ANALYTICAL REPORT

Job Number: 410-5692-1

Job Description: fYNOP Monthly Surface Water

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

Attention: Christopher O'Neil

Approved for release.
Marrissa C Williams
Project Manager
7/27/2020 11:37 AM

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07/27/2020

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
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
410-5692-1

Receipt
The samples were received on 6/25/2020 1:10 PM; the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.2°C

GC/MS VOA
Method 8260D_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 to pH <2 on analytical batch 410-20265 : HD-COD-SW-6-0/1-0 (410-5692-1), HD-COD-SW-7-0/1-0 (410-5692-2), HD-COD-SW-8-0/1-0 (410-5692-3), HD-COD-SW-9-0/1-0 (410-5692-4), HD-COD-SW-13-0/1-0 (410-5692-5), HD-COD-SW-15-0/1-0 (410-5692-6), HD-COD-SW-16-0/1-0 (410-5692-7), HD-COD-SW-17-0/1-0 (410-5692-8), HD-COD-SW-26-0/1-0 (410-5692-9), HD-COD-SW-27-0/1-0 (410-5692-10), HD-COD-SW-28-0/1-0 (410-5692-11), HD-COD-SW-29-0/1-0 (410-5692-12), HD-QC1-0/1-1 (410-5692-13) and HD-QC1-0/1-2 (410-5692-14). The requested target analyte list includes Acrylonitrile.

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

Detection Summary

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

Job ID: 410-5692-1

Client Sample ID: HD-COD-SW-6-0/1-0 — Lab Sample ID: 410-5692-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	2.3	J	5.0	0.90	ug/L	1		8260D	Total/NA

Client Sample ID: HD-COD-SW-7-0/1-0 — Lab Sample ID: 410-5692-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	2.0	J	5.0	0.90	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	0.084	J	0.50	0.050	ug/L	1		8260D	Total/NA
Toluene	0.083	J	0.50	0.070	ug/L	1		8260D	Total/NA

Client Sample ID: HD-COD-SW-8-0/1-0 — Lab Sample ID: 410-5692-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	1.7	J	5.0	0.90	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	0.077	J	0.50	0.050	ug/L	1		8260D	Total/NA
Toluene	0.093	J	0.50	0.070	ug/L	1		8260D	Total/NA
Trichloroethene	0.075	J	0.50	0.060	ug/L	1		8260D	Total/NA

Client Sample ID: HD-COD-SW-9-0/1-0 — Lab Sample ID: 410-5692-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	5.9		5.0	0.90	ug/L	1		8260D	Total/NA
Tetrachloroethene	0.088	J	0.50	0.060	ug/L	1		8260D	Total/NA
Toluene	0.35	J	0.50	0.070	ug/L	1		8260D	Total/NA

Client Sample ID: HD-COD-SW-13-0/1-0 — Lab Sample ID: 410-5692-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	1.9	J	5.0	0.90	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	0.083	J	0.50	0.050	ug/L	1		8260D	Total/NA
Toluene	0.091	J	0.50	0.070	ug/L	1		8260D	Total/NA
Trichloroethene	0.074	J	0.50	0.060	ug/L	1		8260D	Total/NA

Client Sample ID: HD-COD-SW-15-0/1-0 — Lab Sample ID: 410-5692-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.13	J	0.50	0.060	ug/L	1		8260D	Total/NA
1,1-Dichloroethene	0.080	J	0.50	0.060	ug/L	1		8260D	Total/NA
Chloroform	0.26	J	0.50	0.090	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	0.77		0.50	0.050	ug/L	1		8260D	Total/NA
Tetrachloroethene	2.5		0.50	0.060	ug/L	1		8260D	Total/NA
Trichloroethene	0.89		0.50	0.060	ug/L	1		8260D	Total/NA

Client Sample ID: HD-COD-SW-16-0/1-0 — Lab Sample ID: 410-5692-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	2.5	J	5.0	0.90	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	0.082	J	0.50	0.050	ug/L	1		8260D	Total/NA
Toluene	0.10	J	0.50	0.070	ug/L	1		8260D	Total/NA
Trichloroethene	0.078	J	0.50	0.060	ug/L	1		8260D	Total/NA

Client Sample ID: HD-COD-SW-17-0/1-0 — Lab Sample ID: 410-5692-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	0.10	J	0.50	0.070	ug/L	1		8260D	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: HD-COD-SW-17-0/1-0 (Continued) — Lab Sample ID: 410-5692-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	1.2	J	5.0	0.90	ug/L	1		8260D	Total/NA
Chloroform	0.11	J	0.50	0.090	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	1.8		0.50	0.050	ug/L	1		8260D	Total/NA
Tetrachloroethene	3.4		0.50	0.060	ug/L	1		8260D	Total/NA
trans-1,2-Dichloroethene	0.074	J	0.50	0.060	ug/L	1		8260D	Total/NA
Trichloroethene	2.0		0.50	0.060	ug/L	1		8260D	Total/NA
Vinyl chloride	0.25	J	0.50	0.10	ug/L	1		8260D	Total/NA

Client Sample ID: HD-COD-SW-26-0/1-0 — Lab Sample ID: 410-5692-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	1.4	J	5.0	0.90	ug/L	1		8260D	Total/NA
Chloroform	0.25	J	0.50	0.090	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	0.077	J	0.50	0.050	ug/L	1		8260D	Total/NA
Tetrachloroethene	1.5		0.50	0.060	ug/L	1		8260D	Total/NA

Client Sample ID: HD-COD-SW-27-0/1-0 — Lab Sample ID: 410-5692-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	2.5	J	5.0	0.90	ug/L	1		8260D	Total/NA
Chloromethane	0.12	J	0.50	0.060	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	0.087	J	0.50	0.050	ug/L	1		8260D	Total/NA
Tetrachloroethene	0.12	J	0.50	0.060	ug/L	1		8260D	Total/NA
Toluene	0.092	J	0.50	0.070	ug/L	1		8260D	Total/NA
Trichloroethene	0.097	J	0.50	0.060	ug/L	1		8260D	Total/NA

Client Sample ID: HD-COD-SW-28-0/1-0 — Lab Sample ID: 410-5692-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	5.3		5.0	0.90	ug/L	1		8260D	Total/NA
Tetrachloroethene	0.087	J	0.50	0.060	ug/L	1		8260D	Total/NA
Toluene	0.098	J	0.50	0.070	ug/L	1		8260D	Total/NA

Client Sample ID: HD-COD-SW-29-0/1-0 — Lab Sample ID: 410-5692-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.2	J	5.0	0.90	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	0.076	J	0.50	0.050	ug/L	1		8260D	Total/NA
Toluene	0.096	J	0.50	0.070	ug/L	1		8260D	Total/NA
Trichloroethene	0.065	J	0.50	0.060	ug/L	1		8260D	Total/NA

Client Sample ID: HD-QC1-0/1-1 — Lab Sample ID: 410-5692-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.076	J	0.50	0.060	ug/L	1		8260D	Total/NA
1,1-Dichloroethane	0.098	J	0.50	0.070	ug/L	1		8260D	Total/NA
1,1-Dichloroethene	0.071	J	0.50	0.060	ug/L	1		8260D	Total/NA
Acetone	1.1	J	5.0	0.90	ug/L	1		8260D	Total/NA
Chloroform	0.099	J	0.50	0.090	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	1.7		0.50	0.050	ug/L	1		8260D	Total/NA
Tetrachloroethene	3.2		0.50	0.060	ug/L	1		8260D	Total/NA
Trichloroethene	1.8		0.50	0.060	ug/L	1		8260D	Total/NA
Vinyl chloride	0.22	J	0.50	0.10	ug/L	1		8260D	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

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

Job ID: 410-5692-1

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

Lab Sample ID: 410-5692-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	1.8	J	5.0	0.90	ug/L	1		8260D	Total/NA

This Detection Summary does not include radiochemical test results.

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

Date Collected: 06/24/20 10:35
Date Received: 06/25/20 13:10

Lab Sample ID: 410-5692-1

Matrix: Water

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			07/08/20 11:27	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			07/08/20 11:27	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			07/08/20 11:27	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			07/08/20 11:27	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			07/08/20 11:27	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			07/08/20 11:27	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			07/08/20 11:27	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			07/08/20 11:27	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			07/08/20 11:27	1
2-Hexanone	ND		5.0	0.60	ug/L			07/08/20 11:27	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			07/08/20 11:27	1
Acetone	**2.3**	**J**	5.0	0.90	ug/L			07/08/20 11:27	1
Acrylonitrile	ND		5.0	0.40	ug/L			07/08/20 11:27	1
Benzene	ND		0.50	0.050	ug/L			07/08/20 11:27	1
Bromoform	ND		1.0	0.30	ug/L			07/08/20 11:27	1
Bromomethane	ND		0.50	0.070	ug/L			07/08/20 11:27	1
Carbon disulfide	ND		1.0	0.060	ug/L			07/08/20 11:27	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			07/08/20 11:27	1
Chlorobenzene	ND		0.50	0.060	ug/L			07/08/20 11:27	1
Bromochloromethane	ND		0.50	0.050	ug/L			07/08/20 11:27	1
Dibromochloromethane	ND		0.50	0.070	ug/L			07/08/20 11:27	1
Chloroethane	ND		0.50	0.070	ug/L			07/08/20 11:27	1
Chloroform	ND		0.50	0.090	ug/L			07/08/20 11:27	1
Chloromethane	ND		0.50	0.060	ug/L			07/08/20 11:27	1
cis-1,2-Dichloroethene	ND		0.50	0.050	ug/L			07/08/20 11:27	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			07/08/20 11:27	1
Bromodichloromethane	ND		0.50	0.050	ug/L			07/08/20 11:27	1
Ethylbenzene	ND		0.50	0.060	ug/L			07/08/20 11:27	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			07/08/20 11:27	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			07/08/20 11:27	1
Methylene Chloride	ND		0.50	0.070	ug/L			07/08/20 11:27	1
Styrene	ND		0.50	0.050	ug/L			07/08/20 11:27	1
Tetrachloroethene	ND		0.50	0.060	ug/L			07/08/20 11:27	1
Toluene	ND		0.50	0.070	ug/L			07/08/20 11:27	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			07/08/20 11:27	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			07/08/20 11:27	1
Trichloroethene	ND		0.50	0.060	ug/L			07/08/20 11:27	1
Vinyl chloride	ND		0.50	0.10	ug/L			07/08/20 11:27	1
Xylenes, Total	ND		1.0	0.15	ug/L			07/08/20 11:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*80 - 120*		*07/08/20 11:27*	*1*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*		*07/08/20 11:27*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*07/08/20 11:27*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*07/08/20 11:27*	*1*

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

Date Collected: 06/24/20 11:15
Date Received: 06/25/20 13:10

Lab Sample ID: 410-5692-2

Matrix: Water

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			07/08/20 11:48	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			07/08/20 11:48	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			07/08/20 11:48	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			07/08/20 11:48	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			07/08/20 11:48	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			07/08/20 11:48	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			07/08/20 11:48	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			07/08/20 11:48	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			07/08/20 11:48	1
2-Hexanone	ND		5.0	0.60	ug/L			07/08/20 11:48	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			07/08/20 11:48	1
Acetone	**2.0**	**J**	5.0	0.90	ug/L			07/08/20 11:48	1
Acrylonitrile	ND		5.0	0.40	ug/L			07/08/20 11:48	1
Benzene	ND		0.50	0.050	ug/L			07/08/20 11:48	1
Bromoform	ND		1.0	0.30	ug/L			07/08/20 11:48	1
Bromomethane	ND		0.50	0.070	ug/L			07/08/20 11:48	1
Carbon disulfide	ND		1.0	0.060	ug/L			07/08/20 11:48	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			07/08/20 11:48	1
Chlorobenzene	ND		0.50	0.060	ug/L			07/08/20 11:48	1
Bromochloromethane	ND		0.50	0.050	ug/L			07/08/20 11:48	1
Dibromochloromethane	ND		0.50	0.070	ug/L			07/08/20 11:48	1
Chloroethane	ND		0.50	0.070	ug/L			07/08/20 11:48	1
Chloroform	ND		0.50	0.090	ug/L			07/08/20 11:48	1
Chloromethane	ND		0.50	0.060	ug/L			07/08/20 11:48	1
cis-1,2-Dichloroethene	**0.084**	**J**	0.50	0.050	ug/L			07/08/20 11:48	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			07/08/20 11:48	1
Bromodichloromethane	ND		0.50	0.050	ug/L			07/08/20 11:48	1
Ethylbenzene	ND		0.50	0.060	ug/L			07/08/20 11:48	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			07/08/20 11:48	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			07/08/20 11:48	1
Methylene Chloride	ND		0.50	0.070	ug/L			07/08/20 11:48	1
Styrene	ND		0.50	0.050	ug/L			07/08/20 11:48	1
Tetrachloroethene	ND		0.50	0.060	ug/L			07/08/20 11:48	1
Toluene	**0.083**	**J**	0.50	0.070	ug/L			07/08/20 11:48	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			07/08/20 11:48	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			07/08/20 11:48	1
Trichloroethene	ND		0.50	0.060	ug/L			07/08/20 11:48	1
Vinyl chloride	ND		0.50	0.10	ug/L			07/08/20 11:48	1
Xylenes, Total	ND		1.0	0.15	ug/L			07/08/20 11:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 120*		*07/08/20 11:48*	*1*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*		*07/08/20 11:48*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*07/08/20 11:48*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*07/08/20 11:48*	*1*

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

Date Collected: 06/24/20 09:15
Date Received: 06/25/20 13:10

Lab Sample ID: 410-5692-3

Matrix: Water

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			07/08/20 12:09	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			07/08/20 12:09	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			07/08/20 12:09	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			07/08/20 12:09	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			07/08/20 12:09	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			07/08/20 12:09	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			07/08/20 12:09	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			07/08/20 12:09	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			07/08/20 12:09	1
2-Hexanone	ND		5.0	0.60	ug/L			07/08/20 12:09	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			07/08/20 12:09	1
Acetone	**1.7**	**J**	5.0	0.90	ug/L			07/08/20 12:09	1
Acrylonitrile	ND		5.0	0.40	ug/L			07/08/20 12:09	1
Benzene	ND		0.50	0.050	ug/L			07/08/20 12:09	1
Bromoform	ND		1.0	0.30	ug/L			07/08/20 12:09	1
Bromomethane	ND		0.50	0.070	ug/L			07/08/20 12:09	1
Carbon disulfide	ND		1.0	0.060	ug/L			07/08/20 12:09	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			07/08/20 12:09	1
Chlorobenzene	ND		0.50	0.060	ug/L			07/08/20 12:09	1
Bromochloromethane	ND		0.50	0.050	ug/L			07/08/20 12:09	1
Dibromochloromethane	ND		0.50	0.070	ug/L			07/08/20 12:09	1
Chloroethane	ND		0.50	0.070	ug/L			07/08/20 12:09	1
Chloroform	ND		0.50	0.090	ug/L			07/08/20 12:09	1
Chloromethane	ND		0.50	0.060	ug/L			07/08/20 12:09	1
cis-1,2-Dichloroethene	**0.077**	**J**	0.50	0.050	ug/L			07/08/20 12:09	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			07/08/20 12:09	1
Bromodichloromethane	ND		0.50	0.050	ug/L			07/08/20 12:09	1
Ethylbenzene	ND		0.50	0.060	ug/L			07/08/20 12:09	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			07/08/20 12:09	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			07/08/20 12:09	1
Methylene Chloride	ND		0.50	0.070	ug/L			07/08/20 12:09	1
Styrene	ND		0.50	0.050	ug/L			07/08/20 12:09	1
Tetrachloroethene	ND		0.50	0.060	ug/L			07/08/20 12:09	1
Toluene	**0.093**	**J**	0.50	0.070	ug/L			07/08/20 12:09	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			07/08/20 12:09	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			07/08/20 12:09	1
Trichloroethene	**0.075**	**J**	0.50	0.060	ug/L			07/08/20 12:09	1
Vinyl chloride	ND		0.50	0.10	ug/L			07/08/20 12:09	1
Xylenes, Total	ND		1.0	0.15	ug/L			07/08/20 12:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*80 - 120*		*07/08/20 12:09*	*1*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*		*07/08/20 12:09*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*07/08/20 12:09*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*07/08/20 12:09*	*1*

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

Date Collected: 06/24/20 12:15
Date Received: 06/25/20 13:10

Lab Sample ID: 410-5692-4

Matrix: Water

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			07/08/20 12:30	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			07/08/20 12:30	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			07/08/20 12:30	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			07/08/20 12:30	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			07/08/20 12:30	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			07/08/20 12:30	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			07/08/20 12:30	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			07/08/20 12:30	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			07/08/20 12:30	1
2-Hexanone	ND		5.0	0.60	ug/L			07/08/20 12:30	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			07/08/20 12:30	1
Acetone	**5.9**		5.0	0.90	ug/L			07/08/20 12:30	1
Acrylonitrile	ND		5.0	0.40	ug/L			07/08/20 12:30	1
Benzene	ND		0.50	0.050	ug/L			07/08/20 12:30	1
Bromoform	ND		1.0	0.30	ug/L			07/08/20 12:30	1
Bromomethane	ND		0.50	0.070	ug/L			07/08/20 12:30	1
Carbon disulfide	ND		1.0	0.060	ug/L			07/08/20 12:30	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			07/08/20 12:30	1
Chlorobenzene	ND		0.50	0.060	ug/L			07/08/20 12:30	1
Bromochloromethane	ND		0.50	0.050	ug/L			07/08/20 12:30	1
Dibromochloromethane	ND		0.50	0.070	ug/L			07/08/20 12:30	1
Chloroethane	ND		0.50	0.070	ug/L			07/08/20 12:30	1
Chloroform	ND		0.50	0.090	ug/L			07/08/20 12:30	1
Chloromethane	ND		0.50	0.060	ug/L			07/08/20 12:30	1
cis-1,2-Dichloroethene	ND		0.50	0.050	ug/L			07/08/20 12:30	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			07/08/20 12:30	1
Bromodichloromethane	ND		0.50	0.050	ug/L			07/08/20 12:30	1
Ethylbenzene	ND		0.50	0.060	ug/L			07/08/20 12:30	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			07/08/20 12:30	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			07/08/20 12:30	1
Methylene Chloride	ND		0.50	0.070	ug/L			07/08/20 12:30	1
Styrene	ND		0.50	0.050	ug/L			07/08/20 12:30	1
Tetrachloroethene	**0.088**	**J**	0.50	0.060	ug/L			07/08/20 12:30	1
Toluene	**0.35**	**J**	0.50	0.070	ug/L			07/08/20 12:30	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			07/08/20 12:30	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			07/08/20 12:30	1
Trichloroethene	ND		0.50	0.060	ug/L			07/08/20 12:30	1
Vinyl chloride	ND		0.50	0.10	ug/L			07/08/20 12:30	1
Xylenes, Total	ND		1.0	0.15	ug/L			07/08/20 12:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*80 - 120*		*07/08/20 12:30*	*1*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*		*07/08/20 12:30*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*07/08/20 12:30*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*07/08/20 12:30*	*1*

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

Date Collected: 06/24/20 09:35
Date Received: 06/25/20 13:10

Lab Sample ID: 410-5692-5

Matrix: Water

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			07/08/20 12:51	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			07/08/20 12:51	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			07/08/20 12:51	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			07/08/20 12:51	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			07/08/20 12:51	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			07/08/20 12:51	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			07/08/20 12:51	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			07/08/20 12:51	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			07/08/20 12:51	1
2-Hexanone	ND		5.0	0.60	ug/L			07/08/20 12:51	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			07/08/20 12:51	1
Acetone	**1.9**	**J**	5.0	0.90	ug/L			07/08/20 12:51	1
Acrylonitrile	ND		5.0	0.40	ug/L			07/08/20 12:51	1
Benzene	ND		0.50	0.050	ug/L			07/08/20 12:51	1
Bromoform	ND		1.0	0.30	ug/L			07/08/20 12:51	1
Bromomethane	ND		0.50	0.070	ug/L			07/08/20 12:51	1
Carbon disulfide	ND		1.0	0.060	ug/L			07/08/20 12:51	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			07/08/20 12:51	1
Chlorobenzene	ND		0.50	0.060	ug/L			07/08/20 12:51	1
Bromochloromethane	ND		0.50	0.050	ug/L			07/08/20 12:51	1
Dibromochloromethane	ND		0.50	0.070	ug/L			07/08/20 12:51	1
Chloroethane	ND		0.50	0.070	ug/L			07/08/20 12:51	1
Chloroform	ND		0.50	0.090	ug/L			07/08/20 12:51	1
Chloromethane	ND		0.50	0.060	ug/L			07/08/20 12:51	1
cis-1,2-Dichloroethene	**0.083**	**J**	0.50	0.050	ug/L			07/08/20 12:51	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			07/08/20 12:51	1
Bromodichloromethane	ND		0.50	0.050	ug/L			07/08/20 12:51	1
Ethylbenzene	ND		0.50	0.060	ug/L			07/08/20 12:51	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			07/08/20 12:51	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			07/08/20 12:51	1
Methylene Chloride	ND		0.50	0.070	ug/L			07/08/20 12:51	1
Styrene	ND		0.50	0.050	ug/L			07/08/20 12:51	1
Tetrachloroethene	ND		0.50	0.060	ug/L			07/08/20 12:51	1
Toluene	**0.091**	**J**	0.50	0.070	ug/L			07/08/20 12:51	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			07/08/20 12:51	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			07/08/20 12:51	1
Trichloroethene	**0.074**	**J**	0.50	0.060	ug/L			07/08/20 12:51	1
Vinyl chloride	ND		0.50	0.10	ug/L			07/08/20 12:51	1
Xylenes, Total	ND		1.0	0.15	ug/L			07/08/20 12:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*80 - 120*		*07/08/20 12:51*	*1*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*07/08/20 12:51*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*07/08/20 12:51*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*07/08/20 12:51*	*1*

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

Date Collected: 06/24/20 11:30
Date Received: 06/25/20 13:10

Lab Sample ID: 410-5692-6

Matrix: Water

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**0.13**	**J**	0.50	0.060	ug/L			07/08/20 13:12	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			07/08/20 13:12	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			07/08/20 13:12	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			07/08/20 13:12	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			07/08/20 13:12	1
1,1-Dichloroethene	**0.080**	**J**	0.50	0.060	ug/L			07/08/20 13:12	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			07/08/20 13:12	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			07/08/20 13:12	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			07/08/20 13:12	1
2-Hexanone	ND		5.0	0.60	ug/L			07/08/20 13:12	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			07/08/20 13:12	1
Acetone	ND		5.0	0.90	ug/L			07/08/20 13:12	1
Acrylonitrile	ND		5.0	0.40	ug/L			07/08/20 13:12	1
Benzene	ND		0.50	0.050	ug/L			07/08/20 13:12	1
Bromoform	ND		1.0	0.30	ug/L			07/08/20 13:12	1
Bromomethane	ND		0.50	0.070	ug/L			07/08/20 13:12	1
Carbon disulfide	ND		1.0	0.060	ug/L			07/08/20 13:12	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			07/08/20 13:12	1
Chlorobenzene	ND		0.50	0.060	ug/L			07/08/20 13:12	1
Bromochloromethane	ND		0.50	0.050	ug/L			07/08/20 13:12	1
Dibromochloromethane	ND		0.50	0.070	ug/L			07/08/20 13:12	1
Chloroethane	ND		0.50	0.070	ug/L			07/08/20 13:12	1
Chloroform	**0.26**	**J**	0.50	0.090	ug/L			07/08/20 13:12	1
Chloromethane	ND		0.50	0.060	ug/L			07/08/20 13:12	1
cis-1,2-Dichloroethene	**0.77**		0.50	0.050	ug/L			07/08/20 13:12	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			07/08/20 13:12	1
Bromodichloromethane	ND		0.50	0.050	ug/L			07/08/20 13:12	1
Ethylbenzene	ND		0.50	0.060	ug/L			07/08/20 13:12	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			07/08/20 13:12	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			07/08/20 13:12	1
Methylene Chloride	ND		0.50	0.070	ug/L			07/08/20 13:12	1
Styrene	ND		0.50	0.050	ug/L			07/08/20 13:12	1
Tetrachloroethene	**2.5**		0.50	0.060	ug/L			07/08/20 13:12	1
Toluene	ND		0.50	0.070	ug/L			07/08/20 13:12	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			07/08/20 13:12	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			07/08/20 13:12	1
Trichloroethene	**0.89**		0.50	0.060	ug/L			07/08/20 13:12	1
Vinyl chloride	ND		0.50	0.10	ug/L			07/08/20 13:12	1
Xylenes, Total	ND		1.0	0.15	ug/L			07/08/20 13:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 120*		*07/08/20 13:12*	*1*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*07/08/20 13:12*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*07/08/20 13:12*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*07/08/20 13:12*	*1*

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

Date Collected: 06/24/20 10:00
Date Received: 06/25/20 13:10

Lab Sample ID: 410-5692-7

Matrix: Water

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			07/08/20 14:37	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			07/08/20 14:37	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			07/08/20 14:37	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			07/08/20 14:37	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			07/08/20 14:37	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			07/08/20 14:37	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			07/08/20 14:37	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			07/08/20 14:37	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			07/08/20 14:37	1
2-Hexanone	ND		5.0	0.60	ug/L			07/08/20 14:37	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			07/08/20 14:37	1
Acetone	**2.5**	**J**	5.0	0.90	ug/L			07/08/20 14:37	1
Acrylonitrile	ND		5.0	0.40	ug/L			07/08/20 14:37	1
Benzene	ND		0.50	0.050	ug/L			07/08/20 14:37	1
Bromoform	ND		1.0	0.30	ug/L			07/08/20 14:37	1
Bromomethane	ND		0.50	0.070	ug/L			07/08/20 14:37	1
Carbon disulfide	ND		1.0	0.060	ug/L			07/08/20 14:37	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			07/08/20 14:37	1
Chlorobenzene	ND		0.50	0.060	ug/L			07/08/20 14:37	1
Bromochloromethane	ND		0.50	0.050	ug/L			07/08/20 14:37	1
Dibromochloromethane	ND		0.50	0.070	ug/L			07/08/20 14:37	1
Chloroethane	ND		0.50	0.070	ug/L			07/08/20 14:37	1
Chloroform	ND		0.50	0.090	ug/L			07/08/20 14:37	1
Chloromethane	ND		0.50	0.060	ug/L			07/08/20 14:37	1
cis-1,2-Dichloroethene	**0.082**	**J**	0.50	0.050	ug/L			07/08/20 14:37	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			07/08/20 14:37	1
Bromodichloromethane	ND		0.50	0.050	ug/L			07/08/20 14:37	1
Ethylbenzene	ND		0.50	0.060	ug/L			07/08/20 14:37	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			07/08/20 14:37	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			07/08/20 14:37	1
Methylene Chloride	ND		0.50	0.070	ug/L			07/08/20 14:37	1
Styrene	ND		0.50	0.050	ug/L			07/08/20 14:37	1
Tetrachloroethene	ND		0.50	0.060	ug/L			07/08/20 14:37	1
Toluene	**0.10**	**J**	0.50	0.070	ug/L			07/08/20 14:37	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			07/08/20 14:37	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			07/08/20 14:37	1
Trichloroethene	**0.078**	**J**	0.50	0.060	ug/L			07/08/20 14:37	1
Vinyl chloride	ND		0.50	0.10	ug/L			07/08/20 14:37	1
Xylenes, Total	ND		1.0	0.15	ug/L			07/08/20 14:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*80 - 120*		*07/08/20 14:37*	*1*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*		*07/08/20 14:37*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*07/08/20 14:37*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*07/08/20 14:37*	*1*

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

Date Collected: 06/24/20 10:15
Date Received: 06/25/20 13:10

Lab Sample ID: 410-5692-8

Matrix: Water

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			07/08/20 14:59	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			07/08/20 14:59	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			07/08/20 14:59	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			07/08/20 14:59	1
1,1-Dichloroethane	**0.10**	**J**	0.50	0.070	ug/L			07/08/20 14:59	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			07/08/20 14:59	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			07/08/20 14:59	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			07/08/20 14:59	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			07/08/20 14:59	1
2-Hexanone	ND		5.0	0.60	ug/L			07/08/20 14:59	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			07/08/20 14:59	1
Acetone	**1.2**	**J**	5.0	0.90	ug/L			07/08/20 14:59	1
Acrylonitrile	ND		5.0	0.40	ug/L			07/08/20 14:59	1
Benzene	ND		0.50	0.050	ug/L			07/08/20 14:59	1
Bromoform	ND		1.0	0.30	ug/L			07/08/20 14:59	1
Bromomethane	ND		0.50	0.070	ug/L			07/08/20 14:59	1
Carbon disulfide	ND		1.0	0.060	ug/L			07/08/20 14:59	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			07/08/20 14:59	1
Chlorobenzene	ND		0.50	0.060	ug/L			07/08/20 14:59	1
Bromochloromethane	ND		0.50	0.050	ug/L			07/08/20 14:59	1
Dibromochloromethane	ND		0.50	0.070	ug/L			07/08/20 14:59	1
Chloroethane	ND		0.50	0.070	ug/L			07/08/20 14:59	1
Chloroform	**0.11**	**J**	0.50	0.090	ug/L			07/08/20 14:59	1
Chloromethane	ND		0.50	0.060	ug/L			07/08/20 14:59	1
cis-1,2-Dichloroethene	**1.8**		0.50	0.050	ug/L			07/08/20 14:59	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			07/08/20 14:59	1
Bromodichloromethane	ND		0.50	0.050	ug/L			07/08/20 14:59	1
Ethylbenzene	ND		0.50	0.060	ug/L			07/08/20 14:59	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			07/08/20 14:59	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			07/08/20 14:59	1
Methylene Chloride	ND		0.50	0.070	ug/L			07/08/20 14:59	1
Styrene	ND		0.50	0.050	ug/L			07/08/20 14:59	1
Tetrachloroethene	**3.4**		0.50	0.060	ug/L			07/08/20 14:59	1
Toluene	ND		0.50	0.070	ug/L			07/08/20 14:59	1
trans-1,2-Dichloroethene	**0.074**	**J**	0.50	0.060	ug/L			07/08/20 14:59	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			07/08/20 14:59	1
Trichloroethene	**2.0**		0.50	0.060	ug/L			07/08/20 14:59	1
Vinyl chloride	**0.25**	**J**	0.50	0.10	ug/L			07/08/20 14:59	1
Xylenes, Total	ND		1.0	0.15	ug/L			07/08/20 14:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*80 - 120*		*07/08/20 14:59*	*1*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*07/08/20 14:59*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*07/08/20 14:59*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*07/08/20 14:59*	*1*

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

Date Collected: 06/24/20 10:55
Date Received: 06/25/20 13:10

Lab Sample ID: 410-5692-9

Matrix: Water

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			07/08/20 15:20	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			07/08/20 15:20	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			07/08/20 15:20	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			07/08/20 15:20	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			07/08/20 15:20	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			07/08/20 15:20	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			07/08/20 15:20	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			07/08/20 15:20	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			07/08/20 15:20	1
2-Hexanone	ND		5.0	0.60	ug/L			07/08/20 15:20	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			07/08/20 15:20	1
Acetone	**1.4**	**J**	5.0	0.90	ug/L			07/08/20 15:20	1
Acrylonitrile	ND		5.0	0.40	ug/L			07/08/20 15:20	1
Benzene	ND		0.50	0.050	ug/L			07/08/20 15:20	1
Bromoform	ND		1.0	0.30	ug/L			07/08/20 15:20	1
Bromomethane	ND		0.50	0.070	ug/L			07/08/20 15:20	1
Carbon disulfide	ND		1.0	0.060	ug/L			07/08/20 15:20	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			07/08/20 15:20	1
Chlorobenzene	ND		0.50	0.060	ug/L			07/08/20 15:20	1
Bromochloromethane	ND		0.50	0.050	ug/L			07/08/20 15:20	1
Dibromochloromethane	ND		0.50	0.070	ug/L			07/08/20 15:20	1
Chloroethane	ND		0.50	0.070	ug/L			07/08/20 15:20	1
Chloroform	**0.25**	**J**	0.50	0.090	ug/L			07/08/20 15:20	1
Chloromethane	ND		0.50	0.060	ug/L			07/08/20 15:20	1
cis-1,2-Dichloroethene	**0.077**	**J**	0.50	0.050	ug/L			07/08/20 15:20	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			07/08/20 15:20	1
Bromodichloromethane	ND		0.50	0.050	ug/L			07/08/20 15:20	1
Ethylbenzene	ND		0.50	0.060	ug/L			07/08/20 15:20	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			07/08/20 15:20	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			07/08/20 15:20	1
Methylene Chloride	ND		0.50	0.070	ug/L			07/08/20 15:20	1
Styrene	ND		0.50	0.050	ug/L			07/08/20 15:20	1
Tetrachloroethene	**1.5**		0.50	0.060	ug/L			07/08/20 15:20	1
Toluene	ND		0.50	0.070	ug/L			07/08/20 15:20	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			07/08/20 15:20	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			07/08/20 15:20	1
Trichloroethene	ND		0.50	0.060	ug/L			07/08/20 15:20	1
Vinyl chloride	ND		0.50	0.10	ug/L			07/08/20 15:20	1
Xylenes, Total	ND		1.0	0.15	ug/L			07/08/20 15:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*80 - 120*		*07/08/20 15:20*	*1*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*07/08/20 15:20*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*07/08/20 15:20*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*07/08/20 15:20*	*1*

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

Date Collected: 06/24/20 11:25
Date Received: 06/25/20 13:10

Lab Sample ID: 410-5692-10

Matrix: Water

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			07/08/20 15:41	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			07/08/20 15:41	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			07/08/20 15:41	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			07/08/20 15:41	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			07/08/20 15:41	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			07/08/20 15:41	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			07/08/20 15:41	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			07/08/20 15:41	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			07/08/20 15:41	1
2-Hexanone	ND		5.0	0.60	ug/L			07/08/20 15:41	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			07/08/20 15:41	1
Acetone	**2.5**	**J**	5.0	0.90	ug/L			07/08/20 15:41	1
Acrylonitrile	ND		5.0	0.40	ug/L			07/08/20 15:41	1
Benzene	ND		0.50	0.050	ug/L			07/08/20 15:41	1
Bromoform	ND		1.0	0.30	ug/L			07/08/20 15:41	1
Bromomethane	ND		0.50	0.070	ug/L			07/08/20 15:41	1
Carbon disulfide	ND		1.0	0.060	ug/L			07/08/20 15:41	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			07/08/20 15:41	1
Chlorobenzene	ND		0.50	0.060	ug/L			07/08/20 15:41	1
Bromochloromethane	ND		0.50	0.050	ug/L			07/08/20 15:41	1
Dibromochloromethane	ND		0.50	0.070	ug/L			07/08/20 15:41	1
Chloroethane	ND		0.50	0.070	ug/L			07/08/20 15:41	1
Chloroform	ND		0.50	0.090	ug/L			07/08/20 15:41	1
Chloromethane	**0.12**	**J**	0.50	0.060	ug/L			07/08/20 15:41	1
cis-1,2-Dichloroethene	**0.087**	**J**	0.50	0.050	ug/L			07/08/20 15:41	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			07/08/20 15:41	1
Bromodichloromethane	ND		0.50	0.050	ug/L			07/08/20 15:41	1
Ethylbenzene	ND		0.50	0.060	ug/L			07/08/20 15:41	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			07/08/20 15:41	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			07/08/20 15:41	1
Methylene Chloride	ND		0.50	0.070	ug/L			07/08/20 15:41	1
Styrene	ND		0.50	0.050	ug/L			07/08/20 15:41	1
Tetrachloroethene	**0.12**	**J**	0.50	0.060	ug/L			07/08/20 15:41	1
Toluene	**0.092**	**J**	0.50	0.070	ug/L			07/08/20 15:41	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			07/08/20 15:41	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			07/08/20 15:41	1
Trichloroethene	**0.097**	**J**	0.50	0.060	ug/L			07/08/20 15:41	1
Vinyl chloride	ND		0.50	0.10	ug/L			07/08/20 15:41	1
Xylenes, Total	ND		1.0	0.15	ug/L			07/08/20 15:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*80 - 120*		*07/08/20 15:41*	*1*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*		*07/08/20 15:41*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*07/08/20 15:41*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*07/08/20 15:41*	*1*

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

Date Collected: 06/24/20 12:35
Date Received: 06/25/20 13:10

Lab Sample ID: 410-5692-11

Matrix: Water

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			07/08/20 16:02	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			07/08/20 16:02	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			07/08/20 16:02	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			07/08/20 16:02	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			07/08/20 16:02	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			07/08/20 16:02	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			07/08/20 16:02	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			07/08/20 16:02	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			07/08/20 16:02	1
2-Hexanone	ND		5.0	0.60	ug/L			07/08/20 16:02	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			07/08/20 16:02	1
Acetone	**5.3**		5.0	0.90	ug/L			07/08/20 16:02	1
Acrylonitrile	ND		5.0	0.40	ug/L			07/08/20 16:02	1
Benzene	ND		0.50	0.050	ug/L			07/08/20 16:02	1
Bromoform	ND		1.0	0.30	ug/L			07/08/20 16:02	1
Bromomethane	ND		0.50	0.070	ug/L			07/08/20 16:02	1
Carbon disulfide	ND		1.0	0.060	ug/L			07/08/20 16:02	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			07/08/20 16:02	1
Chlorobenzene	ND		0.50	0.060	ug/L			07/08/20 16:02	1
Bromochloromethane	ND		0.50	0.050	ug/L			07/08/20 16:02	1
Dibromochloromethane	ND		0.50	0.070	ug/L			07/08/20 16:02	1
Chloroethane	ND		0.50	0.070	ug/L			07/08/20 16:02	1
Chloroform	ND		0.50	0.090	ug/L			07/08/20 16:02	1
Chloromethane	ND		0.50	0.060	ug/L			07/08/20 16:02	1
cis-1,2-Dichloroethene	ND		0.50	0.050	ug/L			07/08/20 16:02	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			07/08/20 16:02	1
Bromodichloromethane	ND		0.50	0.050	ug/L			07/08/20 16:02	1
Ethylbenzene	ND		0.50	0.060	ug/L			07/08/20 16:02	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			07/08/20 16:02	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			07/08/20 16:02	1
Methylene Chloride	ND		0.50	0.070	ug/L			07/08/20 16:02	1
Styrene	ND		0.50	0.050	ug/L			07/08/20 16:02	1
Tetrachloroethene	**0.087**	**J**	0.50	0.060	ug/L			07/08/20 16:02	1
Toluene	**0.098**	**J**	0.50	0.070	ug/L			07/08/20 16:02	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			07/08/20 16:02	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			07/08/20 16:02	1
Trichloroethene	ND		0.50	0.060	ug/L			07/08/20 16:02	1
Vinyl chloride	ND		0.50	0.10	ug/L			07/08/20 16:02	1
Xylenes, Total	ND		1.0	0.15	ug/L			07/08/20 16:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*80 - 120*		*07/08/20 16:02*	*1*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*		*07/08/20 16:02*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*07/08/20 16:02*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*07/08/20 16:02*	*1*

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

Date Collected: 06/24/20 09:05
Date Received: 06/25/20 13:10

Lab Sample ID: 410-5692-12

Matrix: Water

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			07/08/20 16:23	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			07/08/20 16:23	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			07/08/20 16:23	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			07/08/20 16:23	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			07/08/20 16:23	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			07/08/20 16:23	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			07/08/20 16:23	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			07/08/20 16:23	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			07/08/20 16:23	1
2-Hexanone	ND		5.0	0.60	ug/L			07/08/20 16:23	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			07/08/20 16:23	1
Acetone	**3.2**	**J**	5.0	0.90	ug/L			07/08/20 16:23	1
Acrylonitrile	ND		5.0	0.40	ug/L			07/08/20 16:23	1
Benzene	ND		0.50	0.050	ug/L			07/08/20 16:23	1
Bromoform	ND		1.0	0.30	ug/L			07/08/20 16:23	1
Bromomethane	ND		0.50	0.070	ug/L			07/08/20 16:23	1
Carbon disulfide	ND		1.0	0.060	ug/L			07/08/20 16:23	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			07/08/20 16:23	1
Chlorobenzene	ND		0.50	0.060	ug/L			07/08/20 16:23	1
Bromochloromethane	ND		0.50	0.050	ug/L			07/08/20 16:23	1
Dibromochloromethane	ND		0.50	0.070	ug/L			07/08/20 16:23	1
Chloroethane	ND		0.50	0.070	ug/L			07/08/20 16:23	1
Chloroform	ND		0.50	0.090	ug/L			07/08/20 16:23	1
Chloromethane	ND		0.50	0.060	ug/L			07/08/20 16:23	1
cis-1,2-Dichloroethene	**0.076**	**J**	0.50	0.050	ug/L			07/08/20 16:23	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			07/08/20 16:23	1
Bromodichloromethane	ND		0.50	0.050	ug/L			07/08/20 16:23	1
Ethylbenzene	ND		0.50	0.060	ug/L			07/08/20 16:23	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			07/08/20 16:23	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			07/08/20 16:23	1
Methylene Chloride	ND		0.50	0.070	ug/L			07/08/20 16:23	1
Styrene	ND		0.50	0.050	ug/L			07/08/20 16:23	1
Tetrachloroethene	ND		0.50	0.060	ug/L			07/08/20 16:23	1
Toluene	**0.096**	**J**	0.50	0.070	ug/L			07/08/20 16:23	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			07/08/20 16:23	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			07/08/20 16:23	1
Trichloroethene	**0.065**	**J**	0.50	0.060	ug/L			07/08/20 16:23	1
Vinyl chloride	ND		0.50	0.10	ug/L			07/08/20 16:23	1
Xylenes, Total	ND		1.0	0.15	ug/L			07/08/20 16:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*80 - 120*		*07/08/20 16:23*	*1*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*07/08/20 16:23*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*07/08/20 16:23*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*07/08/20 16:23*	*1*

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

Date Collected: 06/24/20 12:00
Date Received: 06/25/20 13:10

Lab Sample ID: 410-5692-13

Matrix: Water

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**0.076**	**J**	0.50	0.060	ug/L			07/08/20 16:45	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			07/08/20 16:45	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			07/08/20 16:45	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			07/08/20 16:45	1
1,1-Dichloroethane	**0.098**	**J**	0.50	0.070	ug/L			07/08/20 16:45	1
1,1-Dichloroethene	**0.071**	**J**	0.50	0.060	ug/L			07/08/20 16:45	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			07/08/20 16:45	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			07/08/20 16:45	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			07/08/20 16:45	1
2-Hexanone	ND		5.0	0.60	ug/L			07/08/20 16:45	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			07/08/20 16:45	1
Acetone	**1.1**	**J**	5.0	0.90	ug/L			07/08/20 16:45	1
Acrylonitrile	ND		5.0	0.40	ug/L			07/08/20 16:45	1
Benzene	ND		0.50	0.050	ug/L			07/08/20 16:45	1
Bromoform	ND		1.0	0.30	ug/L			07/08/20 16:45	1
Bromomethane	ND		0.50	0.070	ug/L			07/08/20 16:45	1
Carbon disulfide	ND		1.0	0.060	ug/L			07/08/20 16:45	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			07/08/20 16:45	1
Chlorobenzene	ND		0.50	0.060	ug/L			07/08/20 16:45	1
Bromochloromethane	ND		0.50	0.050	ug/L			07/08/20 16:45	1
Dibromochloromethane	ND		0.50	0.070	ug/L			07/08/20 16:45	1
Chloroethane	ND		0.50	0.070	ug/L			07/08/20 16:45	1
Chloroform	**0.099**	**J**	0.50	0.090	ug/L			07/08/20 16:45	1
Chloromethane	ND		0.50	0.060	ug/L			07/08/20 16:45	1
cis-1,2-Dichloroethene	**1.7**		0.50	0.050	ug/L			07/08/20 16:45	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			07/08/20 16:45	1
Bromodichloromethane	ND		0.50	0.050	ug/L			07/08/20 16:45	1
Ethylbenzene	ND		0.50	0.060	ug/L			07/08/20 16:45	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			07/08/20 16:45	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			07/08/20 16:45	1
Methylene Chloride	ND		0.50	0.070	ug/L			07/08/20 16:45	1
Styrene	ND		0.50	0.050	ug/L			07/08/20 16:45	1
Tetrachloroethene	**3.2**		0.50	0.060	ug/L			07/08/20 16:45	1
Toluene	ND		0.50	0.070	ug/L			07/08/20 16:45	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			07/08/20 16:45	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			07/08/20 16:45	1
Trichloroethene	**1.8**		0.50	0.060	ug/L			07/08/20 16:45	1
Vinyl chloride	**0.22**	**J**	0.50	0.10	ug/L			07/08/20 16:45	1
Xylenes, Total	ND		1.0	0.15	ug/L			07/08/20 16:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 120*		*07/08/20 16:45*	*1*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*		*07/08/20 16:45*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*07/08/20 16:45*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*07/08/20 16:45*	*1*

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

Date Collected: 06/24/20 00:00
Date Received: 06/25/20 13:10

Lab Sample ID: 410-5692-14

Matrix: Water

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			07/08/20 10:44	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			07/08/20 10:44	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			07/08/20 10:44	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			07/08/20 10:44	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			07/08/20 10:44	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			07/08/20 10:44	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			07/08/20 10:44	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			07/08/20 10:44	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			07/08/20 10:44	1
2-Hexanone	ND		5.0	0.60	ug/L			07/08/20 10:44	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			07/08/20 10:44	1
Acetone	**1.8**	**J**	5.0	0.90	ug/L			07/08/20 10:44	1
Acrylonitrile	ND		5.0	0.40	ug/L			07/08/20 10:44	1
Benzene	ND		0.50	0.050	ug/L			07/08/20 10:44	1
Bromoform	ND		1.0	0.30	ug/L			07/08/20 10:44	1
Bromomethane	ND		0.50	0.070	ug/L			07/08/20 10:44	1
Carbon disulfide	ND		1.0	0.060	ug/L			07/08/20 10:44	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			07/08/20 10:44	1
Chlorobenzene	ND		0.50	0.060	ug/L			07/08/20 10:44	1
Bromochloromethane	ND		0.50	0.050	ug/L			07/08/20 10:44	1
Dibromochloromethane	ND		0.50	0.070	ug/L			07/08/20 10:44	1
Chloroethane	ND		0.50	0.070	ug/L			07/08/20 10:44	1
Chloroform	ND		0.50	0.090	ug/L			07/08/20 10:44	1
Chloromethane	ND		0.50	0.060	ug/L			07/08/20 10:44	1
cis-1,2-Dichloroethene	ND		0.50	0.050	ug/L			07/08/20 10:44	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			07/08/20 10:44	1
Bromodichloromethane	ND		0.50	0.050	ug/L			07/08/20 10:44	1
Ethylbenzene	ND		0.50	0.060	ug/L			07/08/20 10:44	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			07/08/20 10:44	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			07/08/20 10:44	1
Methylene Chloride	ND		0.50	0.070	ug/L			07/08/20 10:44	1
Styrene	ND		0.50	0.050	ug/L			07/08/20 10:44	1
Tetrachloroethene	ND		0.50	0.060	ug/L			07/08/20 10:44	1
Toluene	ND		0.50	0.070	ug/L			07/08/20 10:44	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			07/08/20 10:44	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			07/08/20 10:44	1
Trichloroethene	ND		0.50	0.060	ug/L			07/08/20 10:44	1
Vinyl chloride	ND		0.50	0.10	ug/L			07/08/20 10:44	1
Xylenes, Total	ND		1.0	0.15	ug/L			07/08/20 10:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*80 - 120*		*07/08/20 10:44*	*1*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*07/08/20 10:44*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*07/08/20 10:44*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*07/08/20 10:44*	*1*

Default Detection Limits

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

Job ID: 410-5692-1

Method: 8260D - Volatile Organic Compounds by GC/MS

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

Surrogate Summary

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

Job ID: 410-5692-1

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(80-120)	(80-120)	(80-120)	(80-120)
410-5692-1	HD-COD-SW-6-0/1-0	103	98	102	100
410-5692-2	HD-COD-SW-7-0/1-0	102	99	101	100
410-5692-3	HD-COD-SW-8-0/1-0	104	97	101	101
410-5692-4	HD-COD-SW-9-0/1-0	105	97	103	99
410-5692-5	HD-COD-SW-13-0/1-0	101	96	101	99
410-5692-6	HD-COD-SW-15-0/1-0	102	96	103	100
410-5692-6 MS	HD-COD-SW-15-0/1-0	102	99	100	99
410-5692-6 MSD	HD-COD-SW-15-0/1-0	103	99	100	100
410-5692-7	HD-COD-SW-16-0/1-0	104	98	102	100
410-5692-8	HD-COD-SW-17-0/1-0	104	96	101	98
410-5692-9	HD-COD-SW-26-0/1-0	103	96	103	99
410-5692-10	HD-COD-SW-27-0/1-0	101	97	102	99
410-5692-11	HD-COD-SW-28-0/1-0	104	97	103	100
410-5692-12	HD-COD-SW-29-0/1-0	105	96	102	99
410-5692-13	HD-QC1-0/1-1	102	97	102	99
410-5692-14	HD-QC1-0/1-2	104	96	101	99
LCS 410-20265/4	Lab Control Sample	103	99	100	100
MB 410-20265/6	Method Blank	105	97	100	100

Surrogate Legend

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

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 410-20265/6
Matrix: Water
Analysis Batch: 20265

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			07/08/20 10:01	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			07/08/20 10:01	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			07/08/20 10:01	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			07/08/20 10:01	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			07/08/20 10:01	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			07/08/20 10:01	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			07/08/20 10:01	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			07/08/20 10:01	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			07/08/20 10:01	1
2-Hexanone	ND		5.0	0.60	ug/L			07/08/20 10:01	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			07/08/20 10:01	1
Acetone	ND		5.0	0.90	ug/L			07/08/20 10:01	1
Acrylonitrile	ND		5.0	0.40	ug/L			07/08/20 10:01	1
Benzene	ND		0.50	0.050	ug/L			07/08/20 10:01	1
Bromoform	ND		1.0	0.30	ug/L			07/08/20 10:01	1
Bromomethane	ND		0.50	0.070	ug/L			07/08/20 10:01	1
Carbon disulfide	ND		1.0	0.060	ug/L			07/08/20 10:01	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			07/08/20 10:01	1
Chlorobenzene	ND		0.50	0.060	ug/L			07/08/20 10:01	1
Bromochloromethane	ND		0.50	0.050	ug/L			07/08/20 10:01	1
Dibromochloromethane	ND		0.50	0.070	ug/L			07/08/20 10:01	1
Chloroethane	ND		0.50	0.070	ug/L			07/08/20 10:01	1
Chloroform	ND		0.50	0.090	ug/L			07/08/20 10:01	1
Chloromethane	ND		0.50	0.060	ug/L			07/08/20 10:01	1
cis-1,2-Dichloroethene	ND		0.50	0.050	ug/L			07/08/20 10:01	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			07/08/20 10:01	1
Bromodichloromethane	ND		0.50	0.050	ug/L			07/08/20 10:01	1
Ethylbenzene	ND		0.50	0.060	ug/L			07/08/20 10:01	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			07/08/20 10:01	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			07/08/20 10:01	1
Methylene Chloride	ND		0.50	0.070	ug/L			07/08/20 10:01	1
Styrene	ND		0.50	0.050	ug/L			07/08/20 10:01	1
Tetrachloroethene	ND		0.50	0.060	ug/L			07/08/20 10:01	1
Toluene	ND		0.50	0.070	ug/L			07/08/20 10:01	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			07/08/20 10:01	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			07/08/20 10:01	1
Trichloroethene	ND		0.50	0.060	ug/L			07/08/20 10:01	1
Vinyl chloride	ND		0.50	0.10	ug/L			07/08/20 10:01	1
Xylenes, Total	ND		1.0	0.15	ug/L			07/08/20 10:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*80 - 120*		*07/08/20 10:01*	*1*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*		*07/08/20 10:01*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 120*		*07/08/20 10:01*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*07/08/20 10:01*	*1*

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

Lab Sample ID: LCS 410-20265/4
Matrix: Water
Analysis Batch: 20265

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	5.00	4.62		ug/L		92	78 - 126
1,1,1,2-Tetrachloroethane	5.00	4.83		ug/L		97	71 - 134
1,1,2,2-Tetrachloroethane	5.00	5.25		ug/L		105	75 - 123
1,1,2-Trichloroethane	5.00	5.23		ug/L		105	80 - 120
1,1-Dichloroethane	5.00	5.08		ug/L		102	74 - 120
1,1-Dichloroethene	5.00	4.84		ug/L		97	80 - 131
1,2-Dichloroethane	5.00	5.05		ug/L		101	69 - 122
1,2-Dichloropropane	5.00	5.40		ug/L		108	80 - 120
2-Butanone (MEK)	37.5	41.0		ug/L		109	59 - 141
2-Hexanone	25.0	28.3		ug/L		113	52 - 140
4-Methyl-2-pentanone (MIBK)	25.0	27.0		ug/L		108	55 - 140
Acetone	37.5	38.1		ug/L		101	60 - 146
Acrylonitrile	25.0	27.1		ug/L		108	64 - 139
Benzene	5.00	5.03		ug/L		101	80 - 120
Bromoform	5.00	5.03		ug/L		101	49 - 144
Bromomethane	5.00	4.17		ug/L		83	60 - 136
Carbon disulfide	5.00	4.78		ug/L		96	67 - 130
Carbon tetrachloride	5.00	4.77		ug/L		95	64 - 141
Chlorobenzene	5.00	5.11		ug/L		102	80 - 120
Bromochloromethane	5.00	4.84		ug/L		97	80 - 120
Dibromochloromethane	5.00	4.99		ug/L		100	64 - 138
Chloroethane	5.00	4.34		ug/L		87	63 - 120
Chloroform	5.00	5.07		ug/L		101	80 - 120
Chloromethane	5.00	4.11		ug/L		82	56 - 124
cis-1,2-Dichloroethene	5.00	5.27		ug/L		105	80 - 122
cis-1,3-Dichloropropene	5.00	5.03		ug/L		101	67 - 121
Bromodichloromethane	5.00	5.00		ug/L		100	73 - 124
Ethylbenzene	5.00	5.04		ug/L		101	80 - 120
1,2-Dibromoethane (EDB)	5.00	5.26		ug/L		105	80 - 120
Methyl tert-butyl ether	5.00	4.84		ug/L		97	69 - 120
Methylene Chloride	5.00	5.18		ug/L		104	80 - 120
Styrene	5.00	5.09		ug/L		102	80 - 120
Tetrachloroethene	5.00	5.07		ug/L		101	80 - 120
Toluene	5.00	5.05		ug/L		101	80 - 120
trans-1,2-Dichloroethene	5.00	4.94		ug/L		99	80 - 122
trans-1,3-Dichloropropene	5.00	4.79		ug/L		96	61 - 129
Trichloroethene	5.00	4.99		ug/L		100	80 - 120
Vinyl chloride	5.00	4.13		ug/L		83	60 - 125
Xylenes, Total	15.0	15.1		ug/L		101	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*103*		*80 - 120*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*80 - 120*
Toluene-d8 (Surr)	*100*		*80 - 120*

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

Lab Sample ID: 410-5692-6 MS
Matrix: Water
Analysis Batch: 20265

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	0.13	J	5.00	5.62		ug/L		110	78 - 126
1,1,1,2-Tetrachloroethane	ND		5.00	5.39		ug/L		108	71 - 134
1,1,2,2-Tetrachloroethane	ND		5.00	5.44		ug/L		109	75 - 123
1,1,2-Trichloroethane	ND		5.00	5.66		ug/L		113	80 - 120
1,1-Dichloroethane	ND		5.00	5.88		ug/L		118	74 - 120
1,1-Dichloroethene	0.080	J	5.00	5.78		ug/L		114	80 - 131
1,2-Dichloroethane	ND		5.00	5.68		ug/L		113	69 - 122
1,2-Dichloropropane	ND		5.00	5.90		ug/L		118	80 - 120
2-Butanone (MEK)	ND		37.5	48.3		ug/L		129	59 - 141
2-Hexanone	ND		25.0	33.3		ug/L		133	52 - 140
4-Methyl-2-pentanone (MIBK)	ND		25.0	32.1		ug/L		128	55 - 140
Acetone	ND		37.5	45.0		ug/L		120	60 - 146
Acrylonitrile	ND		25.0	31.5		ug/L		126	64 - 139
Benzene	ND		5.00	5.73		ug/L		114	80 - 120
Bromoform	ND		5.00	5.30		ug/L		106	49 - 144
Bromomethane	ND		5.00	4.69		ug/L		94	60 - 136
Carbon disulfide	ND		5.00	5.58		ug/L		111	67 - 130
Carbon tetrachloride	ND		5.00	5.85		ug/L		117	64 - 141
Chlorobenzene	ND		5.00	5.72		ug/L		114	80 - 120
Bromochloromethane	ND		5.00	5.38		ug/L		107	80 - 120
Dibromochloromethane	ND		5.00	5.53		ug/L		111	64 - 138
Chloroethane	ND		5.00	4.77		ug/L		95	63 - 120
Chloroform	0.26	J	5.00	6.12		ug/L		117	80 - 120
Chloromethane	ND		5.00	4.39		ug/L		88	80 - 120
cis-1,2-Dichloroethene	0.77		5.00	6.83		ug/L		121	80 - 122
cis-1,3-Dichloropropene	ND		5.00	5.52		ug/L		110	67 - 121
Bromodichloromethane	ND		5.00	5.63		ug/L		112	73 - 124
Ethylbenzene	ND		5.00	5.79		ug/L		116	80 - 120
1,2-Dibromoethane (EDB)	ND		5.00	5.57		ug/L		111	80 - 120
Methyl tert-butyl ether	ND		5.00	5.30		ug/L		106	69 - 120
Methylene Chloride	ND		5.00	5.68		ug/L		114	80 - 120
Styrene	ND		5.00	5.79		ug/L		116	80 - 120
Tetrachloroethene	2.5		5.00	8.27		ug/L		115	80 - 120
Toluene	ND		5.00	5.83		ug/L		117	80 - 120
trans-1,2-Dichloroethene	ND		5.00	5.66		ug/L		113	80 - 122
trans-1,3-Dichloropropene	ND		5.00	5.11		ug/L		102	61 - 129
Trichloroethene	0.89		5.00	6.77		ug/L		118	80 - 120
Vinyl chloride	ND		5.00	4.67		ug/L		93	60 - 125
Xylenes, Total	ND		15.0	17.1		ug/L		114	80 - 120

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 120*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*80 - 120*
Toluene-d8 (Surr)	*99*		*80 - 120*

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

Lab Sample ID: 410-5692-6 MSD
Matrix: Water
Analysis Batch: 20265

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	0.13	J	5.00	5.46		ug/L		106	78 - 126	3	30
1,1,1,2-Tetrachloroethane	ND		5.00	5.34		ug/L		107	71 - 134	1	30
1,1,2,2-Tetrachloroethane	ND		5.00	5.19		ug/L		104	75 - 123	5	30
1,1,2-Trichloroethane	ND		5.00	5.47		ug/L		109	80 - 120	4	30
1,1-Dichloroethane	ND		5.00	5.72		ug/L		114	74 - 120	3	30
1,1-Dichloroethene	0.080	J	5.00	5.61		ug/L		111	80 - 131	3	30
1,2-Dichloroethane	ND		5.00	5.48		ug/L		109	69 - 122	4	30
1,2-Dichloropropane	ND		5.00	5.68		ug/L		113	80 - 120	4	30
2-Butanone (MEK)	ND		37.5	47.9		ug/L		128	59 - 141	1	30
2-Hexanone	ND		25.0	32.3		ug/L		129	52 - 140	3	30
4-Methyl-2-pentanone (MIBK)	ND		25.0	31.5		ug/L		126	55 - 140	2	30
Acetone	ND		37.5	44.6		ug/L		119	60 - 146	1	30
Acrylonitrile	ND		25.0	30.8		ug/L		123	64 - 139	2	30
Benzene	ND		5.00	5.54		ug/L		111	80 - 120	3	30
Bromoform	ND		5.00	5.09		ug/L		102	49 - 144	4	30
Bromomethane	ND		5.00	4.60		ug/L		92	60 - 136	2	30
Carbon disulfide	ND		5.00	5.37		ug/L		107	67 - 130	4	30
Carbon tetrachloride	ND		5.00	5.62		ug/L		112	64 - 141	4	30
Chlorobenzene	ND		5.00	5.61		ug/L		112	80 - 120	2	30
Bromochloromethane	ND		5.00	5.15		ug/L		103	80 - 120	4	30
Dibromochloromethane	ND		5.00	5.36		ug/L		107	64 - 138	3	30
Chloroethane	ND		5.00	4.79		ug/L		96	63 - 120	0	30
Chloroform	0.26	J	5.00	5.96		ug/L		114	80 - 120	3	30
Chloromethane	ND		5.00	4.46		ug/L		89	80 - 120	2	30
cis-1,2-Dichloroethene	0.77		5.00	6.47		ug/L		114	80 - 122	5	30
cis-1,3-Dichloropropene	ND		5.00	5.31		ug/L		106	67 - 121	4	30
Bromodichloromethane	ND		5.00	5.28		ug/L		106	73 - 124	6	30
Ethylbenzene	ND		5.00	5.60		ug/L		112	80 - 120	3	30
1,2-Dibromoethane (EDB)	ND		5.00	5.51		ug/L		110	80 - 120	1	30
Methyl tert-butyl ether	ND		5.00	5.14		ug/L		103	69 - 120	3	30
Methylene Chloride	ND		5.00	5.44		ug/L		109	80 - 120	4	30
Styrene	ND		5.00	5.59		ug/L		112	80 - 120	4	30
Tetrachloroethene	2.5		5.00	8.33		ug/L		116	80 - 120	1	30
Toluene	ND		5.00	5.64		ug/L		113	80 - 120	3	30
trans-1,2-Dichloroethene	ND		5.00	5.55		ug/L		111	80 - 122	2	30
trans-1,3-Dichloropropene	ND		5.00	5.01		ug/L		100	61 - 129	2	30
Trichloroethene	0.89		5.00	6.48		ug/L		112	80 - 120	4	30
Vinyl chloride	ND		5.00	4.68		ug/L		93	60 - 125	0	30
Xylenes, Total	ND		15.0	16.7		ug/L		111	80 - 120	3	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*103*		*80 - 120*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*80 - 120*
Toluene-d8 (Surr)	*100*		*80 - 120*

QC Association Summary

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

Job ID: 410-5692-1

GC/MS VOA

Analysis Batch: 20265

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-5692-1	HD-COD-SW-6-0/1-0	Total/NA	Water	8260D	
410-5692-2	HD-COD-SW-7-0/1-0	Total/NA	Water	8260D	
410-5692-3	HD-COD-SW-8-0/1-0	Total/NA	Water	8260D	
410-5692-4	HD-COD-SW-9-0/1-0	Total/NA	Water	8260D	
410-5692-5	HD-COD-SW-13-0/1-0	Total/NA	Water	8260D	
410-5692-6	HD-COD-SW-15-0/1-0	Total/NA	Water	8260D	
410-5692-7	HD-COD-SW-16-0/1-0	Total/NA	Water	8260D	
410-5692-8	HD-COD-SW-17-0/1-0	Total/NA	Water	8260D	
410-5692-9	HD-COD-SW-26-0/1-0	Total/NA	Water	8260D	
410-5692-10	HD-COD-SW-27-0/1-0	Total/NA	Water	8260D	
410-5692-11	HD-COD-SW-28-0/1-0	Total/NA	Water	8260D	
410-5692-12	HD-COD-SW-29-0/1-0	Total/NA	Water	8260D	
410-5692-13	HD-QC1-0/1-1	Total/NA	Water	8260D	
410-5692-14	HD-QC1-0/1-2	Total/NA	Water	8260D	
MB 410-20265/6	Method Blank	Total/NA	Water	8260D	
LCS 410-20265/4	Lab Control Sample	Total/NA	Water	8260D	
410-5692-6 MS	HD-COD-SW-15-0/1-0	Total/NA	Water	8260D	
410-5692-6 MSD	HD-COD-SW-15-0/1-0	Total/NA	Water	8260D	

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

Lab Sample ID: 410-5692-1
Date Collected: 06/24/20 10:35
Matrix: Water
Date Received: 06/25/20 13:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	20265	07/08/20 11:27	UCB5	ELLE

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

Lab Sample ID: 410-5692-2
Date Collected: 06/24/20 11:15
Matrix: Water
Date Received: 06/25/20 13:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	20265	07/08/20 11:48	UCB5	ELLE

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

Lab Sample ID: 410-5692-3
Date Collected: 06/24/20 09:15
Matrix: Water
Date Received: 06/25/20 13:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	20265	07/08/20 12:09	UCB5	ELLE

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

Lab Sample ID: 410-5692-4
Date Collected: 06/24/20 12:15
Matrix: Water
Date Received: 06/25/20 13:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	20265	07/08/20 12:30	UCB5	ELLE

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

Lab Sample ID: 410-5692-5
Date Collected: 06/24/20 09:35
Matrix: Water
Date Received: 06/25/20 13:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	20265	07/08/20 12:51	UCB5	ELLE

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

Lab Sample ID: 410-5692-6
Date Collected: 06/24/20 11:30
Matrix: Water
Date Received: 06/25/20 13:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	20265	07/08/20 13:12	UCB5	ELLE

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

Lab Sample ID: 410-5692-7
Date Collected: 06/24/20 10:00
Matrix: Water
Date Received: 06/25/20 13:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	20265	07/08/20 14:37	UCB5	ELLE

Client Sample ID: HD-COD-SW-17-0/1-0
Lab Sample ID: 410-5692-8
Date Collected: 06/24/20 10:15
Matrix: Water
Date Received: 06/25/20 13:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	20265	07/08/20 14:59	UCB5	ELLE

Client Sample ID: HD-COD-SW-26-0/1-0
Lab Sample ID: 410-5692-9
Date Collected: 06/24/20 10:55
Matrix: Water
Date Received: 06/25/20 13:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	20265	07/08/20 15:20	UCB5	ELLE

Client Sample ID: HD-COD-SW-27-0/1-0
Lab Sample ID: 410-5692-10
Date Collected: 06/24/20 11:25
Matrix: Water
Date Received: 06/25/20 13:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	20265	07/08/20 15:41	UCB5	ELLE

Client Sample ID: HD-COD-SW-28-0/1-0
Lab Sample ID: 410-5692-11
Date Collected: 06/24/20 12:35
Matrix: Water
Date Received: 06/25/20 13:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	20265	07/08/20 16:02	UCB5	ELLE

Client Sample ID: HD-COD-SW-29-0/1-0
Lab Sample ID: 410-5692-12
Date Collected: 06/24/20 09:05
Matrix: Water
Date Received: 06/25/20 13:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	20265	07/08/20 16:23	UCB5	ELLE

Client Sample ID: HD-QC1-0/1-1
Lab Sample ID: 410-5692-13
Date Collected: 06/24/20 12:00
Matrix: Water
Date Received: 06/25/20 13:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	20265	07/08/20 16:45	UCB5	ELLE

Client Sample ID: HD-QC1-0/1-2
Lab Sample ID: 410-5692-14
Date Collected: 06/24/20 00:00
Matrix: Water
Date Received: 06/25/20 13:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	20265	07/08/20 10:44	UCB5	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: 410-5692-1
Project/Site: fYNOP Monthly Surface Water

Laboratory: Eurofins Lancaster Laboratories Env, LLC

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

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

Method Summary

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

Job ID: 410-5692-1

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

Protocol References:

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

Laboratory References:

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

Sample Summary

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

Job ID: 410-5692-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
410-5692-1	HD-COD-SW-6-0/1-0	Water	06/24/20 10:35	06/25/20 13:10	
410-5692-2	HD-COD-SW-7-0/1-0	Water	06/24/20 11:15	06/25/20 13:10	
410-5692-3	HD-COD-SW-8-0/1-0	Water	06/24/20 09:15	06/25/20 13:10	
410-5692-4	HD-COD-SW-9-0/1-0	Water	06/24/20 12:15	06/25/20 13:10	
410-5692-5	HD-COD-SW-13-0/1-0	Water	06/24/20 09:35	06/25/20 13:10	
410-5692-6	HD-COD-SW-15-0/1-0	Water	06/24/20 11:30	06/25/20 13:10	
410-5692-7	HD-COD-SW-16-0/1-0	Water	06/24/20 10:00	06/25/20 13:10	
410-5692-8	HD-COD-SW-17-0/1-0	Water	06/24/20 10:15	06/25/20 13:10	
410-5692-9	HD-COD-SW-26-0/1-0	Water	06/24/20 10:55	06/25/20 13:10	
410-5692-10	HD-COD-SW-27-0/1-0	Water	06/24/20 11:25	06/25/20 13:10	
410-5692-11	HD-COD-SW-28-0/1-0	Water	06/24/20 12:35	06/25/20 13:10	
410-5692-12	HD-COD-SW-29-0/1-0	Water	06/24/20 09:05	06/25/20 13:10	
410-5692-13	HD-QC1-0/1-1	Water	06/24/20 12:00	06/25/20 13:10	
410-5692-14	HD-QC1-0/1-2	Water	06/24/20 00:00	06/25/20 13:10	

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laborator Job No.: 410-5692-1

SDG No.:

Instrument ID: 19930 Analysis Batch Number: 6388

Lab Sample ID: IC 410-6388/12 Client Sample ID:

Date Analyzed: 03/16/20 16:24 Lab File ID: IM16I01.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.98	Baseline	campbellme	03/17/20 23:26
Chloromethane	2.18	Baseline	campbellme	03/17/20 23:27
Chloroethane	2.72	Incomplete Integration	campbellme	03/18/20 21:34
t-Butyl alcohol-d10 (IS)	4.30	Incomplete Integration	campbellme	03/18/20 21:35
1,4-Dioxane	8.68	Baseline	campbellme	03/18/20 21:37

Lab Sample ID: ICIS 410-6388/13 Client Sample ID:

Date Analyzed: 03/16/20 16:45 Lab File ID: IM16I02.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	03/18/20 21:38
Chloromethane	2.18	Baseline	campbellme	03/18/20 21:39
t-Butyl alcohol-d10 (IS)	4.29	Incomplete Integration	campbellme	03/18/20 21:39
1,4-Dioxane	8.68	Split Peak	campbellme	03/18/20 21:40

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laborator Job No.: 410-5692-1

SDG No.:

Instrument ID: 19930 Analysis Batch Number: 6388

Lab Sample ID: IC 410-6388/14 Client Sample ID:

Date Analyzed: 03/16/20 17:06 Lab File ID: IM16I03.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	03/18/20 21:41
Chloromethane	2.18	Baseline	campbellme	03/18/20 21:41
1,3-Butadiene	2.30	Baseline	campbellme	03/18/20 21:41
t-Butyl alcohol-d10 (IS)	4.30	Incomplete Integration	campbellme	03/18/20 21:41
1,4-Dioxane	8.68	Split Peak	campbellme	03/18/20 21:42

Lab Sample ID: IC 410-6388/15 Client Sample ID:

Date Analyzed: 03/16/20 17:27 Lab File ID: IM16I04.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	03/18/20 21:43
Vinyl chloride	2.30	Incomplete Integration	campbellme	03/18/20 21:43
Dichlorofluoromethane	2.96	Baseline	campbellme	03/18/20 21:43
t-Butyl alcohol-d10 (IS)	4.29	Incomplete Integration	campbellme	03/18/20 21:43
1,4-Dioxane	8.68	Split Peak	campbellme	03/18/20 21:44

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laborator Job No.: 410-5692-1

SDG No.:

Instrument ID: 19930 Analysis Batch Number: 6388

Lab Sample ID: IC 410-6388/16 Client Sample ID:

Date Analyzed: 03/16/20 17:48 Lab File ID: IM16I05.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	2.00	Incomplete Integration	campbellme	03/18/20 21:45
1,3-Butadiene	2.31	Baseline	campbellme	03/18/20 21:45
Acrolein	3.47	Incomplete Integration	campbellme	03/18/20 21:45
1,4-Dioxane	8.69	Split Peak	campbellme	03/18/20 21:46

Lab Sample ID: IC 410-6388/17 Client Sample ID:

Date Analyzed: 03/16/20 18:09 Lab File ID: IM16I06.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	03/18/20 21:46
1,3-Butadiene	2.29	Baseline	campbellme	03/18/20 21:47
t-Butyl alcohol-d10 (IS)	4.29	Incomplete Integration	campbellme	03/18/20 21:47
1,4-Dioxane	8.68	Incomplete Integration	campbellme	03/18/20 21:48

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laborator Job No.: 410-5692-1

SDG No.:

Instrument ID: 19930 Analysis Batch Number: 6388

Lab Sample ID: IC 410-6388/18 Client Sample ID:

Date Analyzed: 03/16/20 18:31 Lab File ID: IM16I07.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.99	Incomplete Integration	campbellme	03/18/20 21:48
1,3-Butadiene	2.31	Baseline	campbellme	03/18/20 21:49
Methyl acetate	4.09	Baseline	campbellme	03/18/20 21:49
Methylene Chloride	4.28	Missed Peak	campbellme	03/18/20 21:50
t-Butyl alcohol-d10 (IS)	4.31	Incomplete Integration	campbellme	03/18/20 21:50
Cyclohexane	7.01	Incomplete Integration	campbellme	03/18/20 21:50
Trichloroethene	8.26	Missed Peak	campbellme	03/18/20 21:50
Methyl methacrylate	8.67	Incomplete Integration	campbellme	03/18/20 21:51
1,4-Dioxane	8.68	Incomplete Integration	campbellme	03/18/20 21:51

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laborator Job No.: 410-5692-1

SDG No.:

Instrument ID: 19930 Analysis Batch Number: 7691

Lab Sample ID: ICV 410-7691/21 Client Sample ID:

Date Analyzed: 03/18/20 10:28 Lab File ID: IM18S01.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	04/24/20 16:38
Bromomethane	2.63	Incomplete Integration	campbellme	04/24/20 16:38
1,4-Dioxane	8.68	Split Peak	campbellme	04/24/20 16:39

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laborator Job No.: 410-5692-1

SDG No.:

Instrument ID: 19930 Analysis Batch Number: 20265

Lab Sample ID: CCVIS 410-20265/3 Client Sample ID:

Date Analyzed: 07/08/20 08:58 Lab File ID: IU06C01.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	2.00	Incomplete Integration	howej	07/08/20 09:22
1,4-Dioxane	8.68	Incomplete Integration	howej	07/08/20 09:22

Lab Sample ID: 410-5692-14 Client Sample ID: HD-QC1-0/1-2

Date Analyzed: 07/08/20 10:44 Lab File ID: IU08s01.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.64	Incomplete Integration	riehlc	07/09/20 08:16
Methylene Chloride	4.29	Incomplete Integration	riehlc	07/09/20 08:17

Lab Sample ID: 410-5692-1 Client Sample ID: HD-COD-SW-6-0/1-0

Date Analyzed: 07/08/20 11:27 Lab File ID: IU08s03.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Carbon disulfide	3.93	Incomplete Integration	riehlc	07/09/20 08:20

Lab Sample ID: 410-5692-2 Client Sample ID: HD-COD-SW-7-0/1-0

Date Analyzed: 07/08/20 11:48 Lab File ID: IU08s04.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Carbon disulfide	3.92	Incomplete Integration	riehlc	07/09/20 08:22

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laborator Job No.: 410-5692-1

SDG No.:

Instrument ID: 19930 Analysis Batch Number: 20265

Lab Sample ID: 410-5692-3 Client Sample ID: HD-COD-SW-8-0/1-0

Date Analyzed: 07/08/20 12:09 Lab File ID: IU08s05.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Carbon disulfide	3.92	Incomplete Integration	riehlc	07/09/20 08:23
Chloroform	6.68	Incomplete Integration	riehlc	07/09/20 08:23
Trichloroethene	8.26	Incomplete Integration	riehlc	07/09/20 08:23

Lab Sample ID: 410-5692-4 Client Sample ID: HD-COD-SW-9-0/1-0

Date Analyzed: 07/08/20 12:30 Lab File ID: IU08s06.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloromethane	2.18	Incomplete Integration	riehlc	07/09/20 08:24
Carbon disulfide	3.92	Incomplete Integration	riehlc	07/09/20 08:24
2-Butanone (MEK)	6.18	Incomplete Integration	riehlc	07/09/20 08:24
Trichloroethene	8.26	Incomplete Integration	riehlc	07/09/20 08:24

Lab Sample ID: 410-5692-5 Client Sample ID: HD-COD-SW-13-0/1-0

Date Analyzed: 07/08/20 12:51 Lab File ID: IU08s07.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Carbon disulfide	3.92	Incomplete Integration	riehlc	07/09/20 08:26
cis-1,2-Dichloroethene	6.21	Incomplete Integration	riehlc	07/09/20 08:26

Lab Sample ID: 410-5692-7 Client Sample ID: HD-COD-SW-16-0/1-0

Date Analyzed: 07/08/20 14:37 Lab File ID: IU08s12.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichloroethene	8.25	Incomplete Integration	riehlc	07/09/20 08:39

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laborator Job No.: 410-5692-1

SDG No.:

Instrument ID: 19930 Analysis Batch Number: 20265

Lab Sample ID: 410-5692-10 Client Sample ID: HD-COD-SW-27-0/1-0

Date Analyzed: 07/08/20 15:41 Lab File ID: IU08s15.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Carbon disulfide	3.93	Incomplete Integration	riehlc	07/09/20 08:47
Chloroform	6.70	Incomplete Integration	riehlc	07/09/20 08:48
Ethylbenzene	11.34	Incomplete Integration	riehlc	07/09/20 08:48
m-Xylene & p-Xylene	11.44	Incomplete Integration	riehlc	07/09/20 08:48
o-Xylene	11.78	Incomplete Integration	riehlc	07/09/20 08:48

Lab Sample ID: 410-5692-11 Client Sample ID: HD-COD-SW-28-0/1-0

Date Analyzed: 07/08/20 16:02 Lab File ID: IU08s16.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichloroethene	8.26	Missed Peak	riehlc	07/09/20 08:50
Tetrachloroethene	10.39	Missed Peak	riehlc	07/09/20 08:51

Lab Sample ID: 410-5692-13 Client Sample ID: HD-QC1-0/1-1

Date Analyzed: 07/08/20 16:45 Lab File ID: IU08s18.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Carbon disulfide	3.92	Incomplete Integration	riehlc	07/09/20 08:58
trans-1,2-Dichloroethene	4.73	Incomplete Integration	riehlc	07/09/20 08:58
1,1-Dichloroethane	5.37	Incomplete Integration	riehlc	07/09/20 08:58

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-5692-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
MSV_31_826ISS_00002	07/28/20	01/28/20	Methanol, Lot DX212	50 mL	MSV_8260_SS_00017	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_00013	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_00017	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_00013	05/31/21		Restek, Lot A0138205		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2500 ug/mL
							Chlorobenzene-d5 (IS)	2500 ug/mL
							Fluorobenzene (IS)	2500 ug/mL
							t-Butyl alcohol-d10 (IS)	12500 ug/mL
MSV_Q_QVOA1_00018	04/15/20	03/16/20	Methanol, Lot DX212	25 mL	MSV_Q#1B_00017	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
							Xylenes, Total	120 mg/L
					MSV_Q#3B_00015	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

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-5692-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acrylonitrile	200 mg/L
					MSV_Q#4C_00023	1 mL	Carbon disulfide	40 mg/L
							Methyl tert-butyl ether	40 mg/L
.MSV_Q#1B_00017	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
							Xylenes, Total	3000 ug/mL
.MSV_Q#3B_00015	09/30/20		Restek, Lot A0147509		(Purchased Reagent)		2-Butanone (MEK)	7500 ug/mL
							2-Hexanone	5000 ug/mL
							4-Methyl-2-pentanone (MIBK)	5000 ug/mL
							Acetone	7500 ug/mL
							Acrylonitrile	5000 ug/mL
.MSV_Q#4C_00023	04/30/20		Restek, Lot A0147642		(Purchased Reagent)		Carbon disulfide	1000 ug/mL
							Methyl tert-butyl ether	1000 ug/mL
MSV_Q_QVOA1_00036	08/05/20	07/06/20	Methanol, Lot DX212	25 mL	MSV_Q#1B_00043	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

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-5692-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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_00037	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_00042	1 mL	Carbon disulfide	40 mg/L
							Methyl tert-butyl ether	40 mg/L
.MSV_Q#1B_00043	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

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-5692-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Trichloroethene	1000 ug/mL
.MSV_Q#3B_00037	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_00042	03/31/21		Restek, Lot A0158704		(Purchased Reagent)		Carbon disulfide	1000 ug/mL
							Methyl tert-butyl ether	1000 ug/mL
MSV_Q_QVOA6_00017	04/11/20	03/12/20	Methanol, Lot DX212	25 mL	MSV_QCS#6Std_00015	1 mL	Bromochloromethane	40 ug/mL
.MSV_QCS#6Std_00015	09/30/20		Restek, Lot A0146910		(Purchased Reagent)		Bromochloromethane	1000 ug/mL
MSV_Q_QVOA6_00033	08/01/20	07/02/20	Methanol, Lot DX212	25 mL	MSV_QCS#6Std_00037	1 mL	Bromochloromethane	40 ug/mL
.MSV_QCS#6Std_00037	09/30/21		Restek, Lot A0158906		(Purchased Reagent)		Bromochloromethane	1000 ug/mL
MSV_QGAS_826_00022	03/25/20	03/18/20	Methanol, Lot DX212	1 mL	MSV_502QGas_00032	20 uL	Bromomethane	40 ug/mL
							Chloroethane	40 ug/mL
							Chloromethane	40 ug/mL
							Vinyl chloride	40 ug/mL
.MSV_502QGas_00032	03/25/20		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_00052	07/13/20	07/06/20	Methanol, Lot DX212	1 mL	MSV_502QGas_00069	20 uL	Bromomethane	40 ug/mL
							Chloroethane	40 ug/mL
							Chloromethane	40 ug/mL
							Vinyl chloride	40 ug/mL
.MSV_502QGas_00069	07/13/20		Restek, Lot A0155823		(Purchased Reagent)		Bromomethane	2000 ug/mL
							Chloroethane	2000 ug/mL
							Chloromethane	2000 ug/mL
							Vinyl chloride	2000 ug/mL
MSV_RV1_826_00008	04/15/20	03/16/20	Methanol, Lot DX212	1 mL	MSV_V#1B_00035	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

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-5692-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							1-Chlorohexane	50 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							4-Isopropyltoluene	50 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Dibromochloromethane	50 ug/mL
							Dibromomethane	50 ug/mL
							Ethylbenzene	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	100 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							Trichloroethene	50 ug/mL
					MSV_V#2B_00042	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_00032	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

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-5692-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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_00021	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_00019	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	2500.03 ug/mL
.MSV_V#1B_00035	04/15/20		Restek, Lot A0154137		(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

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-5692-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,4-Dichlorobenzene	5000 ug/mL
							1-Chlorohexane	5000 ug/mL
							2,2-Dichloropropane	5000 ug/mL
							2-Chlorotoluene	5000 ug/mL
							4-Chlorotoluene	5000 ug/mL
							4-Isopropyltoluene	5000 ug/mL
							Benzene	5000 ug/mL
							Bromobenzene	5000 ug/mL
							Bromodichloromethane	5000 ug/mL
							Bromoform	5000 ug/mL
							Carbon tetrachloride	5000 ug/mL
							Chlorobenzene	5000 ug/mL
							Chloroform	5000 ug/mL
							cis-1,2-Dichloroethene	5000 ug/mL
							cis-1,3-Dichloropropene	5000 ug/mL
							Dibromochloromethane	5000 ug/mL
							Dibromomethane	5000 ug/mL
							Ethylbenzene	5000 ug/mL
							Hexachlorobutadiene	5000 ug/mL
							Isopropylbenzene	5000 ug/mL
							m-Xylene & p-Xylene	10000 ug/mL
							Methylene Chloride	5000 ug/mL
							n-Butylbenzene	5000 ug/mL
							N-Propylbenzene	5000 ug/mL
							Naphthalene	5000 ug/mL
							o-Xylene	5000 ug/mL
							sec-Butylbenzene	5000 ug/mL
							Styrene	5000 ug/mL
							tert-Butylbenzene	5000 ug/mL
							Tetrachloroethene	5000 ug/mL
							Toluene	5000 ug/mL
							trans-1,2-Dichloroethene	5000 ug/mL
							trans-1,3-Dichloropropene	5000 ug/mL
							Trichloroethene	5000 ug/mL
.MSV_V#2B_00042	04/15/20		Restek, Lot A0147800		(Purchased Reagent)		1,4-Dioxane	62500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Methacrylonitrile	12500 ug/mL
							n-Butanol	125000 ug/mL
							Propionitrile	25000 ug/mL
							trans-1,4-Dichloro-2-butene	12500 ug/mL
.MSV_V#4C_00032	04/15/20		Restek, Lot A0147817		(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

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-5692-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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_00021	04/15/20	03/16/20	Methanol, Lot DX212	5 mL	MSV_V#2B_00043	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_00043	04/15/20		Restek, Lot A0147800		(Purchased Reagent)		1,4-Dioxane	62500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Methacrylonitrile	12500 ug/mL
							n-Butanol	125000 ug/mL
							Propionitrile	25000 ug/mL
							trans-1,4-Dichloro-2-butene	12500 ug/mL
.MSV_V_VOA3_00019	04/15/20	03/16/20	Methanol, Lot DX212	5 mL	MSV_V#3B_00023	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_00006	1 mL	Acrolein	25000.3 ug/mL
..MSV_V#3B_00023	04/15/20		Restek, Lot A0153460		(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_00006	04/19/20	02/19/20	Methanol, Lot DX212	10 mL	MSV_VACR_STK_00006	8.587 mL	Acrolein	125002 ug/mL
...MSV_VACR_STK_00006	04/19/20	02/19/20	Methanol, Lot DX212	10 mL	MSV_ACROLEIN_00002	1.5437 g	Acrolein	145571 ug/mL
....MSV_ACROLEIN_00002	12/31/20		Chem Service, Lot 9413200		(Purchased Reagent)		Acrolein	0.943 g/g
MSV_RV1_826_00017	07/29/20	06/29/20	Methanol, Lot DX212	1 mL	MSV_V#1B_00083	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

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-5692-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,2-Dibromoethane (EDB)	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							Benzene	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Dibromochloromethane	50 ug/mL
							Ethylbenzene	50 ug/mL
							Methylene Chloride	50 ug/mL
							Styrene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							Trichloroethene	50 ug/mL
					MSV_V#4C_00064	10 uL	Carbon disulfide	50 ug/mL
							Methyl tert-butyl ether	50 ug/mL
					MSV_V_VOA3_00034	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_00083	07/29/20		Restek, Lot A0137321		(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

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-5692-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							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_00064	07/29/20		Restek, Lot A0158660		(Purchased Reagent)		Carbon disulfide	5000 ug/mL
							Methyl tert-butyl ether	5000 ug/mL
.MSV_V_VOA3_00034	07/29/20	06/29/20	Methanol, Lot DX212	5 mL	MSV_V#3B_00040	1 mL	2-Butanone (MEK)	5000 ug/mL
							2-Hexanone	5000 ug/mL
							4-Methyl-2-pentanone (MIBK)	5000 ug/mL
							Acetone	5000 ug/mL
							Acrylonitrile	2500 ug/mL
..MSV_V#3B_00040	07/29/20		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_00009	04/01/20	03/16/20	Methanol, Lot DX212	1 mL	MSV_V_EE_00002	50 uL	Ethyl ether	50.0069 ug/mL
					MSV_V_VOA6_00026	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_V_EE_00002	05/01/20	11/01/19	Methanol, Lot DX212	100 mL	MSV_EE_MISCSK_00002	1.386 mL	Ethyl ether	1000.14 ug/mL
..MSV_EE_MISCSK_00002	05/01/20	11/01/19	Methanol, Lot DX212	10 mL	MSV_EE_Neat_00001	0.7216 g	Ethyl ether	72160 ug/mL
...MSV_EE_Neat_00001	11/30/21		Chem Service, Lot 7967000		(Purchased Reagent)		Ethyl ether	1 g/g
.MSV_V_VOA6_00026	04/11/20	03/12/20	Methanol, Lot DX212	5 mL	MSV_V#6_00007	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_00007	04/11/20		Restek, Lot A0146393		(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_00019	07/22/20	06/25/20	Methanol, Lot DX212	1 mL	MSV_V_VOA6_00041	50 uL	Bromochloromethane	50 ug/mL
.MSV_V_VOA6_00041	07/25/20	06/25/20	Methanol, Lot DX212	5 mL	MSV_V#6_00023	1 mL	Bromochloromethane	1000 ug/mL
..MSV_V#6_00023	07/25/20		Restek, Lot A0158625		(Purchased Reagent)		Bromochloromethane	5000 ug/mL
MSV_RV4GAS826_00022	03/23/20	03/16/20	Methanol, Lot DX212	1 mL	MSV_DCFM_00010	25 uL	Dichlorofluoromethane	50 ug/mL
					MSV_V_Gas_00045	25 uL	Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-5692-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
.MSV_DCFM_00010	04/09/20	AccuStandard, Lot 219051360			(Purchased Reagent)		Dichlorofluoromethane	2000 ug/mL
.MSV_V_Gas_00045	03/23/20	Restek, Lot A0150705			(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_00054	07/13/20	07/06/20	Methanol, Lot DX212	1 mL	MSV_V_Gas_00104	25 uL	Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
.MSV_V_Gas_00104	07/13/20	Restek, Lot A0150705			(Purchased Reagent)		Bromomethane	2000 ug/mL
							Chloroethane	2000 ug/mL
							Chloromethane	2000 ug/mL
							Vinyl chloride	2000 ug/mL
MSV_V_BFB_00002							1,2-Dichloroethene, Total	
							1,3-Dichloropropene, Total	
							Tentatively Identified Compound	
							Xylenes, Total	
					MSV_VBFB_STK_00002	0.117 mL	BFB	49.8701 ug/mL
.MSV_VBFB_STK_00002	07/28/20	01/28/20	Methanol, Lot DX212	10 mL	MSV_4BFB_NEAT_00001	1.0656 g	BFB	106560 ug/mL
..MSV_4BFB_NEAT_00001	01/31/21	Chem Service, Lot 8995800			(Purchased Reagent)		BFB	1 g/g

Reagent

MSV_502QGas_00032

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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. : 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)

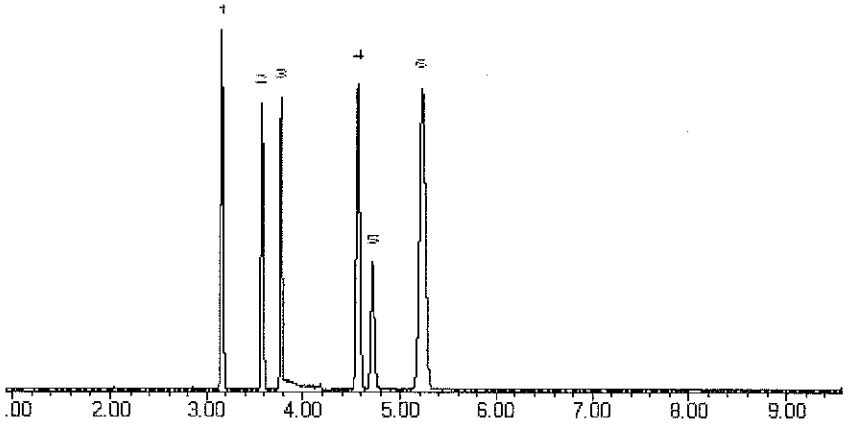
Carrier Gas:
helium-constant flow 2.0 mL/min.

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_00069

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. : 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)

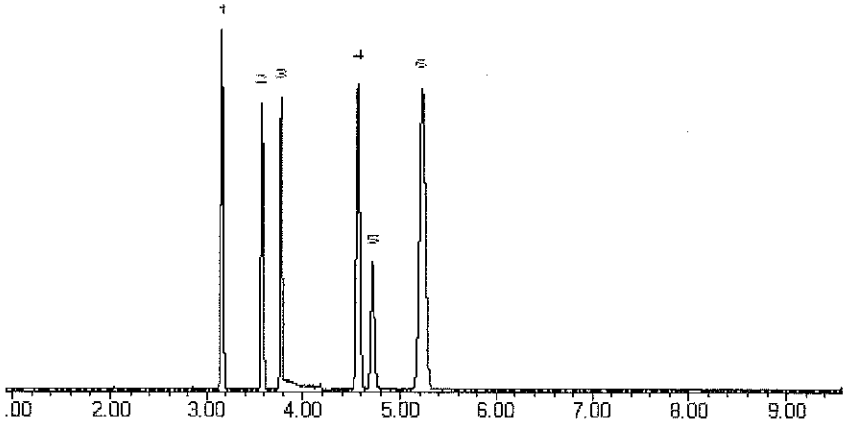
Carrier Gas:
helium-constant flow 2.0 mL/min.

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
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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_ACROLEIN_00002

CHEM SERVICE INC

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

410-21633

CERTIFICATE OF ANALYSIS

Acrolein

CATALOG NUMBER	RPN-11030-1G
LOT NUMBER	9413200
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

1-17-20
LLL2032

COA Form
Revision 3 (3/2015)

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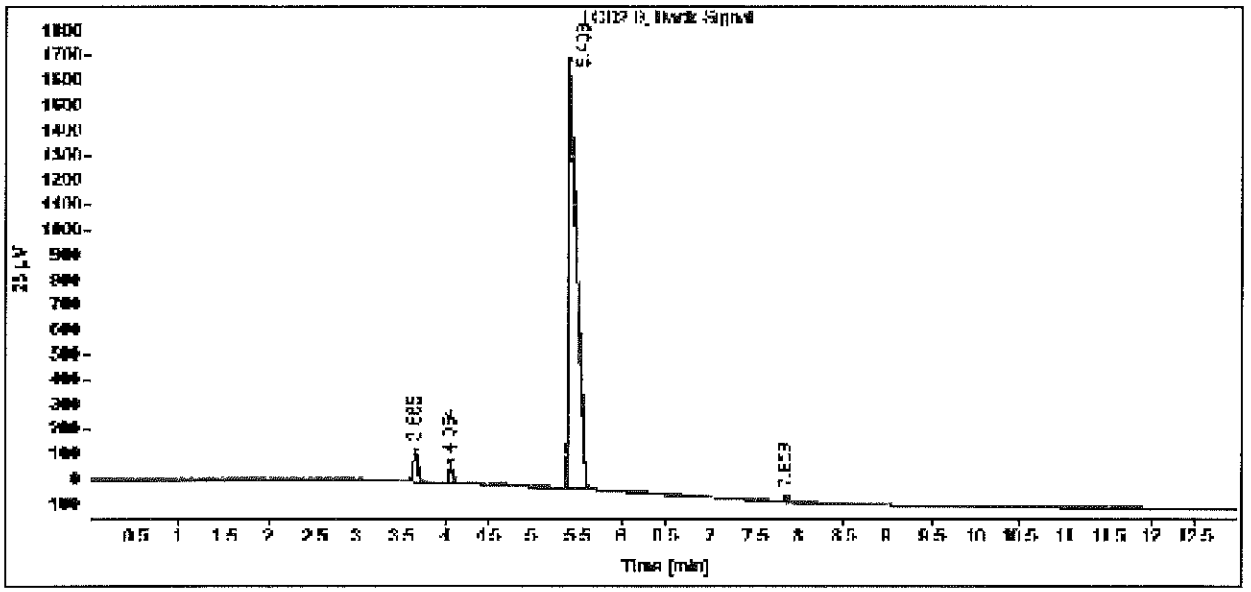
CERTIFICATE OF ANALYSIS

Gas Chromatography / Thermal Conductivity Detector (GC/TCD)

Data file: C:\CHEM32\1\DATA\2019 DATA\1219\SIG2022867.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%
3.665	BB	0.0554	405.7875	114.3327	3.5675
4.064	BB	0.0475	217.2767	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:	9413200
Expiration Date:	12/31/20

Reagent

MSV_DCFM_00010

125 Market Street
New Haven, CT 06513
USA

AccuStandard®

Tel (203)786-5290
Fax (203)786-5287
www.AccuStandard.com

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_EE_Neat_00001

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info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

Ethyl ether

CATALOG NUMBER	N-11897-1G
LOT NUMBER	7967000
DATE CERTIFIED	11/16/18
EXPIRATION DATE	11/30/21
CAS NUMBER	60-29-7
MOLECULAR FORMULA	C4H10O
MOLECULAR WEIGHT	74.12
STORAGE	Store under refrigeration.
HANDLING	See Safety Data Sheet
INTENDED USE	For laboratory use only.
ISO GUIDE 34 CERTIFIED	[ ]

Analytical Test	Value
% PURITY (GC/TCD)	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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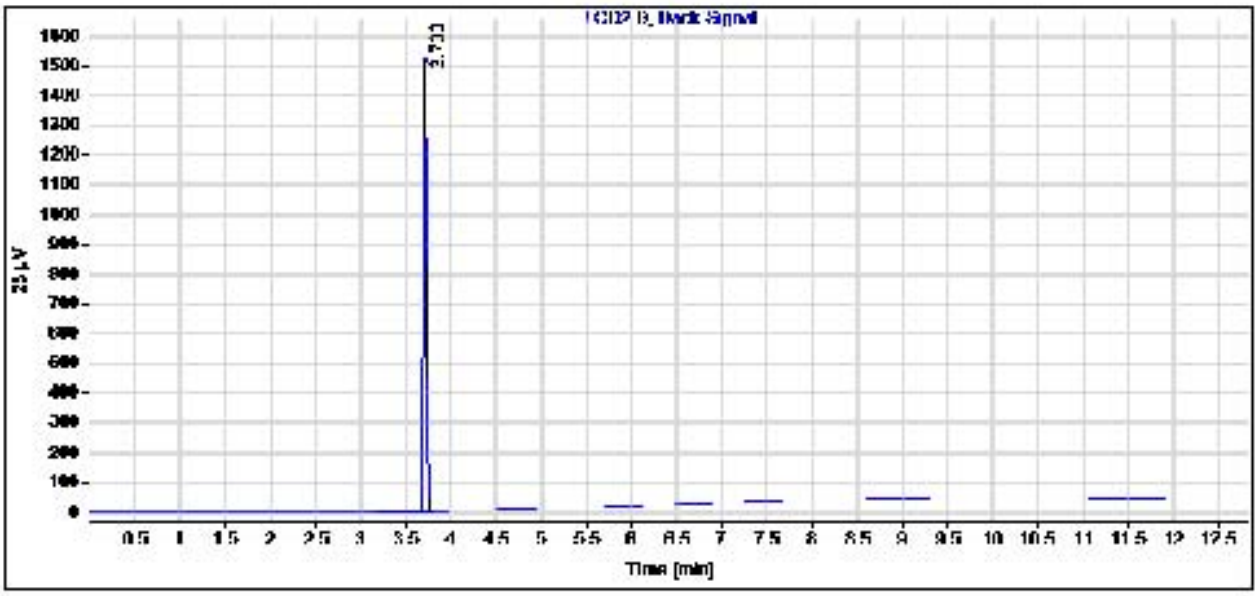
CERTIFICATE OF ANALYSIS

Gas Chromatography / Thermal Conductivity Detector (GC/TCD)

Data file: C:\CHEM32\1\DATA\2018 DATA\1118\SIG2080873.D

Sample name: Ethyl ether

Instrument:	GC 1	**Sample type:**	Sample
Injection date:	11/16/2018 10:06:22 AM	**Location:**	Vial 1
Acq. method:	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%
3.706	BV	0.0361	3473.9382	1497.5255	100.0000
		Sum	3473.9382		

Reagent

MSV_Q#1B_00017

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)

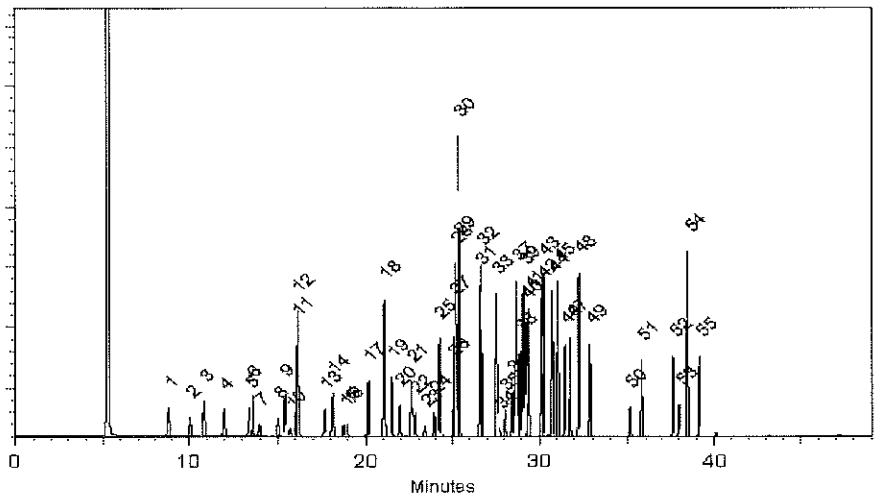
Carrier Gas:
hydrogen-constant pressure 8.0 psi.

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_00043

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)

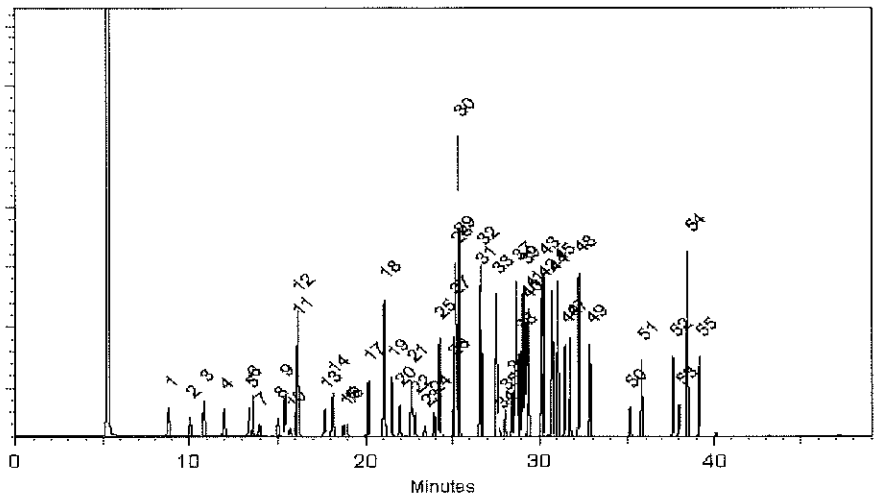
Carrier Gas:
hydrogen-constant pressure 8.0 psi.

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#3B_00015

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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.:** A0147509

Description : Custom Q #3B Standard

Custom Q #3B Standard 1,000-7,500µg/mL, P&T Methanol/Water (90:10), 1mL/ampul

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

Expiration Date : September 30, 2020 **Storage:** 0°C or colder

CERTIFIED VALUES

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

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

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

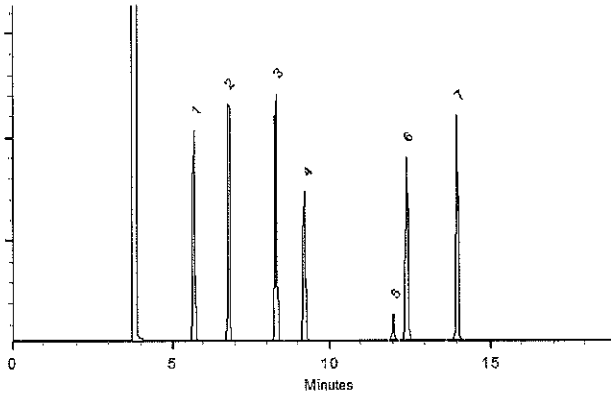
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



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

Brandon Reish - Mix Technician

Date Mixed: 27-Mar-2019 **Balance:** 1128342314

Justine Albertson - Operations Tech-ARM QC

Date Passed: 28-Mar-2019

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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#3B_00037

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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
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)

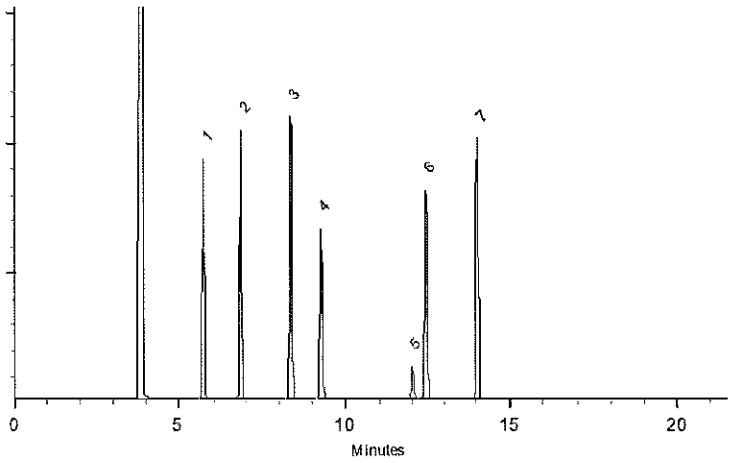
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

MSV_Q#4C_00023

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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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. : 572312.SEC **Lot No.:** A0147642

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 : April 30, 2020 **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	1,3-Butadiene	998.9 µg/mL	+/- 7.3863 µg/mL	Gravimetric
	CAS # 106-99-0.SEC (Lot 24033)		+/- 60.4412 µg/mL	Unstressed
	Purity 99%		+/- 60.5839 µg/mL	Stressed
2	1,2-Dichloro-1,1,2-trifluoroethane (CFC-123a)	1,003.8 µg/mL	+/- 32.4125 µg/mL	Gravimetric
	CAS # 354-23-4 * (Lot Q9B-64)		+/- 68.4405 µg/mL	Unstressed
	Purity 99%		+/- 68.5678 µg/mL	Stressed
3	n-Pentane (C5)	1,003.5 µg/mL	+/- 5.8891 µg/mL	Gravimetric
	CAS # 109-66-0.SEC (Lot FGH02)		+/- 60.5509 µg/mL	Unstressed
	Purity 99%		+/- 60.6946 µg/mL	Stressed
4	1,1,2-Trichlorotrifluoroethane (CFC-113)	1,003.0 µg/mL	+/- 5.8862 µg/mL	Gravimetric
	CAS # 76-13-1.SEC (Lot 18342)		+/- 60.5207 µg/mL	Unstressed
	Purity 99%		+/- 60.6644 µg/mL	Stressed
5	Iodomethane (methyl iodide)	1,009.0 µg/mL	+/- 5.9214 µg/mL	Gravimetric
	CAS # 74-88-4.SEC (Lot Y25A027)		+/- 60.8828 µg/mL	Unstressed
	Purity 99%		+/- 61.0273 µg/mL	Stressed
6	Carbon disulfide	1,009.5 µg/mL	+/- 5.9243 µg/mL	Gravimetric
	CAS # 75-15-0.SEC (Lot MKBL1376V)		+/- 60.9129 µg/mL	Unstressed
	Purity 99%		+/- 61.0575 µg/mL	Stressed
7	Methyl-tert-butyl ether (MTBE)	1,000.5 µg/mL	+/- 5.8715 µg/mL	Gravimetric
	CAS # 1634-04-4.SEC (Lot ZHKYA)		+/- 60.3699 µg/mL	Unstressed
	Purity 99%		+/- 60.5132 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)		1,009.0	µg/mL	+/-	5.9214	µg/mL	Gravimetric
	CAS # 108-20-3.SEC	(Lot LL7TN-SH)			+/-	60.8828	µg/mL	Unstressed
	Purity 99%				+/-	61.0273	µg/mL	Stressed
10	Chloroprene (2-chloro-1,3-butadiene)		1,009.0	µg/mL	+/-	5.9214	µg/mL	Gravimetric
	CAS # 126-99-8 *	(Lot 190312JLM)			+/-	60.8828	µg/mL	Unstressed
	Purity 99%				+/-	61.0273	µg/mL	Stressed
11	Ethyl-tert-butyl ether (ETBE)		1,003.0	µg/mL	+/-	5.8862	µg/mL	Gravimetric
	CAS # 637-92-3.SEC	(Lot MHBJG-QK)			+/-	60.5207	µg/mL	Unstressed
	Purity 99%				+/-	60.6644	µg/mL	Stressed
12	Cyclohexane		1,002.0	µg/mL	+/-	5.8803	µg/mL	Gravimetric
	CAS # 110-82-7.SEC	(Lot YADRA)			+/-	60.4604	µg/mL	Unstressed
	Purity 99%				+/-	60.6039	µg/mL	Stressed
13	tert-Amyl methyl ether (TAME)		1,002.0	µg/mL	+/-	5.8803	µg/mL	Gravimetric
	CAS # 994-05-8.SEC	(Lot 5614600)			+/-	60.4604	µg/mL	Unstressed
	Purity 99%				+/-	60.6039	µg/mL	Stressed
14	n-Heptane (C7)		1,001.0	µg/mL	+/-	5.8744	µg/mL	Gravimetric
	CAS # 142-82-5.SEC	(Lot OGM01)			+/-	60.4000	µg/mL	Unstressed
	Purity 99%				+/-	60.5434	µg/mL	Stressed
15	tert-Amyl ethyl ether (TAEE)		1,007.5	µg/mL	+/-	5.9126	µg/mL	Gravimetric
	CAS # 919-94-8.SEC	(Lot 6455100)			+/-	60.7923	µg/mL	Unstressed
	Purity 99%				+/-	60.9366	µg/mL	Stressed
16	Methyl methacrylate		1,009.5	µg/mL	+/-	5.9243	µg/mL	Gravimetric
	CAS # 80-62-6.SEC	(Lot G01X021)			+/-	60.9129	µg/mL	Unstressed
	Purity 99%				+/-	61.0575	µg/mL	Stressed
17	Ethyl methacrylate		1,003.0	µg/mL	+/-	5.8862	µg/mL	Gravimetric
	CAS # 97-63-2.SEC	(Lot AQSPO)			+/-	60.5207	µg/mL	Unstressed
	Purity 99%				+/-	60.6644	µg/mL	Stressed
18	Benzyl chloride		1,004.5	µg/mL	+/-	5.8950	µg/mL	Gravimetric
	CAS # 100-44-7.SEC	(Lot H29N03)			+/-	60.6112	µg/mL	Unstressed
	Purity 99%				+/-	60.7551	µg/mL	Stressed

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

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

Tech Tips:
Raw material may contain trace amounts of tert-Butanol.

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

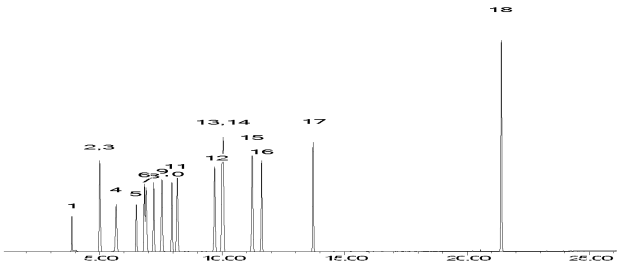
Carrier Gas:
helium-constant pressure 30 psi

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

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



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

Lane Kibe - Mix Technician

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

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 11-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#4C_00042

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)

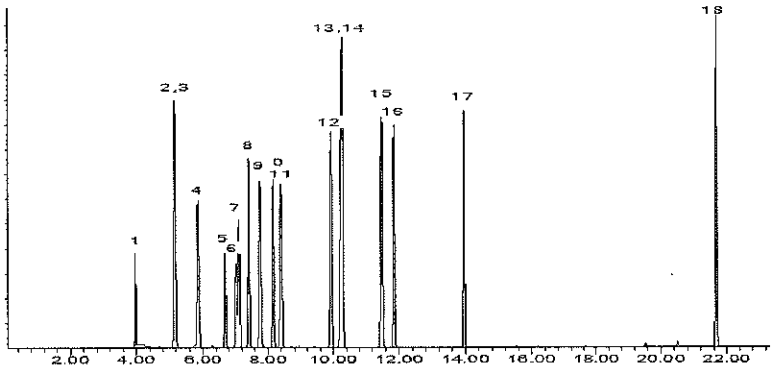
Carrier Gas:
helium-constant pressure 30 psi

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%.

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_QCS#6Std_00015

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
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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.:** A0146910

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, 2020 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Methyl acetate	1,008.7 µg/mL	+/- 5.9912 µg/mL	Gravimetric
	CAS # 79-20-9.SEC (Lot UCNEL)		+/- 60.8697 µg/mL	Unstressed
	Purity 99%		+/- 61.0141 µg/mL	Stressed
2	Allyl chloride (3-chloropropene)	1,006.7 µg/mL	+/- 5.9793 µg/mL	Gravimetric
	CAS # 107-05-1.SEC (Lot H3HGC)		+/- 60.7490 µg/mL	Unstressed
	Purity 99%		+/- 60.8931 µg/mL	Stressed
3	Bromochloromethane	1,005.3 µg/mL	+/- 5.9714 µg/mL	Gravimetric
	CAS # 74-97-5.SEC (Lot 5670200)		+/- 60.6685 µg/mL	Unstressed
	Purity 99%		+/- 60.8125 µg/mL	Stressed
4	Methylcyclohexane	1,004.0 µg/mL	+/- 5.9635 µg/mL	Gravimetric
	CAS # 108-87-2.SEC (Lot Q02QG)		+/- 60.5881 µg/mL	Unstressed
	Purity 99%		+/- 60.7318 µg/mL	Stressed
5	Pentachloroethane	1,007.3 µg/mL	+/- 5.9833 µg/mL	Gravimetric
	CAS # 76-01-7.SEC (Lot 8170200)		+/- 60.7892 µg/mL	Unstressed
	Purity 99%		+/- 60.9335 µg/mL	Stressed
6	1,2,3-Trimethylbenzene	1,008.8 µg/mL	+/- 5.9920 µg/mL	Gravimetric
	CAS # 526-73-8.SEC (Lot 7754800)		+/- 60.8777 µg/mL	Unstressed
	Purity 97%		+/- 61.0222 µg/mL	Stressed
7	1,3-Diethylbenzene	1,006.7 µg/mL	+/- 5.9793 µg/mL	Gravimetric
	CAS # 141-93-5.SEC (Lot 113566-1)		+/- 60.7490 µg/mL	Unstressed
	Purity 99%		+/- 60.8931 µg/mL	Stressed

8	1,4-Diethylbenzene		1,001.6	µg/mL	+/-	5.9490	µg/mL	Gravimetric
	CAS # 105-05-5.SEC	(Lot FBQ02)			+/-	60.4408	µg/mL	Unstressed
	Purity 98%				+/-	60.5842	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		1,005.3	µg/mL	+/-	5.9714	µg/mL	Gravimetric
	CAS # 91-57-6.SEC	(Lot 76023-1)			+/-	60.6685	µg/mL	Unstressed
	Purity 99%				+/-	60.8125	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)

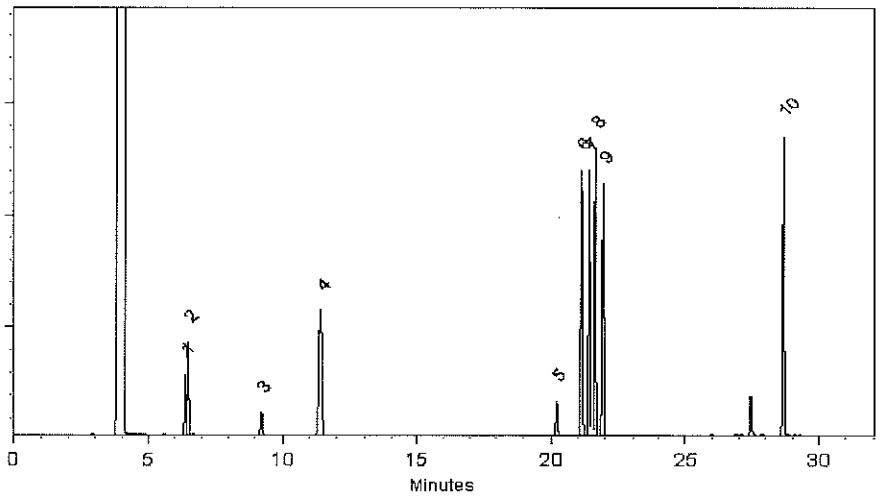
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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: 11-Mar-2019 **Balance:** 1128342314

Jennifer J Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 18-Mar-2019

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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_QCS#6Std_00037

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. : 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)

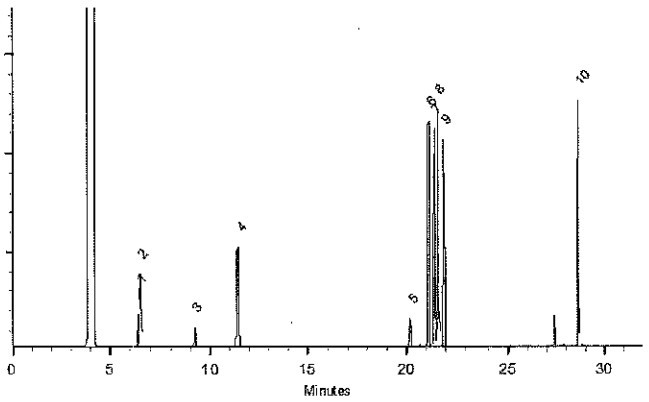
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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%.
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0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_V#1B_00035

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
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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.:** A0154137

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 : October 31, 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		5,010.7	µg/mL	+/- 35.5877	µg/mL	Gravimetric
	CAS # 75-35-4	(Lot SHBG8609V)			+/- 281.6868	µg/mL	Unstressed
	Purity 99%				+/- 288.2436	µg/mL	Stressed
2	Methylene chloride (dichloromethane)		5,004.0	µg/mL	+/- 35.5402	µg/mL	Gravimetric
	CAS # 75-09-2	(Lot SHBK5095)			+/- 281.3109	µg/mL	Unstressed
	Purity 99%				+/- 287.8589	µg/mL	Stressed
3	trans-1,2-Dichloroethene		5,017.5	µg/mL	+/- 35.6361	µg/mL	Gravimetric
	CAS # 156-60-5	(Lot MKBH9850V)			+/- 282.0698	µg/mL	Unstressed
	Purity 99%				+/- 288.6355	µg/mL	Stressed
4	1,1-Dichloroethane		5,004.3	µg/mL	+/- 35.5424	µg/mL	Gravimetric
	CAS # 75-34-3	(Lot 1026.30-2)			+/- 281.3282	µg/mL	Unstressed
	Purity 98%				+/- 287.8767	µg/mL	Stressed
5	2,2-Dichloropropane		5,050.0	µg/mL	+/- 32.0202	µg/mL	Gravimetric
	CAS # 594-20-7	(Lot BCBT5124)			+/- 283.4366	µg/mL	Unstressed
	Purity 99%				+/- 290.0553	µg/mL	Stressed
6	cis-1,2-Dichloroethene		5,046.5	µg/mL	+/- 31.9980	µg/mL	Gravimetric
	CAS # 156-59-2	(Lot MKBX5945V)			+/- 283.2401	µg/mL	Unstressed
	Purity 99%				+/- 289.8543	µg/mL	Stressed
7	chloroform		5,007.1	µg/mL	+/- 35.5624	µg/mL	Gravimetric
	CAS # 67-66-3	(Lot SHBJ9076)			+/- 281.4865	µg/mL	Unstressed
	Purity 99%				+/- 288.0387	µg/mL	Stressed

8	1,1,1-trichloroethane		5,008.3	µg/mL	+/-	35.5707	µg/mL	Gravimetric
	CAS # 71-55-6	(Lot 190123CG)			+/-	281.5520	µg/mL	Unstressed
	Purity 98%				+/-	288.1057	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		5,011.1	µg/mL	+/-	35.5908	µg/mL	Gravimetric
	CAS # 56-23-5	(Lot SHBG8938V)			+/-	281.7114	µg/mL	Unstressed
	Purity 99%				+/-	288.2688	µg/mL	Stressed
11	1,2-Dichloroethane		5,006.9	µg/mL	+/-	35.5607	µg/mL	Gravimetric
	CAS # 107-06-2	(Lot SHBJ6510)			+/-	281.4725	µg/mL	Unstressed
	Purity 99%				+/-	288.0243	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		5,002.1	µg/mL	+/-	35.5269	µg/mL	Gravimetric
	CAS # 79-01-6	(Lot SHBJ4611)			+/-	281.2055	µg/mL	Unstressed
	Purity 99%				+/-	287.7511	µg/mL	Stressed
14	1,2-Dichloropropane		5,014.4	µg/mL	+/-	35.6139	µg/mL	Gravimetric
	CAS # 78-87-5	(Lot BCBR0882V)			+/-	281.8941	µg/mL	Unstressed
	Purity 99%				+/-	288.4558	µg/mL	Stressed
15	bromodichloromethane		5,008.5	µg/mL	+/-	35.5722	µg/mL	Gravimetric
	CAS # 75-27-4	(Lot MKCJ0238)			+/-	281.5638	µg/mL	Unstressed
	Purity 99%				+/-	288.1178	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		5,013.1	µg/mL	+/-	35.6046	µg/mL	Gravimetric
	CAS # 10061-01-5	(Lot 25649)			+/-	281.8203	µg/mL	Unstressed
	Purity 99%				+/-	288.3803	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		5,009.3	µg/mL	+/-	35.5781	µg/mL	Gravimetric
	CAS # 10061-02-6	(Lot 19160070D7119)			+/-	281.6106	µg/mL	Unstressed
	Purity 98%				+/-	288.1656	µg/mL	Stressed
20	1,1,2-Trichloroethane		5,016.1	µg/mL	+/-	35.6264	µg/mL	Gravimetric
	CAS # 79-00-5	(Lot FGB01)			+/-	281.9925	µg/mL	Unstressed
	Purity 99%				+/-	288.5564	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		5,007.9	µg/mL	+/-	35.5678	µg/mL	Gravimetric
	CAS # 127-18-4	(Lot SHBJ7422)			+/-	281.5287	µg/mL	Unstressed
	Purity 99%				+/-	288.0818	µg/mL	Stressed
23	dibromochloromethane		5,004.8	µg/mL	+/-	35.5459	µg/mL	Gravimetric
	CAS # 124-48-1	(Lot MKCJ3856)			+/-	281.3558	µg/mL	Unstressed
	Purity 98%				+/-	287.9049	µg/mL	Stressed

24	1,2-Dibromoethane (EDB)		5,037.4	µg/mL	+/-	31.9401	µg/mL	Gravimetric
	CAS # 106-93-4	(Lot BCBP2268V)			+/-	282.7280	µg/mL	Unstressed
	Purity 99%				+/-	289.3302	µg/mL	Stressed
25	1-Chlorohexane		5,036.2	µg/mL	+/-	29.5554	µg/mL	Gravimetric
	CAS # 544-10-5	(Lot BCBS3368V)			+/-	282.4044	µg/mL	Unstressed
	Purity 98%				+/-	289.0110	µg/mL	Stressed
26	Chlorobenzene		5,015.8	µg/mL	+/-	35.6241	µg/mL	Gravimetric
	CAS # 108-90-7	(Lot SHBJ0839)			+/-	281.9749	µg/mL	Unstressed
	Purity 99%				+/-	288.5384	µg/mL	Stressed
27	1,1,1,2-Tetrachloroethane		5,038.6	µg/mL	+/-	31.9481	µg/mL	Gravimetric
	CAS # 630-20-6	(Lot MKBS3769V)			+/-	282.7981	µg/mL	Unstressed
	Purity 99%				+/-	289.4020	µg/mL	Stressed
28	Ethylbenzene		5,029.3	µg/mL	+/-	31.8886	µg/mL	Gravimetric
	CAS # 100-41-4	(Lot SHBJ3183)			+/-	282.2719	µg/mL	Unstressed
	Purity 99%				+/-	288.8635	µg/mL	Stressed
29	m-Xylene		5,038.4	µg/mL	+/-	31.9465	µg/mL	Gravimetric
	CAS # 108-38-3	(Lot SHBH8323)			+/-	282.7841	µg/mL	Unstressed
	Purity 99%				+/-	289.3876	µg/mL	Stressed
30	p-Xylene		5,038.0	µg/mL	+/-	31.9441	µg/mL	Gravimetric
	CAS # 106-42-3	(Lot SHBJ0052)			+/-	282.7630	µg/mL	Unstressed
	Purity 99%				+/-	289.3661	µg/mL	Stressed
31	o-Xylene		5,046.4	µg/mL	+/-	31.9972	µg/mL	Gravimetric
	CAS # 95-47-6	(Lot SHBH3432V)			+/-	283.2331	µg/mL	Unstressed
	Purity 99%				+/-	289.8471	µg/mL	Stressed
32	Styrene		5,047.0	µg/mL	+/-	32.0012	µg/mL	Gravimetric
	CAS # 100-42-5	(Lot MKBV4061V)			+/-	283.2682	µg/mL	Unstressed
	Purity 99%				+/-	289.8830	µg/mL	Stressed
33	Isopropylbenzene (cumene)		5,035.3	µg/mL	+/-	31.9267	µg/mL	Gravimetric
	CAS # 98-82-8	(Lot 10185056)			+/-	282.6087	µg/mL	Unstressed
	Purity 99%				+/-	289.2081	µg/mL	Stressed
34	bromoform		5,010.7	µg/mL	+/-	35.5877	µg/mL	Gravimetric
	CAS # 75-25-2	(Lot SHBH6924)			+/-	281.6868	µg/mL	Unstressed
	Purity 99%				+/-	288.2436	µg/mL	Stressed
35	1,1,2,2-Tetrachloroethane		5,016.6	µg/mL	+/-	35.6295	µg/mL	Gravimetric
	CAS # 79-34-5	(Lot CFA4D)			+/-	282.0171	µg/mL	Unstressed
	Purity 99%				+/-	288.5816	µg/mL	Stressed
36	1,2,3-Trichloropropane		5,033.4	µg/mL	+/-	31.9148	µg/mL	Gravimetric
	CAS # 96-18-4	(Lot BCBH8722V)			+/-	282.5035	µg/mL	Unstressed
	Purity 99%				+/-	289.1004	µg/mL	Stressed
37	n-Propylbenzene		5,032.4	µg/mL	+/-	31.9084	µg/mL	Gravimetric
	CAS # 103-65-1	(Lot MKBJ0332V)			+/-	282.4473	µg/mL	Unstressed
	Purity 99%				+/-	289.0430	µg/mL	Stressed
38	Bromobenzene		5,035.5	µg/mL	+/-	31.9282	µg/mL	Gravimetric
	CAS # 108-86-1	(Lot WXBC5147V)			+/-	282.6227	µg/mL	Unstressed
	Purity 99%				+/-	289.2225	µg/mL	Stressed
39	1,3,5-Trimethylbenzene		5,029.8	µg/mL	+/-	31.8918	µg/mL	Gravimetric
	CAS # 108-67-8	(Lot BCBS7648V)			+/-	282.3000	µg/mL	Unstressed
	Purity 99%				+/-	288.8922	µg/mL	Stressed

40	2-Chlorotoluene		5,037.5	µg/mL	+/-	31.9409	µg/mL	Gravimetric
	CAS # 95-49-8	(Lot MKBW5554V)			+/-	282.7350	µg/mL	Unstressed
	Purity 99%				+/-	289.3373	µg/mL	Stressed
41	4-Chlorotoluene		5,039.1	µg/mL	+/-	31.9512	µg/mL	Gravimetric
	CAS # 106-43-4	(Lot MKBL7753V)			+/-	282.8262	µg/mL	Unstressed
	Purity 99%				+/-	289.4307	µg/mL	Stressed
42	tert-Butylbenzene		5,049.8	µg/mL	+/-	32.0186	µg/mL	Gravimetric
	CAS # 98-06-6	(Lot STBD6954V)			+/-	283.4225	µg/mL	Unstressed
	Purity 99%				+/-	290.0409	µg/mL	Stressed
43	1,2,4-Trimethylbenzene		5,046.8	µg/mL	+/-	31.9996	µg/mL	Gravimetric
	CAS # 95-63-6	(Lot MKBJ6229V)			+/-	283.2544	µg/mL	Unstressed
	Purity 98%				+/-	289.8689	µg/mL	Stressed
44	sec-Butylbenzene		5,042.8	µg/mL	+/-	31.9742	µg/mL	Gravimetric
	CAS # 135-98-8	(Lot MKBR9260V)			+/-	283.0296	µg/mL	Unstressed
	Purity 99%				+/-	289.6389	µg/mL	Stressed
45	p-Isopropyltoluene (p-Cymene)		5,038.4	µg/mL	+/-	31.9465	µg/mL	Gravimetric
	CAS # 99-87-6	(Lot MKBV3556V)			+/-	282.7841	µg/mL	Unstressed
	Purity 99%				+/-	289.3876	µg/mL	Stressed
46	1,3-Dichlorobenzene		5,005.6	µg/mL	+/-	35.5518	µg/mL	Gravimetric
	CAS # 541-73-1	(Lot BCBQ7100V)			+/-	281.4022	µg/mL	Unstressed
	Purity 99%				+/-	287.9524	µg/mL	Stressed
47	1,4-Dichlorobenzene		5,009.4	µg/mL	+/-	35.5789	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBS4401V)			+/-	281.6166	µg/mL	Unstressed
	Purity 99%				+/-	288.1717	µg/mL	Stressed
48	n-Butylbenzene		5,024.8	µg/mL	+/-	31.8601	µg/mL	Gravimetric
	CAS # 104-51-8	(Lot 09804AE)			+/-	282.0194	µg/mL	Unstressed
	Purity 99%				+/-	288.6050	µg/mL	Stressed
49	1,2-Dichlorobenzene		5,008.9	µg/mL	+/-	35.5753	µg/mL	Gravimetric
	CAS # 95-50-1	(Lot SHBG3111V)			+/-	281.5884	µg/mL	Unstressed
	Purity 99%				+/-	288.1430	µg/mL	Stressed
50	1,2-Dibromo-3-chloropropane		5,036.4	µg/mL	+/-	31.9338	µg/mL	Gravimetric
	CAS # 96-12-8	(Lot FBL01)			+/-	282.6718	µg/mL	Unstressed
	Purity 99%				+/-	289.2727	µg/mL	Stressed
51	1,3,5-Trichlorobenzene		5,026.0	µg/mL	+/-	29.4954	µg/mL	Gravimetric
	CAS # 108-70-3	(Lot 11319AS)			+/-	281.8314	µg/mL	Unstressed
	Purity 99%				+/-	288.4245	µg/mL	Stressed
52	1,2,4-Trichlorobenzene		5,036.5	µg/mL	+/-	31.9346	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBJ0905)			+/-	282.6789	µg/mL	Unstressed
	Purity 99%				+/-	289.2799	µg/mL	Stressed
53	Hexachlorobutadiene		5,033.6	µg/mL	+/-	31.9164	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)			+/-	282.5175	µg/mL	Unstressed
	Purity 99%				+/-	289.1148	µg/mL	Stressed
54	Naphthalene		5,033.6	µg/mL	+/-	31.9164	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBW2603V)			+/-	282.5175	µg/mL	Unstressed
	Purity 99%				+/-	289.1148	µg/mL	Stressed
55	1,2,3-Trichlorobenzene		5,016.0	µg/mL	+/-	31.8046	µg/mL	Gravimetric
	CAS # 87-61-6	(Lot MKBS4859V)			+/-	281.5283	µg/mL	Unstressed
	Purity 99%				+/-	288.1024	µg/mL	Stressed

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

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

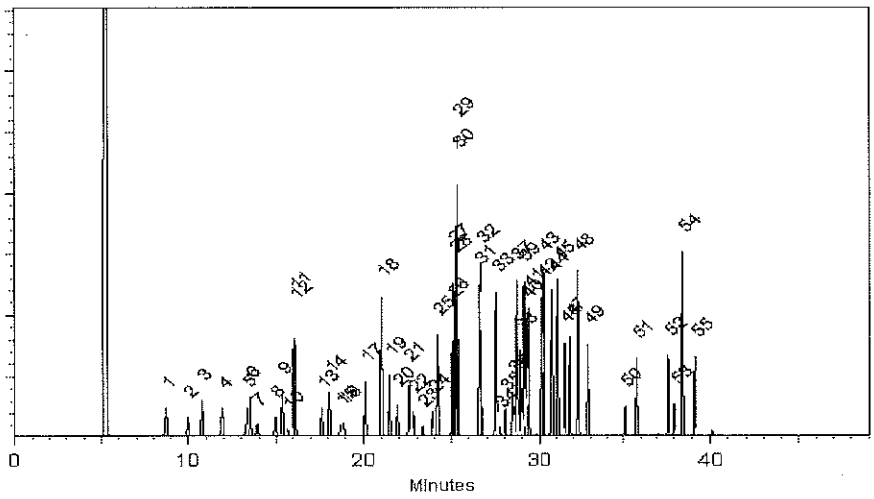
Carrier Gas:
hydrogen-constant pressure 8.0 psi.

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

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



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

Tom Suckar - Mix Technician

Date Mixed: 21-Oct-2019 **Balance:** B707717271

Feng-Yun Lo - QC Analyst

Date Passed: 25-Oct-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_V#1B_00083

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.:** A0137321

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 : April 30, 2021 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)		
1	1,1-dichloroethene		5,044.8 µg/mL	+/-	31.9873	µg/mL	Gravimetric
	CAS # 75-35-4	(Lot SHBG8609V)		+/-	283.1454	µg/mL	Unstressed
	Purity 99%			+/-	289.7573	µg/mL	Stressed
2	Methylene chloride (dichloromethane)		5,006.7 µg/mL	+/-	31.7456	µg/mL	Gravimetric
	CAS # 75-09-2	(Lot SHBJ5755)		+/-	281.0056	µg/mL	Unstressed
	Purity 99%			+/-	287.5676	µg/mL	Stressed
3	trans-1,2-Dichloroethene		5,040.8 µg/mL	+/-	31.9619	µg/mL	Gravimetric
	CAS # 156-60-5	(Lot 09531AE)		+/-	282.9209	µg/mL	Unstressed
	Purity 99%			+/-	289.5276	µg/mL	Stressed
4	1,1-Dichloroethane		5,009.7 µg/mL	+/-	31.7647	µg/mL	Gravimetric
	CAS # 75-34-3	(Lot 384000)		+/-	281.1746	µg/mL	Unstressed
	Purity 98%			+/-	287.7405	µg/mL	Stressed
5	2,2-Dichloropropane		5,050.0 µg/mL	+/-	32.0202	µg/mL	Gravimetric
	CAS # 594-20-7	(Lot BCBT5124)		+/-	283.4366	µg/mL	Unstressed
	Purity 99%			+/-	290.0553	µg/mL	Stressed
6	cis-1,2-Dichloroethene		5,046.5 µg/mL	+/-	31.9980	µg/mL	Gravimetric
	CAS # 156-59-2	(Lot MKBX5945V)		+/-	283.2401	µg/mL	Unstressed
	Purity 99%			+/-	289.8543	µg/mL	Stressed
7	chloroform		5,035.4 µg/mL	+/-	31.9275	µg/mL	Gravimetric
	CAS # 67-66-3	(Lot SHBH4477V)		+/-	282.6157	µg/mL	Unstressed
	Purity 99%			+/-	289.2153	µg/mL	Stressed

8	1,1,1-trichloroethane		5,017.7	µg/mL	+/-	31.8153	µg/mL	Gravimetric
	CAS # 71-55-6	(Lot B15W12061)			+/-	281.6230	µg/mL	Unstressed
	Purity 99%				+/-	288.1994	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		5,045.0	µg/mL	+/-	31.9885	µg/mL	Gravimetric
	CAS # 56-23-5	(Lot SHBH8784)			+/-	283.1559	µg/mL	Unstressed
	Purity 99%				+/-	289.7681	µg/mL	Stressed
11	1,2-Dichloroethane		5,015.4	µg/mL	+/-	31.8006	µg/mL	Gravimetric
	CAS # 107-06-2	(Lot MLBV4561V)			+/-	281.4932	µg/mL	Unstressed
	Purity 99%				+/-	288.0665	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		5,016.0	µg/mL	+/-	31.8046	µg/mL	Gravimetric
	CAS # 79-01-6	(Lot SHBH1955V)			+/-	281.5283	µg/mL	Unstressed
	Purity 99%				+/-	288.1024	µg/mL	Stressed
14	1,2-Dichloropropane		5,009.7	µg/mL	+/-	31.7646	µg/mL	Gravimetric
	CAS # 78-87-5	(Lot BCBR0882V)			+/-	281.1740	µg/mL	Unstressed
	Purity 99%				+/-	287.7399	µg/mL	Stressed
15	bromodichloromethane		5,023.1	µg/mL	+/-	31.8494	µg/mL	Gravimetric
	CAS # 75-27-4	(Lot MKCF2688)			+/-	281.9247	µg/mL	Unstressed
	Purity 99%				+/-	288.5081	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		5,011.1	µg/mL	+/-	31.7737	µg/mL	Gravimetric
	CAS # 10061-01-5	(Lot 24555)			+/-	281.2547	µg/mL	Unstressed
	Purity 99%				+/-	287.8224	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		4,999.5	µg/mL	+/-	31.7002	µg/mL	Gravimetric
	CAS # 10061-02-6	(Lot C797620)			+/-	280.6039	µg/mL	Unstressed
	Purity 98%				+/-	287.1565	µg/mL	Stressed
20	1,1,2-Trichloroethane		5,010.2	µg/mL	+/-	31.7677	µg/mL	Gravimetric
	CAS # 79-00-5	(Lot FGB01)			+/-	281.2020	µg/mL	Unstressed
	Purity 99%				+/-	287.7686	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		5,008.6	µg/mL	+/-	31.7578	µg/mL	Gravimetric
	CAS # 127-18-4	(Lot SHBH1014V)			+/-	281.1143	µg/mL	Unstressed
	Purity 99%				+/-	287.6789	µg/mL	Stressed
23	dibromochloromethane		5,004.9	µg/mL	+/-	31.7344	µg/mL	Gravimetric
	CAS # 124-48-1	(Lot MKCC0877)			+/-	280.9065	µg/mL	Unstressed
	Purity 98%				+/-	287.4661	µg/mL	Stressed

24	1,2-Dibromoethane (EDB)		5,037.4	µg/mL	+/-	31.9401	µg/mL	Gravimetric
	CAS # 106-93-4	(Lot BCBP2268V)			+/-	282.7280	µg/mL	Unstressed
	Purity 99%				+/-	289.3302	µg/mL	Stressed
25	1-Chlorohexane		5,041.1	µg/mL	+/-	29.5169	µg/mL	Gravimetric
	CAS # 544-10-5	(Lot 05107LK)			+/-	282.6722	µg/mL	Unstressed
	Purity 98%				+/-	289.2853	µg/mL	Stressed
26	Chlorobenzene		5,027.5	µg/mL	+/-	31.8775	µg/mL	Gravimetric
	CAS # 108-90-7	(Lot SHBH4459V)			+/-	282.1737	µg/mL	Unstressed
	Purity 99%				+/-	288.7630	µg/mL	Stressed
27	1,1,1,2-Tetrachloroethane		5,038.6	µg/mL	+/-	31.9481	µg/mL	Gravimetric
	CAS # 630-20-6	(Lot MKBS3769V)			+/-	282.7981	µg/mL	Unstressed
	Purity 99%				+/-	289.4020	µg/mL	Stressed
28	Ethylbenzene		5,029.3	µg/mL	+/-	31.8886	µg/mL	Gravimetric
	CAS # 100-41-4	(Lot SHBJ3183)			+/-	282.2719	µg/mL	Unstressed
	Purity 99%				+/-	288.8635	µg/mL	Stressed
29	m-Xylene		5,038.4	µg/mL	+/-	31.9465	µg/mL	Gravimetric
	CAS # 108-38-3	(Lot SHBH8323)			+/-	282.7841	µg/mL	Unstressed
	Purity 99%				+/-	289.3876	µg/mL	Stressed
30	p-Xylene		5,038.0	µg/mL	+/-	31.9441	µg/mL	Gravimetric
	CAS # 106-42-3	(Lot SHBJ0052)			+/-	282.7630	µg/mL	Unstressed
	Purity 99%				+/-	289.3661	µg/mL	Stressed
31	o-Xylene		5,046.4	µg/mL	+/-	31.9972	µg/mL	Gravimetric
	CAS # 95-47-6	(Lot SHBH3432V)			+/-	283.2331	µg/mL	Unstressed
	Purity 99%				+/-	289.8471	µg/mL	Stressed
32	Styrene		5,047.0	µg/mL	+/-	32.0012	µg/mL	Gravimetric
	CAS # 100-42-5	(Lot MKBV4061V)			+/-	283.2682	µg/mL	Unstressed
	Purity 99%				+/-	289.8830	µg/mL	Stressed
33	Isopropylbenzene (cumene)		5,035.3	µg/mL	+/-	31.9267	µg/mL	Gravimetric
	CAS # 98-82-8	(Lot 10185056)			+/-	282.6087	µg/mL	Unstressed
	Purity 99%				+/-	289.2081	µg/mL	Stressed
34	bromoform		5,028.2	µg/mL	+/-	31.8819	µg/mL	Gravimetric
	CAS # 75-25-2	(Lot SHBH6924)			+/-	282.2123	µg/mL	Unstressed
	Purity 99%				+/-	288.8025	µg/mL	Stressed
35	1,1,2,2-Tetrachloroethane		5,040.4	µg/mL	+/-	31.9596	µg/mL	Gravimetric
	CAS # 79-34-5	(Lot DZBLG)			+/-	282.8999	µg/mL	Unstressed
	Purity 99%				+/-	289.5061	µg/mL	Stressed
36	1,2,3-Trichloropropane		5,033.4	µg/mL	+/-	31.9148	µg/mL	Gravimetric
	CAS # 96-18-4	(Lot BCBH8722V)			+/-	282.5035	µg/mL	Unstressed
	Purity 99%				+/-	289.1004	µg/mL	Stressed
37	n-Propylbenzene		5,032.4	µg/mL	+/-	31.9084	µg/mL	Gravimetric
	CAS # 103-65-1	(Lot MKBJ0332V)			+/-	282.4473	µg/mL	Unstressed
	Purity 99%				+/-	289.0430	µg/mL	Stressed
38	Bromobenzene		5,035.5	µg/mL	+/-	31.9282	µg/mL	Gravimetric
	CAS # 108-86-1	(Lot WXBC5147V)			+/-	282.6227	µg/mL	Unstressed
	Purity 99%				+/-	289.2225	µg/mL	Stressed
39	1,3,5-Trimethylbenzene		5,029.8	µg/mL	+/-	31.8918	µg/mL	Gravimetric
	CAS # 108-67-8	(Lot BCBS7648V)			+/-	282.3000	µg/mL	Unstressed
	Purity 99%				+/-	288.8922	µg/mL	Stressed

40	2-Chlorotoluene		5,037.5	µg/mL	+/-	31.9409	µg/mL	Gravimetric
	CAS # 95-49-8	(Lot MKBW5554V)			+/-	282.7350	µg/mL	Unstressed
	Purity 99%				+/-	289.3373	µg/mL	Stressed
41	4-Chlorotoluene		5,039.1	µg/mL	+/-	31.9512	µg/mL	Gravimetric
	CAS # 106-43-4	(Lot MKBL7753V)			+/-	282.8262	µg/mL	Unstressed
	Purity 99%				+/-	289.4307	µg/mL	Stressed
42	tert-Butylbenzene		5,049.8	µg/mL	+/-	32.0186	µg/mL	Gravimetric
	CAS # 98-06-6	(Lot STBD6954V)			+/-	283.4225	µg/mL	Unstressed
	Purity 99%				+/-	290.0409	µg/mL	Stressed
43	1,2,4-Trimethylbenzene		5,046.8	µg/mL	+/-	31.9996	µg/mL	Gravimetric
	CAS # 95-63-6	(Lot MKBJ6229V)			+/-	283.2544	µg/mL	Unstressed
	Purity 98%				+/-	289.8689	µg/mL	Stressed
44	sec-Butylbenzene		5,042.8	µg/mL	+/-	31.9742	µg/mL	Gravimetric
	CAS # 135-98-8	(Lot MKBR9260V)			+/-	283.0296	µg/mL	Unstressed
	Purity 99%				+/-	289.6389	µg/mL	Stressed
45	p-Isopropyltoluene (p-Cymene)		5,038.4	µg/mL	+/-	31.9465	µg/mL	Gravimetric
	CAS # 99-87-6	(Lot MKBV3556V)			+/-	282.7841	µg/mL	Unstressed
	Purity 99%				+/-	289.3876	µg/mL	Stressed
46	1,3-Dichlorobenzene		5,022.9	µg/mL	+/-	31.8482	µg/mL	Gravimetric
	CAS # 541-73-1	(Lot BCBQ7100V)			+/-	281.9141	µg/mL	Unstressed
	Purity 99%				+/-	288.4973	µg/mL	Stressed
47	1,4-Dichlorobenzene		5,009.4	µg/mL	+/-	31.7626	µg/mL	Gravimetric
	CAS # 106-46-7	(Lot MKBS4401V)			+/-	281.1564	µg/mL	Unstressed
	Purity 99%				+/-	287.7219	µg/mL	Stressed
48	n-Butylbenzene		5,024.8	µg/mL	+/-	31.8601	µg/mL	Gravimetric
	CAS # 104-51-8	(Lot 09804AE)			+/-	282.0194	µg/mL	Unstressed
	Purity 99%				+/-	288.6050	µg/mL	Stressed
49	1,2-Dichlorobenzene		5,010.7	µg/mL	+/-	31.7709	µg/mL	Gravimetric
	CAS # 95-50-1	(Lot SHBG3111V)			+/-	281.2301	µg/mL	Unstressed
	Purity 99%				+/-	287.7973	µg/mL	Stressed
50	1,2-Dibromo-3-chloropropane		5,036.4	µg/mL	+/-	31.9338	µg/mL	Gravimetric
	CAS # 96-12-8	(Lot FBL01)			+/-	282.6718	µg/mL	Unstressed
	Purity 99%				+/-	289.2727	µg/mL	Stressed
51	1,3,5-Trichlorobenzene		5,007.5	µg/mL	+/-	29.3200	µg/mL	Gravimetric
	CAS # 108-70-3	(Lot 11319AS)			+/-	280.7870	µg/mL	Unstressed
	Purity 99%				+/-	287.3561	µg/mL	Stressed
52	1,2,4-Trichlorobenzene		5,036.5	µg/mL	+/-	31.9346	µg/mL	Gravimetric
	CAS # 120-82-1	(Lot SHBJ0905)			+/-	282.6789	µg/mL	Unstressed
	Purity 99%				+/-	289.2799	µg/mL	Stressed
53	Hexachlorobutadiene		5,033.6	µg/mL	+/-	31.9164	µg/mL	Gravimetric
	CAS # 87-68-3	(Lot J31X013)			+/-	282.5175	µg/mL	Unstressed
	Purity 99%				+/-	289.1148	µg/mL	Stressed
54	Naphthalene		5,033.6	µg/mL	+/-	31.9164	µg/mL	Gravimetric
	CAS # 91-20-3	(Lot MKBW2603V)			+/-	282.5175	µg/mL	Unstressed
	Purity 99%				+/-	289.1148	µg/mL	Stressed
55	1,2,3-Trichlorobenzene		5,016.0	µg/mL	+/-	31.8046	µg/mL	Gravimetric
	CAS # 87-61-6	(Lot MKBS4859V)			+/-	281.5283	µg/mL	Unstressed
	Purity 99%				+/-	288.1024	µg/mL	Stressed

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

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

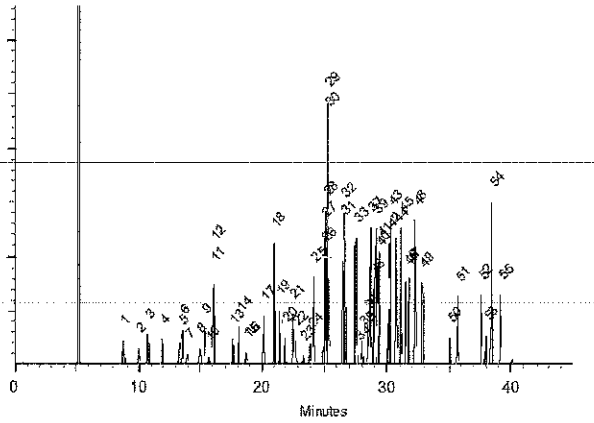
Carrier Gas:
hydrogen-constant pressure 8.0 psi.

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

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



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

Dawn Brownson - Mix Technician

Date Mixed: 19-Apr-2018 **Balance:** B707717271

Justine Albertson - Operations Tech-ARM QC

Date Passed: 23-Apr-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_V#2B_00042

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Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 56734 **Lot No.:** A0147800

Description : Custom V # 2B Standard

Custom V #2B Standard 12,500-125,000µg/mL, P&T Methanol, 1mL/ampul

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

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

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

Specific Reference Material Notes:

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

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

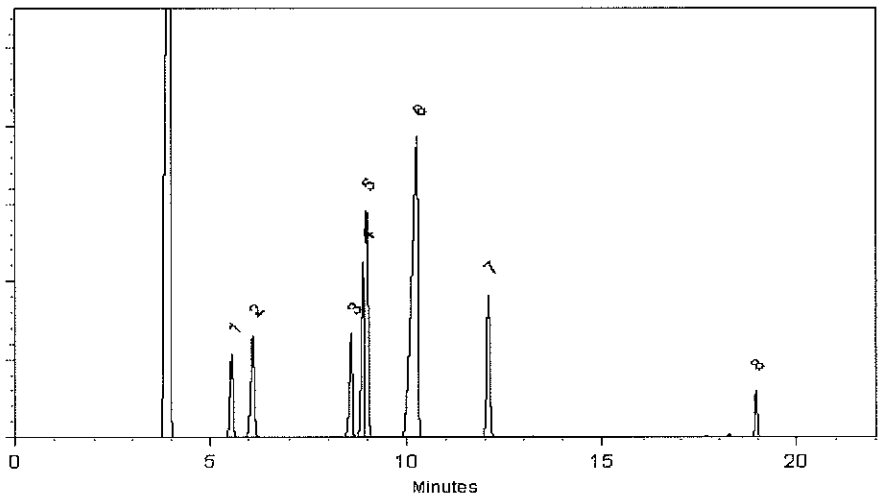
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



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

Clara Windle - Operations Technician I

Date Mixed: 03-Apr-2019 **Balance:** B251644995

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 10-Apr-2019

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

General Reference Material Notes

Expiration Notes:

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

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/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_00043

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Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 56734 **Lot No.:** A0147800

Description : Custom V # 2B Standard

Custom V #2B Standard 12,500-125,000µg/mL, P&T Methanol, 1mL/ampul

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

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

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

Specific Reference Material Notes:

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

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

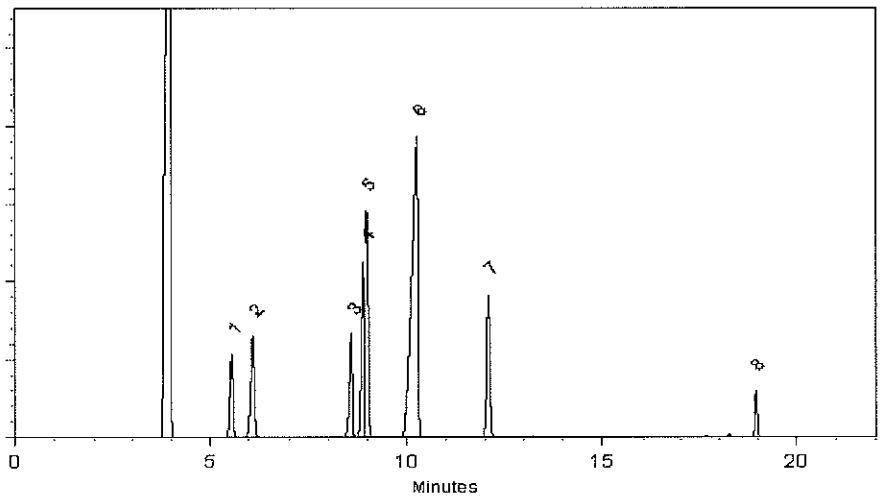
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



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

Clara Windle - Operations Technician I

Date Mixed: 03-Apr-2019 **Balance:** B251644995

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 10-Apr-2019

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

General Reference Material Notes

Expiration Notes:

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

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/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_00023

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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 #3223.02

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.:** A0153460

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 : September 30, 2022 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetone		25,018.0 µg/mL	+/- 146.4859 µg/mL	Gravimetric
	CAS # 67-64-1	(Lot SHBK6362)		+/- 1,237.7080 µg/mL	Unstressed
	Purity 99%			+/- 1,268.4787 µg/mL	Stressed
2	Acrylonitrile		12,520.0 µg/mL	+/- 73.3074 µg/mL	Gravimetric
	CAS # 107-13-1	(Lot A0387097)		+/- 619.3982 µg/mL	Unstressed
	Purity 99%			+/- 634.7971 µg/mL	Stressed
3	2-Butanone (MEK)		25,034.0 µg/mL	+/- 146.5796 µg/mL	Gravimetric
	CAS # 78-93-3	(Lot SHBK5945)		+/- 1,238.4996 µg/mL	Unstressed
	Purity 99%			+/- 1,269.2900 µg/mL	Stressed
4	Tetrahydrofuran		25,010.0 µg/mL	+/- 146.4390 µg/mL	Gravimetric
	CAS # 109-99-9	(Lot SHBK8926)		+/- 1,237.3122 µg/mL	Unstressed
	Purity 99%			+/- 1,268.0731 µg/mL	Stressed
5	2-Nitropropane		25,026.3 µg/mL	+/- 146.5343 µg/mL	Gravimetric
	CAS # 79-46-9	(Lot BCBL0537V)		+/- 1,238.1166 µg/mL	Unstressed
	Purity 98%			+/- 1,268.8975 µg/mL	Stressed
6	4-Methyl-2-pentanone (MIBK)		25,055.0 µg/mL	+/- 146.7025 µg/mL	Gravimetric
	CAS # 108-10-1	(Lot SHBK5017)		+/- 1,239.5385 µg/mL	Unstressed
	Purity 99%			+/- 1,270.3547 µg/mL	Stressed
7	2-Hexanone		25,050.0 µg/mL	+/- 146.6733 µg/mL	Gravimetric
	CAS # 591-78-6	(Lot MKCD9048)		+/- 1,239.2911 µg/mL	Unstressed
	Purity 99%			+/- 1,270.1012 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)

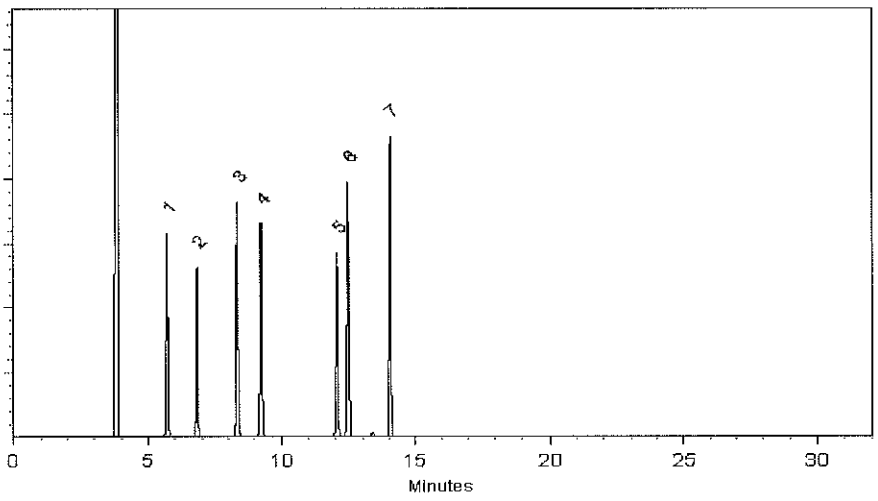
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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.

Miranda Kline
Miranda Kline - Operations Technician I

Date Mixed: 30-Sep-2019 **Balance:** B251644995

Jennifer Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 03-Oct-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_V#3B_00040

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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. : 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)

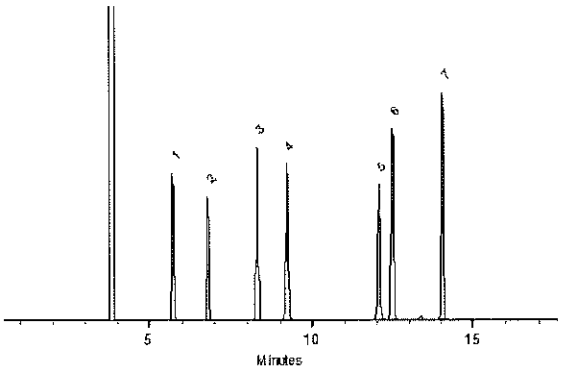
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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_00032

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. : 572312 **Lot No.:** A0147817

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 : April 30, 2020 **Storage:** 0°C or colder

Handling: This product is photosensitive.

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	1,3-Butadiene	4,999.4 µg/mL	+/- 37.8983 µg/mL	Gravimetric
	CAS # 106-99-0 (Lot SHBK2299)		+/- 302.6147 µg/mL	Unstressed
	Purity 99%		+/- 303.3285 µg/mL	Stressed
2	1,2-Dichloro-1,1,2-trifluoroethane (CFC-123a)	5,002.8 µg/mL	+/- 48.3344 µg/mL	Gravimetric
	CAS # 354-23-4 (Lot Q9B-64)		+/- 304.2996 µg/mL	Unstressed
	Purity 99%		+/- 305.0104 µg/mL	Stressed
3	n-Pentane (C5)	5,044.5 µg/mL	+/- 29.5367 µg/mL	Gravimetric
	CAS # 109-66-0 (Lot SHBJ5949)		+/- 304.3771 µg/mL	Unstressed
	Purity 99%		+/- 305.0997 µg/mL	Stressed
4	1,1,2-Trichlorotrifluoroethane (CFC-113)	5,040.0 µg/mL	+/- 29.5103 µg/mL	Gravimetric
	CAS # 76-13-1 (Lot 00009482)		+/- 304.1056 µg/mL	Unstressed
	Purity 99%		+/- 304.8275 µg/mL	Stressed
5	Iodomethane (methyl iodide)	5,048.0 µg/mL	+/- 29.5572 µg/mL	Gravimetric
	CAS # 74-88-4 (Lot SHBH4362V)		+/- 304.5883 µg/mL	Unstressed
	Purity 99%		+/- 305.3113 µg/mL	Stressed
6	Carbon disulfide	5,039.5 µg/mL	+/- 29.5074 µg/mL	Gravimetric
	CAS # 75-15-0 (Lot U22D706)		+/- 304.0754 µg/mL	Unstressed
	Purity 99%		+/- 304.7972 µg/mL	Stressed
7	Methyl-tert-butyl ether (MTBE)	5,033.0 µg/mL	+/- 29.4693 µg/mL	Gravimetric
	CAS # 1634-04-4 (Lot SHBH9526)		+/- 303.6832 µg/mL	Unstressed
	Purity 99%		+/- 304.4041 µg/mL	Stressed

8	n-Hexane (C6)		5,026.5	µg/mL	+/-	29.4313	µg/mL	Gravimetric
	CAS # 110-54-3	(Lot SHBJ7262)			+/-	303.2910	µg/mL	Unstressed
	Purity 99%				+/-	304.0110	µg/mL	Stressed
9	Diisopropyl ether (DIPE)		5,033.0	µg/mL	+/-	29.4693	µg/mL	Gravimetric
	CAS # 108-20-3	(Lot SHBH1927V)			+/-	303.6832	µg/mL	Unstressed
	Purity 99%				+/-	304.4041	µg/mL	Stressed
10	Chloroprene (2-chloro-1,3-butadiene)		5,039.0	µg/mL	+/-	29.5045	µg/mL	Gravimetric
	CAS # 126-99-8	(Lot 190312JLM)			+/-	304.0452	µg/mL	Unstressed
	Purity 99%				+/-	304.7670	µg/mL	Stressed
11	Ethyl-tert-butyl ether (ETBE)		5,028.5	µg/mL	+/-	29.4430	µg/mL	Gravimetric
	CAS # 637-92-3	(Lot MKCC2702)			+/-	303.4117	µg/mL	Unstressed
	Purity 99%				+/-	304.1319	µg/mL	Stressed
12	Cyclohexane		5,028.5	µg/mL	+/-	29.4430	µg/mL	Gravimetric
	CAS # 110-82-7	(Lot MKCC9660)			+/-	303.4117	µg/mL	Unstressed
	Purity 99%				+/-	304.1319	µg/mL	Stressed
13	tert-Amyl methyl ether (TAME)		5,025.5	µg/mL	+/-	29.4254	µg/mL	Gravimetric
	CAS # 994-05-8	(Lot HMBF8365V)			+/-	303.2307	µg/mL	Unstressed
	Purity 99%				+/-	303.9505	µg/mL	Stressed
14	n-Heptane (C7)		5,048.5	µg/mL	+/-	29.5601	µg/mL	Gravimetric
	CAS # 142-82-5	(Lot SHBK2731)			+/-	304.6185	µg/mL	Unstressed
	Purity 99%				+/-	305.3416	µg/mL	Stressed
15	tert-Amyl ethyl ether (TAEE)		5,046.0	µg/mL	+/-	29.5454	µg/mL	Gravimetric
	CAS # 919-94-8	(Lot IKVYB)			+/-	304.4676	µg/mL	Unstressed
	Purity 99%				+/-	305.1904	µg/mL	Stressed
16	Methyl methacrylate		5,033.5	µg/mL	+/-	29.4722	µg/mL	Gravimetric
	CAS # 80-62-6	(Lot MKBH4379V)			+/-	303.7134	µg/mL	Unstressed
	Purity 99%				+/-	304.4344	µg/mL	Stressed
17	Ethyl methacrylate		5,036.7	µg/mL	+/-	29.4910	µg/mL	Gravimetric
	CAS # 97-63-2	(Lot SHBF9649V)			+/-	303.9071	µg/mL	Unstressed
	Purity 98%				+/-	304.6285	µg/mL	Stressed
18	Benzyl chloride		5,036.0	µg/mL	+/-	29.4869	µg/mL	Gravimetric
	CAS # 100-44-7	(Lot SHBB7346V)			+/-	303.8642	µg/mL	Unstressed
	Purity 99%				+/-	304.5856	µg/mL	Stressed

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

Tech Tips:
Raw material may contain trace amounts of tert-Butanol.

