ANALYTICAL REPORT

Job Number: 410-27746-1

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
2/9/2021 1:04 PM

Marrissa C Williams, Project Manager
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02/09/2021

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

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

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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
^c	CCV Recovery is outside acceptance limits.
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
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Receipt
The samples were received on 1/27/2021 5:55 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.3°C

Receipt Exceptions
The container label for the following sample(s) did not match the information listed on the Chain-of-Custody (COC): Sample ID: HD-COD-SW-15-0/1-0 MSD has one container that lists a collection time of 1143, where the COC lists 1145. The client was contacted and confirmed that COC time should be followed.

GC/MS VOA
Method 8260D_LL: The continuing calibration verification (CCV) associated with batch 410-90352 recovered outside acceptance criteria, low biased, for Chloroethane, Bromomethane and Vinyl chloride. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Non-detections of the affected analytes are reported. Any detections are considered estimated.

Method 8260D_LL: The continuing calibration verification (CCV) associated with batch 410-90352 recovered above the upper control limit for Chloromethane. Non-detections of the affected analytes are reported. Any detections are considered estimated.

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: 410-27746-1

Client Sample ID: HD-COD-SW-6-0/1-0 — Lab Sample ID: 410-27746-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	2.4	J	5.0	0.90	ug/L	1		8260D	Total/NA

Client Sample ID: HD-COD-SW-7-0/1-0 — Lab Sample ID: 410-27746-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.0	J	5.0	0.90	ug/L	1		8260D	Total/NA
Tetrachloroethene	0.066	J	0.50	0.060	ug/L	1		8260D	Total/NA

Client Sample ID: HD-COD-SW-8-0/1-0 — Lab Sample ID: 410-27746-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	1.6	J	5.0	0.90	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	0.092	J	0.50	0.050	ug/L	1		8260D	Total/NA
Tetrachloroethene	0.062	J	0.50	0.060	ug/L	1		8260D	Total/NA
Trichloroethene	0.12	J	0.50	0.060	ug/L	1		8260D	Total/NA

Client Sample ID: HD-COD-SW-9-0/1-0 — Lab Sample ID: 410-27746-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	2.7	J	5.0	0.90	ug/L	1		8260D	Total/NA
Tetrachloroethene	0.082	J	0.50	0.060	ug/L	1		8260D	Total/NA

Client Sample ID: HD-COD-SW-13-0/1-0 — Lab Sample ID: 410-27746-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	1.6	J	5.0	0.90	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	0.092	J	0.50	0.050	ug/L	1		8260D	Total/NA
Tetrachloroethene	0.064	J	0.50	0.060	ug/L	1		8260D	Total/NA

Client Sample ID: HD-COD-SW-15-0/1-0 — Lab Sample ID: 410-27746-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.092	J	0.50	0.060	ug/L	1		8260D	Total/NA
1,1-Dichloroethene	0.073	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	0.66		0.50	0.050	ug/L	1		8260D	Total/NA
Tetrachloroethene	2.1		0.50	0.060	ug/L	1		8260D	Total/NA
Trichloroethene	0.78		0.50	0.060	ug/L	1		8260D	Total/NA

Client Sample ID: HD-COD-SW-16-0/1-0 — Lab Sample ID: 410-27746-7

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
Chloromethane	0.064	J ^c	0.50	0.060	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	0.092	J	0.50	0.050	ug/L	1		8260D	Total/NA
Trichloroethene	0.10	J	0.50	0.060	ug/L	1		8260D	Total/NA

Client Sample ID: HD-COD-SW-17-0/1-0 — Lab Sample ID: 410-27746-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.12	J	0.50	0.060	ug/L	1		8260D	Total/NA
1,1-Dichloroethane	0.071	J	0.50	0.070	ug/L	1		8260D	Total/NA
1,1-Dichloroethene	0.094	J	0.50	0.060	ug/L	1		8260D	Total/NA
Chloroform	0.24	J	0.50	0.090	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: 410-27746-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	0.81		0.50	0.050	ug/L	1		8260D	Total/NA
Tetrachloroethene	3.3		0.50	0.060	ug/L	1		8260D	Total/NA
Trichloroethene	1.2		0.50	0.060	ug/L	1		8260D	Total/NA

Client Sample ID: HD-COD-SW-26-0/1-0 — Lab Sample ID: 410-27746-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	0.095	J	0.50	0.060	ug/L	1		8260D	Total/NA
Acetone	2.6	J	5.0	0.90	ug/L	1		8260D	Total/NA
Chloroform	0.35	J	0.50	0.090	ug/L	1		8260D	Total/NA
Tetrachloroethene	2.0		0.50	0.060	ug/L	1		8260D	Total/NA
Trichloroethene	0.13	J	0.50	0.060	ug/L	1		8260D	Total/NA

Client Sample ID: HD-COD-SW-27-0/1-0 — Lab Sample ID: 410-27746-10

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
cis-1,2-Dichloroethene	0.11	J	0.50	0.050	ug/L	1		8260D	Total/NA
Tetrachloroethene	0.13	J	0.50	0.060	ug/L	1		8260D	Total/NA
Trichloroethene	0.15	J	0.50	0.060	ug/L	1		8260D	Total/NA

Client Sample ID: HD-COD-SW-28-0/1-0 — Lab Sample ID: 410-27746-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.7	J	5.0	0.90	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	0.059	J	0.50	0.050	ug/L	1		8260D	Total/NA
Tetrachloroethene	0.080	J	0.50	0.060	ug/L	1		8260D	Total/NA
Trichloroethene	0.091	J	0.50	0.060	ug/L	1		8260D	Total/NA

Client Sample ID: HD-COD-SW-29-0/1-0 — Lab Sample ID: 410-27746-12

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	0.084	J	0.50	0.050	ug/L	1		8260D	Total/NA
Tetrachloroethene	0.061	J	0.50	0.060	ug/L	1		8260D	Total/NA

Client Sample ID: HD-QC1-0/1-1 — Lab Sample ID: 410-27746-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.12	J	0.50	0.060	ug/L	1		8260D	Total/NA
1,1-Dichloroethene	0.090	J	0.50	0.060	ug/L	1		8260D	Total/NA
Chloroform	0.25	J	0.50	0.090	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	0.81		0.50	0.050	ug/L	1		8260D	Total/NA
Tetrachloroethene	3.2		0.50	0.060	ug/L	1		8260D	Total/NA
Trichloroethene	1.2		0.50	0.060	ug/L	1		8260D	Total/NA

Client Sample ID: HD-QC1-0/1-2 — Lab Sample ID: 410-27746-14

No Detections.

This Detection Summary does not include radiochemical test results.

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

Date Collected: 01/26/21 10:50
Date Received: 01/27/21 17:55

Lab Sample ID: 410-27746-1

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			02/03/21 13:44	1
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			02/03/21 13:44	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			02/03/21 13:44	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			02/03/21 13:44	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			02/03/21 13:44	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			02/03/21 13:44	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			02/03/21 13:44	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			02/03/21 13:44	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			02/03/21 13:44	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			02/03/21 13:44	1
2-Hexanone	ND		5.0	0.60	ug/L			02/03/21 13:44	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			02/03/21 13:44	1
Acetone	**2.4**	**J**	5.0	0.90	ug/L			02/03/21 13:44	1
Benzene	ND		0.50	0.050	ug/L			02/03/21 13:44	1
Bromochloromethane	ND		0.50	0.050	ug/L			02/03/21 13:44	1
Bromodichloromethane	ND		0.50	0.050	ug/L			02/03/21 13:44	1
Bromoform	ND		1.0	0.30	ug/L			02/03/21 13:44	1
Bromomethane	ND	^c	0.50	0.070	ug/L			02/03/21 13:44	1
Carbon disulfide	ND		1.0	0.060	ug/L			02/03/21 13:44	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			02/03/21 13:44	1
Chlorobenzene	ND		0.50	0.060	ug/L			02/03/21 13:44	1
Chloroethane	ND	^c	0.50	0.070	ug/L			02/03/21 13:44	1
Chloroform	ND		0.50	0.090	ug/L			02/03/21 13:44	1
Chloromethane	ND	^c	0.50	0.060	ug/L			02/03/21 13:44	1
cis-1,2-Dichloroethene	ND		0.50	0.050	ug/L			02/03/21 13:44	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			02/03/21 13:44	1
Dibromochloromethane	ND		0.50	0.070	ug/L			02/03/21 13:44	1
Ethylbenzene	ND		0.50	0.060	ug/L			02/03/21 13:44	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			02/03/21 13:44	1
Methylene Chloride	ND		0.50	0.070	ug/L			02/03/21 13:44	1
Styrene	ND		0.50	0.050	ug/L			02/03/21 13:44	1
Tetrachloroethene	ND		0.50	0.060	ug/L			02/03/21 13:44	1
Toluene	ND		0.50	0.070	ug/L			02/03/21 13:44	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			02/03/21 13:44	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			02/03/21 13:44	1
Trichloroethene	ND		0.50	0.060	ug/L			02/03/21 13:44	1
Vinyl chloride	ND	^c	0.50	0.10	ug/L			02/03/21 13:44	1
Xylenes, Total	ND		1.0	0.15	ug/L			02/03/21 13:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*80 - 120*		*02/03/21 13:44*	*1*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*		*02/03/21 13:44*	*1*
Dibromofluoromethane (Surr)	*97*		*80 - 120*		*02/03/21 13:44*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*02/03/21 13:44*	*1*

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

Date Collected: 01/26/21 11:30
Date Received: 01/27/21 17:55

Lab Sample ID: 410-27746-2

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			02/03/21 14:06	1
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			02/03/21 14:06	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			02/03/21 14:06	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			02/03/21 14:06	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			02/03/21 14:06	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			02/03/21 14:06	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			02/03/21 14:06	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			02/03/21 14:06	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			02/03/21 14:06	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			02/03/21 14:06	1
2-Hexanone	ND		5.0	0.60	ug/L			02/03/21 14:06	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			02/03/21 14:06	1
Acetone	**3.0**	**J**	5.0	0.90	ug/L			02/03/21 14:06	1
Benzene	ND		0.50	0.050	ug/L			02/03/21 14:06	1
Bromochloromethane	ND		0.50	0.050	ug/L			02/03/21 14:06	1
Bromodichloromethane	ND		0.50	0.050	ug/L			02/03/21 14:06	1
Bromoform	ND		1.0	0.30	ug/L			02/03/21 14:06	1
Bromomethane	ND	^c	0.50	0.070	ug/L			02/03/21 14:06	1
Carbon disulfide	ND		1.0	0.060	ug/L			02/03/21 14:06	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			02/03/21 14:06	1
Chlorobenzene	ND		0.50	0.060	ug/L			02/03/21 14:06	1
Chloroethane	ND	^c	0.50	0.070	ug/L			02/03/21 14:06	1
Chloroform	ND		0.50	0.090	ug/L			02/03/21 14:06	1
Chloromethane	ND	^c	0.50	0.060	ug/L			02/03/21 14:06	1
cis-1,2-Dichloroethene	ND		0.50	0.050	ug/L			02/03/21 14:06	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			02/03/21 14:06	1
Dibromochloromethane	ND		0.50	0.070	ug/L			02/03/21 14:06	1
Ethylbenzene	ND		0.50	0.060	ug/L			02/03/21 14:06	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			02/03/21 14:06	1
Methylene Chloride	ND		0.50	0.070	ug/L			02/03/21 14:06	1
Styrene	ND		0.50	0.050	ug/L			02/03/21 14:06	1
Tetrachloroethene	**0.066**	**J**	0.50	0.060	ug/L			02/03/21 14:06	1
Toluene	ND		0.50	0.070	ug/L			02/03/21 14:06	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			02/03/21 14:06	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			02/03/21 14:06	1
Trichloroethene	ND		0.50	0.060	ug/L			02/03/21 14:06	1
Vinyl chloride	ND	^c	0.50	0.10	ug/L			02/03/21 14:06	1
Xylenes, Total	ND		1.0	0.15	ug/L			02/03/21 14:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*80 - 120*		*02/03/21 14:06*	*1*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*		*02/03/21 14:06*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 120*		*02/03/21 14:06*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*02/03/21 14:06*	*1*

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

Date Collected: 01/26/21 09:25
Date Received: 01/27/21 17:55

Lab Sample ID: 410-27746-3

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			02/03/21 14:29	1
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			02/03/21 14:29	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			02/03/21 14:29	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			02/03/21 14:29	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			02/03/21 14:29	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			02/03/21 14:29	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			02/03/21 14:29	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			02/03/21 14:29	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			02/03/21 14:29	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			02/03/21 14:29	1
2-Hexanone	ND		5.0	0.60	ug/L			02/03/21 14:29	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			02/03/21 14:29	1
Acetone	**1.6**	**J**	5.0	0.90	ug/L			02/03/21 14:29	1
Benzene	ND		0.50	0.050	ug/L			02/03/21 14:29	1
Bromochloromethane	ND		0.50	0.050	ug/L			02/03/21 14:29	1
Bromodichloromethane	ND		0.50	0.050	ug/L			02/03/21 14:29	1
Bromoform	ND		1.0	0.30	ug/L			02/03/21 14:29	1
Bromomethane	ND	^c	0.50	0.070	ug/L			02/03/21 14:29	1
Carbon disulfide	ND		1.0	0.060	ug/L			02/03/21 14:29	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			02/03/21 14:29	1
Chlorobenzene	ND		0.50	0.060	ug/L			02/03/21 14:29	1
Chloroethane	ND	^c	0.50	0.070	ug/L			02/03/21 14:29	1
Chloroform	ND		0.50	0.090	ug/L			02/03/21 14:29	1
Chloromethane	ND	^c	0.50	0.060	ug/L			02/03/21 14:29	1
cis-1,2-Dichloroethene	**0.092**	**J**	0.50	0.050	ug/L			02/03/21 14:29	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			02/03/21 14:29	1
Dibromochloromethane	ND		0.50	0.070	ug/L			02/03/21 14:29	1
Ethylbenzene	ND		0.50	0.060	ug/L			02/03/21 14:29	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			02/03/21 14:29	1
Methylene Chloride	ND		0.50	0.070	ug/L			02/03/21 14:29	1
Styrene	ND		0.50	0.050	ug/L			02/03/21 14:29	1
Tetrachloroethene	**0.062**	**J**	0.50	0.060	ug/L			02/03/21 14:29	1
Toluene	ND		0.50	0.070	ug/L			02/03/21 14:29	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			02/03/21 14:29	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			02/03/21 14:29	1
Trichloroethene	**0.12**	**J**	0.50	0.060	ug/L			02/03/21 14:29	1
Vinyl chloride	ND	^c	0.50	0.10	ug/L			02/03/21 14:29	1
Xylenes, Total	ND		1.0	0.15	ug/L			02/03/21 14:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*80 - 120*		*02/03/21 14:29*	*1*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*02/03/21 14:29*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 120*		*02/03/21 14:29*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*02/03/21 14:29*	*1*

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

Date Collected: 01/26/21 12:50
Date Received: 01/27/21 17:55

Lab Sample ID: 410-27746-4

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			02/03/21 14:51	1
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			02/03/21 14:51	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			02/03/21 14:51	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			02/03/21 14:51	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			02/03/21 14:51	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			02/03/21 14:51	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			02/03/21 14:51	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			02/03/21 14:51	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			02/03/21 14:51	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			02/03/21 14:51	1
2-Hexanone	ND		5.0	0.60	ug/L			02/03/21 14:51	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			02/03/21 14:51	1
Acetone	**2.7**	**J**	5.0	0.90	ug/L			02/03/21 14:51	1
Benzene	ND		0.50	0.050	ug/L			02/03/21 14:51	1
Bromochloromethane	ND		0.50	0.050	ug/L			02/03/21 14:51	1
Bromodichloromethane	ND		0.50	0.050	ug/L			02/03/21 14:51	1
Bromoform	ND		1.0	0.30	ug/L			02/03/21 14:51	1
Bromomethane	ND	^c	0.50	0.070	ug/L			02/03/21 14:51	1
Carbon disulfide	ND		1.0	0.060	ug/L			02/03/21 14:51	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			02/03/21 14:51	1
Chlorobenzene	ND		0.50	0.060	ug/L			02/03/21 14:51	1
Chloroethane	ND	^c	0.50	0.070	ug/L			02/03/21 14:51	1
Chloroform	ND		0.50	0.090	ug/L			02/03/21 14:51	1
Chloromethane	ND	^c	0.50	0.060	ug/L			02/03/21 14:51	1
cis-1,2-Dichloroethene	ND		0.50	0.050	ug/L			02/03/21 14:51	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			02/03/21 14:51	1
Dibromochloromethane	ND		0.50	0.070	ug/L			02/03/21 14:51	1
Ethylbenzene	ND		0.50	0.060	ug/L			02/03/21 14:51	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			02/03/21 14:51	1
Methylene Chloride	ND		0.50	0.070	ug/L			02/03/21 14:51	1
Styrene	ND		0.50	0.050	ug/L			02/03/21 14:51	1
Tetrachloroethene	**0.082**	**J**	0.50	0.060	ug/L			02/03/21 14:51	1
Toluene	ND		0.50	0.070	ug/L			02/03/21 14:51	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			02/03/21 14:51	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			02/03/21 14:51	1
Trichloroethene	ND		0.50	0.060	ug/L			02/03/21 14:51	1
Vinyl chloride	ND	^c	0.50	0.10	ug/L			02/03/21 14:51	1
Xylenes, Total	ND		1.0	0.15	ug/L			02/03/21 14:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*80 - 120*		*02/03/21 14:51*	*1*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*		*02/03/21 14:51*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 120*		*02/03/21 14:51*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*02/03/21 14:51*	*1*

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

Date Collected: 01/26/21 09:45
Date Received: 01/27/21 17:55

Lab Sample ID: 410-27746-5

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			02/03/21 15:13	1
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			02/03/21 15:13	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			02/03/21 15:13	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			02/03/21 15:13	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			02/03/21 15:13	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			02/03/21 15:13	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			02/03/21 15:13	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			02/03/21 15:13	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			02/03/21 15:13	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			02/03/21 15:13	1
2-Hexanone	ND		5.0	0.60	ug/L			02/03/21 15:13	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			02/03/21 15:13	1
Acetone	**1.6**	**J**	5.0	0.90	ug/L			02/03/21 15:13	1
Benzene	ND		0.50	0.050	ug/L			02/03/21 15:13	1
Bromochloromethane	ND		0.50	0.050	ug/L			02/03/21 15:13	1
Bromodichloromethane	ND		0.50	0.050	ug/L			02/03/21 15:13	1
Bromoform	ND		1.0	0.30	ug/L			02/03/21 15:13	1
Bromomethane	ND	^c	0.50	0.070	ug/L			02/03/21 15:13	1
Carbon disulfide	ND		1.0	0.060	ug/L			02/03/21 15:13	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			02/03/21 15:13	1
Chlorobenzene	ND		0.50	0.060	ug/L			02/03/21 15:13	1
Chloroethane	ND	^c	0.50	0.070	ug/L			02/03/21 15:13	1
Chloroform	ND		0.50	0.090	ug/L			02/03/21 15:13	1
Chloromethane	ND	^c	0.50	0.060	ug/L			02/03/21 15:13	1
cis-1,2-Dichloroethene	**0.092**	**J**	0.50	0.050	ug/L			02/03/21 15:13	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			02/03/21 15:13	1
Dibromochloromethane	ND		0.50	0.070	ug/L			02/03/21 15:13	1
Ethylbenzene	ND		0.50	0.060	ug/L			02/03/21 15:13	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			02/03/21 15:13	1
Methylene Chloride	ND		0.50	0.070	ug/L			02/03/21 15:13	1
Styrene	ND		0.50	0.050	ug/L			02/03/21 15:13	1
Tetrachloroethene	**0.064**	**J**	0.50	0.060	ug/L			02/03/21 15:13	1
Toluene	ND		0.50	0.070	ug/L			02/03/21 15:13	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			02/03/21 15:13	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			02/03/21 15:13	1
Trichloroethene	ND		0.50	0.060	ug/L			02/03/21 15:13	1
Vinyl chloride	ND	^c	0.50	0.10	ug/L			02/03/21 15:13	1
Xylenes, Total	ND		1.0	0.15	ug/L			02/03/21 15:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*80 - 120*		*02/03/21 15:13*	*1*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*		*02/03/21 15:13*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 120*		*02/03/21 15:13*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*02/03/21 15:13*	*1*

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

Date Collected: 01/26/21 11:45
Date Received: 01/27/21 17:55

Lab Sample ID: 410-27746-6

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			02/03/21 15:35	1
1,1,1-Trichloroethane	**0.092**	**J**	0.50	0.060	ug/L			02/03/21 15:35	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			02/03/21 15:35	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			02/03/21 15:35	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			02/03/21 15:35	1
1,1-Dichloroethene	**0.073**	**J**	0.50	0.060	ug/L			02/03/21 15:35	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			02/03/21 15:35	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			02/03/21 15:35	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			02/03/21 15:35	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			02/03/21 15:35	1
2-Hexanone	ND		5.0	0.60	ug/L			02/03/21 15:35	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			02/03/21 15:35	1
Acetone	ND		5.0	0.90	ug/L			02/03/21 15:35	1
Benzene	ND		0.50	0.050	ug/L			02/03/21 15:35	1
Bromochloromethane	ND		0.50	0.050	ug/L			02/03/21 15:35	1
Bromodichloromethane	ND		0.50	0.050	ug/L			02/03/21 15:35	1
Bromoform	ND		1.0	0.30	ug/L			02/03/21 15:35	1
Bromomethane	ND	^c	0.50	0.070	ug/L			02/03/21 15:35	1
Carbon disulfide	ND		1.0	0.060	ug/L			02/03/21 15:35	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			02/03/21 15:35	1
Chlorobenzene	ND		0.50	0.060	ug/L			02/03/21 15:35	1
Chloroethane	ND	^c	0.50	0.070	ug/L			02/03/21 15:35	1
Chloroform	**0.26**	**J**	0.50	0.090	ug/L			02/03/21 15:35	1
Chloromethane	ND	^c	0.50	0.060	ug/L			02/03/21 15:35	1
cis-1,2-Dichloroethene	**0.66**		0.50	0.050	ug/L			02/03/21 15:35	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			02/03/21 15:35	1
Dibromochloromethane	ND		0.50	0.070	ug/L			02/03/21 15:35	1
Ethylbenzene	ND		0.50	0.060	ug/L			02/03/21 15:35	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			02/03/21 15:35	1
Methylene Chloride	ND		0.50	0.070	ug/L			02/03/21 15:35	1
Styrene	ND		0.50	0.050	ug/L			02/03/21 15:35	1
Tetrachloroethene	**2.1**		0.50	0.060	ug/L			02/03/21 15:35	1
Toluene	ND		0.50	0.070	ug/L			02/03/21 15:35	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			02/03/21 15:35	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			02/03/21 15:35	1
Trichloroethene	**0.78**		0.50	0.060	ug/L			02/03/21 15:35	1
Vinyl chloride	ND	^c	0.50	0.10	ug/L			02/03/21 15:35	1
Xylenes, Total	ND		1.0	0.15	ug/L			02/03/21 15:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*80 - 120*		*02/03/21 15:35*	*1*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*02/03/21 15:35*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 120*		*02/03/21 15:35*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*02/03/21 15:35*	*1*

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

Date Collected: 01/26/21 10:10
Date Received: 01/27/21 17:55

Lab Sample ID: 410-27746-7

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			02/03/21 16:42	1
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			02/03/21 16:42	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			02/03/21 16:42	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			02/03/21 16:42	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			02/03/21 16:42	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			02/03/21 16:42	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			02/03/21 16:42	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			02/03/21 16:42	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			02/03/21 16:42	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			02/03/21 16:42	1
2-Hexanone	ND		5.0	0.60	ug/L			02/03/21 16:42	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			02/03/21 16:42	1
Acetone	**1.9**	**J**	5.0	0.90	ug/L			02/03/21 16:42	1
Benzene	ND		0.50	0.050	ug/L			02/03/21 16:42	1
Bromochloromethane	ND		0.50	0.050	ug/L			02/03/21 16:42	1
Bromodichloromethane	ND		0.50	0.050	ug/L			02/03/21 16:42	1
Bromoform	ND		1.0	0.30	ug/L			02/03/21 16:42	1
Bromomethane	ND	^c	0.50	0.070	ug/L			02/03/21 16:42	1
Carbon disulfide	ND		1.0	0.060	ug/L			02/03/21 16:42	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			02/03/21 16:42	1
Chlorobenzene	ND		0.50	0.060	ug/L			02/03/21 16:42	1
Chloroethane	ND	^c	0.50	0.070	ug/L			02/03/21 16:42	1
Chloroform	ND		0.50	0.090	ug/L			02/03/21 16:42	1
Chloromethane	**0.064**	**J ^c**	0.50	0.060	ug/L			02/03/21 16:42	1
cis-1,2-Dichloroethene	**0.092**	**J**	0.50	0.050	ug/L			02/03/21 16:42	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			02/03/21 16:42	1
Dibromochloromethane	ND		0.50	0.070	ug/L			02/03/21 16:42	1
Ethylbenzene	ND		0.50	0.060	ug/L			02/03/21 16:42	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			02/03/21 16:42	1
Methylene Chloride	ND		0.50	0.070	ug/L			02/03/21 16:42	1
Styrene	ND		0.50	0.050	ug/L			02/03/21 16:42	1
Tetrachloroethene	ND		0.50	0.060	ug/L			02/03/21 16:42	1
Toluene	ND		0.50	0.070	ug/L			02/03/21 16:42	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			02/03/21 16:42	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			02/03/21 16:42	1
Trichloroethene	**0.10**	**J**	0.50	0.060	ug/L			02/03/21 16:42	1
Vinyl chloride	ND	^c	0.50	0.10	ug/L			02/03/21 16:42	1
Xylenes, Total	ND		1.0	0.15	ug/L			02/03/21 16:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*80 - 120*		*02/03/21 16:42*	*1*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*02/03/21 16:42*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 120*		*02/03/21 16:42*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*02/03/21 16:42*	*1*

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

Date Collected: 01/26/21 10:20
Date Received: 01/27/21 17:55

Lab Sample ID: 410-27746-8

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			02/03/21 17:04	1
1,1,1-Trichloroethane	**0.12**	**J**	0.50	0.060	ug/L			02/03/21 17:04	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			02/03/21 17:04	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			02/03/21 17:04	1
1,1-Dichloroethane	**0.071**	**J**	0.50	0.070	ug/L			02/03/21 17:04	1
1,1-Dichloroethene	**0.094**	**J**	0.50	0.060	ug/L			02/03/21 17:04	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			02/03/21 17:04	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			02/03/21 17:04	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			02/03/21 17:04	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			02/03/21 17:04	1
2-Hexanone	ND		5.0	0.60	ug/L			02/03/21 17:04	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			02/03/21 17:04	1
Acetone	ND		5.0	0.90	ug/L			02/03/21 17:04	1
Benzene	ND		0.50	0.050	ug/L			02/03/21 17:04	1
Bromochloromethane	ND		0.50	0.050	ug/L			02/03/21 17:04	1
Bromodichloromethane	ND		0.50	0.050	ug/L			02/03/21 17:04	1
Bromoform	ND		1.0	0.30	ug/L			02/03/21 17:04	1
Bromomethane	ND	^c	0.50	0.070	ug/L			02/03/21 17:04	1
Carbon disulfide	ND		1.0	0.060	ug/L			02/03/21 17:04	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			02/03/21 17:04	1
Chlorobenzene	ND		0.50	0.060	ug/L			02/03/21 17:04	1
Chloroethane	ND	^c	0.50	0.070	ug/L			02/03/21 17:04	1
Chloroform	**0.24**	**J**	0.50	0.090	ug/L			02/03/21 17:04	1
Chloromethane	ND	^c	0.50	0.060	ug/L			02/03/21 17:04	1
cis-1,2-Dichloroethene	**0.81**		0.50	0.050	ug/L			02/03/21 17:04	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			02/03/21 17:04	1
Dibromochloromethane	ND		0.50	0.070	ug/L			02/03/21 17:04	1
Ethylbenzene	ND		0.50	0.060	ug/L			02/03/21 17:04	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			02/03/21 17:04	1
Methylene Chloride	ND		0.50	0.070	ug/L			02/03/21 17:04	1
Styrene	ND		0.50	0.050	ug/L			02/03/21 17:04	1
Tetrachloroethene	**3.3**		0.50	0.060	ug/L			02/03/21 17:04	1
Toluene	ND		0.50	0.070	ug/L			02/03/21 17:04	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			02/03/21 17:04	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			02/03/21 17:04	1
Trichloroethene	**1.2**		0.50	0.060	ug/L			02/03/21 17:04	1
Vinyl chloride	ND	^c	0.50	0.10	ug/L			02/03/21 17:04	1
Xylenes, Total	ND		1.0	0.15	ug/L			02/03/21 17:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*80 - 120*		*02/03/21 17:04*	*1*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*		*02/03/21 17:04*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 120*		*02/03/21 17:04*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*02/03/21 17:04*	*1*

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

Date Collected: 01/26/21 11:10
Date Received: 01/27/21 17:55

Lab Sample ID: 410-27746-9

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			02/03/21 17:27	1
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			02/03/21 17:27	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			02/03/21 17:27	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			02/03/21 17:27	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			02/03/21 17:27	1
1,1-Dichloroethene	**0.095**	**J**	0.50	0.060	ug/L			02/03/21 17:27	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			02/03/21 17:27	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			02/03/21 17:27	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			02/03/21 17:27	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			02/03/21 17:27	1
2-Hexanone	ND		5.0	0.60	ug/L			02/03/21 17:27	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			02/03/21 17:27	1
Acetone	**2.6**	**J**	5.0	0.90	ug/L			02/03/21 17:27	1
Benzene	ND		0.50	0.050	ug/L			02/03/21 17:27	1
Bromochloromethane	ND		0.50	0.050	ug/L			02/03/21 17:27	1
Bromodichloromethane	ND		0.50	0.050	ug/L			02/03/21 17:27	1
Bromoform	ND		1.0	0.30	ug/L			02/03/21 17:27	1
Bromomethane	ND	^c	0.50	0.070	ug/L			02/03/21 17:27	1
Carbon disulfide	ND		1.0	0.060	ug/L			02/03/21 17:27	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			02/03/21 17:27	1
Chlorobenzene	ND		0.50	0.060	ug/L			02/03/21 17:27	1
Chloroethane	ND	^c	0.50	0.070	ug/L			02/03/21 17:27	1
Chloroform	**0.35**	**J**	0.50	0.090	ug/L			02/03/21 17:27	1
Chloromethane	ND	^c	0.50	0.060	ug/L			02/03/21 17:27	1
cis-1,2-Dichloroethene	ND		0.50	0.050	ug/L			02/03/21 17:27	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			02/03/21 17:27	1
Dibromochloromethane	ND		0.50	0.070	ug/L			02/03/21 17:27	1
Ethylbenzene	ND		0.50	0.060	ug/L			02/03/21 17:27	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			02/03/21 17:27	1
Methylene Chloride	ND		0.50	0.070	ug/L			02/03/21 17:27	1
Styrene	ND		0.50	0.050	ug/L			02/03/21 17:27	1
Tetrachloroethene	**2.0**		0.50	0.060	ug/L			02/03/21 17:27	1
Toluene	ND		0.50	0.070	ug/L			02/03/21 17:27	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			02/03/21 17:27	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			02/03/21 17:27	1
Trichloroethene	**0.13**	**J**	0.50	0.060	ug/L			02/03/21 17:27	1
Vinyl chloride	ND	^c	0.50	0.10	ug/L			02/03/21 17:27	1
Xylenes, Total	ND		1.0	0.15	ug/L			02/03/21 17:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*80 - 120*		*02/03/21 17:27*	*1*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*02/03/21 17:27*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 120*		*02/03/21 17:27*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*02/03/21 17:27*	*1*

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

Date Collected: 01/26/21 11:40
Date Received: 01/27/21 17:55

Lab Sample ID: 410-27746-10

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			02/03/21 17:49	1
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			02/03/21 17:49	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			02/03/21 17:49	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			02/03/21 17:49	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			02/03/21 17:49	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			02/03/21 17:49	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			02/03/21 17:49	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			02/03/21 17:49	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			02/03/21 17:49	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			02/03/21 17:49	1
2-Hexanone	ND		5.0	0.60	ug/L			02/03/21 17:49	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			02/03/21 17:49	1
Acetone	**2.3**	**J**	5.0	0.90	ug/L			02/03/21 17:49	1
Benzene	ND		0.50	0.050	ug/L			02/03/21 17:49	1
Bromochloromethane	ND		0.50	0.050	ug/L			02/03/21 17:49	1
Bromodichloromethane	ND		0.50	0.050	ug/L			02/03/21 17:49	1
Bromoform	ND		1.0	0.30	ug/L			02/03/21 17:49	1
Bromomethane	ND	^c	0.50	0.070	ug/L			02/03/21 17:49	1
Carbon disulfide	ND		1.0	0.060	ug/L			02/03/21 17:49	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			02/03/21 17:49	1
Chlorobenzene	ND		0.50	0.060	ug/L			02/03/21 17:49	1
Chloroethane	ND	^c	0.50	0.070	ug/L			02/03/21 17:49	1
Chloroform	ND		0.50	0.090	ug/L			02/03/21 17:49	1
Chloromethane	ND	^c	0.50	0.060	ug/L			02/03/21 17:49	1
cis-1,2-Dichloroethene	**0.11**	**J**	0.50	0.050	ug/L			02/03/21 17:49	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			02/03/21 17:49	1
Dibromochloromethane	ND		0.50	0.070	ug/L			02/03/21 17:49	1
Ethylbenzene	ND		0.50	0.060	ug/L			02/03/21 17:49	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			02/03/21 17:49	1
Methylene Chloride	ND		0.50	0.070	ug/L			02/03/21 17:49	1
Styrene	ND		0.50	0.050	ug/L			02/03/21 17:49	1
Tetrachloroethene	**0.13**	**J**	0.50	0.060	ug/L			02/03/21 17:49	1
Toluene	ND		0.50	0.070	ug/L			02/03/21 17:49	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			02/03/21 17:49	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			02/03/21 17:49	1
Trichloroethene	**0.15**	**J**	0.50	0.060	ug/L			02/03/21 17:49	1
Vinyl chloride	ND	^c	0.50	0.10	ug/L			02/03/21 17:49	1
Xylenes, Total	ND		1.0	0.15	ug/L			02/03/21 17:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*80 - 120*		*02/03/21 17:49*	*1*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*02/03/21 17:49*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 120*		*02/03/21 17:49*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*02/03/21 17:49*	*1*

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

Date Collected: 01/26/21 13:05
Date Received: 01/27/21 17:55

Lab Sample ID: 410-27746-11

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			02/03/21 18:12	1
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			02/03/21 18:12	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			02/03/21 18:12	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			02/03/21 18:12	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			02/03/21 18:12	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			02/03/21 18:12	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			02/03/21 18:12	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			02/03/21 18:12	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			02/03/21 18:12	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			02/03/21 18:12	1
2-Hexanone	ND		5.0	0.60	ug/L			02/03/21 18:12	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			02/03/21 18:12	1
Acetone	**3.7**	**J**	5.0	0.90	ug/L			02/03/21 18:12	1
Benzene	ND		0.50	0.050	ug/L			02/03/21 18:12	1
Bromochloromethane	ND		0.50	0.050	ug/L			02/03/21 18:12	1
Bromodichloromethane	ND		0.50	0.050	ug/L			02/03/21 18:12	1
Bromoform	ND		1.0	0.30	ug/L			02/03/21 18:12	1
Bromomethane	ND	^c	0.50	0.070	ug/L			02/03/21 18:12	1
Carbon disulfide	ND		1.0	0.060	ug/L			02/03/21 18:12	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			02/03/21 18:12	1
Chlorobenzene	ND		0.50	0.060	ug/L			02/03/21 18:12	1
Chloroethane	ND	^c	0.50	0.070	ug/L			02/03/21 18:12	1
Chloroform	ND		0.50	0.090	ug/L			02/03/21 18:12	1
Chloromethane	ND	^c	0.50	0.060	ug/L			02/03/21 18:12	1
cis-1,2-Dichloroethene	**0.059**	**J**	0.50	0.050	ug/L			02/03/21 18:12	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			02/03/21 18:12	1
Dibromochloromethane	ND		0.50	0.070	ug/L			02/03/21 18:12	1
Ethylbenzene	ND		0.50	0.060	ug/L			02/03/21 18:12	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			02/03/21 18:12	1
Methylene Chloride	ND		0.50	0.070	ug/L			02/03/21 18:12	1
Styrene	ND		0.50	0.050	ug/L			02/03/21 18:12	1
Tetrachloroethene	**0.080**	**J**	0.50	0.060	ug/L			02/03/21 18:12	1
Toluene	ND		0.50	0.070	ug/L			02/03/21 18:12	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			02/03/21 18:12	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			02/03/21 18:12	1
Trichloroethene	**0.091**	**J**	0.50	0.060	ug/L			02/03/21 18:12	1
Vinyl chloride	ND	^c	0.50	0.10	ug/L			02/03/21 18:12	1
Xylenes, Total	ND		1.0	0.15	ug/L			02/03/21 18:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*80 - 120*		*02/03/21 18:12*	*1*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*02/03/21 18:12*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 120*		*02/03/21 18:12*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*02/03/21 18:12*	*1*

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

Date Collected: 01/26/21 09:10
Date Received: 01/27/21 17:55

Lab Sample ID: 410-27746-12

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			02/03/21 18:34	1
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			02/03/21 18:34	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			02/03/21 18:34	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			02/03/21 18:34	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			02/03/21 18:34	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			02/03/21 18:34	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			02/03/21 18:34	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			02/03/21 18:34	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			02/03/21 18:34	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			02/03/21 18:34	1
2-Hexanone	ND		5.0	0.60	ug/L			02/03/21 18:34	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			02/03/21 18:34	1
Acetone	**1.9**	**J**	5.0	0.90	ug/L			02/03/21 18:34	1
Benzene	ND		0.50	0.050	ug/L			02/03/21 18:34	1
Bromochloromethane	ND		0.50	0.050	ug/L			02/03/21 18:34	1
Bromodichloromethane	ND		0.50	0.050	ug/L			02/03/21 18:34	1
Bromoform	ND		1.0	0.30	ug/L			02/03/21 18:34	1
Bromomethane	ND	^c	0.50	0.070	ug/L			02/03/21 18:34	1
Carbon disulfide	ND		1.0	0.060	ug/L			02/03/21 18:34	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			02/03/21 18:34	1
Chlorobenzene	ND		0.50	0.060	ug/L			02/03/21 18:34	1
Chloroethane	ND	^c	0.50	0.070	ug/L			02/03/21 18:34	1
Chloroform	ND		0.50	0.090	ug/L			02/03/21 18:34	1
Chloromethane	ND	^c	0.50	0.060	ug/L			02/03/21 18:34	1
cis-1,2-Dichloroethene	**0.084**	**J**	0.50	0.050	ug/L			02/03/21 18:34	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			02/03/21 18:34	1
Dibromochloromethane	ND		0.50	0.070	ug/L			02/03/21 18:34	1
Ethylbenzene	ND		0.50	0.060	ug/L			02/03/21 18:34	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			02/03/21 18:34	1
Methylene Chloride	ND		0.50	0.070	ug/L			02/03/21 18:34	1
Styrene	ND		0.50	0.050	ug/L			02/03/21 18:34	1
Tetrachloroethene	**0.061**	**J**	0.50	0.060	ug/L			02/03/21 18:34	1
Toluene	ND		0.50	0.070	ug/L			02/03/21 18:34	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			02/03/21 18:34	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			02/03/21 18:34	1
Trichloroethene	ND		0.50	0.060	ug/L			02/03/21 18:34	1
Vinyl chloride	ND	^c	0.50	0.10	ug/L			02/03/21 18:34	1
Xylenes, Total	ND		1.0	0.15	ug/L			02/03/21 18:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*106*		*80 - 120*		*02/03/21 18:34*	*1*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*02/03/21 18:34*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 120*		*02/03/21 18:34*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*02/03/21 18:34*	*1*

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

Date Collected: 01/26/21 12:00
Date Received: 01/27/21 17:55

Lab Sample ID: 410-27746-13

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			02/03/21 18:57	1
1,1,1-Trichloroethane	**0.12**	**J**	0.50	0.060	ug/L			02/03/21 18:57	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			02/03/21 18:57	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			02/03/21 18:57	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			02/03/21 18:57	1
1,1-Dichloroethene	**0.090**	**J**	0.50	0.060	ug/L			02/03/21 18:57	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			02/03/21 18:57	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			02/03/21 18:57	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			02/03/21 18:57	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			02/03/21 18:57	1
2-Hexanone	ND		5.0	0.60	ug/L			02/03/21 18:57	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			02/03/21 18:57	1
Acetone	ND		5.0	0.90	ug/L			02/03/21 18:57	1
Benzene	ND		0.50	0.050	ug/L			02/03/21 18:57	1
Bromochloromethane	ND		0.50	0.050	ug/L			02/03/21 18:57	1
Bromodichloromethane	ND		0.50	0.050	ug/L			02/03/21 18:57	1
Bromoform	ND		1.0	0.30	ug/L			02/03/21 18:57	1
Bromomethane	ND	^c	0.50	0.070	ug/L			02/03/21 18:57	1
Carbon disulfide	ND		1.0	0.060	ug/L			02/03/21 18:57	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			02/03/21 18:57	1
Chlorobenzene	ND		0.50	0.060	ug/L			02/03/21 18:57	1
Chloroethane	ND	^c	0.50	0.070	ug/L			02/03/21 18:57	1
Chloroform	**0.25**	**J**	0.50	0.090	ug/L			02/03/21 18:57	1
Chloromethane	ND	^c	0.50	0.060	ug/L			02/03/21 18:57	1
cis-1,2-Dichloroethene	**0.81**		0.50	0.050	ug/L			02/03/21 18:57	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			02/03/21 18:57	1
Dibromochloromethane	ND		0.50	0.070	ug/L			02/03/21 18:57	1
Ethylbenzene	ND		0.50	0.060	ug/L			02/03/21 18:57	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			02/03/21 18:57	1
Methylene Chloride	ND		0.50	0.070	ug/L			02/03/21 18:57	1
Styrene	ND		0.50	0.050	ug/L			02/03/21 18:57	1
Tetrachloroethene	**3.2**		0.50	0.060	ug/L			02/03/21 18:57	1
Toluene	ND		0.50	0.070	ug/L			02/03/21 18:57	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			02/03/21 18:57	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			02/03/21 18:57	1
Trichloroethene	**1.2**		0.50	0.060	ug/L			02/03/21 18:57	1
Vinyl chloride	ND	^c	0.50	0.10	ug/L			02/03/21 18:57	1
Xylenes, Total	ND		1.0	0.15	ug/L			02/03/21 18:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*80 - 120*		*02/03/21 18:57*	*1*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*02/03/21 18:57*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 120*		*02/03/21 18:57*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*02/03/21 18:57*	*1*

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

Date Collected: 01/26/21 00:00
Date Received: 01/27/21 17:55

Lab Sample ID: 410-27746-14

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			02/03/21 19:19	1
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			02/03/21 19:19	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			02/03/21 19:19	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			02/03/21 19:19	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			02/03/21 19:19	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			02/03/21 19:19	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			02/03/21 19:19	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			02/03/21 19:19	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			02/03/21 19:19	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			02/03/21 19:19	1
2-Hexanone	ND		5.0	0.60	ug/L			02/03/21 19:19	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			02/03/21 19:19	1
Acetone	ND		5.0	0.90	ug/L			02/03/21 19:19	1
Benzene	ND		0.50	0.050	ug/L			02/03/21 19:19	1
Bromochloromethane	ND		0.50	0.050	ug/L			02/03/21 19:19	1
Bromodichloromethane	ND		0.50	0.050	ug/L			02/03/21 19:19	1
Bromoform	ND		1.0	0.30	ug/L			02/03/21 19:19	1
Bromomethane	ND	^c	0.50	0.070	ug/L			02/03/21 19:19	1
Carbon disulfide	ND		1.0	0.060	ug/L			02/03/21 19:19	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			02/03/21 19:19	1
Chlorobenzene	ND		0.50	0.060	ug/L			02/03/21 19:19	1
Chloroethane	ND	^c	0.50	0.070	ug/L			02/03/21 19:19	1
Chloroform	ND		0.50	0.090	ug/L			02/03/21 19:19	1
Chloromethane	ND	^c	0.50	0.060	ug/L			02/03/21 19:19	1
cis-1,2-Dichloroethene	ND		0.50	0.050	ug/L			02/03/21 19:19	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			02/03/21 19:19	1
Dibromochloromethane	ND		0.50	0.070	ug/L			02/03/21 19:19	1
Ethylbenzene	ND		0.50	0.060	ug/L			02/03/21 19:19	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			02/03/21 19:19	1
Methylene Chloride	ND		0.50	0.070	ug/L			02/03/21 19:19	1
Styrene	ND		0.50	0.050	ug/L			02/03/21 19:19	1
Tetrachloroethene	ND		0.50	0.060	ug/L			02/03/21 19:19	1
Toluene	ND		0.50	0.070	ug/L			02/03/21 19:19	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			02/03/21 19:19	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			02/03/21 19:19	1
Trichloroethene	ND		0.50	0.060	ug/L			02/03/21 19:19	1
Vinyl chloride	ND	^c	0.50	0.10	ug/L			02/03/21 19:19	1
Xylenes, Total	ND		1.0	0.15	ug/L			02/03/21 19:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*80 - 120*		*02/03/21 19:19*	*1*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*02/03/21 19:19*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 120*		*02/03/21 19:19*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*02/03/21 19:19*	*1*

Default Detection Limits

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

Job ID: 410-27746-1

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
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: 410-27746-1

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)
410-27746-1	HD-COD-SW-6-0/1-0	105	97	97	101
410-27746-2	HD-COD-SW-7-0/1-0	102	98	98	101
410-27746-3	HD-COD-SW-8-0/1-0	106	96	98	101
410-27746-4	HD-COD-SW-9-0/1-0	105	97	98	100
410-27746-5	HD-COD-SW-13-0/1-0	106	97	98	101
410-27746-6	HD-COD-SW-15-0/1-0	106	96	98	99
410-27746-6 MS	HD-COD-SW-15-0/1-0	104	98	97	101
410-27746-6 MSD	HD-COD-SW-15-0/1-0	105	99	98	101
410-27746-7	HD-COD-SW-16-0/1-0	103	96	98	100
410-27746-8	HD-COD-SW-17-0/1-0	107	97	99	100
410-27746-9	HD-COD-SW-26-0/1-0	107	96	98	102
410-27746-10	HD-COD-SW-27-0/1-0	106	95	98	100
410-27746-11	HD-COD-SW-28-0/1-0	105	96	98	100
410-27746-12	HD-COD-SW-29-0/1-0	106	95	100	100
410-27746-13	HD-QC1-0/1-1	107	96	100	101
410-27746-14	HD-QC1-0/1-2	109	96	98	101
LCS 410-90352/8	Lab Control Sample	105	99	100	101
LCS 410-90807/4	Lab Control Sample	105	99	98	101
LCSD 410-90352/9	Lab Control Sample Dup	107	98	98	101
LCSD 410-90807/5	Lab Control Sample Dup	103	99	98	100
MB 410-90352/7	Method Blank	105	95	98	100
MB 410-90807/7	Method Blank	104	98	97	101

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 410-90352/7
Matrix: Water
Analysis Batch: 90352

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			02/03/21 11:04	1
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			02/03/21 11:04	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			02/03/21 11:04	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			02/03/21 11:04	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			02/03/21 11:04	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			02/03/21 11:04	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			02/03/21 11:04	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			02/03/21 11:04	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			02/03/21 11:04	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			02/03/21 11:04	1
2-Hexanone	ND		5.0	0.60	ug/L			02/03/21 11:04	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			02/03/21 11:04	1
Acetone	ND		5.0	0.90	ug/L			02/03/21 11:04	1
Benzene	ND		0.50	0.050	ug/L			02/03/21 11:04	1
Bromochloromethane	ND		0.50	0.050	ug/L			02/03/21 11:04	1
Bromodichloromethane	ND		0.50	0.050	ug/L			02/03/21 11:04	1
Bromoform	ND		1.0	0.30	ug/L			02/03/21 11:04	1
Bromomethane	ND		0.50	0.070	ug/L			02/03/21 11:04	1
Carbon disulfide	ND		1.0	0.060	ug/L			02/03/21 11:04	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			02/03/21 11:04	1
Chlorobenzene	ND		0.50	0.060	ug/L			02/03/21 11:04	1
Chloroethane	ND		0.50	0.070	ug/L			02/03/21 11:04	1
Chloroform	ND		0.50	0.090	ug/L			02/03/21 11:04	1
Chloromethane	ND		0.50	0.060	ug/L			02/03/21 11:04	1
cis-1,2-Dichloroethene	ND		0.50	0.050	ug/L			02/03/21 11:04	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			02/03/21 11:04	1
Dibromochloromethane	ND		0.50	0.070	ug/L			02/03/21 11:04	1
Ethylbenzene	ND		0.50	0.060	ug/L			02/03/21 11:04	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			02/03/21 11:04	1
Methylene Chloride	ND		0.50	0.070	ug/L			02/03/21 11:04	1
Styrene	ND		0.50	0.050	ug/L			02/03/21 11:04	1
Tetrachloroethene	ND		0.50	0.060	ug/L			02/03/21 11:04	1
Toluene	ND		0.50	0.070	ug/L			02/03/21 11:04	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			02/03/21 11:04	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			02/03/21 11:04	1
Trichloroethene	ND		0.50	0.060	ug/L			02/03/21 11:04	1
Vinyl chloride	ND		0.50	0.10	ug/L			02/03/21 11:04	1
Xylenes, Total	ND		1.0	0.15	ug/L			02/03/21 11:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*105*		*80 - 120*		*02/03/21 11:04*	*1*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*02/03/21 11:04*	*1*
Dibromofluoromethane (Surr)	*98*		*80 - 120*		*02/03/21 11:04*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*02/03/21 11:04*	*1*

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

Lab Sample ID: LCS 410-90352/8
Matrix: Water
Analysis Batch: 90352

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	5.00	4.80		ug/L		96	71 - 134
1,1,1-Trichloroethane	5.00	4.27		ug/L		85	78 - 126
1,1,2,2-Tetrachloroethane	5.00	5.22		ug/L		104	75 - 123
1,1,2-Trichloroethane	5.00	5.10		ug/L		102	80 - 120
1,1-Dichloroethane	5.00	4.52		ug/L		90	74 - 120
1,1-Dichloroethene	5.00	4.68		ug/L		94	80 - 131
1,2-Dibromoethane (EDB)	5.00	5.01		ug/L		100	80 - 120
1,2-Dichloroethane	5.00	4.34		ug/L		87	69 - 122
1,2-Dichloropropane	5.00	4.92		ug/L		98	80 - 120
2-Butanone (MEK)	37.5	39.6		ug/L		106	59 - 141
2-Hexanone	25.0	24.0		ug/L		96	52 - 140
4-Methyl-2-pentanone (MIBK)	25.0	23.0		ug/L		92	55 - 140
Acetone	37.5	45.9		ug/L		123	60 - 146
Benzene	5.00	4.65		ug/L		93	80 - 120
Bromochloromethane	5.00	4.82		ug/L		96	80 - 120
Bromodichloromethane	5.00	4.67		ug/L		93	73 - 124
Bromoform	5.00	5.51		ug/L		110	49 - 144
Bromomethane	5.00	4.27		ug/L		85	60 - 136
Carbon disulfide	5.00	4.51		ug/L		90	67 - 130
Carbon tetrachloride	5.00	4.36		ug/L		87	64 - 141
Chlorobenzene	5.00	4.81		ug/L		96	80 - 120
Chloroethane	5.00	4.09		ug/L		82	63 - 120
Chloroform	5.00	4.42		ug/L		88	80 - 120
Chloromethane	5.00	4.61		ug/L		92	56 - 124
cis-1,2-Dichloroethene	5.00	4.57		ug/L		91	80 - 122
cis-1,3-Dichloropropene	5.00	4.92		ug/L		98	67 - 121
Dibromochloromethane	5.00	4.98		ug/L		100	64 - 138
Ethylbenzene	5.00	4.56		ug/L		91	80 - 120
Methyl tert-butyl ether	5.00	4.60		ug/L		92	69 - 120
Methylene Chloride	5.00	4.90		ug/L		98	80 - 120
Styrene	5.00	4.85		ug/L		97	80 - 120
Tetrachloroethene	5.00	4.67		ug/L		93	80 - 120
Toluene	5.00	4.62		ug/L		92	80 - 120
trans-1,2-Dichloroethene	5.00	4.50		ug/L		90	80 - 122
trans-1,3-Dichloropropene	5.00	5.06		ug/L		101	61 - 129
Trichloroethene	5.00	4.62		ug/L		92	80 - 120
Vinyl chloride	5.00	4.40		ug/L		88	60 - 125
Xylenes, Total	15.0	14.0		ug/L		93	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*105*		*80 - 120*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*80 - 120*
Toluene-d8 (Surr)	*101*		*80 - 120*

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

Lab Sample ID: LCSD 410-90352/9
Matrix: Water
Analysis Batch: 90352

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane			5.00	4.80		ug/L		96	71 - 134	0	30
1,1,1-Trichloroethane			5.00	4.21		ug/L		84	78 - 126	1	30
1,1,2,2-Tetrachloroethane			5.00	5.47		ug/L		109	75 - 123	5	30
1,1,2-Trichloroethane			5.00	5.23		ug/L		105	80 - 120	3	30
1,1-Dichloroethane			5.00	4.46		ug/L		89	74 - 120	1	30
1,1-Dichloroethene			5.00	4.60		ug/L		92	80 - 131	2	30
1,2-Dibromoethane (EDB)			5.00	5.04		ug/L		101	80 - 120	1	30
1,2-Dichloroethane			5.00	4.35		ug/L		87	69 - 122	0	30
1,2-Dichloropropane			5.00	4.86		ug/L		97	80 - 120	1	30
2-Butanone (MEK)			37.5	37.9		ug/L		101	59 - 141	5	30
2-Hexanone			25.0	22.6		ug/L		91	52 - 140	6	30
4-Methyl-2-pentanone (MIBK)			25.0	21.8		ug/L		87	55 - 140	6	30
Acetone			37.5	44.5		ug/L		119	60 - 146	3	30
Benzene			5.00	4.62		ug/L		92	80 - 120	1	30
Bromochloromethane			5.00	4.80		ug/L		96	80 - 120	0	30
Bromodichloromethane			5.00	4.61		ug/L		92	73 - 124	1	30
Bromoform			5.00	5.38		ug/L		108	49 - 144	2	30
Bromomethane			5.00	4.34		ug/L		87	60 - 136	2	30
Carbon disulfide			5.00	4.53		ug/L		91	67 - 130	0	30
Carbon tetrachloride			5.00	4.38		ug/L		88	64 - 141	0	30
Chlorobenzene			5.00	4.83		ug/L		97	80 - 120	0	30
Chloroethane			5.00	4.26		ug/L		85	63 - 120	4	30
Chloroform			5.00	4.42		ug/L		88	80 - 120	0	30
Chloromethane			5.00	4.69		ug/L		94	56 - 124	2	30
cis-1,2-Dichloroethene			5.00	4.59		ug/L		92	80 - 122	1	30
cis-1,3-Dichloropropene			5.00	4.81		ug/L		96	67 - 121	2	30
Dibromochloromethane			5.00	5.03		ug/L		101	64 - 138	1	30
Ethylbenzene			5.00	4.54		ug/L		91	80 - 120	0	30
Methyl tert-butyl ether			5.00	4.55		ug/L		91	69 - 120	1	30
Methylene Chloride			5.00	4.85		ug/L		97	80 - 120	1	30
Styrene			5.00	4.80		ug/L		96	80 - 120	1	30
Tetrachloroethene			5.00	4.67		ug/L		93	80 - 120	0	30
Toluene			5.00	4.59		ug/L		92	80 - 120	1	30
trans-1,2-Dichloroethene			5.00	4.51		ug/L		90	80 - 122	0	30
trans-1,3-Dichloropropene			5.00	5.07		ug/L		101	61 - 129	0	30
Trichloroethene			5.00	4.58		ug/L		92	80 - 120	1	30
Vinyl chloride			5.00	4.52		ug/L		90	60 - 125	3	30
Xylenes, Total			15.0	14.0		ug/L		93	80 - 120	0	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*107*		*80 - 120*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*
Dibromofluoromethane (Surr)	*98*		*80 - 120*
Toluene-d8 (Surr)	*101*		*80 - 120*

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

Lab Sample ID: MB 410-90807/7
Matrix: Water
Analysis Batch: 90807

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.070	ug/L			02/04/21 12:51	1
1,1,1-Trichloroethane	ND		0.50	0.060	ug/L			02/04/21 12:51	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.070	ug/L			02/04/21 12:51	1
1,1,2-Trichloroethane	ND		0.50	0.060	ug/L			02/04/21 12:51	1
1,1-Dichloroethane	ND		0.50	0.070	ug/L			02/04/21 12:51	1
1,1-Dichloroethene	ND		0.50	0.060	ug/L			02/04/21 12:51	1
1,2-Dibromoethane (EDB)	ND		0.50	0.060	ug/L			02/04/21 12:51	1
1,2-Dichloroethane	ND		0.50	0.050	ug/L			02/04/21 12:51	1
1,2-Dichloropropane	ND		0.50	0.060	ug/L			02/04/21 12:51	1
2-Butanone (MEK)	ND		5.0	0.60	ug/L			02/04/21 12:51	1
2-Hexanone	ND		5.0	0.60	ug/L			02/04/21 12:51	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70	ug/L			02/04/21 12:51	1
Acetone	ND		5.0	0.90	ug/L			02/04/21 12:51	1
Benzene	ND		0.50	0.050	ug/L			02/04/21 12:51	1
Bromochloromethane	ND		0.50	0.050	ug/L			02/04/21 12:51	1
Bromodichloromethane	ND		0.50	0.050	ug/L			02/04/21 12:51	1
Bromoform	ND		1.0	0.30	ug/L			02/04/21 12:51	1
Bromomethane	ND		0.50	0.070	ug/L			02/04/21 12:51	1
Carbon disulfide	ND		1.0	0.060	ug/L			02/04/21 12:51	1
Carbon tetrachloride	ND		0.50	0.070	ug/L			02/04/21 12:51	1
Chlorobenzene	ND		0.50	0.060	ug/L			02/04/21 12:51	1
Chloroethane	ND		0.50	0.070	ug/L			02/04/21 12:51	1
Chloroform	ND		0.50	0.090	ug/L			02/04/21 12:51	1
Chloromethane	ND		0.50	0.060	ug/L			02/04/21 12:51	1
cis-1,2-Dichloroethene	ND		0.50	0.050	ug/L			02/04/21 12:51	1
cis-1,3-Dichloropropene	ND		0.50	0.050	ug/L			02/04/21 12:51	1
Dibromochloromethane	ND		0.50	0.070	ug/L			02/04/21 12:51	1
Ethylbenzene	ND		0.50	0.060	ug/L			02/04/21 12:51	1
Methyl tert-butyl ether	ND		0.50	0.050	ug/L			02/04/21 12:51	1
Methylene Chloride	ND		0.50	0.070	ug/L			02/04/21 12:51	1
Styrene	ND		0.50	0.050	ug/L			02/04/21 12:51	1
Tetrachloroethene	ND		0.50	0.060	ug/L			02/04/21 12:51	1
Toluene	ND		0.50	0.070	ug/L			02/04/21 12:51	1
trans-1,2-Dichloroethene	ND		0.50	0.060	ug/L			02/04/21 12:51	1
trans-1,3-Dichloropropene	ND		0.50	0.060	ug/L			02/04/21 12:51	1
Trichloroethene	ND		0.50	0.060	ug/L			02/04/21 12:51	1
Vinyl chloride	ND		0.50	0.10	ug/L			02/04/21 12:51	1
Xylenes, Total	ND		1.0	0.15	ug/L			02/04/21 12:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*80 - 120*		*02/04/21 12:51*	*1*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*		*02/04/21 12:51*	*1*
Dibromofluoromethane (Surr)	*97*		*80 - 120*		*02/04/21 12:51*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*02/04/21 12:51*	*1*

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

Lab Sample ID: LCS 410-90807/4
Matrix: Water
Analysis Batch: 90807

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	5.00	4.85		ug/L		97	71 - 134
1,1,1-Trichloroethane	5.00	4.27		ug/L		85	78 - 126
1,1,2,2-Tetrachloroethane	5.00	5.16		ug/L		103	75 - 123
1,1,2-Trichloroethane	5.00	5.07		ug/L		101	80 - 120
1,1-Dichloroethane	5.00	4.61		ug/L		92	74 - 120
1,1-Dichloroethene	5.00	4.82		ug/L		96	80 - 131
1,2-Dibromoethane (EDB)	5.00	4.96		ug/L		99	80 - 120
1,2-Dichloroethane	5.00	4.32		ug/L		86	69 - 122
1,2-Dichloropropane	5.00	4.86		ug/L		97	80 - 120
2-Butanone (MEK)	37.5	37.2		ug/L		99	59 - 141
2-Hexanone	25.0	22.2		ug/L		89	52 - 140
4-Methyl-2-pentanone (MIBK)	25.0	21.0		ug/L		84	55 - 140
Acetone	37.5	40.9		ug/L		109	60 - 146
Benzene	5.00	4.66		ug/L		93	80 - 120
Bromochloromethane	5.00	4.80		ug/L		96	80 - 120
Bromodichloromethane	5.00	4.67		ug/L		93	73 - 124
Bromoform	5.00	5.53		ug/L		111	49 - 144
Bromomethane	5.00	4.40		ug/L		88	60 - 136
Carbon disulfide	5.00	4.68		ug/L		94	67 - 130
Carbon tetrachloride	5.00	4.40		ug/L		88	64 - 141
Chlorobenzene	5.00	4.81		ug/L		96	80 - 120
Chloroethane	5.00	4.14		ug/L		83	63 - 120
Chloroform	5.00	4.50		ug/L		90	80 - 120
Chloromethane	5.00	4.55		ug/L		91	56 - 124
cis-1,2-Dichloroethene	5.00	4.64		ug/L		93	80 - 122
cis-1,3-Dichloropropene	5.00	4.88		ug/L		98	67 - 121
Dibromochloromethane	5.00	5.10		ug/L		102	64 - 138
Ethylbenzene	5.00	4.57		ug/L		91	80 - 120
Methyl tert-butyl ether	5.00	4.60		ug/L		92	69 - 120
Methylene Chloride	5.00	4.93		ug/L		99	80 - 120
Styrene	5.00	4.80		ug/L		96	80 - 120
Tetrachloroethene	5.00	4.65		ug/L		93	80 - 120
Toluene	5.00	4.63		ug/L		93	80 - 120
trans-1,2-Dichloroethene	5.00	4.62		ug/L		92	80 - 122
trans-1,3-Dichloropropene	5.00	5.13		ug/L		103	61 - 129
Trichloroethene	5.00	4.64		ug/L		93	80 - 120
Vinyl chloride	5.00	4.51		ug/L		90	60 - 125
Xylenes, Total	15.0	13.9		ug/L		93	80 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*105*		*80 - 120*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*
Dibromofluoromethane (Surr)	*98*		*80 - 120*
Toluene-d8 (Surr)	*101*		*80 - 120*

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

Lab Sample ID: LCSD 410-90807/5
Matrix: Water
Analysis Batch: 90807

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane			5.00	4.87		ug/L		97	71 - 134	1	30
1,1,1-Trichloroethane			5.00	4.20		ug/L		84	78 - 126	2	30
1,1,2,2-Tetrachloroethane			5.00	5.32		ug/L		106	75 - 123	3	30
1,1,2-Trichloroethane			5.00	5.10		ug/L		102	80 - 120	1	30
1,1-Dichloroethane			5.00	4.60		ug/L		92	74 - 120	0	30
1,1-Dichloroethene			5.00	4.78		ug/L		96	80 - 131	1	30
1,2-Dibromoethane (EDB)			5.00	5.06		ug/L		101	80 - 120	2	30
1,2-Dichloroethane			5.00	4.32		ug/L		86	69 - 122	0	30
1,2-Dichloropropane			5.00	4.90		ug/L		98	80 - 120	1	30
2-Butanone (MEK)			37.5	35.9		ug/L		96	59 - 141	4	30
2-Hexanone			25.0	22.3		ug/L		89	52 - 140	0	30
4-Methyl-2-pentanone (MIBK)			25.0	21.2		ug/L		85	55 - 140	1	30
Acetone			37.5	41.1		ug/L		110	60 - 146	0	30
Benzene			5.00	4.72		ug/L		94	80 - 120	1	30
Bromochloromethane			5.00	4.79		ug/L		96	80 - 120	0	30
Bromodichloromethane			5.00	4.65		ug/L		93	73 - 124	0	30
Bromoform			5.00	5.57		ug/L		111	49 - 144	1	30
Bromomethane			5.00	4.30		ug/L		86	60 - 136	2	30
Carbon disulfide			5.00	4.63		ug/L		93	67 - 130	1	30
Carbon tetrachloride			5.00	4.43		ug/L		89	64 - 141	1	30
Chlorobenzene			5.00	4.85		ug/L		97	80 - 120	1	30
Chloroethane			5.00	4.19		ug/L		84	63 - 120	1	30
Chloroform			5.00	4.43		ug/L		89	80 - 120	1	30
Chloromethane			5.00	4.52		ug/L		90	56 - 124	1	30
cis-1,2-Dichloroethene			5.00	4.65		ug/L		93	80 - 122	0	30
cis-1,3-Dichloropropene			5.00	4.87		ug/L		97	67 - 121	0	30
Dibromochloromethane			5.00	5.11		ug/L		102	64 - 138	0	30
Ethylbenzene			5.00	4.60		ug/L		92	80 - 120	1	30
Methyl tert-butyl ether			5.00	4.55		ug/L		91	69 - 120	1	30
Methylene Chloride			5.00	4.95		ug/L		99	80 - 120	0	30
Styrene			5.00	4.82		ug/L		96	80 - 120	0	30
Tetrachloroethene			5.00	4.66		ug/L		93	80 - 120	0	30
Toluene			5.00	4.67		ug/L		93	80 - 120	1	30
trans-1,2-Dichloroethene			5.00	4.59		ug/L		92	80 - 122	1	30
trans-1,3-Dichloropropene			5.00	5.04		ug/L		101	61 - 129	2	30
Trichloroethene			5.00	4.65		ug/L		93	80 - 120	0	30
Vinyl chloride			5.00	4.45		ug/L		89	60 - 125	1	30
Xylenes, Total			15.0	14.0		ug/L		93	80 - 120	0	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*103*		*80 - 120*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*
Dibromofluoromethane (Surr)	*98*		*80 - 120*
Toluene-d8 (Surr)	*100*		*80 - 120*

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

Lab Sample ID: 410-27746-6 MS
Matrix: Water
Analysis Batch: 90807

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
1,1,1,2-Tetrachloroethane	ND		5.00	5.25		ug/L		105	71 - 134
1,1,1-Trichloroethane	0.092	J	5.00	4.92		ug/L		96	78 - 126
1,1,2,2-Tetrachloroethane	ND		5.00	5.25		ug/L		105	75 - 123
1,1,2-Trichloroethane	ND		5.00	5.34		ug/L		107	80 - 120
1,1-Dichloroethane	ND		5.00	4.98		ug/L		99	74 - 120
1,1-Dichloroethene	0.073	J	5.00	5.40		ug/L		106	80 - 131
1,2-Dibromoethane (EDB)	ND		5.00	5.12		ug/L		102	80 - 120
1,2-Dichloroethane	ND		5.00	4.58		ug/L		91	69 - 122
1,2-Dichloropropane	ND		5.00	5.19		ug/L		104	80 - 120
2-Butanone (MEK)	ND		37.5	34.8		ug/L		93	59 - 141
2-Hexanone	ND		25.0	21.5		ug/L		86	52 - 140
4-Methyl-2-pentanone (MIBK)	ND		25.0	20.5		ug/L		82	55 - 140
Acetone	ND		37.5	38.6		ug/L		103	60 - 146
Benzene	ND		5.00	5.14		ug/L		103	80 - 120
Bromochloromethane	ND		5.00	4.90		ug/L		98	80 - 120
Bromodichloromethane	ND		5.00	4.93		ug/L		99	73 - 124
Bromoform	ND		5.00	5.71		ug/L		114	49 - 144
Bromomethane	ND	^c	5.00	4.62		ug/L		92	60 - 136
Carbon disulfide	ND		5.00	5.18		ug/L		103	67 - 130
Carbon tetrachloride	ND		5.00	5.10		ug/L		102	64 - 141
Chlorobenzene	ND		5.00	5.29		ug/L		106	80 - 120
Chloroethane	ND	^c	5.00	4.60		ug/L		92	63 - 120
Chloroform	0.26	J	5.00	5.06		ug/L		96	80 - 120
Chloromethane	ND	^c	5.00	4.63		ug/L		93	80 - 120
cis-1,2-Dichloroethene	0.66		5.00	5.69		ug/L		101	80 - 122
cis-1,3-Dichloropropene	ND		5.00	5.13		ug/L		102	67 - 121
Dibromochloromethane	ND		5.00	5.24		ug/L		105	64 - 138
Ethylbenzene	ND		5.00	5.12		ug/L		102	80 - 120
Methyl tert-butyl ether	ND		5.00	4.60		ug/L		92	69 - 120
Methylene Chloride	ND		5.00	5.25		ug/L		105	80 - 120
Styrene	ND		5.00	5.27		ug/L		105	80 - 120
Tetrachloroethene	2.1		5.00	7.47		ug/L		108	80 - 120
Toluene	ND		5.00	5.22		ug/L		104	80 - 120
trans-1,2-Dichloroethene	ND		5.00	5.15		ug/L		103	80 - 122
trans-1,3-Dichloropropene	ND		5.00	5.24		ug/L		105	61 - 129
Trichloroethene	0.78		5.00	5.97		ug/L		104	80 - 120
Vinyl chloride	ND	^c	5.00	4.97		ug/L		99	60 - 125
Xylenes, Total	ND		15.0	15.7		ug/L		104	80 - 120

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*104*		*80 - 120*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*
Dibromofluoromethane (Surr)	*97*		*80 - 120*
Toluene-d8 (Surr)	*101*		*80 - 120*

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

Lab Sample ID: 410-27746-6 MSD
Matrix: Water
Analysis Batch: 90807

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
1,1,1,2-Tetrachloroethane	ND		5.00	5.38		ug/L		108	71 - 134	3	30
1,1,1-Trichloroethane	0.092	J	5.00	5.10		ug/L		100	78 - 126	4	30
1,1,2,2-Tetrachloroethane	ND		5.00	5.52		ug/L		110	75 - 123	5	30
1,1,2-Trichloroethane	ND		5.00	5.69		ug/L		114	80 - 120	6	30
1,1-Dichloroethane	ND		5.00	5.20		ug/L		104	74 - 120	4	30
1,1-Dichloroethene	0.073	J	5.00	5.74		ug/L		113	80 - 131	6	30
1,2-Dibromoethane (EDB)	ND		5.00	5.35		ug/L		107	80 - 120	5	30
1,2-Dichloroethane	ND		5.00	4.61		ug/L		92	69 - 122	1	30
1,2-Dichloropropane	ND		5.00	5.48		ug/L		109	80 - 120	5	30
2-Butanone (MEK)	ND		37.5	40.8		ug/L		109	59 - 141	16	30
2-Hexanone	ND		25.0	24.9		ug/L		99	52 - 140	14	30
4-Methyl-2-pentanone (MIBK)	ND		25.0	23.9		ug/L		95	55 - 140	15	30
Acetone	ND		37.5	48.5		ug/L		129	60 - 146	23	30
Benzene	ND		5.00	5.33		ug/L		107	80 - 120	4	30
Bromochloromethane	ND		5.00	5.16		ug/L		103	80 - 120	5	30
Bromodichloromethane	ND		5.00	5.08		ug/L		102	73 - 124	3	30
Bromoform	ND		5.00	5.78		ug/L		115	49 - 144	1	30
Bromomethane	ND	^c	5.00	4.80		ug/L		96	60 - 136	4	30
Carbon disulfide	ND		5.00	5.41		ug/L		108	67 - 130	4	30
Carbon tetrachloride	ND		5.00	5.23		ug/L		105	64 - 141	3	30
Chlorobenzene	ND		5.00	5.48		ug/L		109	80 - 120	3	30
Chloroethane	ND	^c	5.00	4.64		ug/L		93	63 - 120	1	30
Chloroform	0.26	J	5.00	5.25		ug/L		100	80 - 120	4	30
Chloromethane	ND	^c	5.00	4.68		ug/L		94	80 - 120	1	30
cis-1,2-Dichloroethene	0.66		5.00	5.97		ug/L		106	80 - 122	5	30
cis-1,3-Dichloropropene	ND		5.00	5.35		ug/L		107	67 - 121	4	30
Dibromochloromethane	ND		5.00	5.48		ug/L		110	64 - 138	4	30
Ethylbenzene	ND		5.00	5.34		ug/L		107	80 - 120	4	30
Methyl tert-butyl ether	ND		5.00	4.90		ug/L		98	69 - 120	6	30
Methylene Chloride	ND		5.00	5.42		ug/L		108	80 - 120	3	30
Styrene	ND		5.00	5.44		ug/L		109	80 - 120	3	30
Tetrachloroethene	2.1		5.00	7.76		ug/L		114	80 - 120	4	30
Toluene	ND		5.00	5.39		ug/L		108	80 - 120	3	30
trans-1,2-Dichloroethene	ND		5.00	5.33		ug/L		107	80 - 122	3	30
trans-1,3-Dichloropropene	ND		5.00	5.45		ug/L		109	61 - 129	4	30
Trichloroethene	0.78		5.00	6.24		ug/L		109	80 - 120	4	30
Vinyl chloride	ND	^c	5.00	5.06		ug/L		101	60 - 125	2	30
Xylenes, Total	ND		15.0	16.2		ug/L		108	80 - 120	3	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*105*		*80 - 120*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*
Dibromofluoromethane (Surr)	*98*		*80 - 120*
Toluene-d8 (Surr)	*101*		*80 - 120*

GC/MS VOA

Analysis Batch: 90352

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-27746-1	HD-COD-SW-6-0/1-0	Total/NA	Water	8260D	
410-27746-2	HD-COD-SW-7-0/1-0	Total/NA	Water	8260D	
410-27746-3	HD-COD-SW-8-0/1-0	Total/NA	Water	8260D	
410-27746-4	HD-COD-SW-9-0/1-0	Total/NA	Water	8260D	
410-27746-5	HD-COD-SW-13-0/1-0	Total/NA	Water	8260D	
410-27746-6	HD-COD-SW-15-0/1-0	Total/NA	Water	8260D	
410-27746-7	HD-COD-SW-16-0/1-0	Total/NA	Water	8260D	
410-27746-8	HD-COD-SW-17-0/1-0	Total/NA	Water	8260D	
410-27746-9	HD-COD-SW-26-0/1-0	Total/NA	Water	8260D	
410-27746-10	HD-COD-SW-27-0/1-0	Total/NA	Water	8260D	
410-27746-11	HD-COD-SW-28-0/1-0	Total/NA	Water	8260D	
410-27746-12	HD-COD-SW-29-0/1-0	Total/NA	Water	8260D	
410-27746-13	HD-QC1-0/1-1	Total/NA	Water	8260D	
410-27746-14	HD-QC1-0/1-2	Total/NA	Water	8260D	
MB 410-90352/7	Method Blank	Total/NA	Water	8260D	
LCS 410-90352/8	Lab Control Sample	Total/NA	Water	8260D	
LCSD 410-90352/9	Lab Control Sample Dup	Total/NA	Water	8260D	

Analysis Batch: 90807

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 410-90807/7	Method Blank	Total/NA	Water	8260D	
LCS 410-90807/4	Lab Control Sample	Total/NA	Water	8260D	
LCSD 410-90807/5	Lab Control Sample Dup	Total/NA	Water	8260D	
410-27746-6 MS	HD-COD-SW-15-0/1-0	Total/NA	Water	8260D	
410-27746-6 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: 410-27746-1

Date Collected: 01/26/21 10:50

Matrix: Water

Date Received: 01/27/21 17:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	90352	02/03/21 13:44	UKAD	ELLE

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

Lab Sample ID: 410-27746-2

Date Collected: 01/26/21 11:30

Matrix: Water

Date Received: 01/27/21 17:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	90352	02/03/21 14:06	UKAD	ELLE

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

Lab Sample ID: 410-27746-3

Date Collected: 01/26/21 09:25

Matrix: Water

Date Received: 01/27/21 17:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	90352	02/03/21 14:29	UKAD	ELLE

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

Lab Sample ID: 410-27746-4

Date Collected: 01/26/21 12:50

Matrix: Water

Date Received: 01/27/21 17:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	90352	02/03/21 14:51	UKAD	ELLE

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

Lab Sample ID: 410-27746-5

Date Collected: 01/26/21 09:45

Matrix: Water

Date Received: 01/27/21 17:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	90352	02/03/21 15:13	UKAD	ELLE

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

Lab Sample ID: 410-27746-6

Date Collected: 01/26/21 11:45

Matrix: Water

Date Received: 01/27/21 17:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	90352	02/03/21 15:35	UKAD	ELLE

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

Lab Sample ID: 410-27746-7

Date Collected: 01/26/21 10:10

Matrix: Water

Date Received: 01/27/21 17:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	90352	02/03/21 16:42	UKAD	ELLE

Client Sample ID: HD-COD-SW-17-0/1-0
Lab Sample ID: 410-27746-8
Date Collected: 01/26/21 10:20
Matrix: Water
Date Received: 01/27/21 17:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	90352	02/03/21 17:04	UKAD	ELLE

Client Sample ID: HD-COD-SW-26-0/1-0
Lab Sample ID: 410-27746-9
Date Collected: 01/26/21 11:10
Matrix: Water
Date Received: 01/27/21 17:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	90352	02/03/21 17:27	UKAD	ELLE

Client Sample ID: HD-COD-SW-27-0/1-0
Lab Sample ID: 410-27746-10
Date Collected: 01/26/21 11:40
Matrix: Water
Date Received: 01/27/21 17:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	90352	02/03/21 17:49	UKAD	ELLE

Client Sample ID: HD-COD-SW-28-0/1-0
Lab Sample ID: 410-27746-11
Date Collected: 01/26/21 13:05
Matrix: Water
Date Received: 01/27/21 17:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	90352	02/03/21 18:12	UKAD	ELLE

Client Sample ID: HD-COD-SW-29-0/1-0
Lab Sample ID: 410-27746-12
Date Collected: 01/26/21 09:10
Matrix: Water
Date Received: 01/27/21 17:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	90352	02/03/21 18:34	UKAD	ELLE

Client Sample ID: HD-QC1-0/1-1
Lab Sample ID: 410-27746-13
Date Collected: 01/26/21 12:00
Matrix: Water
Date Received: 01/27/21 17:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	90352	02/03/21 18:57	UKAD	ELLE

Client Sample ID: HD-QC1-0/1-2
Lab Sample ID: 410-27746-14
Date Collected: 01/26/21 00:00
Matrix: Water
Date Received: 01/27/21 17:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	90352	02/03/21 19:19	UKAD	ELLE

Laboratory References:

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

Accreditation/Certification Summary

Client: Groundwater Sciences Corporation
Job ID: 410-27746-1
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	01-31-22

Method Summary

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

Job ID: 410-27746-1

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: 410-27746-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
410-27746-1	HD-COD-SW-6-0/1-0	Water	01/26/21 10:50	01/27/21 17:55	
410-27746-2	HD-COD-SW-7-0/1-0	Water	01/26/21 11:30	01/27/21 17:55	
410-27746-3	HD-COD-SW-8-0/1-0	Water	01/26/21 09:25	01/27/21 17:55	
410-27746-4	HD-COD-SW-9-0/1-0	Water	01/26/21 12:50	01/27/21 17:55	
410-27746-5	HD-COD-SW-13-0/1-0	Water	01/26/21 09:45	01/27/21 17:55	
410-27746-6	HD-COD-SW-15-0/1-0	Water	01/26/21 11:45	01/27/21 17:55	
410-27746-7	HD-COD-SW-16-0/1-0	Water	01/26/21 10:10	01/27/21 17:55	
410-27746-8	HD-COD-SW-17-0/1-0	Water	01/26/21 10:20	01/27/21 17:55	
410-27746-9	HD-COD-SW-26-0/1-0	Water	01/26/21 11:10	01/27/21 17:55	
410-27746-10	HD-COD-SW-27-0/1-0	Water	01/26/21 11:40	01/27/21 17:55	
410-27746-11	HD-COD-SW-28-0/1-0	Water	01/26/21 13:05	01/27/21 17:55	
410-27746-12	HD-COD-SW-29-0/1-0	Water	01/26/21 09:10	01/27/21 17:55	
410-27746-13	HD-QC1-0/1-1	Water	01/26/21 12:00	01/27/21 17:55	
410-27746-14	HD-QC1-0/1-2	Water	01/26/21 00:00	01/27/21 17:55	

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laborator Job No.: 410-27746-1

SDG No.:

Instrument ID: 10193 Analysis Batch Number: 39724

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

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

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

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

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

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

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laborator Job No.: 410-27746-1

SDG No.:

Instrument ID: 10193 Analysis Batch Number: 39724

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

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

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

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

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

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

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laborator Job No.: 410-27746-1

SDG No.:

Instrument ID: 10193 Analysis Batch Number: 39724

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

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

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

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laborator Job No.: 410-27746-1

SDG No.:

Instrument ID: 10193 Analysis Batch Number: 39724

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

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

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

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

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

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

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laborator Job No.: 410-27746-1

SDG No.:

Instrument ID: 10193 Analysis Batch Number: 39724

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

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

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

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laborator Job No.: 410-27746-1

SDG No.:

Instrument ID: 10193 Analysis Batch Number: 90352

Lab Sample ID: CCVIS 410-90352/3 Client Sample ID:

Date Analyzed: 02/03/21 09:34 Lab File ID: CF02C01.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloromethane	2.08	Incomplete Integration	knouses	02/03/21 10:18
1,4-Dioxane	8.43	Incomplete Integration	knouses	02/03/21 10:35

Lab Sample ID: 410-27746-1 Client Sample ID: HD-COD-SW-6-0/1-0

Date Analyzed: 02/03/21 13:44 Lab File ID: CF02S03.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Butanone (MEK)		Invalid Compound ID	spositok	02/04/21 10:46
Chloromethane		Invalid Compound ID	spositok	02/04/21 10:46
Tetrachloroethene		Invalid Compound ID	spositok	02/04/21 10:46
Toluene		Invalid Compound ID	spositok	02/04/21 10:46
Trichloroethene		Invalid Compound ID	spositok	02/04/21 10:46

Lab Sample ID: 410-27746-2 Client Sample ID: HD-COD-SW-7-0/1-0

Date Analyzed: 02/03/21 14:06 Lab File ID: CF02S04.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Butanone (MEK)		Invalid Compound ID	spositok	02/04/21 10:47

Lab Sample ID: 410-27746-3 Client Sample ID: HD-COD-SW-8-0/1-0

Date Analyzed: 02/03/21 14:29 Lab File ID: CF02S05.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.44	Incomplete Integration	spositok	02/04/21 10:47
Chloromethane		Invalid Compound ID	spositok	02/04/21 10:47
Toluene		Invalid Compound ID	spositok	02/04/21 10:50

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laborator Job No.: 410-27746-1

SDG No.:

Instrument ID: 10193 Analysis Batch Number: 90352

Lab Sample ID: 410-27746-4 Client Sample ID: HD-COD-SW-9-0/1-0

Date Analyzed: 02/03/21 14:51 Lab File ID: CF02S06.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloroform	6.42	Peak assignment corrected	spositok	02/04/21 10:50
1,2-Dichloroethane		Invalid Compound ID	spositok	02/04/21 10:50
Chloromethane		Invalid Compound ID	spositok	02/04/21 10:50
Toluene		Invalid Compound ID	spositok	02/04/21 10:51

Lab Sample ID: 410-27746-5 Client Sample ID: HD-COD-SW-13-0/1-0

Date Analyzed: 02/03/21 15:13 Lab File ID: CF02S07.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,2-Dichloroethane		Invalid Compound ID	spositok	02/04/21 10:51
Chloromethane		Invalid Compound ID	spositok	02/04/21 10:51
Toluene		Invalid Compound ID	spositok	02/04/21 10:52

Lab Sample ID: 410-27746-6 Client Sample ID: HD-COD-SW-15-0/1-0

Date Analyzed: 02/03/21 15:35 Lab File ID: CF02S08.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone		Invalid Compound ID	spositok	02/04/21 10:52
Toluene		Invalid Compound ID	spositok	02/04/21 10:53

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laborator Job No.: 410-27746-1

SDG No.:

Instrument ID: 10193 Analysis Batch Number: 90352

Lab Sample ID: 410-27746-8 Client Sample ID: HD-COD-SW-17-0/1-0

Date Analyzed: 02/03/21 17:04 Lab File ID: CF02S12.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone		Invalid Compound ID	spositok	02/04/21 10:59
Chloromethane		Invalid Compound ID	spositok	02/04/21 10:59
Methyl tert-butyl ether		Invalid Compound ID	spositok	02/04/21 10:59
Toluene		Invalid Compound ID	spositok	02/04/21 11:00

Lab Sample ID: 410-27746-9 Client Sample ID: HD-COD-SW-26-0/1-0

Date Analyzed: 02/03/21 17:27 Lab File ID: CF02S13.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Butanone (MEK)		Invalid Compound ID	spositok	02/04/21 11:00
Bromodichloromethane		Invalid Compound ID	spositok	02/04/21 11:00

Lab Sample ID: 410-27746-10 Client Sample ID: HD-COD-SW-27-0/1-0

Date Analyzed: 02/03/21 17:49 Lab File ID: CF02S14.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloromethane		Invalid Compound ID	spositok	02/04/21 11:01
Toluene		Invalid Compound ID	spositok	02/04/21 11:01

Lab Sample ID: 410-27746-11 Client Sample ID: HD-COD-SW-28-0/1-0

Date Analyzed: 02/03/21 18:12 Lab File ID: CF02S15.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toluene		Invalid Compound ID	spositok	02/04/21 11:02

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laborator Job No.: 410-27746-1

SDG No.:

Instrument ID: 10193 Analysis Batch Number: 90352

Lab Sample ID: 410-27746-12 Client Sample ID: HD-COD-SW-29-0/1-0

Date Analyzed: 02/03/21 18:34 Lab File ID: CF02S16.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloroform		Invalid Compound ID	spositok	02/04/21 11:02
Chloromethane		Invalid Compound ID	spositok	02/04/21 11:02
Toluene		Invalid Compound ID	spositok	02/04/21 11:02

Lab Sample ID: 410-27746-13 Client Sample ID: HD-QC1-0/1-1

Date Analyzed: 02/03/21 18:57 Lab File ID: CF02S17.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methyl tert-butyl ether		Invalid Compound ID	spositok	02/04/21 11:02
Toluene		Invalid Compound ID	spositok	02/04/21 11:03

Lab Sample ID: 410-27746-14 Client Sample ID: HD-QC1-0/1-2

Date Analyzed: 02/03/21 19:19 Lab File ID: CF02S18.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone		Invalid Compound ID	spositok	02/04/21 11:03

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laborator Job No.: 410-27746-1

SDG No.:

Instrument ID: 10193 Analysis Batch Number: 90807

Lab Sample ID: CCVIS 410-90807/3 Client Sample ID:

Date Analyzed: 02/04/21 11:22 Lab File ID: CF02X03.D GC Column: R-624SilMS 30 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	8.43	Incomplete Integration	spositok	02/04/21 11:45

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-27746-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
MSV_25_826ISS_00001	03/03/21	08/31/20	Methanol, Lot DX212	10 mL	MSV_8260_SS_00189	1 mL	1,2-Dichloroethane-d4 (Surr)	250 ug/mL
							4-Bromofluorobenzene (Surr)	250 ug/mL
							Dibromofluoromethane (Surr)	250 ug/mL
							Toluene-d8 (Surr)	250 ug/mL
					MSV_Cus826_IS_00118	1 mL	1,4-Dichlorobenzene-d4	250 ug/mL
							Chlorobenzene-d5 (IS)	250 ug/mL
							Fluorobenzene (IS)	250 ug/mL
							t-Butyl alcohol-d10 (IS)	1250 ug/mL
.MSV_8260_SS_00189	03/31/22		Restek, Lot A0146938		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
.MSV_Cus826_IS_00118	05/31/21		Restek, Lot A0138205		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2500 ug/mL
							Chlorobenzene-d5 (IS)	2500 ug/mL
							Fluorobenzene (IS)	2500 ug/mL
							t-Butyl alcohol-d10 (IS)	12500 ug/mL
MSV_HP25_ISSS_00022	05/31/21	01/22/21	Methanol, Lot DZ644	10 mL	MSV_Cus826_IS_00172	1 mL	1,4-Dichlorobenzene-d4	250 ug/mL
							Chlorobenzene-d5 (IS)	250 ug/mL
							Fluorobenzene (IS)	250 ug/mL
							t-Butyl alcohol-d10 (IS)	1250 ug/mL
.MSV_Cus826_IS_00172	05/31/21		Restek, Lot A0138205		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2500 ug/mL
							Chlorobenzene-d5 (IS)	2500 ug/mL
							Fluorobenzene (IS)	2500 ug/mL
							t-Butyl alcohol-d10 (IS)	12500 ug/mL
MSV_HP25_ISSS_00022	05/31/21	01/22/21	Methanol, Lot DZ644	10 mL	MSV_8260_SS_00283	1 mL	1,2-Dichloroethane-d4 (Surr)	250 ug/mL
							4-Bromofluorobenzene (Surr)	250 ug/mL
							Dibromofluoromethane (Surr)	250 ug/mL
							Toluene-d8 (Surr)	250 ug/mL
.MSV_8260_SS_00283	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_Q_QVOA1_00044	10/01/20	09/01/20	Methanol, Lot DX212	25 mL	MSV_Q#1B_00053	1 mL	1,1,1,2-Tetrachloroethane	40 mg/L
							1,1,1-Trichloroethane	40 mg/L
							1,1,2,2-Tetrachloroethane	40 mg/L
							1,1,2-Trichloroethane	40 mg/L
							1,1-Dichloroethane	40 mg/L
							1,1-Dichloroethene	40 mg/L
							1,2-Dibromoethane (EDB)	40 mg/L
							1,2-Dichloroethane	40 mg/L
							1,2-Dichloropropane	40 mg/L
							Benzene	40 mg/L
							Bromodichloromethane	40 mg/L
							Bromoform	40 mg/L
							Carbon tetrachloride	40 mg/L
							Chlorobenzene	40 mg/L
							Chloroform	40 mg/L

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-27746-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							cis-1,2-Dichloroethene	40 mg/L
							cis-1,3-Dichloropropene	40 mg/L
							Dibromochloromethane	40 mg/L
							Ethylbenzene	40 mg/L
							Methylene Chloride	40 mg/L
							Styrene	40 mg/L
							Tetrachloroethene	40 mg/L
							Toluene	40 mg/L
							trans-1,2-Dichloroethene	40 mg/L
							trans-1,3-Dichloropropene	40 mg/L
							Trichloroethene	40 mg/L
					MSV_Q#3B_00046	1 mL	2-Butanone (MEK)	300 mg/L
							2-Hexanone	200 mg/L
							4-Methyl-2-pentanone (MIBK)	200 mg/L
							Acetone	300 mg/L
					MSV_Q#4C_00052	1 mL	Carbon disulfide	40 mg/L
							Methyl tert-butyl ether	40 mg/L
.MSV_Q#1B_00053	04/30/22		Restek, Lot A0148625		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	1000 ug/mL
							1,1,1-Trichloroethane	1000 ug/mL
							1,1,2,2-Tetrachloroethane	1000 ug/mL
							1,1,2-Trichloroethane	1000 ug/mL
							1,1-Dichloroethane	1000 ug/mL
							1,1-Dichloroethene	1000 ug/mL
							1,2-Dibromoethane (EDB)	1000 ug/mL
							1,2-Dichloroethane	1000 ug/mL
							1,2-Dichloropropane	1000 ug/mL
							Benzene	1000 ug/mL
							Bromodichloromethane	1000 ug/mL
							Bromoform	1000 ug/mL
							Carbon tetrachloride	1000 ug/mL
							Chlorobenzene	1000 ug/mL
							Chloroform	1000 ug/mL
							cis-1,2-Dichloroethene	1000 ug/mL
							cis-1,3-Dichloropropene	1000 ug/mL
							Dibromochloromethane	1000 ug/mL
							Ethylbenzene	1000 ug/mL
							Methylene Chloride	1000 ug/mL
							Styrene	1000 ug/mL
							Tetrachloroethene	1000 ug/mL
							Toluene	1000 ug/mL
							trans-1,2-Dichloroethene	1000 ug/mL
							trans-1,3-Dichloropropene	1000 ug/mL
							Trichloroethene	1000 ug/mL
.MSV_Q#3B_00046	09/30/21		Restek, Lot A0158722		(Purchased Reagent)		2-Butanone (MEK)	7500 ug/mL
							2-Hexanone	5000 ug/mL
							4-Methyl-2-pentanone (MIBK)	5000 ug/mL
							Acetone	7500 ug/mL
.MSV_Q#4C_00052	03/31/21		Restek, Lot A0158704		(Purchased Reagent)		Carbon disulfide	1000 ug/mL

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-27746-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Methyl tert-butyl ether	1000 ug/mL
MSV_Q_QVOA1_00066	03/05/21	02/03/21	Methanol, Lot DZ644	25 mL	MSV_Q#1B_00082	1 mL	1,1,1,2-Tetrachloroethane	40 mg/L
							1,1,1-Trichloroethane	40 mg/L
							1,1,2,2-Tetrachloroethane	40 mg/L
							1,1,2-Trichloroethane	40 mg/L
							1,1-Dichloroethane	40 mg/L
							1,1-Dichloroethene	40 mg/L
							1,2-Dibromoethane (EDB)	40 mg/L
							1,2-Dichloroethane	40 mg/L
							1,2-Dichloropropane	40 mg/L
							Benzene	40 mg/L
							Bromodichloromethane	40 mg/L
							Bromoform	40 mg/L
							Carbon tetrachloride	40 mg/L
							Chlorobenzene	40 mg/L
							Chloroform	40 mg/L
							cis-1,2-Dichloroethene	40 mg/L
							cis-1,3-Dichloropropene	40 mg/L
							Dibromochloromethane	40 mg/L
							Ethylbenzene	40 mg/L
							Methylene Chloride	40 mg/L
							Styrene	40 mg/L
							Tetrachloroethene	40 mg/L
							Toluene	40 mg/L
							trans-1,2-Dichloroethene	40 mg/L
							trans-1,3-Dichloropropene	40 mg/L
							Trichloroethene	40 mg/L
					MSV_Q#3B_00073	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
					MSV_Q#4C_00079	1 mL	Carbon disulfide	40 mg/L
							Methyl tert-butyl ether	40 mg/L
.MSV_Q#1B_00082	10/31/23		Restek, Lot A0165522		(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

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-27746-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chloroform	1000 ug/mL
							cis-1,2-Dichloroethene	1000 ug/mL
							cis-1,3-Dichloropropene	1000 ug/mL
							Dibromochloromethane	1000 ug/mL
							Ethylbenzene	1000 ug/mL
							Methylene Chloride	1000 ug/mL
							Styrene	1000 ug/mL
							Tetrachloroethene	1000 ug/mL
							Toluene	1000 ug/mL
							trans-1,2-Dichloroethene	1000 ug/mL
							trans-1,3-Dichloropropene	1000 ug/mL
							Trichloroethene	1000 ug/mL
.MSV_Q#3B_00073	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
.MSV_Q#4C_00079	03/31/21		Restek, Lot A0158704		(Purchased Reagent)		Carbon disulfide	1000 ug/mL
							Methyl tert-butyl ether	1000 ug/mL
MSV_Q_QVOA6_00041	09/25/20	08/26/20	Methanol, Lot DX212	25 mL	MSV_QCS#6Std_00049	1 mL	Bromochloromethane	40 ug/mL
.MSV_QCS#6Std_00049	09/30/21		Restek, Lot A0158906		(Purchased Reagent)		Bromochloromethane	1000 ug/mL
MSV_Q_QVOA6_00064	03/05/21	02/03/21	Methanol, Lot DZ644	25 mL	MSV_QCS#6Std_00078	1 mL	Bromochloromethane	40 ug/mL
.MSV_QCS#6Std_00078	09/30/21		Restek, Lot A0158906		(Purchased Reagent)		Bromochloromethane	1000 ug/mL
MSV_QGAS_826_00069	09/08/20	09/01/20	Methanol, Lot DX212	1 mL	MSV_502QGas_00091	20 uL	Bromomethane	40 ug/mL
							Chloroethane	40 ug/mL
							Chloromethane	40 ug/mL
							Vinyl chloride	40 ug/mL
.MSV_502QGas_00091	09/08/20		Restek, Lot A0155823		(Purchased Reagent)		Bromomethane	2000 ug/mL
							Chloroethane	2000 ug/mL
							Chloromethane	2000 ug/mL
							Vinyl chloride	2000 ug/mL
MSV_QGAS_826_00108	02/09/21	02/02/21	Methanol, Lot DZ644	1 mL	MSV_502QGas_00140	20 uL	Bromomethane	40 ug/mL
							Chloroethane	40 ug/mL
							Chloromethane	40 ug/mL
							Vinyl chloride	40 ug/mL
.MSV_502QGas_00140	02/09/21		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_00022	09/19/20	09/01/20	Methanol, Lot DX212	1 mL	MSV_V#1B_00101	10 uL	1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-27746-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dibromoethane (EDB)	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3,5-Trichlorobenzene	50 ug/mL
							1,3,5-Trimethylbenzene	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							1-Chlorohexane	50 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							4-Chlorotoluene	50 ug/mL
							4-Isopropyltoluene	50 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Dibromochloromethane	50 ug/mL
							Dibromomethane	50 ug/mL
							Ethylbenzene	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	100 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							Trichloroethene	50 ug/mL
					MSV_V#2B_00121	10 uL	1,4-Dioxane	2500 ug/mL
							2-Methyl-2-propanol	1000 ug/mL

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-27746-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Isobutyl alcohol	2500 ug/mL
							Methacrylonitrile	500 ug/mL
							n-Butanol	5000 ug/mL
							Propionitrile	1000 ug/mL
							trans-1,4-Dichloro-2-butene	500 ug/mL
					MSV_V#4C_00082	10 uL	1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,2-Dichloro-1,1,2-trifluoroethane	50 ug/mL
							2-Chloro-1,3-butadiene	50 ug/mL
							Benzyl chloride	50 ug/mL
							Butadiene	50 ug/mL
							Carbon disulfide	50 ug/mL
							Cyclohexane	50 ug/mL
							Ethyl methacrylate	50 ug/mL
							Hexane	50 ug/mL
							Iodomethane	50 ug/mL
							Isopropyl ether	50 ug/mL
							Methyl methacrylate	50 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							n-Heptane	50 ug/mL
							Tert-amyl methyl ether	50 ug/mL
							Tert-butyl ethyl ether	50 ug/mL
					MSV_V_VOA2_00047	150 uL	1,4-Dioxane	2500 ug/mL
							2-Methyl-2-propanol	1000 ug/mL
							Isobutyl alcohol	2500 ug/mL
							Methacrylonitrile	500 ug/mL
							n-Butanol	5000 ug/mL
							Propionitrile	1000 ug/mL
							trans-1,4-Dichloro-2-butene	500 ug/mL
					MSV_V_VOA3_00043	100 uL	2-Butanone (MEK)	500 ug/mL
							2-Hexanone	500 ug/mL
							2-Nitropropane	500 ug/mL
							4-Methyl-2-pentanone (MIBK)	500 ug/mL
							Acetone	500 ug/mL
							Acrylonitrile	250 ug/mL
							Tetrahydrofuran	500 ug/mL
							Acrolein	2499.91 ug/mL
.MSV_V#1B_00101	10/01/20		Restek, Lot A0158586		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	5000 ug/mL
							1,1,1-Trichloroethane	5000 ug/mL
							1,1,2,2-Tetrachloroethane	5000 ug/mL
							1,1,2-Trichloroethane	5000 ug/mL
							1,1-Dichloroethane	5000 ug/mL
							1,1-Dichloroethene	5000 ug/mL
							1,1-Dichloropropene	5000 ug/mL
							1,2,3-Trichlorobenzene	5000 ug/mL
							1,2,3-Trichloropropane	5000 ug/mL
							1,2,4-Trichlorobenzene	5000 ug/mL

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-27746-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2,4-Trimethylbenzene	5000 ug/mL
							1,2-Dibromo-3-Chloropropane	5000 ug/mL
							1,2-Dibromoethane (EDB)	5000 ug/mL
							1,2-Dichlorobenzene	5000 ug/mL
							1,2-Dichloroethane	5000 ug/mL
							1,2-Dichloropropane	5000 ug/mL
							1,3,5-Trichlorobenzene	5000 ug/mL
							1,3,5-Trimethylbenzene	5000 ug/mL
							1,3-Dichlorobenzene	5000 ug/mL
							1,3-Dichloropropane	5000 ug/mL
							1,4-Dichlorobenzene	5000 ug/mL
							1-Chlorohexane	5000 ug/mL
							2,2-Dichloropropane	5000 ug/mL
							2-Chlorotoluene	5000 ug/mL
							4-Chlorotoluene	5000 ug/mL
							4-Isopropyltoluene	5000 ug/mL
							Benzene	5000 ug/mL
							Bromobenzene	5000 ug/mL
							Bromodichloromethane	5000 ug/mL
							Bromoform	5000 ug/mL
							Carbon tetrachloride	5000 ug/mL
							Chlorobenzene	5000 ug/mL
							Chloroform	5000 ug/mL
							cis-1,2-Dichloroethene	5000 ug/mL
							cis-1,3-Dichloropropene	5000 ug/mL
							Dibromochloromethane	5000 ug/mL
							Dibromomethane	5000 ug/mL
							Ethylbenzene	5000 ug/mL
							Hexachlorobutadiene	5000 ug/mL
							Isopropylbenzene	5000 ug/mL
							m-Xylene & p-Xylene	10000 ug/mL
							Methylene Chloride	5000 ug/mL
							n-Butylbenzene	5000 ug/mL
							N-Propylbenzene	5000 ug/mL
							Naphthalene	5000 ug/mL
							o-Xylene	5000 ug/mL
							sec-Butylbenzene	5000 ug/mL
							Styrene	5000 ug/mL
							tert-Butylbenzene	5000 ug/mL
							Tetrachloroethene	5000 ug/mL
							Toluene	5000 ug/mL
							trans-1,2-Dichloroethene	5000 ug/mL
							trans-1,3-Dichloropropene	5000 ug/mL
							Trichloroethene	5000 ug/mL
.MSV_V#2B_00121	10/01/20		Restek, Lot A0159694		(Purchased Reagent)		1,4-Dioxane	62500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Methacrylonitrile	12500 ug/mL

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-27746-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							n-Butanol	125000 ug/mL
							Propionitrile	25000 ug/mL
							trans-1,4-Dichloro-2-butene	12500 ug/mL
.MSV_V#4C_00082	10/01/20		Restek, Lot A0158660		(Purchased Reagent)		1,1,2-Trichloro-1,2,2-trifluoroethane	5000 ug/mL
							1,2-Dichloro-1,1,2-trifluoroethane	5000 ug/mL
							2-Chloro-1,3-butadiene	5000 ug/mL
							Benzyl chloride	5000 ug/mL
							Butadiene	5000 ug/mL
							Carbon disulfide	5000 ug/mL
							Cyclohexane	5000 ug/mL
							Ethyl methacrylate	5000 ug/mL
							Hexane	5000 ug/mL
							Iodomethane	5000 ug/mL
							Isopropyl ether	5000 ug/mL
							Methyl methacrylate	5000 ug/mL
							Methyl tert-butyl ether	5000 ug/mL
							n-Heptane	5000 ug/mL
							Tert-amyl methyl ether	5000 ug/mL
							Tert-butyl ethyl ether	5000 ug/mL
.MSV_V_VOA2_00047	10/01/20	09/01/20	Methanol, Lot DX212	5 mL	MSV_V#2B_00121	1 mL	1,4-Dioxane	12500 ug/mL
							2-Methyl-2-propanol	5000 ug/mL
							Isobutyl alcohol	12500 ug/mL
							Methacrylonitrile	2500 ug/mL
							n-Butanol	25000 ug/mL
							Propionitrile	5000 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
..MSV_V#2B_00121	10/01/20		Restek, Lot A0159694		(Purchased Reagent)		1,4-Dioxane	62500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Methacrylonitrile	12500 ug/mL
							n-Butanol	125000 ug/mL
							Propionitrile	25000 ug/mL
							trans-1,4-Dichloro-2-butene	12500 ug/mL
.MSV_V_VOA3_00043	09/19/20	09/01/20	Methanol, Lot DX212	5 mL	MSV_V#3B_00050	1 mL	2-Butanone (MEK)	5000 ug/mL
							2-Hexanone	5000 ug/mL
							2-Nitropropane	5000 ug/mL
							4-Methyl-2-pentanone (MIBK)	5000 ug/mL
							Acetone	5000 ug/mL
							Acrylonitrile	2500 ug/mL
							Tetrahydrofuran	5000 ug/mL
					MSV_VACR_00010	1 mL	Acrolein	24999.1 ug/mL
..MSV_V#3B_00050	10/01/20		Restek, Lot A0158677		(Purchased Reagent)		2-Butanone (MEK)	25000 ug/mL
							2-Hexanone	25000 ug/mL
							2-Nitropropane	25000 ug/mL
							4-Methyl-2-pentanone (MIBK)	25000 ug/mL
							Acetone	25000 ug/mL

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-27746-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acrylonitrile	12500 ug/mL
							Tetrahydrofuran	25000 ug/mL
..MSV_VACR_00010	09/19/20	07/21/20	Methanol, Lot DX212	10 mL	MSV_VACR_STK_00009	9.149 mL	Acrolein	124995 ug/mL
...MSV_VACR_STK_00009	09/19/20	07/21/20	Methanol, Lot DX212	10 mL	MSV_ACROLEIN_00006	1.4488 g	Acrolein	136622 ug/mL
....MSV_ACROLEIN_00006	12/31/20	Chem Service, Lot 9717000			(Purchased Reagent)		Acrolein	0.943 g/g
MSV_RV1_826_00036	02/13/21	01/19/21	Methanol, Lot DZ644	1 mL	MSV_V#1B_00139	10 uL	1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,2-Dibromoethane (EDB)	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							Benzene	50 ug/mL
							Bromodichloromethane	50 ug/mL
							Bromoform	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Dibromochloromethane	50 ug/mL
							Ethylbenzene	50 ug/mL
							Methylene Chloride	50 ug/mL
							Styrene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							Trichloroethene	50 ug/mL
					MSV_V#4C_00119	10 uL	Carbon disulfide	50 ug/mL
							Methyl tert-butyl ether	50 ug/mL
					MSV_V_VOA3_00064	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
.MSV_V#1B_00139	02/18/21	Restek, Lot A0158586			(Purchased Reagent)		1,1,1,2-Tetrachloroethane	5000 ug/mL
							1,1,1-Trichloroethane	5000 ug/mL
							1,1,2,2-Tetrachloroethane	5000 ug/mL
							1,1,2-Trichloroethane	5000 ug/mL
							1,1-Dichloroethane	5000 ug/mL
							1,1-Dichloroethene	5000 ug/mL
							1,2-Dibromoethane (EDB)	5000 ug/mL
							1,2-Dichloroethane	5000 ug/mL
							1,2-Dichloropropane	5000 ug/mL
							Benzene	5000 ug/mL

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-27746-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Bromodichloromethane	5000 ug/mL
							Bromoform	5000 ug/mL
							Carbon tetrachloride	5000 ug/mL
							Chlorobenzene	5000 ug/mL
							Chloroform	5000 ug/mL
							cis-1,2-Dichloroethene	5000 ug/mL
							cis-1,3-Dichloropropene	5000 ug/mL
							Dibromochloromethane	5000 ug/mL
							Ethylbenzene	5000 ug/mL
							Methylene Chloride	5000 ug/mL
							Styrene	5000 ug/mL
							Tetrachloroethene	5000 ug/mL
							Toluene	5000 ug/mL
							trans-1,2-Dichloroethene	5000 ug/mL
							trans-1,3-Dichloropropene	5000 ug/mL
							Trichloroethene	5000 ug/mL
.MSV_V#4C_00119	02/18/21		Restek, Lot A0158660		(Purchased Reagent)		Carbon disulfide	5000 ug/mL
							Methyl tert-butyl ether	5000 ug/mL
.MSV_V_VOA3_00064	02/13/21	01/19/21	Methanol, Lot DZ644	5 mL	MSV_V#3B_00077	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
..MSV_V#3B_00077	02/18/21		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
MSV_RV4_826_00024	09/25/20	09/01/20	Methanol, Lot DX212	1 mL	MSV_V_EE_00003	50 uL	Ethyl ether	49.9925 ug/mL
					MSV_V_VOA6_00050	50 uL	1,2,3-Trimethylbenzene	50 ug/mL
							3-Chloro-1-propene	50 ug/mL
							Bromochloromethane	50 ug/mL
							Methyl acetate	50 ug/mL
							Methylcyclohexane	50 ug/mL
							Pentachloroethane	50 ug/mL
.MSV_V_EE_00003	10/28/20	04/28/20	Methanol, Lot DX212	100 mL	MSV_EE_MISCSK_00004	2.059 mL	Ethyl ether	999.85 ug/mL
..MSV_EE_MISCSK_00004	10/28/20	04/28/20	Methanol, Lot DX212	10 mL	MSV_EE_Neat_00002	0.4856 g	Ethyl ether	48560 ug/mL
...MSV_EE_Neat_00002	11/30/21		Chem Service, Lot 7967000		(Purchased Reagent)		Ethyl ether	1 g/g
.MSV_V_VOA6_00050	09/25/20	08/26/20	Methanol, Lot DX212	5 mL	MSV_V#6_00032	1 mL	1,2,3-Trimethylbenzene	1000 ug/mL
							3-Chloro-1-propene	1000 ug/mL
							Bromochloromethane	1000 ug/mL
							Methyl acetate	1000 ug/mL
							Methylcyclohexane	1000 ug/mL
							Pentachloroethane	1000 ug/mL
..MSV_V#6_00032	09/25/20		Restek, Lot A0158625		(Purchased Reagent)		1,2,3-Trimethylbenzene	5000 ug/mL
							3-Chloro-1-propene	5000 ug/mL
							Bromochloromethane	5000 ug/mL
							Methyl acetate	5000 ug/mL
							Methylcyclohexane	5000 ug/mL

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-27746-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Pentachloroethane	5000 ug/mL
MSV_RV4_826_00043	02/25/21	01/31/21	Methanol, Lot DZ644	1 mL	MSV_V_VOA6_00072	50 uL	Bromochloromethane	50 ug/mL
.MSV_V_VOA6_00072	02/25/21	01/26/21	Methanol, Lot DZ644	5 mL	MSV_V#6_00056	1 mL	Bromochloromethane	1000 ug/mL
..MSV_V#6_00056	02/25/21		Restek, Lot A0158625		(Purchased Reagent)		Bromochloromethane	5000 ug/mL
MSV_RV4GAS826_00072	09/08/20	09/01/20	Methanol, Lot DX212	1 mL	MSV_DCFM_00019	25 uL	Dichlorofluoromethane	50 ug/mL
					MSV_V_Gas_00136	25 uL	Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
.MSV_DCFM_00019	09/12/20		AccuStandard, Lot 219051360		(Purchased Reagent)		Dichlorofluoromethane	2000 ug/mL
.MSV_V_Gas_00136	09/08/20		Restek, Lot A0159812		(Purchased Reagent)		Bromomethane	2000 ug/mL
							Chloroethane	2000 ug/mL
							Chloromethane	2000 ug/mL
							Dichlorodifluoromethane	2000 ug/mL
							Trichlorofluoromethane	2000 ug/mL
							Vinyl chloride	2000 ug/mL
MSV_RV4GAS826_00111	02/09/21	02/02/21	Methanol, Lot DZ644	1 mL	MSV_V_Gas_00203	25 uL	Bromomethane	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
.MSV_V_Gas_00203	02/09/21		Restek, Lot A0159812		(Purchased Reagent)		Bromomethane	2000 ug/mL
							Chloroethane	2000 ug/mL
							Chloromethane	2000 ug/mL
							Vinyl chloride	2000 ug/mL
MSV_V_BFB_00003							1,2-Dichloroethene, Total	
							1,3-Dichloropropene, Total	
							Tentatively Identified Compound	
							Xylenes, Total	
					MSV_VBFB_STK_00004	0.117 mL	BFB	50.0245 ug/mL
.MSV_VBFB_STK_00004	01/22/21	07/22/20	Methanol, Lot DX212	10 mL	MSV_4BFB_NEAT_00002	1.0689 g	BFB	106890 ug/mL
..MSV_4BFB_NEAT_00002	01/31/21		Chem Service, Lot 8601300		(Purchased Reagent)		BFB	1 g/g
MSV_V_BFB_00004							1,2-Dichloroethene, Total	
							1,3-Dichloropropene, Total	
							Tentatively Identified Compound	
							Xylenes, Total	
					MSV_VBFB_STK_00005	0.124 mL	BFB	49.8282 ug/mL
.MSV_VBFB_STK_00005	07/14/21	01/14/21	Methanol, Lot DZ644	10 mL	MSV_4BFB_NEAT_00004	1.0046 g	BFB	100460 ug/mL
..MSV_4BFB_NEAT_00004	02/28/25		Chem Service, Lot 10727100		(Purchased Reagent)		BFB	1 g/g

Reagent

MSV_4BFB_NEAT_00002

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

CERTIFICATE OF ANALYSIS

4-Bromofluorobenzene

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

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

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

Certified By:

Mary Beth O'Donnell

Mary Beth O'Donnell
CSM/TC

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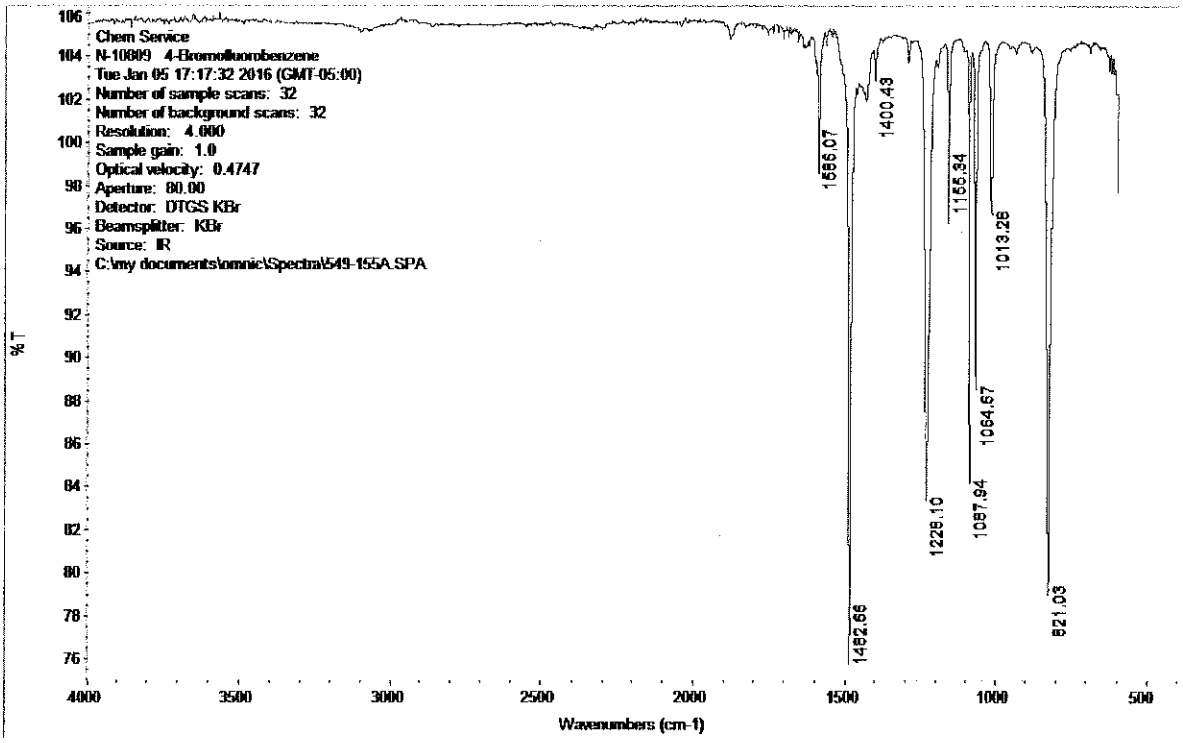
CERTIFICATE OF ANALYSIS

Analysis Method: FTIR- Spectroscopy

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



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CERTIFICATE OF ANALYSIS

Analysis Method:

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

660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
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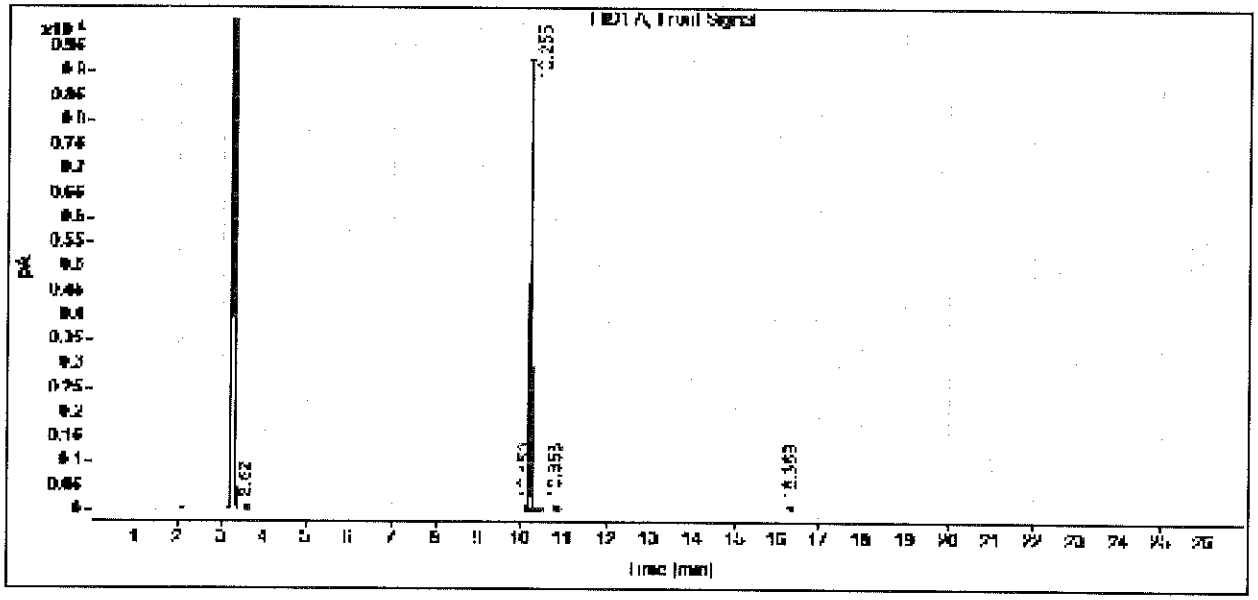
CERTIFICATE OF ANALYSIS

Gas Chromatography / Flame Ionization Detector (GC/FID)

Data file: C:\CHEM32\1\DATA\1215\SIG1007347.D

Sample name: N-10809/CH2CL2

Instrument:	GC 1	**Sample type:**	Sample
Injection date:	1/5/2016 4:20:37 PM	**Location:**	Vial 5
Acq. method:	MIX1.M	**Injection volume:**	1.0uL
Column name:	DB-624 (30m x 0.53mm x 3.0um)		



Signal: FID1 A, Front Signal

RT [min]	Type	Width [min]	Area	Height	Area%
3.620	BB	0.0403	3.8748	1.1723	0.0145
10.156	BV	0.0195	0.7424	0.4869	0.0028
10.255	VB S	0.0437	26687.6328	9172.4229	99.7795
10.853	BB	0.0583	54.3345	12.3602	0.2031
16.369	BB	0.0034	0.0123	0.0605	0.0000
		Sum	26746.5968		

Reagent

MSV_502QGas_00091

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)

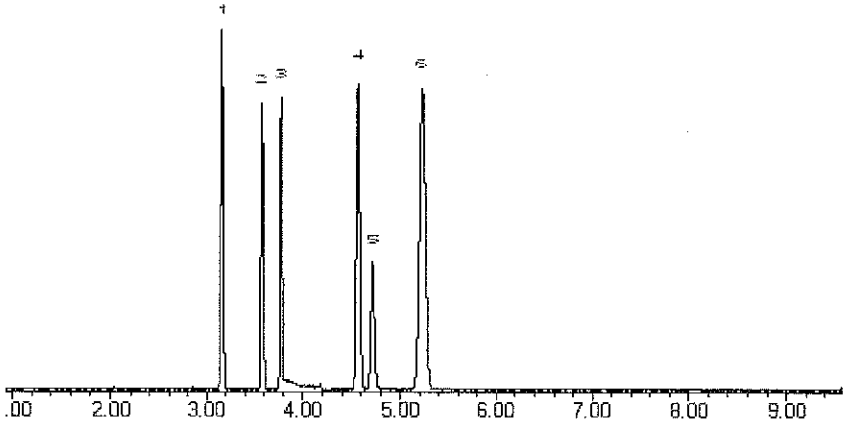
Carrier Gas:
helium-constant flow 2.0 mL/min.

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
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_00140

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)

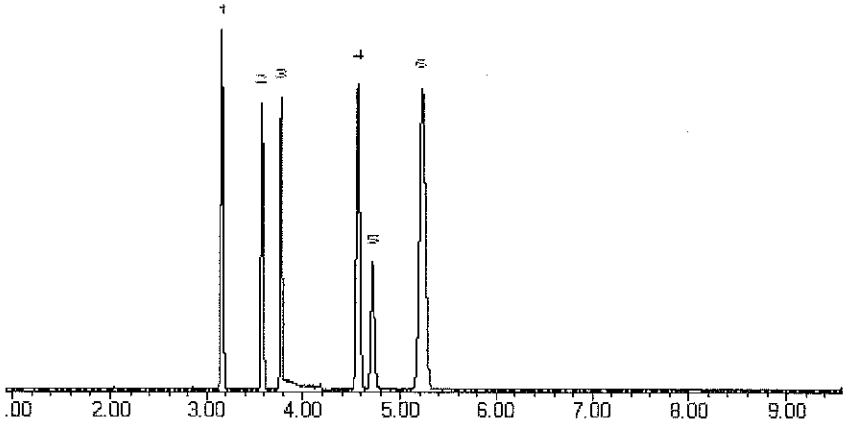
Carrier Gas:
helium-constant flow 2.0 mL/min.

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
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_8260_SS_00189

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 55671 **Lot No.:** A0146938

Description : 8260A Surrogate Mix

8260A Surrogate Mix 2,500µg/mL, P&T Methanol, 1mL/ampul

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

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

CERTIFIED VALUES

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

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

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

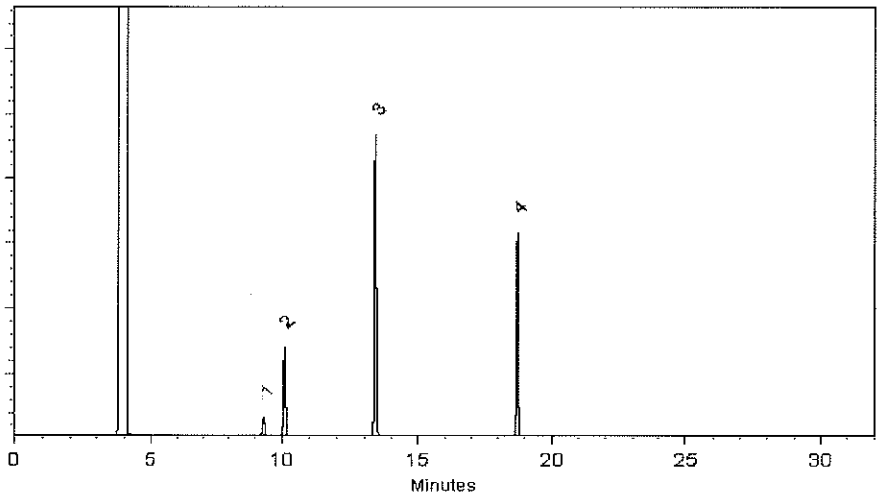
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



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

Maggie Wang
Maggie Wang - Operations Technician I

Date Mixed: 12-Mar-2019 **Balance:** 1128342314

Jennifer J Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 15-Mar-2019

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_8260_SS_00283

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 55671 **Lot No.:** A0146938

Description : 8260A Surrogate Mix

8260A Surrogate Mix 2,500µg/mL, P&T Methanol, 1mL/ampul

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

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

CERTIFIED VALUES

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

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

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

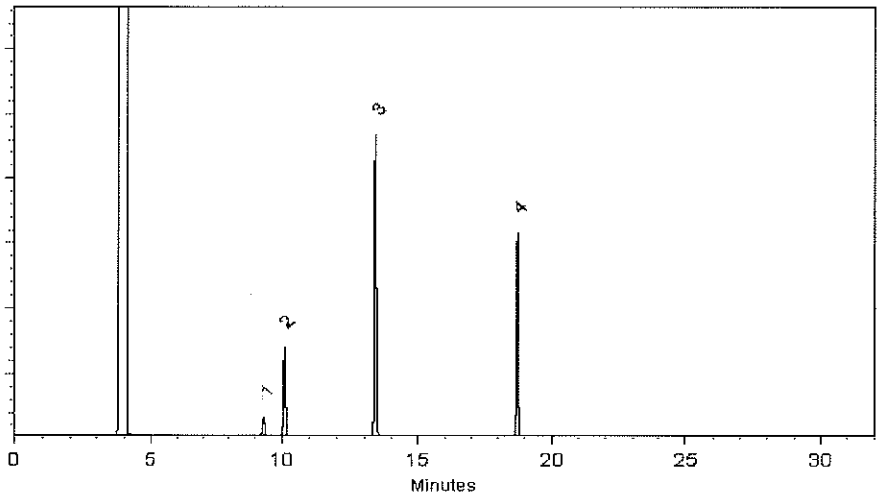
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



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

Maggie Wang
Maggie Wang - Operations Technician I

Date Mixed: 12-Mar-2019 **Balance:** 1128342314

Jennifer J Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 15-Mar-2019

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- 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_ACROLEIN_00006

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

410-83906

CERTIFICATE OF ANALYSIS

Acrolein

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

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

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

Certified By.

Mary Beth O'Donnell

Mary Beth O`Donnell
CSM/TC

COA Form
Revision 3 (3/2015)

660 Tower Lane • P O Box 599 • West Chester, PA 19381-0599
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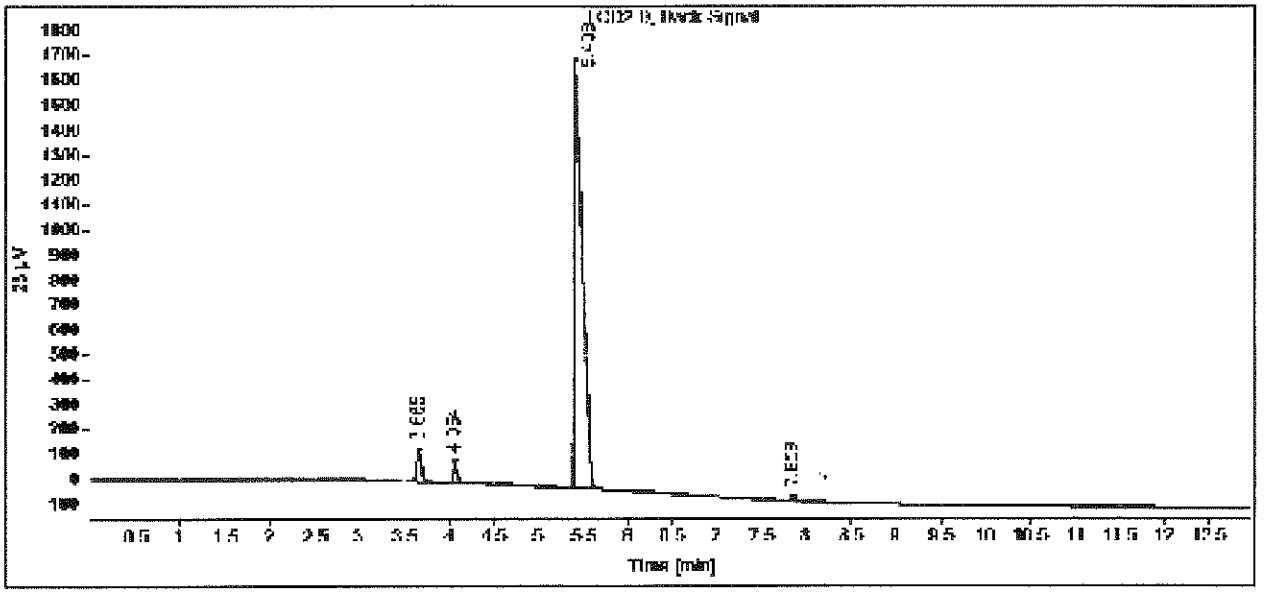
CERTIFICATE OF ANALYSIS

Gas Chromatography / Thermal Conductivity Detector (GC/TCD)

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



Signal: TCD2 B, Back Signal

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

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

CERTIFICATE OF ANALYSIS

Analysis Method:

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

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

410-83907

CERTIFICATE OF ANALYSIS

Acrolein

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

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

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

Certified By

Mary Beth O'Donnell

Mary Beth O'Donnell
CSM/TC

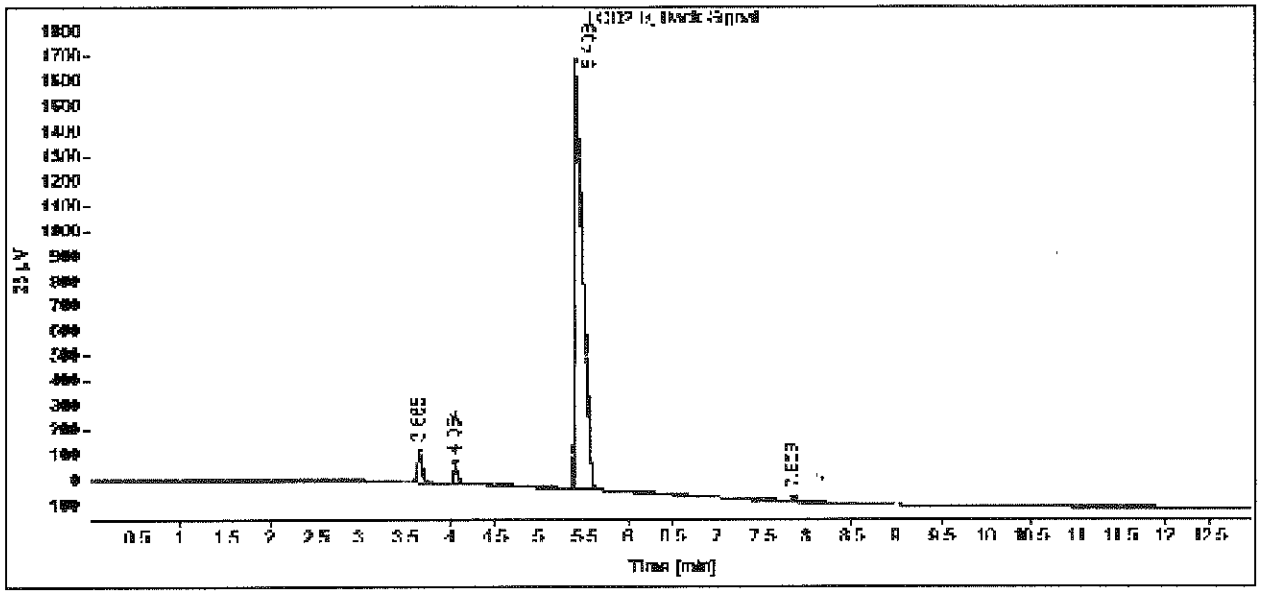
COA Form
Revision 3 (3/2015)

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

CERTIFICATE OF ANALYSIS

Gas Chromatography / Thermal Conductivity Detector (GC/TCD)

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



Signal: TCD2 B, Back Signal

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

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

CERTIFICATE OF ANALYSIS

Analysis Method:

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

Reagent

MSV_Cus826_IS_00118

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. : 558267 **Lot No.:** A0138205

Description : Custom 8260A IS Mix

Custom 8260A IS Mix 2,500-12,500µg/mL, P&T Methanol, 1mL/ampul

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

Expiration Date : May 31, 2021 **Storage:** 0°C or colder

CERTIFIED VALUES

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

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

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

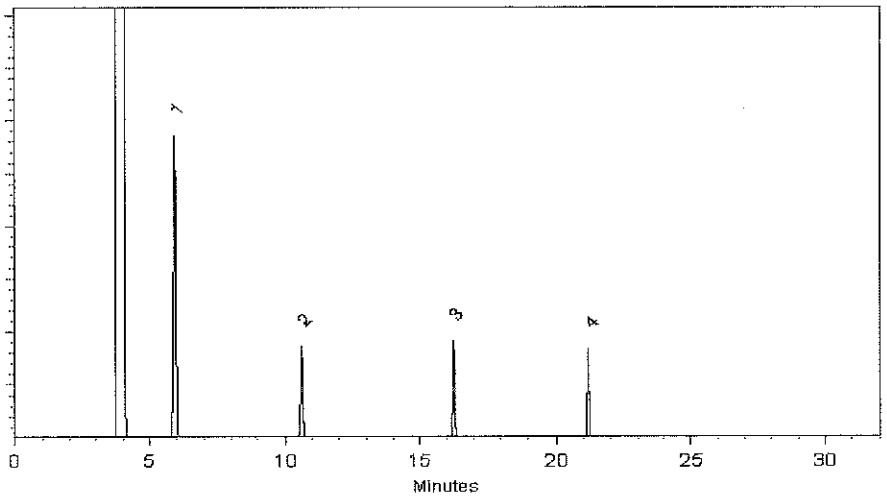
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



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

Tom Suckar - Mix Technician

Date Mixed: 21-May-2018 **Balance:** 1128342314

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 23-May-2018

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_Cus826_IS_00172

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

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 558267 **Lot No.:** A0138205

Description : Custom 8260A IS Mix

Custom 8260A IS Mix 2,500-12,500µg/mL, P&T Methanol, 1mL/ampul

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

Expiration Date : May 31, 2021 **Storage:** 0°C or colder

CERTIFIED VALUES

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

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

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

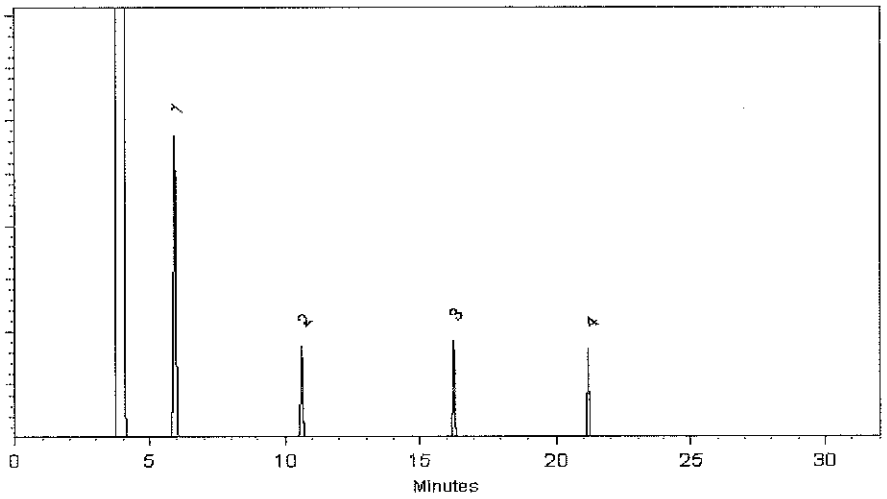
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



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

Tom Suckar - Mix Technician

Date Mixed: 21-May-2018 **Balance:** 1128342314

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 23-May-2018

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
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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_DCFM_00019

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_Q#1B_00053

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

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 569936-1.sec **Lot No.:** A0148625

Description : Custom Revised Q #1B Standard

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

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

Expiration Date : April 30, 2022 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1,1-Dichloroethene	1,005.5 µg/mL	+/- 7.1750 µg/mL	Gravimetric
	CAS # 75-35-4.SEC (Lot 5111300)		+/- 56.5279 µg/mL	Unstressed
	Purity 99%		+/- 57.8435 µg/mL	Stressed
2	Methylene chloride (dichloromethane)	1,004.5 µg/mL	+/- 7.1682 µg/mL	Gravimetric
	CAS # 75-09-2.SEC (Lot FGM02)		+/- 56.4745 µg/mL	Unstressed
	Purity 99%		+/- 57.7888 µg/mL	Stressed
3	trans-1,2-Dichloroethene	1,002.8 µg/mL	+/- 7.1558 µg/mL	Gravimetric
	CAS # 156-60-5.SEC (Lot TS5UB)		+/- 56.3767 µg/mL	Unstressed
	Purity 97%		+/- 57.6888 µg/mL	Stressed
4	1,1-Dichloroethane	1,006.8 µg/mL	+/- 7.1846 µg/mL	Gravimetric
	CAS # 75-34-3.SEC (Lot 5379000)		+/- 56.6038 µg/mL	Unstressed
	Purity 99%		+/- 57.9211 µg/mL	Stressed
5	2,2-Dichloropropane	1,003.2 µg/mL	+/- 7.7659 µg/mL	Gravimetric
	CAS # 594-20-7.SEC (Lot I7E8E)		+/- 56.4820 µg/mL	Unstressed
	Purity 98%		+/- 57.7928 µg/mL	Stressed
6	cis-1,2-Dichloroethene	1,001.2 µg/mL	+/- 7.7507 µg/mL	Gravimetric
	CAS # 156-59-2.SEC (Lot HGC01-BLKT)		+/- 56.3716 µg/mL	Unstressed
	Purity 98%		+/- 57.6799 µg/mL	Stressed
7	Chloroform	1,004.5 µg/mL	+/- 7.1684 µg/mL	Gravimetric
	CAS # 67-66-3.SEC (Lot 1297547)		+/- 56.4759 µg/mL	Unstressed
	Purity 99%		+/- 57.7903 µg/mL	Stressed

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

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

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

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

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

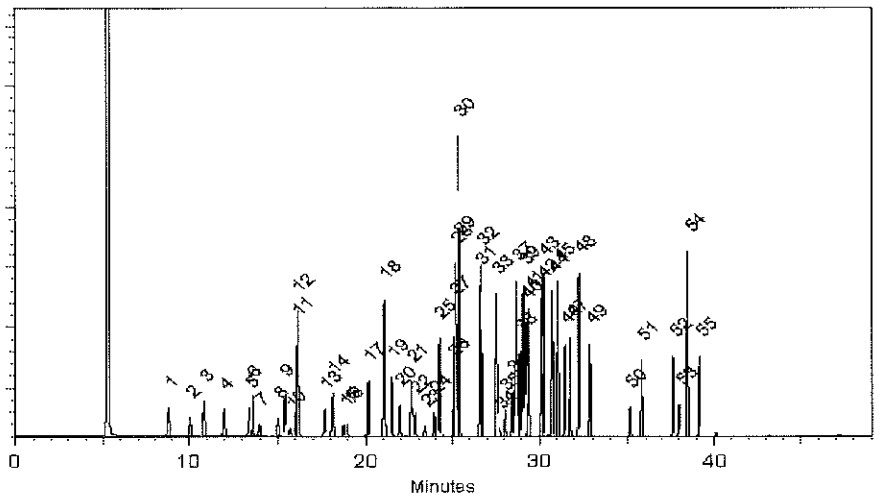
Carrier Gas:
hydrogen-constant pressure 8.0 psi.

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

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



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

Michael J Maye

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

Jennifer Pollino
Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 30-Apr-2019

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_Q#1B_00082

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.:** A0165522

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 : October 31, 2023 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1,1-Dichloroethene	1,003.8 µg/mL	+/- 27.1548 µg/mL	Gravimetric
	CAS # 75-35-4.SEC (Lot 9201700)		+/- 62.2148 µg/mL	Unstressed
	Purity 99%		+/- 63.4085 µg/mL	Stressed
2	Methylene chloride (dichloromethane)	1,001.8 µg/mL	+/- 27.1007 µg/mL	Gravimetric
	CAS # 75-09-2.SEC (Lot FGM02)		+/- 62.0908 µg/mL	Unstressed
	Purity 99%		+/- 63.2822 µg/mL	Stressed
3	trans-1,2-Dichloroethene	1,000.3 µg/mL	+/- 27.0615 µg/mL	Gravimetric
	CAS # 156-60-5.SEC (Lot TS5UB)		+/- 62.0010 µg/mL	Unstressed
	Purity 99%		+/- 63.1906 µg/mL	Stressed
4	1,1-Dichloroethane	1,002.0 µg/mL	+/- 27.1075 µg/mL	Gravimetric
	CAS # 75-34-3.SEC (Lot 7482000)		+/- 62.1063 µg/mL	Unstressed
	Purity 99%		+/- 63.2980 µg/mL	Stressed
5	2,2-Dichloropropane	1,000.0 µg/mL	+/- 7.1361 µg/mL	Gravimetric
	CAS # 594-20-7.SEC (Lot I7E8E)		+/- 56.2215 µg/mL	Unstressed
	Purity 99%		+/- 57.5299 µg/mL	Stressed
6	cis-1,2-Dichloroethene	1,000.2 µg/mL	+/- 7.1372 µg/mL	Gravimetric
	CAS # 156-59-2.SEC (Lot YZO5O)		+/- 56.2305 µg/mL	Unstressed
	Purity 99%		+/- 57.5391 µg/mL	Stressed
7	Chloroform	1,000.8 µg/mL	+/- 27.0736 µg/mL	Gravimetric
	CAS # 67-66-3.SEC (Lot 1297547)		+/- 62.0289 µg/mL	Unstressed
	Purity 99%		+/- 63.2190 µg/mL	Stressed

8	1,1,1-trichloroethane		1,000.3	µg/mL	+/-	27.0618	µg/mL	Gravimetric
	CAS # 71-55-6 *	(Lot 190123CG)			+/-	62.0018	µg/mL	Unstressed
	Purity 98%				+/-	63.1914	µg/mL	Stressed
9	1,1-Dichloropropene		1,000.4	µg/mL	+/-	7.1389	µg/mL	Gravimetric
	CAS # 563-58-6.SEC	(Lot 556500)			+/-	56.2440	µg/mL	Unstressed
	Purity 99%				+/-	57.5529	µg/mL	Stressed
10	Carbon tetrachloride		1,000.8	µg/mL	+/-	27.0736	µg/mL	Gravimetric
	CAS # 56-23-5.SEC	(Lot 11466)			+/-	62.0289	µg/mL	Unstressed
	Purity 99%				+/-	63.2190	µg/mL	Stressed
11	1,2-Dichloroethane		1,000.6	µg/mL	+/-	27.0707	µg/mL	Gravimetric
	CAS # 107-06-2.SEC	(Lot 00016165)			+/-	62.0222	µg/mL	Unstressed
	Purity 99%				+/-	63.2122	µg/mL	Stressed
12	Benzene		1,000.1	µg/mL	+/-	7.1366	µg/mL	Gravimetric
	CAS # 71-43-2.SEC	(Lot B28Y008)			+/-	56.2260	µg/mL	Unstressed
	Purity 99%				+/-	57.5345	µg/mL	Stressed
13	Trichloroethene		1,000.9	µg/mL	+/-	27.0771	µg/mL	Gravimetric
	CAS # 79-01-6.SEC	(Lot H04X050)			+/-	62.0368	µg/mL	Unstressed
	Purity 99%				+/-	63.2271	µg/mL	Stressed
14	1,2-Dichloropropane		1,000.1	µg/mL	+/-	27.0571	µg/mL	Gravimetric
	CAS # 78-87-5.SEC	(Lot ERRBI-RH)			+/-	61.9910	µg/mL	Unstressed
	Purity 99%				+/-	63.1805	µg/mL	Stressed
15	Bromodichloromethane		1,000.8	µg/mL	+/-	27.0749	µg/mL	Gravimetric
	CAS # 75-27-4.SEC	(Lot 13780)			+/-	62.0316	µg/mL	Unstressed
	Purity 99%				+/-	63.2218	µg/mL	Stressed
16	Dibromomethane		1,000.1	µg/mL	+/-	7.1366	µg/mL	Gravimetric
	CAS # 74-95-3.SEC	(Lot MOKKJ)			+/-	56.2260	µg/mL	Unstressed
	Purity 99%				+/-	57.5345	µg/mL	Stressed
17	cis-1,3-Dichloropropene		1,000.9	µg/mL	+/-	27.0778	µg/mL	Gravimetric
	CAS # 10061-01-5.SEC	(Lot 487OA)			+/-	62.0384	µg/mL	Unstressed
	Purity 98%				+/-	63.2287	µg/mL	Stressed
18	Toluene		1,000.1	µg/mL	+/-	7.1366	µg/mL	Gravimetric
	CAS # 108-88-3.SEC	(Lot YND2B-BD)			+/-	56.2260	µg/mL	Unstressed
	Purity 99%				+/-	57.5345	µg/mL	Stressed
19	trans-1,3-Dichloropropene		1,002.1	µg/mL	+/-	27.1112	µg/mL	Gravimetric
	CAS # 10061-02-6.SEC	(Lot ZDMSL)			+/-	62.1150	µg/mL	Unstressed
	Purity 96%				+/-	63.3068	µg/mL	Stressed
20	1,1,2-Trichloroethane		1,001.3	µg/mL	+/-	27.0872	µg/mL	Gravimetric
	CAS # 79-00-5.SEC	(Lot 7871500)			+/-	62.0598	µg/mL	Unstressed
	Purity 99%				+/-	63.2506	µg/mL	Stressed
21	1,3-Dichloropropane		1,000.1	µg/mL	+/-	7.1366	µg/mL	Gravimetric
	CAS # 142-28-9.SEC	(Lot IQCON)			+/-	56.2260	µg/mL	Unstressed
	Purity 99%				+/-	57.5345	µg/mL	Stressed
22	Tetrachloroethene		1,000.2	µg/mL	+/-	27.0598	µg/mL	Gravimetric
	CAS # 127-18-4.SEC	(Lot F09W014)			+/-	61.9972	µg/mL	Unstressed
	Purity 99%				+/-	63.1868	µg/mL	Stressed
23	Dibromochloromethane		1,000.5	µg/mL	+/-	27.0665	µg/mL	Gravimetric
	CAS # 124-48-1.SEC	(Lot 10206360)			+/-	62.0126	µg/mL	Unstressed
	Purity 97%				+/-	63.2024	µg/mL	Stressed

24	1,2-Dibromoethane (EDB)		1,000.3	µg/mL	+/-	7.1384	µg/mL	Gravimetric
	CAS # 106-93-4.SEC	(Lot 8529900)			+/-	56.2395	µg/mL	Unstressed
	Purity 99%				+/-	57.5483	µg/mL	Stressed
25	1-Chlorohexane		1,002.0	µg/mL	+/-	5.9516	µg/mL	Gravimetric
	CAS # 544-10-5.SEC	(Lot 8171700)			+/-	56.1943	µg/mL	Unstressed
	Purity 99%				+/-	57.5086	µg/mL	Stressed
26	Chlorobenzene		1,001.4	µg/mL	+/-	27.0909	µg/mL	Gravimetric
	CAS # 108-90-7.SEC	(Lot 1161936)			+/-	62.0684	µg/mL	Unstressed
	Purity 99%				+/-	63.2593	µg/mL	Stressed
27	1,1,1,2-Tetrachloroethane		1,000.5	µg/mL	+/-	7.1395	µg/mL	Gravimetric
	CAS # 630-20-6.SEC	(Lot 9366000)			+/-	56.2485	µg/mL	Unstressed
	Purity 99%				+/-	57.5576	µg/mL	Stressed
28	Ethylbenzene		1,000.4	µg/mL	+/-	7.1389	µg/mL	Gravimetric
	CAS # 100-41-4.SEC	(Lot PI4SE)			+/-	56.2440	µg/mL	Unstressed
	Purity 99%				+/-	57.5529	µg/mL	Stressed
29	m-Xylene		1,000.3	µg/mL	+/-	7.1384	µg/mL	Gravimetric
	CAS # 108-38-3.SEC	(Lot OUKMG-GB)			+/-	56.2395	µg/mL	Unstressed
	Purity 99%				+/-	57.5483	µg/mL	Stressed
30	p-Xylene		1,000.0	µg/mL	+/-	7.1361	µg/mL	Gravimetric
	CAS # 106-42-3.SEC	(Lot D6UOA)			+/-	56.2215	µg/mL	Unstressed
	Purity 99%				+/-	57.5299	µg/mL	Stressed
31	o-Xylene		1,000.2	µg/mL	+/-	7.1372	µg/mL	Gravimetric
	CAS # 95-47-6.SEC	(Lot FGL01)			+/-	56.2305	µg/mL	Unstressed
	Purity 99%				+/-	57.5391	µg/mL	Stressed
32	Styrene		1,000.5	µg/mL	+/-	7.1395	µg/mL	Gravimetric
	CAS # 100-42-5.SEC	(Lot QGQ7F)			+/-	56.2485	µg/mL	Unstressed
	Purity 99%				+/-	57.5576	µg/mL	Stressed
33	Isopropylbenzene (cumene)		1,000.1	µg/mL	+/-	7.1366	µg/mL	Gravimetric
	CAS # 98-82-8.SEC	(Lot WVREC)			+/-	56.2260	µg/mL	Unstressed
	Purity 99%				+/-	57.5345	µg/mL	Stressed
34	Bromoform		1,001.7	µg/mL	+/-	27.1004	µg/mL	Gravimetric
	CAS # 75-25-2.SEC	(Lot 9170700)			+/-	62.0902	µg/mL	Unstressed
	Purity 99%				+/-	63.2815	µg/mL	Stressed
35	1,1,2,2-Tetrachloroethane		1,001.6	µg/mL	+/-	27.0978	µg/mL	Gravimetric
	CAS # 79-34-5.SEC	(Lot BCCB0724)			+/-	62.0842	µg/mL	Unstressed
	Purity 98%				+/-	63.2754	µg/mL	Stressed
36	1,2,3-Trichloropropane		1,000.0	µg/mL	+/-	7.1361	µg/mL	Gravimetric
	CAS # 96-18-4.SEC	(Lot GUHZN)			+/-	56.2215	µg/mL	Unstressed
	Purity 99%				+/-	57.5299	µg/mL	Stressed
37	n-Propylbenzene		1,000.2	µg/mL	+/-	7.1372	µg/mL	Gravimetric
	CAS # 103-65-1.SEC	(Lot T2HFC)			+/-	56.2305	µg/mL	Unstressed
	Purity 99%				+/-	57.5391	µg/mL	Stressed
38	Bromobenzene		1,000.1	µg/mL	+/-	7.1366	µg/mL	Gravimetric
	CAS # 108-86-1.SEC	(Lot 8DKWJ)			+/-	56.2260	µg/mL	Unstressed
	Purity 99%				+/-	57.5345	µg/mL	Stressed
39	1,3,5-Trichlorobenzene		1,002.0	µg/mL	+/-	5.9516	µg/mL	Gravimetric
	CAS # 108-70-3.SEC	(Lot I28U021)			+/-	56.1943	µg/mL	Unstressed
	Purity 99%				+/-	57.5086	µg/mL	Stressed

40	2-Chlorotoluene		1,000.1	µg/mL	+/- 7.1366	µg/mL	Gravimetric
	CAS # 95-49-8.SEC	(Lot BRHPM)			+/- 56.2260	µg/mL	Unstressed
	Purity 99%				+/- 57.5345	µg/mL	Stressed
41	4-Chlorotoluene		1,000.1	µg/mL	+/- 7.1366	µg/mL	Gravimetric
	CAS # 106-43-4.SEC	(Lot S5SKD)			+/- 56.2260	µg/mL	Unstressed
	Purity 99%				+/- 57.5345	µg/mL	Stressed
42	tert-Butylbenzene		1,000.2	µg/mL	+/- 7.1378	µg/mL	Gravimetric
	CAS # 98-06-6.SEC	(Lot D6OHC)			+/- 56.2350	µg/mL	Unstressed
	Purity 99%				+/- 57.5437	µg/mL	Stressed
43	1,2,4-Trimethylbenzene		1,000.5	µg/mL	+/- 7.1395	µg/mL	Gravimetric
	CAS # 95-63-6.SEC	(Lot JMIYD)			+/- 56.2485	µg/mL	Unstressed
	Purity 99%				+/- 57.5576	µg/mL	Stressed
44	sec-Butylbenzene		1,000.0	µg/mL	+/- 7.1361	µg/mL	Gravimetric
	CAS # 135-98-8.SEC	(Lot O4HRF)			+/- 56.2215	µg/mL	Unstressed
	Purity 99%				+/- 57.5299	µg/mL	Stressed
45	4-Isopropyltoluene (p-cymene)		1,000.2	µg/mL	+/- 7.1378	µg/mL	Gravimetric
	CAS # 99-87-6.SEC	(Lot 6628200)			+/- 56.2350	µg/mL	Unstressed
	Purity 99%				+/- 57.5437	µg/mL	Stressed
46	1,3-Dichlorobenzene		1,000.1	µg/mL	+/- 27.0551	µg/mL	Gravimetric
	CAS # 541-73-1.SEC	(Lot FMDFD)			+/- 61.9864	µg/mL	Unstressed
	Purity 99%				+/- 63.1757	µg/mL	Stressed
47	1,4-Dichlorobenzene		1,002.5	µg/mL	+/- 27.1206	µg/mL	Gravimetric
	CAS # 106-46-7.SEC	(Lot YWKDC-MK)			+/- 62.1364	µg/mL	Unstressed
	Purity 99%				+/- 63.3286	µg/mL	Stressed
48	n-Butylbenzene		1,000.2	µg/mL	+/- 7.1372	µg/mL	Gravimetric
	CAS # 104-51-8.SEC	(Lot MMPGA)			+/- 56.2305	µg/mL	Unstressed
	Purity 99%				+/- 57.5391	µg/mL	Stressed
49	1,2-Dichlorobenzene		1,001.6	µg/mL	+/- 27.0966	µg/mL	Gravimetric
	CAS # 95-50-1.SEC	(Lot R6QDM)			+/- 62.0815	µg/mL	Unstressed
	Purity 99%				+/- 63.2727	µg/mL	Stressed
50	1,2-Dibromo-3-chloropropane		1,000.5	µg/mL	+/- 7.1395	µg/mL	Gravimetric
	CAS # 96-12-8.SEC	(Lot Q135-105)			+/- 56.2485	µg/mL	Unstressed
	Purity 99%				+/- 57.5576	µg/mL	Stressed
51	1,3,5-Trimethylbenzene		1,000.2	µg/mL	+/- 7.1372	µg/mL	Gravimetric
	CAS # 108-67-8.SEC	(Lot TOOOF)			+/- 56.2305	µg/mL	Unstressed
	Purity 99%				+/- 57.5391	µg/mL	Stressed
52	1,2,4-Trichlorobenzene		1,000.2	µg/mL	+/- 7.1372	µg/mL	Gravimetric
	CAS # 120-82-1.SEC	(Lot IGLFA)			+/- 56.2305	µg/mL	Unstressed
	Purity 99%				+/- 57.5391	µg/mL	Stressed
53	Hexachlorobutadiene		1,000.0	µg/mL	+/- 7.1363	µg/mL	Gravimetric
	CAS # 87-68-3.SEC	(Lot 6878400)			+/- 56.2232	µg/mL	Unstressed
	Purity 97%				+/- 57.5317	µg/mL	Stressed
54	Naphthalene		1,000.4	µg/mL	+/- 7.1389	µg/mL	Gravimetric
	CAS # 91-20-3.SEC	(Lot SKZ5N)			+/- 56.2440	µg/mL	Unstressed
	Purity 99%				+/- 57.5529	µg/mL	Stressed
55	1,2,3-Trichlorobenzene		1,000.2	µg/mL	+/- 7.1377	µg/mL	Gravimetric
	CAS # 87-61-6.SEC	(Lot A0043055)			+/- 56.2342	µg/mL	Unstressed
	Purity 98%				+/- 57.5430	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)

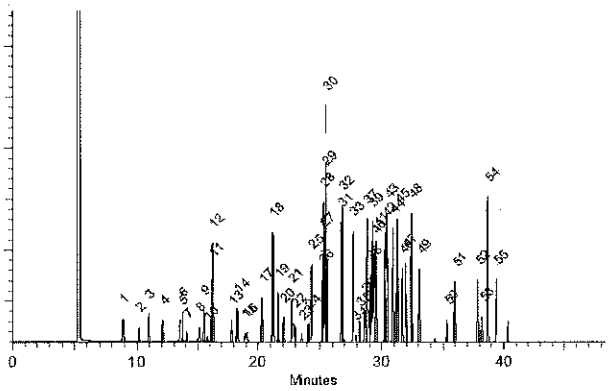
Carrier Gas:
hydrogen-constant pressure 8.0 psi.

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: 20-Oct-2020 **Balance:** 1128342314

Justine Albertson - Operations Tech-ARM QC

Date Passed: 23-Oct-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) -20°C or colder (Deep 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.

