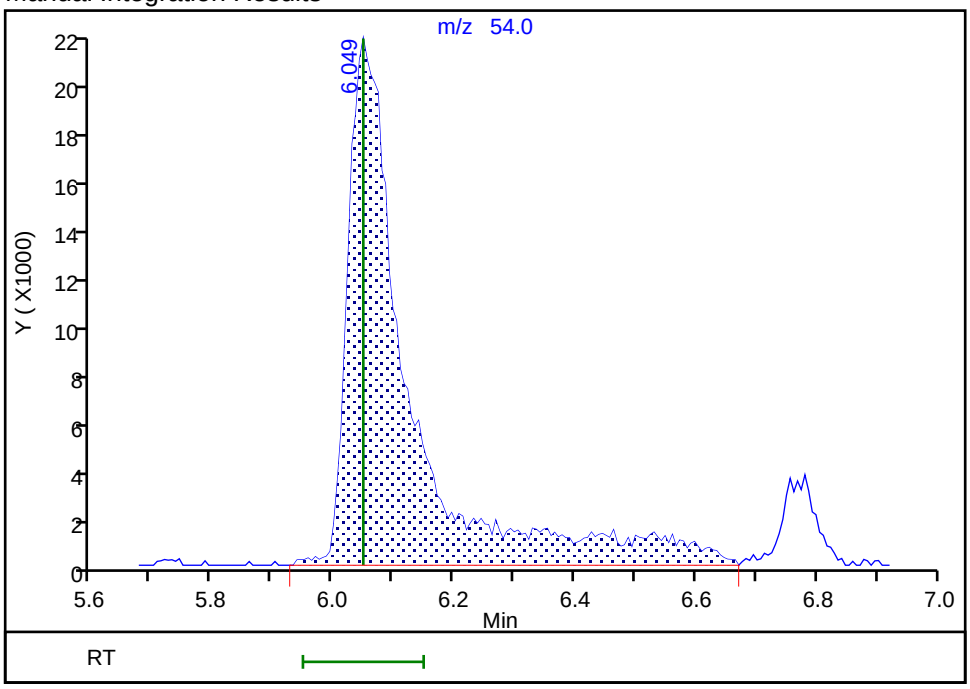
Processing Integration Results

RT: 6.05
Area: 136096
Amount: 39.351569
Amount Units: ug/l



Manual Integration Results

RT: 6.05
Area: 149313
Amount: 41.112721
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:00:32
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

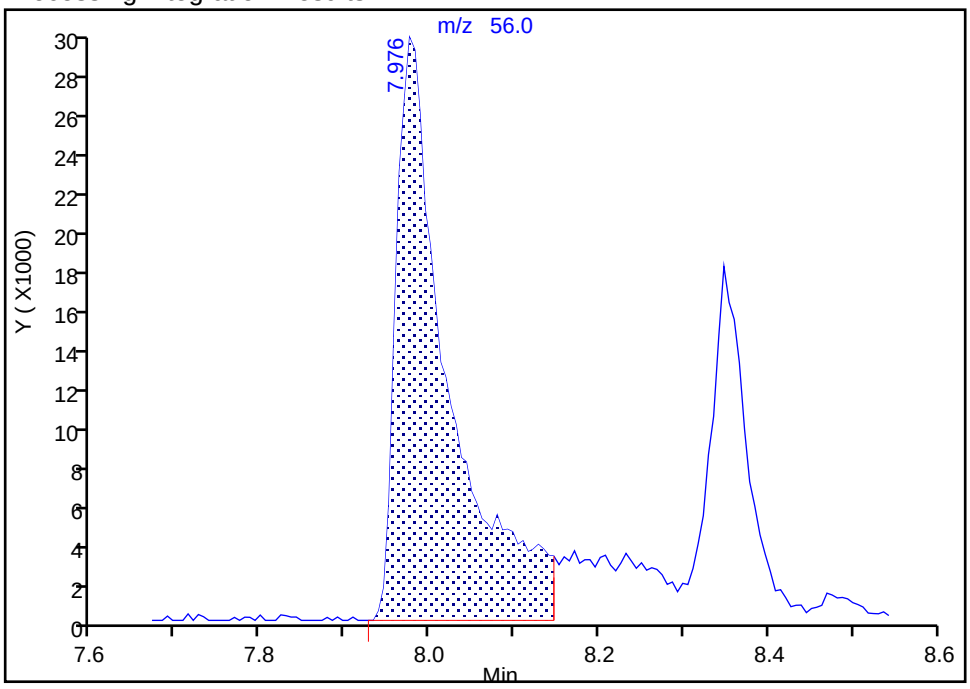
Data File:	\\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I04.D				
Injection Date:	01-Sep-2020 14:42:30	Instrument ID:	10193		
Lims ID:	IC STD4				
Client ID:					
Operator ID:	dvv10203	ALS Bottle#:	5	Worklist Smp#:	6
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

59 n-Butanol, CAS: 71-36-3

Signal: 1

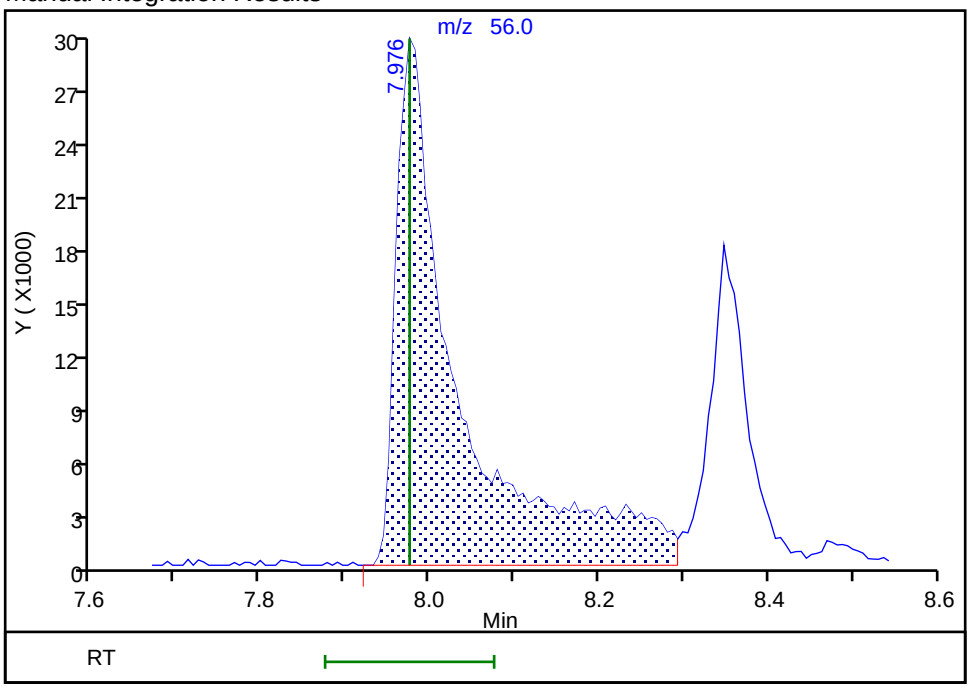
Processing Integration Results

RT: 7.98
Area: 126658
Amount: 189.1626
Amount Units: ug/l



Manual Integration Results

RT: 7.98
Area: 150691
Amount: 196.1351
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:15:38
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

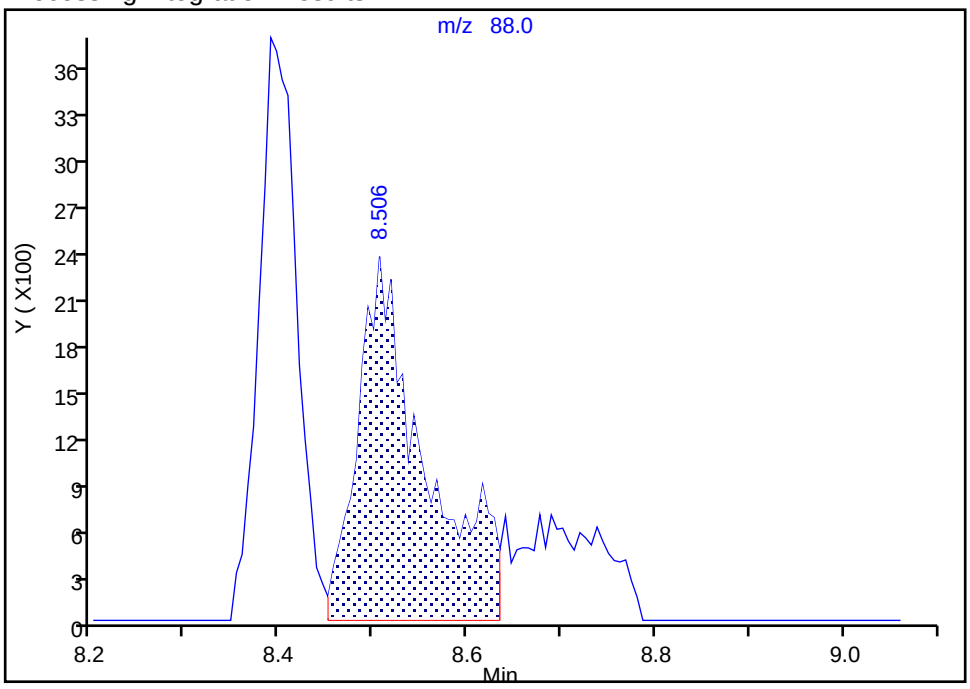
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I04.D
Injection Date: 01-Sep-2020 14:42:30 Instrument ID: 10193
Lims ID: IC STD4
Client ID:
Operator ID: dvv10203 ALS Bottle#: 5 Worklist Smp#: 6
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

65 1,4-Dioxane, CAS: 123-91-1

Signal: 1

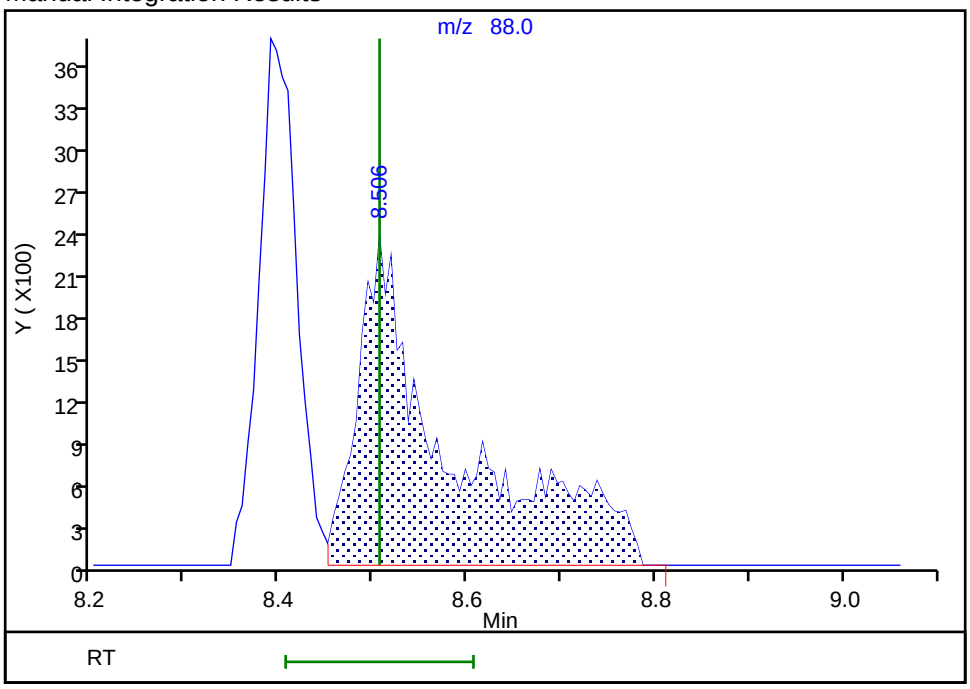
Processing Integration Results

RT: 8.51
Area: 11620
Amount: 92.483167
Amount Units: ug/l



Manual Integration Results

RT: 8.51
Area: 15868
Amount: 103.7267
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:00:52
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I05.D
Lims ID: IC STD3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 01-Sep-2020 15:04:30 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: IC STD3
Misc. Info.: 410-0009503-007
Operator ID: dvv10203 Instrument ID: 10193
Sublist: chrom-MSV_10193_25mL*sub1

Method: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 01-Sep-2020 20:10:47 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1059

First Level Reviewer: campbellme Date: 01-Sep-2020 17:03:43

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.910	1.910	0.000	99	65583	1.00	1.04	M
3 Chloromethane	50	2.093	2.099	-0.006	99	75132	1.00	1.01	M
4 Butadiene	39	2.203	2.209	-0.006	96	77445	1.00	1.11	
5 Vinyl chloride	62	2.209	2.215	-0.006	80	69005	1.00	1.00	
6 Bromomethane	94	2.507	2.520	-0.013	90	49576	1.00	1.02	
7 Chloroethane	64	2.599	2.605	-0.006	99	43065	1.00	1.01	
8 Dichlorofluoromethane	67	2.824	2.837	-0.013	97	94758	1.00	1.03	
9 Trichlorofluoromethane	101	2.891	2.898	-0.007	96	90570	1.00	1.01	
11 Ethyl ether	59	3.135	3.135	0.000	93	45936	1.00	1.01	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.208	3.208	0.000	94	70413	1.00	1.06	
13 Acrolein	56	3.300	3.306	-0.006	99	288468	50.0	51.4	
14 1,1-Dichloroethene	96	3.422	3.428	-0.006	97	46141	1.00	1.02	
15 112TCTFE	101	3.464	3.464	0.000	91	49416	1.00	1.08	
16 Acetone	43	3.471	3.471	0.000	99	53819	10.0	9.02	
17 Iodomethane	142	3.611	3.617	-0.006	99	91381	1.00	1.02	
19 Ethyl bromide	108	3.641	3.641	0.000	97	37062	1.00	0.9880	
18 Isopropyl alcohol	45	3.641	3.647	-0.006	49	20062	20.0	21.9	
20 Carbon disulfide	76	3.702	3.708	-0.006	100	162292	1.00	1.02	
22 Methyl acetate	43	3.867	3.867	0.000	97	17477	1.00	0.7458	
23 3-Chloro-1-propene	41	3.879	3.891	-0.012	89	80597	1.00	1.02	
24 Methylene Chloride	84	4.074	4.074	0.000	97	51267	1.00	1.02	
* 25 t-Butyl alcohol-d10 (IS)	65	4.099	4.111	-0.012	96	140318	50.0	50.0	
26 2-Methyl-2-propanol	59	4.214	4.227	-0.012	99	57344	20.0	20.5	
27 Acrylonitrile	53	4.409	4.409	0.000	100	51371	5.00	5.42	M
28 Methyl tert-butyl ether	73	4.452	4.464	-0.012	96	150474	1.00	1.03	
29 trans-1,2-Dichloroethene	96	4.464	4.470	-0.006	98	54149	1.00	1.03	
30 Hexane	57	4.885	4.897	-0.012	94	78465	1.00	1.05	
32 1,1-Dichloroethane	63	5.129	5.135	-0.006	97	100821	1.00	1.04	
33 Isopropyl ether	45	5.190	5.196	-0.006	94	190197	1.00	1.03	
34 2-Chloro-1,3-butadiene	53	5.245	5.251	-0.006	93	91500	1.00	1.00	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
35 Tert-butyl ethyl ether	59	5.732	5.732	0.000	98	183026	1.00	1.03	M
36 2-Butanone (MEK)	43	5.946	5.946	0.000	100	137888	10.0	9.86	
37 cis-1,2-Dichloroethene	96	5.970	5.970	0.000	82	62000	1.00	1.04	
38 2,2-Dichloropropane	77	5.982	5.988	-0.006	70	85777	1.00	1.02	
40 Propionitrile	54	6.043	6.049	-0.006	98	74651	20.0	21.0	M
S 42 1,2-Dichloroethene, Total	100				0			2.06	
43 Methacrylonitrile	67	6.263	6.251	0.013	93	146687	10.0	10.7	M
44 Chlorobromomethane	128	6.299	6.305	-0.006	93	26529	1.00	1.01	
45 Tetrahydrofuran	71	6.305	6.305	0.000	93	41281	10.0	10.4	
46 Chloroform	83	6.458	6.464	-0.006	94	97764	1.00	1.01	
$ 47 Dibromofluoromethane (Surr)	113	6.677	6.683	-0.006	94	465395	10.0	10.0	
48 1,1,1-Trichloroethane	97	6.683	6.683	0.000	46	87622	1.00	1.01	
49 Cyclohexane	56	6.769	6.775	-0.006	93	97244	1.00	1.06	
50 Carbon tetrachloride	117	6.885	6.891	-0.006	83	74393	1.00	1.02	
51 1,1-Dichloropropene	75	6.891	6.897	-0.006	92	79910	1.00	1.03	
52 Isobutyl alcohol	41	7.080	7.086	-0.006	89	43145	50.0	47.6	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.128	7.134	-0.006	0	94841	10.0	10.0	
54 Benzene	78	7.153	7.159	-0.006	96	228700	1.00	1.02	
55 1,2-Dichloroethane	62	7.232	7.238	-0.006	97	68618	1.00	1.01	
56 Tert-amyl methyl ether	73	7.354	7.360	-0.006	97	164628	1.00	1.02	
* 57 Fluorobenzene (IS)	96	7.567	7.573	-0.006	98	1953950	10.0	10.0	
58 n-Heptane	43	7.580	7.580	0.000	82	86227	1.00	1.04	
59 n-Butanol	56	7.976	7.976	0.000	91	73005	100.0	97.2	M
60 Trichloroethene	95	8.049	8.049	0.000	98	59588	1.00	1.03	
61 Methylcyclohexane	83	8.348	8.354	-0.006	92	90839	1.00	1.03	
62 1,2-Dichloropropane	63	8.384	8.390	-0.006	72	58951	1.00	1.02	
63 2-ethoxy-2-methyl butane	87	8.396	8.396	0.000	93	92481	1.00	1.03	
64 Methyl methacrylate	69	8.482	8.482	0.000	91	29926	1.00	1.02	
66 Dibromomethane	93	8.494	8.494	0.000	96	28840	1.00	1.02	
65 1,4-Dioxane	88	8.512	8.506	0.006	31	8095	50.0	54.1	M
67 Dichlorobromomethane	83	8.732	8.738	-0.006	98	69815	1.00	1.00	
68 2-Nitropropane	41	9.024	9.024	0.000	99	90715	10.0	9.97	
71 1-Bromo-2-chloroethane	63	9.128	9.134	-0.006	98	60281	1.00	1.01	
72 cis-1,3-Dichloropropene	75	9.299	9.299	0.000	93	85955	1.00	0.99	
73 4-Methyl-2-pentanone (MIBK)	43	9.488	9.488	0.000	97	414178	10.0	10.2	
$ 74 Toluene-d8 (Surr)	98	9.610	9.610	0.000	94	1941329	10.0	10.0	
75 Toluene	92	9.689	9.689	0.000	98	148821	1.00	1.02	
76 trans-1,3-Dichloropropene	75	9.957	9.957	0.000	96	72683	1.00	0.99	
78 Ethyl methacrylate	69	10.024	10.024	0.000	91	63147	1.00	1.02	
S 77 1,3-Dichloropropene, Total	100				0			1.99	
79 1,1,2-Trichloroethane	97	10.164	10.164	0.000	92	41496	1.00	1.03	
80 Tetrachloroethene	166	10.244	10.250	-0.006	97	66888	1.00	1.03	
81 1,3-Dichloropropane	76	10.329	10.329	0.000	94	72739	1.00	1.02	
82 2-Hexanone	43	10.390	10.396	-0.006	97	292991	10.0	10.2	
83 Chlorodibromomethane	129	10.542	10.548	-0.006	92	45464	1.00	0.9722	
84 Ethylene Dibromide	107	10.658	10.658	0.000	100	40000	1.00	1.00	
* 85 Chlorobenzene-d5 (IS)	117	11.097	11.097	0.000	87	1485716	10.0	10.0	
86 1-Chlorohexane	91	11.109	11.109	0.000	97	85108	1.00	1.02	
87 Chlorobenzene	112	11.122	11.122	0.000	95	168260	1.00	1.02	
89 1,1,1,2-Tetrachloroethane	131	11.207	11.207	0.000	92	56505	1.00	1.01	
90 Ethylbenzene	91	11.213	11.213	0.000	98	292186	1.00	1.01	
S 88 Xylenes, Total	106				0			3.04	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
91 m-Xylene & p-Xylene	106	11.329	11.329	0.000	0	230072	2.00	2.04	
92 o-Xylene	106	11.664	11.664	0.000	97	111628	1.00	1.01	
93 Styrene	104	11.676	11.676	0.000	95	184556	1.00	0.99	
94 Bromoform	173	11.835	11.835	0.000	95	24617	1.00	0.9477	
95 Isopropylbenzene	105	11.963	11.969	-0.006	96	299877	1.00	1.02	
$ 98 4-Bromofluorobenzene (Surr)	95	12.109	12.109	0.000	91	726539	10.0	9.96	
99 1,1,2,2-Tetrachloroethane	83	12.219	12.219	0.000	94	53769	1.00	1.02	
100 Bromobenzene	156	12.225	12.231	-0.006	95	74061	1.00	1.02	
101 trans-1,4-Dichloro-2-butene	53	12.243	12.243	0.000	95	148178	10.0	10.2	
102 1,2,3-Trichloropropane	110	12.262	12.268	-0.006	81	14553	1.00	1.02	
103 N-Propylbenzene	91	12.298	12.298	0.000	99	349239	1.00	1.03	
104 2-Chlorotoluene	126	12.377	12.377	0.000	96	71969	1.00	1.04	
105 1,3,5-Trimethylbenzene	105	12.438	12.438	0.000	94	261031	1.00	1.04	
106 4-Chlorotoluene	126	12.469	12.469	0.000	98	73083	1.00	1.01	
107 tert-Butylbenzene	134	12.682	12.682	0.000	94	54654	1.00	1.00	
108 Pentachloroethane	167	12.713	12.713	0.000	91	40193	1.00	0.9847	
109 1,2,4-Trimethylbenzene	105	12.725	12.725	0.000	97	264914	1.00	1.03	
110 sec-Butylbenzene	105	12.847	12.847	0.000	94	329993	1.00	1.02	
111 1,3-Dichlorobenzene	146	12.944	12.944	0.000	98	148017	1.00	1.03	
112 4-Isopropyltoluene	119	12.957	12.957	0.000	97	284614	1.00	1.01	
* 113 1,4-Dichlorobenzene-d4	152	12.999	12.999	0.000	95	842960	10.0	10.0	
114 1,4-Dichlorobenzene	146	13.018	13.017	0.001	95	147165	1.00	0.99	
115 1,2,3-Trimethylbenzene	120	13.030	13.030	0.000	99	112026	1.00	0.9896	
116 Benzyl chloride	126	13.097	13.103	-0.006	99	20304	1.00	0.9698	
119 n-Butylbenzene	92	13.249	13.249	0.000	97	143333	1.00	1.00	
120 1,2-Dichlorobenzene	146	13.280	13.286	-0.006	98	138925	1.00	1.02	
118 p-Diethylbenzene	119	13.304	13.304	0.000	0	141827	1.00	0.9889	
123 1,2-Dibromo-3-Chloropropane	155	13.834	13.834	0.000	81	7406	1.00	1.03	
124 1,3,5-Trichlorobenzene	180	13.956	13.956	0.000	97	120502	1.00	1.02	
125 1,2,4-Trichlorobenzene	180	14.383	14.383	0.000	94	106458	1.00	1.01	
126 Hexachlorobutadiene	225	14.468	14.468	0.000	97	51838	1.00	1.00	
127 Naphthalene	128	14.572	14.566	0.006	97	196158	1.00	1.04	
128 1,2,3-Trichlorobenzene	180	14.712	14.712	0.000	95	96242	1.00	1.03	
129 2-Methylnaphthalene	142	15.340	15.340	0.000	0	125807	1.00	0.9870	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MSV_RV1_826_00022	Amount Added:	2.00	Units: uL	
MSV_RV4_826_00024	Amount Added:	2.00	Units: uL	
MSV_RV4GAS826_00072	Amount Added:	2.00	Units: uL	
MSV_25_826ISS_00001	Amount Added:	1.00	Units: uL	Run Reagent

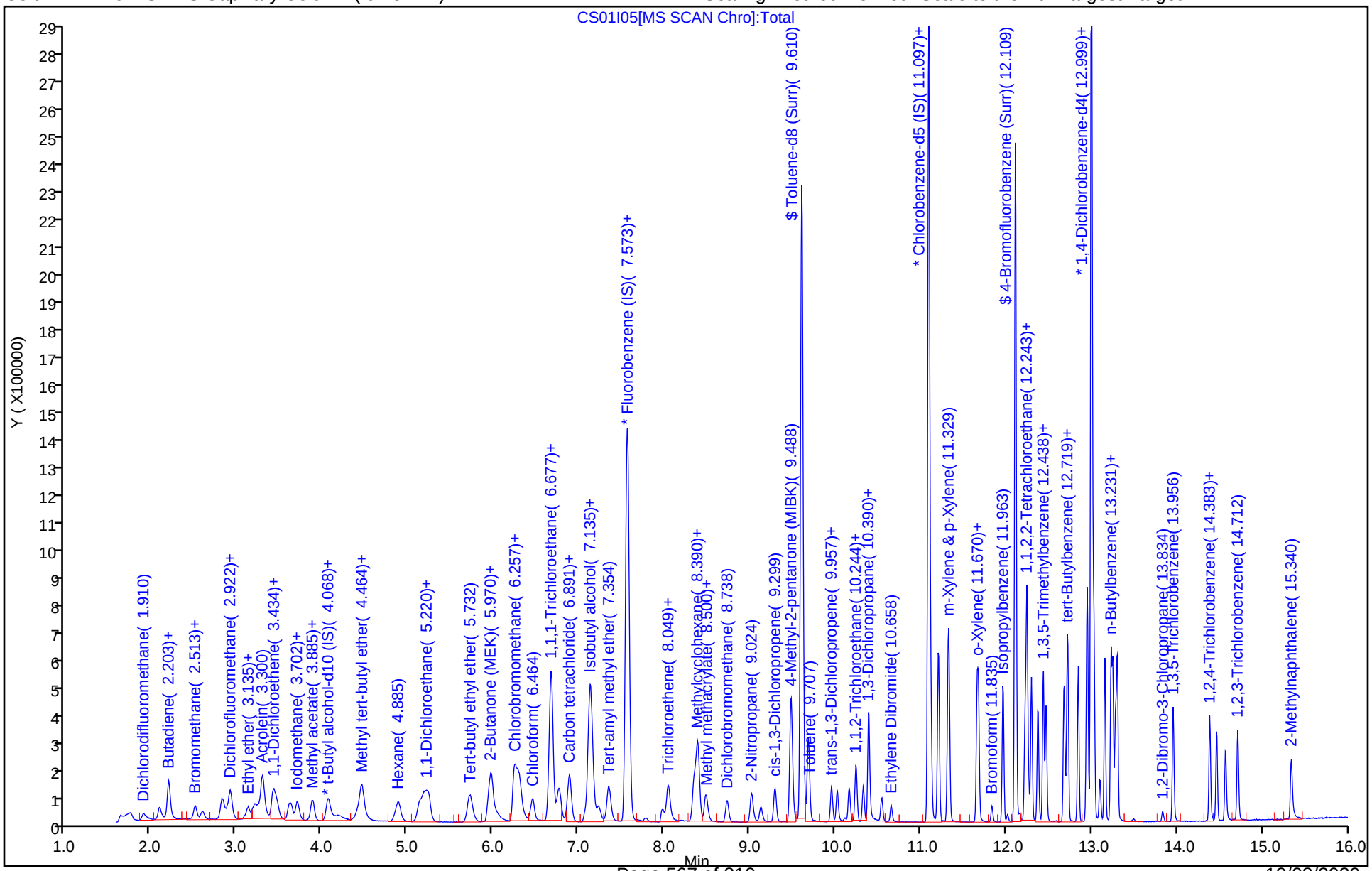
Report Date: 01-Sep-2020 20:10:49 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I05.D

Injection Date:	01-Sep-2020 15:04:30	Instrument ID:	10193	Operator ID:	dvv10203
Lims ID:	IC STD3			Worklist Smp#:	7
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MSV_10193_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



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

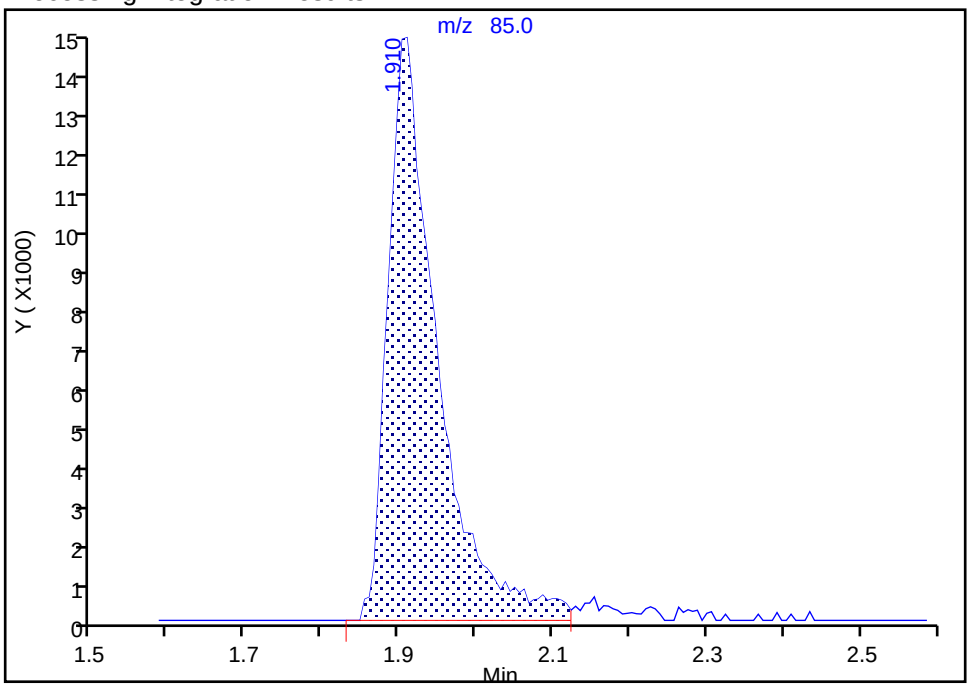
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I05.D
Injection Date: 01-Sep-2020 15:04:30 Instrument ID: 10193
Lims ID: IC STD3
Client ID:
Operator ID: dvv10203 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

2 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

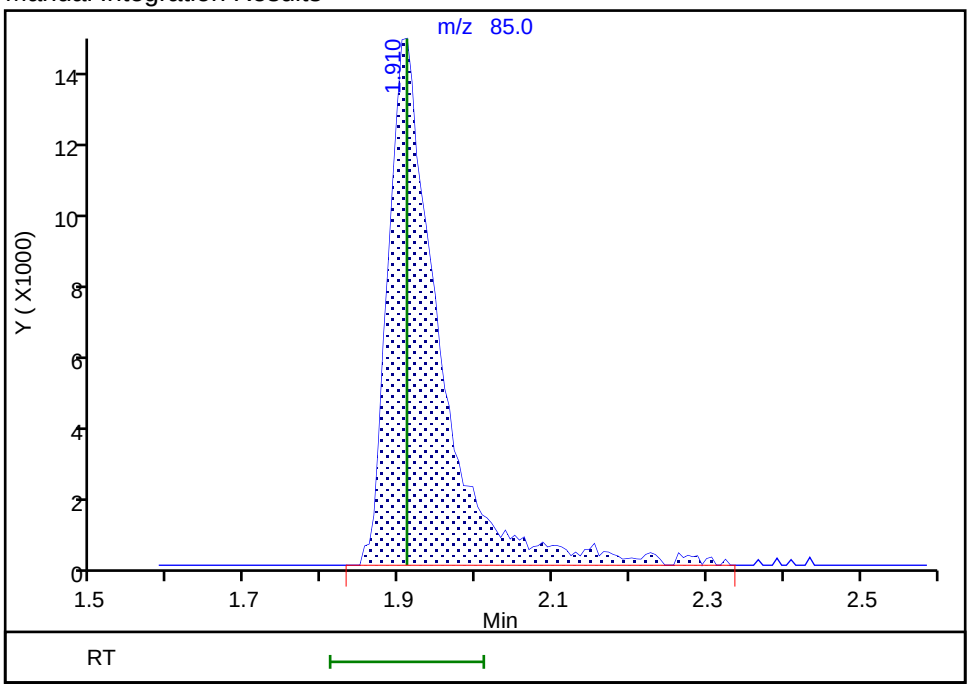
Processing Integration Results

RT: 1.91
Area: 62978
Amount: 1.004767
Amount Units: ug/l



Manual Integration Results

RT: 1.91
Area: 65583
Amount: 1.040152
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:01:28
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

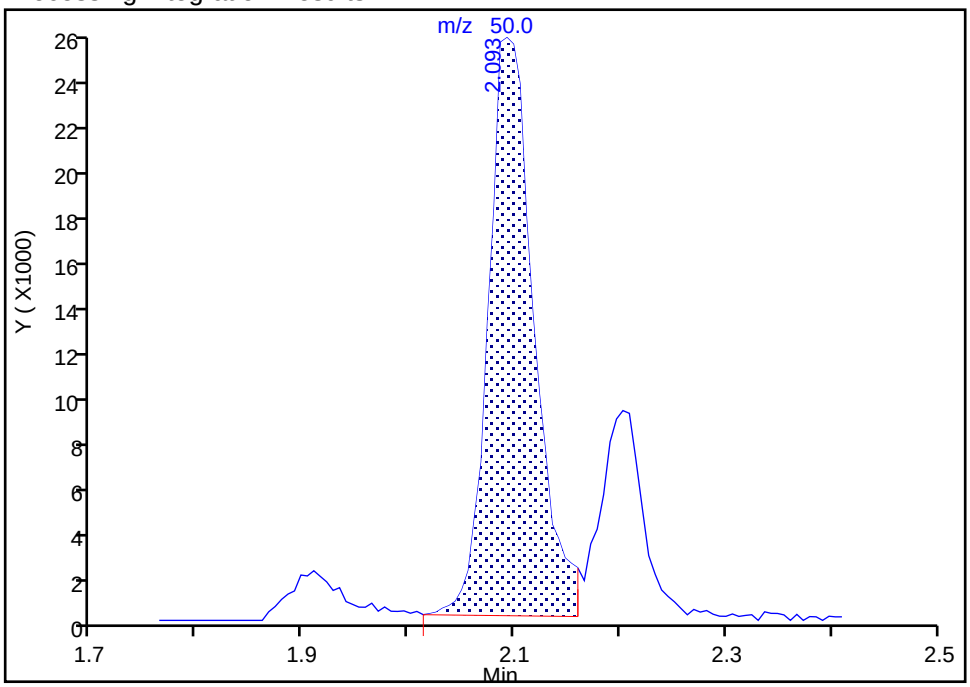
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I05.D
Injection Date: 01-Sep-2020 15:04:30 Instrument ID: 10193
Lims ID: IC STD3
Client ID:
Operator ID: dvv10203 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

3 Chloromethane, CAS: 74-87-3

Signal: 1

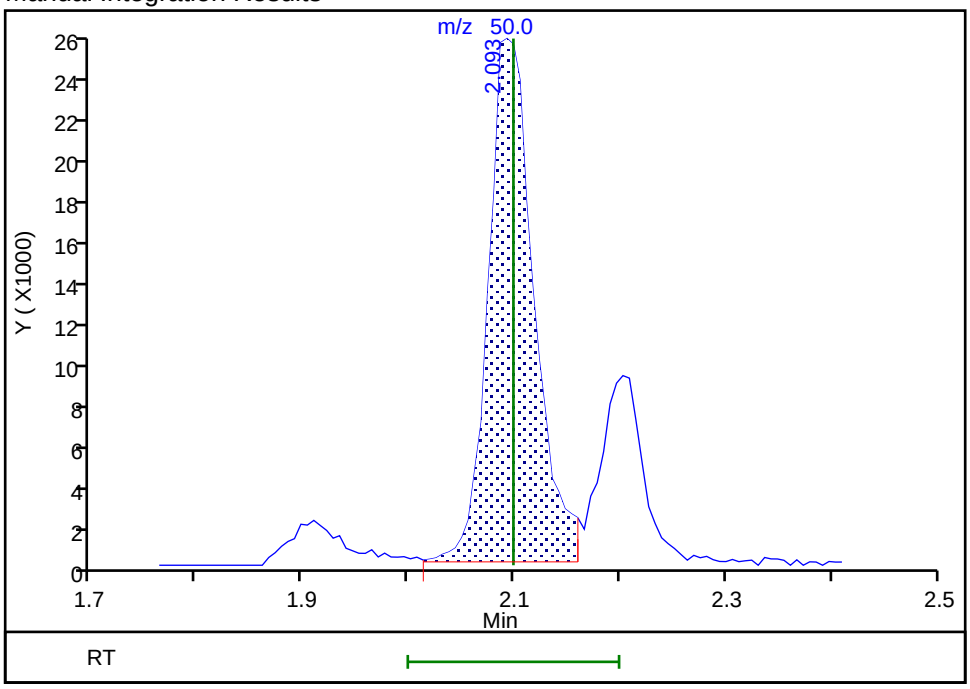
Processing Integration Results

RT: 2.09
Area: 74730
Amount: 1.006130
Amount Units: ug/l



Manual Integration Results

RT: 2.09
Area: 75132
Amount: 1.010761
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:01:41
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

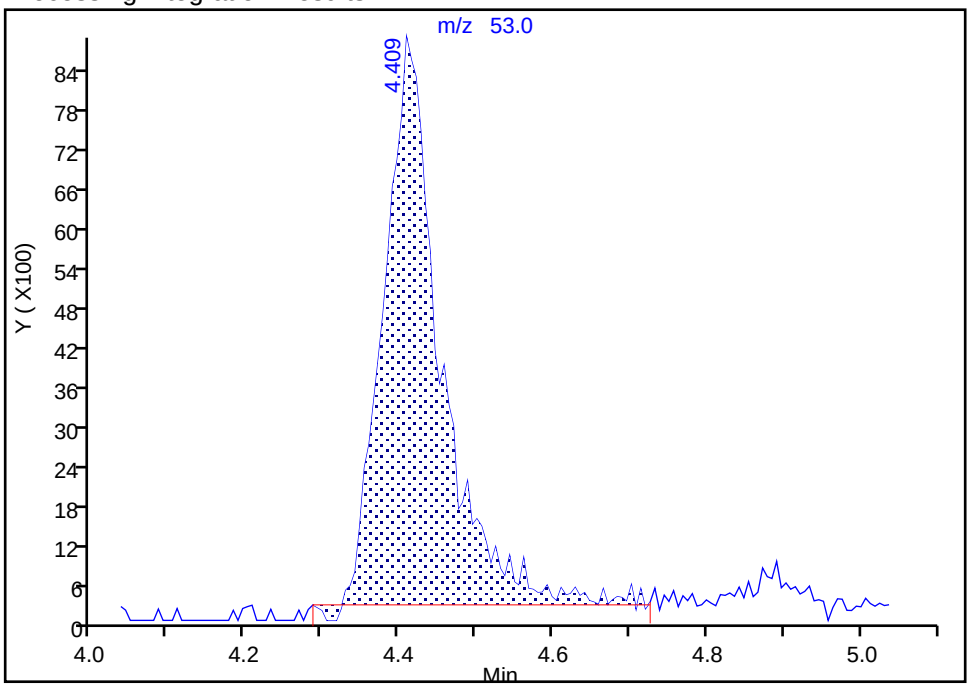
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I05.D
Injection Date: 01-Sep-2020 15:04:30 Instrument ID: 10193
Lims ID: IC STD3
Client ID:
Operator ID: dvv10203 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

27 Acrylonitrile, CAS: 107-13-1

Signal: 1

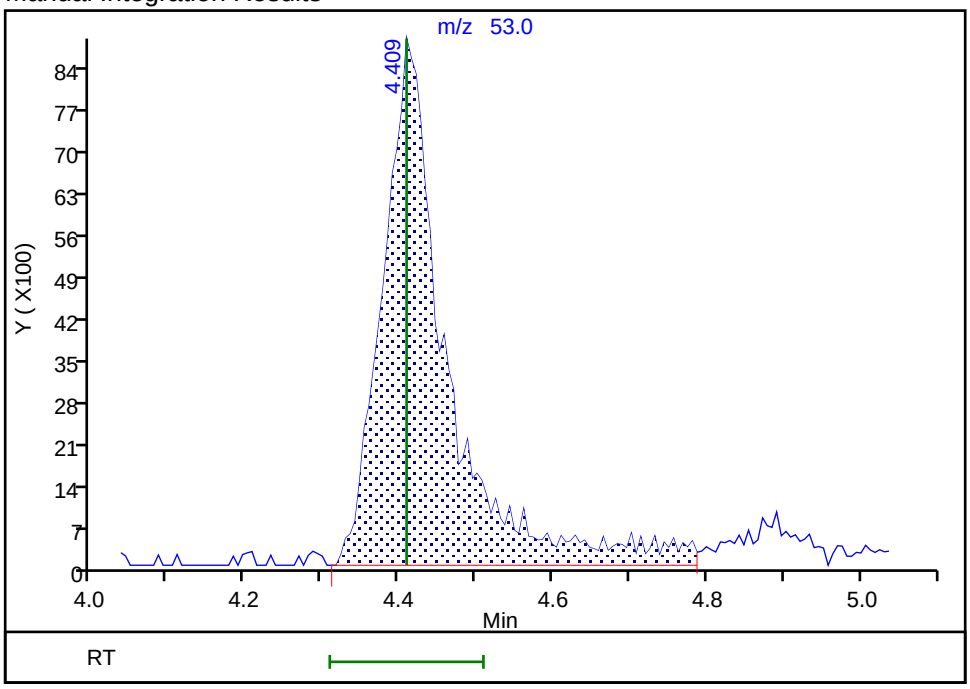
Processing Integration Results

RT: 4.41
Area: 44113
Amount: 4.761831
Amount Units: ug/l



Manual Integration Results

RT: 4.41
Area: 51371
Amount: 5.423891
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:02:09
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

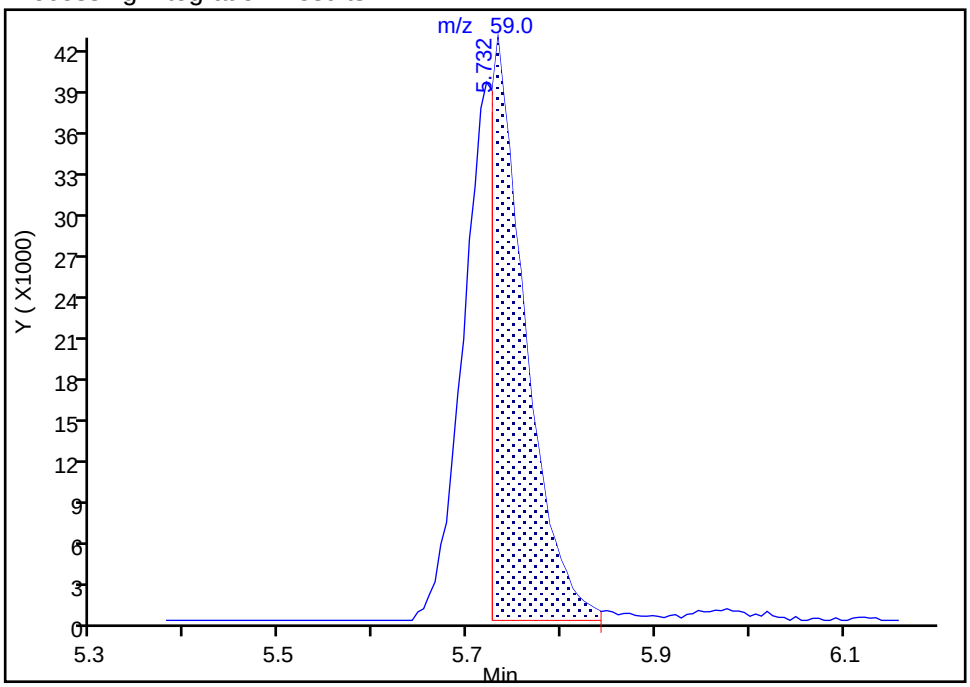
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I05.D
Injection Date: 01-Sep-2020 15:04:30 Instrument ID: 10193
Lims ID: IC STD3
Client ID:
Operator ID: dvv10203 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

35 Tert-butyl ethyl ether, CAS: 637-92-3

Signal: 1

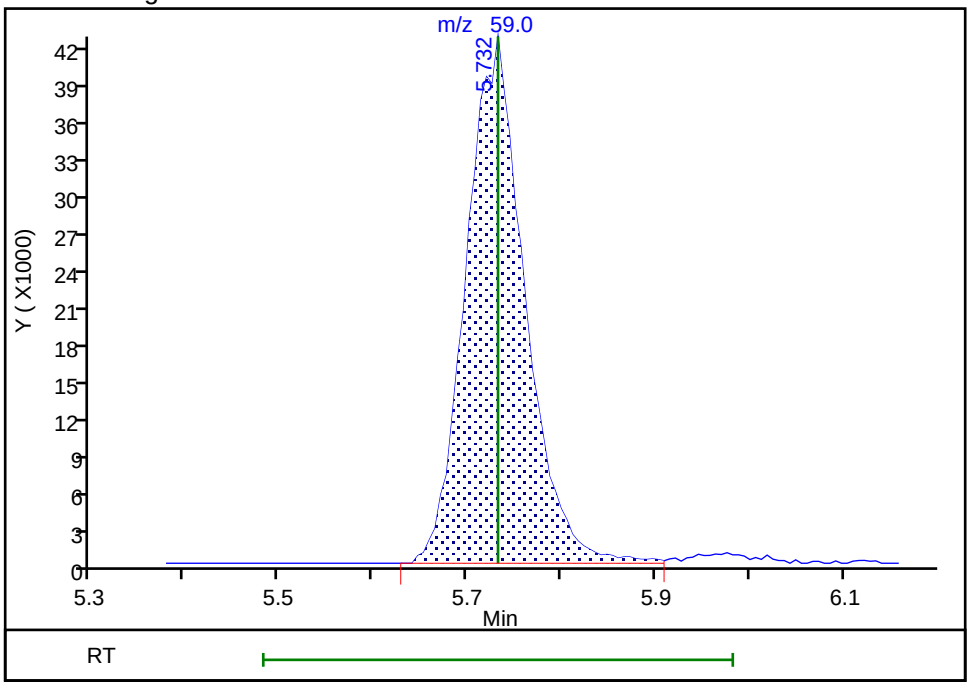
Processing Integration Results

RT: 5.73
Area: 107376
Amount: 0.583894
Amount Units: ug/l



Manual Integration Results

RT: 5.73
Area: 183026
Amount: 1.033821
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:02:27
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

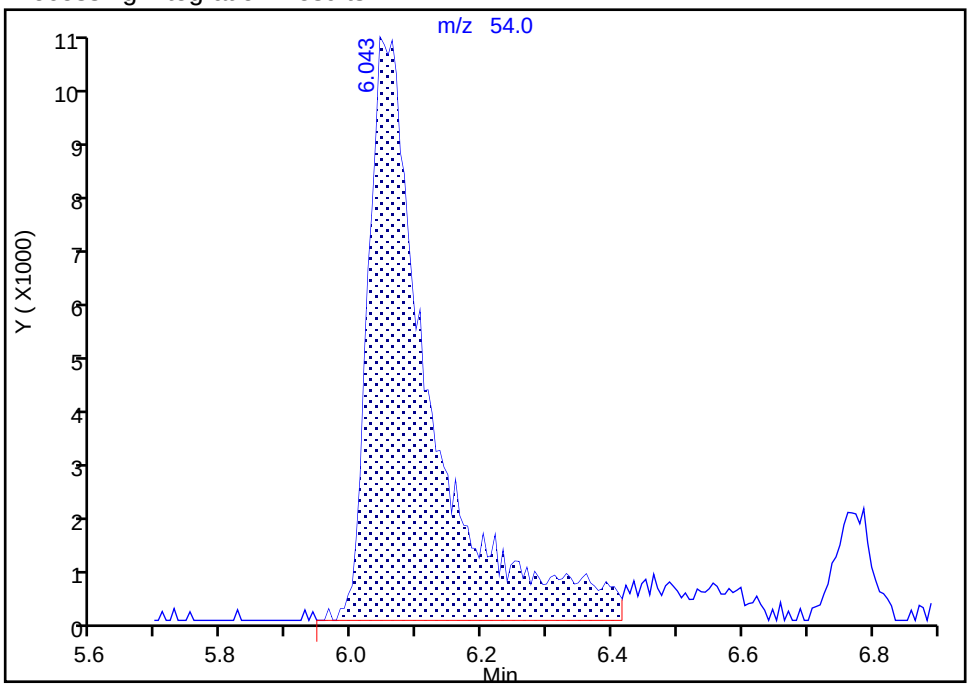
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I05.D
Injection Date: 01-Sep-2020 15:04:30 Instrument ID: 10193
Lims ID: IC STD3
Client ID:
Operator ID: dvv10203 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

40 Propionitrile, CAS: 107-12-0

Signal: 1

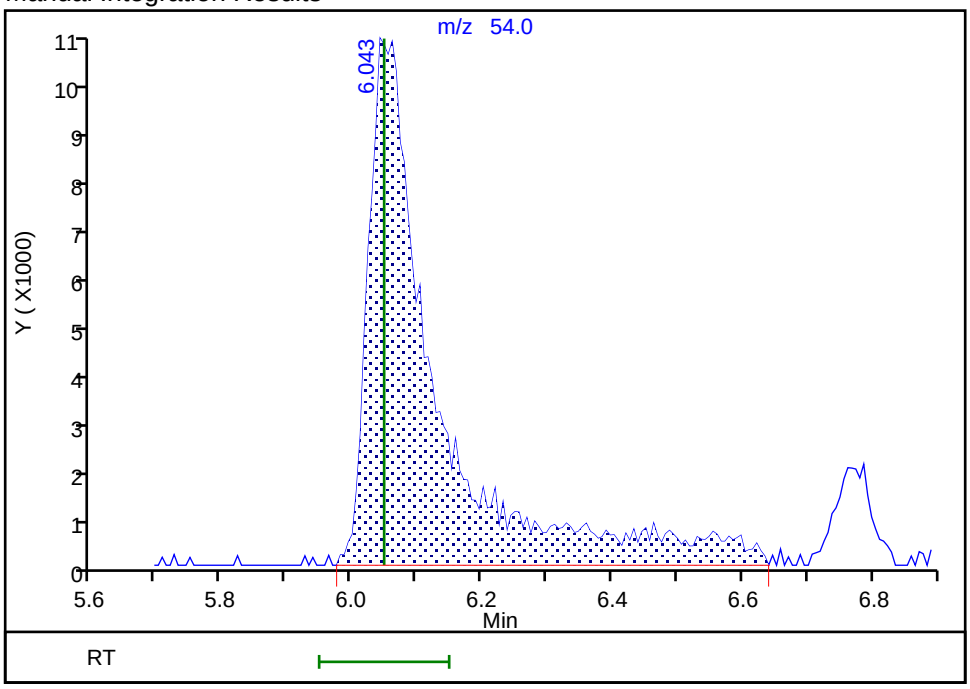
Processing Integration Results

RT: 6.04
Area: 68101
Amount: 19.874939
Amount Units: ug/l



Manual Integration Results

RT: 6.04
Area: 74651
Amount: 21.029905
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:03:38
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

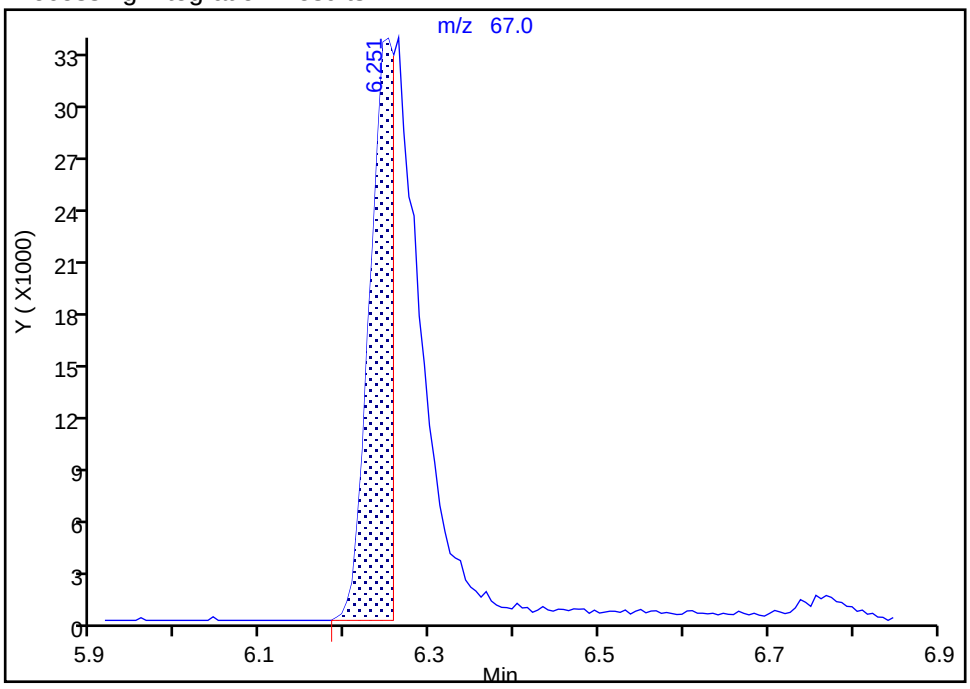
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I05.D
Injection Date: 01-Sep-2020 15:04:30 Instrument ID: 10193
Lims ID: IC STD3
Client ID:
Operator ID: dvv10203 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

43 Methacrylonitrile, CAS: 126-98-7

Signal: 1

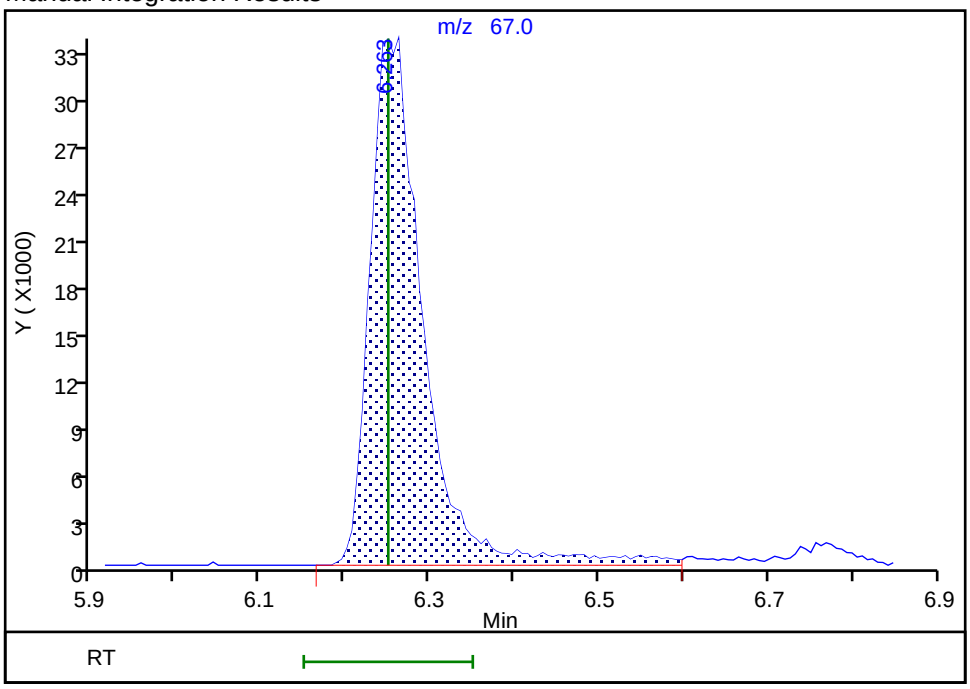
Processing Integration Results

RT: 6.25
Area: 67704
Amount: 8.258310
Amount Units: ug/l



Manual Integration Results

RT: 6.26
Area: 146687
Amount: 10.663214
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:02:56
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

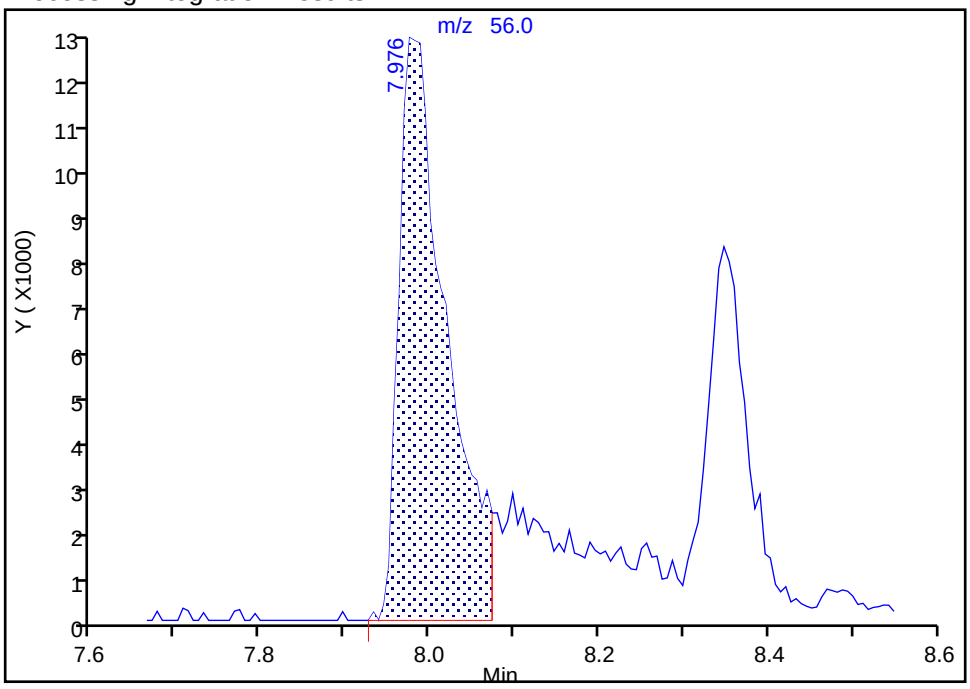
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I05.D
Injection Date: 01-Sep-2020 15:04:30 Instrument ID: 10193
Lims ID: IC STD3
Client ID:
Operator ID: dvv10203 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

59 n-Butanol, CAS: 71-36-3

Signal: 1

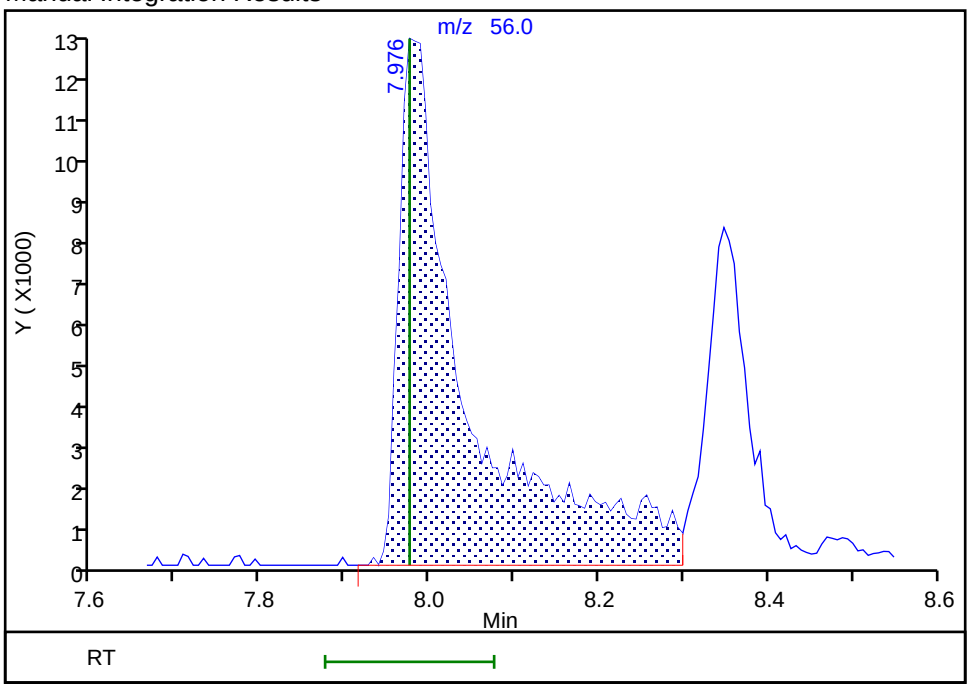
Processing Integration Results

RT: 7.98
Area: 50726
Amount: 98.042226
Amount Units: ug/l



Manual Integration Results

RT: 7.98
Area: 73005
Amount: 97.217312
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:16:24
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

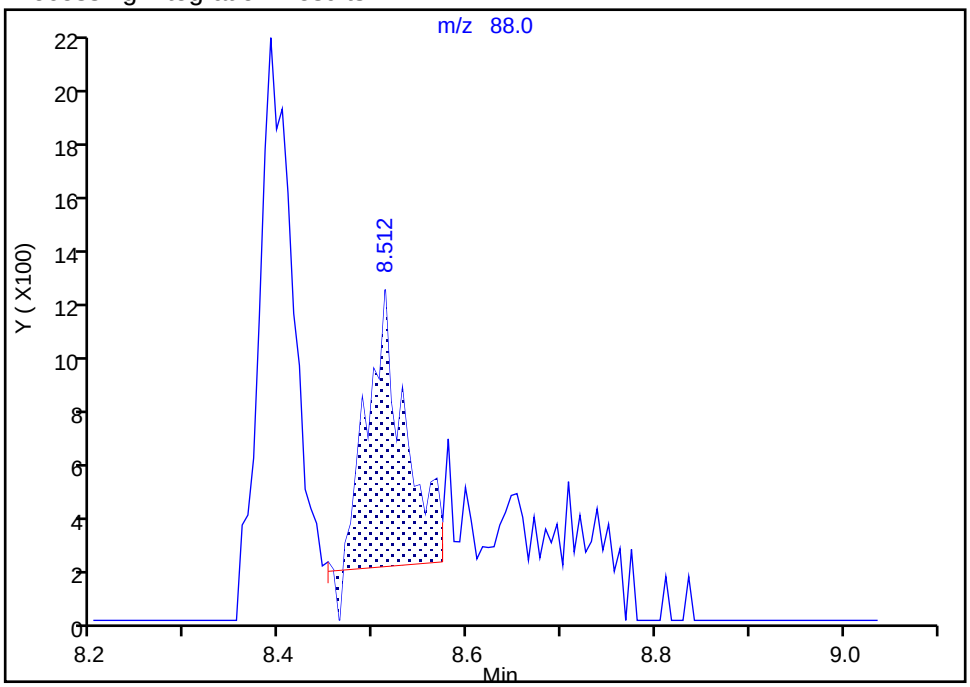
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I05.D
Injection Date: 01-Sep-2020 15:04:30 Instrument ID: 10193
Lims ID: IC STD3
Client ID:
Operator ID: dvv10203 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

65 1,4-Dioxane, CAS: 123-91-1

Signal: 1

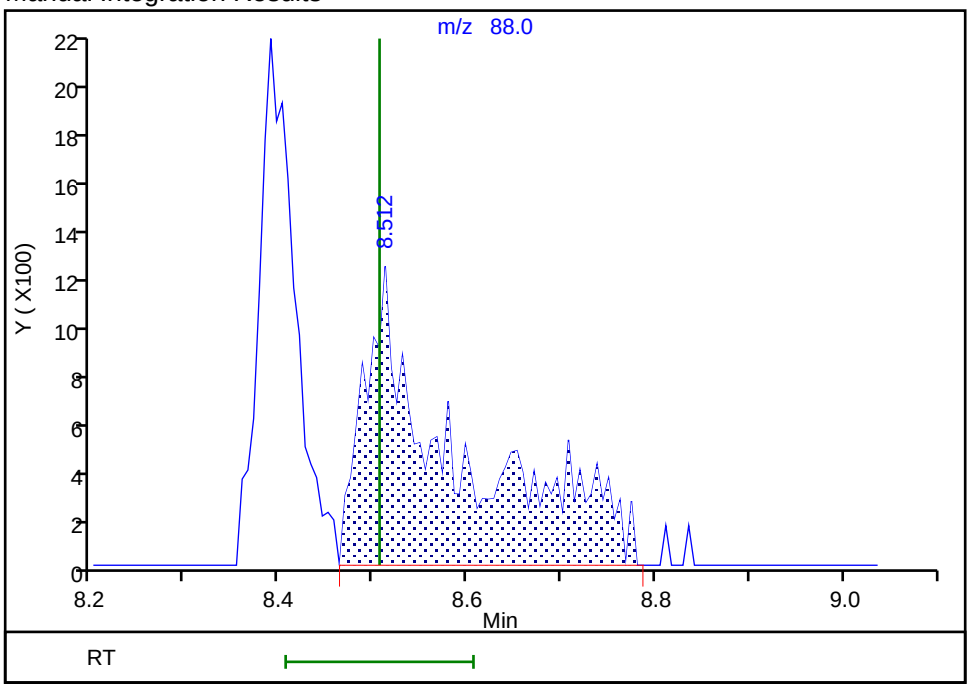
Processing Integration Results

RT: 8.51
Area: 2819
Amount: 21.730370
Amount Units: ug/l



Manual Integration Results

RT: 8.51
Area: 8095
Amount: 54.138741
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:03:11
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I06.D
Lims ID: IC STD2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 01-Sep-2020 15:26:30 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: IC STD2
Misc. Info.: 410-0009503-008
Operator ID: dvv10203 Instrument ID: 10193
Sublist: chrom-MSV_10193_25mL*sub1

Method: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 01-Sep-2020 20:10:57 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1059

First Level Reviewer: campbellme Date: 01-Sep-2020 17:05:39

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.916	1.910	0.006	99	34165	0.5000	0.5457	
3 Chloromethane	50	2.105	2.099	0.006	99	40412	0.5000	0.5476	
4 Butadiene	39	2.209	2.209	0.000	94	37166	0.5000	0.5354	M
5 Vinyl chloride	62	2.221	2.215	0.006	81	36562	0.5000	0.5359	
6 Bromomethane	94	2.520	2.520	0.000	92	24464	0.5000	0.5080	
7 Chloroethane	64	2.611	2.605	0.006	99	22270	0.5000	0.5284	
8 Dichlorofluoromethane	67	2.843	2.837	0.006	97	47161	0.5000	0.5157	
9 Trichlorofluoromethane	101	2.898	2.898	0.000	96	47434	0.5000	0.5344	
11 Ethyl ether	59	3.135	3.135	0.000	92	23165	0.4999	0.5152	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.215	3.208	0.007	96	34942	0.5000	0.5302	
13 Acrolein	56	3.312	3.306	0.006	98	142874	25.0	24.5	
14 1,1-Dichloroethene	96	3.434	3.428	0.006	98	23536	0.5000	0.5248	
15 112TCTFE	101	3.477	3.464	0.013	91	22631	0.5000	0.4960	
16 Acetone	43	3.477	3.471	0.006	99	33503	5.00	5.42	M
17 Iodomethane	142	3.617	3.617	0.000	97	45466	0.5000	0.5131	
19 Ethyl bromide	108	3.654	3.641	0.013	99	19138	0.5003	0.5138	
18 Isopropyl alcohol	45	3.654	3.647	0.007	45	16590	10.0	18.5	
20 Carbon disulfide	76	3.715	3.708	0.007	100	79256	0.5000	0.5002	
22 Methyl acetate	43	3.885	3.867	0.018	25	10666	0.5000	0.4389	M
23 3-Chloro-1-propene	41	3.897	3.891	0.006	90	39926	0.5000	0.5087	
24 Methylene Chloride	84	4.080	4.074	0.006	96	26091	0.5000	0.5227	M
* 25 t-Butyl alcohol-d10 (IS)	65	4.105	4.111	-0.006	95	145520	50.0	50.0	
26 2-Methyl-2-propanol	59	4.221	4.227	-0.005	96	31710	10.0	10.9	
27 Acrylonitrile	53	4.428	4.409	0.019	98	23111	2.50	2.35	
28 Methyl tert-butyl ether	73	4.471	4.464	0.007	95	74946	0.5000	0.5162	
29 trans-1,2-Dichloroethene	96	4.483	4.470	0.013	98	26945	0.5000	0.5139	
30 Hexane	57	4.897	4.897	0.000	94	35026	0.5000	0.4738	
32 1,1-Dichloroethane	63	5.147	5.135	0.012	96	48762	0.5000	0.5052	
33 Isopropyl ether	45	5.196	5.196	0.000	95	95205	0.5000	0.5174	
34 2-Chloro-1,3-butadiene	53	5.251	5.251	0.000	94	47125	0.5000	0.5181	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
35 Tert-butyl ethyl ether	59	5.732	5.732	0.000	98	90729	0.5000	0.5162	
36 2-Butanone (MEK)	43	5.964	5.946	0.018	100	76154	5.00	5.25	
37 cis-1,2-Dichloroethene	96	5.982	5.970	0.012	87	30278	0.5000	0.5093	
38 2,2-Dichloropropane	77	5.989	5.988	0.000	77	42244	0.5000	0.5072	
40 Propionitrile	54	6.049	6.049	0.000	97	39217	10.0	10.7	M
S 42 1,2-Dichloroethene, Total	100				0			1.02	
43 Methacrylonitrile	67	6.257	6.251	0.007	93	67114	5.00	4.70	
44 Chlorobromomethane	128	6.306	6.305	0.001	94	12738	0.5000	0.4868	
45 Tetrahydrofuran	71	6.324	6.305	0.019	89	21034	5.00	5.13	
46 Chloroform	83	6.464	6.464	0.000	94	48103	0.5000	0.5029	
$ 47 Dibromofluoromethane (Surr)	113	6.684	6.683	0.001	93	460223	10.0	9.98	
48 1,1,1-Trichloroethane	97	6.677	6.683	-0.006	40	43566	0.5000	0.5055	
49 Cyclohexane	56	6.781	6.775	0.006	94	45257	0.5000	0.4966	
50 Carbon tetrachloride	117	6.891	6.891	0.000	95	35175	0.5000	0.4872	
51 1,1-Dichloropropene	75	6.897	6.897	0.000	92	39192	0.5000	0.5065	
52 Isobutyl alcohol	41	7.086	7.086	0.000	89	23860	25.0	25.4	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.135	7.134	0.001	0	92350	10.0	9.83	
54 Benzene	78	7.165	7.159	0.006	96	113177	0.5000	0.5079	
55 1,2-Dichloroethane	62	7.244	7.238	0.006	97	36081	0.5000	0.5371	
56 Tert-amyl methyl ether	73	7.354	7.360	-0.006	97	80450	0.5000	0.5024	
* 57 Fluorobenzene (IS)	96	7.574	7.573	0.001	98	1940063	10.0	10.0	
58 n-Heptane	43	7.580	7.580	0.000	38	37755	0.5000	0.4587	
59 n-Butanol	56	7.976	7.976	0.000	90	36853	50.0	47.3	M
60 Trichloroethene	95	8.055	8.049	0.006	98	28843	0.5000	0.5022	
61 Methylcyclohexane	83	8.354	8.354	0.000	91	44211	0.5000	0.5025	
62 1,2-Dichloropropane	63	8.390	8.390	0.000	73	28771	0.5000	0.5027	
63 2-ethoxy-2-methyl butane	87	8.397	8.396	0.001	91	44592	0.5000	0.5008	
64 Methyl methacrylate	69	8.482	8.482	0.000	89	14408	0.5000	0.4737	
66 Dibromomethane	93	8.500	8.494	0.006	94	14141	0.5000	0.5050	
65 1,4-Dioxane	88	8.555	8.506	0.049	30	3795	25.0	24.5	M
67 Dichlorobromomethane	83	8.744	8.738	0.006	98	34459	0.5000	0.4988	
68 2-Nitropropane	41	9.031	9.024	0.007	98	42618	5.00	4.52	
71 1-Bromo-2-chloroethane	63	9.140	9.134	0.006	99	30027	0.5000	0.5073	
72 cis-1,3-Dichloropropene	75	9.299	9.299	0.000	93	41792	0.5000	0.4868	
73 4-Methyl-2-pentanone (MIBK)	43	9.488	9.488	0.000	98	203096	5.00	4.82	
$ 74 Toluene-d8 (Surr)	98	9.610	9.610	0.000	95	1913735	10.0	10.0	
75 Toluene	92	9.689	9.689	0.000	98	73639	0.5000	0.5116	
76 trans-1,3-Dichloropropene	75	9.963	9.957	0.006	97	34646	0.5000	0.4807	
78 Ethyl methacrylate	69	10.030	10.024	0.006	89	30177	0.5000	0.4961	
S 77 1,3-Dichloropropene, Total	100				0			0.9674	
79 1,1,2-Trichloroethane	97	10.165	10.164	0.001	91	20416	0.5000	0.5135	
80 Tetrachloroethene	166	10.244	10.250	-0.006	95	32134	0.5000	0.4997	
81 1,3-Dichloropropane	76	10.329	10.329	0.000	94	36571	0.5000	0.5219	
82 2-Hexanone	43	10.396	10.396	0.000	98	135801	5.00	4.56	
83 Chlorodibromomethane	129	10.549	10.548	0.001	89	21989	0.5000	0.4768	
84 Ethylene Dibromide	107	10.658	10.658	0.000	100	19670	0.5000	0.5010	
* 85 Chlorobenzene-d5 (IS)	117	11.097	11.097	0.000	87	1465303	10.0	10.0	
86 1-Chlorohexane	91	11.109	11.109	0.000	94	42522	0.5000	0.5173	
87 Chlorobenzene	112	11.122	11.122	0.000	95	82597	0.5000	0.5081	
89 1,1,1,2-Tetrachloroethane	131	11.207	11.207	0.000	94	27504	0.5000	0.4974	
90 Ethylbenzene	91	11.213	11.213	0.000	99	143018	0.5000	0.5014	
S 88 Xylenes, Total	106				0			1.50	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
91 m-Xylene & p-Xylene	106	11.329	11.329	0.000	0	112244	1.00	1.01	
92 o-Xylene	106	11.664	11.664	0.000	97	54046	0.5000	0.4949	
93 Styrene	104	11.683	11.676	0.007	94	89517	0.5000	0.4883	
94 Bromoform	173	11.835	11.835	0.000	94	10815	0.5000	0.4222	
95 Isopropylbenzene	105	11.969	11.969	0.000	96	144191	0.5000	0.4991	
$ 98 4-Bromofluorobenzene (Surr)	95	12.109	12.109	0.000	91	715715	10.0	9.95	
99 1,1,2,2-Tetrachloroethane	83	12.219	12.219	0.000	93	26594	0.5000	0.5171	
100 Bromobenzene	156	12.231	12.231	0.000	91	35338	0.5000	0.5005	
101 trans-1,4-Dichloro-2-butene	53	12.243	12.243	0.000	95	65511	5.00	4.60	
102 1,2,3-Trichloropropane	110	12.262	12.268	-0.006	81	7433	0.5000	0.5310	
103 N-Propylbenzene	91	12.298	12.298	0.000	99	167830	0.5000	0.5062	
104 2-Chlorotoluene	126	12.378	12.377	0.001	96	33943	0.5000	0.5006	
105 1,3,5-Trimethylbenzene	105	12.438	12.438	0.000	94	123379	0.5000	0.5024	
106 4-Chlorotoluene	126	12.469	12.469	0.000	98	35497	0.5000	0.5037	
107 tert-Butylbenzene	134	12.682	12.682	0.000	93	25380	0.5000	0.4753	
108 Pentachloroethane	167	12.713	12.713	0.000	77	18671	0.5000	0.4682	
109 1,2,4-Trimethylbenzene	105	12.725	12.725	0.000	98	128573	0.5000	0.5103	
110 sec-Butylbenzene	105	12.847	12.847	0.000	94	159853	0.5000	0.5052	
111 1,3-Dichlorobenzene	146	12.944	12.944	0.000	98	72046	0.5000	0.5108	
112 4-Isopropyltoluene	119	12.957	12.957	0.000	97	136940	0.5000	0.4962	
* 113 1,4-Dichlorobenzene-d4	152	12.999	12.999	0.000	96	823493	10.0	10.0	
114 1,4-Dichlorobenzene	146	13.018	13.017	0.001	94	75027	0.5000	0.5169	
115 1,2,3-Trimethylbenzene	120	13.030	13.030	0.000	99	55416	0.5000	0.5011	
116 Benzyl chloride	126	13.103	13.103	0.000	99	9231	0.5000	0.4513	
119 n-Butylbenzene	92	13.249	13.249	0.000	98	67384	0.5000	0.4819	
120 1,2-Dichlorobenzene	146	13.280	13.286	-0.006	97	66856	0.5000	0.5023	
118 p-Diethylbenzene	119	13.304	13.304	0.000	0	67208	0.5000	0.4797	
123 1,2-Dibromo-3-Chloropropane	155	13.835	13.834	0.001	83	3372	0.5000	0.4781	
124 1,3,5-Trichlorobenzene	180	13.956	13.956	0.000	98	57894	0.5000	0.5031	
125 1,2,4-Trichlorobenzene	180	14.389	14.383	0.006	93	52641	0.5000	0.5099	
126 Hexachlorobutadiene	225	14.469	14.468	0.001	97	25396	0.5000	0.5037	
127 Naphthalene	128	14.572	14.566	0.006	97	93520	0.5000	0.5078	
128 1,2,3-Trichlorobenzene	180	14.712	14.712	0.000	96	47610	0.5000	0.5210	
129 2-Methylnaphthalene	142	15.346	15.340	0.006	0	61192	0.5000	0.4914	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MSV_RV1_826_00022	Amount Added:	2.00	Units: uL	
MSV_RV4_826_00024	Amount Added:	2.00	Units: uL	
MSV_RV4GAS826_00072	Amount Added:	2.00	Units: uL	
MSV_25_826ISS_00001	Amount Added:	1.00	Units: uL	Run Reagent

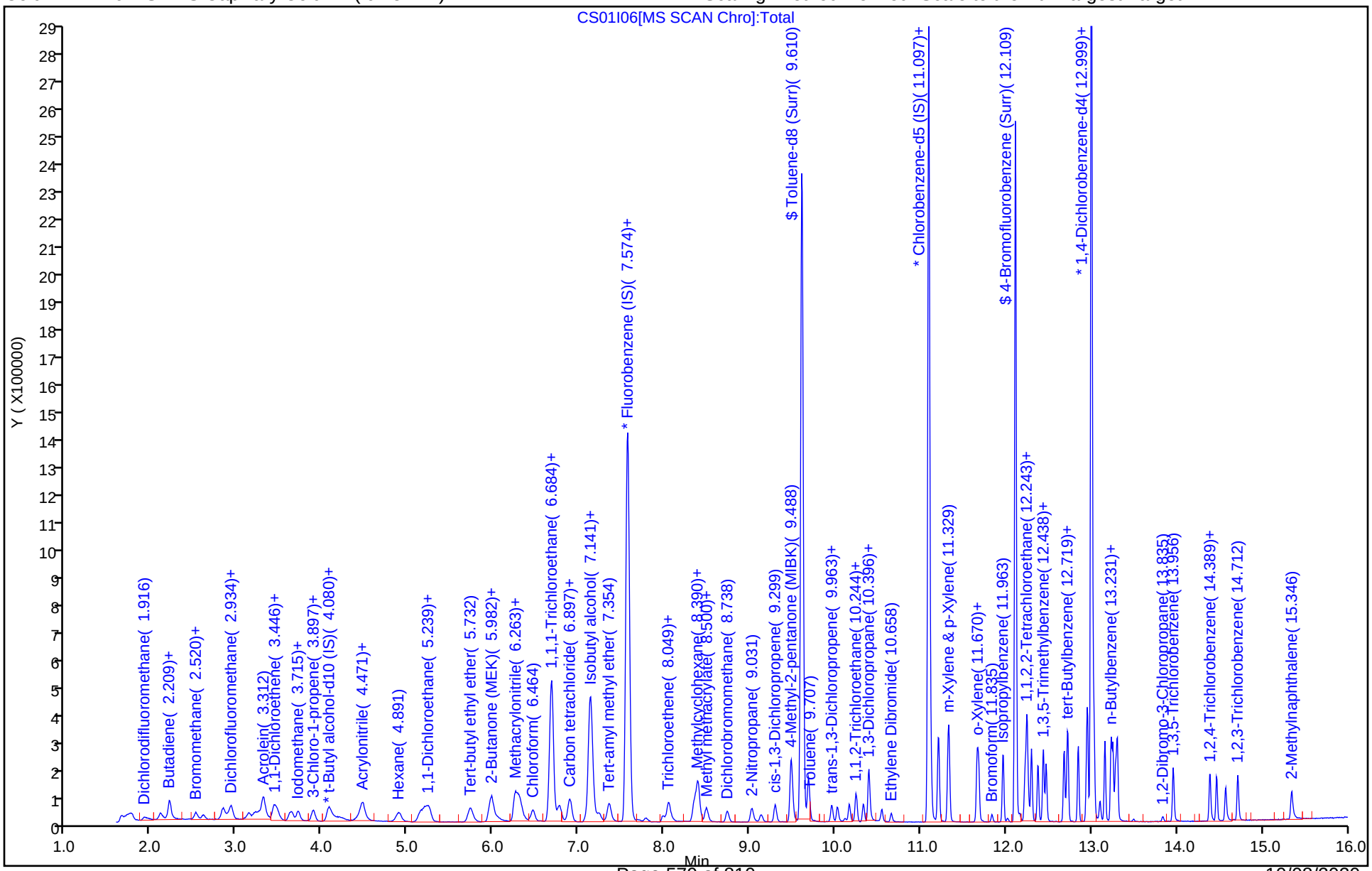
Report Date: 01-Sep-2020 20:10:58 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I06.D

Injection Date:	01-Sep-2020 15:26:30	Instrument ID:	10193	Operator ID:	dvv10203
Lims ID:	IC STD2			Worklist Smp#:	8
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MSV_10193_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



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

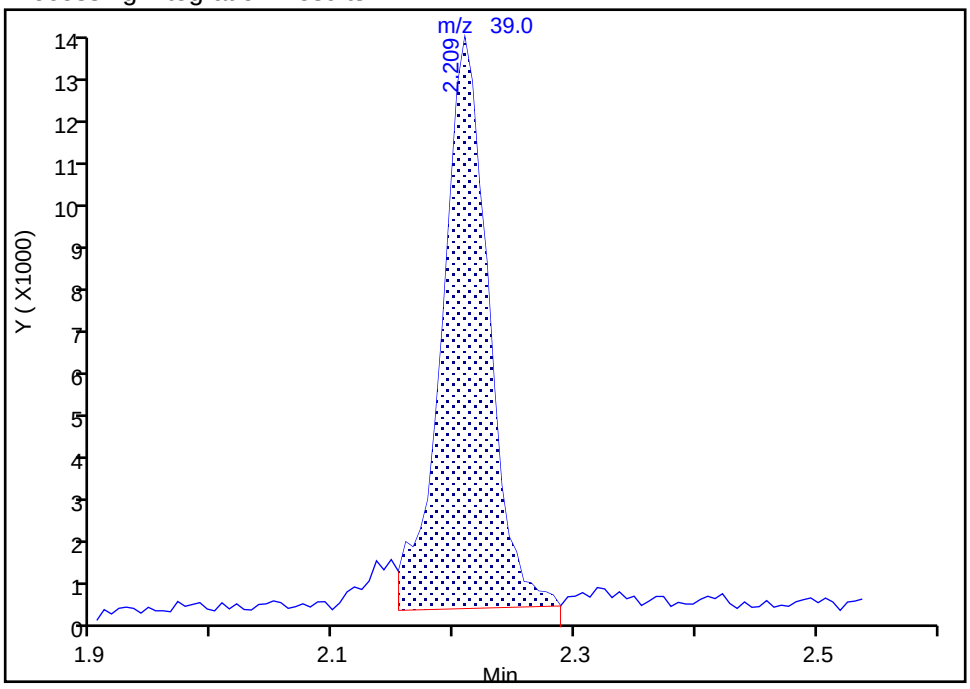
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I06.D
Injection Date: 01-Sep-2020 15:26:30 Instrument ID: 10193
Lims ID: IC STD2
Client ID:
Operator ID: dvv10203 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

4 Butadiene, CAS: 106-99-0

Signal: 1

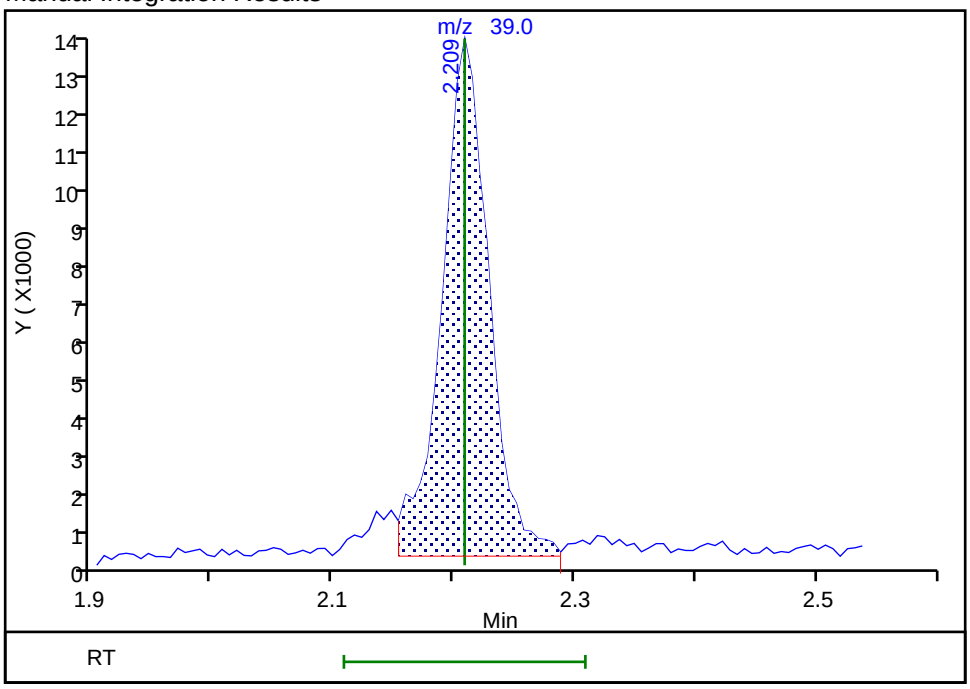
Processing Integration Results

RT: 2.21
Area: 36737
Amount: 0.531655
Amount Units: ug/l



Manual Integration Results

RT: 2.21
Area: 37166
Amount: 0.535389
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:04:06
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

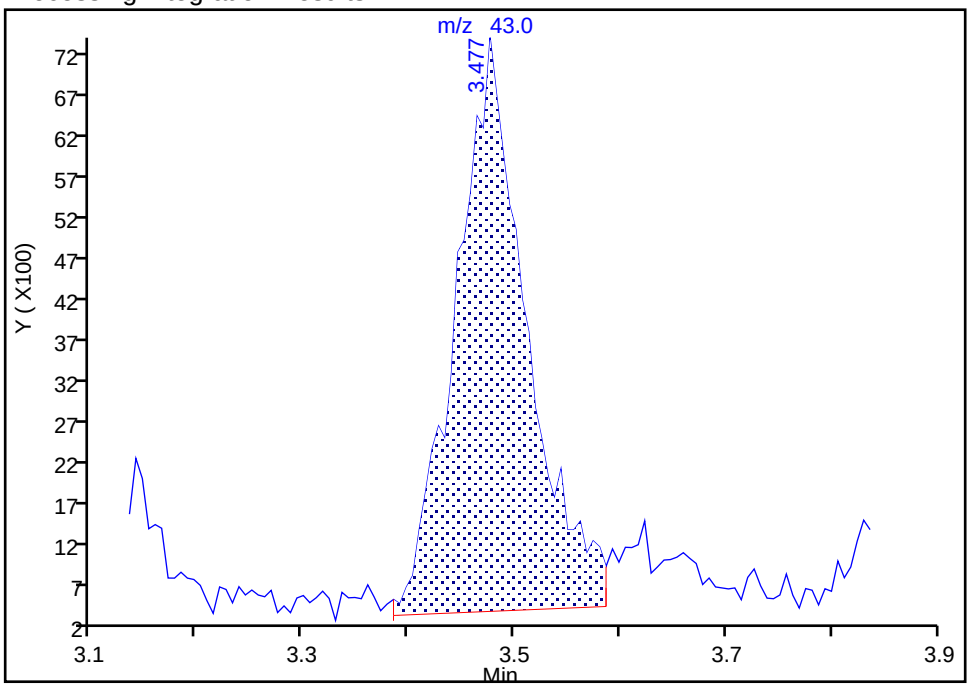
Data File:	\\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I06.D				
Injection Date:	01-Sep-2020 15:26:30	Instrument ID:	10193		
Lims ID:	IC STD2				
Client ID:					
Operator ID:	dvv10203	ALS Bottle#:	7	Worklist Smp#:	8
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

16 Acetone, CAS: 67-64-1

Signal: 1

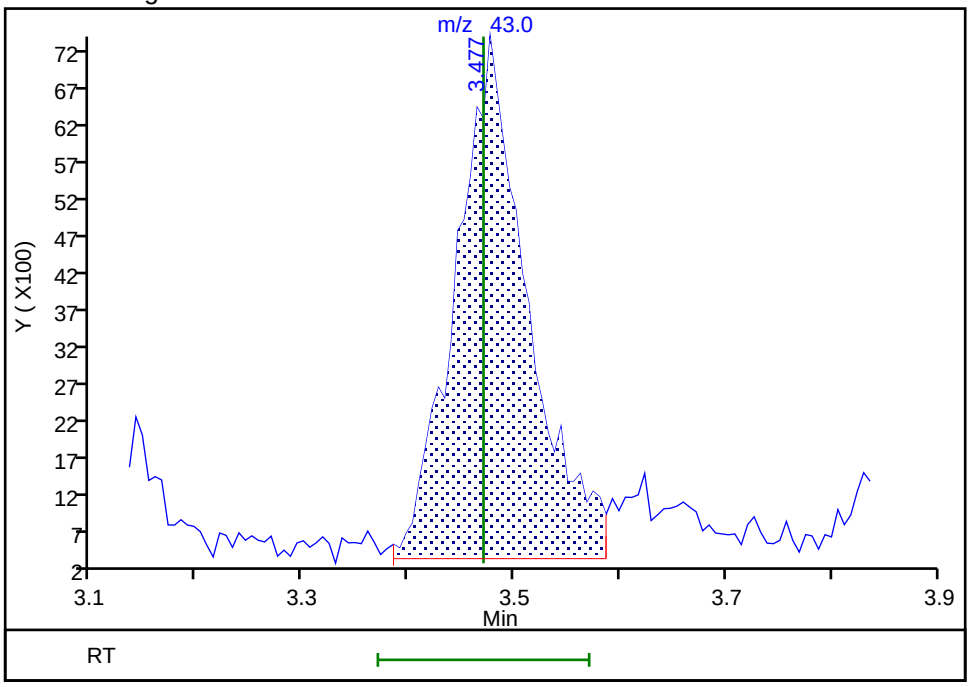
Processing Integration Results

RT: 3.48
Area: 32844
Amount: 5.326538
Amount Units: ug/l



Manual Integration Results

RT: 3.48
Area: 33503
Amount: 5.416872
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:04:18
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

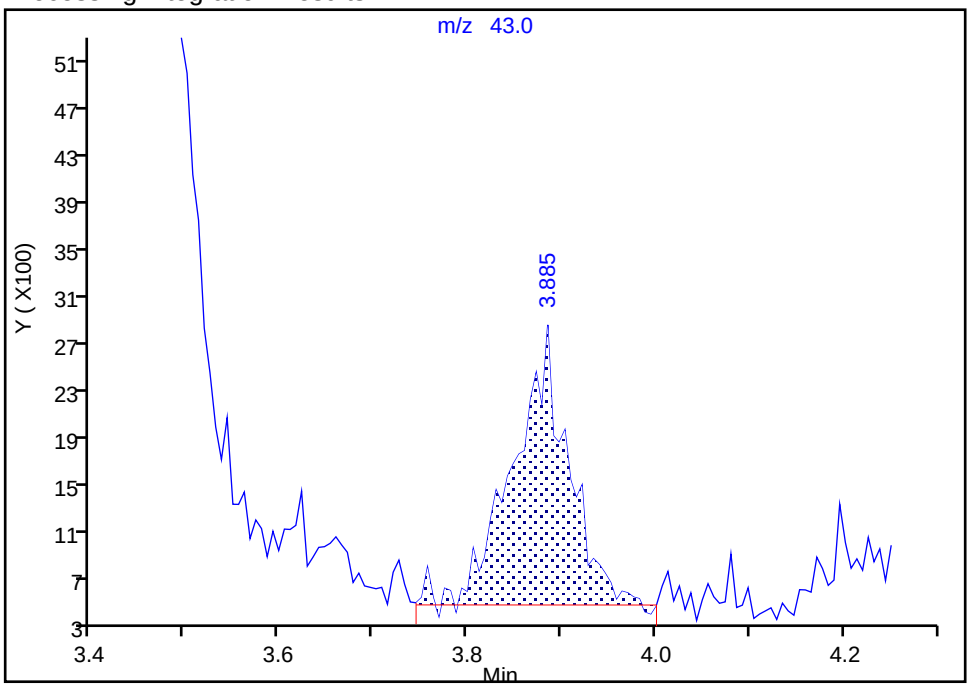
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I06.D
Injection Date: 01-Sep-2020 15:26:30 Instrument ID: 10193
Lims ID: IC STD2
Client ID:
Operator ID: dvv10203 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

22 Methyl acetate, CAS: 79-20-9

Signal: 1

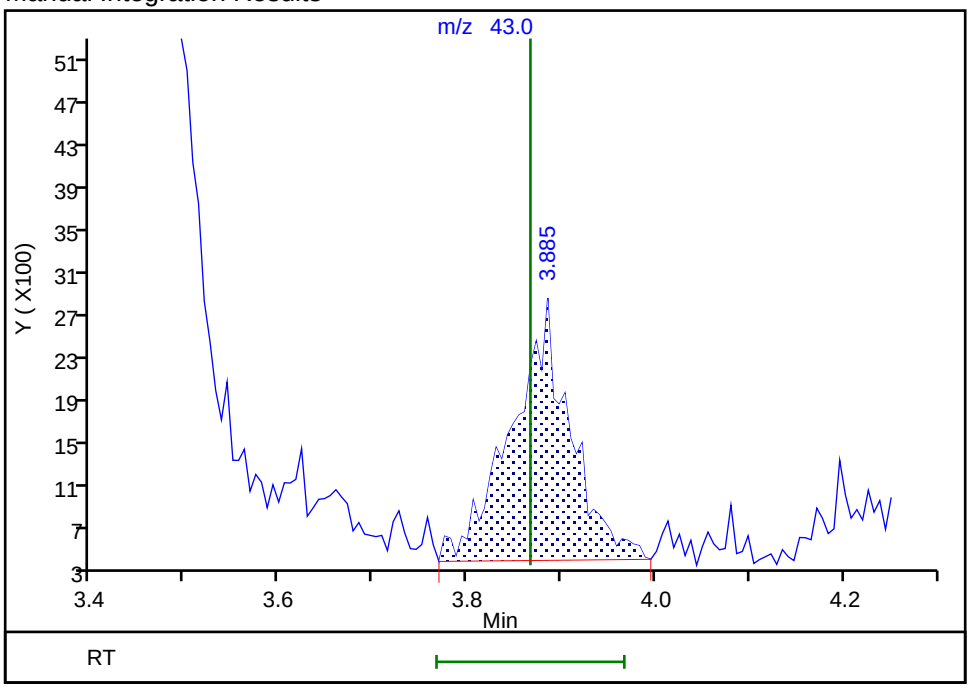
Processing Integration Results

RT: 3.89
Area: 9648
Amount: 0.319685
Amount Units: ug/l



Manual Integration Results

RT: 3.89
Area: 10666
Amount: 0.438891
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:04:37
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

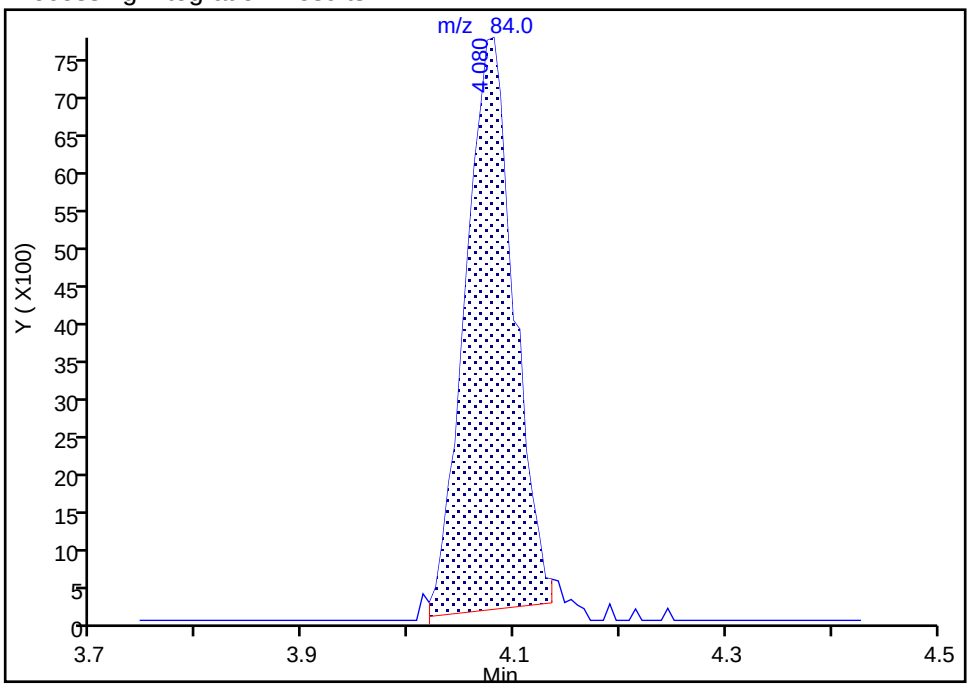
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I06.D
Injection Date: 01-Sep-2020 15:26:30 Instrument ID: 10193
Lims ID: IC STD2
Client ID:
Operator ID: dvv10203 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

24 Methylene Chloride, CAS: 75-09-2

Signal: 1

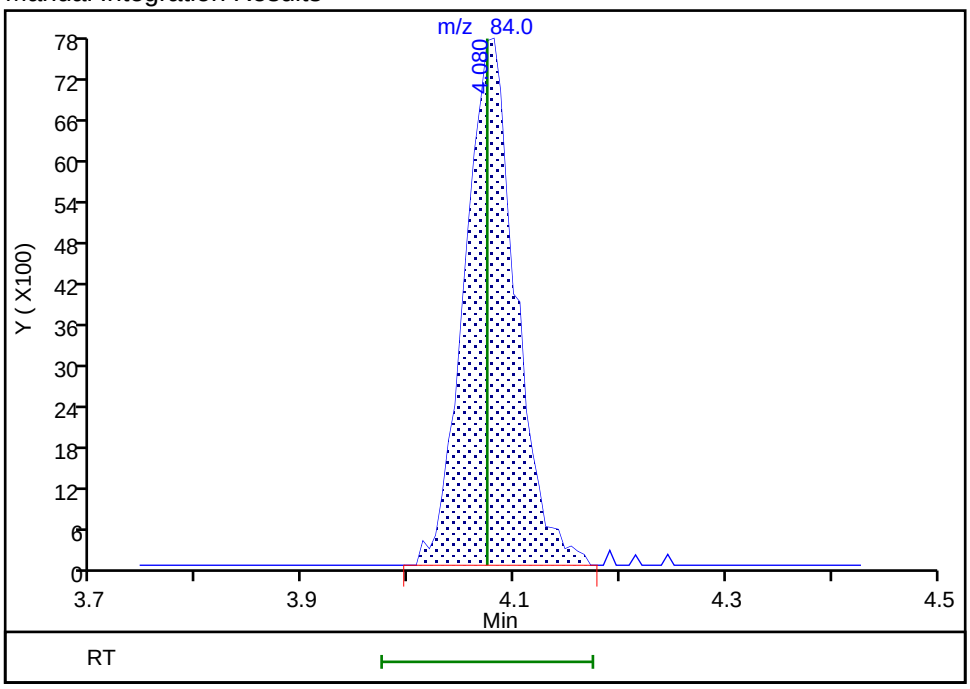
Processing Integration Results

RT: 4.08
Area: 24403
Amount: 0.493670
Amount Units: ug/l



Manual Integration Results

RT: 4.08
Area: 26091
Amount: 0.522718
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:04:54
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

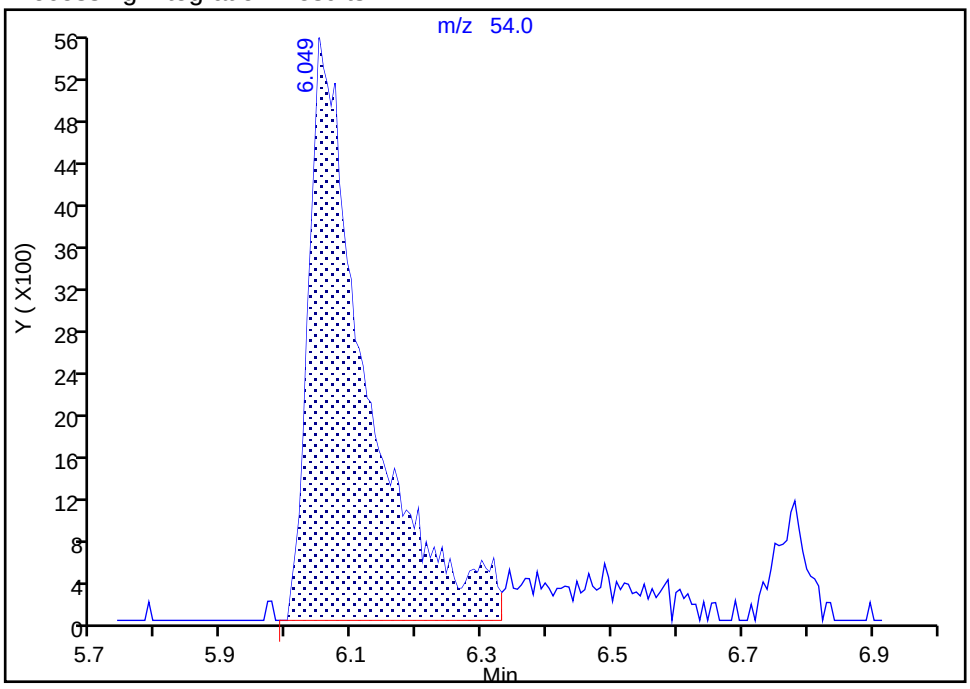
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I06.D
Injection Date: 01-Sep-2020 15:26:30 Instrument ID: 10193
Lims ID: IC STD2
Client ID:
Operator ID: dvv10203 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

40 Propionitrile, CAS: 107-12-0

Signal: 1

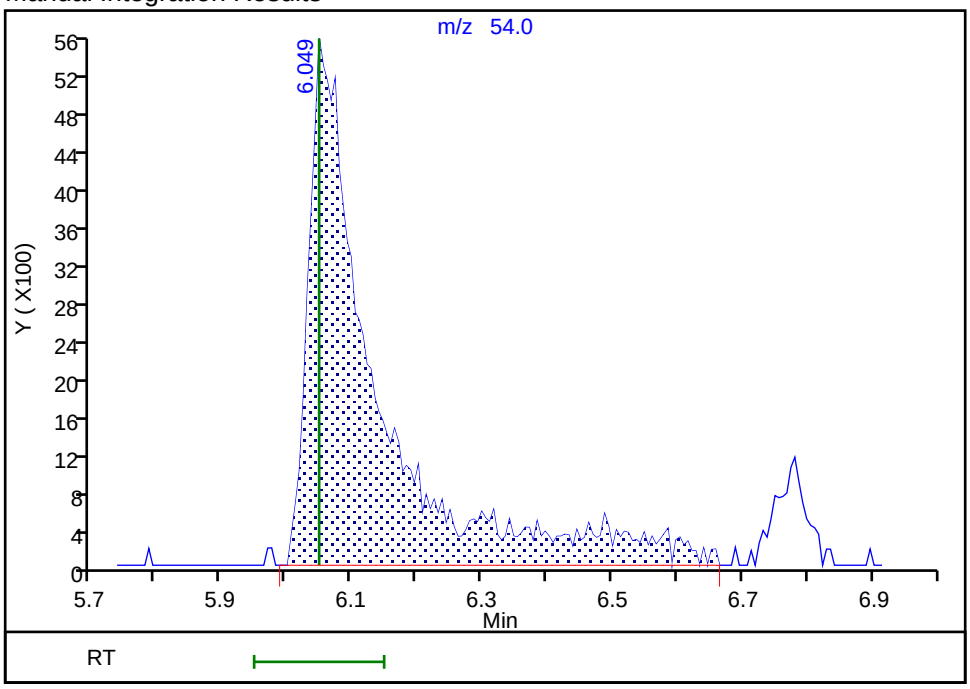
Processing Integration Results

RT: 6.05
Area: 33664
Amount: 9.345852
Amount Units: ug/l



Manual Integration Results

RT: 6.05
Area: 39217
Amount: 10.652873
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:05:07
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

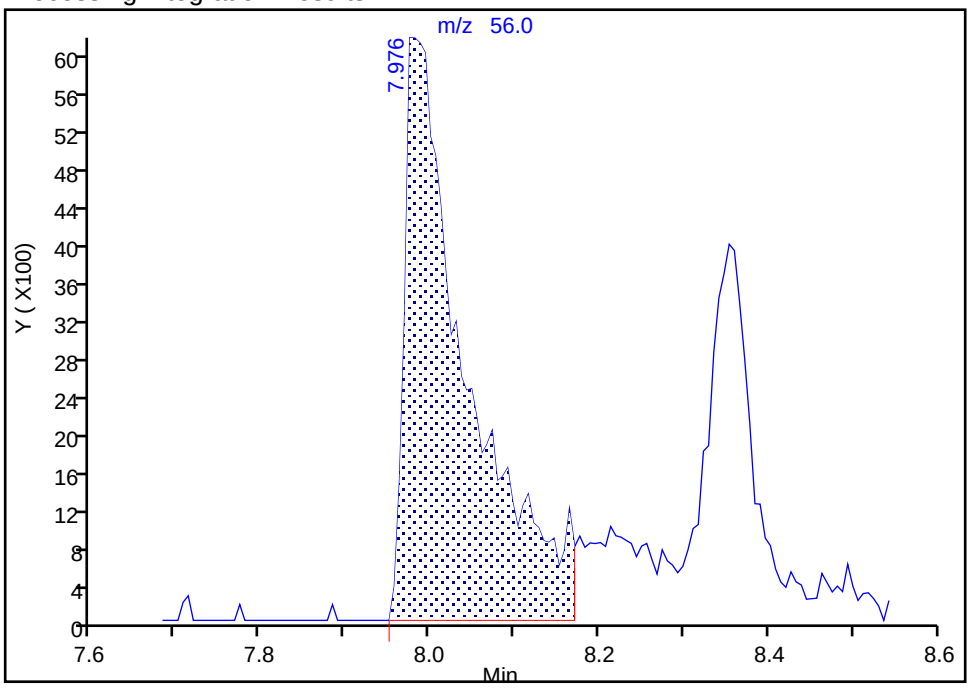
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I06.D
Injection Date: 01-Sep-2020 15:26:30 Instrument ID: 10193
Lims ID: IC STD2
Client ID:
Operator ID: dvv10203 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

59 n-Butanol, CAS: 71-36-3

Signal: 1

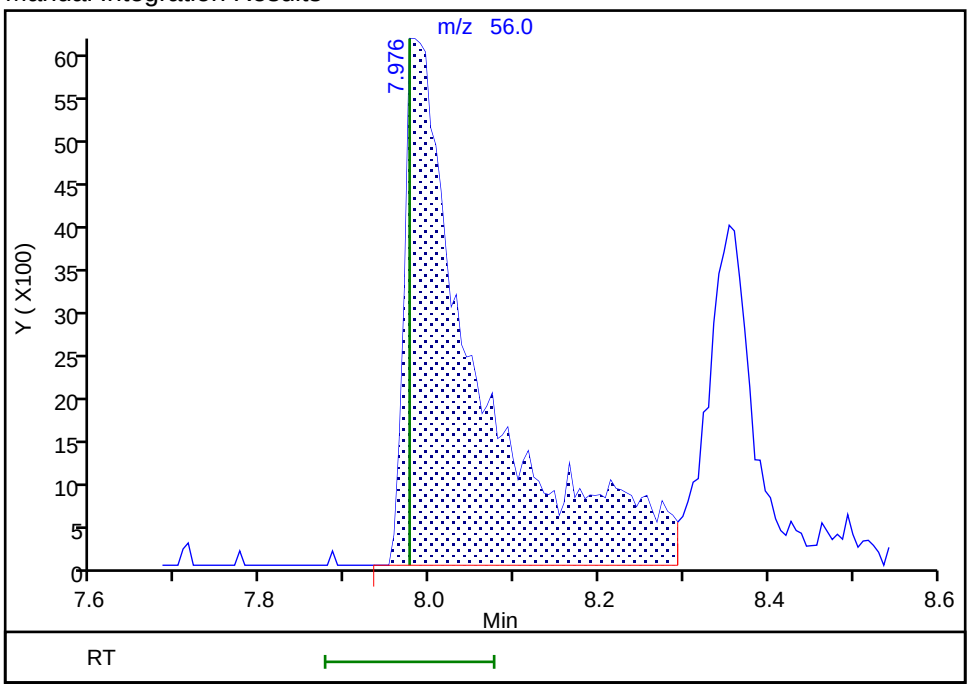
Processing Integration Results

RT: 7.98
Area: 31328
Amount: 41.986609
Amount Units: ug/l



Manual Integration Results

RT: 7.98
Area: 36853
Amount: 47.321069
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:16:57
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

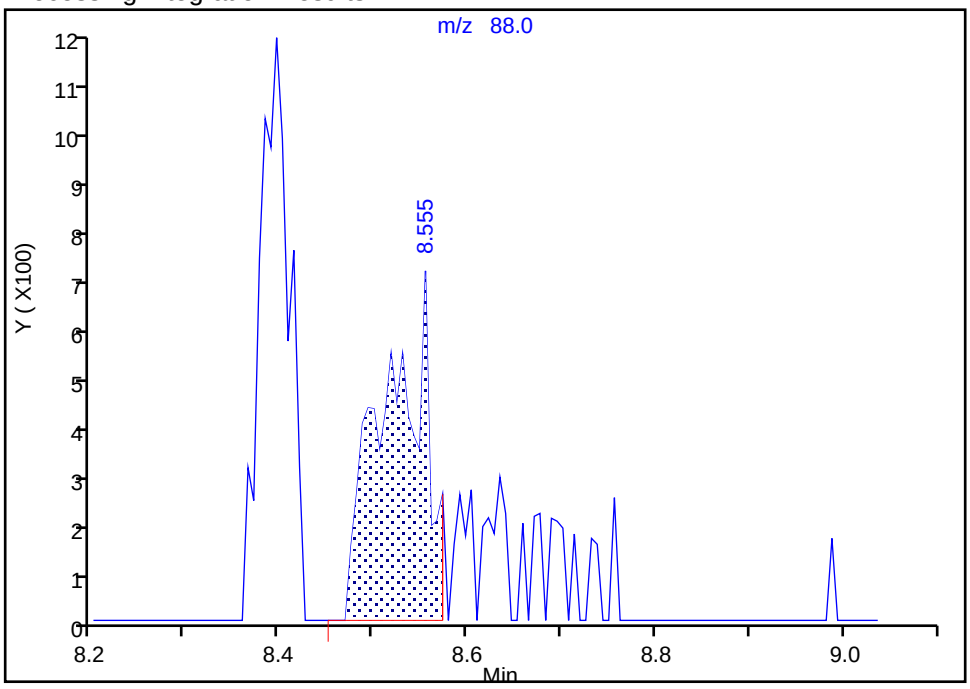
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I06.D
Injection Date: 01-Sep-2020 15:26:30 Instrument ID: 10193
Lims ID: IC STD2
Client ID:
Operator ID: dvv10203 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

65 1,4-Dioxane, CAS: 123-91-1

Signal: 1

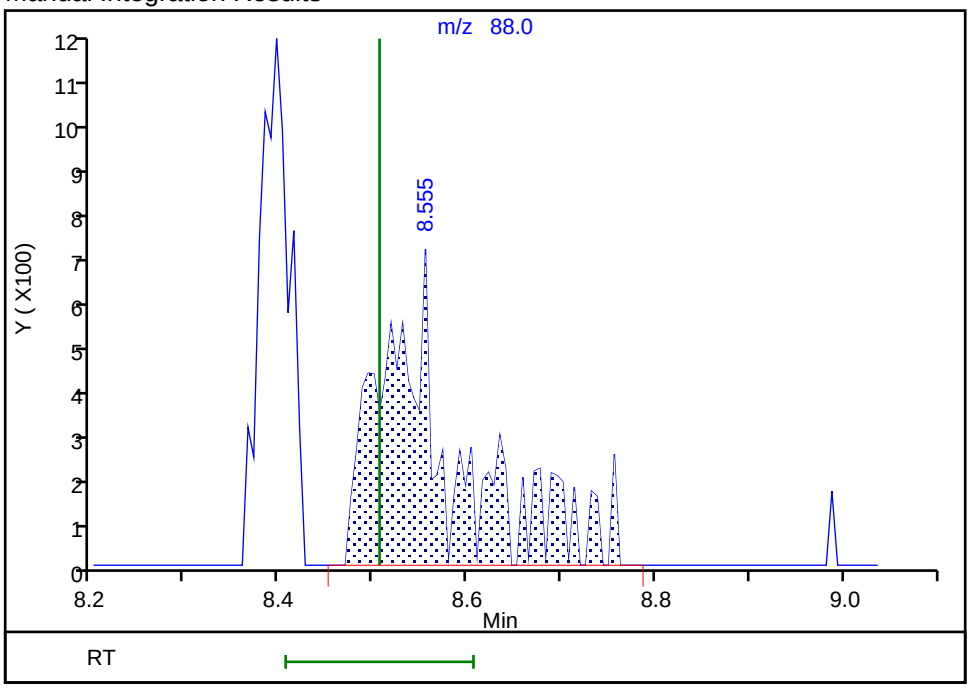
Processing Integration Results

RT: 8.56
Area: 2364
Amount: 15.473810
Amount Units: ug/l



Manual Integration Results

RT: 8.56
Area: 3795
Amount: 24.473370
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:05:22
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I07.D
Lims ID: IC STD1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 01-Sep-2020 15:48:30 ALS Bottle#: 8 Worklist Smp#: 9
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: IC STD1
Misc. Info.: 410-0009503-009
Operator ID: dvv10203 Instrument ID: 10193
Sublist: chrom-MSV_10193_25mL*sub1