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

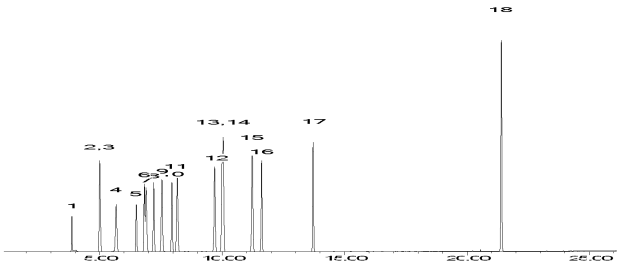
Carrier Gas:
helium-constant pressure 30 psi

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

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



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

Tom Suckar - Mix Technician

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

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 11-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_V#4C_00064

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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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. : 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)

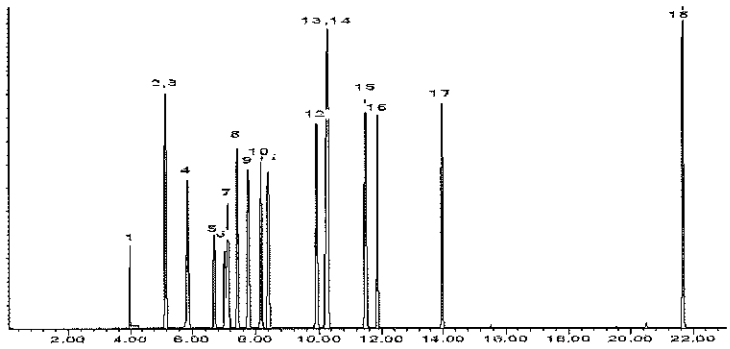
Carrier Gas:
helium-constant pressure 30 psi

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_00007

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Bellefonte, PA 16823-8812
Tel: (800)356-1688
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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 **Lot No.:** A0146393

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 : August 31, 2020 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L., K=2)		
1	Methyl acetate		5,004.0	µg/mL	+/- 29.3663	µg/mL	Gravimetric
	CAS # 79-20-9	(Lot SHBG4345V)			+/- 301.9399	µg/mL	Unstressed
	Purity 99%				+/- 302.6566	µg/mL	Stressed
2	Allyl chloride (3-chloropropene)		5,003.0	µg/mL	+/- 29.3604	µg/mL	Gravimetric
	CAS # 107-05-1	(Lot WXBB7852V)			+/- 301.8795	µg/mL	Unstressed
	Purity 99%				+/- 302.5961	µg/mL	Stressed
3	Bromochloromethane		5,005.0	µg/mL	+/- 29.3721	µg/mL	Gravimetric
	CAS # 74-97-5	(Lot 00004559)			+/- 302.0002	µg/mL	Unstressed
	Purity 99%				+/- 302.7171	µg/mL	Stressed
4	Methylcyclohexane		5,024.0	µg/mL	+/- 29.4836	µg/mL	Gravimetric
	CAS # 108-87-2	(Lot SHBJ0457)			+/- 303.1467	µg/mL	Unstressed
	Purity 99%				+/- 303.8663	µg/mL	Stressed
5	Pentachloroethane		5,004.0	µg/mL	+/- 29.3663	µg/mL	Gravimetric
	CAS # 76-01-7	(Lot L7GVM)			+/- 301.9399	µg/mL	Unstressed
	Purity 99%				+/- 302.6566	µg/mL	Stressed
6	1,2,3-Trimethylbenzene		5,001.9	µg/mL	+/- 29.3541	µg/mL	Gravimetric
	CAS # 526-73-8	(Lot 877605-12)			+/- 301.8144	µg/mL	Unstressed
	Purity 98%				+/- 302.5308	µg/mL	Stressed
7	1,3-Diethylbenzene		5,008.8	µg/mL	+/- 29.3943	µg/mL	Gravimetric
	CAS # 141-93-5	(Lot BCBT8967)			+/- 302.2283	µg/mL	Unstressed
	Purity 98%				+/- 302.9457	µg/mL	Stressed

8	1,4-Diethylbenzene		5,018.6 µg/mL	+/-	29.4518	µg/mL	Gravimetric
	CAS # 105-05-5	(Lot RLHJK)		+/-	302.8196	µg/mL	Unstressed
	Purity 98%			+/-	303.5385	µg/mL	Stressed
9	1,2-Diethylbenzene		5,033.0 µg/mL	+/-	29.5365	µg/mL	Gravimetric
	CAS # 135-01-3	(Lot ECH2970181)		+/-	303.6897	µg/mL	Unstressed
	Purity 99%			+/-	304.4106	µg/mL	Stressed
10	2-Methylnaphthalene		4,997.8 µg/mL	+/-	29.3297	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot STBG8884)		+/-	301.5634	µg/mL	Unstressed
	Purity 96%			+/-	302.2792	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)

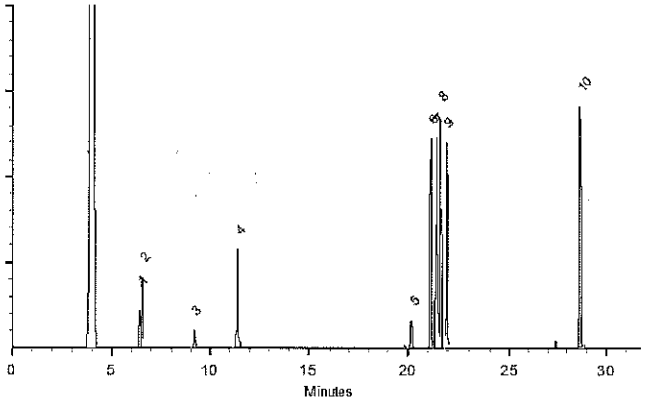
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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.

Rebecca Sawyer

Date Mixed: 24-Feb-2019 **Balance:** B707717271

Justine Albertson - Operations Tech-ARM QC

Date Passed: 04-Mar-2019

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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_00023

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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. : 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)

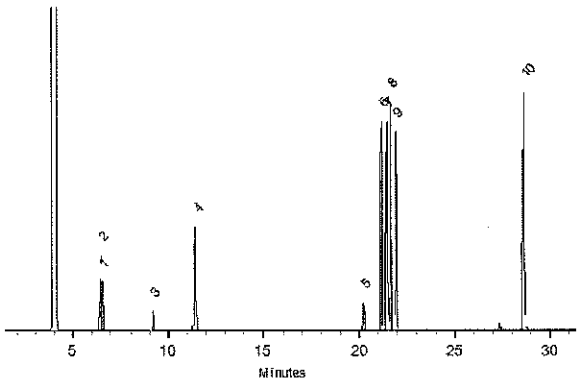
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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:

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  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.
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25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
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0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_V_Gas_00045

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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.:** A0150705

Description : Custom 502.2 "V" Gas Mix

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

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

Expiration Date : August 31, 2026 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dichlorodifluoromethane (CFC-12) **CAS #** 75-71-8 (Lot 00012554) **Purity** 99%	2,001.7 µg/mL	+/- 16.1239 µg/mL +/- 112.7879 µg/mL +/- 115.4014 µg/mL	Gravimetric Unstressed Stressed
2	Chloromethane (methyl chloride) **CAS #** 74-87-3 (Lot SHBK6571) **Purity** 99%	2,000.3 µg/mL	+/- 18.7162 µg/mL +/- 113.1078 µg/mL +/- 115.7104 µg/mL	Gravimetric Unstressed Stressed
3	Vinyl chloride **CAS #** 75-01-4 (Lot 00015559) **Purity** 99%	2,006.5 µg/mL	+/- 18.3560 µg/mL +/- 113.3921 µg/mL +/- 116.0044 µg/mL	Gravimetric Unstressed Stressed
4	Bromomethane (methyl bromide) **CAS #** 74-83-9 (Lot 101604) **Purity** 99%	1,999.6 µg/mL	+/- 20.0741 µg/mL +/- 113.3042 µg/mL +/- 115.9007 µg/mL	Gravimetric Unstressed Stressed
5	Chloroethane (ethyl chloride) **CAS #** 75-00-3 (Lot 107-401039114-1) **Purity** 99%	1,998.5 µg/mL	+/- 16.7167 µg/mL +/- 112.6955 µg/mL +/- 115.3027 µg/mL	Gravimetric Unstressed Stressed
6	Trichlorofluoromethane (CFC-11) **CAS #** 75-69-4 (Lot SHBH4155V) **Purity** 99%	2,000.0 µg/mL	+/- 14.1138 µg/mL +/- 112.4230 µg/mL +/- 115.0403 µg/mL	Gravimetric Unstressed Stressed

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

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

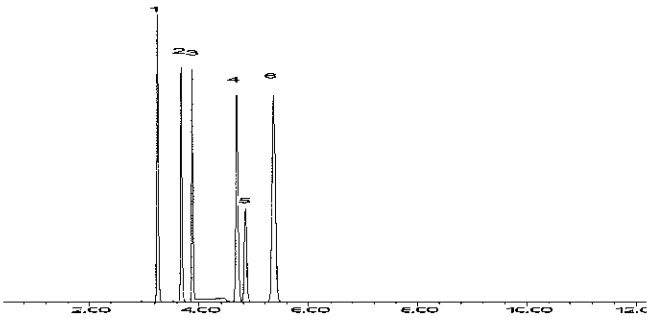
Carrier Gas:
helium-constant flow 2.0 mL/min.

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-Jul-2019 **Balance:** B251644995

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 16-Jul-2019

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
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- 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:

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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

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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. : 55669 **Lot No.:** A0150705

Description : Custom 502.2 "V" Gas Mix

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

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

Expiration Date : August 31, 2026 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dichlorodifluoromethane (CFC-12) **CAS #** 75-71-8 (Lot 00012554) **Purity** 99%	2,001.7 µg/mL	+/- 16.1239 µg/mL +/- 112.7879 µg/mL +/- 115.4014 µg/mL	Gravimetric Unstressed Stressed
2	Chloromethane (methyl chloride) **CAS #** 74-87-3 (Lot SHBK6571) **Purity** 99%	2,000.3 µg/mL	+/- 18.7162 µg/mL +/- 113.1078 µg/mL +/- 115.7104 µg/mL	Gravimetric Unstressed Stressed
3	Vinyl chloride **CAS #** 75-01-4 (Lot 00015559) **Purity** 99%	2,006.5 µg/mL	+/- 18.3560 µg/mL +/- 113.3921 µg/mL +/- 116.0044 µg/mL	Gravimetric Unstressed Stressed
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5	Chloroethane (ethyl chloride) **CAS #** 75-00-3 (Lot 107-401039114-1) **Purity** 99%	1,998.5 µg/mL	+/- 16.7167 µg/mL +/- 112.6955 µg/mL +/- 115.3027 µg/mL	Gravimetric Unstressed Stressed
6	Trichlorofluoromethane (CFC-11) **CAS #** 75-69-4 (Lot SHBH4155V) **Purity** 99%	2,000.0 µg/mL	+/- 14.1138 µg/mL +/- 112.4230 µg/mL +/- 115.0403 µg/mL	Gravimetric Unstressed Stressed

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

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

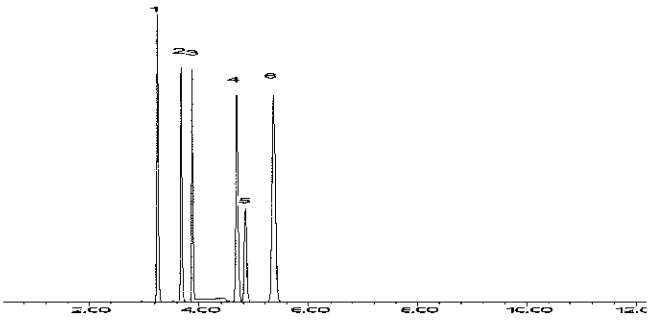
Carrier Gas:
helium-constant flow 2.0 mL/min.

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-Jul-2019 **Balance:** B251644995

Jennifer Pollino - Operations Tech-ARM QC **Date Passed:** 16-Jul-2019

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

General Certified Reference Material Notes

Expiration Notes:

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- Purity values are rounded to the nearest whole number.

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0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

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Method 8260D Low Level

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

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-5692-1

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-6-0/1-0	410-5692-1	102	103	100	98
HD-COD-SW-7-0/1-0	410-5692-2	101	102	100	99
HD-COD-SW-8-0/1-0	410-5692-3	101	104	101	97
HD-COD-SW-9-0/1-0	410-5692-4	103	105	99	97
HD-COD-SW-13-0/1-0	410-5692-5	101	101	99	96
HD-COD-SW-15-0/1-0	410-5692-6	103	102	100	96
HD-COD-SW-16-0/1-0	410-5692-7	102	104	100	98
HD-COD-SW-17-0/1-0	410-5692-8	101	104	98	96
HD-COD-SW-26-0/1-0	410-5692-9	103	103	99	96
HD-COD-SW-27-0/1-0	410-5692-10	102	101	99	97
HD-COD-SW-28-0/1-0	410-5692-11	103	104	100	97
HD-COD-SW-29-0/1-0	410-5692-12	102	105	99	96
HD-QC1-0/1-1	410-5692-13	102	102	99	97
HD-QC1-0/1-2	410-5692-14	101	104	99	96
	MB 410-20265/6	100	105	100	97
	LCS 410-20265/4	100	103	100	99
HD-COD-SW-15-0/1-0 MS	410-5692-6 MS	100	102	99	99
HD-COD-SW-15-0/1-0 MSD	410-5692-6 MSD	100	103	100	99

	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 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-5692-1

SDG No.:

Matrix: Water Level: Low Lab File ID: IU06L01.D

Lab ID: LCS 410-20265/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1-Trichloroethane	5.00	4.62	92	78-126	
1,1,1,2-Tetrachloroethane	5.00	4.83	97	71-134	
1,1,2,2-Tetrachloroethane	5.00	5.25	105	75-123	
1,1,2-Trichloroethane	5.00	5.23	105	80-120	
1,1-Dichloroethane	5.00	5.08	102	74-120	
1,1-Dichloroethene	5.00	4.84	97	80-131	
1,2-Dichloroethane	5.00	5.05	101	69-122	
1,2-Dichloropropane	5.00	5.40	108	80-120	
2-Butanone (MEK)	37.5	41.0	109	59-141	
2-Hexanone	25.0	28.3	113	52-140	
4-Methyl-2-pentanone (MIBK)	25.0	27.0	108	55-140	
Acetone	37.5	38.1	101	60-146	
Acrylonitrile	25.0	27.1	108	64-139	
Benzene	5.00	5.03	101	80-120	
Bromoform	5.00	5.03	101	49-144	
Bromomethane	5.00	4.17	83	60-136	
Carbon disulfide	5.00	4.78	96	67-130	
Carbon tetrachloride	5.00	4.77	95	64-141	
Chlorobenzene	5.00	5.11	102	80-120	
Bromochloromethane	5.00	4.84	97	80-120	
Dibromochloromethane	5.00	4.99	100	64-138	
Chloroethane	5.00	4.34	87	63-120	
Chloroform	5.00	5.07	101	80-120	
Chloromethane	5.00	4.11	82	56-124	
cis-1,2-Dichloroethene	5.00	5.27	105	80-122	
cis-1,3-Dichloropropene	5.00	5.03	101	67-121	
Bromodichloromethane	5.00	5.00	100	73-124	
Ethylbenzene	5.00	5.04	101	80-120	
1,2-Dibromoethane (EDB)	5.00	5.26	105	80-120	
Methyl tert-butyl ether	5.00	4.84	97	69-120	
Methylene Chloride	5.00	5.18	104	80-120	
Styrene	5.00	5.09	102	80-120	
Tetrachloroethene	5.00	5.07	101	80-120	
Toluene	5.00	5.05	101	80-120	
trans-1,2-Dichloroethene	5.00	4.94	99	80-122	
trans-1,3-Dichloropropene	5.00	4.79	96	61-129	
Trichloroethene	5.00	4.99	100	80-120	
Vinyl chloride	5.00	4.13	83	60-125	
Xylenes, Total	15.0	15.1	101	80-120	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-5692-1

SDG No.:

Matrix: Water Level: Low Lab File ID: IU08s09.D

Lab ID: 410-5692-6 MS Client ID: HD-COD-SW-15-0/1-0 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,1,1-Trichloroethane	5.00	0.13 J	5.62	110	78-126	
1,1,1,2-Tetrachloroethane	5.00	ND	5.39	108	71-134	
1,1,2,2-Tetrachloroethane	5.00	ND	5.44	109	75-123	
1,1,2-Trichloroethane	5.00	ND	5.66	113	80-120	
1,1-Dichloroethane	5.00	ND	5.88	118	74-120	
1,1-Dichloroethene	5.00	0.080 J	5.78	114	80-131	
1,2-Dichloroethane	5.00	ND	5.68	113	69-122	
1,2-Dichloropropane	5.00	ND	5.90	118	80-120	
2-Butanone (MEK)	37.5	ND	48.3	129	59-141	
2-Hexanone	25.0	ND	33.3	133	52-140	
4-Methyl-2-pentanone (MIBK)	25.0	ND	32.1	128	55-140	
Acetone	37.5	ND	45.0	120	60-146	
Acrylonitrile	25.0	ND	31.5	126	64-139	
Benzene	5.00	ND	5.73	114	80-120	
Bromoform	5.00	ND	5.30	106	49-144	
Bromomethane	5.00	ND	4.69	94	60-136	
Carbon disulfide	5.00	ND	5.58	111	67-130	
Carbon tetrachloride	5.00	ND	5.85	117	64-141	
Chlorobenzene	5.00	ND	5.72	114	80-120	
Bromochloromethane	5.00	ND	5.38	107	80-120	
Dibromochloromethane	5.00	ND	5.53	111	64-138	
Chloroethane	5.00	ND	4.77	95	63-120	
Chloroform	5.00	0.26 J	6.12	117	80-120	
Chloromethane	5.00	ND	4.39	88	80-120	
cis-1,2-Dichloroethene	5.00	0.77	6.83	121	80-122	
cis-1,3-Dichloropropene	5.00	ND	5.52	110	67-121	
Bromodichloromethane	5.00	ND	5.63	112	73-124	
Ethylbenzene	5.00	ND	5.79	116	80-120	
1,2-Dibromoethane (EDB)	5.00	ND	5.57	111	80-120	
Methyl tert-butyl ether	5.00	ND	5.30	106	69-120	
Methylene Chloride	5.00	ND	5.68	114	80-120	
Styrene	5.00	ND	5.79	116	80-120	
Tetrachloroethene	5.00	2.5	8.27	115	80-120	
Toluene	5.00	ND	5.83	117	80-120	
trans-1,2-Dichloroethene	5.00	ND	5.66	113	80-122	
trans-1,3-Dichloropropene	5.00	ND	5.11	102	61-129	
Trichloroethene	5.00	0.89	6.77	118	80-120	
Vinyl chloride	5.00	ND	4.67	93	60-125	
Xylenes, Total	15.0	ND	17.1	114	80-120	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-5692-1

SDG No.:

Matrix: Water Level: Low Lab File ID: IU08s10.D

Lab ID: 410-5692-6 MSD Client ID: HD-COD-SW-15-0/1-0 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1-Trichloroethane	5.00	5.46	106	3	30	78-126	
1,1,1,2-Tetrachloroethane	5.00	5.34	107	1	30	71-134	
1,1,2,2-Tetrachloroethane	5.00	5.19	104	5	30	75-123	
1,1,2-Trichloroethane	5.00	5.47	109	4	30	80-120	
1,1-Dichloroethane	5.00	5.72	114	3	30	74-120	
1,1-Dichloroethene	5.00	5.61	111	3	30	80-131	
1,2-Dichloroethane	5.00	5.48	109	4	30	69-122	
1,2-Dichloropropane	5.00	5.68	113	4	30	80-120	
2-Butanone (MEK)	37.5	47.9	128	1	30	59-141	
2-Hexanone	25.0	32.3	129	3	30	52-140	
4-Methyl-2-pentanone (MIBK)	25.0	31.5	126	2	30	55-140	
Acetone	37.5	44.6	119	1	30	60-146	
Acrylonitrile	25.0	30.8	123	2	30	64-139	
Benzene	5.00	5.54	111	3	30	80-120	
Bromoform	5.00	5.09	102	4	30	49-144	
Bromomethane	5.00	4.60	92	2	30	60-136	
Carbon disulfide	5.00	5.37	107	4	30	67-130	
Carbon tetrachloride	5.00	5.62	112	4	30	64-141	
Chlorobenzene	5.00	5.61	112	2	30	80-120	
Bromochloromethane	5.00	5.15	103	4	30	80-120	
Dibromochloromethane	5.00	5.36	107	3	30	64-138	
Chloroethane	5.00	4.79	96	0	30	63-120	
Chloroform	5.00	5.96	114	3	30	80-120	
Chloromethane	5.00	4.46	89	2	30	80-120	
cis-1,2-Dichloroethene	5.00	6.47	114	5	30	80-122	
cis-1,3-Dichloropropene	5.00	5.31	106	4	30	67-121	
Bromodichloromethane	5.00	5.28	106	6	30	73-124	
Ethylbenzene	5.00	5.60	112	3	30	80-120	
1,2-Dibromoethane (EDB)	5.00	5.51	110	1	30	80-120	
Methyl tert-butyl ether	5.00	5.14	103	3	30	69-120	
Methylene Chloride	5.00	5.44	109	4	30	80-120	
Styrene	5.00	5.59	112	4	30	80-120	
Tetrachloroethene	5.00	8.33	116	1	30	80-120	
Toluene	5.00	5.64	113	3	30	80-120	
trans-1,2-Dichloroethene	5.00	5.55	111	2	30	80-122	
trans-1,3-Dichloropropene	5.00	5.01	100	2	30	61-129	
Trichloroethene	5.00	6.48	112	4	30	80-120	
Vinyl chloride	5.00	4.68	93	0	30	60-125	
Xylenes, Total	15.0	16.7	111	3	30	80-120	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-5692-1

SDG No.:

Lab File ID: iu06b01.D Lab Sample ID: MB 410-20265/6

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

Instrument ID: 19930 Date Analyzed: 07/08/2020 10:01

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 410-20265/4	IU06L01.D	07/08/2020 09:19
HD-QC1-0/1-2	410-5692-14	IU08s01.D	07/08/2020 10:44
HD-COD-SW-6-0/1-0	410-5692-1	IU08s03.D	07/08/2020 11:27
HD-COD-SW-7-0/1-0	410-5692-2	IU08s04.D	07/08/2020 11:48
HD-COD-SW-8-0/1-0	410-5692-3	IU08s05.D	07/08/2020 12:09
HD-COD-SW-9-0/1-0	410-5692-4	IU08s06.D	07/08/2020 12:30
HD-COD-SW-13-0/1-0	410-5692-5	IU08s07.D	07/08/2020 12:51
HD-COD-SW-15-0/1-0	410-5692-6	IU08s08.D	07/08/2020 13:12
HD-COD-SW-15-0/1-0 MS	410-5692-6 MS	IU08s09.D	07/08/2020 13:33
HD-COD-SW-15-0/1-0 MSD	410-5692-6 MSD	IU08s10.D	07/08/2020 13:55
HD-COD-SW-16-0/1-0	410-5692-7	IU08s12.D	07/08/2020 14:37
HD-COD-SW-17-0/1-0	410-5692-8	IU08s13.D	07/08/2020 14:59
HD-COD-SW-26-0/1-0	410-5692-9	IU08s14.D	07/08/2020 15:20
HD-COD-SW-27-0/1-0	410-5692-10	IU08s15.D	07/08/2020 15:41
HD-COD-SW-28-0/1-0	410-5692-11	IU08s16.D	07/08/2020 16:02
HD-COD-SW-29-0/1-0	410-5692-12	IU08s17.D	07/08/2020 16:23
HD-QC1-0/1-1	410-5692-13	IU08s18.D	07/08/2020 16:45

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

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-5692-1

SDG No.:

Lab File ID: Im16T01.D BFB Injection Date: 03/16/2020

Instrument ID: 19930 BFB Injection Time: 12:37

Analysis Batch No.: 6388

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	16.5	
75	30.0 - 60.0 % of mass 95	46.7	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.6	
173	Less than 2.0 % of mass 174	1.0	(1.2) 1
174	50.0 - 120.00 % of mass 95	83.6	
175	5.0 - 9.0 % of mass 174	6.1	(7.3) 1
176	95.0 - 101.0 % of mass 174	80.8	(96.7) 1
177	5.0 - 9.0 % of mass 176	5.3	(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 410-6388/12	IM16I01.D	03/16/2020	16:24
	ICIS 410-6388/13	IM16I02.D	03/16/2020	16:45
	IC 410-6388/14	IM16I03.D	03/16/2020	17:06
	IC 410-6388/15	IM16I04.D	03/16/2020	17:27
	IC 410-6388/16	IM16I05.D	03/16/2020	17:48
	IC 410-6388/17	IM16I06.D	03/16/2020	18:09
	IC 410-6388/18	IM16I07.D	03/16/2020	18:31

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

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-5692-1

SDG No.:

Lab File ID: IM18T01.D BFB Injection Date: 03/18/2020

Instrument ID: 19930 BFB Injection Time: 09:11

Analysis Batch No.: 7691

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	17.1	
75	30.0 - 60.0 % of mass 95	48.3	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.8	(1.0) 1
174	50.0 - 120.00 % of mass 95	82.6	
175	5.0 - 9.0 % of mass 174	6.2	(7.5) 1
176	95.0 - 101.0 % of mass 174	80.0	(96.8) 1
177	5.0 - 9.0 % of mass 176	5.3	(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
	ICV 410-7691/21	IM18S01.D	03/18/2020	10:28

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

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-5692-1

SDG No.:

Lab File ID: Iu08T03.D BFB Injection Date: 07/08/2020

Instrument ID: 19930 BFB Injection Time: 08:21

Analysis Batch No.: 20265

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	16.0	
75	30.0 - 60.0 % of mass 95	46.6	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.2	
173	Less than 2.0 % of mass 174	0.4	(0.4) 1
174	50.0 - 120.00 % of mass 95	89.3	
175	5.0 - 9.0 % of mass 174	6.6	(7.3) 1
176	95.0 - 101.0 % of mass 174	87.2	(97.6) 1
177	5.0 - 9.0 % of mass 176	5.6	(6.4) 2

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

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

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 410-20265/3	IU06C01.D	07/08/2020	8:58
	LCS 410-20265/4	IU06L01.D	07/08/2020	9:19
	MB 410-20265/6	iu06b01.D	07/08/2020	10:01
HD-QC1-0/1-2	410-5692-14	IU08s01.D	07/08/2020	10:44
HD-COD-SW-6-0/1-0	410-5692-1	IU08s03.D	07/08/2020	11:27
HD-COD-SW-7-0/1-0	410-5692-2	IU08s04.D	07/08/2020	11:48
HD-COD-SW-8-0/1-0	410-5692-3	IU08s05.D	07/08/2020	12:09
HD-COD-SW-9-0/1-0	410-5692-4	IU08s06.D	07/08/2020	12:30
HD-COD-SW-13-0/1-0	410-5692-5	IU08s07.D	07/08/2020	12:51
HD-COD-SW-15-0/1-0	410-5692-6	IU08s08.D	07/08/2020	13:12
HD-COD-SW-15-0/1-0 MS	410-5692-6 MS	IU08s09.D	07/08/2020	13:33
HD-COD-SW-15-0/1-0 MSD	410-5692-6 MSD	IU08s10.D	07/08/2020	13:55
HD-COD-SW-16-0/1-0	410-5692-7	IU08s12.D	07/08/2020	14:37
HD-COD-SW-17-0/1-0	410-5692-8	IU08s13.D	07/08/2020	14:59
HD-COD-SW-26-0/1-0	410-5692-9	IU08s14.D	07/08/2020	15:20
HD-COD-SW-27-0/1-0	410-5692-10	IU08s15.D	07/08/2020	15:41
HD-COD-SW-28-0/1-0	410-5692-11	IU08s16.D	07/08/2020	16:02
HD-COD-SW-29-0/1-0	410-5692-12	IU08s17.D	07/08/2020	16:23
HD-QC1-0/1-1	410-5692-13	IU08s18.D	07/08/2020	16:45

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

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-5692-1

SDG No.:

Sample No.: ICIS 410-6388/13 Date Analyzed: 03/16/2020 16:45

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

Lab File ID (Standard): IM16I02.D Heated Purge: (Y/N) N

Calibration ID: 2799

		TBAd10		FB		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		174786	4.29	2016512	7.78	1509705	11.23
UPPER LIMIT		349572	4.79	4033024	8.28	3019410	11.73
LOWER LIMIT		87393	3.79	1008256	7.28	754853	10.73
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 410-7691/21		170420	4.30	2016169	7.79	1514085	11.22
CCVIS 410-20265/3		177957	4.31	1757170	7.79	1326604	11.22

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 8260D

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

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-5692-1

SDG No.:

Sample No.: ICIS 410-6388/13 Date Analyzed: 03/16/2020 16:45

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

Lab File ID (Standard): IM16I02.D Heated Purge: (Y/N) N

Calibration ID: 2799

		DCBd4					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		813828	13.10				
UPPER LIMIT		1627656	13.60				
LOWER LIMIT		406914	12.60				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 410-7691/21		818513	13.10				
CCVIS 410-20265/3		737000	13.09				

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 8260D

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

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-5692-1

SDG No.:

Sample No.: CCVIS 410-20265/3 Date Analyzed: 07/08/2020 08:58

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

Lab File ID (Standard): IU06C01.D Heated Purge: (Y/N) N

Calibration ID: 2799

		TBAd10		FB		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		177957	4.31	1757170	7.79	1326604	11.22
UPPER LIMIT		355914	4.81	3514340	8.29	2653208	11.72
LOWER LIMIT		88979	3.81	878585	7.29	663302	10.72
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 410-20265/4		162446	4.31	1762318	7.78	1335595	11.22
MB 410-20265/6		168171	4.31	1724434	7.78	1294824	11.22
410-5692-14	HD-QC1-0/1-2	132861	4.32	1648930	7.78	1249223	11.22
410-5692-1	HD-COD-SW-6-0/1-0	148855	4.32	1642527	7.78	1241147	11.22
410-5692-2	HD-COD-SW-7-0/1-0	132827	4.32	1614997	7.78	1213365	11.22
410-5692-3	HD-COD-SW-8-0/1-0	132466	4.32	1563283	7.78	1179079	11.22
410-5692-4	HD-COD-SW-9-0/1-0	122319	4.32	1542851	7.78	1175834	11.22
410-5692-5	HD-COD-SW-13-0/1-0	111637	4.29	1510683	7.78	1152572	11.22
410-5692-6	HD-COD-SW-15-0/1-0	132975	4.32	1493238	7.79	1129767	11.22
410-5692-6 MS	HD-COD-SW-15-0/1-0 MS	119883	4.31	1507086	7.78	1150776	11.22
410-5692-6 MSD	HD-COD-SW-15-0/1-0 MSD	121588	4.31	1535757	7.79	1165175	11.22
410-5692-7	HD-COD-SW-16-0/1-0	118365	4.31	1477007	7.78	1123071	11.22
410-5692-8	HD-COD-SW-17-0/1-0	118433	4.32	1495812	7.78	1149548	11.22
410-5692-9	HD-COD-SW-26-0/1-0	117298	4.31	1476503	7.78	1132167	11.22
410-5692-10	HD-COD-SW-27-0/1-0	104897	4.30	1404882	7.78	1069187	11.22
410-5692-11	HD-COD-SW-28-0/1-0	110668	4.32	1414380	7.79	1081870	11.22
410-5692-12	HD-COD-SW-29-0/1-0	108159	4.31	1372097	7.78	1056494	11.22
410-5692-13	HD-QC1-0/1-1	111944	4.32	1381166	7.78	1054750	11.22

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 8260D

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

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-5692-1

SDG No.:

Sample No.: CCVIS 410-20265/3 Date Analyzed: 07/08/2020 08:58

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

Lab File ID (Standard): IU06C01.D Heated Purge: (Y/N) N

Calibration ID: 2799

		DCBd4					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		737000	13.09				
UPPER LIMIT		1474000	13.59				
LOWER LIMIT		368500	12.59				
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 410-20265/4		724019	13.09				
MB 410-20265/6		701508	13.09				
410-5692-14	HD-QC1-0/1-2	675619	13.09				
410-5692-1	HD-COD-SW-6-0/1-0	679136	13.09				
410-5692-2	HD-COD-SW-7-0/1-0	669041	13.09				
410-5692-3	HD-COD-SW-8-0/1-0	647966	13.09				
410-5692-4	HD-COD-SW-9-0/1-0	637976	13.09				
410-5692-5	HD-COD-SW-13-0/1-0	628096	13.09				
410-5692-6	HD-COD-SW-15-0/1-0	623645	13.09				
410-5692-6 MS	HD-COD-SW-15-0/1-0 MS	650729	13.09				
410-5692-6 MSD	HD-COD-SW-15-0/1-0 MSD	651094	13.09				
410-5692-7	HD-COD-SW-16-0/1-0	614680	13.09				
410-5692-8	HD-COD-SW-17-0/1-0	620375	13.09				
410-5692-9	HD-COD-SW-26-0/1-0	620215	13.09				
410-5692-10	HD-COD-SW-27-0/1-0	589285	13.09				
410-5692-11	HD-COD-SW-28-0/1-0	592718	13.09				
410-5692-12	HD-COD-SW-29-0/1-0	579540	13.09				
410-5692-13	HD-QC1-0/1-1	573964	13.09				

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 8260D

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-5692-1

SDG No.:

Client Sample ID: HD-COD-SW-6-0/1-0 Lab Sample ID: 410-5692-1

Matrix: Water Lab File ID: IU08s03.D

Analysis Method: 8260D Date Collected: 06/24/2020 10:35

Sample wt/vol: 25(mL) Date Analyzed: 07/08/2020 11:27

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.: 20265 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		0.50	0.060
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.50	0.070
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
107-06-2	1,2-Dichloroethane	ND		0.50	0.050
78-87-5	1,2-Dichloropropane	ND		0.50	0.060
78-93-3	2-Butanone (MEK)	ND		5.0	0.60
591-78-6	2-Hexanone	ND		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70
67-64-1	Acetone	2.3	J	5.0	0.90
107-13-1	Acrylonitrile	ND		5.0	0.40
71-43-2	Benzene	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
74-97-5	Bromochloromethane	ND		0.50	0.050
124-48-1	Dibromochloromethane	ND		0.50	0.070
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
75-27-4	Bromodichloromethane	ND		0.50	0.050
100-41-4	Ethylbenzene	ND		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	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.: 410-5692-1

SDG No.:

Client Sample ID: HD-COD-SW-6-0/1-0 Lab Sample ID: 410-5692-1

Matrix: Water Lab File ID: IU08s03.D

Analysis Method: 8260D Date Collected: 06/24/2020 10:35

Sample wt/vol: 25(mL) Date Analyzed: 07/08/2020 11:27

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.: 20265 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)	103		80-120
460-00-4	4-Bromofluorobenzene (Surr)	98		80-120
1868-53-7	Dibromofluoromethane (Surr)	102		80-120
2037-26-5	Toluene-d8 (Surr)	100		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s03.D
Lims ID: 410-5692-A-1
Client ID: HD-COD-SW-6-0/1-0
Sample Type: Client
Inject. Date: 08-Jul-2020 11:27:30 ALS Bottle#: 9 Worklist Smp#: 10
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-5692-A-1
Misc. Info.: 410-0005039-010
Operator ID: jkh09052 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 09-Jul-2020 09:13:09 Calib Date: 16-Mar-2020 18:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1051

First Level Reviewer: riehlc Date: 09-Jul-2020 08:21:13

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
4 Chloromethane	50		2.203				ND	
5 Vinyl chloride	62		2.324				ND	
7 Bromomethane	94		2.648				ND	
8 Chloroethane	64		2.739				ND	
14 1,1-Dichloroethene	96		3.623				ND	
15 Acetone	43	3.647	3.647	0.000	99	16878	2.28	
19 Carbon disulfide	76	3.934	3.934	0.000	39	3495	0.0278	7M
23 Methylene Chloride	84		4.306				ND	
* 24 t-Butyl alcohol-d10 (IS)	65	4.318	4.306	0.012	0	148855	50.0	
26 Acrylonitrile	53		4.641				ND	
27 Methyl tert-butyl ether	73		4.708				ND	
28 trans-1,2-Dichloroethene	96		4.726				ND	
31 1,1-Dichloroethane	63		5.379				ND	
36 2-Butanone (MEK)	43		6.177				ND	
37 cis-1,2-Dichloroethene	96	6.202	6.202	0.000	74	1956	0.0369	
43 Chlorobromomethane	128		6.537				ND	
45 Chloroform	83		6.683				ND	
$ 46 Dibromofluoromethane (Surr)	113	6.897	6.897	0.000	94	405328	10.2	
47 1,1,1-Trichloroethane	97		6.909				ND	
50 Carbon tetrachloride	117		7.128				ND	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.348	7.354	-0.006	0	82896	10.3	
54 Benzene	78		7.384				ND	
56 1,2-Dichloroethane	62		7.452				ND	
* 58 Fluorobenzene (IS)	96	7.781	7.787	-0.006	99	1642527	10.0	
61 Trichloroethene	95		8.262				ND	
63 1,2-Dichloropropane	63		8.592				ND	
68 Dichlorobromomethane	83		8.933				ND	
73 cis-1,3-Dichloropropene	75		9.476				ND	
74 4-Methyl-2-pentanone (MIBK)	43		9.640				ND	
$ 75 Toluene-d8 (Surr)	98	9.774	9.774	0.000	93	1585754	10.0	
76 Toluene	92	9.847	9.853	-0.006	96	7001	0.0555	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
78 trans-1,3-Dichloropropene	75		10.103				ND	
80 1,1,2-Trichloroethane	97		10.305				ND	
81 Tetrachloroethene	166	10.396	10.396	0.000	80	1540	0.0256	
83 2-Hexanone	43		10.512				ND	
85 Chlorodibromomethane	129		10.683				ND	
86 Ethylene Dibromide	107		10.792				ND	
* 87 Chlorobenzene-d5 (IS)	117	11.219	11.219	0.000	85	1241147	10.0	
90 Chlorobenzene	112		11.243				ND	
S 89 Xylenes, Total	106		11.245				ND	
91 1,1,1,2-Tetrachloroethane	131		11.323				ND	
92 Ethylbenzene	91		11.329				ND	
93 m-Xylene & p-Xylene	106		11.445				ND	
94 o-Xylene	106		11.768				ND	
95 Styrene	104		11.786				ND	
96 Bromoform	173		11.945				ND	
$ 100 4-Bromofluorobenzene (Surr)	95	12.213	12.213	0.000	92	575350	9.77	
101 1,1,2,2-Tetrachloroethane	83		12.310				ND	
* 115 1,4-Dichlorobenzene-d4	152	13.091	13.091	0.000	94	679136	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

Reagents:

MSV_31_826ISS_00002 Amount Added: 5.00 Units: uL Run Reagent

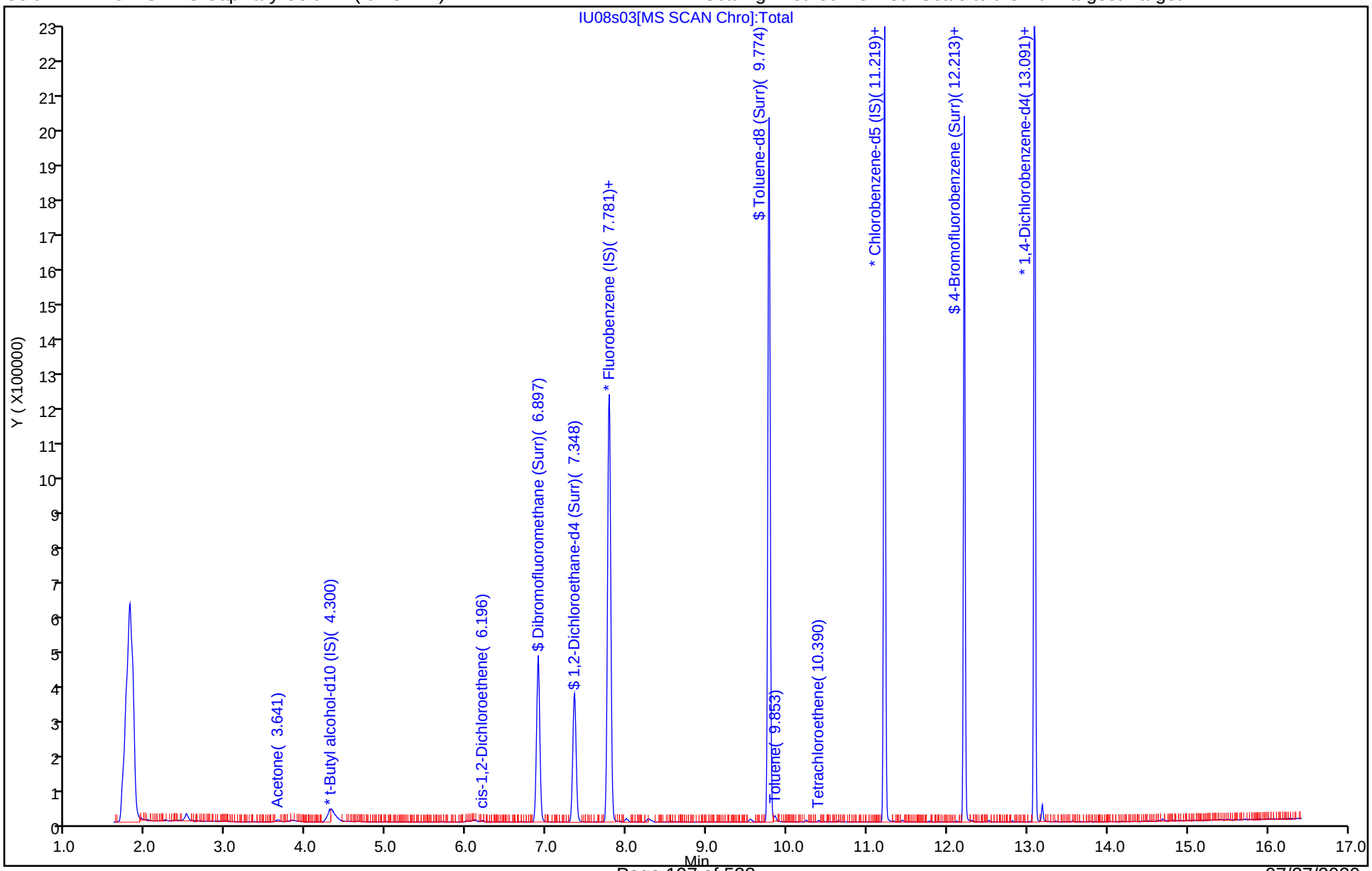
Report Date: 09-Jul-2020 09:13:37 Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s03.D

Injection Date:	08-Jul-2020 11:27:30	Instrument ID:	19930	Operator ID:	jkh09052
Lims ID:	410-5692-A-1	Lab Sample ID:	410-5692-1	Worklist Smp#:	10
Client ID:	HD-COD-SW-6-0/1-0				
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



Eurofins Lancaster Laboratories Env, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s03.D				
Lims ID:	410-5692-A-1				
Client ID:	HD-COD-SW-6-0/1-0				
Sample Type:	Client				
Inject. Date:	08-Jul-2020 11:27:30	ALS Bottle#:	9	Worklist Smp#:	10
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-5692-A-1				
Misc. Info.:	410-0005039-010				
Operator ID:	jkh09052	Instrument ID:	19930		
Method:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\8260 25ml HP31.m				
Limit Group:	MSV - 8260C_D				
Last Update:	09-Jul-2020 09:13:09	Calib Date:	16-Mar-2020 18:31:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1051				

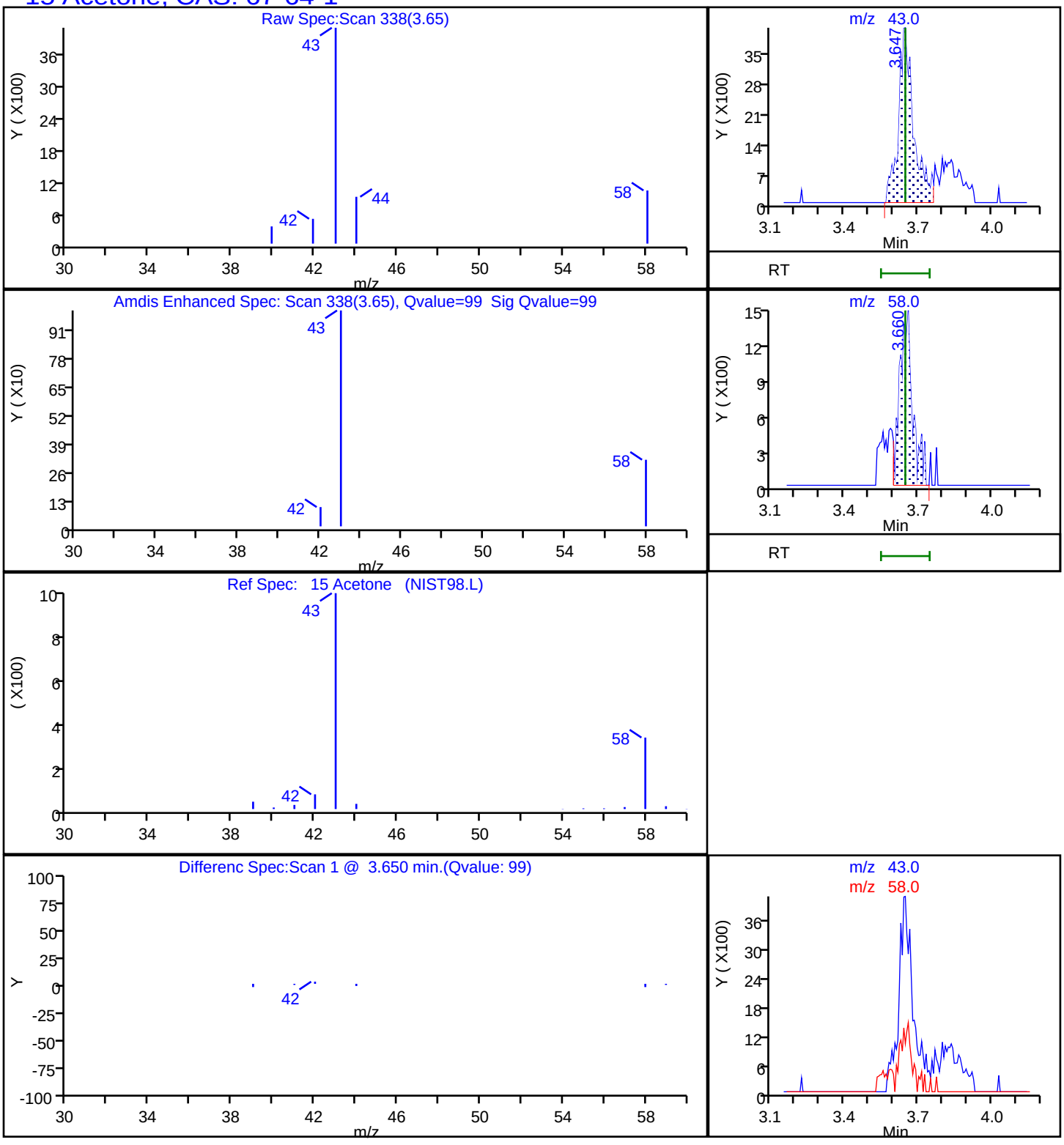
First Level Reviewer: riehlc Date: 09-Jul-2020 08:21:13

Compound	Amount Added	Amount Recovered	% Rec.
$ 46 Dibromofluoromethane (Surr)	10.0	10.2	102.24
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.3	103.19
$ 75 Toluene-d8 (Surr)	10.0	10.0	100.47
$ 100 4-Bromofluorobenzene (Surr)	10.0	9.77	97.69

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s03.D				
Injection Date:	08-Jul-2020 11:27:30	Instrument ID:	19930		
Lims ID:	410-5692-A-1	Lab Sample ID:	410-5692-1		
Client ID:	HD-COD-SW-6-0/1-0				
Operator ID:	jkh09052	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 (0.25 mm)	Detector	MS Quad		

15 Acetone, CAS: 67-64-1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

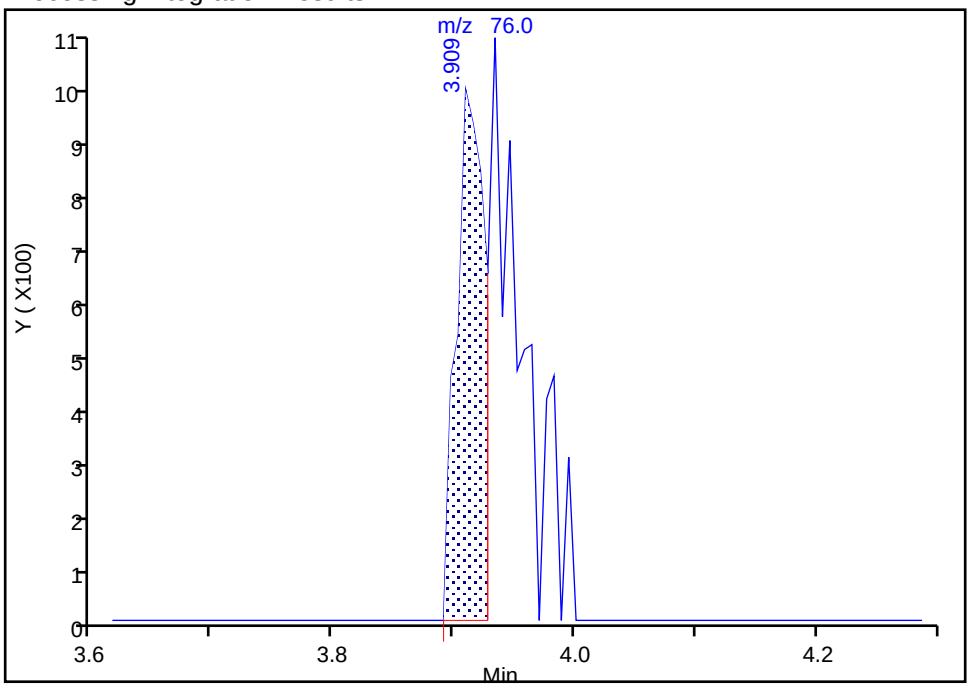
Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s03.D				
Injection Date:	08-Jul-2020 11:27:30	Instrument ID:	19930		
Lims ID:	410-5692-A-1	Lab Sample ID:	410-5692-1		
Client ID:	HD-COD-SW-6-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	9	Worklist Smp#:	10
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

19 Carbon disulfide, CAS: 75-15-0

Signal: 1

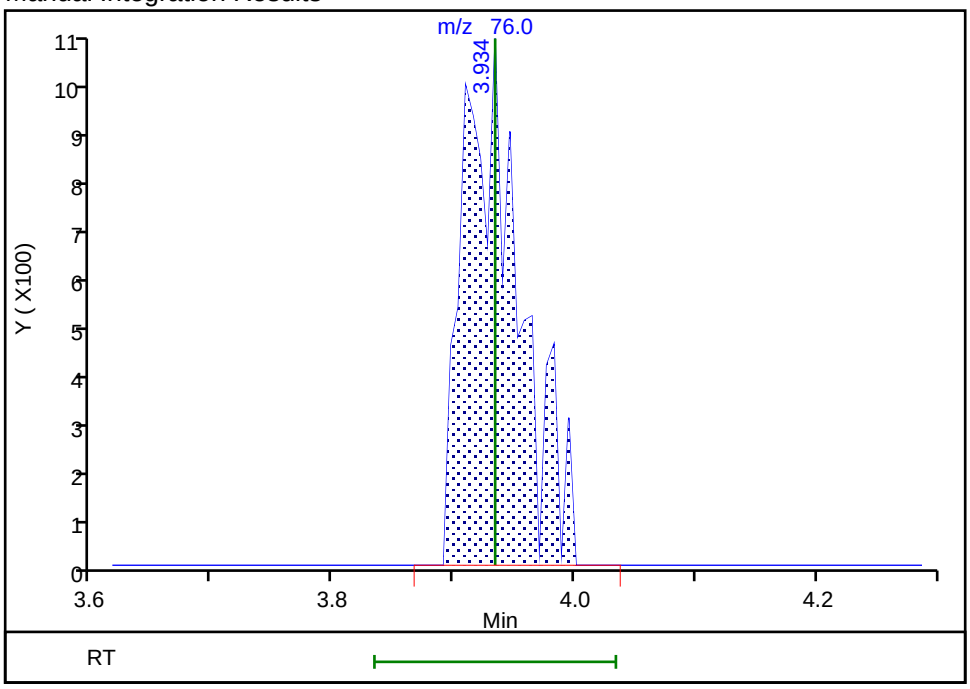
Processing Integration Results

RT: 3.91
Area: 1598
Amount: 0.012724
Amount Units: ug/l



Manual Integration Results

RT: 3.93
Area: 3495
Amount: 0.027828
Amount Units: ug/l



Reviewer: riehlc, 09-Jul-2020 08:20:31
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.: 410-5692-1

SDG No.:

Client Sample ID: HD-COD-SW-7-0/1-0 Lab Sample ID: 410-5692-2

Matrix: Water Lab File ID: IU08s04.D

Analysis Method: 8260D Date Collected: 06/24/2020 11:15

Sample wt/vol: 25(mL) Date Analyzed: 07/08/2020 11:48

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.: 20265 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		0.50	0.060
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.50	0.070
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
107-06-2	1,2-Dichloroethane	ND		0.50	0.050
78-87-5	1,2-Dichloropropane	ND		0.50	0.060
78-93-3	2-Butanone (MEK)	ND		5.0	0.60
591-78-6	2-Hexanone	ND		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70
67-64-1	Acetone	2.0	J	5.0	0.90
107-13-1	Acrylonitrile	ND		5.0	0.40
71-43-2	Benzene	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
74-97-5	Bromochloromethane	ND		0.50	0.050
124-48-1	Dibromochloromethane	ND		0.50	0.070
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	0.084	J	0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	ND		0.50	0.050
75-27-4	Bromodichloromethane	ND		0.50	0.050
100-41-4	Ethylbenzene	ND		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	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	0.083	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.: 410-5692-1

SDG No.:

Client Sample ID: HD-COD-SW-7-0/1-0 Lab Sample ID: 410-5692-2

Matrix: Water Lab File ID: IU08s04.D

Analysis Method: 8260D Date Collected: 06/24/2020 11:15

Sample wt/vol: 25(mL) Date Analyzed: 07/08/2020 11:48

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.: 20265 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)	102		80-120
460-00-4	4-Bromofluorobenzene (Surr)	99		80-120
1868-53-7	Dibromofluoromethane (Surr)	101		80-120
2037-26-5	Toluene-d8 (Surr)	100		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s04.D
Lims ID: 410-5692-A-2
Client ID: HD-COD-SW-7-0/1-0
Sample Type: Client
Inject. Date: 08-Jul-2020 11:48:30 ALS Bottle#: 10 Worklist Smp#: 11
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-5692-A-2
Misc. Info.: 410-0005039-011
Operator ID: jkh09052 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 09-Jul-2020 09:13:09 Calib Date: 16-Mar-2020 18:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1051

First Level Reviewer: riehlc Date: 09-Jul-2020 08:22:38

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
4 Chloromethane	50	2.202	2.203	-0.001	18	3509	0.0496	
5 Vinyl chloride	62		2.324				ND	
7 Bromomethane	94		2.648				ND	
8 Chloroethane	64		2.739				ND	
14 1,1-Dichloroethene	96		3.623				ND	
15 Acetone	43	3.666	3.647	0.019	100	13177	2.00	
19 Carbon disulfide	76	3.916	3.934	-0.018	94	6239	0.0505	M
23 Methylene Chloride	84		4.306				ND	
* 24 t-Butyl alcohol-d10 (IS)	65	4.318	4.306	0.012	0	132827	50.0	
26 Acrylonitrile	53		4.641				ND	
27 Methyl tert-butyl ether	73		4.708				ND	
28 trans-1,2-Dichloroethene	96		4.726				ND	
31 1,1-Dichloroethane	63		5.379				ND	
36 2-Butanone (MEK)	43		6.177				ND	
37 cis-1,2-Dichloroethene	96	6.214	6.202	0.012	65	4365	0.0837	
43 Chlorobromomethane	128		6.537				ND	
45 Chloroform	83	6.683	6.683	0.000	89	4461	0.0540	
$ 46 Dibromofluoromethane (Surr)	113	6.897	6.897	0.000	94	392558	10.1	
47 1,1,1-Trichloroethane	97		6.909				ND	
50 Carbon tetrachloride	117		7.128				ND	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.348	7.354	-0.006	0	80241	10.2	
54 Benzene	78		7.384				ND	
56 1,2-Dichloroethane	62		7.452				ND	
* 58 Fluorobenzene (IS)	96	7.781	7.787	-0.006	99	1614997	10.0	
61 Trichloroethene	95		8.262				ND	
63 1,2-Dichloropropane	63		8.592				ND	
68 Dichlorobromomethane	83		8.933				ND	
73 cis-1,3-Dichloropropene	75		9.476				ND	
74 4-Methyl-2-pentanone (MIBK)	43		9.640				ND	
$ 75 Toluene-d8 (Surr)	98	9.774	9.774	0.000	93	1544934	10.0	
76 Toluene	92	9.853	9.853	0.000	95	10234	0.0830	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
78 trans-1,3-Dichloropropene	75		10.103				ND	
80 1,1,2-Trichloroethane	97		10.305				ND	
81 Tetrachloroethene	166	10.396	10.396	0.000	87	3147	0.0534	
83 2-Hexanone	43		10.512				ND	
85 Chlorodibromomethane	129		10.683				ND	
86 Ethylene Dibromide	107		10.792				ND	
* 87 Chlorobenzene-d5 (IS)	117	11.219	11.219	0.000	85	1213365	10.0	
90 Chlorobenzene	112		11.243				ND	
S 89 Xylenes, Total	106		11.245				ND	
91 1,1,1,2-Tetrachloroethane	131		11.323				ND	
92 Ethylbenzene	91		11.329				ND	
93 m-Xylene & p-Xylene	106		11.445				ND	
94 o-Xylene	106		11.768				ND	
95 Styrene	104		11.786				ND	
96 Bromoform	173		11.945				ND	
$ 100 4-Bromofluorobenzene (Surr)	95	12.213	12.213	0.000	93	568901	9.88	
101 1,1,2,2-Tetrachloroethane	83		12.310				ND	
* 115 1,4-Dichlorobenzene-d4	152	13.091	13.091	0.000	95	669041	10.0	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MSV_31_826ISS_00002 Amount Added: 5.00 Units: uL Run Reagent

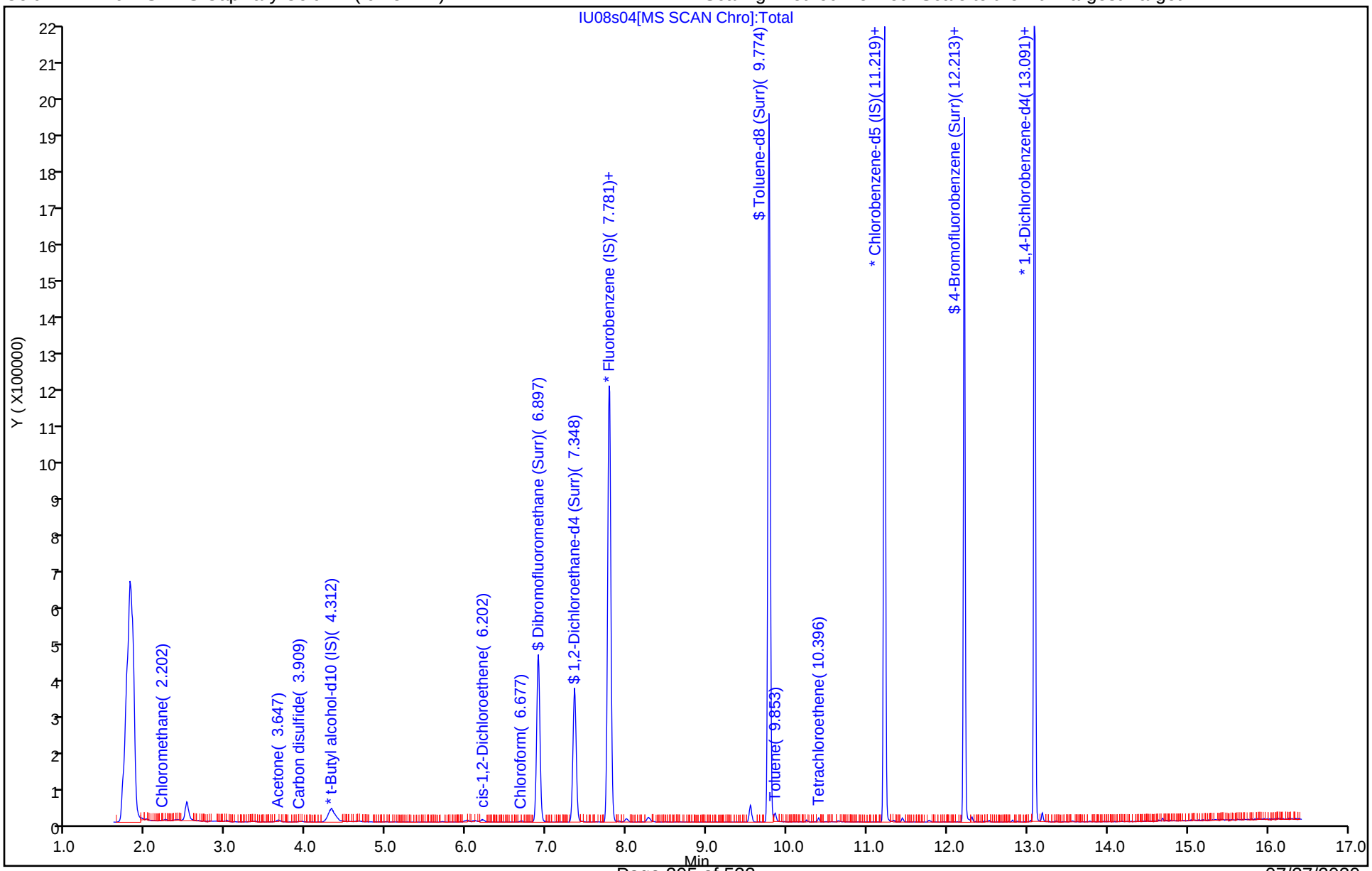
Report Date: 09-Jul-2020 09:13:38 Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s04.D

Injection Date:	08-Jul-2020 11:48:30	Instrument ID:	19930	Operator ID:	jkh09052
Lims ID:	410-5692-A-2	Lab Sample ID:	410-5692-2	Worklist Smp#:	11
Client ID:	HD-COD-SW-7-0/1-0				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
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\20200708-5039.b\IU08s04.D				
Lims ID:	410-5692-A-2				
Client ID:	HD-COD-SW-7-0/1-0				
Sample Type:	Client				
Inject. Date:	08-Jul-2020 11:48:30	ALS Bottle#:	10	Worklist Smp#:	11
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-5692-A-2				
Misc. Info.:	410-0005039-011				
Operator ID:	jkh09052	Instrument ID:	19930		
Method:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\8260 25ml HP31.m				
Limit Group:	MSV - 8260C_D				
Last Update:	09-Jul-2020 09:13:09	Calib Date:	16-Mar-2020 18:31:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1051				

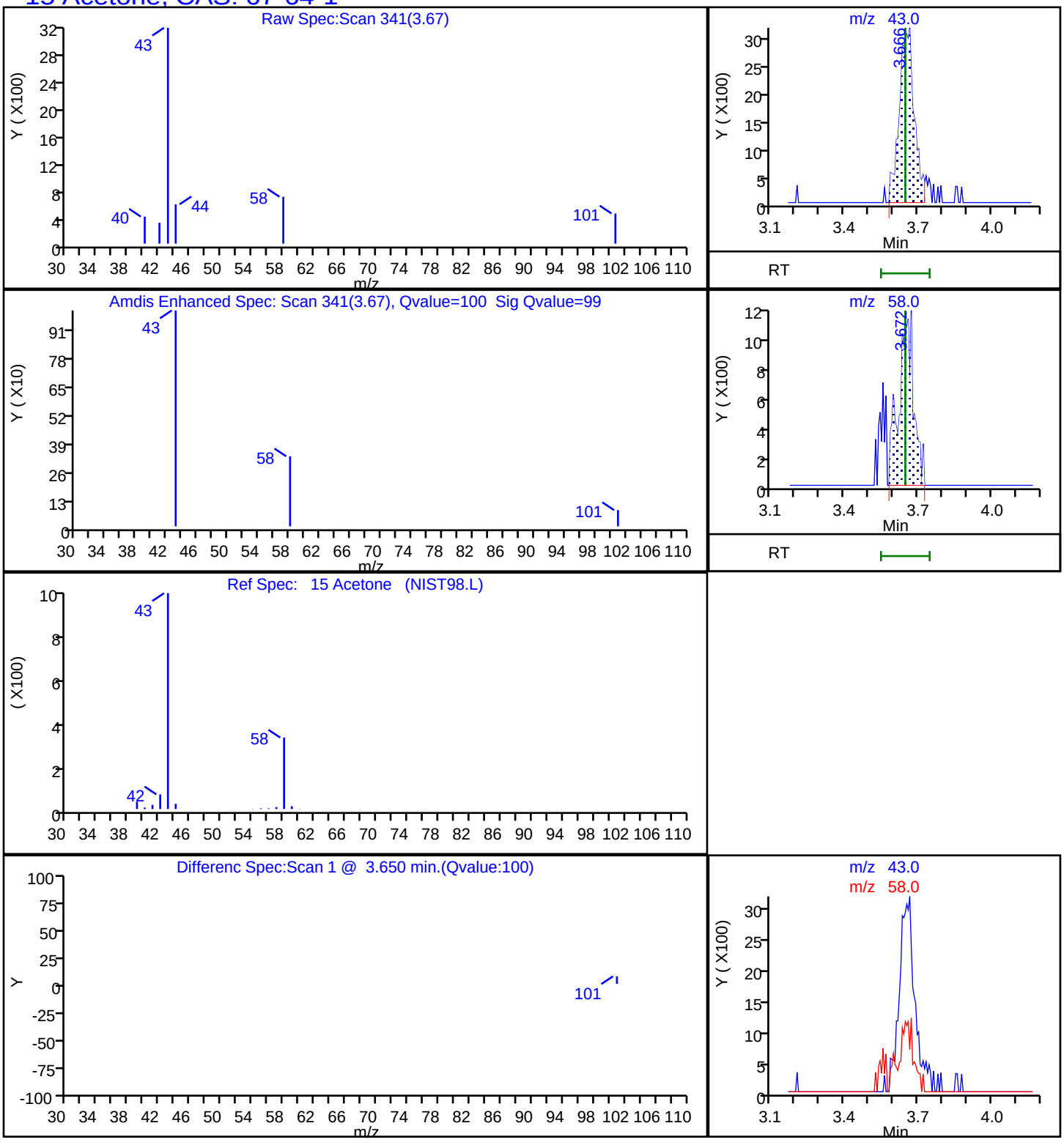
First Level Reviewer: riehlc Date: 09-Jul-2020 08:22:38

Compound	Amount Added	Amount Recovered	% Rec.
$ 46 Dibromofluoromethane (Surr)	10.0	10.1	100.71
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.2	101.59
$ 75 Toluene-d8 (Surr)	10.0	10.0	100.13
$ 100 4-Bromofluorobenzene (Surr)	10.0	9.88	98.81

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s04.D				
Injection Date:	08-Jul-2020 11:48:30	Instrument ID:	19930		
Lims ID:	410-5692-A-2	Lab Sample ID:	410-5692-2		
Client ID:	HD-COD-SW-7-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	10	Worklist Smp#:	11
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		

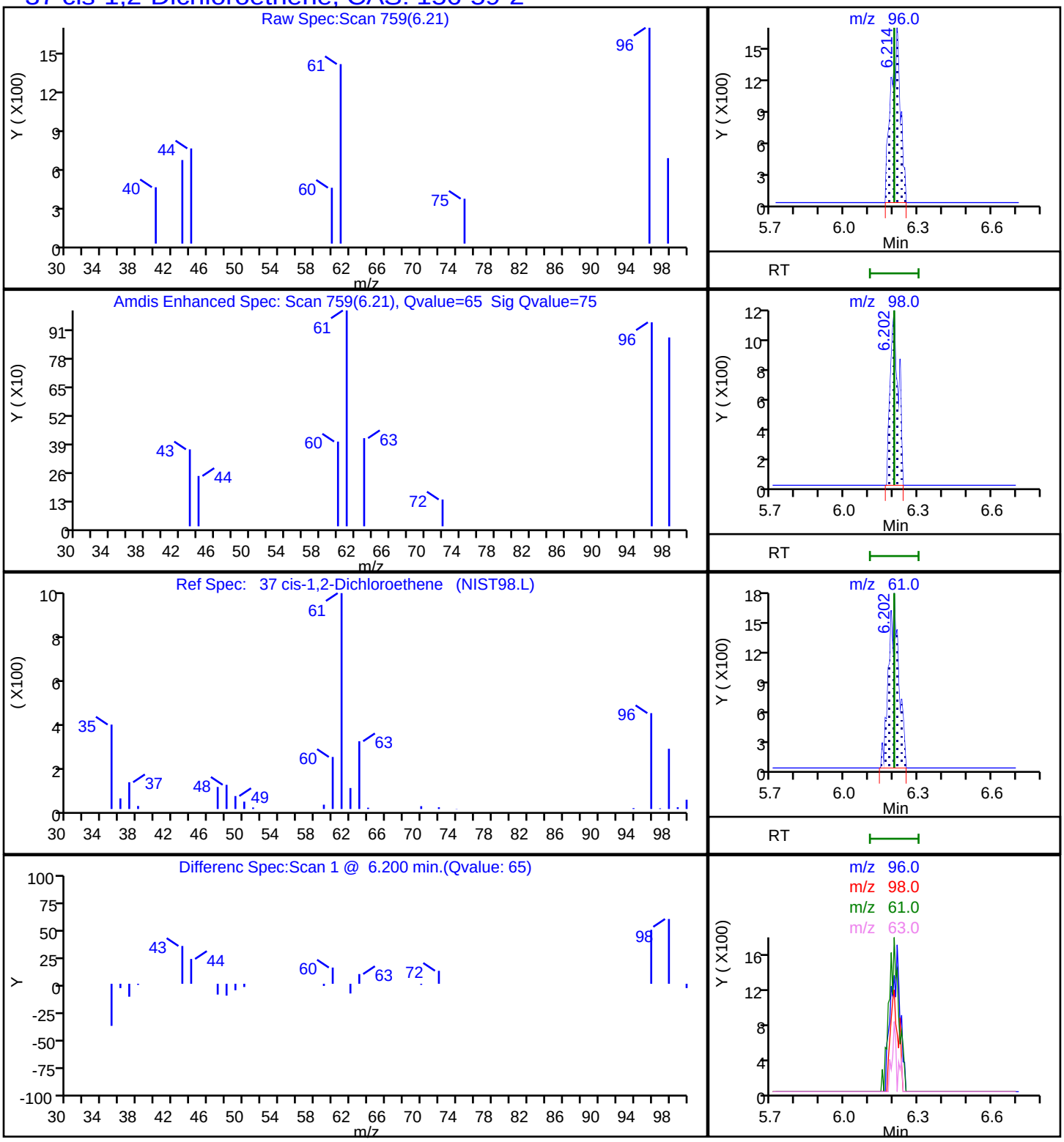
15 Acetone, CAS: 67-64-1



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s04.D				
Injection Date:	08-Jul-2020 11:48:30	Instrument ID:	19930		
Lims ID:	410-5692-A-2	Lab Sample ID:	410-5692-2		
Client ID:	HD-COD-SW-7-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	10	Worklist Smp#:	11
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		

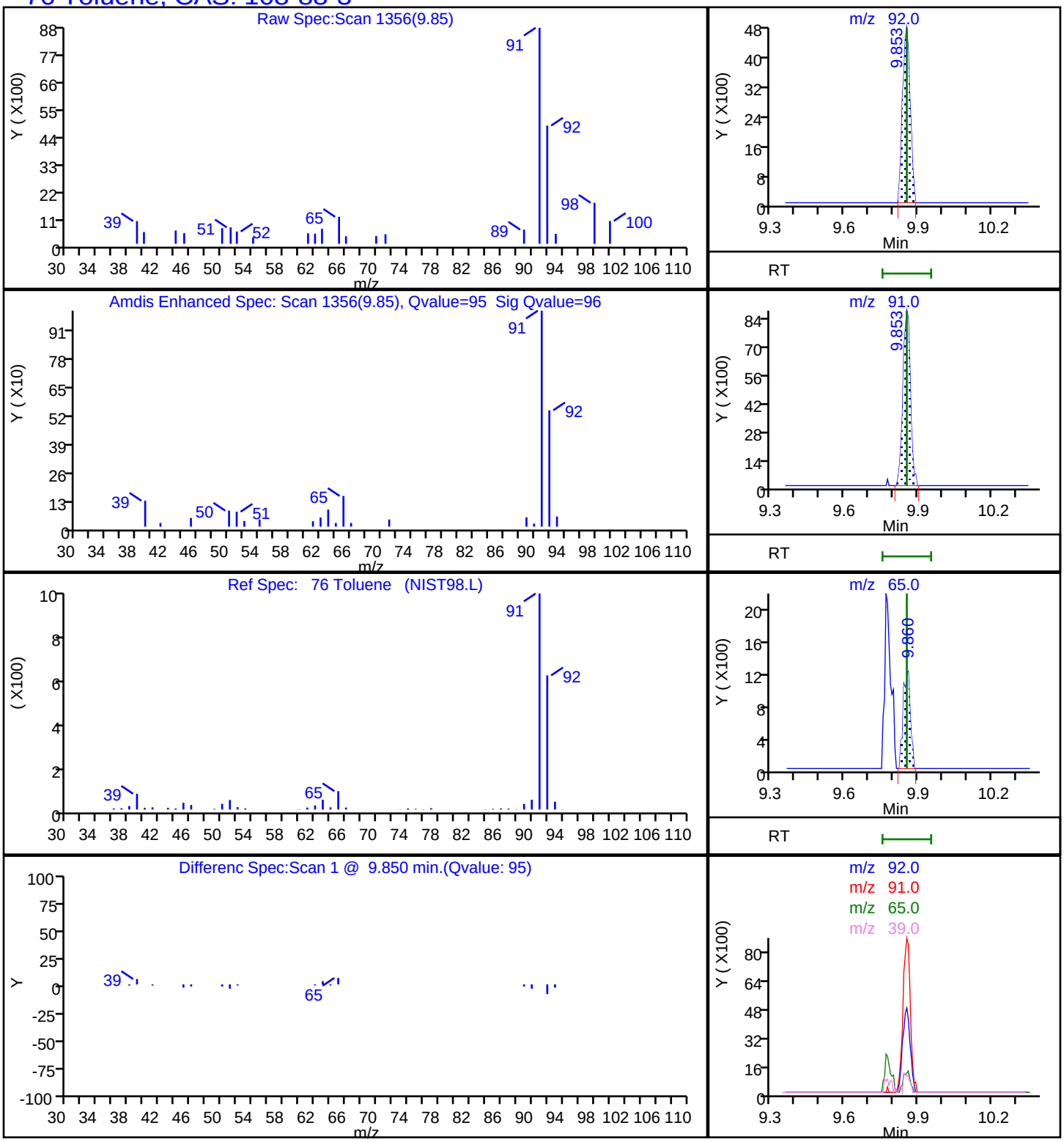
37 cis-1,2-Dichloroethene, CAS: 156-59-2



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s04.D				
Injection Date:	08-Jul-2020 11:48:30	Instrument ID:	19930		
Lims ID:	410-5692-A-2	Lab Sample ID:	410-5692-2		
Client ID:	HD-COD-SW-7-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	10	Worklist Smp#:	11
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		

76 Toluene, CAS: 108-88-3



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

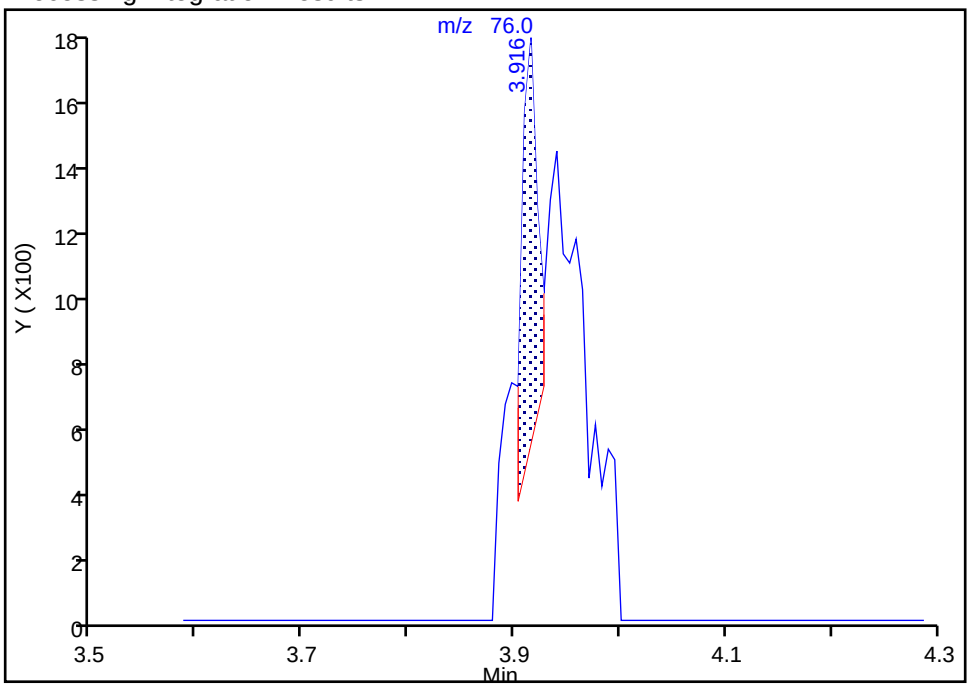
Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s04.D				
Injection Date:	08-Jul-2020 11:48:30	Instrument ID:	19930		
Lims ID:	410-5692-A-2	Lab Sample ID:	410-5692-2		
Client ID:	HD-COD-SW-7-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	10	Worklist Smp#:	11
Purge Vol:	25.000 mL	Dil. 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

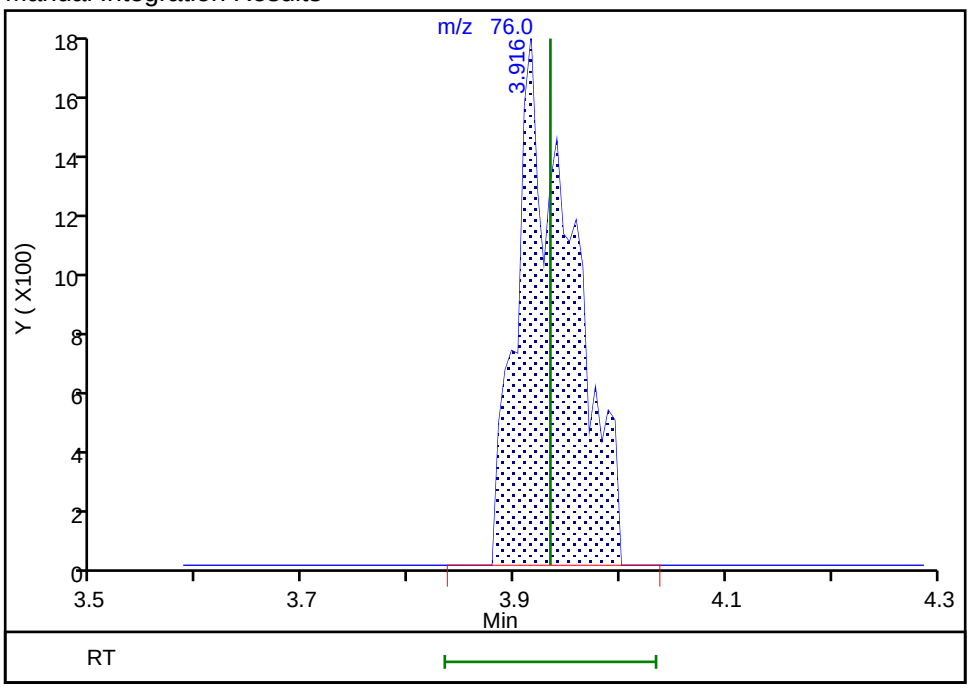
Processing Integration Results

RT: 3.92
Area: 1270
Amount: 0.010284
Amount Units: ug/l



Manual Integration Results

RT: 3.92
Area: 6239
Amount: 0.050523
Amount Units: ug/l



Reviewer: riehlc, 09-Jul-2020 08:22:00

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.: 410-5692-1

SDG No.:

Client Sample ID: HD-COD-SW-8-0/1-0 Lab Sample ID: 410-5692-3

Matrix: Water Lab File ID: IU08s05.D

Analysis Method: 8260D Date Collected: 06/24/2020 09:15

Sample wt/vol: 25(mL) Date Analyzed: 07/08/2020 12:09

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.: 20265 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		0.50	0.060
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.50	0.070
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
107-06-2	1,2-Dichloroethane	ND		0.50	0.050
78-87-5	1,2-Dichloropropane	ND		0.50	0.060
78-93-3	2-Butanone (MEK)	ND		5.0	0.60
591-78-6	2-Hexanone	ND		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70
67-64-1	Acetone	1.7	J	5.0	0.90
107-13-1	Acrylonitrile	ND		5.0	0.40
71-43-2	Benzene	ND		0.50	0.050
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
74-97-5	Bromochloromethane	ND		0.50	0.050
124-48-1	Dibromochloromethane	ND		0.50	0.070
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	0.077	J	0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	ND		0.50	0.050
75-27-4	Bromodichloromethane	ND		0.50	0.050
100-41-4	Ethylbenzene	ND		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	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	0.093	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.: 410-5692-1

SDG No.:

Client Sample ID: HD-COD-SW-8-0/1-0 Lab Sample ID: 410-5692-3

Matrix: Water Lab File ID: IU08s05.D

Analysis Method: 8260D Date Collected: 06/24/2020 09:15

Sample wt/vol: 25(mL) Date Analyzed: 07/08/2020 12:09

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.: 20265 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	0.075	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)	104		80-120
460-00-4	4-Bromofluorobenzene (Surr)	97		80-120
1868-53-7	Dibromofluoromethane (Surr)	101		80-120
2037-26-5	Toluene-d8 (Surr)	101		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s05.D
Lims ID: 410-5692-A-3
Client ID: HD-COD-SW-8-0/1-0
Sample Type: Client
Inject. Date: 08-Jul-2020 12:09:30 ALS Bottle#: 11 Worklist Smp#: 12
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-5692-A-3
Misc. Info.: 410-0005039-012
Operator ID: jkh09052 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 09-Jul-2020 09:13:09 Calib Date: 16-Mar-2020 18:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1051

First Level Reviewer: riehlc Date: 09-Jul-2020 08:24:04

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
4 Chloromethane	50	2.190	2.203	-0.013	1	2103	0.0307	
5 Vinyl chloride	62		2.324				ND	
7 Bromomethane	94		2.648				ND	
8 Chloroethane	64		2.739				ND	
14 1,1-Dichloroethene	96		3.623				ND	
15 Acetone	43	3.647	3.647	0.000	92	11360	1.73	
19 Carbon disulfide	76	3.916	3.934	-0.018	48	3752	0.0314	M
23 Methylene Chloride	84		4.306				ND	
* 24 t-Butyl alcohol-d10 (IS)	65	4.324	4.306	0.018	0	132466	50.0	
26 Acrylonitrile	53		4.641				ND	
27 Methyl tert-butyl ether	73		4.708				ND	
28 trans-1,2-Dichloroethene	96		4.726				ND	
31 1,1-Dichloroethane	63		5.379				ND	
36 2-Butanone (MEK)	43		6.177				ND	
37 cis-1,2-Dichloroethene	96	6.214	6.202	0.012	76	3863	0.0766	
43 Chlorobromomethane	128		6.537				ND	
45 Chloroform	83	6.677	6.683	-0.006	1	2449	0.0306	M
$ 46 Dibromofluoromethane (Surr)	113	6.897	6.897	0.000	94	381750	10.1	
47 1,1,1-Trichloroethane	97		6.909				ND	
50 Carbon tetrachloride	117		7.128				ND	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.348	7.354	-0.006	0	79597	10.4	
54 Benzene	78		7.384				ND	
56 1,2-Dichloroethane	62		7.452				ND	
* 58 Fluorobenzene (IS)	96	7.781	7.787	-0.006	99	1563283	10.0	
61 Trichloroethene	95	8.262	8.262	0.000	52	3733	0.0752	M
63 1,2-Dichloropropane	63		8.592				ND	
68 Dichlorobromomethane	83		8.933				ND	
73 cis-1,3-Dichloropropene	75		9.476				ND	
74 4-Methyl-2-pentanone (MIBK)	43		9.640				ND	
$ 75 Toluene-d8 (Surr)	98	9.774	9.774	0.000	93	1509329	10.1	
76 Toluene	92	9.853	9.853	0.000	99	11199	0.0935	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
78 trans-1,3-Dichloropropene	75		10.103				ND	
80 1,1,2-Trichloroethane	97		10.305				ND	
81 Tetrachloroethene	166	10.396	10.396	0.000	89	2148	0.0375	
83 2-Hexanone	43		10.512				ND	
85 Chlorodibromomethane	129		10.683				ND	
86 Ethylene Dibromide	107		10.792				ND	
* 87 Chlorobenzene-d5 (IS)	117	11.219	11.219	0.000	85	1179079	10.0	
90 Chlorobenzene	112		11.243				ND	
S 89 Xylenes, Total	106		11.245				ND	
91 1,1,1,2-Tetrachloroethane	131		11.323				ND	
92 Ethylbenzene	91		11.329				ND	
93 m-Xylene & p-Xylene	106		11.445				ND	
94 o-Xylene	106		11.768				ND	
95 Styrene	104		11.786				ND	
96 Bromoform	173		11.945				ND	
$ 100 4-Bromofluorobenzene (Surr)	95	12.213	12.213	0.000	93	543655	9.72	
101 1,1,2,2-Tetrachloroethane	83		12.310				ND	
* 115 1,4-Dichlorobenzene-d4	152	13.091	13.091	0.000	94	647966	10.0	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MSV_31_826ISS_00002 Amount Added: 5.00 Units: uL Run Reagent

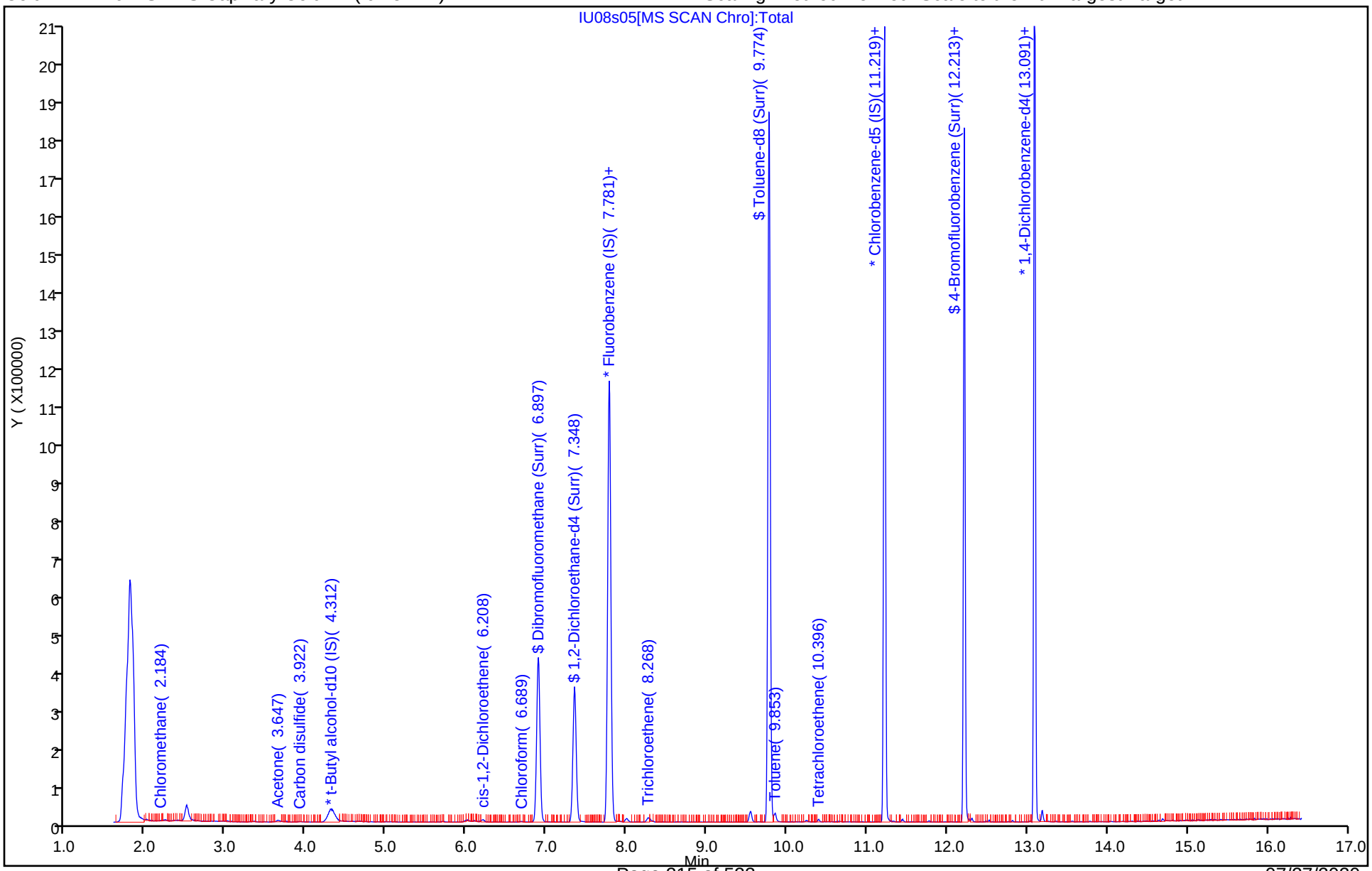
Report Date: 09-Jul-2020 09:13:40 Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s05.D

Injection Date:	08-Jul-2020 12:09:30	Instrument ID:	19930	Operator ID:	jkh09052
Lims ID:	410-5692-A-3	Lab Sample ID:	410-5692-3	Worklist Smp#:	12
Client ID:	HD-COD-SW-8-0/1-0				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
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\20200708-5039.b\IU08s05.D				
Lims ID:	410-5692-A-3				
Client ID:	HD-COD-SW-8-0/1-0				
Sample Type:	Client				
Inject. Date:	08-Jul-2020 12:09:30	ALS Bottle#:	11	Worklist Smp#:	12
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-5692-A-3				
Misc. Info.:	410-0005039-012				
Operator ID:	jkh09052	Instrument ID:	19930		
Method:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\8260 25ml HP31.m				
Limit Group:	MSV - 8260C_D				
Last Update:	09-Jul-2020 09:13:09	Calib Date:	16-Mar-2020 18:31:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1051				

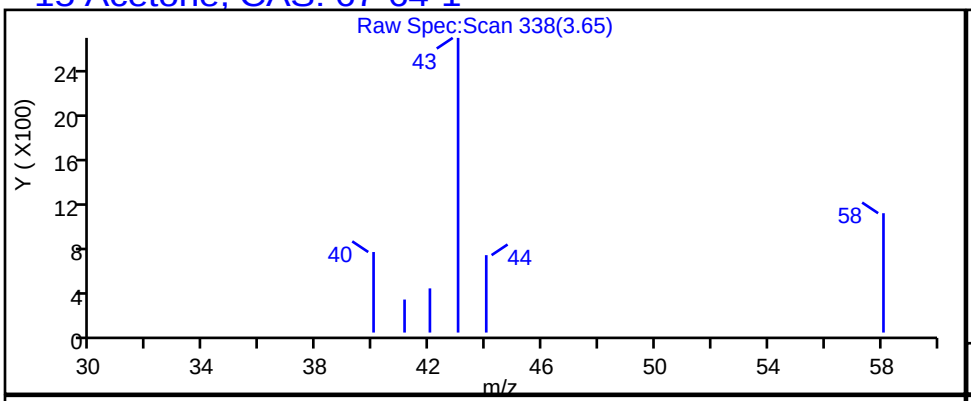
First Level Reviewer: riehlc Date: 09-Jul-2020 08:24:04

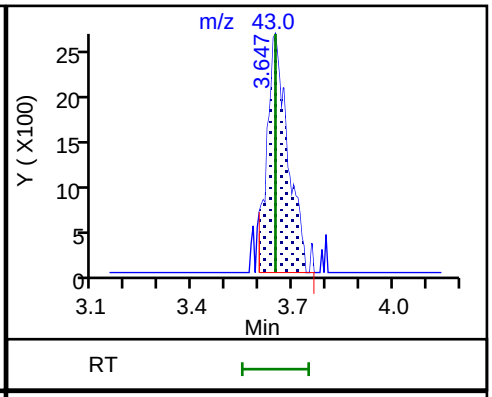
Compound	Amount Added	Amount Recovered	% Rec.
$ 46 Dibromofluoromethane (Surr)	10.0	10.1	101.18
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.4	104.11
$ 75 Toluene-d8 (Surr)	10.0	10.1	100.67
$ 100 4-Bromofluorobenzene (Surr)	10.0	9.72	97.17

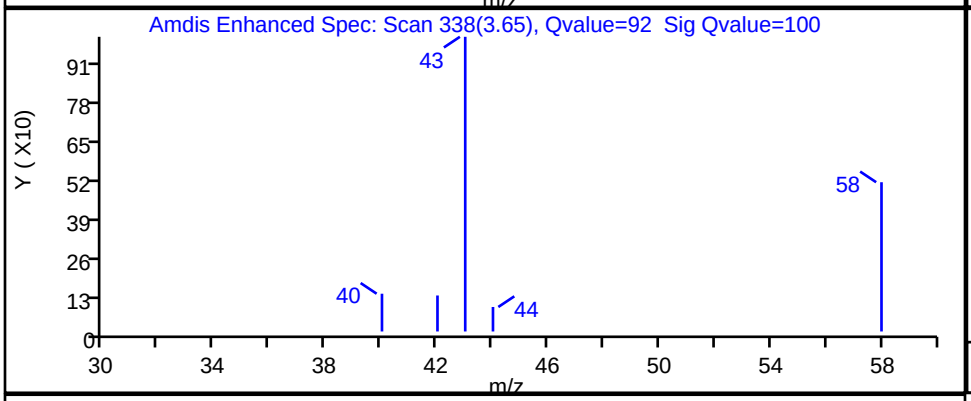
Eurofins Lancaster Laboratories Env, LLC

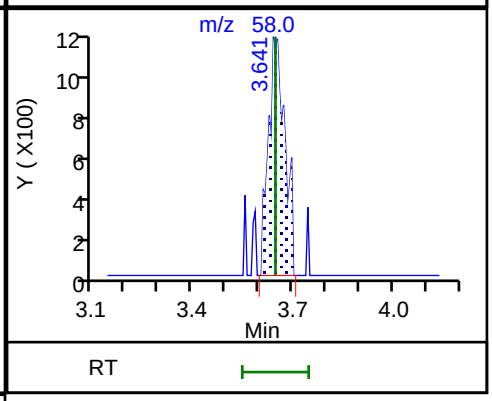
Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s05.D				
Injection Date:	08-Jul-2020 12:09:30	Instrument ID:	19930		
Lims ID:	410-5692-A-3	Lab Sample ID:	410-5692-3		
Client ID:	HD-COD-SW-8-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	11	Worklist Smp#:	12
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

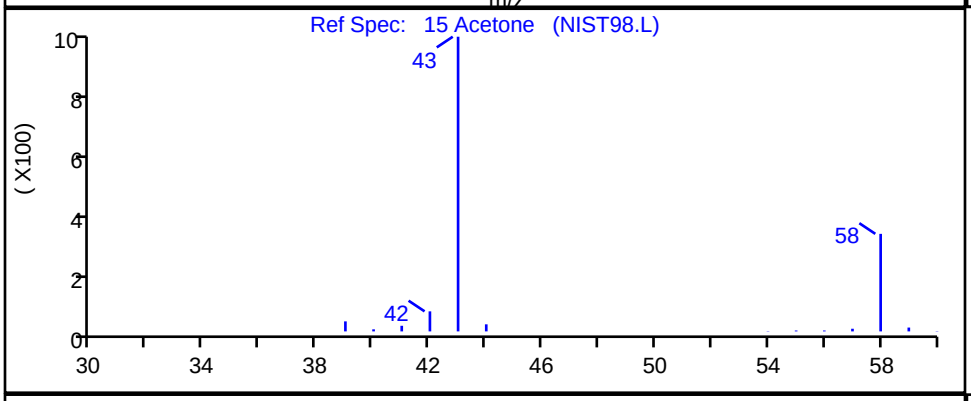
15 Acetone, CAS: 67-64-1

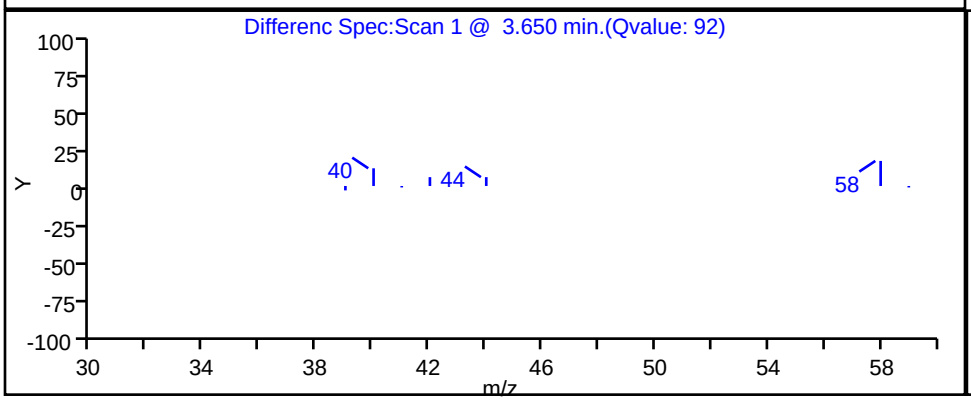


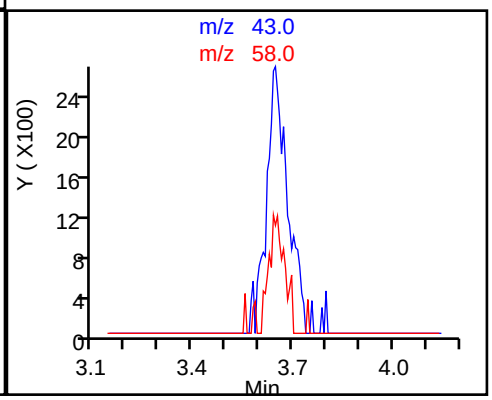








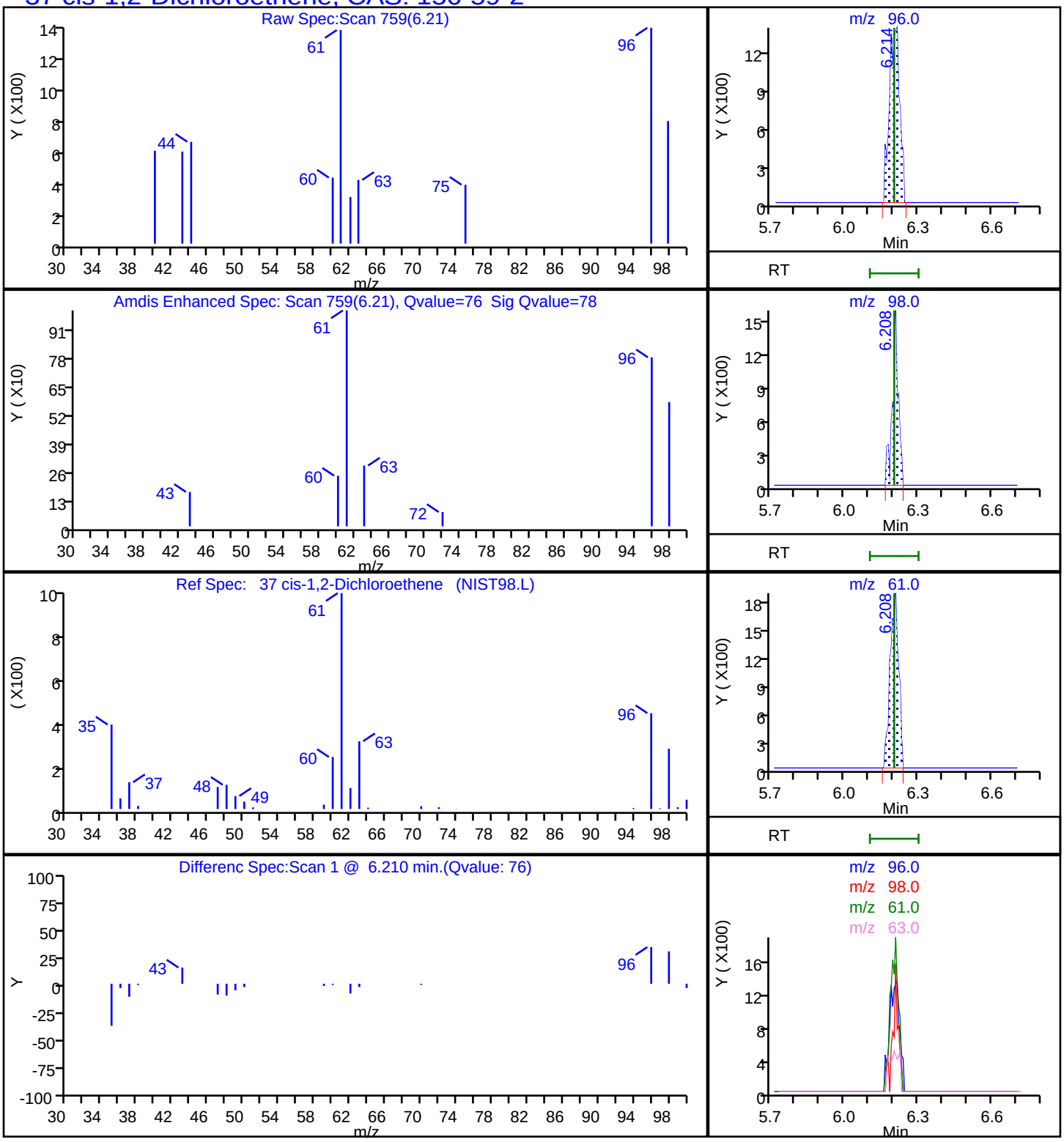




Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s05.D				
Injection Date:	08-Jul-2020 12:09:30	Instrument ID:	19930		
Lims ID:	410-5692-A-3	Lab Sample ID:	410-5692-3		
Client ID:	HD-COD-SW-8-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	11	Worklist Smp#:	12
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		

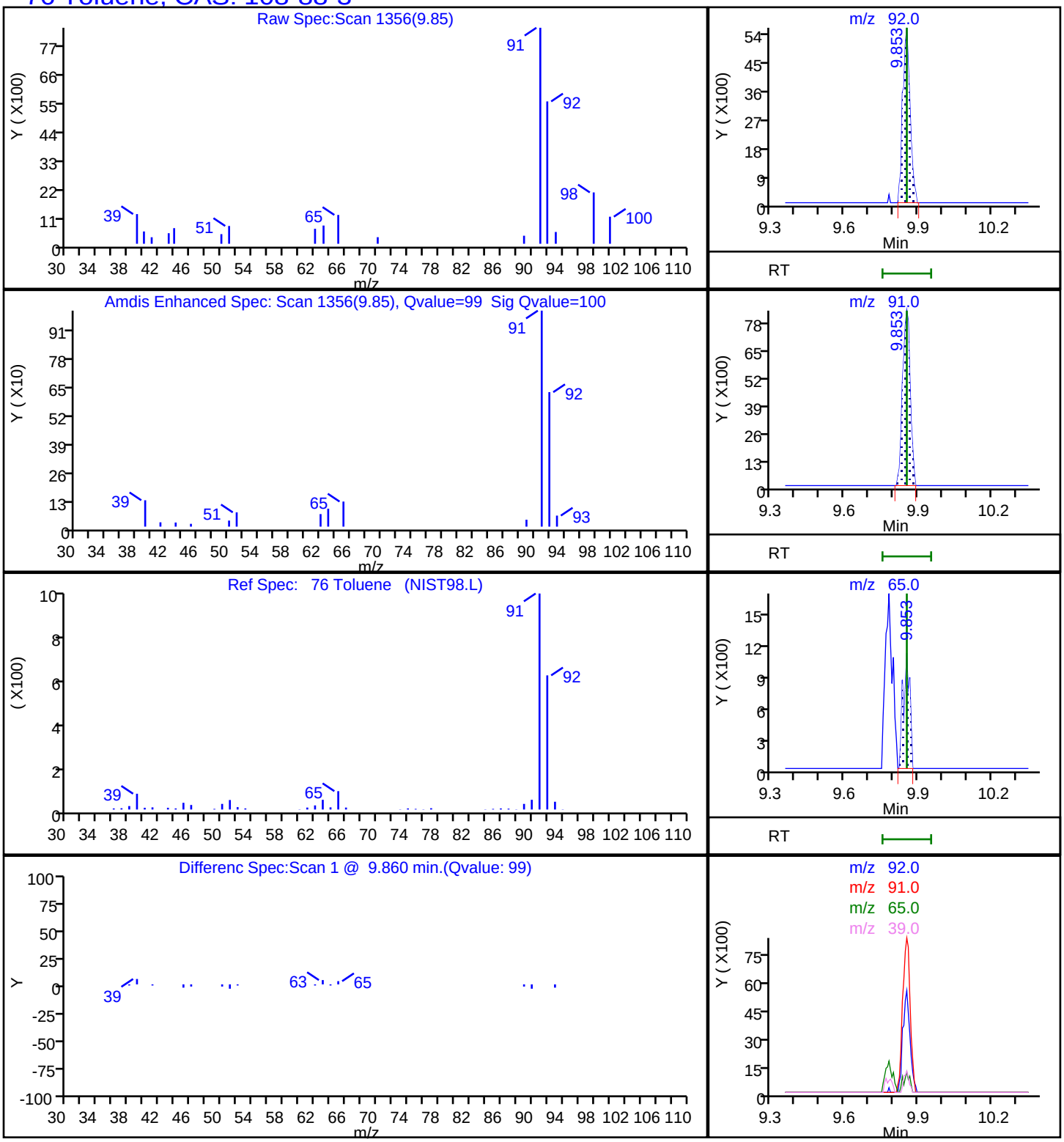
37 cis-1,2-Dichloroethene, CAS: 156-59-2



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s05.D				
Injection Date:	08-Jul-2020 12:09:30	Instrument ID:	19930		
Lims ID:	410-5692-A-3	Lab Sample ID:	410-5692-3		
Client ID:	HD-COD-SW-8-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	11	Worklist Smp#:	12
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		

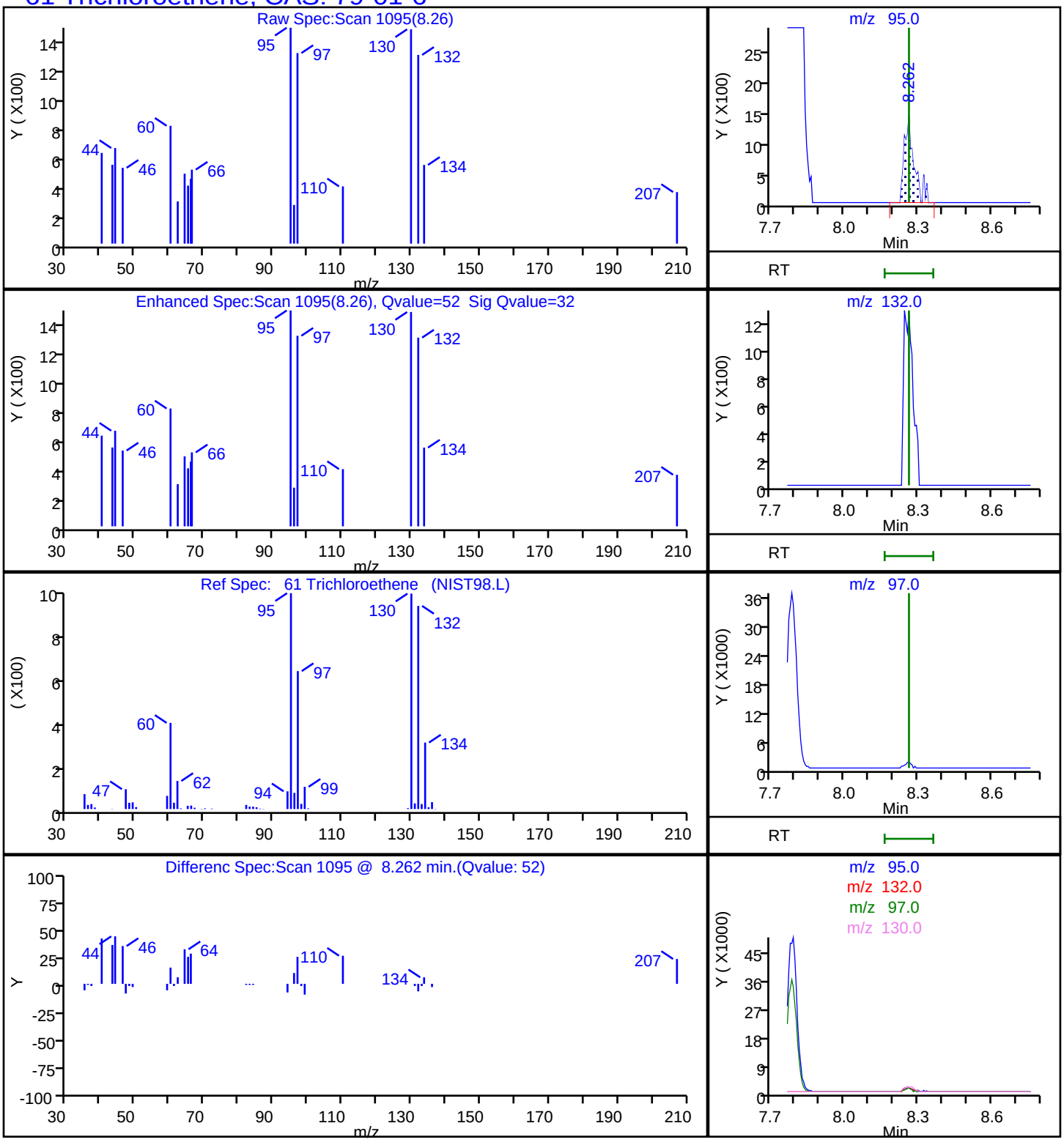
76 Toluene, CAS: 108-88-3



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s05.D				
Injection Date:	08-Jul-2020 12:09:30	Instrument ID:	19930		
Lims ID:	410-5692-A-3	Lab Sample ID:	410-5692-3		
Client ID:	HD-COD-SW-8-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	11	Worklist Smp#:	12
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

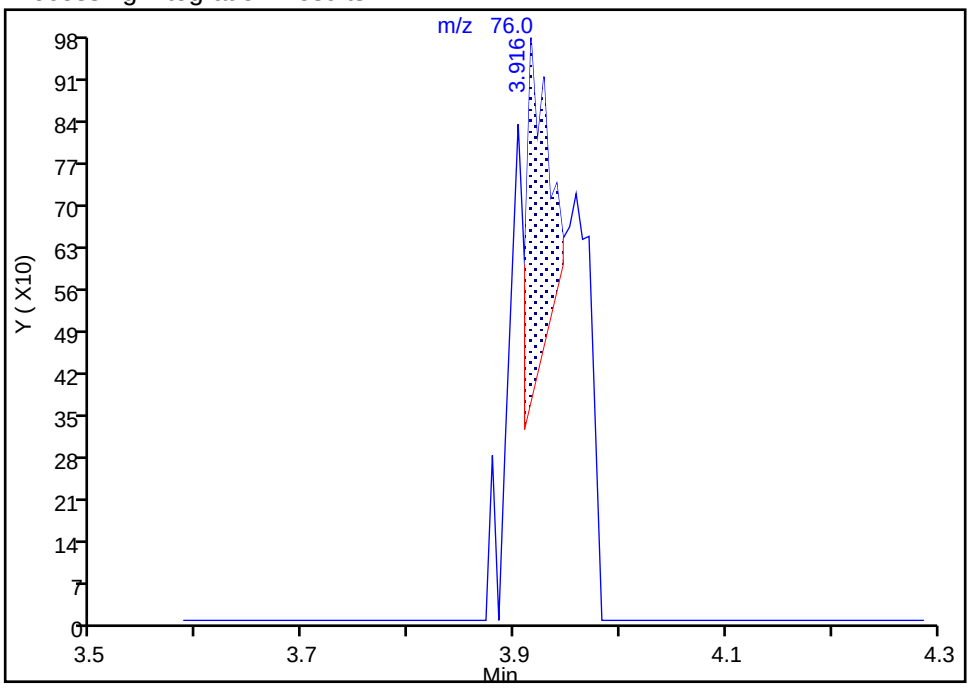
Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s05.D				
Injection Date:	08-Jul-2020 12:09:30	Instrument ID:	19930		
Lims ID:	410-5692-A-3	Lab Sample ID:	410-5692-3		
Client ID:	HD-COD-SW-8-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	11	Worklist Smp#:	12
Purge Vol:	25.000 mL	Dil. 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

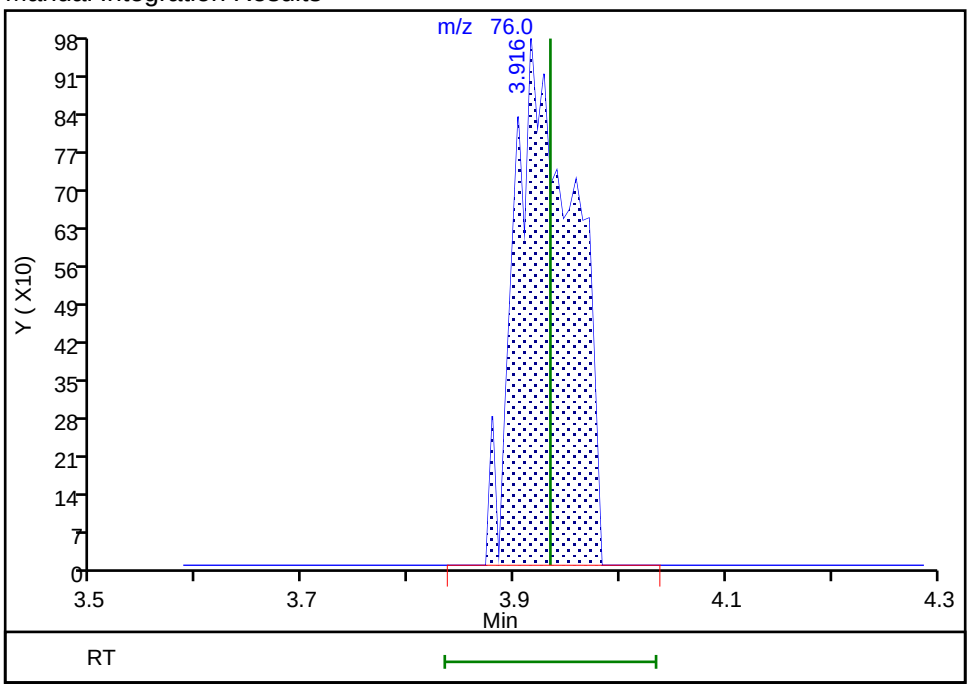
Processing Integration Results

RT: 3.92
Area: 784
Amount: 0.006559
Amount Units: ug/l



Manual Integration Results

RT: 3.92
Area: 3752
Amount: 0.031388
Amount Units: ug/l



Reviewer: riehlc, 09-Jul-2020 08:23:00

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

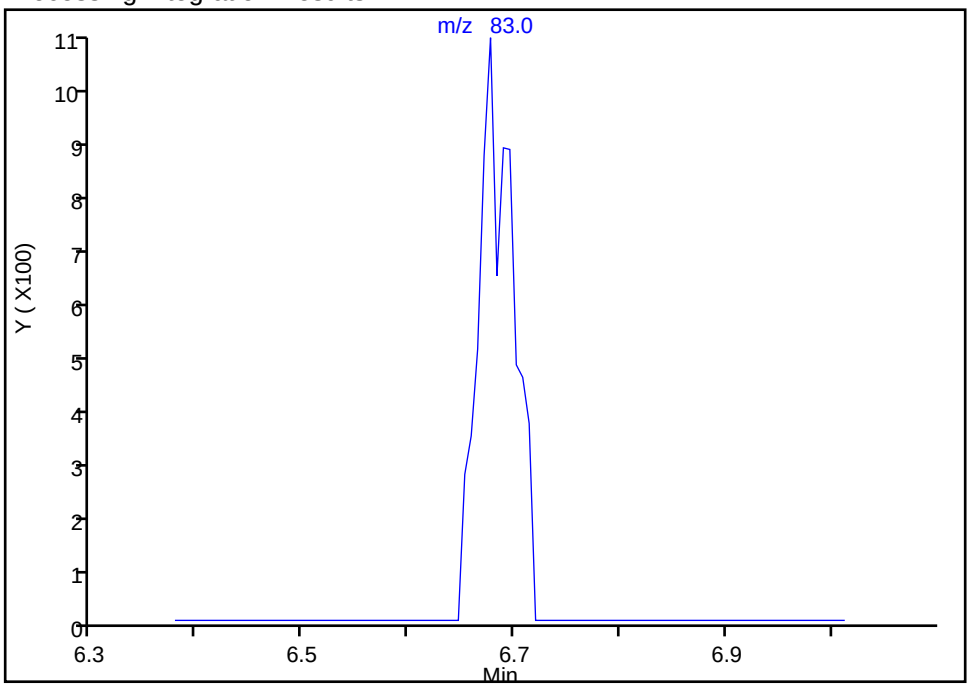
Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s05.D				
Injection Date:	08-Jul-2020 12:09:30	Instrument ID:	19930		
Lims ID:	410-5692-A-3	Lab Sample ID:	410-5692-3		
Client ID:	HD-COD-SW-8-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	11	Worklist Smp#:	12
Purge Vol:	25.000 mL	Dil. 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

Signal: 1

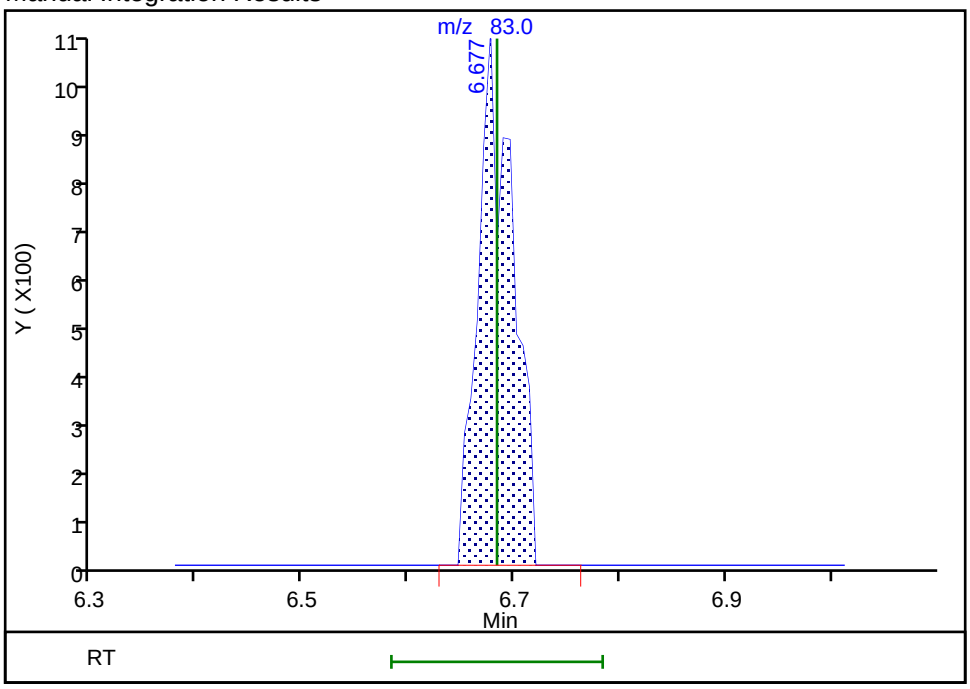
Not Detected
Expected RT: 6.68

Processing Integration Results



Manual Integration Results

RT: 6.68
Area: 2449
Amount: 0.030623
Amount Units: ug/l



Reviewer: riehlc, 09-Jul-2020 08:23:14
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

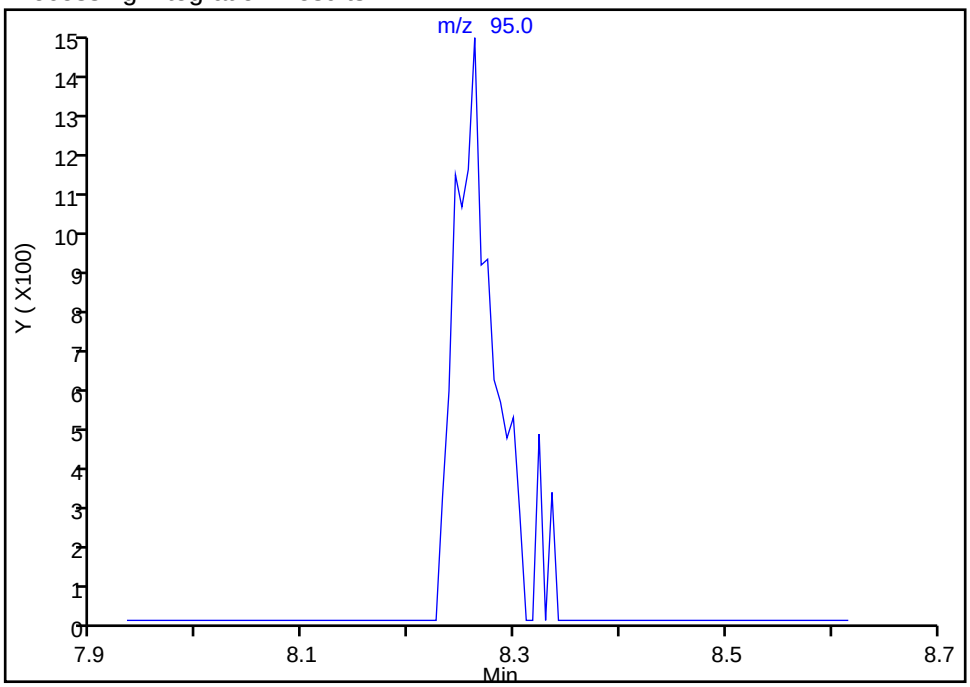
Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s05.D				
Injection Date:	08-Jul-2020 12:09:30	Instrument ID:	19930		
Lims ID:	410-5692-A-3	Lab Sample ID:	410-5692-3		
Client ID:	HD-COD-SW-8-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	11	Worklist Smp#:	12
Purge Vol:	25.000 mL	Dil. 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

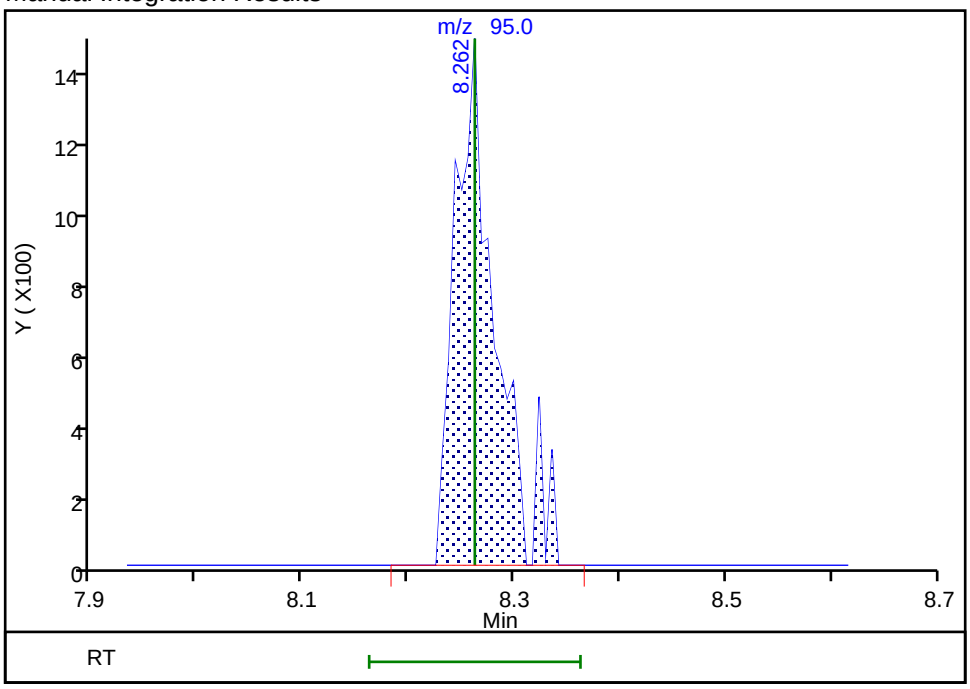
Not Detected
Expected RT: 8.26

Processing Integration Results



Manual Integration Results

RT: 8.26
Area: 3733
Amount: 0.075164
Amount Units: ug/l



Reviewer: riehlc, 09-Jul-2020 08:23:27
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.: 410-5692-1

SDG No.:

Client Sample ID: HD-COD-SW-9-0/1-0 Lab Sample ID: 410-5692-4

Matrix: Water Lab File ID: IU08s06.D

Analysis Method: 8260D Date Collected: 06/24/2020 12:15

Sample wt/vol: 25(mL) Date Analyzed: 07/08/2020 12:30

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.: 20265 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		0.50	0.060
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.50	0.070
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
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	5.9		5.0	0.90
107-13-1	Acrylonitrile	ND		5.0	0.40
71-43-2	Benzene	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
74-97-5	Bromochloromethane	ND		0.50	0.050
124-48-1	Dibromochloromethane	ND		0.50	0.070
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
75-27-4	Bromodichloromethane	ND		0.50	0.050
100-41-4	Ethylbenzene	ND		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	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	0.088	J	0.50	0.060
108-88-3	Toluene	0.35	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.: 410-5692-1

SDG No.:

Client Sample ID: HD-COD-SW-9-0/1-0 Lab Sample ID: 410-5692-4

Matrix: Water Lab File ID: IU08s06.D

Analysis Method: 8260D Date Collected: 06/24/2020 12:15

Sample wt/vol: 25(mL) Date Analyzed: 07/08/2020 12:30

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.: 20265 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)	105		80-120
460-00-4	4-Bromofluorobenzene (Surr)	97		80-120
1868-53-7	Dibromofluoromethane (Surr)	103		80-120
2037-26-5	Toluene-d8 (Surr)	99		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s06.D
Lims ID: 410-5692-A-4
Client ID: HD-COD-SW-9-0/1-0
Sample Type: Client
Inject. Date: 08-Jul-2020 12:30:30 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-5692-A-4
Misc. Info.: 410-0005039-013
Operator ID: jkh09052 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 09-Jul-2020 09:13:09 Calib Date: 16-Mar-2020 18:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1051

First Level Reviewer: riehlc Date: 09-Jul-2020 08:25:24

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
4 Chloromethane	50	2.184	2.203	-0.019	1	3508	0.0519	M
5 Vinyl chloride	62		2.324				ND	
7 Bromomethane	94		2.648				ND	
8 Chloroethane	64		2.739				ND	
14 1,1-Dichloroethene	96		3.623				ND	
15 Acetone	43	3.653	3.647	0.006	98	36025	5.93	
19 Carbon disulfide	76	3.916	3.934	-0.018	53	4214	0.0357	M
23 Methylene Chloride	84		4.306				ND	
* 24 t-Butyl alcohol-d10 (IS)	65	4.318	4.306	0.012	0	122319	50.0	
26 Acrylonitrile	53		4.641				ND	
27 Methyl tert-butyl ether	73		4.708				ND	
28 trans-1,2-Dichloroethene	96		4.726				ND	
31 1,1-Dichloroethane	63		5.379				ND	
36 2-Butanone (MEK)	43	6.177	6.177	0.000	67	5785	0.5412	M
37 cis-1,2-Dichloroethene	96	6.208	6.202	0.006	70	1825	0.0366	
43 Chlorobromomethane	128		6.537				ND	
45 Chloroform	83	6.683	6.683	0.000	87	4531	0.0574	
$ 46 Dibromofluoromethane (Surr)	113	6.897	6.897	0.000	94	383184	10.3	
47 1,1,1-Trichloroethane	97		6.909				ND	
50 Carbon tetrachloride	117		7.128				ND	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.348	7.354	-0.006	0	79056	10.5	
54 Benzene	78		7.384				ND	
56 1,2-Dichloroethane	62		7.452				ND	
* 58 Fluorobenzene (IS)	96	7.781	7.787	-0.006	99	1542851	10.0	
61 Trichloroethene	95	8.256	8.262	-0.006	22	2030	0.0414	M
63 1,2-Dichloropropane	63		8.592				ND	
68 Dichlorobromomethane	83		8.933				ND	
73 cis-1,3-Dichloropropene	75		9.476				ND	
74 4-Methyl-2-pentanone (MIBK)	43		9.640				ND	
$ 75 Toluene-d8 (Surr)	98	9.774	9.774	0.000	94	1485968	9.94	
76 Toluene	92	9.853	9.853	0.000	98	42004	0.3516	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
78 trans-1,3-Dichloropropene	75		10.103				ND	
80 1,1,2-Trichloroethane	97		10.305				ND	
81 Tetrachloroethene	166	10.390	10.396	-0.006	92	5022	0.0880	
83 2-Hexanone	43		10.512				ND	
85 Chlorodibromomethane	129		10.683				ND	
86 Ethylene Dibromide	107		10.792				ND	
* 87 Chlorobenzene-d5 (IS)	117	11.219	11.219	0.000	86	1175834	10.0	
90 Chlorobenzene	112		11.243				ND	
S 89 Xylenes, Total	106		11.245				ND	
91 1,1,1,2-Tetrachloroethane	131		11.323				ND	
92 Ethylbenzene	91		11.329				ND	
93 m-Xylene & p-Xylene	106		11.445				ND	
94 o-Xylene	106		11.768				ND	
95 Styrene	104		11.786				ND	
96 Bromoform	173		11.945				ND	
$ 100 4-Bromofluorobenzene (Surr)	95	12.213	12.213	0.000	92	541577	9.71	
101 1,1,2,2-Tetrachloroethane	83		12.310				ND	
* 115 1,4-Dichlorobenzene-d4	152	13.091	13.091	0.000	95	637976	10.0	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MSV_31_826ISS_00002 Amount Added: 5.00 Units: uL Run Reagent

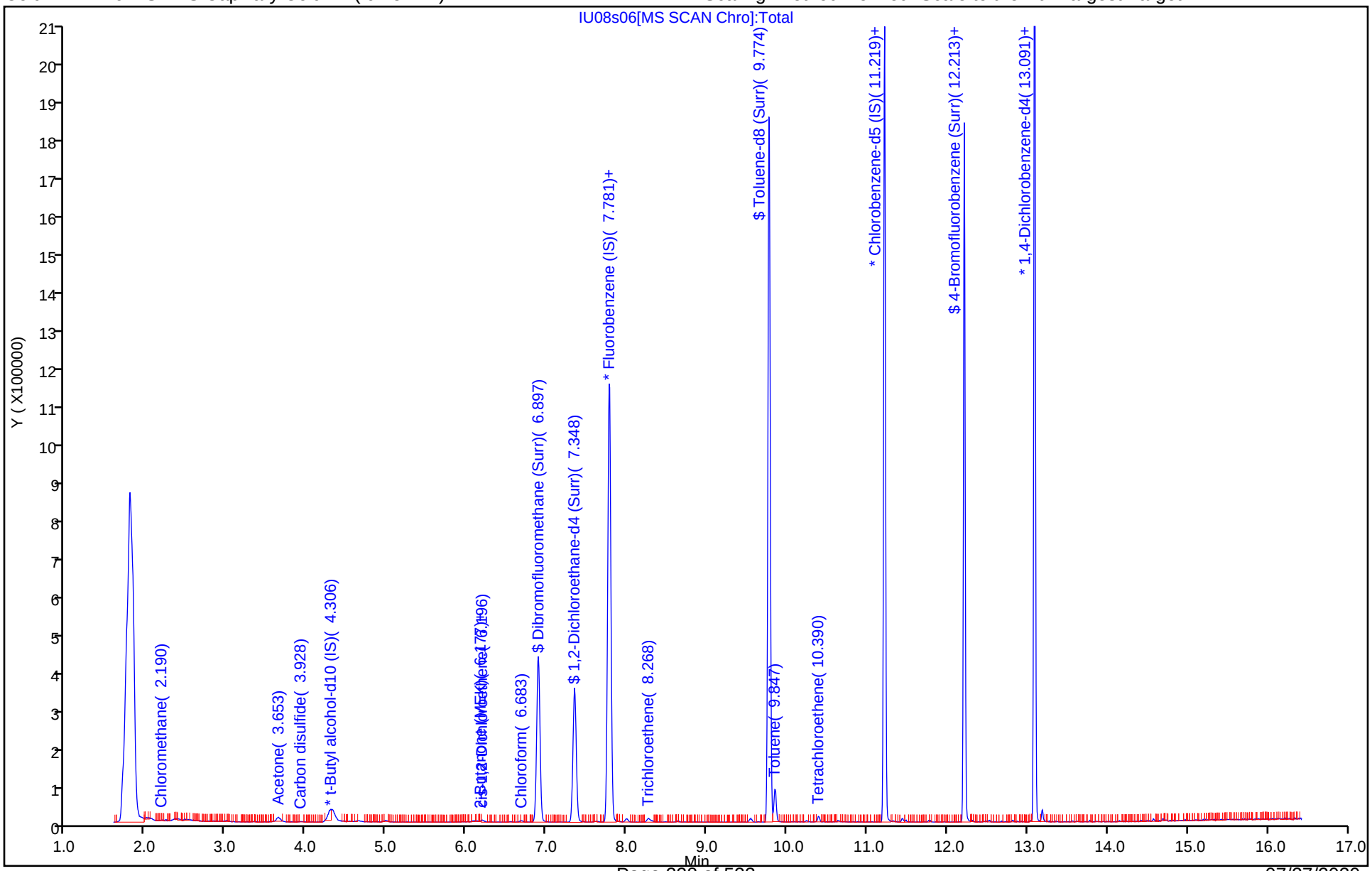
Report Date: 09-Jul-2020 09:13:41 Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s06.D

Injection Date:	08-Jul-2020 12:30:30	Instrument ID:	19930	Operator ID:	jkh09052
Lims ID:	410-5692-A-4	Lab Sample ID:	410-5692-4	Worklist Smp#:	13
Client ID:	HD-COD-SW-9-0/1-0				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
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

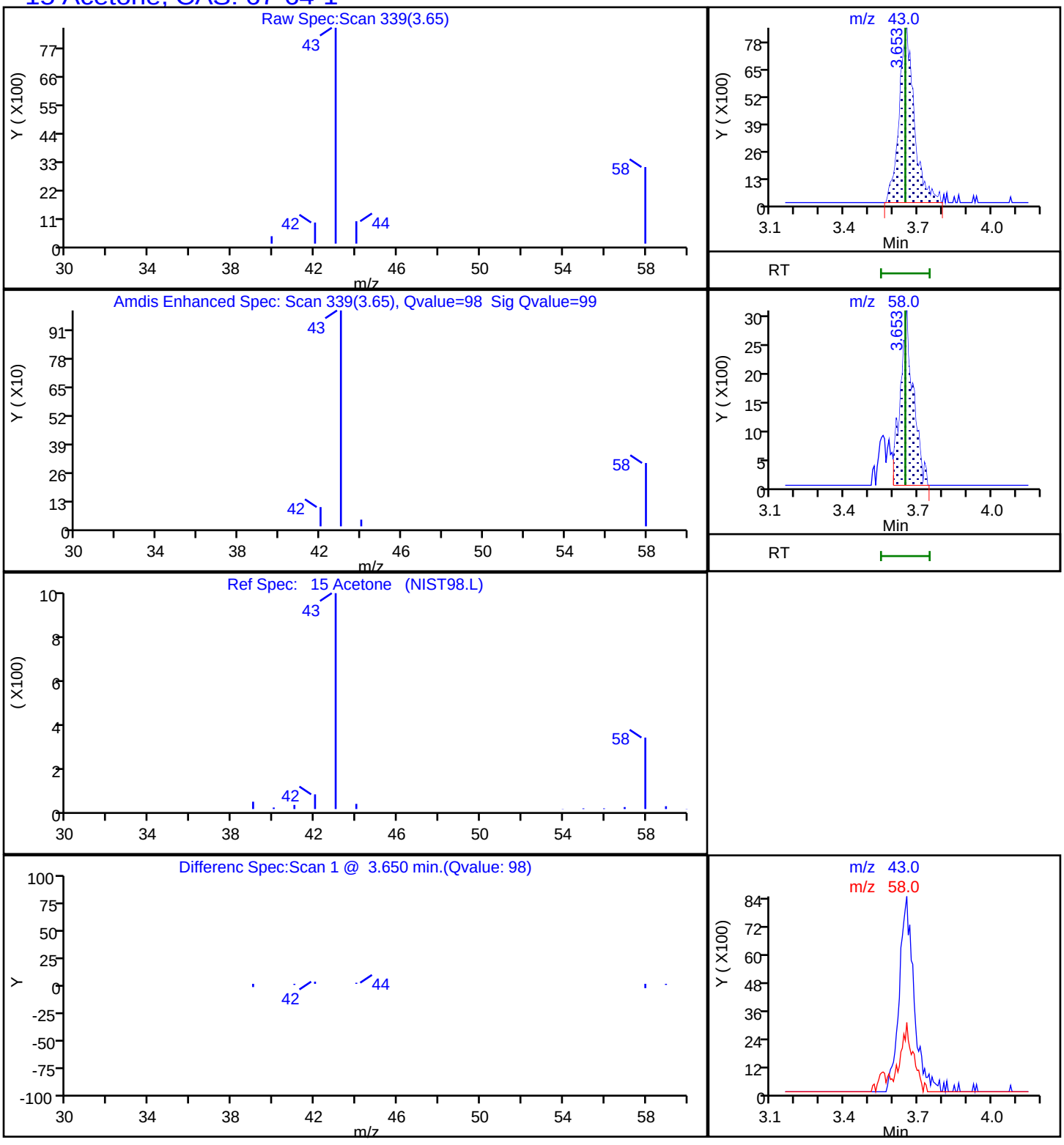
Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s06.D				
Lims ID:	410-5692-A-4				
Client ID:	HD-COD-SW-9-0/1-0				
Sample Type:	Client				
Inject. Date:	08-Jul-2020 12:30:30	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-5692-A-4				
Misc. Info.:	410-0005039-013				
Operator ID:	jkh09052	Instrument ID:	19930		
Method:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\8260 25ml HP31.m				
Limit Group:	MSV - 8260C_D				
Last Update:	09-Jul-2020 09:13:09	Calib Date:	16-Mar-2020 18:31:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1051				
First Level Reviewer: riehlc		Date:	09-Jul-2020 08:25:24		

Compound	Amount Added	Amount Recovered	% Rec.
$ 46 Dibromofluoromethane (Surr)	10.0	10.3	102.90
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.5	104.77
$ 75 Toluene-d8 (Surr)	10.0	9.94	99.38
$ 100 4-Bromofluorobenzene (Surr)	10.0	9.71	97.07

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s06.D				
Injection Date:	08-Jul-2020 12:30:30	Instrument ID:	19930		
Lims ID:	410-5692-A-4	Lab Sample ID:	410-5692-4		
Client ID:	HD-COD-SW-9-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	12	Worklist Smp#:	13
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		

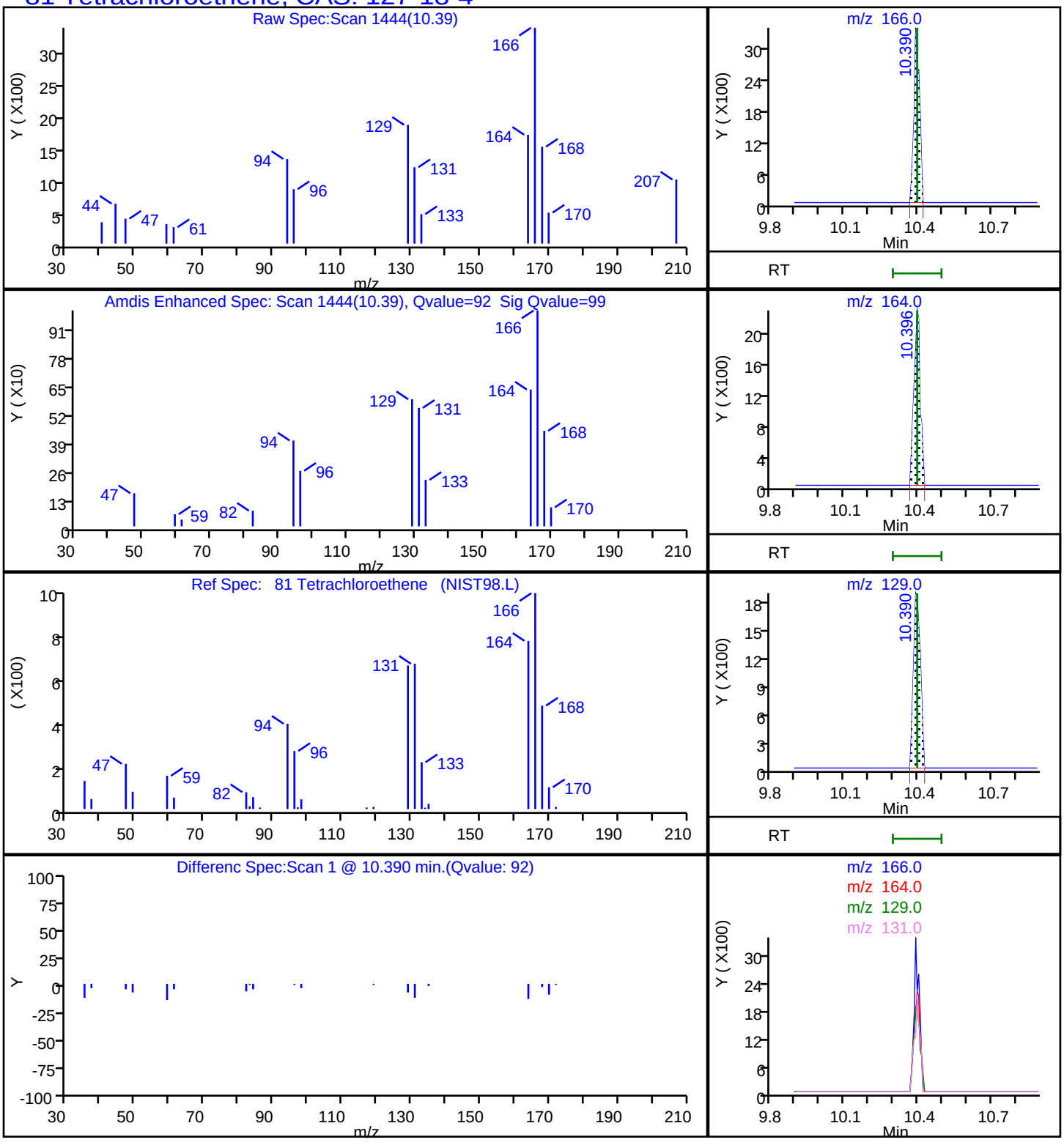
15 Acetone, CAS: 67-64-1



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s06.D				
Injection Date:	08-Jul-2020 12:30:30	Instrument ID:	19930		
Lims ID:	410-5692-A-4	Lab Sample ID:	410-5692-4		
Client ID:	HD-COD-SW-9-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	12	Worklist Smp#:	13
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		

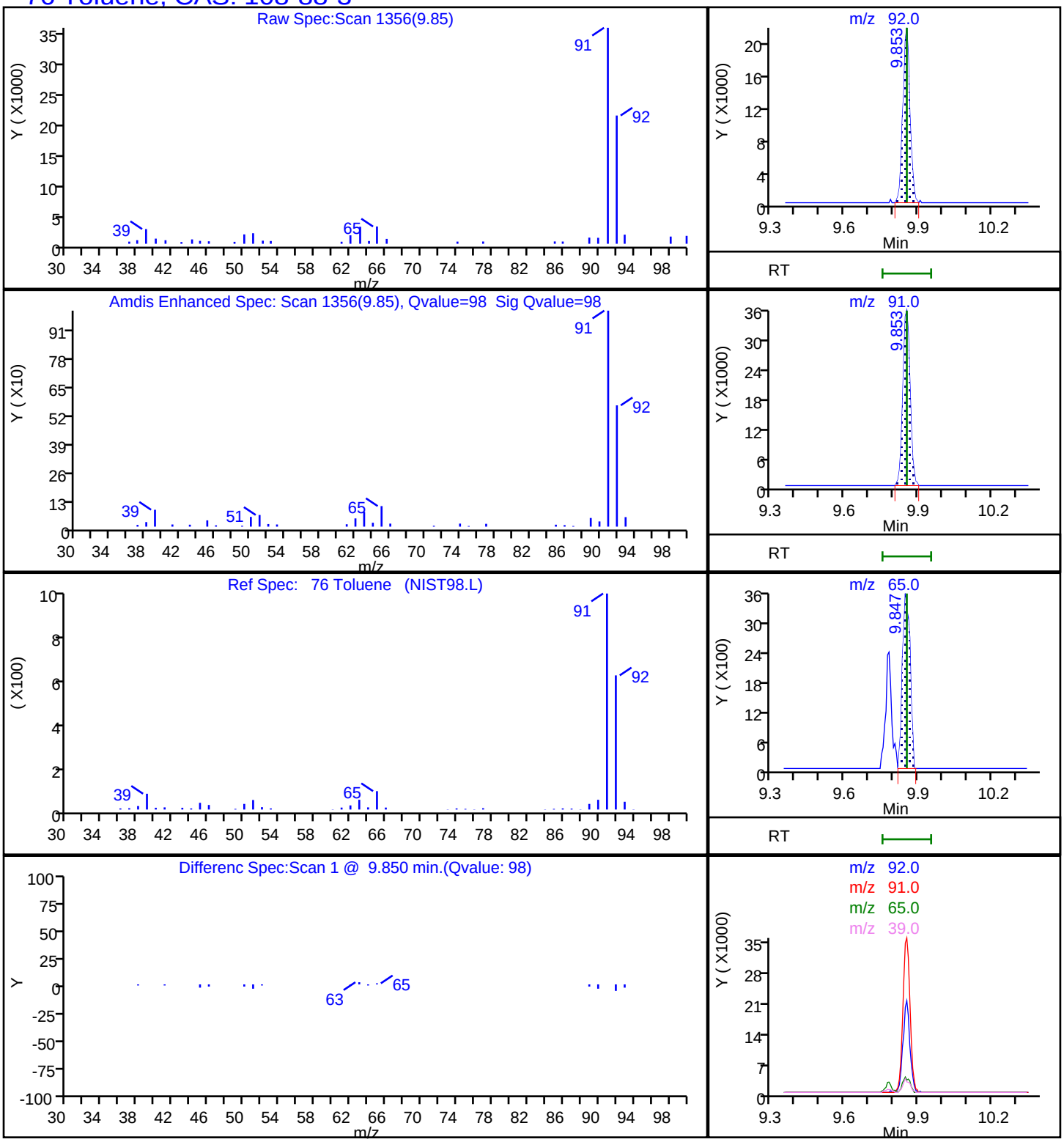
81 Tetrachloroethene, CAS: 127-18-4



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s06.D				
Injection Date:	08-Jul-2020 12:30:30	Instrument ID:	19930		
Lims ID:	410-5692-A-4	Lab Sample ID:	410-5692-4		
Client ID:	HD-COD-SW-9-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	12	Worklist Smp#:	13
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		

76 Toluene, CAS: 108-88-3



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

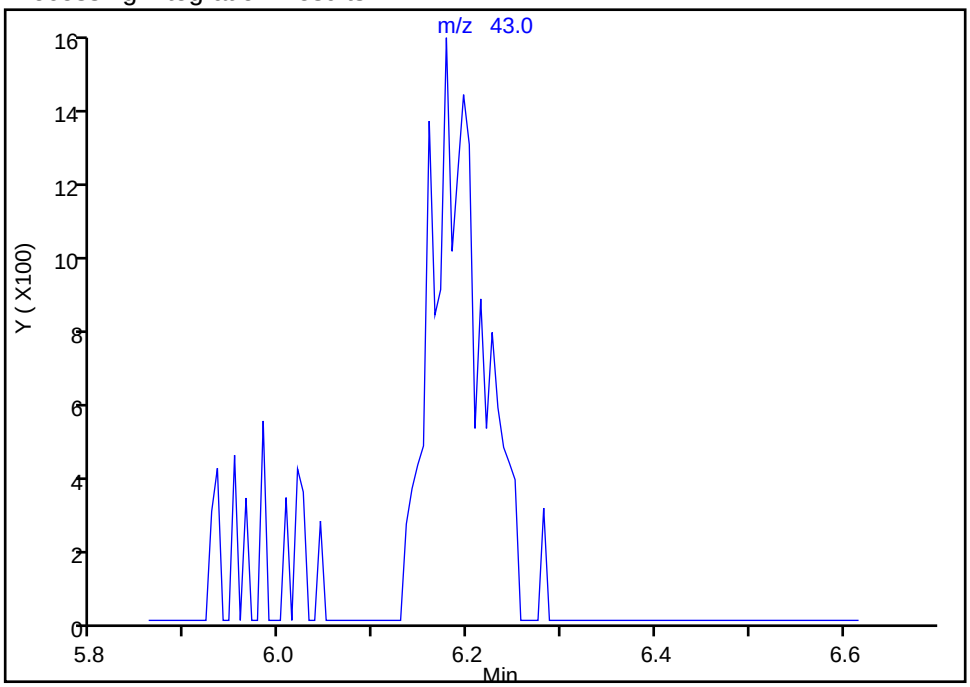
Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s06.D				
Injection Date:	08-Jul-2020 12:30:30	Instrument ID:	19930		
Lims ID:	410-5692-A-4	Lab Sample ID:	410-5692-4		
Client ID:	HD-COD-SW-9-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. 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

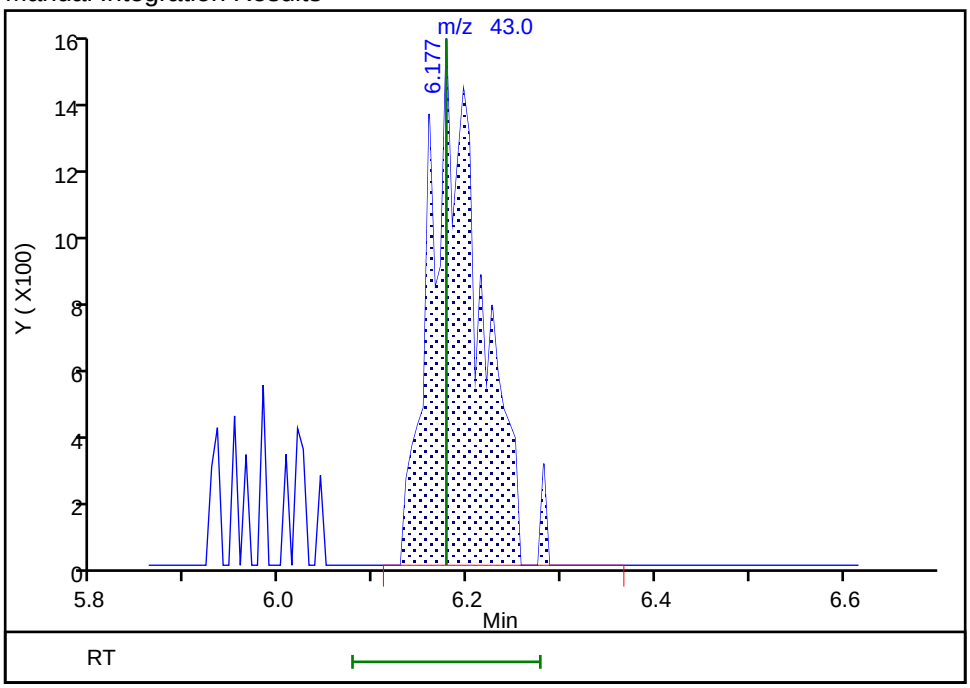
Not Detected
Expected RT: 6.18

Processing Integration Results



Manual Integration Results

RT: 6.18
Area: 5785
Amount: 0.541244
Amount Units: ug/l



Reviewer: riehlc, 09-Jul-2020 08:24:40
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

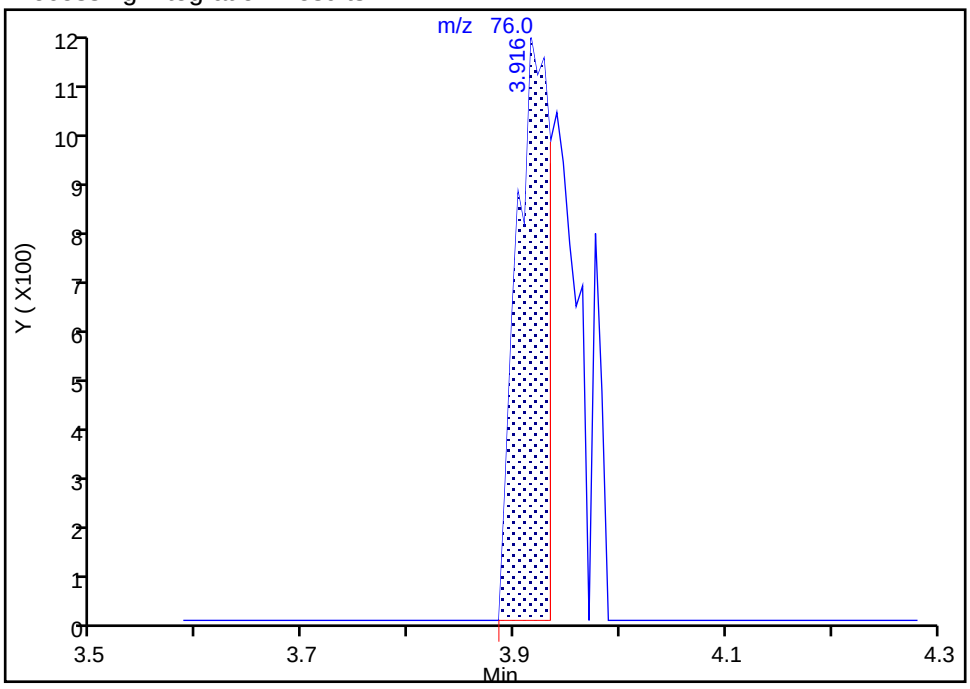
Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s06.D				
Injection Date:	08-Jul-2020 12:30:30	Instrument ID:	19930		
Lims ID:	410-5692-A-4	Lab Sample ID:	410-5692-4		
Client ID:	HD-COD-SW-9-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. 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

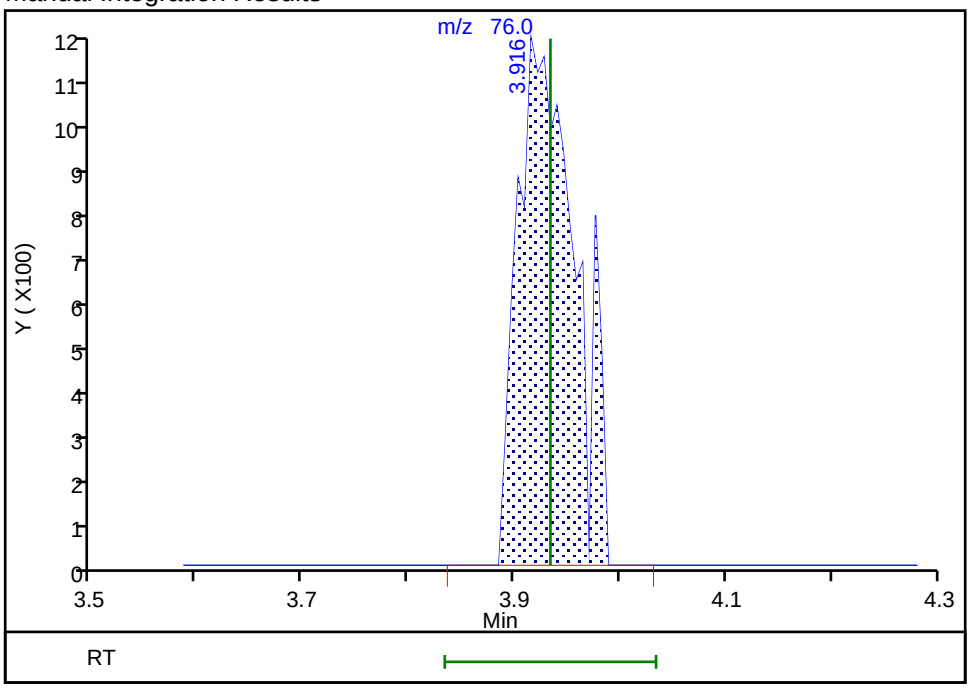
Processing Integration Results

RT: 3.92
Area: 2393
Amount: 0.020284
Amount Units: ug/l



Manual Integration Results

RT: 3.92
Area: 4214
Amount: 0.035720
Amount Units: ug/l



Reviewer: riehlc, 09-Jul-2020 08:24:27
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

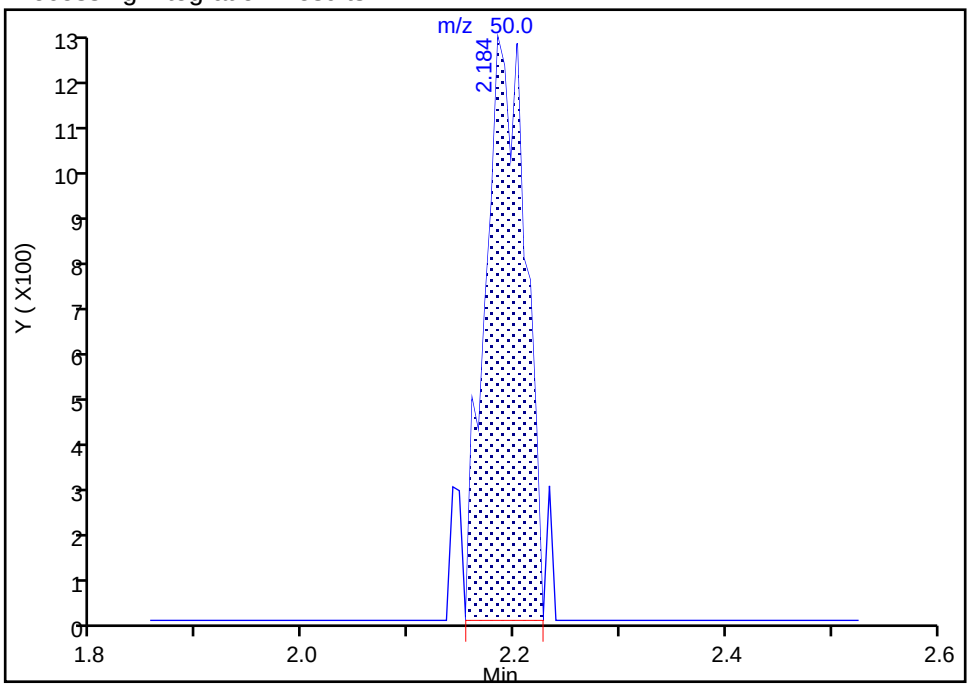
Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s06.D				
Injection Date:	08-Jul-2020 12:30:30	Instrument ID:	19930		
Lims ID:	410-5692-A-4	Lab Sample ID:	410-5692-4		
Client ID:	HD-COD-SW-9-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. 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