Reagent

MSV_Q#3B_00046

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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. : 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)

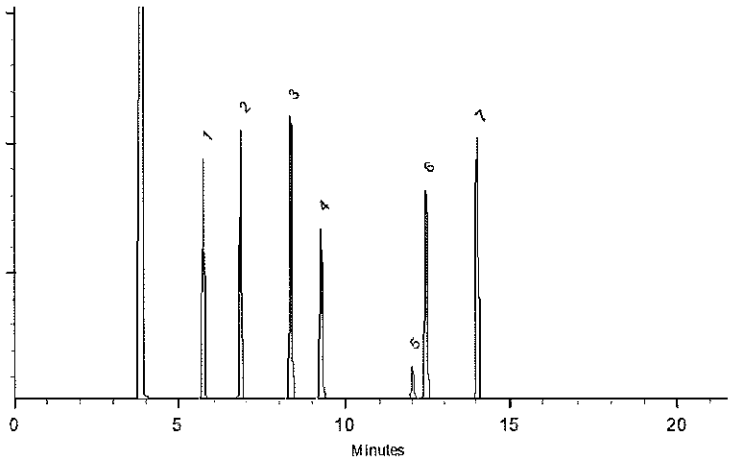
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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#3B_00073

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

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 56736.SEC **Lot No.:** A0158722

Description : Custom Q #3B Standard

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

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

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

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetone	7,550.0 µg/mL	+/- 44.3076 µg/mL	Gravimetric
	CAS # 67-64-1.SEC (Lot U13B039)		+/- 373.5308 µg/mL	Unstressed
	Purity 99%		+/- 382.8166 µg/mL	Stressed
2	Acrylonitrile	5,003.0 µg/mL	+/- 29.3604 µg/mL	Gravimetric
	CAS # 107-13-1.SEC (Lot CCFKL-GL)		+/- 247.5198 µg/mL	Unstressed
	Purity 99%		+/- 253.6730 µg/mL	Stressed
3	2-Butanone (MEK)	7,517.0 µg/mL	+/- 44.1140 µg/mL	Gravimetric
	CAS # 78-93-3.SEC (Lot RGZ2A)		+/- 371.8982 µg/mL	Unstressed
	Purity 99%		+/- 381.1434 µg/mL	Stressed
4	Tetrahydrofuran	5,023.0 µg/mL	+/- 29.4778 µg/mL	Gravimetric
	CAS # 109-99-9.SEC (Lot 8DAOJ)		+/- 248.5093 µg/mL	Unstressed
	Purity 99%		+/- 254.6871 µg/mL	Stressed
5	2-Nitropropane	1,000.6 µg/mL	+/- 5.9431 µg/mL	Gravimetric
	CAS # 79-46-9.SEC (Lot Y4YWD)		+/- 49.5115 µg/mL	Unstressed
	Purity 98%		+/- 50.7419 µg/mL	Stressed
6	4-Methyl-2-pentanone (MIBK)	5,032.0 µg/mL	+/- 29.5306 µg/mL	Gravimetric
	CAS # 108-10-1.SEC (Lot E29T040)		+/- 248.9546 µg/mL	Unstressed
	Purity 99%		+/- 255.1435 µg/mL	Stressed
7	2-Hexanone	5,036.2 µg/mL	+/- 29.5554 µg/mL	Gravimetric
	CAS # 591-78-6.SEC (Lot Y3TUO)		+/- 249.1634 µg/mL	Unstressed
	Purity 98%		+/- 255.3574 µg/mL	Stressed

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

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

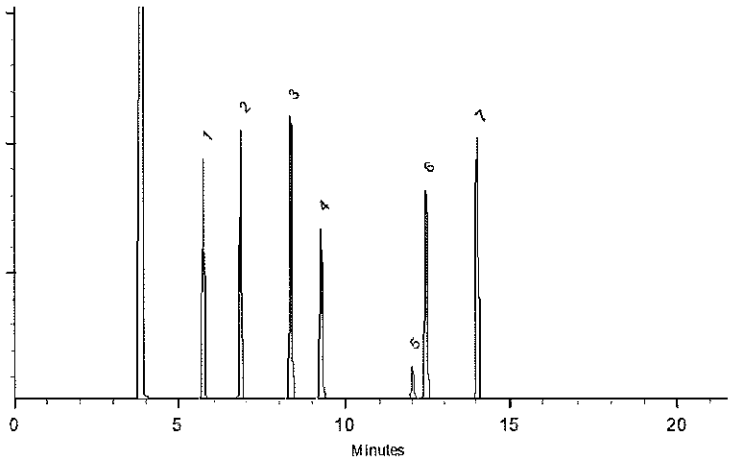
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



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

Brandon Reish - Mix Technician

Date Mixed: 11-Mar-2020 **Balance:** 1127510105

Justine Albertson - Operations Tech-ARM QC

Date Passed: 19-Mar-2020

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_Q#4C_00052

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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. : 572312.SEC **Lot No.:** A0158704

Description : Custom Q #4C (Rev 3) Standard

Custom Q #4C (Rev 3) Standard 1,000µg/mL, P&T Methanol, 1mL/ampul

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

Expiration Date : March 31, 2021 **Storage:** 0°C or colder

CERTIFIED VALUES

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

8	n-Hexane (C6)		1,002.0	µg/mL	+/-	5.8803	µg/mL	Gravimetric
	CAS # 110-54-3.SEC	(Lot 10188491)			+/-	60.4604	µg/mL	Unstressed
	Purity 99%				+/-	60.6039	µg/mL	Stressed
9	Diisopropyl ether (DIPE)		1,003.0	µg/mL	+/-	5.8862	µg/mL	Gravimetric
	CAS # 108-20-3.SEC	(Lot LL7TN-SH)			+/-	60.5207	µg/mL	Unstressed
	Purity 99%				+/-	60.6644	µg/mL	Stressed
10	Chloroprene (2-chloro-1,3-butadiene)		1,001.5	µg/mL	+/-	5.8774	µg/mL	Gravimetric
	CAS # 126-99-8 *	(Lot 191204JLM)			+/-	60.4302	µg/mL	Unstressed
	Purity 99%				+/-	60.5737	µg/mL	Stressed
11	Ethyl-tert-butyl ether (ETBE)		1,001.0	µg/mL	+/-	5.8744	µg/mL	Gravimetric
	CAS # 637-92-3.SEC	(Lot MHBJG-QK)			+/-	60.4000	µg/mL	Unstressed
	Purity 99%				+/-	60.5434	µg/mL	Stressed
12	Cyclohexane		1,001.5	µg/mL	+/-	5.8774	µg/mL	Gravimetric
	CAS # 110-82-7.SEC	(Lot YADRA)			+/-	60.4302	µg/mL	Unstressed
	Purity 99%				+/-	60.5737	µg/mL	Stressed
13	tert-Amyl methyl ether (TAME)		1,006.0	µg/mL	+/-	5.9038	µg/mL	Gravimetric
	CAS # 994-05-8.SEC	(Lot 8471400)			+/-	60.7017	µg/mL	Unstressed
	Purity 99%				+/-	60.8458	µg/mL	Stressed
14	n-Heptane (C7)		1,006.0	µg/mL	+/-	5.9038	µg/mL	Gravimetric
	CAS # 142-82-5.SEC	(Lot OGM01)			+/-	60.7017	µg/mL	Unstressed
	Purity 99%				+/-	60.8458	µg/mL	Stressed
15	tert-Amyl ethyl ether (TAEE)		1,006.0	µg/mL	+/-	5.9038	µg/mL	Gravimetric
	CAS # 919-94-8.SEC	(Lot 6455100)			+/-	60.7017	µg/mL	Unstressed
	Purity 99%				+/-	60.8458	µg/mL	Stressed
16	Methyl methacrylate		1,006.0	µg/mL	+/-	5.9038	µg/mL	Gravimetric
	CAS # 80-62-6.SEC	(Lot G01X021)			+/-	60.7017	µg/mL	Unstressed
	Purity 99%				+/-	60.8458	µg/mL	Stressed
17	Ethyl methacrylate		1,004.5	µg/mL	+/-	5.8950	µg/mL	Gravimetric
	CAS # 97-63-2.SEC	(Lot MLWYK-LS)			+/-	60.6112	µg/mL	Unstressed
	Purity 99%				+/-	60.7551	µg/mL	Stressed
18	Benzyl chloride		1,003.5	µg/mL	+/-	5.8891	µg/mL	Gravimetric
	CAS # 100-44-7.SEC	(Lot H29N03)			+/-	60.5509	µg/mL	Unstressed
	Purity 99%				+/-	60.6946	µg/mL	Stressed
Solvent:	P&T Methanol							
	CAS # 67-56-1							
	Purity 99%							

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

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

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

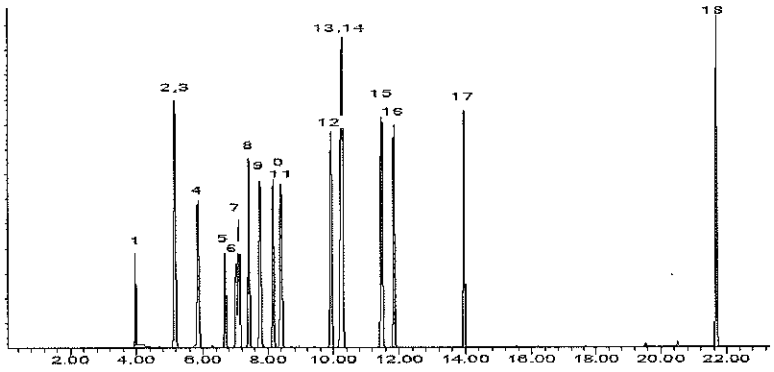
Carrier Gas:
helium-constant pressure 30 psi

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

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



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

Matt Fragassi - Mix Technician

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

Feng-Yun Lo – QC Analyst

Date Passed: 25-Mar-2020

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_Q#4C_00079

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)

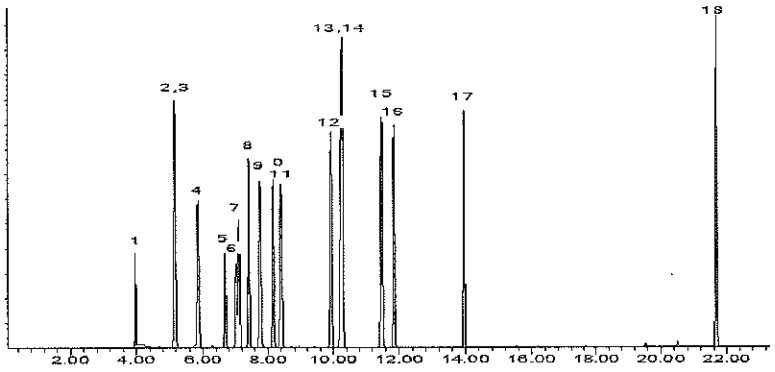
Carrier Gas:
helium-constant pressure 30 psi

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_00049

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)

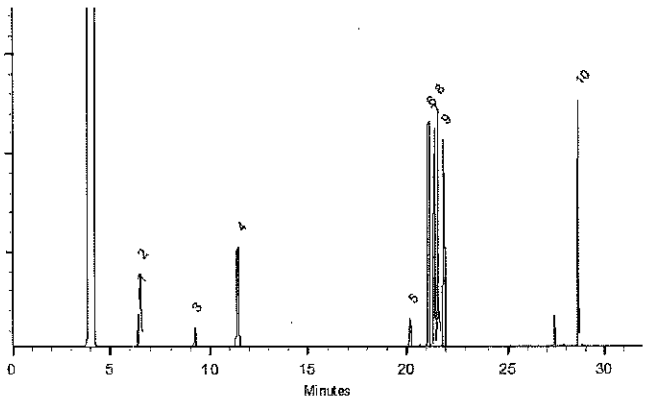
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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%.
- 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_00078

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)

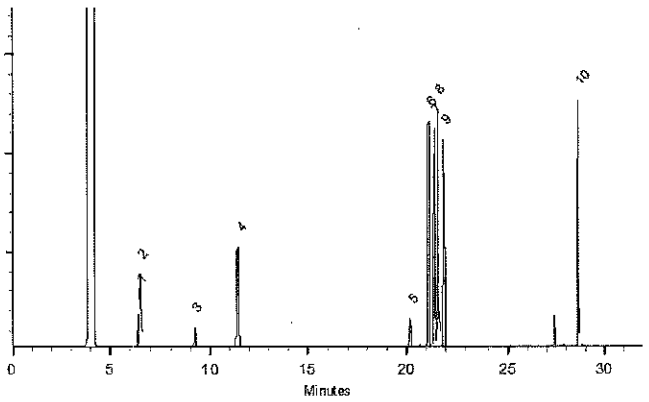
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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%.
- 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_00101

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

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

Description : Custom Revised V #1B Standard

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

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

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

CERTIFIED VALUES

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

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

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

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

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

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

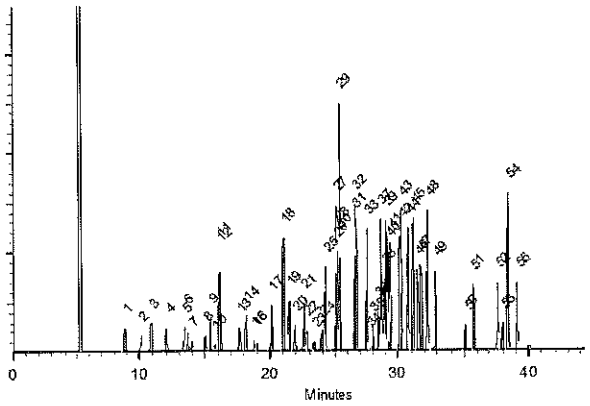
Carrier Gas:
hydrogen-constant pressure 8.0 psi.

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

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



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

Cydnei L. Crust - Mix Technician

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

Feng-Yun Lo - QC Analyst

Date Passed: 11-Mar-2020

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_V#1B_00139

RESTEK®
110 Benner Circle
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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

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

Description : Custom Revised V #1B Standard

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

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

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

CERTIFIED VALUES

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

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

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

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

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

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

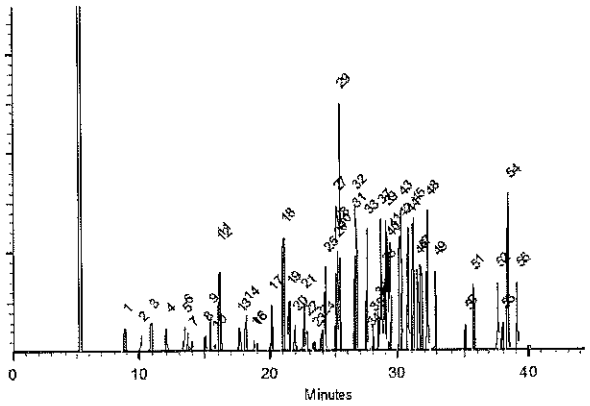
Carrier Gas:
hydrogen-constant pressure 8.0 psi.

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

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



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

Cydnei L. Crust - Mix Technician

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

Feng-Yun Lo - QC Analyst

Date Passed: 11-Mar-2020

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- 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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Label Conditions	Standard Conditions	Non-Standard Conditions
25°C Nominal (Room Temperature)	< 60°C	≥ 60°C up to 7 days
10°C or colder (Refrigerate)	< 40°C	≥ 40°C up to 7 days
0°C or colder (Freezer)	< 25°C	≥ 25°C up to 7 days

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_V#2B_00121

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

www.restek.com

Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

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

Description : Custom V # 2B Standard

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

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

Expiration Date : April 30, 2022 **Storage:** 0°C or colder

Elution Order	Compound	CAS #	Percent Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)
1	2-Propanol (isopropanol)	67-63-0	99%	25,019.2 µg/mL	+/- 146.4929 µg/mL
2	tert-Butanol (TBA)	75-65-0	99%	25,022.4 µg/mL	+/- 146.5117 µg/mL
3	Propionitrile	107-12-0	99%	25,020.0 µg/mL	+/- 146.4976 µg/mL
4	Methacrylonitrile	126-98-7	99%	12,533.6 µg/mL	+/- 73.3870 µg/mL
5	Isobutanol (2-Methyl-1-propanol)	78-83-1	99%	62,702.0 µg/mL	+/- 367.1151 µg/mL
6	1-Butanol	71-36-3	99%	125,150.0 µg/mL	+/- 732.7430 µg/mL
7	1,4-Dioxane	123-91-1	99%	62,550.0 µg/mL	+/- 366.2251 µg/mL
8	trans-1,4-dichloro-2-butene	110-57-6	95%	12,549.5 µg/mL	+/- 73.4801 µg/mL
Solvent:	P&T Methanol	67-56-1	99%		

Specific Reference Material Notes:

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

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

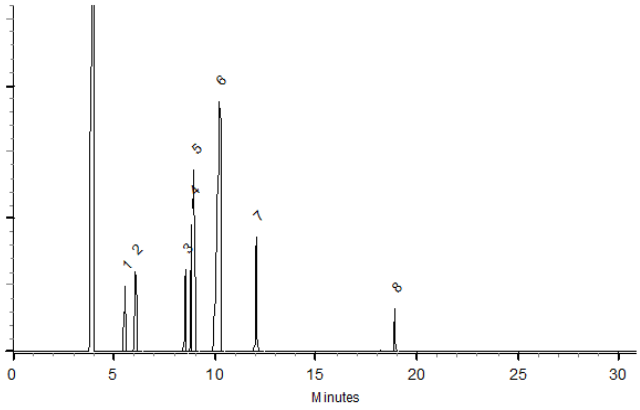
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



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

Clara Windle - Operations Technician I

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

Fang-Yun Lo - QC Analyst

Date Passed: 10-Apr-2020

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

General Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Uncertainty Value Notes:

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_V#3B_00050

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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Reference Material Producer
Certificate #3222.01

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ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 56736 **Lot No.:** A0158677

Description : Custom V # 3B Standard

Custom V #3B Standard 12,500-25,000µg/mL, P&T Methanol/Water (90:10), 1mL/ampul

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

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

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetone		25,001.0 µg/mL	+/- 146.3864 µg/mL	Gravimetric
	CAS # 67-64-1	(Lot MKCK2598)		+/- 1,236.8670 µg/mL	Unstressed
	Purity 99%			+/- 1,267.6168 µg/mL	Stressed
2	Acrylonitrile		12,511.0 µg/mL	+/- 73.2547 µg/mL	Gravimetric
	CAS # 107-13-1	(Lot A0387097)		+/- 618.9529 µg/mL	Unstressed
	Purity 99%			+/- 634.3408 µg/mL	Stressed
3	2-Butanone (MEK)		25,007.0 µg/mL	+/- 146.4215 µg/mL	Gravimetric
	CAS # 78-93-3	(Lot SHBK9603)		+/- 1,237.1638 µg/mL	Unstressed
	Purity 99%			+/- 1,267.9210 µg/mL	Stressed
4	Tetrahydrofuran		25,049.0 µg/mL	+/- 146.6674 µg/mL	Gravimetric
	CAS # 109-99-9	(Lot SHBK8926)		+/- 1,239.2417 µg/mL	Unstressed
	Purity 99%			+/- 1,270.0505 µg/mL	Stressed
5	2-Nitropropane		24,758.3 µg/mL	+/- 144.9652 µg/mL	Gravimetric
	CAS # 79-46-9	(Lot BCCB9352)		+/- 1,224.8589 µg/mL	Unstressed
	Purity 97%			+/- 1,255.3102 µg/mL	Stressed
6	4-Methyl-2-pentanone (MIBK)		25,014.0 µg/mL	+/- 146.4625 µg/mL	Gravimetric
	CAS # 108-10-1	(Lot SHBL5515)		+/- 1,237.5101 µg/mL	Unstressed
	Purity 99%			+/- 1,268.2759 µg/mL	Stressed
7	2-Hexanone		25,016.0 µg/mL	+/- 146.4742 µg/mL	Gravimetric
	CAS # 591-78-6	(Lot MKCL1599)		+/- 1,237.6091 µg/mL	Unstressed
	Purity 99%			+/- 1,268.3773 µg/mL	Stressed

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

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

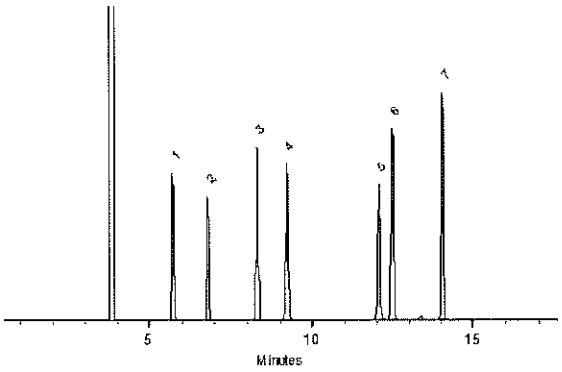
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



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

Kylie Struble - Operations Technician I

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

Feng-Yun Lo - QC Analyst

Date Passed: 12-Mar-2020

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_V#3B_00077

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CERTIFIED REFERENCE MATERIAL

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Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 56736 **Lot No.:** A0158677

Description : Custom V # 3B Standard

Custom V #3B Standard 12,500-25,000µg/mL, P&T Methanol/Water (90:10), 1mL/ampul

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

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

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetone	25,001.0 µg/mL	+/- 146.3864 µg/mL	Gravimetric
	CAS # 67-64-1 (Lot MKCK2598)		+/- 1,236.8670 µg/mL	Unstressed
	Purity 99%		+/- 1,267.6168 µg/mL	Stressed
2	Acrylonitrile	12,511.0 µg/mL	+/- 73.2547 µg/mL	Gravimetric
	CAS # 107-13-1 (Lot A0387097)		+/- 618.9529 µg/mL	Unstressed
	Purity 99%		+/- 634.3408 µg/mL	Stressed
3	2-Butanone (MEK)	25,007.0 µg/mL	+/- 146.4215 µg/mL	Gravimetric
	CAS # 78-93-3 (Lot SHBK9603)		+/- 1,237.1638 µg/mL	Unstressed
	Purity 99%		+/- 1,267.9210 µg/mL	Stressed
4	Tetrahydrofuran	25,049.0 µg/mL	+/- 146.6674 µg/mL	Gravimetric
	CAS # 109-99-9 (Lot SHBK8926)		+/- 1,239.2417 µg/mL	Unstressed
	Purity 99%		+/- 1,270.0505 µg/mL	Stressed
5	2-Nitropropane	24,758.3 µg/mL	+/- 144.9652 µg/mL	Gravimetric
	CAS # 79-46-9 (Lot BCCB9352)		+/- 1,224.8589 µg/mL	Unstressed
	Purity 97%		+/- 1,255.3102 µg/mL	Stressed
6	4-Methyl-2-pentanone (MIBK)	25,014.0 µg/mL	+/- 146.4625 µg/mL	Gravimetric
	CAS # 108-10-1 (Lot SHBL5515)		+/- 1,237.5101 µg/mL	Unstressed
	Purity 99%		+/- 1,268.2759 µg/mL	Stressed
7	2-Hexanone	25,016.0 µg/mL	+/- 146.4742 µg/mL	Gravimetric
	CAS # 591-78-6 (Lot MKCL1599)		+/- 1,237.6091 µg/mL	Unstressed
	Purity 99%		+/- 1,268.3773 µg/mL	Stressed

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

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

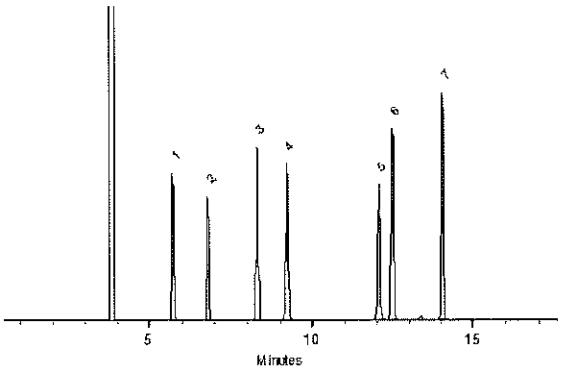
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



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

Kylie Struble - Operations Technician I

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

Feng-Yun Lo - QC Analyst

Date Passed: 12-Mar-2020

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_V#4C_00082

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CERTIFIED REFERENCE MATERIAL

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Certificate #3222.01

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Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 572312 **Lot No.:** A0158660

Description : Custom V #4C (Rev 3) Standard

Custom V #4C (Rev 3) Standard 5,000µg/mL, P&T Methanol, 1mL/ampul

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

Expiration Date : March 31, 2021 **Storage:** 0°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	1,3-Butadiene	5,002.1 µg/mL	+/- 39.8717 µg/mL	Gravimetric
	CAS # 106-99-0 (Lot SHBK2299)		+/- 303.0271 µg/mL	Unstressed
	Purity 99%		+/- 303.7407 µg/mL	Stressed
2	1,2-Dichloro-1,1,2-trifluoroethane (CFC-123a)	5,001.4 µg/mL	+/- 47.3932 µg/mL	Gravimetric
	CAS # 354-23-4 (Lot Q9B-64)		+/- 304.0702 µg/mL	Unstressed
	Purity 99%		+/- 304.7812 µg/mL	Stressed
3	n-Pentane (C5)	5,025.0 µg/mL	+/- 29.4225 µg/mL	Gravimetric
	CAS # 109-66-0 (Lot SHBL0400)		+/- 303.2005 µg/mL	Unstressed
	Purity 99%		+/- 303.9203 µg/mL	Stressed
4	1,1,2-Trichlorotrifluoroethane (CFC-113)	5,024.0 µg/mL	+/- 29.4166 µg/mL	Gravimetric
	CAS # 76-13-1 (Lot 00016133)		+/- 303.1402 µg/mL	Unstressed
	Purity 99%		+/- 303.8598 µg/mL	Stressed
5	Iodomethane (methyl iodide)	5,035.0 µg/mL	+/- 29.4810 µg/mL	Gravimetric
	CAS # 74-88-4 (Lot D4406-0122JM)		+/- 303.8039 µg/mL	Unstressed
	Purity 99%		+/- 304.5251 µg/mL	Stressed
6	Carbon disulfide	5,046.0 µg/mL	+/- 29.5454 µg/mL	Gravimetric
	CAS # 75-15-0 (Lot U22D706)		+/- 304.4676 µg/mL	Unstressed
	Purity 99%		+/- 305.1904 µg/mL	Stressed
7	Methyl-tert-butyl ether (MTBE)	5,025.0 µg/mL	+/- 29.4225 µg/mL	Gravimetric
	CAS # 1634-04-4 (Lot SHBK4806)		+/- 303.2005 µg/mL	Unstressed
	Purity 99%		+/- 303.9203 µg/mL	Stressed

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

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

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

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

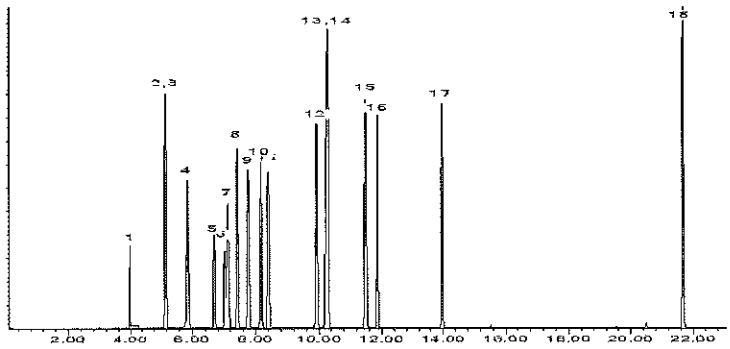
Carrier Gas:
helium-constant pressure 30 psi

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

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



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

Tom Suckar - Mix Technician

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

Fang-Yun Lo - QC Analyst

Date Passed: 25-Mar-2020

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_V#4C_00119

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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. : 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)

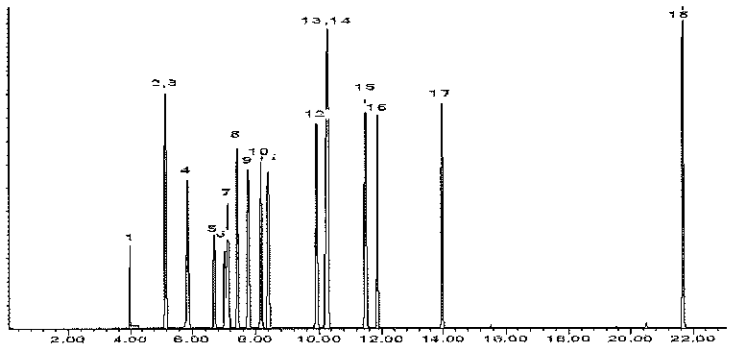
Carrier Gas:
helium-constant pressure 30 psi

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

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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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. : 558268 **Lot No.:** A0158625

Description : Custom CS#6 Standard

Custom CS#6 Standard 5,000µg/mL, P&T Methanol, 1mL/ampul

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

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

CERTIFIED VALUES

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

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

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

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

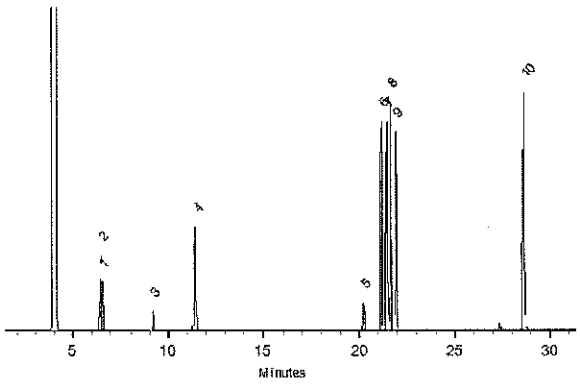
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



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

Tom Suckar - Mix Technician

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

Feng-Yue Lu - QC Analyst

Date Passed: 12-Mar-2020

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_V#6_00056

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

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ISO 17034 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. : 558268 **Lot No.:** A0158625

Description : Custom CS#6 Standard

Custom CS#6 Standard 5,000µg/mL, P&T Methanol, 1mL/ampul

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

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

CERTIFIED VALUES

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

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

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

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

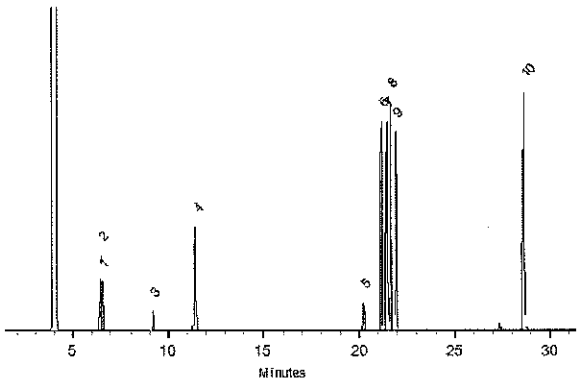
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



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

Tom Suckar - Mix Technician

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

Feng-Yue Lu - QC Analyst

Date Passed: 12-Mar-2020

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_V_Gas_00136

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

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

Description : Custom 502.2 "V" Gas Mix

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

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

Expiration Date : May 31, 2027 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dichlorodifluoromethane (CFC-12)	2,005.1 µg/mL	+/- 16.8576 µg/mL	Gravimetric
	CAS # 75-71-8 (Lot 00012554)		+/- 113.0809 µg/mL	Unstressed
	Purity 99%		+/- 115.6966 µg/mL	Stressed
2	Chloromethane (methyl chloride)	2,003.5 µg/mL	+/- 19.3327 µg/mL	Gravimetric
	CAS # 74-87-3 (Lot SHBK6571)		+/- 113.3884 µg/mL	Unstressed
	Purity 99%		+/- 115.9929 µg/mL	Stressed
3	Vinyl chloride	2,001.1 µg/mL	+/- 18.1213 µg/mL	Gravimetric
	CAS # 75-01-4 (Lot 00015559)		+/- 113.0560 µg/mL	Unstressed
	Purity 99%		+/- 115.6619 µg/mL	Stressed
4	Bromomethane (methyl bromide)	1,998.8 µg/mL	+/- 17.7535 µg/mL	Gravimetric
	CAS # 74-83-9 (Lot 101604)		+/- 112.8737 µg/mL	Unstressed
	Purity 99%		+/- 115.4779 µg/mL	Stressed
5	Chloroethane (ethyl chloride)	2,002.3 µg/mL	+/- 17.1357 µg/mL	Gravimetric
	CAS # 75-00-3 (Lot 107-401039114-1)		+/- 112.9711 µg/mL	Unstressed
	Purity 99%		+/- 115.5821 µg/mL	Stressed
6	Trichlorofluoromethane (CFC-11)	2,020.0 µg/mL	+/- 11.7716 µg/mL	Gravimetric
	CAS # 75-69-4 (Lot 25931)		+/- 113.2622 µg/mL	Unstressed
	Purity 99%		+/- 115.9123 µg/mL	Stressed

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

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

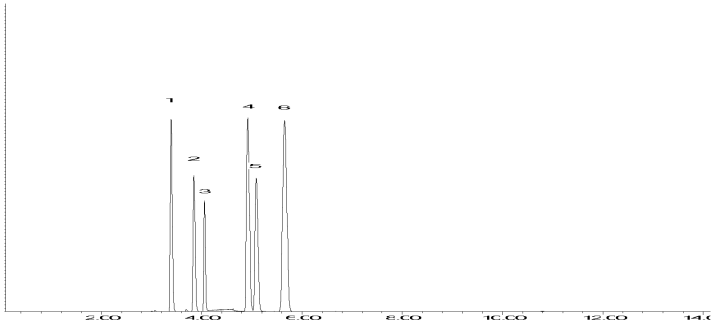
Carrier Gas:
helium-constant flow 2.0 mL/min.

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

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



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

Tom Suckar - Mix Technician

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

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 06-May-2020

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

General Certified Reference Material Notes

Expiration Notes:

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

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:

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

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- The packaged amount is the minimum sample size for which uncertainty is valid. The ampules are over-filled to ensure that the minimum packaged amount can be sufficiently transferred.

Manufacturing Notes:

- 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_00203

110 Benner Circle
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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

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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.:** A0159812

Description : Custom 502.2 "V" Gas Mix

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

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

Expiration Date : May 31, 2027 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
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	CAS # 75-71-8 (Lot 00012554)		+/- 113.0809 µg/mL	Unstressed
	Purity 99%		+/- 115.6966 µg/mL	Stressed
2	Chloromethane (methyl chloride)	2,003.5 µg/mL	+/- 19.3327 µg/mL	Gravimetric
	CAS # 74-87-3 (Lot SHBK6571)		+/- 113.3884 µg/mL	Unstressed
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	CAS # 75-01-4 (Lot 00015559)		+/- 113.0560 µg/mL	Unstressed
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	Purity 99%		+/- 115.4779 µg/mL	Stressed
5	Chloroethane (ethyl chloride)	2,002.3 µg/mL	+/- 17.1357 µg/mL	Gravimetric
	CAS # 75-00-3 (Lot 107-401039114-1)		+/- 112.9711 µg/mL	Unstressed
	Purity 99%		+/- 115.5821 µg/mL	Stressed
6	Trichlorofluoromethane (CFC-11)	2,020.0 µg/mL	+/- 11.7716 µg/mL	Gravimetric
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Solvent: P&T Methanol
CAS # 67-56-1
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60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

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helium-constant flow 2.0 mL/min.

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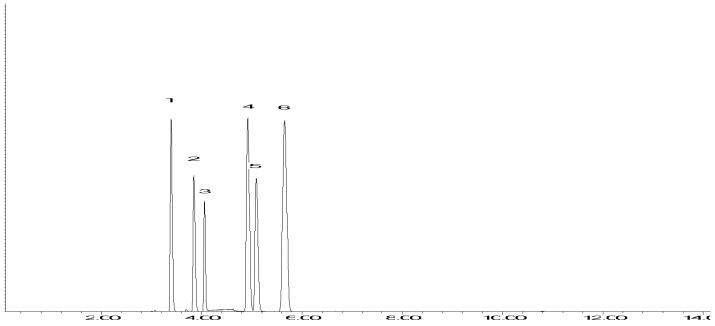
40°C (hold 6 min.) to 100°C
@ 6°C/min.

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



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Tom Suckar - Mix Technician

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

Jennifer Pollino - Operations Tech-ARM QC

Date Passed: 06-May-2020

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

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Manufacturing Notes:

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Handling Notes:

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

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.: 410-27746-1

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	410-27746-1	97	105	101	97
HD-COD-SW-7-0/1-0	410-27746-2	98	102	101	98
HD-COD-SW-8-0/1-0	410-27746-3	98	106	101	96
HD-COD-SW-9-0/1-0	410-27746-4	98	105	100	97
HD-COD-SW-13-0/1-0	410-27746-5	98	106	101	97
HD-COD-SW-15-0/1-0	410-27746-6	98	106	99	96
HD-COD-SW-16-0/1-0	410-27746-7	98	103	100	96
HD-COD-SW-17-0/1-0	410-27746-8	99	107	100	97
HD-COD-SW-26-0/1-0	410-27746-9	98	107	102	96
HD-COD-SW-27-0/1-0	410-27746-10	98	106	100	95
HD-COD-SW-28-0/1-0	410-27746-11	98	105	100	96
HD-COD-SW-29-0/1-0	410-27746-12	100	106	100	95
HD-QC1-0/1-1	410-27746-13	100	107	101	96
HD-QC1-0/1-2	410-27746-14	98	109	101	96
	MB 410-90352/7	98	105	100	95
	MB 410-90807/7	97	104	101	98
	LCS 410-90352/8	100	105	101	99
	LCS 410-90807/4	98	105	101	99
	LCSD 410-90352/9	98	107	101	98
	LCSD 410-90807/5	98	103	100	99
HD-COD-SW-15-0/1-0 MS	410-27746-6 MS	97	104	101	98
HD-COD-SW-15-0/1-0 MSD	410-27746-6 MSD	98	105	101	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.: 410-27746-1

SDG No.:

Matrix: Water Level: Low Lab File ID: CF02S01.D

Lab ID: LCS 410-90352/8 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	5.00	4.80	96	71-134	
1,1,1-Trichloroethane	5.00	4.27	85	78-126	
1,1,2,2-Tetrachloroethane	5.00	5.22	104	75-123	
1,1,2-Trichloroethane	5.00	5.10	102	80-120	
1,1-Dichloroethane	5.00	4.52	90	74-120	
1,1-Dichloroethene	5.00	4.68	94	80-131	
1,2-Dibromoethane (EDB)	5.00	5.01	100	80-120	
1,2-Dichloroethane	5.00	4.34	87	69-122	
1,2-Dichloropropane	5.00	4.92	98	80-120	
2-Butanone (MEK)	37.5	39.6	106	59-141	
2-Hexanone	25.0	24.0	96	52-140	
4-Methyl-2-pentanone (MIBK)	25.0	23.0	92	55-140	
Acetone	37.5	45.9	123	60-146	
Benzene	5.00	4.65	93	80-120	
Bromochloromethane	5.00	4.82	96	80-120	
Bromodichloromethane	5.00	4.67	93	73-124	
Bromoform	5.00	5.51	110	49-144	
Bromomethane	5.00	4.27	85	60-136	
Carbon disulfide	5.00	4.51	90	67-130	
Carbon tetrachloride	5.00	4.36	87	64-141	
Chlorobenzene	5.00	4.81	96	80-120	
Chloroethane	5.00	4.09	82	63-120	
Chloroform	5.00	4.42	88	80-120	
Chloromethane	5.00	4.61	92	56-124	
cis-1,2-Dichloroethene	5.00	4.57	91	80-122	
cis-1,3-Dichloropropene	5.00	4.92	98	67-121	
Dibromochloromethane	5.00	4.98	100	64-138	
Ethylbenzene	5.00	4.56	91	80-120	
Methyl tert-butyl ether	5.00	4.60	92	69-120	
Methylene Chloride	5.00	4.90	98	80-120	
Styrene	5.00	4.85	97	80-120	
Tetrachloroethene	5.00	4.67	93	80-120	
Toluene	5.00	4.62	92	80-120	
trans-1,2-Dichloroethene	5.00	4.50	90	80-122	
trans-1,3-Dichloropropene	5.00	5.06	101	61-129	
Trichloroethene	5.00	4.62	92	80-120	
Vinyl chloride	5.00	4.40	88	60-125	
Xylenes, Total	15.0	14.0	93	80-120	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-27746-1

SDG No.:

Matrix: Water Level: Low Lab File ID: CF02X04.D

Lab ID: LCS 410-90807/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	5.00	4.85	97	71-134	
1,1,1-Trichloroethane	5.00	4.27	85	78-126	
1,1,2,2-Tetrachloroethane	5.00	5.16	103	75-123	
1,1,2-Trichloroethane	5.00	5.07	101	80-120	
1,1-Dichloroethane	5.00	4.61	92	74-120	
1,1-Dichloroethene	5.00	4.82	96	80-131	
1,2-Dibromoethane (EDB)	5.00	4.96	99	80-120	
1,2-Dichloroethane	5.00	4.32	86	69-122	
1,2-Dichloropropane	5.00	4.86	97	80-120	
2-Butanone (MEK)	37.5	37.2	99	59-141	
2-Hexanone	25.0	22.2	89	52-140	
4-Methyl-2-pentanone (MIBK)	25.0	21.0	84	55-140	
Acetone	37.5	40.9	109	60-146	
Benzene	5.00	4.66	93	80-120	
Bromochloromethane	5.00	4.80	96	80-120	
Bromodichloromethane	5.00	4.67	93	73-124	
Bromoform	5.00	5.53	111	49-144	
Bromomethane	5.00	4.40	88	60-136	
Carbon disulfide	5.00	4.68	94	67-130	
Carbon tetrachloride	5.00	4.40	88	64-141	
Chlorobenzene	5.00	4.81	96	80-120	
Chloroethane	5.00	4.14	83	63-120	
Chloroform	5.00	4.50	90	80-120	
Chloromethane	5.00	4.55	91	56-124	
cis-1,2-Dichloroethene	5.00	4.64	93	80-122	
cis-1,3-Dichloropropene	5.00	4.88	98	67-121	
Dibromochloromethane	5.00	5.10	102	64-138	
Ethylbenzene	5.00	4.57	91	80-120	
Methyl tert-butyl ether	5.00	4.60	92	69-120	
Methylene Chloride	5.00	4.93	99	80-120	
Styrene	5.00	4.80	96	80-120	
Tetrachloroethene	5.00	4.65	93	80-120	
Toluene	5.00	4.63	93	80-120	
trans-1,2-Dichloroethene	5.00	4.62	92	80-122	
trans-1,3-Dichloropropene	5.00	5.13	103	61-129	
Trichloroethene	5.00	4.64	93	80-120	
Vinyl chloride	5.00	4.51	90	60-125	
Xylenes, Total	15.0	13.9	93	80-120	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-27746-1

SDG No.:

Matrix: Water Level: Low Lab File ID: CF02S02.D

Lab ID: LCSD 410-90352/9 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	5.00	4.80	96	0	30	71-134	
1,1,1-Trichloroethane	5.00	4.21	84	1	30	78-126	
1,1,2,2-Tetrachloroethane	5.00	5.47	109	5	30	75-123	
1,1,2-Trichloroethane	5.00	5.23	105	3	30	80-120	
1,1-Dichloroethane	5.00	4.46	89	1	30	74-120	
1,1-Dichloroethene	5.00	4.60	92	2	30	80-131	
1,2-Dibromoethane (EDB)	5.00	5.04	101	1	30	80-120	
1,2-Dichloroethane	5.00	4.35	87	0	30	69-122	
1,2-Dichloropropane	5.00	4.86	97	1	30	80-120	
2-Butanone (MEK)	37.5	37.9	101	5	30	59-141	
2-Hexanone	25.0	22.6	91	6	30	52-140	
4-Methyl-2-pentanone (MIBK)	25.0	21.8	87	6	30	55-140	
Acetone	37.5	44.5	119	3	30	60-146	
Benzene	5.00	4.62	92	1	30	80-120	
Bromochloromethane	5.00	4.80	96	0	30	80-120	
Bromodichloromethane	5.00	4.61	92	1	30	73-124	
Bromoform	5.00	5.38	108	2	30	49-144	
Bromomethane	5.00	4.34	87	2	30	60-136	
Carbon disulfide	5.00	4.53	91	0	30	67-130	
Carbon tetrachloride	5.00	4.38	88	0	30	64-141	
Chlorobenzene	5.00	4.83	97	0	30	80-120	
Chloroethane	5.00	4.26	85	4	30	63-120	
Chloroform	5.00	4.42	88	0	30	80-120	
Chloromethane	5.00	4.69	94	2	30	56-124	
cis-1,2-Dichloroethene	5.00	4.59	92	1	30	80-122	
cis-1,3-Dichloropropene	5.00	4.81	96	2	30	67-121	
Dibromochloromethane	5.00	5.03	101	1	30	64-138	
Ethylbenzene	5.00	4.54	91	0	30	80-120	
Methyl tert-butyl ether	5.00	4.55	91	1	30	69-120	
Methylene Chloride	5.00	4.85	97	1	30	80-120	
Styrene	5.00	4.80	96	1	30	80-120	
Tetrachloroethene	5.00	4.67	93	0	30	80-120	
Toluene	5.00	4.59	92	1	30	80-120	
trans-1,2-Dichloroethene	5.00	4.51	90	0	30	80-122	
trans-1,3-Dichloropropene	5.00	5.07	101	0	30	61-129	
Trichloroethene	5.00	4.58	92	1	30	80-120	
Vinyl chloride	5.00	4.52	90	3	30	60-125	
Xylenes, Total	15.0	14.0	93	0	30	80-120	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE DUPLICATE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-27746-1

SDG No.:

Matrix: Water Level: Low Lab File ID: CF02X05.D

Lab ID: LCSD 410-90807/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	5.00	4.87	97	1	30	71-134	
1,1,1-Trichloroethane	5.00	4.20	84	2	30	78-126	
1,1,2,2-Tetrachloroethane	5.00	5.32	106	3	30	75-123	
1,1,2-Trichloroethane	5.00	5.10	102	1	30	80-120	
1,1-Dichloroethane	5.00	4.60	92	0	30	74-120	
1,1-Dichloroethene	5.00	4.78	96	1	30	80-131	
1,2-Dibromoethane (EDB)	5.00	5.06	101	2	30	80-120	
1,2-Dichloroethane	5.00	4.32	86	0	30	69-122	
1,2-Dichloropropane	5.00	4.90	98	1	30	80-120	
2-Butanone (MEK)	37.5	35.9	96	4	30	59-141	
2-Hexanone	25.0	22.3	89	0	30	52-140	
4-Methyl-2-pentanone (MIBK)	25.0	21.2	85	1	30	55-140	
Acetone	37.5	41.1	110	0	30	60-146	
Benzene	5.00	4.72	94	1	30	80-120	
Bromochloromethane	5.00	4.79	96	0	30	80-120	
Bromodichloromethane	5.00	4.65	93	0	30	73-124	
Bromoform	5.00	5.57	111	1	30	49-144	
Bromomethane	5.00	4.30	86	2	30	60-136	
Carbon disulfide	5.00	4.63	93	1	30	67-130	
Carbon tetrachloride	5.00	4.43	89	1	30	64-141	
Chlorobenzene	5.00	4.85	97	1	30	80-120	
Chloroethane	5.00	4.19	84	1	30	63-120	
Chloroform	5.00	4.43	89	1	30	80-120	
Chloromethane	5.00	4.52	90	1	30	56-124	
cis-1,2-Dichloroethene	5.00	4.65	93	0	30	80-122	
cis-1,3-Dichloropropene	5.00	4.87	97	0	30	67-121	
Dibromochloromethane	5.00	5.11	102	0	30	64-138	
Ethylbenzene	5.00	4.60	92	1	30	80-120	
Methyl tert-butyl ether	5.00	4.55	91	1	30	69-120	
Methylene Chloride	5.00	4.95	99	0	30	80-120	
Styrene	5.00	4.82	96	0	30	80-120	
Tetrachloroethene	5.00	4.66	93	0	30	80-120	
Toluene	5.00	4.67	93	1	30	80-120	
trans-1,2-Dichloroethene	5.00	4.59	92	1	30	80-122	
trans-1,3-Dichloropropene	5.00	5.04	101	2	30	61-129	
Trichloroethene	5.00	4.65	93	0	30	80-120	
Vinyl chloride	5.00	4.45	89	1	30	60-125	
Xylenes, Total	15.0	14.0	93	0	30	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.: 410-27746-1

SDG No.:

Matrix: Water Level: Low Lab File ID: CF02X08.D

Lab ID: 410-27746-6 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	#
1,1,1,2-Tetrachloroethane	5.00	ND	5.25	105	71-134	
1,1,1-Trichloroethane	5.00	0.092 J	4.92	96	78-126	
1,1,2,2-Tetrachloroethane	5.00	ND	5.25	105	75-123	
1,1,2-Trichloroethane	5.00	ND	5.34	107	80-120	
1,1-Dichloroethane	5.00	ND	4.98	99	74-120	
1,1-Dichloroethene	5.00	0.073 J	5.40	106	80-131	
1,2-Dibromoethane (EDB)	5.00	ND	5.12	102	80-120	
1,2-Dichloroethane	5.00	ND	4.58	91	69-122	
1,2-Dichloropropane	5.00	ND	5.19	104	80-120	
2-Butanone (MEK)	37.5	ND	34.8	93	59-141	
2-Hexanone	25.0	ND	21.5	86	52-140	
4-Methyl-2-pentanone (MIBK)	25.0	ND	20.5	82	55-140	
Acetone	37.5	ND	38.6	103	60-146	
Benzene	5.00	ND	5.14	103	80-120	
Bromochloromethane	5.00	ND	4.90	98	80-120	
Bromodichloromethane	5.00	ND	4.93	99	73-124	
Bromoform	5.00	ND	5.71	114	49-144	
Bromomethane	5.00	ND	4.62	92	60-136	
Carbon disulfide	5.00	ND	5.18	103	67-130	
Carbon tetrachloride	5.00	ND	5.10	102	64-141	
Chlorobenzene	5.00	ND	5.29	106	80-120	
Chloroethane	5.00	ND	4.60	92	63-120	
Chloroform	5.00	0.26 J	5.06	96	80-120	
Chloromethane	5.00	ND	4.63	93	80-120	
cis-1,2-Dichloroethene	5.00	0.66	5.69	101	80-122	
cis-1,3-Dichloropropene	5.00	ND	5.13	102	67-121	
Dibromochloromethane	5.00	ND	5.24	105	64-138	
Ethylbenzene	5.00	ND	5.12	102	80-120	
Methyl tert-butyl ether	5.00	ND	4.60	92	69-120	
Methylene Chloride	5.00	ND	5.25	105	80-120	
Styrene	5.00	ND	5.27	105	80-120	
Tetrachloroethene	5.00	2.1	7.47	108	80-120	
Toluene	5.00	ND	5.22	104	80-120	
trans-1,2-Dichloroethene	5.00	ND	5.15	103	80-122	
trans-1,3-Dichloropropene	5.00	ND	5.24	105	61-129	
Trichloroethene	5.00	0.78	5.97	104	80-120	
Vinyl chloride	5.00	ND	4.97	99	60-125	
Xylenes, Total	15.0	ND	15.7	104	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.: 410-27746-1

SDG No.:

Matrix: Water Level: Low Lab File ID: CF02X09.D

Lab ID: 410-27746-6 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	#
1,1,1,2-Tetrachloroethane	5.00	5.38	108	3	30	71-134	
1,1,1-Trichloroethane	5.00	5.10	100	4	30	78-126	
1,1,2,2-Tetrachloroethane	5.00	5.52	110	5	30	75-123	
1,1,2-Trichloroethane	5.00	5.69	114	6	30	80-120	
1,1-Dichloroethane	5.00	5.20	104	4	30	74-120	
1,1-Dichloroethene	5.00	5.74	113	6	30	80-131	
1,2-Dibromoethane (EDB)	5.00	5.35	107	5	30	80-120	
1,2-Dichloroethane	5.00	4.61	92	1	30	69-122	
1,2-Dichloropropane	5.00	5.48	109	5	30	80-120	
2-Butanone (MEK)	37.5	40.8	109	16	30	59-141	
2-Hexanone	25.0	24.9	99	14	30	52-140	
4-Methyl-2-pentanone (MIBK)	25.0	23.9	95	15	30	55-140	
Acetone	37.5	48.5	129	23	30	60-146	
Benzene	5.00	5.33	107	4	30	80-120	
Bromochloromethane	5.00	5.16	103	5	30	80-120	
Bromodichloromethane	5.00	5.08	102	3	30	73-124	
Bromoform	5.00	5.78	115	1	30	49-144	
Bromomethane	5.00	4.80	96	4	30	60-136	
Carbon disulfide	5.00	5.41	108	4	30	67-130	
Carbon tetrachloride	5.00	5.23	105	3	30	64-141	
Chlorobenzene	5.00	5.48	109	3	30	80-120	
Chloroethane	5.00	4.64	93	1	30	63-120	
Chloroform	5.00	5.25	100	4	30	80-120	
Chloromethane	5.00	4.68	94	1	30	80-120	
cis-1,2-Dichloroethene	5.00	5.97	106	5	30	80-122	
cis-1,3-Dichloropropene	5.00	5.35	107	4	30	67-121	
Dibromochloromethane	5.00	5.48	110	4	30	64-138	
Ethylbenzene	5.00	5.34	107	4	30	80-120	
Methyl tert-butyl ether	5.00	4.90	98	6	30	69-120	
Methylene Chloride	5.00	5.42	108	3	30	80-120	
Styrene	5.00	5.44	109	3	30	80-120	
Tetrachloroethene	5.00	7.76	114	4	30	80-120	
Toluene	5.00	5.39	108	3	30	80-120	
trans-1,2-Dichloroethene	5.00	5.33	107	3	30	80-122	
trans-1,3-Dichloropropene	5.00	5.45	109	4	30	61-129	
Trichloroethene	5.00	6.24	109	4	30	80-120	
Vinyl chloride	5.00	5.06	101	2	30	60-125	
Xylenes, Total	15.0	16.2	108	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.: 410-27746-1

SDG No.:

Lab File ID: CF02B01.D Lab Sample ID: MB 410-90352/7

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

Instrument ID: 10193 Date Analyzed: 02/03/2021 11:04

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 410-90352/8	CF02S01.D	02/03/2021 11:48
	LCSD 410-90352/9	CF02S02.D	02/03/2021 12:10
HD-COD-SW-6-0/1-0	410-27746-1	CF02S03.D	02/03/2021 13:44
HD-COD-SW-7-0/1-0	410-27746-2	CF02S04.D	02/03/2021 14:06
HD-COD-SW-8-0/1-0	410-27746-3	CF02S05.D	02/03/2021 14:29
HD-COD-SW-9-0/1-0	410-27746-4	CF02S06.D	02/03/2021 14:51
HD-COD-SW-13-0/1-0	410-27746-5	CF02S07.D	02/03/2021 15:13
HD-COD-SW-15-0/1-0	410-27746-6	CF02S08.D	02/03/2021 15:35
HD-COD-SW-16-0/1-0	410-27746-7	CF02S11.D	02/03/2021 16:42
HD-COD-SW-17-0/1-0	410-27746-8	CF02S12.D	02/03/2021 17:04
HD-COD-SW-26-0/1-0	410-27746-9	CF02S13.D	02/03/2021 17:27
HD-COD-SW-27-0/1-0	410-27746-10	CF02S14.D	02/03/2021 17:49
HD-COD-SW-28-0/1-0	410-27746-11	CF02S15.D	02/03/2021 18:12
HD-COD-SW-29-0/1-0	410-27746-12	CF02S16.D	02/03/2021 18:34
HD-QC1-0/1-1	410-27746-13	CF02S17.D	02/03/2021 18:57
HD-QC1-0/1-2	410-27746-14	CF02S18.D	02/03/2021 19:19

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-27746-1

SDG No.:

Lab File ID: CF02X07.D Lab Sample ID: MB 410-90807/7

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

Instrument ID: 10193 Date Analyzed: 02/04/2021 12:51

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 410-90807/4	CF02X04.D	02/04/2021 11:44
	LCSD 410-90807/5	CF02X05.D	02/04/2021 12:07
HD-COD-SW-15-0/1-0 MS	410-27746-6 MS	CF02X08.D	02/04/2021 13:43
HD-COD-SW-15-0/1-0 MSD	410-27746-6 MSD	CF02X09.D	02/04/2021 14:05

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

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

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

Instrument ID: 10193 BFB Injection Time: 12:45

Analysis Batch No.: 39724

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

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

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

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

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

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Lab File ID: CF02T01.D BFB Injection Date: 02/03/2021

Instrument ID: 10193 BFB Injection Time: 08:45

Analysis Batch No.: 90352

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	16.3	
75	30.0 - 60.0 % of mass 95	47.9	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.9	(1.0) 1
174	Greater than 50% of mass 95	85.3	
175	5.0 - 9.0 % of mass 174	6.9	(8.0) 1
176	95.0 - 101.0 % of mass 174	82.1	(96.3) 1
177	5.0 - 9.0 % of mass 176	5.5	(6.7) 2

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

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

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 410-90352/3	CF02C01.D	02/03/2021	9:34
	MB 410-90352/7	CF02B01.D	02/03/2021	11:04
	LCS 410-90352/8	CF02S01.D	02/03/2021	11:48
	LCSD 410-90352/9	CF02S02.D	02/03/2021	12:10
HD-COD-SW-6-0/1-0	410-27746-1	CF02S03.D	02/03/2021	13:44
HD-COD-SW-7-0/1-0	410-27746-2	CF02S04.D	02/03/2021	14:06
HD-COD-SW-8-0/1-0	410-27746-3	CF02S05.D	02/03/2021	14:29
HD-COD-SW-9-0/1-0	410-27746-4	CF02S06.D	02/03/2021	14:51
HD-COD-SW-13-0/1-0	410-27746-5	CF02S07.D	02/03/2021	15:13
HD-COD-SW-15-0/1-0	410-27746-6	CF02S08.D	02/03/2021	15:35
HD-COD-SW-16-0/1-0	410-27746-7	CF02S11.D	02/03/2021	16:42
HD-COD-SW-17-0/1-0	410-27746-8	CF02S12.D	02/03/2021	17:04
HD-COD-SW-26-0/1-0	410-27746-9	CF02S13.D	02/03/2021	17:27
HD-COD-SW-27-0/1-0	410-27746-10	CF02S14.D	02/03/2021	17:49
HD-COD-SW-28-0/1-0	410-27746-11	CF02S15.D	02/03/2021	18:12
HD-COD-SW-29-0/1-0	410-27746-12	CF02S16.D	02/03/2021	18:34
HD-QC1-0/1-1	410-27746-13	CF02S17.D	02/03/2021	18:57
HD-QC1-0/1-2	410-27746-14	CF02S18.D	02/03/2021	19:19

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

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Lab File ID: CF02T02.D BFB Injection Date: 02/04/2021

Instrument ID: 10193 BFB Injection Time: 10:45

Analysis Batch No.: 90807

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	16.7	
75	30.0 - 60.0 % of mass 95	48.0	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.6	
173	Less than 2.0 % of mass 174	0.4	(0.4) 1
174	Greater than 50% of mass 95	94.7	
175	5.0 - 9.0 % of mass 174	8.2	(8.7) 1
176	95.0 - 101.0 % of mass 174	90.6	(95.6) 1
177	5.0 - 9.0 % of mass 176	6.5	(7.2) 2

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

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

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 410-90807/3	CF02X03.D	02/04/2021	11:22
	LCS 410-90807/4	CF02X04.D	02/04/2021	11:44
	LCSD 410-90807/5	CF02X05.D	02/04/2021	12:07
	MB 410-90807/7	CF02X07.D	02/04/2021	12:51
HD-COD-SW-15-0/1-0 MS	410-27746-6 MS	CF02X08.D	02/04/2021	13:43
HD-COD-SW-15-0/1-0 MSD	410-27746-6 MSD	CF02X09.D	02/04/2021	14:05

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

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

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

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

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

Calibration ID: 10281

		TBAd10		FB		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		148289	4.11	2062892	7.57	1569631	11.10
UPPER LIMIT		296578	4.61	4125784	8.07	3139262	11.60
LOWER LIMIT		74145	3.61	1031446	7.07	784816	10.60
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 410-39724/10		148288	4.11	1991070	7.57	1511072	11.10
CCVIS 410-90352/3		171619	4.06	2067437	7.51	1598606	11.06
CCVIS 410-90807/3		196903	4.06	2094070	7.52	1595540	11.06

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.: 410-27746-1

SDG No.:

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

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

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

Calibration ID: 10281

		DCBd4					
		AREA #	RT #	#	RT #	#	RT #
INITIAL CALIBRATION MID-POINT		920484	13.00				
UPPER LIMIT		1840968	13.50				
LOWER LIMIT		460242	12.50				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 410-39724/10		880960	13.00				
CCVIS 410-90352/3		889323	12.97				
CCVIS 410-90807/3		901828	12.97				

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.: 410-27746-1

SDG No.:

Sample No.: CCVIS 410-90352/3 Date Analyzed: 02/03/2021 09:34

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

Lab File ID (Standard): CF02C01.D Heated Purge: (Y/N) N

Calibration ID: 10294

		TBAd10		FB		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		171619	4.06	2067437	7.51	1598606	11.06
UPPER LIMIT		343238	4.56	4134874	8.01	3197212	11.56
LOWER LIMIT		85810	3.56	1033719	7.01	799303	10.56
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 410-90352/7		173929	4.06	2044006	7.52	1563826	11.06
LCS 410-90352/8		173462	4.04	2054873	7.51	1583185	11.06
LCSD 410-90352/9		187890	4.06	2102328	7.52	1598280	11.06
410-27746-1	HD-COD-SW-6-0/1-0	198715	4.04	2067974	7.51	1577310	11.06
410-27746-2	HD-COD-SW-7-0/1-0	184305	4.06	2061782	7.52	1555107	11.06
410-27746-3	HD-COD-SW-8-0/1-0	190212	4.06	2058858	7.52	1559915	11.06
410-27746-4	HD-COD-SW-9-0/1-0	193711	4.04	2049104	7.52	1562417	11.06
410-27746-5	HD-COD-SW-13-0/1-0	191883	4.06	2052926	7.52	1557839	11.06
410-27746-6	HD-COD-SW-15-0/1-0	199223	4.06	2047560	7.52	1563647	11.06
410-27746-7	HD-COD-SW-16-0/1-0	192740	4.06	2030778	7.52	1542718	11.06
410-27746-8	HD-COD-SW-17-0/1-0	194212	4.04	2043240	7.52	1554151	11.06
410-27746-9	HD-COD-SW-26-0/1-0	194113	4.05	2050623	7.52	1559309	11.06
410-27746-10	HD-COD-SW-27-0/1-0	187481	4.06	2029782	7.53	1553907	11.06
410-27746-11	HD-COD-SW-28-0/1-0	190327	4.04	2040473	7.52	1555316	11.06
410-27746-12	HD-COD-SW-29-0/1-0	185809	4.05	2046133	7.51	1560664	11.06
410-27746-13	HD-QC1-0/1-1	183935	4.05	2026432	7.52	1549929	11.06
410-27746-14	HD-QC1-0/1-2	189159	4.04	2011496	7.51	1533974	11.06

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.: 410-27746-1

SDG No.:

Sample No.: CCVIS 410-90352/3 Date Analyzed: 02/03/2021 09:34

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

Lab File ID (Standard): CF02C01.D Heated Purge: (Y/N) N

Calibration ID: 10294

		DCBd4					
		AREA #	RT #	#	RT #	#	RT #
12/24 HOUR STD		889323	12.97				
UPPER LIMIT		1778646	13.47				
LOWER LIMIT		444662	12.47				
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 410-90352/7		820359	12.97				
LCS 410-90352/8		879887	12.98				
LCSD 410-90352/9		866408	12.97				
410-27746-1	HD-COD-SW-6-0/1-0	850742	12.98				
410-27746-2	HD-COD-SW-7-0/1-0	846459	12.98				
410-27746-3	HD-COD-SW-8-0/1-0	847939	12.98				
410-27746-4	HD-COD-SW-9-0/1-0	826542	12.97				
410-27746-5	HD-COD-SW-13-0/1-0	828022	12.98				
410-27746-6	HD-COD-SW-15-0/1-0	819055	12.97				
410-27746-7	HD-COD-SW-16-0/1-0	828619	12.97				
410-27746-8	HD-COD-SW-17-0/1-0	814780	12.97				
410-27746-9	HD-COD-SW-26-0/1-0	821927	12.97				
410-27746-10	HD-COD-SW-27-0/1-0	826791	12.97				
410-27746-11	HD-COD-SW-28-0/1-0	823579	12.97				
410-27746-12	HD-COD-SW-29-0/1-0	814862	12.97				
410-27746-13	HD-QC1-0/1-1	817306	12.97				
410-27746-14	HD-QC1-0/1-2	815501	12.97				

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.: 410-27746-1

SDG No.:

Sample No.: CCVIS 410-90807/3 Date Analyzed: 02/04/2021 11:22

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

Lab File ID (Standard): CF02X03.D Heated Purge: (Y/N) N

Calibration ID: 10294

		TBAd10		FB		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		196903	4.06	2094070	7.52	1595540	11.06
UPPER LIMIT		393806	4.56	4188140	8.02	3191080	11.56
LOWER LIMIT		98452	3.56	1047035	7.02	797770	10.56
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 410-90807/4		189579	4.06	2132836	7.52	1624878	11.06
LCSD 410-90807/5		190552	4.05	2150094	7.52	1634667	11.06
MB 410-90807/7		196257	4.06	2094541	7.52	1591163	11.06
410-27746-6 MS	HD-COD-SW-15-0/1-0 MS	191229	4.03	2115645	7.51	1606167	11.06
410-27746-6 MSD	HD-COD-SW-15-0/1-0 MSD	170549	4.05	2073784	7.52	1565858	11.06

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.: 410-27746-1

SDG No.:

Sample No.: CCVIS 410-90807/3 Date Analyzed: 02/04/2021 11:22

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

Lab File ID (Standard): CF02X03.D Heated Purge: (Y/N) N

Calibration ID: 10294

		DCBd4					
		AREA #	RT #	#	RT #	#	RT #
12/24 HOUR STD		901828	12.97				
UPPER LIMIT		1803656	13.47				
LOWER LIMIT		450914	12.47				
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 410-90807/4		898660	12.97				
LCSD 410-90807/5		897308	12.97				
MB 410-90807/7		861003	12.97				
410-27746-6 MS	HD-COD-SW-15-0/1-0 MS	888949	12.97				
410-27746-6 MSD	HD-COD-SW-15-0/1-0 MSD	872306	12.97				

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.: 410-27746-1

SDG No.:

Client Sample ID: HD-COD-SW-6-0/1-0 Lab Sample ID: 410-27746-1

Matrix: Water Lab File ID: CF02S03.D

Analysis Method: 8260D Date Collected: 01/26/2021 10:50

Sample wt/vol: 25(mL) Date Analyzed: 02/03/2021 13:44

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.: 90352 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.50	0.070
71-55-6	1,1,1-Trichloroethane	ND		0.50	0.060
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.50	0.070
79-00-5	1,1,2-Trichloroethane	ND		0.50	0.060
75-34-3	1,1-Dichloroethane	ND		0.50	0.070
75-35-4	1,1-Dichloroethene	ND		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	ND		0.50	0.060
107-06-2	1,2-Dichloroethane	ND		0.50	0.050
78-87-5	1,2-Dichloropropane	ND		0.50	0.060
78-93-3	2-Butanone (MEK)	ND		5.0	0.60
591-78-6	2-Hexanone	ND		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70
67-64-1	Acetone	2.4	J	5.0	0.90
71-43-2	Benzene	ND		0.50	0.050
74-97-5	Bromochloromethane	ND		0.50	0.050
75-27-4	Bromodichloromethane	ND		0.50	0.050
75-25-2	Bromoform	ND		1.0	0.30
74-83-9	Bromomethane	ND	^c	0.50	0.070
75-15-0	Carbon disulfide	ND		1.0	0.060
56-23-5	Carbon tetrachloride	ND		0.50	0.070
108-90-7	Chlorobenzene	ND		0.50	0.060
75-00-3	Chloroethane	ND	^c	0.50	0.070
67-66-3	Chloroform	ND		0.50	0.090
74-87-3	Chloromethane	ND	^c	0.50	0.060
156-59-2	cis-1,2-Dichloroethene	ND		0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	ND		0.50	0.050
124-48-1	Dibromochloromethane	ND		0.50	0.070
100-41-4	Ethylbenzene	ND		0.50	0.060
1634-04-4	Methyl tert-butyl ether	ND		0.50	0.050
75-09-2	Methylene Chloride	ND		0.50	0.070
100-42-5	Styrene	ND		0.50	0.050
127-18-4	Tetrachloroethene	ND		0.50	0.060
108-88-3	Toluene	ND		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	ND		0.50	0.060
10061-02-6	trans-1,3-Dichloropropene	ND		0.50	0.060
79-01-6	Trichloroethene	ND		0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Client Sample ID: HD-COD-SW-6-0/1-0 Lab Sample ID: 410-27746-1

Matrix: Water Lab File ID: CF02S03.D

Analysis Method: 8260D Date Collected: 01/26/2021 10:50

Sample wt/vol: 25(mL) Date Analyzed: 02/03/2021 13:44

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.: 90352 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-01-4	Vinyl chloride	ND	^c	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)	97		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\10193\20210203-21161.b\CF02S03.D
Lims ID: 410-27746-A-1
Client ID: HD-COD-SW-6-0/1-0
Sample Type: Client
Inject. Date: 03-Feb-2021 13:44:30 ALS Bottle#: 9 Worklist Smp#: 10
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0021161-010
Operator ID: SRK36897 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 04-Feb-2021 11:03:34 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1626

First Level Reviewer: spositok Date: 04-Feb-2021 10:47:04

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
3 Chloromethane	50		2.081				ND	U
5 Vinyl chloride	62		2.190				ND	
6 Bromomethane	94		2.501				ND	7
7 Chloroethane	64		2.574				ND	7
14 1,1-Dichloroethene	96		3.385				ND	7
16 Acetone	43	3.434	3.422	0.012	97	20402	2.42	
20 Carbon disulfide	76		3.666				ND	7
24 Methylene Chloride	84		4.019				ND	7
* 25 t-Butyl alcohol-d10 (IS)	65	4.044	4.056	-0.012	0	198715	50.0	
28 Methyl tert-butyl ether	73		4.403				ND	7
29 trans-1,2-Dichloroethene	96		4.409				ND	
32 1,1-Dichloroethane	63		5.074				ND	
36 2-Butanone (MEK)	43		5.885				ND	U
37 cis-1,2-Dichloroethene	96		5.915				ND	
44 Chlorobromomethane	128		6.251				ND	
46 Chloroform	83		6.403				ND	
$ 47 Dibromofluoromethane (Surr)	113	6.623	6.622	0.001	93	476860	9.70	
48 1,1,1-Trichloroethane	97		6.629				ND	
50 Carbon tetrachloride	117		6.830				ND	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.074	7.080	-0.006	0	104776	10.5	
54 Benzene	78		7.104				ND	7
55 1,2-Dichloroethane	62		7.177				ND	
* 57 Fluorobenzene (IS)	96	7.513	7.513	0.000	99	2067974	10.0	
60 Trichloroethene	95		7.994				ND	U
62 1,2-Dichloropropane	63		8.336				ND	
67 Dichlorobromomethane	83		8.689				ND	7
72 cis-1,3-Dichloropropene	75		9.250				ND	
73 4-Methyl-2-pentanone (MIBK)	43		9.439				ND	7
$ 74 Toluene-d8 (Surr)	98	9.567	9.567	0.000	93	2071999	10.1	
75 Toluene	92		9.646				ND	U
76 trans-1,3-Dichloropropene	75		9.921				ND	7
79 1,1,2-Trichloroethane	97		10.128				ND	

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
	80 Tetrachloroethene	166		10.207				ND	U
	82 2-Hexanone	43		10.353				ND	7
	83 Chlorodibromomethane	129		10.506				ND	
	84 Ethylene Dibromide	107		10.616				ND	
*	85 Chlorobenzene-d5 (IS)	117	11.061	11.061	0.000	85	1577310	10.0	
	87 Chlorobenzene	112		11.085				ND	
	89 1,1,1,2-Tetrachloroethane	131		11.170				ND	
	90 Ethylbenzene	91		11.176				ND	7
S	88 Xylenes, Total	106		11.245				ND	7
	91 m-Xylene & p-Xylene	106		11.292				ND	7
	92 o-Xylene	106		11.628				ND	7
	93 Styrene	104		11.646				ND	7
	94 Bromoform	173		11.804				ND	
$	98 4-Bromofluorobenzene (Surr)	95	12.085	12.079	0.006	94	753768	9.73	
	99 1,1,2,2-Tetrachloroethane	83		12.188				ND	
*	113 1,4-Dichlorobenzene-d4	152	12.975	12.969	0.006	94	850742	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

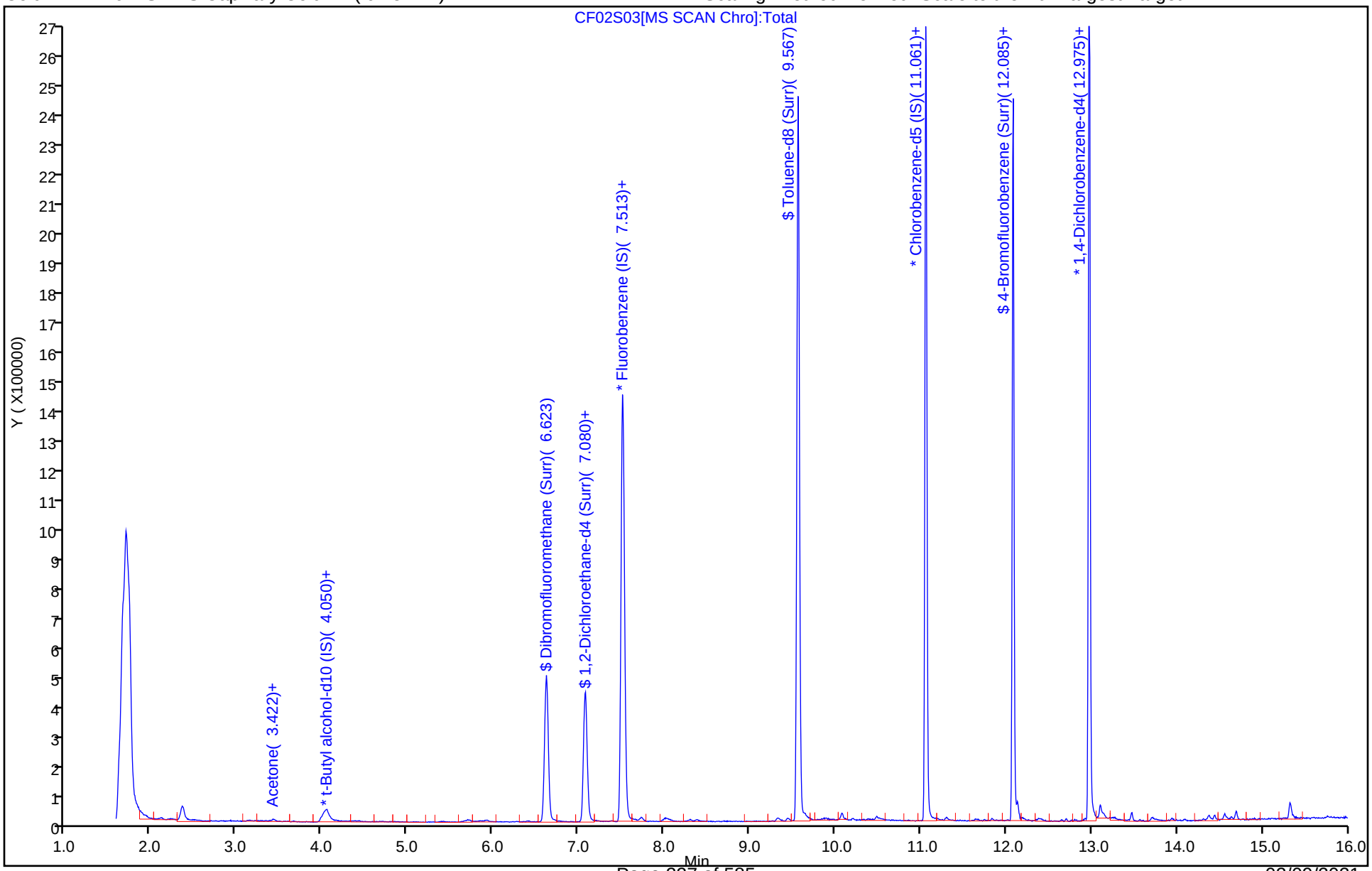
MSV_HP25_ISSS_00022 Amount Added: 1.00 Units: uL Run Reagent

Report Date: 04-Feb-2021 11:08:06 Chrom Revision: 2.3 17-Jan-2021 00:24:10

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S03.D				
Injection Date:	03-Feb-2021 13:44:30	Instrument ID:	10193	Operator ID:	SRK36897
Lims ID:	410-27746-A-1	Lab Sample ID:	410-27746-1	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:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Env, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S03.D				
Lims ID:	410-27746-A-1				
Client ID:	HD-COD-SW-6-0/1-0				
Sample Type:	Client				
Inject. Date:	03-Feb-2021 13:44:30	ALS Bottle#:	9	Worklist Smp#:	10
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0021161-010				
Operator ID:	SRK36897	Instrument ID:	10193		
Method:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\MSV_10193_25mL.m				
Limit Group:	MSV - 8260C_D				
Last Update:	04-Feb-2021 11:03:34	Calib Date:	01-Sep-2020 19:09:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1626				

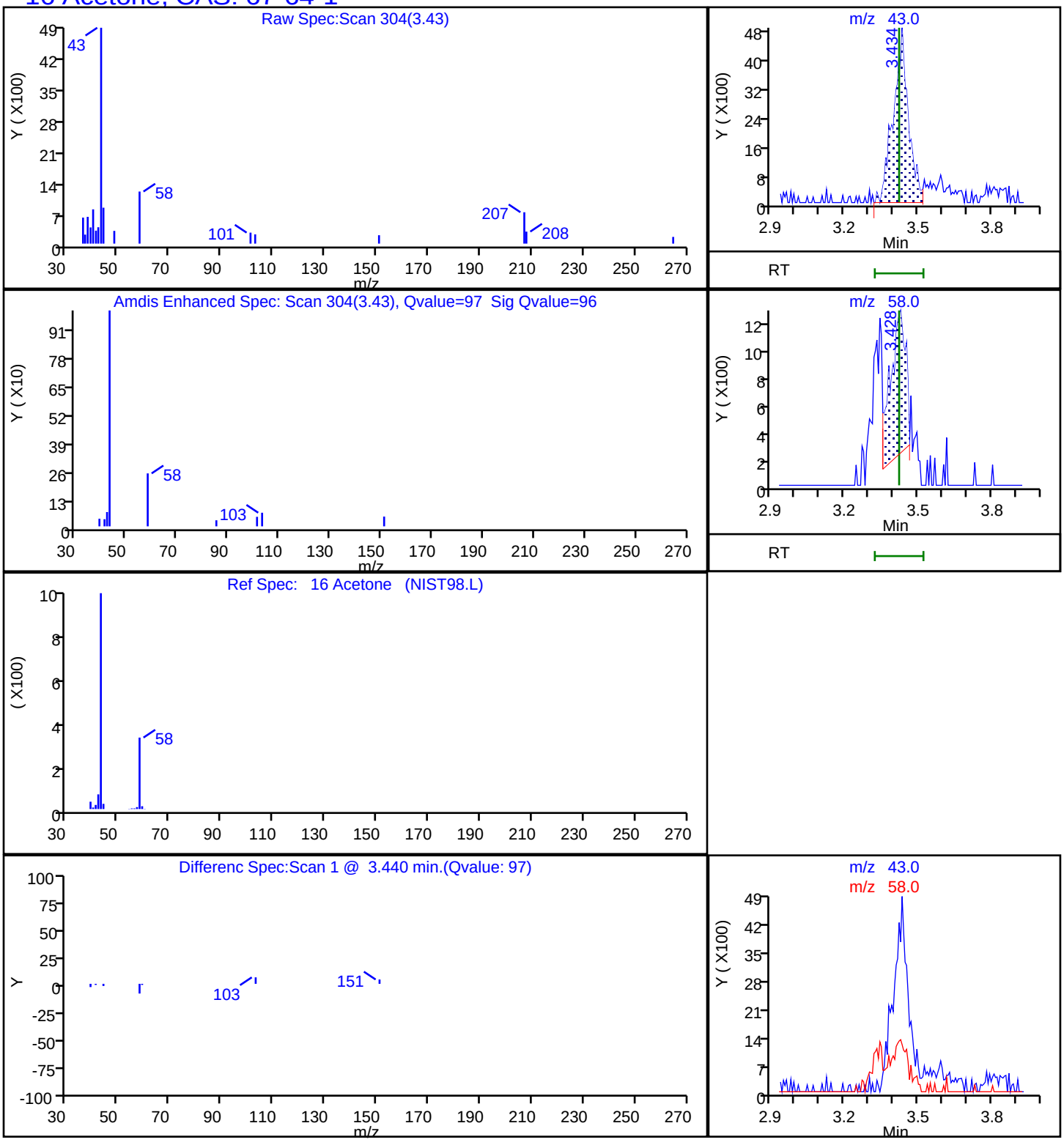
First Level Reviewer: spositok Date: 04-Feb-2021 10:47:04

Compound	Amount Added	Amount Recovered	% Rec.
$ 47 Dibromofluoromethane (Surr)	10.0	9.70	97.04
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.5	104.66
$ 74 Toluene-d8 (Surr)	10.0	10.1	100.58
$ 98 4-Bromofluorobenzene (Surr)	10.0	9.73	97.35

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S03.D				
Injection Date:	03-Feb-2021 13:44:30	Instrument ID:	10193		
Lims ID:	410-27746-A-1	Lab Sample ID:	410-27746-1		
Client ID:	HD-COD-SW-6-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	9	Worklist Smp#:	10
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

16 Acetone, CAS: 67-64-1



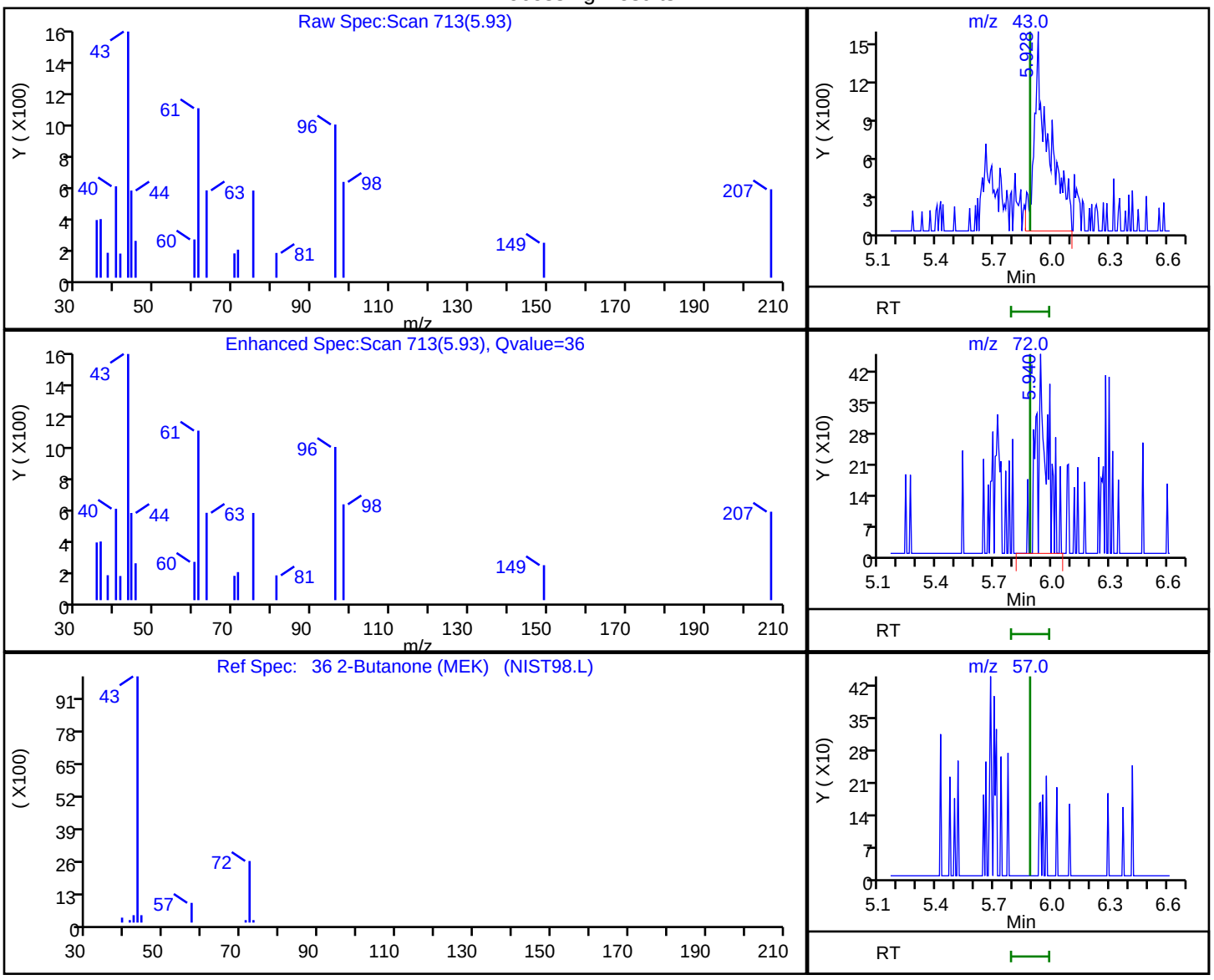
User Disabled Compound Report

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S03.D				
Injection Date:	03-Feb-2021 13:44:30	Instrument ID:	10193		
Lims ID:	410-27746-A-1	Lab Sample ID:	410-27746-1		
Client ID:	HD-COD-SW-6-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	9	Worklist Smp#:	10
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

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

Processing Results



RT	Mass	Response	Amount
5.93	43.00	8276	0.417813
5.94	72.00	1785	
5.88	57.00	0	

Reviewer: spositok, 04-Feb-2021 10:46:27

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

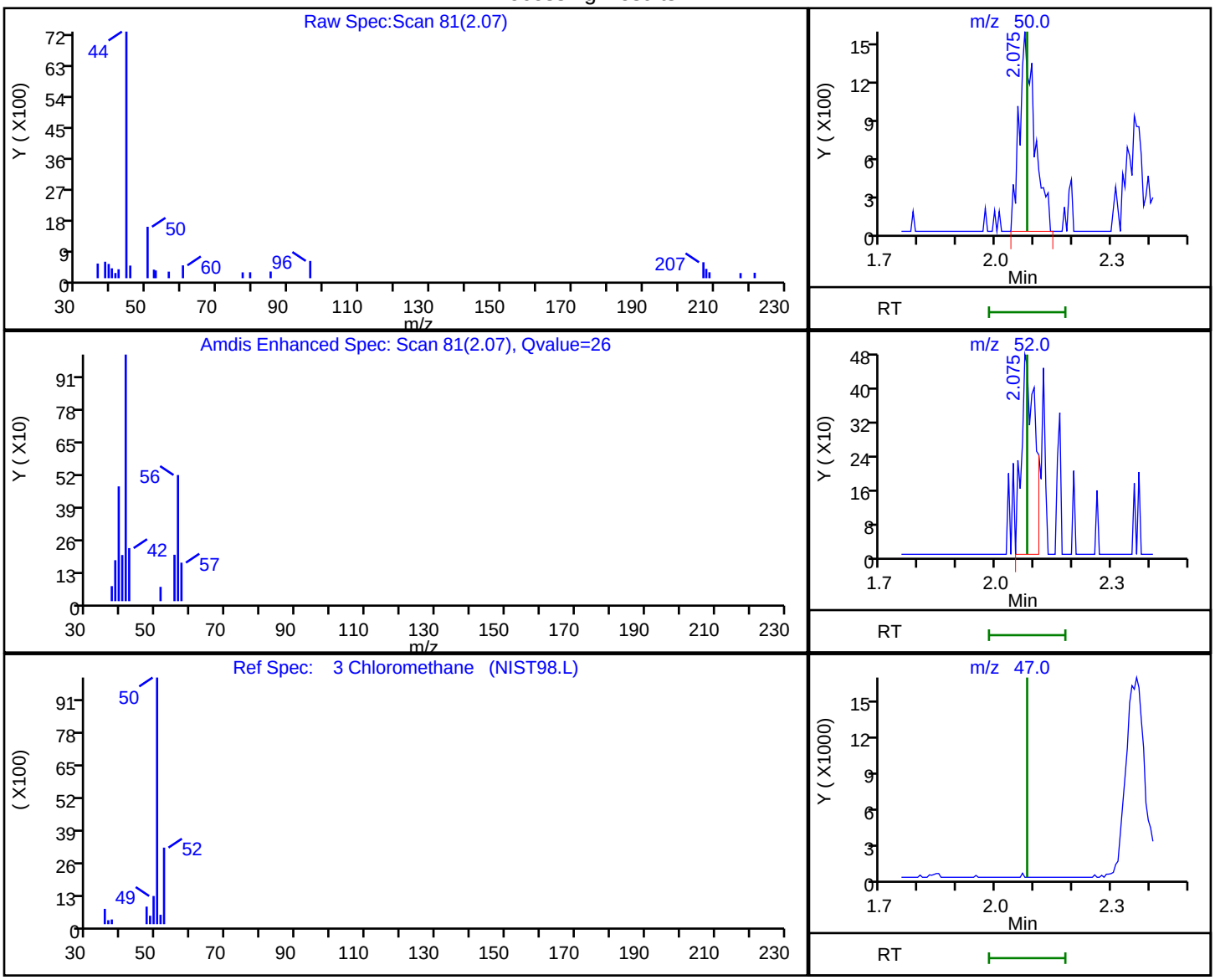
User Disabled Compound Report

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S03.D				
Injection Date:	03-Feb-2021 13:44:30	Instrument ID:	10193		
Lims ID:	410-27746-A-1	Lab Sample ID:	410-27746-1		
Client ID:	HD-COD-SW-6-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	9	Worklist Smp#:	10
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

3 Chloromethane, CAS: 74-87-3

Processing Results



RT	Mass	Response	Amount
2.07	50.00	4164	0.052930
2.07	52.00	1155	
2.08	47.00	0	

Reviewer: spositok, 04-Feb-2021 10:46:20

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

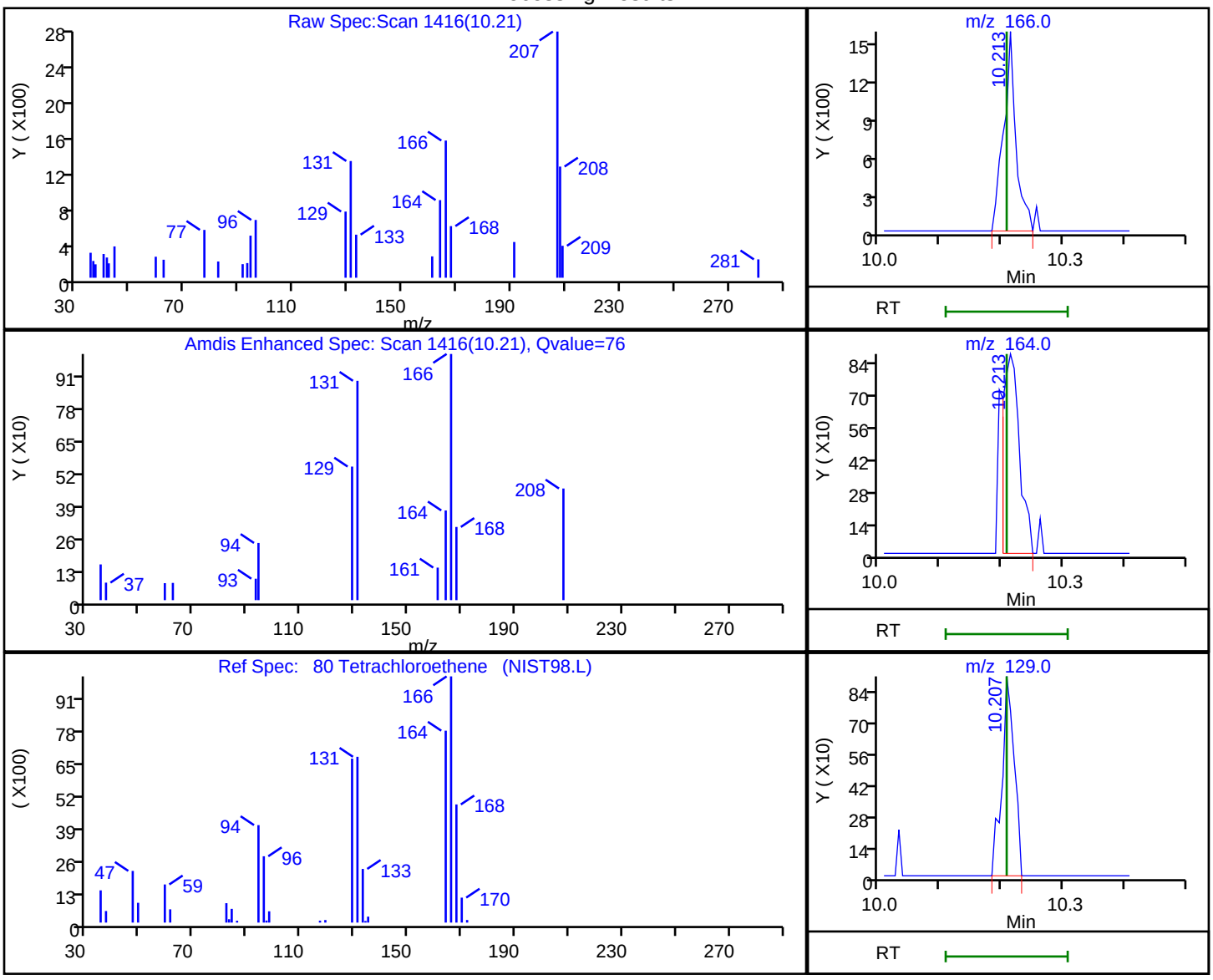
User Disabled Compound Report

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S03.D				
Injection Date:	03-Feb-2021 13:44:30	Instrument ID:	10193		
Lims ID:	410-27746-A-1	Lab Sample ID:	410-27746-1		
Client ID:	HD-COD-SW-6-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	9	Worklist Smp#:	10
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

80 Tetrachloroethene, CAS: 127-18-4

Processing Results



RT	Mass	Response	Amount
10.21	166.00	2189	0.031623
10.21	164.00	1618	
10.21	129.00	1264	
10.21	131.00	1449	

Reviewer: spositok, 04-Feb-2021 10:46:49

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

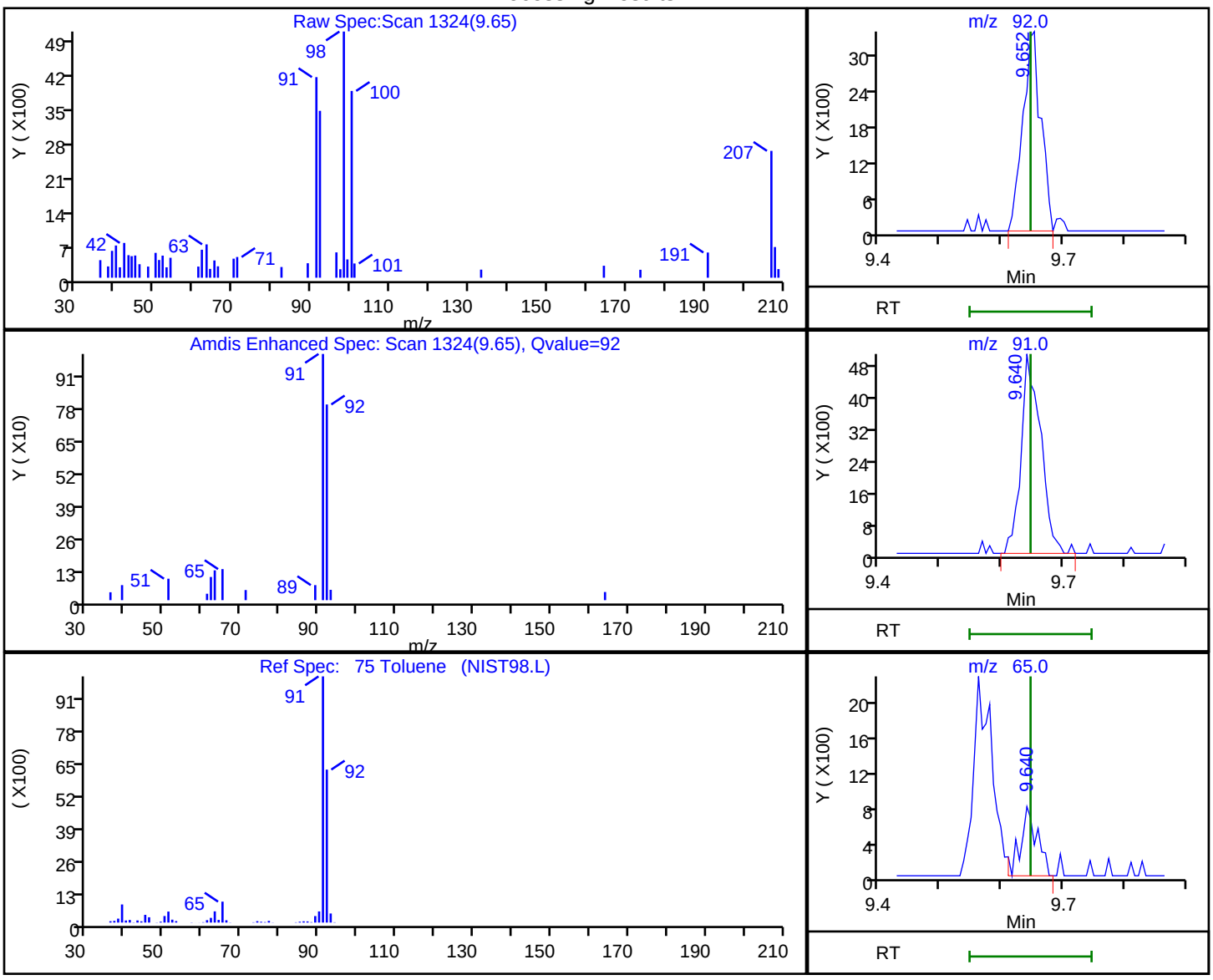
User Disabled Compound Report

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S03.D				
Injection Date:	03-Feb-2021 13:44:30	Instrument ID:	10193		
Lims ID:	410-27746-A-1	Lab Sample ID:	410-27746-1		
Client ID:	HD-COD-SW-6-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	9	Worklist Smp#:	10
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

75 Toluene, CAS: 108-88-3

Processing Results



RT	Mass	Response	Amount
9.65	92.00	6974	0.045011
9.64	91.00	11294	
9.64	65.00	1510	
9.64	39.00	1245	

Reviewer: spositok, 04-Feb-2021 10:46:41

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

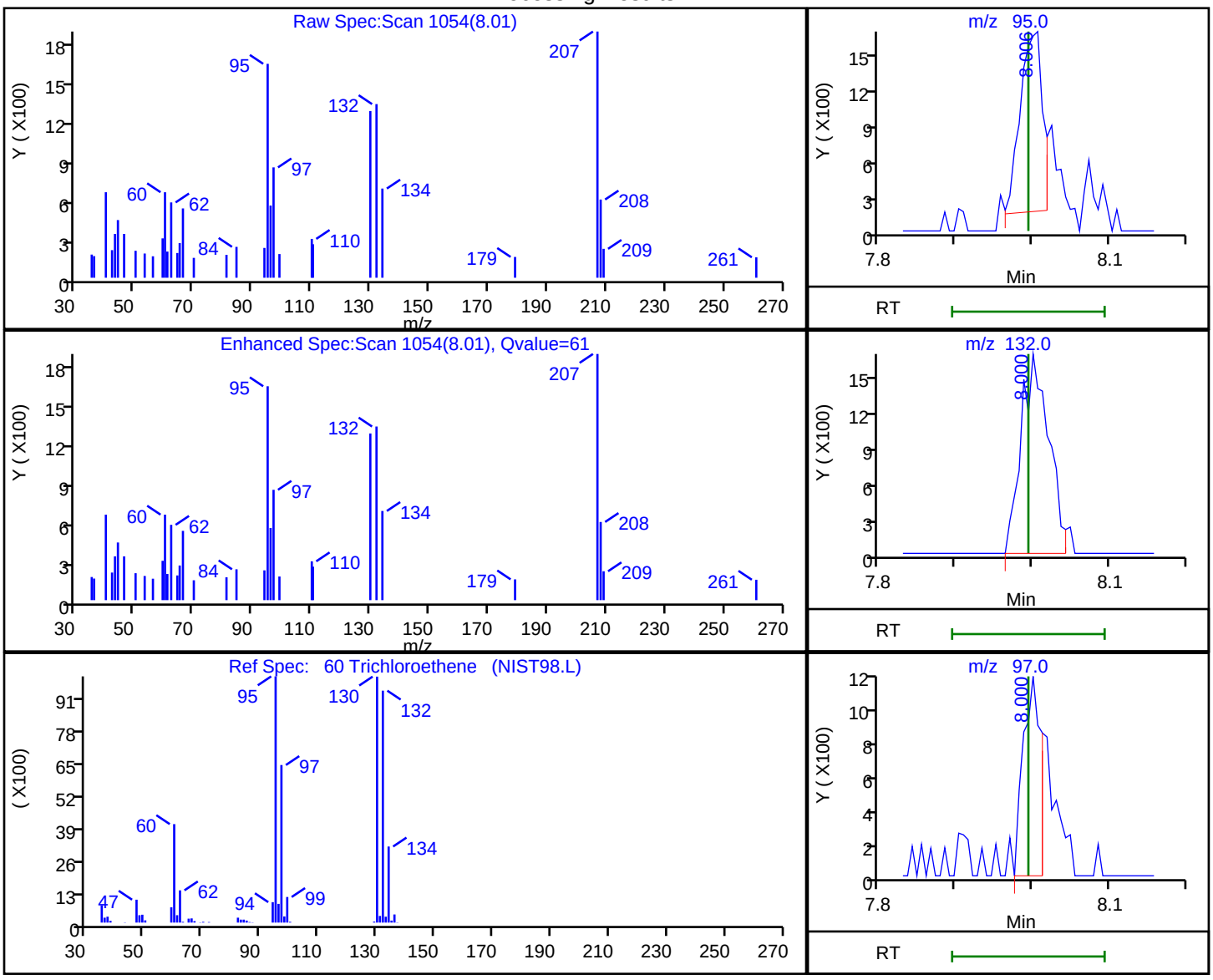
User Disabled Compound Report

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S03.D				
Injection Date:	03-Feb-2021 13:44:30	Instrument ID:	10193		
Lims ID:	410-27746-A-1	Lab Sample ID:	410-27746-1		
Client ID:	HD-COD-SW-6-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	9	Worklist Smp#:	10
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

60 Trichloroethene, CAS: 79-01-6

Processing Results



RT	Mass	Response	Amount
8.01	95.00	3038	0.049622
8.00	132.00	4049	
8.00	97.00	1797	
8.00	130.00	4171	

Reviewer: spositok, 04-Feb-2021 10:46:36

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

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Client Sample ID: HD-COD-SW-7-0/1-0 Lab Sample ID: 410-27746-2

Matrix: Water Lab File ID: CF02S04.D

Analysis Method: 8260D Date Collected: 01/26/2021 11:30

Sample wt/vol: 25(mL) Date Analyzed: 02/03/2021 14:06

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.: 90352 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.50	0.070
71-55-6	1,1,1-Trichloroethane	ND		0.50	0.060
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.50	0.070
79-00-5	1,1,2-Trichloroethane	ND		0.50	0.060
75-34-3	1,1-Dichloroethane	ND		0.50	0.070
75-35-4	1,1-Dichloroethene	ND		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	ND		0.50	0.060
107-06-2	1,2-Dichloroethane	ND		0.50	0.050
78-87-5	1,2-Dichloropropane	ND		0.50	0.060
78-93-3	2-Butanone (MEK)	ND		5.0	0.60
591-78-6	2-Hexanone	ND		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70
67-64-1	Acetone	3.0	J	5.0	0.90
71-43-2	Benzene	ND		0.50	0.050
74-97-5	Bromochloromethane	ND		0.50	0.050
75-27-4	Bromodichloromethane	ND		0.50	0.050
75-25-2	Bromoform	ND		1.0	0.30
74-83-9	Bromomethane	ND	^c	0.50	0.070
75-15-0	Carbon disulfide	ND		1.0	0.060
56-23-5	Carbon tetrachloride	ND		0.50	0.070
108-90-7	Chlorobenzene	ND		0.50	0.060
75-00-3	Chloroethane	ND	^c	0.50	0.070
67-66-3	Chloroform	ND		0.50	0.090
74-87-3	Chloromethane	ND	^c	0.50	0.060
156-59-2	cis-1,2-Dichloroethene	ND		0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	ND		0.50	0.050
124-48-1	Dibromochloromethane	ND		0.50	0.070
100-41-4	Ethylbenzene	ND		0.50	0.060
1634-04-4	Methyl tert-butyl ether	ND		0.50	0.050
75-09-2	Methylene Chloride	ND		0.50	0.070
100-42-5	Styrene	ND		0.50	0.050
127-18-4	Tetrachloroethene	0.066	J	0.50	0.060
108-88-3	Toluene	ND		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	ND		0.50	0.060
10061-02-6	trans-1,3-Dichloropropene	ND		0.50	0.060
79-01-6	Trichloroethene	ND		0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Client Sample ID: HD-COD-SW-7-0/1-0 Lab Sample ID: 410-27746-2

Matrix: Water Lab File ID: CF02S04.D

Analysis Method: 8260D Date Collected: 01/26/2021 11:30

Sample wt/vol: 25(mL) Date Analyzed: 02/03/2021 14:06

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.: 90352 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-01-4	Vinyl chloride	ND	^c	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)	98		80-120
1868-53-7	Dibromofluoromethane (Surr)	98		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\10193\20210203-21161.b\CF02S04.D
Lims ID: 410-27746-A-2
Client ID: HD-COD-SW-7-0/1-0
Sample Type: Client
Inject. Date: 03-Feb-2021 14:06:30 ALS Bottle#: 10 Worklist Smp#: 11
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0021161-011
Operator ID: SRK36897 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 04-Feb-2021 11:03:34 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1626

First Level Reviewer: spositok Date: 04-Feb-2021 10:47:32

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
3 Chloromethane	50		2.081				ND	
5 Vinyl chloride	62		2.190				ND	7
6 Bromomethane	94		2.501				ND	7
7 Chloroethane	64		2.574				ND	7
14 1,1-Dichloroethene	96		3.385				ND	7
16 Acetone	43	3.440	3.422	0.018	97	23374	2.98	
20 Carbon disulfide	76		3.666				ND	7
24 Methylene Chloride	84		4.019				ND	7
* 25 t-Butyl alcohol-d10 (IS)	65	4.056	4.056	0.000	0	184305	50.0	
28 Methyl tert-butyl ether	73		4.403				ND	7
29 trans-1,2-Dichloroethene	96		4.409				ND	
32 1,1-Dichloroethane	63		5.074				ND	
36 2-Butanone (MEK)	43		5.885				ND	U
37 cis-1,2-Dichloroethene	96		5.915				ND	
44 Chlorobromomethane	128		6.251				ND	
46 Chloroform	83	6.415	6.403	0.012	78	6243	0.0614	
$ 47 Dibromofluoromethane (Surr)	113	6.628	6.622	0.006	94	479488	9.79	
48 1,1,1-Trichloroethane	97		6.629				ND	
50 Carbon tetrachloride	117		6.830				ND	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.086	7.080	0.006	0	101787	10.2	
54 Benzene	78		7.104				ND	7
55 1,2-Dichloroethane	62		7.177				ND	7
* 57 Fluorobenzene (IS)	96	7.519	7.513	0.005	99	2061782	10.0	
60 Trichloroethene	95		7.994				ND	
62 1,2-Dichloropropane	63		8.336				ND	
67 Dichlorobromomethane	83		8.689				ND	7
72 cis-1,3-Dichloropropene	75		9.250				ND	
73 4-Methyl-2-pentanone (MIBK)	43		9.439				ND	7
$ 74 Toluene-d8 (Surr)	98	9.573	9.567	0.006	94	2044051	10.1	
75 Toluene	92	9.658	9.646	0.012	95	6852	0.0449	
76 trans-1,3-Dichloropropene	75		9.921				ND	7
79 1,1,2-Trichloroethane	97		10.128				ND	

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
	80 Tetrachloroethene	166	10.207	10.207	0.000	91	4481	0.0657	
	82 2-Hexanone	43		10.353				ND	7
	83 Chlorodibromomethane	129		10.506				ND	
	84 Ethylene Dibromide	107		10.616				ND	
*	85 Chlorobenzene-d5 (IS)	117	11.060	11.061	-0.001	85	1555107	10.0	
	87 Chlorobenzene	112		11.085				ND	
	89 1,1,1,2-Tetrachloroethane	131		11.170				ND	
	90 Ethylbenzene	91		11.176				ND	7
S	88 Xylenes, Total	106		11.245				ND	7
	91 m-Xylene & p-Xylene	106		11.292				ND	7
	92 o-Xylene	106		11.628				ND	7
	93 Styrene	104		11.646				ND	7
	94 Bromoform	173		11.804				ND	
$	98 4-Bromofluorobenzene (Surr)	95	12.085	12.079	0.006	94	747391	9.79	
	99 1,1,2,2-Tetrachloroethane	83		12.188				ND	
*	113 1,4-Dichlorobenzene-d4	152	12.975	12.969	0.006	94	846459	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

MSV_HP25_ISSS_00022 Amount Added: 1.00 Units: uL Run Reagent

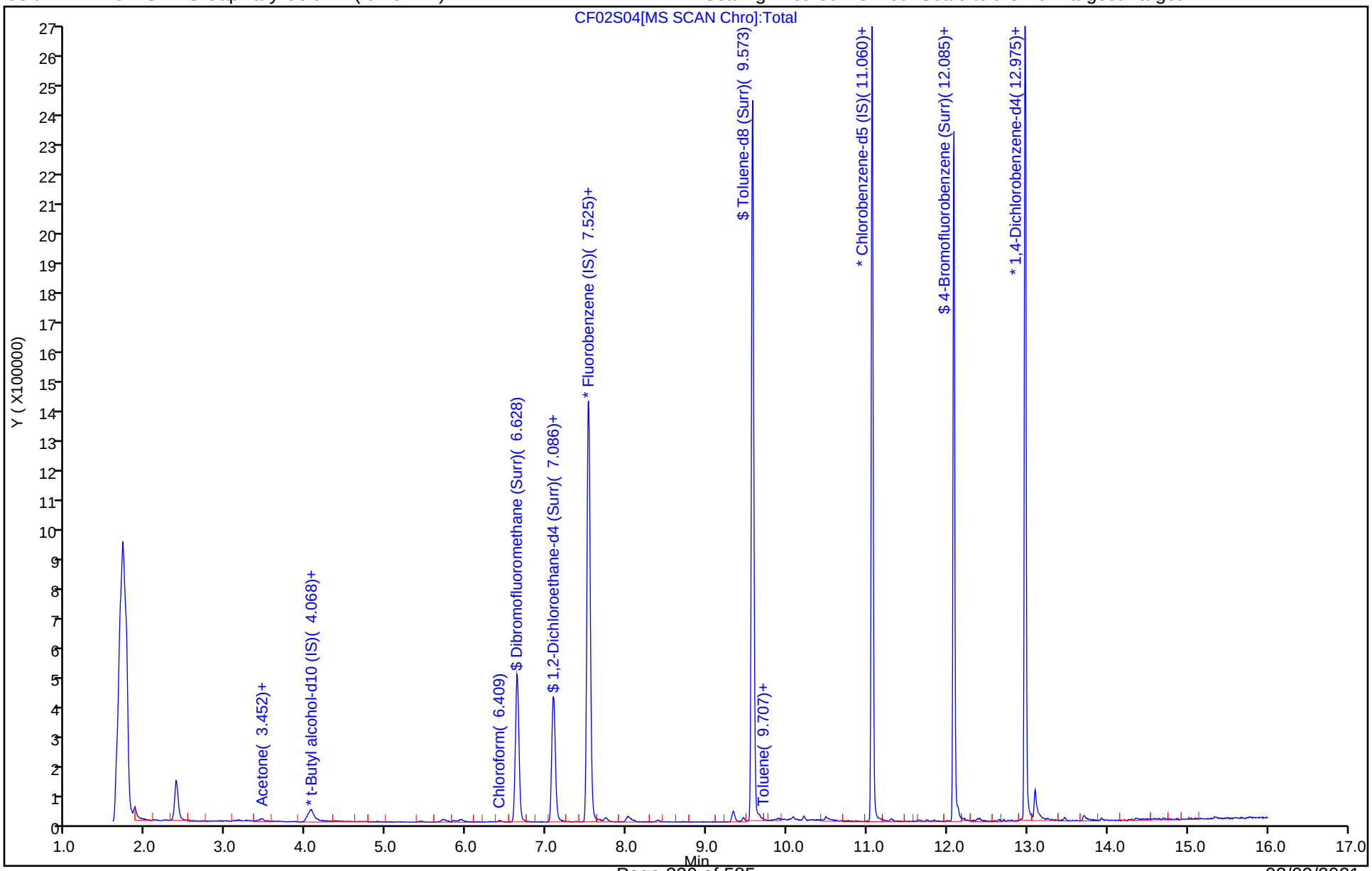
Report Date: 04-Feb-2021 11:08:08 Chrom Revision: 2.3 17-Jan-2021 00:24:10

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S04.D

Injection Date:	03-Feb-2021 14:06:30	Instrument ID:	10193	Operator ID:	SRK36897
Lims ID:	410-27746-A-2	Lab Sample ID:	410-27746-2	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:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Env, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S04.D				
Lims ID:	410-27746-A-2				
Client ID:	HD-COD-SW-7-0/1-0				
Sample Type:	Client				
Inject. Date:	03-Feb-2021 14:06:30	ALS Bottle#:	10	Worklist Smp#:	11
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0021161-011				
Operator ID:	SRK36897	Instrument ID:	10193		
Method:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\MSV_10193_25mL.m				
Limit Group:	MSV - 8260C_D				
Last Update:	04-Feb-2021 11:03:34	Calib Date:	01-Sep-2020 19:09:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1626				

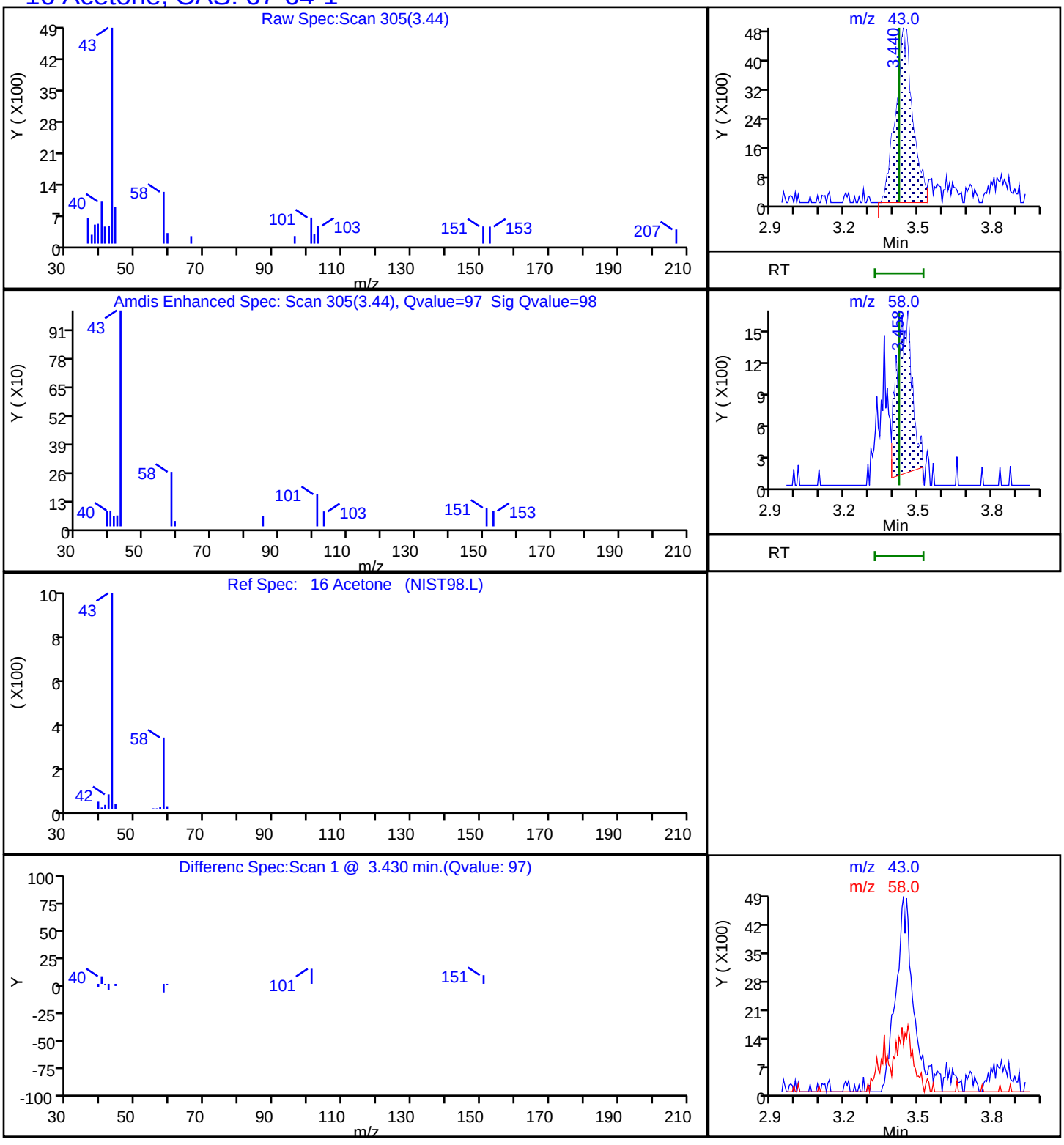
First Level Reviewer: spositok Date: 04-Feb-2021 10:47:32

Compound	Amount Added	Amount Recovered	% Rec.
$ 47 Dibromofluoromethane (Surr)	10.0	9.79	97.87
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.2	101.98
$ 74 Toluene-d8 (Surr)	10.0	10.1	100.64
$ 98 4-Bromofluorobenzene (Surr)	10.0	9.79	97.90

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S04.D				
Injection Date:	03-Feb-2021 14:06:30	Instrument ID:	10193		
Lims ID:	410-27746-A-2	Lab Sample ID:	410-27746-2		
Client ID:	HD-COD-SW-7-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	10	Worklist Smp#:	11
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

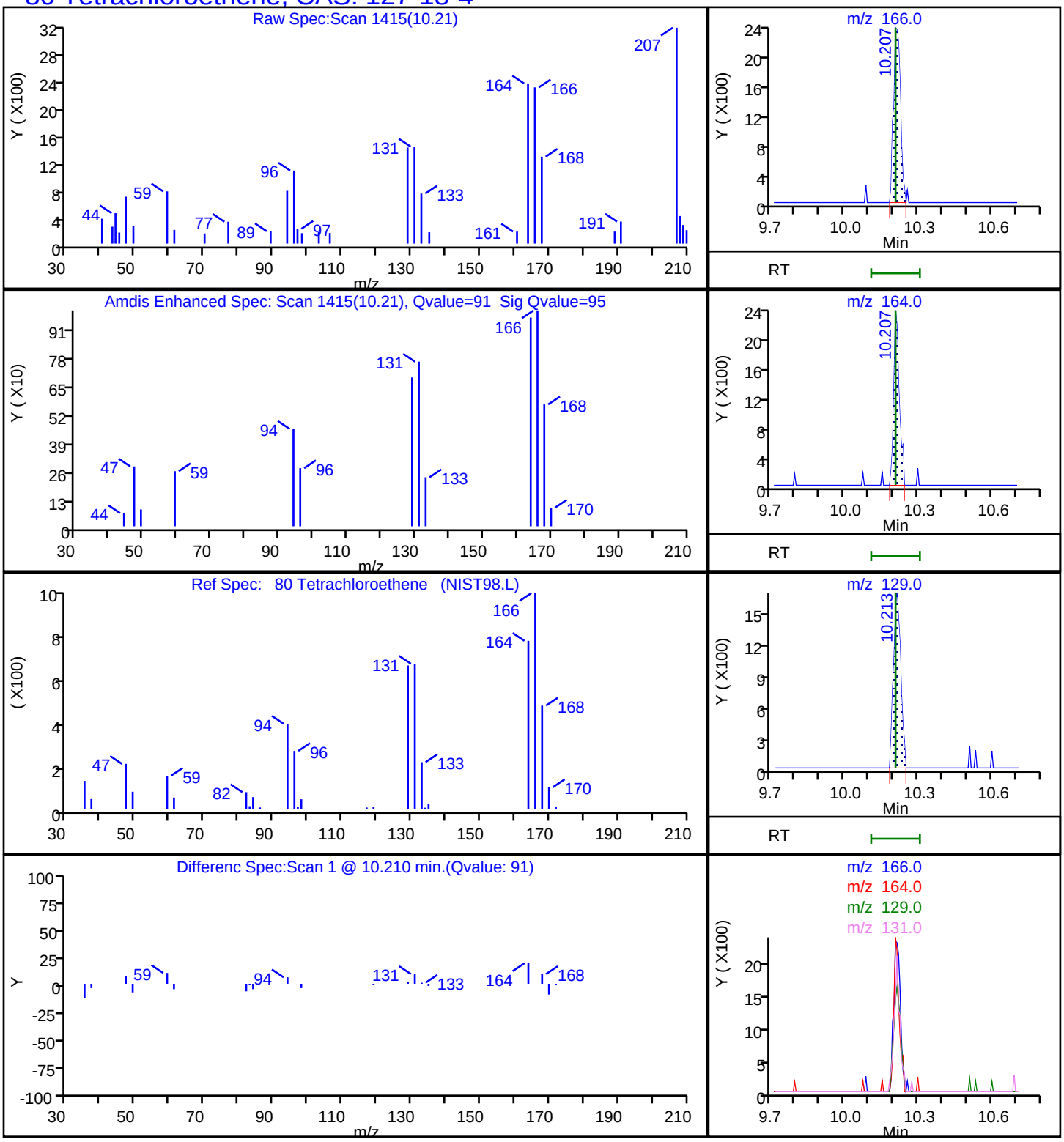
16 Acetone, CAS: 67-64-1



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S04.D				
Injection Date:	03-Feb-2021 14:06:30	Instrument ID:	10193		
Lims ID:	410-27746-A-2	Lab Sample ID:	410-27746-2		
Client ID:	HD-COD-SW-7-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	10	Worklist Smp#:	11
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

80 Tetrachloroethene, CAS: 127-18-4



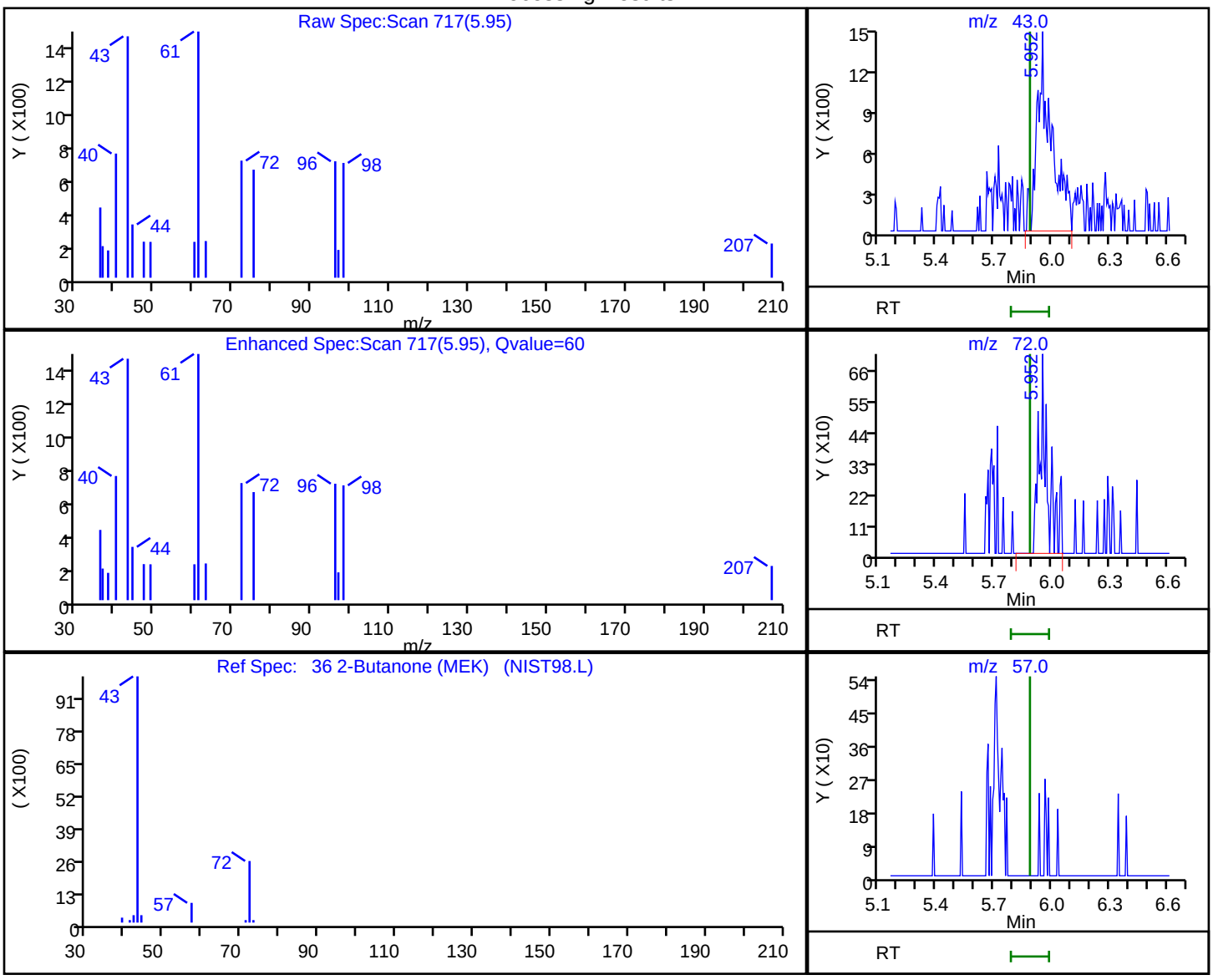
User Disabled Compound Report

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S04.D				
Injection Date:	03-Feb-2021 14:06:30	Instrument ID:	10193		
Lims ID:	410-27746-A-2	Lab Sample ID:	410-27746-2		
Client ID:	HD-COD-SW-7-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	10	Worklist Smp#:	11
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

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

Processing Results



RT	Mass	Response	Amount
5.95	43.00	7626	0.415099
5.95	72.00	2120	
5.88	57.00	0	

Reviewer: spositok, 04-Feb-2021 10:47:14

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

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Client Sample ID: HD-COD-SW-8-0/1-0 Lab Sample ID: 410-27746-3

Matrix: Water Lab File ID: CF02S05.D

Analysis Method: 8260D Date Collected: 01/26/2021 09:25

Sample wt/vol: 25(mL) Date Analyzed: 02/03/2021 14:29

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 90352 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.50	0.070
71-55-6	1,1,1-Trichloroethane	ND		0.50	0.060
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.50	0.070
79-00-5	1,1,2-Trichloroethane	ND		0.50	0.060
75-34-3	1,1-Dichloroethane	ND		0.50	0.070
75-35-4	1,1-Dichloroethene	ND		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	ND		0.50	0.060
107-06-2	1,2-Dichloroethane	ND		0.50	0.050
78-87-5	1,2-Dichloropropane	ND		0.50	0.060
78-93-3	2-Butanone (MEK)	ND		5.0	0.60
591-78-6	2-Hexanone	ND		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70
67-64-1	Acetone	1.6	J	5.0	0.90
71-43-2	Benzene	ND		0.50	0.050
74-97-5	Bromochloromethane	ND		0.50	0.050
75-27-4	Bromodichloromethane	ND		0.50	0.050
75-25-2	Bromoform	ND		1.0	0.30
74-83-9	Bromomethane	ND	^c	0.50	0.070
75-15-0	Carbon disulfide	ND		1.0	0.060
56-23-5	Carbon tetrachloride	ND		0.50	0.070
108-90-7	Chlorobenzene	ND		0.50	0.060
75-00-3	Chloroethane	ND	^c	0.50	0.070
67-66-3	Chloroform	ND		0.50	0.090
74-87-3	Chloromethane	ND	^c	0.50	0.060
156-59-2	cis-1,2-Dichloroethene	0.092	J	0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	ND		0.50	0.050
124-48-1	Dibromochloromethane	ND		0.50	0.070
100-41-4	Ethylbenzene	ND		0.50	0.060
1634-04-4	Methyl tert-butyl ether	ND		0.50	0.050
75-09-2	Methylene Chloride	ND		0.50	0.070
100-42-5	Styrene	ND		0.50	0.050
127-18-4	Tetrachloroethene	0.062	J	0.50	0.060
108-88-3	Toluene	ND		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	ND		0.50	0.060
10061-02-6	trans-1,3-Dichloropropene	ND		0.50	0.060
79-01-6	Trichloroethene	0.12	J	0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Client Sample ID: HD-COD-SW-8-0/1-0 Lab Sample ID: 410-27746-3

Matrix: Water Lab File ID: CF02S05.D

Analysis Method: 8260D Date Collected: 01/26/2021 09:25

Sample wt/vol: 25(mL) Date Analyzed: 02/03/2021 14:29

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 90352 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-01-4	Vinyl chloride	ND	^c	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)	106		80-120
460-00-4	4-Bromofluorobenzene (Surr)	96		80-120
1868-53-7	Dibromofluoromethane (Surr)	98		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\10193\20210203-21161.b\CF02S05.D
Lims ID: 410-27746-A-3
Client ID: HD-COD-SW-8-0/1-0
Sample Type: Client
Inject. Date: 03-Feb-2021 14:29:30 ALS Bottle#: 11 Worklist Smp#: 12
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0021161-012
Operator ID: SRK36897 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 04-Feb-2021 11:03:34 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1626

First Level Reviewer: spositok Date: 04-Feb-2021 10:50:32

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
3 Chloromethane	50		2.081				ND	U
5 Vinyl chloride	62		2.190				ND	
6 Bromomethane	94		2.501				ND	
7 Chloroethane	64		2.574				ND	7
14 1,1-Dichloroethene	96		3.385				ND	7
16 Acetone	43	3.440	3.422	0.018	87	12599	1.56	M
20 Carbon disulfide	76		3.666				ND	7
24 Methylene Chloride	84		4.019				ND	7
* 25 t-Butyl alcohol-d10 (IS)	65	4.056	4.056	0.000	0	190212	50.0	
28 Methyl tert-butyl ether	73		4.403				ND	7
29 trans-1,2-Dichloroethene	96		4.409				ND	
32 1,1-Dichloroethane	63		5.074				ND	
36 2-Butanone (MEK)	43		5.885				ND	7
37 cis-1,2-Dichloroethene	96	5.915	5.915	0.000	73	5804	0.0920	
44 Chlorobromomethane	128		6.251				ND	
46 Chloroform	83	6.409	6.403	0.006	27	3251	0.0320	
$ 47 Dibromofluoromethane (Surr)	113	6.629	6.622	0.007	94	478527	9.78	
48 1,1,1-Trichloroethane	97		6.629				ND	
50 Carbon tetrachloride	117		6.830				ND	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.080	7.080	0.000	0	105434	10.6	
54 Benzene	78		7.104				ND	7
55 1,2-Dichloroethane	62		7.177				ND	
* 57 Fluorobenzene (IS)	96	7.519	7.513	0.006	99	2058858	10.0	
60 Trichloroethene	95	8.006	7.994	0.012	96	7351	0.1206	
62 1,2-Dichloropropane	63		8.336				ND	
67 Dichlorobromomethane	83		8.689				ND	7
72 cis-1,3-Dichloropropene	75		9.250				ND	
73 4-Methyl-2-pentanone (MIBK)	43		9.439				ND	7
$ 74 Toluene-d8 (Surr)	98	9.567	9.567	0.000	93	2050633	10.1	
75 Toluene	92		9.646				ND	U
76 trans-1,3-Dichloropropene	75		9.921				ND	7
79 1,1,2-Trichloroethane	97		10.128				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
80 Tetrachloroethene	166	10.207	10.207	0.000	89	4245	0.0620	
82 2-Hexanone	43		10.353				ND	7
83 Chlorodibromomethane	129		10.506				ND	
84 Ethylene Dibromide	107		10.616				ND	
* 85 Chlorobenzene-d5 (IS)	117	11.061	11.061	0.000	85	1559915	10.0	
87 Chlorobenzene	112		11.085				ND	7
89 1,1,1,2-Tetrachloroethane	131		11.170				ND	
90 Ethylbenzene	91		11.176				ND	7
S 88 Xylenes, Total	106		11.245				ND	7
91 m-Xylene & p-Xylene	106		11.292				ND	7
92 o-Xylene	106		11.628				ND	7
93 Styrene	104		11.646				ND	7
94 Bromoform	173		11.804				ND	
$ 98 4-Bromofluorobenzene (Surr)	95	12.079	12.079	0.000	93	738026	9.64	
99 1,1,2,2-Tetrachloroethane	83		12.188				ND	
* 113 1,4-Dichlorobenzene-d4	152	12.975	12.969	0.006	94	847939	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

M - Manually Integrated

U - Marked Undetected

Reagents:

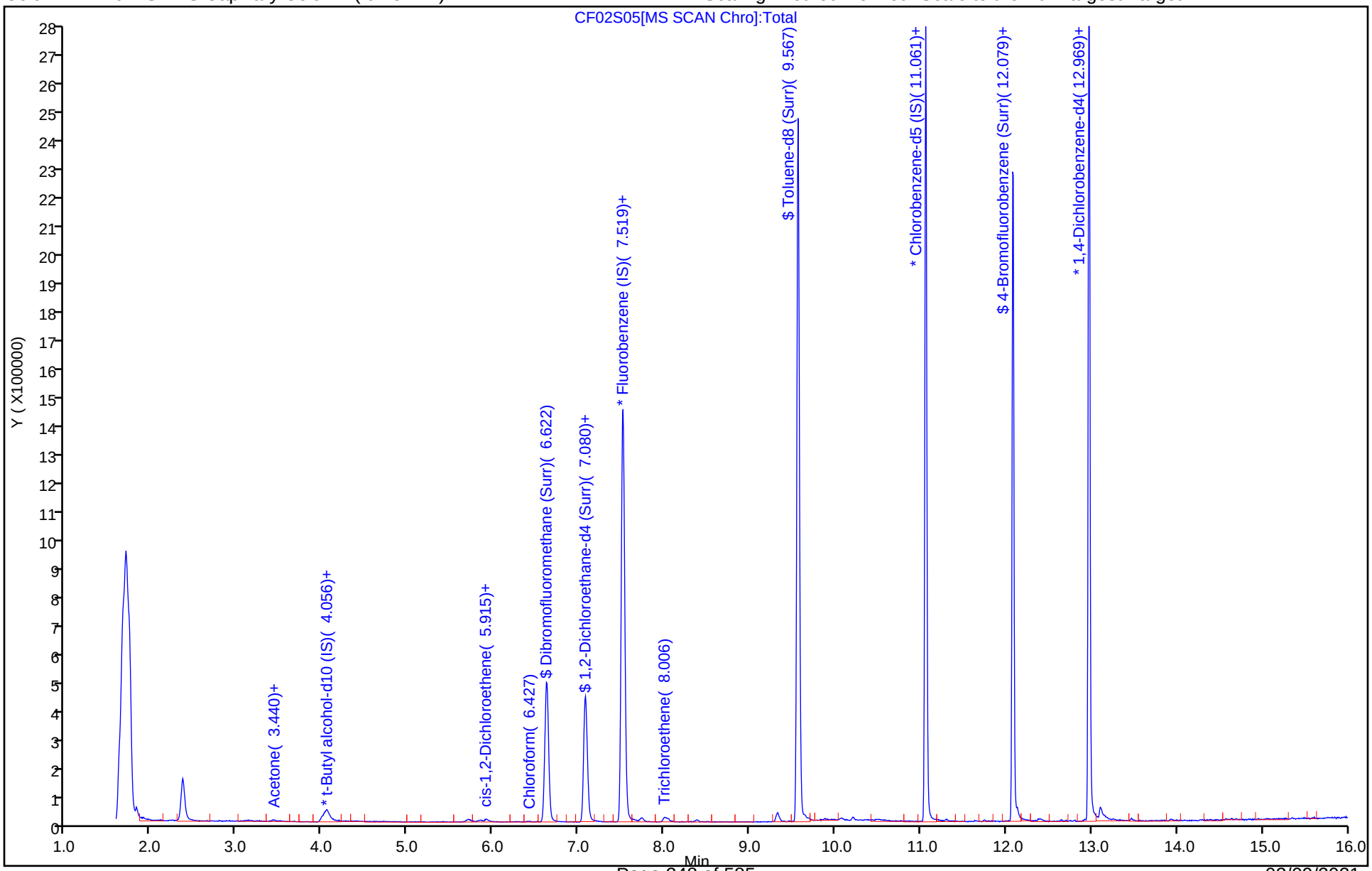
MSV_HP25_ISSS_00022 Amount Added: 1.00 Units: uL Run Reagent

Report Date: 04-Feb-2021 11:08:10 Chrom Revision: 2.3 17-Jan-2021 00:24:10

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S05.D				
Injection Date:	03-Feb-2021 14:29:30	Instrument ID:	10193	Operator ID:	SRK36897
Lims ID:	410-27746-A-3	Lab Sample ID:	410-27746-3	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:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Env, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S05.D				
Lims ID:	410-27746-A-3				
Client ID:	HD-COD-SW-8-0/1-0				
Sample Type:	Client				
Inject. Date:	03-Feb-2021 14:29:30	ALS Bottle#:	11	Worklist Smp#:	12
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0021161-012				
Operator ID:	SRK36897	Instrument ID:	10193		
Method:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\MSV_10193_25mL.m				
Limit Group:	MSV - 8260C_D				
Last Update:	04-Feb-2021 11:03:34	Calib Date:	01-Sep-2020 19:09:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1626				

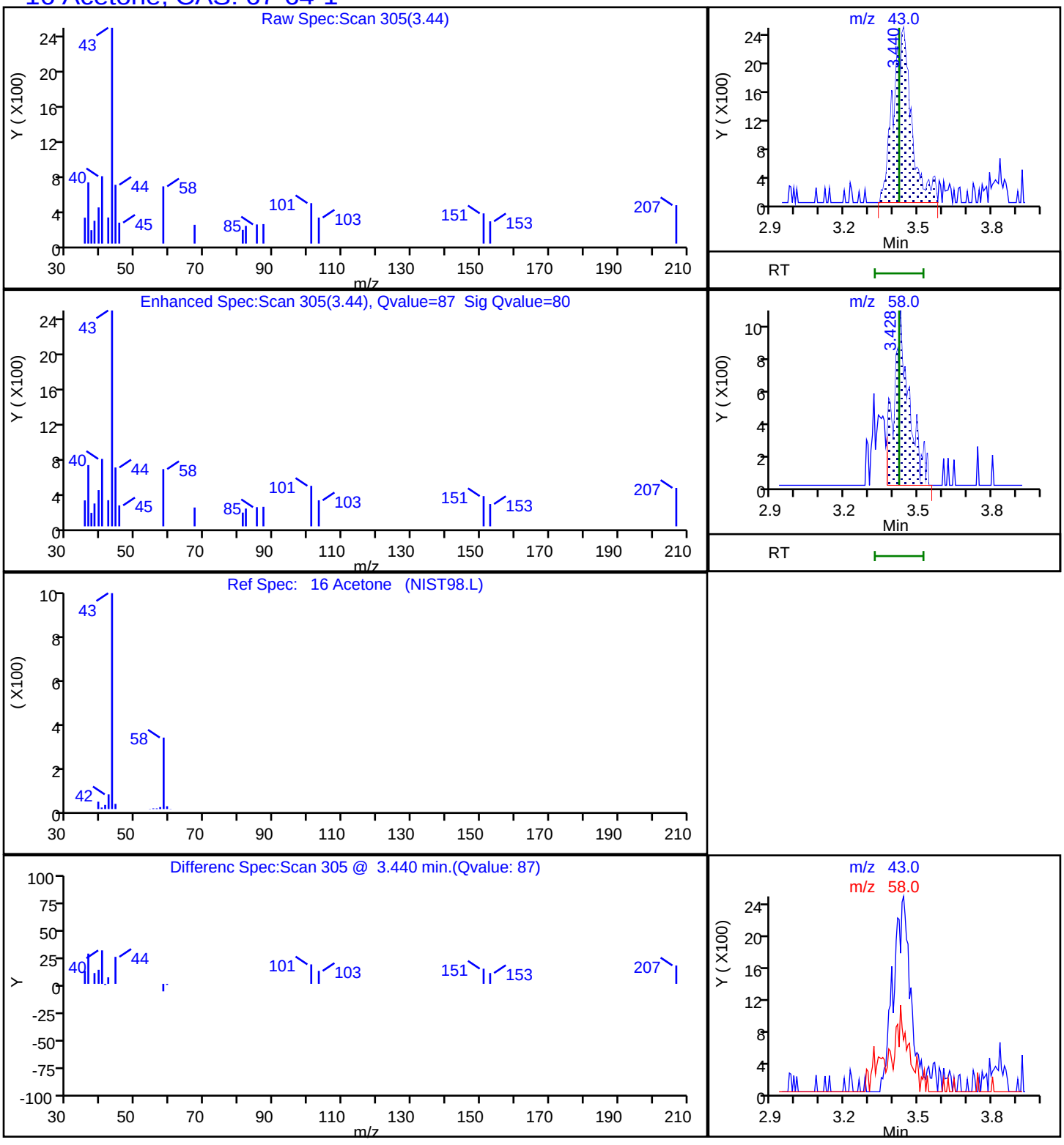
First Level Reviewer: spositok Date: 04-Feb-2021 10:50:32

Compound	Amount Added	Amount Recovered	% Rec.
$ 47 Dibromofluoromethane (Surr)	10.0	9.78	97.81
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.6	105.79
$ 74 Toluene-d8 (Surr)	10.0	10.1	100.65
$ 98 4-Bromofluorobenzene (Surr)	10.0	9.64	96.38

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S05.D				
Injection Date:	03-Feb-2021 14:29:30	Instrument ID:	10193		
Lims ID:	410-27746-A-3	Lab Sample ID:	410-27746-3		
Client ID:	HD-COD-SW-8-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	11	Worklist Smp#:	12
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

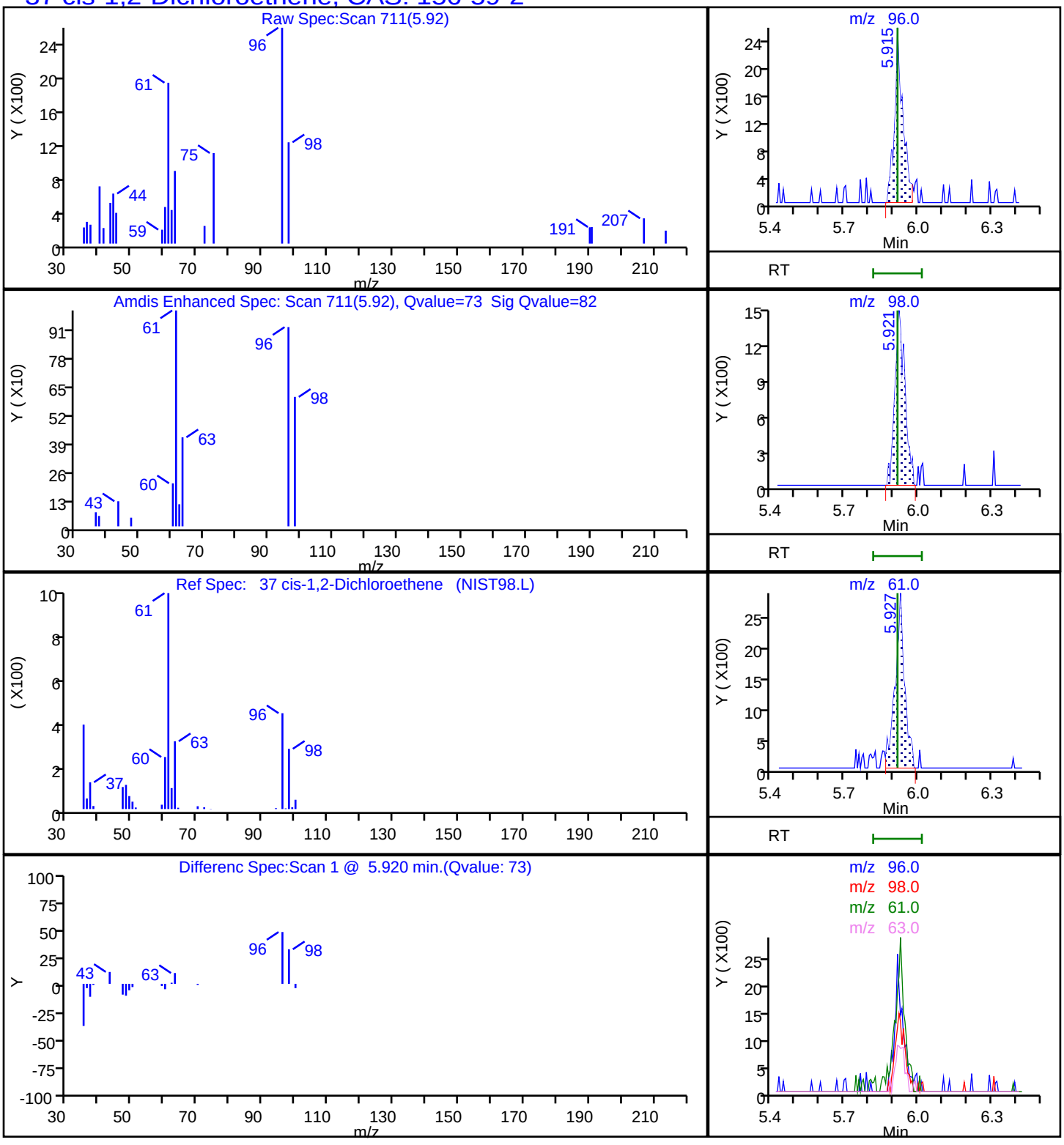
16 Acetone, CAS: 67-64-1



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S05.D				
Injection Date:	03-Feb-2021 14:29:30	Instrument ID:	10193		
Lims ID:	410-27746-A-3	Lab Sample ID:	410-27746-3		
Client ID:	HD-COD-SW-8-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	11	Worklist Smp#:	12
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

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

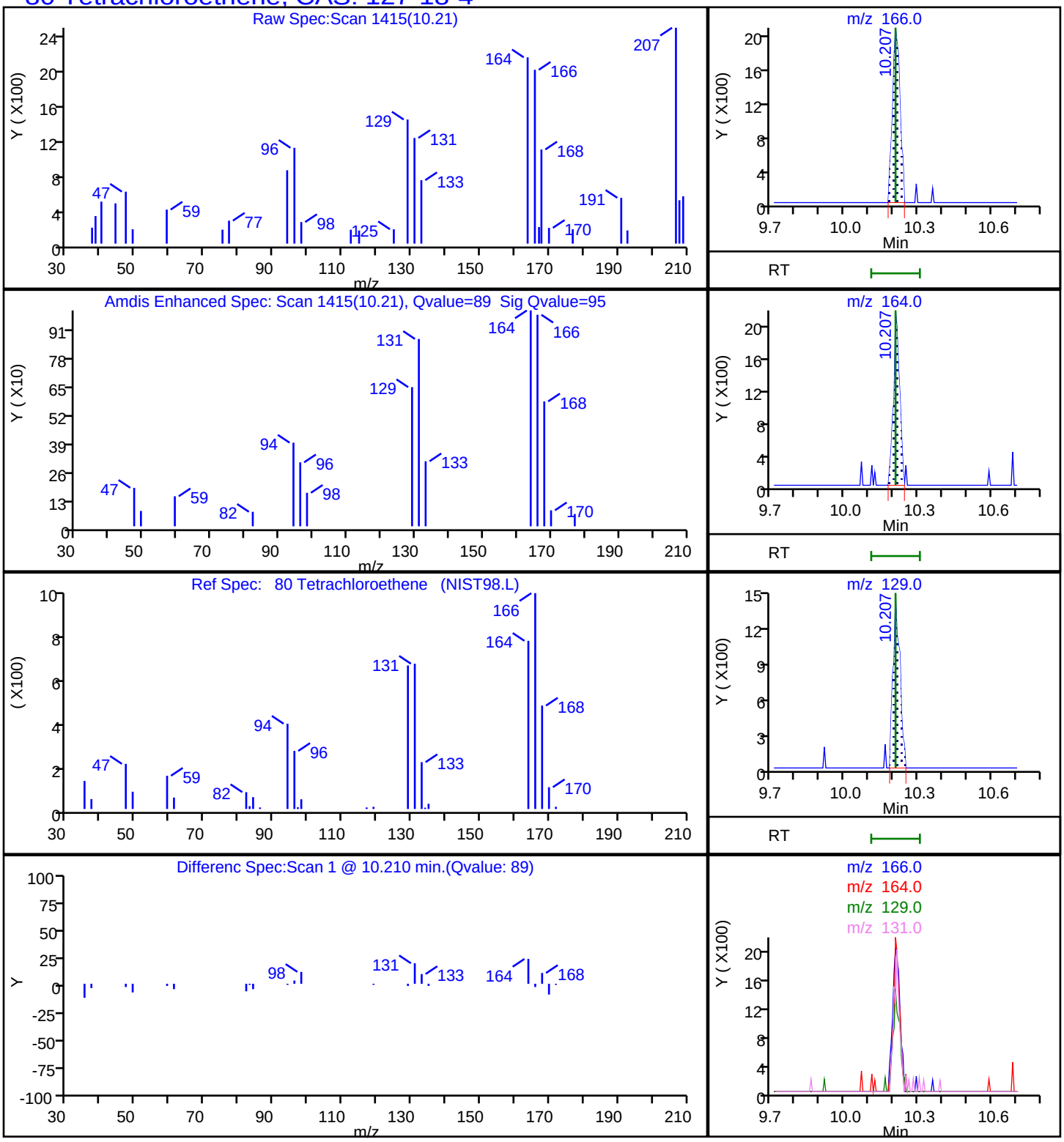


Report Date: 04-Feb-2021 11:08:10 Chrom Revision: 2.3 17-Jan-2021 00:24:10

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S05.D				
Injection Date:	03-Feb-2021 14:29:30	Instrument ID:	10193		
Lims ID:	410-27746-A-3	Lab Sample ID:	410-27746-3		
Client ID:	HD-COD-SW-8-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	11	Worklist Smp#:	12
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

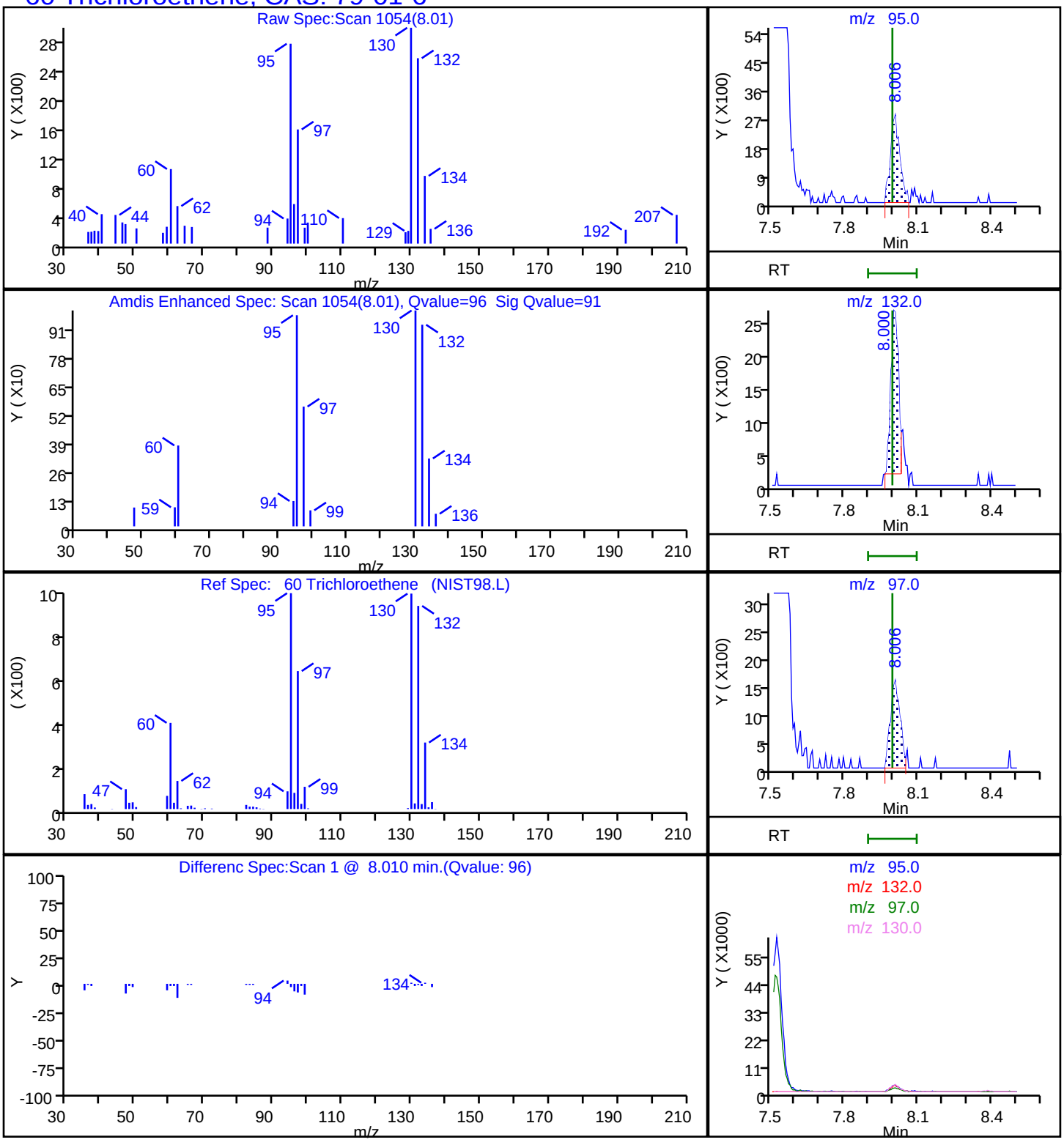
80 Tetrachloroethene, CAS: 127-18-4



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S05.D				
Injection Date:	03-Feb-2021 14:29:30	Instrument ID:	10193		
Lims ID:	410-27746-A-3	Lab Sample ID:	410-27746-3		
Client ID:	HD-COD-SW-8-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	11	Worklist Smp#:	12
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

60 Trichloroethene, CAS: 79-01-6



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

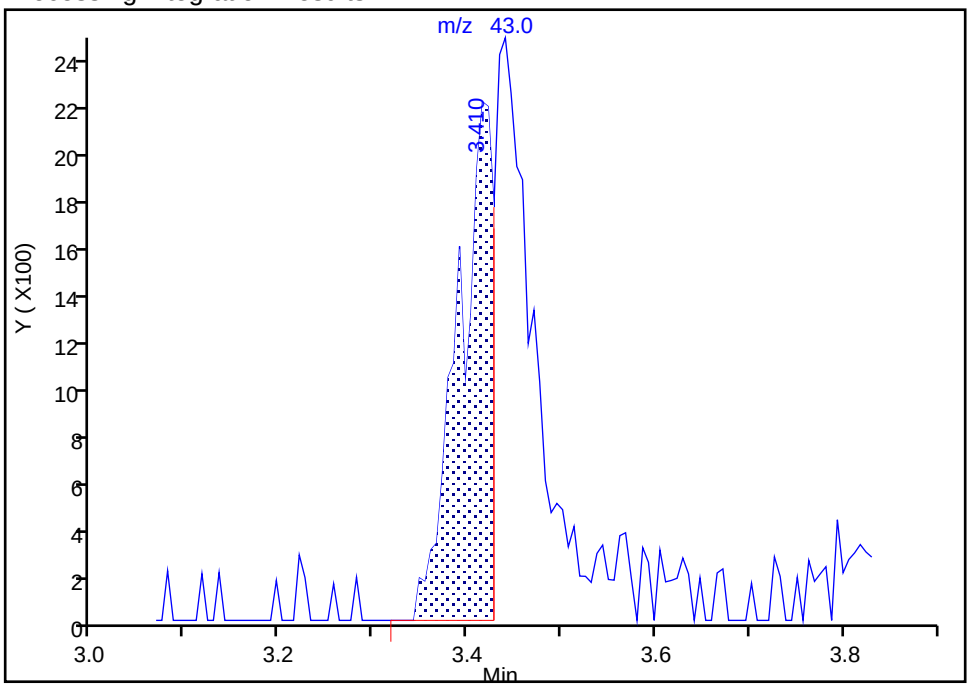
Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S05.D				
Injection Date:	03-Feb-2021 14:29:30	Instrument ID:	10193		
Lims ID:	410-27746-A-3	Lab Sample ID:	410-27746-3		
Client ID:	HD-COD-SW-8-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	11	Worklist Smp#:	12
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

16 Acetone, CAS: 67-64-1

Signal: 1

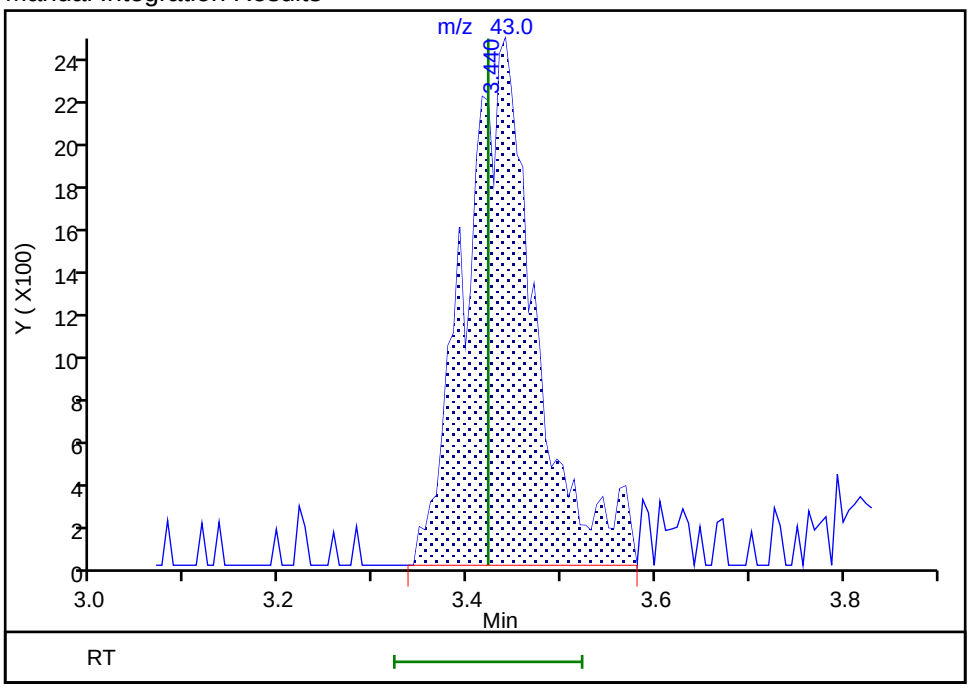
Processing Integration Results

RT: 3.41
Area: 5603
Amount: 0.693059
Amount Units: ug/l



Manual Integration Results

RT: 3.44
Area: 12599
Amount: 1.558424
Amount Units: ug/l



Reviewer: spositok, 04-Feb-2021 10:47:54

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

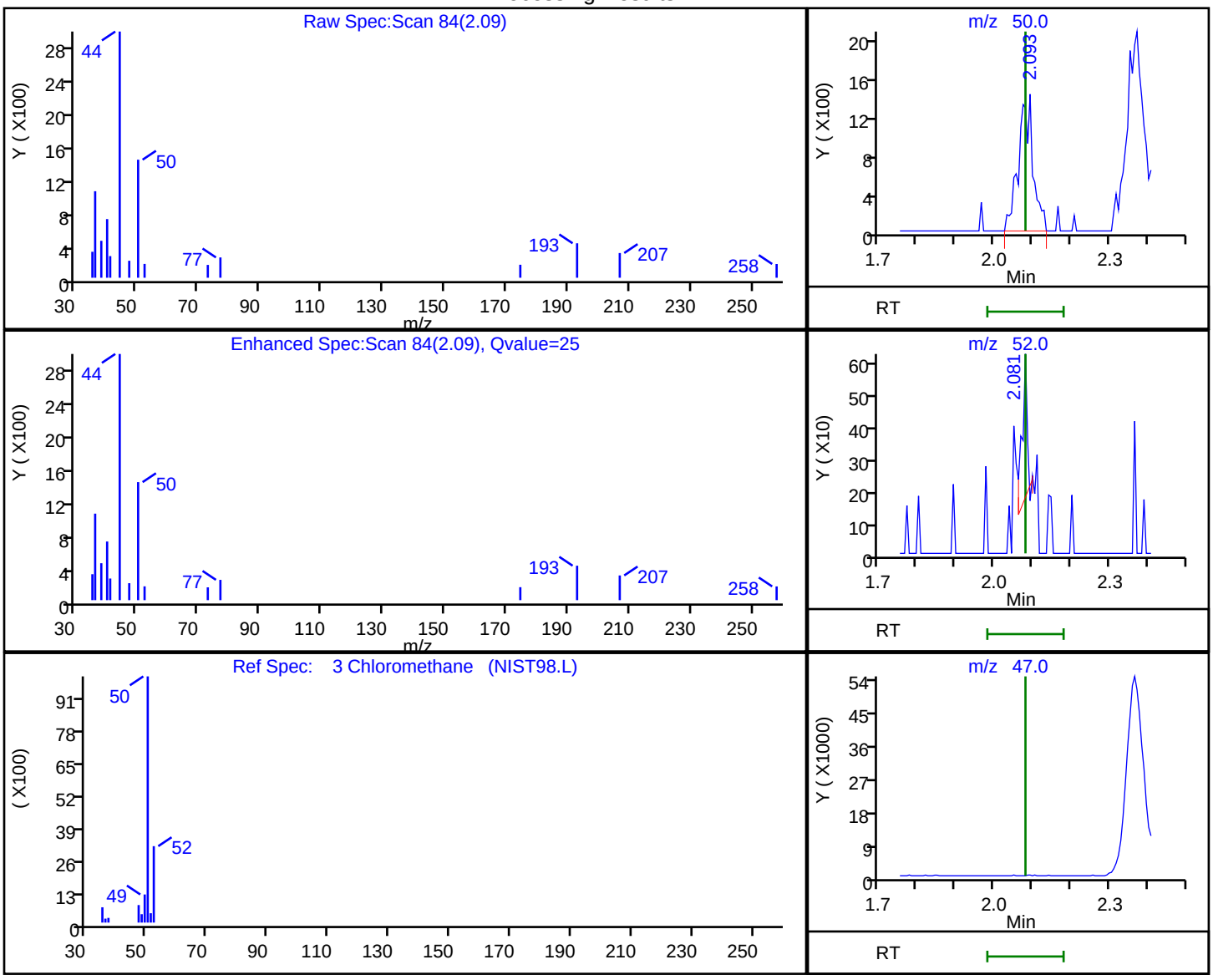
User Disabled Compound Report

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S05.D				
Injection Date:	03-Feb-2021 14:29:30	Instrument ID:	10193		
Lims ID:	410-27746-A-3	Lab Sample ID:	410-27746-3		
Client ID:	HD-COD-SW-8-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	11	Worklist Smp#:	12
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

3 Chloromethane, CAS: 74-87-3

Processing Results



RT	Mass	Response	Amount
2.09	50.00	3747	0.047840
2.08	52.00	404	
2.08	47.00	0	

Reviewer: spositok, 04-Feb-2021 10:47:40

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

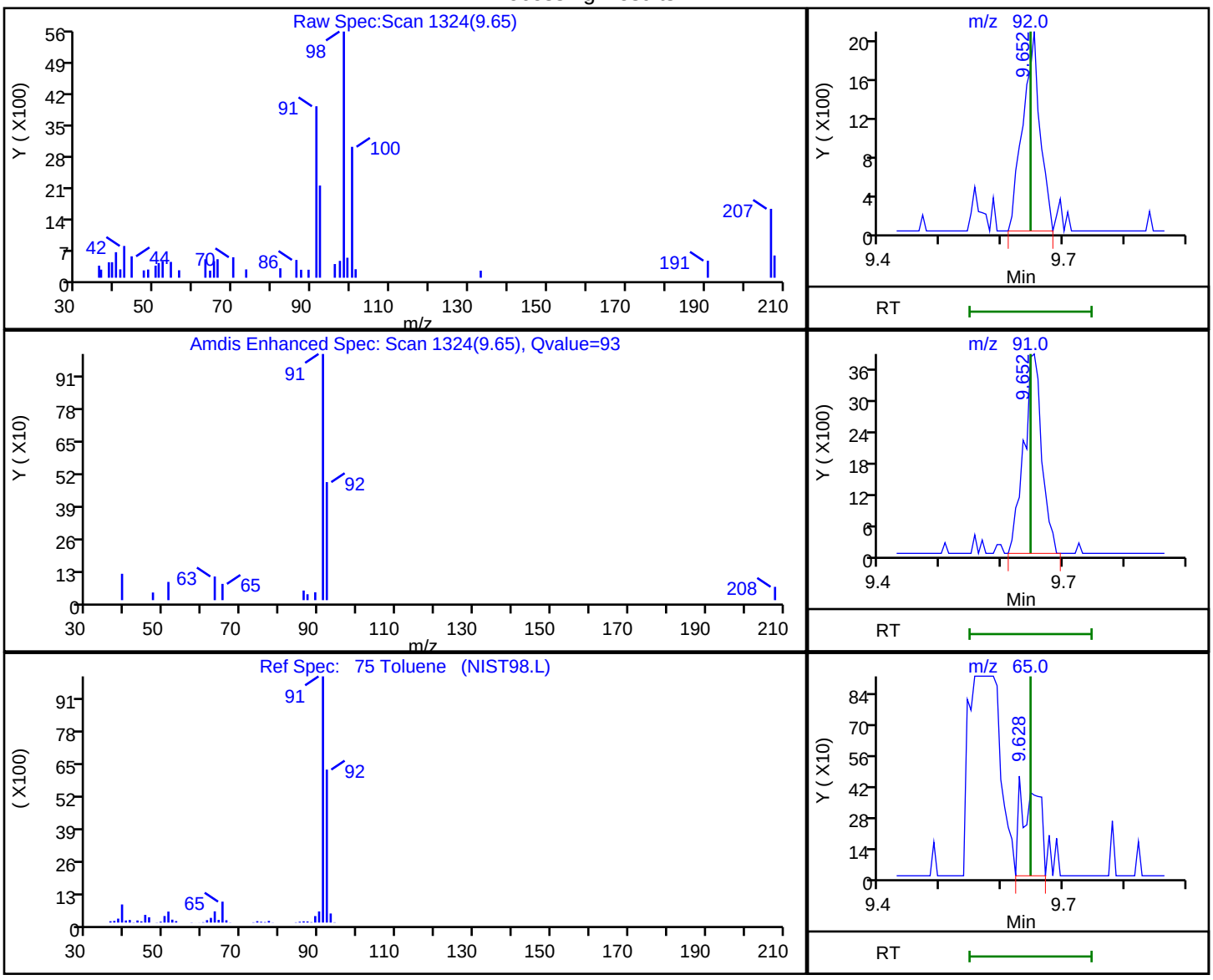
User Disabled Compound Report

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S05.D				
Injection Date:	03-Feb-2021 14:29:30	Instrument ID:	10193		
Lims ID:	410-27746-A-3	Lab Sample ID:	410-27746-3		
Client ID:	HD-COD-SW-8-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	11	Worklist Smp#:	12
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

75 Toluene, CAS: 108-88-3

Processing Results



RT	Mass	Response	Amount
9.65	92.00	4018	0.026222
9.65	91.00	7805	
9.63	65.00	879	
9.64	39.00	1387	

Reviewer: spositok, 04-Feb-2021 10:50:06

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

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Client Sample ID: HD-COD-SW-9-0/1-0 Lab Sample ID: 410-27746-4