Method: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 01-Sep-2020 20:11:06 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1059

First Level Reviewer: campbellme Date: 01-Sep-2020 16:26:38

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.904	1.910	-0.006	97	11305	0.2000	0.1809	
3 Chloromethane	50	2.093	2.099	-0.006	99	15951	0.2000	0.2165	
4 Butadiene	39	2.197	2.209	-0.012	91	14355	0.2000	0.2071	M
5 Vinyl chloride	62	2.215	2.215	0.000	85	14371	0.2000	0.2110	
6 Bromomethane	94	2.514	2.520	-0.006	93	10152	0.2000	0.2112	
7 Chloroethane	64	2.587	2.605	-0.018	99	9373	0.2000	0.2227	
8 Dichlorofluoromethane	67	2.825	2.837	-0.013	96	19377	0.2000	0.2122	
9 Trichlorofluoromethane	101	2.892	2.898	-0.006	96	17838	0.2000	0.2013	
11 Ethyl ether	59	3.123	3.135	-0.012	92	9388	0.2000	0.2091	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.215	3.208	0.007	93	15559	0.2000	0.2365	
13 Acrolein	56	3.300	3.306	-0.006	97	57475	10.0	10.1	
14 1,1-Dichloroethene	96	3.416	3.428	-0.012	98	9367	0.2000	0.2092	
15 112TCTFE	101	3.471	3.464	0.007	85	8535	0.2000	0.1874	
16 Acetone	43	3.465	3.471	-0.006	96	13971	2.00	2.30	
17 Iodomethane	142	3.611	3.617	-0.006	100	18680	0.2000	0.2112	
19 Ethyl bromide	108	3.641	3.641	0.000	98	7374	0.2001	0.1983	
18 Isopropyl alcohol	45	3.629	3.647	-0.018	52	7471	4.00	11.4	
20 Carbon disulfide	76	3.702	3.708	-0.006	100	33471	0.2000	0.2116	
22 Methyl acetate	43	3.879	3.867	0.012	26	5400	0.2000	0.2266	
23 3-Chloro-1-propene	41	3.873	3.891	-0.018	88	16597	0.2000	0.2118	
24 Methylene Chloride	84	4.068	4.074	-0.006	98	10355	0.2000	0.2078	
* 25 t-Butyl alcohol-d10 (IS)	65	4.093	4.111	-0.018	94	142677	50.0	50.0	
26 2-Methyl-2-propanol	59	4.208	4.227	-0.018	97	12311	4.00	4.33	
27 Acrylonitrile	53	4.434	4.409	0.025	96	10290	1.00	1.07	
28 Methyl tert-butyl ether	73	4.440	4.464	-0.024	96	31299	0.2000	0.2159	
29 trans-1,2-Dichloroethene	96	4.458	4.470	-0.012	97	10888	0.2000	0.2080	
30 Hexane	57	4.891	4.897	-0.006	94	14606	0.2000	0.1979	
32 1,1-Dichloroethane	63	5.129	5.135	-0.006	96	20597	0.2000	0.2137	
33 Isopropyl ether	45	5.196	5.196	0.000	95	38832	0.2000	0.2114	
34 2-Chloro-1,3-butadiene	53	5.233	5.251	-0.018	95	19967	0.2000	0.2199	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
35 Tert-butyl ethyl ether	59	5.726	5.732	-0.006	97	36977	0.2000	0.2107	
36 2-Butanone (MEK)	43	5.964	5.946	0.018	95	31084	2.00	2.19	
37 cis-1,2-Dichloroethene	96	5.976	5.970	0.006	84	12683	0.2000	0.2137	
38 2,2-Dichloropropane	77	5.989	5.988	0.001	72	17391	0.2000	0.2091	
40 Propionitrile	54	6.080	6.049	0.031	88	12804	4.00	3.55	
S 42 1,2-Dichloroethene, Total	100				0			0.4217	
43 Methacrylonitrile	67	6.257	6.251	0.007	89	27261	2.00	1.95	
44 Chlorobromomethane	128	6.299	6.305	-0.006	83	5261	0.2000	0.2014	
45 Tetrahydrofuran	71	6.318	6.305	0.013	89	7984	2.00	1.98	
46 Chloroform	83	6.458	6.464	-0.006	93	20153	0.2000	0.2110	
$ 47 Dibromofluoromethane (Surr)	113	6.677	6.683	-0.006	93	459388	10.0	9.98	
48 1,1,1-Trichloroethane	97	6.671	6.683	-0.012	37	17452	0.2000	0.2028	
49 Cyclohexane	56	6.775	6.775	0.000	93	18443	0.2000	0.2027	
50 Carbon tetrachloride	117	6.891	6.891	0.000	92	14471	0.2000	0.2008	
51 1,1-Dichloropropene	75	6.897	6.897	0.000	89	16330	0.2000	0.2114	
52 Isobutyl alcohol	41	7.092	7.086	0.006	90	10703	10.0	11.6	M
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.135	7.134	0.001	0	92975	10.0	9.92	
54 Benzene	78	7.159	7.159	0.000	94	46486	0.2000	0.2090	
55 1,2-Dichloroethane	62	7.238	7.238	0.000	79	16105	0.2000	0.2402	
56 Tert-amyl methyl ether	73	7.348	7.360	-0.012	96	34074	0.2000	0.2132	
* 57 Fluorobenzene (IS)	96	7.567	7.573	-0.006	99	1936882	10.0	10.0	
58 n-Heptane	43	7.574	7.580	-0.006	37	16903	0.2000	0.2057	
59 n-Butanol	56	8.000	7.976	0.024	81	15142	20.0	19.8	M
60 Trichloroethene	95	8.049	8.049	0.000	96	11853	0.2000	0.2067	
61 Methylcyclohexane	83	8.354	8.354	0.000	87	15190	0.2000	0.1729	
62 1,2-Dichloropropane	63	8.384	8.390	-0.006	73	12253	0.2000	0.2145	
63 2-ethoxy-2-methyl butane	87	8.397	8.396	0.001	89	17738	0.2000	0.1995	
64 Methyl methacrylate	69	8.482	8.482	0.000	89	6103	0.2000	0.2047	
66 Dibromomethane	93	8.512	8.494	0.018	86	6094	0.2000	0.2180	
65 1,4-Dioxane	88	8.506	8.506	0.000	33	1094	10.0	7.20	M
67 Dichlorobromomethane	83	8.738	8.738	0.000	96	14281	0.2000	0.2071	
68 2-Nitropropane	41	9.025	9.024	0.001	99	17977	2.00	1.94	
71 1-Bromo-2-chloroethane	63	9.134	9.134	0.000	98	11914	0.2000	0.2016	
72 cis-1,3-Dichloropropene	75	9.299	9.299	0.000	93	17450	0.2000	0.2036	
73 4-Methyl-2-pentanone (MIBK)	43	9.488	9.488	0.000	98	79991	2.00	1.94	
$ 74 Toluene-d8 (Surr)	98	9.610	9.610	0.000	95	1926152	10.0	10.0	
75 Toluene	92	9.689	9.689	0.000	97	29375	0.2000	0.2037	
76 trans-1,3-Dichloropropene	75	9.957	9.957	0.000	96	14266	0.2000	0.1975	
78 Ethyl methacrylate	69	10.030	10.024	0.006	89	11251	0.2000	0.1846	
S 77 1,3-Dichloropropene, Total	100				0			0.4011	
79 1,1,2-Trichloroethane	97	10.165	10.164	0.001	91	8186	0.2000	0.2055	
80 Tetrachloroethene	166	10.244	10.250	-0.006	96	13549	0.2000	0.2103	
81 1,3-Dichloropropane	76	10.329	10.329	0.000	93	14740	0.2000	0.2099	
82 2-Hexanone	43	10.396	10.396	0.000	97	53208	2.00	1.82	
83 Chlorodibromomethane	129	10.543	10.548	-0.006	92	8028	0.2000	0.1737	
84 Ethylene Dibromide	107	10.658	10.658	0.000	99	7944	0.2000	0.2020	
* 85 Chlorobenzene-d5 (IS)	117	11.097	11.097	0.000	87	1468133	10.0	10.0	
86 1-Chlorohexane	91	11.103	11.109	-0.006	82	18891	0.2000	0.2294	
87 Chlorobenzene	112	11.122	11.122	0.000	97	34035	0.2000	0.2090	
89 1,1,1,2-Tetrachloroethane	131	11.207	11.207	0.000	93	10641	0.2000	0.1921	
90 Ethylbenzene	91	11.213	11.213	0.000	99	59671	0.2000	0.2088	
S 88 Xylenes, Total	106				0			0.5952	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
91 m-Xylene & p-Xylene	106	11.329	11.329	0.000	0	43867	0.4000	0.3928	
92 o-Xylene	106	11.664	11.664	0.000	97	22149	0.2000	0.2024	
93 Styrene	104	11.676	11.676	0.000	95	35521	0.2000	0.1934	
94 Bromoform	173	11.835	11.835	0.000	94	4087	0.2000	0.1592	
95 Isopropylbenzene	105	11.969	11.969	0.000	96	57134	0.2000	0.1974	
$ 98 4-Bromofluorobenzene (Surr)	95	12.109	12.109	0.000	90	711441	10.0	9.87	
99 1,1,2,2-Tetrachloroethane	83	12.219	12.219	0.000	62	10523	0.2000	0.2064	
100 Bromobenzene	156	12.225	12.231	-0.006	96	15119	0.2000	0.2160	
101 trans-1,4-Dichloro-2-butene	53	12.249	12.243	0.006	93	25153	2.00	1.78	
102 1,2,3-Trichloropropane	110	12.268	12.268	0.000	82	2945	0.2000	0.2122	
103 N-Propylbenzene	91	12.298	12.298	0.000	98	67115	0.2000	0.2042	
104 2-Chlorotoluene	126	12.378	12.377	0.001	97	14651	0.2000	0.2179	
105 1,3,5-Trimethylbenzene	105	12.438	12.438	0.000	92	50066	0.2000	0.2056	
106 4-Chlorotoluene	126	12.475	12.469	0.006	96	14993	0.2000	0.2146	
107 tert-Butylbenzene	134	12.682	12.682	0.000	93	12027	0.2000	0.2272	
108 Pentachloroethane	167	12.713	12.713	0.000	76	6746	0.2000	0.1706	
109 1,2,4-Trimethylbenzene	105	12.725	12.725	0.000	98	48590	0.2000	0.1945	
110 sec-Butylbenzene	105	12.847	12.847	0.000	94	63813	0.2000	0.2034	
111 1,3-Dichlorobenzene	146	12.944	12.944	0.000	97	28222	0.2000	0.2018	
112 4-Isopropyltoluene	119	12.957	12.957	0.000	98	54332	0.2000	0.1986	
* 113 1,4-Dichlorobenzene-d4	152	12.999	12.999	0.000	96	816488	10.0	10.0	
114 1,4-Dichlorobenzene	146	13.018	13.017	0.001	93	30493	0.2000	0.2119	
115 1,2,3-Trimethylbenzene	120	13.030	13.030	0.000	98	22229	0.2000	0.2027	
116 Benzyl chloride	126	13.103	13.103	0.000	98	3443	0.2000	0.1698	
119 n-Butylbenzene	92	13.249	13.249	0.000	98	26466	0.2000	0.1909	
120 1,2-Dichlorobenzene	146	13.286	13.286	0.000	97	26969	0.2000	0.2044	
118 p-Diethylbenzene	119	13.304	13.304	0.000	0	28577	0.2000	0.2057	
123 1,2-Dibromo-3-Chloropropane	155	13.841	13.834	0.007	80	1161	0.2000	0.1660	
124 1,3,5-Trichlorobenzene	180	13.963	13.956	0.007	96	22982	0.2000	0.2014	
125 1,2,4-Trichlorobenzene	180	14.395	14.383	0.012	93	21212	0.2000	0.2072	
126 Hexachlorobutadiene	225	14.469	14.468	0.001	95	10701	0.2000	0.2141	
127 Naphthalene	128	14.578	14.566	0.012	97	36400	0.2000	0.1993	
128 1,2,3-Trichlorobenzene	180	14.719	14.712	0.007	94	18586	0.2000	0.2051	
129 2-Methylnaphthalene	142	15.353	15.340	0.013	0	23157	0.2000	0.1876	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MSV_RV1_826_00022	Amount Added:	2.00	Units: uL	
MSV_RV4_826_00024	Amount Added:	2.00	Units: uL	
MSV_RV4GAS826_00072	Amount Added:	2.00	Units: uL	
MSV_25_826ISS_00001	Amount Added:	1.00	Units: uL	Run Reagent

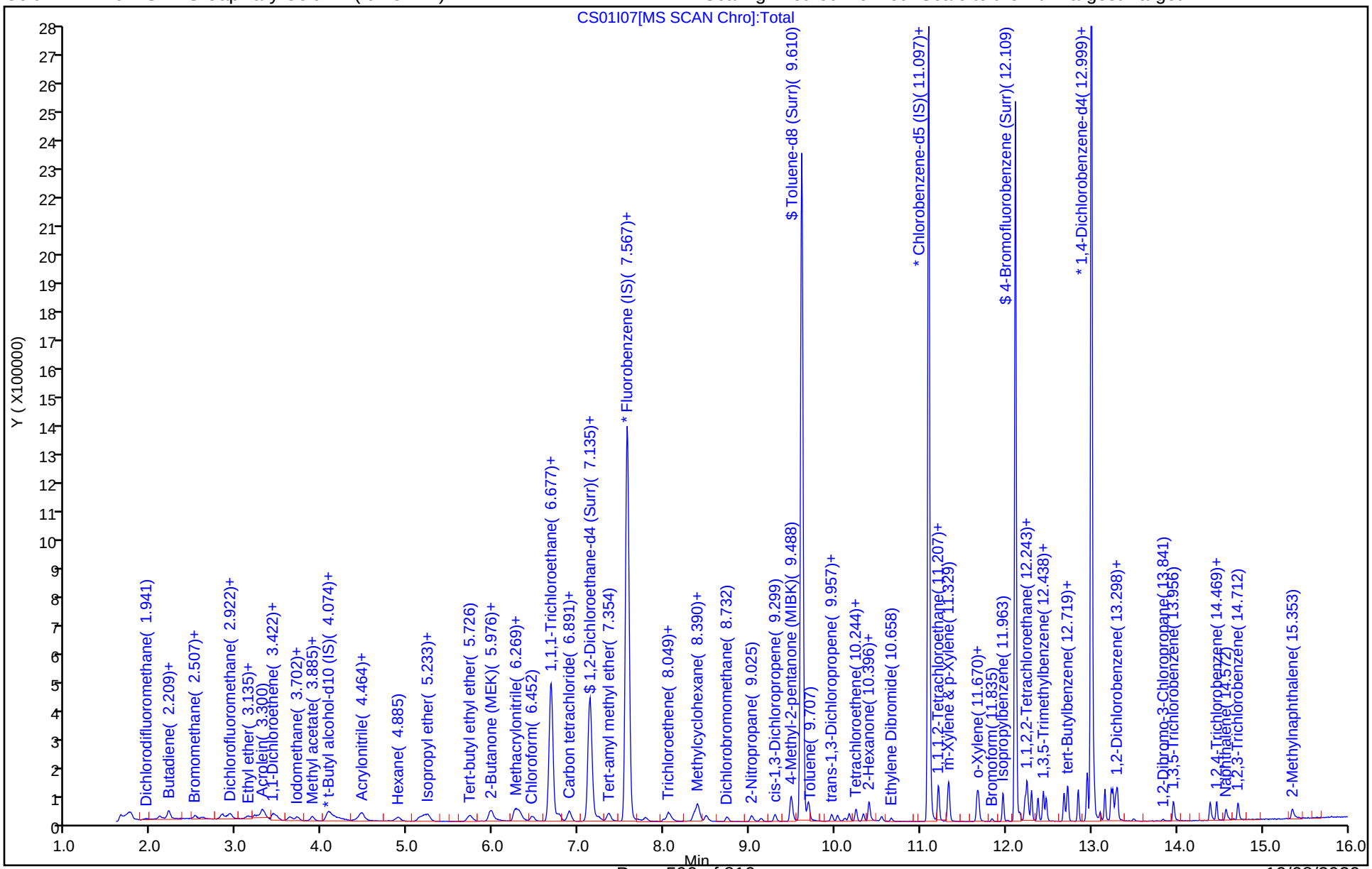
Report Date: 01-Sep-2020 20:11:07 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I07.D

Injection Date:	01-Sep-2020 15:48:30	Instrument ID:	10193	Operator ID:	dvv10203
Lims ID:	IC STD1			Worklist Smp#:	9
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MSV_10193_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



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

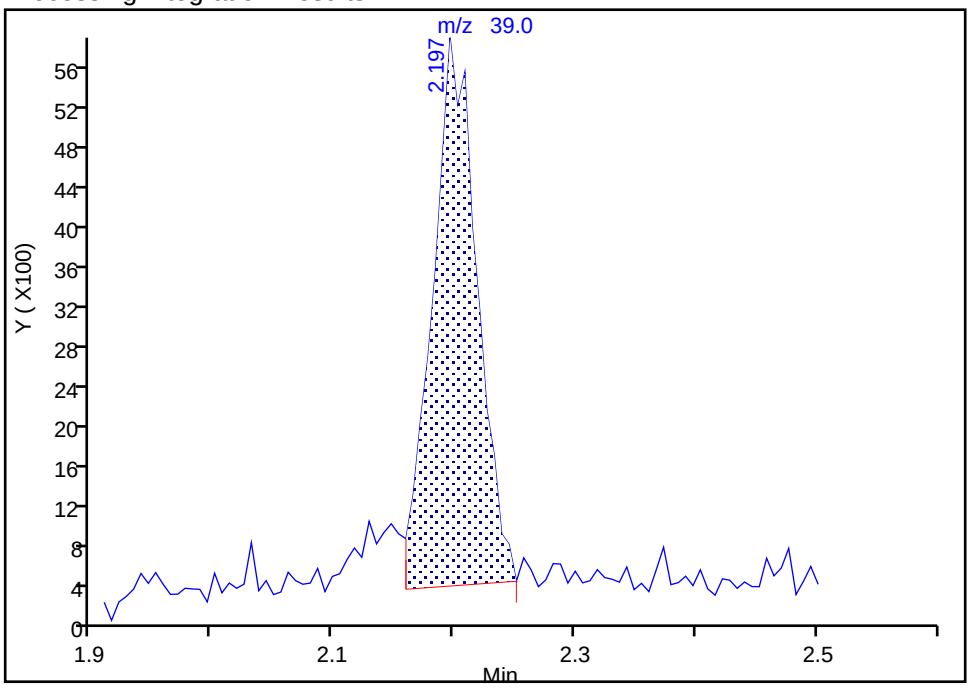
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I07.D
Injection Date: 01-Sep-2020 15:48:30 Instrument ID: 10193
Lims ID: IC STD1
Client ID:
Operator ID: dvv10203 ALS Bottle#: 8 Worklist Smp#: 9
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

4 Butadiene, CAS: 106-99-0

Signal: 1

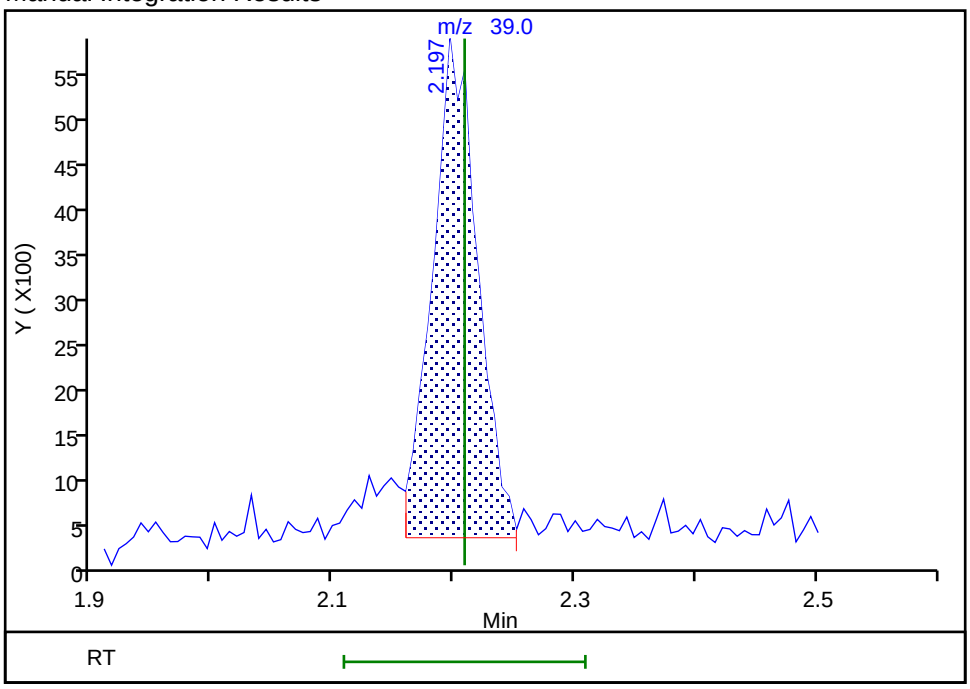
Processing Integration Results

RT: 2.20
Area: 14080
Amount: 0.203738
Amount Units: ug/l



Manual Integration Results

RT: 2.20
Area: 14355
Amount: 0.207128
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:06:05
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

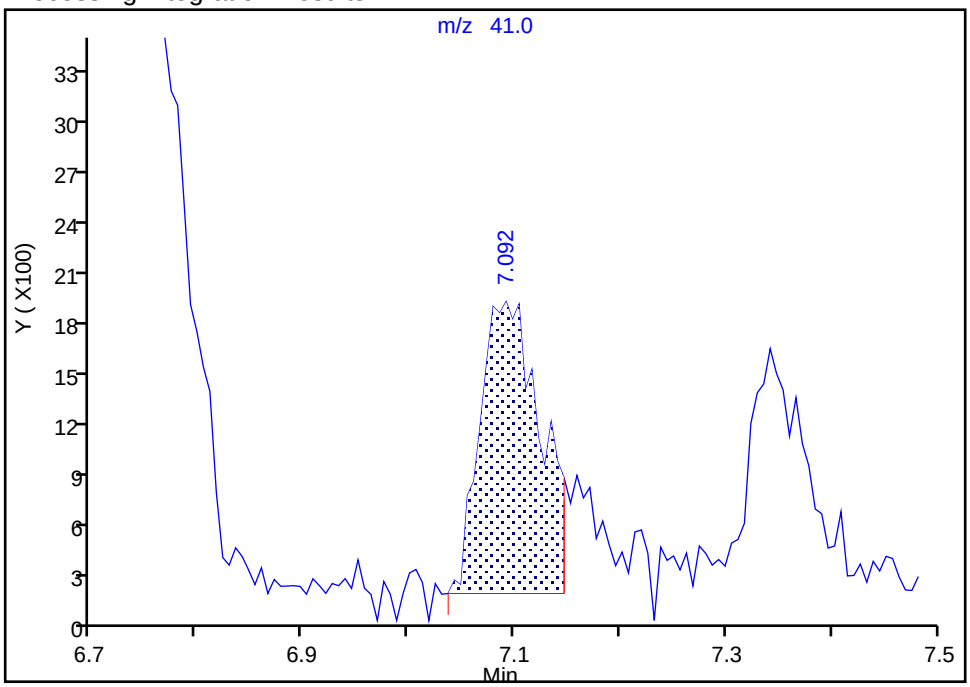
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I07.D
Injection Date: 01-Sep-2020 15:48:30 Instrument ID: 10193
Lims ID: IC STD1
Client ID:
Operator ID: dvv10203 ALS Bottle#: 8 Worklist Smp#: 9
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

52 Isobutyl alcohol, CAS: 78-83-1

Signal: 1

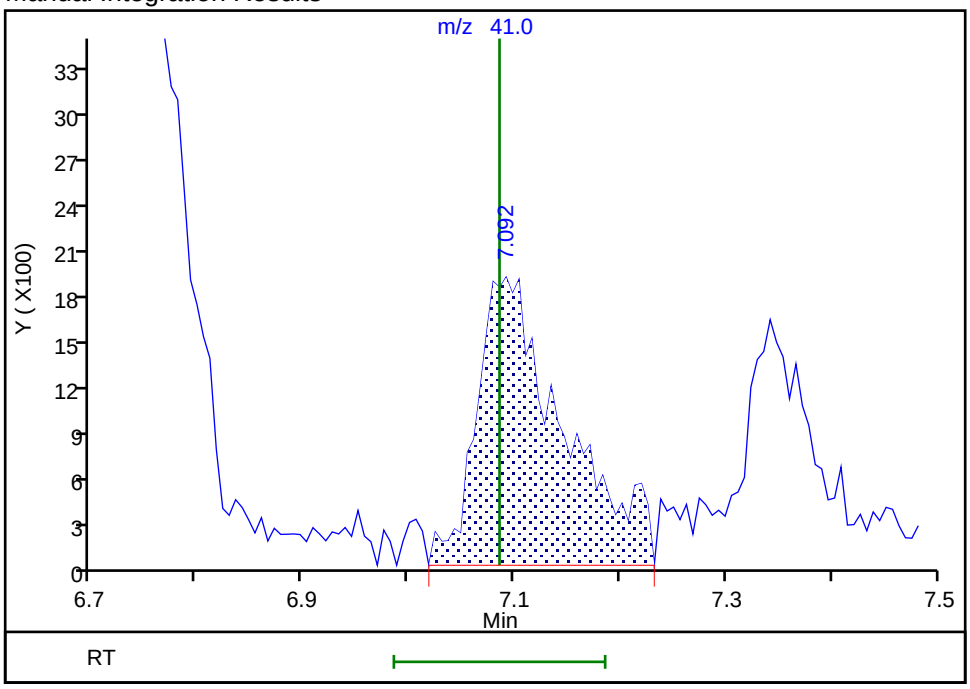
Processing Integration Results

RT: 7.09
Area: 6884
Amount: 7.941417
Amount Units: ug/l



Manual Integration Results

RT: 7.09
Area: 10703
Amount: 11.615957
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:06:35
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

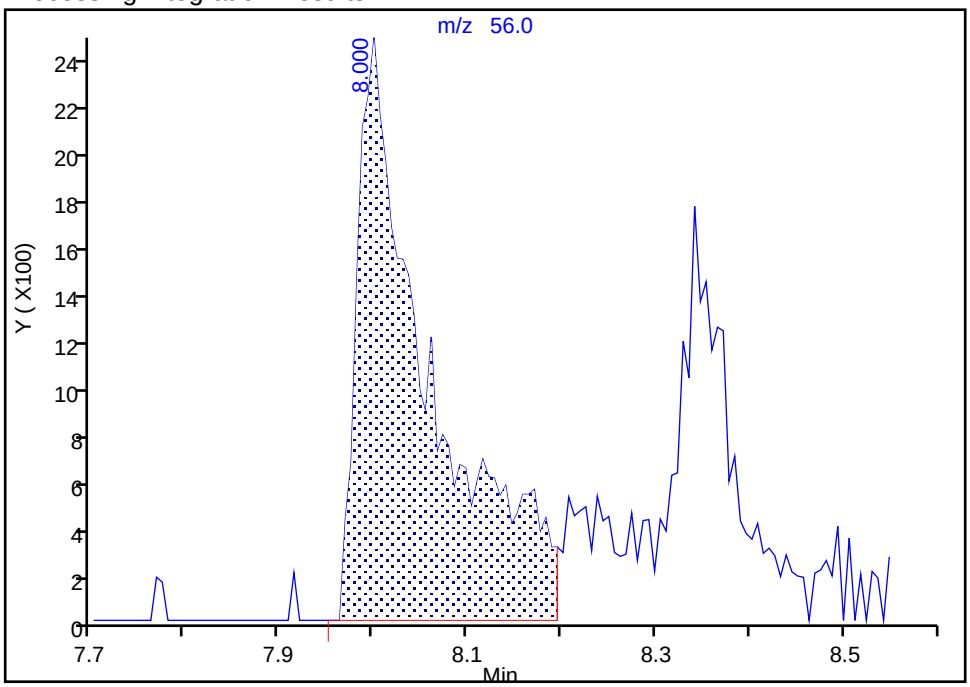
Data File:	\\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I07.D				
Injection Date:	01-Sep-2020 15:48:30	Instrument ID:	10193		
Lims ID:	IC STD1				
Client ID:					
Operator ID:	dvv10203	ALS Bottle#:	8	Worklist Smp#:	9
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

59 n-Butanol, CAS: 71-36-3

Signal: 1

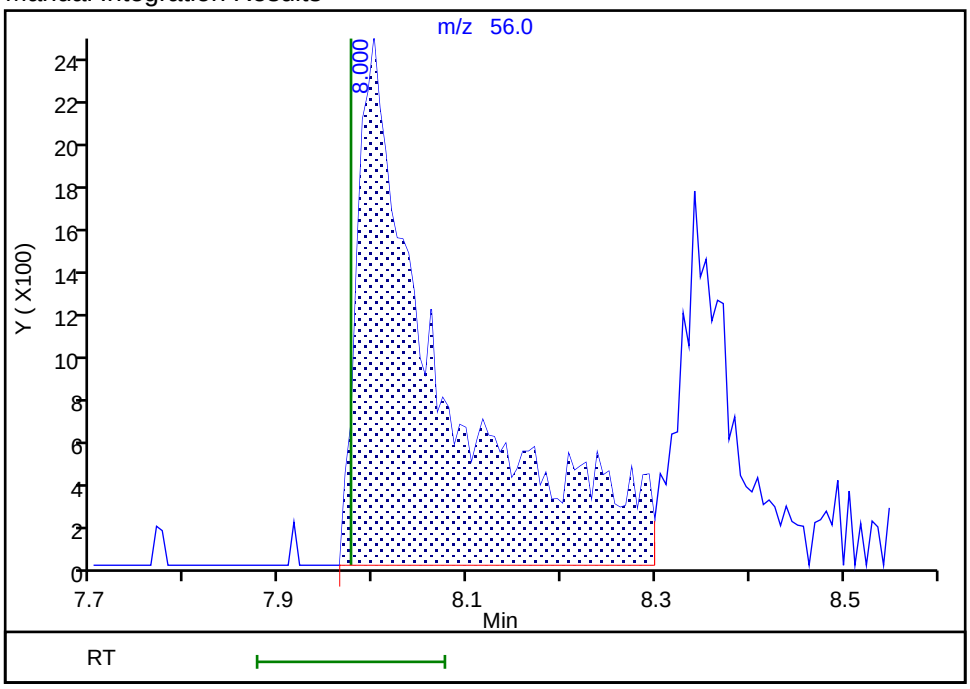
Processing Integration Results

RT: 8.00
Area: 12828
Amount: 17.171709
Amount Units: ug/l



Manual Integration Results

RT: 8.00
Area: 15142
Amount: 19.830500
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:17:24
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

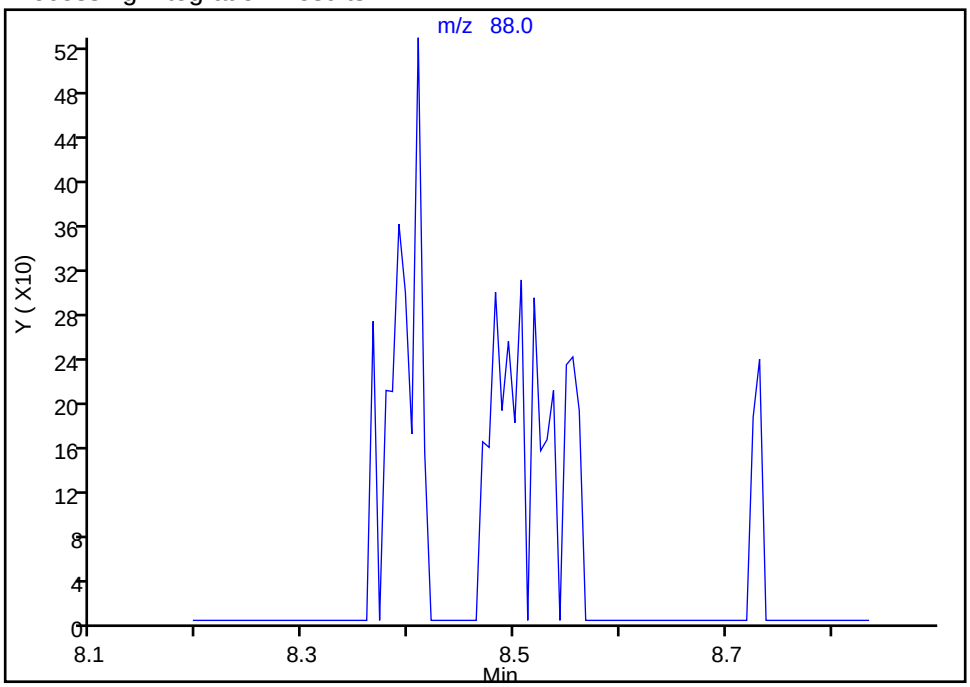
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I07.D
Injection Date: 01-Sep-2020 15:48:30 Instrument ID: 10193
Lims ID: IC STD1
Client ID:
Operator ID: dvv10203 ALS Bottle#: 8 Worklist Smp#: 9
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

65 1,4-Dioxane, CAS: 123-91-1

Signal: 1

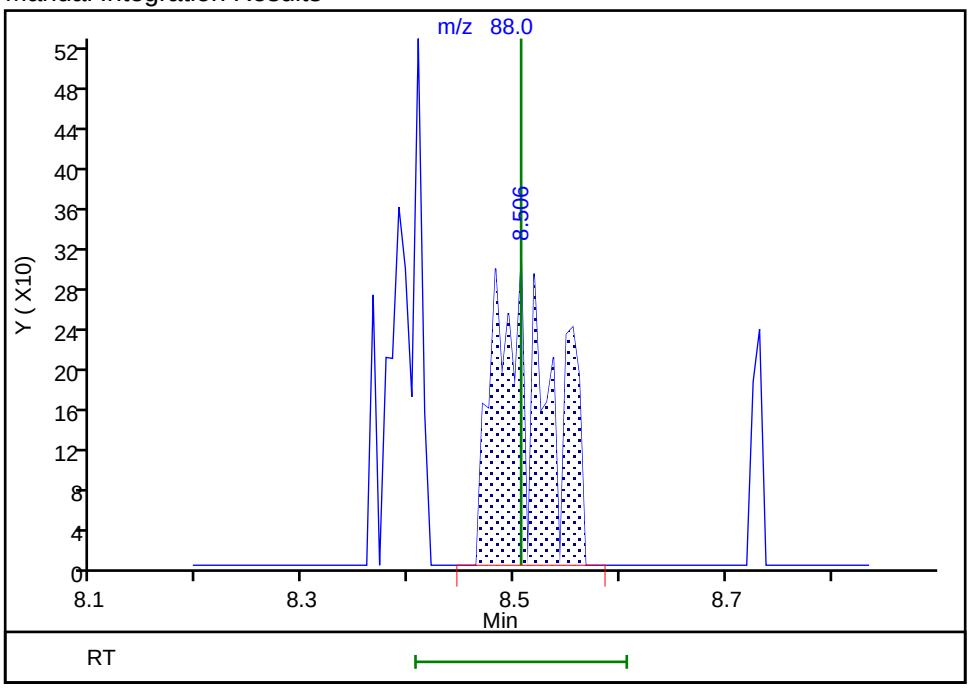
Not Detected
Expected RT: 8.51

Processing Integration Results



Manual Integration Results

RT: 8.51
Area: 1094
Amount: 7.195617
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:06:44
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

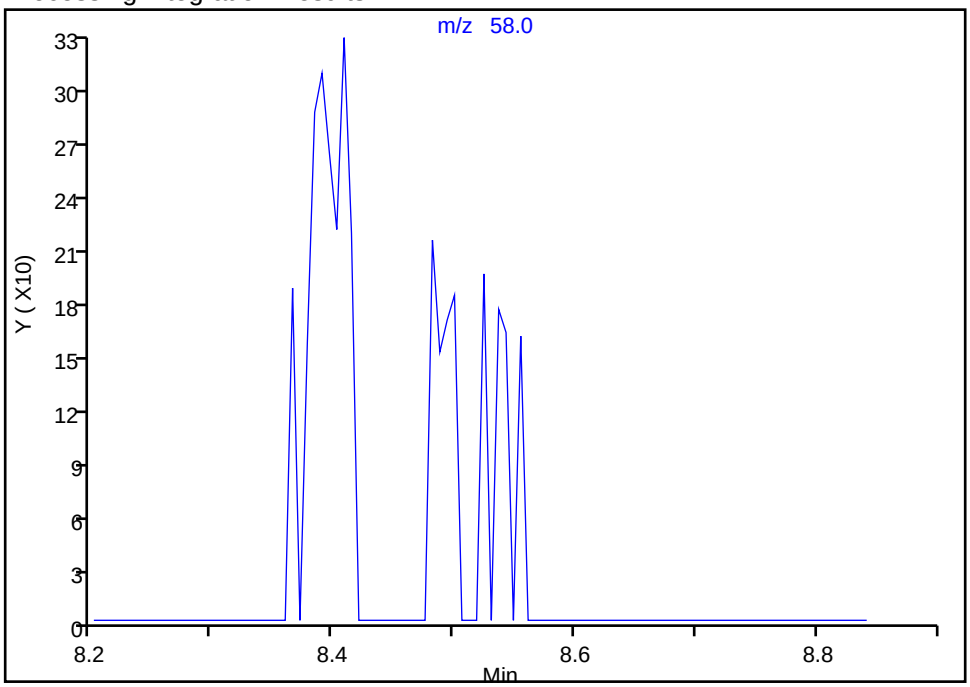
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I07.D
Injection Date: 01-Sep-2020 15:48:30 Instrument ID: 10193
Lims ID: IC STD1
Client ID:
Operator ID: dvv10203 ALS Bottle#: 8 Worklist Smp#: 9
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

65 1,4-Dioxane, CAS: 123-91-1

Signal: 2

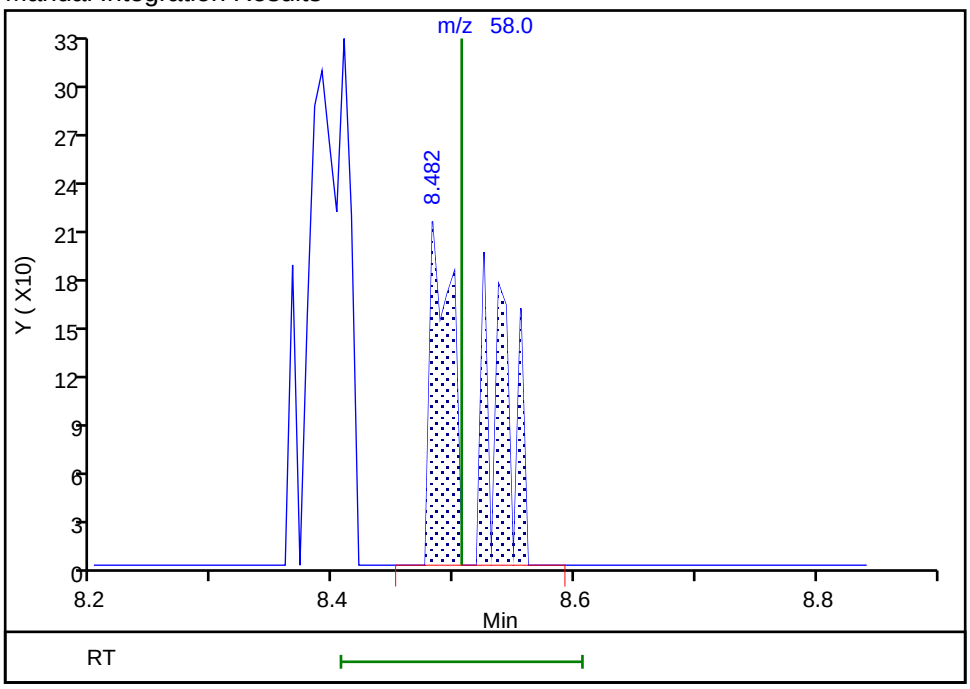
Not Detected
Expected RT: 8.51

Processing Integration Results



Manual Integration Results

RT: 8.48
Area: 515
Amount: 7.195617
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:06:48
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

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

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-15232-1 Analy Batch No.: 42158

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/09/2020 15:55 Calibration End Date: 09/09/2020 18:02 Calibration ID: 10758

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-42158/9	IS09I07.D
Level 2	IC 410-42158/8	IS09I06.D
Level 3	IC 410-42158/7	IS09I05.D
Level 4	IC 410-42158/6	IS09I04.D
Level 5	IC 410-42158/5	IS09I03.D
Level 6	ICIS 410-42158/4	IS09I02.D
Level 7	IC 410-42158/3	IS09I01.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.3471 0.4082	0.4080 0.4156	0.4181	0.4173	0.4032	Ave		0.4025			0.1000	6.2		20.0			
Chloromethane	0.4712 0.3875	0.3991 0.3952	0.3967	0.3904	0.3965	Ave		0.4052			0.1000	7.2		20.0			
1,3-Butadiene	0.4665 0.3297	0.4289 0.3549	0.3678	0.3659	0.3310	Ave		0.3778				13.6		20.0			
Vinyl chloride	0.4206 0.3868	0.4111 0.4125	0.3959	0.3992	0.3839	Ave		0.4014			0.1000	3.4		20.0			
Bromomethane	0.4061 0.3470	0.3601 0.3965	0.3360	0.3386	0.3395	Ave		0.3606			0.1000	8.1		20.0			
Chloroethane	0.2730 0.2515	0.2644 0.2870	0.2519	0.2543	0.2529	Ave		0.2621			0.1000	5.2		20.0			
Dichlorofluoromethane	0.7058 0.6240	0.6462 0.6726	0.6078	0.5995	0.6190	Ave		0.6393			0.1000	6.0		20.0			
Trichlorofluoromethane	0.5838 0.6399	0.6163 0.6430	0.5912	0.6040	0.6075	Ave		0.6123			0.1000	3.7		20.0			
Ethyl ether	0.1917 0.1898	0.1814 0.1912	0.1808	0.1809	0.1850	Ave		0.1858				2.7		20.0			
Freon 123a	0.3133 0.3083	0.3132 0.3131	0.3093	0.3165	0.3007	Ave		0.3106				1.7		20.0			
Acrolein	1.5459 1.5720	1.4930 1.8761	1.4617	1.6301	1.5790	Ave		1.5940				8.6		20.0			
1,1-Dichloroethene	0.2454 0.2663	0.2542 0.2780	0.2662	0.2775	0.2653	Ave		0.2647			0.1000	4.4		20.0			
Acetone	3.5162 2.0312	2.7151 2.3448	2.3041	2.3207	2.2561	Ave		2.4983			0.1000	19.7		20.0			
Freon 113	0.2151 0.2885	0.2751 0.3012	0.2889	0.3019	0.2803	Ave		0.2787			0.1000	10.7		20.0			

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

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

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-15232-1 Analy Batch No.: 42158

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/09/2020 15:55 Calibration End Date: 09/09/2020 18:02 Calibration ID: 10758

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methyl iodide	0.5124 0.5843	0.5161 0.5859	0.5312	0.5846	0.5749	Ave		0.5556				6.1		20.0			
Ethyl bromide	0.2140 0.2346	0.2195 0.2377	0.2214	0.2261	0.2353	Ave		0.2269				4.0		20.0			
Carbon disulfide	0.7129 0.6961	0.7195 0.7283	0.6837	0.7239	0.6906	Ave		0.7079			0.1000	2.5		20.0			
Methyl acetate	9.7436 6.1042	8.1637 6.8315	5.9276	6.0940	6.4831	Ave		7.0497			0.1000	20.0		20.0			
Allyl chloride	0.4047 0.3344	0.3650 0.3384	0.3151	0.3288	0.3328	Ave		0.3456				8.7		20.0			
Methylene Chloride	0.2820 0.2716	0.2647 0.2772	0.2658	0.2853	0.2699	Ave		0.2738			0.1000	2.9		20.0			
t-Butyl alcohol	1.0615 0.9304	1.1132 1.0509	1.0116	1.0421	1.0411	Ave		1.0358				5.4		20.0			
Acrylonitrile	2.5945 2.6886	2.7467 3.1817	2.6795	2.8328	2.7666	Ave		2.7843				6.8		20.0			
Methyl tert-butyl ether	0.6773 0.6858	0.7047 0.7117	0.6762	0.7058	0.6767	Ave		0.6912			0.1000	2.3		20.0			
trans-1,2-Dichloroethene	0.3005 0.2969	0.2896 0.3031	0.2887	0.3054	0.2891	Ave		0.2962			0.1000	2.4		20.0			
n-Hexane	0.2815 0.3528	0.3466 0.3580	0.3508	0.3659	0.3314	Ave		0.3410				8.3		20.0			
1,1-Dichloroethane	0.4847 0.4739	0.4730 0.4930	0.4667	0.5004	0.4708	Ave		0.4804			0.2000	2.6		20.0			
di-Isopropyl ether	0.7448 0.7202	0.7383 0.7419	0.7255	0.7561	0.7129	Ave		0.7342				2.1		20.0			
2-Chloro-1,3-butadiene	0.4257 0.3990	0.4069 0.4190	0.3948	0.4194	0.4000	Ave		0.4092				3.0		20.0			
Ethyl t-butyl ether	0.7915 0.7646	0.7656 0.7873	0.7631	0.7945	0.7636	Ave		0.7757				1.9		20.0			
2-Butanone (MEK)	3.9159 3.5002	3.7481 4.3012	3.4896	3.6102	3.6161	Ave		3.7402			0.1000	7.7		20.0			
cis-1,2-Dichloroethene	0.3364 0.3382	0.3391 0.3517	0.3302	0.3512	0.3332	Ave		0.3400			0.1000	2.5		20.0			
2,2-Dichloropropane	0.4663 0.4633	0.4672 0.4872	0.4563	0.4834	0.4623	Ave		0.4694				2.4		20.0			
Propionitrile	0.9839 0.9709	1.0722 1.2786	1.0752	1.1396	1.1388	Ave		1.0942				9.6		20.0			
Methacrylonitrile	3.8213 4.0187	3.9675 4.9705	3.6765	4.1118	4.1116	Ave		4.0969				10.2		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.: 410-15232-1 Analy Batch No.: 42158

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/09/2020 15:55 Calibration End Date: 09/09/2020 18:02 Calibration ID: 10758

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Bromochloromethane	0.1435 0.1602	0.1533 0.1692	0.1542	0.1510	0.1592	Ave		0.1558				5.2		20.0			
Tetrahydrofuran	1.1767 1.1697	1.1530 1.4198	1.1195	1.2129	1.1983	Ave		1.2071				8.2		20.0			
Chloroform	0.5334 0.5315	0.5319 0.5604	0.5367	0.5587	0.5288	Ave		0.5402			0.2000	2.5		20.0			
1,1,1-Trichloroethane	0.5401 0.5361	0.5345 0.5716	0.5133	0.5580	0.5355	Ave		0.5413			0.1000	3.4		20.0			
Cyclohexane	0.3595 0.4162	0.4199 0.4445	0.4184	0.4392	0.4077	Ave		0.4151			0.1000	6.7		20.0			
Carbon tetrachloride	0.4609 0.5016	0.4852 0.5364	0.4815	0.5137	0.4947	Ave		0.4963			0.1000	4.9		20.0			
1,1-Dichloropropene	0.3796 0.3976	0.4002 0.4258	0.3919	0.4158	0.3952	Ave		0.4009				3.8		20.0			
Isobutyl alcohol	0.3610 0.2686	0.3114 0.3323	0.2857	0.2861	0.2986	Ave		0.3063				10.3		20.0			
Benzene	1.1568 1.1629	1.1819 1.2232	1.1368	1.2065	1.1550	Ave		1.1747			0.5000	2.6		20.0			
1,2-Dichloroethane	0.3541 0.3057	0.3170 0.3208	0.3300	0.3226	0.3047	Ave		0.3221			0.1000	5.2		20.0			
t-Amyl methyl ether	0.7342 0.7407	0.7257 0.7672	0.7241	0.7772	0.7431	Ave		0.7446				2.7		20.0			
n-Heptane	0.2771 0.3296	0.3257 0.3511	0.3296	0.3348	0.3066	Ave		0.3221				7.4		20.0			
n-Butanol	0.2698 0.3014	0.2932 0.3438	0.2749	0.2981	0.2996	Ave		0.2973				8.1		20.0			
Trichloroethene	0.3559 0.3355	0.3534 0.3596	0.3268	0.3428	0.3324	Ave		0.3438			0.2000	3.7		20.0			
Methylcyclohexane	0.4783 0.5126	0.5089 0.5449	0.5041	0.4877	0.5004	Ave		0.5053			0.1000	4.2		20.0			
1,2-Dichloropropane	0.2764 0.2673	0.2763 0.2848	0.2653	0.2727	0.2671	Ave		0.2728			0.1000	2.5		20.0			
Methyl methacrylate	7.4094 7.9309	7.4456 9.8734	7.4725	7.9098	8.0291	Ave		8.0101				10.8		20.0			
1,4-Dioxane	0.0624 0.0861	0.0840 0.0953	0.0831	0.0853	0.0827	Ave		0.0827			0.0050	12.0		20.0			
Dibromomethane	0.1424 0.1494	0.1480 0.1585	0.1510	0.1590	0.1500	Ave		0.1512				3.9		20.0			
Bromodichloromethane	0.3629 0.3900	0.3592 0.4211	0.3665	0.3899	0.3845	Ave		0.3820			0.2000	5.6		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.: 410-15232-1 Analy Batch No.: 42158

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/09/2020 15:55 Calibration End Date: 09/09/2020 18:02 Calibration ID: 10758

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
2-Nitropropane	2.3494 2.3370	2.3473 2.9801	2.2161	2.3814	2.4367	Ave		2.4354				10.2		20.0			
1-Bromo-2-chloroethane	0.2722 0.2747	0.2790 0.2891	0.2603	0.2712	0.2774	Ave		0.2748				3.2		20.0			
cis-1,3-Dichloropropene	0.3999 0.4385	0.4176 0.4742	0.4036	0.4394	0.4306	Ave		0.4291			0.2000	5.9		20.0			
4-Methyl-2-pentanone (MIBK)	9.3157 9.4497	9.5431 11.853	8.9627	9.8203	9.8132	Ave		9.8225			0.1000	9.6		20.0			
Toluene	0.9868 0.9429	0.9898 0.9902	0.9719	1.0035	0.9492	Ave		0.9763			0.4000	2.3		20.0			
trans-1,3-Dichloropropene	0.4035 0.4331	0.4117 0.4578	0.4172	0.4437	0.4325	Ave		0.4285			0.1000	4.4		20.0			
Ethyl methacrylate	0.3273 0.3381	0.3219 0.3530	0.3206	0.3406	0.3427	Ave		0.3349				3.6		20.0			
1,1,2-Trichloroethane	0.2559 0.2529	0.2534 0.2672	0.2539	0.2702	0.2614	Ave		0.2593			0.1000	2.7		20.0			
Tetrachloroethene	0.4733 0.5066	0.4749 0.5428	0.4630	0.4990	0.4990	Ave		0.4941			0.2000	5.4		20.0			
1,3-Dichloropropane	0.4234 0.4065	0.4231 0.4187	0.4082	0.4195	0.4091	Ave		0.4155				1.8		20.0			
2-Hexanone	6.3928 6.7994	6.5682 8.3924	6.2605	6.8513	6.8346	Ave		6.8713			0.1000	10.3		20.0			
Dibromochloromethane	0.2971 0.3668	0.3104 0.3990	0.3277	0.3580	0.3578	Ave		0.3453				10.2		20.0			
1,2-Dibromoethane (EDB)	0.2587 0.2663	0.2672 0.2770	0.2532	0.2807	0.2646	Ave		0.2668			0.1000	3.6		20.0			
1-Chlorohexane	0.6567 0.5400	0.5626 0.5839	0.5570	0.5741	0.5403	Ave		0.5735				7.0		20.0			
Chlorobenzene	1.0982 1.1039	1.1211 1.1657	1.0834	1.1410	1.1013	Ave		1.1164			0.5000	2.5		20.0			
1,1,1,2-Tetrachloroethane	0.3918 0.4347	0.4057 0.4621	0.3913	0.4374	0.4265	Ave		0.4214				6.2		20.0			
Ethylbenzene	1.8495 1.8763	1.9146 1.9686	1.8875	1.9810	1.8855	Ave		1.9090			0.1000	2.6		20.0			
m&p-Xylene	0.7412 0.7806	0.7677 0.8295	0.7667	0.8090	0.7809	Ave		0.7823			0.1000	3.7		20.0			
o-Xylene	0.7630 0.7755	0.7474 0.8266	0.7706	0.7971	0.7634	Ave		0.7777			0.3000	3.4		20.0			
Styrene	1.1322 1.2399	1.1732 1.3293	1.1935	1.2391	1.2211	Ave		1.2183			0.3000	5.1		20.0			

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

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

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-15232-1 Analy Batch No.: 42158

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/09/2020 15:55 Calibration End Date: 09/09/2020 18:02 Calibration ID: 10758

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Bromoform	0.1087 0.2276	0.1483 0.2590	0.1593	0.1998	0.2060	Lin	-0.135	0.2604			0.1000				0.9970		0.9900
Isopropylbenzene	1.9521 2.0271	1.9699 2.1199	1.9976	2.0957	2.0109	Ave		2.0247			0.1000	3.1		20.0			
1,1,2,2-Tetrachloroethane	0.6054 0.5348	0.5348 0.5498	0.5429	0.5726	0.5266	Ave		0.5524			0.3000	5.0		20.0			
Bromobenzene	0.8382 0.8650	0.8417 0.9468	0.8286	0.8823	0.8522	Ave		0.8650				4.7		20.0			
trans-1,4-Dichloro-2-butene	2.9607 3.8328	3.3159 5.2183	3.2089	3.6258	3.7374	Ave		3.7000				19.9		20.0			
1,2,3-Trichloropropane	0.1716 0.1610	0.1678 0.1653	0.1589	0.1745	0.1622	Ave		0.1659				3.4		20.0			
N-Propylbenzene	4.0534 3.7568	4.0868 3.7516	3.9738	4.0569	3.7895	Ave		3.9241				3.9		20.0			
2-Chlorotoluene	0.7816 0.8341	0.8417 0.8793	0.8232	0.8631	0.8256	Ave		0.8355				3.7		20.0			
1,3,5-Trimethylbenzene	2.9817 2.9115	2.9436 2.9825	2.9599	3.0381	2.9063	Ave		2.9605				1.5		20.0			
4-Chlorotoluene	0.8523 0.8479	0.8602 0.9051	0.8499	0.8716	0.8473	Ave		0.8620				2.4		20.0			
tert-Butylbenzene	0.6696 0.6801	0.6997 0.7265	0.6591	0.6899	0.6718	Ave		0.6852				3.3		20.0			
Pentachloroethane	0.4593 0.5708	0.4998 0.6221	0.5119	0.5211	0.5674	Ave		0.5361				10.1		20.0			
1,2,4-Trimethylbenzene	3.0617 2.9644	3.0714 3.0506	2.9738	3.0835	2.9622	Ave		3.0240				1.8		20.0			
sec-Butylbenzene	3.6985 3.7336	3.7491 3.7865	3.7882	3.9182	3.7066	Ave		3.7687				2.0		20.0			
1,3-Dichlorobenzene	1.6395 1.7253	1.6238 1.8850	1.6457	1.7211	1.6940	Ave		1.7049			0.6000	5.2		20.0			
p-Isopropyltoluene	3.1014 3.3196	3.2368 3.4704	3.2298	3.3993	3.2967	Ave		3.2934				3.7		20.0			
1,4-Dichlorobenzene	1.6772 1.7165	1.6772 1.8685	1.6429	1.7225	1.6973	Ave		1.7146			0.5000	4.3		20.0			
1,2,3-Trimethylbenzene	1.4186 1.3080	1.4048 1.3923	1.3019	1.2842	1.3292	Ave		1.3484				4.1		20.0			
Benzyl chloride	0.2229 0.2650	0.2208 0.2838	0.2394	0.2509	0.2562	Ave		0.2484				9.1		20.0			
n-Butylbenzene	1.4221 1.5017	1.4570 1.6095	1.5024	1.5386	1.4862	Ave		1.5025				4.0		20.0			

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

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

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-15232-1 Analy Batch No.: 42158

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/09/2020 15:55 Calibration End Date: 09/09/2020 18:02 Calibration ID: 10758

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2-Dichlorobenzene	1.3905 1.5728	1.4933 1.6639	1.5160	1.5652	1.5518	Ave		1.5362			0.4000	5.5		20.0			
1,2-Dibromo-3-Chloropropane	0.0707 0.0974	0.0733 0.1025	0.0849	0.0930	0.0942	Ave		0.0880			0.0500	13.8		20.0			
1,3,5-Trichlorobenzene	1.0081 1.2152	1.0113 1.3427	1.0694	1.1420	1.1708	Ave		1.1371				10.6		20.0			
1,2,4-Trichlorobenzene	0.8073 1.0168	0.8122 1.1139	0.8821	0.9487	0.9762	Ave		0.9367			0.2000	11.9		20.0			
Hexachlorobutadiene	0.2947 0.3891	0.3003 0.4327	0.3348	0.3553	0.3614	Ave		0.3526				13.8		20.0			
Naphthalene	1.8107 1.9070	1.6917 1.8934	1.8229	1.8885	1.8648	Ave		1.8399				4.1		20.0			
1,2,3-Trichlorobenzene	0.7003 0.8548	0.7229 0.9075	0.7774	0.8088	0.8220	Ave		0.7991				9.1		20.0			
Dibromofluoromethane (Surr)	0.2641 0.2737	0.2683 0.2701	0.2719	0.2708	0.2731	Ave		0.2703				1.2		20.0			
1,2-Dichloroethane-d4 (Surr)	0.0494 0.0499	0.0491 0.0491	0.0493	0.0500	0.0500	Ave		0.0495				0.9		20.0			
Toluene-d8 (Surr)	1.2698 1.1910	1.2564 1.1708	1.2394	1.2360	1.2180	Ave		1.2259				2.9		20.0			
4-Bromofluorobenzene (Surr)	0.4852 0.4666	0.4822 0.4670	0.4817	0.4790	0.4661	Ave		0.4754				1.8		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
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-15232-1 Analy Batch No.: 42158

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/09/2020 15:55 Calibration End Date: 09/09/2020 18:02 Calibration ID: 10758

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-42158/9	IS09I07.D
Level 2	IC 410-42158/8	IS09I06.D
Level 3	IC 410-42158/7	IS09I05.D
Level 4	IC 410-42158/6	IS09I04.D
Level 5	IC 410-42158/5	IS09I03.D
Level 6	ICIS 410-42158/4	IS09I02.D
Level 7	IC 410-42158/3	IS09I01.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	15503 985204	46266 2509507	99239	198515	482795	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Chloromethane	FB	Ave	21046 935246	45256 2386459	94161	185717	474721	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3-Butadiene	FB	Ave	20835 795690	48636 2143002	87310	174076	396338	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Vinyl chloride	FB	Ave	18786 933566	46618 2490782	93992	189871	459682	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Bromomethane	FB	Ave	18137 837437	40836 2394247	79767	161071	406499	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Chloroethane	FB	Ave	12193 606949	29976 1733174	59799	120944	302819	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Dichlorofluoromethane	FB	Ave	31523 1505882	73274 4061002	144285	285176	741126	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Trichlorofluoromethane	FB	Ave	26074 1544319	69887 3882521	140343	287325	727417	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethyl ether	FB	Ave	8561 457895	20565 1154127	42903	86058	221505	0.200 10.00	0.500 25.0	1.000	2.00	5.00
Freon 123a	FB	Ave	13992 744032	35520 1890409	73434	150537	360040	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Acrolein	TBAd 10	Ave	59106 3148585	142002 7932144	300818	655702	1539596	10.00 500	25.0 1250	50.0	100.0	250
1,1-Dichloroethene	FB	Ave	10961 642747	28828 1678812	63196	131998	317698	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Acetone	TBAd 10	Ave	26889 813705	51651 1982894	94836	186709	439990	2.00 100	5.00 250	10.0	20.0	50.0
Freon 113	FB	Ave	9608 696292	31200 1818438	68578	143610	335577	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methyl iodide	FB	Ave	22886 1410078	58524 3537689	126104	278068	688294	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.: 410-15232-1 Analy Batch No.: 42158

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/09/2020 15:55 Calibration End Date: 09/09/2020 18:02 Calibration ID: 10758

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	9561 566360	24902 1436176	52581	107628	281883	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Carbon disulfide	FB	Ave	31841 1680092	81584 4397890	162301	344356	826846	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methyl acetate	TBAd 10	Ave	7451 244536	15530 577700	24398	49028	126434	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Allyl chloride	FB	Ave	18077 807100	41385 2043050	74801	156381	398430	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methylene Chloride	FB	Ave	12594 655598	30017 1673572	63101	135715	323150	0.200 10.0	0.500 25.0	1.00	2.00	5.00
t-Butyl alcohol	TBAd 10	Ave	16235 745468	42352 1777399	83276	167672	406071	4.00 200	10.0 500	20.0	40.0	100
Acrylonitrile	TBAd 10	Ave	9920 538522	26126 1345287	55144	113952	269776	1.00 50.0	2.50 125	5.00	10.0	25.0
Methyl tert-butyl ether	FB	Ave	30248 1655235	79909 4297508	160530	335714	810253	0.200 10.0	0.500 25.0	1.00	2.00	5.00
trans-1,2-Dichloroethene	FB	Ave	13420 716429	32838 1830074	68538	145290	346093	0.200 10.0	0.500 25.0	1.00	2.00	5.00
n-Hexane	FB	Ave	12571 851367	39300 2161943	83281	174049	396827	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1-Dichloroethane	FB	Ave	21649 1143649	53636 2976796	110783	238037	563741	0.200 10.0	0.500 25.0	1.00	2.00	5.00
di-Isopropyl ether	FB	Ave	33265 1738228	83716 4479955	172216	359649	853622	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Chloro-1,3-butadiene	FB	Ave	19012 962862	46143 2529814	93708	199512	478880	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethyl t-butyl ether	FB	Ave	35350 1845254	86810 4753852	181137	377950	914268	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Butanone (MEK)	TBAd 10	Ave	29945 1402208	71302 3637299	143631	290452	705212	2.00 100	5.00 250	10.0	20.0	50.0
cis-1,2-Dichloroethene	FB	Ave	15024 816219	38456 2123446	78387	167058	398935	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2,2-Dichloropropane	FB	Ave	20828 1118170	52979 2941825	108325	229961	553483	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Propionitrile	TBAd 10	Ave	15048 777922	40793 2162469	88513	183370	444167	4.00 200	10.0 500	20.0	40.0	100
Methacrylonitrile	TBAd 10	Ave	29222 1609891	75475 4203249	151327	330804	801857	2.00 100	5.00 250	10.0	20.0	50.0
Bromochloromethane	FB	Ave	6407 386644	17383 1021552	36596	71824	190651	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Tetrahydrofuran	TBAd 10	Ave	8998 468579	21933 1200628	46080	97580	233699	2.00 100	5.00 250	10.0	20.0	50.0

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

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-15232-1 Analy Batch No.: 42158

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/09/2020 15:55 Calibration End Date: 09/09/2020 18:02 Calibration ID: 10758

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	23824 1282685	60314 3384075	127394	265782	633194	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1,1-Trichloroethane	FB	Ave	24124 1293948	60611 3451566	121861	265447	641210	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Cyclohexane	FB	Ave	16057 1004400	47615 2683744	99313	208916	488209	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Carbon tetrachloride	FB	Ave	20584 1210454	55021 3238649	114303	244348	592272	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1-Dichloropropene	FB	Ave	16956 959625	45380 2571273	93026	197775	473158	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Isobutyl alcohol	TBAd 10	Ave	13804 538063	29620 1405052	58791	115096	291171	10.0 500	25.0 1250	50.0	100	250
Benzene	FB	Ave	51664 2806471	134015 7385877	269851	573905	1382982	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dichloroethane	FB	Ave	15817 737859	35941 1936883	78331	153466	364820	0.200 10.0	0.500 25.0	1.00	2.00	5.00
t-Amyl methyl ether	FB	Ave	32792 1787654	82292 4632691	171888	369695	889705	0.200 10.0	0.500 25.0	1.00	2.00	5.00
n-Heptane	FB	Ave	12375 795447	36937 2120140	78232	159274	367051	0.200 10.0	0.500 25.0	1.00	2.00	5.00
n-Butanol	TBAd 10	Ave	20629 1207615	55769 2907587	113169	239799	584226	20.0 1000	50.0 2500	100	200	500
Trichloroethene	FB	Ave	15897 809782	40068 2171592	77573	163068	398026	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methylcyclohexane	FB	Ave	21364 1237082	57702 3289922	119674	231994	599124	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dichloropropane	FB	Ave	12346 644998	31331 1719469	62968	129699	319788	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methyl methacrylate	TBAd 10	Ave	5666 317715	14164 834937	30757	63636	156585	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,4-Dioxane	TBAd 10	Ave	2386 172511	7994 403137	17098	34312	80604	10.0 500	25.0 1250	50.0	100	250
Dibromomethane	FB	Ave	6358 360650	16782 956987	35837	75644	179555	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Bromodichloromethane	FB	Ave	16210 941173	40736 2542732	86998	185482	460359	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Nitropropane	TBAd 10	Ave	17966 936194	44653 2520125	91215	191590	475213	2.00 100	5.00 250	10.0	20.0	50.0
1-Bromo-2-chloroethane	FB	Ave	12155 663010	31641 1745844	61783	128989	332135	0.200 10.0	0.500 25.0	1.00	2.00	5.00
cis-1,3-Dichloropropene	FB	Ave	17861 1058178	47357 2863196	95816	209019	515589	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.: 410-15232-1 Analy Batch No.: 42158

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/09/2020 15:55 Calibration End Date: 09/09/2020 18:02 Calibration ID: 10758

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)	TBAd 10	Ave	71238 3785588	181542 10023185	368908	790063	1913786	2.00 100	5.00 250	10.0	20.0	50.0
Toluene	CBZd 5	Ave	35393 1928652	90625 5194893	186801	393049	946681	0.200 10.0	0.500 25.0	1.00	2.00	5.00
trans-1,3-Dichloropropene	CBZd 5	Ave	14472 885952	37696 2402064	80199	173776	431352	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethyl methacrylate	CBZd 5	Ave	11737 691677	29468 1851822	61632	133412	341836	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1,2-Trichloroethane	CBZd 5	Ave	9177 517228	23198 1401857	48793	105818	260756	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Tetrachloroethene	CBZd 5	Ave	16975 1036365	43479 2847563	89001	195435	497682	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3-Dichloropropane	CBZd 5	Ave	15187 831468	38735 2196627	78467	164296	408063	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Hexanone	TBAd 10	Ave	48886 2723880	124949 7096925	257684	551202	1332882	2.00 100	5.00 250	10.0	20.0	50.0
Dibromochloromethane	CBZd 5	Ave	10656 750350	28421 2093399	62992	140231	356880	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dibromoethane (EDB)	CBZd 5	Ave	9279 544735	24463 1453272	48674	109929	263900	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1-Chlorohexane	CBZd 5	Ave	23552 1104598	51510 3063459	107059	224865	538874	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Chlorobenzene	CBZd 5	Ave	39387 2258124	102647 6115938	208243	446873	1098385	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1,1,2-Tetrachloroethane	CBZd 5	Ave	14051 889203	37148 2424371	75207	171309	425391	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethylbenzene	CBZd 5	Ave	66334 3838006	175299 10328427	362805	775895	1880520	0.200 10.0	0.500 25.0	1.00	2.00	5.00
m&p-Xylene	CBZd 5	Ave	53167 3193595	140582 8704303	294731	633747	1557794	0.400 20.0	1.00 50.0	2.00	4.00	10.0
o-Xylene	CBZd 5	Ave	27366 1586395	68435 4336935	148108	312195	761367	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Styrene	CBZd 5	Ave	40606 2536352	107419 6974106	229406	485318	1217868	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Bromoform	CBZd 5	Lin	3899 465591	13577 1358874	30623	78253	205464	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Isopropylbenzene	CBZd 5	Ave	70014 4146476	180357 11122123	383964	820793	2005623	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	12007 652908	27317 1758130	59285	130375	310585	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Bromobenzene	DCBd 4	Ave	16625 1056073	42995 3027427	90491	200910	502684	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.: 410-15232-1 Analy Batch No.: 42158

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/09/2020 15:55 Calibration End Date: 09/09/2020 18:02 Calibration ID: 10758

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	22641 1535430	63080 4412840	132079	291705	728867	2.00 100	5.00 250	10.0	20.0	50.0
1,2,3-Trichloropropane	DCBd 4	Ave	3403 196614	8573 528560	17357	39734	95695	0.200 10.0	0.500 25.0	1.00	2.00	5.00
N-Propylbenzene	DCBd 4	Ave	80394 4586516	208747 11995756	433971	923786	2235155	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Chlorotoluene	DCBd 4	Ave	15502 1018253	42991 2811467	89901	196537	486942	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3,5-Trimethylbenzene	DCBd 4	Ave	59138 3554503	150355 9536725	323246	691786	1714215	0.200 10.0	0.500 25.0	1.00	2.00	5.00
4-Chlorotoluene	DCBd 4	Ave	16904 1035111	43940 2894067	92818	198467	499774	0.200 10.0	0.500 25.0	1.00	2.00	5.00
tert-Butylbenzene	DCBd 4	Ave	13281 830328	35740 2322894	71974	157097	396252	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Pentachloroethane	DCBd 4	Ave	9110 696855	25528 1989324	55907	118649	334692	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2,4-Trimethylbenzene	DCBd 4	Ave	60724 3619121	156884 9754381	324767	702130	1747235	0.200 10.0	0.500 25.0	1.00	2.00	5.00
sec-Butylbenzene	DCBd 4	Ave	73354 4558183	191497 12107453	413701	892193	2186269	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3-Dichlorobenzene	DCBd 4	Ave	32518 2106368	82939 6027358	179729	391911	999193	0.200 10.0	0.500 25.0	1.00	2.00	5.00
p-Isopropyltoluene	DCBd 4	Ave	61512 4052773	165328 11096837	352726	774045	1944479	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,4-Dichlorobenzene	DCBd 4	Ave	33264 2095547	85667 5974656	179415	392235	1001097	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2,3-Trimethylbenzene	DCBd 4	Ave	28135 1596869	71753 4451775	142182	292419	783981	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Benzyl chloride	DCBd 4	Ave	4420 323570	11278 907490	26142	57135	151088	0.200 10.0	0.500 25.0	1.00	2.00	5.00
n-Butylbenzene	DCBd 4	Ave	28206 1833319	74423 5146560	164078	350341	876586	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dichlorobenzene	DCBd 4	Ave	27578 1920108	76273 5320207	165564	356417	915287	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dibromo-3-Chloropropane	DCBd 4	Ave	1402 118919	3746 327880	9269	21174	55572	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3,5-Trichlorobenzene	DCBd 4	Ave	19994 1483615	51657 4293418	116789	260050	690583	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2,4-Trichlorobenzene	DCBd 4	Ave	16011 1241413	41488 3561597	96330	216034	575792	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Hexachlorobutadiene	DCBd 4	Ave	5845 474992	15337 1383565	36566	80898	213147	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.: 410-15232-1 Analy Batch No.: 42158

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/09/2020 15:55 Calibration End Date: 09/09/2020 18:02 Calibration ID: 10758

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
Naphthalene	DCBd 4	Ave	35912 2328204	86411 6054183	199077	430036	1099902	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2,3-Trichlorobenzene	DCBd 4	Ave	13890 1043582	36925 2901669	84902	184165	484819	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Dibromofluoromethane (Surr)	FB	Ave	589774 660649	608503 652371	645340	644107	654103	10.0 10.0	10.0 10.0	10.0	10.0	10.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	110229 120530	111269 118674	116978	119039	119674	10.0 10.0	10.0 10.0	10.0	10.0	10.0
Toluene-d8 (Surr)	CBZd 5	Ave	2277036 2436337	2300682 2457029	2382339	2420570	2429632	10.0 10.0	10.0 10.0	10.0	10.0	10.0
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	870085 954546	883042 980078	925812	937979	929773	10.0 10.0	10.0 10.0	10.0	10.0	10.0

Curve Type Legend:
Ave = Average ISTD
Lin = Linear ISTD

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I01.D
Lims ID: IC std7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 09-Sep-2020 15:55:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: IC STD7
Misc. Info.: 410-0010046-003
Operator ID: dvv10203 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 11-Sep-2020 18:38:14 Calib Date: 09-Sep-2020 21:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1058

First Level Reviewer: virayd Date: 09-Sep-2020 17:13:12

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	1.983	1.971	0.012	89	2509507	25.0	25.8	M
4 Chloromethane	50	2.178	2.178	0.000	89	2386459	25.0	24.4	
5 Vinyl chloride	62	2.294	2.288	0.006	72	2490782	25.0	25.7	
6 Butadiene	39	2.294	2.294	0.000	90	2143002	25.0	23.5	
7 Bromomethane	94	2.623	2.623	0.000	92	2394247	25.0	27.5	
8 Chloroethane	64	2.709	2.709	0.000	95	1733174	25.0	27.4	
9 Dichlorofluoromethane	67	2.952	2.946	0.006	83	4061002	25.0	26.3	
10 Trichlorofluoromethane	101	3.019	3.013	0.006	88	3882521	25.0	26.3	
11 Ethyl ether	59	3.269	3.270	-0.001	88	1154127	25.0	25.7	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.355	3.355	0.000	82	1890409	25.0	25.2	
13 Acrolein	56	3.440	3.446	-0.006	99	7932144	1250.0	1471.2	
14 1,1-Dichloroethene	96	3.586	3.587	-0.001	88	1678812	25.0	26.3	
15 Acetone	43	3.617	3.617	0.000	98	1982894	250.0	234.6	M
16 112TCTFE	101	3.623	3.623	0.000	84	1818438	25.0	27.0	
17 Iodomethane	142	3.788	3.788	0.000	99	3537689	25.0	26.4	
18 Ethyl bromide	108	3.812	3.812	0.000	78	1436176	25.0	26.2	
19 Carbon disulfide	76	3.897	3.897	0.000	99	4397890	25.0	25.7	
21 Methyl acetate	43	4.044	4.044	0.000	56	577700	25.0	24.2	M
22 3-Chloro-1-propene	41	4.068	4.068	0.000	86	2043050	25.0	24.5	
23 Methylene Chloride	84	4.263	4.263	0.000	81	1673572	25.0	25.3	
* 24 t-Butyl alcohol-d10 (IS)	65	4.269	4.281	-0.012	0	169128	50.0	50.0	
25 2-Methyl-2-propanol	59	4.403	4.403	0.000	99	1777399	500.0	507.3	
26 Acrylonitrile	53	4.605	4.605	-0.001	98	1345287	125.0	142.8	
27 Methyl tert-butyl ether	73	4.665	4.678	-0.013	87	4297508	25.0	25.7	
28 trans-1,2-Dichloroethene	96	4.678	4.678	0.000	92	1830074	25.0	25.6	
29 Hexane	57	5.104	5.111	-0.007	91	2161943	25.0	26.2	
31 1,1-Dichloroethane	63	5.342	5.348	-0.006	85	2976796	25.0	25.7	
32 Isopropyl ether	45	5.403	5.403	0.000	91	4479955	25.0	25.3	
33 2-Chloro-1,3-butadiene	53	5.452	5.452	0.000	87	2529814	25.0	25.6	
34 Tert-butyl ethyl ether	59	5.934	5.928	0.006	95	4753852	25.0	25.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
36 2-Butanone (MEK)	43	6.141	6.135	0.006	98	3637299	250.0	287.5	
S 35 1,2-Dichloroethene, Total	100				0			51.4	
37 cis-1,2-Dichloroethene	96	6.171	6.177	-0.006	67	2123446	25.0	25.9	
38 2,2-Dichloropropane	77	6.190	6.196	-0.006	79	2941825	25.0	25.9	
40 Propionitrile	54	6.232	6.232	0.000	97	2162469	500.0	584.3	M
42 Methacrylonitrile	67	6.446	6.440	0.006	89	4203249	250.0	303.3	
43 Chlorobromomethane	128	6.500	6.507	-0.007	84	1021552	25.0	27.1	
44 Tetrahydrofuran	71	6.513	6.513	0.000	79	1200628	250.0	294.0	
45 Chloroform	83	6.647	6.653	-0.006	81	3384075	25.0	25.9	
$ 46 Dibromofluoromethane (Surr)	113	6.866	6.866	0.000	48	652371	10.0	10.0	
47 1,1,1-Trichloroethane	97	6.878	6.879	-0.001	91	3451566	25.0	26.4	
48 Cyclohexane	56	6.976	6.976	0.000	87	2683744	25.0	26.8	
50 Carbon tetrachloride	117	7.086	7.086	0.000	87	3238649	25.0	27.0	
51 1,1-Dichloropropene	75	7.086	7.092	-0.006	92	2571273	25.0	26.6	
52 Isobutyl alcohol	41	7.232	7.232	0.000	93	1405052	1250.0	1356.3	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.311	7.318	-0.007	0	118674	10.0	9.92	
54 Benzene	78	7.348	7.348	0.000	95	7385877	25.0	26.0	
56 1,2-Dichloroethane	62	7.421	7.421	0.000	92	1936883	25.0	24.9	
57 Tert-amyl methyl ether	73	7.537	7.537	0.000	98	4632691	25.0	25.8	
* 58 Fluorobenzene (IS)	96	7.750	7.750	0.000	89	2415280	10.0	10.0	
59 n-Heptane	43	7.756	7.763	-0.007	87	2120140	25.0	27.3	
60 n-Butanol	56	8.104	8.110	-0.006	86	2907587	2500.0	2891.7	
61 Trichloroethene	95	8.226	8.226	0.000	92	2171592	25.0	26.2	
62 Methylcyclohexane	83	8.531	8.531	0.000	89	3289922	25.0	27.0	
63 1,2-Dichloropropane	63	8.555	8.555	0.000	71	1719469	25.0	26.1	
64 Methyl methacrylate	69	8.634	8.634	0.000	84	834937	25.0	30.8	
65 1,4-Dioxane	88	8.640	8.640	0.000	39	403137	1250.0	1441.0	M
66 Dibromomethane	93	8.671	8.665	0.006	90	956987	25.0	26.2	
68 Dichlorobromomethane	83	8.902	8.903	-0.001	93	2542732	25.0	27.6	
69 2-Nitropropane	41	9.165	9.171	-0.006	99	2520125	250.0	305.9	
72 1-Bromo-2-chloroethane	63	9.287	9.293	-0.006	95	1745844	25.0	26.3	
73 cis-1,3-Dichloropropene	75	9.439	9.439	0.000	95	2863196	25.0	27.6	
74 4-Methyl-2-pentanone (MIBK)	43	9.610	9.610	0.000	95	10023185	250.0	301.7	
$ 75 Toluene-d8 (Surr)	98	9.744	9.750	-0.006	93	2457029	10.0	9.55	
76 Toluene	92	9.823	9.823	0.000	98	5194893	25.0	25.4	
S 77 1,3-Dichloropropene, Total	100				0			54.3	
78 trans-1,3-Dichloropropene	75	10.073	10.073	0.000	87	2402064	25.0	26.7	
79 Ethyl methacrylate	69	10.134	10.134	0.000	86	1851822	25.0	26.3	
80 1,1,2-Trichloroethane	97	10.280	10.280	0.000	85	1401857	25.0	25.8	
81 Tetrachloroethene	166	10.366	10.366	0.000	93	2847563	25.0	27.5	
82 1,3-Dichloropropane	76	10.439	10.439	0.000	88	2196627	25.0	25.2	
83 2-Hexanone	43	10.488	10.488	0.000	94	7096925	250.0	305.3	
85 Chlorodibromomethane	129	10.652	10.652	0.000	87	2093399	25.0	28.9	
86 Ethylene Dibromide	107	10.762	10.762	0.000	99	1453272	25.0	26.0	
* 87 Chlorobenzene-d5 (IS)	117	11.189	11.189	0.000	79	2098599	10.0	10.0	
88 1-Chlorohexane	91	11.195	11.195	0.000	92	3063459	25.0	25.5	
90 Chlorobenzene	112	11.219	11.219	0.000	98	6115938	25.0	26.1	
S 89 Xylenes, Total	106				0			79.6	
91 1,1,1,2-Tetrachloroethane	131	11.298	11.298	0.000	43	2424371	25.0	27.4	
92 Ethylbenzene	91	11.304	11.305	-0.001	97	10328427	25.0	25.8	
93 m-Xylene & p-Xylene	106	11.414	11.414	0.000	97	8704303	50.0	53.0	e
94 o-Xylene	106	11.743	11.743	0.000	94	4336935	25.0	26.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
95 Styrene	104	11.756	11.762	-0.006	92	6974106	25.0	27.3	
96 Bromoform	173	11.914	11.914	0.000	97	1358874	25.0	25.4	
97 Isopropylbenzene	105	12.042	12.042	0.000	95	11122123	25.0	26.2	
$ 100 4-Bromofluorobenzene (Surr)	95	12.182	12.189	-0.006	93	980078	10.0	9.82	
101 1,1,2,2-Tetrachloroethane	83	12.286	12.286	0.000	89	1758130	25.0	24.9	
102 Bromobenzene	156	12.304	12.304	0.000	83	3027427	25.0	27.4	
103 trans-1,4-Dichloro-2-butene	53	12.310	12.310	0.000	89	4412840	250.0	352.6	
104 1,2,3-Trichloropropane	110	12.335	12.329	0.006	84	528560	25.0	24.9	
105 N-Propylbenzene	91	12.371	12.371	0.000	97	11995756	25.0	23.9	e
106 2-Chlorotoluene	126	12.444	12.445	-0.001	98	2811467	25.0	26.3	
107 1,3,5-Trimethylbenzene	105	12.505	12.506	-0.001	94	9536725	25.0	25.2	
108 4-Chlorotoluene	126	12.536	12.536	0.000	96	2894067	25.0	26.2	
109 tert-Butylbenzene	134	12.749	12.749	0.000	91	2322894	25.0	26.5	
110 Pentachloroethane	167	12.780	12.780	0.000	51	1989324	25.0	29.0	
111 1,2,4-Trimethylbenzene	105	12.786	12.786	0.000	95	9754381	25.0	25.2	
112 sec-Butylbenzene	105	12.908	12.908	0.000	94	12107453	25.0	25.1	e
113 1,3-Dichlorobenzene	146	13.011	13.012	-0.001	75	6027358	25.0	27.6	
114 4-Isopropyltoluene	119	13.018	13.018	0.000	93	11096837	25.0	26.3	
* 115 1,4-Dichlorobenzene-d4	152	13.066	13.066	0.000	90	1279009	10.0	10.0	
116 1,4-Dichlorobenzene	146	13.085	13.085	0.000	91	5974656	25.0	27.2	
117 1,2,3-Trimethylbenzene	120	13.091	13.091	0.000	97	4451775	25.0	25.8	
118 Benzyl chloride	126	13.158	13.158	0.000	97	907490	25.0	28.6	
119 n-Butylbenzene	92	13.304	13.304	0.000	95	5146560	25.0	26.8	
120 1,2-Dichlorobenzene	146	13.341	13.341	0.000	98	5320207	25.0	27.1	
122 1,2-Dibromo-3-Chloropropane	155	13.883	13.883	0.000	92	327880	25.0	29.1	
123 1,3,5-Trichlorobenzene	180	14.011	14.011	0.000	97	4293418	25.0	29.5	
124 1,2,4-Trichlorobenzene	180	14.432	14.432	0.000	90	3561597	25.0	29.7	
125 Hexachlorobutadiene	225	14.511	14.511	0.000	96	1383565	25.0	30.7	
126 Naphthalene	128	14.615	14.615	0.000	96	6054183	25.0	25.7	
127 1,2,3-Trichlorobenzene	180	14.755	14.755	0.000	93	2901669	25.0	28.4	
134 Isopropyl alcohol	45		0.000				ND	ND	
135 p-Diethylbenzene	1		0.000				ND	ND	
137 2-Methylnaphthalene	142		0.000				ND	ND	
144 2-ethoxy-2-methyl butane	1		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

e - Potential Peak Saturated

Review Flags

M - Manually Integrated

Reagents:

MSV_RV1_826_00023	Amount Added: 25.00	Units: uL	
MSV_RV4_826_00025	Amount Added: 25.00	Units: uL	
MSV_RV4GAS826_00075	Amount Added: 25.00	Units: uL	
MSV_31_826ISS_00003	Amount Added: 5.00	Units: uL	Run Reagent

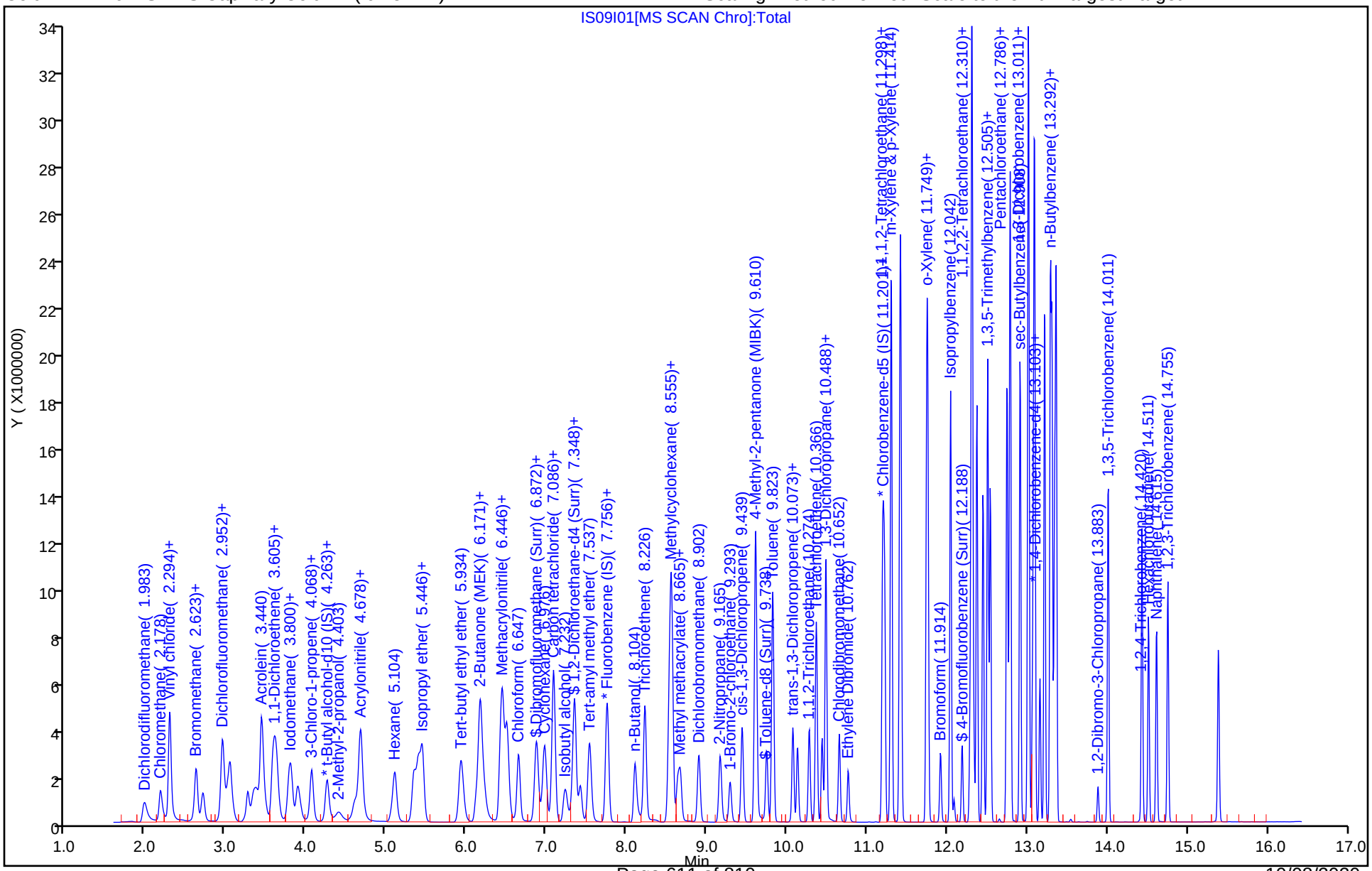
Report Date: 11-Sep-2020 18:38:15 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I01.D

Injection Date:	09-Sep-2020 15:55:30	Instrument ID:	19930	Operator ID:	dvv10203
Lims ID:	IC std7			Worklist Smp#:	3
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	8260 25ml HP31	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



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

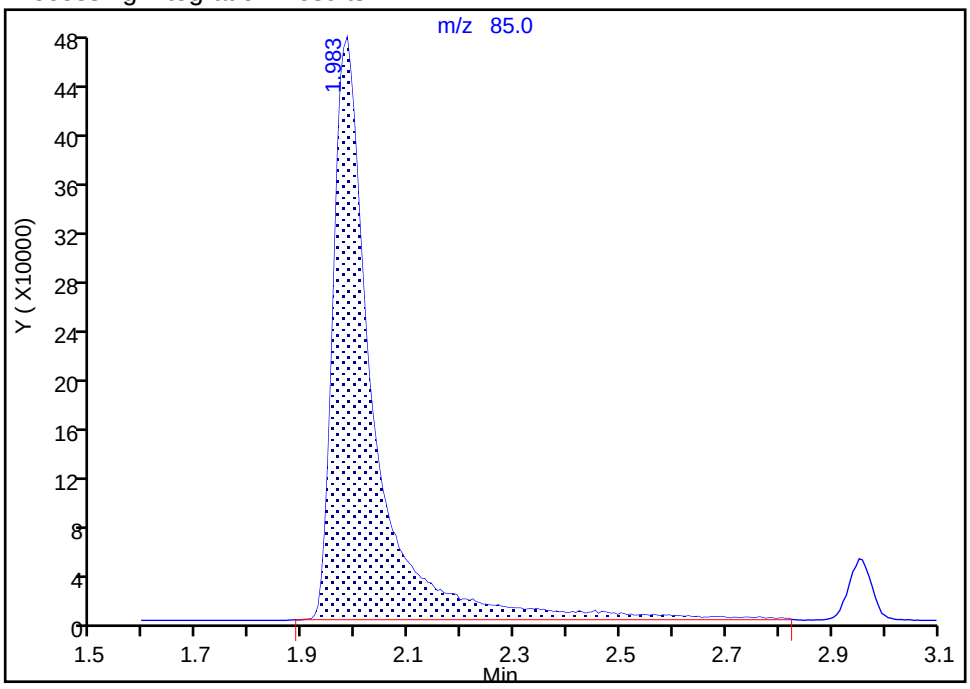
Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I01.D
Injection Date: 09-Sep-2020 15:55:30 Instrument ID: 19930
Lims ID: IC std7
Client ID:
Operator ID: dvv10203 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

1 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

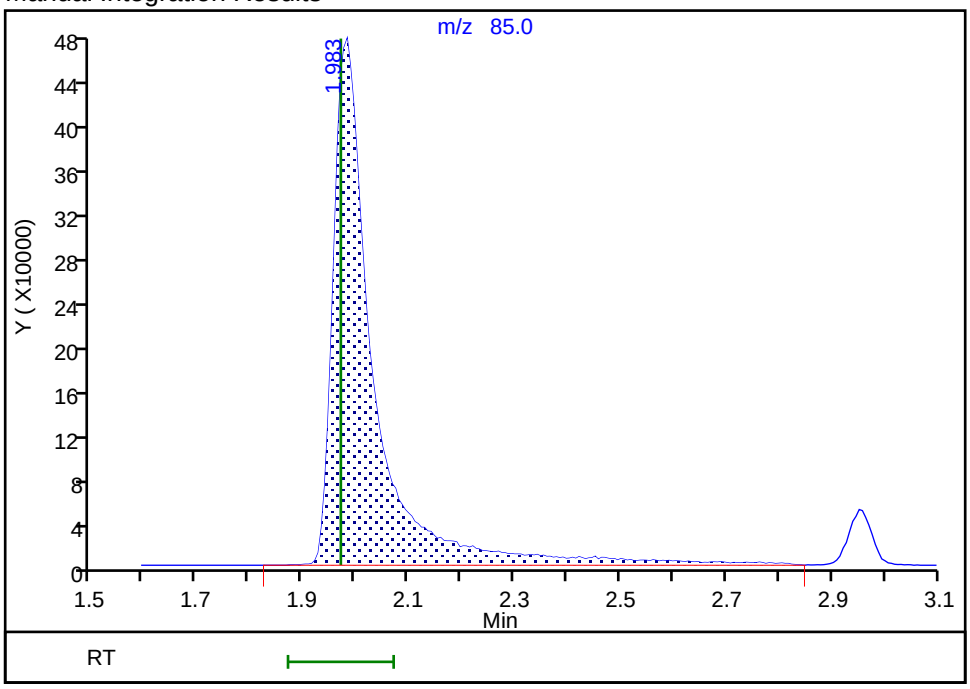
Processing Integration Results

RT: 1.98
Area: 2478462
Amount: 25.540775
Amount Units: ug/l



Manual Integration Results

RT: 1.98
Area: 2509507
Amount: 25.813506
Amount Units: ug/l



Reviewer: campbellme, 09-Sep-2020 22:07:57
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

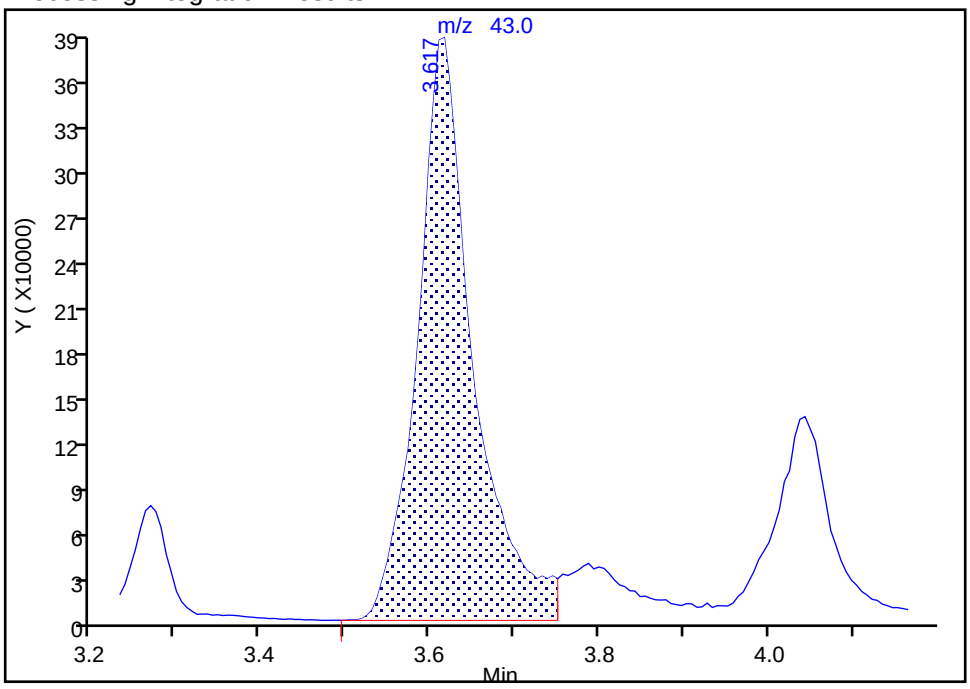
Data File:	\\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I01.D				
Injection Date:	09-Sep-2020 15:55:30	Instrument ID:	19930		
Lims ID:	IC std7				
Client ID:					
Operator ID:	dvv10203	ALS Bottle#:	2	Worklist Smp#:	3
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

15 Acetone, CAS: 67-64-1

Signal: 1

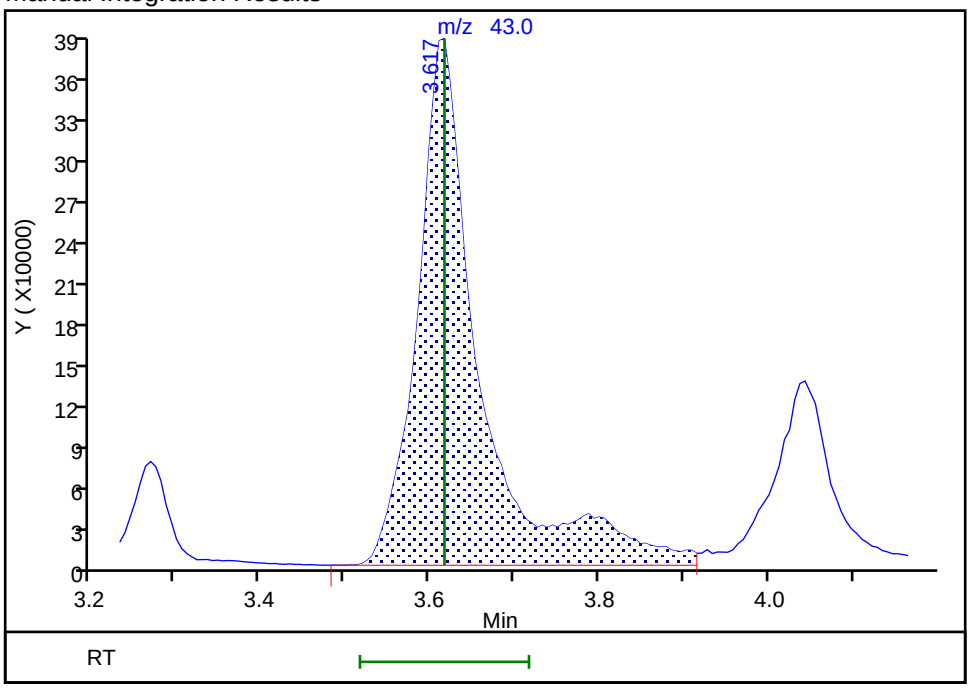
Processing Integration Results

RT: 3.62
Area: 1765490
Amount: 256.0662
Amount Units: ug/l



Manual Integration Results

RT: 3.62
Area: 1982894
Amount: 234.6406
Amount Units: ug/l



Reviewer: campbellme, 09-Sep-2020 22:22:06
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC

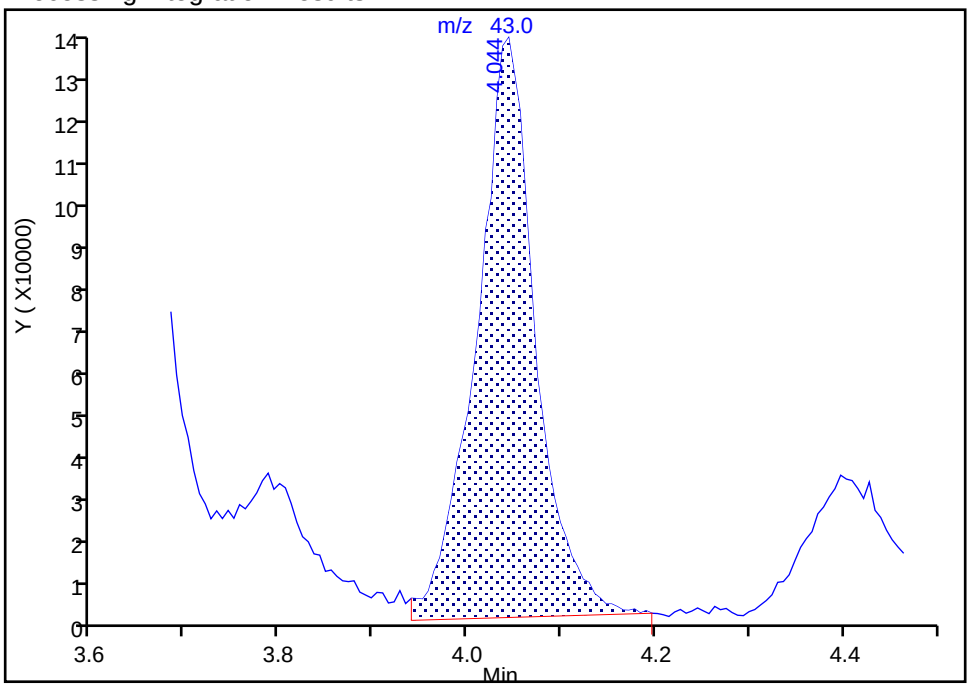
Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I01.D
Injection Date: 09-Sep-2020 15:55:30 Instrument ID: 19930
Lims ID: IC std7
Client ID:
Operator ID: dvv10203 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

21 Methyl acetate, CAS: 79-20-9

Signal: 1

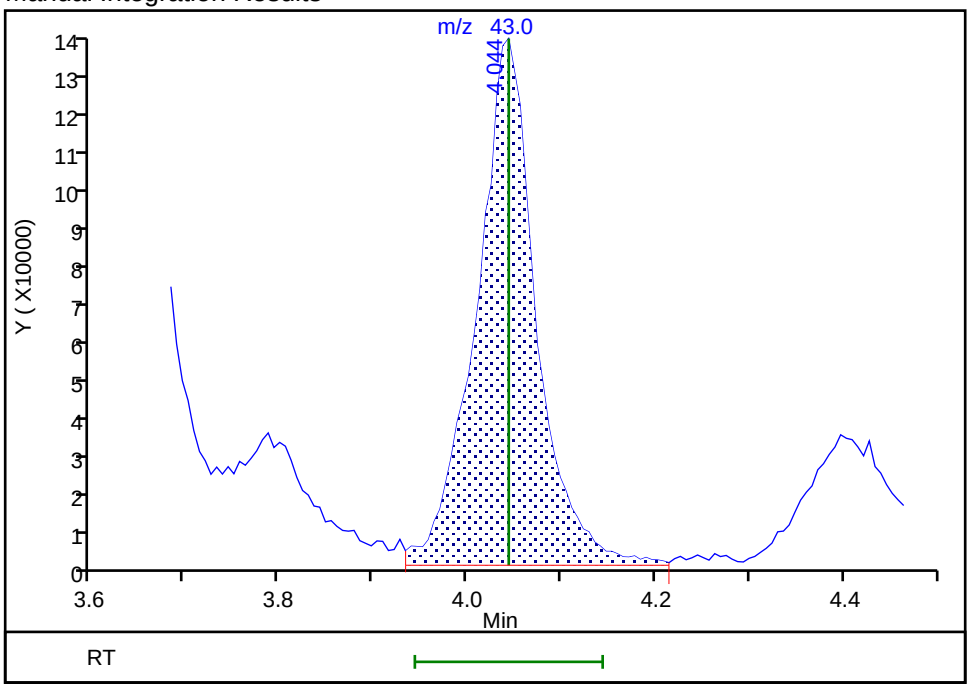
Processing Integration Results

RT: 4.04
Area: 566708
Amount: 24.690208
Amount Units: ug/l



Manual Integration Results

RT: 4.04
Area: 577700
Amount: 24.226368
Amount Units: ug/l



Reviewer: campbellme, 09-Sep-2020 22:08:26
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

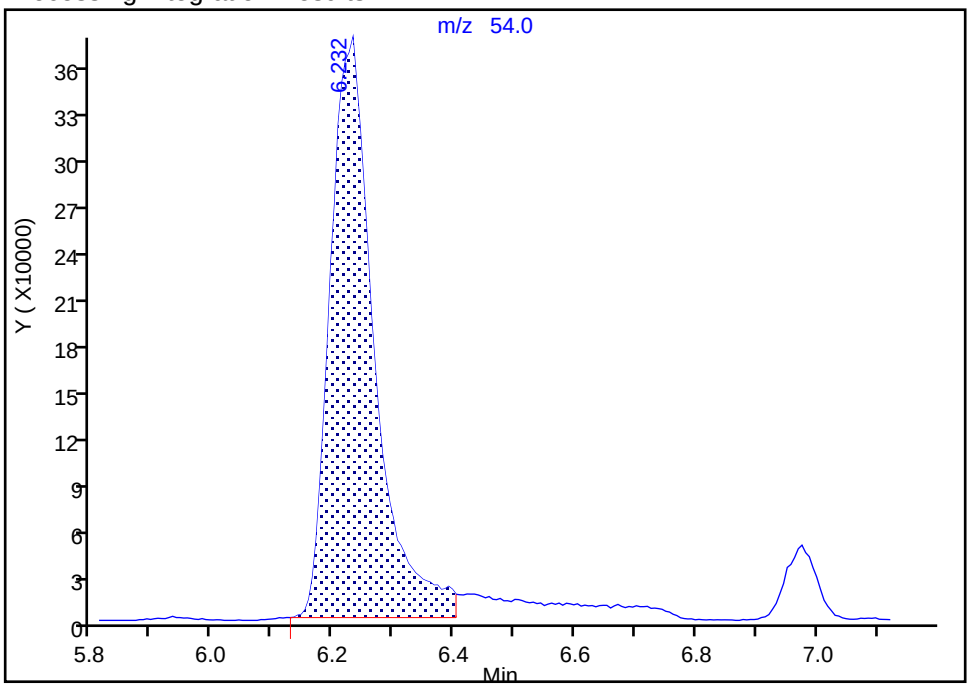
Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I01.D
Injection Date: 09-Sep-2020 15:55:30 Instrument ID: 19930
Lims ID: IC std7
Client ID:
Operator ID: dvv10203 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

40 Propionitrile, CAS: 107-12-0

Signal: 1

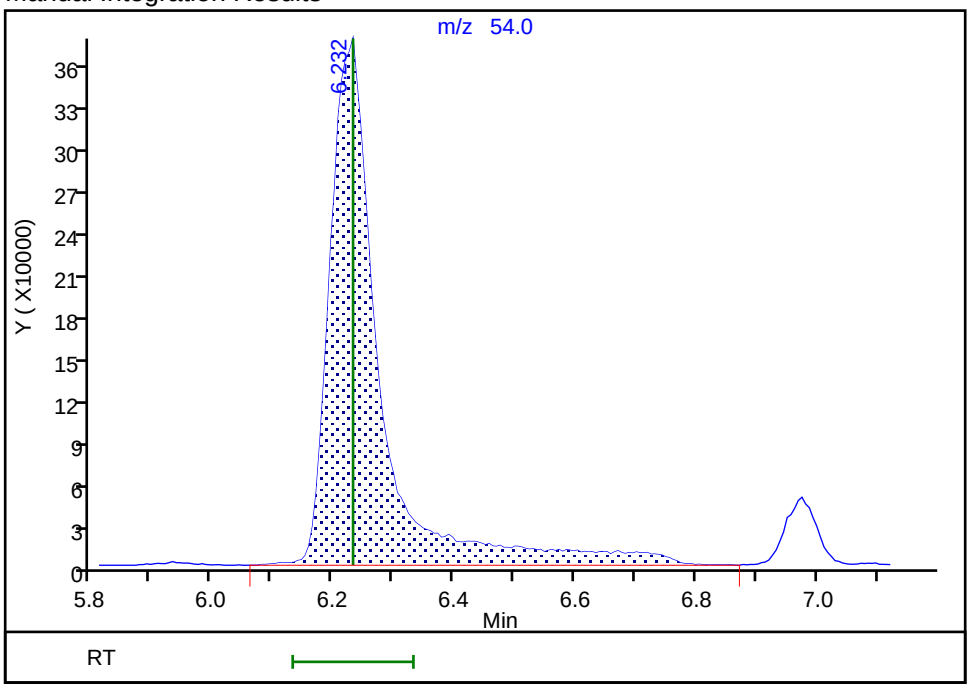
Processing Integration Results

RT: 6.23
Area: 1889950
Amount: 539.6637
Amount Units: ug/l



Manual Integration Results

RT: 6.23
Area: 2162469
Amount: 584.2745
Amount Units: ug/l



Reviewer: campbellme, 09-Sep-2020 22:08:48
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

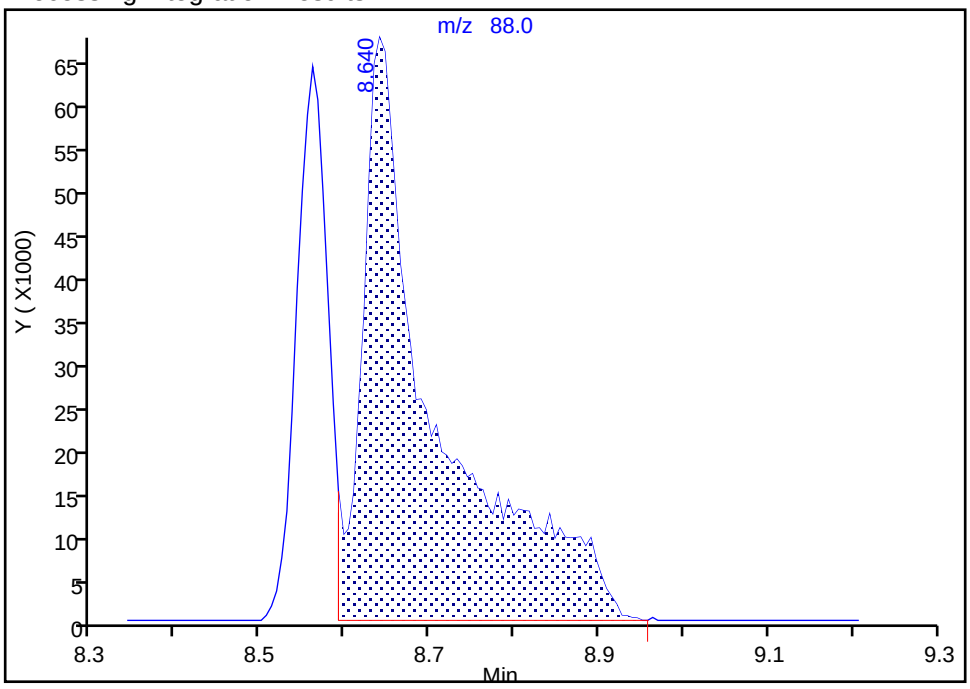
Data File:	\\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I01.D				
Injection Date:	09-Sep-2020 15:55:30	Instrument ID:	19930		
Lims ID:	IC std7				
Client ID:					
Operator ID:	dvv10203	ALS Bottle#:	2	Worklist Smp#:	3
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

65 1,4-Dioxane, CAS: 123-91-1

Signal: 1

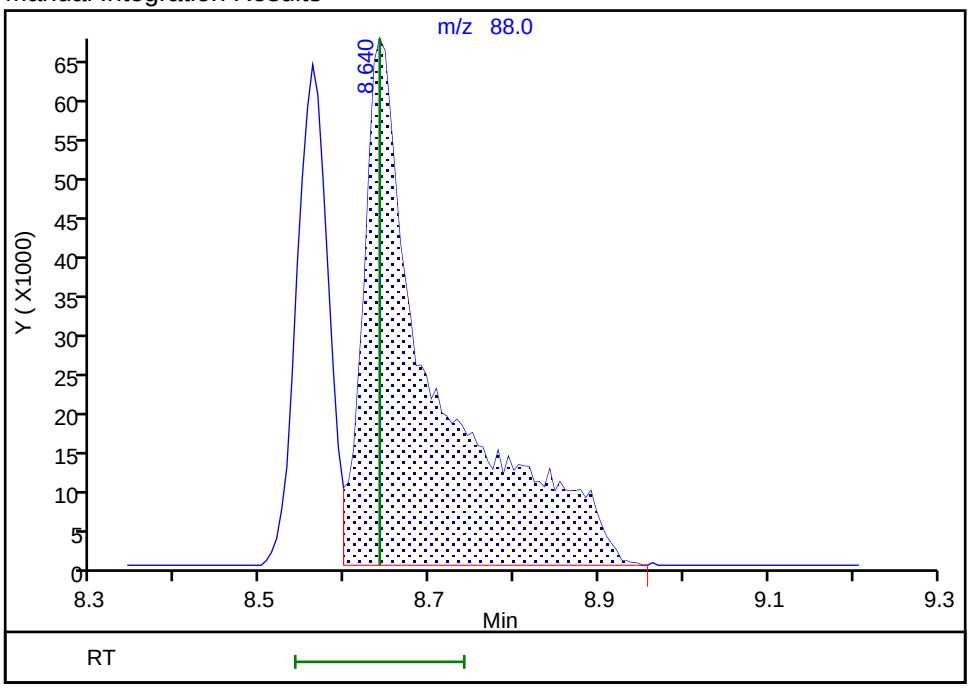
Processing Integration Results

RT: 8.64
Area: 408637
Amount: 1262.8455
Amount Units: ug/l



Manual Integration Results

RT: 8.64
Area: 403137
Amount: 1440.9825
Amount Units: ug/l



Reviewer: campbellme, 09-Sep-2020 22:09:11
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I02.D
Lims ID: ICIS - LG
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 09-Sep-2020 16:16:30 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: ICIS - LG
Misc. Info.: 410-0010046-004
Operator ID: dvv10203 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 11-Sep-2020 18:38:25 Calib Date: 09-Sep-2020 21:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1058