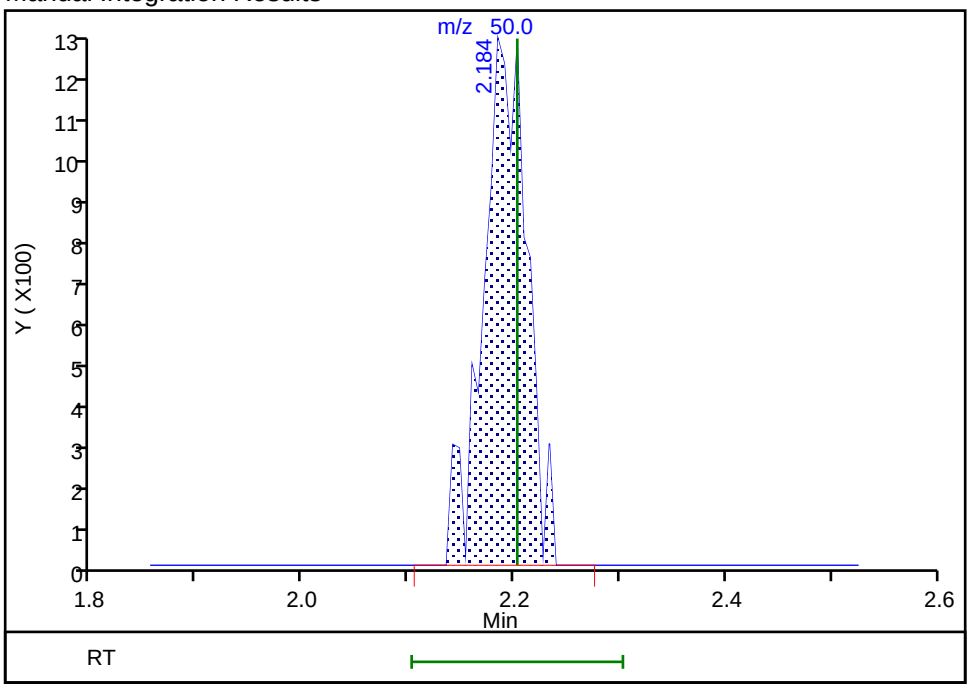
Processing Integration Results

RT: 2.18
Area: 3204
Amount: 0.047405
Amount Units: ug/l



Manual Integration Results

RT: 2.18
Area: 3508
Amount: 0.051903
Amount Units: ug/l



Reviewer: riehlc, 09-Jul-2020 08:24:18

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

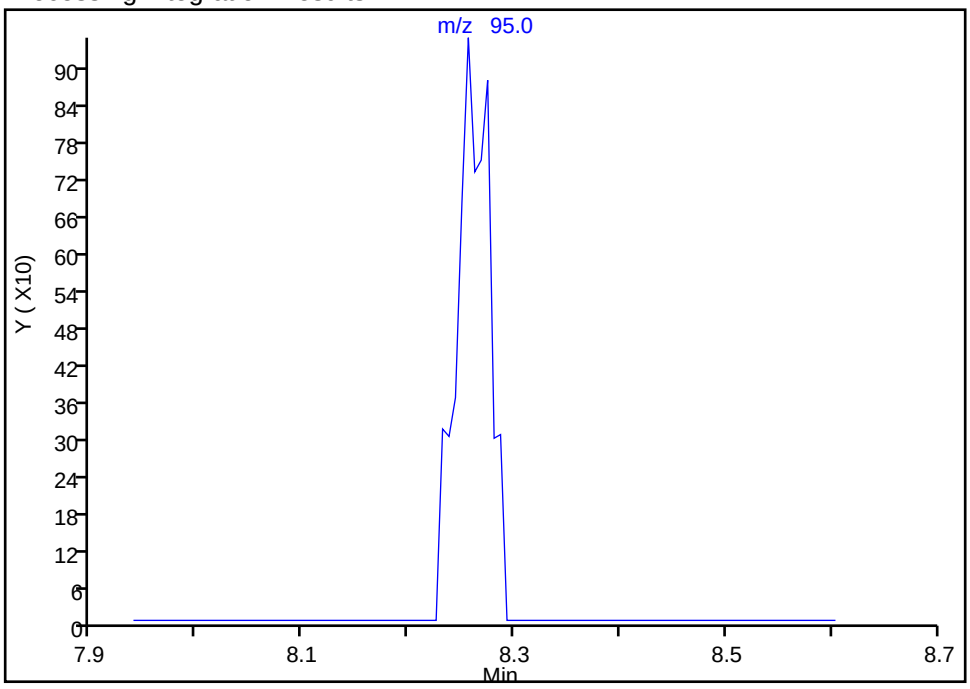
Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s06.D				
Injection Date:	08-Jul-2020 12:30:30	Instrument ID:	19930		
Lims ID:	410-5692-A-4	Lab Sample ID:	410-5692-4		
Client ID:	HD-COD-SW-9-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. 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

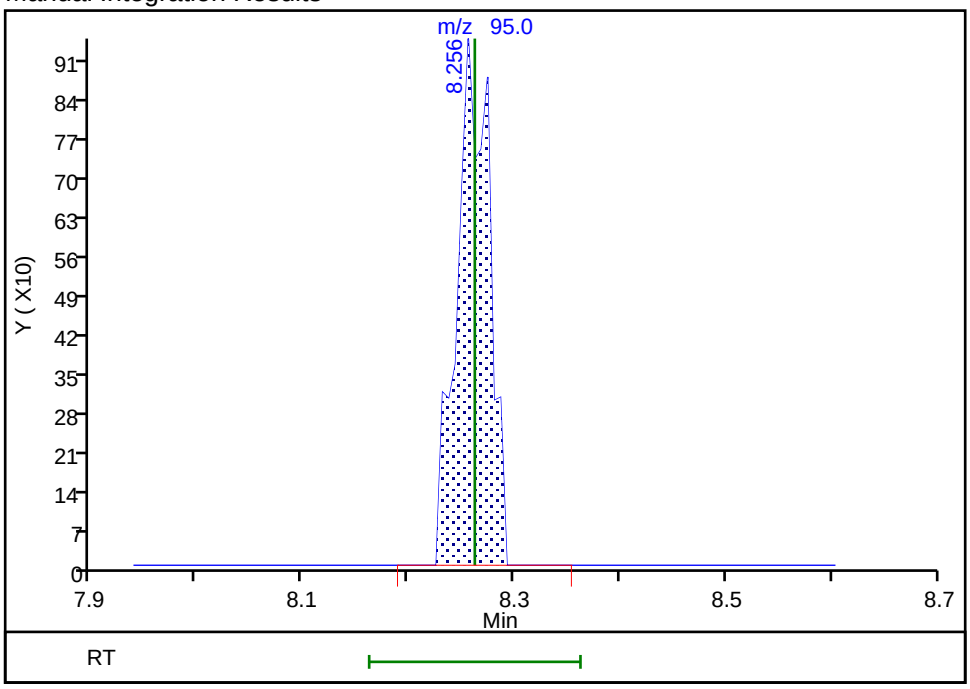
Not Detected
Expected RT: 8.26

Processing Integration Results



Manual Integration Results

RT: 8.26
Area: 2030
Amount: 0.041415
Amount Units: ug/l



Reviewer: riehlc, 09-Jul-2020 08:24:54
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.: 410-5692-1

SDG No.:

Client Sample ID: HD-COD-SW-13-0/1-0 Lab Sample ID: 410-5692-5

Matrix: Water Lab File ID: IU08s07.D

Analysis Method: 8260D Date Collected: 06/24/2020 09:35

Sample wt/vol: 25(mL) Date Analyzed: 07/08/2020 12:51

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.: 20265 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		0.50	0.060
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.50	0.070
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
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	1.9	J	5.0	0.90
107-13-1	Acrylonitrile	ND		5.0	0.40
71-43-2	Benzene	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
74-97-5	Bromochloromethane	ND		0.50	0.050
124-48-1	Dibromochloromethane	ND		0.50	0.070
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	0.083	J	0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	ND		0.50	0.050
75-27-4	Bromodichloromethane	ND		0.50	0.050
100-41-4	Ethylbenzene	ND		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	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	0.091	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.: 410-5692-1

SDG No.:

Client Sample ID: HD-COD-SW-13-0/1-0 Lab Sample ID: 410-5692-5

Matrix: Water Lab File ID: IU08s07.D

Analysis Method: 8260D Date Collected: 06/24/2020 09:35

Sample wt/vol: 25(mL) Date Analyzed: 07/08/2020 12:51

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.: 20265 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	0.074	J	0.50	0.060
75-01-4	Vinyl chloride	ND		0.50	0.10
1330-20-7	Xylenes, Total	ND		1.0	0.15

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		80-120
460-00-4	4-Bromofluorobenzene (Surr)	96		80-120
1868-53-7	Dibromofluoromethane (Surr)	101		80-120
2037-26-5	Toluene-d8 (Surr)	99		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s07.D
Lims ID: 410-5692-A-5
Client ID: HD-COD-SW-13-0/1-0
Sample Type: Client
Inject. Date: 08-Jul-2020 12:51:30 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-5692-A-5
Misc. Info.: 410-0005039-014
Operator ID: jkh09052 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 09-Jul-2020 09:13:09 Calib Date: 16-Mar-2020 18:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1051

First Level Reviewer: riehlc Date: 09-Jul-2020 08:27:24

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
4 Chloromethane	50		2.203				ND	
5 Vinyl chloride	62		2.324				ND	
7 Bromomethane	94		2.648				ND	
8 Chloroethane	64		2.739				ND	
14 1,1-Dichloroethene	96		3.623				ND	
15 Acetone	43	3.654	3.647	0.007	96	10780	1.95	
19 Carbon disulfide	76	3.922	3.934	-0.012	50	3916	0.0339	M
23 Methylene Chloride	84		4.306				ND	
* 24 t-Butyl alcohol-d10 (IS)	65	4.294	4.306	-0.012	0	111637	50.0	
26 Acrylonitrile	53		4.641				ND	
27 Methyl tert-butyl ether	73		4.708				ND	
28 trans-1,2-Dichloroethene	96		4.726				ND	
31 1,1-Dichloroethane	63		5.379				ND	
36 2-Butanone (MEK)	43		6.177				ND	
37 cis-1,2-Dichloroethene	96	6.214	6.202	0.012	9	4044	0.0829	M
43 Chlorobromomethane	128		6.537				ND	
45 Chloroform	83		6.683				ND	
$ 46 Dibromofluoromethane (Surr)	113	6.891	6.897	-0.006	93	369505	10.1	
47 1,1,1-Trichloroethane	97		6.909				ND	
50 Carbon tetrachloride	117		7.128				ND	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.348	7.354	-0.006	0	74583	10.1	
54 Benzene	78		7.384				ND	
56 1,2-Dichloroethane	62		7.452				ND	
* 58 Fluorobenzene (IS)	96	7.781	7.787	-0.006	99	1510683	10.0	
61 Trichloroethene	95	8.262	8.262	0.000	84	3561	0.0742	
63 1,2-Dichloropropane	63		8.592				ND	
68 Dichlorobromomethane	83		8.933				ND	
73 cis-1,3-Dichloropropene	75		9.476				ND	
74 4-Methyl-2-pentanone (MIBK)	43		9.640				ND	
$ 75 Toluene-d8 (Surr)	98	9.774	9.774	0.000	93	1449396	9.89	
76 Toluene	92	9.854	9.853	0.001	99	10669	0.0911	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
78 trans-1,3-Dichloropropene	75		10.103				ND	
80 1,1,2-Trichloroethane	97		10.305				ND	
81 Tetrachloroethene	166	10.396	10.396	0.000	90	2436	0.0435	
83 2-Hexanone	43		10.512				ND	
85 Chlorodibromomethane	129		10.683				ND	
86 Ethylene Dibromide	107		10.792				ND	
* 87 Chlorobenzene-d5 (IS)	117	11.219	11.219	0.000	85	1152572	10.0	
90 Chlorobenzene	112		11.243				ND	
S 89 Xylenes, Total	106		11.245				ND	
91 1,1,1,2-Tetrachloroethane	131		11.323				ND	
92 Ethylbenzene	91		11.329				ND	
93 m-Xylene & p-Xylene	106		11.445				ND	
94 o-Xylene	106		11.768				ND	
95 Styrene	104		11.786				ND	
96 Bromoform	173		11.945				ND	
$ 100 4-Bromofluorobenzene (Surr)	95	12.213	12.213	0.000	93	527647	9.65	
101 1,1,2,2-Tetrachloroethane	83		12.310				ND	
* 115 1,4-Dichlorobenzene-d4	152	13.091	13.091	0.000	95	628096	10.0	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MSV_31_826ISS_00002 Amount Added: 5.00 Units: uL Run Reagent

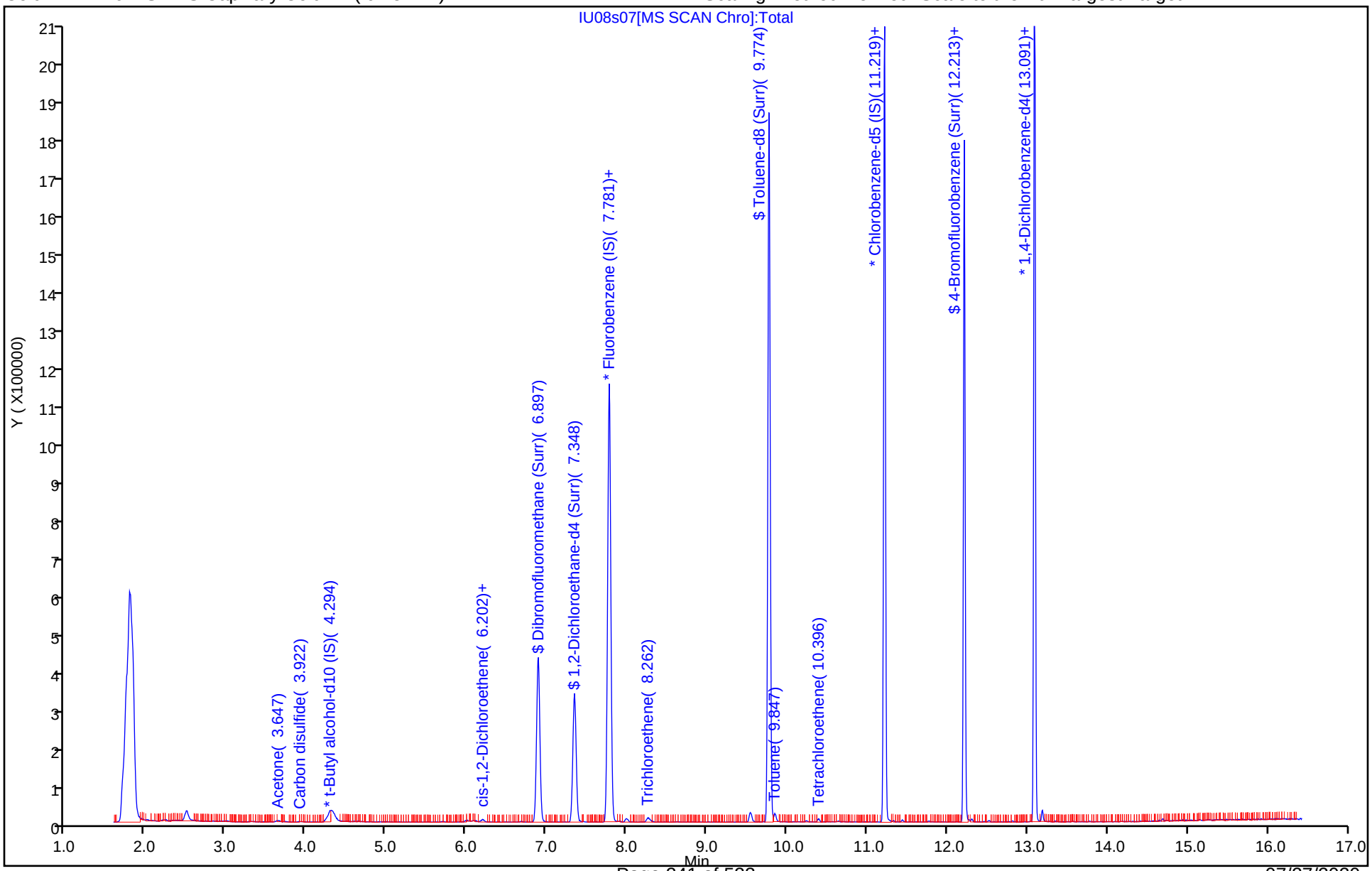
Report Date: 09-Jul-2020 09:13:42 Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s07.D

Injection Date:	08-Jul-2020 12:51:30	Instrument ID:	19930	Operator ID:	jkh09052
Lims ID:	410-5692-A-5	Lab Sample ID:	410-5692-5	Worklist Smp#:	14
Client ID:	HD-COD-SW-13-0/1-0				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
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\20200708-5039.b\IU08s07.D				
Lims ID:	410-5692-A-5				
Client ID:	HD-COD-SW-13-0/1-0				
Sample Type:	Client				
Inject. Date:	08-Jul-2020 12:51:30	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-5692-A-5				
Misc. Info.:	410-0005039-014				
Operator ID:	jkh09052	Instrument ID:	19930		
Method:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\8260 25ml HP31.m				
Limit Group:	MSV - 8260C_D				
Last Update:	09-Jul-2020 09:13:09	Calib Date:	16-Mar-2020 18:31:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1051				

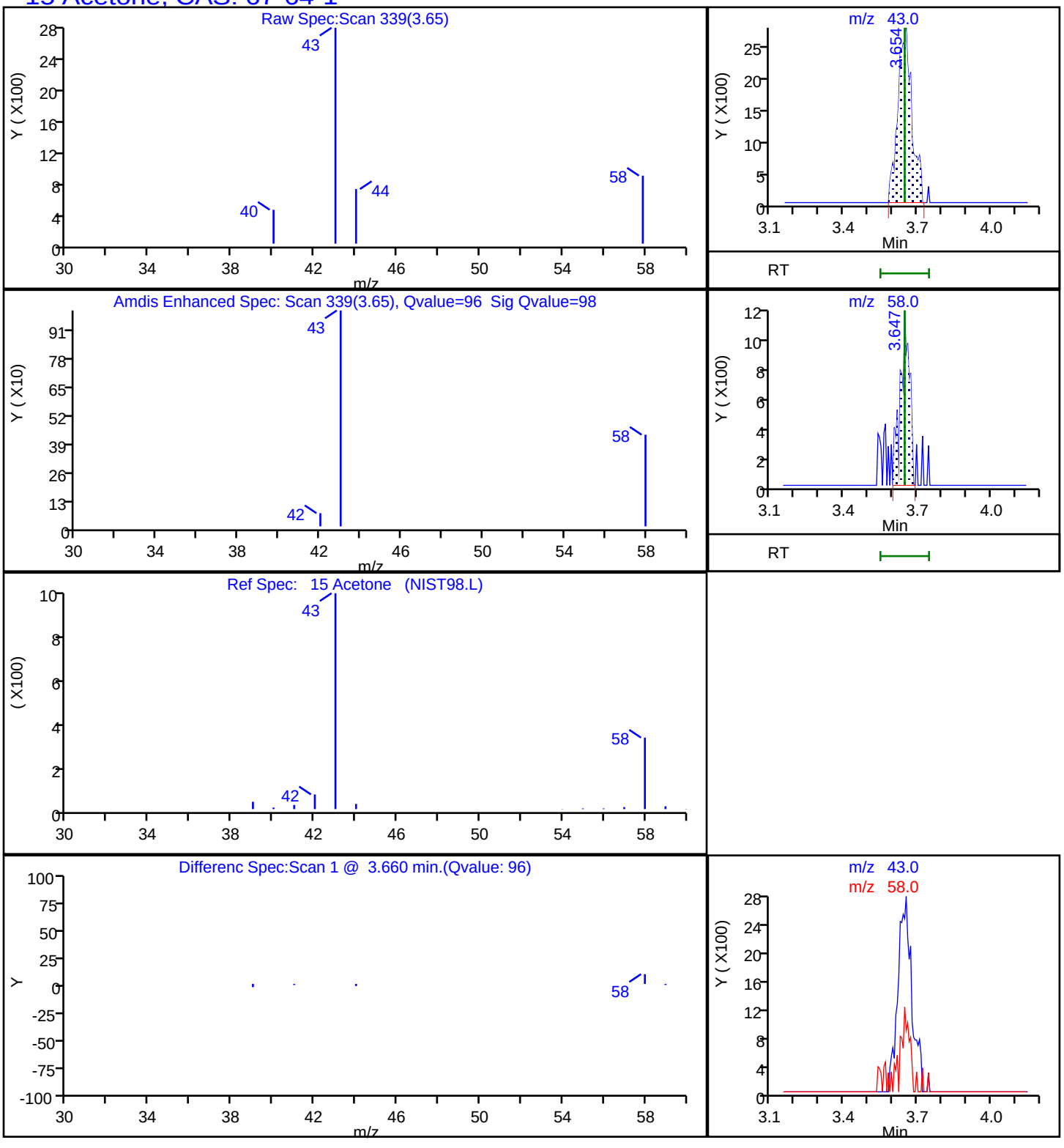
First Level Reviewer: riehlc Date: 09-Jul-2020 08:27:24

Compound	Amount Added	Amount Recovered	% Rec.
$ 46 Dibromofluoromethane (Surr)	10.0	10.1	101.34
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.1	100.95
$ 75 Toluene-d8 (Surr)	10.0	9.89	98.89
$ 100 4-Bromofluorobenzene (Surr)	10.0	9.65	96.48

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s07.D				
Injection Date:	08-Jul-2020 12:51:30	Instrument ID:	19930		
Lims ID:	410-5692-A-5	Lab Sample ID:	410-5692-5		
Client ID:	HD-COD-SW-13-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	13	Worklist Smp#:	14
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		

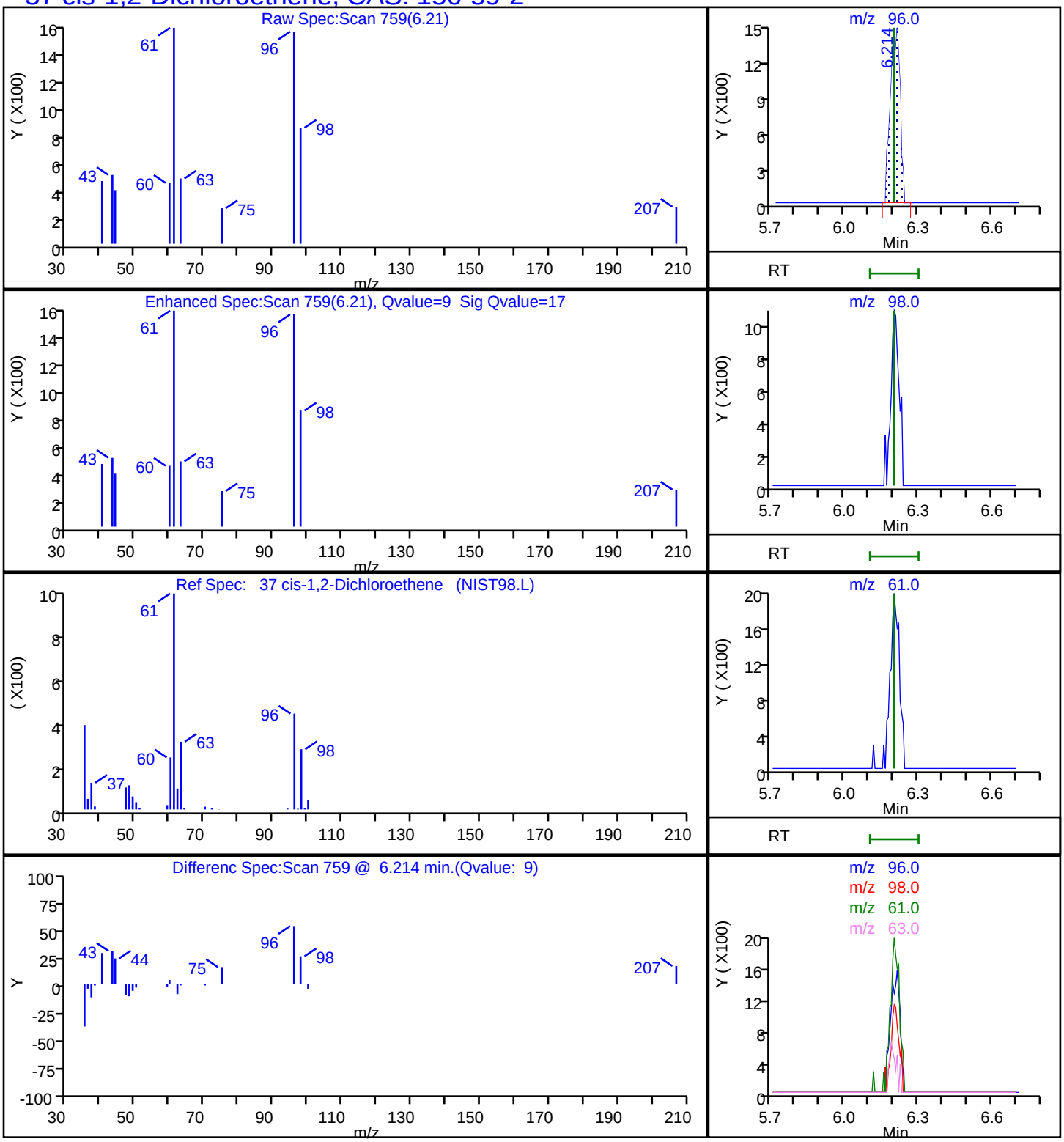
15 Acetone, CAS: 67-64-1



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s07.D				
Injection Date:	08-Jul-2020 12:51:30	Instrument ID:	19930		
Lims ID:	410-5692-A-5	Lab Sample ID:	410-5692-5		
Client ID:	HD-COD-SW-13-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	13	Worklist Smp#:	14
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		

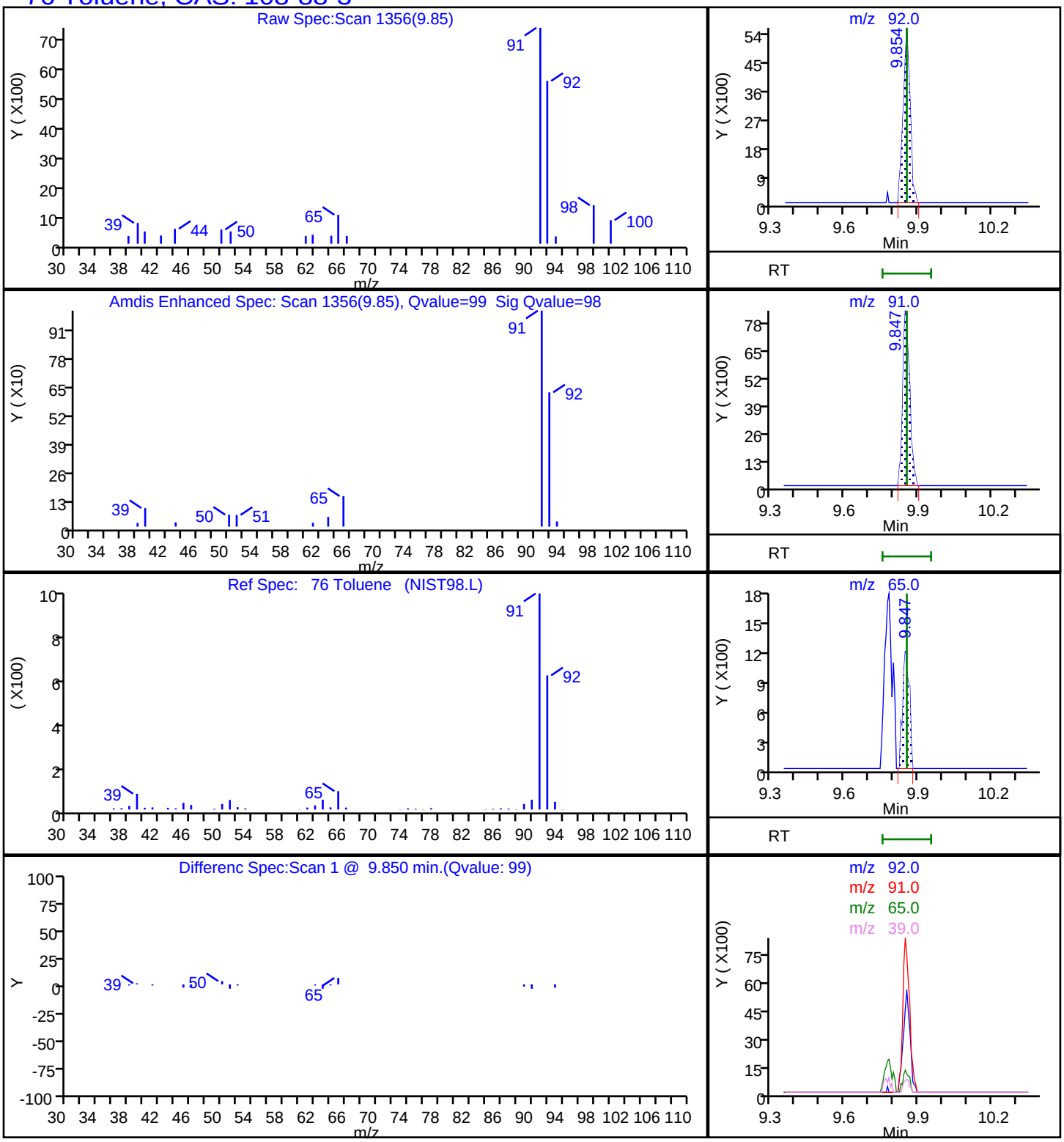
37 cis-1,2-Dichloroethene, CAS: 156-59-2



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s07.D				
Injection Date:	08-Jul-2020 12:51:30	Instrument ID:	19930		
Lims ID:	410-5692-A-5	Lab Sample ID:	410-5692-5		
Client ID:	HD-COD-SW-13-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	13	Worklist Smp#:	14
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		

76 Toluene, CAS: 108-88-3



Report Date: 09-Jul-2020 09:13:42 Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s07.D

Injection Date: 08-Jul-2020 12:51:30 Instrument ID: 19930

Lims ID: 410-5692-A-5 Lab Sample ID: 410-5692-5

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

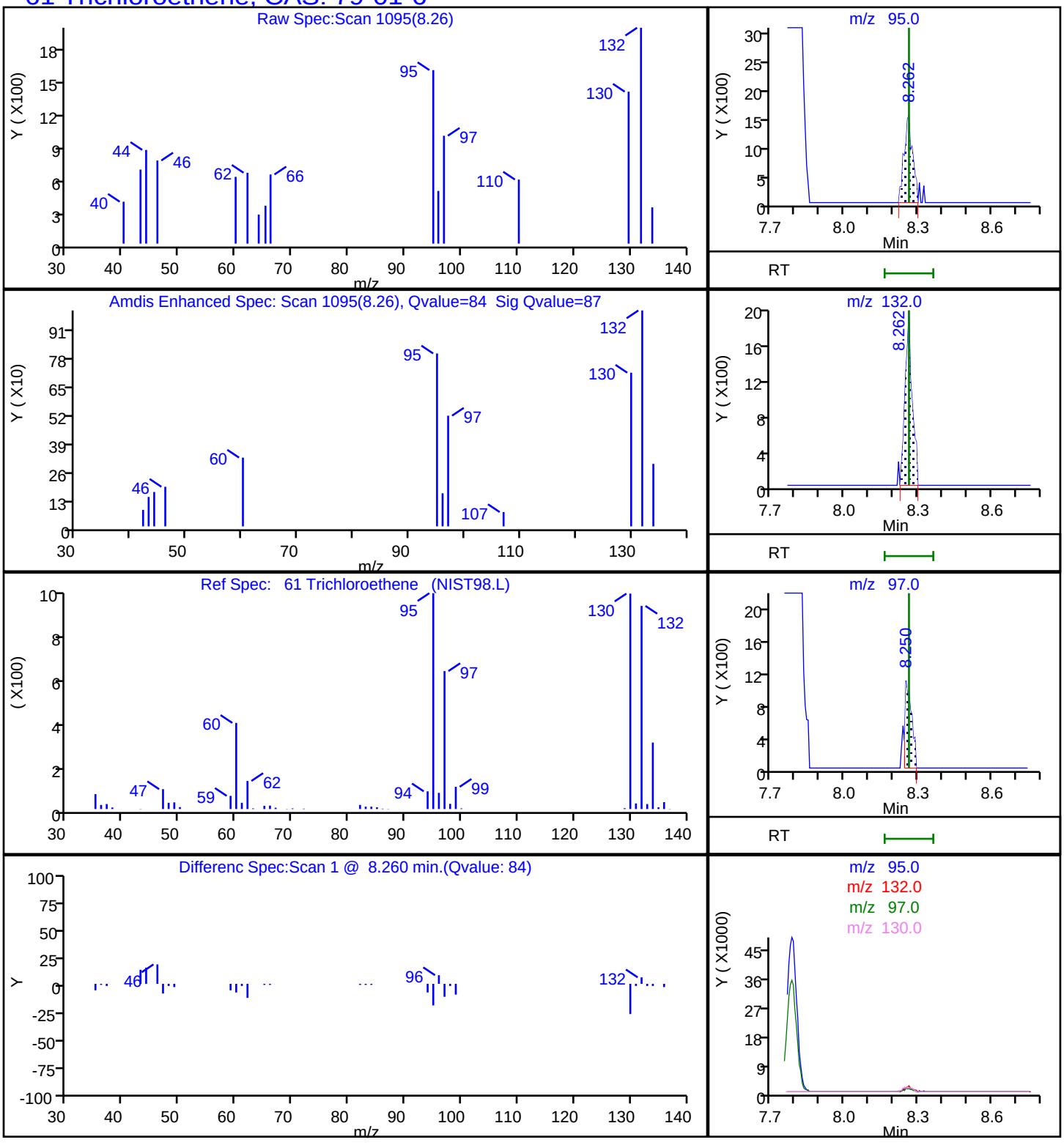
Operator ID: jkh09052 ALS Bottle#: 13 Worklist Smp#: 14

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

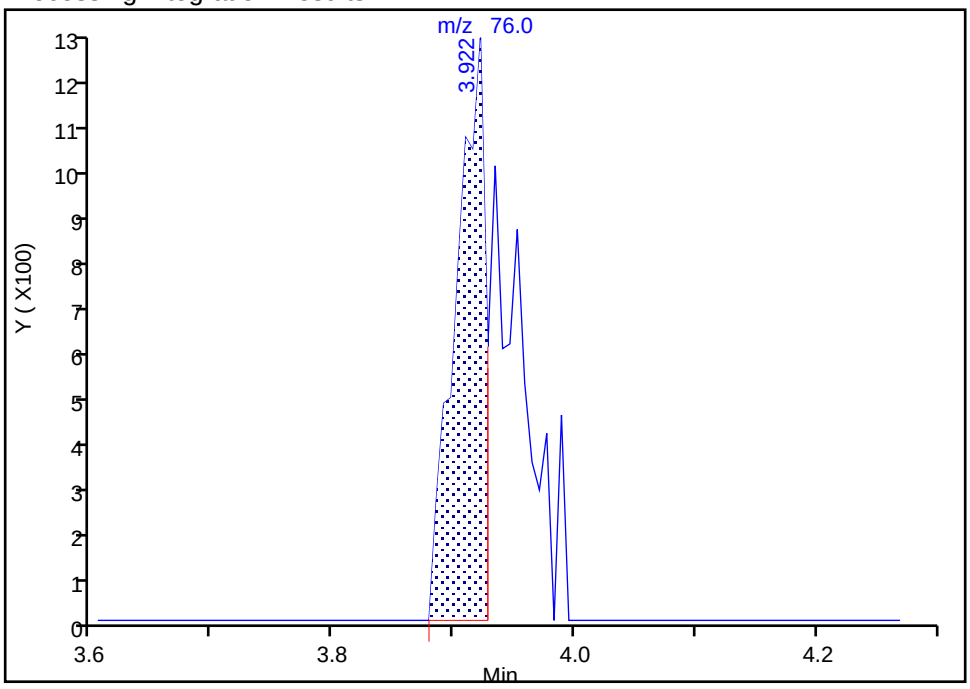
Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s07.D				
Injection Date:	08-Jul-2020 12:51:30	Instrument ID:	19930		
Lims ID:	410-5692-A-5	Lab Sample ID:	410-5692-5		
Client ID:	HD-COD-SW-13-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. 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

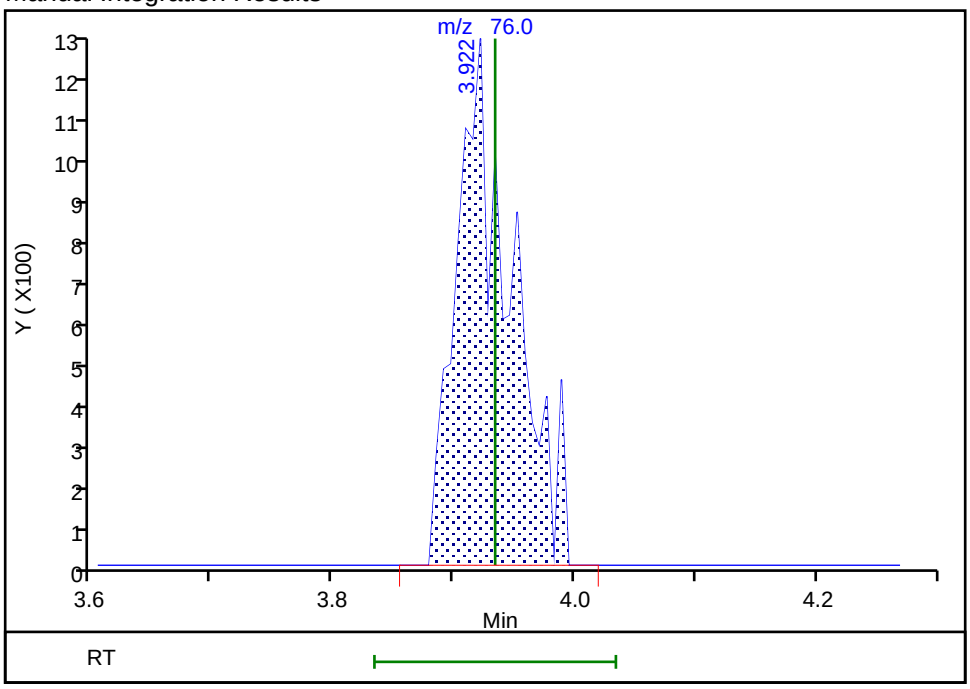
Processing Integration Results

RT: 3.92
Area: 2120
Amount: 0.018353
Amount Units: ug/l



Manual Integration Results

RT: 3.92
Area: 3916
Amount: 0.033901
Amount Units: ug/l



Reviewer: riehlc, 09-Jul-2020 08:26:40
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

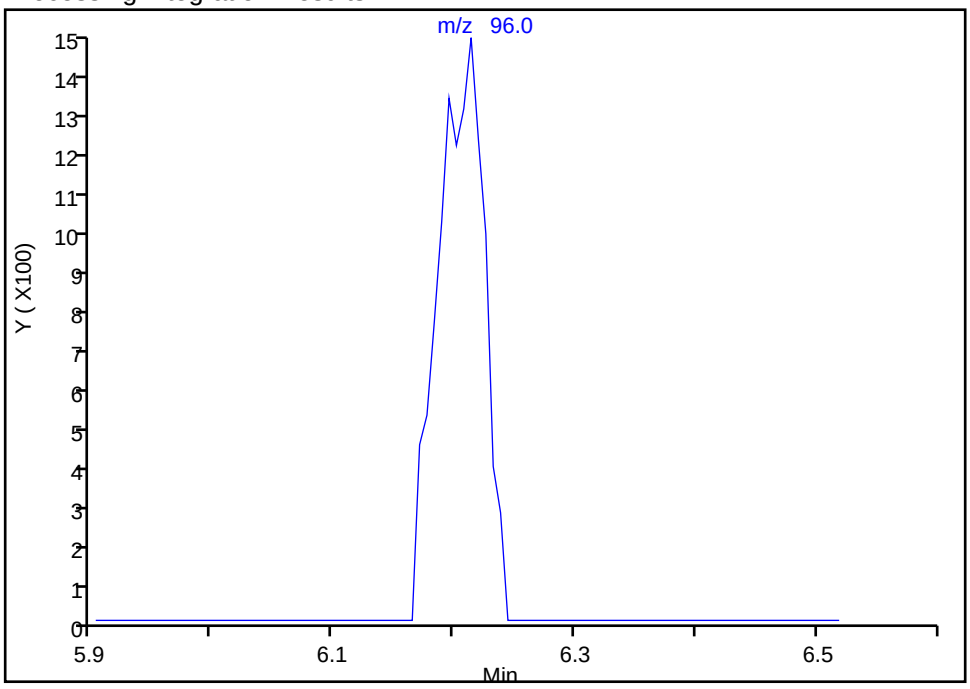
Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s07.D				
Injection Date:	08-Jul-2020 12:51:30	Instrument ID:	19930		
Lims ID:	410-5692-A-5	Lab Sample ID:	410-5692-5		
Client ID:	HD-COD-SW-13-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. 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

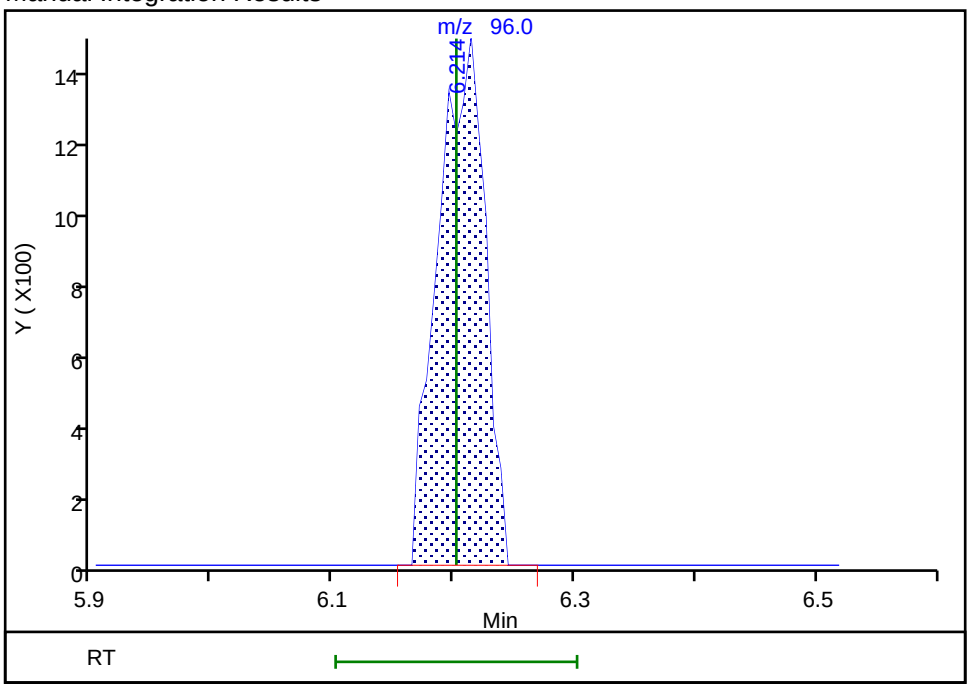
Not Detected
Expected RT: 6.20

Processing Integration Results



Manual Integration Results

RT: 6.21
Area: 4044
Amount: 0.082936
Amount Units: ug/l



Reviewer: riehlc, 09-Jul-2020 08:26:51
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.: 410-5692-1

SDG No.:

Client Sample ID: HD-COD-SW-15-0/1-0 Lab Sample ID: 410-5692-6

Matrix: Water Lab File ID: IU08s08.D

Analysis Method: 8260D Date Collected: 06/24/2020 11:30

Sample wt/vol: 25(mL) Date Analyzed: 07/08/2020 13:12

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.: 20265 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	0.13	J	0.50	0.060
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.50	0.070
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	0.080	J	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
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
74-97-5	Bromochloromethane	ND		0.50	0.050
124-48-1	Dibromochloromethane	ND		0.50	0.070
75-00-3	Chloroethane	ND		0.50	0.070
67-66-3	Chloroform	0.26	J	0.50	0.090
74-87-3	Chloromethane	ND		0.50	0.060
156-59-2	cis-1,2-Dichloroethene	0.77		0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	ND		0.50	0.050
75-27-4	Bromodichloromethane	ND		0.50	0.050
100-41-4	Ethylbenzene	ND		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	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	2.5		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.: 410-5692-1

SDG No.:

Client Sample ID: HD-COD-SW-15-0/1-0 Lab Sample ID: 410-5692-6

Matrix: Water Lab File ID: IU08s08.D

Analysis Method: 8260D Date Collected: 06/24/2020 11:30

Sample wt/vol: 25(mL) Date Analyzed: 07/08/2020 13:12

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.: 20265 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	0.89		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
460-00-4	4-Bromofluorobenzene (Surr)	96		80-120
1868-53-7	Dibromofluoromethane (Surr)	103		80-120
2037-26-5	Toluene-d8 (Surr)	100		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s08.D
Lims ID: 410-5692-A-6
Client ID: HD-COD-SW-15-0/1-0
Sample Type: Client
Inject. Date: 08-Jul-2020 13:12:30 ALS Bottle#: 14 Worklist Smp#: 15
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-5692-A-6
Misc. Info.: 410-0005039-015
Operator ID: jkh09052 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 09-Jul-2020 09:13:09 Calib Date: 16-Mar-2020 18:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1051

First Level Reviewer: riehlc Date: 09-Jul-2020 08:30:02

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
	1 Dichlorodifluoromethane	85		2.001				ND	
	2 Chlorodifluoromethane	51		2.014				ND	
	3 Dimethyl ether	45		2.068				ND	
	4 Chloromethane	50		2.203				ND	
	6 Butadiene	39		2.318				ND	
	5 Vinyl chloride	62		2.324				ND	
	7 Bromomethane	94		2.648				ND	
	8 Chloroethane	64		2.739				ND	
	9 Dichlorofluoromethane	67		2.983				ND	
	10 Trichlorofluoromethane	101		3.038				ND	
T	200 Ethanol TIC	45		3.288				ND	
	11 Ethyl ether	59		3.300				ND	
	12 1,2-Dichloro-1,1,2-trifluoroetha	67		3.385				ND	
	13 Acrolein	56		3.477				ND	
	14 1,1-Dichloroethene	96	3.629	3.623	0.006	88	3184	0.0797	
	15 Acetone	43		3.647				ND	
	16 112TCTFE	101		3.653				ND	
	17 Iodomethane	142		3.824				ND	
	18 Ethyl bromide	108		3.855				ND	
	19 Carbon disulfide	76		3.934				ND	
	20 Acetonitrile	41		4.031				ND	
	21 Methyl acetate	43		4.074				ND	
	22 3-Chloro-1-propene	41		4.111				ND	
	23 Methylene Chloride	84		4.306				ND	
*	24 t-Butyl alcohol-d10 (IS)	65	4.324	4.306	0.018	0	132975	50.0	
	25 2-Methyl-2-propanol	59		4.452				ND	
	26 Acrylonitrile	53		4.641				ND	
	27 Methyl tert-butyl ether	73		4.708				ND	
	28 trans-1,2-Dichloroethene	96		4.726				ND	
	29 Hexane	57		5.141				ND	
	30 Vinyl acetate	43		5.373				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
31 1,1-Dichloroethane	63		5.379				ND	
32 Isopropyl ether	45		5.434				ND	
33 2-Chloro-1,3-butadiene	53		5.488				ND	
34 Tert-butyl ethyl ether	59		5.970				ND	
S 35 1,2-Dichloroethene, Total	100				0		0.7673	
36 2-Butanone (MEK)	43		6.177				ND	
37 cis-1,2-Dichloroethene	96	6.208	6.202	0.006	78	36981	0.7673	
38 2,2-Dichloropropane	77		6.226				ND	
39 Ethyl acetate	43		6.238				ND	U
40 Propionitrile	54		6.263				ND	
41 Methyl acrylate	55		6.305				ND	
42 Methacrylonitrile	67		6.476				ND	
43 Chlorobromomethane	128		6.537				ND	
44 Tetrahydrofuran	71		6.549				ND	
45 Chloroform	83	6.689	6.683	0.006	91	19690	0.2578	
$ 46 Dibromofluoromethane (Surr)	113	6.903	6.897	0.006	94	371770	10.3	
47 1,1,1-Trichloroethane	97	6.921	6.909	0.012	80	9528	0.1286	
48 Cyclohexane	56		7.006				ND	
49 1-Chlorobutane	56		7.067				ND	
51 1,1-Dichloropropene	75		7.122				ND	
50 Carbon tetrachloride	117		7.128				ND	
52 Isobutyl alcohol	41		7.269				ND	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.360	7.354	0.006	0	74852	10.2	
54 Benzene	78		7.384				ND	
56 1,2-Dichloroethane	62		7.452				ND	
55 Isopropyl acetate	43		7.464				ND	
57 Tert-amyl methyl ether	73		7.567				ND	
* 58 Fluorobenzene (IS)	96	7.787	7.787	0.000	99	1493238	10.0	
59 n-Heptane	43	8.122	7.787	0.335	1	0	0	7M
60 n-Butanol	56		8.134				ND	
61 Trichloroethene	95	8.262	8.262	0.000	97	42271	0.8910	
62 Methylcyclohexane	83		8.567				ND	
63 1,2-Dichloropropane	63		8.592				ND	
64 Methyl methacrylate	69		8.671				ND	
65 1,4-Dioxane	88		8.677				ND	
66 Dibromomethane	93		8.701				ND	
67 n-Propyl acetate	43		8.750				ND	
68 Dichlorobromomethane	83		8.933				ND	
69 2-Nitropropane	41		9.201				ND	
70 Chloroacetonitrile	75		9.274				ND	
71 2-Chloroethyl vinyl ether	63		9.293				ND	
72 1-Bromo-2-chloroethane	63		9.323				ND	
73 cis-1,3-Dichloropropene	75		9.476				ND	
74 4-Methyl-2-pentanone (MIBK)	43		9.640				ND	
$ 75 Toluene-d8 (Surr)	98	9.780	9.774	0.006	93	1435746	10.0	
76 Toluene	92	9.847	9.853	-0.006	97	3219	0.0280	
S 77 1,3-Dichloropropene, Total	100		10.060				ND	
78 trans-1,3-Dichloropropene	75		10.103				ND	
79 Ethyl methacrylate	69		10.164				ND	
80 1,1,2-Trichloroethane	97		10.305				ND	
81 Tetrachloroethene	166	10.396	10.396	0.000	97	137302	2.50	
82 1,3-Dichloropropane	76		10.469				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
83 2-Hexanone	43		10.512				ND	
84 n-Butyl acetate	43		10.640				ND	
85 Chlorodibromomethane	129		10.683				ND	
86 Ethylene Dibromide	107		10.792				ND	
* 87 Chlorobenzene-d5 (IS)	117	11.219	11.219	0.000	85	1129767	10.0	
88 1-Chlorohexane	91		11.225				ND	
90 Chlorobenzene	112		11.243				ND	
S 89 Xylenes, Total	106		11.245				ND	
91 1,1,1,2-Tetrachloroethane	131		11.323				ND	
92 Ethylbenzene	91		11.329				ND	
93 m-Xylene & p-Xylene	106		11.445				ND	
94 o-Xylene	106		11.768				ND	
95 Styrene	104		11.786				ND	
96 Bromoform	173		11.945				ND	
97 Isopropylbenzene	105		12.066				ND	
98 cis-1,4-Dichloro-2-butene	88		12.115				ND	U
99 Cyclohexanone	55		12.152				ND	
$ 100 4-Bromofluorobenzene (Surr)	95	12.213	12.213	0.000	93	514399	9.60	
101 1,1,2,2-Tetrachloroethane	83		12.310				ND	
102 Bromobenzene	156		12.329				ND	
103 trans-1,4-Dichloro-2-butene	53		12.335				ND	
104 1,2,3-Trichloropropane	110		12.359				ND	
105 N-Propylbenzene	91		12.396				ND	
106 2-Chlorotoluene	126		12.475				ND	
107 1,3,5-Trimethylbenzene	105		12.530				ND	
108 4-Chlorotoluene	126		12.566				ND	
109 tert-Butylbenzene	134		12.774				ND	
110 Pentachloroethane	167		12.804				ND	
111 1,2,4-Trimethylbenzene	105		12.816				ND	
112 sec-Butylbenzene	105		12.938				ND	
113 1,3-Dichlorobenzene	146		13.036				ND	
114 4-Isopropyltoluene	119		13.042				ND	
* 115 1,4-Dichlorobenzene-d4	152	13.091	13.091	0.000	94	623645	10.0	
116 1,4-Dichlorobenzene	146		13.109				ND	
117 1,2,3-Trimethylbenzene	120		13.115				ND	
118 Benzyl chloride	126		13.182				ND	
119 n-Butylbenzene	92		13.335				ND	
120 1,2-Dichlorobenzene	146		13.365				ND	
121 Hexachloroethane	117		13.572				ND	
122 1,2-Dibromo-3-Chloropropane	155		13.908				ND	
123 1,3,5-Trichlorobenzene	180		14.036				ND	
124 1,2,4-Trichlorobenzene	180		14.456				ND	
125 Hexachlorobutadiene	225		14.542				ND	
126 Naphthalene	128		14.639				ND	
127 1,2,3-Trichlorobenzene	180		14.779				ND	
128 Dodecane	57		0.000				ND	
156 2,3-Dibromopropene TIC	1		0.000				ND	
155 Ethylene oxide TIC	1		0.000				ND	
154 2-Bromo-3-chloropropene TIC	1		0.000				ND	
153 Epichlorohydrin TIC	1		0.000				ND	
152 Vinyl bromide TIC	1		0.000				ND	
151 Chloroacetaldehyde TIC	1		0.000				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
150 Epibromohydrin TIC	1		0.000				ND	
149 2-Chloroethanol TIC	1		0.000				ND	
148 Monochloroacetic acid TIC	1		0.000				ND	
147 2-Bromoethanol TIC	1		0.000				ND	
146 2,3-Dibromo-1-propanol TIC	1		0.000				ND	
144 2-ethoxy-2-methyl butane	1		0.000				ND	
143 n-Decane	57		0.000				ND	
142 2-Bromo-1-chloropropane	1		0.000				ND	
157 3-Chloro-1,2-propanediol TIC	1		0.000				ND	
139 1-Bromo-3-Chloropropane	1		0.000				ND	
138 1,1-Dichloro-1-fluoroethane	1		0.000				ND	
137 2-Methylnaphthalene	142		0.000				ND	
136 2-Chloro-1,1,1-Trifluoroethane	1		0.000				ND	
135 p-Diethylbenzene	1		0.000				ND	
134 Isopropyl alcohol	45		0.000				ND	
133 t-Amyl alcohol	1		0.000				ND	
132 Methylal	1		0.000				ND	
131 tert-Butyl Formate	1		0.000				ND	
130 Chlorotrifluoroethene	1		0.000				ND	
129 Propene oxide	1		0.000				ND	
141 1-Chloropropane	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_00002 Amount Added: 5.00 Units: uL Run Reagent

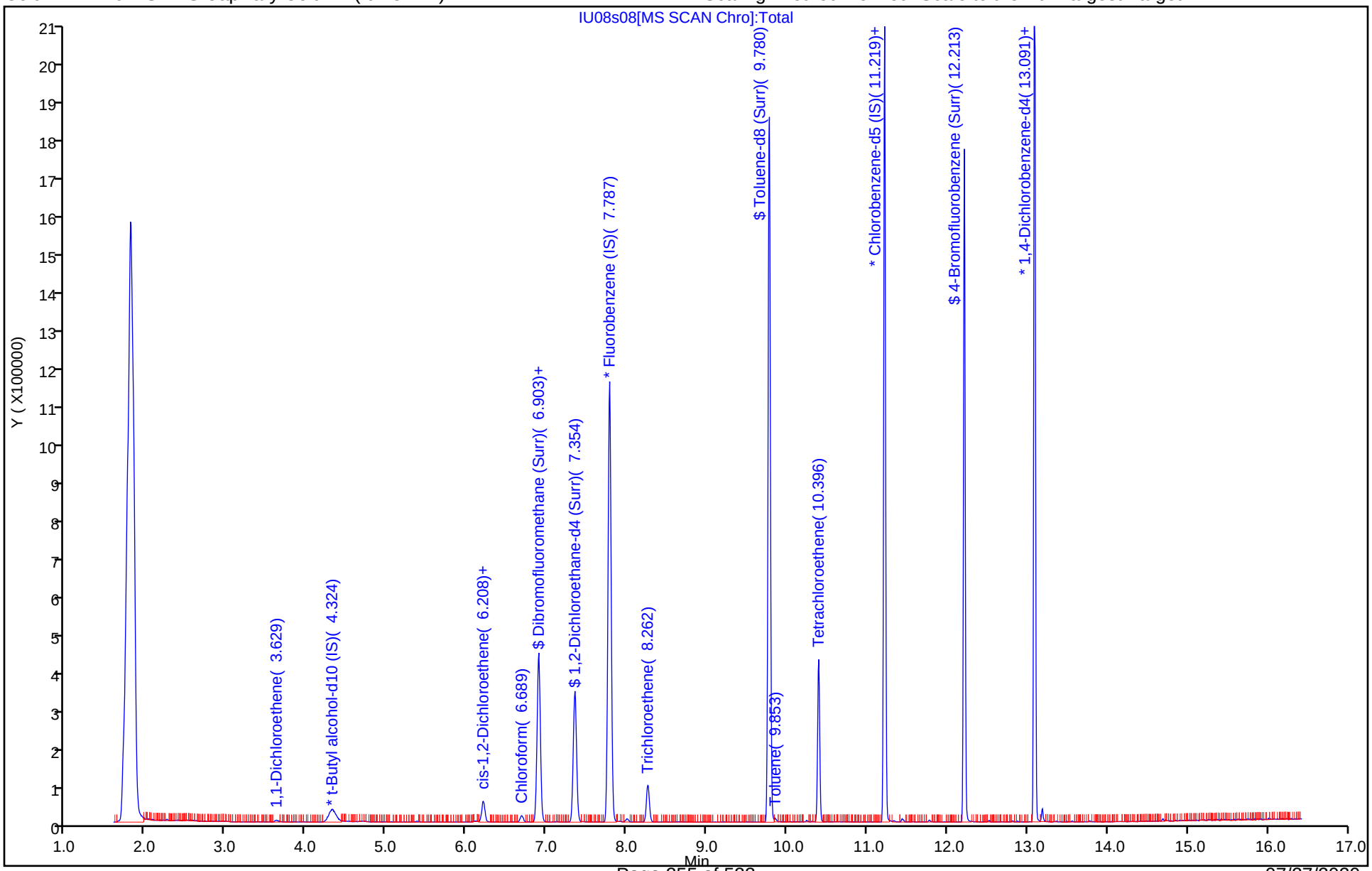
Report Date: 09-Jul-2020 09:13:43 Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s08.D

Injection Date:	08-Jul-2020 13:12:30	Instrument ID:	19930	Operator ID:	jkh09052
Lims ID:	410-5692-A-6	Lab Sample ID:	410-5692-6	Worklist Smp#:	15
Client ID:	HD-COD-SW-15-0/1-0				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
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

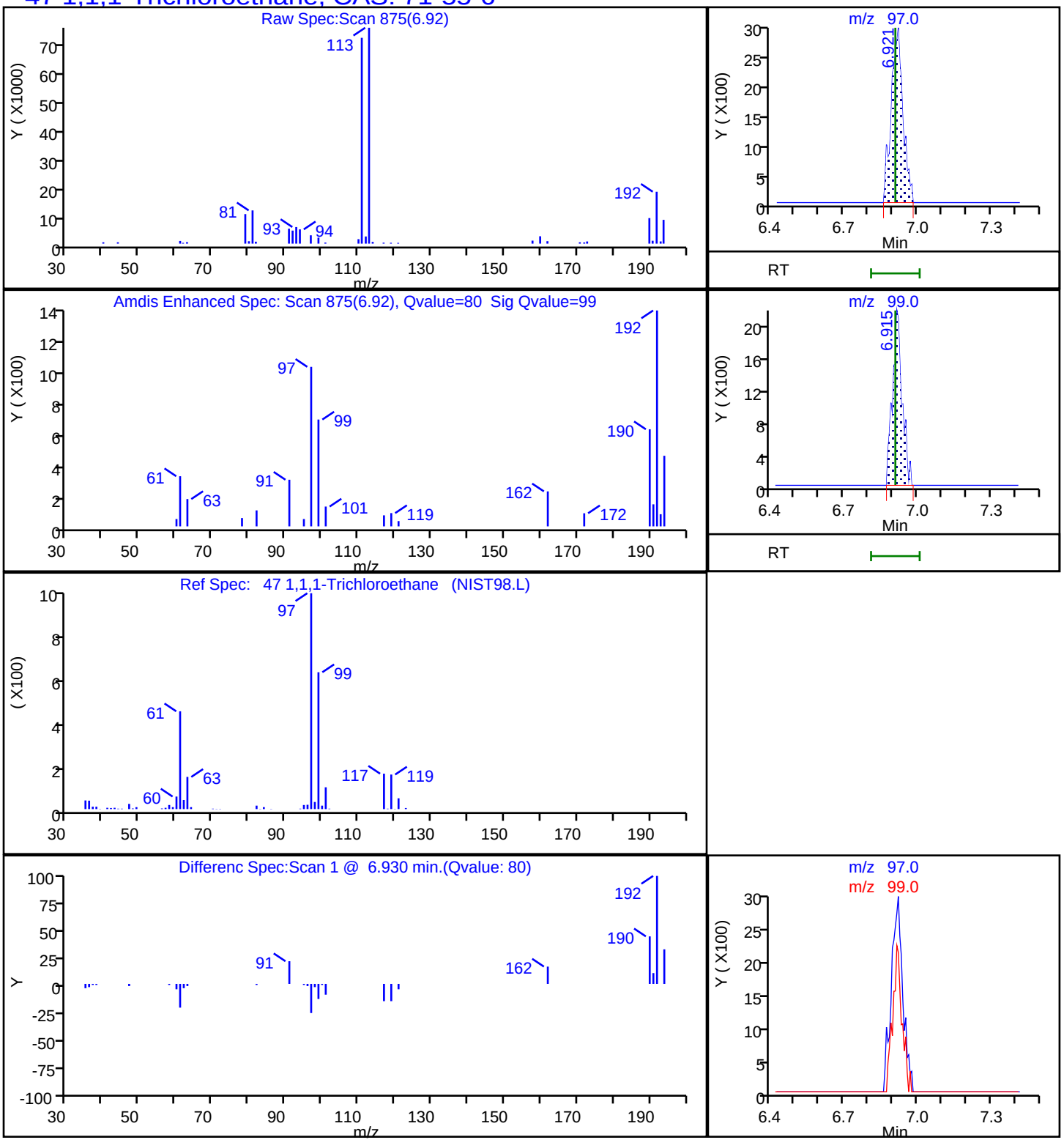
Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s08.D				
Lims ID:	410-5692-A-6				
Client ID:	HD-COD-SW-15-0/1-0				
Sample Type:	Client				
Inject. Date:	08-Jul-2020 13:12:30	ALS Bottle#:	14	Worklist Smp#:	15
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-5692-A-6				
Misc. Info.:	410-0005039-015				
Operator ID:	jkh09052	Instrument ID:	19930		
Method:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\8260 25ml HP31.m				
Limit Group:	MSV - 8260C_D				
Last Update:	09-Jul-2020 09:13:09	Calib Date:	16-Mar-2020 18:31:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1051				
First Level Reviewer: riehlc		Date:	09-Jul-2020 08:30:02		

Compound	Amount Added	Amount Recovered	% Rec.
$ 46 Dibromofluoromethane (Surr)	10.0	10.3	103.15
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.2	102.49
$ 75 Toluene-d8 (Surr)	10.0	10.0	99.94
$ 100 4-Bromofluorobenzene (Surr)	10.0	9.60	95.95

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s08.D				
Injection Date:	08-Jul-2020 13:12:30	Instrument ID:	19930		
Lims ID:	410-5692-A-6	Lab Sample ID:	410-5692-6		
Client ID:	HD-COD-SW-15-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	14	Worklist Smp#:	15
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		

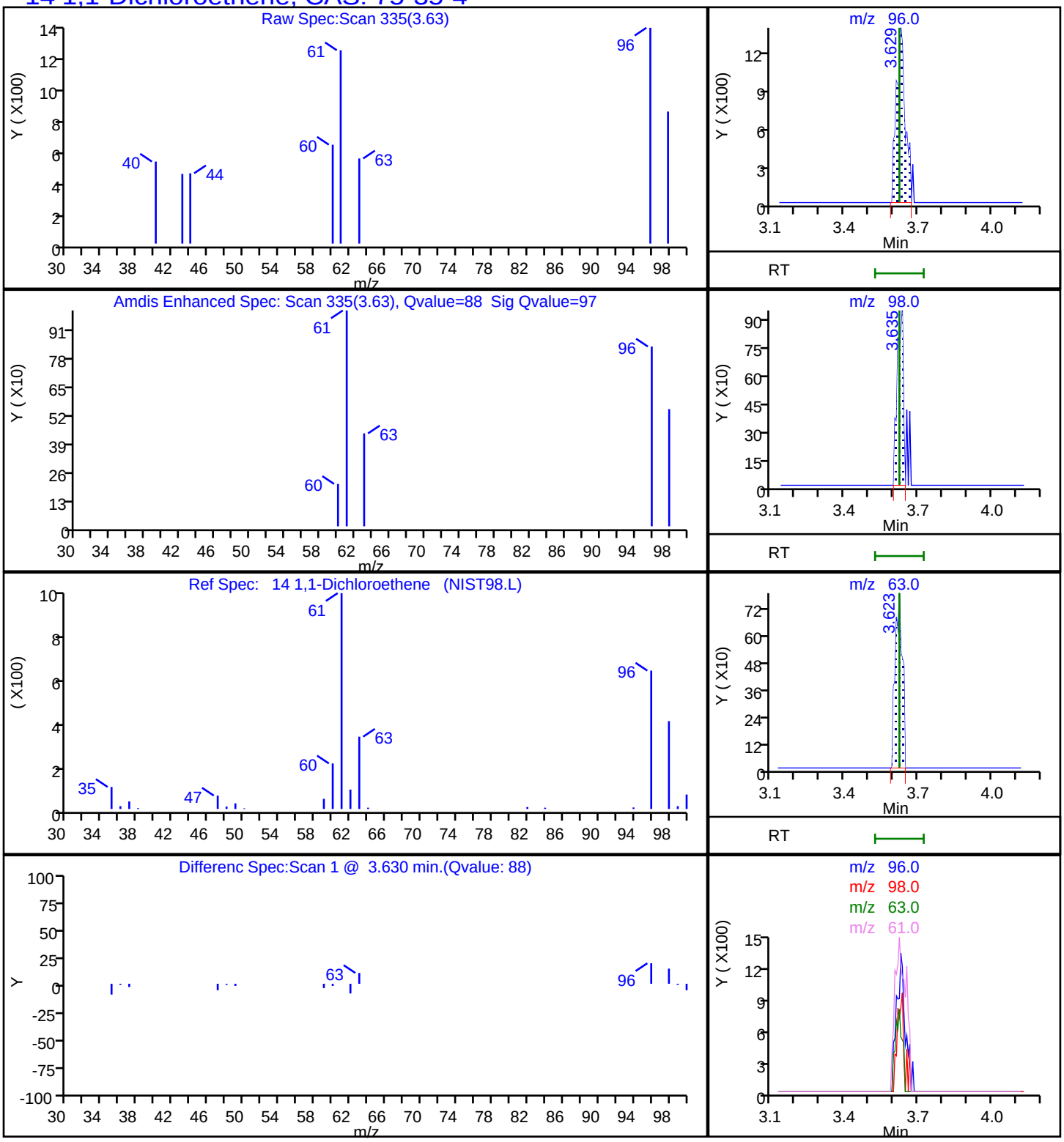
47 1,1,1-Trichloroethane, CAS: 71-55-6



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s08.D				
Injection Date:	08-Jul-2020 13:12:30	Instrument ID:	19930		
Lims ID:	410-5692-A-6	Lab Sample ID:	410-5692-6		
Client ID:	HD-COD-SW-15-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	14	Worklist Smp#:	15
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		

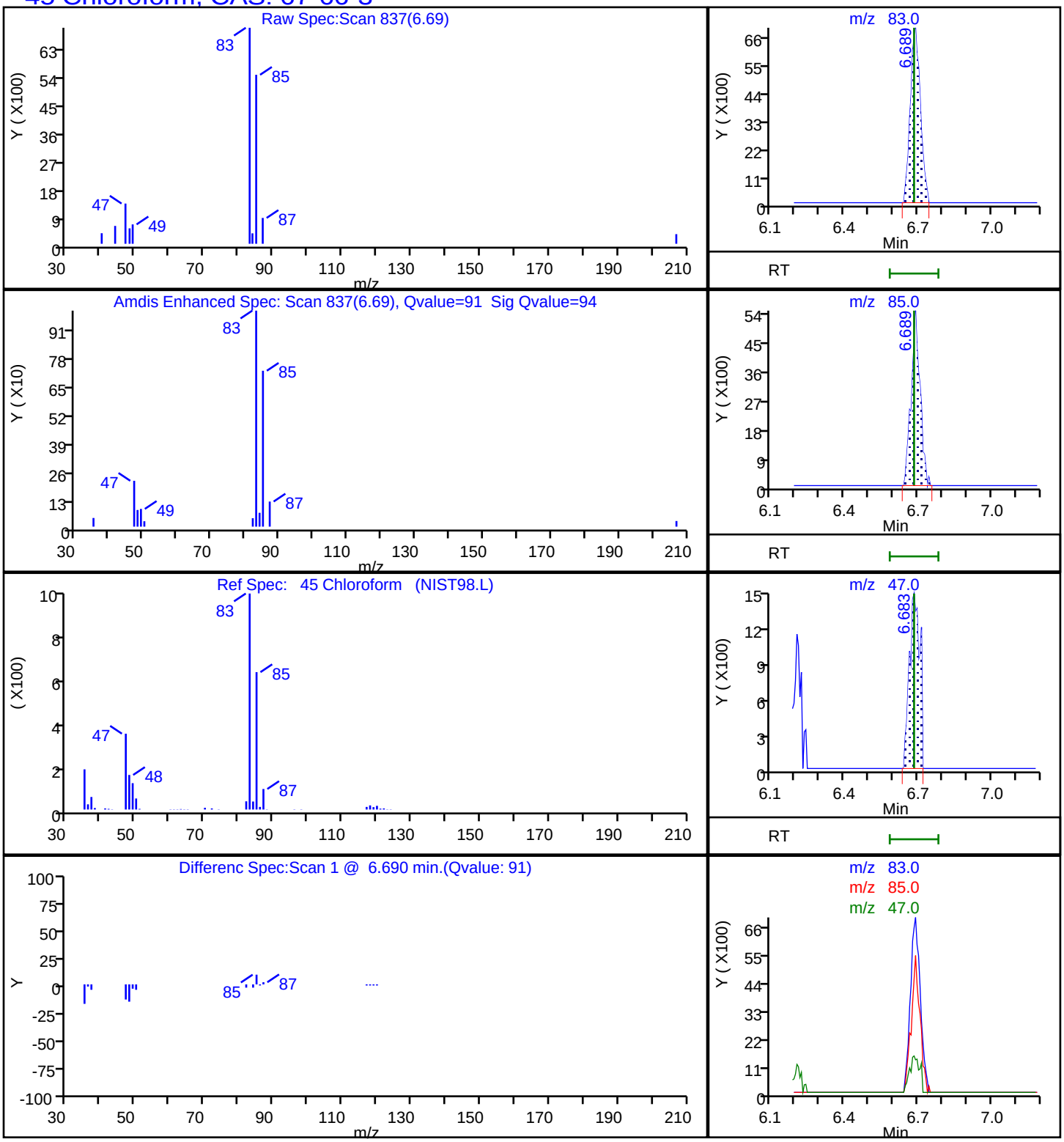
14 1,1-Dichloroethene, CAS: 75-35-4



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s08.D				
Injection Date:	08-Jul-2020 13:12:30	Instrument ID:	19930		
Lims ID:	410-5692-A-6	Lab Sample ID:	410-5692-6		
Client ID:	HD-COD-SW-15-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	14	Worklist Smp#:	15
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		

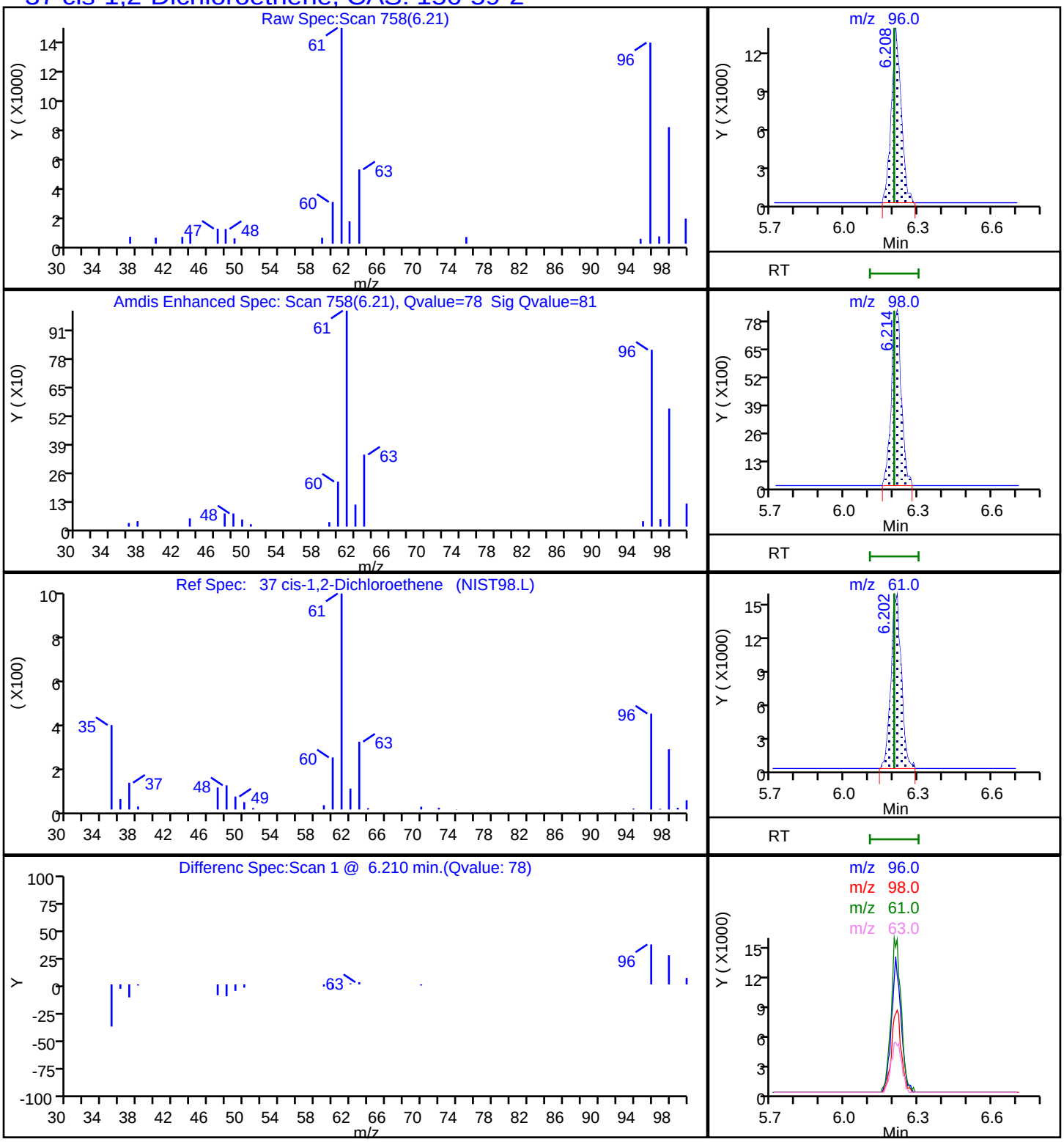
45 Chloroform, CAS: 67-66-3



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s08.D				
Injection Date:	08-Jul-2020 13:12:30	Instrument ID:	19930		
Lims ID:	410-5692-A-6	Lab Sample ID:	410-5692-6		
Client ID:	HD-COD-SW-15-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	14	Worklist Smp#:	15
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



Report Date: 09-Jul-2020 09:13:43 Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s08.D

Injection Date: 08-Jul-2020 13:12:30 Instrument ID: 19930

Lims ID: 410-5692-A-6 Lab Sample ID: 410-5692-6

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

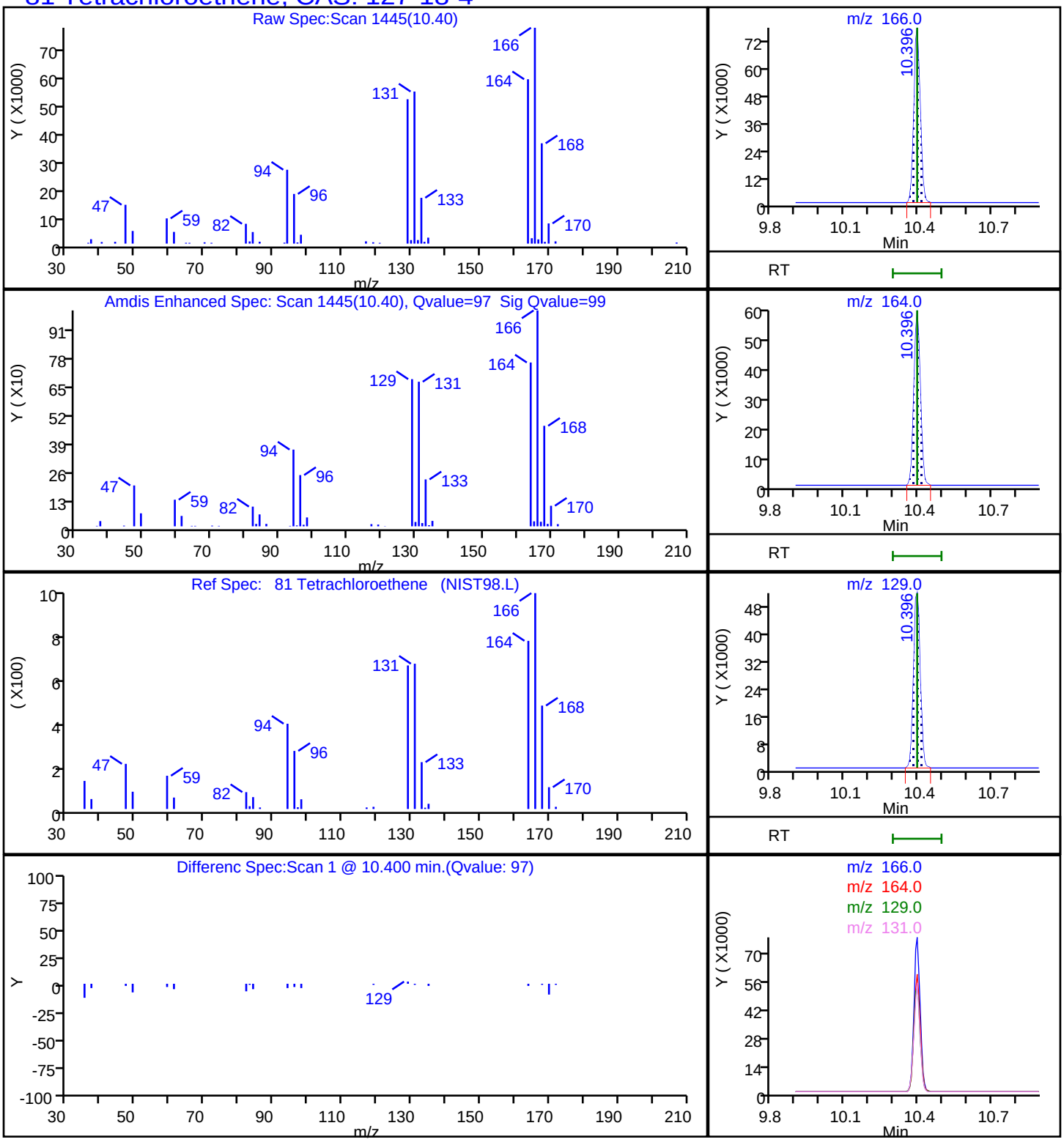
Operator ID: jkh09052 ALS Bottle#: 14 Worklist Smp#: 15

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



Report Date: 09-Jul-2020 09:13:43 Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s08.D

Injection Date: 08-Jul-2020 13:12:30 Instrument ID: 19930

Lims ID: 410-5692-A-6 Lab Sample ID: 410-5692-6

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

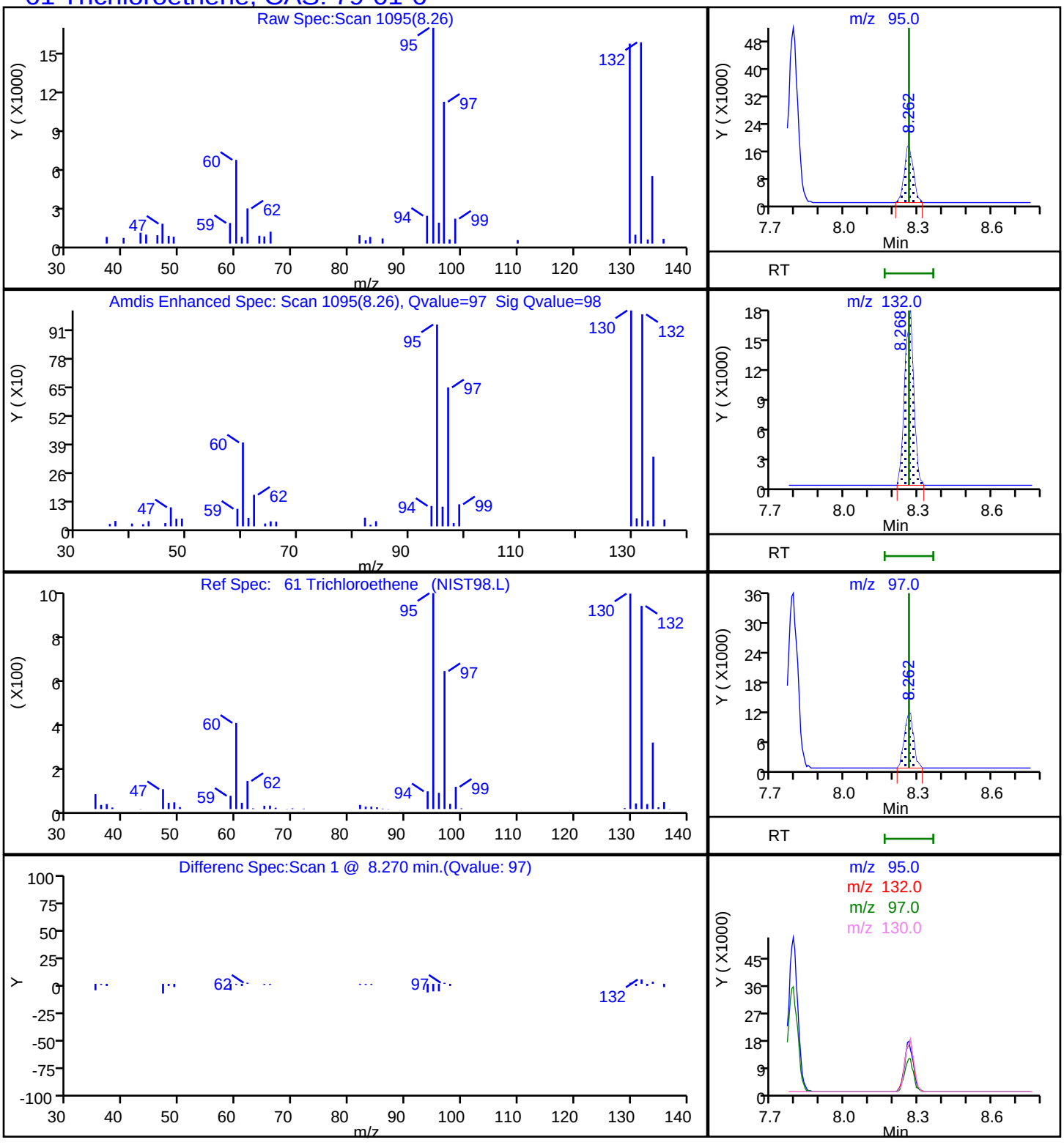
Operator ID: jkh09052 ALS Bottle#: 14 Worklist Smp#: 15

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



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-5692-1

SDG No.:

Client Sample ID: HD-COD-SW-16-0/1-0 Lab Sample ID: 410-5692-7

Matrix: Water Lab File ID: IU08s12.D

Analysis Method: 8260D Date Collected: 06/24/2020 10:00

Sample wt/vol: 25(mL) Date Analyzed: 07/08/2020 14:37

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.: 20265 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		0.50	0.060
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.50	0.070
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
107-06-2	1,2-Dichloroethane	ND		0.50	0.050
78-87-5	1,2-Dichloropropane	ND		0.50	0.060
78-93-3	2-Butanone (MEK)	ND		5.0	0.60
591-78-6	2-Hexanone	ND		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70
67-64-1	Acetone	2.5	J	5.0	0.90
107-13-1	Acrylonitrile	ND		5.0	0.40
71-43-2	Benzene	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
74-97-5	Bromochloromethane	ND		0.50	0.050
124-48-1	Dibromochloromethane	ND		0.50	0.070
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	0.082	J	0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	ND		0.50	0.050
75-27-4	Bromodichloromethane	ND		0.50	0.050
100-41-4	Ethylbenzene	ND		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	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	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.: 410-5692-1

SDG No.:

Client Sample ID: HD-COD-SW-16-0/1-0 Lab Sample ID: 410-5692-7

Matrix: Water Lab File ID: IU08s12.D

Analysis Method: 8260D Date Collected: 06/24/2020 10:00

Sample wt/vol: 25(mL) Date Analyzed: 07/08/2020 14:37

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.: 20265 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	0.078	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)	104		80-120
460-00-4	4-Bromofluorobenzene (Surr)	98		80-120
1868-53-7	Dibromofluoromethane (Surr)	102		80-120
2037-26-5	Toluene-d8 (Surr)	100		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s12.D
Lims ID: 410-5692-A-7
Client ID: HD-COD-SW-16-0/1-0
Sample Type: Client
Inject. Date: 08-Jul-2020 14:37:30 ALS Bottle#: 18 Worklist Smp#: 19
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-5692-A-7
Misc. Info.: 410-0005039-019
Operator ID: jkh09052 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 09-Jul-2020 09:13:09 Calib Date: 16-Mar-2020 18:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1051

First Level Reviewer: riehlc Date: 09-Jul-2020 08:39:42

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
4 Chloromethane	50		2.203				ND	
5 Vinyl chloride	62		2.324				ND	
7 Bromomethane	94		2.648				ND	
8 Chloroethane	64		2.739				ND	
14 1,1-Dichloroethene	96		3.623				ND	
15 Acetone	43	3.647	3.647	0.000	79	14592	2.48	
19 Carbon disulfide	76		3.934				ND	
23 Methylene Chloride	84		4.306				ND	
* 24 t-Butyl alcohol-d10 (IS)	65	4.306	4.306	0.000	0	118365	50.0	
26 Acrylonitrile	53		4.641				ND	
27 Methyl tert-butyl ether	73		4.708				ND	
28 trans-1,2-Dichloroethene	96		4.726				ND	
31 1,1-Dichloroethane	63		5.379				ND	
36 2-Butanone (MEK)	43		6.177				ND	
37 cis-1,2-Dichloroethene	96	6.196	6.202	-0.006	77	3923	0.0823	
43 Chlorobromomethane	128		6.537				ND	
45 Chloroform	83		6.683				ND	
$ 46 Dibromofluoromethane (Surr)	113	6.897	6.897	0.000	94	362851	10.2	
47 1,1,1-Trichloroethane	97		6.909				ND	
50 Carbon tetrachloride	117		7.128				ND	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.348	7.354	-0.006	0	74901	10.4	
54 Benzene	78		7.384				ND	
56 1,2-Dichloroethane	62		7.452				ND	
* 58 Fluorobenzene (IS)	96	7.781	7.787	-0.006	99	1477007	10.0	
61 Trichloroethene	95	8.250	8.262	-0.012	94	3646	0.0777	M
63 1,2-Dichloropropane	63		8.592				ND	
68 Dichlorobromomethane	83		8.933				ND	
73 cis-1,3-Dichloropropene	75		9.476				ND	
74 4-Methyl-2-pentanone (MIBK)	43		9.640				ND	
$ 75 Toluene-d8 (Surr)	98	9.774	9.774	0.000	93	1428507	10.0	
76 Toluene	92	9.853	9.853	0.000	97	11517	0.1009	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
78 trans-1,3-Dichloropropene	75		10.103				ND	
80 1,1,2-Trichloroethane	97		10.305				ND	
81 Tetrachloroethene	166		10.396				ND	
83 2-Hexanone	43		10.512				ND	
85 Chlorodibromomethane	129		10.683				ND	
86 Ethylene Dibromide	107		10.792				ND	
* 87 Chlorobenzene-d5 (IS)	117	11.219	11.219	0.000	85	1123071	10.0	
90 Chlorobenzene	112		11.243				ND	
S 89 Xylenes, Total	106		11.245				ND	
91 1,1,1,2-Tetrachloroethane	131		11.323				ND	
92 Ethylbenzene	91		11.329				ND	
93 m-Xylene & p-Xylene	106		11.445				ND	
94 o-Xylene	106		11.768				ND	
95 Styrene	104		11.786				ND	
96 Bromoform	173		11.945				ND	
$ 100 4-Bromofluorobenzene (Surr)	95	12.213	12.213	0.000	93	521185	9.78	
101 1,1,2,2-Tetrachloroethane	83		12.310				ND	
* 115 1,4-Dichlorobenzene-d4	152	13.091	13.091	0.000	94	614680	10.0	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MSV_31_826ISS_00002 Amount Added: 5.00 Units: uL Run Reagent

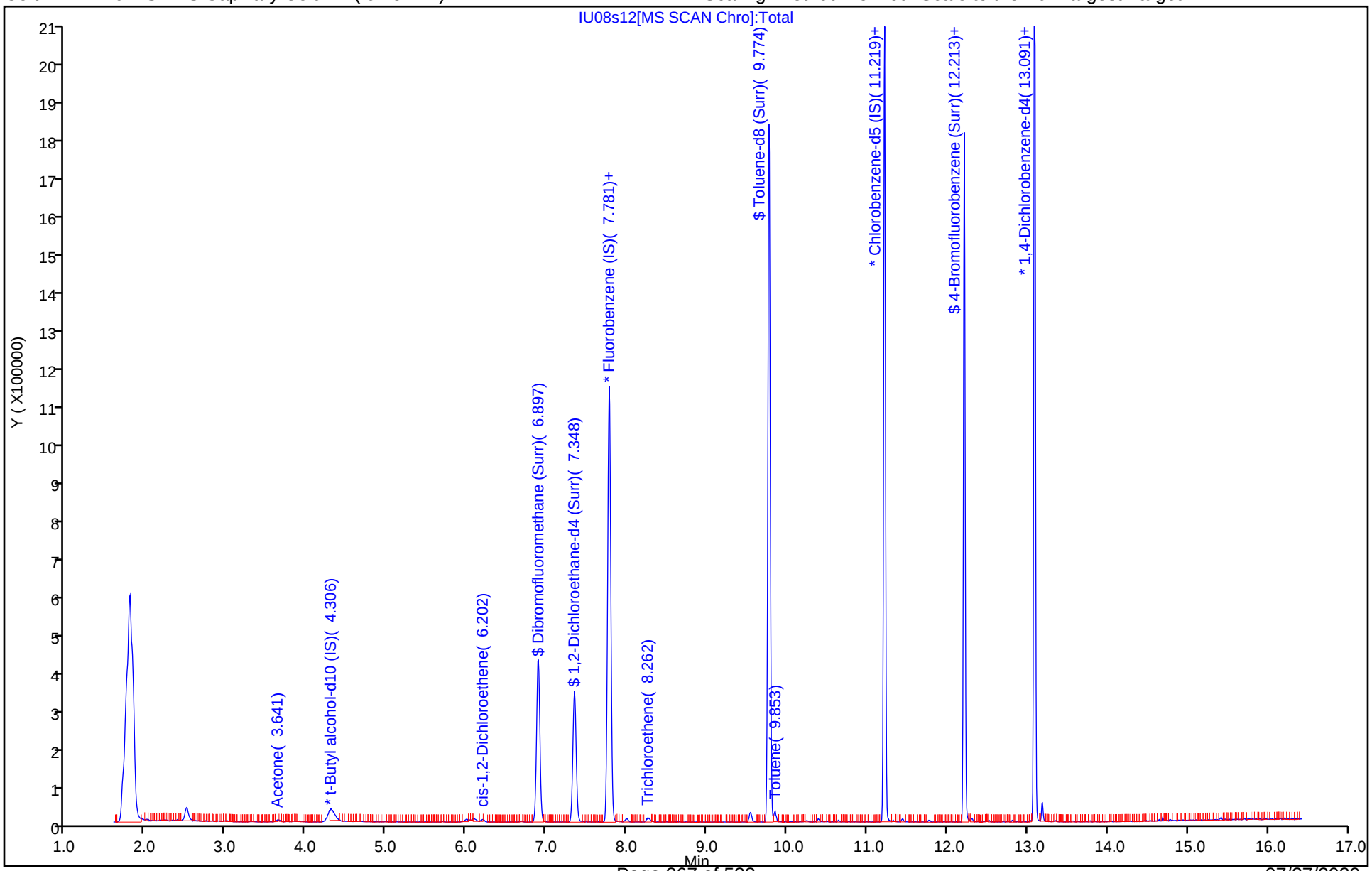
Report Date: 09-Jul-2020 09:13:53 Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s12.D

Injection Date:	08-Jul-2020 14:37:30	Instrument ID:	19930	Operator ID:	jkh09052
Lims ID:	410-5692-A-7	Lab Sample ID:	410-5692-7	Worklist Smp#:	19
Client ID:	HD-COD-SW-16-0/1-0				
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

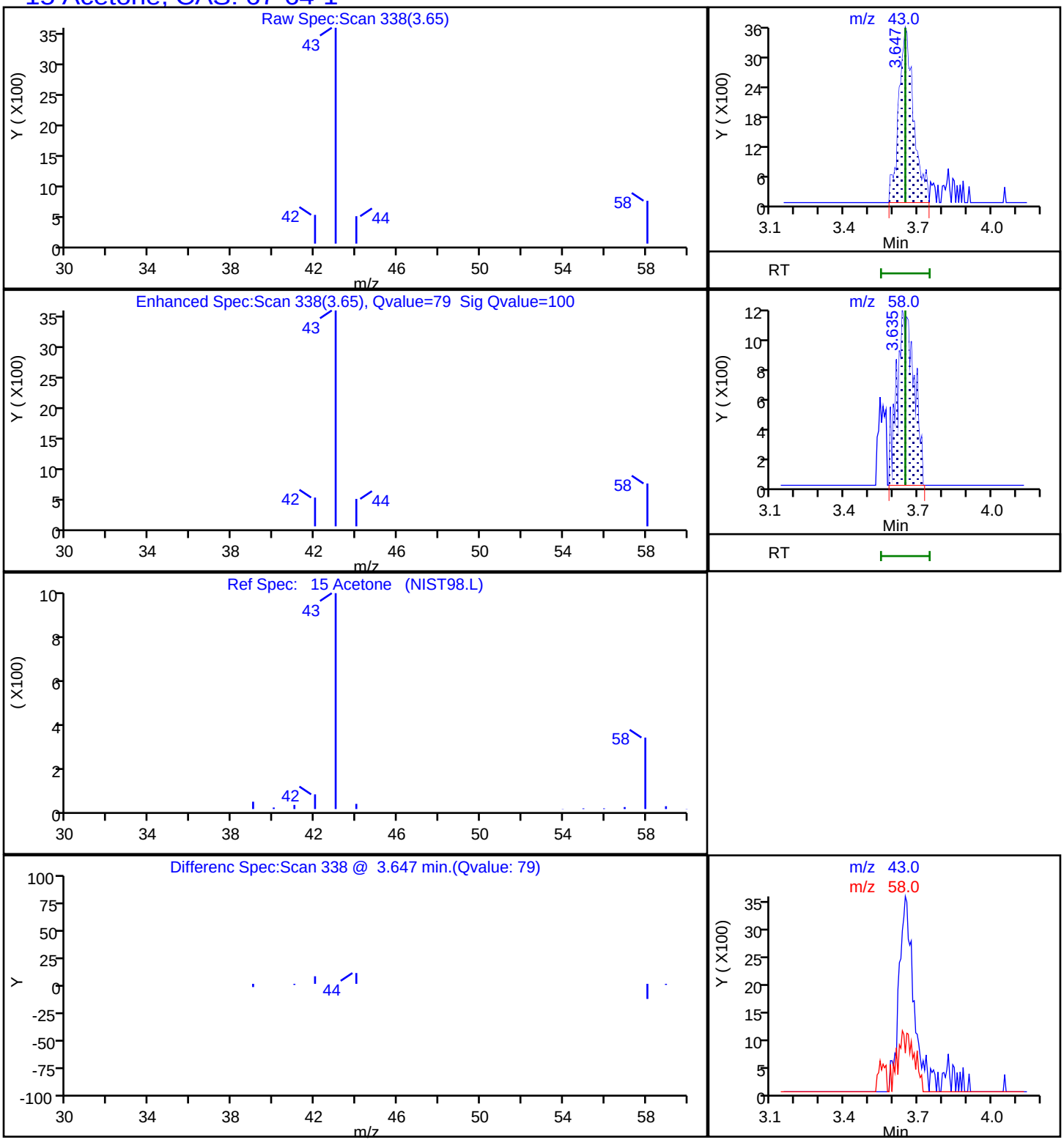
Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s12.D				
Lims ID:	410-5692-A-7				
Client ID:	HD-COD-SW-16-0/1-0				
Sample Type:	Client				
Inject. Date:	08-Jul-2020 14:37:30	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-5692-A-7				
Misc. Info.:	410-0005039-019				
Operator ID:	jkh09052	Instrument ID:	19930		
Method:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\8260 25ml HP31.m				
Limit Group:	MSV - 8260C_D				
Last Update:	09-Jul-2020 09:13:09	Calib Date:	16-Mar-2020 18:31:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1051				
First Level Reviewer: riehlc		Date:	09-Jul-2020 08:39:42		

Compound	Amount Added	Amount Recovered	% Rec.
$ 46 Dibromofluoromethane (Surr)	10.0	10.2	101.78
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.4	103.69
$ 75 Toluene-d8 (Surr)	10.0	10.0	100.03
$ 100 4-Bromofluorobenzene (Surr)	10.0	9.78	97.80

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s12.D				
Injection Date:	08-Jul-2020 14:37:30	Instrument ID:	19930		
Lims ID:	410-5692-A-7	Lab Sample ID:	410-5692-7		
Client ID:	HD-COD-SW-16-0/1-0				
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		

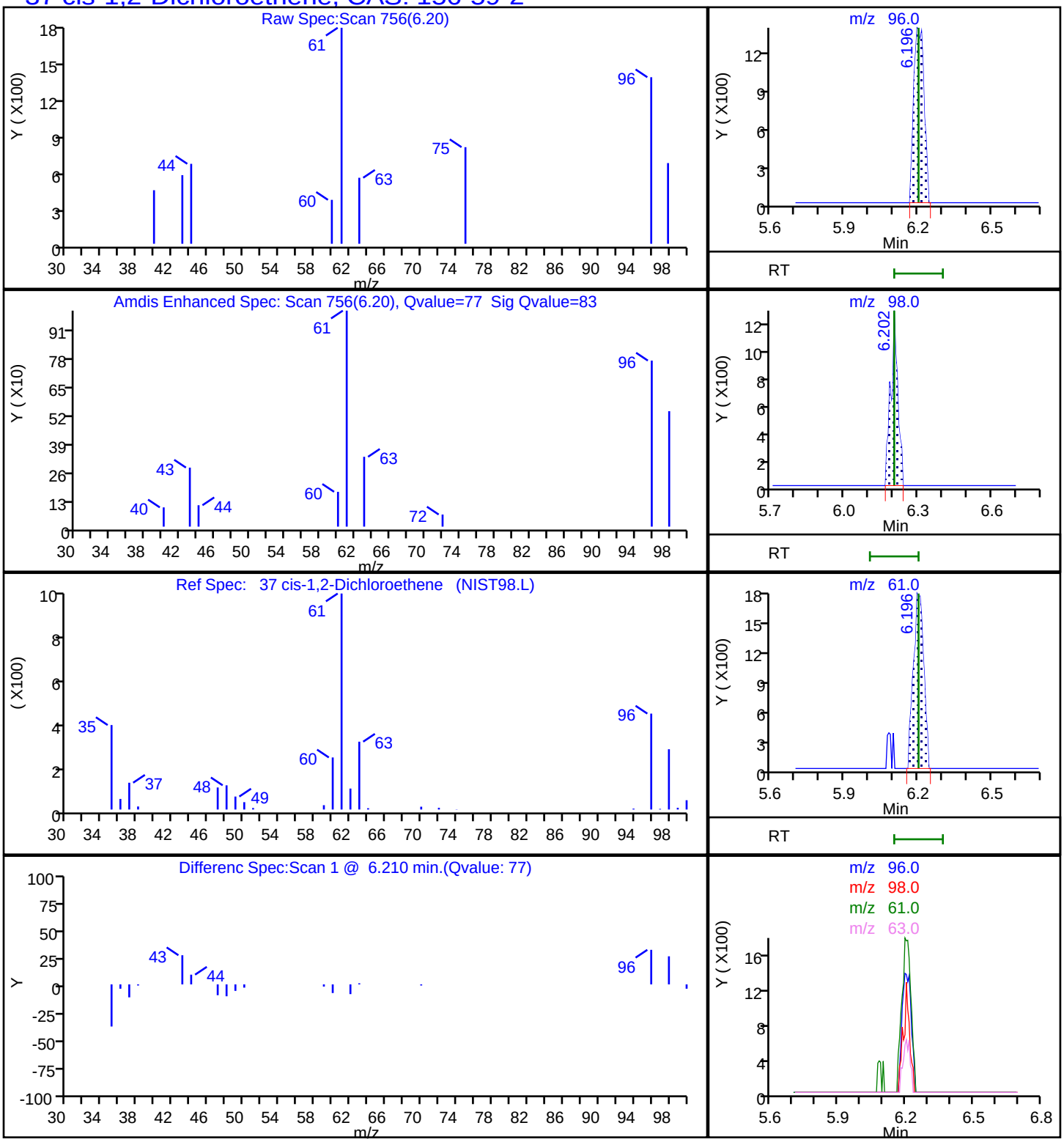
15 Acetone, CAS: 67-64-1



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s12.D				
Injection Date:	08-Jul-2020 14:37:30	Instrument ID:	19930		
Lims ID:	410-5692-A-7	Lab Sample ID:	410-5692-7		
Client ID:	HD-COD-SW-16-0/1-0				
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		

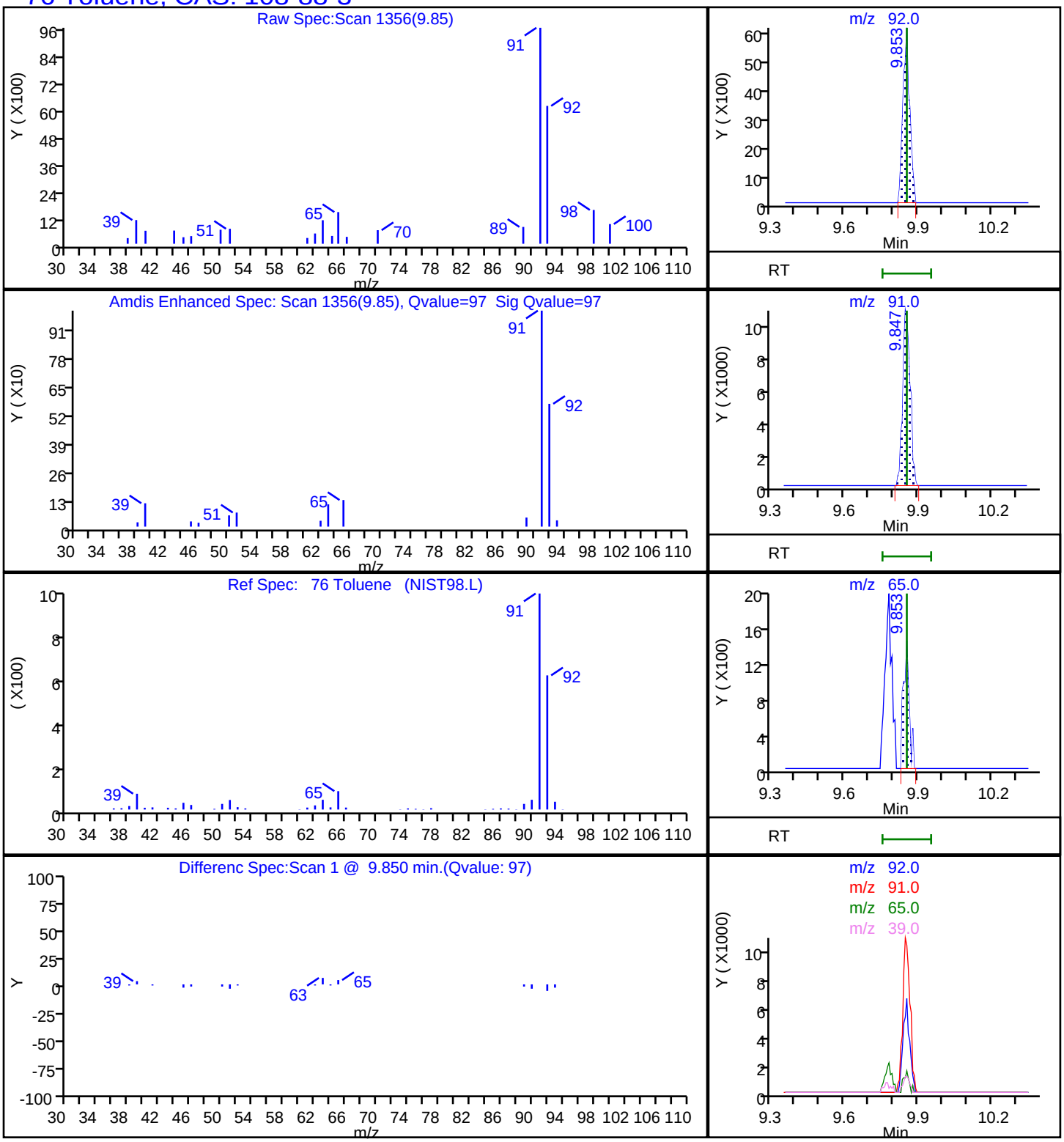
37 cis-1,2-Dichloroethene, CAS: 156-59-2



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s12.D				
Injection Date:	08-Jul-2020 14:37:30	Instrument ID:	19930		
Lims ID:	410-5692-A-7	Lab Sample ID:	410-5692-7		
Client ID:	HD-COD-SW-16-0/1-0				
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		

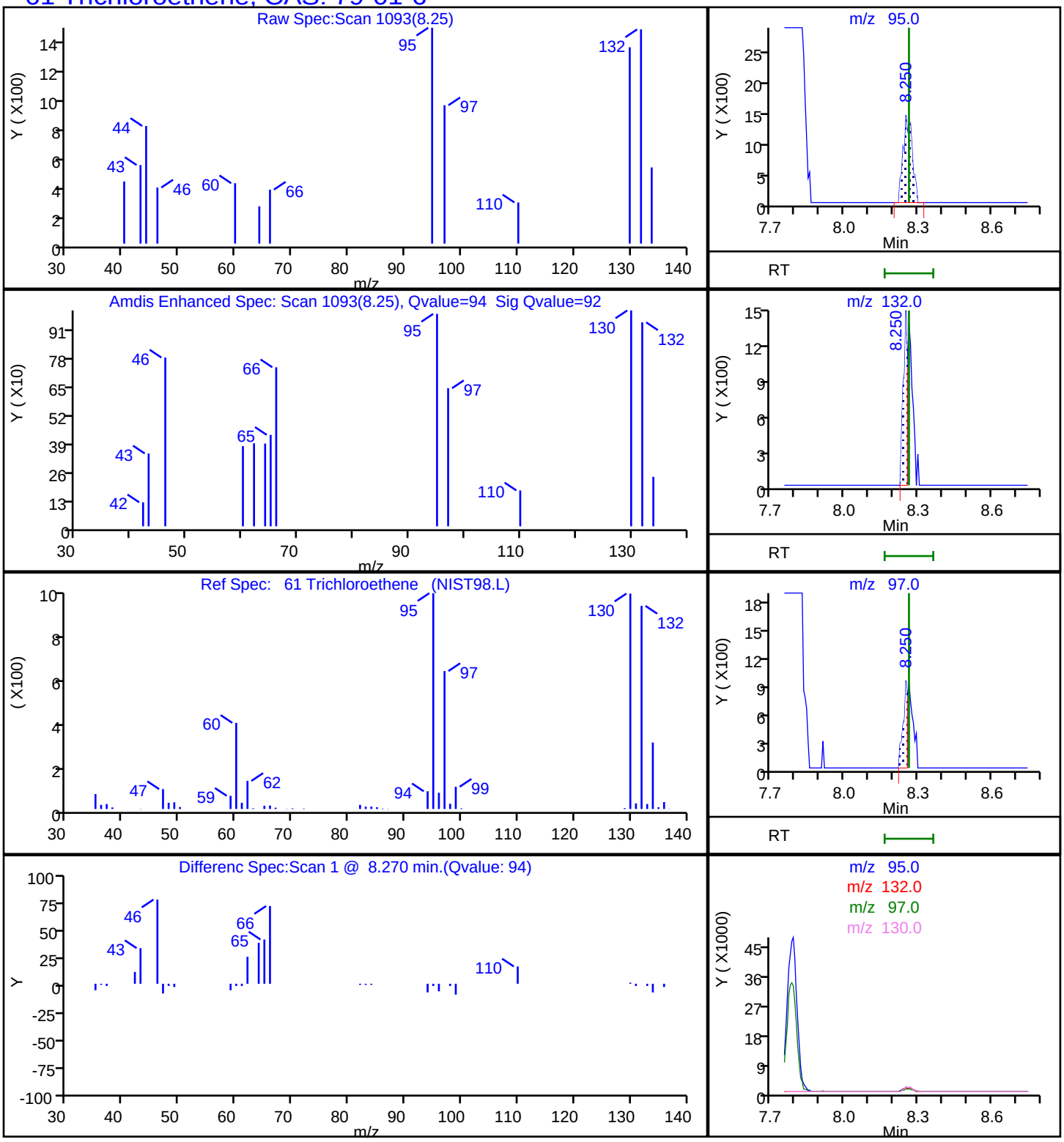
76 Toluene, CAS: 108-88-3



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s12.D				
Injection Date:	08-Jul-2020 14:37:30	Instrument ID:	19930		
Lims ID:	410-5692-A-7	Lab Sample ID:	410-5692-7		
Client ID:	HD-COD-SW-16-0/1-0				
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

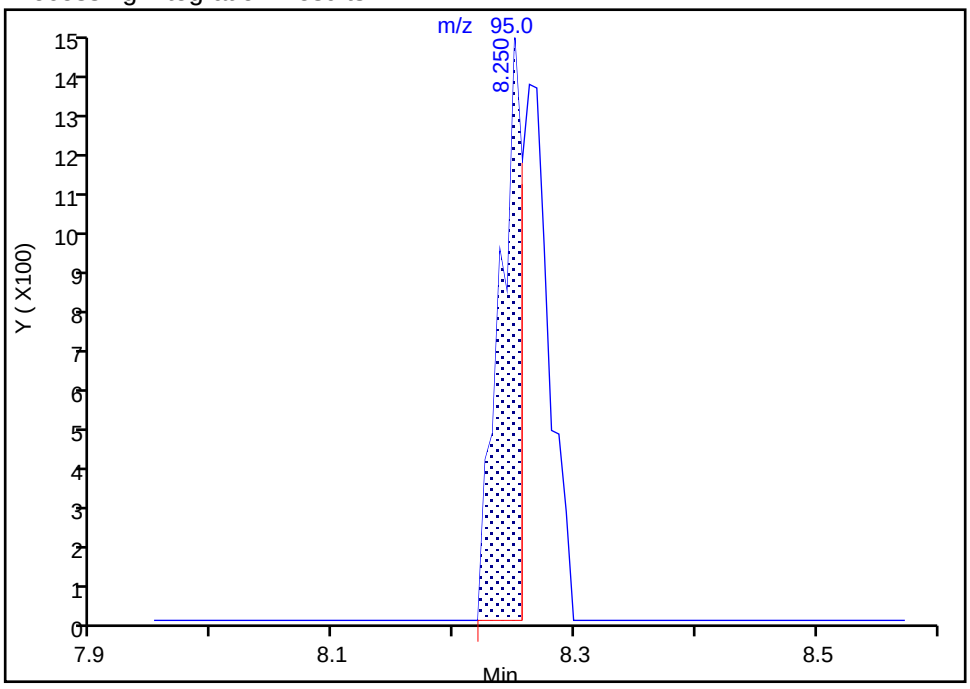
Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s12.D				
Injection Date:	08-Jul-2020 14:37:30	Instrument ID:	19930		
Lims ID:	410-5692-A-7	Lab Sample ID:	410-5692-7		
Client ID:	HD-COD-SW-16-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

61 Trichloroethene, CAS: 79-01-6

Signal: 1

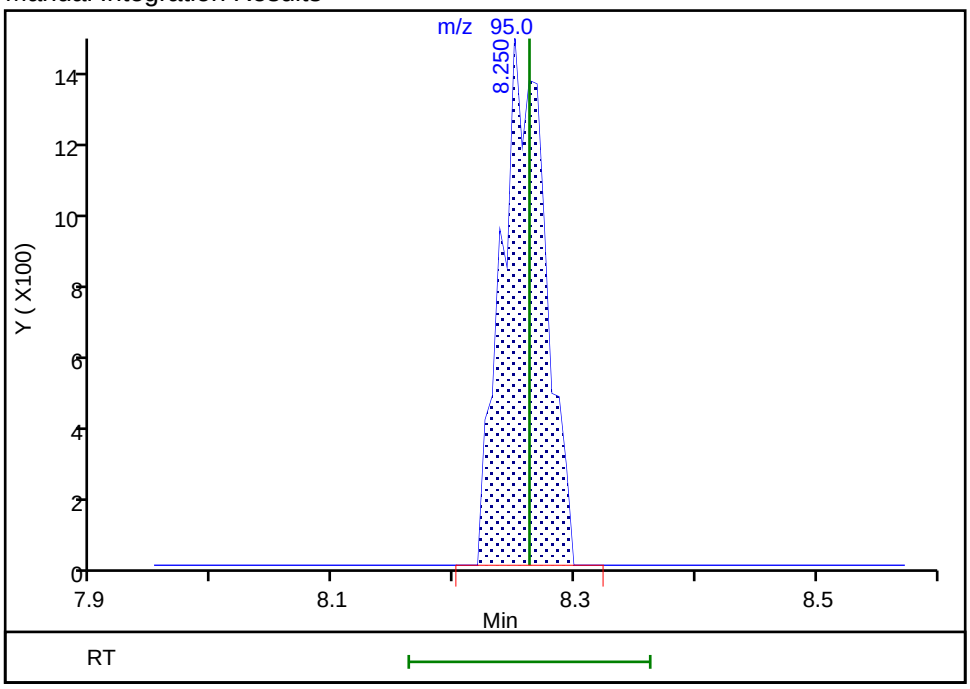
Processing Integration Results

RT: 8.25
Area: 1894
Amount: 0.040363
Amount Units: ug/l



Manual Integration Results

RT: 8.25
Area: 3646
Amount: 0.077700
Amount Units: ug/l



Reviewer: riehlc, 09-Jul-2020 08:39:11

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.: 410-5692-1

SDG No.:

Client Sample ID: HD-COD-SW-17-0/1-0 Lab Sample ID: 410-5692-8

Matrix: Water Lab File ID: IU08s13.D

Analysis Method: 8260D Date Collected: 06/24/2020 10:15

Sample wt/vol: 25(mL) Date Analyzed: 07/08/2020 14:59

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.: 20265 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		0.50	0.060
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.50	0.070
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.50	0.070
79-00-5	1,1,2-Trichloroethane	ND		0.50	0.060
75-34-3	1,1-Dichloroethane	0.10	J	0.50	0.070
75-35-4	1,1-Dichloroethene	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	5.0	0.90
107-13-1	Acrylonitrile	ND		5.0	0.40
71-43-2	Benzene	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
74-97-5	Bromochloromethane	ND		0.50	0.050
124-48-1	Dibromochloromethane	ND		0.50	0.070
75-00-3	Chloroethane	ND		0.50	0.070
67-66-3	Chloroform	0.11	J	0.50	0.090
74-87-3	Chloromethane	ND		0.50	0.060
156-59-2	cis-1,2-Dichloroethene	1.8		0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	ND		0.50	0.050
75-27-4	Bromodichloromethane	ND		0.50	0.050
100-41-4	Ethylbenzene	ND		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	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	3.4		0.50	0.060
108-88-3	Toluene	ND		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	0.074	J	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.: 410-5692-1

SDG No.:

Client Sample ID: HD-COD-SW-17-0/1-0 Lab Sample ID: 410-5692-8

Matrix: Water Lab File ID: IU08s13.D

Analysis Method: 8260D Date Collected: 06/24/2020 10:15

Sample wt/vol: 25(mL) Date Analyzed: 07/08/2020 14:59

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.: 20265 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	2.0		0.50	0.060
75-01-4	Vinyl chloride	0.25	J	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)	104		80-120
460-00-4	4-Bromofluorobenzene (Surr)	96		80-120
1868-53-7	Dibromofluoromethane (Surr)	101		80-120
2037-26-5	Toluene-d8 (Surr)	98		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s13.D
Lims ID: 410-5692-A-8
Client ID: HD-COD-SW-17-0/1-0
Sample Type: Client
Inject. Date: 08-Jul-2020 14:59:30 ALS Bottle#: 19 Worklist Smp#: 20
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-5692-A-8
Misc. Info.: 410-0005039-020
Operator ID: jkh09052 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 09-Jul-2020 09:13:09 Calib Date: 16-Mar-2020 18:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1051

First Level Reviewer: riehlc Date: 09-Jul-2020 08:45:34

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
4 Chloromethane	50	2.196	2.203	-0.007	1	2532	0.0386	
5 Vinyl chloride	62	2.318	2.324	-0.006	97	15732	0.2478	
7 Bromomethane	94		2.648				ND	
8 Chloroethane	64		2.739				ND	
14 1,1-Dichloroethene	96	3.611	3.623	-0.012	19	2148	0.0537	
15 Acetone	43	3.666	3.647	0.019	67	6955	1.18	
19 Carbon disulfide	76		3.934				ND	
23 Methylene Chloride	84		4.306				ND	
* 24 t-Butyl alcohol-d10 (IS)	65	4.324	4.306	0.018	0	118433	50.0	
26 Acrylonitrile	53		4.641				ND	
27 Methyl tert-butyl ether	73		4.708				ND	
28 trans-1,2-Dichloroethene	96	4.726	4.726	0.000	93	3164	0.0736	
31 1,1-Dichloroethane	63	5.391	5.379	0.012	93	8028	0.1050	
36 2-Butanone (MEK)	43		6.177				ND	
37 cis-1,2-Dichloroethene	96	6.208	6.202	0.006	79	87892	1.82	
43 Chlorobromomethane	128		6.537				ND	
45 Chloroform	83	6.689	6.683	0.006	91	8368	0.1094	
$ 46 Dibromofluoromethane (Surr)	113	6.897	6.897	0.000	93	363307	10.1	
47 1,1,1-Trichloroethane	97		6.909				ND	
50 Carbon tetrachloride	117		7.128				ND	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.354	7.354	0.000	0	76348	10.4	
54 Benzene	78		7.384				ND	
56 1,2-Dichloroethane	62		7.452				ND	
* 58 Fluorobenzene (IS)	96	7.781	7.787	-0.006	99	1495812	10.0	
61 Trichloroethene	95	8.262	8.262	0.000	97	93665	1.97	
63 1,2-Dichloropropane	63		8.592				ND	
68 Dichlorobromomethane	83		8.933				ND	
73 cis-1,3-Dichloropropene	75		9.476				ND	
74 4-Methyl-2-pentanone (MIBK)	43		9.640				ND	
$ 75 Toluene-d8 (Surr)	98	9.780	9.774	0.006	94	1433419	9.81	
76 Toluene	92	9.853	9.853	0.000	98	4832	0.0414	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
78 trans-1,3-Dichloropropene	75		10.103				ND	
80 1,1,2-Trichloroethane	97		10.305				ND	
81 Tetrachloroethene	166	10.396	10.396	0.000	98	188742	3.38	
83 2-Hexanone	43		10.512				ND	
85 Chlorodibromomethane	129		10.683				ND	
86 Ethylene Dibromide	107		10.792				ND	
* 87 Chlorobenzene-d5 (IS)	117	11.219	11.219	0.000	85	1149548	10.0	
90 Chlorobenzene	112		11.243				ND	
S 89 Xylenes, Total	106		11.245				ND	
91 1,1,1,2-Tetrachloroethane	131		11.323				ND	
92 Ethylbenzene	91		11.329				ND	
93 m-Xylene & p-Xylene	106		11.445				ND	
94 o-Xylene	106		11.768				ND	
95 Styrene	104		11.786				ND	
96 Bromoform	173		11.945				ND	
$ 100 4-Bromofluorobenzene (Surr)	95	12.213	12.213	0.000	93	522182	9.57	
101 1,1,2,2-Tetrachloroethane	83		12.310				ND	
* 115 1,4-Dichlorobenzene-d4	152	13.091	13.091	0.000	94	620375	10.0	

Reagents:

MSV_31_826ISS_00002 Amount Added: 5.00 Units: uL Run Reagent

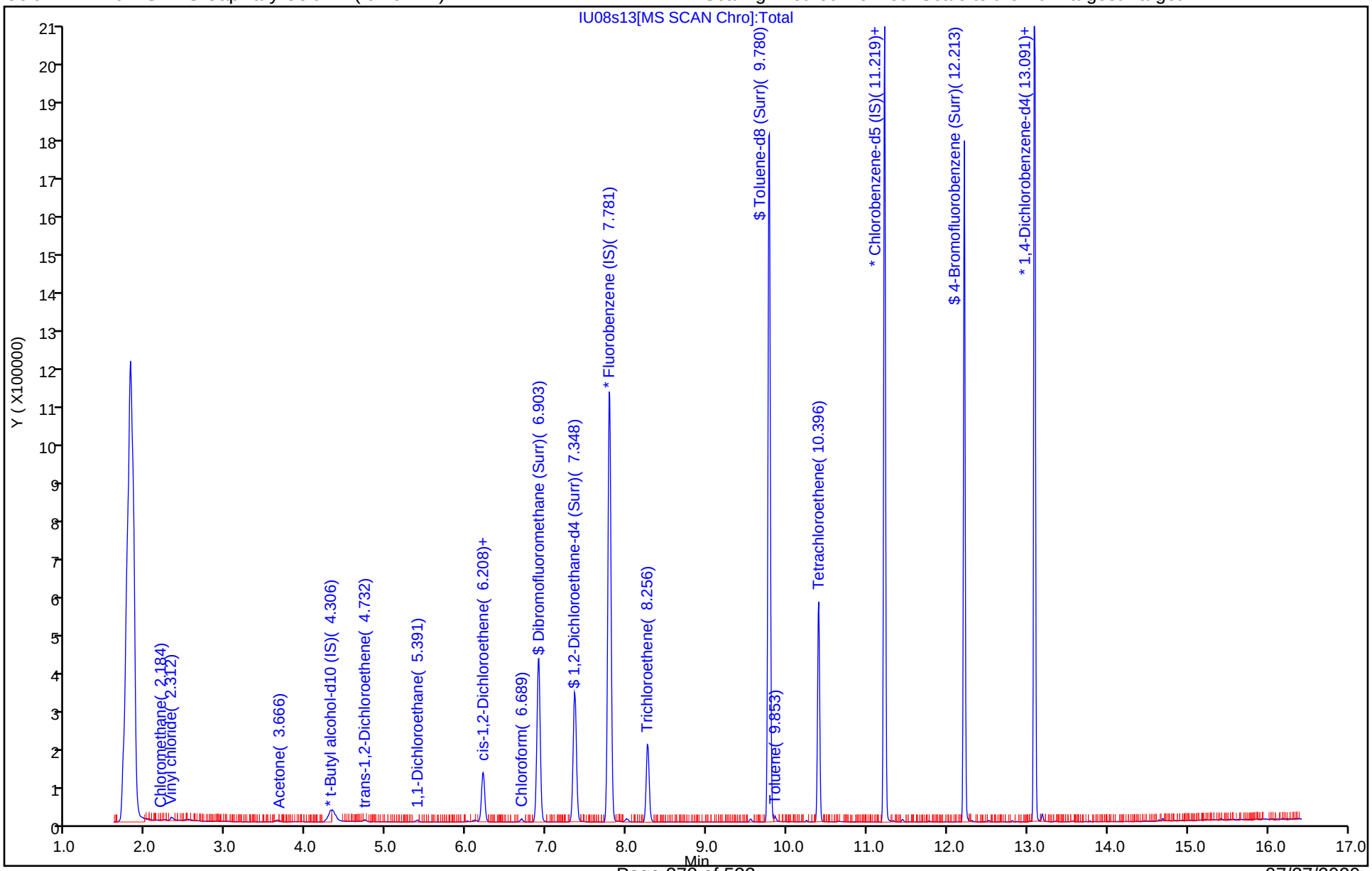
Report Date: 09-Jul-2020 09:13:54 Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s13.D

Injection Date:	08-Jul-2020 14:59:30	Instrument ID:	19930	Operator ID:	jkh09052
Lims ID:	410-5692-A-8	Lab Sample ID:	410-5692-8	Worklist Smp#:	20
Client ID:	HD-COD-SW-17-0/1-0				
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

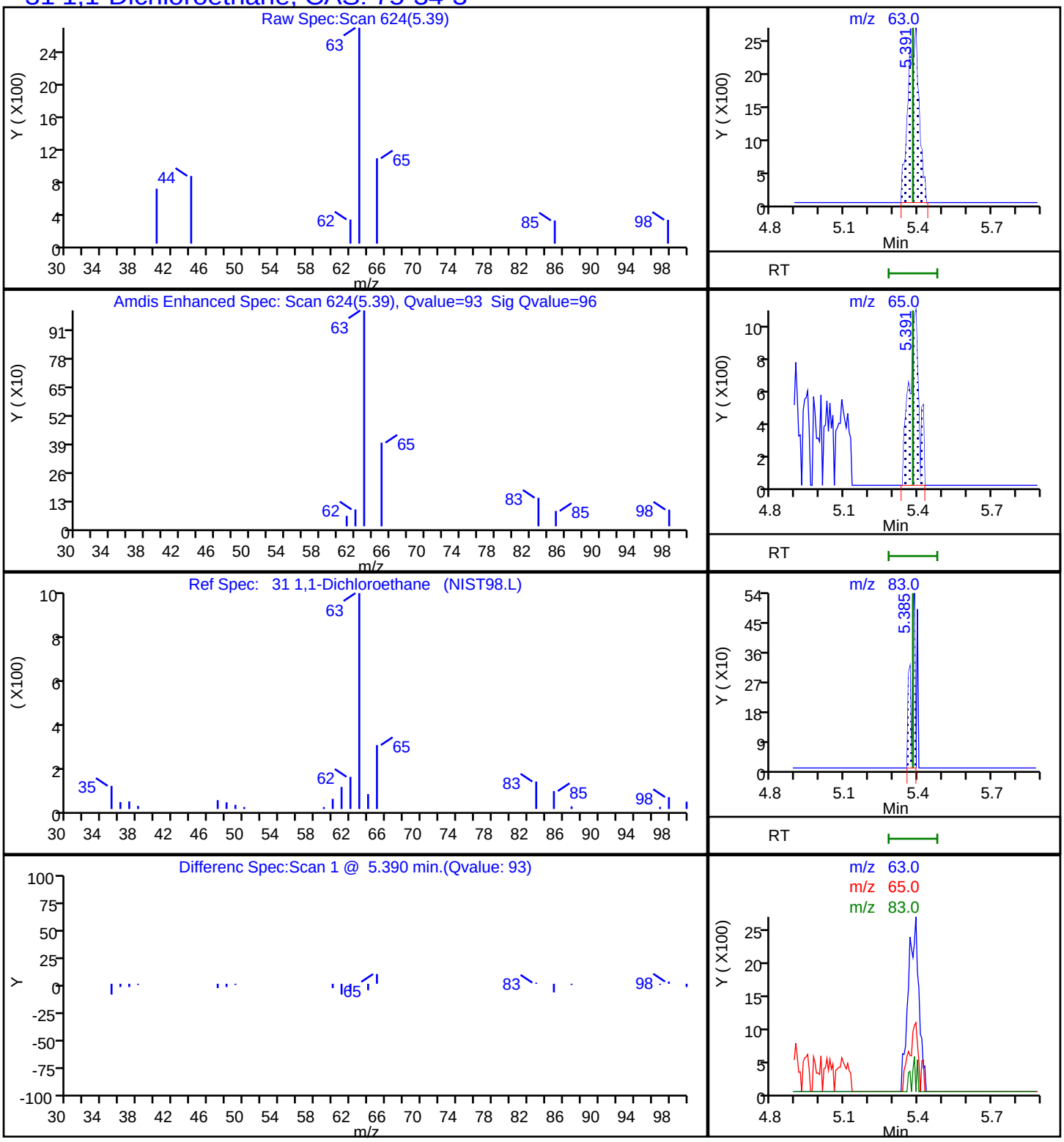
Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s13.D				
Lims ID:	410-5692-A-8				
Client ID:	HD-COD-SW-17-0/1-0				
Sample Type:	Client				
Inject. Date:	08-Jul-2020 14:59:30	ALS Bottle#:	19	Worklist Smp#:	20
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-5692-A-8				
Misc. Info.:	410-0005039-020				
Operator ID:	jkh09052	Instrument ID:	19930		
Method:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\8260 25ml HP31.m				
Limit Group:	MSV - 8260C_D				
Last Update:	09-Jul-2020 09:13:09	Calib Date:	16-Mar-2020 18:31:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1051				
First Level Reviewer: riehlc		Date:	09-Jul-2020 08:45:34		

Compound	Amount Added	Amount Recovered	% Rec.
$ 46 Dibromofluoromethane (Surr)	10.0	10.1	100.63
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.4	104.36
$ 75 Toluene-d8 (Surr)	10.0	9.81	98.06
$ 100 4-Bromofluorobenzene (Surr)	10.0	9.57	95.73
$ 145 BFB	0.0	0	0.00

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s13.D				
Injection Date:	08-Jul-2020 14:59:30	Instrument ID:	19930		
Lims ID:	410-5692-A-8	Lab Sample ID:	410-5692-8		
Client ID:	HD-COD-SW-17-0/1-0				
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		

31 1,1-Dichloroethane, CAS: 75-34-3



Eurofins Lancaster Laboratories Env, LLC

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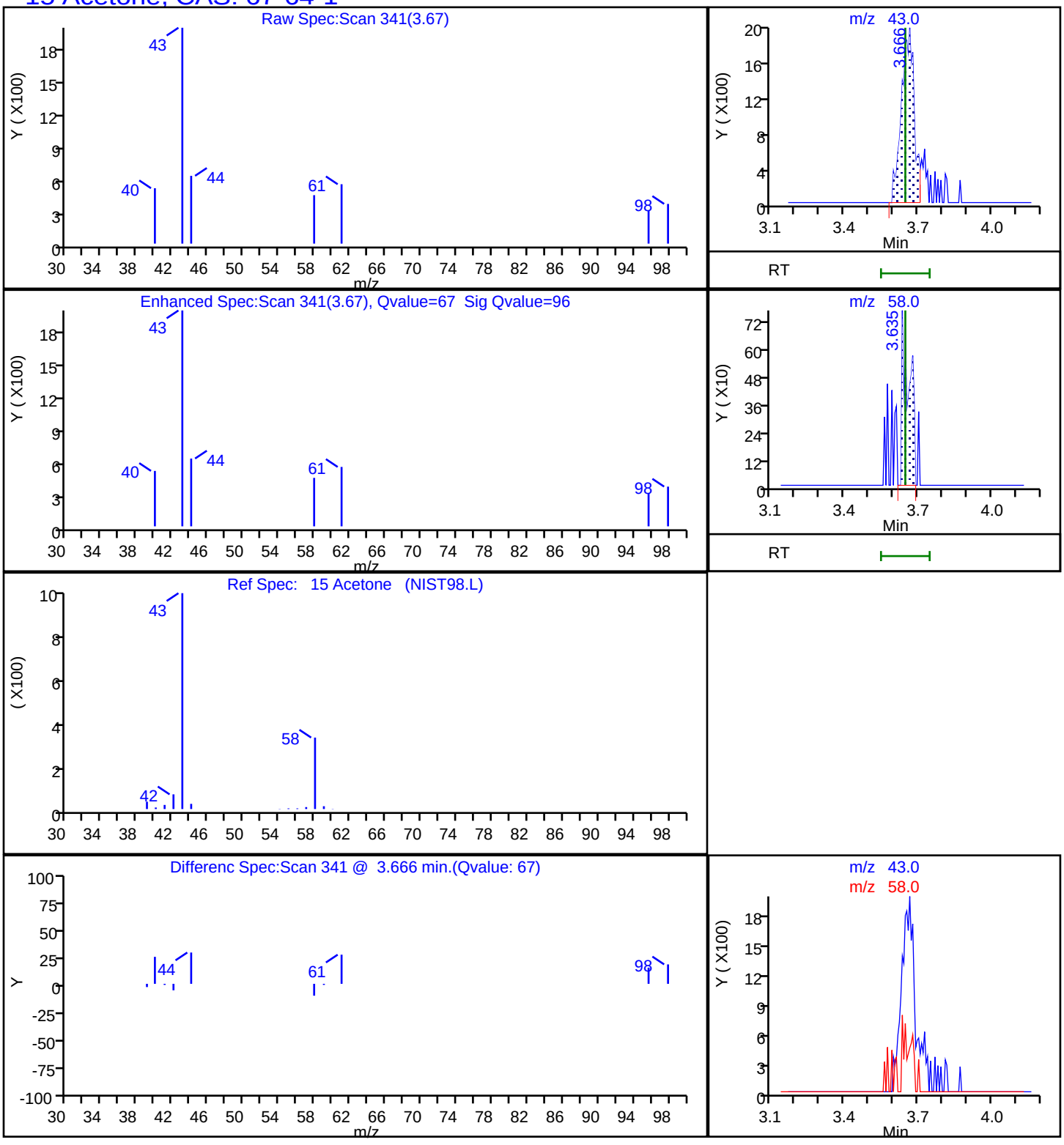
Lims ID:	410-5692-A-8	Lab Sample ID:	410-5692-8		
Client ID:	HD-COD-SW-17-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	19	Worklist Smp#:	20
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

15 Acetone, CAS: 67-64-1

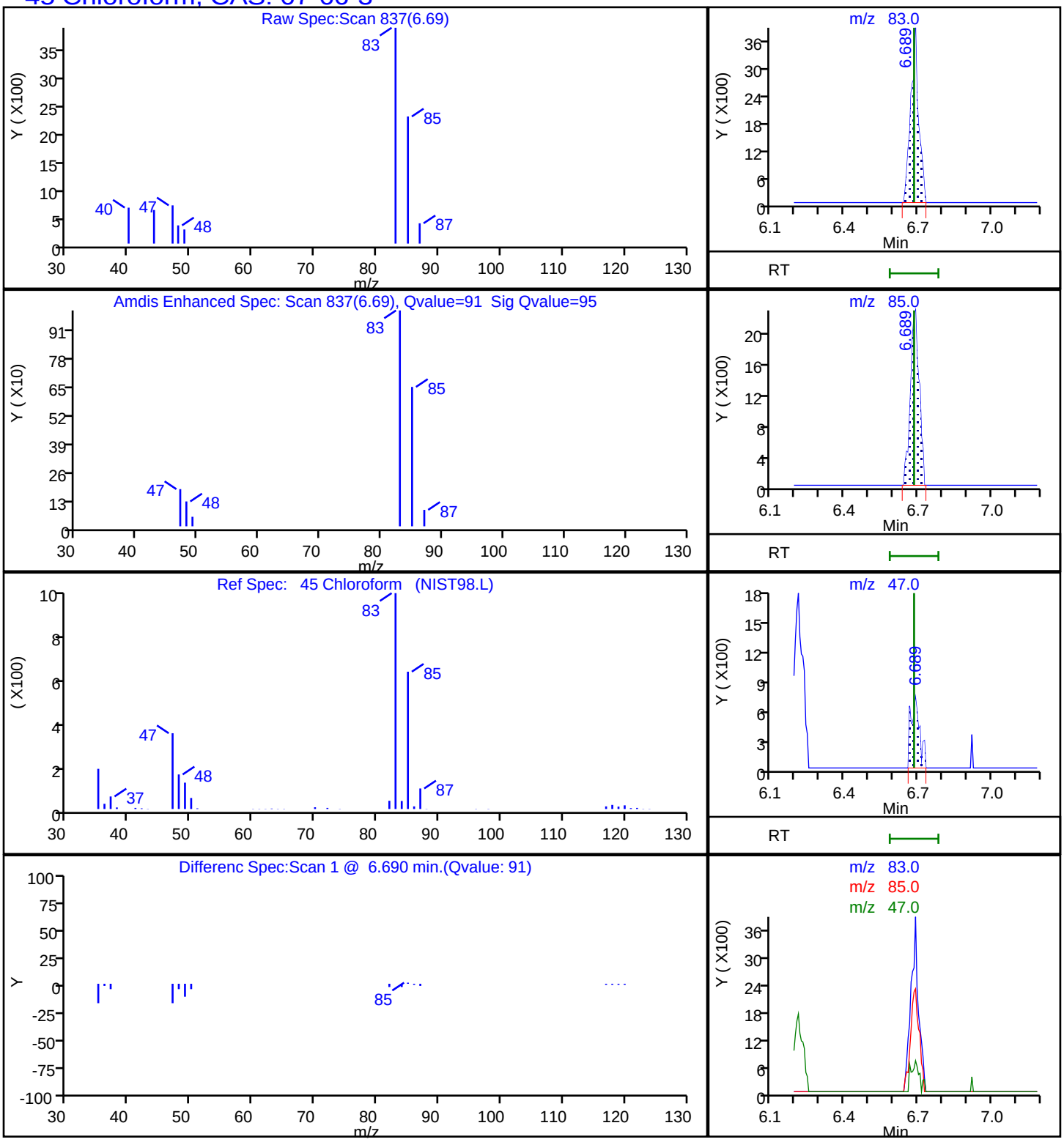


Report Date: 09-Jul-2020 09:13:54 Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s13.D				
Injection Date:	08-Jul-2020 14:59:30	Instrument ID:	19930		
Lims ID:	410-5692-A-8	Lab Sample ID:	410-5692-8		
Client ID:	HD-COD-SW-17-0/1-0				
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		

45 Chloroform, CAS: 67-66-3



Report Date: 09-Jul-2020 09:13:54 Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s13.D

Injection Date: 08-Jul-2020 14:59:30 Instrument ID: 19930

Lims ID: 410-5692-A-8 Lab Sample ID: 410-5692-8

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

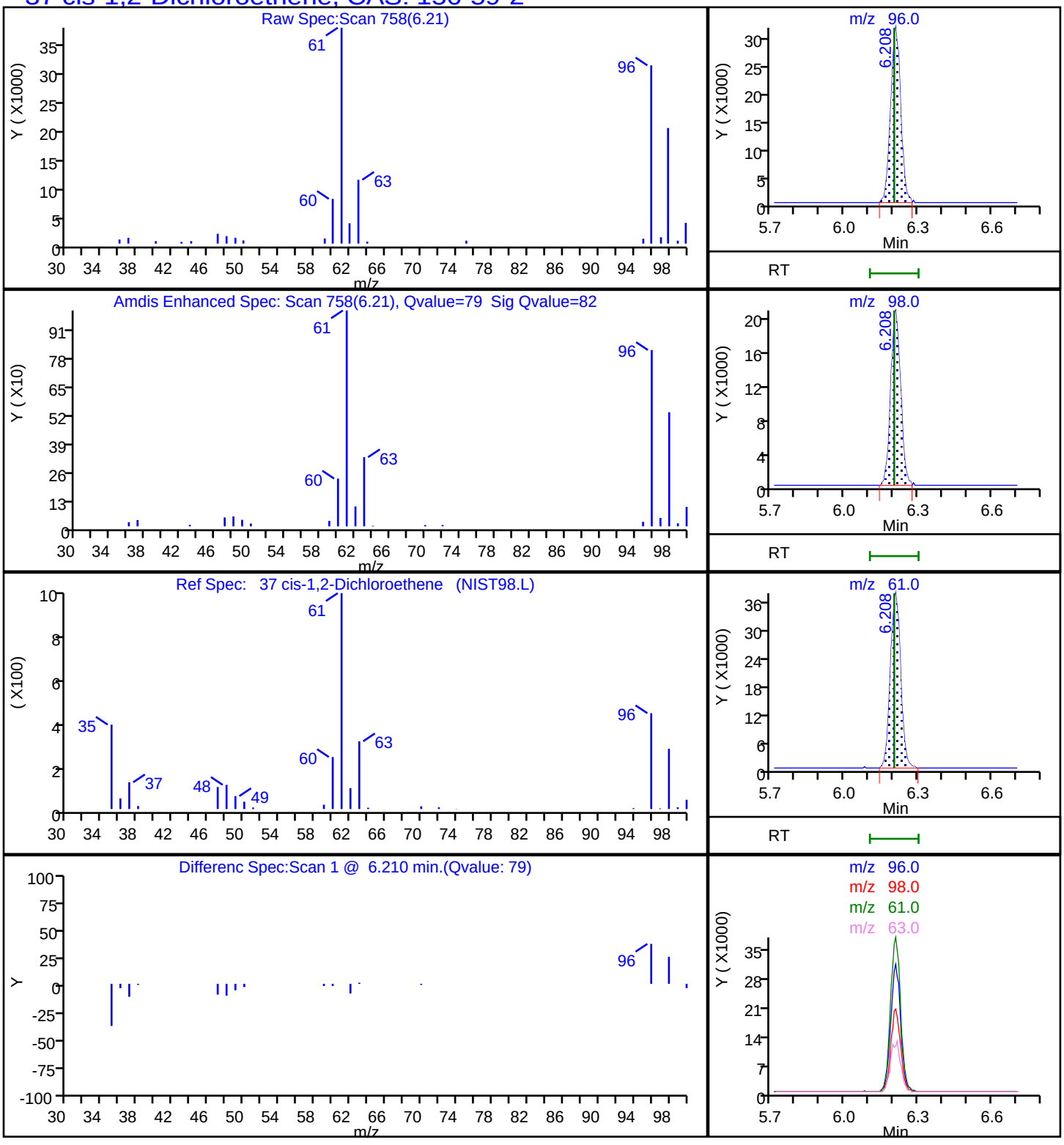
Operator ID: jkh09052 ALS Bottle#: 19 Worklist Smp#: 20

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

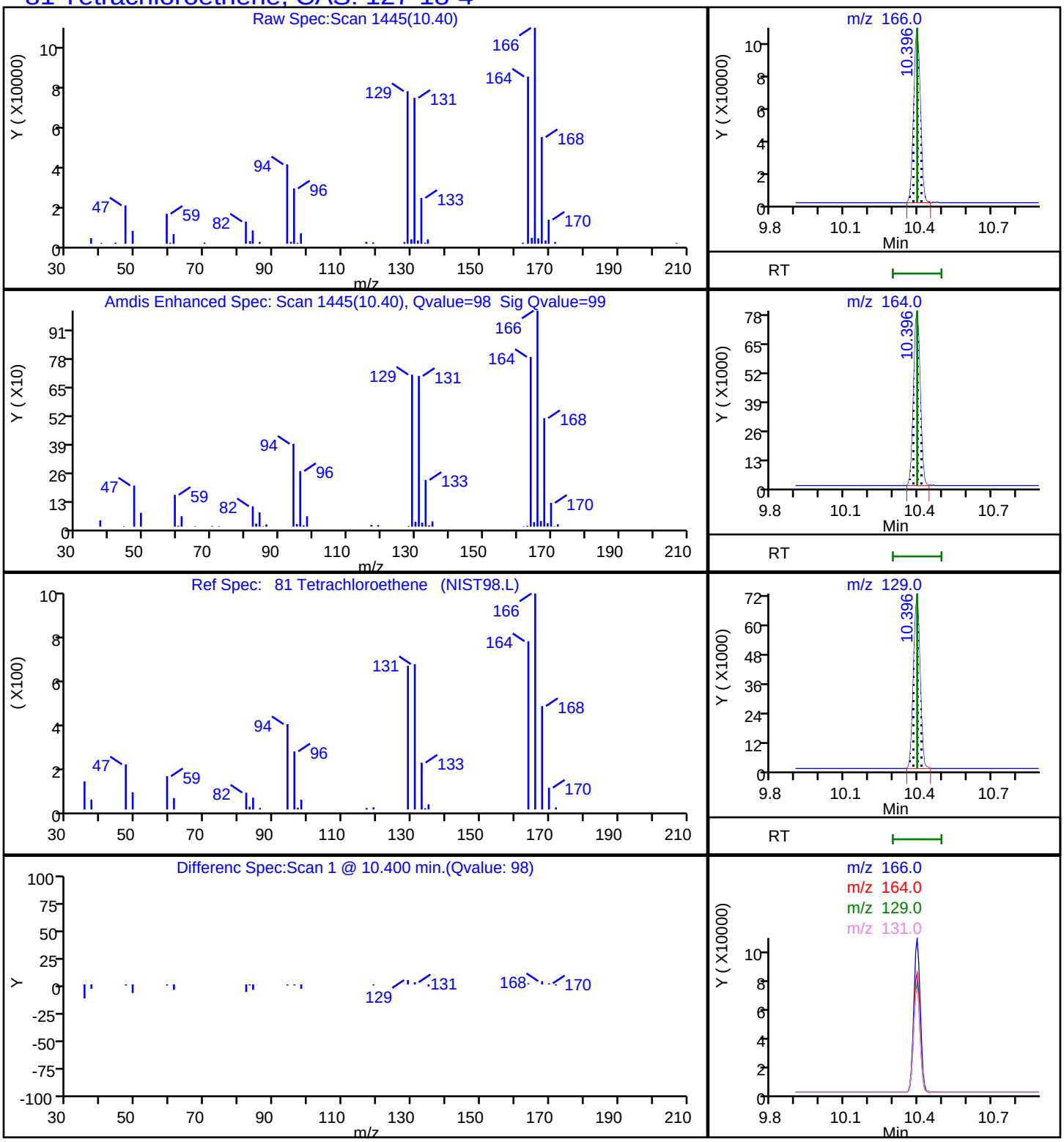
37 cis-1,2-Dichloroethene, CAS: 156-59-2



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s13.D				
Injection Date:	08-Jul-2020 14:59:30	Instrument ID:	19930		
Lims ID:	410-5692-A-8	Lab Sample ID:	410-5692-8		
Client ID:	HD-COD-SW-17-0/1-0				
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		

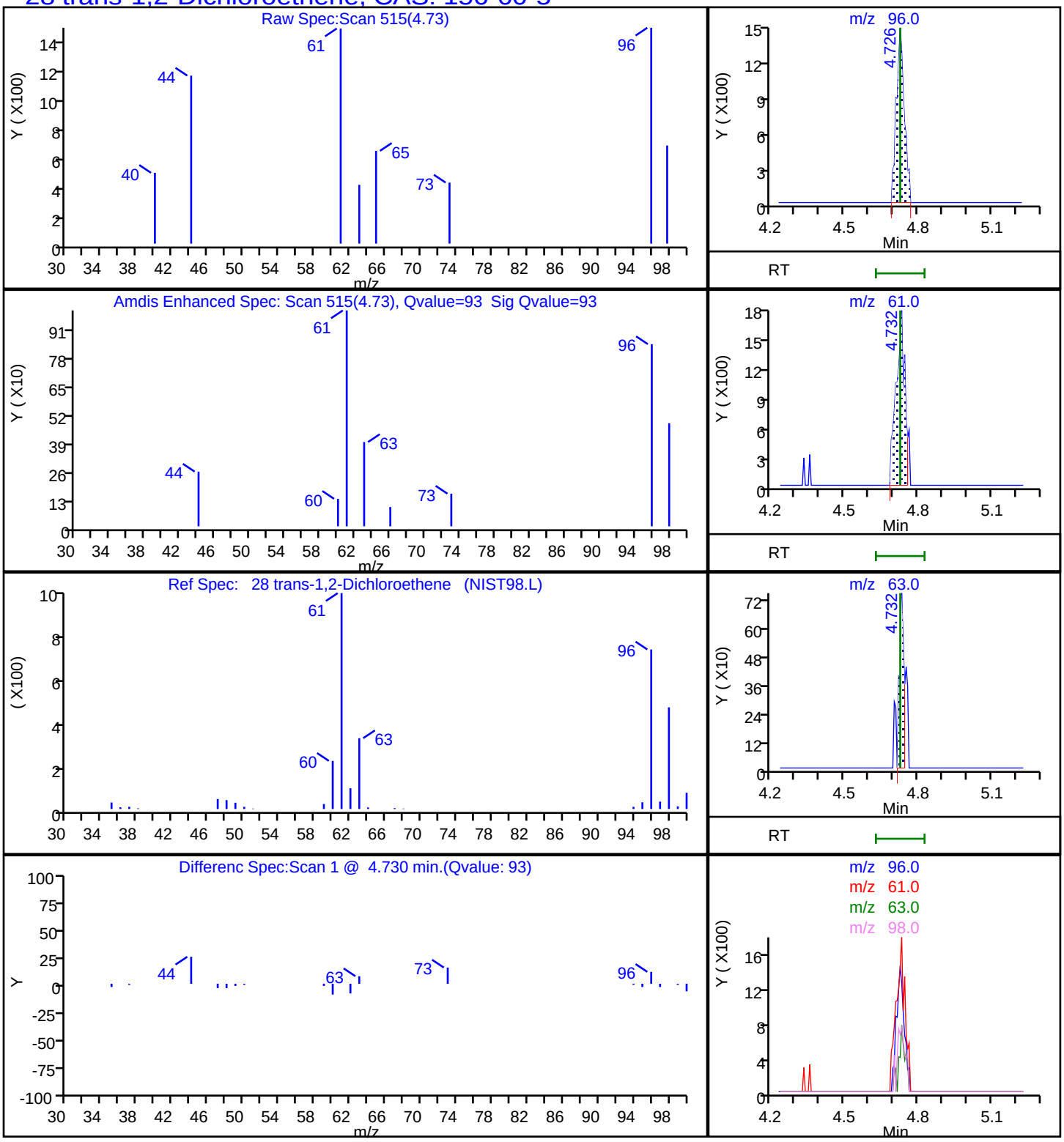
81 Tetrachloroethene, CAS: 127-18-4



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s13.D				
Injection Date:	08-Jul-2020 14:59:30	Instrument ID:	19930		
Lims ID:	410-5692-A-8	Lab Sample ID:	410-5692-8		
Client ID:	HD-COD-SW-17-0/1-0				
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		

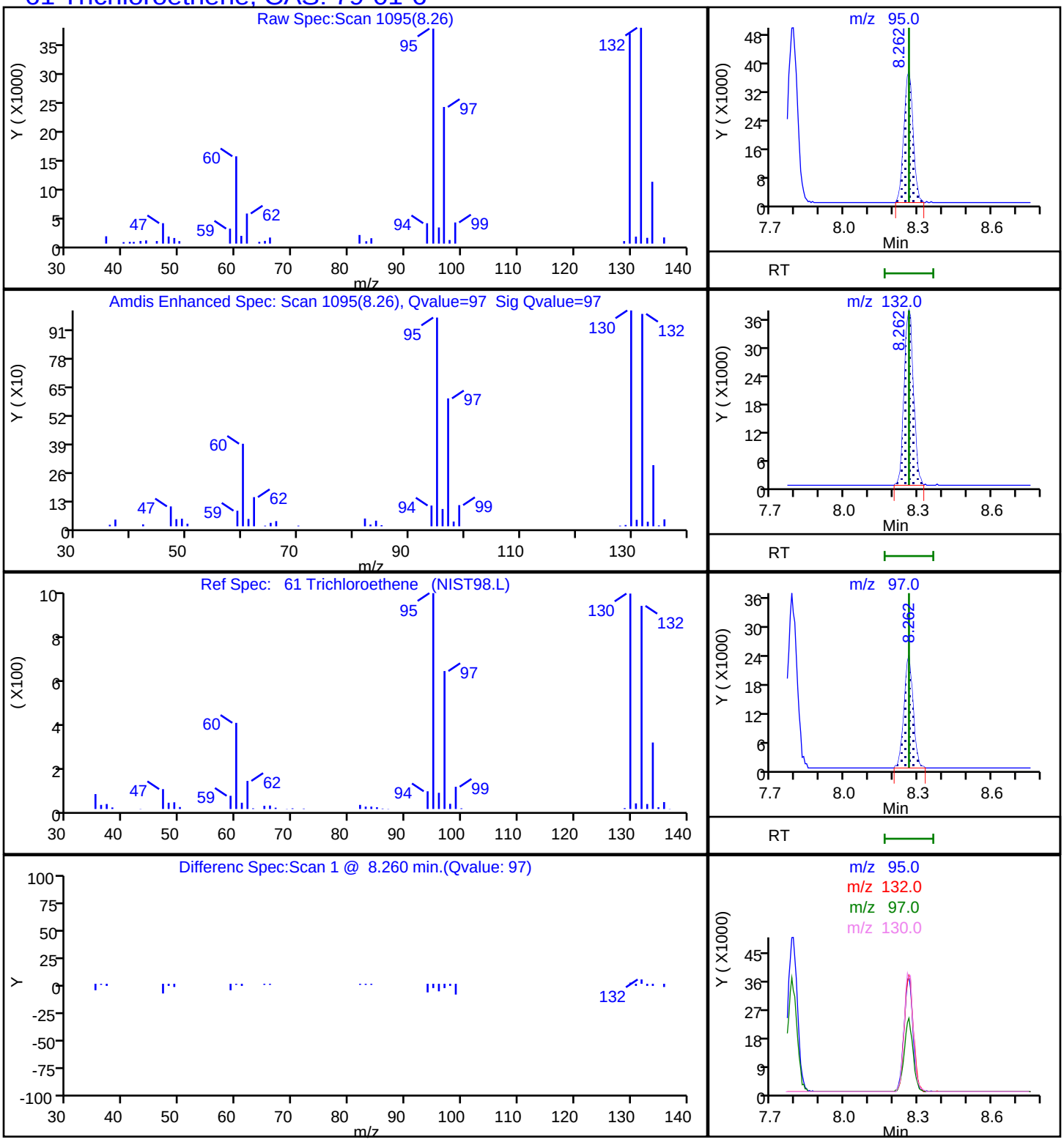
28 trans-1,2-Dichloroethene, CAS: 156-60-5



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s13.D				
Injection Date:	08-Jul-2020 14:59:30	Instrument ID:	19930		
Lims ID:	410-5692-A-8	Lab Sample ID:	410-5692-8		
Client ID:	HD-COD-SW-17-0/1-0				
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		

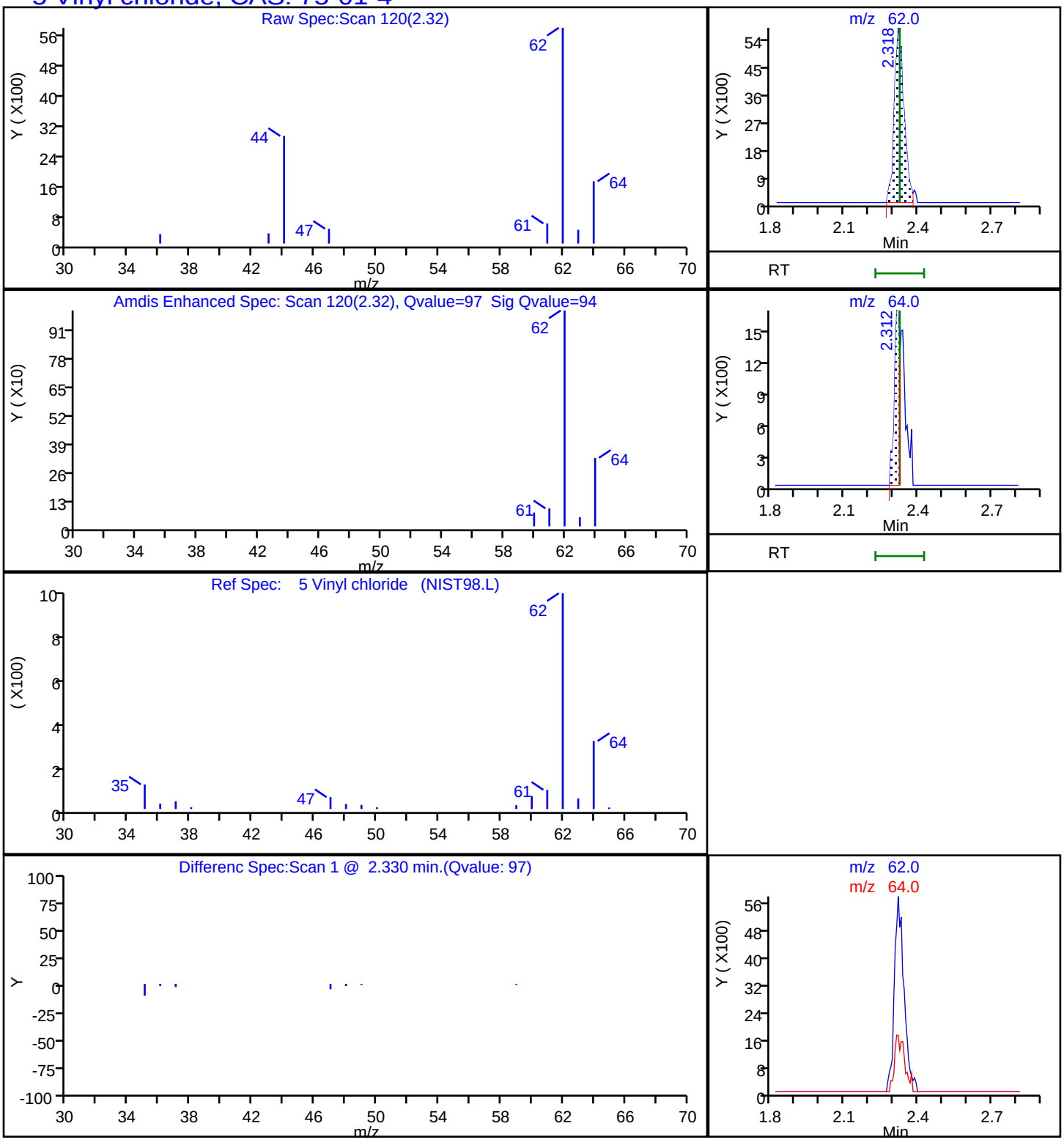
61 Trichloroethene, CAS: 79-01-6



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s13.D				
Injection Date:	08-Jul-2020 14:59:30	Instrument ID:	19930		
Lims ID:	410-5692-A-8	Lab Sample ID:	410-5692-8		
Client ID:	HD-COD-SW-17-0/1-0				
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		

5 Vinyl chloride, CAS: 75-01-4



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-5692-1

SDG No.:

Client Sample ID: HD-COD-SW-26-0/1-0 Lab Sample ID: 410-5692-9

Matrix: Water Lab File ID: IU08s14.D

Analysis Method: 8260D Date Collected: 06/24/2020 10:55

Sample wt/vol: 25(mL) Date Analyzed: 07/08/2020 15:20

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.: 20265 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		0.50	0.060
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.50	0.070
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
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	1.4	J	5.0	0.90
107-13-1	Acrylonitrile	ND		5.0	0.40
71-43-2	Benzene	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
74-97-5	Bromochloromethane	ND		0.50	0.050
124-48-1	Dibromochloromethane	ND		0.50	0.070
75-00-3	Chloroethane	ND		0.50	0.070
67-66-3	Chloroform	0.25	J	0.50	0.090
74-87-3	Chloromethane	ND		0.50	0.060
156-59-2	cis-1,2-Dichloroethene	0.077	J	0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	ND		0.50	0.050
75-27-4	Bromodichloromethane	ND		0.50	0.050
100-41-4	Ethylbenzene	ND		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	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	1.5		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.: 410-5692-1