Matrix: Water Lab File ID: CF02S06.D

Analysis Method: 8260D Date Collected: 01/26/2021 12:50

Sample wt/vol: 25(mL) Date Analyzed: 02/03/2021 14:51

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 90352 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.50	0.070
71-55-6	1,1,1-Trichloroethane	ND		0.50	0.060
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.50	0.070
79-00-5	1,1,2-Trichloroethane	ND		0.50	0.060
75-34-3	1,1-Dichloroethane	ND		0.50	0.070
75-35-4	1,1-Dichloroethene	ND		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	ND		0.50	0.060
107-06-2	1,2-Dichloroethane	ND		0.50	0.050
78-87-5	1,2-Dichloropropane	ND		0.50	0.060
78-93-3	2-Butanone (MEK)	ND		5.0	0.60
591-78-6	2-Hexanone	ND		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70
67-64-1	Acetone	2.7	J	5.0	0.90
71-43-2	Benzene	ND		0.50	0.050
74-97-5	Bromochloromethane	ND		0.50	0.050
75-27-4	Bromodichloromethane	ND		0.50	0.050
75-25-2	Bromoform	ND		1.0	0.30
74-83-9	Bromomethane	ND	^c	0.50	0.070
75-15-0	Carbon disulfide	ND		1.0	0.060
56-23-5	Carbon tetrachloride	ND		0.50	0.070
108-90-7	Chlorobenzene	ND		0.50	0.060
75-00-3	Chloroethane	ND	^c	0.50	0.070
67-66-3	Chloroform	ND		0.50	0.090
74-87-3	Chloromethane	ND	^c	0.50	0.060
156-59-2	cis-1,2-Dichloroethene	ND		0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	ND		0.50	0.050
124-48-1	Dibromochloromethane	ND		0.50	0.070
100-41-4	Ethylbenzene	ND		0.50	0.060
1634-04-4	Methyl tert-butyl ether	ND		0.50	0.050
75-09-2	Methylene Chloride	ND		0.50	0.070
100-42-5	Styrene	ND		0.50	0.050
127-18-4	Tetrachloroethene	0.082	J	0.50	0.060
108-88-3	Toluene	ND		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	ND		0.50	0.060
10061-02-6	trans-1,3-Dichloropropene	ND		0.50	0.060
79-01-6	Trichloroethene	ND		0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Client Sample ID: HD-COD-SW-9-0/1-0 Lab Sample ID: 410-27746-4

Matrix: Water Lab File ID: CF02S06.D

Analysis Method: 8260D Date Collected: 01/26/2021 12:50

Sample wt/vol: 25(mL) Date Analyzed: 02/03/2021 14:51

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 90352 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-01-4	Vinyl chloride	ND	^c	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)	98		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\10193\20210203-21161.b\CF02S06.D
Lims ID: 410-27746-A-4
Client ID: HD-COD-SW-9-0/1-0
Sample Type: Client
Inject. Date: 03-Feb-2021 14:51:30 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0021161-013
Operator ID: SRK36897 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 04-Feb-2021 11:03:34 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1626

First Level Reviewer: spositok Date: 04-Feb-2021 10:51:10

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
3 Chloromethane	50		2.081				ND	U
5 Vinyl chloride	62		2.190				ND	
6 Bromomethane	94		2.501				ND	
7 Chloroethane	64		2.574				ND	7
14 1,1-Dichloroethene	96		3.385				ND	7
16 Acetone	43	3.440	3.422	0.018	97	21990	2.67	
20 Carbon disulfide	76		3.666				ND	7
24 Methylene Chloride	84		4.019				ND	7
* 25 t-Butyl alcohol-d10 (IS)	65	4.044	4.056	-0.012	0	193711	50.0	
28 Methyl tert-butyl ether	73		4.403				ND	7
29 trans-1,2-Dichloroethene	96		4.409				ND	
32 1,1-Dichloroethane	63		5.074				ND	
36 2-Butanone (MEK)	43		5.885				ND	
37 cis-1,2-Dichloroethene	96		5.915				ND	
44 Chlorobromomethane	128		6.251				ND	
46 Chloroform	83	6.415	6.403	0.012	93	8636	0.0855	a
$ 47 Dibromofluoromethane (Surr)	113	6.629	6.622	0.007	94	478866	9.83	
48 1,1,1-Trichloroethane	97		6.629				ND	
50 Carbon tetrachloride	117		6.830				ND	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.086	7.080	0.006	0	103876	10.5	
54 Benzene	78		7.104				ND	7
55 1,2-Dichloroethane	62		7.177				ND	U
* 57 Fluorobenzene (IS)	96	7.519	7.513	0.006	99	2049104	10.0	
60 Trichloroethene	95		7.994				ND	
62 1,2-Dichloropropane	63		8.336				ND	
67 Dichlorobromomethane	83		8.689				ND	7
72 cis-1,3-Dichloropropene	75		9.250				ND	
73 4-Methyl-2-pentanone (MIBK)	43		9.439				ND	7
$ 74 Toluene-d8 (Surr)	98	9.567	9.567	0.000	93	2044361	10.0	
75 Toluene	92		9.646				ND	U
76 trans-1,3-Dichloropropene	75		9.921				ND	7
79 1,1,2-Trichloroethane	97		10.128				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
80 Tetrachloroethene	166	10.213	10.207	0.006	95	5601	0.0817	
82 2-Hexanone	43		10.353				ND	7
83 Chlorodibromomethane	129		10.506				ND	7
84 Ethylene Dibromide	107		10.616				ND	
* 85 Chlorobenzene-d5 (IS)	117	11.061	11.061	0.000	85	1562417	10.0	
87 Chlorobenzene	112		11.085				ND	
89 1,1,1,2-Tetrachloroethane	131		11.170				ND	
90 Ethylbenzene	91		11.176				ND	7
S 88 Xylenes, Total	106		11.245				ND	7
91 m-Xylene & p-Xylene	106		11.292				ND	7
92 o-Xylene	106		11.628				ND	7
93 Styrene	104		11.646				ND	7
94 Bromoform	173		11.804				ND	
$ 98 4-Bromofluorobenzene (Surr)	95	12.079	12.079	0.000	92	743857	9.70	
99 1,1,2,2-Tetrachloroethane	83		12.188				ND	
* 113 1,4-Dichlorobenzene-d4	152	12.969	12.969	0.000	94	826542	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

a - User Assigned ID

Reagents:

MSV_HP25_ISSS_00022 Amount Added: 1.00 Units: uL Run Reagent

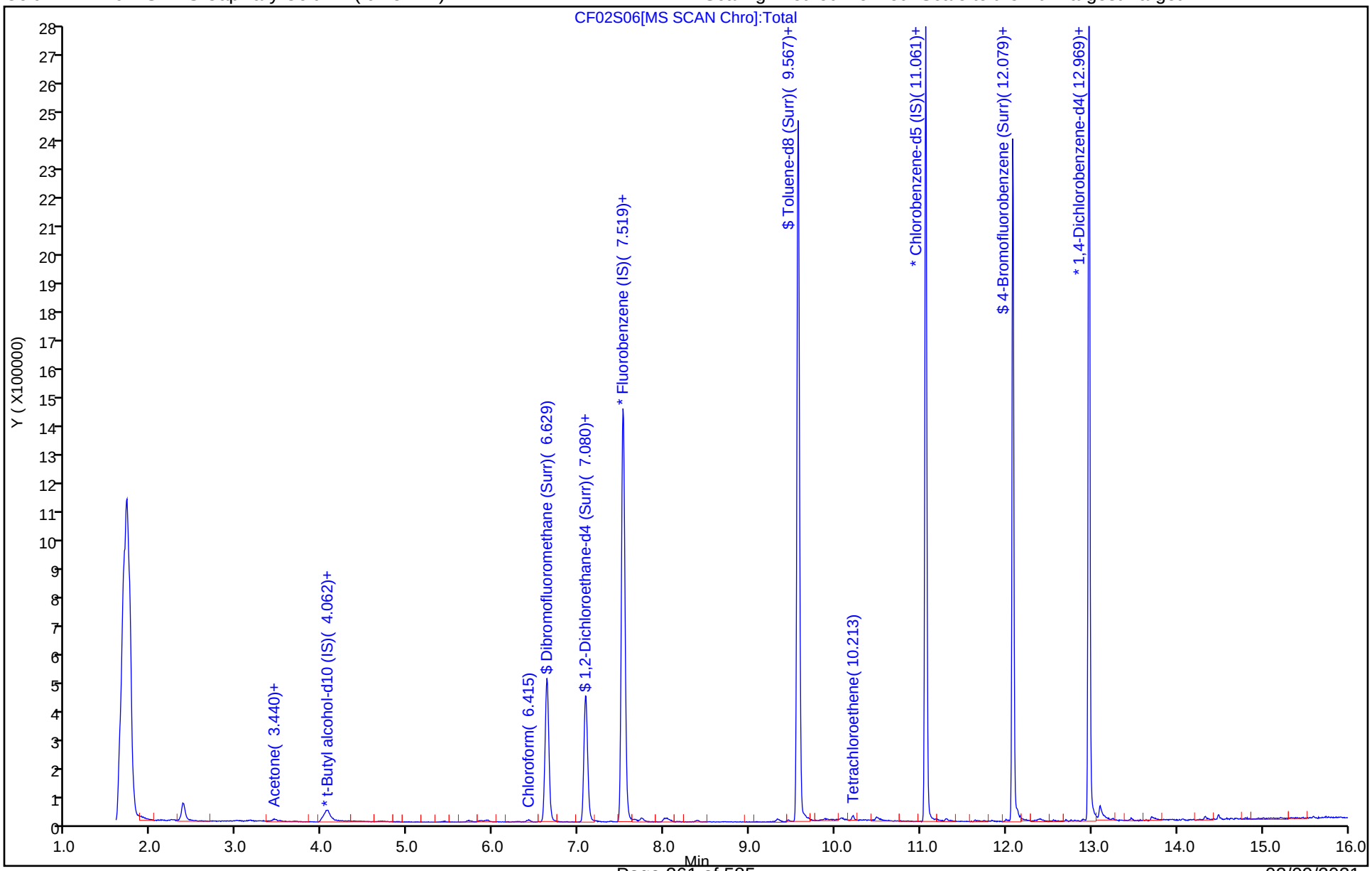
Report Date: 04-Feb-2021 11:08:12 Chrom Revision: 2.3 17-Jan-2021 00:24:10

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S06.D

Injection Date:	03-Feb-2021 14:51:30	Instrument ID:	10193	Operator ID:	SRK36897
Lims ID:	410-27746-A-4	Lab Sample ID:	410-27746-4	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:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Env, LLC

Recovery Report

Data File: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S06.D
Lims ID: 410-27746-A-4
Client ID: HD-COD-SW-9-0/1-0
Sample Type: Client
Inject. Date: 03-Feb-2021 14:51:30 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0021161-013
Operator ID: SRK36897 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 04-Feb-2021 11:03:34 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1626

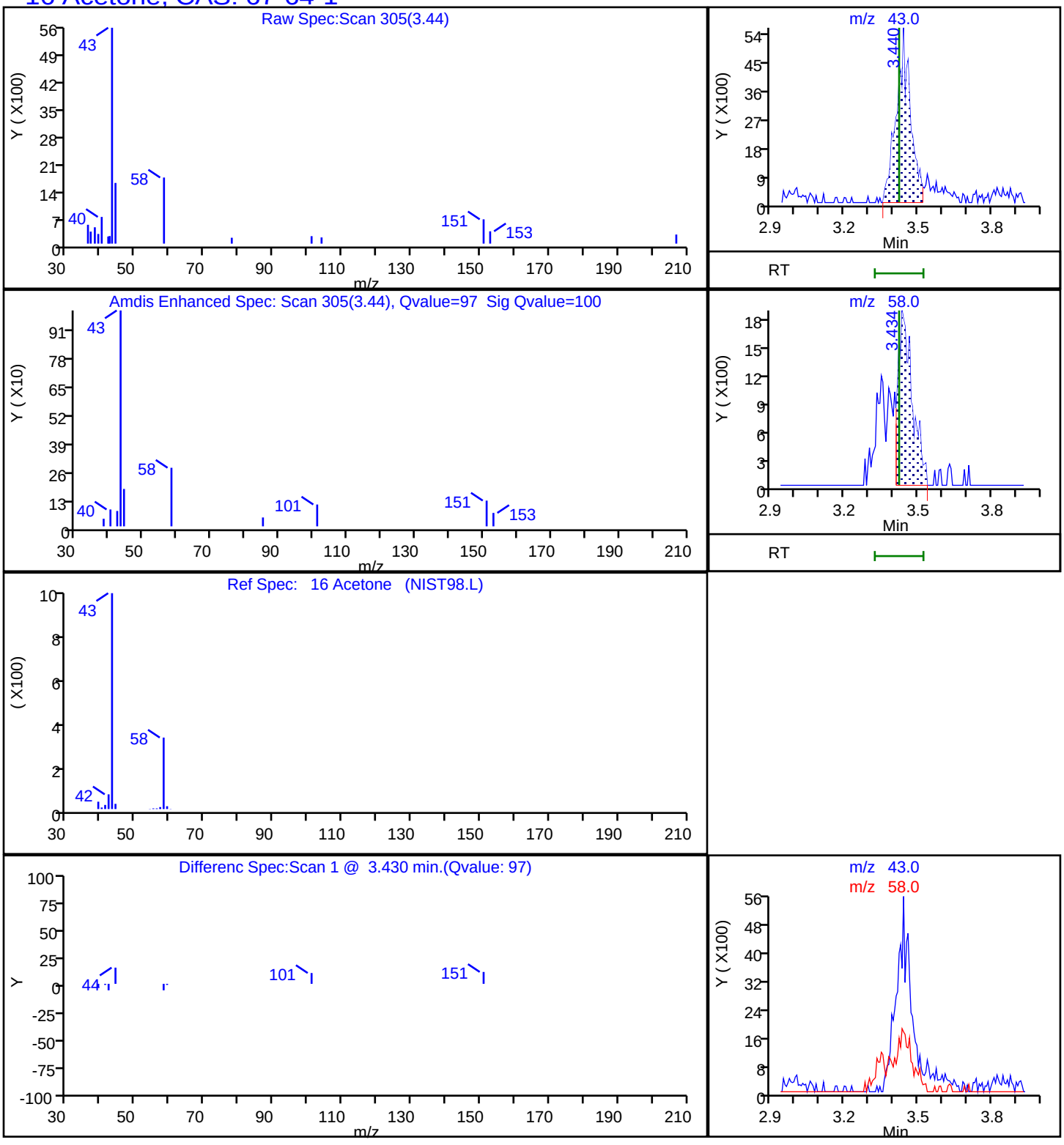
First Level Reviewer: spositok Date: 04-Feb-2021 10:51:10

Compound	Amount Added	Amount Recovered	% Rec.
$ 47 Dibromofluoromethane (Surr)	10.0	9.83	98.35
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.5	104.72
$ 74 Toluene-d8 (Surr)	10.0	10.0	100.18
$ 98 4-Bromofluorobenzene (Surr)	10.0	9.70	96.99

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S06.D				
Injection Date:	03-Feb-2021 14:51:30	Instrument ID:	10193		
Lims ID:	410-27746-A-4	Lab Sample ID:	410-27746-4		
Client ID:	HD-COD-SW-9-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

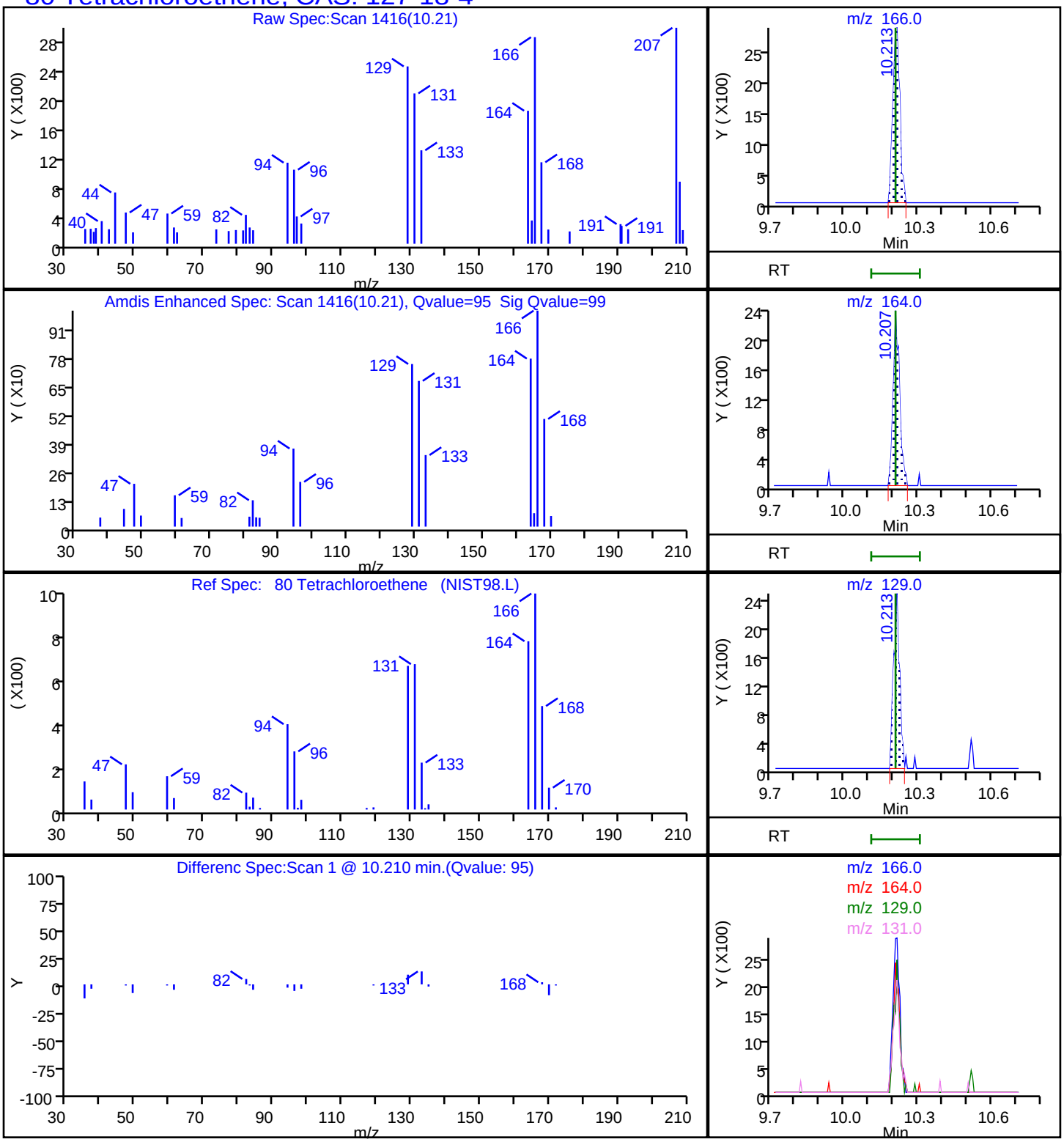
16 Acetone, CAS: 67-64-1



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S06.D				
Injection Date:	03-Feb-2021 14:51:30	Instrument ID:	10193		
Lims ID:	410-27746-A-4	Lab Sample ID:	410-27746-4		
Client ID:	HD-COD-SW-9-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

80 Tetrachloroethene, CAS: 127-18-4



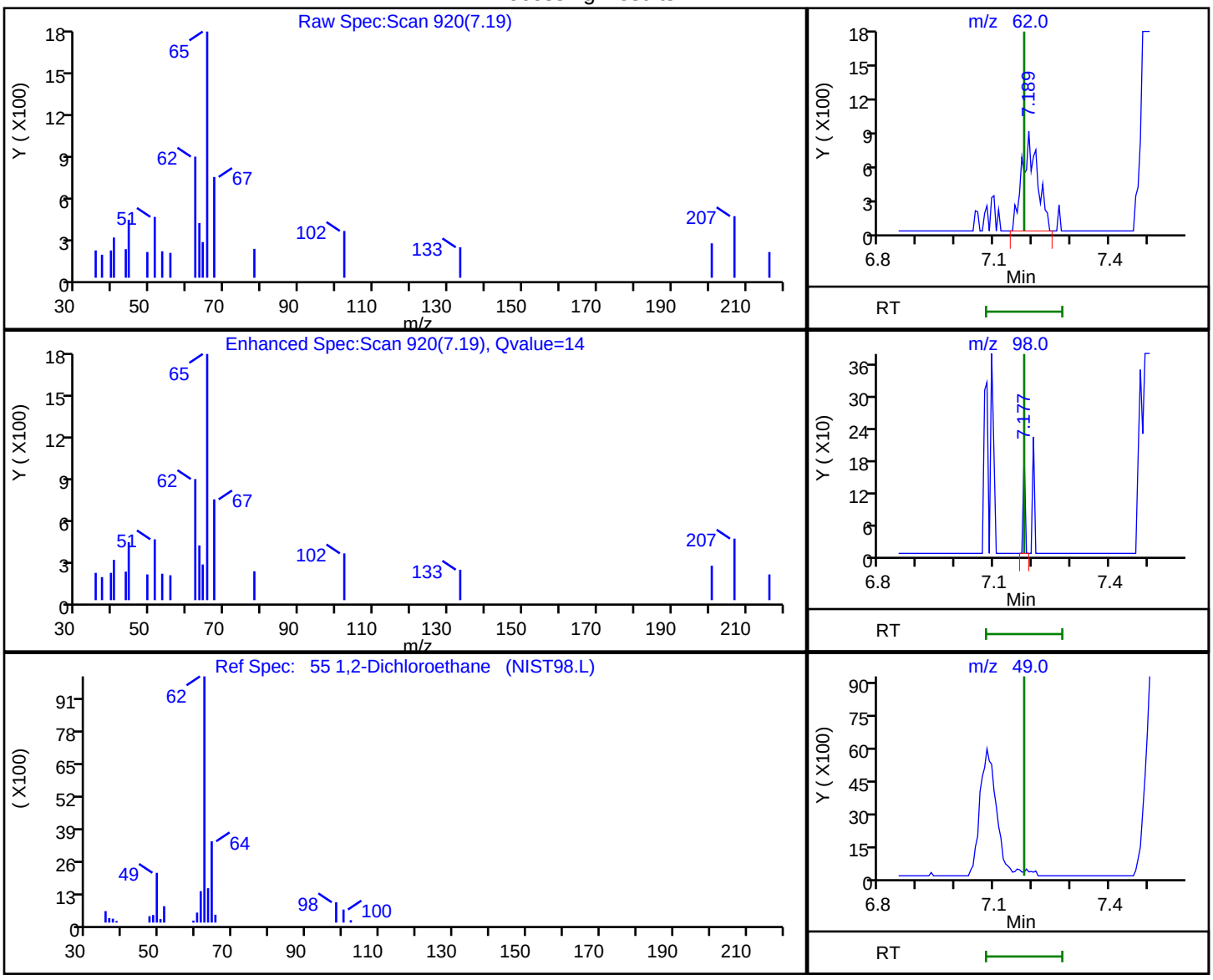
User Disabled Compound Report

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S06.D				
Injection Date:	03-Feb-2021 14:51:30	Instrument ID:	10193		
Lims ID:	410-27746-A-4	Lab Sample ID:	410-27746-4		
Client ID:	HD-COD-SW-9-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

55 1,2-Dichloroethane, CAS: 107-06-2

Processing Results



RT	Mass	Response	Amount
7.19	62.00	2332	0.032870
7.18	98.00	69	
7.18	49.00	0	

Reviewer: spositok, 04-Feb-2021 10:50:54

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

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

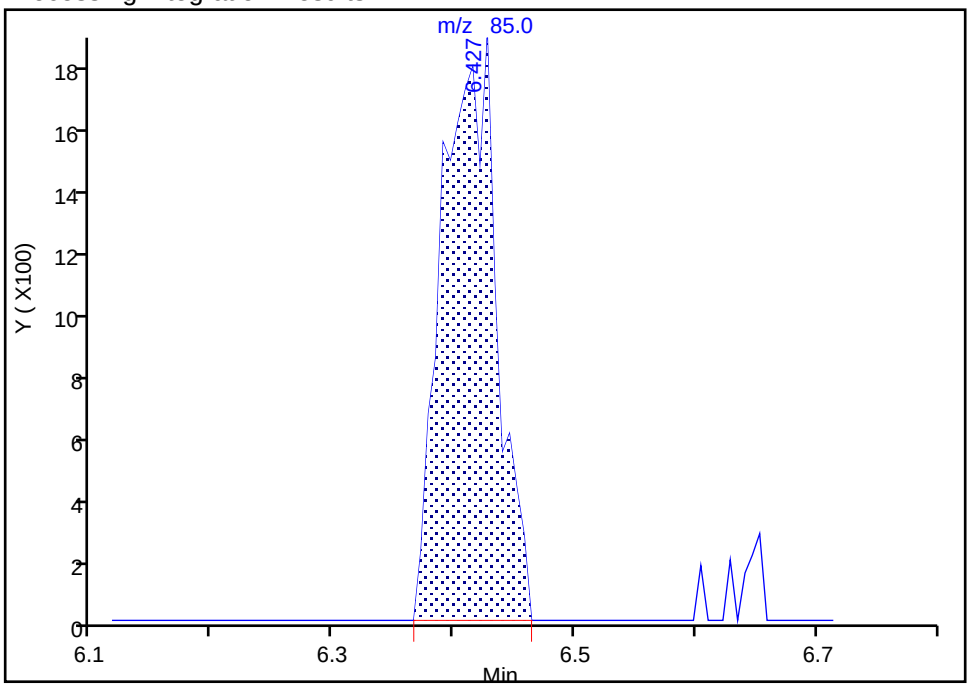
Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S06.D				
Injection Date:	03-Feb-2021 14:51:30	Instrument ID:	10193		
Lims ID:	410-27746-A-4	Lab Sample ID:	410-27746-4		
Client ID:	HD-COD-SW-9-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

46 Chloroform, CAS: 67-66-3

Signal: 2

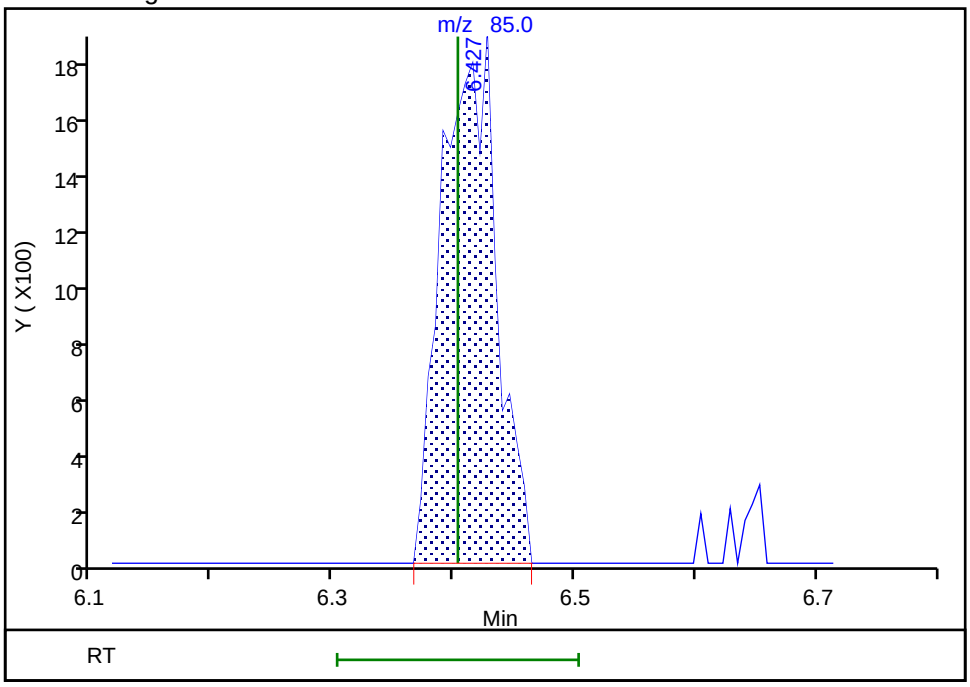
Processing Integration Results

RT: 6.43
Area: 5792
Amount: 0.085480
Amount Units: ug/l



Manual Integration Results

RT: 6.43
Area: 5792
Amount: 0.085480
Amount Units: ug/l



Reviewer: spositok, 04-Feb-2021 10:50:47
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

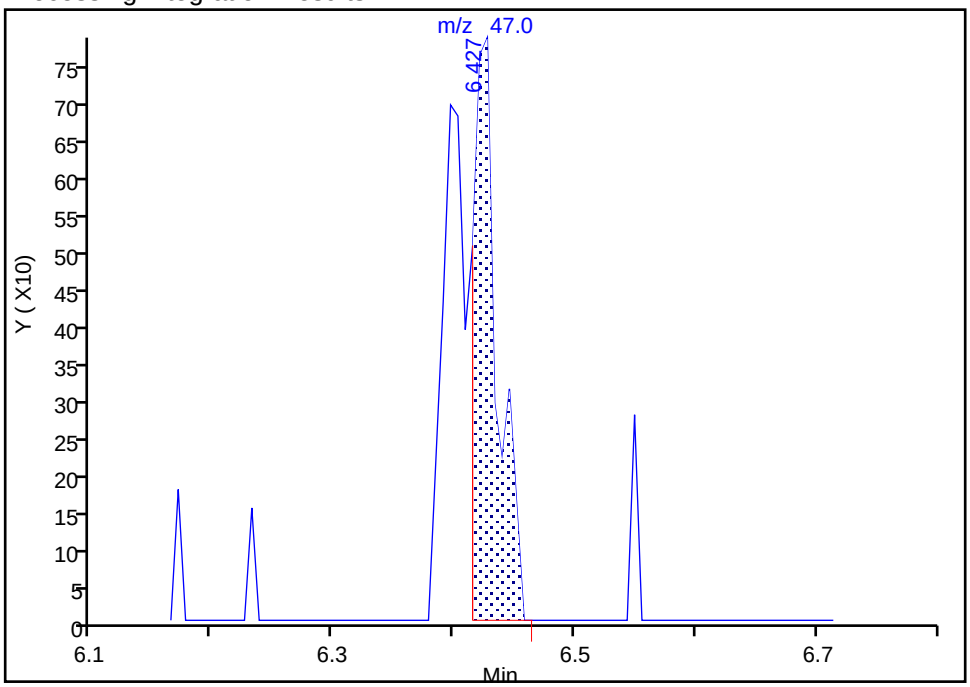
Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S06.D				
Injection Date:	03-Feb-2021 14:51:30	Instrument ID:	10193		
Lims ID:	410-27746-A-4	Lab Sample ID:	410-27746-4		
Client ID:	HD-COD-SW-9-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

46 Chloroform, CAS: 67-66-3

Signal: 3

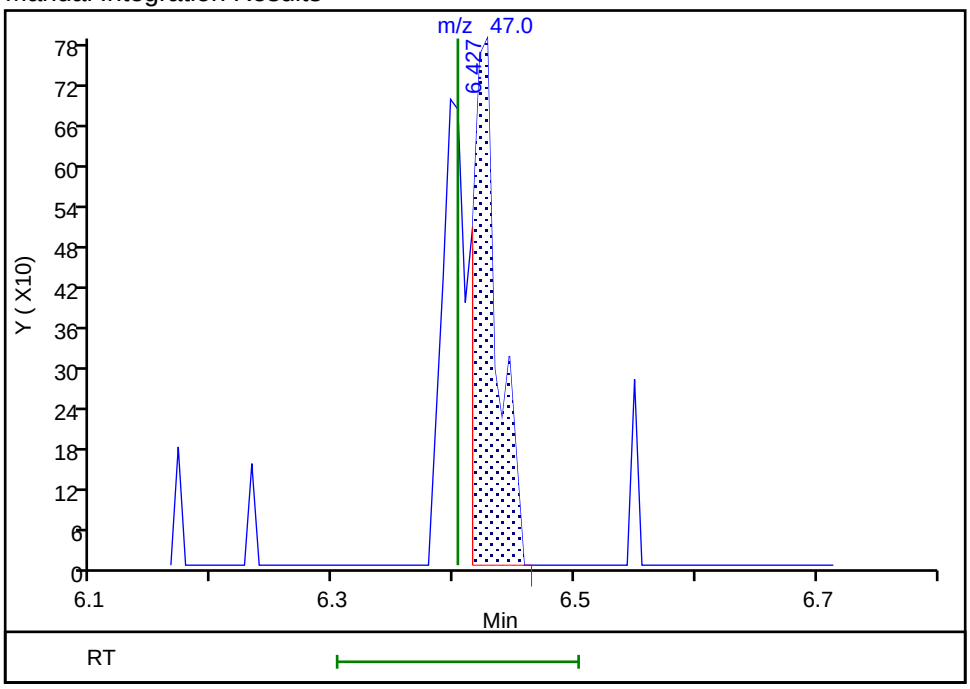
Processing Integration Results

RT: 6.43
Area: 1111
Amount: 0.085480
Amount Units: ug/l



Manual Integration Results

RT: 6.43
Area: 1111
Amount: 0.085480
Amount Units: ug/l



Reviewer: spositok, 04-Feb-2021 10:50:47
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

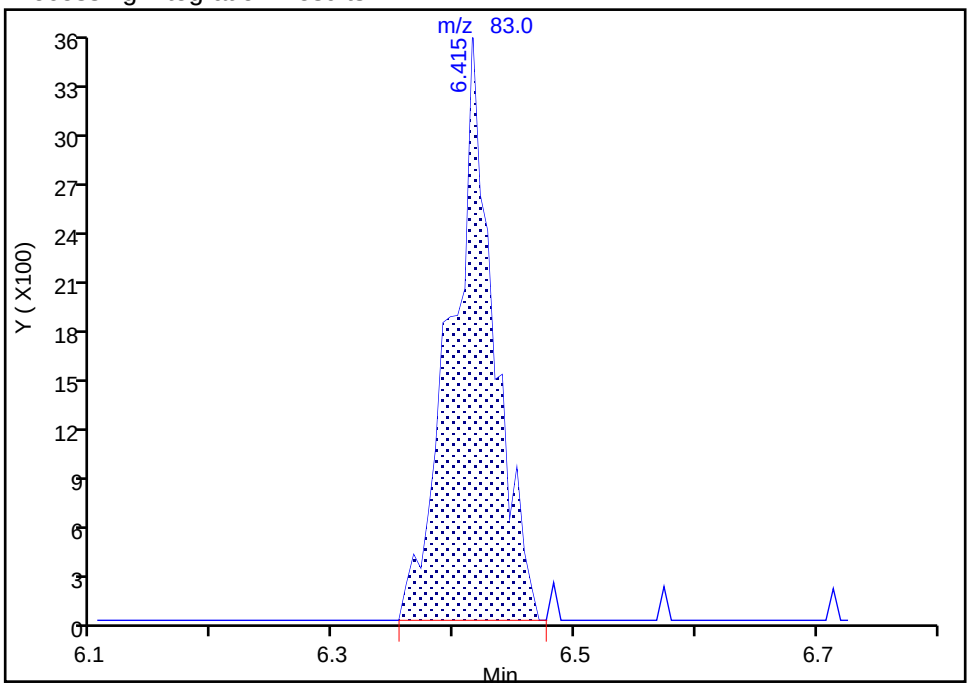
Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S06.D				
Injection Date:	03-Feb-2021 14:51:30	Instrument ID:	10193		
Lims ID:	410-27746-A-4	Lab Sample ID:	410-27746-4		
Client ID:	HD-COD-SW-9-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

46 Chloroform, CAS: 67-66-3

Signal: 1

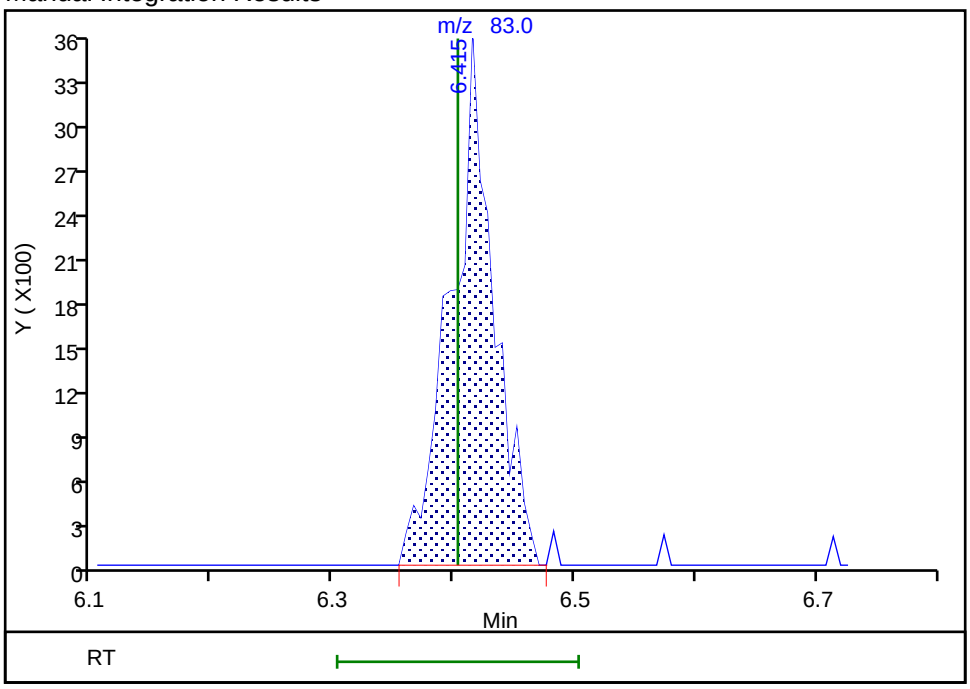
Processing Integration Results

RT: 6.42
Area: 8636
Amount: 0.085480
Amount Units: ug/l



Manual Integration Results

RT: 6.42
Area: 8636
Amount: 0.085480
Amount Units: ug/l



Reviewer: spositok, 04-Feb-2021 10:50:49

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

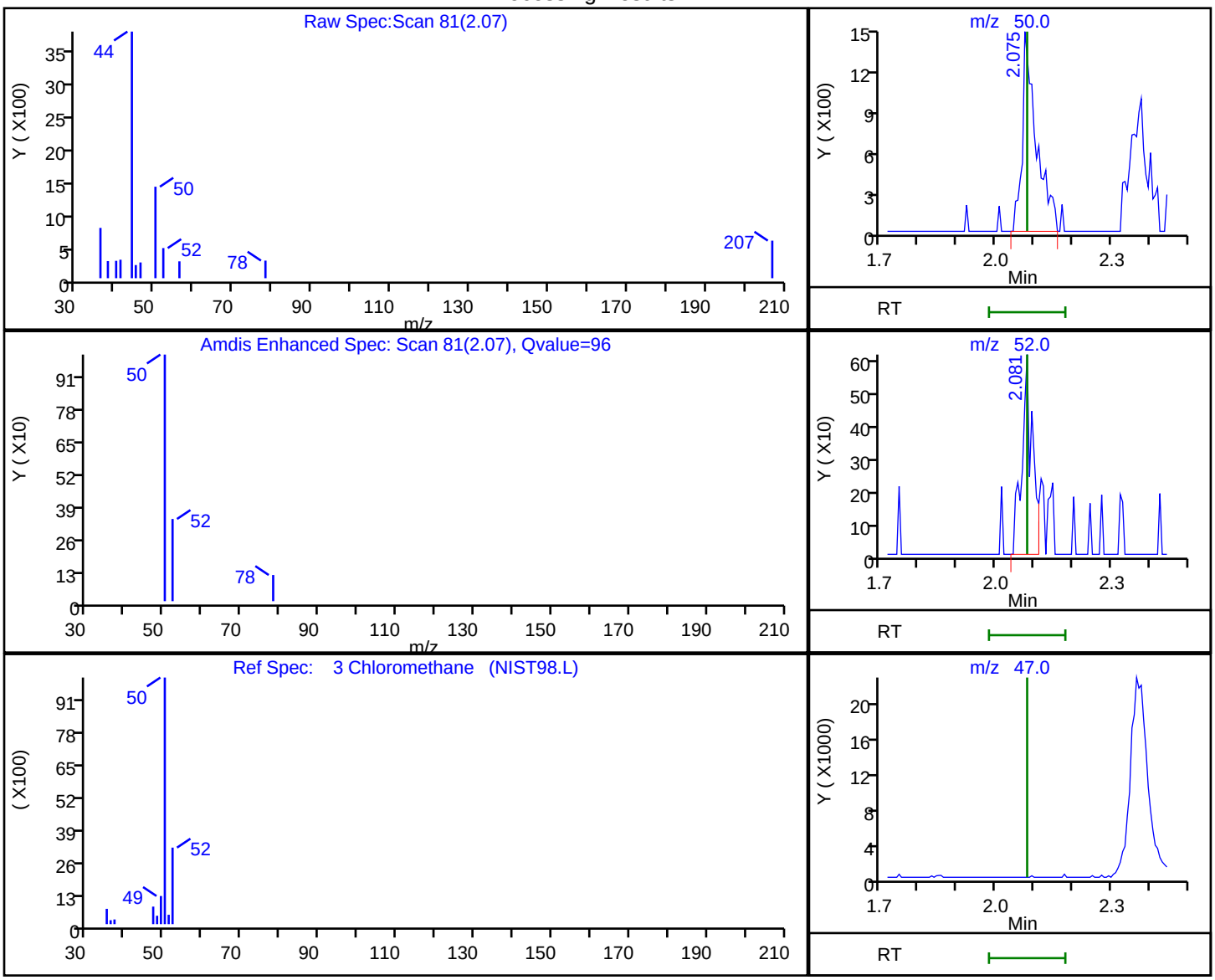
User Disabled Compound Report

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S06.D				
Injection Date:	03-Feb-2021 14:51:30	Instrument ID:	10193		
Lims ID:	410-27746-A-4	Lab Sample ID:	410-27746-4		
Client ID:	HD-COD-SW-9-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

3 Chloromethane, CAS: 74-87-3

Processing Results



RT	Mass	Response	Amount
2.07	50.00	3591	0.046067
2.08	52.00	1175	
2.08	47.00	0	

Reviewer: spositok, 04-Feb-2021 10:50:38

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

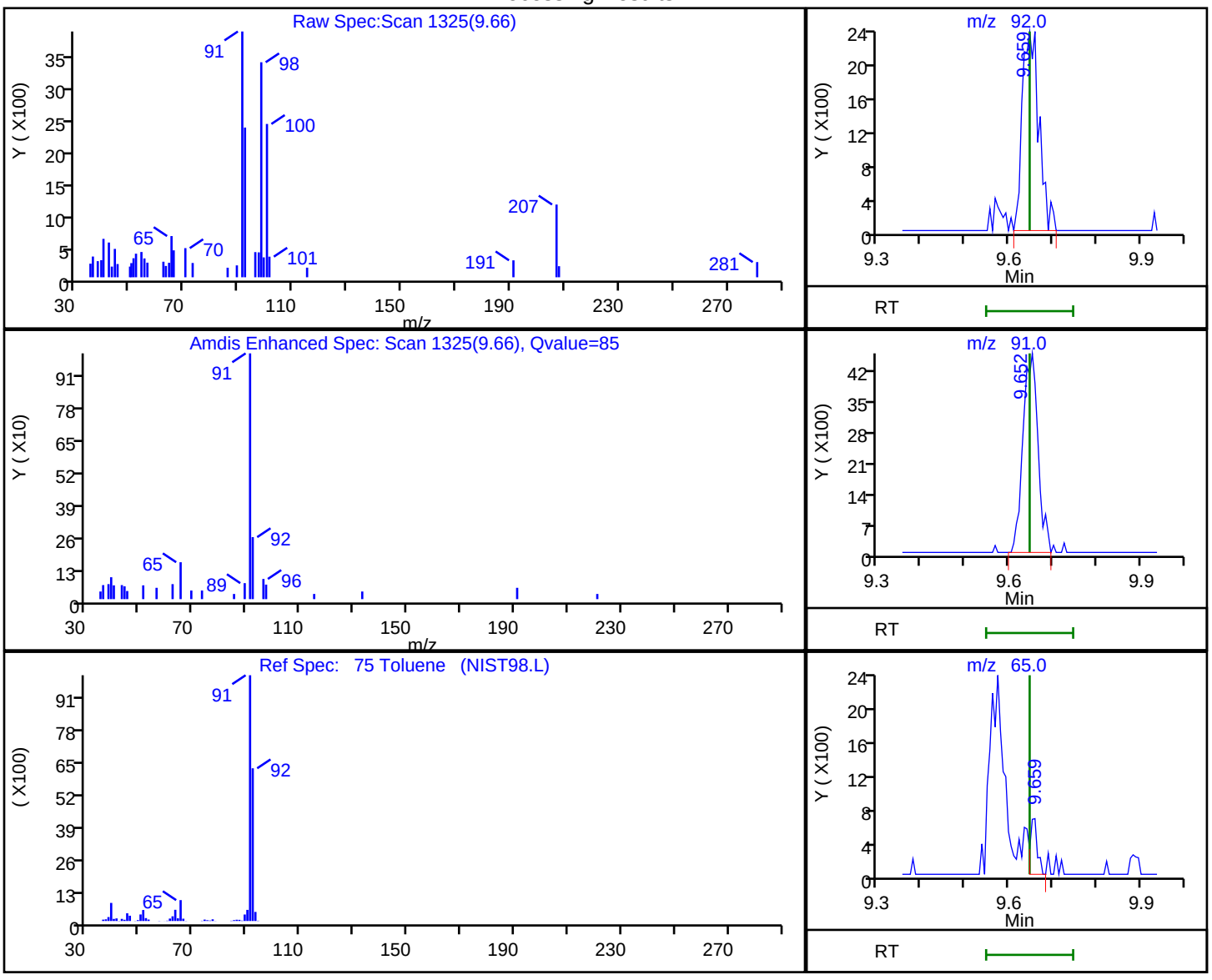
User Disabled Compound Report

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S06.D				
Injection Date:	03-Feb-2021 14:51:30	Instrument ID:	10193		
Lims ID:	410-27746-A-4	Lab Sample ID:	410-27746-4		
Client ID:	HD-COD-SW-9-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

75 Toluene, CAS: 108-88-3

Processing Results



RT	Mass	Response	Amount
9.66	92.00	6328	0.041231
9.65	91.00	11038	
9.66	65.00	724	
9.65	39.00	1033	

Reviewer: spositok, 04-Feb-2021 10:51:00

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

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Client Sample ID: HD-COD-SW-13-0/1-0 Lab Sample ID: 410-27746-5

Matrix: Water Lab File ID: CF02S07.D

Analysis Method: 8260D Date Collected: 01/26/2021 09:45

Sample wt/vol: 25(mL) Date Analyzed: 02/03/2021 15:13

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.: 90352 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.50	0.070
71-55-6	1,1,1-Trichloroethane	ND		0.50	0.060
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.50	0.070
79-00-5	1,1,2-Trichloroethane	ND		0.50	0.060
75-34-3	1,1-Dichloroethane	ND		0.50	0.070
75-35-4	1,1-Dichloroethene	ND		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	ND		0.50	0.060
107-06-2	1,2-Dichloroethane	ND		0.50	0.050
78-87-5	1,2-Dichloropropane	ND		0.50	0.060
78-93-3	2-Butanone (MEK)	ND		5.0	0.60
591-78-6	2-Hexanone	ND		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70
67-64-1	Acetone	1.6	J	5.0	0.90
71-43-2	Benzene	ND		0.50	0.050
74-97-5	Bromochloromethane	ND		0.50	0.050
75-27-4	Bromodichloromethane	ND		0.50	0.050
75-25-2	Bromoform	ND		1.0	0.30
74-83-9	Bromomethane	ND	^c	0.50	0.070
75-15-0	Carbon disulfide	ND		1.0	0.060
56-23-5	Carbon tetrachloride	ND		0.50	0.070
108-90-7	Chlorobenzene	ND		0.50	0.060
75-00-3	Chloroethane	ND	^c	0.50	0.070
67-66-3	Chloroform	ND		0.50	0.090
74-87-3	Chloromethane	ND	^c	0.50	0.060
156-59-2	cis-1,2-Dichloroethene	0.092	J	0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	ND		0.50	0.050
124-48-1	Dibromochloromethane	ND		0.50	0.070
100-41-4	Ethylbenzene	ND		0.50	0.060
1634-04-4	Methyl tert-butyl ether	ND		0.50	0.050
75-09-2	Methylene Chloride	ND		0.50	0.070
100-42-5	Styrene	ND		0.50	0.050
127-18-4	Tetrachloroethene	0.064	J	0.50	0.060
108-88-3	Toluene	ND		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	ND		0.50	0.060
10061-02-6	trans-1,3-Dichloropropene	ND		0.50	0.060
79-01-6	Trichloroethene	ND		0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Client Sample ID: HD-COD-SW-13-0/1-0 Lab Sample ID: 410-27746-5

Matrix: Water Lab File ID: CF02S07.D

Analysis Method: 8260D Date Collected: 01/26/2021 09:45

Sample wt/vol: 25(mL) Date Analyzed: 02/03/2021 15:13

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.: 90352 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-01-4	Vinyl chloride	ND	^c	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)	106		80-120
460-00-4	4-Bromofluorobenzene (Surr)	97		80-120
1868-53-7	Dibromofluoromethane (Surr)	98		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\10193\20210203-21161.b\CF02S07.D
Lims ID: 410-27746-A-5
Client ID: HD-COD-SW-13-0/1-0
Sample Type: Client
Inject. Date: 03-Feb-2021 15:13:30 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0021161-014
Operator ID: SRK36897 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 04-Feb-2021 11:03:34 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1626

First Level Reviewer: spositok Date: 04-Feb-2021 10:52:13

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
3 Chloromethane	50		2.081				ND	U
5 Vinyl chloride	62		2.190				ND	
6 Bromomethane	94		2.501				ND	
7 Chloroethane	64		2.574				ND	7
14 1,1-Dichloroethene	96		3.385				ND	7
16 Acetone	43	3.434	3.422	0.012	97	13224	1.62	
20 Carbon disulfide	76		3.666				ND	7
24 Methylene Chloride	84		4.019				ND	7
* 25 t-Butyl alcohol-d10 (IS)	65	4.062	4.056	0.006	0	191883	50.0	
28 Methyl tert-butyl ether	73		4.403				ND	7
29 trans-1,2-Dichloroethene	96		4.409				ND	
32 1,1-Dichloroethane	63		5.074				ND	
36 2-Butanone (MEK)	43		5.885				ND	7
37 cis-1,2-Dichloroethene	96	5.927	5.915	0.012	80	5800	0.0922	
44 Chlorobromomethane	128		6.251				ND	
46 Chloroform	83		6.403				ND	7
$ 47 Dibromofluoromethane (Surr)	113	6.628	6.622	0.006	94	477444	9.79	
48 1,1,1-Trichloroethane	97		6.629				ND	
50 Carbon tetrachloride	117		6.830				ND	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.080	7.080	0.000	0	105326	10.6	
54 Benzene	78		7.104				ND	7
55 1,2-Dichloroethane	62		7.177				ND	U
* 57 Fluorobenzene (IS)	96	7.519	7.513	0.006	99	2052926	10.0	
60 Trichloroethene	95		7.994				ND	
62 1,2-Dichloropropane	63		8.336				ND	
67 Dichlorobromomethane	83		8.689				ND	
72 cis-1,3-Dichloropropene	75		9.250				ND	
73 4-Methyl-2-pentanone (MIBK)	43		9.439				ND	7
$ 74 Toluene-d8 (Surr)	98	9.567	9.567	0.000	93	2054799	10.1	
75 Toluene	92		9.646				ND	U
76 trans-1,3-Dichloropropene	75		9.921				ND	7
79 1,1,2-Trichloroethane	97		10.128				ND	

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
	80 Tetrachloroethene	166	10.213	10.207	0.006	87	4363	0.0638	
	82 2-Hexanone	43		10.353				ND	7
	83 Chlorodibromomethane	129		10.506				ND	
	84 Ethylene Dibromide	107		10.616				ND	
*	85 Chlorobenzene-d5 (IS)	117	11.061	11.061	0.000	85	1557839	10.0	
	87 Chlorobenzene	112		11.085				ND	
	89 1,1,1,2-Tetrachloroethane	131		11.170				ND	
	90 Ethylbenzene	91		11.176				ND	7
S	88 Xylenes, Total	106		11.245				ND	7
	91 m-Xylene & p-Xylene	106		11.292				ND	7
	92 o-Xylene	106		11.628				ND	7
	93 Styrene	104		11.646				ND	
	94 Bromoform	173		11.804				ND	
$	98 4-Bromofluorobenzene (Surr)	95	12.079	12.079	0.000	93	741475	9.70	
	99 1,1,2,2-Tetrachloroethane	83		12.188				ND	
*	113 1,4-Dichlorobenzene-d4	152	12.975	12.969	0.006	94	828022	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

MSV_HP25_ISSS_00022 Amount Added: 1.00 Units: uL Run Reagent

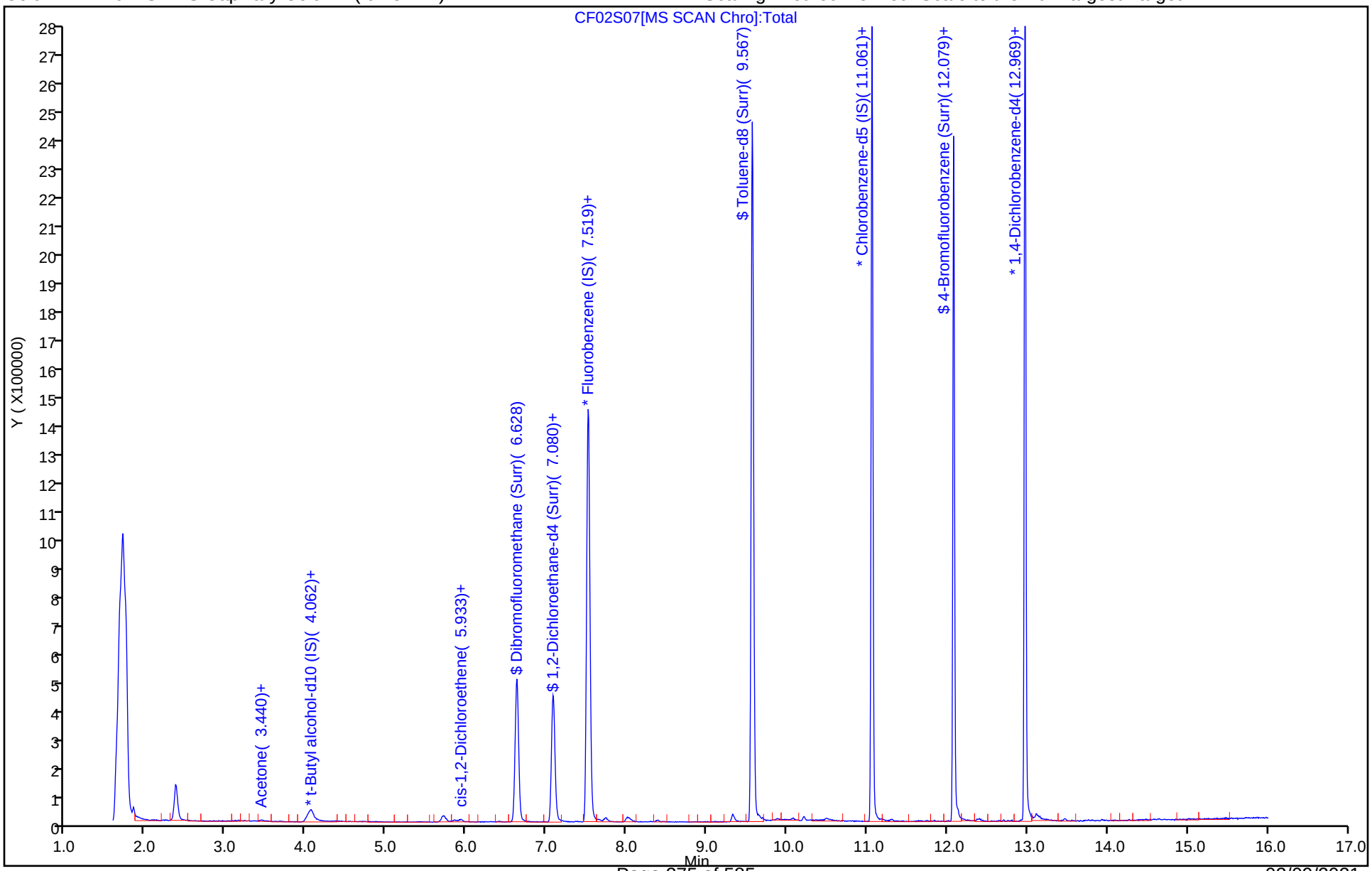
Report Date: 04-Feb-2021 11:08:13 Chrom Revision: 2.3 17-Jan-2021 00:24:10

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S07.D

Injection Date:	03-Feb-2021 15:13:30	Instrument ID:	10193	Operator ID:	SRK36897
Lims ID:	410-27746-A-5	Lab Sample ID:	410-27746-5	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:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Env, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S07.D				
Lims ID:	410-27746-A-5				
Client ID:	HD-COD-SW-13-0/1-0				
Sample Type:	Client				
Inject. Date:	03-Feb-2021 15:13:30	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0021161-014				
Operator ID:	SRK36897	Instrument ID:	10193		
Method:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\MSV_10193_25mL.m				
Limit Group:	MSV - 8260C_D				
Last Update:	04-Feb-2021 11:03:34	Calib Date:	01-Sep-2020 19:09:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1626				

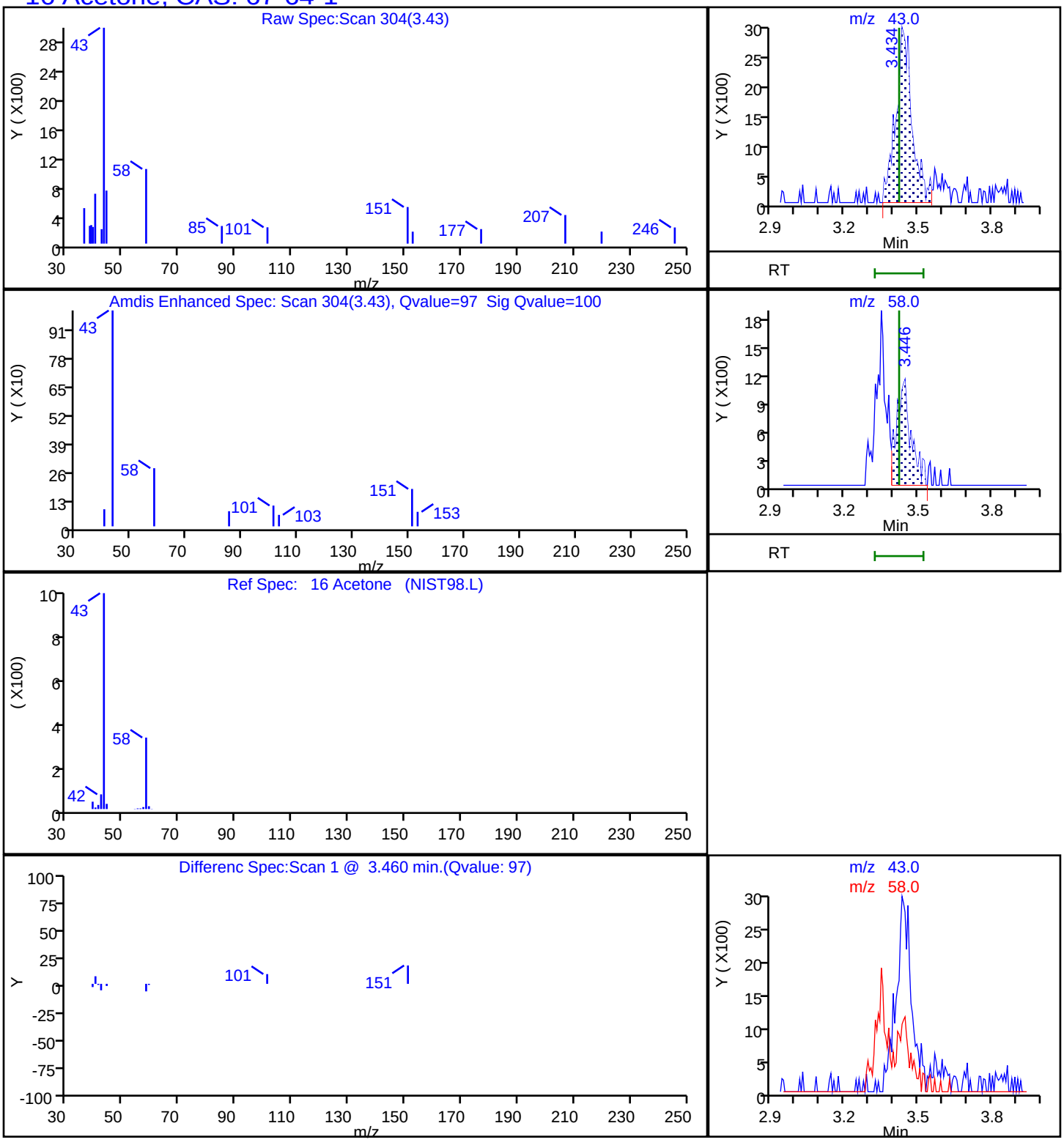
First Level Reviewer: spositok Date: 04-Feb-2021 10:52:13

Compound	Amount Added	Amount Recovered	% Rec.
$ 47 Dibromofluoromethane (Surr)	10.0	9.79	97.87
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.6	105.98
$ 74 Toluene-d8 (Surr)	10.0	10.1	100.99
$ 98 4-Bromofluorobenzene (Surr)	10.0	9.70	96.96

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S07.D				
Injection Date:	03-Feb-2021 15:13:30	Instrument ID:	10193		
Lims ID:	410-27746-A-5	Lab Sample ID:	410-27746-5		
Client ID:	HD-COD-SW-13-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

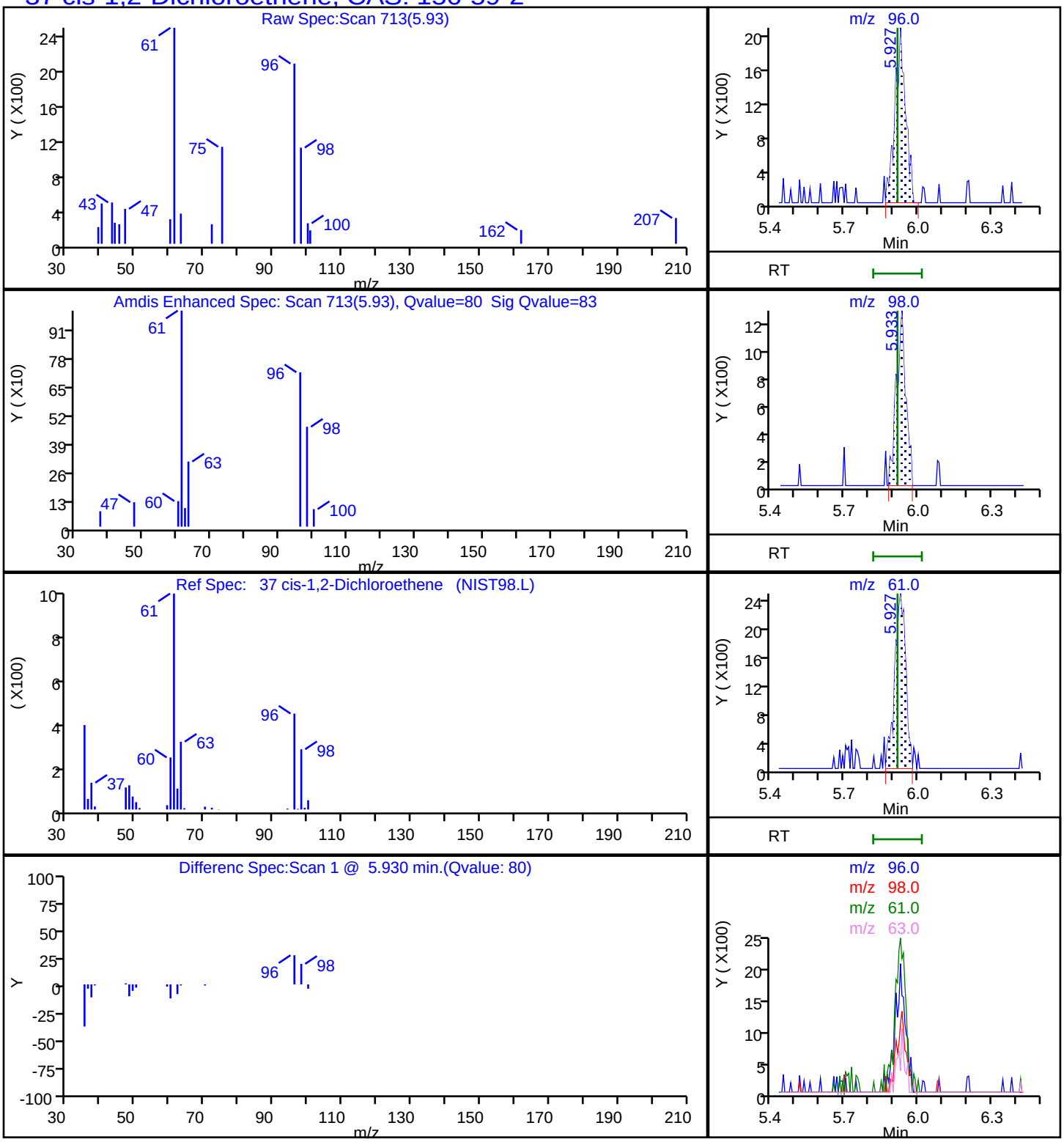
16 Acetone, CAS: 67-64-1



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S07.D				
Injection Date:	03-Feb-2021 15:13:30	Instrument ID:	10193		
Lims ID:	410-27746-A-5	Lab Sample ID:	410-27746-5		
Client ID:	HD-COD-SW-13-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

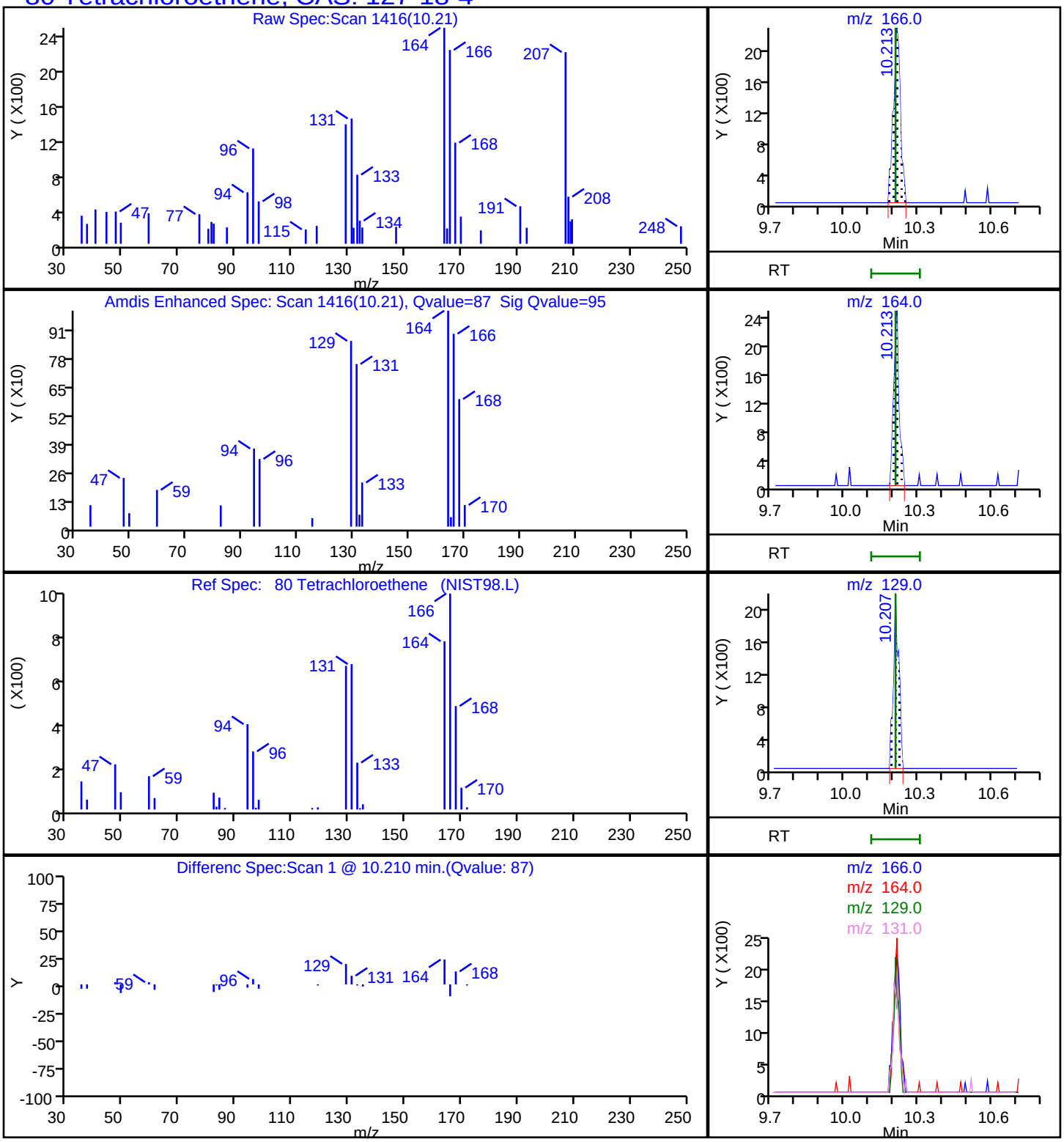
37 cis-1,2-Dichloroethene, CAS: 156-59-2



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S07.D				
Injection Date:	03-Feb-2021 15:13:30	Instrument ID:	10193		
Lims ID:	410-27746-A-5	Lab Sample ID:	410-27746-5		
Client ID:	HD-COD-SW-13-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

80 Tetrachloroethene, CAS: 127-18-4



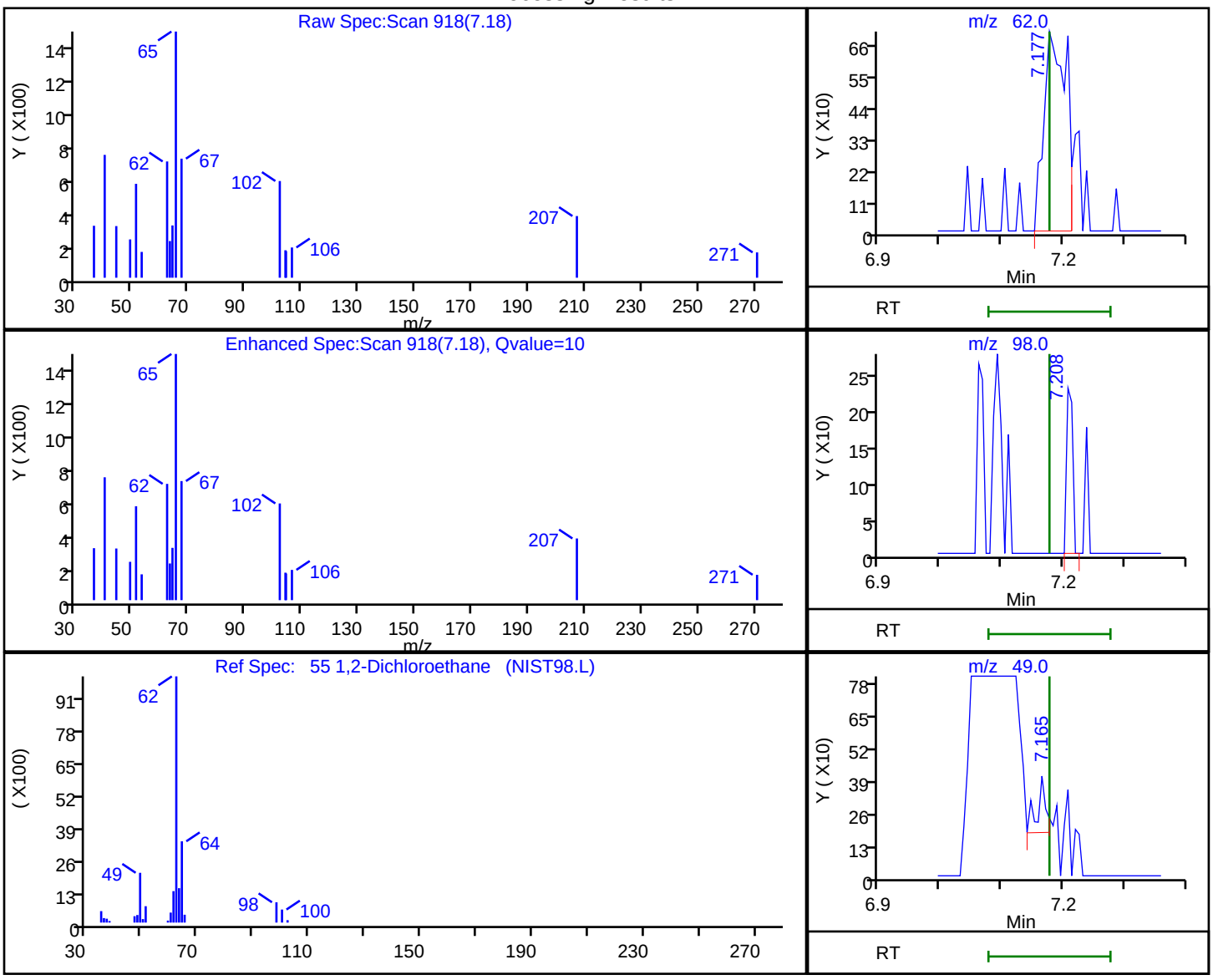
User Disabled Compound Report

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S07.D				
Injection Date:	03-Feb-2021 15:13:30	Instrument ID:	10193		
Lims ID:	410-27746-A-5	Lab Sample ID:	410-27746-5		
Client ID:	HD-COD-SW-13-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

55 1,2-Dichloroethane, CAS: 107-06-2

Processing Results



RT	Mass	Response	Amount
7.18	62.00	1807	0.025422
7.21	98.00	162	
7.16	49.00	219	

Reviewer: spositok, 04-Feb-2021 10:51:52

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

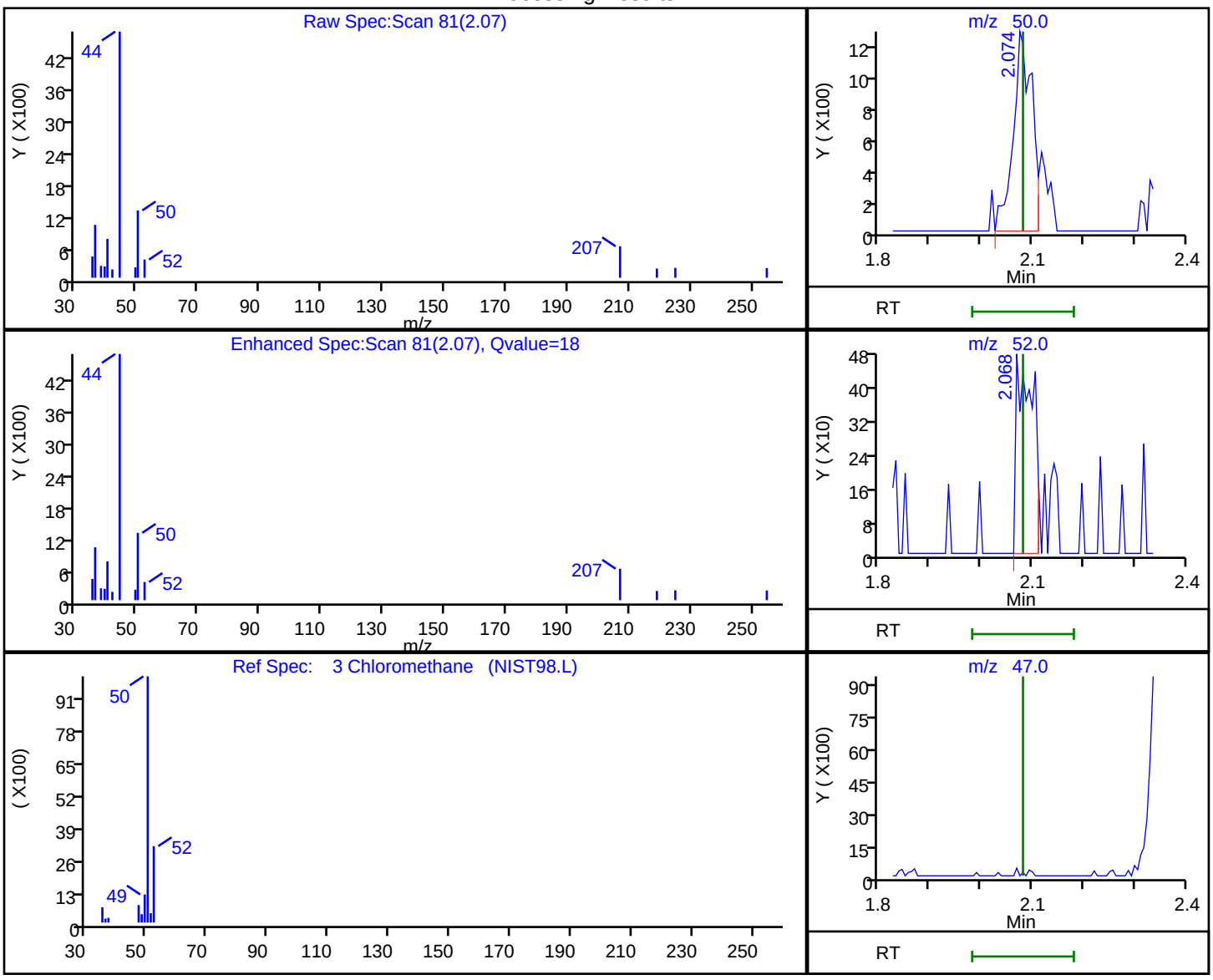
User Disabled Compound Report

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S07.D				
Injection Date:	03-Feb-2021 15:13:30	Instrument ID:	10193		
Lims ID:	410-27746-A-5	Lab Sample ID:	410-27746-5		
Client ID:	HD-COD-SW-13-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

3 Chloromethane, CAS: 74-87-3

Processing Results



RT	Mass	Response	Amount
2.07	50.00	3238	0.041461
2.07	52.00	1084	
2.08	47.00	0	

Reviewer: spositok, 04-Feb-2021 10:51:41

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

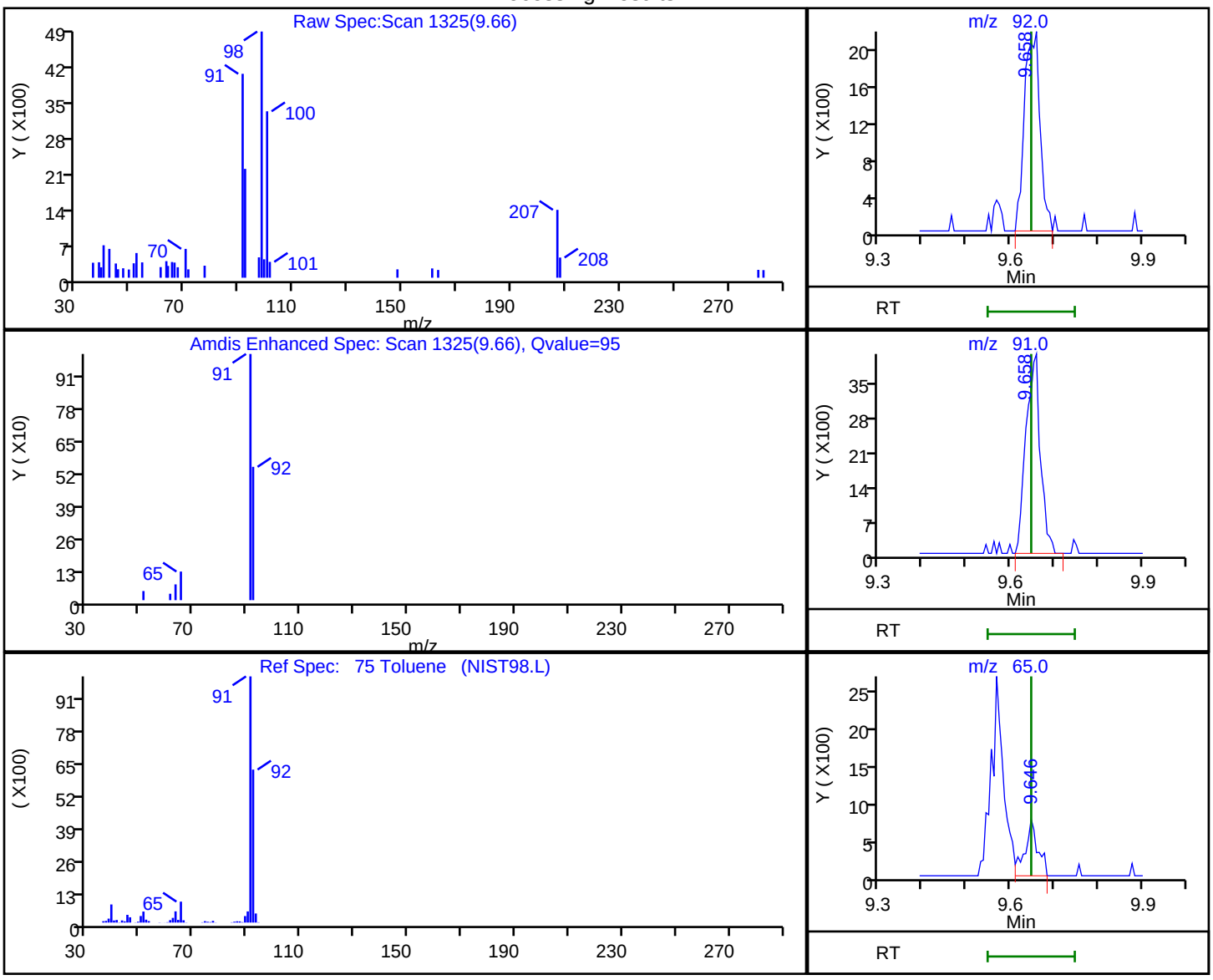
User Disabled Compound Report

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S07.D				
Injection Date:	03-Feb-2021 15:13:30	Instrument ID:	10193		
Lims ID:	410-27746-A-5	Lab Sample ID:	410-27746-5		
Client ID:	HD-COD-SW-13-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

75 Toluene, CAS: 108-88-3

Processing Results



RT	Mass	Response	Amount
9.66	92.00	5294	0.034595
9.66	91.00	9191	
9.65	65.00	1546	
9.64	39.00	691	

Reviewer: spositok, 04-Feb-2021 10:52:02

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

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Client Sample ID: HD-COD-SW-15-0/1-0 Lab Sample ID: 410-27746-6

Matrix: Water Lab File ID: CF02S08.D

Analysis Method: 8260D Date Collected: 01/26/2021 11:45

Sample wt/vol: 25(mL) Date Analyzed: 02/03/2021 15:35

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 90352 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.50	0.070
71-55-6	1,1,1-Trichloroethane	0.092	J	0.50	0.060
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.50	0.070
79-00-5	1,1,2-Trichloroethane	ND		0.50	0.060
75-34-3	1,1-Dichloroethane	ND		0.50	0.070
75-35-4	1,1-Dichloroethene	0.073	J	0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	ND		0.50	0.060
107-06-2	1,2-Dichloroethane	ND		0.50	0.050
78-87-5	1,2-Dichloropropane	ND		0.50	0.060
78-93-3	2-Butanone (MEK)	ND		5.0	0.60
591-78-6	2-Hexanone	ND		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70
67-64-1	Acetone	ND		5.0	0.90
71-43-2	Benzene	ND		0.50	0.050
74-97-5	Bromochloromethane	ND		0.50	0.050
75-27-4	Bromodichloromethane	ND		0.50	0.050
75-25-2	Bromoform	ND		1.0	0.30
74-83-9	Bromomethane	ND	^c	0.50	0.070
75-15-0	Carbon disulfide	ND		1.0	0.060
56-23-5	Carbon tetrachloride	ND		0.50	0.070
108-90-7	Chlorobenzene	ND		0.50	0.060
75-00-3	Chloroethane	ND	^c	0.50	0.070
67-66-3	Chloroform	0.26	J	0.50	0.090
74-87-3	Chloromethane	ND	^c	0.50	0.060
156-59-2	cis-1,2-Dichloroethene	0.66		0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	ND		0.50	0.050
124-48-1	Dibromochloromethane	ND		0.50	0.070
100-41-4	Ethylbenzene	ND		0.50	0.060
1634-04-4	Methyl tert-butyl ether	ND		0.50	0.050
75-09-2	Methylene Chloride	ND		0.50	0.070
100-42-5	Styrene	ND		0.50	0.050
127-18-4	Tetrachloroethene	2.1		0.50	0.060
108-88-3	Toluene	ND		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	ND		0.50	0.060
10061-02-6	trans-1,3-Dichloropropene	ND		0.50	0.060
79-01-6	Trichloroethene	0.78		0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Client Sample ID: HD-COD-SW-15-0/1-0 Lab Sample ID: 410-27746-6

Matrix: Water Lab File ID: CF02S08.D

Analysis Method: 8260D Date Collected: 01/26/2021 11:45

Sample wt/vol: 25(mL) Date Analyzed: 02/03/2021 15:35

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 90352 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-01-4	Vinyl chloride	ND	^c	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)	106		80-120
460-00-4	4-Bromofluorobenzene (Surr)	96		80-120
1868-53-7	Dibromofluoromethane (Surr)	98		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\10193\20210203-21161.b\CF02S08.D
Lims ID: 410-27746-A-6
Client ID: HD-COD-SW-15-0/1-0
Sample Type: Client
Inject. Date: 03-Feb-2021 15:35:30 ALS Bottle#: 14 Worklist Smp#: 15
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0021161-015
Operator ID: SRK36897 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 04-Feb-2021 11:03:34 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1626

First Level Reviewer: spositok Date: 04-Feb-2021 10:54:10

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85		1.892				ND	
1 Chlorodifluoromethane	51		1.928				ND	7
140 Dimethyl ether	45		1.993				ND	7
3 Chloromethane	50		2.081				ND	7
4 Butadiene	39		2.184				ND	7
5 Vinyl chloride	62		2.190				ND	
6 Bromomethane	94		2.501				ND	
7 Chloroethane	64		2.574				ND	
8 Dichlorofluoromethane	67		2.806				ND	7
T 213 Vinyl bromide TIC	106		2.830				ND	
9 Trichlorofluoromethane	101		2.873				ND	
11 Ethyl ether	59		3.093				ND	
T 219 Ethanol TIC	45	3.099	3.099	0.000	1	271	0.001324	
12 1,2-Dichloro-1,1,2-trifluoroetha	67		3.178				ND	7
13 Acrolein	56		3.257				ND	7
14 1,1-Dichloroethene	96	3.391	3.385	0.006	93	3449	0.0729	
16 Acetone	43		3.422				ND	U
15 112TCTFE	101		3.428				ND	
17 Iodomethane	142		3.568				ND	
18 Isopropyl alcohol	45		3.593				ND	
19 Ethyl bromide	108		3.599				ND	
20 Carbon disulfide	76		3.666				ND	7
22 Methyl acetate	43		3.818				ND	
21 Acetonitrile	41		3.836				ND	
23 3-Chloro-1-propene	41		3.836				ND	
24 Methylene Chloride	84		4.019				ND	7
* 25 t-Butyl alcohol-d10 (IS)	65	4.056	4.056	0.000	0	199223	50.0	
26 2-Methyl-2-propanol	59		4.178				ND	
27 Acrylonitrile	53		4.349				ND	
28 Methyl tert-butyl ether	73	4.416	4.403	0.013	40	6133	0.0400	
29 trans-1,2-Dichloroethene	96		4.409				ND	
30 Hexane	57		4.830				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
32 1,1-Dichloroethane	63	5.086	5.074	0.012	24	5336	0.0524	
33 Isopropyl ether	45		5.135				ND	
31 Vinyl acetate	43		5.135				ND	
34 2-Chloro-1,3-butadiene	53		5.184				ND	
35 Tert-butyl ethyl ether	59		5.671				ND	7
36 2-Butanone (MEK)	43		5.885				ND	
37 cis-1,2-Dichloroethene	96	5.934	5.915	0.019	81	41593	0.6629	
38 2,2-Dichloropropane	77		5.927				ND	
40 Propionitrile	54		5.982				ND	
39 Ethyl acetate	43		6.013				ND	
41 Methyl acrylate	55		6.074				ND	
S 42 1,2-Dichloroethene, Total	100				0		0.6629	
43 Methacrylonitrile	67		6.196				ND	
44 Chlorobromomethane	128		6.251				ND	
45 Tetrahydrofuran	71		6.251				ND	
46 Chloroform	83	6.421	6.403	0.018	93	26364	0.2611	
$ 47 Dibromofluoromethane (Surr)	113	6.629	6.622	0.006	94	477031	9.80	
48 1,1,1-Trichloroethane	97	6.622	6.629	-0.007	36	8402	0.0924	
49 Cyclohexane	56		6.720				ND	
50 Carbon tetrachloride	117		6.830				ND	7
51 1,1-Dichloropropene	75		6.836				ND	
145 1-Chlorobutane	56		6.842				ND	
52 Isobutyl alcohol	41		7.019				ND	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.080	7.080	0.000	0	105414	10.6	
54 Benzene	78		7.104				ND	7
55 1,2-Dichloroethane	62		7.177				ND	7
152 Isopropyl acetate	43		7.257				ND	
56 Tert-amyl methyl ether	73		7.305				ND	
* 57 Fluorobenzene (IS)	96	7.519	7.513	0.006	99	2047560	10.0	
58 n-Heptane	43		7.525				ND	
59 n-Butanol	56		7.909				ND	
60 Trichloroethene	95	8.000	7.994	0.006	97	47478	0.7832	
61 Methylcyclohexane	83		8.299				ND	
62 1,2-Dichloropropane	63		8.336				ND	
63 2-ethoxy-2-methyl butane	87		8.348				ND	
65 1,4-Dioxane	88		8.433				ND	
64 Methyl methacrylate	69		8.433				ND	
66 Dibromomethane	93		8.445				ND	
160 n-Propyl acetate	61		8.561				ND	
67 Dichlorobromomethane	83		8.689				ND	7
68 2-Nitropropane	41		8.970				ND	
71 1-Bromo-2-chloroethane	63		9.085				ND	
69 2-Chloroethyl vinyl ether	63		9.116				ND	
70 Chloroacetonitrile	75		9.116				ND	
72 cis-1,3-Dichloropropene	75		9.250				ND	
73 4-Methyl-2-pentanone (MIBK)	43		9.439				ND	7
$ 74 Toluene-d8 (Surr)	98	9.567	9.567	0.000	93	2022438	9.90	
75 Toluene	92		9.646				ND	U
76 trans-1,3-Dichloropropene	75		9.921				ND	7
78 Ethyl methacrylate	69		9.982				ND	
T 207 2,3-Dibromo-1-propanol TIC	57		10.000				ND	
T 216 Ethylene oxide TIC	44	9.969	10.000	-0.031	10	691	0.003375	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
T 215 2-Bromo-3-chloropropene TIC	75	10.000	10.000	0.000	1	141	0.000689	
T 217 2,3-Dibromopropene TIC	119	9.988	10.000	-0.012	1	374	0.001827	
T 211 Epibromohydrin TIC	57		10.000				ND	
T 212 Chloroacetaldehyde TIC	50	9.908	10.000	-0.092	1	193	0.000943	
T 210 2-Chloroethanol TIC	44		10.000				ND	
T 214 Epichlorohydrin TIC	57		10.000				ND	
T 209 Monochloroacetic acid TIC	50	9.908	10.000	-0.092	1	193	0.000943	
T 208 2-Bromoethanol TIC	45	9.988	10.000	-0.012	1	235	0.001148	
T 218 3-Chloro-1,2-propanediol TIC	44	9.969	10.000	-0.031	1	691	0.003375	
S 77 1,3-Dichloropropene, Total	100		10.060				ND	7
79 1,1,2-Trichloroethane	97		10.128				ND	7
80 Tetrachloroethene	166	10.207	10.207	0.000	97	142321	2.07	
81 1,3-Dichloropropane	76		10.292				ND	
82 2-Hexanone	43		10.353				ND	7
83 Chlorodibromomethane	129		10.506				ND	
161 n-Butyl acetate	43		10.512				ND	
84 Ethylene Dibromide	107		10.616				ND	
* 85 Chlorobenzene-d5 (IS)	117	11.061	11.061	0.000	85	1563647	10.0	
86 1-Chlorohexane	91		11.073				ND	7
87 Chlorobenzene	112		11.085				ND	7
89 1,1,1,2-Tetrachloroethane	131		11.170				ND	
90 Ethylbenzene	91		11.176				ND	7
S 88 Xylenes, Total	106		11.245				ND	7
91 m-Xylene & p-Xylene	106		11.292				ND	7
92 o-Xylene	106		11.628				ND	7
93 Styrene	104		11.646				ND	7
94 Bromoform	173		11.804				ND	
95 Isopropylbenzene	105		11.932				ND	
96 cis-1,4-Dichloro-2-butene	88		12.018				ND	U
97 Cyclohexanone	55		12.048				ND	U
$ 98 4-Bromofluorobenzene (Surr)	95	12.079	12.079	0.000	93	735993	9.59	
99 1,1,2,2-Tetrachloroethane	83		12.188				ND	
100 Bromobenzene	156		12.195				ND	
101 trans-1,4-Dichloro-2-butene	53		12.213				ND	
102 1,2,3-Trichloropropane	110		12.231				ND	
103 N-Propylbenzene	91		12.268				ND	7
104 2-Chlorotoluene	126		12.341				ND	
105 1,3,5-Trimethylbenzene	105		12.408				ND	7
106 4-Chlorotoluene	126		12.438				ND	
107 tert-Butylbenzene	134		12.652				ND	
108 Pentachloroethane	167		12.682				ND	
109 1,2,4-Trimethylbenzene	105		12.694				ND	7
110 sec-Butylbenzene	105		12.816				ND	
111 1,3-Dichlorobenzene	146		12.914				ND	
112 4-Isopropyltoluene	119		12.926				ND	7
* 113 1,4-Dichlorobenzene-d4	152	12.969	12.969	0.000	94	819055	10.0	
114 1,4-Dichlorobenzene	146		12.987				ND	7
115 1,2,3-Trimethylbenzene	120		12.999				ND	7
116 Benzyl chloride	126		13.072				ND	7
119 n-Butylbenzene	92		13.219				ND	
120 1,2-Dichlorobenzene	146		13.255				ND	
118 p-Diethylbenzene	119		13.274				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
122 Hexachloroethane	117		13.475				ND	
123 1,2-Dibromo-3-Chloropropane	155		13.804				ND	
124 1,3,5-Trichlorobenzene	180		13.926				ND	
125 1,2,4-Trichlorobenzene	180		14.353				ND	
126 Hexachlorobutadiene	225		14.438				ND	
127 Naphthalene	128		14.536				ND	7
128 1,2,3-Trichlorobenzene	180		14.682				ND	
129 2-Methylnaphthalene	142		15.304				ND	U
130 Dodecane	57		0.000				ND	
155 2-Chloro-1,1,1-Trifluoroethane	1		0.000				ND	
159 tert-Butyl Formate	1		0.000				ND	
131 2-Bromo-1-chloropropane	1		0.000				ND	
133 1-Chloropropane	1		0.000				ND	
136 Methylal	1		0.000				ND	
138 n-Decane	57		0.000				ND	
222 Vinyl acetate (TIC)	1		0.000				ND	
142 1-Bromo-3-Chloropropane	1		0.000				ND	
221 Isopropyl alcohol TIC	1		0.000				ND	
151 Propene oxide	1		0.000				ND	
157 t-Amyl alcohol	1		0.000				ND	
158 1,1-Dichloro-1-fluoroethane	1		0.000				ND	
162 Ethanol	45		0.000				ND	
220 Acetonitrile TIC	1		0.000				ND	
149 Chlorotrifluoroethene	1		0.000				ND	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

MSV_HP25_ISSS_00022 Amount Added: 1.00 Units: uL Run Reagent

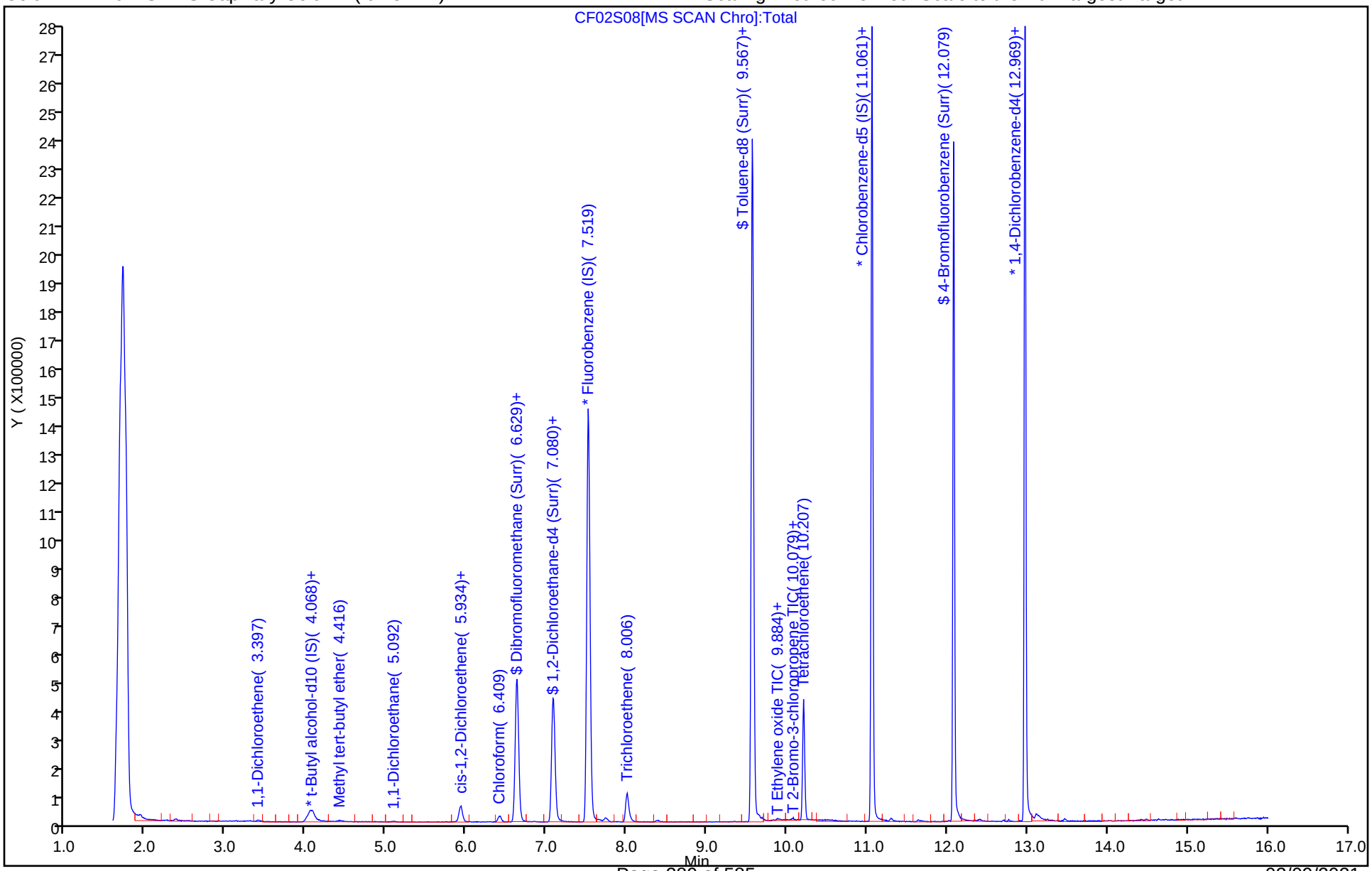
Report Date: 04-Feb-2021 11:08:15 Chrom Revision: 2.3 17-Jan-2021 00:24:10

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S08.D

Injection Date:	03-Feb-2021 15:35:30	Instrument ID:	10193	Operator ID:	SRK36897
Lims ID:	410-27746-A-6	Lab Sample ID:	410-27746-6	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:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Env, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S08.D				
Lims ID:	410-27746-A-6				
Client ID:	HD-COD-SW-15-0/1-0				
Sample Type:	Client				
Inject. Date:	03-Feb-2021 15:35:30	ALS Bottle#:	14	Worklist Smp#:	15
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0021161-015				
Operator ID:	SRK36897	Instrument ID:	10193		
Method:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\MSV_10193_25mL.m				
Limit Group:	MSV - 8260C_D				
Last Update:	04-Feb-2021 11:03:34	Calib Date:	01-Sep-2020 19:09:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1626				

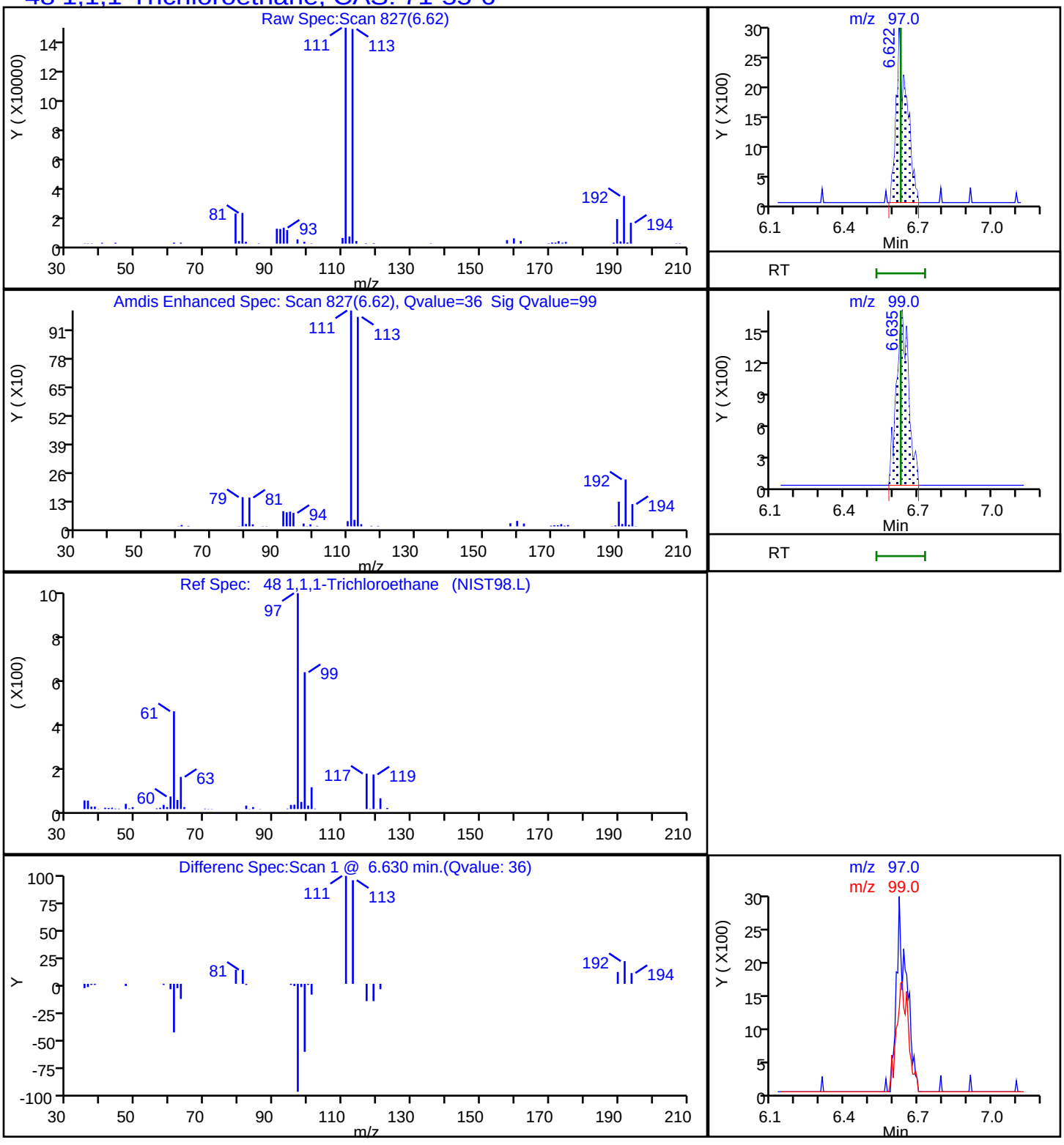
First Level Reviewer: spositok Date: 04-Feb-2021 10:54:10

Compound	Amount Added	Amount Recovered	% Rec.
$ 47 Dibromofluoromethane (Surr)	10.0	9.80	98.05
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.6	106.35
$ 74 Toluene-d8 (Surr)	10.0	9.90	99.03
$ 98 4-Bromofluorobenzene (Surr)	10.0	9.59	95.88

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S08.D				
Injection Date:	03-Feb-2021 15:35:30	Instrument ID:	10193		
Lims ID:	410-27746-A-6	Lab Sample ID:	410-27746-6		
Client ID:	HD-COD-SW-15-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	14	Worklist Smp#:	15
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

48 1,1,1-Trichloroethane, CAS: 71-55-6

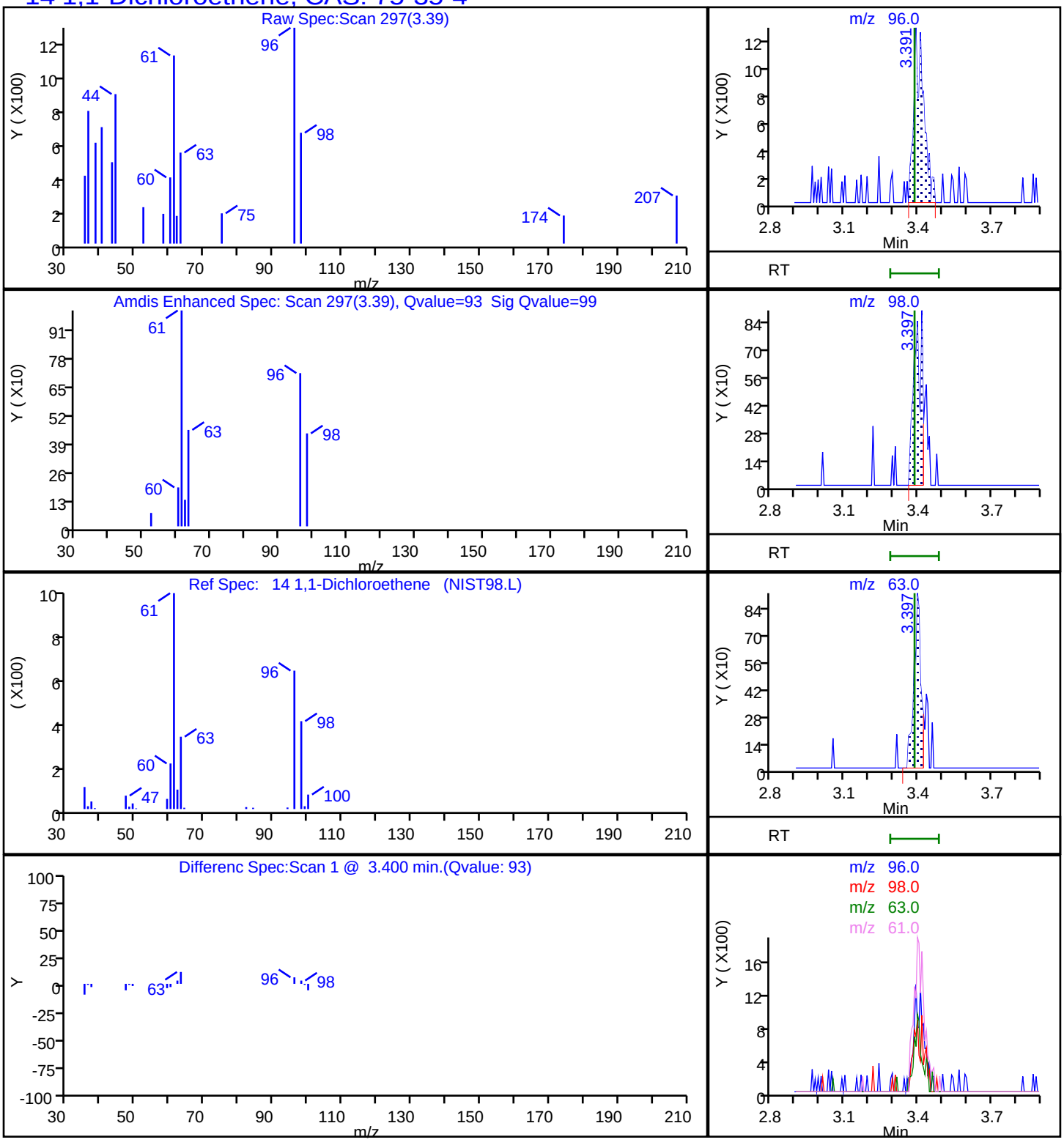


Report Date: 04-Feb-2021 11:08:15 Chrom Revision: 2.3 17-Jan-2021 00:24:10

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S08.D				
Injection Date:	03-Feb-2021 15:35:30	Instrument ID:	10193		
Lims ID:	410-27746-A-6	Lab Sample ID:	410-27746-6		
Client ID:	HD-COD-SW-15-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	14	Worklist Smp#:	15
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

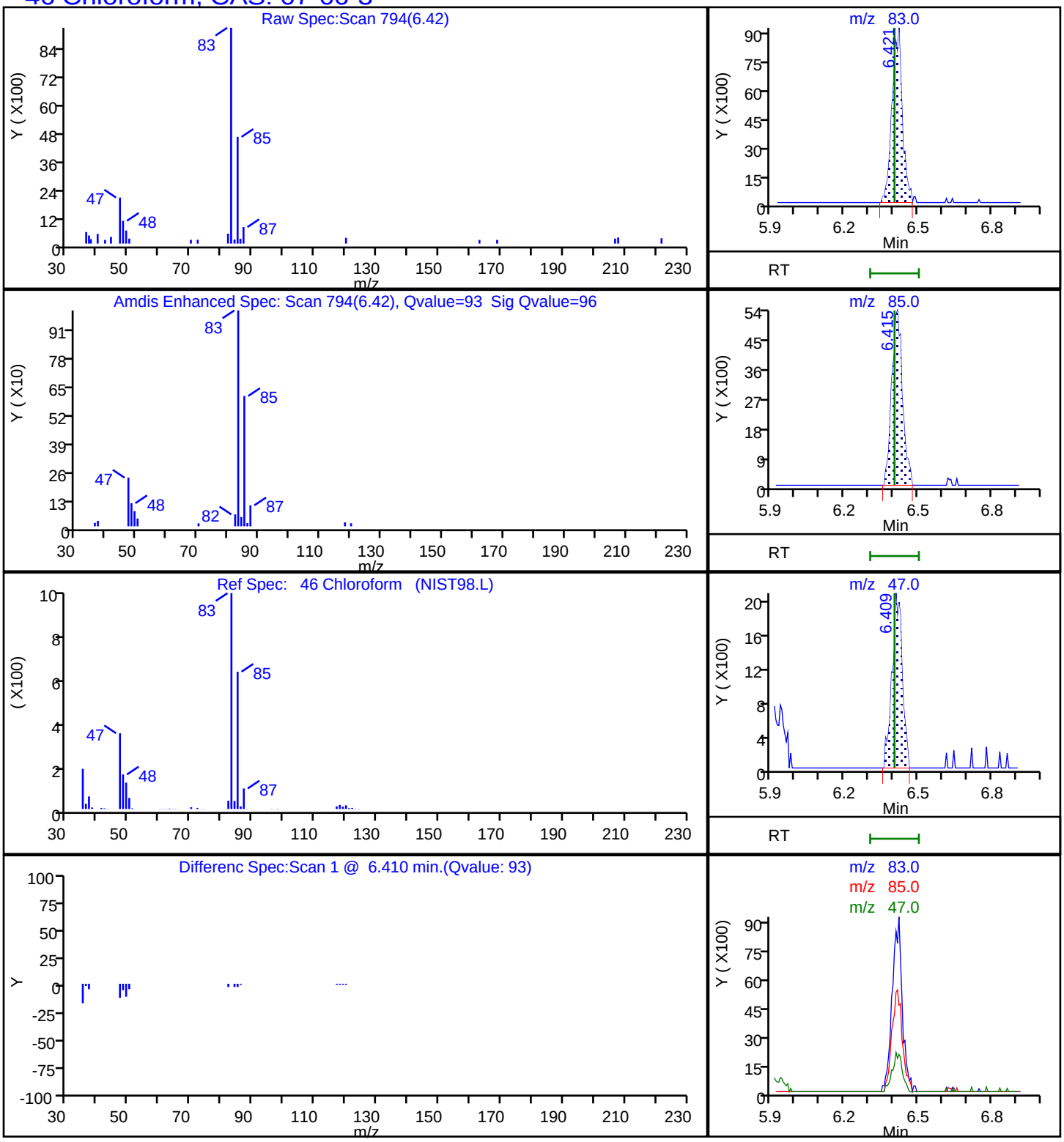
14 1,1-Dichloroethene, CAS: 75-35-4



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S08.D				
Injection Date:	03-Feb-2021 15:35:30	Instrument ID:	10193		
Lims ID:	410-27746-A-6	Lab Sample ID:	410-27746-6		
Client ID:	HD-COD-SW-15-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	14	Worklist Smp#:	15
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

46 Chloroform, CAS: 67-66-3

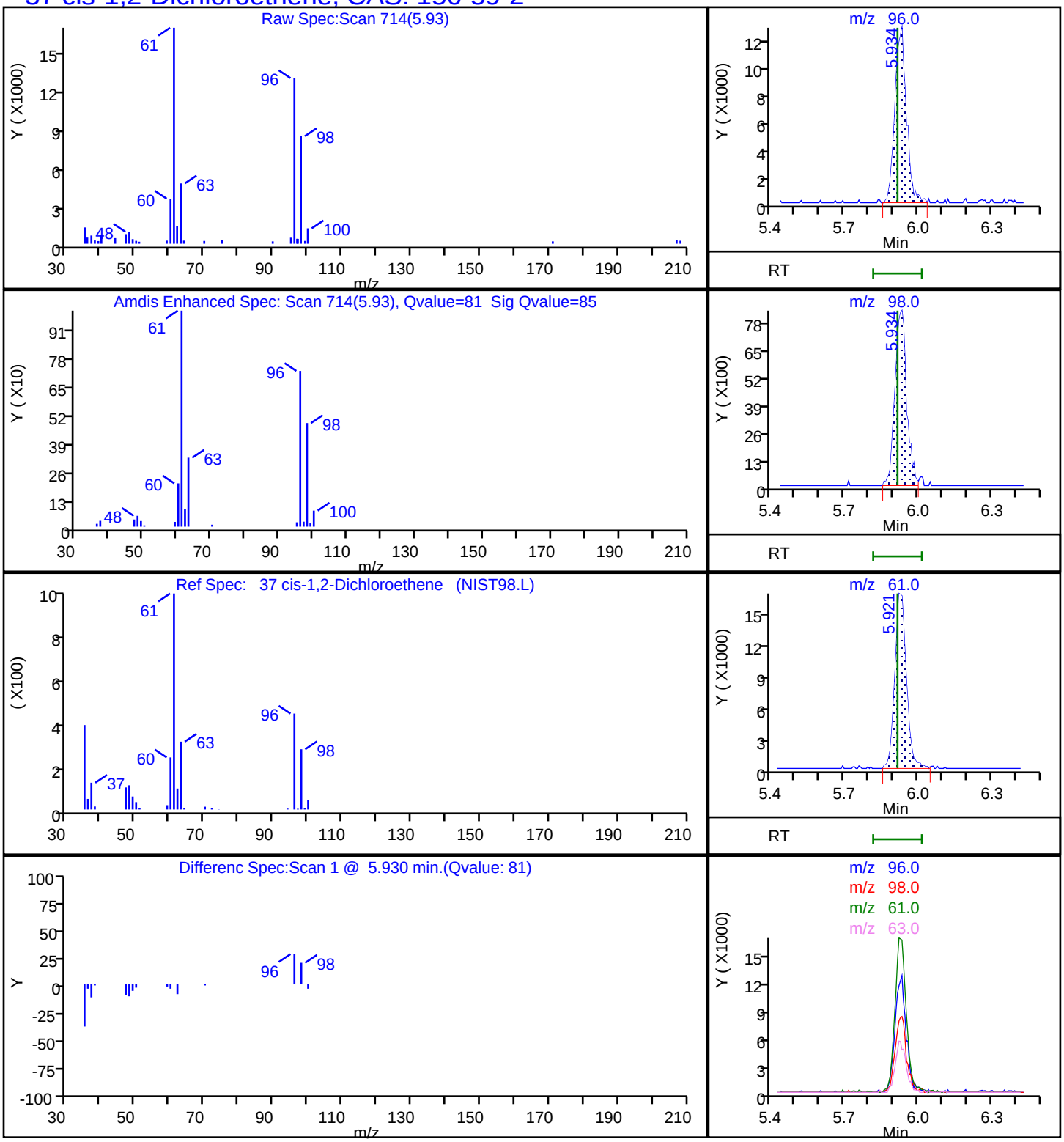


Report Date: 04-Feb-2021 11:08:16 Chrom Revision: 2.3 17-Jan-2021 00:24:10

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S08.D				
Injection Date:	03-Feb-2021 15:35:30	Instrument ID:	10193		
Lims ID:	410-27746-A-6	Lab Sample ID:	410-27746-6		
Client ID:	HD-COD-SW-15-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	14	Worklist Smp#:	15
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

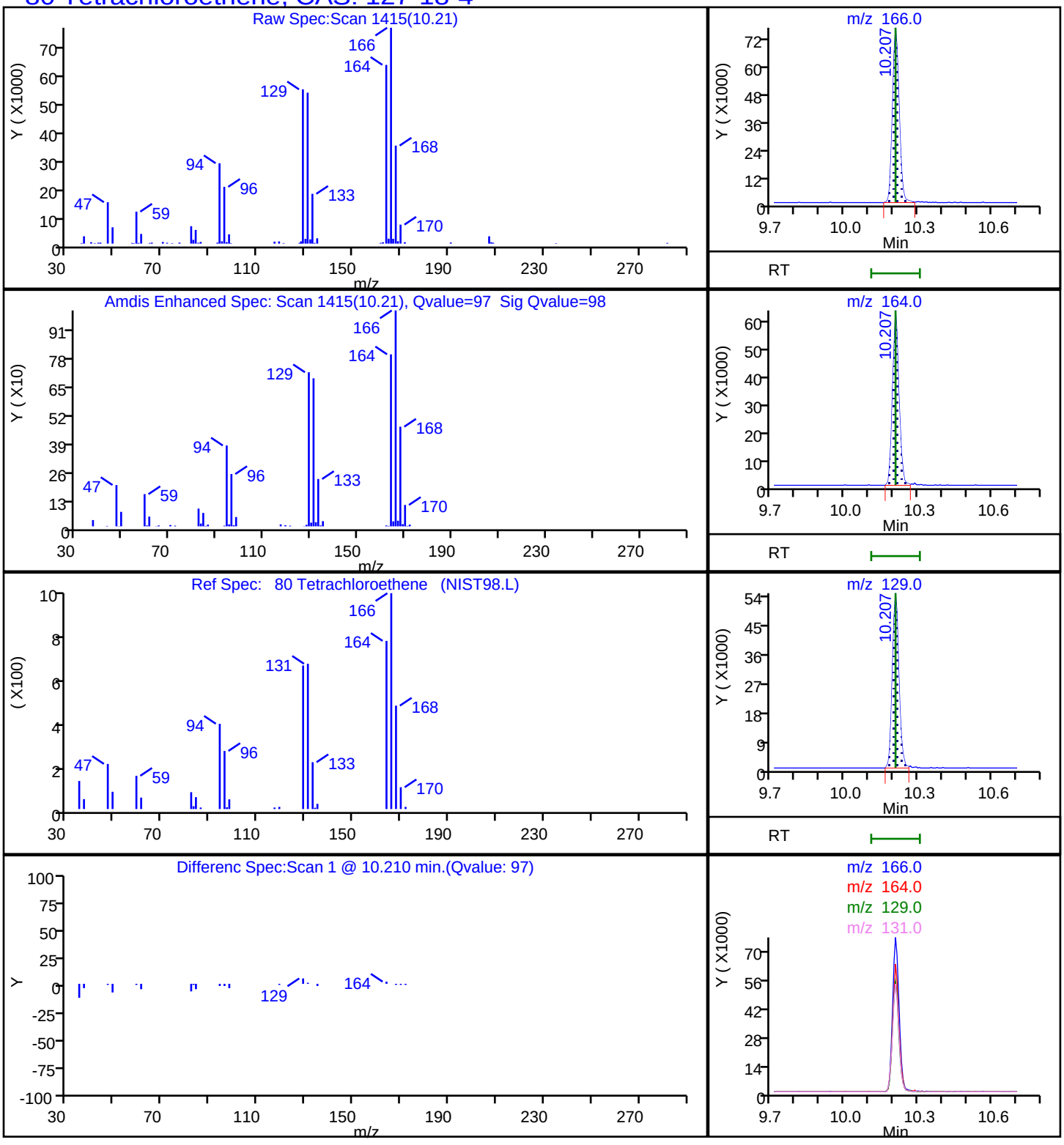
37 cis-1,2-Dichloroethene, CAS: 156-59-2



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S08.D				
Injection Date:	03-Feb-2021 15:35:30	Instrument ID:	10193		
Lims ID:	410-27746-A-6	Lab Sample ID:	410-27746-6		
Client ID:	HD-COD-SW-15-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	14	Worklist Smp#:	15
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

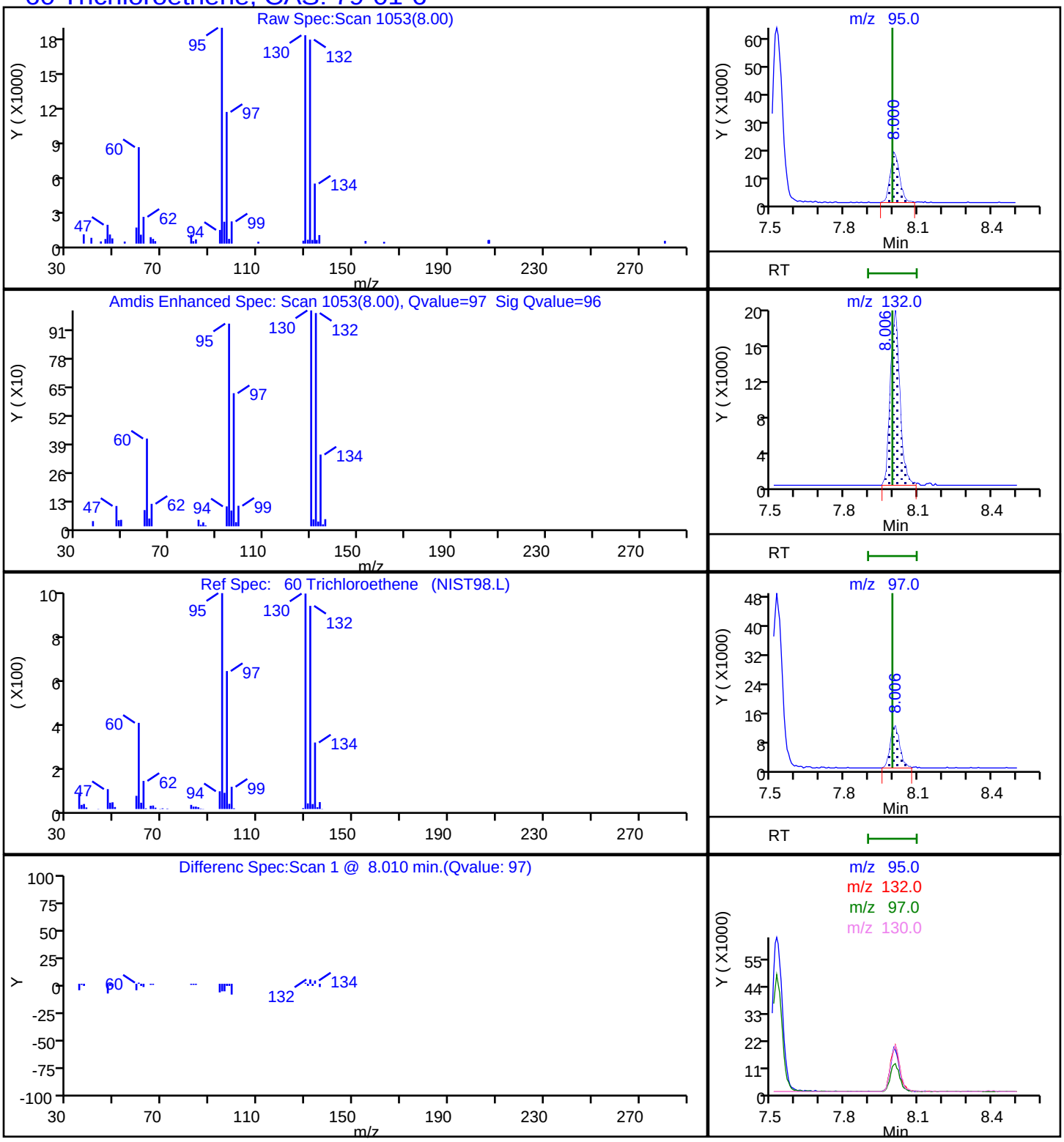
80 Tetrachloroethene, CAS: 127-18-4



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S08.D				
Injection Date:	03-Feb-2021 15:35:30	Instrument ID:	10193		
Lims ID:	410-27746-A-6	Lab Sample ID:	410-27746-6		
Client ID:	HD-COD-SW-15-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	14	Worklist Smp#:	15
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

60 Trichloroethene, CAS: 79-01-6



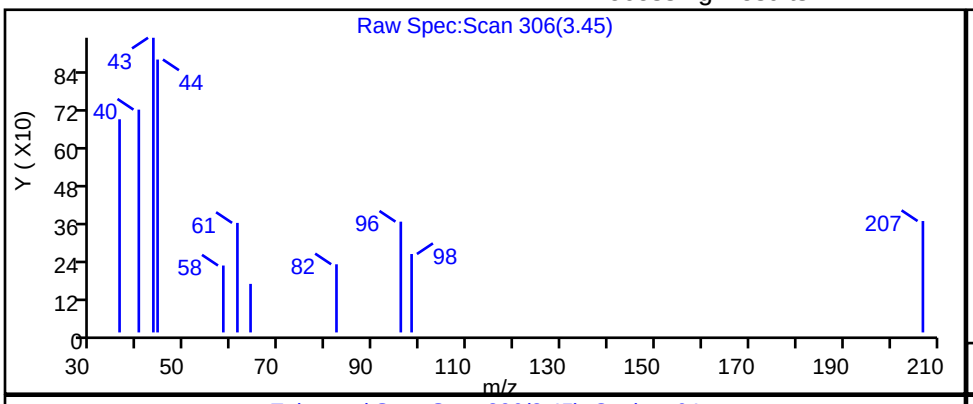
User Disabled Compound Report

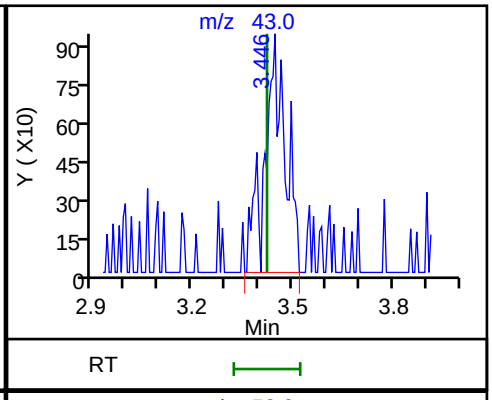
Eurofins Lancaster Laboratories Env, LLC

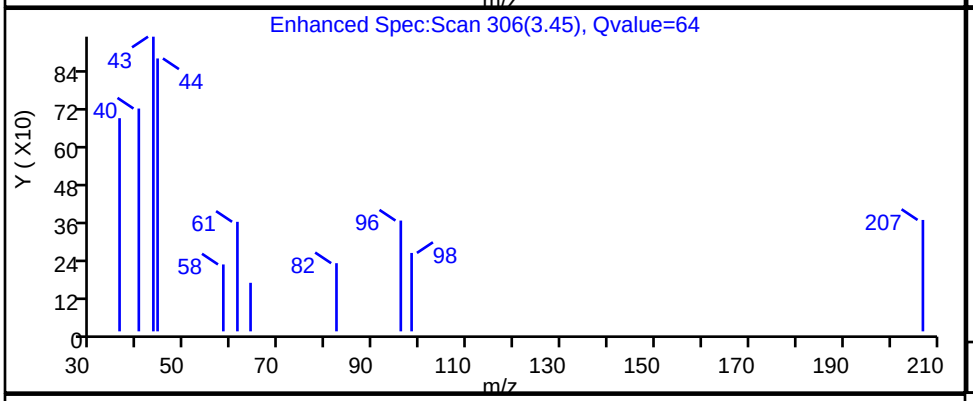
Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S08.D				
Injection Date:	03-Feb-2021 15:35:30	Instrument ID:	10193		
Lims ID:	410-27746-A-6	Lab Sample ID:	410-27746-6		
Client ID:	HD-COD-SW-15-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	14	Worklist Smp#:	15
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

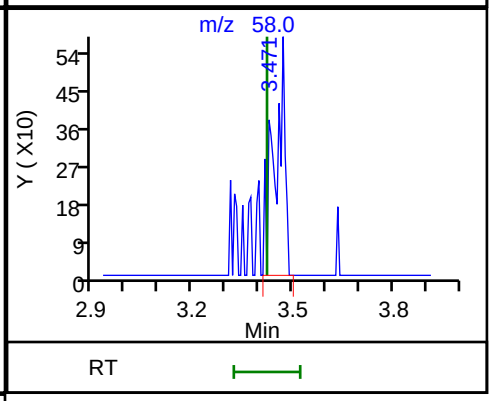
16 Acetone, CAS: 67-64-1

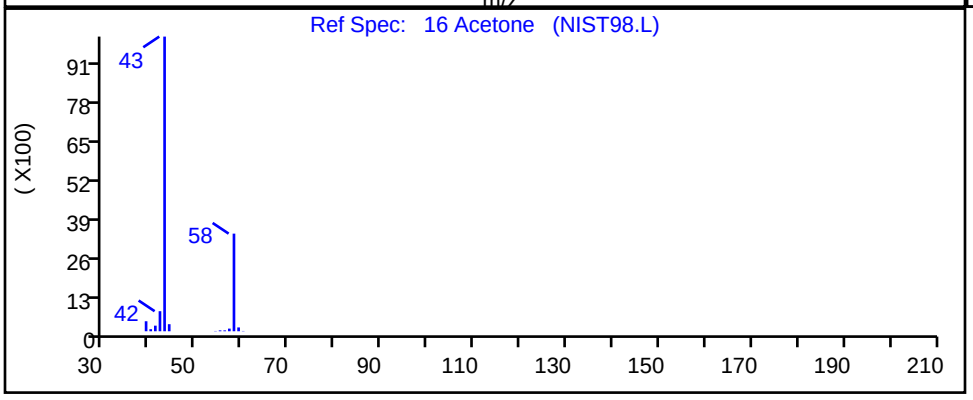
Processing Results











RT	Mass	Response	Amount
3.45	43.00	4077	0.481492
3.47	58.00	1229	

Reviewer: spositok, 04-Feb-2021 10:52:25

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

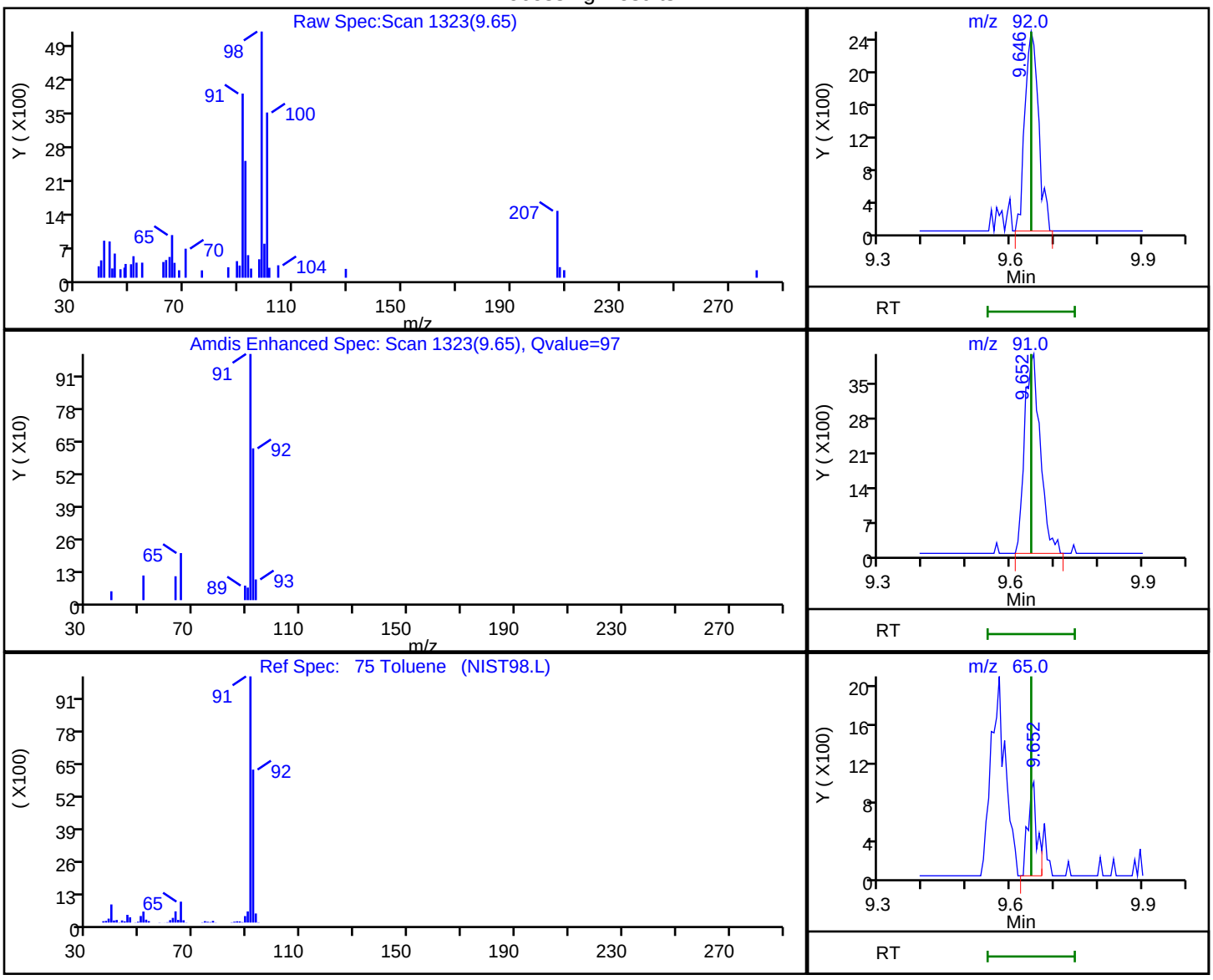
User Disabled Compound Report

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S08.D				
Injection Date:	03-Feb-2021 15:35:30	Instrument ID:	10193		
Lims ID:	410-27746-A-6	Lab Sample ID:	410-27746-6		
Client ID:	HD-COD-SW-15-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	14	Worklist Smp#:	15
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

75 Toluene, CAS: 108-88-3

Processing Results



RT	Mass	Response	Amount
9.65	92.00	5310	0.034571
9.65	91.00	9988	
9.65	65.00	1409	
9.63	39.00	1235	

Reviewer: spositok, 04-Feb-2021 10:53:04

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

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Client Sample ID: HD-COD-SW-16-0/1-0 Lab Sample ID: 410-27746-7

Matrix: Water Lab File ID: CF02S11.D

Analysis Method: 8260D Date Collected: 01/26/2021 10:10

Sample wt/vol: 25(mL) Date Analyzed: 02/03/2021 16:42

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.: 90352 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.50	0.070
71-55-6	1,1,1-Trichloroethane	ND		0.50	0.060
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.50	0.070
79-00-5	1,1,2-Trichloroethane	ND		0.50	0.060
75-34-3	1,1-Dichloroethane	ND		0.50	0.070
75-35-4	1,1-Dichloroethene	ND		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	ND		0.50	0.060
107-06-2	1,2-Dichloroethane	ND		0.50	0.050
78-87-5	1,2-Dichloropropane	ND		0.50	0.060
78-93-3	2-Butanone (MEK)	ND		5.0	0.60
591-78-6	2-Hexanone	ND		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70
67-64-1	Acetone	1.9	J	5.0	0.90
71-43-2	Benzene	ND		0.50	0.050
74-97-5	Bromochloromethane	ND		0.50	0.050
75-27-4	Bromodichloromethane	ND		0.50	0.050
75-25-2	Bromoform	ND		1.0	0.30
74-83-9	Bromomethane	ND	^c	0.50	0.070
75-15-0	Carbon disulfide	ND		1.0	0.060
56-23-5	Carbon tetrachloride	ND		0.50	0.070
108-90-7	Chlorobenzene	ND		0.50	0.060
75-00-3	Chloroethane	ND	^c	0.50	0.070
67-66-3	Chloroform	ND		0.50	0.090
74-87-3	Chloromethane	0.064	J ^c	0.50	0.060
156-59-2	cis-1,2-Dichloroethene	0.092	J	0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	ND		0.50	0.050
124-48-1	Dibromochloromethane	ND		0.50	0.070
100-41-4	Ethylbenzene	ND		0.50	0.060
1634-04-4	Methyl tert-butyl ether	ND		0.50	0.050
75-09-2	Methylene Chloride	ND		0.50	0.070
100-42-5	Styrene	ND		0.50	0.050
127-18-4	Tetrachloroethene	ND		0.50	0.060
108-88-3	Toluene	ND		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	ND		0.50	0.060
10061-02-6	trans-1,3-Dichloropropene	ND		0.50	0.060
79-01-6	Trichloroethene	0.10	J	0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Client Sample ID: HD-COD-SW-16-0/1-0 Lab Sample ID: 410-27746-7

Matrix: Water Lab File ID: CF02S11.D

Analysis Method: 8260D Date Collected: 01/26/2021 10:10

Sample wt/vol: 25(mL) Date Analyzed: 02/03/2021 16:42

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.: 90352 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-01-4	Vinyl chloride	ND	^c	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)	98		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\10193\20210203-21161.b\CF02S11.D
Lims ID: 410-27746-A-7
Client ID: HD-COD-SW-16-0/1-0
Sample Type: Client
Inject. Date: 03-Feb-2021 16:42:30 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0021161-018
Operator ID: SRK36897 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 04-Feb-2021 11:03:34 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1626

First Level Reviewer: spositok Date: 04-Feb-2021 10:59:44

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
3 Chloromethane	50	2.075	2.081	-0.006	35	4923	0.0637	
5 Vinyl chloride	62		2.190				ND	
6 Bromomethane	94		2.501				ND	
7 Chloroethane	64		2.574				ND	7
14 1,1-Dichloroethene	96		3.385				ND	7
16 Acetone	43	3.446	3.422	0.024	90	15774	1.93	
20 Carbon disulfide	76		3.666				ND	7
24 Methylene Chloride	84		4.019				ND	7
* 25 t-Butyl alcohol-d10 (IS)	65	4.056	4.056	0.000	0	192740	50.0	
28 Methyl tert-butyl ether	73		4.403				ND	7
29 trans-1,2-Dichloroethene	96		4.409				ND	
32 1,1-Dichloroethane	63		5.074				ND	
36 2-Butanone (MEK)	43		5.885				ND	
37 cis-1,2-Dichloroethene	96	5.927	5.915	0.012	78	5720	0.0919	
44 Chlorobromomethane	128		6.251				ND	
46 Chloroform	83		6.403				ND	7
$ 47 Dibromofluoromethane (Surr)	113	6.629	6.622	0.007	94	472749	9.80	
48 1,1,1-Trichloroethane	97		6.629				ND	
50 Carbon tetrachloride	117		6.830				ND	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.080	7.080	0.000	0	101515	10.3	
54 Benzene	78		7.104				ND	7
55 1,2-Dichloroethane	62		7.177				ND	7
* 57 Fluorobenzene (IS)	96	7.519	7.513	0.006	99	2030778	10.0	
60 Trichloroethene	95	8.006	7.994	0.012	92	5991	0.0996	
62 1,2-Dichloropropane	63		8.336				ND	
67 Dichlorobromomethane	83		8.689				ND	
72 cis-1,3-Dichloropropene	75		9.250				ND	
73 4-Methyl-2-pentanone (MIBK)	43		9.439				ND	7
$ 74 Toluene-d8 (Surr)	98	9.567	9.567	0.000	93	2022776	10.0	
75 Toluene	92	9.646	9.646	0.000	95	5186	0.0342	
76 trans-1,3-Dichloropropene	75		9.921				ND	7
79 1,1,2-Trichloroethane	97		10.128				ND	

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
	80 Tetrachloroethene	166	10.213	10.207	0.006	88	3552	0.0525	
	82 2-Hexanone	43		10.353				ND	7
	83 Chlorodibromomethane	129		10.506				ND	
	84 Ethylene Dibromide	107		10.616				ND	
*	85 Chlorobenzene-d5 (IS)	117	11.061	11.061	0.000	85	1542718	10.0	
	87 Chlorobenzene	112		11.085				ND	
	89 1,1,1,2-Tetrachloroethane	131		11.170				ND	
	90 Ethylbenzene	91		11.176				ND	7
S	88 Xylenes, Total	106		11.245				ND	7
	91 m-Xylene & p-Xylene	106		11.292				ND	7
	92 o-Xylene	106		11.628				ND	7
	93 Styrene	104		11.646				ND	7
	94 Bromoform	173		11.804				ND	7
$	98 4-Bromofluorobenzene (Surr)	95	12.079	12.079	0.000	93	730280	9.64	
	99 1,1,2,2-Tetrachloroethane	83		12.188				ND	
*	113 1,4-Dichlorobenzene-d4	152	12.969	12.969	0.000	94	828619	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

MSV_HP25_ISSS_00022 Amount Added: 1.00 Units: uL Run Reagent

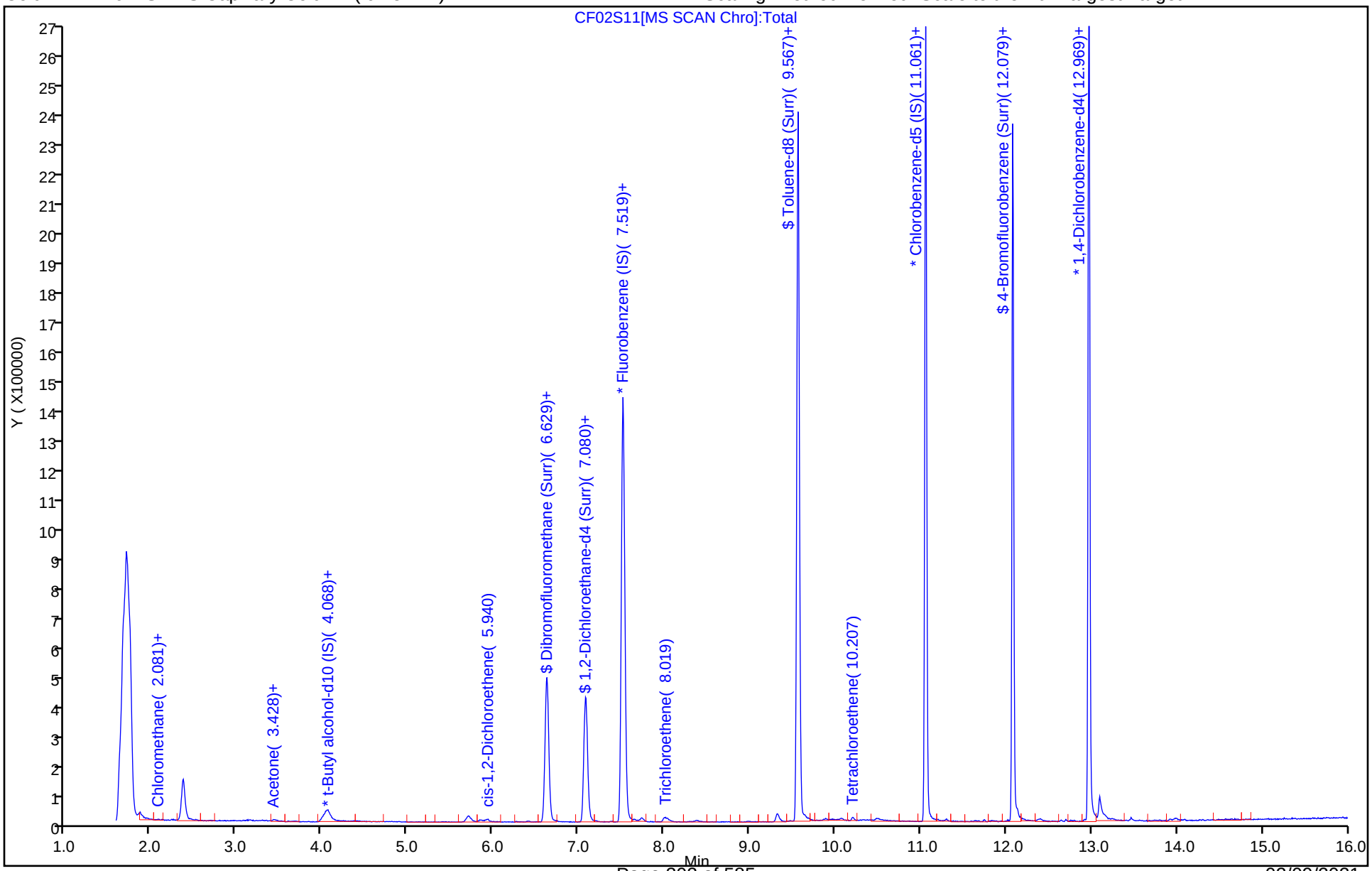
Report Date: 04-Feb-2021 11:07:50 Chrom Revision: 2.3 17-Jan-2021 00:24:10

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S11.D

Injection Date:	03-Feb-2021 16:42:30	Instrument ID:	10193	Operator ID:	SRK36897
Lims ID:	410-27746-A-7	Lab Sample ID:	410-27746-7	Worklist Smp#:	18
Client ID:	HD-COD-SW-16-0/1-0				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Env, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S11.D				
Lims ID:	410-27746-A-7				
Client ID:	HD-COD-SW-16-0/1-0				
Sample Type:	Client				
Inject. Date:	03-Feb-2021 16:42:30	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0021161-018				
Operator ID:	SRK36897	Instrument ID:	10193		
Method:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\MSV_10193_25mL.m				
Limit Group:	MSV - 8260C_D				
Last Update:	04-Feb-2021 11:03:34	Calib Date:	01-Sep-2020 19:09:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1626				

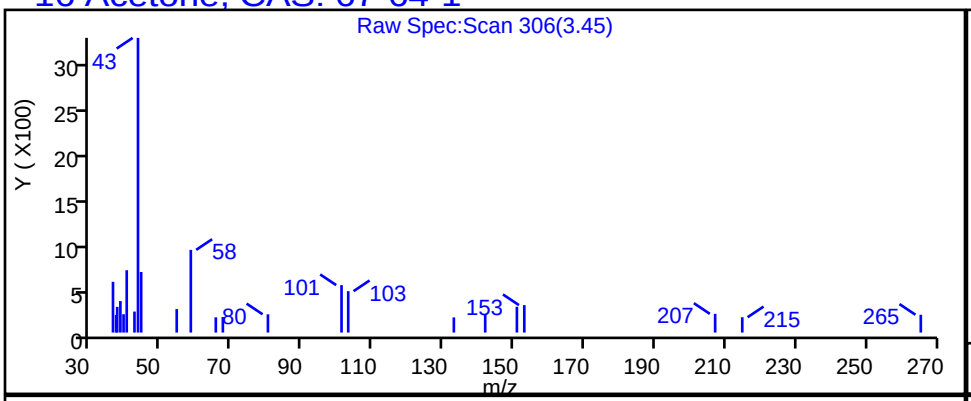
First Level Reviewer: spositok Date: 04-Feb-2021 10:59:44

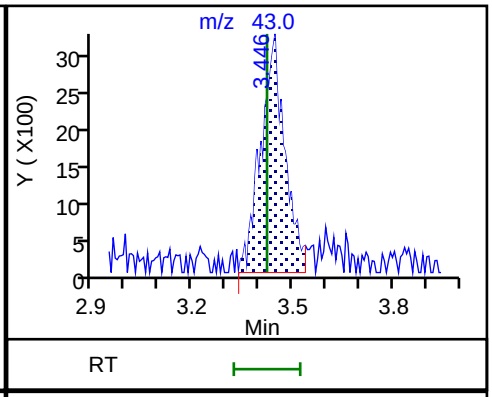
Compound	Amount Added	Amount Recovered	% Rec.
$ 47 Dibromofluoromethane (Surr)	10.0	9.80	97.97
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.3	103.26
$ 74 Toluene-d8 (Surr)	10.0	10.0	100.39
$ 98 4-Bromofluorobenzene (Surr)	10.0	9.64	96.43

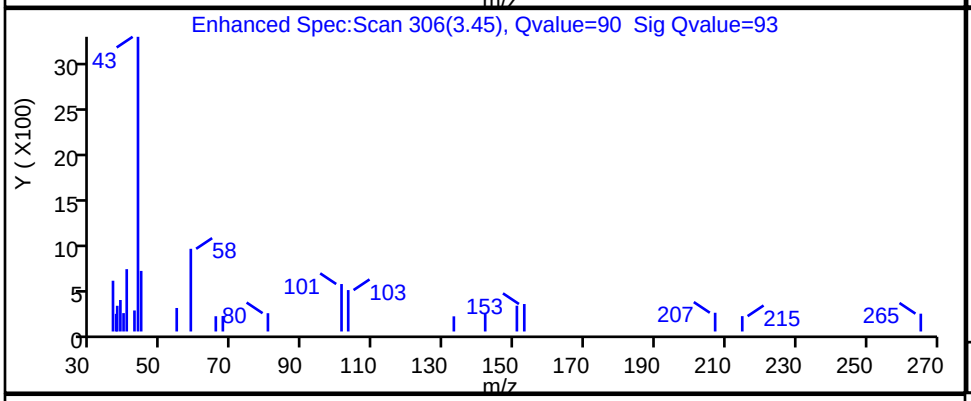
Eurofins Lancaster Laboratories Env, LLC

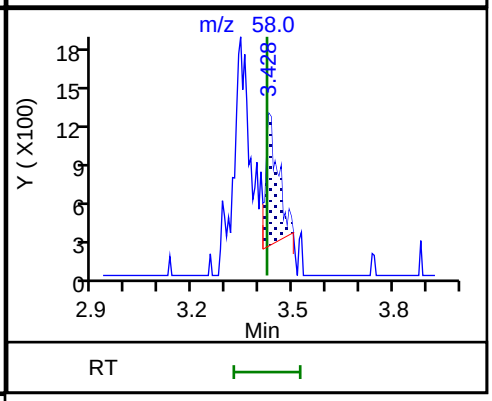
Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S11.D				
Injection Date:	03-Feb-2021 16:42:30	Instrument ID:	10193		
Lims ID:	410-27746-A-7	Lab Sample ID:	410-27746-7		
Client ID:	HD-COD-SW-16-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

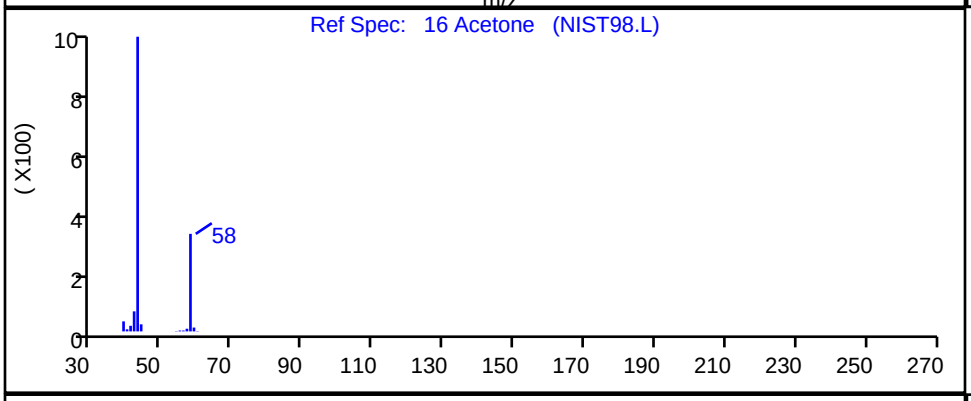
16 Acetone, CAS: 67-64-1

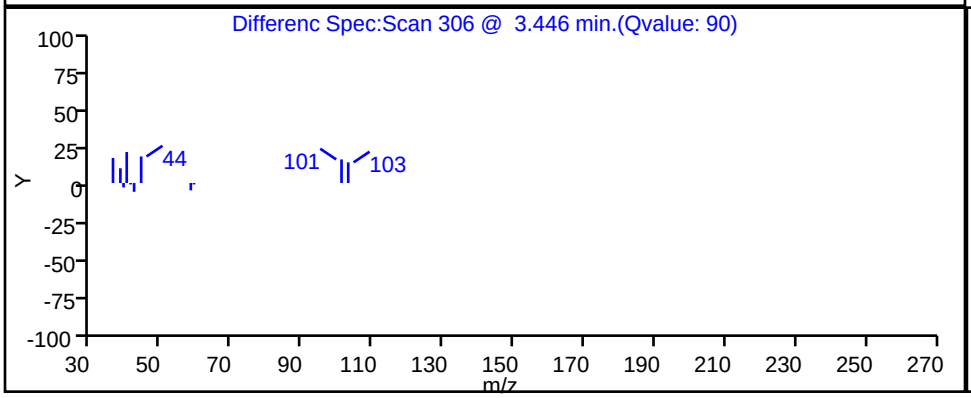


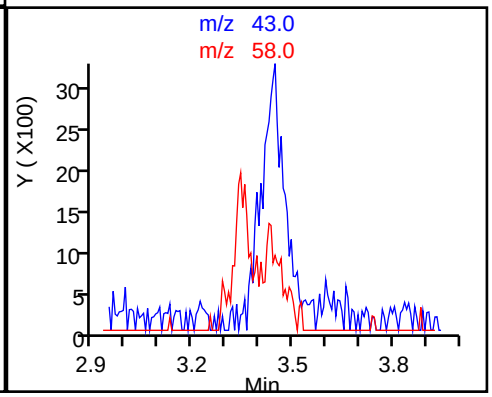








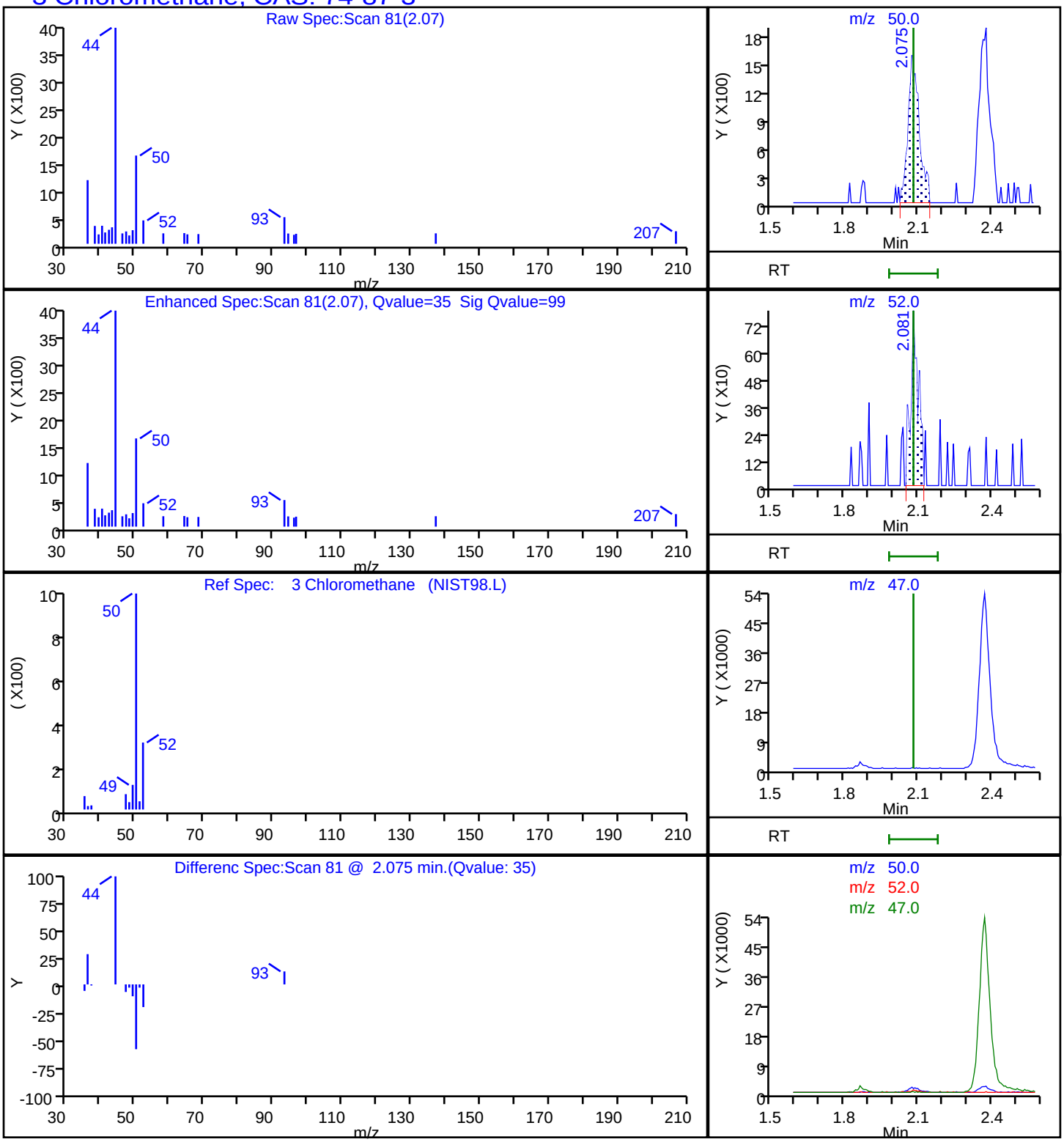




Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S11.D				
Injection Date:	03-Feb-2021 16:42:30	Instrument ID:	10193		
Lims ID:	410-27746-A-7	Lab Sample ID:	410-27746-7		
Client ID:	HD-COD-SW-16-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

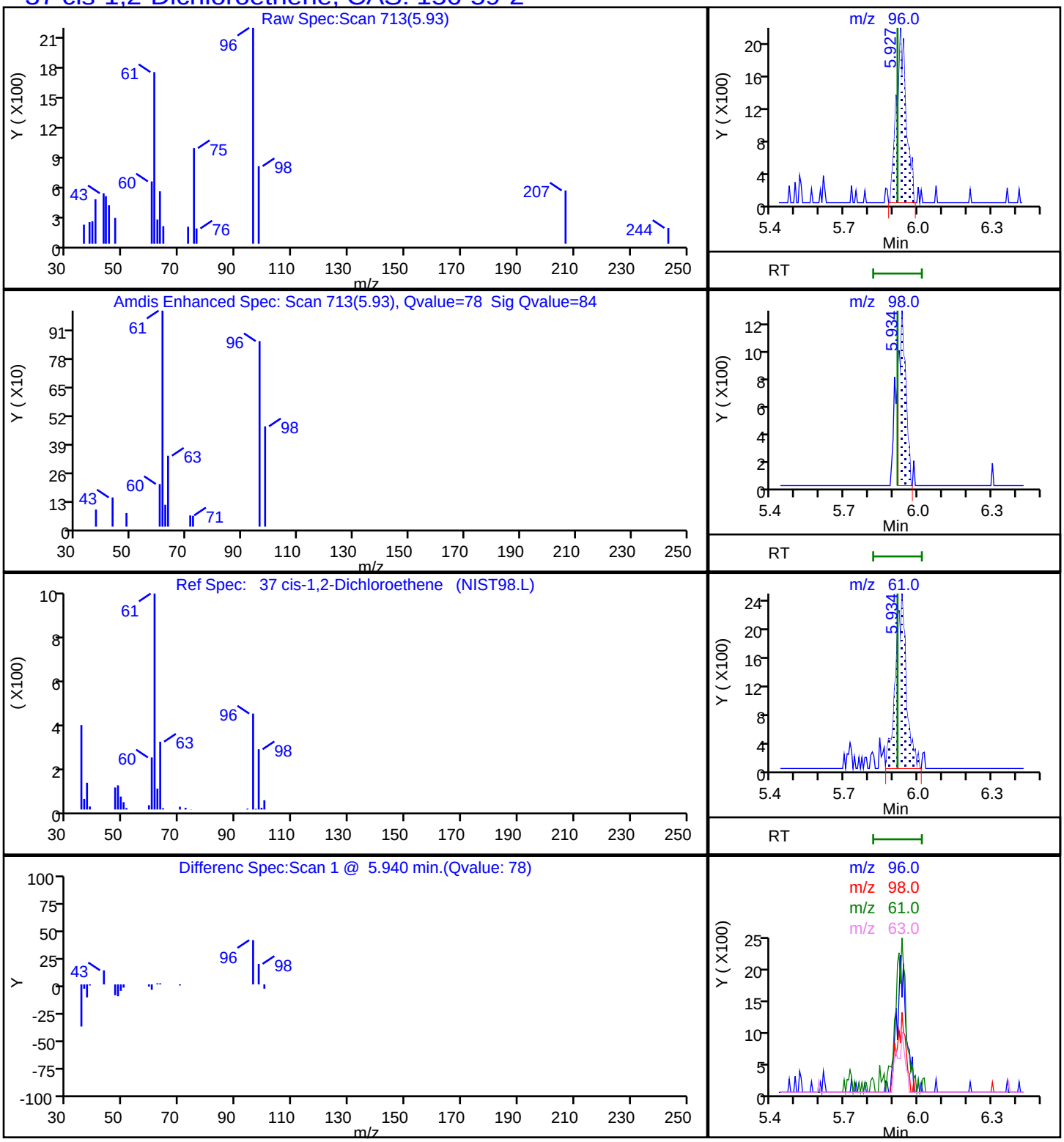
3 Chloromethane, CAS: 74-87-3



Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S11.D
Injection Date: 03-Feb-2021 16:42:30 Instrument ID: 10193
Lims ID: 410-27746-A-7 Lab Sample ID: 410-27746-7
Client ID: HD-COD-SW-16-0/1-0
Operator ID: SRK36897 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