First Level Reviewer: campbellme Date: 09-Sep-2020 22:11:16

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	1.977	1.977	0.000	99	985204	10.0	10.1	
4 Chloromethane	50	2.178	2.178	0.000	99	935246	10.0	9.56	
5 Vinyl chloride	62	2.294	2.294	0.000	83	933566	10.0	9.64	
6 Butadiene	39	2.294	2.294	0.000	90	795690	10.0	8.73	
7 Bromomethane	94	2.629	2.629	0.000	92	837437	10.0	9.62	
8 Chloroethane	64	2.715	2.715	0.000	99	606949	10.0	9.59	
9 Dichlorofluoromethane	67	2.952	2.952	0.000	97	1505882	10.0	9.76	
10 Trichlorofluoromethane	101	3.019	3.019	0.000	96	1544319	10.0	10.5	
11 Ethyl ether	59	3.276	3.276	0.000	88	457895	10.0	10.2	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.361	3.361	0.000	87	744032	10.0	9.92	
13 Acrolein	56	3.446	3.446	0.000	99	3148585	500.0	493.1	
14 1,1-Dichloroethene	96	3.586	3.586	0.000	95	642747	10.0	10.1	
15 Acetone	43	3.617	3.617	0.000	87	813705	100.0	81.3	M
16 112TCTFE	101	3.623	3.623	0.000	89	696292	10.0	10.4	
17 Iodomethane	142	3.788	3.788	0.000	99	1410078	10.0	10.5	
18 Ethyl bromide	108	3.812	3.812	0.000	98	566360	10.0	10.3	
19 Carbon disulfide	76	3.897	3.897	0.000	99	1680092	10.0	9.83	
21 Methyl acetate	43	4.050	4.050	0.000	95	244536	10.0	8.66	M
22 3-Chloro-1-propene	41	4.074	4.074	0.000	88	807100	10.0	9.68	
23 Methylene Chloride	84	4.263	4.263	0.000	86	655598	10.0	9.92	
* 24 t-Butyl alcohol-d10 (IS)	65	4.281	4.281	0.000	0	200302	50.0	50.0	
25 2-Methyl-2-propanol	59	4.409	4.409	0.000	99	745468	200.0	179.6	
26 Acrylonitrile	53	4.605	4.605	0.000	98	538522	50.0	48.3	
27 Methyl tert-butyl ether	73	4.678	4.678	0.000	94	1655235	10.0	9.92	
28 trans-1,2-Dichloroethene	96	4.690	4.690	0.000	94	716429	10.0	10.0	
29 Hexane	57	5.111	5.111	0.000	90	851367	10.0	10.3	
31 1,1-Dichloroethane	63	5.348	5.348	0.000	96	1143649	10.0	9.86	
32 Isopropyl ether	45	5.403	5.403	0.000	91	1738228	10.0	9.81	
33 2-Chloro-1,3-butadiene	53	5.452	5.452	0.000	90	962862	10.0	9.75	
34 Tert-butyl ethyl ether	59	5.934	5.934	0.000	96	1845254	10.0	9.86	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
36 2-Butanone (MEK)	43	6.141	6.141	0.000	98	1402208	100.0	93.6	
37 cis-1,2-Dichloroethene	96	6.171	6.171	0.000	79	816219	10.0	9.95	
38 2,2-Dichloropropane	77	6.190	6.190	0.000	85	1118170	10.0	9.87	
40 Propionitrile	54	6.226	6.226	0.000	99	777922	200.0	177.5	
42 Methacrylonitrile	67	6.446	6.446	0.000	89	1609891	100.0	98.1	
43 Chlorobromomethane	128	6.500	6.500	0.000	84	386644	10.0	10.3	
44 Tetrahydrofuran	71	6.513	6.513	0.000	81	468579	100.0	96.9	
45 Chloroform	83	6.653	6.653	0.000	93	1282685	10.0	9.84	
$ 46 Dibromofluoromethane (Surr)	113	6.866	6.866	0.000	93	660649	10.0	10.1	
47 1,1,1-Trichloroethane	97	6.878	6.878	0.000	97	1293948	10.0	9.90	
48 Cyclohexane	56	6.976	6.976	0.000	91	1004400	10.0	10.0	
50 Carbon tetrachloride	117	7.092	7.092	0.000	96	1210454	10.0	10.1	
51 1,1-Dichloropropene	75	7.092	7.092	0.000	94	959625	10.0	9.92	
52 Isobutyl alcohol	41	7.232	7.232	0.000	94	538063	500.0	438.6	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.323	7.323	0.000	0	120530	10.0	10.1	
54 Benzene	78	7.354	7.354	0.000	95	2806471	10.0	9.90	
56 1,2-Dichloroethane	62	7.421	7.421	0.000	98	737859	10.0	9.49	
57 Tert-amyl methyl ether	73	7.537	7.537	0.000	98	1787654	10.0	9.95	
* 58 Fluorobenzene (IS)	96	7.750	7.750	0.000	99	2413420	10.0	10.0	
59 n-Heptane	43	7.762	7.762	0.000	86	795447	10.0	10.2	
60 n-Butanol	56	8.104	8.104	0.000	86	1207615	1000.0	1014.1	M
61 Trichloroethene	95	8.226	8.226	0.000	96	809782	10.0	9.76	
62 Methylcyclohexane	83	8.537	8.537	0.000	91	1237082	10.0	10.1	
63 1,2-Dichloropropane	63	8.561	8.561	0.000	81	644998	10.0	9.80	
64 Methyl methacrylate	69	8.640	8.640	0.000	83	317715	10.0	9.90	
65 1,4-Dioxane	88	8.646	8.646	0.000	37	172511	500.0	520.7	M
66 Dibromomethane	93	8.671	8.671	0.000	91	360650	10.0	9.88	
68 Dichlorobromomethane	83	8.902	8.902	0.000	99	941173	10.0	10.2	
69 2-Nitropropane	41	9.171	9.171	0.000	99	936194	100.0	96.0	
72 1-Bromo-2-chloroethane	63	9.293	9.293	0.000	98	663010	10.0	10.0	
73 cis-1,3-Dichloropropene	75	9.439	9.439	0.000	96	1058178	10.0	10.2	
74 4-Methyl-2-pentanone (MIBK)	43	9.610	9.610	0.000	95	3785588	100.0	96.2	
$ 75 Toluene-d8 (Surr)	98	9.750	9.750	0.000	93	2436337	10.0	9.72	
76 Toluene	92	9.823	9.823	0.000	98	1928652	10.0	9.66	
78 trans-1,3-Dichloropropene	75	10.073	10.073	0.000	90	885952	10.0	10.1	
79 Ethyl methacrylate	69	10.134	10.134	0.000	86	691677	10.0	10.1	
80 1,1,2-Trichloroethane	97	10.280	10.280	0.000	90	517228	10.0	9.75	
81 Tetrachloroethene	166	10.366	10.366	0.000	98	1036365	10.0	10.3	
82 1,3-Dichloropropane	76	10.439	10.439	0.000	88	831468	10.0	9.78	
83 2-Hexanone	43	10.488	10.488	0.000	95	2723880	100.0	99.0	
85 Chlorodibromomethane	129	10.652	10.652	0.000	89	750350	10.0	10.6	
86 Ethylene Dibromide	107	10.768	10.768	0.000	98	544735	10.0	9.98	
* 87 Chlorobenzene-d5 (IS)	117	11.189	11.189	0.000	83	2045553	10.0	10.0	
88 1-Chlorohexane	91	11.195	11.195	0.000	91	1104598	10.0	9.42	
90 Chlorobenzene	112	11.219	11.219	0.000	98	2258124	10.0	9.89	
91 1,1,1,2-Tetrachloroethane	131	11.298	11.298	0.000	96	889203	10.0	10.3	
92 Ethylbenzene	91	11.304	11.304	0.000	97	3838006	10.0	9.83	
93 m-Xylene & p-Xylene	106	11.414	11.414	0.000	99	3193595	20.0	20.0	
94 o-Xylene	106	11.743	11.743	0.000	95	1586395	10.0	9.97	
95 Styrene	104	11.762	11.762	0.000	95	2536352	10.0	10.2	
96 Bromoform	173	11.920	11.920	0.000	98	465591	10.0	9.26	
97 Isopropylbenzene	105	12.042	12.042	0.000	95	4146476	10.0	10.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 100 4-Bromofluorobenzene (Surr)	95	12.188	12.188	0.000	97	954546	10.0	9.82	
101 1,1,2,2-Tetrachloroethane	83	12.286	12.286	0.000	95	652908	10.0	9.68	
102 Bromobenzene	156	12.304	12.304	0.000	95	1056073	10.0	10.0	
103 trans-1,4-Dichloro-2-butene	53	12.310	12.310	0.000	91	1535430	100.0	103.6	
104 1,2,3-Trichloropropane	110	12.335	12.335	0.000	84	196614	10.0	9.71	
105 N-Propylbenzene	91	12.371	12.371	0.000	98	4586516	10.0	9.57	
106 2-Chlorotoluene	126	12.444	12.444	0.000	98	1018253	10.0	9.98	
107 1,3,5-Trimethylbenzene	105	12.505	12.505	0.000	94	3554503	10.0	9.83	
108 4-Chlorotoluene	126	12.536	12.536	0.000	96	1035111	10.0	9.84	
109 tert-Butylbenzene	134	12.749	12.749	0.000	92	830328	10.0	9.93	
110 Pentachloroethane	167	12.780	12.780	0.000	93	696855	10.0	10.6	
111 1,2,4-Trimethylbenzene	105	12.786	12.786	0.000	96	3619121	10.0	9.80	
112 sec-Butylbenzene	105	12.908	12.908	0.000	94	4558183	10.0	9.91	
113 1,3-Dichlorobenzene	146	13.011	13.011	0.000	98	2106368	10.0	10.1	
114 4-Isopropyltoluene	119	13.018	13.018	0.000	96	4052773	10.0	10.1	
* 115 1,4-Dichlorobenzene-d4	152	13.066	13.066	0.000	93	1220848	10.0	10.0	
116 1,4-Dichlorobenzene	146	13.085	13.085	0.000	96	2095547	10.0	10.0	
117 1,2,3-Trimethylbenzene	120	13.091	13.091	0.000	98	1596869	10.0	9.70	
118 Benzyl chloride	126	13.158	13.158	0.000	98	323570	10.0	10.7	
119 n-Butylbenzene	92	13.304	13.304	0.000	94	1833319	10.0	10.0	
120 1,2-Dichlorobenzene	146	13.341	13.341	0.000	99	1920108	10.0	10.2	
122 1,2-Dibromo-3-Chloropropane	155	13.883	13.883	0.000	92	118919	10.0	11.1	
123 1,3,5-Trichlorobenzene	180	14.011	14.011	0.000	98	1483615	10.0	10.7	
124 1,2,4-Trichlorobenzene	180	14.432	14.432	0.000	94	1241413	10.0	10.9	
125 Hexachlorobutadiene	225	14.517	14.517	0.000	98	474992	10.0	11.0	
126 Naphthalene	128	14.615	14.615	0.000	96	2328204	10.0	10.4	
127 1,2,3-Trichlorobenzene	180	14.755	14.755	0.000	96	1043582	10.0	10.7	
134 Isopropyl alcohol	45		0.000				ND	ND	
135 p-Diethylbenzene	1		0.000				ND	ND	
137 2-Methylnaphthalene	142		0.000				ND	ND	
144 2-ethoxy-2-methyl butane	1		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MSV_RV1_826_00023	Amount Added: 10.00	Units: uL	
MSV_RV4_826_00025	Amount Added: 10.00	Units: uL	
MSV_RV4GAS826_00075	Amount Added: 10.00	Units: uL	
MSV_31_826ISS_00003	Amount Added: 5.00	Units: uL	Run Reagent

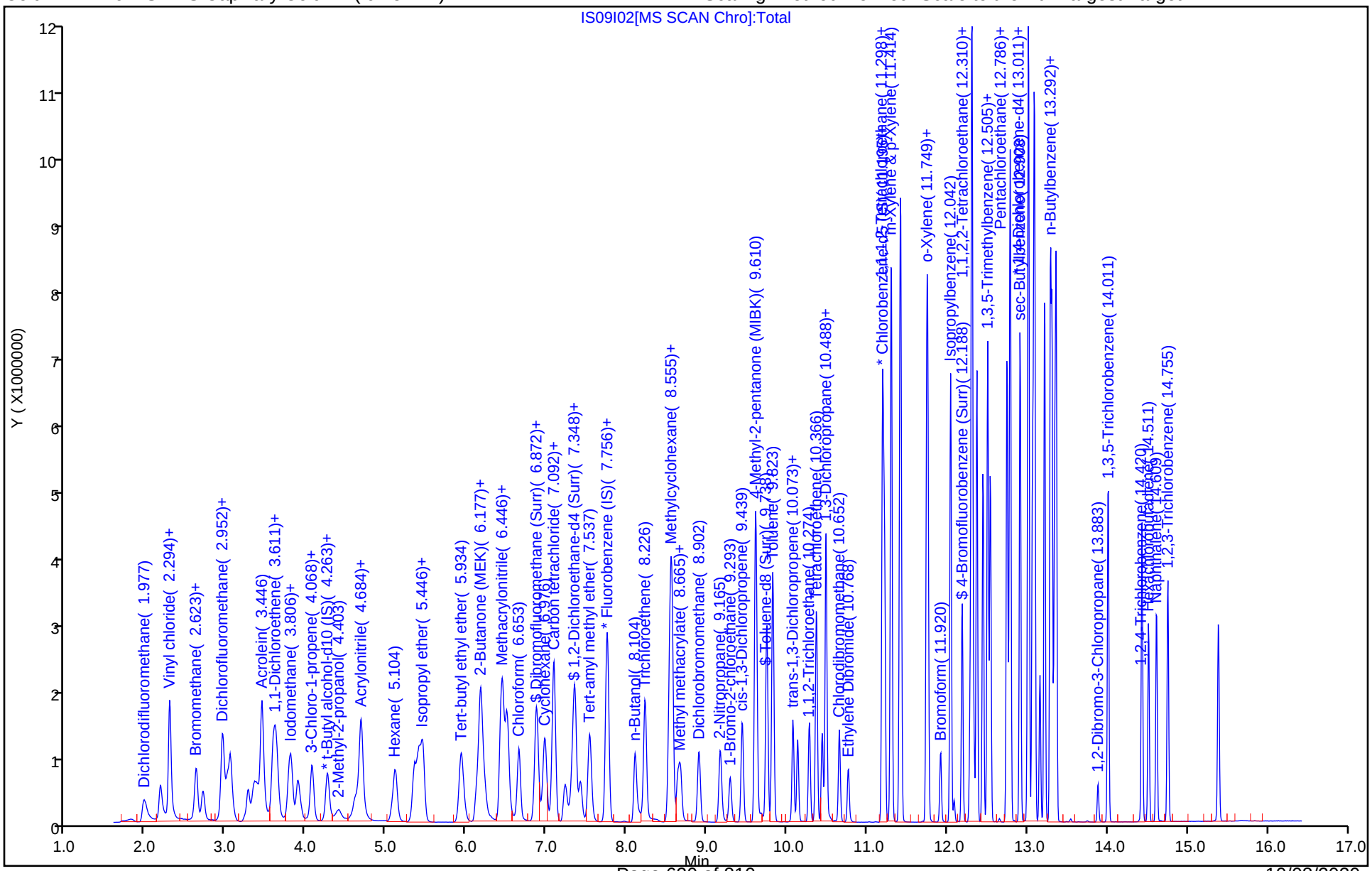
Report Date: 11-Sep-2020 18:38:27 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I02.D

Injection Date:	09-Sep-2020 16:16:30	Instrument ID:	19930	Operator ID:	dvv10203
Lims ID:	ICIS - LG			Worklist Smp#:	4
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	8260 25ml HP31	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



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

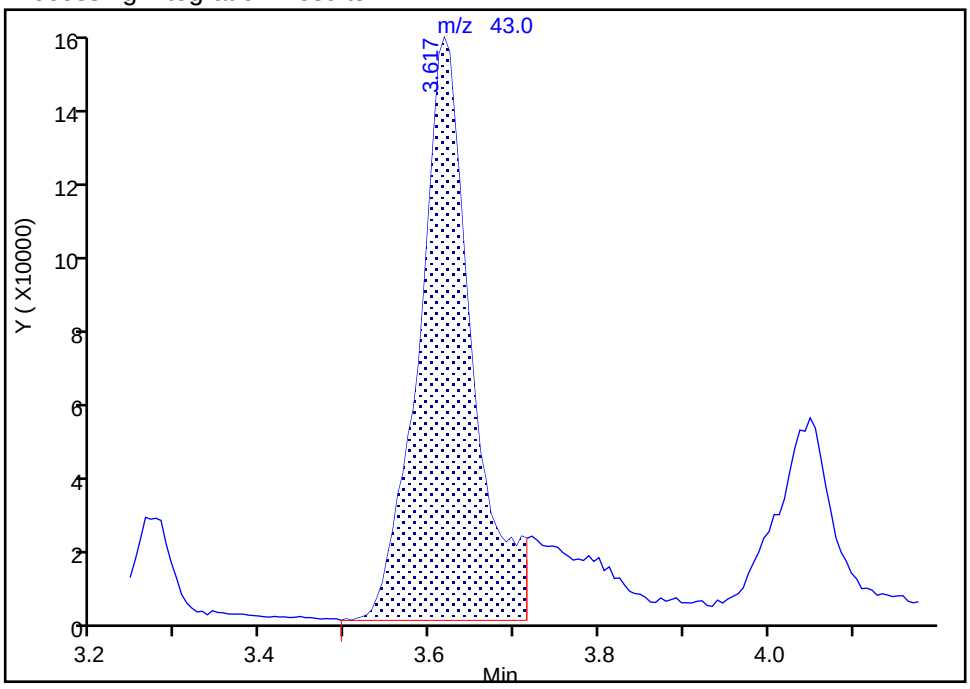
Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I02.D
Injection Date: 09-Sep-2020 16:16:30 Instrument ID: 19930
Lims ID: ICIS - LG
Client ID:
Operator ID: dvv10203 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

15 Acetone, CAS: 67-64-1

Signal: 1

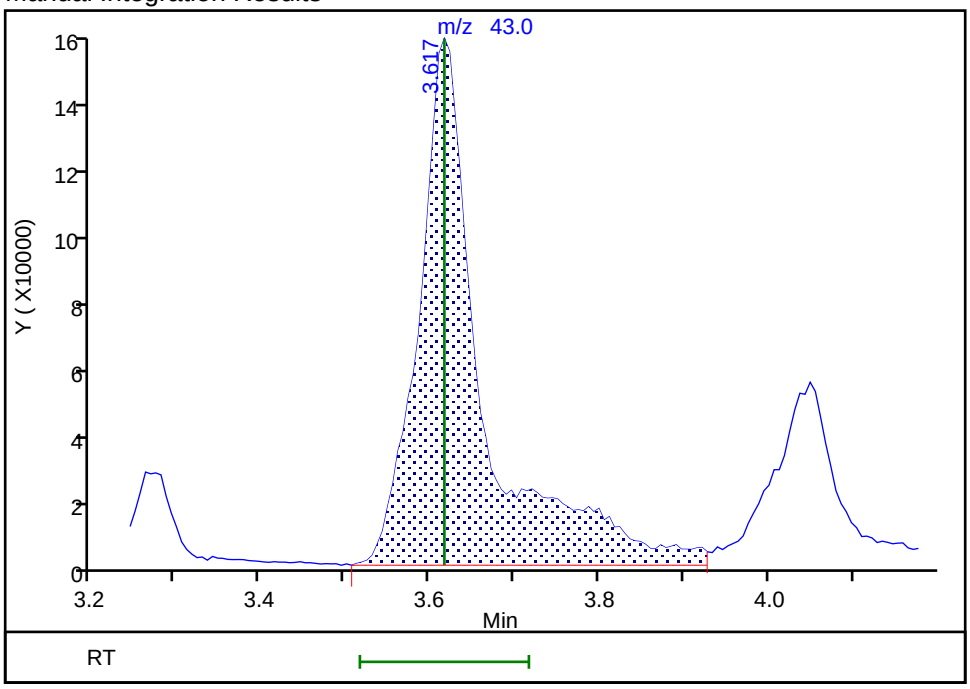
Processing Integration Results

RT: 3.62
Area: 667761
Amount: 68.555582
Amount Units: ug/l



Manual Integration Results

RT: 3.62
Area: 813705
Amount: 81.301926
Amount Units: ug/l



Reviewer: campbellme, 09-Sep-2020 22:22:47
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC

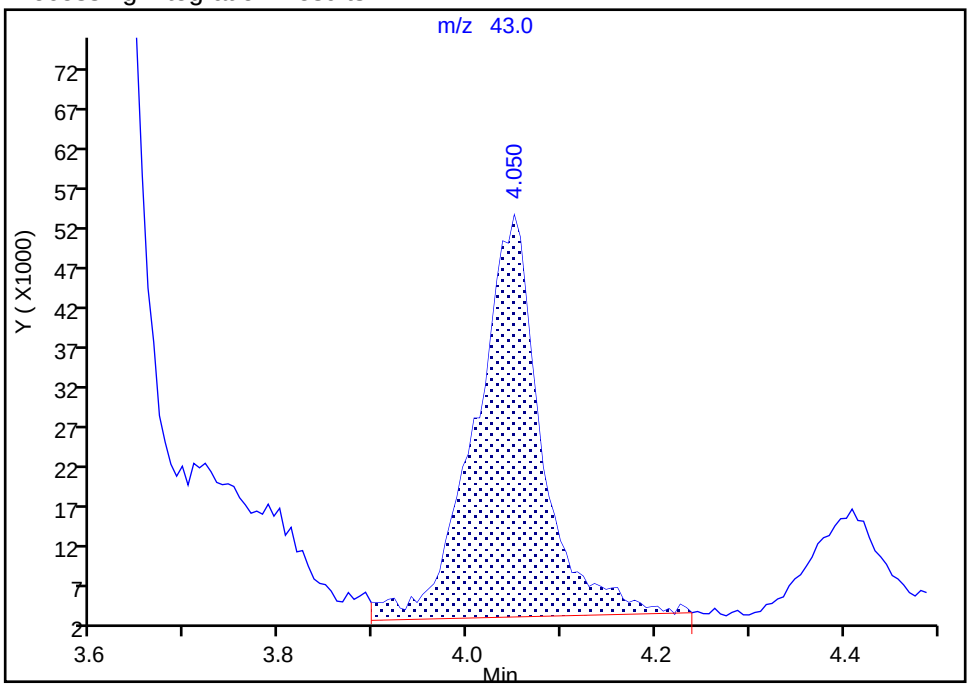
Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I02.D
Injection Date: 09-Sep-2020 16:16:30 Instrument ID: 19930
Lims ID: ICIS - LG
Client ID:
Operator ID: dvv10203 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

21 Methyl acetate, CAS: 79-20-9

Signal: 1

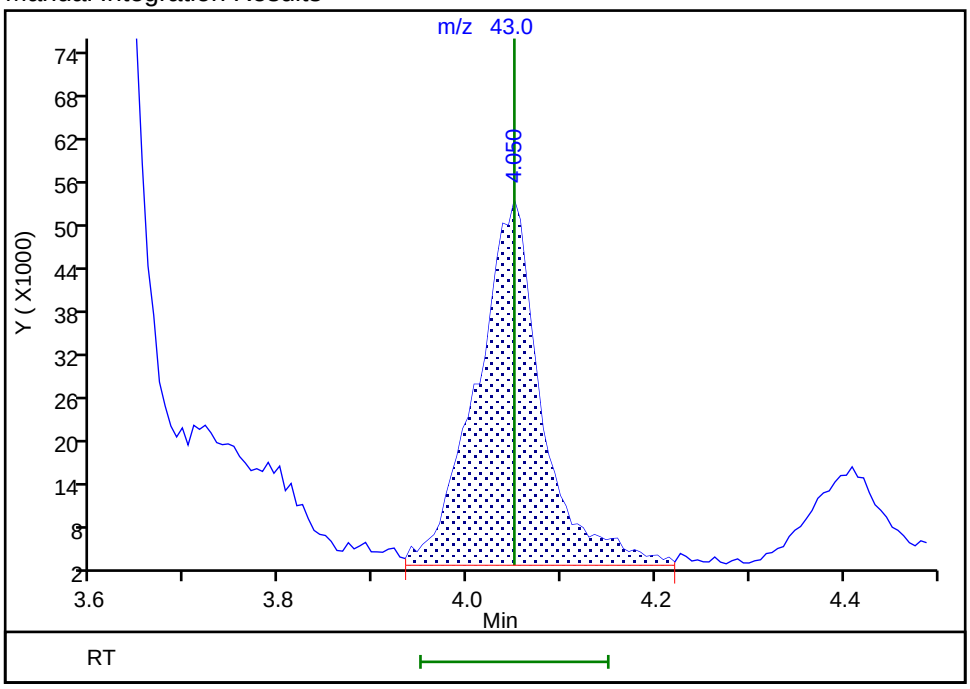
Processing Integration Results

RT: 4.05
Area: 247700
Amount: 10.484362
Amount Units: ug/l



Manual Integration Results

RT: 4.05
Area: 244536
Amount: 8.658825
Amount Units: ug/l



Reviewer: campbellme, 09-Sep-2020 22:10:08
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

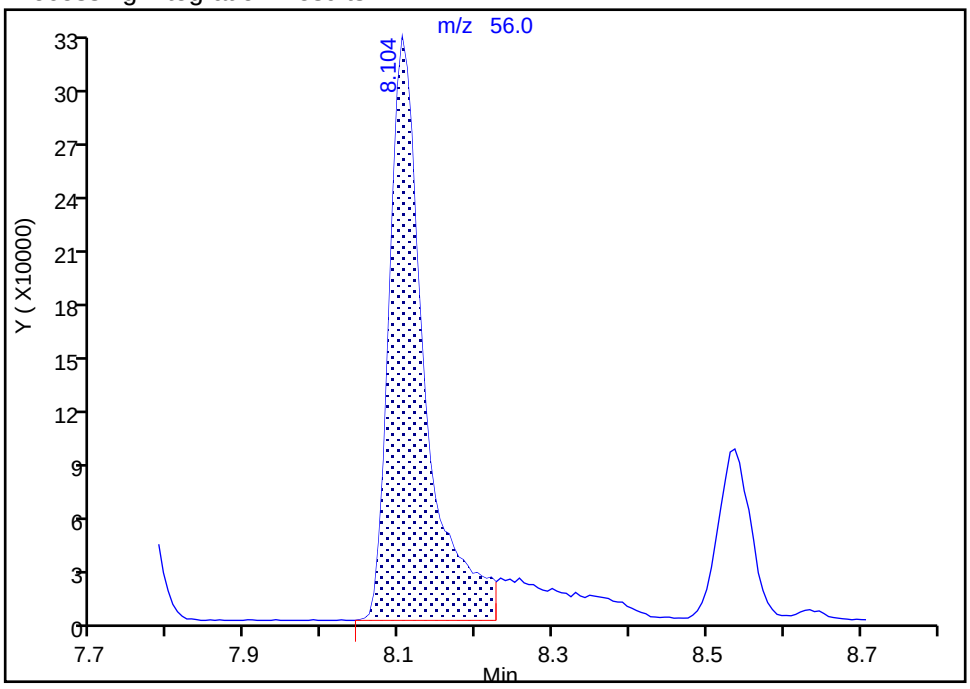
Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I02.D
Injection Date: 09-Sep-2020 16:16:30 Instrument ID: 19930
Lims ID: ICIS - LG
Client ID:
Operator ID: dvv10203 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

60 n-Butanol, CAS: 71-36-3

Signal: 1

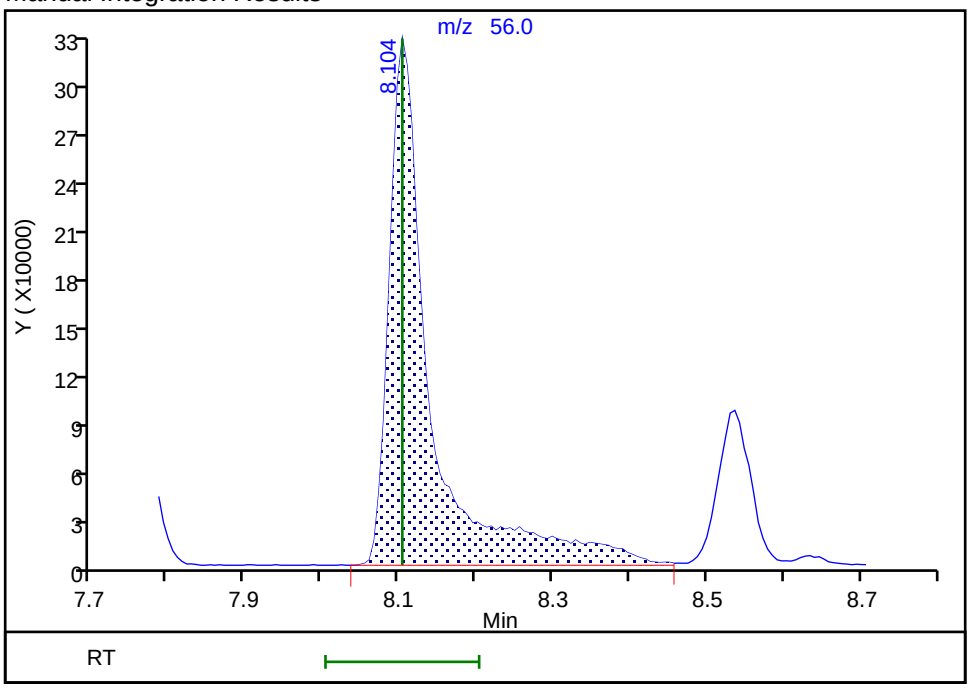
Processing Integration Results

RT: 8.10
Area: 1033200
Amount: 951.4514
Amount Units: ug/l



Manual Integration Results

RT: 8.10
Area: 1207615
Amount: 1014.1064
Amount Units: ug/l



Reviewer: campbellme, 09-Sep-2020 22:10:50
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

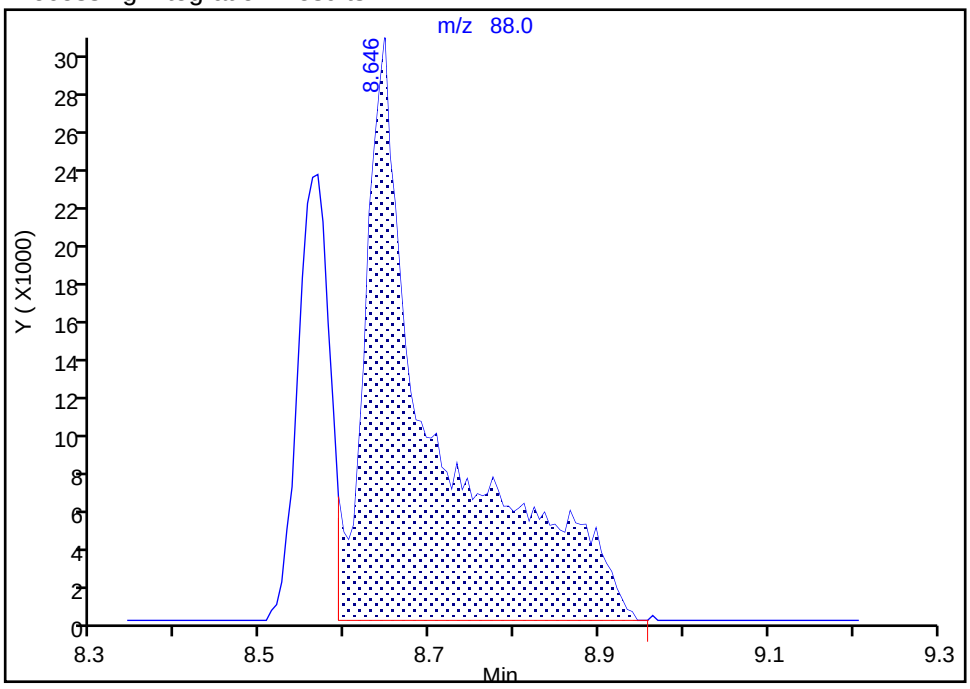
Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I02.D
Injection Date: 09-Sep-2020 16:16:30 Instrument ID: 19930
Lims ID: ICIS - LG
Client ID:
Operator ID: dvv10203 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

65 1,4-Dioxane, CAS: 123-91-1

Signal: 1

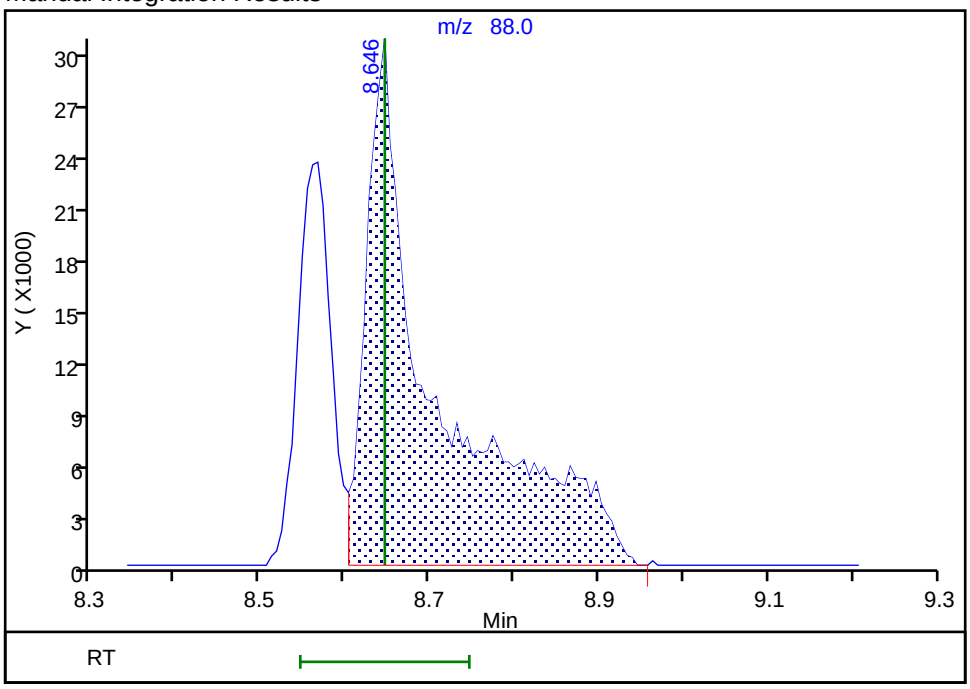
Processing Integration Results

RT: 8.65
Area: 176543
Amount: 481.4725
Amount Units: ug/l



Manual Integration Results

RT: 8.65
Area: 172511
Amount: 520.6586
Amount Units: ug/l



Reviewer: campbellme, 09-Sep-2020 22:11:01
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I03.D
Lims ID: IC std5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 09-Sep-2020 16:37:30 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: IC STD5
Misc. Info.: 410-0010046-005
Operator ID: dvv10203 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 11-Sep-2020 18:38:34 Calib Date: 09-Sep-2020 21:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1058

First Level Reviewer: campbellme Date: 09-Sep-2020 22:13:15

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	1.977	1.977	0.000	99	482795	5.00	5.01	
4 Chloromethane	50	2.178	2.178	0.000	99	474721	5.00	4.89	
5 Vinyl chloride	62	2.294	2.294	0.000	88	459682	5.00	4.78	
6 Butadiene	39	2.294	2.294	0.000	91	396338	5.00	4.38	
7 Bromomethane	94	2.623	2.629	-0.006	92	406499	5.00	4.71	
8 Chloroethane	64	2.709	2.715	-0.006	100	302819	5.00	4.82	
9 Dichlorofluoromethane	67	2.952	2.952	0.000	97	741126	5.00	4.84	
10 Trichlorofluoromethane	101	3.020	3.019	0.001	96	727417	5.00	4.96	
11 Ethyl ether	59	3.276	3.276	0.000	88	221505	5.00	4.98	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.361	3.361	0.000	88	360040	5.00	4.84	
13 Acrolein	56	3.446	3.446	0.000	100	1539596	250.0	247.6	
14 1,1-Dichloroethene	96	3.586	3.586	0.000	96	317698	5.00	5.01	
15 Acetone	43	3.617	3.617	0.000	87	439990	50.0	45.2	M
16 112TCTFE	101	3.629	3.623	0.006	90	335577	5.00	5.03	
17 Iodomethane	142	3.788	3.788	0.000	100	688294	5.00	5.17	
18 Ethyl bromide	108	3.818	3.812	0.006	98	281883	5.00	5.19	
19 Carbon disulfide	76	3.897	3.897	0.000	99	826846	5.00	4.88	
21 Methyl acetate	43	4.050	4.050	0.000	97	126434	5.00	4.60	M
22 3-Chloro-1-propene	41	4.074	4.074	0.000	88	398430	5.00	4.81	
23 Methylene Chloride	84	4.269	4.263	0.006	86	323150	5.00	4.93	
* 24 t-Butyl alcohol-d10 (IS)	65	4.275	4.281	-0.006	0	195021	50.0	50.0	
25 2-Methyl-2-propanol	59	4.403	4.409	-0.006	99	406071	100.0	100.5	
26 Acrylonitrile	53	4.611	4.605	0.007	99	269776	25.0	24.8	
27 Methyl tert-butyl ether	73	4.672	4.678	-0.006	93	810253	5.00	4.90	
28 trans-1,2-Dichloroethene	96	4.690	4.690	0.000	95	346093	5.00	4.88	
29 Hexane	57	5.117	5.111	0.007	91	396827	5.00	4.86	
31 1,1-Dichloroethane	63	5.348	5.348	0.000	96	563741	5.00	4.90	
32 Isopropyl ether	45	5.409	5.403	0.006	91	853622	5.00	4.85	
33 2-Chloro-1,3-butadiene	53	5.458	5.452	0.006	90	478880	5.00	4.89	
34 Tert-butyl ethyl ether	59	5.934	5.934	0.000	96	914268	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
36 2-Butanone (MEK)	43	6.135	6.141	-0.006	98	705212	50.0	48.3	
S 35 1,2-Dichloroethene, Total	100				0			9.78	
37 cis-1,2-Dichloroethene	96	6.177	6.171	0.006	79	398935	5.00	4.90	
38 2,2-Dichloropropane	77	6.190	6.190	0.000	85	553483	5.00	4.92	
40 Propionitrile	54	6.226	6.226	0.000	98	444167	100.0	104.1	M
42 Methacrylonitrile	67	6.440	6.446	-0.006	89	801857	50.0	50.2	
43 Chlorobromomethane	128	6.501	6.500	0.001	85	190651	5.00	5.11	
44 Tetrahydrofuran	71	6.513	6.513	0.000	80	233699	50.0	49.6	
45 Chloroform	83	6.653	6.653	0.000	93	633194	5.00	4.89	
$ 46 Dibromofluoromethane (Surr)	113	6.866	6.866	0.000	94	654103	10.0	10.1	
47 1,1,1-Trichloroethane	97	6.879	6.878	0.000	97	641210	5.00	4.95	
48 Cyclohexane	56	6.976	6.976	0.000	87	488209	5.00	4.91	
50 Carbon tetrachloride	117	7.092	7.092	0.000	96	592272	5.00	4.98	
51 1,1-Dichloropropene	75	7.092	7.092	0.000	94	473158	5.00	4.93	
52 Isobutyl alcohol	41	7.238	7.232	0.006	93	291171	250.0	243.8	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.317	7.323	-0.006	0	119674	10.0	10.1	
54 Benzene	78	7.354	7.354	0.000	96	1382982	5.00	4.92	
56 1,2-Dichloroethane	62	7.427	7.421	0.006	98	364820	5.00	4.73	
57 Tert-amyl methyl ether	73	7.537	7.537	0.000	98	889705	5.00	4.99	
* 58 Fluorobenzene (IS)	96	7.750	7.750	0.000	99	2394682	10.0	10.0	
59 n-Heptane	43	7.762	7.762	0.000	84	367051	5.00	4.76	
60 n-Butanol	56	8.104	8.104	0.000	87	584226	500.0	503.9	M
61 Trichloroethene	95	8.226	8.226	0.000	96	398026	5.00	4.83	
62 Methylcyclohexane	83	8.537	8.537	0.000	90	599124	5.00	4.95	
63 1,2-Dichloropropane	63	8.561	8.561	0.000	87	319788	5.00	4.89	
64 Methyl methacrylate	69	8.634	8.640	-0.006	86	156585	5.00	5.01	
65 1,4-Dioxane	88	8.646	8.646	0.000	43	80604	250.0	249.9	
66 Dibromomethane	93	8.671	8.671	0.000	92	179555	5.00	4.96	
68 Dichlorobromomethane	83	8.903	8.902	0.000	99	460359	5.00	5.03	
69 2-Nitropropane	41	9.165	9.171	-0.006	99	475213	50.0	50.0	
72 1-Bromo-2-chloroethane	63	9.293	9.293	0.000	98	332135	5.00	5.05	
73 cis-1,3-Dichloropropene	75	9.445	9.439	0.006	96	515589	5.00	5.02	
74 4-Methyl-2-pentanone (MIBK)	43	9.610	9.610	0.000	95	1913786	50.0	50.0	
$ 75 Toluene-d8 (Surr)	98	9.750	9.750	0.000	93	2429632	10.0	9.94	
76 Toluene	92	9.823	9.823	0.000	98	946681	5.00	4.86	
S 77 1,3-Dichloropropene, Total	100				0			10.1	
78 trans-1,3-Dichloropropene	75	10.073	10.073	0.000	91	431352	5.00	5.05	
79 Ethyl methacrylate	69	10.134	10.134	0.000	87	341836	5.00	5.12	
80 1,1,2-Trichloroethane	97	10.280	10.280	0.000	89	260756	5.00	5.04	
81 Tetrachloroethene	166	10.366	10.366	0.000	98	497682	5.00	5.05	
82 1,3-Dichloropropane	76	10.439	10.439	0.000	88	408063	5.00	4.92	
83 2-Hexanone	43	10.488	10.488	0.000	95	1332882	50.0	49.7	
85 Chlorodibromomethane	129	10.652	10.652	0.000	89	356880	5.00	5.18	
86 Ethylene Dibromide	107	10.768	10.768	0.000	99	263900	5.00	4.96	
* 87 Chlorobenzene-d5 (IS)	117	11.189	11.189	0.000	85	1994769	10.0	10.0	
88 1-Chlorohexane	91	11.201	11.195	0.006	92	538874	5.00	4.71	
90 Chlorobenzene	112	11.219	11.219	0.000	98	1098385	5.00	4.93	
S 89 Xylenes, Total	106				0			14.9	
91 1,1,1,2-Tetrachloroethane	131	11.298	11.298	0.000	95	425391	5.00	5.06	
92 Ethylbenzene	91	11.304	11.304	0.000	97	1880520	5.00	4.94	
93 m-Xylene & p-Xylene	106	11.414	11.414	0.000	99	1557794	10.0	9.98	
94 o-Xylene	106	11.743	11.743	0.000	96	761367	5.00	4.91	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
95 Styrene	104	11.762	11.762	0.000	95	1217868	5.00	5.01	
96 Bromoform	173	11.920	11.920	0.000	97	205464	5.00	4.47	
97 Isopropylbenzene	105	12.042	12.042	0.000	95	2005623	5.00	4.97	
$ 100 4-Bromofluorobenzene (Surr)	95	12.188	12.188	0.000	97	929773	10.0	9.80	
101 1,1,2,2-Tetrachloroethane	83	12.286	12.286	0.000	93	310585	5.00	4.77	
102 Bromobenzene	156	12.304	12.304	0.000	96	502684	5.00	4.93	
103 trans-1,4-Dichloro-2-butene	53	12.310	12.310	0.000	91	728867	50.0	50.5	
104 1,2,3-Trichloropropane	110	12.329	12.335	-0.006	81	95695	5.00	4.89	
105 N-Propylbenzene	91	12.371	12.371	0.000	98	2235155	5.00	4.83	
106 2-Chlorotoluene	126	12.445	12.444	0.000	98	486942	5.00	4.94	
107 1,3,5-Trimethylbenzene	105	12.505	12.505	0.000	94	1714215	5.00	4.91	
108 4-Chlorotoluene	126	12.536	12.536	0.000	97	499774	5.00	4.91	
109 tert-Butylbenzene	134	12.743	12.749	-0.006	92	396252	5.00	4.90	
110 Pentachloroethane	167	12.780	12.780	0.000	92	334692	5.00	5.29	
111 1,2,4-Trimethylbenzene	105	12.786	12.786	0.000	96	1747235	5.00	4.90	
112 sec-Butylbenzene	105	12.908	12.908	0.000	94	2186269	5.00	4.92	
113 1,3-Dichlorobenzene	146	13.011	13.011	0.000	98	999193	5.00	4.97	
114 4-Isopropyltoluene	119	13.018	13.018	0.000	96	1944479	5.00	5.00	
* 115 1,4-Dichlorobenzene-d4	152	13.066	13.066	0.000	93	1179669	10.0	10.0	
116 1,4-Dichlorobenzene	146	13.085	13.085	0.000	96	1001097	5.00	4.95	
117 1,2,3-Trimethylbenzene	120	13.091	13.091	0.000	98	783981	5.00	4.93	
118 Benzyl chloride	126	13.158	13.158	0.000	98	151088	5.00	5.16	
119 n-Butylbenzene	92	13.304	13.304	0.000	96	876586	5.00	4.95	
120 1,2-Dichlorobenzene	146	13.341	13.341	0.000	99	915287	5.00	5.05	
122 1,2-Dibromo-3-Chloropropane	155	13.883	13.883	0.000	91	55572	5.00	5.35	
123 1,3,5-Trichlorobenzene	180	14.011	14.011	0.000	98	690583	5.00	5.15	
124 1,2,4-Trichlorobenzene	180	14.432	14.432	0.000	94	575792	5.00	5.21	
125 Hexachlorobutadiene	225	14.511	14.517	-0.006	98	213147	5.00	5.12	
126 Naphthalene	128	14.615	14.615	0.000	96	1099902	5.00	5.07	
127 1,2,3-Trichlorobenzene	180	14.755	14.755	0.000	96	484819	5.00	5.14	
134 Isopropyl alcohol	45		0.000				ND	ND	
135 p-Diethylbenzene	1		0.000				ND	ND	
137 2-Methylnaphthalene	142		0.000				ND	ND	
144 2-ethoxy-2-methyl butane	1		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MSV_RV1_826_00023	Amount Added:	5.00	Units: uL	
MSV_RV4_826_00025	Amount Added:	5.00	Units: uL	
MSV_RV4GAS826_00075	Amount Added:	5.00	Units: uL	
MSV_31_826ISS_00003	Amount Added:	5.00	Units: uL	Run Reagent

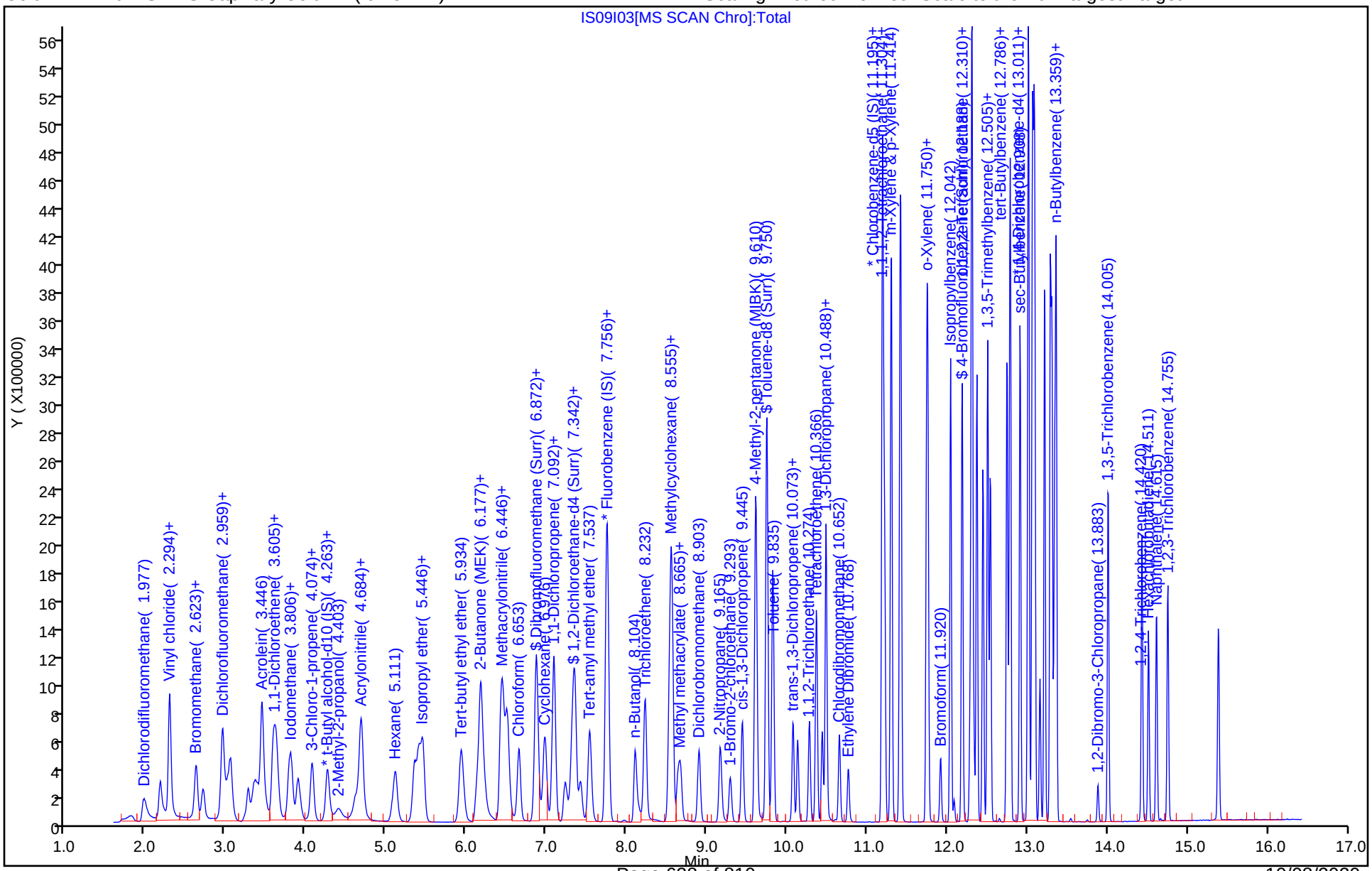
Report Date: 11-Sep-2020 18:38:36 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I03.D

Injection Date:	09-Sep-2020 16:37:30	Instrument ID:	19930	Operator ID:	dvv10203
Lims ID:	IC std5			Worklist Smp#:	5
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	8260 25ml HP31	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



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

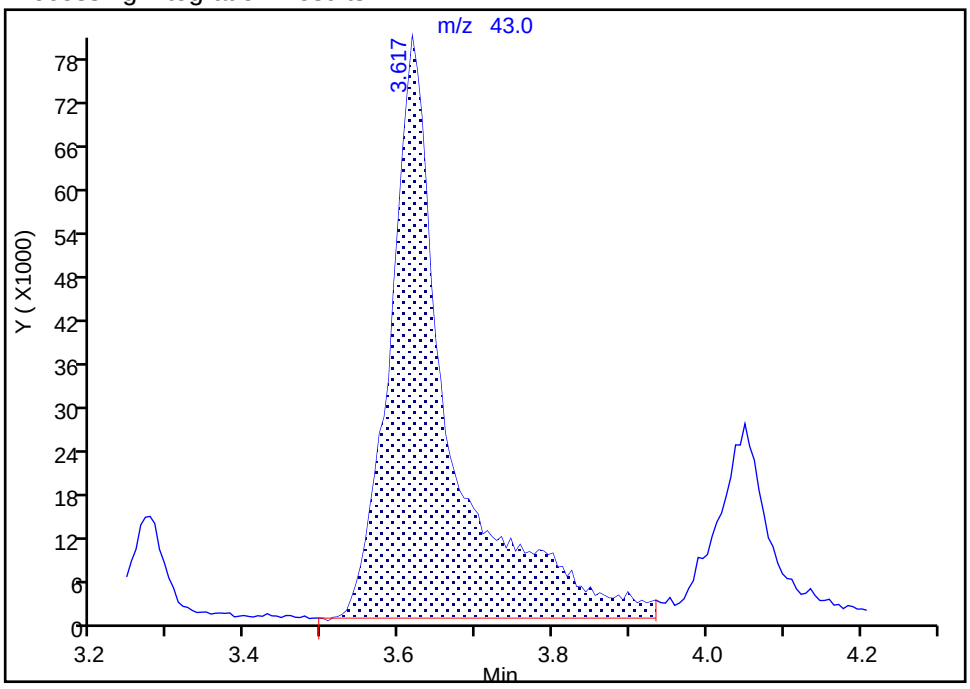
Data File:	\\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I03.D				
Injection Date:	09-Sep-2020 16:37:30	Instrument ID:	19930		
Lims ID:	IC std5				
Client ID:					
Operator ID:	dvv10203	ALS Bottle#:	4	Worklist Smp#:	5
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

15 Acetone, CAS: 67-64-1

Signal: 1

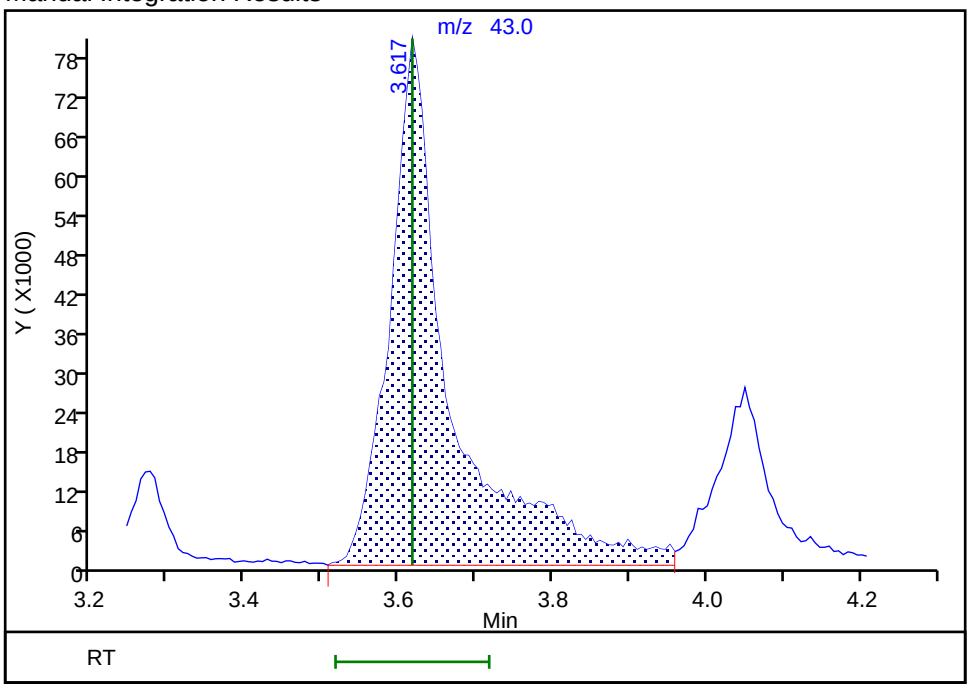
Processing Integration Results

RT: 3.62
Area: 428277
Amount: 48.893527
Amount Units: ug/l



Manual Integration Results

RT: 3.62
Area: 439990
Amount: 45.152371
Amount Units: ug/l



Reviewer: campbellme, 09-Sep-2020 22:23:23
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC

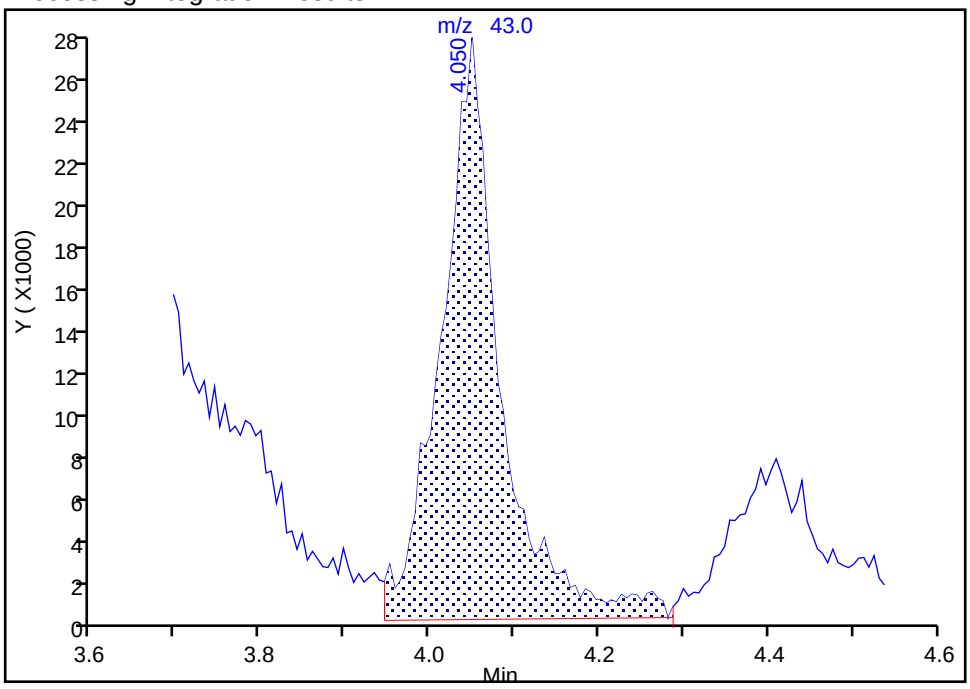
Data File:	\\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I03.D				
Injection Date:	09-Sep-2020 16:37:30	Instrument ID:	19930		
Lims ID:	IC std5				
Client ID:					
Operator ID:	dvv10203	ALS Bottle#:	4	Worklist Smp#:	5
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

21 Methyl acetate, CAS: 79-20-9

Signal: 1

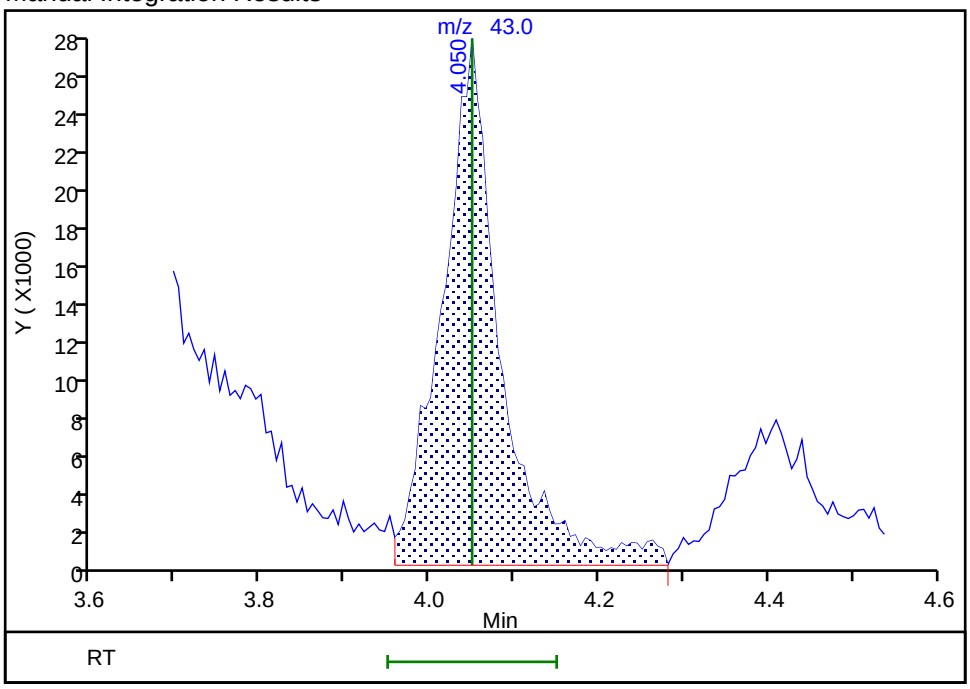
Processing Integration Results

RT: 4.05
Area: 127987
Amount: 5.361819
Amount Units: ug/l



Manual Integration Results

RT: 4.05
Area: 126434
Amount: 4.598159
Amount Units: ug/l



Reviewer: campbellme, 09-Sep-2020 22:12:09
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

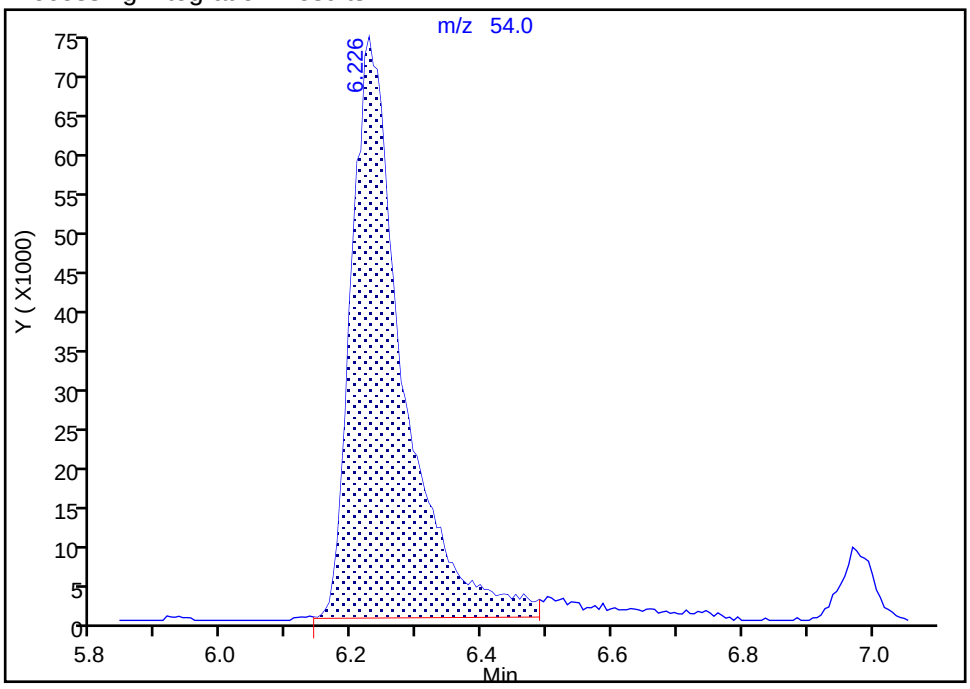
Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I03.D
Injection Date: 09-Sep-2020 16:37:30 Instrument ID: 19930
Lims ID: IC std5
Client ID:
Operator ID: dvv10203 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

40 Propionitrile, CAS: 107-12-0

Signal: 1

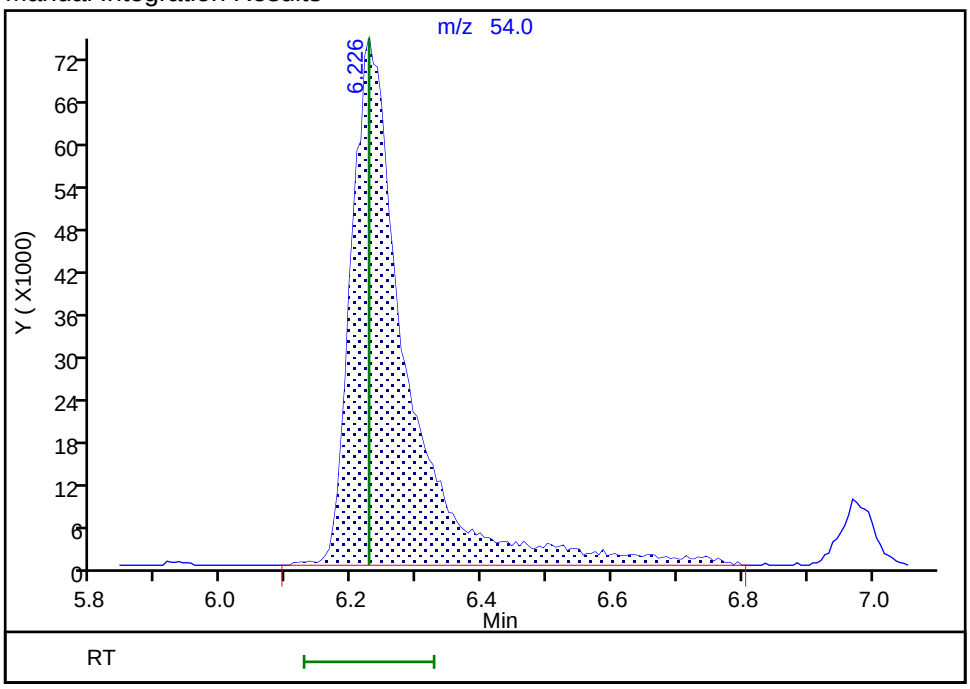
Processing Integration Results

RT: 6.23
Area: 410120
Amount: 99.350037
Amount Units: ug/l



Manual Integration Results

RT: 6.23
Area: 444167
Amount: 104.0753
Amount Units: ug/l



Reviewer: campbellme, 09-Sep-2020 22:12:28
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

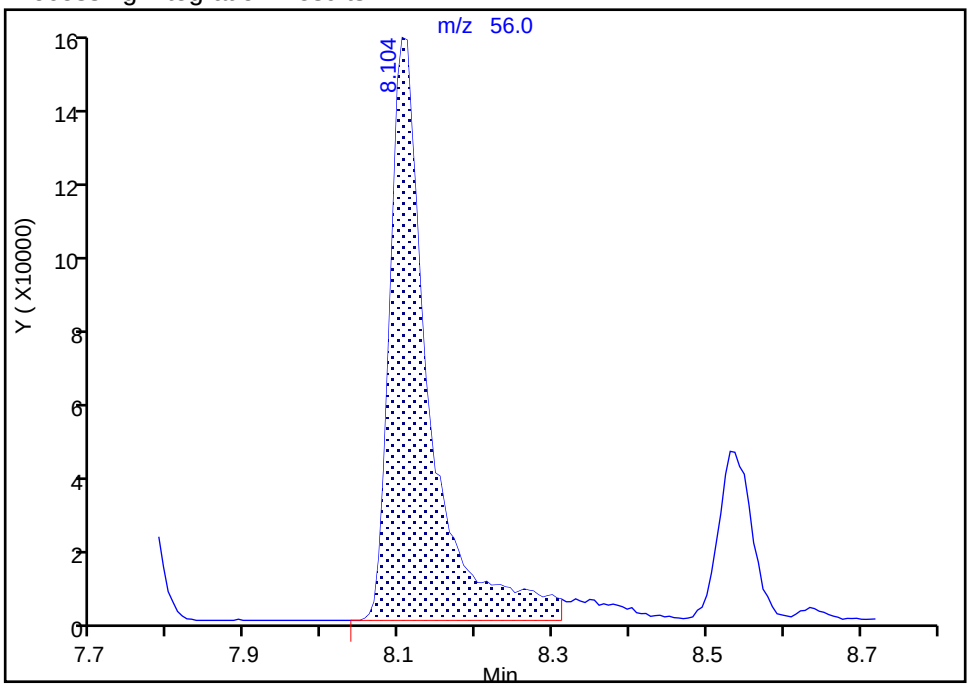
Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I03.D
Injection Date: 09-Sep-2020 16:37:30 Instrument ID: 19930
Lims ID: IC std5
Client ID:
Operator ID: dvv10203 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

60 n-Butanol, CAS: 71-36-3

Signal: 1

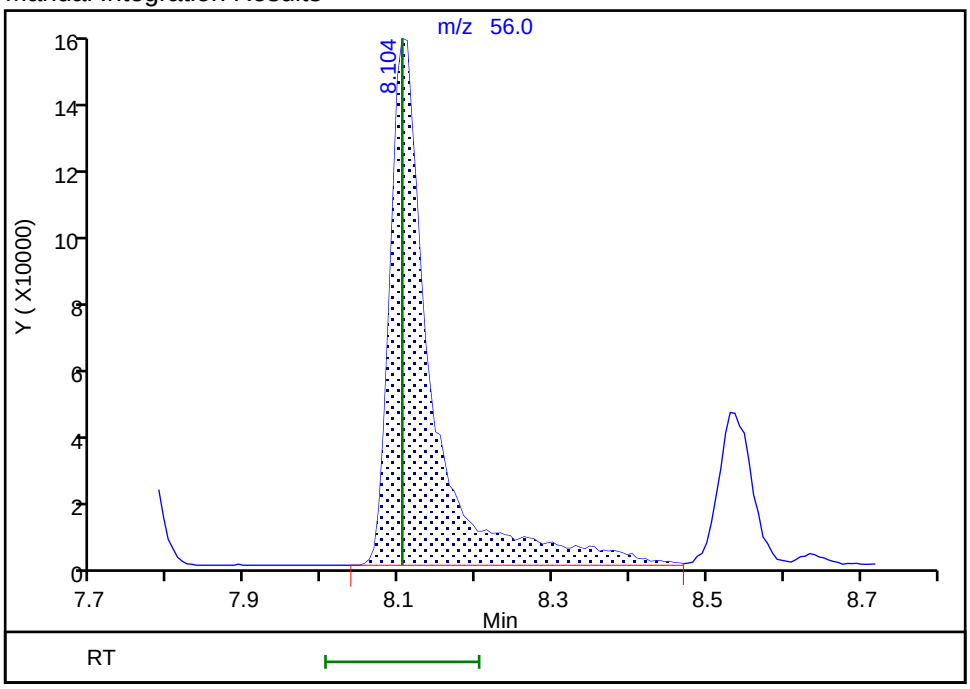
RT: 8.10
Area: 554553
Amount: 512.7396
Amount Units: ug/l

Processing Integration Results



RT: 8.10
Area: 584226
Amount: 503.8947
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 09-Sep-2020 22:12:53
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I04.D
Lims ID: IC std4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 09-Sep-2020 16:58:30 ALS Bottle#: 5 Worklist Smp#: 6
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: IC STD4
Misc. Info.: 410-0010046-006
Operator ID: dvv10203 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 11-Sep-2020 18:38:44 Calib Date: 09-Sep-2020 21:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1058

First Level Reviewer: campbellme Date: 09-Sep-2020 22:15:08

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	1.971	1.971	0.000	99	198515	2.00	2.07	
4 Chloromethane	50	2.178	2.178	0.000	99	185717	2.00	1.93	
5 Vinyl chloride	62	2.288	2.288	0.000	87	189871	2.00	1.99	
6 Butadiene	39	2.294	2.294	0.000	91	174076	2.00	1.94	
7 Bromomethane	94	2.623	2.623	0.000	91	161071	2.00	1.88	
8 Chloroethane	64	2.709	2.709	0.000	99	120944	2.00	1.94	
9 Dichlorofluoromethane	67	2.946	2.946	0.000	97	285176	2.00	1.88	
10 Trichlorofluoromethane	101	3.013	3.013	0.000	98	287325	2.00	1.97	M
11 Ethyl ether	59	3.270	3.270	0.000	87	86058	2.00	1.95	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.355	3.355	0.000	87	150537	2.00	2.04	
13 Acrolein	56	3.446	3.446	0.000	99	655702	100.0	102.3	
14 1,1-Dichloroethene	96	3.587	3.587	0.000	96	131998	2.00	2.10	
15 Acetone	43	3.617	3.617	0.000	87	186709	20.0	18.6	M
16 112TCTFE	101	3.623	3.623	0.000	91	143610	2.00	2.17	
17 Iodomethane	142	3.788	3.788	0.000	100	278068	2.00	2.10	
18 Ethyl bromide	108	3.812	3.812	0.000	98	107628	2.00	1.99	
19 Carbon disulfide	76	3.897	3.897	0.000	99	344356	2.00	2.05	
21 Methyl acetate	43	4.044	4.044	0.000	64	49028	2.00	1.73	
22 3-Chloro-1-propene	41	4.068	4.068	0.000	88	156381	2.00	1.90	
23 Methylene Chloride	84	4.263	4.263	0.000	87	135715	2.00	2.08	
* 24 t-Butyl alcohol-d10 (IS)	65	4.282	4.282	0.000	0	201131	50.0	50.0	
25 2-Methyl-2-propanol	59	4.403	4.403	0.000	98	167672	40.0	40.2	
26 Acrylonitrile	53	4.605	4.605	0.000	99	113952	10.0	10.2	
27 Methyl tert-butyl ether	73	4.678	4.678	0.000	93	335714	2.00	2.04	
28 trans-1,2-Dichloroethene	96	4.678	4.678	0.000	95	145290	2.00	2.06	
29 Hexane	57	5.111	5.111	0.000	90	174049	2.00	2.15	
31 1,1-Dichloroethane	63	5.348	5.348	0.000	96	238037	2.00	2.08	
32 Isopropyl ether	45	5.403	5.403	0.000	91	359649	2.00	2.06	
33 2-Chloro-1,3-butadiene	53	5.452	5.452	0.000	90	199512	2.00	2.05	
34 Tert-butyl ethyl ether	59	5.928	5.928	0.000	95	377950	2.00	2.05	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
36 2-Butanone (MEK)	43	6.135	6.135	0.000	98	290452	20.0	19.3	
S 35 1,2-Dichloroethene, Total	100				0			4.13	
37 cis-1,2-Dichloroethene	96	6.177	6.177	0.000	80	167058	2.00	2.07	
38 2,2-Dichloropropane	77	6.196	6.196	0.000	85	229961	2.00	2.06	
40 Propionitrile	54	6.232	6.232	0.000	98	183370	40.0	41.7	M
42 Methacrylonitrile	67	6.440	6.440	0.000	89	330804	20.0	20.1	
43 Chlorobromomethane	128	6.507	6.507	0.000	85	71824	2.00	1.94	
44 Tetrahydrofuran	71	6.513	6.513	0.000	81	97580	20.0	20.1	
45 Chloroform	83	6.653	6.653	0.000	93	265782	2.00	2.07	
$ 46 Dibromofluoromethane (Surr)	113	6.866	6.866	0.000	93	644107	10.0	10.0	
47 1,1,1-Trichloroethane	97	6.879	6.879	0.000	96	265447	2.00	2.06	
48 Cyclohexane	56	6.976	6.976	0.000	89	208916	2.00	2.12	
50 Carbon tetrachloride	117	7.086	7.086	0.000	96	244348	2.00	2.07	
51 1,1-Dichloropropene	75	7.092	7.092	0.000	94	197775	2.00	2.07	
52 Isobutyl alcohol	41	7.232	7.232	0.000	93	115096	100.0	93.4	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.318	7.318	0.000	0	119039	10.0	10.1	
54 Benzene	78	7.348	7.348	0.000	97	573905	2.00	2.05	
56 1,2-Dichloroethane	62	7.421	7.421	0.000	98	153466	2.00	2.00	
57 Tert-amyl methyl ether	73	7.537	7.537	0.000	98	369695	2.00	2.09	a
* 58 Fluorobenzene (IS)	96	7.750	7.750	0.000	99	2378414	10.0	10.0	
59 n-Heptane	43	7.763	7.763	0.000	81	159274	2.00	2.08	
60 n-Butanol	56	8.110	8.110	0.000	86	239799	200.0	200.5	M
61 Trichloroethene	95	8.226	8.226	0.000	96	163068	2.00	1.99	
62 Methylcyclohexane	83	8.531	8.531	0.000	90	231994	2.00	1.93	
63 1,2-Dichloropropane	63	8.555	8.555	0.000	73	129699	2.00	2.00	
64 Methyl methacrylate	69	8.634	8.634	0.000	81	63636	2.00	1.97	
65 1,4-Dioxane	88	8.640	8.640	0.000	37	34312	100.0	103.1	M
66 Dibromomethane	93	8.665	8.665	0.000	93	75644	2.00	2.10	
68 Dichlorobromomethane	83	8.903	8.903	0.000	98	185482	2.00	2.04	
69 2-Nitropropane	41	9.171	9.171	0.000	99	191590	20.0	19.6	
72 1-Bromo-2-chloroethane	63	9.293	9.293	0.000	98	128989	2.00	1.97	
73 cis-1,3-Dichloropropene	75	9.439	9.439	0.000	96	209019	2.00	2.05	
74 4-Methyl-2-pentanone (MIBK)	43	9.610	9.610	0.000	95	790063	20.0	20.0	
$ 75 Toluene-d8 (Surr)	98	9.750	9.750	0.000	93	2420570	10.0	10.1	
76 Toluene	92	9.823	9.823	0.000	98	393049	2.00	2.06	
S 77 1,3-Dichloropropene, Total	100				0			4.12	
78 trans-1,3-Dichloropropene	75	10.073	10.073	0.000	91	173776	2.00	2.07	
79 Ethyl methacrylate	69	10.134	10.134	0.000	86	133412	2.00	2.03	
80 1,1,2-Trichloroethane	97	10.280	10.280	0.000	90	105818	2.00	2.08	
81 Tetrachloroethene	166	10.366	10.366	0.000	97	195435	2.00	2.02	
82 1,3-Dichloropropane	76	10.439	10.439	0.000	87	164296	2.00	2.02	
83 2-Hexanone	43	10.488	10.488	0.000	95	551202	20.0	19.9	
85 Chlorodibromomethane	129	10.652	10.652	0.000	89	140231	2.00	2.07	
86 Ethylene Dibromide	107	10.762	10.762	0.000	98	109929	2.00	2.10	
* 87 Chlorobenzene-d5 (IS)	117	11.189	11.189	0.000	84	1958318	10.0	10.0	
88 1-Chlorohexane	91	11.195	11.195	0.000	92	224865	2.00	2.00	
90 Chlorobenzene	112	11.219	11.219	0.000	97	446873	2.00	2.04	
S 89 Xylenes, Total	106				0			6.19	
91 1,1,1,2-Tetrachloroethane	131	11.298	11.298	0.000	95	171309	2.00	2.08	
92 Ethylbenzene	91	11.305	11.305	0.000	97	775895	2.00	2.08	
93 m-Xylene & p-Xylene	106	11.414	11.414	0.000	100	633747	4.00	4.14	
94 o-Xylene	106	11.743	11.743	0.000	96	312195	2.00	2.05	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
95 Styrene	104	11.762	11.762	0.000	94	485318	2.00	2.03	
96 Bromoform	173	11.914	11.914	0.000	96	78253	2.00	2.05	
97 Isopropylbenzene	105	12.042	12.042	0.000	95	820793	2.00	2.07	
$ 100 4-Bromofluorobenzene (Surr)	95	12.189	12.189	0.000	95	937979	10.0	10.1	
101 1,1,2,2-Tetrachloroethane	83	12.286	12.286	0.000	95	130375	2.00	2.07	
102 Bromobenzene	156	12.304	12.304	0.000	94	200910	2.00	2.04	
103 trans-1,4-Dichloro-2-butene	53	12.310	12.310	0.000	94	291705	20.0	19.6	
104 1,2,3-Trichloropropane	110	12.329	12.329	0.000	81	39734	2.00	2.10	
105 N-Propylbenzene	91	12.371	12.371	0.000	98	923786	2.00	2.07	
106 2-Chlorotoluene	126	12.445	12.445	0.000	97	196537	2.00	2.07	
107 1,3,5-Trimethylbenzene	105	12.506	12.506	0.000	95	691786	2.00	2.05	
108 4-Chlorotoluene	126	12.536	12.536	0.000	97	198467	2.00	2.02	
109 tert-Butylbenzene	134	12.749	12.749	0.000	92	157097	2.00	2.01	
110 Pentachloroethane	167	12.780	12.780	0.000	93	118649	2.00	1.94	
111 1,2,4-Trimethylbenzene	105	12.786	12.786	0.000	96	702130	2.00	2.04	
112 sec-Butylbenzene	105	12.908	12.908	0.000	94	892193	2.00	2.08	
113 1,3-Dichlorobenzene	146	13.012	13.012	0.000	98	391911	2.00	2.02	
114 4-Isopropyltoluene	119	13.018	13.018	0.000	96	774045	2.00	2.06	
* 115 1,4-Dichlorobenzene-d4	152	13.066	13.066	0.000	94	1138535	10.0	10.0	
116 1,4-Dichlorobenzene	146	13.085	13.085	0.000	96	392235	2.00	2.01	
117 1,2,3-Trimethylbenzene	120	13.091	13.091	0.000	98	292419	2.00	1.90	
118 Benzyl chloride	126	13.158	13.158	0.000	98	57135	2.00	2.02	
119 n-Butylbenzene	92	13.304	13.304	0.000	97	350341	2.00	2.05	
120 1,2-Dichlorobenzene	146	13.341	13.341	0.000	99	356417	2.00	2.04	
122 1,2-Dibromo-3-Chloropropane	155	13.883	13.883	0.000	89	21174	2.00	2.11	
123 1,3,5-Trichlorobenzene	180	14.011	14.011	0.000	97	260050	2.00	2.01	
124 1,2,4-Trichlorobenzene	180	14.432	14.432	0.000	94	216034	2.00	2.03	
125 Hexachlorobutadiene	225	14.511	14.511	0.000	97	80898	2.00	2.02	
126 Naphthalene	128	14.615	14.615	0.000	96	430036	2.00	2.05	
127 1,2,3-Trichlorobenzene	180	14.755	14.755	0.000	96	184165	2.00	2.02	
134 Isopropyl alcohol	45		0.000				ND	ND	
135 p-Diethylbenzene	1		0.000				ND	ND	
137 2-Methylnaphthalene	142		0.000				ND	ND	
144 2-ethoxy-2-methyl butane	1		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_RV1_826_00023	Amount Added:	2.00	Units: uL	
MSV_RV4_826_00025	Amount Added:	2.00	Units: uL	
MSV_RV4GAS826_00075	Amount Added:	2.00	Units: uL	
MSV_31_826ISS_00003	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 11-Sep-2020 18:38:45 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I04.D

Injection Date: 09-Sep-2020 16:58:30 Instrument ID: 19930 Operator ID: dvv10203

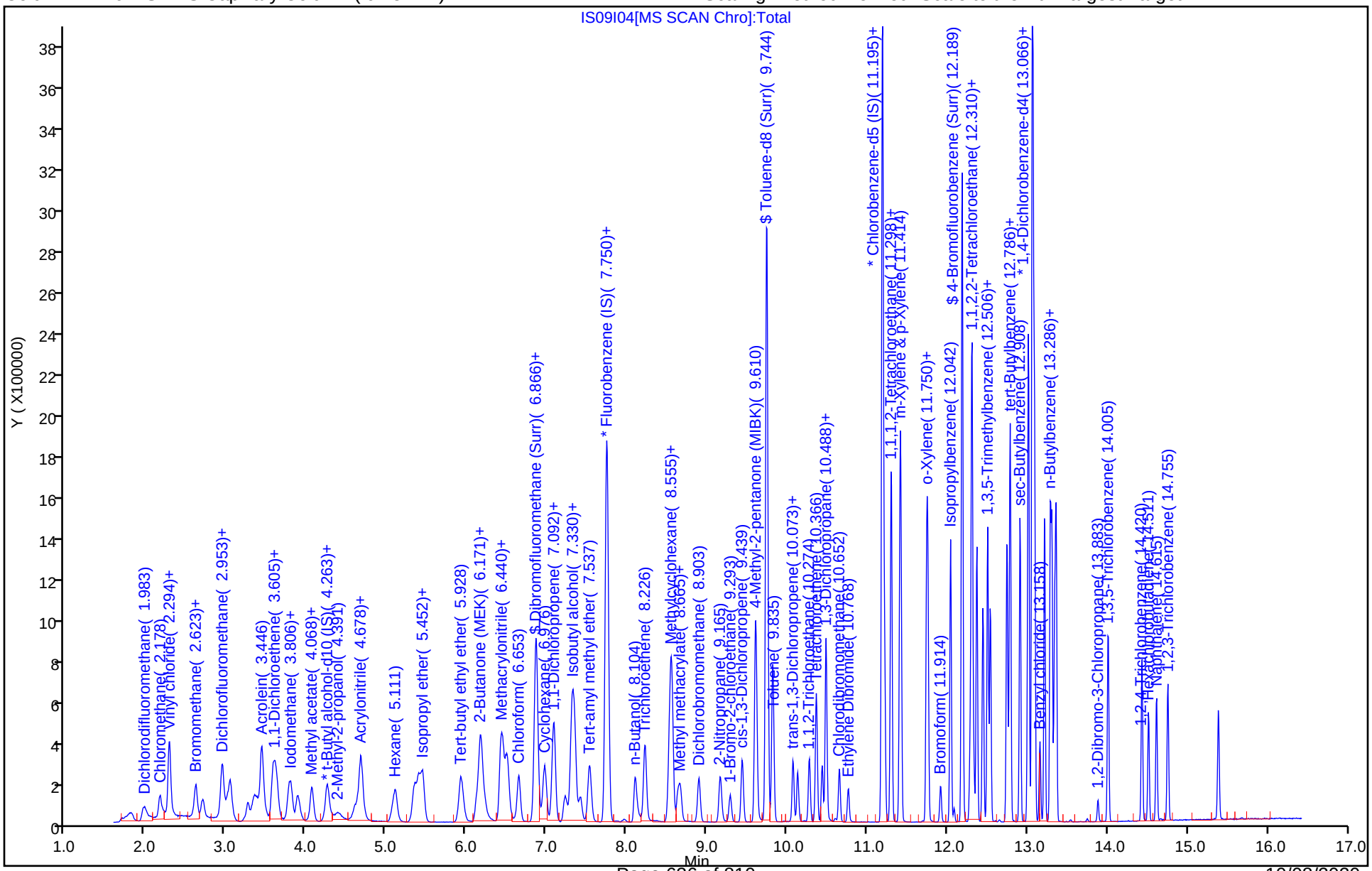
Lims ID: IC std4 Worklist Smp#: 6

Client ID:

Purge Vol: 25.000 mL Dil. Factor: 1.0000 ALS Bottle#: 5

Method: 8260 25ml HP31 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



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

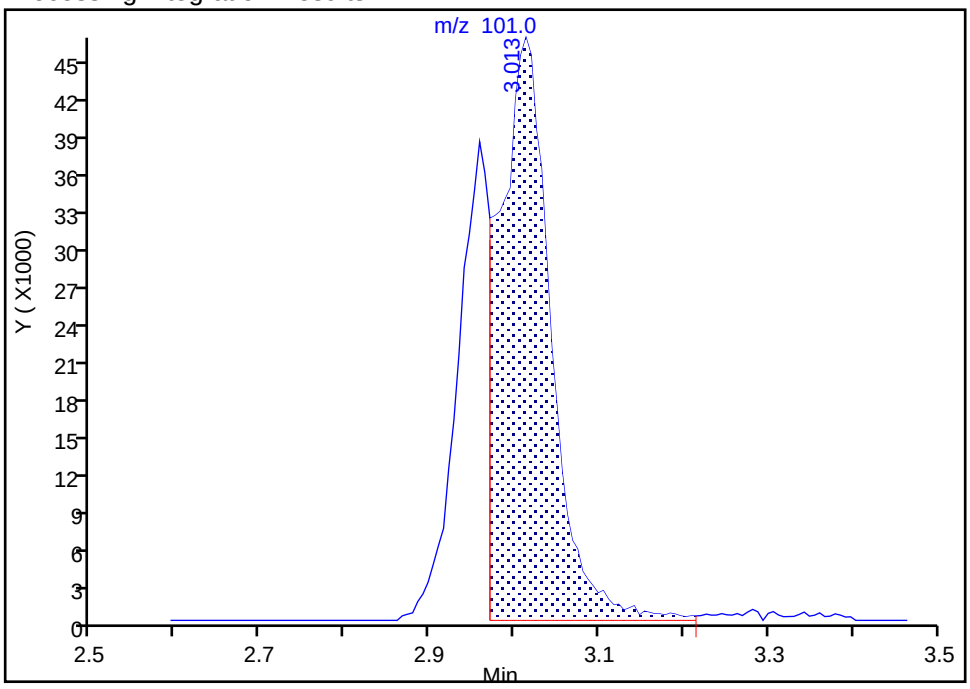
Data File:	\\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I04.D				
Injection Date:	09-Sep-2020 16:58:30	Instrument ID:	19930		
Lims ID:	IC std4				
Client ID:					
Operator ID:	dvv10203	ALS Bottle#:	5	Worklist Smp#:	6
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

10 Trichlorofluoromethane, CAS: 75-69-4

Signal: 1

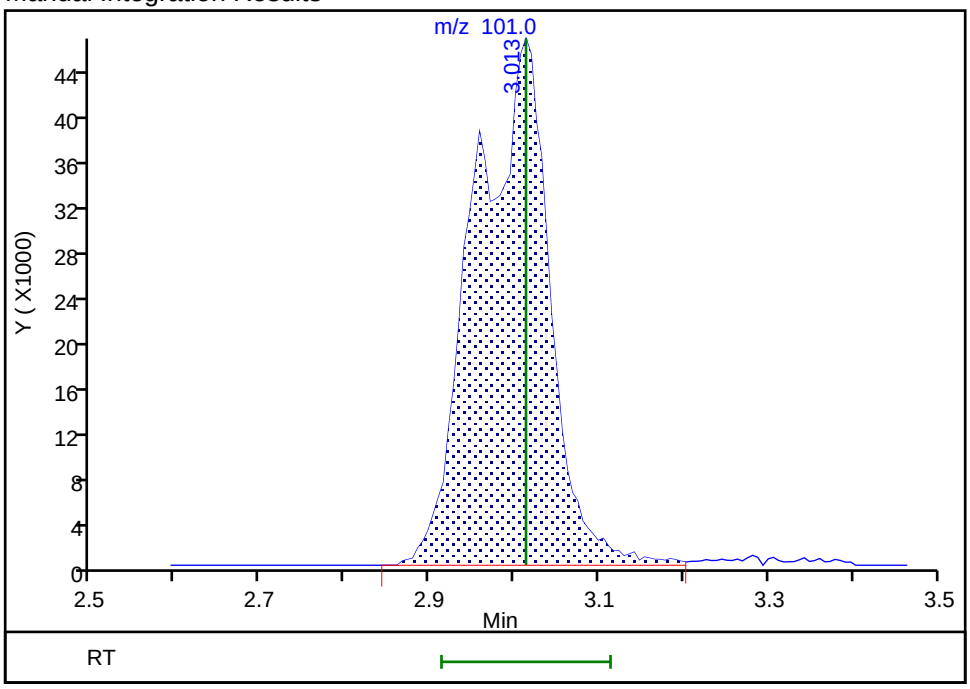
Processing Integration Results

RT: 3.01
Area: 199148
Amount: 1.508674
Amount Units: ug/l



Manual Integration Results

RT: 3.01
Area: 287325
Amount: 1.973130
Amount Units: ug/l



Reviewer: campbellme, 09-Sep-2020 22:13:46

Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

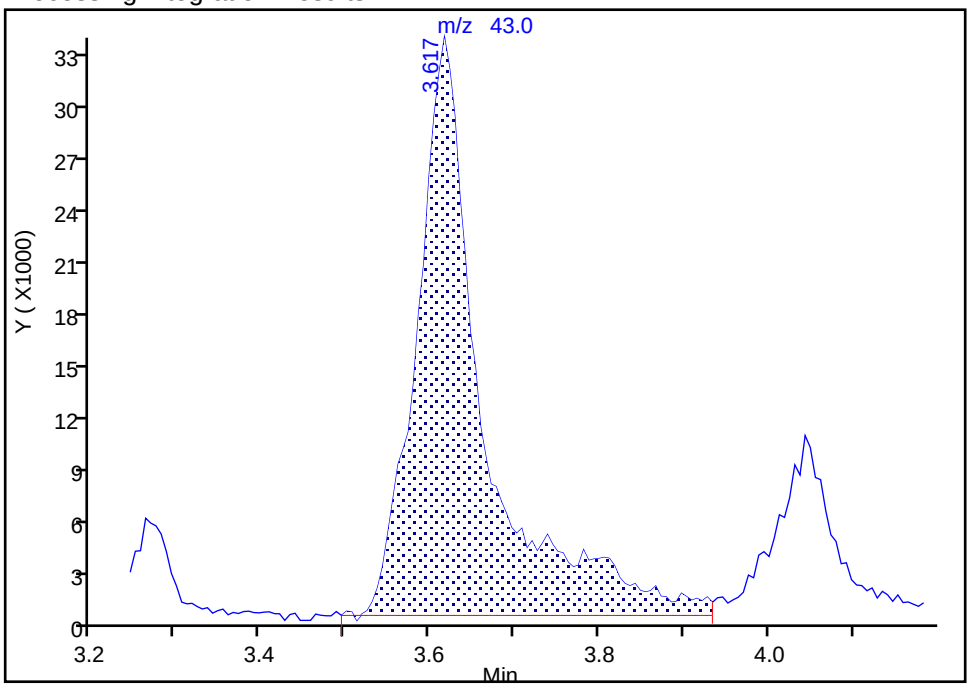
Data File:	\\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I04.D				
Injection Date:	09-Sep-2020 16:58:30	Instrument ID:	19930		
Lims ID:	IC std4				
Client ID:					
Operator ID:	dvv10203	ALS Bottle#:	5	Worklist Smp#:	6
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

15 Acetone, CAS: 67-64-1

Signal: 1

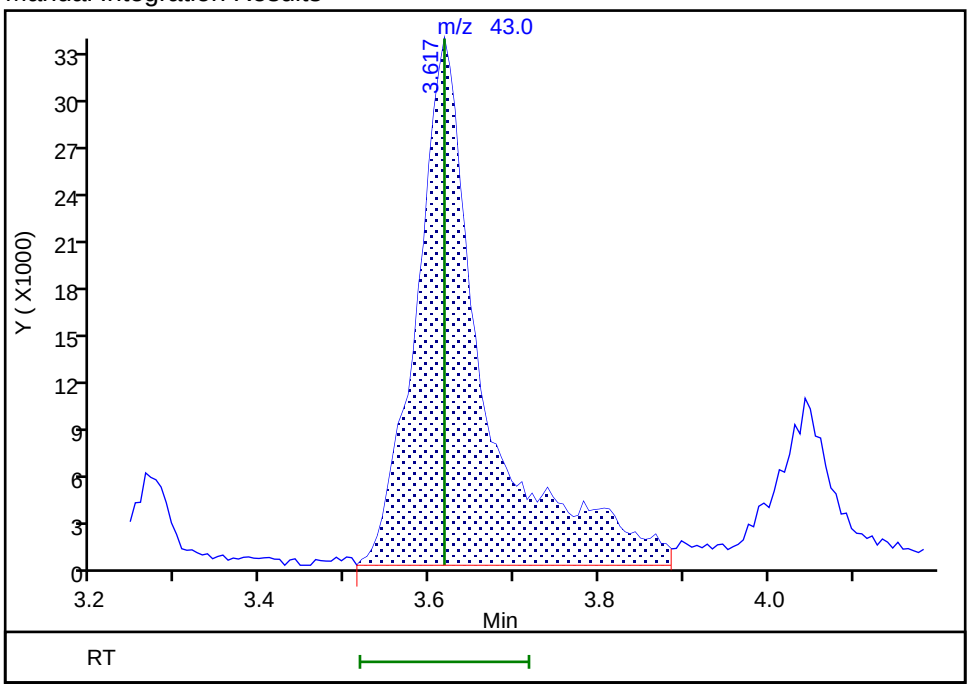
Processing Integration Results

RT: 3.62
Area: 183175
Amount: 18.272524
Amount Units: ug/l



Manual Integration Results

RT: 3.62
Area: 186709
Amount: 18.578275
Amount Units: ug/l



Reviewer: campbellme, 09-Sep-2020 22:24:00
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

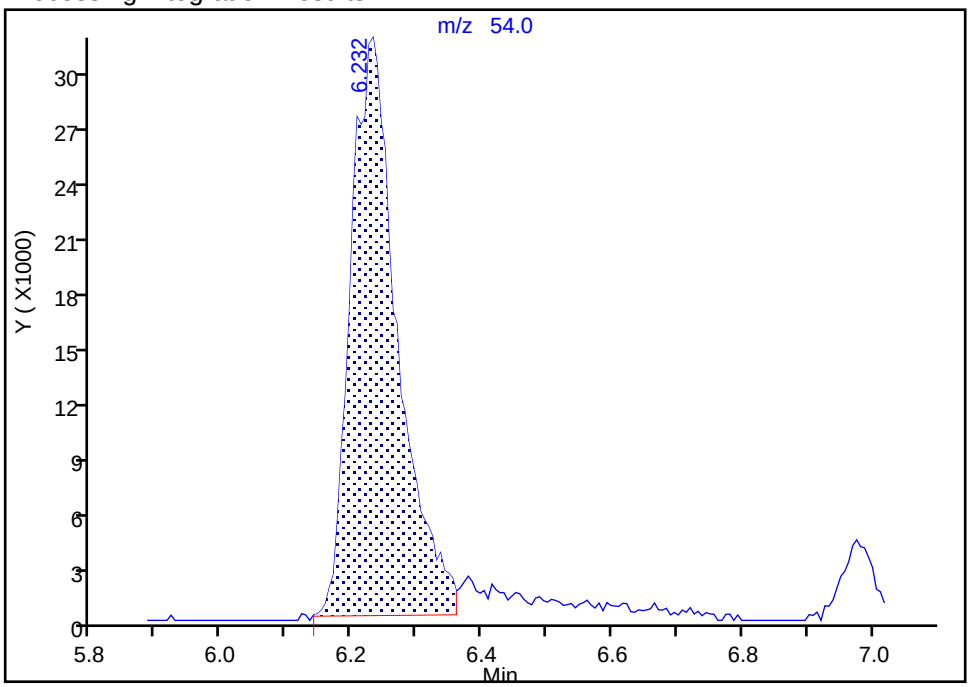
Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I04.D
Injection Date: 09-Sep-2020 16:58:30 Instrument ID: 19930
Lims ID: IC std4
Client ID:
Operator ID: dvv10203 ALS Bottle#: 5 Worklist Smp#: 6
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

40 Propionitrile, CAS: 107-12-0

Signal: 1

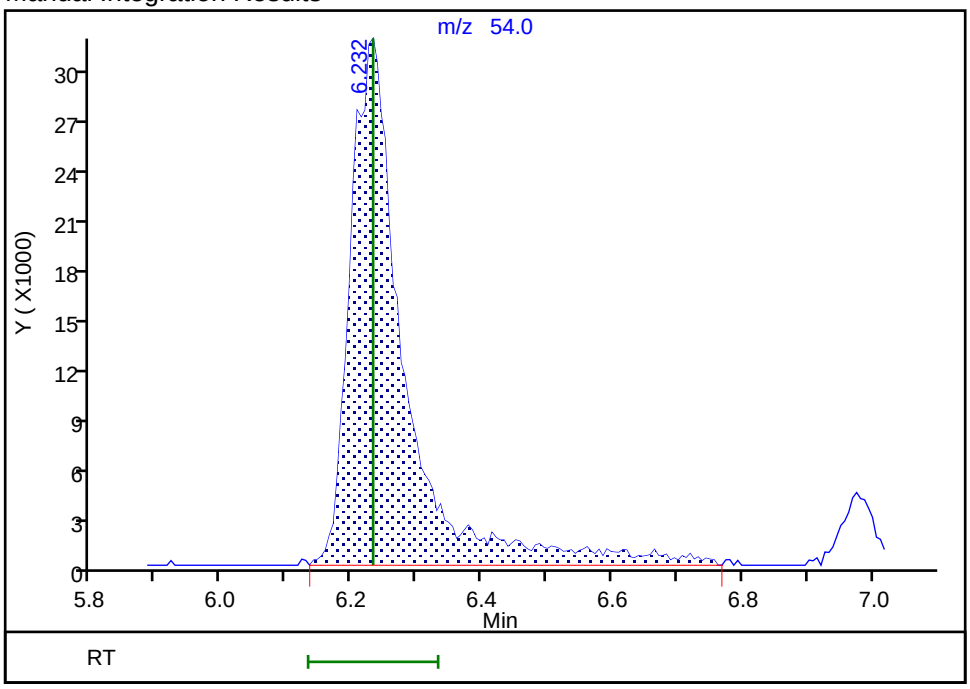
Processing Integration Results

RT: 6.23
Area: 157090
Amount: 36.468745
Amount Units: ug/l



Manual Integration Results

RT: 6.23
Area: 183370
Amount: 41.661207
Amount Units: ug/l



Reviewer: campbellme, 09-Sep-2020 22:14:11
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

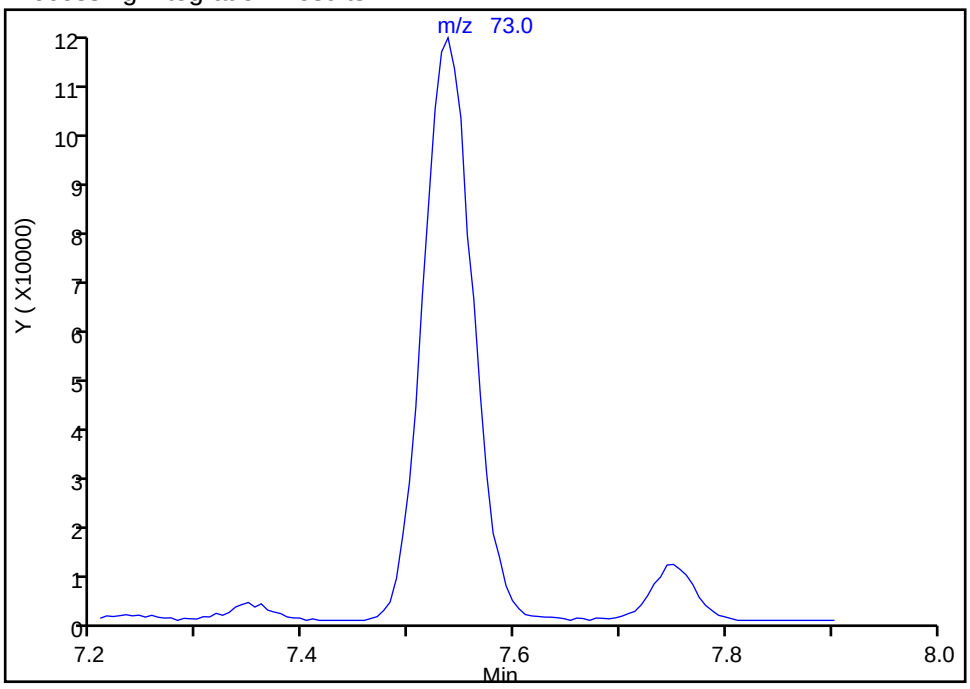
Data File:	\\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I04.D				
Injection Date:	09-Sep-2020 16:58:30	Instrument ID:	19930		
Lims ID:	IC std4				
Client ID:					
Operator ID:	dvv10203	ALS Bottle#:	5	Worklist Smp#:	6
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

57 Tert-amyl methyl ether, CAS: 994-05-8

Signal: 1

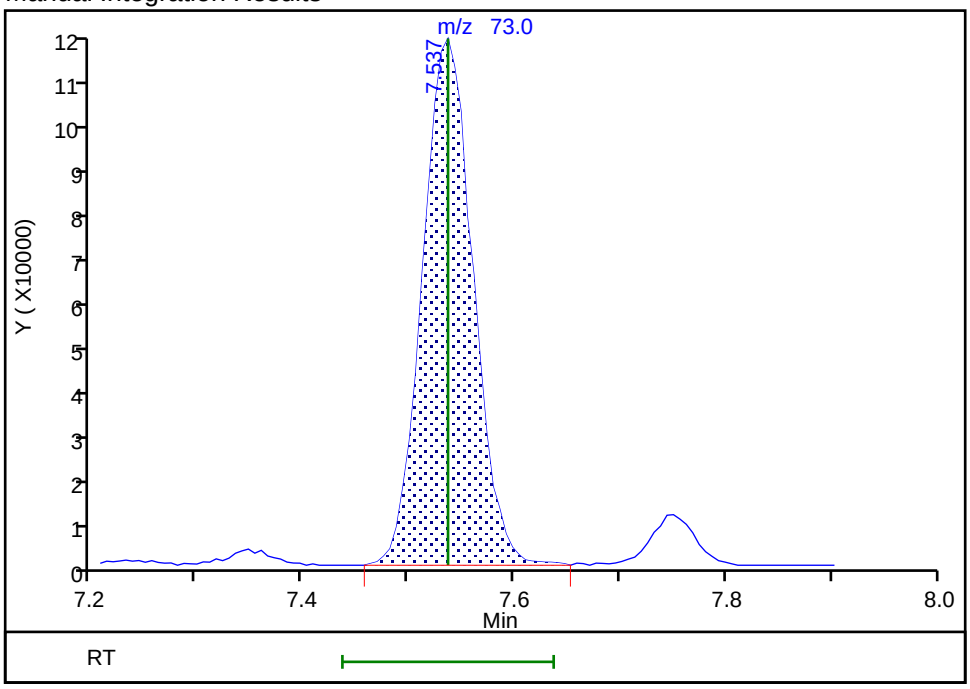
Not Detected
Expected RT: 7.54

Processing Integration Results



RT: 7.54
Area: 369695
Amount: 2.087520
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 09-Sep-2020 22:14:22
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

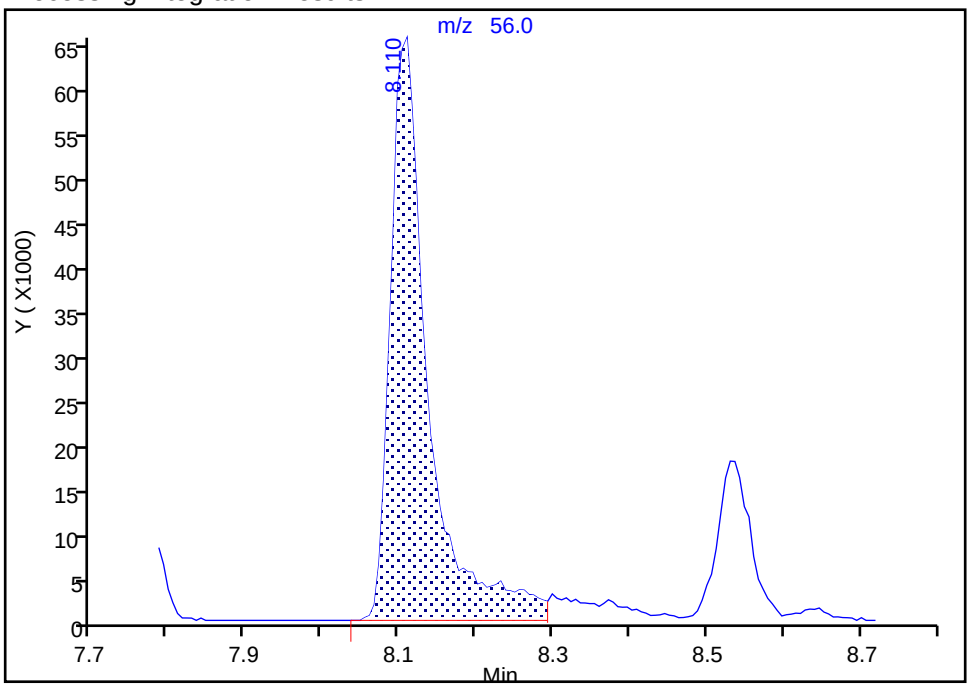
Data File:	\\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I04.D				
Injection Date:	09-Sep-2020 16:58:30	Instrument ID:	19930		
Lims ID:	IC std4				
Client ID:					
Operator ID:	dvv10203	ALS Bottle#:	5	Worklist Smp#:	6
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

60 n-Butanol, CAS: 71-36-3

Signal: 1

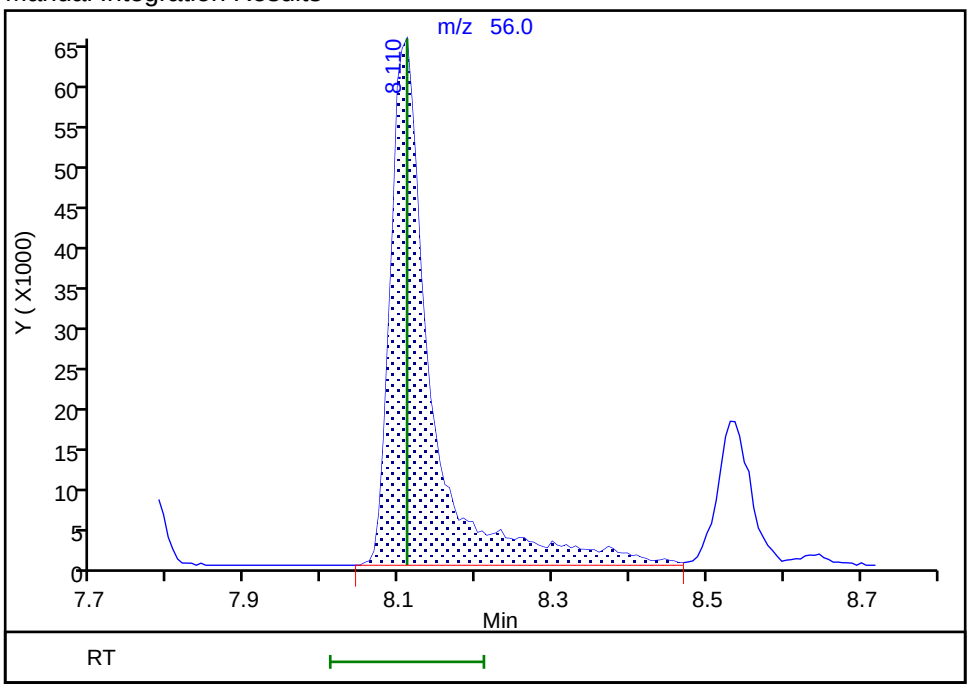
Processing Integration Results

RT: 8.11
Area: 223940
Amount: 199.2034
Amount Units: ug/l



Manual Integration Results

RT: 8.11
Area: 239799
Amount: 200.5435
Amount Units: ug/l



Reviewer: campbellme, 09-Sep-2020 22:14:38
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

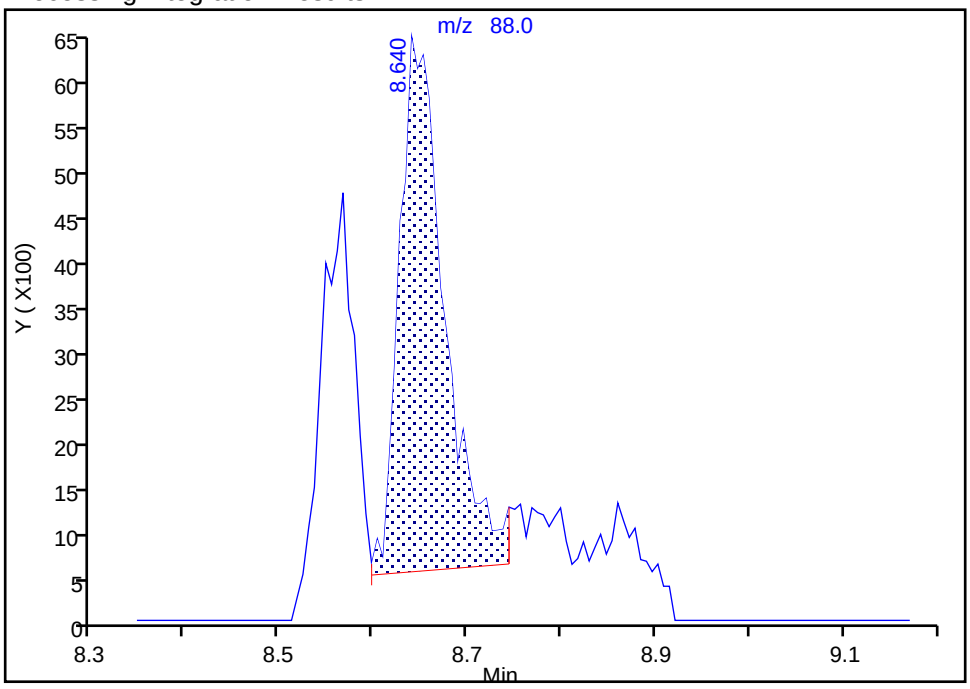
Data File:	\\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I04.D				
Injection Date:	09-Sep-2020 16:58:30	Instrument ID:	19930		
Lims ID:	IC std4				
Client ID:					
Operator ID:	dvv10203	ALS Bottle#:	5	Worklist Smp#:	6
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

65 1,4-Dioxane, CAS: 123-91-1

Signal: 1

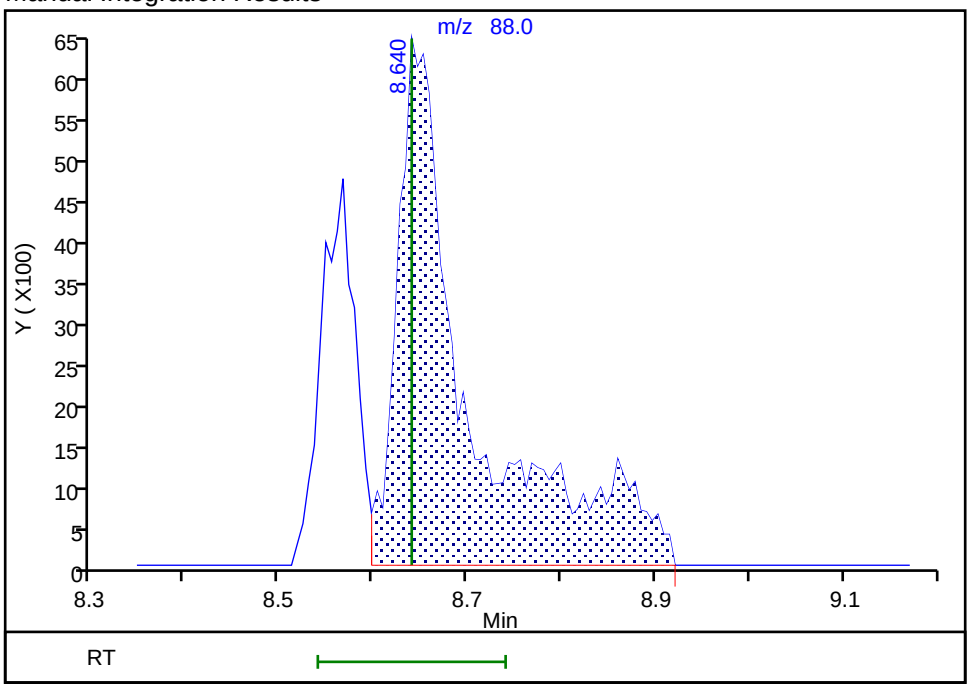
Processing Integration Results

RT: 8.64
Area: 19953
Amount: 76.774758
Amount Units: ug/l



Manual Integration Results

RT: 8.64
Area: 34312
Amount: 103.1308
Amount Units: ug/l



Reviewer: campbellme, 09-Sep-2020 22:14:53

Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I05.D
Lims ID: IC std3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 09-Sep-2020 17:20:30 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: IC STD3
Misc. Info.: 410-0010046-007
Operator ID: dvv10203 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 11-Sep-2020 18:38:53 Calib Date: 09-Sep-2020 21:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1058