SDG No.:

Client Sample ID: HD-COD-SW-26-0/1-0 Lab Sample ID: 410-5692-9

Matrix: Water Lab File ID: IU08s14.D

Analysis Method: 8260D Date Collected: 06/24/2020 10:55

Sample wt/vol: 25(mL) Date Analyzed: 07/08/2020 15:20

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.: 20265 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)	103		80-120
460-00-4	4-Bromofluorobenzene (Surr)	96		80-120
1868-53-7	Dibromofluoromethane (Surr)	103		80-120
2037-26-5	Toluene-d8 (Surr)	99		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s14.D
Lims ID: 410-5692-A-9
Client ID: HD-COD-SW-26-0/1-0
Sample Type: Client
Inject. Date: 08-Jul-2020 15:20:30 ALS Bottle#: 20 Worklist Smp#: 21
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-5692-A-9
Misc. Info.: 410-0005039-021
Operator ID: jkh09052 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 09-Jul-2020 09:13:09 Calib Date: 16-Mar-2020 18:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1051

First Level Reviewer: riehlc Date: 09-Jul-2020 08:46:58

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
4 Chloromethane	50	2.190	2.203	-0.013	1	2559	0.0396	
5 Vinyl chloride	62		2.324				ND	
7 Bromomethane	94		2.648				ND	
8 Chloroethane	64		2.739				ND	
14 1,1-Dichloroethene	96	3.641	3.623	0.018	1	1879	0.0476	
15 Acetone	43	3.653	3.647	0.006	99	8293	1.42	
19 Carbon disulfide	76	3.922	3.934	-0.012	58	3823	0.0339	
23 Methylene Chloride	84		4.306				ND	
* 24 t-Butyl alcohol-d10 (IS)	65	4.312	4.306	0.006	0	117298	50.0	
26 Acrylonitrile	53		4.641				ND	
27 Methyl tert-butyl ether	73		4.708				ND	
28 trans-1,2-Dichloroethene	96		4.726				ND	
31 1,1-Dichloroethane	63		5.379				ND	
36 2-Butanone (MEK)	43		6.177				ND	
37 cis-1,2-Dichloroethene	96	6.196	6.202	-0.006	73	3674	0.0771	
43 Chlorobromomethane	128		6.537				ND	
45 Chloroform	83	6.677	6.683	-0.006	92	18692	0.2475	
$ 46 Dibromofluoromethane (Surr)	113	6.897	6.897	0.000	94	365877	10.3	
47 1,1,1-Trichloroethane	97		6.909				ND	
50 Carbon tetrachloride	117		7.128				ND	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.342	7.354	-0.012	0	74334	10.3	
54 Benzene	78		7.384				ND	
56 1,2-Dichloroethane	62		7.452				ND	
* 58 Fluorobenzene (IS)	96	7.781	7.787	-0.006	99	1476503	10.0	
61 Trichloroethene	95		8.262				ND	
63 1,2-Dichloropropane	63		8.592				ND	
68 Dichlorobromomethane	83		8.933				ND	
73 cis-1,3-Dichloropropene	75		9.476				ND	
74 4-Methyl-2-pentanone (MIBK)	43		9.640				ND	
$ 75 Toluene-d8 (Surr)	98	9.774	9.774	0.000	93	1427720	9.92	
76 Toluene	92	9.853	9.853	0.000	95	4009	0.0348	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
78 trans-1,3-Dichloropropene	75		10.103				ND	
80 1,1,2-Trichloroethane	97		10.305				ND	
81 Tetrachloroethene	166	10.396	10.396	0.000	97	79993	1.46	
83 2-Hexanone	43		10.512				ND	
85 Chlorodibromomethane	129		10.683				ND	
86 Ethylene Dibromide	107		10.792				ND	
* 87 Chlorobenzene-d5 (IS)	117	11.219	11.219	0.000	85	1132167	10.0	
90 Chlorobenzene	112		11.243				ND	
S 89 Xylenes, Total	106		11.245				ND	
91 1,1,1,2-Tetrachloroethane	131		11.323				ND	
92 Ethylbenzene	91		11.329				ND	
93 m-Xylene & p-Xylene	106		11.445				ND	
94 o-Xylene	106		11.768				ND	
95 Styrene	104		11.786				ND	
96 Bromoform	173		11.945				ND	
$ 100 4-Bromofluorobenzene (Surr)	95	12.213	12.213	0.000	93	516209	9.61	
101 1,1,2,2-Tetrachloroethane	83		12.310				ND	
* 115 1,4-Dichlorobenzene-d4	152	13.091	13.091	0.000	94	620215	10.0	

Reagents:

MSV_31_826ISS_00002 Amount Added: 5.00 Units: uL Run Reagent

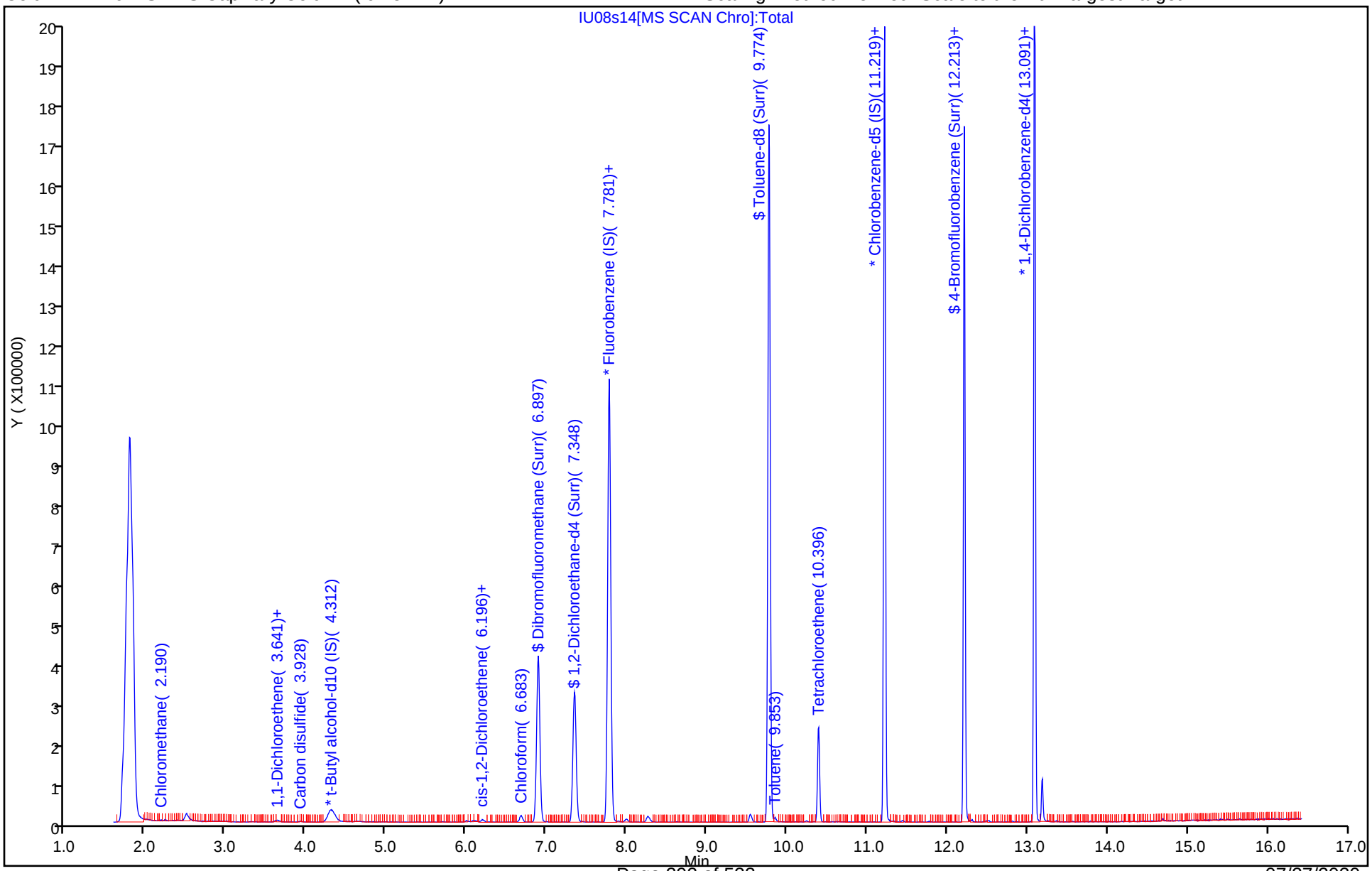
Report Date: 09-Jul-2020 09:13:55 Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s14.D

Injection Date:	08-Jul-2020 15:20:30	Instrument ID:	19930	Operator ID:	jkh09052
Lims ID:	410-5692-A-9	Lab Sample ID:	410-5692-9	Worklist Smp#:	21
Client ID:	HD-COD-SW-26-0/1-0				
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

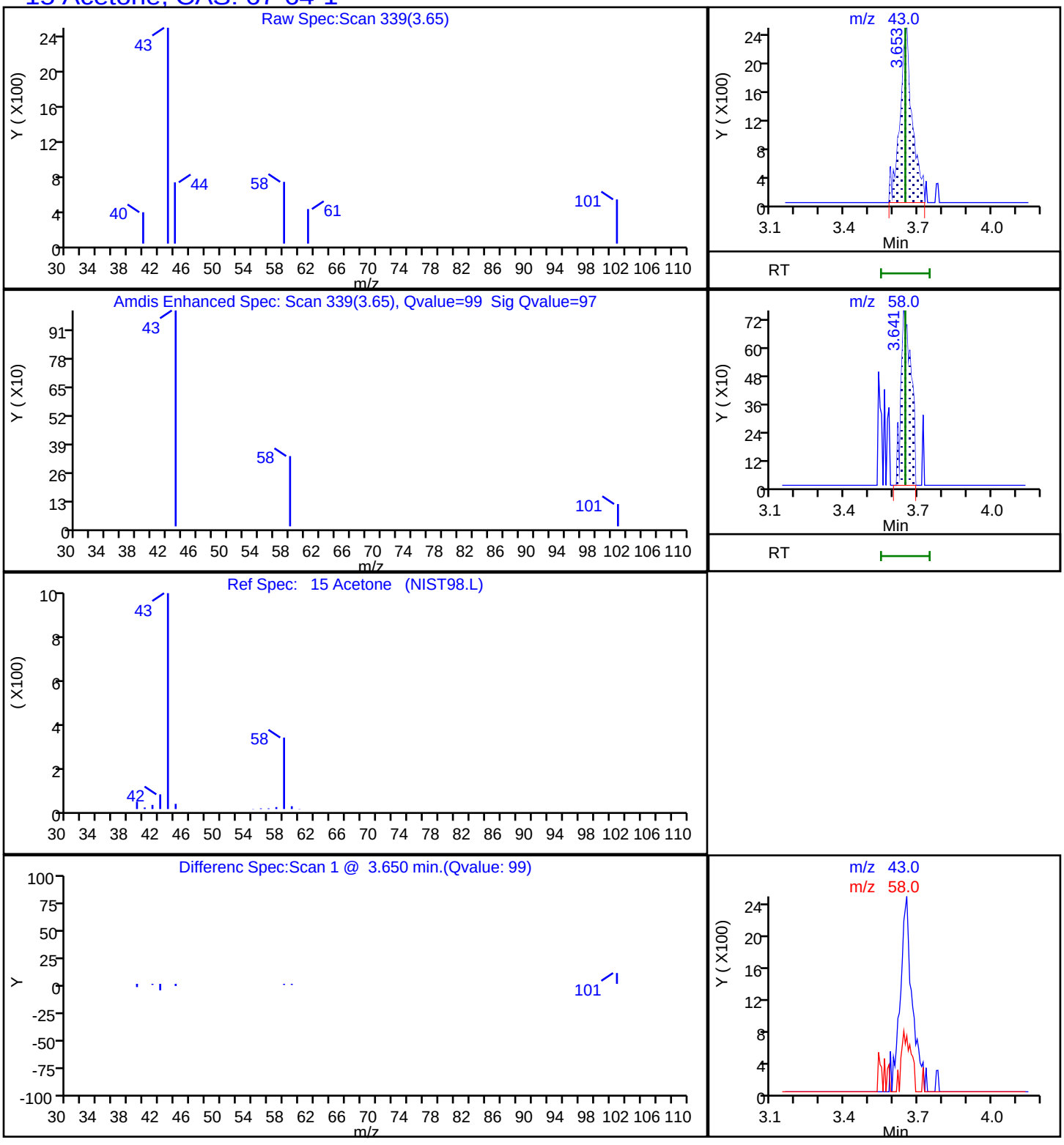
Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s14.D				
Lims ID:	410-5692-A-9				
Client ID:	HD-COD-SW-26-0/1-0				
Sample Type:	Client				
Inject. Date:	08-Jul-2020 15:20:30	ALS Bottle#:	20	Worklist Smp#:	21
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-5692-A-9				
Misc. Info.:	410-0005039-021				
Operator ID:	jkh09052	Instrument ID:	19930		
Method:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\8260 25ml HP31.m				
Limit Group:	MSV - 8260C_D				
Last Update:	09-Jul-2020 09:13:09	Calib Date:	16-Mar-2020 18:31:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1051				
First Level Reviewer: riehlc		Date:	09-Jul-2020 08:46:58		

Compound	Amount Added	Amount Recovered	% Rec.
$ 46 Dibromofluoromethane (Surr)	10.0	10.3	102.67
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.3	102.94
$ 75 Toluene-d8 (Surr)	10.0	9.92	99.17
$ 100 4-Bromofluorobenzene (Surr)	10.0	9.61	96.09

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s14.D				
Injection Date:	08-Jul-2020 15:20:30	Instrument ID:	19930		
Lims ID:	410-5692-A-9	Lab Sample ID:	410-5692-9		
Client ID:	HD-COD-SW-26-0/1-0				
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		

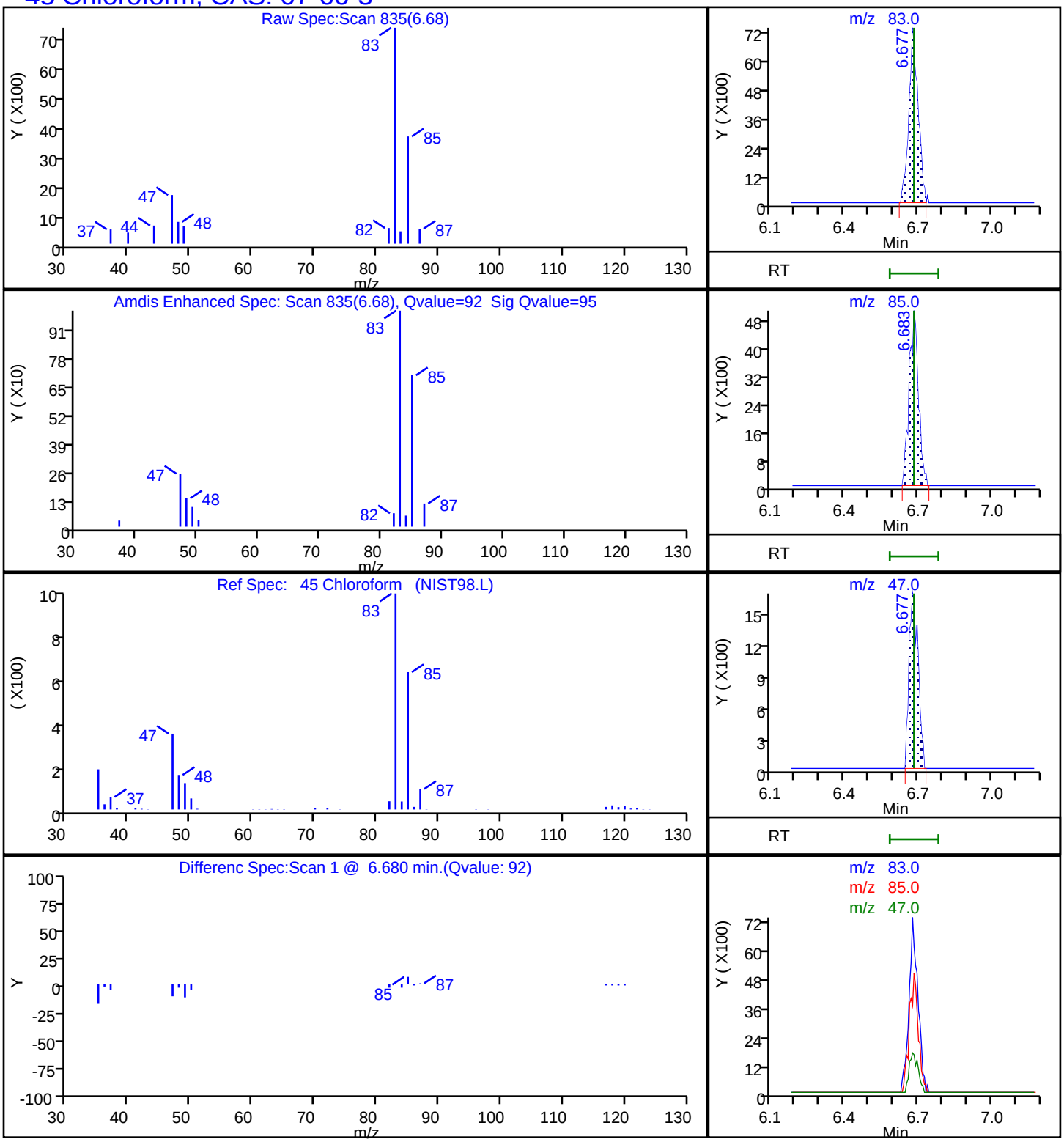
15 Acetone, CAS: 67-64-1



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s14.D				
Injection Date:	08-Jul-2020 15:20:30	Instrument ID:	19930		
Lims ID:	410-5692-A-9	Lab Sample ID:	410-5692-9		
Client ID:	HD-COD-SW-26-0/1-0				
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		

45 Chloroform, CAS: 67-66-3



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s14.D				
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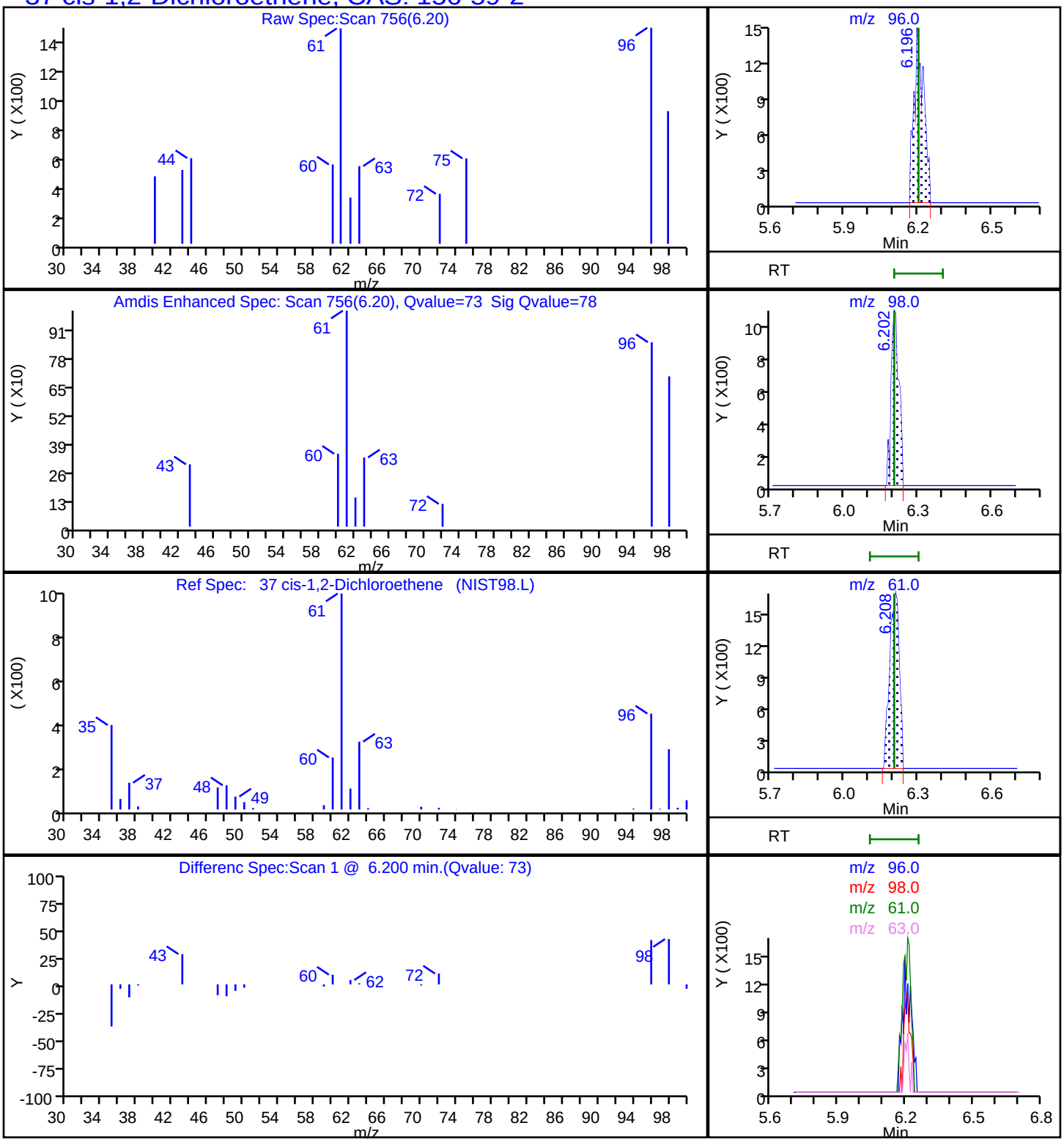
Lims ID:	410-5692-A-9	Lab Sample ID:	410-5692-9		
Client ID:	HD-COD-SW-26-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	20	Worklist Smp#:	21
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

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



Eurofins Lancaster Laboratories Env, LLC

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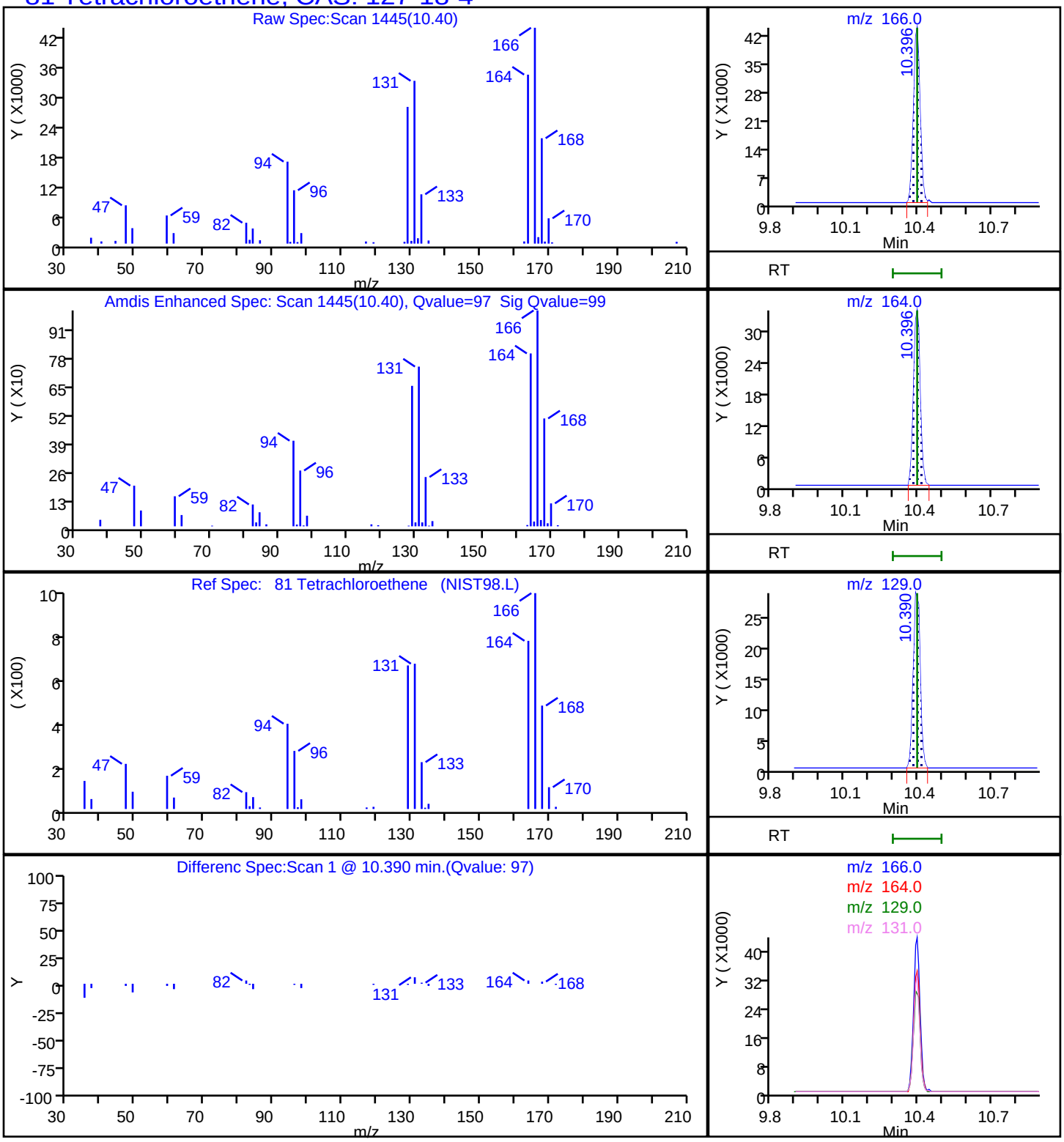
Injection Date:	08-Jul-2020 15:20:30	Instrument ID:	19930		
Lims ID:	410-5692-A-9	Lab Sample ID:	410-5692-9		
Client ID:	HD-COD-SW-26-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	20	Worklist Smp#:	21
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

81 Tetrachloroethene, CAS: 127-18-4



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-5692-1

SDG No.:

Client Sample ID: HD-COD-SW-27-0/1-0 Lab Sample ID: 410-5692-10

Matrix: Water Lab File ID: IU08s15.D

Analysis Method: 8260D Date Collected: 06/24/2020 11:25

Sample wt/vol: 25(mL) Date Analyzed: 07/08/2020 15:41

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: R-624SilMS 30m ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 20265 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		0.50	0.060
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.50	0.070
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
107-06-2	1,2-Dichloroethane	ND		0.50	0.050
78-87-5	1,2-Dichloropropane	ND		0.50	0.060
78-93-3	2-Butanone (MEK)	ND		5.0	0.60
591-78-6	2-Hexanone	ND		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70
67-64-1	Acetone	2.5	J	5.0	0.90
107-13-1	Acrylonitrile	ND		5.0	0.40
71-43-2	Benzene	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
74-97-5	Bromochloromethane	ND		0.50	0.050
124-48-1	Dibromochloromethane	ND		0.50	0.070
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	0.087	J	0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	ND		0.50	0.050
75-27-4	Bromodichloromethane	ND		0.50	0.050
100-41-4	Ethylbenzene	ND		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	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	0.12	J	0.50	0.060
108-88-3	Toluene	0.092	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.: 410-5692-1

SDG No.:

Client Sample ID: HD-COD-SW-27-0/1-0 Lab Sample ID: 410-5692-10

Matrix: Water Lab File ID: IU08s15.D

Analysis Method: 8260D Date Collected: 06/24/2020 11:25

Sample wt/vol: 25(mL) Date Analyzed: 07/08/2020 15:41

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: R-624SilMS 30m ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 20265 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	0.097	J	0.50	0.060
75-01-4	Vinyl chloride	ND		0.50	0.10
1330-20-7	Xylenes, Total	ND		1.0	0.15

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		80-120
460-00-4	4-Bromofluorobenzene (Surr)	97		80-120
1868-53-7	Dibromofluoromethane (Surr)	102		80-120
2037-26-5	Toluene-d8 (Surr)	99		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s15.D
Lims ID: 410-5692-A-10
Client ID: HD-COD-SW-27-0/1-0
Sample Type: Client
Inject. Date: 08-Jul-2020 15:41:30 ALS Bottle#: 21 Worklist Smp#: 22
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-5692-A-10
Misc. Info.: 410-0005039-022
Operator ID: jkh09052 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 09-Jul-2020 09:13:09 Calib Date: 16-Mar-2020 18:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1051

First Level Reviewer: riehlc Date: 09-Jul-2020 08:49:15

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
4 Chloromethane	50	2.184	2.203	-0.019	53	7472	0.1214	
5 Vinyl chloride	62		2.324				ND	
7 Bromomethane	94		2.648				ND	
8 Chloroethane	64		2.739				ND	
14 1,1-Dichloroethene	96		3.623				ND	
15 Acetone	43	3.641	3.647	-0.006	98	12772	2.45	
19 Carbon disulfide	76	3.928	3.934	-0.006	49	5314	0.0495	M
23 Methylene Chloride	84		4.306				ND	
* 24 t-Butyl alcohol-d10 (IS)	65	4.300	4.306	-0.006	0	104897	50.0	
26 Acrylonitrile	53		4.641				ND	
27 Methyl tert-butyl ether	73		4.708				ND	
28 trans-1,2-Dichloroethene	96		4.726				ND	
31 1,1-Dichloroethane	63		5.379				ND	
36 2-Butanone (MEK)	43	6.177	6.177	0.000	66	3328	0.3631	
37 cis-1,2-Dichloroethene	96	6.202	6.202	0.000	79	3947	0.0870	
43 Chlorobromomethane	128		6.537				ND	
45 Chloroform	83	6.696	6.683	0.013	13	3814	0.0531	M
$ 46 Dibromofluoromethane (Surr)	113	6.891	6.897	-0.006	93	344838	10.2	
47 1,1,1-Trichloroethane	97		6.909				ND	
50 Carbon tetrachloride	117		7.128				ND	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.348	7.354	-0.006	0	69312	10.1	
54 Benzene	78		7.384				ND	
56 1,2-Dichloroethane	62		7.452				ND	
* 58 Fluorobenzene (IS)	96	7.781	7.787	-0.006	99	1404882	10.0	
61 Trichloroethene	95	8.262	8.262	0.000	89	4316	0.0967	
63 1,2-Dichloropropane	63		8.592				ND	
68 Dichlorobromomethane	83		8.933				ND	
73 cis-1,3-Dichloropropene	75		9.476				ND	
74 4-Methyl-2-pentanone (MIBK)	43		9.640				ND	
$ 75 Toluene-d8 (Surr)	98	9.774	9.774	0.000	93	1349829	9.93	
76 Toluene	92	9.847	9.853	-0.006	96	10031	0.0923	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
78 trans-1,3-Dichloropropene	75		10.103				ND	
80 1,1,2-Trichloroethane	97		10.305				ND	
81 Tetrachloroethene	166	10.396	10.396	0.000	93	6279	0.1210	
83 2-Hexanone	43		10.512				ND	
85 Chlorodibromomethane	129		10.683				ND	
86 Ethylene Dibromide	107		10.792				ND	
* 87 Chlorobenzene-d5 (IS)	117	11.219	11.219	0.000	86	1069187	10.0	
90 Chlorobenzene	112		11.243				ND	
S 89 Xylenes, Total	106		11.245				ND	
91 1,1,1,2-Tetrachloroethane	131		11.323				ND	
92 Ethylbenzene	91	11.341	11.329	0.012	1	2334	0.0109	M
93 m-Xylene & p-Xylene	106	11.438	11.445	-0.007	0	2459	0.0294	7M
94 o-Xylene	106	11.780	11.768	0.012	91	783	0.009458	7M
95 Styrene	104		11.786				ND	
96 Bromoform	173		11.945				ND	
$ 100 4-Bromofluorobenzene (Surr)	95	12.213	12.213	0.000	93	490360	9.67	
101 1,1,2,2-Tetrachloroethane	83		12.310				ND	
* 115 1,4-Dichlorobenzene-d4	152	13.091	13.091	0.000	94	589285	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

Reagents:

MSV_31_826ISS_00002 Amount Added: 5.00 Units: uL Run Reagent

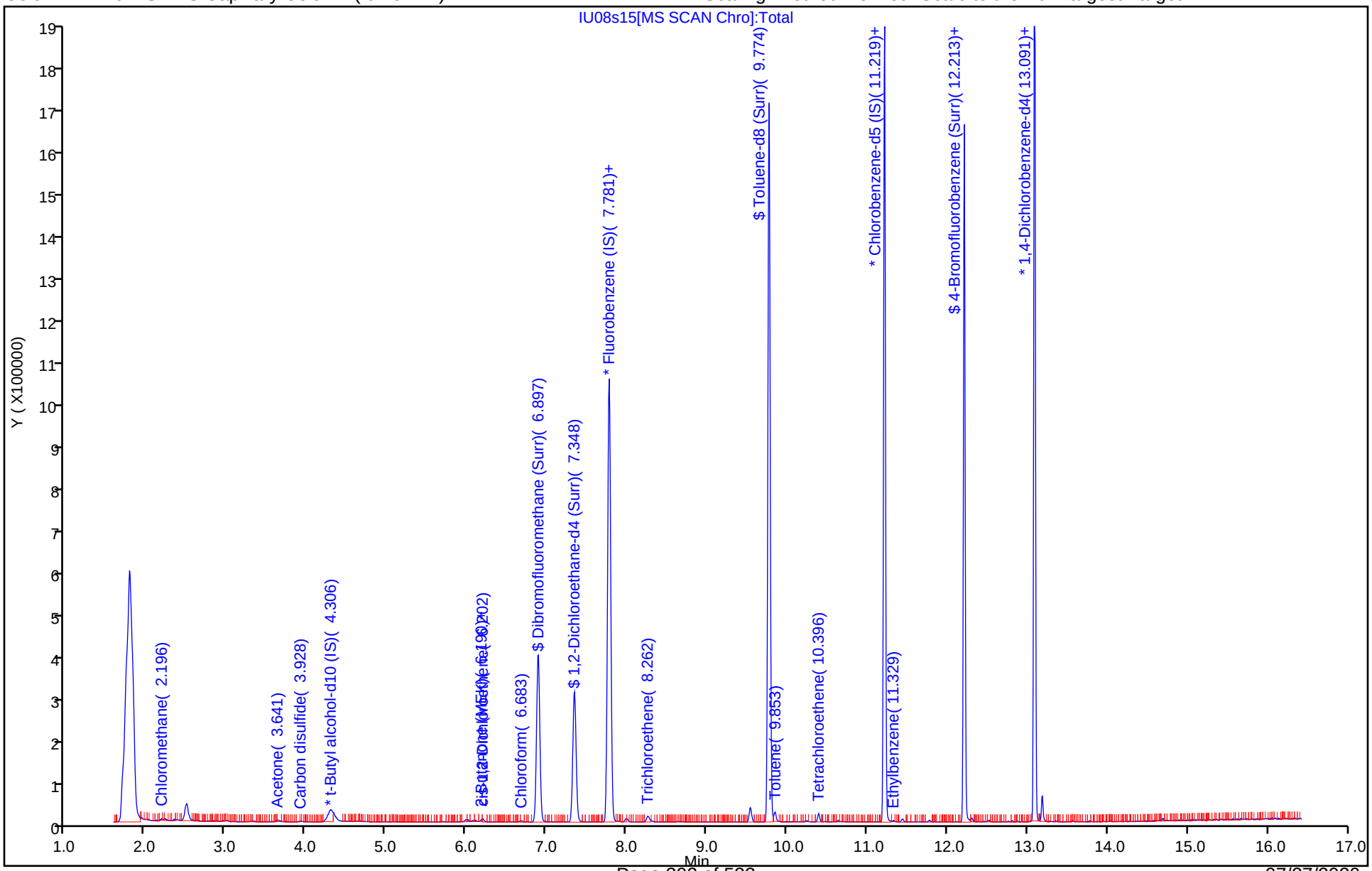
Report Date: 09-Jul-2020 09:13:56 Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s15.D

Injection Date:	08-Jul-2020 15:41:30	Instrument ID:	19930	Operator ID:	jkh09052
Lims ID:	410-5692-A-10	Lab Sample ID:	410-5692-10	Worklist Smp#:	22
Client ID:	HD-COD-SW-27-0/1-0				
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\20200708-5039.b\IU08s15.D				
Lims ID:	410-5692-A-10				
Client ID:	HD-COD-SW-27-0/1-0				
Sample Type:	Client				
Inject. Date:	08-Jul-2020 15:41:30	ALS Bottle#:	21	Worklist Smp#:	22
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-5692-A-10				
Misc. Info.:	410-0005039-022				
Operator ID:	jkh09052	Instrument ID:	19930		
Method:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\8260 25ml HP31.m				
Limit Group:	MSV - 8260C_D				
Last Update:	09-Jul-2020 09:13:09	Calib Date:	16-Mar-2020 18:31:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1051				

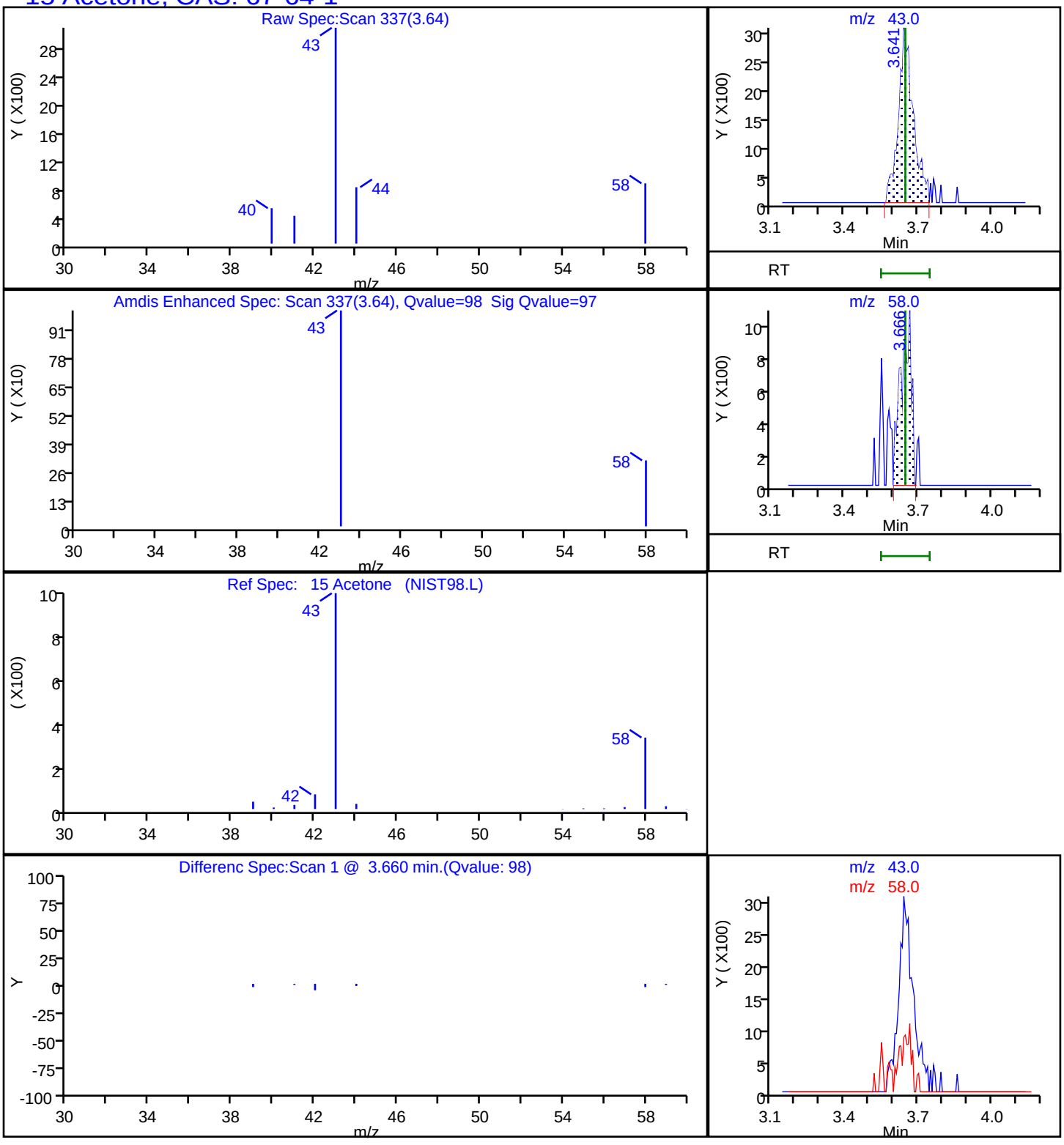
First Level Reviewer: riehlc Date: 09-Jul-2020 08:49:15

Compound	Amount Added	Amount Recovered	% Rec.
$ 46 Dibromofluoromethane (Surr)	10.0	10.2	101.70
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.1	100.88
$ 75 Toluene-d8 (Surr)	10.0	9.93	99.28
$ 100 4-Bromofluorobenzene (Surr)	10.0	9.67	96.65

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s15.D				
Injection Date:	08-Jul-2020 15:41:30	Instrument ID:	19930		
Lims ID:	410-5692-A-10	Lab Sample ID:	410-5692-10		
Client ID:	HD-COD-SW-27-0/1-0				
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		

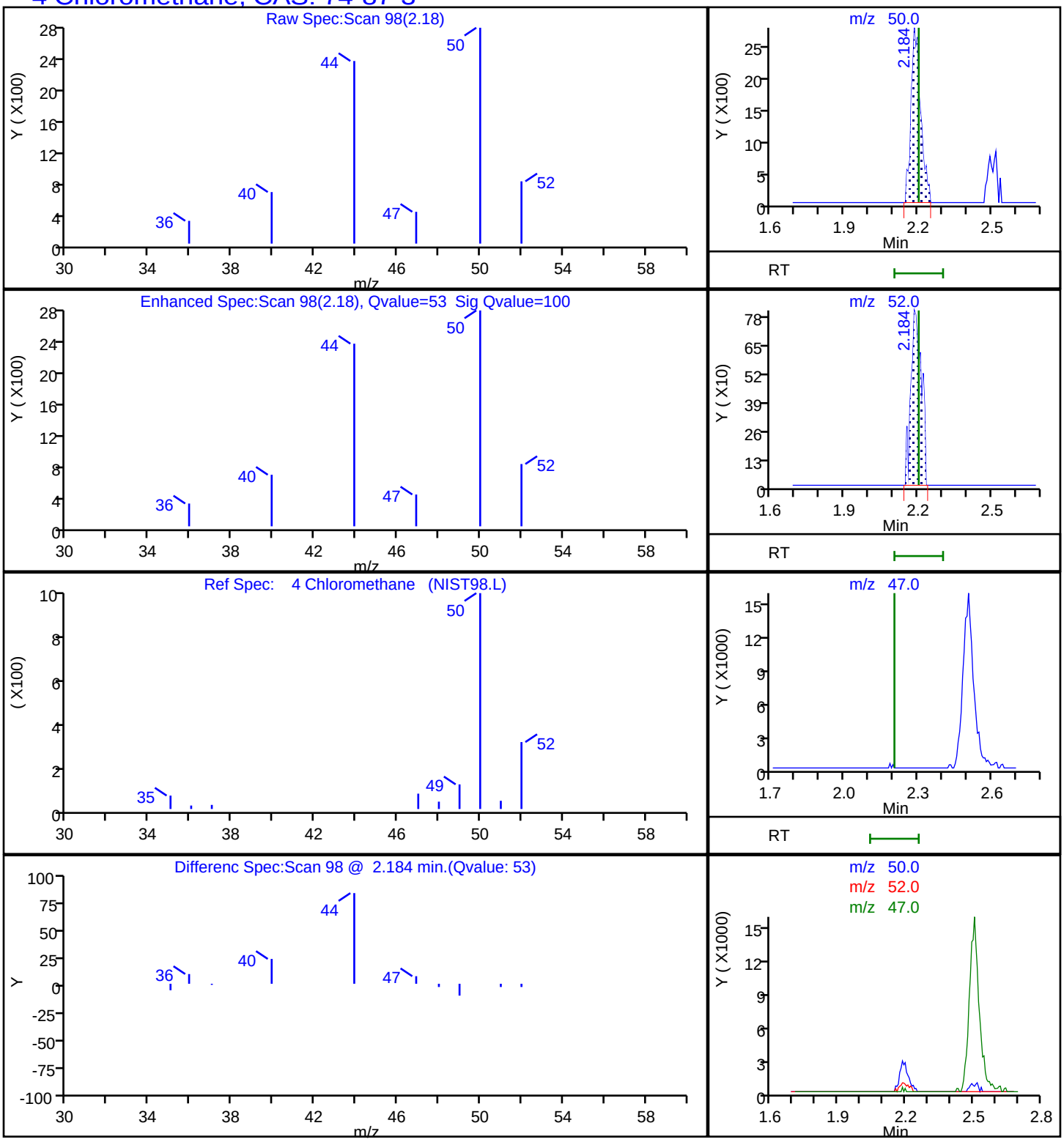
15 Acetone, CAS: 67-64-1



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s15.D				
Injection Date:	08-Jul-2020 15:41:30	Instrument ID:	19930		
Lims ID:	410-5692-A-10	Lab Sample ID:	410-5692-10		
Client ID:	HD-COD-SW-27-0/1-0				
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



Report Date: 09-Jul-2020 09:13:56 Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s15.D

Injection Date: 08-Jul-2020 15:41:30 Instrument ID: 19930

Lims ID: 410-5692-A-10 Lab Sample ID: 410-5692-10

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

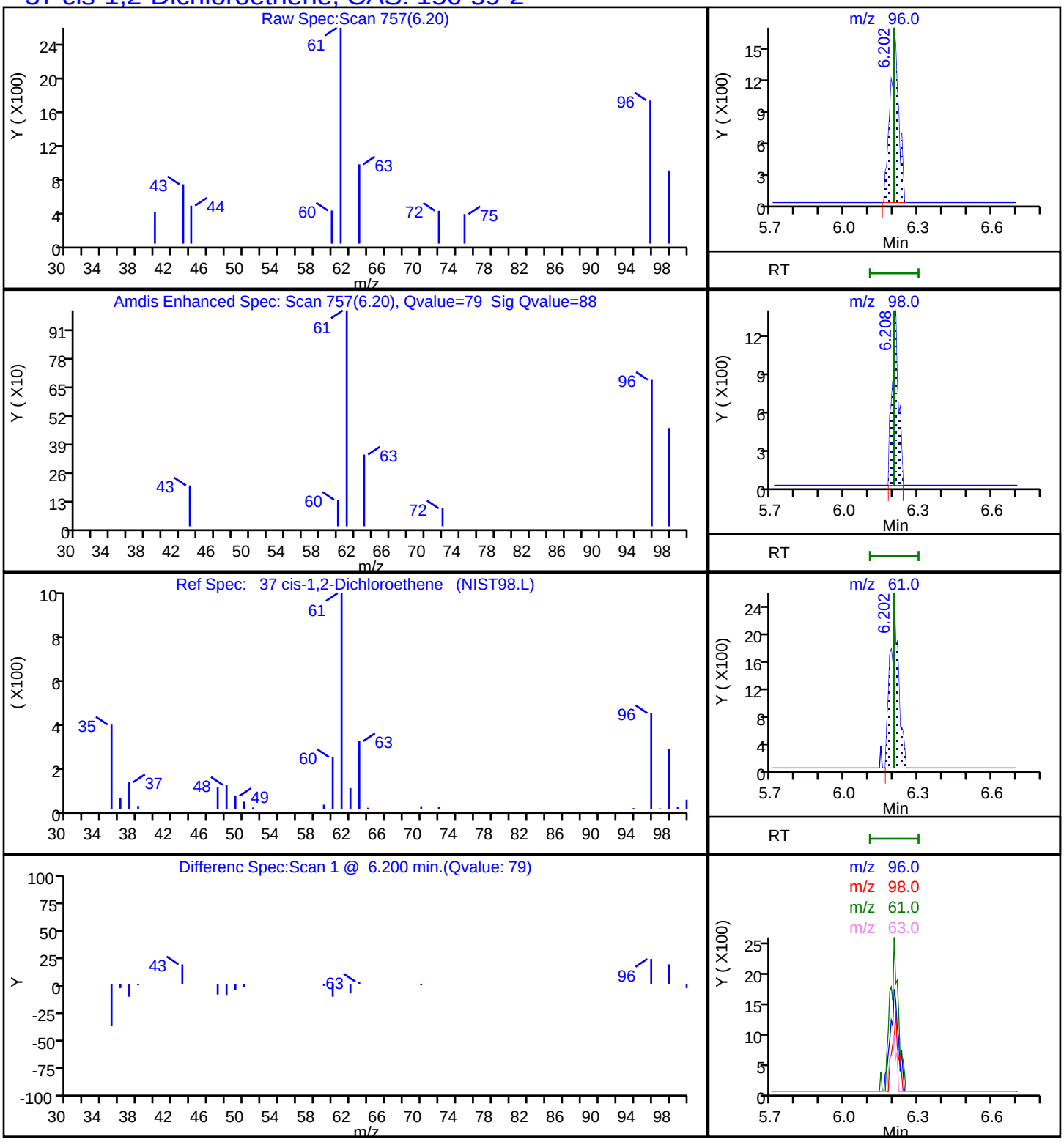
Operator ID: jkh09052 ALS Bottle#: 21 Worklist Smp#: 22

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

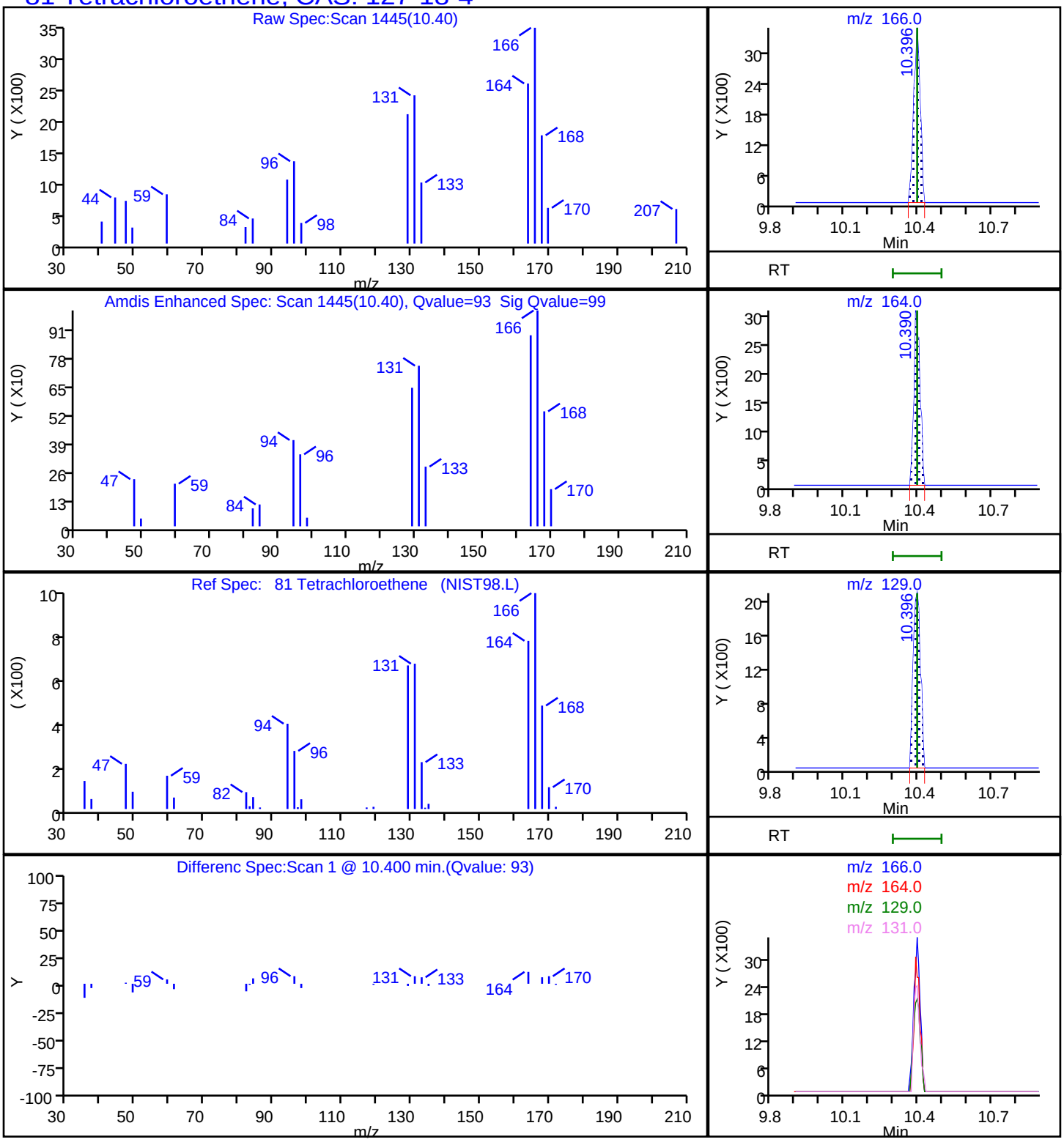
37 cis-1,2-Dichloroethene, CAS: 156-59-2



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s15.D				
Injection Date:	08-Jul-2020 15:41:30	Instrument ID:	19930		
Lims ID:	410-5692-A-10	Lab Sample ID:	410-5692-10		
Client ID:	HD-COD-SW-27-0/1-0				
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		

81 Tetrachloroethene, CAS: 127-18-4



Report Date: 09-Jul-2020 09:13:56 Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s15.D

Injection Date: 08-Jul-2020 15:41:30 Instrument ID: 19930

Lims ID: 410-5692-A-10 Lab Sample ID: 410-5692-10

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

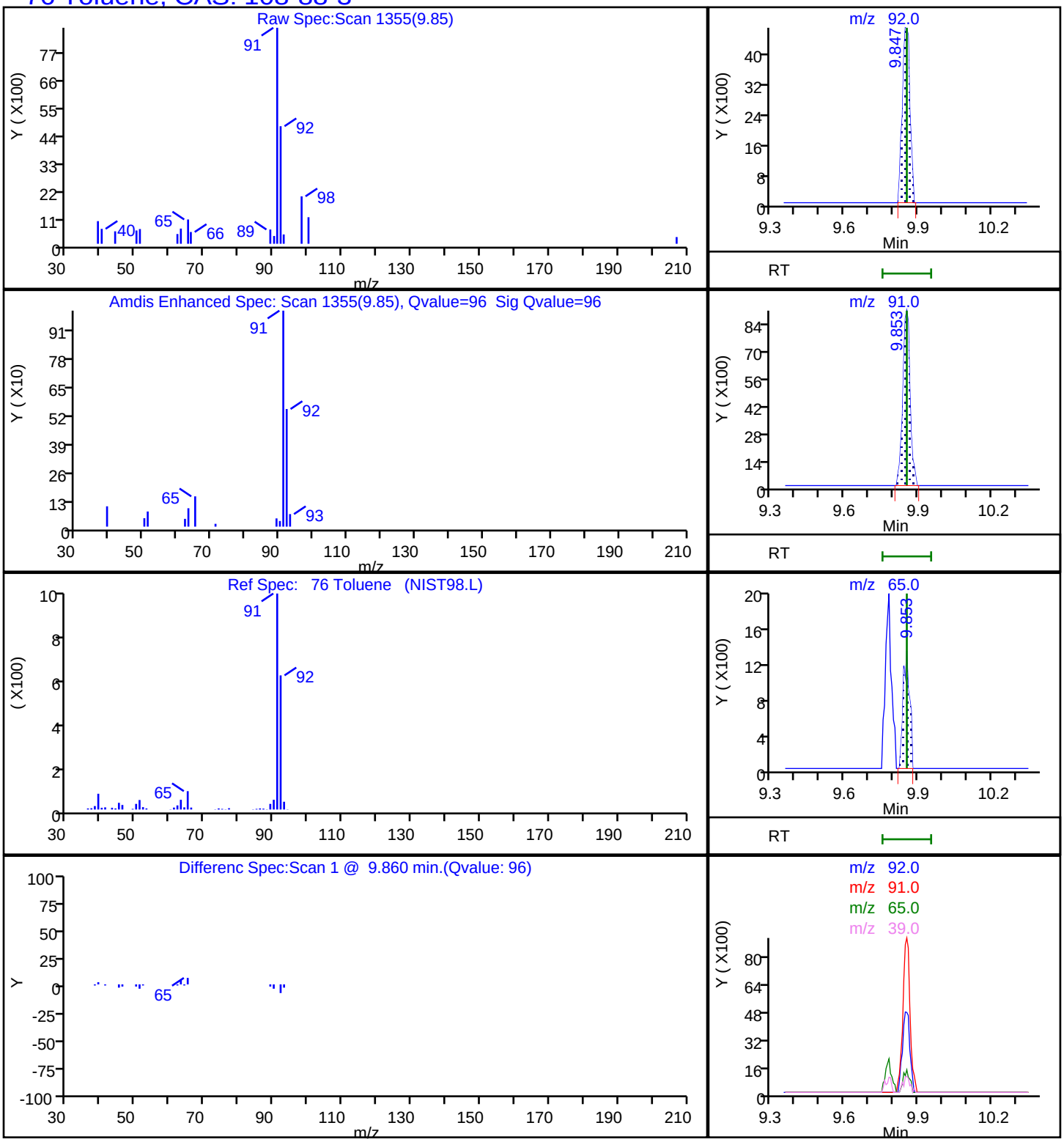
Operator ID: jkh09052 ALS Bottle#: 21 Worklist Smp#: 22

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

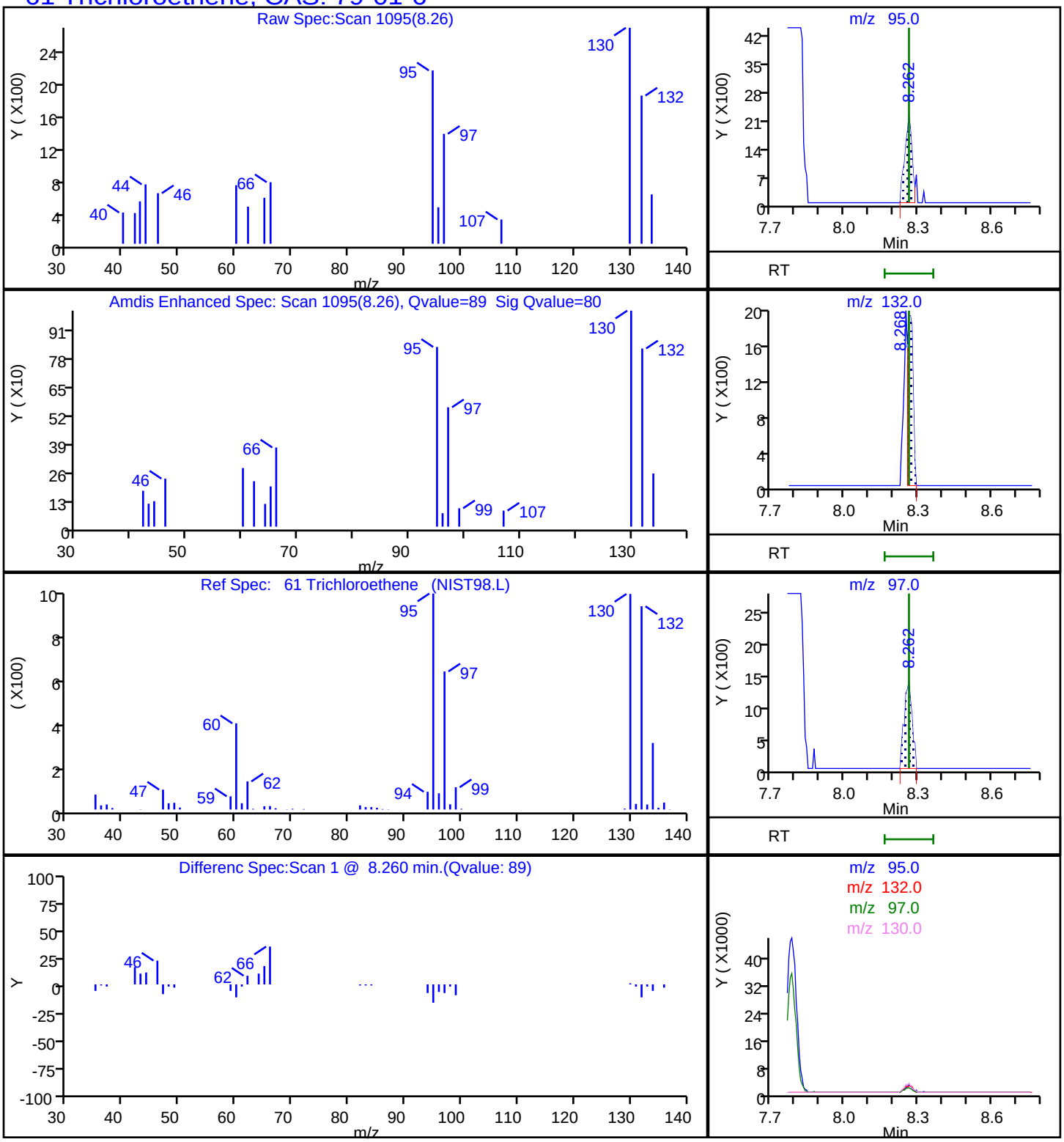
76 Toluene, CAS: 108-88-3



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s15.D				
Injection Date:	08-Jul-2020 15:41:30	Instrument ID:	19930		
Lims ID:	410-5692-A-10	Lab Sample ID:	410-5692-10		
Client ID:	HD-COD-SW-27-0/1-0				
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



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

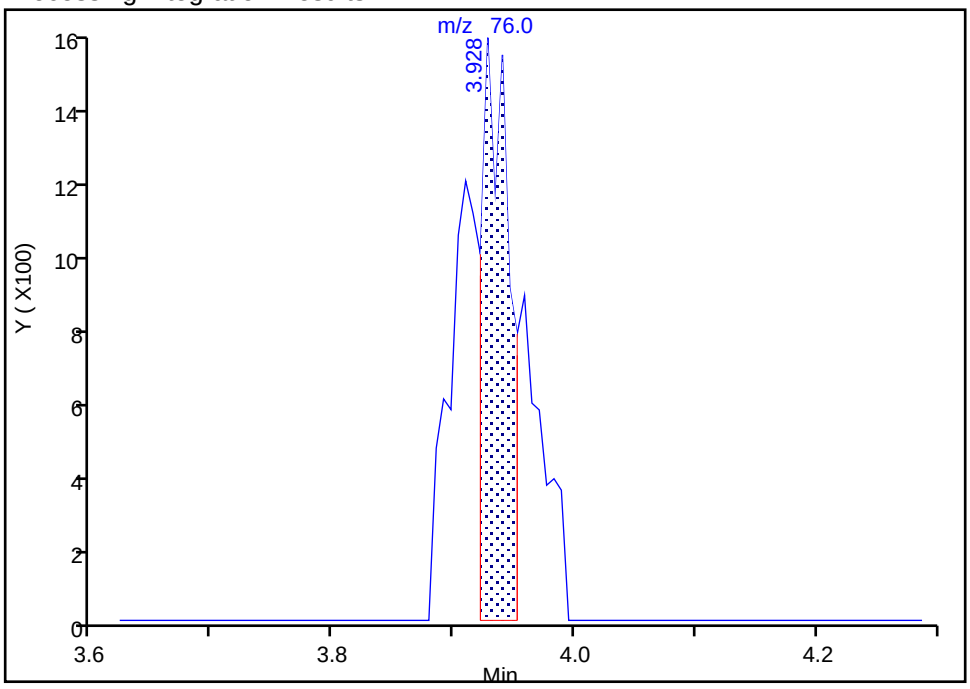
Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s15.D				
Injection Date:	08-Jul-2020 15:41:30	Instrument ID:	19930		
Lims ID:	410-5692-A-10	Lab Sample ID:	410-5692-10		
Client ID:	HD-COD-SW-27-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	21	Worklist Smp#:	22
Purge Vol:	25.000 mL	Dil. 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

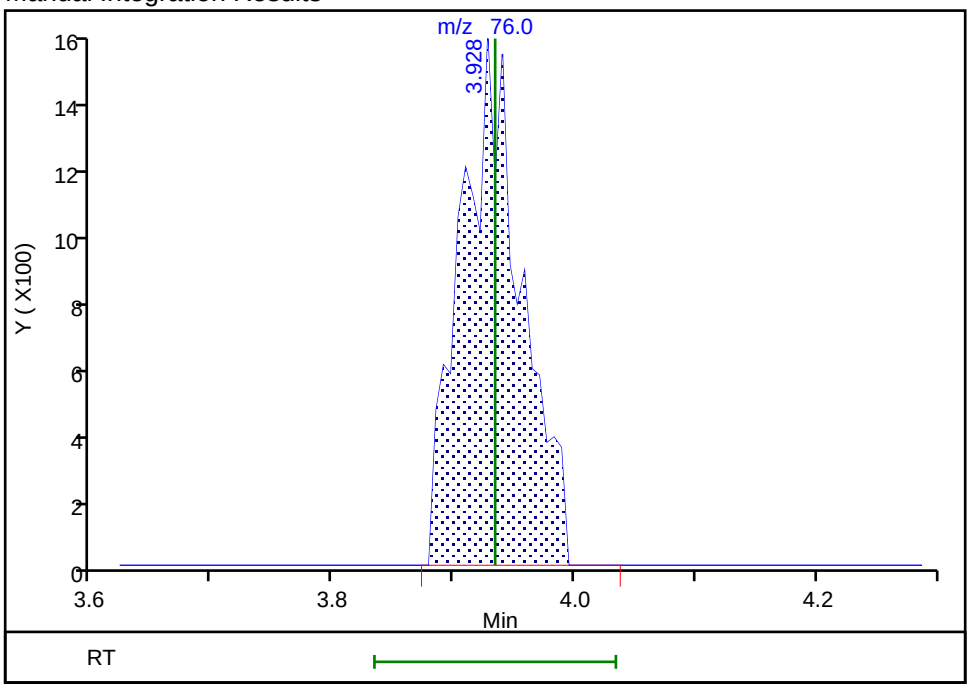
Processing Integration Results

RT: 3.93
Area: 2444
Amount: 0.022751
Amount Units: ug/l



Manual Integration Results

RT: 3.93
Area: 5314
Amount: 0.049468
Amount Units: ug/l



Reviewer: riehlc, 09-Jul-2020 08:47:45

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

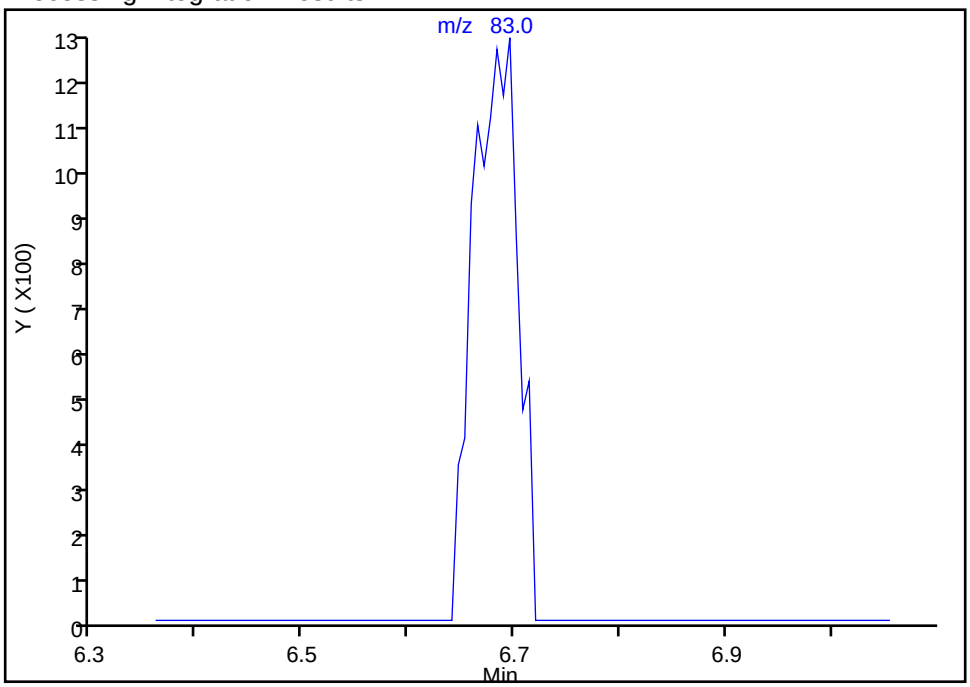
Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s15.D				
Injection Date:	08-Jul-2020 15:41:30	Instrument ID:	19930		
Lims ID:	410-5692-A-10	Lab Sample ID:	410-5692-10		
Client ID:	HD-COD-SW-27-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	21	Worklist Smp#:	22
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

45 Chloroform, CAS: 67-66-3

Signal: 1

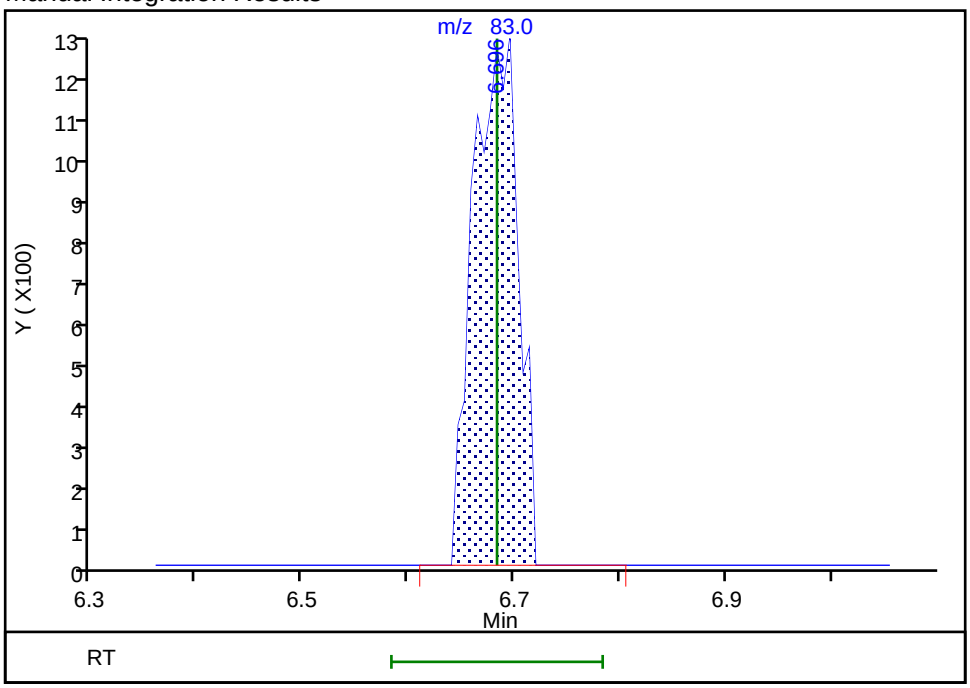
Not Detected
Expected RT: 6.68

Processing Integration Results



Manual Integration Results

RT: 6.70
Area: 3814
Amount: 0.053068
Amount Units: ug/l



Reviewer: riehlc, 09-Jul-2020 08:48:06
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC

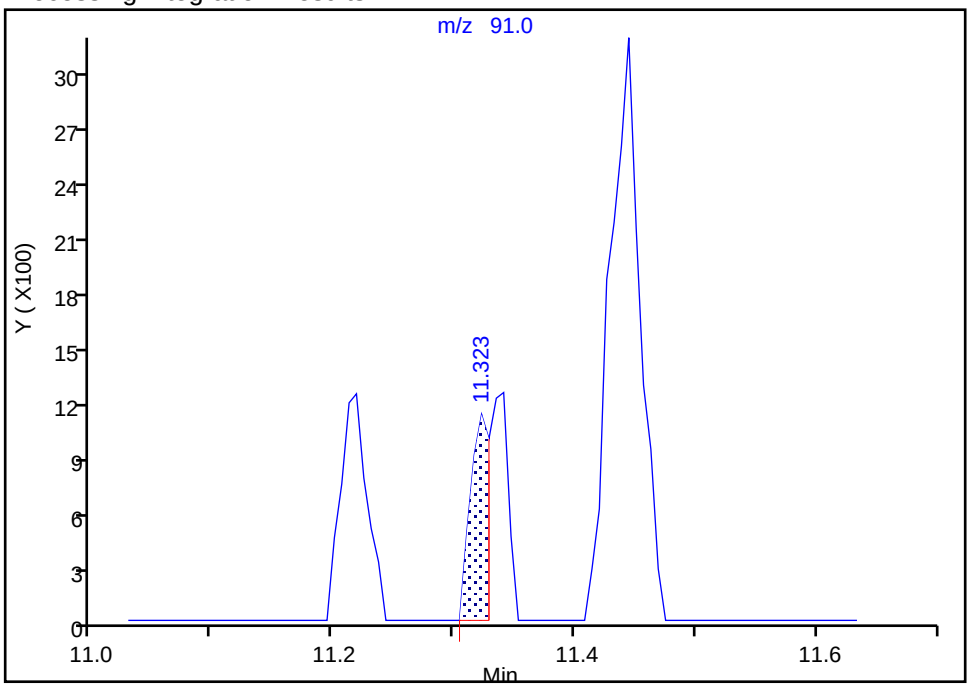
Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s15.D				
Injection Date:	08-Jul-2020 15:41:30	Instrument ID:	19930		
Lims ID:	410-5692-A-10	Lab Sample ID:	410-5692-10		
Client ID:	HD-COD-SW-27-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	21	Worklist Smp#:	22
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

92 Ethylbenzene, CAS: 100-41-4

Signal: 1

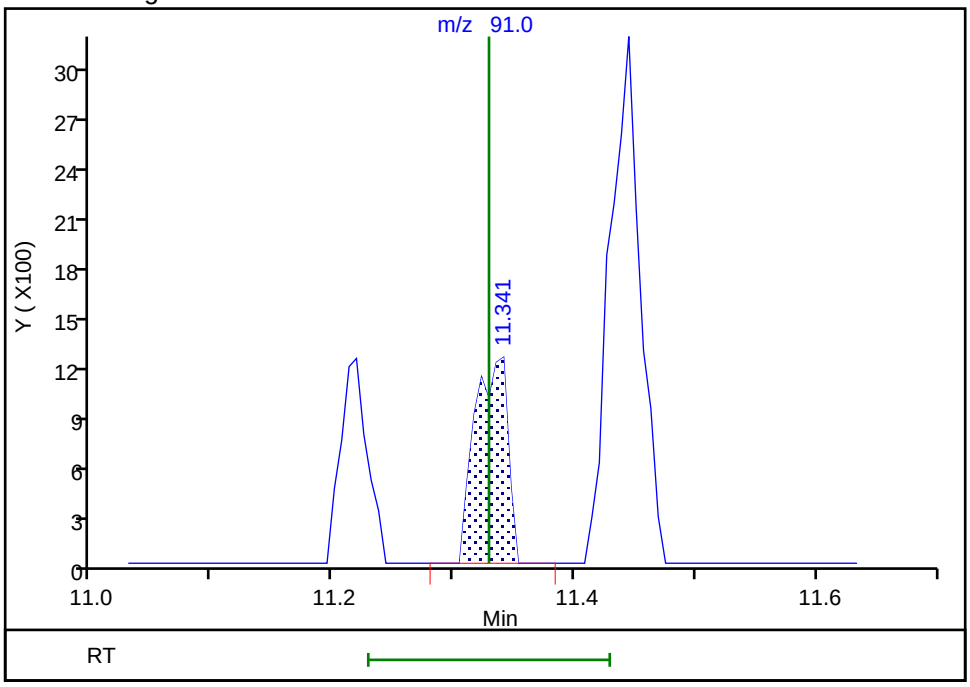
Processing Integration Results

RT: 11.32
Area: 1274
Amount: 0.005976
Amount Units: ug/l



Manual Integration Results

RT: 11.34
Area: 2334
Amount: 0.010948
Amount Units: ug/l



Reviewer: riehlc, 09-Jul-2020 08:48:44
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC

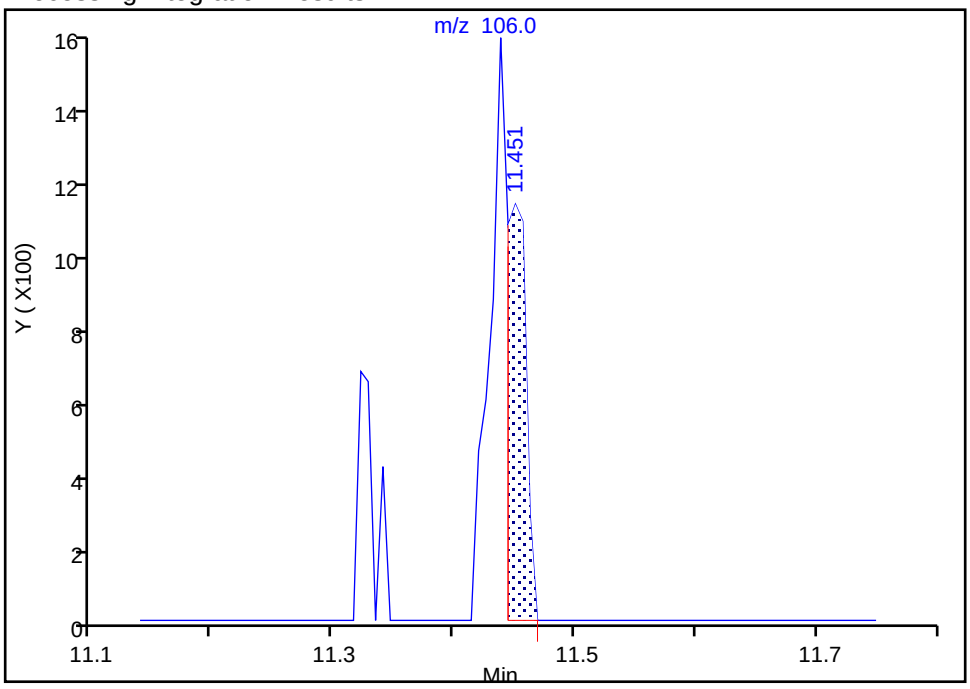
Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s15.D				
Injection Date:	08-Jul-2020 15:41:30	Instrument ID:	19930		
Lims ID:	410-5692-A-10	Lab Sample ID:	410-5692-10		
Client ID:	HD-COD-SW-27-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	21	Worklist Smp#:	22
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

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

Signal: 1

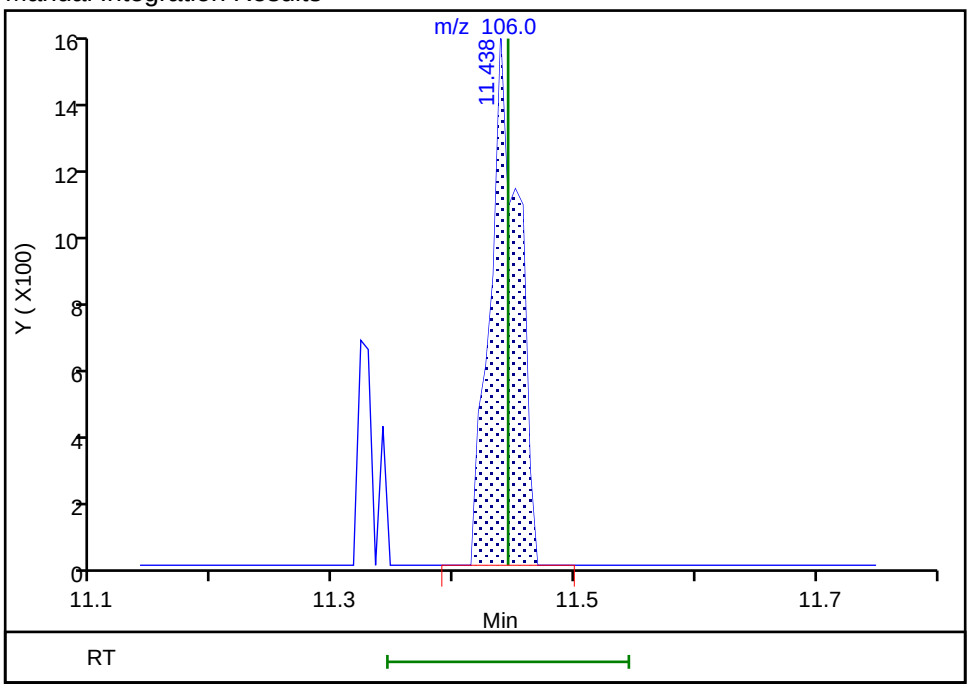
Processing Integration Results

RT: 11.45
Area: 1240
Amount: 0.014846
Amount Units: ug/l



Manual Integration Results

RT: 11.44
Area: 2459
Amount: 0.029440
Amount Units: ug/l



Reviewer: riehlc, 09-Jul-2020 08:48:49
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

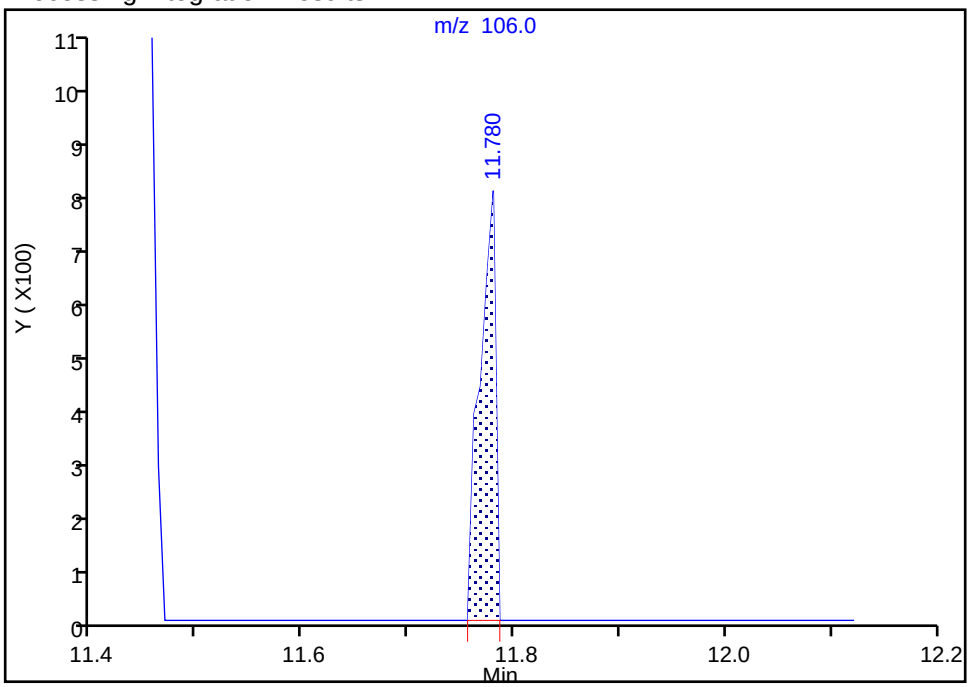
Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s15.D				
Injection Date:	08-Jul-2020 15:41:30	Instrument ID:	19930		
Lims ID:	410-5692-A-10	Lab Sample ID:	410-5692-10		
Client ID:	HD-COD-SW-27-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	21	Worklist Smp#:	22
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

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

Signal: 1

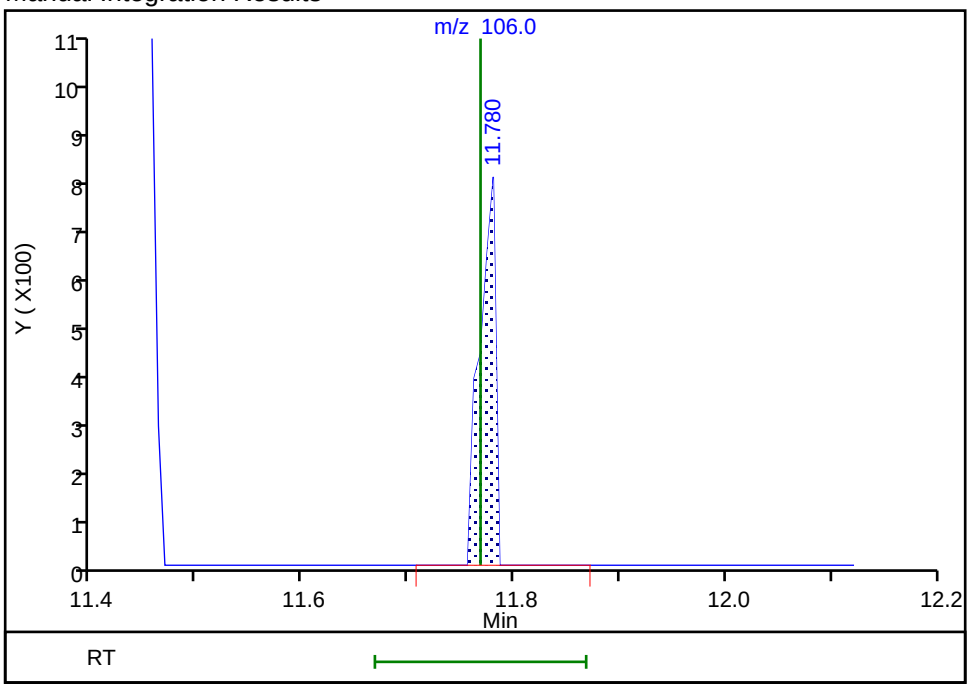
Processing Integration Results

RT: 11.78
Area: 783
Amount: 0.009458
Amount Units: ug/l



Manual Integration Results

RT: 11.78
Area: 783
Amount: 0.009458
Amount Units: ug/l



Reviewer: riehlc, 09-Jul-2020 08:48:53

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.: 410-5692-1

SDG No.:

Client Sample ID: HD-COD-SW-28-0/1-0 Lab Sample ID: 410-5692-11

Matrix: Water Lab File ID: IU08s16.D

Analysis Method: 8260D Date Collected: 06/24/2020 12:35

Sample wt/vol: 25(mL) Date Analyzed: 07/08/2020 16:02

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: R-624SilMS 30m ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 20265 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		0.50	0.060
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.50	0.070
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
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	5.3		5.0	0.90
107-13-1	Acrylonitrile	ND		5.0	0.40
71-43-2	Benzene	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
74-97-5	Bromochloromethane	ND		0.50	0.050
124-48-1	Dibromochloromethane	ND		0.50	0.070
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
75-27-4	Bromodichloromethane	ND		0.50	0.050
100-41-4	Ethylbenzene	ND		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	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	0.087	J	0.50	0.060
108-88-3	Toluene	0.098	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.: 410-5692-1

SDG No.:

Client Sample ID: HD-COD-SW-28-0/1-0 Lab Sample ID: 410-5692-11

Matrix: Water Lab File ID: IU08s16.D

Analysis Method: 8260D Date Collected: 06/24/2020 12:35

Sample wt/vol: 25(mL) Date Analyzed: 07/08/2020 16:02

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: R-624SilMS 30m ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 20265 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)	104		80-120
460-00-4	4-Bromofluorobenzene (Surr)	97		80-120
1868-53-7	Dibromofluoromethane (Surr)	103		80-120
2037-26-5	Toluene-d8 (Surr)	100		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s16.D
Lims ID: 410-5692-A-11
Client ID: HD-COD-SW-28-0/1-0
Sample Type: Client
Inject. Date: 08-Jul-2020 16:02:30 ALS Bottle#: 22 Worklist Smp#: 23
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-5692-A-11
Misc. Info.: 410-0005039-023
Operator ID: jkh09052 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 09-Jul-2020 09:13:09 Calib Date: 16-Mar-2020 18:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1051

First Level Reviewer: riehlc Date: 09-Jul-2020 08:51:42

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
4 Chloromethane	50		2.203				ND	
5 Vinyl chloride	62		2.324				ND	
7 Bromomethane	94		2.648				ND	
8 Chloroethane	64		2.739				ND	
14 1,1-Dichloroethene	96		3.623				ND	
15 Acetone	43	3.666	3.647	0.019	97	29115	5.30	
19 Carbon disulfide	76		3.934				ND	
23 Methylene Chloride	84		4.306				ND	
* 24 t-Butyl alcohol-d10 (IS)	65	4.324	4.306	0.018	0	110668	50.0	
26 Acrylonitrile	53		4.641				ND	
27 Methyl tert-butyl ether	73		4.708				ND	
28 trans-1,2-Dichloroethene	96		4.726				ND	
31 1,1-Dichloroethane	63		5.379				ND	
36 2-Butanone (MEK)	43	6.202	6.177	0.025	56	3650	0.3774	
37 cis-1,2-Dichloroethene	96		6.202				ND	
43 Chlorobromomethane	128		6.537				ND	
45 Chloroform	83	6.683	6.683	0.000	88	4524	0.0625	
$ 46 Dibromofluoromethane (Surr)	113	6.903	6.897	0.006	94	351081	10.3	
47 1,1,1-Trichloroethane	97		6.909				ND	
50 Carbon tetrachloride	117		7.128				ND	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.348	7.354	-0.006	0	71849	10.4	
54 Benzene	78		7.384				ND	
56 1,2-Dichloroethane	62		7.452				ND	
* 58 Fluorobenzene (IS)	96	7.787	7.787	0.000	99	1414380	10.0	
61 Trichloroethene	95	8.262	8.262	0.000	74	2207	0.0491	M
63 1,2-Dichloropropane	63		8.592				ND	
68 Dichlorobromomethane	83		8.933				ND	
73 cis-1,3-Dichloropropene	75		9.476				ND	
74 4-Methyl-2-pentanone (MIBK)	43		9.640				ND	
$ 75 Toluene-d8 (Surr)	98	9.780	9.774	0.006	93	1373382	9.98	
76 Toluene	92	9.860	9.853	0.007	96	10808	0.0983	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
78 trans-1,3-Dichloropropene	75		10.103				ND	
80 1,1,2-Trichloroethane	97		10.305				ND	
81 Tetrachloroethene	166	10.390	10.396	-0.006	91	4574	0.0871	M
83 2-Hexanone	43		10.512				ND	
85 Chlorodibromomethane	129		10.683				ND	
86 Ethylene Dibromide	107		10.792				ND	
* 87 Chlorobenzene-d5 (IS)	117	11.219	11.219	0.000	85	1081870	10.0	
90 Chlorobenzene	112		11.243				ND	
S 89 Xylenes, Total	106		11.245				ND	
91 1,1,1,2-Tetrachloroethane	131		11.323				ND	
92 Ethylbenzene	91		11.329				ND	
93 m-Xylene & p-Xylene	106	11.439	11.445	-0.006	0	3511	0.0415	
94 o-Xylene	106		11.768				ND	
95 Styrene	104		11.786				ND	
96 Bromoform	173		11.945				ND	
$ 100 4-Bromofluorobenzene (Surr)	95	12.213	12.213	0.000	92	497408	9.69	
101 1,1,2,2-Tetrachloroethane	83		12.310				ND	
* 115 1,4-Dichlorobenzene-d4	152	13.091	13.091	0.000	94	592718	10.0	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MSV_31_826ISS_00002 Amount Added: 5.00 Units: uL Run Reagent

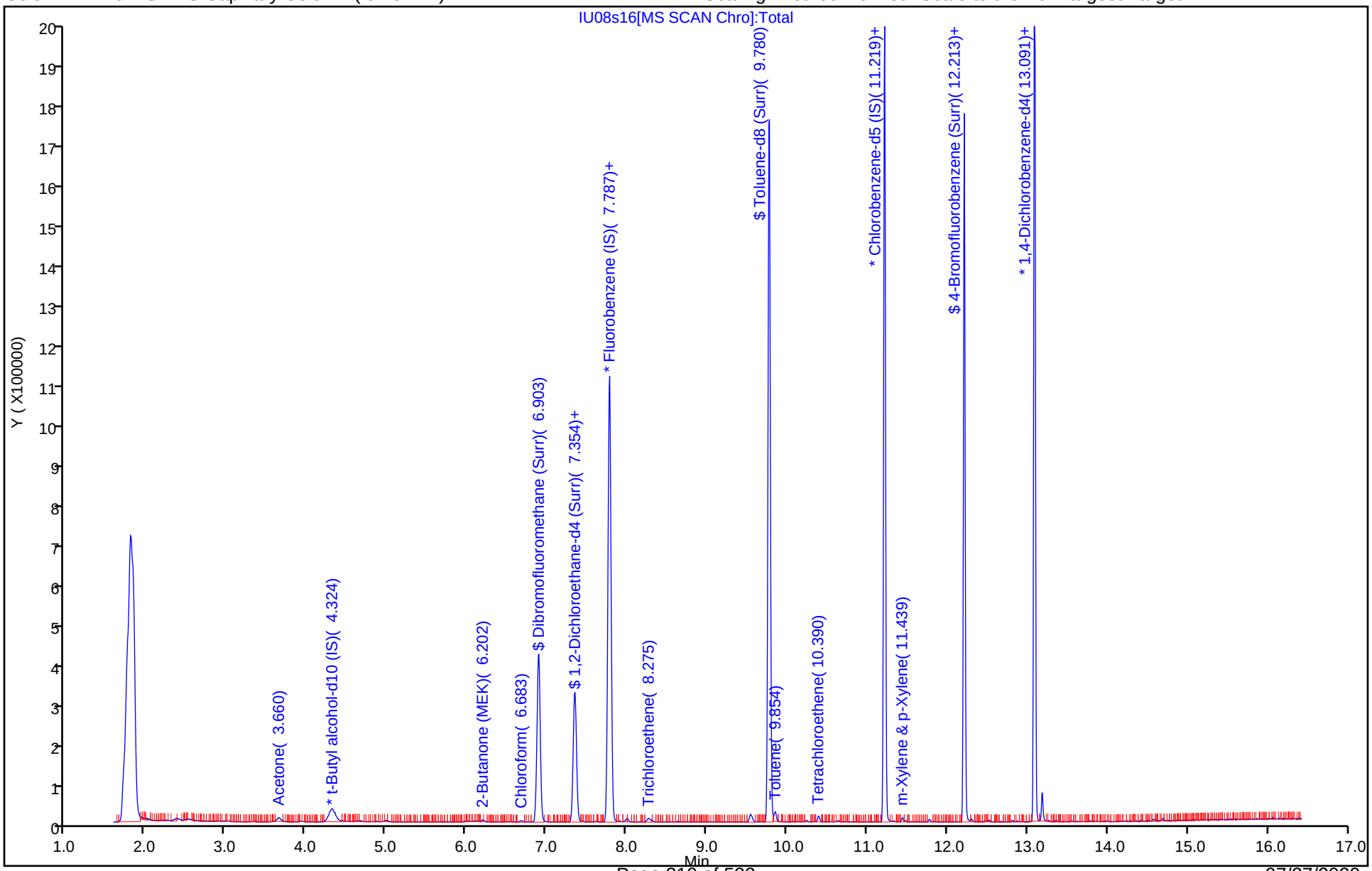
Report Date: 09-Jul-2020 09:13:57 Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s16.D

Injection Date:	08-Jul-2020 16:02:30	Instrument ID:	19930	Operator ID:	jkh09052
Lims ID:	410-5692-A-11	Lab Sample ID:	410-5692-11	Worklist Smp#:	23
Client ID:	HD-COD-SW-28-0/1-0				
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

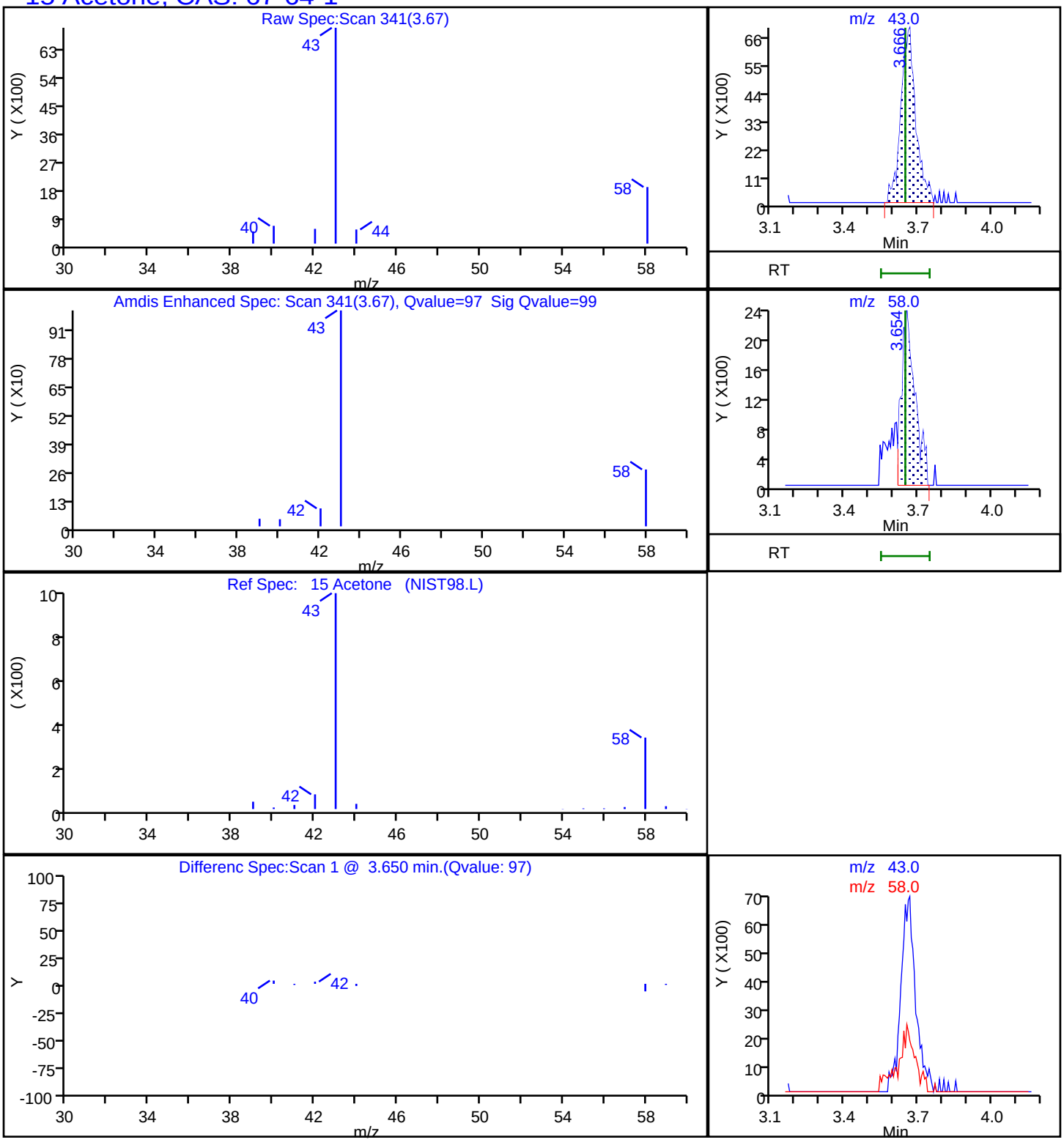
Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s16.D				
Lims ID:	410-5692-A-11				
Client ID:	HD-COD-SW-28-0/1-0				
Sample Type:	Client				
Inject. Date:	08-Jul-2020 16:02:30	ALS Bottle#:	22	Worklist Smp#:	23
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-5692-A-11				
Misc. Info.:	410-0005039-023				
Operator ID:	jkh09052	Instrument ID:	19930		
Method:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\8260 25ml HP31.m				
Limit Group:	MSV - 8260C_D				
Last Update:	09-Jul-2020 09:13:09	Calib Date:	16-Mar-2020 18:31:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1051				
First Level Reviewer: riehlc		Date:	09-Jul-2020 08:51:42		

Compound	Amount Added	Amount Recovered	% Rec.
$ 46 Dibromofluoromethane (Surr)	10.0	10.3	102.84
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.4	103.87
$ 75 Toluene-d8 (Surr)	10.0	9.98	99.83
$ 100 4-Bromofluorobenzene (Surr)	10.0	9.69	96.89

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s16.D				
Injection Date:	08-Jul-2020 16:02:30	Instrument ID:	19930		
Lims ID:	410-5692-A-11	Lab Sample ID:	410-5692-11		
Client ID:	HD-COD-SW-28-0/1-0				
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		

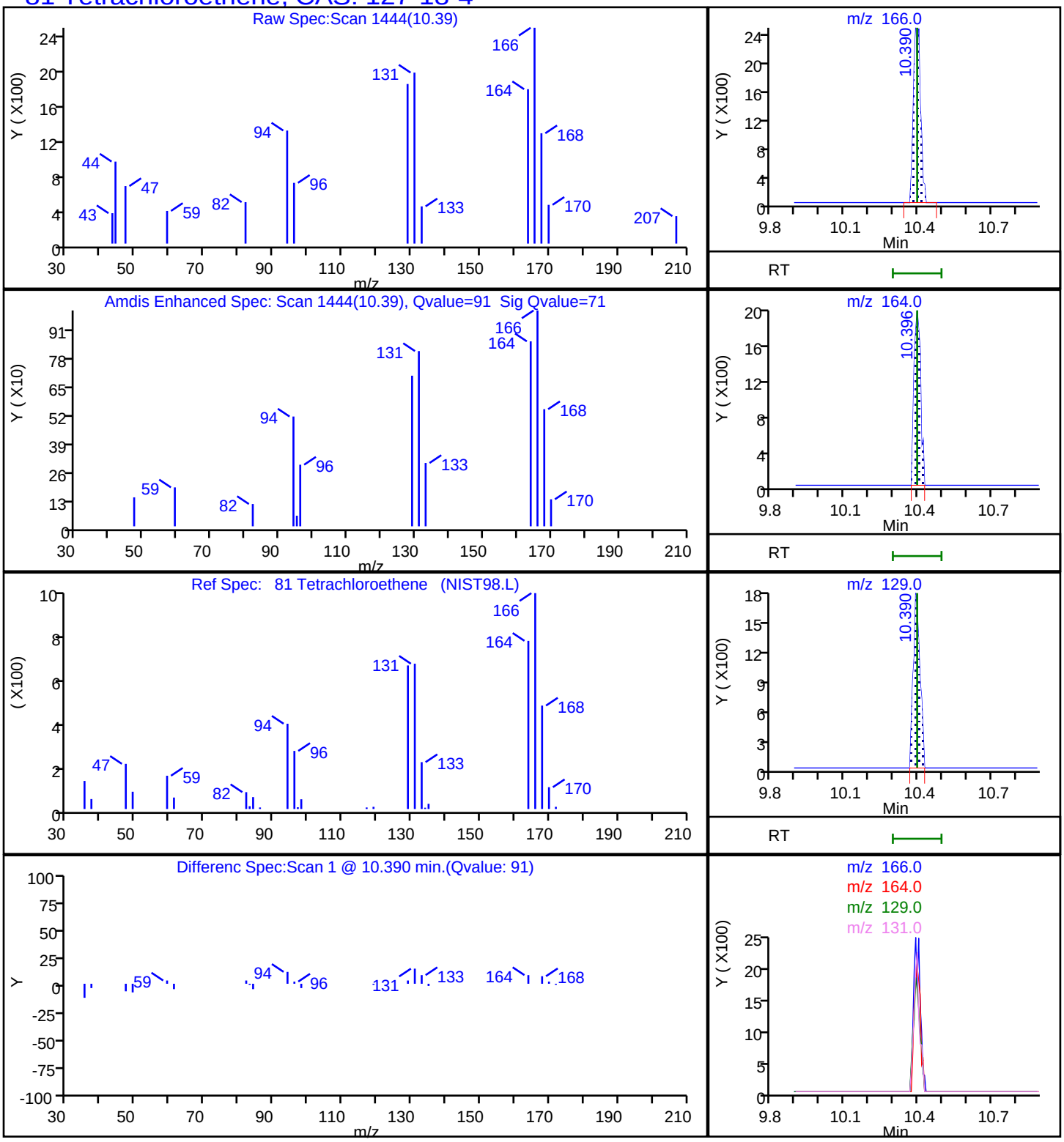
15 Acetone, CAS: 67-64-1



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s16.D				
Injection Date:	08-Jul-2020 16:02:30	Instrument ID:	19930		
Lims ID:	410-5692-A-11	Lab Sample ID:	410-5692-11		
Client ID:	HD-COD-SW-28-0/1-0				
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		

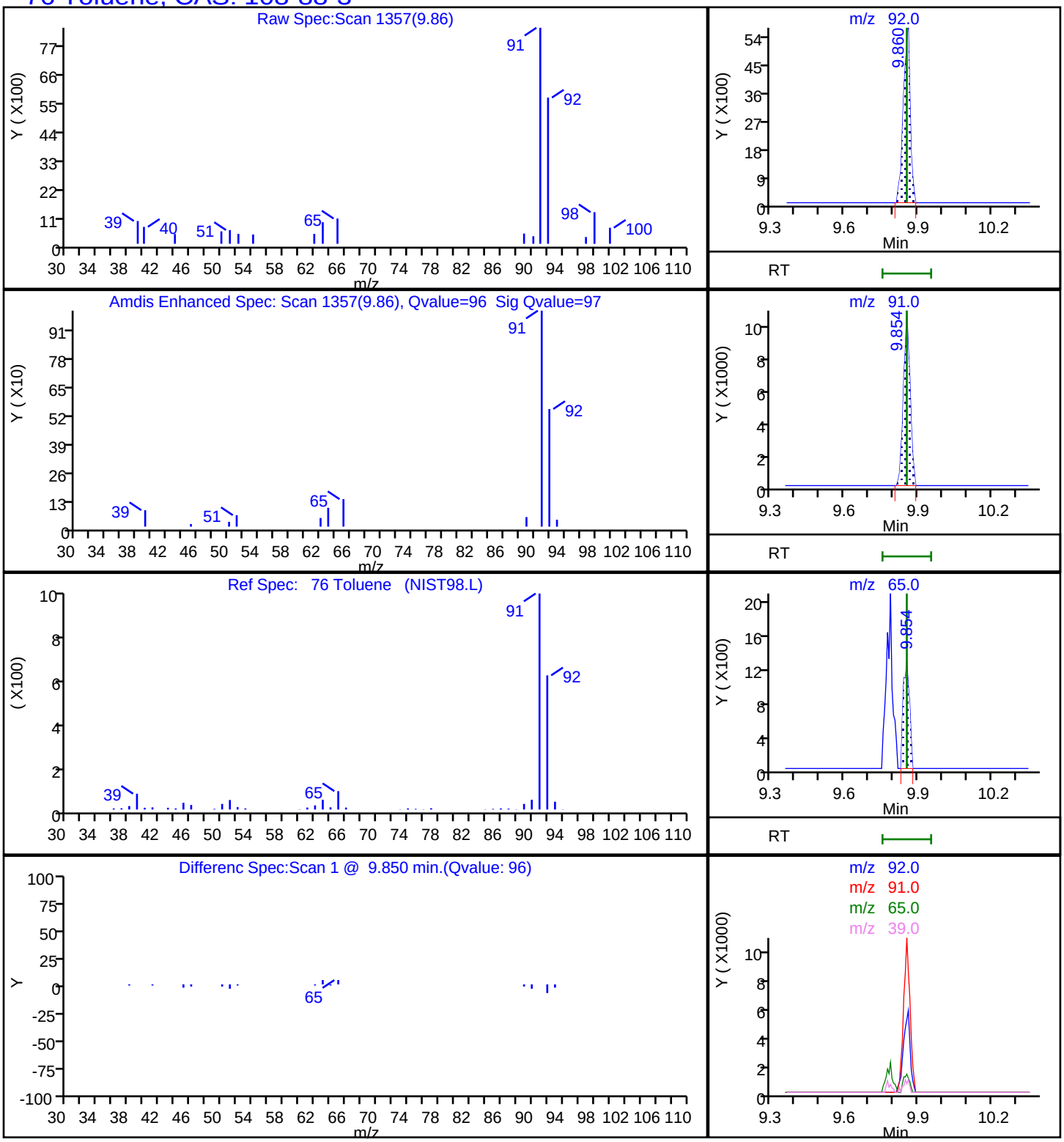
81 Tetrachloroethene, CAS: 127-18-4



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s16.D				
Injection Date:	08-Jul-2020 16:02:30	Instrument ID:	19930		
Lims ID:	410-5692-A-11	Lab Sample ID:	410-5692-11		
Client ID:	HD-COD-SW-28-0/1-0				
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		

76 Toluene, CAS: 108-88-3



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

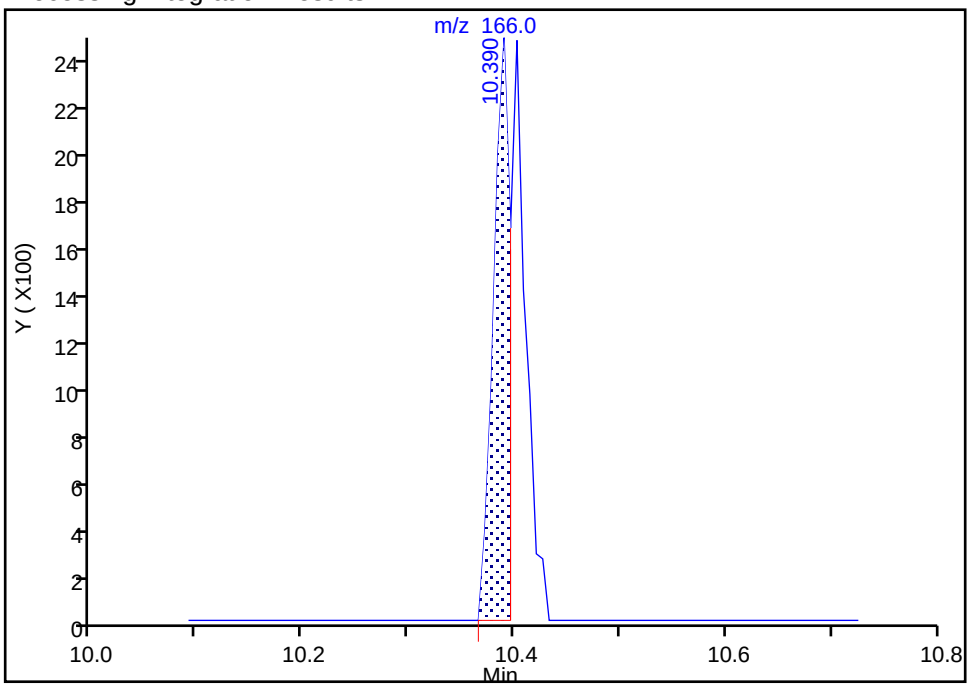
Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s16.D				
Injection Date:	08-Jul-2020 16:02:30	Instrument ID:	19930		
Lims ID:	410-5692-A-11	Lab Sample ID:	410-5692-11		
Client ID:	HD-COD-SW-28-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	22	Worklist Smp#:	23
Purge Vol:	25.000 mL	Dil. 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

Signal: 1

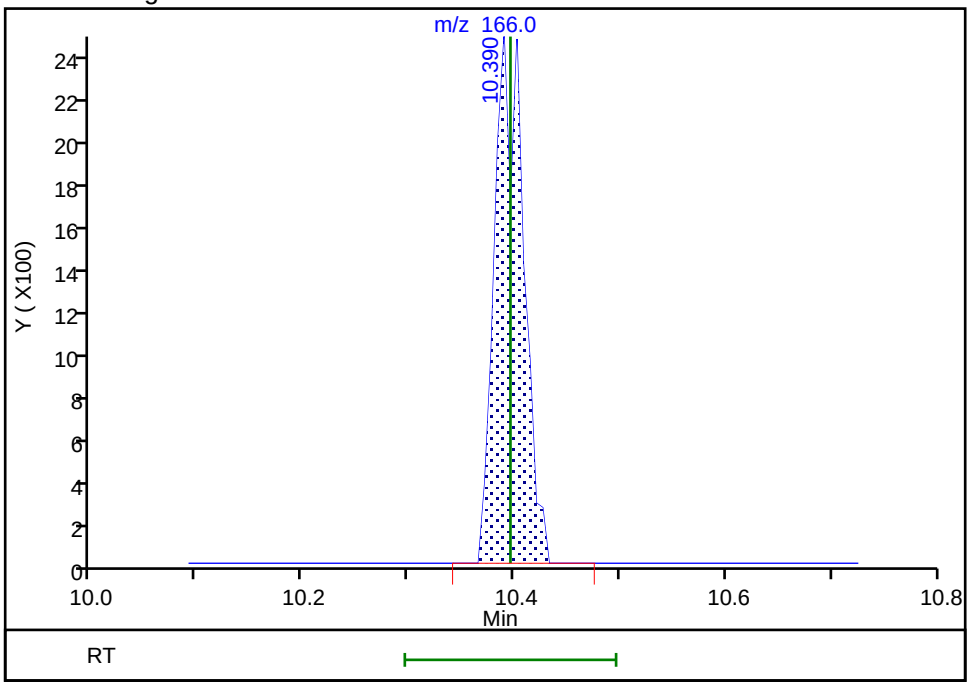
Processing Integration Results

RT: 10.39
Area: 2663
Amount: 0.050718
Amount Units: ug/l



Manual Integration Results

RT: 10.39
Area: 4574
Amount: 0.087113
Amount Units: ug/l



Reviewer: riehlc, 09-Jul-2020 08:51:05
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

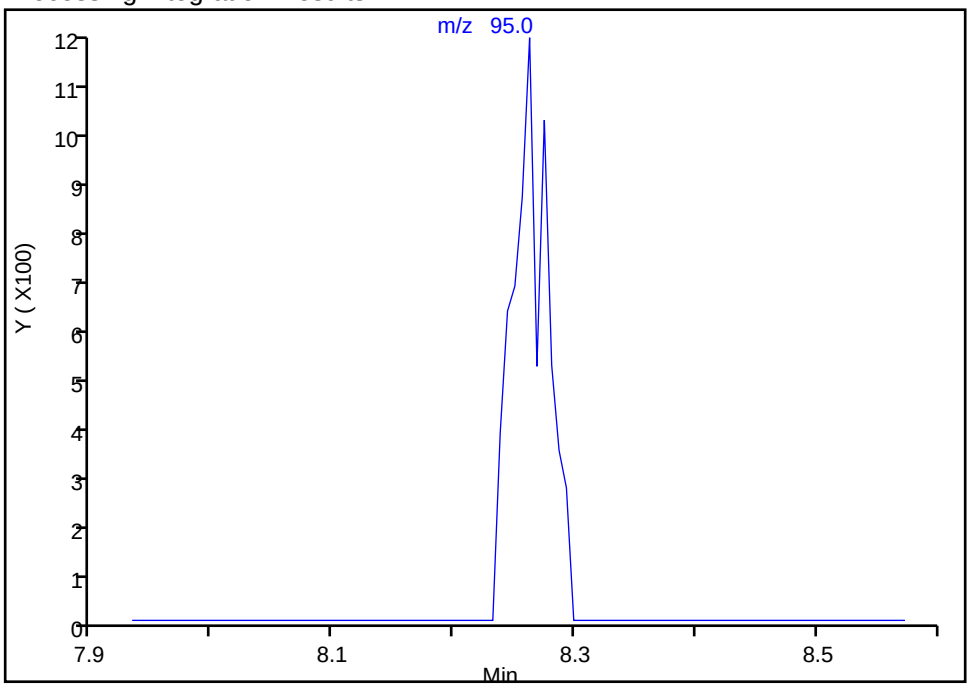
Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s16.D				
Injection Date:	08-Jul-2020 16:02:30	Instrument ID:	19930		
Lims ID:	410-5692-A-11	Lab Sample ID:	410-5692-11		
Client ID:	HD-COD-SW-28-0/1-0				
Operator ID:	jkh09052	ALS Bottle#:	22	Worklist Smp#:	23
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

61 Trichloroethene, CAS: 79-01-6

Signal: 1

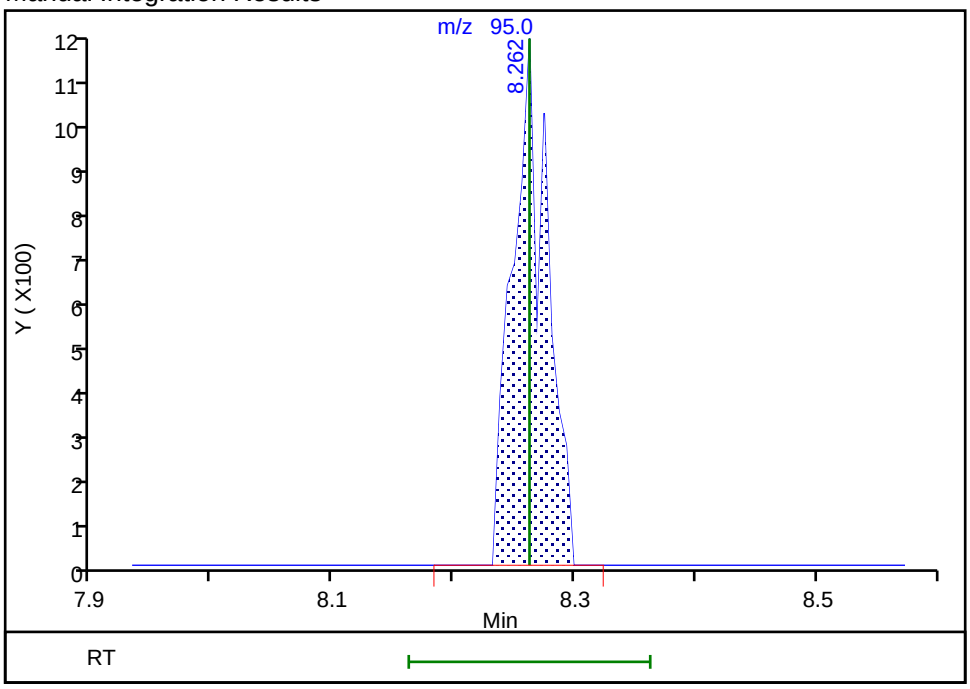
Not Detected
Expected RT: 8.26

Processing Integration Results



Manual Integration Results

RT: 8.26
Area: 2207
Amount: 0.049116
Amount Units: ug/l



Reviewer: riehlc, 09-Jul-2020 08:50:46
Audit Action: Manually Integrated Audit Reason: Missed Peak

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-5692-1

SDG No.:

Client Sample ID: HD-COD-SW-29-0/1-0 Lab Sample ID: 410-5692-12

Matrix: Water Lab File ID: IU08s17.D

Analysis Method: 8260D Date Collected: 06/24/2020 09:05

Sample wt/vol: 25(mL) Date Analyzed: 07/08/2020 16:23

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.: 20265 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		0.50	0.060
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.50	0.070
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
107-06-2	1,2-Dichloroethane	ND		0.50	0.050
78-87-5	1,2-Dichloropropane	ND		0.50	0.060
78-93-3	2-Butanone (MEK)	ND		5.0	0.60
591-78-6	2-Hexanone	ND		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70
67-64-1	Acetone	3.2	J	5.0	0.90
107-13-1	Acrylonitrile	ND		5.0	0.40
71-43-2	Benzene	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
74-97-5	Bromochloromethane	ND		0.50	0.050
124-48-1	Dibromochloromethane	ND		0.50	0.070
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	0.076	J	0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	ND		0.50	0.050
75-27-4	Bromodichloromethane	ND		0.50	0.050
100-41-4	Ethylbenzene	ND		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	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	0.096	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.: 410-5692-1

SDG No.:

Client Sample ID: HD-COD-SW-29-0/1-0 Lab Sample ID: 410-5692-12

Matrix: Water Lab File ID: IU08s17.D

Analysis Method: 8260D Date Collected: 06/24/2020 09:05

Sample wt/vol: 25(mL) Date Analyzed: 07/08/2020 16:23

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.: 20265 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	0.065	J	0.50	0.060
75-01-4	Vinyl chloride	ND		0.50	0.10
1330-20-7	Xylenes, Total	ND		1.0	0.15

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	105		80-120
460-00-4	4-Bromofluorobenzene (Surr)	96		80-120
1868-53-7	Dibromofluoromethane (Surr)	102		80-120
2037-26-5	Toluene-d8 (Surr)	99		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s17.D
Lims ID: 410-5692-A-12
Client ID: HD-COD-SW-29-0/1-0
Sample Type: Client
Inject. Date: 08-Jul-2020 16:23:30 ALS Bottle#: 23 Worklist Smp#: 24
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-5692-A-12
Misc. Info.: 410-0005039-024
Operator ID: jkh09052 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 09-Jul-2020 09:13:09 Calib Date: 16-Mar-2020 18:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1051

First Level Reviewer: riehlc Date: 09-Jul-2020 08:56:44

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
4 Chloromethane	50		2.203				ND	
5 Vinyl chloride	62		2.324				ND	
7 Bromomethane	94		2.648				ND	
8 Chloroethane	64		2.739				ND	
14 1,1-Dichloroethene	96		3.623				ND	
15 Acetone	43	3.647	3.647	0.000	99	16953	3.16	
19 Carbon disulfide	76	3.934	3.934	0.000	56	3194	0.0304	
23 Methylene Chloride	84		4.306				ND	
* 24 t-Butyl alcohol-d10 (IS)	65	4.312	4.306	0.006	0	108159	50.0	
26 Acrylonitrile	53		4.641				ND	
27 Methyl tert-butyl ether	73		4.708				ND	
28 trans-1,2-Dichloroethene	96		4.726				ND	
31 1,1-Dichloroethane	63		5.379				ND	
36 2-Butanone (MEK)	43		6.177				ND	
37 cis-1,2-Dichloroethene	96	6.196	6.202	-0.006	76	3386	0.0765	
43 Chlorobromomethane	128		6.537				ND	
45 Chloroform	83		6.683				ND	
$ 46 Dibromofluoromethane (Surr)	113	6.897	6.897	0.000	94	336418	10.2	
47 1,1,1-Trichloroethane	97		6.909				ND	
50 Carbon tetrachloride	117		7.128				ND	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.354	7.354	0.000	0	70163	10.5	
54 Benzene	78		7.384				ND	
56 1,2-Dichloroethane	62		7.452				ND	
* 58 Fluorobenzene (IS)	96	7.781	7.787	-0.006	99	1372097	10.0	
61 Trichloroethene	95	8.250	8.262	-0.012	90	2849	0.0654	
63 1,2-Dichloropropane	63		8.592				ND	
68 Dichlorobromomethane	83		8.933				ND	
73 cis-1,3-Dichloropropene	75		9.476				ND	
74 4-Methyl-2-pentanone (MIBK)	43		9.640				ND	
$ 75 Toluene-d8 (Surr)	98	9.774	9.774	0.000	94	1330791	9.91	
76 Toluene	92	9.853	9.853	0.000	98	10358	0.0965	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
78 trans-1,3-Dichloropropene	75		10.103				ND	
80 1,1,2-Trichloroethane	97		10.305				ND	
81 Tetrachloroethene	166	10.402	10.396	0.006	86	1840	0.0359	
83 2-Hexanone	43		10.512				ND	
85 Chlorodibromomethane	129		10.683				ND	
86 Ethylene Dibromide	107		10.792				ND	
* 87 Chlorobenzene-d5 (IS)	117	11.219	11.219	0.000	85	1056494	10.0	
90 Chlorobenzene	112		11.243				ND	
S 89 Xylenes, Total	106		11.245				ND	
91 1,1,1,2-Tetrachloroethane	131		11.323				ND	
92 Ethylbenzene	91		11.329				ND	
93 m-Xylene & p-Xylene	106		11.445				ND	
94 o-Xylene	106		11.768				ND	
95 Styrene	104		11.786				ND	
96 Bromoform	173		11.945				ND	
$ 100 4-Bromofluorobenzene (Surr)	95	12.213	12.213	0.000	93	482587	9.63	
101 1,1,2,2-Tetrachloroethane	83		12.310				ND	
* 115 1,4-Dichlorobenzene-d4	152	13.091	13.091	0.000	94	579540	10.0	

Reagents:

MSV_31_826ISS_00002 Amount Added: 5.00 Units: uL Run Reagent

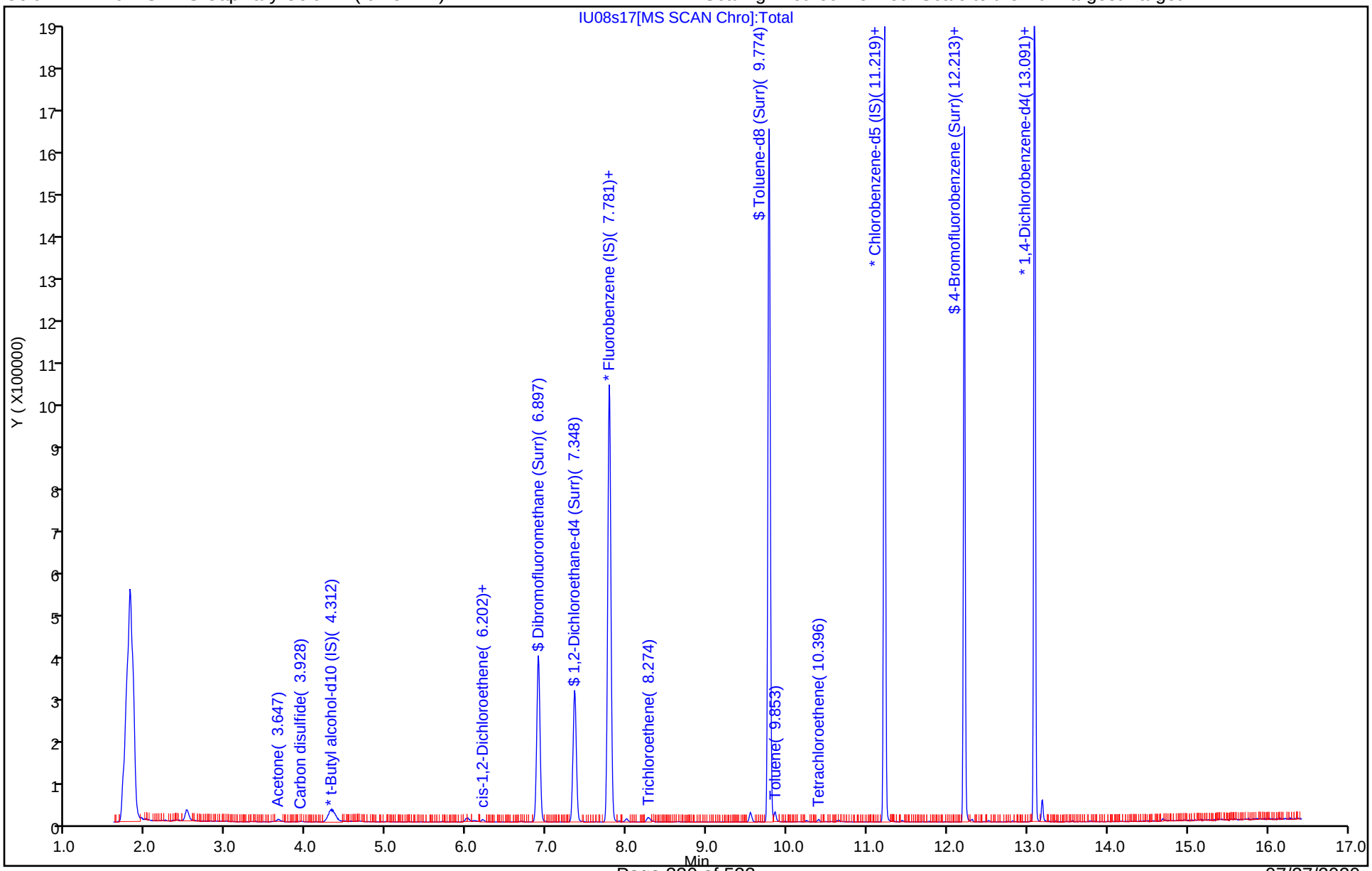
Report Date: 09-Jul-2020 09:13:59 Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s17.D

Injection Date:	08-Jul-2020 16:23:30	Instrument ID:	19930	Operator ID:	jkh09052
Lims ID:	410-5692-A-12	Lab Sample ID:	410-5692-12	Worklist Smp#:	24
Client ID:	HD-COD-SW-29-0/1-0				
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

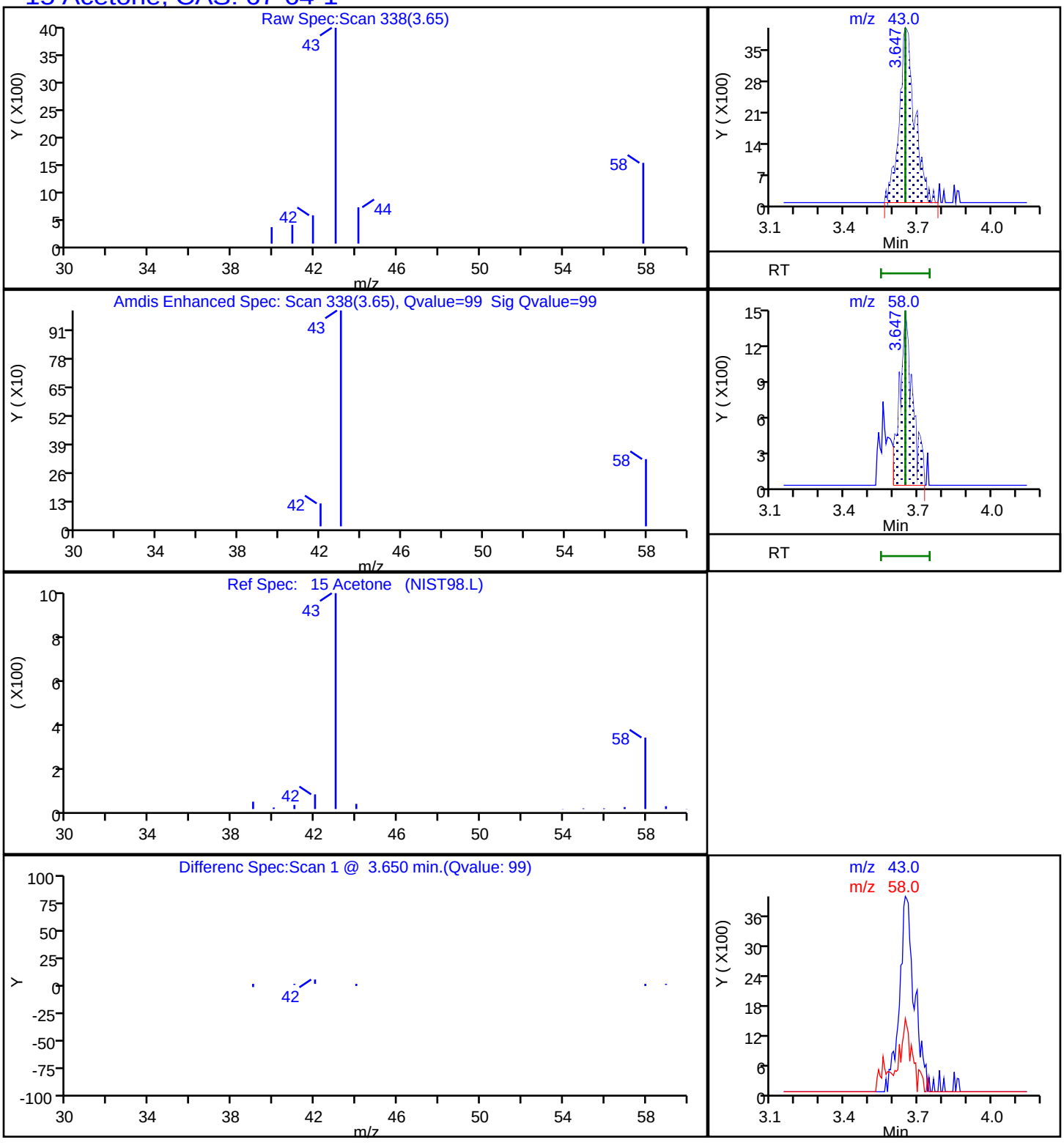
Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s17.D				
Lims ID:	410-5692-A-12				
Client ID:	HD-COD-SW-29-0/1-0				
Sample Type:	Client				
Inject. Date:	08-Jul-2020 16:23:30	ALS Bottle#:	23	Worklist Smp#:	24
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-5692-A-12				
Misc. Info.:	410-0005039-024				
Operator ID:	jkh09052	Instrument ID:	19930		
Method:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\8260 25ml HP31.m				
Limit Group:	MSV - 8260C_D				
Last Update:	09-Jul-2020 09:13:09	Calib Date:	16-Mar-2020 18:31:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1051				
First Level Reviewer: riehlc		Date:	09-Jul-2020 08:56:44		

Compound	Amount Added	Amount Recovered	% Rec.
$ 46 Dibromofluoromethane (Surr)	10.0	10.2	101.58
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.5	104.56
$ 75 Toluene-d8 (Surr)	10.0	9.91	99.06
$ 100 4-Bromofluorobenzene (Surr)	10.0	9.63	96.26

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s17.D				
Injection Date:	08-Jul-2020 16:23:30	Instrument ID:	19930		
Lims ID:	410-5692-A-12	Lab Sample ID:	410-5692-12		
Client ID:	HD-COD-SW-29-0/1-0				
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		

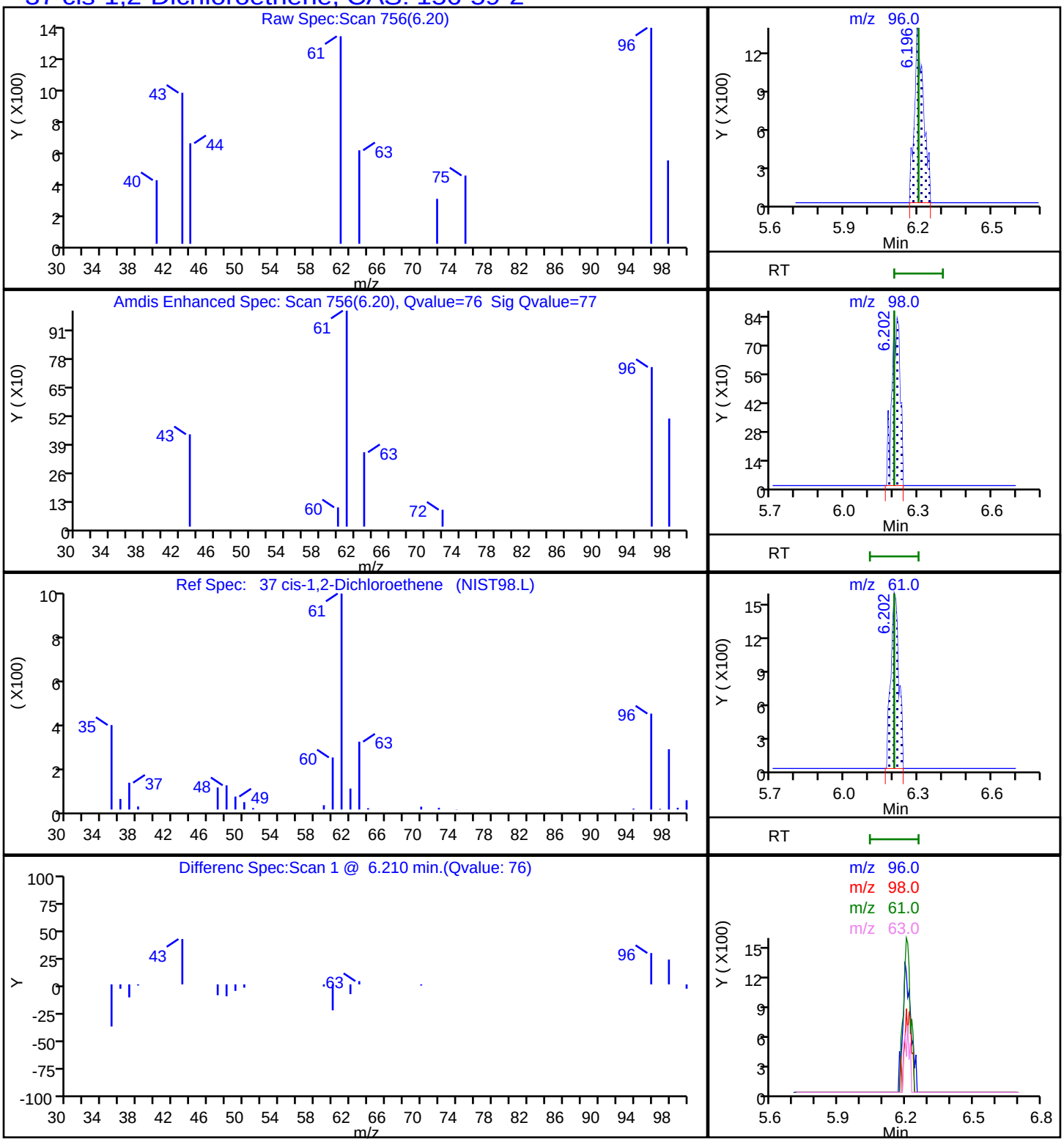
15 Acetone, CAS: 67-64-1



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s17.D				
Injection Date:	08-Jul-2020 16:23:30	Instrument ID:	19930		
Lims ID:	410-5692-A-12	Lab Sample ID:	410-5692-12		
Client ID:	HD-COD-SW-29-0/1-0				
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		

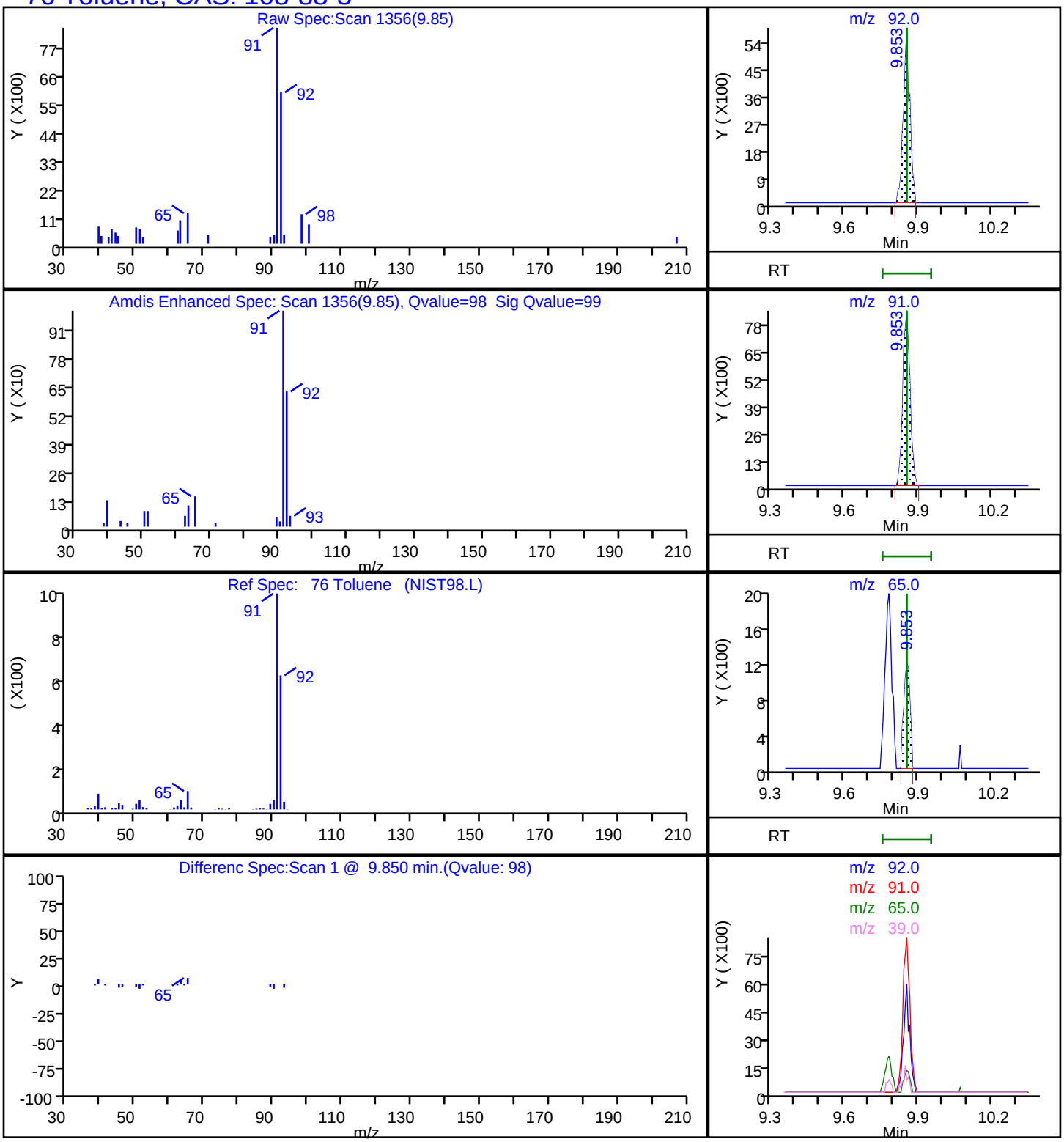
37 cis-1,2-Dichloroethene, CAS: 156-59-2



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s17.D				
Injection Date:	08-Jul-2020 16:23:30	Instrument ID:	19930		
Lims ID:	410-5692-A-12	Lab Sample ID:	410-5692-12		
Client ID:	HD-COD-SW-29-0/1-0				
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		

76 Toluene, CAS: 108-88-3



Report Date: 09-Jul-2020 09:13:59 Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s17.D

Injection Date: 08-Jul-2020 16:23:30 Instrument ID: 19930

Lims ID: 410-5692-A-12 Lab Sample ID: 410-5692-12

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

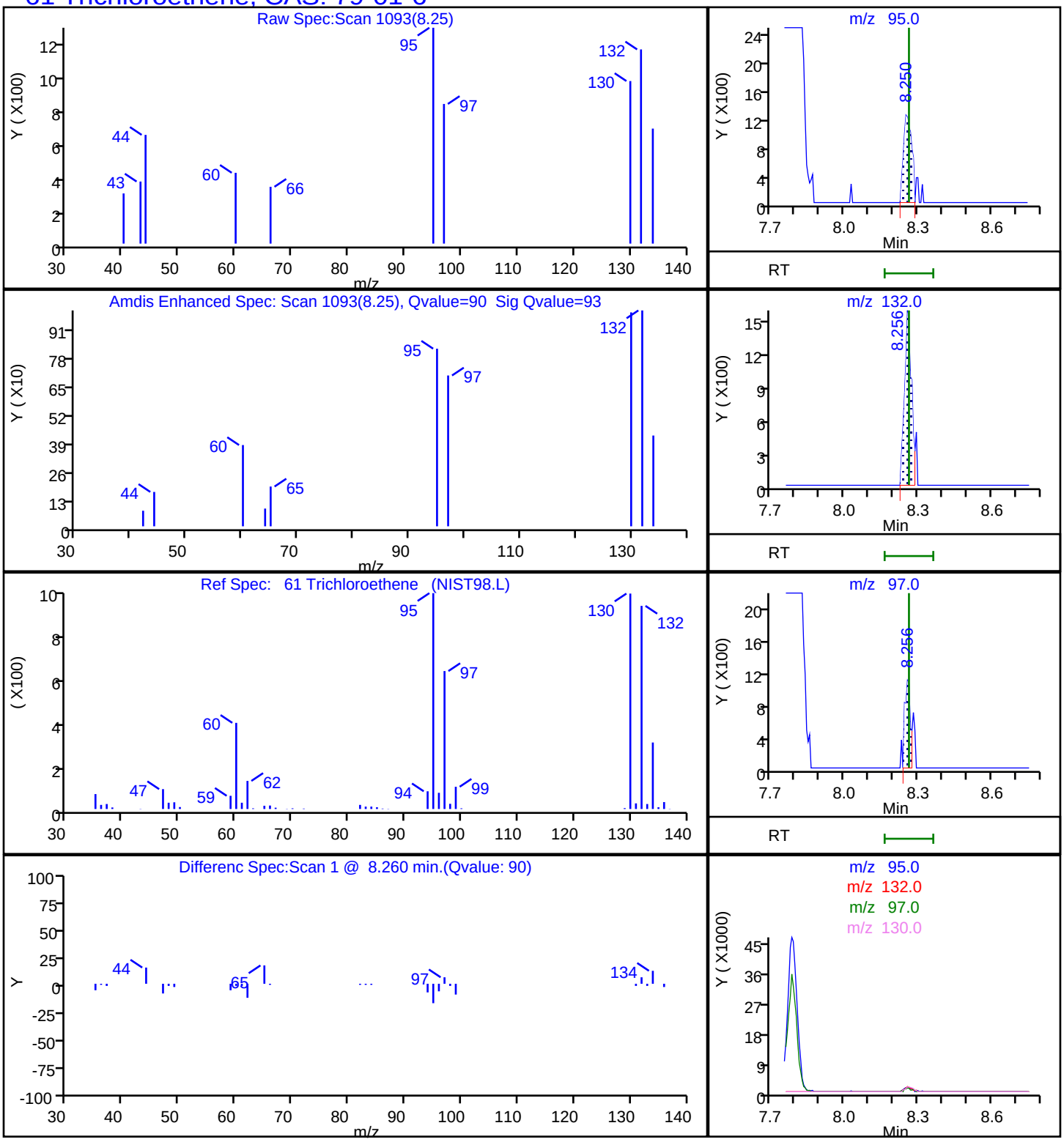
Operator ID: jkh09052 ALS Bottle#: 23 Worklist Smp#: 24

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



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-5692-1

SDG No.:

Client Sample ID: HD-QC1-0/1-1 Lab Sample ID: 410-5692-13

Matrix: Water Lab File ID: IU08s18.D

Analysis Method: 8260D Date Collected: 06/24/2020 12:00

Sample wt/vol: 25(mL) Date Analyzed: 07/08/2020 16:45

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.: 20265 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	0.076	J	0.50	0.060
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.50	0.070
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.50	0.070
79-00-5	1,1,2-Trichloroethane	ND		0.50	0.060
75-34-3	1,1-Dichloroethane	0.098	J	0.50	0.070
75-35-4	1,1-Dichloroethene	0.071	J	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	1.1	J	5.0	0.90
107-13-1	Acrylonitrile	ND		5.0	0.40
71-43-2	Benzene	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
74-97-5	Bromochloromethane	ND		0.50	0.050
124-48-1	Dibromochloromethane	ND		0.50	0.070
75-00-3	Chloroethane	ND		0.50	0.070
67-66-3	Chloroform	0.099	J	0.50	0.090
74-87-3	Chloromethane	ND		0.50	0.060
156-59-2	cis-1,2-Dichloroethene	1.7		0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	ND		0.50	0.050
75-27-4	Bromodichloromethane	ND		0.50	0.050
100-41-4	Ethylbenzene	ND		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	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	3.2		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.: 410-5692-1

SDG No.:

Client Sample ID: HD-QC1-0/1-1 Lab Sample ID: 410-5692-13

Matrix: Water Lab File ID: IU08s18.D

Analysis Method: 8260D Date Collected: 06/24/2020 12:00

Sample wt/vol: 25(mL) Date Analyzed: 07/08/2020 16:45

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.: 20265 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	1.8		0.50	0.060
75-01-4	Vinyl chloride	0.22	J	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
460-00-4	4-Bromofluorobenzene (Surr)	97		80-120
1868-53-7	Dibromofluoromethane (Surr)	102		80-120
2037-26-5	Toluene-d8 (Surr)	99		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s18.D
Lims ID: 410-5692-A-13
Client ID: HD-QC1-0/1-1
Sample Type: Client
Inject. Date: 08-Jul-2020 16:45:30 ALS Bottle#: 24 Worklist Smp#: 25
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-5692-A-13
Misc. Info.: 410-0005039-025
Operator ID: jkh09052 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 09-Jul-2020 09:13:09 Calib Date: 16-Mar-2020 18:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1051

First Level Reviewer: riehlc Date: 09-Jul-2020 08:59:04

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
4 Chloromethane	50		2.203				ND	
5 Vinyl chloride	62	2.319	2.324	-0.006	97	12678	0.2162	
7 Bromomethane	94		2.648				ND	
8 Chloroethane	64		2.739				ND	
14 1,1-Dichloroethene	96	3.611	3.623	-0.012	46	2638	0.0714	
15 Acetone	43	3.660	3.647	0.013	67	5947	1.07	
19 Carbon disulfide	76	3.922	3.934	-0.012	43	2150	0.0204	7M
23 Methylene Chloride	84		4.306				ND	
* 24 t-Butyl alcohol-d10 (IS)	65	4.318	4.306	0.012	0	111944	50.0	
26 Acrylonitrile	53		4.641				ND	
27 Methyl tert-butyl ether	73		4.708				ND	
28 trans-1,2-Dichloroethene	96	4.733	4.726	0.007	89	2289	0.0576	M
31 1,1-Dichloroethane	63	5.373	5.379	-0.006	1	6928	0.0981	M
36 2-Butanone (MEK)	43		6.177				ND	
37 cis-1,2-Dichloroethene	96	6.202	6.202	0.000	79	75245	1.69	
43 Chlorobromomethane	128		6.537				ND	
45 Chloroform	83	6.684	6.683	0.001	92	7014	0.0993	
$ 46 Dibromofluoromethane (Surr)	113	6.897	6.897	0.000	94	341396	10.2	
47 1,1,1-Trichloroethane	97	6.909	6.909	0.000	35	5225	0.0763	
50 Carbon tetrachloride	117		7.128				ND	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.354	7.354	0.000	0	69179	10.2	
54 Benzene	78		7.384				ND	
56 1,2-Dichloroethane	62		7.452				ND	
* 58 Fluorobenzene (IS)	96	7.781	7.787	-0.006	99	1381166	10.0	
61 Trichloroethene	95	8.250	8.262	-0.012	97	79777	1.82	
63 1,2-Dichloropropane	63		8.592				ND	
68 Dichlorobromomethane	83		8.933				ND	
73 cis-1,3-Dichloropropene	75		9.476				ND	
74 4-Methyl-2-pentanone (MIBK)	43		9.640				ND	
$ 75 Toluene-d8 (Surr)	98	9.774	9.774	0.000	93	1325484	9.88	
76 Toluene	92	9.854	9.853	0.001	98	5359	0.0500	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
78 trans-1,3-Dichloropropene	75		10.103				ND	
80 1,1,2-Trichloroethane	97		10.305				ND	
81 Tetrachloroethene	166	10.396	10.396	0.000	98	164919	3.22	
83 2-Hexanone	43		10.512				ND	
85 Chlorodibromomethane	129		10.683				ND	
86 Ethylene Dibromide	107		10.792				ND	
* 87 Chlorobenzene-d5 (IS)	117	11.219	11.219	0.000	85	1054750	10.0	
90 Chlorobenzene	112		11.243				ND	
S 89 Xylenes, Total	106		11.245				ND	
91 1,1,1,2-Tetrachloroethane	131		11.323				ND	
92 Ethylbenzene	91		11.329				ND	
93 m-Xylene & p-Xylene	106		11.445				ND	
94 o-Xylene	106		11.768				ND	
95 Styrene	104		11.786				ND	
96 Bromoform	173		11.945				ND	
$ 100 4-Bromofluorobenzene (Surr)	95	12.213	12.213	0.000	93	483284	9.66	
101 1,1,2,2-Tetrachloroethane	83		12.310				ND	
* 115 1,4-Dichlorobenzene-d4	152	13.091	13.091	0.000	94	573964	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

Reagents:

MSV_31_826ISS_00002 Amount Added: 5.00 Units: uL Run Reagent

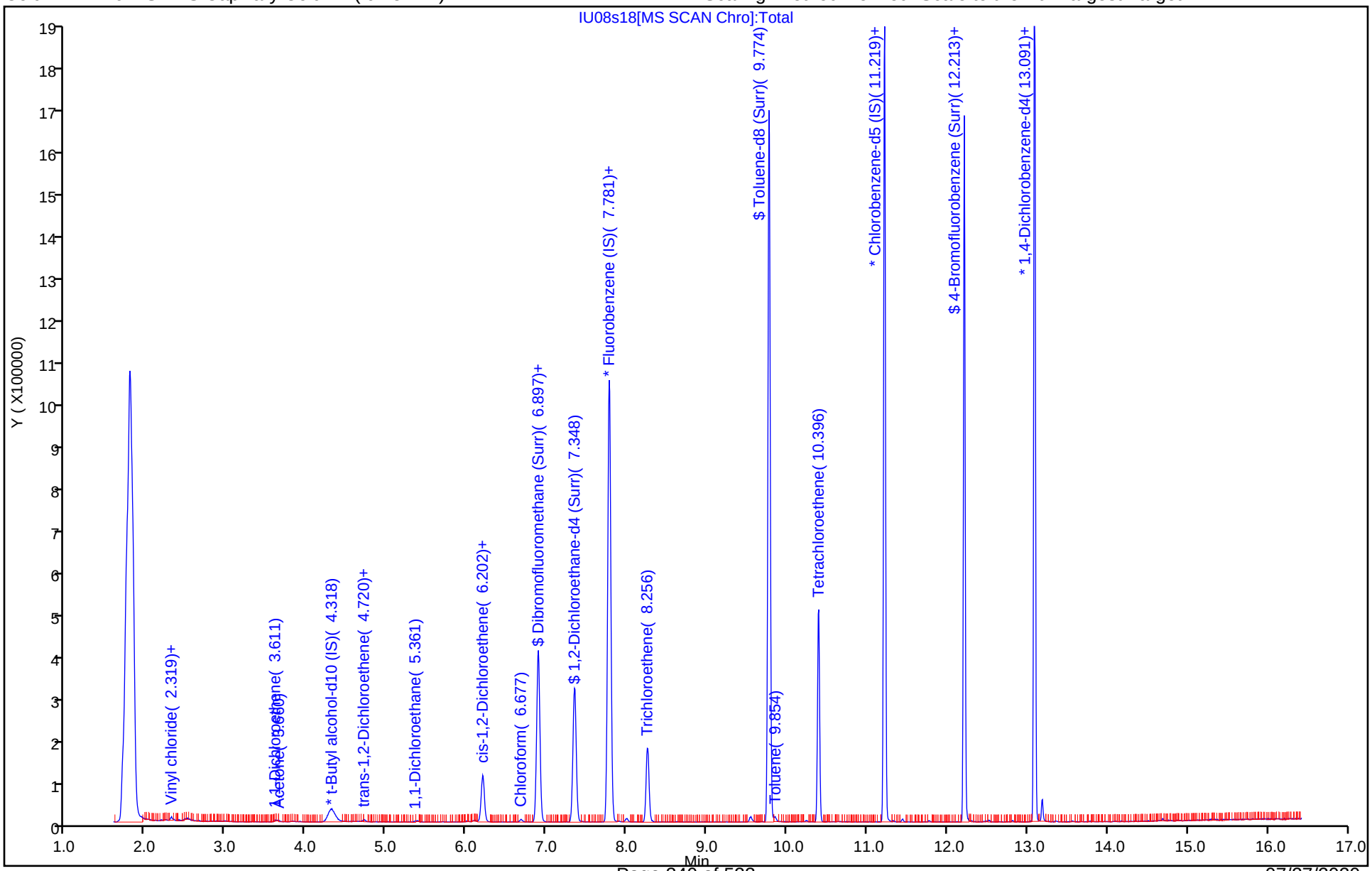
Report Date: 09-Jul-2020 09:14:00 Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s18.D

Injection Date:	08-Jul-2020 16:45:30	Instrument ID:	19930	Operator ID:	jkh09052
Lims ID:	410-5692-A-13	Lab Sample ID:	410-5692-13	Worklist Smp#:	25
Client ID:	HD-QC1-0/1-1				
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\20200708-5039.b\IU08s18.D				
Lims ID:	410-5692-A-13				
Client ID:	HD-QC1-0/1-1				
Sample Type:	Client				
Inject. Date:	08-Jul-2020 16:45:30	ALS Bottle#:	24	Worklist Smp#:	25
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-5692-A-13				
Misc. Info.:	410-0005039-025				
Operator ID:	jkh09052	Instrument ID:	19930		
Method:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\8260 25ml HP31.m				
Limit Group:	MSV - 8260C_D				
Last Update:	09-Jul-2020 09:13:09	Calib Date:	16-Mar-2020 18:31:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1051				

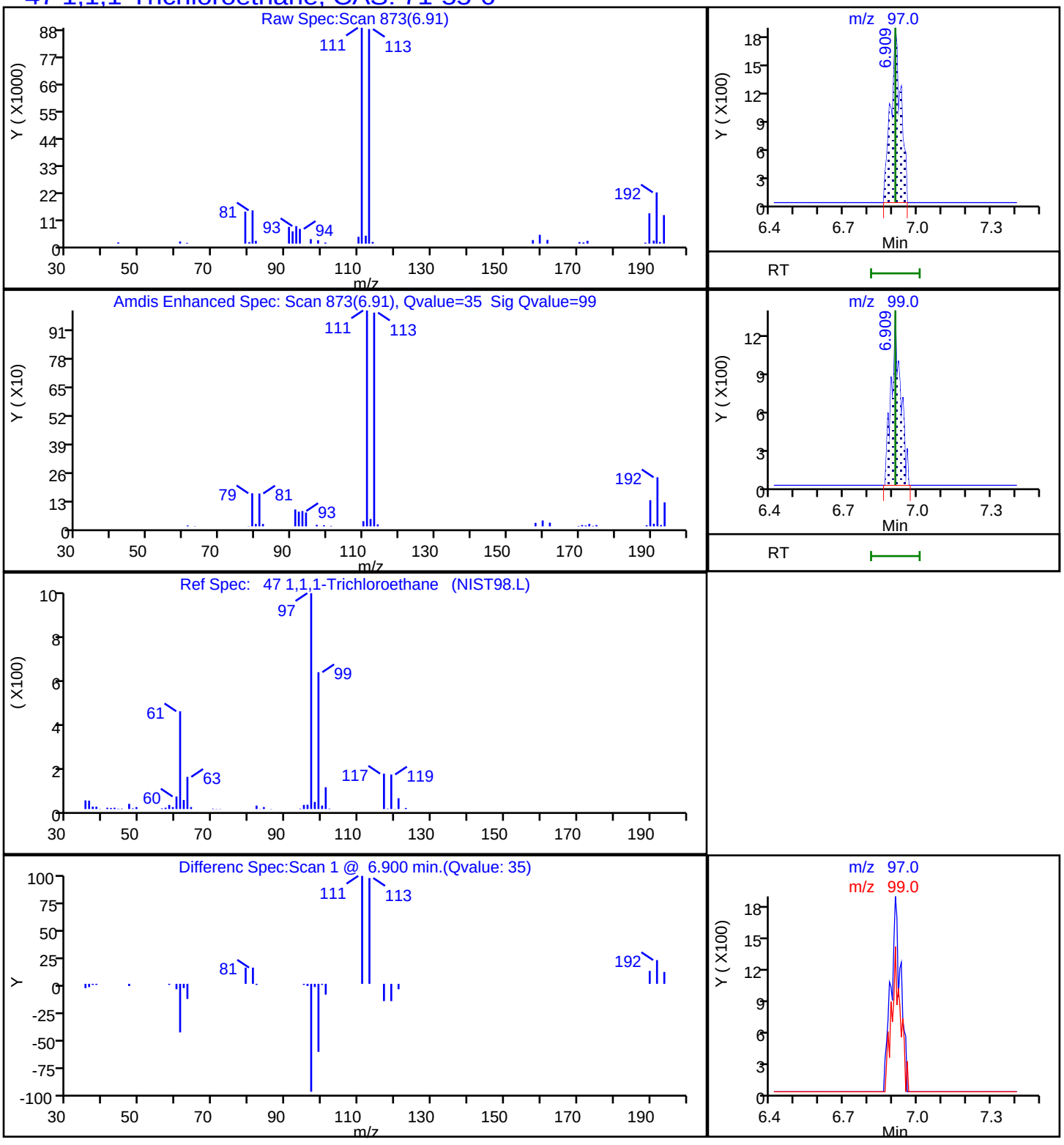
First Level Reviewer: riehlc Date: 09-Jul-2020 08:59:04

Compound	Amount Added	Amount Recovered	% Rec.
$ 46 Dibromofluoromethane (Surr)	10.0	10.2	102.41
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.2	102.41
$ 75 Toluene-d8 (Surr)	10.0	9.88	98.83
$ 100 4-Bromofluorobenzene (Surr)	10.0	9.66	96.56

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s18.D				
Injection Date:	08-Jul-2020 16:45:30	Instrument ID:	19930		
Lims ID:	410-5692-A-13	Lab Sample ID:	410-5692-13		
Client ID:	HD-QC1-0/1-1				
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		