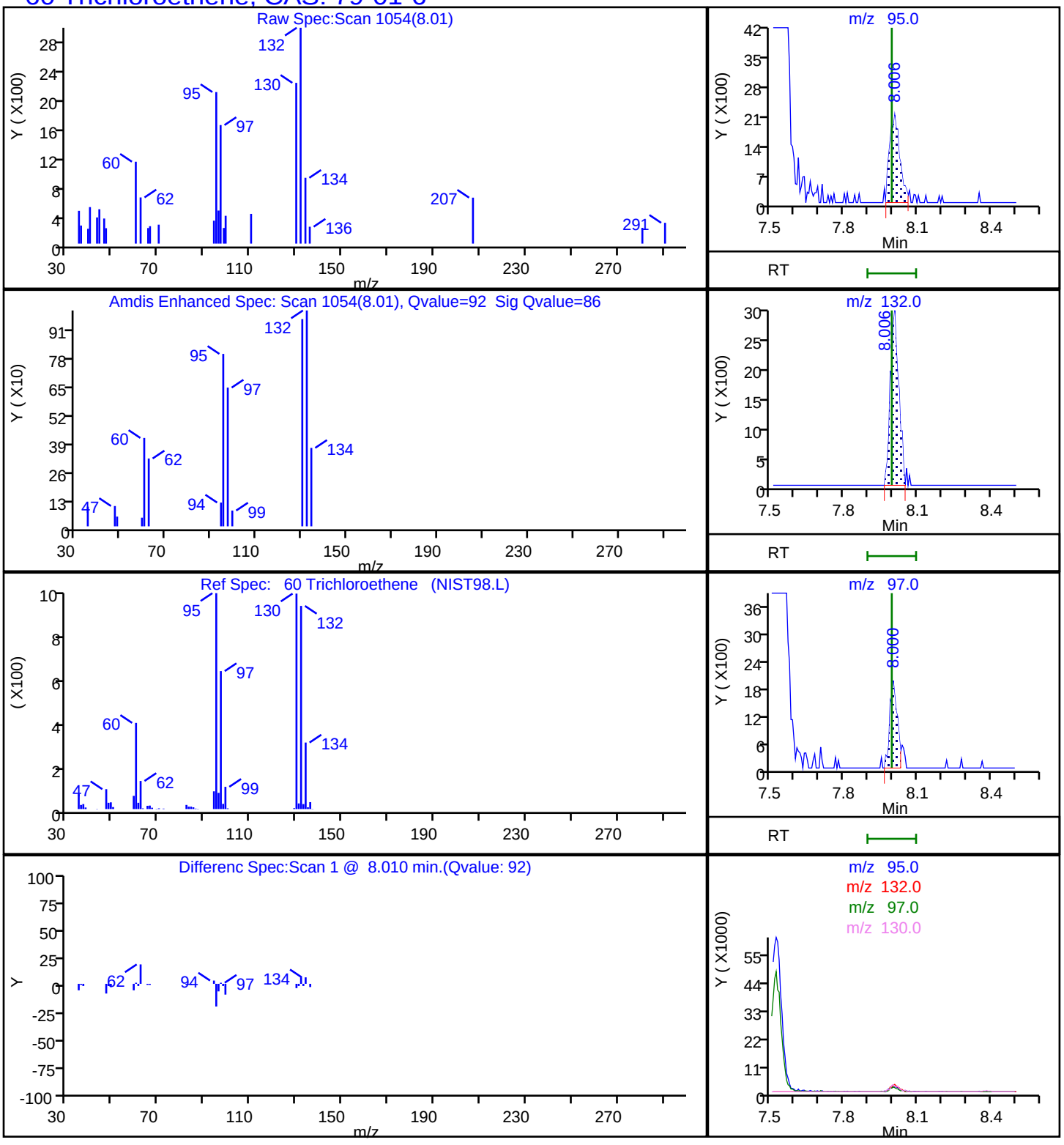
37 cis-1,2-Dichloroethene, CAS: 156-59-2



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S11.D				
Injection Date:	03-Feb-2021 16:42:30	Instrument ID:	10193		
Lims ID:	410-27746-A-7	Lab Sample ID:	410-27746-7		
Client ID:	HD-COD-SW-16-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

60 Trichloroethene, CAS: 79-01-6



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Client Sample ID: HD-COD-SW-17-0/1-0 Lab Sample ID: 410-27746-8

Matrix: Water Lab File ID: CF02S12.D

Analysis Method: 8260D Date Collected: 01/26/2021 10:20

Sample wt/vol: 25(mL) Date Analyzed: 02/03/2021 17:04

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 90352 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.50	0.070
71-55-6	1,1,1-Trichloroethane	0.12	J	0.50	0.060
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.50	0.070
79-00-5	1,1,2-Trichloroethane	ND		0.50	0.060
75-34-3	1,1-Dichloroethane	0.071	J	0.50	0.070
75-35-4	1,1-Dichloroethene	0.094	J	0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	ND		0.50	0.060
107-06-2	1,2-Dichloroethane	ND		0.50	0.050
78-87-5	1,2-Dichloropropane	ND		0.50	0.060
78-93-3	2-Butanone (MEK)	ND		5.0	0.60
591-78-6	2-Hexanone	ND		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70
67-64-1	Acetone	ND		5.0	0.90
71-43-2	Benzene	ND		0.50	0.050
74-97-5	Bromochloromethane	ND		0.50	0.050
75-27-4	Bromodichloromethane	ND		0.50	0.050
75-25-2	Bromoform	ND		1.0	0.30
74-83-9	Bromomethane	ND	^c	0.50	0.070
75-15-0	Carbon disulfide	ND		1.0	0.060
56-23-5	Carbon tetrachloride	ND		0.50	0.070
108-90-7	Chlorobenzene	ND		0.50	0.060
75-00-3	Chloroethane	ND	^c	0.50	0.070
67-66-3	Chloroform	0.24	J	0.50	0.090
74-87-3	Chloromethane	ND	^c	0.50	0.060
156-59-2	cis-1,2-Dichloroethene	0.81		0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	ND		0.50	0.050
124-48-1	Dibromochloromethane	ND		0.50	0.070
100-41-4	Ethylbenzene	ND		0.50	0.060
1634-04-4	Methyl tert-butyl ether	ND		0.50	0.050
75-09-2	Methylene Chloride	ND		0.50	0.070
100-42-5	Styrene	ND		0.50	0.050
127-18-4	Tetrachloroethene	3.3		0.50	0.060
108-88-3	Toluene	ND		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	ND		0.50	0.060
10061-02-6	trans-1,3-Dichloropropene	ND		0.50	0.060
79-01-6	Trichloroethene	1.2		0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Client Sample ID: HD-COD-SW-17-0/1-0 Lab Sample ID: 410-27746-8

Matrix: Water Lab File ID: CF02S12.D

Analysis Method: 8260D Date Collected: 01/26/2021 10:20

Sample wt/vol: 25(mL) Date Analyzed: 02/03/2021 17:04

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 90352 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-01-4	Vinyl chloride	ND	^c	0.50	0.10
1330-20-7	Xylenes, Total	ND		1.0	0.15

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	107		80-120
460-00-4	4-Bromofluorobenzene (Surr)	97		80-120
1868-53-7	Dibromofluoromethane (Surr)	99		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\10193\20210203-21161.b\CF02S12.D
Lims ID: 410-27746-A-8
Client ID: HD-COD-SW-17-0/1-0
Sample Type: Client
Inject. Date: 03-Feb-2021 17:04:30 ALS Bottle#: 18 Worklist Smp#: 19
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0021161-019
Operator ID: SRK36897 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 04-Feb-2021 11:03:34 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1626

First Level Reviewer: spositok Date: 04-Feb-2021 11:00:24

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
3 Chloromethane	50		2.081				ND	U
5 Vinyl chloride	62		2.190				ND	7
6 Bromomethane	94		2.501				ND	
7 Chloroethane	64		2.574				ND	7
14 1,1-Dichloroethene	96	3.379	3.385	-0.006	91	4462	0.0945	
16 Acetone	43		3.422				ND	U
20 Carbon disulfide	76		3.666				ND	7
24 Methylene Chloride	84		4.019				ND	
* 25 t-Butyl alcohol-d10 (IS)	65	4.044	4.056	-0.012	0	194212	50.0	
28 Methyl tert-butyl ether	73		4.403				ND	U
29 trans-1,2-Dichloroethene	96		4.409				ND	
32 1,1-Dichloroethane	63	5.080	5.074	0.006	27	7222	0.0710	
36 2-Butanone (MEK)	43		5.885				ND	
37 cis-1,2-Dichloroethene	96	5.921	5.915	0.006	80	50885	0.8127	
44 Chlorobromomethane	128		6.251				ND	
46 Chloroform	83	6.409	6.403	0.006	94	24586	0.2441	
$ 47 Dibromofluoromethane (Surr)	113	6.623	6.622	0.000	94	480398	9.89	
48 1,1,1-Trichloroethane	97	6.629	6.629	0.000	36	11218	0.1236	
50 Carbon tetrachloride	117		6.830				ND	7
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.074	7.080	-0.006	0	105676	10.7	
54 Benzene	78		7.104				ND	7
55 1,2-Dichloroethane	62		7.177				ND	7
* 57 Fluorobenzene (IS)	96	7.519	7.513	0.006	99	2043240	10.0	
60 Trichloroethene	95	8.000	7.994	0.006	97	71363	1.18	
62 1,2-Dichloropropane	63		8.336				ND	
67 Dichlorobromomethane	83		8.689				ND	7
72 cis-1,3-Dichloropropene	75		9.250				ND	
73 4-Methyl-2-pentanone (MIBK)	43		9.439				ND	7
$ 74 Toluene-d8 (Surr)	98	9.567	9.567	0.000	94	2038215	10.0	
75 Toluene	92		9.646				ND	U
76 trans-1,3-Dichloropropene	75		9.921				ND	7
79 1,1,2-Trichloroethane	97		10.128				ND	7

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
	80 Tetrachloroethene	166	10.207	10.207	0.000	98	222253	3.26	
	82 2-Hexanone	43		10.353				ND	7
	83 Chlorodibromomethane	129		10.506				ND	
	84 Ethylene Dibromide	107		10.616				ND	
*	85 Chlorobenzene-d5 (IS)	117	11.061	11.061	0.000	85	1554151	10.0	
	87 Chlorobenzene	112		11.085				ND	7
	89 1,1,1,2-Tetrachloroethane	131		11.170				ND	7
	90 Ethylbenzene	91		11.176				ND	
S	88 Xylenes, Total	106		11.245				ND	7
	91 m-Xylene & p-Xylene	106		11.292				ND	7
	92 o-Xylene	106		11.628				ND	7
	93 Styrene	104		11.646				ND	
	94 Bromoform	173		11.804				ND	
$	98 4-Bromofluorobenzene (Surr)	95	12.079	12.079	0.000	92	736695	9.66	
	99 1,1,2,2-Tetrachloroethane	83		12.188				ND	
*	113 1,4-Dichlorobenzene-d4	152	12.969	12.969	0.000	94	814780	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

MSV_HP25_ISSS_00022 Amount Added: 1.00 Units: uL Run Reagent

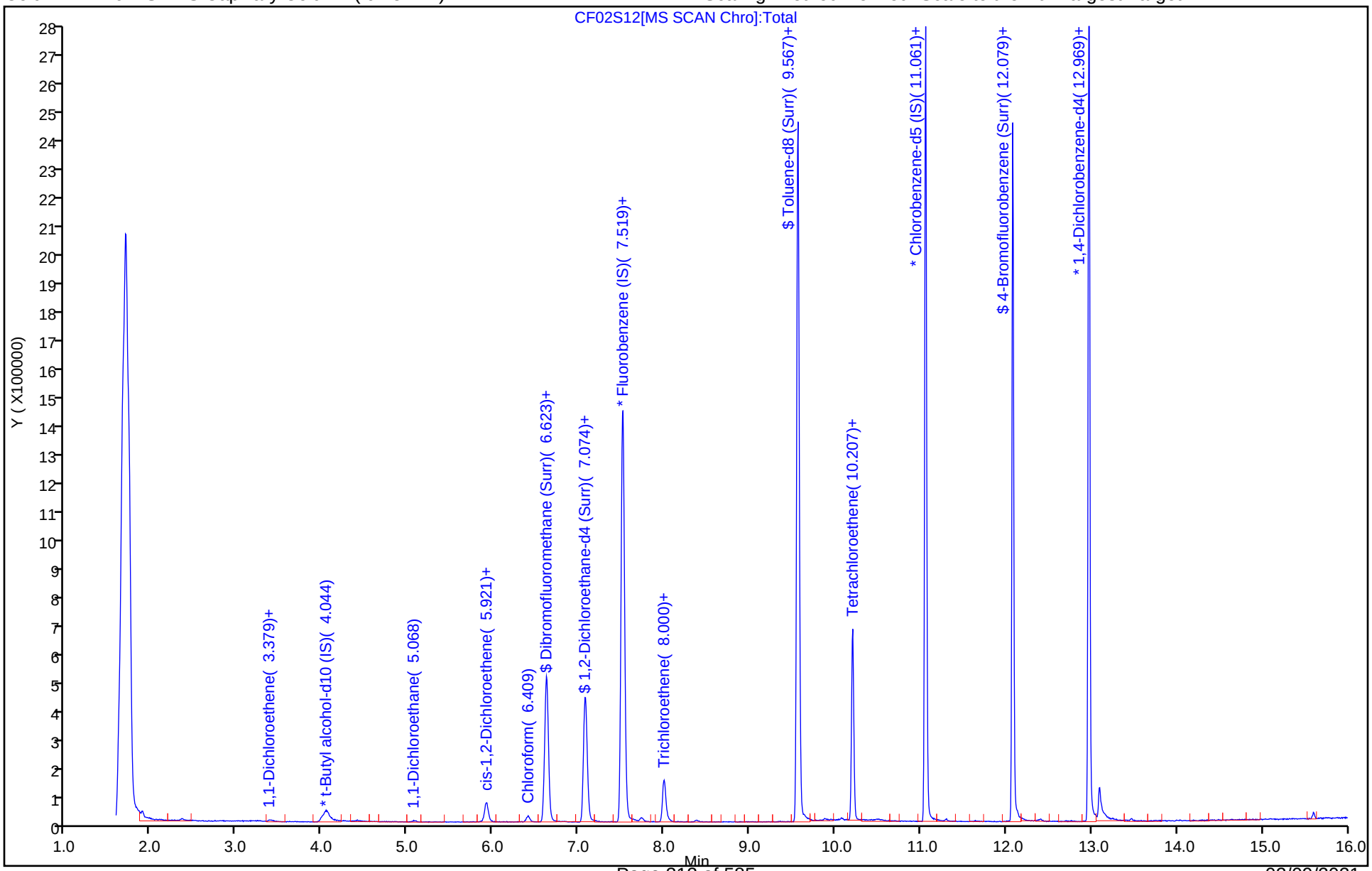
Report Date: 04-Feb-2021 11:07:52 Chrom Revision: 2.3 17-Jan-2021 00:24:10

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S12.D

Injection Date:	03-Feb-2021 17:04:30	Instrument ID:	10193	Operator ID:	SRK36897
Lims ID:	410-27746-A-8	Lab Sample ID:	410-27746-8	Worklist Smp#:	19
Client ID:	HD-COD-SW-17-0/1-0				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Env, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S12.D				
Lims ID:	410-27746-A-8				
Client ID:	HD-COD-SW-17-0/1-0				
Sample Type:	Client				
Inject. Date:	03-Feb-2021 17:04:30	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0021161-019				
Operator ID:	SRK36897	Instrument ID:	10193		
Method:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\MSV_10193_25mL.m				
Limit Group:	MSV - 8260C_D				
Last Update:	04-Feb-2021 11:03:34	Calib Date:	01-Sep-2020 19:09:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1626				

First Level Reviewer: spositok Date: 04-Feb-2021 11:00:24

Compound	Amount Added	Amount Recovered	% Rec.
$ 47 Dibromofluoromethane (Surr)	10.0	9.89	98.95
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.7	106.84
$ 74 Toluene-d8 (Surr)	10.0	10.0	100.41
$ 98 4-Bromofluorobenzene (Surr)	10.0	9.66	96.56

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S12.D

Injection Date: 03-Feb-2021 17:04:30 Instrument ID: 10193

Lims ID: 410-27746-A-8 Lab Sample ID: 410-27746-8

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

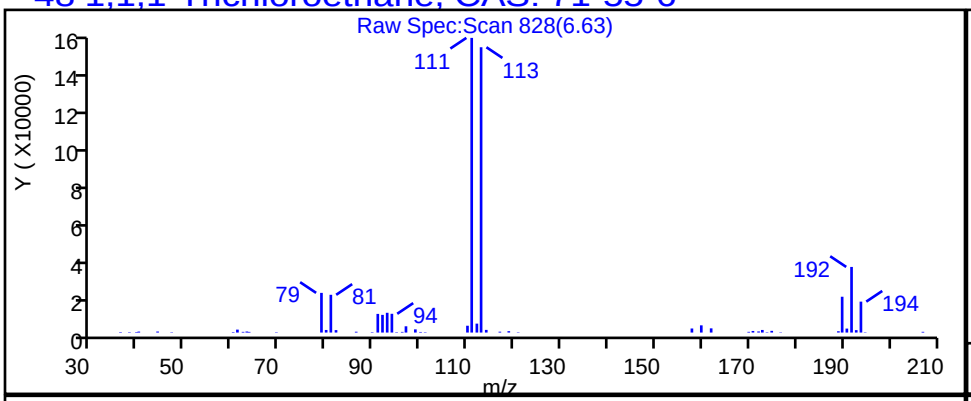
Operator ID: SRK36897 ALS Bottle#: 18 Worklist Smp#: 19

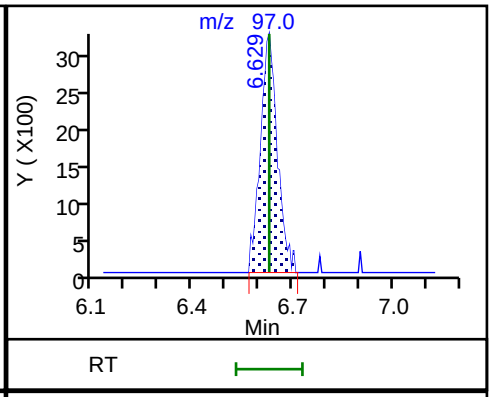
Purge Vol: 25.000 mL Dil. Factor: 1.0000

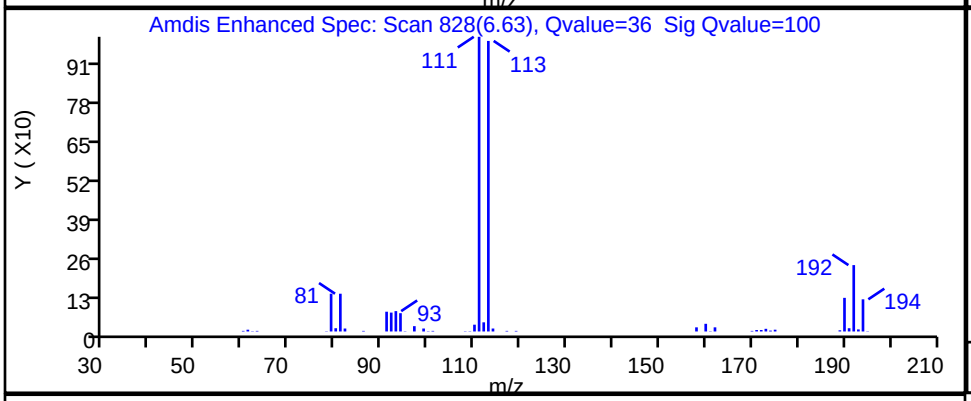
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D

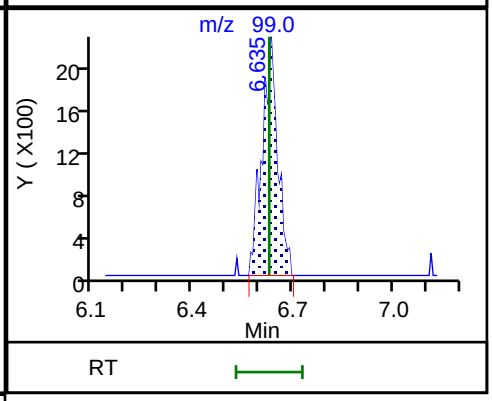
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

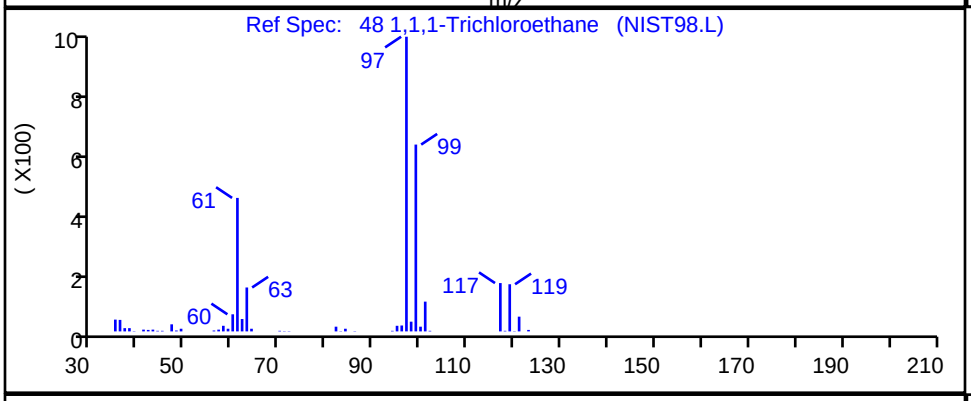
48 1,1,1-Trichloroethane, CAS: 71-55-6

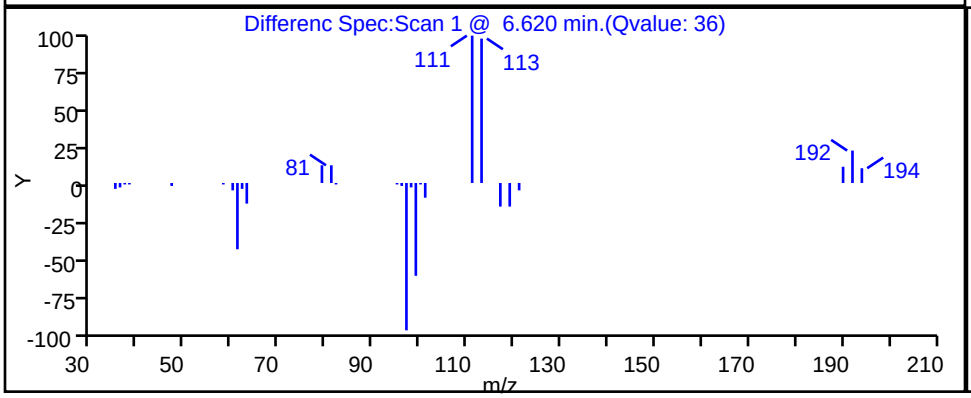


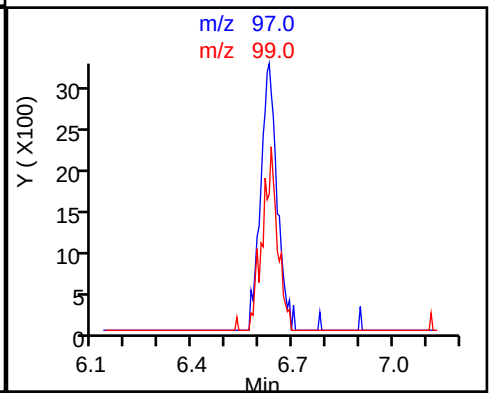








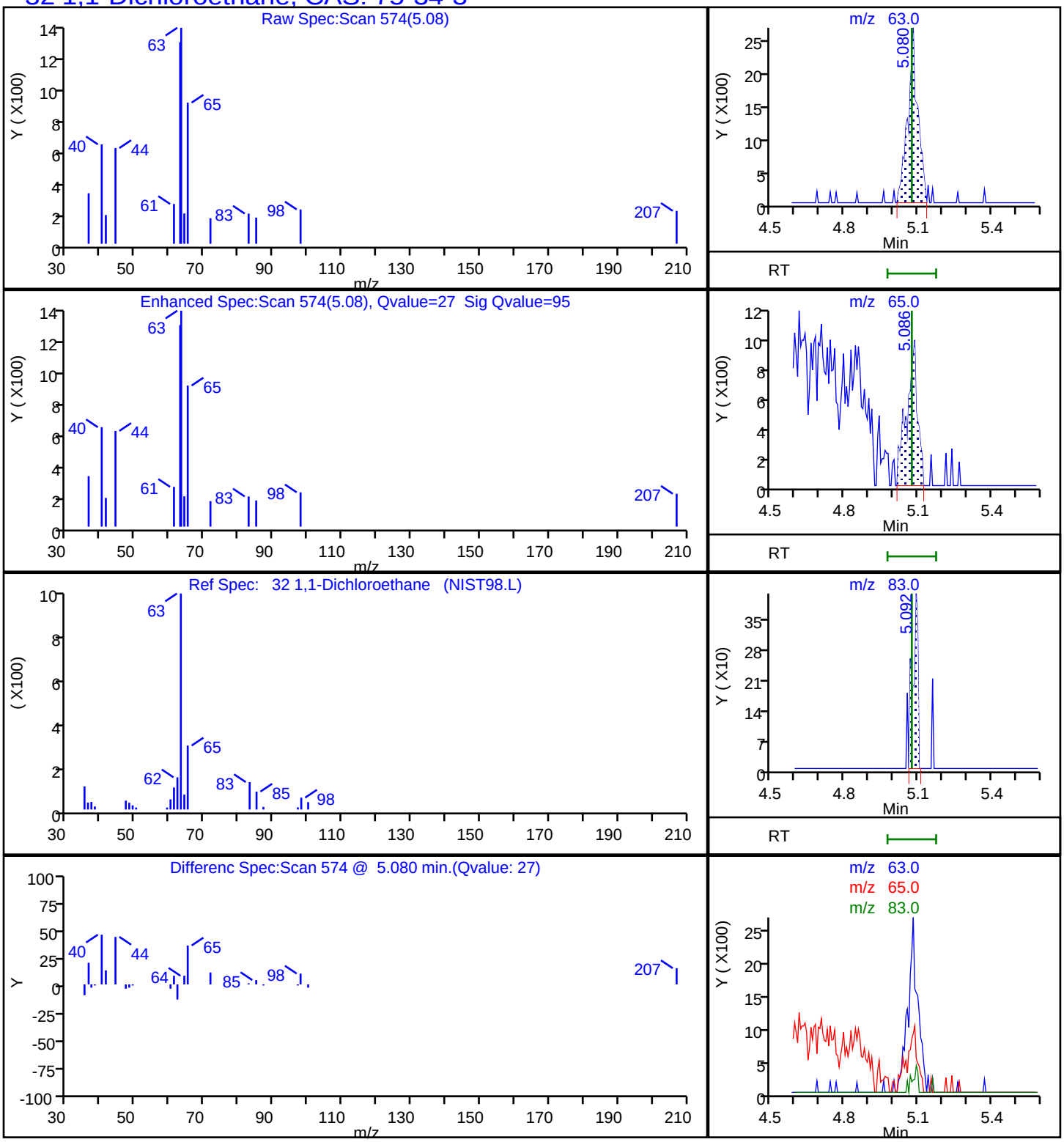




Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S12.D				
Injection Date:	03-Feb-2021 17:04:30	Instrument ID:	10193		
Lims ID:	410-27746-A-8	Lab Sample ID:	410-27746-8		
Client ID:	HD-COD-SW-17-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

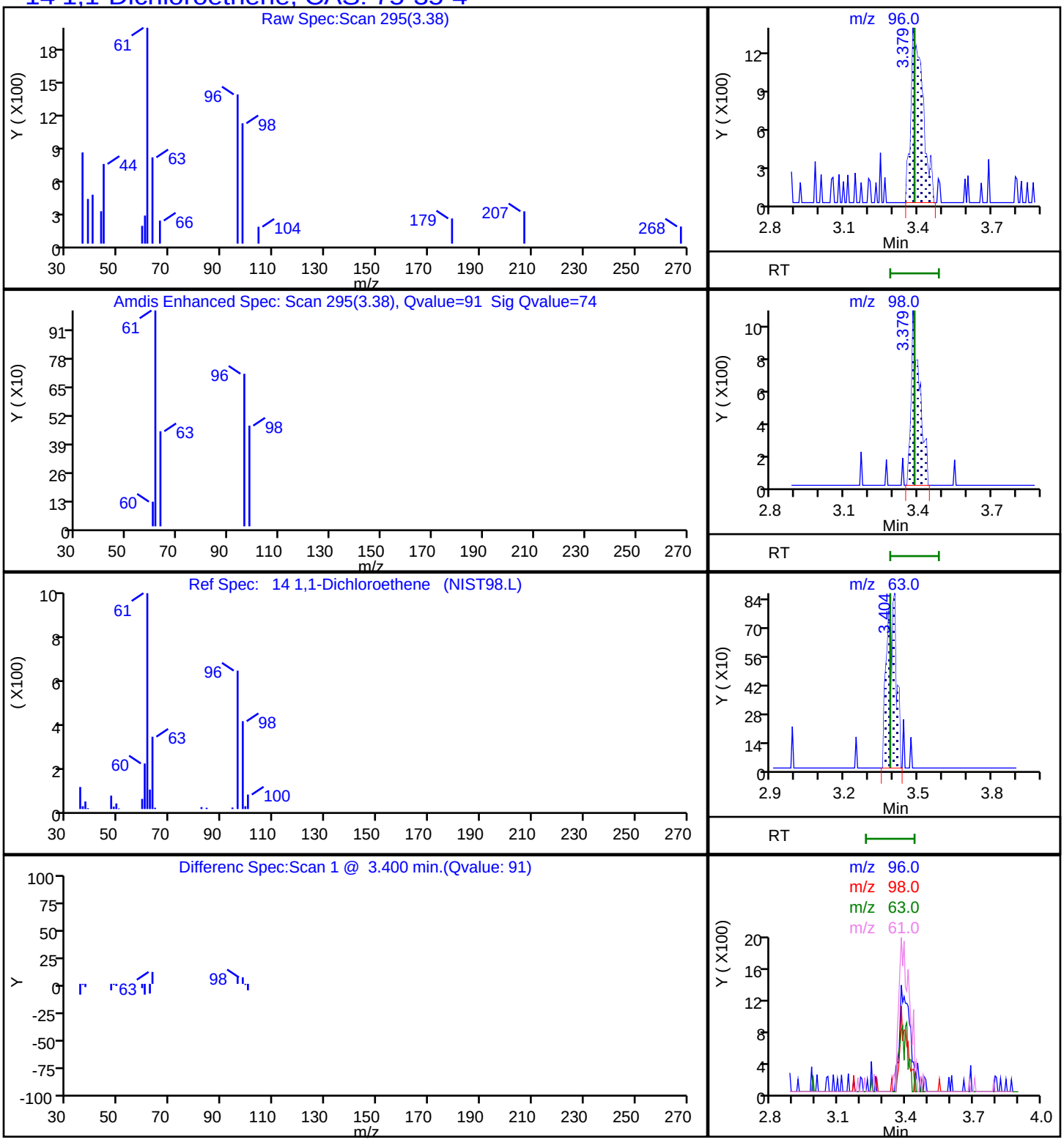
32 1,1-Dichloroethane, CAS: 75-34-3



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S12.D				
Injection Date:	03-Feb-2021 17:04:30	Instrument ID:	10193		
Lims ID:	410-27746-A-8	Lab Sample ID:	410-27746-8		
Client ID:	HD-COD-SW-17-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

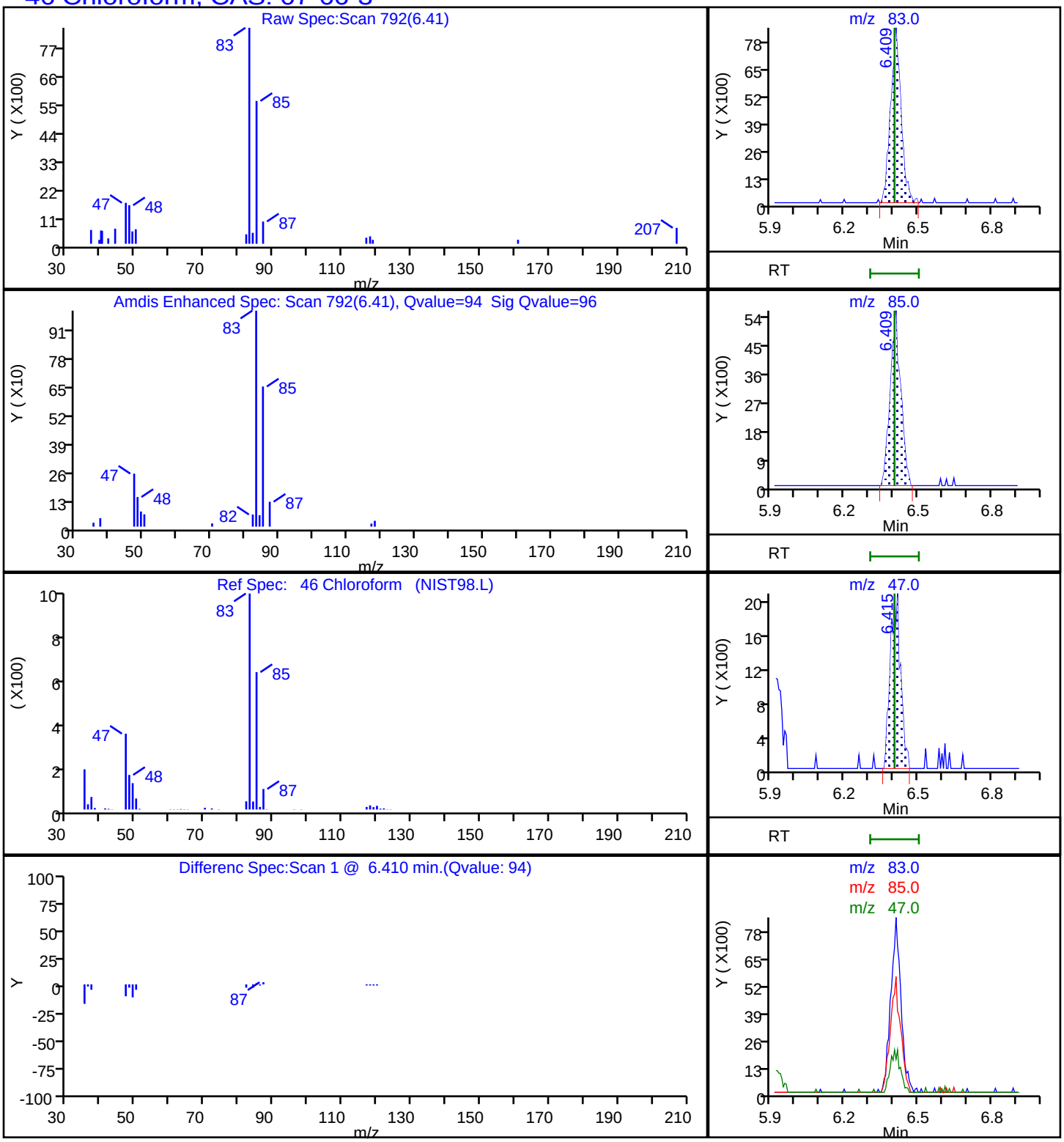
14 1,1-Dichloroethene, CAS: 75-35-4



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S12.D				
Injection Date:	03-Feb-2021 17:04:30	Instrument ID:	10193		
Lims ID:	410-27746-A-8	Lab Sample ID:	410-27746-8		
Client ID:	HD-COD-SW-17-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

46 Chloroform, CAS: 67-66-3



Report Date: 04-Feb-2021 11:07:52 Chrom Revision: 2.3 17-Jan-2021 00:24:10

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S12.D

Injection Date: 03-Feb-2021 17:04:30 Instrument ID: 10193

Lims ID: 410-27746-A-8 Lab Sample ID: 410-27746-8

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

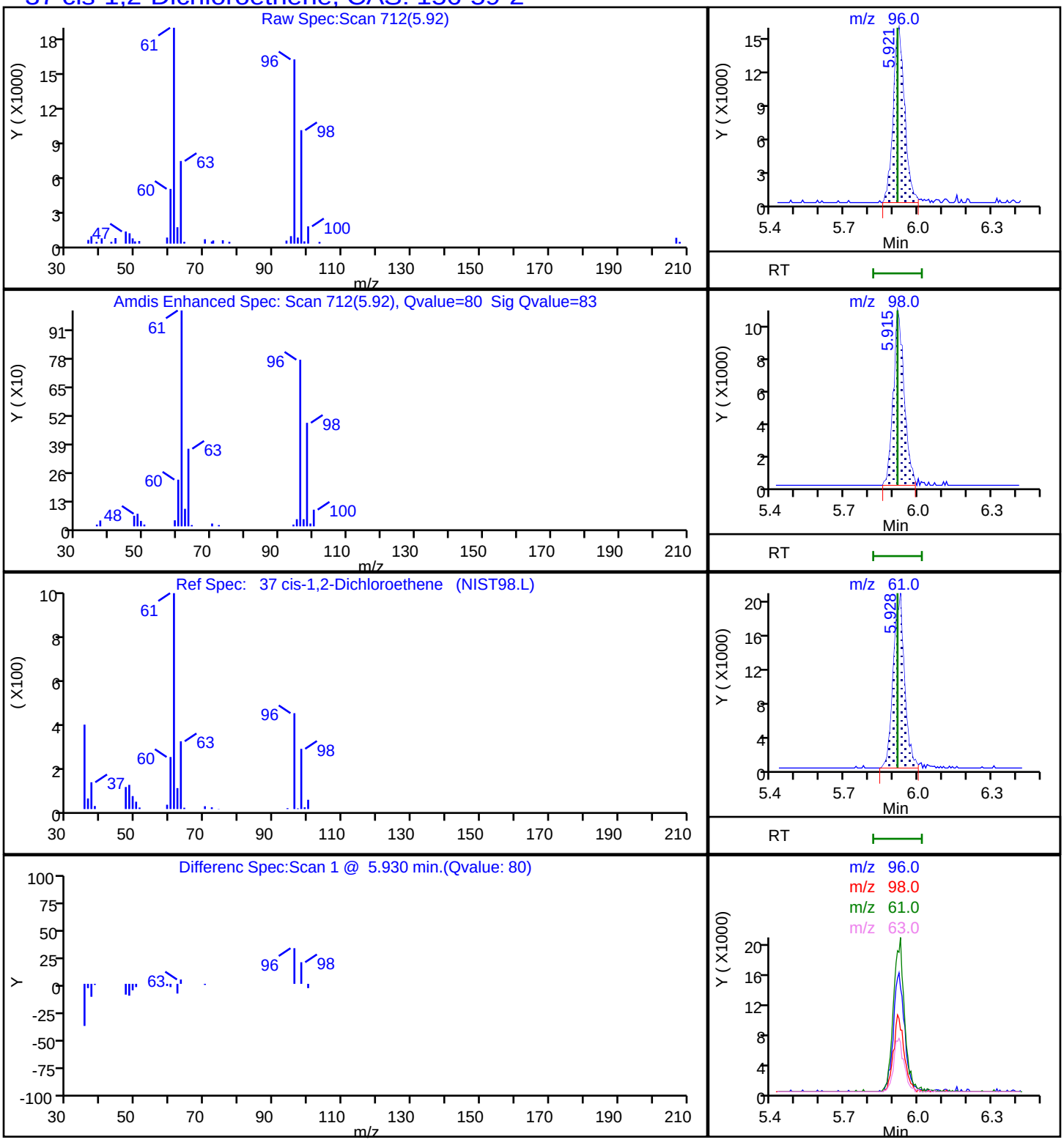
Operator ID: SRK36897 ALS Bottle#: 18 Worklist Smp#: 19

Purge Vol: 25.000 mL Dil. Factor: 1.0000

Method: MSV_10193_25mL Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

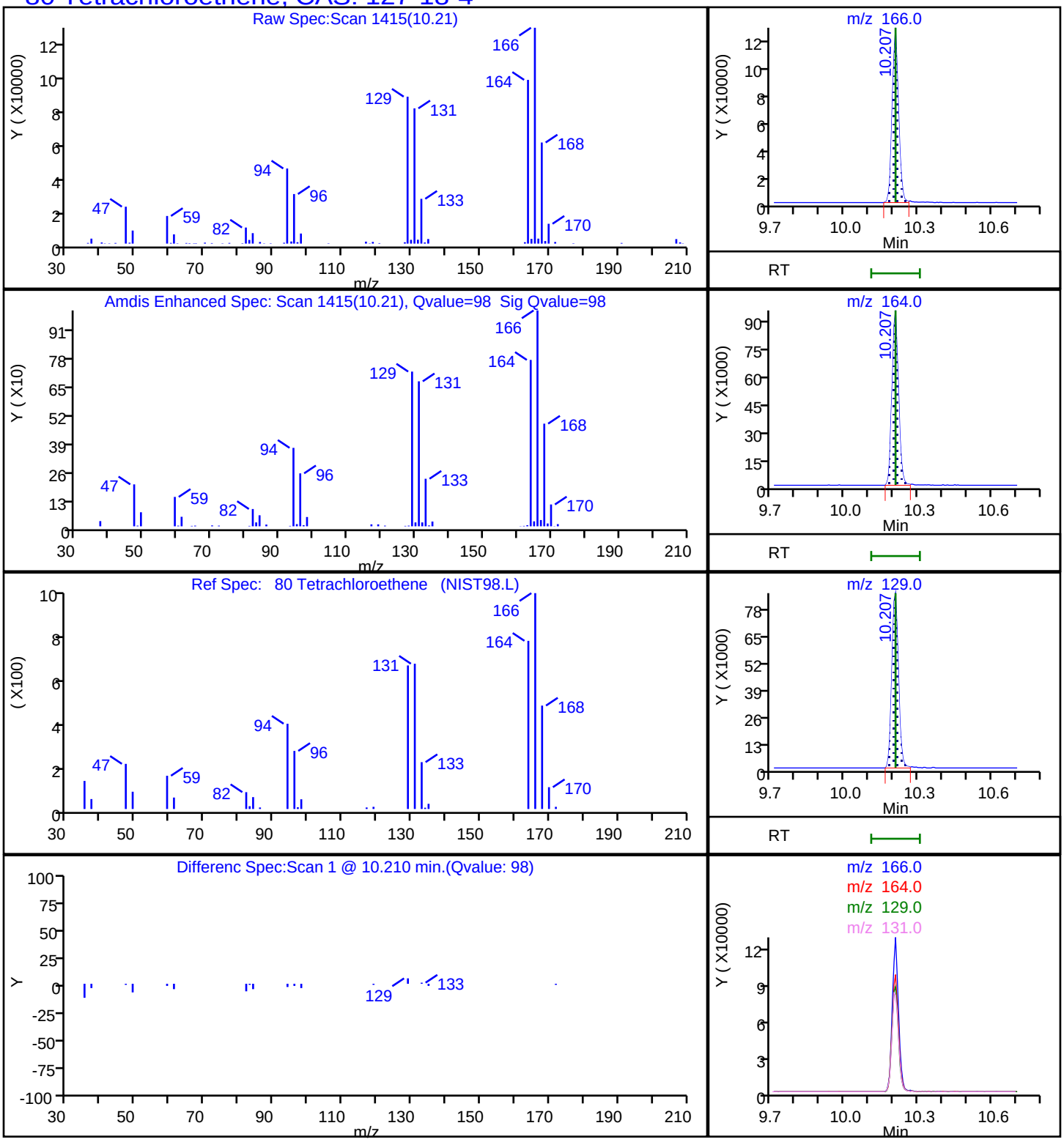
37 cis-1,2-Dichloroethene, CAS: 156-59-2



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S12.D				
Injection Date:	03-Feb-2021 17:04:30	Instrument ID:	10193		
Lims ID:	410-27746-A-8	Lab Sample ID:	410-27746-8		
Client ID:	HD-COD-SW-17-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

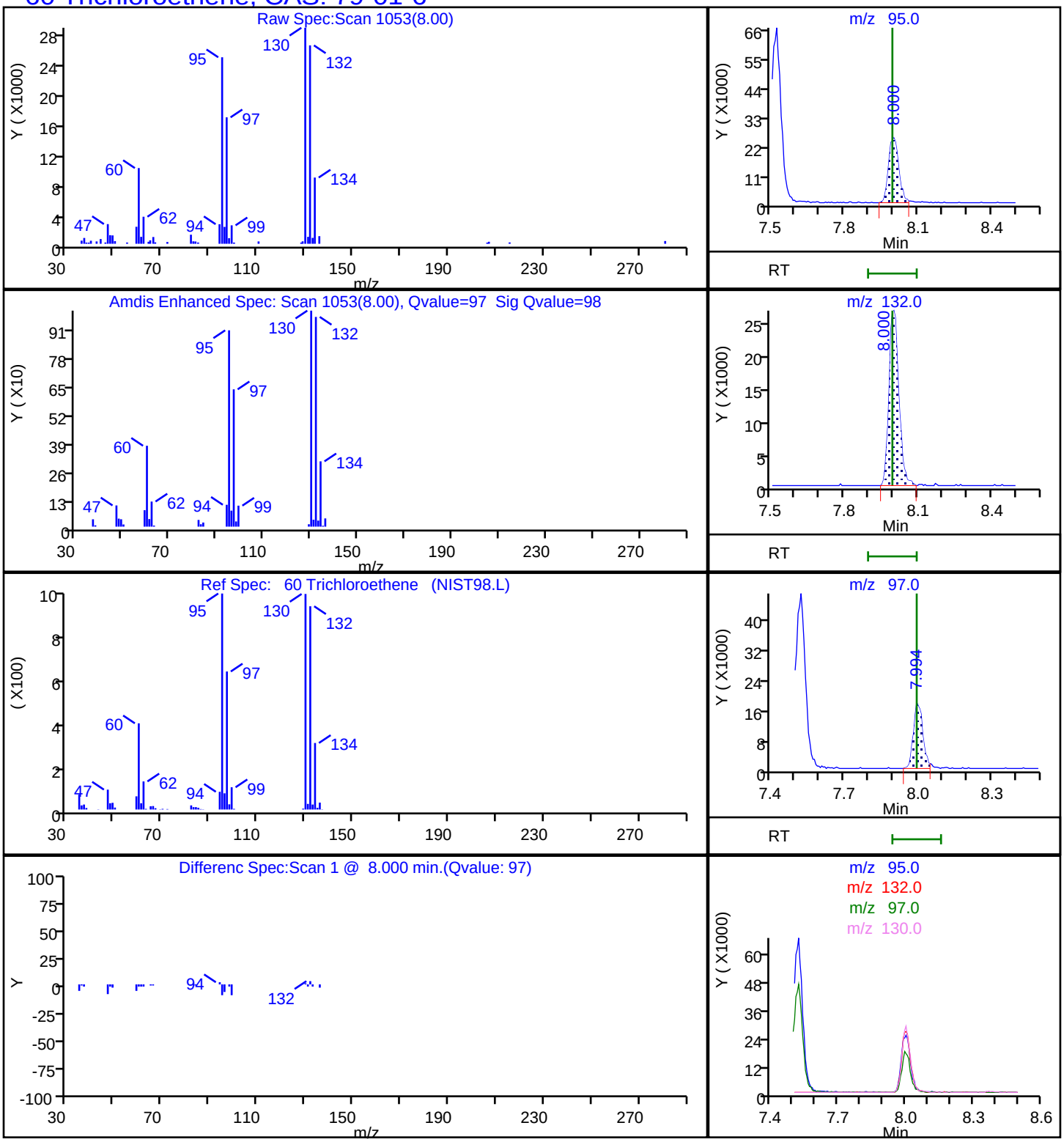
80 Tetrachloroethene, CAS: 127-18-4



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S12.D				
Injection Date:	03-Feb-2021 17:04:30	Instrument ID:	10193		
Lims ID:	410-27746-A-8	Lab Sample ID:	410-27746-8		
Client ID:	HD-COD-SW-17-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

60 Trichloroethene, CAS: 79-01-6



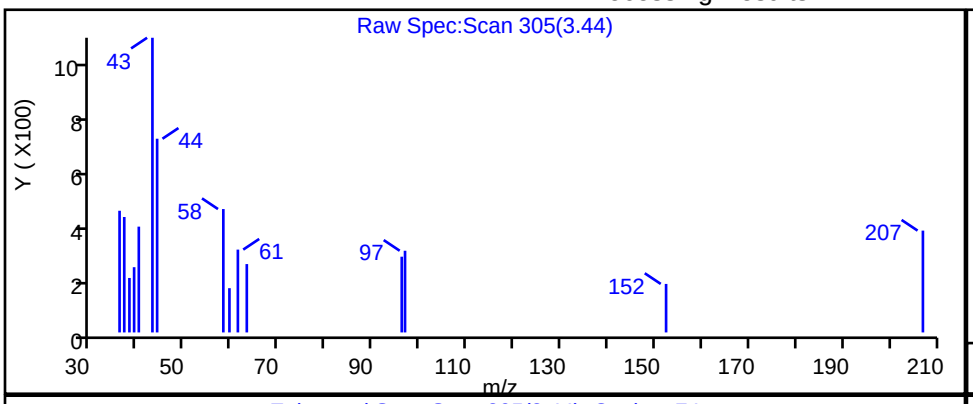
User Disabled Compound Report

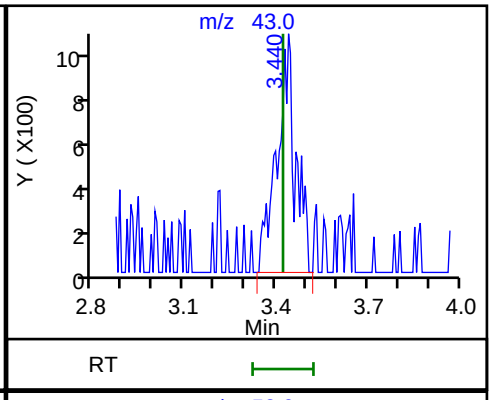
Eurofins Lancaster Laboratories Env, LLC

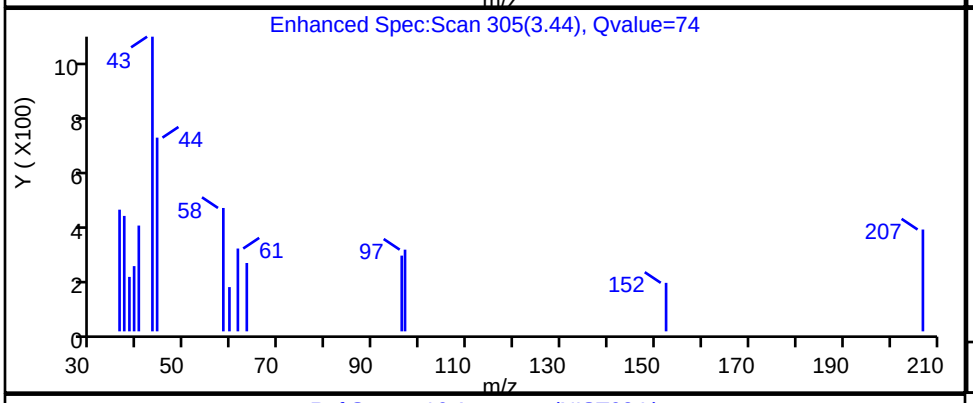
Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S12.D				
Injection Date:	03-Feb-2021 17:04:30	Instrument ID:	10193		
Lims ID:	410-27746-A-8	Lab Sample ID:	410-27746-8		
Client ID:	HD-COD-SW-17-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

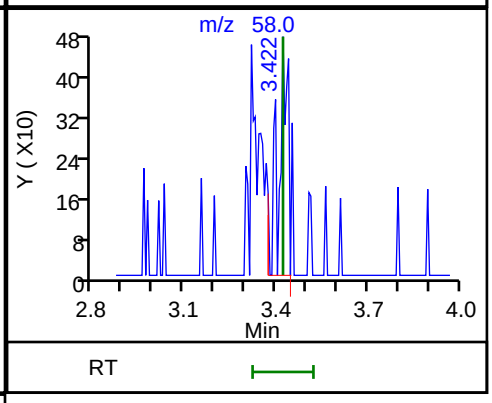
16 Acetone, CAS: 67-64-1

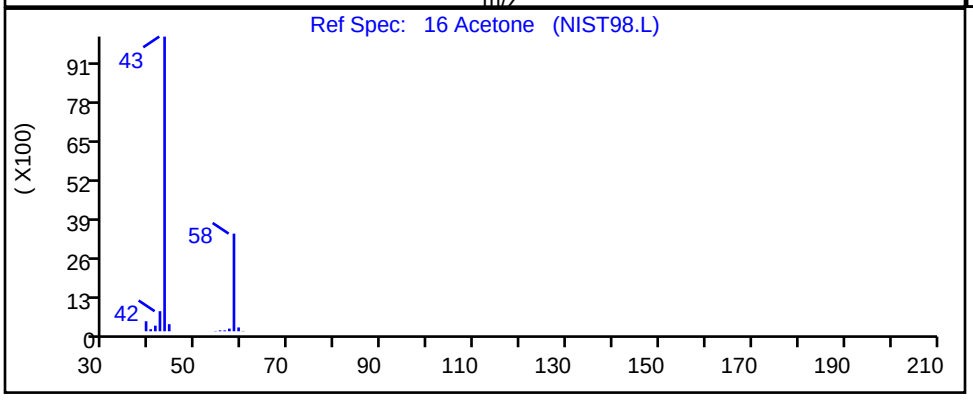
Processing Results











RT	Mass	Response	Amount
3.44	43.00	4365	0.528805
3.42	58.00	1019	

Reviewer: spositok, 04-Feb-2021 10:59:55

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

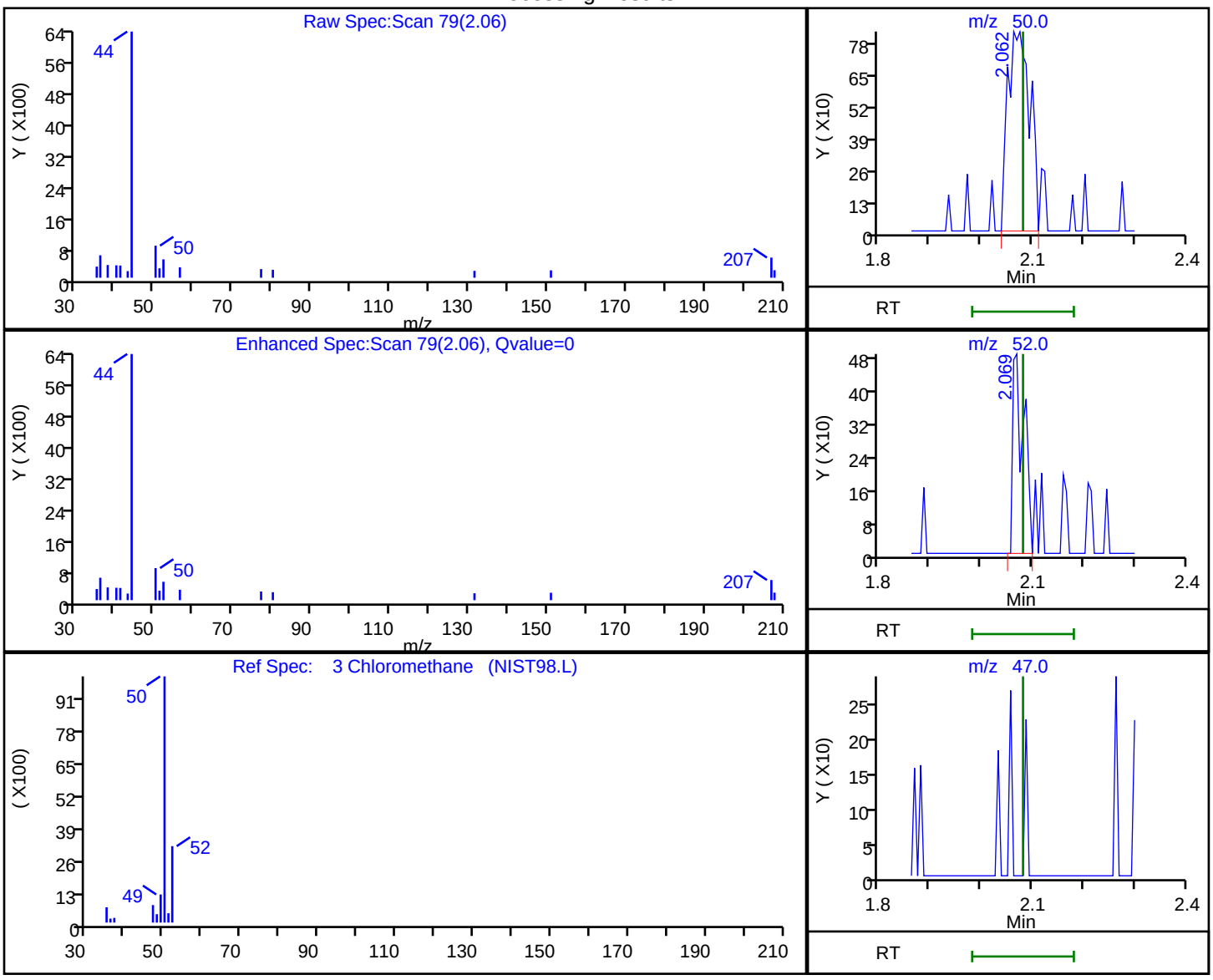
User Disabled Compound Report

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S12.D				
Injection Date:	03-Feb-2021 17:04:30	Instrument ID:	10193		
Lims ID:	410-27746-A-8	Lab Sample ID:	410-27746-8		
Client ID:	HD-COD-SW-17-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

3 Chloromethane, CAS: 74-87-3

Processing Results



RT	Mass	Response	Amount
2.06	50.00	2494	0.032086
2.07	52.00	737	
2.08	47.00	0	

Reviewer: spositok, 04-Feb-2021 10:59:50

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

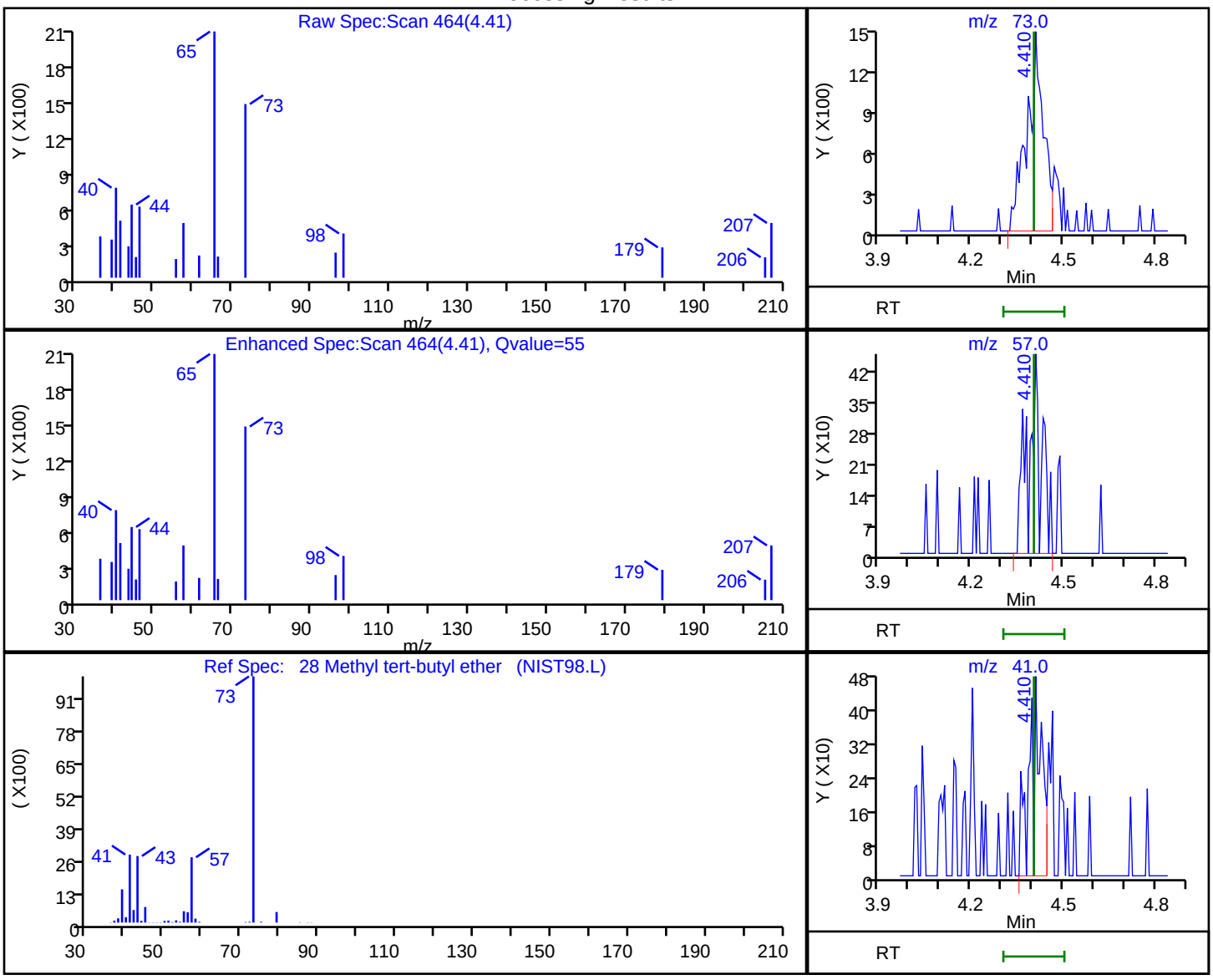
User Disabled Compound Report

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S12.D				
Injection Date:	03-Feb-2021 17:04:30	Instrument ID:	10193		
Lims ID:	410-27746-A-8	Lab Sample ID:	410-27746-8		
Client ID:	HD-COD-SW-17-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

28 Methyl tert-butyl ether, CAS: 1634-04-4

Processing Results



RT	Mass	Response	Amount
4.41	73.00	5441	0.035580
4.41	57.00	1419	
4.41	41.00	1316	

Reviewer: spositok, 04-Feb-2021 10:59:57

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

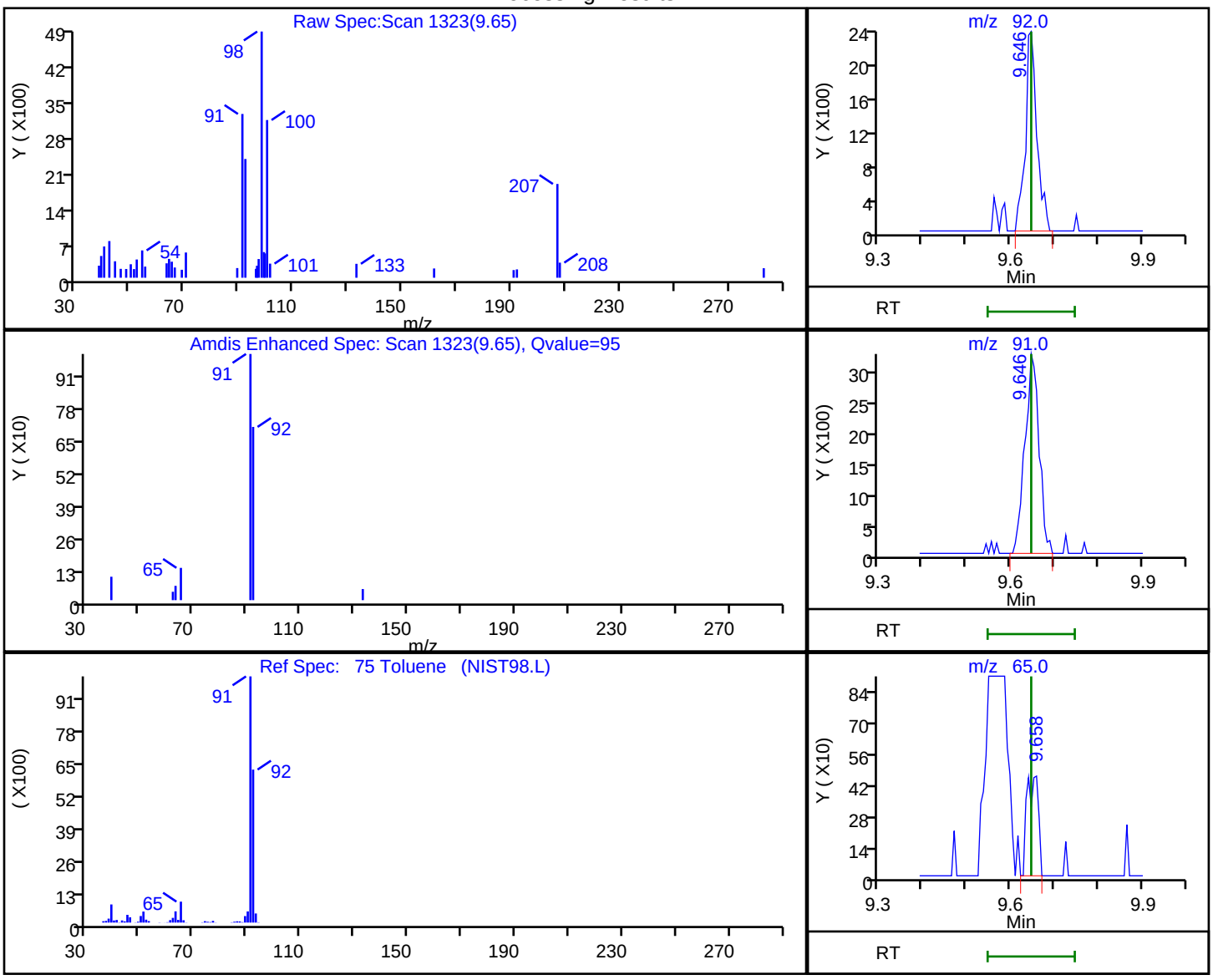
User Disabled Compound Report

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S12.D				
Injection Date:	03-Feb-2021 17:04:30	Instrument ID:	10193		
Lims ID:	410-27746-A-8	Lab Sample ID:	410-27746-8		
Client ID:	HD-COD-SW-17-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

75 Toluene, CAS: 108-88-3

Processing Results



RT	Mass	Response	Amount
9.65	92.00	4284	0.028062
9.65	91.00	7249	
9.66	65.00	832	
9.65	39.00	827	

Reviewer: spositok, 04-Feb-2021 11:00:17

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

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Client Sample ID: HD-COD-SW-26-0/1-0 Lab Sample ID: 410-27746-9

Matrix: Water Lab File ID: CF02S13.D

Analysis Method: 8260D Date Collected: 01/26/2021 11:10

Sample wt/vol: 25(mL) Date Analyzed: 02/03/2021 17:27

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.: 90352 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.50	0.070
71-55-6	1,1,1-Trichloroethane	ND		0.50	0.060
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.50	0.070
79-00-5	1,1,2-Trichloroethane	ND		0.50	0.060
75-34-3	1,1-Dichloroethane	ND		0.50	0.070
75-35-4	1,1-Dichloroethene	0.095	J	0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	ND		0.50	0.060
107-06-2	1,2-Dichloroethane	ND		0.50	0.050
78-87-5	1,2-Dichloropropane	ND		0.50	0.060
78-93-3	2-Butanone (MEK)	ND		5.0	0.60
591-78-6	2-Hexanone	ND		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70
67-64-1	Acetone	2.6	J	5.0	0.90
71-43-2	Benzene	ND		0.50	0.050
74-97-5	Bromochloromethane	ND		0.50	0.050
75-27-4	Bromodichloromethane	ND		0.50	0.050
75-25-2	Bromoform	ND		1.0	0.30
74-83-9	Bromomethane	ND	^c	0.50	0.070
75-15-0	Carbon disulfide	ND		1.0	0.060
56-23-5	Carbon tetrachloride	ND		0.50	0.070
108-90-7	Chlorobenzene	ND		0.50	0.060
75-00-3	Chloroethane	ND	^c	0.50	0.070
67-66-3	Chloroform	0.35	J	0.50	0.090
74-87-3	Chloromethane	ND	^c	0.50	0.060
156-59-2	cis-1,2-Dichloroethene	ND		0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	ND		0.50	0.050
124-48-1	Dibromochloromethane	ND		0.50	0.070
100-41-4	Ethylbenzene	ND		0.50	0.060
1634-04-4	Methyl tert-butyl ether	ND		0.50	0.050
75-09-2	Methylene Chloride	ND		0.50	0.070
100-42-5	Styrene	ND		0.50	0.050
127-18-4	Tetrachloroethene	2.0		0.50	0.060
108-88-3	Toluene	ND		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	ND		0.50	0.060
10061-02-6	trans-1,3-Dichloropropene	ND		0.50	0.060
79-01-6	Trichloroethene	0.13	J	0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Client Sample ID: HD-COD-SW-26-0/1-0 Lab Sample ID: 410-27746-9

Matrix: Water Lab File ID: CF02S13.D

Analysis Method: 8260D Date Collected: 01/26/2021 11:10

Sample wt/vol: 25(mL) Date Analyzed: 02/03/2021 17:27

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.: 90352 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-01-4	Vinyl chloride	ND	^c	0.50	0.10
1330-20-7	Xylenes, Total	ND		1.0	0.15

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	107		80-120
460-00-4	4-Bromofluorobenzene (Surr)	96		80-120
1868-53-7	Dibromofluoromethane (Surr)	98		80-120
2037-26-5	Toluene-d8 (Surr)	102		80-120

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S13.D
Lims ID: 410-27746-A-9
Client ID: HD-COD-SW-26-0/1-0
Sample Type: Client
Inject. Date: 03-Feb-2021 17:27:30 ALS Bottle#: 19 Worklist Smp#: 20
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0021161-020
Operator ID: SRK36897 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 04-Feb-2021 11:03:34 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1626

First Level Reviewer: spositok Date: 04-Feb-2021 11:01:08

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
3 Chloromethane	50		2.081				ND	
5 Vinyl chloride	62		2.190				ND	
6 Bromomethane	94		2.501				ND	7
7 Chloroethane	64		2.574				ND	7
14 1,1-Dichloroethene	96	3.379	3.385	-0.006	49	4507	0.0951	
16 Acetone	43	3.434	3.422	0.012	88	21279	2.58	
20 Carbon disulfide	76		3.666				ND	7
24 Methylene Chloride	84		4.019				ND	7
* 25 t-Butyl alcohol-d10 (IS)	65	4.050	4.056	-0.006	0	194113	50.0	
28 Methyl tert-butyl ether	73		4.403				ND	7
29 trans-1,2-Dichloroethene	96		4.409				ND	
32 1,1-Dichloroethane	63		5.074				ND	
36 2-Butanone (MEK)	43		5.885				ND	U
37 cis-1,2-Dichloroethene	96		5.915				ND	
44 Chlorobromomethane	128		6.251				ND	
46 Chloroform	83	6.409	6.403	0.006	93	35686	0.3530	
$ 47 Dibromofluoromethane (Surr)	113	6.622	6.622	0.000	94	477127	9.79	
48 1,1,1-Trichloroethane	97		6.629				ND	7
50 Carbon tetrachloride	117		6.830				ND	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.080	7.080	0.000	0	105900	10.7	
54 Benzene	78		7.104				ND	7
55 1,2-Dichloroethane	62		7.177				ND	7
* 57 Fluorobenzene (IS)	96	7.519	7.513	0.005	99	2050623	10.0	
60 Trichloroethene	95	7.994	7.994	0.000	97	7785	0.1282	
62 1,2-Dichloropropane	63		8.336				ND	
67 Dichlorobromomethane	83		8.689				ND	U
72 cis-1,3-Dichloropropene	75		9.250				ND	
73 4-Methyl-2-pentanone (MIBK)	43		9.439				ND	7
$ 74 Toluene-d8 (Surr)	98	9.567	9.567	0.000	94	2069699	10.2	
75 Toluene	92	9.646	9.646	0.000	97	8913	0.0582	
76 trans-1,3-Dichloropropene	75		9.921				ND	7
79 1,1,2-Trichloroethane	97		10.128				ND	7

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
80 Tetrachloroethene	166	10.207	10.207	0.000	97	137814	2.01	
82 2-Hexanone	43		10.353				ND	7
83 Chlorodibromomethane	129		10.506				ND	
84 Ethylene Dibromide	107		10.616				ND	
* 85 Chlorobenzene-d5 (IS)	117	11.061	11.061	-0.001	85	1559309	10.0	
87 Chlorobenzene	112		11.085				ND	
89 1,1,1,2-Tetrachloroethane	131		11.170				ND	
90 Ethylbenzene	91		11.176				ND	7
S 88 Xylenes, Total	106		11.245				ND	7
91 m-Xylene & p-Xylene	106		11.292				ND	7
92 o-Xylene	106		11.628				ND	7
93 Styrene	104		11.646				ND	
94 Bromoform	173		11.804				ND	
$ 98 4-Bromofluorobenzene (Surr)	95	12.079	12.079	0.000	92	738285	9.65	
99 1,1,2,2-Tetrachloroethane	83		12.188				ND	
* 113 1,4-Dichlorobenzene-d4	152	12.969	12.969	0.000	94	821927	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

MSV_HP25_ISSS_00022 Amount Added: 1.00 Units: uL Run Reagent

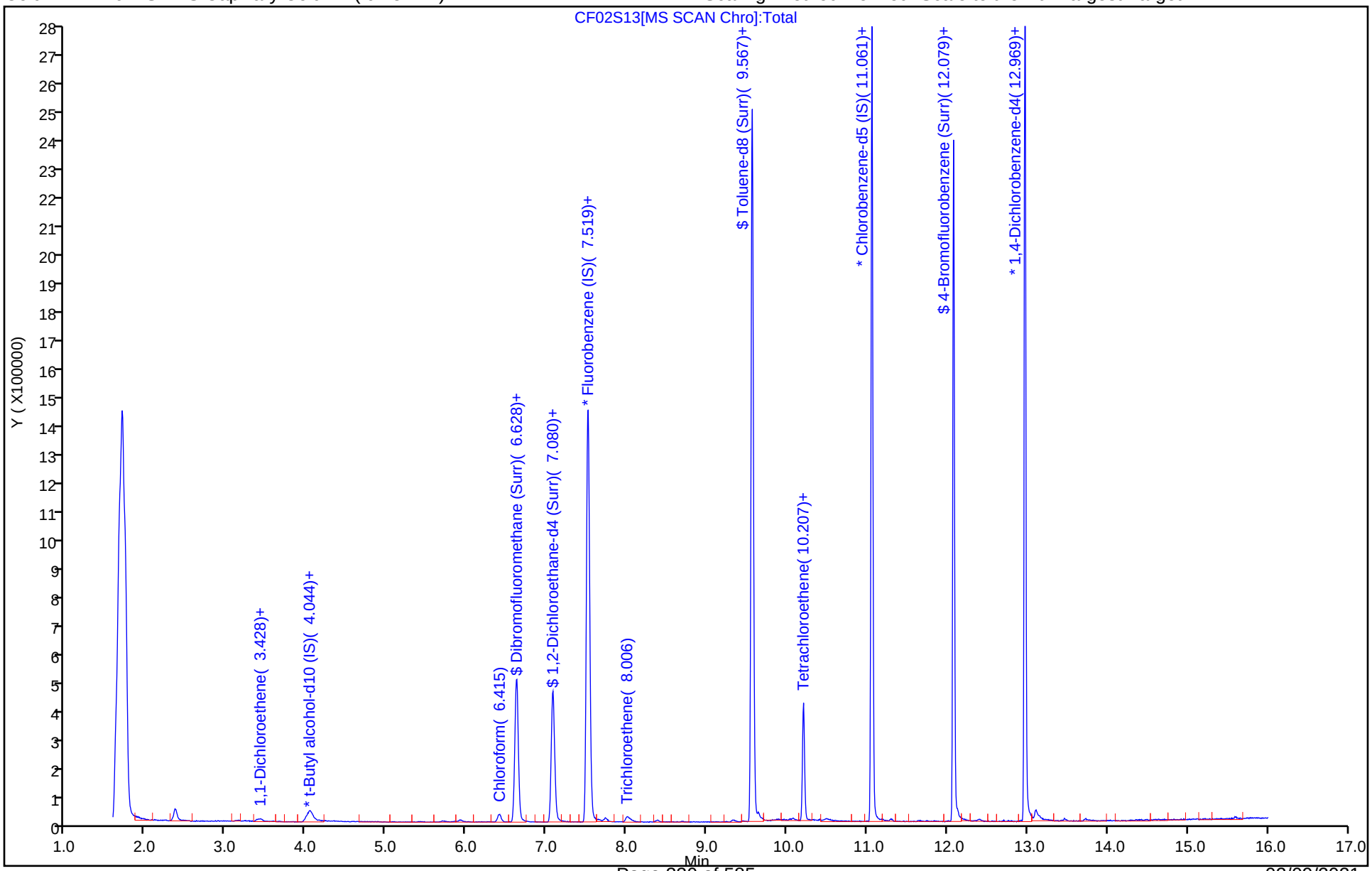
Report Date: 04-Feb-2021 11:07:53 Chrom Revision: 2.3 17-Jan-2021 00:24:10

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S13.D

Injection Date:	03-Feb-2021 17:27:30	Instrument ID:	10193	Operator ID:	SRK36897
Lims ID:	410-27746-A-9	Lab Sample ID:	410-27746-9	Worklist Smp#:	20
Client ID:	HD-COD-SW-26-0/1-0				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Env, LLC

Recovery Report

Data File: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S13.D
Lims ID: 410-27746-A-9
Client ID: HD-COD-SW-26-0/1-0
Sample Type: Client
Inject. Date: 03-Feb-2021 17:27:30 ALS Bottle#: 19 Worklist Smp#: 20
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0021161-020
Operator ID: SRK36897 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 04-Feb-2021 11:03:34 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1626

First Level Reviewer: spositok Date: 04-Feb-2021 11:01:08

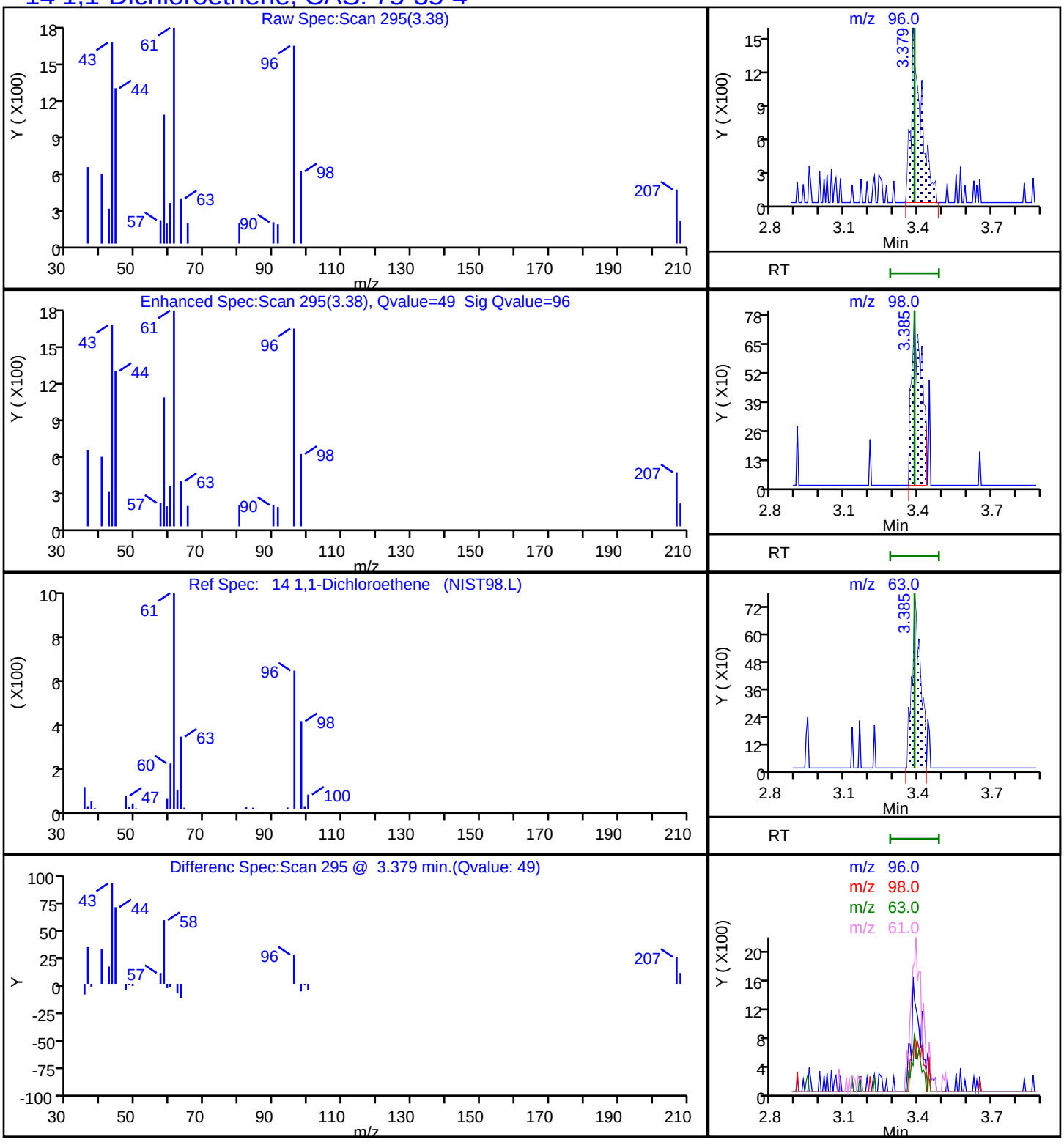
Compound	Amount Added	Amount Recovered	% Rec.
$ 47 Dibromofluoromethane (Surr)	10.0	9.79	97.92
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.7	106.68
$ 74 Toluene-d8 (Surr)	10.0	10.2	101.63
$ 98 4-Bromofluorobenzene (Surr)	10.0	9.65	96.45

Report Date: 04-Feb-2021 11:07:53 Chrom Revision: 2.3 17-Jan-2021 00:24:10

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S13.D				
Injection Date:	03-Feb-2021 17:27:30	Instrument ID:	10193		
Lims ID:	410-27746-A-9	Lab Sample ID:	410-27746-9		
Client ID:	HD-COD-SW-26-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	19	Worklist Smp#:	20
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

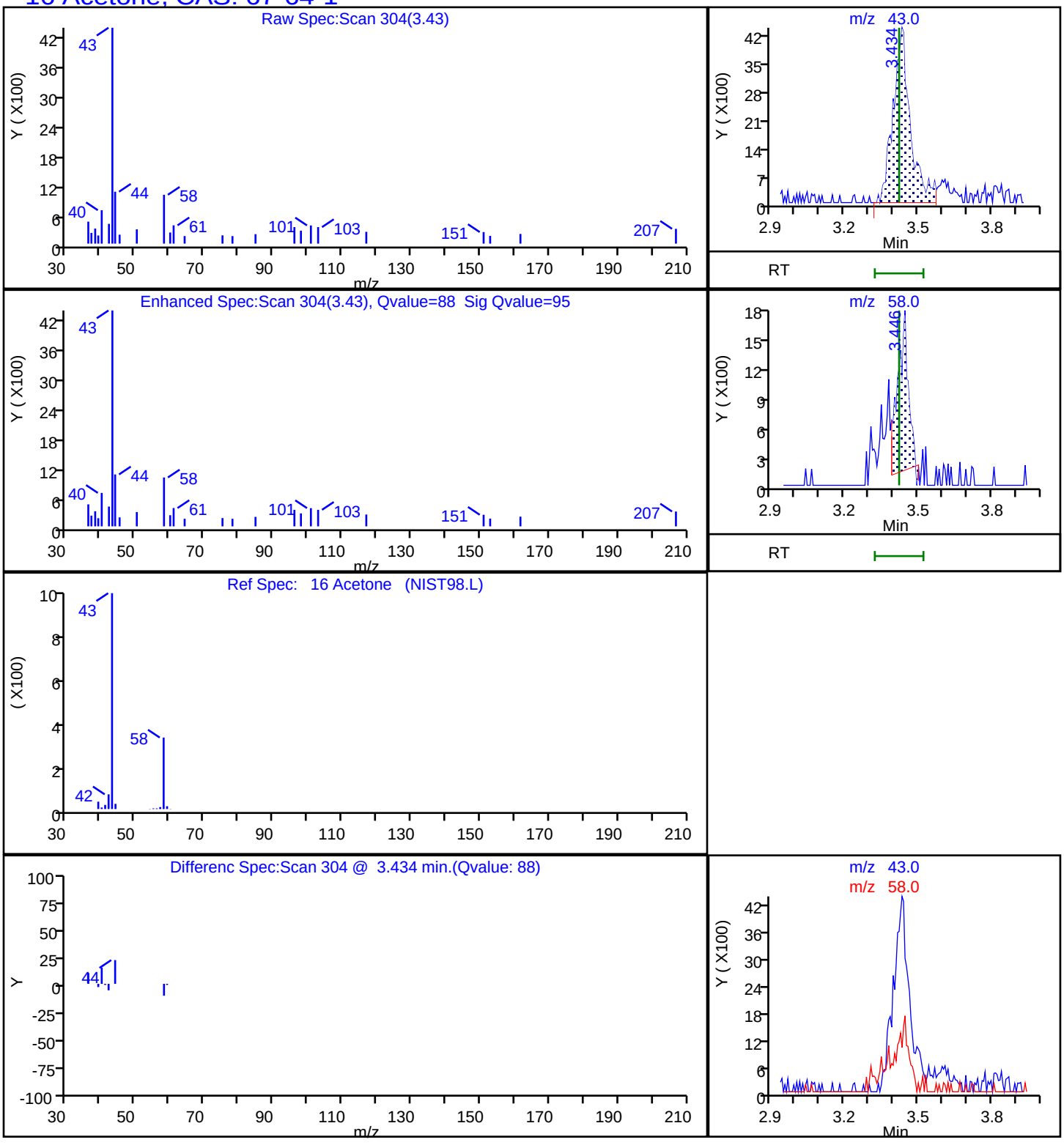
14 1,1-Dichloroethene, CAS: 75-35-4



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S13.D				
Injection Date:	03-Feb-2021 17:27:30	Instrument ID:	10193		
Lims ID:	410-27746-A-9	Lab Sample ID:	410-27746-9		
Client ID:	HD-COD-SW-26-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	19	Worklist Smp#:	20
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

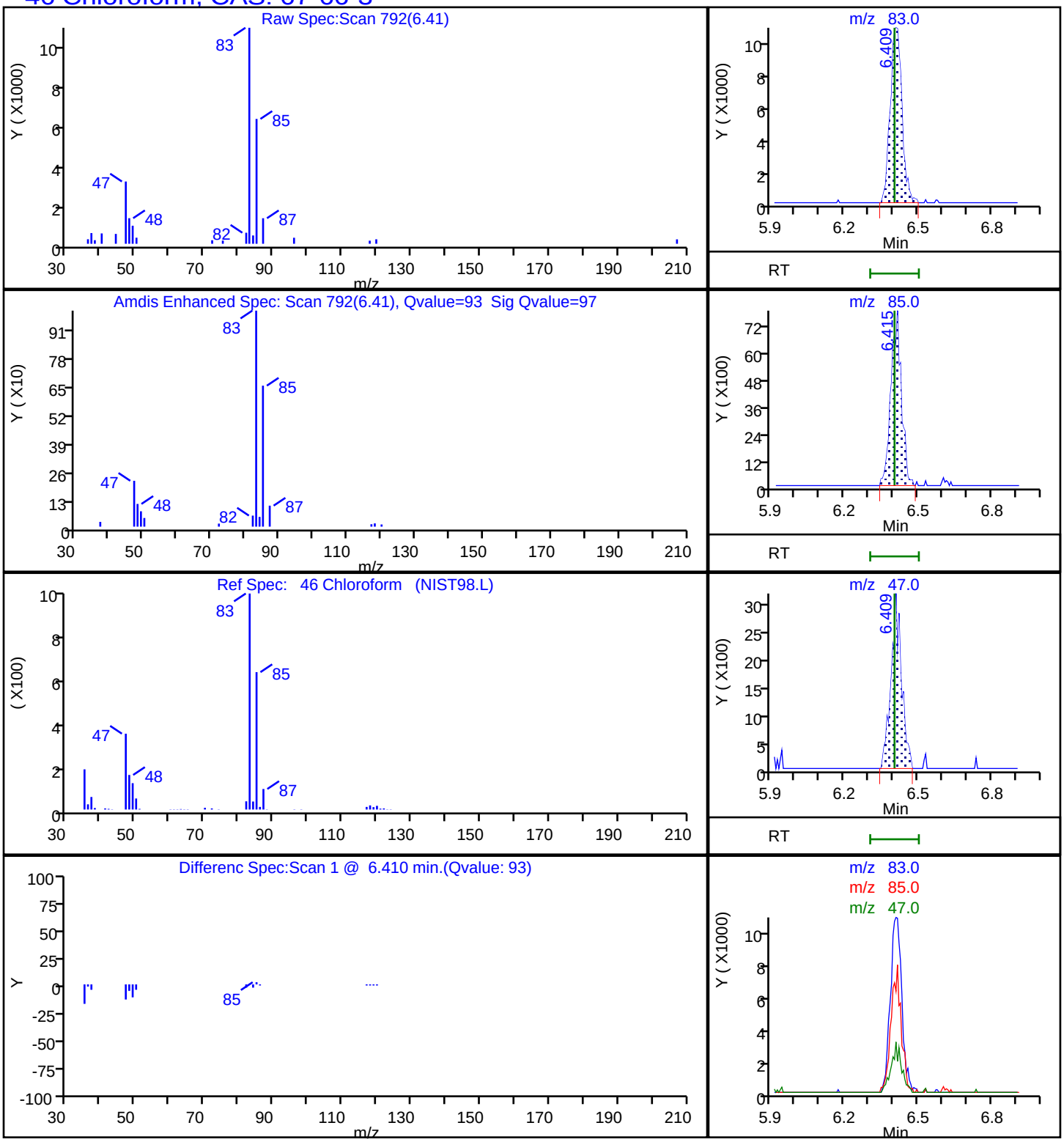
16 Acetone, CAS: 67-64-1



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S13.D				
Injection Date:	03-Feb-2021 17:27:30	Instrument ID:	10193		
Lims ID:	410-27746-A-9	Lab Sample ID:	410-27746-9		
Client ID:	HD-COD-SW-26-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	19	Worklist Smp#:	20
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

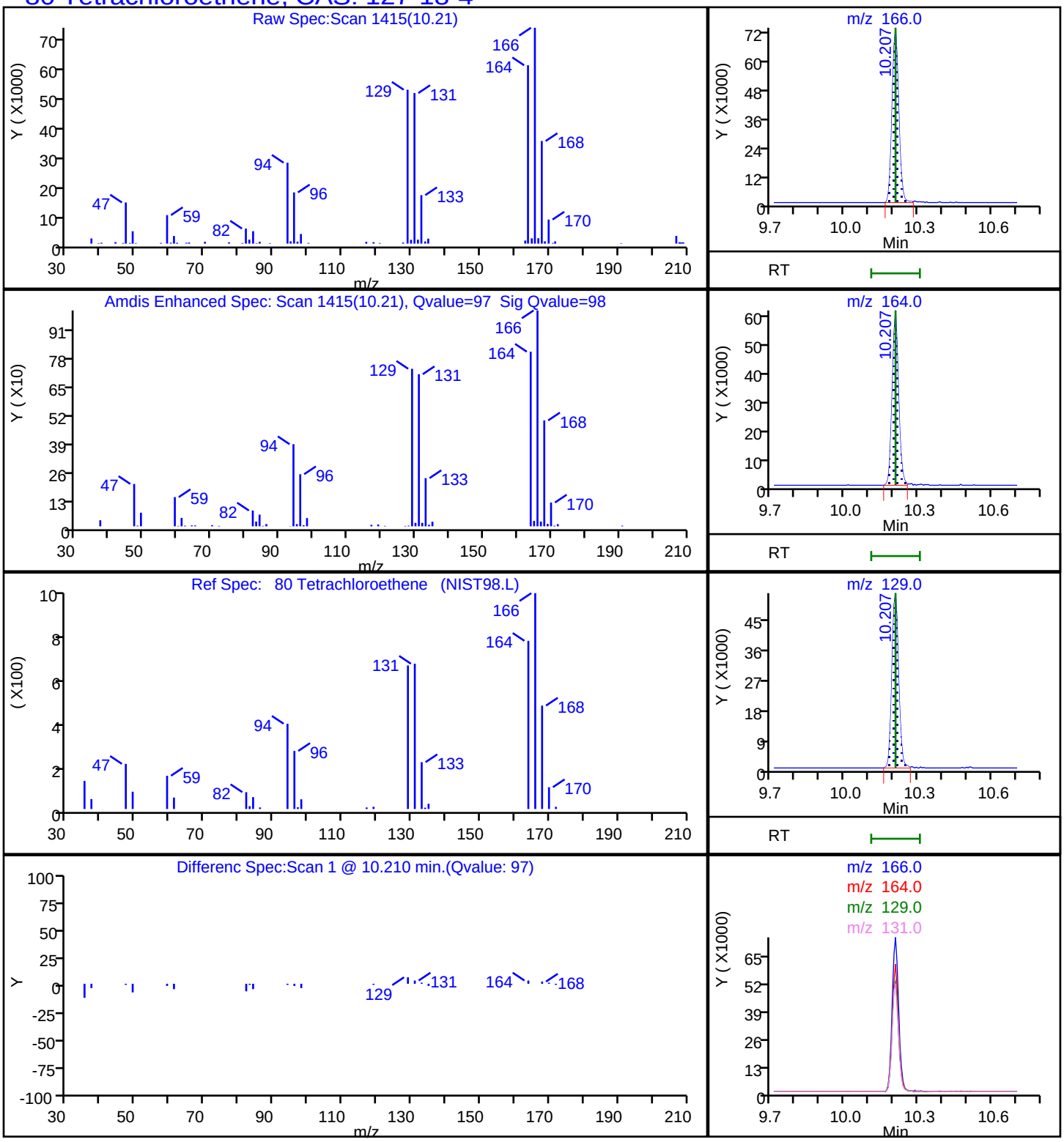
46 Chloroform, CAS: 67-66-3



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S13.D				
Injection Date:	03-Feb-2021 17:27:30	Instrument ID:	10193		
Lims ID:	410-27746-A-9	Lab Sample ID:	410-27746-9		
Client ID:	HD-COD-SW-26-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	19	Worklist Smp#:	20
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

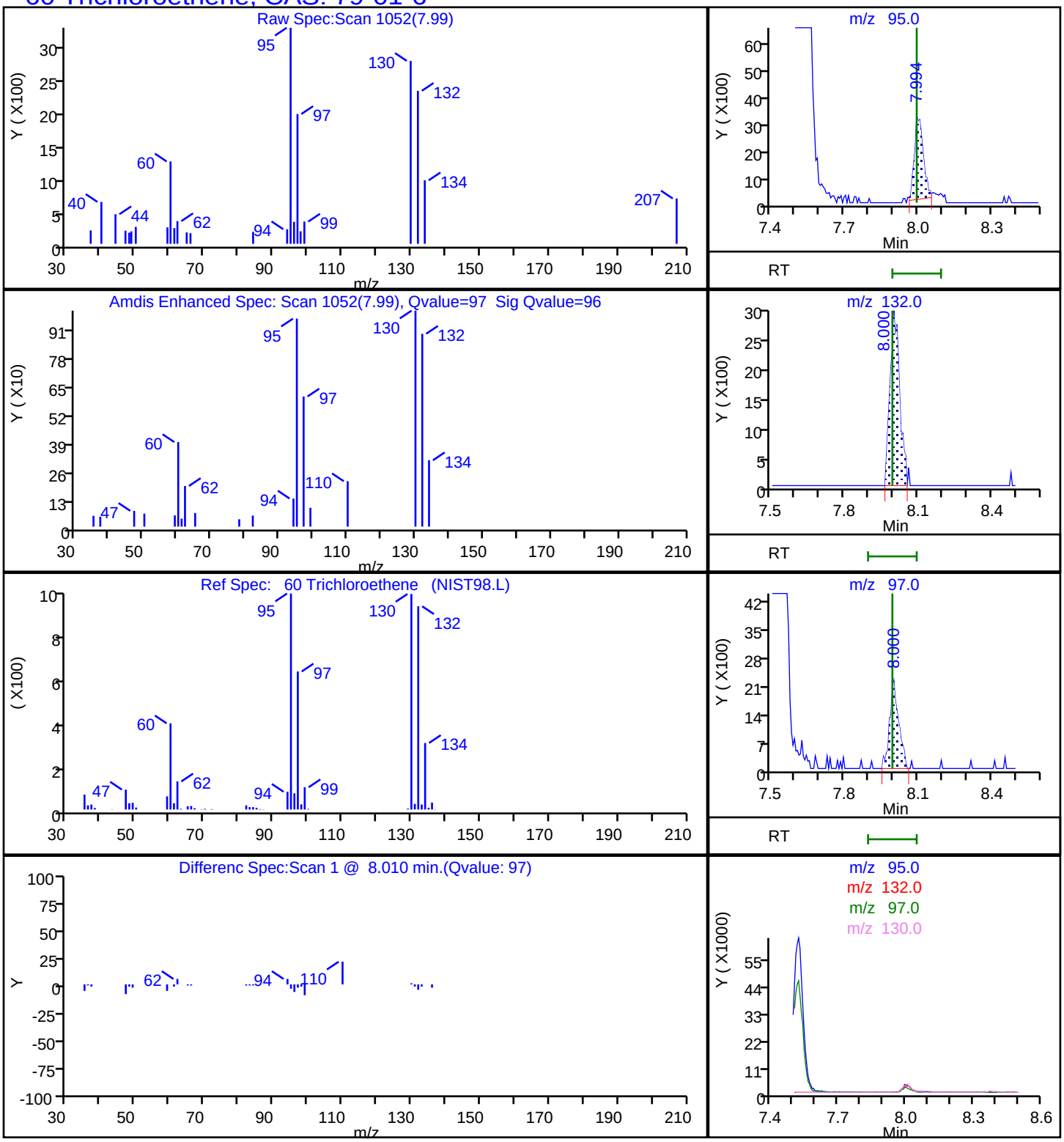
80 Tetrachloroethene, CAS: 127-18-4



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S13.D				
Injection Date:	03-Feb-2021 17:27:30	Instrument ID:	10193		
Lims ID:	410-27746-A-9	Lab Sample ID:	410-27746-9		
Client ID:	HD-COD-SW-26-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	19	Worklist Smp#:	20
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

60 Trichloroethene, CAS: 79-01-6



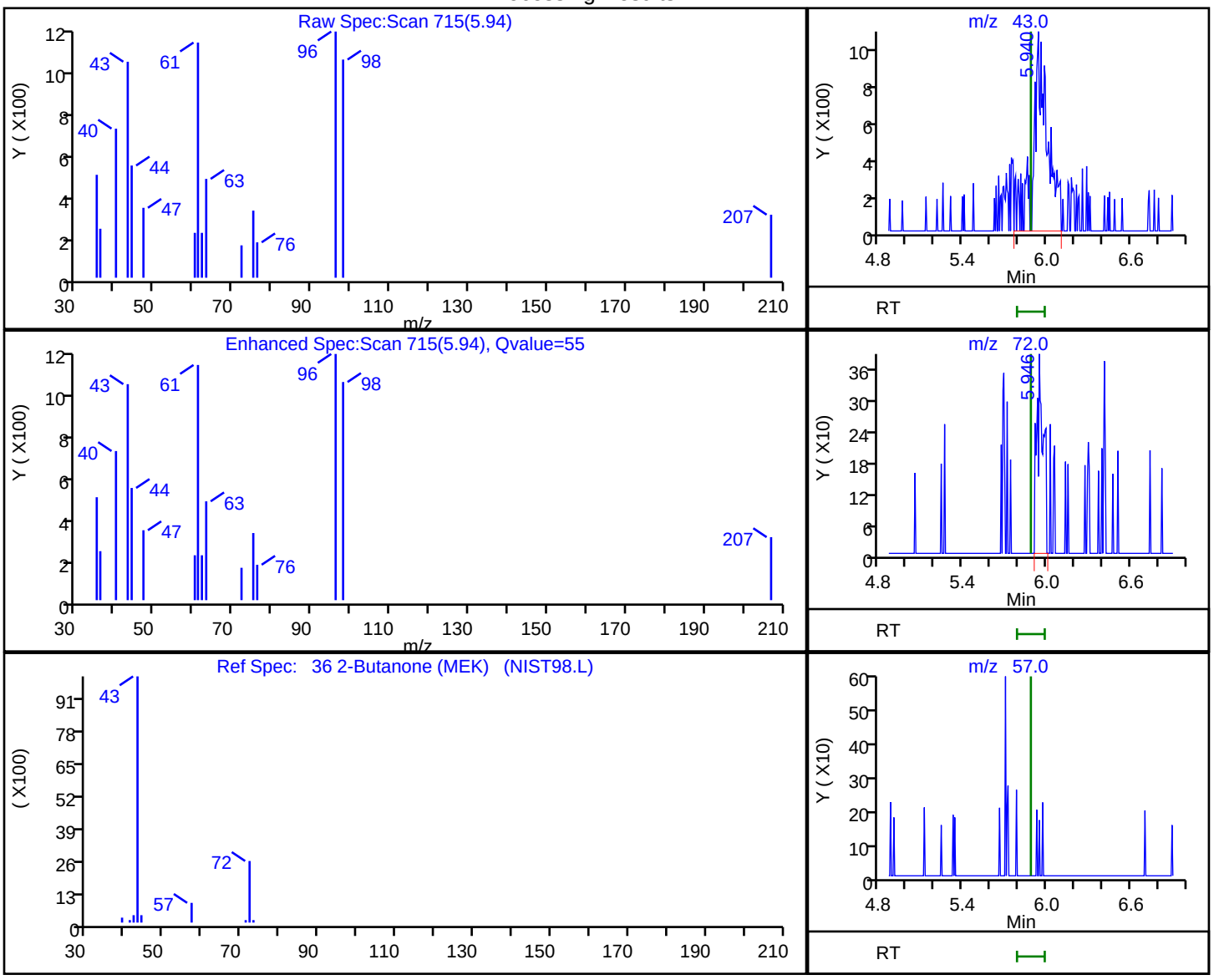
User Disabled Compound Report

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S13.D				
Injection Date:	03-Feb-2021 17:27:30	Instrument ID:	10193		
Lims ID:	410-27746-A-9	Lab Sample ID:	410-27746-9		
Client ID:	HD-COD-SW-26-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	19	Worklist Smp#:	20
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

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

Processing Results



RT	Mass	Response	Amount
5.94	43.00	7033	0.363478
5.95	72.00	1262	
5.88	57.00	0	

Reviewer: spositok, 04-Feb-2021 11:00:43

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

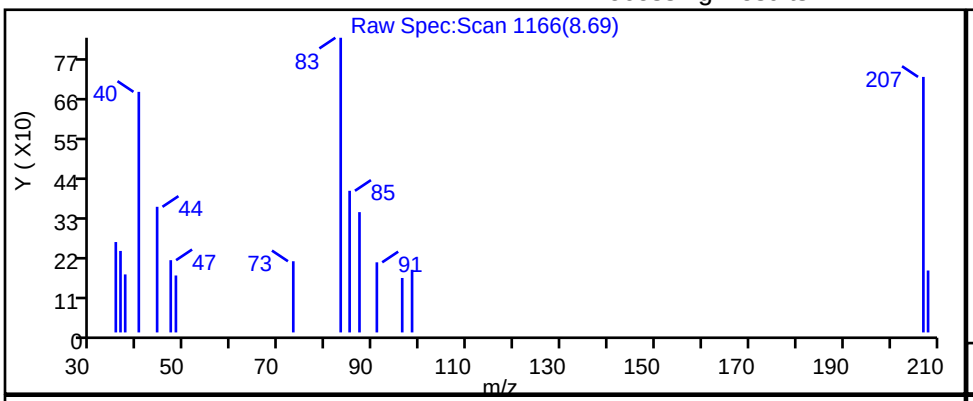
User Disabled Compound Report

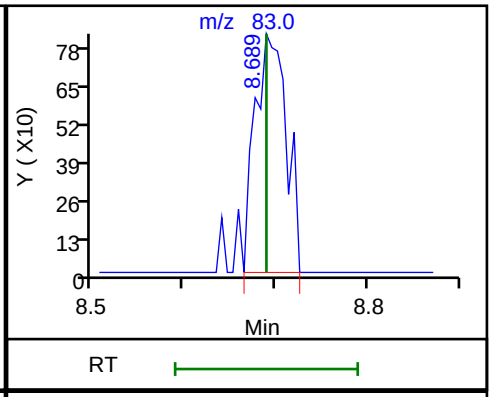
Eurofins Lancaster Laboratories Env, LLC

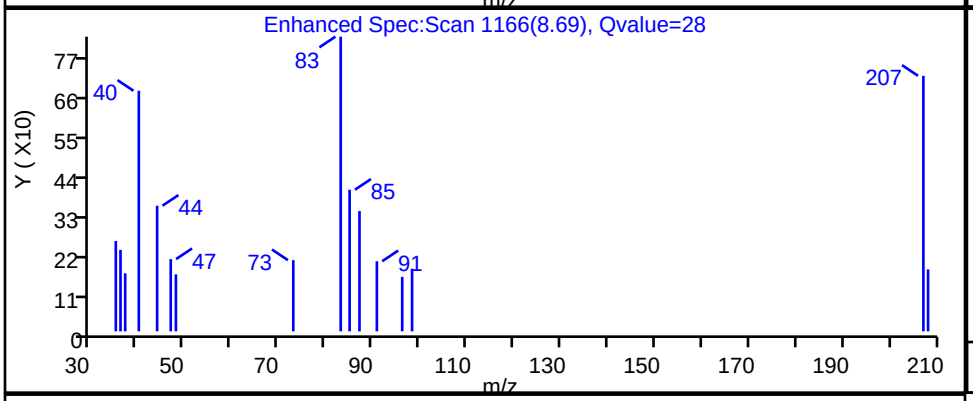
Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S13.D				
Injection Date:	03-Feb-2021 17:27:30	Instrument ID:	10193		
Lims ID:	410-27746-A-9	Lab Sample ID:	410-27746-9		
Client ID:	HD-COD-SW-26-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	19	Worklist Smp#:	20
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

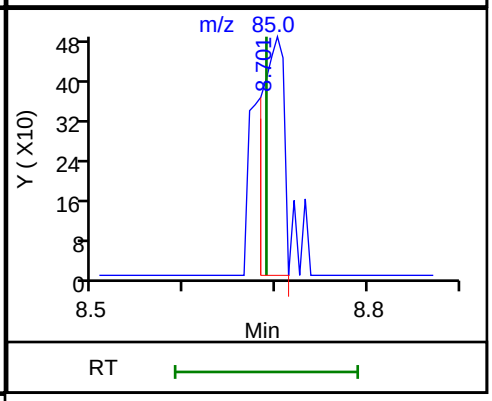
67 Dichlorobromomethane, CAS: 75-27-4

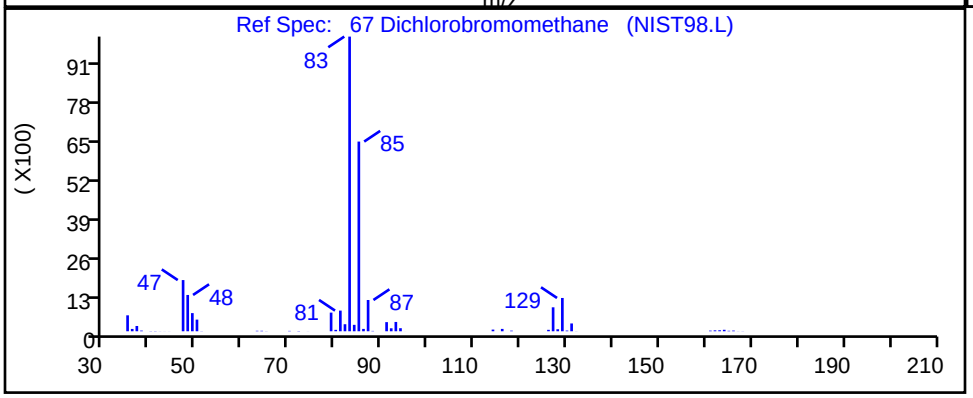
Processing Results











RT	Mass	Response	Amount
8.69	83.00	1975	0.027046
8.70	85.00	778	

Reviewer: spositok, 04-Feb-2021 11:00:58

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

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Client Sample ID: HD-COD-SW-27-0/1-0 Lab Sample ID: 410-27746-10

Matrix: Water Lab File ID: CF02S14.D

Analysis Method: 8260D Date Collected: 01/26/2021 11:40

Sample wt/vol: 25(mL) Date Analyzed: 02/03/2021 17:49

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.: 90352 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.50	0.070
71-55-6	1,1,1-Trichloroethane	ND		0.50	0.060
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.50	0.070
79-00-5	1,1,2-Trichloroethane	ND		0.50	0.060
75-34-3	1,1-Dichloroethane	ND		0.50	0.070
75-35-4	1,1-Dichloroethene	ND		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	ND		0.50	0.060
107-06-2	1,2-Dichloroethane	ND		0.50	0.050
78-87-5	1,2-Dichloropropane	ND		0.50	0.060
78-93-3	2-Butanone (MEK)	ND		5.0	0.60
591-78-6	2-Hexanone	ND		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70
67-64-1	Acetone	2.3	J	5.0	0.90
71-43-2	Benzene	ND		0.50	0.050
74-97-5	Bromochloromethane	ND		0.50	0.050
75-27-4	Bromodichloromethane	ND		0.50	0.050
75-25-2	Bromoform	ND		1.0	0.30
74-83-9	Bromomethane	ND	^c	0.50	0.070
75-15-0	Carbon disulfide	ND		1.0	0.060
56-23-5	Carbon tetrachloride	ND		0.50	0.070
108-90-7	Chlorobenzene	ND		0.50	0.060
75-00-3	Chloroethane	ND	^c	0.50	0.070
67-66-3	Chloroform	ND		0.50	0.090
74-87-3	Chloromethane	ND	^c	0.50	0.060
156-59-2	cis-1,2-Dichloroethene	0.11	J	0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	ND		0.50	0.050
124-48-1	Dibromochloromethane	ND		0.50	0.070
100-41-4	Ethylbenzene	ND		0.50	0.060
1634-04-4	Methyl tert-butyl ether	ND		0.50	0.050
75-09-2	Methylene Chloride	ND		0.50	0.070
100-42-5	Styrene	ND		0.50	0.050
127-18-4	Tetrachloroethene	0.13	J	0.50	0.060
108-88-3	Toluene	ND		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	ND		0.50	0.060
10061-02-6	trans-1,3-Dichloropropene	ND		0.50	0.060
79-01-6	Trichloroethene	0.15	J	0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Client Sample ID: HD-COD-SW-27-0/1-0 Lab Sample ID: 410-27746-10

Matrix: Water Lab File ID: CF02S14.D

Analysis Method: 8260D Date Collected: 01/26/2021 11:40

Sample wt/vol: 25(mL) Date Analyzed: 02/03/2021 17:49

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.: 90352 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-01-4	Vinyl chloride	ND	^c	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)	106		80-120
460-00-4	4-Bromofluorobenzene (Surr)	95		80-120
1868-53-7	Dibromofluoromethane (Surr)	98		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\10193\20210203-21161.b\CF02S14.D
Lims ID: 410-27746-A-10
Client ID: HD-COD-SW-27-0/1-0
Sample Type: Client
Inject. Date: 03-Feb-2021 17:49:30 ALS Bottle#: 20 Worklist Smp#: 21
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0021161-021
Operator ID: SRK36897 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 04-Feb-2021 11:03:34 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1626

First Level Reviewer: spositok Date: 04-Feb-2021 11:01:40

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
3 Chloromethane	50		2.081				ND	U
5 Vinyl chloride	62		2.190				ND	
6 Bromomethane	94		2.501				ND	7
7 Chloroethane	64		2.574				ND	7
14 1,1-Dichloroethene	96		3.385				ND	7
16 Acetone	43	3.440	3.422	0.018	93	18379	2.31	
20 Carbon disulfide	76		3.666				ND	7
24 Methylene Chloride	84		4.019				ND	7
* 25 t-Butyl alcohol-d10 (IS)	65	4.056	4.056	0.000	0	187481	50.0	
28 Methyl tert-butyl ether	73		4.403				ND	7
29 trans-1,2-Dichloroethene	96		4.409				ND	
32 1,1-Dichloroethane	63		5.074				ND	
36 2-Butanone (MEK)	43		5.885				ND	
37 cis-1,2-Dichloroethene	96	5.928	5.915	0.013	83	6564	0.1055	
44 Chlorobromomethane	128		6.251				ND	
46 Chloroform	83		6.403				ND	
$ 47 Dibromofluoromethane (Surr)	113	6.623	6.622	0.001	94	472433	9.80	
48 1,1,1-Trichloroethane	97		6.629				ND	
50 Carbon tetrachloride	117		6.830				ND	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.080	7.080	0.000	0	103940	10.6	
54 Benzene	78		7.104				ND	7
55 1,2-Dichloroethane	62		7.177				ND	7
* 57 Fluorobenzene (IS)	96	7.525	7.513	0.012	99	2029782	10.0	
60 Trichloroethene	95	8.006	7.994	0.012	96	9268	0.1542	
62 1,2-Dichloropropane	63		8.336				ND	
67 Dichlorobromomethane	83		8.689				ND	7
72 cis-1,3-Dichloropropene	75		9.250				ND	
73 4-Methyl-2-pentanone (MIBK)	43		9.439				ND	7
$ 74 Toluene-d8 (Surr)	98	9.567	9.567	0.000	93	2032279	10.0	
75 Toluene	92		9.646				ND	U
76 trans-1,3-Dichloropropene	75		9.921				ND	7
79 1,1,2-Trichloroethane	97		10.128				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
80 Tetrachloroethene	166	10.213	10.207	0.006	93	8998	0.1319	
82 2-Hexanone	43		10.353				ND	7
83 Chlorodibromomethane	129		10.506				ND	
84 Ethylene Dibromide	107		10.616				ND	
* 85 Chlorobenzene-d5 (IS)	117	11.061	11.061	0.000	85	1553907	10.0	
87 Chlorobenzene	112		11.085				ND	7
89 1,1,1,2-Tetrachloroethane	131		11.170				ND	
90 Ethylbenzene	91		11.176				ND	7
S 88 Xylenes, Total	106		11.245				ND	7
91 m-Xylene & p-Xylene	106		11.292				ND	7
92 o-Xylene	106		11.628				ND	7
93 Styrene	104		11.646				ND	7
94 Bromoform	173		11.804				ND	
$ 98 4-Bromofluorobenzene (Surr)	95	12.079	12.079	0.000	93	724599	9.50	
99 1,1,2,2-Tetrachloroethane	83		12.188				ND	
* 113 1,4-Dichlorobenzene-d4	152	12.969	12.969	0.000	94	826791	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

MSV_HP25_ISSS_00022 Amount Added: 1.00 Units: uL Run Reagent

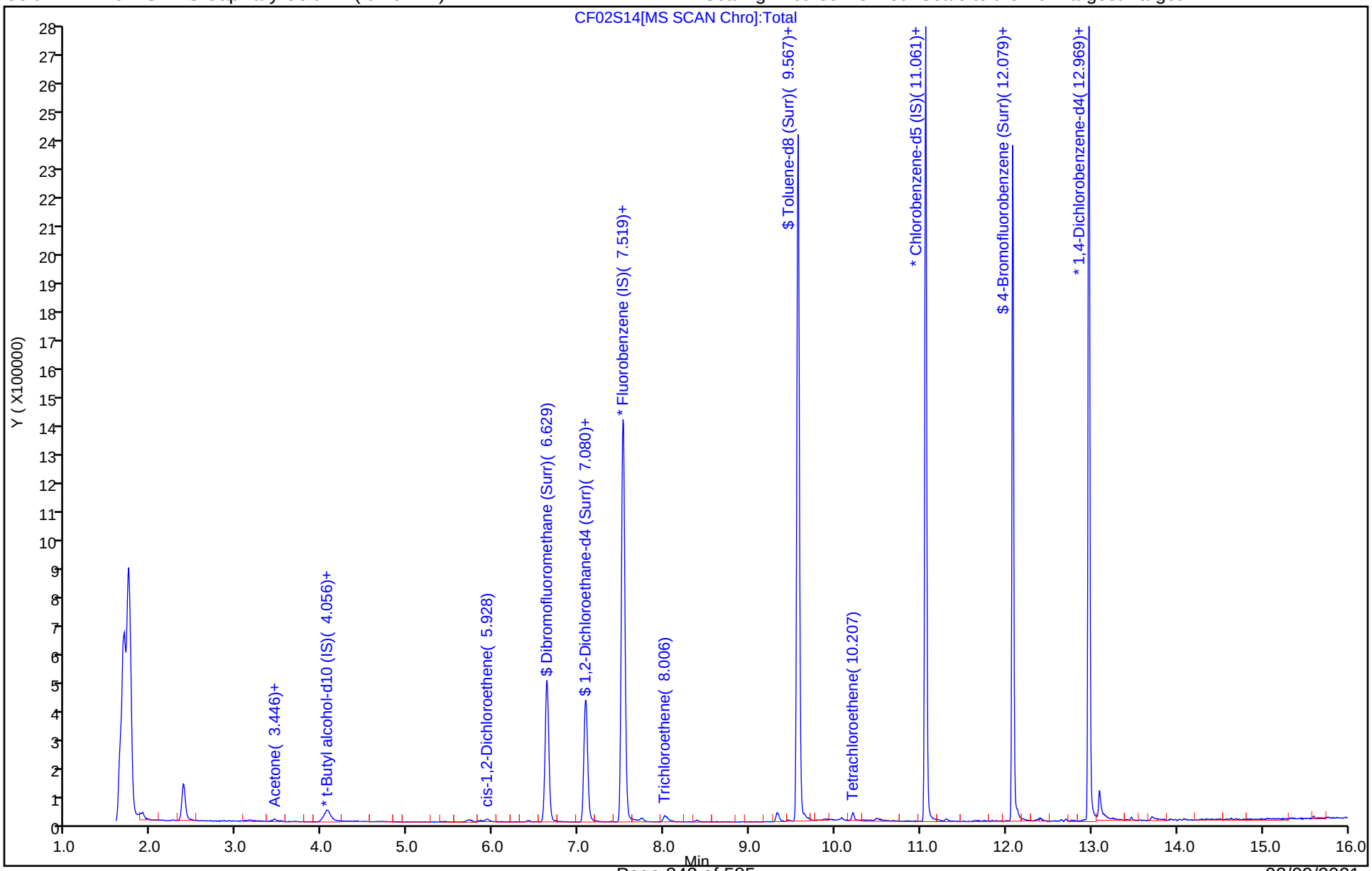
Report Date: 04-Feb-2021 11:07:55 Chrom Revision: 2.3 17-Jan-2021 00:24:10

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S14.D

Injection Date:	03-Feb-2021 17:49:30	Instrument ID:	10193	Operator ID:	SRK36897
Lims ID:	410-27746-A-10	Lab Sample ID:	410-27746-10	Worklist Smp#:	21
Client ID:	HD-COD-SW-27-0/1-0				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Env, LLC

Recovery Report

Data File: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S14.D
Lims ID: 410-27746-A-10
Client ID: HD-COD-SW-27-0/1-0
Sample Type: Client
Inject. Date: 03-Feb-2021 17:49:30 ALS Bottle#: 20 Worklist Smp#: 21
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0021161-021
Operator ID: SRK36897 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 04-Feb-2021 11:03:34 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1626

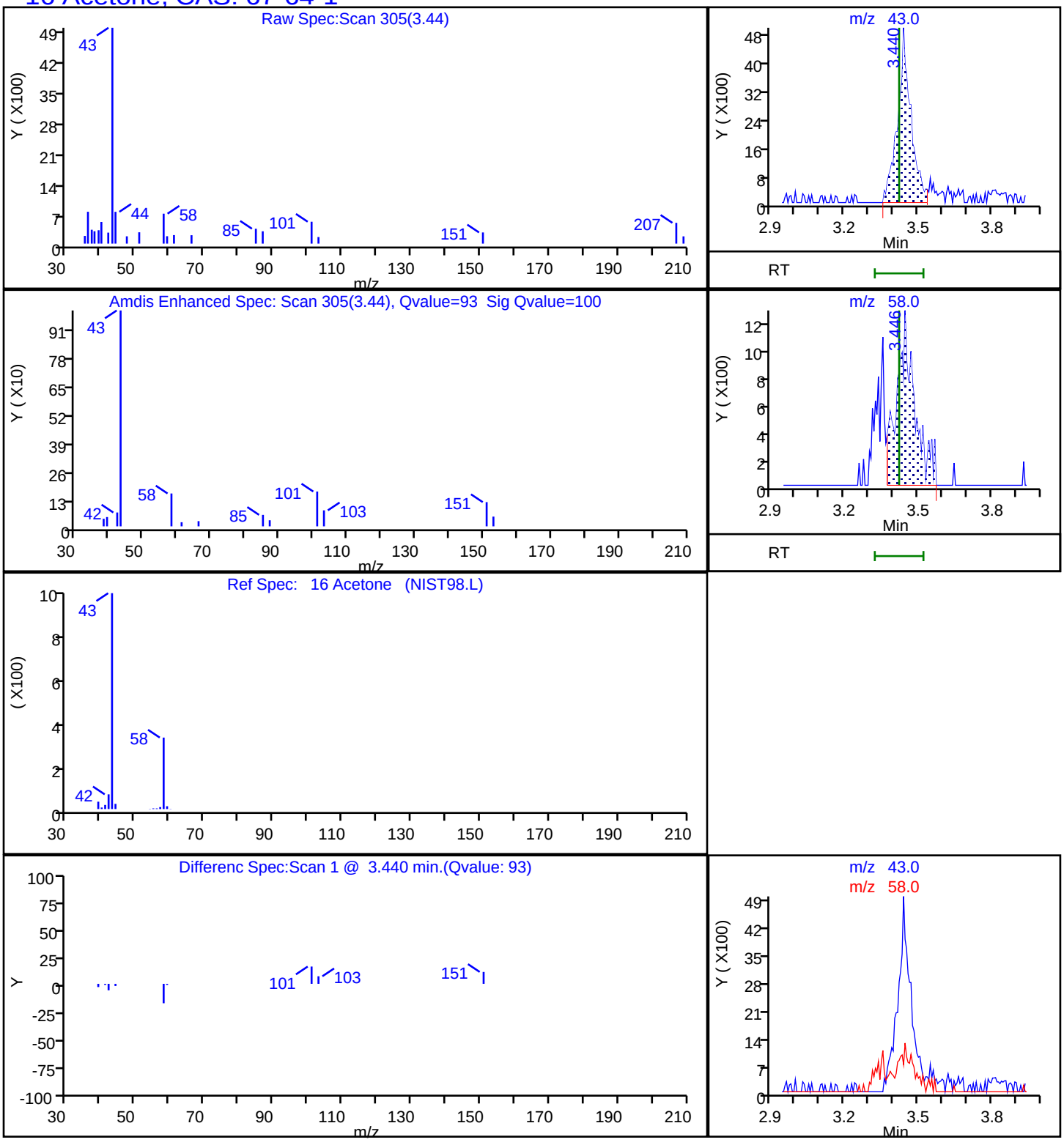
First Level Reviewer: spositok Date: 04-Feb-2021 11:01:40

Compound	Amount Added	Amount Recovered	% Rec.
$ 47 Dibromofluoromethane (Surr)	10.0	9.80	97.95
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.6	105.78
$ 74 Toluene-d8 (Surr)	10.0	10.0	100.14
$ 98 4-Bromofluorobenzene (Surr)	10.0	9.50	94.99

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S14.D				
Injection Date:	03-Feb-2021 17:49:30	Instrument ID:	10193		
Lims ID:	410-27746-A-10	Lab Sample ID:	410-27746-10		
Client ID:	HD-COD-SW-27-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	20	Worklist Smp#:	21
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

16 Acetone, CAS: 67-64-1

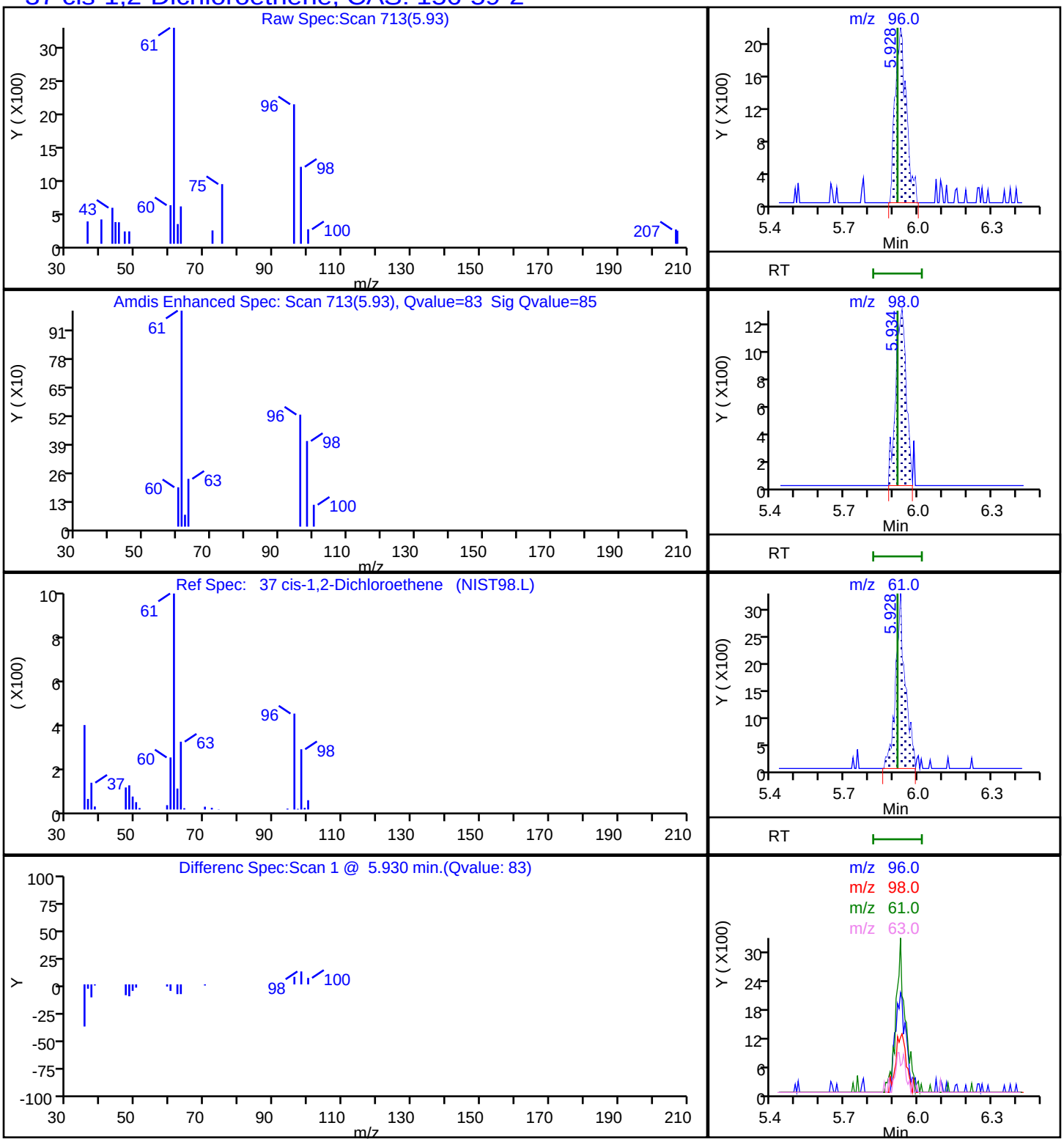


Report Date: 04-Feb-2021 11:07:55 Chrom Revision: 2.3 17-Jan-2021 00:24:10

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S14.D				
Injection Date:	03-Feb-2021 17:49:30	Instrument ID:	10193		
Lims ID:	410-27746-A-10	Lab Sample ID:	410-27746-10		
Client ID:	HD-COD-SW-27-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	20	Worklist Smp#:	21
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

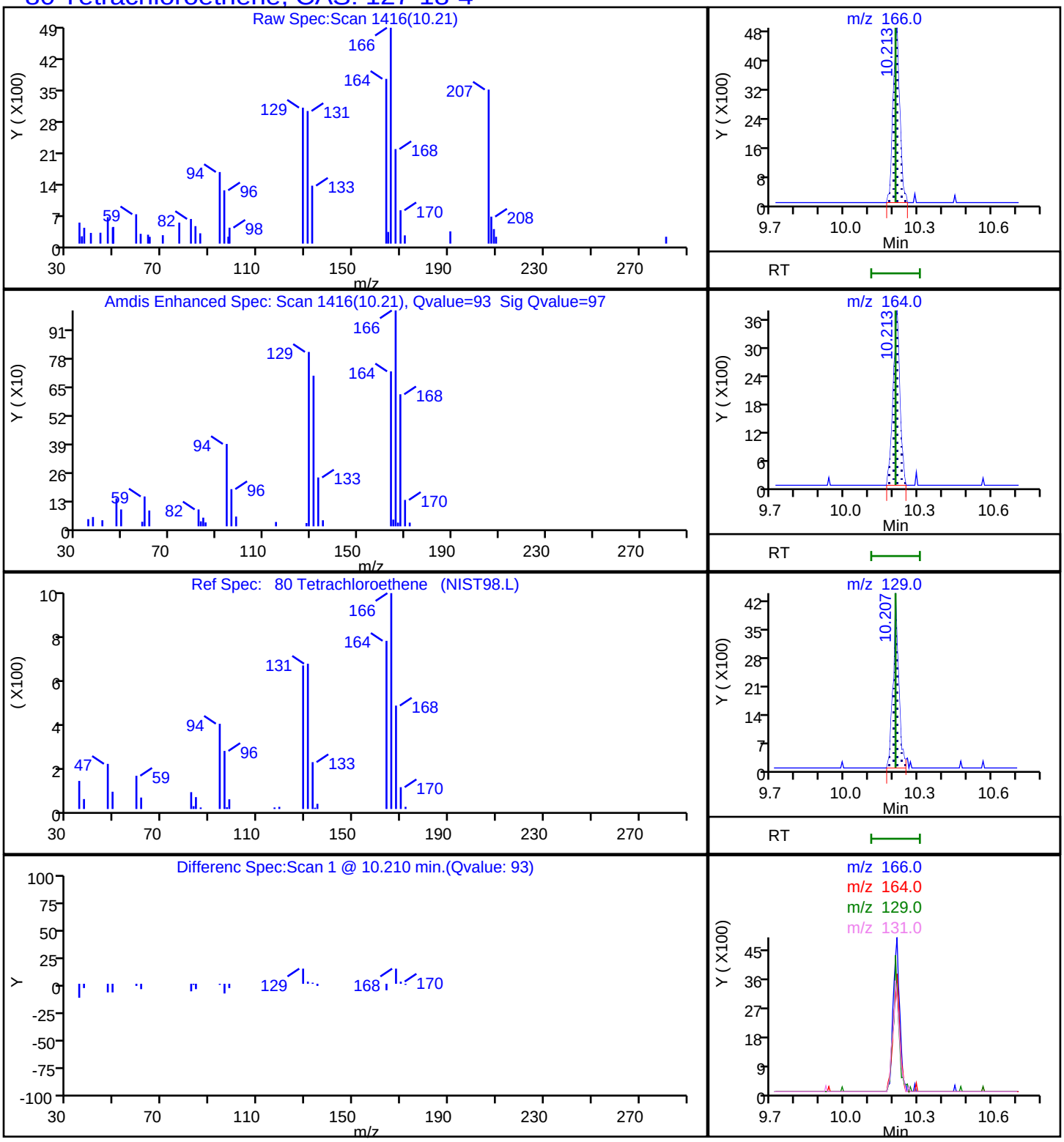
37 cis-1,2-Dichloroethene, CAS: 156-59-2



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S14.D				
Injection Date:	03-Feb-2021 17:49:30	Instrument ID:	10193		
Lims ID:	410-27746-A-10	Lab Sample ID:	410-27746-10		
Client ID:	HD-COD-SW-27-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	20	Worklist Smp#:	21
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

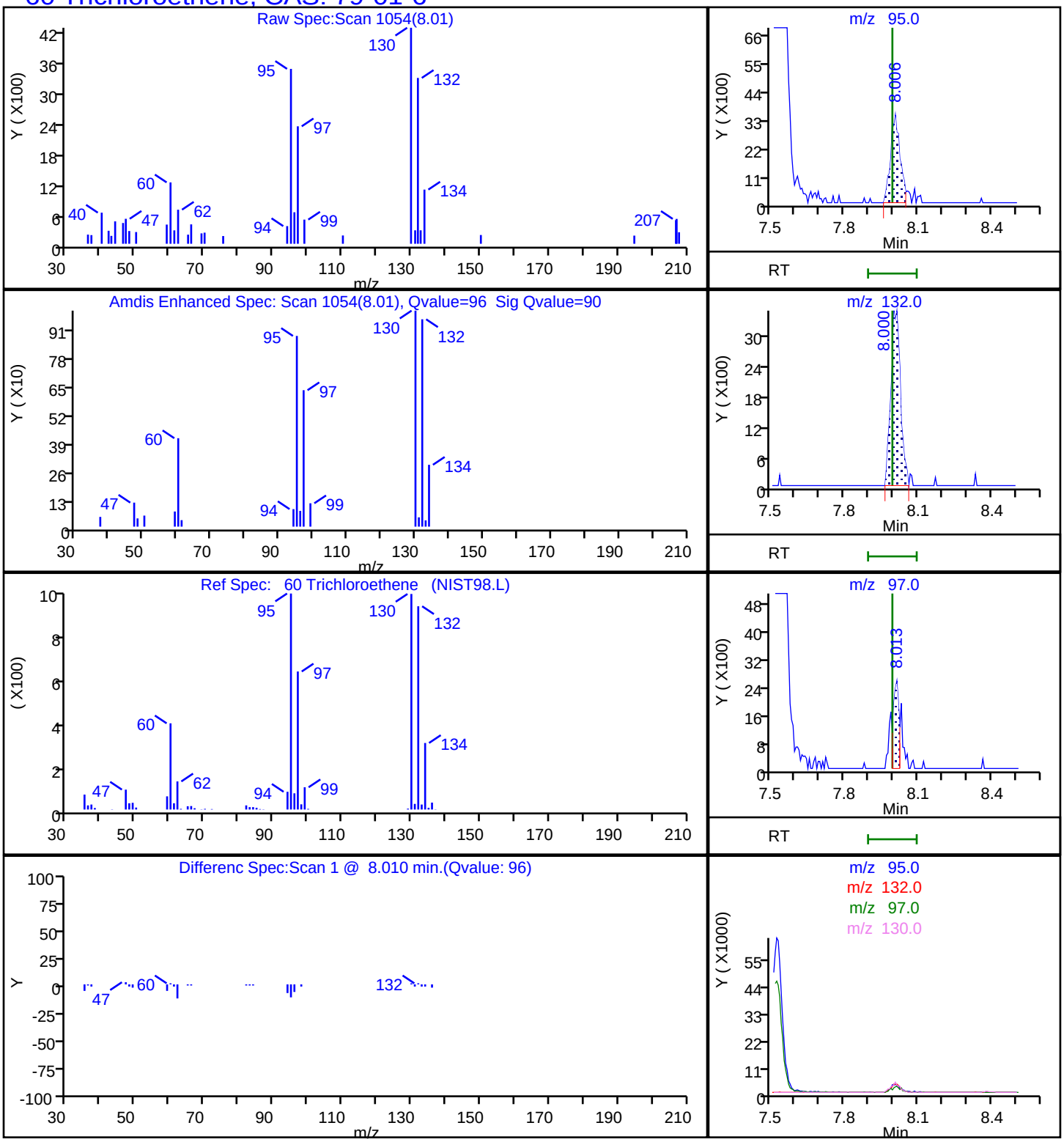
80 Tetrachloroethene, CAS: 127-18-4



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S14.D				
Injection Date:	03-Feb-2021 17:49:30	Instrument ID:	10193		
Lims ID:	410-27746-A-10	Lab Sample ID:	410-27746-10		
Client ID:	HD-COD-SW-27-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	20	Worklist Smp#:	21
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

60 Trichloroethene, CAS: 79-01-6



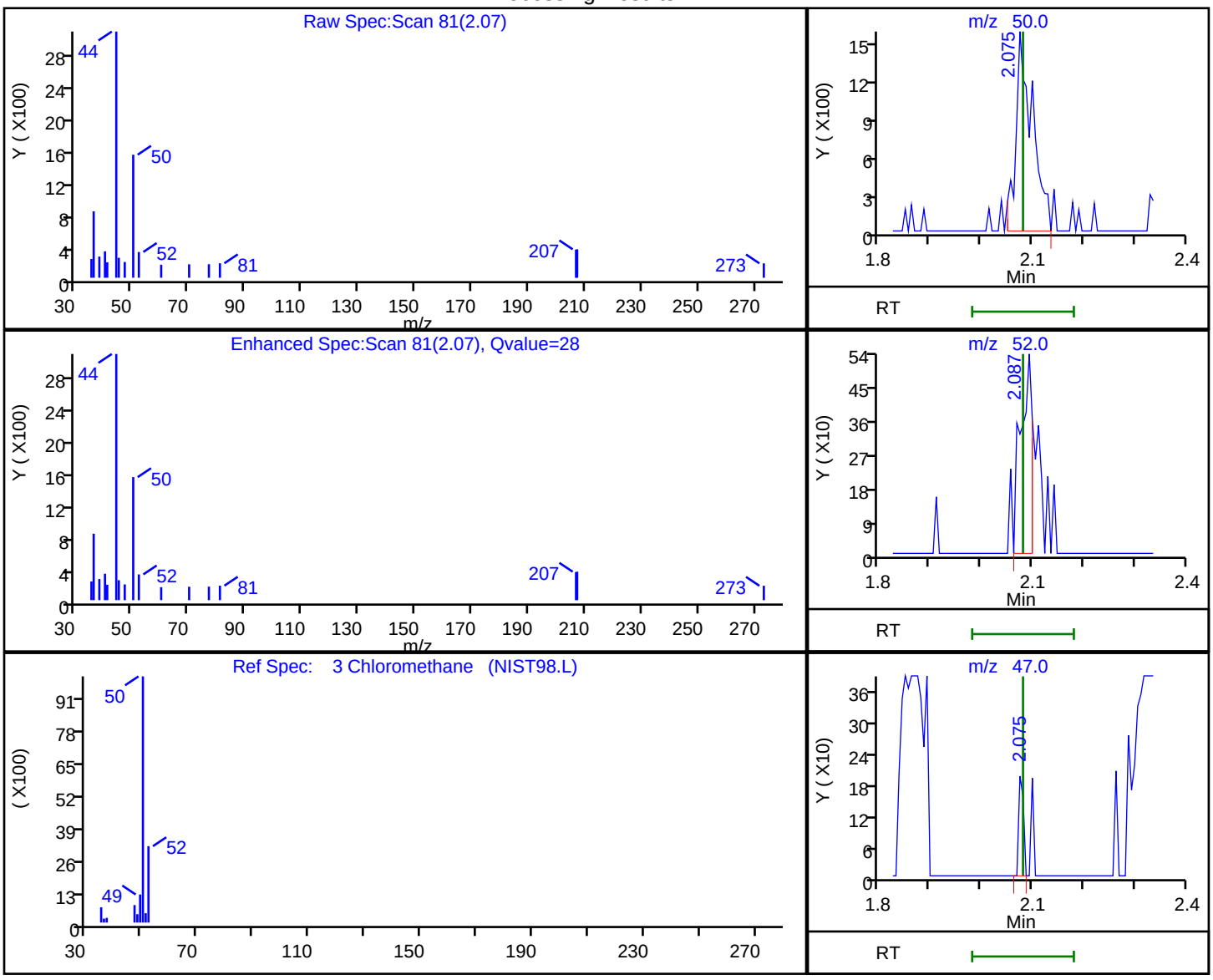
User Disabled Compound Report

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S14.D				
Injection Date:	03-Feb-2021 17:49:30	Instrument ID:	10193		
Lims ID:	410-27746-A-10	Lab Sample ID:	410-27746-10		
Client ID:	HD-COD-SW-27-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	20	Worklist Smp#:	21
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

3 Chloromethane, CAS: 74-87-3

Processing Results



RT	Mass	Response	Amount
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2.09	52.00	833	
2.07	47.00	128	

Reviewer: spositok, 04-Feb-2021 11:01:15

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

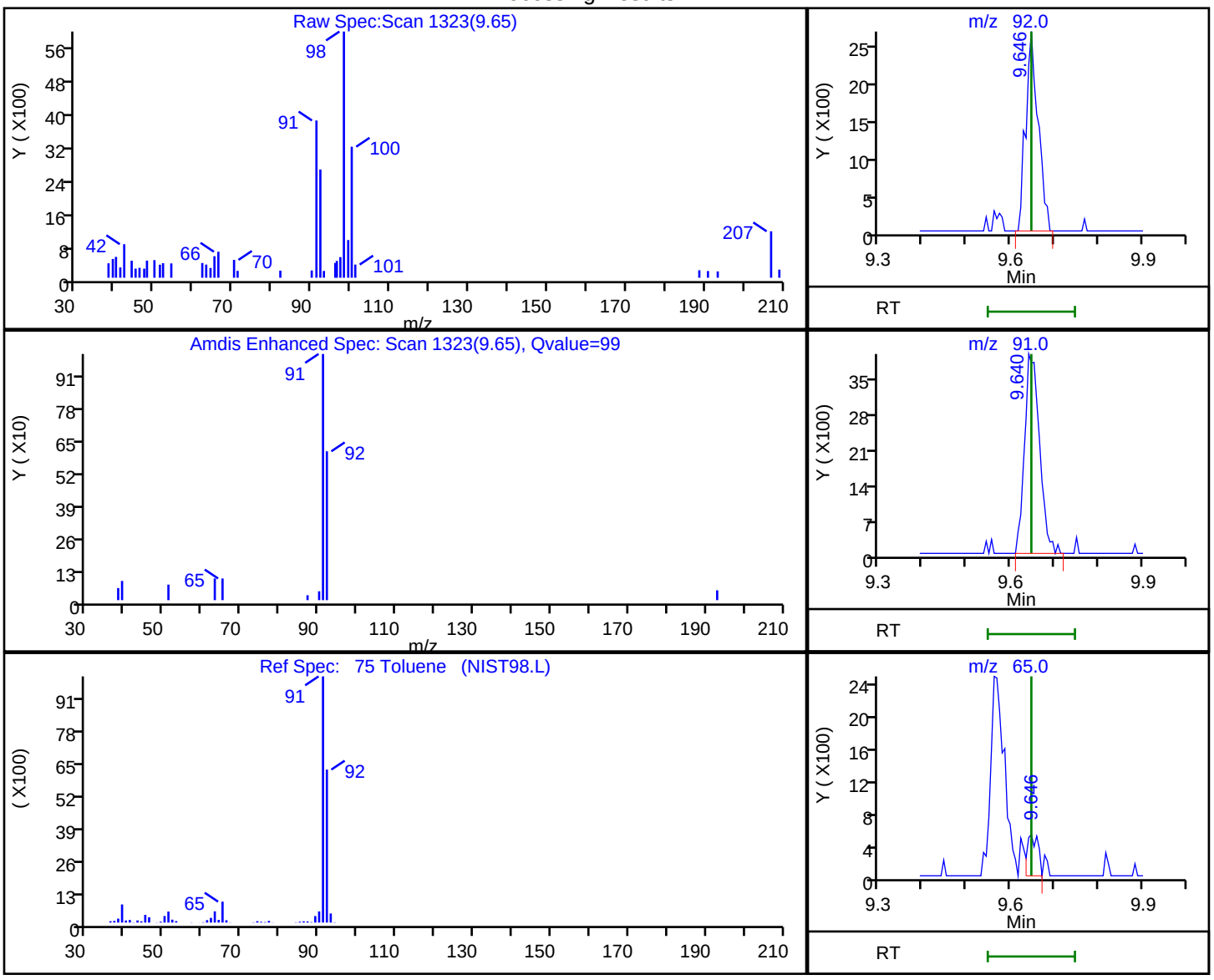
User Disabled Compound Report

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S14.D				
Injection Date:	03-Feb-2021 17:49:30	Instrument ID:	10193		
Lims ID:	410-27746-A-10	Lab Sample ID:	410-27746-10		
Client ID:	HD-COD-SW-27-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	20	Worklist Smp#:	21
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

75 Toluene, CAS: 108-88-3

Processing Results



RT	Mass	Response	Amount
9.65	92.00	5141	0.033681
9.64	91.00	9507	
9.65	65.00	885	
9.64	39.00	1050	

Reviewer: spositok, 04-Feb-2021 11:01:31

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

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Client Sample ID: HD-COD-SW-28-0/1-0 Lab Sample ID: 410-27746-11

Matrix: Water Lab File ID: CF02S15.D

Analysis Method: 8260D Date Collected: 01/26/2021 13:05

Sample wt/vol: 25(mL) Date Analyzed: 02/03/2021 18:12

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.: 90352 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.50	0.070
71-55-6	1,1,1-Trichloroethane	ND		0.50	0.060
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.50	0.070
79-00-5	1,1,2-Trichloroethane	ND		0.50	0.060
75-34-3	1,1-Dichloroethane	ND		0.50	0.070
75-35-4	1,1-Dichloroethene	ND		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	ND		0.50	0.060
107-06-2	1,2-Dichloroethane	ND		0.50	0.050
78-87-5	1,2-Dichloropropane	ND		0.50	0.060
78-93-3	2-Butanone (MEK)	ND		5.0	0.60
591-78-6	2-Hexanone	ND		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70
67-64-1	Acetone	3.7	J	5.0	0.90
71-43-2	Benzene	ND		0.50	0.050
74-97-5	Bromochloromethane	ND		0.50	0.050
75-27-4	Bromodichloromethane	ND		0.50	0.050
75-25-2	Bromoform	ND		1.0	0.30
74-83-9	Bromomethane	ND	^c	0.50	0.070
75-15-0	Carbon disulfide	ND		1.0	0.060
56-23-5	Carbon tetrachloride	ND		0.50	0.070
108-90-7	Chlorobenzene	ND		0.50	0.060
75-00-3	Chloroethane	ND	^c	0.50	0.070
67-66-3	Chloroform	ND		0.50	0.090
74-87-3	Chloromethane	ND	^c	0.50	0.060
156-59-2	cis-1,2-Dichloroethene	0.059	J	0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	ND		0.50	0.050
124-48-1	Dibromochloromethane	ND		0.50	0.070
100-41-4	Ethylbenzene	ND		0.50	0.060
1634-04-4	Methyl tert-butyl ether	ND		0.50	0.050
75-09-2	Methylene Chloride	ND		0.50	0.070
100-42-5	Styrene	ND		0.50	0.050
127-18-4	Tetrachloroethene	0.080	J	0.50	0.060
108-88-3	Toluene	ND		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	ND		0.50	0.060
10061-02-6	trans-1,3-Dichloropropene	ND		0.50	0.060
79-01-6	Trichloroethene	0.091	J	0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Client Sample ID: HD-COD-SW-28-0/1-0 Lab Sample ID: 410-27746-11

Matrix: Water Lab File ID: CF02S15.D

Analysis Method: 8260D Date Collected: 01/26/2021 13:05

Sample wt/vol: 25(mL) Date Analyzed: 02/03/2021 18:12

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.: 90352 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-01-4	Vinyl chloride	ND	^c	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)	98		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\10193\20210203-21161.b\CF02S15.D
Lims ID: 410-27746-A-11
Client ID: HD-COD-SW-28-0/1-0
Sample Type: Client
Inject. Date: 03-Feb-2021 18:12:30 ALS Bottle#: 21 Worklist Smp#: 22
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0021161-022
Operator ID: SRK36897 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 04-Feb-2021 11:03:34 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1626

First Level Reviewer: spositok Date: 04-Feb-2021 11:02:17

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
3 Chloromethane	50	2.081	2.081	0.000	2	3258	0.0420	
5 Vinyl chloride	62		2.190				ND	
6 Bromomethane	94		2.501				ND	
7 Chloroethane	64		2.574				ND	7
14 1,1-Dichloroethene	96		3.385				ND	7
16 Acetone	43	3.428	3.422	0.006	97	30248	3.74	
20 Carbon disulfide	76		3.666				ND	7
24 Methylene Chloride	84		4.019				ND	7
* 25 t-Butyl alcohol-d10 (IS)	65	4.044	4.056	-0.012	0	190327	50.0	
28 Methyl tert-butyl ether	73		4.403				ND	7
29 trans-1,2-Dichloroethene	96		4.409				ND	
32 1,1-Dichloroethane	63		5.074				ND	
36 2-Butanone (MEK)	43		5.885				ND	
37 cis-1,2-Dichloroethene	96	5.915	5.915	0.000	81	3687	0.0590	
44 Chlorobromomethane	128		6.251				ND	
46 Chloroform	83	6.403	6.403	0.000	93	8365	0.0831	
$ 47 Dibromofluoromethane (Surr)	113	6.629	6.622	0.007	94	476556	9.83	
48 1,1,1-Trichloroethane	97		6.629				ND	
50 Carbon tetrachloride	117		6.830				ND	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.080	7.080	0.000	0	104084	10.5	
54 Benzene	78		7.104				ND	7
55 1,2-Dichloroethane	62		7.177				ND	7
* 57 Fluorobenzene (IS)	96	7.519	7.513	0.006	99	2040473	10.0	
60 Trichloroethene	95	8.012	7.994	0.018	95	5499	0.0910	
62 1,2-Dichloropropane	63		8.336				ND	
67 Dichlorobromomethane	83		8.689				ND	7
72 cis-1,3-Dichloropropene	75		9.250				ND	
73 4-Methyl-2-pentanone (MIBK)	43		9.439				ND	7
$ 74 Toluene-d8 (Surr)	98	9.567	9.567	0.000	94	2036627	10.0	
75 Toluene	92		9.646				ND	U
76 trans-1,3-Dichloropropene	75		9.921				ND	7
79 1,1,2-Trichloroethane	97		10.128				ND	

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
	80 Tetrachloroethene	166	10.201	10.207	-0.006	89	5442	0.0797	
	82 2-Hexanone	43		10.353				ND	7
	83 Chlorodibromomethane	129		10.506				ND	7
	84 Ethylene Dibromide	107		10.616				ND	
*	85 Chlorobenzene-d5 (IS)	117	11.061	11.061	0.000	85	1555316	10.0	
	87 Chlorobenzene	112		11.085				ND	7
	89 1,1,1,2-Tetrachloroethane	131		11.170				ND	
	90 Ethylbenzene	91		11.176				ND	7
S	88 Xylenes, Total	106		11.245				ND	7
	91 m-Xylene & p-Xylene	106		11.292				ND	7
	92 o-Xylene	106		11.628				ND	7
	93 Styrene	104		11.646				ND	7
	94 Bromoform	173		11.804				ND	
$	98 4-Bromofluorobenzene (Surr)	95	12.079	12.079	0.000	93	733280	9.60	
	99 1,1,2,2-Tetrachloroethane	83		12.188				ND	
*	113 1,4-Dichlorobenzene-d4	152	12.969	12.969	0.000	94	823579	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

MSV_HP25_ISSS_00022 Amount Added: 1.00 Units: uL Run Reagent

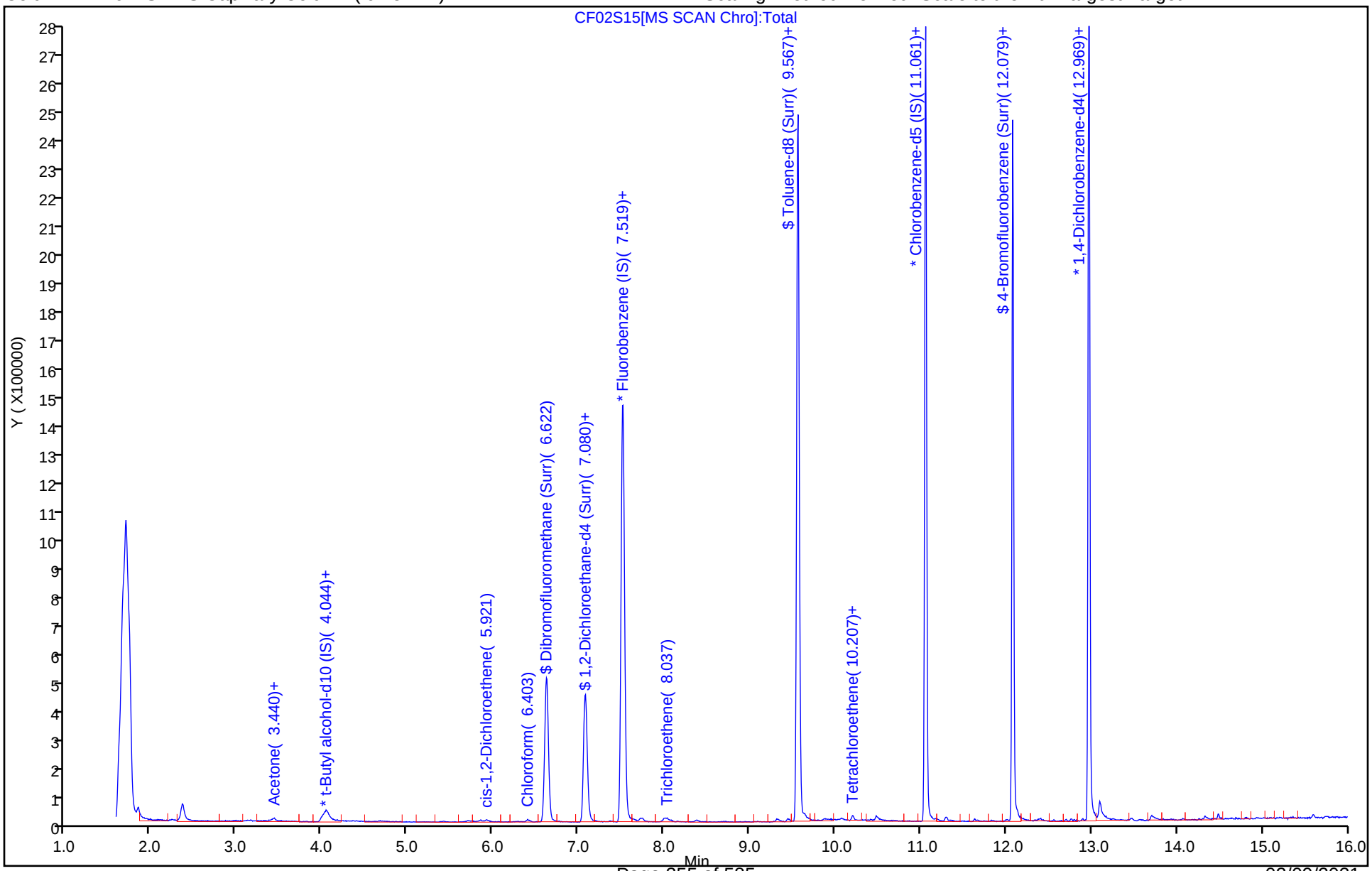
Report Date: 04-Feb-2021 11:07:57 Chrom Revision: 2.3 17-Jan-2021 00:24:10

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S15.D

Injection Date:	03-Feb-2021 18:12:30	Instrument ID:	10193	Operator ID:	SRK36897
Lims ID:	410-27746-A-11	Lab Sample ID:	410-27746-11	Worklist Smp#:	22
Client ID:	HD-COD-SW-28-0/1-0				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	21
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Env, LLC

Recovery Report

Data File: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S15.D
Lims ID: 410-27746-A-11
Client ID: HD-COD-SW-28-0/1-0
Sample Type: Client
Inject. Date: 03-Feb-2021 18:12:30 ALS Bottle#: 21 Worklist Smp#: 22
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0021161-022
Operator ID: SRK36897 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 04-Feb-2021 11:03:34 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1626

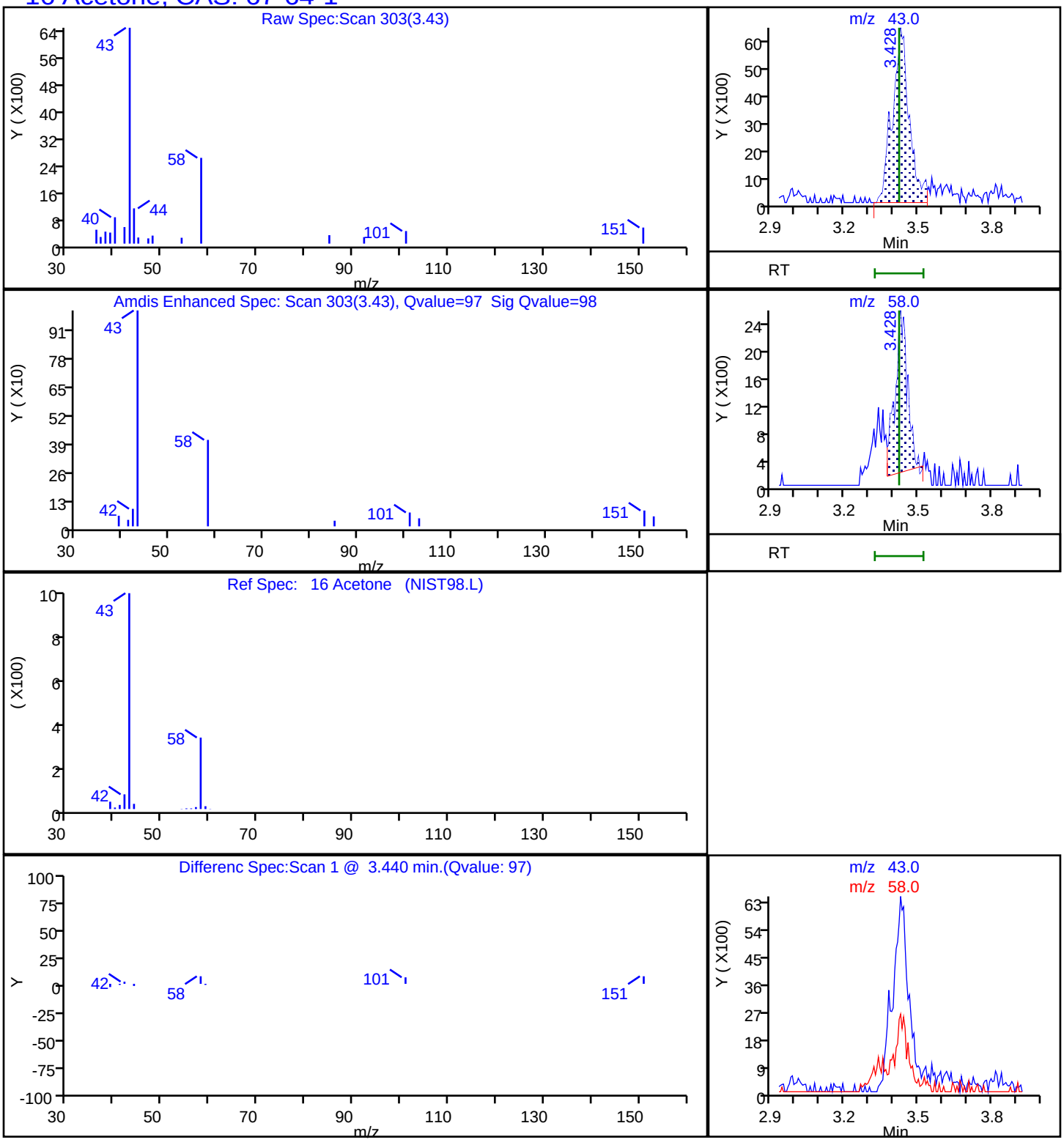
First Level Reviewer: spositok Date: 04-Feb-2021 11:02:17

Compound	Amount Added	Amount Recovered	% Rec.
$ 47 Dibromofluoromethane (Surr)	10.0	9.83	98.29
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.5	105.37
$ 74 Toluene-d8 (Surr)	10.0	10.0	100.26
$ 98 4-Bromofluorobenzene (Surr)	10.0	9.60	96.04

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S15.D				
Injection Date:	03-Feb-2021 18:12:30	Instrument ID:	10193		
Lims ID:	410-27746-A-11	Lab Sample ID:	410-27746-11		
Client ID:	HD-COD-SW-28-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	21	Worklist Smp#:	22
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

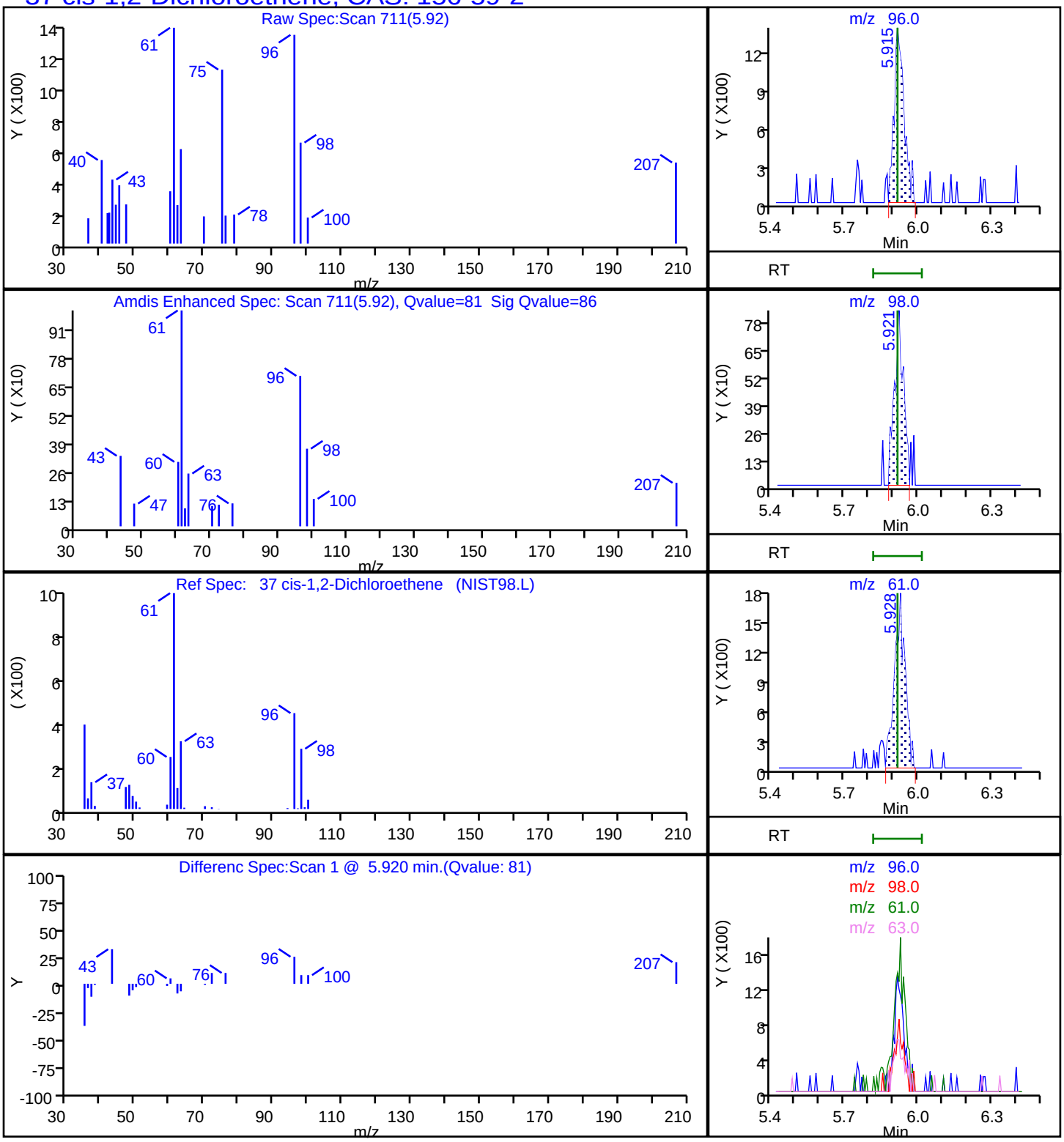
16 Acetone, CAS: 67-64-1



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S15.D				
Injection Date:	03-Feb-2021 18:12:30	Instrument ID:	10193		
Lims ID:	410-27746-A-11	Lab Sample ID:	410-27746-11		
Client ID:	HD-COD-SW-28-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	21	Worklist Smp#:	22
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