First Level Reviewer: campbellme Date: 09-Sep-2020 22:17:49

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	1.983	1.971	0.012	99	99239	1.00	1.04	
4 Chloromethane	50	2.184	2.178	0.006	97	94161	1.00	0.9788	
5 Vinyl chloride	62	2.306	2.288	0.018	88	93992	1.00	0.9863	M
6 Butadiene	39	2.300	2.294	0.006	92	87310	1.00	0.9735	M
7 Bromomethane	94	2.629	2.623	0.006	93	79767	1.00	0.9320	
8 Chloroethane	64	2.721	2.709	0.012	98	59799	1.00	0.9610	
9 Dichlorofluoromethane	67	2.959	2.946	0.013	97	144285	1.00	0.9508	
10 Trichlorofluoromethane	101	3.026	3.013	0.013	95	140343	1.00	0.9656	M
11 Ethyl ether	59	3.276	3.270	0.006	88	42903	1.00	0.9726	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.349	3.355	-0.006	91	73434	1.00	1.00	
13 Acrolein	56	3.459	3.446	0.013	99	300818	50.0	45.9	
14 1,1-Dichloroethene	96	3.599	3.587	0.012	95	63196	1.00	1.01	
15 Acetone	43	3.629	3.617	0.012	92	94836	10.0	9.22	M
16 112TCTFE	101	3.641	3.623	0.018	91	68578	1.00	1.04	
17 Iodomethane	142	3.794	3.788	0.006	99	126104	1.00	0.9561	
18 Ethyl bromide	108	3.824	3.812	0.012	99	52581	1.00	0.9760	
19 Carbon disulfide	76	3.904	3.897	0.007	99	162301	1.00	0.9659	
21 Methyl acetate	43	4.062	4.044	0.018	20	24398	1.00	0.8408	M
22 3-Chloro-1-propene	41	4.080	4.068	0.012	88	74801	1.00	0.9118	
23 Methylene Chloride	84	4.275	4.263	0.012	86	63101	1.00	0.9709	
* 24 t-Butyl alcohol-d10 (IS)	65	4.288	4.282	0.006	0	205801	50.0	50.0	M
25 2-Methyl-2-propanol	59	4.403	4.403	0.000	99	83276	20.0	19.5	
26 Acrylonitrile	53	4.617	4.605	0.012	96	55144	5.00	4.81	
27 Methyl tert-butyl ether	73	4.666	4.678	-0.012	93	160530	1.00	0.9784	
28 trans-1,2-Dichloroethene	96	4.696	4.678	0.018	96	68538	1.00	0.9748	
29 Hexane	57	5.123	5.111	0.012	90	83281	1.00	1.03	
31 1,1-Dichloroethane	63	5.361	5.348	0.013	96	110783	1.00	0.9715	
32 Isopropyl ether	45	5.403	5.403	0.000	93	172216	1.00	0.9880	
33 2-Chloro-1,3-butadiene	53	5.464	5.452	0.012	91	93708	1.00	0.9646	
34 Tert-butyl ethyl ether	59	5.940	5.928	0.012	96	181137	1.00	0.9837	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
36 2-Butanone (MEK)	43	6.135	6.135	0.000	98	143631	10.0	9.33	
S 35 1,2-Dichloroethene, Total	100				0			1.95	
37 cis-1,2-Dichloroethene	96	6.184	6.177	0.007	80	78387	1.00	0.9712	
38 2,2-Dichloropropane	77	6.190	6.196	-0.006	83	108325	1.00	0.9721	
40 Propionitrile	54	6.238	6.232	0.006	99	88513	20.0	19.7	M
42 Methacrylonitrile	67	6.440	6.440	0.000	89	151327	10.0	8.97	
43 Chlorobromomethane	128	6.513	6.507	0.006	82	36596	1.00	0.9896	
44 Tetrahydrofuran	71	6.513	6.513	0.000	80	46080	10.0	9.27	
45 Chloroform	83	6.659	6.653	0.006	93	127394	1.00	0.99	
$ 46 Dibromofluoromethane (Surr)	113	6.873	6.866	0.006	93	645340	10.0	10.1	
47 1,1,1-Trichloroethane	97	6.885	6.879	0.006	96	121861	1.00	0.9483	
48 Cyclohexane	56	6.982	6.976	0.006	87	99313	1.00	1.01	
50 Carbon tetrachloride	117	7.092	7.086	0.006	95	114303	1.00	0.9703	
51 1,1-Dichloropropene	75	7.092	7.092	0.000	94	93026	1.00	0.9776	
52 Isobutyl alcohol	41	7.238	7.232	0.006	92	58791	50.0	46.6	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.324	7.318	0.006	0	116978	10.0	9.95	
54 Benzene	78	7.354	7.348	0.006	94	269851	1.00	0.9677	
56 1,2-Dichloroethane	62	7.427	7.421	0.006	98	78331	1.00	1.02	M
57 Tert-amyl methyl ether	73	7.537	7.537	0.000	98	171888	1.00	0.9724	
* 58 Fluorobenzene (IS)	96	7.750	7.750	0.000	99	2373851	10.0	10.0	
59 n-Heptane	43	7.763	7.763	0.000	75	78232	1.00	1.02	
60 n-Butanol	56	8.110	8.110	0.000	85	113169	100.0	92.5	M
61 Trichloroethene	95	8.232	8.226	0.006	97	77573	1.00	0.9505	
62 Methylcyclohexane	83	8.537	8.531	0.006	90	119674	1.00	1.00	
63 1,2-Dichloropropane	63	8.561	8.555	0.006	73	62968	1.00	0.9723	
64 Methyl methacrylate	69	8.634	8.634	0.000	82	30757	1.00	0.9329	
65 1,4-Dioxane	88	8.647	8.640	0.007	37	17098	50.0	50.2	M
66 Dibromomethane	93	8.677	8.665	0.012	95	35837	1.00	1.00	
68 Dichlorobromomethane	83	8.903	8.903	0.000	99	86998	1.00	0.9593	
69 2-Nitropropane	41	9.171	9.171	0.000	100	91215	10.0	9.10	
72 1-Bromo-2-chloroethane	63	9.293	9.293	0.000	98	61783	1.00	0.9470	
73 cis-1,3-Dichloropropene	75	9.445	9.439	0.006	96	95816	1.00	0.9406	
74 4-Methyl-2-pentanone (MIBK)	43	9.610	9.610	0.000	95	368908	10.0	9.12	
$ 75 Toluene-d8 (Surr)	98	9.750	9.750	0.000	93	2382339	10.0	10.1	
76 Toluene	92	9.823	9.823	0.000	98	186801	1.00	1.00	
S 77 1,3-Dichloropropene, Total	100				0			1.91	
78 trans-1,3-Dichloropropene	75	10.079	10.073	0.006	92	80199	1.00	0.9737	
79 Ethyl methacrylate	69	10.134	10.134	0.000	87	61632	1.00	0.9575	
80 1,1,2-Trichloroethane	97	10.280	10.280	0.000	90	48793	1.00	0.9792	
81 Tetrachloroethene	166	10.372	10.366	0.006	96	89001	1.00	0.9372	
82 1,3-Dichloropropane	76	10.439	10.439	0.000	87	78467	1.00	0.9825	
83 2-Hexanone	43	10.488	10.488	0.000	95	257684	10.0	9.11	
85 Chlorodibromomethane	129	10.652	10.652	0.000	90	62992	1.00	0.9492	
86 Ethylene Dibromide	107	10.768	10.762	0.006	100	48674	1.00	0.9491	
* 87 Chlorobenzene-d5 (IS)	117	11.195	11.189	0.006	84	1922100	10.0	10.0	
88 1-Chlorohexane	91	11.201	11.195	0.006	92	107059	1.00	0.9712	
90 Chlorobenzene	112	11.219	11.219	0.000	97	208243	1.00	0.9705	
S 89 Xylenes, Total	106				0			2.95	
91 1,1,1,2-Tetrachloroethane	131	11.298	11.298	0.000	93	75207	1.00	0.9286	
92 Ethylbenzene	91	11.305	11.305	0.000	97	362805	1.00	0.9888	
93 m-Xylene & p-Xylene	106	11.420	11.414	0.006	100	294731	2.00	1.96	
94 o-Xylene	106	11.744	11.743	0.001	95	148108	1.00	0.99	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
95 Styrene	104	11.762	11.762	0.000	94	229406	1.00	0.9796	
96 Bromoform	173	11.920	11.914	0.006	94	30623	1.00	1.13	
97 Isopropylbenzene	105	12.042	12.042	0.000	95	383964	1.00	0.9866	
$ 100 4-Bromofluorobenzene (Surr)	95	12.189	12.189	0.001	93	925812	10.0	10.1	
101 1,1,2,2-Tetrachloroethane	83	12.286	12.286	0.000	95	59285	1.00	0.9827	
102 Bromobenzene	156	12.304	12.304	0.000	96	90491	1.00	0.9579	
103 trans-1,4-Dichloro-2-butene	53	12.310	12.310	0.000	94	132079	10.0	8.67	
104 1,2,3-Trichloropropane	110	12.329	12.329	0.000	80	17357	1.00	0.9579	
105 N-Propylbenzene	91	12.371	12.371	0.000	99	433971	1.00	1.01	
106 2-Chlorotoluene	126	12.445	12.445	0.000	97	89901	1.00	0.9853	
107 1,3,5-Trimethylbenzene	105	12.506	12.506	0.000	94	323246	1.00	1.00	
108 4-Chlorotoluene	126	12.542	12.536	0.006	97	92818	1.00	0.9859	
109 tert-Butylbenzene	134	12.749	12.749	0.000	92	71974	1.00	0.9618	
110 Pentachloroethane	167	12.780	12.780	0.000	90	55907	1.00	0.9550	
111 1,2,4-Trimethylbenzene	105	12.786	12.786	0.000	96	324767	1.00	0.9834	
112 sec-Butylbenzene	105	12.908	12.908	0.000	94	413701	1.00	1.01	
113 1,3-Dichlorobenzene	146	13.012	13.012	0.000	97	179729	1.00	0.9653	
114 4-Isopropyltoluene	119	13.018	13.018	0.000	96	352726	1.00	0.9807	
* 115 1,4-Dichlorobenzene-d4	152	13.066	13.066	0.000	94	1092082	10.0	10.0	
116 1,4-Dichlorobenzene	146	13.085	13.085	0.000	95	179415	1.00	0.9582	
117 1,2,3-Trimethylbenzene	120	13.091	13.091	0.000	98	142182	1.00	0.9655	
118 Benzyl chloride	126	13.158	13.158	0.000	98	26142	1.00	0.9636	
119 n-Butylbenzene	92	13.310	13.304	0.006	97	164078	1.00	1.00	
120 1,2-Dichlorobenzene	146	13.341	13.341	0.000	99	165564	1.00	0.9869	
122 1,2-Dibromo-3-Chloropropane	155	13.883	13.883	0.000	87	9269	1.00	0.9644	
123 1,3,5-Trichlorobenzene	180	14.011	14.011	0.000	97	116789	1.00	0.9405	
124 1,2,4-Trichlorobenzene	180	14.432	14.432	0.000	94	96330	1.00	0.9416	
125 Hexachlorobutadiene	225	14.511	14.511	0.000	96	36566	1.00	0.9496	
126 Naphthalene	128	14.615	14.615	0.000	96	199077	1.00	0.99	
127 1,2,3-Trichlorobenzene	180	14.755	14.755	0.000	96	84902	1.00	0.9729	
134 Isopropyl alcohol	45		0.000				ND	ND	
135 p-Diethylbenzene	1		0.000				ND	ND	
137 2-Methylnaphthalene	142		0.000				ND	ND	
144 2-ethoxy-2-methyl butane	1		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MSV_RV1_826_00023	Amount Added:	2.00	Units: uL	
MSV_RV4_826_00025	Amount Added:	2.00	Units: uL	
MSV_RV4GAS826_00075	Amount Added:	2.00	Units: uL	
MSV_31_826ISS_00003	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 11-Sep-2020 18:38:55 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I05.D

Injection Date: 09-Sep-2020 17:20:30 Instrument ID: 19930 Operator ID: dvv10203

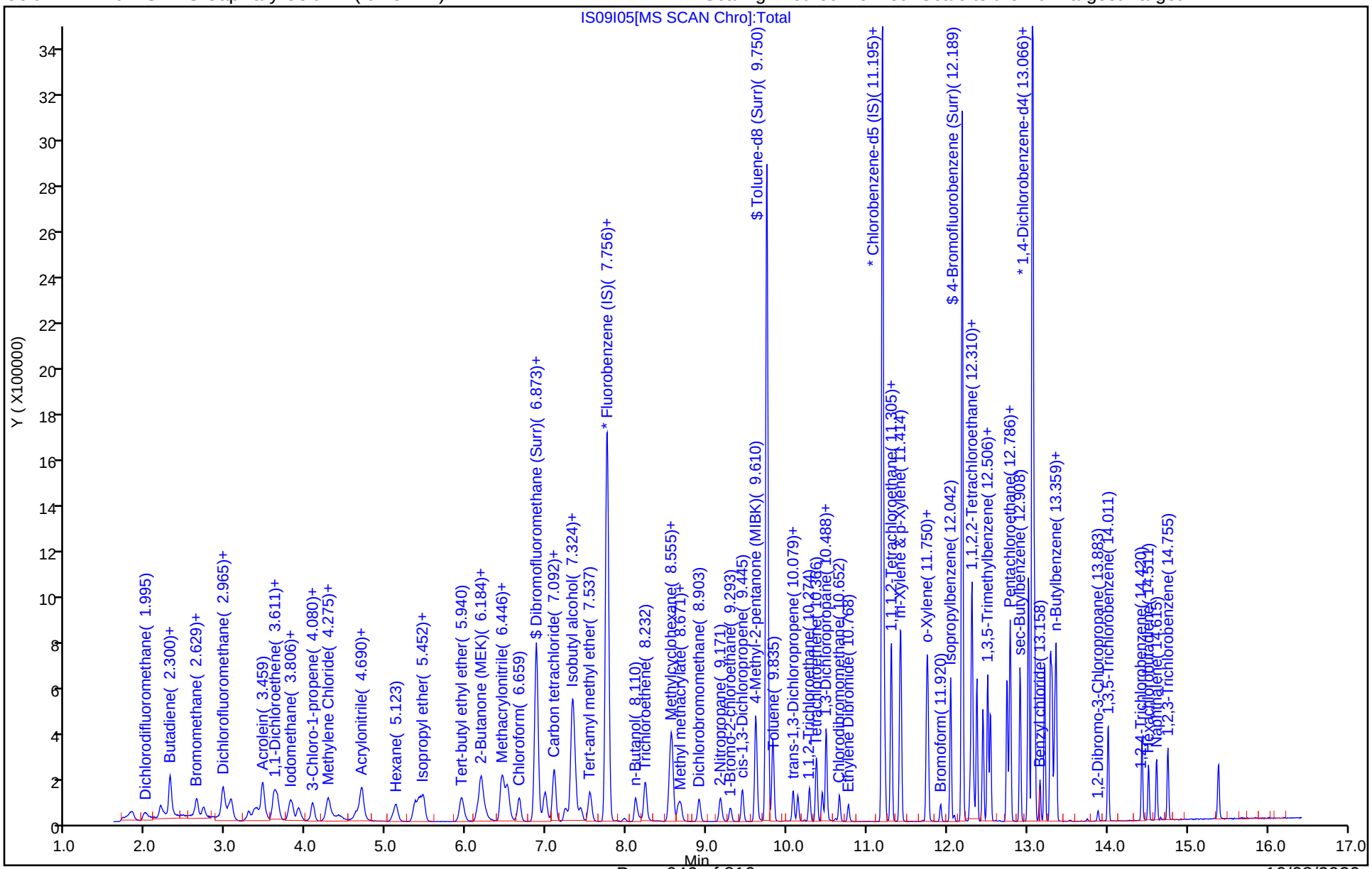
Lims ID: IC std3 Worklist Smp#: 7

Client ID:

Purge Vol: 25.000 mL Dil. Factor: 1.0000 ALS Bottle#: 6

Method: 8260 25ml HP31 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

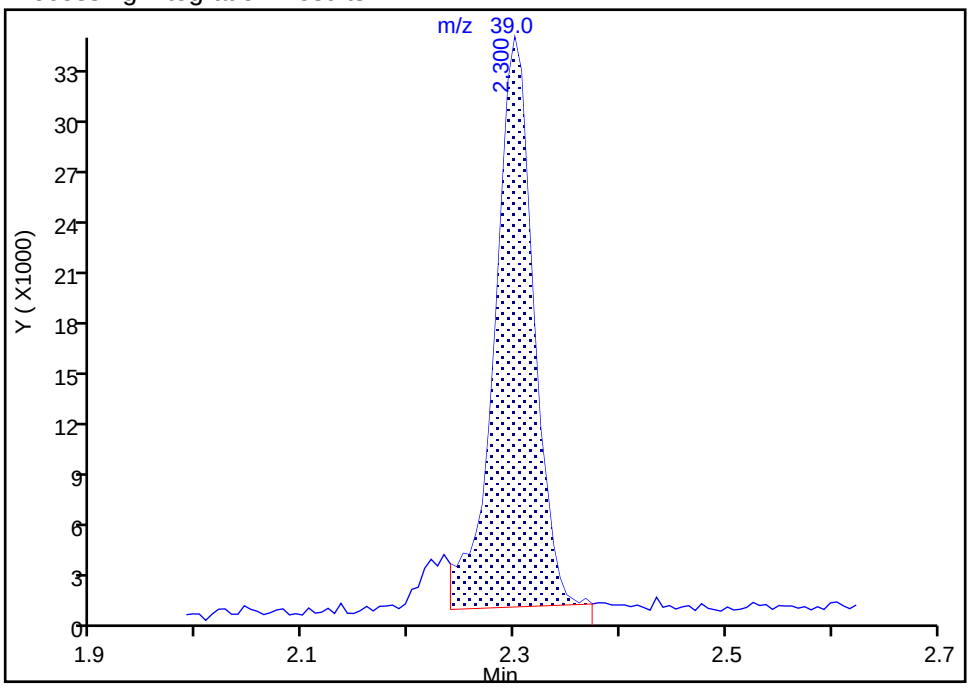
Data File:	\\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I05.D				
Injection Date:	09-Sep-2020 17:20:30	Instrument ID:	19930		
Lims ID:	IC std3				
Client ID:					
Operator ID:	dvv10203	ALS Bottle#:	6	Worklist Smp#:	7
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

6 Butadiene, CAS: 106-99-0

Signal: 1

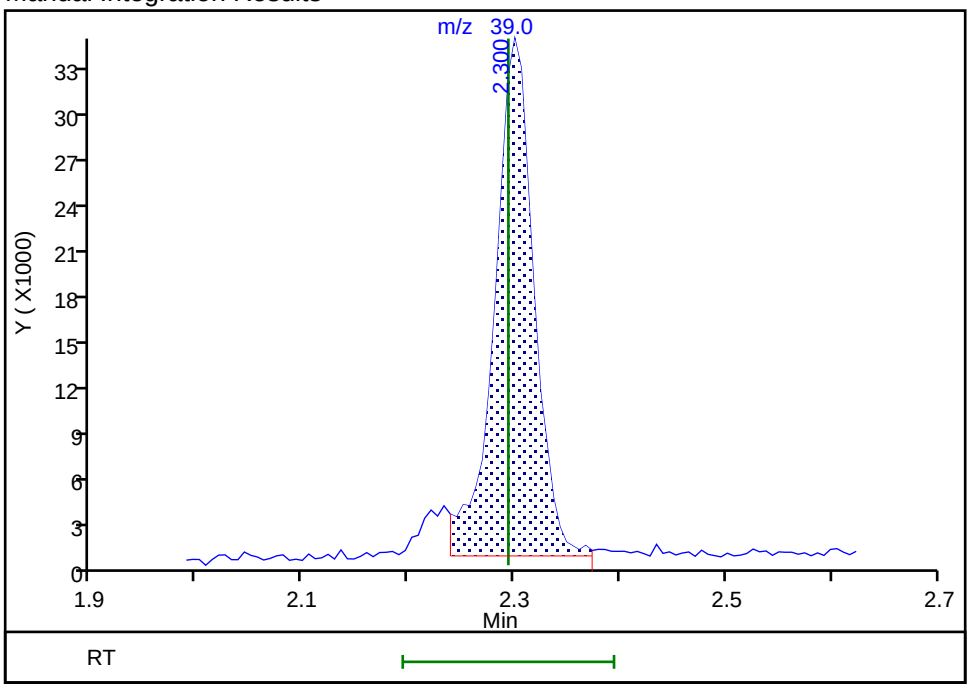
Processing Integration Results

RT: 2.30
Area: 85656
Amount: 0.957544
Amount Units: ug/l



Manual Integration Results

RT: 2.30
Area: 87310
Amount: 0.973463
Amount Units: ug/l



Reviewer: campbellme, 09-Sep-2020 22:15:45
Audit Action: Assigned New Baseline Audit Reason: Baseline

Eurofins Lancaster Laboratories Env, LLC

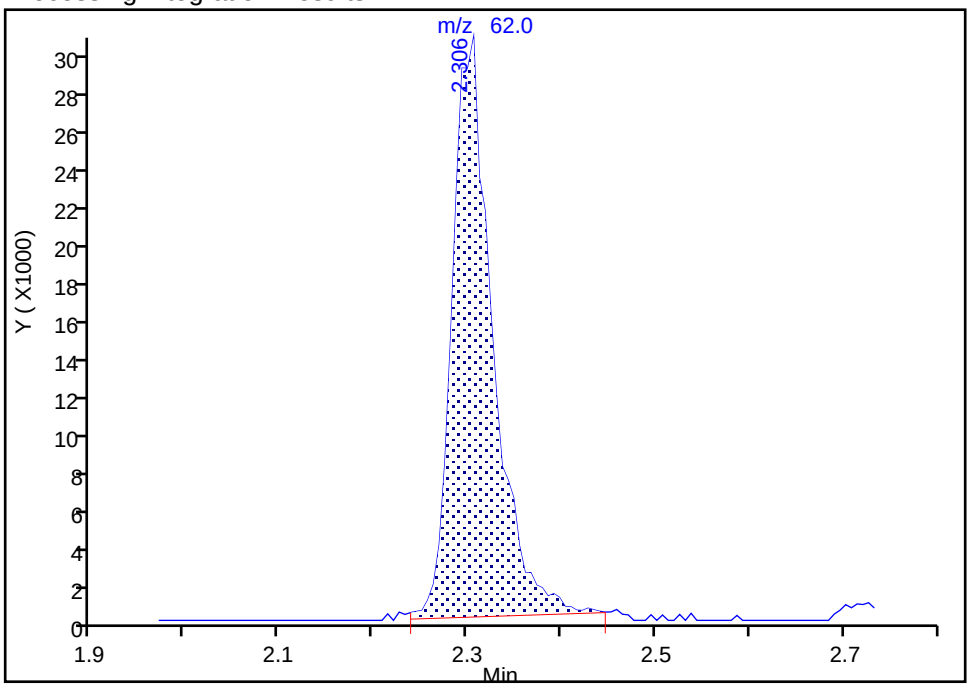
Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I05.D
Injection Date: 09-Sep-2020 17:20:30 Instrument ID: 19930
Lims ID: IC std3
Client ID:
Operator ID: dvv10203 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

5 Vinyl chloride, CAS: 75-01-4

Signal: 1

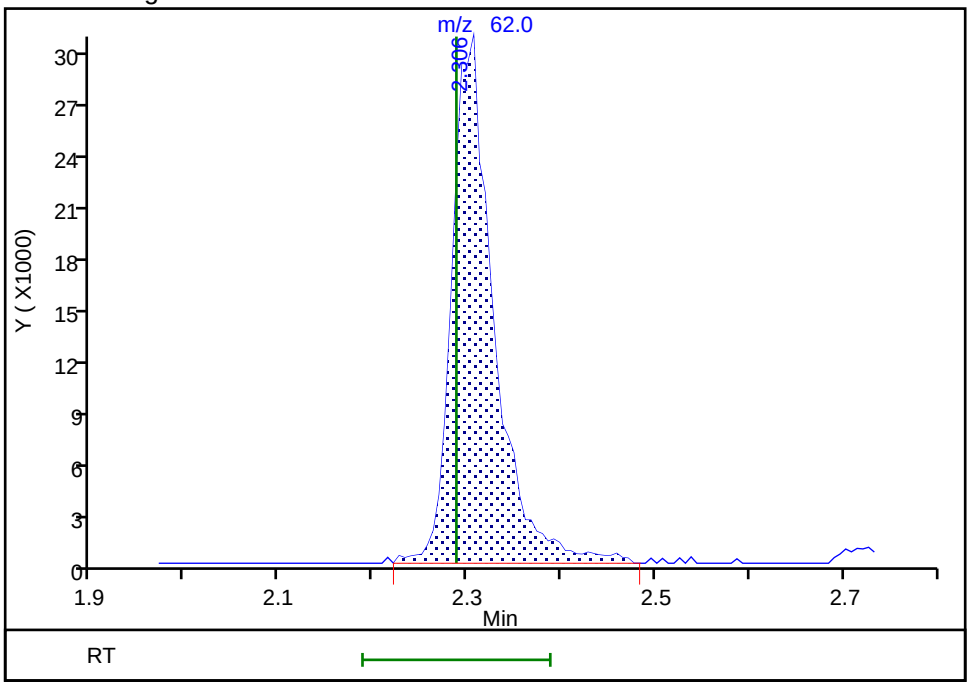
Processing Integration Results

RT: 2.31
Area: 90151
Amount: 0.951488
Amount Units: ug/l



Manual Integration Results

RT: 2.31
Area: 93992
Amount: 0.986315
Amount Units: ug/l



Reviewer: campbellme, 09-Sep-2020 22:15:33
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

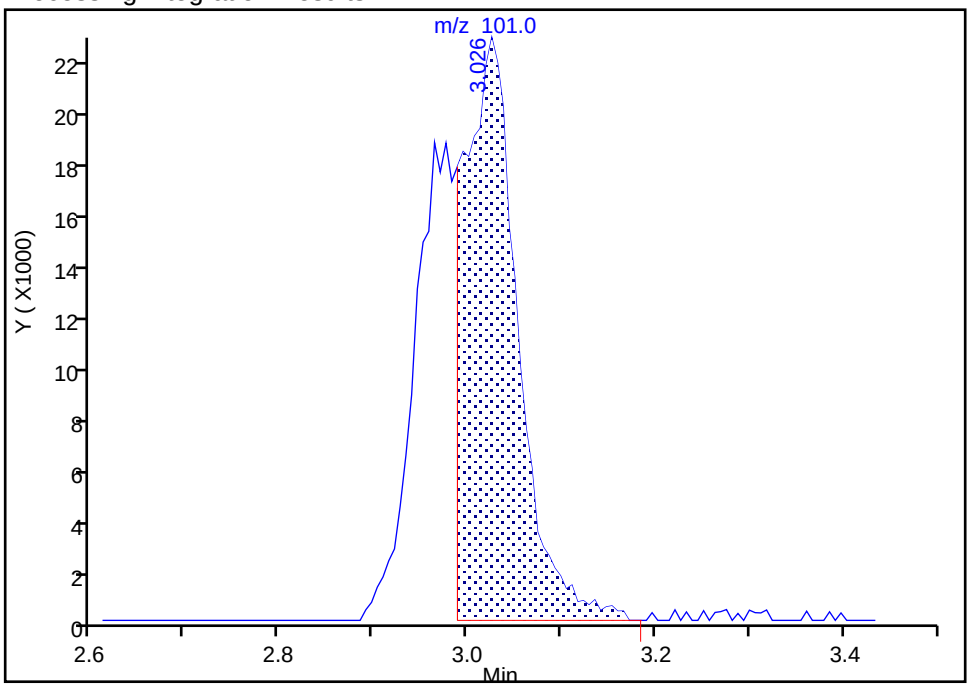
Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I05.D
Injection Date: 09-Sep-2020 17:20:30 Instrument ID: 19930
Lims ID: IC std3
Client ID:
Operator ID: dvv10203 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

10 Trichlorofluoromethane, CAS: 75-69-4

Signal: 1

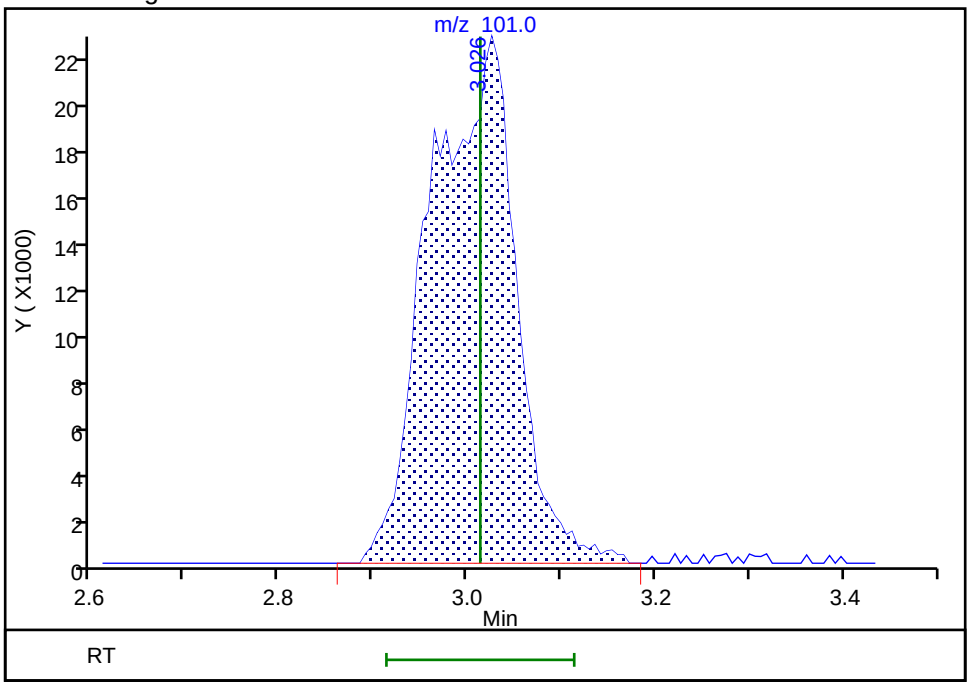
Processing Integration Results

RT: 3.03
Area: 89212
Amount: 0.646300
Amount Units: ug/l



Manual Integration Results

RT: 3.03
Area: 140343
Amount: 0.965622
Amount Units: ug/l



Reviewer: campbellme, 09-Sep-2020 22:15:55
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

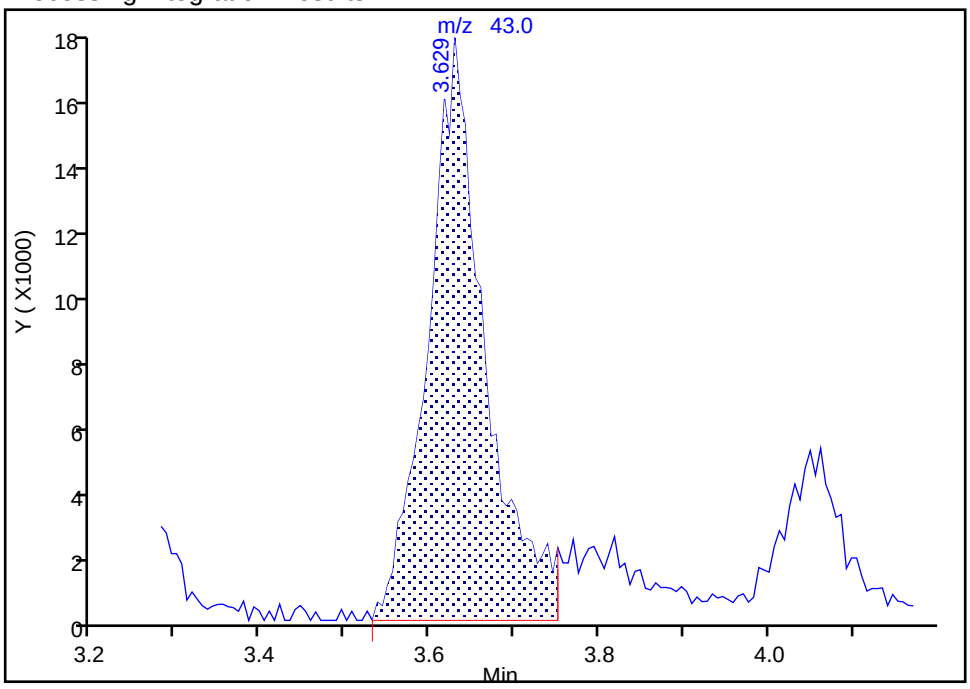
Data File:	\\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I05.D				
Injection Date:	09-Sep-2020 17:20:30	Instrument ID:	19930		
Lims ID:	IC std3				
Client ID:					
Operator ID:	dvv10203	ALS Bottle#:	6	Worklist Smp#:	7
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

15 Acetone, CAS: 67-64-1

Signal: 1

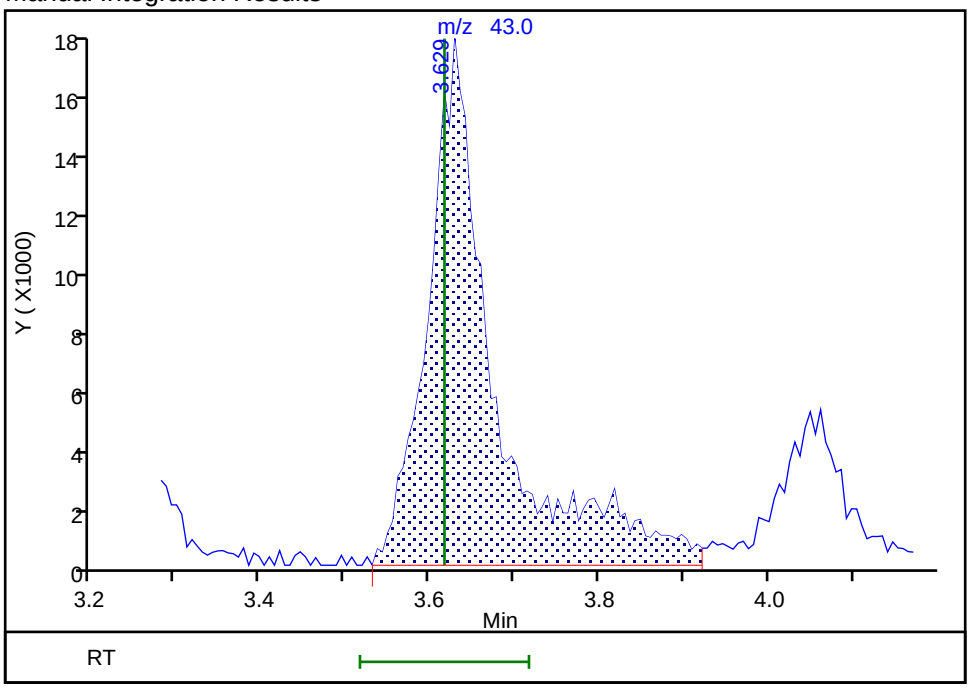
Processing Integration Results

RT: 3.63
Area: 80587
Amount: 9.467729
Amount Units: ug/l



Manual Integration Results

RT: 3.63
Area: 94836
Amount: 9.222420
Amount Units: ug/l



Reviewer: campbellme, 09-Sep-2020 22:16:12
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

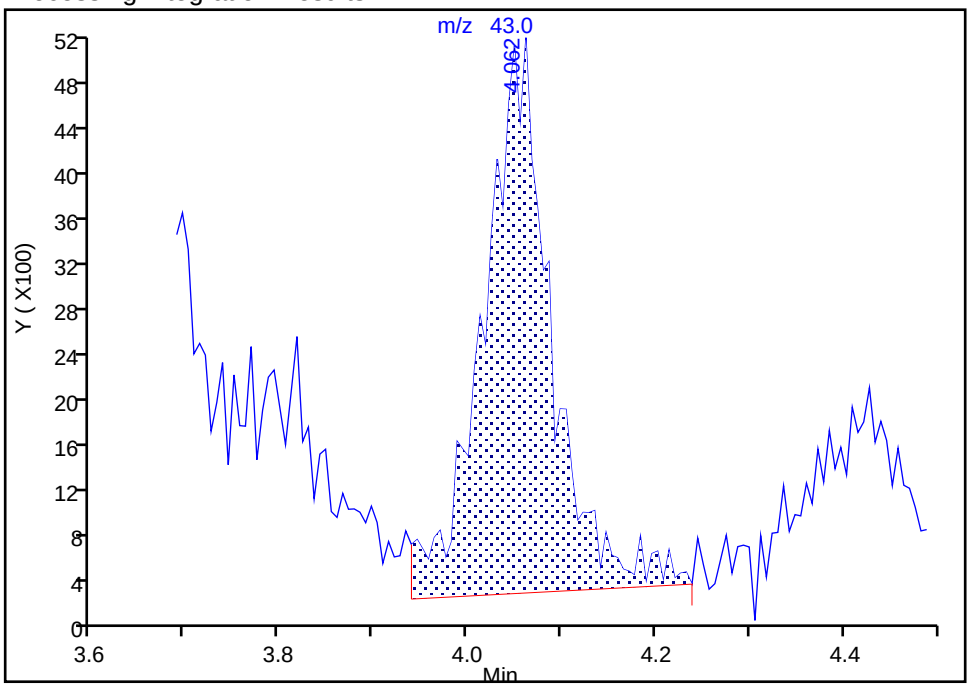
Data File:	\\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I05.D				
Injection Date:	09-Sep-2020 17:20:30	Instrument ID:	19930		
Lims ID:	IC std3				
Client ID:					
Operator ID:	dvv10203	ALS Bottle#:	6	Worklist Smp#:	7
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

21 Methyl acetate, CAS: 79-20-9

Signal: 1

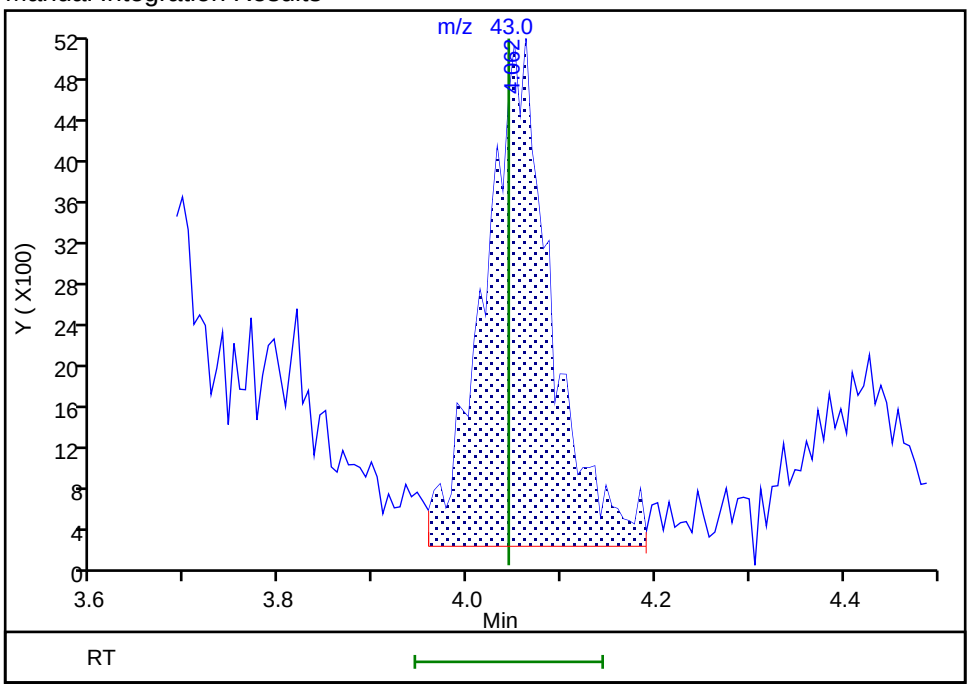
Processing Integration Results

RT: 4.06
Area: 24479
Amount: 0.859196
Amount Units: ug/l



Manual Integration Results

RT: 4.06
Area: 24398
Amount: 0.840830
Amount Units: ug/l



Reviewer: campbellme, 09-Sep-2020 22:16:36

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

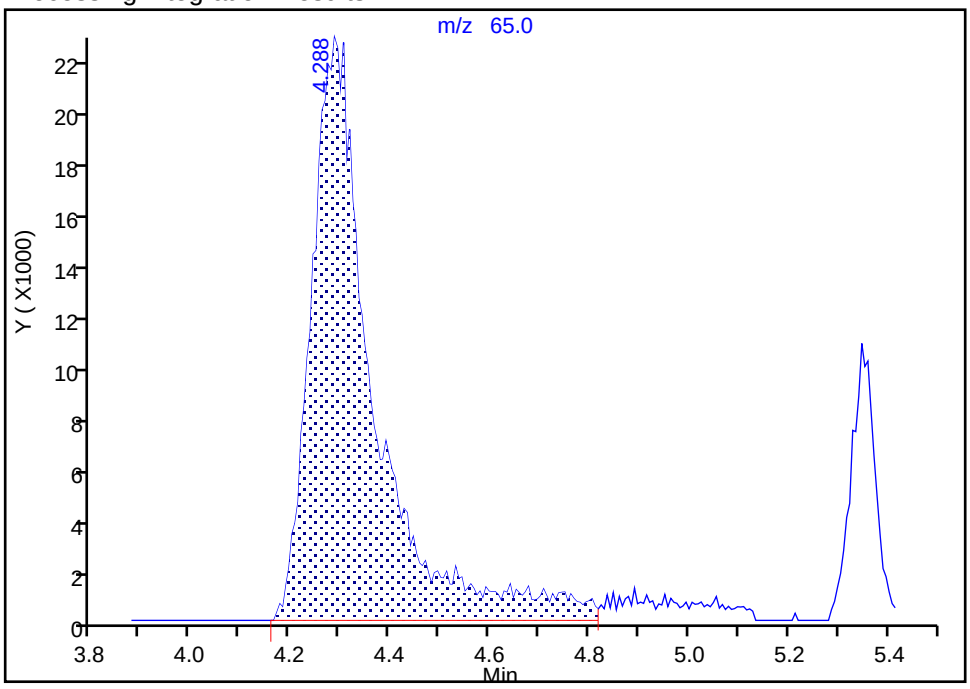
Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I05.D
Injection Date: 09-Sep-2020 17:20:30 Instrument ID: 19930
Lims ID: IC std3
Client ID:
Operator ID: dvv10203 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

* 24 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

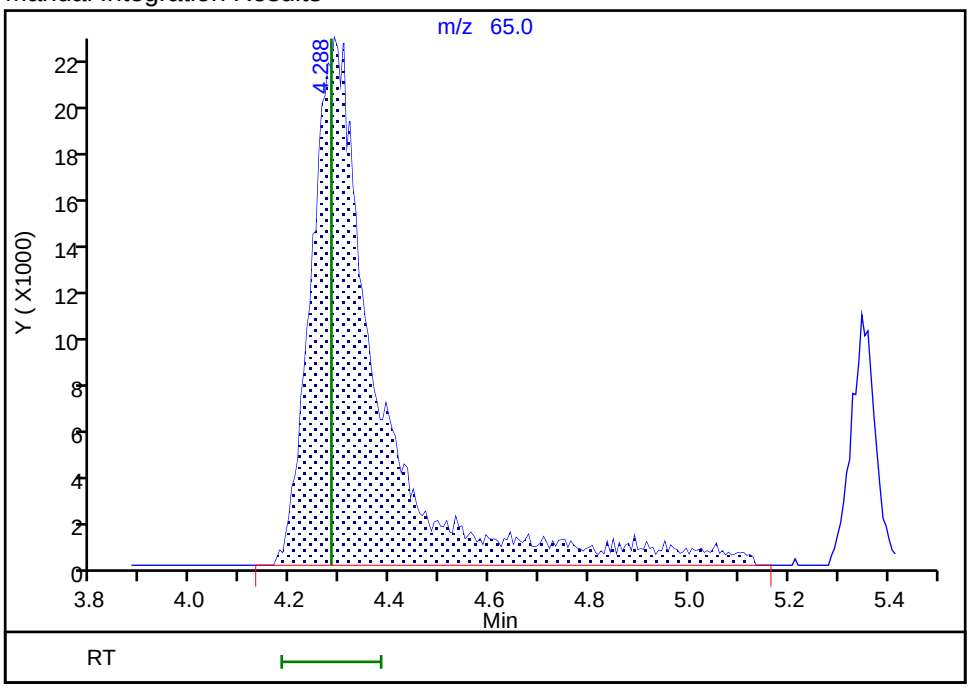
Processing Integration Results

RT: 4.29
Area: 193976
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 4.29
Area: 205801
Amount: 50.000000
Amount Units: ug/l



Reviewer: campbellme, 09-Sep-2020 22:16:52
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

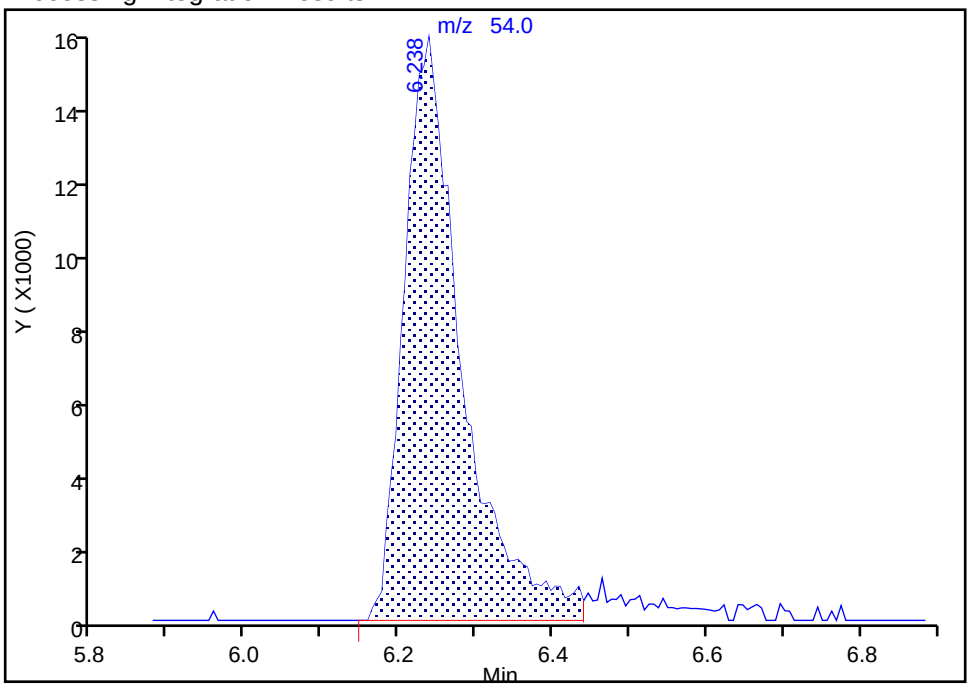
Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I05.D
Injection Date: 09-Sep-2020 17:20:30 Instrument ID: 19930
Lims ID: IC std3
Client ID:
Operator ID: dvv10203 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

40 Propionitrile, CAS: 107-12-0

Signal: 1

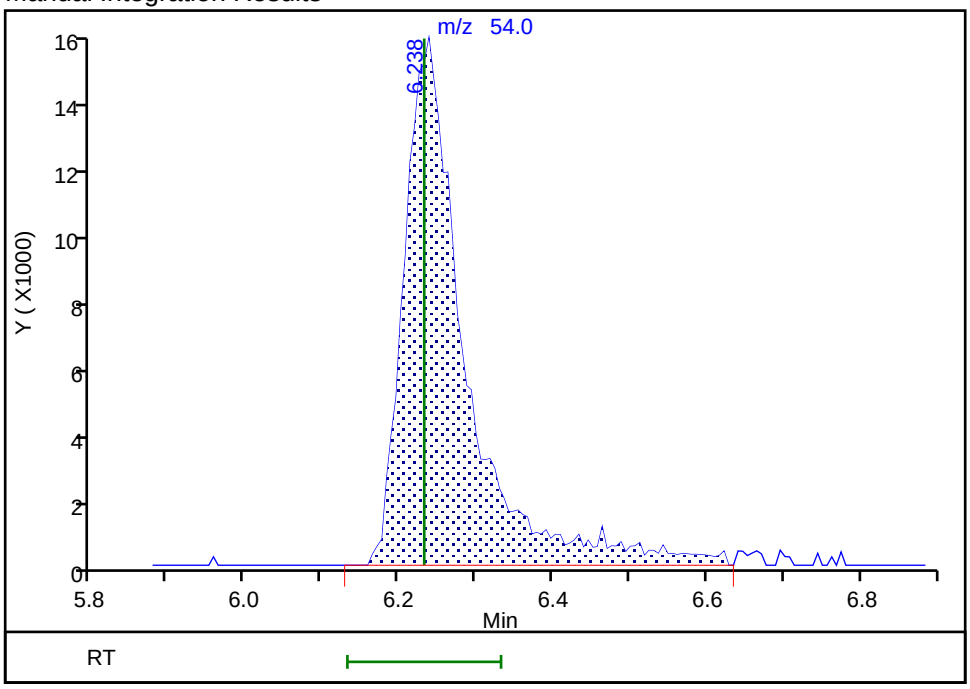
Processing Integration Results

RT: 6.24
Area: 83417
Amount: 18.672998
Amount Units: ug/l



Manual Integration Results

RT: 6.24
Area: 88513
Amount: 19.653602
Amount Units: ug/l



Reviewer: campbellme, 09-Sep-2020 22:17:03
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

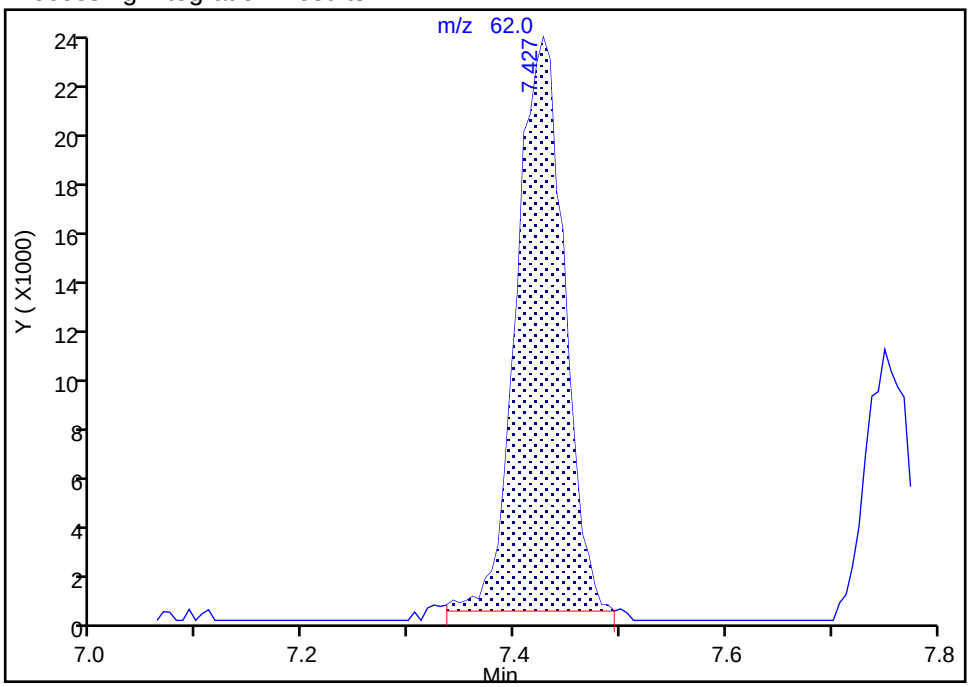
Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I05.D
Injection Date: 09-Sep-2020 17:20:30 Instrument ID: 19930
Lims ID: IC std3
Client ID:
Operator ID: dvv10203 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

56 1,2-Dichloroethane, CAS: 107-06-2

Signal: 1

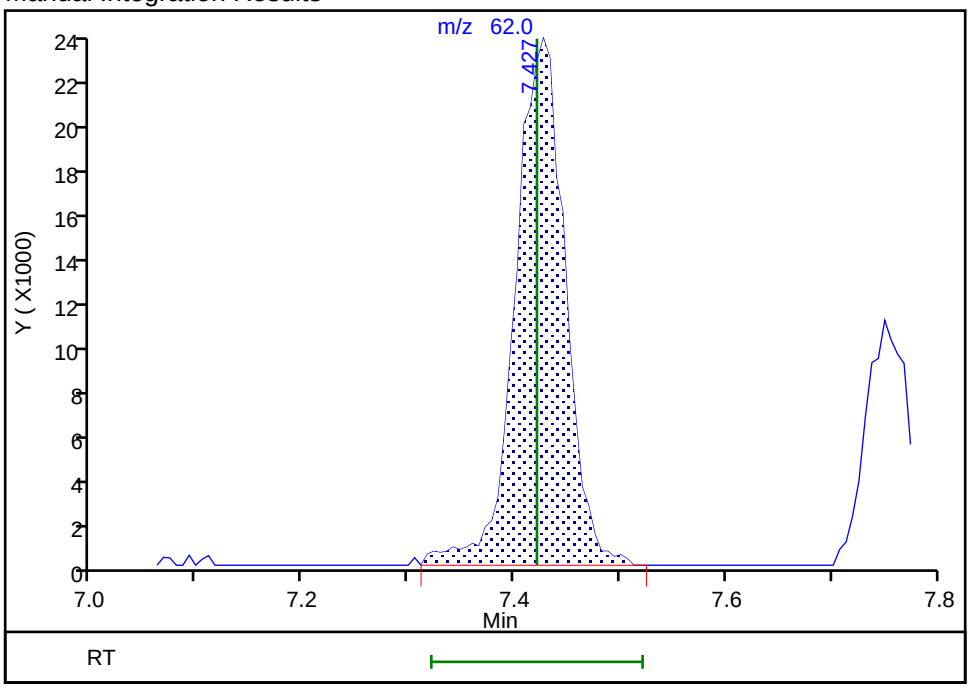
Processing Integration Results

RT: 7.43
Area: 73663
Amount: 0.971788
Amount Units: ug/l



Manual Integration Results

RT: 7.43
Area: 78331
Amount: 1.024358
Amount Units: ug/l



Reviewer: campbellme, 09-Sep-2020 22:17:14
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

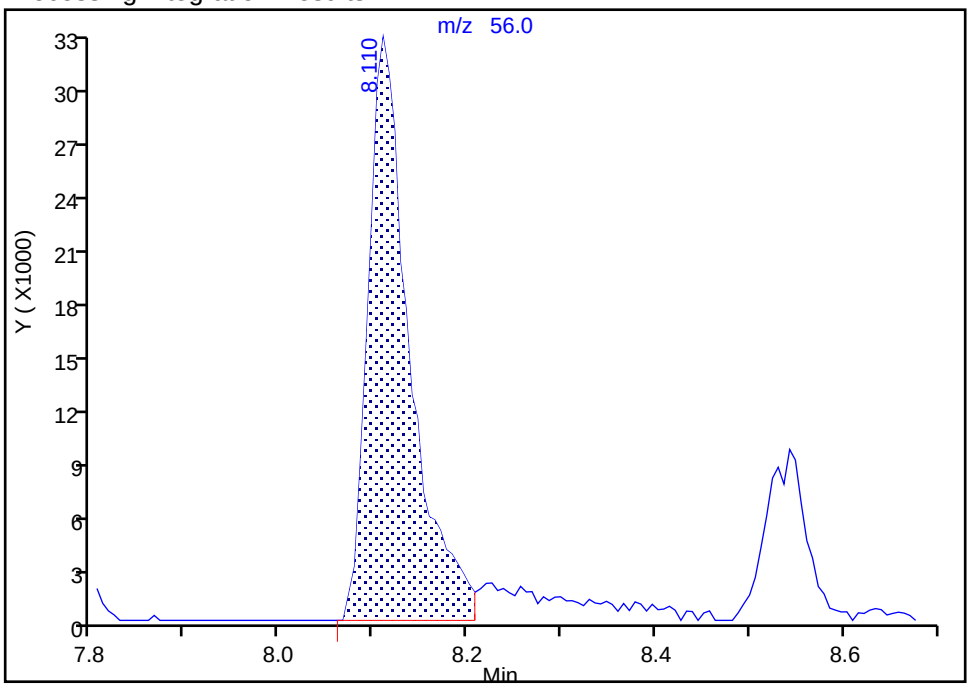
Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I05.D
Injection Date: 09-Sep-2020 17:20:30 Instrument ID: 19930
Lims ID: IC std3
Client ID:
Operator ID: dvv10203 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

60 n-Butanol, CAS: 71-36-3

Signal: 1

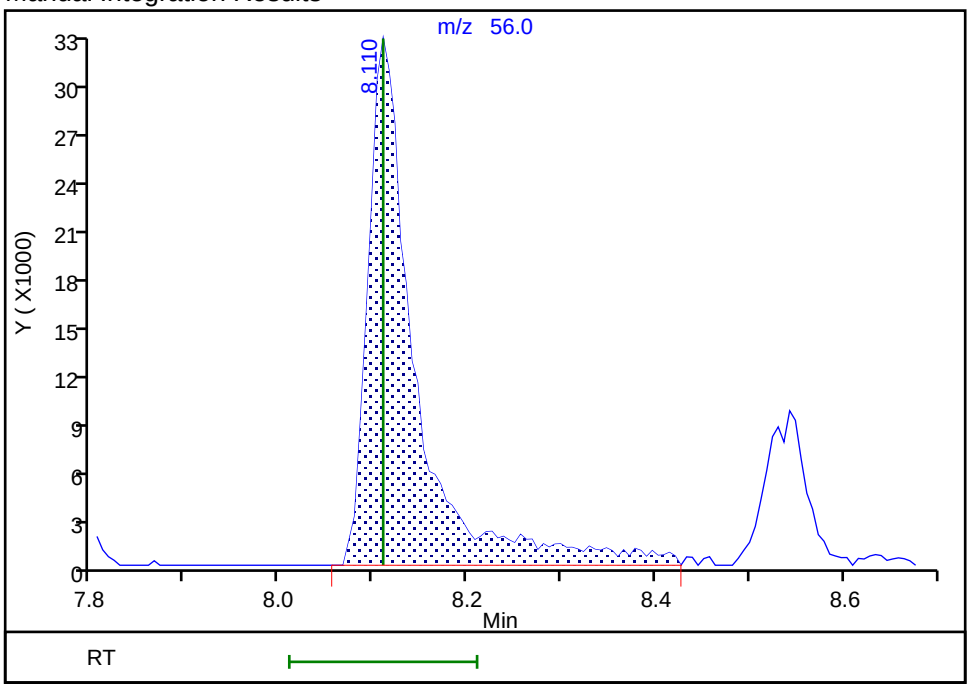
Processing Integration Results

RT: 8.11
Area: 98609
Amount: 85.502890
Amount Units: ug/l



Manual Integration Results

RT: 8.11
Area: 113169
Amount: 92.495434
Amount Units: ug/l



Reviewer: campbellme, 09-Sep-2020 22:17:21
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

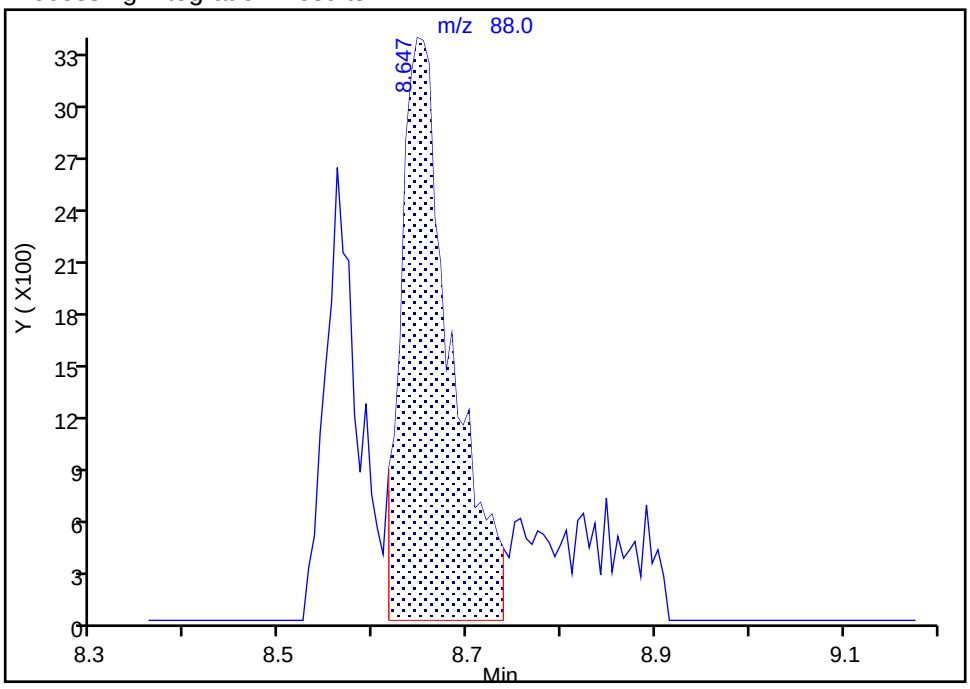
Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I05.D
Injection Date: 09-Sep-2020 17:20:30 Instrument ID: 19930
Lims ID: IC std3
Client ID:
Operator ID: dvv10203 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

65 1,4-Dioxane, CAS: 123-91-1

Signal: 1

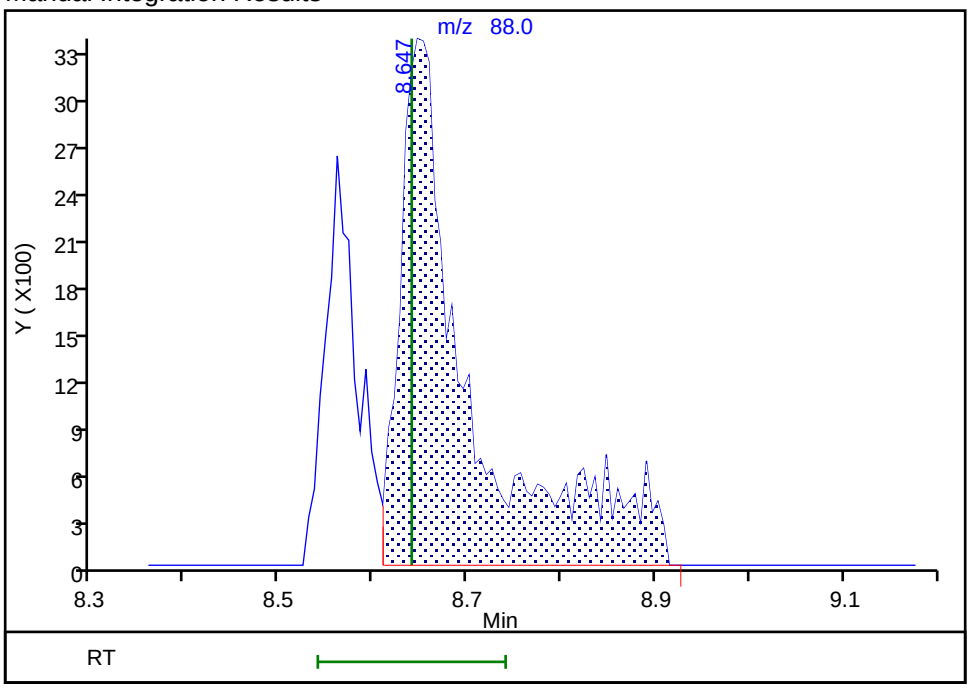
Processing Integration Results

RT: 8.65
Area: 12373
Amount: 49.834189
Amount Units: ug/l



Manual Integration Results

RT: 8.65
Area: 17098
Amount: 50.224934
Amount Units: ug/l



Reviewer: campbellme, 09-Sep-2020 22:17:35
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I06.D
Lims ID: IC std2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 09-Sep-2020 17:41:30 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: IC STD2
Misc. Info.: 410-0010046-008
Operator ID: dvv10203 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 11-Sep-2020 18:39:02 Calib Date: 09-Sep-2020 21:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1058

First Level Reviewer: campbellme Date: 09-Sep-2020 22:19:39

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	1.989	1.971	0.018	99	46266	0.5000	0.5068	
4 Chloromethane	50	2.178	2.178	0.000	99	45256	0.5000	0.4924	M
5 Vinyl chloride	62	2.300	2.288	0.012	85	46618	0.5000	0.5121	
6 Butadiene	39	2.300	2.294	0.006	91	48636	0.5000	0.5676	
7 Bromomethane	94	2.629	2.623	0.006	92	40836	0.5000	0.4994	
8 Chloroethane	64	2.709	2.709	0.000	99	29976	0.5000	0.5042	
9 Dichlorofluoromethane	67	2.965	2.946	0.019	97	73274	0.5000	0.5054	
10 Trichlorofluoromethane	101	3.032	3.013	0.019	97	69887	0.5000	0.5033	
11 Ethyl ether	59	3.282	3.270	0.012	89	20565	0.4999	0.4880	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.361	3.355	0.006	69	35520	0.5000	0.5042	
13 Acrolein	56	3.458	3.446	0.012	97	142002	25.0	23.4	
14 1,1-Dichloroethene	96	3.593	3.587	0.006	98	28828	0.5000	0.4802	
15 Acetone	43	3.629	3.617	0.012	100	51651	5.00	5.43	M
16 112TCTFE	101	3.629	3.623	0.006	92	31200	0.5000	0.4936	
17 Iodomethane	142	3.800	3.788	0.012	98	58524	0.5000	0.4645	
18 Ethyl bromide	108	3.830	3.812	0.018	96	24902	0.5003	0.4838	Ma
19 Carbon disulfide	76	3.903	3.897	0.006	99	81584	0.5000	0.5082	
21 Methyl acetate	43	4.062	4.044	0.018	20	15530	0.5000	0.5790	M
22 3-Chloro-1-propene	41	4.080	4.068	0.012	87	41385	0.5000	0.5280	
23 Methylene Chloride	84	4.275	4.263	0.012	88	30017	0.5000	0.4834	
* 24 t-Butyl alcohol-d10 (IS)	65	4.275	4.282	-0.007	0	190233	50.0	50.0	
25 2-Methyl-2-propanol	59	4.403	4.403	0.000	98	42352	10.0	10.7	
26 Acrylonitrile	53	4.617	4.605	0.012	97	26126	2.50	2.47	M
27 Methyl tert-butyl ether	73	4.678	4.678	0.000	85	79909	0.5000	0.5098	
28 trans-1,2-Dichloroethene	96	4.696	4.678	0.018	97	32838	0.5000	0.4889	
29 Hexane	57	5.117	5.111	0.006	90	39300	0.5000	0.5082	
31 1,1-Dichloroethane	63	5.348	5.348	0.000	96	53636	0.5000	0.4924	
32 Isopropyl ether	45	5.403	5.403	0.000	89	83716	0.5000	0.5027	
33 2-Chloro-1,3-butadiene	53	5.464	5.452	0.012	91	46143	0.5000	0.4972	
34 Tert-butyl ethyl ether	59	5.940	5.928	0.012	95	86810	0.5000	0.4935	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
36 2-Butanone (MEK)	43	6.135	6.135	0.000	98	71302	5.00	5.01	
S 35 1,2-Dichloroethene, Total	100				0			0.9876	
37 cis-1,2-Dichloroethene	96	6.184	6.177	0.007	80	38456	0.5000	0.4987	
38 2,2-Dichloropropane	77	6.190	6.196	-0.006	74	52979	0.5000	0.4976	
40 Propionitrile	54	6.238	6.232	0.006	96	40793	10.0	9.80	
42 Methacrylonitrile	67	6.446	6.440	0.006	88	75475	5.00	4.84	
43 Chlorobromomethane	128	6.513	6.507	0.006	84	17383	0.5000	0.4920	
44 Tetrahydrofuran	71	6.519	6.513	0.006	79	21933	5.00	4.78	
45 Chloroform	83	6.659	6.653	0.006	93	60314	0.5000	0.4923	
$ 46 Dibromofluoromethane (Surr)	113	6.872	6.866	0.006	93	608503	10.0	9.93	
47 1,1,1-Trichloroethane	97	6.885	6.879	0.006	64	60611	0.5000	0.4937	
48 Cyclohexane	56	6.976	6.976	0.000	88	47615	0.5000	0.5059	
50 Carbon tetrachloride	117	7.098	7.086	0.012	95	55021	0.5000	0.4889	
51 1,1-Dichloropropene	75	7.092	7.092	0.000	94	45380	0.5000	0.4992	
52 Isobutyl alcohol	41	7.238	7.232	0.006	91	29620	25.0	25.4	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.324	7.318	0.006	0	111269	10.0	9.90	
54 Benzene	78	7.354	7.348	0.006	95	134015	0.5000	0.5030	
56 1,2-Dichloroethane	62	7.421	7.421	0.000	97	35941	0.5000	0.4920	
57 Tert-amyl methyl ether	73	7.537	7.537	0.000	98	82292	0.5000	0.4873	
* 58 Fluorobenzene (IS)	96	7.756	7.750	0.006	99	2267856	10.0	10.0	
59 n-Heptane	43	7.769	7.763	0.006	58	36937	0.5000	0.5057	
60 n-Butanol	56	8.110	8.110	0.000	86	55769	50.0	49.3	M
61 Trichloroethene	95	8.232	8.226	0.006	99	40068	0.5000	0.5139	
62 Methylcyclohexane	83	8.537	8.531	0.006	91	57702	0.5000	0.5036	
63 1,2-Dichloropropane	63	8.555	8.555	0.000	73	31331	0.5000	0.5064	
64 Methyl methacrylate	69	8.640	8.634	0.006	80	14164	0.5000	0.4648	
65 1,4-Dioxane	88	8.653	8.640	0.013	39	7994	25.0	25.4	M
66 Dibromomethane	93	8.671	8.665	0.006	93	16782	0.5000	0.4895	
68 Dichlorobromomethane	83	8.902	8.903	-0.001	98	40736	0.5000	0.4702	
69 2-Nitropropane	41	9.165	9.171	-0.006	99	44653	5.00	4.82	
72 1-Bromo-2-chloroethane	63	9.293	9.293	0.000	98	31641	0.5000	0.5076	
73 cis-1,3-Dichloropropene	75	9.445	9.439	0.006	96	47357	0.5000	0.4866	
74 4-Methyl-2-pentanone (MIBK)	43	9.610	9.610	0.000	96	181542	5.00	4.86	
$ 75 Toluene-d8 (Surr)	98	9.750	9.750	0.000	93	2300682	10.0	10.2	
76 Toluene	92	9.823	9.823	0.000	99	90625	0.5000	0.5069	
S 77 1,3-Dichloropropene, Total	100				0			0.9670	
78 trans-1,3-Dichloropropene	75	10.079	10.073	0.006	91	37696	0.5000	0.4804	
79 Ethyl methacrylate	69	10.134	10.134	0.000	87	29468	0.5000	0.4805	
80 1,1,2-Trichloroethane	97	10.286	10.280	0.006	90	23198	0.5000	0.4887	
81 Tetrachloroethene	166	10.372	10.366	0.006	96	43479	0.5000	0.4806	
82 1,3-Dichloropropane	76	10.439	10.439	0.000	86	38735	0.5000	0.5091	
83 2-Hexanone	43	10.494	10.488	0.006	96	124949	5.00	4.78	
85 Chlorodibromomethane	129	10.652	10.652	0.000	91	28421	0.5000	0.4495	
86 Ethylene Dibromide	107	10.768	10.762	0.006	97	24463	0.5000	0.5007	
* 87 Chlorobenzene-d5 (IS)	117	11.189	11.189	0.000	85	1831162	10.0	10.0	
88 1-Chlorohexane	91	11.201	11.195	0.006	91	51510	0.5000	0.4905	
90 Chlorobenzene	112	11.219	11.219	0.000	97	102647	0.5000	0.5021	
S 89 Xylenes, Total	106				0			1.46	
91 1,1,1,2-Tetrachloroethane	131	11.298	11.298	0.000	94	37148	0.5000	0.4815	
92 Ethylbenzene	91	11.304	11.305	-0.001	97	175299	0.5000	0.5015	
93 m-Xylene & p-Xylene	106	11.414	11.414	0.000	100	140582	1.00	0.9814	
94 o-Xylene	106	11.743	11.743	0.000	96	68435	0.5000	0.4806	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
95 Styrene	104	11.762	11.762	0.000	94	107419	0.5000	0.4815	
96 Bromoform	173	11.920	11.914	0.006	95	13577	0.5000	0.8024	
97 Isopropylbenzene	105	12.042	12.042	0.000	95	180357	0.5000	0.4864	
$ 100 4-Bromofluorobenzene (Surr)	95	12.188	12.189	0.000	91	883042	10.0	10.1	
101 1,1,2,2-Tetrachloroethane	83	12.286	12.286	0.000	95	27317	0.5000	0.4841	
102 Bromobenzene	156	12.304	12.304	0.000	96	42995	0.5000	0.4866	
103 trans-1,4-Dichloro-2-butene	53	12.310	12.310	0.000	92	63080	5.00	4.48	
104 1,2,3-Trichloropropane	110	12.335	12.329	0.006	84	8573	0.5000	0.5058	
105 N-Propylbenzene	91	12.371	12.371	0.000	98	208747	0.5000	0.5207	
106 2-Chlorotoluene	126	12.444	12.445	-0.001	96	42991	0.5000	0.5037	
107 1,3,5-Trimethylbenzene	105	12.505	12.506	-0.001	94	150355	0.5000	0.4971	
108 4-Chlorotoluene	126	12.542	12.536	0.006	97	43940	0.5000	0.4990	
109 tert-Butylbenzene	134	12.743	12.749	-0.006	92	35740	0.5000	0.5106	
110 Pentachloroethane	167	12.780	12.780	0.000	78	25528	0.5000	0.4662	
111 1,2,4-Trimethylbenzene	105	12.792	12.786	0.006	97	156884	0.5000	0.5079	
112 sec-Butylbenzene	105	12.908	12.908	0.000	94	191497	0.5000	0.4974	
113 1,3-Dichlorobenzene	146	13.011	13.012	-0.001	97	82939	0.5000	0.4762	
114 4-Isopropyltoluene	119	13.018	13.018	0.000	97	165328	0.5000	0.4914	
* 115 1,4-Dichlorobenzene-d4	152	13.066	13.066	0.000	95	1021567	10.0	10.0	
116 1,4-Dichlorobenzene	146	13.085	13.085	0.000	94	85667	0.5000	0.4891	
117 1,2,3-Trimethylbenzene	120	13.091	13.091	0.000	97	71753	0.5000	0.5209	
118 Benzyl chloride	126	13.164	13.158	0.006	98	11278	0.5000	0.4444	
119 n-Butylbenzene	92	13.310	13.304	0.006	98	74423	0.5000	0.4849	
120 1,2-Dichlorobenzene	146	13.341	13.341	0.000	99	76273	0.5000	0.4860	
122 1,2-Dibromo-3-Chloropropane	155	13.883	13.883	0.000	83	3746	0.5000	0.4167	
123 1,3,5-Trichlorobenzene	180	14.011	14.011	0.000	95	51657	0.5000	0.4447	
124 1,2,4-Trichlorobenzene	180	14.432	14.432	0.000	94	41488	0.5000	0.4335	
125 Hexachlorobutadiene	225	14.511	14.511	0.000	92	15337	0.5000	0.4258	
126 Naphthalene	128	14.615	14.615	0.000	98	86411	0.5000	0.4597	
127 1,2,3-Trichlorobenzene	180	14.755	14.755	0.000	92	36925	0.5000	0.4523	
134 Isopropyl alcohol	45		0.000				ND	ND	
135 p-Diethylbenzene	1		0.000				ND	ND	
137 2-Methylnaphthalene	142		0.000				ND	ND	
144 2-ethoxy-2-methyl butane	1		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_RV1_826_00023	Amount Added:	2.00	Units: uL	
MSV_RV4_826_00025	Amount Added:	2.00	Units: uL	
MSV_RV4GAS826_00075	Amount Added:	2.00	Units: uL	
MSV_31_826ISS_00003	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 11-Sep-2020 18:39:03 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I06.D

Injection Date: 09-Sep-2020 17:41:30 Instrument ID: 19930 Operator ID: dvv10203

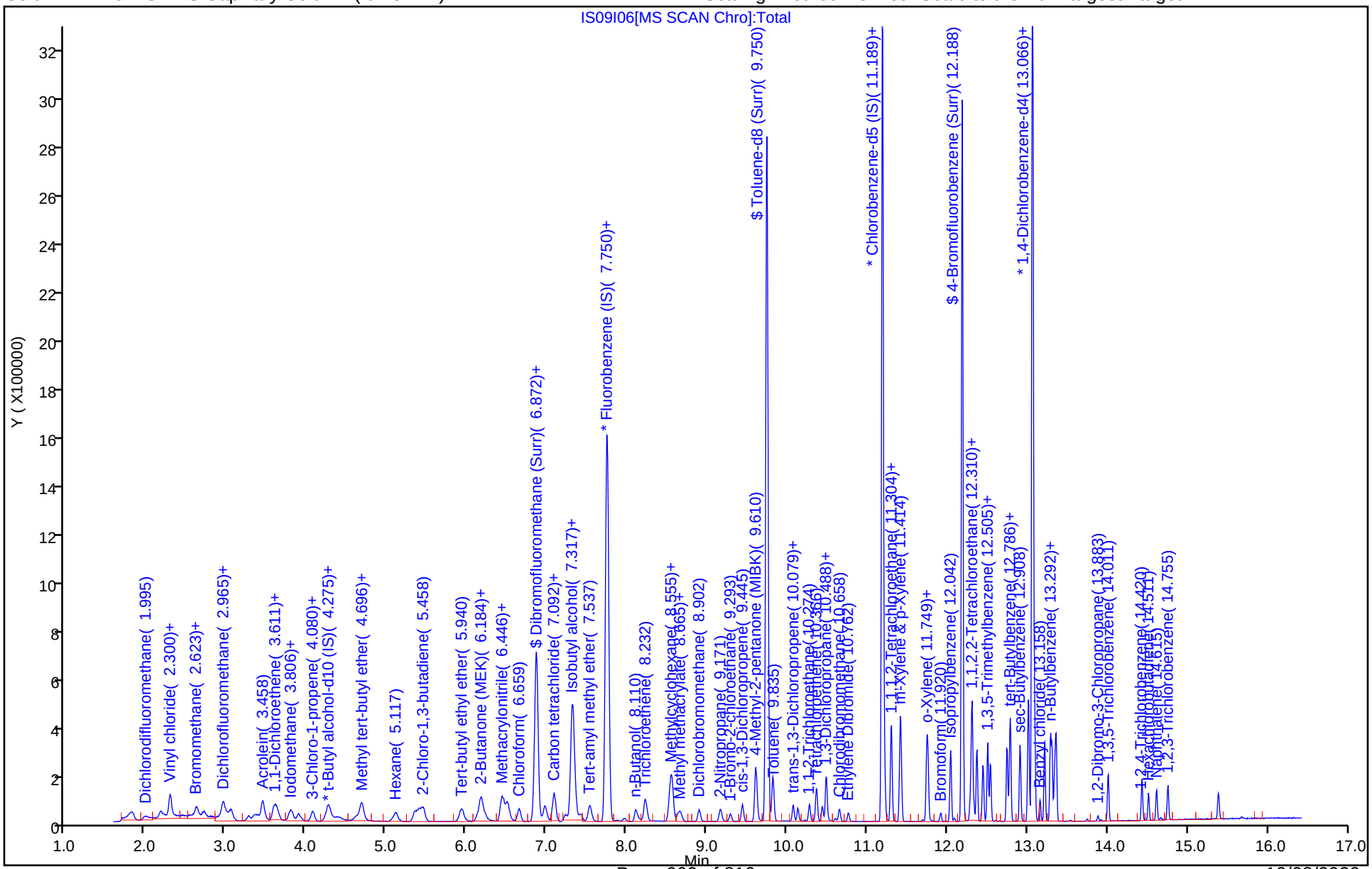
Lims ID: IC std2 Worklist Smp#: 8

Client ID:

Purge Vol: 25.000 mL Dil. Factor: 1.0000 ALS Bottle#: 7

Method: 8260 25ml HP31 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

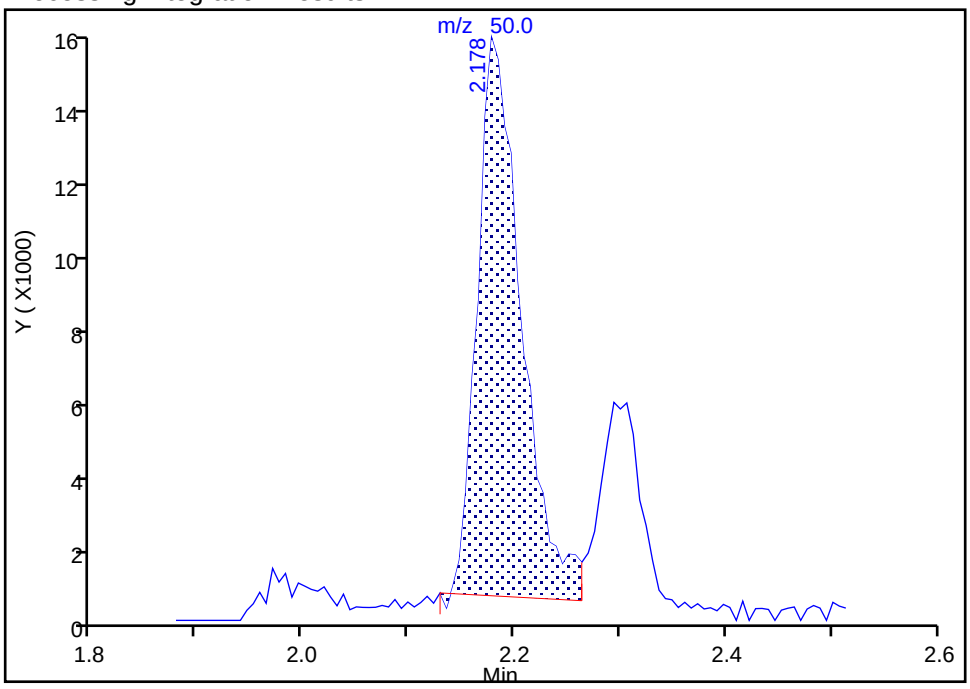
Data File:	\\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I06.D				
Injection Date:	09-Sep-2020 17:41:30	Instrument ID:	19930		
Lims ID:	IC std2				
Client ID:					
Operator ID:	dvv10203	ALS Bottle#:	7	Worklist Smp#:	8
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

4 Chloromethane, CAS: 74-87-3

Signal: 1

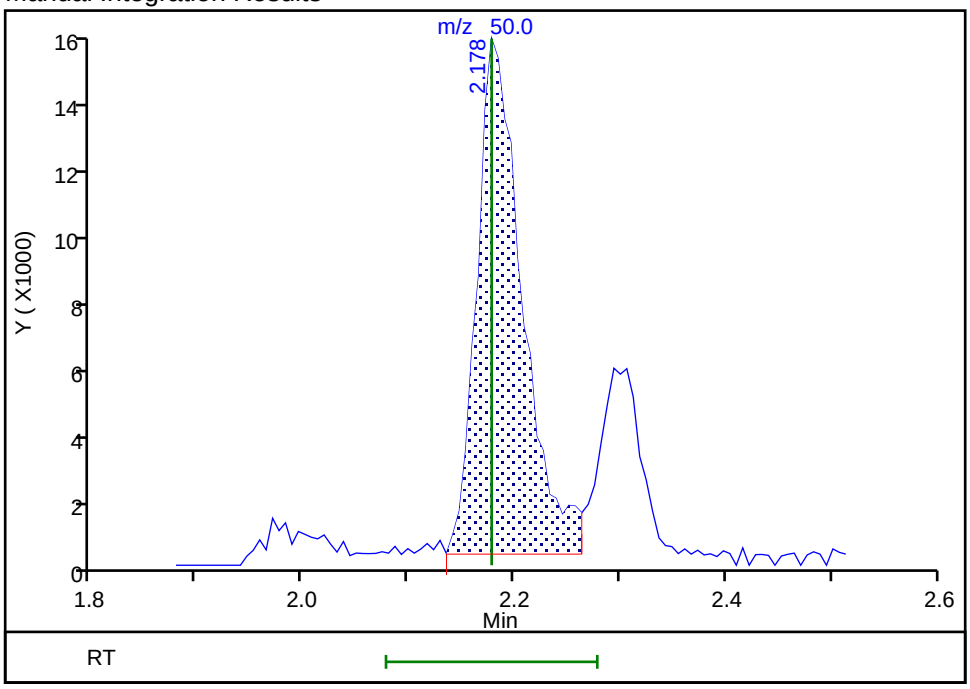
Processing Integration Results

RT: 2.18
Area: 42879
Amount: 0.470051
Amount Units: ug/l



Manual Integration Results

RT: 2.18
Area: 45256
Amount: 0.492442
Amount Units: ug/l



Reviewer: campbellme, 09-Sep-2020 22:18:18
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

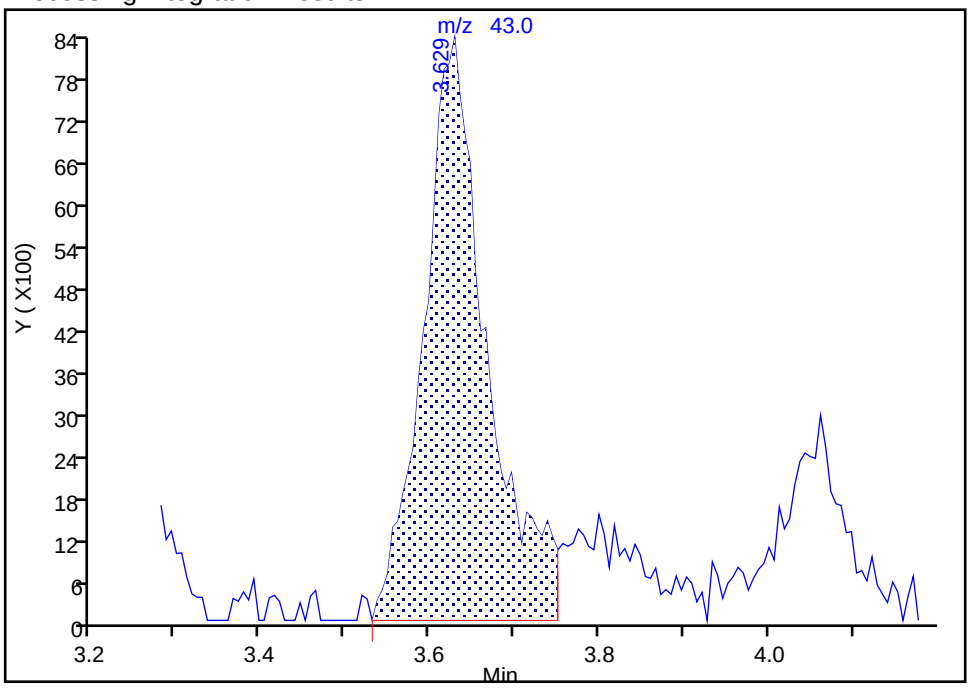
Data File:	\\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I06.D				
Injection Date:	09-Sep-2020 17:41:30	Instrument ID:	19930		
Lims ID:	IC std2				
Client ID:					
Operator ID:	dvv10203	ALS Bottle#:	7	Worklist Smp#:	8
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

15 Acetone, CAS: 67-64-1

Signal: 1

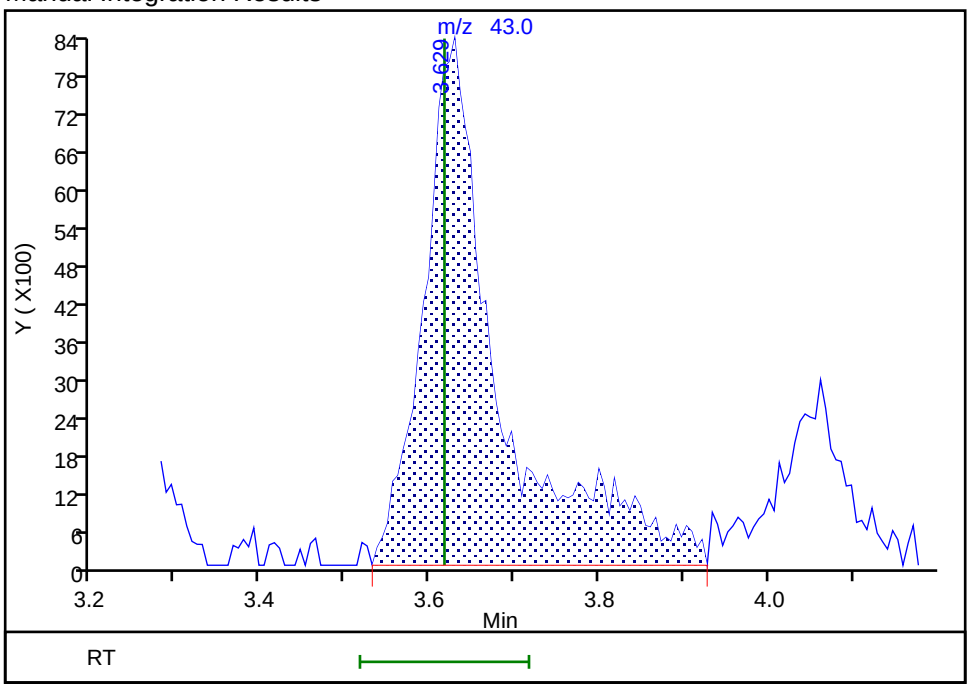
Processing Integration Results

RT: 3.63
Area: 43041
Amount: 5.081103
Amount Units: ug/l



Manual Integration Results

RT: 3.63
Area: 51651
Amount: 5.433905
Amount Units: ug/l



Reviewer: campbellme, 09-Sep-2020 22:18:33

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

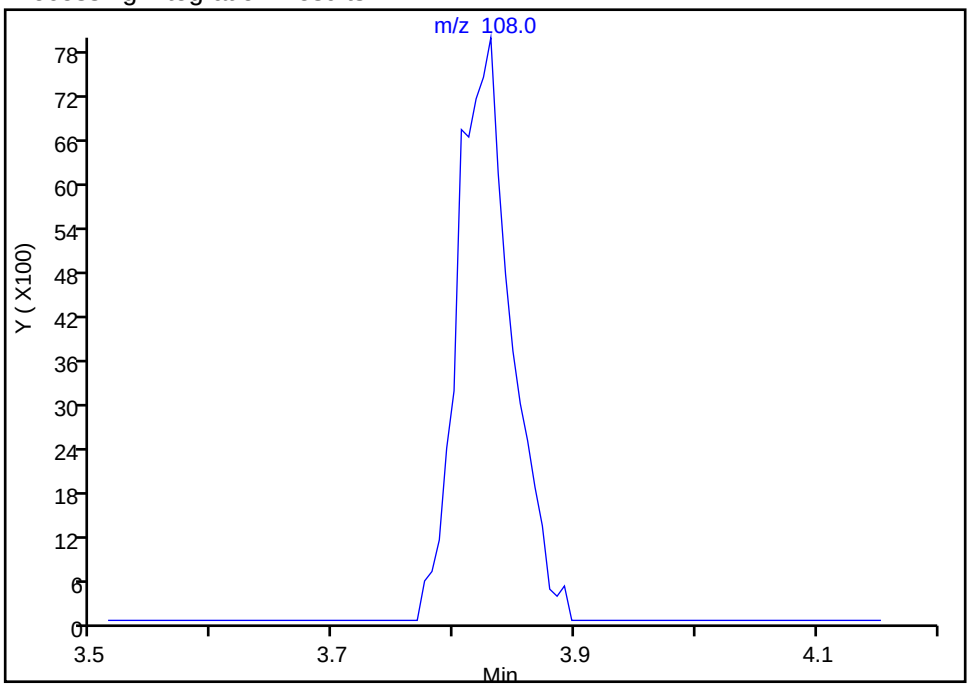
Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I06.D
Injection Date: 09-Sep-2020 17:41:30 Instrument ID: 19930
Lims ID: IC std2
Client ID:
Operator ID: dvv10203 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

18 Ethyl bromide, CAS: 74-96-4

Signal: 1

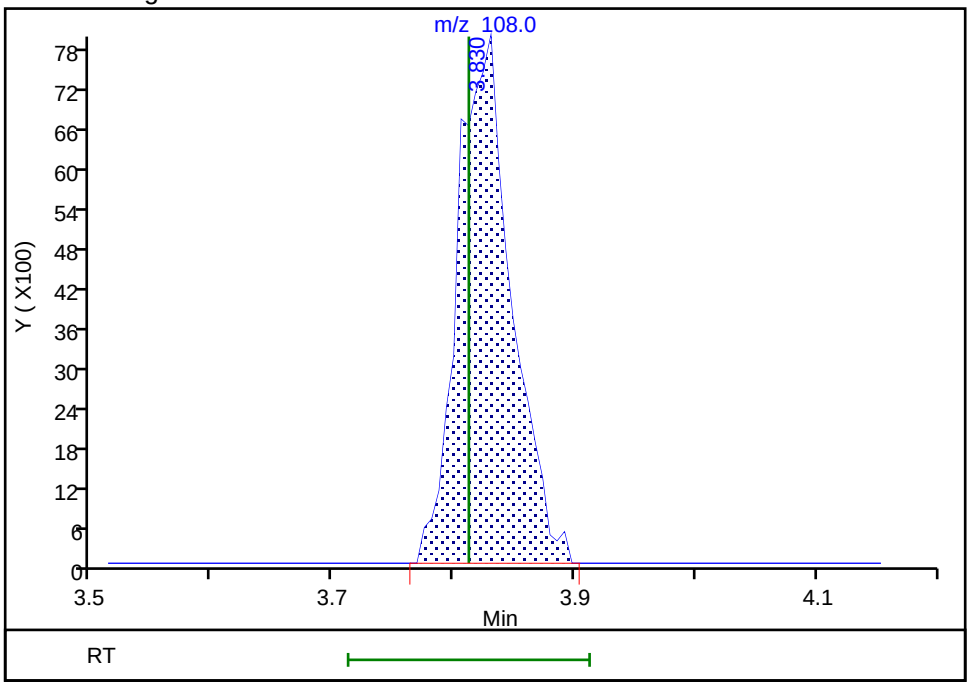
Not Detected
Expected RT: 3.81

Processing Integration Results



Manual Integration Results

RT: 3.83
Area: 24902
Amount: 0.483849
Amount Units: ug/l



Reviewer: campbellme, 09-Sep-2020 22:18:43
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

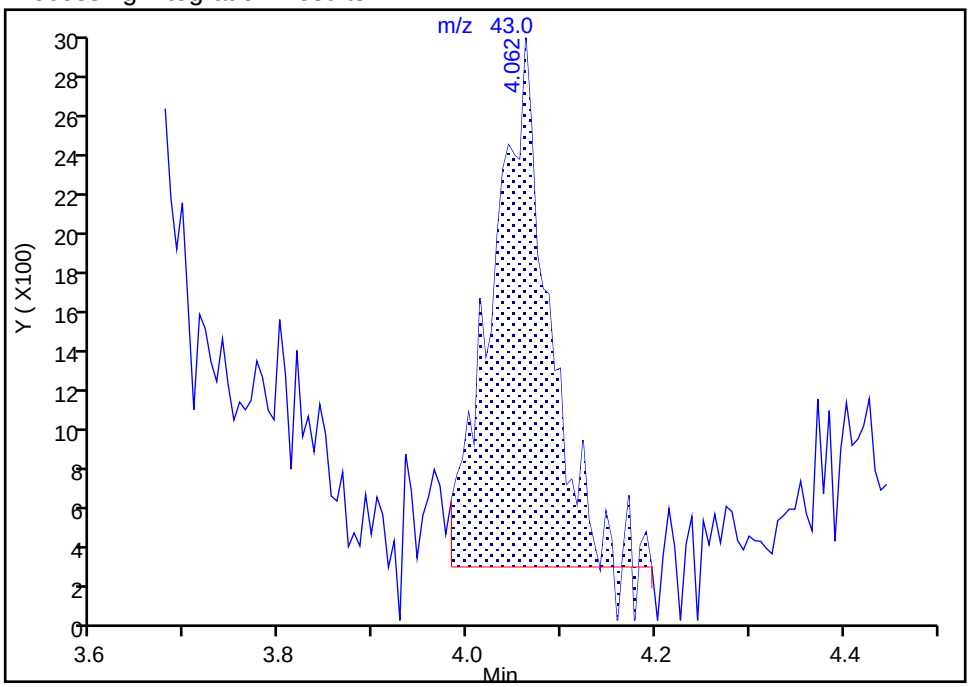
Data File:	\\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I06.D				
Injection Date:	09-Sep-2020 17:41:30	Instrument ID:	19930		
Lims ID:	IC std2				
Client ID:					
Operator ID:	dvv10203	ALS Bottle#:	7	Worklist Smp#:	8
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

21 Methyl acetate, CAS: 79-20-9

Signal: 1

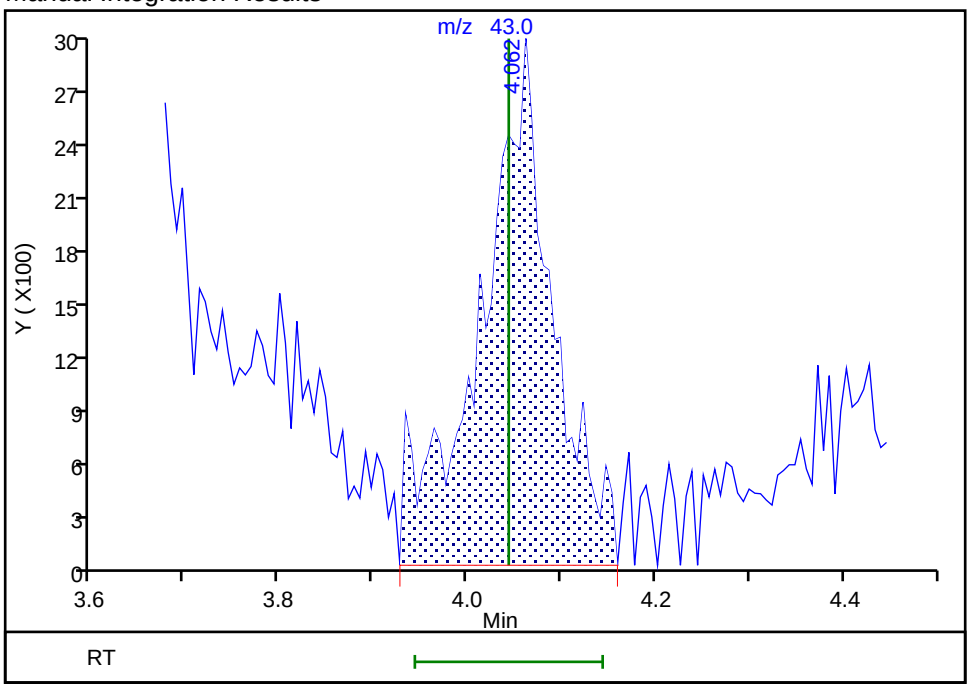
Processing Integration Results

RT: 4.06
Area: 10997
Amount: 0.288444
Amount Units: ug/l



Manual Integration Results

RT: 4.06
Area: 15530
Amount: 0.579011
Amount Units: ug/l



Reviewer: campbellme, 09-Sep-2020 22:18:52
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

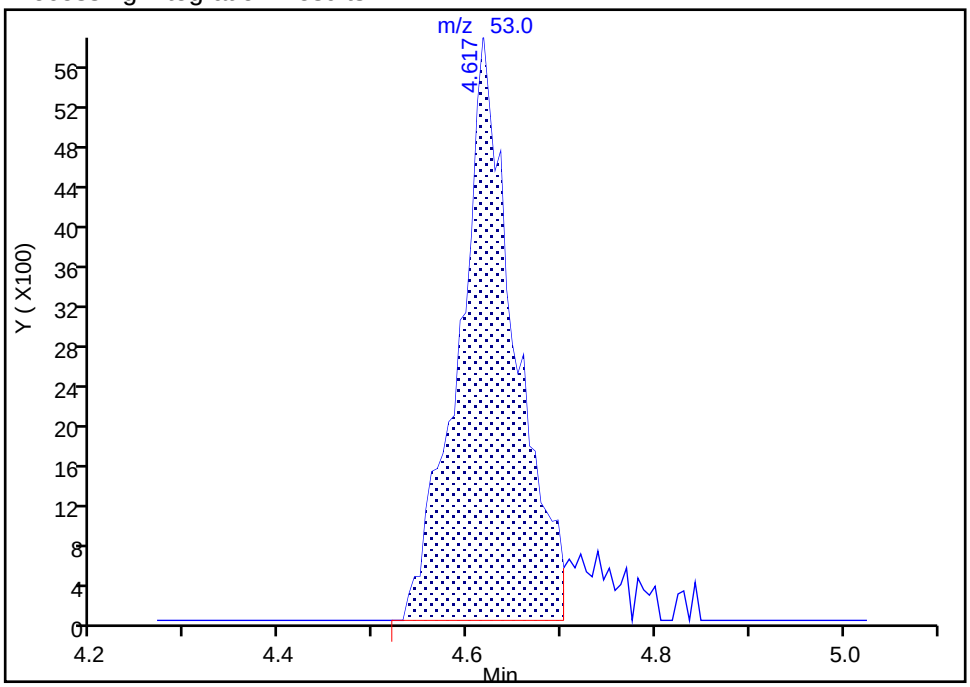
Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I06.D
Injection Date: 09-Sep-2020 17:41:30 Instrument ID: 19930
Lims ID: IC std2
Client ID:
Operator ID: dvv10203 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

26 Acrylonitrile, CAS: 107-13-1

Signal: 1

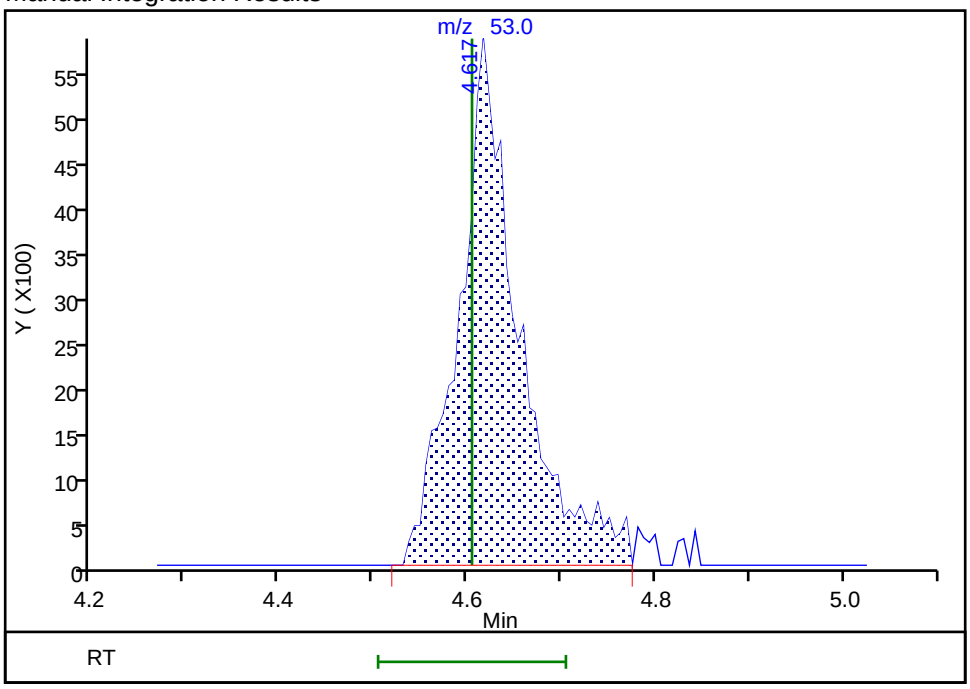
Processing Integration Results

RT: 4.62
Area: 24097
Amount: 2.299880
Amount Units: ug/l



Manual Integration Results

RT: 4.62
Area: 26126
Amount: 2.466242
Amount Units: ug/l



Reviewer: campbellme, 09-Sep-2020 22:19:00
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

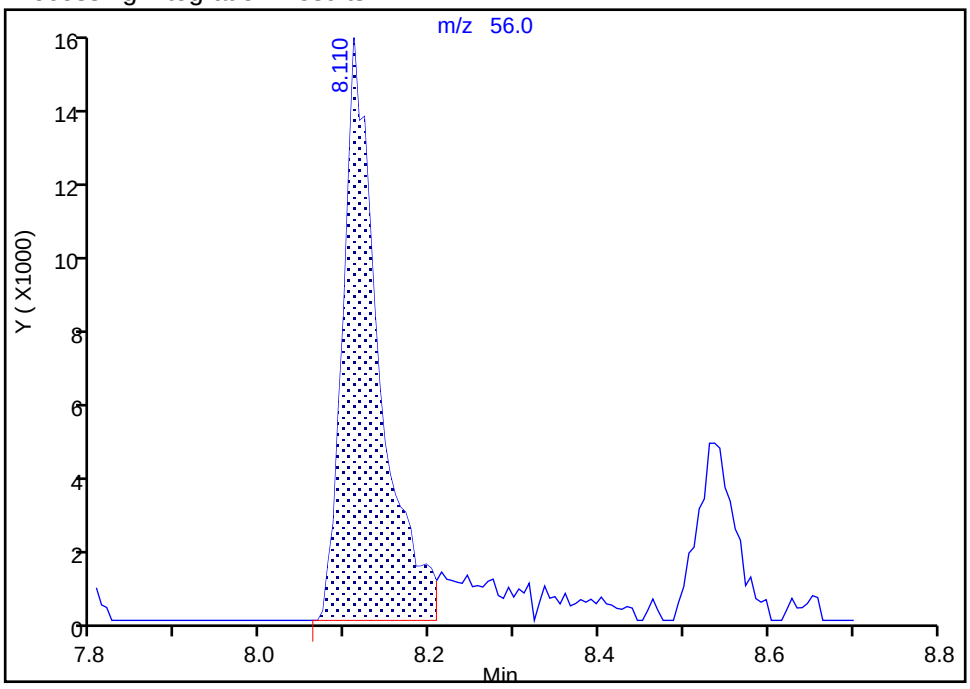
Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I06.D
Injection Date: 09-Sep-2020 17:41:30 Instrument ID: 19930
Lims ID: IC std2
Client ID:
Operator ID: dvv10203 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

60 n-Butanol, CAS: 71-36-3

Signal: 1

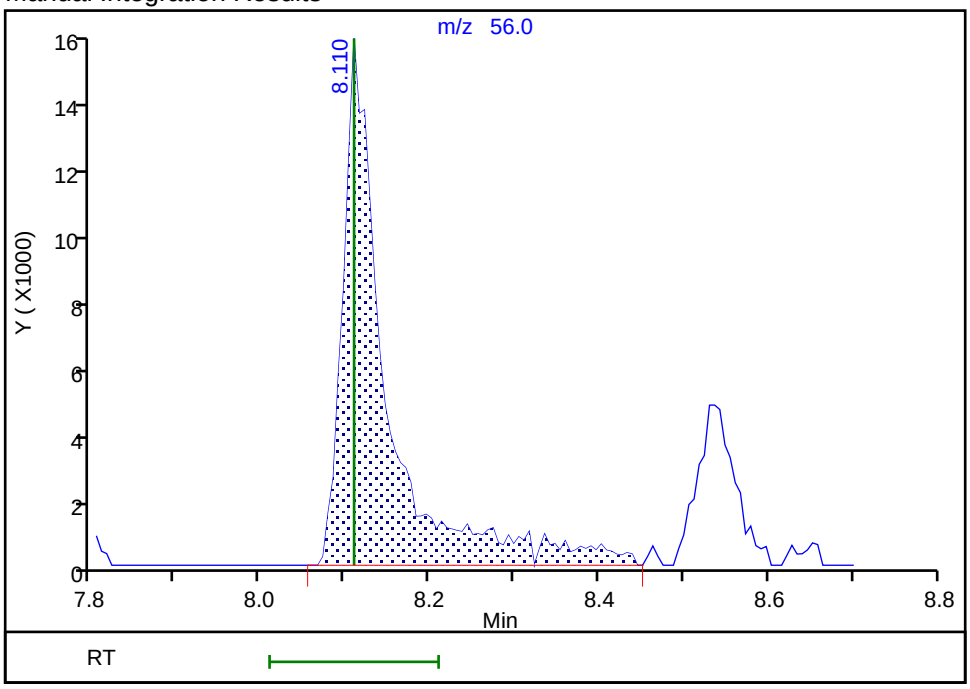
Processing Integration Results

RT: 8.11
Area: 46102
Amount: 42.479825
Amount Units: ug/l



Manual Integration Results

RT: 8.11
Area: 55769
Amount: 49.311396
Amount Units: ug/l



Reviewer: campbellme, 09-Sep-2020 22:19:16
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

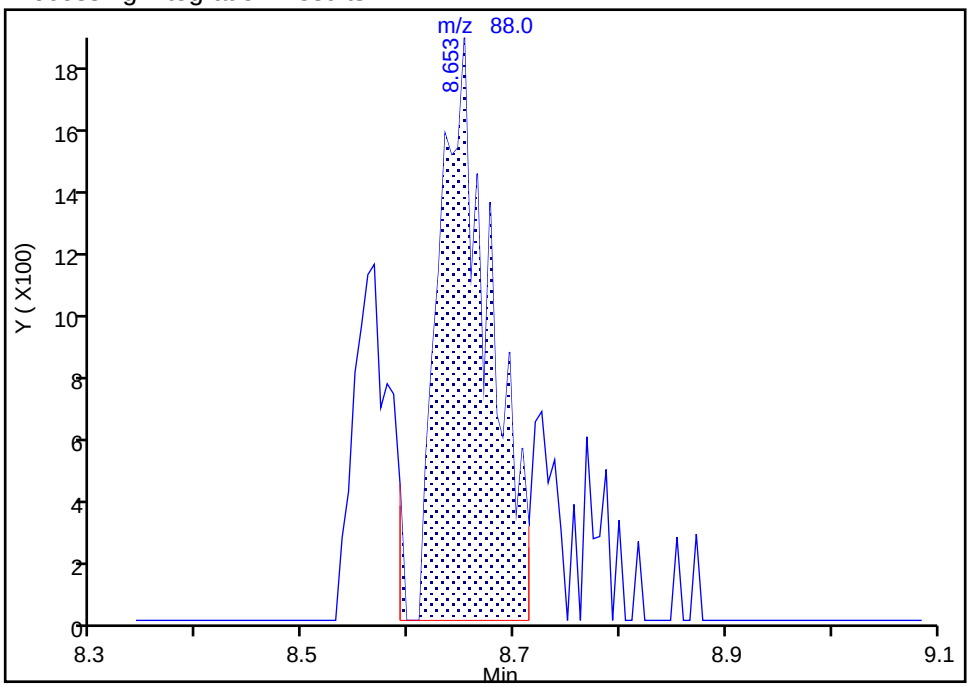
Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I06.D
Injection Date: 09-Sep-2020 17:41:30 Instrument ID: 19930
Lims ID: IC std2
Client ID:
Operator ID: dvv10203 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

65 1,4-Dioxane, CAS: 123-91-1

Signal: 1

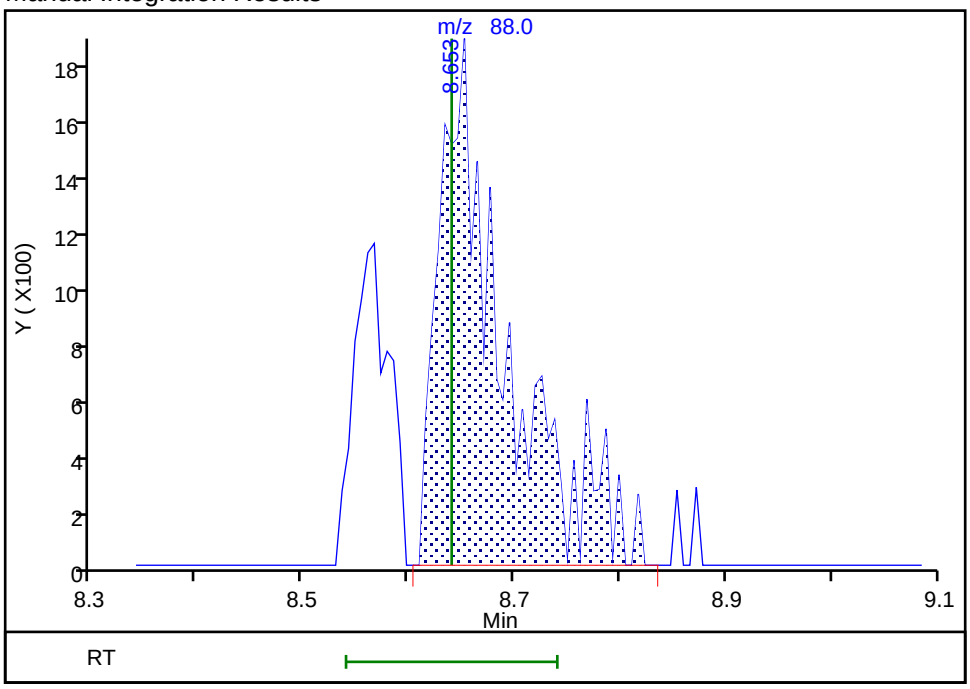
Processing Integration Results

RT: 8.65
Area: 6287
Amount: 20.952433
Amount Units: ug/l



Manual Integration Results

RT: 8.65
Area: 7994
Amount: 25.403867
Amount Units: ug/l



Reviewer: campbellme, 09-Sep-2020 22:19:23
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I07.D
Lims ID: IC std1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 09-Sep-2020 18:02:30 ALS Bottle#: 8 Worklist Smp#: 9
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: IC STD1
Misc. Info.: 410-0010046-009
Operator ID: dvv10203 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 11-Sep-2020 18:39:11 Calib Date: 09-Sep-2020 21:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1058