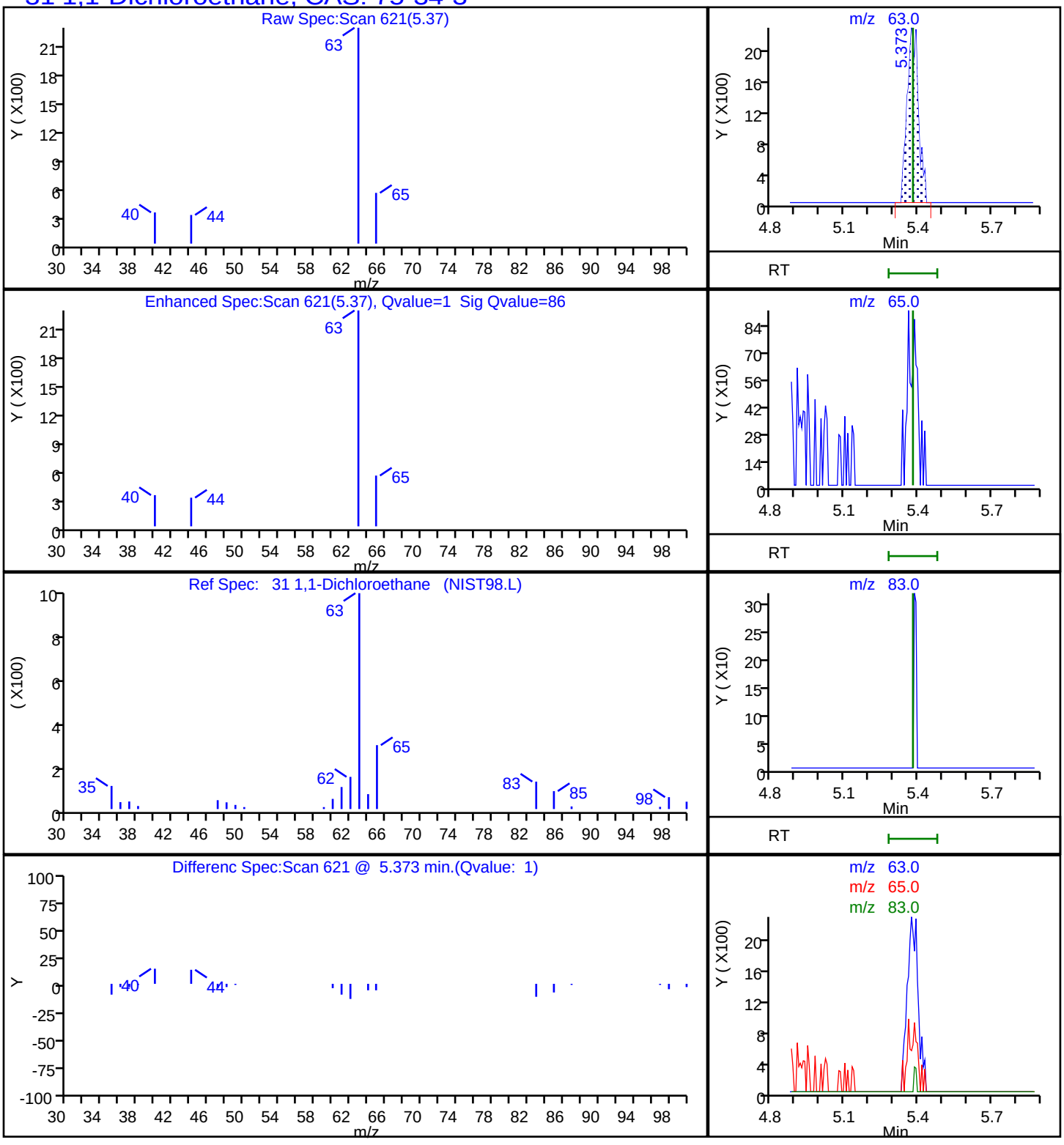
47 1,1,1-Trichloroethane, CAS: 71-55-6



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s18.D				
Injection Date:	08-Jul-2020 16:45:30	Instrument ID:	19930		
Lims ID:	410-5692-A-13	Lab Sample ID:	410-5692-13		
Client ID:	HD-QC1-0/1-1				
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		

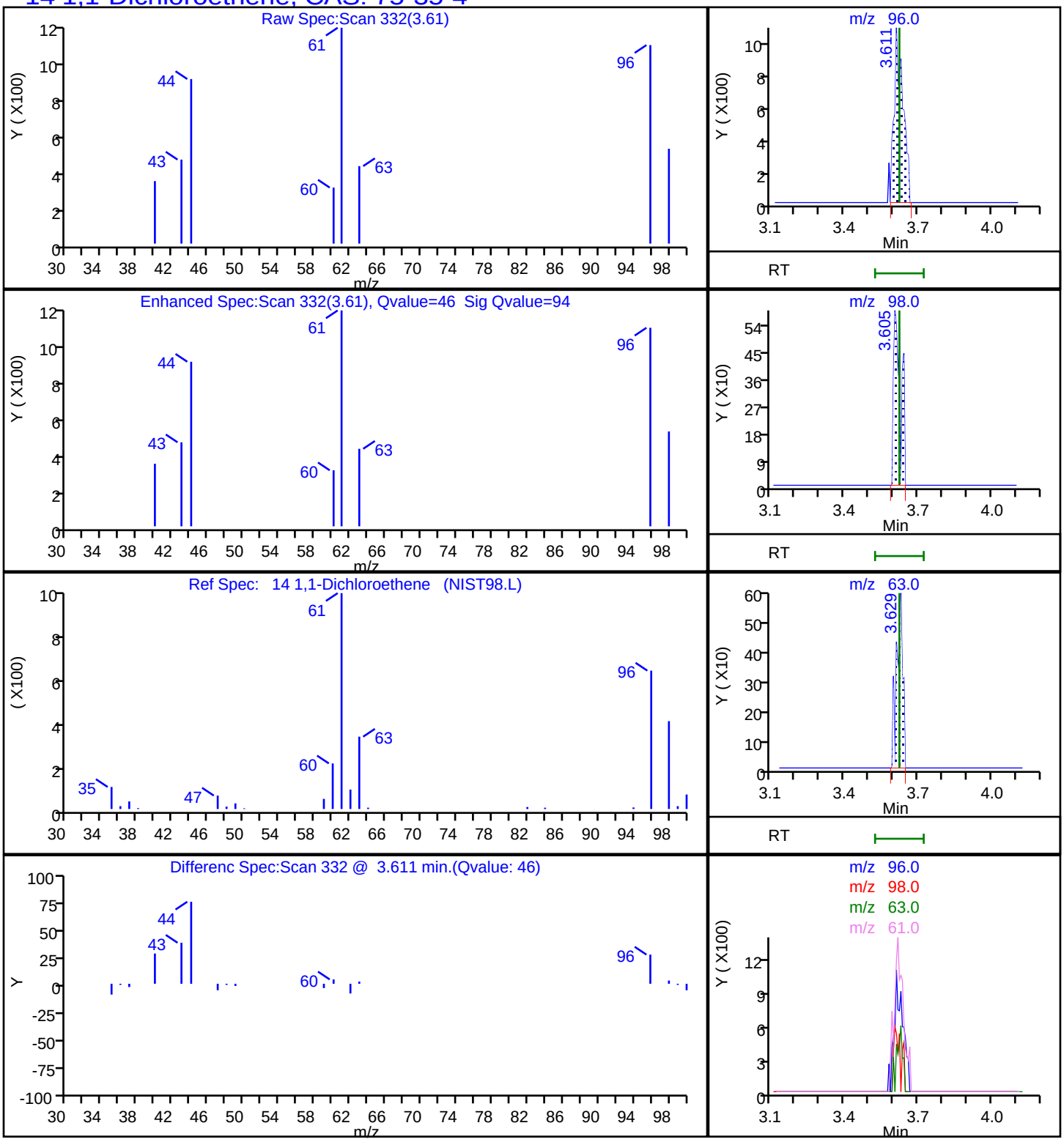
31 1,1-Dichloroethane, CAS: 75-34-3



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s18.D				
Injection Date:	08-Jul-2020 16:45:30	Instrument ID:	19930		
Lims ID:	410-5692-A-13	Lab Sample ID:	410-5692-13		
Client ID:	HD-QC1-0/1-1				
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		

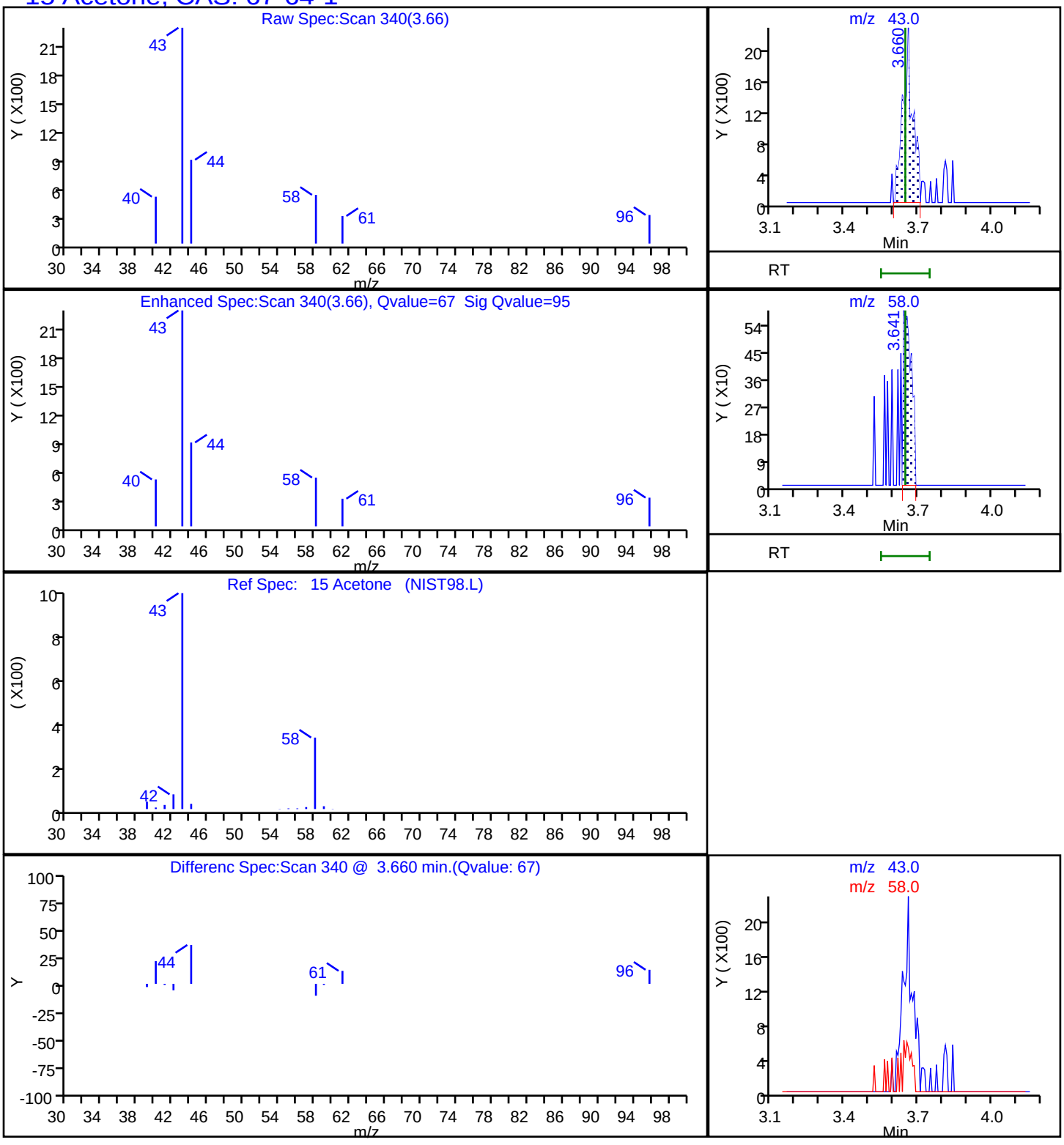
14 1,1-Dichloroethene, CAS: 75-35-4



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s18.D				
Injection Date:	08-Jul-2020 16:45:30	Instrument ID:	19930		
Lims ID:	410-5692-A-13	Lab Sample ID:	410-5692-13		
Client ID:	HD-QC1-0/1-1				
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		

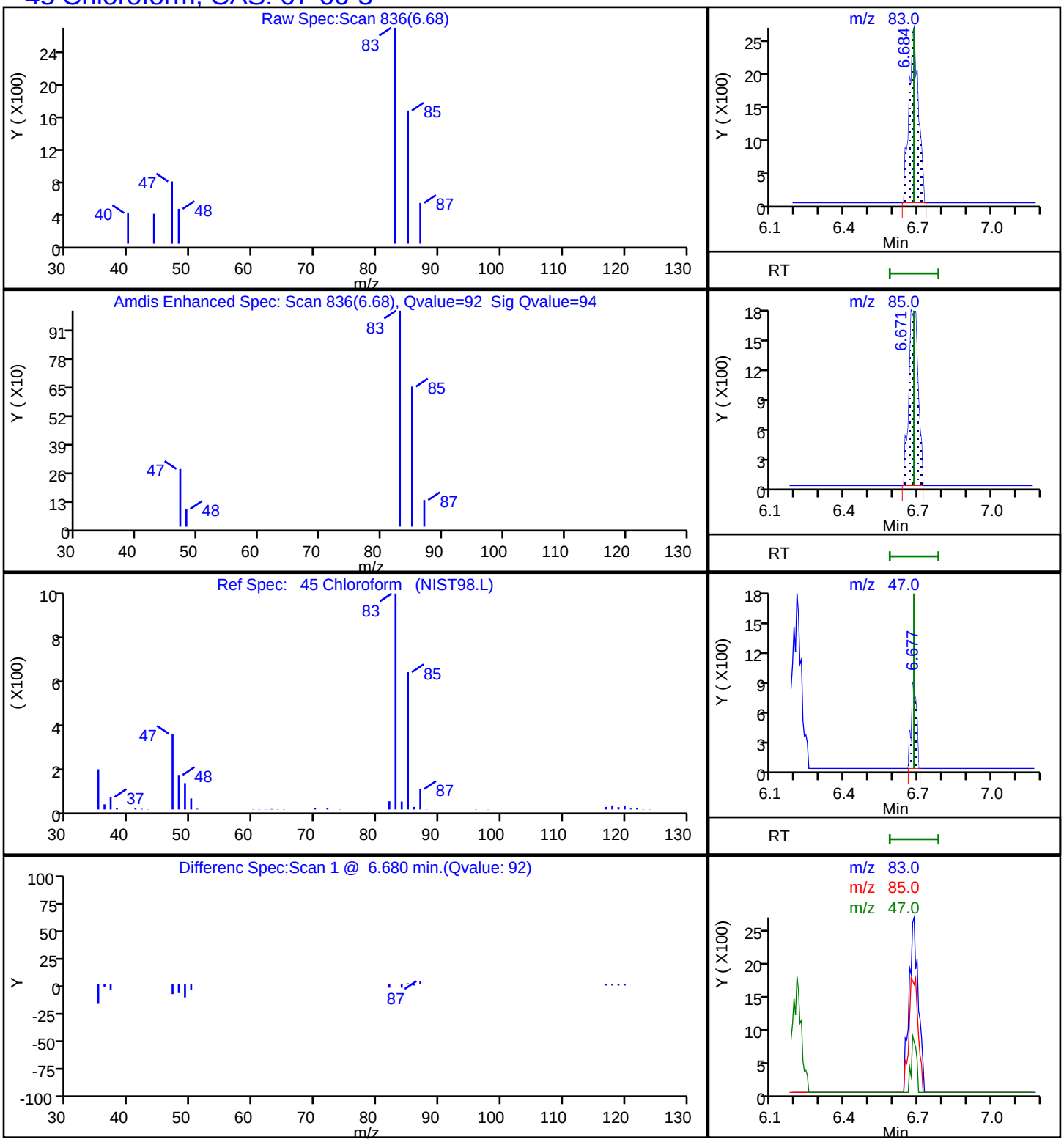
15 Acetone, CAS: 67-64-1



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s18.D				
Injection Date:	08-Jul-2020 16:45:30	Instrument ID:	19930		
Lims ID:	410-5692-A-13	Lab Sample ID:	410-5692-13		
Client ID:	HD-QC1-0/1-1				
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		

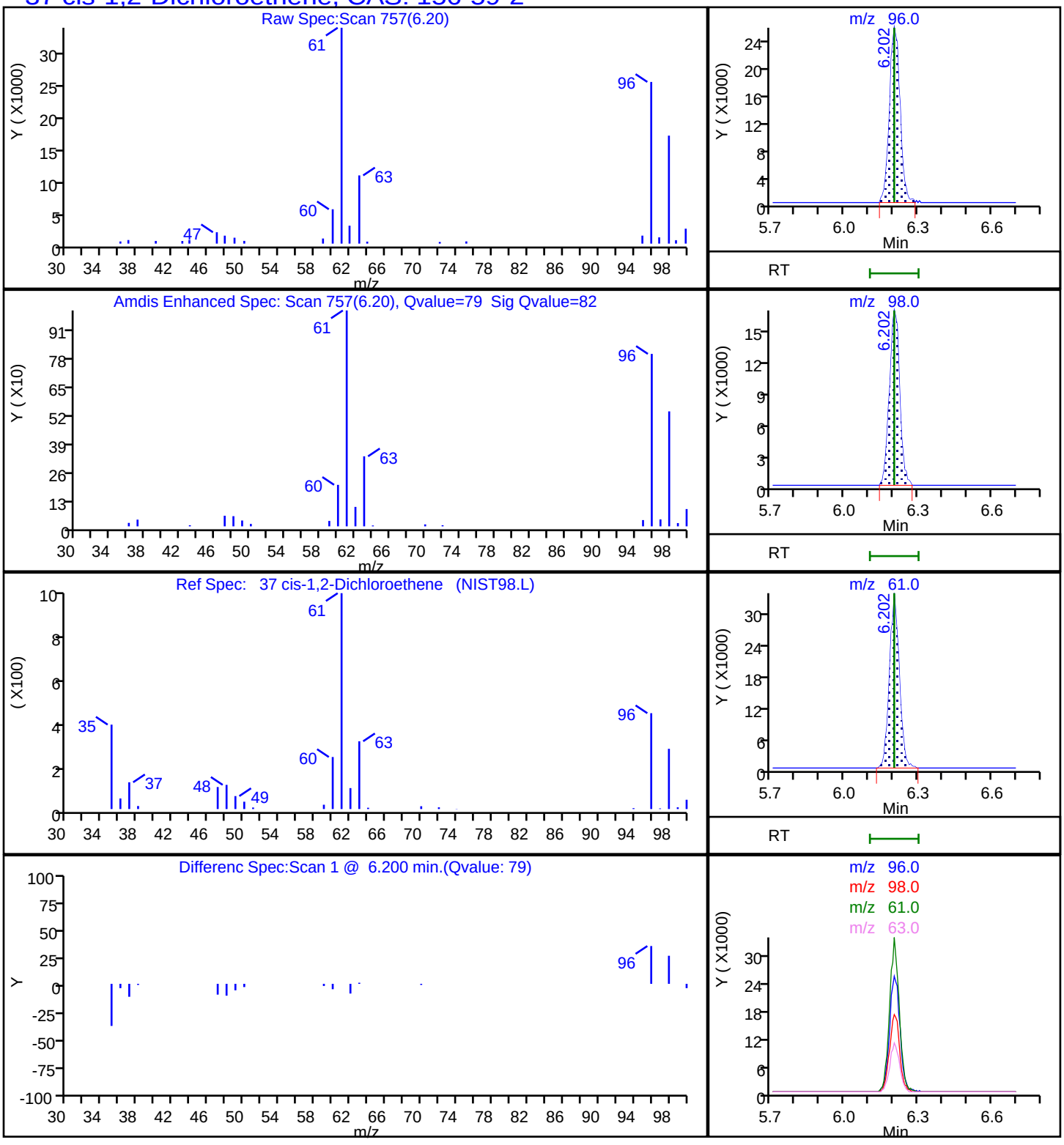
45 Chloroform, CAS: 67-66-3



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s18.D				
Injection Date:	08-Jul-2020 16:45:30	Instrument ID:	19930		
Lims ID:	410-5692-A-13	Lab Sample ID:	410-5692-13		
Client ID:	HD-QC1-0/1-1				
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		

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



Report Date: 09-Jul-2020 09:14:00 Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s18.D

Injection Date: 08-Jul-2020 16:45:30 Instrument ID: 19930

Lims ID: 410-5692-A-13 Lab Sample ID: 410-5692-13

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

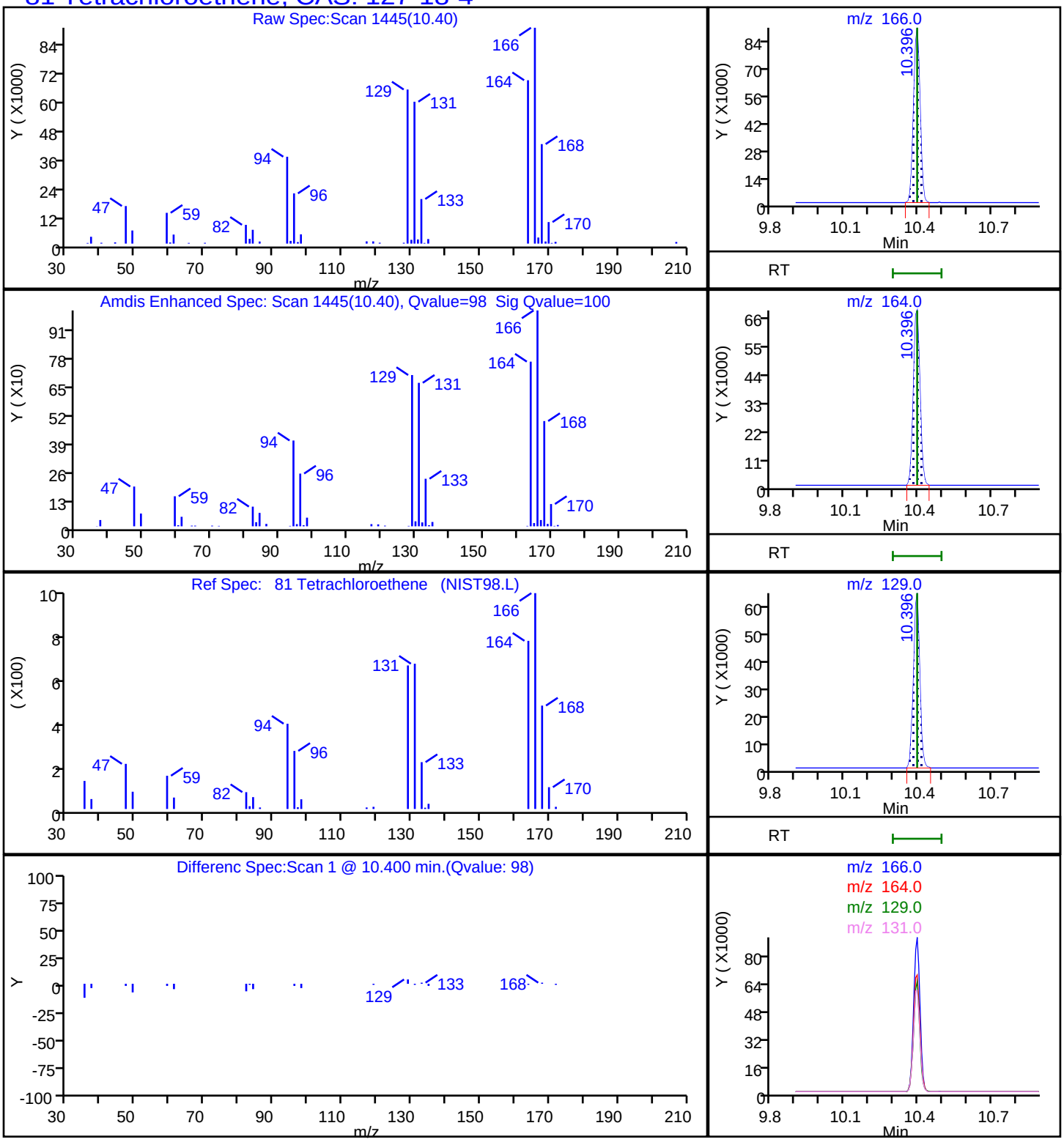
Operator ID: jkh09052 ALS Bottle#: 24 Worklist Smp#: 25

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

81 Tetrachloroethene, CAS: 127-18-4



Report Date: 09-Jul-2020 09:14:00 Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s18.D

Injection Date: 08-Jul-2020 16:45:30 Instrument ID: 19930

Lims ID: 410-5692-A-13 Lab Sample ID: 410-5692-13

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

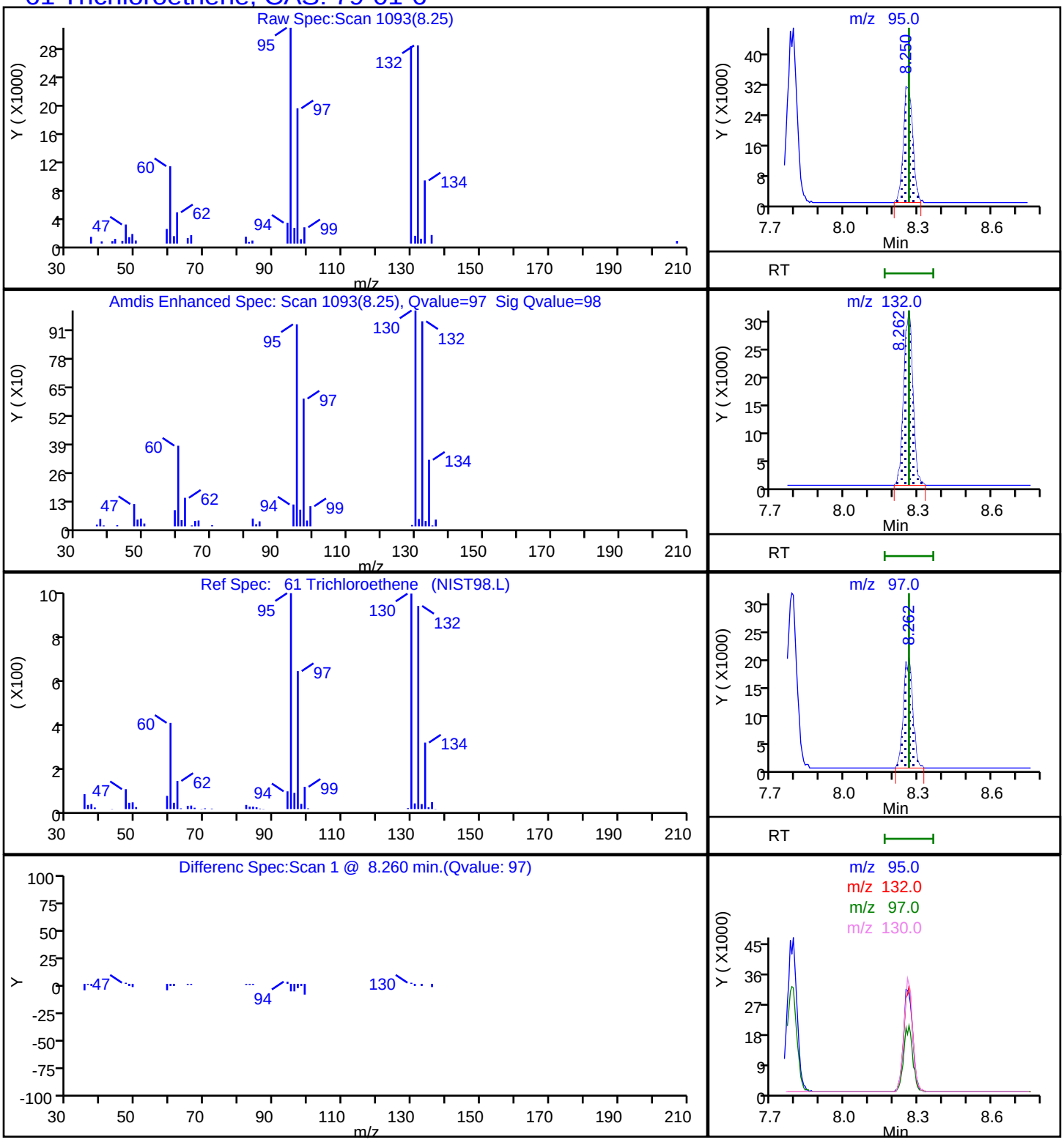
Operator ID: jkh09052 ALS Bottle#: 24 Worklist Smp#: 25

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

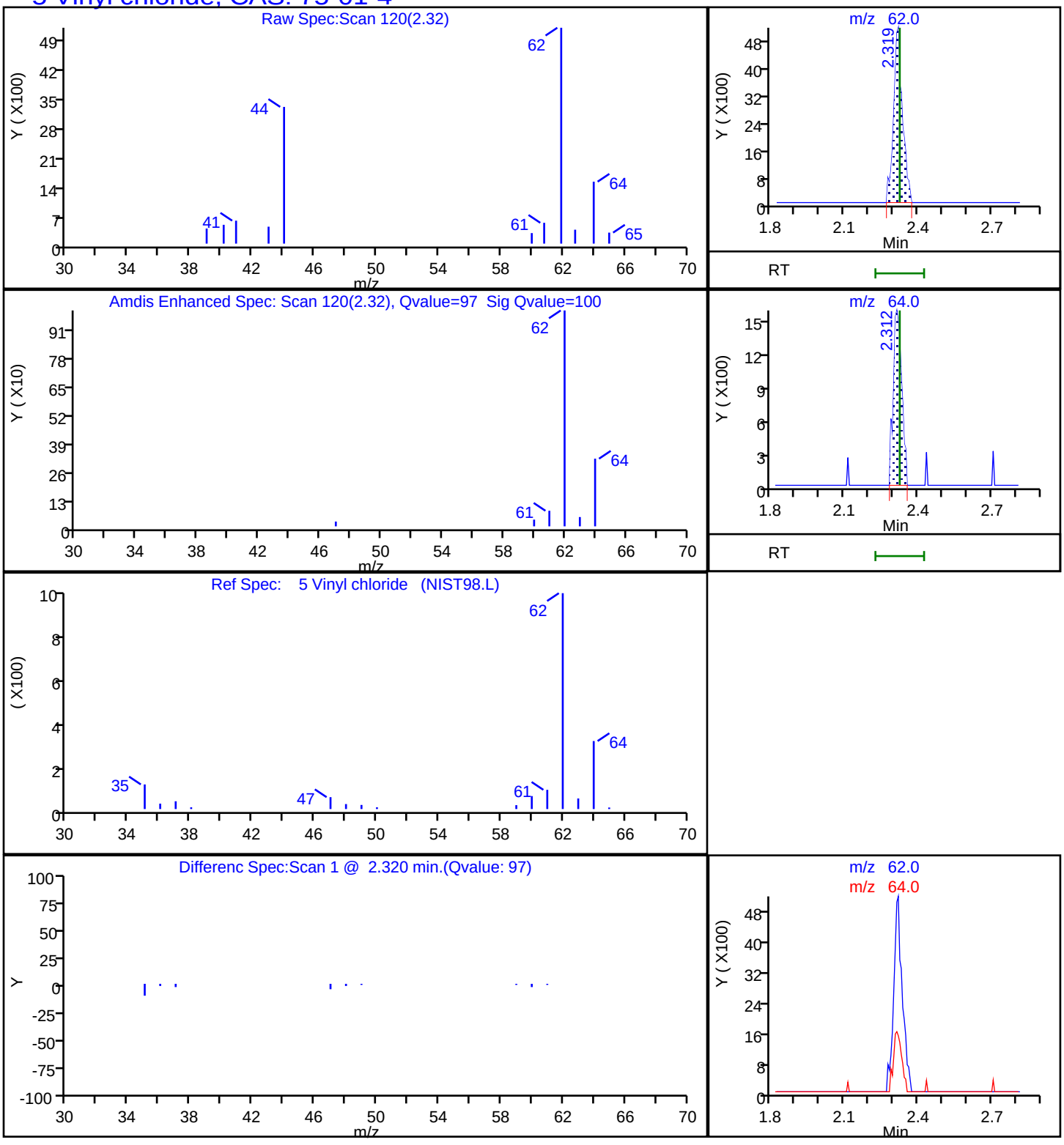
61 Trichloroethene, CAS: 79-01-6



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s18.D				
Injection Date:	08-Jul-2020 16:45:30	Instrument ID:	19930		
Lims ID:	410-5692-A-13	Lab Sample ID:	410-5692-13		
Client ID:	HD-QC1-0/1-1				
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		

5 Vinyl chloride, CAS: 75-01-4



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

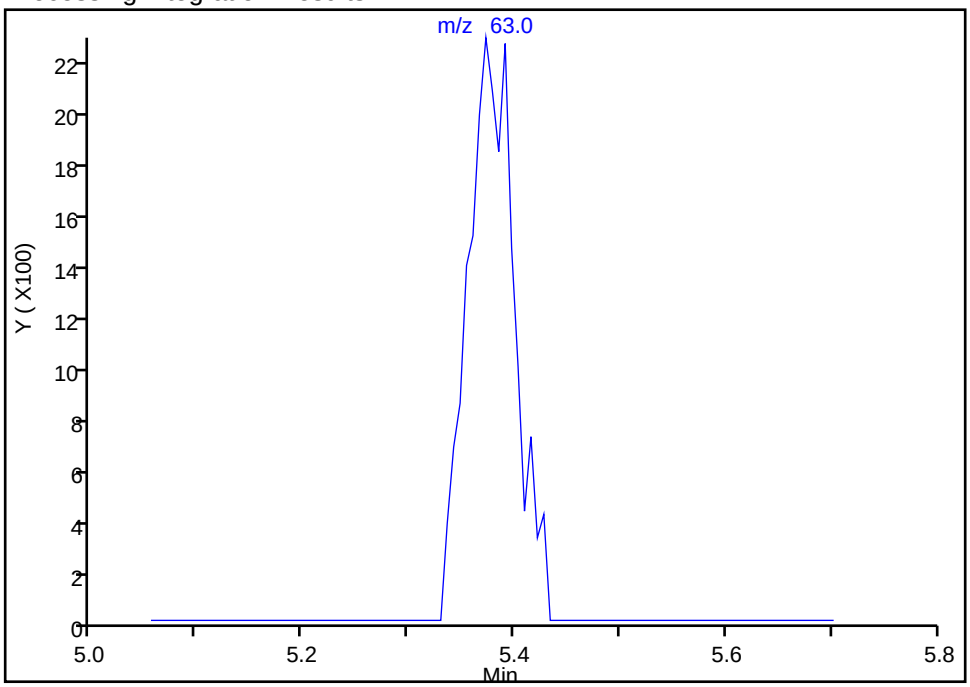
Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s18.D				
Injection Date:	08-Jul-2020 16:45:30	Instrument ID:	19930		
Lims ID:	410-5692-A-13	Lab Sample ID:	410-5692-13		
Client ID:	HD-QC1-0/1-1				
Operator ID:	jkh09052	ALS Bottle#:	24	Worklist Smp#:	25
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

31 1,1-Dichloroethane, CAS: 75-34-3

Signal: 1

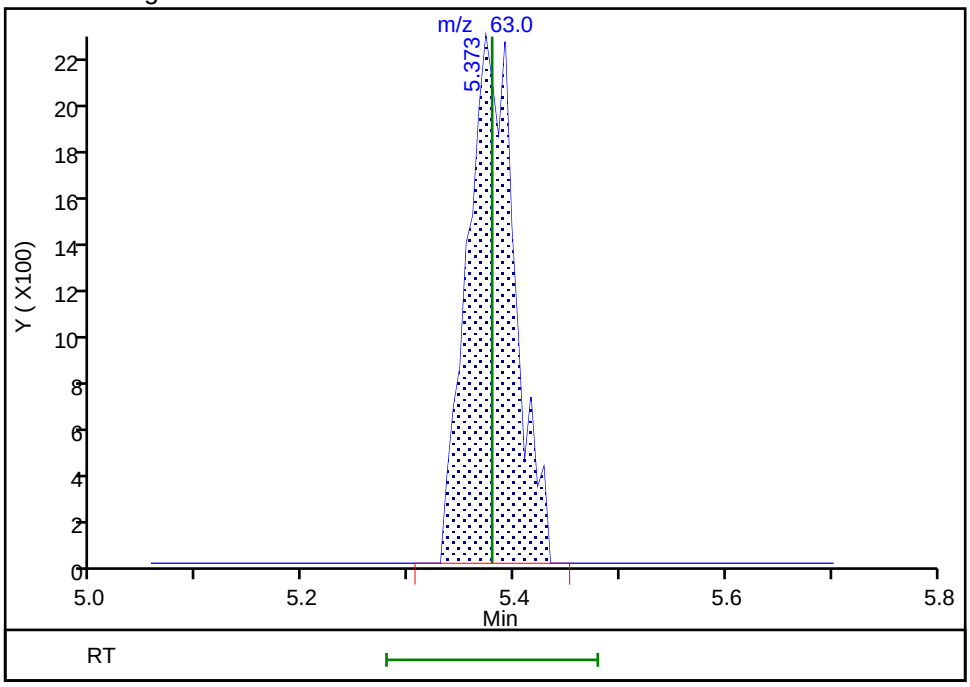
Not Detected
Expected RT: 5.38

Processing Integration Results



Manual Integration Results

RT: 5.37
Area: 6928
Amount: 0.098099
Amount Units: ug/l



Reviewer: riehlc, 09-Jul-2020 08:58:26
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

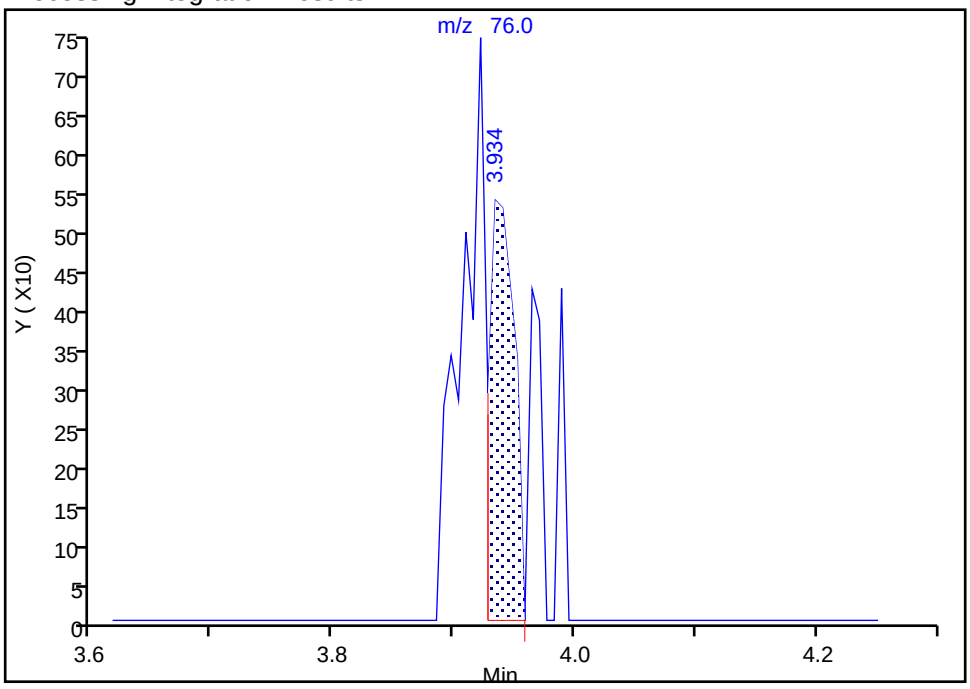
Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s18.D				
Injection Date:	08-Jul-2020 16:45:30	Instrument ID:	19930		
Lims ID:	410-5692-A-13	Lab Sample ID:	410-5692-13		
Client ID:	HD-QC1-0/1-1				
Operator ID:	jkh09052	ALS Bottle#:	24	Worklist Smp#:	25
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

19 Carbon disulfide, CAS: 75-15-0

Signal: 1

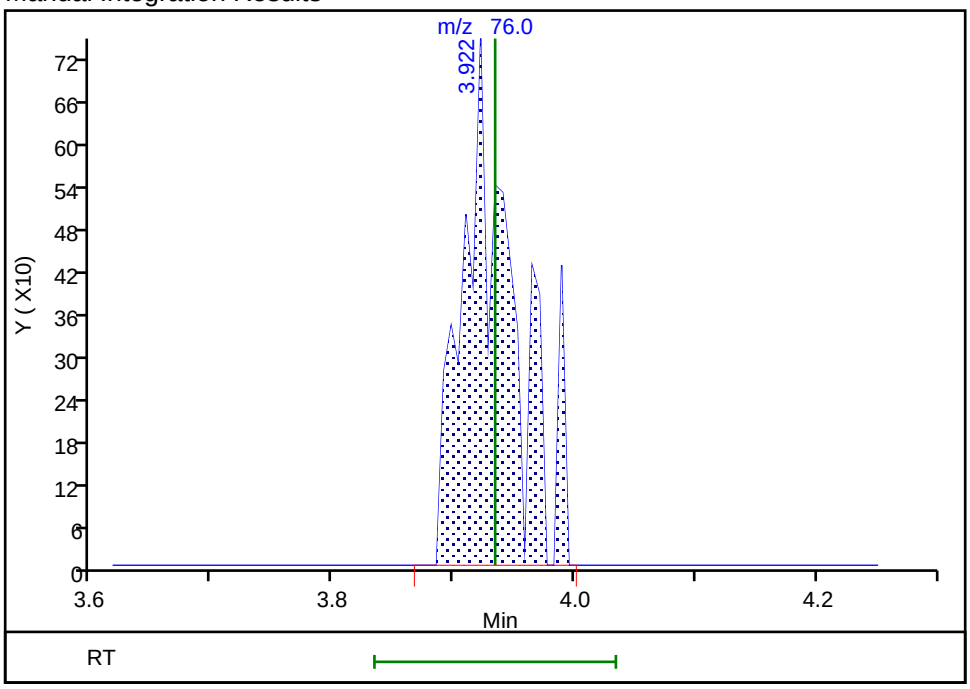
Processing Integration Results

RT: 3.93
Area: 776
Amount: 0.007348
Amount Units: ug/l



Manual Integration Results

RT: 3.92
Area: 2150
Amount: 0.020358
Amount Units: ug/l



Reviewer: riehlc, 09-Jul-2020 08:58:10

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

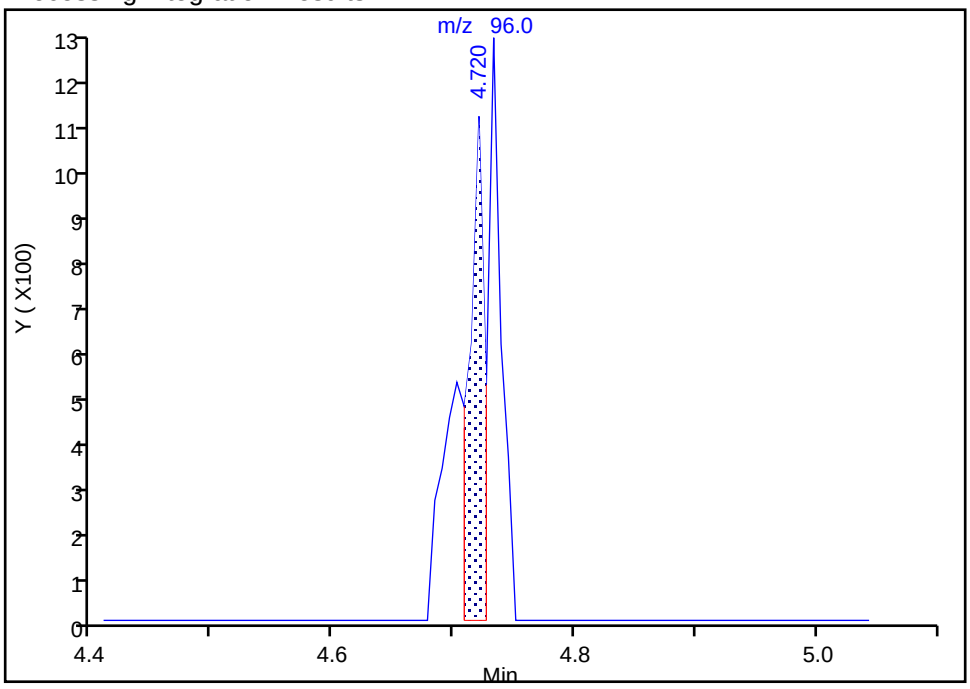
Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s18.D				
Injection Date:	08-Jul-2020 16:45:30	Instrument ID:	19930		
Lims ID:	410-5692-A-13	Lab Sample ID:	410-5692-13		
Client ID:	HD-QC1-0/1-1				
Operator ID:	jkh09052	ALS Bottle#:	24	Worklist Smp#:	25
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

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

Signal: 1

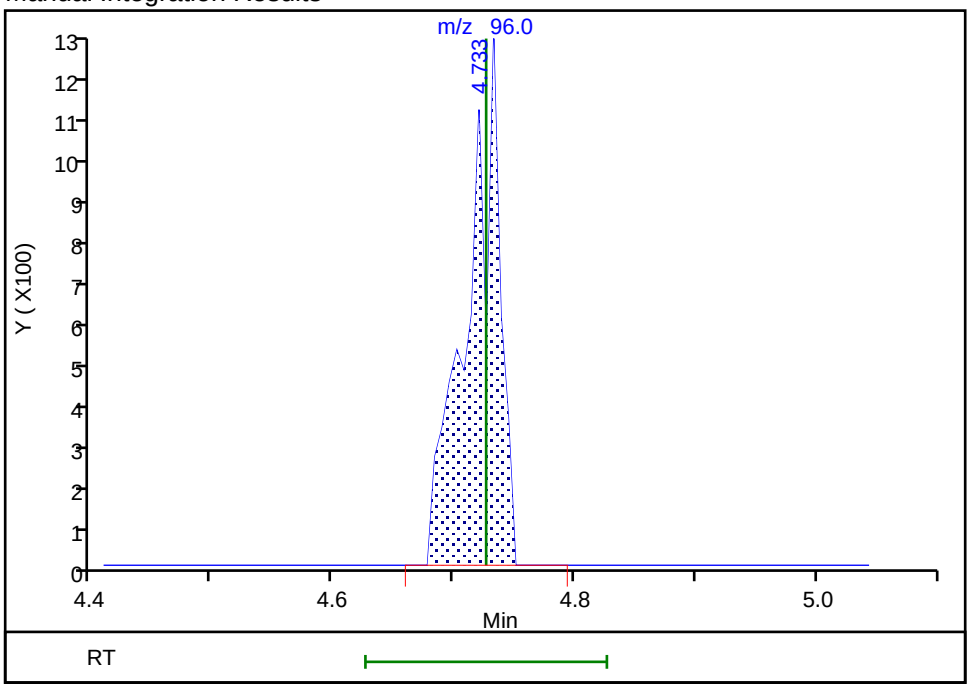
Processing Integration Results

RT: 4.72
Area: 949
Amount: 0.023896
Amount Units: ug/l



Manual Integration Results

RT: 4.73
Area: 2289
Amount: 0.057637
Amount Units: ug/l



Reviewer: riehlc, 09-Jul-2020 08:58:20

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.: 410-5692-1

SDG No.:

Client Sample ID: HD-QC1-0/1-2 Lab Sample ID: 410-5692-14

Matrix: Water Lab File ID: IU08s01.D

Analysis Method: 8260D Date Collected: 06/24/2020 00:00

Sample wt/vol: 25(mL) Date Analyzed: 07/08/2020 10:44

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.: 20265 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		0.50	0.060
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.50	0.070
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
107-06-2	1,2-Dichloroethane	ND		0.50	0.050
78-87-5	1,2-Dichloropropane	ND		0.50	0.060
78-93-3	2-Butanone (MEK)	ND		5.0	0.60
591-78-6	2-Hexanone	ND		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70
67-64-1	Acetone	1.8	J	5.0	0.90
107-13-1	Acrylonitrile	ND		5.0	0.40
71-43-2	Benzene	ND		0.50	0.050
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
74-97-5	Bromochloromethane	ND		0.50	0.050
124-48-1	Dibromochloromethane	ND		0.50	0.070
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
75-27-4	Bromodichloromethane	ND		0.50	0.050
100-41-4	Ethylbenzene	ND		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	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.: 410-5692-1

SDG No.:

Client Sample ID: HD-QC1-0/1-2 Lab Sample ID: 410-5692-14

Matrix: Water Lab File ID: IU08s01.D

Analysis Method: 8260D Date Collected: 06/24/2020 00:00

Sample wt/vol: 25(mL) Date Analyzed: 07/08/2020 10:44

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.: 20265 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)	104		80-120
460-00-4	4-Bromofluorobenzene (Surr)	96		80-120
1868-53-7	Dibromofluoromethane (Surr)	101		80-120
2037-26-5	Toluene-d8 (Surr)	99		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s01.D
Lims ID: 410-5692-A-14
Client ID: HD-QC1-0/1-2
Sample Type: Client
Inject. Date: 08-Jul-2020 10:44:30 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-5692-A-14
Misc. Info.: 410-0005039-008
Operator ID: jkh09052 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 09-Jul-2020 09:13:09 Calib Date: 16-Mar-2020 18:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1051

First Level Reviewer: riehlc Date: 09-Jul-2020 08:18:11

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
4 Chloromethane	50		2.203				ND	
5 Vinyl chloride	62		2.324				ND	
7 Bromomethane	94		2.648				ND	
8 Chloroethane	64		2.739				ND	
14 1,1-Dichloroethene	96		3.623				ND	
15 Acetone	43	3.641	3.647	-0.006	97	11973	1.82	M
19 Carbon disulfide	76		3.934				ND	
23 Methylene Chloride	84	4.288	4.306	-0.018	69	3109	0.0679	M
* 24 t-Butyl alcohol-d10 (IS)	65	4.318	4.306	0.012	0	132861	50.0	
26 Acrylonitrile	53		4.641				ND	
27 Methyl tert-butyl ether	73		4.708				ND	
28 trans-1,2-Dichloroethene	96		4.726				ND	
31 1,1-Dichloroethane	63		5.379				ND	
36 2-Butanone (MEK)	43		6.177				ND	
37 cis-1,2-Dichloroethene	96		6.202				ND	
43 Chlorobromomethane	128		6.537				ND	
45 Chloroform	83		6.683				ND	
$ 46 Dibromofluoromethane (Surr)	113	6.897	6.897	0.000	94	403168	10.1	
47 1,1,1-Trichloroethane	97		6.909				ND	
50 Carbon tetrachloride	117		7.128				ND	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.348	7.354	-0.006	0	83981	10.4	
54 Benzene	78		7.384				ND	
56 1,2-Dichloroethane	62		7.452				ND	
* 58 Fluorobenzene (IS)	96	7.781	7.787	-0.006	99	1648930	10.0	
61 Trichloroethene	95		8.262				ND	
63 1,2-Dichloropropane	63		8.592				ND	
68 Dichlorobromomethane	83		8.933				ND	
73 cis-1,3-Dichloropropene	75		9.476				ND	
74 4-Methyl-2-pentanone (MIBK)	43		9.640				ND	
$ 75 Toluene-d8 (Surr)	98	9.774	9.774	0.000	94	1567088	9.87	
76 Toluene	92		9.853				ND	

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
	78 trans-1,3-Dichloropropene	75		10.103				ND	
	80 1,1,2-Trichloroethane	97		10.305				ND	
	81 Tetrachloroethene	166		10.396				ND	
	83 2-Hexanone	43		10.512				ND	
	85 Chlorodibromomethane	129		10.683				ND	
	86 Ethylene Dibromide	107		10.792				ND	
*	87 Chlorobenzene-d5 (IS)	117	11.219	11.219	0.000	85	1249223	10.0	
	90 Chlorobenzene	112		11.243				ND	
S	89 Xylenes, Total	106		11.245				ND	
	91 1,1,1,2-Tetrachloroethane	131		11.323				ND	
	92 Ethylbenzene	91		11.329				ND	
	93 m-Xylene & p-Xylene	106		11.445				ND	
	94 o-Xylene	106		11.768				ND	
	95 Styrene	104		11.786				ND	
	96 Bromoform	173		11.945				ND	
$	100 4-Bromofluorobenzene (Surr)	95	12.213	12.213	0.000	93	570529	9.62	
	101 1,1,2,2-Tetrachloroethane	83		12.310				ND	
*	115 1,4-Dichlorobenzene-d4	152	13.091	13.091	0.000	95	675619	10.0	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MSV_31_826ISS_00002 Amount Added: 5.00 Units: uL Run Reagent

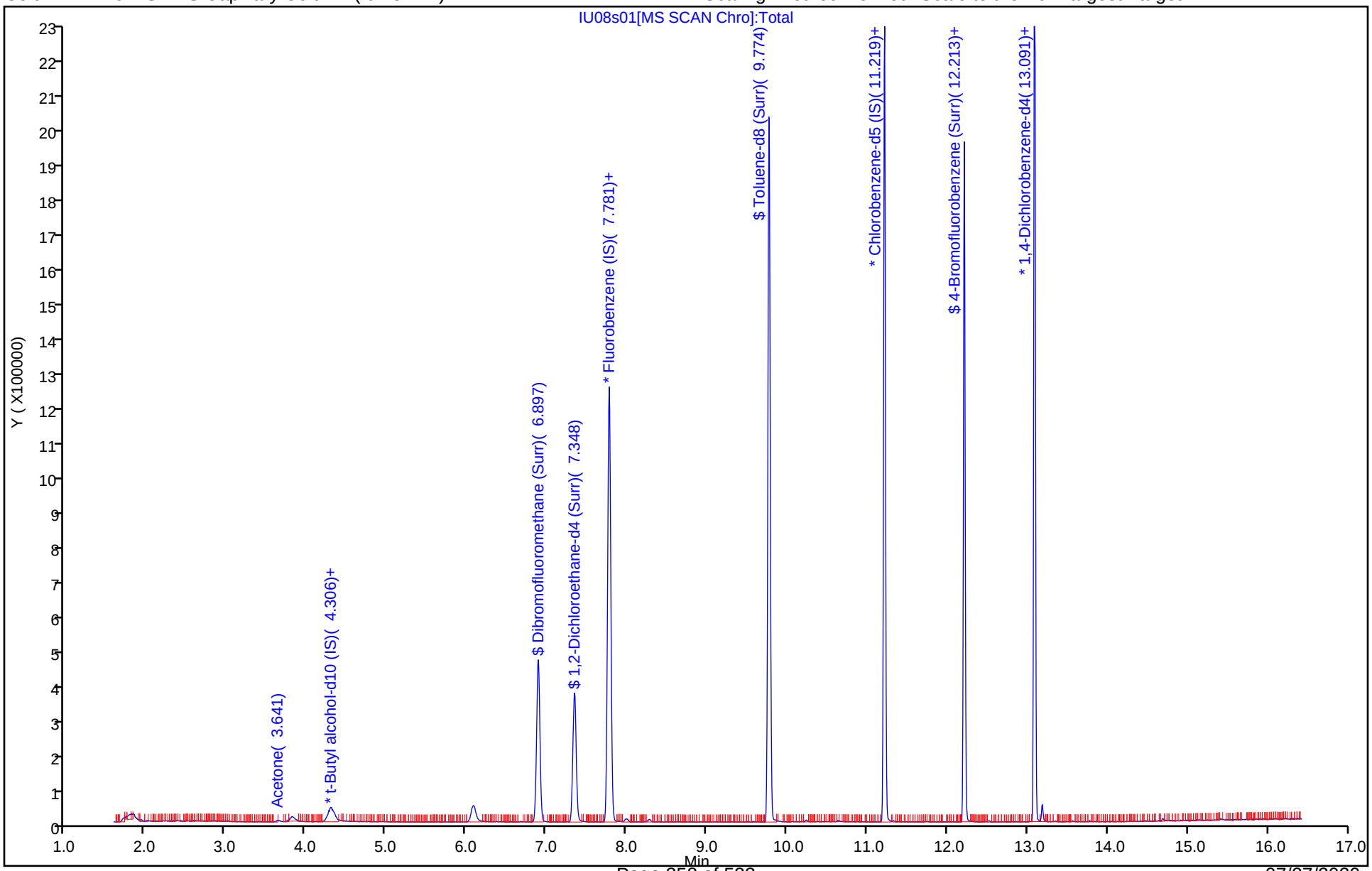
Report Date: 09-Jul-2020 09:13:35 Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s01.D

Injection Date:	08-Jul-2020 10:44:30	Instrument ID:	19930	Operator ID:	jkh09052
Lims ID:	410-5692-A-14	Lab Sample ID:	410-5692-14	Worklist Smp#:	8
Client ID:	HD-QC1-0/1-2				
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

Recovery Report

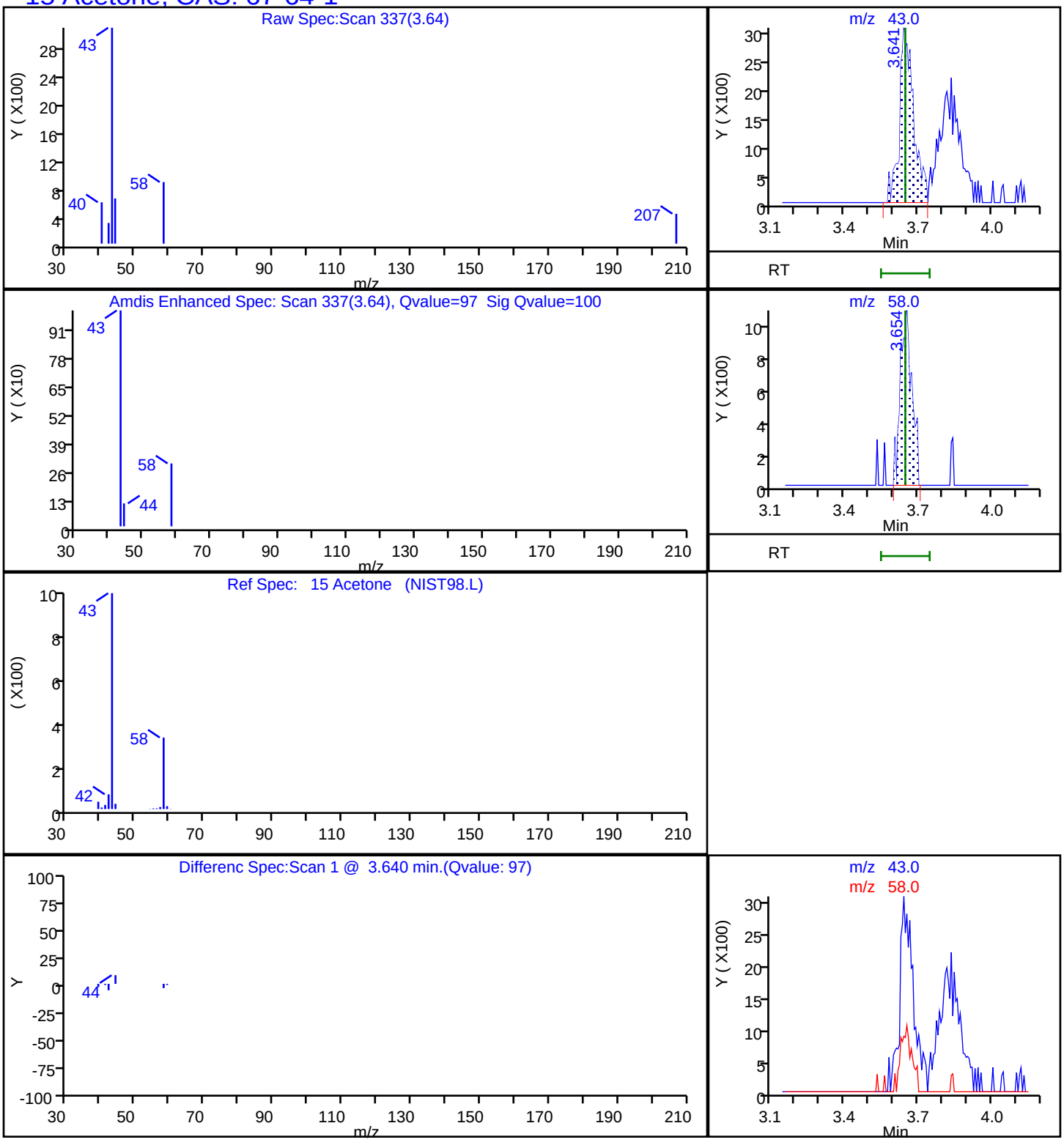
Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s01.D				
Lims ID:	410-5692-A-14				
Client ID:	HD-QC1-0/1-2				
Sample Type:	Client				
Inject. Date:	08-Jul-2020 10:44:30	ALS Bottle#:	7	Worklist Smp#:	8
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-5692-A-14				
Misc. Info.:	410-0005039-008				
Operator ID:	jkh09052	Instrument ID:	19930		
Method:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\8260 25ml HP31.m				
Limit Group:	MSV - 8260C_D				
Last Update:	09-Jul-2020 09:13:09	Calib Date:	16-Mar-2020 18:31:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1051				
First Level Reviewer: riehlc		Date:	09-Jul-2020 08:18:11		

Compound	Amount Added	Amount Recovered	% Rec.
$ 46 Dibromofluoromethane (Surr)	10.0	10.1	101.30
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.4	104.14
$ 75 Toluene-d8 (Surr)	10.0	9.87	98.65
$ 100 4-Bromofluorobenzene (Surr)	10.0	9.62	96.25

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s01.D		
Injection Date:	08-Jul-2020 10:44:30	Instrument ID:	19930
Lims ID:	410-5692-A-14	Lab Sample ID:	410-5692-14
Client ID:	HD-QC1-0/1-2		
Operator ID:	jkh09052	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 (0.25 mm)	Detector	MS Quad

15 Acetone, CAS: 67-64-1



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

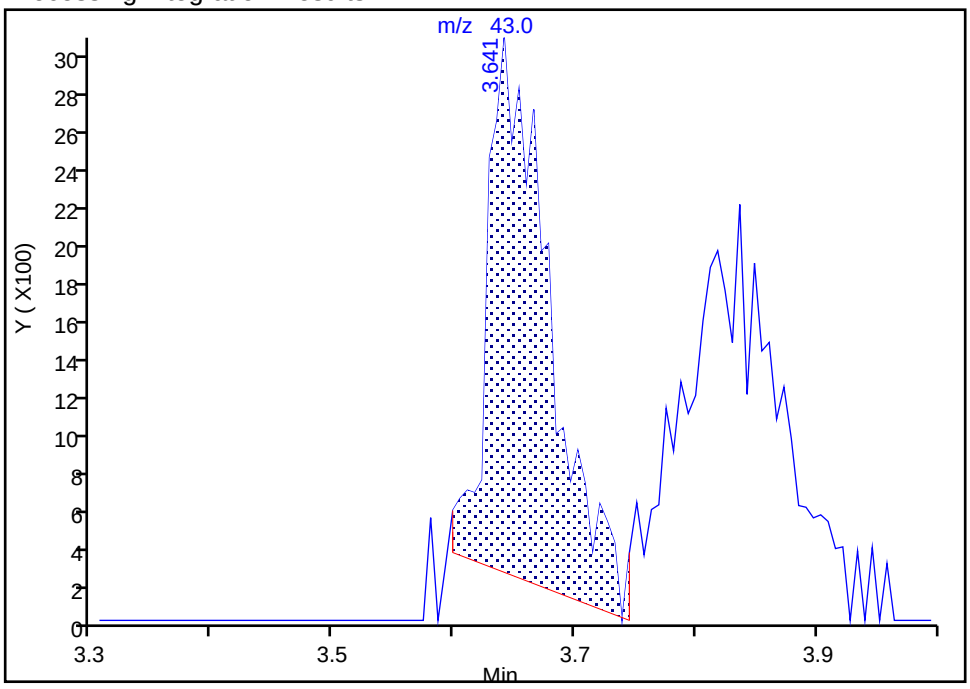
Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s01.D				
Injection Date:	08-Jul-2020 10:44:30	Instrument ID:	19930		
Lims ID:	410-5692-A-14	Lab Sample ID:	410-5692-14		
Client ID:	HD-QC1-0/1-2				
Operator ID:	jkh09052	ALS Bottle#:	7	Worklist Smp#:	8
Purge Vol:	25.000 mL	Dil. Factor:	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

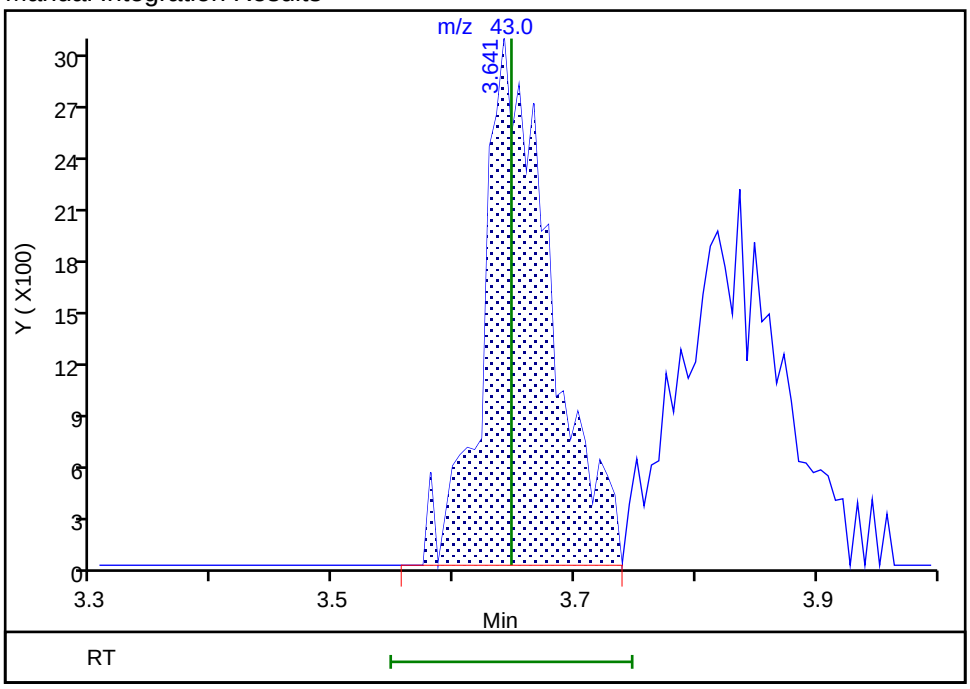
Processing Integration Results

RT: 3.64
Area: 10165
Amount: 1.541645
Amount Units: ug/l



Manual Integration Results

RT: 3.64
Area: 11973
Amount: 1.815849
Amount Units: ug/l



Reviewer: riehlc, 09-Jul-2020 08:16:50
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

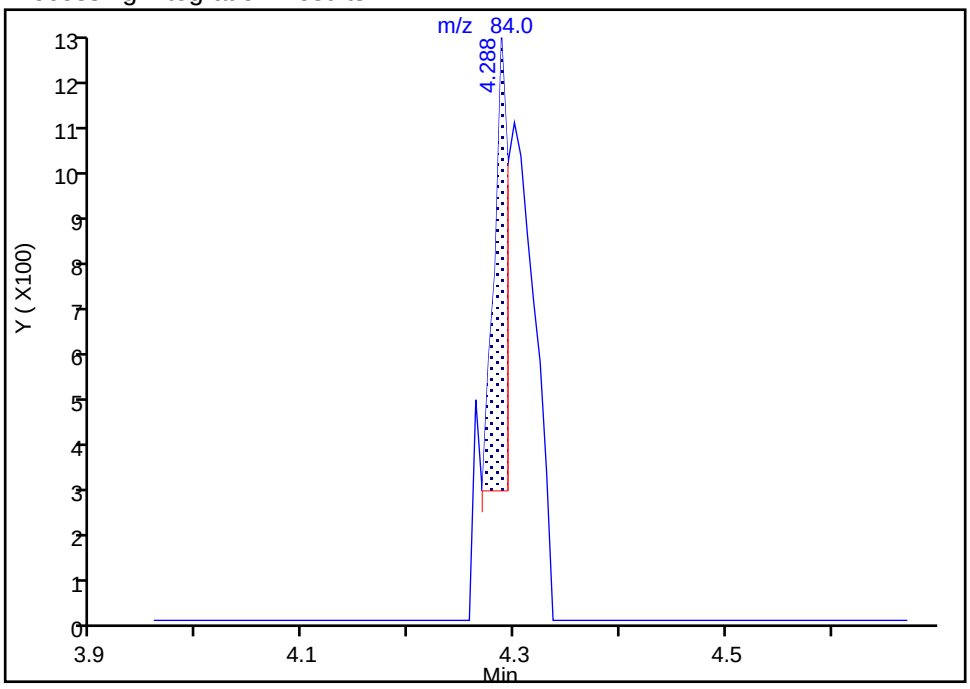
Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s01.D				
Injection Date:	08-Jul-2020 10:44:30	Instrument ID:	19930		
Lims ID:	410-5692-A-14	Lab Sample ID:	410-5692-14		
Client ID:	HD-QC1-0/1-2				
Operator ID:	jkh09052	ALS Bottle#:	7	Worklist Smp#:	8
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

23 Methylene Chloride, CAS: 75-09-2

Signal: 1

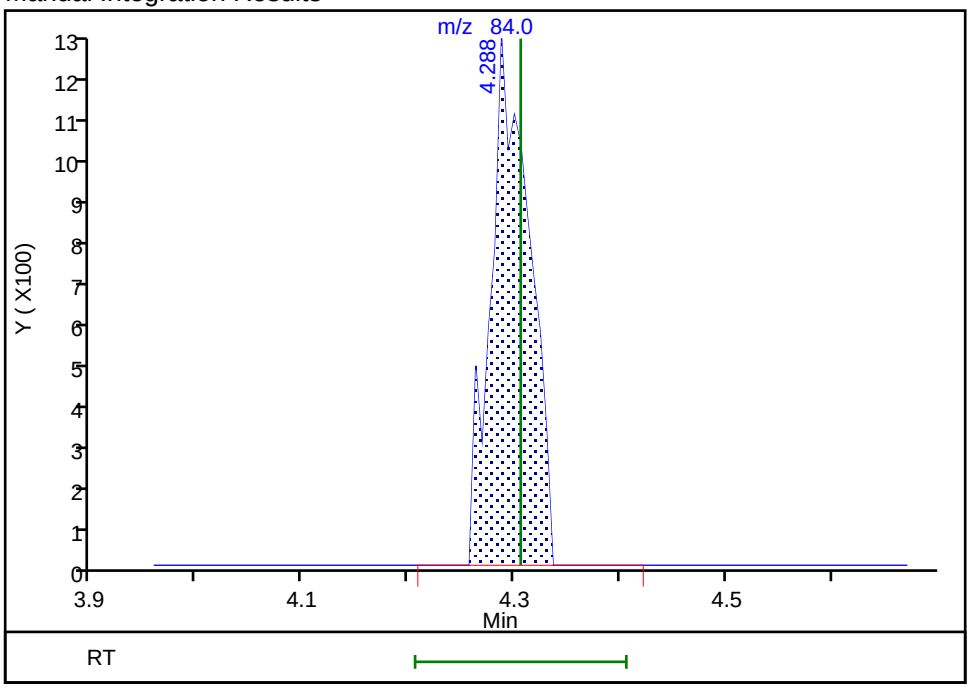
Processing Integration Results

RT: 4.29
Area: 866
Amount: 0.018905
Amount Units: ug/l



Manual Integration Results

RT: 4.29
Area: 3109
Amount: 0.067871
Amount Units: ug/l



Reviewer: riehlc, 09-Jul-2020 08:17:34
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.: 410-5692-1 Analy Batch No.: 6388

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/16/2020 16:24 Calibration End Date: 03/16/2020 18:31 Calibration ID: 2799

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-6388/18	IM16I07.D
Level 2	IC 410-6388/17	IM16I06.D
Level 3	IC 410-6388/16	IM16I05.D
Level 4	IC 410-6388/15	IM16I04.D
Level 5	IC 410-6388/14	IM16I03.D
Level 6	ICIS 410-6388/13	IM16I02.D
Level 7	IC 410-6388/12	IM16I01.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	0.7248 0.5060	0.5380 0.5082	0.5398	0.4855	0.5032	Ave		0.5436			0.1000	15.1		20.0			
Chloromethane	0.4601 0.4454	0.4178 0.4461	0.4291	0.4229	0.4452	Ave		0.4381			0.1000	3.5		20.0			
1,3-Butadiene	0.3205 0.3154	0.3130 0.3093	0.3276	0.3090	0.3067	Ave		0.3145				2.3		20.0			
Vinyl chloride	0.4281 0.4380	0.3945 0.4374	0.4211	0.4135	0.4388	Ave		0.4245			0.1000	3.8		20.0			
Bromomethane	0.3146 0.3001	0.2847 0.2973	0.2920	0.2873	0.3076	Ave		0.2976			0.1000	3.6		20.0			
Chloroethane	0.2494 0.2424	0.2267 0.2397	0.2426	0.2336	0.2474	Ave		0.2402			0.1000	3.3		20.0			
Dichlorofluoromethane	0.6391 0.5539	0.5249 0.5479	0.5476	0.5349	0.5633	Ave		0.5588			0.1000	6.7		20.0			
Trichlorofluoromethane	0.5016 0.5256	0.4674 0.5211	0.5088	0.4962	0.5218	Ave		0.5061			0.1000	4.0		20.0			
Ethyl ether	0.2220 0.2203	0.2182 0.2135	0.2064	0.2202	0.2218	Ave		0.2175				2.6		20.0			
Freon 123a	0.3512 0.3478	0.3329 0.3333	0.3558	0.3403	0.3358	Ave		0.3424				2.7		20.0			
Acrolein	1.7901 2.1084	1.8223 2.1384	2.0188	1.9950	1.9897	Ave		1.9804				6.7		20.0			
1,1-Dichloroethene	0.2504 0.2748	0.2657 0.2642	0.2756	0.2736	0.2687	Ave		0.2676			0.1000	3.3		20.0			
Acetone	2.5908 2.4459	2.4869 2.4117	2.6072	2.4683	2.3589	Ave		2.4814			0.1000	3.6		20.0			
Freon 113	0.2478 0.3090	0.2706 0.2988	0.3094	0.2952	0.3021	Ave		0.2904			0.1000	7.9		20.0			

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

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

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-5692-1 Analy Batch No.: 6388

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/16/2020 16:24 Calibration End Date: 03/16/2020 18:31 Calibration ID: 2799

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	0.4834 0.5275	0.4950 0.5105	0.5242	0.5186	0.5166	Ave		0.5108				3.2		20.0			
Carbon disulfide	0.7526 0.7803	0.7455 0.7499	0.7887	0.7753	0.7600	Ave		0.7646			0.1000	2.2		20.0			
Methyl acetate	0.1512 0.1196	0.1212 0.1114	0.1089	0.1156	0.1132	Ave		0.1202			0.1000	11.9		20.0			
Allyl chloride	0.3923 0.4109	0.4037 0.3994	0.3959	0.4142	0.4120	Ave		0.4040				2.1		20.0			
Methylene Chloride	0.2697 0.2824	0.2805 0.2722	0.2851	0.2779	0.2768	Ave		0.2778			0.1000	2.0		20.0			
t-Butyl alcohol	1.1724 1.2154	1.1833 1.1315	1.3084	1.2346	1.1856	Ave		1.2045				4.7		20.0			
Acrylonitrile	2.9719 3.4734	3.0008 3.5107	3.3407	3.2593	3.2811	Ave		3.2626				6.4		20.0			
Methyl tert-butyl ether	0.6405 0.7005	0.6898 0.6616	0.7101	0.6988	0.7070	Ave		0.6869			0.1000	3.8		20.0			
trans-1,2-Dichloroethene	0.2865 0.2938	0.2826 0.2822	0.2909	0.2885	0.2883	Ave		0.2875			0.1000	1.5		20.0			
n-Hexane	0.4442 0.4541	0.4046 0.4375	0.4358	0.4285	0.4261	Ave		0.4330				3.6		20.0			
1,1-Dichloroethane	0.4598 0.5319	0.5054 0.5134	0.5295	0.5222	0.5172	Ave		0.5113			0.2000	4.8		20.0			
di-Isopropyl ether	0.7943 0.8838	0.8404 0.8471	0.8859	0.8711	0.8645	Ave		0.8553				3.7		20.0			
2-Chloro-1,3-butadiene	0.4285 0.4690	0.4368 0.4526	0.4591	0.4581	0.4580	Ave		0.4517				3.1		20.0			
Ethyl t-butyl ether	0.8002 0.8555	0.8244 0.8087	0.8827	0.8683	0.8522	Ave		0.8417				3.7		20.0			
2-Butanone (MEK)	3.9176 4.6223	4.0453 4.7355	4.4465	4.4302	4.3859	Ave		4.3690			0.1000	6.7		20.0			
cis-1,2-Dichloroethene	0.3121 0.3307	0.3151 0.3197	0.3300	0.3260	0.3258	Ave		0.3228			0.1000	2.3		20.0			
2,2-Dichloropropane	0.4570 0.4750	0.4512 0.4549	0.4696	0.4654	0.4649	Ave		0.4626				1.8		20.0			
Propionitrile	1.1162 1.2641	1.1378 1.2723	1.2661	1.2494	1.2031	Ave		1.2156				5.3		20.0			
Methacrylonitrile	3.6535 4.4605	3.8117 4.5747	4.2160	4.2195	4.1917	Ave		4.1611				7.9		20.0			
Bromochloromethane	0.1440 0.1433	0.1477 0.1381	0.1379	0.1440	0.1446	Ave		0.1428				2.5		20.0			

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

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

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-5692-1 Analy Batch No.: 6388

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/16/2020 16:24 Calibration End Date: 03/16/2020 18:31 Calibration ID: 2799

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								
Tetrahydrofuran	1.3815 1.3711	1.2312 1.3840	1.3713	1.3240	1.3153	Ave		1.3398				4.1		20.0			
Chloroform	0.4855 0.5211	0.5075 0.5040	0.5306	0.5178	0.5147	Ave		0.5116			0.2000	2.8		20.0			
1,1,1-Trichloroethane	0.4633 0.5125	0.4852 0.4938	0.5169	0.5024	0.4986	Ave		0.4961			0.1000	3.6		20.0			
Cyclohexane	0.5307 0.5356	0.4955 0.5156	0.5463	0.5187	0.5188	Ave		0.5230			0.1000	3.1		20.0			
Carbon tetrachloride	0.3963 0.4605	0.4154 0.4484	0.4608	0.4483	0.4489	Ave		0.4398			0.1000	5.6		20.0			
1,1-Dichloropropene	0.3703 0.4309	0.3921 0.4168	0.4241	0.4207	0.4141	Ave		0.4099				5.2		20.0			
Isobutyl alcohol	0.3710 0.3502	0.3329 0.3374	0.3529	0.3487	0.3435	Ave		0.3481				3.6		20.0			
Benzene	1.1329 1.2362	1.1632 1.1905	1.2220	1.2051	1.2022	Ave		1.1931			0.5000	3.0		20.0			
1,2-Dichloroethane	0.3324 0.3218	0.3232 0.3057	0.3263	0.3252	0.3126	Ave		0.3210			0.1000	2.8		20.0			
t-Amyl methyl ether	0.7625 0.7985	0.7793 0.7513	0.7972	0.7901	0.7948	Ave		0.7820				2.4		20.0			
n-Heptane	0.3791 0.4454	0.3734 0.4313	0.4239	0.4159	0.4187	Ave		0.4125				6.5		20.0			
n-Butanol	0.2723 0.3268	0.3027 0.2973	0.3178	0.3187	0.3177	Ave		0.3076				6.1		20.0			
Trichloroethene	0.3015 0.3283	0.3078 0.3199	0.3261	0.3212	0.3192	Ave		0.3177			0.2000	3.0		20.0			
Methylcyclohexane	0.5398 0.5919	0.5335 0.5815	0.5427	0.5827	0.5898	Ave		0.5660			0.1000	4.6		20.0			
1,2-Dichloropropane	0.2698 0.3000	0.2847 0.2935	0.2965	0.2912	0.2946	Ave		0.2901			0.1000	3.5		20.0			
Methyl methacrylate	7.5664 8.9898	7.6398 9.3199	8.5948	8.4203	8.4955	Ave		8.4324				7.7		20.0			
1,4-Dioxane	0.0493 0.0807	0.0845 0.0544	0.0757	0.0763	0.0740	Ave		0.0707			0.0050	19.0		20.0			
Dibromomethane	0.1352 0.1467	0.1375 0.1414	0.1548	0.1467	0.1445	Ave		0.1438				4.6		20.0			
Bromodichloromethane	0.3583 0.3885	0.3725 0.3811	0.3880	0.3765	0.3790	Ave		0.3777			0.2000	2.7		20.0			
2-Nitropropane	2.1962 2.8180	2.4103 2.9065	2.7131	2.6526	2.6444	Ave		2.6202				9.3		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.: 410-5692-1 Analy Batch No.: 6388

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/16/2020 16:24 Calibration End Date: 03/16/2020 18:31 Calibration ID: 2799

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								
cis-1,3-Dichloropropene	0.3943 0.4720	0.4262 0.4604	0.4622	0.4528	0.4599	Ave		0.4468			0.2000	6.1		20.0			
4-Methyl-2-pentanone (MIBK)	9.3982 11.604	9.8843 11.649	11.147	11.001	11.000	Ave		10.812			0.1000	7.9		20.0			
Toluene	0.9248 1.0593	0.9894 1.0172	1.0422	1.0460	1.0340	Ave		1.0161			0.4000	4.5		20.0			
trans-1,3-Dichloropropene	0.4858 0.5325	0.4957 0.5210	0.5182	0.5221	0.5248	Ave		0.5143			0.1000	3.3		20.0			
Ethyl methacrylate	0.4171 0.4480	0.4247 0.4331	0.4561	0.4436	0.4464	Ave		0.4384				3.2		20.0			
1,1,2-Trichloroethane	0.2787 0.2886	0.2882 0.2789	0.2854	0.2871	0.2850	Ave		0.2845			0.1000	1.5		20.0			
Tetrachloroethene	0.4490 0.5111	0.4629 0.4929	0.4905	0.4952	0.4957	Ave		0.4853			0.2000	4.4		20.0			
1,3-Dichloropropane	0.4361 0.4927	0.4693 0.4736	0.4978	0.4879	0.4900	Ave		0.4782				4.4		20.0			
2-Hexanone	6.4513 8.0128	6.7793 8.1253	7.6757	7.6123	7.6631	Ave		7.4743			0.1000	8.4		20.0			
Dibromochloromethane	0.3192 0.3806	0.3517 0.3735	0.3668	0.3719	0.3751	Ave		0.3627				5.9		20.0			
1,2-Dibromoethane (EDB)	0.2325 0.2804	0.2642 0.2721	0.2817	0.2718	0.2779	Ave		0.2687			0.1000	6.3		20.0			
1-Chlorohexane	0.6374 0.6402	0.5995 0.6146	0.6418	0.6219	0.6179	Ave		0.6248				2.5		20.0			
Chlorobenzene	1.0371 1.1742	1.0934 1.1296	1.1502	1.1456	1.1484	Ave		1.1255			0.5000	4.1		20.0			
1,1,1,2-Tetrachloroethane	0.3634 0.4381	0.4204 0.4242	0.4341	0.4280	0.4252	Ave		0.4190				6.0		20.0			
Ethylbenzene	1.8850 2.0767	1.9240 1.9568	2.0397	2.0484	2.0268	Ave		1.9939			0.1000	3.6		20.0			
m&p-Xylene	0.7213 0.8107	0.7629 0.7783	0.7963	0.8022	0.7967	Ave		0.7812			0.1000	4.0		20.0			
o-Xylene	0.7430 0.8033	0.7336 0.7767	0.7961	0.7850	0.7825	Ave		0.7743			0.3000	3.4		20.0			
Styrene	1.1358 1.2964	1.1666 1.2426	1.2600	1.2762	1.2717	Ave		1.2356			0.3000	4.9		20.0			
Bromoform	0.1957 0.2363	0.2193 0.2335	0.2229	0.2228	0.2318	Ave		0.2232			0.1000	6.1		20.0			
Isopropylbenzene	1.8217 2.1703	1.9715 2.0302	2.1314	2.1147	2.1127	Ave		2.0504			0.1000	5.9		20.0			

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

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

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-5692-1 Analy Batch No.: 6388

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/16/2020 16:24 Calibration End Date: 03/16/2020 18:31 Calibration ID: 2799

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								
1,1,2,2-Tetrachloroethane	0.5993 0.6832	0.6053 0.6575	0.6589	0.6493	0.6695	Ave		0.6462			0.3000	4.9		20.0			
Bromobenzene	0.8016 0.9094	0.8336 0.8994	0.8746	0.8711	0.8884	Ave		0.8683				4.4		20.0			
trans-1,4-Dichloro-2-butene	3.3637 4.0803	3.4533 4.1701	3.8658	3.8531	3.8559	Ave		3.8060				7.9		20.0			
1,2,3-Trichloropropane	0.1628 0.1839	0.1717 0.1759	0.1920	0.1843	0.1895	Ave		0.1800				5.8		20.0			
N-Propylbenzene	4.0491 4.5133	4.0643 4.2214	4.3707	4.3794	4.4185	Ave		4.2881				4.2		20.0			
2-Chlorotoluene	0.7545 0.9190	0.8302 0.8993	0.8800	0.8919	0.8882	Ave		0.8662				6.5		20.0			
1,3,5-Trimethylbenzene	2.8797 3.3335	2.9000 3.1827	3.1478	3.2061	3.2056	Ave		3.1222				5.4		20.0			
4-Chlorotoluene	0.8214 0.9240	0.8418 0.8964	0.8867	0.9018	0.9004	Ave		0.8818				4.1		20.0			
tert-Butylbenzene	0.6277 0.7534	0.6374 0.7384	0.7058	0.7125	0.7246	Ave		0.7000				7.0		20.0			
Pentachloroethane	0.5599 0.6222	0.5602 0.6144	0.5665	0.6003	0.6099	Ave		0.5905				4.6		20.0			
1,2,4-Trimethylbenzene	2.9120 3.4212	3.0724 3.2542	3.2817	3.2354	3.2966	Ave		3.2105				5.2		20.0			
sec-Butylbenzene	3.5318 4.3404	3.7129 4.1224	4.0613	4.1240	4.1808	Ave		4.0105				7.1		20.0			
1,3-Dichlorobenzene	1.5559 1.7775	1.6203 1.7414	1.7434	1.7227	1.7323	Ave		1.6991			0.6000	4.7		20.0			
p-Isopropyltoluene	3.0325 3.7690	3.1818 3.5991	3.5009	3.5406	3.5930	Ave		3.4596				7.5		20.0			
1,4-Dichlorobenzene	1.5892 1.7408	1.5890 1.7100	1.7341	1.7107	1.6974	Ave		1.6816			0.5000	3.9		20.0			
1,2,3-Trimethylbenzene	1.3443 1.4229	1.3392 1.4035	1.3358	1.4044	1.4226	Ave		1.3818				2.9		20.0			
Benzyl chloride	0.2626 0.3113	0.2958 0.3035	0.3038	0.2919	0.3044	Ave		0.2962				5.4		20.0			
n-Butylbenzene	1.3733 1.7853	1.4743 1.7328	1.5939	1.6466	1.6790	Ave		1.6122				9.0		20.0			
1,2-Dichlorobenzene	1.4410 1.6143	1.5154 1.5609	1.5698	1.5833	1.5741	Ave		1.5512			0.4000	3.7		20.0			
1,2-Dibromo-3-Chloropropane	0.0902 0.1098	0.1137 0.1089	0.1107	0.1065	0.1072	Ave		0.1067			0.0500	7.2		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.: 410-5692-1 Analy Batch No.: 6388

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/16/2020 16:24 Calibration End Date: 03/16/2020 18:31 Calibration ID: 2799

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								
1,3,5-Trichlorobenzene	1.0577 1.3525	1.1401 1.3547	1.2278	1.2226	1.2517	Ave		1.2296				8.7		20.0			
1,2,4-Trichlorobenzene	0.8882 1.1312	0.9801 1.1458	1.0440	1.0037	1.0558	Ave		1.0355			0.2000	8.6		20.0			
Hexachlorobutadiene	0.3835 0.4859	0.3890 0.4999	0.4249	0.4273	0.4479	Ave		0.4369				10.2		20.0			
Naphthalene	1.8032 2.1521	2.0509 2.0696	2.0881	2.0514	2.0686	Ave		2.0406				5.4		20.0			
1,2,3-Trichlorobenzene	0.7277 0.9275	0.8555 0.9328	0.8665	0.8572	0.8710	Ave		0.8626				7.8		20.0			
Dibromofluoromethane (Surr)	0.2418 0.2412	0.2426 0.2408	0.2401	0.2404	0.2426	Ave		0.2414				0.4		20.0			
1,2-Dichloroethane-d4 (Surr)	0.0491 0.0485	0.0489 0.0492	0.0492	0.0493	0.0482	Ave		0.0489				0.8		20.0			
Toluene-d8 (Surr)	1.2755 1.2640	1.2826 1.2573	1.2736	1.2697	1.2785	Ave		1.2716				0.7		20.0			
4-Bromofluorobenzene (Surr)	0.4760 0.4670	0.4819 0.4684	0.4750	0.4765	0.4766	Ave		0.4745				1.1		20.0			

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

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

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-5692-1 Analy Batch No.: 6388

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/16/2020 16:24 Calibration End Date: 03/16/2020 18:31 Calibration ID: 2799

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-6388/18	IM16I07.D
Level 2	IC 410-6388/17	IM16I06.D
Level 3	IC 410-6388/16	IM16I05.D
Level 4	IC 410-6388/15	IM16I04.D
Level 5	IC 410-6388/14	IM16I03.D
Level 6	ICIS 410-6388/13	IM16I02.D
Level 7	IC 410-6388/12	IM16I01.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	29447 1020389	54675 2551714	110058	198151	507814	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Chloromethane	FB	Ave	18692 898074	42463 2240175	87485	172586	449250	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3-Butadiene	FB	Ave	13020 635985	31811 1553125	66790	126126	309498	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Vinyl chloride	FB	Ave	17394 883143	40095 2196123	85852	168751	442830	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Bromomethane	FB	Ave	12781 605057	28935 1492837	59528	117256	310370	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Chloroethane	FB	Ave	10135 488722	23037 1203506	49459	95356	249607	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Dichlorofluoromethane	FB	Ave	25966 1116990	53348 2751224	111662	218323	568382	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Trichlorofluoromethane	FB	Ave	20380 1059857	47505 2616531	103739	202528	526540	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethyl ether	FB	Ave	9020 444364	22182 1072038	42087	89867	223830	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Freon 123a	FB	Ave	14271 701358	33829 1673357	72547	138896	338811	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Acrolein	TBAd 10	Ave	70800 3685275	184567 8721564	380382	747595	1864004	10.0 500	25.0 1250	50.0	100	250
1,1-Dichloroethene	FB	Ave	10173 554085	27004 1326647	56192	111680	271165	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Acetone	TBAd 10	Ave	20493 855032	50375 1967275	98249	184990	441964	2.00 100	5.00 250	10.0	20.0	50.0
Freon 113	FB	Ave	10068 623018	27503 1500259	63078	120472	304860	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methyl iodide	FB	Ave	19642 1063805	50302 2563231	106891	211652	521309	0.200 10.0	0.500 25.0	1.00	2.00	5.00

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-5692-1 Analy Batch No.: 6388

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/16/2020 16:24 Calibration End Date: 03/16/2020 18:31 Calibration ID: 2799

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
Carbon disulfide	FB	Ave	30579 1573563	75768 3765697	160810	316449	766906	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methyl acetate	FB	Ave	6142 241267	12313 559292	22212	47166	114270	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Allyl chloride	FB	Ave	15938 828579	41024 2005431	80727	169050	415708	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methylene Chloride	FB	Ave	10957 569463	28507 1366733	58139	113412	279336	0.200 10.0	0.500 25.0	1.00	2.00	5.00
t-Butyl alcohol	TBAd 10	Ave	18548 849755	47936 1845881	98614	185056	444257	4.00 200	10.0 500	20.0	40.0	100
Acrylonitrile	TBAd 10	Ave	11754 607103	30392 1431830	62946	122138	307372	1.00 50.0	2.50 125	5.00	10.0	25.0
Methyl tert-butyl ether	FB	Ave	26023 1412572	70101 3321974	144775	285194	713424	0.200 10.0	0.500 25.0	1.00	2.00	5.00
trans-1,2-Dichloroethene	FB	Ave	11639 592532	28719 1417019	59314	117731	290960	0.200 10.0	0.500 25.0	1.00	2.00	5.00
n-Hexane	FB	Ave	18047 915761	41124 2196756	88852	174899	430008	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1-Dichloroethane	FB	Ave	18680 1072677	51361 2577850	107953	213118	521875	0.200 10.0	0.500 25.0	1.00	2.00	5.00
di-Isopropyl ether	FB	Ave	32274 1782121	85406 4253330	180623	355534	872306	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Chloro-1,3-butadiene	FB	Ave	17410 945809	44387 2272460	93611	186962	462107	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethyl t-butyl ether	FB	Ave	32510 1725201	83782 4060868	179979	354411	859911	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Butanone (MEK)	TBAd 10	Ave	30988 1615831	81941 3862804	167561	332028	821747	2.00 100	5.00 250	10.0	20.0	50.0
cis-1,2-Dichloroethene	FB	Ave	12679 666924	32022 1605416	67279	133056	328795	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2,2-Dichloropropane	FB	Ave	18569 957766	45857 2284227	95753	189959	469089	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Propionitrile	TBAd 10	Ave	17659 883801	46096 2075641	95421	187283	450837	4.00 200	10.0 500	20.0	40.0	100
Methacrylonitrile	TBAd 10	Ave	28899 1559282	77209 3731583	158877	316236	785361	2.00 100	5.00 250	10.0	20.0	50.0
Bromochloromethane	FB	Ave	5852 289006	15015 693555	28121	58764	145894	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Tetrahydrofuran	TBAd 10	Ave	10928 479313	24939 1128963	51676	99231	246436	2.00 100	5.00 250	10.0	20.0	50.0
Chloroform	FB	Ave	19725 1050753	51575 2530552	108176	211329	519324	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.: 410-5692-1 Analy Batch No.: 6388

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/16/2020 16:24 Calibration End Date: 03/16/2020 18:31 Calibration ID: 2799

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
1,1,1-Trichloroethane	FB	Ave	18825 1033490	49308 2479708	105395	205071	503133	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Cyclohexane	FB	Ave	21564 1080056	50356 2588845	111385	211691	523555	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Carbon tetrachloride	FB	Ave	16102 928589	42212 2251684	93963	182976	452962	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1-Dichloropropene	FB	Ave	15046 868999	39847 2092962	86478	171702	417889	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Isobutyl alcohol	TBAd 10	Ave	14672 612127	33714 1376227	66493	130668	321827	10.0 500	25.0 1250	50.0	100	250
Benzene	FB	Ave	46030 2492767	118212 5977955	249148	491839	1213141	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dichloroethane	FB	Ave	13507 648929	32843 1534806	66533	132744	315451	0.200 10.0	0.500 25.0	1.00	2.00	5.00
t-Amyl methyl ether	FB	Ave	30981 1610282	79199 3772482	162542	322462	802048	0.200 10.0	0.500 25.0	1.00	2.00	5.00
n-Heptane	FB	Ave	15403 898225	37944 2165706	86431	169759	422462	0.200 10.0	0.500 25.0	1.00	2.00	5.00
n-Butanol	TBAd 10	Ave	21535 1142481	61312 2424781	119752	238865	595233	20.0 1000	50.0 2500	100	200	500
Trichloroethene	FB	Ave	12251 661952	31278 1606195	66486	131079	322098	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methylcyclohexane	FB	Ave	21932 1193666	54220 2920090	110645	237846	595183	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dichloropropane	FB	Ave	10960 605037	28933 1473998	60450	118855	297311	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methyl methacrylate	TBAd 10	Ave	5985 314259	15475 760228	32389	63108	159170	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,4-Dioxane	TBAd 10	Ave	1950 141136	8556 221774	14258	28575	69311	10.0 500	25.0 1250	50.0	100	250
Dibromomethane	FB	Ave	5492 295807	13976 709799	31570	59862	145809	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Bromodichloromethane	FB	Ave	14558 783507	37860 1913810	79116	153673	382425	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Nitropropane	TBAd 10	Ave	17372 985108	48823 2370828	102241	198803	495450	2.00 100	5.00 250	10.0	20.0	50.0
cis-1,3-Dichloropropene	FB	Ave	16020 951714	43315 2311579	94232	184819	464109	0.200 10.0	0.500 25.0	1.00	2.00	5.00
4-Methyl-2-pentanone (MIBK)	TBAd 10	Ave	74340 4056586	200214 9501953	420051	824516	2060954	2.00 100	5.00 250	10.0	20.0	50.0
Toluene	CBZd 5	Ave	27903 1599225	74368 3860923	158032	317517	776857	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.: 410-5692-1 Analy Batch No.: 6388

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/16/2020 16:24 Calibration End Date: 03/16/2020 18:31 Calibration ID: 2799

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-1,3-Dichloropropene	CBZd 5	Ave	14659 803868	37257 1977417	78583	158481	394285	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethyl methacrylate	CBZd 5	Ave	12586 676318	31923 1644049	69163	134668	335368	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1,2-Trichloroethane	CBZd 5	Ave	8408 435626	21660 1058474	43280	87162	214127	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Tetrachloroethene	CBZd 5	Ave	13547 771679	34794 1870823	74375	150308	372446	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3-Dichloropropane	CBZd 5	Ave	13157 743778	35276 1797641	75482	148091	368157	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Hexanone	TBAd 10	Ave	51030 2801042	137320 6627827	289252	570518	1435758	2.00 100	5.00 250	10.0	20.0	50.0
Dibromochloromethane	CBZd 5	Ave	9631 574600	26432 1417766	55626	112901	281805	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dibromoethane (EDB)	CBZd 5	Ave	7016 423280	19859 1032636	42717	82516	208754	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1-Chlorohexane	CBZd 5	Ave	19231 966542	45065 2332716	97319	188787	464220	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Chlorobenzene	CBZd 5	Ave	31292 1772740	82189 4287527	174405	347759	862744	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1,1,2-Tetrachloroethane	CBZd 5	Ave	10964 661375	31596 1609952	65818	129908	319438	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethylbenzene	CBZd 5	Ave	56876 3135198	144619 7427537	309286	621789	1522716	0.200 10.0	0.500 25.0	1.00	2.00	5.00
m&p-Xylene	CBZd 5	Ave	43526 2447965	114685 5908255	241508	487008	1197162	0.400 20.0	1.00 50.0	2.00	4.00	10.0
o-Xylene	CBZd 5	Ave	22418 1212795	55140 2948072	120712	238276	587908	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Styrene	CBZd 5	Ave	34270 1957192	87686 4716643	191061	387394	955403	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Bromoform	CBZd 5	Ave	5904 356744	16484 886158	33797	67646	174165	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Isopropylbenzene	CBZd 5	Ave	54965 3276510	148190 7706092	323191	641937	1587251	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	9904 556023	25318 1335482	54891	107882	273453	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Bromobenzene	DCBd 4	Ave	13246 740069	34868 1826739	72862	144735	362833	0.200 10.0	0.500 25.0	1.00	2.00	5.00
trans-1,4-Dichloro-2-butene	TBAd 10	Ave	26607 1426343	69949 3401551	145681	288778	722433	2.00 100	5.00 250	10.0	20.0	50.0
1,2,3-Trichloropropane	DCBd 4	Ave	2691 149666	7183 357175	15995	30624	77402	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.: 410-5692-1 Analy Batch No.: 6388

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/16/2020 16:24 Calibration End Date: 03/16/2020 18:31 Calibration ID: 2799

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
N-Propylbenzene	DCBd 4	Ave	66911 3673082	170003 8573781	364128	727660	1804651	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Chlorotoluene	DCBd 4	Ave	12468 747923	34726 1826509	73314	148197	362786	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3,5-Trimethylbenzene	DCBd 4	Ave	47587 2712914	121303 6463980	262244	532706	1309251	0.200 10.0	0.500 25.0	1.00	2.00	5.00
4-Chlorotoluene	DCBd 4	Ave	13573 751944	35210 1820544	73872	149835	367758	0.200 10.0	0.500 25.0	1.00	2.00	5.00
tert-Butylbenzene	DCBd 4	Ave	10372 613177	26660 1499603	58801	118387	295952	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Pentachloroethane	DCBd 4	Ave	9252 506329	23433 1247885	47192	99745	249082	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2,4-Trimethylbenzene	DCBd 4	Ave	48121 2784291	128514 6609280	273400	537587	1346411	0.200 10.0	0.500 25.0	1.00	2.00	5.00
sec-Butylbenzene	DCBd 4	Ave	58363 3532328	155303 8372660	338352	685221	1707579	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3-Dichlorobenzene	DCBd 4	Ave	25712 1446570	67773 3536888	145246	286238	707528	0.200 10.0	0.500 25.0	1.00	2.00	5.00
p-Isopropyltoluene	DCBd 4	Ave	50112 3067350	133089 7309726	291668	588295	1467497	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,4-Dichlorobenzene	DCBd 4	Ave	26261 1416735	66463 3472989	144468	284244	693277	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2,3-Trimethylbenzene	DCBd 4	Ave	22215 1157997	56015 2850454	111289	233348	581033	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Benzyl chloride	DCBd 4	Ave	4340 253323	12374 616447	25310	48505	124318	0.200 10.0	0.500 25.0	1.00	2.00	5.00
n-Butylbenzene	DCBd 4	Ave	22693 1452958	61668 3519318	132791	273595	685755	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dichlorobenzene	DCBd 4	Ave	23812 1313773	63385 3170211	130781	263070	642903	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dibromo-3-Chloropropane	DCBd 4	Ave	1491 89366	4756 221127	9220	17700	43766	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3,5-Trichlorobenzene	DCBd 4	Ave	17479 1100723	47689 2751351	102291	203146	511228	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2,4-Trichlorobenzene	DCBd 4	Ave	14677 920606	40997 2327125	86977	166771	431202	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Hexachlorobutadiene	DCBd 4	Ave	6338 395472	16272 1015261	35400	71002	182926	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Naphthalene	DCBd 4	Ave	29798 1751429	85787 4203327	173964	340844	844888	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2,3-Trichlorobenzene	DCBd 4	Ave	12026 754804	35782 1894519	72189	142435	355728	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.: 410-5692-1 Analy Batch No.: 6388

SDG No.:

Instrument ID: 19930 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/16/2020 16:24 Calibration End Date: 03/16/2020 18:31 Calibration ID: 2799

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
Dibromofluoromethane (Surr)	FB	Ave	491181 486394	493200 483569	489598	490540	489679	10.0 10.0	10.0 10.0	10.0	10.0	10.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	99741 97836	99319 98806	100281	100629	97249	10.0 10.0	10.0 10.0	10.0	10.0	10.0
Toluene-d8 (Surr)	CBZd 5	Ave	1924255 1908330	1928163 1908928	1931273	1927152	1921017	10.0 10.0	10.0 10.0	10.0	10.0	10.0
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	718165 705064	724468 711219	720334	723296	716065	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\19930\20200317-1775.b\IM16I01.D
Lims ID: IC std7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 16-Mar-2020 16:24:30 ALS Bottle#: 11 Worklist Smp#: 12
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: VSTD025;VSTD025;1;1;;;;;;
Misc. Info.: 8260W25.SUB;;;25;25;;;
Operator ID: JKH09052 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 13-May-2020 18:29:55 Calib Date: 16-Mar-2020 18:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1007

First Level Reviewer: campbellme Date: 17-Mar-2020 23:28:17

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	1.983	-0.006	99	2551714	25.0	23.4	M
4 Chloromethane	50	2.178	2.184	-0.006	99	2240175	25.0	25.5	M
5 Vinyl chloride	62	2.294	2.300	-0.006	97	2196123	25.0	25.8	
6 Butadiene	39	2.294	2.300	-0.006	84	1553125	25.0	24.6	
7 Bromomethane	94	2.623	2.629	-0.006	90	1492837	25.0	25.0	
8 Chloroethane	64	2.715	2.721	-0.006	100	1203506	25.0	24.9	M
9 Dichlorofluoromethane	67	2.959	2.964	-0.005	97	2751224	25.0	24.5	
10 Trichlorofluoromethane	101	3.020	3.025	-0.005	97	2616531	25.0	25.7	
11 Ethyl ether	59	3.276	3.288	-0.012	90	1072038	25.0	24.5	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.367	3.373	-0.006	91	1673357	25.0	24.3	
13 Acrolein	56	3.459	3.464	-0.006	100	8721564	1250.0	1349.7	
14 1,1-Dichloroethene	96	3.599	3.605	-0.006	98	1326647	25.0	24.7	
15 Acetone	43	3.629	3.635	-0.006	100	1967275	250.0	243.0	
16 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.635	3.641	-0.006	91	1500259	25.0	25.7	
17 Iodomethane	142	3.800	3.806	-0.006	99	2563231	25.0	25.0	
18 Ethyl bromide	108	3.830	3.830	0.000	99	1128023	25.0	24.7	
19 Carbon disulfide	76	3.910	3.909	0.001	99	3765697	25.0	24.5	
21 Methyl acetate	43	4.056	4.068	-0.012	97	559292	25.0	23.2	
22 3-Chloro-1-propene	41	4.086	4.092	-0.006	91	2005431	25.0	24.7	
23 Methylene Chloride	84	4.282	4.293	-0.011	90	1366733	25.0	24.5	
* 24 t-Butyl alcohol-d10 (IS)	65	4.300	4.293	0.007	0	163141	50.0	50.0	M
25 2-Methyl-2-propanol	59	4.422	4.428	-0.006	100	1845881	500.0	469.7	
26 Acrylonitrile	53	4.623	4.629	-0.006	99	1431830	125.0	134.5	
27 Methyl tert-butyl ether	73	4.696	4.702	-0.006	94	3321974	25.0	24.1	
28 trans-1,2-Dichloroethene	96	4.702	4.702	0.000	99	1417019	25.0	24.5	
29 Hexane	57	5.129	5.129	0.000	91	2196756	25.0	25.3	
31 1,1-Dichloroethane	63	5.361	5.366	-0.005	96	2577850	25.0	25.1	
32 Isopropyl ether	45	5.422	5.421	0.001	94	4253330	25.0	24.8	
33 2-Chloro-1,3-butadiene	53	5.470	5.476	-0.006	91	2272460	25.0	25.0	
34 Tert-butyl ethyl ether	59	5.958	5.958	0.000	97	4060868	25.0	24.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
S 35 1,2-Dichloroethene, Total	100				0			49.3	
36 2-Butanone (MEK)	43	6.171	6.171	0.000	99	3862804	250.0	271.0	
37 cis-1,2-Dichloroethene	96	6.196	6.196	0.000	81	1605416	25.0	24.8	
38 2,2-Dichloropropane	77	6.214	6.208	0.006	86	2284227	25.0	24.6	
40 Propionitrile	54	6.257	6.263	-0.006	99	2075641	500.0	523.3	
42 Methacrylonitrile	67	6.476	6.470	0.006	90	3731583	250.0	274.8	
43 Chlorobromomethane	128	6.531	6.531	0.000	86	693555	25.0	24.2	
44 Tetrahydrofuran	71	6.537	6.543	-0.006	89	1128963	250.0	258.3	
45 Chloroform	83	6.677	6.683	-0.006	93	2530552	25.0	24.6	
$ 46 Dibromofluoromethane (Surr)	113	6.891	6.897	-0.006	93	483569	10.0	9.98	
47 1,1,1-Trichloroethane	97	6.909	6.903	0.006	98	2479708	25.0	24.9	
48 Cyclohexane	56	7.001	7.000	0.000	89	2588845	25.0	24.6	
50 Carbon tetrachloride	117	7.116	7.116	0.000	85	2251684	25.0	25.5	
51 1,1-Dichloropropene	75	7.116	7.116	0.000	95	2092962	25.0	25.4	
52 Isobutyl alcohol	41	7.263	7.269	-0.006	94	1376227	1250.0	1211.7	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.348	7.354	-0.006	0	98806	10.0	10.1	
54 Benzene	78	7.378	7.378	0.000	96	5977955	25.0	24.9	
56 1,2-Dichloroethane	62	7.452	7.451	0.001	98	1534806	25.0	23.8	
57 Tert-amyl methyl ether	73	7.567	7.561	0.006	98	3772482	25.0	24.0	
* 58 Fluorobenzene (IS)	96	7.781	7.781	0.000	99	2008523	10.0	10.0	
59 n-Heptane	43	7.787	7.793	-0.006	89	2165706	25.0	26.1	
60 n-Butanol	56	8.134	8.140	-0.006	87	2424781	2500.0	2416.0	
61 Trichloroethene	95	8.262	8.262	0.000	98	1606195	25.0	25.2	
62 Methylcyclohexane	83	8.567	8.567	0.000	93	2920090	25.0	25.7	
63 1,2-Dichloropropane	63	8.592	8.591	0.001	83	1473998	25.0	25.3	
64 Methyl methacrylate	69	8.671	8.671	0.000	90	760228	25.0	27.6	
65 1,4-Dioxane	88	8.677	8.683	-0.006	85	221774	1250.0	961.5	M
66 Dibromomethane	93	8.701	8.707	-0.006	95	709799	25.0	24.6	
68 Dichlorobromomethane	83	8.933	8.933	0.000	99	1913810	25.0	25.2	
69 2-Nitropropane	41	9.201	9.201	0.000	98	2370828	250.0	277.3	
72 1-Bromo-2-chloroethane	63	9.329	9.323	0.006	99	1526808	25.0	25.2	
73 cis-1,3-Dichloropropene	75	9.476	9.475	0.001	96	2311579	25.0	25.8	
74 4-Methyl-2-pentanone (MIBK)	43	9.640	9.640	0.000	95	9501953	250.0	269.3	
$ 75 Toluene-d8 (Surr)	98	9.780	9.780	0.000	93	1908928	10.0	9.89	
76 Toluene	92	9.854	9.853	0.001	98	3860923	25.0	25.0	
S 77 1,3-Dichloropropene, Total	100				0			51.1	
78 trans-1,3-Dichloropropene	75	10.110	10.109	0.001	92	1977417	25.0	25.3	
79 Ethyl methacrylate	69	10.165	10.164	0.001	88	1644049	25.0	24.7	
80 1,1,2-Trichloroethane	97	10.311	10.311	0.000	90	1058474	25.0	24.5	
81 Tetrachloroethene	166	10.396	10.396	0.000	98	1870823	25.0	25.4	
82 1,3-Dichloropropane	76	10.469	10.475	-0.006	89	1797641	25.0	24.8	
83 2-Hexanone	43	10.518	10.518	0.000	95	6627827	250.0	271.8	
85 Chlorodibromomethane	129	10.683	10.682	0.001	90	1417766	25.0	25.7	
86 Ethylene Dibromide	107	10.799	10.798	0.001	99	1032636	25.0	25.3	
* 87 Chlorobenzene-d5 (IS)	117	11.225	11.219	0.006	86	1518268	10.0	10.0	
88 1-Chlorohexane	91	11.231	11.231	0.000	96	2332716	25.0	24.6	
S 89 Xylenes, Total	106				0			74.9	
90 Chlorobenzene	112	11.250	11.249	0.001	98	4287527	25.0	25.1	
91 1,1,1,2-Tetrachloroethane	131	11.329	11.329	0.000	96	1609952	25.0	25.3	
92 Ethylbenzene	91	11.335	11.335	0.000	98	7427537	25.0	24.5	
93 m-Xylene & p-Xylene	106	11.451	11.445	0.006	0	5908255	50.0	49.8	
94 o-Xylene	106	11.774	11.774	0.000	96	2948072	25.0	25.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
95 Styrene	104	11.786	11.792	-0.006	95	4716643	25.0	25.1	
96 Bromoform	173	11.945	11.944	0.001	98	886158	25.0	26.2	
97 Isopropylbenzene	105	12.073	12.072	0.001	96	7706092	25.0	24.8	
$ 100 4-Bromofluorobenzene (Surr)	95	12.219	12.219	0.000	93	711219	10.0	9.87	
101 1,1,2,2-Tetrachloroethane	83	12.317	12.316	0.001	92	1335482	25.0	25.4	
102 Bromobenzene	156	12.335	12.335	0.000	97	1826739	25.0	25.9	
103 trans-1,4-Dichloro-2-butene	53	12.341	12.341	0.000	91	3401551	250.0	273.9	
104 1,2,3-Trichloropropane	110	12.365	12.365	0.000	83	357175	25.0	24.4	
105 N-Propylbenzene	91	12.402	12.402	0.000	98	8573781	25.0	24.6	
106 2-Chlorotoluene	126	12.475	12.475	0.000	97	1826509	25.0	26.0	
107 1,3,5-Trimethylbenzene	105	12.536	12.536	0.000	94	6463980	25.0	25.5	
108 4-Chlorotoluene	126	12.566	12.566	0.000	97	1820544	25.0	25.4	
109 tert-Butylbenzene	134	12.774	12.780	-0.006	93	1499603	25.0	26.4	
110 Pentachloroethane	167	12.810	12.810	0.000	95	1247885	25.0	26.0	
111 1,2,4-Trimethylbenzene	105	12.816	12.816	0.000	97	6609280	25.0	25.3	
112 sec-Butylbenzene	105	12.938	12.938	0.000	94	8372660	25.0	25.7	
113 1,3-Dichlorobenzene	146	13.042	13.042	0.000	98	3536888	25.0	25.6	
114 4-Isopropyltoluene	119	13.048	13.048	0.000	97	7309726	25.0	26.0	
* 115 1,4-Dichlorobenzene-d4	152	13.097	13.097	0.000	92	812402	10.0	10.0	
116 1,4-Dichlorobenzene	146	13.115	13.115	0.000	95	3472989	25.0	25.4	
117 1,2,3-Trimethylbenzene	120	13.121	13.121	0.000	98	2850454	25.0	25.4	
118 Benzyl chloride	126	13.188	13.188	0.000	98	616447	25.0	25.6	
119 n-Butylbenzene	92	13.335	13.334	0.001	97	3519318	25.0	26.9	
120 1,2-Dichlorobenzene	146	13.371	13.371	0.000	99	3170211	25.0	25.2	
122 1,2-Dibromo-3-Chloropropane	155	13.914	13.914	0.000	90	221127	25.0	25.5	
123 1,3,5-Trichlorobenzene	180	14.036	14.035	0.001	98	2751351	25.0	27.5	
124 1,2,4-Trichlorobenzene	180	14.462	14.462	0.000	94	2327125	25.0	27.7	
125 Hexachlorobutadiene	225	14.542	14.541	0.001	97	1015261	25.0	28.6	
126 Naphthalene	128	14.645	14.645	0.000	97	4203327	25.0	25.4	
127 1,2,3-Trichlorobenzene	180	14.786	14.785	0.001	96	1894519	25.0	27.0	
134 Isopropyl alcohol	45		0.000				ND	ND	U
135 p-Diethylbenzene	1		0.000				ND	ND	U
137 2-Methylnaphthalene	142		0.000				ND	ND	U
144 2-ethoxy-2-methyl butane	1		0.000				ND	ND	U

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

U - Marked Undetected

Reagents:

MSV_RV1_826_00008	Amount Added: 25.00	Units: uL	
MSV_RV4_826_00009	Amount Added: 25.00	Units: uL	
MSV_RV4GAS826_00022	Amount Added: 25.00	Units: uL	
MSV_31_826ISS_00002	Amount Added: 5.00	Units: uL	Run Reagent

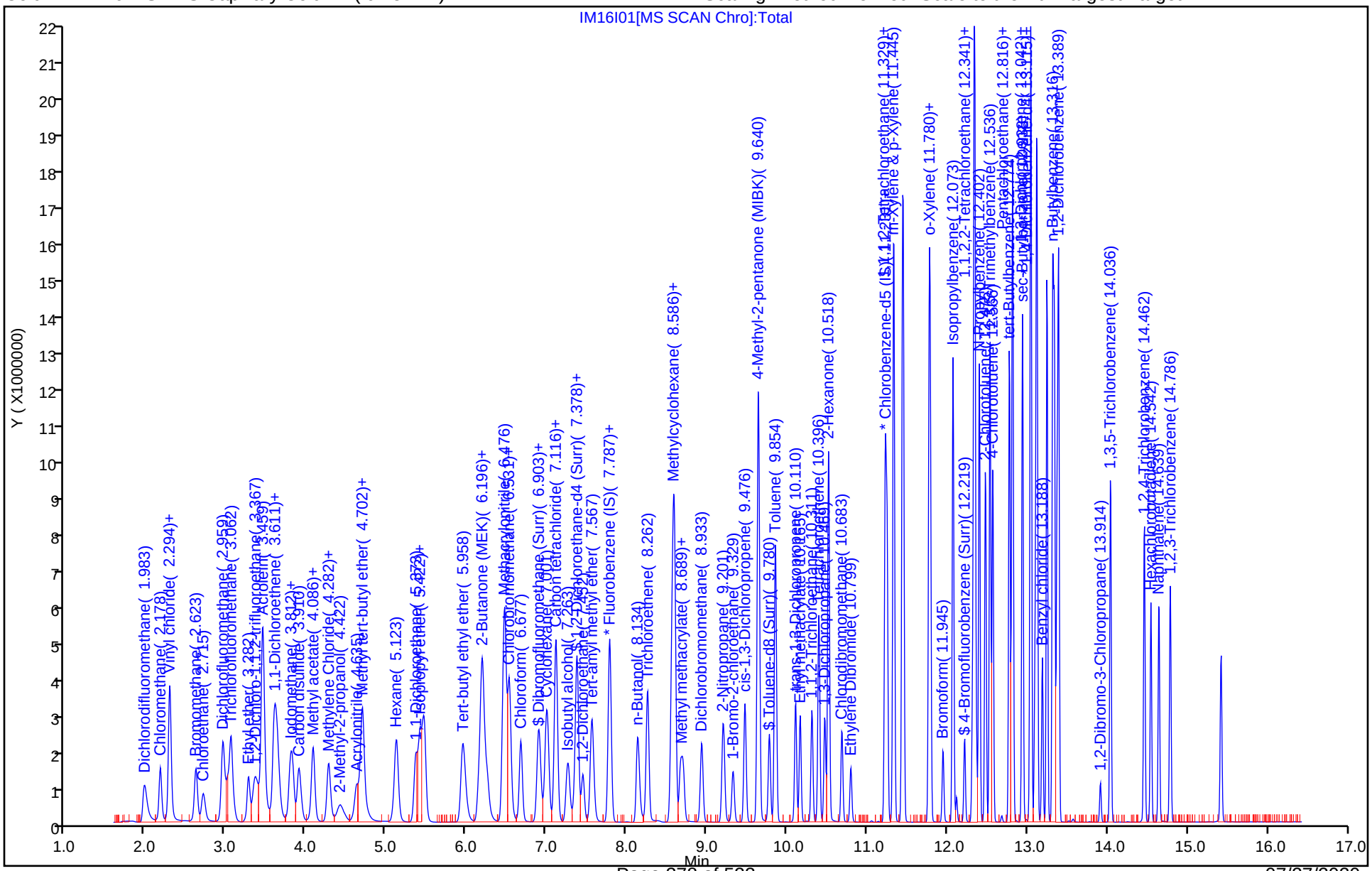
Report Date: 13-May-2020 18:29:56 Chrom Revision: 2.3 12-May-2020 10:44:46

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I01.D

Injection Date:	16-Mar-2020 16:24:30	Instrument ID:	19930	Operator ID:	JKH09052
Lims ID:	IC std7			Worklist Smp#:	12
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
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

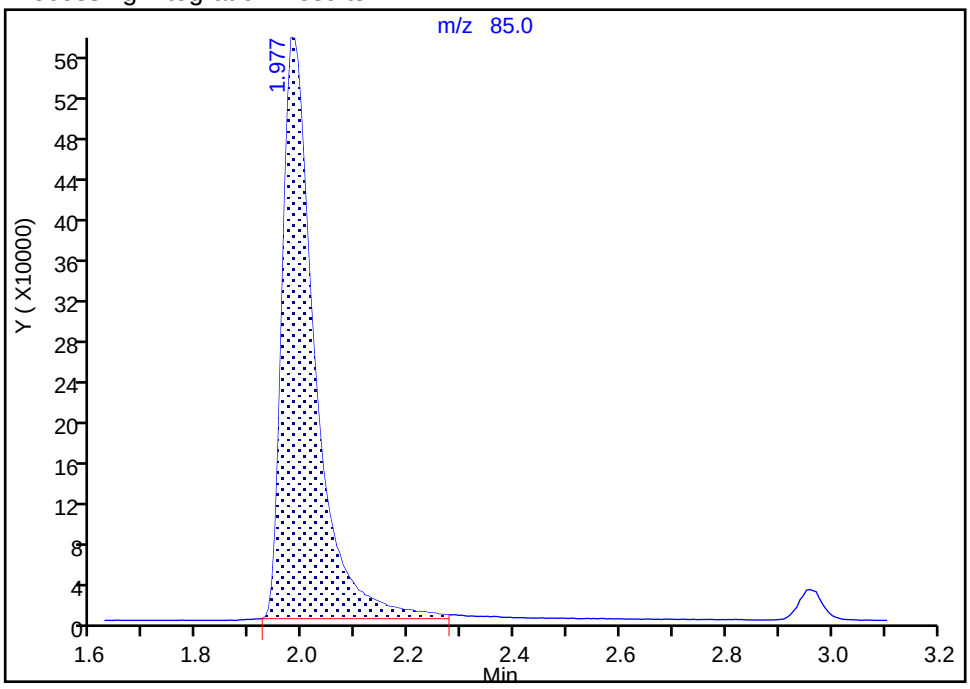
Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I01.D
Injection Date: 16-Mar-2020 16:24:30 Instrument ID: 19930
Lims ID: IC std7
Client ID:
Operator ID: JKH09052 ALS Bottle#: 11 Worklist Smp#: 12
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
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: 2445688
Amount: 25.920637
Amount Units: ug/l



Manual Integration Results

RT: 1.98
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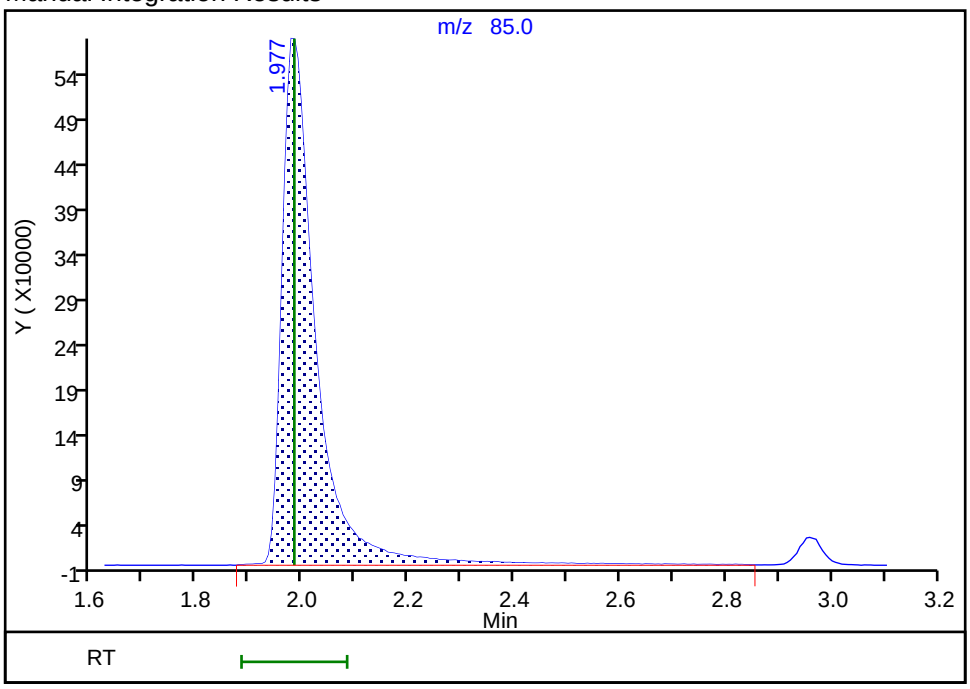
Amount: 23.369316
Amount Units: ug/l



Reviewer: campbellme, 17-Mar-2020 23:26:31
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

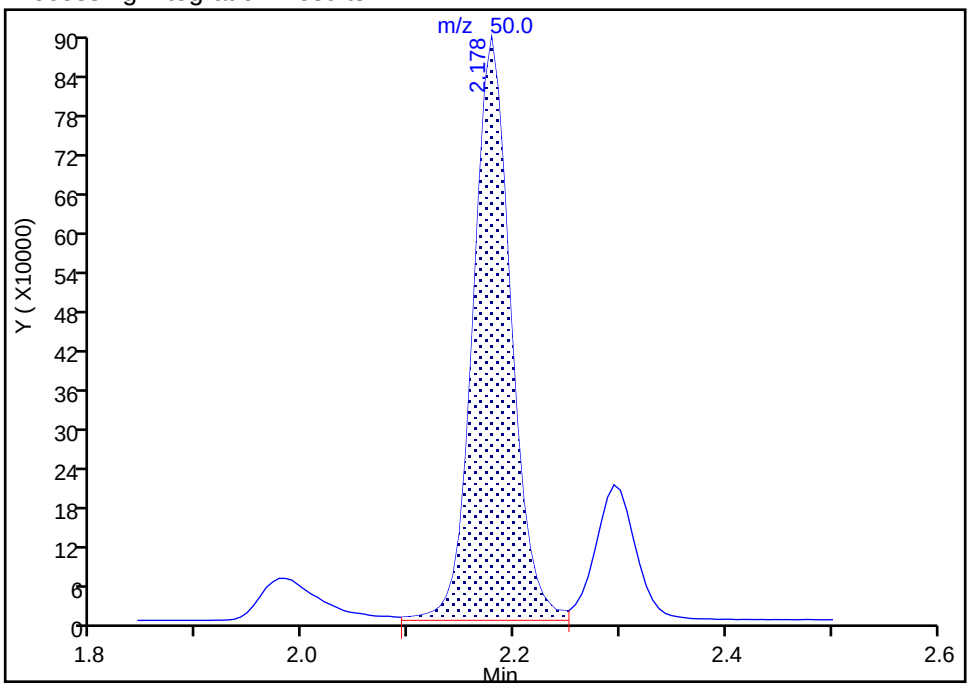
Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I01.D
Injection Date: 16-Mar-2020 16:24:30 Instrument ID: 19930
Lims ID: IC std7
Client ID:
Operator ID: JKH09052 ALS Bottle#: 11 Worklist Smp#: 12
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

4 Chloromethane, CAS: 74-87-3

Signal: 1

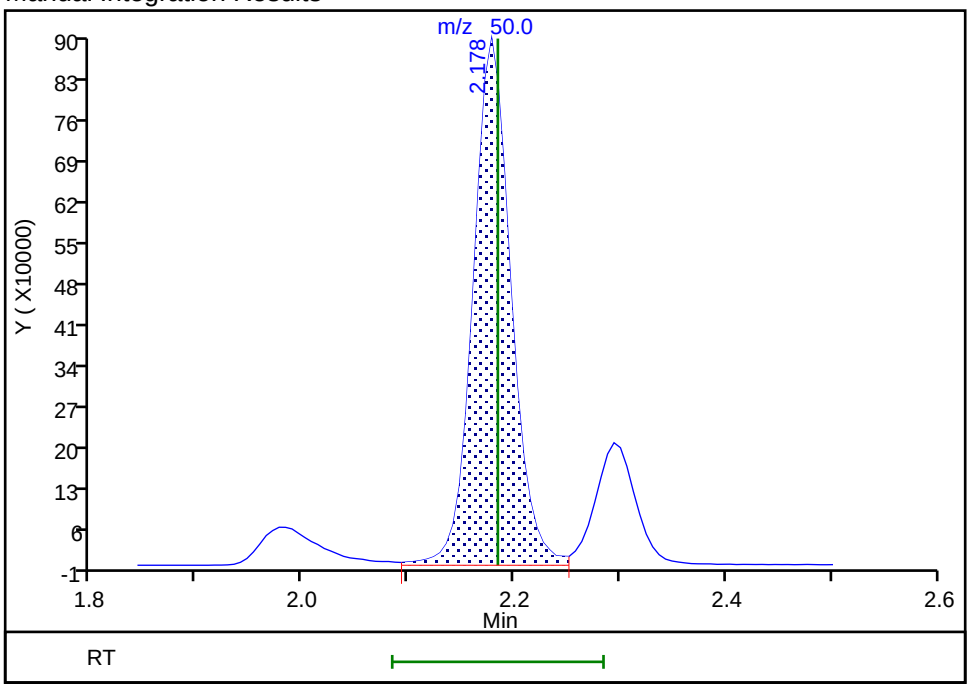
Processing Integration Results

RT: 2.18
Area: 2239128
Amount: 25.459081
Amount Units: ug/l



Manual Integration Results

RT: 2.18
Area: 2240175
Amount: 25.460044
Amount Units: ug/l



Reviewer: campbellme, 17-Mar-2020 23:27:08
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

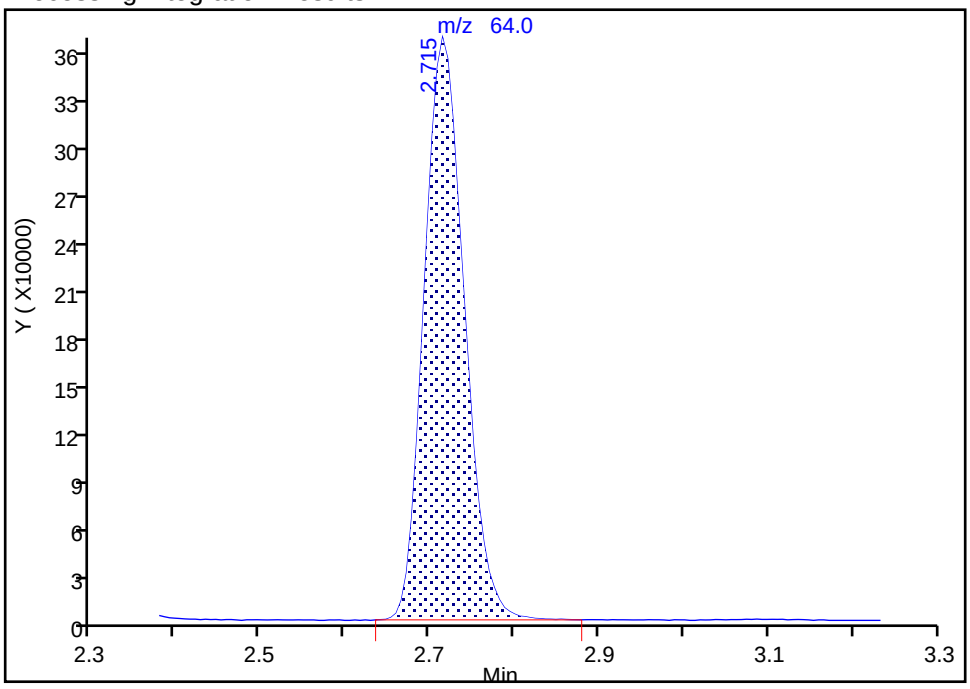
Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I01.D
Injection Date: 16-Mar-2020 16:24:30 Instrument ID: 19930
Lims ID: IC std7
Client ID:
Operator ID: JKH09052 ALS Bottle#: 11 Worklist Smp#: 12
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

8 Chloroethane, CAS: 75-00-3

Signal: 1

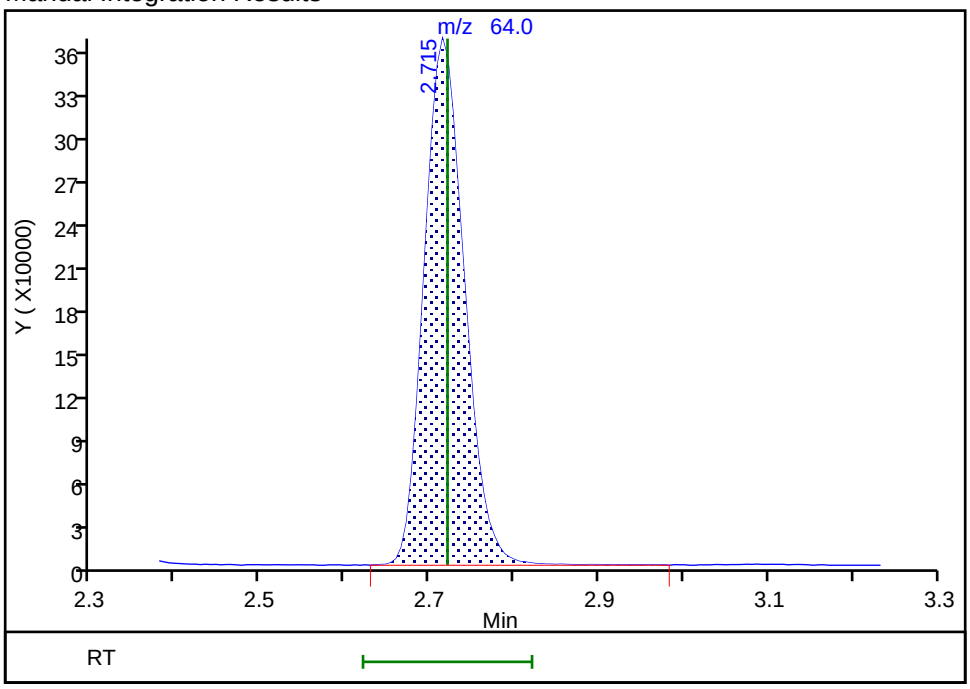
Processing Integration Results

RT: 2.71
Area: 1196677
Amount: 24.819501
Amount Units: ug/l



Manual Integration Results

RT: 2.71
Area: 1203506
Amount: 24.940951
Amount Units: ug/l



Reviewer: campbellme, 18-Mar-2020 21:34:44
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

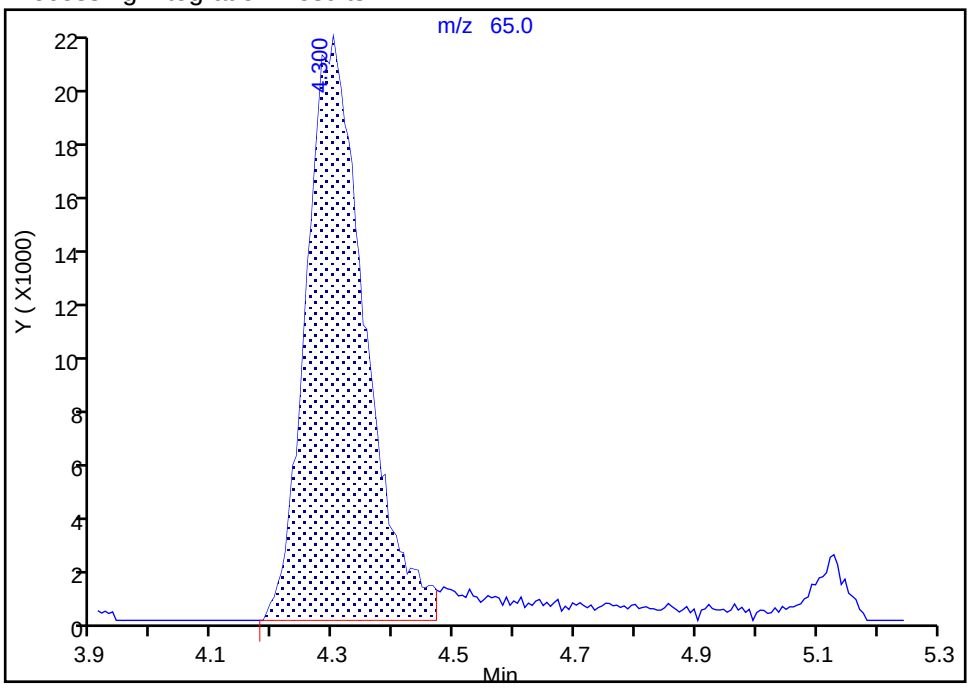
Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I01.D
Injection Date: 16-Mar-2020 16:24:30 Instrument ID: 19930
Lims ID: IC std7
Client ID:
Operator ID: JKH09052 ALS Bottle#: 11 Worklist Smp#: 12
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

* 24 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

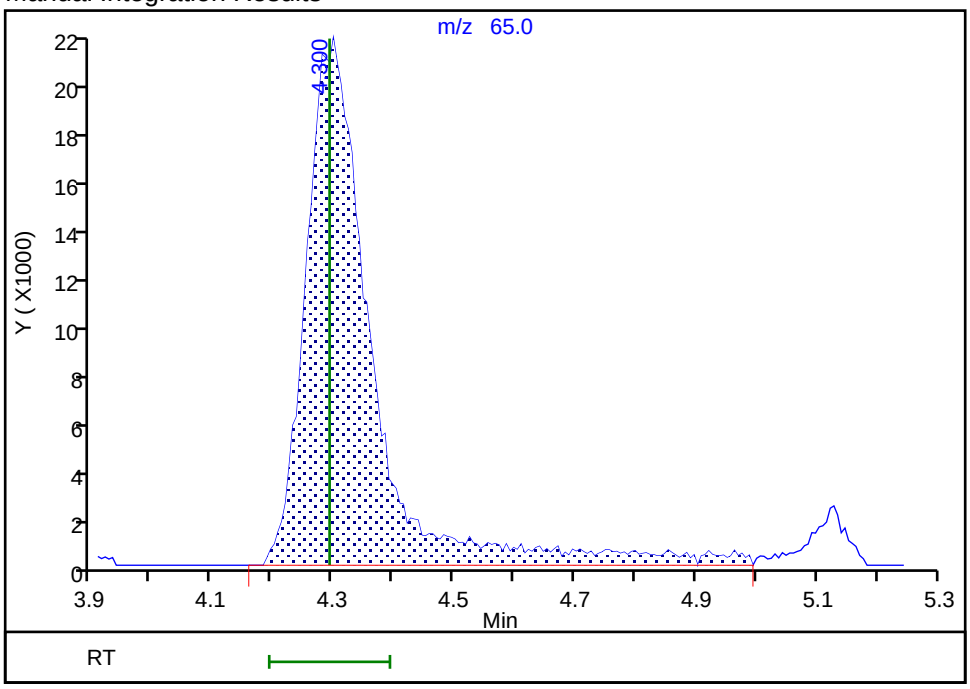
Processing Integration Results

RT: 4.30
Area: 144659
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 4.30
Area: 163141
Amount: 50.000000
Amount Units: ug/l



Reviewer: campbellme, 18-Mar-2020 21:35:03
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

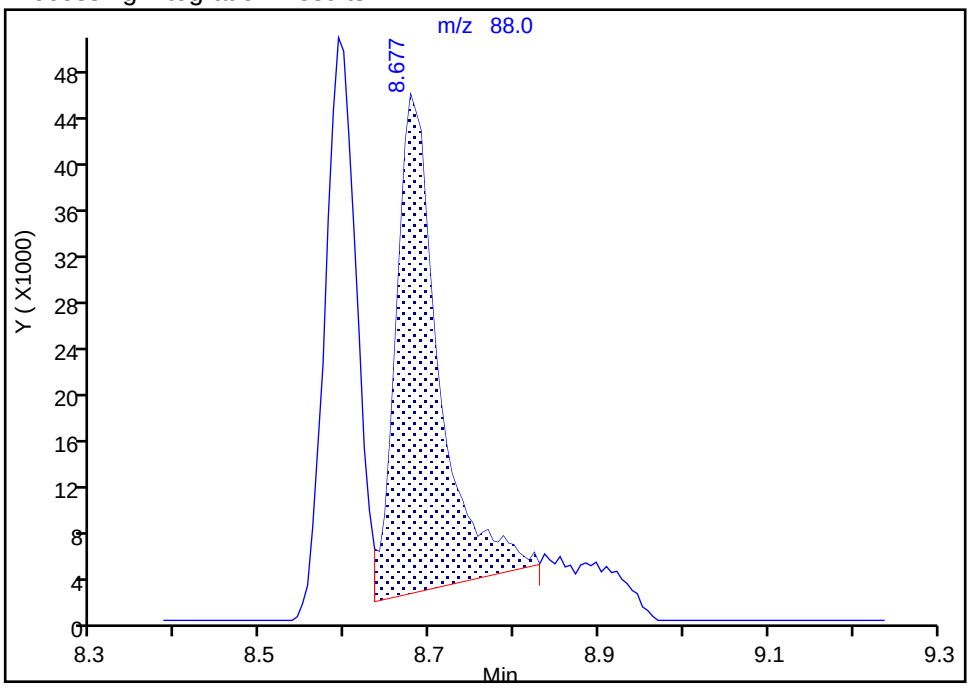
Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I01.D
Injection Date: 16-Mar-2020 16:24:30 Instrument ID: 19930
Lims ID: IC std7
Client ID:
Operator ID: JKH09052 ALS Bottle#: 11 Worklist Smp#: 12
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

65 1,4-Dioxane, CAS: 123-91-1

Signal: 1

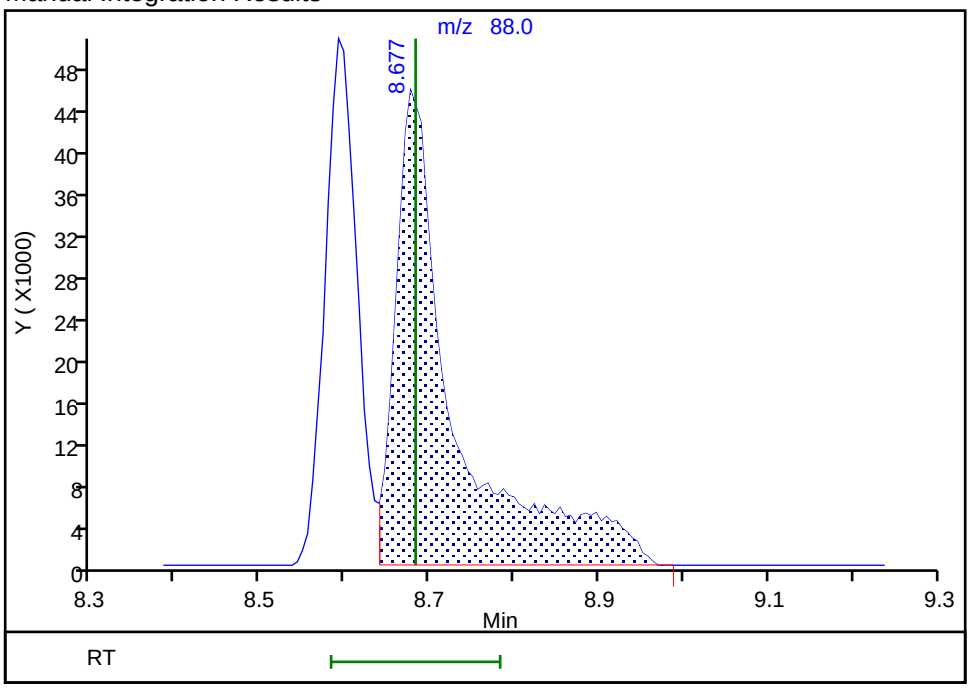
Processing Integration Results

RT: 8.68
Area: 153776
Amount: 1166.0942
Amount Units: ug/l



Manual Integration Results

RT: 8.68
Area: 221774
Amount: 961.5419
Amount Units: ug/l



Reviewer: campbellme, 18-Mar-2020 21:37:49
Audit Action: Assigned New Baseline Audit Reason: Baseline

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I02.D
Lims ID: ICIS - LG
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 16-Mar-2020 16:45:30 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: VSTD010;VSTD010;1;1;;;;;;
Misc. Info.: 8260W25.SUB;;;25;25;;;
Operator ID: JKH09052 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 13-May-2020 18:30:05 Calib Date: 16-Mar-2020 18:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1007

First Level Reviewer: campbellme Date: 18-Mar-2020 21:40:54

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	1.983	0.000	99	1020389	10.0	9.31	M
4 Chloromethane	50	2.184	2.184	0.000	99	898074	10.0	10.2	M
5 Vinyl chloride	62	2.300	2.300	0.000	97	883143	10.0	10.3	
6 Butadiene	39	2.300	2.300	0.000	86	635985	10.0	10.0	
7 Bromomethane	94	2.629	2.629	0.000	90	605057	10.0	10.1	
8 Chloroethane	64	2.715	2.715	0.000	99	488722	10.0	10.1	
9 Dichlorofluoromethane	67	2.965	2.965	0.000	97	1116990	10.0	9.91	
10 Trichlorofluoromethane	101	3.025	3.025	0.000	98	1059857	10.0	10.4	
11 Ethyl ether	59	3.282	3.282	0.000	90	444364	10.0	10.1	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.367	3.367	0.000	91	701358	10.0	10.2	
13 Acrolein	56	3.458	3.458	0.000	99	3685275	500.0	532.3	
14 1,1-Dichloroethene	96	3.605	3.605	0.000	98	554085	10.0	10.3	
15 Acetone	43	3.635	3.635	0.000	100	855032	100.0	98.6	
16 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.641	3.641	0.000	93	623018	10.0	10.6	
17 Iodomethane	142	3.806	3.806	0.000	99	1063805	10.0	10.3	
18 Ethyl bromide	108	3.830	3.830	0.000	99	469558	10.0	10.2	
19 Carbon disulfide	76	3.916	3.916	0.000	99	1573563	10.0	10.2	
21 Methyl acetate	43	4.062	4.062	0.000	97	241267	10.0	9.96	
22 3-Chloro-1-propene	41	4.092	4.092	0.000	91	828579	10.0	10.2	
23 Methylene Chloride	84	4.281	4.281	0.000	90	569463	10.0	10.2	
* 24 t-Butyl alcohol-d10 (IS)	65	4.294	4.294	0.000	0	174786	50.0	50.0	M
25 2-Methyl-2-propanol	59	4.428	4.428	0.000	100	849755	200.0	201.8	
26 Acrylonitrile	53	4.629	4.629	0.000	98	607103	50.0	53.2	
27 Methyl tert-butyl ether	73	4.696	4.696	0.000	95	1412572	10.0	10.2	
28 trans-1,2-Dichloroethene	96	4.708	4.708	0.000	99	592532	10.0	10.2	
29 Hexane	57	5.129	5.129	0.000	91	915761	10.0	10.5	
31 1,1-Dichloroethane	63	5.366	5.366	0.000	96	1072677	10.0	10.4	
32 Isopropyl ether	45	5.421	5.421	0.000	94	1782121	10.0	10.3	
33 2-Chloro-1,3-butadiene	53	5.476	5.476	0.000	90	945809	10.0	10.4	
34 Tert-butyl ethyl ether	59	5.958	5.958	0.000	97	1725201	10.0	10.2	

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	6.171	6.171	0.000	99	1615831	100.0	105.8	
37 cis-1,2-Dichloroethene	96	6.196	6.196	0.000	82	666924	10.0	10.2	
38 2,2-Dichloropropane	77	6.208	6.208	0.000	86	957766	10.0	10.3	
40 Propionitrile	54	6.263	6.263	0.000	99	883801	200.0	208.0	
42 Methacrylonitrile	67	6.476	6.476	0.000	92	1559282	100.0	107.2	
43 Chlorobromomethane	128	6.531	6.531	0.000	88	289006	10.0	10.0	
44 Tetrahydrofuran	71	6.543	6.543	0.000	86	479313	100.0	102.3	
45 Chloroform	83	6.677	6.677	0.000	93	1050753	10.0	10.2	
$ 46 Dibromofluoromethane (Surr)	113	6.897	6.897	0.000	94	486394	10.0	10.0	
47 1,1,1-Trichloroethane	97	6.909	6.909	0.000	98	1033490	10.0	10.3	
48 Cyclohexane	56	7.006	7.006	0.000	89	1080056	10.0	10.2	
50 Carbon tetrachloride	117	7.116	7.116	0.000	88	928589	10.0	10.5	
51 1,1-Dichloropropene	75	7.116	7.116	0.000	95	868999	10.0	10.5	
52 Isobutyl alcohol	41	7.269	7.269	0.000	94	612127	500.0	503.1	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.348	7.348	0.000	0	97836	10.0	9.92	
54 Benzene	78	7.378	7.378	0.000	96	2492767	10.0	10.4	
56 1,2-Dichloroethane	62	7.451	7.451	0.000	98	648929	10.0	10.0	
57 Tert-amyl methyl ether	73	7.567	7.567	0.000	98	1610282	10.0	10.2	
* 58 Fluorobenzene (IS)	96	7.781	7.781	0.000	99	2016512	10.0	10.0	
59 n-Heptane	43	7.793	7.793	0.000	90	898225	10.0	10.8	
60 n-Butanol	56	8.134	8.134	0.000	87	1142481	1000.0	1062.5	
61 Trichloroethene	95	8.262	8.262	0.000	98	661952	10.0	10.3	
62 Methylcyclohexane	83	8.567	8.567	0.000	93	1193666	10.0	10.5	
63 1,2-Dichloropropane	63	8.591	8.591	0.000	72	605037	10.0	10.3	
64 Methyl methacrylate	69	8.671	8.671	0.000	89	314259	10.0	10.7	
65 1,4-Dioxane	88	8.677	8.677	0.000	44	141136	500.0	571.2	M
66 Dibromomethane	93	8.701	8.701	0.000	95	295807	10.0	10.2	
68 Dichlorobromomethane	83	8.939	8.939	0.000	100	783507	10.0	10.3	
69 2-Nitropropane	41	9.201	9.201	0.000	98	985108	100.0	107.6	
72 1-Bromo-2-chloroethane	63	9.329	9.329	0.000	98	627353	10.0	10.3	
73 cis-1,3-Dichloropropene	75	9.475	9.475	0.000	96	951714	10.0	10.6	
74 4-Methyl-2-pentanone (MIBK)	43	9.646	9.646	0.000	96	4056586	100.0	107.3	
$ 75 Toluene-d8 (Surr)	98	9.780	9.780	0.000	93	1908330	10.0	9.94	
76 Toluene	92	9.853	9.853	0.000	98	1599225	10.0	10.4	
78 trans-1,3-Dichloropropene	75	10.109	10.109	0.000	92	803868	10.0	10.4	
79 Ethyl methacrylate	69	10.164	10.164	0.000	88	676318	10.0	10.2	
80 1,1,2-Trichloroethane	97	10.311	10.311	0.000	90	435626	10.0	10.1	
81 Tetrachloroethene	166	10.396	10.396	0.000	98	771679	10.0	10.5	
82 1,3-Dichloropropane	76	10.475	10.475	0.000	88	743778	10.0	10.3	
83 2-Hexanone	43	10.518	10.518	0.000	96	2801042	100.0	107.2	
85 Chlorodibromomethane	129	10.683	10.683	0.000	90	574600	10.0	10.5	
86 Ethylene Dibromide	107	10.798	10.798	0.000	99	423280	10.0	10.4	
* 87 Chlorobenzene-d5 (IS)	117	11.225	11.225	0.000	85	1509705	10.0	10.0	
88 1-Chlorohexane	91	11.225	11.225	0.000	95	966542	10.0	10.2	
90 Chlorobenzene	112	11.249	11.249	0.000	96	1772740	10.0	10.4	
91 1,1,1,2-Tetrachloroethane	131	11.329	11.329	0.000	96	661375	10.0	10.5	
92 Ethylbenzene	91	11.335	11.335	0.000	98	3135198	10.0	10.4	
93 m-Xylene & p-Xylene	106	11.445	11.445	0.000	0	2447965	20.0	20.8	
94 o-Xylene	106	11.774	11.774	0.000	96	1212795	10.0	10.4	
95 Styrene	104	11.786	11.786	0.000	95	1957192	10.0	10.5	
96 Bromoform	173	11.951	11.951	0.000	98	356744	10.0	10.6	
97 Isopropylbenzene	105	12.072	12.072	0.000	95	3276510	10.0	10.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 100 4-Bromofluorobenzene (Surr)	95	12.213	12.213	0.000	92	705064	10.0	9.84	
101 1,1,2,2-Tetrachloroethane	83	12.316	12.316	0.000	94	556023	10.0	10.6	
102 Bromobenzene	156	12.335	12.335	0.000	95	740069	10.0	10.5	
103 trans-1,4-Dichloro-2-butene	53	12.341	12.341	0.000	92	1426343	100.0	107.2	
104 1,2,3-Trichloropropane	110	12.365	12.365	0.000	83	149666	10.0	10.2	
105 N-Propylbenzene	91	12.402	12.402	0.000	99	3673082	10.0	10.5	
106 2-Chlorotoluene	126	12.475	12.475	0.000	97	747923	10.0	10.6	
107 1,3,5-Trimethylbenzene	105	12.536	12.536	0.000	94	2712914	10.0	10.7	
108 4-Chlorotoluene	126	12.566	12.566	0.000	97	751944	10.0	10.5	
109 tert-Butylbenzene	134	12.774	12.774	0.000	93	613177	10.0	10.8	
110 Pentachloroethane	167	12.810	12.810	0.000	93	506329	10.0	10.5	
111 1,2,4-Trimethylbenzene	105	12.816	12.816	0.000	97	2784291	10.0	10.7	
112 sec-Butylbenzene	105	12.938	12.938	0.000	94	3532328	10.0	10.8	
113 1,3-Dichlorobenzene	146	13.042	13.042	0.000	98	1446570	10.0	10.5	
114 4-Isopropyltoluene	119	13.048	13.048	0.000	97	3067350	10.0	10.9	
* 115 1,4-Dichlorobenzene-d4	152	13.097	13.097	0.000	94	813828	10.0	10.0	
116 1,4-Dichlorobenzene	146	13.115	13.115	0.000	95	1416735	10.0	10.4	
117 1,2,3-Trimethylbenzene	120	13.121	13.121	0.000	98	1157997	10.0	10.3	
118 Benzyl chloride	126	13.188	13.188	0.000	98	253323	10.0	10.5	
119 n-Butylbenzene	92	13.334	13.334	0.000	96	1452958	10.0	11.1	
120 1,2-Dichlorobenzene	146	13.371	13.371	0.000	99	1313773	10.0	10.4	
122 1,2-Dibromo-3-Chloropropane	155	13.914	13.914	0.000	88	89366	10.0	10.3	
123 1,3,5-Trichlorobenzene	180	14.036	14.036	0.000	98	1100723	10.0	11.0	
124 1,2,4-Trichlorobenzene	180	14.462	14.462	0.000	94	920606	10.0	10.9	
125 Hexachlorobutadiene	225	14.542	14.542	0.000	97	395472	10.0	11.1	
126 Naphthalene	128	14.645	14.645	0.000	97	1751429	10.0	10.5	
127 1,2,3-Trichlorobenzene	180	14.785	14.785	0.000	95	754804	10.0	10.8	
144 2-ethoxy-2-methyl butane	1		0.000				ND	ND	U
137 2-Methylnaphthalene	142		0.000				ND	ND	U
135 p-Diethylbenzene	1		0.000				ND	ND	U
134 Isopropyl alcohol	45		0.000				ND	ND	U

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

U - Marked Undetected

Reagents:

MSV_RV1_826_00008	Amount Added: 10.00	Units: uL	
MSV_RV4_826_00009	Amount Added: 10.00	Units: uL	
MSV_RV4GAS826_00022	Amount Added: 10.00	Units: uL	
MSV_31_826ISS_00002	Amount Added: 5.00	Units: uL	Run Reagent

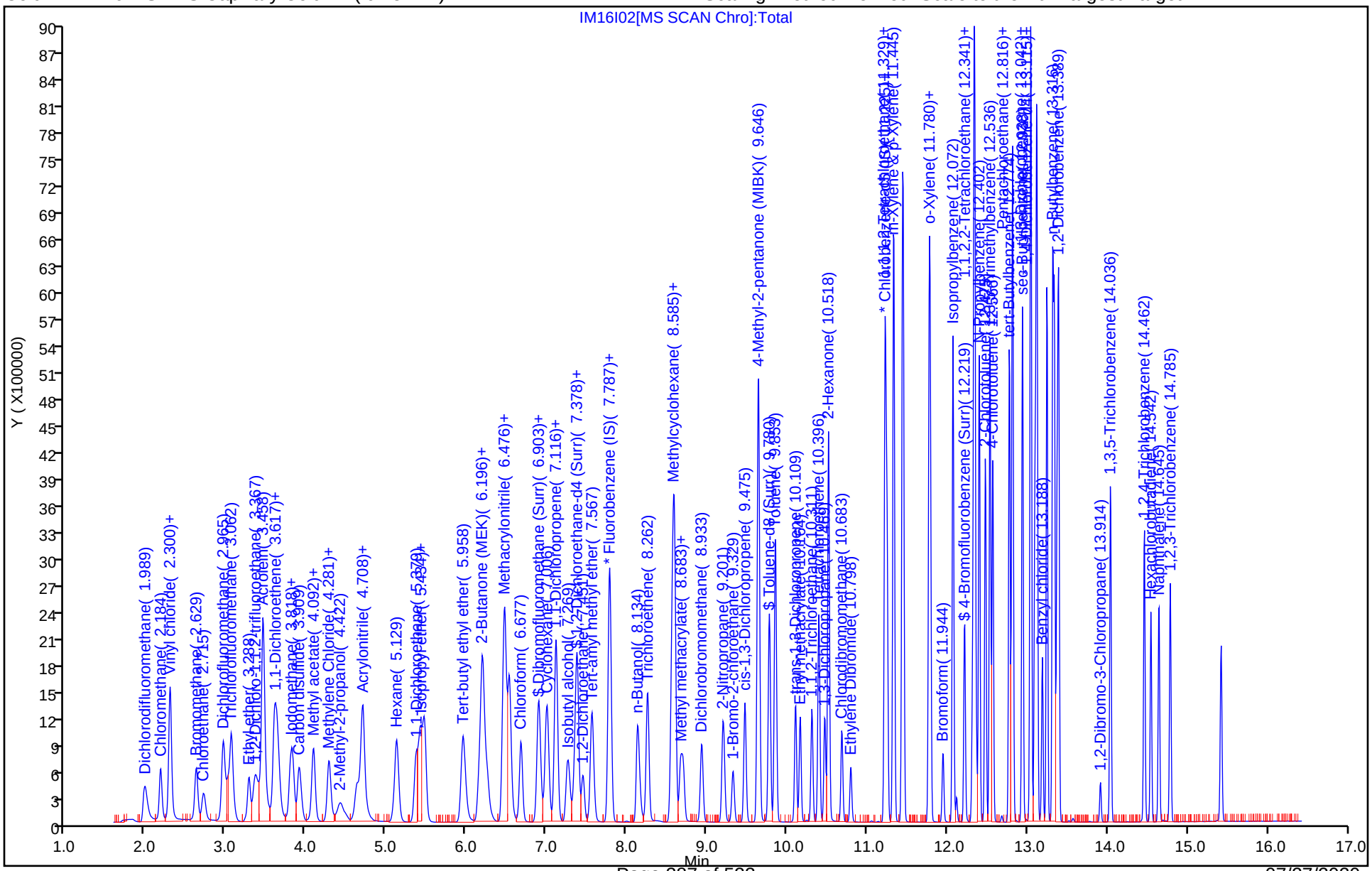
Report Date: 13-May-2020 18:30:07 Chrom Revision: 2.3 12-May-2020 10:44:46

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I02.D

Injection Date:	16-Mar-2020 16:45:30	Instrument ID:	19930	Operator ID:	JKH09052
Lims ID:	ICIS - LG			Worklist Smp#:	13
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
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

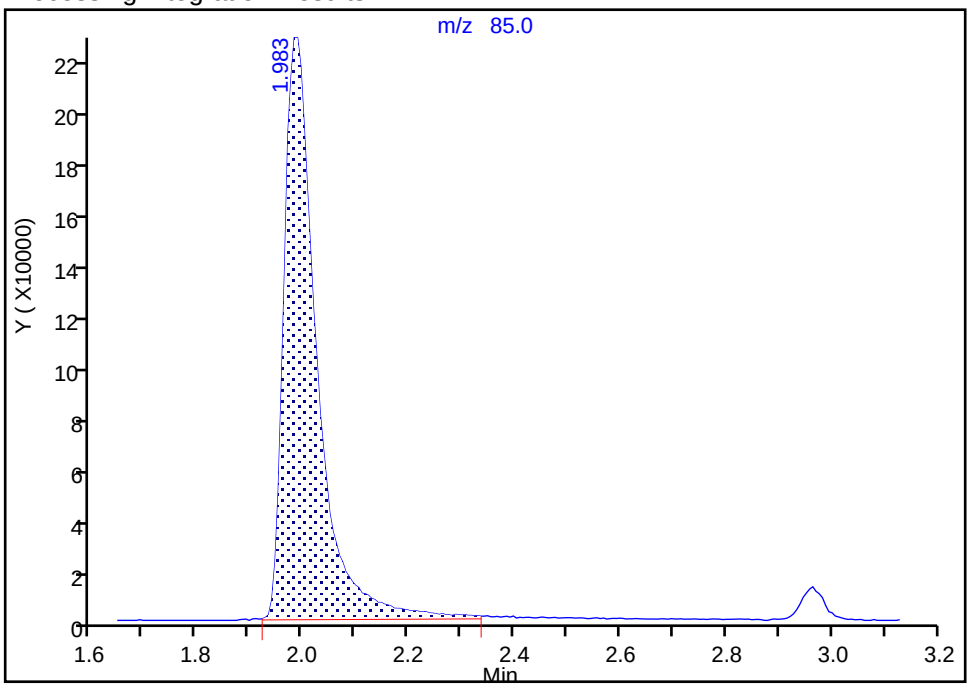
Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I02.D
Injection Date: 16-Mar-2020 16:45:30 Instrument ID: 19930
Lims ID: ICIS - LG
Client ID:
Operator ID: JKH09052 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