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



Report Date: 04-Feb-2021 11:07:57 Chrom Revision: 2.3 17-Jan-2021 00:24:10

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S15.D

Injection Date: 03-Feb-2021 18:12:30 Instrument ID: 10193

Lims ID: 410-27746-A-11 Lab Sample ID: 410-27746-11

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

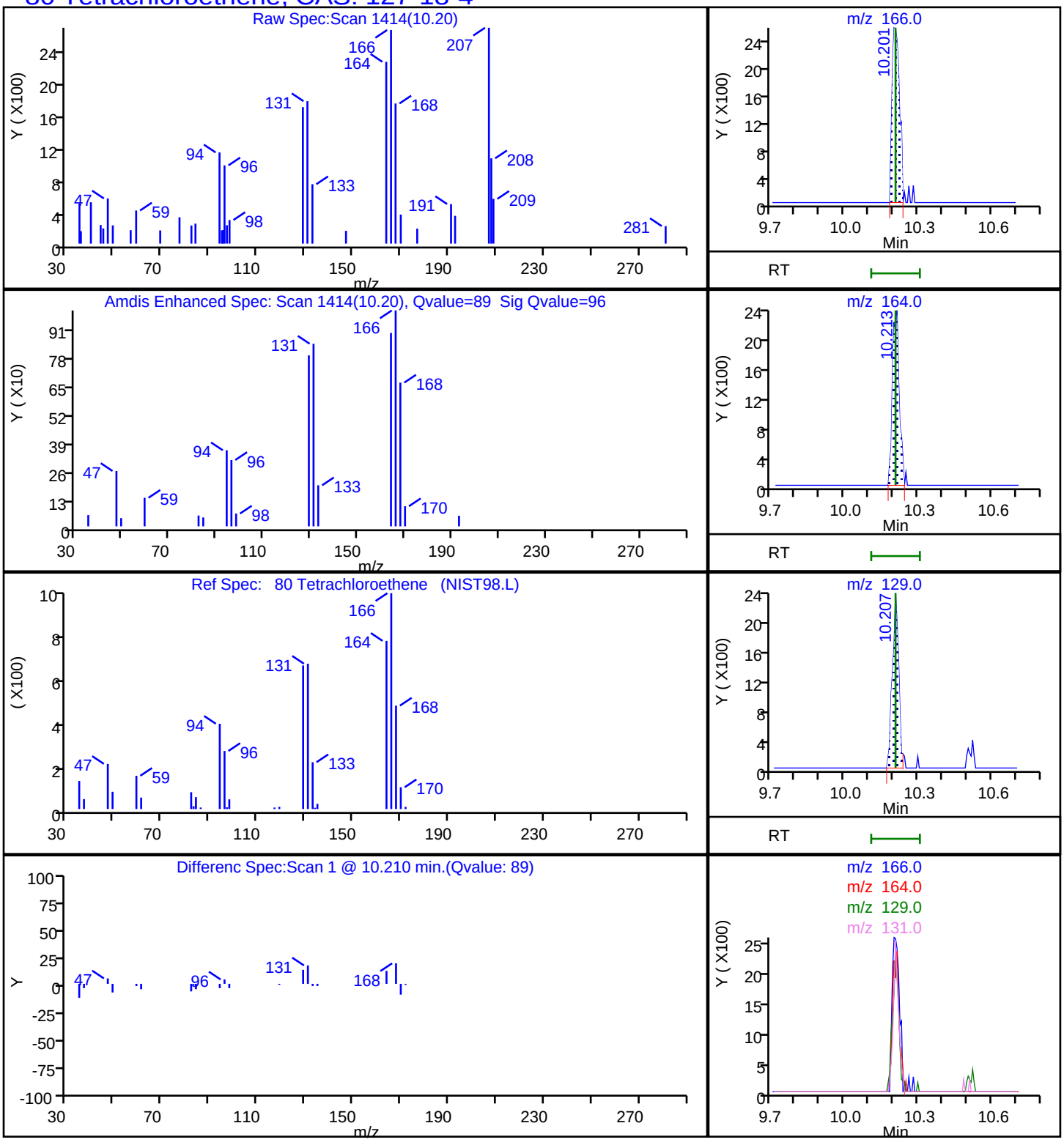
Operator ID: SRK36897 ALS Bottle#: 21 Worklist Smp#: 22

Purge Vol: 25.000 mL Dil. Factor: 1.0000

Method: MSV_10193_25mL Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

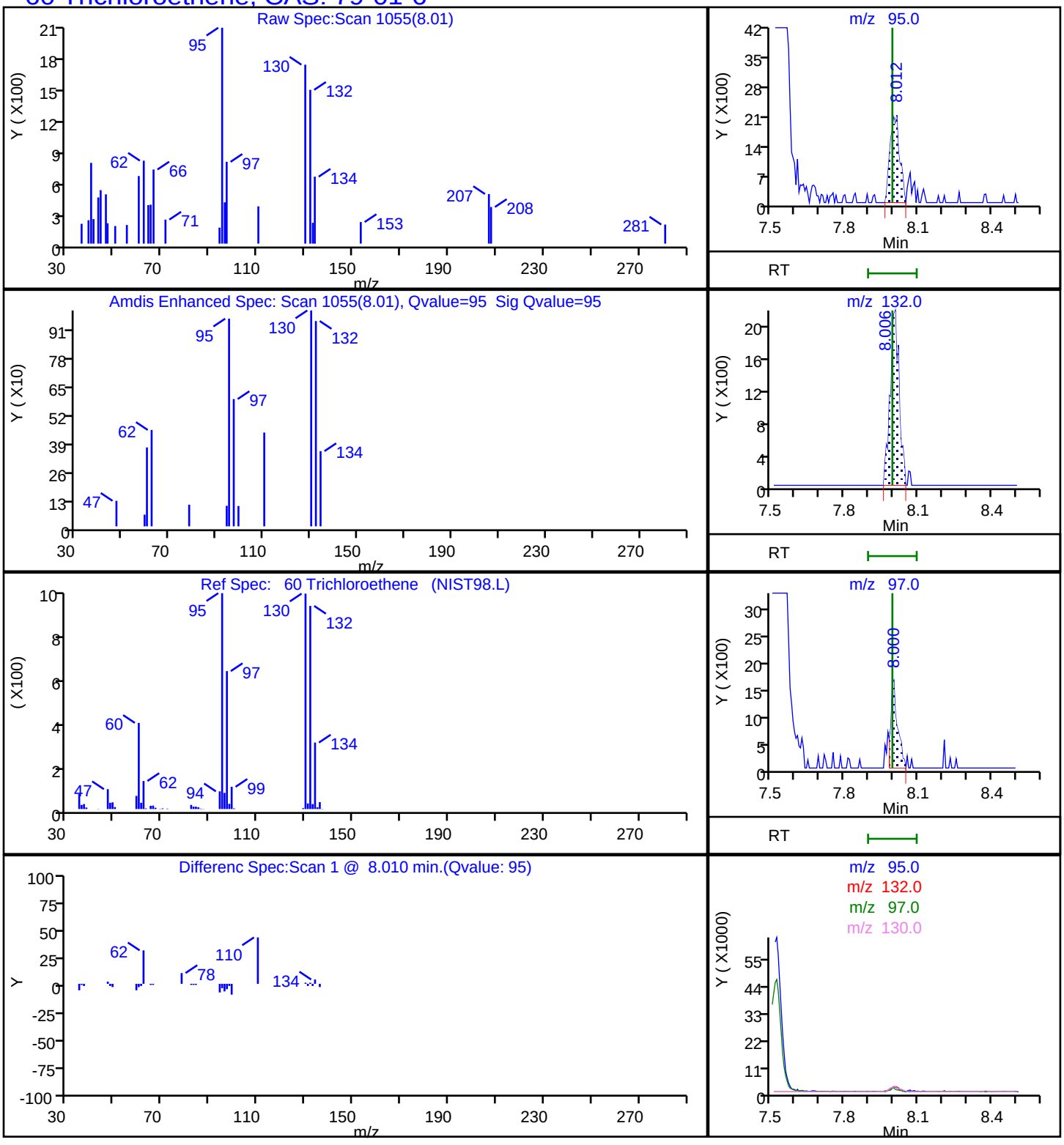
80 Tetrachloroethene, CAS: 127-18-4



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S15.D				
Injection Date:	03-Feb-2021 18:12:30	Instrument ID:	10193		
Lims ID:	410-27746-A-11	Lab Sample ID:	410-27746-11		
Client ID:	HD-COD-SW-28-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	21	Worklist Smp#:	22
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

60 Trichloroethene, CAS: 79-01-6



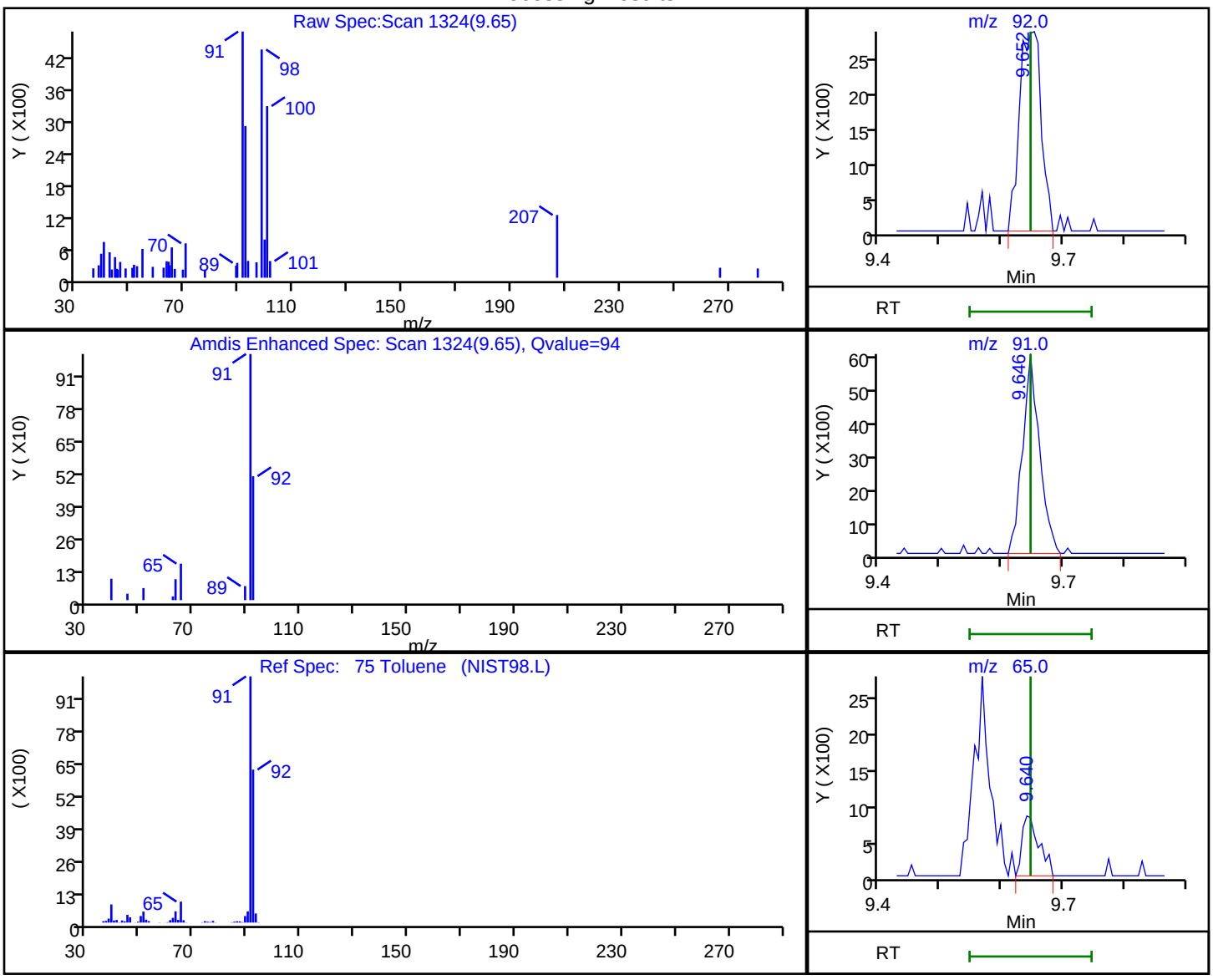
User Disabled Compound Report

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S15.D				
Injection Date:	03-Feb-2021 18:12:30	Instrument ID:	10193		
Lims ID:	410-27746-A-11	Lab Sample ID:	410-27746-11		
Client ID:	HD-COD-SW-28-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	21	Worklist Smp#:	22
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

75 Toluene, CAS: 108-88-3

Processing Results



RT	Mass	Response	Amount
9.65	92.00	7033	0.046034
9.65	91.00	11692	
9.64	65.00	1601	
9.65	39.00	1430	

Reviewer: spositok, 04-Feb-2021 11:02:06

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

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Client Sample ID: HD-COD-SW-29-0/1-0 Lab Sample ID: 410-27746-12

Matrix: Water Lab File ID: CF02S16.D

Analysis Method: 8260D Date Collected: 01/26/2021 09:10

Sample wt/vol: 25(mL) Date Analyzed: 02/03/2021 18:34

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.: 90352 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.50	0.070
71-55-6	1,1,1-Trichloroethane	ND		0.50	0.060
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.50	0.070
79-00-5	1,1,2-Trichloroethane	ND		0.50	0.060
75-34-3	1,1-Dichloroethane	ND		0.50	0.070
75-35-4	1,1-Dichloroethene	ND		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	ND		0.50	0.060
107-06-2	1,2-Dichloroethane	ND		0.50	0.050
78-87-5	1,2-Dichloropropane	ND		0.50	0.060
78-93-3	2-Butanone (MEK)	ND		5.0	0.60
591-78-6	2-Hexanone	ND		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70
67-64-1	Acetone	1.9	J	5.0	0.90
71-43-2	Benzene	ND		0.50	0.050
74-97-5	Bromochloromethane	ND		0.50	0.050
75-27-4	Bromodichloromethane	ND		0.50	0.050
75-25-2	Bromoform	ND		1.0	0.30
74-83-9	Bromomethane	ND	^c	0.50	0.070
75-15-0	Carbon disulfide	ND		1.0	0.060
56-23-5	Carbon tetrachloride	ND		0.50	0.070
108-90-7	Chlorobenzene	ND		0.50	0.060
75-00-3	Chloroethane	ND	^c	0.50	0.070
67-66-3	Chloroform	ND		0.50	0.090
74-87-3	Chloromethane	ND	^c	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
124-48-1	Dibromochloromethane	ND		0.50	0.070
100-41-4	Ethylbenzene	ND		0.50	0.060
1634-04-4	Methyl tert-butyl ether	ND		0.50	0.050
75-09-2	Methylene Chloride	ND		0.50	0.070
100-42-5	Styrene	ND		0.50	0.050
127-18-4	Tetrachloroethene	0.061	J	0.50	0.060
108-88-3	Toluene	ND		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	ND		0.50	0.060
10061-02-6	trans-1,3-Dichloropropene	ND		0.50	0.060
79-01-6	Trichloroethene	ND		0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Client Sample ID: HD-COD-SW-29-0/1-0 Lab Sample ID: 410-27746-12

Matrix: Water Lab File ID: CF02S16.D

Analysis Method: 8260D Date Collected: 01/26/2021 09:10

Sample wt/vol: 25(mL) Date Analyzed: 02/03/2021 18:34

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.: 90352 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-01-4	Vinyl chloride	ND	^c	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)	106		80-120
460-00-4	4-Bromofluorobenzene (Surr)	95		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\10193\20210203-21161.b\CF02S16.D
Lims ID: 410-27746-A-12
Client ID: HD-COD-SW-29-0/1-0
Sample Type: Client
Inject. Date: 03-Feb-2021 18:34:30 ALS Bottle#: 22 Worklist Smp#: 23
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0021161-023
Operator ID: SRK36897 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 04-Feb-2021 11:03:34 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1626

First Level Reviewer: spositok Date: 04-Feb-2021 11:02:43

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
3 Chloromethane	50		2.081				ND	U
5 Vinyl chloride	62		2.190				ND	
6 Bromomethane	94		2.501				ND	
7 Chloroethane	64		2.574				ND	7
14 1,1-Dichloroethene	96		3.385				ND	7
16 Acetone	43	3.428	3.422	0.006	96	14894	1.89	
20 Carbon disulfide	76		3.666				ND	7
24 Methylene Chloride	84		4.019				ND	7
* 25 t-Butyl alcohol-d10 (IS)	65	4.050	4.056	-0.006	0	185809	50.0	
28 Methyl tert-butyl ether	73		4.403				ND	7
29 trans-1,2-Dichloroethene	96		4.409				ND	
32 1,1-Dichloroethane	63		5.074				ND	
36 2-Butanone (MEK)	43		5.885				ND	
37 cis-1,2-Dichloroethene	96	5.915	5.915	0.000	69	5278	0.0842	
44 Chlorobromomethane	128		6.251				ND	
46 Chloroform	83		6.403				ND	U
$ 47 Dibromofluoromethane (Surr)	113	6.622	6.622	0.000	94	487187	10.0	
48 1,1,1-Trichloroethane	97		6.629				ND	
50 Carbon tetrachloride	117		6.830				ND	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.074	7.080	-0.006	0	105233	10.6	
54 Benzene	78		7.104				ND	7
55 1,2-Dichloroethane	62		7.177				ND	
* 57 Fluorobenzene (IS)	96	7.513	7.513	0.000	99	2046133	10.0	
60 Trichloroethene	95		7.994				ND	
62 1,2-Dichloropropane	63		8.336				ND	
67 Dichlorobromomethane	83		8.689				ND	
72 cis-1,3-Dichloropropene	75		9.250				ND	
73 4-Methyl-2-pentanone (MIBK)	43		9.439				ND	7
$ 74 Toluene-d8 (Surr)	98	9.567	9.567	0.000	93	2039373	10.0	
75 Toluene	92		9.646				ND	U
76 trans-1,3-Dichloropropene	75		9.921				ND	7
79 1,1,2-Trichloroethane	97		10.128				ND	

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
	80 Tetrachloroethene	166	10.207	10.207	0.000	92	4198	0.0613	
	82 2-Hexanone	43		10.353				ND	7
	83 Chlorodibromomethane	129		10.506				ND	
	84 Ethylene Dibromide	107		10.616				ND	
*	85 Chlorobenzene-d5 (IS)	117	11.061	11.061	0.000	85	1560664	10.0	
	87 Chlorobenzene	112		11.085				ND	
	89 1,1,1,2-Tetrachloroethane	131		11.170				ND	
	90 Ethylbenzene	91		11.176				ND	7
S	88 Xylenes, Total	106		11.245				ND	7
	91 m-Xylene & p-Xylene	106		11.292				ND	7
	92 o-Xylene	106		11.628				ND	7
	93 Styrene	104		11.646				ND	7
	94 Bromoform	173		11.804				ND	
$	98 4-Bromofluorobenzene (Surr)	95	12.079	12.079	0.000	94	730790	9.54	
	99 1,1,2,2-Tetrachloroethane	83		12.188				ND	
*	113 1,4-Dichlorobenzene-d4	152	12.969	12.969	0.000	94	814862	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

MSV_HP25_ISSS_00022 Amount Added: 1.00 Units: uL Run Reagent

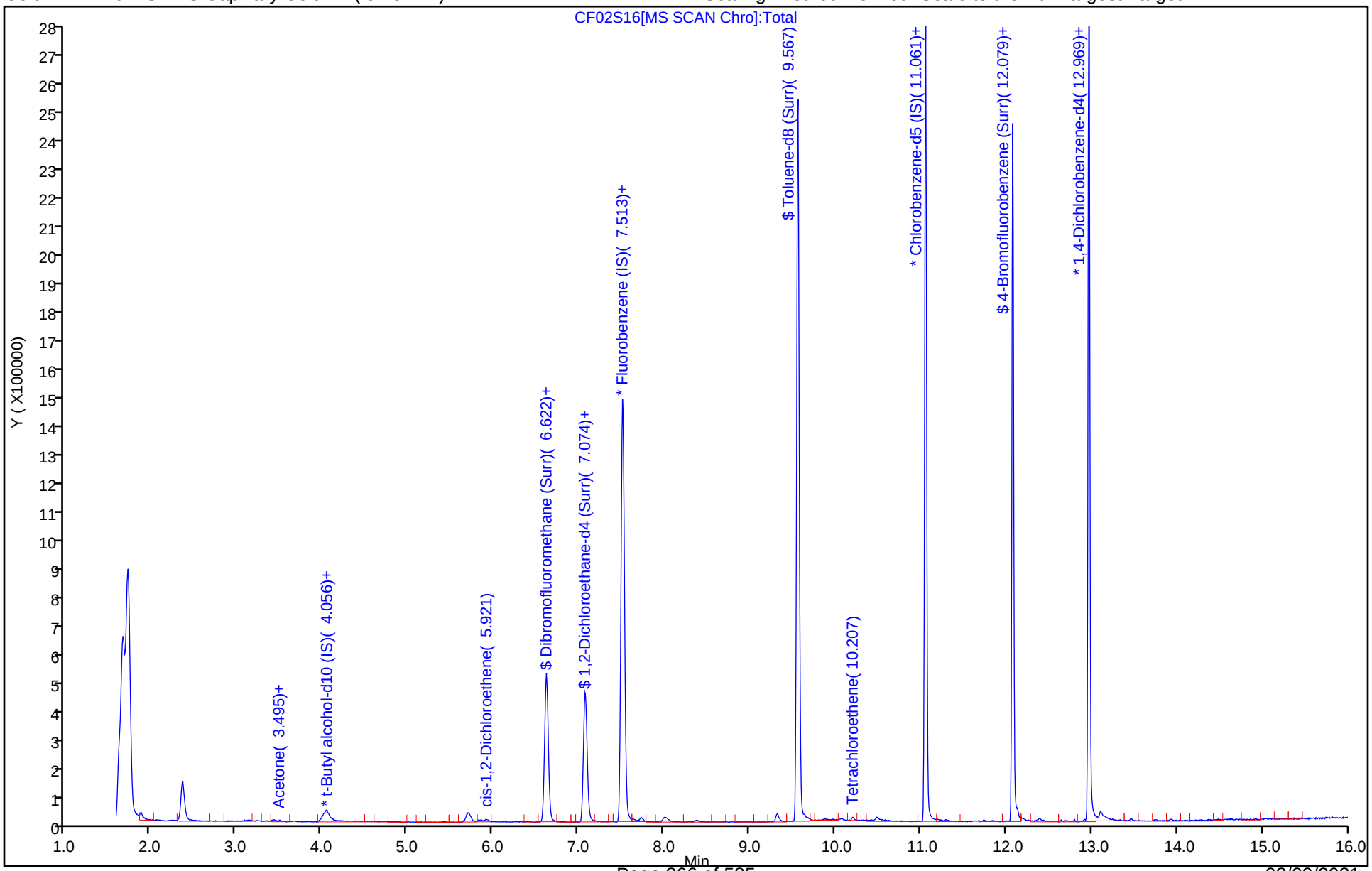
Report Date: 04-Feb-2021 11:07:59 Chrom Revision: 2.3 17-Jan-2021 00:24:10

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S16.D

Injection Date:	03-Feb-2021 18:34:30	Instrument ID:	10193	Operator ID:	SRK36897
Lims ID:	410-27746-A-12	Lab Sample ID:	410-27746-12	Worklist Smp#:	23
Client ID:	HD-COD-SW-29-0/1-0				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	22
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Env, LLC

Recovery Report

Data File: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S16.D
Lims ID: 410-27746-A-12
Client ID: HD-COD-SW-29-0/1-0
Sample Type: Client
Inject. Date: 03-Feb-2021 18:34:30 ALS Bottle#: 22 Worklist Smp#: 23
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0021161-023
Operator ID: SRK36897 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 04-Feb-2021 11:03:34 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1626

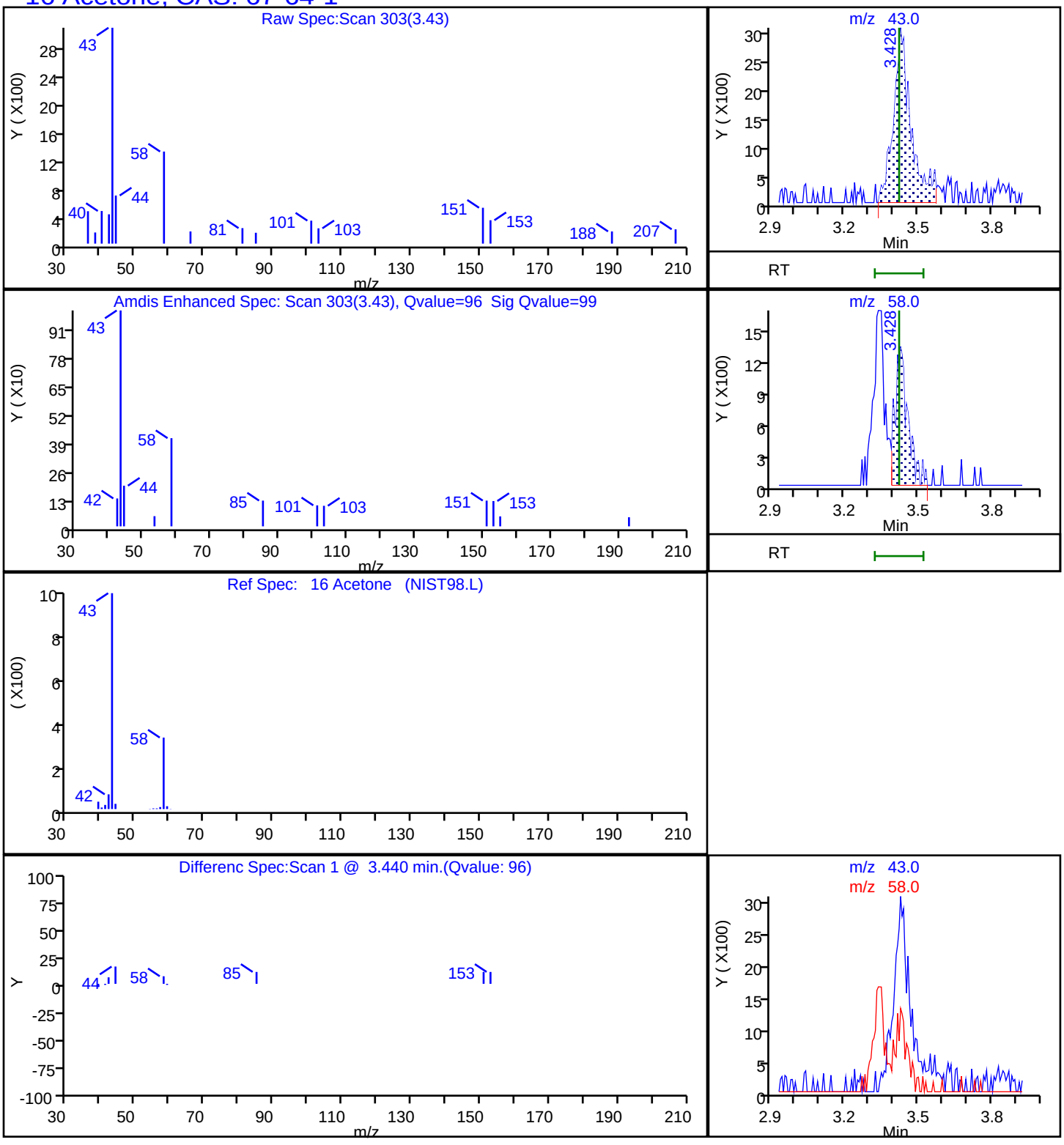
First Level Reviewer: spositok Date: 04-Feb-2021 11:02:43

Compound	Amount Added	Amount Recovered	% Rec.
$ 47 Dibromofluoromethane (Surr)	10.0	10.0	100.20
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.6	106.24
$ 74 Toluene-d8 (Surr)	10.0	10.0	100.05
$ 98 4-Bromofluorobenzene (Surr)	10.0	9.54	95.39

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S16.D				
Injection Date:	03-Feb-2021 18:34:30	Instrument ID:	10193		
Lims ID:	410-27746-A-12	Lab Sample ID:	410-27746-12		
Client ID:	HD-COD-SW-29-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	22	Worklist Smp#:	23
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

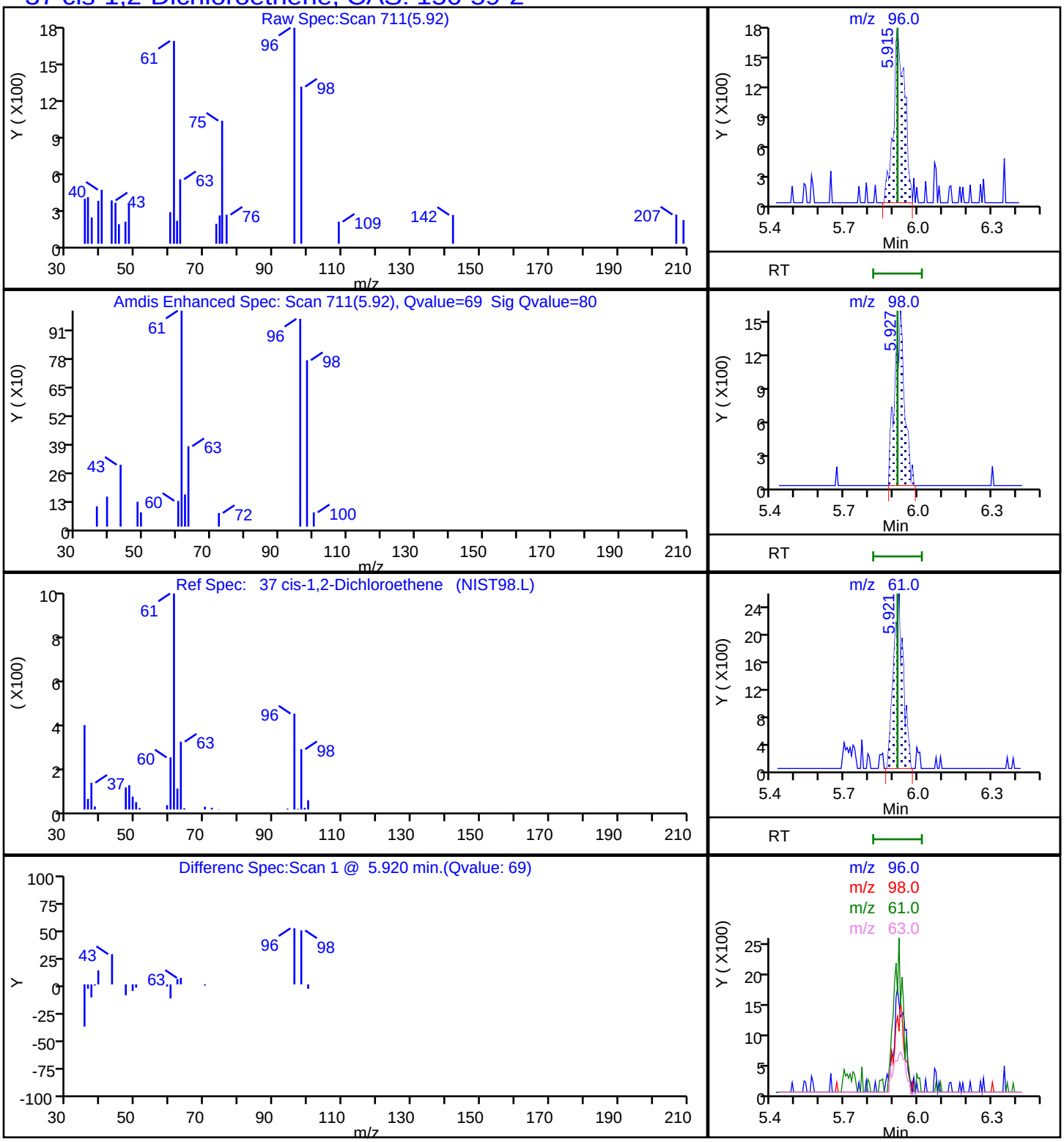
16 Acetone, CAS: 67-64-1



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S16.D				
Injection Date:	03-Feb-2021 18:34:30	Instrument ID:	10193		
Lims ID:	410-27746-A-12	Lab Sample ID:	410-27746-12		
Client ID:	HD-COD-SW-29-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	22	Worklist Smp#:	23
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

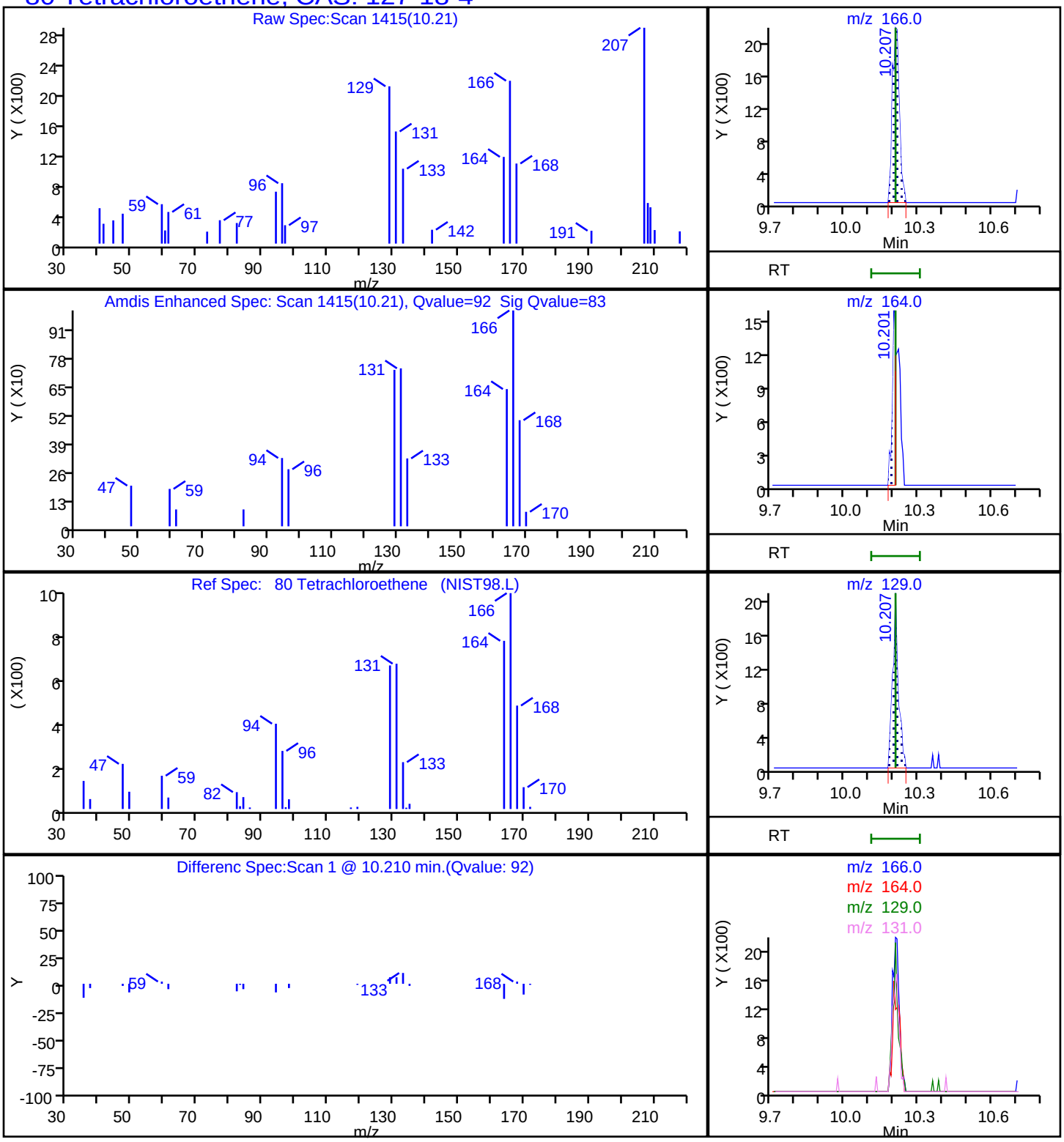
37 cis-1,2-Dichloroethene, CAS: 156-59-2



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S16.D				
Injection Date:	03-Feb-2021 18:34:30	Instrument ID:	10193		
Lims ID:	410-27746-A-12	Lab Sample ID:	410-27746-12		
Client ID:	HD-COD-SW-29-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	22	Worklist Smp#:	23
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

80 Tetrachloroethene, CAS: 127-18-4



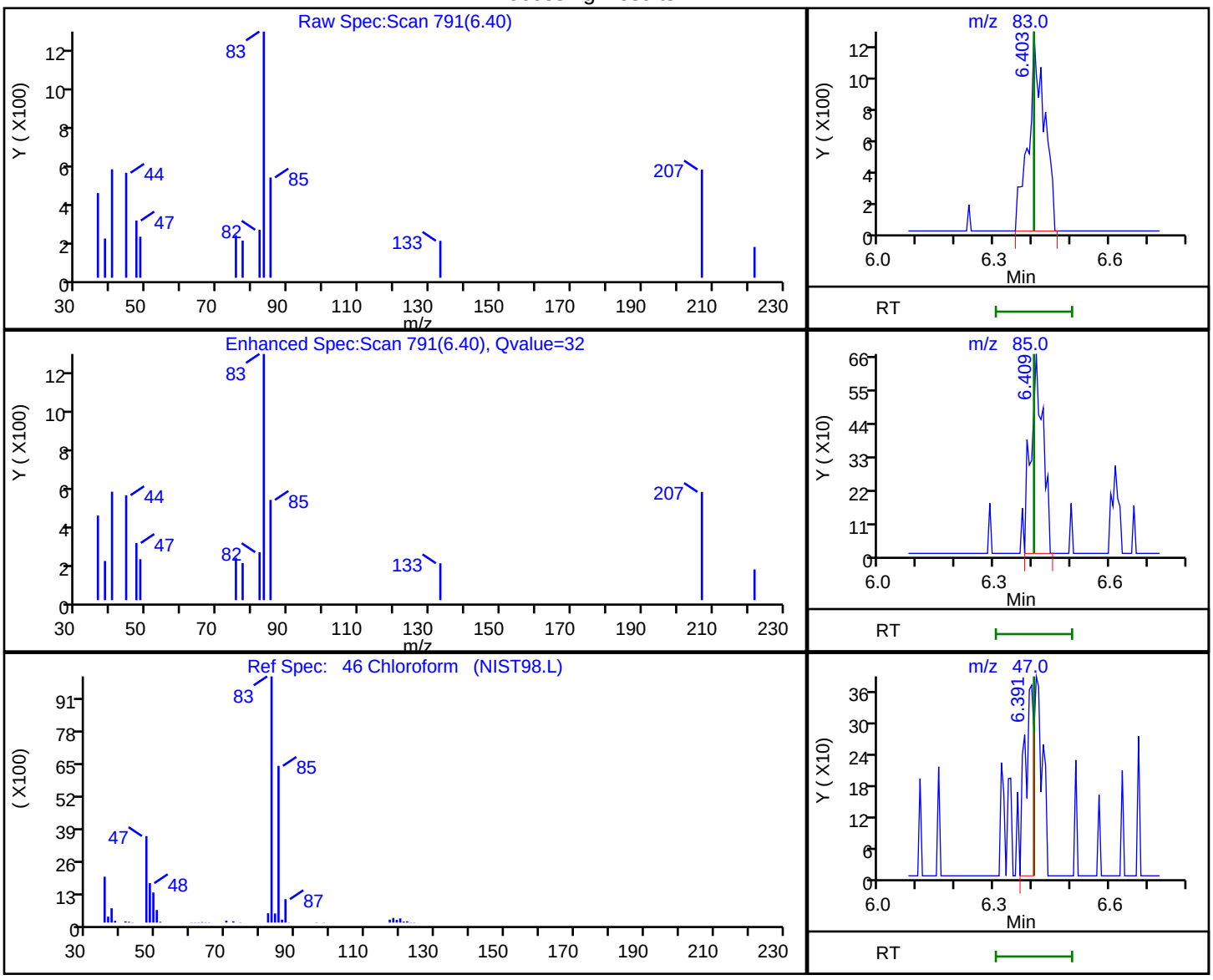
User Disabled Compound Report

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S16.D				
Injection Date:	03-Feb-2021 18:34:30	Instrument ID:	10193		
Lims ID:	410-27746-A-12	Lab Sample ID:	410-27746-12		
Client ID:	HD-COD-SW-29-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	22	Worklist Smp#:	23
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

46 Chloroform, CAS: 67-66-3

Processing Results



RT	Mass	Response	Amount
6.40	83.00	3449	0.034188
6.41	85.00	1473	
6.39	47.00	609	

Reviewer: spositok, 04-Feb-2021 11:02:29

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

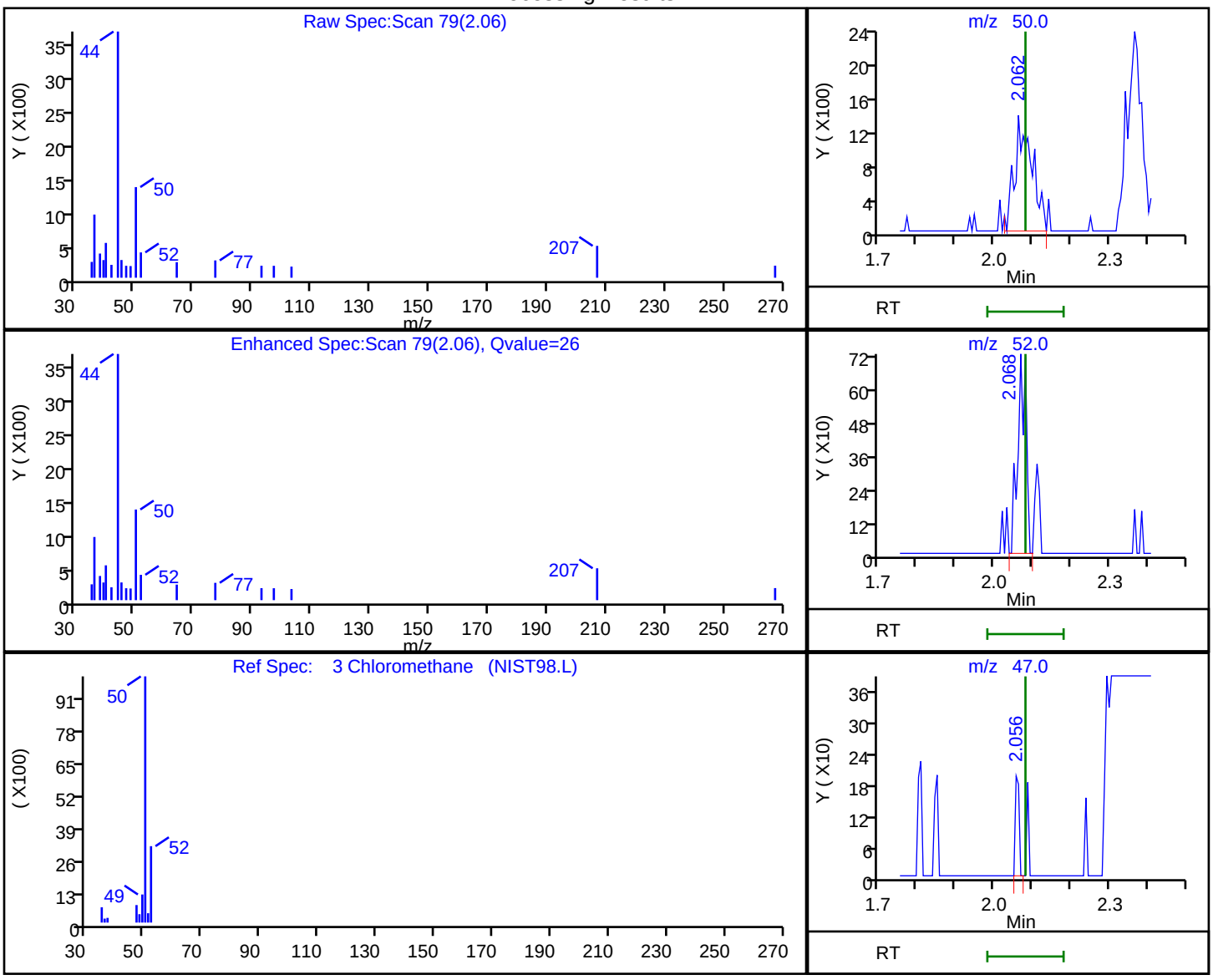
User Disabled Compound Report

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S16.D				
Injection Date:	03-Feb-2021 18:34:30	Instrument ID:	10193		
Lims ID:	410-27746-A-12	Lab Sample ID:	410-27746-12		
Client ID:	HD-COD-SW-29-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	22	Worklist Smp#:	23
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

3 Chloromethane, CAS: 74-87-3

Processing Results



RT	Mass	Response	Amount
2.06	50.00	4212	0.054112
2.07	52.00	1103	
2.06	47.00	135	

Reviewer: spositok, 04-Feb-2021 11:02:22

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

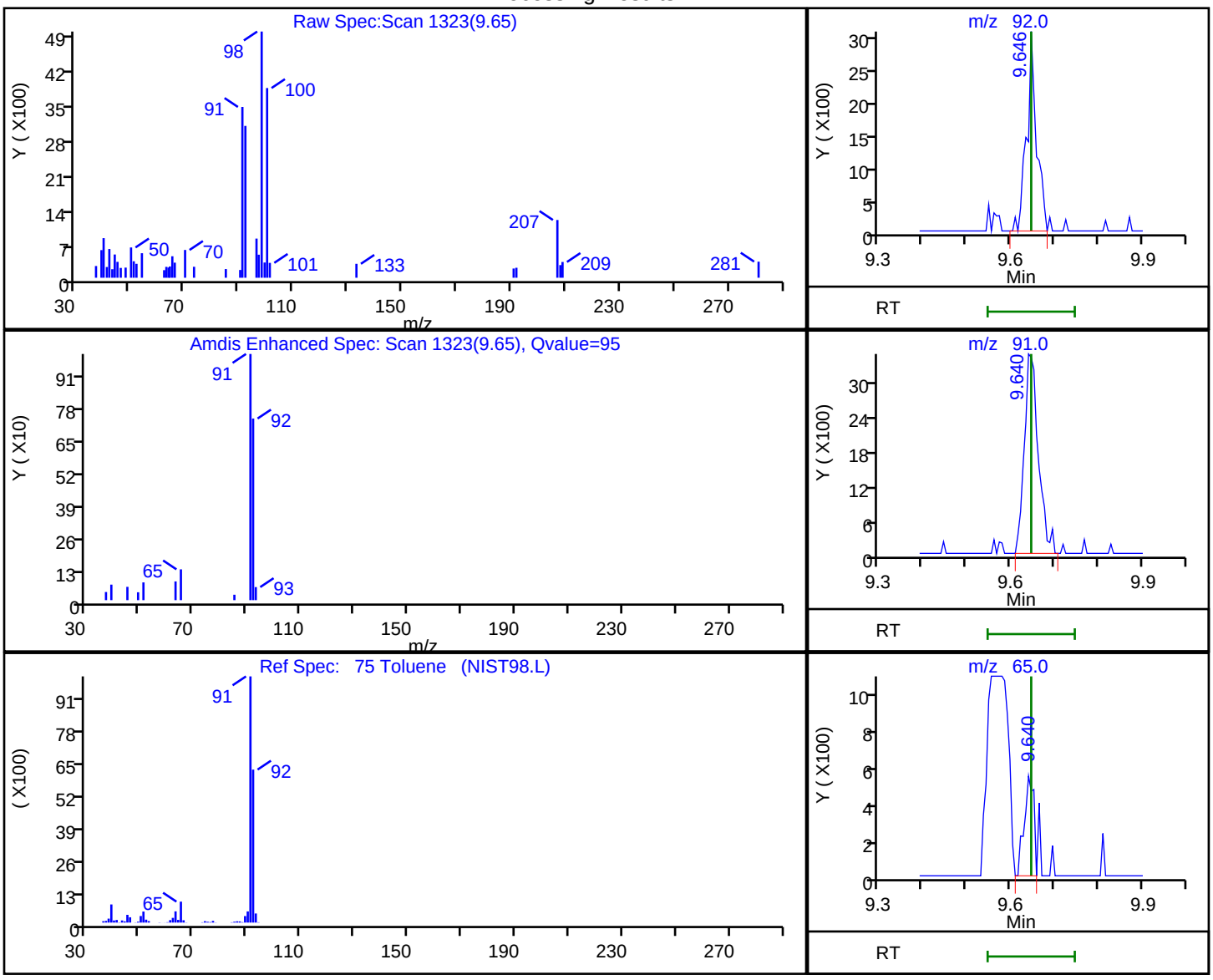
User Disabled Compound Report

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S16.D				
Injection Date:	03-Feb-2021 18:34:30	Instrument ID:	10193		
Lims ID:	410-27746-A-12	Lab Sample ID:	410-27746-12		
Client ID:	HD-COD-SW-29-0/1-0				
Operator ID:	SRK36897	ALS Bottle#:	22	Worklist Smp#:	23
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

75 Toluene, CAS: 108-88-3

Processing Results



RT	Mass	Response	Amount
9.65	92.00	4750	0.030984
9.64	91.00	7791	
9.64	65.00	769	
9.65	39.00	897	

Reviewer: spositok, 04-Feb-2021 11:02:35

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

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Client Sample ID: HD-QC1-0/1-1 Lab Sample ID: 410-27746-13

Matrix: Water Lab File ID: CF02S17.D

Analysis Method: 8260D Date Collected: 01/26/2021 12:00

Sample wt/vol: 25(mL) Date Analyzed: 02/03/2021 18:57

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 90352 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	ND		0.50	0.070
71-55-6	1,1,1-Trichloroethane	0.12	J	0.50	0.060
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.50	0.070
79-00-5	1,1,2-Trichloroethane	ND		0.50	0.060
75-34-3	1,1-Dichloroethane	ND		0.50	0.070
75-35-4	1,1-Dichloroethene	0.090	J	0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	ND		0.50	0.060
107-06-2	1,2-Dichloroethane	ND		0.50	0.050
78-87-5	1,2-Dichloropropane	ND		0.50	0.060
78-93-3	2-Butanone (MEK)	ND		5.0	0.60
591-78-6	2-Hexanone	ND		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	0.70
67-64-1	Acetone	ND		5.0	0.90
71-43-2	Benzene	ND		0.50	0.050
74-97-5	Bromochloromethane	ND		0.50	0.050
75-27-4	Bromodichloromethane	ND		0.50	0.050
75-25-2	Bromoform	ND		1.0	0.30
74-83-9	Bromomethane	ND	^c	0.50	0.070
75-15-0	Carbon disulfide	ND		1.0	0.060
56-23-5	Carbon tetrachloride	ND		0.50	0.070
108-90-7	Chlorobenzene	ND		0.50	0.060
75-00-3	Chloroethane	ND	^c	0.50	0.070
67-66-3	Chloroform	0.25	J	0.50	0.090
74-87-3	Chloromethane	ND	^c	0.50	0.060
156-59-2	cis-1,2-Dichloroethene	0.81		0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	ND		0.50	0.050
124-48-1	Dibromochloromethane	ND		0.50	0.070
100-41-4	Ethylbenzene	ND		0.50	0.060
1634-04-4	Methyl tert-butyl ether	ND		0.50	0.050
75-09-2	Methylene Chloride	ND		0.50	0.070
100-42-5	Styrene	ND		0.50	0.050
127-18-4	Tetrachloroethene	3.2		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
79-01-6	Trichloroethene	1.2		0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Client Sample ID: HD-QC1-0/1-1 Lab Sample ID: 410-27746-13

Matrix: Water Lab File ID: CF02S17.D

Analysis Method: 8260D Date Collected: 01/26/2021 12:00

Sample wt/vol: 25(mL) Date Analyzed: 02/03/2021 18:57

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 90352 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-01-4	Vinyl chloride	ND	^c	0.50	0.10
1330-20-7	Xylenes, Total	ND		1.0	0.15

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	107		80-120
460-00-4	4-Bromofluorobenzene (Surr)	96		80-120
1868-53-7	Dibromofluoromethane (Surr)	100		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\10193\20210203-21161.b\CF02S17.D
Lims ID: 410-27746-A-13 DL
Client ID: HD-QC1-0/1-1
Sample Type: Client
Inject. Date: 03-Feb-2021 18:57:30 ALS Bottle#: 23 Worklist Smp#: 24
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0021161-024
Operator ID: SRK36897 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 04-Feb-2021 11:03:34 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1626

First Level Reviewer: spositok Date: 04-Feb-2021 11:03:16

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
3 Chloromethane	50		2.081				ND	7
5 Vinyl chloride	62		2.190				ND	7
6 Bromomethane	94		2.501				ND	
7 Chloroethane	64		2.574				ND	
14 1,1-Dichloroethene	96	3.391	3.385	0.006	94	4222	0.0901	
16 Acetone	43		3.422				ND	7
20 Carbon disulfide	76		3.666				ND	7
24 Methylene Chloride	84		4.019				ND	
* 25 t-Butyl alcohol-d10 (IS)	65	4.050	4.056	-0.006	0	183935	50.0	
28 Methyl tert-butyl ether	73		4.403				ND	U
29 trans-1,2-Dichloroethene	96		4.409				ND	
32 1,1-Dichloroethane	63	5.086	5.074	0.012	92	6780	0.0672	
36 2-Butanone (MEK)	43		5.885				ND	
37 cis-1,2-Dichloroethene	96	5.921	5.915	0.006	78	50327	0.8104	
44 Chlorobromomethane	128		6.251				ND	
46 Chloroform	83	6.415	6.403	0.012	94	25206	0.2523	
$ 47 Dibromofluoromethane (Surr)	113	6.628	6.622	0.006	94	480353	9.98	
48 1,1,1-Trichloroethane	97	6.628	6.629	-0.001	36	10685	0.1187	
50 Carbon tetrachloride	117		6.830				ND	7
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.080	7.080	0.000	0	104525	10.7	
54 Benzene	78		7.104				ND	7
55 1,2-Dichloroethane	62		7.177				ND	7
* 57 Fluorobenzene (IS)	96	7.519	7.513	0.006	99	2026432	10.0	
60 Trichloroethene	95	8.000	7.994	0.006	97	70207	1.17	
62 1,2-Dichloropropane	63		8.336				ND	
67 Dichlorobromomethane	83		8.689				ND	
72 cis-1,3-Dichloropropene	75		9.250				ND	
73 4-Methyl-2-pentanone (MIBK)	43		9.439				ND	7
$ 74 Toluene-d8 (Surr)	98	9.567	9.567	0.000	93	2035310	10.1	
75 Toluene	92		9.646				ND	U
76 trans-1,3-Dichloropropene	75		9.921				ND	7
79 1,1,2-Trichloroethane	97		10.128				ND	7

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
	80 Tetrachloroethene	166	10.207	10.207	0.000	97	220948	3.25	
	82 2-Hexanone	43		10.353				ND	
	83 Chlorodibromomethane	129		10.506				ND	
	84 Ethylene Dibromide	107		10.616				ND	
*	85 Chlorobenzene-d5 (IS)	117	11.061	11.061	0.000	85	1549929	10.0	
	87 Chlorobenzene	112		11.085				ND	
	89 1,1,1,2-Tetrachloroethane	131		11.170				ND	
	90 Ethylbenzene	91		11.176				ND	7
S	88 Xylenes, Total	106		11.245				ND	7
	91 m-Xylene & p-Xylene	106		11.292				ND	7
	92 o-Xylene	106		11.628				ND	
	93 Styrene	104		11.646				ND	
	94 Bromoform	173		11.804				ND	
$	98 4-Bromofluorobenzene (Surr)	95	12.079	12.079	0.000	93	728780	9.58	
	99 1,1,2,2-Tetrachloroethane	83		12.188				ND	
*	113 1,4-Dichlorobenzene-d4	152	12.969	12.969	0.000	94	817306	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

MSV_HP25_ISSS_00022 Amount Added: 1.00 Units: uL Run Reagent

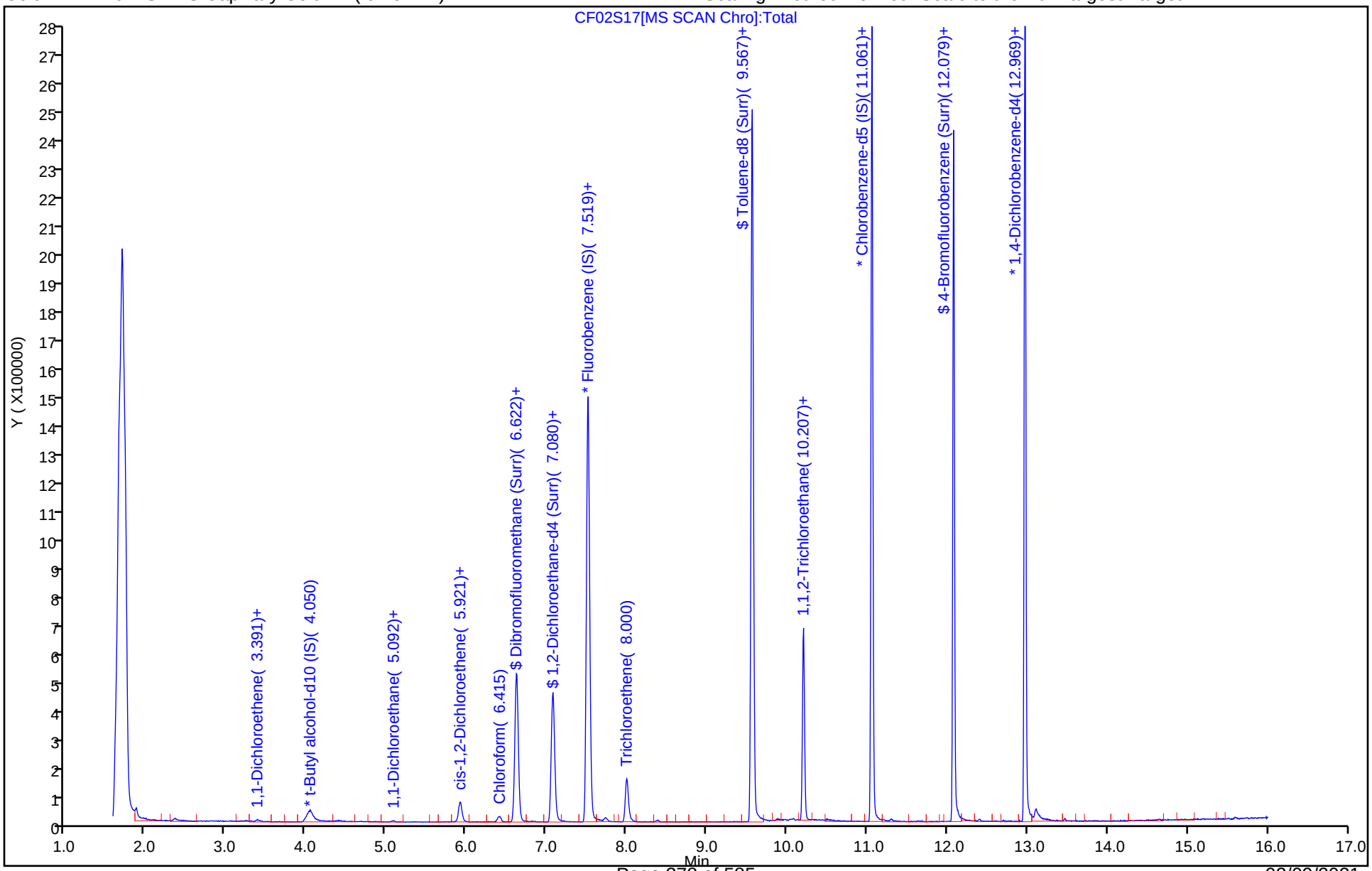
Report Date: 04-Feb-2021 11:08:00 Chrom Revision: 2.3 17-Jan-2021 00:24:10

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S17.D

Injection Date:	03-Feb-2021 18:57:30	Instrument ID:	10193	Operator ID:	SRK36897
Lims ID:	410-27746-A-13 DL	Lab Sample ID:	410-27746-13	Worklist Smp#:	24
Client ID:	HD-QC1-0/1-1				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	23
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Env, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S17.D				
Lims ID:	410-27746-A-13 DL				
Client ID:	HD-QC1-0/1-1				
Sample Type:	Client				
Inject. Date:	03-Feb-2021 18:57:30	ALS Bottle#:	23	Worklist Smp#:	24
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0021161-024				
Operator ID:	SRK36897	Instrument ID:	10193		
Method:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\MSV_10193_25mL.m				
Limit Group:	MSV - 8260C_D				
Last Update:	04-Feb-2021 11:03:34	Calib Date:	01-Sep-2020 19:09:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1626				

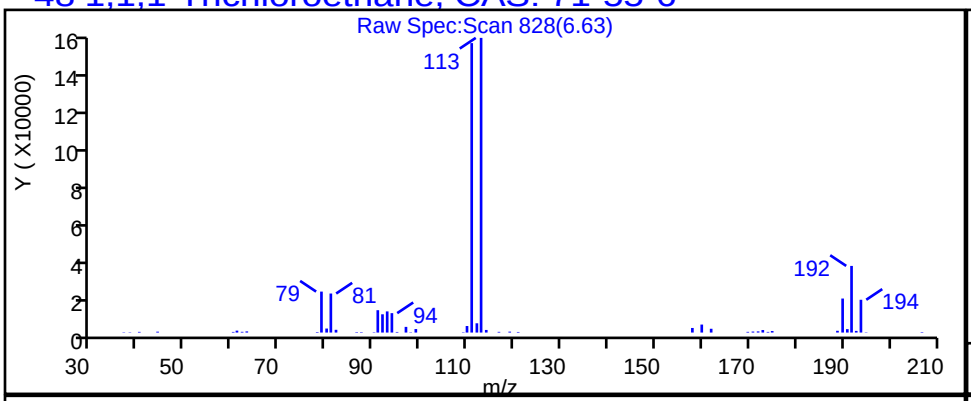
First Level Reviewer: spositok Date: 04-Feb-2021 11:03:16

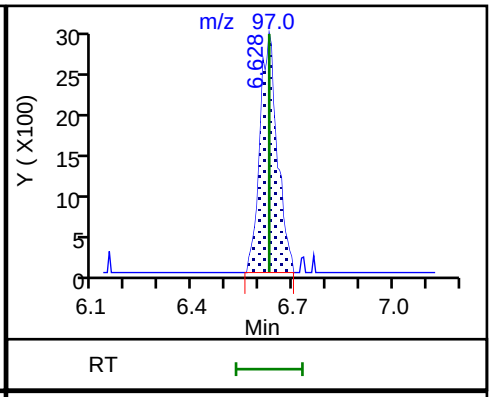
Compound	Amount Added	Amount Recovered	% Rec.
$ 47 Dibromofluoromethane (Surr)	10.0	9.98	99.76
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.7	106.55
$ 74 Toluene-d8 (Surr)	10.0	10.1	100.54
$ 98 4-Bromofluorobenzene (Surr)	10.0	9.58	95.78

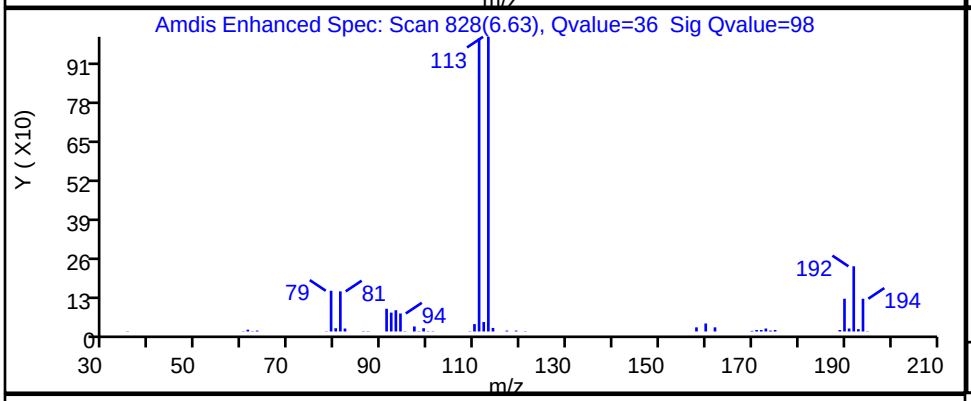
Eurofins Lancaster Laboratories Env, LLC

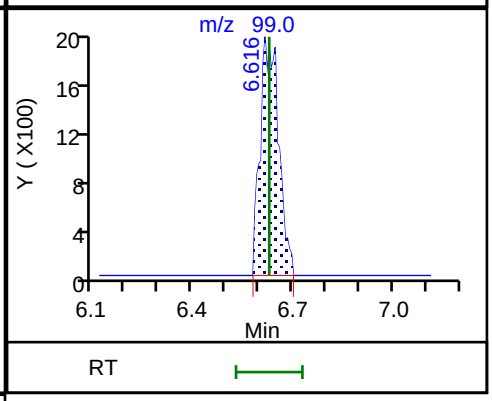
Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S17.D				
Injection Date:	03-Feb-2021 18:57:30	Instrument ID:	10193		
Lims ID:	410-27746-A-13 DL	Lab Sample ID:	410-27746-13		
Client ID:	HD-QC1-0/1-1				
Operator ID:	SRK36897	ALS Bottle#:	23	Worklist Smp#:	24
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

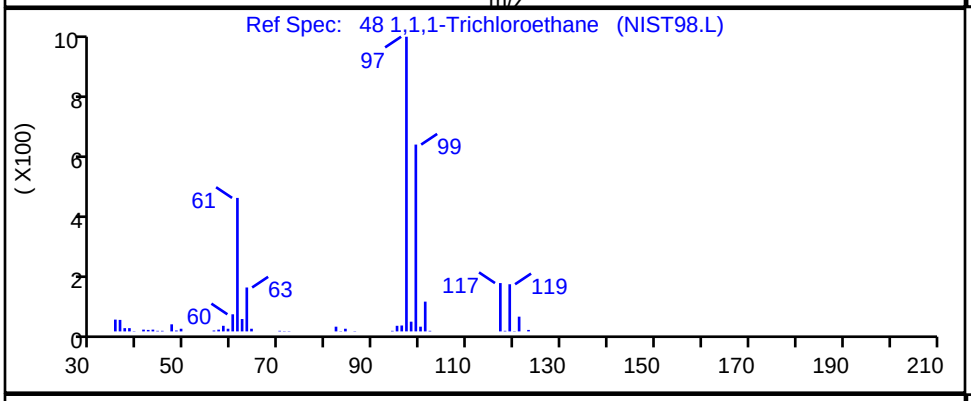
48 1,1,1-Trichloroethane, CAS: 71-55-6

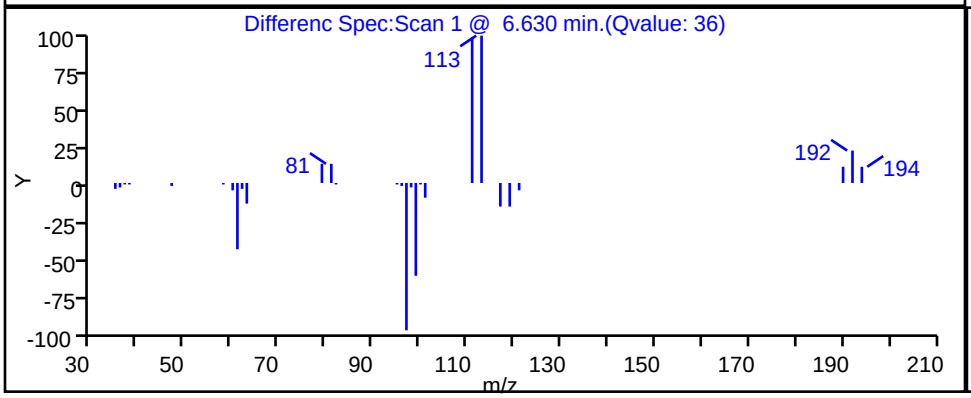


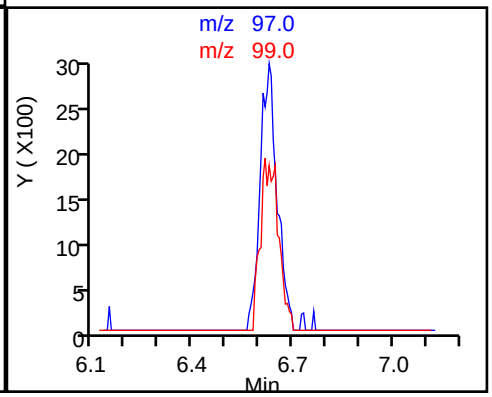








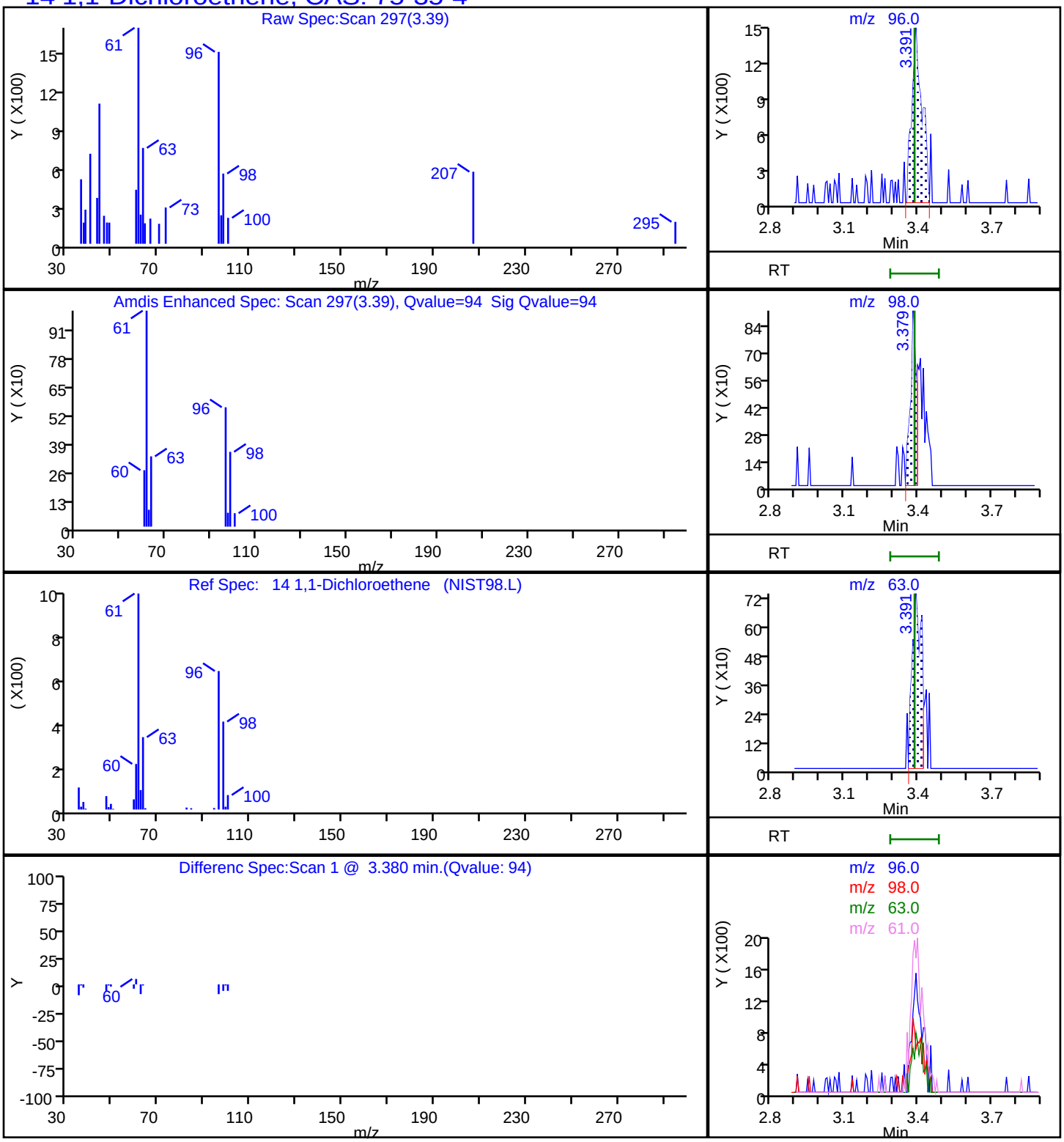




Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S17.D				
Injection Date:	03-Feb-2021 18:57:30	Instrument ID:	10193		
Lims ID:	410-27746-A-13 DL	Lab Sample ID:	410-27746-13		
Client ID:	HD-QC1-0/1-1				
Operator ID:	SRK36897	ALS Bottle#:	23	Worklist Smp#:	24
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

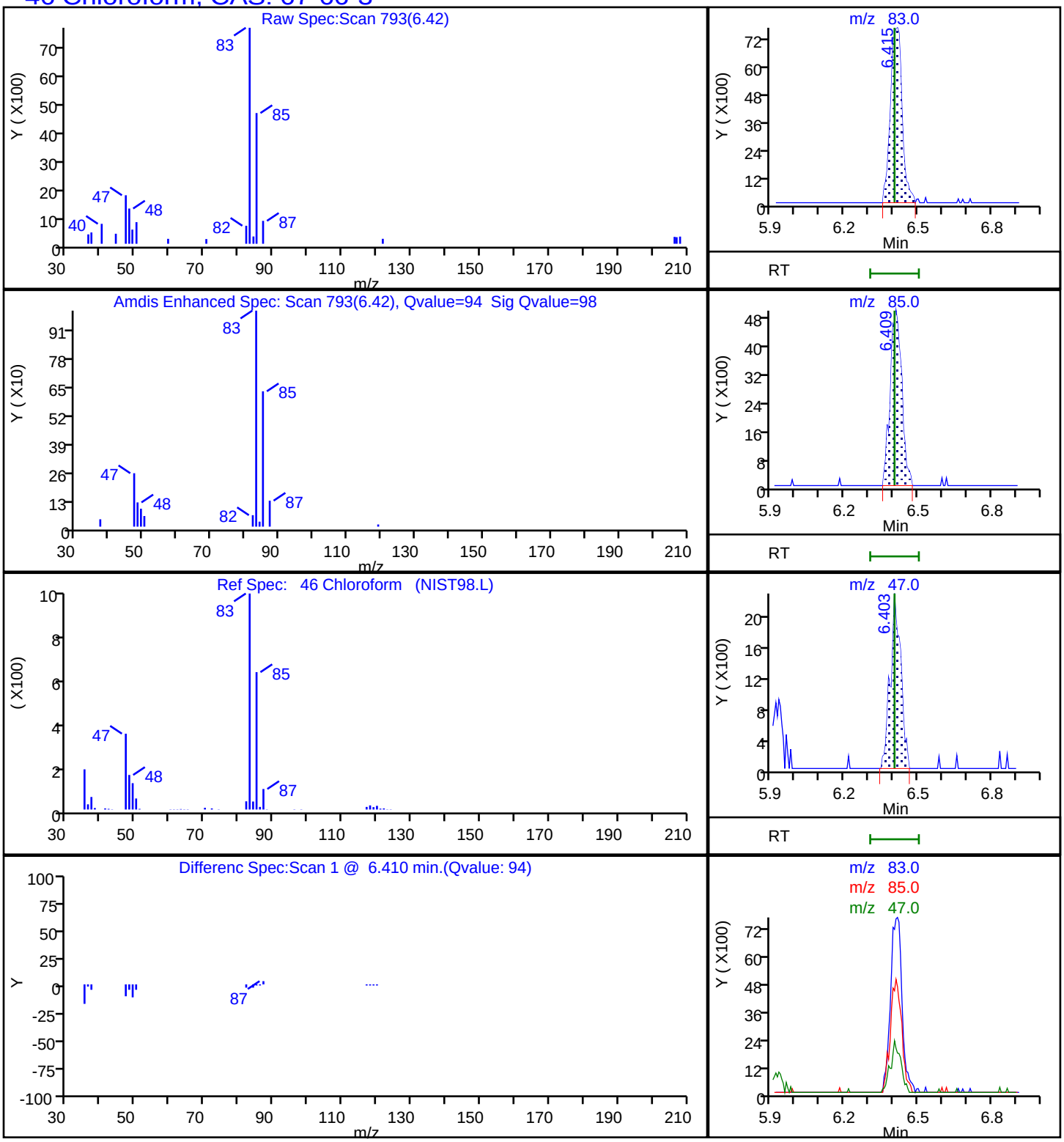
14 1,1-Dichloroethene, CAS: 75-35-4



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S17.D				
Injection Date:	03-Feb-2021 18:57:30	Instrument ID:	10193		
Lims ID:	410-27746-A-13 DL	Lab Sample ID:	410-27746-13		
Client ID:	HD-QC1-0/1-1				
Operator ID:	SRK36897	ALS Bottle#:	23	Worklist Smp#:	24
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

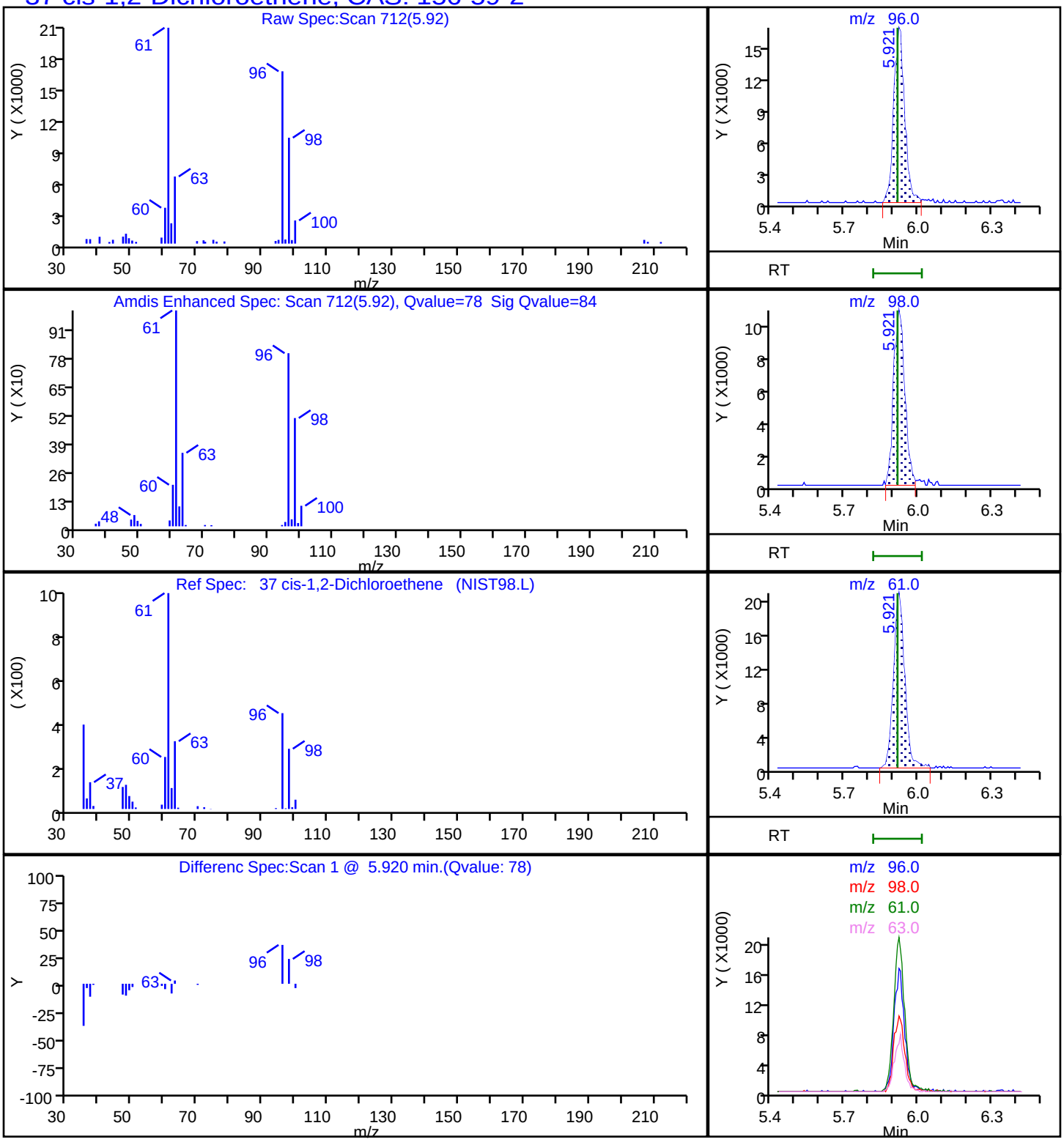
46 Chloroform, CAS: 67-66-3



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S17.D				
Injection Date:	03-Feb-2021 18:57:30	Instrument ID:	10193		
Lims ID:	410-27746-A-13 DL	Lab Sample ID:	410-27746-13		
Client ID:	HD-QC1-0/1-1				
Operator ID:	SRK36897	ALS Bottle#:	23	Worklist Smp#:	24
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

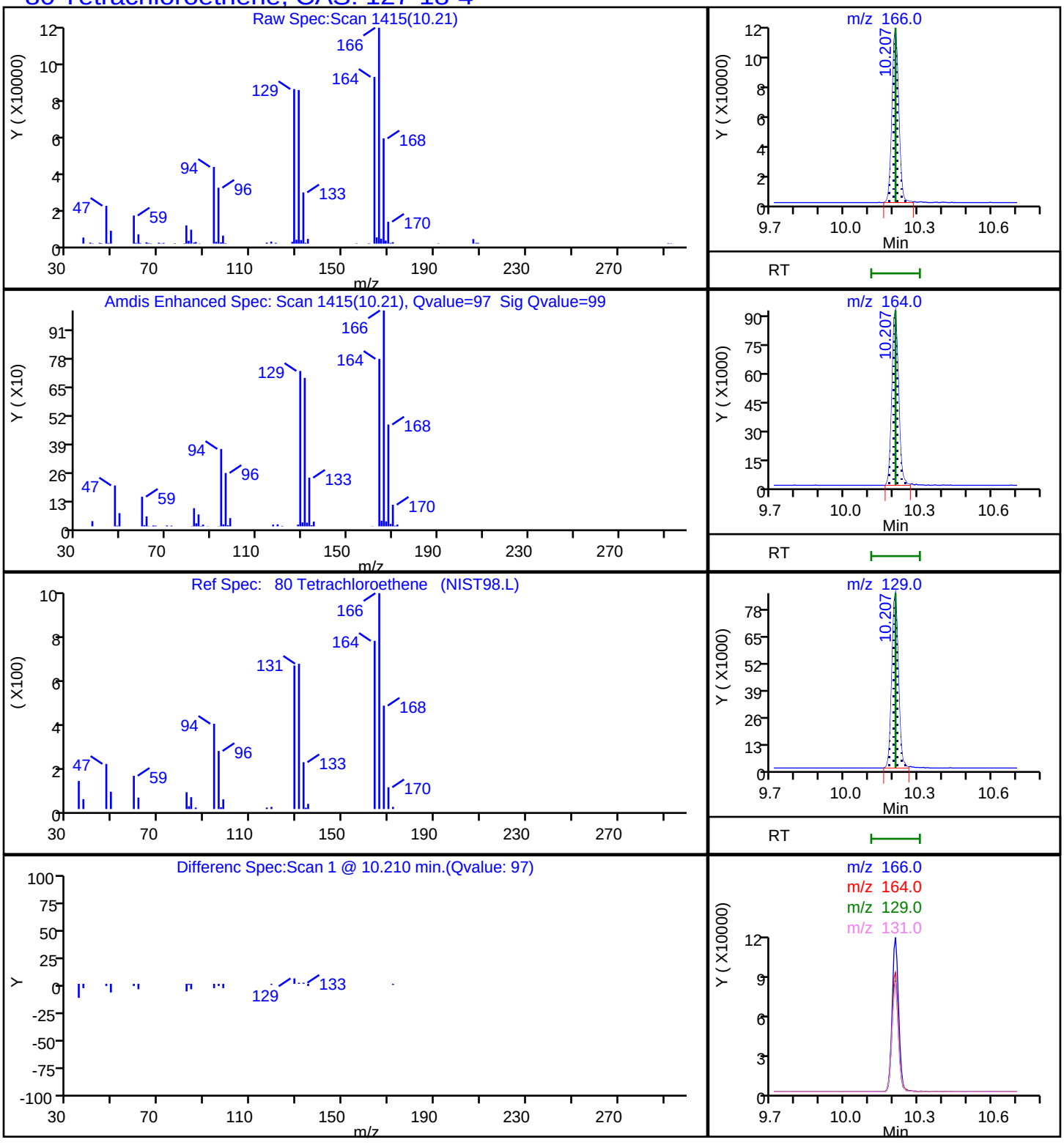
37 cis-1,2-Dichloroethene, CAS: 156-59-2



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S17.D		
Injection Date:	03-Feb-2021 18:57:30	Instrument ID:	10193
Lims ID:	410-27746-A-13 DL	Lab Sample ID:	410-27746-13
Client ID:	HD-QC1-0/1-1		
Operator ID:	SRK36897	ALS Bottle#:	23 Worklist Smp#: 24
Purge Vol:	25.000 mL	Dil. Factor:	1.0000
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad

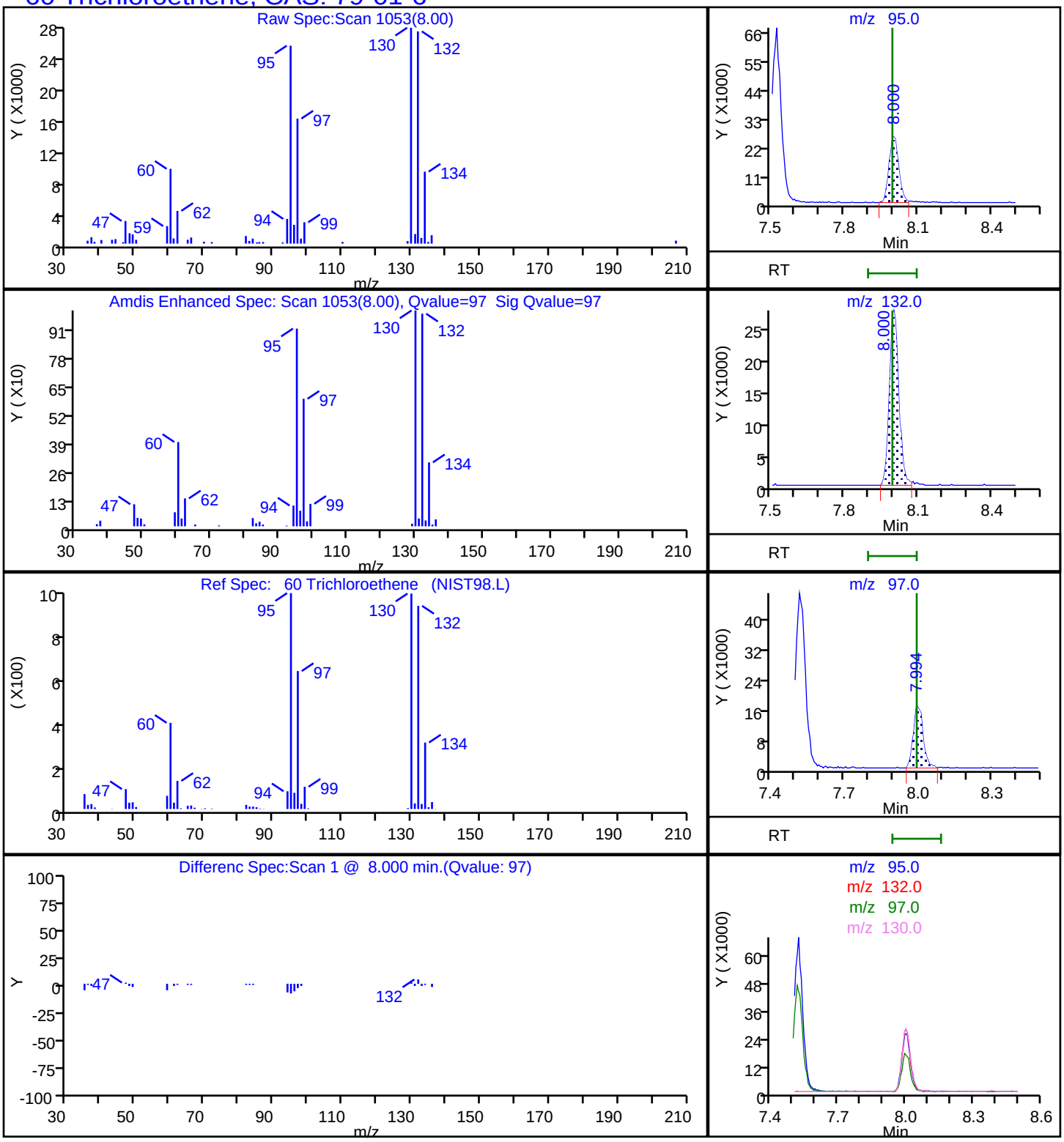
80 Tetrachloroethene, CAS: 127-18-4



Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S17.D				
Injection Date:	03-Feb-2021 18:57:30	Instrument ID:	10193		
Lims ID:	410-27746-A-13 DL	Lab Sample ID:	410-27746-13		
Client ID:	HD-QC1-0/1-1				
Operator ID:	SRK36897	ALS Bottle#:	23	Worklist Smp#:	24
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

60 Trichloroethene, CAS: 79-01-6



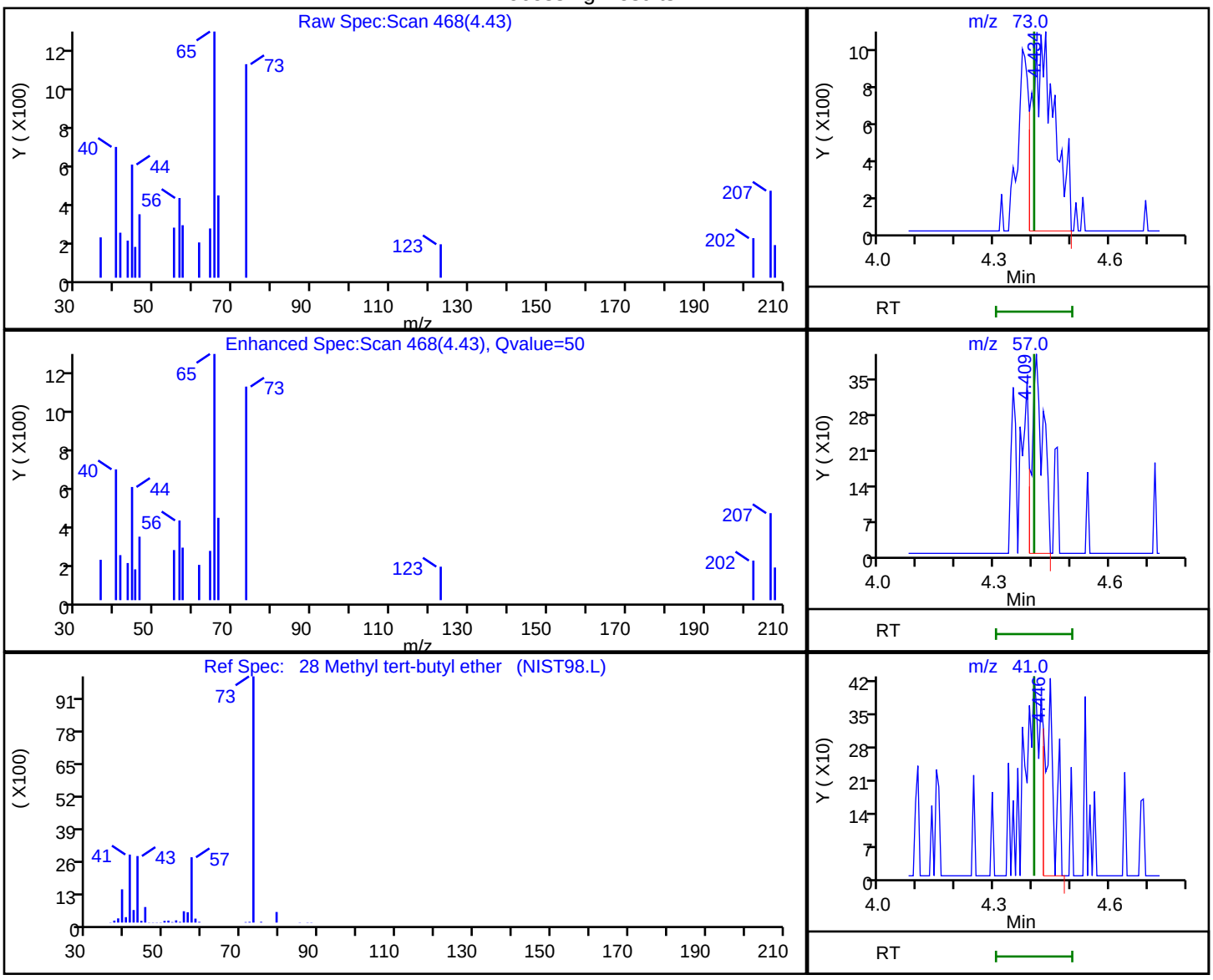
User Disabled Compound Report

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S17.D				
Injection Date:	03-Feb-2021 18:57:30	Instrument ID:	10193		
Lims ID:	410-27746-A-13 DL	Lab Sample ID:	410-27746-13		
Client ID:	HD-QC1-0/1-1				
Operator ID:	SRK36897	ALS Bottle#:	23	Worklist Smp#:	24
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

28 Methyl tert-butyl ether, CAS: 1634-04-4

Processing Results



RT	Mass	Response	Amount
4.43	73.00	4131	0.027238
4.41	57.00	809	
4.45	41.00	680	

Reviewer: spositok, 04-Feb-2021 11:02:53

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

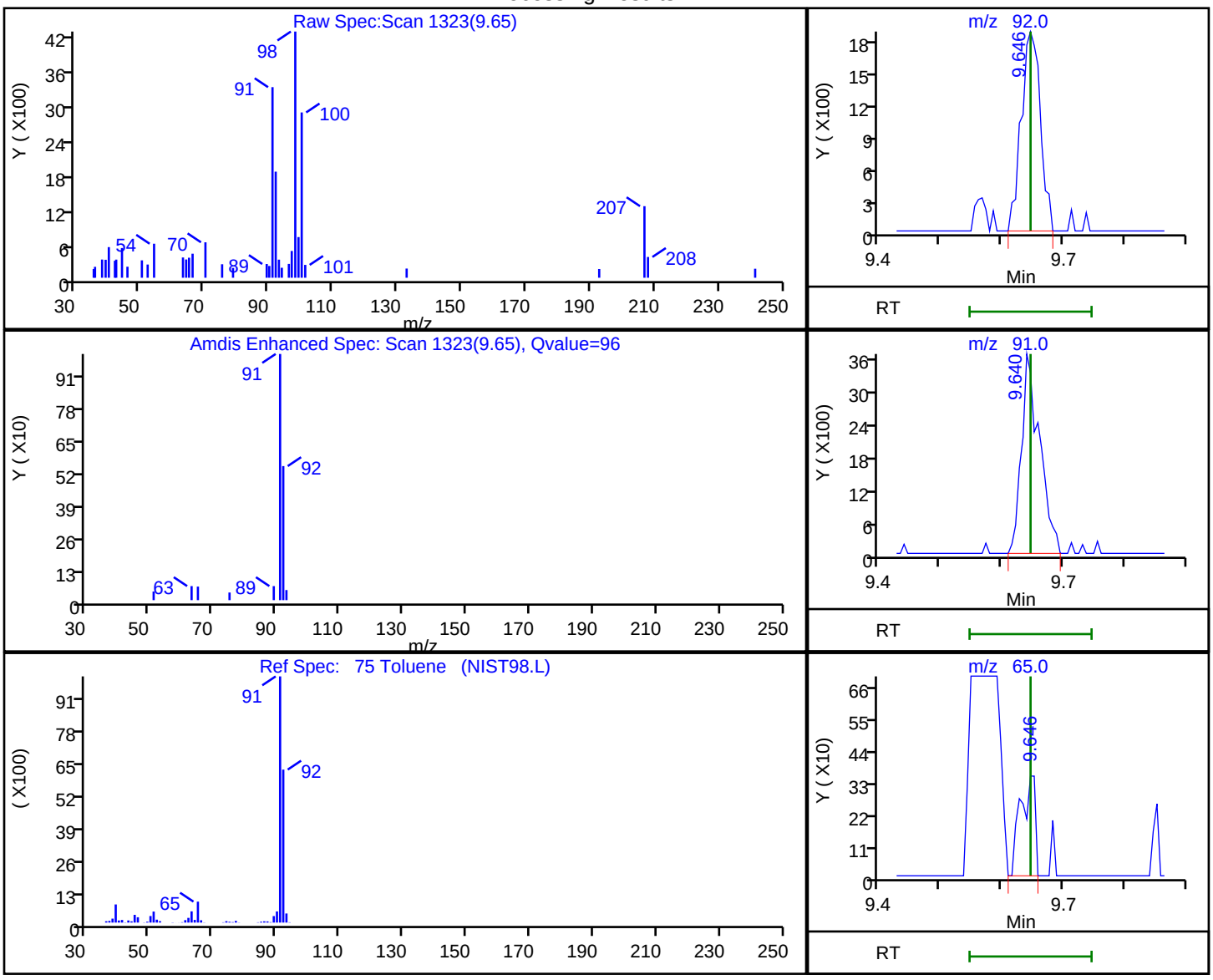
User Disabled Compound Report

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S17.D				
Injection Date:	03-Feb-2021 18:57:30	Instrument ID:	10193		
Lims ID:	410-27746-A-13 DL	Lab Sample ID:	410-27746-13		
Client ID:	HD-QC1-0/1-1				
Operator ID:	SRK36897	ALS Bottle#:	23	Worklist Smp#:	24
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

75 Toluene, CAS: 108-88-3

Processing Results



RT	Mass	Response	Amount
9.65	92.00	4028	0.026457
9.64	91.00	7602	
9.65	65.00	585	
9.64	39.00	403	

Reviewer: spositok, 04-Feb-2021 11:03:08

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

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Client Sample ID: HD-QC1-0/1-2 Lab Sample ID: 410-27746-14

Matrix: Water Lab File ID: CF02S18.D

Analysis Method: 8260D Date Collected: 01/26/2021 00:00

Sample wt/vol: 25(mL) Date Analyzed: 02/03/2021 19:19

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.: 90352 Units: ug/L

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

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Client Sample ID: HD-QC1-0/1-2 Lab Sample ID: 410-27746-14

Matrix: Water Lab File ID: CF02S18.D

Analysis Method: 8260D Date Collected: 01/26/2021 00:00

Sample wt/vol: 25(mL) Date Analyzed: 02/03/2021 19:19

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.: 90352 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-01-4	Vinyl chloride	ND	^c	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)	109		80-120
460-00-4	4-Bromofluorobenzene (Surr)	96		80-120
1868-53-7	Dibromofluoromethane (Surr)	98		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\10193\20210203-21161.b\CF02S18.D
Lims ID: 410-27746-A-14
Client ID: HD-QC1-0/1-2
Sample Type: Client
Inject. Date: 03-Feb-2021 19:19:30 ALS Bottle#: 24 Worklist Smp#: 25
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0021161-025
Operator ID: SRK36897 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 04-Feb-2021 11:03:34 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1626

First Level Reviewer: spositok Date: 04-Feb-2021 11:03:34

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
3 Chloromethane	50		2.081				ND	7
5 Vinyl chloride	62		2.190				ND	
6 Bromomethane	94		2.501				ND	
7 Chloroethane	64		2.574				ND	7
14 1,1-Dichloroethene	96		3.385				ND	
16 Acetone	43		3.422				ND	U
20 Carbon disulfide	76		3.666				ND	7
24 Methylene Chloride	84		4.019				ND	7
* 25 t-Butyl alcohol-d10 (IS)	65	4.044	4.056	-0.012	0	189159	50.0	
28 Methyl tert-butyl ether	73		4.403				ND	
29 trans-1,2-Dichloroethene	96		4.409				ND	
32 1,1-Dichloroethane	63		5.074				ND	
36 2-Butanone (MEK)	43		5.885				ND	
37 cis-1,2-Dichloroethene	96		5.915				ND	
44 Chlorobromomethane	128		6.251				ND	
46 Chloroform	83		6.403				ND	
$ 47 Dibromofluoromethane (Surr)	113	6.622	6.622	0.000	94	470254	9.84	
48 1,1,1-Trichloroethane	97		6.629				ND	
50 Carbon tetrachloride	117		6.830				ND	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.080	7.080	0.000	0	105972	10.9	
54 Benzene	78		7.104				ND	7
55 1,2-Dichloroethane	62		7.177				ND	
* 57 Fluorobenzene (IS)	96	7.513	7.513	0.000	99	2011496	10.0	
60 Trichloroethene	95		7.994				ND	
62 1,2-Dichloropropane	63		8.336				ND	
67 Dichlorobromomethane	83		8.689				ND	
72 cis-1,3-Dichloropropene	75		9.250				ND	
73 4-Methyl-2-pentanone (MIBK)	43		9.439				ND	7
$ 74 Toluene-d8 (Surr)	98	9.567	9.567	0.000	94	2025477	10.1	
75 Toluene	92		9.646				ND	7
76 trans-1,3-Dichloropropene	75		9.921				ND	7
79 1,1,2-Trichloroethane	97		10.128				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
80 Tetrachloroethene	166		10.207				ND	
82 2-Hexanone	43		10.353				ND	7
83 Chlorodibromomethane	129		10.506				ND	
84 Ethylene Dibromide	107		10.616				ND	
* 85 Chlorobenzene-d5 (IS)	117	11.061	11.061	0.000	85	1533974	10.0	
87 Chlorobenzene	112		11.085				ND	
89 1,1,1,2-Tetrachloroethane	131		11.170				ND	
90 Ethylbenzene	91		11.176				ND	
S 88 Xylenes, Total	106		11.245				ND	7
91 m-Xylene & p-Xylene	106		11.292				ND	7
92 o-Xylene	106		11.628				ND	
93 Styrene	104		11.646				ND	7
94 Bromoform	173		11.804				ND	
$ 98 4-Bromofluorobenzene (Surr)	95	12.079	12.079	0.000	93	721443	9.58	
99 1,1,2,2-Tetrachloroethane	83		12.188				ND	
* 113 1,4-Dichlorobenzene-d4	152	12.969	12.969	0.000	94	815501	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

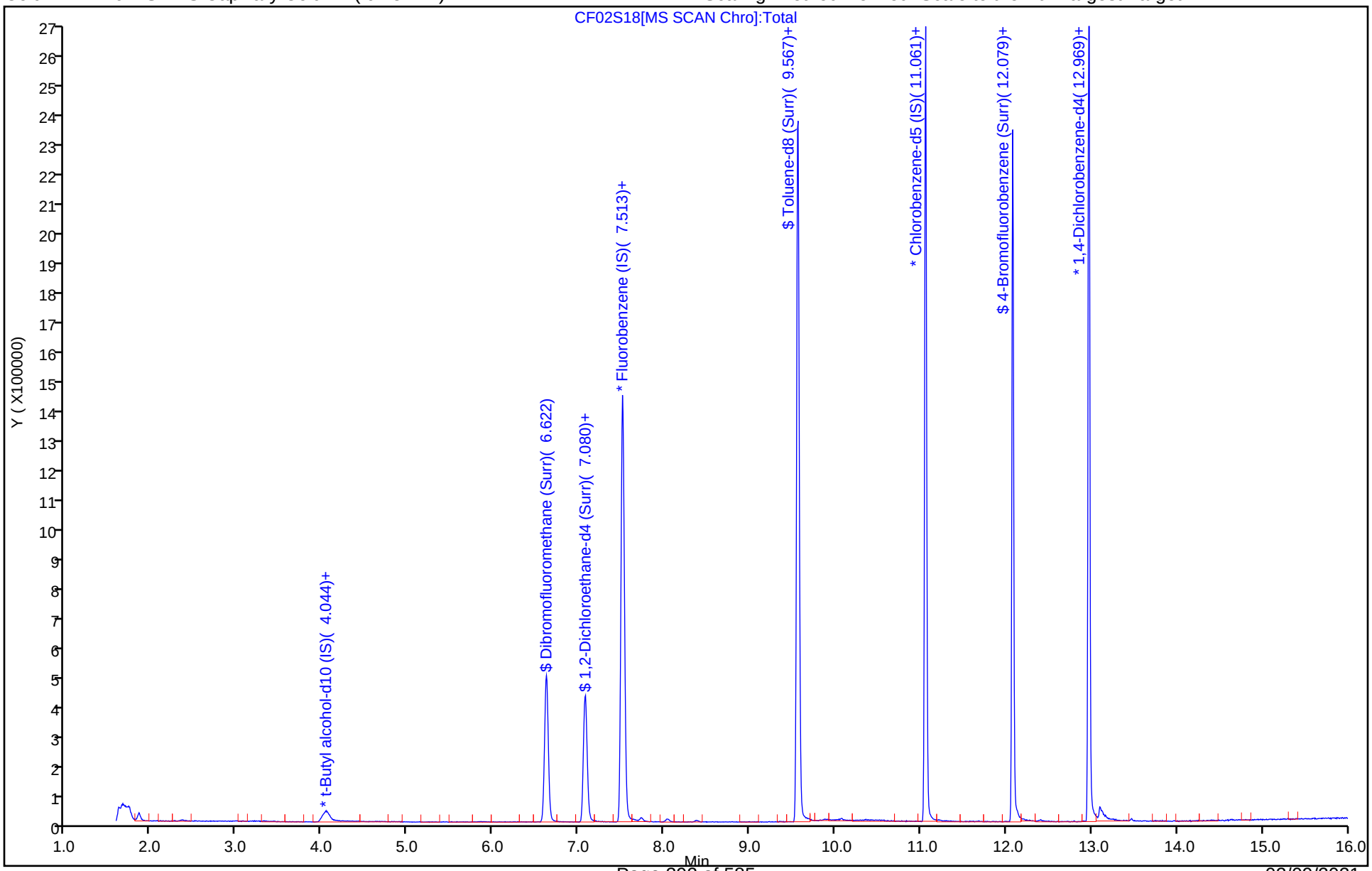
MSV_HP25_ISSS_00022 Amount Added: 1.00 Units: uL Run Reagent

Report Date: 04-Feb-2021 11:08:02 Chrom Revision: 2.3 17-Jan-2021 00:24:10

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S18.D				
Injection Date:	03-Feb-2021 19:19:30	Instrument ID:	10193	Operator ID:	SRK36897
Lims ID:	410-27746-A-14	Lab Sample ID:	410-27746-14	Worklist Smp#:	25
Client ID:	HD-QC1-0/1-2				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Env, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S18.D				
Lims ID:	410-27746-A-14				
Client ID:	HD-QC1-0/1-2				
Sample Type:	Client				
Inject. Date:	03-Feb-2021 19:19:30	ALS Bottle#:	24	Worklist Smp#:	25
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0021161-025				
Operator ID:	SRK36897	Instrument ID:	10193		
Method:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\MSV_10193_25mL.m				
Limit Group:	MSV - 8260C_D				
Last Update:	04-Feb-2021 11:03:34	Calib Date:	01-Sep-2020 19:09:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1626				

First Level Reviewer: spositok Date: 04-Feb-2021 11:03:34

Compound	Amount Added	Amount Recovered	% Rec.
$ 47 Dibromofluoromethane (Surr)	10.0	9.84	98.39
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.9	108.83
$ 74 Toluene-d8 (Surr)	10.0	10.1	101.10
$ 98 4-Bromofluorobenzene (Surr)	10.0	9.58	95.81

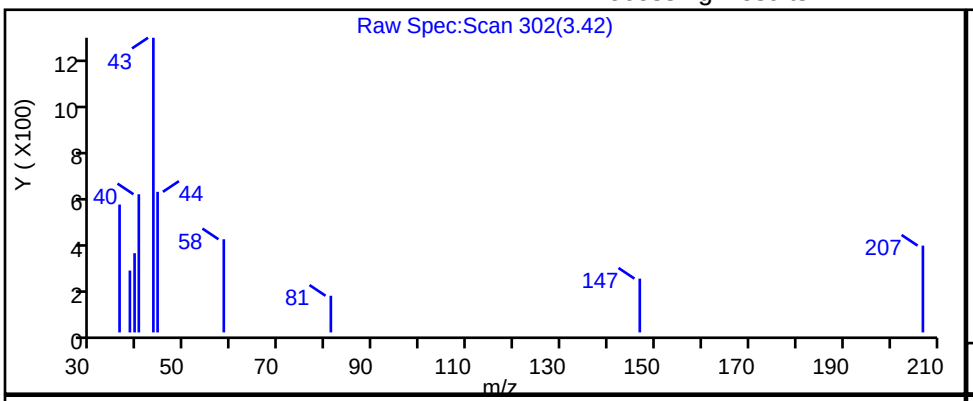
User Disabled Compound Report

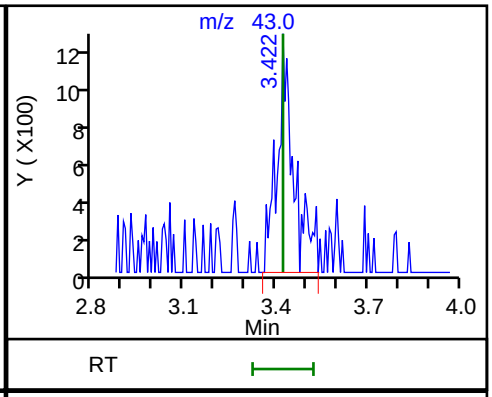
Eurofins Lancaster Laboratories Env, LLC

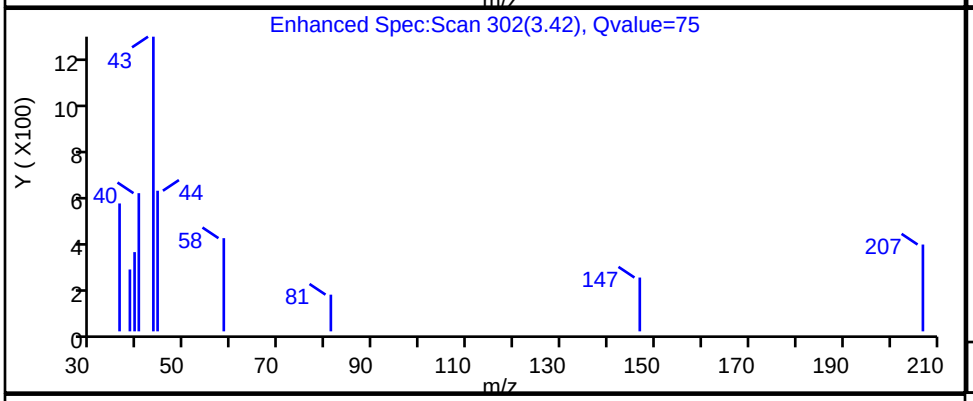
Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S18.D				
Injection Date:	03-Feb-2021 19:19:30	Instrument ID:	10193		
Lims ID:	410-27746-A-14	Lab Sample ID:	410-27746-14		
Client ID:	HD-QC1-0/1-2				
Operator ID:	SRK36897	ALS Bottle#:	24	Worklist Smp#:	25
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

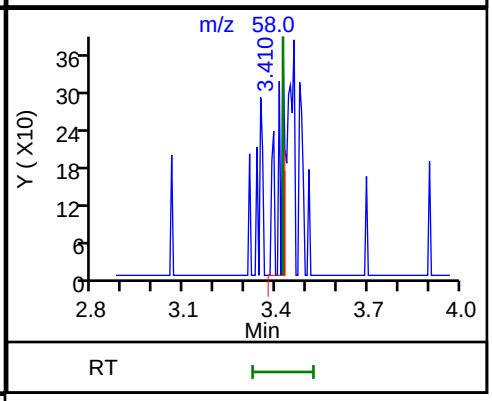
16 Acetone, CAS: 67-64-1

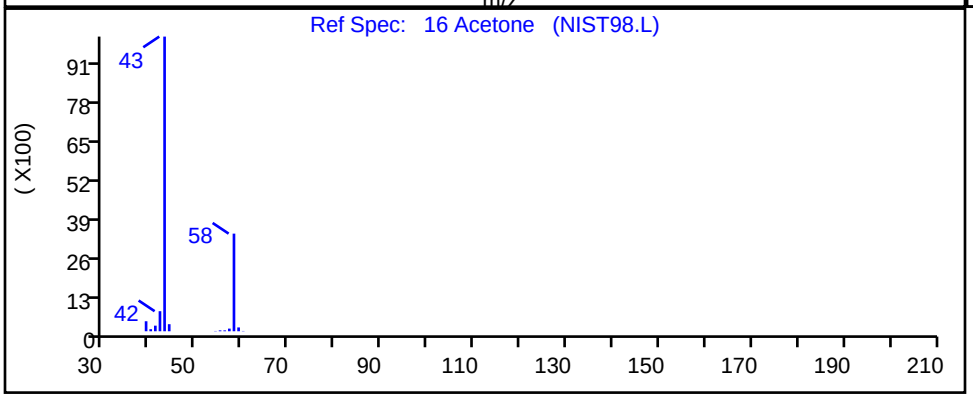
Processing Results











RT	Mass	Response	Amount
3.42	43.00	4611	0.573529
3.41	58.00	477	

Reviewer: spositok, 04-Feb-2021 11:03:22

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

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-27746-1 Analy Batch No.: 39724

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/01/2020 13:35 Calibration End Date: 09/01/2020 15:48 Calibration ID: 10281

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-39724/9	CS01I07.D
Level 2	IC 410-39724/8	CS01I06.D
Level 3	IC 410-39724/7	CS01I05.D
Level 4	IC 410-39724/6	CS01I04.D
Level 5	IC 410-39724/5	CS01I03.D
Level 6	ICIS 410-39724/4	CS01I02.D
Level 7	IC 410-39724/3	CS01I01.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.2918 0.3266	0.3522 0.3000	0.3356	0.3227	0.3298	Ave		0.3227			0.1000	6.4		20.0			
Chloromethane	0.4118 0.3640	0.4166 0.3415	0.3845	0.3763	0.3682	Ave		0.3804			0.1000	7.0		20.0			
1,3-Butadiene	0.3706 0.3470	0.3831 0.3209	0.3964	0.3503	0.3364	Ave		0.3578				7.5		20.0			
Vinyl chloride	0.3710 0.3447	0.3769 0.3205	0.3532	0.3491	0.3465	Ave		0.3517			0.1000	5.3		20.0			
Bromomethane	0.2621 0.2463	0.2522 0.2334	0.2537	0.2470	0.2428	Ave		0.2482			0.1000	3.6		20.0			
Chloroethane	0.2420 0.2076	0.2296 0.1957	0.2204	0.2152	0.2103	Ave		0.2173			0.1000	7.0		20.0			
Dichlorofluoromethane	0.5002 0.4568	0.4862 0.4354	0.4850	0.4761	0.4597	Ave		0.4713			0.1000	4.7		20.0			
Trichlorofluoromethane	0.4605 0.4468	0.4890 0.4345	0.4635	0.4578	0.4502	Ave		0.4575			0.1000	3.7		20.0			
Ethyl ether	0.2424 0.2280	0.2388 0.2201	0.2351	0.2329	0.2252	Ave		0.2318				3.4		20.0			
Freon 123a	0.4017 0.3216	0.3602 0.3077	0.3604	0.3197	0.3068	Ave		0.3397				10.4		20.0			
Acrolein	2.0142 1.8940	1.9637 2.1651	2.0559	2.0043	1.9065	Ave		2.0005				4.6		20.0			
1,1-Dichloroethene	0.2418 0.2306	0.2426 0.2200	0.2361	0.2292	0.2178	Ave		0.2312			0.1000	4.2		20.0			
Freon 113	0.2203 0.2427	0.2333 0.2316	0.2529	0.2353	0.2301	Ave		0.2352			0.1000	4.4		20.0			
Acetone	2.4480 1.8275	2.3023 2.0458	1.9178	2.1806	2.1538	Ave		2.1251			0.1000	10.1		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-27746-1 Analy Batch No.: 39724

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/01/2020 13:35 Calibration End Date: 09/01/2020 15:48 Calibration ID: 10281

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methyl iodide	0.4822 0.4629	0.4687 0.4378	0.4677	0.4453	0.4325	Ave		0.4567				4.0		20.0			
Carbon disulfide	0.8640 0.8277	0.8170 0.7933	0.8306	0.8071	0.7771	Ave		0.8167			0.1000	3.4		20.0			
Methyl acetate	9.4619 9.1956	7.3296 8.4904	6.2276	8.6421	9.1035	Ave		8.3501			0.1000	14.0		20.0			
Allyl chloride	0.4284 0.3952	0.4116 0.3911	0.4125	0.4004	0.3924	Ave		0.4045				3.4		20.0			
Methylene Chloride	0.2673 0.2596	0.2690 0.2450	0.2624	0.2530	0.2446	Ave		0.2573			0.1000	3.9		20.0			
t-Butyl alcohol	1.0786 0.9343	1.0895 0.9573	1.0217	0.9595	0.9311	Ave		0.9960				6.7		20.0			
Acrylonitrile	3.6060 3.1435	3.1763 3.4734	3.6610	3.3562	3.2079	Ave		3.3749				6.2		20.0			
Methyl tert-butyl ether	0.8080 0.7372	0.7726 0.6995	0.7701	0.7370	0.7146	Ave		0.7484			0.1000	5.0		20.0			
trans-1,2-Dichloroethene	0.2811 0.2736	0.2778 0.2609	0.2771	0.2631	0.2584	Ave		0.2703			0.1000	3.4		20.0			
n-Hexane	0.3770 0.3916	0.3611 0.3799	0.4016	0.3797	0.3767	Ave		0.3811				3.3		20.0			
1,1-Dichloroethane	0.5317 0.5021	0.5027 0.4713	0.5160	0.4888	0.4701	Ave		0.4975			0.2000	4.6		20.0			
di-Isopropyl ether	1.0024 0.9422	0.9815 0.8947	0.9734	0.9396	0.9047	Ave		0.9484				4.2		20.0			
2-Chloro-1,3-butadiene	0.5154 0.4645	0.4858 0.4485	0.4683	0.4604	0.4388	Ave		0.4688				5.4		20.0			
Ethyl t-butyl ether	0.9545 0.8964	0.9353 0.8421	0.9367	0.9013	0.8760	Ave		0.9061				4.3		20.0			
2-Butanone (MEK)	5.4466 4.7533	5.2332 4.9507	4.9134	4.9045	4.6863	Ave		4.9840			0.1000	5.4		20.0			
cis-1,2-Dichloroethene	0.3274 0.3030	0.3121 0.2918	0.3173	0.3033	0.2901	Ave		0.3064			0.1000	4.4		20.0			
2,2-Dichloropropane	0.4489 0.4318	0.4355 0.4139	0.4390	0.4295	0.4067	Ave		0.4293				3.4		20.0			
Propionitrile	1.1218 1.2317	1.3475 1.3330	1.3300	1.3001	1.1903	Ave		1.2649				6.8		20.0			
Methacrylonitrile	4.7767 4.8580	4.6120 5.3811	5.2269	4.8310	4.6272	Ave		4.9019				6.0		20.0			
Bromochloromethane	0.1358 0.1353	0.1313 0.1355	0.1358	0.1372	0.1333	Ave		0.1349				1.4		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-27746-1 Analy Batch No.: 39724

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/01/2020 13:35 Calibration End Date: 09/01/2020 15:48 Calibration ID: 10281

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Tetrahydrofuran	1.3990 1.4024	1.4454 1.4410	1.4710	1.4167	1.2917	Ave		1.4096				4.1		20.0			
Chloroform	0.5202 0.4930	0.4959 0.4791	0.5003	0.4910	0.4717	Ave		0.4930			0.2000	3.2		20.0			
1,1,1-Trichloroethane	0.4505 0.4529	0.4491 0.4340	0.4484	0.4481	0.4266	Ave		0.4442			0.1000	2.2		20.0			
Cyclohexane	0.4761 0.4708	0.4666 0.4592	0.4977	0.4651	0.4526	Ave		0.4697			0.1000	3.1		20.0			
Carbon tetrachloride	0.3736 0.3825	0.3626 0.3735	0.3807	0.3709	0.3612	Ave		0.3722			0.1000	2.2		20.0			
1,1-Dichloropropene	0.4216 0.3987	0.4040 0.3841	0.4090	0.3942	0.3800	Ave		0.3988				3.6		20.0			
Isobutyl alcohol	0.3751 0.3074	0.3279 0.3354	0.3075	0.2990	0.3080	Ave		0.3229				8.2		20.0			
Benzene	1.2000 1.1470	1.1667 1.1118	1.1704	1.1462	1.0973	Ave		1.1485			0.5000	3.1		20.0			
1,2-Dichloroethane	0.4157 0.3201	0.3720 0.3103	0.3512	0.3372	0.3171	Ave		0.3462			0.1000	10.8		20.0			
t-Amyl methyl ether	0.8796 0.8203	0.8294 0.7843	0.8425	0.8248	0.7964	Ave		0.8253				3.8		20.0			
n-Heptane	0.4363 0.4299	0.3892 0.4305	0.4413	0.4327	0.4098	Ave		0.4242				4.3		20.0			
n-Butanol	0.2653 0.2713	0.2533 0.3015	0.2601	0.2624	0.2592	Ave		0.2676				6.0		20.0			
Trichloroethene	0.3060 0.2974	0.2973 0.2896	0.3050	0.2951	0.2821	Ave		0.2961			0.2000	2.8		20.0			
Methylcyclohexane	0.3921 0.4589	0.4558 0.4681	0.4649	0.4659	0.4686	Ave		0.4535			0.1000	6.1		20.0			
1,2-Dichloropropane	0.3163 0.2907	0.2966 0.2887	0.3017	0.2907	0.2801	Ave		0.2950			0.1000	3.9		20.0			
Methyl methacrylate	10.694 10.216	9.9010 11.465	10.664	10.304	9.9075	Ave		10.450				5.3		20.0			
Dibromomethane	0.1573 0.1425	0.1458 0.1389	0.1476	0.1402	0.1380	Ave		0.1443				4.7		20.0			
1,4-Dioxane	0.0383 0.0539	0.0522 0.0636	0.0577	0.0553	0.0521	Ave		0.0533			0.0050	14.4		20.0			
Bromodichloromethane	0.3687 0.3625	0.3552 0.3560	0.3573	0.3500	0.3429	Ave		0.3561			0.2000	2.3		20.0			
2-Nitropropane	3.1499 3.3581	2.9287 3.7715	3.2325	3.1838	3.0651	Ave		3.2414				8.3		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.: 410-27746-1 Analy Batch No.: 39724

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/01/2020 13:35 Calibration End Date: 09/01/2020 15:48 Calibration ID: 10281

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
cis-1,3-Dichloropropene	0.4505 0.4574	0.4308 0.4504	0.4399	0.4366	0.4322	Ave		0.4426			0.2000	2.3		20.0			
4-Methyl-2-pentanone (MIBK)	14.016 14.367	13.957 16.290	14.759	14.207	13.754	Ave		14.478			0.1000	6.0		20.0			
Toluene	1.0004 0.9956	1.0051 0.9649	1.0017	0.9778	0.9307	Ave		0.9823			0.4000	2.8		20.0			
trans-1,3-Dichloropropene	0.4859 0.5150	0.4729 0.5037	0.4892	0.4888	0.4880	Ave		0.4919			0.1000	2.8		20.0			
Ethyl methacrylate	0.3832 0.4288	0.4119 0.4219	0.4250	0.4203	0.4148	Ave		0.4151				3.7		20.0			
1,1,2-Trichloroethane	0.2788 0.2711	0.2787 0.2614	0.2793	0.2703	0.2599	Ave		0.2713			0.1000	3.0		20.0			
Tetrachloroethene	0.4614 0.4409	0.4386 0.4283	0.4502	0.4359	0.4167	Ave		0.4389			0.2000	3.3		20.0			
1,3-Dichloropropane	0.5020 0.4753	0.4992 0.4587	0.4896	0.4663	0.4567	Ave		0.4783				3.9		20.0			
2-Hexanone	9.3232 10.451	9.3321 11.730	10.440	10.418	9.9066	Ave		10.229			0.1000	8.1		20.0			
Dibromochloromethane	0.2734 0.3437	0.3001 0.3401	0.3060	0.3197	0.3203	Ave		0.3148				7.7		20.0			
1,2-Dibromoethane (EDB)	0.2705 0.2751	0.2685 0.2647	0.2692	0.2658	0.2615	Ave		0.2679			0.1000	1.6		20.0			
1-Chlorohexane	0.6434 0.5456	0.5804 0.5365	0.5728	0.5308	0.5171	Ave		0.5609				7.6		20.0			
Chlorobenzene	1.1591 1.1088	1.1274 1.0823	1.1325	1.0960	1.0596	Ave		1.1094			0.5000	3.0		20.0			
1,1,1,2-Tetrachloroethane	0.3624 0.3937	0.3754 0.3864	0.3803	0.3722	0.3711	Ave		0.3774				2.8		20.0			
Ethylbenzene	2.0322 1.9609	1.9521 1.9374	1.9666	1.9197	1.8587	Ave		1.9468			0.1000	2.7		20.0			
m&p-Xylene	0.7470 0.7821	0.7660 0.7722	0.7743	0.7524	0.7314	Ave		0.7608			0.1000	2.4		20.0			
o-Xylene	0.7543 0.7626	0.7377 0.7544	0.7513	0.7404	0.7161	Ave		0.7453			0.3000	2.1		20.0			
Styrene	1.2097 1.3027	1.2218 1.3129	1.2422	1.2428	1.2248	Ave		1.2510			0.3000	3.2		20.0			
Bromoform	0.1392 0.2053	0.1476 0.2084	0.1657	0.1718	0.1858	Ave		0.1748			0.1000	15.3		20.0			
Isopropylbenzene	1.9458 2.0263	1.9681 2.0001	2.0184	1.9483	1.8930	Ave		1.9714			0.1000	2.4		20.0			

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.: 410-27746-1 Analy Batch No.: 39724

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/01/2020 13:35 Calibration End Date: 09/01/2020 15:48 Calibration ID: 10281

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,1,2,2-Tetrachloroethane	0.6444 0.6192	0.6459 0.5895	0.6379	0.6292	0.6052	Ave		0.6245			0.3000	3.4		20.0			
Bromobenzene	0.9259 0.8543	0.8582 0.8201	0.8786	0.8448	0.8202	Ave		0.8574				4.3		20.0			
trans-1,4-Dichloro-2-butene	0.1540 0.1855	0.1591 0.1839	0.1758	0.1743	0.1775	Ave		0.1729				6.9		20.0			
1,2,3-Trichloropropane	0.1803 0.1668	0.1805 0.1560	0.1726	0.1710	0.1625	Ave		0.1700				5.3		20.0			
N-Propylbenzene	4.1100 4.0800	4.0761 3.8615	4.1430	4.0328	3.8780	Ave		4.0259				2.8		20.0			
2-Chlorotoluene	0.8972 0.8148	0.8244 0.7752	0.8538	0.8098	0.7883	Ave		0.8233				5.0		20.0			
1,3,5-Trimethylbenzene	3.0659 3.0010	2.9965 2.8926	3.0966	2.9616	2.8629	Ave		2.9824				2.8		20.0			
4-Chlorotoluene	0.9181 0.8554	0.8621 0.8224	0.8670	0.8507	0.8152	Ave		0.8558				3.9		20.0			
tert-Butylbenzene	0.7365 0.6340	0.6164 0.6142	0.6484	0.6819	0.6078	Ave		0.6485				7.2		20.0			
Pentachloroethane	0.4131 0.5184	0.4535 0.5288	0.4768	0.4964	0.5026	Ave		0.4842				8.3		20.0			
1,2,4-Trimethylbenzene	2.9755 3.1351	3.1226 3.0397	3.1427	3.0238	2.9789	Ave		3.0598				2.4		20.0			
sec-Butylbenzene	3.9078 3.8805	3.8823 3.7594	3.9147	3.8335	3.7199	Ave		3.8426				2.0		20.0			
1,3-Dichlorobenzene	1.7283 1.7190	1.7498 1.6706	1.7559	1.7171	1.6487	Ave		1.7128			0.6000	2.3		20.0			
p-Isopropyltoluene	3.3272 3.4552	3.3258 3.3657	3.3764	3.3527	3.2540	Ave		3.3510				1.8		20.0			
1,4-Dichlorobenzene	1.8673 1.7552	1.8222 1.7031	1.7458	1.7522	1.6928	Ave		1.7627			0.5000	3.5		20.0			
1,2,3-Trimethylbenzene	1.3613 1.3406	1.3459 1.3335	1.3290	1.3729	1.3170	Ave		1.3429				1.4		20.0			
Benzyl chloride	0.2108 0.2769	0.2242 0.2729	0.2409	0.2506	0.2623	Ave		0.2484				9.9		20.0			
n-Butylbenzene	1.6207 1.7769	1.6365 1.7347	1.7004	1.7288	1.6881	Ave		1.6980				3.3		20.0			
1,2-Dichlorobenzene	1.6515 1.6333	1.6237 1.5733	1.6481	1.6158	1.5674	Ave		1.6162			0.4000	2.1		20.0			
1,2-Dibromo-3-Chloropropane	0.0711 0.0942	0.0819 0.0878	0.0879	0.0890	0.0877	Ave		0.0856			0.0500	8.6		20.0			

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.: 410-27746-1 Analy Batch No.: 39724

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/01/2020 13:35 Calibration End Date: 09/01/2020 15:48 Calibration ID: 10281

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,3,5-Trichlorobenzene	1.4074 1.4110	1.4061 1.3656	1.4295	1.4062	1.3555	Ave		1.3973				1.9		20.0			
1,2,4-Trichlorobenzene	1.2990 1.2622	1.2785 1.2137	1.2629	1.2451	1.2149	Ave		1.2538			0.2000	2.5		20.0			
Hexachlorobutadiene	0.6553 0.6171	0.6168 0.5892	0.6150	0.6075	0.5846	Ave		0.6122				3.8		20.0			
Naphthalene	2.2291 2.2731	2.2713 2.0879	2.3270	2.2619	2.2049	Ave		2.2365				3.4		20.0			
1,2,3-Trichlorobenzene	1.1382 1.1080	1.1563 1.0364	1.1417	1.1153	1.0727	Ave		1.1098				3.8		20.0			
Dibromofluoromethane (Surr)	0.2372 0.2368	0.2372 0.2376	0.2382	0.2372	0.2391	Ave		0.2376				0.3		20.0			
1,2-Dichloroethane-d4 (Surr)	0.0480 0.0484	0.0476 0.0484	0.0485	0.0490	0.0490	Ave		0.0484				1.0		20.0			
Toluene-d8 (Surr)	1.3120 1.3054	1.3060 1.2984	1.3067	1.3058	1.3081	Ave		1.3061				0.3		20.0			
4-Bromofluorobenzene (Surr)	0.4846 0.4929	0.4884 0.4967	0.4890	0.4914	0.4931	Ave		0.4909				0.8		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-27746-1 Analy Batch No.: 39724

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/01/2020 13:35 Calibration End Date: 09/01/2020 15:48 Calibration ID: 10281

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-39724/9	CS01I07.D
Level 2	IC 410-39724/8	CS01I06.D
Level 3	IC 410-39724/7	CS01I05.D
Level 4	IC 410-39724/6	CS01I04.D
Level 5	IC 410-39724/5	CS01I03.D
Level 6	ICIS 410-39724/4	CS01I02.D
Level 7	IC 410-39724/3	CS01I01.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	11305 673806	34165 1551921	65583	129325	335623	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Chloromethane	FB	Ave	15951 750884	40412 1766636	75132	150814	374739	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3-Butadiene	FB	Ave	14355 715813	37166 1660055	77445	140385	342407	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Vinyl chloride	FB	Ave	14371 711167	36562 1657758	69005	139896	352685	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Bromomethane	FB	Ave	10152 508157	24464 1207360	49576	98967	247103	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Chloroethane	FB	Ave	9373 428295	22270 1012488	43065	86238	214069	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Dichlorofluoromethane	FB	Ave	19377 942431	47161 2252587	94758	190803	467823	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Trichlorofluoromethane	FB	Ave	17838 921738	47434 2247593	90570	183481	458162	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethyl ether	FB	Ave	9388 470167	23165 1138572	45936	93303	229113	0.200 10.00	0.500 25.0	1.000	2.00	5.00
Freon 123a	FB	Ave	15559 663506	34942 1591534	70413	128139	312190	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Acrolein	TBAd10	Ave	57475 2808556	142874 7052881	288468	575443	1427897	10.00 500	25.0 1250	50.0	100.0	250
1,1-Dichloroethene	FB	Ave	9367 475627	23536 1138101	46141	91871	221612	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Freon 113	FB	Ave	8535 500744	22631 1197984	49416	94307	234166	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Acetone	TBAd10	Ave	13971 541999	33503 1332893	53819	125222	322634	2.00 100	5.00 250	10.0	20.0	50.0
Methyl iodide	FB	Ave	18680	45466	91381	178469	440171	0.200	0.500	1.00	2.00	5.00

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-27746-1 Analy Batch No.: 39724

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/01/2020 13:35 Calibration End Date: 09/01/2020 15:48 Calibration ID: 10281

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
			954840	2264828				10.0	25.0			
Carbon disulfide	FB	Ave	33471 1707453	79256 4103979	162292	323433	790900	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methyl acetate	TBAd10	Ave	5400 272722	10666 553177	17477	49627	136367	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Allyl chloride	FB	Ave	16597 815256	39926 2023275	80597	160482	399375	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methylene Chloride	FB	Ave	10355 535609	26091 1267299	51267	101409	248970	0.200 10.0	0.500 25.0	1.00	2.00	5.00
t-Butyl alcohol	TBAd10	Ave	12311 554170	31710 1247393	57344	110192	278959	4.00 200	10.0 500	20.0	40.0	100
Acrylonitrile	TBAd10	Ave	10290 466148	23111 1131501	51371	96365	240268	1.00 50.0	2.50 125	5.00	10.0	25.0
Methyl tert-butyl ether	FB	Ave	31299 1520759	74946 3618649	150474	295369	727225	0.200 10.0	0.500 25.0	1.00	2.00	5.00
trans-1,2-Dichloroethene	FB	Ave	10888 564465	26945 1349657	54149	105433	262964	0.200 10.0	0.500 25.0	1.00	2.00	5.00
n-Hexane	FB	Ave	14606 807784	35026 1965108	78465	152150	383350	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1-Dichloroethane	FB	Ave	20597 1035693	48762 2437799	100821	195904	478397	0.200 10.0	0.500 25.0	1.00	2.00	5.00
di-Isopropyl ether	FB	Ave	38832 1943658	95205 4628483	190197	376556	920754	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Chloro-1,3-butadiene	FB	Ave	19967 958306	47125 2319881	91500	184491	446582	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethyl t-butyl ether	FB	Ave	36977 1849075	90729 4356436	183026	361189	891552	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Butanone (MEK)	TBAd10	Ave	31084 1409728	76154 3225526	137888	281636	701991	2.00 100	5.00 250	10.0	20.0	50.0
cis-1,2-Dichloroethene	FB	Ave	12683 625147	30278 1509697	62000	121548	295208	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2,2-Dichloropropane	FB	Ave	17391 890664	42244 2141366	85777	172113	413880	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Propionitrile	TBAd10	Ave	12804 730594	39217 1736921	74651	149313	356593	4.00 200	10.0 500	20.0	40.0	100
Methacrylonitrile	TBAd10	Ave	27261	67114	146687	277418	693145	2.00	5.00	10.0	20.0	50.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-27746-1 Analy Batch No.: 39724

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/01/2020 13:35 Calibration End Date: 09/01/2020 15:48 Calibration ID: 10281

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
			1440762	3505951				100	250			
Bromochloromethane	FB	Ave	5261 279022	12738 700885	26529	54981	135663	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Tetrahydrofuran	TBAd10	Ave	7984 415910	21034 938881	41281	81352	193486	2.00 100	5.00 250	10.0	20.0	50.0
Chloroform	FB	Ave	20153 1017069	48103 2478178	97764	196768	480095	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1,1-Trichloroethane	FB	Ave	17452 934233	43566 2245085	87622	179578	434162	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Cyclohexane	FB	Ave	18443 971248	45257 2375325	97244	186390	460601	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Carbon tetrachloride	FB	Ave	14471 789037	35175 1932273	74393	148659	367580	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1-Dichloropropene	FB	Ave	16330 822564	39192 1986821	79910	157992	386758	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Isobutyl alcohol	TBAd10	Ave	10703 455897	23860 1092722	43145	85837	230672	10.0 500	25.0 1250	50.0	100	250
Benzene	FB	Ave	46486 2366224	113177 5751371	228700	459354	1116708	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dichloroethane	FB	Ave	16105 660414	36081 1605051	68618	135129	322763	0.200 10.0	0.500 25.0	1.00	2.00	5.00
t-Amyl methyl ether	FB	Ave	34074 1692208	80450 4057198	164628	330560	810520	0.200 10.0	0.500 25.0	1.00	2.00	5.00
n-Heptane	FB	Ave	16903 886773	37755 2226987	86227	173398	417078	0.200 10.0	0.500 25.0	1.00	2.00	5.00
n-Butanol	TBAd10	Ave	15142 804563	36853 1964301	73005	150691	388291	20.0 1000	50.0 2500	100	200	500
Trichloroethene	FB	Ave	11853 613428	28843 1497905	59588	118251	287079	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methylcyclohexane	FB	Ave	15190 946727	44211 2421507	90839	186709	476901	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dichloropropane	FB	Ave	12253 599777	28771 1493537	58951	116517	285051	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methyl methacrylate	TBAd10	Ave	6103 302973	14408 746981	29926	59171	148411	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Dibromomethane	FB	Ave	6094 293984	14141 718764	28840	56166	140420	0.200 10.0	0.500 25.0	1.00	2.00	5.00

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-27746-1 Analy Batch No.: 39724

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/01/2020 13:35 Calibration End Date: 09/01/2020 15:48 Calibration ID: 10281

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
1,4-Dioxane	TBAd10	Ave	1094 79862	3795 207069	8095	15868	39014	10.0 500	25.0 1250	50.0	100	250
Bromodichloromethane	FB	Ave	14281 747888	34459 1841851	69815	140278	348987	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Nitropropane	TBAd10	Ave	17977 995940	42618 2457254	90715	182830	459149	2.00 100	5.00 250	10.0	20.0	50.0
cis-1,3-Dichloropropene	FB	Ave	17450 943666	41792 2329714	85955	174979	439884	0.200 10.0	0.500 25.0	1.00	2.00	5.00
4-Methyl-2-pentanone (MIBK)	TBAd10	Ave	79991 4260875	203096 10613666	414178	815838	2060281	2.00 100	5.00 250	10.0	20.0	50.0
Toluene	CBZd5	Ave	29375 1562669	73639 3853589	148821	297381	721183	0.200 10.0	0.500 25.0	1.00	2.00	5.00
trans-1,3-Dichloropropene	CBZd5	Ave	14266 808366	34646 2011642	72683	148652	378157	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethyl methacrylate	CBZd5	Ave	11251 673046	30177 1684778	63147	127842	321458	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1,2-Trichloroethane	CBZd5	Ave	8186 425508	20416 1044114	41496	82201	201374	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Tetrachloroethene	CBZd5	Ave	13549 692046	32134 1710454	66888	132588	322909	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3-Dichloropropane	CBZd5	Ave	14740 746124	36571 1831923	72739	141833	353883	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Hexanone	TBAd10	Ave	53208 3099544	135801 7642331	292991	598268	1483984	2.00 100	5.00 250	10.0	20.0	50.0
Dibromochloromethane	CBZd5	Ave	8028 539411	21989 1358246	45464	97240	248177	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dibromoethane (EDB)	CBZd5	Ave	7944 431839	19670 1057340	40000	80851	202633	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1-Chlorohexane	CBZd5	Ave	18891 856372	42522 2142701	85108	161444	400674	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Chlorobenzene	CBZd5	Ave	34035 1740350	82597 4322456	168260	333345	821070	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1,1,2-Tetrachloroethane	CBZd5	Ave	10641 617994	27504 1543073	56505	113207	287568	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethylbenzene	CBZd5	Ave	59671 3077887	143018 7737357	292186	583876	1440317	0.200 10.0	0.500 25.0	1.00	2.00	5.00
m&p-Xylene	CBZd5	Ave	43867 2455146	112244 6167767	230072	457654	1133528	0.400 20.0	1.00 50.0	2.00	4.00	10.0

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-27746-1 Analy Batch No.: 39724

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/01/2020 13:35 Calibration End Date: 09/01/2020 15:48 Calibration ID: 10281

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
o-Xylene	CBZd5	Ave	22149 1197012	54046 3012741	111628	225199	554888	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Styrene	CBZd5	Ave	35521 2044773	89517 5243447	184556	377982	949081	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Bromoform	CBZd5	Ave	4087 322179	10815 832204	24617	52263	143999	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Isopropylbenzene	CBZd5	Ave	57134 3180524	144191 7987853	299877	592584	1466907	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1,2,2-Tetrachloroethane	DCBd4	Ave	10523 569960	26594 1416700	53769	109660	269440	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Bromobenzene	DCBd4	Ave	15119 786388	35338 1970860	74061	147229	365172	0.200 10.0	0.500 25.0	1.00	2.00	5.00
trans-1,4-Dichloro-2-butene	DCBd4	Ave	25153 1707722	65511 4418631	148178	303768	790342	2.00 100	5.00 250	10.0	20.0	50.0
1,2,3-Trichloropropane	DCBd4	Ave	2945 153575	7433 374830	14553	29794	72364	0.200 10.0	0.500 25.0	1.00	2.00	5.00
N-Propylbenzene	DCBd4	Ave	67115 3755554	167830 9279542	349239	702814	1726631	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Chlorotoluene	DCBd4	Ave	14651 750019	33943 1862946	71969	141124	350978	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3,5-Trimethylbenzene	DCBd4	Ave	50066 2762343	123379 6951334	261031	516140	1274650	0.200 10.0	0.500 25.0	1.00	2.00	5.00
4-Chlorotoluene	DCBd4	Ave	14993 787376	35497 1976218	73083	148252	362949	0.200 10.0	0.500 25.0	1.00	2.00	5.00
tert-Butylbenzene	DCBd4	Ave	12027 583616	25380 1475973	54654	118830	270627	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Pentachloroethane	DCBd4	Ave	6746 477219	18671 1270655	40193	86508	223759	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2,4-Trimethylbenzene	DCBd4	Ave	48590 2885821	128573 7304755	264914	526977	1326302	0.200 10.0	0.500 25.0	1.00	2.00	5.00
sec-Butylbenzene	DCBd4	Ave	63813 3571893	159853 9034349	329993	668081	1656218	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3-Dichlorobenzene	DCBd4	Ave	28222 1582324	72046 4014697	148017	299249	734044	0.200 10.0	0.500 25.0	1.00	2.00	5.00
p-Isopropyltoluene	DCBd4	Ave	54332 3180481	136940 8088100	284614	584284	1448806	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,4-Dichlorobenzene	DCBd4	Ave	30493 1615615	75027 4092757	147165	305373	753707	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2,3-Trimethylbenzene	DCBd4	Ave	22229 1234014	55416 3204589	112026	239261	586354	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Benzyl chloride	DCBd4	Ave	3443 254856	9231 655880	20304	43679	116794	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.: 410-27746-1 Analy Batch No.: 39724

SDG No.:

Instrument ID: 10193 GC Column: R-624SilMS ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 09/01/2020 13:35 Calibration End Date: 09/01/2020 15:48 Calibration ID: 10281

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
n-Butylbenzene	DCBd4	Ave	26466 1635579	67384 4168646	143333	301292	751620	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dichlorobenzene	DCBd4	Ave	26969 1503472	66856 3780882	138925	281587	697848	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dibromo-3-Chloropropane	DCBd4	Ave	1161 86753	3372 210885	7406	15503	39048	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3,5-Trichlorobenzene	DCBd4	Ave	22982 1298817	57894 3281646	120502	245063	603506	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2,4-Trichlorobenzene	DCBd4	Ave	21212 1161828	52641 2916702	106458	216994	540926	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Hexachlorobutadiene	DCBd4	Ave	10701 568070	25396 1415792	51838	105865	260304	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Naphthalene	DCBd4	Ave	36400 2092386	93520 5017456	196158	394190	981719	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2,3-Trichlorobenzene	DCBd4	Ave	18586 1019899	47610 2490582	96242	194367	477586	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Dibromofluoromethane (Surr)	FB	Ave	459388 488556	460223 491718	465395	475332	486623	10.0 10.0	10.0 10.0	10.0	10.0	10.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	92975 99744	92350 100134	94841	98150	99716	10.0 10.0	10.0 10.0	10.0	10.0	10.0
Toluene-d8 (Surr)	CBZd5	Ave	1926152 2048995	1913735 2074244	1941329	1985750	2027327	10.0 10.0	10.0 10.0	10.0	10.0	10.0
4-Bromofluorobenzene (Surr)	CBZd5	Ave	711441 773730	715715 793546	726539	747277	764276	10.0 10.0	10.0 10.0	10.0	10.0	10.0

Curve Type Legend:
Ave = Average ISTD

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I01.D
Lims ID: IC STD7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 01-Sep-2020 13:35:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: IC STD7
Misc. Info.: 410-0009503-003
Operator ID: dvv10203 Instrument ID: 10193
Sublist: chrom-MSV_10193_25mL*sub1

Method: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 01-Sep-2020 20:10:09 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1059

First Level Reviewer: virayd Date: 01-Sep-2020 15:49:38

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.910	1.910	0.000	99	1551921	25.0	23.2	
3 Chloromethane	50	2.099	2.099	0.000	99	1766636	25.0	22.4	
4 Butadiene	39	2.203	2.209	-0.006	95	1660055	25.0	22.4	
5 Vinyl chloride	62	2.209	2.215	-0.006	98	1657758	25.0	22.8	
6 Bromomethane	94	2.507	2.520	-0.013	91	1207360	25.0	23.5	
7 Chloroethane	64	2.599	2.605	-0.006	100	1012488	25.0	22.5	
8 Dichlorofluoromethane	67	2.831	2.837	-0.006	97	2252587	25.0	23.1	
9 Trichlorofluoromethane	101	2.892	2.898	-0.006	97	2247593	25.0	23.7	
11 Ethyl ether	59	3.129	3.135	-0.006	92	1138572	25.0	23.7	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.215	3.208	0.007	97	1591534	25.0	22.6	
13 Acrolein	56	3.300	3.306	-0.006	99	7052881	1250.0	1352.8	
14 1,1-Dichloroethene	96	3.422	3.428	-0.006	97	1138101	25.0	23.8	
15 112TCTFE	101	3.458	3.464	-0.006	92	1197984	25.0	24.6	
16 Acetone	43	3.458	3.471	-0.013	100	1332893	250.0	240.7	
17 Iodomethane	142	3.611	3.617	-0.006	99	2264828	25.0	24.0	
19 Ethyl bromide	108	3.641	3.641	0.000	99	978776	25.0	24.6	
18 Isopropyl alcohol	45	3.635	3.647	-0.012	41	563815	500.0	508.3	
20 Carbon disulfide	76	3.708	3.708	0.000	100	4103979	25.0	24.3	
22 Methyl acetate	43	3.855	3.867	-0.012	98	553177	25.0	25.4	M
23 3-Chloro-1-propene	41	3.885	3.891	-0.006	89	2023275	25.0	24.2	
24 Methylene Chloride	84	4.068	4.074	-0.006	94	1267299	25.0	23.8	
* 25 t-Butyl alcohol-d10 (IS)	65	4.092	4.117	-0.025	99	130306	50.0	50.0	
26 2-Methyl-2-propanol	59	4.214	4.227	-0.012	99	1247393	500.0	480.6	
27 Acrylonitrile	53	4.403	4.409	-0.006	98	1131501	125.0	128.6	
28 Methyl tert-butyl ether	73	4.452	4.464	-0.012	96	3618649	25.0	23.4	
29 trans-1,2-Dichloroethene	96	4.464	4.470	-0.006	97	1349657	25.0	24.1	
30 Hexane	57	4.885	4.897	-0.012	95	1965108	25.0	24.9	
32 1,1-Dichloroethane	63	5.129	5.135	-0.006	96	2437799	25.0	23.7	
33 Isopropyl ether	45	5.190	5.196	-0.006	93	4628483	25.0	23.6	
34 2-Chloro-1,3-butadiene	53	5.239	5.251	-0.012	93	2319881	25.0	23.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
35 Tert-butyl ethyl ether	59	5.732	5.732	0.000	98	4356436	25.0	23.2	
36 2-Butanone (MEK)	43	5.940	5.946	-0.006	100	3225526	250.0	248.3	
37 cis-1,2-Dichloroethene	96	5.970	5.970	0.000	83	1509697	25.0	23.8	
38 2,2-Dichloropropane	77	5.988	5.988	0.000	89	2141366	25.0	24.1	
40 Propionitrile	54	6.049	6.049	0.000	99	1736921	500.0	526.9	M
S 42 1,2-Dichloroethene, Total	100				0			47.9	
43 Methacrylonitrile	67	6.251	6.251	0.001	93	3505951	250.0	274.4	
44 Chlorobromomethane	128	6.305	6.305	0.000	96	700885	25.0	25.1	
45 Tetrahydrofuran	71	6.312	6.305	0.007	89	938881	250.0	255.6	
46 Chloroform	83	6.458	6.464	-0.006	94	2478178	25.0	24.3	
$ 47 Dibromofluoromethane (Surr)	113	6.677	6.683	-0.006	94	491718	10.0	10.0	
48 1,1,1-Trichloroethane	97	6.677	6.683	-0.006	99	2245085	25.0	24.4	
49 Cyclohexane	56	6.769	6.775	-0.006	93	2375325	25.0	24.4	
50 Carbon tetrachloride	117	6.891	6.891	0.000	96	1932273	25.0	25.1	
51 1,1-Dichloropropene	75	6.897	6.897	0.000	96	1986821	25.0	24.1	
52 Isobutyl alcohol	41	7.086	7.086	0.000	94	1092722	1250.0	1298.5	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.135	7.134	0.001	0	100134	10.0	10.0	
54 Benzene	78	7.165	7.159	0.006	97	5751371	25.0	24.2	
55 1,2-Dichloroethane	62	7.238	7.238	0.000	98	1605051	25.0	22.4	
56 Tert-amyl methyl ether	73	7.354	7.360	-0.006	98	4057198	25.0	23.8	
* 57 Fluorobenzene (IS)	96	7.574	7.567	0.007	99	2069205	10.0	10.0	
58 n-Heptane	43	7.580	7.580	0.000	92	2226987	25.0	25.4	
59 n-Butanol	56	7.970	7.976	-0.006	90	1964301	2500.0	2816.7	
60 Trichloroethene	95	8.049	8.049	0.000	98	1497905	25.0	24.5	
61 Methylcyclohexane	83	8.354	8.354	0.000	93	2421507	25.0	25.8	
62 1,2-Dichloropropane	63	8.390	8.390	0.000	94	1493537	25.0	24.5	
63 2-ethoxy-2-methyl butane	87	8.403	8.396	0.007	92	2353267	25.0	24.8	
64 Methyl methacrylate	69	8.482	8.482	0.000	91	746981	25.0	27.4	
66 Dibromomethane	93	8.500	8.494	0.006	94	718764	25.0	24.1	
65 1,4-Dioxane	88	8.494	8.506	-0.012	66	207069	1250.0	1491.3	M
67 Dichlorobromomethane	83	8.744	8.738	0.006	99	1841851	25.0	25.0	
68 2-Nitropropane	41	9.024	9.024	0.000	99	2457254	250.0	290.9	
71 1-Bromo-2-chloroethane	63	9.134	9.134	0.000	99	1550438	25.0	24.6	
72 cis-1,3-Dichloropropene	75	9.299	9.299	0.000	94	2329714	25.0	25.4	
73 4-Methyl-2-pentanone (MIBK)	43	9.488	9.488	0.000	98	10613666	250.0	281.3	
$ 74 Toluene-d8 (Surr)	98	9.610	9.610	0.000	94	2074244	10.0	9.94	
75 Toluene	92	9.689	9.689	0.000	98	3853589	25.0	24.6	
76 trans-1,3-Dichloropropene	75	9.963	9.957	0.006	96	2011642	25.0	25.6	
78 Ethyl methacrylate	69	10.024	10.024	0.000	90	1684778	25.0	25.4	
S 77 1,3-Dichloropropene, Total	100				0			51.0	
79 1,1,2-Trichloroethane	97	10.171	10.164	0.007	91	1044114	25.0	24.1	
80 Tetrachloroethene	166	10.250	10.250	0.000	97	1710454	25.0	24.4	
81 1,3-Dichloropropane	76	10.335	10.329	0.006	93	1831923	25.0	24.0	
82 2-Hexanone	43	10.390	10.396	-0.006	97	7642331	250.0	286.7	
83 Chlorodibromomethane	129	10.549	10.548	0.001	90	1358246	25.0	27.0	
84 Ethylene Dibromide	107	10.658	10.658	0.000	98	1057340	25.0	24.7	
* 85 Chlorobenzene-d5 (IS)	117	11.097	11.097	0.000	87	1597498	10.0	10.0	
86 1-Chlorohexane	91	11.109	11.109	0.000	98	2142701	25.0	23.9	
87 Chlorobenzene	112	11.122	11.122	0.000	98	4322456	25.0	24.4	
89 1,1,1,2-Tetrachloroethane	131	11.207	11.207	0.000	95	1543073	25.0	25.6	
90 Ethylbenzene	91	11.213	11.213	0.000	98	7737357	25.0	24.9	
S 88 Xylenes, Total	106				0			76.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
91 m-Xylene & p-Xylene	106	11.329	11.329	0.000	0	6167767	50.0	50.8	
92 o-Xylene	106	11.664	11.664	0.000	95	3012741	25.0	25.3	
93 Styrene	104	11.676	11.676	0.000	95	5243447	25.0	26.2	
94 Bromoform	173	11.835	11.835	0.000	97	832204	25.0	29.8	
95 Isopropylbenzene	105	11.969	11.969	0.000	96	7987853	25.0	25.4	
$ 98 4-Bromofluorobenzene (Surr)	95	12.109	12.109	0.000	91	793546	10.0	10.1	
99 1,1,2,2-Tetrachloroethane	83	12.219	12.219	0.000	93	1416700	25.0	23.6	
100 Bromobenzene	156	12.231	12.231	0.000	94	1970860	25.0	23.9	
101 trans-1,4-Dichloro-2-butene	53	12.243	12.243	0.000	96	4418631	250.0	265.9	
102 1,2,3-Trichloropropane	110	12.268	12.268	0.000	83	374830	25.0	22.9	
103 N-Propylbenzene	91	12.298	12.298	0.000	99	9279542	25.0	24.0	
104 2-Chlorotoluene	126	12.377	12.377	0.000	96	1862946	25.0	23.5	
105 1,3,5-Trimethylbenzene	105	12.438	12.438	0.000	94	6951334	25.0	24.2	
106 4-Chlorotoluene	126	12.469	12.469	0.000	98	1976218	25.0	24.0	
107 tert-Butylbenzene	134	12.682	12.682	0.000	94	1475973	25.0	23.7	
108 Pentachloroethane	167	12.713	12.713	0.000	93	1270655	25.0	27.3	
109 1,2,4-Trimethylbenzene	105	12.725	12.725	0.000	97	7304755	25.0	24.8	
110 sec-Butylbenzene	105	12.847	12.847	0.000	94	9034349	25.0	24.5	
111 1,3-Dichlorobenzene	146	12.944	12.944	0.000	98	4014697	25.0	24.4	
112 4-Isopropyltoluene	119	12.957	12.957	0.000	97	8088100	25.0	25.1	
* 113 1,4-Dichlorobenzene-d4	152	12.999	12.999	0.000	94	961243	10.0	10.0	
114 1,4-Dichlorobenzene	146	13.018	13.017	0.001	95	4092757	25.0	24.2	
115 1,2,3-Trimethylbenzene	120	13.030	13.030	0.000	99	3204589	25.0	24.8	
116 Benzyl chloride	126	13.097	13.103	-0.006	99	655880	25.0	27.5	
119 n-Butylbenzene	92	13.249	13.249	0.000	96	4168646	25.0	25.5	
120 1,2-Dichlorobenzene	146	13.280	13.286	-0.006	98	3780882	25.0	24.3	
118 p-Diethylbenzene	119	13.304	13.304	0.000	0	4145941	25.0	25.4	
123 1,2-Dibromo-3-Chloropropane	155	13.834	13.834	0.000	87	210885	25.0	25.6	
124 1,3,5-Trichlorobenzene	180	13.956	13.956	0.000	98	3281646	25.0	24.4	
125 1,2,4-Trichlorobenzene	180	14.383	14.383	0.000	94	2916702	25.0	24.2	
126 Hexachlorobutadiene	225	14.469	14.468	0.001	97	1415792	25.0	24.1	
127 Naphthalene	128	14.566	14.566	0.000	97	5017456	25.0	23.3	
128 1,2,3-Trichlorobenzene	180	14.712	14.712	0.000	96	2490582	25.0	23.3	
129 2-Methylnaphthalene	142	15.334	15.340	-0.006	0	3387149	25.0	23.3	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MSV_RV1_826_00022	Amount Added: 25.00	Units: uL	
MSV_RV4_826_00024	Amount Added: 25.00	Units: uL	
MSV_RV4GAS826_00072	Amount Added: 25.00	Units: uL	
MSV_25_826ISS_00001	Amount Added: 1.00	Units: uL	Run Reagent

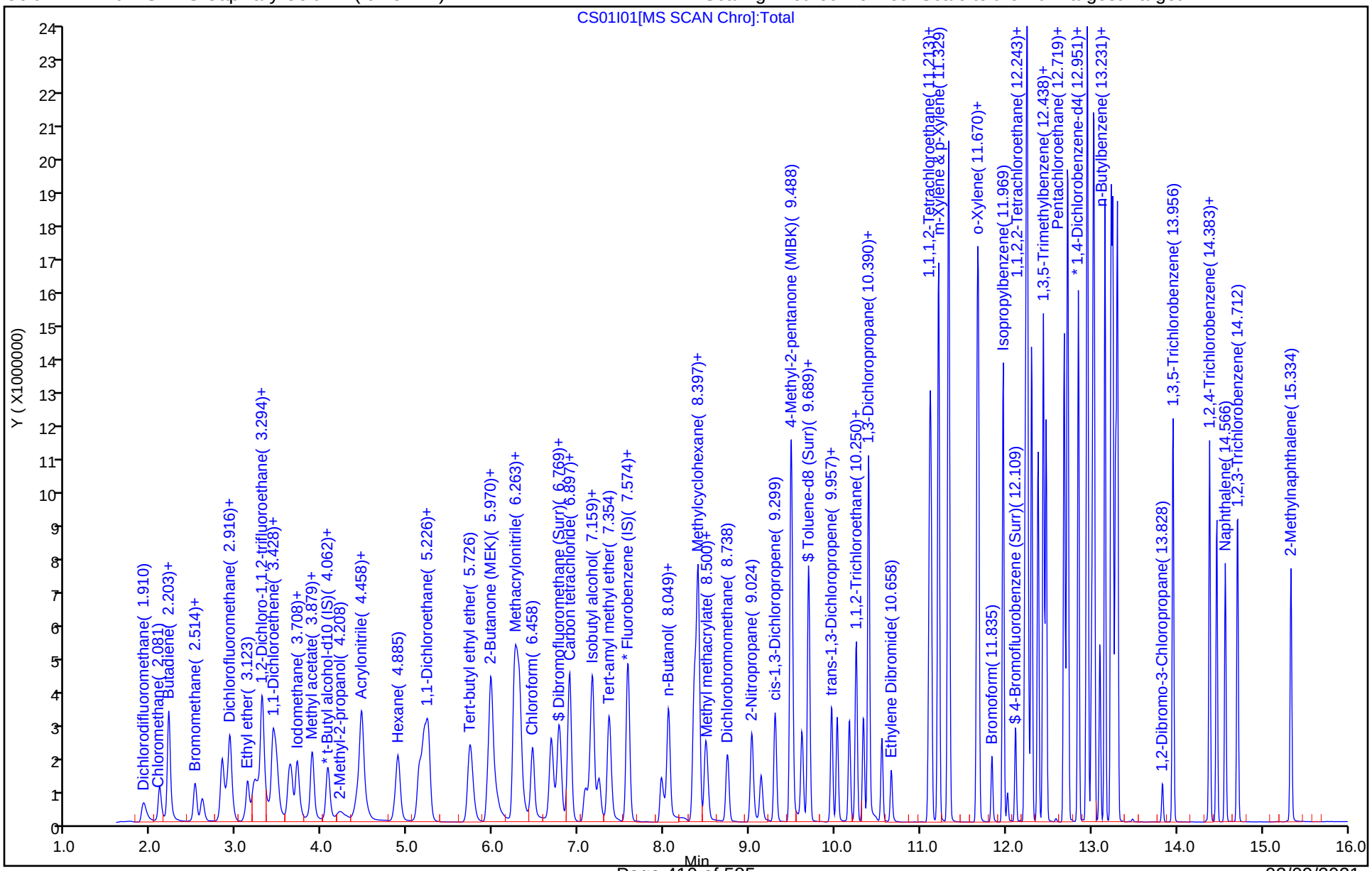
Report Date: 01-Sep-2020 20:10:10 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I01.D

Injection Date:	01-Sep-2020 13:35:30	Instrument ID:	10193	Operator ID:	dvv10203
Lims ID:	IC STD7			Worklist Smp#:	3
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

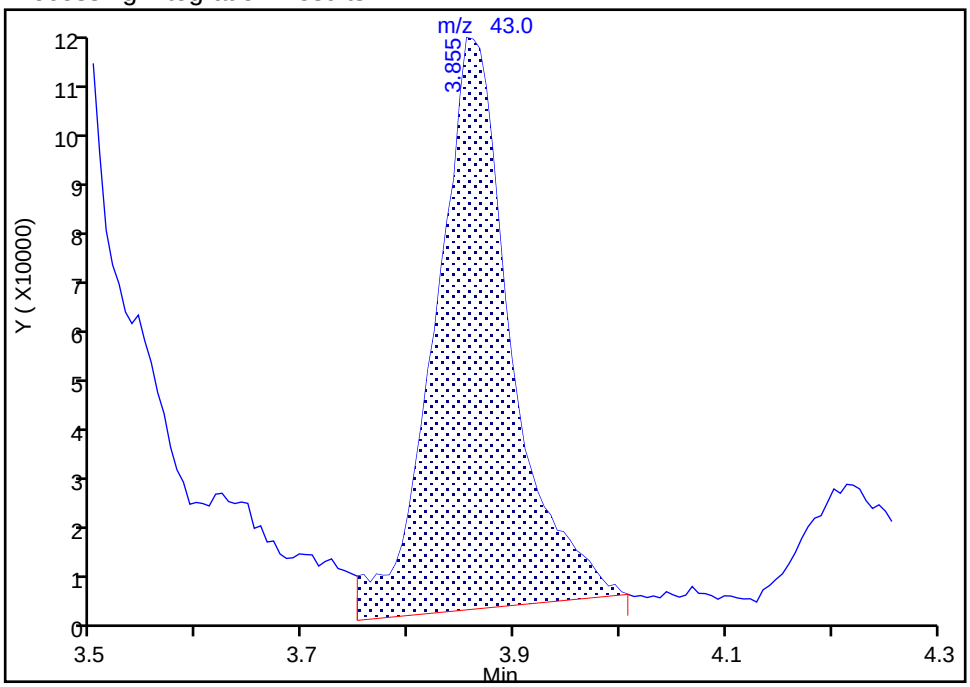
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I01.D
Injection Date: 01-Sep-2020 13:35:30 Instrument ID: 10193
Lims ID: IC STD7
Client ID:
Operator ID: dvv10203 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