First Level Reviewer: campbellme Date: 09-Sep-2020 22:04:20

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	1.977	1.971	0.006	96	15503	0.2000	0.1725	
4 Chloromethane	50	2.178	2.178	0.000	98	21046	0.2000	0.2326	
5 Vinyl chloride	62	2.288	2.288	0.000	92	18786	0.2000	0.2096	
6 Butadiene	39	2.288	2.294	-0.006	89	20835	0.2000	0.2469	
7 Bromomethane	94	2.623	2.623	0.000	90	18137	0.2000	0.2253	
8 Chloroethane	64	2.708	2.709	-0.001	98	12193	0.2000	0.2083	
9 Dichlorofluoromethane	67	2.946	2.946	0.000	96	31523	0.2000	0.2208	
10 Trichlorofluoromethane	101	3.013	3.013	0.000	90	26074	0.2000	0.1907	
11 Ethyl ether	59	3.281	3.270	0.011	91	8561	0.2000	0.2063	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.336	3.355	-0.019	88	13992	0.2000	0.2017	
13 Acrolein	56	3.452	3.446	0.006	98	59106	10.0	9.70	
14 1,1-Dichloroethene	96	3.598	3.587	0.011	97	10961	0.2000	0.1854	
15 Acetone	43	3.611	3.617	-0.006	93	26889	2.00	2.81	M
16 112TCTFE	101	3.611	3.623	-0.012	73	9608	0.2000	0.1544	
17 Iodomethane	142	3.781	3.788	-0.007	97	22886	0.2000	0.1844	
18 Ethyl bromide	108	3.818	3.812	0.006	94	9561	0.2001	0.1887	
19 Carbon disulfide	76	3.891	3.897	-0.006	100	31841	0.2000	0.2014	
21 Methyl acetate	43	4.062	4.044	0.018	26	7451	0.2000	0.2764	
22 3-Chloro-1-propene	41	4.074	4.068	0.006	90	18077	0.2000	0.2342	
23 Methylene Chloride	84	4.269	4.263	0.006	46	12594	0.2000	0.2060	
* 24 t-Butyl alcohol-d10 (IS)	65	4.287	4.282	0.005	0	191177	50.0	50.0	
25 2-Methyl-2-propanol	59	4.434	4.403	0.031	28	16235	4.00	4.10	M
26 Acrylonitrile	53	4.610	4.605	0.005	70	9920	1.00	0.9318	
27 Methyl tert-butyl ether	73	4.665	4.678	-0.013	94	30248	0.2000	0.1960	
28 trans-1,2-Dichloroethene	96	4.690	4.678	0.012	98	13420	0.2000	0.2029	
29 Hexane	57	5.116	5.111	0.005	84	12571	0.2000	0.1651	
31 1,1-Dichloroethane	63	5.342	5.348	-0.006	94	21649	0.2000	0.2018	
32 Isopropyl ether	45	5.403	5.403	0.000	90	33265	0.2000	0.2029	
33 2-Chloro-1,3-butadiene	53	5.464	5.452	0.012	92	19012	0.2000	0.2080	
34 Tert-butyl ethyl ether	59	5.933	5.928	0.005	95	35350	0.2000	0.2041	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
36 2-Butanone (MEK)	43	6.153	6.135	0.018	98	29945	2.00	2.09	
S 35 1,2-Dichloroethene, Total	100				0			0.4008	
37 cis-1,2-Dichloroethene	96	6.183	6.177	0.006	79	15024	0.2000	0.1979	
38 2,2-Dichloropropane	77	6.196	6.196	0.000	71	20828	0.2000	0.1987	
40 Propionitrile	54	6.250	6.232	0.018	97	15048	4.00	3.60	
42 Methacrylonitrile	67	6.439	6.440	-0.001	86	29222	2.00	1.87	
43 Chlorobromomethane	128	6.513	6.507	0.006	85	6407	0.2000	0.1842	
44 Tetrahydrofuran	71	6.506	6.513	-0.007	77	8998	2.00	1.95	
45 Chloroform	83	6.653	6.653	0.000	92	23824	0.2000	0.1975	
$ 46 Dibromofluoromethane (Surr)	113	6.866	6.866	0.000	93	589774	10.0	9.77	
47 1,1,1-Trichloroethane	97	6.878	6.879	-0.001	36	24124	0.2000	0.1996	
48 Cyclohexane	56	6.976	6.976	0.000	86	16057	0.2000	0.1732	
50 Carbon tetrachloride	117	7.092	7.086	0.006	93	20584	0.2000	0.1857	
51 1,1-Dichloropropene	75	7.098	7.092	0.006	90	16956	0.2000	0.1894	
52 Isobutyl alcohol	41	7.232	7.232	0.000	62	13804	10.0	11.8	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.323	7.318	0.005	0	110229	10.0	9.96	
54 Benzene	78	7.354	7.348	0.006	92	51664	0.2000	0.1969	
56 1,2-Dichloroethane	62	7.421	7.421	0.000	69	15817	0.2000	0.2199	
57 Tert-amyl methyl ether	73	7.537	7.537	0.000	98	32792	0.2000	0.1972	
* 58 Fluorobenzene (IS)	96	7.750	7.750	0.000	99	2233135	10.0	10.0	
59 n-Heptane	43	7.750	7.763	-0.013	37	12375	0.2000	0.1721	
60 n-Butanol	56	8.110	8.110	0.000	87	20629	20.0	18.2	M
61 Trichloroethene	95	8.226	8.226	0.000	94	15897	0.2000	0.2071	
62 Methylcyclohexane	83	8.543	8.531	0.012	87	21364	0.2000	0.1893	
63 1,2-Dichloropropane	63	8.561	8.555	0.006	74	12346	0.2000	0.2026	
64 Methyl methacrylate	69	8.640	8.634	0.006	68	5666	0.2000	0.1850	
65 1,4-Dioxane	88	8.652	8.640	0.012	41	2386	10.0	7.54	M
66 Dibromomethane	93	8.671	8.665	0.006	91	6358	0.2000	0.1883	
68 Dichlorobromomethane	83	8.902	8.903	-0.001	96	16210	0.2000	0.1900	
69 2-Nitropropane	41	9.171	9.171	0.000	97	17966	2.00	1.93	
72 1-Bromo-2-chloroethane	63	9.293	9.293	-0.001	96	12155	0.2000	0.1980	
73 cis-1,3-Dichloropropene	75	9.445	9.439	0.006	93	17861	0.2000	0.1864	
74 4-Methyl-2-pentanone (MIBK)	43	9.610	9.610	0.000	95	71238	2.00	1.90	
$ 75 Toluene-d8 (Surr)	98	9.750	9.750	0.000	93	2277036	10.0	10.4	
76 Toluene	92	9.823	9.823	0.000	98	35393	0.2000	0.2022	
S 77 1,3-Dichloropropene, Total	100				0			0.3747	
78 trans-1,3-Dichloropropene	75	10.079	10.073	0.006	91	14472	0.2000	0.1883	
79 Ethyl methacrylate	69	10.140	10.134	0.006	87	11737	0.2000	0.1954	
80 1,1,2-Trichloroethane	97	10.280	10.280	0.000	92	9177	0.2000	0.1974	
81 Tetrachloroethene	166	10.365	10.366	-0.001	95	16975	0.2000	0.1916	
82 1,3-Dichloropropane	76	10.445	10.439	0.006	88	15187	0.2000	0.2038	
83 2-Hexanone	43	10.487	10.488	-0.001	96	48886	2.00	1.86	
85 Chlorodibromomethane	129	10.658	10.652	0.006	89	10656	0.2000	0.1721	
86 Ethylene Dibromide	107	10.762	10.762	0.000	98	9279	0.2000	0.1939	
* 87 Chlorobenzene-d5 (IS)	117	11.188	11.189	-0.001	85	1793254	10.0	10.0	
88 1-Chlorohexane	91	11.201	11.195	0.006	39	23552	0.2000	0.2290	
90 Chlorobenzene	112	11.219	11.219	0.000	95	39387	0.2000	0.1967	
S 89 Xylenes, Total	106				0			0.5752	
91 1,1,1,2-Tetrachloroethane	131	11.298	11.298	0.000	44	14051	0.2000	0.1860	
92 Ethylbenzene	91	11.304	11.305	-0.001	98	66334	0.2000	0.1938	
93 m-Xylene & p-Xylene	106	11.414	11.414	0.000	100	53167	0.4000	0.3790	
94 o-Xylene	106	11.743	11.743	0.000	95	27366	0.2000	0.1962	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
95 Styrene	104	11.762	11.762	0.000	94	40606	0.2000	0.1859	
96 Bromoform	173	11.920	11.914	0.006	92	3899	0.2000	0.6011	
97 Isopropylbenzene	105	12.042	12.042	0.000	95	70014	0.2000	0.1928	
$ 100 4-Bromofluorobenzene (Surr)	95	12.188	12.189	0.000	91	870085	10.0	10.2	
101 1,1,2,2-Tetrachloroethane	83	12.286	12.286	0.000	93	12007	0.2000	0.2192	
102 Bromobenzene	156	12.298	12.304	-0.006	89	16625	0.2000	0.1938	
103 trans-1,4-Dichloro-2-butene	53	12.310	12.310	0.000	89	22641	2.00	1.60	
104 1,2,3-Trichloropropane	110	12.335	12.329	0.006	68	3403	0.2000	0.2068	
105 N-Propylbenzene	91	12.371	12.371	0.000	99	80394	0.2000	0.2066	
106 2-Chlorotoluene	126	12.444	12.445	-0.001	96	15502	0.2000	0.1871	
107 1,3,5-Trimethylbenzene	105	12.505	12.506	-0.001	93	59138	0.2000	0.2014	
108 4-Chlorotoluene	126	12.542	12.536	0.006	97	16904	0.2000	0.1977	
109 tert-Butylbenzene	134	12.743	12.749	-0.006	92	13281	0.2000	0.1954	
110 Pentachloroethane	167	12.780	12.780	0.000	79	9110	0.2000	0.1714	
111 1,2,4-Trimethylbenzene	105	12.792	12.786	0.006	97	60724	0.2000	0.2025	
112 sec-Butylbenzene	105	12.908	12.908	0.000	94	73354	0.2000	0.1963	
113 1,3-Dichlorobenzene	146	13.011	13.012	-0.001	96	32518	0.2000	0.1923	
114 4-Isopropyltoluene	119	13.017	13.018	-0.001	96	61512	0.2000	0.1883	
* 115 1,4-Dichlorobenzene-d4	152	13.066	13.066	0.000	95	991680	10.0	10.0	
116 1,4-Dichlorobenzene	146	13.084	13.085	-0.001	91	33264	0.2000	0.1956	
117 1,2,3-Trimethylbenzene	120	13.091	13.091	0.000	96	28135	0.2000	0.2104	
118 Benzyl chloride	126	13.158	13.158	0.000	98	4420	0.2000	0.1794	
119 n-Butylbenzene	92	13.304	13.304	0.000	97	28206	0.2000	0.1893	
120 1,2-Dichlorobenzene	146	13.340	13.341	-0.001	96	27578	0.2000	0.1810	
122 1,2-Dibromo-3-Chloropropane	155	13.889	13.883	0.006	79	1402	0.2000	0.1606	
123 1,3,5-Trichlorobenzene	180	14.011	14.011	0.000	97	19994	0.2000	0.1773	
124 1,2,4-Trichlorobenzene	180	14.432	14.432	0.000	92	16011	0.2000	0.1724	
125 Hexachlorobutadiene	225	14.517	14.511	0.006	90	5845	0.2000	0.1672	
126 Naphthalene	128	14.615	14.615	0.000	97	35912	0.2000	0.1968	
127 1,2,3-Trichlorobenzene	180	14.755	14.755	0.000	94	13890	0.2000	0.1753	
134 Isopropyl alcohol	45		0.000				ND	ND	
135 p-Diethylbenzene	1		0.000				ND	ND	
137 2-Methylnaphthalene	142		0.000				ND	ND	
144 2-ethoxy-2-methyl butane	1		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MSV_RV1_826_00023	Amount Added:	2.00	Units: uL	
MSV_RV4_826_00025	Amount Added:	2.00	Units: uL	
MSV_RV4GAS826_00075	Amount Added:	2.00	Units: uL	
MSV_31_826ISS_00003	Amount Added:	5.00	Units: uL	Run Reagent

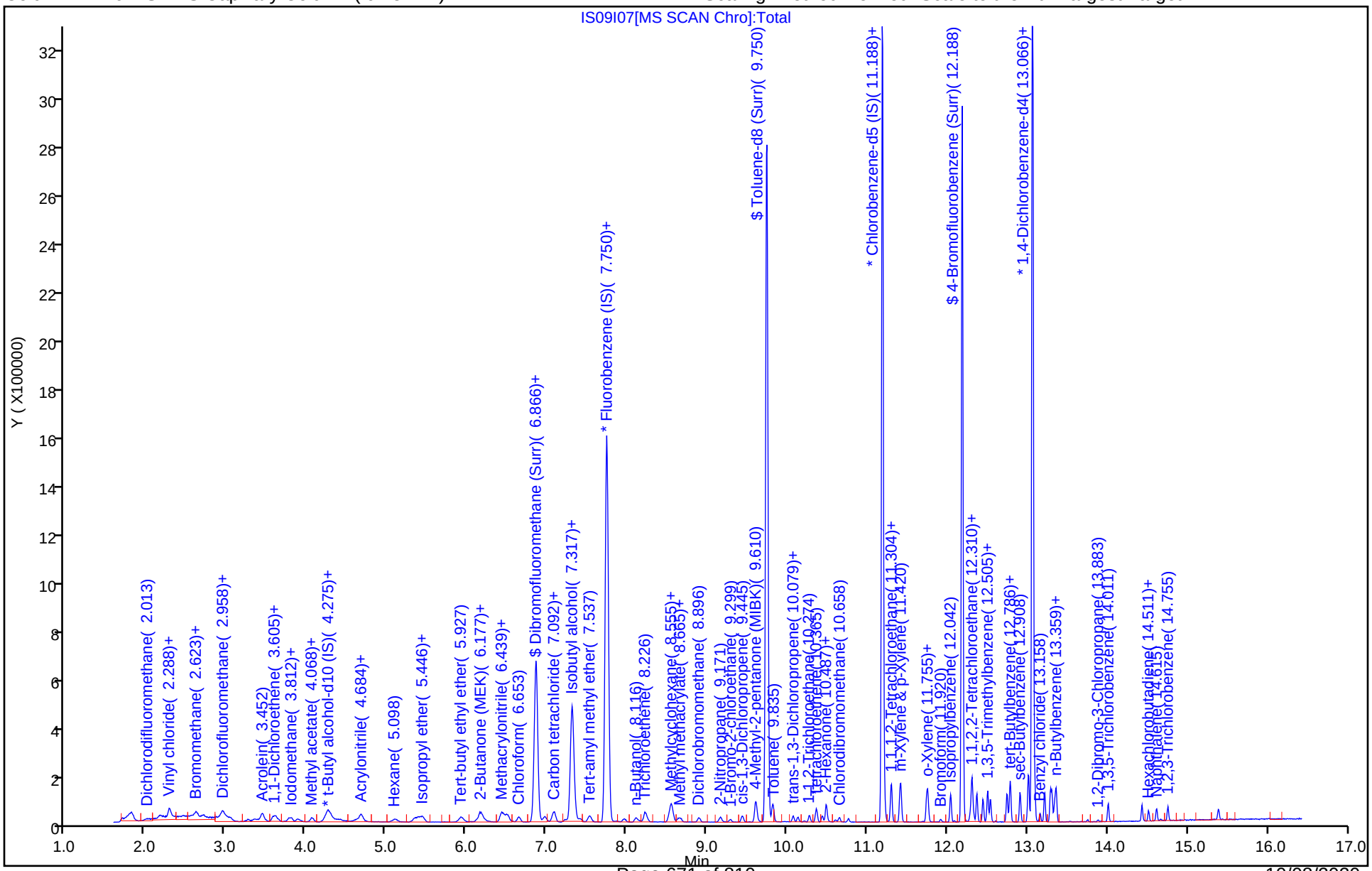
Report Date: 11-Sep-2020 18:39:12 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I07.D

Injection Date:	09-Sep-2020 18:02:30	Instrument ID:	19930	Operator ID:	dvv10203
Lims ID:	IC std1			Worklist Smp#:	9
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	8260 25ml HP31	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



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

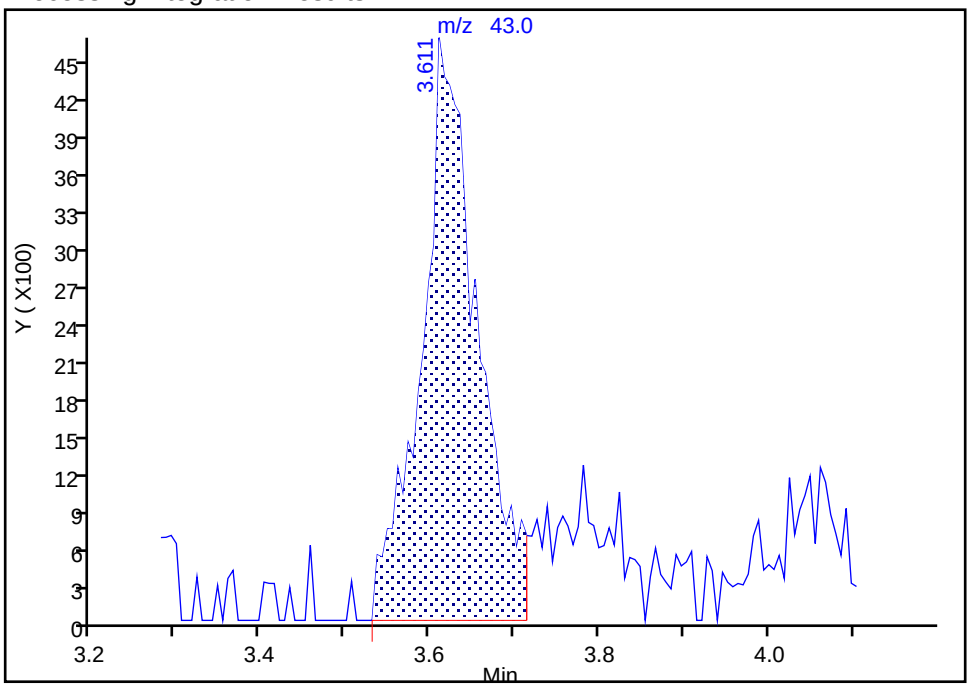
Data File:	\\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I07.D				
Injection Date:	09-Sep-2020 18:02:30	Instrument ID:	19930		
Lims ID:	IC std1				
Client ID:					
Operator ID:	dvv10203	ALS Bottle#:	8	Worklist Smp#:	9
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

15 Acetone, CAS: 67-64-1

Signal: 1

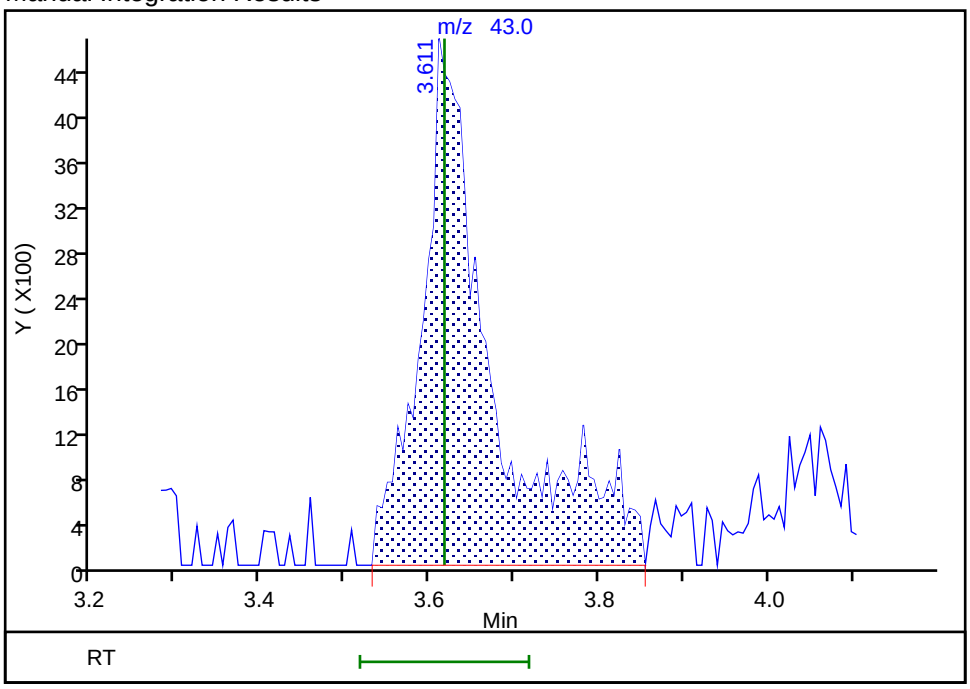
Processing Integration Results

RT: 3.61
Area: 21342
Amount: 2.436286
Amount Units: ug/l



Manual Integration Results

RT: 3.61
Area: 26889
Amount: 2.814869
Amount Units: ug/l



Reviewer: campbellme, 09-Sep-2020 22:20:04
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC

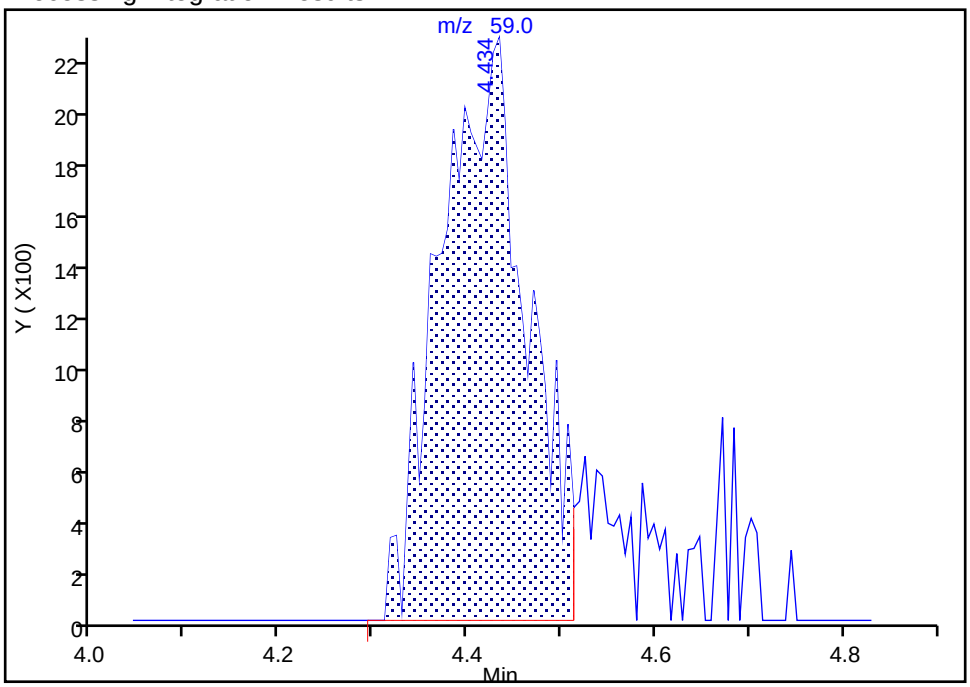
Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I07.D
Injection Date: 09-Sep-2020 18:02:30 Instrument ID: 19930
Lims ID: IC std1
Client ID:
Operator ID: dvv10203 ALS Bottle#: 8 Worklist Smp#: 9
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

25 2-Methyl-2-propanol, CAS: 75-65-0

Signal: 1

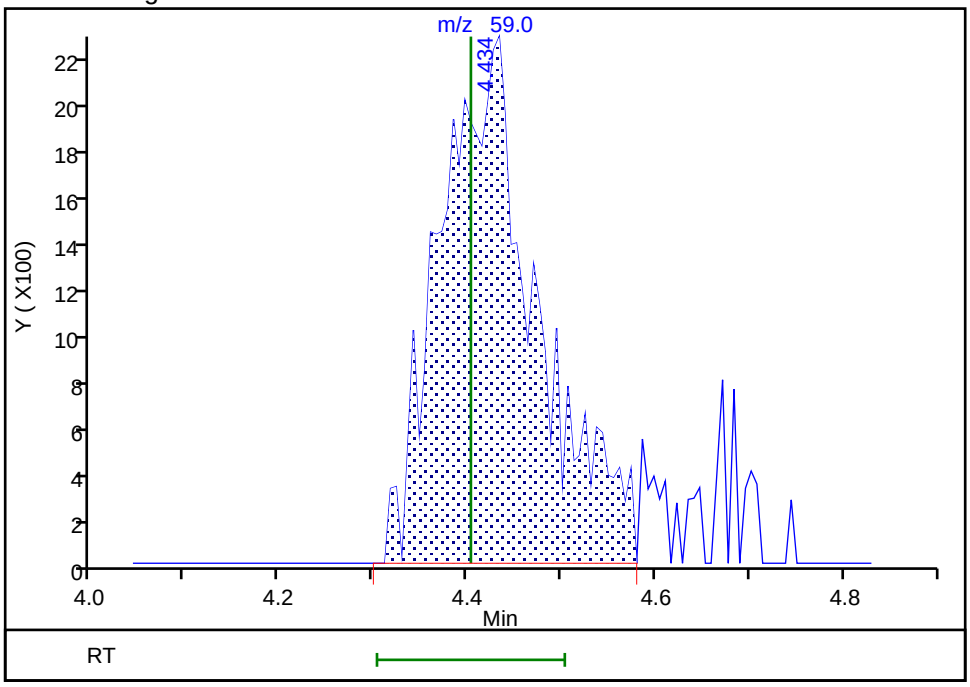
Processing Integration Results

RT: 4.43
Area: 14632
Amount: 3.748647
Amount Units: ug/l



Manual Integration Results

RT: 4.43
Area: 16235
Amount: 4.099204
Amount Units: ug/l



Reviewer: campbellme, 09-Sep-2020 22:20:20
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

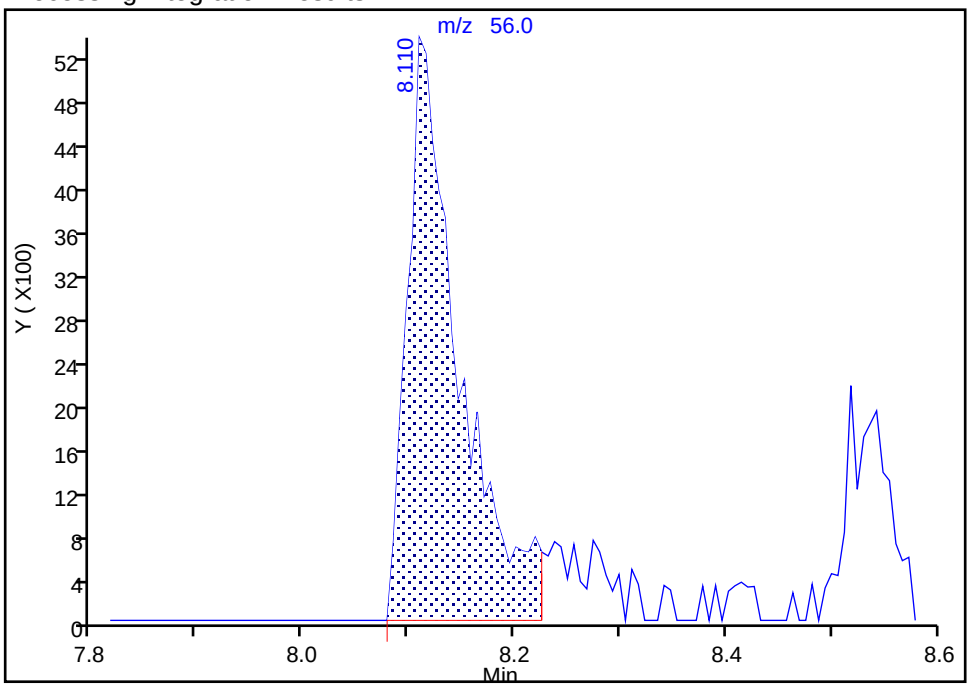
Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I07.D
Injection Date: 09-Sep-2020 18:02:30 Instrument ID: 19930
Lims ID: IC std1
Client ID:
Operator ID: dvv10203 ALS Bottle#: 8 Worklist Smp#: 9
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

60 n-Butanol, CAS: 71-36-3

Signal: 1

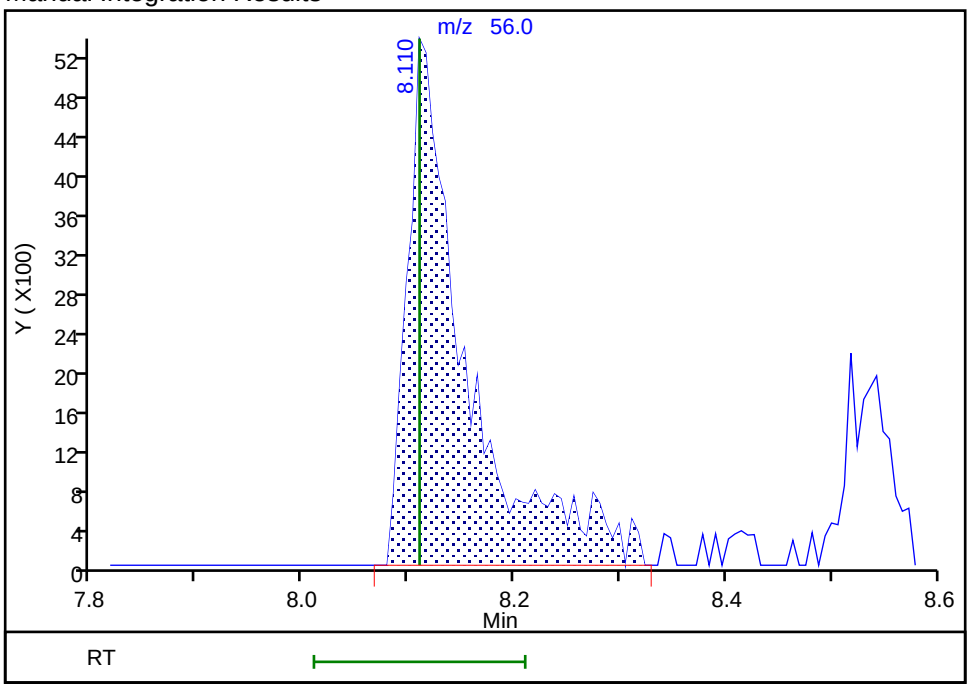
Processing Integration Results

RT: 8.11
Area: 18087
Amount: 16.172056
Amount Units: ug/l



Manual Integration Results

RT: 8.11
Area: 20629
Amount: 18.150259
Amount Units: ug/l



Reviewer: campbellme, 09-Sep-2020 22:20:37
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

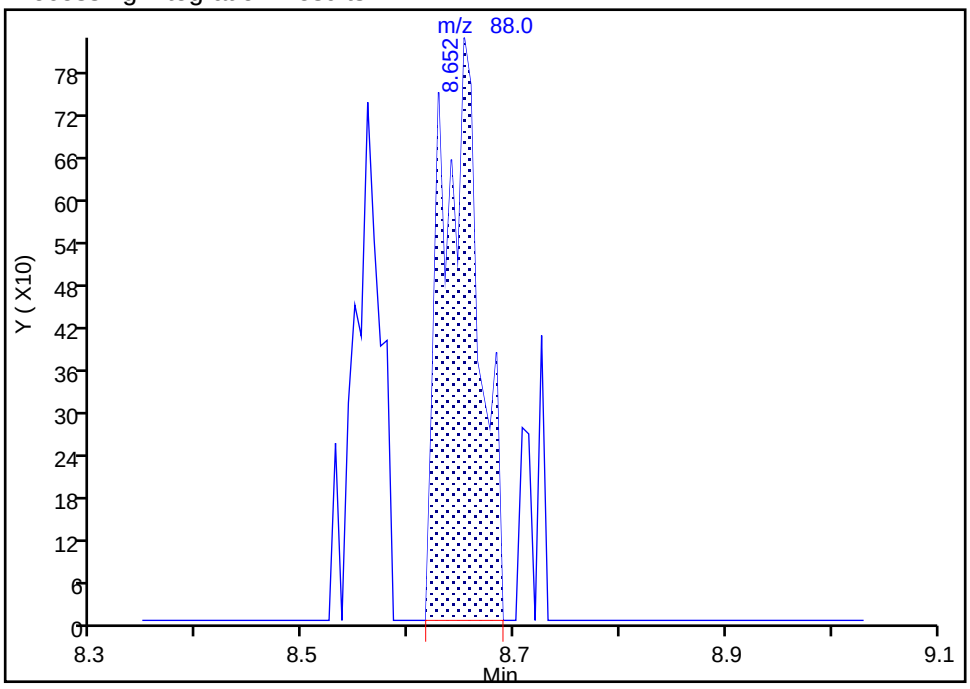
Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I07.D
Injection Date: 09-Sep-2020 18:02:30 Instrument ID: 19930
Lims ID: IC std1
Client ID:
Operator ID: dvv10203 ALS Bottle#: 8 Worklist Smp#: 9
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

65 1,4-Dioxane, CAS: 123-91-1

Signal: 1

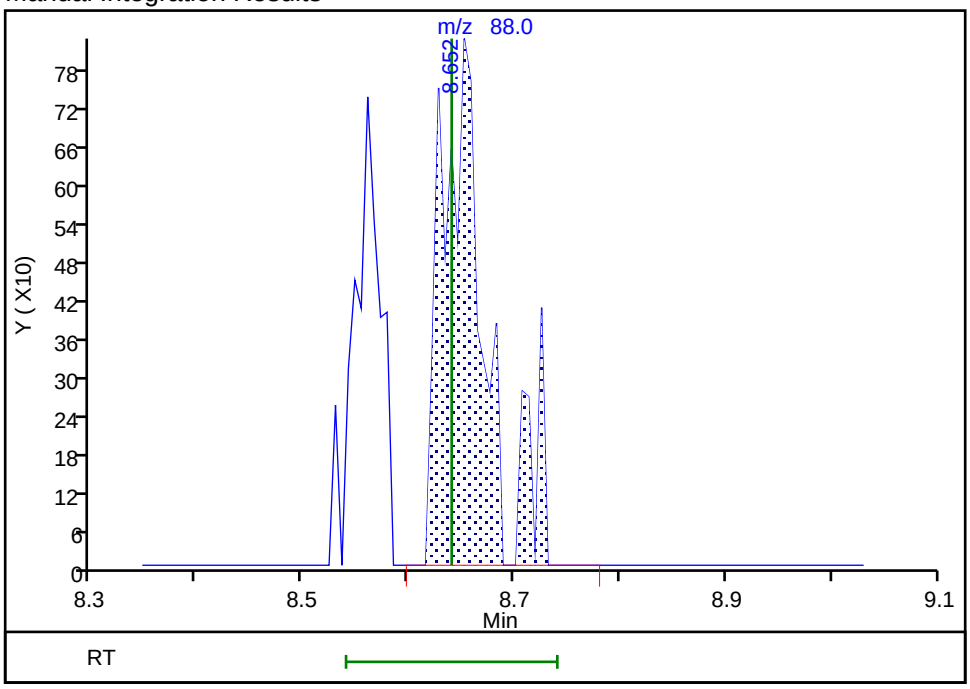
Processing Integration Results

RT: 8.65
Area: 2044
Amount: 6.564910
Amount Units: ug/l



Manual Integration Results

RT: 8.65
Area: 2386
Amount: 7.544950
Amount Units: ug/l



Reviewer: campbellme, 09-Sep-2020 22:20:43
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-15232-1

SDG No.:

Lab Sample ID: ICV 410-39724/10 Calibration Date: 09/01/2020 16:10

Instrument ID: 10193 Calib Start Date: 09/01/2020 13:35

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 09/01/2020 15:48

Lab File ID: CS01V01.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	0.3227	0.2655	0.1000	4.11	5.00	-17.7	30.0
Chloromethane	Ave	0.3804	0.3562	0.1000	4.68	5.00	-6.4	30.0
1,3-Butadiene	Ave	0.3578	0.2620		3.66	5.00	-26.8	30.0
Vinyl chloride	Ave	0.3517	0.3461	0.1000	4.92	5.00	-1.6	30.0
Bromomethane	Ave	0.2482	0.2411	0.1000	4.86	5.00	-2.9	30.0
Chloroethane	Ave	0.2173	0.2006	0.1000	4.62	5.00	-7.7	30.0
Dichlorofluoromethane	Ave	0.4713	0.4600		4.88	5.00	-2.4	30.0
Trichlorofluoromethane	Ave	0.4575	0.4312	0.1000	4.71	5.00	-5.8	30.0
Ethyl ether	Ave	0.2318	0.2359		5.09	5.01	1.8	30.0
Freon 123a	Ave	0.3397	0.3020		4.45	5.00	-11.1	30.0
Acrolein	Ave	2.001	1.892		35.5	37.5	-5.4	30.0
1,1-Dichloroethene	Ave	0.2312	0.2117	0.1000	4.58	5.00	-8.4	30.0
Freon 113	Ave	0.2352	0.1884	0.1000	4.01	5.00	-19.9	30.0
Acetone	Ave	2.125	2.093	0.1000	36.9	37.5	-1.5	30.0
Methyl iodide	Ave	0.4567	0.3802		4.16	5.00	-16.8	30.0
Ethyl bromide	Ave	0.1920	0.1921		4.94	4.93	0.0	30.0
Carbon disulfide	Ave	0.8167	0.6841	0.1000	4.19	5.00	-16.2	30.0
Methyl acetate	Ave	8.350	6.856	0.1000	4.11	5.00	-17.9	30.0
Allyl chloride	Ave	0.4045	0.3946		4.88	5.00	-2.5	30.0
Methylene Chloride	Ave	0.2573	0.2481	0.1000	4.82	5.00	-3.6	30.0
t-Butyl alcohol	Ave	0.996	0.9520		47.8	50.0	-4.4	30.0
Acrylonitrile	Ave	3.375	3.260		24.1	25.0	-3.4	30.0
Methyl tert-butyl ether	Ave	0.7484	0.6818	0.1000	4.55	5.00	-8.9	30.0
trans-1,2-Dichloroethene	Ave	0.2703	0.2572	0.1000	4.76	5.00	-4.8	30.0
n-Hexane	Ave	0.3811	0.3137		4.12	5.00	-17.7	30.0
1,1-Dichloroethane	Ave	0.4975	0.4811	0.2000	4.84	5.00	-3.3	30.0
di-Isopropyl ether	Ave	0.9484	0.8957		4.72	5.00	-5.6	30.0
2-Chloro-1,3-butadiene	Ave	0.4688	0.4198		4.48	5.00	-10.5	30.0
Ethyl t-butyl ether	Ave	0.9061	0.8489		4.68	5.00	-6.3	30.0
2-Butanone (MEK)	Ave	4.984	4.790	0.1000	36.0	37.5	-3.9	30.0
cis-1,2-Dichloroethene	Ave	0.3064	0.3042	0.1000	4.96	5.00	-0.7	30.0
2,2-Dichloropropane	Ave	0.4293	0.4087		4.76	5.00	-4.8	30.0
Propionitrile	Ave	1.265	1.271		37.7	37.5	0.5	30.0
Methacrylonitrile	Ave	4.902	4.714		36.1	37.5	-3.8	30.0
Bromochloromethane	Ave	0.1349	0.1264		4.68	5.00	-6.3	30.0
Tetrahydrofuran	Ave	1.410	1.351		24.0	25.0	-4.2	30.0
Chloroform	Ave	0.4930	0.4756	0.2000	4.82	5.00	-3.5	30.0
1,1,1-Trichloroethane	Ave	0.4442	0.4159	0.1000	4.68	5.00	-6.4	30.0
Cyclohexane	Ave	0.4697	0.4135	0.1000	4.40	5.00	-12.0	30.0
Carbon tetrachloride	Ave	0.3722	0.3538	0.1000	4.75	5.00	-4.9	30.0
1,1-Dichloropropene	Ave	0.3988	0.3706		4.65	5.00	-7.1	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-15232-1

SDG No.:

Lab Sample ID: ICV 410-39724/10 Calibration Date: 09/01/2020 16:10

Instrument ID: 10193 Calib Start Date: 09/01/2020 13:35

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 09/01/2020 15:48

Lab File ID: CS01V01.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	0.3229	0.2828		109	125	-12.4	30.0
Benzene	Ave	1.149	1.092	0.5000	4.75	5.00	-5.0	30.0
1,2-Dichloroethane	Ave	0.3462	0.3217	0.1000	4.65	5.00	-7.1	30.0
t-Amyl methyl ether	Ave	0.8253	0.7936		4.81	5.00	-3.8	30.0
n-Heptane	Ave	0.4242	0.3694		4.35	5.00	-12.9	30.0
n-Butanol	Ave	0.2676	0.2616		244	250	-2.2	30.0
Trichloroethene	Ave	0.2961	0.2842	0.2000	4.80	5.00	-4.0	30.0
Methylcyclohexane	Ave	0.4535	0.4365	0.1000	4.81	5.00	-3.7	30.0
1,2-Dichloropropane	Ave	0.2950	0.2906	0.1000	4.93	5.00	-1.5	30.0
Methyl methacrylate	Ave	10.45	10.05		4.81	5.00	-3.8	30.0
Dibromomethane	Ave	0.1443	0.1405		4.87	5.00	-2.6	30.0
1,4-Dioxane	Ave	0.0533	0.0559	0.0050	131	125	5.0	30.0
Bromodichloromethane	Ave	0.3561	0.3507	0.2000	4.92	5.00	-1.5	30.0
2-Nitropropane	Ave	3.241	2.885		4.45	5.00	-11.0	30.0
1-Bromo-2-chloroethane	Ave	0.3051	0.3043		4.99	5.00	-0.2	30.0
cis-1,3-Dichloropropene	Ave	0.4426	0.4313	0.2000	4.87	5.00	-2.5	30.0
4-Methyl-2-pentanone (MIBK)	Ave	14.48	13.77	0.1000	23.8	25.0	-4.9	30.0
Toluene	Ave	0.9823	0.9494	0.4000	4.83	5.00	-3.4	30.0
trans-1,3-Dichloropropene	Ave	0.4919	0.4842	0.1000	4.92	5.00	-1.6	30.0
Ethyl methacrylate	Ave	0.4151	0.4260		5.13	5.00	2.6	30.0
1,1,2-Trichloroethane	Ave	0.2713	0.2787	0.1000	5.14	5.00	2.7	30.0
Tetrachloroethene	Ave	0.4389	0.4223	0.2000	4.81	5.00	-3.8	30.0
1,3-Dichloropropane	Ave	0.4783	0.4650		4.86	5.00	-2.8	30.0
2-Hexanone	Ave	10.23	10.23	0.1000	25.0	25.0	-0.0	30.0
Dibromochloromethane	Ave	0.3148	0.3277		5.21	5.00	4.1	30.0
1,2-Dibromoethane (EDB)	Ave	0.2679	0.2650	0.1000	4.95	5.00	-1.1	30.0
1-Chlorohexane	Ave	0.5609	0.5151		4.59	5.00	-8.2	30.0
Chlorobenzene	Ave	1.109	1.087	0.5000	4.90	5.00	-2.0	30.0
1,1,1,2-Tetrachloroethane	Ave	0.3774	0.3730		4.94	5.00	-1.2	30.0
Ethylbenzene	Ave	1.947	1.889	0.1000	4.85	5.00	-3.0	30.0
m&p-Xylene	Ave	0.7608	0.7544	0.1000	9.92	10.0	-0.8	30.0
o-Xylene	Ave	0.7453	0.7426	0.3000	4.98	5.00	-0.4	30.0
Styrene	Ave	1.251	1.265	0.3000	5.06	5.00	1.2	30.0
Bromoform	Ave	0.1748	0.1830	0.1000	5.23	5.00	4.7	30.0
Isopropylbenzene	Ave	1.971	1.961	0.1000	4.97	5.00	-0.6	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6245	0.6168	0.3000	4.94	5.00	-1.2	30.0
Bromobenzene	Ave	0.8574	0.8335		4.86	5.00	-2.8	30.0
trans-1,4-Dichloro-2-butene	Ave	0.1729	0.1773		25.6	25.0	2.5	30.0
1,2,3-Trichloropropane	Ave	0.1700	0.1678		4.94	5.00	-1.3	30.0
N-Propylbenzene	Ave	4.026	4.008		4.98	5.00	-0.5	30.0
2-Chlorotoluene	Ave	0.8233	0.8004		4.86	5.00	-2.8	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-15232-1

SDG No.:

Lab Sample ID: ICV 410-39724/10 Calibration Date: 09/01/2020 16:10

Instrument ID: 10193 Calib Start Date: 09/01/2020 13:35

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 09/01/2020 15:48

Lab File ID: CS01V01.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	2.982	2.928		4.91	5.00	-1.8	30.0
4-Chlorotoluene	Ave	0.8558	0.8396		4.91	5.00	-1.9	30.0
tert-Butylbenzene	Ave	0.6485	0.6174		4.76	5.00	-4.8	30.0
Pentachloroethane	Ave	0.4842	0.4885		5.04	5.00	0.9	30.0
1,2,4-Trimethylbenzene	Ave	3.060	2.989		4.88	5.00	-2.3	30.0
sec-Butylbenzene	Ave	3.843	3.781		4.92	5.00	-1.6	30.0
1,3-Dichlorobenzene	Ave	1.713	1.693	0.6000	4.94	5.00	-1.1	30.0
p-Isopropyltoluene	Ave	3.351	3.368		5.03	5.00	0.5	30.0
1,4-Dichlorobenzene	Ave	1.763	1.744	0.5000	4.95	5.00	-1.1	30.0
1,2,3-Trimethylbenzene	Ave	1.343	1.414		5.26	5.00	5.3	30.0
Benzyl chloride	Ave	0.2484	0.2561		5.16	5.00	3.1	30.0
n-Butylbenzene	Ave	1.698	1.693		4.99	5.00	-0.3	30.0
1,2-Dichlorobenzene	Ave	1.616	1.619	0.4000	5.01	5.00	0.2	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.0856	0.0908	0.0500	5.30	5.00	6.0	30.0
1,3,5-Trichlorobenzene	Ave	1.397	1.368		4.89	5.00	-2.1	30.0
1,2,4-Trichlorobenzene	Ave	1.254	1.256	0.2000	5.01	5.00	0.2	30.0
Hexachlorobutadiene	Ave	0.6122	0.6020		4.92	5.00	-1.7	30.0
Naphthalene	Ave	2.236	2.184		4.88	5.00	-2.4	30.0
1,2,3-Trichlorobenzene	Ave	1.110	1.084		4.88	5.00	-2.4	30.0
Dibromofluoromethane (Surr)	Ave	0.2376	0.2368		9.97	10.0	-0.3	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.0484	0.0489		10.1	10.0	1.0	30.0
Toluene-d8 (Surr)	Ave	1.306	1.306		10.0	10.0	0.0	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4909	0.4964		10.1	10.0	1.1	30.0

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01V01.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 01-Sep-2020 16:10:30 ALS Bottle#: 9 Worklist Smp#: 10
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 410-0009503-010
Operator ID: dvv10203 Instrument ID: 10193
Sublist:

Method: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 01-Sep-2020 20:14:46 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1048

First Level Reviewer: campbellme Date: 01-Sep-2020 17:33:29

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.916	1.910	0.006	99	264279	5.00	4.11	M
3 Chloromethane	50	2.105	2.099	0.006	99	354625	5.00	4.68	
4 Butadiene	39	2.209	2.209	0.000	94	260871	5.00	3.66	M
5 Vinyl chloride	62	2.215	2.215	0.000	98	344571	5.00	4.92	
6 Bromomethane	94	2.520	2.520	0.000	91	240018	5.00	4.86	
7 Chloroethane	64	2.605	2.605	0.000	99	199689	5.00	4.62	
8 Dichlorofluoromethane	67	2.837	2.837	0.000	97	457908	5.00	4.88	
9 Trichlorofluoromethane	101	2.897	2.898	-0.001	99	429242	5.00	4.71	
11 Ethyl ether	59	3.135	3.135	0.000	92	235125	5.01	5.09	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.221	3.208	0.013	92	300678	5.00	4.45	
13 Acrolein	56	3.306	3.306	0.000	98	210460	37.5	35.5	
14 1,1-Dichloroethene	96	3.434	3.428	0.006	96	210789	5.00	4.58	
15 112TCTFE	101	3.464	3.464	0.000	92	187589	5.00	4.01	M
16 Acetone	43	3.471	3.471	0.000	99	232764	37.5	36.9	
17 Iodomethane	142	3.623	3.617	0.006	99	378488	5.00	4.16	
19 Ethyl bromide	108	3.647	3.641	0.006	99	188731	4.93	4.94	
18 Isopropyl alcohol	45	3.629	3.647	-0.018	72	39562	37.5	36.3	
20 Carbon disulfide	76	3.714	3.708	0.006	100	681004	5.00	4.19	
22 Methyl acetate	43	3.867	3.867	0.000	98	101664	5.00	4.11	
23 3-Chloro-1-propene	41	3.885	3.891	-0.006	88	392813	5.00	4.88	
24 Methylene Chloride	84	4.074	4.074	0.000	95	247001	5.00	4.82	
* 25 t-Butyl alcohol-d10 (IS)	65	4.111	4.117	-0.006	98	148288	50.0	50.0	M
26 2-Methyl-2-propanol	59	4.227	4.227	0.000	97	141172	50.0	47.8	
27 Acrylonitrile	53	4.409	4.409	0.000	99	241713	25.0	24.1	
28 Methyl tert-butyl ether	73	4.464	4.464	0.000	97	678723	5.00	4.55	
29 trans-1,2-Dichloroethene	96	4.470	4.470	0.000	98	256056	5.00	4.76	
30 Hexane	57	4.897	4.897	0.000	95	312253	5.00	4.12	
32 1,1-Dichloroethane	63	5.135	5.135	0.000	96	478958	5.00	4.84	
33 Isopropyl ether	45	5.196	5.196	0.000	93	891675	5.00	4.72	
34 2-Chloro-1,3-butadiene	53	5.245	5.251	-0.006	93	417876	5.00	4.48	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
35 Tert-butyl ethyl ether	59	5.732	5.732	0.000	97	845060	5.00	4.68	
36 2-Butanone (MEK)	43	5.946	5.946	0.000	100	532750	37.5	36.0	
37 cis-1,2-Dichloroethene	96	5.976	5.970	0.006	84	302828	5.00	4.96	
38 2,2-Dichloropropane	77	5.988	5.988	0.000	71	406838	5.00	4.76	
40 Propionitrile	54	6.049	6.049	0.000	97	141387	37.5	37.7	M
43 Methacrylonitrile	67	6.250	6.251	0.000	94	524313	37.5	36.1	
44 Chlorobromomethane	128	6.311	6.305	0.006	94	125796	5.00	4.68	
45 Tetrahydrofuran	71	6.311	6.305	0.006	91	100170	25.0	24.0	
46 Chloroform	83	6.464	6.464	0.000	94	473508	5.00	4.82	
$ 47 Dibromofluoromethane (Surr)	113	6.683	6.683	0.000	93	471541	10.0	9.97	
48 1,1,1-Trichloroethane	97	6.683	6.683	0.000	99	414044	5.00	4.68	
49 Cyclohexane	56	6.769	6.775	-0.006	93	411644	5.00	4.40	
50 Carbon tetrachloride	117	6.891	6.891	0.000	95	352249	5.00	4.75	
51 1,1-Dichloropropene	75	6.897	6.897	0.000	94	368901	5.00	4.65	
52 Isobutyl alcohol	41	7.080	7.086	-0.006	94	104834	125.0	109.5	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.134	7.134	0.000	0	97321	10.0	10.1	
54 Benzene	78	7.159	7.159	0.000	97	1086680	5.00	4.75	
55 1,2-Dichloroethane	62	7.238	7.238	0.000	97	320287	5.00	4.65	
56 Tert-amyl methyl ether	73	7.354	7.360	-0.006	98	790095	5.00	4.81	
* 57 Fluorobenzene (IS)	96	7.573	7.567	0.006	98	1991070	10.0	10.0	
58 n-Heptane	43	7.580	7.580	0.000	93	367740	5.00	4.35	
59 n-Butanol	56	7.976	7.976	0.000	91	193947	250.0	244.4	M
60 Trichloroethene	95	8.049	8.049	0.000	97	282972	5.00	4.80	
61 Methylcyclohexane	83	8.354	8.354	0.000	92	434594	5.00	4.81	
62 1,2-Dichloropropane	63	8.390	8.390	0.000	93	289309	5.00	4.93	
63 2-ethoxy-2-methyl butane	87	8.396	8.396	0.000	91	450498	5.00	4.93	
64 Methyl methacrylate	69	8.482	8.482	0.000	92	149094	5.00	4.81	
66 Dibromomethane	93	8.500	8.494	0.006	96	139880	5.00	4.87	
65 1,4-Dioxane	88	8.506	8.506	0.000	29	20737	125.0	131.2	M
67 Dichlorobromomethane	83	8.738	8.738	0.000	99	349091	5.00	4.92	
68 2-Nitropropane	41	9.024	9.024	0.000	98	42778	5.00	4.45	
69 2-Chloroethyl vinyl ether	63		9.116				ND	ND	
71 1-Bromo-2-chloroethane	63	9.134	9.134	0.000	99	302961	5.00	4.99	
72 cis-1,3-Dichloropropene	75	9.299	9.299	0.000	93	429373	5.00	4.87	
73 4-Methyl-2-pentanone (MIBK)	43	9.488	9.488	0.000	98	1020805	25.0	23.8	
$ 74 Toluene-d8 (Surr)	98	9.610	9.610	0.000	94	1974214	10.0	10.0	
75 Toluene	92	9.689	9.689	0.000	97	717293	5.00	4.83	
76 trans-1,3-Dichloropropene	75	9.957	9.957	0.000	96	365821	5.00	4.92	
78 Ethyl methacrylate	69	10.024	10.024	0.000	90	321895	5.00	5.13	
79 1,1,2-Trichloroethane	97	10.164	10.164	0.000	91	210589	5.00	5.14	
80 Tetrachloroethene	166	10.244	10.250	-0.006	97	319078	5.00	4.81	
81 1,3-Dichloropropane	76	10.329	10.329	0.000	94	351288	5.00	4.86	
82 2-Hexanone	43	10.390	10.396	-0.006	97	758216	25.0	25.0	
83 Chlorodibromomethane	129	10.548	10.548	0.000	90	247564	5.00	5.21	
84 Ethylene Dibromide	107	10.658	10.658	0.000	99	200231	5.00	4.95	
* 85 Chlorobenzene-d5 (IS)	117	11.097	11.097	0.000	87	1511072	10.0	10.0	
86 1-Chlorohexane	91	11.109	11.109	0.000	98	389170	5.00	4.59	
87 Chlorobenzene	112	11.121	11.122	-0.001	94	821508	5.00	4.90	
89 1,1,1,2-Tetrachloroethane	131	11.207	11.207	0.000	94	281793	5.00	4.94	
90 Ethylbenzene	91	11.213	11.213	0.000	98	1427334	5.00	4.85	
91 m-Xylene & p-Xylene	106	11.329	11.329	0.000	0	1139958	10.0	9.92	
92 o-Xylene	106	11.658	11.664	-0.006	97	561093	5.00	4.98	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
93 Styrene	104	11.676	11.676	0.000	95	956073	5.00	5.06	
94 Bromoform	173	11.835	11.835	0.000	96	138272	5.00	5.23	
95 Isopropylbenzene	105	11.963	11.969	-0.006	96	1481268	5.00	4.97	
$ 98 4-Bromofluorobenzene (Surr)	95	12.109	12.109	0.000	91	750136	10.0	10.1	
99 1,1,2,2-Tetrachloroethane	83	12.219	12.219	0.000	94	271685	5.00	4.94	
100 Bromobenzene	156	12.225	12.231	-0.006	95	367124	5.00	4.86	
101 trans-1,4-Dichloro-2-butene	53	12.243	12.243	0.000	93	390404	25.0	25.6	
102 1,2,3-Trichloropropane	110	12.262	12.268	-0.006	83	73933	5.00	4.94	
103 N-Propylbenzene	91	12.298	12.298	0.000	99	1765255	5.00	4.98	
104 2-Chlorotoluene	126	12.371	12.377	-0.006	96	352540	5.00	4.86	
105 1,3,5-Trimethylbenzene	105	12.438	12.438	0.000	94	1289854	5.00	4.91	
106 4-Chlorotoluene	126	12.469	12.469	0.000	98	369849	5.00	4.91	
107 tert-Butylbenzene	134	12.682	12.682	0.000	93	271974	5.00	4.76	
108 Pentachloroethane	167	12.713	12.713	0.000	92	215173	5.00	5.04	
109 1,2,4-Trimethylbenzene	105	12.725	12.725	0.000	97	1316654	5.00	4.88	
110 sec-Butylbenzene	105	12.847	12.847	0.000	94	1665555	5.00	4.92	
111 1,3-Dichlorobenzene	146	12.944	12.944	0.000	98	745869	5.00	4.94	
112 4-Isopropyltoluene	119	12.957	12.957	-0.001	97	1483427	5.00	5.03	
* 113 1,4-Dichlorobenzene-d4	152	12.999	12.999	0.000	96	880960	10.0	10.0	
114 1,4-Dichlorobenzene	146	13.017	13.017	0.000	95	768103	5.00	4.95	
115 1,2,3-Trimethylbenzene	120	13.030	13.030	0.000	99	622827	5.00	5.26	
116 Benzyl chloride	126	13.097	13.103	-0.006	99	112804	5.00	5.16	
119 n-Butylbenzene	92	13.249	13.249	0.000	97	745894	5.00	4.99	
120 1,2-Dichlorobenzene	146	13.280	13.286	-0.006	98	713058	5.00	5.01	
118 p-Diethylbenzene	119	13.304	13.304	0.000	0	749866	5.00	5.00	
123 1,2-Dibromo-3-Chloropropane	155	13.834	13.834	0.000	86	39996	5.00	5.30	
124 1,3,5-Trichlorobenzene	180	13.956	13.956	0.000	97	602454	5.00	4.89	
125 1,2,4-Trichlorobenzene	180	14.383	14.383	0.000	94	553460	5.00	5.01	
126 Hexachlorobutadiene	225	14.468	14.468	0.000	98	265181	5.00	4.92	
127 Naphthalene	128	14.566	14.566	0.000	97	961807	5.00	4.88	
128 1,2,3-Trichlorobenzene	180	14.712	14.712	0.000	96	477279	5.00	4.88	
129 2-Methylnaphthalene	142	15.334	15.340	-0.006	0	607671	5.00	4.56	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MSV_Q_QVOA1_00044	Amount Added: 12.50	Units: uL	
MSV_Q_QARC_00043	Amount Added: 12.50	Units: uL	
MSV_Q_QVOA6_00041	Amount Added: 12.50	Units: uL	
MSV_Q_EE_00002	Amount Added: 12.50	Units: uL	
MSV_Q_ETBR_00003	Amount Added: 12.50	Units: uL	
MSV_QGAS_826_00069	Amount Added: 12.50	Units: uL	
MSV_25_826ISS_00001	Amount Added: 1.00	Units: uL	Run Reagent

Report Date: 01-Sep-2020 20:59:13 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01V01.D

Injection Date: 01-Sep-2020 16:10:30 Instrument ID: 10193 Operator ID: dvv10203

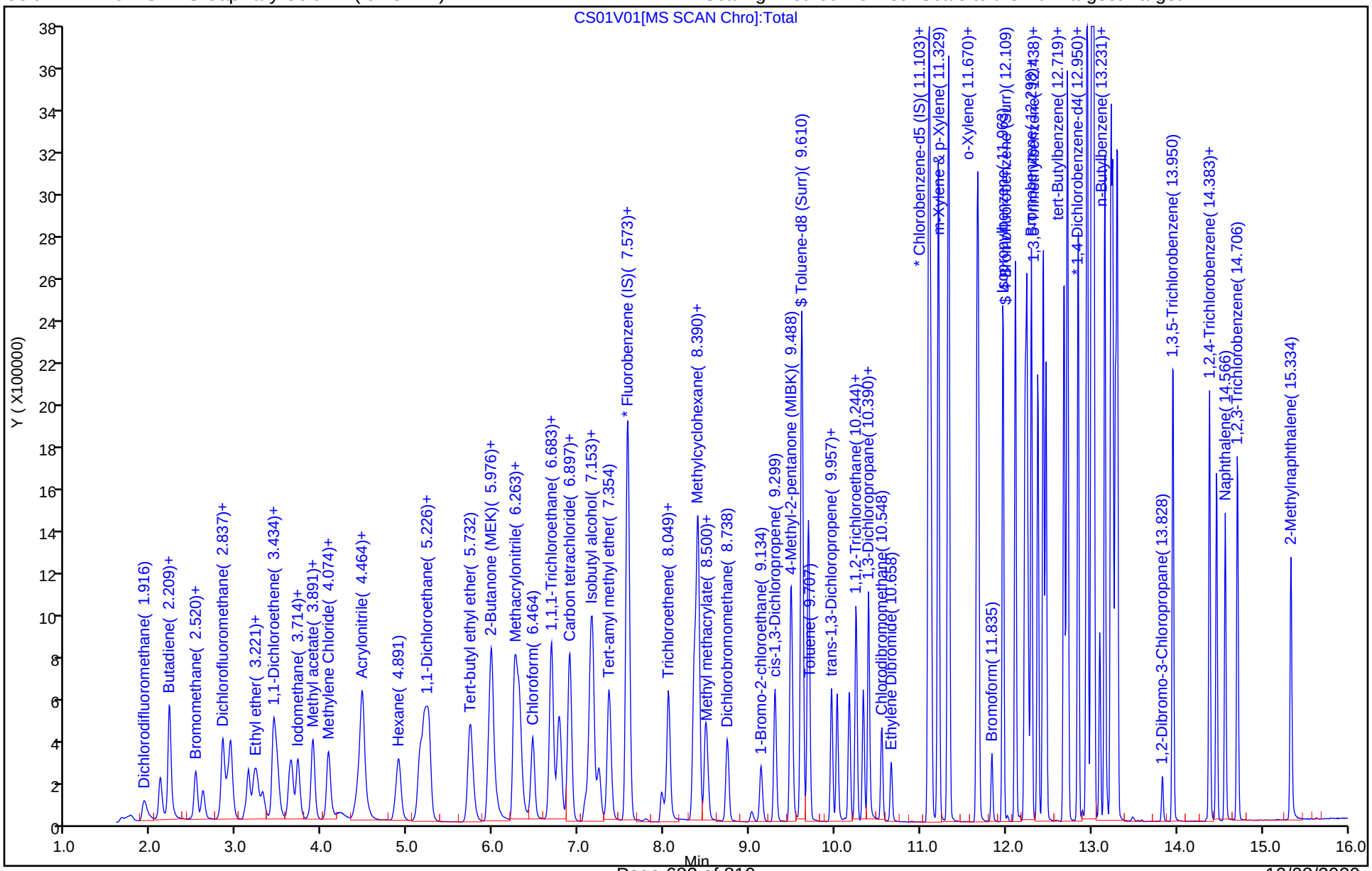
Lims ID: ICV Worklist Smp#: 10

Client ID:

Purge Vol: 25.000 mL Dil. Factor: 1.0000 ALS Bottle#: 9

Method: MSV_10193_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



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

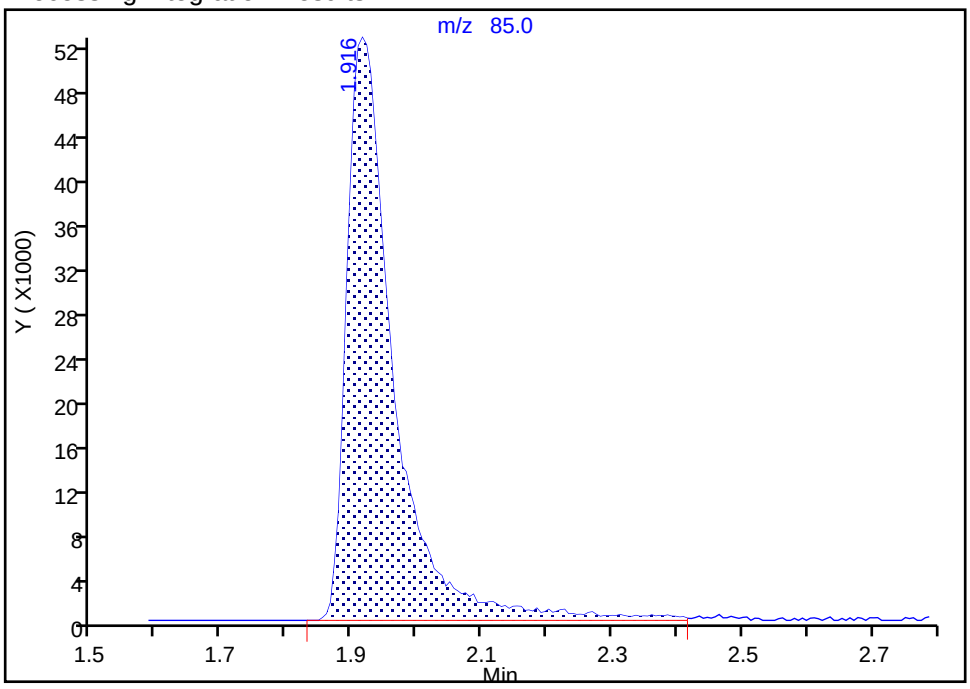
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01V01.D
Injection Date: 01-Sep-2020 16:10:30 Instrument ID: 10193
Lims ID: ICV
Client ID:
Operator ID: dvv10203 ALS Bottle#: 9 Worklist Smp#: 10
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

2 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

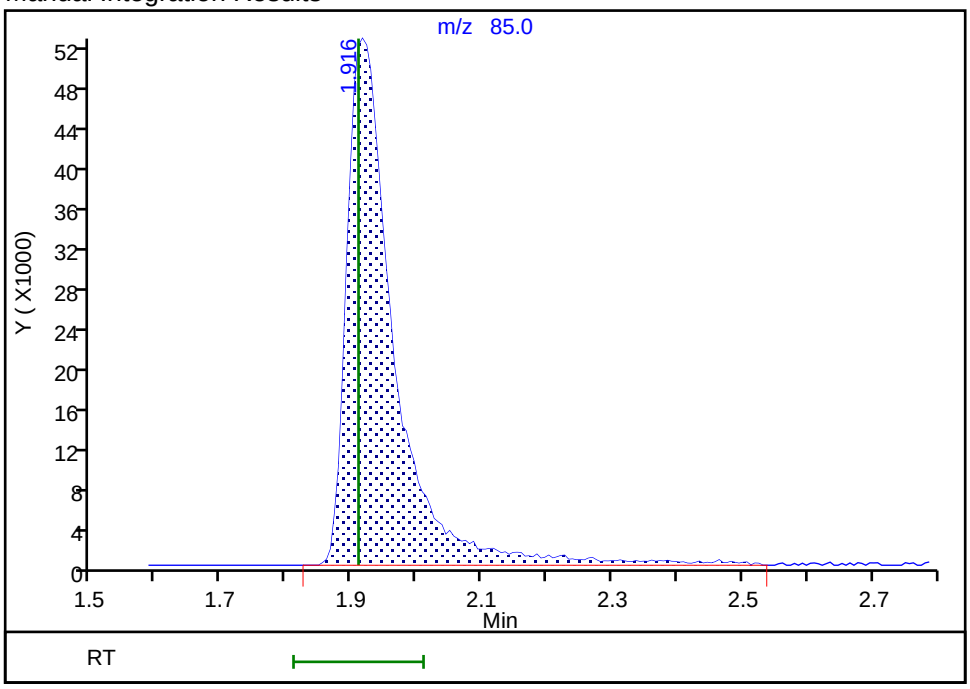
Processing Integration Results

RT: 1.92
Area: 262611
Amount: 4.087385
Amount Units: ug/l



Manual Integration Results

RT: 1.92
Area: 264279
Amount: 4.113346
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:26:05
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

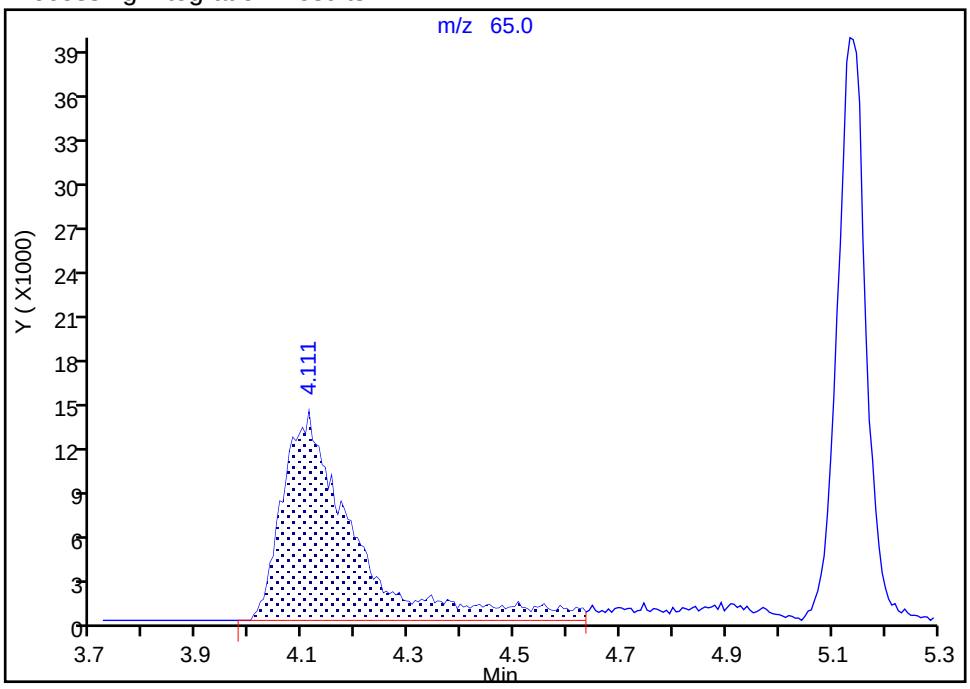
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01V01.D
Injection Date: 01-Sep-2020 16:10:30 Instrument ID: 10193
Lims ID: ICV
Client ID:
Operator ID: dvv10203 ALS Bottle#: 9 Worklist Smp#: 10
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

* 25 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

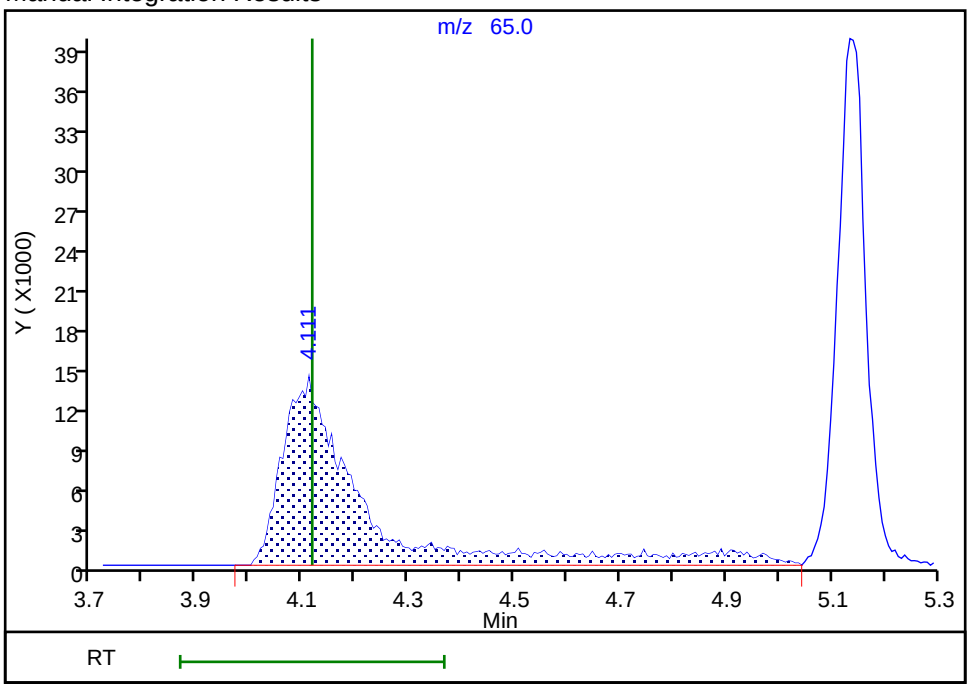
Processing Integration Results

RT: 4.11
Area: 131313
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 4.11
Area: 148288
Amount: 50.000000
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:26:30
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

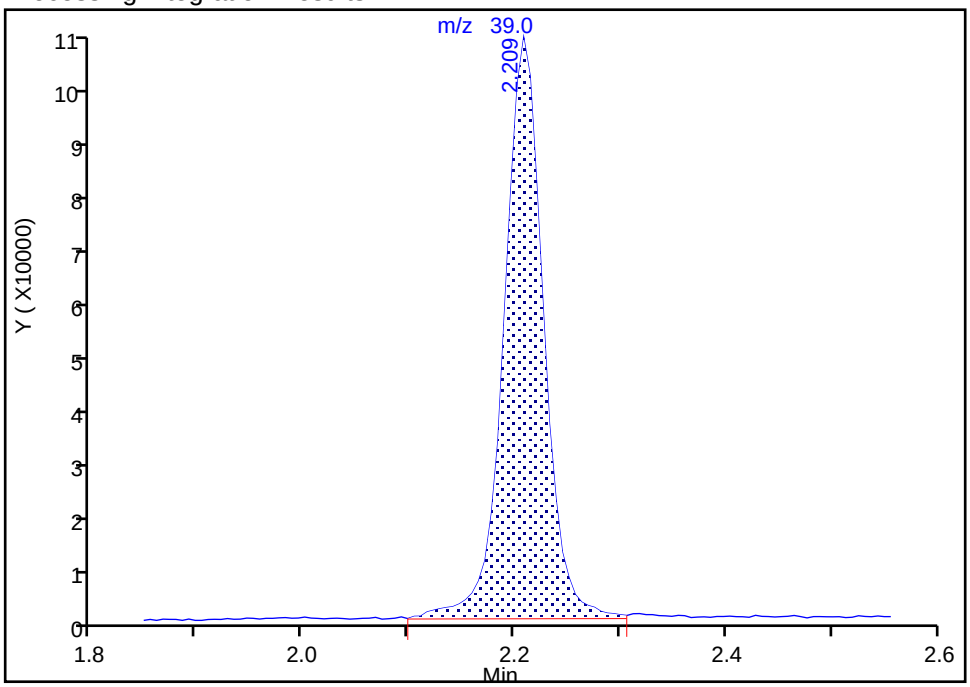
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01V01.D
Injection Date: 01-Sep-2020 16:10:30 Instrument ID: 10193
Lims ID: ICV
Client ID:
Operator ID: dvv10203 ALS Bottle#: 9 Worklist Smp#: 10
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

4 Butadiene, CAS: 106-99-0

Signal: 1

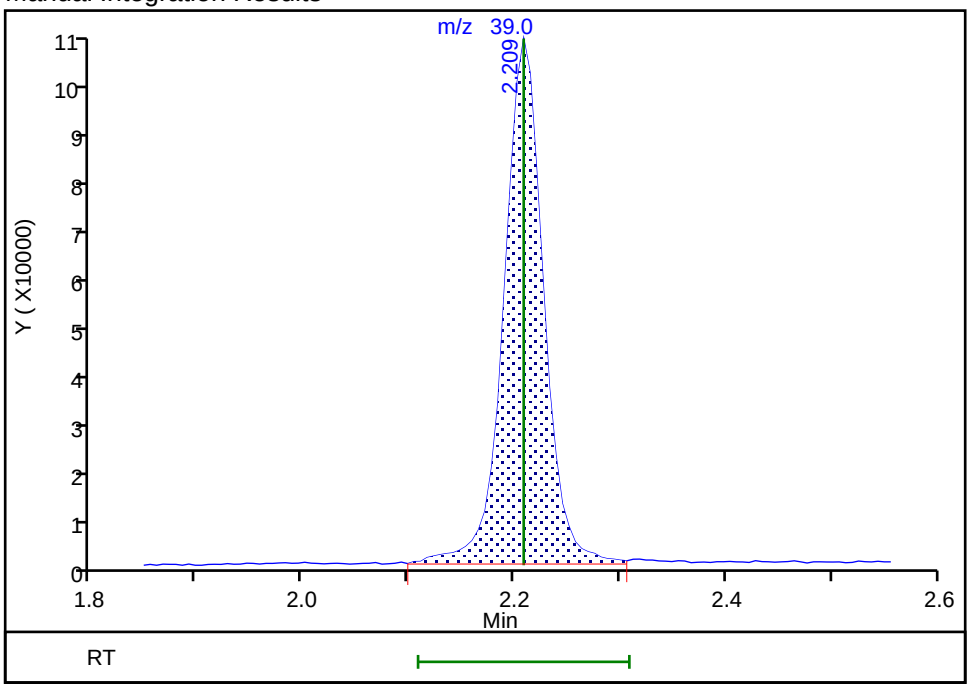
Processing Integration Results

RT: 2.21
Area: 260372
Amount: 3.654662
Amount Units: ug/l



Manual Integration Results

RT: 2.21
Area: 260871
Amount: 3.661667
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:30:49
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

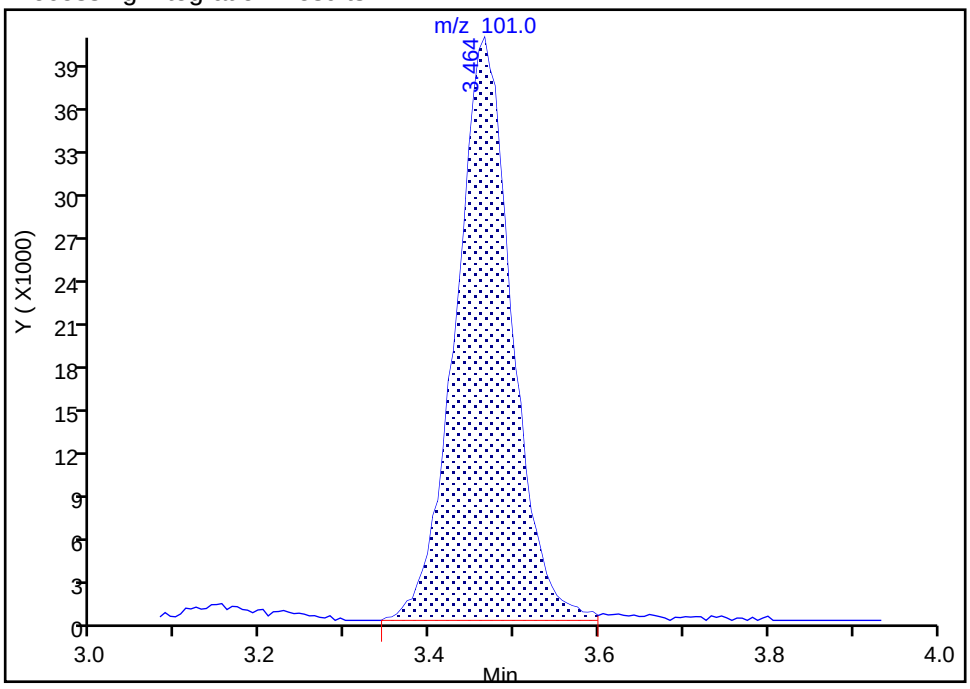
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01V01.D
Injection Date: 01-Sep-2020 16:10:30 Instrument ID: 10193
Lims ID: ICV
Client ID:
Operator ID: dvv10203 ALS Bottle#: 9 Worklist Smp#: 10
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

15 112TCTFE, CAS: 76-13-1

Signal: 1

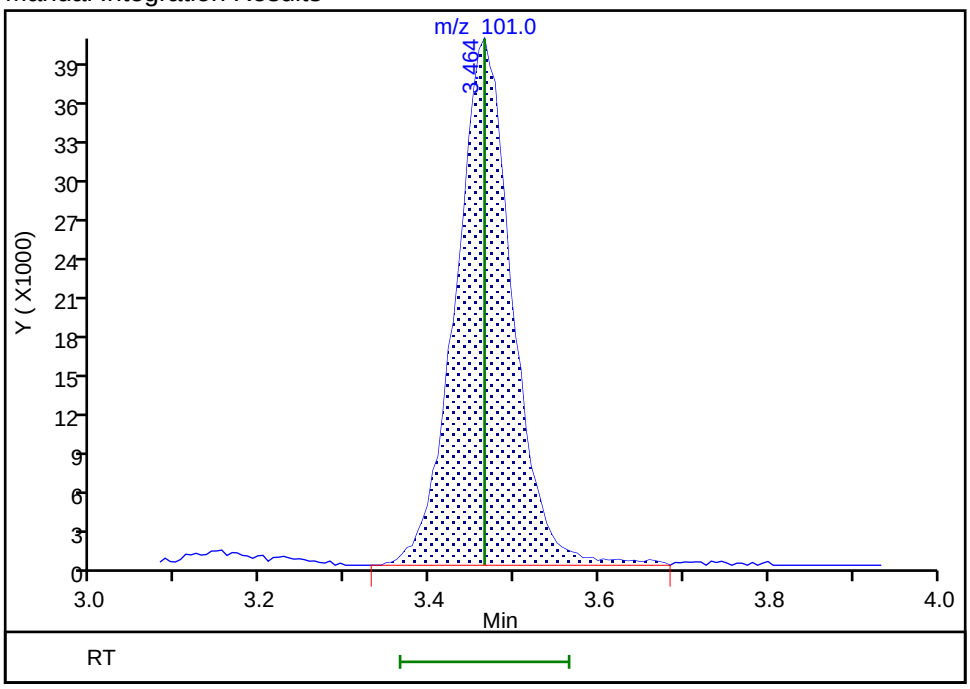
Processing Integration Results

RT: 3.46
Area: 185974
Amount: 3.971572
Amount Units: ug/l



Manual Integration Results

RT: 3.46
Area: 187589
Amount: 4.006061
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:31:05
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

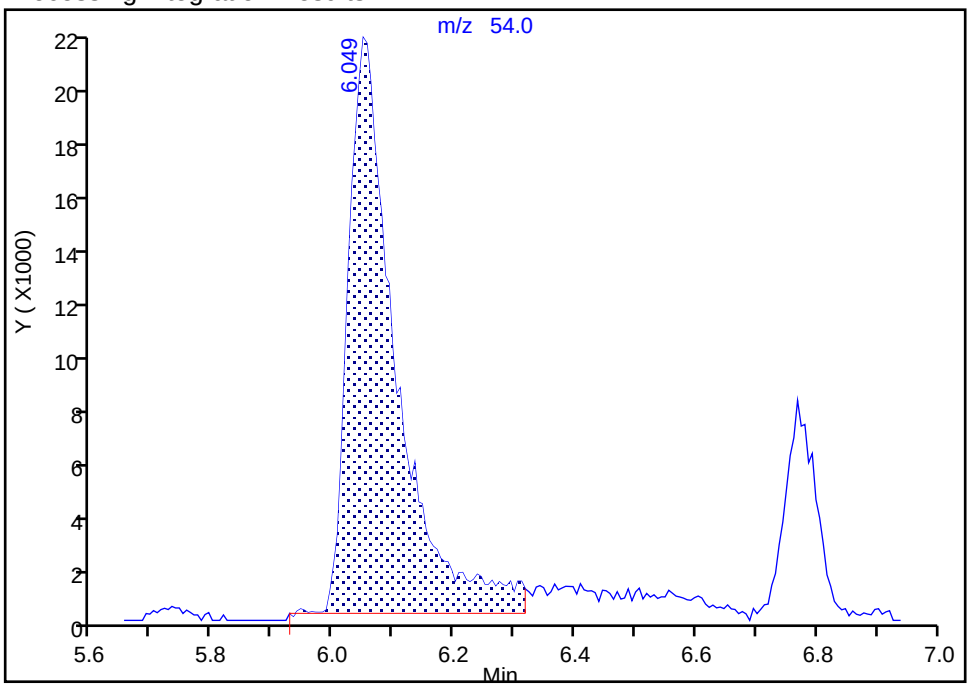
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01V01.D
Injection Date: 01-Sep-2020 16:10:30 Instrument ID: 10193
Lims ID: ICV
Client ID:
Operator ID: dvv10203 ALS Bottle#: 9 Worklist Smp#: 10
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

40 Propionitrile, CAS: 107-12-0

Signal: 1

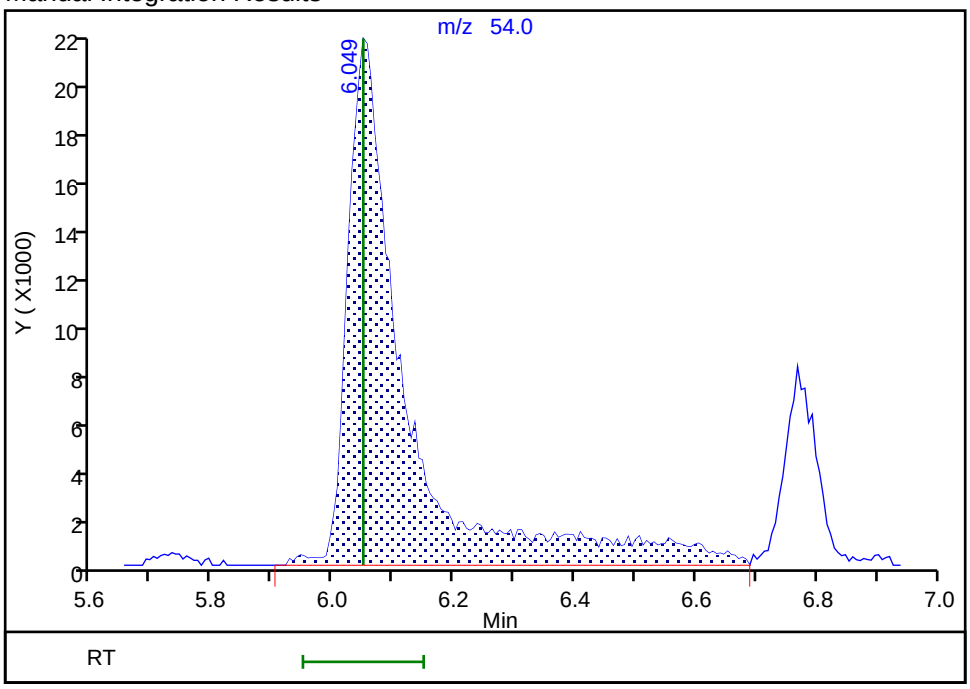
Processing Integration Results

RT: 6.05
Area: 115982
Amount: 30.917165
Amount Units: ug/l



Manual Integration Results

RT: 6.05
Area: 141387
Amount: 37.689341
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:27:06
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

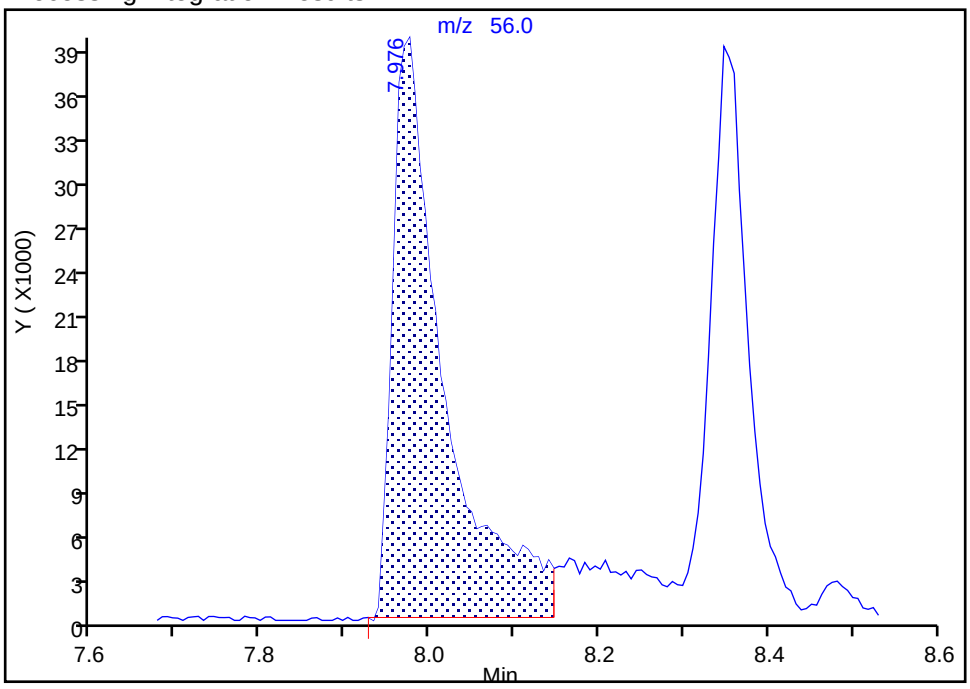
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01V01.D
Injection Date: 01-Sep-2020 16:10:30 Instrument ID: 10193
Lims ID: ICV
Client ID:
Operator ID: dvv10203 ALS Bottle#: 9 Worklist Smp#: 10
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

59 n-Butanol, CAS: 71-36-3

Signal: 1

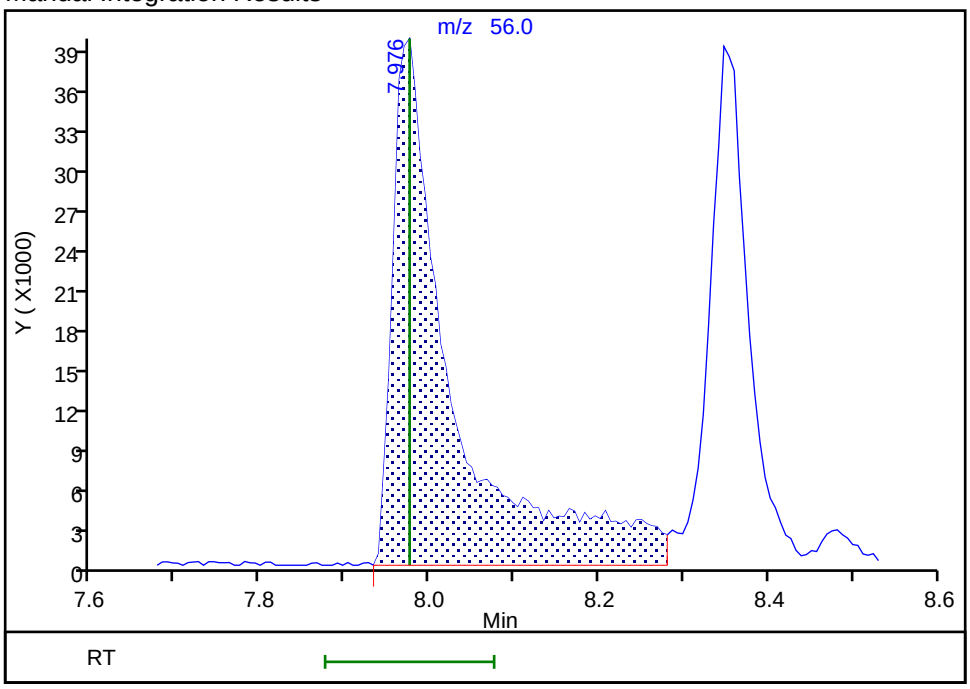
Processing Integration Results

RT: 7.98
Area: 164567
Amount: 207.3677
Amount Units: ug/l



Manual Integration Results

RT: 7.98
Area: 193947
Amount: 244.3889
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:28:44
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

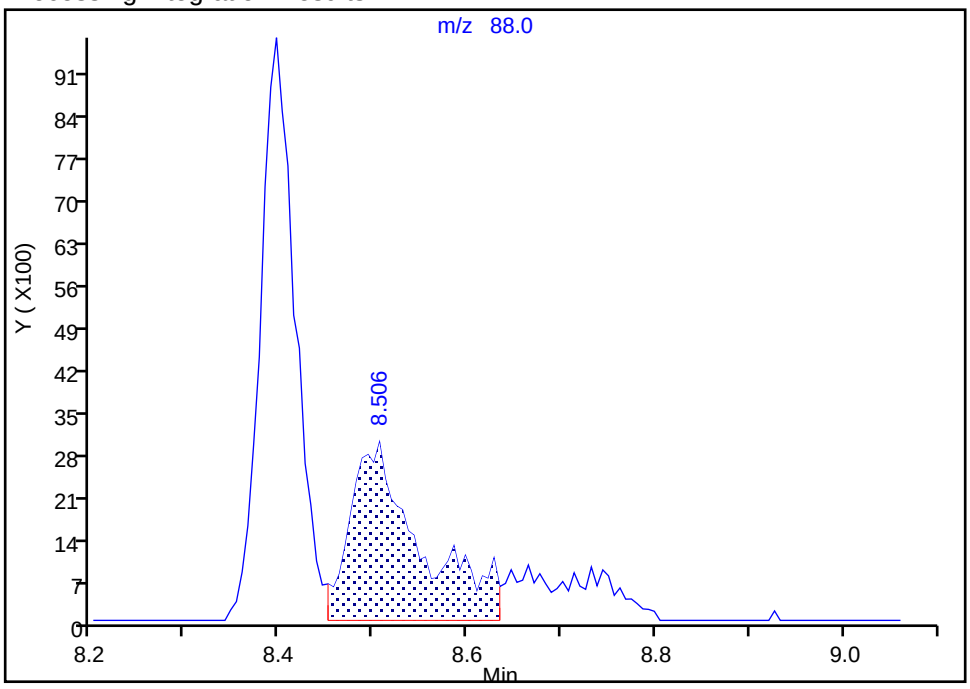
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01V01.D
Injection Date: 01-Sep-2020 16:10:30 Instrument ID: 10193
Lims ID: ICV
Client ID:
Operator ID: dvv10203 ALS Bottle#: 9 Worklist Smp#: 10
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

65 1,4-Dioxane, CAS: 123-91-1

Signal: 1

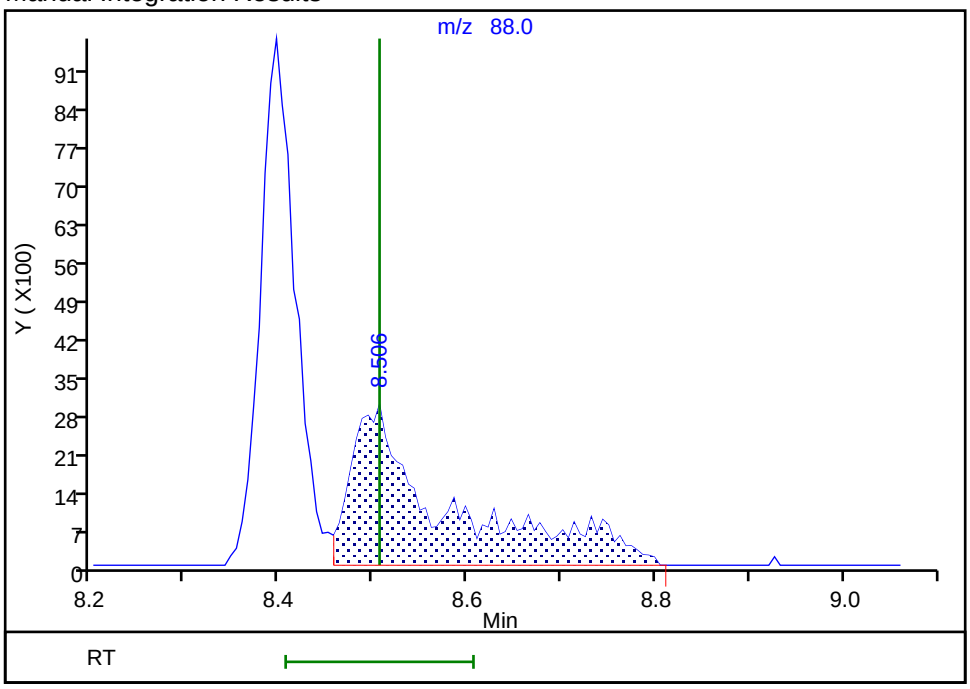
Processing Integration Results

RT: 8.51
Area: 15392
Amount: 97.407800
Amount Units: ug/l



Manual Integration Results

RT: 8.51
Area: 20737
Amount: 131.2335
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:26:53
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-15232-1

SDG No.:

Lab Sample ID: CCVIS 410-50813/3 Calibration Date: 10/05/2020 10:03

Instrument ID: 10193 Calib Start Date: 09/01/2020 13:35

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 09/01/2020 15:48

Lab File ID: CC05C01.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	0.3227	0.3250	0.1000	12.6	12.5	0.7	20.0
Chloromethane	Ave	0.3804	0.3873	0.1000	12.7	12.5	1.8	20.0
1,3-Butadiene	Ave	0.3578	0.8399		29.3	12.5	134.7*	20.0
Vinyl chloride	Ave	0.3517	0.3392	0.1000	12.1	12.5	-3.6	20.0
Bromomethane	Ave	0.2482	0.2387	0.1000	12.0	12.5	-3.8	20.0
Chloroethane	Ave	0.2173	0.2110	0.1000	12.1	12.5	-2.9	20.0
Dichlorofluoromethane	Ave	0.4713	0.4596		12.2	12.5	-2.5	20.0
Trichlorofluoromethane	Ave	0.4575	0.4345	0.1000	11.9	12.5	-5.0	20.0
Ethyl ether	Ave	0.2318	0.2473		13.3	12.5	6.7	20.0
Freon 123a	Ave	0.3397	0.3100		11.4	12.5	-8.8	20.0
Acrolein	Ave	2.001	2.256		706	626	12.8	20.0
1,1-Dichloroethene	Ave	0.2312	0.2332	0.1000	12.6	12.5	0.9	20.0
Freon 113	Ave	0.2352	0.2316	0.1000	12.3	12.5	-1.5	20.0
Acetone	Ave	2.125	2.659	0.1000	156	125	25.1*	20.0
Methyl iodide	Ave	0.4567	0.4434		12.1	12.5	-2.9	20.0
Ethyl bromide	Ave	0.1920	0.1875		12.2	12.5	-2.3	20.0
Carbon disulfide	Ave	0.8167	0.8021	0.1000	12.3	12.5	-1.8	20.0
Methyl acetate	Ave	8.350	9.486	0.1000	14.2	12.5	13.6	20.0
Allyl chloride	Ave	0.4045	0.4030		12.5	12.5	-0.4	20.0
Methylene Chloride	Ave	0.2573	0.2726	0.1000	13.2	12.5	6.0	20.0
t-Butyl alcohol	Ave	0.996	0.8817		221	250	-11.5	20.0
Acrylonitrile	Ave	3.375	3.625		67.1	62.5	7.4	20.0
Methyl tert-butyl ether	Ave	0.7484	0.7553	0.1000	12.6	12.5	0.9	20.0
trans-1,2-Dichloroethene	Ave	0.2703	0.2717	0.1000	12.6	12.5	0.5	20.0
n-Hexane	Ave	0.3811	0.3890		12.8	12.5	2.1	20.0
1,1-Dichloroethane	Ave	0.4975	0.5082	0.2000	12.8	12.5	2.2	20.0
di-Isopropyl ether	Ave	0.9484	0.9874		13.0	12.5	4.1	20.0
2-Chloro-1,3-butadiene	Ave	0.4688	0.4383		11.7	12.5	-6.5	20.0
Ethyl t-butyl ether	Ave	0.9061	0.8915		12.3	12.5	-1.6	20.0
2-Butanone (MEK)	Ave	4.984	5.262	0.1000	132	125	5.6	20.0
cis-1,2-Dichloroethene	Ave	0.3064	0.3100	0.1000	12.6	12.5	1.2	20.0
2,2-Dichloropropane	Ave	0.4293	0.4004		11.7	12.5	-6.7	20.0
Propionitrile	Ave	1.265	1.481		293	250	17.1	20.0
Methacrylonitrile	Ave	4.902	4.854		124	125	-1.0	20.0
Bromochloromethane	Ave	0.1349	0.1509		14.0	12.5	11.9	20.0
Tetrahydrofuran	Ave	1.410	1.468		130	125	4.1	20.0
Chloroform	Ave	0.4930	0.4966	0.2000	12.6	12.5	0.7	20.0
1,1,1-Trichloroethane	Ave	0.4442	0.4239	0.1000	11.9	12.5	-4.6	20.0
Cyclohexane	Ave	0.4697	0.4754	0.1000	12.7	12.5	1.2	20.0
Carbon tetrachloride	Ave	0.3722	0.3660	0.1000	12.3	12.5	-1.7	20.0
1,1-Dichloropropene	Ave	0.3988	0.3943		12.4	12.5	-1.1	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-15232-1

SDG No.:

Lab Sample ID: CCVIS 410-50813/3 Calibration Date: 10/05/2020 10:03

Instrument ID: 10193 Calib Start Date: 09/01/2020 13:35

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 09/01/2020 15:48

Lab File ID: CC05C01.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	0.3229	0.3496		677	625	8.3	20.0
Benzene	Ave	1.149	1.190	0.5000	12.9	12.5	3.6	20.0
1,2-Dichloroethane	Ave	0.3462	0.3431	0.1000	12.4	12.5	-0.9	20.0
t-Amyl methyl ether	Ave	0.8253	0.8378		12.7	12.5	1.5	20.0
n-Heptane	Ave	0.4242	0.4482		13.2	12.5	5.6	20.0
n-Butanol	Ave	0.2676	0.3692		1720	1250	38.0*	20.0
Trichloroethene	Ave	0.2961	0.3010	0.2000	12.7	12.5	1.7	20.0
Methylcyclohexane	Ave	0.4535	0.4774	0.1000	13.2	12.5	5.3	20.0
1,2-Dichloropropane	Ave	0.2950	0.3159	0.1000	13.4	12.5	7.1	20.0
1,4-Dioxane	Ave	0.0533	0.0741	0.0050	869	625	39.0*	20.0
Methyl methacrylate	Ave	10.45	9.427		11.3	12.5	-9.8	20.0
Dibromomethane	Ave	0.1443	0.1599		13.8	12.5	10.8	20.0
Bromodichloromethane	Ave	0.3561	0.3768	0.2000	13.2	12.5	5.8	20.0
2-Nitropropane	Ave	3.241	3.163		122	125	-2.4	20.0
1-Bromo-2-chloroethane	Ave	0.3051	0.3537		14.5	12.5	15.9	20.0
cis-1,3-Dichloropropene	Ave	0.4426	0.4714	0.2000	13.3	12.5	6.5	20.0
4-Methyl-2-pentanone (MIBK)	Ave	14.48	14.29	0.1000	123	125	-1.3	20.0
Toluene	Ave	0.9823	0.9488	0.4000	12.1	12.5	-3.4	20.0
trans-1,3-Dichloropropene	Ave	0.4919	0.5002	0.1000	12.7	12.5	1.7	20.0
Ethyl methacrylate	Ave	0.4151	0.4596		13.8	12.5	10.7	20.0
1,1,2-Trichloroethane	Ave	0.2713	0.2884	0.1000	13.3	12.5	6.3	20.0
Tetrachloroethene	Ave	0.4389	0.4104	0.2000	11.7	12.5	-6.5	20.0
1,3-Dichloropropane	Ave	0.4783	0.5047		13.2	12.5	5.5	20.0
2-Hexanone	Ave	10.23	10.45	0.1000	128	125	2.1	20.0
Dibromochloromethane	Ave	0.3148	0.3533		14.0	12.5	12.3	20.0
1,2-Dibromoethane (EDB)	Ave	0.2679	0.2901	0.1000	13.5	12.5	8.3	20.0
1-Chlorohexane	Ave	0.5609	0.5142		11.5	12.5	-8.3	20.0
Chlorobenzene	Ave	1.109	1.078	0.5000	12.1	12.5	-2.8	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3774	0.3807		12.6	12.5	0.9	20.0
Ethylbenzene	Ave	1.947	1.875	0.1000	12.0	12.5	-3.7	20.0
m&p-Xylene	Ave	0.7608	0.7359	0.1000	24.2	25.0	-3.3	20.0
o-Xylene	Ave	0.7453	0.7266	0.3000	12.2	12.5	-2.5	20.0
Styrene	Ave	1.251	1.260	0.3000	12.6	12.5	0.7	20.0
Bromoform	Ave	0.1748	0.2183	0.1000	15.6	12.5	24.9*	20.0
Isopropylbenzene	Ave	1.971	1.887	0.1000	12.0	12.5	-4.3	20.0
1,1,2,2-Tetrachloroethane	Ave	0.6245	0.6742	0.3000	13.5	12.5	8.0	20.0
Bromobenzene	Ave	0.8574	0.8524		12.4	12.5	-0.6	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1729	0.0626		45.3	125	-63.8*	20.0
1,2,3-Trichloropropane	Ave	0.1700	0.1820		13.4	12.5	7.1	20.0
N-Propylbenzene	Ave	4.026	3.834		11.9	12.5	-4.8	20.0
2-Chlorotoluene	Ave	0.8233	0.7869		11.9	12.5	-4.4	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-15232-1

SDG No.:

Lab Sample ID: CCVIS 410-50813/3 Calibration Date: 10/05/2020 10:03

Instrument ID: 10193 Calib Start Date: 09/01/2020 13:35

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 09/01/2020 15:48

Lab File ID: CC05C01.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	2.982	2.828		11.9	12.5	-5.2	20.0
4-Chlorotoluene	Ave	0.8558	0.8313		12.1	12.5	-2.9	20.0
tert-Butylbenzene	Ave	0.6485	0.6020		11.6	12.5	-7.2	20.0
Pentachloroethane	Ave	0.4842	0.5227		13.5	12.5	7.9	20.0
1,2,4-Trimethylbenzene	Ave	3.060	2.959		12.1	12.5	-3.3	20.0
sec-Butylbenzene	Ave	3.843	3.663		11.9	12.5	-4.7	20.0
1,3-Dichlorobenzene	Ave	1.713	1.682	0.6000	12.3	12.5	-1.8	20.0
p-Isopropyltoluene	Ave	3.351	3.227		12.0	12.5	-3.7	20.0
1,4-Dichlorobenzene	Ave	1.763	1.709	0.5000	12.1	12.5	-3.1	20.0
1,2,3-Trimethylbenzene	Ave	1.343	1.309		12.2	12.5	-2.6	20.0
Benzyl chloride	Ave	0.2484	0.2888		14.5	12.5	16.3	20.0
n-Butylbenzene	Ave	1.698	1.652		12.2	12.5	-2.7	20.0
1,2-Dichlorobenzene	Ave	1.616	1.596	0.4000	12.3	12.5	-1.3	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0856	0.1023	0.0500	14.9	12.5	19.5	20.0
1,3,5-Trichlorobenzene	Ave	1.397	1.362		12.2	12.5	-2.6	20.0
1,2,4-Trichlorobenzene	Ave	1.254	1.235	0.2000	12.3	12.5	-1.5	20.0
Hexachlorobutadiene	Ave	0.6122	0.5963		12.2	12.5	-2.6	20.0
Naphthalene	Ave	2.236	2.279		12.7	12.5	1.9	20.0
1,2,3-Trichlorobenzene	Ave	1.110	1.056		11.9	12.5	-4.8	20.0
Dibromofluoromethane (Surr)	Ave	0.2376	0.2508		10.6	10.0	5.6	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.0484	0.0524		10.8	10.0	8.2	20.0
Toluene-d8 (Surr)	Ave	1.306	1.280		9.80	10.0	-2.0	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4909	0.4950		10.1	10.0	0.8	20.0

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05C01.D
Lims ID: CCVIS VSTD12.5
Client ID:
Sample Type: CCVIS
Inject. Date: 05-Oct-2020 10:03:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0012055-003
Misc. Info.: CCVIS
Operator ID: dvv10203 Instrument ID: 10193
Sublist: chrom-MSV_10193_25mL*sub1

Method: \\chromfs\Lancaster\ChromData\10193\20201005-12055.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 05-Oct-2020 11:37:57 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1028

First Level Reviewer: virayd Date: 05-Oct-2020 11:12:57

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.910	1.910	0.000	100	779852	12.5	12.6	
3 Chloromethane	50	2.099	2.099	0.000	99	929470	12.5	12.7	
4 Butadiene	39	2.203	2.203	0.000	94	2015422	12.5	29.3	E
5 Vinyl chloride	62	2.209	2.209	0.000	98	813836	12.5	12.1	
6 Bromomethane	94	2.514	2.514	0.000	91	572707	12.5	12.0	
7 Chloroethane	64	2.599	2.599	0.000	100	506228	12.5	12.1	
8 Dichlorofluoromethane	67	2.831	2.831	0.000	98	1102855	12.5	12.2	
9 Trichlorofluoromethane	101	2.885	2.885	0.000	99	1042567	12.5	11.9	
11 Ethyl ether	59	3.123	3.123	0.000	94	593337	12.5	13.3	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.209	3.209	0.000	93	743799	12.5	11.4	
13 Acrolein	56	3.294	3.294	0.000	100	4990815	626.2	706.2	
14 1,1-Dichloroethene	96	3.422	3.422	0.000	97	559496	12.5	12.6	
15 112TCTFE	101	3.452	3.452	0.000	88	555646	12.5	12.3	
16 Acetone	43	3.459	3.459	0.000	100	1174309	125.0	156.4	
17 Iodomethane	142	3.605	3.605	0.000	99	1063967	12.5	12.1	
18 Isopropyl alcohol	45	3.623	3.623	0.000	45	302628	250.0	204.4	
19 Ethyl bromide	108	3.635	3.635	0.000	98	450131	12.5	12.2	
20 Carbon disulfide	76	3.702	3.702	0.000	100	1924705	12.5	12.3	
22 Methyl acetate	43	3.849	3.849	0.000	98	418913	12.5	14.2	M
23 3-Chloro-1-propene	41	3.879	3.879	0.000	90	967123	12.5	12.5	
24 Methylene Chloride	84	4.056	4.056	0.000	94	654213	12.5	13.2	
* 25 t-Butyl alcohol-d10 (IS)	65	4.080	4.080	0.000	0	176637	50.0	50.0	M
26 2-Methyl-2-propanol	59	4.202	4.202	0.000	98	778700	250.0	221.3	
27 Acrylonitrile	53	4.397	4.397	0.000	98	800277	62.5	67.1	
28 Methyl tert-butyl ether	73	4.446	4.446	0.000	96	1812373	12.5	12.6	
29 trans-1,2-Dichloroethene	96	4.452	4.452	0.000	99	651909	12.5	12.6	
30 Hexane	57	4.873	4.873	0.000	95	933527	12.5	12.8	
32 1,1-Dichloroethane	63	5.123	5.123	0.000	96	1219498	12.5	12.8	
33 Isopropyl ether	45	5.178	5.178	0.000	94	2369283	12.5	13.0	
34 2-Chloro-1,3-butadiene	53	5.226	5.226	0.000	92	1051756	12.5	11.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
35 Tert-butyl ethyl ether	59	5.714	5.714	0.000	98	2139293	12.5	12.3	
36 2-Butanone (MEK)	43	5.934	5.934	0.000	100	2323777	125.0	132.0	
37 cis-1,2-Dichloroethene	96	5.958	5.958	0.000	83	743880	12.5	12.6	
38 2,2-Dichloropropane	77	5.970	5.970	0.000	89	960747	12.5	11.7	
40 Propionitrile	54	6.031	6.031	0.000	99	1307944	250.0	292.7	
43 Methacrylonitrile	67	6.245	6.245	0.000	94	2143598	125.0	123.8	
44 Chlorobromomethane	128	6.293	6.293	0.000	97	362155	12.5	14.0	
45 Tetrahydrofuran	71	6.299	6.299	0.000	89	648133	125.0	130.2	
46 Chloroform	83	6.446	6.446	0.000	94	1191536	12.5	12.6	
$ 47 Dibromofluoromethane (Surr)	113	6.659	6.659	0.000	94	481487	10.0	10.6	
48 1,1,1-Trichloroethane	97	6.665	6.665	0.000	99	1017079	12.5	11.9	
49 Cyclohexane	56	6.757	6.757	0.000	93	1140741	12.5	12.7	
50 Carbon tetrachloride	117	6.873	6.873	0.000	97	878245	12.5	12.3	
51 1,1-Dichloropropene	75	6.885	6.885	0.000	95	946259	12.5	12.4	
52 Isobutyl alcohol	41	7.061	7.061	0.000	93	771845	625.0	676.6	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.116	7.116	0.000	0	100529	10.0	10.8	
54 Benzene	78	7.147	7.147	0.000	97	2854978	12.5	12.9	
55 1,2-Dichloroethane	62	7.220	7.220	0.000	97	823296	12.5	12.4	
56 Tert-amyl methyl ether	73	7.342	7.342	0.000	98	2010321	12.5	12.7	
* 57 Fluorobenzene (IS)	96	7.561	7.561	0.000	99	1919653	10.0	10.0	
58 n-Heptane	43	7.561	7.561	0.000	95	1075492	12.5	13.2	
59 n-Butanol	56	7.952	7.952	0.000	90	1630174	1250.0	1724.5	
60 Trichloroethene	95	8.037	8.037	0.000	98	722225	12.5	12.7	
61 Methylcyclohexane	83	8.336	8.336	0.000	92	1145590	12.5	13.2	
62 1,2-Dichloropropane	63	8.372	8.372	0.000	95	757929	12.5	13.4	
63 2-ethoxy-2-methyl butane	87	8.384	8.384	0.000	93	1093520	12.5	12.4	
64 Methyl methacrylate	69	8.470	8.470	0.000	91	416300	12.5	11.3	
65 1,4-Dioxane	88	8.470	8.470	0.000	39	163566	625.0	869.0	M
66 Dibromomethane	93	8.488	8.488	0.000	95	383673	12.5	13.8	
67 Dichlorobromomethane	83	8.726	8.726	0.000	99	904227	12.5	13.2	
68 2-Nitropropane	41	9.012	9.012	0.000	98	1396972	125.0	122.0	
71 1-Bromo-2-chloroethane	63	9.116	9.116	0.000	99	848755	12.5	14.5	
72 cis-1,3-Dichloropropene	75	9.281	9.281	0.000	95	1131122	12.5	13.3	
73 4-Methyl-2-pentanone (MIBK)	43	9.470	9.470	0.000	98	6310869	125.0	123.4	
$ 74 Toluene-d8 (Surr)	98	9.598	9.598	0.000	94	1988199	10.0	9.80	
75 Toluene	92	9.677	9.677	0.000	98	1841683	12.5	12.1	
76 trans-1,3-Dichloropropene	75	9.945	9.945	0.000	94	970960	12.5	12.7	
78 Ethyl methacrylate	69	10.012	10.012	0.000	90	892083	12.5	13.8	
79 1,1,2-Trichloroethane	97	10.152	10.152	0.000	91	559890	12.5	13.3	
80 Tetrachloroethene	166	10.232	10.232	0.000	98	796559	12.5	11.7	
81 1,3-Dichloropropane	76	10.317	10.317	0.000	93	979712	12.5	13.2	
82 2-Hexanone	43	10.378	10.378	0.000	98	4613703	125.0	127.7	
83 Chlorodibromomethane	129	10.536	10.536	0.000	90	685835	12.5	14.0	
84 Ethylene Dibromide	107	10.646	10.646	0.000	99	563119	12.5	13.5	
* 85 Chlorobenzene-d5 (IS)	117	11.085	11.085	0.000	85	1552890	10.0	10.0	
86 1-Chlorohexane	91	11.097	11.097	0.000	97	998149	12.5	11.5	
87 Chlorobenzene	112	11.109	11.109	0.000	94	2092398	12.5	12.1	
89 1,1,1,2-Tetrachloroethane	131	11.201	11.201	0.000	96	738912	12.5	12.6	
90 Ethylbenzene	91	11.201	11.201	0.000	98	3638679	12.5	12.0	
91 m-Xylene & p-Xylene	106	11.317	11.317	0.000	0	2856994	25.0	24.2	
92 o-Xylene	106	11.652	11.652	0.000	96	1410502	12.5	12.2	
93 Styrene	104	11.664	11.664	0.000	93	2446015	12.5	12.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
94 Bromoform	173	11.823	11.823	0.000	97	423837	12.5	15.6	
95 Isopropylbenzene	105	11.957	11.957	0.000	96	3663233	12.5	12.0	
$ 98 4-Bromofluorobenzene (Surr)	95	12.097	12.097	0.000	93	768750	10.0	10.1	
99 1,1,2,2-Tetrachloroethane	83	12.207	12.207	0.000	94	759517	12.5	13.5	
100 Bromobenzene	156	12.219	12.219	0.000	96	960261	12.5	12.4	
101 trans-1,4-Dichloro-2-butene	53	12.231	12.231	0.000	92	705336	125.0	45.3	
102 1,2,3-Trichloropropane	110	12.256	12.256	0.000	85	205042	12.5	13.4	
103 N-Propylbenzene	91	12.286	12.286	0.000	99	4319753	12.5	11.9	
104 2-Chlorotoluene	126	12.365	12.365	0.000	97	886458	12.5	11.9	
105 1,3,5-Trimethylbenzene	105	12.426	12.426	0.000	94	3185922	12.5	11.9	
106 4-Chlorotoluene	126	12.457	12.457	0.000	98	936522	12.5	12.1	
107 tert-Butylbenzene	134	12.670	12.670	0.000	94	678249	12.5	11.6	
108 Pentachloroethane	167	12.701	12.701	0.000	92	588824	12.5	13.5	
109 1,2,4-Trimethylbenzene	105	12.713	12.713	0.000	97	3333832	12.5	12.1	
110 sec-Butylbenzene	105	12.835	12.835	0.000	94	4126112	12.5	11.9	
111 1,3-Dichlorobenzene	146	12.932	12.932	0.000	99	1895376	12.5	12.3	
112 4-Isopropyltoluene	119	12.944	12.944	0.000	97	3635191	12.5	12.0	
* 113 1,4-Dichlorobenzene-d4	152	12.993	12.993	0.000	94	901265	10.0	10.0	
114 1,4-Dichlorobenzene	146	13.005	13.005	0.000	94	1925116	12.5	12.1	
115 1,2,3-Trimethylbenzene	120	13.018	13.018	0.000	99	1474150	12.5	12.2	
116 Benzyl chloride	126	13.091	13.091	0.000	99	325387	12.5	14.5	
119 n-Butylbenzene	92	13.237	13.237	0.000	96	1860977	12.5	12.2	
120 1,2-Dichlorobenzene	146	13.274	13.274	0.000	99	1797488	12.5	12.3	
118 p-Diethylbenzene	119	13.292	13.292	0.000	86	1850874	12.5	12.1	
123 1,2-Dibromo-3-Chloropropane	155	13.822	13.822	0.000	86	115252	12.5	14.9	
124 1,3,5-Trichlorobenzene	180	13.944	13.944	0.000	98	1533910	12.5	12.2	
125 1,2,4-Trichlorobenzene	180	14.371	14.371	0.000	94	1391079	12.5	12.3	
126 Hexachlorobutadiene	225	14.456	14.456	0.000	97	671778	12.5	12.2	
127 Naphthalene	128	14.554	14.554	0.000	97	2567169	12.5	12.7	
128 1,2,3-Trichlorobenzene	180	14.700	14.700	0.000	95	1189839	12.5	11.9	
129 2-Methylnaphthalene	142	15.322	15.322	0.000	92	1526188	12.5	11.2	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Review Flags