1 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

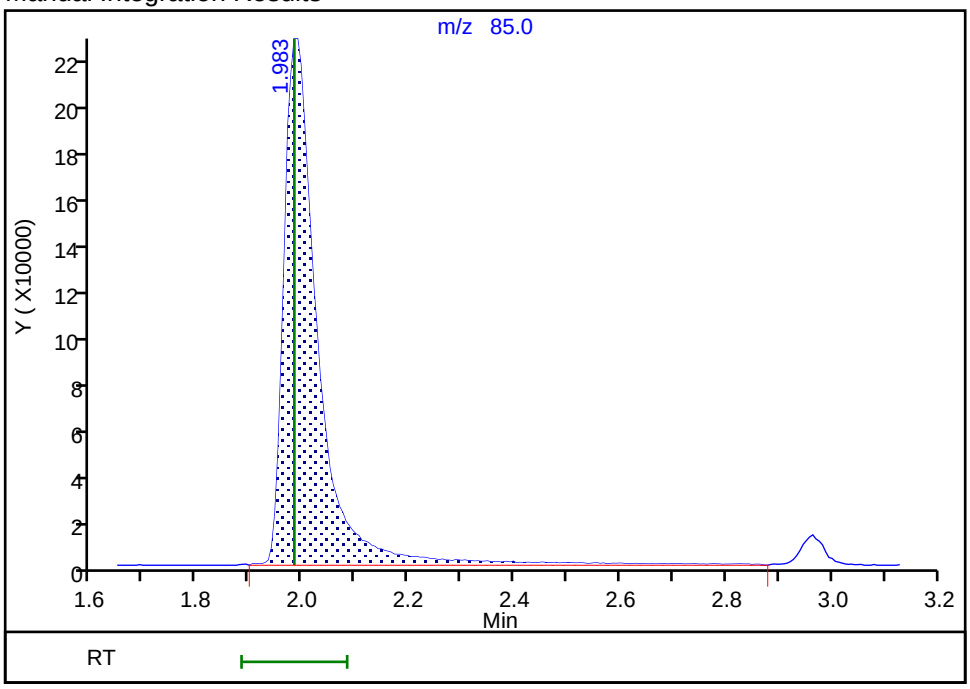
Processing Integration Results

RT: 1.98
Area: 984962
Amount: 10.331427
Amount Units: ug/l



Manual Integration Results

RT: 1.98
Area: 1020389
Amount: 9.307987
Amount Units: ug/l



Reviewer: campbellme, 18-Mar-2020 21:38:47
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

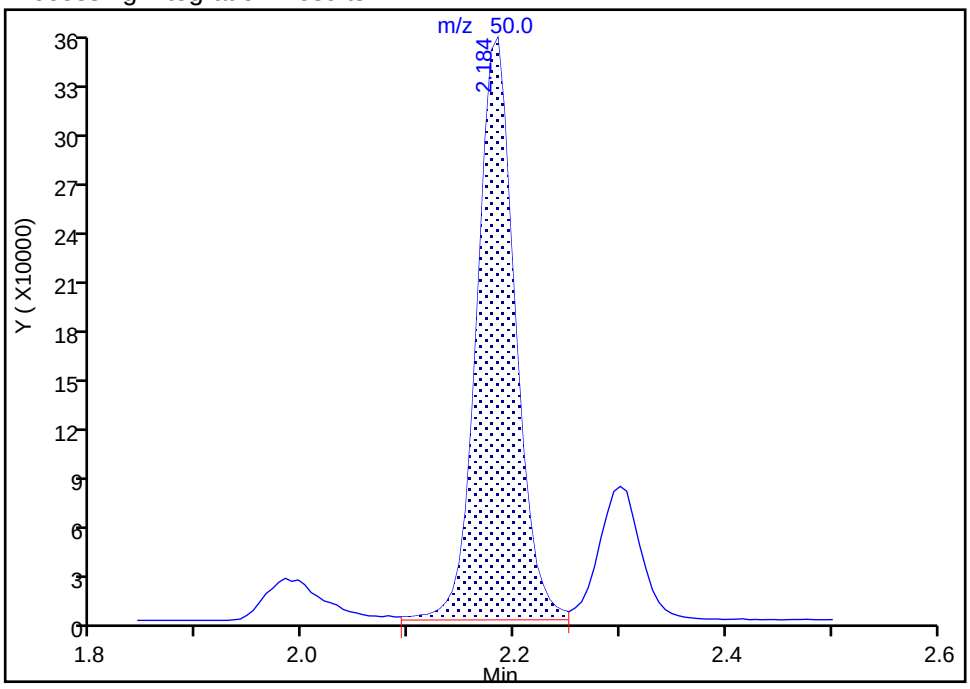
Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I02.D
Injection Date: 16-Mar-2020 16:45:30 Instrument ID: 19930
Lims ID: ICIS - LG
Client ID:
Operator ID: JKH09052 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

4 Chloromethane, CAS: 74-87-3

Signal: 1

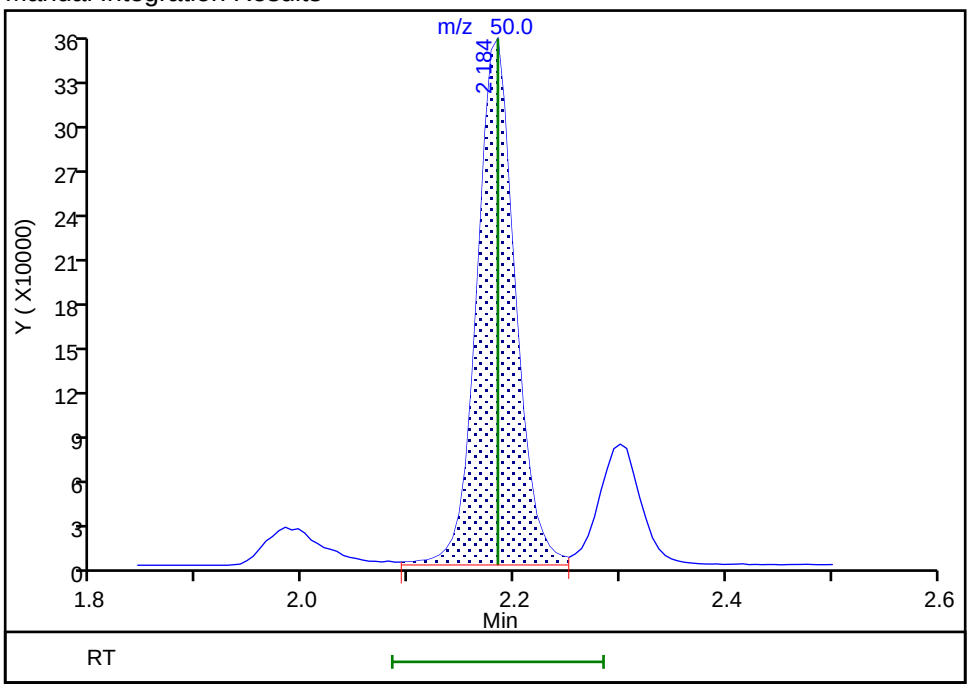
Processing Integration Results

RT: 2.18
Area: 897071
Amount: 10.158675
Amount Units: ug/l



Manual Integration Results

RT: 2.18
Area: 898074
Amount: 10.166356
Amount Units: ug/l



Reviewer: campbellme, 18-Mar-2020 21:39:17
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

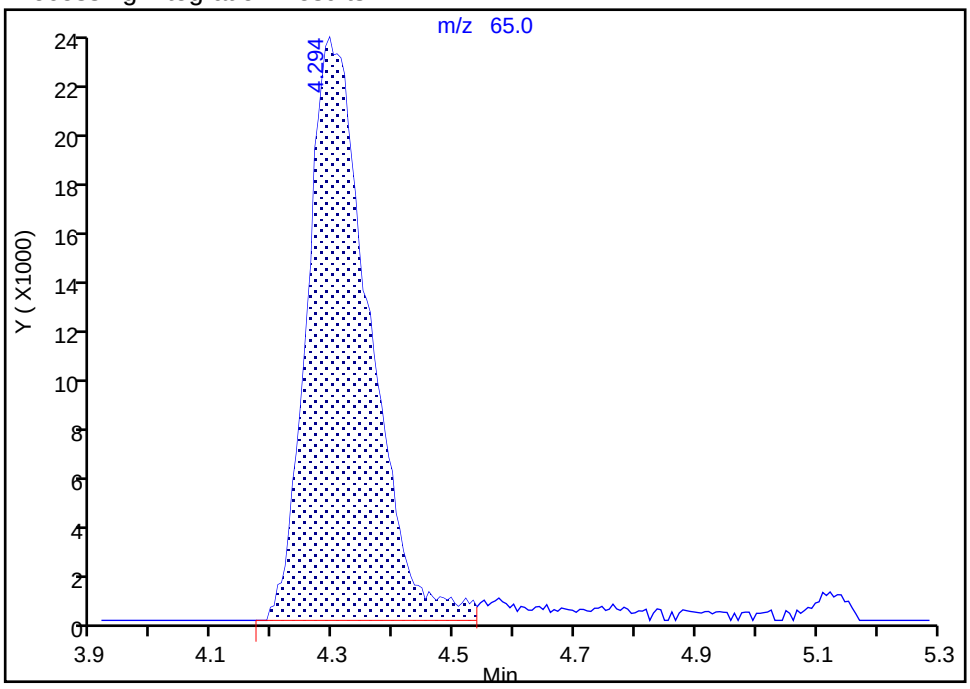
Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I02.D
Injection Date: 16-Mar-2020 16:45:30 Instrument ID: 19930
Lims ID: ICIS - LG
Client ID:
Operator ID: JKH09052 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

* 24 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

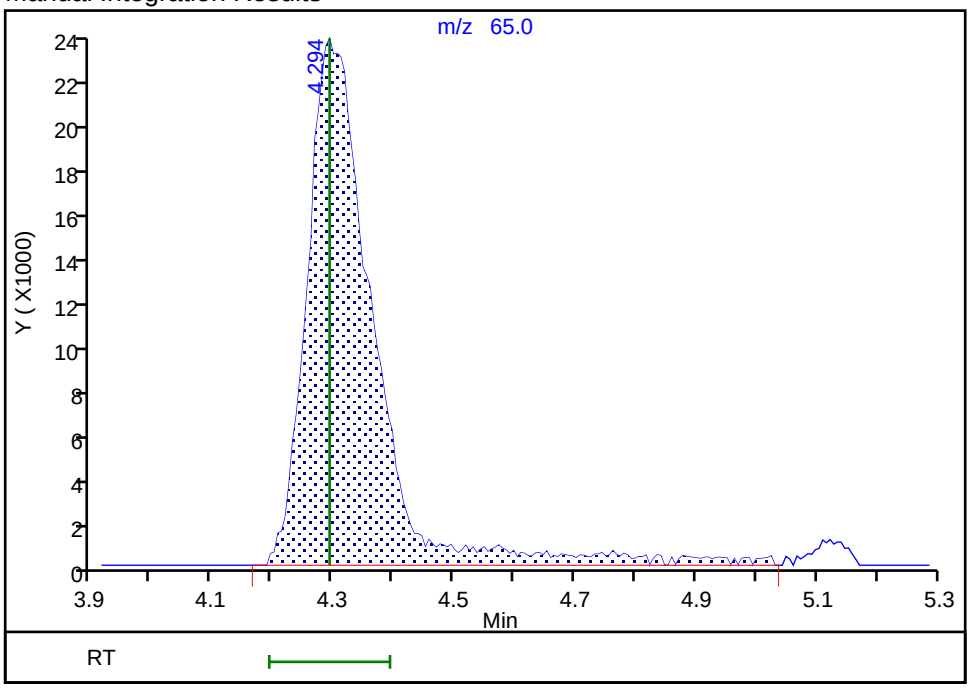
Processing Integration Results

RT: 4.29
Area: 163221
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 4.29
Area: 174786
Amount: 50.000000
Amount Units: ug/l



Reviewer: campbellme, 18-Mar-2020 21:39:49
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

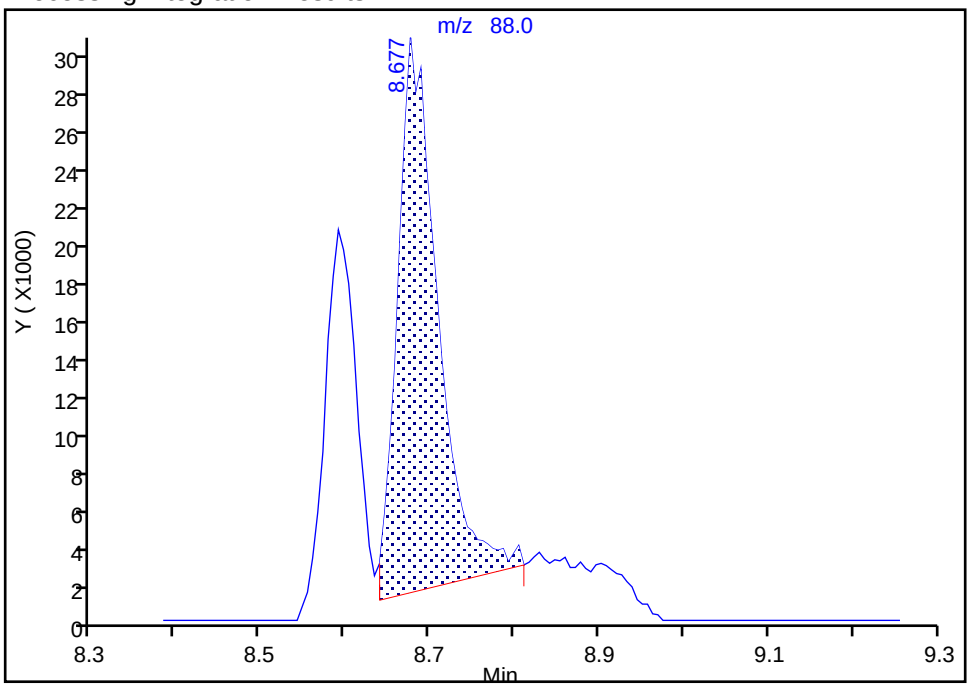
Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I02.D
Injection Date: 16-Mar-2020 16:45:30 Instrument ID: 19930
Lims ID: ICIS - LG
Client ID:
Operator ID: JKH09052 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

65 1,4-Dioxane, CAS: 123-91-1

Signal: 1

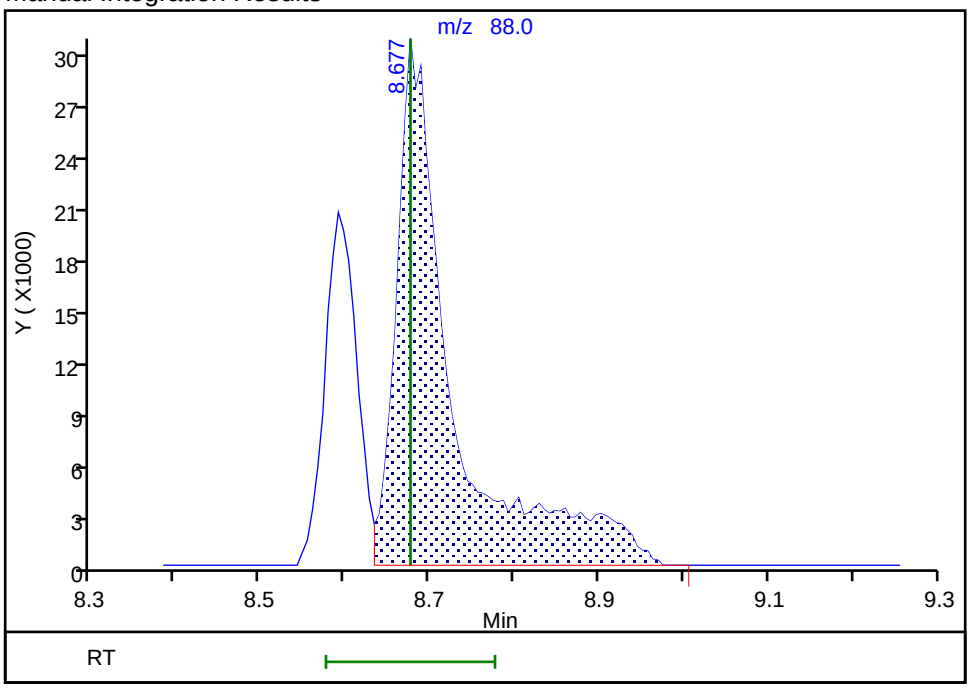
Processing Integration Results

RT: 8.68
Area: 96173
Amount: 502.3752
Amount Units: ug/l



Manual Integration Results

RT: 8.68
Area: 141136
Amount: 571.1522
Amount Units: ug/l



Reviewer: campbellme, 18-Mar-2020 21:40:30
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\20200317-1775.b\IM16I03.D
Lims ID: IC std5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 16-Mar-2020 17:06:30 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: VSTD005;VSTD005;1;1;;;;;;
Misc. Info.: 8260W25.SUB;;;25;25;;;
Operator ID: JKH09052 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 13-May-2020 18:30:15 Calib Date: 16-Mar-2020 18:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1007

First Level Reviewer: campbellme Date: 18-Mar-2020 21:42:49

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	1.983	0.000	99	507814	5.00	4.63	M
4 Chloromethane	50	2.184	2.184	0.000	99	449250	5.00	5.08	M
5 Vinyl chloride	62	2.300	2.300	0.000	98	442830	5.00	5.17	
6 Butadiene	39	2.300	2.300	0.000	83	309498	5.00	4.88	M
7 Bromomethane	94	2.629	2.629	0.000	91	310370	5.00	5.17	
8 Chloroethane	64	2.721	2.715	0.006	100	249607	5.00	5.15	
9 Dichlorofluoromethane	67	2.964	2.965	0.000	97	568382	5.00	5.04	
10 Trichlorofluoromethane	101	3.025	3.025	0.000	97	526540	5.00	5.16	
11 Ethyl ether	59	3.288	3.282	0.006	90	223830	5.00	5.10	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.367	3.367	0.000	91	338811	5.00	4.90	
13 Acrolein	56	3.464	3.458	0.006	99	1864004	250.0	251.2	
14 1,1-Dichloroethene	96	3.605	3.605	0.000	98	271165	5.00	5.02	
15 Acetone	43	3.635	3.635	0.000	100	441964	50.0	47.5	
16 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.635	3.641	-0.006	90	304860	5.00	5.20	
17 Iodomethane	142	3.806	3.806	0.000	99	521309	5.00	5.06	
18 Ethyl bromide	108	3.830	3.830	0.000	99	235938	5.00	5.14	
19 Carbon disulfide	76	3.916	3.916	0.000	99	766906	5.00	4.97	
21 Methyl acetate	43	4.062	4.062	0.000	97	114270	5.00	4.71	
22 3-Chloro-1-propene	41	4.092	4.092	0.000	90	415708	5.00	5.10	
23 Methylene Chloride	84	4.287	4.281	0.006	90	279336	5.00	4.98	
* 24 t-Butyl alcohol-d10 (IS)	65	4.300	4.294	0.006	0	187359	50.0	50.0	M
25 2-Methyl-2-propanol	59	4.428	4.428	0.000	100	444257	100.0	98.4	
26 Acrylonitrile	53	4.629	4.629	0.000	99	307372	25.0	25.1	
27 Methyl tert-butyl ether	73	4.690	4.696	-0.006	94	713424	5.00	5.15	
28 trans-1,2-Dichloroethene	96	4.702	4.708	-0.006	99	290960	5.00	5.01	
29 Hexane	57	5.129	5.129	0.000	92	430008	5.00	4.92	
31 1,1-Dichloroethane	63	5.373	5.366	0.007	96	521875	5.00	5.06	
32 Isopropyl ether	45	5.421	5.421	0.000	93	872306	5.00	5.05	
33 2-Chloro-1,3-butadiene	53	5.476	5.476	0.000	91	462107	5.00	5.07	
34 Tert-butyl ethyl ether	59	5.958	5.958	0.000	97	859911	5.00	5.06	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
S 35 1,2-Dichloroethene, Total	100				0			10.1	
36 2-Butanone (MEK)	43	6.171	6.171	0.000	99	821747	50.0	50.2	
37 cis-1,2-Dichloroethene	96	6.202	6.196	0.006	81	328795	5.00	5.05	
38 2,2-Dichloropropane	77	6.214	6.208	0.006	85	469089	5.00	5.02	
40 Propionitrile	54	6.269	6.263	0.006	99	450837	100.0	99.0	
42 Methacrylonitrile	67	6.476	6.476	0.000	91	785361	50.0	50.4	
43 Chlorobromomethane	128	6.531	6.531	0.000	89	145894	5.00	5.06	
44 Tetrahydrofuran	71	6.543	6.543	0.000	84	246436	50.0	49.1	
45 Chloroform	83	6.683	6.677	0.006	93	519324	5.00	5.03	
$ 46 Dibromofluoromethane (Surr)	113	6.897	6.897	0.000	94	489679	10.0	10.1	
47 1,1,1-Trichloroethane	97	6.909	6.909	0.000	98	503133	5.00	5.03	
48 Cyclohexane	56	7.006	7.006	0.000	89	523555	5.00	4.96	
50 Carbon tetrachloride	117	7.116	7.116	0.000	93	452962	5.00	5.10	
51 1,1-Dichloropropene	75	7.116	7.116	0.000	96	417889	5.00	5.05	
52 Isobutyl alcohol	41	7.269	7.269	-0.001	94	321827	250.0	246.7	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.354	7.348	0.006	0	97249	10.0	9.85	
54 Benzene	78	7.384	7.378	0.006	97	1213141	5.00	5.04	
56 1,2-Dichloroethane	62	7.451	7.451	0.000	98	315451	5.00	4.87	
57 Tert-amyl methyl ether	73	7.567	7.567	0.000	98	802048	5.00	5.08	
* 58 Fluorobenzene (IS)	96	7.781	7.781	0.000	99	2018146	10.0	10.0	
59 n-Heptane	43	7.793	7.793	0.000	90	422462	5.00	5.07	
60 n-Butanol	56	8.134	8.134	0.000	87	595233	500.0	516.4	
61 Trichloroethene	95	8.262	8.262	0.000	98	322098	5.00	5.02	
62 Methylcyclohexane	83	8.567	8.567	0.000	93	595183	5.00	5.21	
63 1,2-Dichloropropane	63	8.591	8.591	0.000	88	297311	5.00	5.08	
64 Methyl methacrylate	69	8.671	8.671	0.000	87	159170	5.00	5.04	
65 1,4-Dioxane	88	8.677	8.677	0.000	45	69311	250.0	261.7	M
66 Dibromomethane	93	8.701	8.701	0.000	95	145809	5.00	5.02	
68 Dichlorobromomethane	83	8.933	8.939	-0.006	100	382425	5.00	5.02	
69 2-Nitropropane	41	9.201	9.201	0.000	98	495450	50.0	50.5	
72 1-Bromo-2-chloroethane	63	9.323	9.329	-0.006	99	312286	5.00	5.14	
73 cis-1,3-Dichloropropene	75	9.475	9.475	0.000	96	464109	5.00	5.15	
74 4-Methyl-2-pentanone (MIBK)	43	9.640	9.646	-0.006	96	2060954	50.0	50.9	
$ 75 Toluene-d8 (Surr)	98	9.780	9.780	0.000	93	1921017	10.0	10.1	
76 Toluene	92	9.853	9.853	0.000	98	776857	5.00	5.09	
S 77 1,3-Dichloropropene, Total	100				0			10.2	
78 trans-1,3-Dichloropropene	75	10.109	10.109	0.000	92	394285	5.00	5.10	
79 Ethyl methacrylate	69	10.164	10.164	0.000	88	335368	5.00	5.09	
80 1,1,2-Trichloroethane	97	10.311	10.311	0.000	91	214127	5.00	5.01	
81 Tetrachloroethene	166	10.396	10.396	0.000	98	372446	5.00	5.11	
82 1,3-Dichloropropane	76	10.469	10.475	-0.006	89	368157	5.00	5.12	
83 2-Hexanone	43	10.518	10.518	0.000	96	1435758	50.0	51.3	
85 Chlorodibromomethane	129	10.682	10.683	-0.001	90	281805	5.00	5.17	
86 Ethylene Dibromide	107	10.798	10.798	0.000	98	208754	5.00	5.17	
* 87 Chlorobenzene-d5 (IS)	117	11.225	11.225	0.000	86	1502563	10.0	10.0	
88 1-Chlorohexane	91	11.231	11.225	0.006	95	464220	5.00	4.95	
S 89 Xylenes, Total	106				0			15.3	
90 Chlorobenzene	112	11.249	11.249	0.000	96	862744	5.00	5.10	
91 1,1,1,2-Tetrachloroethane	131	11.329	11.329	0.000	97	319438	5.00	5.07	
92 Ethylbenzene	91	11.335	11.335	0.000	98	1522716	5.00	5.08	
93 m-Xylene & p-Xylene	106	11.445	11.445	0.000	0	1197162	10.0	10.2	
94 o-Xylene	106	11.774	11.774	0.000	96	587908	5.00	5.05	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
95 Styrene	104	11.786	11.786	0.000	95	955403	5.00	5.15	
96 Bromoform	173	11.944	11.951	-0.007	97	174165	5.00	5.19	
97 Isopropylbenzene	105	12.072	12.072	0.000	95	1587251	5.00	5.15	
$ 100 4-Bromofluorobenzene (Surr)	95	12.219	12.213	0.006	93	716065	10.0	10.0	
101 1,1,2,2-Tetrachloroethane	83	12.316	12.316	0.000	92	273453	5.00	5.18	
102 Bromobenzene	156	12.335	12.335	0.000	94	362833	5.00	5.12	
103 trans-1,4-Dichloro-2-butene	53	12.341	12.341	0.000	92	722433	50.0	50.7	
104 1,2,3-Trichloropropane	110	12.365	12.365	0.000	83	77402	5.00	5.26	
105 N-Propylbenzene	91	12.402	12.402	0.000	99	1804651	5.00	5.15	
106 2-Chlorotoluene	126	12.475	12.475	0.000	97	362786	5.00	5.13	
107 1,3,5-Trimethylbenzene	105	12.536	12.536	0.000	94	1309251	5.00	5.13	
108 4-Chlorotoluene	126	12.566	12.566	0.000	98	367758	5.00	5.11	
109 tert-Butylbenzene	134	12.774	12.774	0.000	93	295952	5.00	5.18	
110 Pentachloroethane	167	12.810	12.810	0.000	95	249082	5.00	5.16	
111 1,2,4-Trimethylbenzene	105	12.816	12.816	0.000	97	1346411	5.00	5.13	
112 sec-Butylbenzene	105	12.938	12.938	0.000	94	1707579	5.00	5.21	
113 1,3-Dichlorobenzene	146	13.036	13.042	-0.006	98	707528	5.00	5.10	
114 4-Isopropyltoluene	119	13.048	13.048	0.000	97	1467497	5.00	5.19	
* 115 1,4-Dichlorobenzene-d4	152	13.097	13.097	0.000	98	816859	10.0	10.0	
116 1,4-Dichlorobenzene	146	13.115	13.115	0.000	95	693277	5.00	5.05	
117 1,2,3-Trimethylbenzene	120	13.121	13.121	0.000	98	581033	5.00	5.15	
118 Benzyl chloride	126	13.188	13.188	0.000	98	124318	5.00	5.14	
119 n-Butylbenzene	92	13.334	13.334	0.000	97	685755	5.00	5.21	
120 1,2-Dichlorobenzene	146	13.371	13.371	0.000	99	642903	5.00	5.07	
122 1,2-Dibromo-3-Chloropropane	155	13.914	13.914	0.000	88	43766	5.00	5.02	
123 1,3,5-Trichlorobenzene	180	14.042	14.036	0.006	98	511228	5.00	5.09	
124 1,2,4-Trichlorobenzene	180	14.462	14.462	0.000	94	431202	5.00	5.10	
125 Hexachlorobutadiene	225	14.541	14.542	-0.001	97	182926	5.00	5.13	
126 Naphthalene	128	14.645	14.645	0.000	97	844888	5.00	5.07	
127 1,2,3-Trichlorobenzene	180	14.785	14.785	0.000	96	355728	5.00	5.05	
134 Isopropyl alcohol	45		0.000				ND	ND	U
135 p-Diethylbenzene	1		0.000				ND	ND	U
137 2-Methylnaphthalene	142		0.000				ND	ND	U
144 2-ethoxy-2-methyl butane	1		0.000				ND	ND	U

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

U - Marked Undetected

Reagents:

MSV_RV1_826_00008	Amount Added:	5.00	Units: uL	
MSV_RV4_826_00009	Amount Added:	5.00	Units: uL	
MSV_RV4GAS826_00022	Amount Added:	5.00	Units: uL	
MSV_31_826ISS_00002	Amount Added:	5.00	Units: uL	Run Reagent

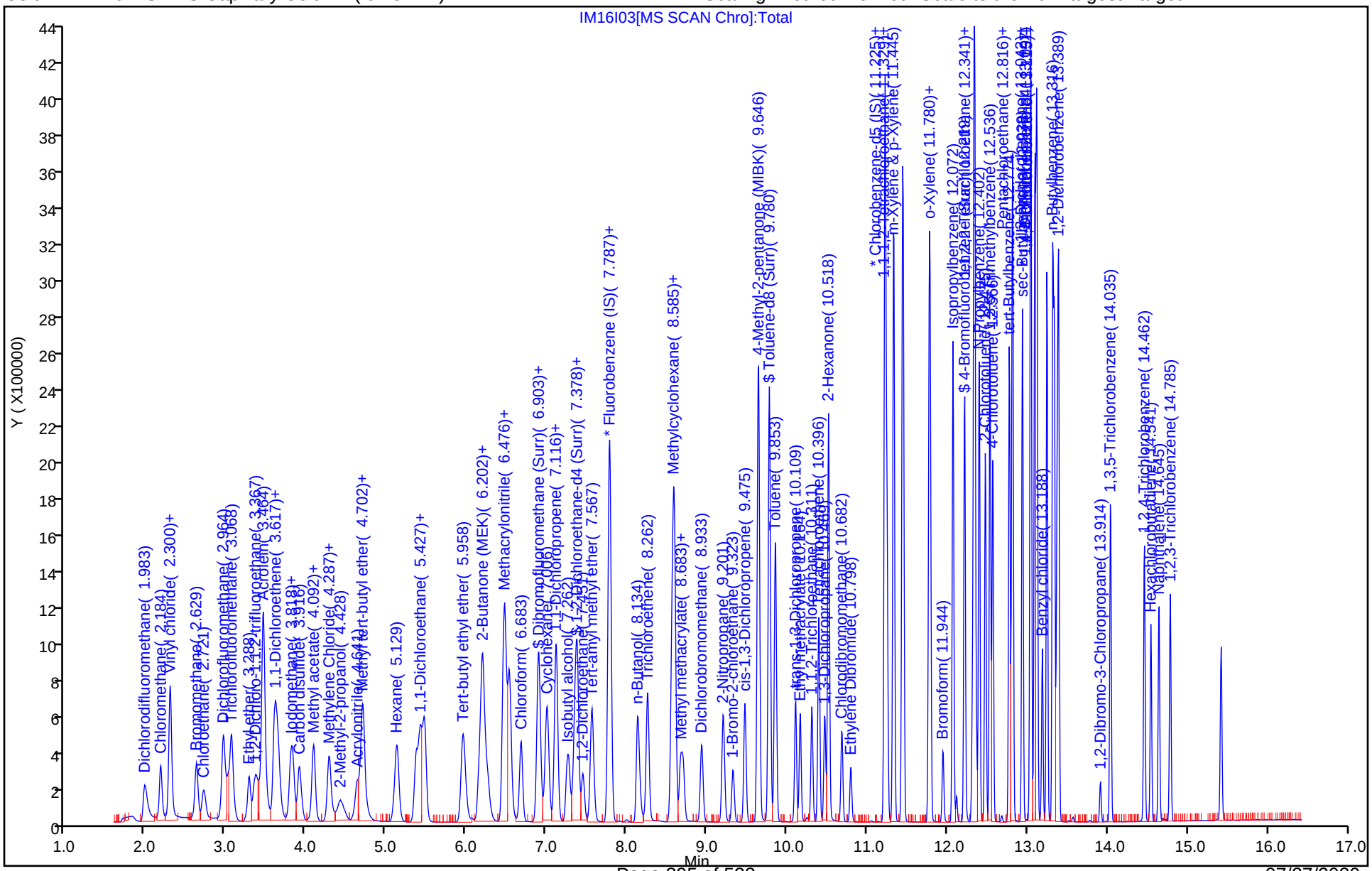
Report Date: 13-May-2020 18:30:16 Chrom Revision: 2.3 12-May-2020 10:44:46

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I03.D

Injection Date:	16-Mar-2020 17:06:30	Instrument ID:	19930	Operator ID:	JKH09052
Lims ID:	IC std5			Worklist Smp#:	14
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
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

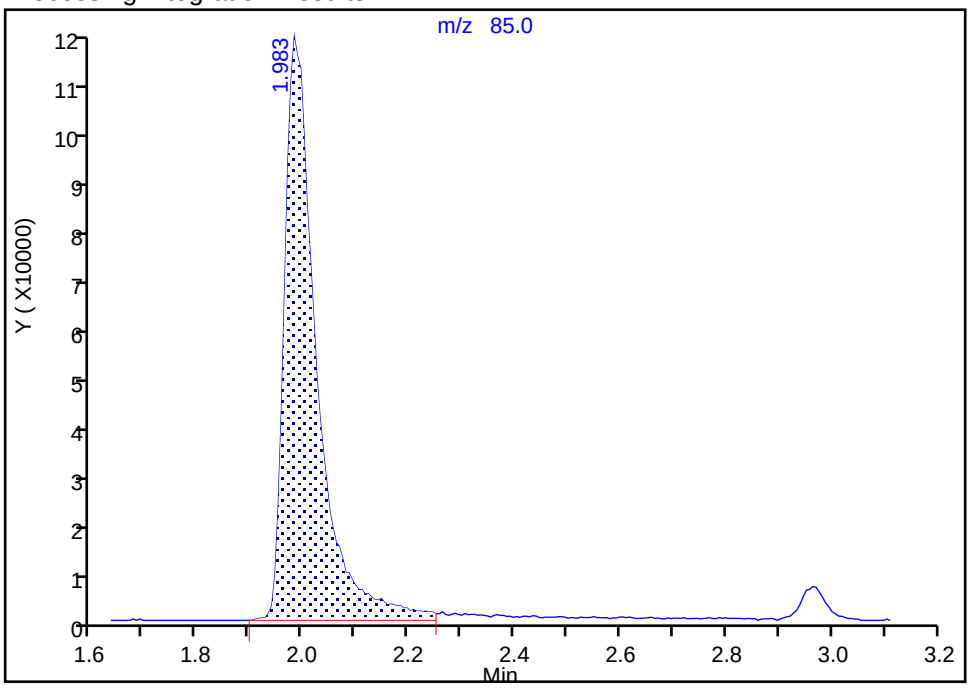
Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I03.D
Injection Date: 16-Mar-2020 17:06:30 Instrument ID: 19930
Lims ID: IC std5
Client ID:
Operator ID: JKH09052 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

1 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

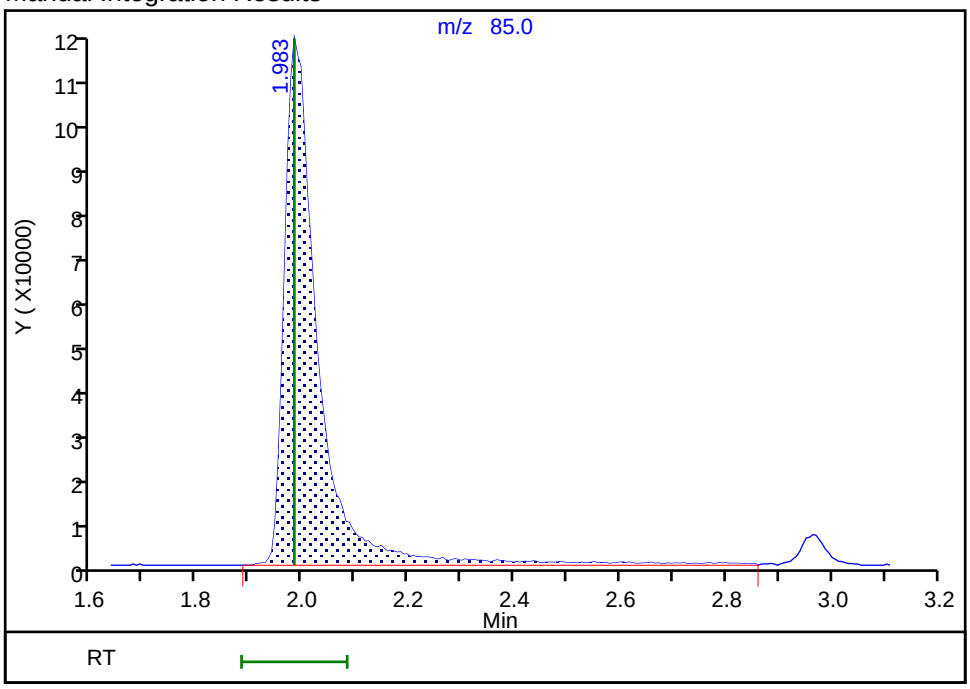
Processing Integration Results

RT: 1.98
Area: 484513
Amount: 5.051206
Amount Units: ug/l



Manual Integration Results

RT: 1.98
Area: 507814
Amount: 4.628528
Amount Units: ug/l



Reviewer: campbellme, 18-Mar-2020 21:41:14
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

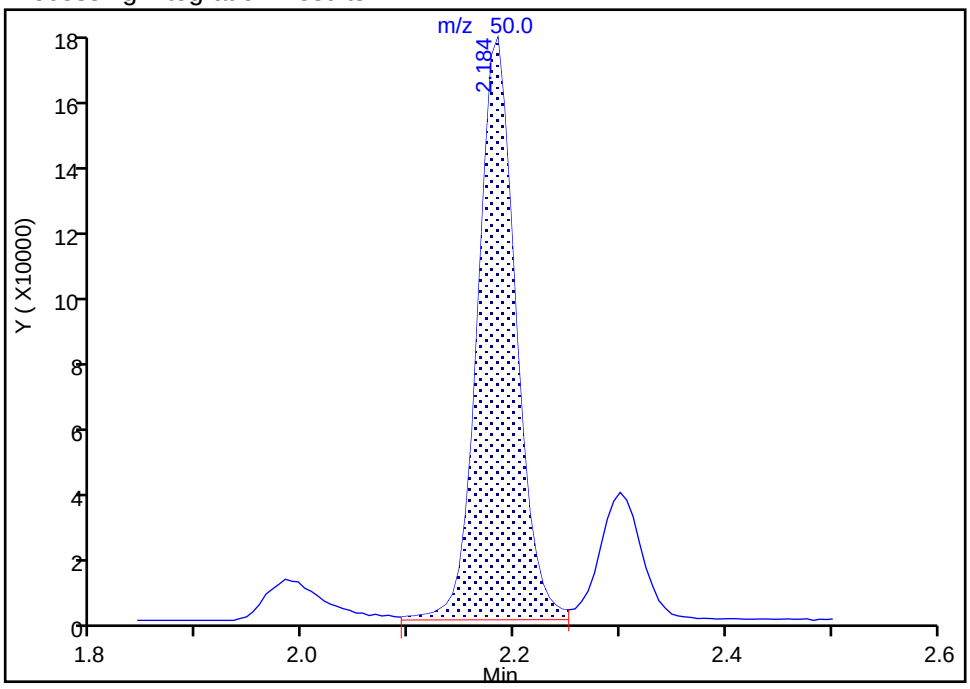
Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I03.D
Injection Date: 16-Mar-2020 17:06:30 Instrument ID: 19930
Lims ID: IC std5
Client ID:
Operator ID: JKH09052 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

4 Chloromethane, CAS: 74-87-3

Signal: 1

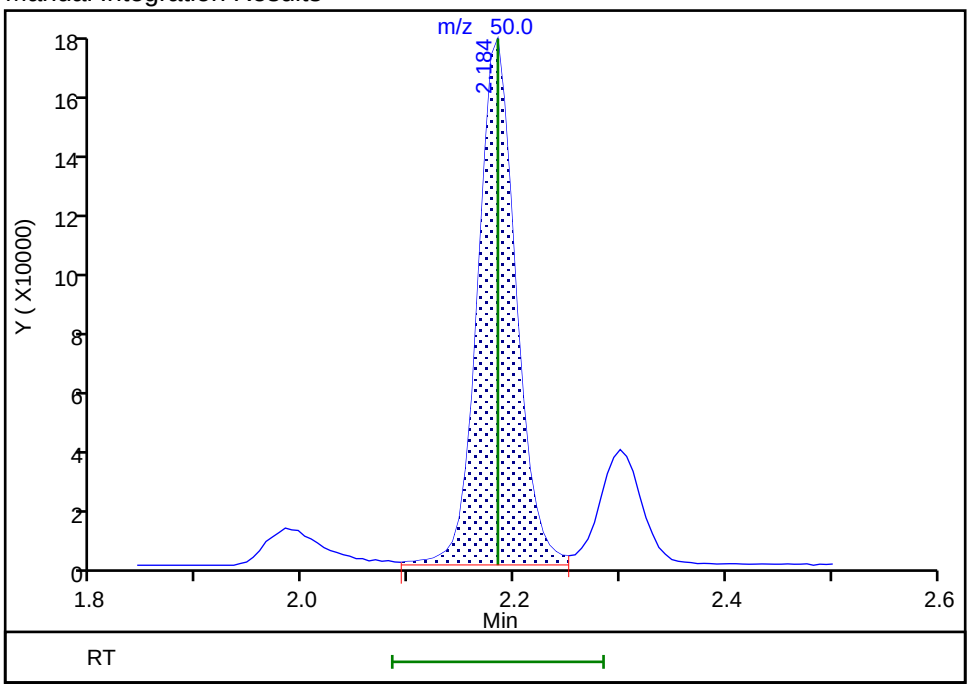
Processing Integration Results

RT: 2.18
Area: 448633
Amount: 5.075505
Amount Units: ug/l



Manual Integration Results

RT: 2.18
Area: 449250
Amount: 5.081472
Amount Units: ug/l



Reviewer: campbellme, 18-Mar-2020 21:41:28
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

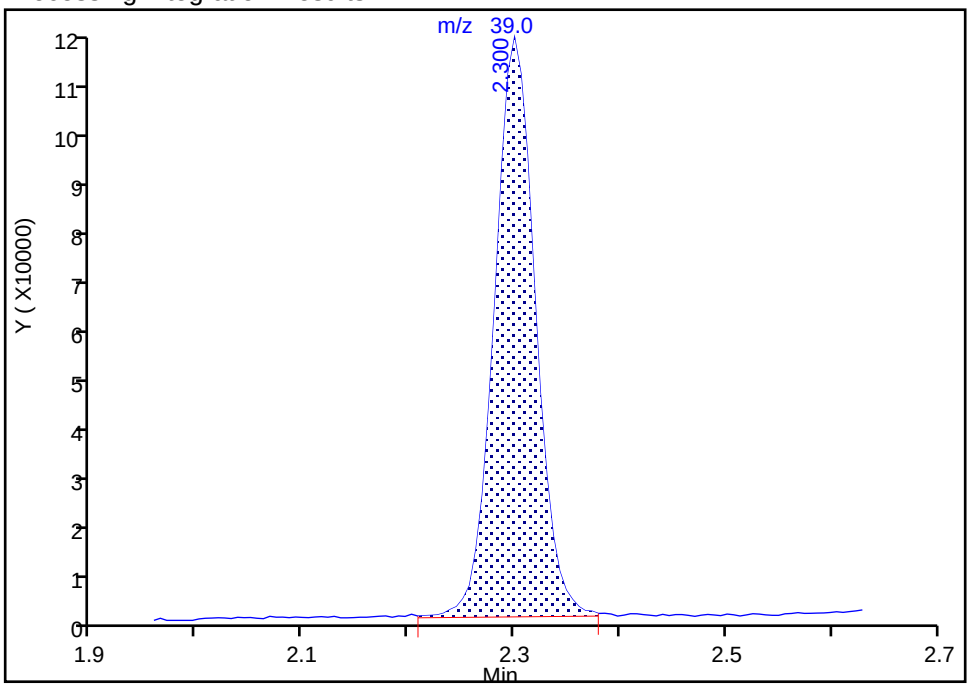
Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I03.D
Injection Date: 16-Mar-2020 17:06:30 Instrument ID: 19930
Lims ID: IC std5
Client ID:
Operator ID: JKH09052 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

6 Butadiene, CAS: 106-99-0

Signal: 1

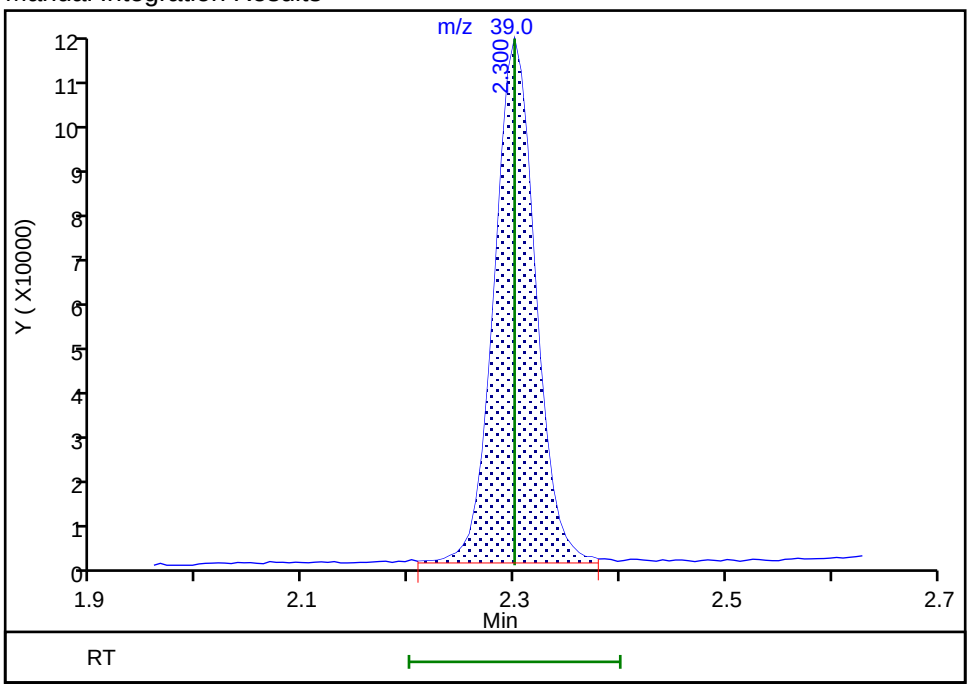
Processing Integration Results

RT: 2.30
Area: 307642
Amount: 4.896211
Amount Units: ug/l



Manual Integration Results

RT: 2.30
Area: 309498
Amount: 4.876304
Amount Units: ug/l



Reviewer: campbellme, 18-Mar-2020 21:41:37
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

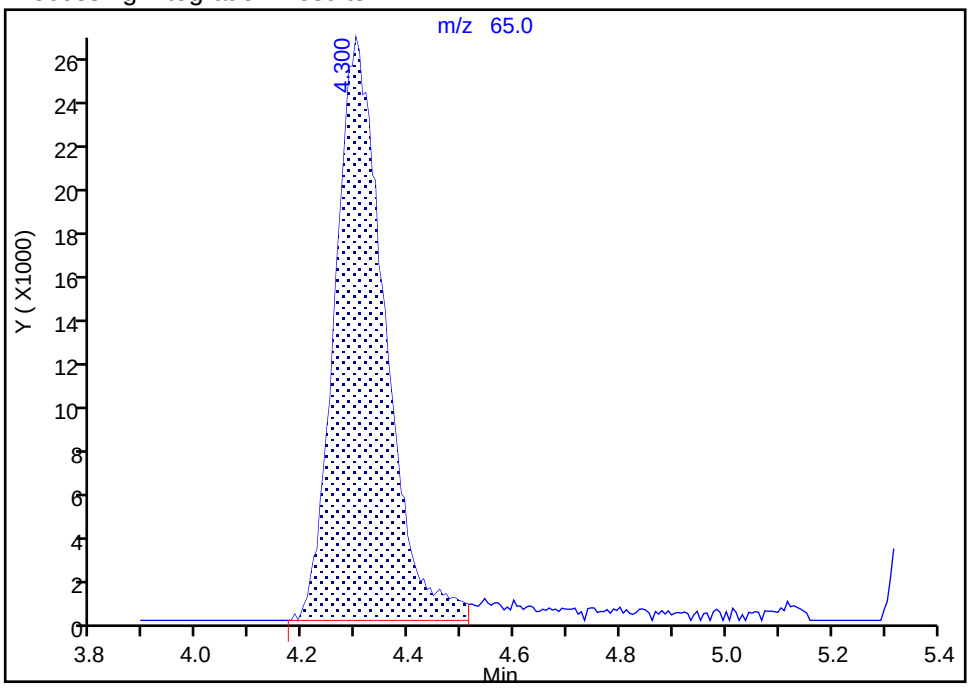
Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I03.D
Injection Date: 16-Mar-2020 17:06:30 Instrument ID: 19930
Lims ID: IC std5
Client ID:
Operator ID: JKH09052 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

* 24 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

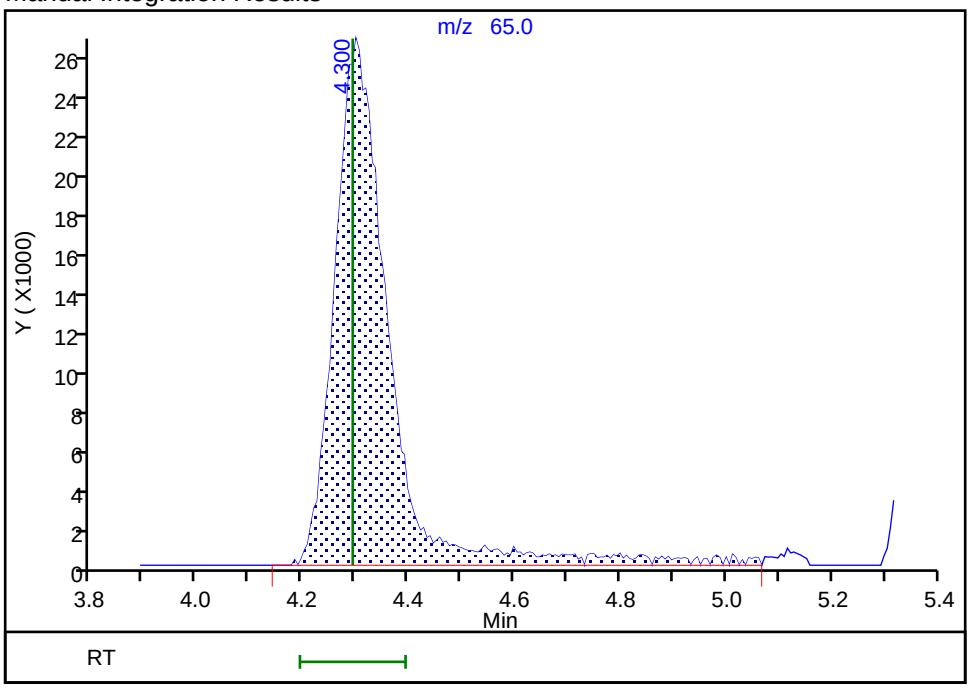
Processing Integration Results

RT: 4.30
Area: 173055
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 4.30
Area: 187359
Amount: 50.000000
Amount Units: ug/l



Reviewer: campbellme, 18-Mar-2020 21:41:58
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

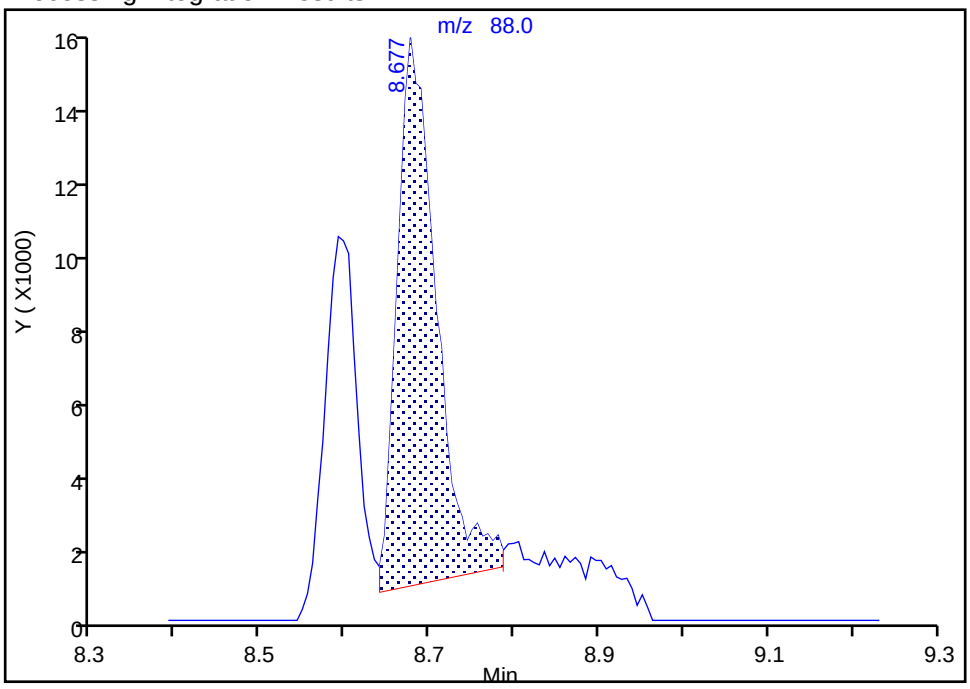
Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I03.D
Injection Date: 16-Mar-2020 17:06:30 Instrument ID: 19930
Lims ID: IC std5
Client ID:
Operator ID: JKH09052 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

65 1,4-Dioxane, CAS: 123-91-1

Signal: 1

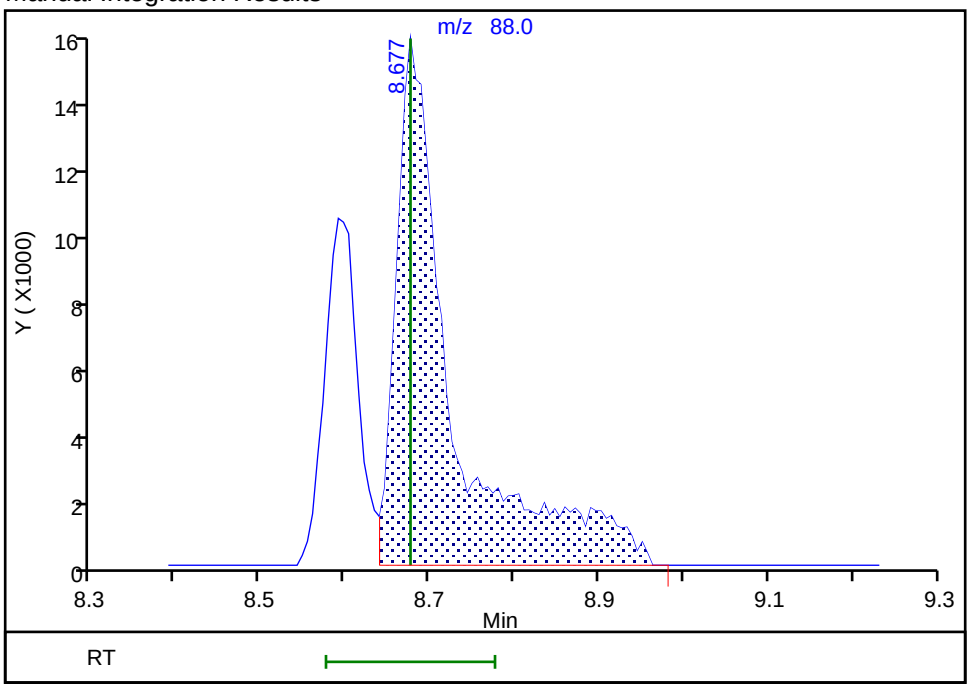
Processing Integration Results

RT: 8.68
Area: 45577
Amount: 191.8223
Amount Units: ug/l



Manual Integration Results

RT: 8.68
Area: 69311
Amount: 261.6666
Amount Units: ug/l



Reviewer: campbellme, 18-Mar-2020 21:42:26
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I04.D
Lims ID: IC std4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 16-Mar-2020 17:27:30 ALS Bottle#: 14 Worklist Smp#: 15
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: VSTD002;VSTD002;1;1;;;;;;
Misc. Info.: 8260W25.SUB;;;25;25;;;
Operator ID: JKH09052 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 13-May-2020 18:30:26 Calib Date: 16-Mar-2020 18:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1007

First Level Reviewer: campbellme Date: 18-Mar-2020 21:44:46

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	1.983	0.000	99	198151	2.00	1.79	M
4 Chloromethane	50	2.184	2.184	0.000	99	172586	2.00	1.93	
5 Vinyl chloride	62	2.300	2.300	0.000	98	168751	2.00	1.95	M
6 Butadiene	39	2.300	2.300	0.000	85	126126	2.00	1.97	
7 Bromomethane	94	2.629	2.629	0.000	91	117256	2.00	1.93	
8 Chloroethane	64	2.721	2.721	0.000	99	95356	2.00	1.94	
9 Dichlorofluoromethane	67	2.964	2.964	0.000	97	218323	2.00	1.91	M
10 Trichlorofluoromethane	101	3.025	3.025	0.000	97	202528	2.00	1.96	
11 Ethyl ether	59	3.288	3.288	0.000	90	89867	2.00	2.02	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.373	3.373	0.000	91	138896	2.00	1.99	
13 Acrolein	56	3.464	3.464	0.000	100	747595	100.0	100.7	
14 1,1-Dichloroethene	96	3.605	3.605	0.000	98	111680	2.00	2.05	
15 Acetone	43	3.635	3.635	0.000	100	184990	20.0	19.9	
16 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.641	3.641	0.000	71	120472	2.00	2.03	
17 Iodomethane	142	3.806	3.806	0.000	99	211652	2.00	2.03	
18 Ethyl bromide	108	3.830	3.830	0.000	99	93851	2.00	2.02	
19 Carbon disulfide	76	3.909	3.909	0.000	99	316449	2.00	2.03	
21 Methyl acetate	43	4.068	4.068	0.000	97	47166	2.00	1.92	
22 3-Chloro-1-propene	41	4.092	4.092	0.000	91	169050	2.00	2.05	
23 Methylene Chloride	84	4.293	4.293	0.000	91	113412	2.00	2.00	
* 24 t-Butyl alcohol-d10 (IS)	65	4.293	4.293	0.000	0	187368	50.0	50.0	M
25 2-Methyl-2-propanol	59	4.428	4.428	0.000	100	185056	40.0	41.0	
26 Acrylonitrile	53	4.629	4.629	0.000	99	122138	10.0	10.0	
27 Methyl tert-butyl ether	73	4.702	4.702	0.000	95	285194	2.00	2.03	
28 trans-1,2-Dichloroethene	96	4.702	4.702	0.000	99	117731	2.00	2.01	
29 Hexane	57	5.129	5.129	0.000	92	174899	2.00	1.98	
31 1,1-Dichloroethane	63	5.366	5.366	0.000	96	213118	2.00	2.04	
32 Isopropyl ether	45	5.421	5.421	0.000	94	355534	2.00	2.04	
33 2-Chloro-1,3-butadiene	53	5.476	5.476	0.000	91	186962	2.00	2.03	
34 Tert-butyl ethyl ether	59	5.958	5.958	0.000	97	354411	2.00	2.06	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
S 35 1,2-Dichloroethene, Total	100				0			4.03	
36 2-Butanone (MEK)	43	6.171	6.171	0.000	99	332028	20.0	20.3	
37 cis-1,2-Dichloroethene	96	6.196	6.196	0.000	82	133056	2.00	2.02	
38 2,2-Dichloropropane	77	6.208	6.208	0.000	87	189959	2.00	2.01	
40 Propionitrile	54	6.263	6.263	0.000	99	187283	40.0	41.1	
42 Methacrylonitrile	67	6.470	6.470	0.000	91	316236	20.0	20.3	
43 Chlorobromomethane	128	6.531	6.531	0.000	75	58764	2.00	2.02	
44 Tetrahydrofuran	71	6.543	6.543	0.000	87	99231	20.0	19.8	
45 Chloroform	83	6.683	6.683	0.000	93	211329	2.00	2.02	
$ 46 Dibromofluoromethane (Surr)	113	6.897	6.897	0.000	94	490540	10.0	9.96	
47 1,1,1-Trichloroethane	97	6.903	6.903	0.000	97	205071	2.00	2.03	
48 Cyclohexane	56	7.000	7.000	0.000	89	211691	2.00	1.98	
50 Carbon tetrachloride	117	7.116	7.116	0.000	89	182976	2.00	2.04	
51 1,1-Dichloropropene	75	7.116	7.116	0.000	95	171702	2.00	2.05	
52 Isobutyl alcohol	41	7.269	7.269	0.000	94	130668	100.0	100.2	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.354	7.354	0.000	0	100629	10.0	10.1	
54 Benzene	78	7.378	7.378	0.000	96	491839	2.00	2.02	
56 1,2-Dichloroethane	62	7.451	7.451	0.000	98	132744	2.00	2.03	
57 Tert-amyl methyl ether	73	7.561	7.561	0.000	98	322462	2.00	2.02	
* 58 Fluorobenzene (IS)	96	7.781	7.781	0.000	99	2040726	10.0	10.0	
59 n-Heptane	43	7.793	7.793	0.000	94	169759	2.00	2.02	
60 n-Butanol	56	8.140	8.140	0.000	87	238865	200.0	207.2	
61 Trichloroethene	95	8.262	8.262	0.000	98	131079	2.00	2.02	
62 Methylcyclohexane	83	8.567	8.567	0.000	93	237846	2.00	2.06	
63 1,2-Dichloropropane	63	8.591	8.591	0.000	80	118855	2.00	2.01	
64 Methyl methacrylate	69	8.671	8.671	0.000	88	63108	2.00	2.00	
65 1,4-Dioxane	88	8.683	8.683	0.000	45	28575	100.0	107.9	M
66 Dibromomethane	93	8.707	8.707	0.000	94	59862	2.00	2.04	
68 Dichlorobromomethane	83	8.933	8.933	0.000	99	153673	2.00	1.99	
69 2-Nitropropane	41	9.201	9.201	0.000	98	198803	20.0	20.2	
72 1-Bromo-2-chloroethane	63	9.323	9.323	0.000	99	126137	2.00	2.05	
73 cis-1,3-Dichloropropene	75	9.475	9.475	0.000	96	184819	2.00	2.03	
74 4-Methyl-2-pentanone (MIBK)	43	9.640	9.640	0.000	96	824516	20.0	20.4	
$ 75 Toluene-d8 (Surr)	98	9.780	9.780	0.000	93	1927152	10.0	9.99	
76 Toluene	92	9.853	9.853	0.000	98	317517	2.00	2.06	
S 77 1,3-Dichloropropene, Total	100				0			4.06	
78 trans-1,3-Dichloropropene	75	10.109	10.109	0.000	92	158481	2.00	2.03	
79 Ethyl methacrylate	69	10.164	10.164	0.000	89	134668	2.00	2.02	
80 1,1,2-Trichloroethane	97	10.311	10.311	0.000	91	87162	2.00	2.02	
81 Tetrachloroethene	166	10.396	10.396	0.000	98	150308	2.00	2.04	
82 1,3-Dichloropropane	76	10.475	10.475	0.000	88	148091	2.00	2.04	
83 2-Hexanone	43	10.518	10.518	0.000	96	570518	20.0	20.4	
85 Chlorodibromomethane	129	10.682	10.682	0.000	89	112901	2.00	2.05	
86 Ethylene Dibromide	107	10.798	10.798	0.000	99	82516	2.00	2.02	
* 87 Chlorobenzene-d5 (IS)	117	11.219	11.219	0.000	86	1517778	10.0	10.0	
88 1-Chlorohexane	91	11.231	11.231	0.000	94	188787	2.00	1.99	
S 89 Xylenes, Total	106				0			6.13	
90 Chlorobenzene	112	11.249	11.249	0.000	96	347759	2.00	2.04	
91 1,1,1,2-Tetrachloroethane	131	11.329	11.329	0.000	96	129908	2.00	2.04	
92 Ethylbenzene	91	11.335	11.335	0.000	98	621789	2.00	2.05	
93 m-Xylene & p-Xylene	106	11.445	11.445	0.000	0	487008	4.00	4.11	
94 o-Xylene	106	11.774	11.774	0.000	96	238276	2.00	2.03	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
95 Styrene	104	11.792	11.792	0.000	94	387394	2.00	2.07	
96 Bromoform	173	11.944	11.944	0.000	97	67646	2.00	2.00	
97 Isopropylbenzene	105	12.072	12.072	0.000	95	641937	2.00	2.06	
$ 100 4-Bromofluorobenzene (Surr)	95	12.219	12.219	0.000	93	723296	10.0	10.0	
101 1,1,2,2-Tetrachloroethane	83	12.316	12.316	0.000	93	107882	2.00	2.01	
102 Bromobenzene	156	12.335	12.335	0.000	93	144735	2.00	2.01	
103 trans-1,4-Dichloro-2-butene	53	12.341	12.341	0.000	92	288778	20.0	20.2	
104 1,2,3-Trichloropropane	110	12.365	12.365	0.000	84	30624	2.00	2.05	
105 N-Propylbenzene	91	12.402	12.402	0.000	99	727660	2.00	2.04	
106 2-Chlorotoluene	126	12.475	12.475	0.000	97	148197	2.00	2.06	
107 1,3,5-Trimethylbenzene	105	12.536	12.536	0.000	94	532706	2.00	2.05	
108 4-Chlorotoluene	126	12.566	12.566	0.000	98	149835	2.00	2.05	
109 tert-Butylbenzene	134	12.780	12.780	0.000	93	118387	2.00	2.04	
110 Pentachloroethane	167	12.810	12.810	0.000	94	99745	2.00	2.03	
111 1,2,4-Trimethylbenzene	105	12.816	12.816	0.000	97	537587	2.00	2.02	
112 sec-Butylbenzene	105	12.938	12.938	0.000	94	685221	2.00	2.06	
113 1,3-Dichlorobenzene	146	13.042	13.042	0.000	98	286238	2.00	2.03	
114 4-Isopropyltoluene	119	13.048	13.048	0.000	97	588295	2.00	2.05	
* 115 1,4-Dichlorobenzene-d4	152	13.097	13.097	0.000	95	830779	10.0	10.0	
116 1,4-Dichlorobenzene	146	13.115	13.115	0.000	96	284244	2.00	2.03	
117 1,2,3-Trimethylbenzene	120	13.121	13.121	0.000	98	233348	2.00	2.03	
118 Benzyl chloride	126	13.188	13.188	0.000	98	48505	2.00	1.97	
119 n-Butylbenzene	92	13.334	13.334	0.000	96	273595	2.00	2.04	
120 1,2-Dichlorobenzene	146	13.371	13.371	0.000	99	263070	2.00	2.04	
122 1,2-Dibromo-3-Chloropropane	155	13.914	13.914	0.000	88	17700	2.00	2.00	
123 1,3,5-Trichlorobenzene	180	14.035	14.035	0.000	98	203146	2.00	1.99	
124 1,2,4-Trichlorobenzene	180	14.462	14.462	0.000	95	166771	2.00	1.94	
125 Hexachlorobutadiene	225	14.541	14.541	0.000	97	71002	2.00	1.96	
126 Naphthalene	128	14.645	14.645	0.000	97	340844	2.00	2.01	
127 1,2,3-Trichlorobenzene	180	14.785	14.785	0.000	96	142435	2.00	1.99	
144 2-ethoxy-2-methyl butane	1		0.000				ND	ND	U
137 2-Methylnaphthalene	142		0.000				ND	ND	U
135 p-Diethylbenzene	1		0.000				ND	ND	U
134 Isopropyl alcohol	45		0.000				ND	ND	U

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

U - Marked Undetected

Reagents:

MSV_RV1_826_00008	Amount Added:	2.00	Units: uL	
MSV_RV4_826_00009	Amount Added:	2.00	Units: uL	
MSV_RV4GAS826_00022	Amount Added:	2.00	Units: uL	
MSV_31_826ISS_00002	Amount Added:	5.00	Units: uL	Run Reagent

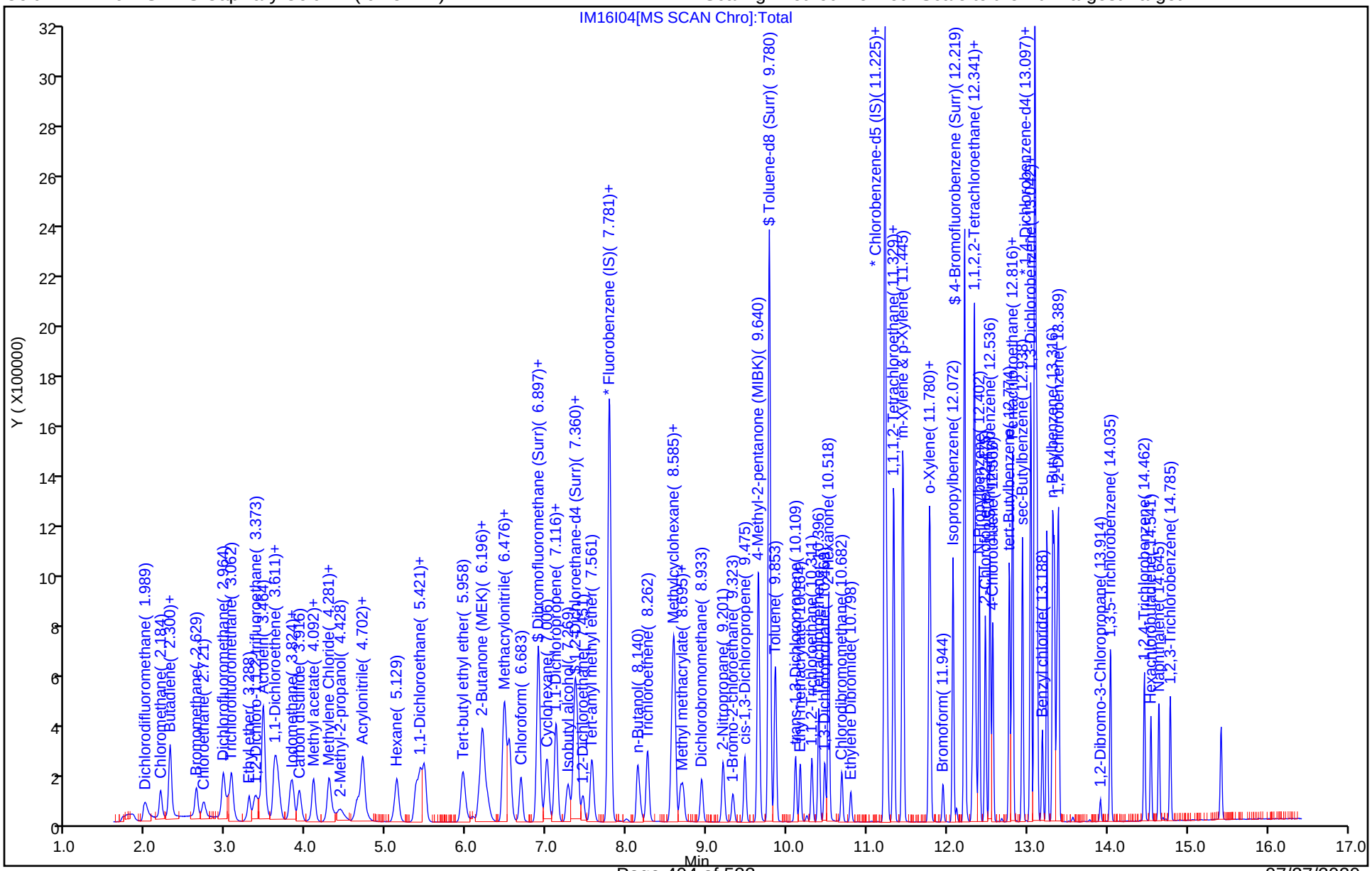
Report Date: 13-May-2020 18:30:27 Chrom Revision: 2.3 12-May-2020 10:44:46

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I04.D

Injection Date:	16-Mar-2020 17:27:30	Instrument ID:	19930	Operator ID:	JKH09052
Lims ID:	IC std4			Worklist Smp#:	15
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
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

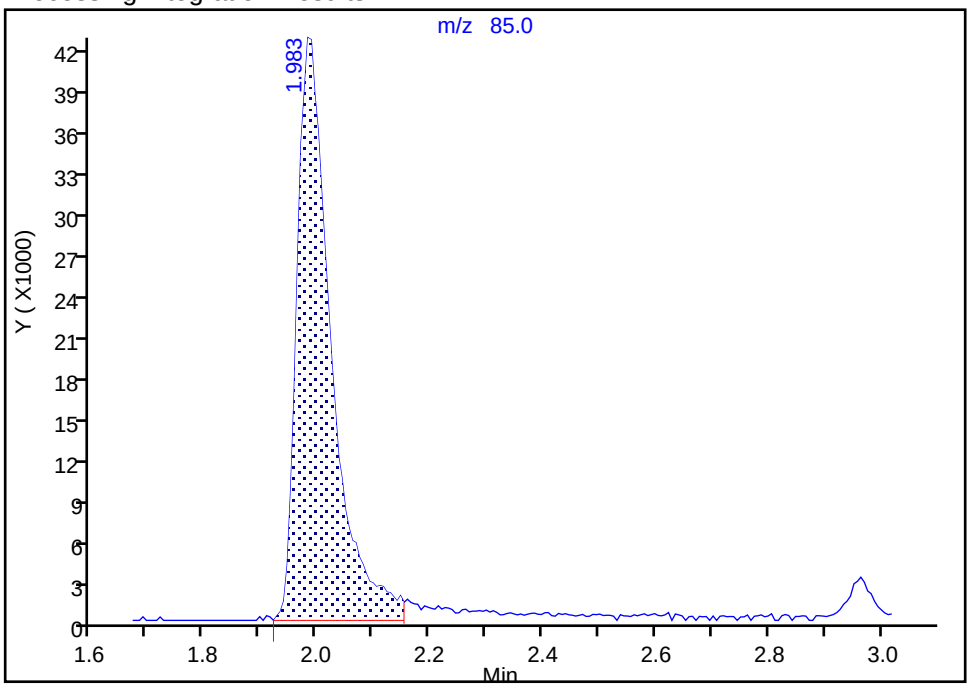
Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I04.D
Injection Date: 16-Mar-2020 17:27:30 Instrument ID: 19930
Lims ID: IC std4
Client ID:
Operator ID: JKH09052 ALS Bottle#: 14 Worklist Smp#: 15
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

1 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

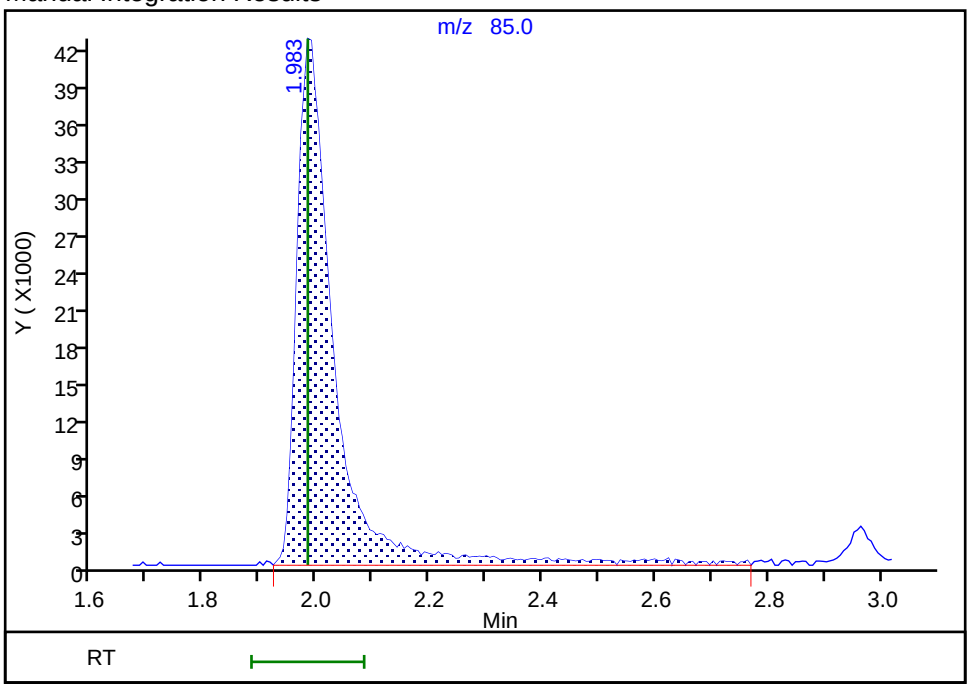
Processing Integration Results

RT: 1.98
Area: 180314
Amount: 1.846219
Amount Units: ug/l



Manual Integration Results

RT: 1.98
Area: 198151
Amount: 1.786086
Amount Units: ug/l



Reviewer: campbellme, 18-Mar-2020 21:43:08
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

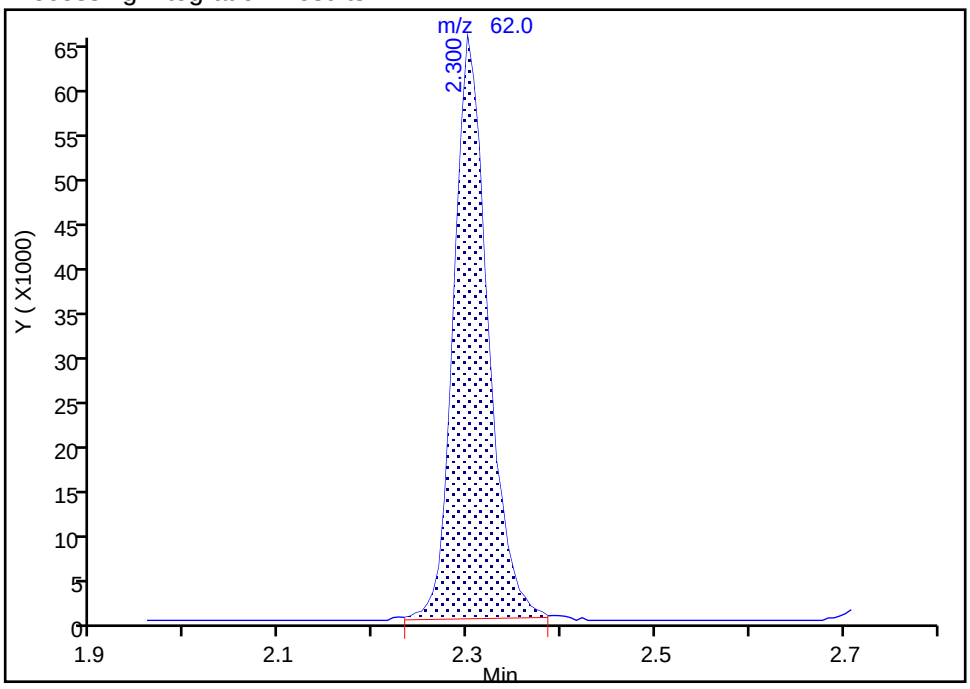
Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I04.D
Injection Date: 16-Mar-2020 17:27:30 Instrument ID: 19930
Lims ID: IC std4
Client ID:
Operator ID: JKH09052 ALS Bottle#: 14 Worklist Smp#: 15
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

5 Vinyl chloride, CAS: 75-01-4

Signal: 1

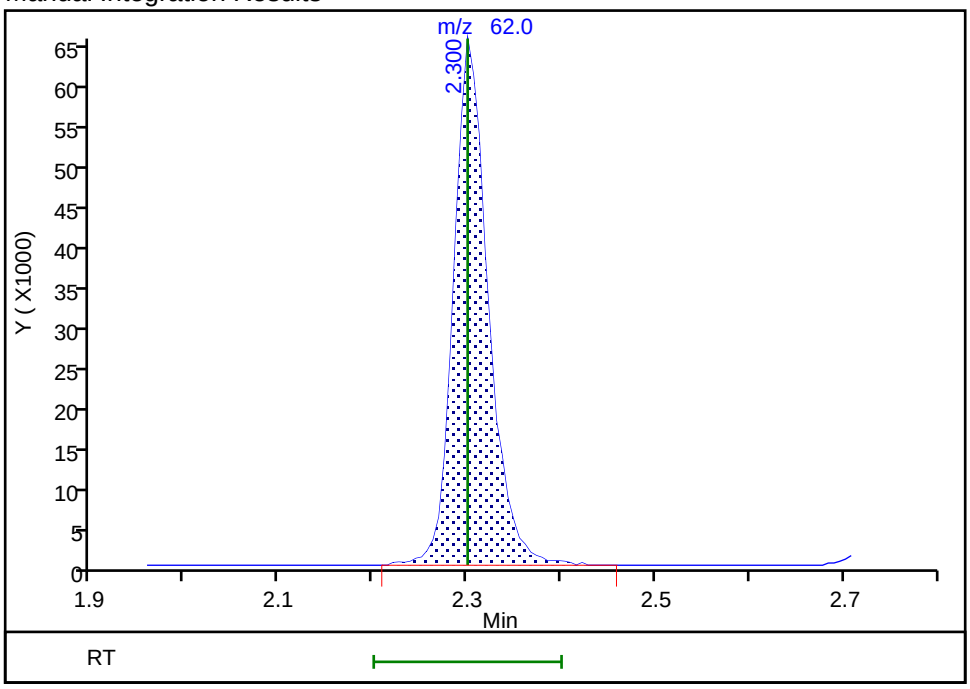
Processing Integration Results

RT: 2.30
Area: 165853
Amount: 1.919230
Amount Units: ug/l



Manual Integration Results

RT: 2.30
Area: 168751
Amount: 1.948099
Amount Units: ug/l



Reviewer: campbellme, 18-Mar-2020 21:43:19
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

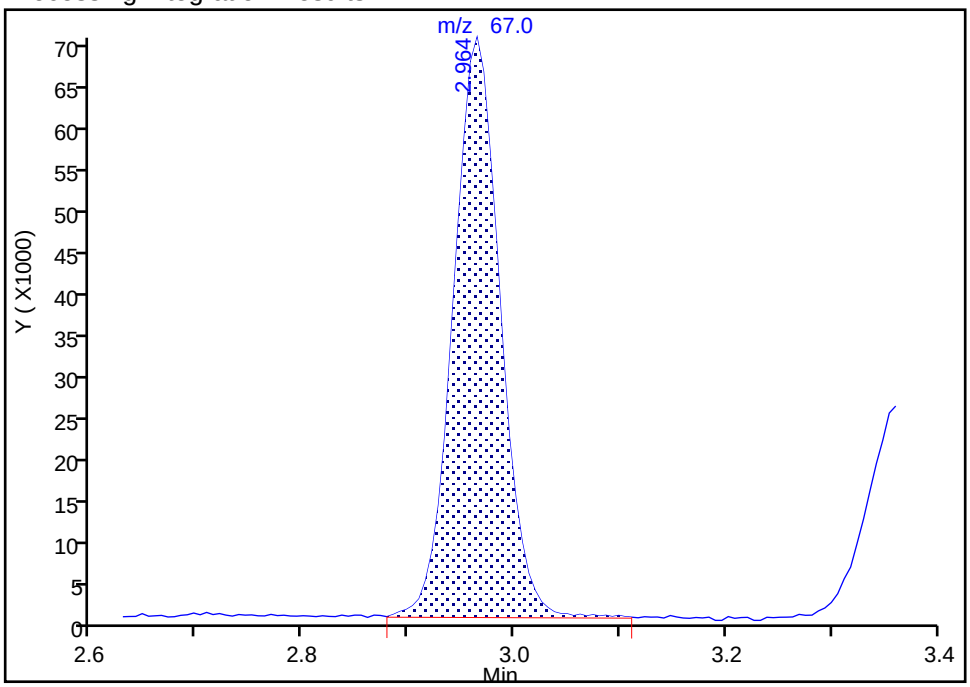
Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I04.D
Injection Date: 16-Mar-2020 17:27:30 Instrument ID: 19930
Lims ID: IC std4
Client ID:
Operator ID: JKH09052 ALS Bottle#: 14 Worklist Smp#: 15
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

9 Dichlorofluoromethane, CAS: 75-43-4

Signal: 1

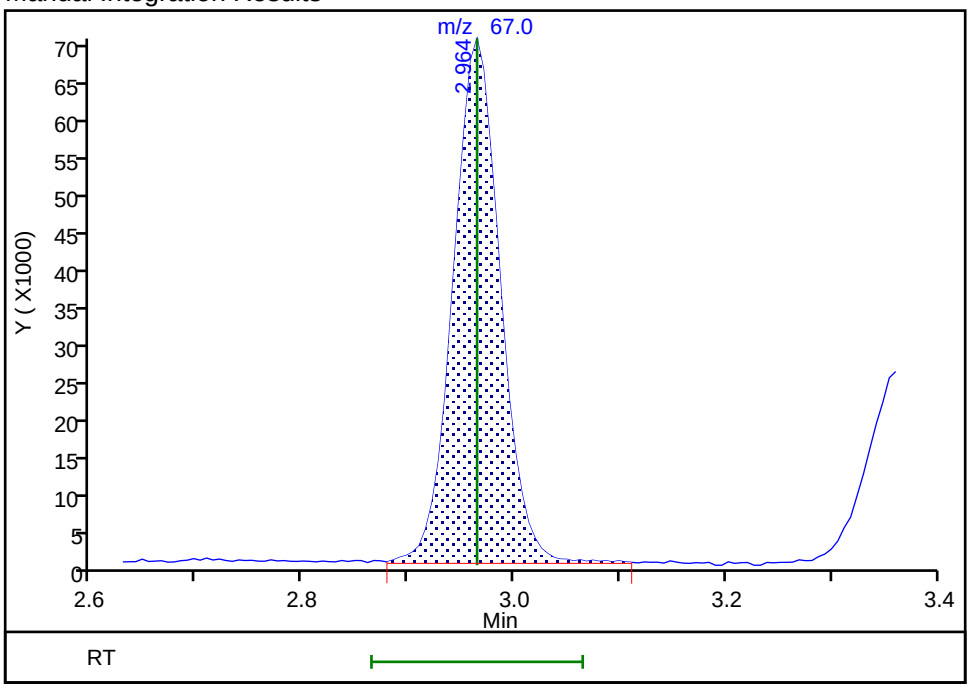
RT: 2.96
Area: 217274
Amount: 1.906529
Amount Units: ug/l

Processing Integration Results



RT: 2.96
Area: 218323
Amount: 1.914475
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 18-Mar-2020 21:43:39
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

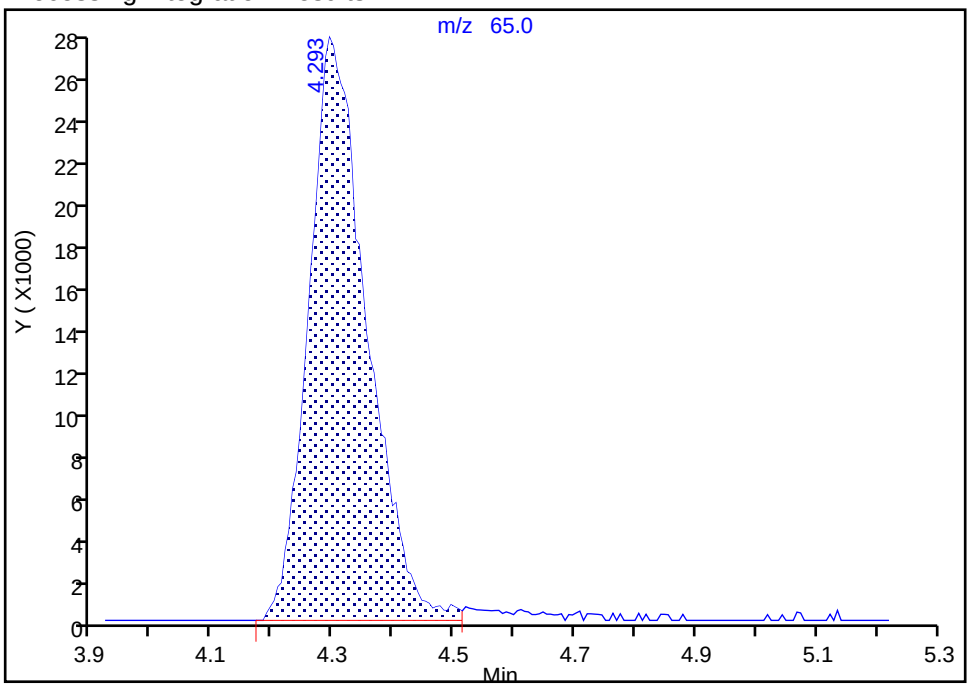
Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I04.D
Injection Date: 16-Mar-2020 17:27:30 Instrument ID: 19930
Lims ID: IC std4
Client ID:
Operator ID: JKH09052 ALS Bottle#: 14 Worklist Smp#: 15
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

* 24 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

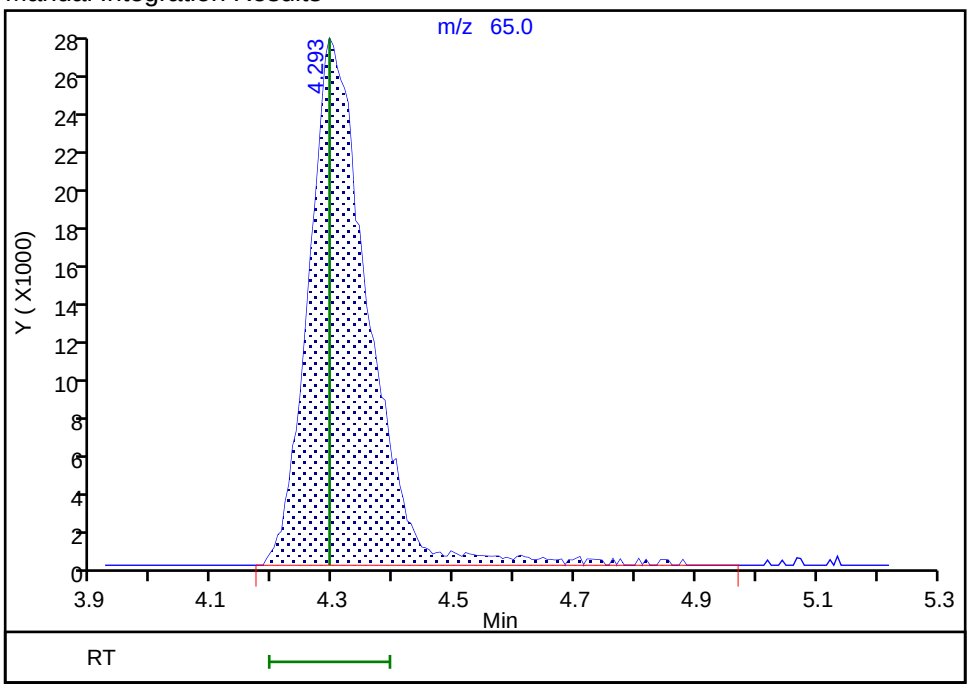
Processing Integration Results

RT: 4.29
Area: 181547
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 4.29
Area: 187368
Amount: 50.000000
Amount Units: ug/l



Reviewer: campbellme, 18-Mar-2020 21:43:54
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

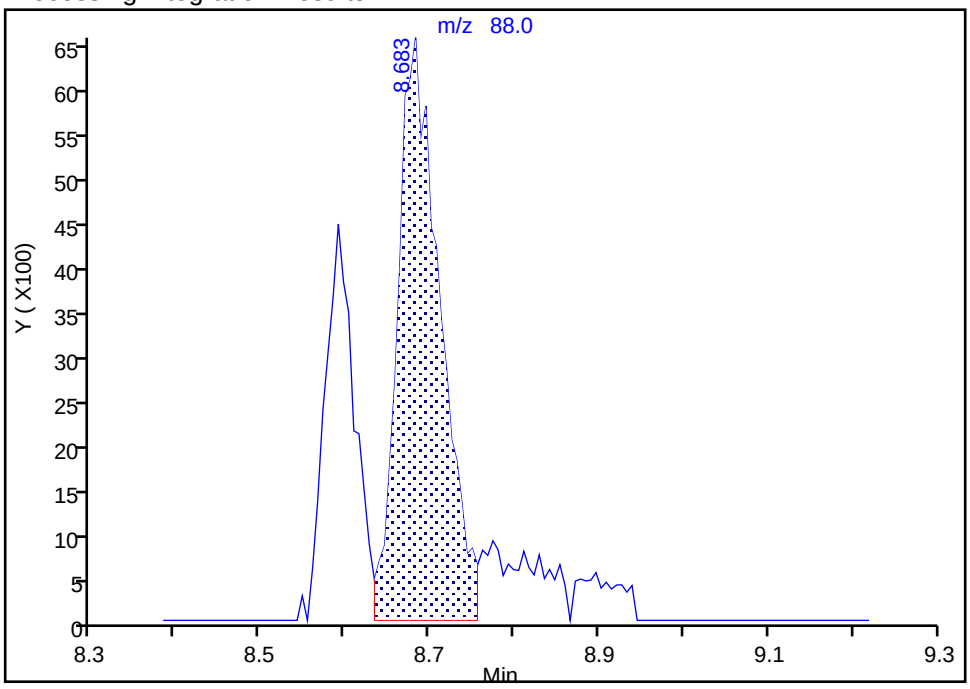
Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I04.D
Injection Date: 16-Mar-2020 17:27:30 Instrument ID: 19930
Lims ID: IC std4
Client ID:
Operator ID: JKH09052 ALS Bottle#: 14 Worklist Smp#: 15
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

65 1,4-Dioxane, CAS: 123-91-1

Signal: 1

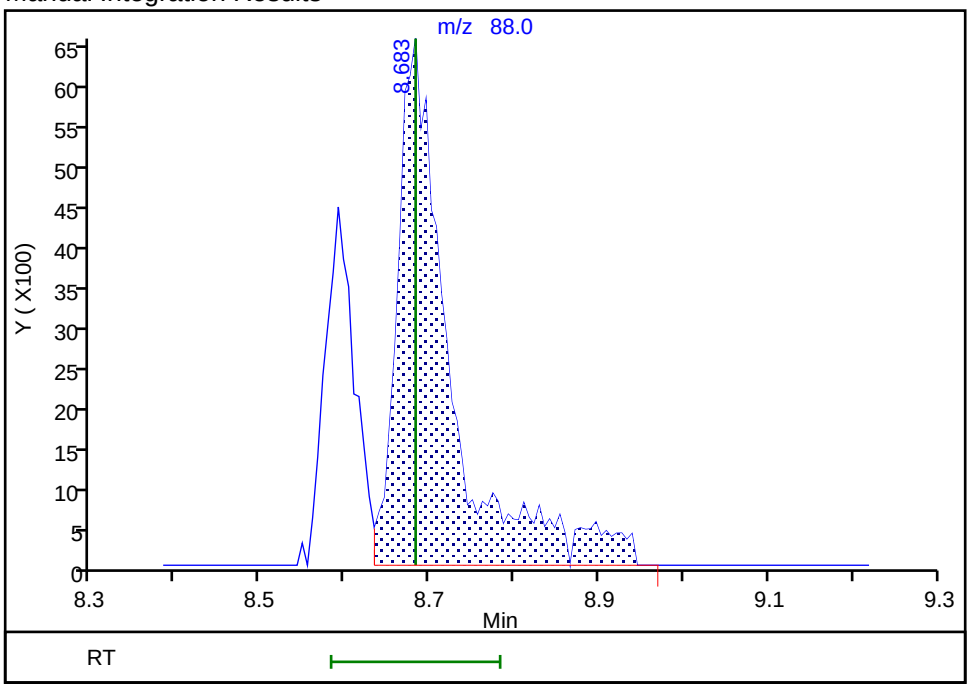
Processing Integration Results

RT: 8.68
Area: 22863
Amount: 66.941775
Amount Units: ug/l



Manual Integration Results

RT: 8.68
Area: 28575
Amount: 107.8727
Amount Units: ug/l



Reviewer: campbellme, 18-Mar-2020 21:44:21
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\20200317-1775.b\IM16I05.D
Lims ID: IC std3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 16-Mar-2020 17:48:30 ALS Bottle#: 15 Worklist Smp#: 16
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: VSTD001;VSTD001;1;1;;;;;;
Misc. Info.: 8260W25.SUB;;;25;25;;;
Operator ID: JKH09052 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 13-May-2020 18:30:36 Calib Date: 16-Mar-2020 18:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1007

First Level Reviewer: campbellme Date: 18-Mar-2020 21:46:39

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	1.995	1.983	0.012	99	110058	1.00	0.99	M
4 Chloromethane	50	2.184	2.184	0.000	99	87485	1.00	0.9795	
5 Vinyl chloride	62	2.312	2.300	0.012	97	85852	1.00	0.99	
6 Butadiene	39	2.312	2.300	0.012	87	66790	1.00	1.04	M
7 Bromomethane	94	2.635	2.629	0.006	90	59528	1.00	0.9809	
8 Chloroethane	64	2.727	2.721	0.006	100	49459	1.00	1.01	
9 Dichlorofluoromethane	67	2.971	2.964	0.007	97	111662	1.00	0.9800	
10 Trichlorofluoromethane	101	3.025	3.025	0.000	98	103739	1.00	1.01	
11 Ethyl ether	59	3.294	3.288	0.006	91	42087	1.00	0.9491	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.379	3.373	0.006	91	72547	1.00	1.04	
13 Acrolein	56	3.471	3.464	0.007	100	380382	50.0	51.0	M
14 1,1-Dichloroethene	96	3.611	3.605	0.006	98	56192	1.00	1.03	
15 Acetone	43	3.641	3.635	0.006	99	98249	10.0	10.5	
16 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.647	3.641	0.006	82	63078	1.00	1.07	
17 Iodomethane	142	3.812	3.806	0.006	99	106891	1.00	1.03	
18 Ethyl bromide	108	3.842	3.830	0.012	99	45162	1.00	0.9743	
19 Carbon disulfide	76	3.916	3.909	0.007	99	160810	1.00	1.03	
21 Methyl acetate	43	4.074	4.068	0.006	97	22212	1.00	0.9066	
22 3-Chloro-1-propene	41	4.098	4.092	0.006	91	80727	1.00	0.9799	
23 Methylene Chloride	84	4.294	4.293	0.001	91	58139	1.00	1.03	
* 24 t-Butyl alcohol-d10 (IS)	65	4.306	4.293	0.013	0	188421	50.0	50.0	
25 2-Methyl-2-propanol	59	4.434	4.428	0.006	99	98614	20.0	21.7	
26 Acrylonitrile	53	4.641	4.629	0.012	100	62946	5.00	5.12	
27 Methyl tert-butyl ether	73	4.708	4.702	0.006	91	144775	1.00	1.03	
28 trans-1,2-Dichloroethene	96	4.714	4.702	0.012	99	59314	1.00	1.01	
29 Hexane	57	5.135	5.129	0.006	91	88852	1.00	1.01	
31 1,1-Dichloroethane	63	5.373	5.366	0.007	96	107953	1.00	1.04	
32 Isopropyl ether	45	5.434	5.421	0.013	93	180623	1.00	1.04	
33 2-Chloro-1,3-butadiene	53	5.482	5.476	0.006	91	93611	1.00	1.02	
34 Tert-butyl ethyl ether	59	5.964	5.958	0.006	97	179979	1.00	1.05	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
S 35 1,2-Dichloroethene, Total	100				0			2.03	
36 2-Butanone (MEK)	43	6.171	6.171	0.000	99	167561	10.0	10.2	
37 cis-1,2-Dichloroethene	96	6.202	6.196	0.006	86	67279	1.00	1.02	
38 2,2-Dichloropropane	77	6.220	6.208	0.012	88	95753	1.00	1.02	
40 Propionitrile	54	6.275	6.263	0.012	99	95421	20.0	20.8	
42 Methacrylonitrile	67	6.476	6.470	0.006	93	158877	10.0	10.1	
43 Chlorobromomethane	128	6.531	6.531	0.000	89	28121	1.00	0.9657	
44 Tetrahydrofuran	71	6.549	6.543	0.006	87	51676	10.0	10.2	
45 Chloroform	83	6.683	6.683	0.000	93	108176	1.00	1.04	
$ 46 Dibromofluoromethane (Surr)	113	6.897	6.897	0.000	94	489598	10.0	9.95	
47 1,1,1-Trichloroethane	97	6.909	6.903	0.006	98	105395	1.00	1.04	
48 Cyclohexane	56	7.006	7.000	0.006	89	111385	1.00	1.04	
50 Carbon tetrachloride	117	7.122	7.116	0.006	91	93963	1.00	1.05	
51 1,1-Dichloropropene	75	7.122	7.116	0.006	94	86478	1.00	1.03	
52 Isobutyl alcohol	41	7.275	7.269	0.006	94	66493	50.0	50.7	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.354	7.354	0.000	0	100281	10.0	10.1	
54 Benzene	78	7.384	7.378	0.006	95	249148	1.00	1.02	
56 1,2-Dichloroethane	62	7.458	7.451	0.007	97	66533	1.00	1.02	
57 Tert-amyl methyl ether	73	7.567	7.561	0.006	98	162542	1.00	1.02	
* 58 Fluorobenzene (IS)	96	7.787	7.781	0.006	99	2038932	10.0	10.0	
59 n-Heptane	43	7.793	7.793	0.000	84	86431	1.00	1.03	
60 n-Butanol	56	8.146	8.140	0.006	87	119752	100.0	103.3	
61 Trichloroethene	95	8.262	8.262	0.000	97	66486	1.00	1.03	
62 Methylcyclohexane	83	8.567	8.567	0.000	92	110645	1.00	0.9588	
63 1,2-Dichloropropane	63	8.598	8.591	0.007	71	60450	1.00	1.02	
64 Methyl methacrylate	69	8.677	8.671	0.006	88	32389	1.00	1.02	
65 1,4-Dioxane	88	8.689	8.683	0.006	82	14258	50.0	53.5	M
66 Dibromomethane	93	8.701	8.707	-0.006	95	31570	1.00	1.08	
68 Dichlorobromomethane	83	8.939	8.933	0.006	99	79116	1.00	1.03	
69 2-Nitropropane	41	9.207	9.201	0.006	99	102241	10.0	10.4	
72 1-Bromo-2-chloroethane	63	9.329	9.323	0.006	98	58883	1.00	0.9591	
73 cis-1,3-Dichloropropene	75	9.475	9.475	0.000	96	94232	1.00	1.03	
74 4-Methyl-2-pentanone (MIBK)	43	9.646	9.640	0.006	96	420051	10.0	10.3	
$ 75 Toluene-d8 (Surr)	98	9.780	9.780	0.000	93	1931273	10.0	10.0	
76 Toluene	92	9.853	9.853	0.000	98	158032	1.00	1.03	
S 77 1,3-Dichloropropene, Total	100				0			2.04	
78 trans-1,3-Dichloropropene	75	10.109	10.109	0.000	93	78583	1.00	1.01	
79 Ethyl methacrylate	69	10.164	10.164	0.000	88	69163	1.00	1.04	
80 1,1,2-Trichloroethane	97	10.311	10.311	0.000	91	43280	1.00	1.00	
81 Tetrachloroethene	166	10.396	10.396	0.000	97	74375	1.00	1.01	
82 1,3-Dichloropropane	76	10.475	10.475	0.000	88	75482	1.00	1.04	
83 2-Hexanone	43	10.518	10.518	0.000	96	289252	10.0	10.3	
85 Chlorodibromomethane	129	10.683	10.682	0.001	90	55626	1.00	1.01	
86 Ethylene Dibromide	107	10.798	10.798	0.000	99	42717	1.00	1.05	
* 87 Chlorobenzene-d5 (IS)	117	11.219	11.219	0.000	86	1516366	10.0	10.0	
88 1-Chlorohexane	91	11.231	11.231	0.000	95	97319	1.00	1.03	
S 89 Xylenes, Total	106				0			3.07	
90 Chlorobenzene	112	11.250	11.249	0.001	95	174405	1.00	1.02	
91 1,1,1,2-Tetrachloroethane	131	11.329	11.329	0.000	95	65818	1.00	1.04	
92 Ethylbenzene	91	11.335	11.335	0.000	98	309286	1.00	1.02	
93 m-Xylene & p-Xylene	106	11.445	11.445	0.000	0	241508	2.00	2.04	
94 o-Xylene	106	11.774	11.774	0.000	96	120712	1.00	1.03	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
95 Styrene	104	11.792	11.792	0.000	95	191061	1.00	1.02	
96 Bromoform	173	11.951	11.944	0.007	97	33797	1.00	1.00	
97 Isopropylbenzene	105	12.073	12.072	0.000	95	323191	1.00	1.04	
$ 100 4-Bromofluorobenzene (Surr)	95	12.219	12.219	0.000	93	720334	10.0	10.0	
101 1,1,2,2-Tetrachloroethane	83	12.316	12.316	0.000	93	54891	1.00	1.02	
102 Bromobenzene	156	12.335	12.335	0.000	94	72862	1.00	1.01	
103 trans-1,4-Dichloro-2-butene	53	12.341	12.341	0.000	92	145681	10.0	10.2	
104 1,2,3-Trichloropropane	110	12.365	12.365	0.000	84	15995	1.00	1.07	
105 N-Propylbenzene	91	12.402	12.402	0.000	99	364128	1.00	1.02	
106 2-Chlorotoluene	126	12.475	12.475	0.000	97	73314	1.00	1.02	
107 1,3,5-Trimethylbenzene	105	12.536	12.536	0.000	94	262244	1.00	1.01	
108 4-Chlorotoluene	126	12.566	12.566	0.000	98	73872	1.00	1.01	
109 tert-Butylbenzene	134	12.774	12.780	-0.006	93	58801	1.00	1.01	
110 Pentachloroethane	167	12.810	12.810	0.000	80	47192	1.00	0.9593	
111 1,2,4-Trimethylbenzene	105	12.816	12.816	0.000	97	273400	1.00	1.02	
112 sec-Butylbenzene	105	12.938	12.938	0.000	94	338352	1.00	1.01	
113 1,3-Dichlorobenzene	146	13.042	13.042	0.000	97	145246	1.00	1.03	
114 4-Isopropyltoluene	119	13.048	13.048	0.000	97	291668	1.00	1.01	
* 115 1,4-Dichlorobenzene-d4	152	13.097	13.097	0.000	94	833112	10.0	10.0	
116 1,4-Dichlorobenzene	146	13.115	13.115	0.000	96	144468	1.00	1.03	
117 1,2,3-Trimethylbenzene	120	13.121	13.121	0.000	98	111289	1.00	0.9667	
118 Benzyl chloride	126	13.188	13.188	0.000	98	25310	1.00	1.03	
119 n-Butylbenzene	92	13.334	13.334	0.000	96	132791	1.00	0.9887	
120 1,2-Dichlorobenzene	146	13.371	13.371	0.000	98	130781	1.00	1.01	
122 1,2-Dibromo-3-Chloropropane	155	13.914	13.914	0.000	88	9220	1.00	1.04	
123 1,3,5-Trichlorobenzene	180	14.042	14.035	0.007	98	102291	1.00	1.00	
124 1,2,4-Trichlorobenzene	180	14.462	14.462	0.000	93	86977	1.00	1.01	
125 Hexachlorobutadiene	225	14.542	14.541	0.001	98	35400	1.00	0.9725	
126 Naphthalene	128	14.639	14.645	-0.006	97	173964	1.00	1.02	
127 1,2,3-Trichlorobenzene	180	14.785	14.785	0.000	95	72189	1.00	1.00	
134 Isopropyl alcohol	45		0.000				ND	ND	U
135 p-Diethylbenzene	1		0.000				ND	ND	U
137 2-Methylnaphthalene	142		0.000				ND	ND	U
144 2-ethoxy-2-methyl butane	1		0.000				ND	ND	U

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

U - Marked Undetected

Reagents:

MSV_RV1_826_00008	Amount Added:	2.00	Units: uL	
MSV_RV4_826_00009	Amount Added:	2.00	Units: uL	
MSV_RV4GAS826_00022	Amount Added:	2.00	Units: uL	
MSV_31_826ISS_00002	Amount Added:	5.00	Units: uL	Run Reagent

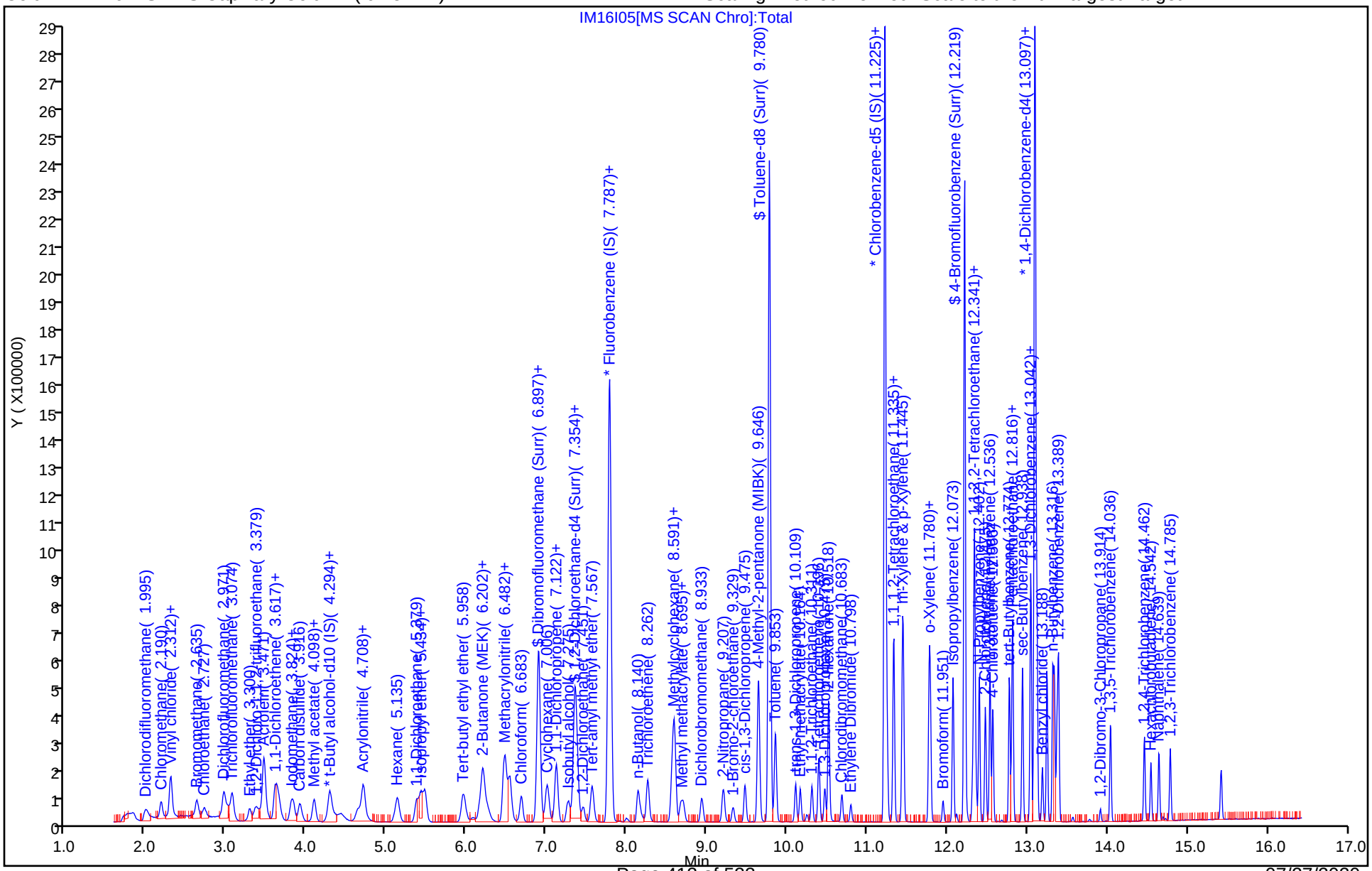
Report Date: 13-May-2020 18:30:37 Chrom Revision: 2.3 12-May-2020 10:44:46

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I05.D

Injection Date:	16-Mar-2020 17:48:30	Instrument ID:	19930	Operator ID:	JKH09052
Lims ID:	IC std3			Worklist Smp#:	16
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
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

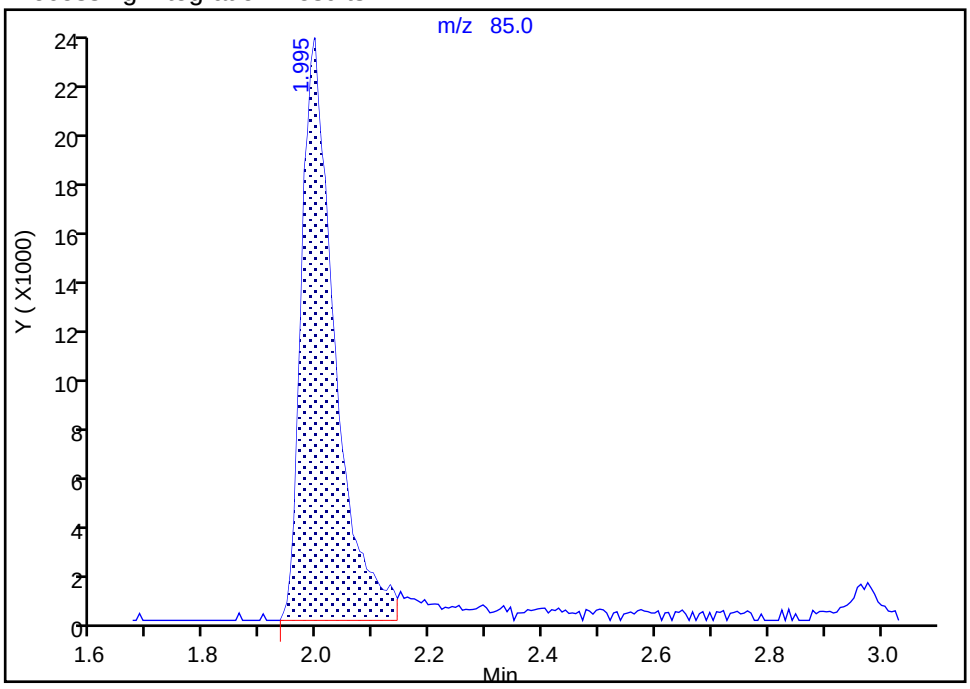
Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I05.D
Injection Date: 16-Mar-2020 17:48:30 Instrument ID: 19930
Lims ID: IC std3
Client ID:
Operator ID: JKH09052 ALS Bottle#: 15 Worklist Smp#: 16
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

1 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

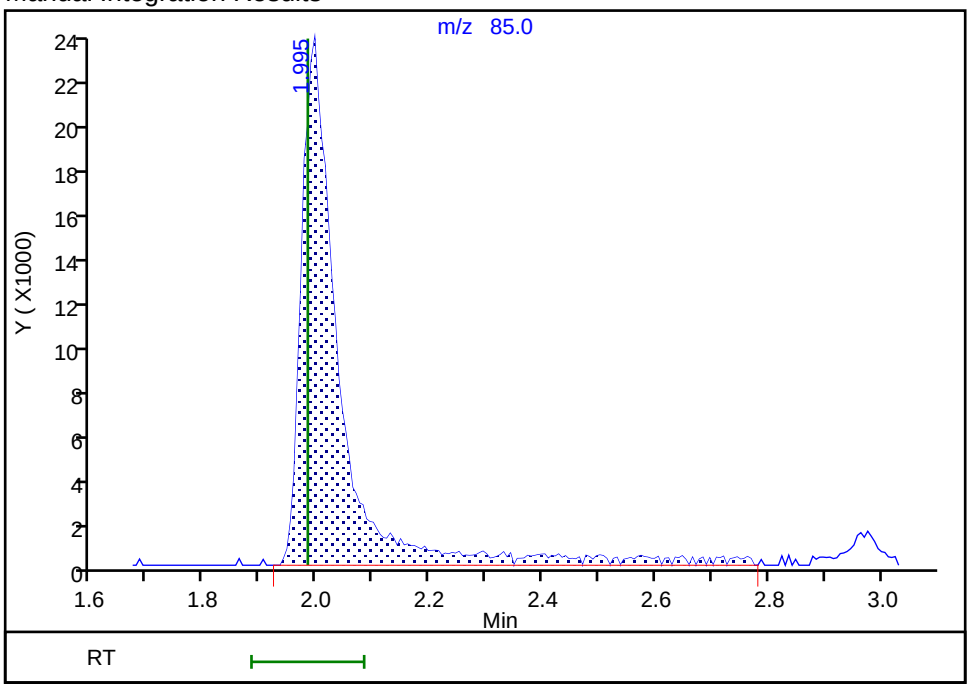
Processing Integration Results

RT: 2.00
Area: 95342
Amount: 0.964475
Amount Units: ug/l



Manual Integration Results

RT: 2.00
Area: 110058
Amount: 0.992910
Amount Units: ug/l



Reviewer: campbellme, 18-Mar-2020 21:45:05
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

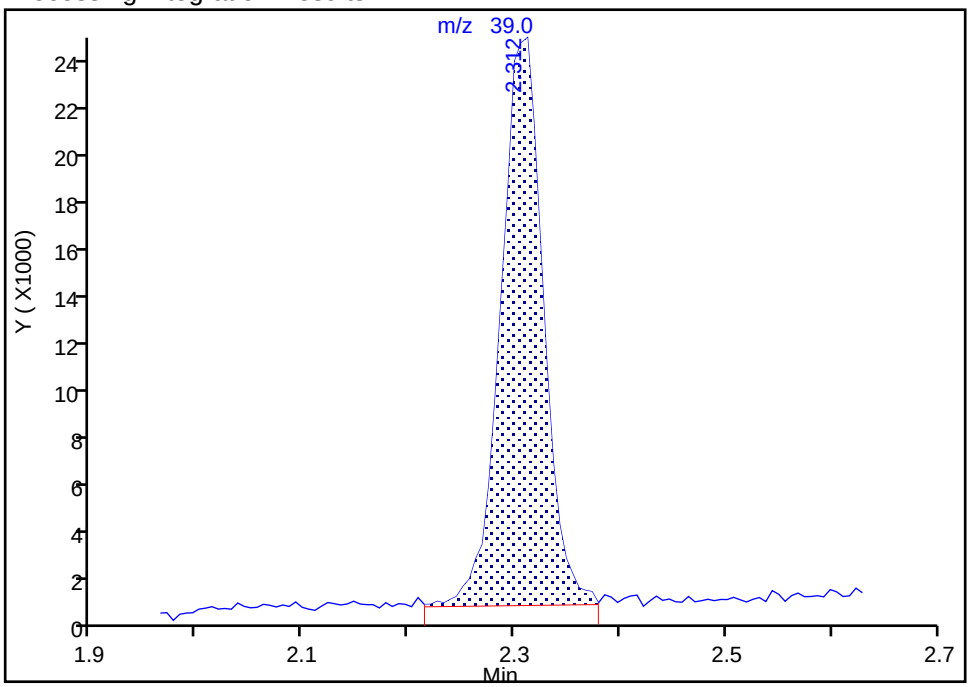
Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I05.D
Injection Date: 16-Mar-2020 17:48:30 Instrument ID: 19930
Lims ID: IC std3
Client ID:
Operator ID: JKH09052 ALS Bottle#: 15 Worklist Smp#: 16
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

6 Butadiene, CAS: 106-99-0

Signal: 1

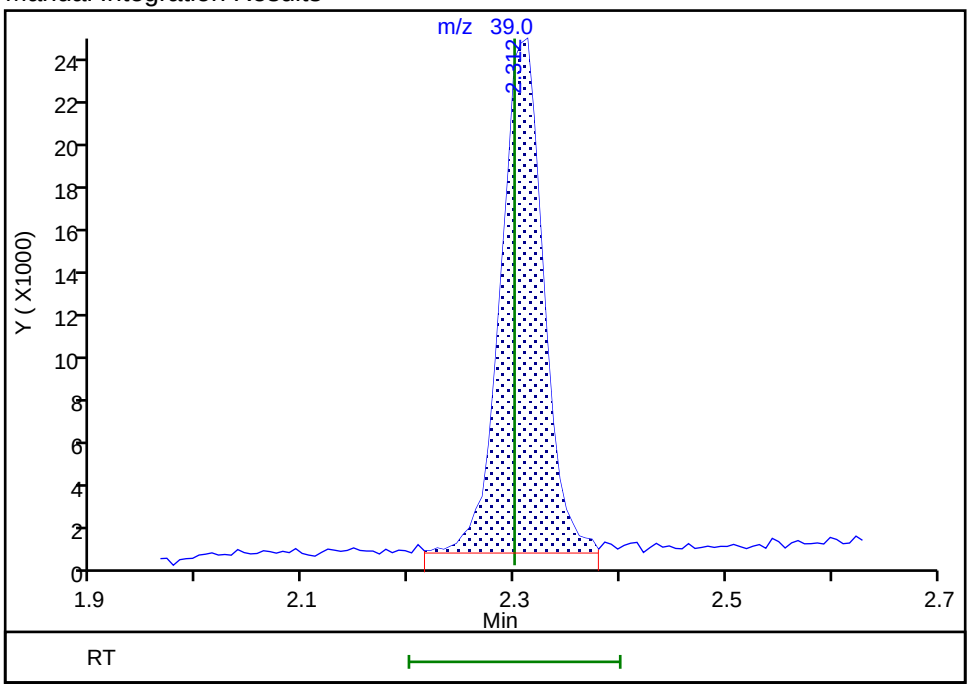
Processing Integration Results

RT: 2.31
Area: 66288
Amount: 1.043357
Amount Units: ug/l



Manual Integration Results

RT: 2.31
Area: 66790
Amount: 1.041584
Amount Units: ug/l



Reviewer: campbellme, 18-Mar-2020 21:45:21
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

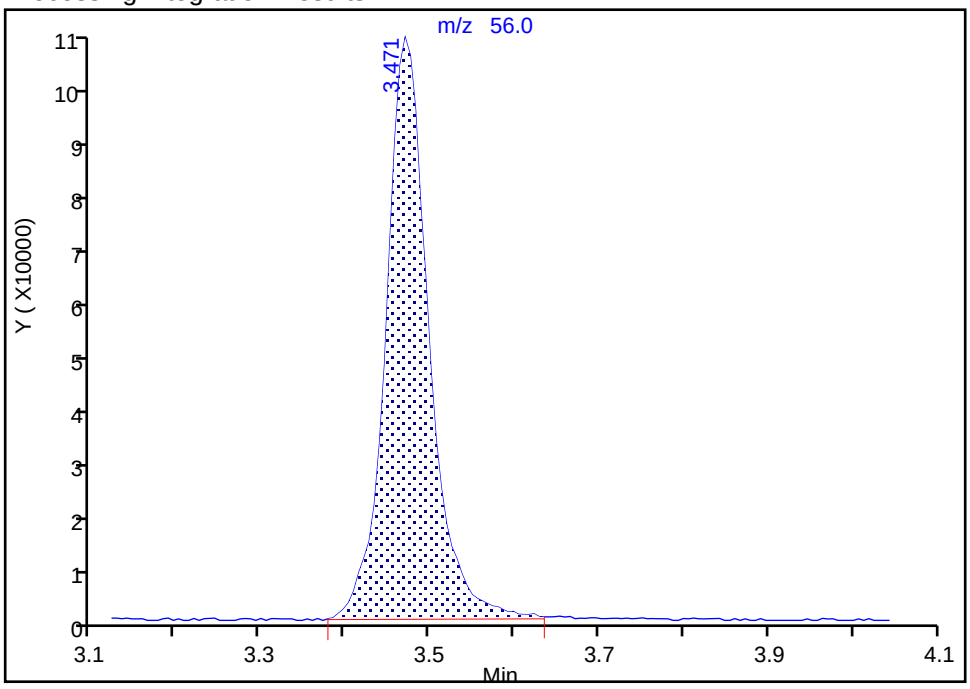
Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I05.D
Injection Date: 16-Mar-2020 17:48:30 Instrument ID: 19930
Lims ID: IC std3
Client ID:
Operator ID: JKH09052 ALS Bottle#: 15 Worklist Smp#: 16
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

13 Acrolein, CAS: 107-02-8

Signal: 1

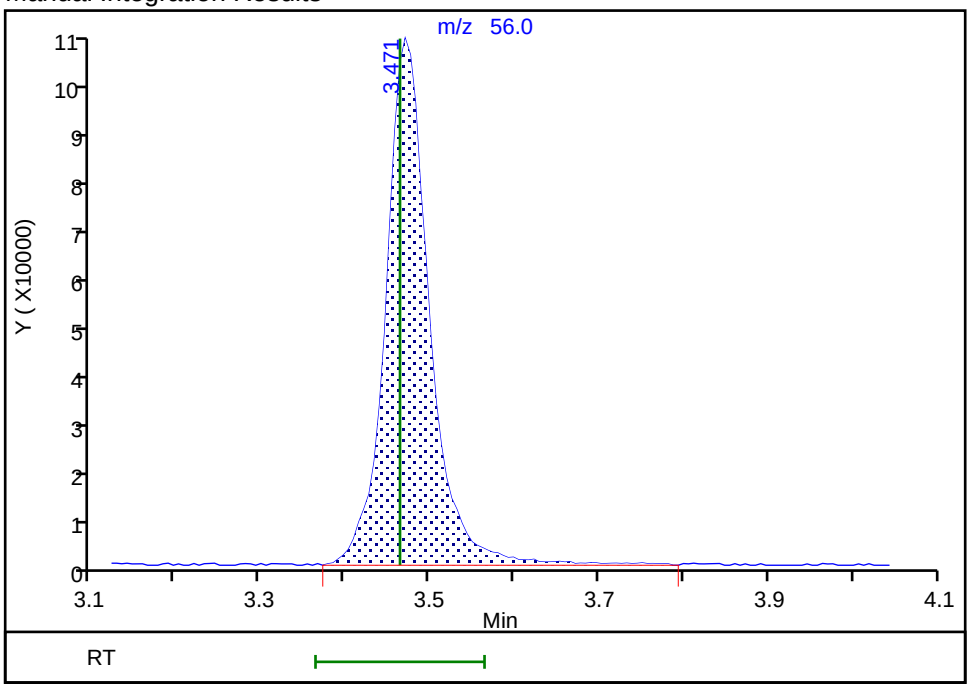
Processing Integration Results

RT: 3.47
Area: 373379
Amount: 49.704668
Amount Units: ug/l



Manual Integration Results

RT: 3.47
Area: 380382
Amount: 50.969503
Amount Units: ug/l



Reviewer: campbellme, 18-Mar-2020 21:45:37
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

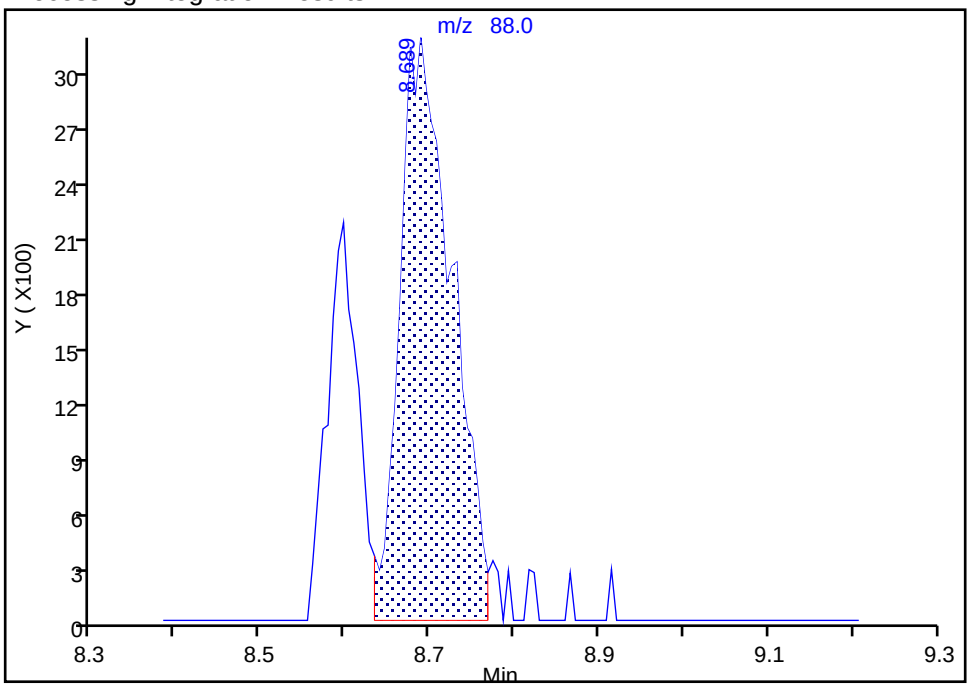
Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I05.D
Injection Date: 16-Mar-2020 17:48:30 Instrument ID: 19930
Lims ID: IC std3
Client ID:
Operator ID: JKH09052 ALS Bottle#: 15 Worklist Smp#: 16
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

65 1,4-Dioxane, CAS: 123-91-1

Signal: 1

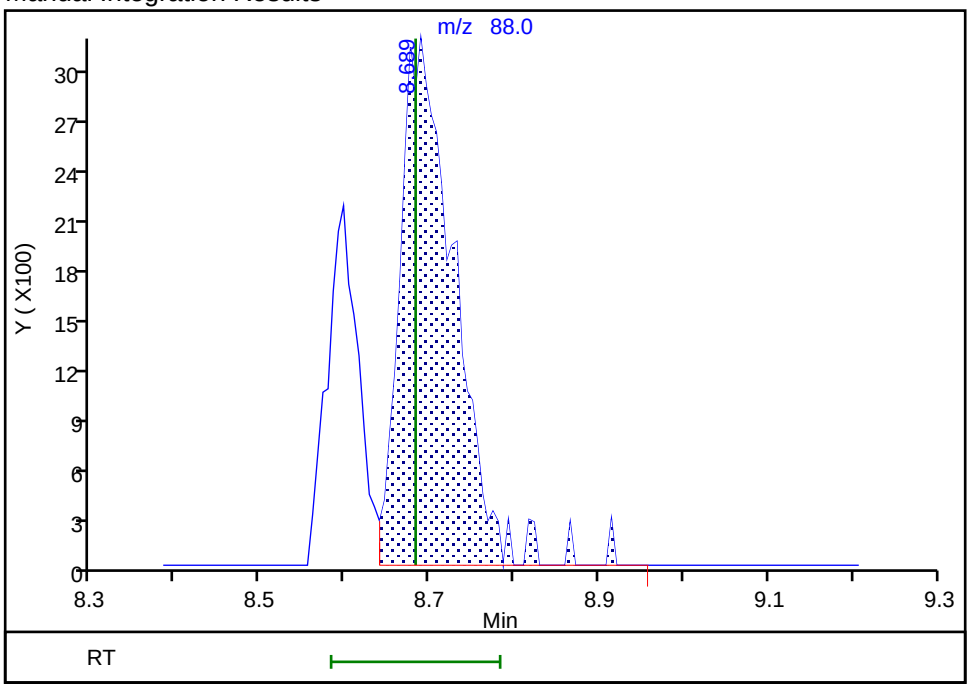
Processing Integration Results

RT: 8.69
Area: 13678
Amount: 17.371619
Amount Units: ug/l



Manual Integration Results

RT: 8.69
Area: 14258
Amount: 53.524177
Amount Units: ug/l



Reviewer: campbellme, 18-Mar-2020 21:46:15
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\20200317-1775.b\IM16I06.D
Lims ID: IC std2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 16-Mar-2020 18:09:30 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: VSTD0.5;VSTD0.5;1;1;;;;;;
Misc. Info.: 8260W25.SUB;;;25;25;;;
Operator ID: JKH09052 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 13-May-2020 18:30:45 Calib Date: 16-Mar-2020 18:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1007

First Level Reviewer: campbellme Date: 18-Mar-2020 21:48:42

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	1.983	0.000	99	54675	0.5000	0.4948	M
4 Chloromethane	50	2.178	2.184	-0.006	99	42463	0.5000	0.4769	
5 Vinyl chloride	62	2.300	2.300	0.000	97	40095	0.5000	0.4647	
6 Butadiene	39	2.294	2.300	-0.006	85	31811	0.5000	0.4976	M
7 Bromomethane	94	2.623	2.629	-0.006	89	28935	0.5000	0.4783	
8 Chloroethane	64	2.721	2.721	0.000	99	23037	0.5000	0.4718	
9 Dichlorofluoromethane	67	2.958	2.964	-0.006	97	53348	0.5000	0.4697	
10 Trichlorofluoromethane	101	3.019	3.025	-0.006	97	47505	0.5000	0.4618	
11 Ethyl ether	59	3.282	3.288	-0.006	90	22182	0.5001	0.5018	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.367	3.373	-0.006	91	33829	0.5000	0.4860	
13 Acrolein	56	3.458	3.464	-0.006	99	184567	25.0	23.0	
14 1,1-Dichloroethene	96	3.605	3.605	0.000	98	27004	0.5000	0.4965	
15 Acetone	43	3.635	3.635	0.000	100	50375	5.00	5.01	
16 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.641	3.641	0.000	65	27503	0.5000	0.4659	
17 Iodomethane	142	3.800	3.806	-0.006	100	50302	0.5000	0.4845	
18 Ethyl bromide	108	3.830	3.830	0.000	98	22777	0.5000	0.4929	
19 Carbon disulfide	76	3.909	3.909	0.000	99	75768	0.5000	0.4875	
21 Methyl acetate	43	4.068	4.068	0.000	97	12313	0.5000	0.5042	
22 3-Chloro-1-propene	41	4.086	4.092	-0.006	90	41024	0.5000	0.4995	
23 Methylene Chloride	84	4.281	4.293	-0.012	82	28507	0.5000	0.5049	
* 24 t-Butyl alcohol-d10 (IS)	65	4.294	4.293	0.001	0	202558	50.0	50.0	M
25 2-Methyl-2-propanol	59	4.422	4.428	-0.006	98	47936	10.0	9.82	
26 Acrylonitrile	53	4.629	4.629	0.000	99	30392	2.50	2.30	
27 Methyl tert-butyl ether	73	4.702	4.702	0.000	86	70101	0.5000	0.5021	
28 trans-1,2-Dichloroethene	96	4.702	4.702	0.000	99	28719	0.5000	0.4914	
29 Hexane	57	5.129	5.129	0.000	91	41124	0.5000	0.4673	
31 1,1-Dichloroethane	63	5.366	5.366	0.000	96	51361	0.5000	0.4942	
32 Isopropyl ether	45	5.421	5.421	0.000	93	85406	0.5000	0.4913	
33 2-Chloro-1,3-butadiene	53	5.476	5.476	0.000	92	44387	0.5000	0.4834	
34 Tert-butyl ethyl ether	59	5.952	5.958	-0.006	97	83782	0.5000	0.4897	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
S 35 1,2-Dichloroethene, Total	100				0			0.9795	
36 2-Butanone (MEK)	43	6.159	6.171	-0.012	99	81941	5.00	4.63	
37 cis-1,2-Dichloroethene	96	6.196	6.196	0.000	81	32022	0.5000	0.4881	
38 2,2-Dichloropropane	77	6.220	6.208	0.012	88	45857	0.5000	0.4877	
40 Propionitrile	54	6.263	6.263	0.000	99	46096	10.0	9.36	
42 Methacrylonitrile	67	6.464	6.470	-0.006	90	77209	5.00	4.58	
43 Chlorobromomethane	128	6.525	6.531	-0.006	82	15015	0.5000	0.5173	
44 Tetrahydrofuran	71	6.537	6.543	-0.006	85	24939	5.00	4.59	
45 Chloroform	83	6.677	6.683	-0.006	93	51575	0.5000	0.4960	
$ 46 Dibromofluoromethane (Surr)	113	6.897	6.897	0.000	93	493200	10.0	10.1	
47 1,1,1-Trichloroethane	97	6.903	6.903	0.000	38	49308	0.5000	0.4890	
48 Cyclohexane	56	7.000	7.000	0.000	88	50356	0.5000	0.4737	
50 Carbon tetrachloride	117	7.110	7.116	-0.006	91	42212	0.5000	0.4722	
51 1,1-Dichloropropene	75	7.116	7.116	0.000	95	39847	0.5000	0.4783	
52 Isobutyl alcohol	41	7.269	7.269	0.000	94	33714	25.0	23.9	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.348	7.354	-0.006	0	99319	10.0	10.0	
54 Benzene	78	7.378	7.378	0.000	92	118212	0.5000	0.4874	
56 1,2-Dichloroethane	62	7.451	7.451	0.000	98	32843	0.5000	0.5033	
57 Tert-amyl methyl ether	73	7.567	7.561	0.006	98	79199	0.5000	0.4983	
* 58 Fluorobenzene (IS)	96	7.781	7.781	0.000	99	2032599	10.0	10.0	
59 n-Heptane	43	7.793	7.793	0.000	63	37944	0.5000	0.4525	
60 n-Butanol	56	8.134	8.140	-0.006	87	61312	50.0	49.2	
61 Trichloroethene	95	8.256	8.262	-0.006	98	31278	0.5000	0.4844	
62 Methylcyclohexane	83	8.567	8.567	0.000	91	54220	0.5000	0.4713	
63 1,2-Dichloropropane	63	8.591	8.591	0.000	70	28933	0.5000	0.4908	
64 Methyl methacrylate	69	8.671	8.671	0.000	88	15475	0.5000	0.4530	
65 1,4-Dioxane	88	8.677	8.683	-0.006	44	8556	25.0	29.9	M
66 Dibromomethane	93	8.707	8.707	0.000	93	13976	0.5000	0.4781	
68 Dichlorobromomethane	83	8.933	8.933	0.000	98	37860	0.5000	0.4931	
69 2-Nitropropane	41	9.201	9.201	0.000	99	48823	5.00	4.60	
72 1-Bromo-2-chloroethane	63	9.329	9.323	0.006	98	30408	0.5000	0.4968	
73 cis-1,3-Dichloropropene	75	9.475	9.475	0.000	96	43315	0.5000	0.4769	
74 4-Methyl-2-pentanone (MIBK)	43	9.640	9.640	0.000	96	200214	5.00	4.57	
$ 75 Toluene-d8 (Surr)	98	9.780	9.780	0.000	93	1928163	10.0	10.1	
76 Toluene	92	9.853	9.853	0.000	98	74368	0.5000	0.4868	
S 77 1,3-Dichloropropene, Total	100				0			0.9588	
78 trans-1,3-Dichloropropene	75	10.109	10.109	0.000	92	37257	0.5000	0.4819	
79 Ethyl methacrylate	69	10.164	10.164	0.000	88	31923	0.5000	0.4843	
80 1,1,2-Trichloroethane	97	10.311	10.311	0.000	91	21660	0.5000	0.5064	
81 Tetrachloroethene	166	10.396	10.396	0.000	98	34794	0.5000	0.4769	
82 1,3-Dichloropropane	76	10.469	10.475	-0.006	89	35276	0.5000	0.4907	
83 2-Hexanone	43	10.518	10.518	0.000	96	137320	5.00	4.54	
85 Chlorodibromomethane	129	10.682	10.682	0.000	90	26432	0.5000	0.4848	
86 Ethylene Dibromide	107	10.798	10.798	0.000	100	19859	0.5000	0.4917	
* 87 Chlorobenzene-d5 (IS)	117	11.219	11.219	0.000	85	1503299	10.0	10.0	
88 1-Chlorohexane	91	11.231	11.231	0.000	93	45065	0.5000	0.4798	
S 89 Xylenes, Total	106				0			1.45	
90 Chlorobenzene	112	11.249	11.249	0.000	96	82189	0.5000	0.4858	
91 1,1,1,2-Tetrachloroethane	131	11.329	11.329	0.000	94	31596	0.5000	0.5016	
92 Ethylbenzene	91	11.335	11.335	0.000	98	144619	0.5000	0.4825	
93 m-Xylene & p-Xylene	106	11.445	11.445	0.000	0	114685	1.00	0.9766	
94 o-Xylene	106	11.774	11.774	0.000	96	55140	0.5000	0.4737	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
95 Styrene	104	11.792	11.792	0.000	93	87686	0.5000	0.4721	
96 Bromoform	173	11.951	11.944	0.007	97	16484	0.5000	0.4913	
97 Isopropylbenzene	105	12.072	12.072	0.000	96	148190	0.5000	0.4808	
$ 100 4-Bromofluorobenzene (Surr)	95	12.219	12.219	0.000	93	724468	10.0	10.2	
101 1,1,2,2-Tetrachloroethane	83	12.316	12.316	0.000	94	25318	0.5000	0.4684	
102 Bromobenzene	156	12.335	12.335	0.000	93	34868	0.5000	0.4800	
103 trans-1,4-Dichloro-2-butene	53	12.341	12.341	0.000	94	69949	5.00	4.54	
104 1,2,3-Trichloropropane	110	12.365	12.365	0.000	81	7183	0.5000	0.4770	
105 N-Propylbenzene	91	12.402	12.402	0.000	99	170003	0.5000	0.4739	
106 2-Chlorotoluene	126	12.475	12.475	0.000	97	34726	0.5000	0.4792	
107 1,3,5-Trimethylbenzene	105	12.536	12.536	0.000	94	121303	0.5000	0.4644	
108 4-Chlorotoluene	126	12.572	12.566	0.006	97	35210	0.5000	0.4773	
109 tert-Butylbenzene	134	12.780	12.780	0.000	93	26660	0.5000	0.4553	
110 Pentachloroethane	167	12.810	12.810	0.000	80	23433	0.5000	0.4744	
111 1,2,4-Trimethylbenzene	105	12.816	12.816	0.000	97	128514	0.5000	0.4785	
112 sec-Butylbenzene	105	12.938	12.938	0.000	94	155303	0.5000	0.4629	
113 1,3-Dichlorobenzene	146	13.042	13.042	0.000	97	67773	0.5000	0.4768	
114 4-Isopropyltoluene	119	13.048	13.048	0.000	97	133089	0.5000	0.4599	
* 115 1,4-Dichlorobenzene-d4	152	13.097	13.097	0.000	95	836561	10.0	10.0	
116 1,4-Dichlorobenzene	146	13.115	13.115	0.000	95	66463	0.5000	0.4725	
117 1,2,3-Trimethylbenzene	120	13.121	13.121	0.000	98	56015	0.5000	0.4846	
118 Benzyl chloride	126	13.188	13.188	0.000	98	12374	0.5000	0.4994	
119 n-Butylbenzene	92	13.334	13.334	0.000	98	61668	0.5000	0.4572	
120 1,2-Dichlorobenzene	146	13.371	13.371	0.000	98	63385	0.5000	0.4884	
122 1,2-Dibromo-3-Chloropropane	155	13.914	13.914	0.000	85	4756	0.5000	0.5328	
123 1,3,5-Trichlorobenzene	180	14.036	14.035	0.001	97	47689	0.5000	0.4636	
124 1,2,4-Trichlorobenzene	180	14.462	14.462	0.000	94	40997	0.5000	0.4732	
125 Hexachlorobutadiene	225	14.542	14.541	0.001	97	16272	0.5000	0.4452	
126 Naphthalene	128	14.645	14.645	0.000	97	85787	0.5000	0.5025	
127 1,2,3-Trichlorobenzene	180	14.785	14.785	0.000	95	35782	0.5000	0.4959	
144 2-ethoxy-2-methyl butane	1		0.000				ND	ND	U
137 2-Methylnaphthalene	142		0.000				ND	ND	U
135 p-Diethylbenzene	1		0.000				ND	ND	U
134 Isopropyl alcohol	45		0.000				ND	ND	U

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

U - Marked Undetected

Reagents:

MSV_RV1_826_00008	Amount Added:	2.00	Units: uL	
MSV_RV4_826_00009	Amount Added:	2.00	Units: uL	
MSV_RV4GAS826_00022	Amount Added:	2.00	Units: uL	
MSV_31_826ISS_00002	Amount Added:	5.00	Units: uL	Run Reagent

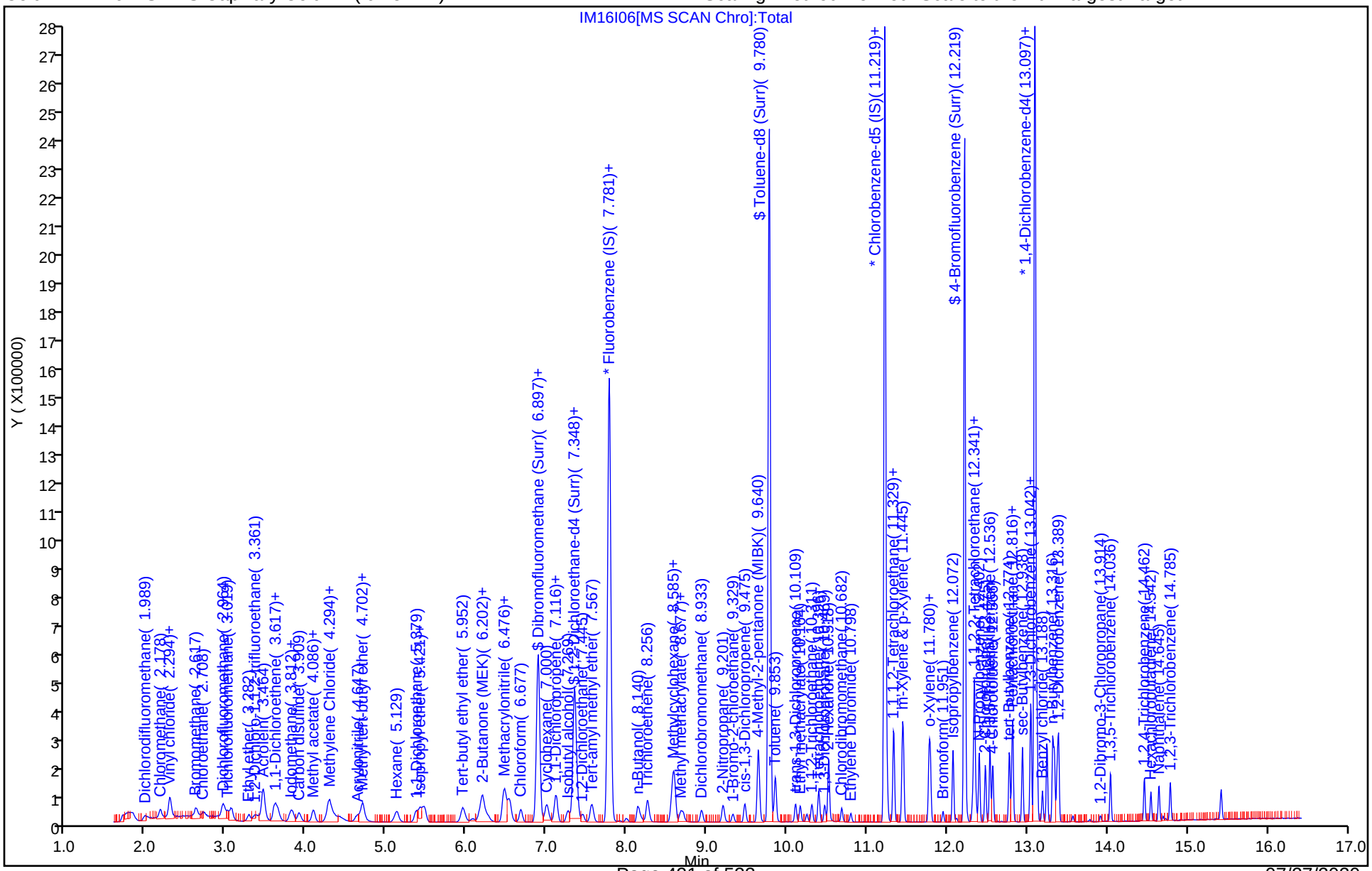
Report Date: 13-May-2020 18:30:46 Chrom Revision: 2.3 12-May-2020 10:44:46

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I06.D

Injection Date:	16-Mar-2020 18:09:30	Instrument ID:	19930	Operator ID:	JKH09052
Lims ID:	IC std2			Worklist Smp#:	17
Client ID:					
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



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

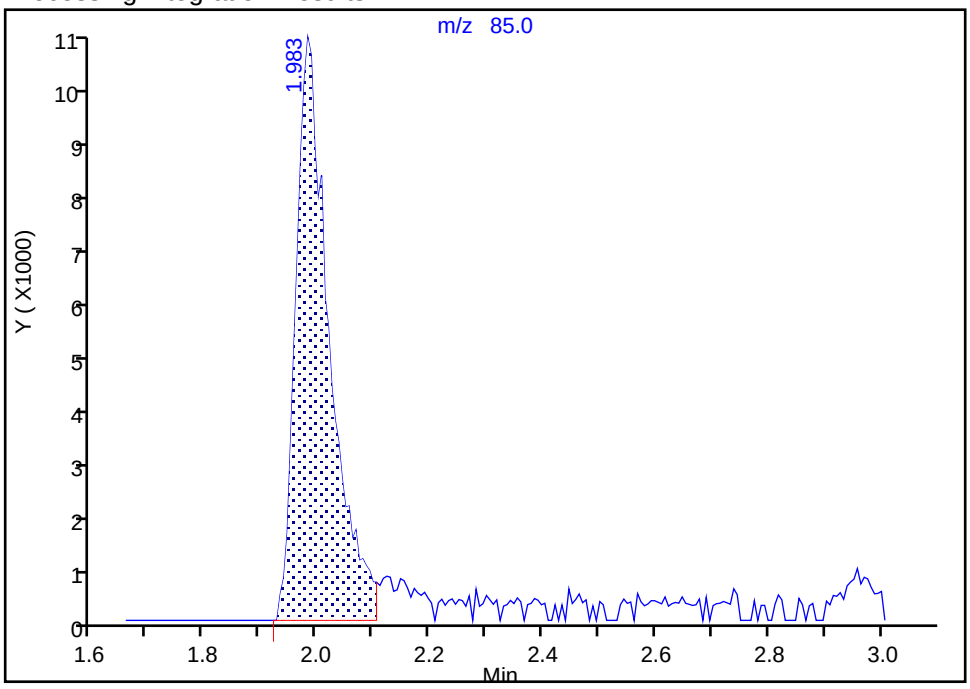
Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I06.D
Injection Date: 16-Mar-2020 18:09:30 Instrument ID: 19930
Lims ID: IC std2
Client ID:
Operator ID: JKH09052 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

1 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

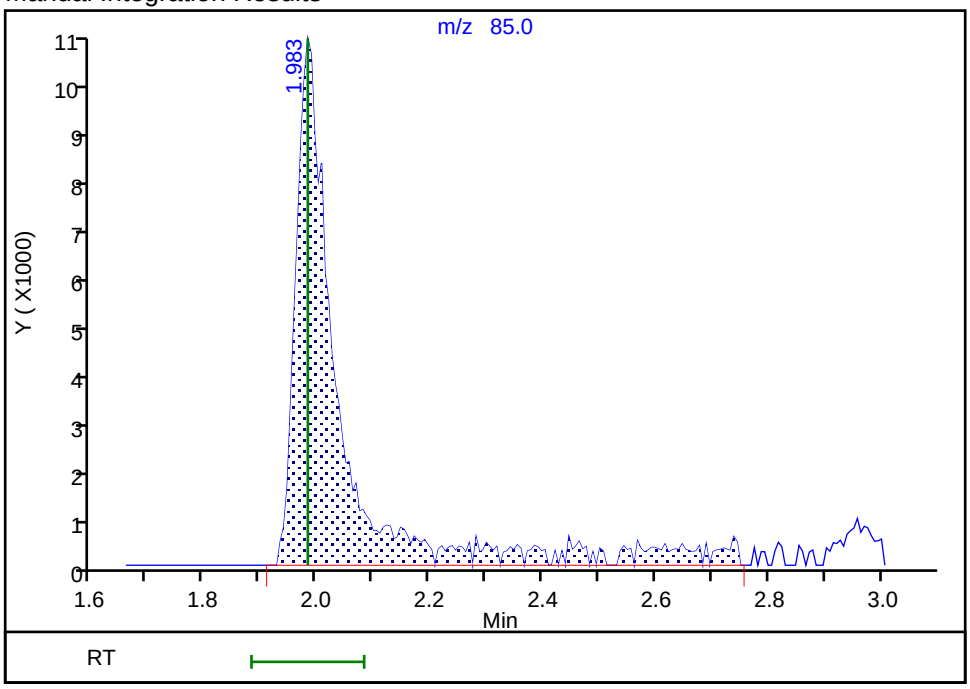
Processing Integration Results

RT: 1.98
Area: 42492
Amount: 0.422208
Amount Units: ug/l



Manual Integration Results

RT: 1.98
Area: 54675
Amount: 0.494798
Amount Units: ug/l



Reviewer: campbellme, 18-Mar-2020 21:46:55
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

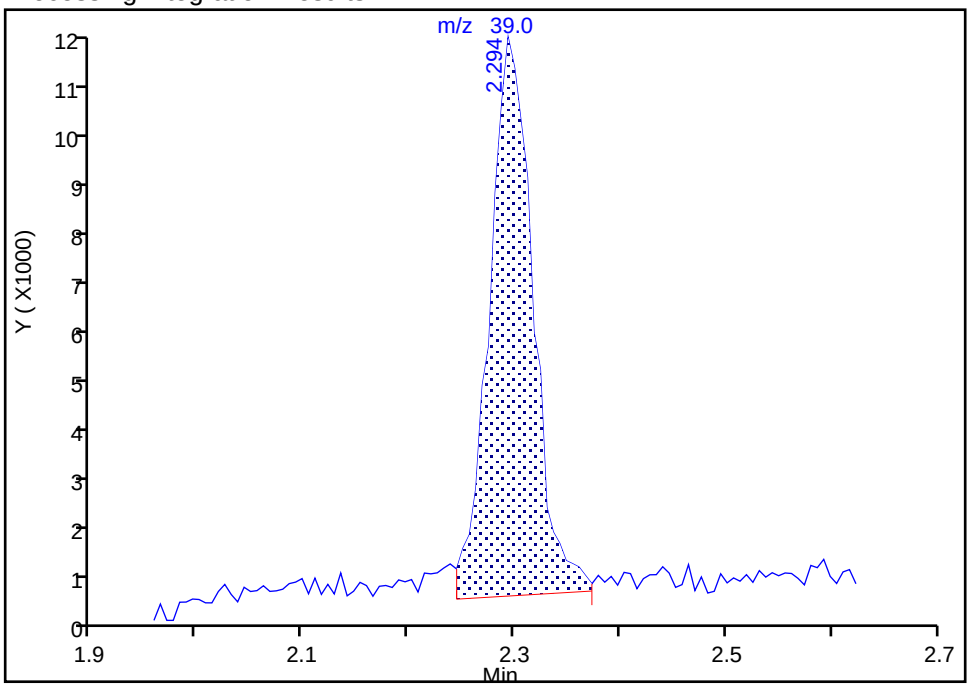
Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I06.D
Injection Date: 16-Mar-2020 18:09:30 Instrument ID: 19930
Lims ID: IC std2
Client ID:
Operator ID: JKH09052 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

6 Butadiene, CAS: 106-99-0

Signal: 1

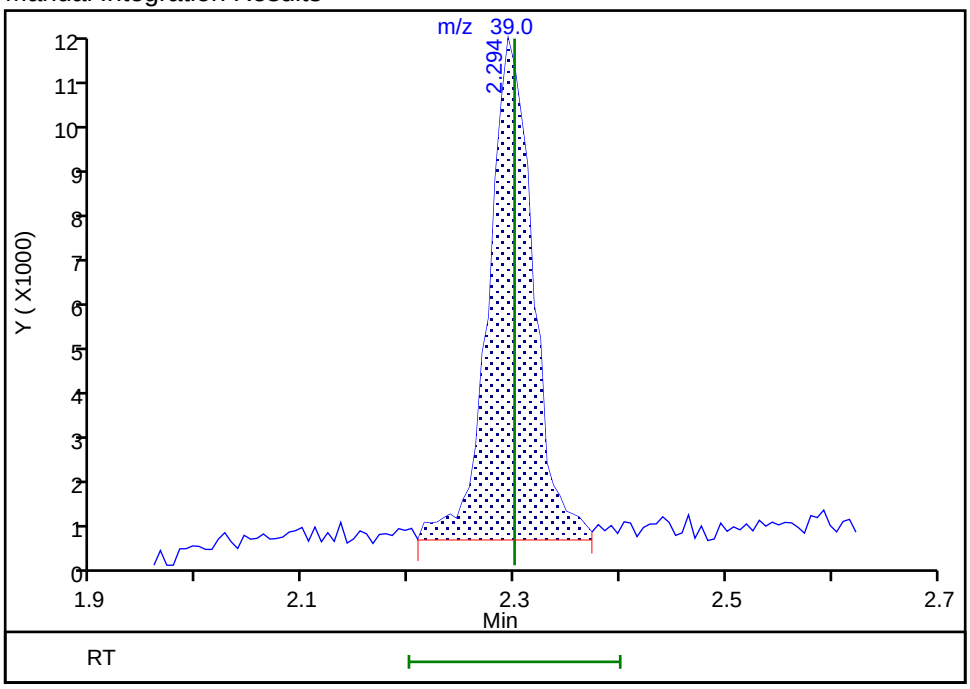
Processing Integration Results

RT: 2.29
Area: 31438
Amount: 0.495809
Amount Units: ug/l



Manual Integration Results

RT: 2.29
Area: 31811
Amount: 0.497635
Amount Units: ug/l



Reviewer: campbellme, 18-Mar-2020 21:47:16
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

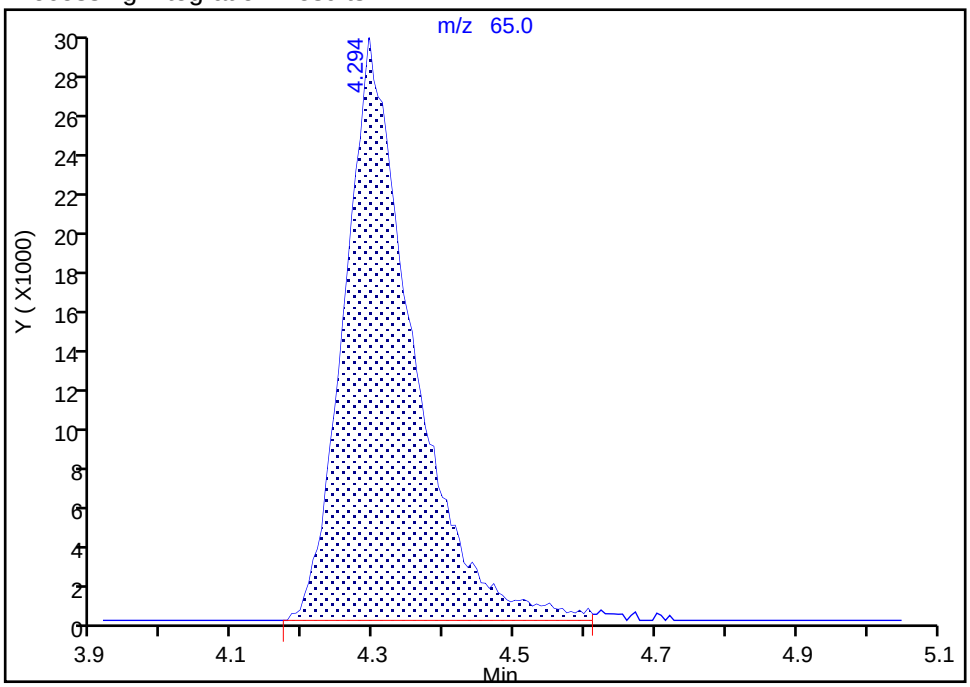
Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I06.D
Injection Date: 16-Mar-2020 18:09:30 Instrument ID: 19930
Lims ID: IC std2
Client ID:
Operator ID: JKH09052 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