22 Methyl acetate, CAS: 79-20-9

Signal: 1

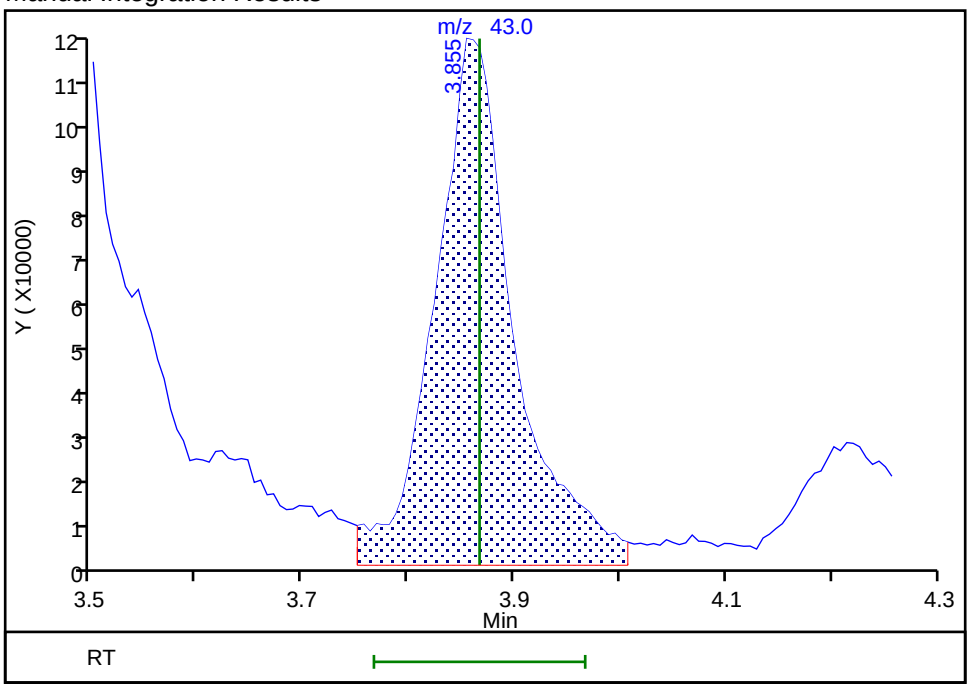
Processing Integration Results

RT: 3.85
Area: 517473
Amount: 24.896311
Amount Units: ug/l



Manual Integration Results

RT: 3.85
Area: 553177
Amount: 25.420101
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 16:54:24
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

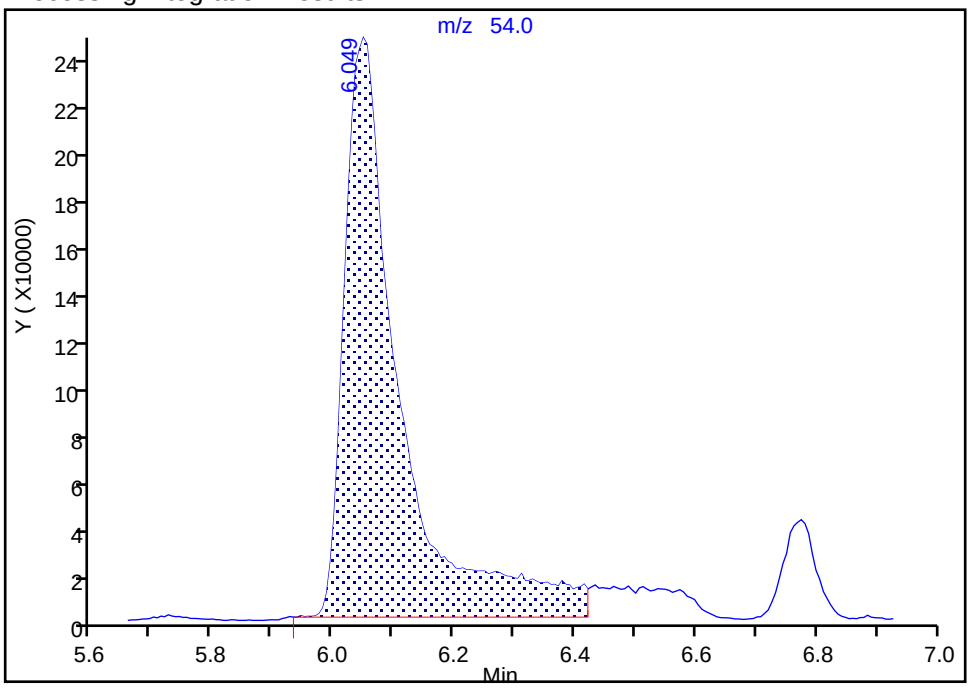
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I01.D
Injection Date: 01-Sep-2020 13:35:30 Instrument ID: 10193
Lims ID: IC STD7
Client ID:
Operator ID: dvv10203 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

40 Propionitrile, CAS: 107-12-0

Signal: 1

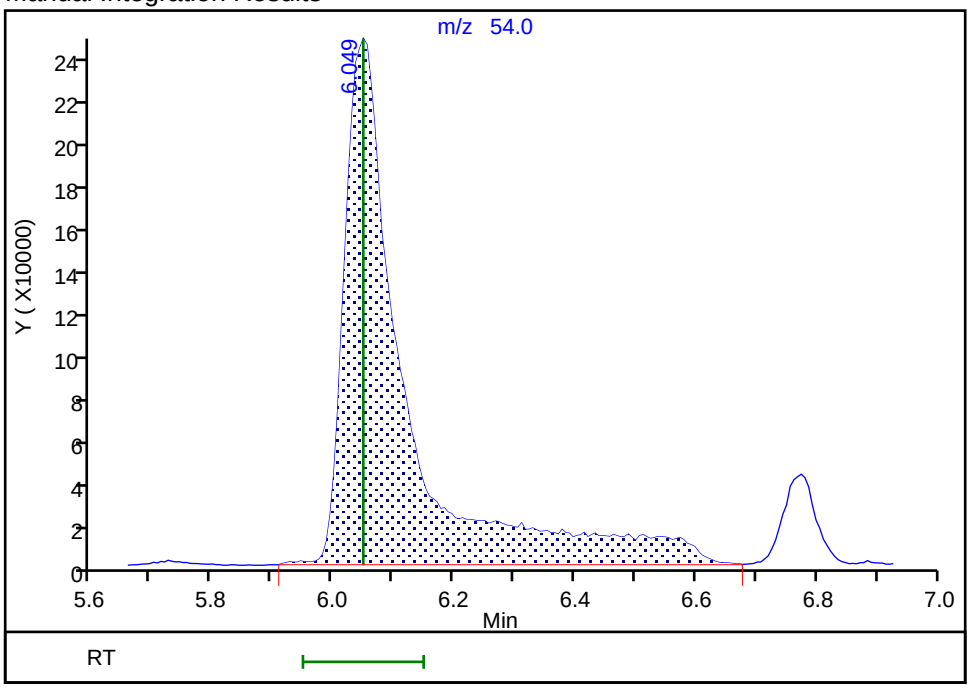
Processing Integration Results

RT: 6.05
Area: 1559949
Amount: 516.6274
Amount Units: ug/l



Manual Integration Results

RT: 6.05
Area: 1736921
Amount: 526.9031
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 16:54:59
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

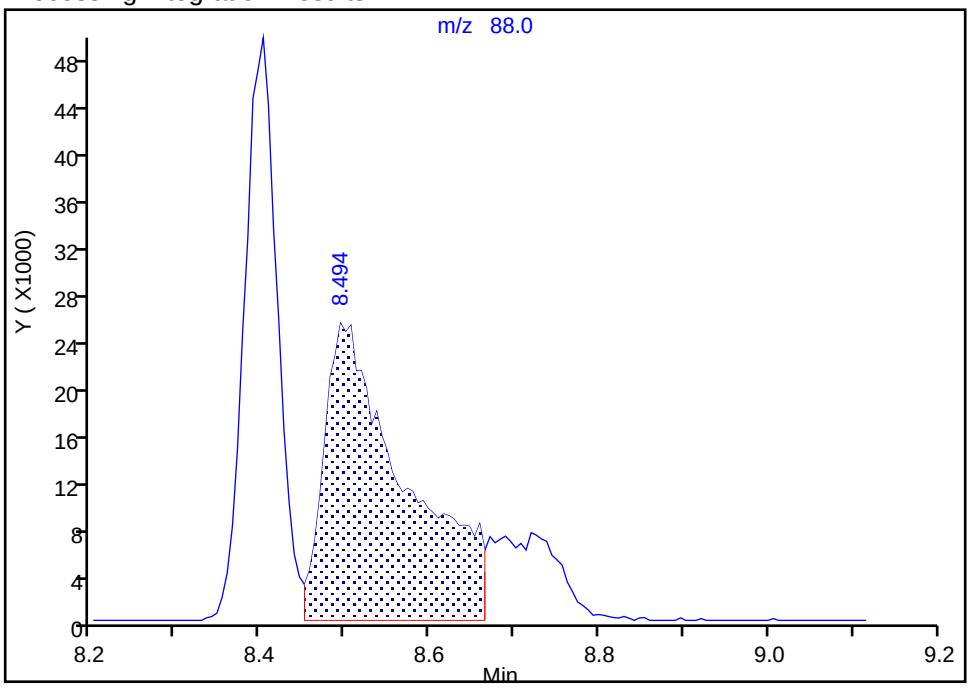
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I01.D
Injection Date: 01-Sep-2020 13:35:30 Instrument ID: 10193
Lims ID: IC STD7
Client ID:
Operator ID: dvv10203 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

65 1,4-Dioxane, CAS: 123-91-1

Signal: 1

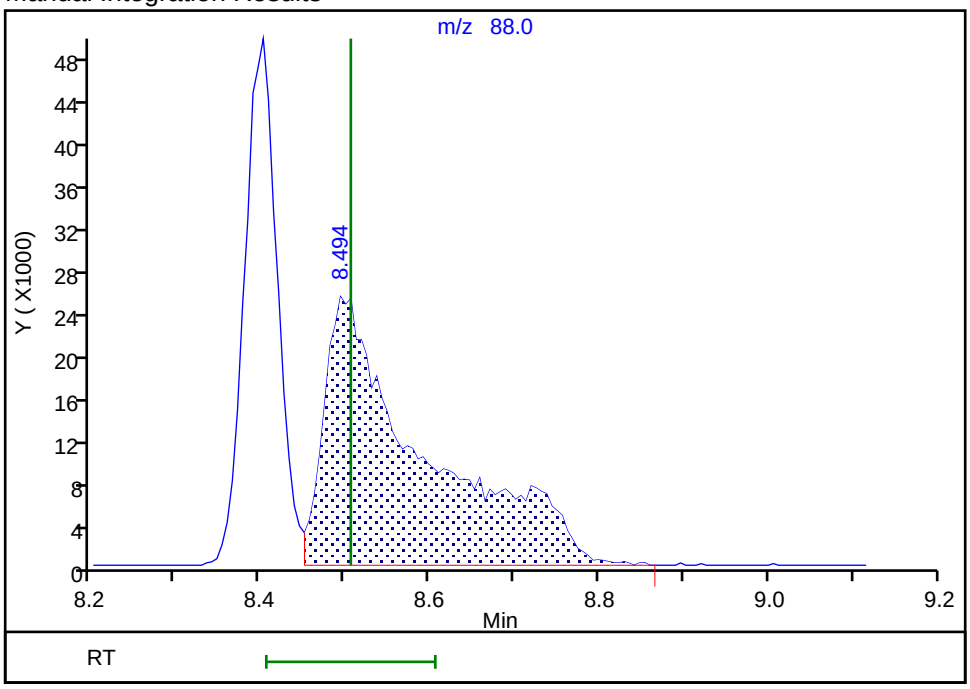
Processing Integration Results

RT: 8.49
Area: 167365
Amount: 1747.3259
Amount Units: ug/l



Manual Integration Results

RT: 8.49
Area: 207069
Amount: 1491.2668
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 16:55:25
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I02.D
Lims ID: ICIS
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 01-Sep-2020 13:57:30 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: ICIS
Misc. Info.: 410-0009503-004
Operator ID: dvv10203 Instrument ID: 10193
Sublist: chrom-MSV_10193_25mL*sub1

Method: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 01-Sep-2020 20:10:18 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1059

First Level Reviewer: virayd Date: 01-Sep-2020 15:34:31

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.916	1.916	0.000	99	673806	10.0	10.1	M
3 Chloromethane	50	2.105	2.105	0.000	89	750884	10.0	9.57	
4 Butadiene	39	2.215	2.215	0.000	93	715813	10.0	9.70	
5 Vinyl chloride	62	2.221	2.221	0.000	79	711167	10.0	9.80	
6 Bromomethane	94	2.526	2.526	0.000	91	508157	10.0	9.92	
7 Chloroethane	64	2.611	2.611	0.000	95	428295	10.0	9.56	
8 Dichlorofluoromethane	67	2.836	2.836	0.000	83	942431	10.0	9.69	
9 Trichlorofluoromethane	101	2.897	2.897	0.000	88	921738	10.0	9.77	
11 Ethyl ether	59	3.141	3.141	0.000	92	470167	10.0	9.83	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.227	3.227	0.000	85	663506	10.0	9.47	
13 Acrolein	56	3.306	3.306	0.000	99	2808556	500.0	473.4	
14 1,1-Dichloroethene	96	3.434	3.434	0.000	88	475627	10.0	9.97	
15 112TCTFE	101	3.470	3.470	0.000	84	500744	10.0	10.3	
16 Acetone	43	3.470	3.470	0.000	98	541999	100.0	86.0	
17 Iodomethane	142	3.623	3.623	0.000	98	954840	10.0	10.1	
19 Ethyl bromide	108	3.653	3.653	0.000	98	399370	10.0	10.1	
18 Isopropyl alcohol	45	3.641	3.641	0.000	38	228137	200.0	184.1	
20 Carbon disulfide	76	3.714	3.714	0.000	100	1707453	10.0	10.1	
22 Methyl acetate	43	3.873	3.873	0.000	98	272722	10.0	11.0	M
23 3-Chloro-1-propene	41	3.891	3.891	0.000	88	815256	10.0	9.77	
24 Methylene Chloride	84	4.080	4.080	0.000	89	535609	10.0	10.1	
* 25 t-Butyl alcohol-d10 (IS)	65	4.111	4.111	0.000	98	148289	50.0	50.0	
26 2-Methyl-2-propanol	59	4.226	4.226	0.000	98	554170	200.0	187.6	
27 Acrylonitrile	53	4.422	4.422	0.000	79	466148	50.0	46.6	
28 Methyl tert-butyl ether	73	4.464	4.464	0.000	96	1520759	10.0	9.85	
29 trans-1,2-Dichloroethene	96	4.476	4.476	0.000	93	564465	10.0	10.1	
30 Hexane	57	4.897	4.897	0.000	95	807784	10.0	10.3	
32 1,1-Dichloroethane	63	5.141	5.141	0.000	85	1035693	10.0	10.1	
33 Isopropyl ether	45	5.202	5.202	0.000	93	1943658	10.0	9.93	
34 2-Chloro-1,3-butadiene	53	5.251	5.251	0.000	90	958306	10.0	9.91	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
35 Tert-butyl ethyl ether	59	5.738	5.738	0.000	98	1849075	10.0	9.89	
36 2-Butanone (MEK)	43	5.952	5.952	0.000	99	1409728	100.0	95.4	
37 cis-1,2-Dichloroethene	96	5.976	5.976	0.000	71	625147	10.0	9.89	
38 2,2-Dichloropropane	77	5.988	5.988	0.000	69	890664	10.0	10.1	
40 Propionitrile	54	6.055	6.055	0.000	98	730594	200.0	194.8	
43 Methacrylonitrile	67	6.263	6.263	0.000	92	1440762	100.0	99.1	
44 Chlorobromomethane	128	6.311	6.311	0.000	69	279022	10.0	10.0	
45 Tetrahydrofuran	71	6.317	6.317	0.000	72	415910	100.0	99.5	
46 Chloroform	83	6.464	6.464	0.000	83	1017069	10.0	10.0	
$ 47 Dibromofluoromethane (Surr)	113	6.683	6.683	0.000	70	488556	10.0	9.97	
48 1,1,1-Trichloroethane	97	6.689	6.689	0.000	92	934233	10.0	10.2	
49 Cyclohexane	56	6.775	6.775	0.000	92	971248	10.0	10.0	
50 Carbon tetrachloride	117	6.891	6.891	0.000	83	789037	10.0	10.3	
51 1,1-Dichloropropene	75	6.903	6.903	0.000	92	822564	10.0	10.0	
52 Isobutyl alcohol	41	7.086	7.086	0.000	92	455897	500.0	476.1	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.141	7.141	0.000	0	99744	10.0	9.99	
54 Benzene	78	7.165	7.165	0.000	97	2366224	10.0	9.99	
55 1,2-Dichloroethane	62	7.238	7.238	0.000	91	660414	10.0	9.25	
56 Tert-amyl methyl ether	73	7.360	7.360	0.000	97	1692208	10.0	9.94	
* 57 Fluorobenzene (IS)	96	7.573	7.573	0.000	94	2062892	10.0	10.0	
58 n-Heptane	43	7.579	7.579	0.000	66	886773	10.0	10.1	
59 n-Butanol	56	7.976	7.976	0.000	89	804563	1000.0	1013.8	M
60 Trichloroethene	95	8.055	8.055	0.000	94	613428	10.0	10.0	
61 Methylcyclohexane	83	8.360	8.360	0.000	92	946727	10.0	10.1	
62 1,2-Dichloropropane	63	8.390	8.390	0.000	71	599777	10.0	9.86	
63 2-ethoxy-2-methyl butane	87	8.402	8.402	0.000	91	965317	10.0	10.2	
64 Methyl methacrylate	69	8.482	8.482	0.000	91	302973	10.0	9.78	
66 Dibromomethane	93	8.500	8.500	0.000	95	293984	10.0	9.87	
65 1,4-Dioxane	88	8.506	8.506	0.000	31	79862	500.0	505.4	M
67 Dichlorobromomethane	83	8.738	8.738	0.000	93	747888	10.0	10.2	
68 2-Nitropropane	41	9.024	9.024	0.000	99	995940	100.0	103.6	
71 1-Bromo-2-chloroethane	63	9.134	9.134	0.000	95	622797	10.0	9.90	
72 cis-1,3-Dichloropropene	75	9.299	9.299	0.000	92	943666	10.0	10.3	
73 4-Methyl-2-pentanone (MIBK)	43	9.488	9.488	0.000	98	4260875	100.0	99.2	
$ 74 Toluene-d8 (Surr)	98	9.616	9.616	0.000	94	2048995	10.0	10.0	
75 Toluene	92	9.689	9.689	0.000	97	1562669	10.0	10.1	
76 trans-1,3-Dichloropropene	75	9.957	9.957	0.000	92	808366	10.0	10.5	
78 Ethyl methacrylate	69	10.024	10.024	0.000	90	673046	10.0	10.3	
79 1,1,2-Trichloroethane	97	10.170	10.170	0.000	87	425508	10.0	10.0	
80 Tetrachloroethene	166	10.250	10.250	0.000	93	692046	10.0	10.0	
81 1,3-Dichloropropane	76	10.329	10.329	0.000	94	746124	10.0	9.94	
82 2-Hexanone	43	10.390	10.390	0.000	97	3099544	100.0	102.2	
83 Chlorodibromomethane	129	10.548	10.548	0.000	88	539411	10.0	10.9	
84 Ethylene Dibromide	107	10.658	10.658	0.000	99	431839	10.0	10.3	
* 85 Chlorobenzene-d5 (IS)	117	11.097	11.097	0.000	85	1569631	10.0	10.0	
86 1-Chlorohexane	91	11.109	11.109	0.000	96	856372	10.0	9.73	
87 Chlorobenzene	112	11.121	11.121	0.000	93	1740350	10.0	10.0	
89 1,1,1,2-Tetrachloroethane	131	11.207	11.207	0.000	41	617994	10.0	10.4	
90 Ethylbenzene	91	11.213	11.213	0.000	98	3077887	10.0	10.1	
91 m-Xylene & p-Xylene	106	11.329	11.329	0.000	0	2455146	20.0	20.6	
92 o-Xylene	106	11.664	11.664	0.000	95	1197012	10.0	10.2	
93 Styrene	104	11.676	11.676	0.000	93	2044773	10.0	10.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
94 Bromoform	173	11.835	11.835	0.000	96	322179	10.0	11.7	
95 Isopropylbenzene	105	11.969	11.969	0.000	96	3180524	10.0	10.3	
$ 98 4-Bromofluorobenzene (Surr)	95	12.109	12.109	0.000	89	773730	10.0	10.0	
99 1,1,2,2-Tetrachloroethane	83	12.219	12.219	0.000	72	569960	10.0	9.92	
100 Bromobenzene	156	12.231	12.231	0.000	92	786388	10.0	9.96	
101 trans-1,4-Dichloro-2-butene	53	12.243	12.243	0.000	93	1707722	100.0	107.3	
102 1,2,3-Trichloropropane	110	12.261	12.261	0.000	79	153575	10.0	9.82	
103 N-Propylbenzene	91	12.298	12.298	0.000	99	3755554	10.0	10.1	
104 2-Chlorotoluene	126	12.377	12.377	0.000	97	750019	10.0	9.90	
105 1,3,5-Trimethylbenzene	105	12.438	12.438	0.000	94	2762343	10.0	10.1	
106 4-Chlorotoluene	126	12.469	12.469	0.000	98	787376	10.0	10.0	
107 tert-Butylbenzene	134	12.682	12.682	0.000	88	583616	10.0	9.78	
108 Pentachloroethane	167	12.713	12.713	0.000	58	477219	10.0	10.7	
109 1,2,4-Trimethylbenzene	105	12.725	12.725	0.000	97	2885821	10.0	10.2	
110 sec-Butylbenzene	105	12.847	12.847	0.000	94	3571893	10.0	10.1	
111 1,3-Dichlorobenzene	146	12.944	12.944	0.000	97	1582324	10.0	10.0	
112 4-Isopropyltoluene	119	12.956	12.956	0.000	95	3180481	10.0	10.3	
* 113 1,4-Dichlorobenzene-d4	152	12.999	12.999	0.000	95	920484	10.0	10.0	
114 1,4-Dichlorobenzene	146	13.017	13.017	0.000	92	1615615	10.0	9.96	
115 1,2,3-Trimethylbenzene	120	13.030	13.030	0.000	99	1234014	10.0	9.98	
116 Benzyl chloride	126	13.097	13.097	0.000	99	254856	10.0	11.1	
119 n-Butylbenzene	92	13.249	13.249	0.000	97	1635579	10.0	10.5	
120 1,2-Dichlorobenzene	146	13.280	13.280	0.000	96	1503472	10.0	10.1	
118 p-Diethylbenzene	119	13.304	13.304	0.000	0	1569936	10.0	10.0	
123 1,2-Dibromo-3-Chloropropane	155	13.834	13.834	0.000	86	86753	10.0	11.0	
124 1,3,5-Trichlorobenzene	180	13.956	13.956	0.000	94	1298817	10.0	10.1	
125 1,2,4-Trichlorobenzene	180	14.383	14.383	0.000	90	1161828	10.0	10.1	
126 Hexachlorobutadiene	225	14.468	14.468	0.000	94	568070	10.0	10.1	
127 Naphthalene	128	14.566	14.566	0.000	97	2092386	10.0	10.2	
128 1,2,3-Trichlorobenzene	180	14.712	14.712	0.000	94	1019899	10.0	9.98	
129 2-Methylnaphthalene	142	15.334	15.334	0.000	0	1458971	10.0	10.5	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MSV_RV1_826_00022	Amount Added: 10.00	Units: uL	
MSV_RV4_826_00024	Amount Added: 10.00	Units: uL	
MSV_RV4GAS826_00072	Amount Added: 10.00	Units: uL	
MSV_25_826ISS_00001	Amount Added: 1.00	Units: uL	Run Reagent

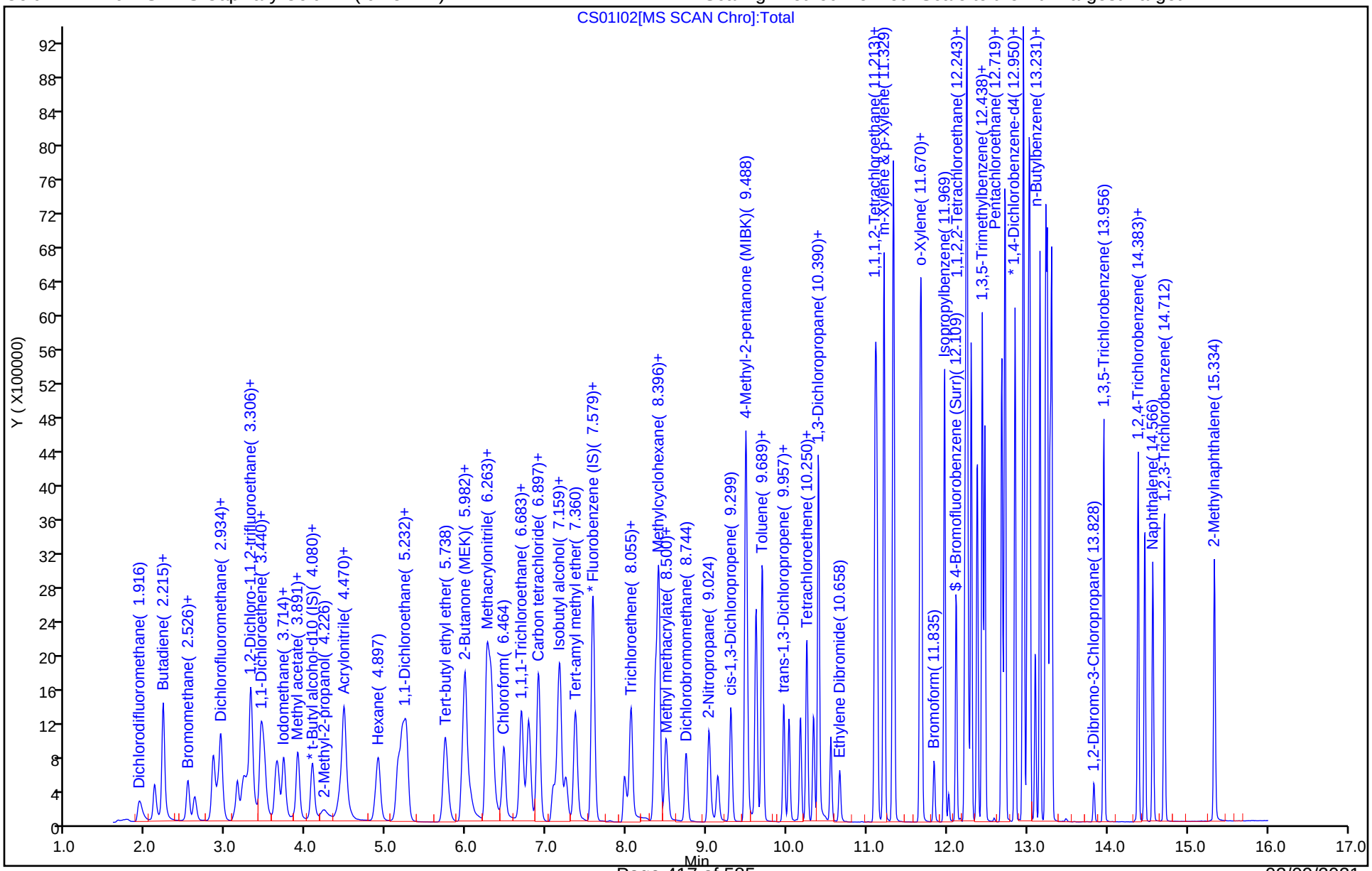
Report Date: 01-Sep-2020 20:10:19 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I02.D

Injection Date:	01-Sep-2020 13:57:30	Instrument ID:	10193	Operator ID:	dvv10203
Lims ID:	ICIS			Worklist Smp#:	4
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

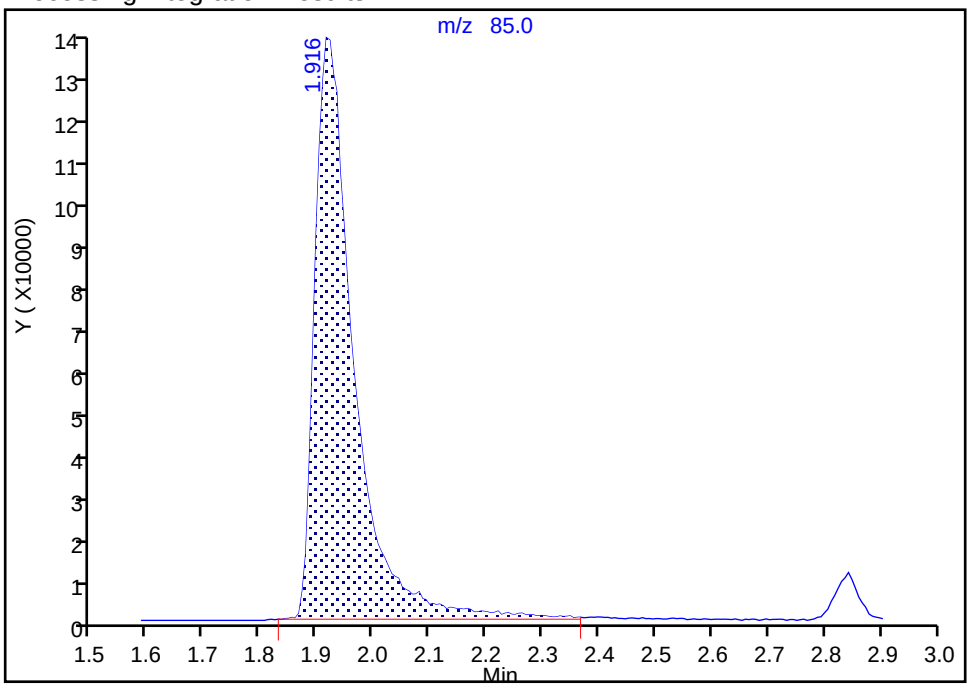
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I02.D
Injection Date: 01-Sep-2020 13:57:30 Instrument ID: 10193
Lims ID: ICIS
Client ID:
Operator ID: dvv10203 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

2 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

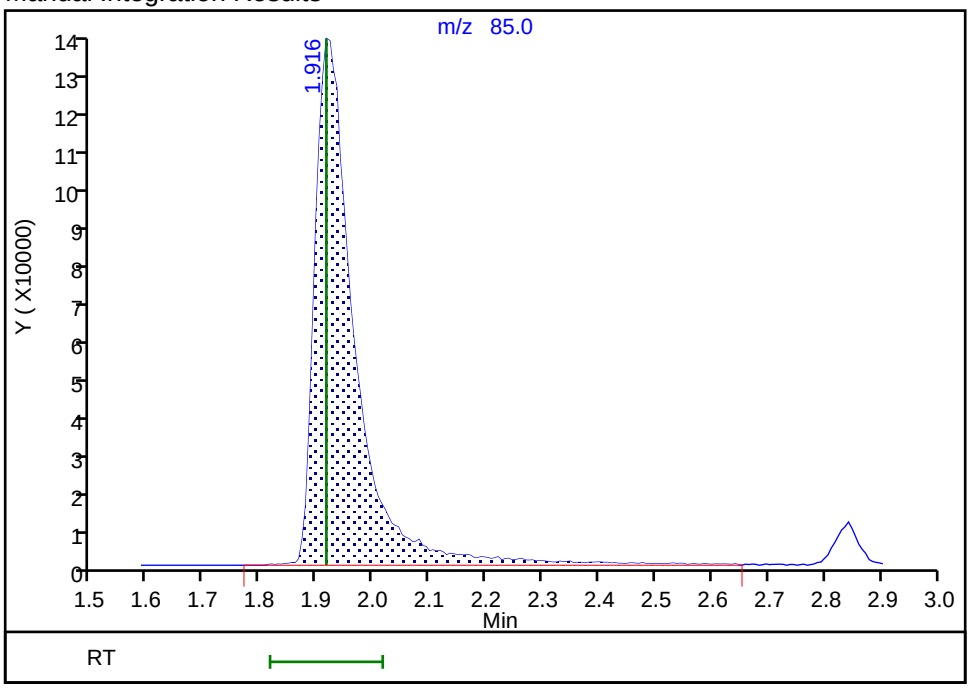
Processing Integration Results

RT: 1.92
Area: 657253
Amount: 9.998399
Amount Units: ug/l



Manual Integration Results

RT: 1.92
Area: 673806
Amount: 10.122260
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 16:56:25
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

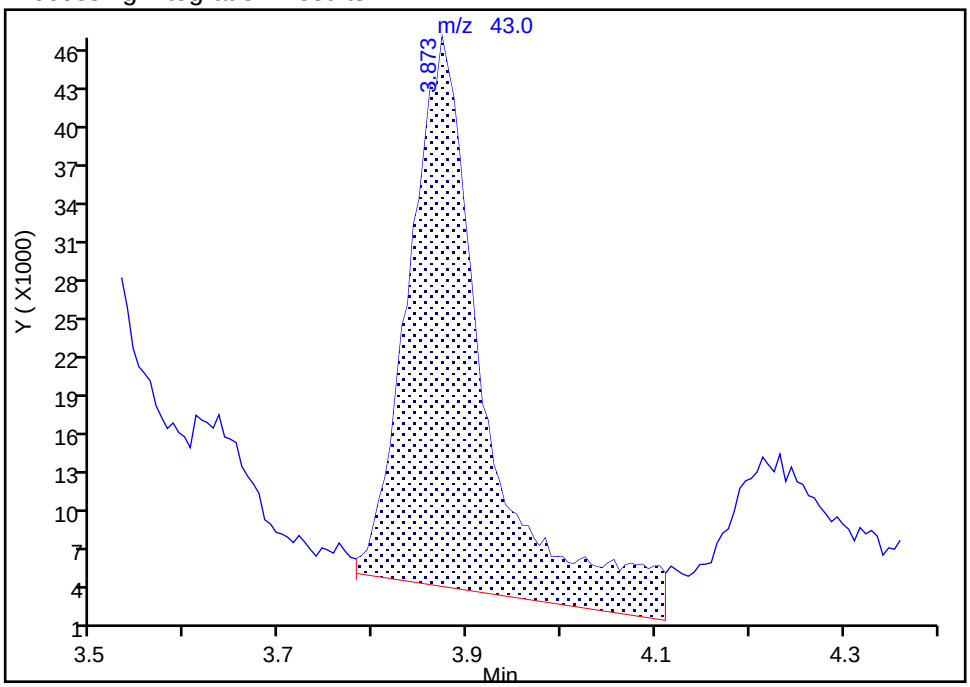
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I02.D
Injection Date: 01-Sep-2020 13:57:30 Instrument ID: 10193
Lims ID: ICIS
Client ID:
Operator ID: dvv10203 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

22 Methyl acetate, CAS: 79-20-9

Signal: 1

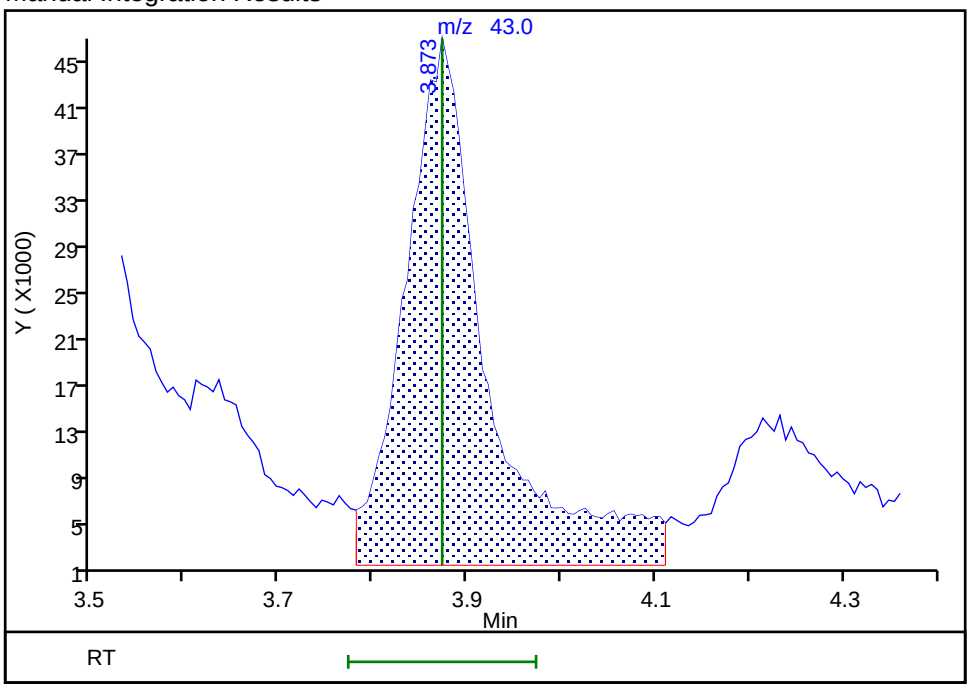
RT: 3.87
Area: 237365
Amount: 9.508028
Amount Units: ug/l

Processing Integration Results



RT: 3.87
Area: 272722
Amount: 11.012573
Amount Units: ug/l

Manual Integration Results



Reviewer: campbellme, 01-Sep-2020 16:56:51
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

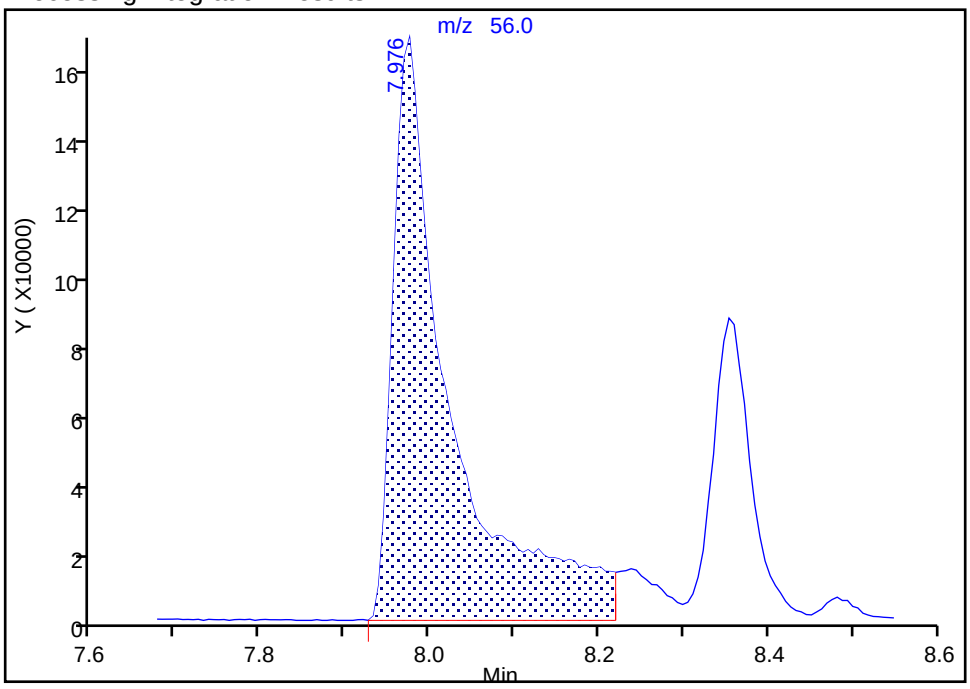
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I02.D
Injection Date: 01-Sep-2020 13:57:30 Instrument ID: 10193
Lims ID: ICIS
Client ID:
Operator ID: dvv10203 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

59 n-Butanol, CAS: 71-36-3

Signal: 1

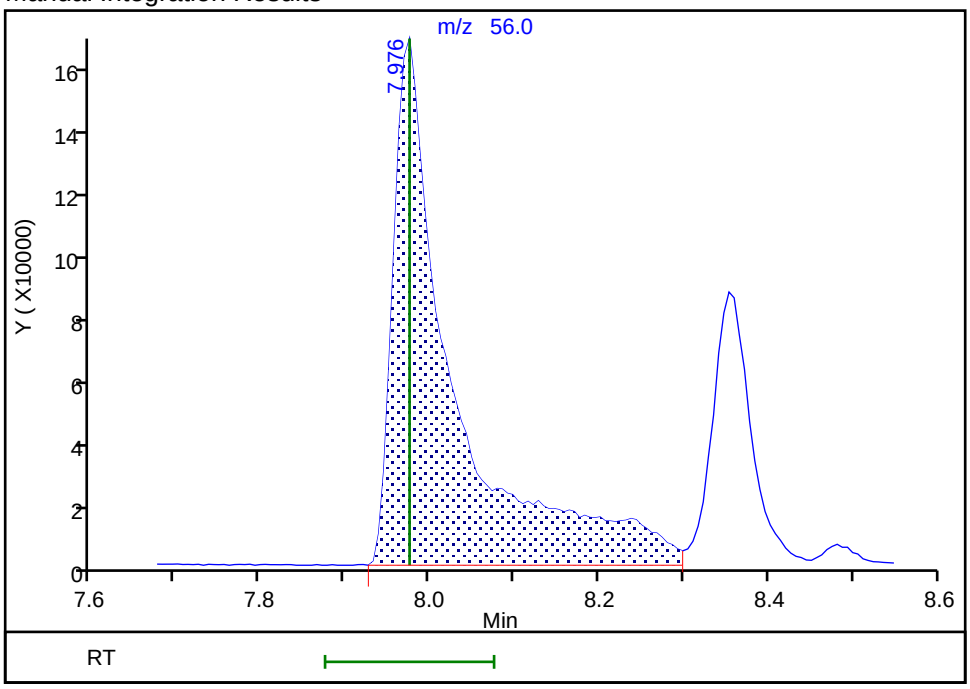
Processing Integration Results

RT: 7.98
Area: 757439
Amount: 899.3216
Amount Units: ug/l



Manual Integration Results

RT: 7.98
Area: 804563
Amount: 1013.8075
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:14:33
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

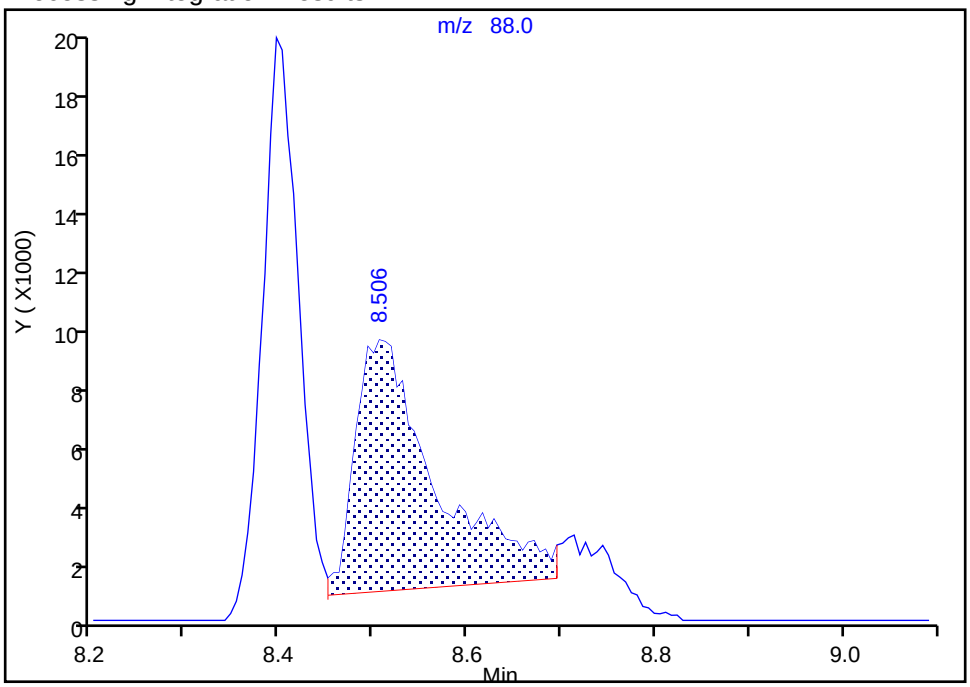
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I02.D
Injection Date: 01-Sep-2020 13:57:30 Instrument ID: 10193
Lims ID: ICIS
Client ID:
Operator ID: dvv10203 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

65 1,4-Dioxane, CAS: 123-91-1

Signal: 1

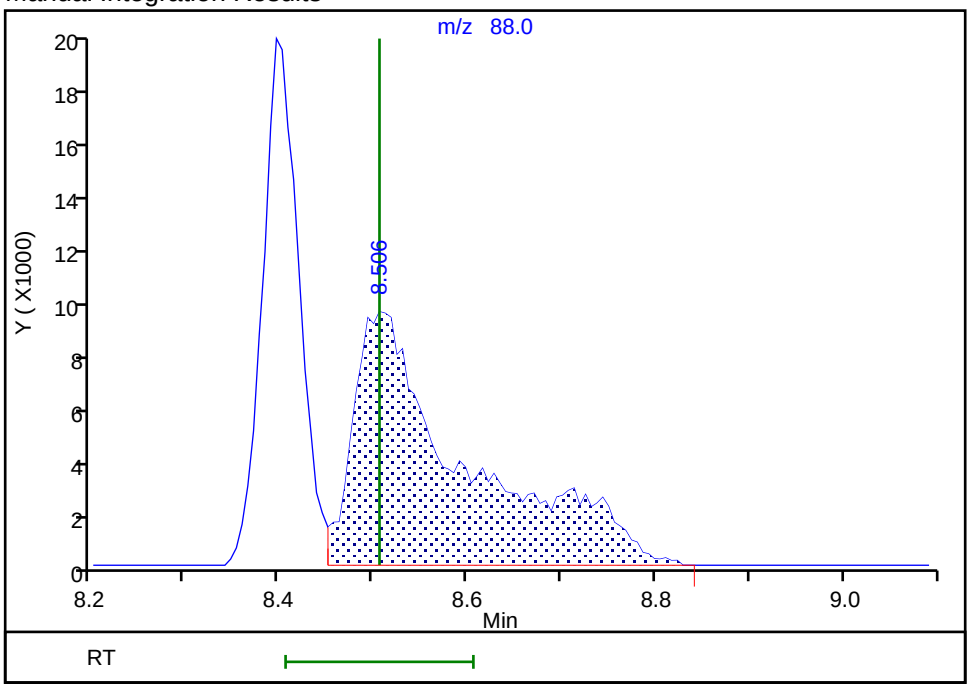
Processing Integration Results

RT: 8.51
Area: 51295
Amount: 445.9401
Amount Units: ug/l



Manual Integration Results

RT: 8.51
Area: 79862
Amount: 505.4008
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 16:57:29
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I03.D
Lims ID: IC STD5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 01-Sep-2020 14:19:30 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: IC STD5
Misc. Info.: 410-0009503-005
Operator ID: dvv10203 Instrument ID: 10193
Sublist: chrom-MSV_10193_25mL*sub1

Method: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 01-Sep-2020 20:10:27 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1059

First Level Reviewer: campbellme Date: 01-Sep-2020 16:59:24

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.910	1.916	-0.006	99	335623	5.00	5.11	M
3 Chloromethane	50	2.099	2.105	-0.006	99	374739	5.00	4.84	
4 Butadiene	39	2.203	2.215	-0.012	94	342407	5.00	4.70	
5 Vinyl chloride	62	2.215	2.221	-0.006	98	352685	5.00	4.93	
6 Bromomethane	94	2.513	2.526	-0.013	91	247103	5.00	4.89	
7 Chloroethane	64	2.605	2.611	-0.006	100	214069	5.00	4.84	
8 Dichlorofluoromethane	67	2.830	2.836	-0.006	97	467823	5.00	4.88	
9 Trichlorofluoromethane	101	2.898	2.897	0.001	97	458162	5.00	4.92	
11 Ethyl ether	59	3.135	3.141	-0.006	92	229113	5.00	4.86	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.215	3.227	-0.012	92	312190	5.00	4.51	
13 Acrolein	56	3.300	3.306	-0.006	99	1427897	250.0	238.2	
14 1,1-Dichloroethene	96	3.428	3.434	-0.006	96	221612	5.00	4.71	
15 112TCTFE	101	3.458	3.470	-0.012	92	234166	5.00	4.89	
16 Acetone	43	3.464	3.470	-0.006	98	322634	50.0	50.7	
17 Iodomethane	142	3.617	3.623	-0.006	99	440171	5.00	4.73	
18 Isopropyl alcohol	45	3.635	3.641	-0.006	40	106675	100.0	88.1	
19 Ethyl bromide	108	3.641	3.653	-0.012	98	194973	5.00	4.99	
20 Carbon disulfide	76	3.714	3.714	0.000	100	790900	5.00	4.76	
22 Methyl acetate	43	3.867	3.873	-0.006	97	136367	5.00	5.45	
23 3-Chloro-1-propene	41	3.885	3.891	-0.006	89	399375	5.00	4.85	
24 Methylene Chloride	84	4.068	4.080	-0.012	94	248970	5.00	4.75	
* 25 t-Butyl alcohol-d10 (IS)	65	4.111	4.111	0.000	98	149797	50.0	50.0	
26 2-Methyl-2-propanol	59	4.208	4.226	-0.018	99	278959	100.0	93.5	
27 Acrylonitrile	53	4.409	4.422	-0.013	99	240268	25.0	23.8	
28 Methyl tert-butyl ether	73	4.458	4.464	-0.006	91	727225	5.00	4.77	
29 trans-1,2-Dichloroethene	96	4.470	4.476	-0.006	97	262964	5.00	4.78	
30 Hexane	57	4.897	4.897	0.000	95	383350	5.00	4.94	
32 1,1-Dichloroethane	63	5.135	5.141	-0.006	96	478397	5.00	4.72	
33 Isopropyl ether	45	5.196	5.202	-0.006	93	920754	5.00	4.77	
34 2-Chloro-1,3-butadiene	53	5.245	5.251	-0.006	93	446582	5.00	4.68	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
35 Tert-butyl ethyl ether	59	5.726	5.738	-0.012	98	891552	5.00	4.83	
36 2-Butanone (MEK)	43	5.940	5.952	-0.012	100	701991	50.0	47.0	
37 cis-1,2-Dichloroethene	96	5.970	5.976	-0.006	83	295208	5.00	4.73	
38 2,2-Dichloropropane	77	5.988	5.988	0.000	88	413880	5.00	4.74	
40 Propionitrile	54	6.043	6.055	-0.012	99	356593	100.0	94.1	M
S 42 1,2-Dichloroethene, Total	100				0			9.51	
43 Methacrylonitrile	67	6.251	6.263	-0.013	93	693145	50.0	47.2	
44 Chlorobromomethane	128	6.311	6.311	0.000	78	135663	5.00	4.94	
45 Tetrahydrofuran	71	6.311	6.317	-0.006	86	193486	50.0	45.8	
46 Chloroform	83	6.464	6.464	0.000	95	480095	5.00	4.78	
$ 47 Dibromofluoromethane (Surr)	113	6.683	6.683	0.000	93	486623	10.0	10.1	
48 1,1,1-Trichloroethane	97	6.677	6.689	-0.012	98	434162	5.00	4.80	
49 Cyclohexane	56	6.769	6.775	-0.006	93	460601	5.00	4.82	
50 Carbon tetrachloride	117	6.891	6.891	0.000	96	367580	5.00	4.85	
51 1,1-Dichloropropene	75	6.897	6.903	-0.006	94	386758	5.00	4.76	
52 Isobutyl alcohol	41	7.080	7.086	-0.006	94	230672	250.0	238.4	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.134	7.141	-0.006	0	99716	10.0	10.1	
54 Benzene	78	7.159	7.165	-0.006	97	1116708	5.00	4.78	
55 1,2-Dichloroethane	62	7.238	7.238	0.000	98	322763	5.00	4.58	
56 Tert-amyl methyl ether	73	7.354	7.360	-0.006	97	810520	5.00	4.82	
* 57 Fluorobenzene (IS)	96	7.573	7.573	0.000	99	2035412	10.0	10.0	
58 n-Heptane	43	7.573	7.579	-0.006	90	417078	5.00	4.83	
59 n-Butanol	56	7.976	7.976	0.000	90	388291	500.0	484.3	M
60 Trichloroethene	95	8.049	8.055	-0.006	98	287079	5.00	4.76	
61 Methylcyclohexane	83	8.354	8.360	-0.006	92	476901	5.00	5.17	
62 1,2-Dichloropropane	63	8.390	8.390	0.000	86	285051	5.00	4.75	
63 2-ethoxy-2-methyl butane	87	8.396	8.402	-0.006	91	452593	5.00	4.84	
64 Methyl methacrylate	69	8.482	8.482	0.000	91	148411	5.00	4.74	
66 Dibromomethane	93	8.494	8.500	-0.006	96	140420	5.00	4.78	
65 1,4-Dioxane	88	8.500	8.506	-0.006	32	39014	250.0	244.4	M
67 Dichlorobromomethane	83	8.738	8.738	0.000	98	348987	5.00	4.81	
68 2-Nitropropane	41	9.024	9.024	0.000	99	459149	50.0	47.3	
71 1-Bromo-2-chloroethane	63	9.134	9.134	0.000	99	302656	5.00	4.87	
72 cis-1,3-Dichloropropene	75	9.299	9.299	0.000	94	439884	5.00	4.88	
73 4-Methyl-2-pentanone (MIBK)	43	9.482	9.488	-0.006	98	2060281	50.0	47.5	
$ 74 Toluene-d8 (Surr)	98	9.610	9.616	-0.006	94	2027327	10.0	10.0	
75 Toluene	92	9.689	9.689	0.000	98	721183	5.00	4.74	
76 trans-1,3-Dichloropropene	75	9.957	9.957	0.000	96	378157	5.00	4.96	
78 Ethyl methacrylate	69	10.024	10.024	0.000	89	321458	5.00	5.00	
S 77 1,3-Dichloropropene, Total	100				0			9.84	
79 1,1,2-Trichloroethane	97	10.164	10.170	-0.006	91	201374	5.00	4.79	
80 Tetrachloroethene	166	10.244	10.250	-0.006	97	322909	5.00	4.75	
81 1,3-Dichloropropane	76	10.329	10.329	0.000	94	353883	5.00	4.77	
82 2-Hexanone	43	10.390	10.390	0.000	97	1483984	50.0	48.4	
83 Chlorodibromomethane	129	10.548	10.548	0.000	90	248177	5.00	5.09	
84 Ethylene Dibromide	107	10.658	10.658	0.000	98	202633	5.00	4.88	
* 85 Chlorobenzene-d5 (IS)	117	11.097	11.097	0.000	87	1549814	10.0	10.0	
86 1-Chlorohexane	91	11.109	11.109	0.000	98	400674	5.00	4.61	
87 Chlorobenzene	112	11.122	11.121	0.001	94	821070	5.00	4.78	
89 1,1,1,2-Tetrachloroethane	131	11.207	11.207	0.000	94	287568	5.00	4.92	
90 Ethylbenzene	91	11.213	11.213	0.000	98	1440317	5.00	4.77	
S 88 Xylenes, Total	106				0			14.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
91 m-Xylene & p-Xylene	106	11.329	11.329	0.000	0	1133528	10.0	9.61	
92 o-Xylene	106	11.664	11.664	0.000	97	554888	5.00	4.80	
93 Styrene	104	11.676	11.676	0.000	95	949081	5.00	4.90	
94 Bromoform	173	11.835	11.835	0.000	97	143999	5.00	5.31	
95 Isopropylbenzene	105	11.969	11.969	0.000	96	1466907	5.00	4.80	
$ 98 4-Bromofluorobenzene (Surr)	95	12.109	12.109	0.000	91	764276	10.0	10.0	
99 1,1,2,2-Tetrachloroethane	83	12.219	12.219	0.000	93	269440	5.00	4.85	
100 Bromobenzene	156	12.231	12.231	0.000	94	365172	5.00	4.78	
101 trans-1,4-Dichloro-2-butene	53	12.243	12.243	0.000	93	790342	50.0	51.3	
102 1,2,3-Trichloropropane	110	12.268	12.261	0.007	83	72364	5.00	4.78	
103 N-Propylbenzene	91	12.298	12.298	0.000	99	1726631	5.00	4.82	
104 2-Chlorotoluene	126	12.377	12.377	0.000	97	350978	5.00	4.79	
105 1,3,5-Trimethylbenzene	105	12.438	12.438	0.000	94	1274650	5.00	4.80	
106 4-Chlorotoluene	126	12.469	12.469	0.000	98	362949	5.00	4.76	
107 tert-Butylbenzene	134	12.682	12.682	0.000	93	270627	5.00	4.69	
108 Pentachloroethane	167	12.713	12.713	0.000	92	223759	5.00	5.19	
109 1,2,4-Trimethylbenzene	105	12.725	12.725	0.000	97	1326302	5.00	4.87	
110 sec-Butylbenzene	105	12.847	12.847	0.000	94	1656218	5.00	4.84	
111 1,3-Dichlorobenzene	146	12.944	12.944	0.000	98	734044	5.00	4.81	
112 4-Isopropyltoluene	119	12.957	12.956	0.001	97	1448806	5.00	4.86	
* 113 1,4-Dichlorobenzene-d4	152	12.999	12.999	0.000	95	890471	10.0	10.0	
114 1,4-Dichlorobenzene	146	13.017	13.017	0.000	94	753707	5.00	4.80	
115 1,2,3-Trimethylbenzene	120	13.030	13.030	0.000	98	586354	5.00	4.90	
116 Benzyl chloride	126	13.103	13.097	0.006	99	116794	5.00	5.28	
119 n-Butylbenzene	92	13.249	13.249	0.000	97	751620	5.00	4.97	
120 1,2-Dichlorobenzene	146	13.280	13.280	0.000	98	697848	5.00	4.85	
118 p-Diethylbenzene	119	13.304	13.304	0.000	0	755567	5.00	4.99	
123 1,2-Dibromo-3-Chloropropane	155	13.834	13.834	0.000	84	39048	5.00	5.12	
124 1,3,5-Trichlorobenzene	180	13.956	13.956	0.000	98	603506	5.00	4.85	
125 1,2,4-Trichlorobenzene	180	14.383	14.383	0.000	94	540926	5.00	4.85	
126 Hexachlorobutadiene	225	14.468	14.468	0.000	97	260304	5.00	4.77	
127 Naphthalene	128	14.566	14.566	0.000	97	981719	5.00	4.93	
128 1,2,3-Trichlorobenzene	180	14.712	14.712	0.000	95	477586	5.00	4.83	
129 2-Methylnaphthalene	142	15.334	15.334	0.000	0	699145	5.00	5.19	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MSV_RV1_826_00022	Amount Added:	5.00	Units: uL	
MSV_RV4_826_00024	Amount Added:	5.00	Units: uL	
MSV_RV4GAS826_00072	Amount Added:	5.00	Units: uL	
MSV_25_826ISS_00001	Amount Added:	1.00	Units: uL	Run Reagent

Report Date: 01-Sep-2020 20:10:29 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I03.D

Injection Date: 01-Sep-2020 14:19:30 Instrument ID: 10193 Operator ID: dvv10203

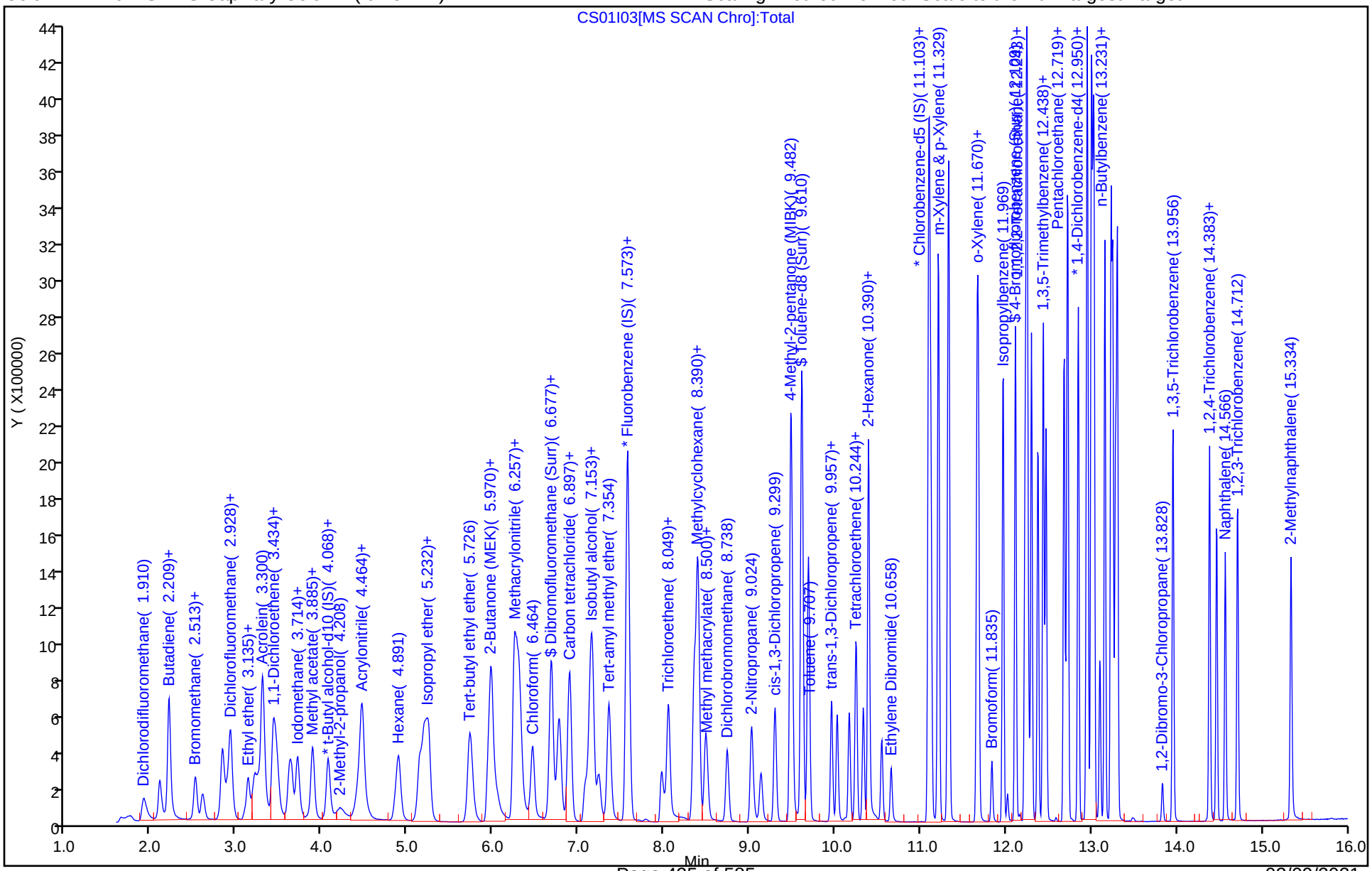
Lims ID: IC STD5 Worklist Smp#: 5

Client ID:

Purge Vol: 25.000 mL Dil. Factor: 1.0000 ALS Bottle#: 4

Method: MSV_10193_25mL Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

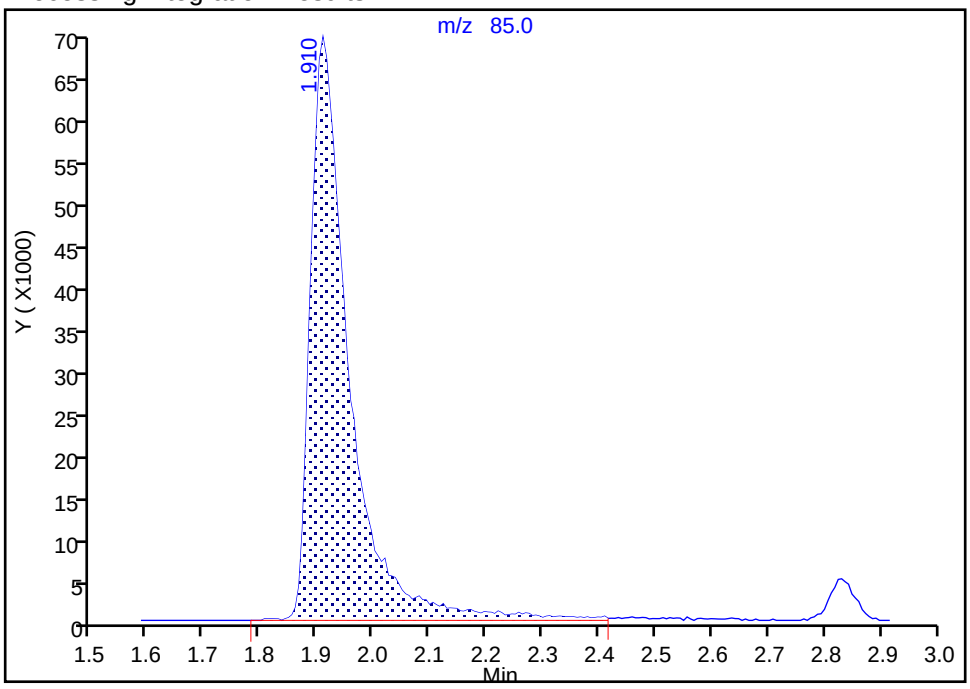
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I03.D
Injection Date: 01-Sep-2020 14:19:30 Instrument ID: 10193
Lims ID: IC STD5
Client ID:
Operator ID: dvv10203 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

2 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

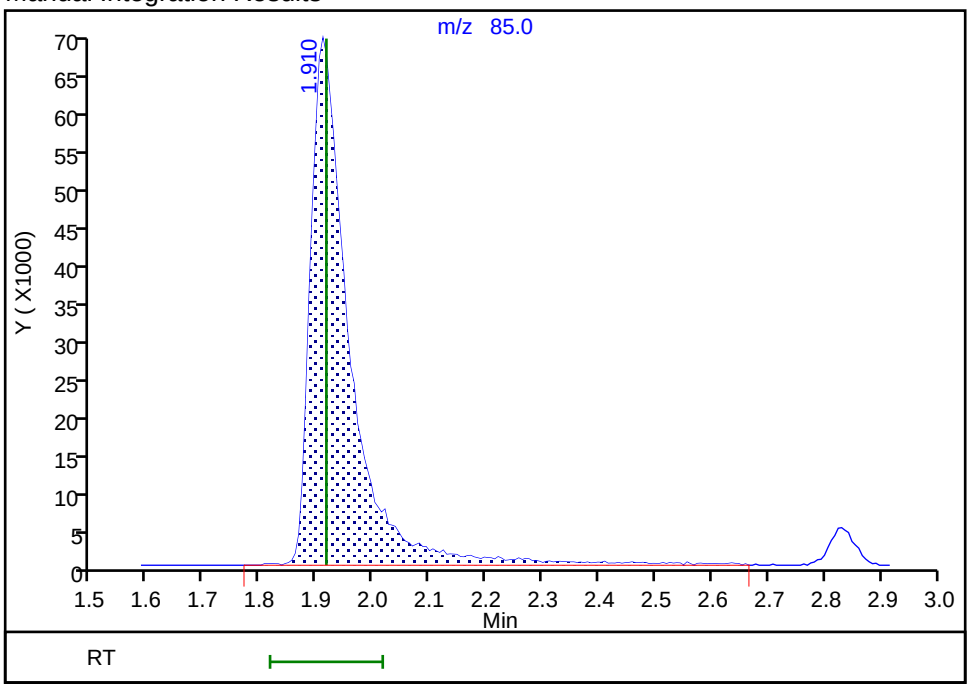
Processing Integration Results

RT: 1.91
Area: 332253
Amount: 5.104245
Amount Units: ug/l



Manual Integration Results

RT: 1.91
Area: 335623
Amount: 5.109972
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 16:58:04
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

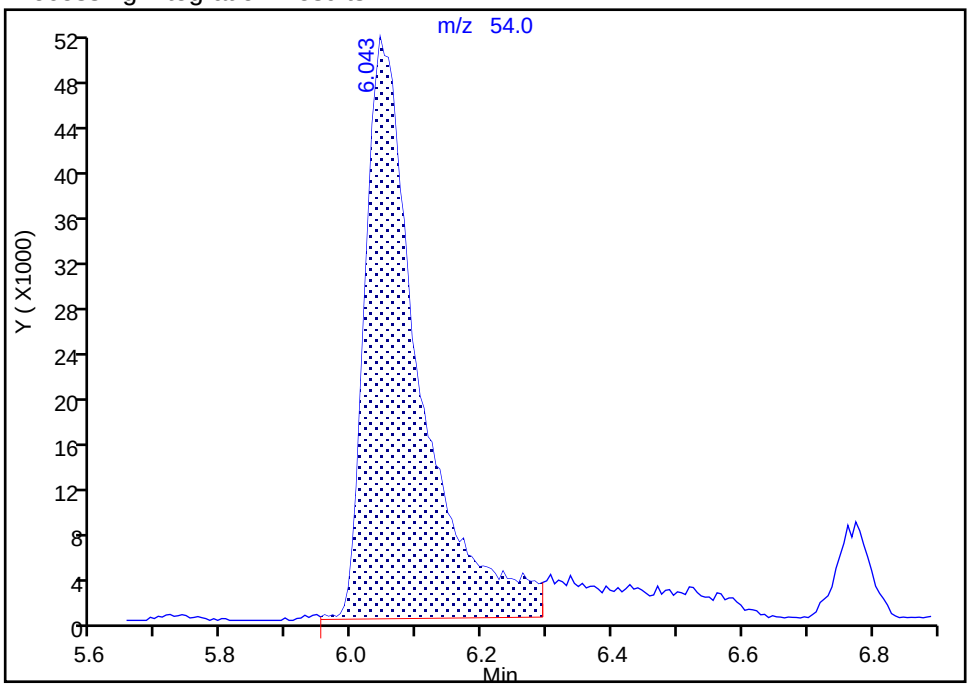
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I03.D
Injection Date: 01-Sep-2020 14:19:30 Instrument ID: 10193
Lims ID: IC STD5
Client ID:
Operator ID: dvv10203 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

40 Propionitrile, CAS: 107-12-0

Signal: 1

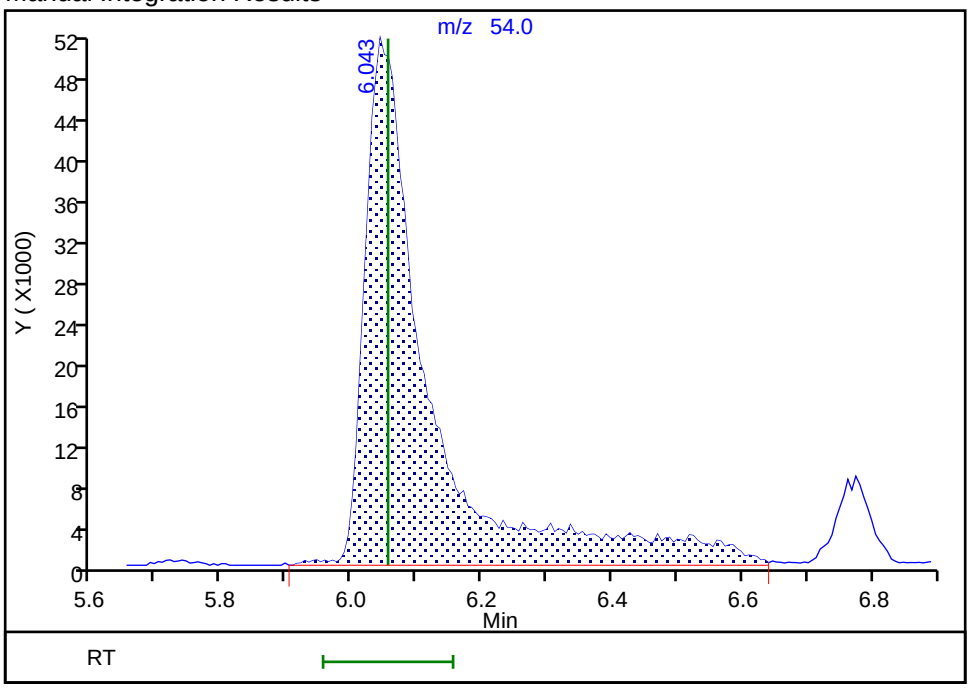
Processing Integration Results

RT: 6.04
Area: 300992
Amount: 85.284659
Amount Units: ug/l



Manual Integration Results

RT: 6.04
Area: 356593
Amount: 94.098949
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 16:58:42
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

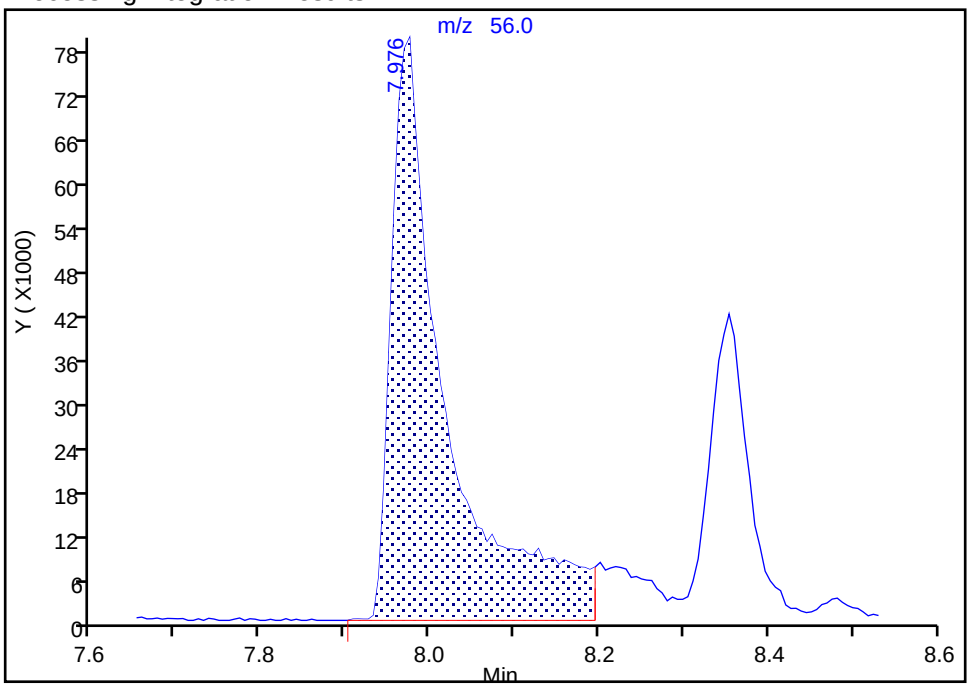
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I03.D
Injection Date: 01-Sep-2020 14:19:30 Instrument ID: 10193
Lims ID: IC STD5
Client ID:
Operator ID: dvv10203 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

59 n-Butanol, CAS: 71-36-3

Signal: 1

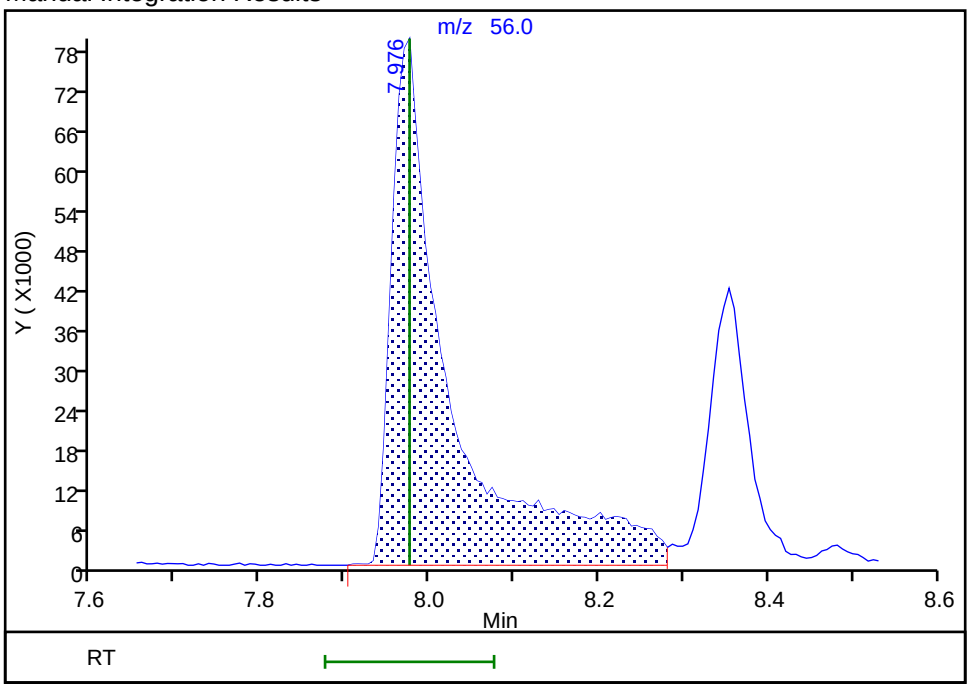
Processing Integration Results

RT: 7.98
Area: 357938
Amount: 442.7101
Amount Units: ug/l



Manual Integration Results

RT: 7.98
Area: 388291
Amount: 484.3492
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:15:09
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

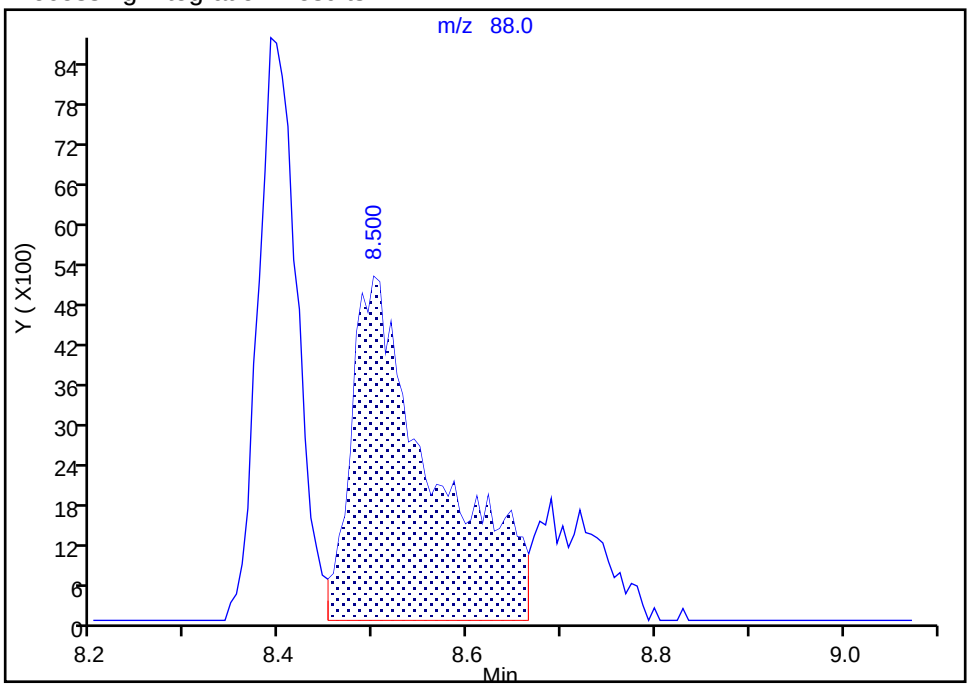
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I03.D
Injection Date: 01-Sep-2020 14:19:30 Instrument ID: 10193
Lims ID: IC STD5
Client ID:
Operator ID: dvv10203 ALS Bottle#: 4 Worklist Smp#: 5
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

65 1,4-Dioxane, CAS: 123-91-1

Signal: 1

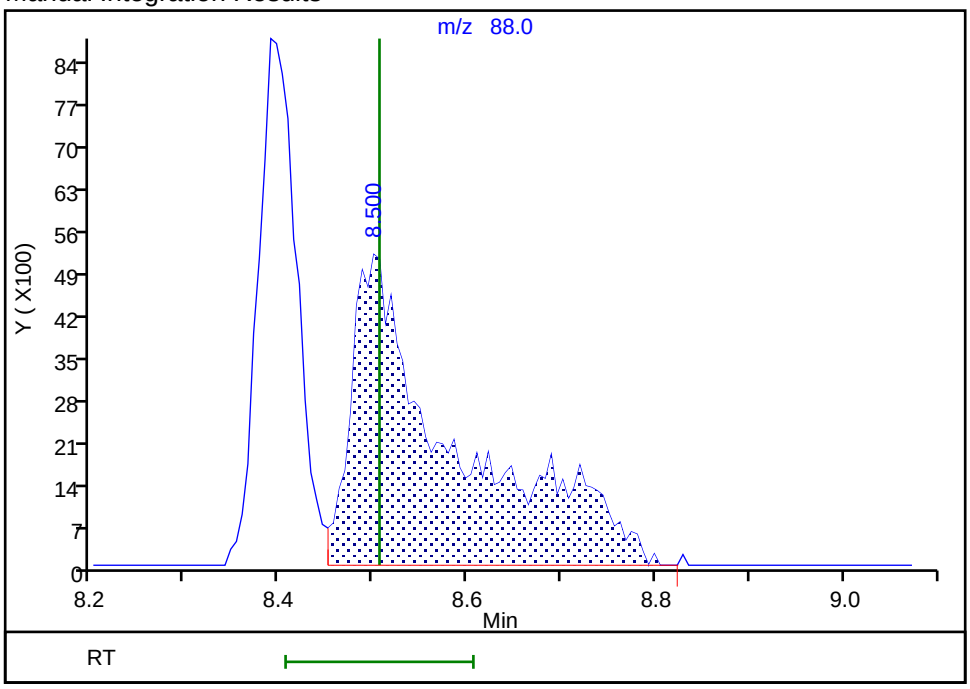
Processing Integration Results

RT: 8.50
Area: 31084
Amount: 247.0601
Amount Units: ug/l



Manual Integration Results

RT: 8.50
Area: 39014
Amount: 244.4117
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 16:59:05
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I04.D
Lims ID: IC STD4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 01-Sep-2020 14:42:30 ALS Bottle#: 5 Worklist Smp#: 6
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: IC STD4
Misc. Info.: 410-0009503-006
Operator ID: dvv10203 Instrument ID: 10193
Sublist: chrom-MSV_10193_25mL*sub1

Method: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 01-Sep-2020 20:10:37 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1059

First Level Reviewer: campbellme Date: 01-Sep-2020 17:01:08

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.910	1.910	0.000	99	129325	2.00	2.00	M
3 Chloromethane	50	2.099	2.099	0.000	99	150814	2.00	1.98	
4 Butadiene	39	2.209	2.209	0.000	93	140385	2.00	1.96	
5 Vinyl chloride	62	2.215	2.215	0.000	98	139896	2.00	1.99	
6 Bromomethane	94	2.520	2.520	0.000	92	98967	2.00	1.99	
7 Chloroethane	64	2.605	2.605	0.000	99	86238	2.00	1.98	
8 Dichlorofluoromethane	67	2.837	2.837	0.000	98	190803	2.00	2.02	
9 Trichlorofluoromethane	101	2.898	2.898	0.000	97	183481	2.00	2.00	
11 Ethyl ether	59	3.135	3.135	0.000	92	93303	2.00	2.01	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.208	3.208	0.000	93	128139	2.00	1.88	
13 Acrolein	56	3.306	3.306	0.000	99	575443	100.0	100.2	
14 1,1-Dichloroethene	96	3.428	3.428	0.000	97	91871	2.00	1.98	
15 112TCTFE	101	3.464	3.464	0.000	92	94307	2.00	2.00	
16 Acetone	43	3.471	3.471	0.000	98	125222	20.0	20.5	
17 Iodomethane	142	3.617	3.617	0.000	99	178469	2.00	1.95	
18 Isopropyl alcohol	45	3.647	3.647	0.000	41	45049	40.0	41.8	
19 Ethyl bromide	108	3.641	3.641	0.000	99	77273	2.00	2.01	
20 Carbon disulfide	76	3.708	3.708	0.000	100	323433	2.00	1.98	
22 Methyl acetate	43	3.867	3.867	0.000	96	49627	2.00	2.07	
23 3-Chloro-1-propene	41	3.891	3.891	0.000	89	160482	2.00	1.98	
24 Methylene Chloride	84	4.074	4.074	0.000	94	101409	2.00	1.97	
* 25 t-Butyl alcohol-d10 (IS)	65	4.111	4.111	0.000	98	143561	50.0	50.0	
26 2-Methyl-2-propanol	59	4.227	4.227	0.000	98	110192	40.0	38.5	
27 Acrylonitrile	53	4.409	4.409	0.000	99	96365	10.0	9.94	
28 Methyl tert-butyl ether	73	4.464	4.464	0.000	94	295369	2.00	1.97	
29 trans-1,2-Dichloroethene	96	4.470	4.470	0.000	97	105433	2.00	1.95	
30 Hexane	57	4.897	4.897	0.000	95	152150	2.00	1.99	
32 1,1-Dichloroethane	63	5.135	5.135	0.000	96	195904	2.00	1.97	
33 Isopropyl ether	45	5.196	5.196	0.000	94	376556	2.00	1.98	
34 2-Chloro-1,3-butadiene	53	5.251	5.251	0.000	93	184491	2.00	1.96	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
35 Tert-butyl ethyl ether	59	5.732	5.732	0.000	98	361189	2.00	1.99	
36 2-Butanone (MEK)	43	5.946	5.946	0.000	100	281636	20.0	19.7	
37 cis-1,2-Dichloroethene	96	5.970	5.970	0.000	83	121548	2.00	1.98	
38 2,2-Dichloropropane	77	5.988	5.988	0.000	77	172113	2.00	2.00	
40 Propionitrile	54	6.049	6.049	0.000	99	149313	40.0	41.1	M
S 42 1,2-Dichloroethene, Total	100				0			3.93	
43 Methacrylonitrile	67	6.251	6.251	0.000	92	277418	20.0	19.7	
44 Chlorobromomethane	128	6.305	6.305	0.000	76	54981	2.00	2.03	
45 Tetrahydrofuran	71	6.305	6.305	0.000	80	81352	20.0	20.1	
46 Chloroform	83	6.464	6.464	0.000	95	196768	2.00	1.99	
$ 47 Dibromofluoromethane (Surr)	113	6.683	6.683	0.000	93	475332	10.0	9.98	
48 1,1,1-Trichloroethane	97	6.683	6.683	0.000	54	179578	2.00	2.02	
49 Cyclohexane	56	6.775	6.775	0.000	93	186390	2.00	1.98	
50 Carbon tetrachloride	117	6.891	6.891	0.000	95	148659	2.00	1.99	
51 1,1-Dichloropropene	75	6.897	6.897	0.000	95	157992	2.00	1.98	
52 Isobutyl alcohol	41	7.086	7.086	0.000	92	85837	100.0	92.6	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.134	7.134	0.000	0	98150	10.0	10.1	
54 Benzene	78	7.159	7.159	0.000	96	459354	2.00	2.00	
55 1,2-Dichloroethane	62	7.238	7.238	0.000	98	135129	2.00	1.95	
56 Tert-amyl methyl ether	73	7.360	7.360	0.000	98	330560	2.00	2.00	
* 57 Fluorobenzene (IS)	96	7.573	7.573	0.000	98	2003773	10.0	10.0	
58 n-Heptane	43	7.580	7.580	0.000	76	173398	2.00	2.04	
59 n-Butanol	56	7.976	7.976	0.000	89	150691	200.0	196.1	M
60 Trichloroethene	95	8.049	8.049	0.000	98	118251	2.00	1.99	
61 Methylcyclohexane	83	8.354	8.354	0.000	93	186709	2.00	2.05	
62 1,2-Dichloropropane	63	8.390	8.390	0.000	92	116517	2.00	1.97	
63 2-ethoxy-2-methyl butane	87	8.396	8.396	0.000	91	182044	2.00	1.98	
64 Methyl methacrylate	69	8.482	8.482	0.000	92	59171	2.00	1.97	
66 Dibromomethane	93	8.494	8.494	0.000	94	56166	2.00	1.94	
65 1,4-Dioxane	88	8.506	8.506	0.000	31	15868	100.0	103.7	M
67 Dichlorobromomethane	83	8.738	8.738	0.000	98	140278	2.00	1.97	
68 2-Nitropropane	41	9.024	9.024	0.000	99	182830	20.0	19.6	
71 1-Bromo-2-chloroethane	63	9.134	9.134	0.000	99	124609	2.00	2.04	
72 cis-1,3-Dichloropropene	75	9.299	9.299	0.000	94	174979	2.00	1.97	
73 4-Methyl-2-pentanone (MIBK)	43	9.488	9.488	0.000	98	815838	20.0	19.6	
$ 74 Toluene-d8 (Surr)	98	9.610	9.610	0.000	94	1985750	10.0	10.0	
75 Toluene	92	9.689	9.689	0.000	98	297381	2.00	1.99	
76 trans-1,3-Dichloropropene	75	9.957	9.957	0.000	96	148652	2.00	1.99	
78 Ethyl methacrylate	69	10.024	10.024	0.000	90	127842	2.00	2.03	
S 77 1,3-Dichloropropene, Total	100				0			3.96	
79 1,1,2-Trichloroethane	97	10.164	10.164	0.000	92	82201	2.00	1.99	
80 Tetrachloroethene	166	10.250	10.250	0.000	97	132588	2.00	1.99	
81 1,3-Dichloropropane	76	10.329	10.329	0.000	94	141833	2.00	1.95	
82 2-Hexanone	43	10.396	10.396	0.000	97	598268	20.0	20.4	
83 Chlorodibromomethane	129	10.548	10.548	0.000	90	97240	2.00	2.03	
84 Ethylene Dibromide	107	10.658	10.658	0.000	99	80851	2.00	1.98	
* 85 Chlorobenzene-d5 (IS)	117	11.097	11.097	0.000	87	1520735	10.0	10.0	
86 1-Chlorohexane	91	11.109	11.109	0.000	98	161444	2.00	1.89	
87 Chlorobenzene	112	11.122	11.122	0.000	95	333345	2.00	1.98	
89 1,1,1,2-Tetrachloroethane	131	11.207	11.207	0.000	91	113207	2.00	1.97	
90 Ethylbenzene	91	11.213	11.213	0.000	99	583876	2.00	1.97	
S 88 Xylenes, Total	106				0			5.94	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
91 m-Xylene & p-Xylene	106	11.329	11.329	0.000	0	457654	4.00	3.96	
92 o-Xylene	106	11.664	11.664	0.000	97	225199	2.00	1.99	
93 Styrene	104	11.676	11.676	0.000	95	377982	2.00	1.99	
94 Bromoform	173	11.835	11.835	0.000	96	52263	2.00	1.97	
95 Isopropylbenzene	105	11.969	11.969	0.000	96	592584	2.00	1.98	
$ 98 4-Bromofluorobenzene (Surr)	95	12.109	12.109	0.000	91	747277	10.0	10.0	
99 1,1,2,2-Tetrachloroethane	83	12.219	12.219	0.000	93	109660	2.00	2.02	
100 Bromobenzene	156	12.231	12.231	0.000	91	147229	2.00	1.97	
101 trans-1,4-Dichloro-2-butene	53	12.243	12.243	0.000	96	303768	20.0	20.2	
102 1,2,3-Trichloropropane	110	12.268	12.268	0.000	84	29794	2.00	2.01	
103 N-Propylbenzene	91	12.298	12.298	0.000	99	702814	2.00	2.00	
104 2-Chlorotoluene	126	12.377	12.377	0.000	96	141124	2.00	1.97	
105 1,3,5-Trimethylbenzene	105	12.438	12.438	0.000	94	516140	2.00	1.99	
106 4-Chlorotoluene	126	12.469	12.469	0.000	98	148252	2.00	1.99	
107 tert-Butylbenzene	134	12.682	12.682	0.000	93	118830	2.00	2.10	
108 Pentachloroethane	167	12.713	12.713	0.000	91	86508	2.00	2.05	
109 1,2,4-Trimethylbenzene	105	12.725	12.725	0.000	97	526977	2.00	1.98	
110 sec-Butylbenzene	105	12.847	12.847	0.000	94	668081	2.00	2.00	
111 1,3-Dichlorobenzene	146	12.944	12.944	0.000	99	299249	2.00	2.01	
112 4-Isopropyltoluene	119	12.957	12.957	0.000	97	584284	2.00	2.00	
* 113 1,4-Dichlorobenzene-d4	152	12.999	12.999	0.000	95	871376	10.0	10.0	
114 1,4-Dichlorobenzene	146	13.017	13.017	0.000	95	305373	2.00	1.99	
115 1,2,3-Trimethylbenzene	120	13.030	13.030	0.000	99	239261	2.00	2.04	
116 Benzyl chloride	126	13.103	13.103	0.000	99	43679	2.00	2.02	
119 n-Butylbenzene	92	13.249	13.249	0.000	98	301292	2.00	2.04	
120 1,2-Dichlorobenzene	146	13.286	13.286	0.000	98	281587	2.00	2.00	
118 p-Diethylbenzene	119	13.304	13.304	0.000	0	299228	2.00	2.02	
123 1,2-Dibromo-3-Chloropropane	155	13.834	13.834	0.000	84	15503	2.00	2.08	
124 1,3,5-Trichlorobenzene	180	13.956	13.956	0.000	97	245063	2.00	2.01	
125 1,2,4-Trichlorobenzene	180	14.383	14.383	0.000	94	216994	2.00	1.99	
126 Hexachlorobutadiene	225	14.468	14.468	0.000	97	105865	2.00	1.98	
127 Naphthalene	128	14.566	14.566	0.000	97	394190	2.00	2.02	
128 1,2,3-Trichlorobenzene	180	14.712	14.712	0.000	96	194367	2.00	2.01	
129 2-Methylnaphthalene	142	15.340	15.340	0.000	0	282956	2.00	2.15	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MSV_RV1_826_00022	Amount Added:	2.00	Units: uL	
MSV_RV4_826_00024	Amount Added:	2.00	Units: uL	
MSV_RV4GAS826_00072	Amount Added:	2.00	Units: uL	
MSV_25_826ISS_00001	Amount Added:	1.00	Units: uL	Run Reagent

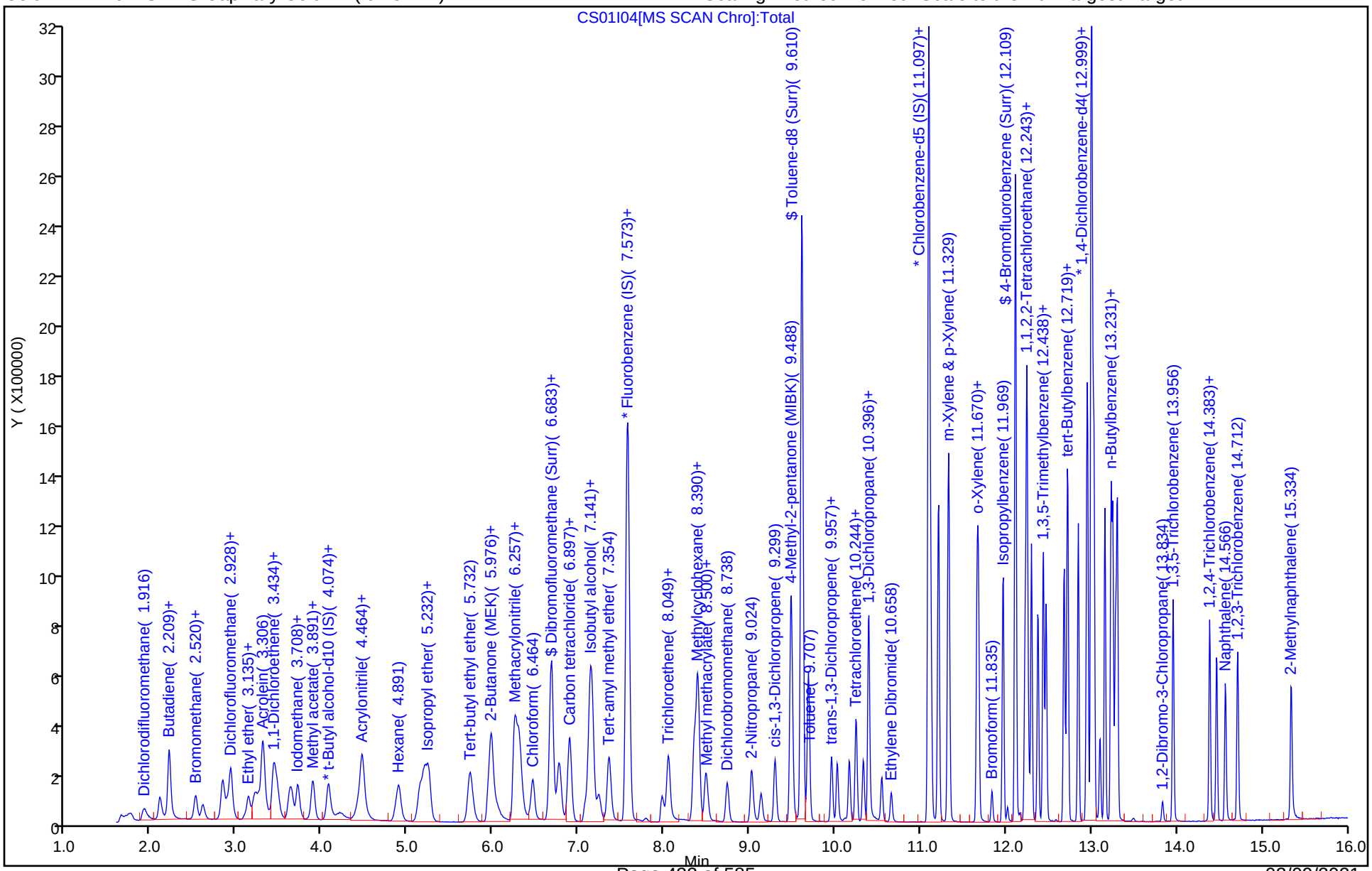
Report Date: 01-Sep-2020 20:10:39 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I04.D

Injection Date:	01-Sep-2020 14:42:30	Instrument ID:	10193	Operator ID:	dvv10203
Lims ID:	IC STD4			Worklist Smp#:	6
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

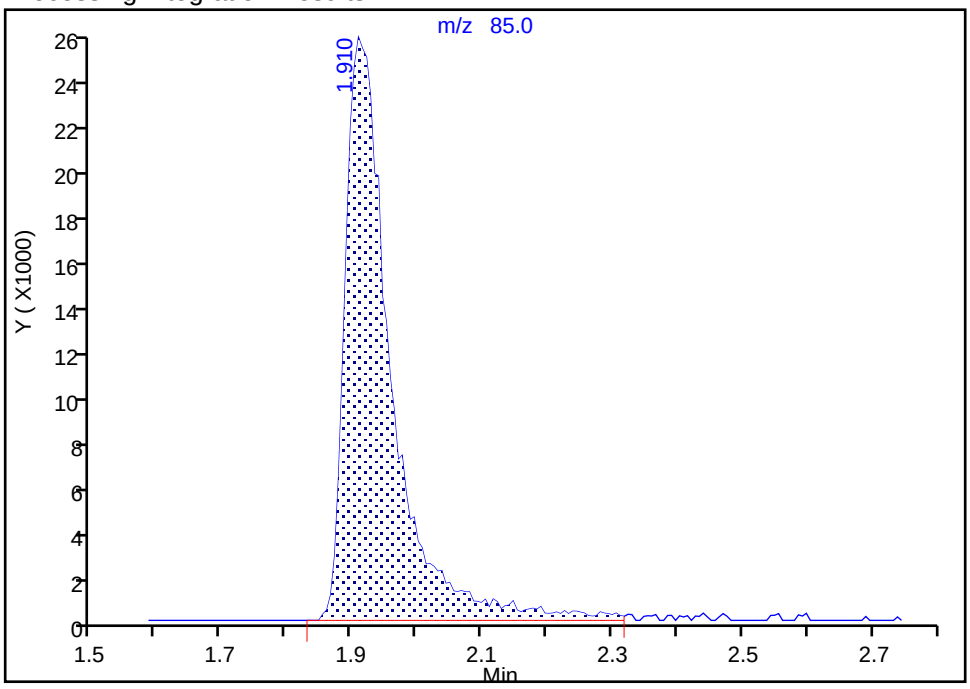
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I04.D
Injection Date: 01-Sep-2020 14:42:30 Instrument ID: 10193
Lims ID: IC STD4
Client ID:
Operator ID: dvv10203 ALS Bottle#: 5 Worklist Smp#: 6
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

2 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

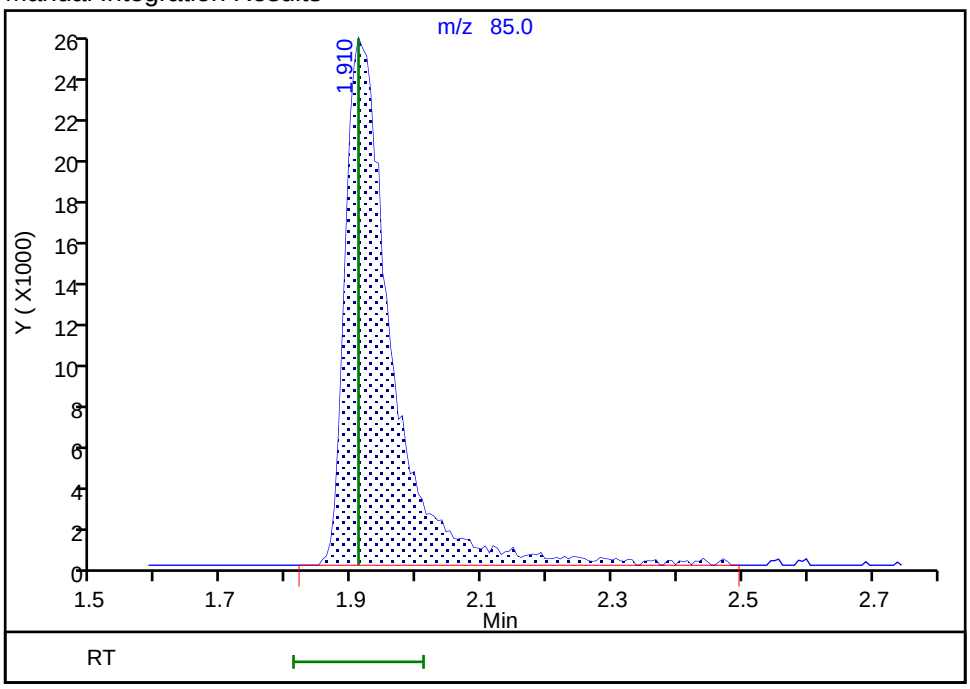
Processing Integration Results

RT: 1.91
Area: 127911
Amount: 1.993115
Amount Units: ug/l



Manual Integration Results

RT: 1.91
Area: 129325
Amount: 2.000106
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:00:09
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

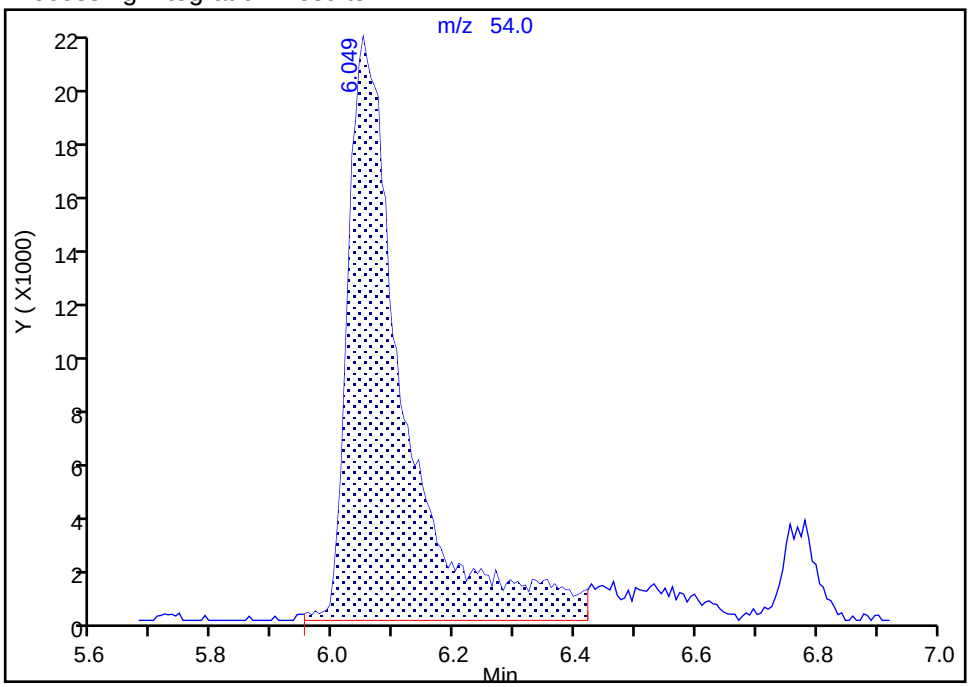
Data File:	\\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I04.D				
Injection Date:	01-Sep-2020 14:42:30	Instrument ID:	10193		
Lims ID:	IC STD4				
Client ID:					
Operator ID:	dvv10203	ALS Bottle#:	5	Worklist Smp#:	6
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

40 Propionitrile, CAS: 107-12-0

Signal: 1

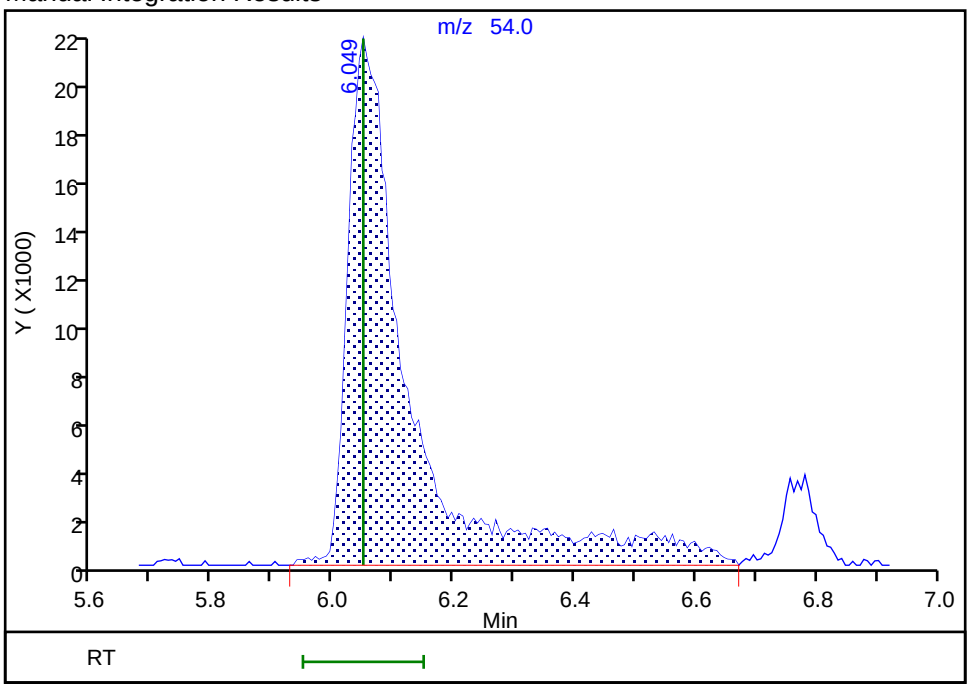
Processing Integration Results

RT: 6.05
Area: 136096
Amount: 39.351569
Amount Units: ug/l



Manual Integration Results

RT: 6.05
Area: 149313
Amount: 41.112721
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:00:32

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

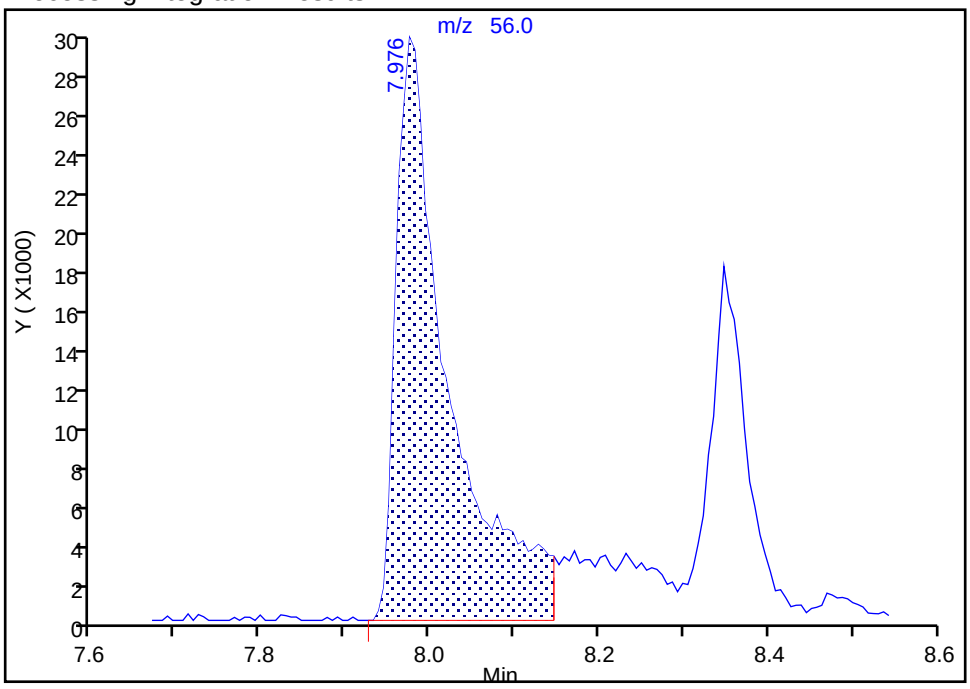
Data File:	\\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I04.D				
Injection Date:	01-Sep-2020 14:42:30	Instrument ID:	10193		
Lims ID:	IC STD4				
Client ID:					
Operator ID:	dvv10203	ALS Bottle#:	5	Worklist Smp#:	6
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

59 n-Butanol, CAS: 71-36-3

Signal: 1

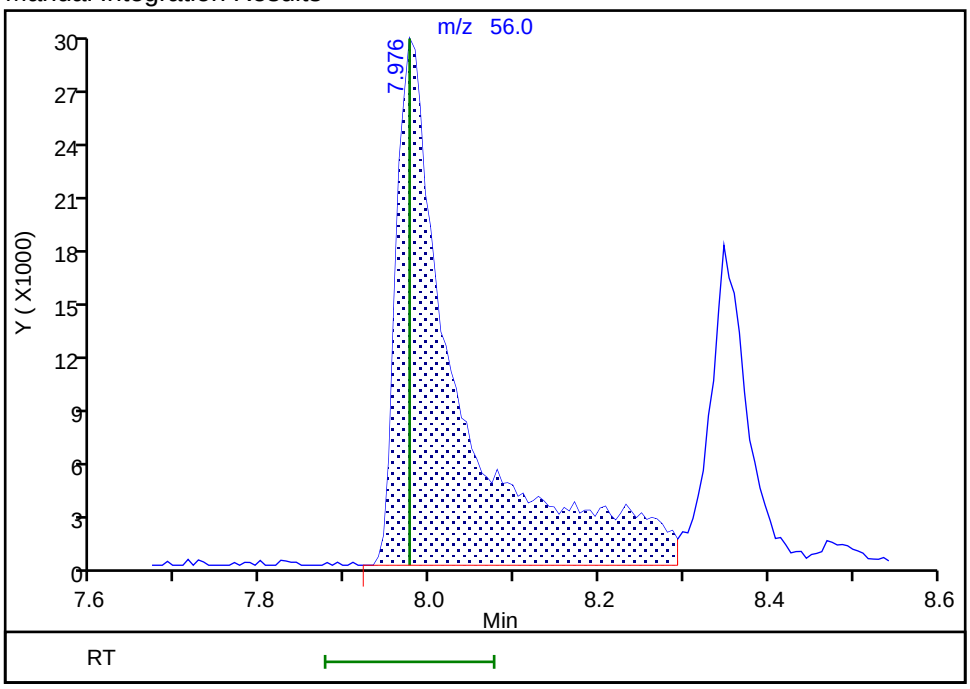
Processing Integration Results

RT: 7.98
Area: 126658
Amount: 189.1626
Amount Units: ug/l



Manual Integration Results

RT: 7.98
Area: 150691
Amount: 196.1351
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:15:38
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

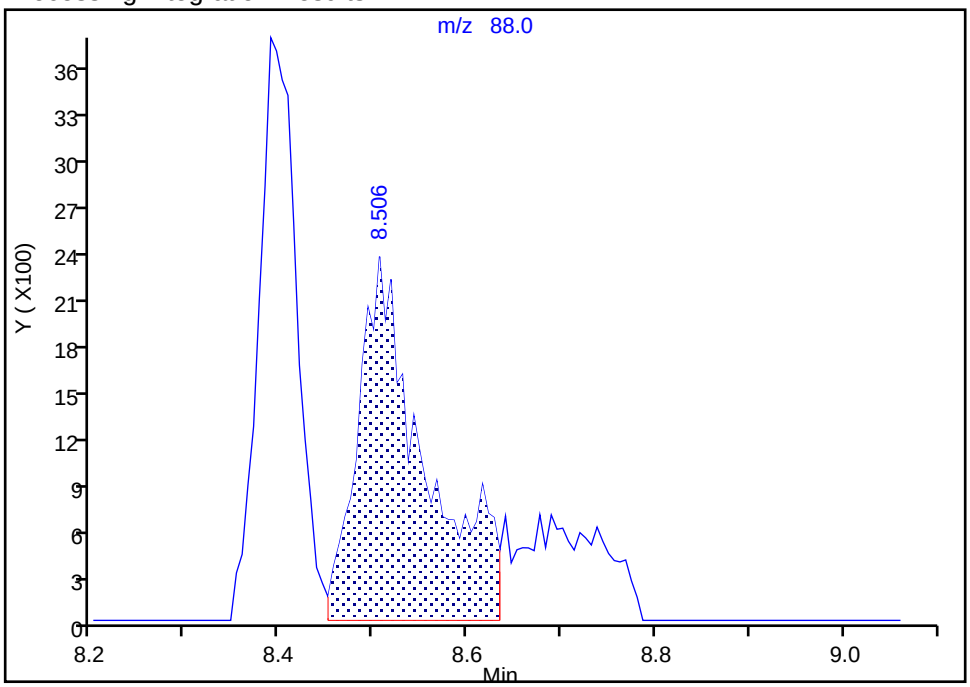
Data File:	\\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I04.D				
Injection Date:	01-Sep-2020 14:42:30	Instrument ID:	10193		
Lims ID:	IC STD4				
Client ID:					
Operator ID:	dvv10203	ALS Bottle#:	5	Worklist Smp#:	6
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

65 1,4-Dioxane, CAS: 123-91-1

Signal: 1

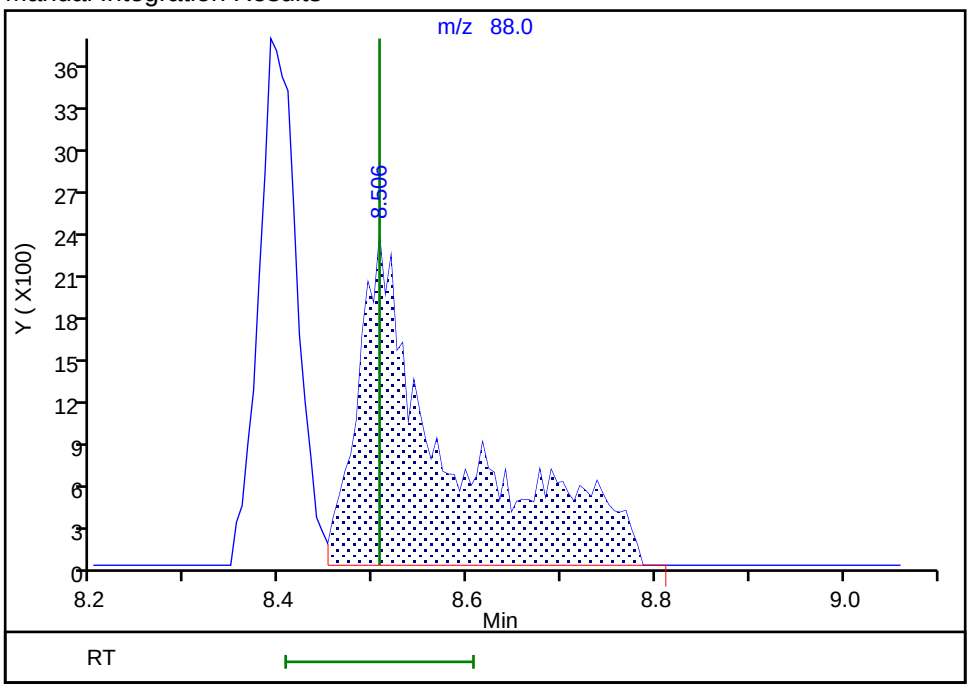
Processing Integration Results

RT: 8.51
Area: 11620
Amount: 92.483167
Amount Units: ug/l



Manual Integration Results

RT: 8.51
Area: 15868
Amount: 103.7267
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:00:52

Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I05.D
Lims ID: IC STD3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 01-Sep-2020 15:04:30 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: IC STD3
Misc. Info.: 410-0009503-007
Operator ID: dvv10203 Instrument ID: 10193
Sublist: chrom-MSV_10193_25mL*sub1

Method: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 01-Sep-2020 20:10:47 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1059

First Level Reviewer: campbellme Date: 01-Sep-2020 17:03:43

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.910	1.910	0.000	99	65583	1.00	1.04	M
3 Chloromethane	50	2.093	2.099	-0.006	99	75132	1.00	1.01	M
4 Butadiene	39	2.203	2.209	-0.006	96	77445	1.00	1.11	
5 Vinyl chloride	62	2.209	2.215	-0.006	80	69005	1.00	1.00	
6 Bromomethane	94	2.507	2.520	-0.013	90	49576	1.00	1.02	
7 Chloroethane	64	2.599	2.605	-0.006	99	43065	1.00	1.01	
8 Dichlorofluoromethane	67	2.824	2.837	-0.013	97	94758	1.00	1.03	
9 Trichlorofluoromethane	101	2.891	2.898	-0.007	96	90570	1.00	1.01	
11 Ethyl ether	59	3.135	3.135	0.000	93	45936	1.00	1.01	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.208	3.208	0.000	94	70413	1.00	1.06	
13 Acrolein	56	3.300	3.306	-0.006	99	288468	50.0	51.4	
14 1,1-Dichloroethene	96	3.422	3.428	-0.006	97	46141	1.00	1.02	
15 112TCTFE	101	3.464	3.464	0.000	91	49416	1.00	1.08	
16 Acetone	43	3.471	3.471	0.000	99	53819	10.0	9.02	
17 Iodomethane	142	3.611	3.617	-0.006	99	91381	1.00	1.02	
19 Ethyl bromide	108	3.641	3.641	0.000	97	37062	1.00	0.9880	
18 Isopropyl alcohol	45	3.641	3.647	-0.006	49	20062	20.0	21.9	
20 Carbon disulfide	76	3.702	3.708	-0.006	100	162292	1.00	1.02	
22 Methyl acetate	43	3.867	3.867	0.000	97	17477	1.00	0.7458	
23 3-Chloro-1-propene	41	3.879	3.891	-0.012	89	80597	1.00	1.02	
24 Methylene Chloride	84	4.074	4.074	0.000	97	51267	1.00	1.02	
* 25 t-Butyl alcohol-d10 (IS)	65	4.099	4.111	-0.012	96	140318	50.0	50.0	
26 2-Methyl-2-propanol	59	4.214	4.227	-0.012	99	57344	20.0	20.5	
27 Acrylonitrile	53	4.409	4.409	0.000	100	51371	5.00	5.42	M
28 Methyl tert-butyl ether	73	4.452	4.464	-0.012	96	150474	1.00	1.03	
29 trans-1,2-Dichloroethene	96	4.464	4.470	-0.006	98	54149	1.00	1.03	
30 Hexane	57	4.885	4.897	-0.012	94	78465	1.00	1.05	
32 1,1-Dichloroethane	63	5.129	5.135	-0.006	97	100821	1.00	1.04	
33 Isopropyl ether	45	5.190	5.196	-0.006	94	190197	1.00	1.03	
34 2-Chloro-1,3-butadiene	53	5.245	5.251	-0.006	93	91500	1.00	1.00	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
35 Tert-butyl ethyl ether	59	5.732	5.732	0.000	98	183026	1.00	1.03	M
36 2-Butanone (MEK)	43	5.946	5.946	0.000	100	137888	10.0	9.86	
37 cis-1,2-Dichloroethene	96	5.970	5.970	0.000	82	62000	1.00	1.04	
38 2,2-Dichloropropane	77	5.982	5.988	-0.006	70	85777	1.00	1.02	
40 Propionitrile	54	6.043	6.049	-0.006	98	74651	20.0	21.0	M
S 42 1,2-Dichloroethene, Total	100				0			2.06	
43 Methacrylonitrile	67	6.263	6.251	0.013	93	146687	10.0	10.7	M
44 Chlorobromomethane	128	6.299	6.305	-0.006	93	26529	1.00	1.01	
45 Tetrahydrofuran	71	6.305	6.305	0.000	93	41281	10.0	10.4	
46 Chloroform	83	6.458	6.464	-0.006	94	97764	1.00	1.01	
$ 47 Dibromofluoromethane (Surr)	113	6.677	6.683	-0.006	94	465395	10.0	10.0	
48 1,1,1-Trichloroethane	97	6.683	6.683	0.000	46	87622	1.00	1.01	
49 Cyclohexane	56	6.769	6.775	-0.006	93	97244	1.00	1.06	
50 Carbon tetrachloride	117	6.885	6.891	-0.006	83	74393	1.00	1.02	
51 1,1-Dichloropropene	75	6.891	6.897	-0.006	92	79910	1.00	1.03	
52 Isobutyl alcohol	41	7.080	7.086	-0.006	89	43145	50.0	47.6	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.128	7.134	-0.006	0	94841	10.0	10.0	
54 Benzene	78	7.153	7.159	-0.006	96	228700	1.00	1.02	
55 1,2-Dichloroethane	62	7.232	7.238	-0.006	97	68618	1.00	1.01	
56 Tert-amyl methyl ether	73	7.354	7.360	-0.006	97	164628	1.00	1.02	
* 57 Fluorobenzene (IS)	96	7.567	7.573	-0.006	98	1953950	10.0	10.0	
58 n-Heptane	43	7.580	7.580	0.000	82	86227	1.00	1.04	
59 n-Butanol	56	7.976	7.976	0.000	91	73005	100.0	97.2	M
60 Trichloroethene	95	8.049	8.049	0.000	98	59588	1.00	1.03	
61 Methylcyclohexane	83	8.348	8.354	-0.006	92	90839	1.00	1.03	
62 1,2-Dichloropropane	63	8.384	8.390	-0.006	72	58951	1.00	1.02	
63 2-ethoxy-2-methyl butane	87	8.396	8.396	0.000	93	92481	1.00	1.03	
64 Methyl methacrylate	69	8.482	8.482	0.000	91	29926	1.00	1.02	
66 Dibromomethane	93	8.494	8.494	0.000	96	28840	1.00	1.02	
65 1,4-Dioxane	88	8.512	8.506	0.006	31	8095	50.0	54.1	M
67 Dichlorobromomethane	83	8.732	8.738	-0.006	98	69815	1.00	1.00	
68 2-Nitropropane	41	9.024	9.024	0.000	99	90715	10.0	9.97	
71 1-Bromo-2-chloroethane	63	9.128	9.134	-0.006	98	60281	1.00	1.01	
72 cis-1,3-Dichloropropene	75	9.299	9.299	0.000	93	85955	1.00	0.99	
73 4-Methyl-2-pentanone (MIBK)	43	9.488	9.488	0.000	97	414178	10.0	10.2	
$ 74 Toluene-d8 (Surr)	98	9.610	9.610	0.000	94	1941329	10.0	10.0	
75 Toluene	92	9.689	9.689	0.000	98	148821	1.00	1.02	
76 trans-1,3-Dichloropropene	75	9.957	9.957	0.000	96	72683	1.00	0.99	
78 Ethyl methacrylate	69	10.024	10.024	0.000	91	63147	1.00	1.02	
S 77 1,3-Dichloropropene, Total	100				0			1.99	
79 1,1,2-Trichloroethane	97	10.164	10.164	0.000	92	41496	1.00	1.03	
80 Tetrachloroethene	166	10.244	10.250	-0.006	97	66888	1.00	1.03	
81 1,3-Dichloropropane	76	10.329	10.329	0.000	94	72739	1.00	1.02	
82 2-Hexanone	43	10.390	10.396	-0.006	97	292991	10.0	10.2	
83 Chlorodibromomethane	129	10.542	10.548	-0.006	92	45464	1.00	0.9722	
84 Ethylene Dibromide	107	10.658	10.658	0.000	100	40000	1.00	1.00	
* 85 Chlorobenzene-d5 (IS)	117	11.097	11.097	0.000	87	1485716	10.0	10.0	
86 1-Chlorohexane	91	11.109	11.109	0.000	97	85108	1.00	1.02	
87 Chlorobenzene	112	11.122	11.122	0.000	95	168260	1.00	1.02	
89 1,1,1,2-Tetrachloroethane	131	11.207	11.207	0.000	92	56505	1.00	1.01	
90 Ethylbenzene	91	11.213	11.213	0.000	98	292186	1.00	1.01	
S 88 Xylenes, Total	106				0			3.04	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
91 m-Xylene & p-Xylene	106	11.329	11.329	0.000	0	230072	2.00	2.04	
92 o-Xylene	106	11.664	11.664	0.000	97	111628	1.00	1.01	
93 Styrene	104	11.676	11.676	0.000	95	184556	1.00	0.99	
94 Bromoform	173	11.835	11.835	0.000	95	24617	1.00	0.9477	
95 Isopropylbenzene	105	11.963	11.969	-0.006	96	299877	1.00	1.02	
$ 98 4-Bromofluorobenzene (Surr)	95	12.109	12.109	0.000	91	726539	10.0	9.96	
99 1,1,2,2-Tetrachloroethane	83	12.219	12.219	0.000	94	53769	1.00	1.02	
100 Bromobenzene	156	12.225	12.231	-0.006	95	74061	1.00	1.02	
101 trans-1,4-Dichloro-2-butene	53	12.243	12.243	0.000	95	148178	10.0	10.2	
102 1,2,3-Trichloropropane	110	12.262	12.268	-0.006	81	14553	1.00	1.02	
103 N-Propylbenzene	91	12.298	12.298	0.000	99	349239	1.00	1.03	
104 2-Chlorotoluene	126	12.377	12.377	0.000	96	71969	1.00	1.04	
105 1,3,5-Trimethylbenzene	105	12.438	12.438	0.000	94	261031	1.00	1.04	
106 4-Chlorotoluene	126	12.469	12.469	0.000	98	73083	1.00	1.01	
107 tert-Butylbenzene	134	12.682	12.682	0.000	94	54654	1.00	1.00	
108 Pentachloroethane	167	12.713	12.713	0.000	91	40193	1.00	0.9847	
109 1,2,4-Trimethylbenzene	105	12.725	12.725	0.000	97	264914	1.00	1.03	
110 sec-Butylbenzene	105	12.847	12.847	0.000	94	329993	1.00	1.02	
111 1,3-Dichlorobenzene	146	12.944	12.944	0.000	98	148017	1.00	1.03	
112 4-Isopropyltoluene	119	12.957	12.957	0.000	97	284614	1.00	1.01	
* 113 1,4-Dichlorobenzene-d4	152	12.999	12.999	0.000	95	842960	10.0	10.0	
114 1,4-Dichlorobenzene	146	13.018	13.017	0.001	95	147165	1.00	0.99	
115 1,2,3-Trimethylbenzene	120	13.030	13.030	0.000	99	112026	1.00	0.9896	
116 Benzyl chloride	126	13.097	13.103	-0.006	99	20304	1.00	0.9698	
119 n-Butylbenzene	92	13.249	13.249	0.000	97	143333	1.00	1.00	
120 1,2-Dichlorobenzene	146	13.280	13.286	-0.006	98	138925	1.00	1.02	
118 p-Diethylbenzene	119	13.304	13.304	0.000	0	141827	1.00	0.9889	
123 1,2-Dibromo-3-Chloropropane	155	13.834	13.834	0.000	81	7406	1.00	1.03	
124 1,3,5-Trichlorobenzene	180	13.956	13.956	0.000	97	120502	1.00	1.02	
125 1,2,4-Trichlorobenzene	180	14.383	14.383	0.000	94	106458	1.00	1.01	
126 Hexachlorobutadiene	225	14.468	14.468	0.000	97	51838	1.00	1.00	
127 Naphthalene	128	14.572	14.566	0.006	97	196158	1.00	1.04	
128 1,2,3-Trichlorobenzene	180	14.712	14.712	0.000	95	96242	1.00	1.03	
129 2-Methylnaphthalene	142	15.340	15.340	0.000	0	125807	1.00	0.9870	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MSV_RV1_826_00022	Amount Added:	2.00	Units: uL	
MSV_RV4_826_00024	Amount Added:	2.00	Units: uL	
MSV_RV4GAS826_00072	Amount Added:	2.00	Units: uL	
MSV_25_826ISS_00001	Amount Added:	1.00	Units: uL	Run Reagent

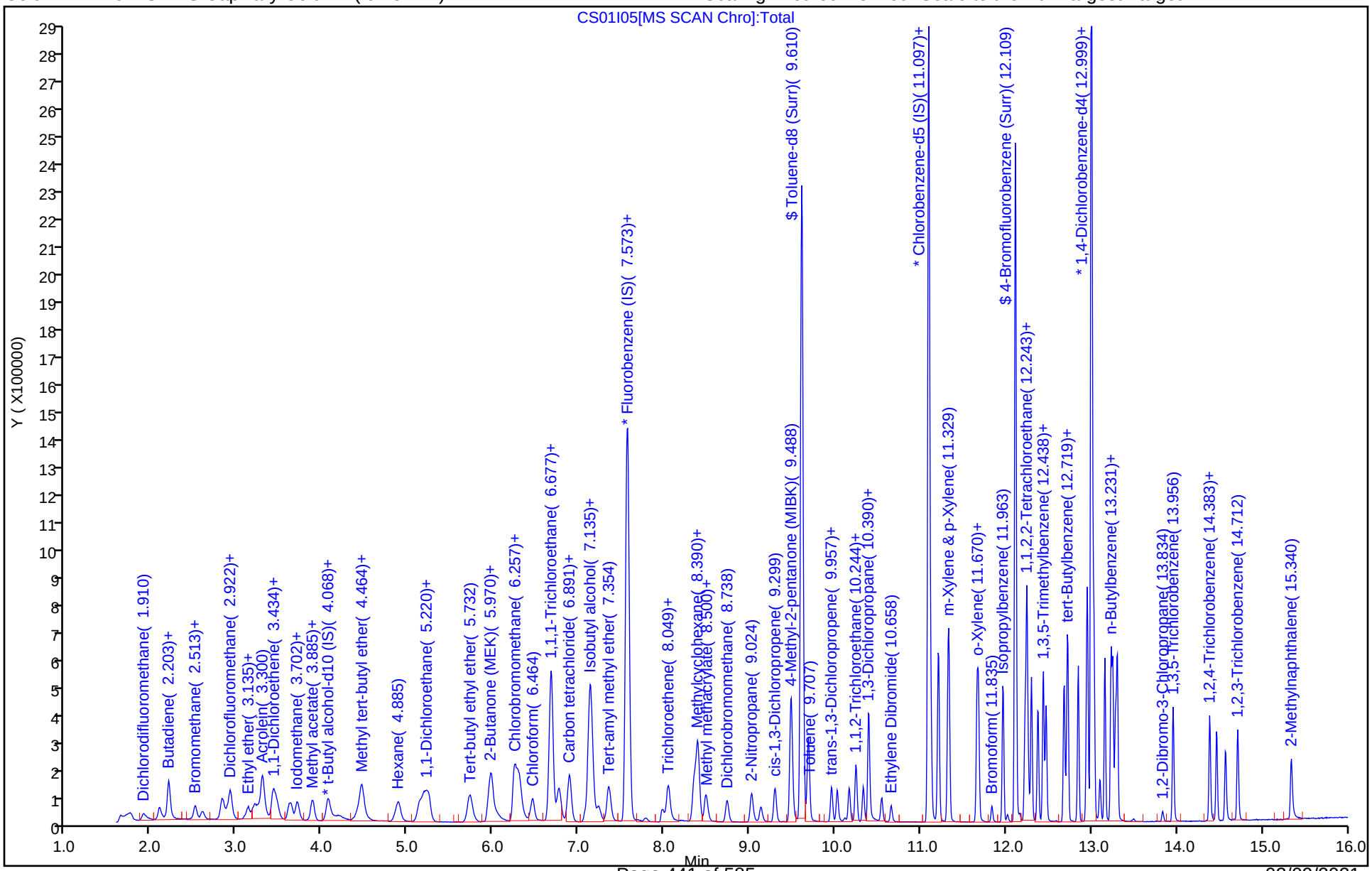
Report Date: 01-Sep-2020 20:10:49 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I05.D

Injection Date:	01-Sep-2020 15:04:30	Instrument ID:	10193	Operator ID:	dvv10203
Lims ID:	IC STD3			Worklist Smp#:	7
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

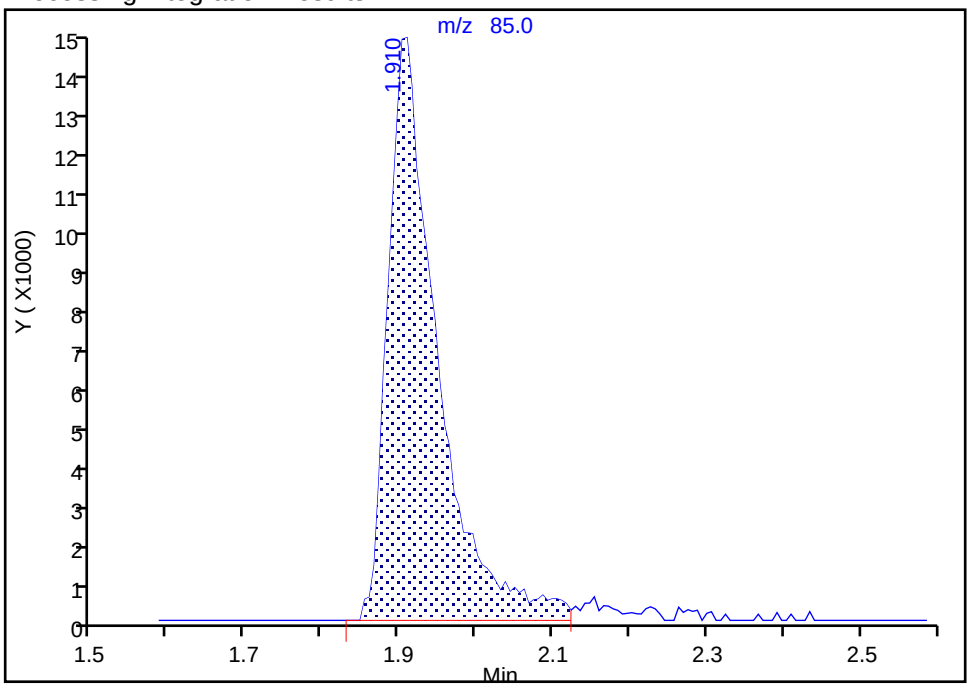
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I05.D
Injection Date: 01-Sep-2020 15:04:30 Instrument ID: 10193
Lims ID: IC STD3
Client ID:
Operator ID: dvv10203 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

2 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

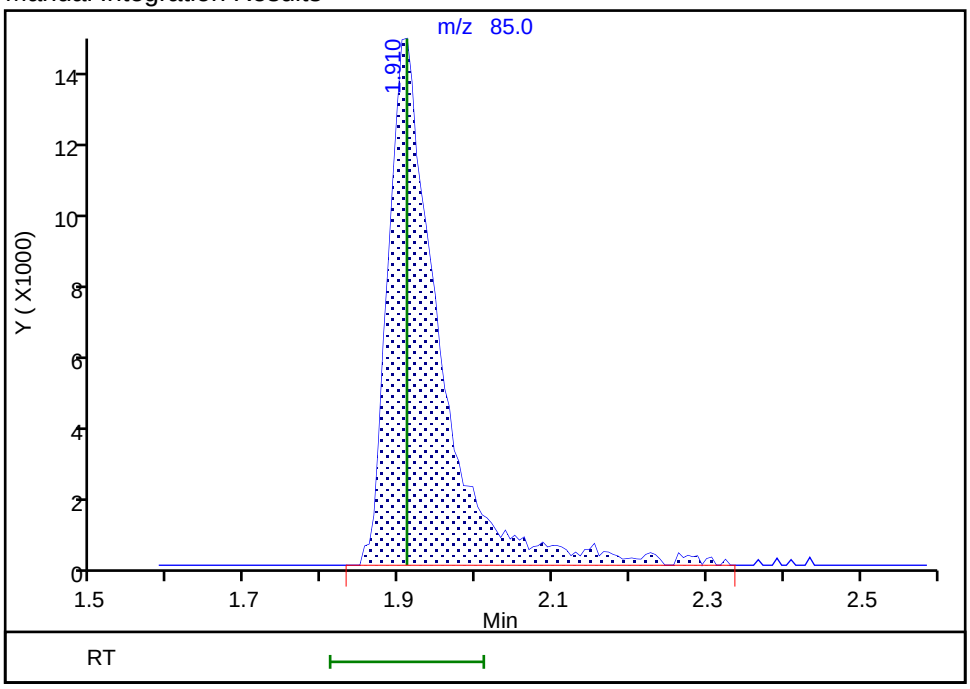
Processing Integration Results

RT: 1.91
Area: 62978
Amount: 1.004767
Amount Units: ug/l



Manual Integration Results

RT: 1.91
Area: 65583
Amount: 1.040152
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:01:28
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

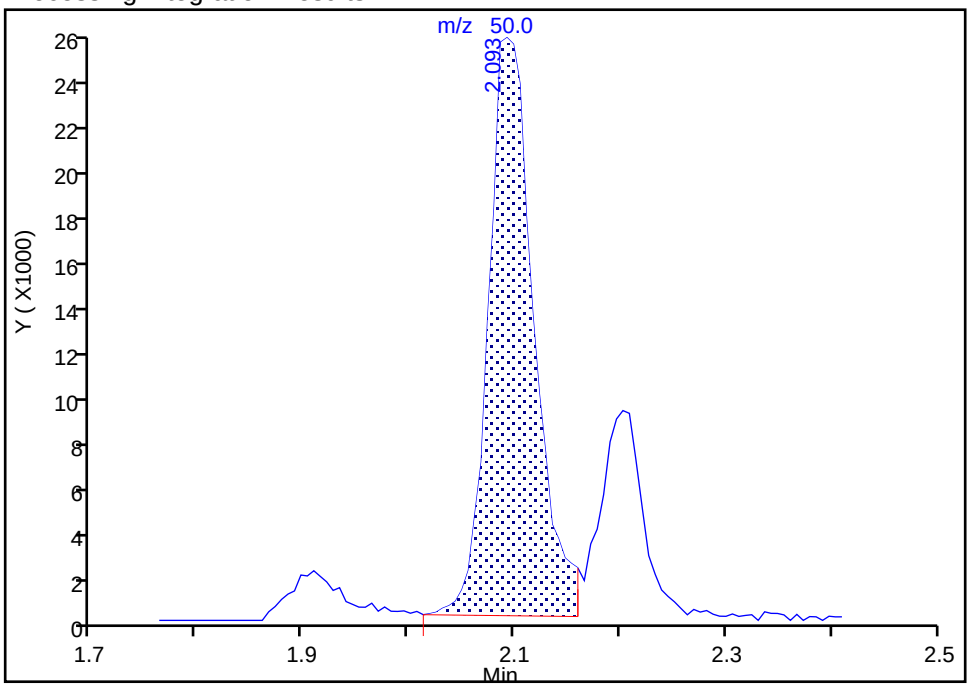
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I05.D
Injection Date: 01-Sep-2020 15:04:30 Instrument ID: 10193
Lims ID: IC STD3
Client ID:
Operator ID: dvv10203 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

3 Chloromethane, CAS: 74-87-3

Signal: 1

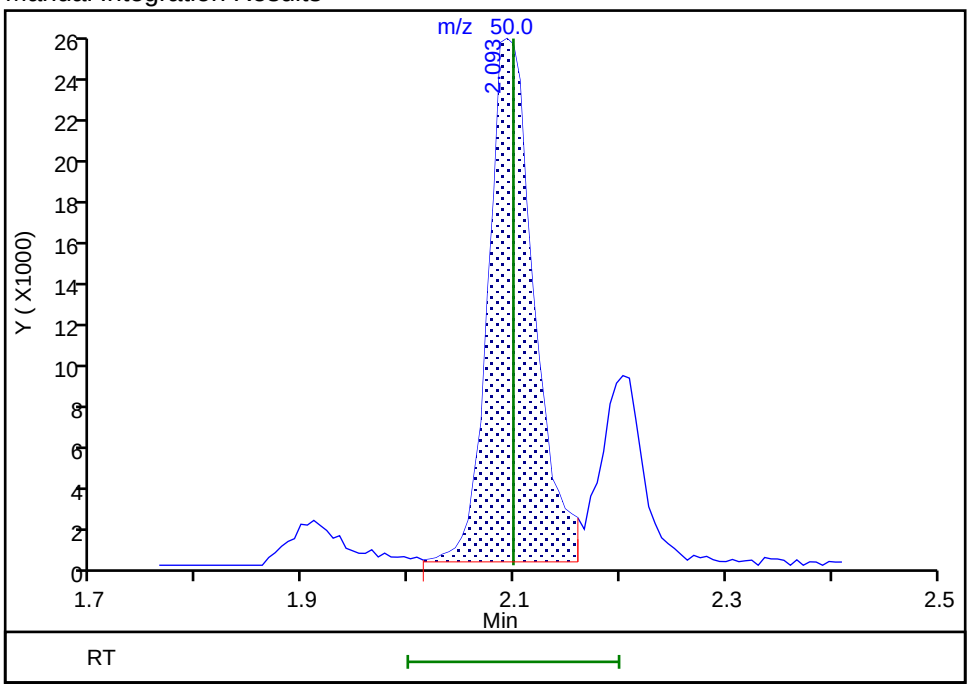
Processing Integration Results

RT: 2.09
Area: 74730
Amount: 1.006130
Amount Units: ug/l



Manual Integration Results

RT: 2.09
Area: 75132
Amount: 1.010761
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:01:41
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

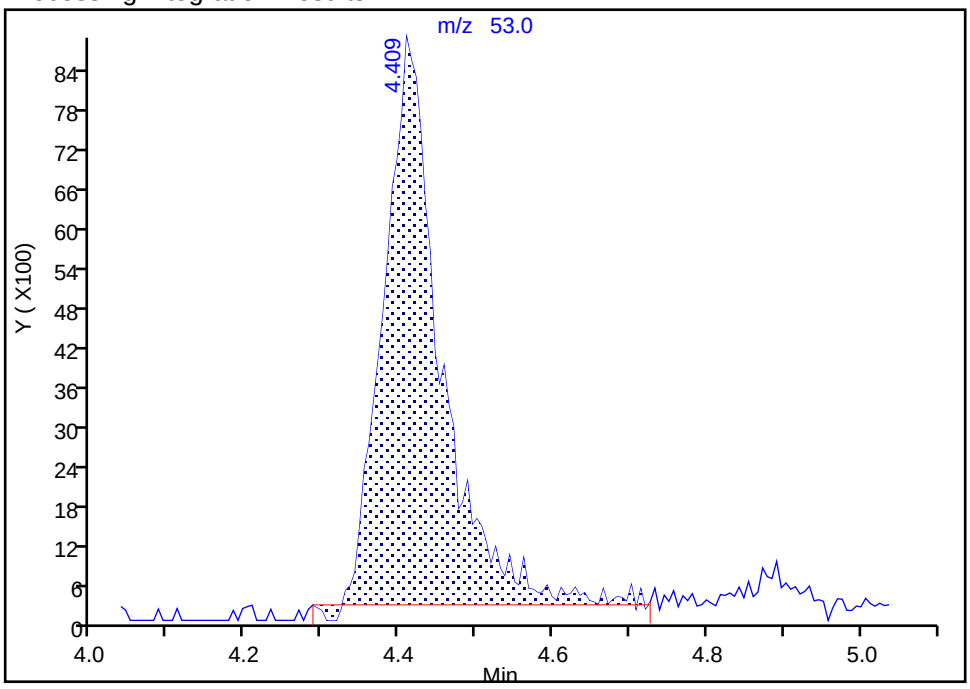
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I05.D
Injection Date: 01-Sep-2020 15:04:30 Instrument ID: 10193
Lims ID: IC STD3
Client ID:
Operator ID: dvv10203 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

27 Acrylonitrile, CAS: 107-13-1

Signal: 1

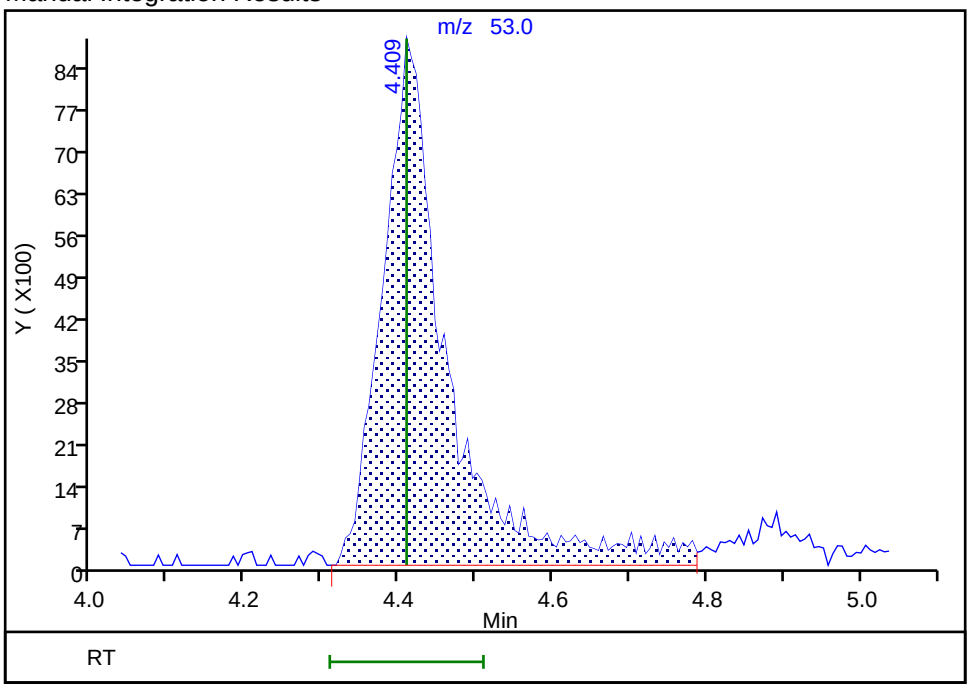
Processing Integration Results

RT: 4.41
Area: 44113
Amount: 4.761831
Amount Units: ug/l



Manual Integration Results

RT: 4.41
Area: 51371
Amount: 5.423891
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:02:09
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

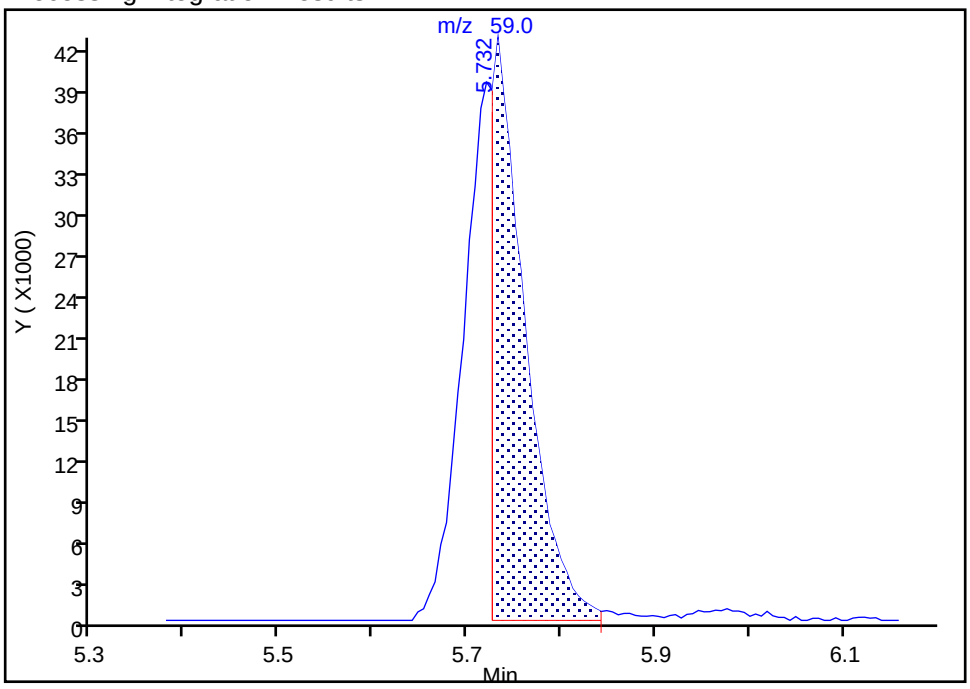
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I05.D
Injection Date: 01-Sep-2020 15:04:30 Instrument ID: 10193
Lims ID: IC STD3
Client ID:
Operator ID: dvv10203 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

35 Tert-butyl ethyl ether, CAS: 637-92-3

Signal: 1

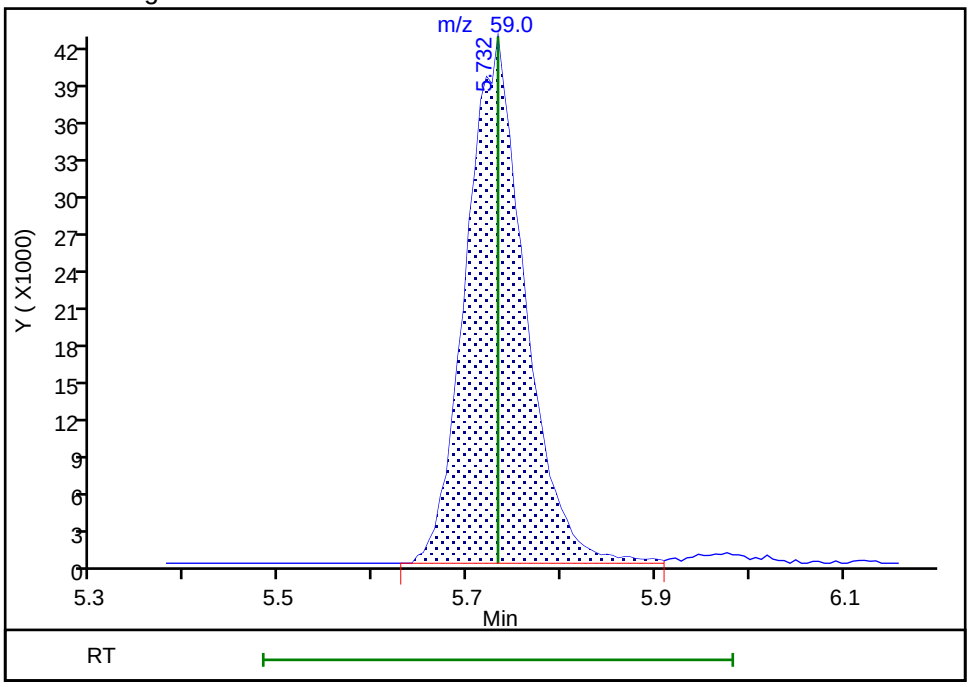
Processing Integration Results

RT: 5.73
Area: 107376
Amount: 0.583894
Amount Units: ug/l



Manual Integration Results

RT: 5.73
Area: 183026
Amount: 1.033821
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:02:27
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

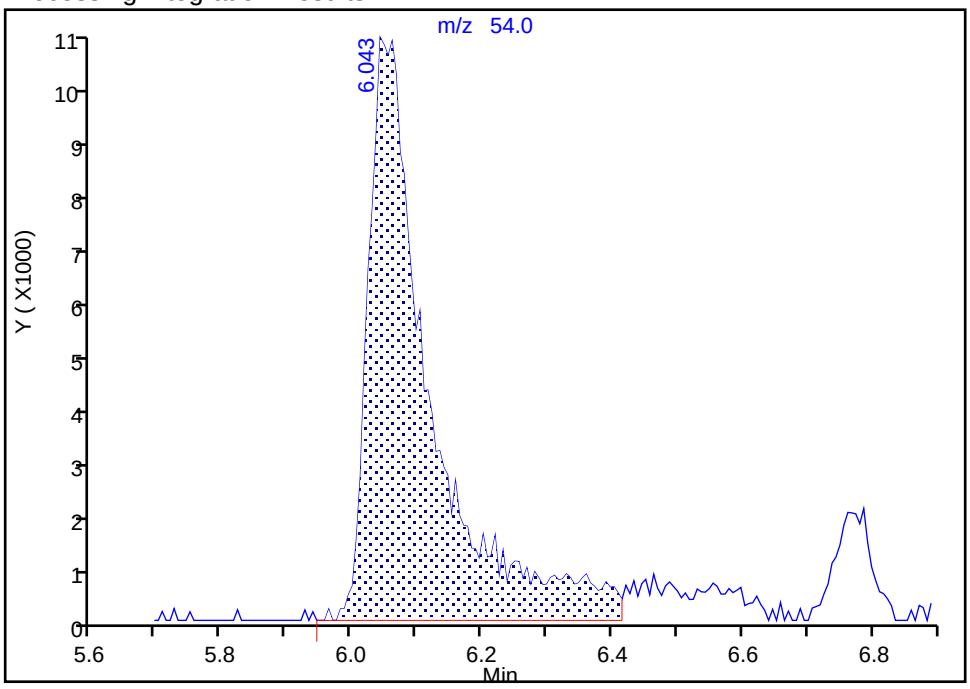
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I05.D
Injection Date: 01-Sep-2020 15:04:30 Instrument ID: 10193
Lims ID: IC STD3
Client ID:
Operator ID: dvv10203 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

40 Propionitrile, CAS: 107-12-0

Signal: 1

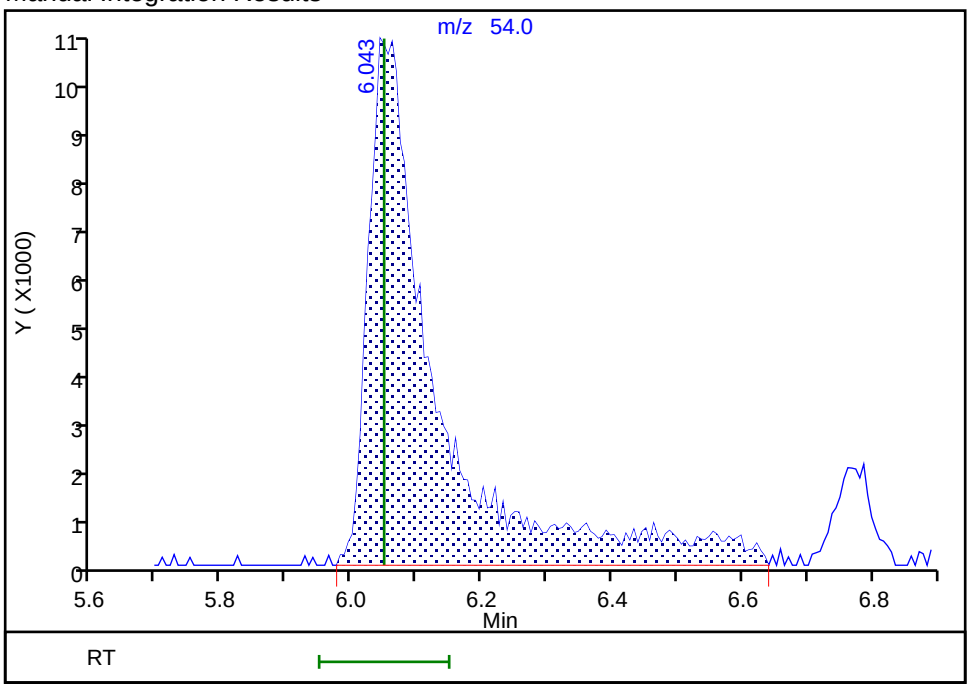
Processing Integration Results

RT: 6.04
Area: 68101
Amount: 19.874939
Amount Units: ug/l



Manual Integration Results

RT: 6.04
Area: 74651
Amount: 21.029905
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:03:38
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

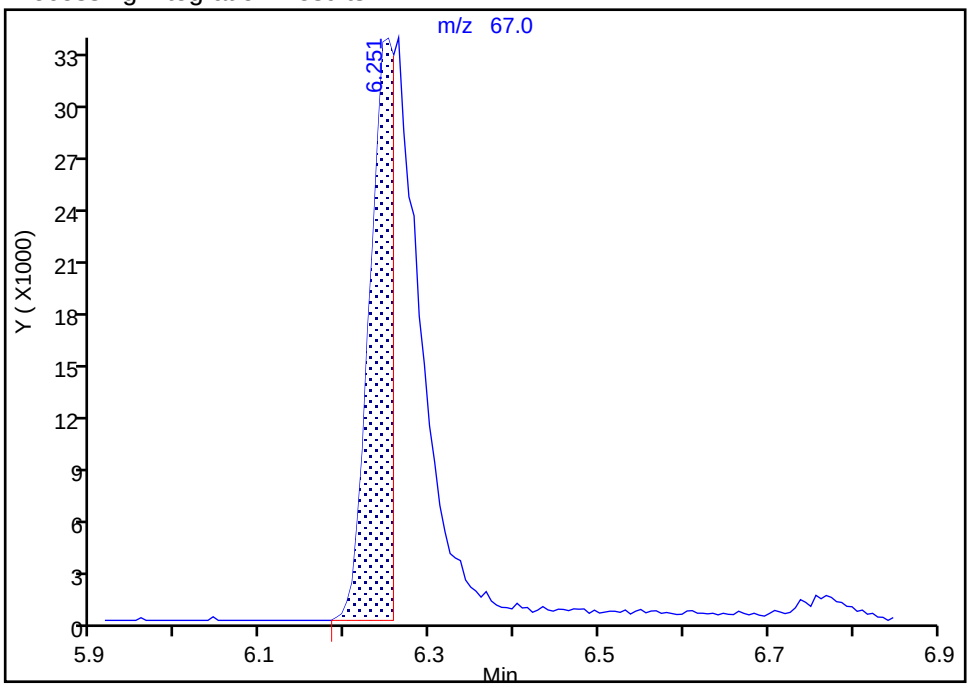
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I05.D
Injection Date: 01-Sep-2020 15:04:30 Instrument ID: 10193
Lims ID: IC STD3
Client ID:
Operator ID: dvv10203 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

43 Methacrylonitrile, CAS: 126-98-7

Signal: 1

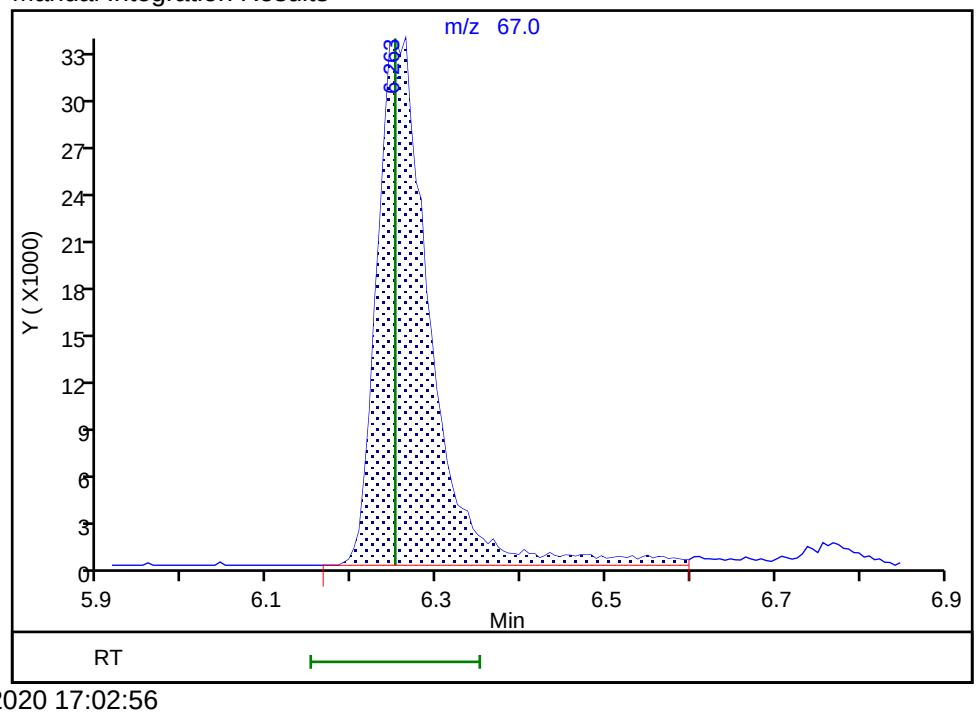
Processing Integration Results

RT: 6.25
Area: 67704
Amount: 8.258310
Amount Units: ug/l



Manual Integration Results

RT: 6.26
Area: 146687
Amount: 10.663214
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:02:56
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

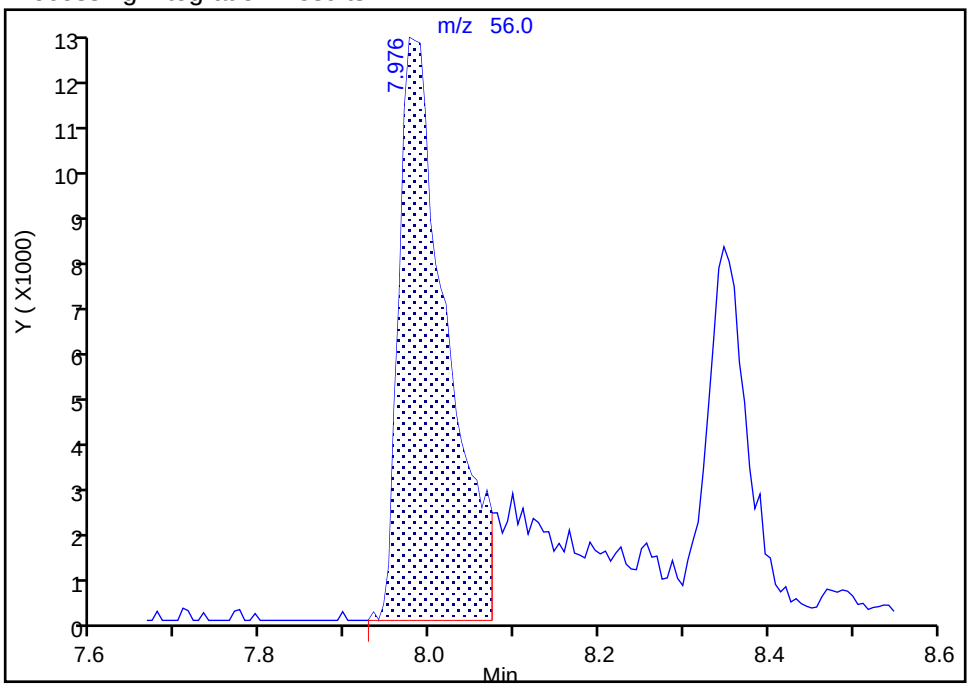
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I05.D
Injection Date: 01-Sep-2020 15:04:30 Instrument ID: 10193
Lims ID: IC STD3
Client ID:
Operator ID: dvv10203 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

59 n-Butanol, CAS: 71-36-3

Signal: 1

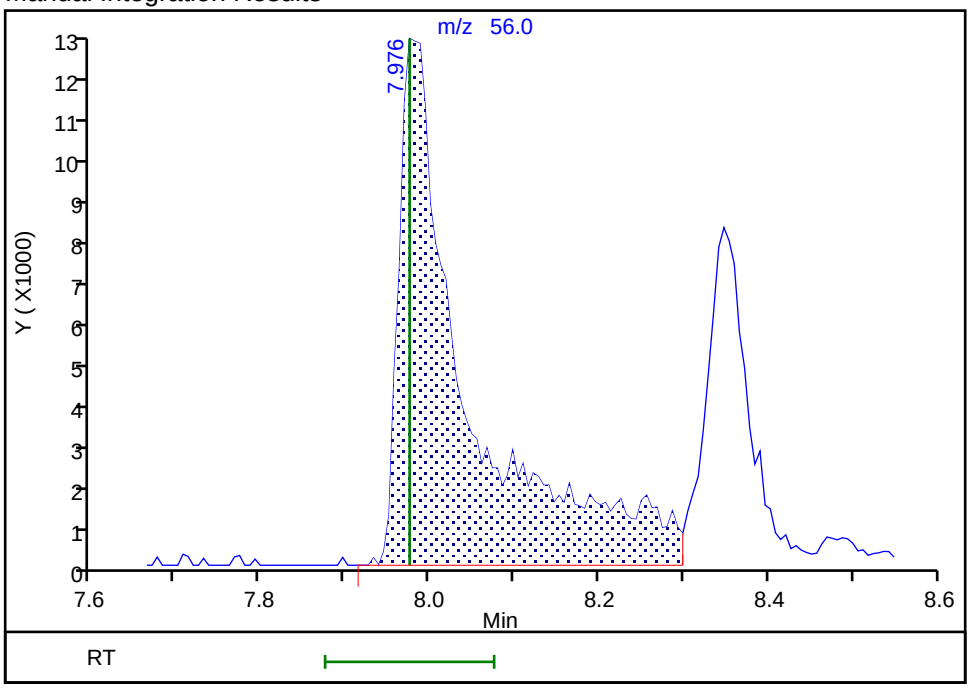
Processing Integration Results

RT: 7.98
Area: 50726
Amount: 98.042226
Amount Units: ug/l



Manual Integration Results

RT: 7.98
Area: 73005
Amount: 97.217312
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:16:24
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