M - Manually Integrated

Reagents:

MSV_RV1_826_00024	Amount Added: 25.00	Units: uL	
MSV_RV4_826_00028	Amount Added: 25.00	Units: uL	
MSV_RV4GAS826_00083	Amount Added: 25.00	Units: uL	
MSV_HP25_ISSS_00014	Amount Added: 1.00	Units: uL	Run Reagent

Report Date: 05-Oct-2020 11:37:59 Chrom Revision: 2.3 24-Sep-2020 19:22:38

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05C01.D

Injection Date: 05-Oct-2020 10:03:30 Instrument ID: 10193 Operator ID: dvv10203

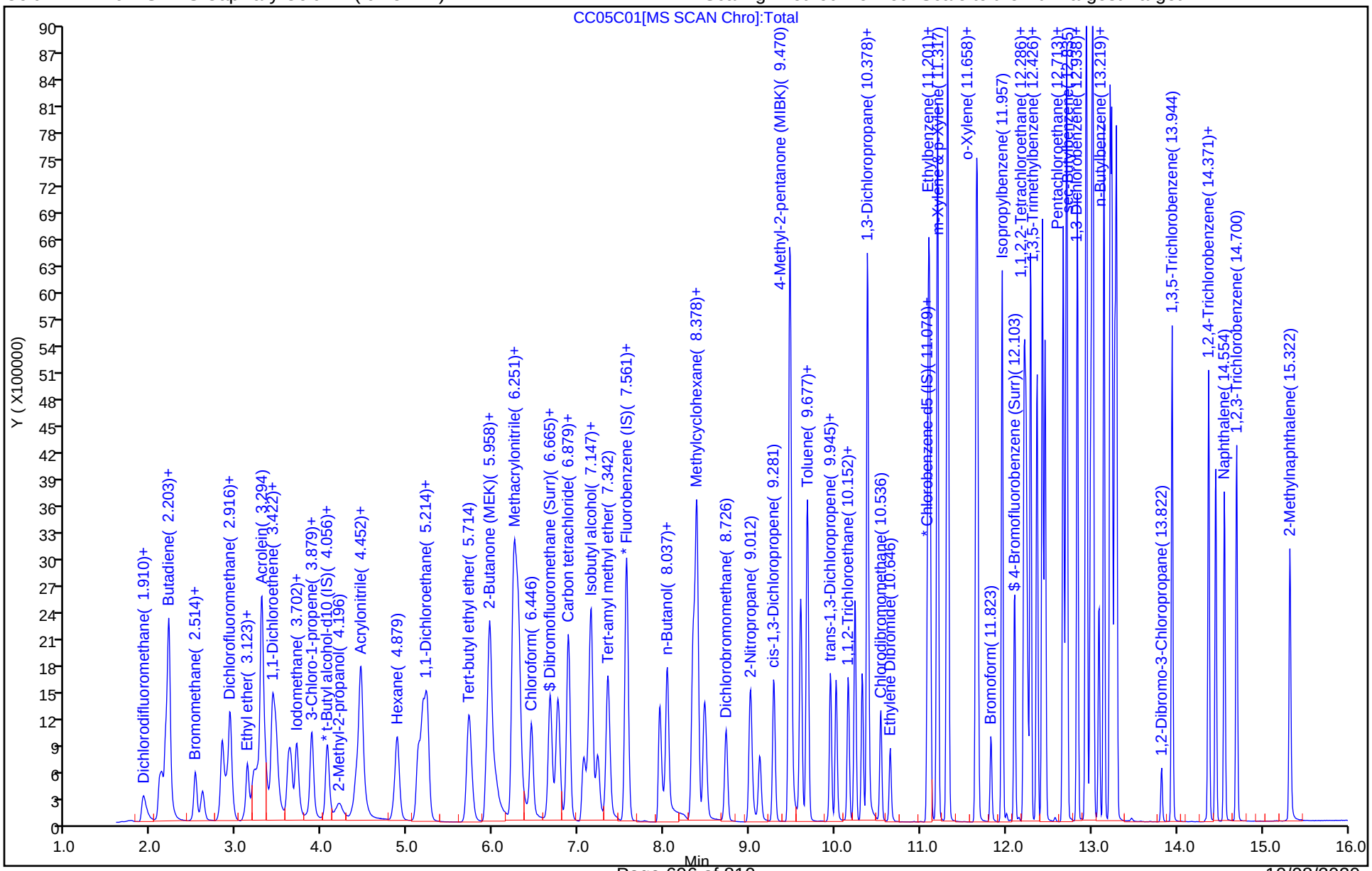
Lims ID: CCVIS VSTD12.5 Worklist Smp#: 3

Client ID:

Purge Vol: 25.000 mL Dil. Factor: 1.0000 ALS Bottle#: 2

Method: MSV_10193_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



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

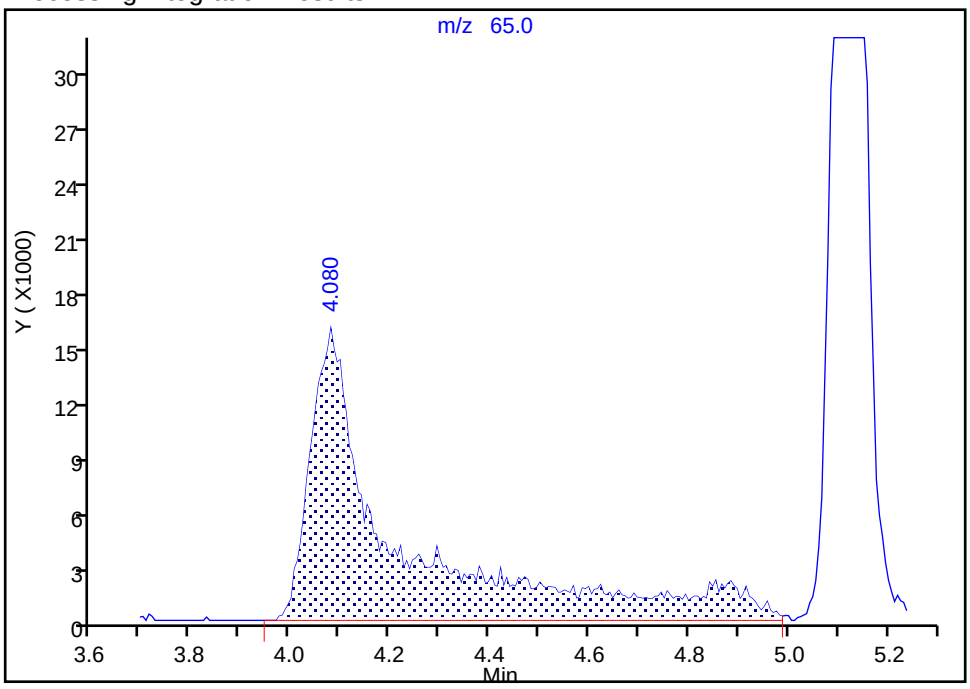
Data File: \\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05C01.D
Injection Date: 05-Oct-2020 10:03:30 Instrument ID: 10193
Lims ID: CCVIS VSTD12.5
Client ID:
Operator ID: dvv10203 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

* 25 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

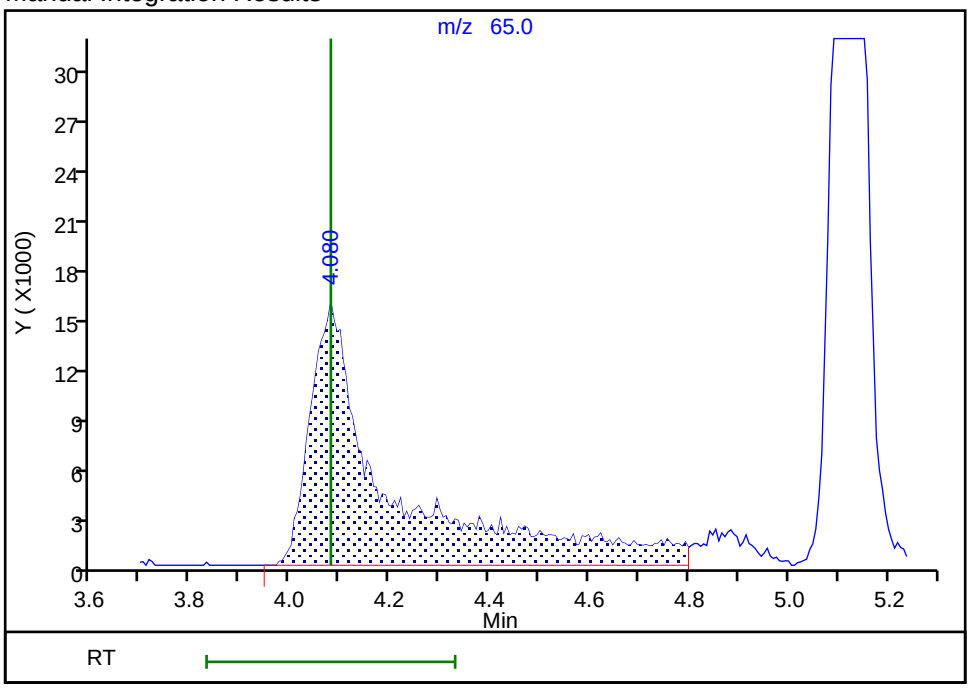
Processing Integration Results

RT: 4.08
Area: 191089
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 4.08
Area: 176637
Amount: 50.000000
Amount Units: ug/l



Reviewer: virayd, 05-Oct-2020 11:09:36
Audit Action: Split an Integrated Peak Audit Reason: Other

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

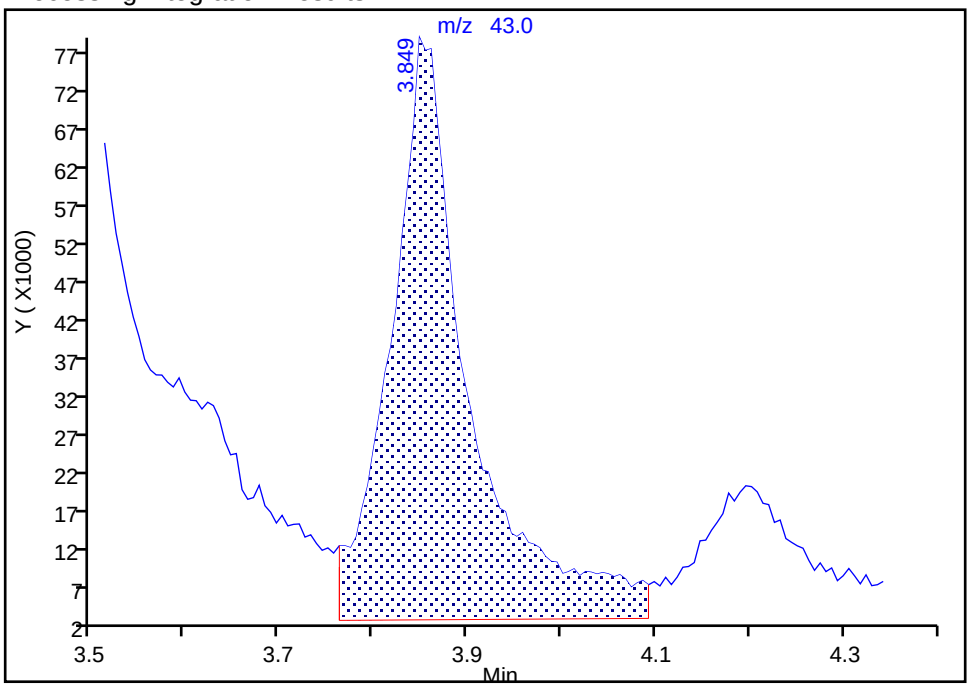
Data File: \\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05C01.D
Injection Date: 05-Oct-2020 10:03:30 Instrument ID: 10193
Lims ID: CCVIS VSTD12.5
Client ID:
Operator ID: dvv10203 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

22 Methyl acetate, CAS: 79-20-9

Signal: 1

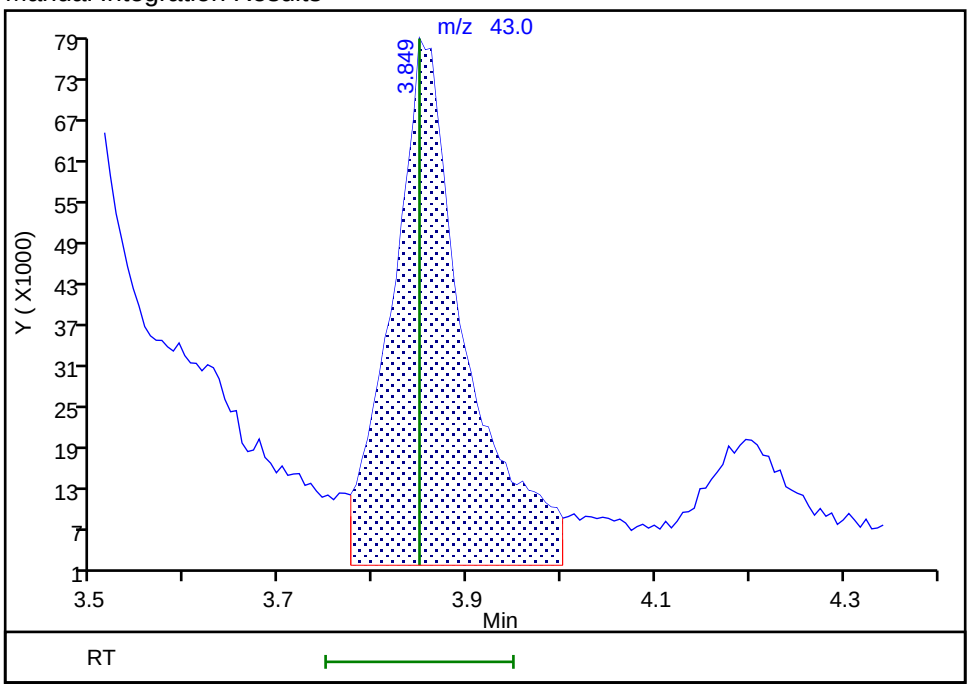
RT: 3.85
Area: 443998
Amount: 13.913068
Amount Units: ug/l

Processing Integration Results



Manual Integration Results

RT: 3.85
Area: 418913
Amount: 14.201026
Amount Units: ug/l



Reviewer: virayd, 05-Oct-2020 11:09:24
Audit Action: Manually Integrated Audit Reason: Other

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

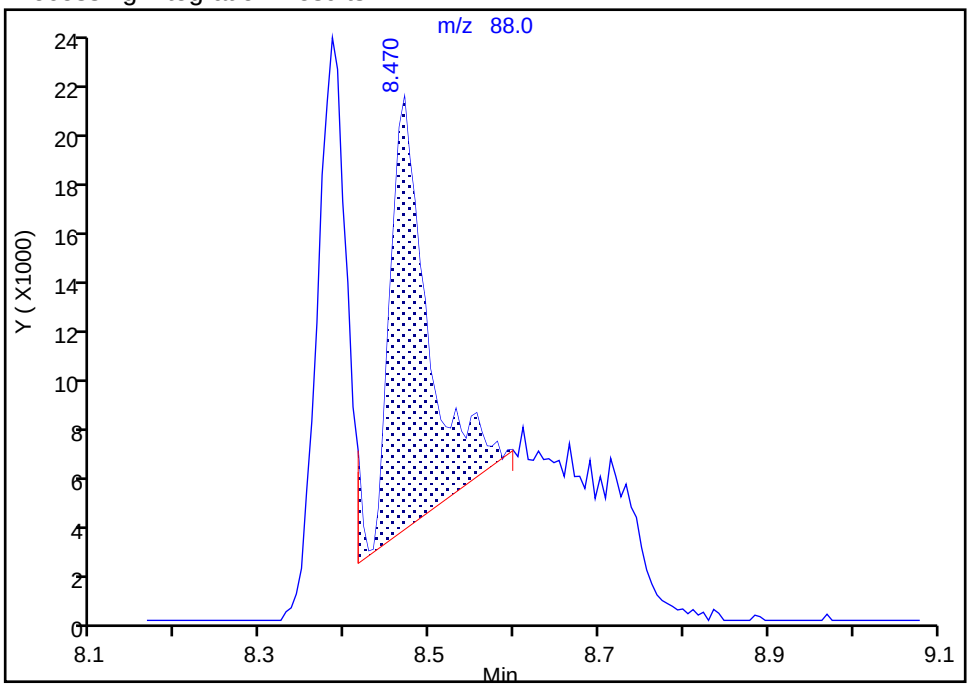
Data File:	\\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05C01.D				
Injection Date:	05-Oct-2020 10:03:30	Instrument ID:	10193		
Lims ID:	CCVIS VSTD12.5				
Client ID:					
Operator ID:	dvv10203	ALS Bottle#:	2	Worklist Smp#:	3
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

65 1,4-Dioxane, CAS: 123-91-1

Signal: 1

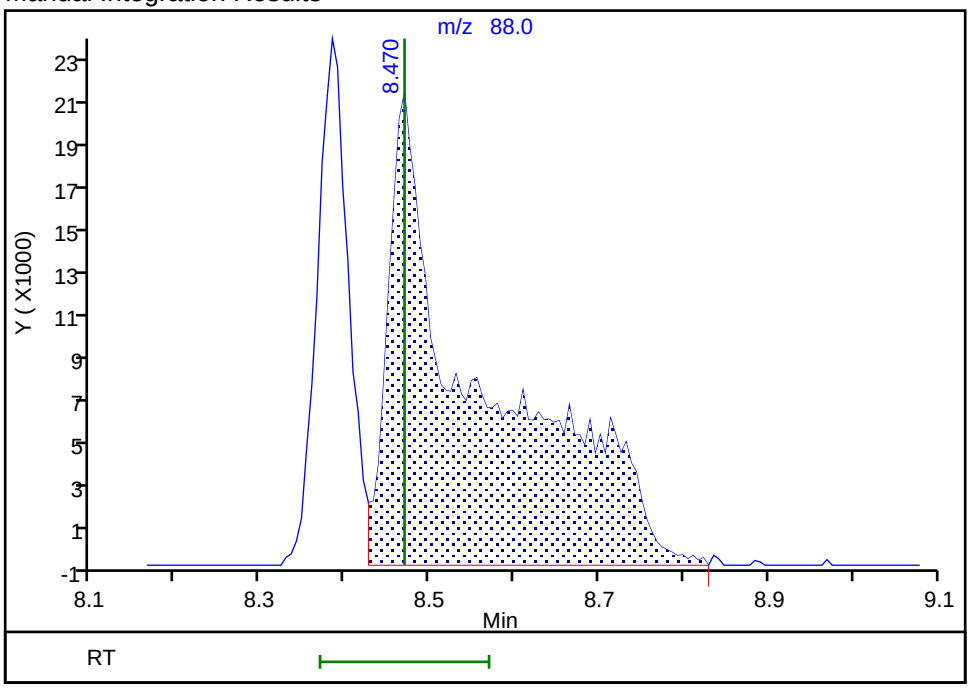
Processing Integration Results

RT: 8.47
Area: 56846
Amount: 302.0111
Amount Units: ug/l



Manual Integration Results

RT: 8.47
Area: 163566
Amount: 868.9925
Amount Units: ug/l



Reviewer: virayd, 05-Oct-2020 11:10:06
Audit Action: Manually Integrated Audit Reason: Other

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-15232-1

SDG No.:

Lab Sample ID: ICV 410-42158/10 Calibration Date: 09/09/2020 18:23

Instrument ID: 19930 Calib Start Date: 09/09/2020 15:55

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 09/09/2020 18:02

Lab File ID: IS09V01.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	0.4025	0.4407	0.1000	5.47	5.00	9.5	30.0
Chloromethane	Ave	0.4052	0.4312	0.1000	5.32	5.00	6.4	30.0
1,3-Butadiene	Ave	0.3778	0.3254		4.31	5.00	-13.9	30.0
Vinyl chloride	Ave	0.4014	0.4555	0.1000	5.67	5.00	13.5	30.0
Bromomethane	Ave	0.3606	0.4101	0.1000	5.69	5.00	13.7	30.0
Chloroethane	Ave	0.2621	0.2836	0.1000	5.41	5.00	8.2	30.0
Dichlorofluoromethane	Ave	0.6393	0.6464		5.06	5.00	1.1	30.0
Trichlorofluoromethane	Ave	0.6123	0.6376	0.1000	5.21	5.00	4.1	30.0
Ethyl ether	Ave	0.1858	0.1860		5.01	5.01	0.1	30.0
Freon 123a	Ave	0.3106	0.3101		4.99	5.00	-0.2	30.0
Acrolein	Ave	1.594	1.512		35.6	37.5	-5.1	30.0
1,1-Dichloroethene	Ave	0.2647	0.2641	0.1000	4.99	5.00	-0.2	30.0
Acetone	Ave	2.498	2.073	0.1000	31.1	37.5	-17.0	30.0
Freon 113	Ave	0.2787	0.2597	0.1000	4.66	5.00	-6.8	30.0
Methyl iodide	Ave	0.5556	0.5081		4.57	5.00	-8.6	30.0
Ethyl bromide	Ave	0.2269	0.2213		4.81	4.93	-2.5	30.0
Carbon disulfide	Ave	0.7079	0.6646	0.1000	4.69	5.00	-6.1	30.0
Methyl acetate	Ave	7.050	5.638	0.1000	4.00	5.00	-20.0	30.0
Allyl chloride	Ave	0.3456	0.3367		4.87	5.00	-2.6	30.0
Methylene Chloride	Ave	0.2738	0.2768	0.1000	5.05	5.00	1.1	30.0
t-Butyl alcohol	Ave	1.036	0.9767		47.1	50.0	-5.7	30.0
Acrylonitrile	Ave	2.784	2.783		25.0	25.0	-0.0	30.0
Methyl tert-butyl ether	Ave	0.6912	0.6777	0.1000	4.90	5.00	-1.9	30.0
trans-1,2-Dichloroethene	Ave	0.2962	0.2936	0.1000	4.96	5.00	-0.9	30.0
n-Hexane	Ave	0.3410	0.3370		4.94	5.00	-1.2	30.0
1,1-Dichloroethane	Ave	0.4804	0.4870	0.2000	5.07	5.00	1.4	30.0
di-Isopropyl ether	Ave	0.7342	0.7360		5.01	5.00	0.2	30.0
2-Chloro-1,3-butadiene	Ave	0.4092	0.4036		4.93	5.00	-1.4	30.0
Ethyl t-butyl ether	Ave	0.7757	0.7769		5.01	5.00	0.1	30.0
2-Butanone (MEK)	Ave	3.740	3.587	0.1000	36.0	37.5	-4.1	30.0
cis-1,2-Dichloroethene	Ave	0.3400	0.3549	0.1000	5.22	5.00	4.4	30.0
2,2-Dichloropropane	Ave	0.4694	0.4765		5.08	5.00	1.5	30.0
Propionitrile	Ave	1.094	0.9717		33.3	37.5	-11.2	30.0
Methacrylonitrile	Ave	4.097	3.950		36.2	37.5	-3.6	30.0
Bromochloromethane	Ave	0.1558	0.1473		4.73	5.00	-5.5	30.0
Tetrahydrofuran	Ave	1.207	1.215		25.2	25.0	0.6	30.0
Chloroform	Ave	0.5402	0.5504	0.2000	5.09	5.00	1.9	30.0
1,1,1-Trichloroethane	Ave	0.5413	0.5416	0.1000	5.00	5.00	0.0	30.0
Cyclohexane	Ave	0.4151	0.4194	0.1000	5.05	5.00	1.0	30.0
1,1-Dichloropropene	Ave	0.4009	0.4012		5.00	5.00	0.0	30.0
Carbon tetrachloride	Ave	0.4963	0.4948	0.1000	4.99	5.00	-0.3	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-15232-1

SDG No.:

Lab Sample ID: ICV 410-42158/10 Calibration Date: 09/09/2020 18:23

Instrument ID: 19930 Calib Start Date: 09/09/2020 15:55

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 09/09/2020 18:02

Lab File ID: IS09V01.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	0.3063	0.2930		120	125	-4.3	30.0
Benzene	Ave	1.175	1.171	0.5000	4.99	5.00	-0.3	30.0
1,2-Dichloroethane	Ave	0.3221	0.3184	0.1000	4.94	5.00	-1.2	30.0
t-Amyl methyl ether	Ave	0.7446	0.7665		5.15	5.00	2.9	30.0
n-Heptane	Ave	0.3221	0.3247		5.04	5.00	0.8	30.0
n-Butanol	Ave	0.2973	0.2939		247	250	-1.1	30.0
Trichloroethene	Ave	0.3438	0.3415	0.2000	4.97	5.00	-0.7	30.0
Methylcyclohexane	Ave	0.5053	0.5037	0.1000	4.98	5.00	-0.3	30.0
1,2-Dichloropropane	Ave	0.2728	0.2788	0.1000	5.11	5.00	2.2	30.0
Methyl methacrylate	Ave	8.010	7.991		4.99	5.00	-0.2	30.0
1,4-Dioxane	Ave	0.0827	0.0851	0.0050	129	125	2.9	30.0
Dibromomethane	Ave	0.1512	0.1539		5.09	5.00	1.8	30.0
Bromodichloromethane	Ave	0.3820	0.3955	0.2000	5.18	5.00	3.5	30.0
2-Nitropropane	Ave	2.435	2.215		4.55	5.00	-9.0	30.0
1-Bromo-2-chloroethane	Ave	0.2748	0.2764		5.03	5.00	0.6	30.0
cis-1,3-Dichloropropene	Ave	0.4291	0.4397	0.2000	5.12	5.00	2.5	30.0
4-Methyl-2-pentanone (MIBK)	Ave	9.823	9.332	0.1000	23.8	25.0	-5.0	30.0
Toluene	Ave	0.9763	0.9701	0.4000	4.97	5.00	-0.6	30.0
trans-1,3-Dichloropropene	Ave	0.4285	0.4320	0.1000	5.04	5.00	0.8	30.0
Ethyl methacrylate	Ave	0.3349	0.3551		5.30	5.00	6.0	30.0
1,1,2-Trichloroethane	Ave	0.2593	0.2722	0.1000	5.25	5.00	5.0	30.0
Tetrachloroethene	Ave	0.4941	0.4847	0.2000	4.91	5.00	-1.9	30.0
1,3-Dichloropropane	Ave	0.4155	0.4174		5.02	5.00	0.5	30.0
2-Hexanone	Ave	6.871	6.752	0.1000	24.6	25.0	-1.7	30.0
Dibromochloromethane	Ave	0.3453	0.3537		5.12	5.00	2.5	30.0
1,2-Dibromoethane (EDB)	Ave	0.2668	0.2655	0.1000	4.98	5.00	-0.5	30.0
1-Chlorohexane	Ave	0.5735	0.5445		4.75	5.00	-5.1	30.0
Chlorobenzene	Ave	1.116	1.129	0.5000	5.06	5.00	1.1	30.0
1,1,1,2-Tetrachloroethane	Ave	0.4214	0.4221		5.01	5.00	0.2	30.0
Ethylbenzene	Ave	1.909	1.952	0.1000	5.11	5.00	2.2	30.0
m&p-Xylene	Ave	0.7823	0.8040	0.1000	10.3	10.0	2.8	30.0
o-Xylene	Ave	0.7777	0.7934	0.3000	5.10	5.00	2.0	30.0
Styrene	Ave	1.218	1.268	0.3000	5.21	5.00	4.1	30.0
Bromoform	Lin		0.1952	0.1000	4.27	5.00	-14.7	30.0
Isopropylbenzene	Ave	2.025	2.099	0.1000	5.18	5.00	3.7	30.0
1,1,2,2-Tetrachloroethane	Ave	0.5524	0.5626	0.3000	5.09	5.00	1.8	30.0
Bromobenzene	Ave	0.8650	0.8710		5.03	5.00	0.7	30.0
trans-1,4-Dichloro-2-butene	Ave	3.700	3.590		24.3	25.0	-3.0	30.0
1,2,3-Trichloropropane	Ave	0.1659	0.1711		5.15	5.00	3.1	30.0
N-Propylbenzene	Ave	3.924	4.110		5.24	5.00	4.7	30.0
2-Chlorotoluene	Ave	0.8355	0.8793		5.26	5.00	5.2	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-15232-1

SDG No.:

Lab Sample ID: ICV 410-42158/10 Calibration Date: 09/09/2020 18:23

Instrument ID: 19930 Calib Start Date: 09/09/2020 15:55

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 09/09/2020 18:02

Lab File ID: IS09V01.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	2.961	3.091		5.22	5.00	4.4	30.0
4-Chlorotoluene	Ave	0.8620	0.8863		5.14	5.00	2.8	30.0
tert-Butylbenzene	Ave	0.6852	0.6957		5.08	5.00	1.5	30.0
Pentachloroethane	Ave	0.5361	0.5537		5.16	5.00	3.3	30.0
1,2,4-Trimethylbenzene	Ave	3.024	3.144		5.20	5.00	4.0	30.0
sec-Butylbenzene	Ave	3.769	3.981		5.28	5.00	5.6	30.0
1,3-Dichlorobenzene	Ave	1.705	1.768	0.6000	5.18	5.00	3.7	30.0
p-Isopropyltoluene	Ave	3.293	3.497		5.31	5.00	6.2	30.0
1,4-Dichlorobenzene	Ave	1.715	1.785	0.5000	5.21	5.00	4.1	30.0
1,2,3-Trimethylbenzene	Ave	1.348	1.440		5.34	5.00	6.8	30.0
Benzyl chloride	Ave	0.2484	0.2566		5.16	5.00	3.3	30.0
n-Butylbenzene	Ave	1.503	1.574		5.24	5.00	4.8	30.0
1,2-Dichlorobenzene	Ave	1.536	1.627	0.4000	5.30	5.00	5.9	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.0880	0.0977	0.0500	5.55	5.00	11.0	30.0
1,3,5-Trichlorobenzene	Ave	1.137	1.206		5.30	5.00	6.0	30.0
1,2,4-Trichlorobenzene	Ave	0.9367	1.000	0.2000	5.34	5.00	6.7	30.0
Hexachlorobutadiene	Ave	0.3526	0.3769		5.34	5.00	6.9	30.0
Naphthalene	Ave	1.840	1.901		5.17	5.00	3.3	30.0
1,2,3-Trichlorobenzene	Ave	0.7991	0.8131		5.09	5.00	1.7	30.0
Dibromofluoromethane (Surr)	Ave	0.2703	0.2688		9.94	10.0	-0.6	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.0495	0.0493		9.96	10.0	-0.4	30.0
Toluene-d8 (Surr)	Ave	1.226	1.222		9.97	10.0	-0.3	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4754	0.4780		10.1	10.0	0.5	30.0

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09V01.D
Lims ID: ICV LG
Client ID:
Sample Type: ICV
Inject. Date: 09-Sep-2020 18:23:30 ALS Bottle#: 9 Worklist Smp#: 10
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: ICV LG
Misc. Info.: 410-0010046-010
Operator ID: dvv10203 Instrument ID: 19930
Sublist:

Method: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 11-Sep-2020 19:25:25 Calib Date: 09-Sep-2020 21:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1058

First Level Reviewer: virayd Date: 10-Sep-2020 09:44:45

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	1.971	1.971	0.000	99	493851	5.00	5.47	
4 Chloromethane	50	2.172	2.178	-0.006	99	483153	5.00	5.32	M
5 Vinyl chloride	62	2.288	2.288	0.000	98	510415	5.00	5.67	
6 Butadiene	39	2.288	2.294	-0.006	89	364665	5.00	4.31	M
7 Bromomethane	94	2.617	2.623	-0.006	92	459536	5.00	5.69	
8 Chloroethane	64	2.702	2.709	-0.007	99	317820	5.00	5.41	
9 Dichlorofluoromethane	67	2.946	2.946	0.000	97	724343	5.00	5.06	
10 Trichlorofluoromethane	101	3.013	3.013	0.000	98	714457	5.00	5.21	M
11 Ethyl ether	59	3.269	3.270	-0.001	88	208665	5.01	5.01	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.349	3.355	-0.006	90	347463	5.00	4.99	
13 Acrolein	56	3.440	3.446	-0.006	98	220553	37.5	35.6	
14 1,1-Dichloroethene	96	3.580	3.587	-0.007	97	295941	5.00	4.99	
15 Acetone	43	3.617	3.617	0.000	97	302321	37.5	31.1	
16 112TCTFE	101	3.617	3.623	-0.006	92	290966	5.00	4.66	
17 Iodomethane	142	3.782	3.788	-0.006	99	569316	5.00	4.57	
18 Ethyl bromide	108	3.812	3.812	0.000	99	244665	4.93	4.81	
19 Carbon disulfide	76	3.891	3.897	-0.006	99	744688	5.00	4.69	
21 Methyl acetate	43	4.044	4.044	0.000	97	109619	5.00	4.00	M
22 3-Chloro-1-propene	41	4.068	4.068	0.000	87	377298	5.00	4.87	
23 Methylene Chloride	84	4.251	4.263	-0.012	90	310129	5.00	5.05	
* 24 t-Butyl alcohol-d10 (IS)	65	4.269	4.281	-0.012	0	194436	50.0	50.0	
25 2-Methyl-2-propanol	59	4.409	4.403	0.006	99	189913	50.0	47.1	
26 Acrylonitrile	53	4.605	4.605	0.000	99	270540	25.0	25.0	
27 Methyl tert-butyl ether	73	4.666	4.678	-0.012	93	759387	5.00	4.90	
28 trans-1,2-Dichloroethene	96	4.684	4.678	0.006	96	328952	5.00	4.96	
29 Hexane	57	5.104	5.111	-0.007	91	377630	5.00	4.94	
31 1,1-Dichloroethane	63	5.342	5.348	-0.006	96	545637	5.00	5.07	
32 Isopropyl ether	45	5.403	5.403	0.000	91	824725	5.00	5.01	
33 2-Chloro-1,3-butadiene	53	5.452	5.452	0.000	91	452249	5.00	4.93	
34 Tert-butyl ethyl ether	59	5.927	5.928	-0.001	96	870503	5.00	5.01	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
36 2-Butanone (MEK)	43	6.141	6.135	0.006	98	523053	37.5	36.0	
37 cis-1,2-Dichloroethene	96	6.171	6.177	-0.006	81	397612	5.00	5.22	
38 2,2-Dichloropropane	77	6.190	6.196	-0.006	89	533960	5.00	5.08	
40 Propionitrile	54	6.232	6.232	0.000	99	141704	37.5	33.3	M
42 Methacrylonitrile	67	6.440	6.440	0.000	88	576031	37.5	36.2	
43 Chlorobromomethane	128	6.507	6.507	0.000	84	165006	5.00	4.73	
44 Tetrahydrofuran	71	6.513	6.513	0.000	77	118093	25.0	25.2	
45 Chloroform	83	6.653	6.653	0.000	93	616703	5.00	5.09	
$ 46 Dibromofluoromethane (Surr)	113	6.866	6.866	0.000	93	602385	10.0	9.94	
47 1,1,1-Trichloroethane	97	6.879	6.879	-0.001	97	606871	5.00	5.00	
48 Cyclohexane	56	6.976	6.976	0.000	88	469925	5.00	5.05	
50 Carbon tetrachloride	117	7.086	7.086	0.000	96	554470	5.00	4.99	
51 1,1-Dichloropropene	75	7.086	7.092	-0.006	94	449563	5.00	5.00	
52 Isobutyl alcohol	41	7.232	7.232	0.000	92	142438	125.0	119.6	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.317	7.318	-0.001	0	110552	10.0	9.96	
54 Benzene	78	7.348	7.348	0.000	96	1312504	5.00	4.99	
56 1,2-Dichloroethane	62	7.421	7.421	0.000	98	356729	5.00	4.94	
57 Tert-amyl methyl ether	73	7.531	7.537	-0.006	98	858889	5.00	5.15	
* 58 Fluorobenzene (IS)	96	7.750	7.750	0.000	99	2241008	10.0	10.0	
59 n-Heptane	43	7.756	7.763	-0.007	87	363846	5.00	5.04	
60 n-Butanol	56	8.104	8.110	-0.006	86	285743	250.0	247.2	M
61 Trichloroethene	95	8.226	8.226	0.000	97	382664	5.00	4.97	
62 Methylcyclohexane	83	8.537	8.531	0.006	92	564403	5.00	4.98	
63 1,2-Dichloropropane	63	8.555	8.555	0.000	82	312444	5.00	5.11	
64 Methyl methacrylate	69	8.634	8.634	0.000	85	155371	5.00	4.99	
65 1,4-Dioxane	88	8.653	8.640	0.013	31	41362	125.0	128.6	M
66 Dibromomethane	93	8.671	8.665	0.006	94	172422	5.00	5.09	
68 Dichlorobromomethane	83	8.902	8.903	-0.001	99	443214	5.00	5.18	
69 2-Nitropropane	41	9.165	9.171	-0.006	96	43077	5.00	4.55	
71 2-Chloroethyl vinyl ether	63		9.256				ND	ND	
72 1-Bromo-2-chloroethane	63	9.287	9.293	-0.006	99	309685	5.00	5.03	
73 cis-1,3-Dichloropropene	75	9.439	9.439	0.000	96	492654	5.00	5.12	
74 4-Methyl-2-pentanone (MIBK)	43	9.610	9.610	0.000	95	907223	25.0	23.8	
$ 75 Toluene-d8 (Surr)	98	9.744	9.750	-0.006	93	2288534	10.0	9.97	
76 Toluene	92	9.823	9.823	0.000	98	908035	5.00	4.97	
78 trans-1,3-Dichloropropene	75	10.079	10.073	0.006	91	404339	5.00	5.04	
79 Ethyl methacrylate	69	10.134	10.134	0.000	86	332399	5.00	5.30	
80 1,1,2-Trichloroethane	97	10.280	10.280	0.000	90	254822	5.00	5.25	
81 Tetrachloroethene	166	10.366	10.366	0.000	97	453742	5.00	4.91	
82 1,3-Dichloropropane	76	10.439	10.439	0.000	88	390701	5.00	5.02	
83 2-Hexanone	43	10.488	10.488	0.000	95	656406	25.0	24.6	
85 Chlorodibromomethane	129	10.652	10.652	0.000	89	331123	5.00	5.12	
86 Ethylene Dibromide	107	10.768	10.762	0.006	99	248539	5.00	4.98	
* 87 Chlorobenzene-d5 (IS)	117	11.189	11.189	0.000	84	1872080	10.0	10.0	
88 1-Chlorohexane	91	11.201	11.195	0.006	92	509684	5.00	4.75	
90 Chlorobenzene	112	11.219	11.219	0.000	97	1056720	5.00	5.06	
91 1,1,1,2-Tetrachloroethane	131	11.298	11.298	0.000	96	395068	5.00	5.01	
92 Ethylbenzene	91	11.304	11.305	-0.001	97	1826820	5.00	5.11	
93 m-Xylene & p-Xylene	106	11.414	11.414	0.000	100	1505104	10.0	10.3	
94 o-Xylene	106	11.743	11.743	0.000	96	742666	5.00	5.10	
95 Styrene	104	11.762	11.762	0.000	95	1187316	5.00	5.21	
96 Bromoform	173	11.920	11.914	0.006	96	182722	5.00	4.27	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
97 Isopropylbenzene	105	12.042	12.042	0.000	95	1965113	5.00	5.18	
$ 100 4-Bromofluorobenzene (Surr)	95	12.188	12.189	0.000	93	894859	10.0	10.1	
101 1,1,2,2-Tetrachloroethane	83	12.286	12.286	0.000	94	305386	5.00	5.09	
102 Bromobenzene	156	12.304	12.304	0.000	93	472759	5.00	5.03	
103 trans-1,4-Dichloro-2-butene	53	12.310	12.310	0.000	92	349041	25.0	24.3	
104 1,2,3-Trichloropropane	110	12.335	12.329	0.006	84	92847	5.00	5.15	
105 N-Propylbenzene	91	12.371	12.371	0.000	98	2230988	5.00	5.24	
106 2-Chlorotoluene	126	12.444	12.445	-0.001	97	477275	5.00	5.26	
107 1,3,5-Trimethylbenzene	105	12.505	12.506	-0.001	94	1677931	5.00	5.22	
108 4-Chlorotoluene	126	12.536	12.536	0.000	97	481051	5.00	5.14	
109 tert-Butylbenzene	134	12.743	12.749	-0.006	92	377602	5.00	5.08	
110 Pentachloroethane	167	12.780	12.780	0.000	93	300553	5.00	5.16	
111 1,2,4-Trimethylbenzene	105	12.786	12.786	0.000	97	1706694	5.00	5.20	
112 sec-Butylbenzene	105	12.908	12.908	0.000	94	2160786	5.00	5.28	
113 1,3-Dichlorobenzene	146	13.011	13.012	-0.001	98	959490	5.00	5.18	
114 4-Isopropyltoluene	119	13.018	13.018	0.000	96	1898131	5.00	5.31	
* 115 1,4-Dichlorobenzene-d4	152	13.066	13.066	0.000	94	1085585	10.0	10.0	
116 1,4-Dichlorobenzene	146	13.085	13.085	0.000	95	968956	5.00	5.21	
117 1,2,3-Trimethylbenzene	120	13.091	13.091	0.000	98	781885	5.00	5.34	
118 Benzyl chloride	126	13.158	13.158	0.000	98	139288	5.00	5.16	
119 n-Butylbenzene	92	13.304	13.304	0.000	96	854493	5.00	5.24	
120 1,2-Dichlorobenzene	146	13.341	13.341	0.000	99	883083	5.00	5.30	
122 1,2-Dibromo-3-Chloropropane	155	13.883	13.883	0.000	90	53031	5.00	5.55	
123 1,3,5-Trichlorobenzene	180	14.011	14.011	0.000	98	654402	5.00	5.30	
124 1,2,4-Trichlorobenzene	180	14.432	14.432	0.000	94	542662	5.00	5.34	
125 Hexachlorobutadiene	225	14.511	14.511	0.000	97	204563	5.00	5.34	
126 Naphthalene	128	14.615	14.615	0.000	96	1031767	5.00	5.17	
127 1,2,3-Trichlorobenzene	180	14.755	14.755	0.000	95	441334	5.00	5.09	
134 Isopropyl alcohol	45		0.000				ND	ND	
135 p-Diethylbenzene	1		0.000				ND	ND	
137 2-Methylnaphthalene	142		0.000				ND	ND	
144 2-ethoxy-2-methyl butane	1		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MSV_Q_EE_00002	Amount Added:	12.50	Units: uL	
MSV_Q_QVOA1_00045	Amount Added:	12.50	Units: uL	
MSV_Q_QARC_00044	Amount Added:	12.50	Units: uL	
MSV_Q_QVOA6_00042	Amount Added:	12.50	Units: uL	
MSV_QGAS_826_00072	Amount Added:	12.50	Units: uL	
MSV_Q_ETBR_00003	Amount Added:	12.50	Units: uL	
MSV_31_826ISS_00003	Amount Added:	5.00	Units: uL	Run Reagent

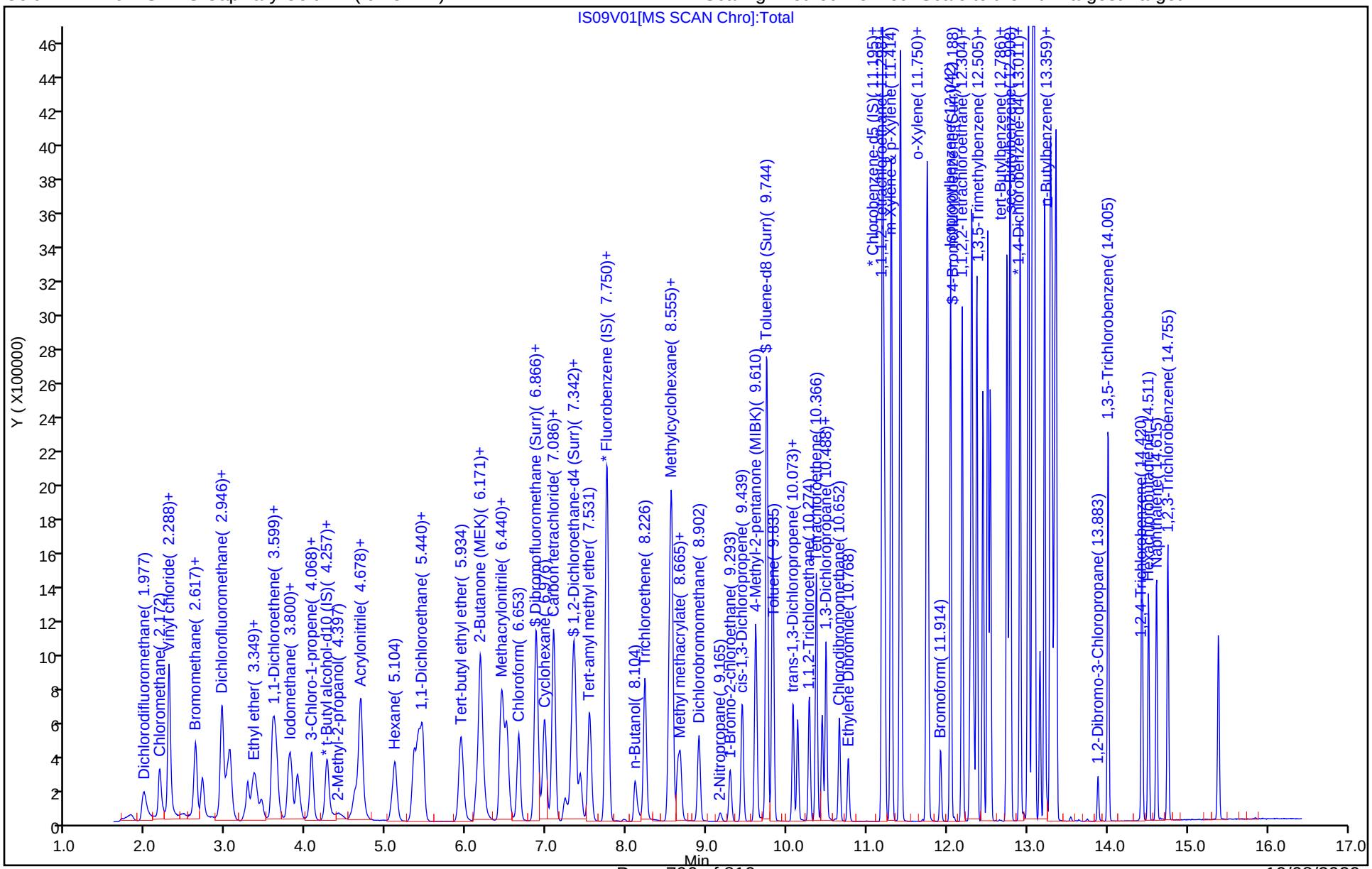
Report Date: 11-Sep-2020 19:25:30 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09V01.D

Injection Date:	09-Sep-2020 18:23:30	Instrument ID:	19930	Operator ID:	dvv10203
Lims ID:	ICV LG			Worklist Smp#:	10
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	8260 25ml HP31	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



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

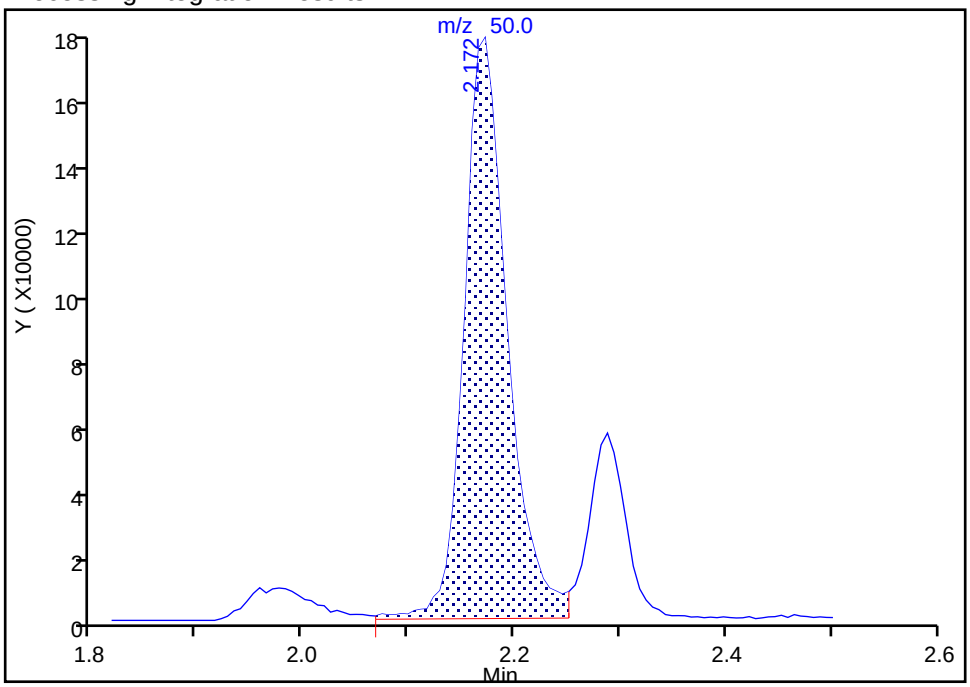
Data File:	\\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09V01.D				
Injection Date:	09-Sep-2020 18:23:30	Instrument ID:	19930		
Lims ID:	ICV LG				
Client ID:					
Operator ID:	dvv10203	ALS Bottle#:	9	Worklist Smp#:	10
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

4 Chloromethane, CAS: 74-87-3

Signal: 1

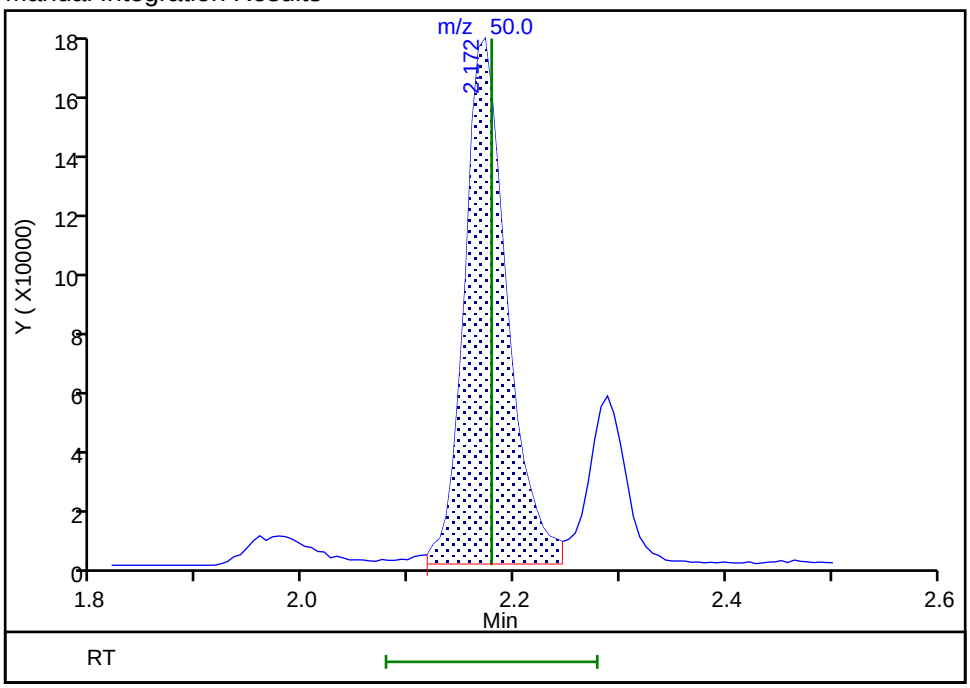
Processing Integration Results

RT: 2.17
Area: 489791
Amount: 5.393391
Amount Units: ug/l



Manual Integration Results

RT: 2.17
Area: 483153
Amount: 5.320296
Amount Units: ug/l



Reviewer: beckerk, 11-Sep-2020 18:22:21

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

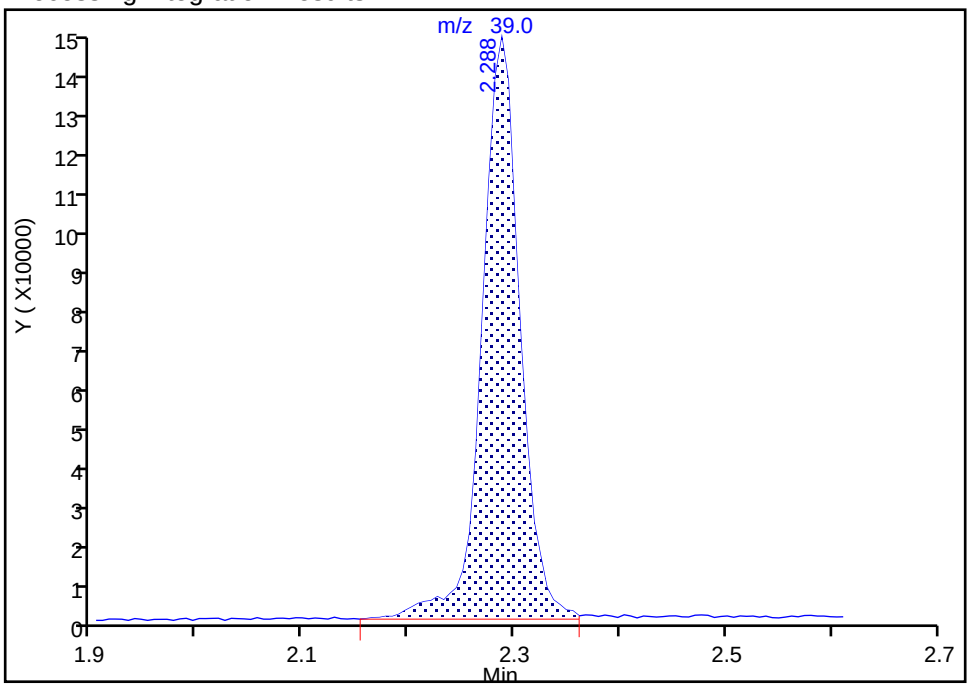
Data File:	\\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09V01.D				
Injection Date:	09-Sep-2020 18:23:30	Instrument ID:	19930		
Lims ID:	ICV LG				
Client ID:					
Operator ID:	dvv10203	ALS Bottle#:	9	Worklist Smp#:	10
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

6 Butadiene, CAS: 106-99-0

Signal: 1

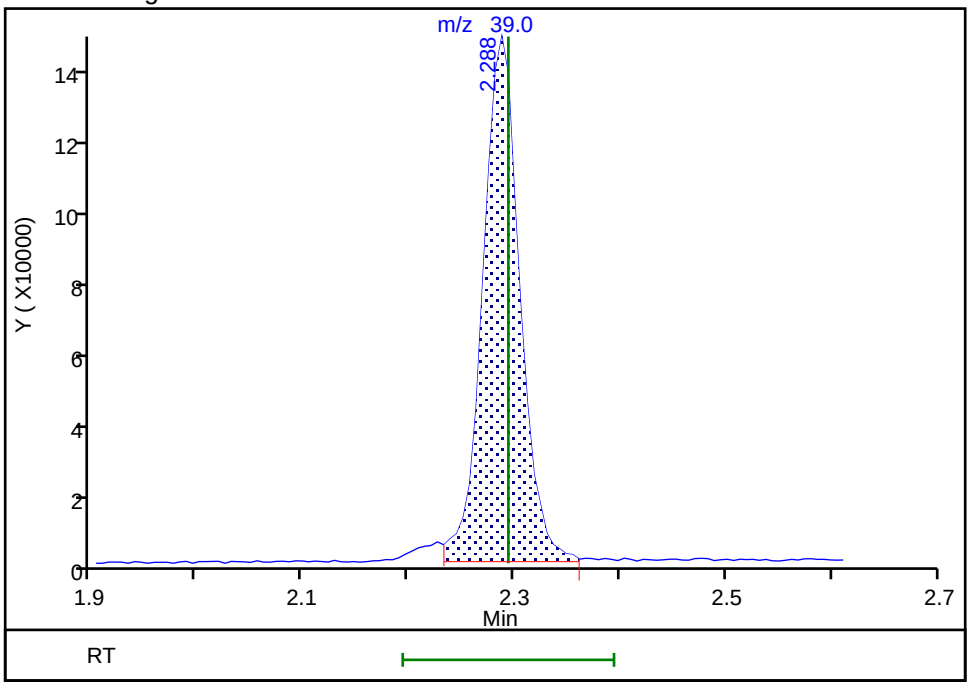
Processing Integration Results

RT: 2.29
Area: 375921
Amount: 4.439786
Amount Units: ug/l



Manual Integration Results

RT: 2.29
Area: 364665
Amount: 4.306847
Amount Units: ug/l



Reviewer: beckerk, 11-Sep-2020 18:22:34

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

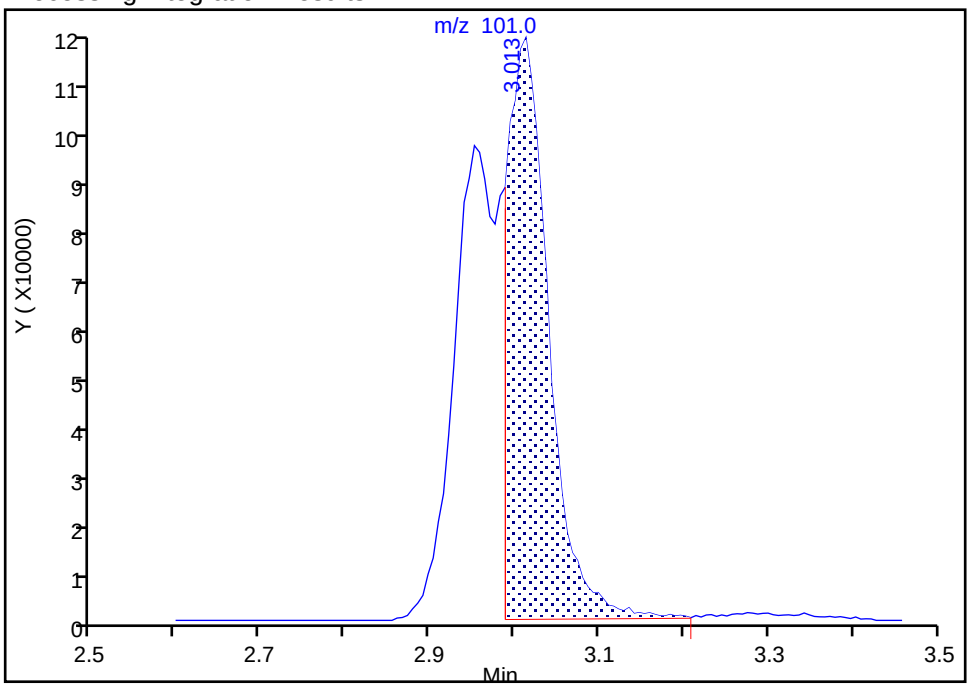
Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09V01.D
Injection Date: 09-Sep-2020 18:23:30 Instrument ID: 19930
Lims ID: ICV LG
Client ID:
Operator ID: dvv10203 ALS Bottle#: 9 Worklist Smp#: 10
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

10 Trichlorofluoromethane, CAS: 75-69-4

Signal: 1

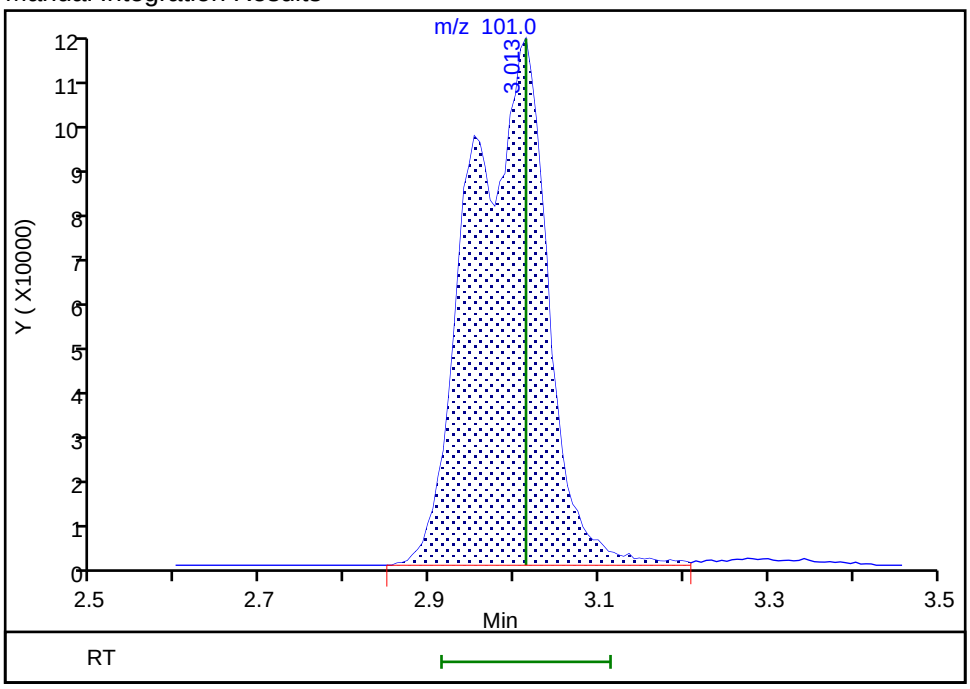
Processing Integration Results

RT: 3.01
Area: 381695
Amount: 2.781909
Amount Units: ug/l



Manual Integration Results

RT: 3.01
Area: 714457
Amount: 5.207179
Amount Units: ug/l



Reviewer: campbellme, 09-Sep-2020 22:37:08
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

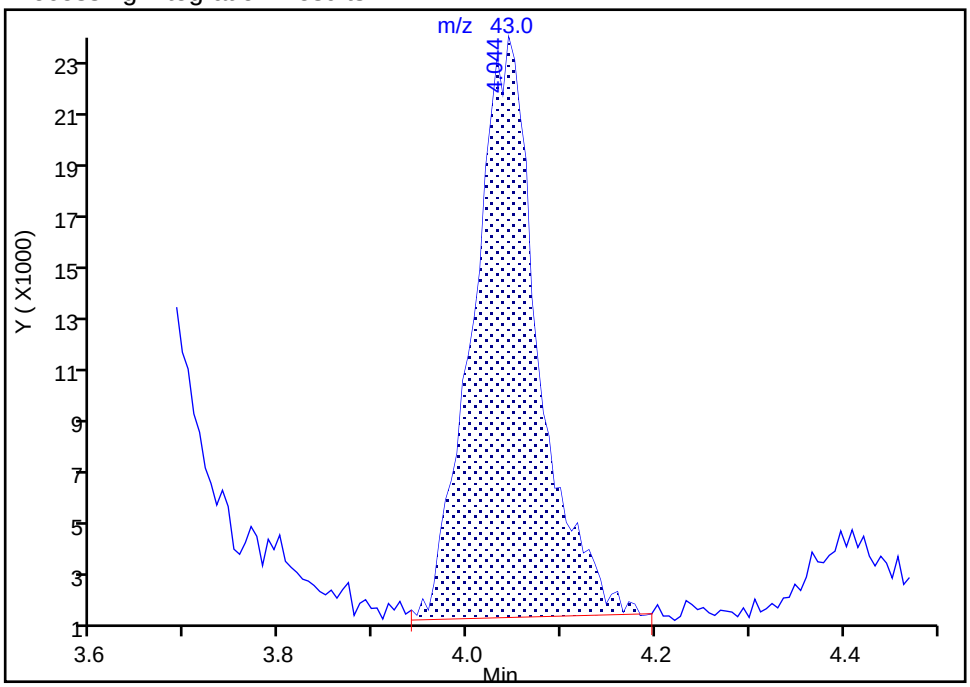
Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09V01.D
Injection Date: 09-Sep-2020 18:23:30 Instrument ID: 19930
Lims ID: ICV LG
Client ID:
Operator ID: dvv10203 ALS Bottle#: 9 Worklist Smp#: 10
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

21 Methyl acetate, CAS: 79-20-9

Signal: 1

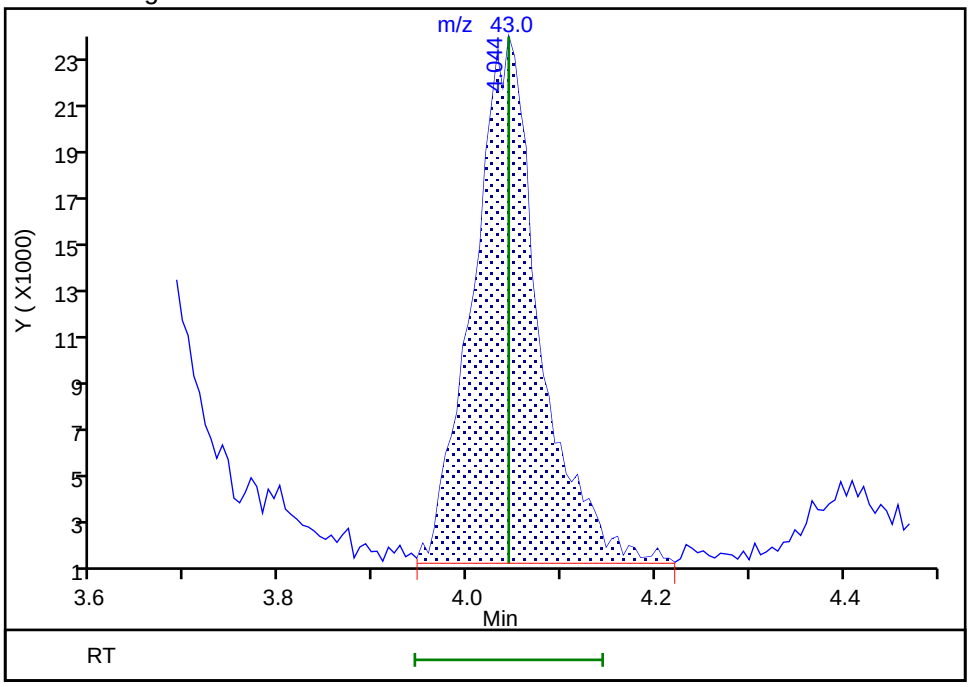
Processing Integration Results

RT: 4.04
Area: 106743
Amount: 4.428125
Amount Units: ug/l



Manual Integration Results

RT: 4.04
Area: 109619
Amount: 3.998624
Amount Units: ug/l



Reviewer: campbellme, 09-Sep-2020 22:37:36
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

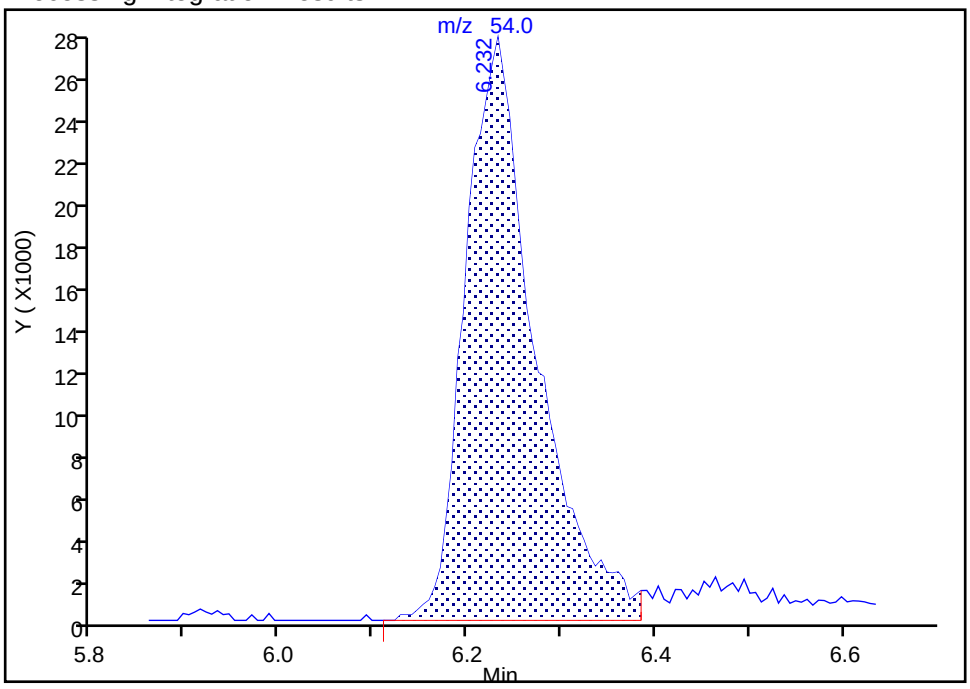
Data File:	\\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09V01.D				
Injection Date:	09-Sep-2020 18:23:30	Instrument ID:	19930		
Lims ID:	ICV LG				
Client ID:					
Operator ID:	dvv10203	ALS Bottle#:	9	Worklist Smp#:	10
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

40 Propionitrile, CAS: 107-12-0

Signal: 1

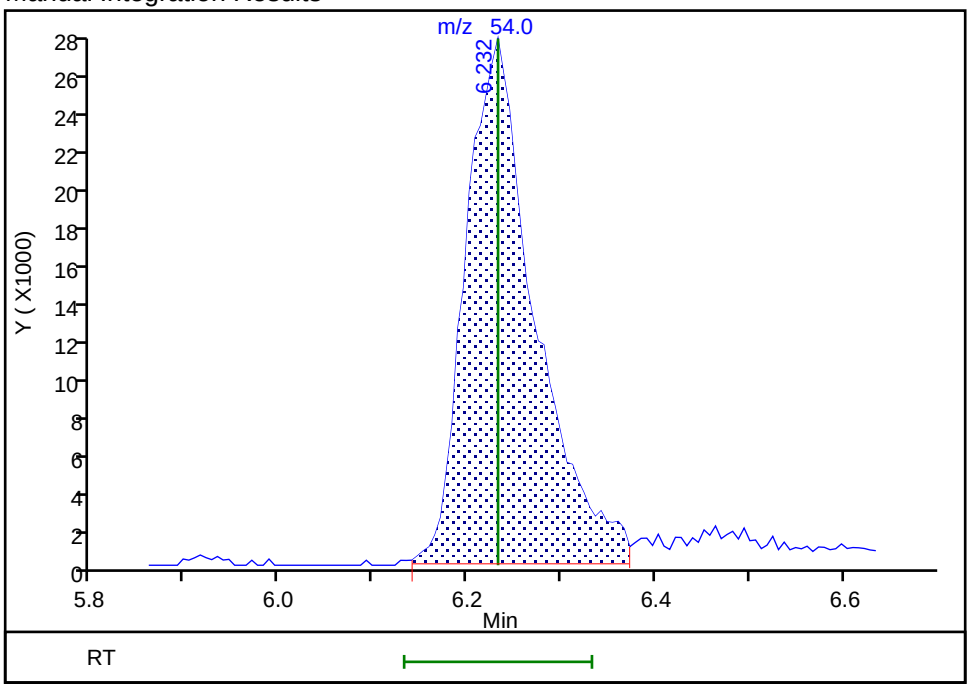
Processing Integration Results

RT: 6.23
Area: 143903
Amount: 33.820167
Amount Units: ug/l



Manual Integration Results

RT: 6.23
Area: 141704
Amount: 33.303357
Amount Units: ug/l



Reviewer: beckerk, 11-Sep-2020 18:24:01
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

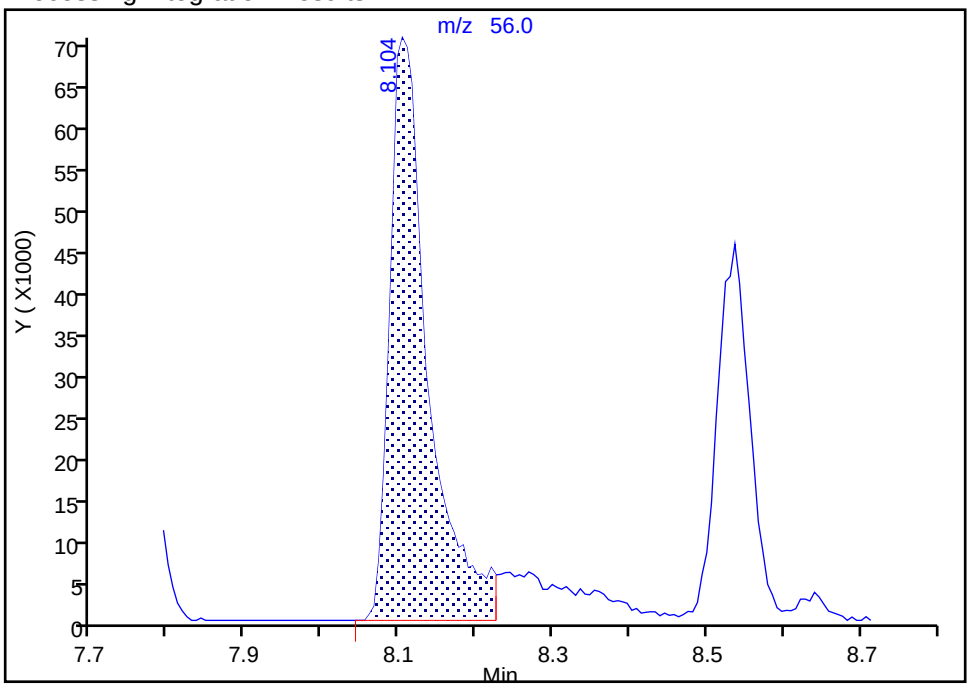
Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09V01.D
Injection Date: 09-Sep-2020 18:23:30 Instrument ID: 19930
Lims ID: ICV LG
Client ID:
Operator ID: dvv10203 ALS Bottle#: 9 Worklist Smp#: 10
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

60 n-Butanol, CAS: 71-36-3

Signal: 1

Processing Integration Results

RT: 8.10
Area: 241520
Amount: 208.9377
Amount Units: ug/l



Manual Integration Results

RT: 8.10
Area: 285743
Amount: 247.1947
Amount Units: ug/l

Reviewer: campbellme, 09-Sep-2020 22:38:14
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

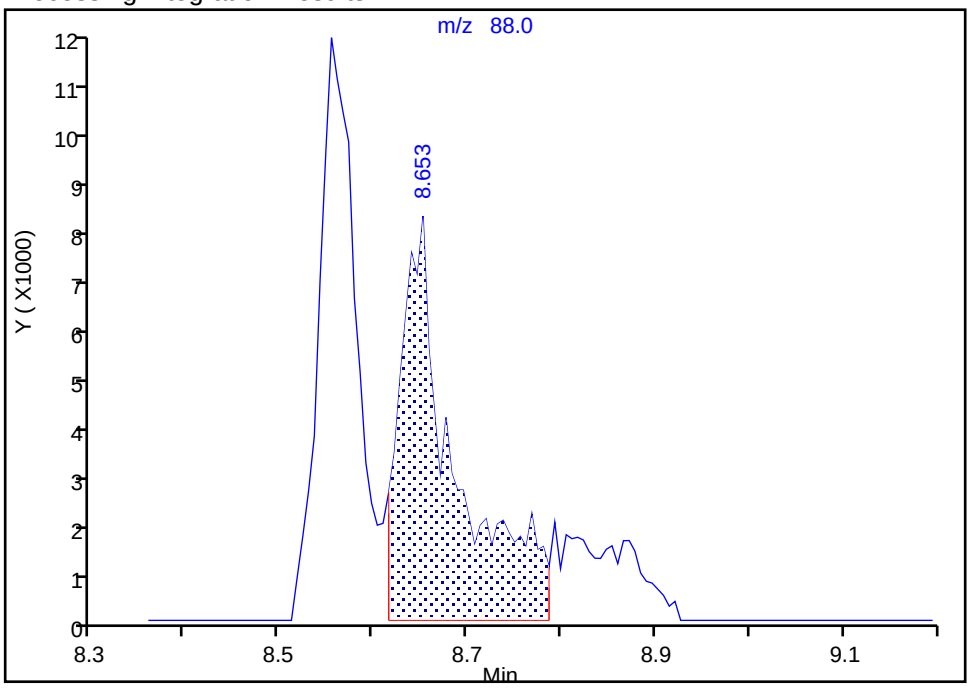
Data File:	\\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09V01.D				
Injection Date:	09-Sep-2020 18:23:30	Instrument ID:	19930		
Lims ID:	ICV LG				
Client ID:					
Operator ID:	dvv10203	ALS Bottle#:	9	Worklist Smp#:	10
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

65 1,4-Dioxane, CAS: 123-91-1

Signal: 1

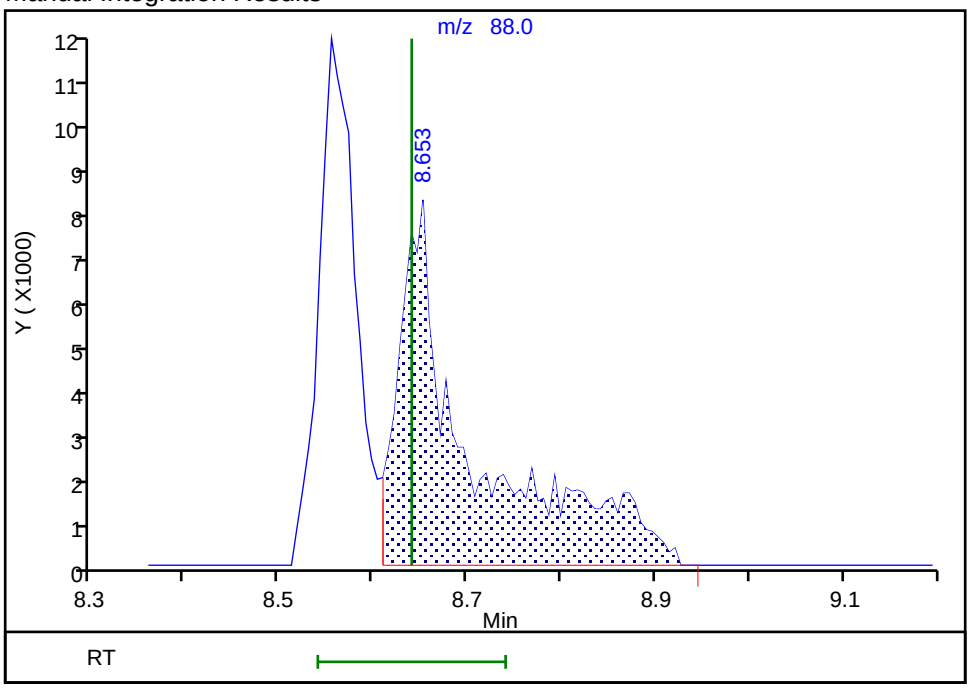
Processing Integration Results

RT: 8.65
Area: 31404
Amount: 97.640464
Amount Units: ug/l



Manual Integration Results

RT: 8.65
Area: 41362
Amount: 128.6016
Amount Units: ug/l



Reviewer: campbellme, 09-Sep-2020 22:38:29

Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-15232-1

SDG No.:

Lab Sample ID: CCVIS 410-50506/3 Calibration Date: 10/03/2020 07:35

Instrument ID: 19930 Calib Start Date: 09/09/2020 15:55

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 09/09/2020 18:02

Lab File ID: IS21X02.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	0.4025	0.3499	0.1000	8.69	10.0	-13.1	20.0
Chloromethane	Ave	0.4052	0.3821	0.1000	9.43	10.0	-5.7	20.0
1,3-Butadiene	Ave	0.3778	0.4956		13.1	10.0	31.2*	20.0
Vinyl chloride	Ave	0.4014	0.3838	0.1000	9.56	10.0	-4.4	20.0
Bromomethane	Ave	0.3606	0.3252	0.1000	9.02	10.0	-9.8	20.0
Chloroethane	Ave	0.2621	0.2528	0.1000	9.65	10.0	-3.5	20.0
Dichlorofluoromethane	Ave	0.6393	0.6276		9.82	10.0	-1.8	20.0
Trichlorofluoromethane	Ave	0.6123	0.5879	0.1000	9.60	10.0	-4.0	20.0
Ethyl ether	Ave	0.1858	0.1876		10.1	10.0	1.0	20.0
Freon 123a	Ave	0.3106	0.3155		10.2	10.0	1.6	20.0
Acrolein	Ave	1.594	1.766		555	501	10.8	20.0
1,1-Dichloroethene	Ave	0.2647	0.2571	0.1000	9.71	10.0	-2.9	20.0
Acetone	Ave	2.498	2.239	0.1000	89.6	100	-10.4	20.0
Freon 113	Ave	0.2787	0.2919	0.1000	10.5	10.0	4.7	20.0
Methyl iodide	Ave	0.5556	0.4639		8.35	10.0	-16.5	20.0
Ethyl bromide	Ave	0.2269	0.1968		8.68	10.0	-13.3	20.0
Carbon disulfide	Ave	0.7079	0.6651	0.1000	9.40	10.0	-6.0	20.0
Methyl acetate	Ave	7.050	8.212	0.1000	11.6	10.0	16.5	20.0
Allyl chloride	Ave	0.3456	0.3527		10.2	10.0	2.1	20.0
Methylene Chloride	Ave	0.2738	0.2677	0.1000	9.78	10.0	-2.2	20.0
t-Butyl alcohol	Ave	1.036	0.8672		167	200	-16.3	20.0
Acrylonitrile	Ave	2.784	3.577		64.2	50.0	28.5*	20.0
Methyl tert-butyl ether	Ave	0.6912	0.6951	0.1000	10.1	10.0	0.6	20.0
trans-1,2-Dichloroethene	Ave	0.2962	0.2803	0.1000	9.46	10.0	-5.4	20.0
n-Hexane	Ave	0.3410	0.4015		11.8	10.0	17.7	20.0
1,1-Dichloroethane	Ave	0.4804	0.4964	0.2000	10.3	10.0	3.3	20.0
di-Isopropyl ether	Ave	0.7342	0.8027		10.9	10.0	9.3	20.0
2-Chloro-1,3-butadiene	Ave	0.4092	0.4375		10.7	10.0	6.9	20.0
Ethyl t-butyl ether	Ave	0.7757	0.8015		10.3	10.0	3.3	20.0
2-Butanone (MEK)	Ave	3.740	5.110	0.1000	137	100	36.6*	20.0
cis-1,2-Dichloroethene	Ave	0.3400	0.3288	0.1000	9.67	10.0	-3.3	20.0
2,2-Dichloropropane	Ave	0.4694	0.4740		10.1	10.0	1.0	20.0
Propionitrile	Ave	1.094	1.227		224	200	12.1	20.0
Methacrylonitrile	Ave	4.097	5.402		132	100	31.9*	20.0
Bromochloromethane	Ave	0.1558	0.1483		9.52	10.0	-4.8	20.0
Tetrahydrofuran	Ave	1.207	1.566		130	100	29.7*	20.0
Chloroform	Ave	0.5402	0.5501	0.2000	10.2	10.0	1.8	20.0
1,1,1-Trichloroethane	Ave	0.5413	0.5329	0.1000	9.84	10.0	-1.6	20.0
Cyclohexane	Ave	0.4151	0.4853	0.1000	11.7	10.0	16.9	20.0
1,1-Dichloropropene	Ave	0.4009	0.4154		10.4	10.0	3.6	20.0
Carbon tetrachloride	Ave	0.4963	0.4806	0.1000	9.68	10.0	-3.2	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-15232-1

SDG No.:

Lab Sample ID: CCVIS 410-50506/3 Calibration Date: 10/03/2020 07:35

Instrument ID: 19930 Calib Start Date: 09/09/2020 15:55

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 09/09/2020 18:02

Lab File ID: IS21X02.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	0.3063	0.3487		569	500	13.9	20.0
Benzene	Ave	1.175	1.195	0.5000	10.2	10.0	1.7	20.0
1,2-Dichloroethane	Ave	0.3221	0.3358	0.1000	10.4	10.0	4.2	20.0
t-Amyl methyl ether	Ave	0.7446	0.7650		10.3	10.0	2.7	20.0
n-Heptane	Ave	0.3221	0.4249		13.2	10.0	31.9*	20.0
n-Butanol	Ave	0.2973	0.2775		933	1000	-6.7	20.0
Trichloroethene	Ave	0.3438	0.3379	0.2000	9.83	10.0	-1.7	20.0
Methylcyclohexane	Ave	0.5053	0.5442	0.1000	10.8	10.0	7.7	20.0
1,2-Dichloropropane	Ave	0.2728	0.2905	0.1000	10.6	10.0	6.5	20.0
Methyl methacrylate	Ave	8.010	11.05		13.8	10.0	38.0*	20.0
1,4-Dioxane	Ave	0.0827	0.0625	0.0050	378	500	-24.4*	20.0
Dibromomethane	Ave	0.1512	0.1568		10.4	10.0	3.7	20.0
Bromodichloromethane	Ave	0.3820	0.4037	0.2000	10.6	10.0	5.7	20.0
2-Nitropropane	Ave	2.435	3.498		144	100	43.6*	20.0
1-Bromo-2-chloroethane	Ave	0.2748	0.2978		10.8	10.0	8.4	20.0
cis-1,3-Dichloropropene	Ave	0.4291	0.4463	0.2000	10.4	10.0	4.0	20.0
4-Methyl-2-pentanone (MIBK)	Ave	9.823	14.36	0.1000	146	100	46.2*	20.0
Toluene	Ave	0.9763	0.9609	0.4000	9.84	10.0	-1.6	20.0
trans-1,3-Dichloropropene	Ave	0.4285	0.4455	0.1000	10.4	10.0	4.0	20.0
Ethyl methacrylate	Ave	0.3349	0.3708		11.1	10.0	10.7	20.0
1,1,2-Trichloroethane	Ave	0.2593	0.2601	0.1000	10.0	10.0	0.3	20.0
Tetrachloroethene	Ave	0.4941	0.4509	0.2000	9.13	10.0	-8.7	20.0
1,3-Dichloropropane	Ave	0.4155	0.4294		10.3	10.0	3.3	20.0
2-Hexanone	Ave	6.871	10.18	0.1000	148	100	48.2*	20.0
Dibromochloromethane	Ave	0.3453	0.3517		10.2	10.0	1.9	20.0
1,2-Dibromoethane (EDB)	Ave	0.2668	0.2675	0.1000	10.0	10.0	0.3	20.0
1-Chlorohexane	Ave	0.5735	0.5610		9.78	10.0	-2.2	20.0
Chlorobenzene	Ave	1.116	1.094	0.5000	9.80	10.0	-2.0	20.0
1,1,1,2-Tetrachloroethane	Ave	0.4214	0.4118		9.77	10.0	-2.3	20.0
Ethylbenzene	Ave	1.909	1.950	0.1000	10.2	10.0	2.2	20.0
m&p-Xylene	Ave	0.7823	0.7837	0.1000	20.0	20.0	0.2	20.0
o-Xylene	Ave	0.7777	0.7615	0.3000	9.79	10.0	-2.1	20.0
Styrene	Ave	1.218	1.242	0.3000	10.2	10.0	2.0	20.0
Bromoform	Lin		0.2128	0.1000	8.69	10.0	-13.1	20.0
Isopropylbenzene	Ave	2.025	2.049	0.1000	10.1	10.0	1.2	20.0
1,1,2,2-Tetrachloroethane	Ave	0.5524	0.5461	0.3000	9.89	10.0	-1.1	20.0
Bromobenzene	Ave	0.8650	0.7973		9.22	10.0	-7.8	20.0
trans-1,4-Dichloro-2-butene	Ave	3.700	3.875		105	100	4.7	20.0
1,2,3-Trichloropropane	Ave	0.1659	0.1600		9.64	10.0	-3.6	20.0
N-Propylbenzene	Ave	3.924	3.855		9.82	10.0	-1.8	20.0
2-Chlorotoluene	Ave	0.8355	0.7894		9.45	10.0	-5.5	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-15232-1

SDG No.:

Lab Sample ID: CCVIS 410-50506/3 Calibration Date: 10/03/2020 07:35

Instrument ID: 19930 Calib Start Date: 09/09/2020 15:55

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 09/09/2020 18:02

Lab File ID: IS21X02.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	2.961	2.867		9.69	10.0	-3.1	20.0
4-Chlorotoluene	Ave	0.8620	0.8198		9.51	10.0	-4.9	20.0
tert-Butylbenzene	Ave	0.6852	0.6331		9.24	10.0	-7.6	20.0
Pentachloroethane	Ave	0.5361	0.5225		9.75	10.0	-2.5	20.0
1,2,4-Trimethylbenzene	Ave	3.024	2.964		9.80	10.0	-2.0	20.0
sec-Butylbenzene	Ave	3.769	3.729		9.90	10.0	-1.0	20.0
1,3-Dichlorobenzene	Ave	1.705	1.637	0.6000	9.60	10.0	-4.0	20.0
p-Isopropyltoluene	Ave	3.293	3.246		9.85	10.0	-1.5	20.0
1,4-Dichlorobenzene	Ave	1.715	1.643	0.5000	9.58	10.0	-4.2	20.0
1,2,3-Trimethylbenzene	Ave	1.348	1.249		9.26	10.0	-7.4	20.0
Benzyl chloride	Ave	0.2484	0.2487		10.0	10.0	0.1	20.0
n-Butylbenzene	Ave	1.503	1.539		10.2	10.0	2.5	20.0
1,2-Dichlorobenzene	Ave	1.536	1.517	0.4000	9.87	10.0	-1.3	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0880	0.0848	0.0500	9.63	10.0	-3.7	20.0
1,3,5-Trichlorobenzene	Ave	1.137	1.105		9.72	10.0	-2.8	20.0
1,2,4-Trichlorobenzene	Ave	0.9367	0.9089	0.2000	9.70	10.0	-3.0	20.0
Hexachlorobutadiene	Ave	0.3526	0.3418		9.69	10.0	-3.1	20.0
Naphthalene	Ave	1.840	1.709		9.29	10.0	-7.1	20.0
1,2,3-Trichlorobenzene	Ave	0.7991	0.7429		9.30	10.0	-7.0	20.0
Dibromofluoromethane (Surr)	Ave	0.2703	0.2607		9.65	10.0	-3.5	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.0495	0.0496		10.0	10.0	0.0	20.0
Toluene-d8 (Surr)	Ave	1.226	1.211		9.88	10.0	-1.2	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4754	0.4949		10.4	10.0	4.1	20.0

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\IS21X02.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 03-Oct-2020 07:35:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0011975-003
Misc. Info.: CCVIS
Operator ID: jkh09052 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 03-Oct-2020 09:36:39 Calib Date: 09-Sep-2020 21:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1015

First Level Reviewer: howej Date: 03-Oct-2020 08:41:53

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	1.977	1.977	0.000	100	829555	10.0	8.69	
4 Chloromethane	50	2.172	2.172	0.000	99	905906	10.0	9.43	
6 Butadiene	39	2.282	2.282	0.000	91	1175044	10.0	13.1	M
5 Vinyl chloride	62	2.288	2.288	0.000	74	909975	10.0	9.56	
7 Bromomethane	94	2.617	2.617	0.000	92	770980	10.0	9.02	
8 Chloroethane	64	2.703	2.703	0.000	99	599415	10.0	9.65	
9 Dichlorofluoromethane	67	2.946	2.946	0.000	97	1487882	10.0	9.82	
10 Trichlorofluoromethane	101	3.007	3.007	0.000	95	1393681	10.0	9.60	M
11 Ethyl ether	59	3.263	3.263	0.000	90	444714	10.0	10.1	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.349	3.349	0.000	93	748055	10.0	10.2	
13 Acrolein	56	3.434	3.434	0.000	99	2756994	500.9	554.9	
14 1,1-Dichloroethene	96	3.580	3.580	0.000	99	609469	10.0	9.71	
15 Acetone	43	3.599	3.599	0.000	99	697701	100.0	89.6	
16 112TCTFE	101	3.617	3.617	0.000	94	691924	10.0	10.5	
17 Iodomethane	142	3.776	3.776	0.000	99	1099835	10.0	8.35	
18 Ethyl bromide	108	3.806	3.806	0.000	99	466863	10.0	8.68	
19 Carbon disulfide	76	3.885	3.885	0.000	100	1576730	10.0	9.40	
21 Methyl acetate	43	4.032	4.032	0.000	97	255939	10.0	11.6	M
22 3-Chloro-1-propene	41	4.062	4.062	0.000	89	836115	10.0	10.2	
23 Methylene Chloride	84	4.251	4.251	0.000	90	634672	10.0	9.78	
* 24 t-Butyl alcohol-d10 (IS)	65	4.257	4.257	0.000	0	155839	50.0	50.0	M
25 2-Methyl-2-propanol	59	4.385	4.385	0.000	98	540549	200.0	167.4	
26 Acrylonitrile	53	4.599	4.599	0.000	99	557460	50.0	64.2	
27 Methyl tert-butyl ether	73	4.660	4.660	0.000	95	1647953	10.0	10.1	
28 trans-1,2-Dichloroethene	96	4.678	4.678	0.000	99	664529	10.0	9.46	
29 Hexane	57	5.105	5.105	0.000	93	951778	10.0	11.8	
31 1,1-Dichloroethane	63	5.330	5.330	0.000	96	1176830	10.0	10.3	
32 Isopropyl ether	45	5.391	5.391	0.000	92	1903097	10.0	10.9	
33 2-Chloro-1,3-butadiene	53	5.446	5.446	0.000	92	1037135	10.0	10.7	
34 Tert-butyl ethyl ether	59	5.921	5.921	0.000	97	1900227	10.0	10.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
36 2-Butanone (MEK)	43	6.129	6.129	0.000	99	1592634	100.0	136.6	
37 cis-1,2-Dichloroethene	96	6.159	6.159	0.000	82	779434	10.0	9.67	
38 2,2-Dichloropropane	77	6.184	6.184	0.000	89	1123801	10.0	10.1	
40 Propionitrile	54	6.214	6.214	0.000	99	764820	200.0	224.3	
42 Methacrylonitrile	67	6.434	6.434	0.000	90	1683613	100.0	131.9	
43 Chlorobromomethane	128	6.495	6.495	0.000	86	351688	10.0	9.52	
44 Tetrahydrofuran	71	6.501	6.501	0.000	81	487935	100.0	129.7	
45 Chloroform	83	6.647	6.647	0.000	94	1304213	10.0	10.2	
$ 46 Dibromofluoromethane (Surr)	113	6.860	6.860	0.000	91	618094	10.0	9.65	
47 1,1,1-Trichloroethane	97	6.872	6.872	0.000	98	1263452	10.0	9.84	
48 Cyclohexane	56	6.970	6.970	0.000	90	1150566	10.0	11.7	
50 Carbon tetrachloride	117	7.080	7.080	0.000	94	1139352	10.0	9.68	
51 1,1-Dichloropropene	75	7.080	7.080	0.000	94	984872	10.0	10.4	
52 Isobutyl alcohol	41	7.226	7.226	0.000	92	543366	500.0	569.3	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.311	7.311	0.000	0	117563	10.0	10.0	
54 Benzene	78	7.342	7.342	0.000	96	2833250	10.0	10.2	
56 1,2-Dichloroethane	62	7.415	7.415	0.000	98	796138	10.0	10.4	M
57 Tert-amyl methyl ether	73	7.531	7.531	0.000	98	1813705	10.0	10.3	
* 58 Fluorobenzene (IS)	96	7.744	7.744	0.000	99	2370744	10.0	10.0	
59 n-Heptane	43	7.750	7.750	0.000	89	1007426	10.0	13.2	
60 n-Butanol	56	8.104	8.104	0.000	88	864812	1000.0	933.4	
61 Trichloroethene	95	8.220	8.220	0.000	98	801151	10.0	9.83	
62 Methylcyclohexane	83	8.531	8.531	0.000	92	1290138	10.0	10.8	
63 1,2-Dichloropropane	63	8.555	8.555	0.000	79	688603	10.0	10.6	
64 Methyl methacrylate	69	8.634	8.634	0.000	86	344412	10.0	13.8	
65 1,4-Dioxane	88	8.640	8.640	0.000	33	97412	500.0	377.9	M
66 Dibromomethane	93	8.665	8.665	0.000	96	371657	10.0	10.4	
68 Dichlorobromomethane	83	8.896	8.896	0.000	99	957096	10.0	10.6	
69 2-Nitropropane	41	9.165	9.165	0.000	100	1090280	100.0	143.6	
72 1-Bromo-2-chloroethane	63	9.293	9.293	0.000	99	706004	10.0	10.8	
73 cis-1,3-Dichloropropene	75	9.439	9.439	0.000	95	1057974	10.0	10.4	
74 4-Methyl-2-pentanone (MIBK)	43	9.604	9.604	0.000	97	4474684	100.0	146.2	
$ 75 Toluene-d8 (Surr)	98	9.744	9.744	0.000	94	2445281	10.0	9.88	
76 Toluene	92	9.823	9.823	0.000	98	1940821	10.0	9.84	
78 trans-1,3-Dichloropropene	75	10.073	10.073	0.000	93	899734	10.0	10.4	
79 Ethyl methacrylate	69	10.134	10.134	0.000	88	748915	10.0	11.1	
80 1,1,2-Trichloroethane	97	10.274	10.274	0.000	92	525350	10.0	10.0	
81 Tetrachloroethene	166	10.366	10.366	0.000	96	910822	10.0	9.13	
82 1,3-Dichloropropane	76	10.439	10.439	0.000	91	867306	10.0	10.3	
83 2-Hexanone	43	10.488	10.488	0.000	96	3174041	100.0	148.2	
85 Chlorodibromomethane	129	10.652	10.652	0.000	89	710320	10.0	10.2	
86 Ethylene Dibromide	107	10.762	10.762	0.000	98	540278	10.0	10.0	
* 87 Chlorobenzene-d5 (IS)	117	11.189	11.189	0.000	85	2019788	10.0	10.0	
88 1-Chlorohexane	91	11.195	11.195	0.000	95	1133183	10.0	9.78	
90 Chlorobenzene	112	11.219	11.219	0.000	96	2209813	10.0	9.80	
91 1,1,1,2-Tetrachloroethane	131	11.298	11.298	0.000	95	831740	10.0	9.77	
92 Ethylbenzene	91	11.305	11.305	0.000	98	3938759	10.0	10.2	
93 m-Xylene & p-Xylene	106	11.414	11.414	0.000	100	3165817	20.0	20.0	
94 o-Xylene	106	11.743	11.743	0.000	96	1538141	10.0	9.79	
95 Styrene	104	11.756	11.756	0.000	95	2509276	10.0	10.2	
96 Bromoform	173	11.920	11.920	0.000	96	429810	10.0	8.69	
97 Isopropylbenzene	105	12.042	12.042	0.000	96	4138826	10.0	10.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 100 4-Bromofluorobenzene (Surr)	95	12.189	12.189	0.000	93	999606	10.0	10.4	
101 1,1,2,2-Tetrachloroethane	83	12.286	12.286	0.000	94	678318	10.0	9.89	
102 Bromobenzene	156	12.304	12.304	0.000	97	990358	10.0	9.22	
103 trans-1,4-Dichloro-2-butene	53	12.310	12.310	0.000	95	1207845	100.0	104.7	
104 1,2,3-Trichloropropane	110	12.335	12.335	0.000	85	198738	10.0	9.64	
105 N-Propylbenzene	91	12.371	12.371	0.000	99	4788535	10.0	9.82	
106 2-Chlorotoluene	126	12.451	12.451	0.000	97	980486	10.0	9.45	
107 1,3,5-Trimethylbenzene	105	12.506	12.506	0.000	93	3561457	10.0	9.69	
108 4-Chlorotoluene	126	12.542	12.542	0.000	97	1018297	10.0	9.51	
109 tert-Butylbenzene	134	12.749	12.749	0.000	92	786407	10.0	9.24	
110 Pentachloroethane	167	12.780	12.780	0.000	91	648925	10.0	9.75	
111 1,2,4-Trimethylbenzene	105	12.786	12.786	0.000	97	3681233	10.0	9.80	
112 sec-Butylbenzene	105	12.908	12.908	0.000	94	4632305	10.0	9.90	
113 1,3-Dichlorobenzene	146	13.012	13.012	0.000	98	2033275	10.0	9.60	
114 4-Isopropyltoluene	119	13.018	13.018	0.000	96	4031247	10.0	9.85	
* 115 1,4-Dichlorobenzene-d4	152	13.066	13.066	0.000	94	1242080	10.0	10.0	
116 1,4-Dichlorobenzene	146	13.085	13.085	0.000	95	2040692	10.0	9.58	
117 1,2,3-Trimethylbenzene	120	13.091	13.091	0.000	98	1551270	10.0	9.26	
118 Benzyl chloride	126	13.158	13.158	0.000	98	308866	10.0	10.0	
119 n-Butylbenzene	92	13.310	13.310	0.000	97	1912094	10.0	10.2	
120 1,2-Dichlorobenzene	146	13.341	13.341	0.000	99	1883755	10.0	9.87	
122 1,2-Dibromo-3-Chloropropane	155	13.883	13.883	0.000	86	105315	10.0	9.63	
123 1,3,5-Trichlorobenzene	180	14.011	14.011	0.000	97	1373046	10.0	9.72	
124 1,2,4-Trichlorobenzene	180	14.432	14.432	0.000	95	1128884	10.0	9.70	
125 Hexachlorobutadiene	225	14.517	14.517	0.000	97	424523	10.0	9.69	
126 Naphthalene	128	14.615	14.615	0.000	97	2123137	10.0	9.29	
127 1,2,3-Trichlorobenzene	180	14.755	14.755	0.000	95	922777	10.0	9.30	
134 Isopropyl alcohol	45		0.000				ND	ND	
135 p-Diethylbenzene	1		0.000				ND	ND	
137 2-Methylnaphthalene	142		0.000				ND	ND	
144 2-ethoxy-2-methyl butane	1		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MSV_RV1_826_00024	Amount Added: 20.00	Units: uL	
MSV_RV4_826_00028	Amount Added: 20.00	Units: uL	
MSV_RV4GAS826_00081	Amount Added: 20.00	Units: uL	
MSV_31_826ISS_00003	Amount Added: 5.00	Units: uL	Run Reagent

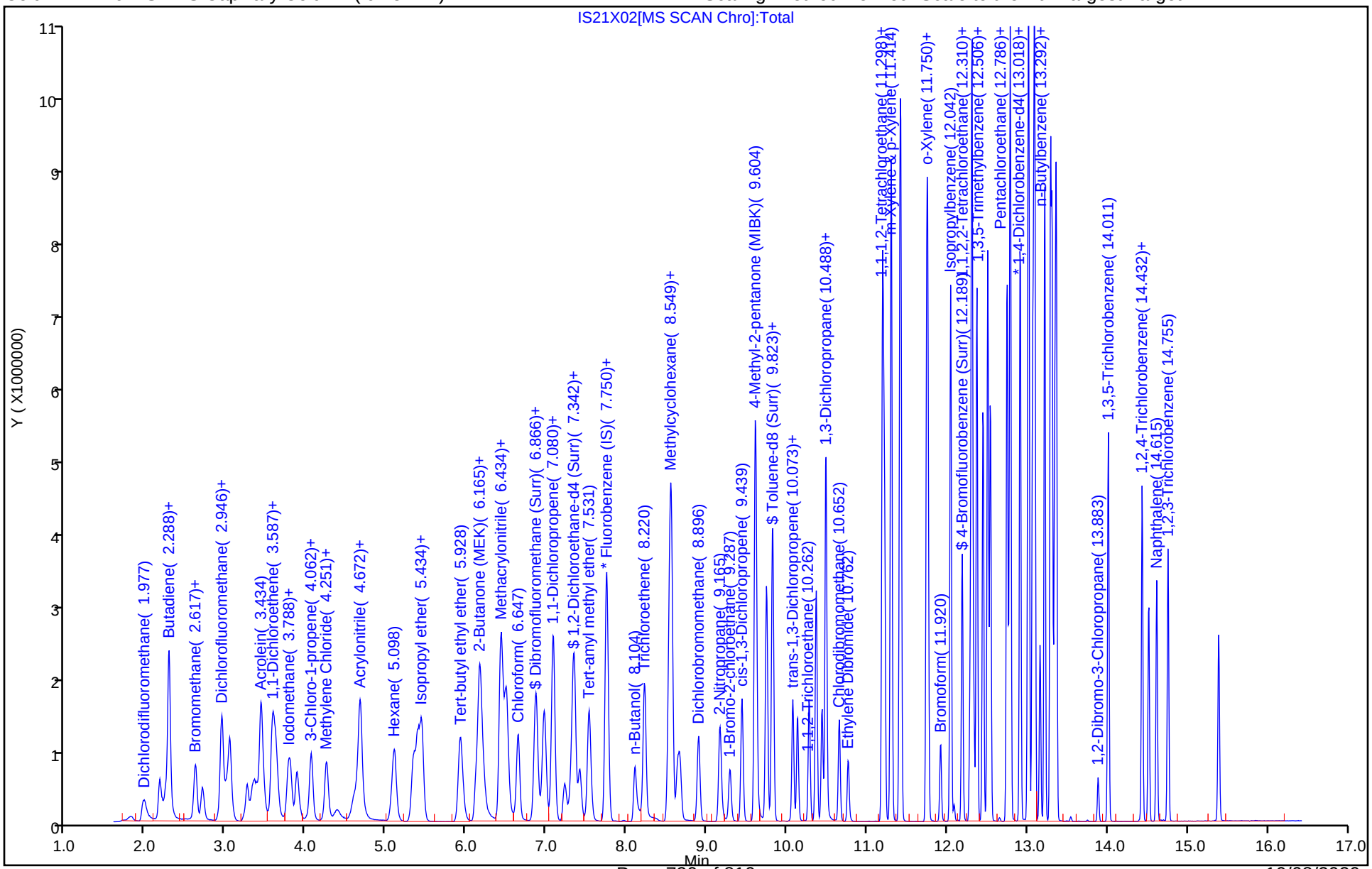
Report Date: 03-Oct-2020 09:36:40 Chrom Revision: 2.3 24-Sep-2020 19:22:38

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\IS21X02.D

Injection Date:	03-Oct-2020 07:35:30	Instrument ID:	19930	Operator ID:	jkh09052
Lims ID:	CCVIS			Worklist Smp#:	3
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	8260 25ml HP31	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



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

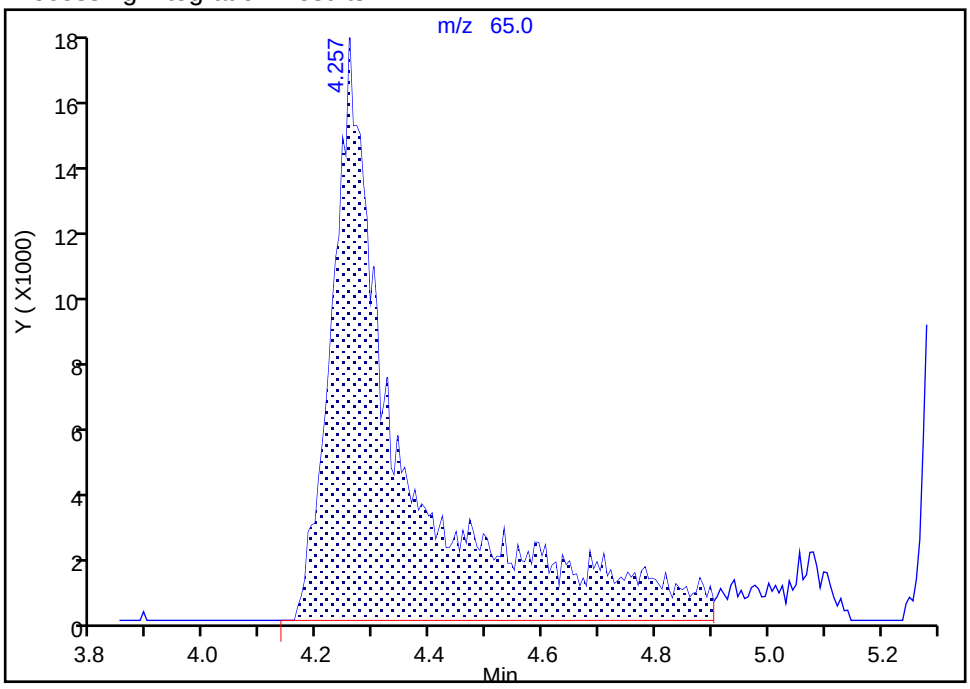
Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\IS21X02.D				
Injection Date:	03-Oct-2020 07:35:30	Instrument ID:	19930		
Lims ID:	CCVIS				
Client ID:					
Operator ID:	jkh09052	ALS Bottle#:	2	Worklist Smp#:	3
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

* 24 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

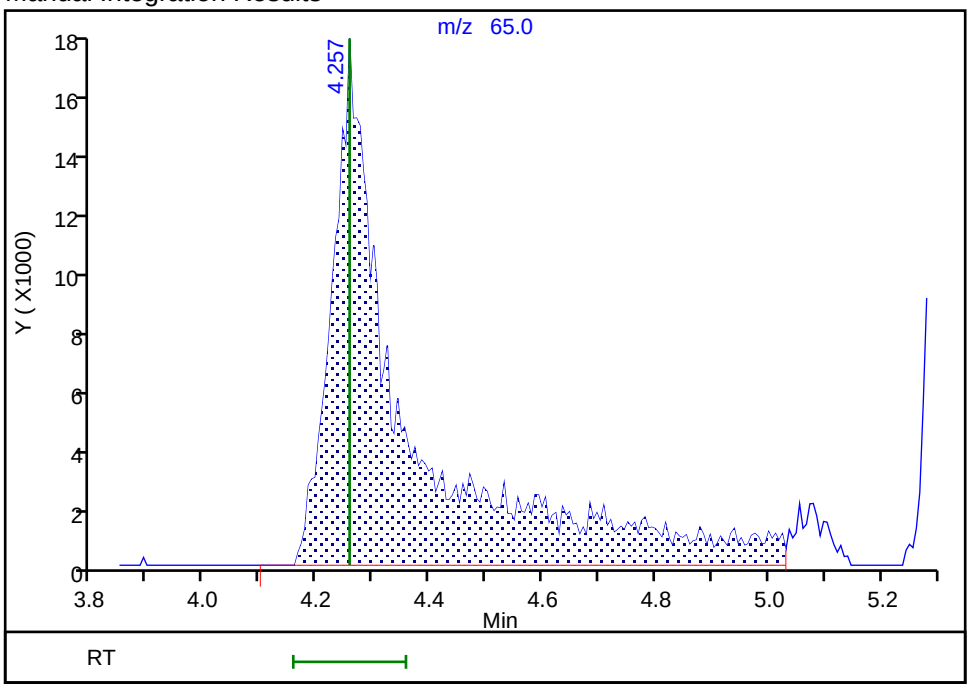
Processing Integration Results

RT: 4.26
Area: 149301
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 4.26
Area: 155839
Amount: 50.000000
Amount Units: ug/l



Reviewer: howej, 03-Oct-2020 08:11:36
Audit Action: Split an Integrated Peak Audit Reason: Other

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

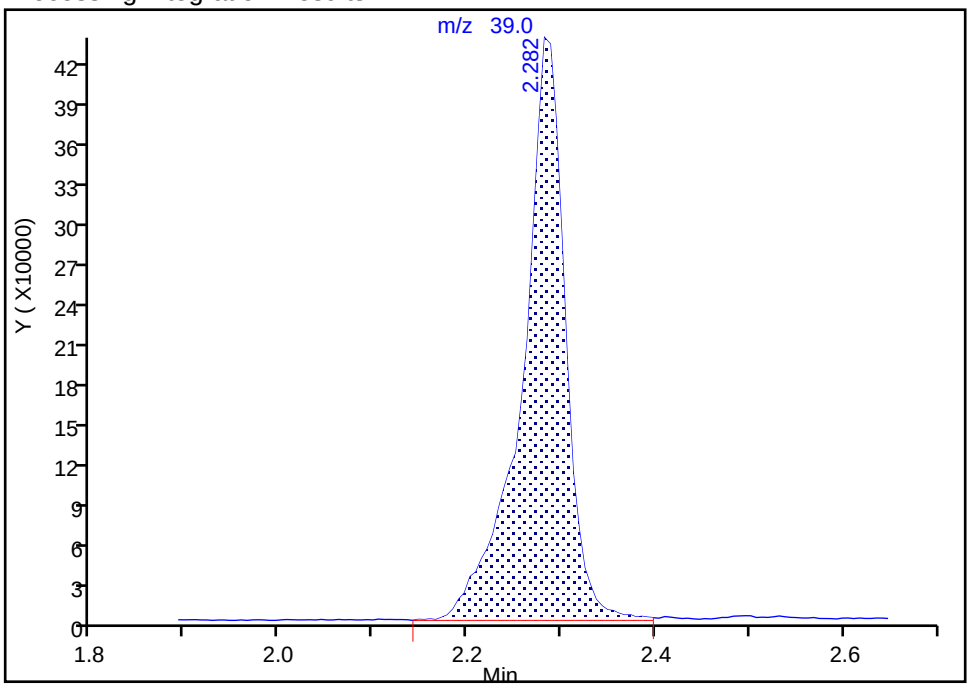
Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\IS21X02.D
Injection Date: 03-Oct-2020 07:35:30 Instrument ID: 19930
Lims ID: CCVIS
Client ID:
Operator ID: jkh09052 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