* 24 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

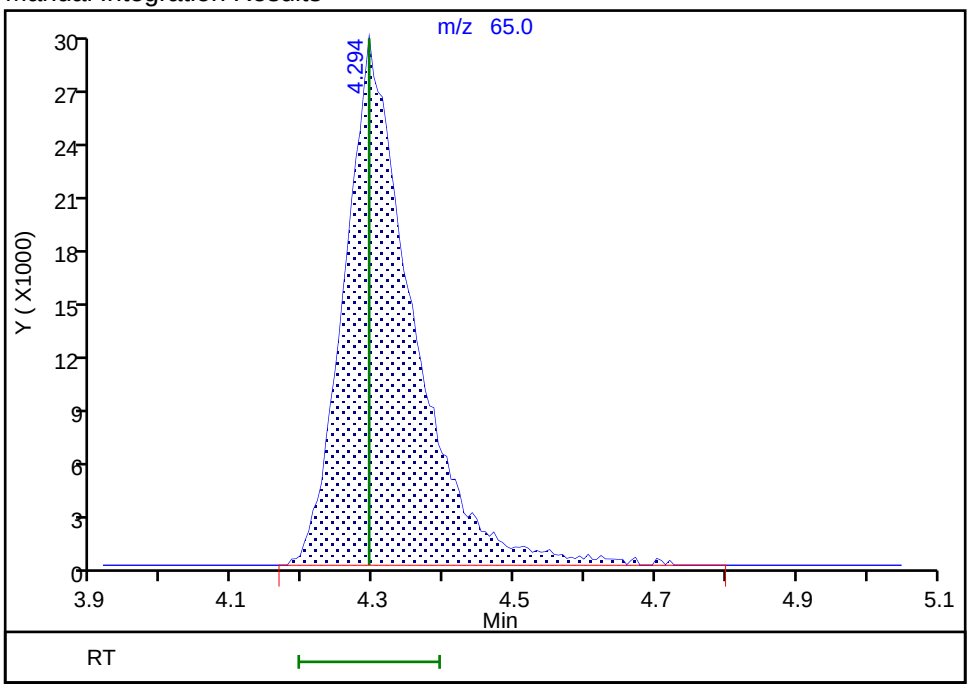
Processing Integration Results

RT: 4.29
Area: 201077
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 4.29
Area: 202558
Amount: 50.000000
Amount Units: ug/l



Reviewer: campbellme, 18-Mar-2020 21:47:48
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

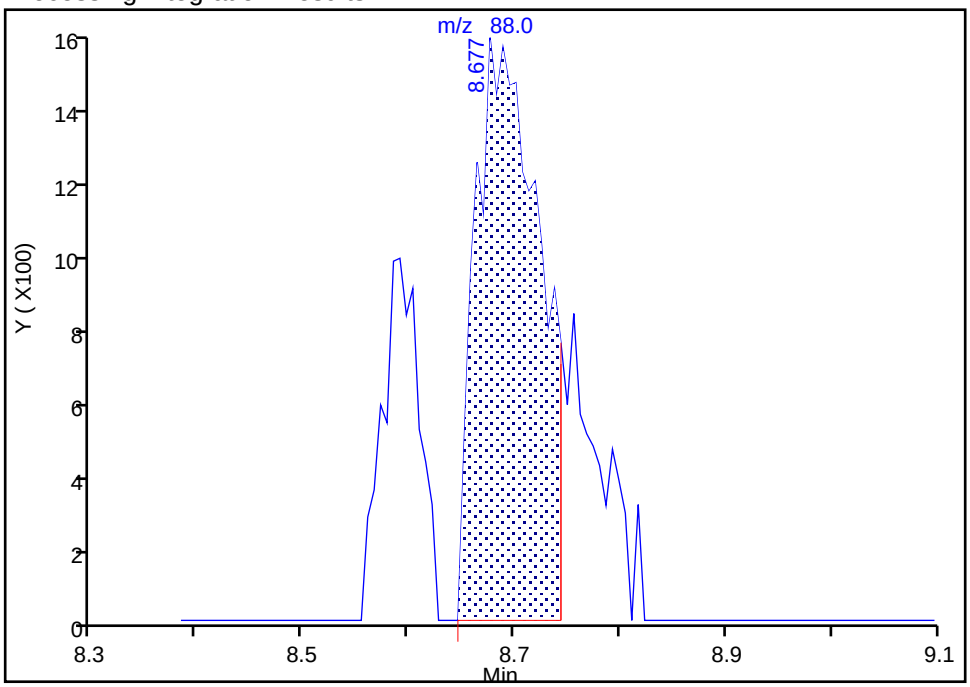
Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I06.D
Injection Date: 16-Mar-2020 18:09:30 Instrument ID: 19930
Lims ID: IC std2
Client ID:
Operator ID: JKH09052 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

65 1,4-Dioxane, CAS: 123-91-1

Signal: 1

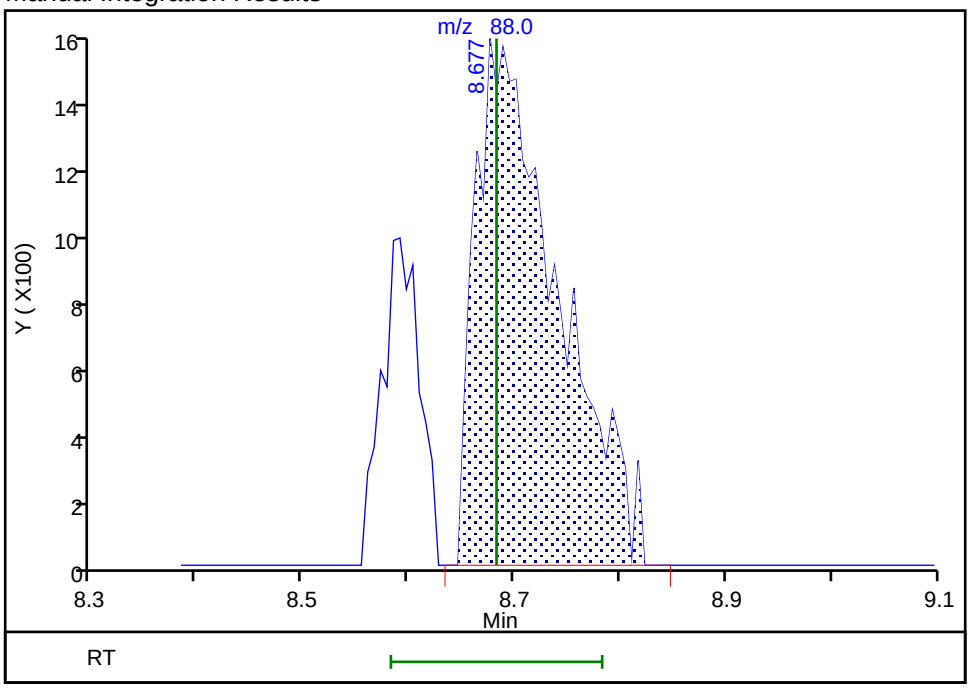
Processing Integration Results

RT: 8.68
Area: 6679
Amount: -18.818739
Amount Units: ug/l



Manual Integration Results

RT: 8.68
Area: 8556
Amount: 29.877349
Amount Units: ug/l



Reviewer: campbellme, 18-Mar-2020 21:48:07
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D
Lims ID: IC std1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 16-Mar-2020 18:31:30 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: VSTD0.2;VSTD0.2;1;1;;;;;;
Misc. Info.: 8260W25.SUB;;;25;25;;;
Operator ID: JKH09052 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 13-May-2020 18:30:54 Calib Date: 16-Mar-2020 18:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1007

First Level Reviewer: campbellme Date: 18-Mar-2020 22:00:29

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	1.983	0.006	98	29447	0.2000	0.2666	M
4 Chloromethane	50	2.184	2.184	0.000	99	18692	0.2000	0.2100	
5 Vinyl chloride	62	2.306	2.300	0.006	96	17394	0.2000	0.2017	
6 Butadiene	39	2.306	2.300	0.006	79	13020	0.2000	0.2038	M
7 Bromomethane	94	2.635	2.629	0.006	90	12781	0.2000	0.2114	
8 Chloroethane	64	2.727	2.721	0.006	88	10135	0.2000	0.2077	
9 Dichlorofluoromethane	67	2.971	2.964	0.007	96	25966	0.2000	0.2287	
10 Trichlorofluoromethane	101	3.032	3.025	0.007	70	20380	0.2000	0.1982	
11 Ethyl ether	59	3.294	3.288	0.006	91	9020	0.2000	0.2042	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.367	3.373	-0.006	88	14271	0.2000	0.2051	
13 Acrolein	56	3.477	3.464	0.013	98	70800	10.0	9.04	
14 1,1-Dichloroethene	96	3.617	3.605	0.012	97	10173	0.2000	0.1872	
15 Acetone	43	3.641	3.635	0.006	99	20493	2.00	2.09	
16 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.659	3.641	0.018	68	10068	0.2000	0.1707	
17 Iodomethane	142	3.812	3.806	0.006	99	19642	0.2000	0.1893	
18 Ethyl bromide	108	3.848	3.830	0.018	97	9120	0.2000	0.1975	
19 Carbon disulfide	76	3.922	3.909	0.013	98	30579	0.2000	0.1969	
21 Methyl acetate	43	4.086	4.068	0.018	20	6142	0.2000	0.2516	M
22 3-Chloro-1-propene	41	4.098	4.092	0.006	88	15938	0.2000	0.1942	
23 Methylene Chloride	84	4.281	4.293	-0.012	61	10957	0.2000	0.1942	M
* 24 t-Butyl alcohol-d10 (IS)	65	4.306	4.293	0.013	0	197750	50.0	50.0	M
25 2-Methyl-2-propanol	59	4.440	4.428	0.012	87	18548	4.00	3.89	
26 Acrylonitrile	53	4.641	4.629	0.012	76	11754	1.00	0.9109	
27 Methyl tert-butyl ether	73	4.696	4.702	-0.006	93	26023	0.2000	0.1865	
28 trans-1,2-Dichloroethene	96	4.720	4.702	0.018	98	11639	0.2000	0.1993	
29 Hexane	57	5.129	5.129	0.000	89	18047	0.2000	0.2052	
31 1,1-Dichloroethane	63	5.379	5.366	0.013	95	18680	0.2000	0.1798	
32 Isopropyl ether	45	5.434	5.421	0.013	94	32274	0.2000	0.1858	
33 2-Chloro-1,3-butadiene	53	5.482	5.476	0.006	90	17410	0.2000	0.1897	
34 Tert-butyl ethyl ether	59	5.958	5.958	0.000	97	32510	0.2000	0.1901	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
S 35 1,2-Dichloroethene, Total	100				0			0.3926	
36 2-Butanone (MEK)	43	6.171	6.171	0.000	98	30988	2.00	1.79	
37 cis-1,2-Dichloroethene	96	6.202	6.196	0.006	81	12679	0.2000	0.1934	
38 2,2-Dichloropropane	77	6.220	6.208	0.012	75	18569	0.2000	0.1976	
40 Propionitrile	54	6.281	6.263	0.018	97	17659	4.00	3.67	
42 Methacrylonitrile	67	6.482	6.470	0.012	90	28899	2.00	1.76	
43 Chlorobromomethane	128	6.537	6.531	0.006	82	5852	0.2000	0.2017	
44 Tetrahydrofuran	71	6.543	6.543	0.000	87	10928	2.00	2.06	
45 Chloroform	83	6.677	6.683	-0.006	92	19725	0.2000	0.1898	
$ 46 Dibromofluoromethane (Surr)	113	6.897	6.897	0.000	93	491181	10.0	10.0	
47 1,1,1-Trichloroethane	97	6.915	6.903	0.012	36	18825	0.2000	0.1868	
48 Cyclohexane	56	7.006	7.000	0.006	89	21564	0.2000	0.2029	M
50 Carbon tetrachloride	117	7.116	7.116	0.000	90	16102	0.2000	0.1802	
51 1,1-Dichloropropene	75	7.122	7.116	0.006	91	15046	0.2000	0.1807	
52 Isobutyl alcohol	41	7.287	7.269	0.018	96	14672	10.0	10.7	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.348	7.354	-0.006	0	99741	10.0	10.0	
54 Benzene	78	7.384	7.378	0.006	95	46030	0.2000	0.1899	
56 1,2-Dichloroethane	62	7.458	7.451	0.007	98	13507	0.2000	0.2071	
57 Tert-amyl methyl ether	73	7.573	7.561	0.012	98	30981	0.2000	0.1950	
* 58 Fluorobenzene (IS)	96	7.787	7.781	0.006	99	2031491	10.0	10.0	
59 n-Heptane	43	7.799	7.793	0.006	37	15403	0.2000	0.1838	
60 n-Butanol	56	8.153	8.140	0.012	87	21535	20.0	17.7	
61 Trichloroethene	95	8.256	8.262	-0.006	96	12251	0.2000	0.1898	M
62 Methylcyclohexane	83	8.567	8.567	0.000	91	21932	0.2000	0.1907	
63 1,2-Dichloropropane	63	8.591	8.591	0.000	69	10960	0.2000	0.1860	
64 Methyl methacrylate	69	8.665	8.671	-0.006	87	5985	0.2000	0.1795	M
65 1,4-Dioxane	88	8.677	8.683	-0.006	51	1950	10.0	6.97	M
66 Dibromomethane	93	8.701	8.707	-0.006	96	5492	0.2000	0.1880	
68 Dichlorobromomethane	83	8.933	8.933	0.000	97	14558	0.2000	0.1897	
69 2-Nitropropane	41	9.207	9.201	0.006	97	17372	2.00	1.68	
72 1-Bromo-2-chloroethane	63	9.323	9.323	0.000	96	11627	0.2000	0.1901	
73 cis-1,3-Dichloropropene	75	9.475	9.475	0.000	95	16020	0.2000	0.1765	
74 4-Methyl-2-pentanone (MIBK)	43	9.646	9.640	0.006	96	74340	2.00	1.74	
$ 75 Toluene-d8 (Surr)	98	9.780	9.780	0.000	93	1924255	10.0	10.0	
76 Toluene	92	9.853	9.853	0.000	97	27903	0.2000	0.1820	
S 77 1,3-Dichloropropene, Total	100				0			0.3654	
78 trans-1,3-Dichloropropene	75	10.109	10.109	0.000	93	14659	0.2000	0.1889	
79 Ethyl methacrylate	69	10.170	10.164	0.006	90	12586	0.2000	0.1903	
80 1,1,2-Trichloroethane	97	10.311	10.311	0.000	89	8408	0.2000	0.1959	
81 Tetrachloroethene	166	10.402	10.396	0.006	95	13547	0.2000	0.1850	
82 1,3-Dichloropropane	76	10.469	10.475	-0.006	90	13157	0.2000	0.1824	
83 2-Hexanone	43	10.518	10.518	0.000	97	51030	2.00	1.73	
85 Chlorodibromomethane	129	10.689	10.682	0.007	91	9631	0.2000	0.1760	
86 Ethylene Dibromide	107	10.798	10.798	0.000	95	7016	0.2000	0.1731	
* 87 Chlorobenzene-d5 (IS)	117	11.219	11.219	0.000	85	1508640	10.0	10.0	
88 1-Chlorohexane	91	11.231	11.231	0.000	68	19231	0.2000	0.2040	
S 89 Xylenes, Total	106				0			0.5612	
90 Chlorobenzene	112	11.249	11.249	0.000	95	31292	0.2000	0.1843	
91 1,1,1,2-Tetrachloroethane	131	11.329	11.329	0.000	96	10964	0.2000	0.1734	
92 Ethylbenzene	91	11.335	11.335	0.000	98	56876	0.2000	0.1891	
93 m-Xylene & p-Xylene	106	11.445	11.445	0.000	0	43526	0.4000	0.3693	
94 o-Xylene	106	11.774	11.774	0.000	94	22418	0.2000	0.1919	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
95 Styrene	104	11.792	11.792	0.000	94	34270	0.2000	0.1838	
96 Bromoform	173	11.951	11.944	0.007	96	5904	0.2000	0.1753	
97 Isopropylbenzene	105	12.072	12.072	0.000	95	54965	0.2000	0.1777	
$ 100 4-Bromofluorobenzene (Surr)	95	12.219	12.219	0.000	92	718165	10.0	10.0	
101 1,1,2,2-Tetrachloroethane	83	12.316	12.316	0.000	94	9904	0.2000	0.1855	
102 Bromobenzene	156	12.335	12.335	0.000	94	13246	0.2000	0.1846	
103 trans-1,4-Dichloro-2-butene	53	12.341	12.341	0.000	92	26607	2.00	1.77	
104 1,2,3-Trichloropropane	110	12.365	12.365	0.000	77	2691	0.2000	0.1809	
105 N-Propylbenzene	91	12.402	12.402	0.000	99	66911	0.2000	0.1889	
106 2-Chlorotoluene	126	12.481	12.475	0.006	96	12468	0.2000	0.1742	
107 1,3,5-Trimethylbenzene	105	12.536	12.536	0.000	94	47587	0.2000	0.1845	
108 4-Chlorotoluene	126	12.572	12.566	0.006	96	13573	0.2000	0.1863	
109 tert-Butylbenzene	134	12.780	12.780	0.000	93	10372	0.2000	0.1793	
110 Pentachloroethane	167	12.810	12.810	0.000	88	9252	0.2000	0.1896	
111 1,2,4-Trimethylbenzene	105	12.816	12.816	0.000	97	48121	0.2000	0.1814	
112 sec-Butylbenzene	105	12.938	12.938	0.000	94	58363	0.2000	0.1761	
113 1,3-Dichlorobenzene	146	13.042	13.042	0.000	97	25712	0.2000	0.1832	
114 4-Isopropyltoluene	119	13.048	13.048	0.000	97	50112	0.2000	0.1753	
* 115 1,4-Dichlorobenzene-d4	152	13.097	13.097	0.000	95	826251	10.0	10.0	
116 1,4-Dichlorobenzene	146	13.115	13.115	0.000	93	26261	0.2000	0.1890	
117 1,2,3-Trimethylbenzene	120	13.121	13.121	0.000	97	22215	0.2000	0.1946	
118 Benzyl chloride	126	13.188	13.188	0.000	99	4340	0.2000	0.1773	
119 n-Butylbenzene	92	13.341	13.334	0.006	97	22693	0.2000	0.1704	
120 1,2-Dichlorobenzene	146	13.371	13.371	0.000	98	23812	0.2000	0.1858	
122 1,2-Dibromo-3-Chloropropane	155	13.914	13.914	0.000	86	1491	0.2000	0.1691	
123 1,3,5-Trichlorobenzene	180	14.042	14.035	0.007	96	17479	0.2000	0.1720	
124 1,2,4-Trichlorobenzene	180	14.462	14.462	0.000	95	14677	0.2000	0.1715	
125 Hexachlorobutadiene	225	14.542	14.541	0.001	95	6338	0.2000	0.1756	
126 Naphthalene	128	14.645	14.645	0.000	97	29798	0.2000	0.1767	
127 1,2,3-Trichlorobenzene	180	14.785	14.785	0.000	93	12026	0.2000	0.1687	
134 Isopropyl alcohol	45		0.000				ND	ND	U
135 p-Diethylbenzene	1		0.000				ND	ND	U
137 2-Methylnaphthalene	142		0.000				ND	ND	U
144 2-ethoxy-2-methyl butane	1		0.000				ND	ND	U

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

U - Marked Undetected

Reagents:

MSV_RV1_826_00008	Amount Added:	2.00	Units: uL	
MSV_RV4_826_00009	Amount Added:	2.00	Units: uL	
MSV_RV4GAS826_00022	Amount Added:	2.00	Units: uL	
MSV_31_826ISS_00002	Amount Added:	5.00	Units: uL	Run Reagent

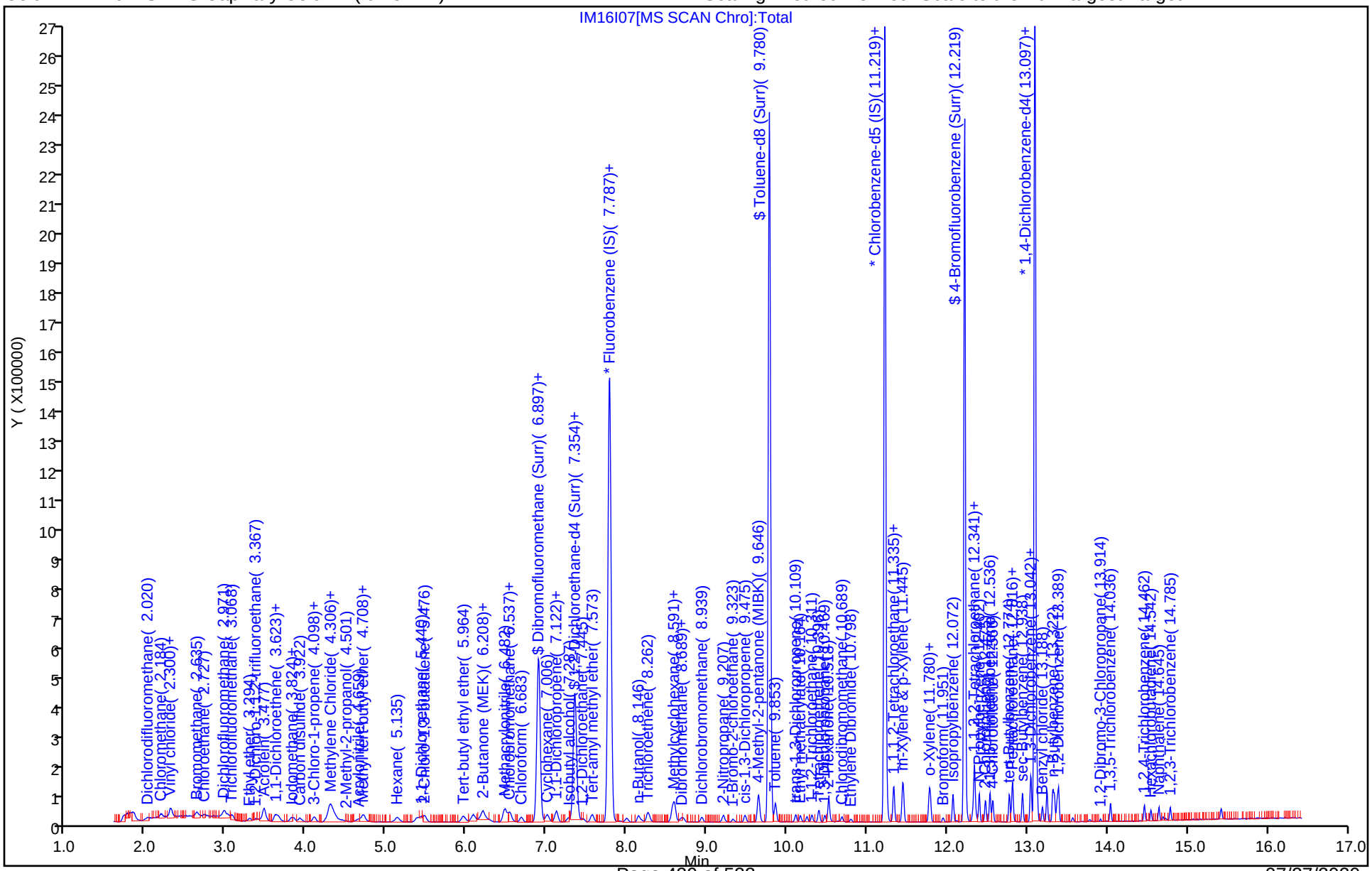
Report Date: 13-May-2020 18:30:56 Chrom Revision: 2.3 12-May-2020 10:44:46

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D

Injection Date:	16-Mar-2020 18:31:30	Instrument ID:	19930	Operator ID:	JKH09052
Lims ID:	IC std1			Worklist Smp#:	18
Client ID:					
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



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

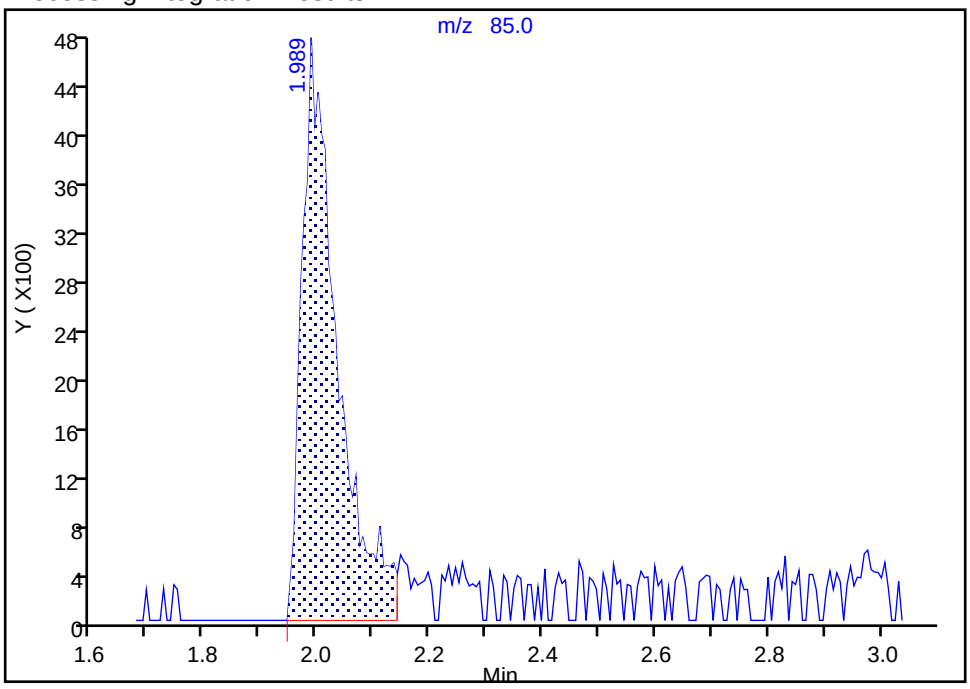
Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D
Injection Date: 16-Mar-2020 18:31:30 Instrument ID: 19930
Lims ID: IC std1
Client ID:
Operator ID: JKH09052 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

1 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

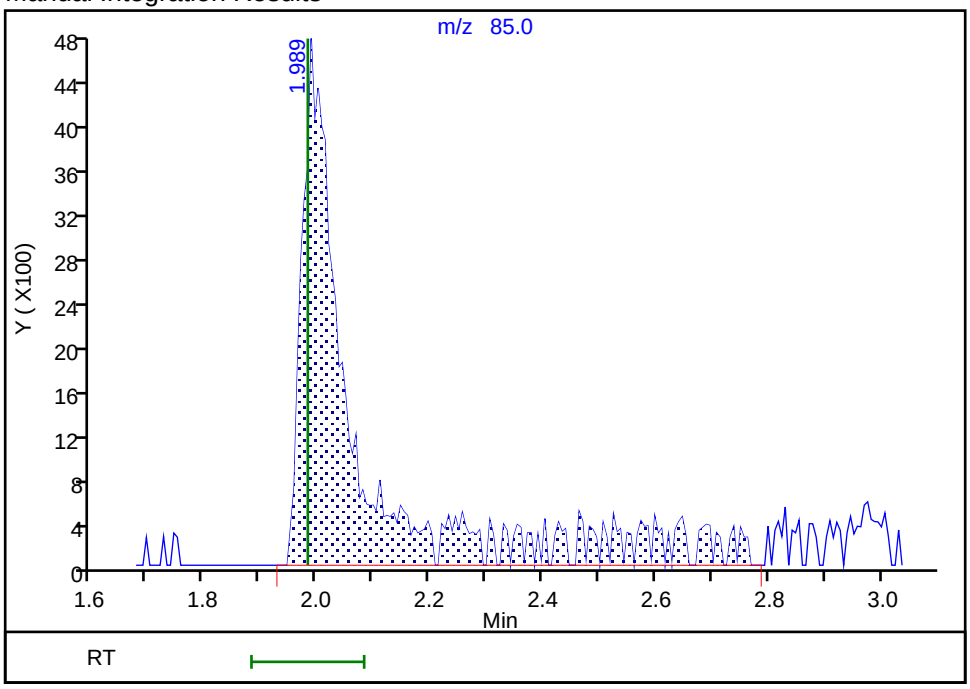
Processing Integration Results

RT: 1.99
Area: 20525
Amount: 0.197230
Amount Units: ug/l



Manual Integration Results

RT: 1.99
Area: 29447
Amount: 0.266635
Amount Units: ug/l



Reviewer: campbellme, 18-Mar-2020 21:48:58
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

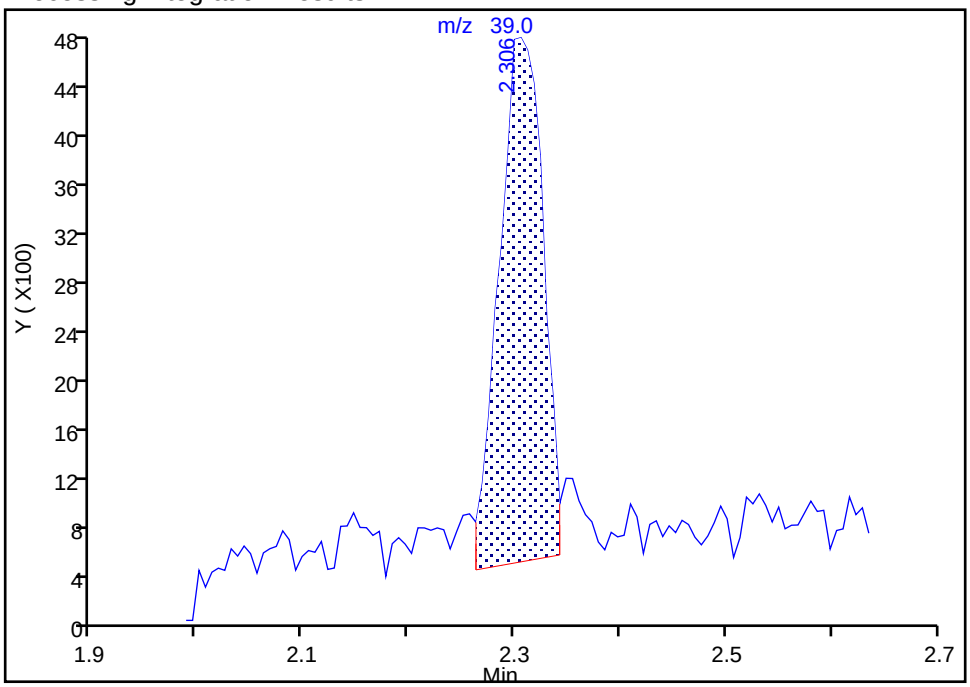
Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D
Injection Date: 16-Mar-2020 18:31:30 Instrument ID: 19930
Lims ID: IC std1
Client ID:
Operator ID: JKH09052 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

6 Butadiene, CAS: 106-99-0

Signal: 1

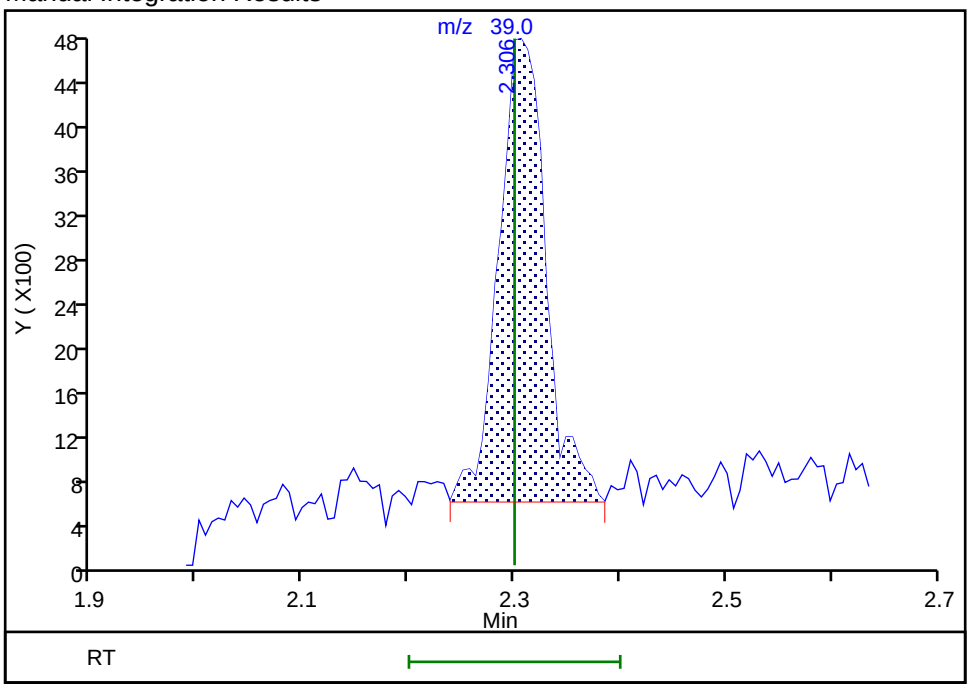
Processing Integration Results

RT: 2.31
Area: 12446
Amount: 0.196063
Amount Units: ug/l



Manual Integration Results

RT: 2.31
Area: 13020
Amount: 0.203789
Amount Units: ug/l



Reviewer: campbellme, 18-Mar-2020 21:49:16
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

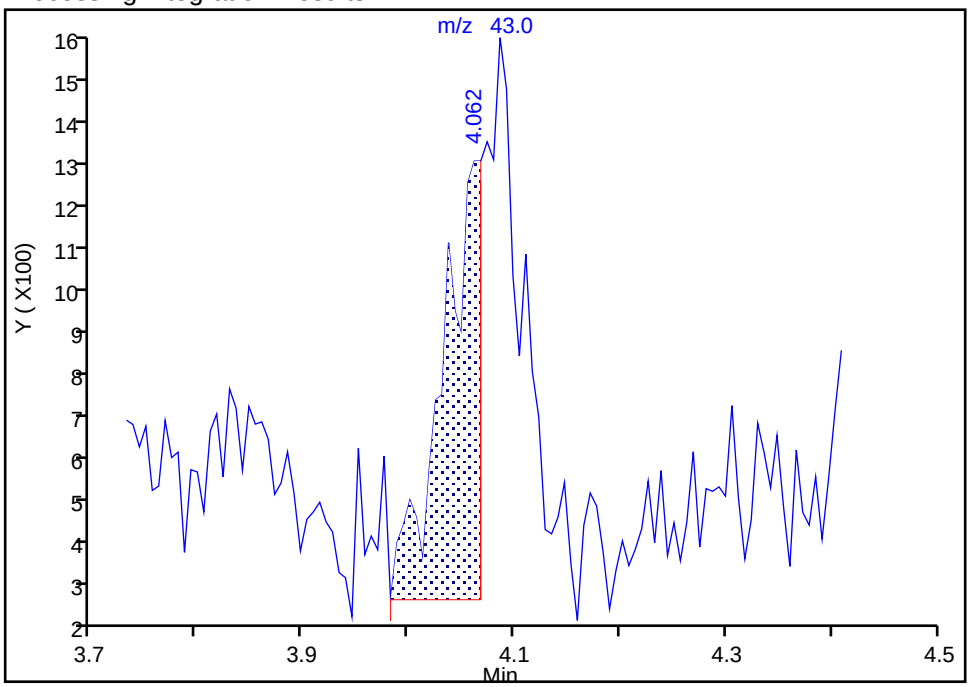
Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D
Injection Date: 16-Mar-2020 18:31:30 Instrument ID: 19930
Lims ID: IC std1
Client ID:
Operator ID: JKH09052 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

21 Methyl acetate, CAS: 79-20-9

Signal: 1

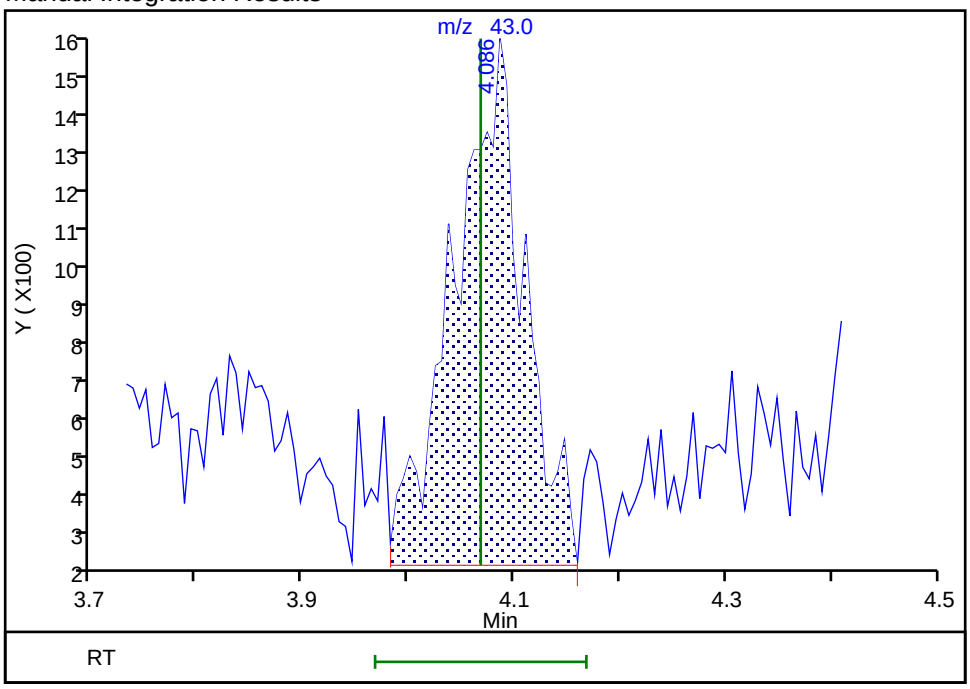
Processing Integration Results

RT: 4.06
Area: 2577
Amount: 0.117869
Amount Units: ug/l



Manual Integration Results

RT: 4.09
Area: 6142
Amount: 0.251621
Amount Units: ug/l



Reviewer: campbellme, 18-Mar-2020 21:49:55
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

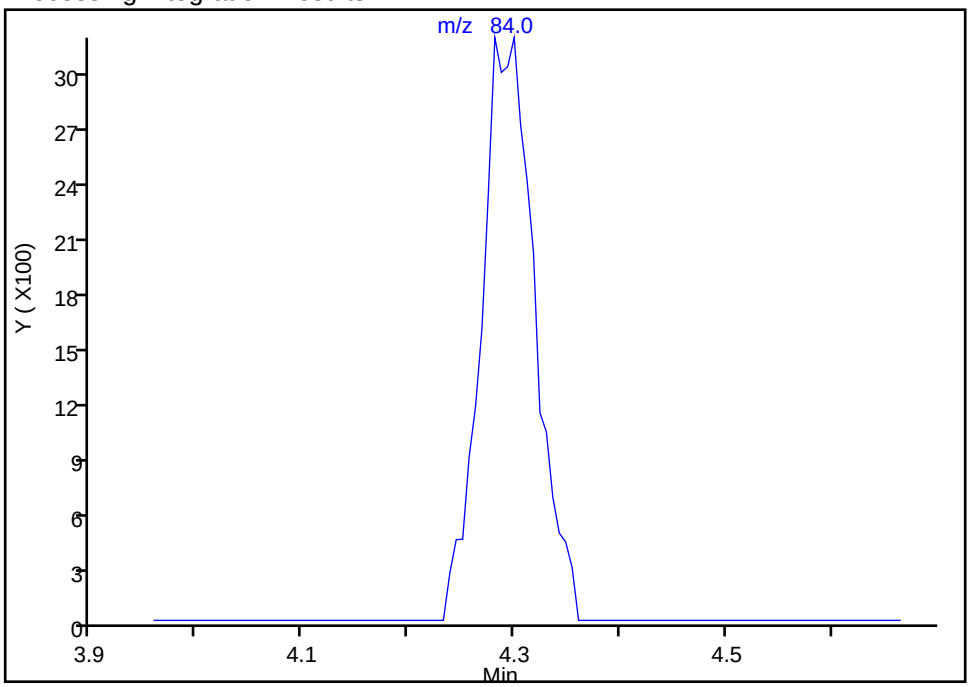
Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D
Injection Date: 16-Mar-2020 18:31:30 Instrument ID: 19930
Lims ID: IC std1
Client ID:
Operator ID: JKH09052 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

23 Methylene Chloride, CAS: 75-09-2

Signal: 1

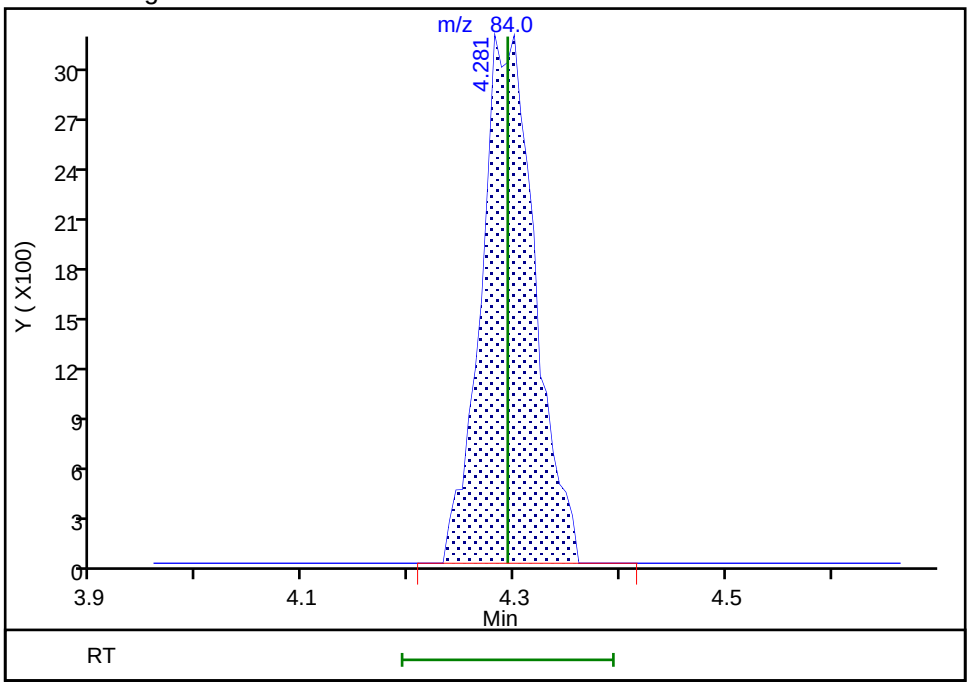
Not Detected
Expected RT: 4.29

Processing Integration Results



Manual Integration Results

RT: 4.28
Area: 10957
Amount: 0.194153
Amount Units: ug/l



Reviewer: campbellme, 18-Mar-2020 21:50:07
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

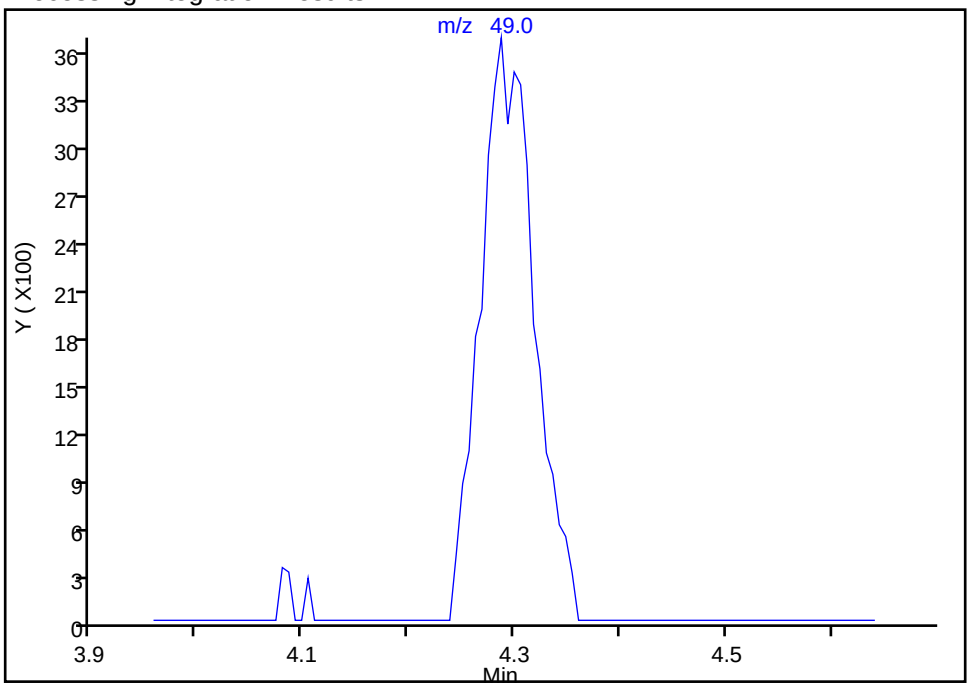
Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D
Injection Date: 16-Mar-2020 18:31:30 Instrument ID: 19930
Lims ID: IC std1
Client ID:
Operator ID: JKH09052 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

23 Methylene Chloride, CAS: 75-09-2

Signal: 2

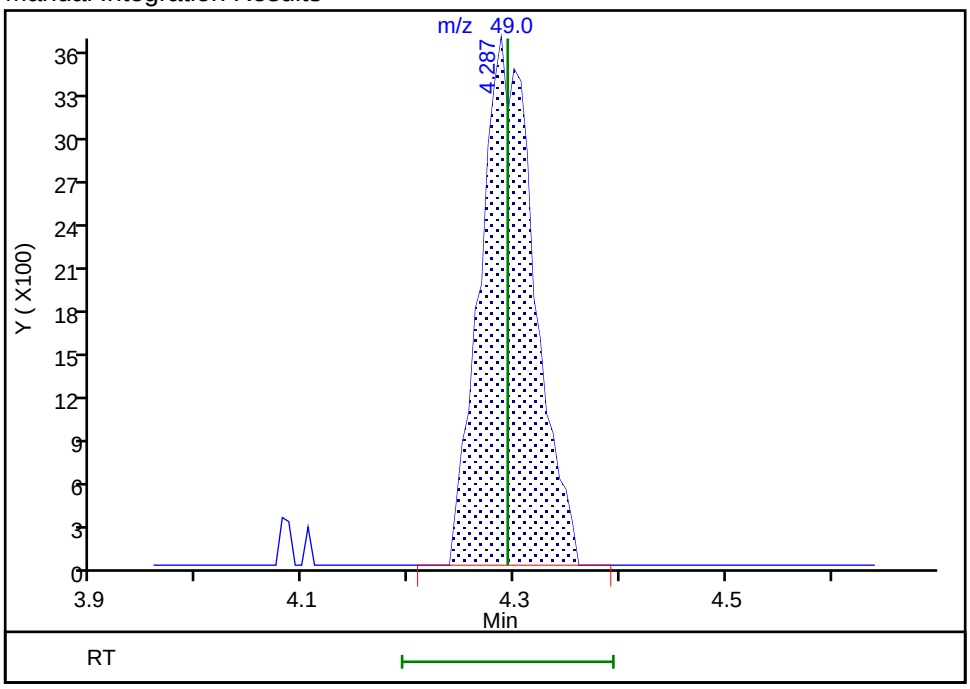
Not Detected
Expected RT: 4.29

Processing Integration Results



Manual Integration Results

RT: 4.29
Area: 13173
Amount: 0.194153
Amount Units: ug/l



Reviewer: campbellme, 18-Mar-2020 21:50:10
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

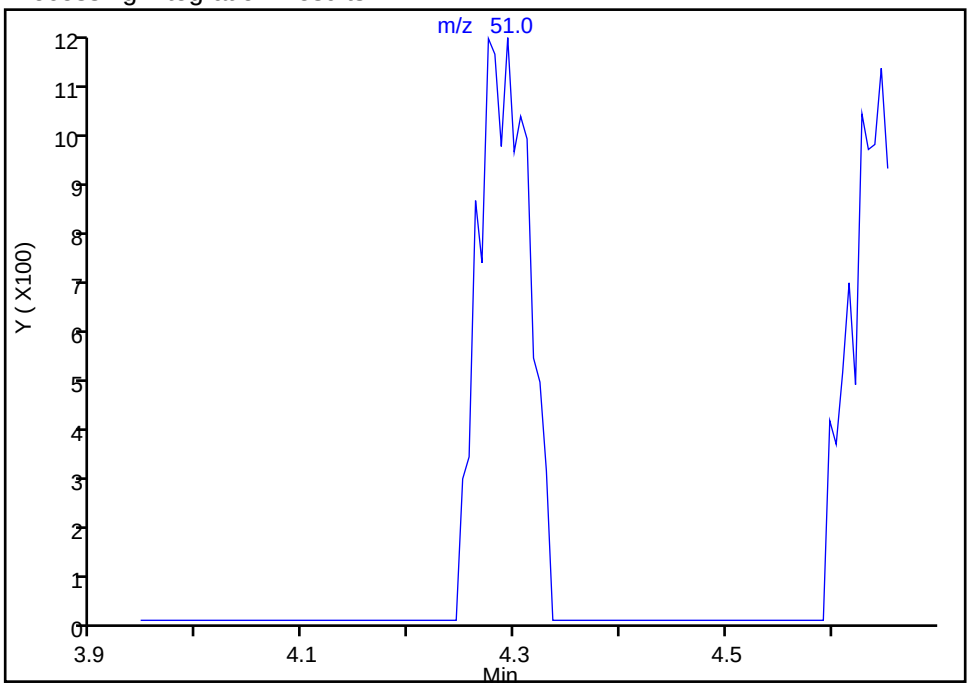
Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D
Injection Date: 16-Mar-2020 18:31:30 Instrument ID: 19930
Lims ID: IC std1
Client ID:
Operator ID: JKH09052 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

23 Methylene Chloride, CAS: 75-09-2

Signal: 3

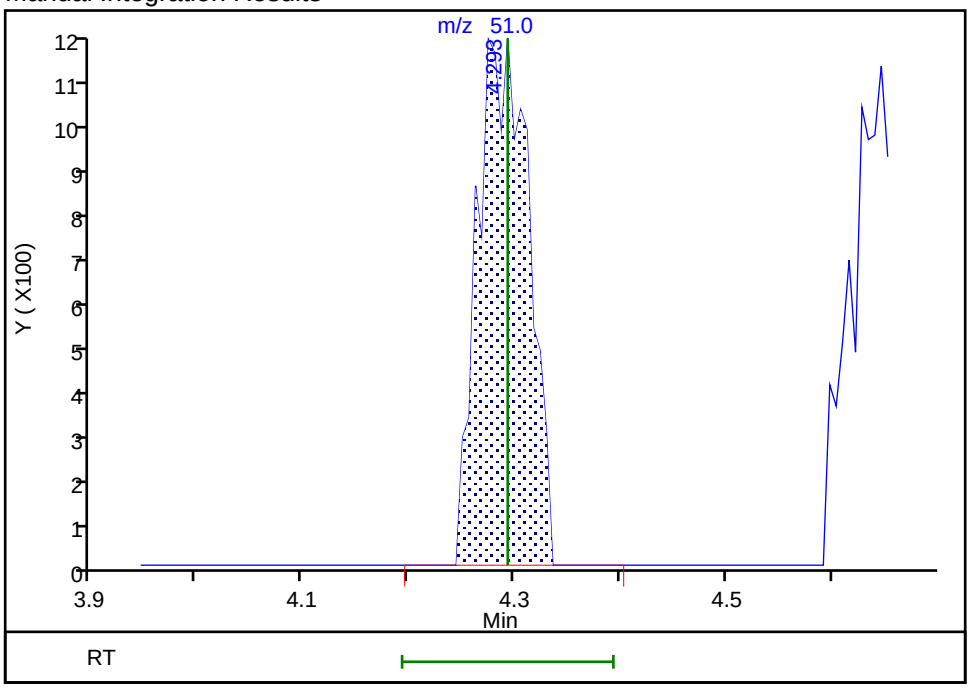
Not Detected
Expected RT: 4.29

Processing Integration Results



Manual Integration Results

RT: 4.29
Area: 3932
Amount: 0.194153
Amount Units: ug/l



Reviewer: campbellme, 18-Mar-2020 21:50:12
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

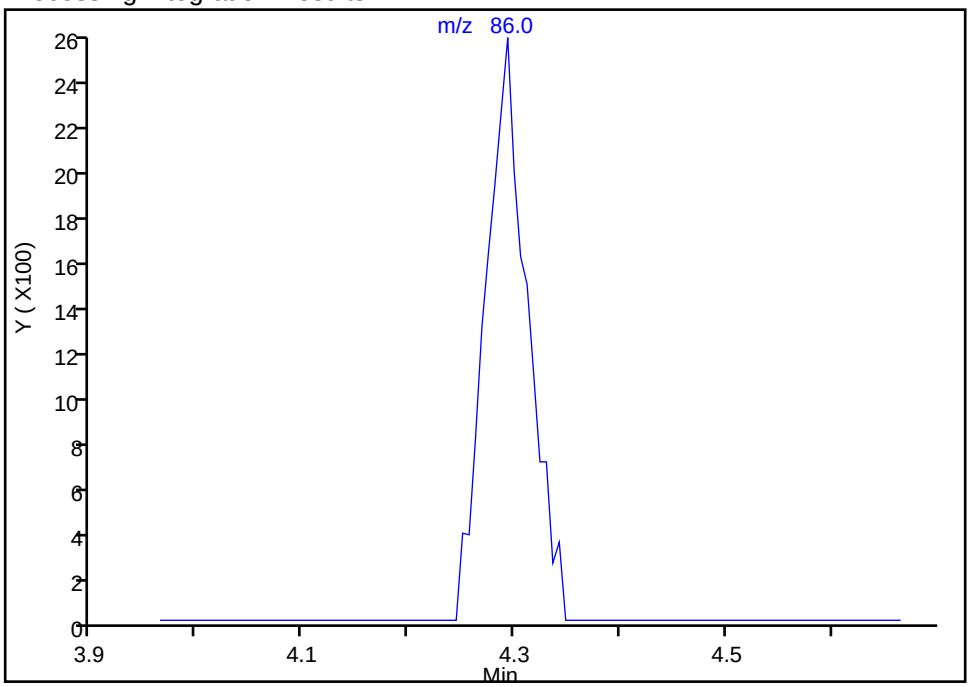
Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D
Injection Date: 16-Mar-2020 18:31:30 Instrument ID: 19930
Lims ID: IC std1
Client ID:
Operator ID: JKH09052 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

23 Methylene Chloride, CAS: 75-09-2

Signal: 4

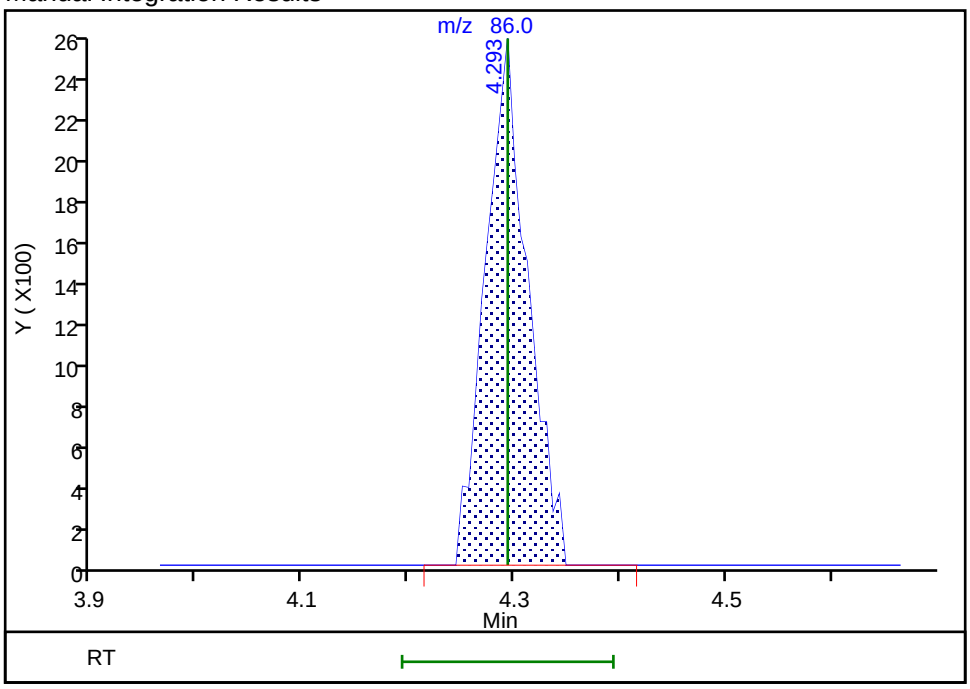
Not Detected
Expected RT: 4.29

Processing Integration Results



Manual Integration Results

RT: 4.29
Area: 7030
Amount: 0.194153
Amount Units: ug/l



Reviewer: campbellme, 18-Mar-2020 21:50:14
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

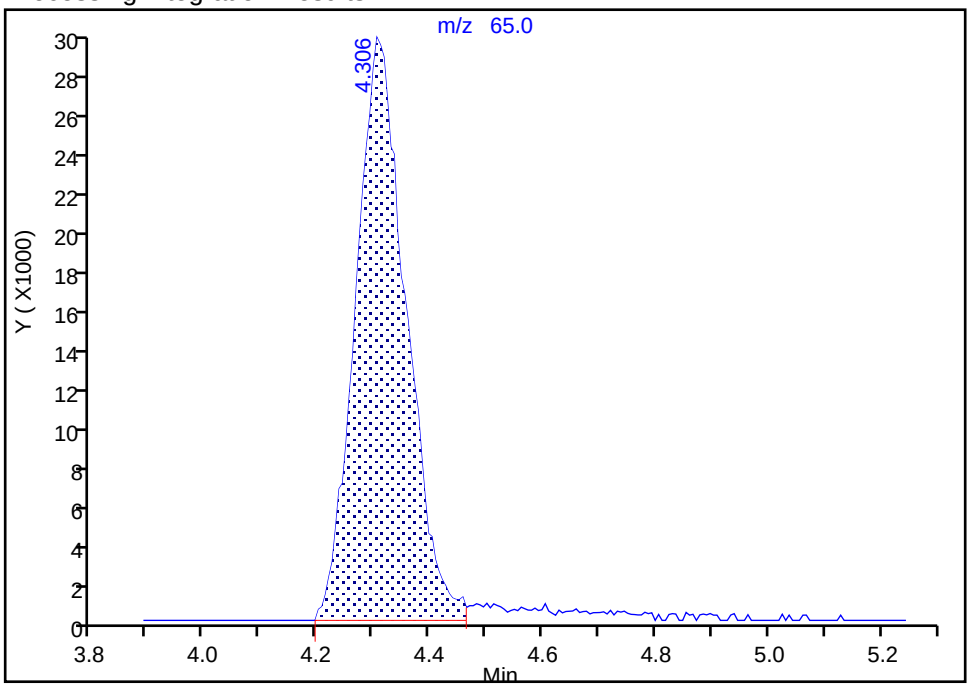
Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D
Injection Date: 16-Mar-2020 18:31:30 Instrument ID: 19930
Lims ID: IC std1
Client ID:
Operator ID: JKH09052 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

* 24 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

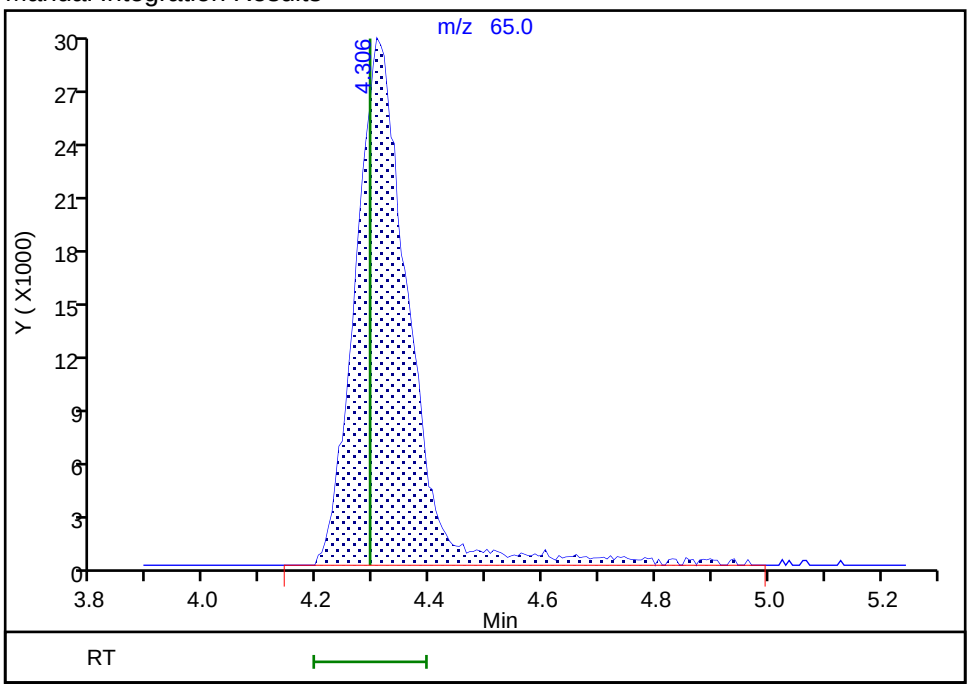
Processing Integration Results

RT: 4.31
Area: 185833
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 4.31
Area: 197750
Amount: 50.000000
Amount Units: ug/l



Reviewer: campbellme, 18-Mar-2020 21:50:21
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

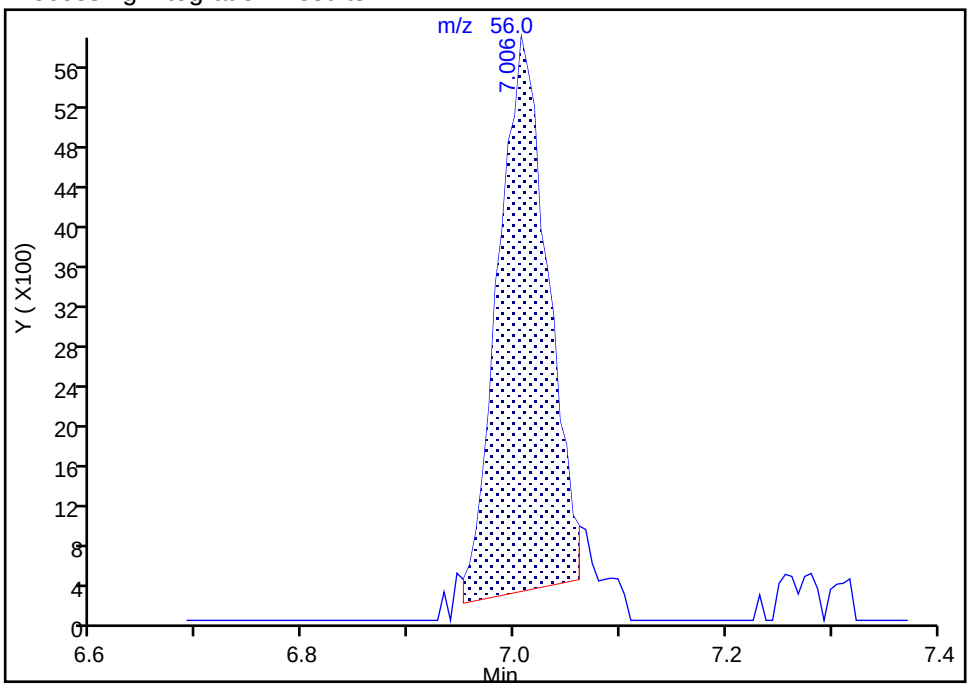
Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D
Injection Date: 16-Mar-2020 18:31:30 Instrument ID: 19930
Lims ID: IC std1
Client ID:
Operator ID: JKH09052 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

48 Cyclohexane, CAS: 110-82-7

Signal: 1

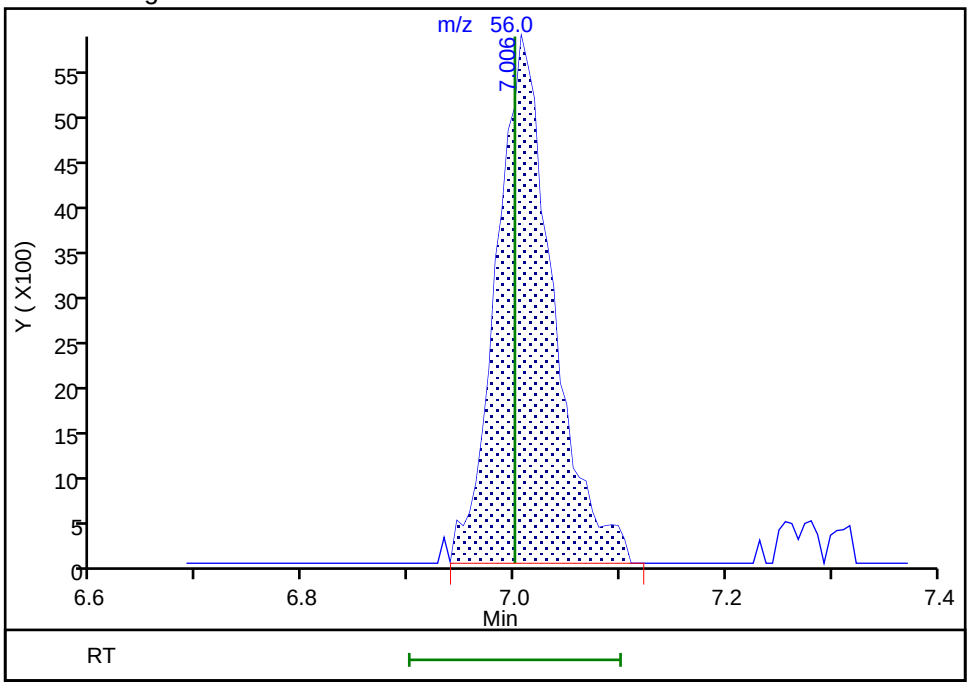
Processing Integration Results

RT: 7.01
Area: 18150
Amount: 0.174831
Amount Units: ug/l



Manual Integration Results

RT: 7.01
Area: 21564
Amount: 0.202949
Amount Units: ug/l



Reviewer: campbellme, 18-Mar-2020 21:50:39
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

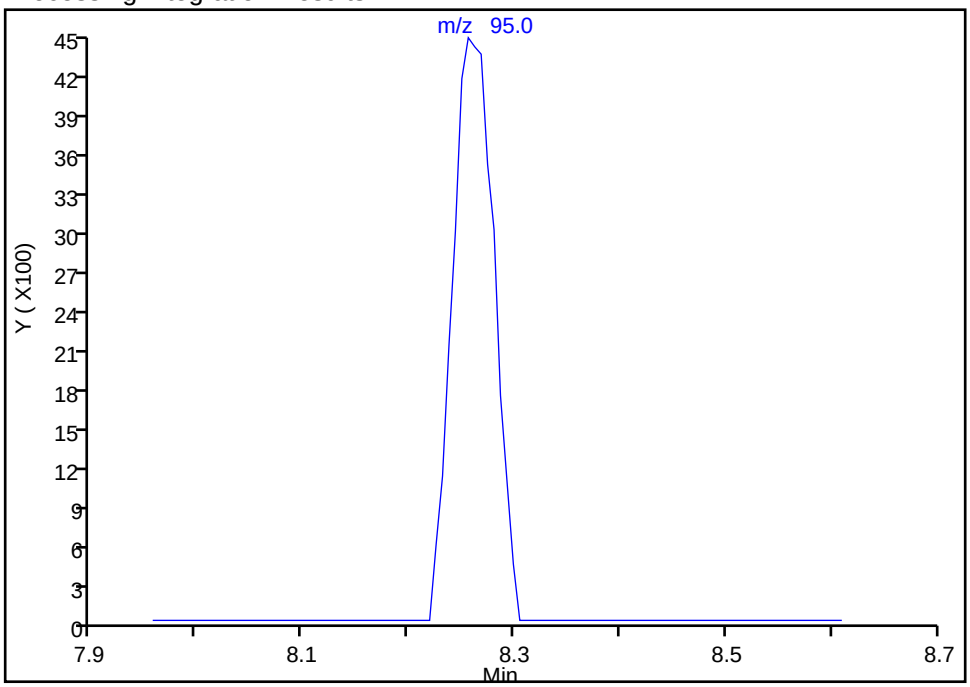
Data File:	\\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D				
Injection Date:	16-Mar-2020 18:31:30	Instrument ID:	19930		
Lims ID:	IC std1				
Client ID:					
Operator ID:	JKH09052	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

61 Trichloroethene, CAS: 79-01-6

Signal: 1

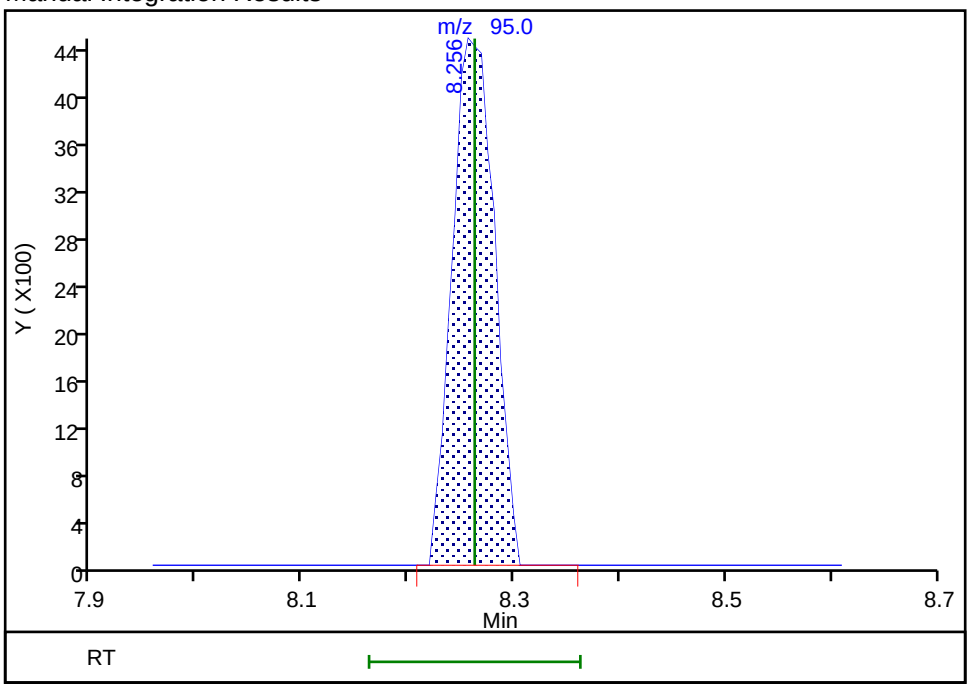
Not Detected
Expected RT: 8.26

Processing Integration Results



Manual Integration Results

RT: 8.26
Area: 12251
Amount: 0.189821
Amount Units: ug/l



Reviewer: campbellme, 18-Mar-2020 21:50:54
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

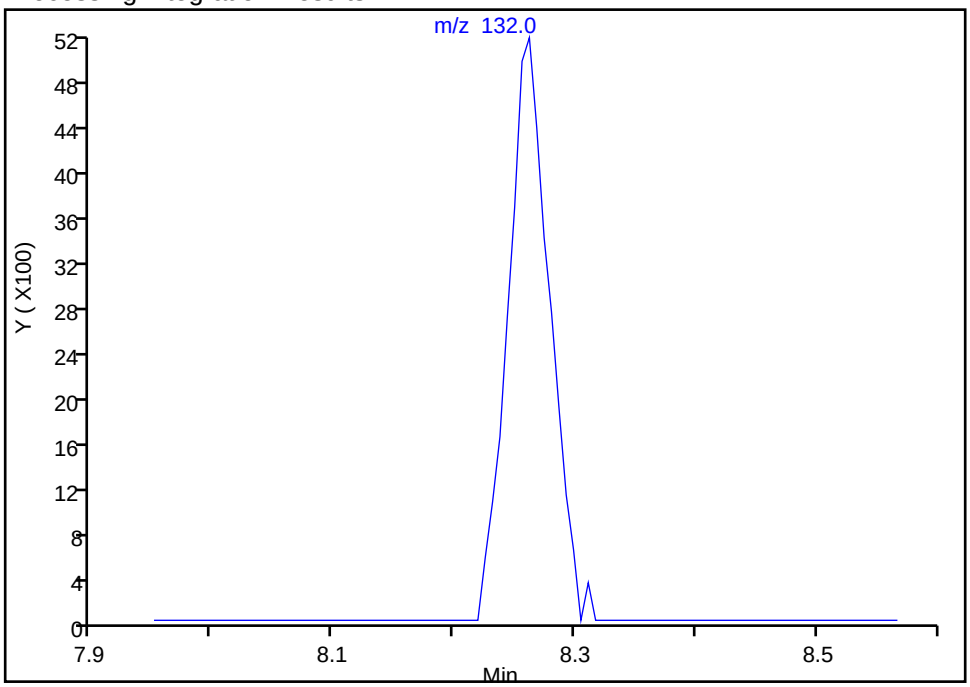
Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D
Injection Date: 16-Mar-2020 18:31:30 Instrument ID: 19930
Lims ID: IC std1
Client ID:
Operator ID: JKH09052 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

61 Trichloroethene, CAS: 79-01-6

Signal: 2

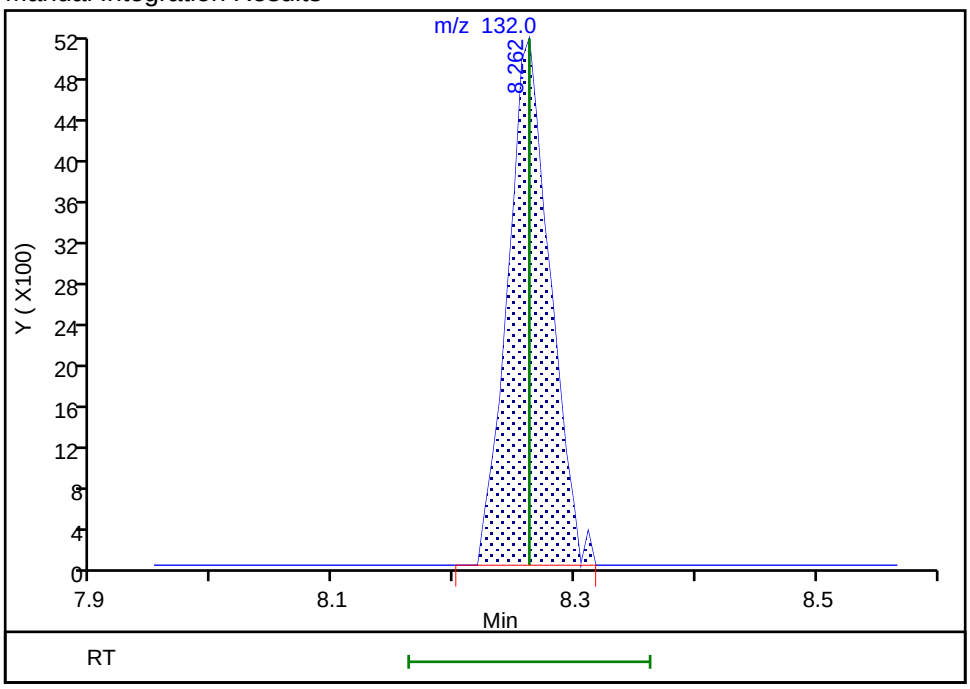
Not Detected
Expected RT: 8.26

Processing Integration Results



Manual Integration Results

RT: 8.26
Area: 12421
Amount: 0.189821
Amount Units: ug/l



Reviewer: campbellme, 18-Mar-2020 21:50:58
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

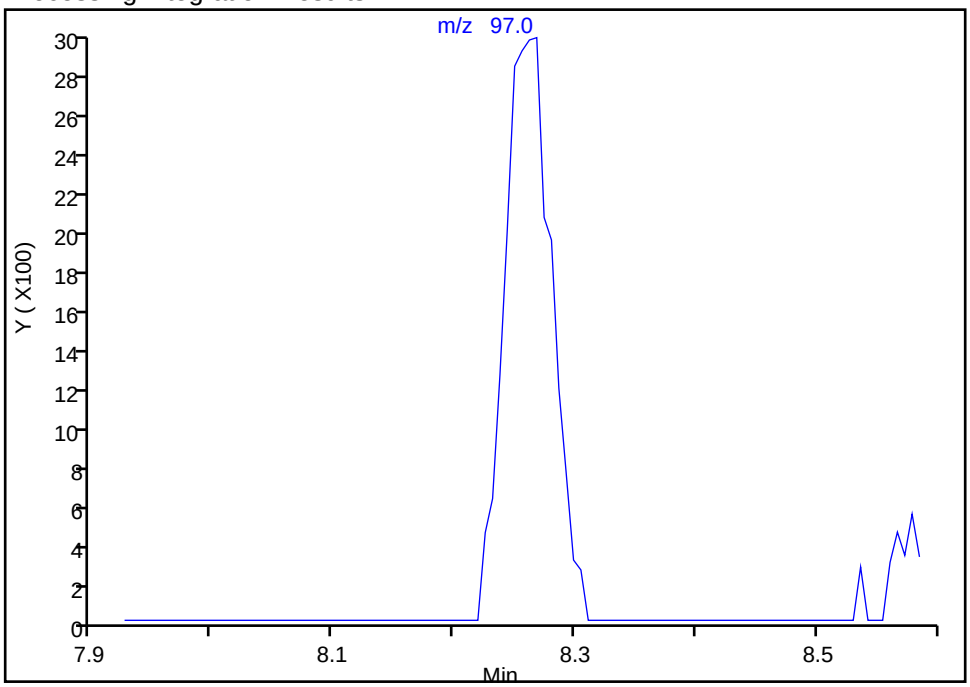
Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D
Injection Date: 16-Mar-2020 18:31:30 Instrument ID: 19930
Lims ID: IC std1
Client ID:
Operator ID: JKH09052 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

61 Trichloroethene, CAS: 79-01-6

Signal: 3

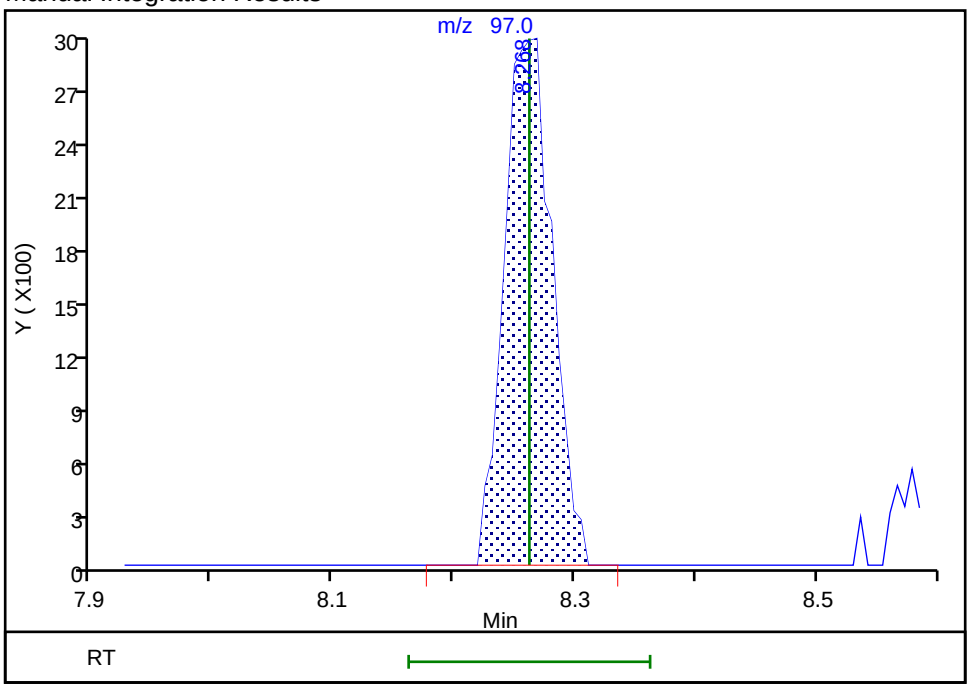
Not Detected
Expected RT: 8.26

Processing Integration Results



Manual Integration Results

RT: 8.27
Area: 8130
Amount: 0.189821
Amount Units: ug/l



Reviewer: campbellme, 18-Mar-2020 21:51:01
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

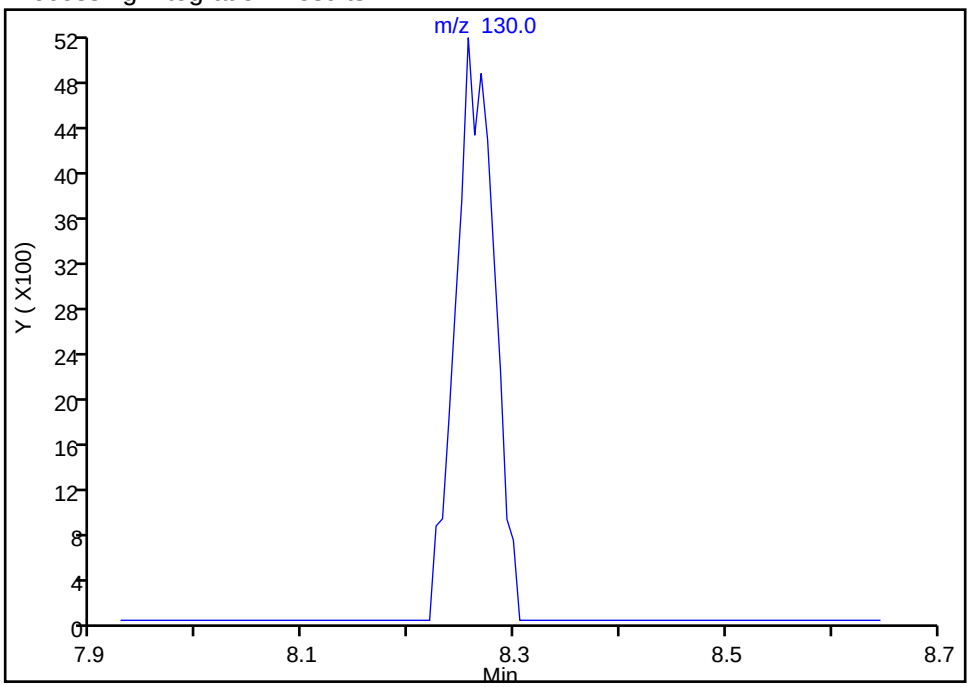
Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D
Injection Date: 16-Mar-2020 18:31:30 Instrument ID: 19930
Lims ID: IC std1
Client ID:
Operator ID: JKH09052 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

61 Trichloroethene, CAS: 79-01-6

Signal: 4

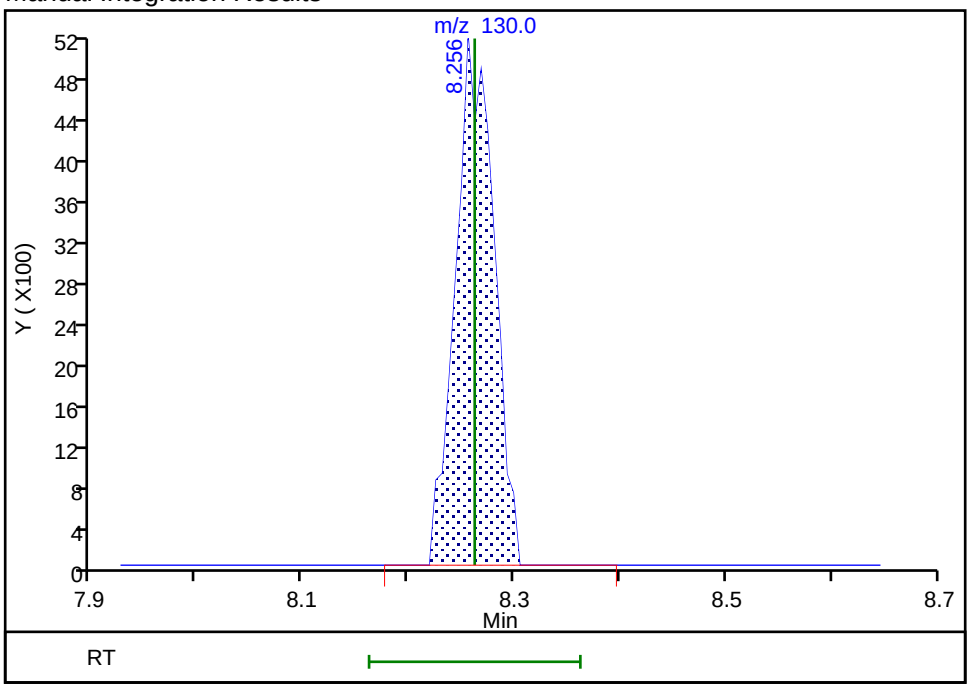
Not Detected
Expected RT: 8.26

Processing Integration Results



Manual Integration Results

RT: 8.26
Area: 12971
Amount: 0.189821
Amount Units: ug/l



Reviewer: campbellme, 18-Mar-2020 21:51:04
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

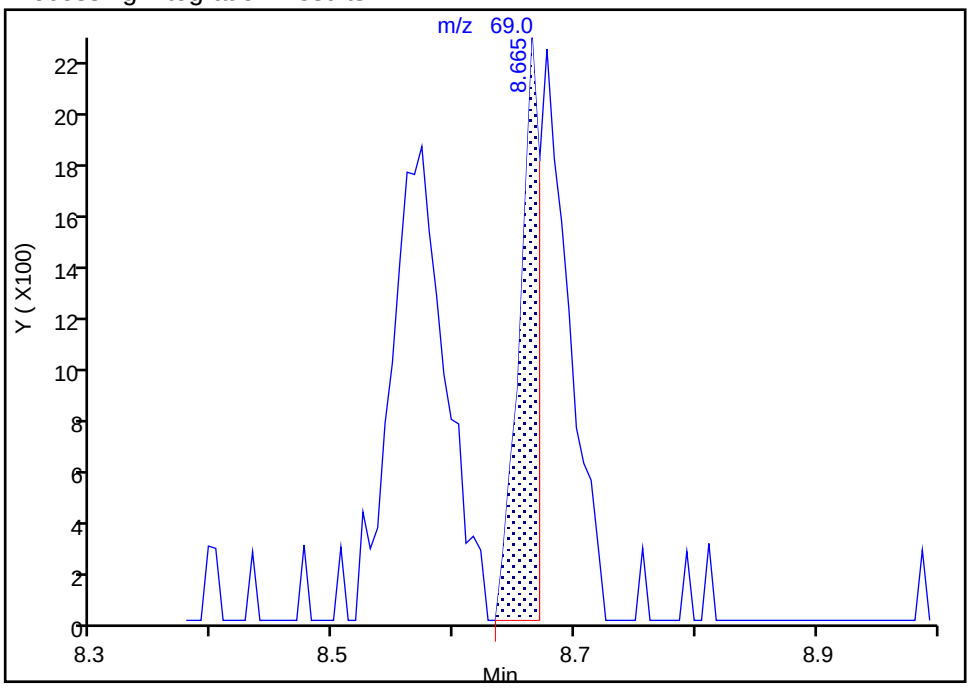
Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D
Injection Date: 16-Mar-2020 18:31:30 Instrument ID: 19930
Lims ID: IC std1
Client ID:
Operator ID: JKH09052 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

64 Methyl methacrylate, CAS: 80-62-6

Signal: 1

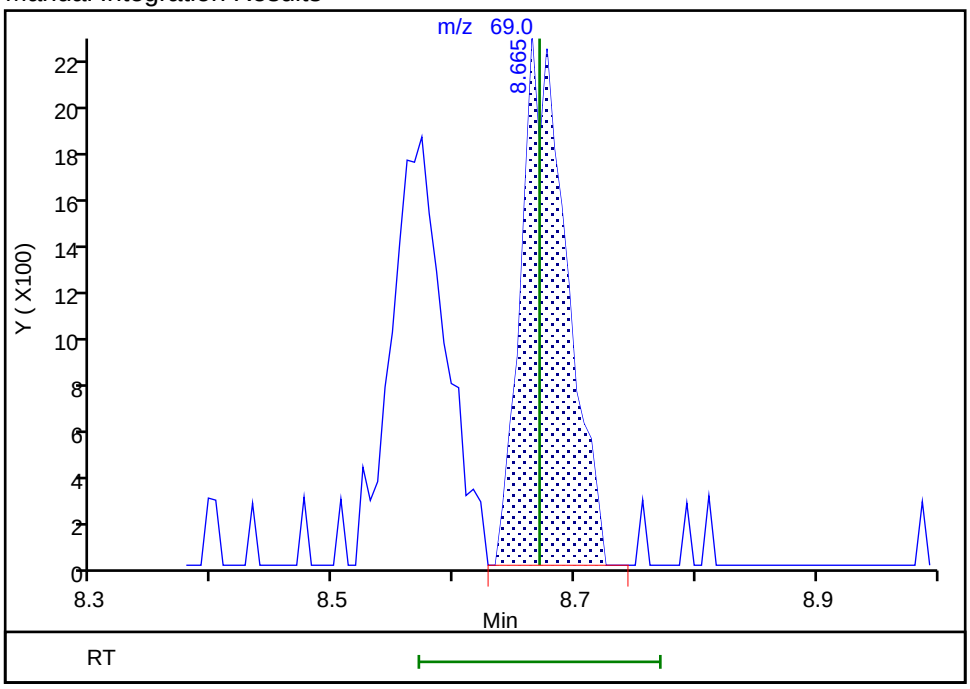
Processing Integration Results

RT: 8.66
Area: 2711
Amount: 0.278318
Amount Units: ug/l



Manual Integration Results

RT: 8.66
Area: 5985
Amount: 0.179460
Amount Units: ug/l



Reviewer: campbellme, 18-Mar-2020 21:51:12
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

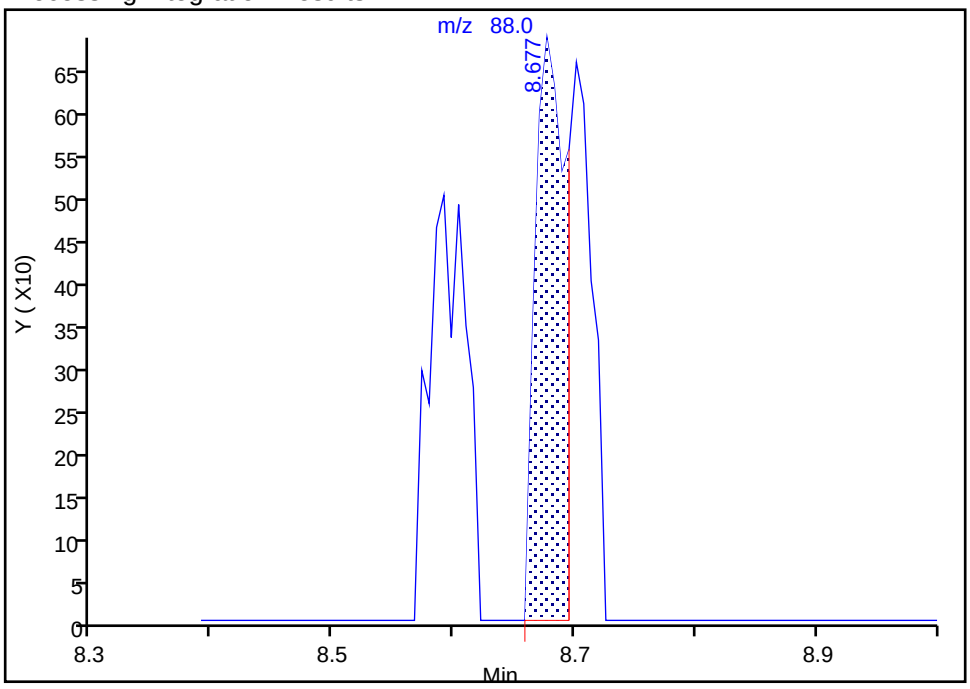
Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D
Injection Date: 16-Mar-2020 18:31:30 Instrument ID: 19930
Lims ID: IC std1
Client ID:
Operator ID: JKH09052 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

65 1,4-Dioxane, CAS: 123-91-1

Signal: 1

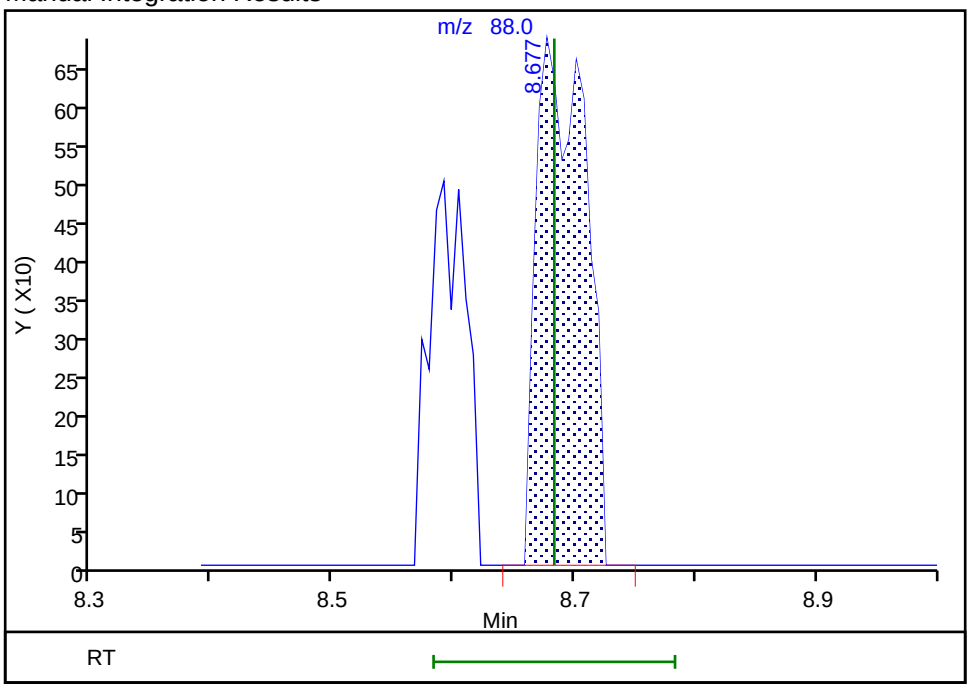
Processing Integration Results

RT: 8.68
Area: 1218
Amount: -44.773165
Amount Units: ug/l



Manual Integration Results

RT: 8.68
Area: 1950
Amount: 6.974913
Amount Units: ug/l



Reviewer: campbellme, 18-Mar-2020 21:51:19
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-5692-1

SDG No.:

Lab Sample ID: ICV 410-7691/21 Calibration Date: 03/18/2020 10:28

Instrument ID: 19930 Calib Start Date: 03/16/2020 16:24

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 03/16/2020 18:31

Lab File ID: IM18S01.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	0.5436	0.4009	0.1000	3.69	5.00	-26.3	30.0
Chloromethane	Ave	0.4381	0.4341	0.1000	4.96	5.00	-0.9	30.0
1,3-Butadiene	Ave	0.3145	0.3049		4.85	5.00	-3.1	30.0
Vinyl chloride	Ave	0.4245	0.4275	0.1000	5.04	5.00	0.7	30.0
Bromomethane	Ave	0.2976	0.2949	0.1000	4.95	5.00	-0.9	30.0
Chloroethane	Ave	0.2402	0.2390	0.1000	4.97	5.00	-0.5	30.0
Dichlorofluoromethane	Ave	0.5588	0.5347		4.78	5.00	-4.3	30.0
Trichlorofluoromethane	Ave	0.5061	0.5347	0.1000	5.28	5.00	5.7	30.0
Ethyl ether	Ave	0.2175	0.2029		4.68	5.02	-6.7	30.0
Freon 123a	Ave	0.3424	0.3352		4.89	5.00	-2.1	30.0
Acrolein	Ave	1.980	1.893		35.9	37.5	-4.4	30.0
1,1-Dichloroethene	Ave	0.2676	0.2628	0.1000	4.91	5.00	-1.8	30.0
Acetone	Ave	2.481	2.369	0.1000	35.8	37.5	-4.5	30.0
Freon 113	Ave	0.2904	0.2870	0.1000	4.94	5.00	-1.2	30.0
Methyl iodide	Ave	0.5108	0.4854		4.75	5.00	-5.0	30.0
Ethyl bromide	Ave	0.2273	0.2286		5.10	5.07	0.5	30.0
Carbon disulfide	Ave	0.7646	0.7243	0.1000	4.74	5.00	-5.3	30.0
Methyl acetate	Ave	0.1202	0.1023	0.1000	4.26	5.00	-14.9	30.0
Allyl chloride	Ave	0.4040	0.3985		4.93	5.00	-1.4	30.0
Methylene Chloride	Ave	0.2778	0.2747	0.1000	4.94	5.00	-1.1	30.0
t-Butyl alcohol	Ave	1.204	1.131		46.9	50.0	-6.1	30.0
Acrylonitrile	Ave	3.263	3.316		25.4	25.0	1.6	30.0
Methyl tert-butyl ether	Ave	0.6869	0.6731	0.1000	4.90	5.00	-2.0	30.0
trans-1,2-Dichloroethene	Ave	0.2875	0.2825	0.1000	4.91	5.00	-1.8	30.0
n-Hexane	Ave	0.4330	0.4198		4.85	5.00	-3.1	30.0
1,1-Dichloroethane	Ave	0.5113	0.5128	0.2000	5.01	5.00	0.3	30.0
di-Isopropyl ether	Ave	0.8553	0.8532		4.99	5.00	-0.2	30.0
2-Chloro-1,3-butadiene	Ave	0.4517	0.4505		4.99	5.00	-0.3	30.0
Ethyl t-butyl ether	Ave	0.8417	0.8210		4.88	5.00	-2.5	30.0
2-Butanone (MEK)	Ave	4.369	4.399	0.1000	37.8	37.5	0.7	30.0
cis-1,2-Dichloroethene	Ave	0.3228	0.3383	0.1000	5.24	5.00	4.8	30.0
2,2-Dichloropropane	Ave	0.4626	0.4754		5.14	5.00	2.8	30.0
Propionitrile	Ave	1.216	1.232		38.0	37.5	1.3	30.0
Methacrylonitrile	Ave	4.161	4.373		39.4	37.5	5.1	30.0
Bromochloromethane	Ave	0.1428	0.1381		4.84	5.00	-3.3	30.0
Tetrahydrofuran	Ave	1.340	1.316		24.6	25.0	-1.8	30.0
Chloroform	Ave	0.5116	0.5207	0.2000	5.09	5.00	1.8	30.0
1,1,1-Trichloroethane	Ave	0.4961	0.4865	0.1000	4.90	5.00	-1.9	30.0
Cyclohexane	Ave	0.5230	0.4790	0.1000	4.58	5.00	-8.4	30.0
1,1-Dichloropropene	Ave	0.4099	0.4107		5.01	5.00	0.2	30.0
Carbon tetrachloride	Ave	0.4398	0.4506	0.1000	5.12	5.00	2.5	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-5692-1

SDG No.:

Lab Sample ID: ICV 410-7691/21 Calibration Date: 03/18/2020 10:28

Instrument ID: 19930 Calib Start Date: 03/16/2020 16:24

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 03/16/2020 18:31

Lab File ID: IM18S01.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	0.3481	0.3220		116	125	-7.5	30.0
Benzene	Ave	1.193	1.180	0.5000	4.94	5.00	-1.1	30.0
1,2-Dichloroethane	Ave	0.3210	0.3101	0.1000	4.83	5.00	-3.4	30.0
t-Amyl methyl ether	Ave	0.7820	0.7616		4.87	5.00	-2.6	30.0
n-Heptane	Ave	0.4125	0.3917		4.75	5.00	-5.1	30.0
n-Butanol	Ave	0.3076	0.2628		214	250	-14.6	30.0
Trichloroethene	Ave	0.3177	0.3187	0.2000	5.02	5.00	0.3	30.0
Methylcyclohexane	Ave	0.5660	0.5322	0.1000	4.70	5.00	-6.0	30.0
1,2-Dichloropropane	Ave	0.2901	0.2910	0.1000	5.02	5.00	0.3	30.0
Methyl methacrylate	Ave	8.432	9.199		5.45	5.00	9.1	30.0
1,4-Dioxane	Ave	0.0707	0.0552	0.0050	97.5	125	-22.0	30.0
Dibromomethane	Ave	0.1438	0.1431		4.98	5.00	-0.5	30.0
Bromodichloromethane	Ave	0.3777	0.3789	0.2000	5.02	5.00	0.3	30.0
2-Nitropropane	Ave	2.620	2.779		5.30	5.00	6.1	30.0
1-Bromo-2-chloroethane	Ave	0.3011	0.3099		5.15	5.00	2.9	30.0
cis-1,3-Dichloropropene	Ave	0.4468	0.4534	0.2000	5.07	5.00	1.5	30.0
4-Methyl-2-pentanone (MIBK)	Ave	10.81	11.26	0.1000	26.0	25.0	4.1	30.0
Toluene	Ave	1.016	1.016	0.4000	5.00	5.00	-0.0	30.0
trans-1,3-Dichloropropene	Ave	0.5143	0.5006	0.1000	4.87	5.00	-2.7	30.0
Ethyl methacrylate	Ave	0.4384	0.3902		4.45	5.00	-11.0	30.0
1,1,2-Trichloroethane	Ave	0.2845	0.2820	0.1000	4.96	5.00	-0.9	30.0
Tetrachloroethene	Ave	0.4853	0.4956	0.2000	5.11	5.00	2.1	30.0
1,3-Dichloropropane	Ave	0.4782	0.4694		4.91	5.00	-1.8	30.0
2-Hexanone	Ave	7.474	7.850	0.1000	26.3	25.0	5.0	30.0
Dibromochloromethane	Ave	0.3627	0.3734		5.15	5.00	3.0	30.0
1,2-Dibromoethane (EDB)	Ave	0.2687	0.2675	0.1000	4.98	5.00	-0.4	30.0
1-Chlorohexane	Ave	0.6248	0.5983		4.79	5.00	-4.2	30.0
Chlorobenzene	Ave	1.125	1.134	0.5000	5.04	5.00	0.7	30.0
1,1,1,2-Tetrachloroethane	Ave	0.4190	0.4228		5.05	5.00	0.9	30.0
Ethylbenzene	Ave	1.994	1.994	0.1000	5.00	5.00	0.0	30.0
m&p-Xylene	Ave	0.7812	0.7907	0.1000	10.1	10.0	1.2	30.0
o-Xylene	Ave	0.7743	0.7721	0.3000	4.99	5.00	-0.3	30.0
Styrene	Ave	1.236	1.251	0.3000	5.06	5.00	1.3	30.0
Bromoform	Ave	0.2232	0.2257	0.1000	5.06	5.00	1.1	30.0
Isopropylbenzene	Ave	2.050	2.104	0.1000	5.13	5.00	2.6	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6462	0.6382	0.3000	4.94	5.00	-1.2	30.0
Bromobenzene	Ave	0.8683	0.8816		5.08	5.00	1.5	30.0
trans-1,4-Dichloro-2-butene	Ave	3.806	4.121		27.1	25.0	8.3	30.0
1,2,3-Trichloropropane	Ave	0.1800	0.1783		4.95	5.00	-1.0	30.0
N-Propylbenzene	Ave	4.288	4.486		5.23	5.00	4.6	30.0
2-Chlorotoluene	Ave	0.8662	0.8927		5.15	5.00	3.1	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-5692-1

SDG No.:

Lab Sample ID: ICV 410-7691/21 Calibration Date: 03/18/2020 10:28

Instrument ID: 19930 Calib Start Date: 03/16/2020 16:24

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 03/16/2020 18:31

Lab File ID: IM18S01.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	3.122	3.245		5.20	5.00	3.9	30.0
4-Chlorotoluene	Ave	0.8818	0.8934		5.07	5.00	1.3	30.0
tert-Butylbenzene	Ave	0.7000	0.7227		5.16	5.00	3.2	30.0
Pentachloroethane	Ave	0.5905	0.5999		5.08	5.00	1.6	30.0
1,2,4-Trimethylbenzene	Ave	3.211	3.231		5.03	5.00	0.6	30.0
sec-Butylbenzene	Ave	4.011	4.202		5.24	5.00	4.8	30.0
1,3-Dichlorobenzene	Ave	1.699	1.727	0.6000	5.08	5.00	1.6	30.0
p-Isopropyltoluene	Ave	3.460	3.633		5.25	5.00	5.0	30.0
1,4-Dichlorobenzene	Ave	1.682	1.727	0.5000	5.14	5.00	2.7	30.0
1,2,3-Trimethylbenzene	Ave	1.382	1.411		5.10	5.00	2.1	30.0
Benzyl chloride	Ave	0.2962	0.2643		4.46	5.00	-10.8	30.0
n-Butylbenzene	Ave	1.612	1.689		5.24	5.00	4.8	30.0
1,2-Dichlorobenzene	Ave	1.551	1.588	0.4000	5.12	5.00	2.3	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.1067	0.1047	0.0500	4.91	5.00	-1.9	30.0
1,3,5-Trichlorobenzene	Ave	1.230	1.284		5.22	5.00	4.5	30.0
1,2,4-Trichlorobenzene	Ave	1.036	1.076	0.2000	5.20	5.00	3.9	30.0
Hexachlorobutadiene	Ave	0.4369	0.4717		5.40	5.00	8.0	30.0
Naphthalene	Ave	2.041	1.947		4.77	5.00	-4.6	30.0
1,2,3-Trichlorobenzene	Ave	0.8626	0.8811		5.11	5.00	2.1	30.0
Dibromofluoromethane (Surr)	Ave	0.2414	0.2422		10.0	10.0	0.3	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.0489	0.0486		9.93	10.0	-0.7	30.0
Toluene-d8 (Surr)	Ave	1.272	1.271		10.0	10.0	-0.0	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4745	0.4717		9.94	10.0	-0.6	30.0

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20200424-2093.b\IM18S01.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 18-Mar-2020 10:28:30 ALS Bottle#: 4 Worklist Smp#: 21
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: LCSI89;LCSI89;1;3;LCS;;;;im18b01;
Misc. Info.: 8260W25.SUB;I200781AA;;25;25;;;
Operator ID: DVV10203 Instrument ID: 19930
Sublist:

Method: \\chromfs\Lancaster\ChromData\19930\20200424-2093.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 19-May-2020 23:44:47 Calib Date: 16-Mar-2020 18:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1037

First Level Reviewer: campbellme Date: 24-Apr-2020 16:40:14

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	1.983	0.000	99	404104	5.00	3.69	M
4 Chloromethane	50	2.184	2.184	0.000	99	437653	5.00	4.96	
5 Vinyl chloride	62	2.306	2.300	0.006	98	430930	5.00	5.04	
6 Butadiene	39	2.300	2.300	0.000	90	307326	5.00	4.85	
7 Bromomethane	94	2.629	2.629	0.000	90	297264	5.00	4.95	M
8 Chloroethane	64	2.727	2.721	0.006	100	240900	5.00	4.97	
9 Dichlorofluoromethane	67	2.965	2.964	0.001	97	539028	5.00	4.78	
10 Trichlorofluoromethane	101	3.026	3.025	0.001	97	539068	5.00	5.28	
11 Ethyl ether	59	3.288	3.288	0.000	91	205286	5.02	4.68	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.367	3.373	-0.006	91	337893	5.00	4.89	
13 Acrolein	56	3.464	3.464	0.000	99	242041	37.5	35.9	
14 1,1-Dichloroethene	96	3.605	3.605	0.000	98	264961	5.00	4.91	
15 Acetone	43	3.635	3.635	0.000	100	302822	37.5	35.8	
16 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.641	3.641	0.000	93	289351	5.00	4.94	
17 Iodomethane	142	3.806	3.806	0.000	99	489334	5.00	4.75	
18 Ethyl bromide	108	3.836	3.830	0.006	98	233560	5.07	5.10	
19 Carbon disulfide	76	3.916	3.909	0.007	99	730180	5.00	4.74	
21 Methyl acetate	43	4.068	4.068	0.000	97	103085	5.00	4.26	
22 3-Chloro-1-propene	41	4.092	4.092	0.000	91	401729	5.00	4.93	
23 Methylene Chloride	84	4.287	4.293	-0.006	92	276886	5.00	4.94	
* 24 t-Butyl alcohol-d10 (IS)	65	4.300	4.293	0.007	0	170420	50.0	50.0	M
25 2-Methyl-2-propanol	59	4.415	4.428	-0.013	100	192735	50.0	46.9	
26 Acrylonitrile	53	4.635	4.629	0.006	100	282549	25.0	25.4	
27 Methyl tert-butyl ether	73	4.696	4.702	-0.006	94	678500	5.00	4.90	
28 trans-1,2-Dichloroethene	96	4.708	4.702	0.006	99	284777	5.00	4.91	
29 Hexane	57	5.129	5.129	0.000	92	423157	5.00	4.85	
31 1,1-Dichloroethane	63	5.373	5.366	0.007	96	516975	5.00	5.01	
32 Isopropyl ether	45	5.427	5.421	0.006	94	860113	5.00	4.99	
33 2-Chloro-1,3-butadiene	53	5.476	5.476	0.000	91	454110	5.00	4.99	
34 Tert-butyl ethyl ether	59	5.958	5.958	0.000	97	827664	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	6.165	6.171	-0.006	99	562303	37.5	37.8	
37 cis-1,2-Dichloroethene	96	6.202	6.196	0.006	82	341025	5.00	5.24	
38 2,2-Dichloropropane	77	6.220	6.208	0.012	86	479210	5.00	5.14	
40 Propionitrile	54	6.263	6.263	0.000	98	157419	37.5	38.0	
42 Methacrylonitrile	67	6.476	6.470	0.006	91	558882	37.5	39.4	
43 Chlorobromomethane	128	6.531	6.531	0.000	92	139230	5.00	4.84	
44 Tetrahydrofuran	71	6.537	6.543	-0.006	81	112127	25.0	24.6	
45 Chloroform	83	6.677	6.683	-0.006	93	524929	5.00	5.09	
$ 46 Dibromofluoromethane (Surr)	113	6.897	6.897	0.000	94	488293	10.0	10.0	
47 1,1,1-Trichloroethane	97	6.909	6.903	0.006	98	490387	5.00	4.90	
48 Cyclohexane	56	7.006	7.000	0.006	89	482823	5.00	4.58	
50 Carbon tetrachloride	117	7.122	7.116	0.006	95	454285	5.00	5.12	
51 1,1-Dichloropropene	75	7.122	7.116	0.006	96	414063	5.00	5.01	
52 Isobutyl alcohol	41	7.262	7.269	-0.007	94	137191	125.0	115.6	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.348	7.354	-0.006	0	97917	10.0	9.93	
54 Benzene	78	7.384	7.378	0.006	97	1189445	5.00	4.94	
56 1,2-Dichloroethane	62	7.451	7.451	0.000	98	312565	5.00	4.83	
57 Tert-amyl methyl ether	73	7.567	7.561	0.006	98	767781	5.00	4.87	
* 58 Fluorobenzene (IS)	96	7.787	7.781	0.006	99	2016169	10.0	10.0	
59 n-Heptane	43	7.793	7.793	0.000	90	394847	5.00	4.75	
60 n-Butanol	56	8.140	8.140	0.000	88	223911	250.0	213.6	
61 Trichloroethene	95	8.262	8.262	0.000	97	321228	5.00	5.02	
62 Methylcyclohexane	83	8.567	8.567	0.000	93	536524	5.00	4.70	
63 1,2-Dichloropropane	63	8.591	8.591	0.000	72	293345	5.00	5.02	
64 Methyl methacrylate	69	8.671	8.671	0.000	88	156771	5.00	5.45	
65 1,4-Dioxane	88	8.677	8.683	-0.006	32	23496	125.0	97.5	M
66 Dibromomethane	93	8.701	8.707	-0.006	95	144299	5.00	4.98	
68 Dichlorobromomethane	83	8.933	8.933	0.000	99	381979	5.00	5.02	
69 2-Nitropropane	41	9.207	9.201	0.006	98	47365	5.00	5.30	
71 2-Chloroethyl vinyl ether	63		9.293				ND	ND	
72 1-Bromo-2-chloroethane	63	9.329	9.323	0.006	99	312437	5.00	5.15	
73 cis-1,3-Dichloropropene	75	9.475	9.475	0.000	96	457064	5.00	5.07	
74 4-Methyl-2-pentanone (MIBK)	43	9.646	9.640	0.006	96	959083	25.0	26.0	
$ 75 Toluene-d8 (Surr)	98	9.780	9.780	0.000	93	1924449	10.0	10.0	
76 Toluene	92	9.853	9.853	0.000	98	768894	5.00	5.00	
78 trans-1,3-Dichloropropene	75	10.109	10.109	0.000	92	378998	5.00	4.87	
79 Ethyl methacrylate	69	10.164	10.164	0.000	88	295371	5.00	4.45	
80 1,1,2-Trichloroethane	97	10.311	10.311	0.000	91	213493	5.00	4.96	
81 Tetrachloroethene	166	10.396	10.396	0.000	98	375185	5.00	5.11	
82 1,3-Dichloropropane	76	10.475	10.475	0.000	88	355320	5.00	4.91	
83 2-Hexanone	43	10.518	10.518	0.000	96	668874	25.0	26.3	
85 Chlorodibromomethane	129	10.689	10.682	0.007	90	282705	5.00	5.15	
86 Ethylene Dibromide	107	10.798	10.798	0.000	99	202474	5.00	4.98	
* 87 Chlorobenzene-d5 (IS)	117	11.219	11.219	0.000	85	1514085	10.0	10.0	
88 1-Chlorohexane	91	11.225	11.231	-0.006	96	452970	5.00	4.79	
S 89 Xylenes, Total	106				0		15.0	15.1	
90 Chlorobenzene	112	11.250	11.249	0.001	95	858293	5.00	5.04	
91 1,1,1,2-Tetrachloroethane	131	11.329	11.329	0.000	96	320098	5.00	5.05	
92 Ethylbenzene	91	11.335	11.335	0.000	98	1509851	5.00	5.00	
93 m-Xylene & p-Xylene	106	11.445	11.445	0.000	0	1197117	10.0	10.1	
94 o-Xylene	106	11.774	11.774	0.000	96	584485	5.00	4.99	
95 Styrene	104	11.792	11.792	0.000	95	947320	5.00	5.06	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
96 Bromoform	173	11.951	11.944	0.007	98	170830	5.00	5.06	
97 Isopropylbenzene	105	12.073	12.072	0.001	96	1592927	5.00	5.13	
$ 100 4-Bromofluorobenzene (Surr)	95	12.213	12.219	-0.006	91	714156	10.0	9.94	
101 1,1,2,2-Tetrachloroethane	83	12.316	12.316	0.000	93	261202	5.00	4.94	
102 Bromobenzene	156	12.335	12.335	0.000	97	360806	5.00	5.08	
103 trans-1,4-Dichloro-2-butene	53	12.341	12.341	0.000	90	351123	25.0	27.1	
104 1,2,3-Trichloropropane	110	12.365	12.365	0.000	84	72960	5.00	4.95	
105 N-Propylbenzene	91	12.402	12.402	0.000	99	1835795	5.00	5.23	
106 2-Chlorotoluene	126	12.475	12.475	0.000	97	365335	5.00	5.15	
107 1,3,5-Trimethylbenzene	105	12.536	12.536	0.000	94	1328220	5.00	5.20	
108 4-Chlorotoluene	126	12.566	12.566	0.000	97	365638	5.00	5.07	
109 tert-Butylbenzene	134	12.774	12.780	-0.006	93	295748	5.00	5.16	
110 Pentachloroethane	167	12.810	12.810	0.000	94	245519	5.00	5.08	
111 1,2,4-Trimethylbenzene	105	12.816	12.816	0.000	97	1322411	5.00	5.03	
112 sec-Butylbenzene	105	12.938	12.938	0.000	94	1719613	5.00	5.24	
113 1,3-Dichlorobenzene	146	13.042	13.042	0.000	98	706697	5.00	5.08	
114 4-Isopropyltoluene	119	13.048	13.048	0.000	97	1486702	5.00	5.25	
* 115 1,4-Dichlorobenzene-d4	152	13.097	13.097	0.000	95	818513	10.0	10.0	
116 1,4-Dichlorobenzene	146	13.115	13.115	0.000	95	706966	5.00	5.14	
117 1,2,3-Trimethylbenzene	120	13.121	13.121	0.000	98	577385	5.00	5.10	
118 Benzyl chloride	126	13.188	13.188	0.000	98	108177	5.00	4.46	
119 n-Butylbenzene	92	13.334	13.334	0.000	97	691258	5.00	5.24	
120 1,2-Dichlorobenzene	146	13.371	13.371	0.000	98	649745	5.00	5.12	
122 1,2-Dibromo-3-Chloropropane	155	13.914	13.914	0.000	89	42856	5.00	4.91	
123 1,3,5-Trichlorobenzene	180	14.036	14.035	0.001	98	525629	5.00	5.22	
124 1,2,4-Trichlorobenzene	180	14.462	14.462	0.000	94	440336	5.00	5.20	
125 Hexachlorobutadiene	225	14.542	14.541	0.001	97	193036	5.00	5.40	
126 Naphthalene	128	14.645	14.645	0.000	97	796649	5.00	4.77	
127 1,2,3-Trichlorobenzene	180	14.785	14.785	0.000	96	360586	5.00	5.11	
144 2-ethoxy-2-methyl butane	1		0.000				ND	ND	
137 2-Methylnaphthalene	142		0.000				ND	ND	
135 p-Diethylbenzene	1		0.000				ND	ND	
134 Isopropyl alcohol	45		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MSV_Q_ETBR_00002	Amount Added:	12.50	Units: uL	
MSV_Q_EE_00001	Amount Added:	12.50	Units: uL	
MSV_Q_QVOA1_00018	Amount Added:	12.50	Units: uL	
MSV_Q_QARC_00018	Amount Added:	12.50	Units: uL	
MSV_Q_QVOA6_00017	Amount Added:	12.50	Units: uL	
MSV_QGAS_826_00022	Amount Added:	12.50	Units: uL	
MSV_31_826ISS_00002	Amount Added:	5.00	Units: uL	Run Reagent

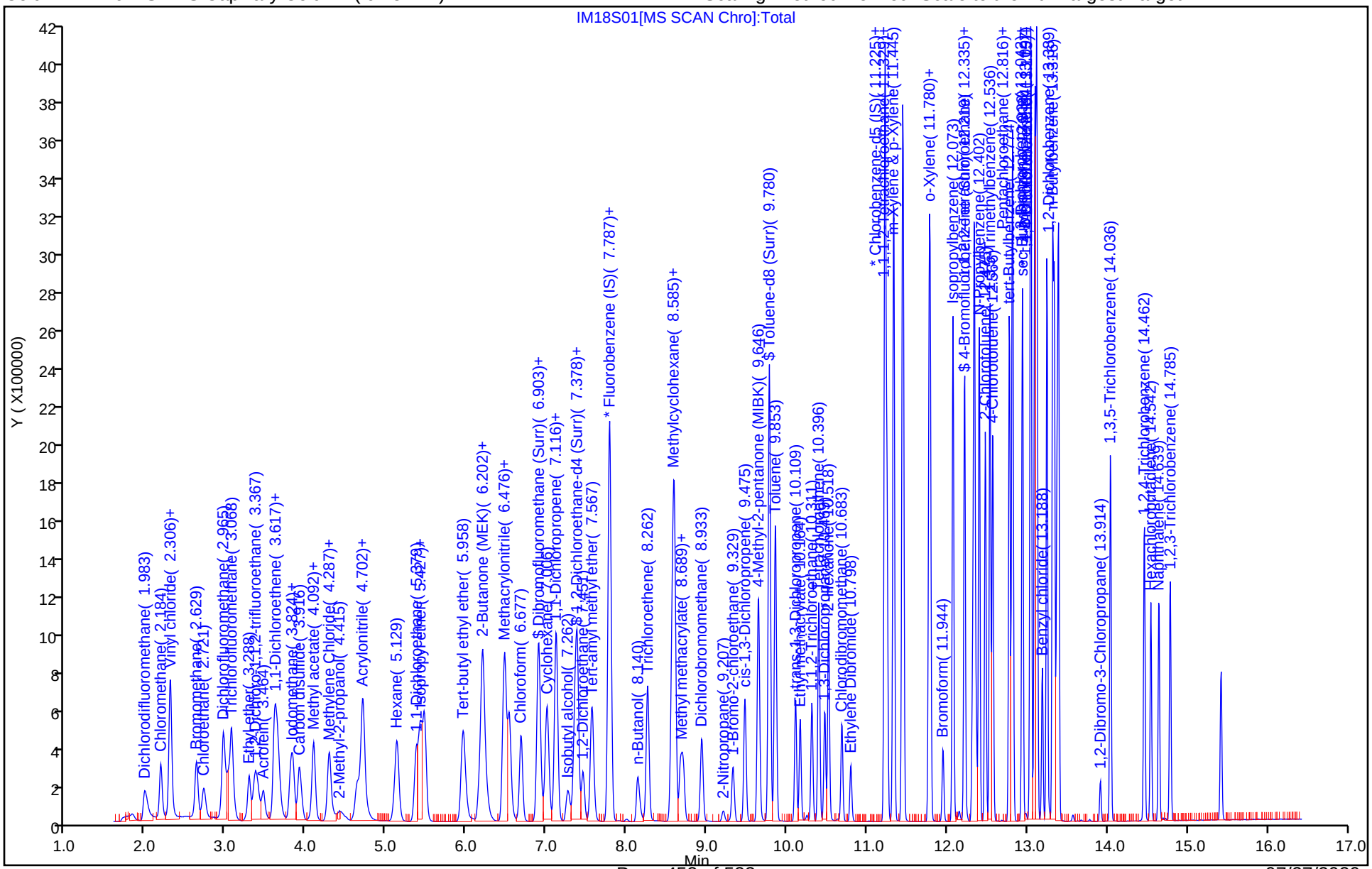
Report Date: 19-May-2020 23:44:51 Chrom Revision: 2.3 19-May-2020 20:15:52

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200424-2093.b\IM18S01.D

Injection Date:	18-Mar-2020 10:28:30	Instrument ID:	19930	Operator ID:	DVV10203
Lims ID:	ICV			Worklist Smp#:	21
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

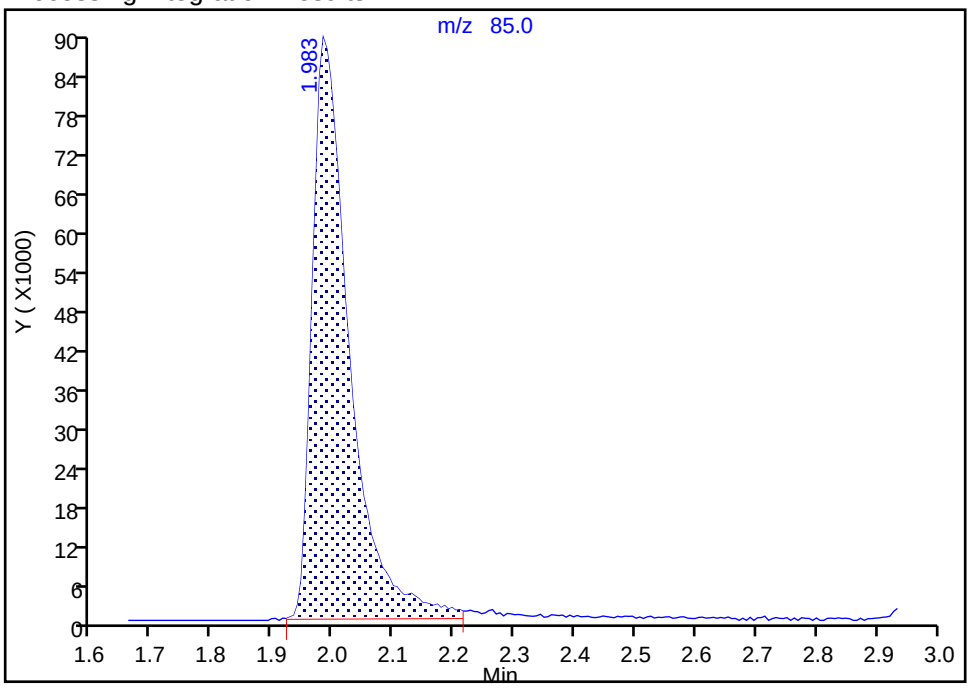
Data File: \\chromfs\Lancaster\ChromData\19930\20200424-2093.b\IM18S01.D
Injection Date: 18-Mar-2020 10:28:30 Instrument ID: 19930
Lims ID: ICV
Client ID:
Operator ID: DVV10203 ALS Bottle#: 4 Worklist Smp#: 21
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

1 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

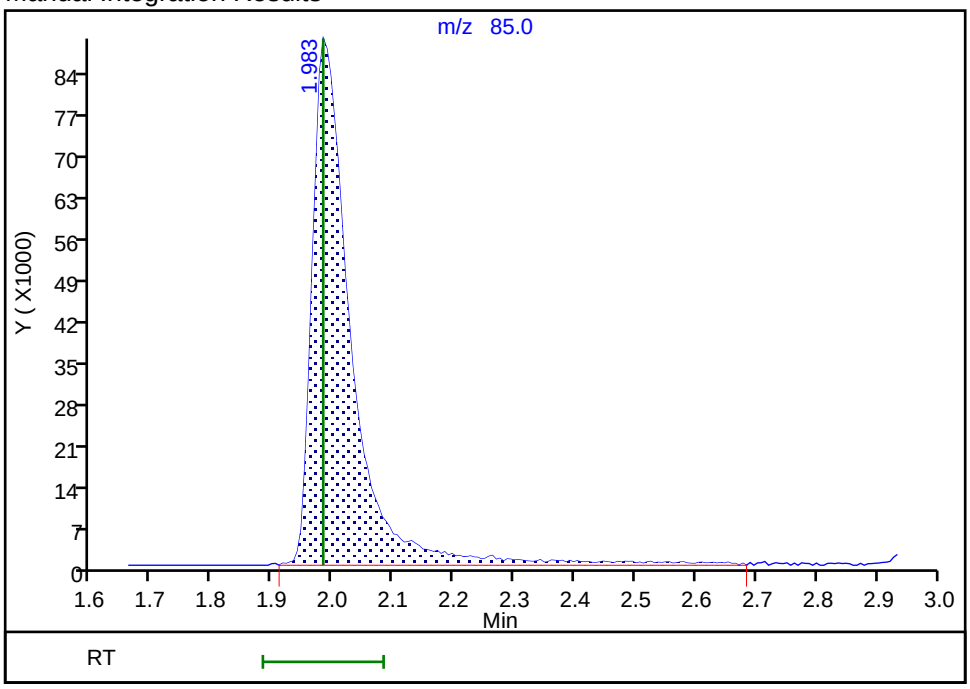
Processing Integration Results

RT: 1.98
Area: 381872
Amount: 3.484029
Amount Units: ug/l



Manual Integration Results

RT: 1.98
Area: 404104
Amount: 3.686863
Amount Units: ug/l



Reviewer: campbellme, 24-Apr-2020 16:38:30
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC

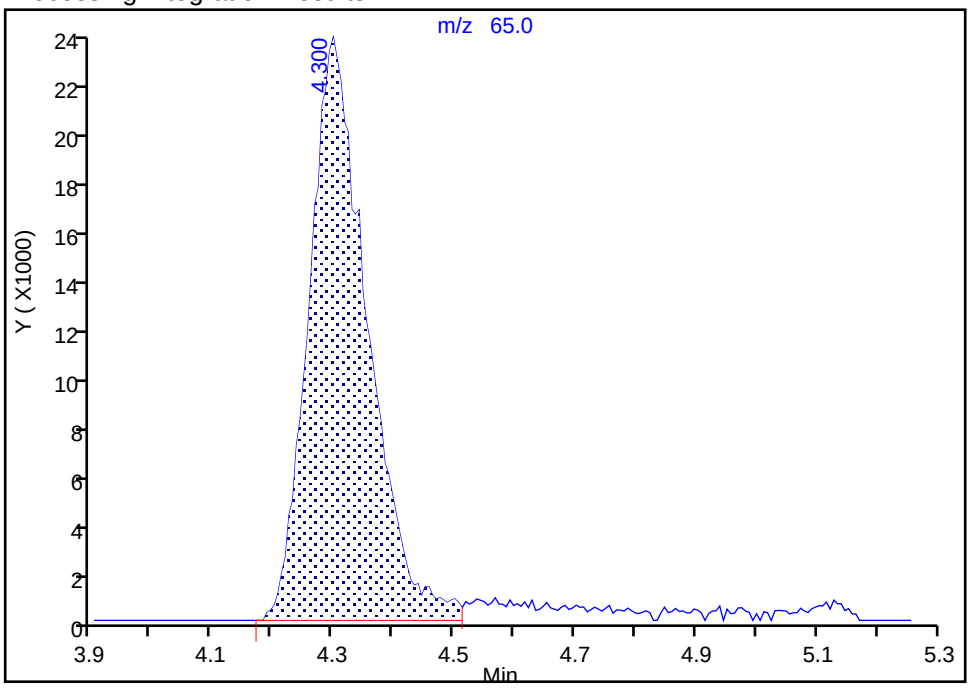
Data File: \\chromfs\Lancaster\ChromData\19930\20200424-2093.b\IM18S01.D
Injection Date: 18-Mar-2020 10:28:30 Instrument ID: 19930
Lims ID: ICV
Client ID:
Operator ID: DVV10203 ALS Bottle#: 4 Worklist Smp#: 21
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

* 24 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

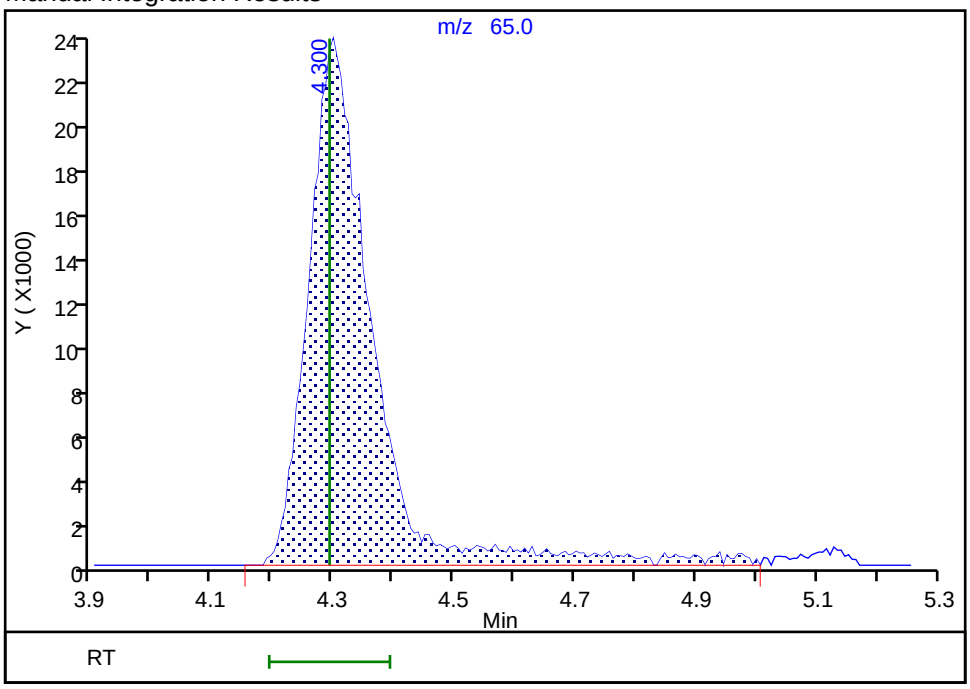
Processing Integration Results

RT: 4.30
Area: 156986
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 4.30
Area: 170420
Amount: 50.000000
Amount Units: ug/l



Reviewer: campbellme, 24-Apr-2020 16:39:01
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC

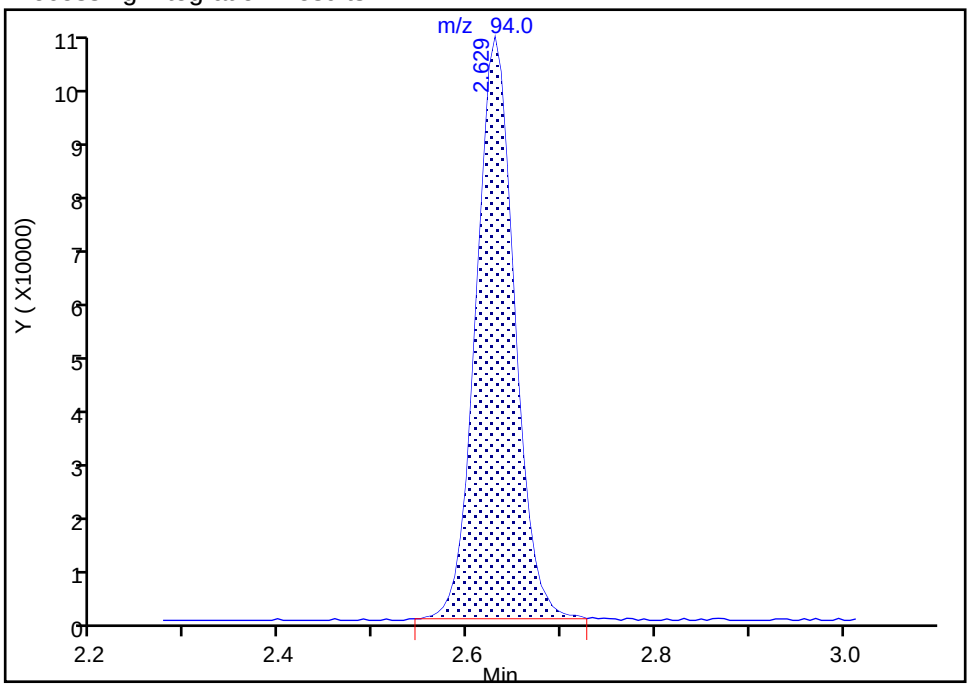
Data File: \\chromfs\Lancaster\ChromData\19930\20200424-2093.b\IM18S01.D
Injection Date: 18-Mar-2020 10:28:30 Instrument ID: 19930
Lims ID: ICV
Client ID:
Operator ID: DVV10203 ALS Bottle#: 4 Worklist Smp#: 21
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

7 Bromomethane, CAS: 74-83-9

Signal: 1

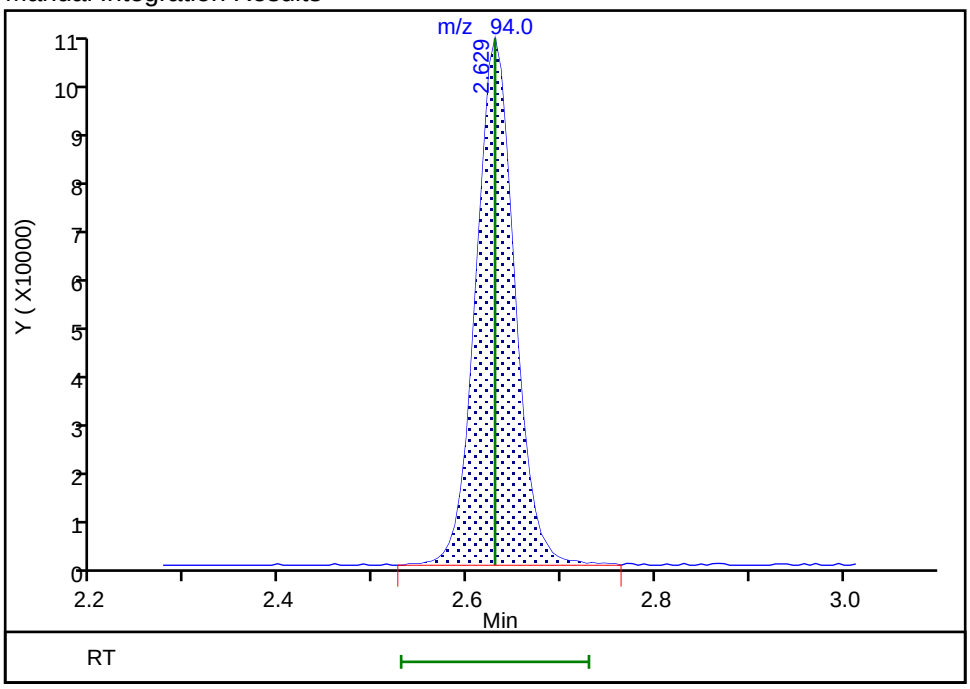
Processing Integration Results

RT: 2.63
Area: 293285
Amount: 4.887379
Amount Units: ug/l



Manual Integration Results

RT: 2.63
Area: 297264
Amount: 4.953686
Amount Units: ug/l



Reviewer: campbellme, 24-Apr-2020 16:38:45
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC

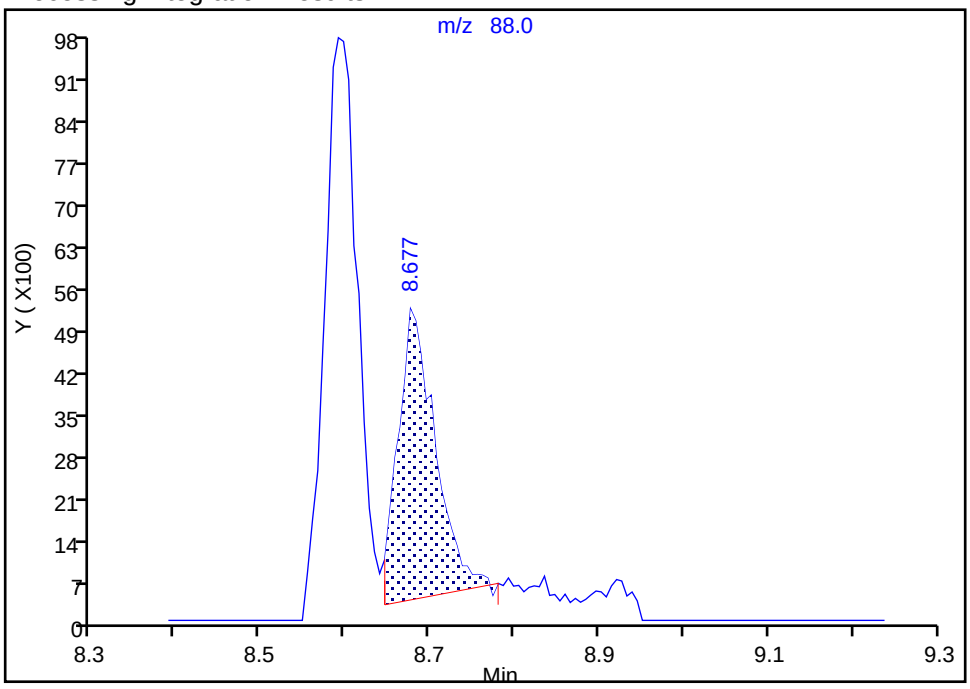
Data File:	\\chromfs\Lancaster\ChromData\19930\20200424-2093.b\IM18S01.D				
Injection Date:	18-Mar-2020 10:28:30	Instrument ID:	19930		
Lims ID:	ICV				
Client ID:					
Operator ID:	DVV10203	ALS Bottle#:	4	Worklist Smp#:	21
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

65 1,4-Dioxane, CAS: 123-91-1

Signal: 1

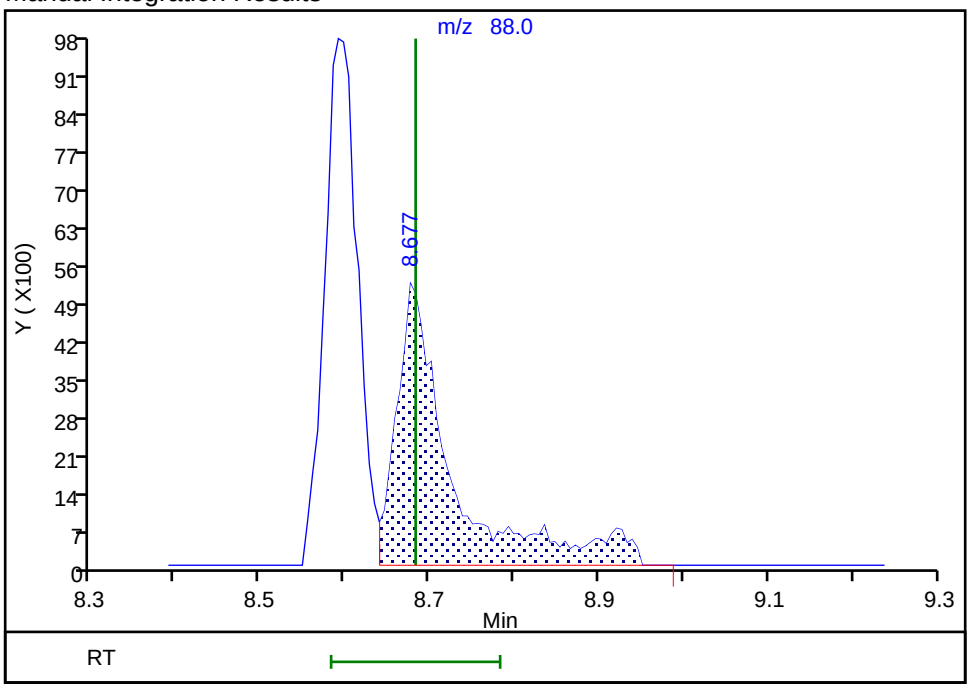
Processing Integration Results

RT: 8.68
Area: 14693
Amount: 60.983256
Amount Units: ug/l



Manual Integration Results

RT: 8.68
Area: 23496
Amount: 97.520083
Amount Units: ug/l



Reviewer: campbellme, 24-Apr-2020 16:39:49
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-5692-1

SDG No.:

Lab Sample ID: CCVIS 410-20265/3 Calibration Date: 07/08/2020 08:58

Instrument ID: 19930 Calib Start Date: 03/16/2020 16:24

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 03/16/2020 18:31

Lab File ID: IU06C01.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	0.5436	0.4163	0.1000	7.66	10.0	-23.4*	20.0
Chloromethane	Ave	0.4381	0.4105	0.1000	9.37	10.0	-6.3	20.0
1,3-Butadiene	Ave	0.3145	0.4229		13.4	10.0	34.5*	20.0
Vinyl chloride	Ave	0.4245	0.3877	0.1000	9.13	10.0	-8.7	20.0
Bromomethane	Ave	0.2976	0.2685	0.1000	9.02	10.0	-9.8	20.0
Chloroethane	Ave	0.2402	0.2165	0.1000	9.01	10.0	-9.9	20.0
Dichlorofluoromethane	Ave	0.5588	0.4933		8.83	10.0	-11.7	20.0
Trichlorofluoromethane	Ave	0.5061	0.4719	0.1000	9.33	10.0	-6.7	20.0
Ethyl ether	Ave	0.2175	0.2067		9.50	10.0	-5.0	20.0
Freon 123a	Ave	0.3424	0.3080		8.99	10.0	-10.1	20.0
Acrolein	Ave	1.980	1.754		443	500	-11.4	20.0
1,1-Dichloroethene	Ave	0.2676	0.2198	0.1000	8.21	10.0	-17.9	20.0
Acetone	Ave	2.481	2.314	0.1000	93.3	100	-6.7	20.0
Freon 113	Ave	0.2904	0.2639	0.1000	9.09	10.0	-9.1	20.0
Methyl iodide	Ave	0.5108	0.4651		9.10	10.0	-9.0	20.0
Ethyl bromide	Ave	0.2273	0.2092		9.21	10.0	-8.0	20.0
Carbon disulfide	Ave	0.7646	0.6790	0.1000	8.88	10.0	-11.2	20.0
Methyl acetate	Ave	0.1202	0.1335	0.1000	11.1	10.0	11.1	20.0
Allyl chloride	Ave	0.4040	0.4025		9.96	10.0	-0.4	20.0
Methylene Chloride	Ave	0.2778	0.2515	0.1000	9.05	10.0	-9.5	20.0
t-Butyl alcohol	Ave	1.204	1.102		183	200	-8.5	20.0
Acrylonitrile	Ave	3.263	3.171		48.6	50.0	-2.8	20.0
Methyl tert-butyl ether	Ave	0.6869	0.6691	0.1000	9.74	10.0	-2.6	20.0
trans-1,2-Dichloroethene	Ave	0.2875	0.2518	0.1000	8.76	10.0	-12.4	20.0
n-Hexane	Ave	0.4330	0.4125		9.53	10.0	-4.7	20.0
1,1-Dichloroethane	Ave	0.5113	0.4782	0.2000	9.35	10.0	-6.5	20.0
di-Isopropyl ether	Ave	0.8553	0.8712		10.2	10.0	1.9	20.0
2-Chloro-1,3-butadiene	Ave	0.4517	0.4370		9.67	10.0	-3.3	20.0
Ethyl t-butyl ether	Ave	0.8417	0.8005		9.51	10.0	-4.9	20.0
2-Butanone (MEK)	Ave	4.369	4.389	0.1000	100	100	0.5	20.0
cis-1,2-Dichloroethene	Ave	0.3228	0.2940	0.1000	9.11	10.0	-8.9	20.0
2,2-Dichloropropane	Ave	0.4626	0.3891		8.41	10.0	-15.9	20.0
Propionitrile	Ave	1.216	1.275		210	200	4.9	20.0
Methacrylonitrile	Ave	4.161	4.099		98.5	100	-1.5	20.0
Bromochloromethane	Ave	0.1428	0.1413		9.90	10.0	-1.0	20.0
Tetrahydrofuran	Ave	1.340	1.218		90.9	100	-9.1	20.0
Chloroform	Ave	0.5116	0.4684	0.2000	9.16	10.0	-8.4	20.0
1,1,1-Trichloroethane	Ave	0.4961	0.4146	0.1000	8.36	10.0	-16.4	20.0
Cyclohexane	Ave	0.5230	0.4833	0.1000	9.24	10.0	-7.6	20.0
1,1-Dichloropropene	Ave	0.4099	0.3770		9.20	10.0	-8.0	20.0
Carbon tetrachloride	Ave	0.4398	0.3770	0.1000	8.57	10.0	-14.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-5692-1

SDG No.:

Lab Sample ID: CCVIS 410-20265/3 Calibration Date: 07/08/2020 08:58

Instrument ID: 19930 Calib Start Date: 03/16/2020 16:24

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 03/16/2020 18:31

Lab File ID: IU06C01.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	0.3481	0.3554		510	500	2.1	20.0
Benzene	Ave	1.193	1.096	0.5000	9.19	10.0	-8.1	20.0
1,2-Dichloroethane	Ave	0.3210	0.2891	0.1000	9.00	10.0	-10.0	20.0
t-Amyl methyl ether	Ave	0.7820	0.7467		9.55	10.0	-4.5	20.0
n-Heptane	Ave	0.4125	0.4339		10.5	10.0	5.2	20.0
n-Butanol	Ave	0.3076	0.3356		1090	1000	9.1	20.0
Trichloroethene	Ave	0.3177	0.2900	0.2000	9.13	10.0	-8.7	20.0
Methylcyclohexane	Ave	0.5660	0.5214	0.1000	9.21	10.0	-7.9	20.0
1,2-Dichloropropane	Ave	0.2901	0.2801	0.1000	9.66	10.0	-3.4	20.0
Methyl methacrylate	Ave	8.432	7.790		9.24	10.0	-7.6	20.0
1,4-Dioxane	Ave	0.0707	0.0766	0.0050	542	500	8.4	20.0
Dibromomethane	Ave	0.1438	0.1364		9.49	10.0	-5.1	20.0
Bromodichloromethane	Ave	0.3777	0.3423	0.2000	9.06	10.0	-9.4	20.0
2-Nitropropane	Ave	2.620	2.360		90.1	100	-9.9	20.0
1-Bromo-2-chloroethane	Ave	0.3011	0.3165		10.5	10.0	5.1	20.0
cis-1,3-Dichloropropene	Ave	0.4468	0.4274	0.2000	9.56	10.0	-4.4	20.0
4-Methyl-2-pentanone (MIBK)	Ave	10.81	10.79	0.1000	99.8	100	-0.2	20.0
Toluene	Ave	1.016	0.9460	0.4000	9.31	10.0	-6.9	20.0
trans-1,3-Dichloropropene	Ave	0.5143	0.4761	0.1000	9.26	10.0	-7.4	20.0
Ethyl methacrylate	Ave	0.4384	0.4370		9.97	10.0	-0.3	20.0
1,1,2-Trichloroethane	Ave	0.2845	0.2673	0.1000	9.39	10.0	-6.1	20.0
Tetrachloroethene	Ave	0.4853	0.4385	0.2000	9.04	10.0	-9.6	20.0
1,3-Dichloropropane	Ave	0.4782	0.4715		9.86	10.0	-1.4	20.0
2-Hexanone	Ave	7.474	7.651	0.1000	102	100	2.4	20.0
Dibromochloromethane	Ave	0.3627	0.3422		9.44	10.0	-5.6	20.0
1,2-Dibromoethane (EDB)	Ave	0.2687	0.2666	0.1000	9.92	10.0	-0.8	20.0
1-Chlorohexane	Ave	0.6248	0.5358		8.58	10.0	-14.2	20.0
Chlorobenzene	Ave	1.125	1.049	0.5000	9.32	10.0	-6.8	20.0
1,1,1,2-Tetrachloroethane	Ave	0.4190	0.3795		9.06	10.0	-9.4	20.0
Ethylbenzene	Ave	1.994	1.847	0.1000	9.26	10.0	-7.4	20.0
m&p-Xylene	Ave	0.7812	0.7160	0.1000	18.3	20.0	-8.4	20.0
o-Xylene	Ave	0.7743	0.7004	0.3000	9.05	10.0	-9.5	20.0
Styrene	Ave	1.236	1.172	0.3000	9.49	10.0	-5.1	20.0
Bromoform	Ave	0.2232	0.2143	0.1000	9.60	10.0	-4.0	20.0
Isopropylbenzene	Ave	2.050	1.880	0.1000	9.17	10.0	-8.3	20.0
1,1,2,2-Tetrachloroethane	Ave	0.6462	0.6313	0.3000	9.77	10.0	-2.3	20.0
Bromobenzene	Ave	0.8683	0.8120		9.35	10.0	-6.5	20.0
trans-1,4-Dichloro-2-butene	Ave	3.806	3.093		81.3	100	-18.7	20.0
1,2,3-Trichloropropane	Ave	0.1800	0.1772		9.84	10.0	-1.6	20.0
N-Propylbenzene	Ave	4.288	3.950		9.21	10.0	-7.9	20.0
2-Chlorotoluene	Ave	0.8662	0.7859		9.07	10.0	-9.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-5692-1

SDG No.:

Lab Sample ID: CCVIS 410-20265/3 Calibration Date: 07/08/2020 08:58

Instrument ID: 19930 Calib Start Date: 03/16/2020 16:24

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 03/16/2020 18:31

Lab File ID: IU06C01.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	3.122	2.845		9.11	10.0	-8.9	20.0
4-Chlorotoluene	Ave	0.8818	0.8071		9.15	10.0	-8.5	20.0
tert-Butylbenzene	Ave	0.7000	0.6205		8.86	10.0	-11.4	20.0
Pentachloroethane	Ave	0.5905	0.5631		9.54	10.0	-4.6	20.0
1,2,4-Trimethylbenzene	Ave	3.211	2.899		9.03	10.0	-9.7	20.0
sec-Butylbenzene	Ave	4.011	3.693		9.21	10.0	-7.9	20.0
1,3-Dichlorobenzene	Ave	1.699	1.564	0.6000	9.20	10.0	-8.0	20.0
p-Isopropyltoluene	Ave	3.460	3.164		9.15	10.0	-8.5	20.0
1,4-Dichlorobenzene	Ave	1.682	1.549	0.5000	9.21	10.0	-7.9	20.0
1,2,3-Trimethylbenzene	Ave	1.382	1.307		9.45	10.0	-5.5	20.0
Benzyl chloride	Ave	0.2962	0.2920		9.86	10.0	-1.4	20.0
n-Butylbenzene	Ave	1.612	1.555		9.65	10.0	-3.5	20.0
1,2-Dichlorobenzene	Ave	1.551	1.442	0.4000	9.29	10.0	-7.1	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.1067	0.0965	0.0500	9.05	10.0	-9.5	20.0
1,3,5-Trichlorobenzene	Ave	1.230	1.119		9.10	10.0	-9.0	20.0
1,2,4-Trichlorobenzene	Ave	1.036	0.9323	0.2000	9.00	10.0	-10.0	20.0
Hexachlorobutadiene	Ave	0.4369	0.4111		9.41	10.0	-5.9	20.0
Naphthalene	Ave	2.041	1.840		9.02	10.0	-9.8	20.0
1,2,3-Trichlorobenzene	Ave	0.8626	0.7766		9.00	10.0	-10.0	20.0
Dibromofluoromethane (Surr)	Ave	0.2414	0.2399		9.94	10.0	-0.6	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.0489	0.0488		9.98	10.0	-0.2	20.0
Toluene-d8 (Surr)	Ave	1.272	1.277		10.0	10.0	0.4	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4745	0.4767		10.0	10.0	0.5	20.0

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU06C01.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 08-Jul-2020 08:58:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: CCVIS
Misc. Info.: 410-0005039-003
Operator ID: jkh09052 Instrument ID: 19930
Sublist: chrom-8260 25ml HP31*sub2

Method: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 08-Jul-2020 10:54:26 Calib Date: 16-Mar-2020 18:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1027

First Level Reviewer: howej Date: 08-Jul-2020 09:52:03

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	2.001	2.001	0.000	99	731564	10.0	7.66	M
4 Chloromethane	50	2.203	2.203	0.000	99	721247	10.0	9.37	
6 Butadiene	39	2.318	2.318	0.000	93	743011	10.0	13.4	
5 Vinyl chloride	62	2.324	2.324	0.000	98	681295	10.0	9.13	
7 Bromomethane	94	2.648	2.648	0.000	91	471864	10.0	9.02	
8 Chloroethane	64	2.739	2.739	0.000	100	380462	10.0	9.01	
9 Dichlorofluoromethane	67	2.983	2.983	0.000	97	866738	10.0	8.83	
10 Trichlorofluoromethane	101	3.038	3.038	0.000	97	829257	10.0	9.33	
11 Ethyl ether	59	3.300	3.300	0.000	91	363154	10.0	9.50	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.385	3.385	0.000	95	541151	10.0	8.99	
13 Acrolein	56	3.477	3.477	0.000	99	3121651	500.0	442.9	
14 1,1-Dichloroethene	96	3.623	3.623	0.000	98	386245	10.0	8.21	
15 Acetone	43	3.647	3.647	0.000	100	823612	100.0	93.3	
16 112TCTFE	101	3.653	3.653	0.000	89	463696	10.0	9.09	
17 Iodomethane	142	3.824	3.824	0.000	99	817205	10.0	9.10	
18 Ethyl bromide	108	3.855	3.855	0.000	98	367775	10.0	9.21	
19 Carbon disulfide	76	3.934	3.934	0.000	99	1193083	10.0	8.88	
21 Methyl acetate	43	4.074	4.074	0.000	98	234659	10.0	11.1	
22 3-Chloro-1-propene	41	4.111	4.111	0.000	93	707255	10.0	9.96	
23 Methylene Chloride	84	4.306	4.306	0.000	92	441965	10.0	9.05	
* 24 t-Butyl alcohol-d10 (IS)	65	4.306	4.306	0.000	0	177957	50.0	50.0	M
25 2-Methyl-2-propanol	59	4.452	4.452	0.000	100	784470	200.0	183.0	
26 Acrylonitrile	53	4.641	4.641	0.000	99	564282	50.0	48.6	
27 Methyl tert-butyl ether	73	4.708	4.708	0.000	90	1175766	10.0	9.74	
28 trans-1,2-Dichloroethene	96	4.726	4.726	0.000	99	442499	10.0	8.76	
29 Hexane	57	5.141	5.141	0.000	92	724786	10.0	9.53	
31 1,1-Dichloroethane	63	5.379	5.379	0.000	96	840347	10.0	9.35	
32 Isopropyl ether	45	5.434	5.434	0.000	95	1530847	10.0	10.2	
33 2-Chloro-1,3-butadiene	53	5.488	5.488	0.000	91	767876	10.0	9.67	
34 Tert-butyl ethyl ether	59	5.970	5.970	0.000	98	1406680	10.0	9.51	

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	6.177	6.177	0.000	100	1562270	100.0	100.5	
37 cis-1,2-Dichloroethene	96	6.202	6.202	0.000	82	516646	10.0	9.11	
38 2,2-Dichloropropane	77	6.226	6.226	0.000	85	683619	10.0	8.41	
40 Propionitrile	54	6.263	6.263	0.000	99	907428	200.0	209.7	
42 Methacrylonitrile	67	6.476	6.476	0.000	92	1458819	100.0	98.5	
43 Chlorobromomethane	128	6.537	6.537	0.000	90	248316	10.0	9.90	
44 Tetrahydrofuran	71	6.549	6.549	0.000	90	433432	100.0	90.9	
45 Chloroform	83	6.683	6.683	0.000	93	823058	10.0	9.16	
$ 46 Dibromofluoromethane (Surr)	113	6.897	6.897	0.000	94	421577	10.0	9.94	
47 1,1,1-Trichloroethane	97	6.909	6.909	0.000	98	728508	10.0	8.36	
48 Cyclohexane	56	7.006	7.006	0.000	90	849169	10.0	9.24	
51 1,1-Dichloropropene	75	7.122	7.122	0.000	97	662526	10.0	9.20	
50 Carbon tetrachloride	117	7.128	7.128	0.000	95	662358	10.0	8.57	
52 Isobutyl alcohol	41	7.269	7.269	0.000	95	632449	500.0	510.5	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.354	7.354	0.000	0	85791	10.0	9.98	
54 Benzene	78	7.384	7.384	0.000	96	1926099	10.0	9.19	
56 1,2-Dichloroethane	62	7.452	7.452	0.000	97	507970	10.0	9.00	
57 Tert-amyl methyl ether	73	7.567	7.567	0.000	99	1312153	10.0	9.55	
* 58 Fluorobenzene (IS)	96	7.787	7.787	0.000	99	1757170	10.0	10.0	
59 n-Heptane	43	7.787	7.787	0.000	90	762436	10.0	10.5	
60 n-Butanol	56	8.134	8.134	0.000	88	1194488	1000.0	1091.1	
61 Trichloroethene	95	8.262	8.262	0.000	98	509610	10.0	9.13	
62 Methylcyclohexane	83	8.567	8.567	0.000	94	916138	10.0	9.21	
63 1,2-Dichloropropane	63	8.592	8.592	0.000	81	492202	10.0	9.66	
64 Methyl methacrylate	69	8.671	8.671	0.000	90	277263	10.0	9.24	
65 1,4-Dioxane	88	8.677	8.677	0.000	45	136315	500.0	541.8	M
66 Dibromomethane	93	8.701	8.701	0.000	95	239726	10.0	9.49	
68 Dichlorobromomethane	83	8.933	8.933	0.000	99	601398	10.0	9.06	
69 2-Nitropropane	41	9.201	9.201	0.000	97	840079	100.0	90.1	
72 1-Bromo-2-chloroethane	63	9.323	9.323	0.000	98	556059	10.0	10.5	
73 cis-1,3-Dichloropropene	75	9.476	9.476	0.000	97	750945	10.0	9.56	
74 4-Methyl-2-pentanone (MIBK)	43	9.640	9.640	0.000	96	3841705	100.0	99.8	
$ 75 Toluene-d8 (Surr)	98	9.774	9.774	0.000	94	1693958	10.0	10.0	
76 Toluene	92	9.853	9.853	0.000	98	1254902	10.0	9.31	
78 trans-1,3-Dichloropropene	75	10.103	10.103	0.000	92	631556	10.0	9.26	
79 Ethyl methacrylate	69	10.164	10.164	0.000	89	579718	10.0	9.97	
80 1,1,2-Trichloroethane	97	10.305	10.305	0.000	90	354561	10.0	9.39	
81 Tetrachloroethene	166	10.396	10.396	0.000	98	581718	10.0	9.04	
82 1,3-Dichloropropane	76	10.469	10.469	0.000	89	625432	10.0	9.86	
83 2-Hexanone	43	10.512	10.512	0.000	96	2723254	100.0	102.4	
85 Chlorodibromomethane	129	10.683	10.683	0.000	89	453983	10.0	9.44	
86 Ethylene Dibromide	107	10.792	10.792	0.000	97	353652	10.0	9.92	
* 87 Chlorobenzene-d5 (IS)	117	11.219	11.219	0.000	85	1326604	10.0	10.0	
88 1-Chlorohexane	91	11.225	11.225	0.000	96	710841	10.0	8.58	
90 Chlorobenzene	112	11.243	11.243	0.000	95	1391613	10.0	9.32	
91 1,1,1,2-Tetrachloroethane	131	11.323	11.323	0.000	96	503375	10.0	9.06	
92 Ethylbenzene	91	11.329	11.329	0.000	98	2449595	10.0	9.26	
93 m-Xylene & p-Xylene	106	11.445	11.445	0.000	0	1899599	20.0	18.3	
94 o-Xylene	106	11.768	11.768	0.000	96	929120	10.0	9.05	
95 Styrene	104	11.786	11.786	0.000	95	1555419	10.0	9.49	
96 Bromoform	173	11.945	11.945	0.000	98	284285	10.0	9.60	
97 Isopropylbenzene	105	12.066	12.066	0.000	96	2493676	10.0	9.17	