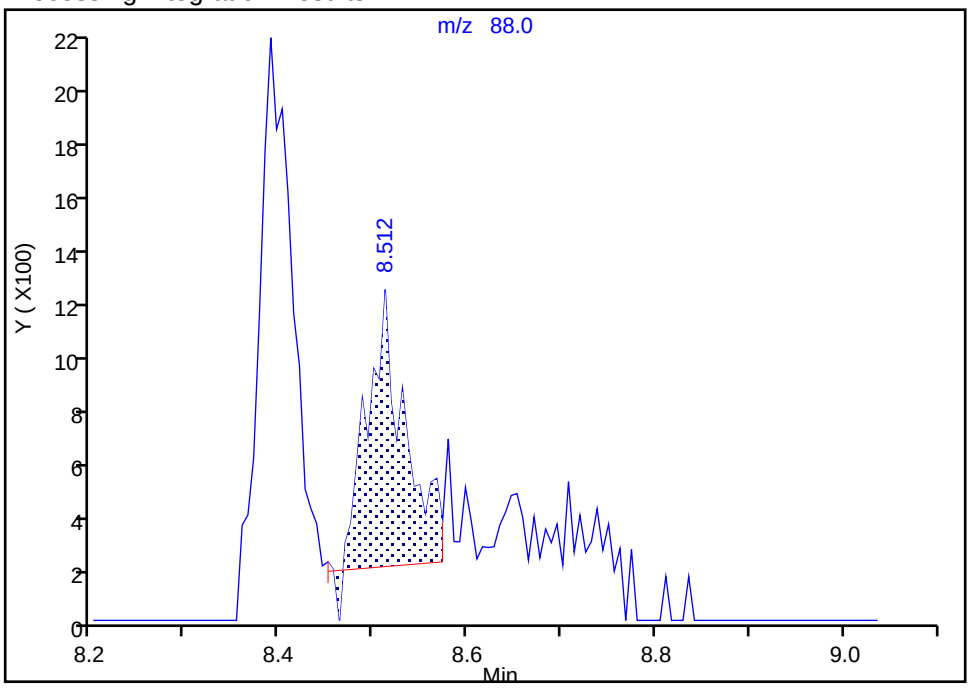
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I05.D
Injection Date: 01-Sep-2020 15:04:30 Instrument ID: 10193
Lims ID: IC STD3
Client ID:
Operator ID: dvv10203 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

65 1,4-Dioxane, CAS: 123-91-1

Signal: 1

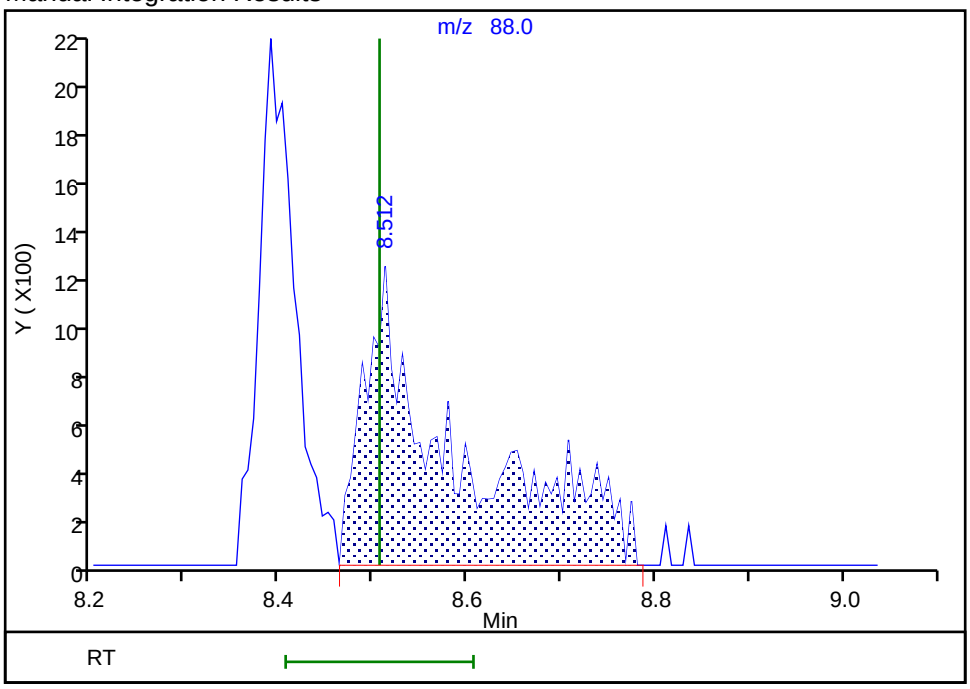
Processing Integration Results

RT: 8.51
Area: 2819
Amount: 21.730370
Amount Units: ug/l



Manual Integration Results

RT: 8.51
Area: 8095
Amount: 54.138741
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:03:11
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I06.D
Lims ID: IC STD2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 01-Sep-2020 15:26:30 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: IC STD2
Misc. Info.: 410-0009503-008
Operator ID: dvv10203 Instrument ID: 10193
Sublist: chrom-MSV_10193_25mL*sub1

Method: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 01-Sep-2020 20:10:57 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1059

First Level Reviewer: campbellme Date: 01-Sep-2020 17:05:39

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.916	1.910	0.006	99	34165	0.5000	0.5457	
3 Chloromethane	50	2.105	2.099	0.006	99	40412	0.5000	0.5476	
4 Butadiene	39	2.209	2.209	0.000	94	37166	0.5000	0.5354	M
5 Vinyl chloride	62	2.221	2.215	0.006	81	36562	0.5000	0.5359	
6 Bromomethane	94	2.520	2.520	0.000	92	24464	0.5000	0.5080	
7 Chloroethane	64	2.611	2.605	0.006	99	22270	0.5000	0.5284	
8 Dichlorofluoromethane	67	2.843	2.837	0.006	97	47161	0.5000	0.5157	
9 Trichlorofluoromethane	101	2.898	2.898	0.000	96	47434	0.5000	0.5344	
11 Ethyl ether	59	3.135	3.135	0.000	92	23165	0.4999	0.5152	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.215	3.208	0.007	96	34942	0.5000	0.5302	
13 Acrolein	56	3.312	3.306	0.006	98	142874	25.0	24.5	
14 1,1-Dichloroethene	96	3.434	3.428	0.006	98	23536	0.5000	0.5248	
15 112TCTFE	101	3.477	3.464	0.013	91	22631	0.5000	0.4960	
16 Acetone	43	3.477	3.471	0.006	99	33503	5.00	5.42	M
17 Iodomethane	142	3.617	3.617	0.000	97	45466	0.5000	0.5131	
19 Ethyl bromide	108	3.654	3.641	0.013	99	19138	0.5003	0.5138	
18 Isopropyl alcohol	45	3.654	3.647	0.007	45	16590	10.0	18.5	
20 Carbon disulfide	76	3.715	3.708	0.007	100	79256	0.5000	0.5002	
22 Methyl acetate	43	3.885	3.867	0.018	25	10666	0.5000	0.4389	M
23 3-Chloro-1-propene	41	3.897	3.891	0.006	90	39926	0.5000	0.5087	
24 Methylene Chloride	84	4.080	4.074	0.006	96	26091	0.5000	0.5227	M
* 25 t-Butyl alcohol-d10 (IS)	65	4.105	4.111	-0.006	95	145520	50.0	50.0	
26 2-Methyl-2-propanol	59	4.221	4.227	-0.005	96	31710	10.0	10.9	
27 Acrylonitrile	53	4.428	4.409	0.019	98	23111	2.50	2.35	
28 Methyl tert-butyl ether	73	4.471	4.464	0.007	95	74946	0.5000	0.5162	
29 trans-1,2-Dichloroethene	96	4.483	4.470	0.013	98	26945	0.5000	0.5139	
30 Hexane	57	4.897	4.897	0.000	94	35026	0.5000	0.4738	
32 1,1-Dichloroethane	63	5.147	5.135	0.012	96	48762	0.5000	0.5052	
33 Isopropyl ether	45	5.196	5.196	0.000	95	95205	0.5000	0.5174	
34 2-Chloro-1,3-butadiene	53	5.251	5.251	0.000	94	47125	0.5000	0.5181	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
35 Tert-butyl ethyl ether	59	5.732	5.732	0.000	98	90729	0.5000	0.5162	
36 2-Butanone (MEK)	43	5.964	5.946	0.018	100	76154	5.00	5.25	
37 cis-1,2-Dichloroethene	96	5.982	5.970	0.012	87	30278	0.5000	0.5093	
38 2,2-Dichloropropane	77	5.989	5.988	0.000	77	42244	0.5000	0.5072	
40 Propionitrile	54	6.049	6.049	0.000	97	39217	10.0	10.7	M
S 42 1,2-Dichloroethene, Total	100				0			1.02	
43 Methacrylonitrile	67	6.257	6.251	0.007	93	67114	5.00	4.70	
44 Chlorobromomethane	128	6.306	6.305	0.001	94	12738	0.5000	0.4868	
45 Tetrahydrofuran	71	6.324	6.305	0.019	89	21034	5.00	5.13	
46 Chloroform	83	6.464	6.464	0.000	94	48103	0.5000	0.5029	
$ 47 Dibromofluoromethane (Surr)	113	6.684	6.683	0.001	93	460223	10.0	9.98	
48 1,1,1-Trichloroethane	97	6.677	6.683	-0.006	40	43566	0.5000	0.5055	
49 Cyclohexane	56	6.781	6.775	0.006	94	45257	0.5000	0.4966	
50 Carbon tetrachloride	117	6.891	6.891	0.000	95	35175	0.5000	0.4872	
51 1,1-Dichloropropene	75	6.897	6.897	0.000	92	39192	0.5000	0.5065	
52 Isobutyl alcohol	41	7.086	7.086	0.000	89	23860	25.0	25.4	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.135	7.134	0.001	0	92350	10.0	9.83	
54 Benzene	78	7.165	7.159	0.006	96	113177	0.5000	0.5079	
55 1,2-Dichloroethane	62	7.244	7.238	0.006	97	36081	0.5000	0.5371	
56 Tert-amyl methyl ether	73	7.354	7.360	-0.006	97	80450	0.5000	0.5024	
* 57 Fluorobenzene (IS)	96	7.574	7.573	0.001	98	1940063	10.0	10.0	
58 n-Heptane	43	7.580	7.580	0.000	38	37755	0.5000	0.4587	
59 n-Butanol	56	7.976	7.976	0.000	90	36853	50.0	47.3	M
60 Trichloroethene	95	8.055	8.049	0.006	98	28843	0.5000	0.5022	
61 Methylcyclohexane	83	8.354	8.354	0.000	91	44211	0.5000	0.5025	
62 1,2-Dichloropropane	63	8.390	8.390	0.000	73	28771	0.5000	0.5027	
63 2-ethoxy-2-methyl butane	87	8.397	8.396	0.001	91	44592	0.5000	0.5008	
64 Methyl methacrylate	69	8.482	8.482	0.000	89	14408	0.5000	0.4737	
66 Dibromomethane	93	8.500	8.494	0.006	94	14141	0.5000	0.5050	
65 1,4-Dioxane	88	8.555	8.506	0.049	30	3795	25.0	24.5	M
67 Dichlorobromomethane	83	8.744	8.738	0.006	98	34459	0.5000	0.4988	
68 2-Nitropropane	41	9.031	9.024	0.007	98	42618	5.00	4.52	
71 1-Bromo-2-chloroethane	63	9.140	9.134	0.006	99	30027	0.5000	0.5073	
72 cis-1,3-Dichloropropene	75	9.299	9.299	0.000	93	41792	0.5000	0.4868	
73 4-Methyl-2-pentanone (MIBK)	43	9.488	9.488	0.000	98	203096	5.00	4.82	
$ 74 Toluene-d8 (Surr)	98	9.610	9.610	0.000	95	1913735	10.0	10.0	
75 Toluene	92	9.689	9.689	0.000	98	73639	0.5000	0.5116	
76 trans-1,3-Dichloropropene	75	9.963	9.957	0.006	97	34646	0.5000	0.4807	
78 Ethyl methacrylate	69	10.030	10.024	0.006	89	30177	0.5000	0.4961	
S 77 1,3-Dichloropropene, Total	100				0			0.9674	
79 1,1,2-Trichloroethane	97	10.165	10.164	0.001	91	20416	0.5000	0.5135	
80 Tetrachloroethene	166	10.244	10.250	-0.006	95	32134	0.5000	0.4997	
81 1,3-Dichloropropane	76	10.329	10.329	0.000	94	36571	0.5000	0.5219	
82 2-Hexanone	43	10.396	10.396	0.000	98	135801	5.00	4.56	
83 Chlorodibromomethane	129	10.549	10.548	0.001	89	21989	0.5000	0.4768	
84 Ethylene Dibromide	107	10.658	10.658	0.000	100	19670	0.5000	0.5010	
* 85 Chlorobenzene-d5 (IS)	117	11.097	11.097	0.000	87	1465303	10.0	10.0	
86 1-Chlorohexane	91	11.109	11.109	0.000	94	42522	0.5000	0.5173	
87 Chlorobenzene	112	11.122	11.122	0.000	95	82597	0.5000	0.5081	
89 1,1,1,2-Tetrachloroethane	131	11.207	11.207	0.000	94	27504	0.5000	0.4974	
90 Ethylbenzene	91	11.213	11.213	0.000	99	143018	0.5000	0.5014	
S 88 Xylenes, Total	106				0			1.50	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
91 m-Xylene & p-Xylene	106	11.329	11.329	0.000	0	112244	1.00	1.01	
92 o-Xylene	106	11.664	11.664	0.000	97	54046	0.5000	0.4949	
93 Styrene	104	11.683	11.676	0.007	94	89517	0.5000	0.4883	
94 Bromoform	173	11.835	11.835	0.000	94	10815	0.5000	0.4222	
95 Isopropylbenzene	105	11.969	11.969	0.000	96	144191	0.5000	0.4991	
$ 98 4-Bromofluorobenzene (Surr)	95	12.109	12.109	0.000	91	715715	10.0	9.95	
99 1,1,2,2-Tetrachloroethane	83	12.219	12.219	0.000	93	26594	0.5000	0.5171	
100 Bromobenzene	156	12.231	12.231	0.000	91	35338	0.5000	0.5005	
101 trans-1,4-Dichloro-2-butene	53	12.243	12.243	0.000	95	65511	5.00	4.60	
102 1,2,3-Trichloropropane	110	12.262	12.268	-0.006	81	7433	0.5000	0.5310	
103 N-Propylbenzene	91	12.298	12.298	0.000	99	167830	0.5000	0.5062	
104 2-Chlorotoluene	126	12.378	12.377	0.001	96	33943	0.5000	0.5006	
105 1,3,5-Trimethylbenzene	105	12.438	12.438	0.000	94	123379	0.5000	0.5024	
106 4-Chlorotoluene	126	12.469	12.469	0.000	98	35497	0.5000	0.5037	
107 tert-Butylbenzene	134	12.682	12.682	0.000	93	25380	0.5000	0.4753	
108 Pentachloroethane	167	12.713	12.713	0.000	77	18671	0.5000	0.4682	
109 1,2,4-Trimethylbenzene	105	12.725	12.725	0.000	98	128573	0.5000	0.5103	
110 sec-Butylbenzene	105	12.847	12.847	0.000	94	159853	0.5000	0.5052	
111 1,3-Dichlorobenzene	146	12.944	12.944	0.000	98	72046	0.5000	0.5108	
112 4-Isopropyltoluene	119	12.957	12.957	0.000	97	136940	0.5000	0.4962	
* 113 1,4-Dichlorobenzene-d4	152	12.999	12.999	0.000	96	823493	10.0	10.0	
114 1,4-Dichlorobenzene	146	13.018	13.017	0.001	94	75027	0.5000	0.5169	
115 1,2,3-Trimethylbenzene	120	13.030	13.030	0.000	99	55416	0.5000	0.5011	
116 Benzyl chloride	126	13.103	13.103	0.000	99	9231	0.5000	0.4513	
119 n-Butylbenzene	92	13.249	13.249	0.000	98	67384	0.5000	0.4819	
120 1,2-Dichlorobenzene	146	13.280	13.286	-0.006	97	66856	0.5000	0.5023	
118 p-Diethylbenzene	119	13.304	13.304	0.000	0	67208	0.5000	0.4797	
123 1,2-Dibromo-3-Chloropropane	155	13.835	13.834	0.001	83	3372	0.5000	0.4781	
124 1,3,5-Trichlorobenzene	180	13.956	13.956	0.000	98	57894	0.5000	0.5031	
125 1,2,4-Trichlorobenzene	180	14.389	14.383	0.006	93	52641	0.5000	0.5099	
126 Hexachlorobutadiene	225	14.469	14.468	0.001	97	25396	0.5000	0.5037	
127 Naphthalene	128	14.572	14.566	0.006	97	93520	0.5000	0.5078	
128 1,2,3-Trichlorobenzene	180	14.712	14.712	0.000	96	47610	0.5000	0.5210	
129 2-Methylnaphthalene	142	15.346	15.340	0.006	0	61192	0.5000	0.4914	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MSV_RV1_826_00022	Amount Added:	2.00	Units: uL	
MSV_RV4_826_00024	Amount Added:	2.00	Units: uL	
MSV_RV4GAS826_00072	Amount Added:	2.00	Units: uL	
MSV_25_826ISS_00001	Amount Added:	1.00	Units: uL	Run Reagent

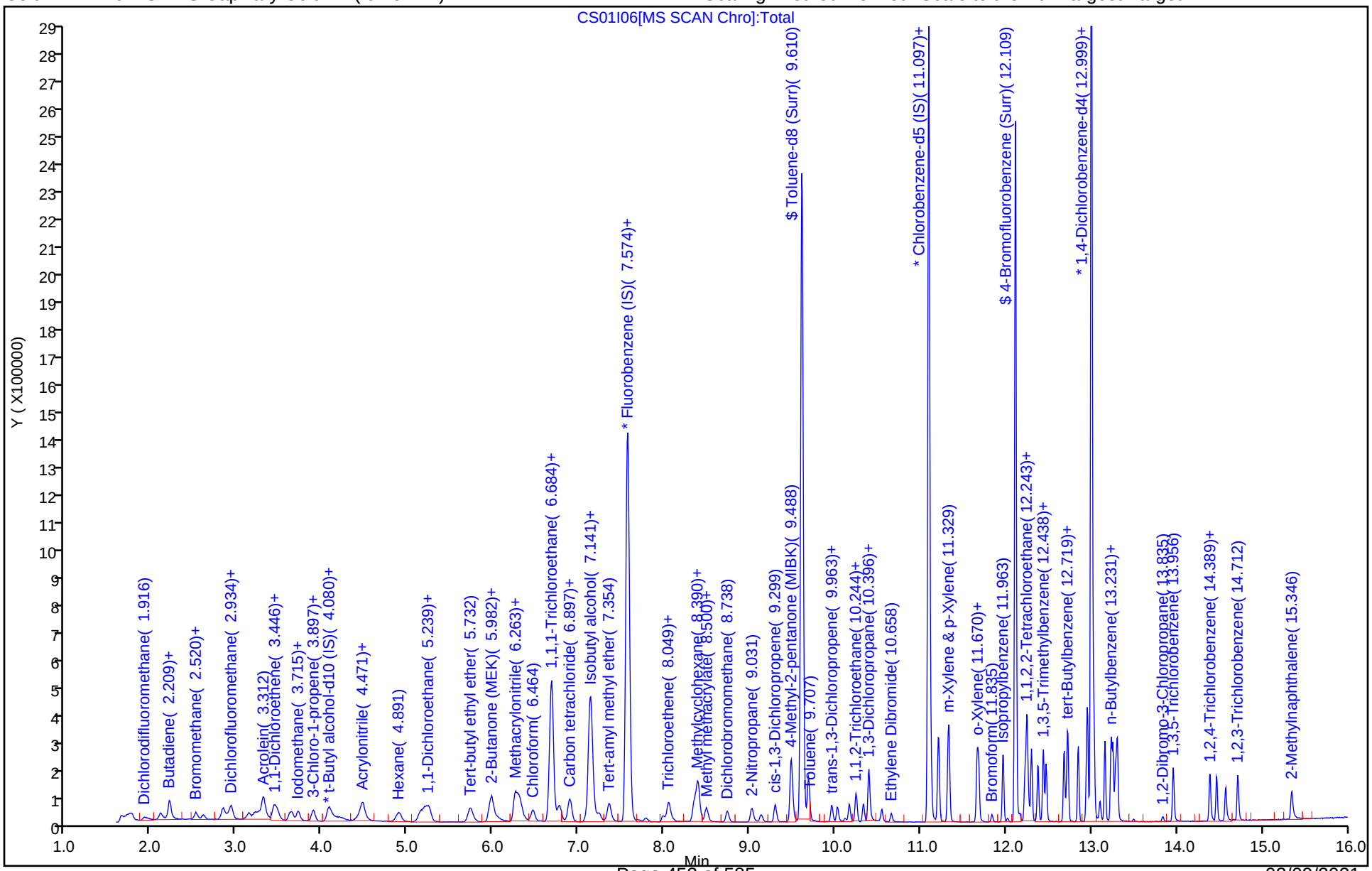
Report Date: 01-Sep-2020 20:10:58 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I06.D

Injection Date:	01-Sep-2020 15:26:30	Instrument ID:	10193	Operator ID:	dvv10203
Lims ID:	IC STD2			Worklist Smp#:	8
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

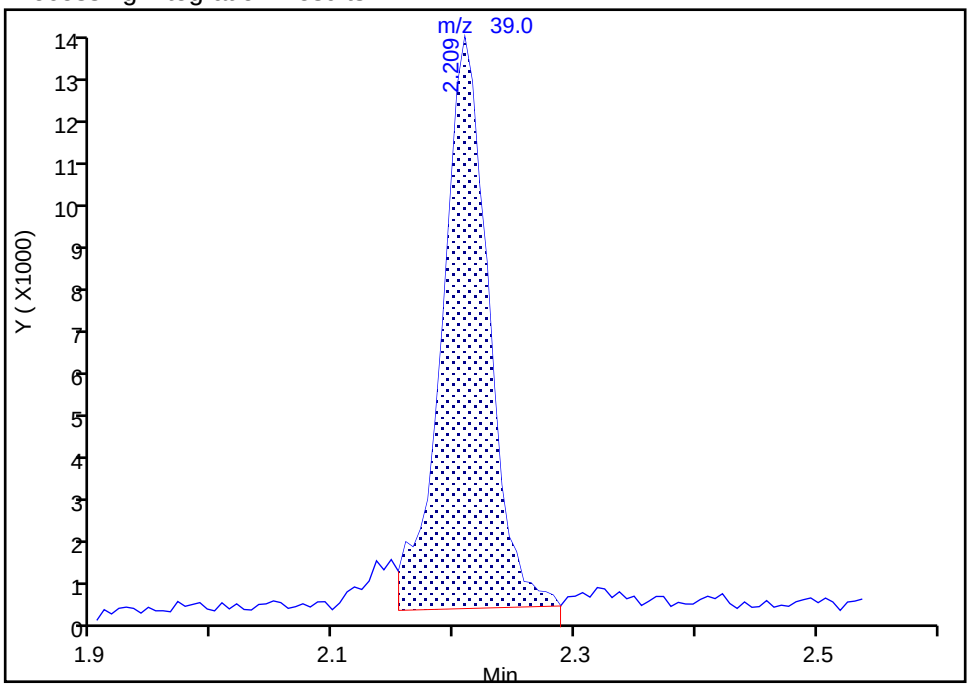
Data File:	\\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I06.D				
Injection Date:	01-Sep-2020 15:26:30	Instrument ID:	10193		
Lims ID:	IC STD2				
Client ID:					
Operator ID:	dvv10203	ALS Bottle#:	7	Worklist Smp#:	8
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

4 Butadiene, CAS: 106-99-0

Signal: 1

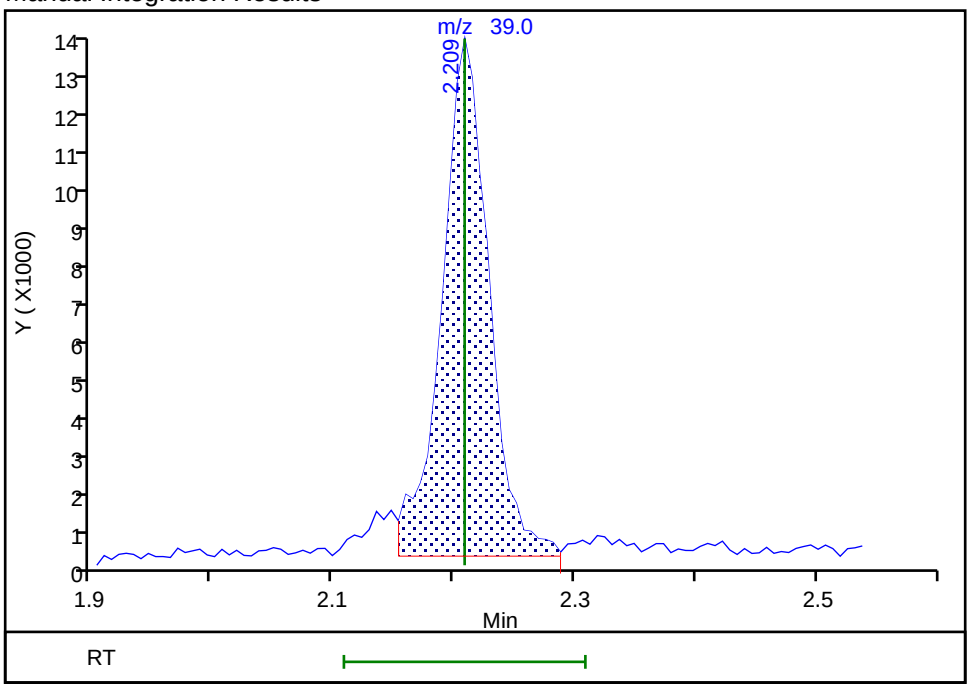
Processing Integration Results

RT: 2.21
Area: 36737
Amount: 0.531655
Amount Units: ug/l



Manual Integration Results

RT: 2.21
Area: 37166
Amount: 0.535389
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:04:06
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

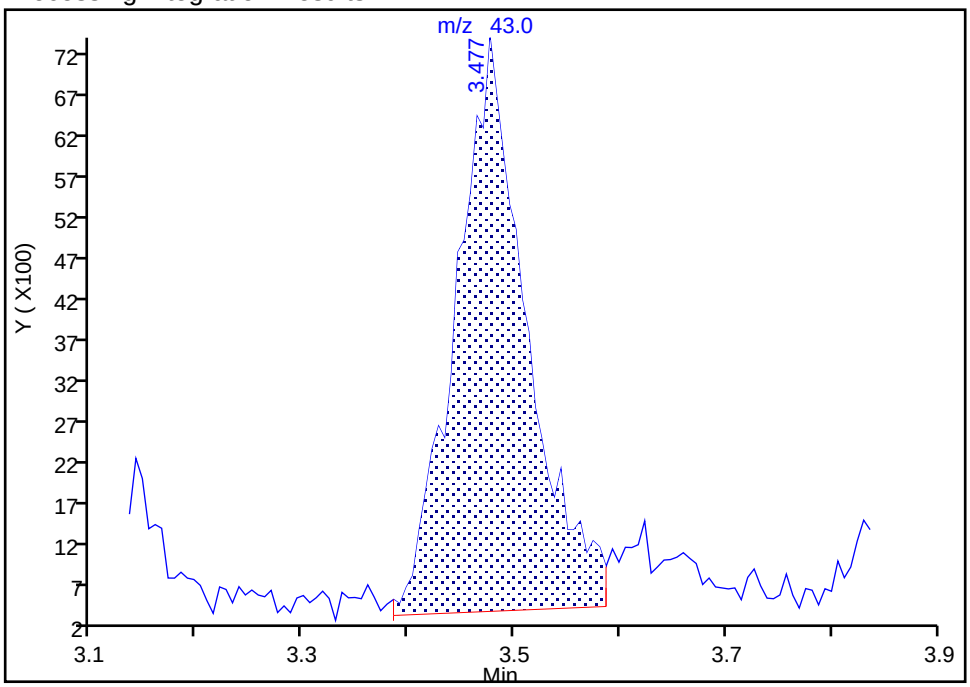
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I06.D
Injection Date: 01-Sep-2020 15:26:30 Instrument ID: 10193
Lims ID: IC STD2
Client ID:
Operator ID: dvv10203 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

16 Acetone, CAS: 67-64-1

Signal: 1

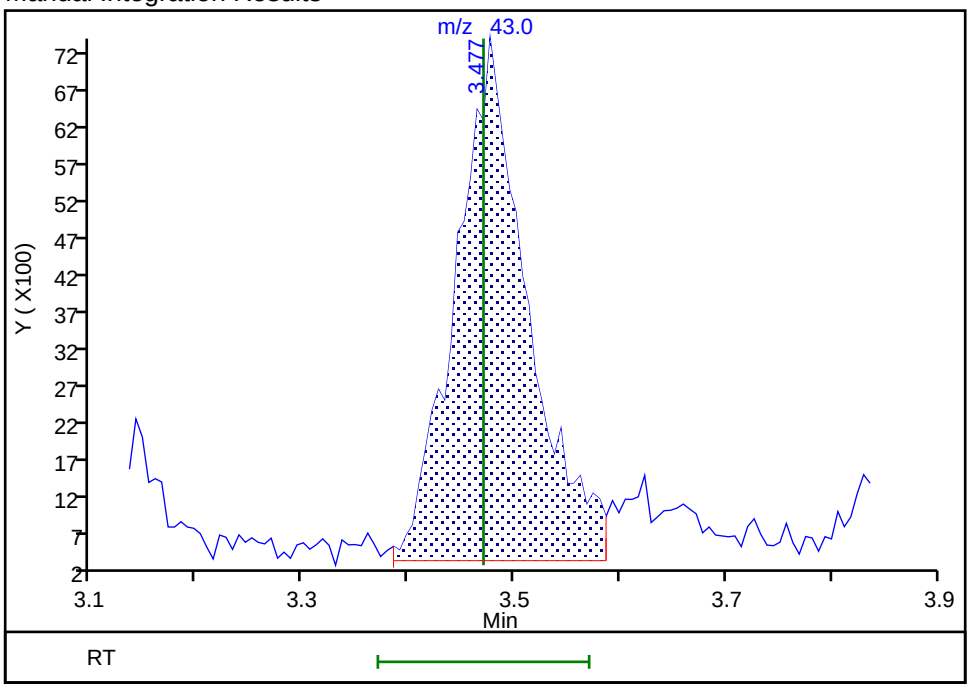
Processing Integration Results

RT: 3.48
Area: 32844
Amount: 5.326538
Amount Units: ug/l



Manual Integration Results

RT: 3.48
Area: 33503
Amount: 5.416872
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:04:18
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

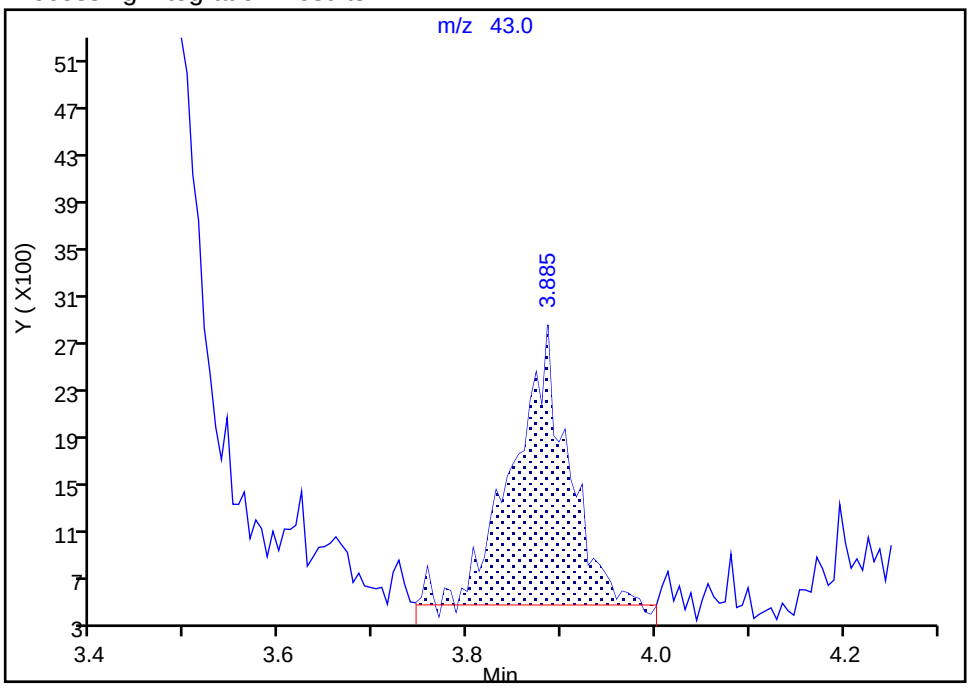
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I06.D
Injection Date: 01-Sep-2020 15:26:30 Instrument ID: 10193
Lims ID: IC STD2
Client ID:
Operator ID: dvv10203 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

22 Methyl acetate, CAS: 79-20-9

Signal: 1

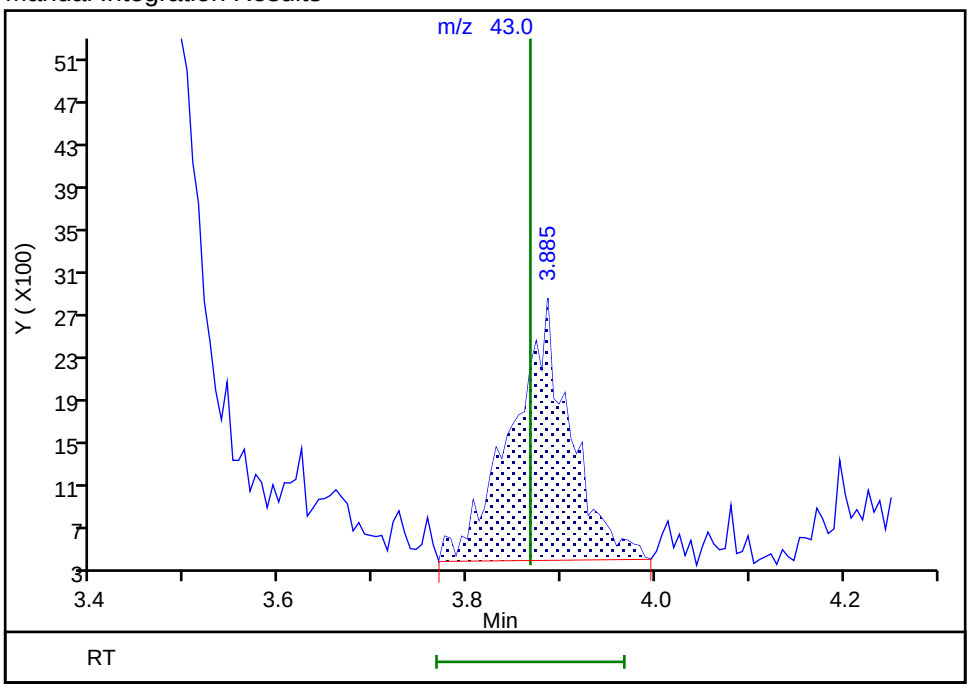
Processing Integration Results

RT: 3.89
Area: 9648
Amount: 0.319685
Amount Units: ug/l



Manual Integration Results

RT: 3.89
Area: 10666
Amount: 0.438891
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:04:37
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

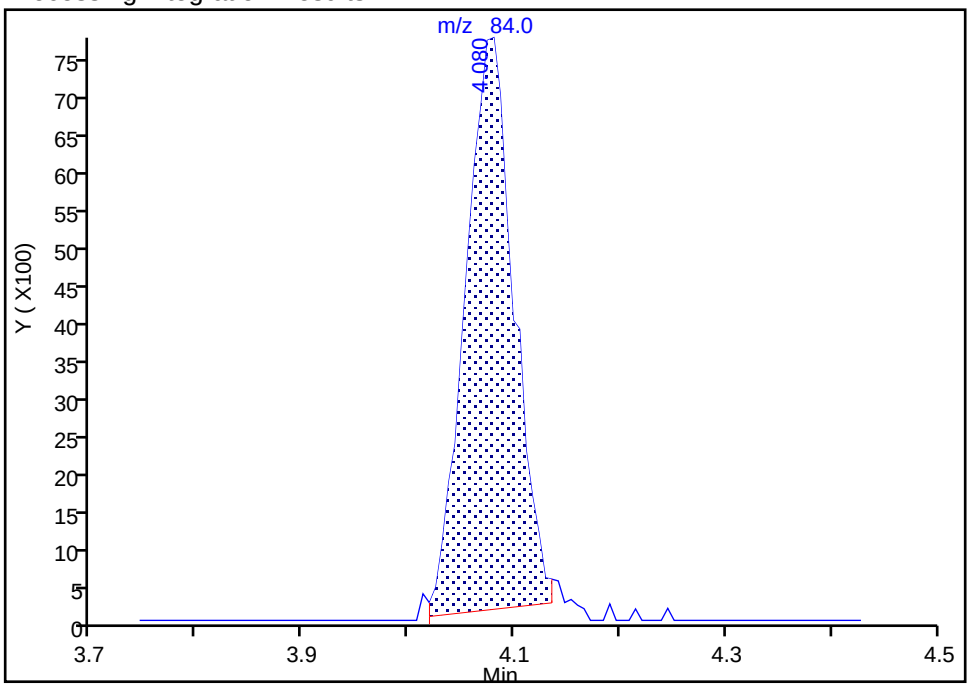
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I06.D
Injection Date: 01-Sep-2020 15:26:30 Instrument ID: 10193
Lims ID: IC STD2
Client ID:
Operator ID: dvv10203 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

24 Methylene Chloride, CAS: 75-09-2

Signal: 1

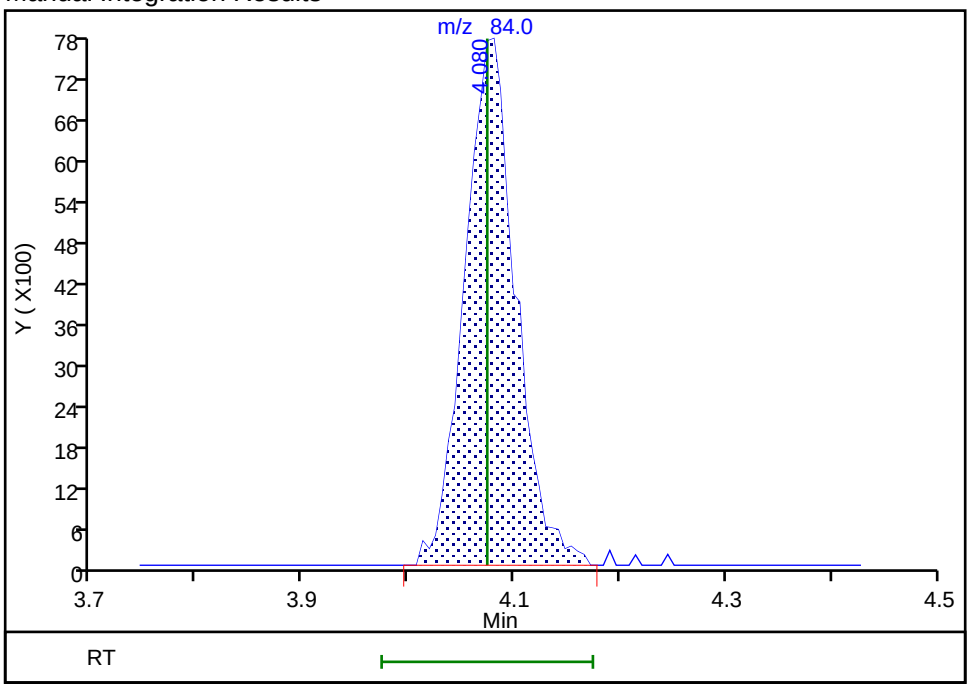
Processing Integration Results

RT: 4.08
Area: 24403
Amount: 0.493670
Amount Units: ug/l



Manual Integration Results

RT: 4.08
Area: 26091
Amount: 0.522718
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:04:54
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC

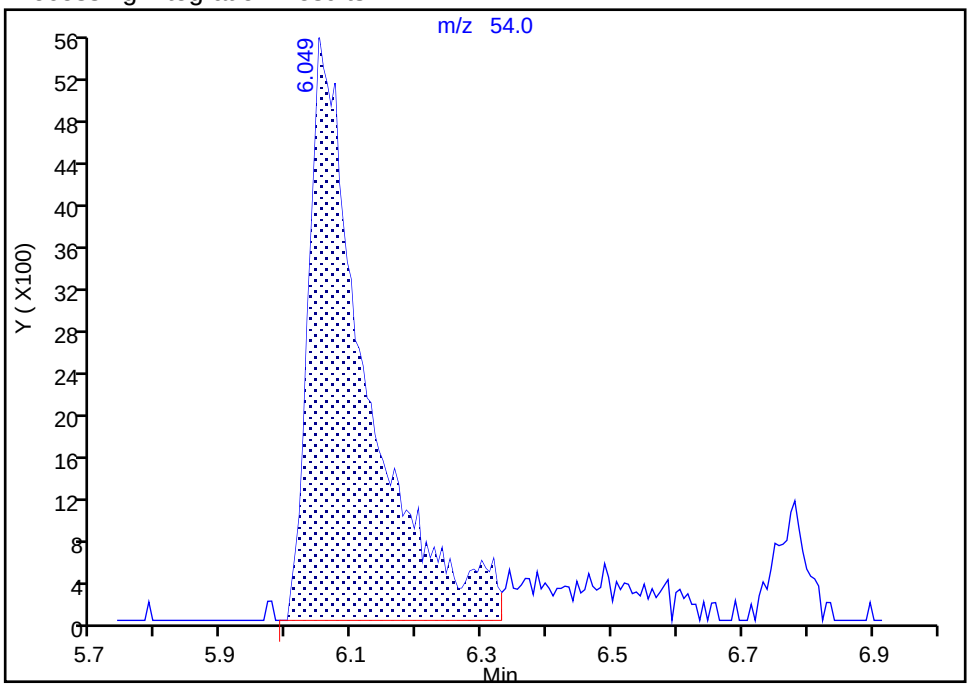
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I06.D
Injection Date: 01-Sep-2020 15:26:30 Instrument ID: 10193
Lims ID: IC STD2
Client ID:
Operator ID: dvv10203 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

40 Propionitrile, CAS: 107-12-0

Signal: 1

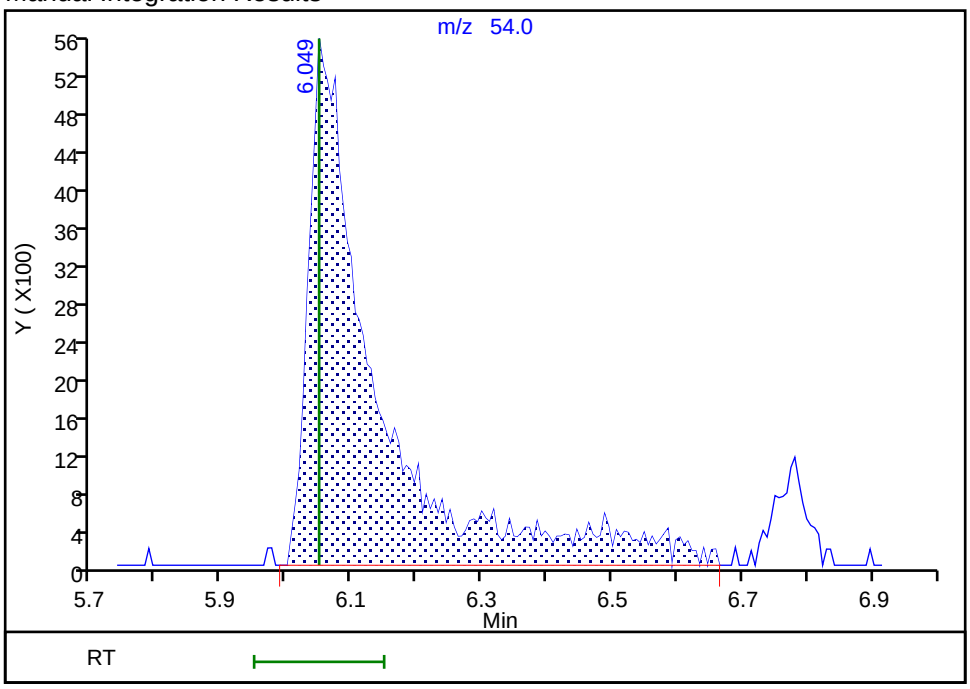
Processing Integration Results

RT: 6.05
Area: 33664
Amount: 9.345852
Amount Units: ug/l



Manual Integration Results

RT: 6.05
Area: 39217
Amount: 10.652873
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:05:07
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

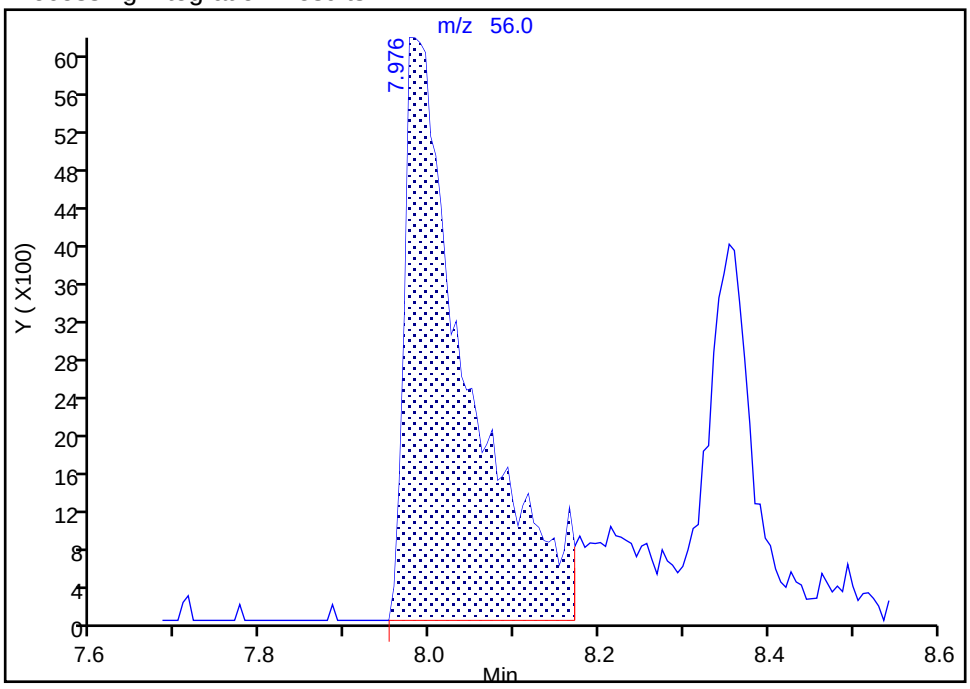
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I06.D
Injection Date: 01-Sep-2020 15:26:30 Instrument ID: 10193
Lims ID: IC STD2
Client ID:
Operator ID: dvv10203 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

59 n-Butanol, CAS: 71-36-3

Signal: 1

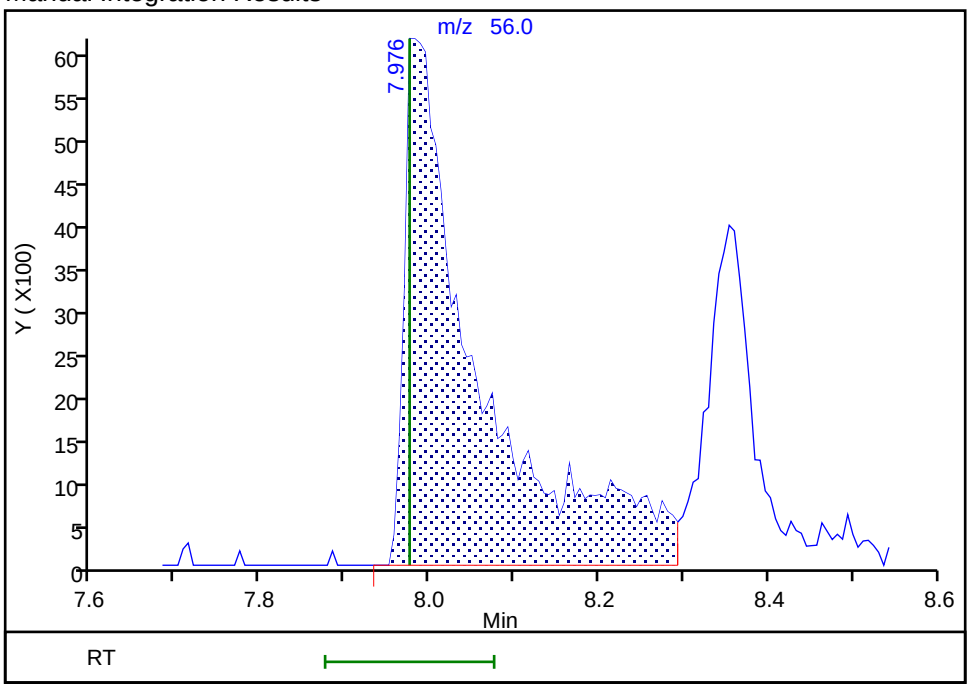
Processing Integration Results

RT: 7.98
Area: 31328
Amount: 41.986609
Amount Units: ug/l



Manual Integration Results

RT: 7.98
Area: 36853
Amount: 47.321069
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:16:57
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

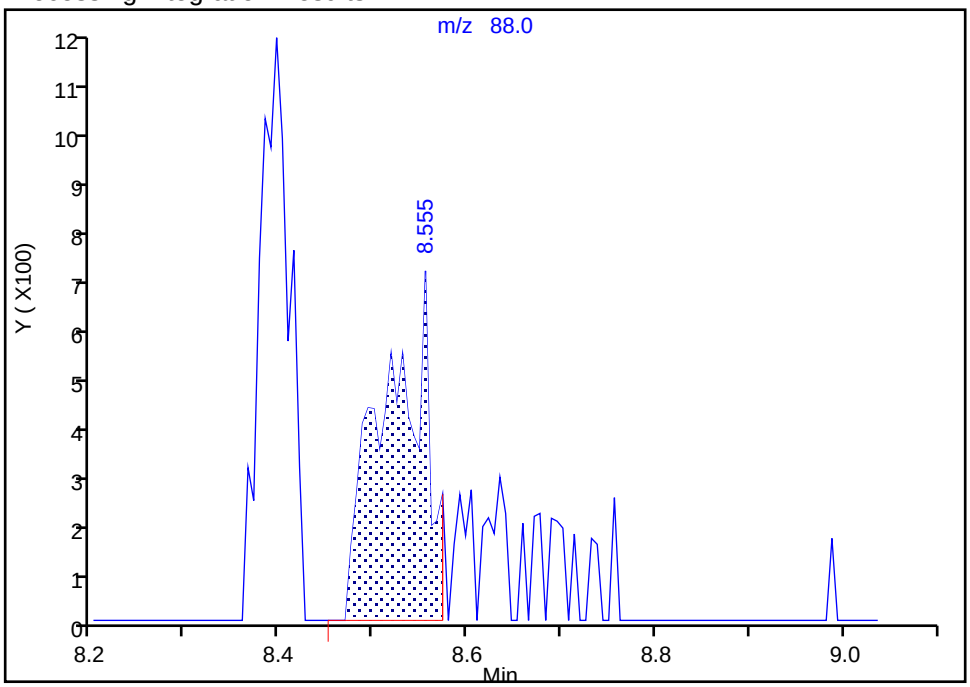
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I06.D
Injection Date: 01-Sep-2020 15:26:30 Instrument ID: 10193
Lims ID: IC STD2
Client ID:
Operator ID: dvv10203 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

65 1,4-Dioxane, CAS: 123-91-1

Signal: 1

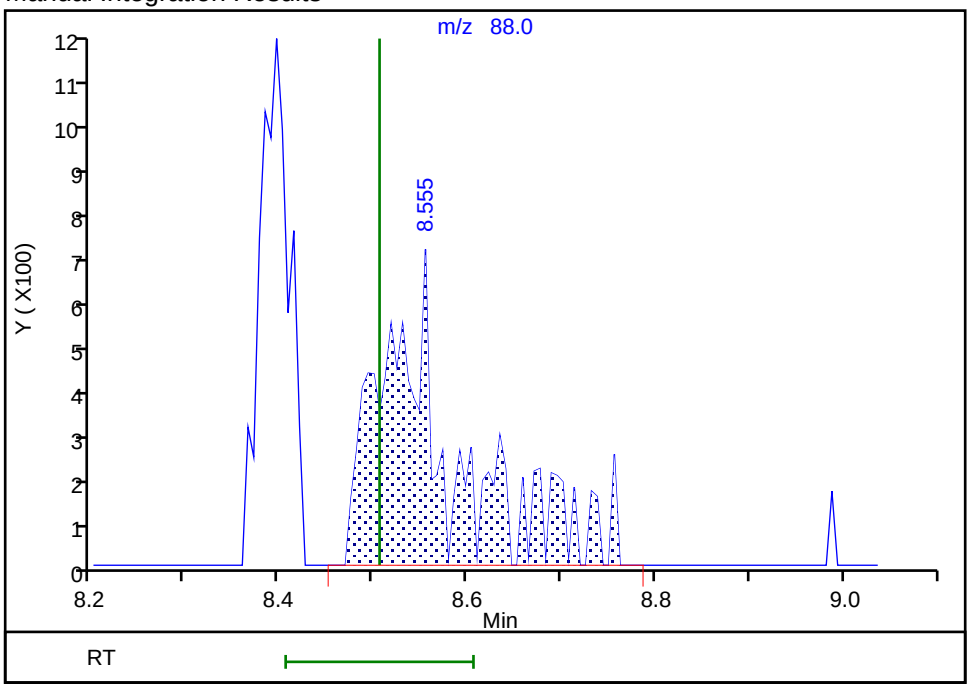
Processing Integration Results

RT: 8.56
Area: 2364
Amount: 15.473810
Amount Units: ug/l



Manual Integration Results

RT: 8.56
Area: 3795
Amount: 24.473370
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:05:22
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I07.D
Lims ID: IC STD1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 01-Sep-2020 15:48:30 ALS Bottle#: 8 Worklist Smp#: 9
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: IC STD1
Misc. Info.: 410-0009503-009
Operator ID: dvv10203 Instrument ID: 10193
Sublist: chrom-MSV_10193_25mL*sub1

Method: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 01-Sep-2020 20:11:06 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1059

First Level Reviewer: campbellme Date: 01-Sep-2020 16:26:38

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.904	1.910	-0.006	97	11305	0.2000	0.1809	
3 Chloromethane	50	2.093	2.099	-0.006	99	15951	0.2000	0.2165	
4 Butadiene	39	2.197	2.209	-0.012	91	14355	0.2000	0.2071	M
5 Vinyl chloride	62	2.215	2.215	0.000	85	14371	0.2000	0.2110	
6 Bromomethane	94	2.514	2.520	-0.006	93	10152	0.2000	0.2112	
7 Chloroethane	64	2.587	2.605	-0.018	99	9373	0.2000	0.2227	
8 Dichlorofluoromethane	67	2.825	2.837	-0.013	96	19377	0.2000	0.2122	
9 Trichlorofluoromethane	101	2.892	2.898	-0.006	96	17838	0.2000	0.2013	
11 Ethyl ether	59	3.123	3.135	-0.012	92	9388	0.2000	0.2091	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.215	3.208	0.007	93	15559	0.2000	0.2365	
13 Acrolein	56	3.300	3.306	-0.006	97	57475	10.0	10.1	
14 1,1-Dichloroethene	96	3.416	3.428	-0.012	98	9367	0.2000	0.2092	
15 112TCTFE	101	3.471	3.464	0.007	85	8535	0.2000	0.1874	
16 Acetone	43	3.465	3.471	-0.006	96	13971	2.00	2.30	
17 Iodomethane	142	3.611	3.617	-0.006	100	18680	0.2000	0.2112	
19 Ethyl bromide	108	3.641	3.641	0.000	98	7374	0.2001	0.1983	
18 Isopropyl alcohol	45	3.629	3.647	-0.018	52	7471	4.00	11.4	
20 Carbon disulfide	76	3.702	3.708	-0.006	100	33471	0.2000	0.2116	
22 Methyl acetate	43	3.879	3.867	0.012	26	5400	0.2000	0.2266	
23 3-Chloro-1-propene	41	3.873	3.891	-0.018	88	16597	0.2000	0.2118	
24 Methylene Chloride	84	4.068	4.074	-0.006	98	10355	0.2000	0.2078	
* 25 t-Butyl alcohol-d10 (IS)	65	4.093	4.111	-0.018	94	142677	50.0	50.0	
26 2-Methyl-2-propanol	59	4.208	4.227	-0.018	97	12311	4.00	4.33	
27 Acrylonitrile	53	4.434	4.409	0.025	96	10290	1.00	1.07	
28 Methyl tert-butyl ether	73	4.440	4.464	-0.024	96	31299	0.2000	0.2159	
29 trans-1,2-Dichloroethene	96	4.458	4.470	-0.012	97	10888	0.2000	0.2080	
30 Hexane	57	4.891	4.897	-0.006	94	14606	0.2000	0.1979	
32 1,1-Dichloroethane	63	5.129	5.135	-0.006	96	20597	0.2000	0.2137	
33 Isopropyl ether	45	5.196	5.196	0.000	95	38832	0.2000	0.2114	
34 2-Chloro-1,3-butadiene	53	5.233	5.251	-0.018	95	19967	0.2000	0.2199	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
35 Tert-butyl ethyl ether	59	5.726	5.732	-0.006	97	36977	0.2000	0.2107	
36 2-Butanone (MEK)	43	5.964	5.946	0.018	95	31084	2.00	2.19	
37 cis-1,2-Dichloroethene	96	5.976	5.970	0.006	84	12683	0.2000	0.2137	
38 2,2-Dichloropropane	77	5.989	5.988	0.001	72	17391	0.2000	0.2091	
40 Propionitrile	54	6.080	6.049	0.031	88	12804	4.00	3.55	
S 42 1,2-Dichloroethene, Total	100				0			0.4217	
43 Methacrylonitrile	67	6.257	6.251	0.007	89	27261	2.00	1.95	
44 Chlorobromomethane	128	6.299	6.305	-0.006	83	5261	0.2000	0.2014	
45 Tetrahydrofuran	71	6.318	6.305	0.013	89	7984	2.00	1.98	
46 Chloroform	83	6.458	6.464	-0.006	93	20153	0.2000	0.2110	
$ 47 Dibromofluoromethane (Surr)	113	6.677	6.683	-0.006	93	459388	10.0	9.98	
48 1,1,1-Trichloroethane	97	6.671	6.683	-0.012	37	17452	0.2000	0.2028	
49 Cyclohexane	56	6.775	6.775	0.000	93	18443	0.2000	0.2027	
50 Carbon tetrachloride	117	6.891	6.891	0.000	92	14471	0.2000	0.2008	
51 1,1-Dichloropropene	75	6.897	6.897	0.000	89	16330	0.2000	0.2114	
52 Isobutyl alcohol	41	7.092	7.086	0.006	90	10703	10.0	11.6	M
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.135	7.134	0.001	0	92975	10.0	9.92	
54 Benzene	78	7.159	7.159	0.000	94	46486	0.2000	0.2090	
55 1,2-Dichloroethane	62	7.238	7.238	0.000	79	16105	0.2000	0.2402	
56 Tert-amyl methyl ether	73	7.348	7.360	-0.012	96	34074	0.2000	0.2132	
* 57 Fluorobenzene (IS)	96	7.567	7.573	-0.006	99	1936882	10.0	10.0	
58 n-Heptane	43	7.574	7.580	-0.006	37	16903	0.2000	0.2057	
59 n-Butanol	56	8.000	7.976	0.024	81	15142	20.0	19.8	M
60 Trichloroethene	95	8.049	8.049	0.000	96	11853	0.2000	0.2067	
61 Methylcyclohexane	83	8.354	8.354	0.000	87	15190	0.2000	0.1729	
62 1,2-Dichloropropane	63	8.384	8.390	-0.006	73	12253	0.2000	0.2145	
63 2-ethoxy-2-methyl butane	87	8.397	8.396	0.001	89	17738	0.2000	0.1995	
64 Methyl methacrylate	69	8.482	8.482	0.000	89	6103	0.2000	0.2047	
66 Dibromomethane	93	8.512	8.494	0.018	86	6094	0.2000	0.2180	
65 1,4-Dioxane	88	8.506	8.506	0.000	33	1094	10.0	7.20	M
67 Dichlorobromomethane	83	8.738	8.738	0.000	96	14281	0.2000	0.2071	
68 2-Nitropropane	41	9.025	9.024	0.001	99	17977	2.00	1.94	
71 1-Bromo-2-chloroethane	63	9.134	9.134	0.000	98	11914	0.2000	0.2016	
72 cis-1,3-Dichloropropene	75	9.299	9.299	0.000	93	17450	0.2000	0.2036	
73 4-Methyl-2-pentanone (MIBK)	43	9.488	9.488	0.000	98	79991	2.00	1.94	
$ 74 Toluene-d8 (Surr)	98	9.610	9.610	0.000	95	1926152	10.0	10.0	
75 Toluene	92	9.689	9.689	0.000	97	29375	0.2000	0.2037	
76 trans-1,3-Dichloropropene	75	9.957	9.957	0.000	96	14266	0.2000	0.1975	
78 Ethyl methacrylate	69	10.030	10.024	0.006	89	11251	0.2000	0.1846	
S 77 1,3-Dichloropropene, Total	100				0			0.4011	
79 1,1,2-Trichloroethane	97	10.165	10.164	0.001	91	8186	0.2000	0.2055	
80 Tetrachloroethene	166	10.244	10.250	-0.006	96	13549	0.2000	0.2103	
81 1,3-Dichloropropane	76	10.329	10.329	0.000	93	14740	0.2000	0.2099	
82 2-Hexanone	43	10.396	10.396	0.000	97	53208	2.00	1.82	
83 Chlorodibromomethane	129	10.543	10.548	-0.006	92	8028	0.2000	0.1737	
84 Ethylene Dibromide	107	10.658	10.658	0.000	99	7944	0.2000	0.2020	
* 85 Chlorobenzene-d5 (IS)	117	11.097	11.097	0.000	87	1468133	10.0	10.0	
86 1-Chlorohexane	91	11.103	11.109	-0.006	82	18891	0.2000	0.2294	
87 Chlorobenzene	112	11.122	11.122	0.000	97	34035	0.2000	0.2090	
89 1,1,1,2-Tetrachloroethane	131	11.207	11.207	0.000	93	10641	0.2000	0.1921	
90 Ethylbenzene	91	11.213	11.213	0.000	99	59671	0.2000	0.2088	
S 88 Xylenes, Total	106				0			0.5952	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
91 m-Xylene & p-Xylene	106	11.329	11.329	0.000	0	43867	0.4000	0.3928	
92 o-Xylene	106	11.664	11.664	0.000	97	22149	0.2000	0.2024	
93 Styrene	104	11.676	11.676	0.000	95	35521	0.2000	0.1934	
94 Bromoform	173	11.835	11.835	0.000	94	4087	0.2000	0.1592	
95 Isopropylbenzene	105	11.969	11.969	0.000	96	57134	0.2000	0.1974	
$ 98 4-Bromofluorobenzene (Surr)	95	12.109	12.109	0.000	90	711441	10.0	9.87	
99 1,1,2,2-Tetrachloroethane	83	12.219	12.219	0.000	62	10523	0.2000	0.2064	
100 Bromobenzene	156	12.225	12.231	-0.006	96	15119	0.2000	0.2160	
101 trans-1,4-Dichloro-2-butene	53	12.249	12.243	0.006	93	25153	2.00	1.78	
102 1,2,3-Trichloropropane	110	12.268	12.268	0.000	82	2945	0.2000	0.2122	
103 N-Propylbenzene	91	12.298	12.298	0.000	98	67115	0.2000	0.2042	
104 2-Chlorotoluene	126	12.378	12.377	0.001	97	14651	0.2000	0.2179	
105 1,3,5-Trimethylbenzene	105	12.438	12.438	0.000	92	50066	0.2000	0.2056	
106 4-Chlorotoluene	126	12.475	12.469	0.006	96	14993	0.2000	0.2146	
107 tert-Butylbenzene	134	12.682	12.682	0.000	93	12027	0.2000	0.2272	
108 Pentachloroethane	167	12.713	12.713	0.000	76	6746	0.2000	0.1706	
109 1,2,4-Trimethylbenzene	105	12.725	12.725	0.000	98	48590	0.2000	0.1945	
110 sec-Butylbenzene	105	12.847	12.847	0.000	94	63813	0.2000	0.2034	
111 1,3-Dichlorobenzene	146	12.944	12.944	0.000	97	28222	0.2000	0.2018	
112 4-Isopropyltoluene	119	12.957	12.957	0.000	98	54332	0.2000	0.1986	
* 113 1,4-Dichlorobenzene-d4	152	12.999	12.999	0.000	96	816488	10.0	10.0	
114 1,4-Dichlorobenzene	146	13.018	13.017	0.001	93	30493	0.2000	0.2119	
115 1,2,3-Trimethylbenzene	120	13.030	13.030	0.000	98	22229	0.2000	0.2027	
116 Benzyl chloride	126	13.103	13.103	0.000	98	3443	0.2000	0.1698	
119 n-Butylbenzene	92	13.249	13.249	0.000	98	26466	0.2000	0.1909	
120 1,2-Dichlorobenzene	146	13.286	13.286	0.000	97	26969	0.2000	0.2044	
118 p-Diethylbenzene	119	13.304	13.304	0.000	0	28577	0.2000	0.2057	
123 1,2-Dibromo-3-Chloropropane	155	13.841	13.834	0.007	80	1161	0.2000	0.1660	
124 1,3,5-Trichlorobenzene	180	13.963	13.956	0.007	96	22982	0.2000	0.2014	
125 1,2,4-Trichlorobenzene	180	14.395	14.383	0.012	93	21212	0.2000	0.2072	
126 Hexachlorobutadiene	225	14.469	14.468	0.001	95	10701	0.2000	0.2141	
127 Naphthalene	128	14.578	14.566	0.012	97	36400	0.2000	0.1993	
128 1,2,3-Trichlorobenzene	180	14.719	14.712	0.007	94	18586	0.2000	0.2051	
129 2-Methylnaphthalene	142	15.353	15.340	0.013	0	23157	0.2000	0.1876	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

MSV_RV1_826_00022	Amount Added:	2.00	Units: uL	
MSV_RV4_826_00024	Amount Added:	2.00	Units: uL	
MSV_RV4GAS826_00072	Amount Added:	2.00	Units: uL	
MSV_25_826ISS_00001	Amount Added:	1.00	Units: uL	Run Reagent

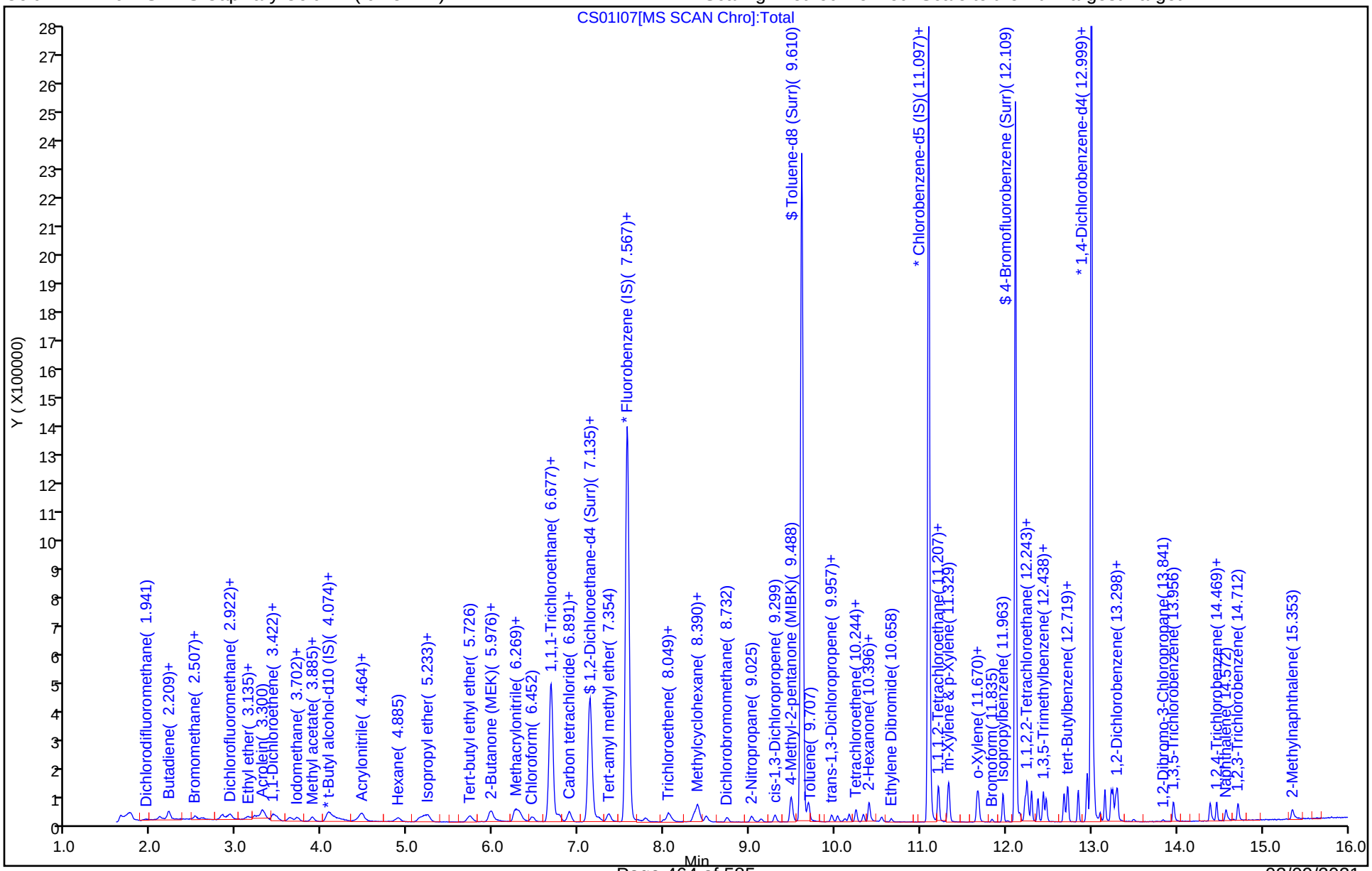
Report Date: 01-Sep-2020 20:11:07 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I07.D

Injection Date:	01-Sep-2020 15:48:30	Instrument ID:	10193	Operator ID:	dvv10203
Lims ID:	IC STD1			Worklist Smp#:	9
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

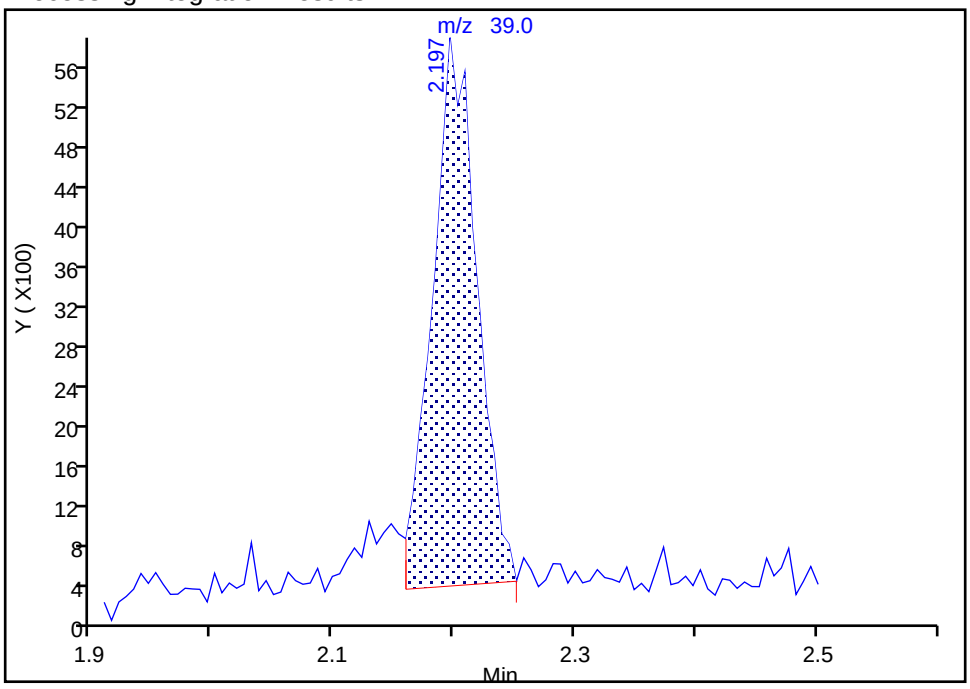
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I07.D
Injection Date: 01-Sep-2020 15:48:30 Instrument ID: 10193
Lims ID: IC STD1
Client ID:
Operator ID: dvv10203 ALS Bottle#: 8 Worklist Smp#: 9
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

4 Butadiene, CAS: 106-99-0

Signal: 1

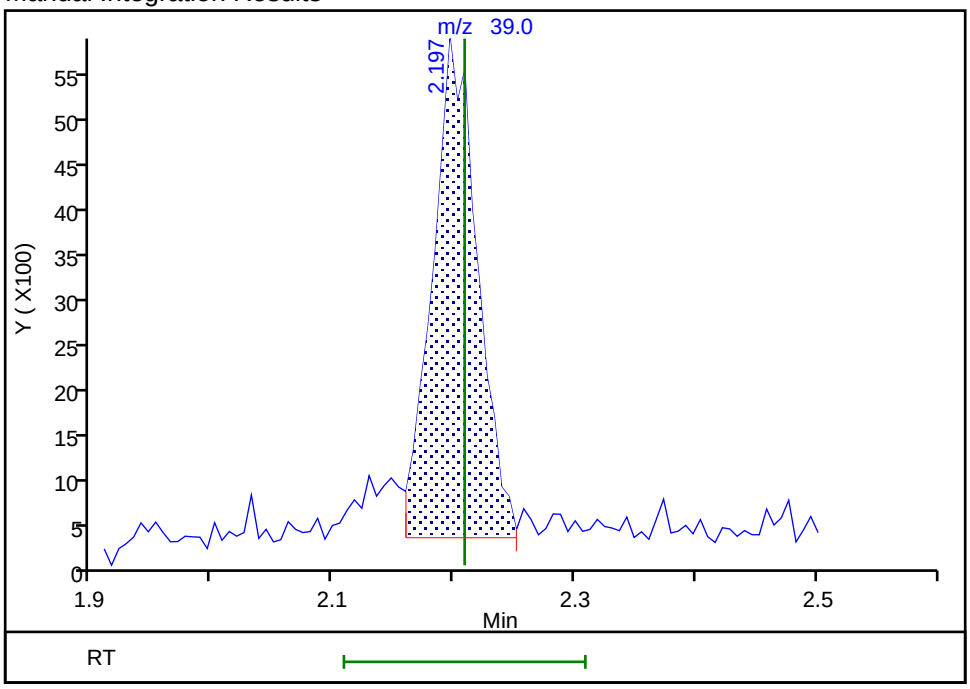
Processing Integration Results

RT: 2.20
Area: 14080
Amount: 0.203738
Amount Units: ug/l



Manual Integration Results

RT: 2.20
Area: 14355
Amount: 0.207128
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:06:05
Audit Action: Assigned New Baseline Audit Reason: Baseline

Eurofins Lancaster Laboratories Env, LLC

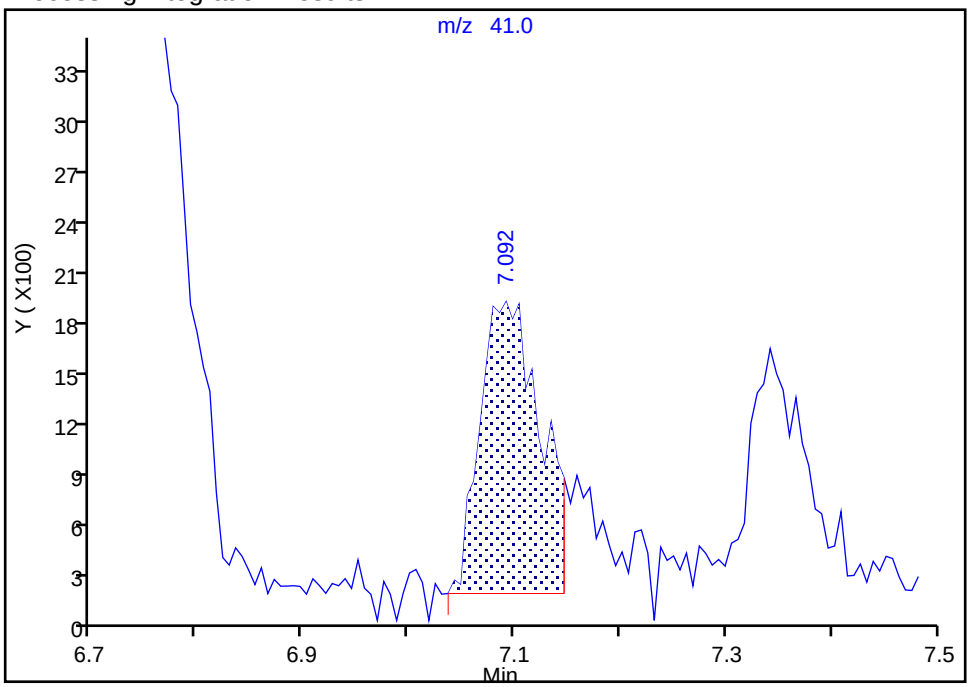
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I07.D
Injection Date: 01-Sep-2020 15:48:30 Instrument ID: 10193
Lims ID: IC STD1
Client ID:
Operator ID: dvv10203 ALS Bottle#: 8 Worklist Smp#: 9
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

52 Isobutyl alcohol, CAS: 78-83-1

Signal: 1

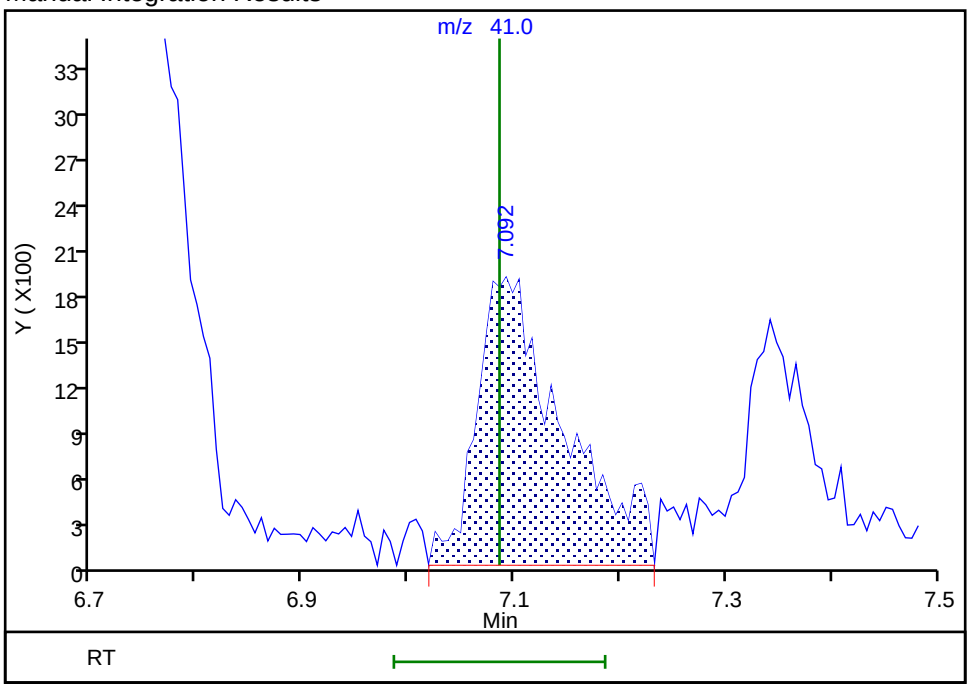
Processing Integration Results

RT: 7.09
Area: 6884
Amount: 7.941417
Amount Units: ug/l



Manual Integration Results

RT: 7.09
Area: 10703
Amount: 11.615957
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:06:35
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

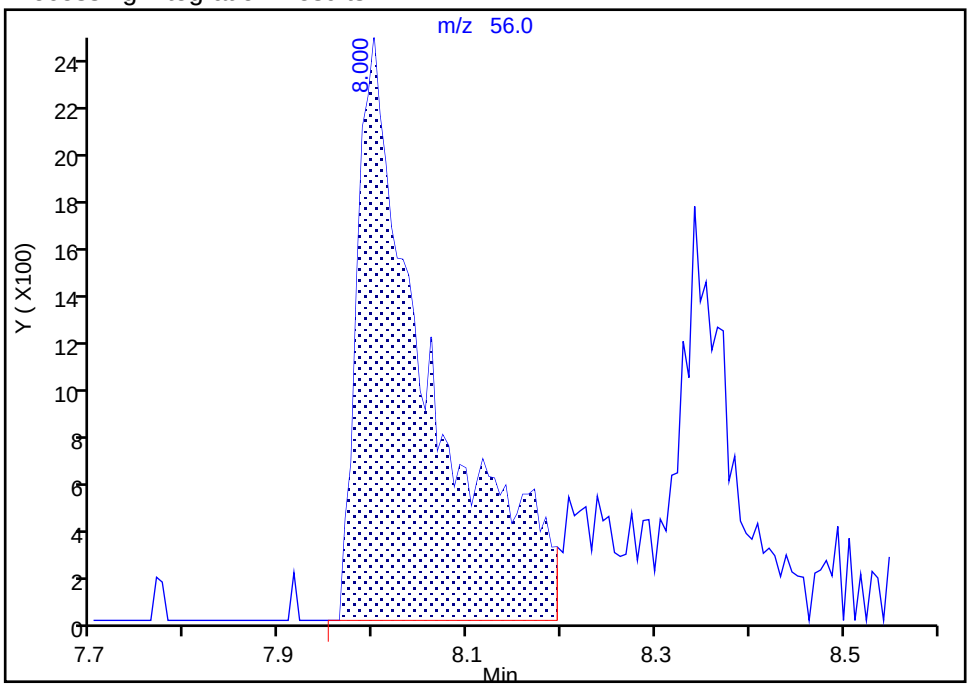
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I07.D
Injection Date: 01-Sep-2020 15:48:30 Instrument ID: 10193
Lims ID: IC STD1
Client ID:
Operator ID: dvv10203 ALS Bottle#: 8 Worklist Smp#: 9
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

59 n-Butanol, CAS: 71-36-3

Signal: 1

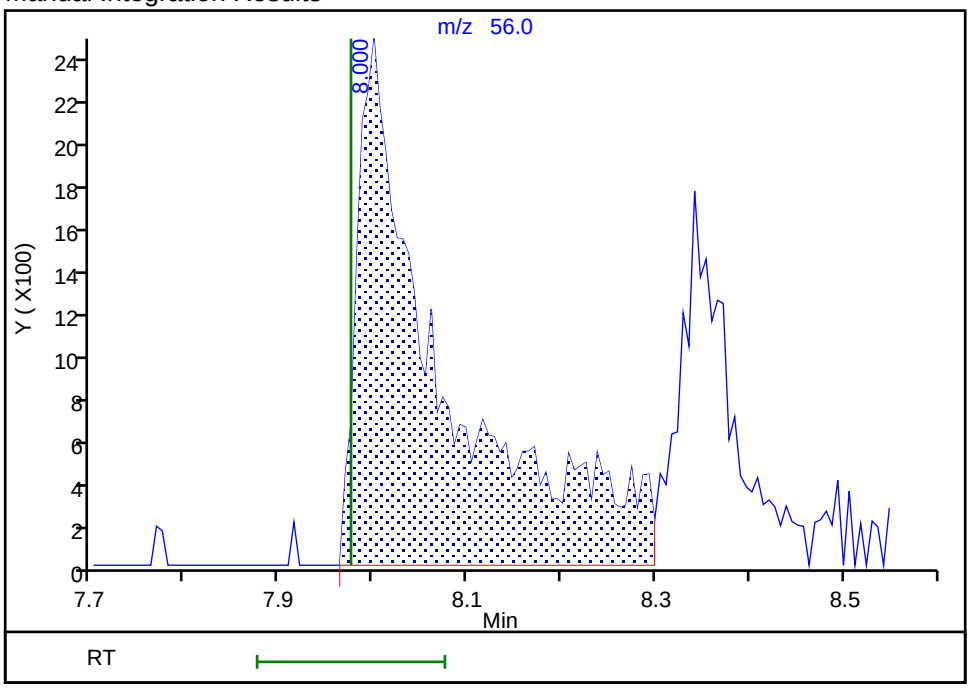
Processing Integration Results

RT: 8.00
Area: 12828
Amount: 17.171709
Amount Units: ug/l



Manual Integration Results

RT: 8.00
Area: 15142
Amount: 19.830500
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:17:24
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

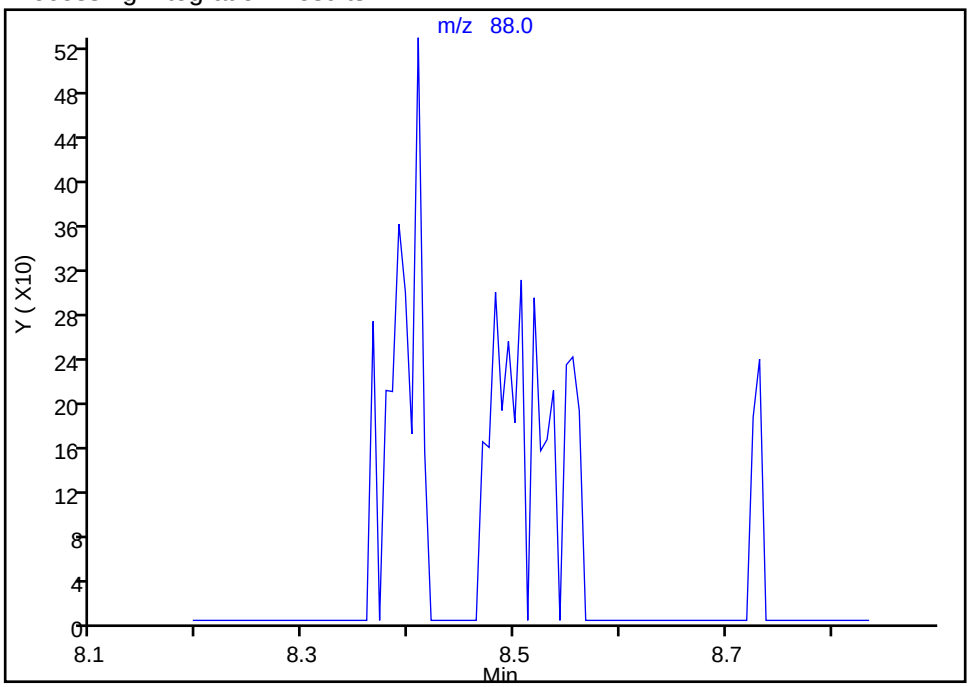
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I07.D
Injection Date: 01-Sep-2020 15:48:30 Instrument ID: 10193
Lims ID: IC STD1
Client ID:
Operator ID: dvv10203 ALS Bottle#: 8 Worklist Smp#: 9
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

65 1,4-Dioxane, CAS: 123-91-1

Signal: 1

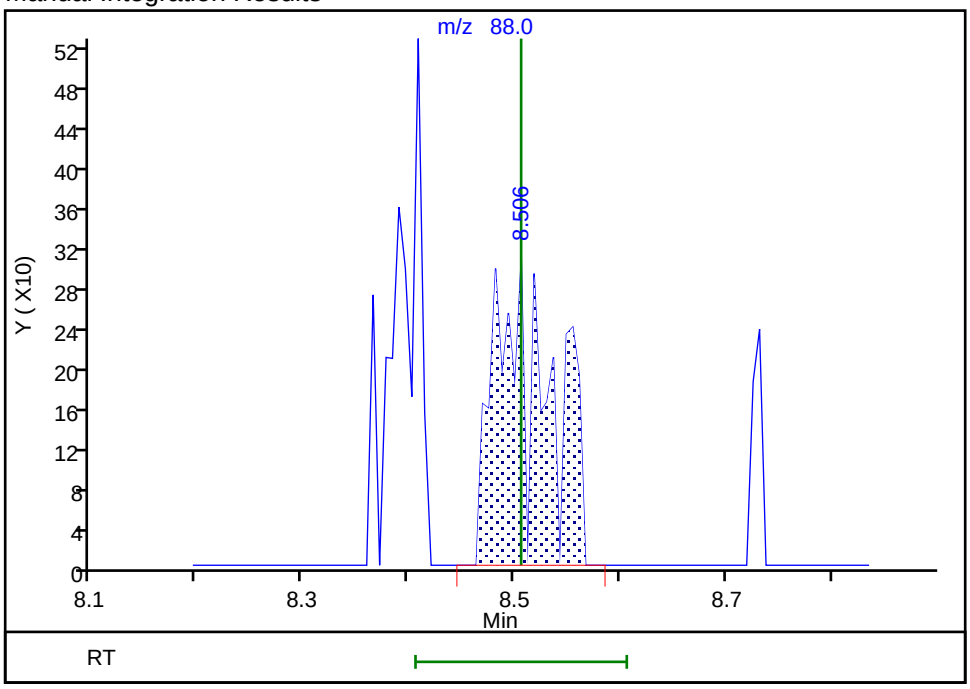
Not Detected
Expected RT: 8.51

Processing Integration Results



Manual Integration Results

RT: 8.51
Area: 1094
Amount: 7.195617
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:06:44
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

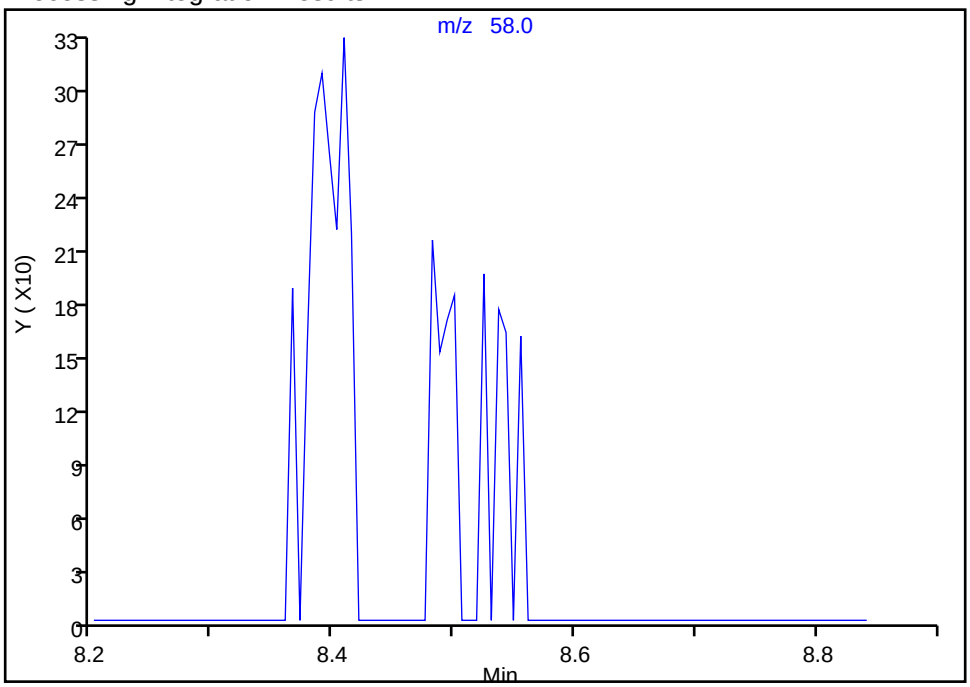
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I07.D
Injection Date: 01-Sep-2020 15:48:30 Instrument ID: 10193
Lims ID: IC STD1
Client ID:
Operator ID: dvv10203 ALS Bottle#: 8 Worklist Smp#: 9
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

65 1,4-Dioxane, CAS: 123-91-1

Signal: 2

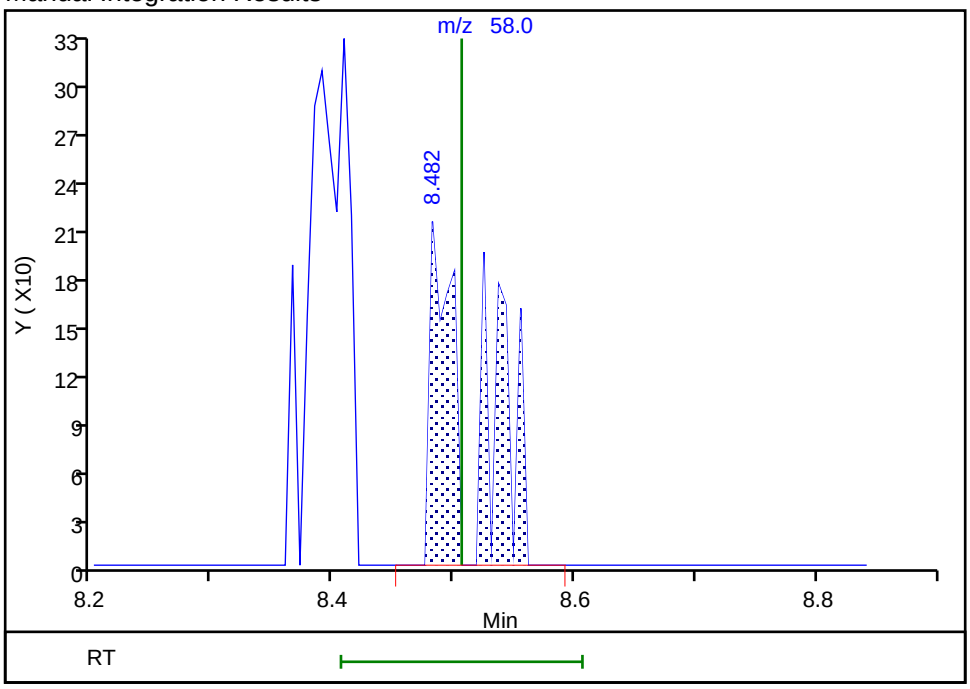
Not Detected
Expected RT: 8.51

Processing Integration Results



Manual Integration Results

RT: 8.48
Area: 515
Amount: 7.195617
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:06:48
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-27746-1

SDG No.:

Lab Sample ID: ICV 410-39724/10 Calibration Date: 09/01/2020 16:10

Instrument ID: 10193 Calib Start Date: 09/01/2020 13:35

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 09/01/2020 15:48

Lab File ID: CS01V01.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3227	0.2655	0.1000	4.11	5.00	-17.7	30.0
Chloromethane	Ave	0.3804	0.3562	0.1000	4.68	5.00	-6.4	30.0
1,3-Butadiene	Ave	0.3578	0.2620		3.66	5.00	-26.8	30.0
Vinyl chloride	Ave	0.3517	0.3461	0.1000	4.92	5.00	-1.6	30.0
Bromomethane	Ave	0.2482	0.2411	0.1000	4.86	5.00	-2.9	30.0
Chloroethane	Ave	0.2173	0.2006	0.1000	4.62	5.00	-7.7	30.0
Dichlorofluoromethane	Ave	0.4713	0.4600		4.88	5.00	-2.4	30.0
Trichlorofluoromethane	Ave	0.4575	0.4312	0.1000	4.71	5.00	-5.8	30.0
Ethyl ether	Ave	0.2318	0.2359		5.09	5.01	1.8	30.0
Freon 123a	Ave	0.3397	0.3020		4.45	5.00	-11.1	30.0
Acrolein	Ave	2.001	1.892		35.5	37.5	-5.4	30.0
1,1-Dichloroethene	Ave	0.2312	0.2117	0.1000	4.58	5.00	-8.4	30.0
Freon 113	Ave	0.2352	0.1884	0.1000	4.01	5.00	-19.9	30.0
Acetone	Ave	2.125	2.093	0.1000	36.9	37.5	-1.5	30.0
Methyl iodide	Ave	0.4567	0.3802		4.16	5.00	-16.8	30.0
Ethyl bromide	Ave	0.1920	0.1921		4.94	4.93	0.0	30.0
Carbon disulfide	Ave	0.8167	0.6841	0.1000	4.19	5.00	-16.2	30.0
Methyl acetate	Ave	8.350	6.856	0.1000	4.11	5.00	-17.9	30.0
Allyl chloride	Ave	0.4045	0.3946		4.88	5.00	-2.5	30.0
Methylene Chloride	Ave	0.2573	0.2481	0.1000	4.82	5.00	-3.6	30.0
t-Butyl alcohol	Ave	0.996	0.9520		47.8	50.0	-4.4	30.0
Acrylonitrile	Ave	3.375	3.260		24.1	25.0	-3.4	30.0
Methyl tert-butyl ether	Ave	0.7484	0.6818	0.1000	4.55	5.00	-8.9	30.0
trans-1,2-Dichloroethene	Ave	0.2703	0.2572	0.1000	4.76	5.00	-4.8	30.0
n-Hexane	Ave	0.3811	0.3137		4.12	5.00	-17.7	30.0
1,1-Dichloroethane	Ave	0.4975	0.4811	0.2000	4.84	5.00	-3.3	30.0
di-Isopropyl ether	Ave	0.9484	0.8957		4.72	5.00	-5.6	30.0
2-Chloro-1,3-butadiene	Ave	0.4688	0.4198		4.48	5.00	-10.5	30.0
Ethyl t-butyl ether	Ave	0.9061	0.8489		4.68	5.00	-6.3	30.0
2-Butanone (MEK)	Ave	4.984	4.790	0.1000	36.0	37.5	-3.9	30.0
cis-1,2-Dichloroethene	Ave	0.3064	0.3042	0.1000	4.96	5.00	-0.7	30.0
2,2-Dichloropropane	Ave	0.4293	0.4087		4.76	5.00	-4.8	30.0
Propionitrile	Ave	1.265	1.271		37.7	37.5	0.5	30.0
Methacrylonitrile	Ave	4.902	4.714		36.1	37.5	-3.8	30.0
Bromochloromethane	Ave	0.1349	0.1264		4.68	5.00	-6.3	30.0
Tetrahydrofuran	Ave	1.410	1.351		24.0	25.0	-4.2	30.0
Chloroform	Ave	0.4930	0.4756	0.2000	4.82	5.00	-3.5	30.0
1,1,1-Trichloroethane	Ave	0.4442	0.4159	0.1000	4.68	5.00	-6.4	30.0
Cyclohexane	Ave	0.4697	0.4135	0.1000	4.40	5.00	-12.0	30.0
Carbon tetrachloride	Ave	0.3722	0.3538	0.1000	4.75	5.00	-4.9	30.0
1,1-Dichloropropene	Ave	0.3988	0.3706		4.65	5.00	-7.1	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-27746-1

SDG No.:

Lab Sample ID: ICV 410-39724/10 Calibration Date: 09/01/2020 16:10

Instrument ID: 10193 Calib Start Date: 09/01/2020 13:35

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 09/01/2020 15:48

Lab File ID: CS01V01.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Isobutyl alcohol	Ave	0.3229	0.2828		109	125	-12.4	30.0
Benzene	Ave	1.149	1.092	0.5000	4.75	5.00	-5.0	30.0
1,2-Dichloroethane	Ave	0.3462	0.3217	0.1000	4.65	5.00	-7.1	30.0
t-Amyl methyl ether	Ave	0.8253	0.7936		4.81	5.00	-3.8	30.0
n-Heptane	Ave	0.4242	0.3694		4.35	5.00	-12.9	30.0
n-Butanol	Ave	0.2676	0.2616		244	250	-2.2	30.0
Trichloroethene	Ave	0.2961	0.2842	0.2000	4.80	5.00	-4.0	30.0
Methylcyclohexane	Ave	0.4535	0.4365	0.1000	4.81	5.00	-3.7	30.0
1,2-Dichloropropane	Ave	0.2950	0.2906	0.1000	4.93	5.00	-1.5	30.0
Methyl methacrylate	Ave	10.45	10.05		4.81	5.00	-3.8	30.0
Dibromomethane	Ave	0.1443	0.1405		4.87	5.00	-2.6	30.0
1,4-Dioxane	Ave	0.0533	0.0559	0.0050	131	125	5.0	30.0
Bromodichloromethane	Ave	0.3561	0.3507	0.2000	4.92	5.00	-1.5	30.0
2-Nitropropane	Ave	3.241	2.885		4.45	5.00	-11.0	30.0
1-Bromo-2-chloroethane	Ave	0.3051	0.3043		4.99	5.00	-0.2	30.0
cis-1,3-Dichloropropene	Ave	0.4426	0.4313	0.2000	4.87	5.00	-2.5	30.0
4-Methyl-2-pentanone (MIBK)	Ave	14.48	13.77	0.1000	23.8	25.0	-4.9	30.0
Toluene	Ave	0.9823	0.9494	0.4000	4.83	5.00	-3.4	30.0
trans-1,3-Dichloropropene	Ave	0.4919	0.4842	0.1000	4.92	5.00	-1.6	30.0
Ethyl methacrylate	Ave	0.4151	0.4260		5.13	5.00	2.6	30.0
1,1,2-Trichloroethane	Ave	0.2713	0.2787	0.1000	5.14	5.00	2.7	30.0
Tetrachloroethene	Ave	0.4389	0.4223	0.2000	4.81	5.00	-3.8	30.0
1,3-Dichloropropane	Ave	0.4783	0.4650		4.86	5.00	-2.8	30.0
2-Hexanone	Ave	10.23	10.23	0.1000	25.0	25.0	-0.0	30.0
Dibromochloromethane	Ave	0.3148	0.3277		5.21	5.00	4.1	30.0
1,2-Dibromoethane (EDB)	Ave	0.2679	0.2650	0.1000	4.95	5.00	-1.1	30.0
1-Chlorohexane	Ave	0.5609	0.5151		4.59	5.00	-8.2	30.0
Chlorobenzene	Ave	1.109	1.087	0.5000	4.90	5.00	-2.0	30.0
1,1,1,2-Tetrachloroethane	Ave	0.3774	0.3730		4.94	5.00	-1.2	30.0
Ethylbenzene	Ave	1.947	1.889	0.1000	4.85	5.00	-3.0	30.0
m&p-Xylene	Ave	0.7608	0.7544	0.1000	9.92	10.0	-0.8	30.0
o-Xylene	Ave	0.7453	0.7426	0.3000	4.98	5.00	-0.4	30.0
Styrene	Ave	1.251	1.265	0.3000	5.06	5.00	1.2	30.0
Bromoform	Ave	0.1748	0.1830	0.1000	5.23	5.00	4.7	30.0
Isopropylbenzene	Ave	1.971	1.961	0.1000	4.97	5.00	-0.6	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6245	0.6168	0.3000	4.94	5.00	-1.2	30.0
Bromobenzene	Ave	0.8574	0.8335		4.86	5.00	-2.8	30.0
trans-1,4-Dichloro-2-butene	Ave	0.1729	0.1773		25.6	25.0	2.5	30.0
1,2,3-Trichloropropane	Ave	0.1700	0.1678		4.94	5.00	-1.3	30.0
N-Propylbenzene	Ave	4.026	4.008		4.98	5.00	-0.5	30.0
2-Chlorotoluene	Ave	0.8233	0.8004		4.86	5.00	-2.8	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-27746-1

SDG No.:

Lab Sample ID: ICV 410-39724/10 Calibration Date: 09/01/2020 16:10

Instrument ID: 10193 Calib Start Date: 09/01/2020 13:35

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 09/01/2020 15:48

Lab File ID: CS01V01.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,3,5-Trimethylbenzene	Ave	2.982	2.928		4.91	5.00	-1.8	30.0
4-Chlorotoluene	Ave	0.8558	0.8396		4.91	5.00	-1.9	30.0
tert-Butylbenzene	Ave	0.6485	0.6174		4.76	5.00	-4.8	30.0
Pentachloroethane	Ave	0.4842	0.4885		5.04	5.00	0.9	30.0
1,2,4-Trimethylbenzene	Ave	3.060	2.989		4.88	5.00	-2.3	30.0
sec-Butylbenzene	Ave	3.843	3.781		4.92	5.00	-1.6	30.0
1,3-Dichlorobenzene	Ave	1.713	1.693	0.6000	4.94	5.00	-1.1	30.0
p-Isopropyltoluene	Ave	3.351	3.368		5.03	5.00	0.5	30.0
1,4-Dichlorobenzene	Ave	1.763	1.744	0.5000	4.95	5.00	-1.1	30.0
1,2,3-Trimethylbenzene	Ave	1.343	1.414		5.26	5.00	5.3	30.0
Benzyl chloride	Ave	0.2484	0.2561		5.16	5.00	3.1	30.0
n-Butylbenzene	Ave	1.698	1.693		4.99	5.00	-0.3	30.0
1,2-Dichlorobenzene	Ave	1.616	1.619	0.4000	5.01	5.00	0.2	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.0856	0.0908	0.0500	5.30	5.00	6.0	30.0
1,3,5-Trichlorobenzene	Ave	1.397	1.368		4.89	5.00	-2.1	30.0
1,2,4-Trichlorobenzene	Ave	1.254	1.256	0.2000	5.01	5.00	0.2	30.0
Hexachlorobutadiene	Ave	0.6122	0.6020		4.92	5.00	-1.7	30.0
Naphthalene	Ave	2.236	2.184		4.88	5.00	-2.4	30.0
1,2,3-Trichlorobenzene	Ave	1.110	1.084		4.88	5.00	-2.4	30.0
Dibromofluoromethane (Surr)	Ave	0.2376	0.2368		9.97	10.0	-0.3	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.0484	0.0489		10.1	10.0	1.0	30.0
Toluene-d8 (Surr)	Ave	1.306	1.306		10.0	10.0	0.0	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4909	0.4964		10.1	10.0	1.1	30.0

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01V01.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 01-Sep-2020 16:10:30 ALS Bottle#: 9 Worklist Smp#: 10
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: ICV
Misc. Info.: 410-0009503-010
Operator ID: dvv10203 Instrument ID: 10193
Sublist:

Method: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 01-Sep-2020 20:14:46 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1048

First Level Reviewer: campbellme Date: 01-Sep-2020 17:33:29

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.916	1.910	0.006	99	264279	5.00	4.11	M
3 Chloromethane	50	2.105	2.099	0.006	99	354625	5.00	4.68	
4 Butadiene	39	2.209	2.209	0.000	94	260871	5.00	3.66	M
5 Vinyl chloride	62	2.215	2.215	0.000	98	344571	5.00	4.92	
6 Bromomethane	94	2.520	2.520	0.000	91	240018	5.00	4.86	
7 Chloroethane	64	2.605	2.605	0.000	99	199689	5.00	4.62	
8 Dichlorofluoromethane	67	2.837	2.837	0.000	97	457908	5.00	4.88	
9 Trichlorofluoromethane	101	2.897	2.898	-0.001	99	429242	5.00	4.71	
11 Ethyl ether	59	3.135	3.135	0.000	92	235125	5.01	5.09	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.221	3.208	0.013	92	300678	5.00	4.45	
13 Acrolein	56	3.306	3.306	0.000	98	210460	37.5	35.5	
14 1,1-Dichloroethene	96	3.434	3.428	0.006	96	210789	5.00	4.58	
15 112TCTFE	101	3.464	3.464	0.000	92	187589	5.00	4.01	M
16 Acetone	43	3.471	3.471	0.000	99	232764	37.5	36.9	
17 Iodomethane	142	3.623	3.617	0.006	99	378488	5.00	4.16	
19 Ethyl bromide	108	3.647	3.641	0.006	99	188731	4.93	4.94	
18 Isopropyl alcohol	45	3.629	3.647	-0.018	72	39562	37.5	36.3	
20 Carbon disulfide	76	3.714	3.708	0.006	100	681004	5.00	4.19	
22 Methyl acetate	43	3.867	3.867	0.000	98	101664	5.00	4.11	
23 3-Chloro-1-propene	41	3.885	3.891	-0.006	88	392813	5.00	4.88	
24 Methylene Chloride	84	4.074	4.074	0.000	95	247001	5.00	4.82	
* 25 t-Butyl alcohol-d10 (IS)	65	4.111	4.117	-0.006	98	148288	50.0	50.0	M
26 2-Methyl-2-propanol	59	4.227	4.227	0.000	97	141172	50.0	47.8	
27 Acrylonitrile	53	4.409	4.409	0.000	99	241713	25.0	24.1	
28 Methyl tert-butyl ether	73	4.464	4.464	0.000	97	678723	5.00	4.55	
29 trans-1,2-Dichloroethene	96	4.470	4.470	0.000	98	256056	5.00	4.76	
30 Hexane	57	4.897	4.897	0.000	95	312253	5.00	4.12	
32 1,1-Dichloroethane	63	5.135	5.135	0.000	96	478958	5.00	4.84	
33 Isopropyl ether	45	5.196	5.196	0.000	93	891675	5.00	4.72	
34 2-Chloro-1,3-butadiene	53	5.245	5.251	-0.006	93	417876	5.00	4.48	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
35 Tert-butyl ethyl ether	59	5.732	5.732	0.000	97	845060	5.00	4.68	
36 2-Butanone (MEK)	43	5.946	5.946	0.000	100	532750	37.5	36.0	
37 cis-1,2-Dichloroethene	96	5.976	5.970	0.006	84	302828	5.00	4.96	
38 2,2-Dichloropropane	77	5.988	5.988	0.000	71	406838	5.00	4.76	
40 Propionitrile	54	6.049	6.049	0.000	97	141387	37.5	37.7	M
43 Methacrylonitrile	67	6.250	6.251	0.000	94	524313	37.5	36.1	
44 Chlorobromomethane	128	6.311	6.305	0.006	94	125796	5.00	4.68	
45 Tetrahydrofuran	71	6.311	6.305	0.006	91	100170	25.0	24.0	
46 Chloroform	83	6.464	6.464	0.000	94	473508	5.00	4.82	
$ 47 Dibromofluoromethane (Surr)	113	6.683	6.683	0.000	93	471541	10.0	9.97	
48 1,1,1-Trichloroethane	97	6.683	6.683	0.000	99	414044	5.00	4.68	
49 Cyclohexane	56	6.769	6.775	-0.006	93	411644	5.00	4.40	
50 Carbon tetrachloride	117	6.891	6.891	0.000	95	352249	5.00	4.75	
51 1,1-Dichloropropene	75	6.897	6.897	0.000	94	368901	5.00	4.65	
52 Isobutyl alcohol	41	7.080	7.086	-0.006	94	104834	125.0	109.5	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.134	7.134	0.000	0	97321	10.0	10.1	
54 Benzene	78	7.159	7.159	0.000	97	1086680	5.00	4.75	
55 1,2-Dichloroethane	62	7.238	7.238	0.000	97	320287	5.00	4.65	
56 Tert-amyl methyl ether	73	7.354	7.360	-0.006	98	790095	5.00	4.81	
* 57 Fluorobenzene (IS)	96	7.573	7.567	0.006	98	1991070	10.0	10.0	
58 n-Heptane	43	7.580	7.580	0.000	93	367740	5.00	4.35	
59 n-Butanol	56	7.976	7.976	0.000	91	193947	250.0	244.4	M
60 Trichloroethene	95	8.049	8.049	0.000	97	282972	5.00	4.80	
61 Methylcyclohexane	83	8.354	8.354	0.000	92	434594	5.00	4.81	
62 1,2-Dichloropropane	63	8.390	8.390	0.000	93	289309	5.00	4.93	
63 2-ethoxy-2-methyl butane	87	8.396	8.396	0.000	91	450498	5.00	4.93	
64 Methyl methacrylate	69	8.482	8.482	0.000	92	149094	5.00	4.81	
66 Dibromomethane	93	8.500	8.494	0.006	96	139880	5.00	4.87	
65 1,4-Dioxane	88	8.506	8.506	0.000	29	20737	125.0	131.2	M
67 Dichlorobromomethane	83	8.738	8.738	0.000	99	349091	5.00	4.92	
68 2-Nitropropane	41	9.024	9.024	0.000	98	42778	5.00	4.45	
69 2-Chloroethyl vinyl ether	63		9.116				ND	ND	
71 1-Bromo-2-chloroethane	63	9.134	9.134	0.000	99	302961	5.00	4.99	
72 cis-1,3-Dichloropropene	75	9.299	9.299	0.000	93	429373	5.00	4.87	
73 4-Methyl-2-pentanone (MIBK)	43	9.488	9.488	0.000	98	1020805	25.0	23.8	
$ 74 Toluene-d8 (Surr)	98	9.610	9.610	0.000	94	1974214	10.0	10.0	
75 Toluene	92	9.689	9.689	0.000	97	717293	5.00	4.83	
76 trans-1,3-Dichloropropene	75	9.957	9.957	0.000	96	365821	5.00	4.92	
78 Ethyl methacrylate	69	10.024	10.024	0.000	90	321895	5.00	5.13	
79 1,1,2-Trichloroethane	97	10.164	10.164	0.000	91	210589	5.00	5.14	
80 Tetrachloroethene	166	10.244	10.250	-0.006	97	319078	5.00	4.81	
81 1,3-Dichloropropane	76	10.329	10.329	0.000	94	351288	5.00	4.86	
82 2-Hexanone	43	10.390	10.396	-0.006	97	758216	25.0	25.0	
83 Chlorodibromomethane	129	10.548	10.548	0.000	90	247564	5.00	5.21	
84 Ethylene Dibromide	107	10.658	10.658	0.000	99	200231	5.00	4.95	
* 85 Chlorobenzene-d5 (IS)	117	11.097	11.097	0.000	87	1511072	10.0	10.0	
86 1-Chlorohexane	91	11.109	11.109	0.000	98	389170	5.00	4.59	
87 Chlorobenzene	112	11.121	11.122	-0.001	94	821508	5.00	4.90	
89 1,1,1,2-Tetrachloroethane	131	11.207	11.207	0.000	94	281793	5.00	4.94	
90 Ethylbenzene	91	11.213	11.213	0.000	98	1427334	5.00	4.85	
91 m-Xylene & p-Xylene	106	11.329	11.329	0.000	0	1139958	10.0	9.92	
92 o-Xylene	106	11.658	11.664	-0.006	97	561093	5.00	4.98	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
93 Styrene	104	11.676	11.676	0.000	95	956073	5.00	5.06	
94 Bromoform	173	11.835	11.835	0.000	96	138272	5.00	5.23	
95 Isopropylbenzene	105	11.963	11.969	-0.006	96	1481268	5.00	4.97	
$ 98 4-Bromofluorobenzene (Surr)	95	12.109	12.109	0.000	91	750136	10.0	10.1	
99 1,1,2,2-Tetrachloroethane	83	12.219	12.219	0.000	94	271685	5.00	4.94	
100 Bromobenzene	156	12.225	12.231	-0.006	95	367124	5.00	4.86	
101 trans-1,4-Dichloro-2-butene	53	12.243	12.243	0.000	93	390404	25.0	25.6	
102 1,2,3-Trichloropropane	110	12.262	12.268	-0.006	83	73933	5.00	4.94	
103 N-Propylbenzene	91	12.298	12.298	0.000	99	1765255	5.00	4.98	
104 2-Chlorotoluene	126	12.371	12.377	-0.006	96	352540	5.00	4.86	
105 1,3,5-Trimethylbenzene	105	12.438	12.438	0.000	94	1289854	5.00	4.91	
106 4-Chlorotoluene	126	12.469	12.469	0.000	98	369849	5.00	4.91	
107 tert-Butylbenzene	134	12.682	12.682	0.000	93	271974	5.00	4.76	
108 Pentachloroethane	167	12.713	12.713	0.000	92	215173	5.00	5.04	
109 1,2,4-Trimethylbenzene	105	12.725	12.725	0.000	97	1316654	5.00	4.88	
110 sec-Butylbenzene	105	12.847	12.847	0.000	94	1665555	5.00	4.92	
111 1,3-Dichlorobenzene	146	12.944	12.944	0.000	98	745869	5.00	4.94	
112 4-Isopropyltoluene	119	12.957	12.957	-0.001	97	1483427	5.00	5.03	
* 113 1,4-Dichlorobenzene-d4	152	12.999	12.999	0.000	96	880960	10.0	10.0	
114 1,4-Dichlorobenzene	146	13.017	13.017	0.000	95	768103	5.00	4.95	
115 1,2,3-Trimethylbenzene	120	13.030	13.030	0.000	99	622827	5.00	5.26	
116 Benzyl chloride	126	13.097	13.103	-0.006	99	112804	5.00	5.16	
119 n-Butylbenzene	92	13.249	13.249	0.000	97	745894	5.00	4.99	
120 1,2-Dichlorobenzene	146	13.280	13.286	-0.006	98	713058	5.00	5.01	
118 p-Diethylbenzene	119	13.304	13.304	0.000	0	749866	5.00	5.00	
123 1,2-Dibromo-3-Chloropropane	155	13.834	13.834	0.000	86	39996	5.00	5.30	
124 1,3,5-Trichlorobenzene	180	13.956	13.956	0.000	97	602454	5.00	4.89	
125 1,2,4-Trichlorobenzene	180	14.383	14.383	0.000	94	553460	5.00	5.01	
126 Hexachlorobutadiene	225	14.468	14.468	0.000	98	265181	5.00	4.92	
127 Naphthalene	128	14.566	14.566	0.000	97	961807	5.00	4.88	
128 1,2,3-Trichlorobenzene	180	14.712	14.712	0.000	96	477279	5.00	4.88	
129 2-Methylnaphthalene	142	15.334	15.340	-0.006	0	607671	5.00	4.56	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MSV_Q_QVOA1_00044	Amount Added:	12.50	Units: uL	
MSV_Q_QARC_00043	Amount Added:	12.50	Units: uL	
MSV_Q_QVOA6_00041	Amount Added:	12.50	Units: uL	
MSV_Q_EE_00002	Amount Added:	12.50	Units: uL	
MSV_Q_ETBR_00003	Amount Added:	12.50	Units: uL	
MSV_QGAS_826_00069	Amount Added:	12.50	Units: uL	
MSV_25_826ISS_00001	Amount Added:	1.00	Units: uL	Run Reagent

Report Date: 01-Sep-2020 20:59:13 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01V01.D

Injection Date: 01-Sep-2020 16:10:30 Instrument ID: 10193 Operator ID: dvv10203

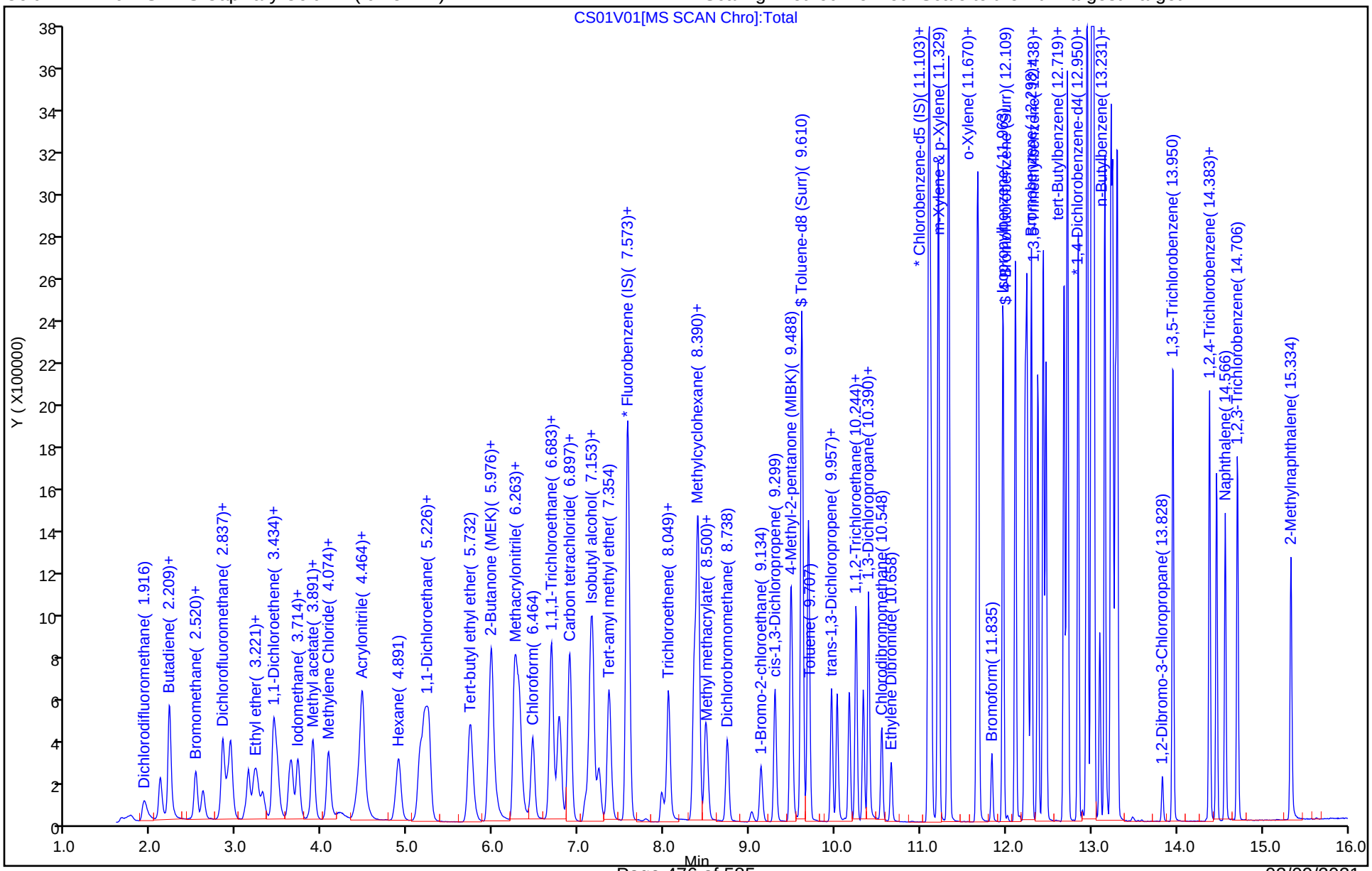
Lims ID: ICV Worklist Smp#: 10

Client ID:

Purge Vol: 25.000 mL Dil. Factor: 1.0000 ALS Bottle#: 9

Method: MSV_10193_25mL Limit Group: MSV - 8260C_D

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

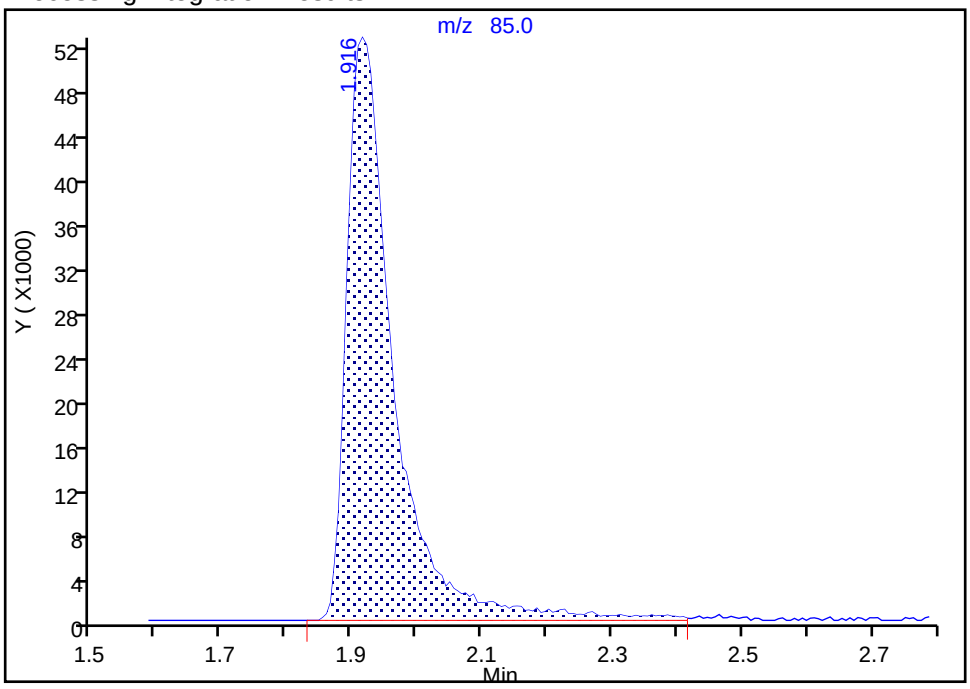
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01V01.D
Injection Date: 01-Sep-2020 16:10:30 Instrument ID: 10193
Lims ID: ICV
Client ID:
Operator ID: dvv10203 ALS Bottle#: 9 Worklist Smp#: 10
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

2 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

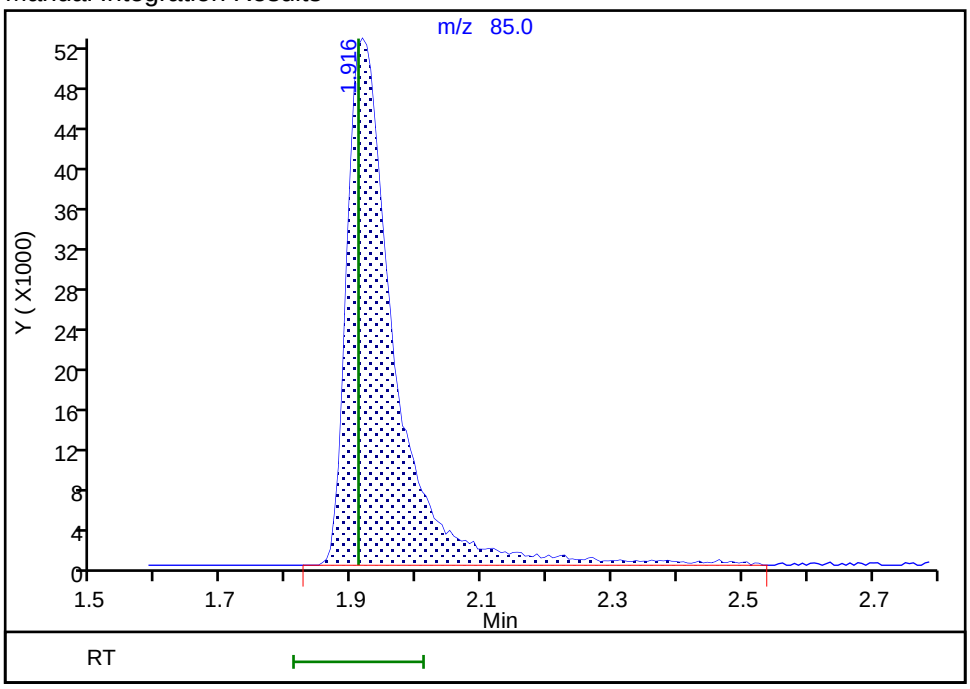
Processing Integration Results

RT: 1.92
Area: 262611
Amount: 4.087385
Amount Units: ug/l



Manual Integration Results

RT: 1.92
Area: 264279
Amount: 4.113346
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:26:05
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

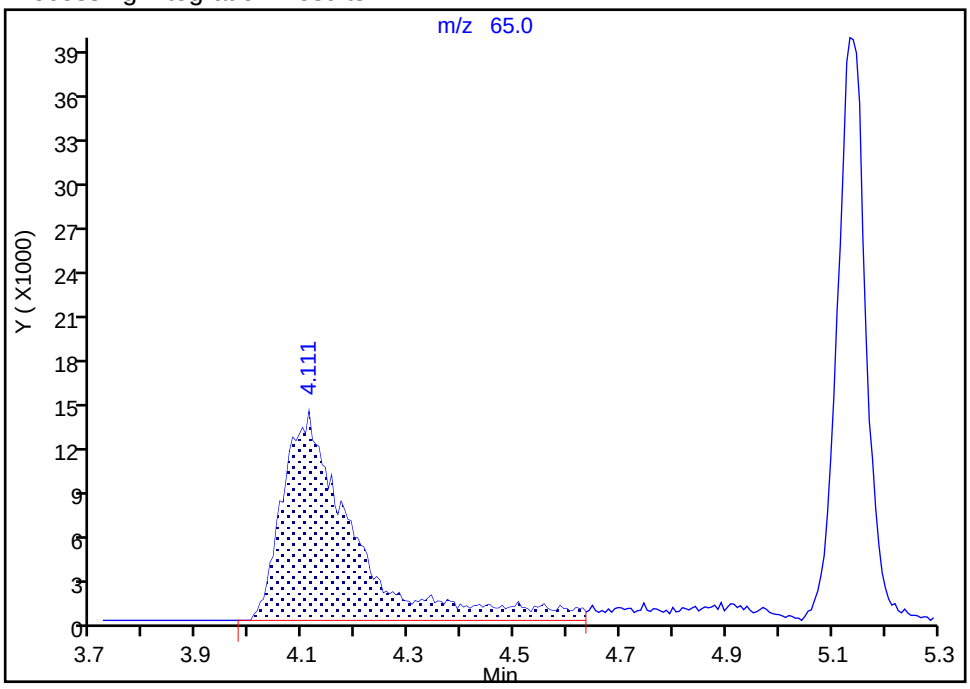
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01V01.D
Injection Date: 01-Sep-2020 16:10:30 Instrument ID: 10193
Lims ID: ICV
Client ID:
Operator ID: dvv10203 ALS Bottle#: 9 Worklist Smp#: 10
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

* 25 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

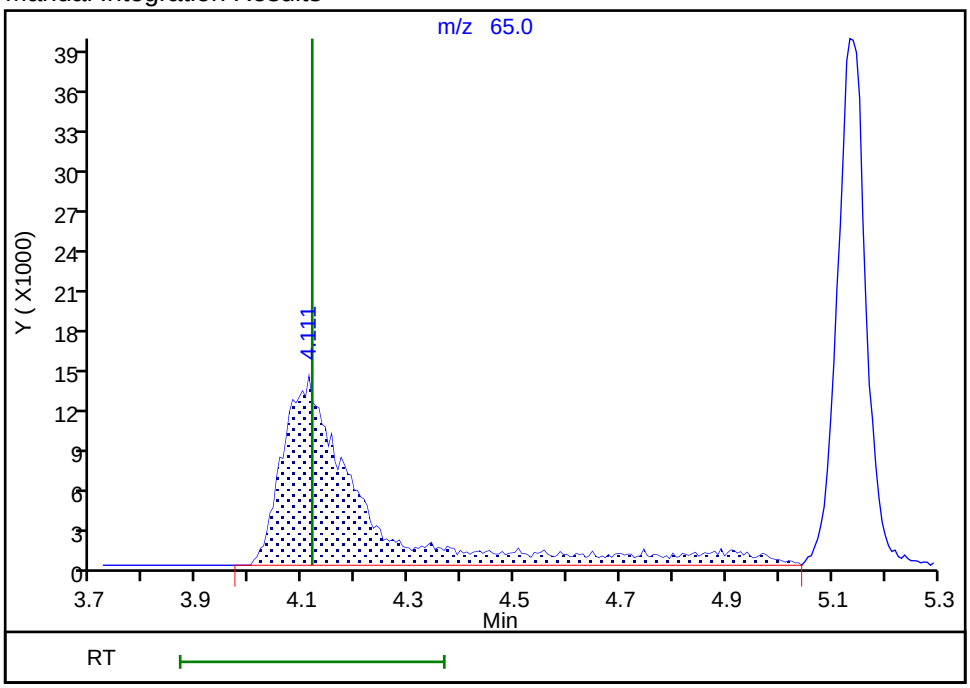
Processing Integration Results

RT: 4.11
Area: 131313
Amount: 50.000000
Amount Units: ug/l



Manual Integration Results

RT: 4.11
Area: 148288
Amount: 50.000000
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:26:30
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

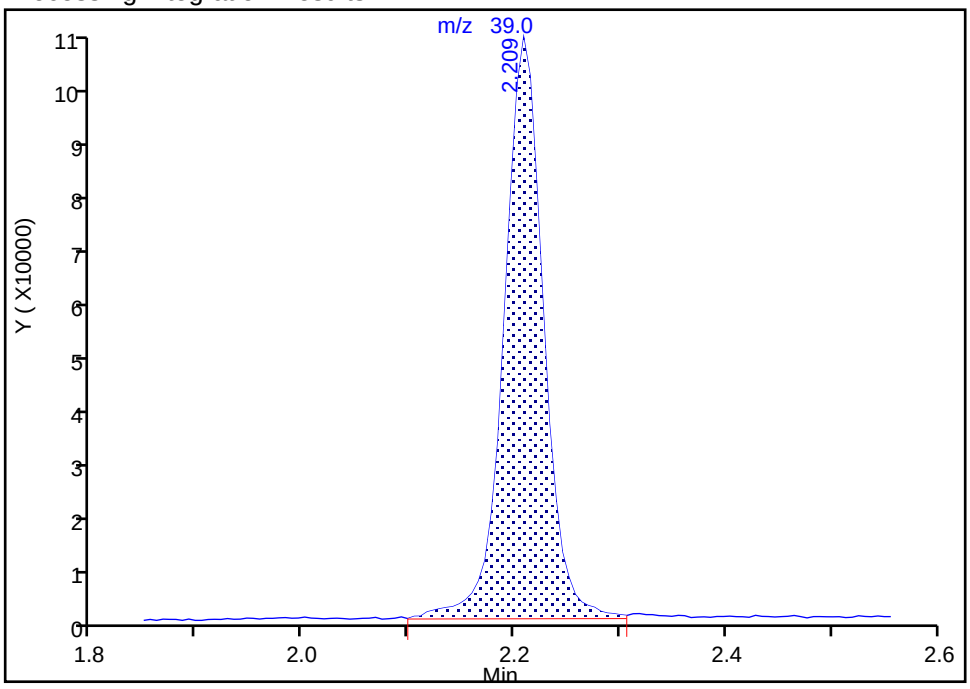
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01V01.D
Injection Date: 01-Sep-2020 16:10:30 Instrument ID: 10193
Lims ID: ICV
Client ID:
Operator ID: dvv10203 ALS Bottle#: 9 Worklist Smp#: 10
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

4 Butadiene, CAS: 106-99-0

Signal: 1

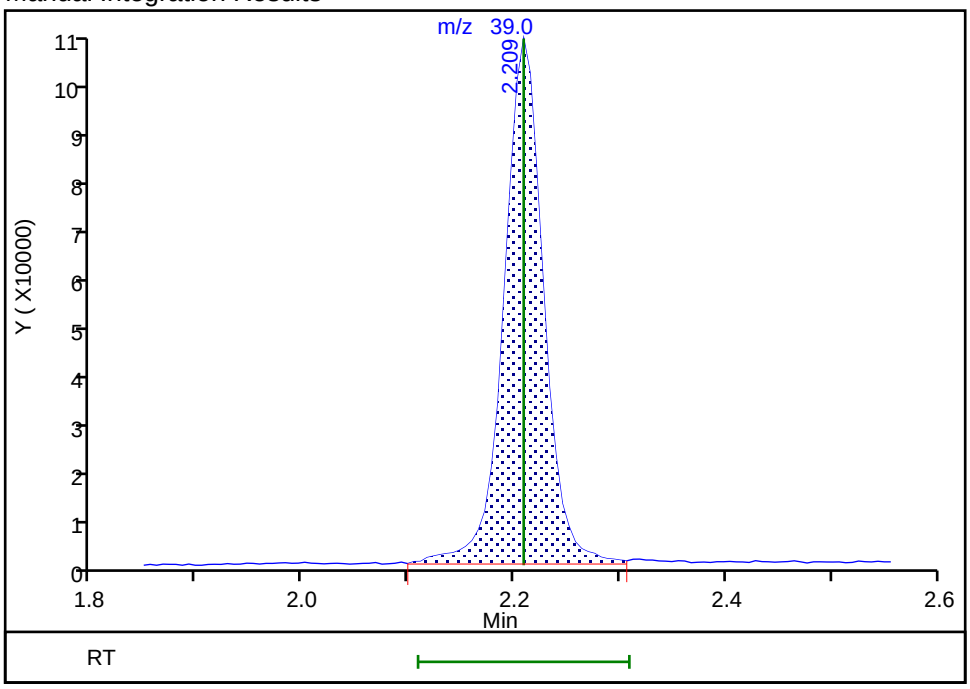
Processing Integration Results

RT: 2.21
Area: 260372
Amount: 3.654662
Amount Units: ug/l



Manual Integration Results

RT: 2.21
Area: 260871
Amount: 3.661667
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:30:49
Audit Action: Assigned New Baseline Audit Reason: Baseline

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

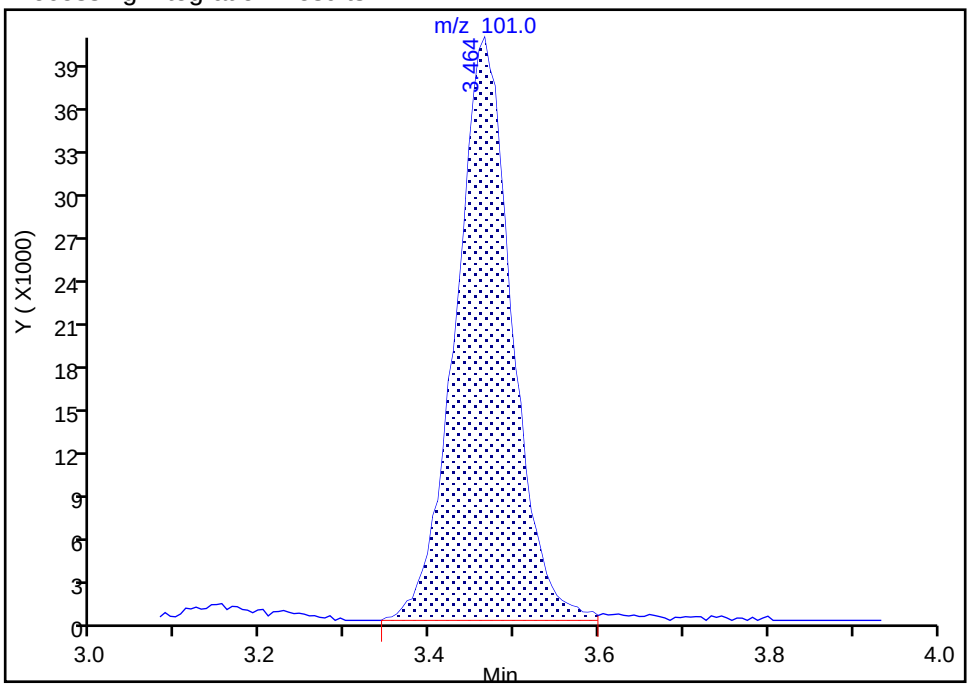
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01V01.D
Injection Date: 01-Sep-2020 16:10:30 Instrument ID: 10193
Lims ID: ICV
Client ID:
Operator ID: dvv10203 ALS Bottle#: 9 Worklist Smp#: 10
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

15 112TCTFE, CAS: 76-13-1

Signal: 1

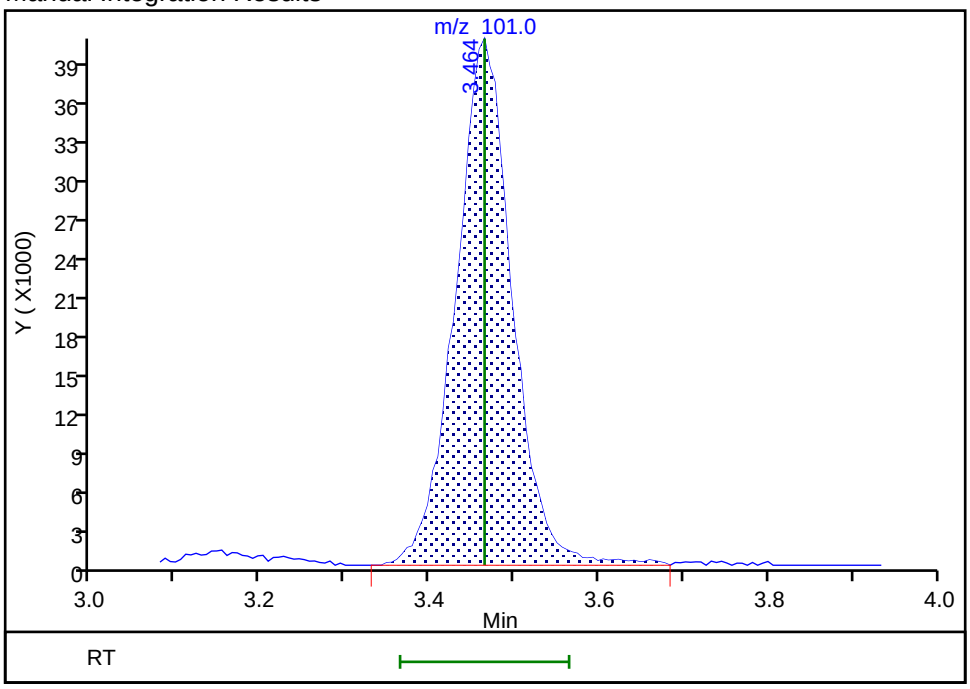
Processing Integration Results

RT: 3.46
Area: 185974
Amount: 3.971572
Amount Units: ug/l



Manual Integration Results

RT: 3.46
Area: 187589
Amount: 4.006061
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:31:05
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

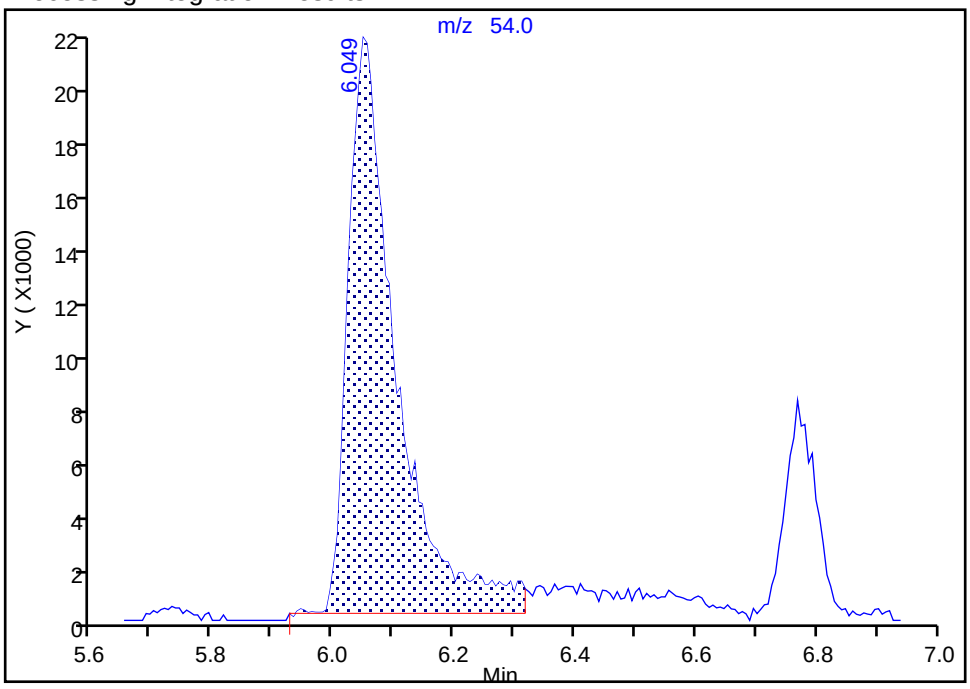
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01V01.D
Injection Date: 01-Sep-2020 16:10:30 Instrument ID: 10193
Lims ID: ICV
Client ID:
Operator ID: dvv10203 ALS Bottle#: 9 Worklist Smp#: 10
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

40 Propionitrile, CAS: 107-12-0

Signal: 1

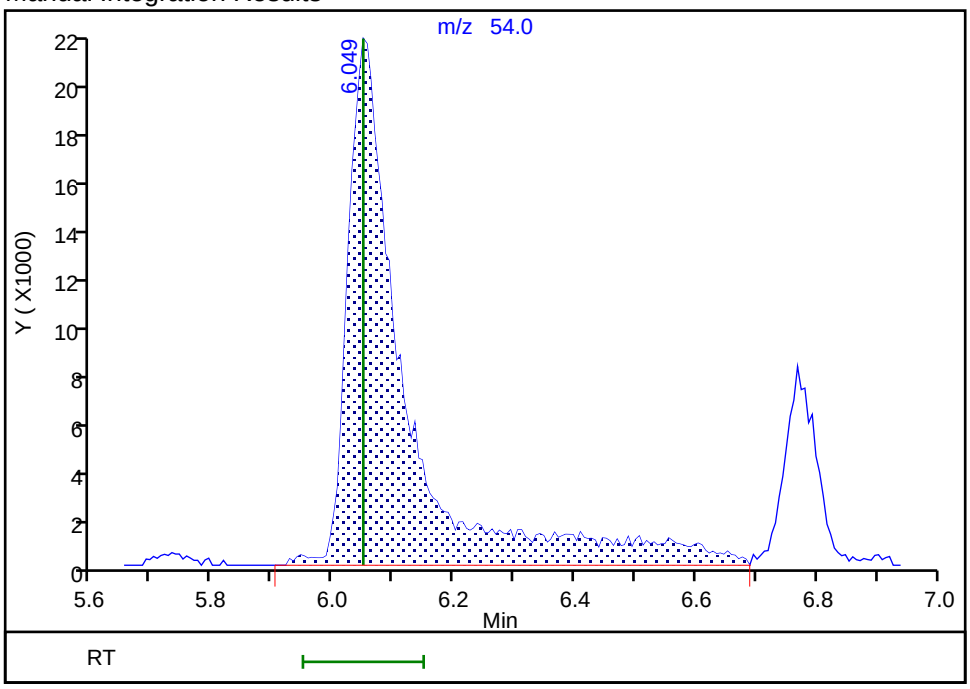
Processing Integration Results

RT: 6.05
Area: 115982
Amount: 30.917165
Amount Units: ug/l



Manual Integration Results

RT: 6.05
Area: 141387
Amount: 37.689341
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:27:06
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

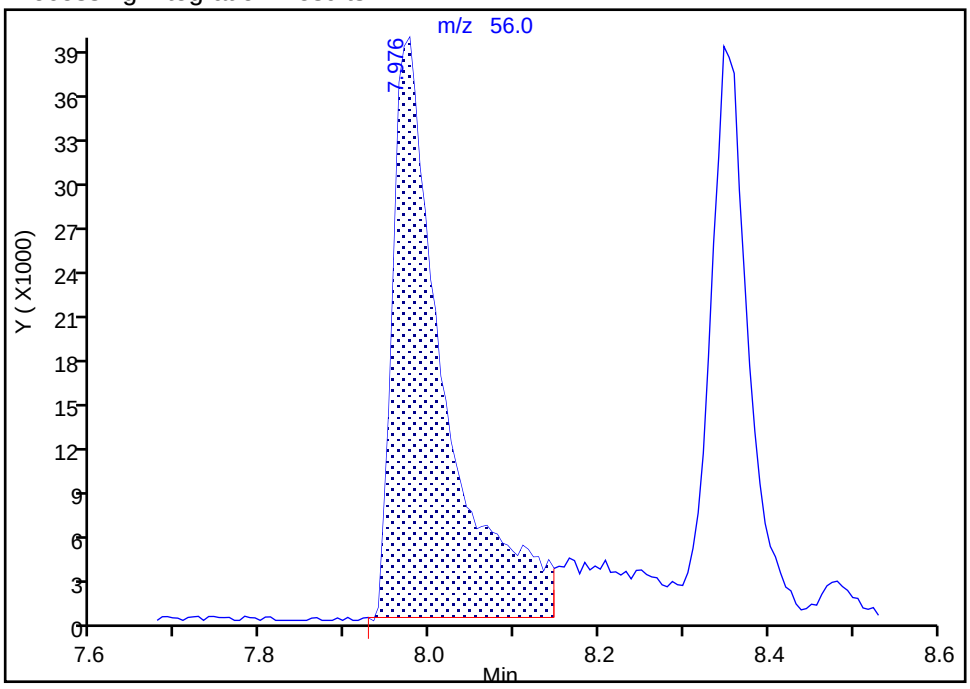
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01V01.D
Injection Date: 01-Sep-2020 16:10:30 Instrument ID: 10193
Lims ID: ICV
Client ID:
Operator ID: dvv10203 ALS Bottle#: 9 Worklist Smp#: 10
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

59 n-Butanol, CAS: 71-36-3

Signal: 1

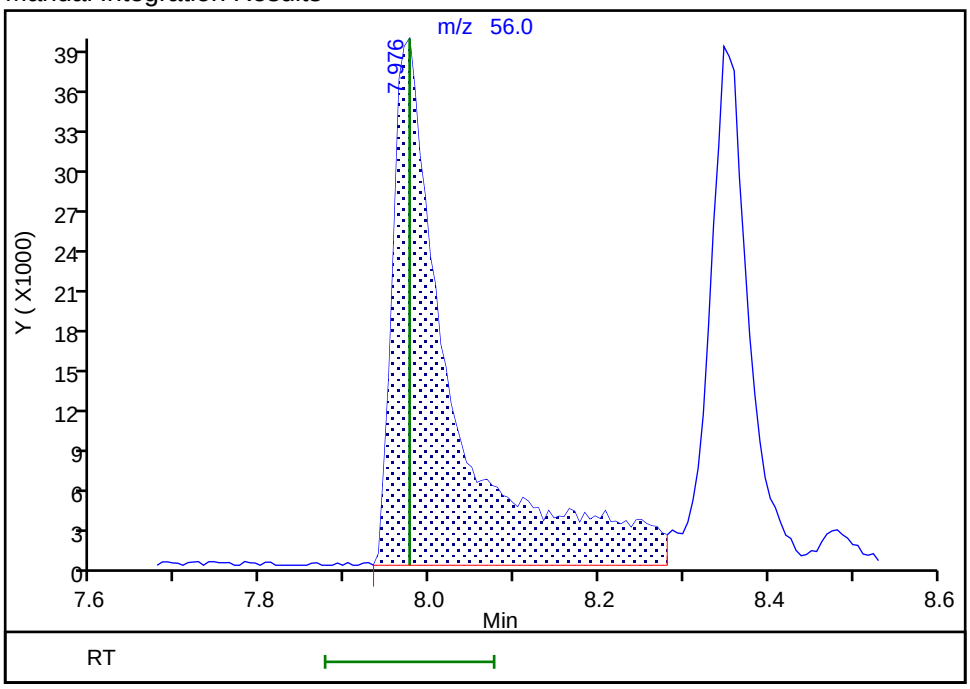
Processing Integration Results

RT: 7.98
Area: 164567
Amount: 207.3677
Amount Units: ug/l



Manual Integration Results

RT: 7.98
Area: 193947
Amount: 244.3889
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:28:44
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

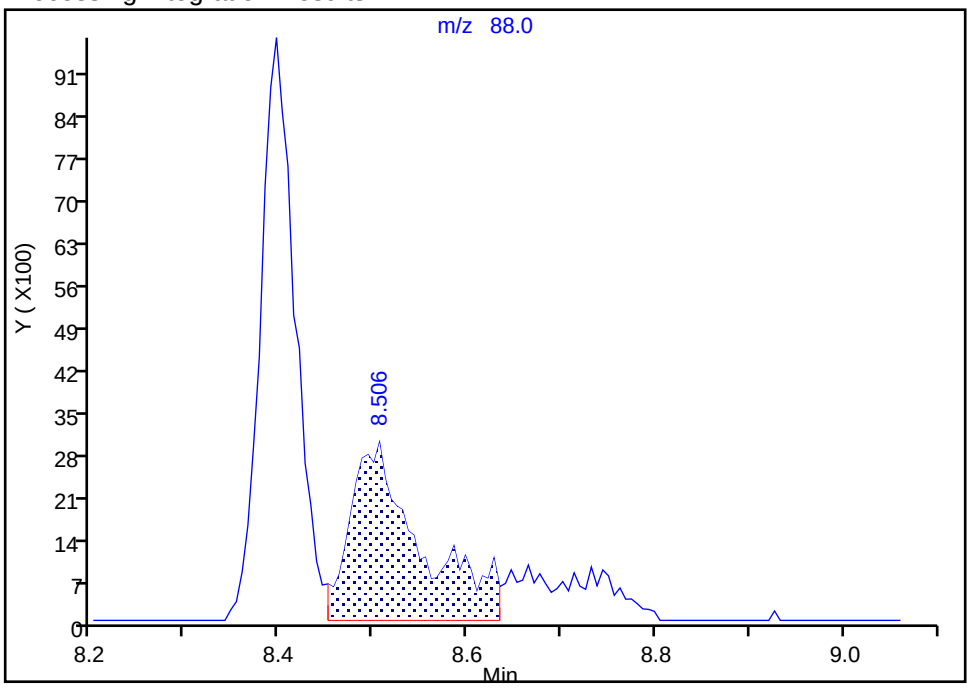
Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01V01.D
Injection Date: 01-Sep-2020 16:10:30 Instrument ID: 10193
Lims ID: ICV
Client ID:
Operator ID: dvv10203 ALS Bottle#: 9 Worklist Smp#: 10
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

65 1,4-Dioxane, CAS: 123-91-1

Signal: 1

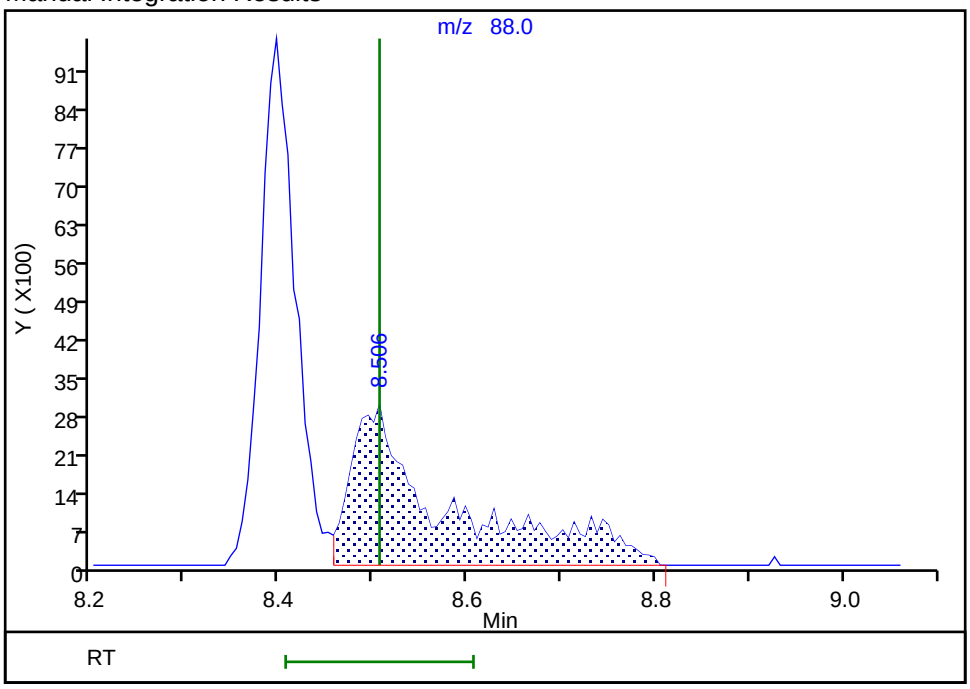
Processing Integration Results

RT: 8.51
Area: 15392
Amount: 97.407800
Amount Units: ug/l



Manual Integration Results

RT: 8.51
Area: 20737
Amount: 131.2335
Amount Units: ug/l



Reviewer: campbellme, 01-Sep-2020 17:26:53
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-27746-1

SDG No.:

Lab Sample ID: CCVIS 410-90352/3 Calibration Date: 02/03/2021 09:34

Instrument ID: 10193 Calib Start Date: 09/01/2020 13:35

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 09/01/2020 15:48

Lab File ID: CF02C01.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3227	0.2734	0.1000	8.47	10.0	-15.3	20.0
Chloromethane	Ave	0.3804	0.5096	0.1000	13.4	10.0	34.0*	20.0
1,3-Butadiene	Ave	0.3578	0.6695		18.7	10.0	87.1*	20.0
Vinyl chloride	Ave	0.3517	0.2767	0.1000	7.87	10.0	-21.3*	20.0
Bromomethane	Ave	0.2482	0.1959	0.1000	7.89	10.0	-21.1*	20.0
Chloroethane	Ave	0.2173	0.1706	0.1000	7.85	10.0	-21.5*	20.0
Dichlorofluoromethane	Ave	0.4713	0.2711		5.75	10.0	-42.5*	20.0
Trichlorofluoromethane	Ave	0.4575	0.3500	0.1000	7.65	10.0	-23.5*	20.0
Ethyl ether	Ave	0.2318	0.1999		8.63	10.0	-13.7	20.0
Freon 123a	Ave	0.3397	0.2437		7.17	10.0	-28.3*	20.0
Acrolein	Ave	2.001	1.818		454	500	-9.1	20.0
1,1-Dichloroethene	Ave	0.2312	0.1954	0.1000	8.45	10.0	-15.5	20.0
Acetone	Ave	2.125	2.253	0.1000	106	100	6.0	20.0
Freon 113	Ave	0.2352	0.2062	0.1000	8.77	10.0	-12.3	20.0
Methyl iodide	Ave	0.4567	0.3985		8.72	10.0	-12.8	20.0
Ethyl bromide	Ave	0.1920	0.1849		9.64	10.0	-3.7	20.0
Carbon disulfide	Ave	0.8167	0.6848	0.1000	8.39	10.0	-16.1	20.0
Methyl acetate	Ave	8.350	7.282	0.1000	8.72	10.0	-12.8	20.0
Allyl chloride	Ave	0.4045	0.3557		8.79	10.0	-12.1	20.0
Methylene Chloride	Ave	0.2573	0.2305	0.1000	8.96	10.0	-10.4	20.0
t-Butyl alcohol	Ave	0.996	1.035		208	200	4.0	20.0
Acrylonitrile	Ave	3.375	3.510		52.0	50.0	4.0	20.0
Methyl tert-butyl ether	Ave	0.7484	0.6772	0.1000	9.05	10.0	-9.5	20.0
trans-1,2-Dichloroethene	Ave	0.2703	0.2318	0.1000	8.57	10.0	-14.3	20.0
n-Hexane	Ave	0.3811	0.3562		9.35	10.0	-6.5	20.0
1,1-Dichloroethane	Ave	0.4975	0.4333	0.2000	8.71	10.0	-12.9	20.0
di-Isopropyl ether	Ave	0.9484	0.8414		8.87	10.0	-11.3	20.0
2-Chloro-1,3-butadiene	Ave	0.4688	0.3800		8.11	10.0	-18.9	20.0
Ethyl t-butyl ether	Ave	0.9061	0.8016		8.85	10.0	-11.5	20.0
2-Butanone (MEK)	Ave	4.984	5.111	0.1000	103	100	2.6	20.0
cis-1,2-Dichloroethene	Ave	0.3064	0.2711	0.1000	8.85	10.0	-11.5	20.0
2,2-Dichloropropane	Ave	0.4293	0.3528		8.22	10.0	-17.8	20.0
Propionitrile	Ave	1.265	1.310		207	200	3.6	20.0
Methacrylonitrile	Ave	4.902	4.745		96.8	100	-3.2	20.0
Bromochloromethane	Ave	0.1349	0.1321		9.80	10.0	-2.0	20.0
Tetrahydrofuran	Ave	1.410	1.392		98.7	100	-1.3	20.0
Chloroform	Ave	0.4930	0.4178	0.2000	8.47	10.0	-15.3	20.0
1,1,1-Trichloroethane	Ave	0.4442	0.3622	0.1000	8.15	10.0	-18.5	20.0
Cyclohexane	Ave	0.4697	0.4305	0.1000	9.17	10.0	-8.3	20.0
Carbon tetrachloride	Ave	0.3722	0.3134	0.1000	8.42	10.0	-15.8	20.0
1,1-Dichloropropene	Ave	0.3988	0.3437		8.62	10.0	-13.8	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-27746-1

SDG No.:

Lab Sample ID: CCVIS 410-90352/3 Calibration Date: 02/03/2021 09:34

Instrument ID: 10193 Calib Start Date: 09/01/2020 13:35

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 09/01/2020 15:48

Lab File ID: CF02C01.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Isobutyl alcohol	Ave	0.3229	0.3879		601	500	20.1*	20.0
Benzene	Ave	1.149	1.036	0.5000	9.02	10.0	-9.8	20.0
1,2-Dichloroethane	Ave	0.3462	0.2876	0.1000	8.31	10.0	-16.9	20.0
t-Amyl methyl ether	Ave	0.8253	0.7461		9.04	10.0	-9.6	20.0
n-Heptane	Ave	0.4242	0.4113		9.69	10.0	-3.1	20.0
n-Butanol	Ave	0.2676	0.3798		1420	1000	41.9*	20.0
Trichloroethene	Ave	0.2961	0.2632	0.2000	8.89	10.0	-11.1	20.0
Methylcyclohexane	Ave	0.4535	0.4483	0.1000	9.89	10.0	-1.1	20.0
1,2-Dichloropropane	Ave	0.2950	0.2768	0.1000	9.38	10.0	-6.2	20.0
1,4-Dioxane	Ave	0.0533	0.0703	0.0050	660	500	32.0*	20.0
Methyl methacrylate	Ave	10.45	9.181		8.79	10.0	-12.1	20.0
Dibromomethane	Ave	0.1443	0.1347		9.33	10.0	-6.7	20.0
Bromodichloromethane	Ave	0.3561	0.3164	0.2000	8.89	10.0	-11.1	20.0
2-Nitropropane	Ave	3.241	2.732		84.3	100	-15.7	20.0
1-Bromo-2-chloroethane	Ave	0.3051	0.2976		9.75	10.0	-2.5	20.0
cis-1,3-Dichloropropene	Ave	0.4426	0.4109	0.2000	9.29	10.0	-7.1	20.0
4-Methyl-2-pentanone (MIBK)	Ave	14.48	13.35	0.1000	92.2	100	-7.8	20.0
Toluene	Ave	0.9823	0.8871	0.4000	9.03	10.0	-9.7	20.0
trans-1,3-Dichloropropene	Ave	0.4919	0.4572	0.1000	9.29	10.0	-7.1	20.0
Ethyl methacrylate	Ave	0.4151	0.4236		10.2	10.0	2.0	20.0
1,1,2-Trichloroethane	Ave	0.2713	0.2633	0.1000	9.70	10.0	-3.0	20.0
Tetrachloroethene	Ave	0.4389	0.3907	0.2000	8.90	10.0	-11.0	20.0
1,3-Dichloropropane	Ave	0.4783	0.4665		9.75	10.0	-2.5	20.0
2-Hexanone	Ave	10.23	9.850	0.1000	96.3	100	-3.7	20.0
Dibromochloromethane	Ave	0.3148	0.3077		9.78	10.0	-2.2	20.0
1,2-Dibromoethane (EDB)	Ave	0.2679	0.2585	0.1000	9.65	10.0	-3.5	20.0
1-Chlorohexane	Ave	0.5609	0.4959		8.84	10.0	-11.6	20.0
Chlorobenzene	Ave	1.109	1.030	0.5000	9.28	10.0	-7.2	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3774	0.3537		9.37	10.0	-6.3	20.0
Ethylbenzene	Ave	1.947	1.727	0.1000	8.87	10.0	-11.3	20.0
m&p-Xylene	Ave	0.7608	0.6918	0.1000	18.2	20.0	-9.1	20.0
o-Xylene	Ave	0.7453	0.6777	0.3000	9.09	10.0	-9.1	20.0
Styrene	Ave	1.251	1.178	0.3000	9.42	10.0	-5.8	20.0
Bromoform	Ave	0.1748	0.1874	0.1000	10.7	10.0	7.2	20.0
Isopropylbenzene	Ave	1.971	1.750	0.1000	8.87	10.0	-11.3	20.0
1,1,2,2-Tetrachloroethane	Ave	0.6245	0.6156	0.3000	9.86	10.0	-1.4	20.0
Bromobenzene	Ave	0.8574	0.7988		9.32	10.0	-6.8	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1729	0.0974		56.3	100	-43.7*	20.0
1,2,3-Trichloropropane	Ave	0.1700	0.1621		9.54	10.0	-4.6	20.0
N-Propylbenzene	Ave	4.026	3.664		9.10	10.0	-9.0	20.0
2-Chlorotoluene	Ave	0.8233	0.7733		9.39	10.0	-6.1	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-27746-1