6 Butadiene, CAS: 106-99-0

Signal: 1

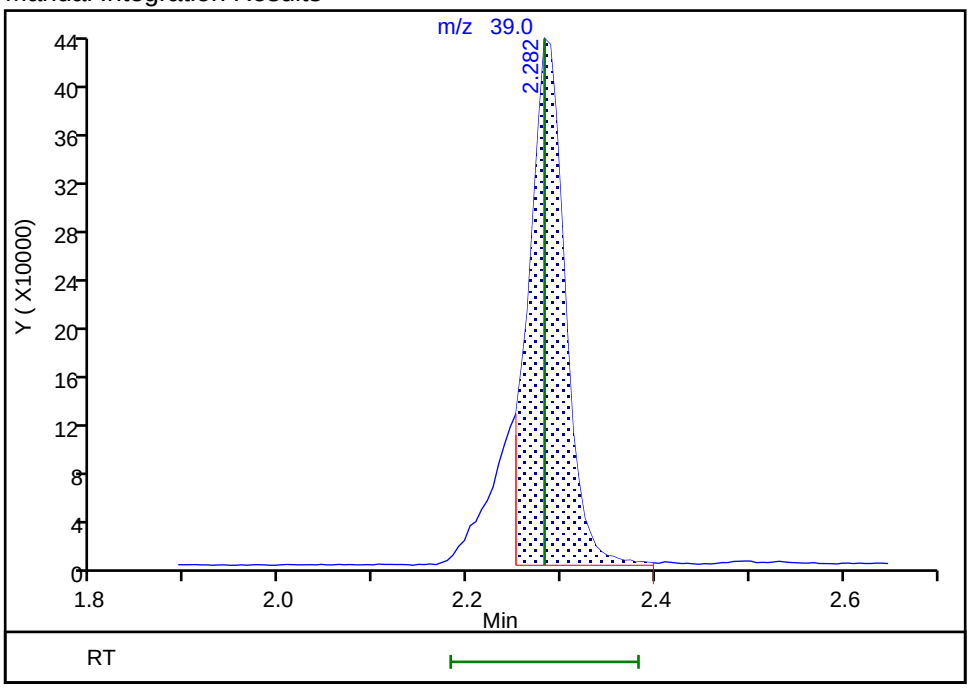
Processing Integration Results

RT: 2.28
Area: 1390609
Amount: 15.524913
Amount Units: ug/l



Manual Integration Results

RT: 2.28
Area: 1175044
Amount: 13.118322
Amount Units: ug/l



Reviewer: howej, 03-Oct-2020 08:09:38
Audit Action: Split an Integrated Peak Audit Reason: Other

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

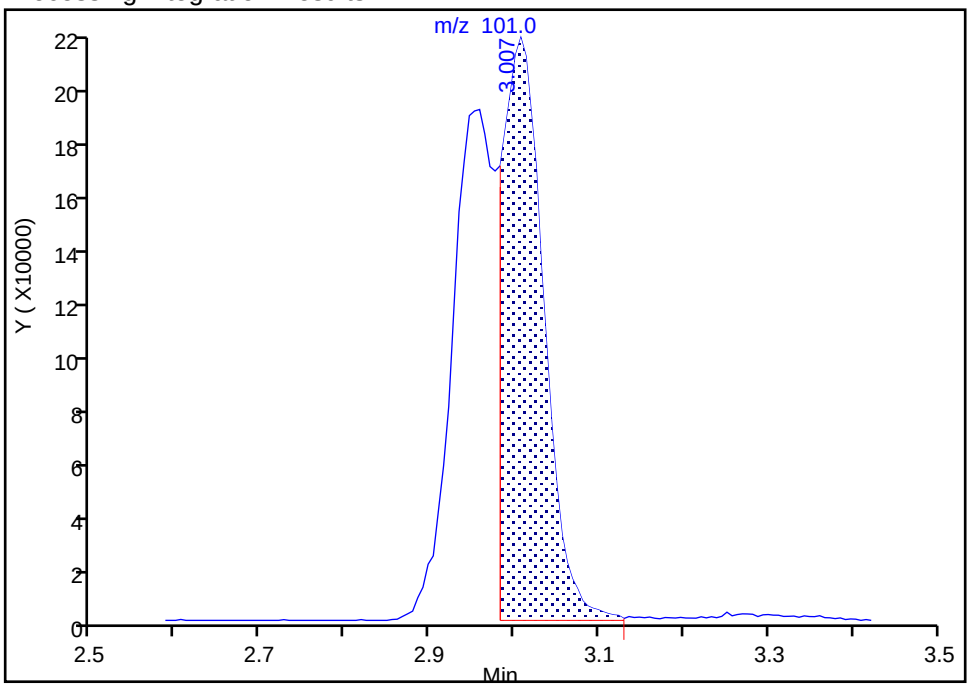
Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\IS21X02.D
Injection Date: 03-Oct-2020 07:35:30 Instrument ID: 19930
Lims ID: CCVIS
Client ID:
Operator ID: jkh09052 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

10 Trichlorofluoromethane, CAS: 75-69-4

Signal: 1

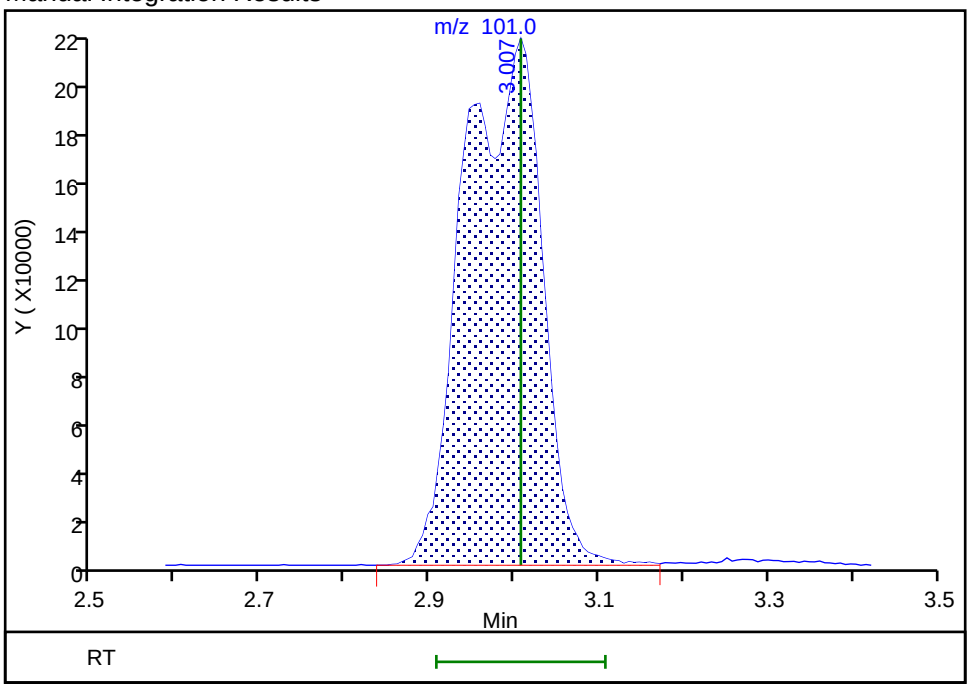
Processing Integration Results

RT: 3.01
Area: 738908
Amount: 5.090677
Amount Units: ug/l



Manual Integration Results

RT: 3.01
Area: 1393681
Amount: 9.601710
Amount Units: ug/l



Reviewer: howej, 03-Oct-2020 08:09:53
Audit Action: Split an Integrated Peak Audit Reason: Other

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

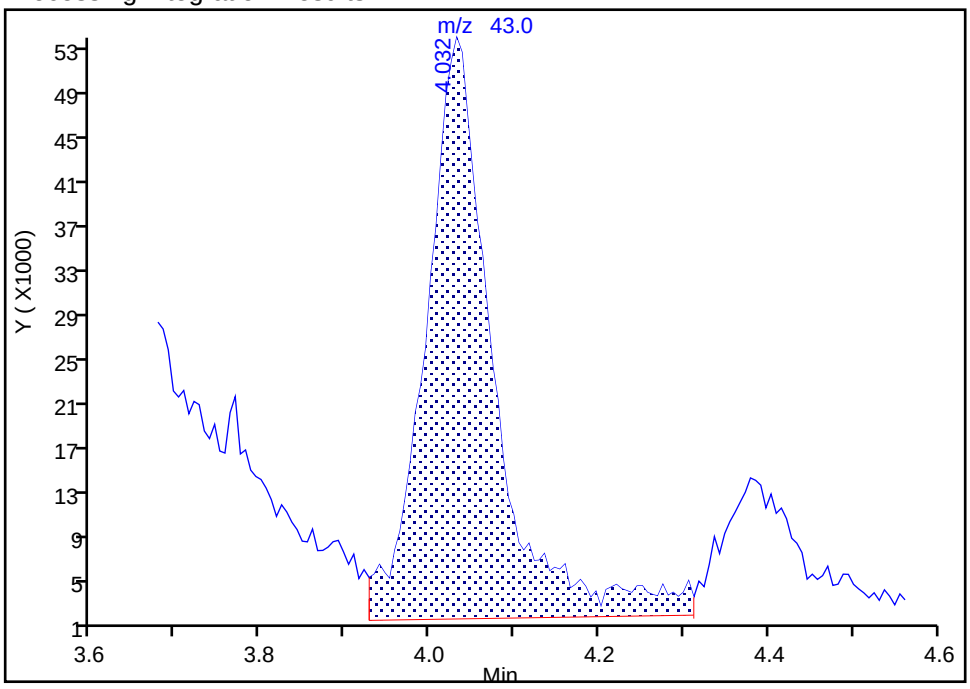
Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\IS21X02.D
Injection Date: 03-Oct-2020 07:35:30 Instrument ID: 19930
Lims ID: CCVIS
Client ID:
Operator ID: jkh09052 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

21 Methyl acetate, CAS: 79-20-9

Signal: 1

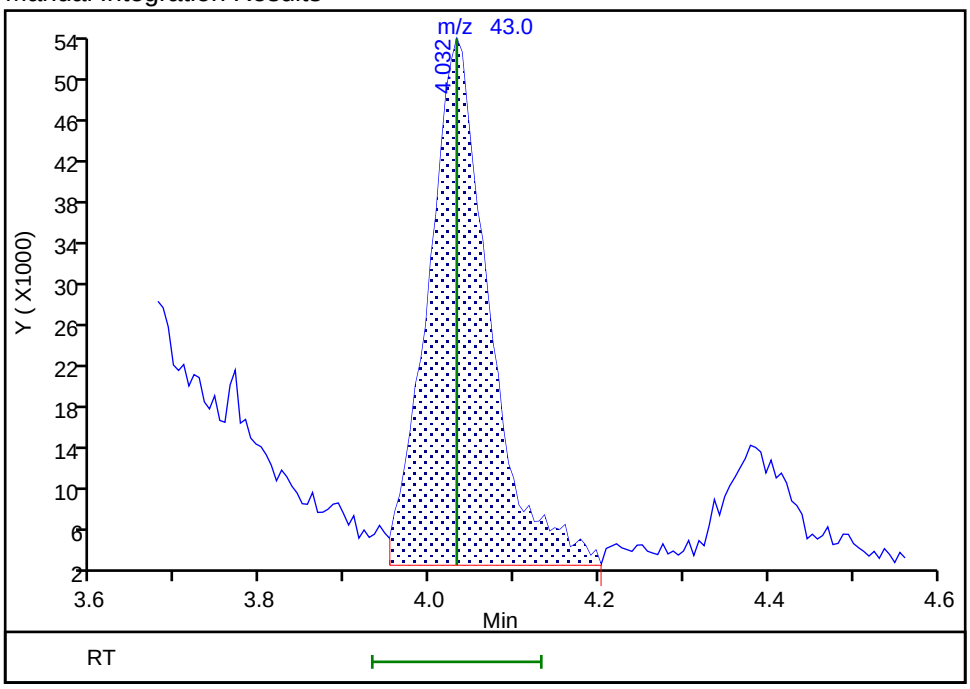
Processing Integration Results

RT: 4.03
Area: 291589
Amount: 13.851917
Amount Units: ug/l



Manual Integration Results

RT: 4.03
Area: 255939
Amount: 11.648279
Amount Units: ug/l



Reviewer: howej, 03-Oct-2020 08:10:25
Audit Action: Assigned New Baseline Audit Reason: Other

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

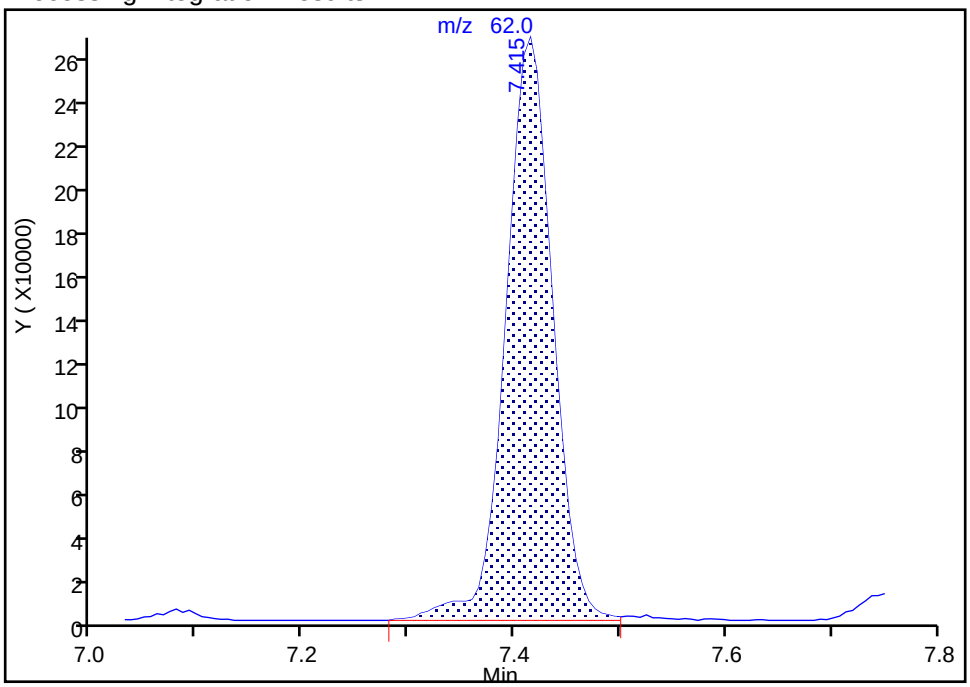
Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\IS21X02.D
Injection Date: 03-Oct-2020 07:35:30 Instrument ID: 19930
Lims ID: CCVIS
Client ID:
Operator ID: jkh09052 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

56 1,2-Dichloroethane, CAS: 107-06-2

Signal: 1

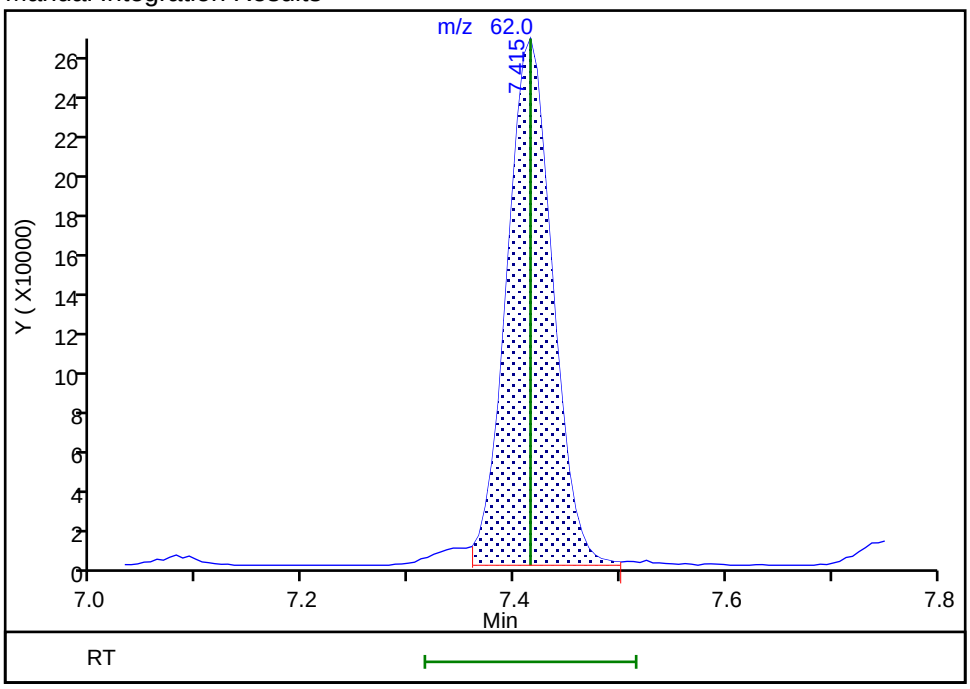
Processing Integration Results

RT: 7.42
Area: 816846
Amount: 10.696141
Amount Units: ug/l



Manual Integration Results

RT: 7.42
Area: 796138
Amount: 10.424982
Amount Units: ug/l



Reviewer: howej, 03-Oct-2020 08:10:57
Audit Action: Split an Integrated Peak Audit Reason: Other

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

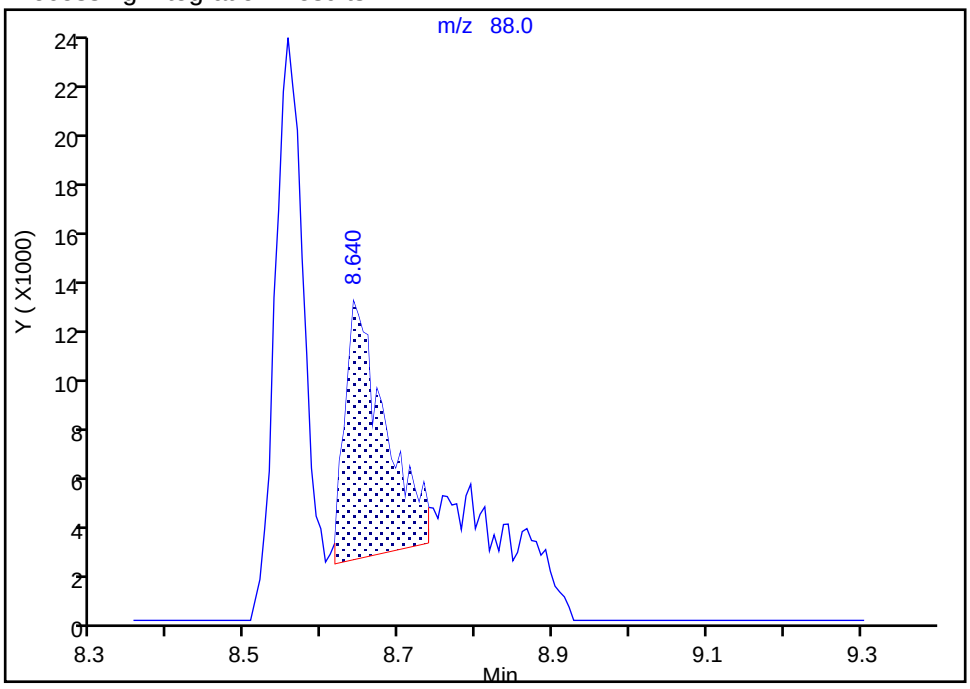
Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\IS21X02.D
Injection Date: 03-Oct-2020 07:35:30 Instrument ID: 19930
Lims ID: CCVIS
Client ID:
Operator ID: jkh09052 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

65 1,4-Dioxane, CAS: 123-91-1

Signal: 1

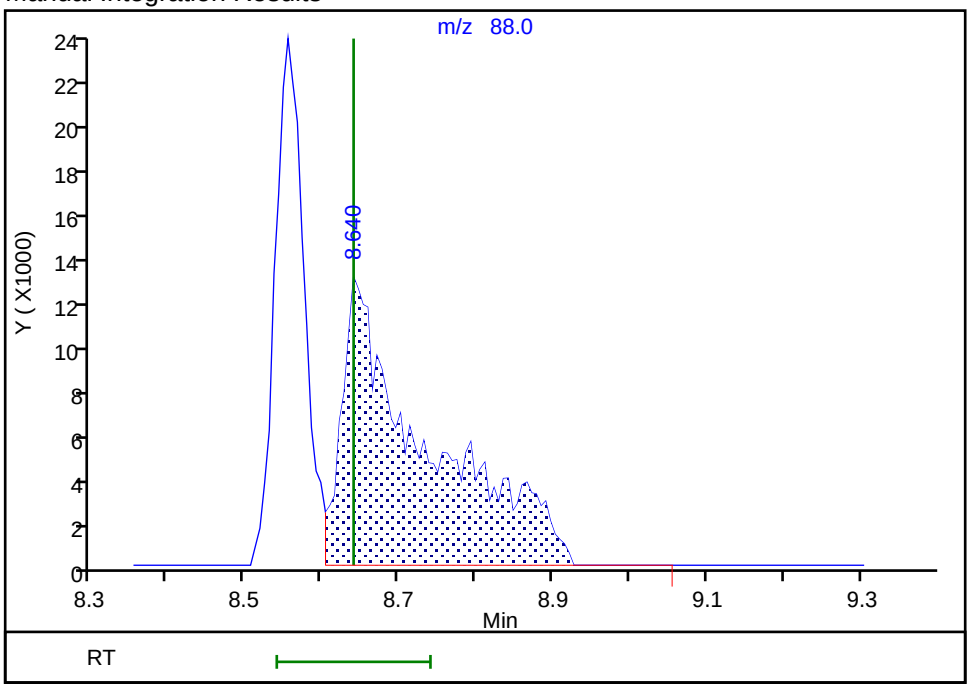
Processing Integration Results

RT: 8.64
Area: 37704
Amount: 139.5645
Amount Units: ug/l



Manual Integration Results

RT: 8.64
Area: 97412
Amount: 377.8834
Amount Units: ug/l



Reviewer: howej, 03-Oct-2020 08:11:13
Audit Action: Split an Integrated Peak Audit Reason: Other

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01T01.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	01-Sep-2020 12:45:30	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Sample Info:	BFB				
Misc. Info.:	410-0009503-001				
Operator ID:	dvv10203	Instrument ID:	10193		
Method:	\\chromfs\Lancaster\ChromData\10193\20200901-9503.b\MSV_10193_25mL.m				
Limit Group:	MSV - 8260C_D				
Last Update:	01-Sep-2020 20:14:46	Calib Date:	01-Sep-2020 19:09:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1059				
First Level Reviewer: virayd		Date:	01-Sep-2020 12:56:16		

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 165 BFB	95	5.160	5.160	0.000	88	127617	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

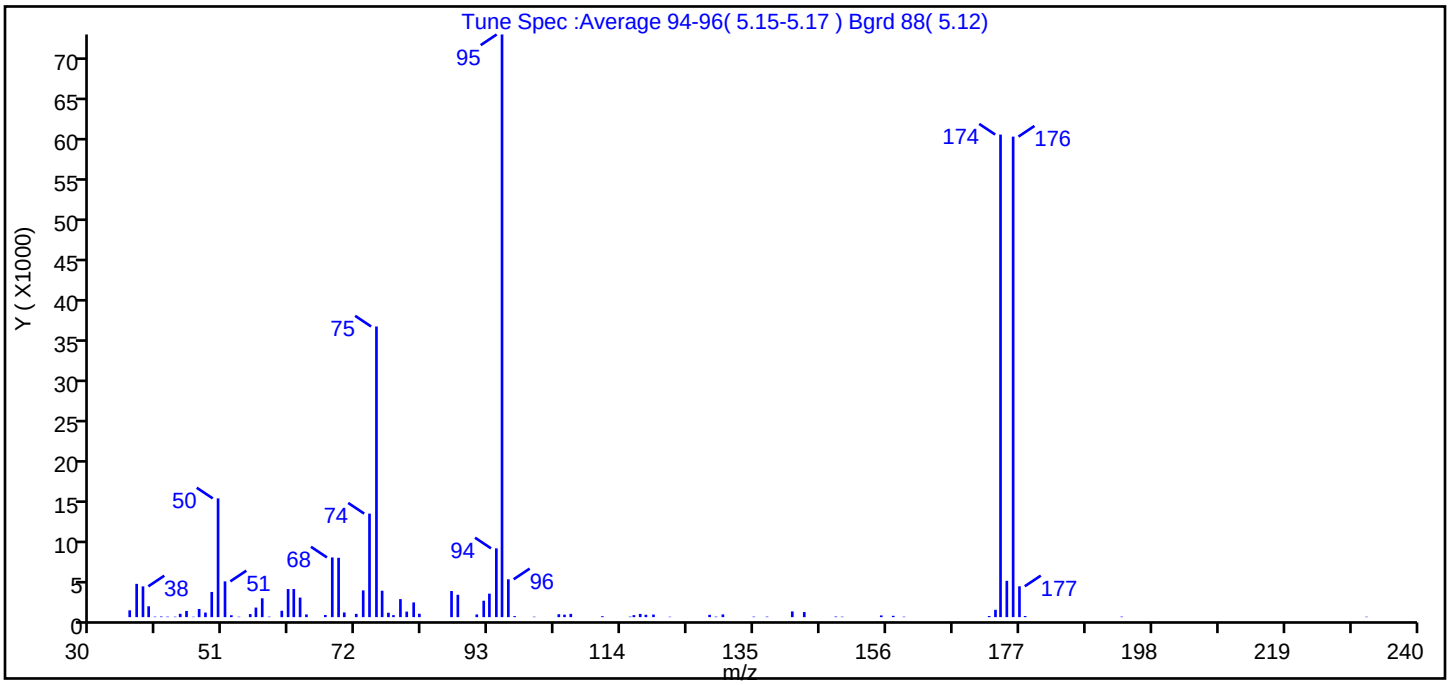
MSV_V_BFB_00003 Amount Added: 1.00 Units: uL

MS Tune Report

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01T01.D
Injection Date: 01-Sep-2020 12:45:30 Instrument ID: 10193
Lims ID: BFB
Client ID:
Operator ID: dvv10203 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: MSV_10193_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	20.4
75	30 to 60% of m/z 95	49.9
96	5 to 9% of m/z 95	6.5
173	Less than 2% of m/z 174	1.3 (1.5)
174	50 to 120% of m/z 95	82.8
175	5 to 9% of m/z 174	6.2 (7.5)
176	Greater than 95% but less than 101% of m/z 174	82.5 (99.6)
177	5 to 9% of m/z 176	5.3 (6.4)

Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01T01.D\MSV_10193_25mL.rslt\spectra.d
Injection Date: 01-Sep-2020 12:45:30
Spectrum: Tune Spec :Average 94-96(5.15-5.17) Bgrd 88(5.12)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 83

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	849	58.00	59	87.00	3249	129.00	66
37.00	4140	60.00	797	88.00	2781	130.00	340
38.00	3829	61.00	3495	91.00	335	135.00	62
39.00	1350	62.00	3499	92.00	2042	137.00	64
40.00	62	63.00	2433	93.00	2922	141.00	712
41.00	79	64.00	339	94.00	8556	143.00	634
42.00	64	67.00	265	95.00	72472	148.00	75
43.00	58	68.00	7426	96.00	4710	149.00	56
44.00	414	69.00	7382	97.00	129	155.00	212
45.00	774	70.00	584	100.00	53	157.00	165
46.00	51	72.00	409	104.00	361	159.00	55
47.00	1016	73.00	3331	105.00	305	172.00	140
48.00	566	74.00	12877	106.00	407	173.00	911
49.00	3135	75.00	36152	111.00	112	174.00	60024
50.00	14770	76.00	3285	115.00	61	175.00	4518
51.00	4452	77.00	548	116.00	250	176.00	59768
52.00	235	78.00	250	117.00	403	177.00	3839
53.00	51	79.00	2245	118.00	298	178.00	141
55.00	379	80.00	691	119.00	321	193.00	64
56.00	1192	81.00	1829	122.00	51	232.00	52
57.00	2349	82.00	424	128.00	291		

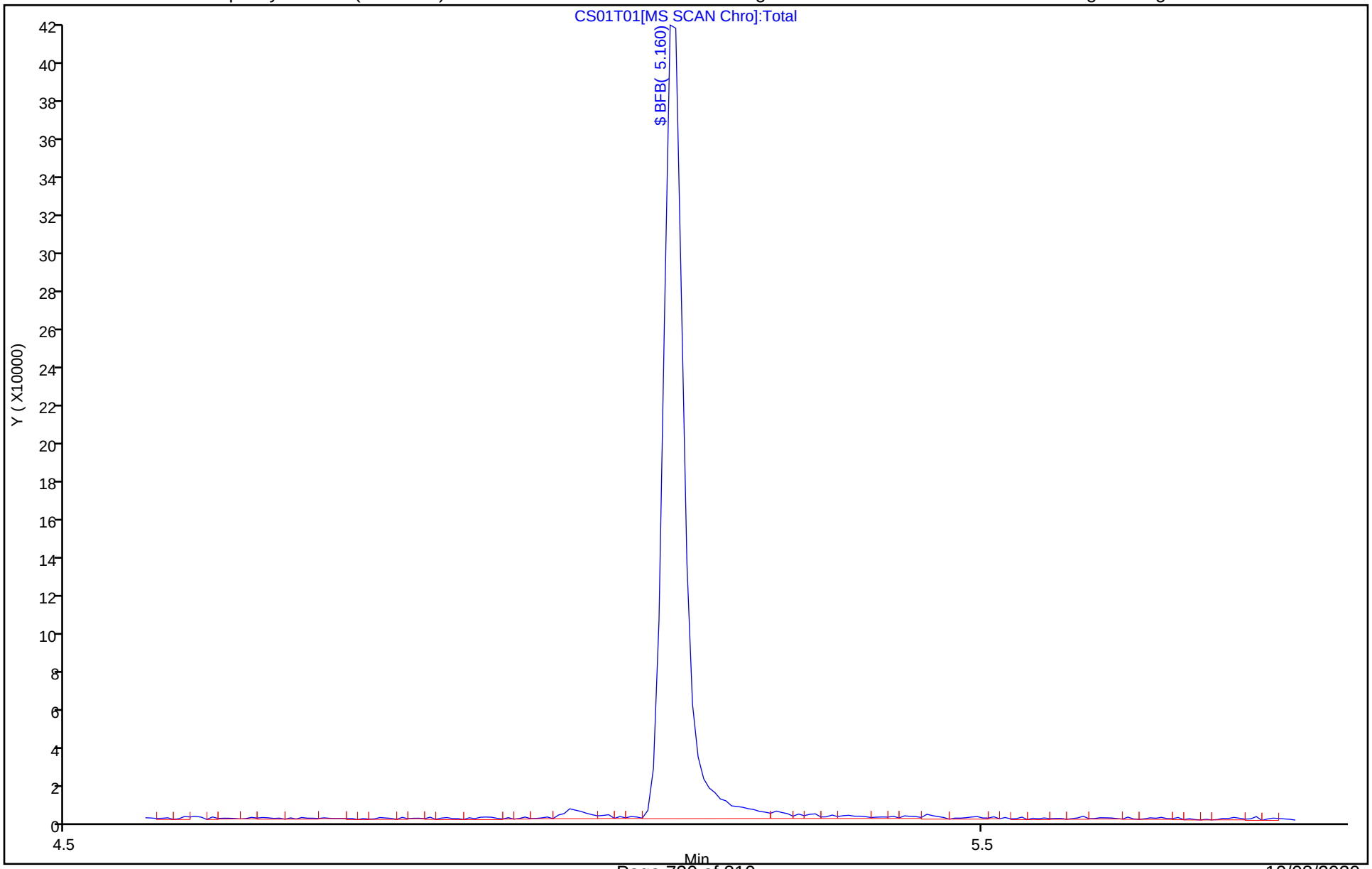
Report Date: 01-Sep-2020 20:14:46 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01T01.D

Injection Date:	01-Sep-2020 12:45:30	Instrument ID:	10193	Operator ID:	dvv10203
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MSV_10193_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\10193\20201005-12055.b\CC05T01.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	05-Oct-2020 09:26:30	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Sample Info:					
Misc. Info.:	BFB				
Operator ID:	dvv10203	Instrument ID:	10193		
Method:	\\chromfs\Lancaster\ChromData\10193\20201005-12055.b\MSV_10193_25mL.m				
Limit Group:	MSV - 8260C_D				
Last Update:	05-Oct-2020 11:37:54	Calib Date:	01-Sep-2020 19:09:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1028				

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 165 BFB	95	5.154	5.154	0.000	93	237619	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

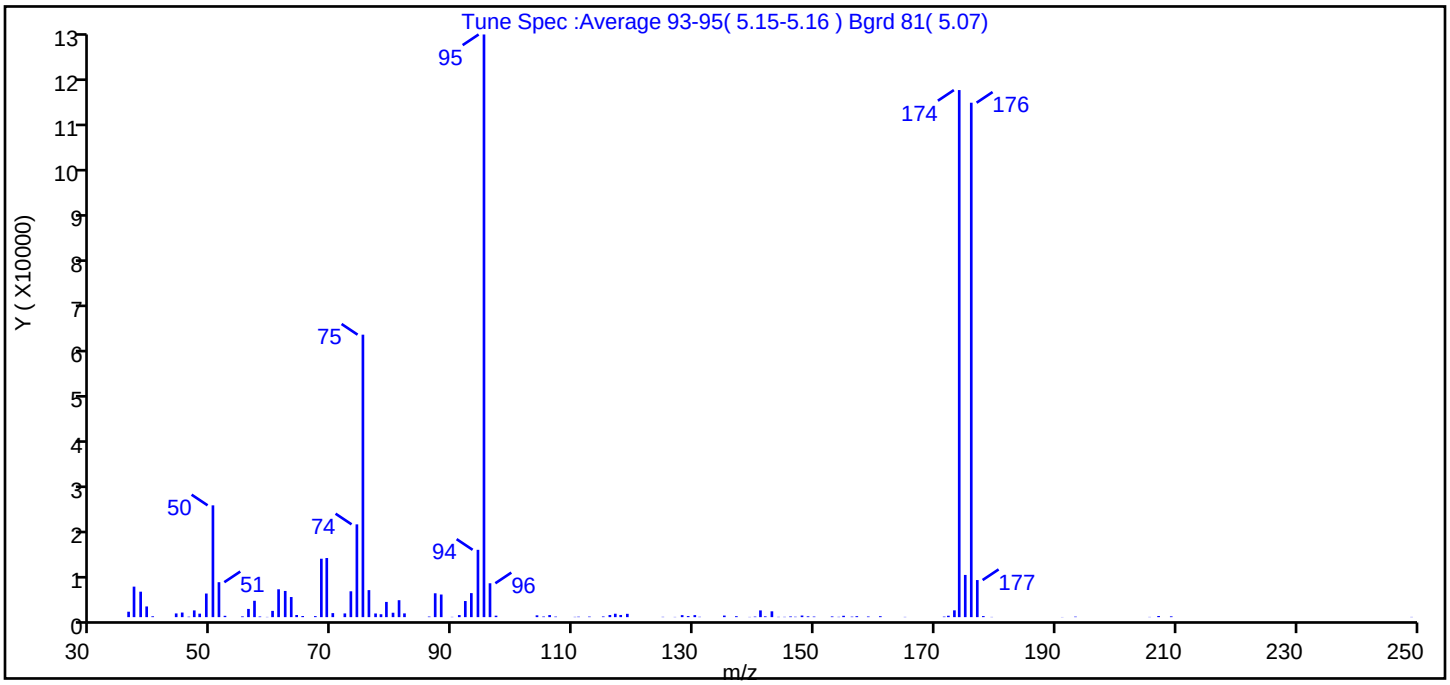
MSV_V_BFB_00003 Amount Added: 1.00 Units: uL

MS Tune Report

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05T01.D
Injection Date: 05-Oct-2020 09:26:30 Instrument ID: 10193
Lims ID: BFB
Client ID:
Operator ID: dvv10203 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: MSV_10193_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	19.2
75	30 to 60% of m/z 95	48.5
96	5 to 9% of m/z 95	5.8
173	Less than 2% of m/z 174	1.2 (1.3)
174	50 to 120% of m/z 95	90.5
175	5 to 9% of m/z 174	7.2 (8.0)
176	Greater than 95% but less than 101% of m/z 174	88.3 (97.6)
177	5 to 9% of m/z 176	6.4 (7.2)

Data File: \\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05T01.D\MSV_10193_25mL.rslt\spectra.d
Injection Date: 05-Oct-2020 09:26:30
Spectrum: Tune Spec :Average 93-95(5.15-5.16) Bgrd 81(5.07)
Base Peak: 95.10
Minimum % Base Peak: 0
Number of Points: 106

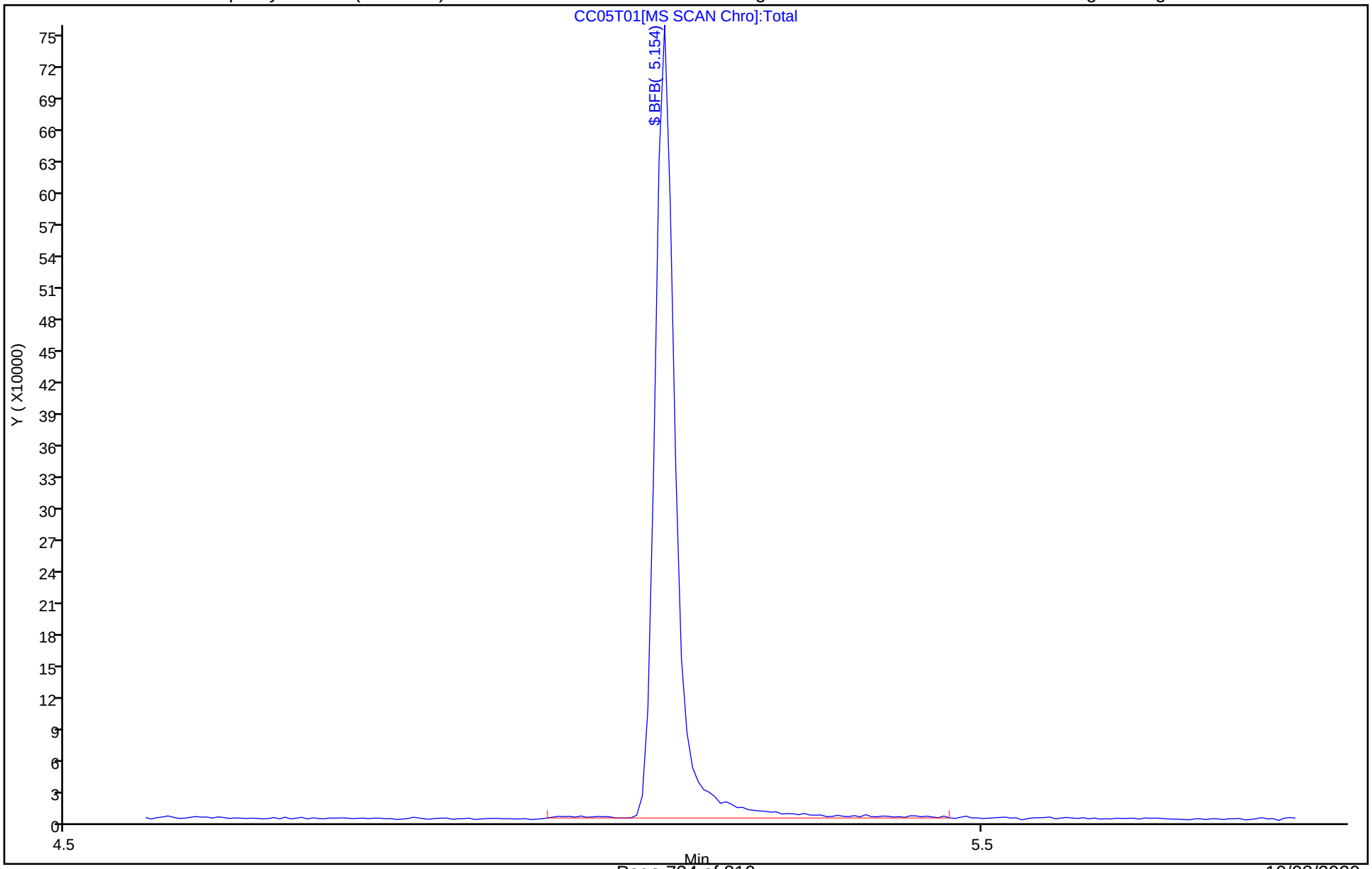
m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1206	69.00	13135	107.00	122	149.00	180
37.00	6779	70.00	896	110.00	63	150.00	129
38.00	5656	72.00	826	111.00	100	153.00	159
39.00	2376	73.00	5746	113.00	126	154.00	71
40.00	191	74.00	20616	115.00	151	155.00	302
44.00	826	75.00	62760	116.00	474	156.00	113
45.00	1022	76.00	6003	117.00	759	157.00	217
46.00	102	77.00	814	118.00	481	159.00	145
47.00	1500	78.00	644	119.00	738	161.00	206
48.00	775	79.00	3381	125.00	68	165.00	54
49.00	5248	80.00	979	127.00	51	172.00	121
50.00	24840	81.00	3764	128.00	447	172.00	313
51.00	7763	82.00	833	129.00	237	173.00	1511
52.00	298	86.00	130	130.00	451	174.00	117104
55.00	166	87.00	5300	131.00	78	175.00	9378
56.00	1827	88.00	5028	135.00	351	176.00	114296
57.00	3636	90.00	58	137.00	212	177.00	8239
58.00	140	91.00	456	139.00	50	178.00	233
59.00	50	92.00	3578	140.00	125	179.00	50
60.00	1392	93.00	5339	141.00	1496	191.00	35
61.00	6190	94.00	14959	142.00	177	193.00	111
62.00	5821	95.00	129456	143.00	1296	206.00	52
63.00	4468	96.00	7527	144.00	67	207.00	250
64.00	478	97.00	328	145.00	68	209.00	175
65.00	245	104.00	404	146.00	155	249.00	50
67.00	230	105.00	140	147.00	91		
68.00	12980	106.00	463	148.00	359		

Report Date: 05-Oct-2020 11:37:54 Chrom Revision: 2.3 24-Sep-2020 19:22:38

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05T01.D				
Injection Date:	05-Oct-2020 09:26:30	Instrument ID:	10193	Operator ID:	dvv10203
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MSV_10193_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\19930\20200909-10046.b\IS09T01.D				
Lims ID:	bfb				
Client ID:					
Sample Type:	BFB				
Inject. Date:	09-Sep-2020 15:02:30	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Sample Info:	bfb				
Misc. Info.:	410-0010046-001				
Operator ID:	dvv10203	Instrument ID:	19930		
Method:	\\chromfs\Lancaster\ChromData\19930\20200909-10046.b\8260 25ml HP31.m				
Limit Group:	MSV - 8260C_D				
Last Update:	11-Sep-2020 19:25:25	Calib Date:	09-Sep-2020 21:13:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I17.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1058				
First Level Reviewer: campbellme		Date:	09-Sep-2020 21:46:56		

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 145 BFB	95	5.190	5.190	0.000	89	275321	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

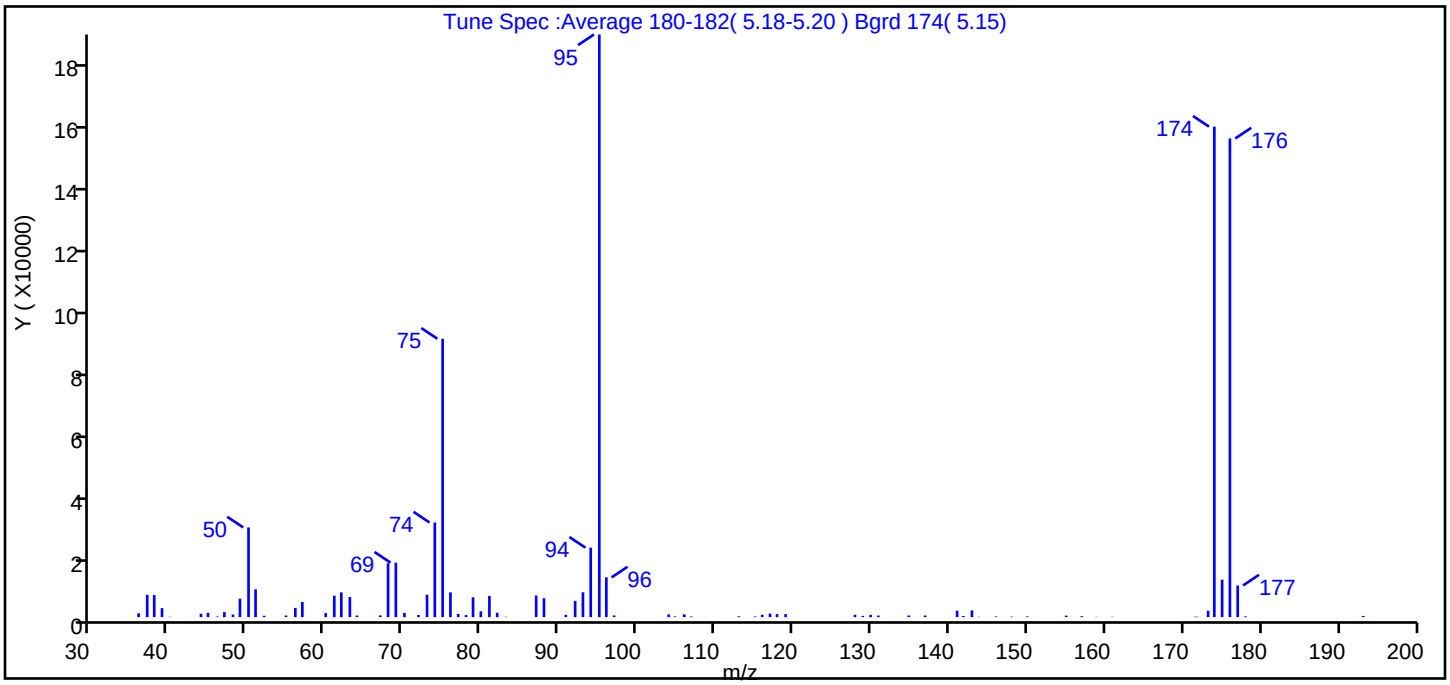
MSV_V_BFB_00003 Amount Added: 1.00 Units: uL

MS Tune Report

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09T01.D
Injection Date: 09-Sep-2020 15:02:30 Instrument ID: 19930
Lims ID: bfb
Client ID:
Operator ID: dvv10203 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Tune Method: BFB Method 8260

$ 145 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	15.4
75	30 to 60% of m/z 95	47.8
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	1.1 (1.3)
174	50 to 120% of m/z 95	84.2
175	5 to 9% of m/z 174	6.4 (7.6)
176	Greater than 95% but less than 101% of m/z 174	82.2 (97.6)
177	5 to 9% of m/z 176	5.4 (6.6)

Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09T01.D\8260 25ml HP31.rslt\spectra.d
Injection Date: 09-Sep-2020 15:02:30
Spectrum: Tune Spec :Average 180-182(5.18-5.20) Bgrd 174(5.15)
Base Peak: 95.10
Minimum % Base Peak: 0
Number of Points: 83

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1227	64.00	509	93.00	7941	141.00	2051
37.00	7128	67.00	551	94.00	22192	142.00	368
38.00	7048	68.00	17208	95.00	186112	143.00	2153
39.00	2872	69.00	17400	96.00	12709	144.00	116
40.00	95	70.00	1358	97.00	543	146.00	229
44.00	1093	72.00	684	104.00	859	148.00	164
45.00	1359	73.00	7144	105.00	238	150.00	228
46.00	185	74.00	30232	106.00	900	155.00	485
47.00	1596	75.00	88928	107.00	209	157.00	308
48.00	831	76.00	7918	113.00	284	159.00	95
49.00	5904	77.00	992	115.00	213	161.00	114
50.00	28656	78.00	650	116.00	766	172.00	120
51.00	8865	79.00	6331	117.00	1138	172.00	149
52.00	443	80.00	1846	118.00	984	173.00	2028
55.00	517	81.00	6779	119.00	966	174.00	156672
56.00	2941	82.00	1394	128.00	762	175.00	11962
57.00	4841	83.00	117	129.00	398	176.00	152896
60.00	1295	87.00	6925	130.00	721	177.00	10117
61.00	6857	88.00	6043	131.00	510	178.00	262
62.00	7910	91.00	724	135.00	530	193.00	379
63.00	6428	92.00	5204	137.00	525		

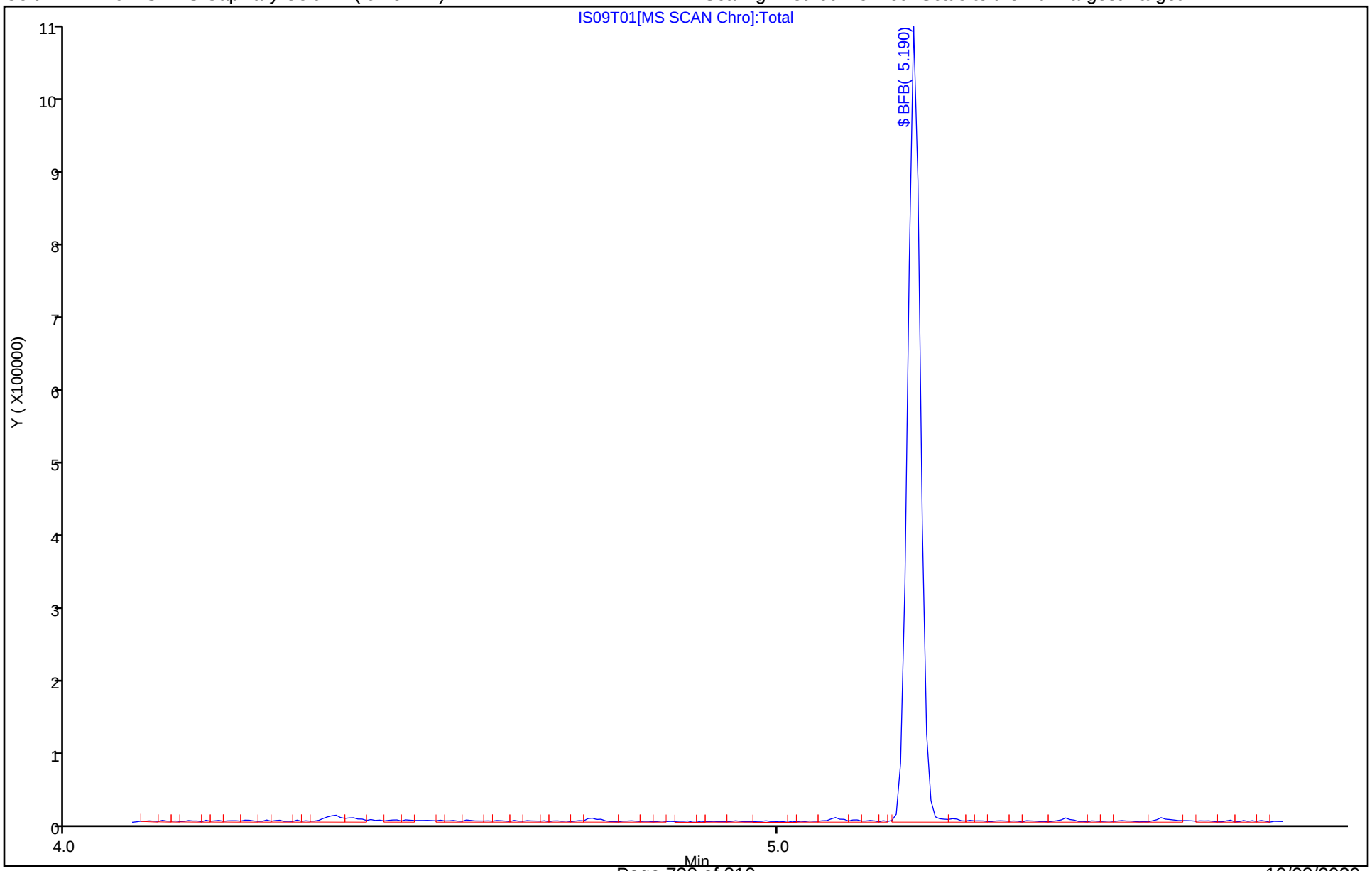
Report Date: 11-Sep-2020 19:25:26 Chrom Revision: 2.3 09-Sep-2020 15:12:58

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09T01.D

Injection Date:	09-Sep-2020 15:02:30	Instrument ID:	19930	Operator ID:	dvv10203
Lims ID:	bfb			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	8260 25ml HP31	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\19930\20201003-11975.b\IO03T01.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	03-Oct-2020 06:57:30	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Sample Info:	410-0011975-001				
Misc. Info.:	BFB				
Operator ID:	jkh09052	Instrument ID:	19930		
Method:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\8260 25ml HP31.m				
Limit Group:	MSV - 8260C_D				
Last Update:	03-Oct-2020 09:37:02	Calib Date:	09-Sep-2020 21:13:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I17.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1015				

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 145 BFB	95	5.190	5.190	0.000	0	205457	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

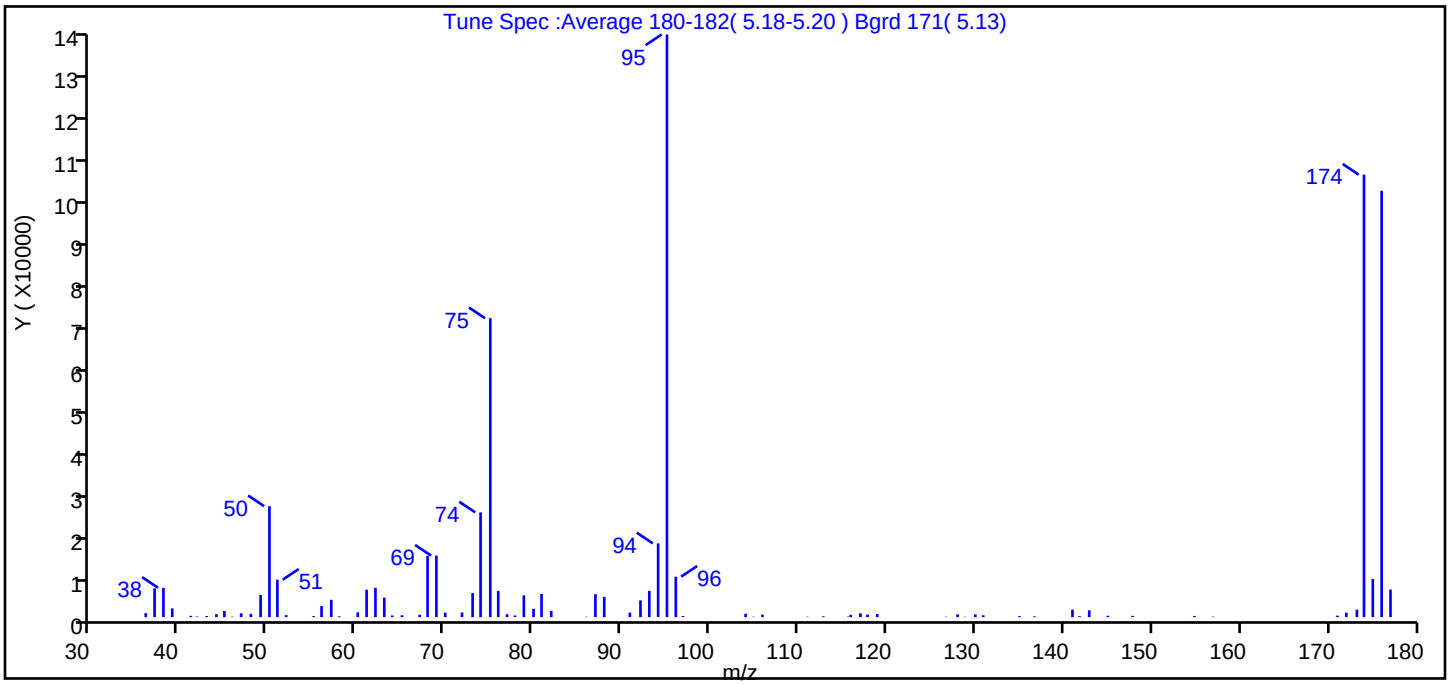
MSV_V_BFB_00003 Amount Added: 1.00 Units: uL

MS Tune Report

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\IO03T01.D
Injection Date: 03-Oct-2020 06:57:30 Instrument ID: 19930
Lims ID: BFB
Client ID:
Operator ID: jkh09052 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Tune Method: BFB Method 8260

$ 145 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	19.0
75	30 to 60% of m/z 95	51.3
96	5 to 9% of m/z 95	6.9
173	Less than 2% of m/z 174	1.3 (1.7)
174	50 to 120% of m/z 95	75.9
175	5 to 9% of m/z 174	6.5 (8.6)
176	Greater than 95% but less than 101% of m/z 174	73.2 (96.3)
177	5 to 9% of m/z 176	4.7 (6.5)

Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\IO03T01.D\8260 25ml HP31.rslt\spectra.d
Injection Date: 03-Oct-2020 06:57:30
Spectrum: Tune Spec :Average 180-182(5.18-5.20) Bgrd 171(5.13)
Base Peak: 95.10
Minimum % Base Peak: 0
Number of Points: 82

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	935	61.00	6500	87.00	5424	129.00	89
37.00	6797	62.00	6946	88.00	4792	130.00	665
38.00	6926	63.00	4613	91.00	1079	131.00	440
39.00	2071	64.00	389	92.00	3957	135.00	254
41.00	316	65.00	435	93.00	6206	137.00	192
42.00	133	67.00	555	94.00	17424	141.00	1786
43.00	268	68.00	14499	95.00	137600	142.00	222
44.00	697	69.00	14536	96.00	9552	143.00	1614
45.00	1453	70.00	1079	97.00	261	145.00	325
46.00	113	72.00	1097	104.00	795	148.00	299
47.00	918	73.00	5700	105.00	93	155.00	289
48.00	786	74.00	24744	106.00	594	157.00	122
49.00	5248	75.00	70600	111.00	104	171.00	352
50.00	26208	76.00	6206	113.00	198	172.00	1077
51.00	8845	77.00	692	116.00	122	173.00	1772
52.00	474	78.00	399	116.00	552	174.00	104504
55.00	250	79.00	5156	117.00	911	175.00	9009
56.00	2628	80.00	1974	118.00	622	176.00	100688
57.00	4099	81.00	5486	119.00	749	177.00	6523
58.00	199	82.00	1481	127.00	98		
60.00	1128	86.00	93	128.00	648		

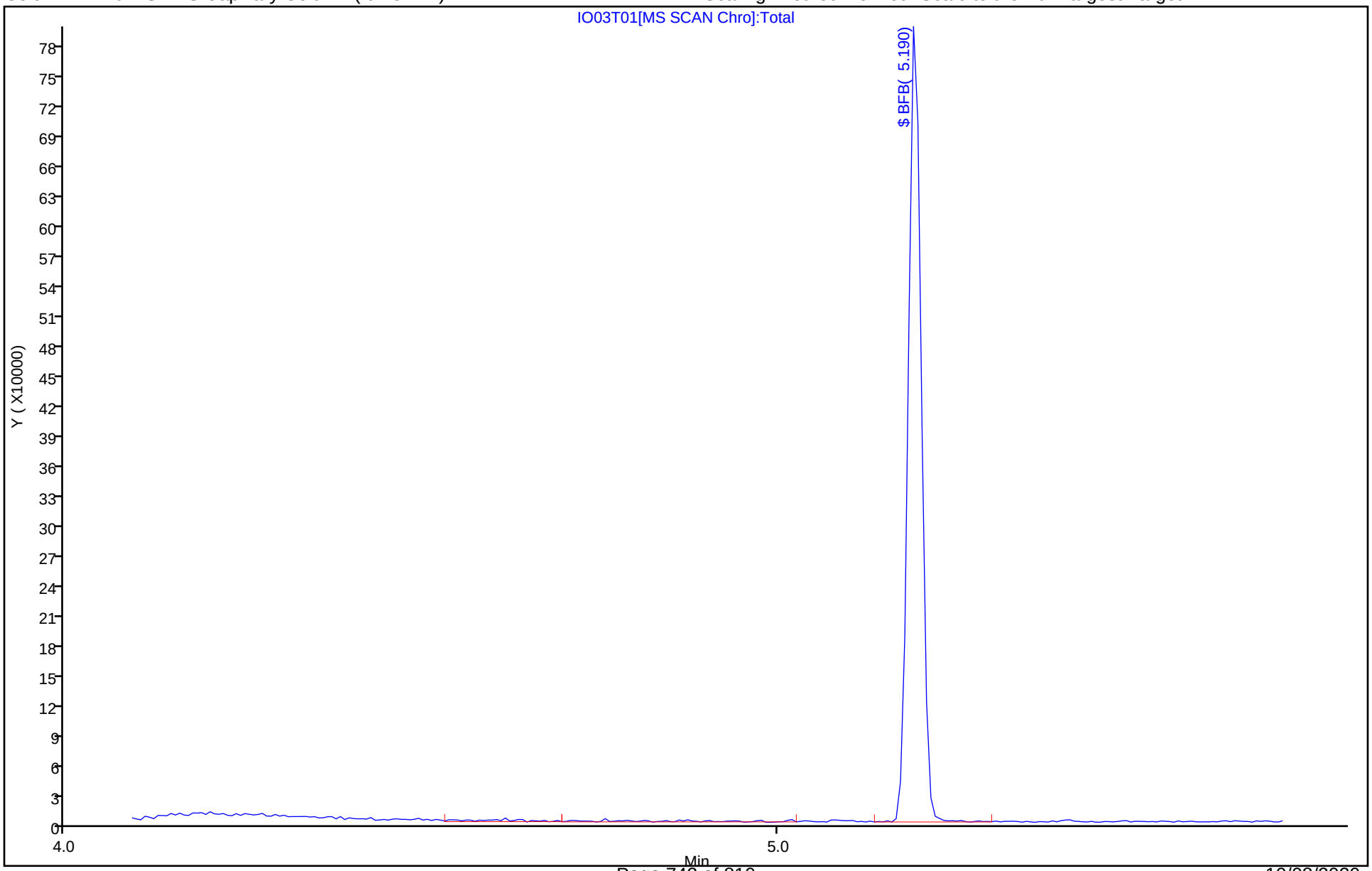
Report Date: 03-Oct-2020 09:37:03 Chrom Revision: 2.3 24-Sep-2020 19:22:38

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\IO03T01.D

Injection Date:	03-Oct-2020 06:57:30	Instrument ID:	19930	Operator ID:	jkh09052
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	8260 25ml HP31	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 E Job No.: 410-15232-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 410-50506/6

Matrix: Water Lab File ID: IS21X07.D

Analysis Method: 8260C LL Date Collected:

Sample wt/vol: 25(mL) Date Analyzed: 10/03/2020 08:39

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.: 50506 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 E Job No.: 410-15232-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 410-50506/6

Matrix: Water Lab File ID: IS21X07.D

Analysis Method: 8260C LL Date Collected:

Sample wt/vol: 25(mL) Date Analyzed: 10/03/2020 08:39

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.: 50506 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)	98		80-120
1868-53-7	Dibromofluoromethane (Surr)	97		80-120
2037-26-5	Toluene-d8 (Surr)	107		80-120
460-00-4	4-Bromofluorobenzene (Surr)	108		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\IS21X07.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 03-Oct-2020 08:39:30 ALS Bottle#: 5 Worklist Smp#: 6
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0011975-006
Misc. Info.: MB
Operator ID: jkh09052 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 03-Oct-2020 09:36:39 Calib Date: 09-Sep-2020 21:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1015

First Level Reviewer: howej Date: 03-Oct-2020 09:36:30

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85		1.977					ND	
2 Chlorodifluoromethane	51		1.989					ND	
3 Dimethyl ether	45		2.056					ND	
4 Chloromethane	50		2.172					ND	7
6 Butadiene	39		2.282					ND	7
5 Vinyl chloride	62		2.288					ND	
7 Bromomethane	94		2.617					ND	
8 Chloroethane	64		2.703					ND	7
9 Dichlorofluoromethane	67		2.946					ND	7
10 Trichlorofluoromethane	101		3.007					ND	
11 Ethyl ether	59		3.263					ND	
12 1,2-Dichloro-1,1,2-trifluoroetha	67		3.349					ND	
13 Acrolein	56		3.434					ND	7
14 1,1-Dichloroethene	96		3.580					ND	
15 Acetone	43	3.617	3.599	0.018	69	5126		0.5451	
16 112TCTFE	101		3.617					ND	
17 Iodomethane	142		3.776					ND	
18 Ethyl bromide	108		3.806					ND	
19 Carbon disulfide	76		3.885					ND	7
20 Acetonitrile	41		3.995					ND	7
21 Methyl acetate	43		4.032					ND	
22 3-Chloro-1-propene	41		4.062					ND	
23 Methylene Chloride	84		4.251					ND	
* 24 t-Butyl alcohol-d10 (IS)	65	4.294	4.257	0.037	0	188211	50.0	50.0	M
25 2-Methyl-2-propanol	59		4.385					ND	
26 Acrylonitrile	53		4.599					ND	
27 Methyl tert-butyl ether	73		4.660					ND	
28 trans-1,2-Dichloroethene	96		4.678					ND	
29 Hexane	57		5.105					ND	
30 Vinyl acetate	43		5.324					ND	
31 1,1-Dichloroethane	63		5.330					ND	

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
	32 Isopropyl ether	45		5.391					ND	
	33 2-Chloro-1,3-butadiene	53		5.446					ND	
	34 Tert-butyl ethyl ether	59		5.921					ND	
	36 2-Butanone (MEK)	43		6.129					ND	
S	35 1,2-Dichloroethene, Total	100		6.155					ND	7
	37 cis-1,2-Dichloroethene	96		6.159					ND	
	38 2,2-Dichloropropane	77		6.184					ND	
	39 Ethyl acetate	43		6.202					ND	
	40 Propionitrile	54		6.214					ND	
	41 Methyl acrylate	55		6.263					ND	
	42 Methacrylonitrile	67		6.434					ND	
	43 Chlorobromomethane	128		6.495					ND	
	44 Tetrahydrofuran	71		6.501					ND	
	45 Chloroform	83		6.647					ND	
$	46 Dibromofluoromethane (Surr)	113	6.866	6.860	0.006	92	534905	10.0	9.71	
	47 1,1,1-Trichloroethane	97		6.872					ND	
	48 Cyclohexane	56		6.970					ND	
	49 1-Chlorobutane	56		7.037					ND	
	50 Carbon tetrachloride	117		7.080					ND	
	51 1,1-Dichloropropene	75		7.080					ND	
	52 Isobutyl alcohol	41		7.226					ND	
$	53 1,2-Dichloroethane-d4 (Surr)	102	7.317	7.311	0.006	0	99003	10.0	9.81	
	54 Benzene	78		7.342					ND	
	56 1,2-Dichloroethane	62		7.415					ND	
	55 Isopropyl acetate	43		7.427					ND	
	57 Tert-amyl methyl ether	73		7.531					ND	
*	58 Fluorobenzene (IS)	96	7.750	7.744	0.006	99	2037611	10.0	10.0	
	59 n-Heptane	43		7.750					ND	7
	60 n-Butanol	56		8.104					ND	
	61 Trichloroethene	95		8.220					ND	
	62 Methylcyclohexane	83		8.531					ND	
	63 1,2-Dichloropropane	63		8.555					ND	
	64 Methyl methacrylate	69		8.634					ND	
	65 1,4-Dioxane	88		8.640					ND	
	66 Dibromomethane	93		8.665					ND	
	67 n-Propyl acetate	43		8.713					ND	
	68 Dichlorobromomethane	83		8.896					ND	
	69 2-Nitropropane	41		9.165					ND	
	70 Chloroacetonitrile	75		9.238					ND	
	71 2-Chloroethyl vinyl ether	63		9.256					ND	
	72 1-Bromo-2-chloroethane	63		9.293					ND	
	73 cis-1,3-Dichloropropene	75		9.439					ND	
	74 4-Methyl-2-pentanone (MIBK)	43		9.604					ND	
$	75 Toluene-d8 (Surr)	98	9.750	9.744	0.006	94	2135319	10.0	10.7	
	76 Toluene	92		9.823					ND	7
S	77 1,3-Dichloropropene, Total	100		10.060					ND	7
	78 trans-1,3-Dichloropropene	75		10.073					ND	7
	79 Ethyl methacrylate	69		10.134					ND	
	80 1,1,2-Trichloroethane	97		10.274					ND	
	81 Tetrachloroethene	166		10.366					ND	
	82 1,3-Dichloropropane	76		10.439					ND	
	83 2-Hexanone	43		10.488					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
84 n-Butyl acetate	43		10.609				ND		
85 Chlorodibromomethane	129		10.652				ND		
86 Ethylene Dibromide	107		10.762				ND		
* 87 Chlorobenzene-d5 (IS)	117	11.189	11.189	0.000	87	1635165	10.0	10.0	
88 1-Chlorohexane	91		11.195				ND		7
90 Chlorobenzene	112		11.219				ND		7
S 89 Xylenes, Total	106		11.245				ND		7
91 1,1,1,2-Tetrachloroethane	131		11.298				ND		
92 Ethylbenzene	91		11.305				ND		
93 m-Xylene & p-Xylene	106		11.414				ND		7
94 o-Xylene	106		11.743				ND		
95 Styrene	104		11.756				ND		
96 Bromoform	173		11.920				ND		
97 Isopropylbenzene	105		12.042				ND		
98 cis-1,4-Dichloro-2-butene	88		12.085				ND		
99 Cyclohexanone	55		12.121				ND		
$ 100 4-Bromofluorobenzene (Surr)	95	12.188	12.189	-0.001	85	835682	10.0	10.8	
101 1,1,2,2-Tetrachloroethane	83		12.286				ND		
102 Bromobenzene	156		12.304				ND		
103 trans-1,4-Dichloro-2-butene	53		12.310				ND		
104 1,2,3-Trichloropropane	110		12.335				ND		
105 N-Propylbenzene	91		12.371				ND		7
106 2-Chlorotoluene	126		12.451				ND		
107 1,3,5-Trimethylbenzene	105		12.506				ND		
108 4-Chlorotoluene	126		12.542				ND		
109 tert-Butylbenzene	134		12.749				ND		
110 Pentachloroethane	167		12.780				ND		
111 1,2,4-Trimethylbenzene	105		12.786				ND		
112 sec-Butylbenzene	105		12.908				ND		
113 1,3-Dichlorobenzene	146		13.012				ND		
114 4-Isopropyltoluene	119		13.018				ND		
* 115 1,4-Dichlorobenzene-d4	152	13.066	13.066	0.000	97	866950	10.0	10.0	
116 1,4-Dichlorobenzene	146		13.085				ND		7
117 1,2,3-Trimethylbenzene	120		13.091				ND		7
118 Benzyl chloride	126		13.158				ND		
119 n-Butylbenzene	92		13.310				ND		7
120 1,2-Dichlorobenzene	146		13.341				ND		7
121 Hexachloroethane	117		13.542				ND		
122 1,2-Dibromo-3-Chloropropane	155		13.883				ND		
123 1,3,5-Trichlorobenzene	180		14.011				ND		7
124 1,2,4-Trichlorobenzene	180		14.432				ND		
125 Hexachlorobutadiene	225		14.517				ND		U
126 Naphthalene	128		14.615				ND		7
127 1,2,3-Trichlorobenzene	180		14.755				ND		7
128 Dodecane	57		0.000				ND		
141 1-Chloropropane	1		0.000				ND		
129 Propene oxide	1		0.000				ND		
130 Chlorotrifluoroethene	1		0.000				ND		
131 tert-Butyl Formate	1		0.000				ND		
132 Methylal	1		0.000				ND		
133 t-Amyl alcohol	1		0.000				ND		
134 Isopropyl alcohol	45		0.000				ND		

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
135 p-Diethylbenzene	1		0.000					ND	
136 2-Chloro-1,1,1-Trifluoroethane	1		0.000					ND	
137 2-Methylnaphthalene	142		0.000					ND	
138 1,1-Dichloro-1-fluoroethane	1		0.000					ND	
139 1-Bromo-3-Chloropropane	1		0.000					ND	
142 2-Bromo-1-chloropropane	1		0.000					ND	
143 n-Decane	57		0.000					ND	
144 2-ethoxy-2-methyl butane	1		0.000					ND	
140 Ethanol	45		3.288					ND	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

U - Marked Undetected

Reagents:

MSV_31_826ISS_00003 Amount Added: 5.00 Units: uL Run Reagent

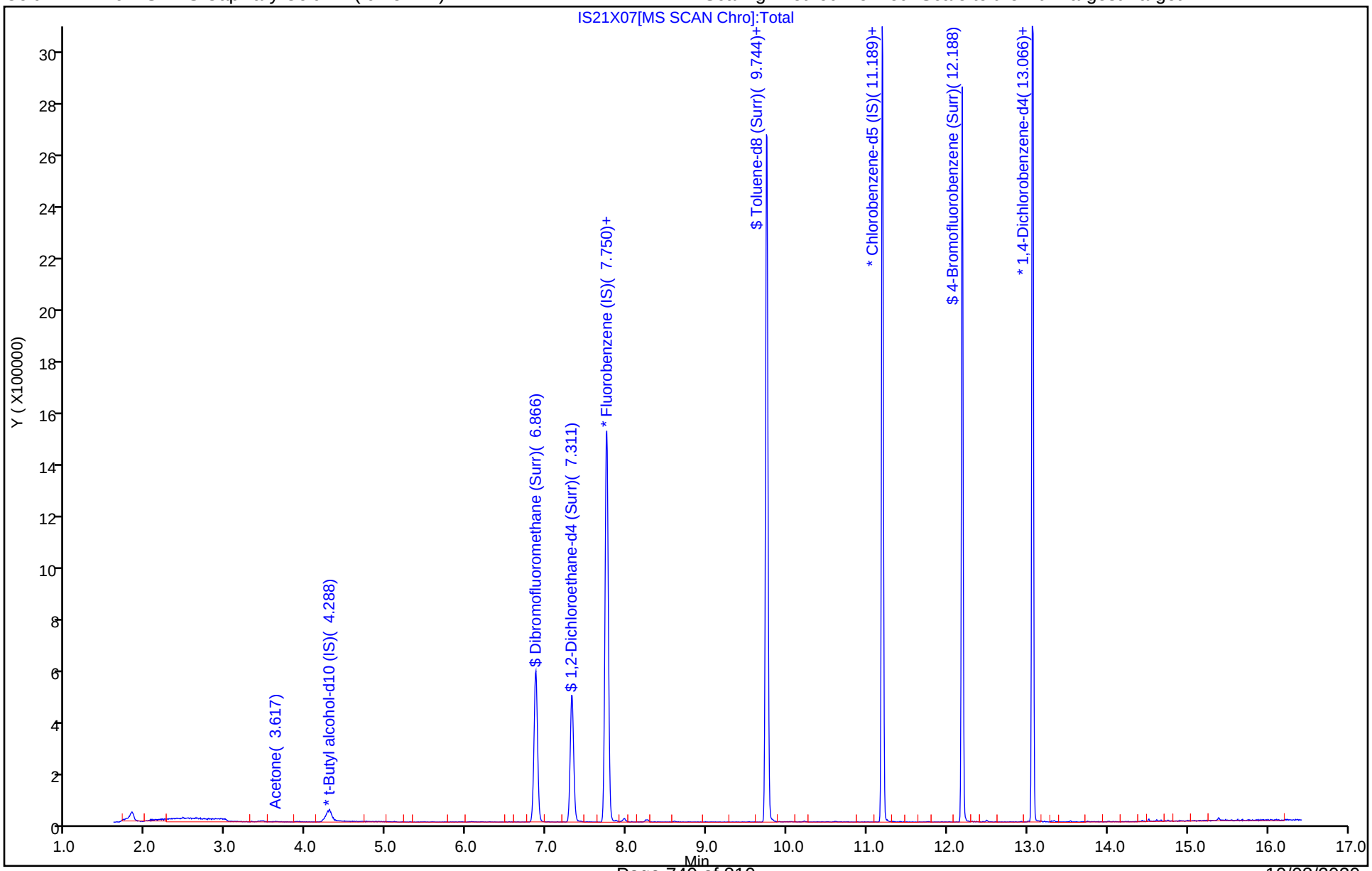
Report Date: 03-Oct-2020 09:37:01 Chrom Revision: 2.3 24-Sep-2020 19:22:38

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\IS21X07.D

Injection Date:	03-Oct-2020 08:39:30	Instrument ID:	19930	Operator ID:	jkh09052
Lims ID:	MB			Worklist Smp#:	6
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	8260 25ml HP31	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\19930\20201003-11975.b\IS21X07.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 03-Oct-2020 08:39:30 ALS Bottle#: 5 Worklist Smp#: 6
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0011975-006
Misc. Info.: MB
Operator ID: jkh09052 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 03-Oct-2020 09:36:39 Calib Date: 09-Sep-2020 21:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1015

First Level Reviewer: howej Date: 03-Oct-2020 09:36:30

Compound	Amount Added	Amount Recovered	% Rec.
$ 46 Dibromofluoromethane (Surr)	10.0	9.71	97.12
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	9.81	98.07
$ 75 Toluene-d8 (Surr)	10.0	10.7	106.52
$ 100 4-Bromofluorobenzene (Surr)	10.0	10.8	107.50

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

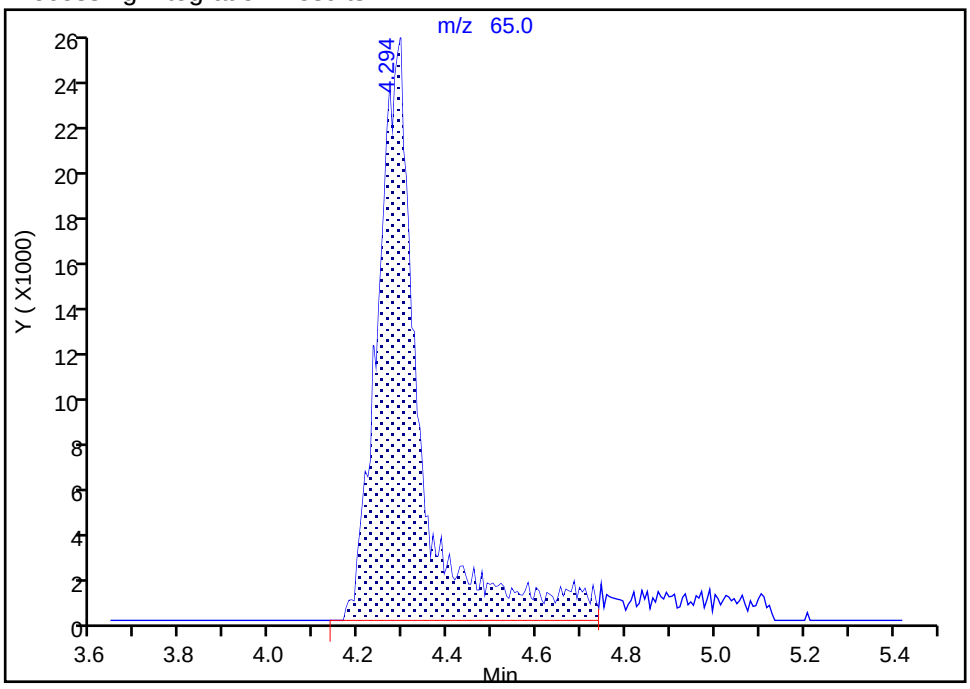
Data File:	\\chromfs\Lancaster\ChromData\19930\20201003-11975.b\IS21X07.D				
Injection Date:	03-Oct-2020 08:39:30	Instrument ID:	19930		
Lims ID:	MB				
Client ID:					
Operator ID:	jkh09052	ALS Bottle#:	5	Worklist Smp#:	6
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

* 24 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

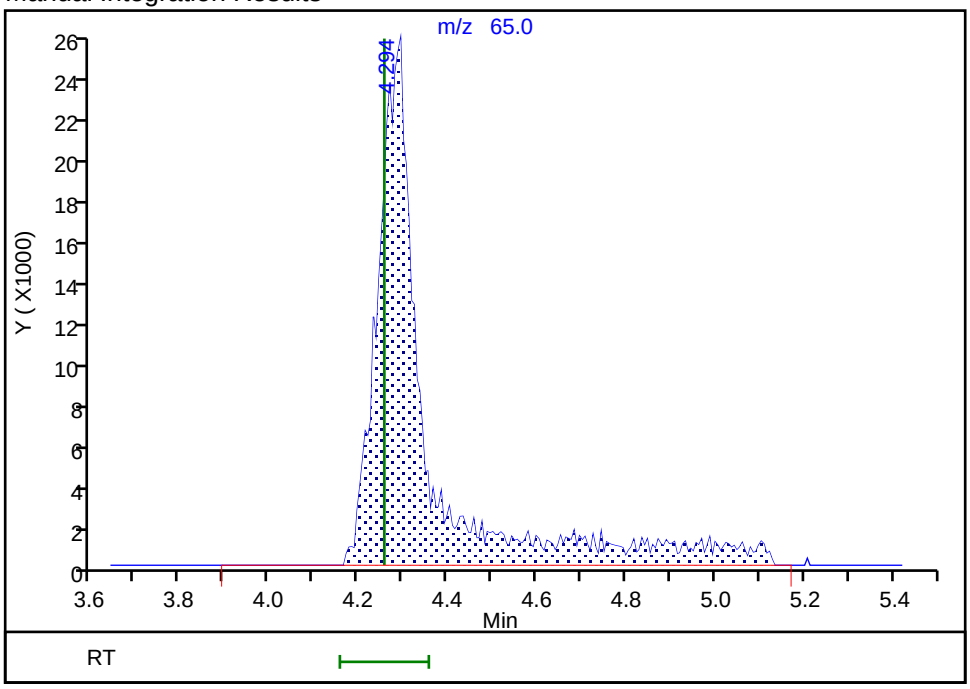
Processing Integration Results

RT: 4.29
Area: 167249
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 4.29
Area: 188211
Amount: 50.000000
Amount Units: ug/l



Reviewer: howej, 03-Oct-2020 09:03:26
Audit Action: Manually Integrated Audit Reason: Other

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-15232-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 410-50813/6

Matrix: Water Lab File ID: CC05B01.D

Analysis Method: 8260C LL Date Collected:

Sample wt/vol: 25(mL) Date Analyzed: 10/05/2020 11:10

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.: 50813 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 E Job No.: 410-15232-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 410-50813/6

Matrix: Water Lab File ID: CC05B01.D

Analysis Method: 8260C LL Date Collected:

Sample wt/vol: 25(mL) Date Analyzed: 10/05/2020 11:10

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.: 50813 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)	105		80-120
2037-26-5	Toluene-d8 (Surr)	98		80-120
460-00-4	4-Bromofluorobenzene (Surr)	98		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05B01.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 05-Oct-2020 11:10:30 ALS Bottle#: 5 Worklist Smp#: 6
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0012055-006
Misc. Info.: MB
Operator ID: dvv10203 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20201005-12055.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 05-Oct-2020 11:37:57 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1028

First Level Reviewer: virayd Date: 05-Oct-2020 11:37:31

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85		1.910					ND	
1 Chlorodifluoromethane	51		1.928					ND	7
140 Dimethyl ether	45		1.993					ND	
3 Chloromethane	50		2.099					ND	7
4 Butadiene	39		2.203					ND	7
5 Vinyl chloride	62		2.209					ND	
6 Bromomethane	94		2.514					ND	
7 Chloroethane	64		2.599					ND	
8 Dichlorofluoromethane	67		2.831					ND	
9 Trichlorofluoromethane	101		2.885					ND	
11 Ethyl ether	59		3.123					ND	
12 1,2-Dichloro-1,1,2-trifluoroetha	67		3.209					ND	
13 Acrolein	56		3.294					ND	7
14 1,1-Dichloroethene	96		3.422					ND	7
15 112TCTFE	101		3.452					ND	
16 Acetone	43		3.459					ND	7
17 Iodomethane	142		3.605					ND	
18 Isopropyl alcohol	45		3.623					ND	U
19 Ethyl bromide	108		3.635					ND	
20 Carbon disulfide	76	3.690	3.702	-0.012	95	8938		0.0590	M
21 Acetonitrile	41		3.836					ND	
22 Methyl acetate	43		3.849					ND	7
23 3-Chloro-1-propene	41		3.879					ND	7
24 Methylene Chloride	84		4.056					ND	
* 25 t-Butyl alcohol-d10 (IS)	65	4.080	4.080	0.000	0	192320	50.0	50.0	
26 2-Methyl-2-propanol	59		4.202					ND	
27 Acrylonitrile	53		4.397					ND	
28 Methyl tert-butyl ether	73		4.446					ND	
29 trans-1,2-Dichloroethene	96		4.452					ND	
30 Hexane	57		4.873					ND	
32 1,1-Dichloroethane	63		5.123					ND	

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
	31 Vinyl acetate	43		5.135					ND	
	33 Isopropyl ether	45		5.178					ND	
	34 2-Chloro-1,3-butadiene	53		5.226					ND	
	35 Tert-butyl ethyl ether	59		5.714					ND	
	36 2-Butanone (MEK)	43		5.934					ND	
	37 cis-1,2-Dichloroethene	96		5.958					ND	
	38 2,2-Dichloropropane	77		5.970					ND	
	39 Ethyl acetate	43		6.013					ND	7
	40 Propionitrile	54		6.031					ND	
	41 Methyl acrylate	55		6.074					ND	
S	42 1,2-Dichloroethene, Total	100		6.155					ND	7
	43 Methacrylonitrile	67		6.245					ND	
	44 Chlorobromomethane	128		6.293					ND	
	45 Tetrahydrofuran	71		6.299					ND	
	46 Chloroform	83		6.446					ND	
$	47 Dibromofluoromethane (Surr)	113	6.659	6.659	0.000	93	460733	10.0	10.5	
	48 1,1,1-Trichloroethane	97		6.665					ND	
	49 Cyclohexane	56		6.757					ND	
	145 1-Chlorobutane	56		6.842					ND	
	50 Carbon tetrachloride	117		6.873					ND	
	51 1,1-Dichloropropene	75		6.885					ND	
	52 Isobutyl alcohol	41		7.061					ND	
$	53 1,2-Dichloroethane-d4 (Surr)	102	7.116	7.116	0.000	0	99359	10.0	11.1	
	54 Benzene	78		7.147					ND	
	55 1,2-Dichloroethane	62	7.220	7.220	0.000	21	1980		0.0309	
	152 Isopropyl acetate	43		7.257					ND	
	56 Tert-amyl methyl ether	73		7.342					ND	
*	57 Fluorobenzene (IS)	96	7.549	7.561	-0.012	99	1853516	10.0	10.0	
	58 n-Heptane	43		7.561					ND	7
	59 n-Butanol	56		7.952					ND	
	60 Trichloroethene	95		8.037					ND	
	61 Methylcyclohexane	83		8.336					ND	
	62 1,2-Dichloropropane	63		8.372					ND	
	63 2-ethoxy-2-methyl butane	87		8.384					ND	
	64 Methyl methacrylate	69		8.470					ND	
	65 1,4-Dioxane	88		8.470					ND	
	66 Dibromomethane	93		8.488					ND	
	160 n-Propyl acetate	61		8.561					ND	
	67 Dichlorobromomethane	83		8.726					ND	
	68 2-Nitropropane	41		9.012					ND	7
	69 2-Chloroethyl vinyl ether	63		9.116					ND	
	70 Chloroacetonitrile	75		9.116					ND	
	71 1-Bromo-2-chloroethane	63		9.116					ND	
	72 cis-1,3-Dichloropropene	75		9.281					ND	
	73 4-Methyl-2-pentanone (MIBK)	43		9.470					ND	
$	74 Toluene-d8 (Surr)	98	9.597	9.598	-0.001	94	1878225	10.0	9.77	
	75 Toluene	92		9.677					ND	7
	76 trans-1,3-Dichloropropene	75		9.945					ND	
	78 Ethyl methacrylate	69		10.012					ND	7
S	77 1,3-Dichloropropene, Total	100		10.060					ND	7
	79 1,1,2-Trichloroethane	97		10.152					ND	
	80 Tetrachloroethene	166		10.232					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
81 1,3-Dichloropropane	76		10.317					ND	
82 2-Hexanone	43		10.378					ND	7
161 n-Butyl acetate	43		10.512					ND	U
83 Chlorodibromomethane	129		10.536					ND	
84 Ethylene Dibromide	107		10.646					ND	
* 85 Chlorobenzene-d5 (IS)	117	11.085	11.085	0.000	86	1472454	10.0	10.0	
86 1-Chlorohexane	91		11.097					ND	7
87 Chlorobenzene	112		11.109					ND	
89 1,1,1,2-Tetrachloroethane	131		11.201					ND	
90 Ethylbenzene	91		11.201					ND	
S 88 Xylenes, Total	106		11.245					ND	7
91 m-Xylene & p-Xylene	106		11.317					ND	
92 o-Xylene	106		11.652					ND	
93 Styrene	104		11.664					ND	
94 Bromoform	173		11.823					ND	
95 Isopropylbenzene	105		11.957					ND	
96 cis-1,4-Dichloro-2-butene	88		12.018					ND	U
97 Cyclohexanone	55		12.048					ND	
$ 98 4-Bromofluorobenzene (Surr)	95	12.097	12.097	0.000	93	711611	10.0	9.84	
99 1,1,2,2-Tetrachloroethane	83		12.207					ND	
100 Bromobenzene	156		12.219					ND	
101 trans-1,4-Dichloro-2-butene	53		12.231					ND	
102 1,2,3-Trichloropropane	110		12.256					ND	
103 N-Propylbenzene	91		12.286					ND	
104 2-Chlorotoluene	126		12.365					ND	
105 1,3,5-Trimethylbenzene	105		12.426					ND	
106 4-Chlorotoluene	126		12.457					ND	
107 tert-Butylbenzene	134		12.670					ND	
108 Pentachloroethane	167		12.701					ND	
109 1,2,4-Trimethylbenzene	105		12.713					ND	7
110 sec-Butylbenzene	105		12.835					ND	
111 1,3-Dichlorobenzene	146		12.932					ND	7
112 4-Isopropyltoluene	119		12.944					ND	7
* 113 1,4-Dichlorobenzene-d4	152	12.993	12.993	0.000	95	814311	10.0	10.0	
114 1,4-Dichlorobenzene	146		13.005					ND	7
115 1,2,3-Trimethylbenzene	120		13.018					ND	7
116 Benzyl chloride	126		13.091					ND	
119 n-Butylbenzene	92		13.237					ND	
120 1,2-Dichlorobenzene	146		13.274					ND	
118 p-Diethylbenzene	119		13.292					ND	
122 Hexachloroethane	117		13.475					ND	
123 1,2-Dibromo-3-Chloropropane	155		13.822					ND	
124 1,3,5-Trichlorobenzene	180		13.944					ND	7
125 1,2,4-Trichlorobenzene	180		14.371					ND	7
126 Hexachlorobutadiene	225		14.456					ND	7
127 Naphthalene	128		14.554					ND	7
128 1,2,3-Trichlorobenzene	180		14.700					ND	
129 2-Methylnaphthalene	142		15.322					ND	
130 Dodecane	57		0.000					ND	
159 tert-Butyl Formate	1		0.000					ND	
131 2-Bromo-1-chloropropane	1		0.000					ND	
133 1-Chloropropane	1		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
136 Methylal	1		0.000					ND	
138 n-Decane	57		0.000					ND	
142 1-Bromo-3-Chloropropane	1		0.000					ND	
155 2-Chloro-1,1,1-Trifluoroethane	1		0.000					ND	
149 Chlorotrifluoroethene	1		0.000					ND	
151 Propene oxide	1		0.000					ND	
157 t-Amyl alcohol	1		0.000					ND	
158 1,1-Dichloro-1-fluoroethane	1		0.000					ND	
162 Ethanol	45		0.000					ND	

QC Flag Legend

Processing Flags
7 - Failed Limit of Detection
Review Flags
M - Manually Integrated
U - Marked Undetected

Reagents:

MSV_HP25_ISSS_00014 Amount Added: 1.00 Units: uL Run Reagent

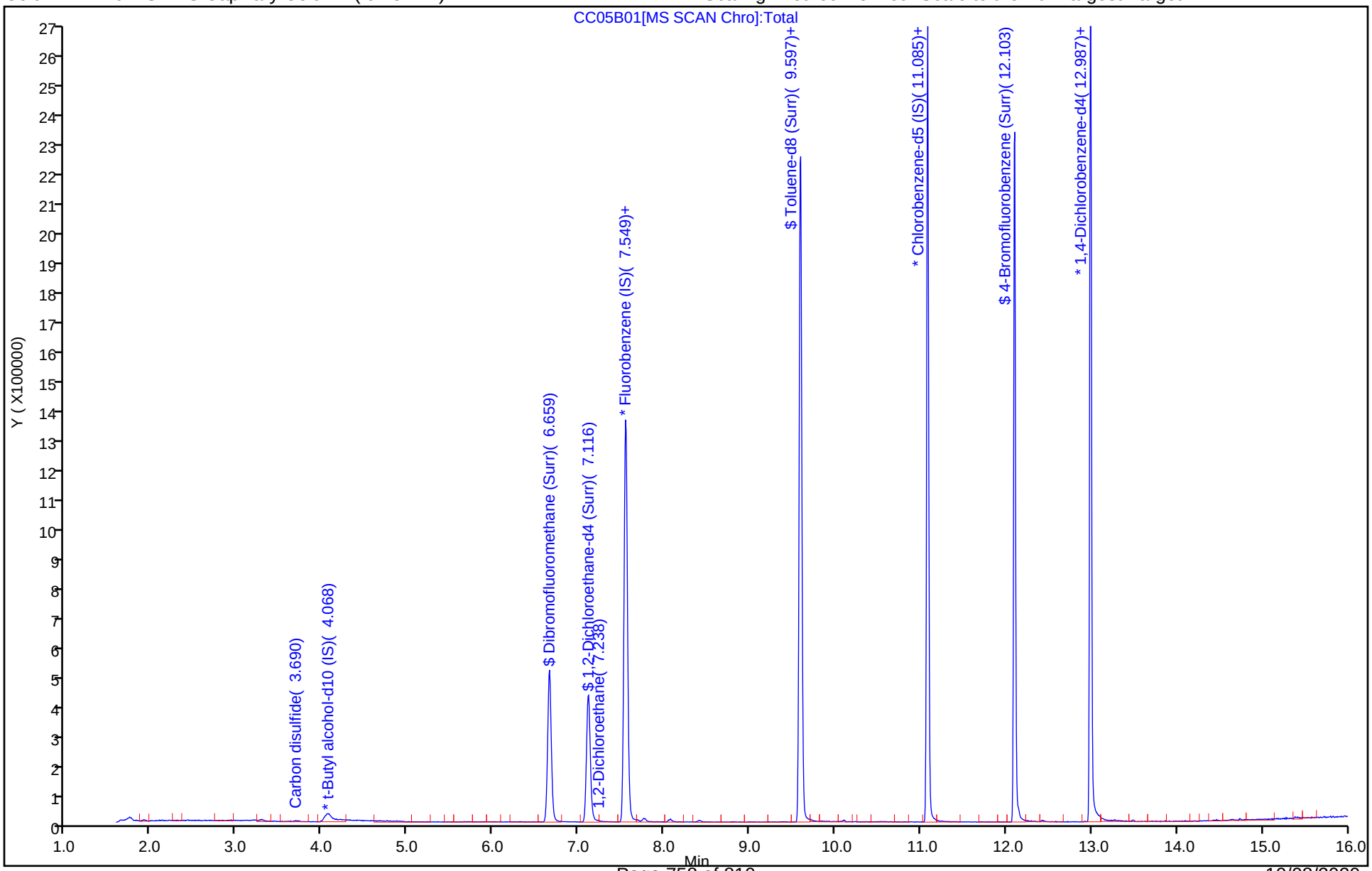
Report Date: 05-Oct-2020 11:38:19 Chrom Revision: 2.3 24-Sep-2020 19:22:38

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05B01.D

Injection Date:	05-Oct-2020 11:10:30	Instrument ID:	10193	Operator ID:	dvv10203
Lims ID:	MB			Worklist Smp#:	6
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MSV_10193_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\10193\20201005-12055.b\CC05B01.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 05-Oct-2020 11:10:30 ALS Bottle#: 5 Worklist Smp#: 6
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0012055-006
Misc. Info.: MB
Operator ID: dvv10203 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20201005-12055.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 05-Oct-2020 11:37:57 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1028

First Level Reviewer: virayd Date: 05-Oct-2020 11:37:31

Compound	Amount Added	Amount Recovered	% Rec.
$ 47 Dibromofluoromethane (Surr)	10.0	10.5	104.61
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	11.1	110.74
$ 74 Toluene-d8 (Surr)	10.0	9.77	97.67
$ 98 4-Bromofluorobenzene (Surr)	10.0	9.84	98.45

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

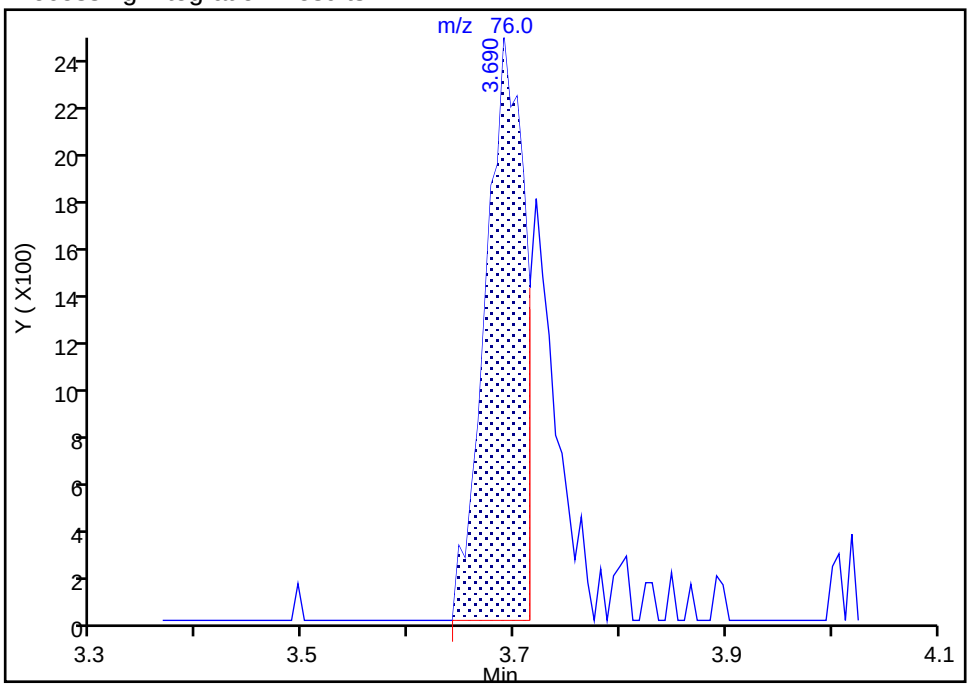
Data File: \\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05B01.D
Injection Date: 05-Oct-2020 11:10:30 Instrument ID: 10193
Lims ID: MB
Client ID:
Operator ID: dvv10203 ALS Bottle#: 5 Worklist Smp#: 6
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

20 Carbon disulfide, CAS: 75-15-0

Signal: 1

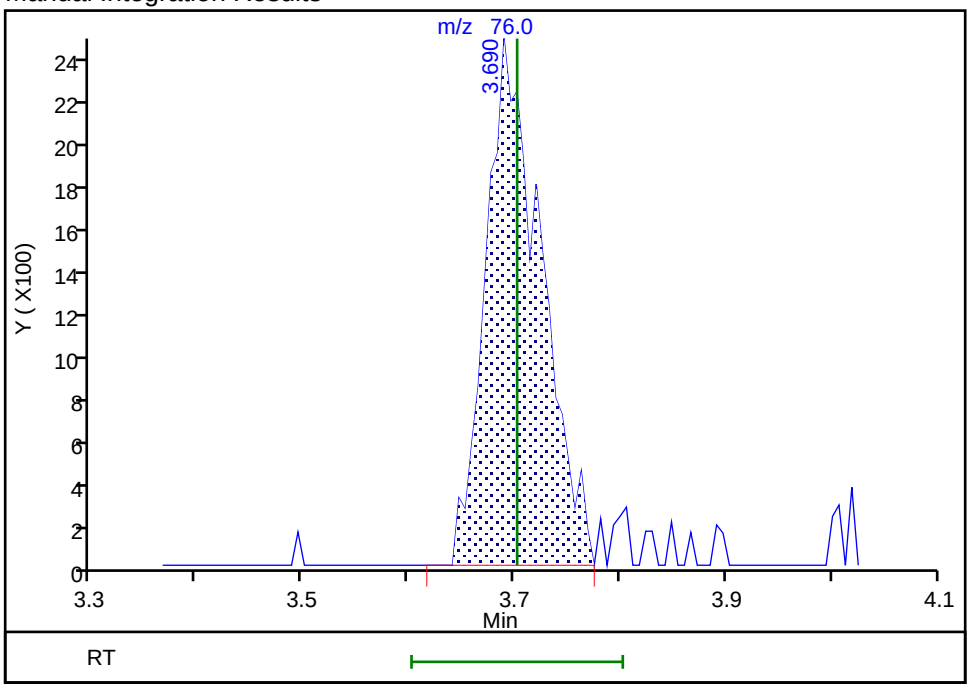
Processing Integration Results

RT: 3.69
Area: 6284
Amount: 0.041512
Amount Units: ug/l



Manual Integration Results

RT: 3.69
Area: 8938
Amount: 0.059045
Amount Units: ug/l



Reviewer: virayd, 05-Oct-2020 11:36:40
Audit Action: Manually Integrated Audit Reason: Other

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-15232-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 410-50506/4

Matrix: Water Lab File ID: IS21X04.D

Analysis Method: 8260C LL Date Collected:

Sample wt/vol: 25(mL) Date Analyzed: 10/03/2020 07:56

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.: 50506 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	4.82		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	5.17		0.50	0.070
79-00-5	1,1,2-Trichloroethane	5.37		0.50	0.060
75-34-3	1,1-Dichloroethane	5.28		0.50	0.070
75-35-4	1,1-Dichloroethene	4.80		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	4.98		0.50	0.060
107-06-2	1,2-Dichloroethane	5.32		0.50	0.050
78-87-5	1,2-Dichloropropane	5.31		0.50	0.060
78-93-3	2-Butanone (MEK)	45.3		5.0	0.60
591-78-6	2-Hexanone	31.6		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	30.5		5.0	0.70
67-64-1	Acetone	33.4		5.0	0.90
107-13-1	Acrylonitrile	30.0		5.0	0.40
71-43-2	Benzene	5.00		0.50	0.050
74-97-5	Bromochloromethane	4.79		0.50	0.050
75-27-4	Bromodichloromethane	5.28		0.50	0.050
75-25-2	Bromoform	4.37		1.0	0.30
74-83-9	Bromomethane	4.77		0.50	0.070
75-15-0	Carbon disulfide	4.46		1.0	0.060
56-23-5	Carbon tetrachloride	4.71		0.50	0.070
108-90-7	Chlorobenzene	4.90		0.50	0.060
75-00-3	Chloroethane	4.91		0.50	0.070
67-66-3	Chloroform	5.23		0.50	0.090
74-87-3	Chloromethane	4.83		0.50	0.060
156-59-2	cis-1,2-Dichloroethene	5.25		0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	5.06		0.50	0.050
124-48-1	Dibromochloromethane	5.15		0.50	0.070
100-41-4	Ethylbenzene	5.11		0.50	0.060
1634-04-4	Methyl tert-butyl ether	4.88		0.50	0.050
75-09-2	Methylene Chloride	5.10		0.50	0.070
100-42-5	Styrene	5.04		0.50	0.050
127-18-4	Tetrachloroethene	4.61		0.50	0.060
108-88-3	Toluene	5.00		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	4.91		0.50	0.060
10061-02-6	trans-1,3-Dichloropropene	5.20		0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-15232-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 410-50506/4

Matrix: Water Lab File ID: IS21X04.D

Analysis Method: 8260C LL Date Collected:

Sample wt/vol: 25(mL) Date Analyzed: 10/03/2020 07:56

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.: 50506 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	4.83		0.50	0.060
75-01-4	Vinyl chloride	5.19		0.50	0.10
1330-20-7	Xylenes, Total	15.0		1.0	0.15

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	96		80-120
1868-53-7	Dibromofluoromethane (Surr)	98		80-120
2037-26-5	Toluene-d8 (Surr)	100		80-120
460-00-4	4-Bromofluorobenzene (Surr)	105		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\IS21X04.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 03-Oct-2020 07:56:30 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0011975-004
Misc. Info.: LCS
Operator ID: jkh09052 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 03-Oct-2020 09:36:39 Calib Date: 09-Sep-2020 21:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1015

First Level Reviewer: howej Date: 03-Oct-2020 08:43:35

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	1.977	1.977	0.000	99	405534	5.00	4.31	
4 Chloromethane	50	2.184	2.172	0.012	99	457390	5.00	4.83	
6 Butadiene	39	2.300	2.282	0.018	91	466995	5.00	5.29	
5 Vinyl chloride	62	2.300	2.288	0.012	95	486087	5.00	5.19	
7 Bromomethane	94	2.629	2.617	0.012	93	401519	5.00	4.77	
8 Chloroethane	64	2.721	2.703	0.018	98	300450	5.00	4.91	
9 Dichlorofluoromethane	67	2.958	2.946	0.012	97	739932	5.00	4.96	
10 Trichlorofluoromethane	101	3.019	3.007	0.012	98	740358	5.00	5.18	
11 Ethyl ether	59	3.275	3.263	0.012	90	233730	5.01	5.39	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.361	3.349	0.012	92	387246	5.00	5.34	
13 Acrolein	56	3.452	3.434	0.018	99	195620	37.4	32.8	
14 1,1-Dichloroethene	96	3.592	3.580	0.012	98	296835	5.00	4.80	
15 Acetone	43	3.623	3.599	0.024	99	312143	37.5	33.4	
16 112TCTFE	101	3.635	3.617	0.018	92	296095	5.00	4.55	
17 Iodomethane	142	3.788	3.776	0.012	99	527829	5.00	4.07	
18 Ethyl bromide	108	3.824	3.806	0.018	99	217362	4.93	4.10	
19 Carbon disulfide	76	3.897	3.885	0.012	100	737750	5.00	4.46	
21 Methyl acetate	43	4.044	4.032	0.012	97	147306	5.00	5.58	
22 3-Chloro-1-propene	41	4.074	4.062	0.012	89	458210	5.00	5.68	
23 Methylene Chloride	84	4.269	4.251	0.018	90	326242	5.00	5.10	
* 24 t-Butyl alcohol-d10 (IS)	65	4.269	4.257	0.012	0	187254	50.0	50.0	M
25 2-Methyl-2-propanol	59	4.415	4.385	0.030	99	173536	50.0	44.7	M
26 Acrylonitrile	53	4.623	4.599	0.024	100	312732	25.0	30.0	a
27 Methyl tert-butyl ether	73	4.678	4.660	0.018	94	788148	5.00	4.88	
28 trans-1,2-Dichloroethene	96	4.690	4.678	0.012	98	339259	5.00	4.91	
29 Hexane	57	5.110	5.105	0.005	93	423887	5.00	5.32	
31 1,1-Dichloroethane	63	5.342	5.330	0.012	96	592006	5.00	5.28	
32 Isopropyl ether	45	5.403	5.391	0.012	92	934401	5.00	5.45	
33 2-Chloro-1,3-butadiene	53	5.452	5.446	0.006	93	489791	5.00	5.13	
34 Tert-butyl ethyl ether	59	5.940	5.921	0.019	97	927715	5.00	5.12	
36 2-Butanone (MEK)	43	6.141	6.129	0.012	99	634853	37.5	45.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
37 cis-1,2-Dichloroethene	96	6.177	6.159	0.018	81	416960	5.00	5.25	
38 2,2-Dichloropropane	77	6.189	6.184	0.005	88	551807	5.00	5.03	
40 Propionitrile	54	6.232	6.214	0.018	99	149840	37.5	36.6	
42 Methacrylonitrile	67	6.439	6.434	0.005	91	646592	37.5	42.1	
43 Chlorobromomethane	128	6.500	6.495	0.006	89	174276	5.00	4.79	
44 Tetrahydrofuran	71	6.506	6.501	0.005	80	130886	25.0	29.0	
45 Chloroform	83	6.653	6.647	0.006	94	660247	5.00	5.23	
$ 46 Dibromofluoromethane (Surr)	113	6.860	6.860	0.000	93	618514	10.0	9.80	
47 1,1,1-Trichloroethane	97	6.878	6.872	0.006	98	612661	5.00	4.85	
48 Cyclohexane	56	6.976	6.970	0.006	91	515274	5.00	5.32	
50 Carbon tetrachloride	117	7.092	7.080	0.012	93	545292	5.00	4.71	
51 1,1-Dichloropropene	75	7.086	7.080	0.006	94	483423	5.00	5.16	
52 Isobutyl alcohol	41	7.226	7.226	0.000	92	139474	125.0	121.6	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.317	7.311	0.006	0	111496	10.0	9.64	
54 Benzene	78	7.348	7.342	0.006	97	1372550	5.00	5.00	
56 1,2-Dichloroethane	62	7.421	7.415	0.006	98	400132	5.00	5.32	M
57 Tert-amyl methyl ether	73	7.537	7.531	0.006	98	890836	5.00	5.12	
* 58 Fluorobenzene (IS)	96	7.750	7.744	0.006	99	2335168	10.0	10.0	
59 n-Heptane	43	7.762	7.750	0.012	90	453284	5.00	6.03	
60 n-Butanol	56	8.110	8.104	0.006	90	226530	250.0	203.5	
61 Trichloroethene	95	8.226	8.220	0.006	98	387791	5.00	4.83	
62 Methylcyclohexane	83	8.537	8.531	0.006	92	636176	5.00	5.39	
63 1,2-Dichloropropane	63	8.561	8.555	0.006	76	338018	5.00	5.31	
64 Methyl methacrylate	69	8.634	8.634	0.000	87	165604	5.00	5.52	
65 1,4-Dioxane	88	8.659	8.640	0.018	66	32398	125.0	104.6	M
66 Dibromomethane	93	8.671	8.665	0.006	96	181711	5.00	5.15	
68 Dichlorobromomethane	83	8.902	8.896	0.006	99	470614	5.00	5.28	
69 2-Nitropropane	41	9.171	9.165	0.006	99	48492	5.00	5.32	
71 2-Chloroethyl vinyl ether	63		9.256				ND	ND	
72 1-Bromo-2-chloroethane	63	9.293	9.293	0.000	99	355352	5.00	5.54	
73 cis-1,3-Dichloropropene	75	9.439	9.439	0.000	95	506950	5.00	5.06	
74 4-Methyl-2-pentanone (MIBK)	43	9.610	9.604	0.006	97	1120552	25.0	30.5	
$ 75 Toluene-d8 (Surr)	98	9.750	9.744	0.006	94	2384834	10.0	10.0	
76 Toluene	92	9.823	9.823	0.000	98	945104	5.00	5.00	
78 trans-1,3-Dichloropropene	75	10.073	10.073	0.000	93	431652	5.00	5.20	
79 Ethyl methacrylate	69	10.134	10.134	0.000	88	339930	5.00	5.24	
80 1,1,2-Trichloroethane	97	10.280	10.274	0.006	91	269638	5.00	5.37	
81 Tetrachloroethene	166	10.365	10.366	-0.001	96	441154	5.00	4.61	
82 1,3-Dichloropropane	76	10.439	10.439	0.000	90	425287	5.00	5.28	
83 2-Hexanone	43	10.487	10.488	-0.001	97	813252	25.0	31.6	
85 Chlorodibromomethane	129	10.652	10.652	0.000	89	344540	5.00	5.15	
86 Ethylene Dibromide	107	10.762	10.762	0.000	98	257280	5.00	4.98	
* 87 Chlorobenzene-d5 (IS)	117	11.189	11.189	-0.001	86	1937745	10.0	10.0	
88 1-Chlorohexane	91	11.195	11.195	0.000	95	534725	5.00	4.81	
90 Chlorobenzene	112	11.219	11.219	0.000	95	1060004	5.00	4.90	
91 1,1,1,2-Tetrachloroethane	131	11.298	11.298	0.000	95	393346	5.00	4.82	
92 Ethylbenzene	91	11.304	11.305	-0.001	98	1888532	5.00	5.11	
93 m-Xylene & p-Xylene	106	11.414	11.414	0.000	100	1533217	10.0	10.1	
94 o-Xylene	106	11.743	11.743	0.000	96	740940	5.00	4.92	
95 Styrene	104	11.762	11.756	0.006	95	1189379	5.00	5.04	
96 Bromoform	173	11.920	11.920	0.000	94	194591	5.00	4.37	
97 Isopropylbenzene	105	12.042	12.042	0.000	96	1998814	5.00	5.09	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 100 4-Bromofluorobenzene (Surr)	95	12.188	12.189	-0.001	91	964560	10.0	10.5	
101 1,1,2,2-Tetrachloroethane	83	12.286	12.286	0.000	94	332125	5.00	5.17	
102 Bromobenzene	156	12.304	12.304	0.000	95	463208	5.00	4.61	
103 trans-1,4-Dichloro-2-butene	53	12.310	12.310	0.000	89	291744	25.0	21.1	
104 1,2,3-Trichloropropane	110	12.335	12.335	0.000	85	98212	5.00	5.09	
105 N-Propylbenzene	91	12.371	12.371	0.000	99	2337138	5.00	5.12	
106 2-Chlorotoluene	126	12.450	12.451	-0.001	97	476950	5.00	4.91	
107 1,3,5-Trimethylbenzene	105	12.505	12.506	-0.001	94	1716961	5.00	4.99	
108 4-Chlorotoluene	126	12.542	12.542	0.000	97	489866	5.00	4.89	
109 tert-Butylbenzene	134	12.749	12.749	0.000	93	368932	5.00	4.63	
110 Pentachloroethane	167	12.780	12.780	0.000	92	311754	5.00	5.00	
111 1,2,4-Trimethylbenzene	105	12.792	12.786	0.006	97	1726877	5.00	4.91	
112 sec-Butylbenzene	105	12.908	12.908	0.000	94	2216953	5.00	5.06	
113 1,3-Dichlorobenzene	146	13.011	13.012	-0.001	98	949181	5.00	4.79	
114 4-Isopropyltoluene	119	13.017	13.018	-0.001	97	1935915	5.00	5.06	
* 115 1,4-Dichlorobenzene-d4	152	13.066	13.066	0.000	94	1162577	10.0	10.0	
116 1,4-Dichlorobenzene	146	13.084	13.085	-0.001	95	979273	5.00	4.91	
117 1,2,3-Trimethylbenzene	120	13.097	13.091	0.006	98	801972	5.00	5.12	
118 Benzyl chloride	126	13.158	13.158	0.000	98	143359	5.00	4.96	
119 n-Butylbenzene	92	13.310	13.310	0.000	96	894832	5.00	5.12	
120 1,2-Dichlorobenzene	146	13.347	13.341	0.006	99	893257	5.00	5.00	
122 1,2-Dibromo-3-Chloropropane	155	13.883	13.883	0.000	87	55318	5.00	5.41	
123 1,3,5-Trichlorobenzene	180	14.011	14.011	0.000	97	652046	5.00	4.93	
124 1,2,4-Trichlorobenzene	180	14.432	14.432	0.000	94	536260	5.00	4.92	
125 Hexachlorobutadiene	225	14.517	14.517	0.000	97	209879	5.00	5.12	
126 Naphthalene	128	14.615	14.615	0.000	97	1066062	5.00	4.98	
127 1,2,3-Trichlorobenzene	180	14.755	14.755	0.000	95	462115	5.00	4.97	
134 Isopropyl alcohol	45		0.000				ND	ND	
135 p-Diethylbenzene	1		0.000				ND	ND	
137 2-Methylnaphthalene	142		0.000				ND	ND	
144 2-ethoxy-2-methyl butane	1		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_Q_QVOA1_00048	Amount Added:	12.50	Units: uL	
MSV_Q_QARC_00047	Amount Added:	12.50	Units: uL	
MSV_Q_QVOA6_00046	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_00078	Amount Added:	12.50	Units: uL	
MSV_31_826ISS_00003	Amount Added:	5.00	Units: uL	Run Reagent