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	12.213	12.213	0.000	92	632398	10.0	10.0	
101 1,1,2,2-Tetrachloroethane	83	12.310	12.310	0.000	92	465266	10.0	9.77	
102 Bromobenzene	156	12.329	12.329	0.000	95	598429	10.0	9.35	
103 trans-1,4-Dichloro-2-butene	53	12.335	12.335	0.000	92	1100732	100.0	81.3	
104 1,2,3-Trichloropropane	110	12.359	12.359	0.000	83	130590	10.0	9.84	
105 N-Propylbenzene	91	12.396	12.396	0.000	99	2911227	10.0	9.21	
106 2-Chlorotoluene	126	12.475	12.475	0.000	97	579216	10.0	9.07	
107 1,3,5-Trimethylbenzene	105	12.530	12.530	0.000	94	2096685	10.0	9.11	
108 4-Chlorotoluene	126	12.566	12.566	0.000	97	594830	10.0	9.15	
109 tert-Butylbenzene	134	12.774	12.774	0.000	93	457268	10.0	8.86	
110 Pentachloroethane	167	12.804	12.804	0.000	93	414978	10.0	9.54	
111 1,2,4-Trimethylbenzene	105	12.816	12.816	0.000	97	2136506	10.0	9.03	
112 sec-Butylbenzene	105	12.938	12.938	0.000	94	2721440	10.0	9.21	
113 1,3-Dichlorobenzene	146	13.036	13.036	0.000	98	1152523	10.0	9.20	
114 4-Isopropyltoluene	119	13.042	13.042	0.000	97	2331948	10.0	9.15	
* 115 1,4-Dichlorobenzene-d4	152	13.091	13.091	0.000	94	737000	10.0	10.0	
116 1,4-Dichlorobenzene	146	13.109	13.109	0.000	94	1141587	10.0	9.21	
117 1,2,3-Trimethylbenzene	120	13.115	13.115	0.000	98	962892	10.0	9.45	
118 Benzyl chloride	126	13.182	13.182	0.000	98	215217	10.0	9.86	
119 n-Butylbenzene	92	13.335	13.335	0.000	98	1146083	10.0	9.65	
120 1,2-Dichlorobenzene	146	13.365	13.365	0.000	99	1062408	10.0	9.29	
122 1,2-Dibromo-3-Chloropropane	155	13.908	13.908	0.000	87	71146	10.0	9.05	
123 1,3,5-Trichlorobenzene	180	14.036	14.036	0.000	98	824836	10.0	9.10	
124 1,2,4-Trichlorobenzene	180	14.456	14.456	0.000	94	687121	10.0	9.00	
125 Hexachlorobutadiene	225	14.542	14.542	0.000	95	302996	10.0	9.41	
126 Naphthalene	128	14.639	14.639	0.000	97	1356113	10.0	9.02	
127 1,2,3-Trichlorobenzene	180	14.779	14.779	0.000	96	572358	10.0	9.00	
144 2-ethoxy-2-methyl butane	1		0.000				ND	ND	
137 2-Methylnaphthalene	142		0.000				ND	ND	
135 p-Diethylbenzene	1		0.000				ND	ND	
134 Isopropyl alcohol	45		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MSV_RV4_826_00019	Amount Added: 20.00	Units: uL	
MSV_RV1_826_00017	Amount Added: 20.00	Units: uL	
MSV_RV4GAS826_00054	Amount Added: 20.00	Units: uL	
MSV_31_826ISS_00002	Amount Added: 5.00	Units: uL	Run Reagent

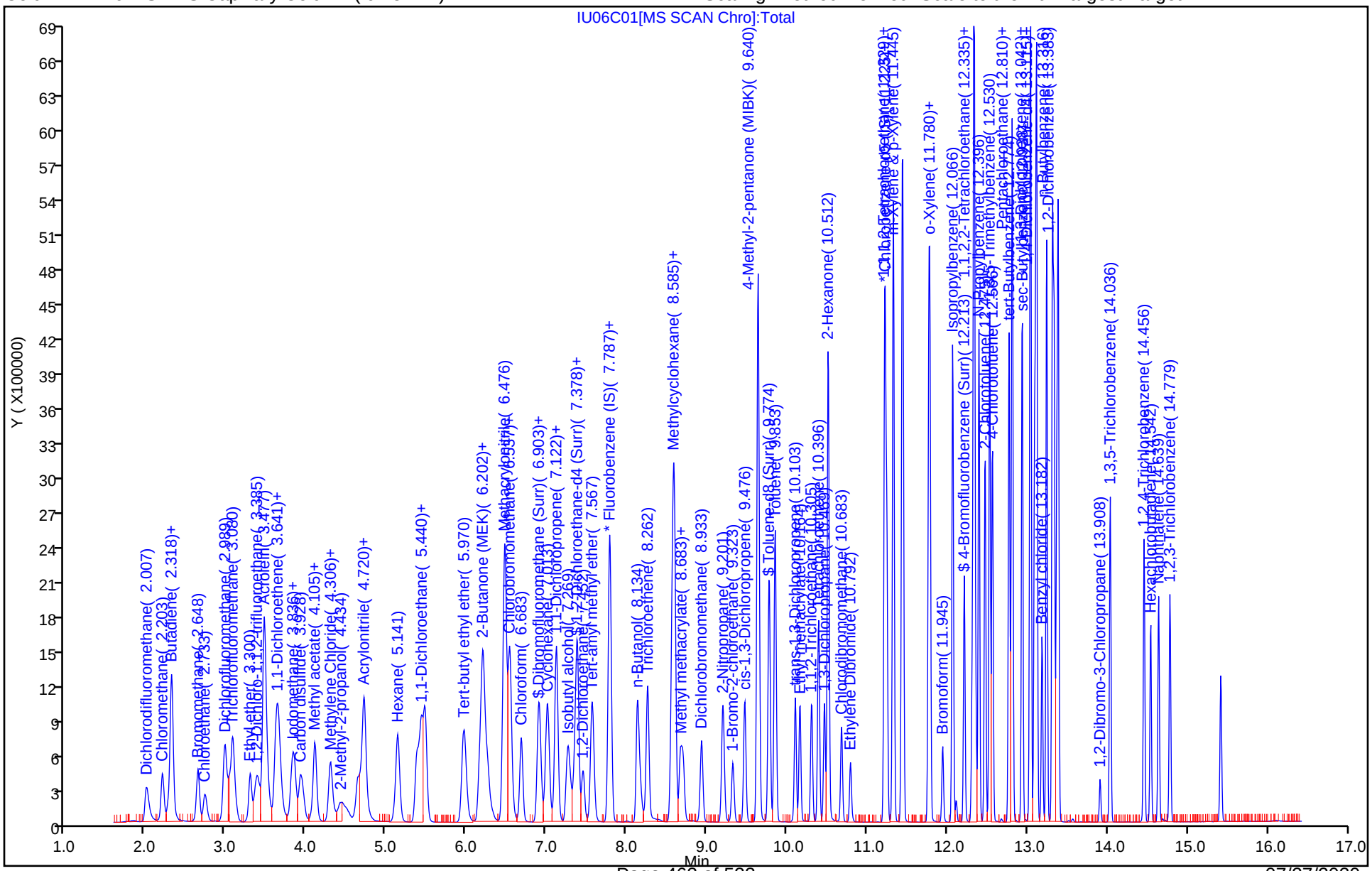
Report Date: 08-Jul-2020 10:54:28 Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU06C01.D

Injection Date:	08-Jul-2020 08:58:30	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

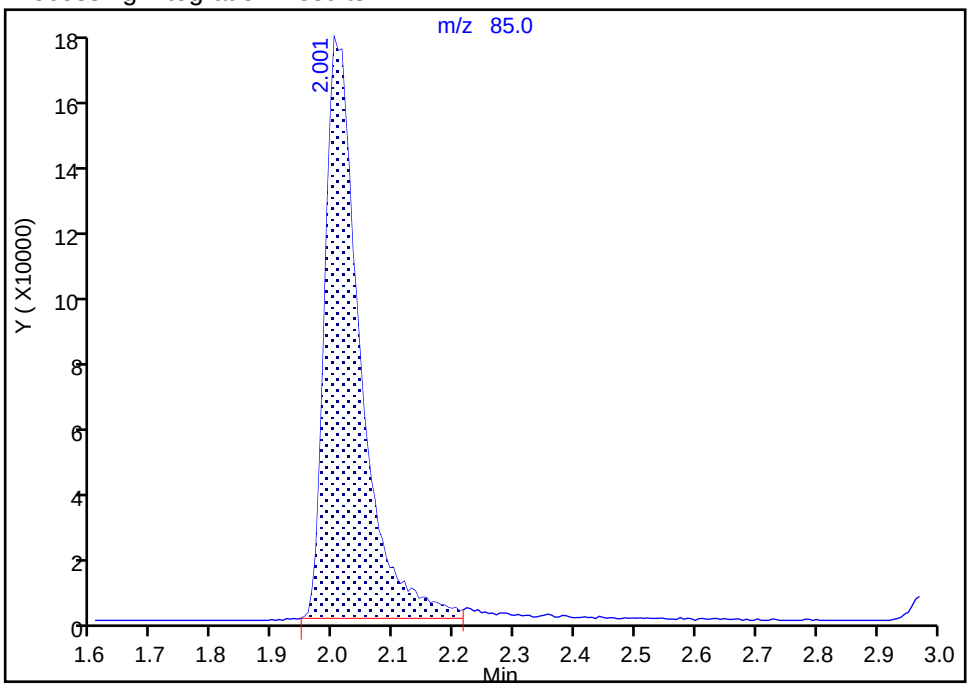
Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU06C01.D				
Injection Date:	08-Jul-2020 08:58:30	Instrument ID:	19930		
Lims ID:	CCVIS				
Client ID:					
Operator ID:	jkh09052	ALS Bottle#:	2	Worklist Smp#:	3
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

1 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

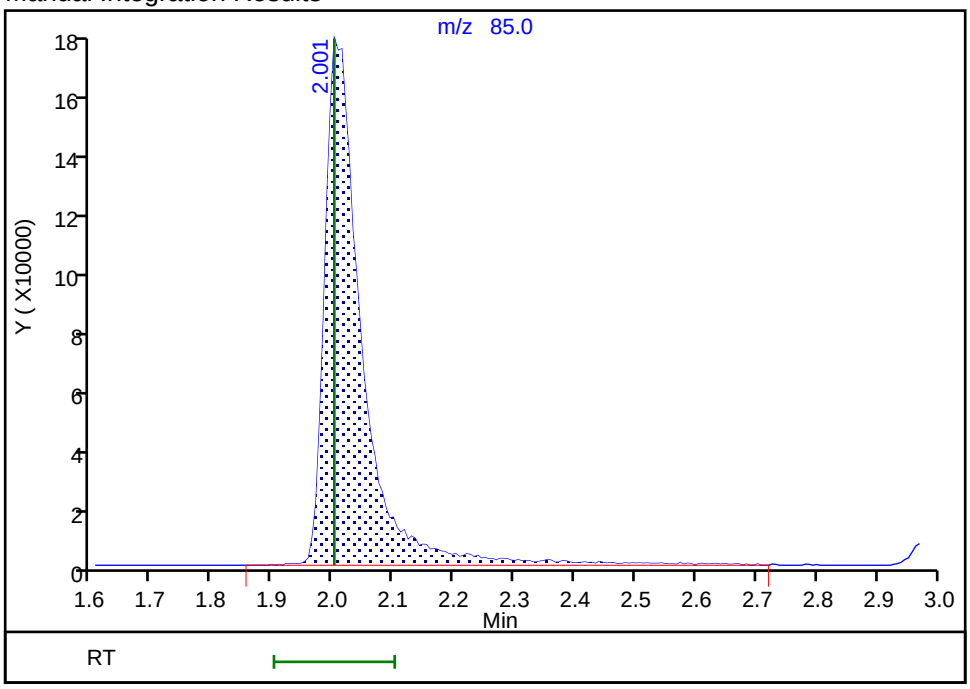
Processing Integration Results

RT: 2.00
Area: 691153
Amount: 7.235212
Amount Units: ug/l



Manual Integration Results

RT: 2.00
Area: 731564
Amount: 7.658247
Amount Units: ug/l



Reviewer: howej, 08-Jul-2020 09:22:10
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

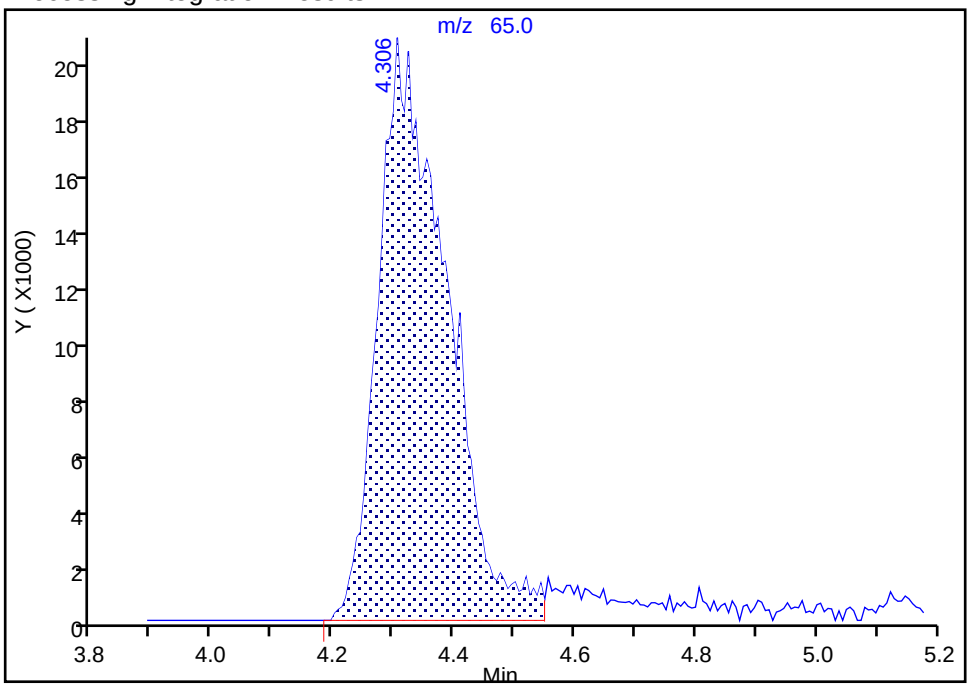
Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU06C01.D				
Injection Date:	08-Jul-2020 08:58:30	Instrument ID:	19930		
Lims ID:	CCVIS				
Client ID:					
Operator ID:	jkh09052	ALS Bottle#:	2	Worklist Smp#:	3
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	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

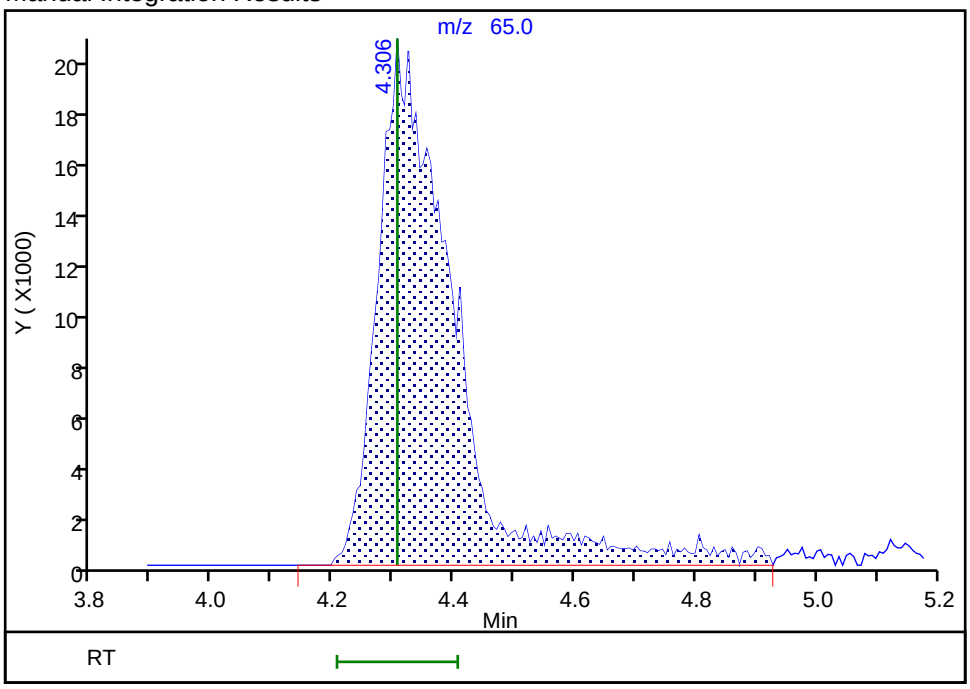
Processing Integration Results

RT: 4.31
Area: 162539
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 4.31
Area: 177957
Amount: 50.000000
Amount Units: ug/l



Reviewer: howej, 08-Jul-2020 09:22:27

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

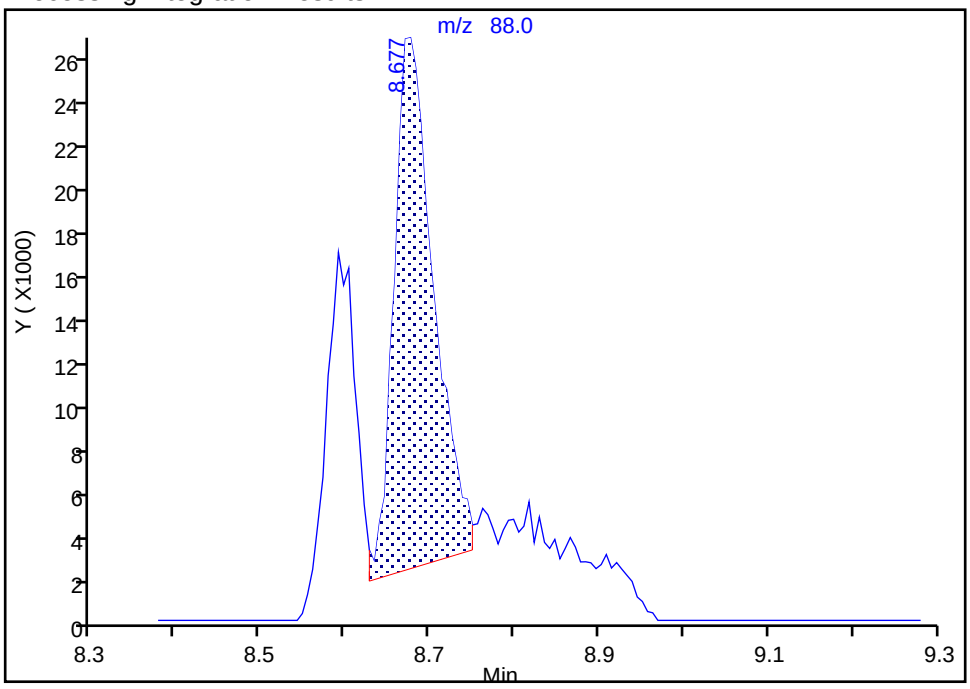
Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU06C01.D
Injection Date: 08-Jul-2020 08:58:30 Instrument ID: 19930
Lims ID: CCVIS
Client ID:
Operator ID: jkh09052 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: 8260 25ml HP31 Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

65 1,4-Dioxane, CAS: 123-91-1

Signal: 1

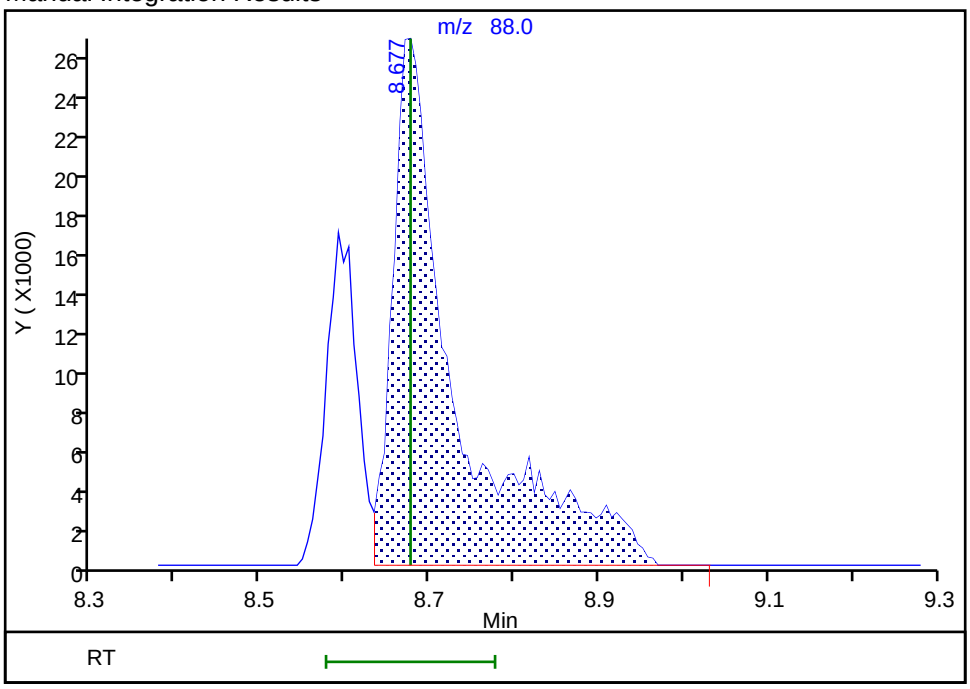
Processing Integration Results

RT: 8.68
Area: 78278
Amount: 311.1325
Amount Units: ug/l



Manual Integration Results

RT: 8.68
Area: 136315
Amount: 541.8128
Amount Units: ug/l



Reviewer: howej, 08-Jul-2020 09:22:48
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Lancaster, PA
Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\19930\20200317-1775.b\Im16T01.D				
Lims ID:	bfb				
Client ID:					
Sample Type:	BFB				
Inject. Date:	16-Mar-2020 12:37:30	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Sample Info:	JAN28 2020 BFB;50NGBFB;1;3;;;;;;				
Misc. Info.:	;I193434AA;;25;25;;;				
Operator ID:	JKH09052	Instrument ID:	19930		
Method:	\\chromfs\Lancaster\ChromData\19930\20200317-1775.b\8260 25ml HP31.m				
Limit Group:	MSV - 8260C_D				
Last Update:	28-Apr-2020 17:05:23	Calib Date:	16-Mar-2020 18:31:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1031				
First Level Reviewer: campbellme		Date:	17-Mar-2020 22:40:53		

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 145 BFB	95	5.215	5.215	0.000	89	486511	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

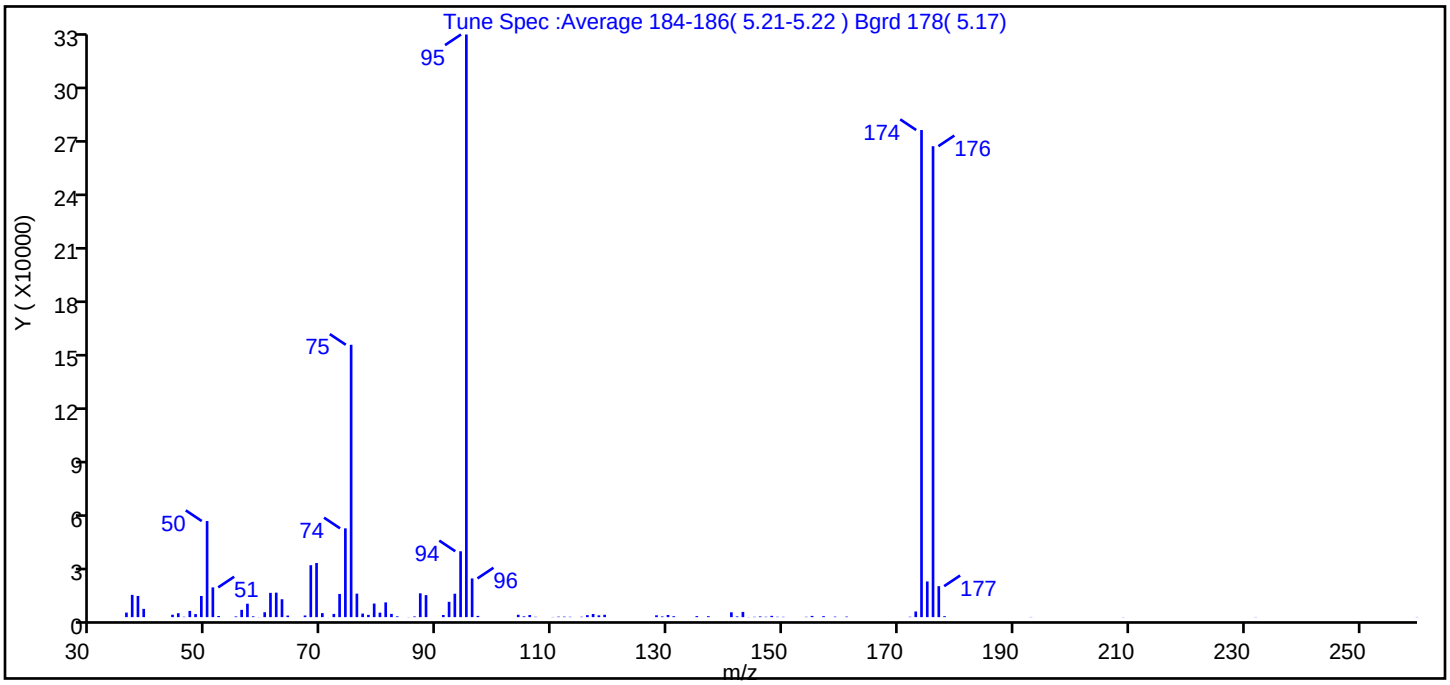
MSV_V_BFB_00002 Amount Added: 1.00 Units: uL

MS Tune Report

Lancaster, PA

Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\lm16T01.D
Injection Date: 16-Mar-2020 12:37:30 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	16.5
75	30 to 60% of m/z 95	46.7
96	5 to 9% of m/z 95	6.6
173	Less than 2% of m/z 174	1.0 (1.2)
174	50 to 120% of m/z 95	83.6
175	5 to 9% of m/z 174	6.1 (7.3)
176	Greater than 95% but less than 101% of m/z 174	80.8 (96.7)
177	5 to 9% of m/z 176	5.3 (6.6)

Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\Im16T01.D\8260 25ml HP31.rslt\spectra.d
Injection Date: 16-Mar-2020 12:37:30
Spectrum: Tune Spec :Average 184-186(5.21-5.22) Bgrd 178(5.17)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 97

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2578	68.00	29368	96.00	21888	145.00	198
37.00	12584	69.00	30616	97.00	715	146.00	401
38.00	11995	70.00	2282	104.00	1336	147.00	219
39.00	4674	71.00	37	105.00	449	148.00	737
40.00	24	72.00	1830	106.00	1221	149.00	207
44.00	1375	73.00	13115	107.00	200	150.00	191
45.00	2223	74.00	50208	110.00	101	154.00	199
46.00	205	75.00	153984	111.00	268	155.00	697
47.00	3535	76.00	13289	112.00	281	157.00	550
48.00	1729	77.00	2010	113.00	205	159.00	302
49.00	11966	78.00	1275	115.00	231	161.00	316
50.00	54328	79.00	7677	116.00	1136	172.00	226
51.00	16816	80.00	2535	117.00	1783	173.00	3197
52.00	655	81.00	8343	118.00	1026	174.00	275392
55.00	403	82.00	1843	119.00	1336	175.00	20176
56.00	4122	83.00	453	128.00	1039	176.00	266240
57.00	7603	85.00	84	129.00	401	177.00	17512
58.00	445	86.00	386	130.00	1235	178.00	538
59.00	93	87.00	13476	131.00	526	193.00	107
60.00	2772	88.00	12459	135.00	598	209.00	92
61.00	13729	91.00	1231	137.00	535	232.00	98
62.00	13850	92.00	8669	141.00	2741	260.00	105
63.00	10129	93.00	13252	142.00	411		
64.00	897	94.00	37248	143.00	2964		
67.00	936	95.00	329408	144.00	90		

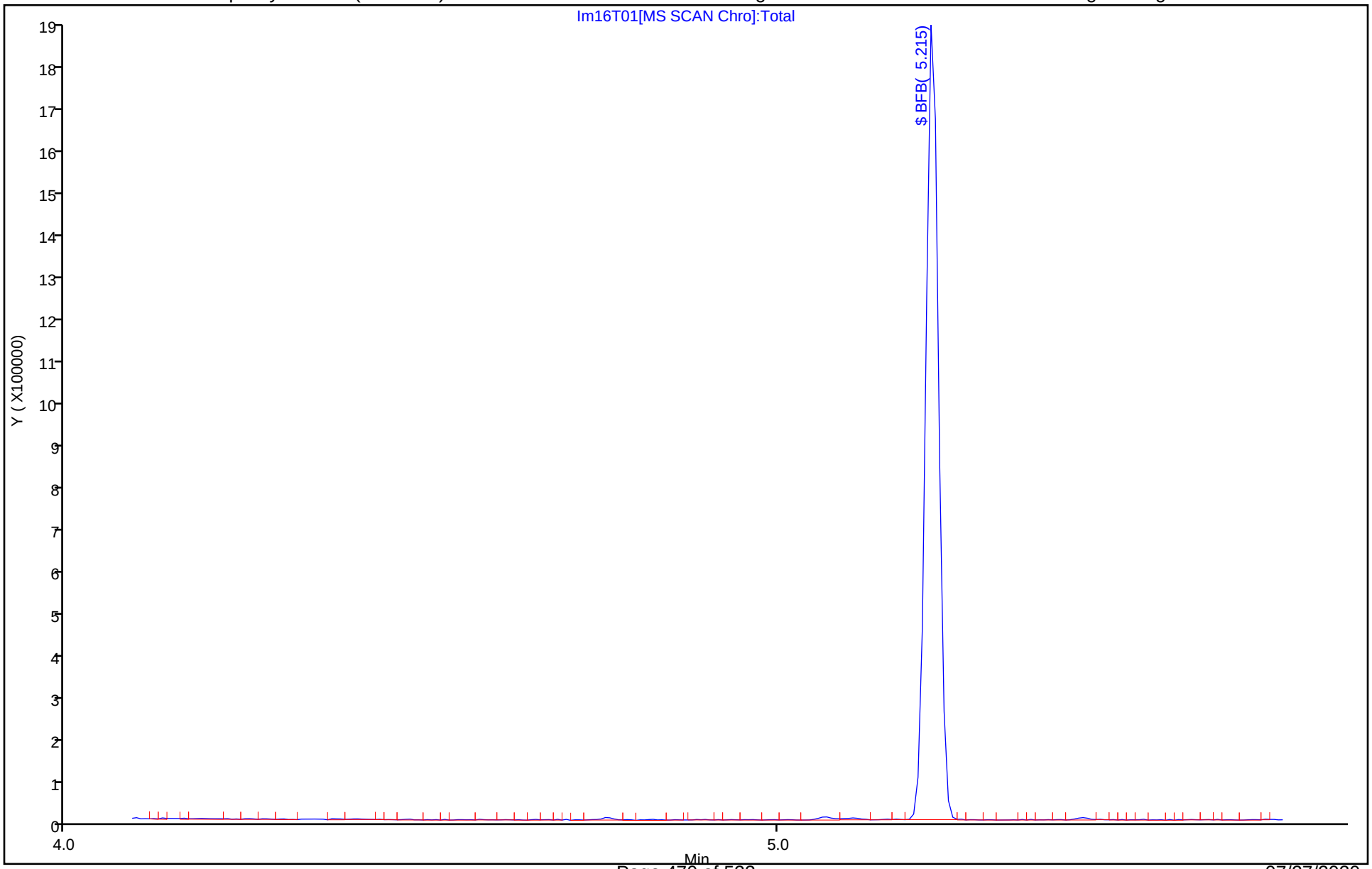
Report Date: 28-Apr-2020 17:05:23 Chrom Revision: 2.3 27-Apr-2020 15:18:36

Lancaster, PA

Data File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\Im16T01.D

Injection Date:	16-Mar-2020 12:37:30	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



Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\19930\20200424-2093.b\IM18T01.D				
Lims ID:	bfb				
Client ID:					
Sample Type:	BFB				
Inject. Date:	18-Mar-2020 09:11:30	ALS Bottle#:	2	Worklist Smp#:	20
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Sample Info:	BFB JAN28-20;50NGBFB;1;3;;;;;;				
Misc. Info.:	;;;25;25;;;				
Operator ID:	DVV10203	Instrument ID:	19930		
Method:	\\chromfs\Lancaster\ChromData\19930\20200424-2093.b\8260 25ml HP31.m				
Limit Group:	MSV - 8260C_D				
Last Update:	19-May-2020 23:44:47	Calib Date:	16-Mar-2020 18:31:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1037				
First Level Reviewer: campbellme		Date:	24-Apr-2020 16:49:14		

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 145 BFB	95	5.215	5.215	0.000	88	294667	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

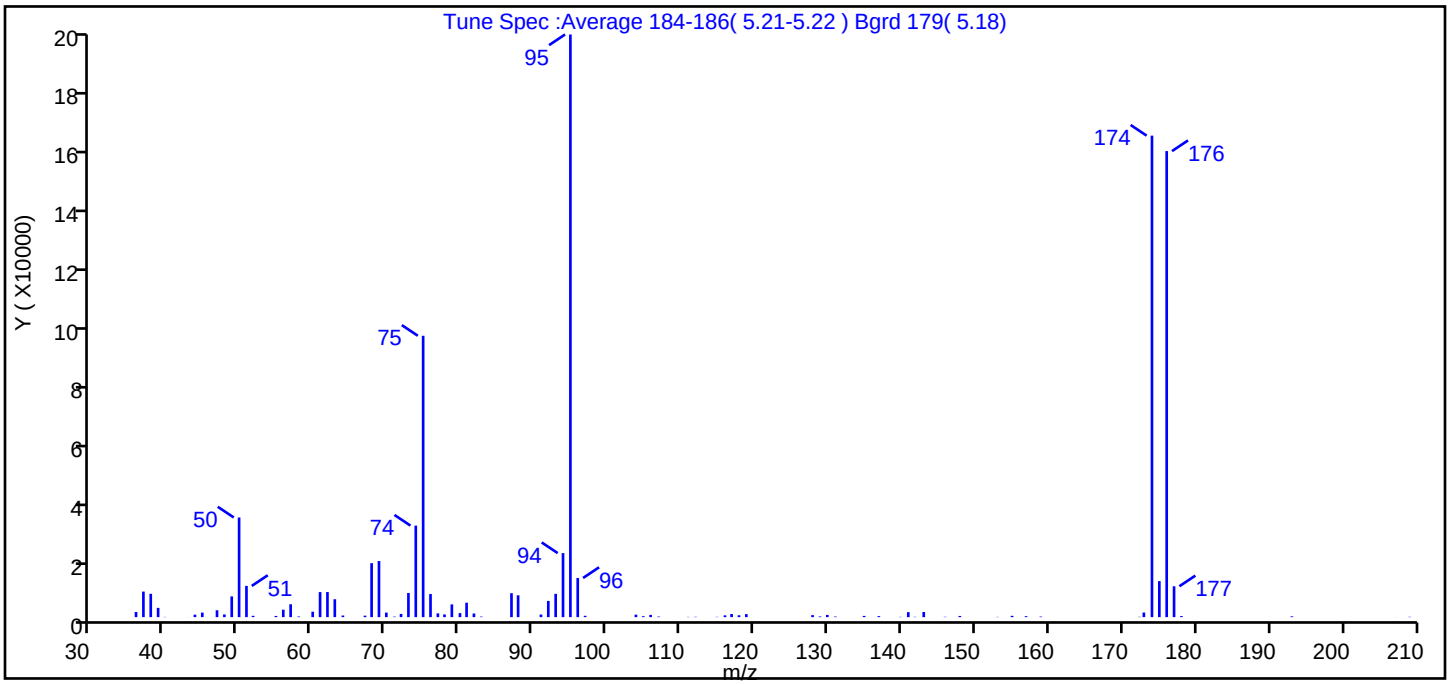
MSV_V_BFB_00002 Amount Added: 1.00 Units: uL

MS Tune Report

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200424-2093.b\IM18T01.D
Injection Date: 18-Mar-2020 09:11:30 Instrument ID: 19930
Lims ID: bfb
Client ID:
Operator ID: DVV10203 ALS Bottle#: 2 Worklist Smp#: 20
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	17.1
75	30 to 60% of m/z 95	48.3
96	5 to 9% of m/z 95	6.7
173	Less than 2% of m/z 174	0.8 (1.0)
174	50 to 120% of m/z 95	82.6
175	5 to 9% of m/z 174	6.2 (7.5)
176	Greater than 95% but less than 101% of m/z 174	80.0 (96.8)
177	5 to 9% of m/z 176	5.3 (6.6)

Data File: \\chromfs\Lancaster\ChromData\19930\20200424-2093.b\IM18T01.D\8260 25ml HP31.rslt\spectra.d
Injection Date: 18-Mar-2020 09:11:30
Spectrum: Tune Spec :Average 184-186(5.21-5.22) Bgrd 179(5.18)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 86

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1730	64.00	547	93.00	7815	140.00	87
37.00	8590	67.00	498	94.00	21512	141.00	1675
38.00	7842	68.00	18136	95.00	195712	142.00	107
39.00	3111	69.00	18848	96.00	13157	143.00	1731
40.00	80	70.00	1527	97.00	456	146.00	114
43.00	17	71.00	174	104.00	828	148.00	402
44.00	833	72.00	1081	105.00	314	153.00	89
45.00	1521	73.00	8123	106.00	754	155.00	441
47.00	2309	74.00	30744	107.00	189	157.00	324
48.00	901	75.00	94512	111.00	86	159.00	192
49.00	6967	76.00	7761	112.00	116	172.00	115
50.00	33480	77.00	1268	115.00	96	173.00	1554
51.00	10494	78.00	908	116.00	606	174.00	161728
52.00	447	79.00	4289	117.00	1060	175.00	12097
55.00	405	80.00	1358	118.00	633	176.00	156544
56.00	2499	81.00	4848	119.00	1010	177.00	10372
57.00	4334	82.00	1225	128.00	684	178.00	352
58.00	222	83.00	180	129.00	227	193.00	269
60.00	1830	87.00	8044	130.00	743	207.00	19
61.00	8417	88.00	7332	131.00	199	209.00	112
62.00	8437	91.00	877	135.00	419		
63.00	6018	92.00	5453	137.00	341		

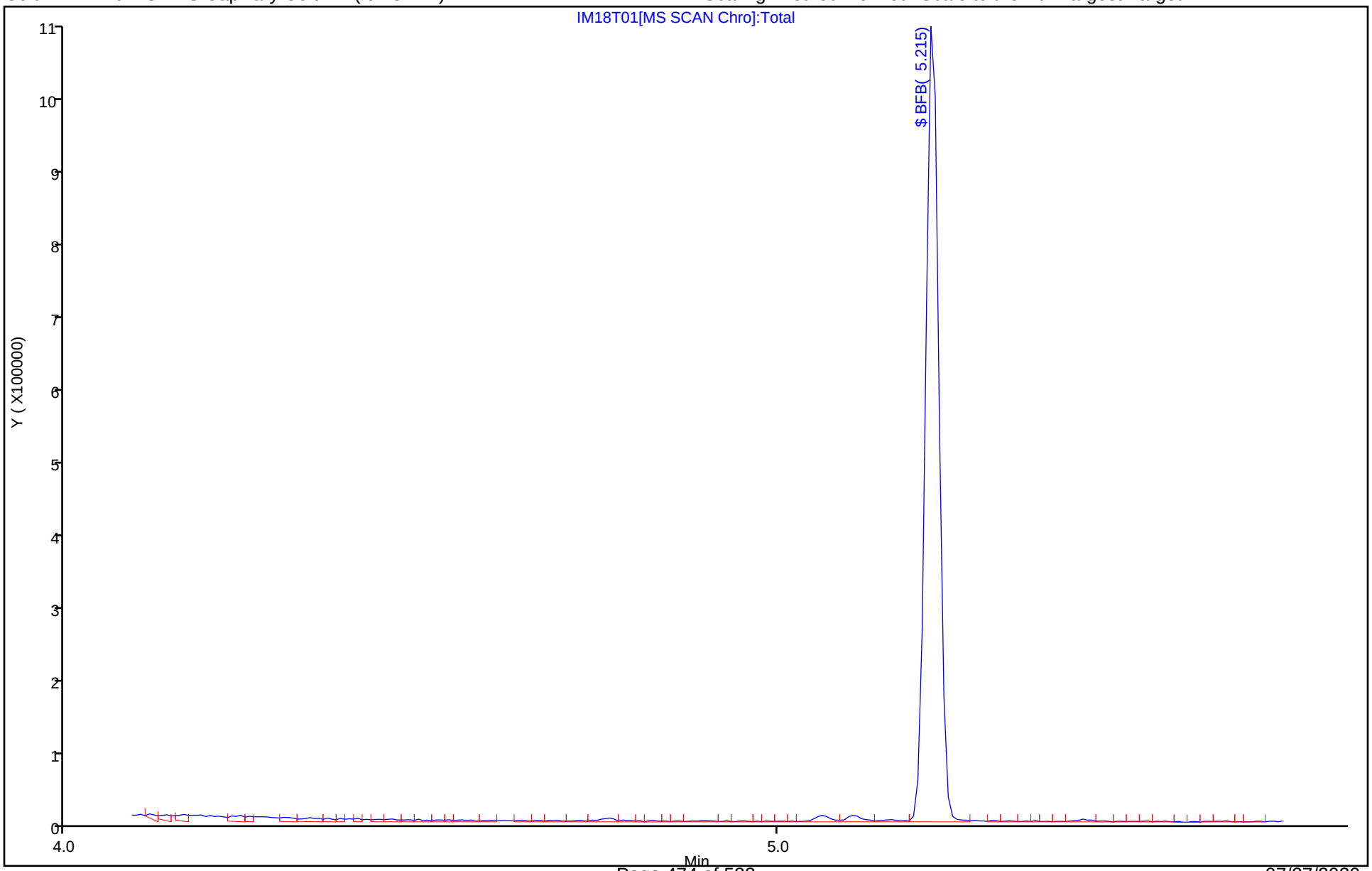
Report Date: 19-May-2020 23:44:47 Chrom Revision: 2.3 19-May-2020 20:15:52

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200424-2093.b\IM18T01.D

Injection Date:	18-Mar-2020 09:11:30	Instrument ID:	19930	Operator ID:	DVV10203
Lims ID:	bfb			Worklist Smp#:	20
Client ID:					
Injection Vol:	1.0 uL	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



Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\Iu08T03.D				
Lims ID:	bfb				
Client ID:					
Sample Type:	BFB				
Inject. Date:	08-Jul-2020 08:21:30	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Sample Info:	bfb				
Misc. Info.:	410-0005039-001				
Operator ID:	jkh09052	Instrument ID:	19930		
Method:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\8260 25ml HP31.m				
Limit Group:	MSV - 8260C_D				
Last Update:	08-Jul-2020 10:54:24	Calib Date:	16-Mar-2020 18:31:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1027				

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 145 BFB	95	5.215	5.215	0.000	92	419277	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

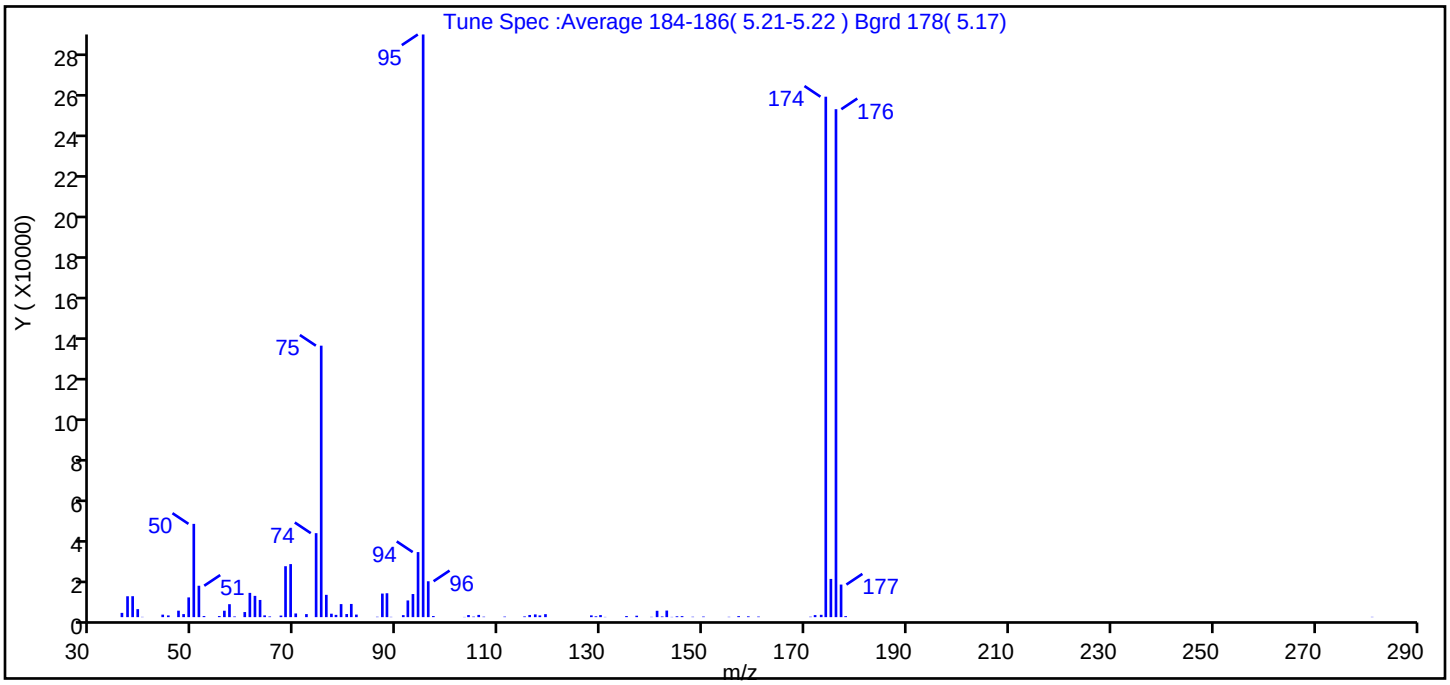
MSV_V_BFB_00002 Amount Added: 1.00 Units: uL

MS Tune Report

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\lu08T03.D
Injection Date: 08-Jul-2020 08:21:30 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	16.0
75	30 to 60% of m/z 95	46.6
96	5 to 9% of m/z 95	6.2
173	Less than 2% of m/z 174	0.4 (0.4)
174	50 to 120% of m/z 95	89.3
175	5 to 9% of m/z 174	6.6 (7.3)
176	Greater than 95% but less than 101% of m/z 174	87.2 (97.6)
177	5 to 9% of m/z 176	5.6 (6.4)

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\Iu08T03.D\8260 25ml HP31.rslt\spectra.d
Injection Date: 08-Jul-2020 08:21:30
Spectrum: Tune Spec :Average 184-186(5.21-5.22) Bgrd 178(5.17)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 87

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2057	65.00	333	94.00	31312	141.00	3063
37.00	10057	67.00	757	95.00	280448	142.00	322
38.00	10085	68.00	24512	96.00	17272	143.00	3167
39.00	3851	69.00	25536	97.00	520	144.00	119
40.00	126	70.00	1770	103.00	98	145.00	425
44.00	1203	72.00	1469	104.00	1006	146.00	491
45.00	827	74.00	40424	105.00	248	148.00	186
47.00	3115	75.00	130664	106.00	1075	150.00	280
48.00	1465	76.00	10736	107.00	220	155.00	154
49.00	9502	77.00	1656	111.00	258	157.00	483
50.00	44896	78.00	1096	115.00	347	159.00	389
51.00	15118	79.00	6278	116.00	1043	161.00	274
52.00	519	80.00	1491	117.00	1319	171.00	205
55.00	513	81.00	6353	118.00	832	172.00	983
56.00	3088	82.00	1232	119.00	1434	173.00	1118
57.00	6240	86.00	182	128.00	850	174.00	250496
58.00	323	87.00	11352	129.00	407	175.00	18400
60.00	2455	88.00	11498	130.00	994	176.00	244480
61.00	11681	89.00	135	131.00	106	177.00	15681
62.00	10237	91.00	960	135.00	522	178.00	475
63.00	8271	92.00	8043	137.00	684	281.00	132
64.00	852	93.00	11119	140.00	152		

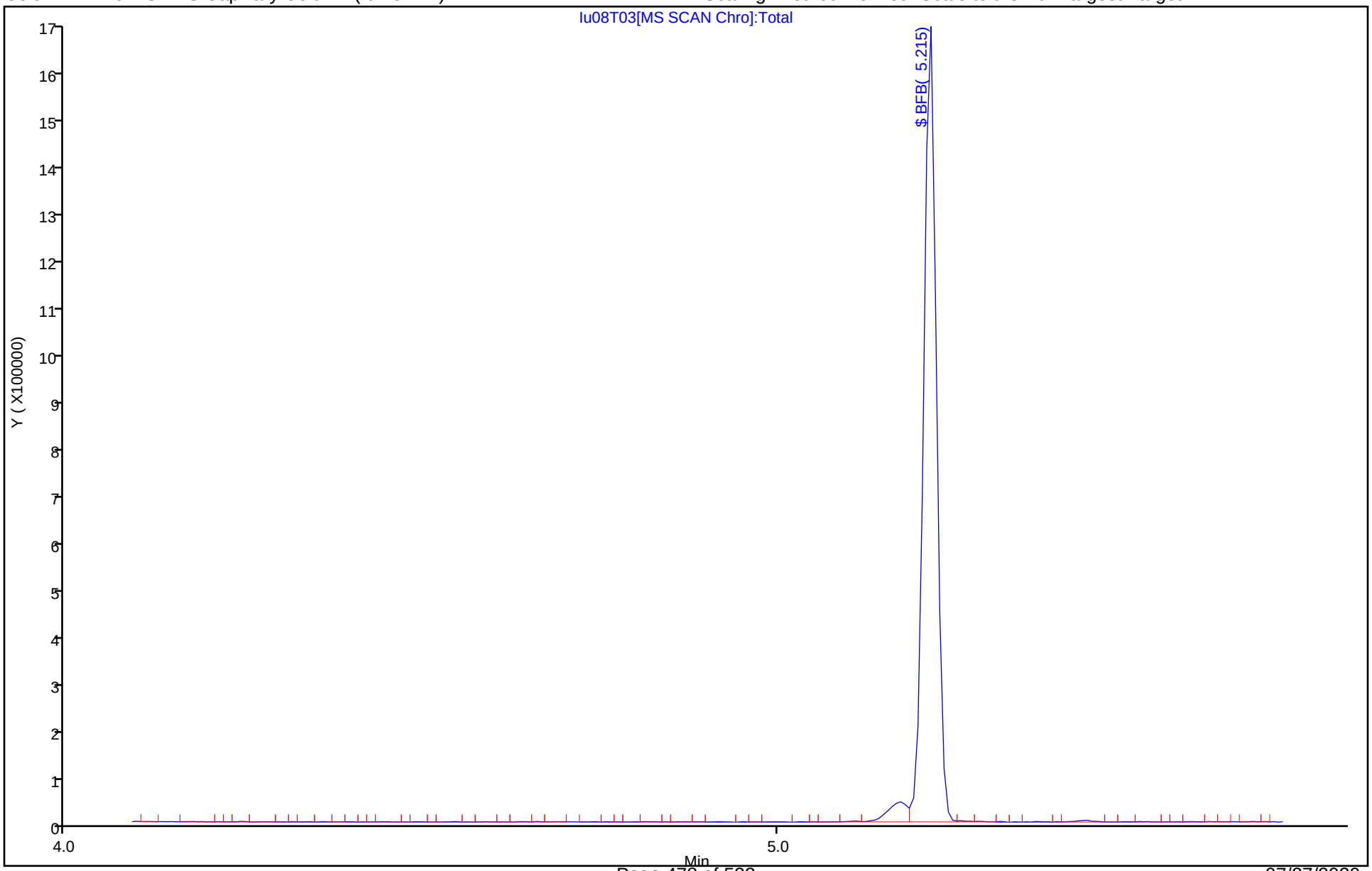
Report Date: 08-Jul-2020 10:54:24 Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\Iu08T03.D

Injection Date:	08-Jul-2020 08:21:30	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.: 410-5692-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 410-20265/6

Matrix: Water Lab File ID: iu06b01.D

Analysis Method: 8260D Date Collected:

Sample wt/vol: 25(mL) Date Analyzed: 07/08/2020 10:01

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.: 20265 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		0.50	0.060
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.50	0.070
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
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
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
74-97-5	Bromochloromethane	ND		0.50	0.050
124-48-1	Dibromochloromethane	ND		0.50	0.070
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
75-27-4	Bromodichloromethane	ND		0.50	0.050
100-41-4	Ethylbenzene	ND		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	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.: 410-5692-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 410-20265/6

Matrix: Water Lab File ID: iu06b01.D

Analysis Method: 8260D Date Collected:

Sample wt/vol: 25(mL) Date Analyzed: 07/08/2020 10:01

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.: 20265 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)	105		80-120
460-00-4	4-Bromofluorobenzene (Surr)	97		80-120
1868-53-7	Dibromofluoromethane (Surr)	100		80-120
2037-26-5	Toluene-d8 (Surr)	100		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\iu06b01.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 08-Jul-2020 10:01:30 ALS Bottle#: 7 Worklist Smp#: 6
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: MB
Misc. Info.: 410-0005039-006
Operator ID: jkh09052 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 08-Jul-2020 10:54:26 Calib Date: 16-Mar-2020 18:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1027

First Level Reviewer: howej Date: 08-Jul-2020 10:53:42

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85		2.001					ND	
2 Chlorodifluoromethane	51		2.014					ND	
3 Dimethyl ether	45		2.068					ND	
4 Chloromethane	50		2.203					ND	
6 Butadiene	39		2.318					ND	
5 Vinyl chloride	62		2.324					ND	
7 Bromomethane	94		2.648					ND	
8 Chloroethane	64		2.739					ND	
9 Dichlorofluoromethane	67		2.983					ND	
10 Trichlorofluoromethane	101		3.038					ND	
11 Ethyl ether	59		3.300					ND	
12 1,2-Dichloro-1,1,2-trifluoroetha	67		3.385					ND	
13 Acrolein	56		3.477					ND	
14 1,1-Dichloroethene	96		3.623					ND	
15 Acetone	43		3.647					ND	
16 112TCTFE	101		3.653					ND	
17 Iodomethane	142		3.824					ND	
18 Ethyl bromide	108		3.855					ND	
19 Carbon disulfide	76		3.934					ND	
20 Acetonitrile	41		4.031					ND	
21 Methyl acetate	43		4.074					ND	
22 3-Chloro-1-propene	41		4.111					ND	
23 Methylene Chloride	84		4.306					ND	
* 24 t-Butyl alcohol-d10 (IS)	65	4.306	4.306	0.000	0	168171	50.0	50.0	M
25 2-Methyl-2-propanol	59		4.452					ND	
26 Acrylonitrile	53		4.641					ND	
27 Methyl tert-butyl ether	73		4.708					ND	
28 trans-1,2-Dichloroethene	96		4.726					ND	
29 Hexane	57		5.141					ND	
30 Vinyl acetate	43		5.373					ND	
31 1,1-Dichloroethane	63		5.379					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		5.434					ND	
	33 2-Chloro-1,3-butadiene	53		5.488					ND	
	34 Tert-butyl ethyl ether	59		5.970					ND	
S	35 1,2-Dichloroethene, Total	100		6.155					ND	
	36 2-Butanone (MEK)	43		6.177					ND	
	37 cis-1,2-Dichloroethene	96		6.202					ND	
	38 2,2-Dichloropropane	77		6.226					ND	
	39 Ethyl acetate	43		6.238					ND	
	40 Propionitrile	54		6.263					ND	
	41 Methyl acrylate	55		6.305					ND	
	42 Methacrylonitrile	67		6.476					ND	
	43 Chlorobromomethane	128		6.537					ND	
	44 Tetrahydrofuran	71		6.549					ND	
	45 Chloroform	83		6.683					ND	
$	46 Dibromofluoromethane (Surr)	113	6.891	6.897	-0.006	93	417967	10.0		10.0
	47 1,1,1-Trichloroethane	97		6.909					ND	
	48 Cyclohexane	56		7.006					ND	
	49 1-Chlorobutane	56		7.067					ND	
	51 1,1-Dichloropropene	75		7.122					ND	
	50 Carbon tetrachloride	117		7.128					ND	
	52 Isobutyl alcohol	41		7.269					ND	
$	53 1,2-Dichloroethane-d4 (Surr)	102	7.354	7.354	0.000	0	88805	10.0		10.5
	54 Benzene	78		7.384					ND	
	56 1,2-Dichloroethane	62		7.452					ND	
	55 Isopropyl acetate	43		7.464					ND	
	57 Tert-amyl methyl ether	73		7.567					ND	
*	58 Fluorobenzene (IS)	96	7.781	7.787	-0.006	99	1724434	10.0		10.0
	59 n-Heptane	43		7.787					ND	
	60 n-Butanol	56		8.134					ND	
	61 Trichloroethene	95		8.262					ND	
	62 Methylcyclohexane	83		8.567					ND	
	63 1,2-Dichloropropane	63		8.592					ND	
	64 Methyl methacrylate	69		8.671					ND	
	65 1,4-Dioxane	88		8.677					ND	
	66 Dibromomethane	93		8.701					ND	
	67 n-Propyl acetate	43		8.750					ND	
	68 Dichlorobromomethane	83		8.933					ND	
	69 2-Nitropropane	41		9.201					ND	
	70 Chloroacetonitrile	75		9.274					ND	
	71 2-Chloroethyl vinyl ether	63		9.293					ND	
	72 1-Bromo-2-chloroethane	63		9.323					ND	
	73 cis-1,3-Dichloropropene	75		9.476					ND	
	74 4-Methyl-2-pentanone (MIBK)	43		9.640					ND	
$	75 Toluene-d8 (Surr)	98	9.774	9.774	0.000	93	1646501	10.0		10.0
	76 Toluene	92		9.853					ND	
S	77 1,3-Dichloropropene, Total	100		10.060					ND	
	78 trans-1,3-Dichloropropene	75		10.103					ND	
	79 Ethyl methacrylate	69		10.164					ND	
	80 1,1,2-Trichloroethane	97		10.305					ND	
	81 Tetrachloroethene	166		10.396					ND	
	82 1,3-Dichloropropane	76		10.469					ND	
	83 2-Hexanone	43		10.512					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		10.640				ND		
	85 Chlorodibromomethane	129		10.683				ND		
	86 Ethylene Dibromide	107		10.792				ND		
*	87 Chlorobenzene-d5 (IS)	117	11.219	11.219	0.000	85	1294824	10.0	10.0	
	88 1-Chlorohexane	91		11.225				ND		
	90 Chlorobenzene	112		11.243				ND		
S	89 Xylenes, Total	106		11.245				ND		
	91 1,1,1,2-Tetrachloroethane	131		11.323				ND		
	92 Ethylbenzene	91		11.329				ND		
	93 m-Xylene & p-Xylene	106		11.445				ND		
	94 o-Xylene	106		11.768				ND		
	95 Styrene	104		11.786				ND		
	96 Bromoform	173		11.945				ND		
	97 Isopropylbenzene	105		12.066				ND		
	98 cis-1,4-Dichloro-2-butene	88		12.115				ND		U
	99 Cyclohexanone	55		12.152				ND		
$	100 4-Bromofluorobenzene (Surr)	95	12.213	12.213	0.000	93	594535	10.0	9.68	
	101 1,1,2,2-Tetrachloroethane	83		12.310				ND		
	102 Bromobenzene	156		12.329				ND		
	103 trans-1,4-Dichloro-2-butene	53		12.335				ND		
	104 1,2,3-Trichloropropane	110		12.359				ND		
	105 N-Propylbenzene	91		12.396				ND		
	106 2-Chlorotoluene	126		12.475				ND		
	107 1,3,5-Trimethylbenzene	105		12.530				ND		
	108 4-Chlorotoluene	126		12.566				ND		
	109 tert-Butylbenzene	134		12.774				ND		
	110 Pentachloroethane	167		12.804				ND		
	111 1,2,4-Trimethylbenzene	105		12.816				ND		
	112 sec-Butylbenzene	105		12.938				ND		
	113 1,3-Dichlorobenzene	146		13.036				ND		
	114 4-Isopropyltoluene	119		13.042				ND		
*	115 1,4-Dichlorobenzene-d4	152	13.091	13.091	0.000	95	701508	10.0	10.0	
	116 1,4-Dichlorobenzene	146		13.109				ND		
	117 1,2,3-Trimethylbenzene	120		13.115				ND		
	118 Benzyl chloride	126		13.182				ND		
	119 n-Butylbenzene	92		13.335				ND		
	120 1,2-Dichlorobenzene	146		13.365				ND		
	121 Hexachloroethane	117		13.572				ND		
	122 1,2-Dibromo-3-Chloropropane	155		13.908				ND		
	123 1,3,5-Trichlorobenzene	180		14.036				ND		
	124 1,2,4-Trichlorobenzene	180		14.456				ND		
	125 Hexachlorobutadiene	225		14.542				ND		
	126 Naphthalene	128		14.639				ND		
	127 1,2,3-Trichlorobenzene	180		14.779				ND		U
	128 Dodecane	57		0.000				ND		
	156 2,3-Dibromopropene TIC	1		0.000				ND		
	155 Ethylene oxide TIC	1		0.000				ND		
	154 2-Bromo-3-chloropropene TIC	1		0.000				ND		
	153 Epichlorohydrin TIC	1		0.000				ND		
	152 Vinyl bromide TIC	1		0.000				ND		
	151 Chloroacetaldehyde TIC	1		0.000				ND		
	150 Epibromohydrin TIC	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
149 2-Chloroethanol TIC	1		0.000					ND	
148 Monochloroacetic acid TIC	1		0.000					ND	
147 2-Bromoethanol TIC	1		0.000					ND	
146 2,3-Dibromo-1-propanol TIC	1		0.000					ND	
144 2-ethoxy-2-methyl butane	1		0.000					ND	
143 n-Decane	57		0.000					ND	
142 2-Bromo-1-chloropropane	1		0.000					ND	
157 3-Chloro-1,2-propanediol TIC	1		0.000					ND	
139 1-Bromo-3-Chloropropane	1		0.000					ND	
138 1,1-Dichloro-1-fluoroethane	1		0.000					ND	
137 2-Methylnaphthalene	142		0.000					ND	
136 2-Chloro-1,1,1-Trifluoroethane	1		0.000					ND	
135 p-Diethylbenzene	1		0.000					ND	
134 Isopropyl alcohol	45		0.000					ND	
133 t-Amyl alcohol	1		0.000					ND	
132 Methylal	1		0.000					ND	
131 tert-Butyl Formate	1		0.000					ND	
130 Chlorotrifluoroethene	1		0.000					ND	
129 Propene oxide	1		0.000					ND	
141 1-Chloropropane	1		0.000					ND	
140 Ethanol	45		3.288					ND	

QC Flag Legend

Review Flags

M - Manually Integrated

U - Marked Undetected

Reagents:

MSV_31_826ISS_00002 Amount Added: 5.00 Units: uL Run Reagent

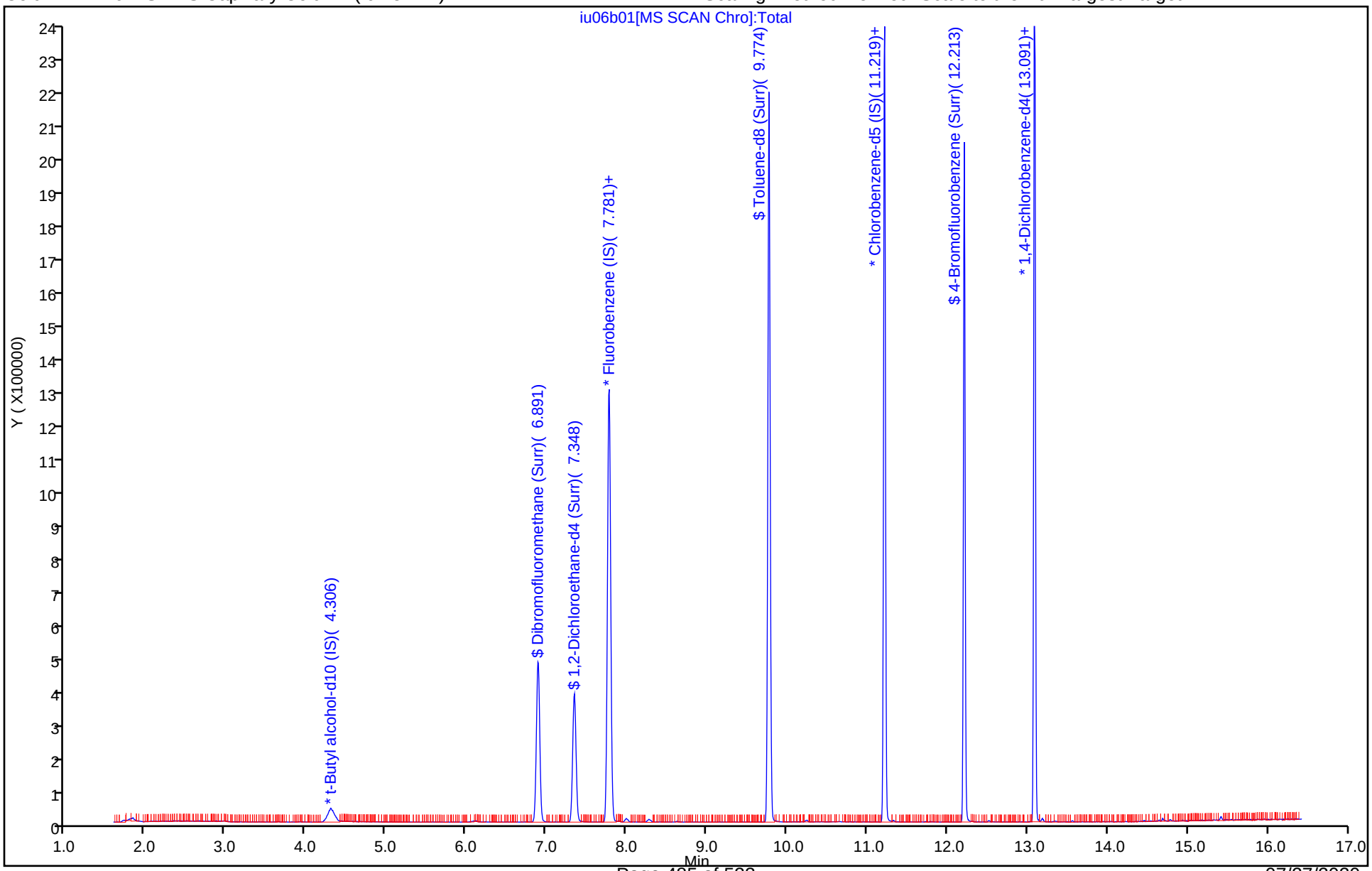
Report Date: 08-Jul-2020 10:54:46 Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\iu06b01.D

Injection Date:	08-Jul-2020 10:01:30	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#:	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

Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\iu06b01.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 08-Jul-2020 10:01:30 ALS Bottle#: 7 Worklist Smp#: 6
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: MB
Misc. Info.: 410-0005039-006
Operator ID: jkh09052 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 08-Jul-2020 10:54:26 Calib Date: 16-Mar-2020 18:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1027

First Level Reviewer: howej Date: 08-Jul-2020 10:53:42

Compound	Amount Added	Amount Recovered	% Rec.
$ 46 Dibromofluoromethane (Surr)	10.0	10.0	100.42
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.5	105.30
$ 75 Toluene-d8 (Surr)	10.0	10.0	100.00
$ 100 4-Bromofluorobenzene (Surr)	10.0	9.68	96.77

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

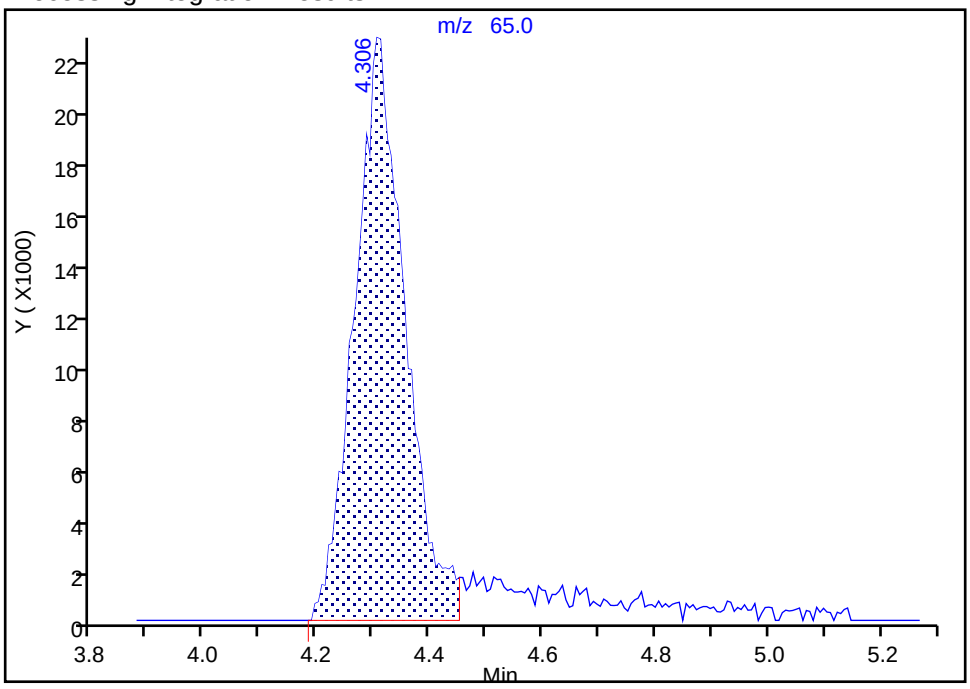
Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\iu06b01.D				
Injection Date:	08-Jul-2020 10:01:30	Instrument ID:	19930		
Lims ID:	MB				
Client ID:					
Operator ID:	jkh09052	ALS Bottle#:	7	Worklist Smp#:	6
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	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

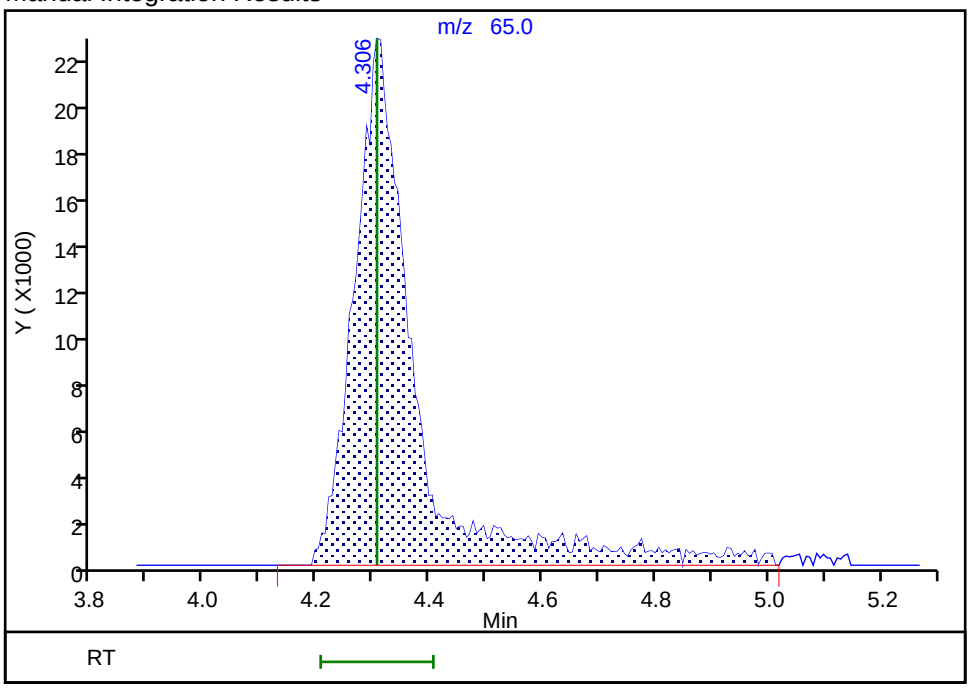
Processing Integration Results

RT: 4.31
Area: 141006
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 4.31
Area: 168171
Amount: 50.000000
Amount Units: ug/l



Reviewer: howej, 08-Jul-2020 10:29:28
Audit Action: Manually Integrated Audit Reason: Other

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-5692-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 410-20265/4

Matrix: Water Lab File ID: IU06L01.D

Analysis Method: 8260D Date Collected:

Sample wt/vol: 25(mL) Date Analyzed: 07/08/2020 09:19

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: R-624SilMS 30m ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 20265 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	4.62		0.50	0.060
630-20-6	1,1,1,2-Tetrachloroethane	4.83		0.50	0.070
79-34-5	1,1,2,2-Tetrachloroethane	5.25		0.50	0.070
79-00-5	1,1,2-Trichloroethane	5.23		0.50	0.060
75-34-3	1,1-Dichloroethane	5.08		0.50	0.070
75-35-4	1,1-Dichloroethene	4.84		0.50	0.060
107-06-2	1,2-Dichloroethane	5.05		0.50	0.050
78-87-5	1,2-Dichloropropane	5.40		0.50	0.060
78-93-3	2-Butanone (MEK)	41.0		5.0	0.60
591-78-6	2-Hexanone	28.3		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	27.0		5.0	0.70
67-64-1	Acetone	38.1		5.0	0.90
107-13-1	Acrylonitrile	27.1		5.0	0.40
71-43-2	Benzene	5.03		0.50	0.050
75-25-2	Bromoform	5.03		1.0	0.30
74-83-9	Bromomethane	4.17		0.50	0.070
75-15-0	Carbon disulfide	4.78		1.0	0.060
56-23-5	Carbon tetrachloride	4.77		0.50	0.070
108-90-7	Chlorobenzene	5.11		0.50	0.060
74-97-5	Bromochloromethane	4.84		0.50	0.050
124-48-1	Dibromochloromethane	4.99		0.50	0.070
75-00-3	Chloroethane	4.34		0.50	0.070
67-66-3	Chloroform	5.07		0.50	0.090
74-87-3	Chloromethane	4.11		0.50	0.060
156-59-2	cis-1,2-Dichloroethene	5.27		0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	5.03		0.50	0.050
75-27-4	Bromodichloromethane	5.00		0.50	0.050
100-41-4	Ethylbenzene	5.04		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	5.26		0.50	0.060
1634-04-4	Methyl tert-butyl ether	4.84		0.50	0.050
75-09-2	Methylene Chloride	5.18		0.50	0.070
100-42-5	Styrene	5.09		0.50	0.050
127-18-4	Tetrachloroethene	5.07		0.50	0.060
108-88-3	Toluene	5.05		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	4.94		0.50	0.060
10061-02-6	trans-1,3-Dichloropropene	4.79		0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-5692-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 410-20265/4

Matrix: Water Lab File ID: IU06L01.D

Analysis Method: 8260D Date Collected:

Sample wt/vol: 25(mL) Date Analyzed: 07/08/2020 09:19

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: R-624SilMS 30m ID: 0.25(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 20265 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	4.99		0.50	0.060
75-01-4	Vinyl chloride	4.13		0.50	0.10
1330-20-7	Xylenes, Total	15.1		1.0	0.15

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		80-120
460-00-4	4-Bromofluorobenzene (Surr)	99		80-120
1868-53-7	Dibromofluoromethane (Surr)	100		80-120
2037-26-5	Toluene-d8 (Surr)	100		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU06L01.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 08-Jul-2020 09:19:30 ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: LCS
Misc. Info.: 410-0005039-004
Operator ID: jkh09052 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 08-Jul-2020 10:54:26 Calib Date: 16-Mar-2020 18:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1027

First Level Reviewer: howej Date: 08-Jul-2020 09:53:49

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	2.001	2.001	0.000	98	251551	5.00	2.63	M
4 Chloromethane	50	2.190	2.203	-0.013	99	316963	5.00	4.11	
6 Butadiene	39	2.306	2.318	-0.012	92	351612	5.00	6.34	
5 Vinyl chloride	62	2.312	2.324	-0.012	98	309308	5.00	4.13	
7 Bromomethane	94	2.641	2.648	-0.007	92	218511	5.00	4.17	
8 Chloroethane	64	2.727	2.739	-0.012	99	183881	5.00	4.34	
9 Dichlorofluoromethane	67	2.977	2.983	-0.006	97	436529	5.00	4.43	
10 Trichlorofluoromethane	101	3.032	3.038	-0.006	97	416550	5.00	4.67	
11 Ethyl ether	59	3.294	3.300	-0.006	90	169625	5.01	4.43	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.385	3.385	0.000	92	293580	5.00	4.86	
13 Acrolein	56	3.470	3.477	-0.007	99	206651	37.5	32.1	
14 1,1-Dichloroethene	96	3.617	3.623	-0.006	98	228294	5.00	4.84	
15 Acetone	43	3.641	3.647	-0.006	100	306758	37.5	38.1	
16 112TCTFE	101	3.641	3.653	-0.012	86	230292	5.00	4.50	
17 Iodomethane	142	3.818	3.824	-0.006	99	413029	5.00	4.59	
18 Ethyl bromide	108	3.842	3.855	-0.013	97	190526	4.93	4.76	
19 Carbon disulfide	76	3.922	3.934	-0.012	99	644436	5.00	4.78	
21 Methyl acetate	43	4.068	4.074	-0.006	98	111940	5.00	5.29	
22 3-Chloro-1-propene	41	4.104	4.111	-0.007	93	354627	5.00	4.98	
23 Methylene Chloride	84	4.287	4.306	-0.019	91	253707	5.00	5.18	
* 24 t-Butyl alcohol-d10 (IS)	65	4.306	4.306	0.000	0	162446	50.0	50.0	M
25 2-Methyl-2-propanol	59	4.434	4.452	-0.018	99	159439	50.0	40.7	
26 Acrylonitrile	53	4.641	4.641	0.000	99	287302	25.0	27.1	
27 Methyl tert-butyl ether	73	4.708	4.708	0.000	88	585353	5.00	4.84	
28 trans-1,2-Dichloroethene	96	4.714	4.726	-0.012	99	250259	5.00	4.94	
29 Hexane	57	5.135	5.141	-0.006	92	369361	5.00	4.84	
31 1,1-Dichloroethane	63	5.373	5.379	-0.006	96	457442	5.00	5.08	
32 Isopropyl ether	45	5.433	5.434	-0.001	94	767960	5.00	5.10	
33 2-Chloro-1,3-butadiene	53	5.476	5.488	-0.012	91	389562	5.00	4.89	
34 Tert-butyl ethyl ether	59	5.964	5.970	-0.006	98	709222	5.00	4.78	
36 2-Butanone (MEK)	43	6.171	6.177	-0.006	100	582075	37.5	41.0	

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	6.202	6.202	0.000	83	300043	5.00	5.27	
38 2,2-Dichloropropane	77	6.214	6.226	-0.012	91	384350	5.00	4.71	
40 Propionitrile	54	6.257	6.263	-0.007	98	159411	37.5	40.4	
42 Methacrylonitrile	67	6.476	6.476	0.000	92	543590	37.5	40.2	
43 Chlorobromomethane	128	6.531	6.537	-0.006	94	121870	5.00	4.84	
44 Tetrahydrofuran	71	6.543	6.549	-0.006	83	109512	25.0	25.2	
45 Chloroform	83	6.683	6.683	0.000	93	456910	5.00	5.07	
$ 46 Dibromofluoromethane (Surr)	113	6.897	6.897	0.000	94	424278	10.0	9.97	
47 1,1,1-Trichloroethane	97	6.909	6.909	0.000	98	404119	5.00	4.62	
48 Cyclohexane	56	7.012	7.006	0.006	90	435421	5.00	4.72	
51 1,1-Dichloropropene	75	7.116	7.122	-0.006	96	361701	5.00	5.01	
50 Carbon tetrachloride	117	7.116	7.128	-0.012	86	370031	5.00	4.77	
52 Isobutyl alcohol	41	7.269	7.269	-0.001	93	144251	125.0	127.6	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.354	7.354	0.000	0	88702	10.0	10.3	
54 Benzene	78	7.378	7.384	-0.006	97	1056651	5.00	5.03	
56 1,2-Dichloroethane	62	7.451	7.452	-0.001	97	285960	5.00	5.05	
57 Tert-amyl methyl ether	73	7.567	7.567	0.000	99	674064	5.00	4.89	
* 58 Fluorobenzene (IS)	96	7.781	7.787	-0.006	98	1762318	10.0	10.0	
59 n-Heptane	43	7.793	7.787	0.006	92	392589	5.00	5.40	
60 n-Butanol	56	8.134	8.134	0.000	87	244343	250.0	244.5	
61 Trichloroethene	95	8.256	8.262	-0.006	97	279176	5.00	4.99	
62 Methylcyclohexane	83	8.567	8.567	0.000	94	461322	5.00	4.62	
63 1,2-Dichloropropane	63	8.591	8.592	-0.001	86	275817	5.00	5.40	
64 Methyl methacrylate	69	8.671	8.671	0.000	91	138250	5.00	5.05	
65 1,4-Dioxane	88	8.683	8.677	0.006	33	33934	125.0	147.8	M
66 Dibromomethane	93	8.701	8.701	0.000	95	128732	5.00	5.08	
68 Dichlorobromomethane	83	8.933	8.933	0.000	99	333121	5.00	5.00	
69 2-Nitropropane	41	9.195	9.201	-0.006	98	39709	5.00	4.66	
71 2-Chloroethyl vinyl ether	63		9.293				ND	ND	
72 1-Bromo-2-chloroethane	63	9.323	9.323	0.000	98	285351	5.00	5.38	
73 cis-1,3-Dichloropropene	75	9.469	9.476	-0.007	96	395934	5.00	5.03	
74 4-Methyl-2-pentanone (MIBK)	43	9.640	9.640	0.000	97	948025	25.0	27.0	
$ 75 Toluene-d8 (Surr)	98	9.774	9.774	0.000	93	1698481	10.0	10.0	
76 Toluene	92	9.847	9.853	-0.006	98	685549	5.00	5.05	
78 trans-1,3-Dichloropropene	75	10.103	10.103	0.000	92	329124	5.00	4.79	
79 Ethyl methacrylate	69	10.164	10.164	0.000	89	287147	5.00	4.90	
80 1,1,2-Trichloroethane	97	10.304	10.305	-0.001	91	198770	5.00	5.23	
81 Tetrachloroethene	166	10.396	10.396	0.000	98	328569	5.00	5.07	
82 1,3-Dichloropropane	76	10.469	10.469	0.000	89	332986	5.00	5.21	
83 2-Hexanone	43	10.512	10.512	0.000	97	686316	25.0	28.3	
85 Chlorodibromomethane	129	10.682	10.683	-0.001	90	241829	5.00	4.99	
86 Ethylene Dibromide	107	10.792	10.792	0.000	100	188872	5.00	5.26	
* 87 Chlorobenzene-d5 (IS)	117	11.219	11.219	0.000	86	1335595	10.0	10.0	
88 1-Chlorohexane	91	11.225	11.225	0.000	97	384708	5.00	4.61	
90 Chlorobenzene	112	11.243	11.243	0.000	95	767845	5.00	5.11	
91 1,1,1,2-Tetrachloroethane	131	11.329	11.323	0.006	96	270371	5.00	4.83	
92 Ethylbenzene	91	11.329	11.329	0.000	98	1342374	5.00	5.04	
93 m-Xylene & p-Xylene	106	11.445	11.445	-0.001	0	1064169	10.0	10.2	
94 o-Xylene	106	11.768	11.768	0.000	97	504196	5.00	4.88	
95 Styrene	104	11.786	11.786	0.000	95	839223	5.00	5.09	
96 Bromoform	173	11.944	11.945	-0.001	97	150042	5.00	5.03	
97 Isopropylbenzene	105	12.066	12.066	0.000	95	1386336	5.00	5.06	

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	12.213	12.213	0.000	93	626709	10.0	9.89	
101 1,1,2,2-Tetrachloroethane	83	12.310	12.310	0.000	93	245598	5.00	5.25	
102 Bromobenzene	156	12.328	12.329	-0.001	96	327578	5.00	5.21	
103 trans-1,4-Dichloro-2-butene	53	12.335	12.335	0.000	92	254269	25.0	20.6	
104 1,2,3-Trichloropropane	110	12.359	12.359	0.000	84	68025	5.00	5.22	
105 N-Propylbenzene	91	12.396	12.396	0.000	99	1633541	5.00	5.26	
106 2-Chlorotoluene	126	12.475	12.475	0.000	97	317073	5.00	5.06	
107 1,3,5-Trimethylbenzene	105	12.530	12.530	0.000	93	1147535	5.00	5.08	
108 4-Chlorotoluene	126	12.566	12.566	0.000	97	324223	5.00	5.08	
109 tert-Butylbenzene	134	12.774	12.774	0.000	93	248727	5.00	4.91	
110 Pentachloroethane	167	12.804	12.804	0.000	93	208608	5.00	4.88	
111 1,2,4-Trimethylbenzene	105	12.816	12.816	0.000	97	1149938	5.00	4.95	
112 sec-Butylbenzene	105	12.932	12.938	-0.006	94	1496165	5.00	5.15	
113 1,3-Dichlorobenzene	146	13.036	13.036	0.000	98	622269	5.00	5.06	
114 4-Isopropyltoluene	119	13.042	13.042	0.000	97	1275871	5.00	5.09	
* 115 1,4-Dichlorobenzene-d4	152	13.091	13.091	0.000	94	724019	10.0	10.0	
116 1,4-Dichlorobenzene	146	13.109	13.109	0.000	96	631895	5.00	5.19	
117 1,2,3-Trimethylbenzene	120	13.115	13.115	0.000	99	512522	5.00	5.12	
118 Benzyl chloride	126	13.182	13.182	0.000	98	103897	5.00	4.84	
119 n-Butylbenzene	92	13.334	13.335	0.000	97	598516	5.00	5.13	
120 1,2-Dichlorobenzene	146	13.365	13.365	0.000	99	582152	5.00	5.18	
122 1,2-Dibromo-3-Chloropropane	155	13.907	13.908	-0.001	89	39008	5.00	5.05	
123 1,3,5-Trichlorobenzene	180	14.035	14.036	-0.001	98	452218	5.00	5.08	
124 1,2,4-Trichlorobenzene	180	14.456	14.456	0.000	94	377631	5.00	5.04	
125 Hexachlorobutadiene	225	14.541	14.542	-0.001	96	166752	5.00	5.27	
126 Naphthalene	128	14.639	14.639	0.000	97	735849	5.00	4.98	
127 1,2,3-Trichlorobenzene	180	14.779	14.779	0.000	96	319888	5.00	5.12	
144 2-ethoxy-2-methyl butane	1		0.000				ND	ND	
137 2-Methylnaphthalene	142		0.000				ND	ND	
135 p-Diethylbenzene	1		0.000				ND	ND	
134 Isopropyl alcohol	45		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MSV_Q_QVOA6_00033	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_Q_QVOA1_00036	Amount Added: 12.50	Units: uL	
MSV_Q_QARC_00035	Amount Added: 12.50	Units: uL	
MSV_QGAS_826_00052	Amount Added: 12.50	Units: uL	
MSV_31_826ISS_00002	Amount Added: 5.00	Units: uL	Run Reagent

Report Date: 08-Jul-2020 10:54:38 Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU06L01.D

Injection Date: 08-Jul-2020 09:19:30 Instrument ID: 19930 Operator ID: jkh09052

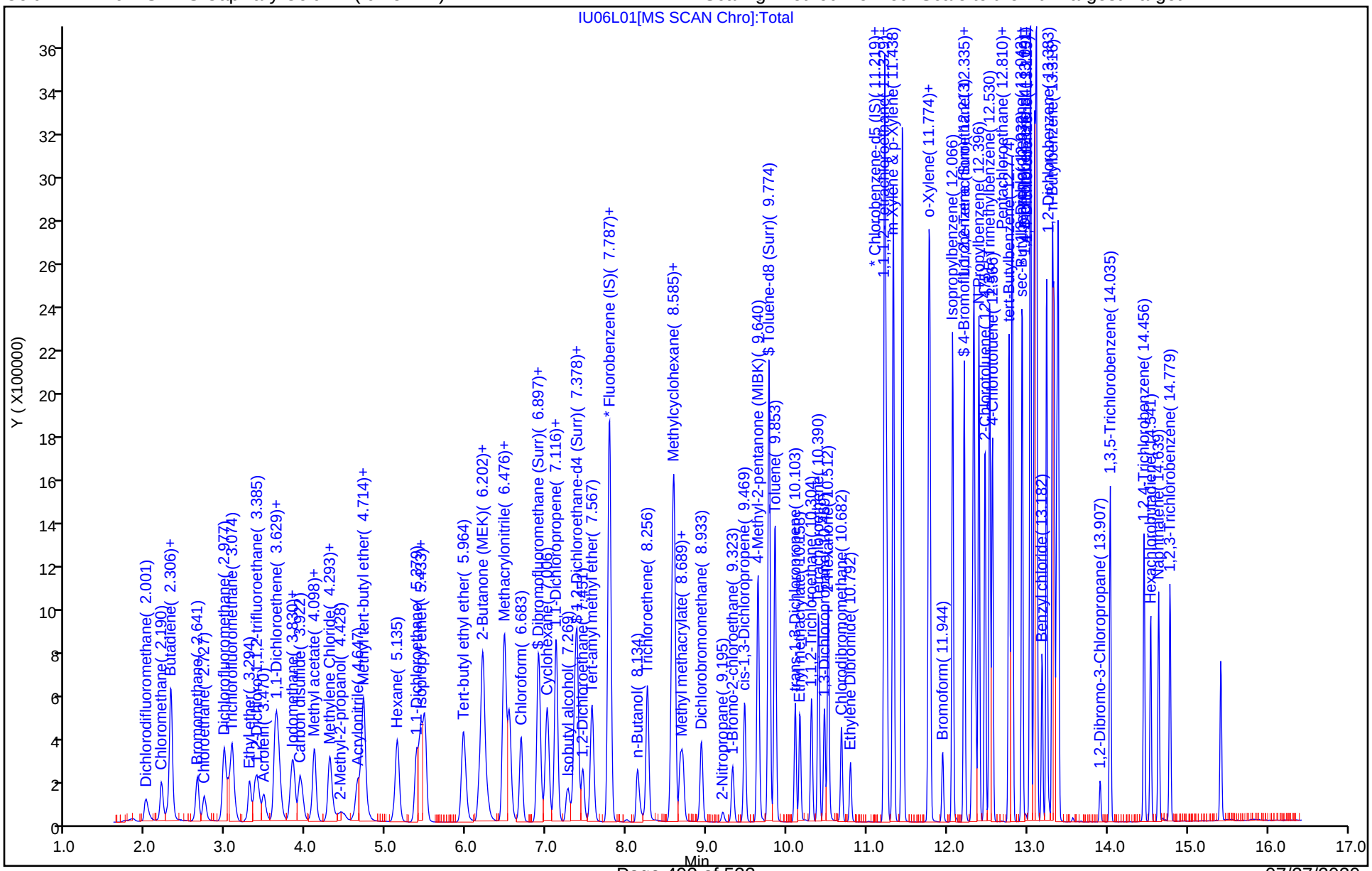
Lims ID: LCS Worklist Smp#: 4

Client ID:

Purge Vol: 25.000 mL Dil. Factor: 1.0000 ALS Bottle#: 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



Eurofins Lancaster Laboratories Env, LLC

Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU06L01.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 08-Jul-2020 09:19:30 ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: LCS
Misc. Info.: 410-0005039-004
Operator ID: jkh09052 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 08-Jul-2020 10:54:26 Calib Date: 16-Mar-2020 18:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1027

First Level Reviewer: howej Date: 08-Jul-2020 09:53:49

Compound	Amount Added	Amount Recovered	% Rec.
$ 46 Dibromofluoromethane (Surr)	10.0	9.97	99.75
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.3	102.91
$ 75 Toluene-d8 (Surr)	10.0	10.0	100.01
$ 100 4-Bromofluorobenzene (Surr)	10.0	9.89	98.89

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

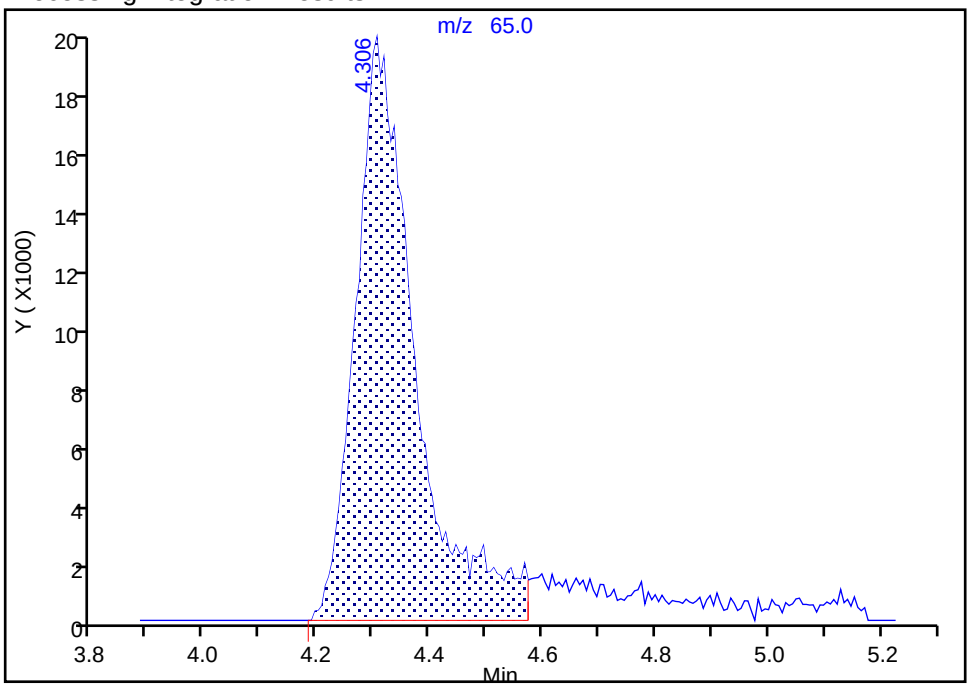
Data File:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU06L01.D				
Injection Date:	08-Jul-2020 09:19:30	Instrument ID:	19930		
Lims ID:	LCS				
Client ID:					
Operator ID:	jkh09052	ALS Bottle#:	4	Worklist Smp#:	4
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	8260 25ml HP31	Limit Group:	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

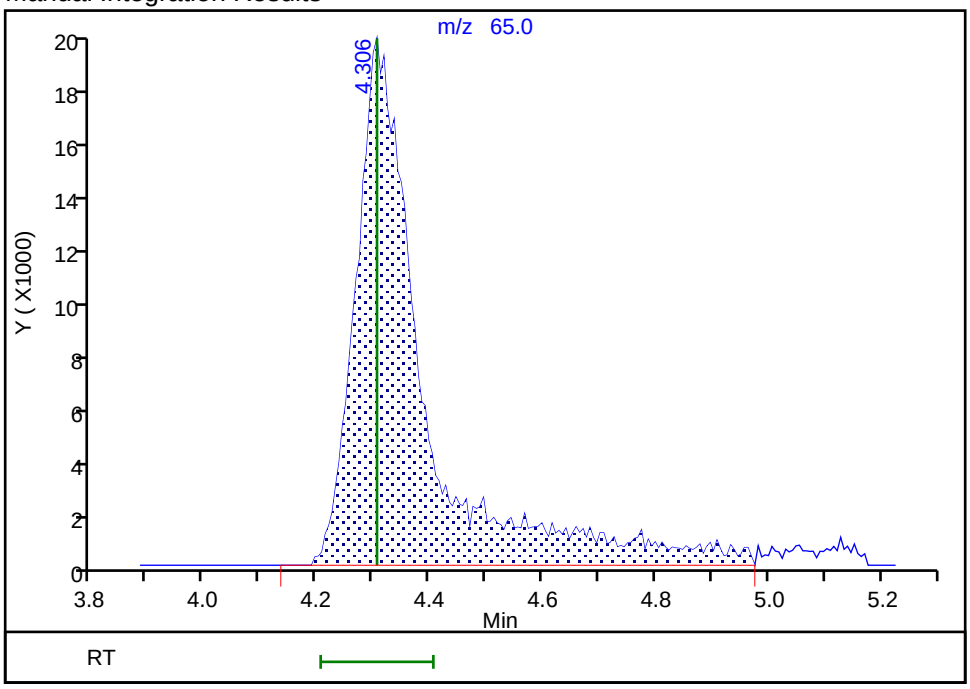
Processing Integration Results

RT: 4.31
Area: 141810
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 4.31
Area: 162446
Amount: 50.000000
Amount Units: ug/l



Reviewer: howej, 08-Jul-2020 09:53:06
Audit Action: Manually Integrated Audit Reason: Other

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-5692-1

SDG No.:

Client Sample ID: HD-COD-SW-15-0/1-0 MS Lab Sample ID: 410-5692-6 MS

Matrix: Water Lab File ID: IU08s09.D

Analysis Method: 8260D Date Collected: 06/24/2020 11:30

Sample wt/vol: 25(mL) Date Analyzed: 07/08/2020 13:33

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.: 20265 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	5.62		0.50	0.060
630-20-6	1,1,1,2-Tetrachloroethane	5.39		0.50	0.070
79-34-5	1,1,2,2-Tetrachloroethane	5.44		0.50	0.070
79-00-5	1,1,2-Trichloroethane	5.66		0.50	0.060
75-34-3	1,1-Dichloroethane	5.88		0.50	0.070
75-35-4	1,1-Dichloroethene	5.78		0.50	0.060
107-06-2	1,2-Dichloroethane	5.68		0.50	0.050
78-87-5	1,2-Dichloropropane	5.90		0.50	0.060
78-93-3	2-Butanone (MEK)	48.3		5.0	0.60
591-78-6	2-Hexanone	33.3		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	32.1		5.0	0.70
67-64-1	Acetone	45.0		5.0	0.90
107-13-1	Acrylonitrile	31.5		5.0	0.40
71-43-2	Benzene	5.73		0.50	0.050
75-25-2	Bromoform	5.30		1.0	0.30
74-83-9	Bromomethane	4.69		0.50	0.070
75-15-0	Carbon disulfide	5.58		1.0	0.060
56-23-5	Carbon tetrachloride	5.85		0.50	0.070
108-90-7	Chlorobenzene	5.72		0.50	0.060
74-97-5	Bromochloromethane	5.38		0.50	0.050
124-48-1	Dibromochloromethane	5.53		0.50	0.070
75-00-3	Chloroethane	4.77		0.50	0.070
67-66-3	Chloroform	6.12		0.50	0.090
74-87-3	Chloromethane	4.39		0.50	0.060
156-59-2	cis-1,2-Dichloroethene	6.83		0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	5.52		0.50	0.050
75-27-4	Bromodichloromethane	5.63		0.50	0.050
100-41-4	Ethylbenzene	5.79		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	5.57		0.50	0.060
1634-04-4	Methyl tert-butyl ether	5.30		0.50	0.050
75-09-2	Methylene Chloride	5.68		0.50	0.070
100-42-5	Styrene	5.79		0.50	0.050
127-18-4	Tetrachloroethene	8.27		0.50	0.060
108-88-3	Toluene	5.83		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	5.66		0.50	0.060
10061-02-6	trans-1,3-Dichloropropene	5.11		0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-5692-1

SDG No.:

Client Sample ID: HD-COD-SW-15-0/1-0 MS Lab Sample ID: 410-5692-6 MS

Matrix: Water Lab File ID: IU08s09.D

Analysis Method: 8260D Date Collected: 06/24/2020 11:30

Sample wt/vol: 25(mL) Date Analyzed: 07/08/2020 13:33

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.: 20265 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	6.77		0.50	0.060
75-01-4	Vinyl chloride	4.67		0.50	0.10
1330-20-7	Xylenes, Total	17.1		1.0	0.15

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		80-120
460-00-4	4-Bromofluorobenzene (Surr)	99		80-120
1868-53-7	Dibromofluoromethane (Surr)	100		80-120
2037-26-5	Toluene-d8 (Surr)	99		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s09.D
Lims ID: 410-5692-A-6 MS
Client ID: HD-COD-SW-15-0/1-0
Sample Type: MS
Inject. Date: 08-Jul-2020 13:33:30 ALS Bottle#: 15 Worklist Smp#: 16
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-5692-A-6 MS
Misc. Info.: 410-0005039-016
Operator ID: jkh09052 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 09-Jul-2020 09:13:09 Calib Date: 16-Mar-2020 18:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1051

First Level Reviewer: riehlc Date: 09-Jul-2020 08:32:16

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	2.007	2.001	0.006	99	249311	5.00	3.04	
2 Chlorodifluoromethane	51		2.014					ND	
3 Dimethyl ether	45		2.068					ND	
4 Chloromethane	50	2.202	2.203	-0.001	99	289528	5.00	4.39	
6 Butadiene	39	2.312	2.318	-0.006	93	353642	5.00	7.46	
5 Vinyl chloride	62	2.318	2.324	-0.006	87	298691	5.00	4.67	
7 Bromomethane	94	2.647	2.648	-0.001	91	210225	5.00	4.69	
8 Chloroethane	64	2.739	2.739	0.000	100	172576	5.00	4.77	
9 Dichlorofluoromethane	67	2.983	2.983	0.000	97	427106	5.00	5.07	
10 Trichlorofluoromethane	101	3.044	3.038	0.006	97	435457	5.00	5.71	
11 Ethyl ether	59	3.300	3.300	0.000	91	159383	5.01	4.86	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.391	3.385	0.006	92	293293	5.00	5.68	
13 Acrolein	56	3.477	3.477	0.000	99	181360	37.5	38.2	
14 1,1-Dichloroethene	96	3.623	3.623	0.000	98	233123	5.00	5.78	
15 Acetone	43	3.653	3.647	0.006	100	267551	37.5	45.0	
16 112TCTFE	101	3.653	3.653	0.000	88	237620	5.00	5.43	
17 Iodomethane	142	3.824	3.824	0.000	100	409244	5.00	5.32	
18 Ethyl bromide	108	3.848	3.855	-0.007	99	194890	4.94	5.69	
19 Carbon disulfide	76	3.934	3.934	0.000	99	642902	5.00	5.58	
20 Acetonitrile	41		4.031					ND	
21 Methyl acetate	43	4.086	4.074	0.012	97	98306	5.00	5.43	
22 3-Chloro-1-propene	41	4.104	4.111	-0.007	93	327775	5.00	5.38	
23 Methylene Chloride	84	4.306	4.306	0.000	94	237936	5.00	5.68	
* 24 t-Butyl alcohol-d10 (IS)	65	4.312	4.306	0.006	0	119883	50.0	50.0	
25 2-Methyl-2-propanol	59	4.446	4.452	-0.006	99	156057	50.0	54.0	
26 Acrylonitrile	53	4.641	4.641	0.000	99	246412	25.0	31.5	
27 Methyl tert-butyl ether	73	4.708	4.708	0.000	94	548430	5.00	5.30	
28 trans-1,2-Dichloroethene	96	4.720	4.726	-0.006	99	245079	5.00	5.66	
29 Hexane	57	5.141	5.141	0.000	92	367871	5.00	5.64	
30 Vinyl acetate	43		5.373					ND	U
31 1,1-Dichloroethane	63	5.379	5.379	0.000	96	453171	5.00	5.88	

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	5.440	5.434	0.006	94	718905	5.00	5.58	
33 2-Chloro-1,3-butadiene	53	5.488	5.488	0.000	91	391353	5.00	5.75	
34 Tert-butyl ethyl ether	59	5.970	5.970	0.000	97	659580	5.00	5.20	
S 35 1,2-Dichloroethene, Total	100				0			12.5	
36 2-Butanone (MEK)	43	6.177	6.177	0.000	100	506168	37.5	48.3	
37 cis-1,2-Dichloroethene	96	6.208	6.202	0.006	81	332180	5.00	6.83	
38 2,2-Dichloropropane	77	6.220	6.226	-0.006	87	384605	5.00	5.52	
39 Ethyl acetate	43		6.238					ND	
40 Propionitrile	54	6.269	6.263	0.006	98	146974	37.5	50.4	
41 Methyl acrylate	55		6.305					ND	
42 Methacrylonitrile	67	6.476	6.476	0.000	91	481983	37.5	48.3	
43 Chlorobromomethane	128	6.537	6.537	0.000	93	115748	5.00	5.38	
44 Tetrahydrofuran	71	6.543	6.549	-0.006	82	98203	25.0	30.6	
45 Chloroform	83	6.689	6.683	0.006	93	471928	5.00	6.12	
$ 46 Dibromofluoromethane (Surr)	113	6.903	6.897	0.006	94	363469	10.0	10.0	
47 1,1,1-Trichloroethane	97	6.915	6.909	0.006	98	419919	5.00	5.62	
48 Cyclohexane	56	7.012	7.006	0.006	90	455515	5.00	5.78	
49 1-Chlorobutane	56		7.067					ND	
51 1,1-Dichloropropene	75	7.116	7.122	-0.006	95	368699	5.00	5.97	
50 Carbon tetrachloride	117	7.122	7.128	-0.006	94	387979	5.00	5.85	
52 Isobutyl alcohol	41	7.262	7.269	-0.007	95	135693	125.1	162.6	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.354	7.354	0.000	0	75304	10.0	10.2	
54 Benzene	78	7.384	7.384	0.000	97	1030272	5.00	5.73	
56 1,2-Dichloroethane	62	7.451	7.452	-0.001	97	274699	5.00	5.68	
55 Isopropyl acetate	43		7.464					ND	U
57 Tert-amyl methyl ether	73	7.573	7.567	0.006	99	622561	5.00	5.28	
* 58 Fluorobenzene (IS)	96	7.781	7.787	-0.006	99	1507086	10.0	10.0	
59 n-Heptane	43	7.793	7.787	0.006	90	382634	5.00	6.15	
60 n-Butanol	56	8.140	8.134	0.006	88	236459	250.2	320.6	
61 Trichloroethene	95	8.262	8.262	0.000	98	324375	5.00	6.77	
62 Methylcyclohexane	83	8.567	8.567	0.000	94	466295	5.00	5.47	
63 1,2-Dichloropropane	63	8.591	8.592	-0.001	87	258085	5.00	5.90	
64 Methyl methacrylate	69	8.671	8.671	0.000	92	123470	5.00	6.11	
65 1,4-Dioxane	88	8.683	8.677	0.006	36	19211	125.1	113.3	
66 Dibromomethane	93	8.701	8.701	0.000	93	123050	5.00	5.68	
67 n-Propyl acetate	43		8.750					ND	
68 Dichlorobromomethane	83	8.933	8.933	0.000	99	320393	5.00	5.63	
69 2-Nitropropane	41	9.207	9.201	0.006	99	34490	5.00	5.49	
70 Chloroacetonitrile	75		9.274					ND	
71 2-Chloroethyl vinyl ether	63		9.293				ND	ND	
72 1-Bromo-2-chloroethane	63	9.329	9.323	0.006	98	261727	5.00	5.77	
73 cis-1,3-Dichloropropene	75	9.475	9.476	-0.001	96	371524	5.00	5.52	
74 4-Methyl-2-pentanone (MIBK)	43	9.640	9.640	0.000	97	831977	25.0	32.1	
$ 75 Toluene-d8 (Surr)	98	9.780	9.774	0.006	93	1447145	10.0	9.89	
76 Toluene	92	9.853	9.853	0.000	98	681874	5.00	5.83	
S 77 1,3-Dichloropropene, Total	100				0			10.6	
78 trans-1,3-Dichloropropene	75	10.103	10.103	0.000	92	302193	5.00	5.11	
79 Ethyl methacrylate	69	10.158	10.164	-0.006	89	263634	5.00	5.23	
80 1,1,2-Trichloroethane	97	10.304	10.305	-0.001	91	185363	5.00	5.66	
81 Tetrachloroethene	166	10.396	10.396	0.000	98	461794	5.00	8.27	
82 1,3-Dichloropropane	76	10.469	10.469	0.000	89	307089	5.00	5.58	
83 2-Hexanone	43	10.518	10.512	0.006	96	596186	25.0	33.3	

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		10.640					ND	
85 Chlorodibromomethane	129	10.682	10.683	-0.001	89	230875	5.00	5.53	
86 Ethylene Dibromide	107	10.792	10.792	0.000	99	172101	5.00	5.57	
* 87 Chlorobenzene-d5 (IS)	117	11.219	11.219	0.000	86	1150776	10.0	10.0	
88 1-Chlorohexane	91	11.225	11.225	0.000	96	386209	5.00	5.37	
90 Chlorobenzene	112	11.243	11.243	0.000	95	741056	5.00	5.72	
S 89 Xylenes, Total	106				0			17.1	
91 1,1,1,2-Tetrachloroethane	131	11.323	11.323	0.000	95	259701	5.00	5.39	
92 Ethylbenzene	91	11.329	11.329	0.000	98	1328019	5.00	5.79	
93 m-Xylene & p-Xylene	106	11.445	11.445	-0.001	0	1035537	10.0	11.5	
94 o-Xylene	106	11.768	11.768	0.000	96	501720	5.00	5.63	
95 Styrene	104	11.786	11.786	0.000	94	822738	5.00	5.79	
96 Bromoform	173	11.944	11.945	-0.001	98	136222	5.00	5.30	
97 Isopropylbenzene	105	12.066	12.066	0.000	96	1365724	5.00	5.79	
98 cis-1,4-Dichloro-2-butene	88		12.115					ND	
99 Cyclohexanone	55		12.152					ND	
$ 100 4-Bromofluorobenzene (Surr)	95	12.213	12.213	0.000	93	539723	10.0	9.88	
101 1,1,2,2-Tetrachloroethane	83	12.310	12.310	0.000	93	228573	5.00	5.44	
102 Bromobenzene	156	12.328	12.329	-0.001	95	313845	5.00	5.55	
103 trans-1,4-Dichloro-2-butene	53	12.335	12.335	0.000	92	229930	25.0	25.2	
104 1,2,3-Trichloropropane	110	12.359	12.359	0.000	83	63872	5.00	5.45	
105 N-Propylbenzene	91	12.396	12.396	0.000	99	1604866	5.00	5.75	
106 2-Chlorotoluene	126	12.475	12.475	0.000	97	314354	5.00	5.58	
107 1,3,5-Trimethylbenzene	105	12.530	12.530	0.000	94	1128551	5.00	5.55	
108 4-Chlorotoluene	126	12.566	12.566	0.000	97	313081	5.00	5.46	
109 tert-Butylbenzene	134	12.774	12.774	0.000	93	249005	5.00	5.47	
110 Pentachloroethane	167	12.804	12.804	0.000	94	203990	5.00	5.31	
111 1,2,4-Trimethylbenzene	105	12.816	12.816	0.000	97	1127896	5.00	5.40	
112 sec-Butylbenzene	105	12.938	12.938	0.000	94	1487617	5.00	5.70	
113 1,3-Dichlorobenzene	146	13.036	13.036	0.000	98	609060	5.00	5.51	
114 4-Isopropyltoluene	119	13.042	13.042	0.000	97	1246248	5.00	5.54	
* 115 1,4-Dichlorobenzene-d4	152	13.091	13.091	0.000	94	650729	10.0	10.0	
116 1,4-Dichlorobenzene	146	13.109	13.109	0.000	95	614306	5.00	5.61	
117 1,2,3-Trimethylbenzene	120	13.115	13.115	0.000	98	504098	5.00	5.61	
118 Benzyl chloride	126	13.188	13.182	0.006	98	94779	5.00	4.92	
119 n-Butylbenzene	92	13.334	13.335	0.000	97	595871	5.00	5.68	
120 1,2-Dichlorobenzene	146	13.365	13.365	0.000	99	560351	5.00	5.55	
121 Hexachloroethane	117	13.566	13.572	-0.006	0	2533		0.0590	
122 1,2-Dibromo-3-Chloropropane	155	13.914	13.908	0.006	89	34364	5.00	4.95	
123 1,3,5-Trichlorobenzene	180	14.035	14.036	-0.001	98	434068	5.00	5.42	
124 1,2,4-Trichlorobenzene	180	14.456	14.456	0.000	94	349869	5.00	5.19	
125 Hexachlorobutadiene	225	14.541	14.542	-0.001	95	165264	5.00	5.81	
126 Naphthalene	128	14.639	14.639	0.000	97	667012	5.00	5.02	
127 1,2,3-Trichlorobenzene	180	14.779	14.779	0.000	96	296883	5.00	5.29	
128 Dodecane	57		0.000					ND	
156 2,3-Dibromopropene TIC	1		0.000					ND	
155 Ethylene oxide TIC	1		0.000					ND	
154 2-Bromo-3-chloropropene TIC	1		0.000					ND	
153 Epichlorohydrin TIC	1		0.000					ND	
152 Vinyl bromide TIC	1		0.000					ND	
151 Chloroacetaldehyde TIC	1		0.000					ND	
150 Epibromohydrin TIC	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
149 2-Chloroethanol TIC	1		0.000					ND	
148 Monochloroacetic acid TIC	1		0.000					ND	
147 2-Bromoethanol TIC	1		0.000					ND	
146 2,3-Dibromo-1-propanol TIC	1		0.000					ND	
144 2-ethoxy-2-methyl butane	1		0.000				ND	ND	
143 n-Decane	57		0.000					ND	
142 2-Bromo-1-chloropropane	1		0.000					ND	
157 3-Chloro-1,2-propanediol TIC	1		0.000					ND	
139 1-Bromo-3-Chloropropane	1		0.000					ND	
138 1,1-Dichloro-1-fluoroethane	1		0.000					ND	
137 2-Methylnaphthalene	142		0.000				ND	ND	
136 2-Chloro-1,1,1-Trifluoroethane	1		0.000					ND	
135 p-Diethylbenzene	1		0.000				ND	ND	
134 Isopropyl alcohol	45		0.000				ND	ND	
133 t-Amyl alcohol	1		0.000					ND	
132 Methylal	1		0.000					ND	
131 tert-Butyl Formate	1		0.000					ND	
130 Chlorotrifluoroethene	1		0.000					ND	
129 Propene oxide	1		0.000					ND	
141 1-Chloropropane	1		0.000					ND	
140 Ethanol	45	3.300	3.288	0.012	0	111915			NR

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

ND - Not Detected or Marked ND

Review Flags

U - Marked Undetected

Reagents:

MSV_Q_QVOA6_00033	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_Q_QVOA1_00036	Amount Added:	5.38	Units: uL	
MSV_Q_QARC_00035	Amount Added:	5.38	Units: uL	
MSV_QGAS_826_00052	Amount Added:	5.38	Units: uL	
MSV_31_826ISS_00002	Amount Added:	5.00	Units: uL	Run Reagent

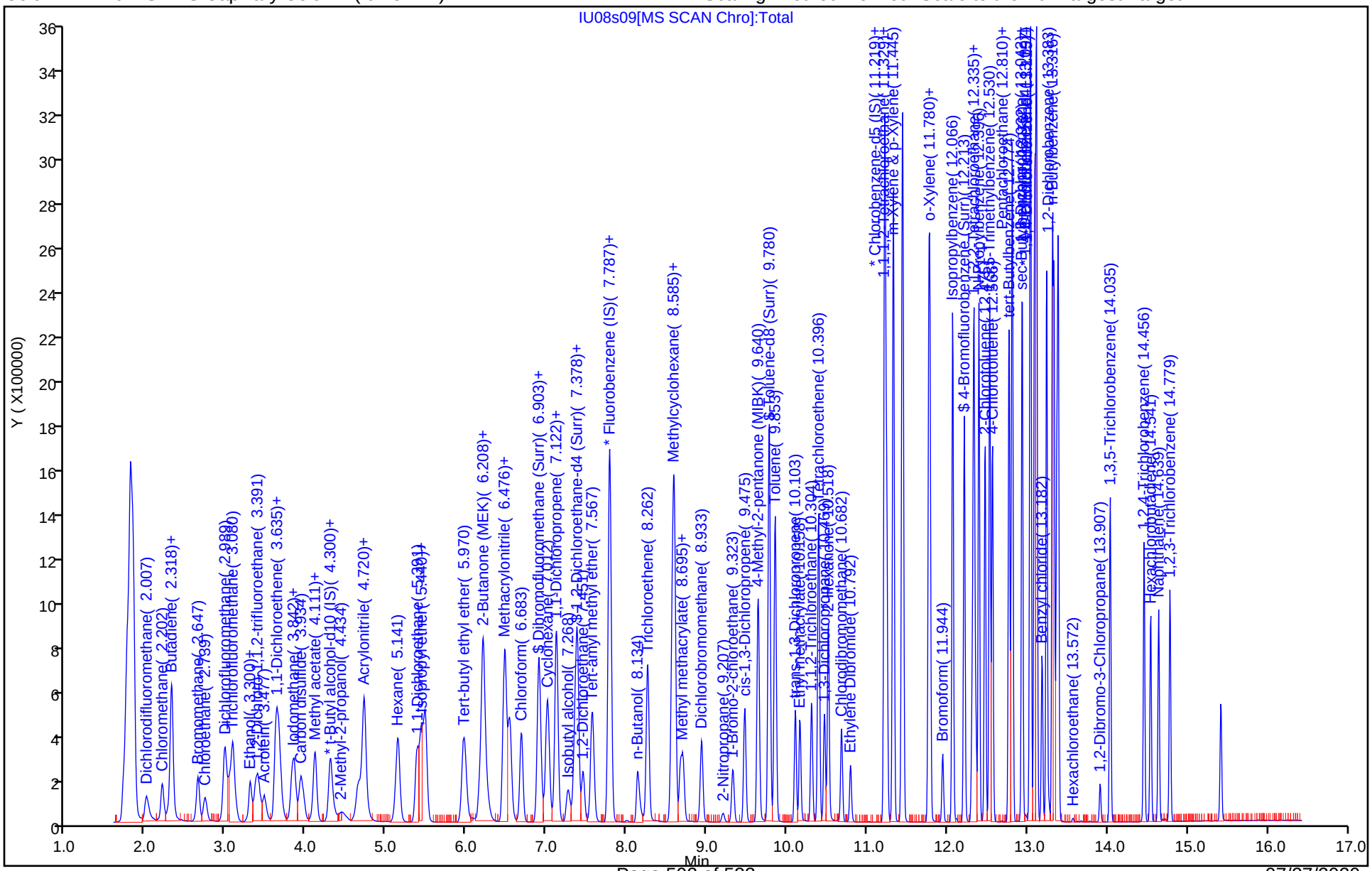
Report Date: 09-Jul-2020 09:13:46 Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s09.D

Injection Date:	08-Jul-2020 13:33:30	Instrument ID:	19930	Operator ID:	jkh09052
Lims ID:	410-5692-A-6 MS			Worklist Smp#:	16
Client ID:	HD-COD-SW-15-0/1-0				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
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\20200708-5039.b\IU08s09.D				
Lims ID:	410-5692-A-6 MS				
Client ID:	HD-COD-SW-15-0/1-0				
Sample Type:	MS				
Inject. Date:	08-Jul-2020 13:33:30	ALS Bottle#:	15	Worklist Smp#:	16
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-5692-A-6 MS				
Misc. Info.:	410-0005039-016				
Operator ID:	jkh09052	Instrument ID:	19930		
Method:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\8260 25ml HP31.m				
Limit Group:	MSV - 8260C_D				
Last Update:	09-Jul-2020 09:13:09	Calib Date:	16-Mar-2020 18:31:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1051				

First Level Reviewer: riehlc Date: 09-Jul-2020 08:32:16

Compound	Amount Added	Amount Recovered	% Rec.
$ 46 Dibromofluoromethane (Surr)	10.0	10.0	99.92
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.2	102.17
$ 75 Toluene-d8 (Surr)	10.0	9.89	98.89
$ 100 4-Bromofluorobenzene (Surr)	10.0	9.88	98.84

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-5692-1

SDG No.:

Client Sample ID: HD-COD-SW-15-0/1-0 MSD Lab Sample ID: 410-5692-6 MSD

Matrix: Water Lab File ID: IU08s10.D

Analysis Method: 8260D Date Collected: 06/24/2020 11:30

Sample wt/vol: 25(mL) Date Analyzed: 07/08/2020 13:55

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.: 20265 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	5.46		0.50	0.060
630-20-6	1,1,1,2-Tetrachloroethane	5.34		0.50	0.070
79-34-5	1,1,2,2-Tetrachloroethane	5.19		0.50	0.070
79-00-5	1,1,2-Trichloroethane	5.47		0.50	0.060
75-34-3	1,1-Dichloroethane	5.72		0.50	0.070
75-35-4	1,1-Dichloroethene	5.61		0.50	0.060
107-06-2	1,2-Dichloroethane	5.48		0.50	0.050
78-87-5	1,2-Dichloropropane	5.68		0.50	0.060
78-93-3	2-Butanone (MEK)	47.9		5.0	0.60
591-78-6	2-Hexanone	32.3		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	31.5		5.0	0.70
67-64-1	Acetone	44.6		5.0	0.90
107-13-1	Acrylonitrile	30.8		5.0	0.40
71-43-2	Benzene	5.54		0.50	0.050
75-25-2	Bromoform	5.09		1.0	0.30
74-83-9	Bromomethane	4.60		0.50	0.070
75-15-0	Carbon disulfide	5.37		1.0	0.060
56-23-5	Carbon tetrachloride	5.62		0.50	0.070
108-90-7	Chlorobenzene	5.61		0.50	0.060
74-97-5	Bromochloromethane	5.15		0.50	0.050
124-48-1	Dibromochloromethane	5.36		0.50	0.070
75-00-3	Chloroethane	4.79		0.50	0.070
67-66-3	Chloroform	5.96		0.50	0.090
74-87-3	Chloromethane	4.46		0.50	0.060
156-59-2	cis-1,2-Dichloroethene	6.47		0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	5.31		0.50	0.050
75-27-4	Bromodichloromethane	5.28		0.50	0.050
100-41-4	Ethylbenzene	5.60		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	5.51		0.50	0.060
1634-04-4	Methyl tert-butyl ether	5.14		0.50	0.050
75-09-2	Methylene Chloride	5.44		0.50	0.070
100-42-5	Styrene	5.59		0.50	0.050
127-18-4	Tetrachloroethene	8.33		0.50	0.060
108-88-3	Toluene	5.64		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	5.55		0.50	0.060
10061-02-6	trans-1,3-Dichloropropene	5.01		0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-5692-1

SDG No.:

Client Sample ID: HD-COD-SW-15-0/1-0 MSD Lab Sample ID: 410-5692-6 MSD

Matrix: Water Lab File ID: IU08s10.D

Analysis Method: 8260D Date Collected: 06/24/2020 11:30

Sample wt/vol: 25(mL) Date Analyzed: 07/08/2020 13:55

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.: 20265 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	6.48		0.50	0.060
75-01-4	Vinyl chloride	4.68		0.50	0.10
1330-20-7	Xylenes, Total	16.7		1.0	0.15

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		80-120
460-00-4	4-Bromofluorobenzene (Surr)	99		80-120
1868-53-7	Dibromofluoromethane (Surr)	100		80-120
2037-26-5	Toluene-d8 (Surr)	100		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s10.D
Lims ID: 410-5692-A-6 MSD
Client ID: HD-COD-SW-15-0/1-0
Sample Type: MSD
Inject. Date: 08-Jul-2020 13:55:30 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-5692-A-6 MSD
Misc. Info.: 410-0005039-017
Operator ID: jkh09052 Instrument ID: 19930

Method: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\8260 25ml HP31.m
Limit Group: MSV - 8260C_D
Last Update: 09-Jul-2020 09:13:09 Calib Date: 16-Mar-2020 18:31:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1051

First Level Reviewer: riehlc Date: 09-Jul-2020 08:35:38

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Dichlorodifluoromethane	85	2.007	2.001	0.006	98	243465	5.00	2.92	
2 Chlorodifluoromethane	51		2.014					ND	
3 Dimethyl ether	45		2.068					ND	
4 Chloromethane	50	2.202	2.203	-0.001	99	300237	5.00	4.46	
6 Butadiene	39	2.318	2.318	0.000	91	350226	5.00	7.25	
5 Vinyl chloride	62	2.324	2.324	0.000	86	304909	5.00	4.68	
7 Bromomethane	94	2.647	2.648	-0.001	91	210371	5.00	4.60	
8 Chloroethane	64	2.739	2.739	0.000	99	176736	5.00	4.79	
9 Dichlorofluoromethane	67	2.983	2.983	0.000	97	433481	5.00	5.05	
10 Trichlorofluoromethane	101	3.044	3.038	0.006	97	440827	5.00	5.67	
11 Ethyl ether	59	3.306	3.300	0.006	91	155992	5.01	4.67	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.385	3.385	0.000	92	294583	5.00	5.60	
13 Acrolein	56	3.477	3.477	0.000	99	177772	37.5	36.9	
14 1,1-Dichloroethene	96	3.629	3.623	0.006	98	230694	5.00	5.61	
15 Acetone	43	3.647	3.647	0.000	100	269067	37.5	44.6	
16 112TCTFE	101	3.653	3.653	0.000	84	234859	5.00	5.27	
17 Iodomethane	142	3.830	3.824	0.006	99	397534	5.00	5.07	
18 Ethyl bromide	108	3.861	3.855	0.006	98	190484	4.94	5.46	
19 Carbon disulfide	76	3.940	3.934	0.006	99	630399	5.00	5.37	
20 Acetonitrile	41		4.031					ND	
21 Methyl acetate	43	4.074	4.074	0.000	98	92672	5.00	5.02	
22 3-Chloro-1-propene	41	4.111	4.111	0.000	93	321712	5.00	5.18	
23 Methylene Chloride	84	4.306	4.306	0.000	92	232290	5.00	5.44	
* 24 t-Butyl alcohol-d10 (IS)	65	4.306	4.306	0.000	0	121588	50.0	50.0	
25 2-Methyl-2-propanol	59	4.446	4.452	-0.006	99	159679	50.0	54.5	M
26 Acrylonitrile	53	4.641	4.641	0.000	98	244625	25.0	30.8	
27 Methyl tert-butyl ether	73	4.708	4.708	0.000	94	542169	5.00	5.14	
28 trans-1,2-Dichloroethene	96	4.720	4.726	-0.006	100	244965	5.00	5.55	
29 Hexane	57	5.147	5.141	0.006	92	368319	5.00	5.54	
30 Vinyl acetate	43		5.373					ND	U
31 1,1-Dichloroethane	63	5.379	5.379	0.000	96	449498	5.00	5.72	

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	5.433	5.434	-0.001	94	705441	5.00	5.37	
33 2-Chloro-1,3-butadiene	53	5.488	5.488	0.000	91	385155	5.00	5.55	
34 Tert-butyl ethyl ether	59	5.970	5.970	0.000	97	647559	5.00	5.01	
S 35 1,2-Dichloroethene, Total	100				0			12.0	
36 2-Butanone (MEK)	43	6.177	6.177	0.000	99	508600	37.5	47.9	
37 cis-1,2-Dichloroethene	96	6.208	6.202	0.006	81	320853	5.00	6.47	
38 2,2-Dichloropropane	77	6.220	6.226	-0.006	88	373151	5.00	5.25	
39 Ethyl acetate	43		6.238					ND	
40 Propionitrile	54	6.275	6.263	0.012	98	128387	37.5	43.4	
41 Methyl acrylate	55		6.305					ND	
42 Methacrylonitrile	67	6.476	6.476	0.000	91	483071	37.5	47.7	
43 Chlorobromomethane	128	6.537	6.537	0.000	93	112853	5.00	5.15	
44 Tetrahydrofuran	71	6.543	6.549	-0.006	82	96582	25.0	29.6	
45 Chloroform	83	6.683	6.683	0.000	93	468111	5.00	5.96	
$ 46 Dibromofluoromethane (Surr)	113	6.903	6.897	0.006	94	370214	10.0	9.99	
47 1,1,1-Trichloroethane	97	6.915	6.909	0.006	98	415792	5.00	5.46	
48 Cyclohexane	56	7.006	7.006	0.000	90	444759	5.00	5.54	
49 1-Chlorobutane	56		7.067					ND	
51 1,1-Dichloropropene	75	7.122	7.122	0.000	96	359650	5.00	5.71	
50 Carbon tetrachloride	117	7.122	7.128	-0.006	86	379391	5.00	5.62	
52 Isobutyl alcohol	41	7.269	7.269	-0.001	95	120876	125.1	142.8	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.348	7.354	-0.006	0	77094	10.0	10.3	
54 Benzene	78	7.384	7.384	0.000	97	1014640	5.00	5.54	
56 1,2-Dichloroethane	62	7.457	7.452	0.005	97	270011	5.00	5.48	
55 Isopropyl acetate	43		7.464					ND	U
57 Tert-amyl methyl ether	73	7.567	7.567	0.000	99	614184	5.00	5.11	
* 58 Fluorobenzene (IS)	96	7.787	7.787	0.000	99	1535757	10.0	10.0	
59 n-Heptane	43	7.793	7.787	0.006	92	389572	5.00	6.15	
60 n-Butanol	56	8.140	8.134	0.006	88	200435	250.2	268.0	
61 Trichloroethene	95	8.262	8.262	0.000	98	316369	5.00	6.48	
62 Methylcyclohexane	83	8.567	8.567	0.000	93	451763	5.00	5.20	
63 1,2-Dichloropropane	63	8.591	8.592	-0.001	84	252852	5.00	5.68	
64 Methyl methacrylate	69	8.671	8.671	0.000	91	119900	5.00	5.85	
65 1,4-Dioxane	88	8.689	8.677	0.012	33	20853	125.1	121.3	
66 Dibromomethane	93	8.701	8.701	0.000	94	119543	5.00	5.41	
67 n-Propyl acetate	43		8.750					ND	
68 Dichlorobromomethane	83	8.933	8.933	0.000	99	306521	5.00	5.28	
69 2-Nitropropane	41	9.195	9.201	-0.006	97	34633	5.00	5.44	
70 Chloroacetonitrile	75		9.274					ND	
71 2-Chloroethyl vinyl ether	63		9.293				ND	ND	
72 1-Bromo-2-chloroethane	63	9.323	9.323	0.000	99	265528	5.00	5.74	
73 cis-1,3-Dichloropropene	75	9.475	9.476	-0.001	96	364596	5.00	5.31	
74 4-Methyl-2-pentanone (MIBK)	43	9.640	9.640	0.000	96	828012	25.0	31.5	
$ 75 Toluene-d8 (Surr)	98	9.774	9.774	0.000	93	1478148	10.0	9.98	
76 Toluene	92	9.853	9.853	0.000	98	667314	5.00	5.64	
S 77 1,3-Dichloropropene, Total	100				0			10.3	
78 trans-1,3-Dichloropropene	75	10.103	10.103	0.000	92	300163	5.00	5.01	
79 Ethyl methacrylate	69	10.164	10.164	0.000	89	259632	5.00	5.08	
80 1,1,2-Trichloroethane	97	10.305	10.305	-0.001	91	181201	5.00	5.47	
81 Tetrachloroethene	166	10.396	10.396	0.000	98	470962	5.00	8.33	
82 1,3-Dichloropropane	76	10.469	10.469	0.000	88	305921	5.00	5.49	
83 2-Hexanone	43	10.512	10.512	0.000	97	587694	25.0	32.3	

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		10.640					ND	
85 Chlorodibromomethane	129	10.682	10.683	-0.001	89	226582	5.00	5.36	
86 Ethylene Dibromide	107	10.792	10.792	0.000	98	172553	5.00	5.51	
* 87 Chlorobenzene-d5 (IS)	117	11.219	11.219	0.000	85	1165175	10.0	10.0	
88 1-Chlorohexane	91	11.225	11.225	0.000	96	383492	5.00	5.27	
90 Chlorobenzene	112	11.243	11.243	0.000	95	735691	5.00	5.61	
S 89 Xylenes, Total	106				0			16.7	
91 1,1,1,2-Tetrachloroethane	131	11.329	11.323	0.006	95	260919	5.00	5.34	
92 Ethylbenzene	91	11.329	11.329	0.000	98	1300147	5.00	5.60	
93 m-Xylene & p-Xylene	106	11.445	11.445	0.000	0	1030810	10.0	11.3	
94 o-Xylene	106	11.774	11.768	0.006	96	484899	5.00	5.37	
95 Styrene	104	11.786	11.786	0.000	95	804124	5.00	5.59	
96 Bromoform	173	11.944	11.945	-0.001	97	132369	5.00	5.09	
97 Isopropylbenzene	105	12.066	12.066	0.000	96	1334032	5.00	5.58	
98 cis-1,4-Dichloro-2-butene	88		12.115					ND	
99 Cyclohexanone	55		12.152					ND	
$ 100 4-Bromofluorobenzene (Surr)	95	12.213	12.213	0.000	92	548070	10.0	9.91	
101 1,1,2,2-Tetrachloroethane	83	12.310	12.310	0.000	93	218472	5.00	5.19	
102 Bromobenzene	156	12.328	12.329	-0.001	95	311936	5.00	5.52	
103 trans-1,4-Dichloro-2-butene	53	12.335	12.335	0.000	91	231510	25.0	25.0	
104 1,2,3-Trichloropropane	110	12.359	12.359	0.000	83	64593	5.00	5.51	
105 N-Propylbenzene	91	12.396	12.396	0.000	99	1559917	5.00	5.59	
106 2-Chlorotoluene	126	12.475	12.475	0.000	97	308294	5.00	5.47	
107 1,3,5-Trimethylbenzene	105	12.530	12.530	0.000	94	1105104	5.00	5.44	
108 4-Chlorotoluene	126	12.566	12.566	0.000	97	310310	5.00	5.41	
109 tert-Butylbenzene	134	12.774	12.774	0.000	93	248338	5.00	5.45	
110 Pentachloroethane	167	12.804	12.804	0.000	93	197614	5.00	5.14	
111 1,2,4-Trimethylbenzene	105	12.816	12.816	0.000	97	1106779	5.00	5.29	
112 sec-Butylbenzene	105	12.932	12.938	-0.006	94	1475077	5.00	5.65	
113 1,3-Dichlorobenzene	146	13.036	13.036	0.000	98	598377	5.00	5.41	
114 4-Isopropyltoluene	119	13.042	13.042	0.000	97	1248619	5.00	5.54	
* 115 1,4-Dichlorobenzene-d4	152	13.091	13.091	0.000	94	651094	10.0	10.0	
116 1,4-Dichlorobenzene	146	13.109	13.109	0.000	95	602546	5.00	5.50	
117 1,2,3-Trimethylbenzene	120	13.115	13.115	0.000	98	487728	5.00	5.42	
118 Benzyl chloride	126	13.182	13.182	0.000	98	95092	5.00	4.93	
119 n-Butylbenzene	92	13.334	13.335	0.000	98	589144	5.00	5.61	
120 1,2-Dichlorobenzene	146	13.365	13.365	0.000	99	549114	5.00	5.44	
121 Hexachloroethane	117	13.572	13.572	0.000	0	2497		0.0581	
122 1,2-Dibromo-3-Chloropropane	155	13.907	13.908	-0.001	87	34683	5.00	4.99	
123 1,3,5-Trichlorobenzene	180	14.035	14.036	-0.001	98	420795	5.00	5.26	
124 1,2,4-Trichlorobenzene	180	14.456	14.456	0.000	94	351820	5.00	5.22	
125 Hexachlorobutadiene	225	14.541	14.542	-0.001	96	162690	5.00	5.72	
126 Naphthalene	128	14.639	14.639	0.000	97	663010	5.00	4.99	
127 1,2,3-Trichlorobenzene	180	14.779	14.779	0.000	96	296727	5.00	5.28	
128 Dodecane	57		0.000					ND	
156 2,3-Dibromopropene TIC	1		0.000					ND	
155 Ethylene oxide TIC	1		0.000					ND	
154 2-Bromo-3-chloropropene TIC	1		0.000					ND	
153 Epichlorohydrin TIC	1		0.000					ND	
152 Vinyl bromide TIC	1		0.000					ND	
151 Chloroacetaldehyde TIC	1		0.000					ND	
150 Epibromohydrin TIC	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
149 2-Chloroethanol TIC	1		0.000					ND	
148 Monochloroacetic acid TIC	1		0.000					ND	
147 2-Bromoethanol TIC	1		0.000					ND	
146 2,3-Dibromo-1-propanol TIC	1		0.000					ND	
144 2-ethoxy-2-methyl butane	1		0.000				ND	ND	
143 n-Decane	57		0.000					ND	
142 2-Bromo-1-chloropropane	1		0.000					ND	
157 3-Chloro-1,2-propanediol TIC	1		0.000					ND	
139 1-Bromo-3-Chloropropane	1		0.000					ND	
138 1,1-Dichloro-1-fluoroethane	1		0.000					ND	
137 2-Methylnaphthalene	142		0.000				ND	ND	
136 2-Chloro-1,1,1-Trifluoroethane	1		0.000					ND	
135 p-Diethylbenzene	1		0.000				ND	ND	
134 Isopropyl alcohol	45		0.000				ND	ND	
133 t-Amyl alcohol	1		0.000					ND	
132 Methylal	1		0.000					ND	
131 tert-Butyl Formate	1		0.000					ND	
130 Chlorotrifluoroethene	1		0.000					ND	
129 Propene oxide	1		0.000					ND	
141 1-Chloropropane	1		0.000					ND	
140 Ethanol	45	3.306	3.288	0.018	0	111034			NR

QC Flag Legend

Processing Flags
- NR - Missing Quant Standard
- ND - Not Detected or Marked ND

Review Flags
- M - Manually Integrated
- U - Marked Undetected

Reagents:

MSV_Q_QVOA6_00033	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_Q_QVOA1_00036	Amount Added:	5.38	Units: uL	
MSV_Q_QARC_00035	Amount Added:	5.38	Units: uL	
MSV_QGAS_826_00052	Amount Added:	5.38	Units: uL	
MSV_31_826ISS_00002	Amount Added:	5.00	Units: uL	Run Reagent

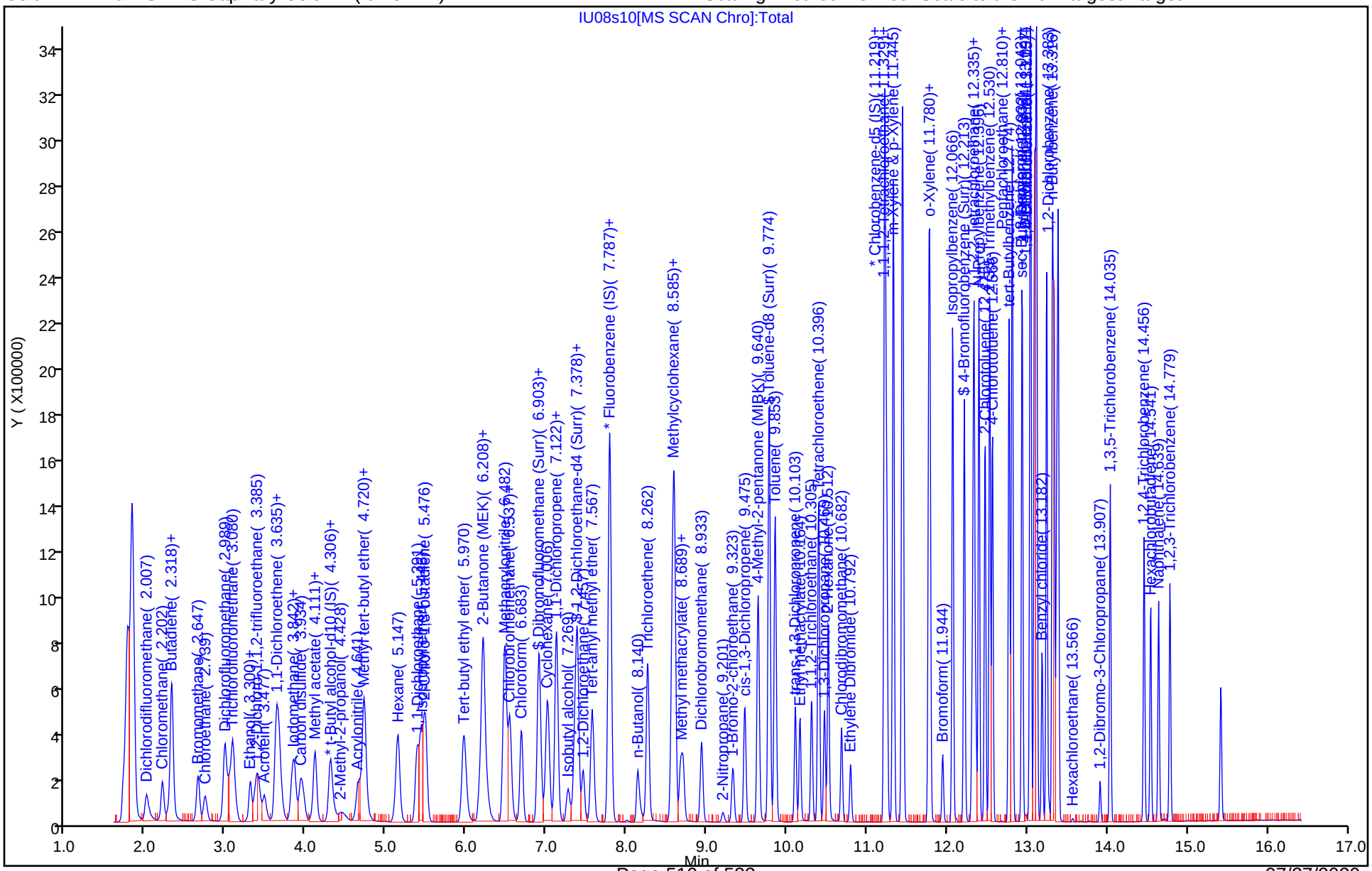
Report Date: 09-Jul-2020 09:13:49 Chrom Revision: 2.3 30-Jun-2020 12:05:54

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\19930\20200708-5039.b\IU08s10.D

Injection Date:	08-Jul-2020 13:55:30	Instrument ID:	19930	Operator ID:	jkh09052
Lims ID:	410-5692-A-6 MSD			Worklist Smp#:	17
Client ID:	HD-COD-SW-15-0/1-0				
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\20200708-5039.b\IU08s10.D				
Lims ID:	410-5692-A-6 MSD				
Client ID:	HD-COD-SW-15-0/1-0				
Sample Type:	MSD				
Inject. Date:	08-Jul-2020 13:55:30	ALS Bottle#:	16	Worklist Smp#:	17
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-5692-A-6 MSD				
Misc. Info.:	410-0005039-017				
Operator ID:	jkh09052	Instrument ID:	19930		
Method:	\\chromfs\Lancaster\ChromData\19930\20200708-5039.b\8260 25ml HP31.m				
Limit Group:	MSV - 8260C_D				
Last Update:	09-Jul-2020 09:13:09	Calib Date:	16-Mar-2020 18:31:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19930\20200317-1775.b\IM16I07.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1051				

First Level Reviewer: riehlc Date: 09-Jul-2020 08:35:38

Compound	Amount Added	Amount Recovered	% Rec.
$ 46 Dibromofluoromethane (Surr)	10.0	9.99	99.88
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.3	102.64
$ 75 Toluene-d8 (Surr)	10.0	9.98	99.76
$ 100 4-Bromofluorobenzene (Surr)	10.0	9.91	99.13

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-5692-1

SDG No.:

Instrument ID: 19930 Start Date: 03/16/2020 12:37

Analysis Batch Number: 6388 End Date: 03/16/2020 18:31

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 410-6388/1		03/16/2020 12:37	1	Im16T01.D	R-624SilMS 30m 0.25(mm)
IC 410-6388/3		03/16/2020 13:13	1		R-624SilMS 30m 0.25(mm)
IC 410-6388/4		03/16/2020 13:34	1		R-624SilMS 30m 0.25(mm)
IC 410-6388/5		03/16/2020 13:55	1		R-624SilMS 30m 0.25(mm)
IC 410-6388/6		03/16/2020 14:16	1		R-624SilMS 30m 0.25(mm)
IC 410-6388/7		03/16/2020 14:38	1		R-624SilMS 30m 0.25(mm)
IC 410-6388/8		03/16/2020 14:59	1		R-624SilMS 30m 0.25(mm)
IC 410-6388/9		03/16/2020 15:20	1		R-624SilMS 30m 0.25(mm)
IC 410-6388/12		03/16/2020 16:24	1	IM16I01.D	R-624SilMS 30m 0.25(mm)
ICIS 410-6388/13		03/16/2020 16:45	1	IM16I02.D	R-624SilMS 30m 0.25(mm)
IC 410-6388/14		03/16/2020 17:06	1	IM16I03.D	R-624SilMS 30m 0.25(mm)
IC 410-6388/15		03/16/2020 17:27	1	IM16I04.D	R-624SilMS 30m 0.25(mm)
IC 410-6388/16		03/16/2020 17:48	1	IM16I05.D	R-624SilMS 30m 0.25(mm)
IC 410-6388/17		03/16/2020 18:09	1	IM16I06.D	R-624SilMS 30m 0.25(mm)
IC 410-6388/18		03/16/2020 18:31	1	IM16I07.D	R-624SilMS 30m 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-5692-1

SDG No.:

Instrument ID: 19930 Start Date: 03/18/2020 09:11

Analysis Batch Number: 7691 End Date: 03/18/2020 11:11

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 410-7691/20		03/18/2020 09:11	1	IM18T01.D	R-624SilMS 30m 0.25(mm)
ICV 410-7691/21		03/18/2020 10:28	1	IM18S01.D	R-624SilMS 30m 0.25(mm)
ICV 410-7691/22		03/18/2020 11:11	1		R-624SilMS 30m 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-5692-1

SDG No.:

Instrument ID: 19930 Start Date: 07/08/2020 08:21

Analysis Batch Number: 20265 End Date: 07/08/2020 19:55

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 410-20265/1		07/08/2020 08:21	1	Iu08T03.D	R-624SilMS 30m 0.25(mm)
CCVIS 410-20265/3		07/08/2020 08:58	1	IU06C01.D	R-624SilMS 30m 0.25(mm)
LCS 410-20265/4		07/08/2020 09:19	1	IU06L01.D	R-624SilMS 30m 0.25(mm)
MB 410-20265/6		07/08/2020 10:01	1	iu06b01.D	R-624SilMS 30m 0.25(mm)
ZZZZZ		07/08/2020 10:23	1		R-624SilMS 30m 0.25(mm)
410-5692-14		07/08/2020 10:44	1	IU08s01.D	R-624SilMS 30m 0.25(mm)
ZZZZZ		07/08/2020 11:05	1		R-624SilMS 30m 0.25(mm)
410-5692-1		07/08/2020 11:27	1	IU08s03.D	R-624SilMS 30m 0.25(mm)
410-5692-2		07/08/2020 11:48	1	IU08s04.D	R-624SilMS 30m 0.25(mm)
410-5692-3		07/08/2020 12:09	1	IU08s05.D	R-624SilMS 30m 0.25(mm)
410-5692-4		07/08/2020 12:30	1	IU08s06.D	R-624SilMS 30m 0.25(mm)
410-5692-5		07/08/2020 12:51	1	IU08s07.D	R-624SilMS 30m 0.25(mm)
410-5692-6		07/08/2020 13:12	1	IU08s08.D	R-624SilMS 30m 0.25(mm)
410-5692-6 MS		07/08/2020 13:33	1	IU08s09.D	R-624SilMS 30m 0.25(mm)
410-5692-6 MSD		07/08/2020 13:55	1	IU08s10.D	R-624SilMS 30m 0.25(mm)
ZZZZZ		07/08/2020 14:16	10		R-624SilMS 30m 0.25(mm)
410-5692-7		07/08/2020 14:37	1	IU08s12.D	R-624SilMS 30m 0.25(mm)
410-5692-8		07/08/2020 14:59	1	IU08s13.D	R-624SilMS 30m 0.25(mm)
410-5692-9		07/08/2020 15:20	1	IU08s14.D	R-624SilMS 30m 0.25(mm)
410-5692-10		07/08/2020 15:41	1	IU08s15.D	R-624SilMS 30m 0.25(mm)
410-5692-11		07/08/2020 16:02	1	IU08s16.D	R-624SilMS 30m 0.25(mm)
410-5692-12		07/08/2020 16:23	1	IU08s17.D	R-624SilMS 30m 0.25(mm)
410-5692-13		07/08/2020 16:45	1	IU08s18.D	R-624SilMS 30m 0.25(mm)
ZZZZZ		07/08/2020 17:06	100		R-624SilMS 30m 0.25(mm)
ZZZZZ		07/08/2020 17:27	1000		R-624SilMS 30m 0.25(mm)
ZZZZZ		07/08/2020 17:48	20		R-624SilMS 30m 0.25(mm)
ZZZZZ		07/08/2020 18:31	200		R-624SilMS 30m 0.25(mm)
ZZZZZ		07/08/2020 18:52	2000		R-624SilMS 30m 0.25(mm)
ZZZZZ		07/08/2020 19:13	500		R-624SilMS 30m 0.25(mm)
ZZZZZ		07/08/2020 19:34	5		R-624SilMS 30m 0.25(mm)
ZZZZZ		07/08/2020 19:55	500		R-624SilMS 30m 0.25(mm)

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-5692-1

SDG No.:

Batch Number: 6388 Batch Start Date: 03/16/20 12:37 Batch Analyst: Campbell, Miranda E

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MSV_31_826ISS 00002	MSV_RV1_826 00008	MSV_RV4_826 00009	MSV_RV4GAS826 00022
BFB 410-6388/1		8260D		1 uL	1 uL				
IC 410-6388/12		8260D		25 mL	25 mL	5 uL	25 uL	25 uL	25 uL
ICIS 410-6388/13		8260D		25 mL	25 mL	5 uL	10 uL	10 uL	10 uL
IC 410-6388/14		8260D		25 mL	25 mL	5 uL	5 uL	5 uL	5 uL
IC 410-6388/15		8260D		25 mL	25 mL	5 uL	2 uL	2 uL	2 uL
IC 410-6388/16		8260D		25 mL	25 mL	5 uL	2 uL	2 uL	2 uL
IC 410-6388/17		8260D		25 mL	25 mL	5 uL	2 uL	2 uL	2 uL
IC 410-6388/18		8260D		25 mL	25 mL	5 uL	2 uL	2 uL	2 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_V_BFB 00002					
BFB 410-6388/1		8260D		1 uL					
IC 410-6388/12		8260D							
ICIS 410-6388/13		8260D							
IC 410-6388/14		8260D							
IC 410-6388/15		8260D							
IC 410-6388/16		8260D							
IC 410-6388/17		8260D							
IC 410-6388/18		8260D							

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.: 410-5692-1

SDG No.:

Batch Number: 7691 Batch Start Date: 03/18/20 09:11 Batch Analyst: Campbell, Miranda E

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MSV_31_826ISS 00002	MSV_Q_EE 00001	MSV_Q_ETBR 00002	MSV_Q_QARC 00018
BFB 410-7691/20		8260D		1 uL	1 uL				
ICV 410-7691/21		8260D		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 00018	MSV_Q_QVOA6 00017	MSV_QGAS_826 00022	MSV_V_BFB 00002		
BFB 410-7691/20		8260D					1 uL		
ICV 410-7691/21		8260D		12.5 uL	12.5 uL	12.5 uL			

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.: 410-5692-1

SDG No.:

Batch Number: 20265 Batch Start Date: 07/08/20 08:21 Batch Analyst: Riehl, Chelsea

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	ResidualChloCheck	MSV_31_826ISS 00002	MSV_Q_EE 00002
BFB 410-20265/1		8260D		1 uL	1 uL				
CCVIS 410-20265/3		8260D		25 mL	25 mL			5 uL	
LCS 410-20265/4		8260D		25 mL	25 mL			5 uL	12.5 uL
MB 410-20265/6		8260D		25 mL	25 mL			5 uL	
410-5692-A-14	HD-QC1-0/1-2	8260D	T	25 mL	25 mL	<2 SU	N	5 uL	
410-5692-A-1	HD-COD-SW-6-0/1-0	8260D	T	25 mL	25 mL	<2 SU	N	5 uL	
410-5692-A-2	HD-COD-SW-7-0/1-0	8260D	T	25 mL	25 mL	<2 SU	N	5 uL	
410-5692-A-3	HD-COD-SW-8-0/1-0	8260D	T	25 mL	25 mL	<2 SU	N	5 uL	
410-5692-A-4	HD-COD-SW-9-0/1-0	8260D	T	25 mL	25 mL	<2 SU	N	5 uL	
410-5692-A-5	HD-COD-SW-13-0/1-0	8260D	T	25 mL	25 mL	<2 SU	N	5 uL	
410-5692-A-6	HD-COD-SW-15-0/1-0	8260D	T	25 mL	25 mL	<2 SU	N	5 uL	
410-5692-A-6 MS	HD-COD-SW-15-0/1-0	8260D	T	25 mL	25 mL	<2 SU	N	5 uL	5.38 uL
410-5692-A-6 MSD	HD-COD-SW-15-0/1-0	8260D	T	25 mL	25 mL	<2 SU	N	5 uL	5.38 uL
410-5692-A-7	HD-COD-SW-16-0/1-0	8260D	T	25 mL	25 mL	<2 SU	N	5 uL	
410-5692-A-8	HD-COD-SW-17-0/1-0	8260D	T	25 mL	25 mL	<2 SU	N	5 uL	
410-5692-A-9	HD-COD-SW-26-0/1-0	8260D	T	25 mL	25 mL	<2 SU	N	5 uL	
410-5692-A-10	HD-COD-SW-27-0/1-0	8260D	T	25 mL	25 mL	<2 SU	N	5 uL	
410-5692-A-11	HD-COD-SW-28-0/1-0	8260D	T	25 mL	25 mL	<2 SU	N	5 uL	
410-5692-A-12	HD-COD-SW-29-0/1-0	8260D	T	25 mL	25 mL	<2 SU	N	5 uL	
410-5692-A-13	HD-QC1-0/1-1	8260D	T	25 mL	25 mL	<2 SU	N	5 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_Q_ETBR 00003	MSV_Q_QARC 00035	MSV_Q_QVOA1 00036	MSV_Q_QVOA6 00033	MSV_QGAS_826 00052	MSV_RV1_826 00017
BFB 410-20265/1		8260D							

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.: 410-5692-1

SDG No.:

Batch Number: 20265 Batch Start Date: 07/08/20 08:21 Batch Analyst: Riehl, Chelsea

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_Q_ETBR 00003	MSV_Q_QARC 00035	MSV_Q_QVOA1 00036	MSV_Q_QVOA6 00033	MSV_QGAS_826 00052	MSV_RV1_826 00017
CCVIS 410-20265/3		8260D							20 uL
LCS 410-20265/4		8260D		12.5 uL	12.5 uL	12.5 uL	12.5 uL	12.5 uL	
MB 410-20265/6		8260D							
410-5692-A-14	HD-QC1-0/1-2	8260D	T						
410-5692-A-1	HD-COD-SW-6-0/1-0	8260D	T						
410-5692-A-2	HD-COD-SW-7-0/1-0	8260D	T						
410-5692-A-3	HD-COD-SW-8-0/1-0	8260D	T						
410-5692-A-4	HD-COD-SW-9-0/1-0	8260D	T						
410-5692-A-5	HD-COD-SW-13-0/1-0	8260D	T						
410-5692-A-6	HD-COD-SW-15-0/1-0	8260D	T						
410-5692-A-6 MS	HD-COD-SW-15-0/1-0	8260D	T	5.38 uL	5.38 uL	5.38 uL	5.38 uL	5.38 uL	
410-5692-A-6 MSD	HD-COD-SW-15-0/1-0	8260D	T	5.38 uL	5.38 uL	5.38 uL	5.38 uL	5.38 uL	
410-5692-A-7	HD-COD-SW-16-0/1-0	8260D	T						
410-5692-A-8	HD-COD-SW-17-0/1-0	8260D	T						
410-5692-A-9	HD-COD-SW-26-0/1-0	8260D	T						
410-5692-A-10	HD-COD-SW-27-0/1-0	8260D	T						
410-5692-A-11	HD-COD-SW-28-0/1-0	8260D	T						
410-5692-A-12	HD-COD-SW-29-0/1-0	8260D	T						
410-5692-A-13	HD-QC1-0/1-1	8260D	T						

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_RV4_826 00019	MSV_RV4GAS826 00054	MSV_V_BFB 00002			
BFB 410-20265/1		8260D				1 uL			
CCVIS 410-20265/3		8260D		20 uL	20 uL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-5692-1

SDG No.:

Batch Number: 20265 Batch Start Date: 07/08/20 08:21 Batch Analyst: Riehl, Chelsea

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_RV4_826 00019	MSV_RV4GAS826 00054	MSV_V_BFB 00002			
LCS 410-20265/4		8260D							
MB 410-20265/6		8260D							
410-5692-A-14	HD-QC1-0/1-2	8260D	T						
410-5692-A-1	HD-COD-SW-6-0/1-0	8260D	T						
410-5692-A-2	HD-COD-SW-7-0/1-0	8260D	T						
410-5692-A-3	HD-COD-SW-8-0/1-0	8260D	T						
410-5692-A-4	HD-COD-SW-9-0/1-0	8260D	T						
410-5692-A-5	HD-COD-SW-13-0/1-0	8260D	T						
410-5692-A-6	HD-COD-SW-15-0/1-0	8260D	T						
410-5692-A-6 MS	HD-COD-SW-15-0/1-0	8260D	T						
410-5692-A-6 MSD	HD-COD-SW-15-0/1-0	8260D	T						
410-5692-A-7	HD-COD-SW-16-0/1-0	8260D	T						
410-5692-A-8	HD-COD-SW-17-0/1-0	8260D	T						
410-5692-A-9	HD-COD-SW-26-0/1-0	8260D	T						
410-5692-A-10	HD-COD-SW-27-0/1-0	8260D	T						
410-5692-A-11	HD-COD-SW-28-0/1-0	8260D	T						
410-5692-A-12	HD-COD-SW-29-0/1-0	8260D	T						
410-5692-A-13	HD-QC1-0/1-1	8260D	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

Env[illegible] s Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

410-5692 Chain of Custody

Sample # _____

Client:	Groundwater Sciences Corporation		
Project Name/#:	fYNOP Monthly Surface Water	Site ID #:	fYNOP, York PA
Project Manager:	Chris O'Neil	P.O. #:	10012.42
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	Analyses Requested: Aqueous VOCs via 8260C (low level - 25 ml purge)	Preservation Codes: H
HD-COD-SW-6-0/1-0	6/24/20	1035	X					X					3	X	
HD-COD-SW-7-0/1-0		1115	X					X					3	X	
HD-COD-SW-8-0/1-0		0915	X					X					3	X	
HD-COD-SW-9-0/1-0		1215	X					X					3	X	
HD-COD-SW-13-0/1-0		0935	X					X					3	X	
HD-COD-SW-15-0/1-0		1130	X					X					3	X	
HD-COD-SW-15-0/1-0 MS		1130	X					X					3	X	
HD-COD-SW-15-0/1-0 MSD		1130	X					X					3	X	
HD-COD-SW-16-0/1-0		1000	X					X					3	X	
HD-COD-SW-17-0/1-0	↓	1015	X					X					3	X	

For Lab Use Only

SF #: _____

SCR #: _____

Preservation Codes

H = HCl (circled) 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
[signature]	6/24/20	1445	Dennis Rowe	6/24/20	1445
Dennis Rowe	6/24	1530	[signature]	6/24/20	1530
[signature]	6/25	1310			
			[signature]	6/25/20	1310

Relinquished by Commercial Carrier:

UPS _____ FedEx _____ Other X

Temperature upon receipt 3.2 °C

Eurofins Lancaster Laboratories Environmental, LLC • 2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300

7045 0216

TMDL/TR

07/27/2020 AP

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

Acct. # _____ Group # _____ Sample # _____

Client: **Groundwater Sciences Corporation**			
Project Name/#: fYNOP Monthly Surface Water	Site ID #: fYNOP, York PA		
Project Manager: Chris O'Neil	P.O. #: 10012.42		
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: Trip Blank	Total # of Containers	Analyses Requested: Aqueous VOCs via 8260C (low level - 25 ml purge)	Preservation Codes: H
HD-COD-SW-26-0/1-0	6/24/20	1055	X			X		3	X	
HD-COD-SW-27-0/1-0		1125	X			X		3	X	
HD-COD-SW-28-0/1-0		1235	X			X		3	X	
HD-COD-SW-29-0/1-0		0905	X			X		3	X	
HD-QC1-0/1-1		1200	X			X		3	X	
HD-QC1-0/1-2		—	X				X	2	X	

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
[signature]	6/24/20	1445	Dennis Rowe	6/24/20	1445
Dennis Rowe	6/24	1530	[signature]	6/24/20	1530
[signature]	6/25	1310			
			[signature]	6/25/20	1310

Relinquished by Commercial Carrier:

UPS _____ FedEx _____ Other X

Temperature upon receipt 3.2 °C

TMR/JR

Login Sample Receipt Checklist

Client: Groundwater Sciences Corporation

Job Number: 410-5692-1

Login Number: 5692
List Number: 1
Creator: Rivera-Santa, Julissa

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 is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable (</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	N/A	
Is the Field Sampler's name present on COC?	True	
Sample Preservation Verified.	N/A	
Residual Chlorine Checked.	N/A	
Sample custody seals are intact.	N/A	