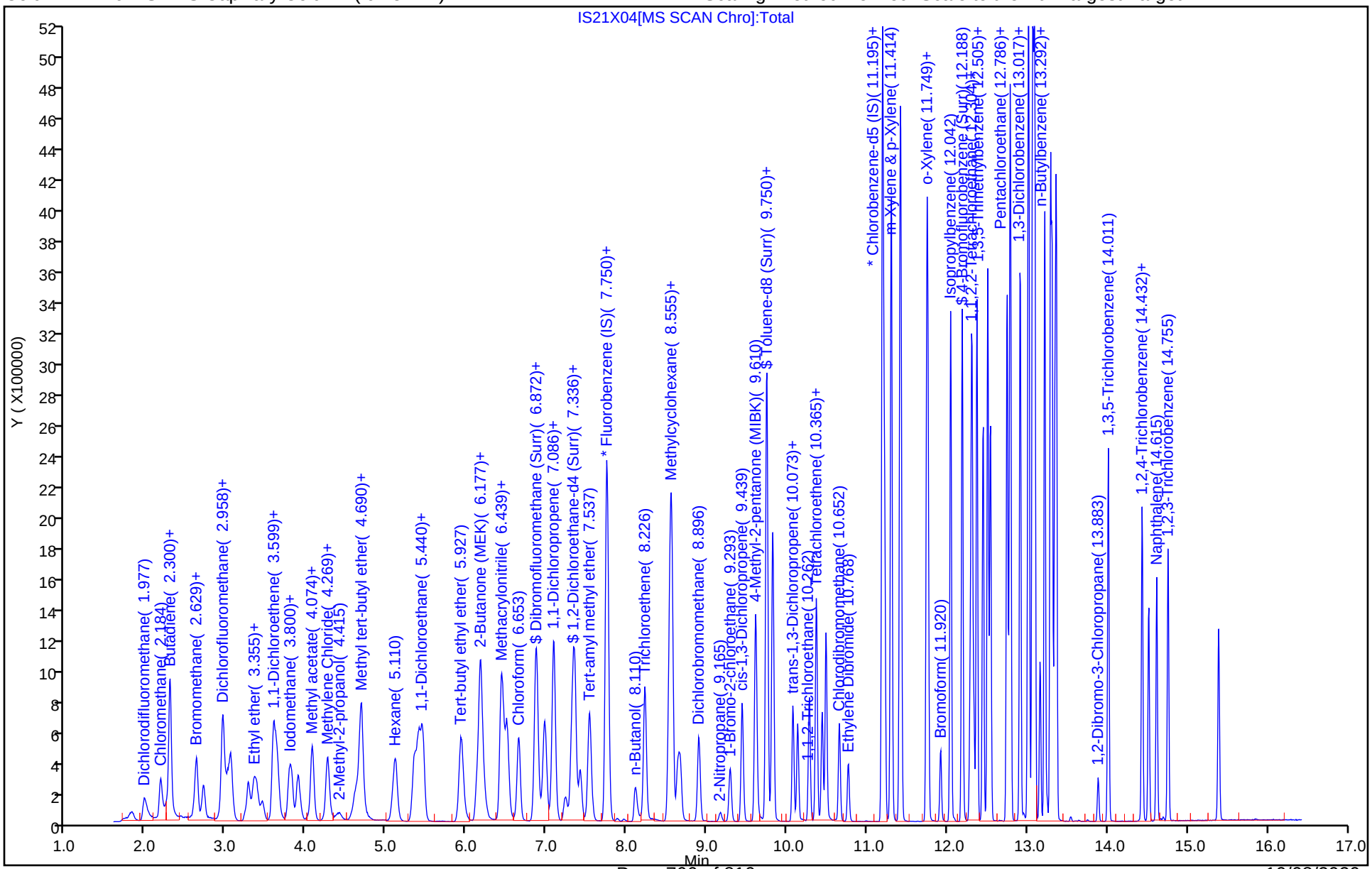
Report Date: 03-Oct-2020 09:36:48 Chrom Revision: 2.3 24-Sep-2020 19:22:38

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\IS21X04.D

Injection Date:	03-Oct-2020 07:56:30	Instrument ID:	19930	Operator ID:	jkh09052
Lims ID:	LCS			Worklist Smp#:	4
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	8260 25ml HP31	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\19930\20201003-11975.b\IS21X04.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 03-Oct-2020 07:56:30 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0011975-004
Misc. Info.: LCS
Operator ID: jkh09052 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 03-Oct-2020 09:36:39 Calib Date: 09-Sep-2020 21:13:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200909-10046.b\IS09I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1015

First Level Reviewer: howej Date: 03-Oct-2020 08:43:35

Compound	Amount Added	Amount Recovered	% Rec.
$ 46 Dibromofluoromethane (Surr)	10.0	9.80	97.99
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	9.64	96.37
$ 75 Toluene-d8 (Surr)	10.0	10.0	100.39
$ 100 4-Bromofluorobenzene (Surr)	10.0	10.5	104.71

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

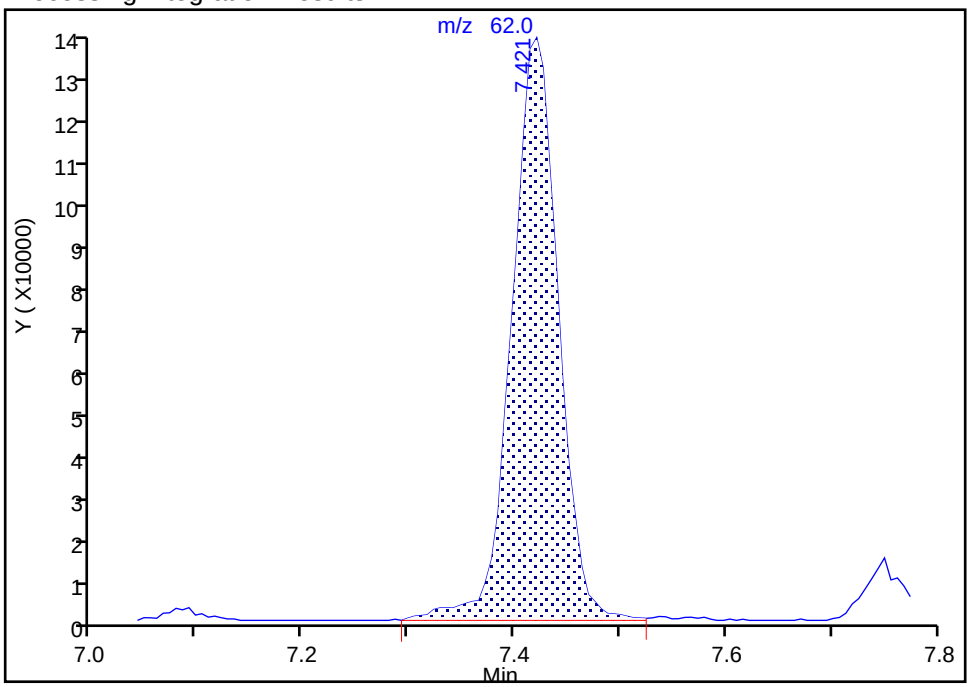
Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\IS21X04.D
Injection Date: 03-Oct-2020 07:56:30 Instrument ID: 19930
Lims ID: LCS
Client ID:
Operator ID: jkh09052 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

56 1,2-Dichloroethane, CAS: 107-06-2

Signal: 1

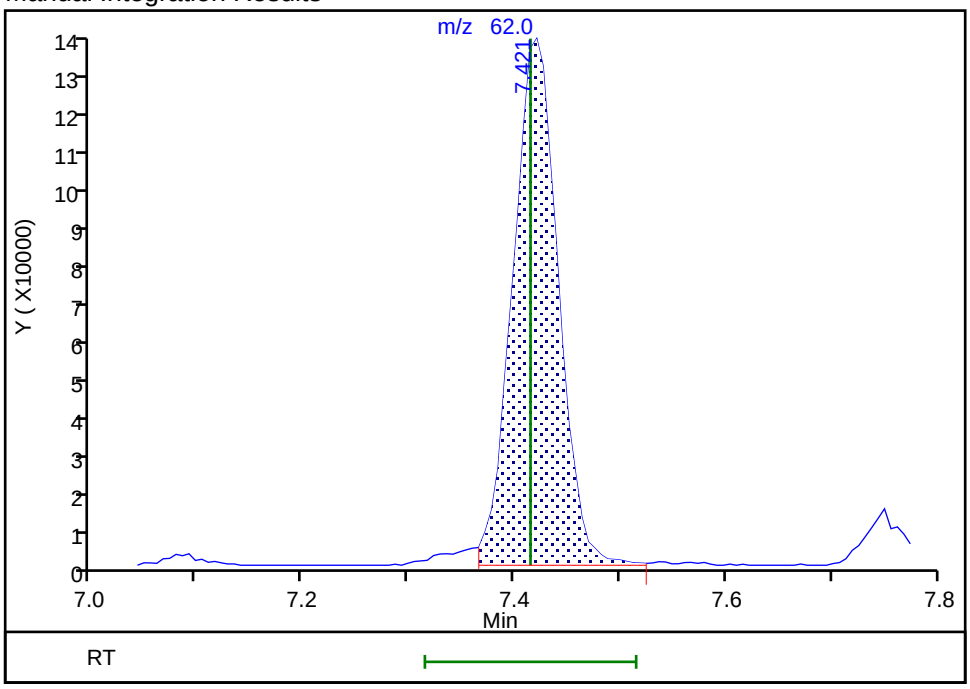
Processing Integration Results

RT: 7.42
Area: 409822
Amount: 5.448146
Amount Units: ug/l



Manual Integration Results

RT: 7.42
Area: 400132
Amount: 5.319328
Amount Units: ug/l



Reviewer: howej, 03-Oct-2020 08:43:04
Audit Action: Split an Integrated Peak Audit Reason: Other

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

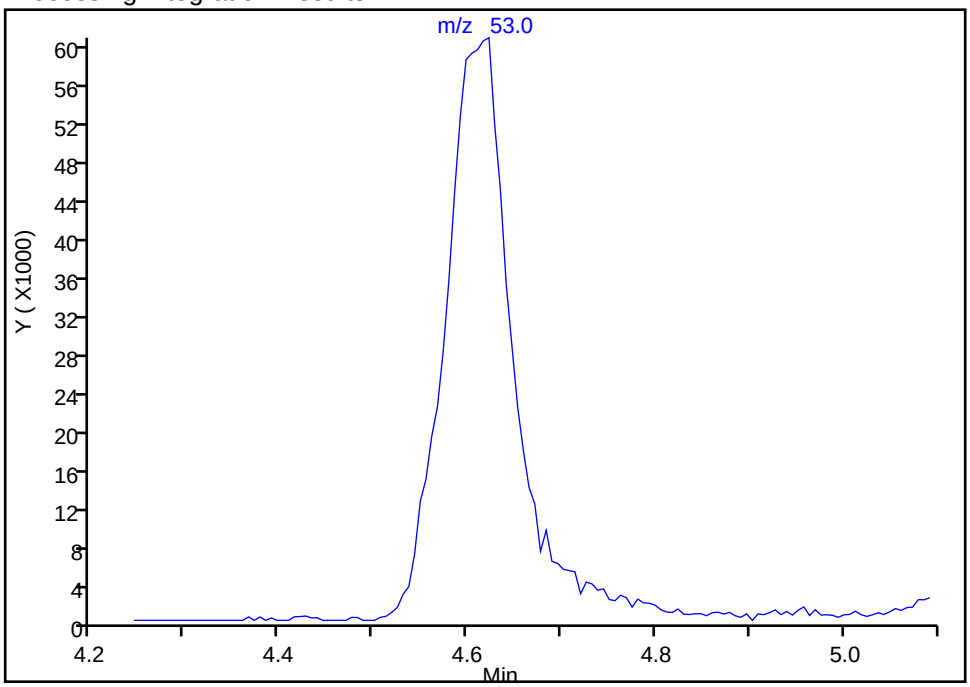
Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\IS21X04.D
Injection Date: 03-Oct-2020 07:56:30 Instrument ID: 19930
Lims ID: LCS
Client ID:
Operator ID: jkh09052 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

26 Acrylonitrile, CAS: 107-13-1

Signal: 1

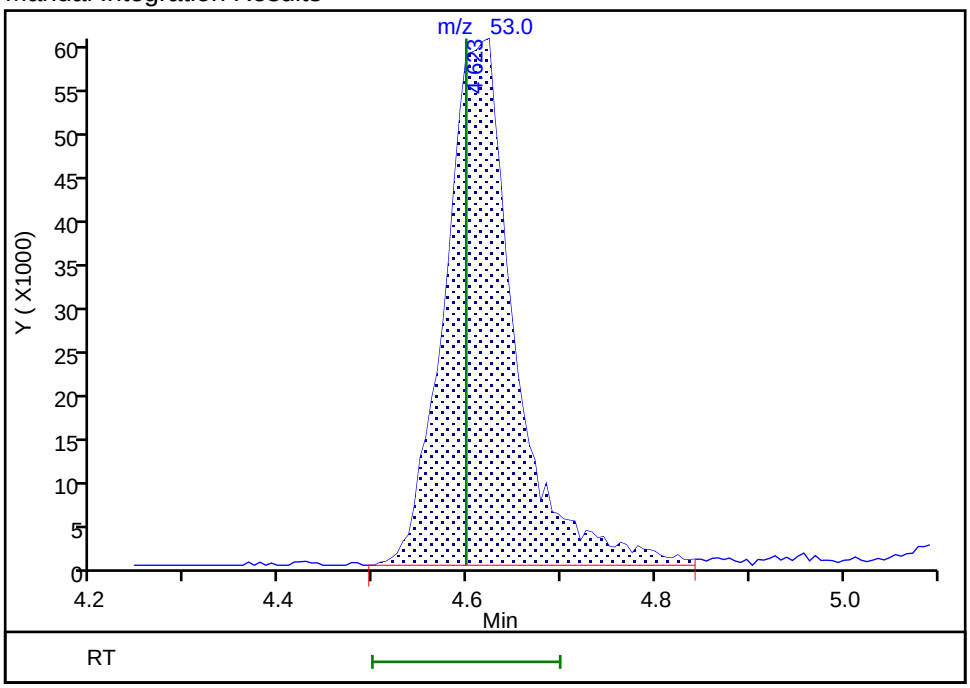
Not Detected
Expected RT: 4.60

Processing Integration Results



Manual Integration Results

RT: 4.62
Area: 312732
Amount: 29.990923
Amount Units: ug/l



Reviewer: howej, 03-Oct-2020 08:42:37
Audit Action: Assigned Compound ID Audit Reason: Other

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

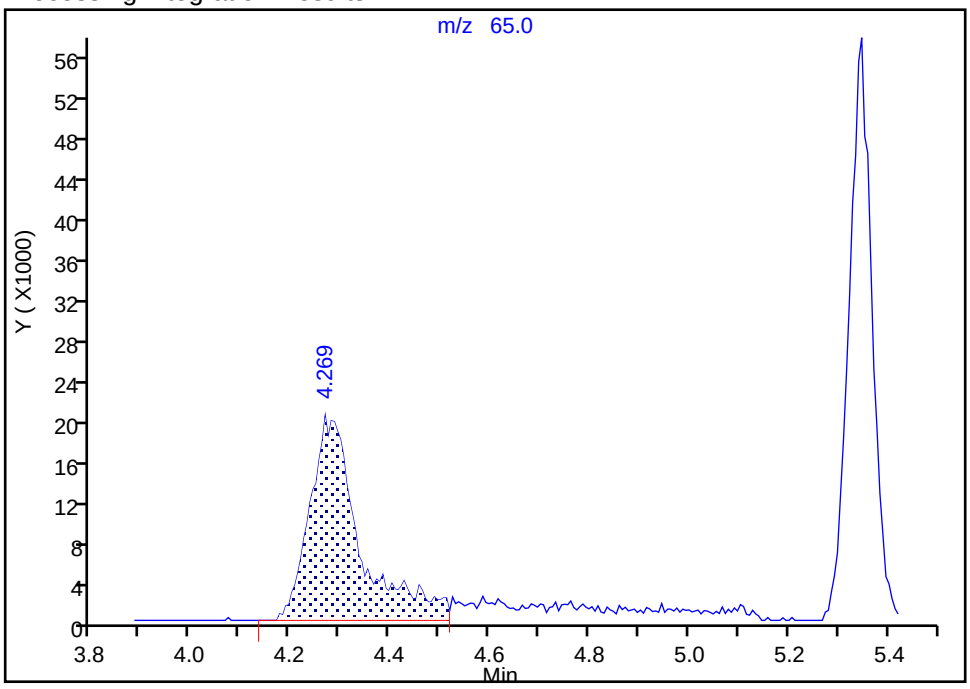
Data File: \\chromfs\Lancaster\ChromData\19930\20201003-11975.b\IS21X04.D
Injection Date: 03-Oct-2020 07:56:30 Instrument ID: 19930
Lims ID: LCS
Client ID:
Operator ID: jkh09052 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

* 24 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

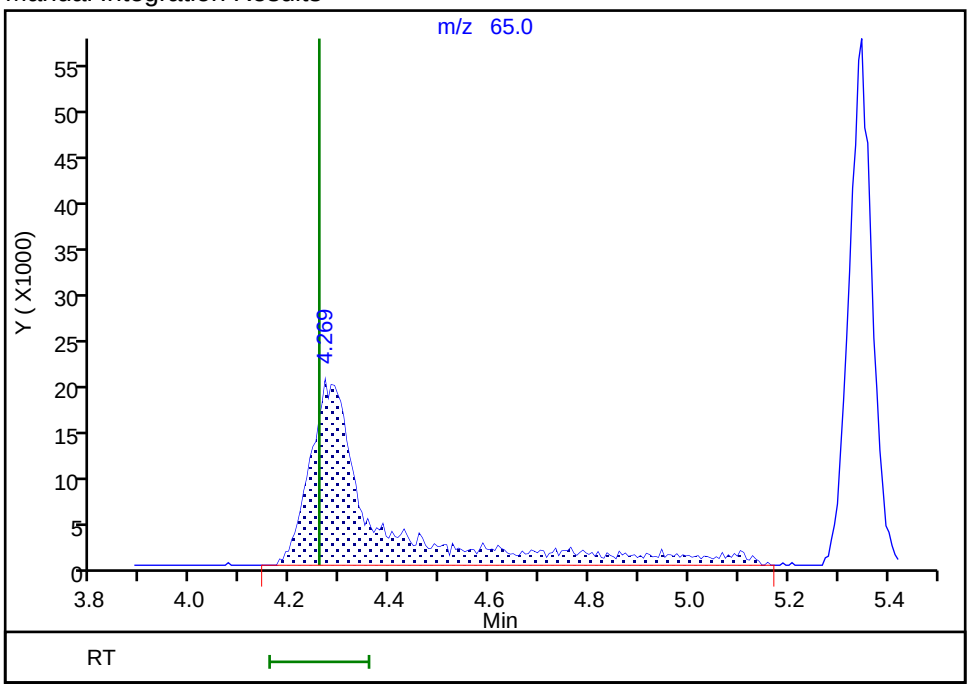
Processing Integration Results

RT: 4.27
Area: 141463
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 4.27
Area: 187254
Amount: 50.000000
Amount Units: ug/l



Reviewer: howej, 03-Oct-2020 08:42:30
Audit Action: Manually Integrated Audit Reason: Other

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-15232-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 410-50813/4

Matrix: Water Lab File ID: CC05L01.D

Analysis Method: 8260C LL Date Collected:

Sample wt/vol: 25(mL) Date Analyzed: 10/05/2020 10:25

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.: 50813 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	4.88		0.50	0.070
71-55-6	1,1,1-Trichloroethane	4.75		0.50	0.060
79-34-5	1,1,2,2-Tetrachloroethane	5.30		0.50	0.070
79-00-5	1,1,2-Trichloroethane	5.45		0.50	0.060
75-34-3	1,1-Dichloroethane	5.06		0.50	0.070
75-35-4	1,1-Dichloroethene	5.07		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	5.40		0.50	0.060
107-06-2	1,2-Dichloroethane	5.05		0.50	0.050
78-87-5	1,2-Dichloropropane	5.35		0.50	0.060
78-93-3	2-Butanone (MEK)	40.7		5.0	0.60
591-78-6	2-Hexanone	25.3		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	24.2		5.0	0.70
67-64-1	Acetone	47.4		5.0	0.90
107-13-1	Acrylonitrile	27.8		5.0	0.40
71-43-2	Benzene	5.09		0.50	0.050
74-97-5	Bromochloromethane	5.40		0.50	0.050
75-27-4	Bromodichloromethane	5.25		0.50	0.050
75-25-2	Bromoform	5.71		1.0	0.30
74-83-9	Bromomethane	5.25		0.50	0.070
75-15-0	Carbon disulfide	4.99		1.0	0.060
56-23-5	Carbon tetrachloride	4.85		0.50	0.070
108-90-7	Chlorobenzene	4.85		0.50	0.060
75-00-3	Chloroethane	5.12		0.50	0.070
67-66-3	Chloroform	5.06		0.50	0.090
74-87-3	Chloromethane	5.57		0.50	0.060
156-59-2	cis-1,2-Dichloroethene	5.34		0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	5.00		0.50	0.050
124-48-1	Dibromochloromethane	5.53		0.50	0.070
100-41-4	Ethylbenzene	4.70		0.50	0.060
1634-04-4	Methyl tert-butyl ether	4.90		0.50	0.050
75-09-2	Methylene Chloride	5.47		0.50	0.070
100-42-5	Styrene	4.84		0.50	0.050
127-18-4	Tetrachloroethene	4.74		0.50	0.060
108-88-3	Toluene	4.77		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	5.01		0.50	0.060
10061-02-6	trans-1,3-Dichloropropene	4.77		0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-15232-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 410-50813/4

Matrix: Water Lab File ID: CC05L01.D

Analysis Method: 8260C LL Date Collected:

Sample wt/vol: 25(mL) Date Analyzed: 10/05/2020 10:25

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.: 50813 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	5.06		0.50	0.060
75-01-4	Vinyl chloride	5.53		0.50	0.10
1330-20-7	Xylenes, Total	14.4		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)	105		80-120
2037-26-5	Toluene-d8 (Surr)	98		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\10193\20201005-12055.b\CC05L01.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 05-Oct-2020 10:25:30 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0012055-004
Misc. Info.: LCS
Operator ID: dvv10203 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20201005-12055.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 05-Oct-2020 11:37:57 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1028

First Level Reviewer: virayd Date: 05-Oct-2020 11:15:38

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.916	1.910	0.006	99	338980	5.00	5.50	
3 Chloromethane	50	2.099	2.099	0.000	98	404502	5.00	5.57	
4 Butadiene	39	2.209	2.203	0.006	95	601786	5.00	8.81	
5 Vinyl chloride	62	2.209	2.209	0.000	98	371104	5.00	5.53	
6 Bromomethane	94	2.519	2.514	0.005	90	248585	5.00	5.25	
7 Chloroethane	64	2.599	2.599	0.000	100	212420	5.00	5.12	
8 Dichlorofluoromethane	67	2.830	2.831	-0.001	97	449565	5.00	5.00	
9 Trichlorofluoromethane	101	2.891	2.885	0.006	97	437215	5.00	5.01	
11 Ethyl ether	59	3.129	3.123	0.006	94	236166	5.01	5.34	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.202	3.209	-0.007	93	297159	5.00	4.58	
13 Acrolein	56	3.300	3.294	0.006	99	224523	37.4	32.5	
14 1,1-Dichloroethene	96	3.422	3.422	0.000	98	223656	5.00	5.07	
15 112TCTFE	101	3.458	3.452	0.006	91	200416	5.00	4.46	
16 Acetone	43	3.458	3.459	-0.001	99	347460	37.5	47.4	
17 Iodomethane	142	3.611	3.605	0.006	98	408337	5.00	4.68	
18 Isopropyl alcohol	45	3.635	3.623	0.012	37	64996	37.5	49.0	
19 Ethyl bromide	108	3.635	3.635	0.000	98	152223	4.93	4.15	
20 Carbon disulfide	76	3.702	3.702	0.000	100	777527	5.00	4.99	
22 Methyl acetate	43	3.861	3.849	0.012	98	168663	5.00	5.85	
23 3-Chloro-1-propene	41	3.879	3.879	0.000	90	400146	5.00	5.18	
24 Methylene Chloride	84	4.062	4.056	0.006	94	268443	5.00	5.47	
* 25 t-Butyl alcohol-d10 (IS)	65	4.086	4.080	0.006	0	172610	50.0	50.0	M
26 2-Methyl-2-propanol	59	4.208	4.202	0.006	99	161873	50.0	47.1	
27 Acrylonitrile	53	4.397	4.397	0.000	99	323451	25.0	27.8	
28 Methyl tert-butyl ether	73	4.446	4.446	0.000	97	700490	5.00	4.90	
29 trans-1,2-Dichloroethene	96	4.458	4.452	0.006	98	258417	5.00	5.01	
30 Hexane	57	4.879	4.873	0.006	95	358526	5.00	4.93	
32 1,1-Dichloroethane	63	5.123	5.123	0.000	96	480525	5.00	5.06	
33 Isopropyl ether	45	5.184	5.178	0.006	94	922954	5.00	5.10	
34 2-Chloro-1,3-butadiene	53	5.232	5.226	0.006	92	407045	5.00	4.55	
35 Tert-butyl ethyl ether	59	5.714	5.714	0.000	98	844074	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
36 2-Butanone (MEK)	43	5.933	5.934	-0.001	100	700080	37.5	40.7	
37 cis-1,2-Dichloroethene	96	5.964	5.958	0.006	84	312570	5.00	5.34	
38 2,2-Dichloropropane	77	5.970	5.970	0.000	89	378411	5.00	4.62	
40 Propionitrile	54	6.037	6.031	0.006	97	159840	37.5	36.6	
43 Methacrylonitrile	67	6.238	6.245	-0.007	95	633630	37.5	37.4	
44 Chlorobromomethane	128	6.293	6.293	0.000	95	139017	5.00	5.40	
45 Tetrahydrofuran	71	6.299	6.299	0.000	93	128103	25.0	26.3	
46 Chloroform	83	6.452	6.446	0.006	94	476392	5.00	5.06	
$ 47 Dibromofluoromethane (Surr)	113	6.665	6.659	0.006	94	476974	10.0	10.5	
48 1,1,1-Trichloroethane	97	6.671	6.665	0.006	98	402634	5.00	4.75	
49 Cyclohexane	56	6.756	6.757	-0.001	92	433174	5.00	4.83	
50 Carbon tetrachloride	117	6.872	6.873	0.000	97	344377	5.00	4.85	
51 1,1-Dichloropropene	75	6.884	6.885	-0.001	95	369099	5.00	4.85	
52 Isobutyl alcohol	41	7.061	7.061	0.000	94	130234	125.0	116.8	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.122	7.116	0.006	0	102712	10.0	11.1	
54 Benzene	78	7.147	7.147	0.000	97	1115507	5.00	5.09	
55 1,2-Dichloroethane	62	7.220	7.220	0.000	97	333687	5.00	5.05	
56 Tert-amyl methyl ether	73	7.342	7.342	0.000	98	795694	5.00	5.05	
* 57 Fluorobenzene (IS)	96	7.555	7.561	-0.006	99	1908686	10.0	10.0	
58 n-Heptane	43	7.561	7.561	0.000	92	402259	5.00	4.97	
59 n-Butanol	56	7.957	7.952	0.005	90	295677	250.0	320.1	
60 Trichloroethene	95	8.031	8.037	-0.006	98	285897	5.00	5.06	
61 Methylcyclohexane	83	8.341	8.336	0.005	93	463504	5.00	5.36	
62 1,2-Dichloropropane	63	8.372	8.372	0.000	92	301349	5.00	5.35	
63 2-ethoxy-2-methyl butane	87	8.384	8.384	0.000	91	427034	5.00	4.87	
64 Methyl methacrylate	69	8.470	8.470	0.000	92	165907	5.00	4.60	
65 1,4-Dioxane	88	8.476	8.470	0.006	30	32271	125.0	175.4	M
66 Dibromomethane	93	8.482	8.488	-0.006	95	150080	5.00	5.45	
67 Dichlorobromomethane	83	8.726	8.726	0.000	99	356888	5.00	5.25	
68 2-Nitropropane	41	9.006	9.012	-0.006	99	50534	5.00	4.52	
69 2-Chloroethyl vinyl ether	63		9.116				ND	ND	
71 1-Bromo-2-chloroethane	63	9.122	9.116	0.006	99	335976	5.00	5.77	
72 cis-1,3-Dichloropropene	75	9.280	9.281	-0.001	95	422712	5.00	5.00	
73 4-Methyl-2-pentanone (MIBK)	43	9.469	9.470	-0.001	98	1207215	25.0	24.2	
$ 74 Toluene-d8 (Surr)	98	9.597	9.598	-0.001	94	1954879	10.0	9.77	
75 Toluene	92	9.677	9.677	0.000	97	718069	5.00	4.77	
76 trans-1,3-Dichloropropene	75	9.945	9.945	0.000	95	359247	5.00	4.77	
78 Ethyl methacrylate	69	10.012	10.012	0.000	91	330130	5.00	5.19	
79 1,1,2-Trichloroethane	97	10.152	10.152	0.000	91	226242	5.00	5.45	
80 Tetrachloroethene	166	10.231	10.232	-0.001	98	318840	5.00	4.74	
81 1,3-Dichloropropane	76	10.317	10.317	0.000	93	380037	5.00	5.19	
82 2-Hexanone	43	10.378	10.378	0.000	98	893739	25.0	25.3	
83 Chlorodibromomethane	129	10.536	10.536	0.000	90	266700	5.00	5.53	
84 Ethylene Dibromide	107	10.646	10.646	0.000	99	221680	5.00	5.40	
* 85 Chlorobenzene-d5 (IS)	117	11.085	11.085	0.000	86	1531251	10.0	10.0	
86 1-Chlorohexane	91	11.097	11.097	0.000	98	383057	5.00	4.46	
87 Chlorobenzene	112	11.109	11.109	0.000	97	823841	5.00	4.85	
89 1,1,1,2-Tetrachloroethane	131	11.195	11.201	-0.006	96	282151	5.00	4.88	
90 Ethylbenzene	91	11.201	11.201	0.000	98	1402124	5.00	4.70	
91 m-Xylene & p-Xylene	106	11.317	11.317	0.000	0	1119107	10.0	9.61	
92 o-Xylene	106	11.652	11.652	0.000	96	545631	5.00	4.78	
93 Styrene	104	11.664	11.664	0.000	95	927408	5.00	4.84	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
94 Bromoform	173	11.823	11.823	0.000	97	152852	5.00	5.71	
95 Isopropylbenzene	105	11.957	11.957	0.000	96	1415110	5.00	4.69	
$ 98 4-Bromofluorobenzene (Surr)	95	12.097	12.097	0.000	93	752889	10.0	10.0	
99 1,1,2,2-Tetrachloroethane	83	12.207	12.207	0.000	95	292102	5.00	5.30	
100 Bromobenzene	156	12.219	12.219	0.000	91	378771	5.00	5.00	
101 trans-1,4-Dichloro-2-butene	53	12.231	12.231	0.000	70	75102	25.0	4.92	a
102 1,2,3-Trichloropropane	110	12.255	12.256	-0.001	86	82255	5.00	5.48	
103 N-Propylbenzene	91	12.286	12.286	0.000	99	1690004	5.00	4.76	
104 2-Chlorotoluene	126	12.365	12.365	0.000	97	344616	5.00	4.74	
105 1,3,5-Trimethylbenzene	105	12.426	12.426	0.000	94	1217462	5.00	4.62	
106 4-Chlorotoluene	126	12.457	12.457	0.000	98	355937	5.00	4.71	
107 tert-Butylbenzene	134	12.670	12.670	0.000	94	261930	5.00	4.58	
108 Pentachloroethane	167	12.700	12.701	-0.001	92	223266	5.00	5.22	
109 1,2,4-Trimethylbenzene	105	12.713	12.713	0.000	97	1262985	5.00	4.68	
110 sec-Butylbenzene	105	12.835	12.835	0.000	94	1601681	5.00	4.72	
111 1,3-Dichlorobenzene	146	12.932	12.932	0.000	99	732276	5.00	4.84	
112 4-Isopropyltoluene	119	12.944	12.944	0.000	97	1419153	5.00	4.80	
* 113 1,4-Dichlorobenzene-d4	152	12.987	12.993	-0.006	95	882696	10.0	10.0	
114 1,4-Dichlorobenzene	146	13.005	13.005	0.000	95	758816	5.00	4.88	
115 1,2,3-Trimethylbenzene	120	13.017	13.018	-0.001	99	600624	5.00	5.07	
116 Benzyl chloride	126	13.091	13.091	0.000	99	116003	5.00	5.29	
119 n-Butylbenzene	92	13.237	13.237	0.000	96	704205	5.00	4.70	
120 1,2-Dichlorobenzene	146	13.273	13.274	-0.001	98	699411	5.00	4.90	
118 p-Diethylbenzene	119	13.292	13.292	0.000	86	724190	5.00	4.82	
123 1,2-Dibromo-3-Chloropropane	155	13.822	13.822	0.000	86	44109	5.00	5.83	
124 1,3,5-Trichlorobenzene	180	13.944	13.944	0.000	98	594325	5.00	4.82	
125 1,2,4-Trichlorobenzene	180	14.371	14.371	0.000	94	547301	5.00	4.95	
126 Hexachlorobutadiene	225	14.456	14.456	0.000	96	269485	5.00	4.99	
127 Naphthalene	128	14.554	14.554	0.000	97	998516	5.00	5.06	
128 1,2,3-Trichlorobenzene	180	14.700	14.700	0.000	95	480110	5.00	4.90	
129 2-Methylnaphthalene	142	15.322	15.322	0.000	95	633295	5.00	4.74	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_Q_QVOA1_00048	Amount Added: 12.50	Units: uL	
MSV_Q_QARC_00047	Amount Added: 12.50	Units: uL	
MSV_Q_EE_00002	Amount Added: 12.50	Units: uL	
MSV_Q_ETBR_00003	Amount Added: 12.50	Units: uL	
MSV_Q_QVOA6_00046	Amount Added: 12.50	Units: uL	
MSV_QGAS_826_00079	Amount Added: 12.50	Units: uL	
MSV_HP25_ISSS_00014	Amount Added: 1.00	Units: uL	Run Reagent

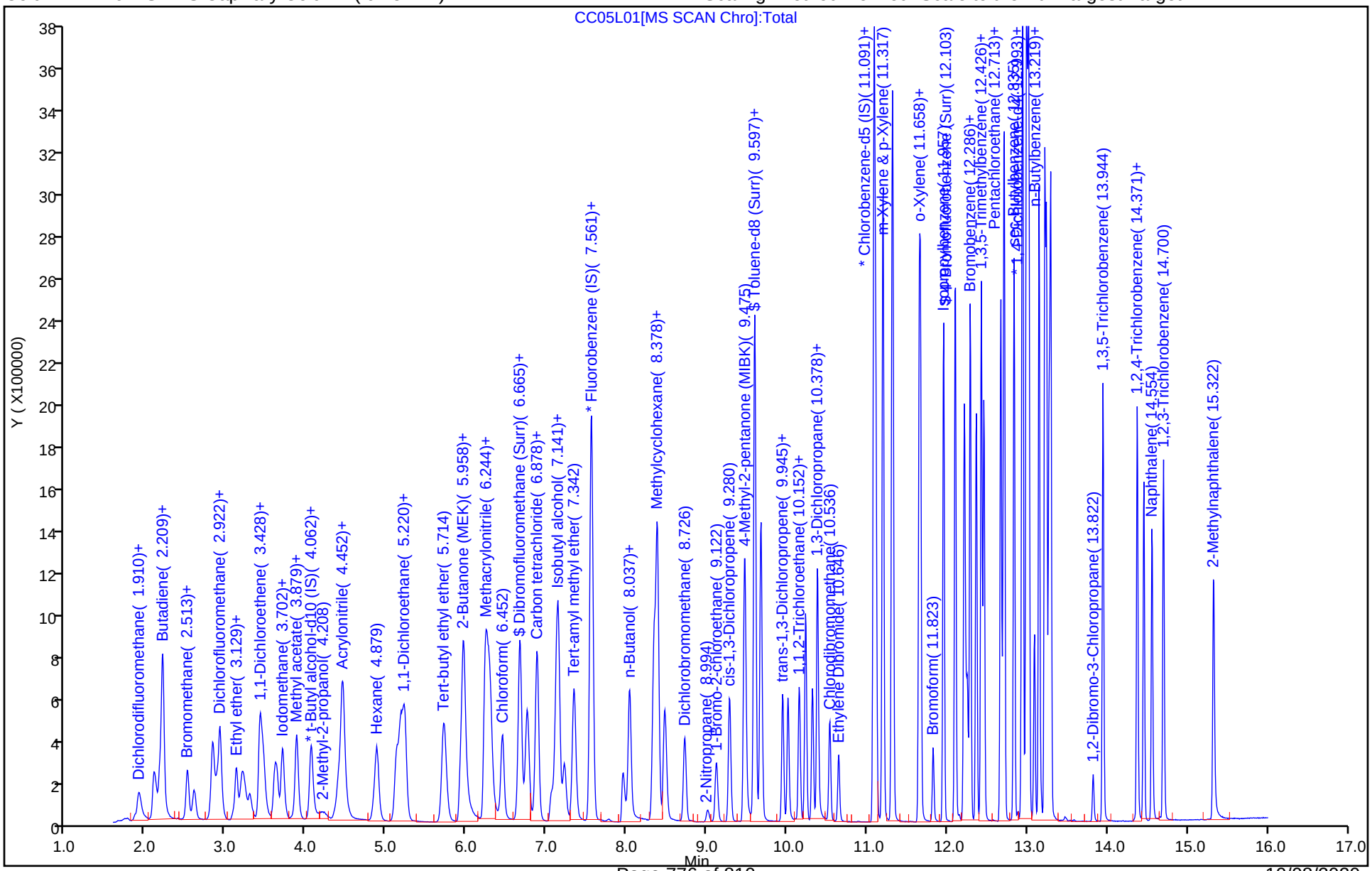
Report Date: 05-Oct-2020 11:38:11 Chrom Revision: 2.3 24-Sep-2020 19:22:38

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05L01.D

Injection Date:	05-Oct-2020 10:25:30	Instrument ID:	10193	Operator ID:	dvv10203
Lims ID:	LCS			Worklist Smp#:	4
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MSV_10193_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\10193\20201005-12055.b\CC05L01.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 05-Oct-2020 10:25:30 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0012055-004
Misc. Info.: LCS
Operator ID: dvv10203 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20201005-12055.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 05-Oct-2020 11:37:57 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1028

First Level Reviewer: virayd Date: 05-Oct-2020 11:15:38

Compound	Amount Added	Amount Recovered	% Rec.
$ 47 Dibromofluoromethane (Surr)	10.0	10.5	105.17
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	11.1	111.16
$ 74 Toluene-d8 (Surr)	10.0	9.77	97.75
$ 98 4-Bromofluorobenzene (Surr)	10.0	10.0	100.16

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

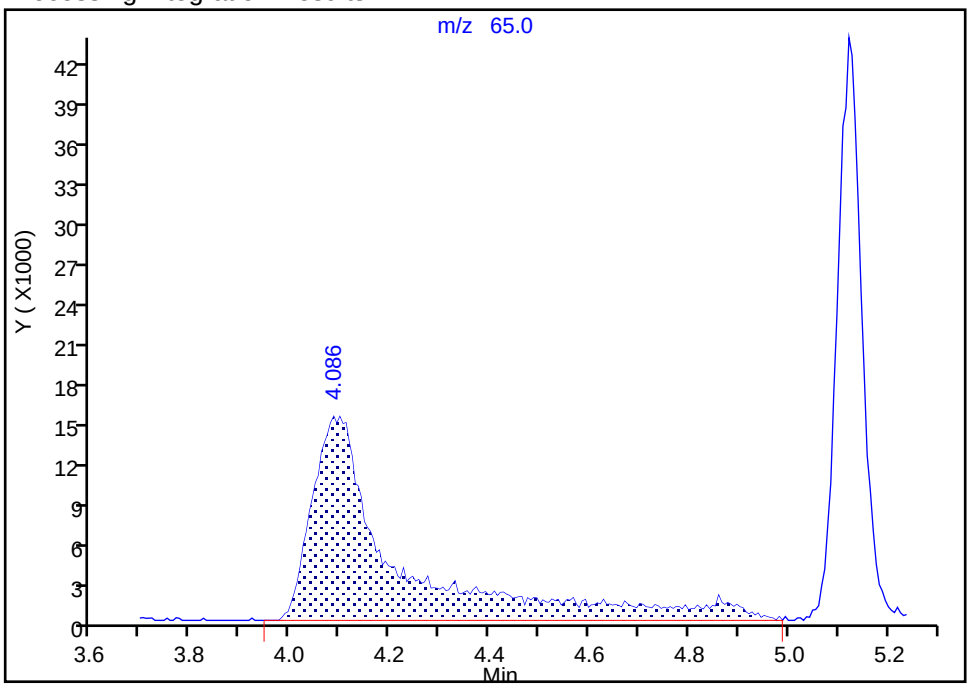
Data File: \\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05L01.D
Injection Date: 05-Oct-2020 10:25:30 Instrument ID: 10193
Lims ID: LCS
Client ID:
Operator ID: dvv10203 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

* 25 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

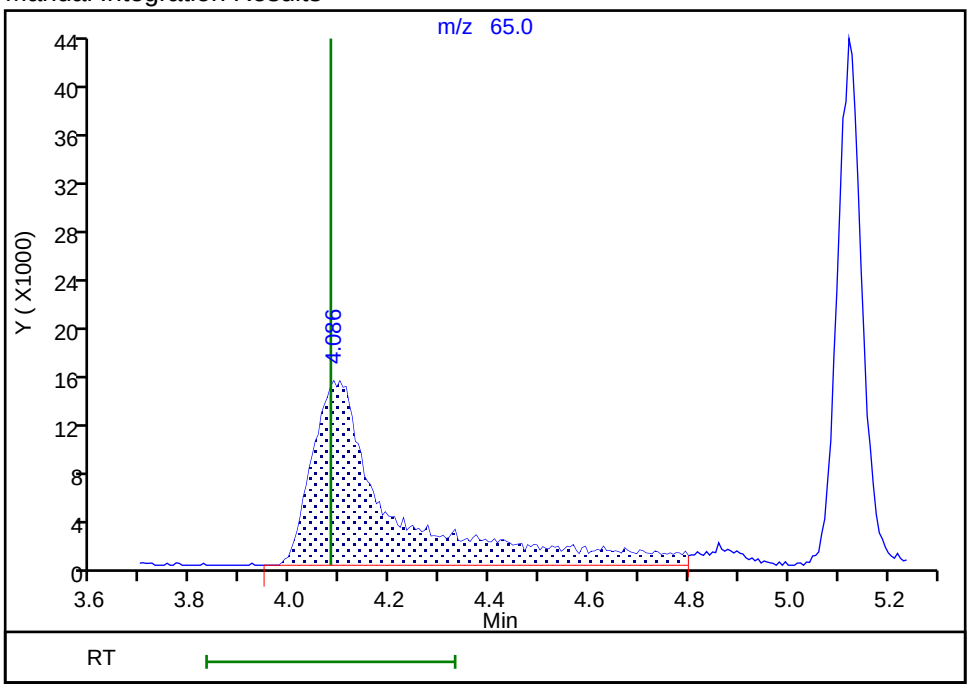
Processing Integration Results

RT: 4.09
Area: 181288
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 4.09
Area: 172610
Amount: 50.000000
Amount Units: ug/l



Reviewer: virayd, 05-Oct-2020 11:14:43
Audit Action: Split an Integrated Peak Audit Reason: Other

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-15232-1

SDG No.:

Client Sample ID: HD-COD-SW-15-0/1-0 MS MS Lab Sample ID: 410-15232-10 MS

Matrix: Water Lab File ID: CC05S05.D

Analysis Method: 8260C LL Date Collected: 09/25/2020 12:30

Sample wt/vol: 25(mL) Date Analyzed: 10/05/2020 13:23

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.: 50813 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	5.14		0.50	0.070
71-55-6	1,1,1-Trichloroethane	5.37		0.50	0.060
79-34-5	1,1,2,2-Tetrachloroethane	5.35		0.50	0.070
79-00-5	1,1,2-Trichloroethane	5.71		0.50	0.060
75-34-3	1,1-Dichloroethane	5.49		0.50	0.070
75-35-4	1,1-Dichloroethene	5.69		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	5.47		0.50	0.060
107-06-2	1,2-Dichloroethane	5.25		0.50	0.050
78-87-5	1,2-Dichloropropane	5.63		0.50	0.060
78-93-3	2-Butanone (MEK)	36.2		5.0	0.60
591-78-6	2-Hexanone	22.4		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	21.4		5.0	0.70
67-64-1	Acetone	38.2		5.0	0.90
107-13-1	Acrylonitrile	24.8		5.0	0.40
71-43-2	Benzene	5.51		0.50	0.050
74-97-5	Bromochloromethane	5.47		0.50	0.050
75-27-4	Bromodichloromethane	5.57		0.50	0.050
75-25-2	Bromoform	5.94		1.0	0.30
74-83-9	Bromomethane	5.42		0.50	0.070
75-15-0	Carbon disulfide	5.52		1.0	0.060
56-23-5	Carbon tetrachloride	5.61		0.50	0.070
108-90-7	Chlorobenzene	5.26		0.50	0.060
75-00-3	Chloroethane	5.35		0.50	0.070
67-66-3	Chloroform	5.72		0.50	0.090
74-87-3	Chloromethane	6.13		0.50	0.060
156-59-2	cis-1,2-Dichloroethene	6.43		0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	5.29		0.50	0.050
124-48-1	Dibromochloromethane	5.74		0.50	0.070
100-41-4	Ethylbenzene	5.18		0.50	0.060
1634-04-4	Methyl tert-butyl ether	4.92		0.50	0.050
75-09-2	Methylene Chloride	5.72		0.50	0.070
100-42-5	Styrene	5.22		0.50	0.050
127-18-4	Tetrachloroethene	7.49		0.50	0.060
108-88-3	Toluene	5.24		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	5.53		0.50	0.060
10061-02-6	trans-1,3-Dichloropropene	4.98		0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-15232-1

SDG No.:

Client Sample ID: HD-COD-SW-15-0/1-0 MS MS Lab Sample ID: 410-15232-10 MS

Matrix: Water Lab File ID: CC05S05.D

Analysis Method: 8260C LL Date Collected: 09/25/2020 12:30

Sample wt/vol: 25(mL) Date Analyzed: 10/05/2020 13:23

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.: 50813 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	6.41		0.50	0.060
75-01-4	Vinyl chloride	6.16		0.50	0.10
1330-20-7	Xylenes, Total	15.6		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)	104		80-120
2037-26-5	Toluene-d8 (Surr)	99		80-120
460-00-4	4-Bromofluorobenzene (Surr)	101		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S05.D
Lims ID: 410-15232-A-10 MS
Client ID: HD-COD-SW-15-0/1-0 MS
Sample Type: MS
Inject. Date: 05-Oct-2020 13:23:30 ALS Bottle#: 10 Worklist Smp#: 11
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0012055-011
Misc. Info.: 410-15232-A-10 MS
Operator ID: dvv10203 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20201005-12055.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 06-Oct-2020 12:41:33 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1013

First Level Reviewer: spositok Date: 06-Oct-2020 12:18:07

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.910	1.910	0.000	99	409800	5.00	6.77	
3 Chloromethane	50	2.099	2.099	0.000	99	437165	5.00	6.13	
4 Butadiene	39	2.203	2.203	0.000	94	606039	5.00	9.04	
5 Vinyl chloride	62	2.209	2.209	0.000	98	406177	5.00	6.16	
6 Bromomethane	94	2.513	2.514	-0.001	91	252236	5.00	5.42	
7 Chloroethane	64	2.599	2.599	0.000	100	218005	5.00	5.35	
8 Dichlorofluoromethane	67	2.830	2.831	-0.001	98	459382	5.00	5.20	
9 Trichlorofluoromethane	101	2.885	2.885	0.000	97	498573	5.00	5.81	
11 Ethyl ether	59	3.129	3.123	0.006	94	228290	5.01	5.25	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.208	3.209	-0.001	92	340457	5.00	5.35	
13 Acrolein	56	3.294	3.294	0.000	98	221707	37.5	28.6	
14 1,1-Dichloroethene	96	3.422	3.422	0.000	97	246677	5.00	5.69	
15 112TCTFE	101	3.452	3.452	0.000	92	239987	5.00	5.44	
16 Acetone	43	3.458	3.459	-0.001	99	314707	37.5	38.2	
17 Iodomethane	142	3.605	3.605	0.000	98	427034	5.00	4.99	
18 Isopropyl alcohol	45	3.629	3.623	0.006	34	50419	37.5	35.5	
19 Ethyl bromide	108	3.635	3.635	0.000	99	151266	4.94	4.20	
20 Carbon disulfide	76	3.702	3.702	0.000	100	844492	5.00	5.52	
22 Methyl acetate	43	3.861	3.849	0.012	99	170034	5.00	5.25	
23 3-Chloro-1-propene	41	3.879	3.879	0.000	90	425210	5.00	5.61	
24 Methylene Chloride	84	4.056	4.056	0.000	95	276019	5.00	5.72	
* 25 t-Butyl alcohol-d10 (IS)	65	4.080	4.080	0.000	0	193880	50.0	50.0	
26 2-Methyl-2-propanol	59	4.208	4.202	0.006	98	153072	50.0	39.6	
27 Acrylonitrile	53	4.397	4.397	0.000	99	324398	25.0	24.8	
28 Methyl tert-butyl ether	73	4.440	4.446	-0.006	92	689589	5.00	4.92	
29 trans-1,2-Dichloroethene	96	4.452	4.452	0.000	97	279972	5.00	5.53	
30 Hexane	57	4.873	4.873	0.000	95	443540	5.00	6.21	
32 1,1-Dichloroethane	63	5.123	5.123	0.000	96	512235	5.00	5.49	
33 Isopropyl ether	45	5.184	5.178	0.006	93	928228	5.00	5.22	
34 2-Chloro-1,3-butadiene	53	5.226	5.226	0.000	92	446557	5.00	5.08	
35 Tert-butyl ethyl ether	59	5.714	5.714	0.000	97	836478	5.00	4.93	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
36 2-Butanone (MEK)	43	5.927	5.934	-0.007	100	700168	37.5	36.2	
37 cis-1,2-Dichloroethene	96	5.958	5.958	0.000	84	369490	5.00	6.43	
38 2,2-Dichloropropane	77	5.970	5.970	0.000	92	418818	5.00	5.20	
40 Propionitrile	54	6.037	6.031	0.006	98	189641	37.5	38.7	
43 Methacrylonitrile	67	6.244	6.245	-0.001	94	611145	37.5	32.2	
44 Chlorobromomethane	128	6.293	6.293	0.000	97	138266	5.00	5.47	
45 Tetrahydrofuran	71	6.299	6.299	0.000	87	124662	25.0	22.8	
46 Chloroform	83	6.446	6.446	0.000	94	528364	5.00	5.72	
$ 47 Dibromofluoromethane (Surr)	113	6.659	6.659	0.000	93	462940	10.0	10.4	
48 1,1,1-Trichloroethane	97	6.665	6.665	0.000	98	447072	5.00	5.37	
49 Cyclohexane	56	6.763	6.757	0.006	92	519996	5.00	5.91	
50 Carbon tetrachloride	117	6.872	6.873	0.000	96	391602	5.00	5.61	
51 1,1-Dichloropropene	75	6.878	6.885	-0.007	95	415004	5.00	5.55	
52 Isobutyl alcohol	41	7.055	7.061	-0.006	97	133219	125.1	106.4	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.122	7.116	0.006	0	98703	10.0	10.9	
54 Benzene	78	7.141	7.147	-0.006	97	1185684	5.00	5.51	
55 1,2-Dichloroethane	62	7.220	7.220	0.000	98	340857	5.00	5.25	
56 Tert-amyl methyl ether	73	7.342	7.342	0.000	98	787234	5.00	5.09	
* 57 Fluorobenzene (IS)	96	7.555	7.561	-0.006	99	1874501	10.0	10.0	
58 n-Heptane	43	7.567	7.561	0.006	94	512819	5.00	6.45	
59 n-Butanol	56	7.958	7.952	0.006	92	304835	250.2	293.8	
60 Trichloroethene	95	8.031	8.037	-0.006	98	355733	5.00	6.41	
61 Methylcyclohexane	83	8.335	8.336	-0.001	93	549043	5.00	6.46	
62 1,2-Dichloropropane	63	8.372	8.372	0.000	96	311077	5.00	5.63	
63 2-ethoxy-2-methyl butane	87	8.384	8.384	0.000	93	437980	5.00	5.09	
64 Methyl methacrylate	69	8.464	8.470	-0.006	93	154715	5.00	3.82	
65 1,4-Dioxane	88	8.470	8.470	0.000	29	35464	125.1	171.7	M
66 Dibromomethane	93	8.482	8.488	-0.006	93	151062	5.00	5.58	
67 Dichlorobromomethane	83	8.720	8.726	-0.006	99	371544	5.00	5.57	
68 2-Nitropropane	41	9.006	9.012	-0.006	98	48666	5.00	3.87	
69 2-Chloroethyl vinyl ether	63		9.116				ND	ND	Ua
71 1-Bromo-2-chloroethane	63	9.116	9.116	0.000	98	331881	5.00	5.80	
72 cis-1,3-Dichloropropene	75	9.280	9.281	-0.001	94	438821	5.00	5.29	
73 4-Methyl-2-pentanone (MIBK)	43	9.469	9.470	-0.001	98	1198712	25.0	21.4	
$ 74 Toluene-d8 (Surr)	98	9.597	9.598	-0.001	94	1929342	10.0	9.85	
75 Toluene	92	9.677	9.677	0.000	98	772075	5.00	5.24	
76 trans-1,3-Dichloropropene	75	9.945	9.945	0.000	95	367228	5.00	4.98	
78 Ethyl methacrylate	69	10.012	10.012	0.000	90	340484	5.00	5.47	
79 1,1,2-Trichloroethane	97	10.152	10.152	0.000	91	232262	5.00	5.71	
80 Tetrachloroethene	166	10.231	10.232	-0.001	98	492479	5.00	7.49	
81 1,3-Dichloropropane	76	10.317	10.317	0.000	94	383566	5.00	5.35	
82 2-Hexanone	43	10.378	10.378	0.000	98	889150	25.0	22.4	
83 Chlorodibromomethane	129	10.530	10.536	-0.006	90	270787	5.00	5.74	
84 Ethylene Dibromide	107	10.646	10.646	0.000	98	219751	5.00	5.47	
* 85 Chlorobenzene-d5 (IS)	117	11.085	11.085	0.000	86	1498977	10.0	10.0	
86 1-Chlorohexane	91	11.097	11.097	0.000	96	430729	5.00	5.12	
87 Chlorobenzene	112	11.109	11.109	0.000	95	874395	5.00	5.26	
89 1,1,1,2-Tetrachloroethane	131	11.195	11.201	-0.006	94	290488	5.00	5.14	
90 Ethylbenzene	91	11.201	11.201	0.000	98	1510733	5.00	5.18	
91 m-Xylene & p-Xylene	106	11.317	11.317	0.000	0	1195522	10.0	10.5	
92 o-Xylene	106	11.652	11.652	0.000	96	572454	5.00	5.12	
93 Styrene	104	11.664	11.664	0.000	95	979384	5.00	5.22	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
94 Bromoform	173	11.823	11.823	0.000	97	155628	5.00	5.94	
95 Isopropylbenzene	105	11.957	11.957	0.000	96	1539632	5.00	5.21	
$ 98 4-Bromofluorobenzene (Surr)	95	12.097	12.097	0.000	93	742893	10.0	10.1	
99 1,1,2,2-Tetrachloroethane	83	12.207	12.207	0.000	95	292337	5.00	5.35	
100 Bromobenzene	156	12.219	12.219	0.000	92	388244	5.00	5.17	
101 trans-1,4-Dichloro-2-butene	53	12.231	12.231	0.000	72	102457	25.0	6.77	a
102 1,2,3-Trichloropropane	110	12.255	12.256	-0.001	85	81356	5.00	5.47	
103 N-Propylbenzene	91	12.286	12.286	0.000	99	1861636	5.00	5.28	
104 2-Chlorotoluene	126	12.365	12.365	0.000	97	365472	5.00	5.07	
105 1,3,5-Trimethylbenzene	105	12.426	12.426	0.000	94	1304302	5.00	4.99	
106 4-Chlorotoluene	126	12.457	12.457	0.000	98	383373	5.00	5.11	
107 tert-Butylbenzene	134	12.670	12.670	0.000	93	285498	5.00	5.03	
108 Pentachloroethane	167	12.700	12.701	-0.001	92	222193	5.00	5.24	
109 1,2,4-Trimethylbenzene	105	12.713	12.713	0.000	97	1349291	5.00	5.04	
110 sec-Butylbenzene	105	12.835	12.835	0.000	94	1761128	5.00	5.23	
111 1,3-Dichlorobenzene	146	12.932	12.932	0.000	99	771533	5.00	5.14	
112 4-Isopropyltoluene	119	12.944	12.944	0.000	97	1537442	5.00	5.24	
* 113 1,4-Dichlorobenzene-d4	152	12.987	12.993	-0.006	98	875784	10.0	10.0	
114 1,4-Dichlorobenzene	146	13.005	13.005	0.000	94	795396	5.00	5.15	
115 1,2,3-Trimethylbenzene	120	13.018	13.018	0.000	99	613877	5.00	5.22	
116 Benzyl chloride	126	13.091	13.091	0.000	99	120099	5.00	5.52	
119 n-Butylbenzene	92	13.237	13.237	0.000	96	785962	5.00	5.29	
120 1,2-Dichlorobenzene	146	13.267	13.274	-0.007	99	725190	5.00	5.12	
118 p-Diethylbenzene	119	13.292	13.292	0.000	86	749443	5.00	5.03	
123 1,2-Dibromo-3-Chloropropane	155	13.822	13.822	0.000	87	43843	5.00	5.85	
124 1,3,5-Trichlorobenzene	180	13.944	13.944	0.000	98	628944	5.00	5.14	
125 1,2,4-Trichlorobenzene	180	14.371	14.371	0.000	94	561511	5.00	5.11	
126 Hexachlorobutadiene	225	14.456	14.456	0.000	97	290798	5.00	5.42	
127 Naphthalene	128	14.554	14.554	0.000	97	985246	5.00	5.03	
128 1,2,3-Trichlorobenzene	180	14.700	14.700	0.000	95	476209	5.00	4.90	
129 2-Methylnaphthalene	142	15.322	15.322	0.000	92	535216	5.00	4.04	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

U - Marked Undetected

a - User Assigned ID

Reagents:

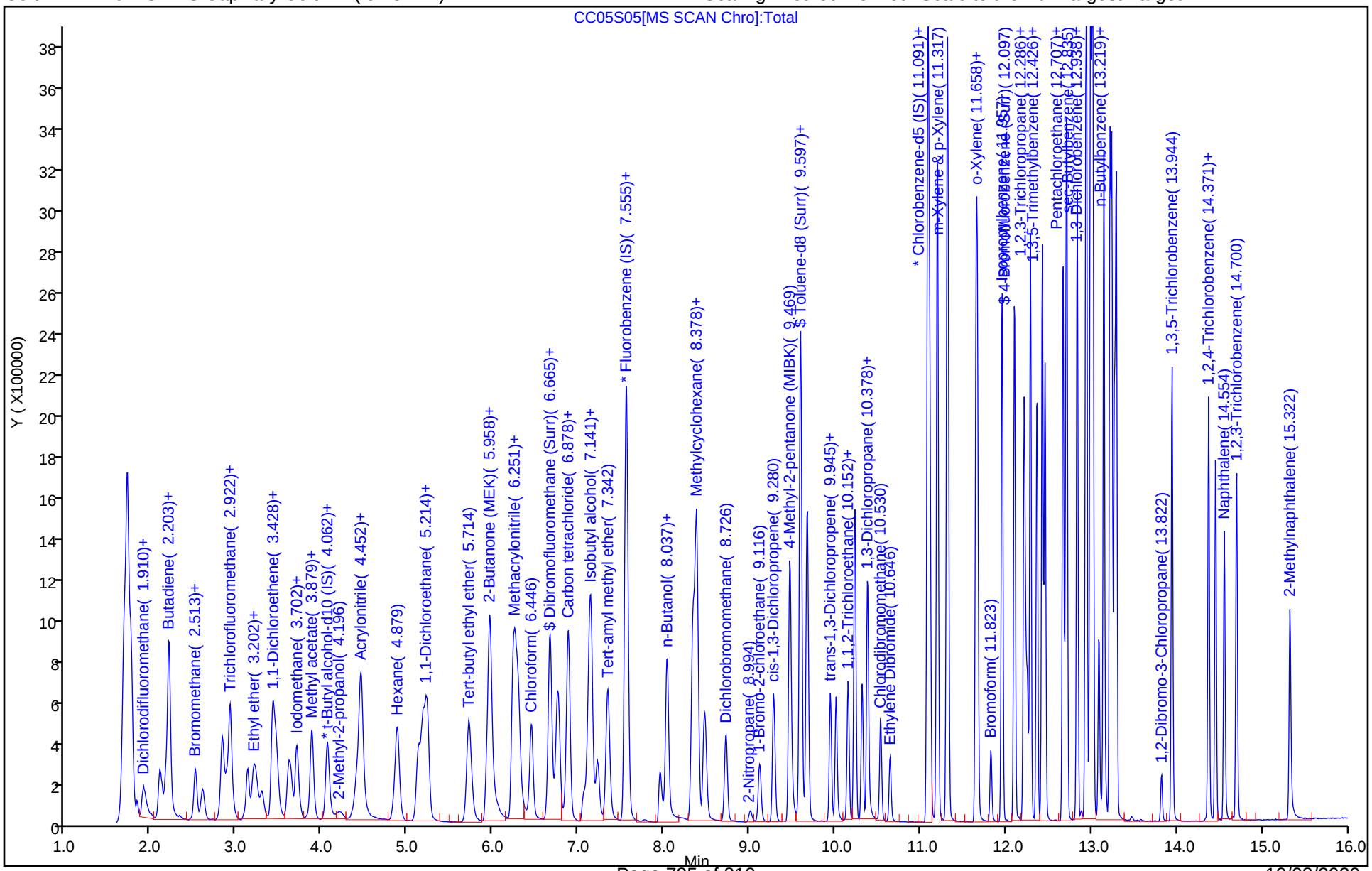
MSV_Q_QVOA1_00048	Amount Added:	5.38	Units: uL	
MSV_Q_QARC_00047	Amount Added:	5.38	Units: uL	
MSV_Q_QVOA6_00046	Amount Added:	5.38	Units: uL	
MSV_Q_ETBR_00003	Amount Added:	5.38	Units: uL	
MSV_Q_EE_00002	Amount Added:	5.38	Units: uL	
MSV_QGAS_826_00079	Amount Added:	5.38	Units: uL	
MSV_HP25_ISSS_00014	Amount Added:	1.00	Units: uL	Run Reagent

Report Date: 06-Oct-2020 12:47:23 Chrom Revision: 2.3 05-Oct-2020 16:17:16

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S05.D				
Injection Date:	05-Oct-2020 13:23:30	Instrument ID:	10193	Operator ID:	dvv10203
Lims ID:	410-15232-A-10 MS			Worklist Smp#:	11
Client ID:	HD-COD-SW-15-0/1-0 MS				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	MSV_10193_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\10193\20201005-12055.b\CC05S05.D				
Lims ID:	410-15232-A-10 MS				
Client ID:	HD-COD-SW-15-0/1-0 MS				
Sample Type:	MS				
Inject. Date:	05-Oct-2020 13:23:30	ALS Bottle#:	10	Worklist Smp#:	11
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0012055-011				
Misc. Info.:	410-15232-A-10 MS				
Operator ID:	dvv10203	Instrument ID:	10193		
Method:	\\chromfs\Lancaster\ChromData\10193\20201005-12055.b\MSV_10193_25mL.m				
Limit Group:	MSV - 8260C_D				
Last Update:	06-Oct-2020 12:41:33	Calib Date:	01-Sep-2020 19:09:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1013				

First Level Reviewer: spositok Date: 06-Oct-2020 12:18:07

Compound	Amount Added	Amount Recovered	% Rec.
$ 47 Dibromofluoromethane (Surr)	10.0	10.4	103.93
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.9	108.77
$ 74 Toluene-d8 (Surr)	10.0	9.85	98.55
$ 98 4-Bromofluorobenzene (Surr)	10.0	10.1	100.96

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-15232-1

SDG No.:

Client Sample ID: HD-COD-SW-15-0/1-0 MSD MSD Lab Sample ID: 410-15232-10 MSD

Matrix: Water Lab File ID: CC05S06.D

Analysis Method: 8260C LL Date Collected: 09/25/2020 12:30

Sample wt/vol: 25(mL) Date Analyzed: 10/05/2020 13:45

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.: 50813 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	5.30		0.50	0.070
71-55-6	1,1,1-Trichloroethane	5.50		0.50	0.060
79-34-5	1,1,2,2-Tetrachloroethane	5.56		0.50	0.070
79-00-5	1,1,2-Trichloroethane	5.77		0.50	0.060
75-34-3	1,1-Dichloroethane	5.63		0.50	0.070
75-35-4	1,1-Dichloroethene	5.90		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	5.66		0.50	0.060
107-06-2	1,2-Dichloroethane	5.37		0.50	0.050
78-87-5	1,2-Dichloropropane	5.85		0.50	0.060
78-93-3	2-Butanone (MEK)	37.3		5.0	0.60
591-78-6	2-Hexanone	23.0		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	21.8		5.0	0.70
67-64-1	Acetone	43.1		5.0	0.90
107-13-1	Acrylonitrile	25.6		5.0	0.40
71-43-2	Benzene	5.67		0.50	0.050
74-97-5	Bromochloromethane	5.66		0.50	0.050
75-27-4	Bromodichloromethane	5.66		0.50	0.050
75-25-2	Bromoform	6.08		1.0	0.30
74-83-9	Bromomethane	5.85		0.50	0.070
75-15-0	Carbon disulfide	5.72		1.0	0.060
56-23-5	Carbon tetrachloride	5.69		0.50	0.070
108-90-7	Chlorobenzene	5.34		0.50	0.060
75-00-3	Chloroethane	5.90		0.50	0.070
67-66-3	Chloroform	5.85		0.50	0.090
74-87-3	Chloromethane	6.51		0.50	0.060
156-59-2	cis-1,2-Dichloroethene	6.60		0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	5.39		0.50	0.050
124-48-1	Dibromochloromethane	5.86		0.50	0.070
100-41-4	Ethylbenzene	5.30		0.50	0.060
1634-04-4	Methyl tert-butyl ether	5.14		0.50	0.050
75-09-2	Methylene Chloride	5.87		0.50	0.070
100-42-5	Styrene	5.35		0.50	0.050
127-18-4	Tetrachloroethene	7.59		0.50	0.060
108-88-3	Toluene	5.34		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	5.65		0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-15232-1

SDG No.:

Client Sample ID: HD-COD-SW-15-0/1-0 MSD MSD Lab Sample ID: 410-15232-10 MSD

Matrix: Water Lab File ID: CC05S06.D

Analysis Method: 8260C LL Date Collected: 09/25/2020 12:30

Sample wt/vol: 25(mL) Date Analyzed: 10/05/2020 13:45

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.: 50813 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
10061-02-6	trans-1,3-Dichloropropene	5.17		0.50	0.060
79-01-6	Trichloroethene	6.50		0.50	0.060
75-01-4	Vinyl chloride	6.48		0.50	0.10
1330-20-7	Xylenes, Total	16.0		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)	105		80-120
2037-26-5	Toluene-d8 (Surr)	98		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\10193\20201005-12055.b\CC05S06.D
Lims ID: 410-15232-A-10 MSD
Client ID: HD-COD-SW-15-0/1-0 MSD
Sample Type: MSD
Inject. Date: 05-Oct-2020 13:45:30 ALS Bottle#: 11 Worklist Smp#: 12
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0012055-012
Misc. Info.: 410-15232-A-10 MSD
Operator ID: dvv10203 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20201005-12055.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 06-Oct-2020 12:41:33 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1013

First Level Reviewer: spositok Date: 06-Oct-2020 12:19:13

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.904	1.910	-0.006	99	424542	5.00	6.99	
3 Chloromethane	50	2.093	2.099	-0.006	99	466413	5.00	6.51	
4 Butadiene	39	2.203	2.203	0.000	93	621217	5.00	9.22	
5 Vinyl chloride	62	2.209	2.209	0.000	98	429447	5.00	6.48	
6 Bromomethane	94	2.514	2.514	0.000	91	273648	5.00	5.85	
7 Chloroethane	64	2.593	2.599	-0.006	100	241192	5.00	5.90	
8 Dichlorofluoromethane	67	2.825	2.831	-0.007	98	497345	5.00	5.60	
9 Trichlorofluoromethane	101	2.879	2.885	-0.006	97	534880	5.00	6.21	
11 Ethyl ether	59	3.123	3.123	0.000	93	240296	5.01	5.51	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.209	3.209	0.000	93	356003	5.00	5.56	
13 Acrolein	56	3.288	3.294	-0.006	99	231518	37.5	29.8	
14 1,1-Dichloroethene	96	3.416	3.422	-0.006	97	257014	5.00	5.90	
15 112TCTFE	101	3.452	3.452	0.000	92	256973	5.00	5.80	
16 Acetone	43	3.459	3.459	0.000	98	356201	37.5	43.1	
17 Iodomethane	142	3.605	3.605	0.000	98	438741	5.00	5.10	
18 Isopropyl alcohol	45	3.635	3.623	0.012	40	54201	37.5	37.7	
19 Ethyl bromide	108	3.629	3.635	-0.006	98	160663	4.94	4.44	
20 Carbon disulfide	76	3.696	3.702	-0.006	100	879895	5.00	5.72	
22 Methyl acetate	43	3.855	3.849	0.006	98	169108	5.00	5.21	
23 3-Chloro-1-propene	41	3.879	3.879	0.000	90	439587	5.00	5.77	
24 Methylene Chloride	84	4.056	4.056	0.000	95	284545	5.00	5.87	
* 25 t-Butyl alcohol-d10 (IS)	65	4.080	4.080	0.000	0	194253	50.0	50.0	
26 2-Methyl-2-propanol	59	4.196	4.202	-0.006	99	140377	50.0	36.3	
27 Acrylonitrile	53	4.391	4.397	-0.006	100	335758	25.0	25.6	
28 Methyl tert-butyl ether	73	4.446	4.446	0.000	92	724519	5.00	5.14	
29 trans-1,2-Dichloroethene	96	4.452	4.452	0.000	97	287460	5.00	5.65	
30 Hexane	57	4.873	4.873	0.000	95	463731	5.00	6.46	
32 1,1-Dichloroethane	63	5.117	5.123	-0.006	96	527366	5.00	5.63	
33 Isopropyl ether	45	5.178	5.178	0.000	94	974700	5.00	5.46	
34 2-Chloro-1,3-butadiene	53	5.226	5.226	0.000	92	462896	5.00	5.24	
35 Tert-butyl ethyl ether	59	5.714	5.714	0.000	98	876605	5.00	5.14	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
36 2-Butanone (MEK)	43	5.928	5.934	-0.006	100	722287	37.5	37.3	
37 cis-1,2-Dichloroethene	96	5.958	5.958	0.000	83	380950	5.00	6.60	
38 2,2-Dichloropropane	77	5.970	5.970	0.000	89	438484	5.00	5.42	
40 Propionitrile	54	6.037	6.031	0.006	98	185337	37.5	37.7	
43 Methacrylonitrile	67	6.238	6.245	-0.007	94	655153	37.5	34.4	
44 Chlorobromomethane	128	6.293	6.293	0.000	97	143808	5.00	5.66	
45 Tetrahydrofuran	71	6.299	6.299	0.000	75	130361	25.0	23.8	
46 Chloroform	83	6.446	6.446	0.000	94	542880	5.00	5.85	
$ 47 Dibromofluoromethane (Surr)	113	6.659	6.659	0.000	94	469145	10.0	10.5	
48 1,1,1-Trichloroethane	97	6.665	6.665	0.000	83	459721	5.00	5.50	
49 Cyclohexane	56	6.757	6.757	0.000	92	532338	5.00	6.02	
50 Carbon tetrachloride	117	6.872	6.873	0.000	96	398546	5.00	5.69	
51 1,1-Dichloropropene	75	6.879	6.885	-0.006	95	422562	5.00	5.63	
52 Isobutyl alcohol	41	7.068	7.061	0.007	93	151831	125.1	121.0	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.116	7.116	0.000	0	101397	10.0	11.1	
54 Benzene	78	7.141	7.147	-0.006	97	1225491	5.00	5.67	
55 1,2-Dichloroethane	62	7.220	7.220	0.000	97	350195	5.00	5.37	
56 Tert-amyl methyl ether	73	7.336	7.342	-0.006	98	819114	5.00	5.27	
* 57 Fluorobenzene (IS)	96	7.555	7.561	-0.006	99	1883199	10.0	10.0	
58 n-Heptane	43	7.555	7.561	-0.006	93	533237	5.00	6.67	
59 n-Butanol	56	7.952	7.952	0.000	91	296970	250.2	285.7	
60 Trichloroethene	95	8.031	8.037	-0.006	98	362156	5.00	6.50	
61 Methylcyclohexane	83	8.336	8.336	0.000	92	573137	5.00	6.71	
62 1,2-Dichloropropane	63	8.372	8.372	0.000	95	324937	5.00	5.85	
63 2-ethoxy-2-methyl butane	87	8.384	8.384	0.000	91	454353	5.00	5.26	
64 Methyl methacrylate	69	8.464	8.470	-0.006	93	166781	5.00	4.11	
65 1,4-Dioxane	88	8.476	8.470	0.006	29	35592	125.1	171.9	M
66 Dibromomethane	93	8.482	8.488	-0.006	95	156527	5.00	5.76	
67 Dichlorobromomethane	83	8.726	8.726	0.000	99	379363	5.00	5.66	
68 2-Nitropropane	41	9.006	9.012	-0.006	99	48515	5.00	3.85	
69 2-Chloroethyl vinyl ether	63		9.116				ND	ND	
71 1-Bromo-2-chloroethane	63	9.116	9.116	0.000	99	349728	5.00	6.09	
72 cis-1,3-Dichloropropene	75	9.281	9.281	0.000	95	449066	5.00	5.39	
73 4-Methyl-2-pentanone (MIBK)	43	9.470	9.470	0.000	98	1227120	25.0	21.8	
$ 74 Toluene-d8 (Surr)	98	9.598	9.598	0.000	94	1931508	10.0	9.83	
75 Toluene	92	9.671	9.677	-0.006	98	790151	5.00	5.34	
76 trans-1,3-Dichloropropene	75	9.945	9.945	0.000	95	383104	5.00	5.17	
78 Ethyl methacrylate	69	10.012	10.012	0.000	90	349645	5.00	5.60	
79 1,1,2-Trichloroethane	97	10.152	10.152	0.000	91	235654	5.00	5.77	
80 Tetrachloroethene	166	10.232	10.232	0.000	98	501212	5.00	7.59	
81 1,3-Dichloropropane	76	10.317	10.317	0.000	93	396342	5.00	5.51	
82 2-Hexanone	43	10.378	10.378	0.000	98	913645	25.0	23.0	
83 Chlorodibromomethane	129	10.530	10.536	-0.006	90	277407	5.00	5.86	
84 Ethylene Dibromide	107	10.640	10.646	-0.006	98	228405	5.00	5.66	
* 85 Chlorobenzene-d5 (IS)	117	11.085	11.085	0.000	86	1505112	10.0	10.0	
86 1-Chlorohexane	91	11.097	11.097	0.000	95	438995	5.00	5.20	
87 Chlorobenzene	112	11.109	11.109	0.000	96	890890	5.00	5.34	
89 1,1,1,2-Tetrachloroethane	131	11.195	11.201	-0.006	96	300933	5.00	5.30	
90 Ethylbenzene	91	11.201	11.201	0.000	98	1553465	5.00	5.30	
91 m-Xylene & p-Xylene	106	11.317	11.317	0.000	0	1223772	10.0	10.7	
92 o-Xylene	106	11.652	11.652	0.000	97	594668	5.00	5.30	
93 Styrene	104	11.664	11.664	0.000	95	1007193	5.00	5.35	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
94 Bromoform	173	11.823	11.823	0.000	97	159894	5.00	6.08	
95 Isopropylbenzene	105	11.951	11.957	-0.006	96	1580801	5.00	5.33	
$ 98 4-Bromofluorobenzene (Surr)	95	12.097	12.097	0.000	93	741899	10.0	10.0	
99 1,1,2,2-Tetrachloroethane	83	12.207	12.207	0.000	95	302966	5.00	5.56	
100 Bromobenzene	156	12.213	12.219	-0.006	93	400828	5.00	5.36	
101 trans-1,4-Dichloro-2-butene	53	12.231	12.231	0.000	72	108830	25.0	7.21	a
102 1,2,3-Trichloropropane	110	12.249	12.256	-0.007	85	83654	5.00	5.64	
103 N-Propylbenzene	91	12.286	12.286	0.000	99	1893610	5.00	5.39	
104 2-Chlorotoluene	126	12.359	12.365	-0.006	96	378520	5.00	5.27	
105 1,3,5-Trimethylbenzene	105	12.426	12.426	0.000	94	1336013	5.00	5.13	
106 4-Chlorotoluene	126	12.457	12.457	0.000	98	388680	5.00	5.20	
107 tert-Butylbenzene	134	12.670	12.670	0.000	93	293419	5.00	5.18	
108 Pentachloroethane	167	12.701	12.701	0.000	92	231023	5.00	5.47	
109 1,2,4-Trimethylbenzene	105	12.713	12.713	0.000	97	1383387	5.00	5.18	
110 sec-Butylbenzene	105	12.835	12.835	0.000	94	1813159	5.00	5.41	
111 1,3-Dichlorobenzene	146	12.932	12.932	0.000	98	782385	5.00	5.23	
112 4-Isopropyltoluene	119	12.944	12.944	0.000	97	1575972	5.00	5.39	
* 113 1,4-Dichlorobenzene-d4	152	12.987	12.993	-0.006	95	872727	10.0	10.0	
114 1,4-Dichlorobenzene	146	13.005	13.005	0.000	94	810404	5.00	5.27	
115 1,2,3-Trimethylbenzene	120	13.018	13.018	0.000	98	637188	5.00	5.44	
116 Benzyl chloride	126	13.091	13.091	0.000	99	120291	5.00	5.55	
119 n-Butylbenzene	92	13.237	13.237	0.000	97	807260	5.00	5.45	
120 1,2-Dichlorobenzene	146	13.268	13.274	-0.006	99	743908	5.00	5.27	
118 p-Diethylbenzene	119	13.292	13.292	0.000	86	776947	5.00	5.23	
123 1,2-Dibromo-3-Chloropropane	155	13.822	13.822	0.000	85	45328	5.00	6.06	
124 1,3,5-Trichlorobenzene	180	13.944	13.944	0.000	98	645833	5.00	5.30	
125 1,2,4-Trichlorobenzene	180	14.371	14.371	0.000	94	573214	5.00	5.24	
126 Hexachlorobutadiene	225	14.456	14.456	0.000	97	302356	5.00	5.66	
127 Naphthalene	128	14.554	14.554	0.000	97	1010102	5.00	5.18	
128 1,2,3-Trichlorobenzene	180	14.700	14.700	0.000	95	492255	5.00	5.08	
129 2-Methylnaphthalene	142	15.322	15.322	0.000	93	595076	5.00	4.51	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_Q_QVOA1_00048	Amount Added:	5.38	Units: uL	
MSV_Q_QARC_00047	Amount Added:	5.38	Units: uL	
MSV_Q_QVOA6_00046	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_00079	Amount Added:	5.38	Units: uL	
MSV_HP25_ISSS_00014	Amount Added:	1.00	Units: uL	Run Reagent

Report Date: 06-Oct-2020 12:47:29 Chrom Revision: 2.3 05-Oct-2020 16:17:16

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20201005-12055.b\CC05S06.D

Injection Date: 05-Oct-2020 13:45:30 Instrument ID: 10193 Operator ID: dvv10203

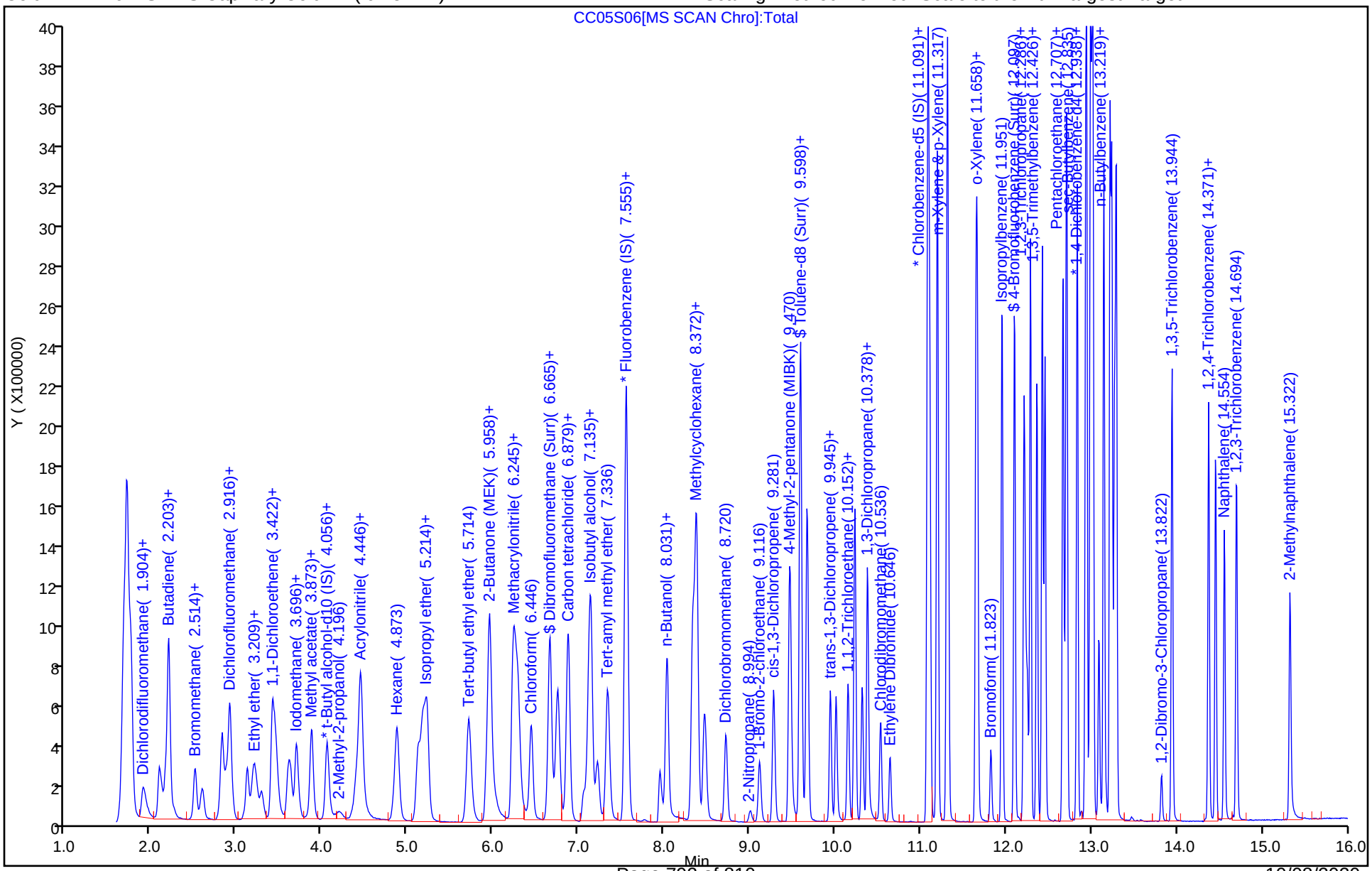
Lims ID: 410-15232-A-10 MSD Worklist Smp#: 12

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

Purge Vol: 25.000 mL Dil. Factor: 1.0000 ALS Bottle#: 11

Method: MSV_10193_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\10193\20201005-12055.b\CC05S06.D				
Lims ID:	410-15232-A-10 MSD				
Client ID:	HD-COD-SW-15-0/1-0 MSD				
Sample Type:	MSD				
Inject. Date:	05-Oct-2020 13:45:30	ALS Bottle#:	11	Worklist Smp#:	12
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0012055-012				
Misc. Info.:	410-15232-A-10 MSD				
Operator ID:	dvv10203	Instrument ID:	10193		
Method:	\\chromfs\Lancaster\ChromData\10193\20201005-12055.b\MSV_10193_25mL.m				
Limit Group:	MSV - 8260C_D				
Last Update:	06-Oct-2020 12:41:33	Calib Date:	01-Sep-2020 19:09:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1013				

First Level Reviewer: spositok Date: 06-Oct-2020 12:19:13

Compound	Amount Added	Amount Recovered	% Rec.
$ 47 Dibromofluoromethane (Surr)	10.0	10.5	104.84
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	11.1	111.23
$ 74 Toluene-d8 (Surr)	10.0	9.83	98.26
$ 98 4-Bromofluorobenzene (Surr)	10.0	10.0	100.41

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-15232-1

SDG No.:

Instrument ID: 10193 Start Date: 09/01/2020 12:45

Analysis Batch Number: 39724 End Date: 09/01/2020 19:31

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 410-39724/1		09/01/2020 12:45	1	CS01T01.D	R-624SilMS 30m 0.25(mm)
IC 410-39724/3		09/01/2020 13:35	1	CS01I01.D	R-624SilMS 30m 0.25(mm)
ICIS 410-39724/4		09/01/2020 13:57	1	CS01I02.D	R-624SilMS 30m 0.25(mm)
IC 410-39724/5		09/01/2020 14:19	1	CS01I03.D	R-624SilMS 30m 0.25(mm)
IC 410-39724/6		09/01/2020 14:42	1	CS01I04.D	R-624SilMS 30m 0.25(mm)
IC 410-39724/7		09/01/2020 15:04	1	CS01I05.D	R-624SilMS 30m 0.25(mm)
IC 410-39724/8		09/01/2020 15:26	1	CS01I06.D	R-624SilMS 30m 0.25(mm)
IC 410-39724/9		09/01/2020 15:48	1	CS01I07.D	R-624SilMS 30m 0.25(mm)
ICV 410-39724/10		09/01/2020 16:10	1	CS01V01.D	R-624SilMS 30m 0.25(mm)
IC 410-39724/12		09/01/2020 16:55	1		R-624SilMS 30m 0.25(mm)
IC 410-39724/13		09/01/2020 17:17	1		R-624SilMS 30m 0.25(mm)
IC 410-39724/14		09/01/2020 17:39	1		R-624SilMS 30m 0.25(mm)
IC 410-39724/15		09/01/2020 18:02	1		R-624SilMS 30m 0.25(mm)
IC 410-39724/16		09/01/2020 18:24	1		R-624SilMS 30m 0.25(mm)
IC 410-39724/17		09/01/2020 18:46	1		R-624SilMS 30m 0.25(mm)
IC 410-39724/18		09/01/2020 19:09	1		R-624SilMS 30m 0.25(mm)
ICV 410-39724/19		09/01/2020 19:31	1		R-624SilMS 30m 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-15232-1

SDG No.:

Instrument ID: 19930 Start Date: 09/09/2020 15:02

Analysis Batch Number: 42158 End Date: 09/09/2020 21:34

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 410-42158/1		09/09/2020 15:02	1	IS09T01.D	R-624SilMS 30m 0.25(mm)
IC 410-42158/3		09/09/2020 15:55	1	IS09I01.D	R-624SilMS 30m 0.25(mm)
ICIS 410-42158/4		09/09/2020 16:16	1	IS09I02.D	R-624SilMS 30m 0.25(mm)
IC 410-42158/5		09/09/2020 16:37	1	IS09I03.D	R-624SilMS 30m 0.25(mm)
IC 410-42158/6		09/09/2020 16:58	1	IS09I04.D	R-624SilMS 30m 0.25(mm)
IC 410-42158/7		09/09/2020 17:20	1	IS09I05.D	R-624SilMS 30m 0.25(mm)
IC 410-42158/8		09/09/2020 17:41	1	IS09I06.D	R-624SilMS 30m 0.25(mm)
IC 410-42158/9		09/09/2020 18:02	1	IS09I07.D	R-624SilMS 30m 0.25(mm)
ICV 410-42158/10		09/09/2020 18:23	1	IS09V01.D	R-624SilMS 30m 0.25(mm)
IC 410-42158/12		09/09/2020 19:06	1		R-624SilMS 30m 0.25(mm)
IC 410-42158/13		09/09/2020 19:27	1		R-624SilMS 30m 0.25(mm)
IC 410-42158/14		09/09/2020 19:48	1		R-624SilMS 30m 0.25(mm)
IC 410-42158/15		09/09/2020 20:10	1		R-624SilMS 30m 0.25(mm)
IC 410-42158/16		09/09/2020 20:31	1		R-624SilMS 30m 0.25(mm)
IC 410-42158/17		09/09/2020 20:52	1		R-624SilMS 30m 0.25(mm)
IC 410-42158/18		09/09/2020 21:13	1		R-624SilMS 30m 0.25(mm)
ICV 410-42158/19		09/09/2020 21:34	1		R-624SilMS 30m 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-15232-1

SDG No.:

Instrument ID: 19930 Start Date: 10/03/2020 06:57

Analysis Batch Number: 50506 End Date: 10/03/2020 17:37

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 410-50506/1		10/03/2020 06:57	1	IO03T01.D	R-624SilMS 30m 0.25(mm)
CCVIS 410-50506/3		10/03/2020 07:35	1	IS21X02.D	R-624SilMS 30m 0.25(mm)
LCS 410-50506/4		10/03/2020 07:56	1	IS21X04.D	R-624SilMS 30m 0.25(mm)
ZZZZZ		10/03/2020 08:17	1		R-624SilMS 30m 0.25(mm)
MB 410-50506/6		10/03/2020 08:39	1	IS21X07.D	R-624SilMS 30m 0.25(mm)
ZZZZZ		10/03/2020 09:05	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		10/03/2020 09:26	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		10/03/2020 09:48	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		10/03/2020 10:09	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		10/03/2020 10:31	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		10/03/2020 11:13	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		10/03/2020 11:34	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		10/03/2020 11:56	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		10/03/2020 12:17	1		R-624SilMS 30m 0.25(mm)
410-15232-1	HD-COD-SW-29-0/1-0	10/03/2020 12:38	1	Io03s11.D	R-624SilMS 30m 0.25(mm)
410-15232-2	HD-COD-SW-8-0/1-0	10/03/2020 13:00	1	Io03s12.D	R-624SilMS 30m 0.25(mm)
410-15232-3	HD-COD-SW-13-0/1-0	10/03/2020 13:21	1	Io03s13.D	R-624SilMS 30m 0.25(mm)
410-15232-4	HD-COD-SW-16-0/1-0	10/03/2020 13:43	1	Io03s14.D	R-624SilMS 30m 0.25(mm)
410-15232-5	HD-COD-SW-17-0/1-0	10/03/2020 14:04	1	Io03s15.D	R-624SilMS 30m 0.25(mm)
410-15232-6	HD-COD-SW-6-0/1-0	10/03/2020 14:26	1	Io03s16.D	R-624SilMS 30m 0.25(mm)
410-15232-7	HD-COD-SW-26-0/1-0	10/03/2020 14:47	1	Io03s17.D	R-624SilMS 30m 0.25(mm)
410-15232-8	HD-COD-SW-7-0/1-0	10/03/2020 15:08	1	Io03s18.D	R-624SilMS 30m 0.25(mm)
410-15232-9	HD-COD-SW-27-0/1-0	10/03/2020 15:30	1	Io03s19.D	R-624SilMS 30m 0.25(mm)
ZZZZZ		10/03/2020 15:51	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		10/03/2020 16:12	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		10/03/2020 16:33	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		10/03/2020 16:54	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		10/03/2020 17:16	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		10/03/2020 17:37	1		R-624SilMS 30m 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-15232-1

SDG No.:

Instrument ID: 10193 Start Date: 10/05/2020 09:26

Analysis Batch Number: 50813 End Date: 10/05/2020 20:47

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 410-50813/1		10/05/2020 09:26	1	CC05T01.D	R-624SilMS 30m 0.25(mm)
CCVIS 410-50813/3		10/05/2020 10:03	1	CC05C01.D	R-624SilMS 30m 0.25(mm)
LCS 410-50813/4		10/05/2020 10:25	1	CC05L01.D	R-624SilMS 30m 0.25(mm)
MB 410-50813/6		10/05/2020 11:10	1	CC05B01.D	R-624SilMS 30m 0.25(mm)
ZZZZZ		10/05/2020 11:53	1		R-624SilMS 30m 0.25(mm)
410-15232-13	HD-QC1-0/1-1	10/05/2020 12:15	1	CC05S02.D	R-624SilMS 30m 0.25(mm)
410-15232-14	HD-QC1-0/1-2	10/05/2020 12:38	1	CC05S03.D	R-624SilMS 30m 0.25(mm)
410-15232-10	HD-COD-SW-15-0/1-0	10/05/2020 13:00	1	CC05S04.D	R-624SilMS 30m 0.25(mm)
410-15232-10 MS	HD-COD-SW-15-0/1-0 MS MS	10/05/2020 13:23	1	CC05S05.D	R-624SilMS 30m 0.25(mm)
410-15232-10 MSD	HD-COD-SW-15-0/1-0 MSD MSD	10/05/2020 13:45	1	CC05S06.D	R-624SilMS 30m 0.25(mm)
410-15232-11	HD-COD-SW-9-0/1-0	10/05/2020 14:29	1	CC05S08.D	R-624SilMS 30m 0.25(mm)
410-15232-12	HD-COD-SW-28-0/1-0	10/05/2020 14:51	1	CC05S09.D	R-624SilMS 30m 0.25(mm)
ZZZZZ		10/05/2020 15:14	100		R-624SilMS 30m 0.25(mm)
ZZZZZ		10/05/2020 15:36	1000		R-624SilMS 30m 0.25(mm)
ZZZZZ		10/05/2020 15:58	20		R-624SilMS 30m 0.25(mm)
ZZZZZ		10/05/2020 16:20	200		R-624SilMS 30m 0.25(mm)
ZZZZZ		10/05/2020 16:42	200		R-624SilMS 30m 0.25(mm)
ZZZZZ		10/05/2020 17:05	2000		R-624SilMS 30m 0.25(mm)
ZZZZZ		10/05/2020 17:27	200		R-624SilMS 30m 0.25(mm)
ZZZZZ		10/05/2020 17:49	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		10/05/2020 18:11	10		R-624SilMS 30m 0.25(mm)
ZZZZZ		10/05/2020 18:33	100		R-624SilMS 30m 0.25(mm)
ZZZZZ		10/05/2020 18:56	20		R-624SilMS 30m 0.25(mm)
ZZZZZ		10/05/2020 19:40	20		R-624SilMS 30m 0.25(mm)
ZZZZZ		10/05/2020 20:25	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		10/05/2020 20:47	1		R-624SilMS 30m 0.25(mm)

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-15232-1

SDG No.:

Batch Number: 39724 Batch Start Date: 09/01/20 12:45 Batch Analyst: Campbell, Miranda E

Batch Method: 8260C LL Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MSV_25_826ISS 00001	MSV_Q_EE 00002	MSV_Q_ETBR 00003	MSV_Q_QARC 00043
BFB 410-39724/1		8260C LL		1 uL	1 uL				
IC 410-39724/3		8260C LL		25 mL	25 mL	1 uL			
ICIS 410-39724/4		8260C LL		25 mL	25 mL	1 uL			
IC 410-39724/5		8260C LL		25 mL	25 mL	1 uL			
IC 410-39724/6		8260C LL		25 mL	25 mL	1 uL			
IC 410-39724/7		8260C LL		25 mL	25 mL	1 uL			
IC 410-39724/8		8260C LL		25 mL	25 mL	1 uL			
IC 410-39724/9		8260C LL		25 mL	25 mL	1 uL			
ICV 410-39724/10		8260C LL		25 mL	25 mL	1 uL	12.5 uL	12.5 uL	12.5 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_Q_QVOA1 00044	MSV_Q_QVOA6 00041	MSV_QGAS_826 00069	MSV_RV1_826 00022	MSV_RV4_826 00024	MSV_RV4GAS826 00072
BFB 410-39724/1		8260C LL							
IC 410-39724/3		8260C LL					25 uL	25 uL	25 uL
ICIS 410-39724/4		8260C LL					10 uL	10 uL	10 uL
IC 410-39724/5		8260C LL					5 uL	5 uL	5 uL
IC 410-39724/6		8260C LL					2 uL	2 uL	2 uL
IC 410-39724/7		8260C LL					2 uL	2 uL	2 uL
IC 410-39724/8		8260C LL					2 uL	2 uL	2 uL
IC 410-39724/9		8260C LL					2 uL	2 uL	2 uL
ICV 410-39724/10		8260C LL		12.5 uL	12.5 uL	12.5 uL			

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_V_BFB 00003					
BFB 410-39724/1		8260C LL		1 uL					
IC 410-39724/3		8260C LL							
ICIS 410-39724/4		8260C LL							
IC 410-39724/5		8260C LL							
IC 410-39724/6		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 Laboratorie Job No.: 410-15232-1

SDG No.:

Batch Number: 39724 Batch Start Date: 09/01/20 12:45 Batch Analyst: Campbell, Miranda E

Batch Method: 8260C LL Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_V_BFB 00003					
IC 410-39724/7		8260C LL							
IC 410-39724/8		8260C LL							
IC 410-39724/9		8260C LL							
ICV 410-39724/10		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 Laboratorie Job No.: 410-15232-1

SDG No.:

Batch Number: 42158 Batch Start Date: 09/09/20 15:02 Batch Analyst: Campbell, Miranda E

Batch Method: 8260C LL Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MSV_31_826ISS 00003	MSV_Q_EE 00002	MSV_Q_ETBR 00003	MSV_Q_QARC 00044
BFB 410-42158/1		8260C LL		1 uL	1 uL				
IC 410-42158/3		8260C LL		25 mL	25 mL	5 uL			
ICIS 410-42158/4		8260C LL		25 mL	25 mL	5 uL			
IC 410-42158/5		8260C LL		25 mL	25 mL	5 uL			
IC 410-42158/6		8260C LL		25 mL	25 mL	5 uL			
IC 410-42158/7		8260C LL		25 mL	25 mL	5 uL			
IC 410-42158/8		8260C LL		25 mL	25 mL	5 uL			
IC 410-42158/9		8260C LL		25 mL	25 mL	5 uL			
ICV 410-42158/10		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 00045	MSV_Q_QVOA6 00042	MSV_QGAS_826 00072	MSV_RV1_826 00023	MSV_RV4_826 00025	MSV_RV4GAS826 00075
BFB 410-42158/1		8260C LL							
IC 410-42158/3		8260C LL					25 uL	25 uL	25 uL
ICIS 410-42158/4		8260C LL					10 uL	10 uL	10 uL
IC 410-42158/5		8260C LL					5 uL	5 uL	5 uL
IC 410-42158/6		8260C LL					2 uL	2 uL	2 uL
IC 410-42158/7		8260C LL					2 uL	2 uL	2 uL
IC 410-42158/8		8260C LL					2 uL	2 uL	2 uL
IC 410-42158/9		8260C LL					2 uL	2 uL	2 uL
ICV 410-42158/10		8260C LL		12.5 uL	12.5 uL	12.5 uL			

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_V_BFB 00003					
BFB 410-42158/1		8260C LL		1 uL					
IC 410-42158/3		8260C LL							
ICIS 410-42158/4		8260C LL							
IC 410-42158/5		8260C LL							
IC 410-42158/6		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 Laboratorie Job No.: 410-15232-1

SDG No.:

Batch Number: 42158 Batch Start Date: 09/09/20 15:02 Batch Analyst: Campbell, Miranda E

Batch Method: 8260C LL Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_V_BFB 00003					
IC 410-42158/7		8260C LL							
IC 410-42158/8		8260C LL							
IC 410-42158/9		8260C LL							
ICV 410-42158/10		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 Laboratorie Job No.: 410-15232-1

SDG No.:

Batch Number: 50506 Batch Start Date: 10/03/20 06:57 Batch Analyst: Howe, Jennifer K

Batch Method: 8260C LL Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	ResidualChloCheck	Headspace	MSV_31_826ISS 00003
BFB 410-50506/1		8260C LL		1 uL	1 uL				
CCVIS 410-50506/3		8260C LL		25 mL	25 mL				5 uL
LCS 410-50506/4		8260C LL		25 mL	25 mL				5 uL
MB 410-50506/6		8260C LL		25 mL	25 mL				5 uL
410-15232-A-1	HD-COD-SW-29-0/1-0	8260C LL	T	25 mL	25 mL	<2 SU	N	N	5 uL
410-15232-A-2	HD-COD-SW-8-0/1-0	8260C LL	T	25 mL	25 mL	<2 SU	N	N	5 uL
410-15232-A-3	HD-COD-SW-13-0/1-0	8260C LL	T	25 mL	25 mL	<2 SU	N	N	5 uL
410-15232-A-4	HD-COD-SW-16-0/1-0	8260C LL	T	25 mL	25 mL	<2 SU	N	N	5 uL
410-15232-A-5	HD-COD-SW-17-0/1-0	8260C LL	T	25 mL	25 mL	<2 SU	N	N	5 uL
410-15232-A-6	HD-COD-SW-6-0/1-0	8260C LL	T	25 mL	25 mL	<2 SU	N	N	5 uL
410-15232-A-7	HD-COD-SW-26-0/1-0	8260C LL	T	25 mL	25 mL	<2 SU	N	N	5 uL
410-15232-A-8	HD-COD-SW-7-0/1-0	8260C LL	T	25 mL	25 mL	<2 SU	N	N	5 uL
410-15232-A-9	HD-COD-SW-27-0/1-0	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 00047	MSV_Q_QVOA1 00048	MSV_Q_QVOA6 00046	MSV_QGAS_826 00078
BFB 410-50506/1		8260C LL							
CCVIS 410-50506/3		8260C LL							
LCS 410-50506/4		8260C LL		12.5 uL	12.5 uL	12.5 uL	12.5 uL	12.5 uL	12.5 uL
MB 410-50506/6		8260C LL							
410-15232-A-1	HD-COD-SW-29-0/1-0	8260C LL	T						
410-15232-A-2	HD-COD-SW-8-0/1-0	8260C LL	T						
410-15232-A-3	HD-COD-SW-13-0/1-0	8260C LL	T						
410-15232-A-4	HD-COD-SW-16-0/1-0	8260C LL	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-15232-1

SDG No.:

Batch Number: 50506 Batch Start Date: 10/03/20 06:57 Batch Analyst: Howe, Jennifer K

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 00047	MSV_Q_QVOA1 00048	MSV_Q_QVOA6 00046	MSV_QGAS_826 00078
410-15232-A-5	HD-COD-SW-17-0/1-0	8260C LL	T						
410-15232-A-6	HD-COD-SW-6-0/1-0	8260C LL	T						
410-15232-A-7	HD-COD-SW-26-0/1-0	8260C LL	T						
410-15232-A-8	HD-COD-SW-7-0/1-0	8260C LL	T						
410-15232-A-9	HD-COD-SW-27-0/1-0	8260C LL	T						

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_RV1_826 00024	MSV_RV4_826 00028	MSV_RV4GAS826 00081	MSV_V_BFB 00003	AnalysisComment	
BFB 410-50506/1		8260C LL					1 uL		
CCVIS 410-50506/3		8260C LL		20 uL	20 uL	20 uL			
LCS 410-50506/4		8260C LL							
MB 410-50506/6		8260C LL							
410-15232-A-1	HD-COD-SW-29-0/1-0	8260C LL	T						
410-15232-A-2	HD-COD-SW-8-0/1-0	8260C LL	T						
410-15232-A-3	HD-COD-SW-13-0/1-0	8260C LL	T						
410-15232-A-4	HD-COD-SW-16-0/1-0	8260C LL	T					9179	
410-15232-A-5	HD-COD-SW-17-0/1-0	8260C LL	T						
410-15232-A-6	HD-COD-SW-6-0/1-0	8260C LL	T					9179	
410-15232-A-7	HD-COD-SW-26-0/1-0	8260C LL	T						
410-15232-A-8	HD-COD-SW-7-0/1-0	8260C LL	T					9179	
410-15232-A-9	HD-COD-SW-27-0/1-0	8260C LL	T					9179	

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 Laboratorie Job No.: 410-15232-1

SDG No.:

Batch Number: 50506 Batch Start Date: 10/03/20 06:57 Batch Analyst: Howe, Jennifer K

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.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-15232-1

SDG No.:

Batch Number: 50813 Batch Start Date: 10/05/20 09:26 Batch Analyst: Sposito, Kevin A

Batch Method: 8260C LL Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	ResidualChloCheck	Headspace	MSV_HP25_ISSS 00014
BFB 410-50813/1		8260C LL		1 uL	1 uL				
CCVIS 410-50813/3		8260C LL		25 mL	25 mL				1 uL
LCS 410-50813/4		8260C LL		25 mL	25 mL				1 uL
MB 410-50813/6		8260C LL		25 mL	25 mL				1 uL
410-15232-A-13	HD-QC1-0/1-1	8260C LL	T	25 mL	25 mL	<2 SU	N	N	1 uL
410-15232-A-14	HD-QC1-0/1-2	8260C LL	T	25 mL	25 mL	<2 SU	N	N	1 uL
410-15232-A-10	HD-COD-SW-15-0/1-0	8260C LL	T	25 mL	25 mL	<2 SU	N	N	1 uL
410-15232-A-10 MS	HD-COD-SW-15-0/1-0 MS	8260C LL	T	25 mL	25 mL	<2 SU	N	N	1 uL
410-15232-A-10 MSD	HD-COD-SW-15-0/1-0 MSD	8260C LL	T	25 mL	25 mL	<2 SU	N	N	1 uL
410-15232-A-11	HD-COD-SW-9-0/1-0	8260C LL	T	25 mL	25 mL	<2 SU	N	N	1 uL
410-15232-A-12	HD-COD-SW-28-0/1-0	8260C LL	T	25 mL	25 mL	<2 SU	N	N	1 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_Q_EE 00002	MSV_Q_ETBR 00003	MSV_Q_QARC 00047	MSV_Q_QVOA1 00048	MSV_Q_QVOA6 00046	MSV_QGAS_826 00079
BFB 410-50813/1		8260C LL							
CCVIS 410-50813/3		8260C LL							
LCS 410-50813/4		8260C LL		12.5 uL	12.5 uL	12.5 uL	12.5 uL	12.5 uL	12.5 uL
MB 410-50813/6		8260C LL							
410-15232-A-13	HD-QC1-0/1-1	8260C LL	T						
410-15232-A-14	HD-QC1-0/1-2	8260C LL	T						
410-15232-A-10	HD-COD-SW-15-0/1-0	8260C LL	T						
410-15232-A-10 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
410-15232-A-10 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
410-15232-A-11	HD-COD-SW-9-0/1-0	8260C LL	T						
410-15232-A-12	HD-COD-SW-28-0/1-0	8260C LL	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-15232-1

SDG No.:

Batch Number: 50813 Batch Start Date: 10/05/20 09:26 Batch Analyst: Sposito, Kevin A

Batch Method: 8260C LL Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_RV1_826 00024	MSV_RV4_826 00028	MSV_RV4GAS826 00083	MSV_V_BFB 00003		
BFB 410-50813/1		8260C LL					1 uL		
CCVIS 410-50813/3		8260C LL		25 uL	25 uL	25 uL			
LCS 410-50813/4		8260C LL							
MB 410-50813/6		8260C LL							
410-15232-A-13	HD-QC1-0/1-1	8260C LL	T						
410-15232-A-14	HD-QC1-0/1-2	8260C LL	T						
410-15232-A-10	HD-COD-SW-15-0/1-0	8260C LL	T						
410-15232-A-10 MS	HD-COD-SW-15-0/1-0 MS	8260C LL	T						
410-15232-A-10 MSD	HD-COD-SW-15-0/1-0 MSD	8260C LL	T						
410-15232-A-11	HD-COD-SW-9-0/1-0	8260C LL	T						
410-15232-A-12	HD-COD-SW-28-0/1-0	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.

Shipping and Receiving Documents

E [barcode] ysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

410-15232 Chain of Custody

Sample # _____

Client: Groundwater Sciences Corporation — SURFACE WATER MONTHLY SAMPLING

Project Name/#: fYNOP ~~2020 Comprehensive Sampling~~ — Site ID #: fYNOP, York PA

Project Manager: Chris O'Neil — P.O. #: 1000012.42

Sampler: Casey Littlefield — PWSID #: N/A

Phone #: (717) 901-8176 / (717) 756-1246 — Quote #:

State where samples were collected: York, PA — For Compliance: Yes ☐ No ☑

Sample Identification	Collection Date	Collection Time	Grab	Composite	Matrix: Soil	Sediment	Tissue	Water: Potable	Ground	Surface	NPDES	Other:	Total # of Containers	Aqueous VOCs via 8260C Modified QAPP List (Low level 25ml purge)	H
~~HD~~ COD-SW-29-Ø/1-Ø	9/25/20	Ø950	X					SW					3	X	
HD-COD-SW-8-Ø/1-Ø		1005													
HD-COD-SW-13-Ø/1-Ø		1020													
HD-COD-SW-16-Ø/1-Ø		1040													
HD-COD-SW-17-Ø/1-Ø		1050													
HD-COD-SW-6-Ø/1-Ø		1115													
HD-COD-SW-26-Ø/1-Ø		1145													
HD-COD-SW-7-Ø/1-Ø		1210													
HD-COD-SW-27-Ø/1-Ø		1220													
HD-COD-SW-15-Ø/1-Ø		1230													

Analyses Requested — Preservation Codes

For Lab Use Only

SF #: _____

SCR #: _____

Preservation Codes: H = HCl; T = Thiosulfate; N = HNO_3; B = NaOH; S = H_2SO_4; P = H_3PO_4; O = Other

Remarks

Turnaround Time Requested (TAT) (please check): Standard ☑ Rush ☐

(Rush TAT is subject to laboratory approval and surcharges.)

Date results are needed:

Rush results requested by (please check): E-Mail ☐ Phone ☐

E-mail Address:

Phone:

Data Package Options (please check if required)

Type I (Validation/non-CLP) ☐ MA MCP ☐

Type III (Reduced non-CLP) ☐ CT RCP ☐

Type VI (Raw Data Only) ☐ TX TRRP-13 ☐

NJ DKQP ☐ NYSDEC Category ☐ A or ☐ B

EDD Required? Yes ☑ No ☐ If yes, format: _____ CLP Like Deliverables, Project Specific Analyte List

Relinquished by:	Date	Time	Received by:	Date	Time
CASEY LITTLEFIELD	9/25/20	1400		25Sep20	1400
	25Sep20	1915			
				9-25-20	1952

Relinquished by Commercial Carrier: EUROFINS CURRIER

UPS _____ FedEx _____ Other _____

Temperature upon receipt -1.2 °C

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

Acct. # _____ Group # _____ Sample # _____

Client: Groundwater Sciences Corporation			
Project Name/#: ~~SURFACE WATER~~ fYNOP ~~2020 Comprehensive Sampling~~ MONTHLY SAMPLING	Site ID #: fYNOP, York PA		
Project Manager: Chris O'Neil	P.O. #: 100212.42		
Sampler: Casey Littlefield	PWSID #: N/A		
Phone #: (717) 901-8176 / (717) 756-1246	Quote #:		
State where samples were collected: York, PA	For Compliance: Yes ☐ No ☑		

Sample Identification	Collection Date	Collection Time	Grab	Composite	Matrix: Soil ☐ Sediment ☐ Tissue ☐	Water: Potable ☐ Ground ☐ NPDES ☑ Surface ☐	Other:	Total # of Containers	Analyses Requested: Aqueous VOCs via 8260C Modified QAPP List (LOW LEVEL 25ml PURGE)	Preservation Codes: H	Remarks
HD-~~SW~~ COD-SW-15-0/1-0MS	9/25/20	1230	X			SW		3	X		
HD-COD-SW-15-0/1-0MSD	"	1230	"			"		"	"		
HD-COD-SW-9-0/1-0	"	1305	"			"		"	"		
HD-COD-SW-28-0/1-0	"	1320	"			"		"	"		
HD-QC1-0/1-1	"	1200	"			"		"	"		
HD-QC1-0/1-2	↓	—	↓			↓		↓	↓		

Preservation Codes: H = HCl; T = Thiosulfate; N = HNO_3; B = NaOH; S = H_2SO_4; P = H_3PO_4; O = Other

Turnaround Time Requested (TAT) (please check): Standard ☑ Rush ☐

(Rush TAT is subject to laboratory approval and surcharges.)

Date results are needed:

Rush results requested by (please check): E-Mail ☐ Phone ☐

E-mail Address:

Phone:

Data Package Options (please check if required)

Type I (Validation/non-CLP)	☐	MA MCP	☐
Type III (Reduced non-CLP)	☐	CT RCP	☐
Type VI (Raw Data Only)	☐	TX TRRP-13	☐
NJ DKQP	☐	NYSDEC Category	☐ A or ☐ B

EDD Required? Yes ☑ No ☐ If yes, format: _____ CLP Like Deliverables, Project Specific Analyte List

Relinquished by:	Date	Time	Received by:	Date	Time
CASEY LITTLEFIELD	9/25/20	1400		25Sept20	1400
RPMcDonnell	25Sept20	1915			
				9-25-20	1932

Relinquished by Commercial Carrier: EUROFINS

UPS _____ FedEx _____ Other COURIER

Temperature upon receipt -1.2 °C

For Lab Use Only: SF #: _____ SCR #: _____

Login Sample Receipt Checklist

Client: Groundwater Sciences Corporation

Job Number: 410-15232-1

Login Number: 15232
List Number: 1
Creator: Reiff, Nicole L

List Source: Eurofins Lancaster Laboratories Env

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are 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.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	