SDG No.:

Lab Sample ID: CCVIS 410-90352/3 Calibration Date: 02/03/2021 09:34

Instrument ID: 10193 Calib Start Date: 09/01/2020 13:35

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 09/01/2020 15:48

Lab File ID: CF02C01.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,3,5-Trimethylbenzene	Ave	2.982	2.724		9.13	10.0	-8.7	20.0
4-Chlorotoluene	Ave	0.8558	0.8160		9.53	10.0	-4.7	20.0
tert-Butylbenzene	Ave	0.6485	0.6070		9.36	10.0	-6.4	20.0
Pentachloroethane	Ave	0.4842	0.4897		10.1	10.0	1.1	20.0
1,2,4-Trimethylbenzene	Ave	3.060	2.847		9.31	10.0	-6.9	20.0
sec-Butylbenzene	Ave	3.843	3.543		9.22	10.0	-7.8	20.0
1,3-Dichlorobenzene	Ave	1.713	1.594	0.6000	9.31	10.0	-6.9	20.0
p-Isopropyltoluene	Ave	3.351	3.136		9.36	10.0	-6.4	20.0
1,4-Dichlorobenzene	Ave	1.763	1.619	0.5000	9.18	10.0	-8.2	20.0
1,2,3-Trimethylbenzene	Ave	1.343	1.270		9.46	10.0	-5.4	20.0
Benzyl chloride	Ave	0.2484	0.2851		11.5	10.0	14.8	20.0
n-Butylbenzene	Ave	1.698	1.532		9.02	10.0	-9.8	20.0
1,2-Dichlorobenzene	Ave	1.616	1.474	0.4000	9.12	10.0	-8.8	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0856	0.0962	0.0500	11.2	10.0	12.4	20.0
1,3,5-Trichlorobenzene	Ave	1.397	1.356		9.71	10.0	-2.9	20.0
1,2,4-Trichlorobenzene	Ave	1.254	1.227	0.2000	9.79	10.0	-2.1	20.0
Hexachlorobutadiene	Ave	0.6122	0.5947		9.71	10.0	-2.9	20.0
Naphthalene	Ave	2.236	2.185		9.77	10.0	-2.3	20.0
1,2,3-Trichlorobenzene	Ave	1.110	1.071		9.65	10.0	-3.5	20.0
Dibromofluoromethane (Surr)	Ave	0.2376	0.2338		9.84	10.0	-1.6	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.0484	0.0508		10.5	10.0	5.0	20.0
Toluene-d8 (Surr)	Ave	1.306	1.300		9.96	10.0	-0.4	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4909	0.4822		9.82	10.0	-1.8	20.0

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02C01.D
Lims ID: CCVIS VSTD010
Client ID:
Sample Type: CCVIS
Inject. Date: 03-Feb-2021 09:34:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0021161-003
Misc. Info.: CCVIS VSTD010
Operator ID: SRK36897 Instrument ID: 10193
Sublist: chrom-MSV_10193_25mL*sub1

Method: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 03-Feb-2021 13:49:58 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1670

First Level Reviewer: knouses Date: 03-Feb-2021 10:22:51

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.892	1.892	0.000	99	565309	10.0	8.47	
3 Chloromethane	50	2.081	2.081	0.000	99	1053513	10.0	13.4	M
4 Butadiene	39	2.184	2.184	0.000	93	1384111	10.0	18.7	
5 Vinyl chloride	62	2.190	2.190	0.000	98	572089	10.0	7.87	
6 Bromomethane	94	2.501	2.501	0.000	90	405063	10.0	7.89	
7 Chloroethane	64	2.574	2.574	0.000	100	352799	10.0	7.85	
8 Dichlorofluoromethane	67	2.806	2.806	0.000	97	560524	10.0	5.75	
9 Trichlorofluoromethane	101	2.873	2.873	0.000	76	723530	10.0	7.65	
11 Ethyl ether	59	3.093	3.093	0.000	92	413425	10.0	8.63	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.178	3.178	0.000	92	503845	10.0	7.17	
13 Acrolein	56	3.257	3.257	0.000	100	3120739	500.0	454.5	
14 1,1-Dichloroethene	96	3.385	3.385	0.000	97	403986	10.0	8.45	
16 Acetone	43	3.422	3.422	0.000	100	773250	100.0	106.0	
15 112TCTFE	101	3.428	3.428	0.000	91	426257	10.0	8.77	
17 Iodomethane	142	3.568	3.568	0.000	98	823826	10.0	8.72	
18 Isopropyl alcohol	45	3.593	3.593	0.000	50	381391	200.0	263.6	
19 Ethyl bromide	108	3.599	3.599	0.000	98	382467	10.0	9.64	
20 Carbon disulfide	76	3.666	3.666	0.000	99	1415844	10.0	8.39	
22 Methyl acetate	43	3.818	3.818	0.000	97	249931	10.0	8.72	
23 3-Chloro-1-propene	41	3.836	3.836	0.000	93	735460	10.0	8.79	
24 Methylene Chloride	84	4.019	4.019	0.000	93	476613	10.0	8.96	
* 25 t-Butyl alcohol-d10 (IS)	65	4.056	4.056	0.000	0	171619	50.0	50.0	
26 2-Methyl-2-propanol	59	4.178	4.178	0.000	100	710822	200.0	207.9	
27 Acrylonitrile	53	4.349	4.349	0.000	99	602418	50.0	52.0	
28 Methyl tert-butyl ether	73	4.403	4.403	0.000	95	1400100	10.0	9.05	
29 trans-1,2-Dichloroethene	96	4.409	4.409	0.000	98	479139	10.0	8.57	
30 Hexane	57	4.830	4.830	0.000	93	736402	10.0	9.35	
32 1,1-Dichloroethane	63	5.074	5.074	0.000	96	895831	10.0	8.71	
33 Isopropyl ether	45	5.135	5.135	0.000	94	1739601	10.0	8.87	
34 2-Chloro-1,3-butadiene	53	5.184	5.184	0.000	90	785691	10.0	8.11	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
35 Tert-butyl ethyl ether	59	5.671	5.671	0.000	98	1657264	10.0	8.85	
36 2-Butanone (MEK)	43	5.885	5.885	0.000	100	1754437	100.0	102.6	
37 cis-1,2-Dichloroethene	96	5.915	5.915	0.000	82	560505	10.0	8.85	
38 2,2-Dichloropropane	77	5.927	5.927	0.000	87	729349	10.0	8.22	
40 Propionitrile	54	5.982	5.982	0.000	99	899261	200.0	207.1	
43 Methacrylonitrile	67	6.196	6.196	0.000	92	1628503	100.0	96.8	
44 Chlorobromomethane	128	6.251	6.251	0.000	69	273202	10.0	9.80	
45 Tetrahydrofuran	71	6.251	6.251	0.000	80	477745	100.0	98.7	
46 Chloroform	83	6.403	6.403	0.000	93	863803	10.0	8.47	
$ 47 Dibromofluoromethane (Surr)	113	6.622	6.622	0.000	94	483444	10.0	9.84	
48 1,1,1-Trichloroethane	97	6.629	6.629	0.000	98	748807	10.0	8.15	
49 Cyclohexane	56	6.720	6.720	0.000	91	890067	10.0	9.17	
50 Carbon tetrachloride	117	6.830	6.830	0.000	95	647949	10.0	8.42	
51 1,1-Dichloropropene	75	6.836	6.836	0.000	96	710540	10.0	8.62	
52 Isobutyl alcohol	41	7.019	7.019	0.000	96	665745	500.0	600.7	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.080	7.080	0.000	0	105093	10.0	10.5	
54 Benzene	78	7.104	7.104	0.000	96	2141926	10.0	9.02	
55 1,2-Dichloroethane	62	7.177	7.177	0.000	97	594616	10.0	8.31	
56 Tert-amyl methyl ether	73	7.305	7.305	0.000	98	1542615	10.0	9.04	
* 57 Fluorobenzene (IS)	96	7.513	7.513	0.000	99	2067437	10.0	10.0	
58 n-Heptane	43	7.525	7.525	0.000	92	850342	10.0	9.69	
59 n-Butanol	56	7.909	7.909	0.000	89	1303512	1000.0	1419.2	
60 Trichloroethene	95	7.994	7.994	0.000	97	544169	10.0	8.89	
61 Methylcyclohexane	83	8.299	8.299	0.000	90	926818	10.0	9.89	
62 1,2-Dichloropropane	63	8.336	8.336	0.000	97	572203	10.0	9.38	
63 2-ethoxy-2-methyl butane	87	8.348	8.348	0.000	92	869342	10.0	9.16	
65 1,4-Dioxane	88	8.433	8.433	0.000	35	120668	500.0	659.8	M
64 Methyl methacrylate	69	8.433	8.433	0.000	92	315122	10.0	8.79	
66 Dibromomethane	93	8.445	8.445	0.000	95	278389	10.0	9.33	
67 Dichlorobromomethane	83	8.689	8.689	0.000	99	654168	10.0	8.89	
68 2-Nitropropane	41	8.970	8.970	0.000	96	937892	100.0	84.3	
71 1-Bromo-2-chloroethane	63	9.085	9.085	0.000	99	615227	10.0	9.75	
72 cis-1,3-Dichloropropene	75	9.250	9.250	0.000	96	849605	10.0	9.29	
73 4-Methyl-2-pentanone (MIBK)	43	9.439	9.439	0.000	97	4583731	100.0	92.2	
$ 74 Toluene-d8 (Surr)	98	9.567	9.567	0.000	94	2078536	10.0	9.96	
75 Toluene	92	9.646	9.646	0.000	98	1418198	10.0	9.03	
76 trans-1,3-Dichloropropene	75	9.921	9.921	0.000	93	730828	10.0	9.29	
78 Ethyl methacrylate	69	9.982	9.982	0.000	91	677097	10.0	10.2	
79 1,1,2-Trichloroethane	97	10.128	10.128	0.000	90	420902	10.0	9.70	
80 Tetrachloroethene	166	10.207	10.207	0.000	98	624581	10.0	8.90	
81 1,3-Dichloropropane	76	10.292	10.292	0.000	91	745698	10.0	9.75	
82 2-Hexanone	43	10.353	10.353	0.000	97	3380878	100.0	96.3	
83 Chlorodibromomethane	129	10.506	10.506	0.000	90	491960	10.0	9.78	
84 Ethylene Dibromide	107	10.616	10.616	0.000	98	413216	10.0	9.65	
* 85 Chlorobenzene-d5 (IS)	117	11.061	11.061	0.000	85	1598606	10.0	10.0	
86 1-Chlorohexane	91	11.073	11.073	0.000	98	792721	10.0	8.84	
87 Chlorobenzene	112	11.085	11.085	0.000	95	1646348	10.0	9.28	
89 1,1,1,2-Tetrachloroethane	131	11.170	11.170	0.000	97	565506	10.0	9.37	
90 Ethylbenzene	91	11.176	11.176	0.000	98	2760583	10.0	8.87	
91 m-Xylene & p-Xylene	106	11.292	11.292	0.000	100	2211760	20.0	18.2	
92 o-Xylene	106	11.628	11.628	0.000	96	1083422	10.0	9.09	
93 Styrene	104	11.646	11.646	0.000	95	1883235	10.0	9.42	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
94 Bromoform	173	11.804	11.804	0.000	98	299528	10.0	10.7	
95 Isopropylbenzene	105	11.932	11.932	0.000	95	2796847	10.0	8.87	
$ 98 4-Bromofluorobenzene (Surr)	95	12.079	12.079	0.000	93	770852	10.0	9.82	
99 1,1,2,2-Tetrachloroethane	83	12.188	12.188	0.000	93	547443	10.0	9.86	
100 Bromobenzene	156	12.195	12.195	0.000	95	710371	10.0	9.32	
101 trans-1,4-Dichloro-2-butene	53	12.213	12.213	0.000	93	866176	100.0	56.3	
102 1,2,3-Trichloropropane	110	12.231	12.231	0.000	81	144199	10.0	9.54	
103 N-Propylbenzene	91	12.268	12.268	0.000	99	3258519	10.0	9.10	
104 2-Chlorotoluene	126	12.341	12.341	0.000	97	687682	10.0	9.39	
105 1,3,5-Trimethylbenzene	105	12.408	12.408	0.000	94	2422818	10.0	9.13	
106 4-Chlorotoluene	126	12.438	12.438	0.000	97	725701	10.0	9.53	
107 tert-Butylbenzene	134	12.652	12.652	0.000	93	539820	10.0	9.36	
108 Pentachloroethane	167	12.682	12.682	0.000	93	435524	10.0	10.1	
109 1,2,4-Trimethylbenzene	105	12.694	12.694	0.000	97	2532069	10.0	9.31	
110 sec-Butylbenzene	105	12.816	12.816	0.000	94	3151099	10.0	9.22	
111 1,3-Dichlorobenzene	146	12.914	12.914	0.000	99	1417899	10.0	9.31	
112 4-Isopropyltoluene	119	12.926	12.926	0.000	97	2788783	10.0	9.36	
* 113 1,4-Dichlorobenzene-d4	152	12.969	12.969	0.000	94	889323	10.0	10.0	
114 1,4-Dichlorobenzene	146	12.987	12.987	0.000	95	1439555	10.0	9.18	
115 1,2,3-Trimethylbenzene	120	12.999	12.999	0.000	98	1129494	10.0	9.46	
116 Benzyl chloride	126	13.072	13.072	0.000	98	253567	10.0	11.5	
119 n-Butylbenzene	92	13.219	13.219	0.000	97	1362070	10.0	9.02	
120 1,2-Dichlorobenzene	146	13.255	13.255	0.000	99	1310498	10.0	9.12	
118 p-Diethylbenzene	119	13.274	13.274	0.000	87	1378677	10.0	9.11	
123 1,2-Dibromo-3-Chloropropane	155	13.804	13.804	0.000	87	85578	10.0	11.2	
124 1,3,5-Trichlorobenzene	180	13.926	13.926	0.000	98	1206309	10.0	9.71	
125 1,2,4-Trichlorobenzene	180	14.353	14.353	0.000	94	1091587	10.0	9.79	
126 Hexachlorobutadiene	225	14.438	14.438	0.000	96	528895	10.0	9.71	
127 Naphthalene	128	14.536	14.536	0.000	97	1943291	10.0	9.77	
128 1,2,3-Trichlorobenzene	180	14.682	14.682	0.000	96	952170	10.0	9.65	
129 2-Methylnaphthalene	142	15.304	15.304	0.000	92	1257591	10.0	9.35	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

MSV_RV1_826_00036	Amount Added: 10.00	Units: uL	
MSV_RV4_826_00043	Amount Added: 10.00	Units: uL	
MSV_RV4GAS826_00111	Amount Added: 10.00	Units: uL	
MSV_HP25_ISSS_00022	Amount Added: 1.00	Units: uL	Run Reagent

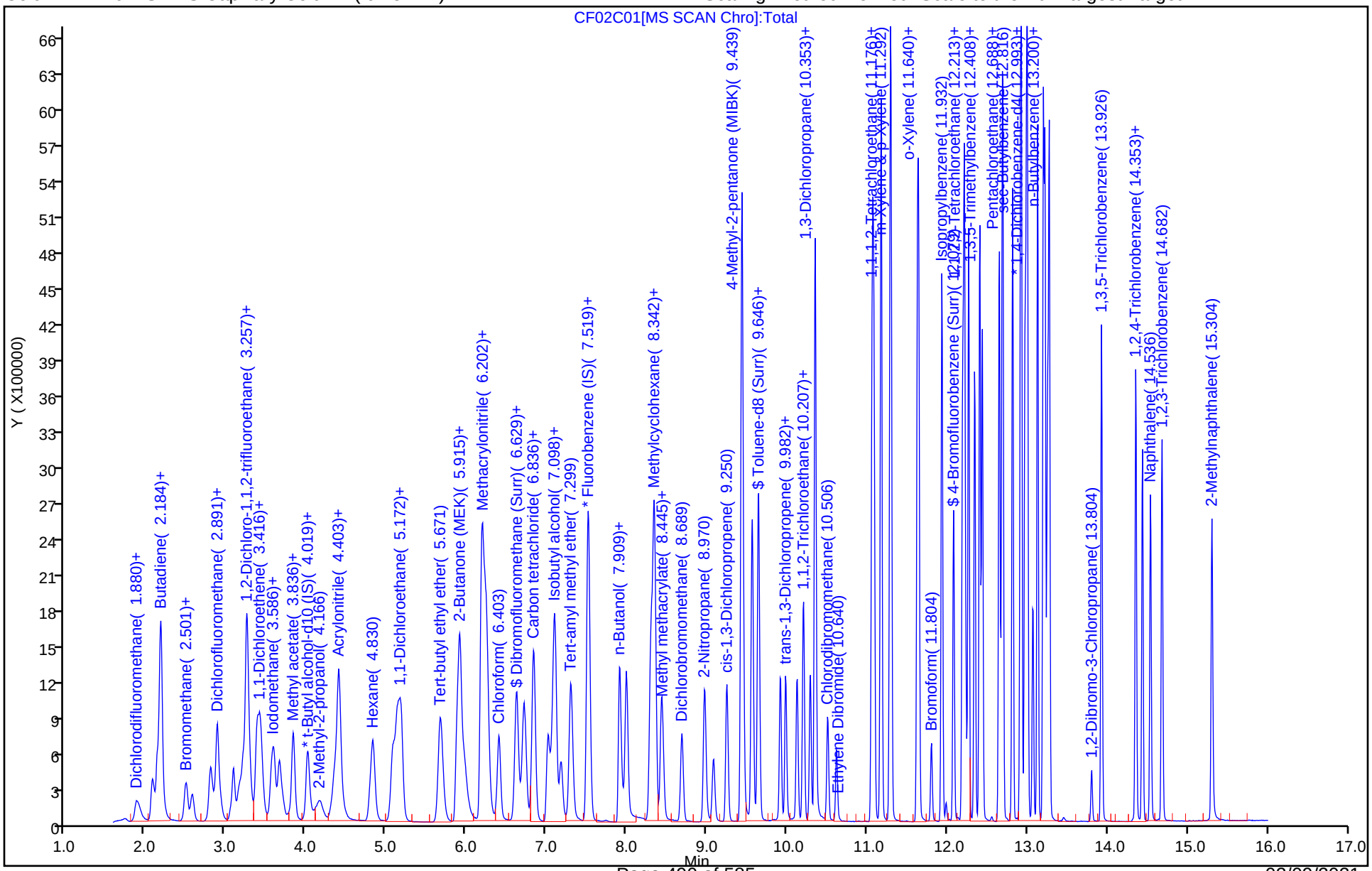
Report Date: 03-Feb-2021 13:49:59 Chrom Revision: 2.3 17-Jan-2021 00:24:10

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02C01.D

Injection Date:	03-Feb-2021 09:34:30	Instrument ID:	10193	Operator ID:	SRK36897
Lims ID:	CCVIS VSTD010			Worklist Smp#:	3
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

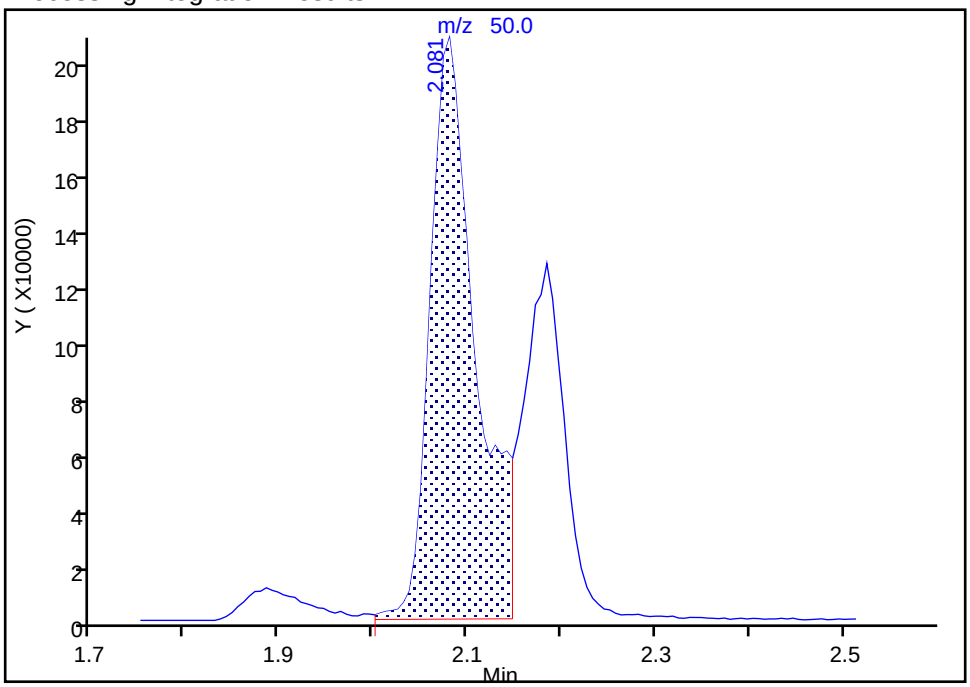
Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02C01.D				
Injection Date:	03-Feb-2021 09:34:30	Instrument ID:	10193		
Lims ID:	CCVIS VSTD010				
Client ID:					
Operator ID:	SRK36897	ALS Bottle#:	2	Worklist Smp#:	3
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

3 Chloromethane, CAS: 74-87-3

Signal: 1

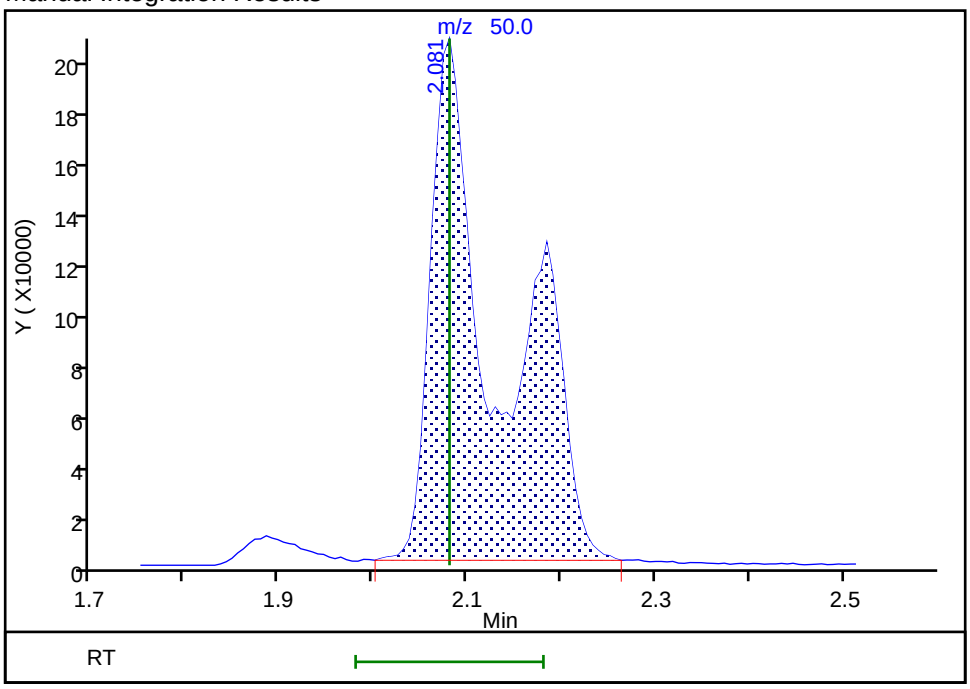
Processing Integration Results

RT: 2.08
Area: 709946
Amount: 9.026718
Amount Units: ug/l



Manual Integration Results

RT: 2.08
Area: 1053513
Amount: 13.395054
Amount Units: ug/l



Reviewer: knouses, 03-Feb-2021 10:18:12
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

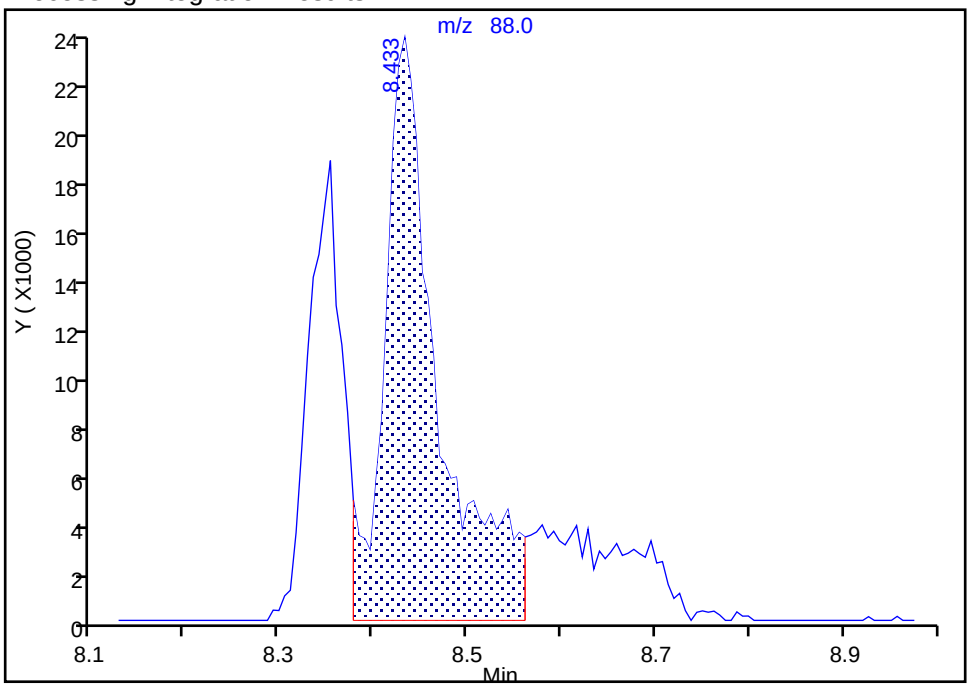
Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02C01.D				
Injection Date:	03-Feb-2021 09:34:30	Instrument ID:	10193		
Lims ID:	CCVIS VSTD010				
Client ID:					
Operator ID:	SRK36897	ALS Bottle#:	2	Worklist Smp#:	3
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

65 1,4-Dioxane, CAS: 123-91-1

Signal: 1

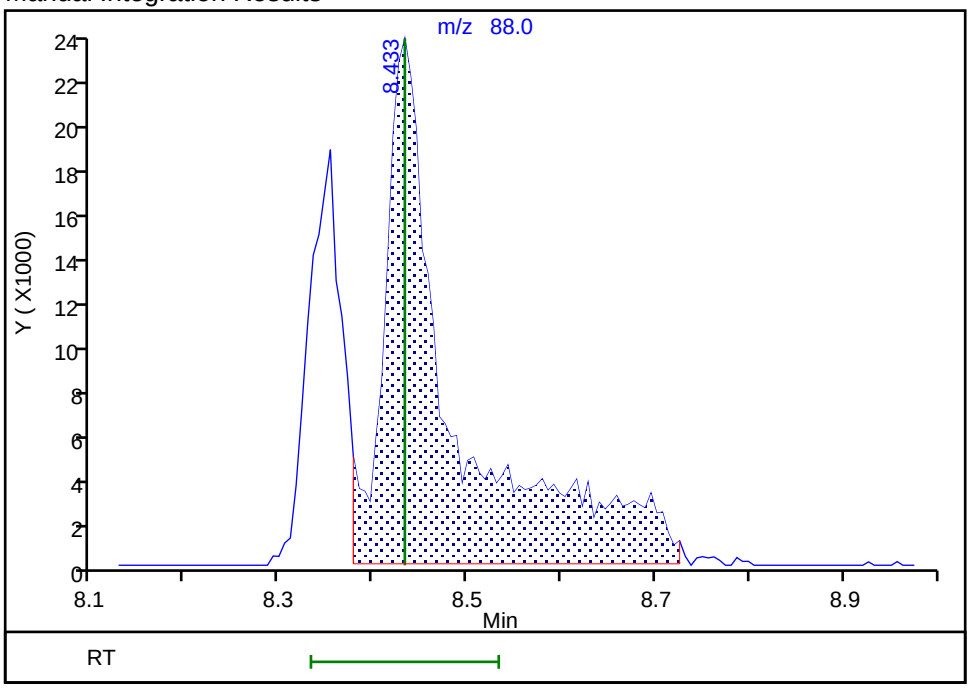
Processing Integration Results

RT: 8.43
Area: 94404
Amount: 516.2139
Amount Units: ug/l



Manual Integration Results

RT: 8.43
Area: 120668
Amount: 659.8291
Amount Units: ug/l



Reviewer: knouses, 03-Feb-2021 10:35:03

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-27746-1

SDG No.:

Lab Sample ID: CCVIS 410-90807/3 Calibration Date: 02/04/2021 11:22

Instrument ID: 10193 Calib Start Date: 09/01/2020 13:35

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 09/01/2020 15:48

Lab File ID: CF02X03.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3227	0.2889	0.1000	8.95	10.0	-10.5	20.0
Chloromethane	Ave	0.3804	0.3141	0.1000	8.26	10.0	-17.4	20.0
1,3-Butadiene	Ave	0.3578	0.4724		13.2	10.0	32.0*	20.0
Vinyl chloride	Ave	0.3517	0.2781	0.1000	7.91	10.0	-20.9*	20.0
Bromomethane	Ave	0.2482	0.1987	0.1000	8.01	10.0	-19.9	20.0
Chloroethane	Ave	0.2173	0.1734	0.1000	7.98	10.0	-20.2*	20.0
Dichlorofluoromethane	Ave	0.4713	0.2723		5.78	10.0	-42.2*	20.0
Trichlorofluoromethane	Ave	0.4575	0.3808	0.1000	8.32	10.0	-16.8	20.0
Ethyl ether	Ave	0.2318	0.2015		8.70	10.0	-13.1	20.0
Freon 123a	Ave	0.3397	0.2534		7.46	10.0	-25.4*	20.0
Acrolein	Ave	2.001	1.690		423	500	-15.5	20.0
1,1-Dichloroethene	Ave	0.2312	0.2012	0.1000	8.70	10.0	-13.0	20.0
Acetone	Ave	2.125	2.100	0.1000	98.8	100	-1.2	20.0
Freon 113	Ave	0.2352	0.2180	0.1000	9.27	10.0	-7.3	20.0
Methyl iodide	Ave	0.4567	0.4005		8.77	10.0	-12.3	20.0
Ethyl bromide	Ave	0.1920	0.1966		10.2	10.0	2.4	20.0
Carbon disulfide	Ave	0.8167	0.6909	0.1000	8.46	10.0	-15.4	20.0
Methyl acetate	Ave	8.350	7.113	0.1000	8.52	10.0	-14.8	20.0
Allyl chloride	Ave	0.4045	0.3832		9.47	10.0	-5.3	20.0
Methylene Chloride	Ave	0.2573	0.2330	0.1000	9.05	10.0	-9.5	20.0
t-Butyl alcohol	Ave	0.996	1.004		202	200	0.8	20.0
Acrylonitrile	Ave	3.375	3.092		45.8	50.0	-8.4	20.0
Methyl tert-butyl ether	Ave	0.7484	0.6678	0.1000	8.92	10.0	-10.8	20.0
trans-1,2-Dichloroethene	Ave	0.2703	0.2352	0.1000	8.70	10.0	-13.0	20.0
n-Hexane	Ave	0.3811	0.3898		10.2	10.0	2.3	20.0
1,1-Dichloroethane	Ave	0.4975	0.4424	0.2000	8.89	10.0	-11.1	20.0
di-Isopropyl ether	Ave	0.9484	0.8396		8.85	10.0	-11.5	20.0
2-Chloro-1,3-butadiene	Ave	0.4688	0.3894		8.31	10.0	-16.9	20.0
Ethyl t-butyl ether	Ave	0.9061	0.7945		8.77	10.0	-12.3	20.0
2-Butanone (MEK)	Ave	4.984	4.352	0.1000	87.3	100	-12.7	20.0
cis-1,2-Dichloroethene	Ave	0.3064	0.2738	0.1000	8.93	10.0	-10.7	20.0
2,2-Dichloropropane	Ave	0.4293	0.3594		8.37	10.0	-16.3	20.0
Propionitrile	Ave	1.265	1.142		181	200	-9.7	20.0
Methacrylonitrile	Ave	4.902	4.101		83.7	100	-16.3	20.0
Bromochloromethane	Ave	0.1349	0.1348		9.99	10.0	-0.0	20.0
Tetrahydrofuran	Ave	1.410	1.252		88.8	100	-11.2	20.0
Chloroform	Ave	0.4930	0.4269	0.2000	8.66	10.0	-13.4	20.0
1,1,1-Trichloroethane	Ave	0.4442	0.3658	0.1000	8.23	10.0	-17.7	20.0
Cyclohexane	Ave	0.4697	0.4485	0.1000	9.55	10.0	-4.5	20.0
Carbon tetrachloride	Ave	0.3722	0.3237	0.1000	8.70	10.0	-13.0	20.0
1,1-Dichloropropene	Ave	0.3988	0.3510		8.80	10.0	-12.0	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-27746-1

SDG No.:

Lab Sample ID: CCVIS 410-90807/3 Calibration Date: 02/04/2021 11:22

Instrument ID: 10193 Calib Start Date: 09/01/2020 13:35

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 09/01/2020 15:48

Lab File ID: CF02X03.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Isobutyl alcohol	Ave	0.3229	0.3583		555	500	11.0	20.0
Benzene	Ave	1.149	1.045	0.5000	9.10	10.0	-9.0	20.0
1,2-Dichloroethane	Ave	0.3462	0.2839	0.1000	8.20	10.0	-18.0	20.0
t-Amyl methyl ether	Ave	0.8253	0.7440		9.01	10.0	-9.9	20.0
n-Heptane	Ave	0.4242	0.4481		10.6	10.0	5.6	20.0
n-Butanol	Ave	0.2676	0.3469		1300	1000	29.7*	20.0
Trichloroethene	Ave	0.2961	0.2663	0.2000	9.00	10.0	-10.0	20.0
Methylcyclohexane	Ave	0.4535	0.5038	0.1000	11.1	10.0	11.1	20.0
1,2-Dichloropropane	Ave	0.2950	0.2767	0.1000	9.38	10.0	-6.2	20.0
1,4-Dioxane	Ave	0.0533	0.0597	0.0050	560	500	12.0	20.0
Methyl methacrylate	Ave	10.45	7.880		7.54	10.0	-24.6*	20.0
Dibromomethane	Ave	0.1443	0.1312		9.09	10.0	-9.1	20.0
Bromodichloromethane	Ave	0.3561	0.3208	0.2000	9.01	10.0	-9.9	20.0
2-Nitropropane	Ave	3.241	2.415		74.5	100	-25.5*	20.0
1-Bromo-2-chloroethane	Ave	0.3051	0.3036		9.95	10.0	-0.5	20.0
cis-1,3-Dichloropropene	Ave	0.4426	0.4269	0.2000	9.65	10.0	-3.5	20.0
4-Methyl-2-pentanone (MIBK)	Ave	14.48	11.62	0.1000	80.2	100	-19.8	20.0
Toluene	Ave	0.9823	0.8986	0.4000	9.15	10.0	-8.5	20.0
trans-1,3-Dichloropropene	Ave	0.4919	0.4815	0.1000	9.79	10.0	-2.1	20.0
Ethyl methacrylate	Ave	0.4151	0.4244		10.2	10.0	2.2	20.0
1,1,2-Trichloroethane	Ave	0.2713	0.2651	0.1000	9.77	10.0	-2.3	20.0
Tetrachloroethene	Ave	0.4389	0.4035	0.2000	9.20	10.0	-8.0	20.0
1,3-Dichloropropane	Ave	0.4783	0.4682		9.79	10.0	-2.1	20.0
2-Hexanone	Ave	10.23	8.431	0.1000	82.4	100	-17.6	20.0
Dibromochloromethane	Ave	0.3148	0.3229		10.3	10.0	2.6	20.0
1,2-Dibromoethane (EDB)	Ave	0.2679	0.2611	0.1000	9.74	10.0	-2.6	20.0
1-Chlorohexane	Ave	0.5609	0.5167		9.21	10.0	-7.9	20.0
Chlorobenzene	Ave	1.109	1.045	0.5000	9.42	10.0	-5.8	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3774	0.3609		9.56	10.0	-4.4	20.0
Ethylbenzene	Ave	1.947	1.767	0.1000	9.08	10.0	-9.2	20.0
m&p-Xylene	Ave	0.7608	0.7081	0.1000	18.6	20.0	-6.9	20.0
o-Xylene	Ave	0.7453	0.6909	0.3000	9.27	10.0	-7.3	20.0
Styrene	Ave	1.251	1.196	0.3000	9.56	10.0	-4.4	20.0
Bromoform	Ave	0.1748	0.2002	0.1000	11.4	10.0	14.5	20.0
Isopropylbenzene	Ave	1.971	1.788	0.1000	9.07	10.0	-9.3	20.0
1,1,2,2-Tetrachloroethane	Ave	0.6245	0.6216	0.3000	9.95	10.0	-0.5	20.0
Bromobenzene	Ave	0.8574	0.8247		9.62	10.0	-3.8	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1729	0.1407		81.4	100	-18.6	20.0
1,2,3-Trichloropropane	Ave	0.1700	0.1613		9.49	10.0	-5.1	20.0
N-Propylbenzene	Ave	4.026	3.715		9.23	10.0	-7.7	20.0
2-Chlorotoluene	Ave	0.8233	0.7963		9.67	10.0	-3.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-27746-1

SDG No.:

Lab Sample ID: CCVIS 410-90807/3 Calibration Date: 02/04/2021 11:22

Instrument ID: 10193 Calib Start Date: 09/01/2020 13:35

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 09/01/2020 15:48

Lab File ID: CF02X03.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,3,5-Trimethylbenzene	Ave	2.982	2.746		9.21	10.0	-7.9	20.0
4-Chlorotoluene	Ave	0.8558	0.8241		9.63	10.0	-3.7	20.0
tert-Butylbenzene	Ave	0.6485	0.5993		9.24	10.0	-7.6	20.0
Pentachloroethane	Ave	0.4842	0.5168		10.7	10.0	6.7	20.0
1,2,4-Trimethylbenzene	Ave	3.060	2.746		8.97	10.0	-10.3	20.0
sec-Butylbenzene	Ave	3.843	3.567		9.28	10.0	-7.2	20.0
1,3-Dichlorobenzene	Ave	1.713	1.609	0.6000	9.39	10.0	-6.1	20.0
p-Isopropyltoluene	Ave	3.351	3.156		9.42	10.0	-5.8	20.0
1,4-Dichlorobenzene	Ave	1.763	1.625	0.5000	9.22	10.0	-7.8	20.0
1,2,3-Trimethylbenzene	Ave	1.343	1.323		9.85	10.0	-1.5	20.0
Benzyl chloride	Ave	0.2484	0.2983		12.0	10.0	20.1*	20.0
n-Butylbenzene	Ave	1.698	1.591		9.37	10.0	-6.3	20.0
1,2-Dichlorobenzene	Ave	1.616	1.492	0.4000	9.23	10.0	-7.7	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0856	0.0955	0.0500	11.1	10.0	11.5	20.0
1,3,5-Trichlorobenzene	Ave	1.397	1.319		9.44	10.0	-5.6	20.0
1,2,4-Trichlorobenzene	Ave	1.254	1.216	0.2000	9.70	10.0	-3.0	20.0
Hexachlorobutadiene	Ave	0.6122	0.5966		9.75	10.0	-2.5	20.0
Naphthalene	Ave	2.236	2.140		9.57	10.0	-4.3	20.0
1,2,3-Trichlorobenzene	Ave	1.110	1.038		9.36	10.0	-6.4	20.0
Dibromofluoromethane (Surr)	Ave	0.2376	0.2334		9.82	10.0	-1.8	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.0484	0.0508		10.5	10.0	4.9	20.0
Toluene-d8 (Surr)	Ave	1.306	1.319		10.1	10.0	1.0	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4909	0.4856		9.89	10.0	-1.1	20.0

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\10193\20210204-21283.b\CF02X03.D
Lims ID: CCVIS VSTD010
Client ID:
Sample Type: CCVIS
Inject. Date: 04-Feb-2021 11:22:30 ALS Bottle#: 3 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0021283-003
Misc. Info.: CCVIS VSTD010
Operator ID: kas02648 Instrument ID: 10193
Sublist: chrom-MSV_10193_25mL*sub1

Method: \\chromfs\Lancaster\ChromData\10193\20210204-21283.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 04-Feb-2021 13:11:02 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1626

First Level Reviewer: spositok Date: 04-Feb-2021 11:50:08

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.898	1.898	0.000	99	605080	10.0	8.95	
3 Chloromethane	50	2.087	2.087	0.000	98	657684	10.0	8.26	
4 Butadiene	39	2.196	2.196	0.000	91	989280	10.0	13.2	
5 Vinyl chloride	62	2.196	2.196	0.000	65	582356	10.0	7.91	
6 Bromomethane	94	2.513	2.513	0.000	90	416172	10.0	8.01	
7 Chloroethane	64	2.593	2.593	0.000	100	363050	10.0	7.98	
8 Dichlorofluoromethane	67	2.824	2.824	0.000	97	570182	10.0	5.78	
9 Trichlorofluoromethane	101	2.885	2.885	0.000	95	797367	10.0	8.32	
11 Ethyl ether	59	3.105	3.105	0.000	91	422080	10.0	8.70	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.202	3.202	0.000	92	530633	10.0	7.46	
13 Acrolein	56	3.269	3.269	0.000	100	3328599	500.0	422.5	
14 1,1-Dichloroethene	96	3.397	3.397	0.000	98	421223	10.0	8.70	
16 Acetone	43	3.428	3.428	0.000	100	827166	100.0	98.8	
15 112TCTFE	101	3.434	3.434	0.000	87	456551	10.0	9.27	
17 Iodomethane	142	3.580	3.580	0.000	98	838670	10.0	8.77	
18 Isopropyl alcohol	45	3.599	3.599	0.000	51	412277	200.0	248.7	
19 Ethyl bromide	108	3.611	3.611	0.000	97	411794	10.0	10.2	
20 Carbon disulfide	76	3.678	3.678	0.000	99	1446848	10.0	8.46	
22 Methyl acetate	43	3.824	3.824	0.000	97	280100	10.0	8.52	
23 3-Chloro-1-propene	41	3.849	3.849	0.000	93	802365	10.0	9.47	
24 Methylene Chloride	84	4.031	4.031	0.000	93	487842	10.0	9.05	
* 25 t-Butyl alcohol-d10 (IS)	65	4.056	4.056	0.000	0	196903	50.0	50.0	
26 2-Methyl-2-propanol	59	4.172	4.172	0.000	100	790517	200.0	201.5	
27 Acrylonitrile	53	4.367	4.367	0.000	100	608868	50.0	45.8	
28 Methyl tert-butyl ether	73	4.409	4.409	0.000	95	1398418	10.0	8.92	
29 trans-1,2-Dichloroethene	96	4.422	4.422	0.000	98	492588	10.0	8.70	
30 Hexane	57	4.842	4.842	0.000	93	816194	10.0	10.2	
32 1,1-Dichloroethane	63	5.080	5.080	0.000	96	926452	10.0	8.89	
33 Isopropyl ether	45	5.147	5.147	0.000	94	1758082	10.0	8.85	
34 2-Chloro-1,3-butadiene	53	5.196	5.196	0.000	90	815483	10.0	8.31	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
35 Tert-butyl ethyl ether	59	5.684	5.684	0.000	98	1663826	10.0	8.77	
36 2-Butanone (MEK)	43	5.897	5.897	0.000	100	1713914	100.0	87.3	
37 cis-1,2-Dichloroethene	96	5.927	5.927	0.000	82	573265	10.0	8.93	
38 2,2-Dichloropropane	77	5.934	5.934	0.000	87	752538	10.0	8.37	
40 Propionitrile	54	5.995	5.995	0.000	99	899832	200.0	180.6	
43 Methacrylonitrile	67	6.202	6.202	0.000	93	1614972	100.0	83.7	
44 Chlorobromomethane	128	6.257	6.257	0.000	97	282293	10.0	10.0	
45 Tetrahydrofuran	71	6.263	6.263	0.000	88	492970	100.0	88.8	
46 Chloroform	83	6.409	6.409	0.000	93	894037	10.0	8.66	
$ 47 Dibromofluoromethane (Surr)	113	6.629	6.629	0.000	92	488798	10.0	9.82	
48 1,1,1-Trichloroethane	97	6.629	6.629	0.000	99	765921	10.0	8.23	
49 Cyclohexane	56	6.726	6.726	0.000	92	939245	10.0	9.55	
50 Carbon tetrachloride	117	6.842	6.842	0.000	97	677779	10.0	8.70	
51 1,1-Dichloropropene	75	6.848	6.848	0.000	98	734960	10.0	8.80	
52 Isobutyl alcohol	41	7.025	7.025	0.000	95	705436	500.0	554.8	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.086	7.086	0.000	0	106378	10.0	10.5	
54 Benzene	78	7.110	7.110	0.000	97	2187648	10.0	9.10	
55 1,2-Dichloroethane	62	7.183	7.183	0.000	97	594420	10.0	8.20	
56 Tert-amyl methyl ether	73	7.311	7.311	0.000	99	1557923	10.0	9.01	
* 57 Fluorobenzene (IS)	96	7.519	7.519	0.000	99	2094070	10.0	10.0	
58 n-Heptane	43	7.525	7.525	0.000	93	938304	10.0	10.6	
59 n-Butanol	56	7.915	7.915	0.000	89	1366239	1000.0	1296.5	
60 Trichloroethene	95	8.000	8.000	0.000	97	557659	10.0	9.00	
61 Methylcyclohexane	83	8.305	8.305	0.000	91	1055037	10.0	11.1	
62 1,2-Dichloropropane	63	8.342	8.342	0.000	98	579392	10.0	9.38	
63 2-ethoxy-2-methyl butane	87	8.354	8.354	0.000	93	894087	10.0	9.30	
65 1,4-Dioxane	88	8.433	8.433	0.000	37	117495	500.0	560.0	M
64 Methyl methacrylate	69	8.433	8.433	0.000	93	310323	10.0	7.54	
66 Dibromomethane	93	8.451	8.451	0.000	95	274808	10.0	9.09	
67 Dichlorobromomethane	83	8.689	8.689	0.000	99	671711	10.0	9.01	
68 2-Nitropropane	41	8.976	8.976	0.000	97	950931	100.0	74.5	
71 1-Bromo-2-chloroethane	63	9.085	9.085	0.000	98	635851	10.0	9.95	
72 cis-1,3-Dichloropropene	75	9.256	9.256	0.000	96	894008	10.0	9.65	
73 4-Methyl-2-pentanone (MIBK)	43	9.439	9.439	0.000	97	4575119	100.0	80.2	
$ 74 Toluene-d8 (Surr)	98	9.567	9.567	0.000	94	2104992	10.0	10.1	
75 Toluene	92	9.646	9.646	0.000	98	1433806	10.0	9.15	
76 trans-1,3-Dichloropropene	75	9.921	9.921	0.000	93	768185	10.0	9.79	
78 Ethyl methacrylate	69	9.988	9.988	0.000	90	677173	10.0	10.2	
79 1,1,2-Trichloroethane	97	10.128	10.128	0.000	90	422970	10.0	9.77	
80 Tetrachloroethene	166	10.207	10.207	0.000	98	643863	10.0	9.20	
81 1,3-Dichloropropane	76	10.292	10.292	0.000	91	746987	10.0	9.79	
82 2-Hexanone	43	10.353	10.353	0.000	97	3320301	100.0	82.4	
83 Chlorodibromomethane	129	10.506	10.506	0.000	90	515260	10.0	10.3	
84 Ethylene Dibromide	107	10.622	10.622	0.000	99	416564	10.0	9.74	
* 85 Chlorobenzene-d5 (IS)	117	11.061	11.061	0.000	88	1595540	10.0	10.0	
86 1-Chlorohexane	91	11.073	11.073	0.000	98	824344	10.0	9.21	
87 Chlorobenzene	112	11.085	11.085	0.000	96	1667839	10.0	9.42	
89 1,1,1,2-Tetrachloroethane	131	11.176	11.176	0.000	97	575880	10.0	9.56	
90 Ethylbenzene	91	11.176	11.176	0.000	98	2819630	10.0	9.08	
91 m-Xylene & p-Xylene	106	11.292	11.292	0.000	100	2259542	20.0	18.6	
92 o-Xylene	106	11.628	11.628	0.000	96	1102340	10.0	9.27	
93 Styrene	104	11.646	11.646	0.000	95	1907857	10.0	9.56	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
94 Bromoform	173	11.804	11.804	0.000	98	319353	10.0	11.4	
95 Isopropylbenzene	105	11.932	11.932	0.000	95	2852134	10.0	9.07	
$ 98 4-Bromofluorobenzene (Surr)	95	12.079	12.079	0.000	93	774778	10.0	9.89	
99 1,1,2,2-Tetrachloroethane	83	12.188	12.188	0.000	93	560548	10.0	9.95	
100 Bromobenzene	156	12.195	12.195	0.000	92	743759	10.0	9.62	
101 trans-1,4-Dichloro-2-butene	53	12.213	12.213	0.000	93	1268479	100.0	81.4	
102 1,2,3-Trichloropropane	110	12.231	12.231	0.000	79	145425	10.0	9.49	
103 N-Propylbenzene	91	12.268	12.268	0.000	99	3350678	10.0	9.23	
104 2-Chlorotoluene	126	12.341	12.341	0.000	97	718085	10.0	9.67	
105 1,3,5-Trimethylbenzene	105	12.408	12.408	0.000	94	2476194	10.0	9.21	
106 4-Chlorotoluene	126	12.438	12.438	0.000	97	743197	10.0	9.63	
107 tert-Butylbenzene	134	12.652	12.652	0.000	93	540466	10.0	9.24	
108 Pentachloroethane	167	12.682	12.682	0.000	93	466049	10.0	10.7	
109 1,2,4-Trimethylbenzene	105	12.694	12.694	0.000	96	2476195	10.0	8.97	
110 sec-Butylbenzene	105	12.816	12.816	0.000	94	3217143	10.0	9.28	
111 1,3-Dichlorobenzene	146	12.914	12.914	0.000	99	1450647	10.0	9.39	
112 4-Isopropyltoluene	119	12.926	12.926	0.000	97	2845831	10.0	9.42	
* 113 1,4-Dichlorobenzene-d4	152	12.969	12.969	0.000	94	901828	10.0	10.0	
114 1,4-Dichlorobenzene	146	12.987	12.987	0.000	95	1465907	10.0	9.22	
115 1,2,3-Trimethylbenzene	120	12.999	12.999	0.000	98	1192701	10.0	9.85	
116 Benzyl chloride	126	13.066	13.066	0.000	98	268972	10.0	12.0	
119 n-Butylbenzene	92	13.219	13.219	0.000	96	1434702	10.0	9.37	
120 1,2-Dichlorobenzene	146	13.255	13.255	0.000	99	1345549	10.0	9.23	
118 p-Diethylbenzene	119	13.274	13.274	0.000	87	1507759	10.0	9.83	
123 1,2-Dibromo-3-Chloropropane	155	13.804	13.804	0.000	89	86092	10.0	11.1	
124 1,3,5-Trichlorobenzene	180	13.926	13.926	0.000	98	1189597	10.0	9.44	
125 1,2,4-Trichlorobenzene	180	14.353	14.353	0.000	94	1097025	10.0	9.70	
126 Hexachlorobutadiene	225	14.438	14.438	0.000	96	538035	10.0	9.75	
127 Naphthalene	128	14.536	14.536	0.000	97	1929757	10.0	9.57	
128 1,2,3-Trichlorobenzene	180	14.682	14.682	0.000	95	936526	10.0	9.36	
129 2-Methylnaphthalene	142	15.304	15.304	0.000	92	1276452	10.0	9.36	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

MSV_RV1_826_00036	Amount Added: 10.00	Units: uL	
MSV_RV4_826_00043	Amount Added: 10.00	Units: uL	
MSV_RV4GAS826_00111	Amount Added: 10.00	Units: uL	
MSV_HP25_ISSS_00022	Amount Added: 1.00	Units: uL	Run Reagent

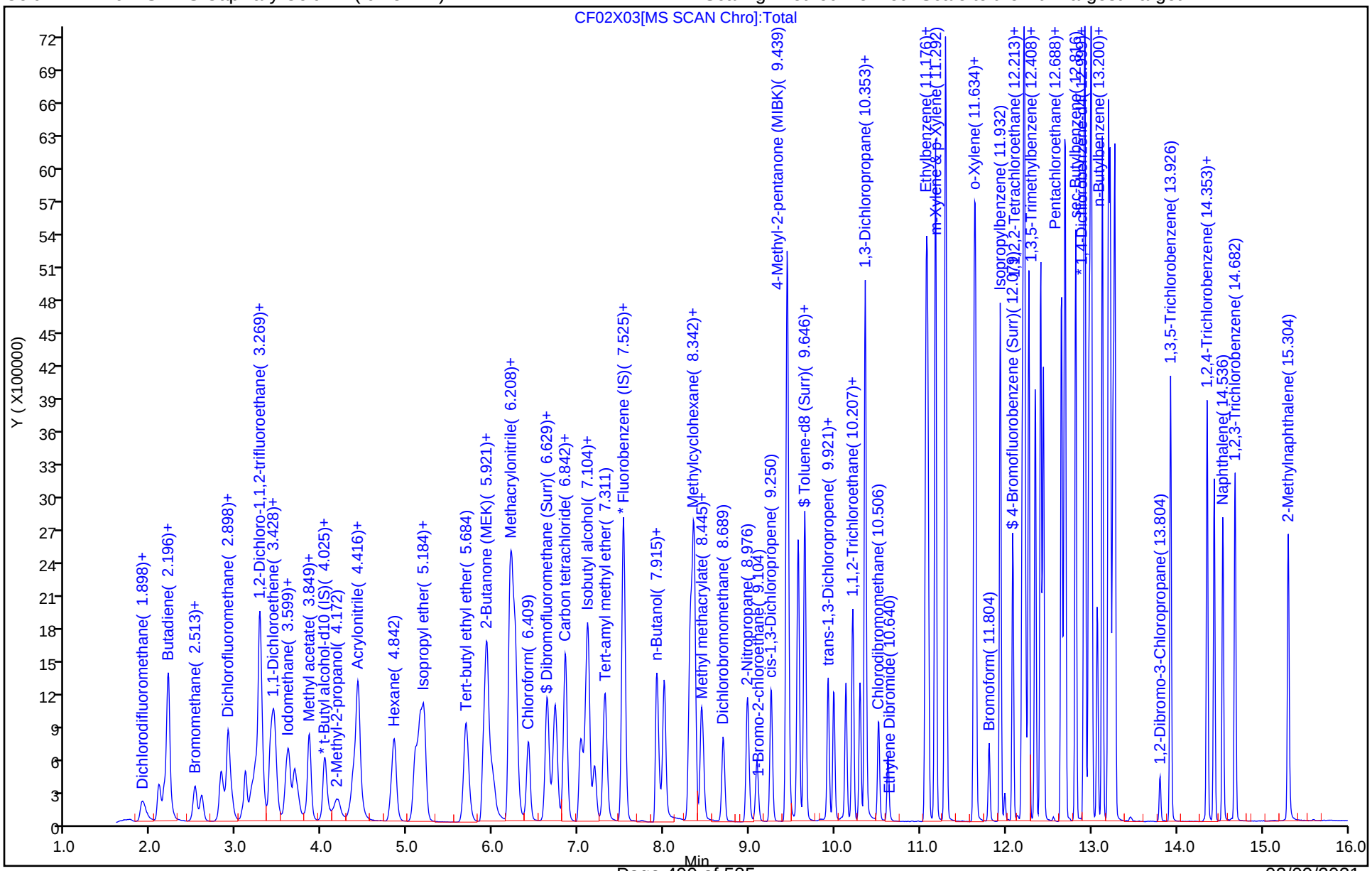
Report Date: 04-Feb-2021 13:11:04 Chrom Revision: 2.3 17-Jan-2021 00:24:10

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20210204-21283.b\CF02X03.D

Injection Date:	04-Feb-2021 11:22:30	Instrument ID:	10193	Operator ID:	kas02648
Lims ID:	CCVIS VSTD010			Worklist Smp#:	3
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Env, LLC

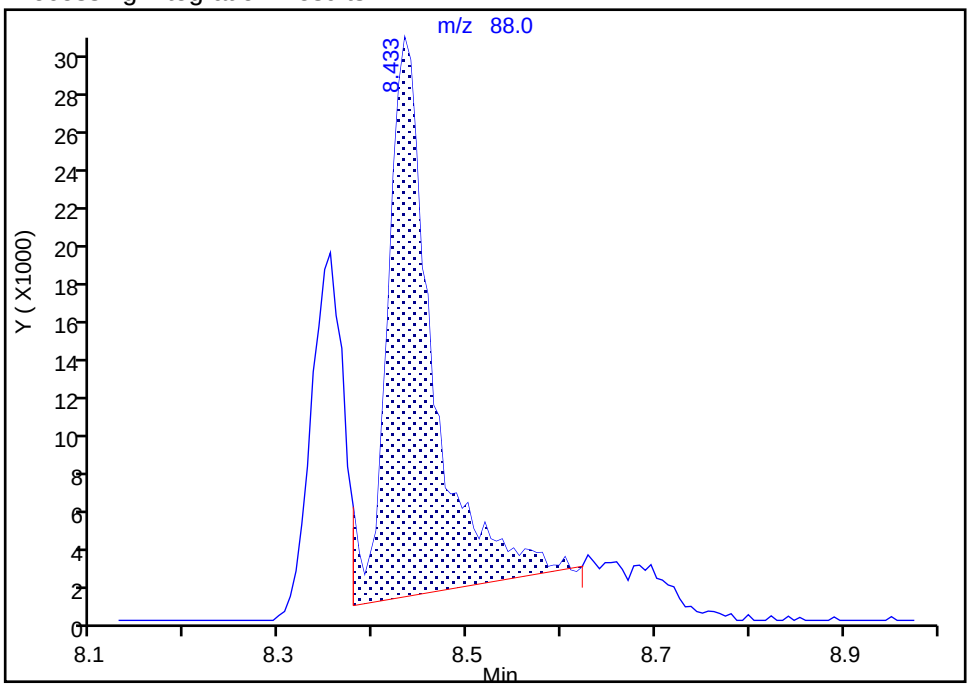
Data File: \\chromfs\Lancaster\ChromData\10193\20210204-21283.b\CF02X03.D
Injection Date: 04-Feb-2021 11:22:30 Instrument ID: 10193
Lims ID: CCVIS VSTD010
Client ID:
Operator ID: kas02648 ALS Bottle#: 3 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

65 1,4-Dioxane, CAS: 123-91-1

Signal: 1

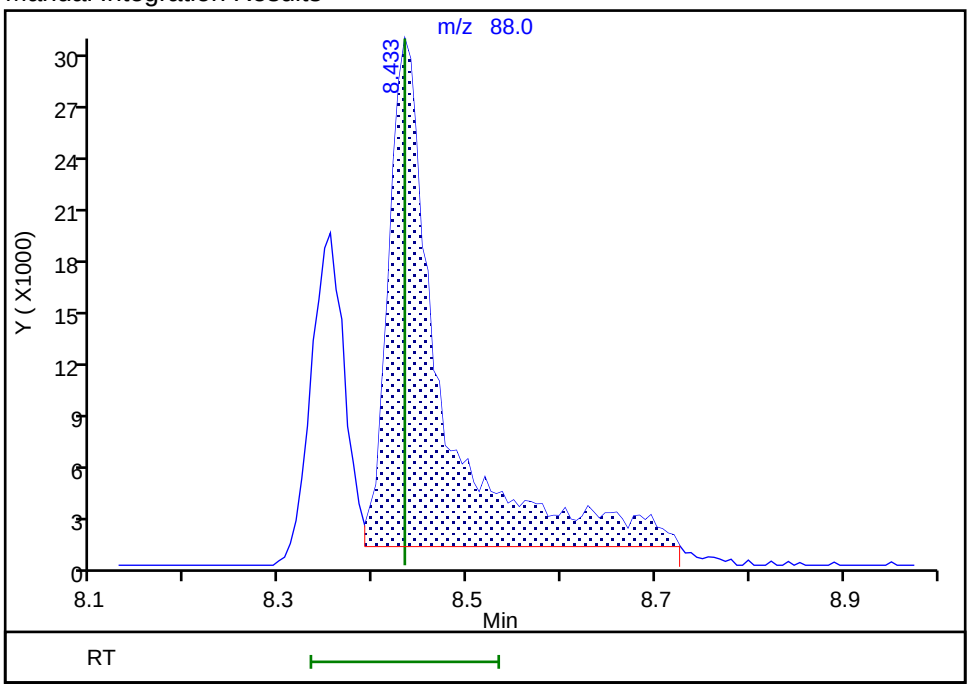
Processing Integration Results

RT: 8.43
Area: 99979
Amount: 476.4981
Amount Units: ug/l



Manual Integration Results

RT: 8.43
Area: 117495
Amount: 559.9790
Amount Units: ug/l



Reviewer: spositok, 04-Feb-2021 11:45:59
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01T01.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	01-Sep-2020 12:45:30	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Sample Info:	BFB				
Misc. Info.:	410-0009503-001				
Operator ID:	dvv10203	Instrument ID:	10193		
Method:	\\chromfs\Lancaster\ChromData\10193\20200901-9503.b\MSV_10193_25mL.m				
Limit Group:	MSV - 8260C_D				
Last Update:	01-Sep-2020 20:14:46	Calib Date:	01-Sep-2020 19:09:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1059				
First Level Reviewer: virayd		Date:	01-Sep-2020 12:56:16		

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 165 BFB	95	5.160	5.160	0.000	88	127617	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

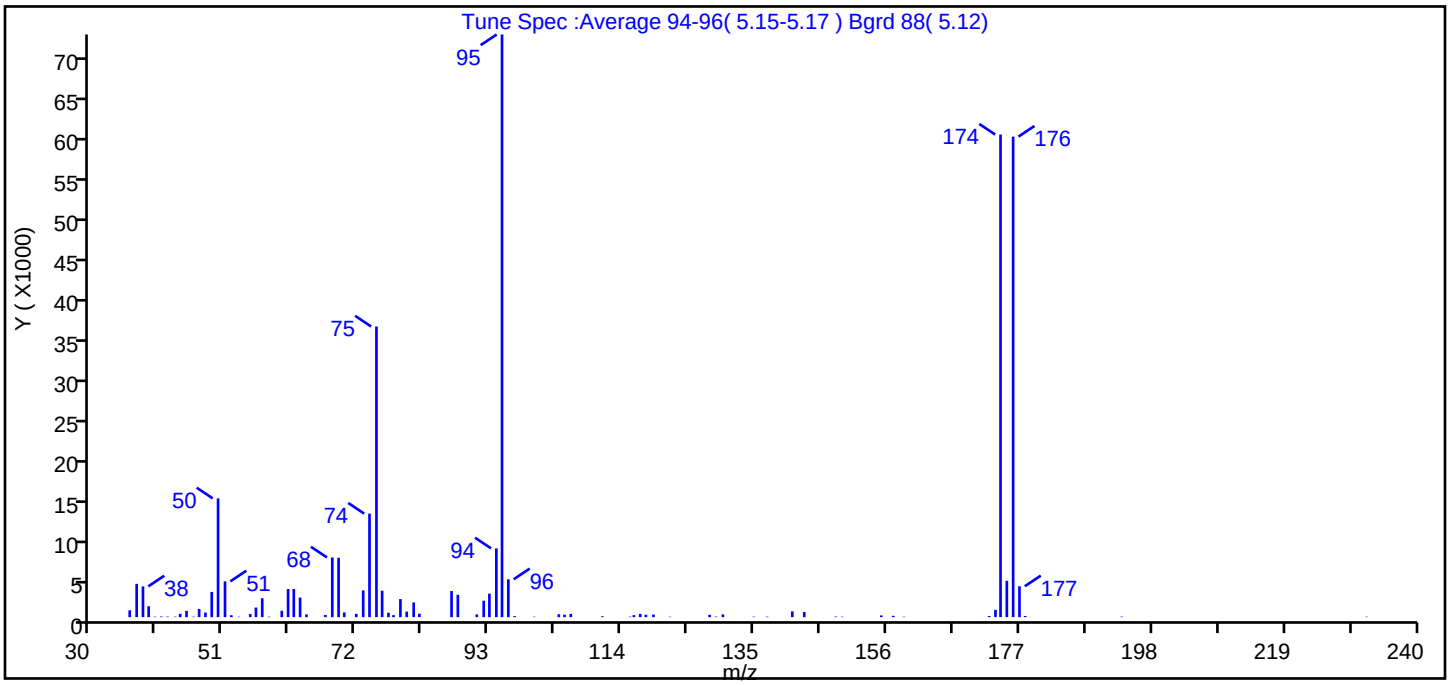
MSV_V_BFB_00003 Amount Added: 1.00 Units: uL

MS Tune Report

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01T01.D				
Injection Date:	01-Sep-2020 12:45:30	Instrument ID:	10193		
Lims ID:	BFB				
Client ID:					
Operator ID:	dvv10203	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		
Tune Method:	BFB Method 8260				

$ 165 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	20.4
75	30 to 60% of m/z 95	49.9
96	5 to 9% of m/z 95	6.5
173	Less than 2% of m/z 174	1.3 (1.5)
174	50 to 120% of m/z 95	82.8
175	5 to 9% of m/z 174	6.2 (7.5)
176	Greater than 95% but less than 101% of m/z 174	82.5 (99.6)
177	5 to 9% of m/z 176	5.3 (6.4)

Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01T01.D\MSV_10193_25mL.rslt\spectra.d
Injection Date: 01-Sep-2020 12:45:30
Spectrum: Tune Spec :Average 94-96(5.15-5.17) Bgrd 88(5.12)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 83

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	849	58.00	59	87.00	3249	129.00	66
37.00	4140	60.00	797	88.00	2781	130.00	340
38.00	3829	61.00	3495	91.00	335	135.00	62
39.00	1350	62.00	3499	92.00	2042	137.00	64
40.00	62	63.00	2433	93.00	2922	141.00	712
41.00	79	64.00	339	94.00	8556	143.00	634
42.00	64	67.00	265	95.00	72472	148.00	75
43.00	58	68.00	7426	96.00	4710	149.00	56
44.00	414	69.00	7382	97.00	129	155.00	212
45.00	774	70.00	584	100.00	53	157.00	165
46.00	51	72.00	409	104.00	361	159.00	55
47.00	1016	73.00	3331	105.00	305	172.00	140
48.00	566	74.00	12877	106.00	407	173.00	911
49.00	3135	75.00	36152	111.00	112	174.00	60024
50.00	14770	76.00	3285	115.00	61	175.00	4518
51.00	4452	77.00	548	116.00	250	176.00	59768
52.00	235	78.00	250	117.00	403	177.00	3839
53.00	51	79.00	2245	118.00	298	178.00	141
55.00	379	80.00	691	119.00	321	193.00	64
56.00	1192	81.00	1829	122.00	51	232.00	52
57.00	2349	82.00	424	128.00	291		

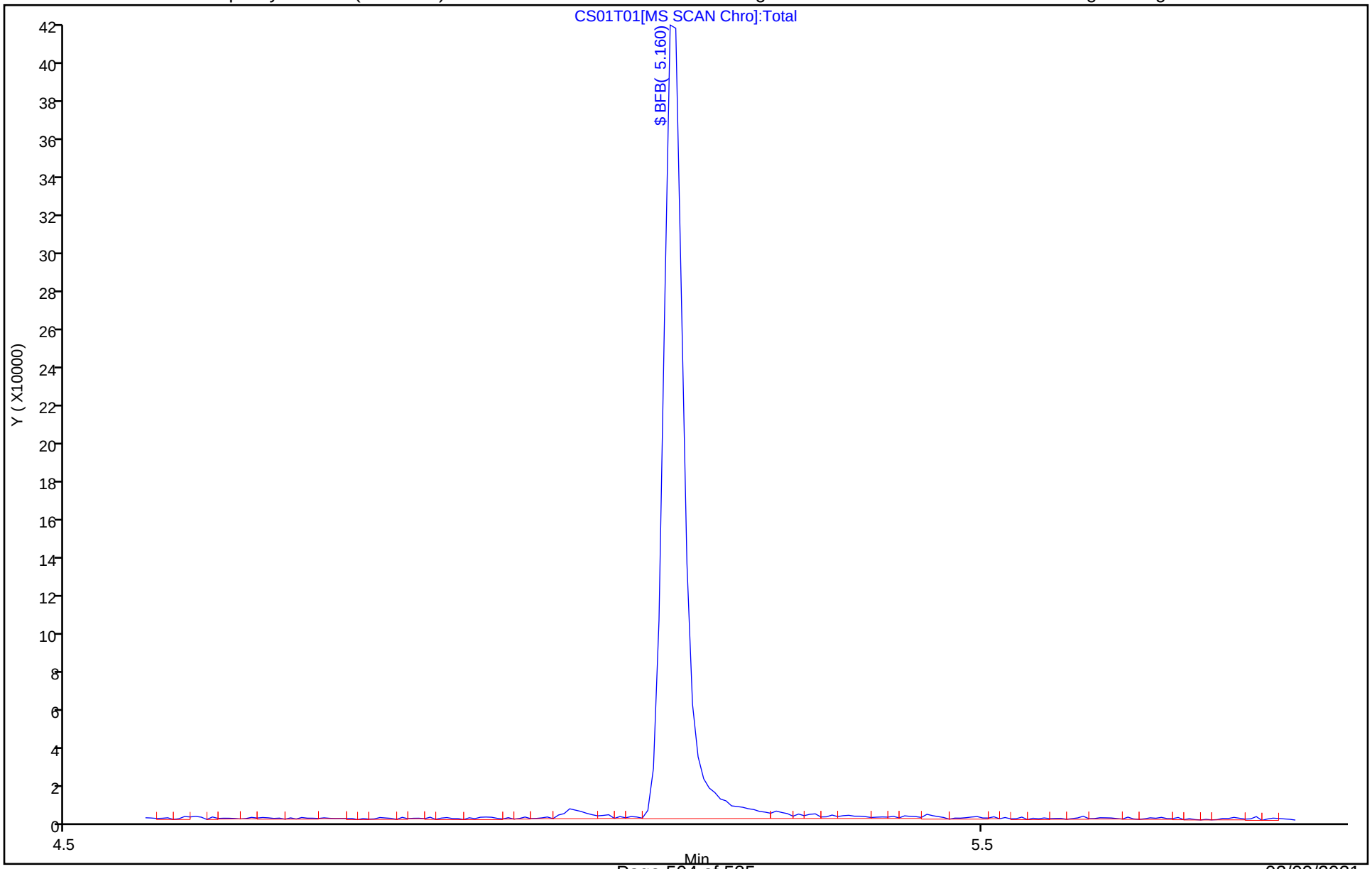
Report Date: 01-Sep-2020 20:14:46 Chrom Revision: 2.3 20-Aug-2020 13:57:12

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01T01.D

Injection Date:	01-Sep-2020 12:45:30	Instrument ID:	10193	Operator ID:	dvv10203
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02T01.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	03-Feb-2021 08:45:30	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Sample Info:	410-0021161-001				
Misc. Info.:	BFB				
Operator ID:	SRK36897	Instrument ID:	10193		
Method:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\MSV_10193_25mL.m				
Limit Group:	MSV - 8260C_D				
Last Update:	03-Feb-2021 13:57:59	Calib Date:	01-Sep-2020 19:09:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1670				

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 165 BFB	95	5.129	5.129	0.000	89	191172	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

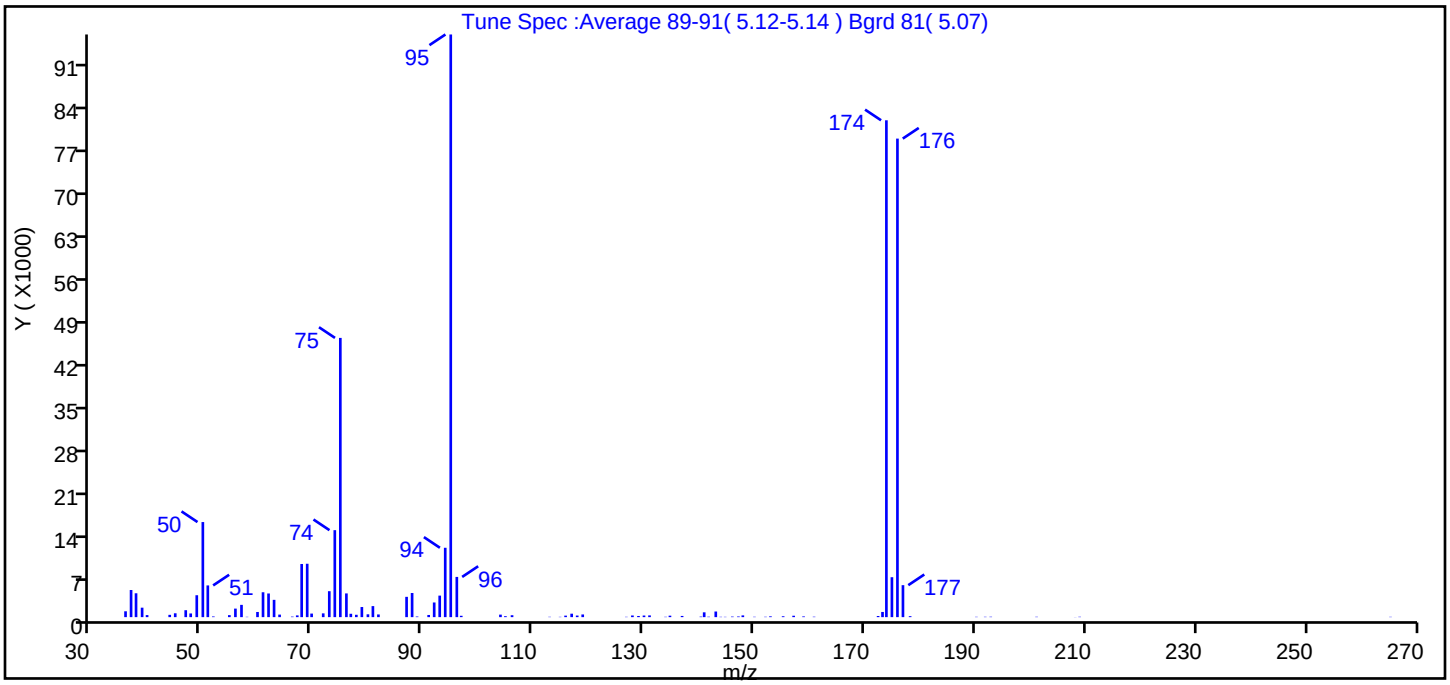
MSV_V_BFB_00004 Amount Added: 1.00 Units: uL

MS Tune Report

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02T01.D
Injection Date: 03-Feb-2021 08:45:30 Instrument ID: 10193
Lims ID: BFB
Client ID:
Operator ID: SRK36897 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Tune Method: BFB Method 8260

$ 165 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	16.3
75	30 to 60% of m/z 95	47.9
96	5 to 9% of m/z 95	6.9
173	Less than 2% of m/z 174	0.9 (1.0)
174	50 to 120% of m/z 95	85.3
175	5 to 9% of m/z 174	6.9 (8.0)
176	Greater than 95% but less than 101% of m/z 174	82.1 (96.3)
177	5 to 9% of m/z 176	5.5 (6.7)

Data File: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02T01.D\MSV_10193_25mL.rslt\spectra.d
Injection Date: 03-Feb-2021 08:45:30
Spectrum: Tune Spec :Average 89-91(5.12-5.14) Bgrd 81(5.07)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 95

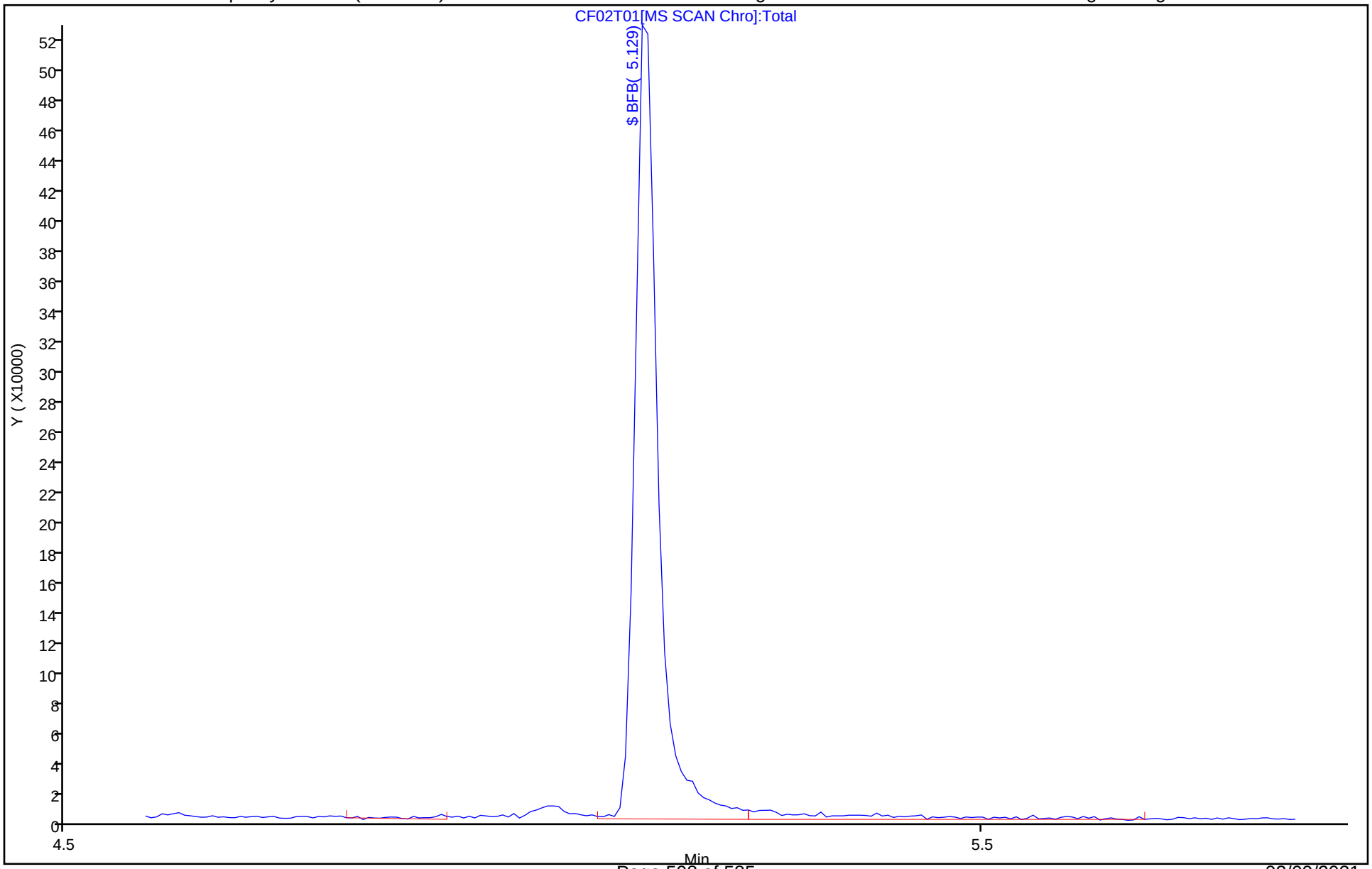
m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	961	68.00	8727	104.00	413	147.00	108
37.00	4456	69.00	8765	105.00	157	148.00	287
38.00	3919	70.00	587	106.00	316	150.00	60
39.00	1555	72.00	621	113.00	56	152.00	61
40.00	337	73.00	4261	115.00	51	153.00	131
44.00	379	74.00	14280	116.00	249	155.00	143
45.00	634	75.00	45848	117.00	567	157.00	230
47.00	1140	76.00	3895	118.00	262	159.00	118
48.00	606	77.00	553	119.00	442	161.00	71
49.00	3598	78.00	387	127.00	54	172.00	186
50.00	15611	79.00	1661	128.00	272	173.00	850
51.00	5207	80.00	465	129.00	190	174.00	81576
52.00	111	81.00	1812	130.00	265	175.00	6555
55.00	330	82.00	442	131.00	285	176.00	78568
56.00	1402	87.00	3334	134.00	57	177.00	5250
57.00	2016	88.00	3963	135.00	241	178.00	157
58.00	54	89.00	104	137.00	198	190.00	55
60.00	848	91.00	356	140.00	86	192.00	59
61.00	4087	92.00	2408	141.00	791	193.00	68
62.00	3886	93.00	3535	142.00	71	201.00	61
63.00	2841	94.00	11389	143.00	925	208.00	17
64.00	418	95.00	95664	144.00	55	209.00	63
66.00	89	96.00	6604	145.00	51	265.00	52
67.00	287	97.00	224	146.00	91		

Report Date: 03-Feb-2021 13:57:59 Chrom Revision: 2.3 17-Jan-2021 00:24:10

Eurofins Lancaster Laboratories Env, LLC

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02T01.D				
Injection Date:	03-Feb-2021 08:45:30	Instrument ID:	10193	Operator ID:	SRK36897
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Env, LLC
Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\10193\20210204-21283.b\CF02T02.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	04-Feb-2021 10:45:30	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Sample Info:	410-0021283-001				
Misc. Info.:	BFB				
Operator ID:	kas02648	Instrument ID:	10193		
Method:	\\chromfs\Lancaster\ChromData\10193\20210204-21283.b\MSV_10193_25mL.m				
Limit Group:	MSV - 8260C_D				
Last Update:	04-Feb-2021 13:11:37	Calib Date:	01-Sep-2020 19:09:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1626				

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 165 BFB	95	5.142	5.142	0.000	0	47244	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

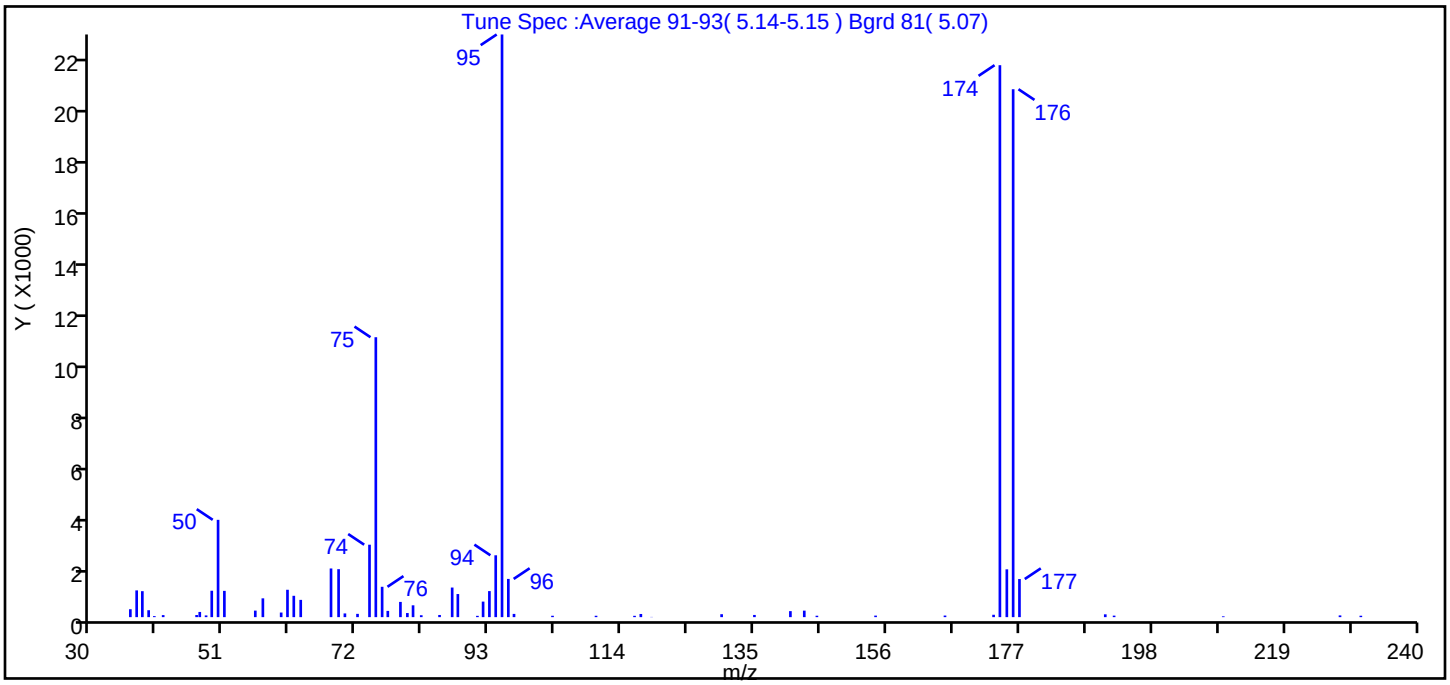
MSV_V_BFB_00004 Amount Added: 1.00 Units: uL

MS Tune Report

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20210204-21283.b\CF02T02.D
Injection Date: 04-Feb-2021 10:45:30 Instrument ID: 10193
Lims ID: BFB
Client ID:
Operator ID: kas02648 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: MSV_10193_25mL Limit Group: MSV - 8260C_D
Tune Method: BFB Method 8260

$ 165 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	16.7
75	30 to 60% of m/z 95	48.0
96	5 to 9% of m/z 95	6.6
173	Less than 2% of m/z 174	0.4 (0.4)
174	50 to 120% of m/z 95	94.7
175	5 to 9% of m/z 174	8.2 (8.7)
176	Greater than 95% but less than 101% of m/z 174	90.6 (95.6)
177	5 to 9% of m/z 176	6.5 (7.2)

Data File: \\chromfs\Lancaster\ChromData\10193\20210204-21283.b\CF02T02.D\MSV_10193_25mL.rslt\spectra.d
Injection Date: 04-Feb-2021 10:45:30
Spectrum: Tune Spec :Average 91-93(5.14-5.15) Bgrd 81(5.07)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 62

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	303	62.00	817	88.00	884	143.00	249
37.00	1024	63.00	661	91.00	50	145.00	54
38.00	994	68.00	1863	92.00	595	154.00	59
39.00	265	69.00	1836	93.00	997	165.00	61
40.00	39	70.00	142	94.00	2368	173.00	91
41.00	78	72.00	126	95.00	22304	174.00	21128
47.00	81	74.00	2773	96.00	1463	175.00	1830
47.00	199	75.00	10715	97.00	124	176.00	20208
48.00	66	76.00	1162	103.00	53	177.00	1459
49.00	1011	77.00	239	110.00	53	191.00	108
50.00	3725	79.00	583	116.00	51	192.00	58
51.00	1006	80.00	157	117.00	121	209.00	30
56.00	250	81.00	453	119.00	8	228.00	66
57.00	720	82.00	73	130.00	113	231.00	54
60.00	176	85.00	83	135.00	84		
61.00	1048	87.00	1133	141.00	230		

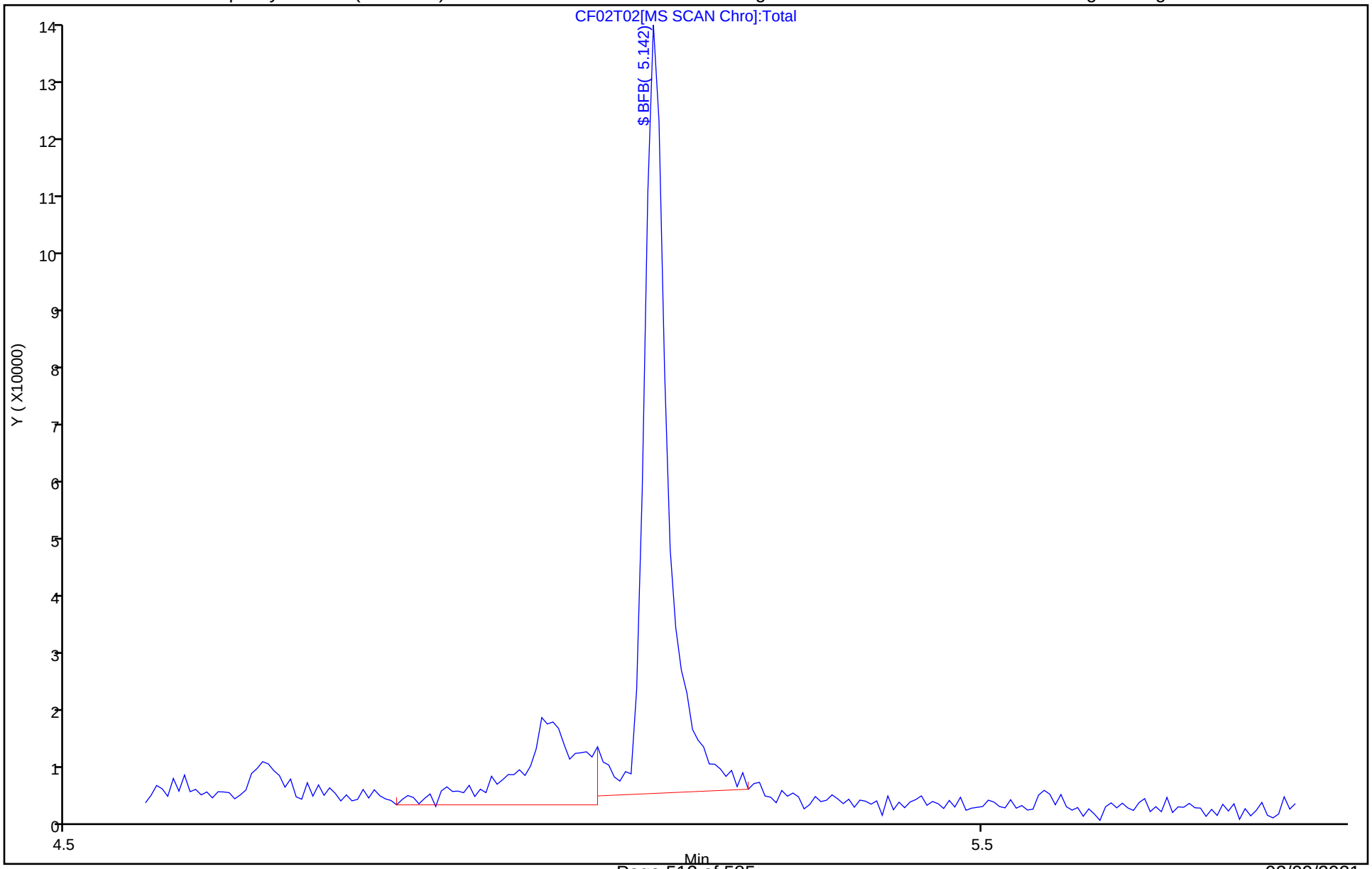
Report Date: 04-Feb-2021 13:11:38 Chrom Revision: 2.3 17-Jan-2021 00:24:10

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20210204-21283.b\CF02T02.D

Injection Date:	04-Feb-2021 10:45:30	Instrument ID:	10193	Operator ID:	kas02648
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 410-90352/7

Matrix: Water Lab File ID: CF02B01.D

Analysis Method: 8260D Date Collected:

Sample wt/vol: 25(mL) Date Analyzed: 02/03/2021 11:04

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 90352 Units: ug/L

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

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 410-90352/7

Matrix: Water Lab File ID: CF02B01.D

Analysis Method: 8260D Date Collected:

Sample wt/vol: 25(mL) Date Analyzed: 02/03/2021 11:04

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 90352 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
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)	95		80-120
1868-53-7	Dibromofluoromethane (Surr)	98		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\10193\20210203-21161.b\CF02B01.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 03-Feb-2021 11:04:30 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0021161-007
Misc. Info.: MB
Operator ID: SRK36897 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 03-Feb-2021 16:08:17 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1677

First Level Reviewer: spositok Date: 03-Feb-2021 16:08:17

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85		1.892					ND	
1 Chlorodifluoromethane	51		1.928					ND	7
140 Dimethyl ether	45		1.993					ND	7
3 Chloromethane	50		2.081					ND	
4 Butadiene	39		2.184					ND	7
5 Vinyl chloride	62		2.190					ND	
6 Bromomethane	94		2.501					ND	
7 Chloroethane	64		2.574					ND	7
8 Dichlorofluoromethane	67		2.806					ND	
9 Trichlorofluoromethane	101		2.873					ND	
11 Ethyl ether	59		3.093					ND	
12 1,2-Dichloro-1,1,2-trifluoroetha	67		3.178					ND	
13 Acrolein	56		3.257					ND	7
14 1,1-Dichloroethene	96		3.385					ND	7
16 Acetone	43		3.422					ND	7
15 112TCTFE	101		3.428					ND	
17 Iodomethane	142		3.568					ND	
18 Isopropyl alcohol	45		3.593					ND	
19 Ethyl bromide	108		3.599					ND	
20 Carbon disulfide	76		3.666					ND	7
22 Methyl acetate	43		3.818					ND	
21 Acetonitrile	41		3.836					ND	
23 3-Chloro-1-propene	41		3.836					ND	
24 Methylene Chloride	84		4.019					ND	
* 25 t-Butyl alcohol-d10 (IS)	65	4.056	4.056	0.000	0	173929	50.0	50.0	
26 2-Methyl-2-propanol	59		4.178					ND	
27 Acrylonitrile	53		4.349					ND	
28 Methyl tert-butyl ether	73		4.403					ND	
29 trans-1,2-Dichloroethene	96		4.409					ND	
30 Hexane	57		4.830					ND	
32 1,1-Dichloroethane	63		5.074					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
33 Isopropyl ether	45		5.135				ND		
31 Vinyl acetate	43		5.135				ND		
34 2-Chloro-1,3-butadiene	53		5.184				ND		
35 Tert-butyl ethyl ether	59		5.671				ND		
36 2-Butanone (MEK)	43		5.885				ND		
37 cis-1,2-Dichloroethene	96		5.915				ND		
38 2,2-Dichloropropane	77		5.927				ND		
40 Propionitrile	54		5.982				ND		
39 Ethyl acetate	43		6.013				ND		
41 Methyl acrylate	55		6.074				ND		
S 42 1,2-Dichloroethene, Total	100		6.155				ND		7
43 Methacrylonitrile	67		6.196				ND		
44 Chlorobromomethane	128		6.251				ND		
45 Tetrahydrofuran	71		6.251				ND		
46 Chloroform	83		6.403				ND		
$ 47 Dibromofluoromethane (Surr)	113	6.628	6.622	0.006	94	473565	10.0	9.75	
48 1,1,1-Trichloroethane	97		6.629				ND		
49 Cyclohexane	56		6.720				ND		
50 Carbon tetrachloride	117		6.830				ND		
51 1,1-Dichloropropene	75		6.836				ND		
145 1-Chlorobutane	56		6.842				ND		
52 Isobutyl alcohol	41		7.019				ND		
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.080	7.080	0.000	0	104288	10.0	10.5	
54 Benzene	78		7.104				ND		
55 1,2-Dichloroethane	62		7.177				ND		
152 Isopropyl acetate	43		7.257				ND		
56 Tert-amyl methyl ether	73		7.305				ND		
* 57 Fluorobenzene (IS)	96	7.518	7.513	0.005	99	2044006	10.0	10.0	
58 n-Heptane	43		7.525				ND		7
59 n-Butanol	56		7.909				ND		
60 Trichloroethene	95		7.994				ND		
61 Methylcyclohexane	83		8.299				ND		
62 1,2-Dichloropropane	63		8.336				ND		
63 2-ethoxy-2-methyl butane	87		8.348				ND		
65 1,4-Dioxane	88		8.433				ND		
64 Methyl methacrylate	69		8.433				ND		
66 Dibromomethane	93		8.445				ND		
160 n-Propyl acetate	61		8.561				ND		
67 Dichlorobromomethane	83		8.689				ND		
68 2-Nitropropane	41		8.970				ND		
71 1-Bromo-2-chloroethane	63		9.085				ND		
69 2-Chloroethyl vinyl ether	63		9.116				ND		
70 Chloroacetonitrile	75		9.116				ND		
72 cis-1,3-Dichloropropene	75		9.250				ND		
73 4-Methyl-2-pentanone (MIBK)	43		9.439				ND		7
$ 74 Toluene-d8 (Surr)	98	9.567	9.567	0.000	93	2036642	10.0	9.97	
75 Toluene	92		9.646				ND		7
76 trans-1,3-Dichloropropene	75		9.921				ND		7
78 Ethyl methacrylate	69		9.982				ND		7
S 77 1,3-Dichloropropene, Total	100		10.060				ND		7
79 1,1,2-Trichloroethane	97		10.128				ND		
80 Tetrachloroethene	166		10.207				ND		

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
81 1,3-Dichloropropane	76		10.292					ND	
82 2-Hexanone	43		10.353					ND	7
83 Chlorodibromomethane	129		10.506					ND	
161 n-Butyl acetate	43		10.512					ND	U
84 Ethylene Dibromide	107		10.616					ND	
* 85 Chlorobenzene-d5 (IS)	117	11.060	11.061	-0.001	85	1563826	10.0	10.0	
86 1-Chlorohexane	91		11.073					ND	7
87 Chlorobenzene	112		11.085					ND	7
89 1,1,1,2-Tetrachloroethane	131		11.170					ND	
90 Ethylbenzene	91		11.176					ND	
S 88 Xylenes, Total	106		11.245					ND	7
91 m-Xylene & p-Xylene	106		11.292					ND	7
92 o-Xylene	106		11.628					ND	
93 Styrene	104		11.646					ND	
94 Bromoform	173		11.804					ND	
95 Isopropylbenzene	105		11.932					ND	
96 cis-1,4-Dichloro-2-butene	88		12.018					ND	U
97 Cyclohexanone	55		12.048					ND	
$ 98 4-Bromofluorobenzene (Surr)	95	12.079	12.079	0.000	92	729552	10.0	9.50	
99 1,1,2,2-Tetrachloroethane	83		12.188					ND	
100 Bromobenzene	156		12.195					ND	
101 trans-1,4-Dichloro-2-butene	53		12.213					ND	
102 1,2,3-Trichloropropane	110		12.231					ND	
103 N-Propylbenzene	91		12.268					ND	
104 2-Chlorotoluene	126		12.341					ND	
105 1,3,5-Trimethylbenzene	105		12.408					ND	
106 4-Chlorotoluene	126		12.438					ND	
107 tert-Butylbenzene	134		12.652					ND	
108 Pentachloroethane	167		12.682					ND	
109 1,2,4-Trimethylbenzene	105		12.694					ND	7
110 sec-Butylbenzene	105		12.816					ND	
111 1,3-Dichlorobenzene	146		12.914					ND	
112 4-Isopropyltoluene	119		12.926					ND	7
* 113 1,4-Dichlorobenzene-d4	152	12.969	12.969	0.000	94	820359	10.0	10.0	
114 1,4-Dichlorobenzene	146		12.987					ND	7
115 1,2,3-Trimethylbenzene	120		12.999					ND	7
116 Benzyl chloride	126		13.072					ND	
119 n-Butylbenzene	92		13.219					ND	
120 1,2-Dichlorobenzene	146		13.255					ND	
118 p-Diethylbenzene	119		13.274					ND	U
122 Hexachloroethane	117		13.475					ND	
123 1,2-Dibromo-3-Chloropropane	155		13.804					ND	
124 1,3,5-Trichlorobenzene	180		13.926					ND	7
125 1,2,4-Trichlorobenzene	180		14.353					ND	7
126 Hexachlorobutadiene	225		14.438					ND	
127 Naphthalene	128		14.536					ND	7
128 1,2,3-Trichlorobenzene	180		14.682					ND	7
129 2-Methylnaphthalene	142		15.304					ND	U
130 Dodecane	57		0.000					ND	
155 2-Chloro-1,1,1-Trifluoroethane	1		0.000					ND	
159 tert-Butyl Formate	1		0.000					ND	
131 2-Bromo-1-chloropropane	1		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
133 1-Chloropropane	1		0.000					ND	
136 Methylal	1		0.000					ND	
138 n-Decane	57		0.000					ND	
222 Vinyl acetate (TIC)	1		0.000					ND	
142 1-Bromo-3-Chloropropane	1		0.000					ND	
221 Isopropyl alcohol TIC	1		0.000					ND	
151 Propene oxide	1		0.000					ND	
157 t-Amyl alcohol	1		0.000					ND	
158 1,1-Dichloro-1-fluoroethane	1		0.000					ND	
162 Ethanol	45		0.000					ND	
220 Acetonitrile TIC	1		0.000					ND	
149 Chlorotrifluoroethene	1		0.000					ND	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

MSV_HP25_ISSS_00022 Amount Added: 1.00 Units: uL Run Reagent

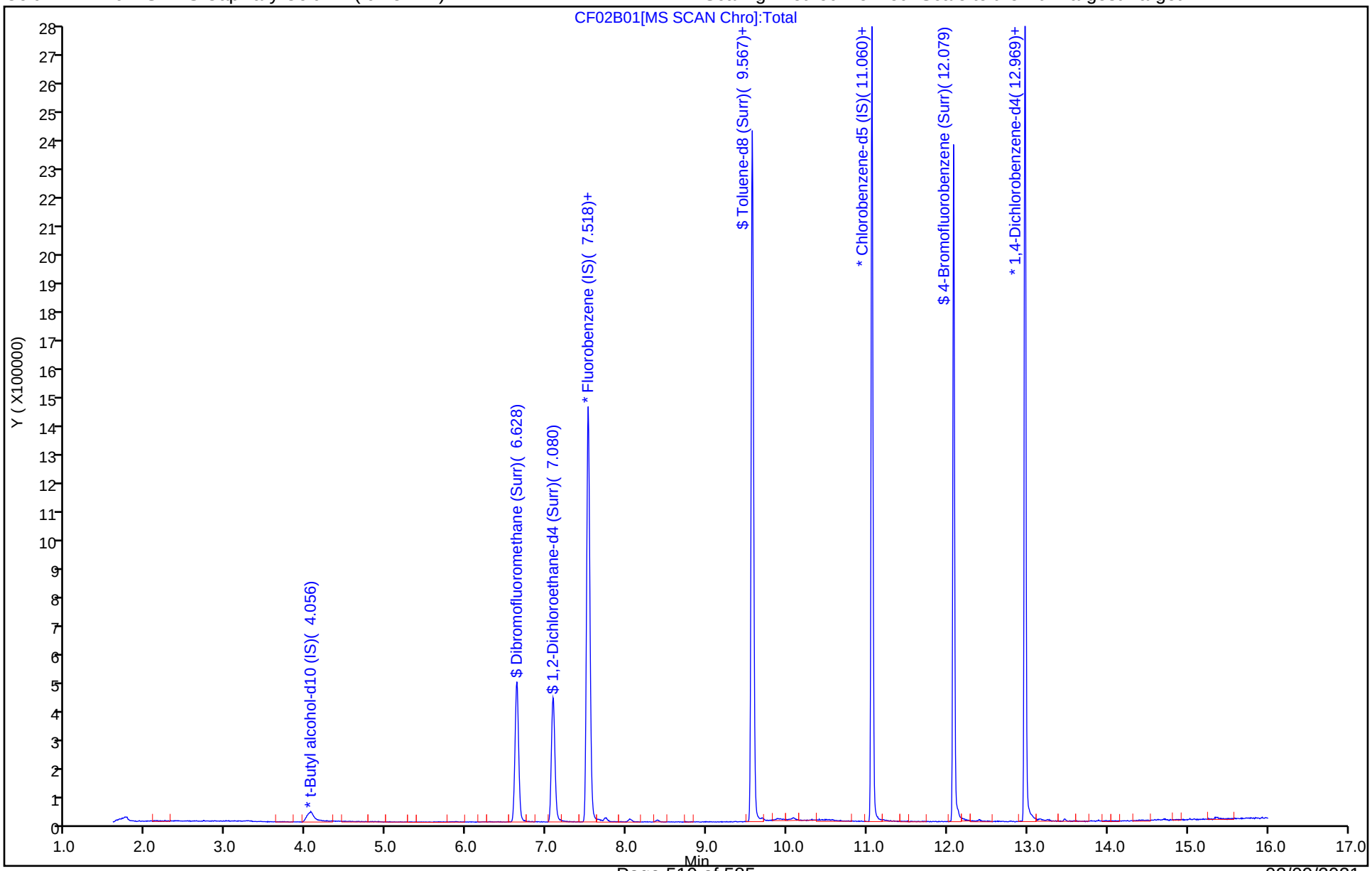
Report Date: 03-Feb-2021 16:08:29 Chrom Revision: 2.3 17-Jan-2021 00:24:10

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02B01.D

Injection Date:	03-Feb-2021 11:04:30	Instrument ID:	10193	Operator ID:	SRK36897
Lims ID:	MB			Worklist Smp#:	7
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Env, LLC

Recovery Report

Data File: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02B01.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 03-Feb-2021 11:04:30 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0021161-007
Misc. Info.: MB
Operator ID: SRK36897 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 03-Feb-2021 16:08:17 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1677

First Level Reviewer: spositok Date: 03-Feb-2021 16:08:17

Compound	Amount Added	Amount Recovered	% Rec.
$ 47 Dibromofluoromethane (Surr)	10.0	9.75	97.50
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.5	105.40
$ 74 Toluene-d8 (Surr)	10.0	9.97	99.72
$ 98 4-Bromofluorobenzene (Surr)	10.0	9.50	95.03

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 410-90807/7

Matrix: Water Lab File ID: CF02X07.D

Analysis Method: 8260D Date Collected:

Sample wt/vol: 25(mL) Date Analyzed: 02/04/2021 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.: 90807 Units: ug/L

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

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 410-90807/7

Matrix: Water Lab File ID: CF02X07.D

Analysis Method: 8260D Date Collected:

Sample wt/vol: 25(mL) Date Analyzed: 02/04/2021 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.: 90807 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
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)	97		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\10193\20210204-21283.b\CF02X07.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 04-Feb-2021 12:51:30 ALS Bottle#: 7 Worklist Smp#: 7
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0021283-007
Misc. Info.: MB
Operator ID: kas02648 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20210204-21283.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 04-Feb-2021 13:19:01 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1626

First Level Reviewer: spositok Date: 04-Feb-2021 13:19:01

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85		1.898					ND	
1 Chlorodifluoromethane	51		1.928					ND	7
140 Dimethyl ether	45		1.993					ND	7
3 Chloromethane	50		2.087					ND	
4 Butadiene	39		2.196					ND	7
5 Vinyl chloride	62		2.196					ND	
6 Bromomethane	94		2.513					ND	
7 Chloroethane	64		2.593					ND	
8 Dichlorofluoromethane	67		2.824					ND	
9 Trichlorofluoromethane	101		2.885					ND	
11 Ethyl ether	59		3.105					ND	
12 1,2-Dichloro-1,1,2-trifluoroetha	67		3.202					ND	
13 Acrolein	56		3.269					ND	7
14 1,1-Dichloroethene	96		3.397					ND	
16 Acetone	43		3.428					ND	7
15 112TCTFE	101		3.434					ND	
17 Iodomethane	142		3.580					ND	
18 Isopropyl alcohol	45		3.599					ND	U
19 Ethyl bromide	108		3.611					ND	
20 Carbon disulfide	76		3.678					ND	7
22 Methyl acetate	43		3.824					ND	
21 Acetonitrile	41		3.836					ND	
23 3-Chloro-1-propene	41		3.849					ND	
24 Methylene Chloride	84		4.031					ND	
* 25 t-Butyl alcohol-d10 (IS)	65	4.056	4.056	0.000	0	196257	50.0	50.0	
26 2-Methyl-2-propanol	59		4.172					ND	
27 Acrylonitrile	53		4.367					ND	
28 Methyl tert-butyl ether	73		4.409					ND	
29 trans-1,2-Dichloroethene	96		4.422					ND	
30 Hexane	57		4.842					ND	
32 1,1-Dichloroethane	63		5.080					ND	

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
	31 Vinyl acetate	43		5.135					ND	
	33 Isopropyl ether	45		5.147					ND	
	34 2-Chloro-1,3-butadiene	53		5.196					ND	
	35 Tert-butyl ethyl ether	59		5.684					ND	
	36 2-Butanone (MEK)	43		5.897					ND	
	37 cis-1,2-Dichloroethene	96		5.927					ND	
	38 2,2-Dichloropropane	77		5.934					ND	
	40 Propionitrile	54		5.995					ND	
	39 Ethyl acetate	43		6.013					ND	
	41 Methyl acrylate	55		6.074					ND	
S	42 1,2-Dichloroethene, Total	100		6.155					ND	7
	43 Methacrylonitrile	67		6.202					ND	
	44 Chlorobromomethane	128		6.257					ND	
	45 Tetrahydrofuran	71		6.263					ND	
	46 Chloroform	83		6.409					ND	
$	47 Dibromofluoromethane (Surr)	113	6.622	6.629	-0.007	94	484967	10.0	9.74	
	48 1,1,1-Trichloroethane	97		6.629					ND	
	49 Cyclohexane	56		6.726					ND	
	50 Carbon tetrachloride	117		6.842					ND	
	145 1-Chlorobutane	56		6.842					ND	
	51 1,1-Dichloropropene	75		6.848					ND	7
	52 Isobutyl alcohol	41		7.025					ND	
$	53 1,2-Dichloroethane-d4 (Surr)	102	7.080	7.086	-0.006	0	105541	10.0	10.4	
	54 Benzene	78		7.110					ND	7
	55 1,2-Dichloroethane	62		7.183					ND	
	152 Isopropyl acetate	43		7.257					ND	U
	56 Tert-amyl methyl ether	73		7.311					ND	
*	57 Fluorobenzene (IS)	96	7.519	7.519	0.000	99	2094541	10.0	10.0	
	58 n-Heptane	43		7.525					ND	7
	59 n-Butanol	56		7.915					ND	
	60 Trichloroethene	95		8.000					ND	
	61 Methylcyclohexane	83		8.305					ND	
	62 1,2-Dichloropropane	63		8.342					ND	
	63 2-ethoxy-2-methyl butane	87		8.354					ND	
	65 1,4-Dioxane	88		8.433					ND	
	64 Methyl methacrylate	69		8.433					ND	
	66 Dibromomethane	93		8.451					ND	
	160 n-Propyl acetate	61		8.561					ND	
	67 Dichlorobromomethane	83		8.689					ND	7
	68 2-Nitropropane	41		8.976					ND	
	71 1-Bromo-2-chloroethane	63		9.085					ND	
	69 2-Chloroethyl vinyl ether	63		9.116					ND	
	70 Chloroacetonitrile	75		9.116					ND	
	72 cis-1,3-Dichloropropene	75		9.256					ND	
	73 4-Methyl-2-pentanone (MIBK)	43		9.439					ND	7
$	74 Toluene-d8 (Surr)	98	9.567	9.567	0.000	93	2096238	10.0	10.1	
	75 Toluene	92		9.646					ND	7
	76 trans-1,3-Dichloropropene	75		9.921					ND	7
	78 Ethyl methacrylate	69		9.988					ND	7
S	77 1,3-Dichloropropene, Total	100		10.060					ND	7
	79 1,1,2-Trichloroethane	97		10.128					ND	
	80 Tetrachloroethene	166		10.207					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
81 1,3-Dichloropropane	76		10.292					ND	
82 2-Hexanone	43		10.353					ND	7
83 Chlorodibromomethane	129		10.506					ND	
161 n-Butyl acetate	43		10.512					ND	U
84 Ethylene Dibromide	107		10.622					ND	
* 85 Chlorobenzene-d5 (IS)	117	11.061	11.061	-0.001	85	1591163	10.0	10.0	
86 1-Chlorohexane	91		11.073					ND	7
87 Chlorobenzene	112		11.085					ND	7
89 1,1,1,2-Tetrachloroethane	131		11.176					ND	
90 Ethylbenzene	91		11.176					ND	
S 88 Xylenes, Total	106		11.245					ND	7
91 m-Xylene & p-Xylene	106		11.292					ND	7
92 o-Xylene	106		11.628					ND	
93 Styrene	104		11.646					ND	
94 Bromoform	173		11.804					ND	
95 Isopropylbenzene	105		11.932					ND	
96 cis-1,4-Dichloro-2-butene	88		12.018					ND	U
97 Cyclohexanone	55		12.048					ND	
$ 98 4-Bromofluorobenzene (Surr)	95	12.079	12.079	0.000	93	764992	10.0	9.79	
99 1,1,2,2-Tetrachloroethane	83		12.188					ND	
100 Bromobenzene	156		12.195					ND	
101 trans-1,4-Dichloro-2-butene	53		12.213					ND	
102 1,2,3-Trichloropropane	110		12.231					ND	
103 N-Propylbenzene	91		12.268					ND	
104 2-Chlorotoluene	126		12.341					ND	
105 1,3,5-Trimethylbenzene	105		12.408					ND	
106 4-Chlorotoluene	126		12.438					ND	7
107 tert-Butylbenzene	134		12.652					ND	
108 Pentachloroethane	167		12.682					ND	
109 1,2,4-Trimethylbenzene	105		12.694					ND	7
110 sec-Butylbenzene	105		12.816					ND	
111 1,3-Dichlorobenzene	146		12.914					ND	7
112 4-Isopropyltoluene	119		12.926					ND	7
* 113 1,4-Dichlorobenzene-d4	152	12.969	12.969	0.000	94	861003	10.0	10.0	
114 1,4-Dichlorobenzene	146		12.987					ND	7
115 1,2,3-Trimethylbenzene	120		12.999					ND	7
116 Benzyl chloride	126		13.066					ND	7
119 n-Butylbenzene	92		13.219					ND	7
120 1,2-Dichlorobenzene	146		13.255					ND	
118 p-Diethylbenzene	119		13.274					ND	
122 Hexachloroethane	117		13.475					ND	
123 1,2-Dibromo-3-Chloropropane	155		13.804					ND	
124 1,3,5-Trichlorobenzene	180		13.926					ND	7
125 1,2,4-Trichlorobenzene	180		14.353					ND	7
126 Hexachlorobutadiene	225		14.438					ND	
127 Naphthalene	128		14.536					ND	7
128 1,2,3-Trichlorobenzene	180		14.682					ND	7
129 2-Methylnaphthalene	142		15.304					ND	U
130 Dodecane	57		0.000					ND	
155 2-Chloro-1,1,1-Trifluoroethane	1		0.000					ND	
159 tert-Butyl Formate	1		0.000					ND	
131 2-Bromo-1-chloropropane	1		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
133 1-Chloropropane	1		0.000					ND	
136 Methylal	1		0.000					ND	
138 n-Decane	57		0.000					ND	
222 Vinyl acetate (TIC)	1		0.000					ND	
142 1-Bromo-3-Chloropropane	1		0.000					ND	
221 Isopropyl alcohol TIC	1		0.000					ND	
151 Propene oxide	1		0.000					ND	
157 t-Amyl alcohol	1		0.000					ND	
158 1,1-Dichloro-1-fluoroethane	1		0.000					ND	
162 Ethanol	45		0.000					ND	
220 Acetonitrile TIC	1		0.000					ND	
149 Chlorotrifluoroethene	1		0.000					ND	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

MSV_HP25_ISSS_00022 Amount Added: 1.00 Units: uL Run Reagent

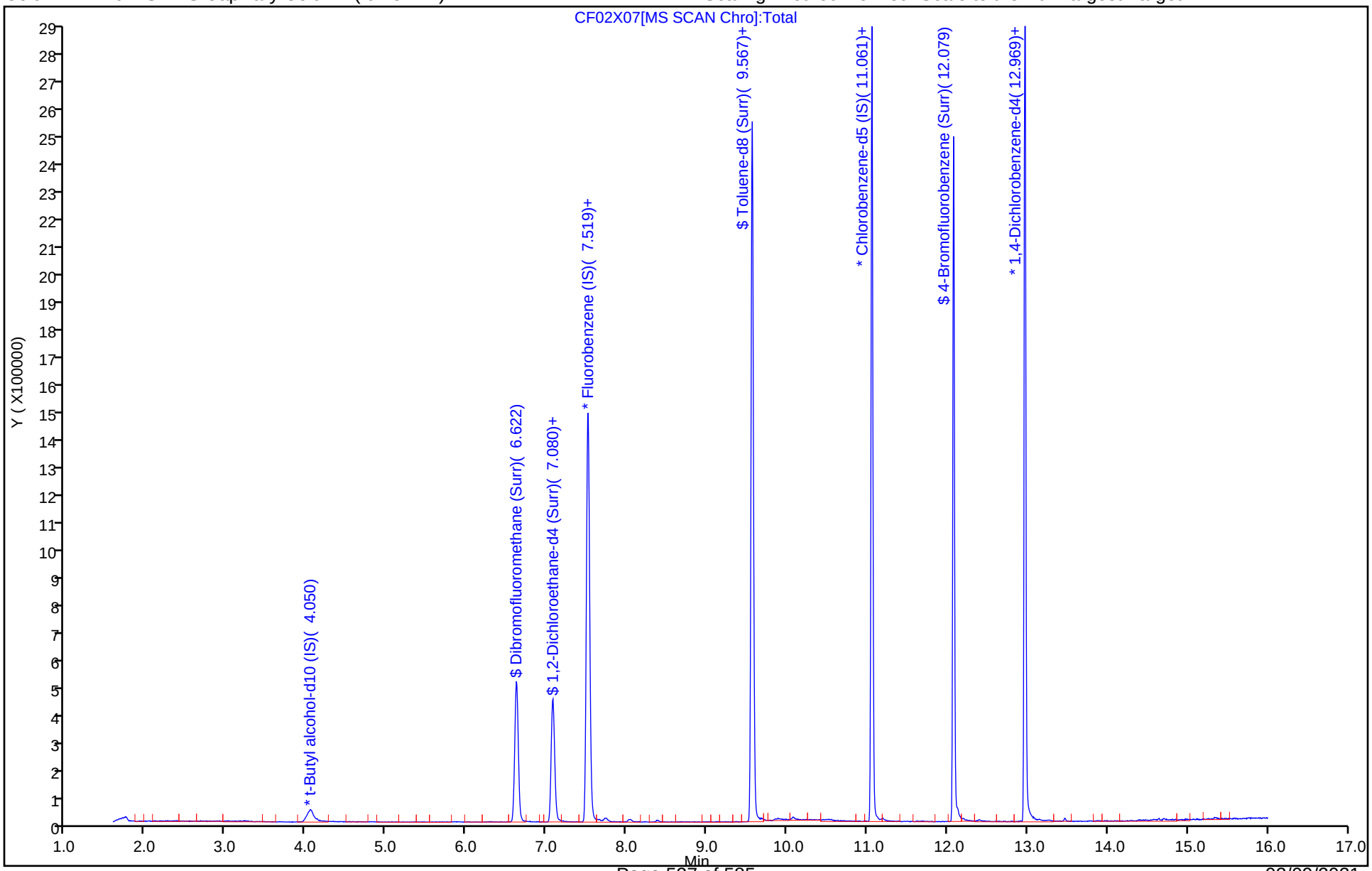
Report Date: 04-Feb-2021 13:19:15 Chrom Revision: 2.3 17-Jan-2021 00:24:10

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20210204-21283.b\CF02X07.D

Injection Date:	04-Feb-2021 12:51:30	Instrument ID:	10193	Operator ID:	kas02648
Lims ID:	MB			Worklist Smp#:	7
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Env, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\10193\20210204-21283.b\CF02X07.D				
Lims ID:	MB				
Client ID:					
Sample Type:	MB				
Inject. Date:	04-Feb-2021 12:51:30	ALS Bottle#:	7	Worklist Smp#:	7
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0021283-007				
Misc. Info.:	MB				
Operator ID:	kas02648	Instrument ID:	10193		
Method:	\\chromfs\Lancaster\ChromData\10193\20210204-21283.b\MSV_10193_25mL.m				
Limit Group:	MSV - 8260C_D				
Last Update:	04-Feb-2021 13:19:01	Calib Date:	01-Sep-2020 19:09:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1626				

First Level Reviewer: spositok Date: 04-Feb-2021 13:19:01

Compound	Amount Added	Amount Recovered	% Rec.
$ 47 Dibromofluoromethane (Surr)	10.0	9.74	97.44
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.4	104.09
$ 74 Toluene-d8 (Surr)	10.0	10.1	100.87
$ 98 4-Bromofluorobenzene (Surr)	10.0	9.79	97.94

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 410-90352/8

Matrix: Water Lab File ID: CF02S01.D

Analysis Method: 8260D Date Collected:

Sample wt/vol: 25(mL) Date Analyzed: 02/03/2021 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.: 90352 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	4.80		0.50	0.070
71-55-6	1,1,1-Trichloroethane	4.27		0.50	0.060
79-34-5	1,1,2,2-Tetrachloroethane	5.22		0.50	0.070
79-00-5	1,1,2-Trichloroethane	5.10		0.50	0.060
75-34-3	1,1-Dichloroethane	4.52		0.50	0.070
75-35-4	1,1-Dichloroethene	4.68		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	5.01		0.50	0.060
107-06-2	1,2-Dichloroethane	4.34		0.50	0.050
78-87-5	1,2-Dichloropropane	4.92		0.50	0.060
78-93-3	2-Butanone (MEK)	39.6		5.0	0.60
591-78-6	2-Hexanone	24.0		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	23.0		5.0	0.70
67-64-1	Acetone	45.9		5.0	0.90
71-43-2	Benzene	4.65		0.50	0.050
74-97-5	Bromochloromethane	4.82		0.50	0.050
75-27-4	Bromodichloromethane	4.67		0.50	0.050
75-25-2	Bromoform	5.51		1.0	0.30
74-83-9	Bromomethane	4.27		0.50	0.070
75-15-0	Carbon disulfide	4.51		1.0	0.060
56-23-5	Carbon tetrachloride	4.36		0.50	0.070
108-90-7	Chlorobenzene	4.81		0.50	0.060
75-00-3	Chloroethane	4.09		0.50	0.070
67-66-3	Chloroform	4.42		0.50	0.090
74-87-3	Chloromethane	4.61		0.50	0.060
156-59-2	cis-1,2-Dichloroethene	4.57		0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	4.92		0.50	0.050
124-48-1	Dibromochloromethane	4.98		0.50	0.070
100-41-4	Ethylbenzene	4.56		0.50	0.060
1634-04-4	Methyl tert-butyl ether	4.60		0.50	0.050
75-09-2	Methylene Chloride	4.90		0.50	0.070
100-42-5	Styrene	4.85		0.50	0.050
127-18-4	Tetrachloroethene	4.67		0.50	0.060
108-88-3	Toluene	4.62		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	4.50		0.50	0.060
10061-02-6	trans-1,3-Dichloropropene	5.06		0.50	0.060
79-01-6	Trichloroethene	4.62		0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 410-90352/8

Matrix: Water Lab File ID: CF02S01.D

Analysis Method: 8260D Date Collected:

Sample wt/vol: 25(mL) Date Analyzed: 02/03/2021 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.: 90352 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-01-4	Vinyl chloride	4.40		0.50	0.10
1330-20-7	Xylenes, Total	14.0		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)	99		80-120
1868-53-7	Dibromofluoromethane (Surr)	100		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\10193\20210203-21161.b\CF02S01.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 03-Feb-2021 11:48:30 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0021161-008
Operator ID: SRK36897 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 03-Feb-2021 14:07:15 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1670

First Level Reviewer: knouses Date: 03-Feb-2021 12:31:32

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.892	1.892	0.000	99	296905	5.00	4.48	
3 Chloromethane	50	2.081	2.081	0.000	100	360085	5.00	4.61	
4 Butadiene	39	2.184	2.184	0.000	93	506397	5.00	6.89	
5 Vinyl chloride	62	2.184	2.190	-0.006	64	317954	5.00	4.40	
6 Bromomethane	94	2.501	2.501	0.000	90	217603	5.00	4.27	
7 Chloroethane	64	2.574	2.574	0.000	100	182443	5.00	4.09	
8 Dichlorofluoromethane	67	2.806	2.806	0.000	97	274920	5.00	2.84	
9 Trichlorofluoromethane	101	2.873	2.873	0.000	95	396076	5.00	4.21	
11 Ethyl ether	59	3.093	3.093	0.000	92	198614	5.00	4.17	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.190	3.178	0.012	91	262479	5.00	3.76	
13 Acrolein	56	3.263	3.257	0.006	99	219520	37.5	31.6	
14 1,1-Dichloroethene	96	3.385	3.385	0.000	98	222380	5.00	4.68	
16 Acetone	43	3.422	3.422	0.000	100	338731	37.5	45.9	
15 112TCTFE	101	3.416	3.428	-0.012	88	208556	5.00	4.32	
17 Iodomethane	142	3.568	3.568	0.000	97	416855	5.00	4.44	
18 Isopropyl alcohol	45	3.586	3.593	-0.007	72	85010	37.5	62.2	
19 Ethyl bromide	108	3.599	3.599	0.000	98	186177	5.03	4.72	
20 Carbon disulfide	76	3.660	3.666	-0.006	99	756153	5.00	4.51	
22 Methyl acetate	43	3.818	3.818	0.000	97	136676	5.00	4.72	
23 3-Chloro-1-propene	41	3.830	3.836	-0.006	93	387911	5.00	4.67	
24 Methylene Chloride	84	4.013	4.019	-0.006	93	258819	5.00	4.90	
* 25 t-Butyl alcohol-d10 (IS)	65	4.044	4.056	-0.012	0	173462	50.0	50.0	
26 2-Methyl-2-propanol	59	4.166	4.178	-0.012	99	203385	50.0	58.9	
27 Acrylonitrile	53	4.342	4.349	-0.007	99	322214	25.0	27.5	
28 Methyl tert-butyl ether	73	4.397	4.403	-0.006	94	707627	5.00	4.60	
29 trans-1,2-Dichloroethene	96	4.403	4.409	-0.006	98	249788	5.00	4.50	
30 Hexane	57	4.830	4.830	0.000	95	393829	5.00	5.03	
32 1,1-Dichloroethane	63	5.074	5.074	0.000	96	461700	5.00	4.52	
33 Isopropyl ether	45	5.129	5.135	-0.006	95	881500	5.00	4.52	
34 2-Chloro-1,3-butadiene	53	5.178	5.184	-0.006	90	398752	5.00	4.14	
35 Tert-butyl ethyl ether	59	5.671	5.671	0.000	98	836928	5.00	4.50	
36 2-Butanone (MEK)	43	5.885	5.885	0.000	100	684775	37.5	39.6	

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	5.909	5.915	-0.006	82	287616	5.00	4.57	
38 2,2-Dichloropropane	77	5.921	5.927	-0.006	62	375682	5.00	4.26	
40 Propionitrile	54	5.988	5.982	0.006	99	168748	37.5	38.5	
43 Methacrylonitrile	67	6.196	6.196	0.000	92	633415	37.5	37.2	
44 Chlorobromomethane	128	6.244	6.251	-0.007	96	133647	5.00	4.82	
45 Tetrahydrofuran	71	6.250	6.251	-0.001	79	127887	25.0	26.2	
46 Chloroform	83	6.403	6.403	0.000	93	447906	5.00	4.42	
$ 47 Dibromofluoromethane (Surr)	113	6.622	6.622	0.000	94	486034	10.0	9.95	
48 1,1,1-Trichloroethane	97	6.622	6.629	-0.007	99	389569	5.00	4.27	
49 Cyclohexane	56	6.720	6.720	0.000	91	455812	5.00	4.72	
50 Carbon tetrachloride	117	6.836	6.830	0.006	95	333267	5.00	4.36	
51 1,1-Dichloropropene	75	6.830	6.836	-0.006	96	360942	5.00	4.40	
52 Isobutyl alcohol	41	7.019	7.019	0.000	94	177031	125.0	158.0	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.073	7.080	-0.007	0	104292	10.0	10.5	
54 Benzene	78	7.104	7.104	0.000	97	1097182	5.00	4.65	
55 1,2-Dichloroethane	62	7.177	7.177	0.000	97	308577	5.00	4.34	
56 Tert-amyl methyl ether	73	7.299	7.305	-0.006	98	792853	5.00	4.67	
* 57 Fluorobenzene (IS)	96	7.512	7.513	-0.001	99	2054873	10.0	10.0	
58 n-Heptane	43	7.519	7.525	-0.007	93	451203	5.00	5.18	
59 n-Butanol	56	7.915	7.909	0.006	89	333391	250.0	359.1	
60 Trichloroethene	95	7.994	7.994	0.000	98	280757	5.00	4.62	
61 Methylcyclohexane	83	8.299	8.299	0.000	91	494055	5.00	5.30	
62 1,2-Dichloropropane	63	8.335	8.336	-0.001	97	298310	5.00	4.92	
63 2-ethoxy-2-methyl butane	87	8.348	8.348	0.000	92	448330	5.00	4.75	
65 1,4-Dioxane	88	8.439	8.433	0.006	31	37307	125.0	201.8	M
64 Methyl methacrylate	69	8.433	8.433	0.000	95	158876	5.00	4.38	
66 Dibromomethane	93	8.445	8.445	0.000	95	142632	5.00	4.81	
67 Dichlorobromomethane	83	8.683	8.689	-0.006	99	341523	5.00	4.67	
68 2-Nitropropane	41	8.969	8.970	-0.001	99	45758	5.00	4.07	
71 1-Bromo-2-chloroethane	63	9.079	9.085	-0.006	98	320788	5.00	5.12	
69 2-Chloroethyl vinyl ether	63		9.116				ND	ND	
72 cis-1,3-Dichloropropene	75	9.250	9.250	0.000	96	447411	5.00	4.92	
73 4-Methyl-2-pentanone (MIBK)	43	9.439	9.439	0.000	97	1157477	25.0	23.0	
$ 74 Toluene-d8 (Surr)	98	9.561	9.567	-0.006	94	2084193	10.0	10.1	
75 Toluene	92	9.640	9.646	-0.006	98	718101	5.00	4.62	
76 trans-1,3-Dichloropropene	75	9.914	9.921	-0.007	92	394368	5.00	5.06	
78 Ethyl methacrylate	69	9.988	9.982	0.006	90	340827	5.00	5.19	
79 1,1,2-Trichloroethane	97	10.128	10.128	0.000	90	219222	5.00	5.10	
80 Tetrachloroethene	166	10.207	10.207	0.000	98	324751	5.00	4.67	
81 1,3-Dichloropropane	76	10.292	10.292	0.000	90	378277	5.00	5.00	
82 2-Hexanone	43	10.353	10.353	0.000	97	850591	25.0	24.0	
83 Chlorodibromomethane	129	10.506	10.506	0.000	90	248201	5.00	4.98	
84 Ethylene Dibromide	107	10.622	10.616	0.006	99	212321	5.00	5.01	
* 85 Chlorobenzene-d5 (IS)	117	11.061	11.061	-0.001	85	1583185	10.0	10.0	
86 1-Chlorohexane	91	11.073	11.073	0.000	99	392134	5.00	4.42	
87 Chlorobenzene	112	11.085	11.085	0.000	95	844014	5.00	4.81	
89 1,1,1,2-Tetrachloroethane	131	11.176	11.170	0.006	97	286809	5.00	4.80	
90 Ethylbenzene	91	11.176	11.176	0.000	98	1405621	5.00	4.56	
91 m-Xylene & p-Xylene	106	11.292	11.292	0.000	100	1115047	10.0	9.26	
92 o-Xylene	106	11.627	11.628	-0.001	97	557131	5.00	4.72	
93 Styrene	104	11.646	11.646	0.000	95	960497	5.00	4.85	
94 Bromoform	173	11.804	11.804	0.000	98	152477	5.00	5.51	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
95 Isopropylbenzene	105	11.932	11.932	0.000	96	1373639	5.00	4.40	
$ 98 4-Bromofluorobenzene (Surr)	95	12.079	12.079	0.000	92	770416	10.0	9.91	
99 1,1,2,2-Tetrachloroethane	83	12.188	12.188	0.000	94	286746	5.00	5.22	
100 Bromobenzene	156	12.194	12.195	-0.001	94	368381	5.00	4.88	
101 trans-1,4-Dichloro-2-butene	53	12.213	12.213	0.000	88	216709	25.0	14.2	
102 1,2,3-Trichloropropane	110	12.231	12.231	0.000	82	73757	5.00	4.93	
103 N-Propylbenzene	91	12.268	12.268	0.000	99	1675170	5.00	4.73	
104 2-Chlorotoluene	126	12.347	12.341	0.006	97	352017	5.00	4.86	
105 1,3,5-Trimethylbenzene	105	12.408	12.408	0.000	94	1208333	5.00	4.60	
106 4-Chlorotoluene	126	12.438	12.438	0.000	97	368481	5.00	4.89	
107 tert-Butylbenzene	134	12.652	12.652	0.000	93	262168	5.00	4.59	
108 Pentachloroethane	167	12.682	12.682	0.000	93	214005	5.00	5.02	
109 1,2,4-Trimethylbenzene	105	12.694	12.694	0.000	96	1234349	5.00	4.58	
110 sec-Butylbenzene	105	12.816	12.816	0.000	94	1561467	5.00	4.62	
111 1,3-Dichlorobenzene	146	12.914	12.914	0.000	98	713960	5.00	4.74	
112 4-Isopropyltoluene	119	12.926	12.926	0.000	97	1410489	5.00	4.78	
* 113 1,4-Dichlorobenzene-d4	152	12.975	12.969	0.006	93	879887	10.0	10.0	
114 1,4-Dichlorobenzene	146	12.993	12.987	0.006	95	751576	5.00	4.85	
115 1,2,3-Trimethylbenzene	120	13.005	12.999	0.006	98	595369	5.00	5.04	
116 Benzyl chloride	126	13.072	13.072	0.000	98	134774	5.00	6.17	
119 n-Butylbenzene	92	13.219	13.219	0.000	97	698562	5.00	4.68	
120 1,2-Dichlorobenzene	146	13.255	13.255	0.000	99	681743	5.00	4.79	
118 p-Diethylbenzene	119	13.273	13.274	-0.001	87	715513	5.00	4.78	
123 1,2-Dibromo-3-Chloropropane	155	13.804	13.804	0.000	87	41837	5.00	5.55	
124 1,3,5-Trichlorobenzene	180	13.926	13.926	0.000	98	609716	5.00	4.96	
125 1,2,4-Trichlorobenzene	180	14.359	14.353	0.006	94	548042	5.00	4.97	
126 Hexachlorobutadiene	225	14.438	14.438	0.000	96	272925	5.00	5.07	
127 Naphthalene	128	14.542	14.536	0.006	97	980707	5.00	4.98	
128 1,2,3-Trichlorobenzene	180	14.682	14.682	0.000	96	495493	5.00	5.07	
129 2-Methylnaphthalene	142	15.310	15.304	0.006	92	592197	5.00	4.45	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MSV_Q_QARC_00065	Amount Added:	12.50	Units: uL	
MSV_Q_EE_00003	Amount Added:	12.50	Units: uL	
MSV_Q_QVOA6_00064	Amount Added:	12.50	Units: uL	
MSV_Q_ETBR_00006	Amount Added:	12.50	Units: uL	
MSV_Q_QVOA1_00066	Amount Added:	12.50	Units: uL	
MSV_QGAS_826_00108	Amount Added:	12.50	Units: uL	
MSV_HP25_ISSS_00022	Amount Added:	1.00	Units: uL	Run Reagent

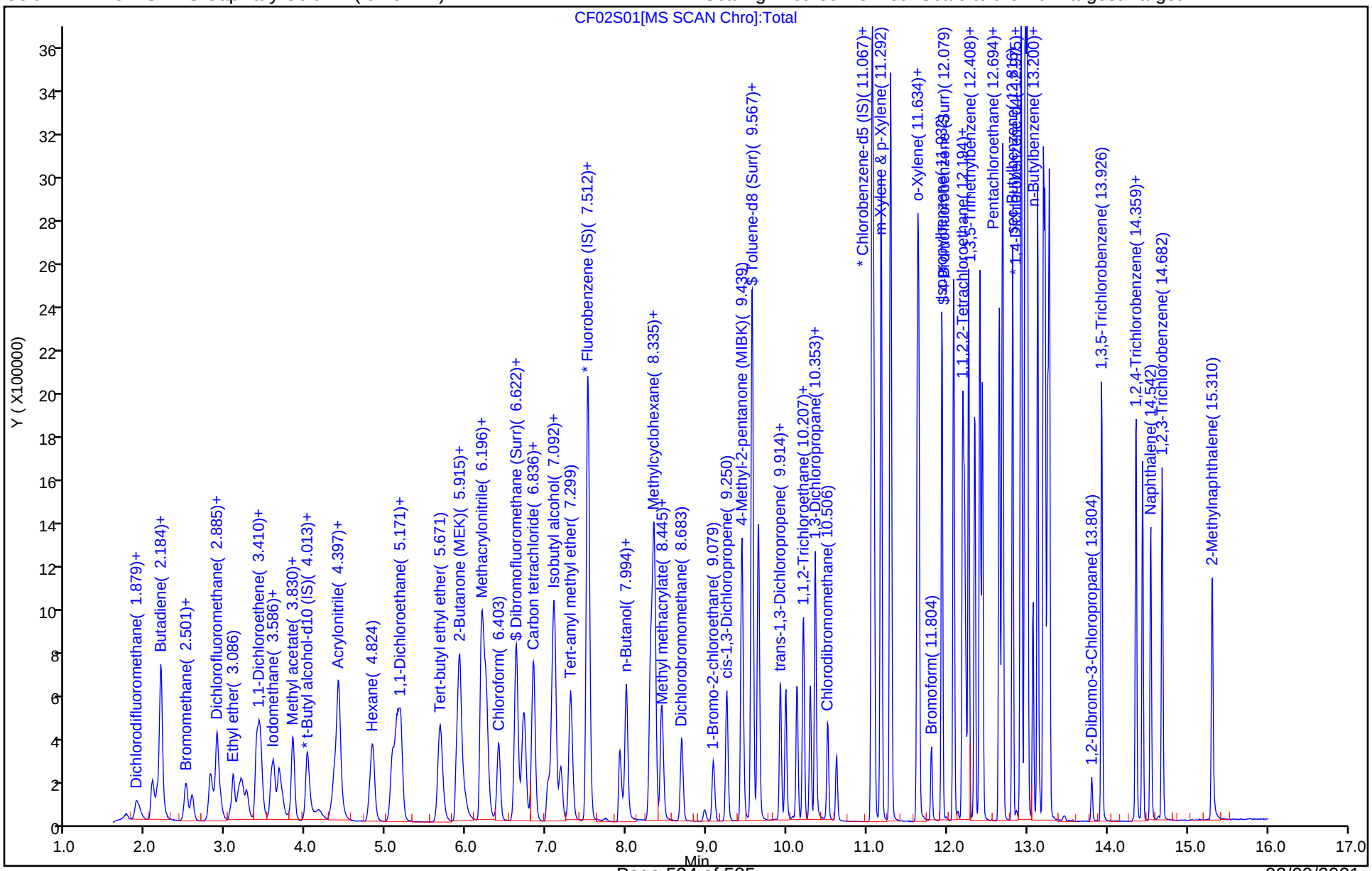
Report Date: 03-Feb-2021 14:08:17 Chrom Revision: 2.3 17-Jan-2021 00:24:10

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S01.D

Injection Date:	03-Feb-2021 11:48:30	Instrument ID:	10193	Operator ID:	SRK36897
Lims ID:	LCS			Worklist Smp#:	8
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Env, LLC

Recovery Report

Data File: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S01.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 03-Feb-2021 11:48:30 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0021161-008
Operator ID: SRK36897 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 03-Feb-2021 14:07:15 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1670

First Level Reviewer: knouses Date: 03-Feb-2021 12:31:32

Compound	Amount Added	Amount Recovered	% Rec.
$ 47 Dibromofluoromethane (Surr)	10.0	9.95	99.54
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.5	104.84
$ 74 Toluene-d8 (Surr)	10.0	10.1	100.80
$ 98 4-Bromofluorobenzene (Surr)	10.0	9.91	99.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 410-90807/4

Matrix: Water Lab File ID: CF02X04.D

Analysis Method: 8260D Date Collected:

Sample wt/vol: 25(mL) Date Analyzed: 02/04/2021 11:44

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.: 90807 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	4.85		0.50	0.070
71-55-6	1,1,1-Trichloroethane	4.27		0.50	0.060
79-34-5	1,1,2,2-Tetrachloroethane	5.16		0.50	0.070
79-00-5	1,1,2-Trichloroethane	5.07		0.50	0.060
75-34-3	1,1-Dichloroethane	4.61		0.50	0.070
75-35-4	1,1-Dichloroethene	4.82		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	4.96		0.50	0.060
107-06-2	1,2-Dichloroethane	4.32		0.50	0.050
78-87-5	1,2-Dichloropropane	4.86		0.50	0.060
78-93-3	2-Butanone (MEK)	37.2		5.0	0.60
591-78-6	2-Hexanone	22.2		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	21.0		5.0	0.70
67-64-1	Acetone	40.9		5.0	0.90
71-43-2	Benzene	4.66		0.50	0.050
74-97-5	Bromochloromethane	4.80		0.50	0.050
75-27-4	Bromodichloromethane	4.67		0.50	0.050
75-25-2	Bromoform	5.53		1.0	0.30
74-83-9	Bromomethane	4.40		0.50	0.070
75-15-0	Carbon disulfide	4.68		1.0	0.060
56-23-5	Carbon tetrachloride	4.40		0.50	0.070
108-90-7	Chlorobenzene	4.81		0.50	0.060
75-00-3	Chloroethane	4.14		0.50	0.070
67-66-3	Chloroform	4.50		0.50	0.090
74-87-3	Chloromethane	4.55		0.50	0.060
156-59-2	cis-1,2-Dichloroethene	4.64		0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	4.88		0.50	0.050
124-48-1	Dibromochloromethane	5.10		0.50	0.070
100-41-4	Ethylbenzene	4.57		0.50	0.060
1634-04-4	Methyl tert-butyl ether	4.60		0.50	0.050
75-09-2	Methylene Chloride	4.93		0.50	0.070
100-42-5	Styrene	4.80		0.50	0.050
127-18-4	Tetrachloroethene	4.65		0.50	0.060
108-88-3	Toluene	4.63		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	4.62		0.50	0.060
10061-02-6	trans-1,3-Dichloropropene	5.13		0.50	0.060
79-01-6	Trichloroethene	4.64		0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 410-90807/4

Matrix: Water Lab File ID: CF02X04.D

Analysis Method: 8260D Date Collected:

Sample wt/vol: 25(mL) Date Analyzed: 02/04/2021 11:44

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.: 90807 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-01-4	Vinyl chloride	4.51		0.50	0.10
1330-20-7	Xylenes, Total	13.9		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)	99		80-120
1868-53-7	Dibromofluoromethane (Surr)	98		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\10193\20210204-21283.b\CF02X04.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 04-Feb-2021 11:44:30 ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0021283-004
Misc. Info.: LCS
Operator ID: kas02648 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20210204-21283.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 04-Feb-2021 13:11:02 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1626

First Level Reviewer: spositok Date: 04-Feb-2021 12:15:15

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.892	1.898	-0.006	99	300627	5.00	4.37	
3 Chloromethane	50	2.081	2.087	-0.006	99	369543	5.00	4.55	
4 Butadiene	39	2.190	2.196	-0.006	92	463133	5.00	6.07	
5 Vinyl chloride	62	2.190	2.196	-0.006	68	338329	5.00	4.51	
6 Bromomethane	94	2.507	2.513	-0.006	91	233007	5.00	4.40	
7 Chloroethane	64	2.587	2.593	-0.006	100	191735	5.00	4.14	
8 Dichlorofluoromethane	67	2.812	2.824	-0.012	97	279903	5.00	2.78	
9 Trichlorofluoromethane	101	2.879	2.885	-0.006	94	408709	5.00	4.19	
11 Ethyl ether	59	3.099	3.105	-0.006	92	208169	5.00	4.21	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.196	3.202	-0.006	91	282201	5.00	3.89	
13 Acrolein	56	3.269	3.269	0.000	99	231689	37.5	30.5	
14 1,1-Dichloroethene	96	3.391	3.397	-0.006	98	237504	5.00	4.82	
16 Acetone	43	3.428	3.428	0.000	100	329487	37.5	40.9	
15 112TCTFE	101	3.434	3.434	0.000	89	228197	5.00	4.55	
17 Iodomethane	142	3.580	3.580	0.000	97	439024	5.00	4.51	
18 Isopropyl alcohol	45	3.617	3.599	0.018	39	88450	37.5	59.5	
19 Ethyl bromide	108	3.605	3.611	-0.006	97	230452	5.03	5.63	
20 Carbon disulfide	76	3.678	3.678	0.000	99	814824	5.00	4.68	
22 Methyl acetate	43	3.818	3.824	-0.006	98	131274	5.00	4.15	
23 3-Chloro-1-propene	41	3.849	3.849	0.000	93	422240	5.00	4.89	
24 Methylene Chloride	84	4.025	4.031	-0.006	93	270401	5.00	4.93	
* 25 t-Butyl alcohol-d10 (IS)	65	4.062	4.056	0.006	0	189579	50.0	50.0	
26 2-Methyl-2-propanol	59	4.178	4.172	0.006	99	220249	50.0	58.3	
27 Acrylonitrile	53	4.355	4.367	-0.012	98	326175	25.0	25.5	
28 Methyl tert-butyl ether	73	4.409	4.409	0.000	95	735051	5.00	4.60	
29 trans-1,2-Dichloroethene	96	4.416	4.422	-0.006	98	266601	5.00	4.62	
30 Hexane	57	4.836	4.842	-0.006	94	399079	5.00	4.91	
32 1,1-Dichloroethane	63	5.080	5.080	0.000	96	489001	5.00	4.61	
33 Isopropyl ether	45	5.147	5.147	0.000	95	925586	5.00	4.58	
34 2-Chloro-1,3-butadiene	53	5.190	5.196	-0.006	90	417407	5.00	4.17	
35 Tert-butyl ethyl ether	59	5.684	5.684	0.000	99	876091	5.00	4.53	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
36 2-Butanone (MEK)	43	5.891	5.897	-0.006	100	702972	37.5	37.2	
37 cis-1,2-Dichloroethene	96	5.921	5.927	-0.006	82	303463	5.00	4.64	
38 2,2-Dichloropropane	77	5.940	5.934	0.006	86	392193	5.00	4.28	a
40 Propionitrile	54	5.995	5.995	0.000	98	190180	37.5	39.7	
43 Methacrylonitrile	67	6.196	6.202	-0.006	93	646942	37.5	34.8	
44 Chlorobromomethane	128	6.251	6.257	-0.006	94	138204	5.00	4.80	
45 Tetrahydrofuran	71	6.263	6.263	0.000	79	131928	25.0	24.7	
46 Chloroform	83	6.409	6.409	0.000	93	473120	5.00	4.50	
$ 47 Dibromofluoromethane (Surr)	113	6.629	6.629	0.000	94	496614	10.0	9.80	
48 1,1,1-Trichloroethane	97	6.629	6.629	0.000	98	404959	5.00	4.27	
49 Cyclohexane	56	6.726	6.726	0.000	91	481529	5.00	4.81	
50 Carbon tetrachloride	117	6.836	6.842	-0.006	95	349253	5.00	4.40	
51 1,1-Dichloropropene	75	6.842	6.848	-0.006	95	375260	5.00	4.41	
52 Isobutyl alcohol	41	7.025	7.025	0.000	95	180133	125.0	147.1	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.086	7.086	0.000	0	107928	10.0	10.5	
54 Benzene	78	7.110	7.110	0.000	97	1140774	5.00	4.66	
55 1,2-Dichloroethane	62	7.183	7.183	0.000	97	318989	5.00	4.32	
56 Tert-amyl methyl ether	73	7.305	7.311	-0.006	98	820840	5.00	4.66	
* 57 Fluorobenzene (IS)	96	7.519	7.519	0.000	99	2132836	10.0	10.0	
58 n-Heptane	43	7.525	7.525	0.000	92	455524	5.00	5.03	
59 n-Butanol	56	7.915	7.915	0.000	90	333582	250.0	328.8	
60 Trichloroethene	95	7.994	8.000	-0.006	97	292947	5.00	4.64	
61 Methylcyclohexane	83	8.305	8.305	0.000	91	484123	5.00	5.01	
62 1,2-Dichloropropane	63	8.336	8.342	-0.006	97	305602	5.00	4.86	
63 2-ethoxy-2-methyl butane	87	8.348	8.354	-0.006	91	465115	5.00	4.75	
65 1,4-Dioxane	88	8.439	8.433	0.006	33	34201	125.0	169.3	
64 Methyl methacrylate	69	8.433	8.433	0.000	92	168165	5.00	4.24	
66 Dibromomethane	93	8.445	8.451	-0.006	94	145897	5.00	4.74	
67 Dichlorobromomethane	83	8.689	8.689	0.000	99	354460	5.00	4.67	
68 2-Nitropropane	41	8.976	8.976	0.000	98	46648	5.00	3.80	
71 1-Bromo-2-chloroethane	63	9.085	9.085	0.000	98	314727	5.00	4.84	
69 2-Chloroethyl vinyl ether	63		9.116				ND	ND	
72 cis-1,3-Dichloropropene	75	9.250	9.256	-0.006	96	460231	5.00	4.88	
73 4-Methyl-2-pentanone (MIBK)	43	9.439	9.439	0.000	97	1154625	25.0	21.0	
$ 74 Toluene-d8 (Surr)	98	9.567	9.567	0.000	94	2143301	10.0	10.1	
75 Toluene	92	9.640	9.646	-0.006	98	738693	5.00	4.63	
76 trans-1,3-Dichloropropene	75	9.921	9.921	0.000	93	409651	5.00	5.13	
78 Ethyl methacrylate	69	9.988	9.988	0.000	90	340425	5.00	5.05	
79 1,1,2-Trichloroethane	97	10.122	10.128	-0.006	90	223432	5.00	5.07	
80 Tetrachloroethene	166	10.207	10.207	0.000	97	331752	5.00	4.65	
81 1,3-Dichloropropane	76	10.292	10.292	0.000	91	387936	5.00	4.99	
82 2-Hexanone	43	10.353	10.353	0.000	97	859446	25.0	22.2	
83 Chlorodibromomethane	129	10.506	10.506	0.000	90	260936	5.00	5.10	
84 Ethylene Dibromide	107	10.622	10.622	0.000	99	216144	5.00	4.96	
* 85 Chlorobenzene-d5 (IS)	117	11.061	11.061	0.000	85	1624878	10.0	10.0	
86 1-Chlorohexane	91	11.073	11.073	0.000	98	402706	5.00	4.42	
87 Chlorobenzene	112	11.085	11.085	0.000	96	867327	5.00	4.81	
89 1,1,1,2-Tetrachloroethane	131	11.170	11.176	-0.006	94	297183	5.00	4.85	
90 Ethylbenzene	91	11.176	11.176	0.000	98	1444214	5.00	4.57	
91 m-Xylene & p-Xylene	106	11.292	11.292	0.000	100	1144684	10.0	9.26	
92 o-Xylene	106	11.628	11.628	0.000	96	565454	5.00	4.67	
93 Styrene	104	11.646	11.646	0.000	94	976587	5.00	4.80	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
94 Bromoform	173	11.804	11.804	0.000	98	157032	5.00	5.53	
95 Isopropylbenzene	105	11.932	11.932	0.000	95	1416551	5.00	4.42	
$ 98 4-Bromofluorobenzene (Surr)	95	12.079	12.079	0.000	92	785929	10.0	9.85	
99 1,1,2,2-Tetrachloroethane	83	12.188	12.188	0.000	94	289798	5.00	5.16	
100 Bromobenzene	156	12.195	12.195	0.000	91	383797	5.00	4.98	
101 trans-1,4-Dichloro-2-butene	53	12.213	12.213	0.000	93	294945	25.0	19.0	
102 1,2,3-Trichloropropane	110	12.231	12.231	0.000	82	77670	5.00	5.08	
103 N-Propylbenzene	91	12.268	12.268	0.000	99	1706104	5.00	4.72	
104 2-Chlorotoluene	126	12.341	12.341	0.000	97	351769	5.00	4.75	
105 1,3,5-Trimethylbenzene	105	12.408	12.408	0.000	94	1219690	5.00	4.55	
106 4-Chlorotoluene	126	12.438	12.438	0.000	97	375937	5.00	4.89	
107 tert-Butylbenzene	134	12.652	12.652	0.000	93	271722	5.00	4.66	
108 Pentachloroethane	167	12.682	12.682	0.000	94	224966	5.00	5.17	
109 1,2,4-Trimethylbenzene	105	12.694	12.694	0.000	97	1264927	5.00	4.60	
110 sec-Butylbenzene	105	12.816	12.816	0.000	94	1616961	5.00	4.68	
111 1,3-Dichlorobenzene	146	12.914	12.914	0.000	99	736970	5.00	4.79	
112 4-Isopropyltoluene	119	12.926	12.926	0.000	97	1438701	5.00	4.78	
* 113 1,4-Dichlorobenzene-d4	152	12.969	12.969	0.000	94	898660	10.0	10.0	
114 1,4-Dichlorobenzene	146	12.987	12.987	0.000	96	772857	5.00	4.88	
115 1,2,3-Trimethylbenzene	120	12.999	12.999	0.000	99	598509	5.00	4.96	
116 Benzyl chloride	126	13.072	13.066	0.006	98	140908	5.00	6.31	
119 n-Butylbenzene	92	13.219	13.219	0.000	97	692551	5.00	4.54	
120 1,2-Dichlorobenzene	146	13.249	13.255	-0.006	99	678559	5.00	4.67	
118 p-Diethylbenzene	119	13.274	13.274	0.000	86	713834	5.00	4.67	
123 1,2-Dibromo-3-Chloropropane	155	13.804	13.804	0.000	88	44628	5.00	5.80	
124 1,3,5-Trichlorobenzene	180	13.926	13.926	0.000	98	611755	5.00	4.87	
125 1,2,4-Trichlorobenzene	180	14.353	14.353	0.000	94	563070	5.00	5.00	
126 Hexachlorobutadiene	225	14.438	14.438	0.000	96	278742	5.00	5.07	
127 Naphthalene	128	14.536	14.536	0.000	97	1011778	5.00	5.03	
128 1,2,3-Trichlorobenzene	180	14.682	14.682	0.000	96	508164	5.00	5.10	
129 2-Methylnaphthalene	142	15.304	15.304	0.000	92	663650	5.00	4.88	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

a - User Assigned ID

Reagents:

MSV_Q_QARC_00065	Amount Added: 12.50	Units: uL	
MSV_Q_EE_00003	Amount Added: 12.50	Units: uL	
MSV_Q_QVOA6_00064	Amount Added: 12.50	Units: uL	
MSV_Q_ETBR_00006	Amount Added: 12.50	Units: uL	
MSV_Q_QVOA1_00066	Amount Added: 12.50	Units: uL	
MSV_QGAS_826_00108	Amount Added: 12.50	Units: uL	
MSV_HP25_ISSS_00022	Amount Added: 1.00	Units: uL	Run Reagent

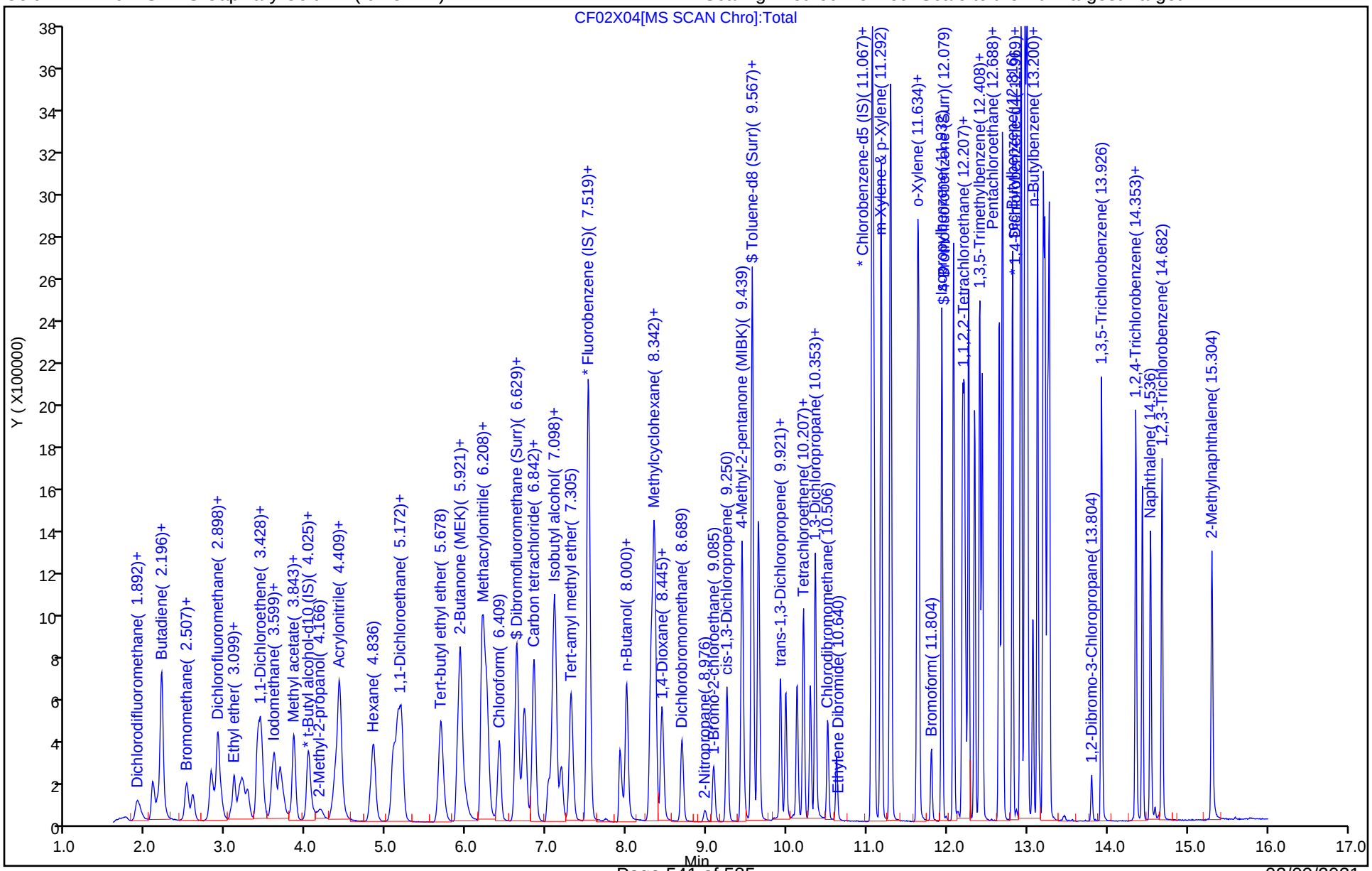
Report Date: 04-Feb-2021 13:11:16 Chrom Revision: 2.3 17-Jan-2021 00:24:10

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20210204-21283.b\CF02X04.D

Injection Date:	04-Feb-2021 11:44:30	Instrument ID:	10193	Operator ID:	kas02648
Lims ID:	LCS			Worklist Smp#:	4
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Env, LLC

Recovery Report

Data File: \\chromfs\Lancaster\ChromData\10193\20210204-21283.b\CF02X04.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 04-Feb-2021 11:44:30 ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0021283-004
Misc. Info.: LCS
Operator ID: kas02648 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20210204-21283.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 04-Feb-2021 13:11:02 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1626

First Level Reviewer: spositok Date: 04-Feb-2021 12:15:15

Compound	Amount Added	Amount Recovered	% Rec.
$ 47 Dibromofluoromethane (Surr)	10.0	9.80	97.99
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.5	104.53
$ 74 Toluene-d8 (Surr)	10.0	10.1	101.00
$ 98 4-Bromofluorobenzene (Surr)	10.0	9.85	98.53

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 410-90352/9

Matrix: Water Lab File ID: CF02S02.D

Analysis Method: 8260D Date Collected:

Sample wt/vol: 25(mL) Date Analyzed: 02/03/2021 12:10

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 90352 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	4.80		0.50	0.070
71-55-6	1,1,1-Trichloroethane	4.21		0.50	0.060
79-34-5	1,1,2,2-Tetrachloroethane	5.47		0.50	0.070
79-00-5	1,1,2-Trichloroethane	5.23		0.50	0.060
75-34-3	1,1-Dichloroethane	4.46		0.50	0.070
75-35-4	1,1-Dichloroethene	4.60		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	5.04		0.50	0.060
107-06-2	1,2-Dichloroethane	4.35		0.50	0.050
78-87-5	1,2-Dichloropropane	4.86		0.50	0.060
78-93-3	2-Butanone (MEK)	37.9		5.0	0.60
591-78-6	2-Hexanone	22.6		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	21.8		5.0	0.70
67-64-1	Acetone	44.5		5.0	0.90
71-43-2	Benzene	4.62		0.50	0.050
74-97-5	Bromochloromethane	4.80		0.50	0.050
75-27-4	Bromodichloromethane	4.61		0.50	0.050
75-25-2	Bromoform	5.38		1.0	0.30
74-83-9	Bromomethane	4.34		0.50	0.070
75-15-0	Carbon disulfide	4.53		1.0	0.060
56-23-5	Carbon tetrachloride	4.38		0.50	0.070
108-90-7	Chlorobenzene	4.83		0.50	0.060
75-00-3	Chloroethane	4.26		0.50	0.070
67-66-3	Chloroform	4.42		0.50	0.090
74-87-3	Chloromethane	4.69		0.50	0.060
156-59-2	cis-1,2-Dichloroethene	4.59		0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	4.81		0.50	0.050
124-48-1	Dibromochloromethane	5.03		0.50	0.070
100-41-4	Ethylbenzene	4.54		0.50	0.060
1634-04-4	Methyl tert-butyl ether	4.55		0.50	0.050
75-09-2	Methylene Chloride	4.85		0.50	0.070
100-42-5	Styrene	4.80		0.50	0.050
127-18-4	Tetrachloroethene	4.67		0.50	0.060
108-88-3	Toluene	4.59		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	4.51		0.50	0.060
10061-02-6	trans-1,3-Dichloropropene	5.07		0.50	0.060
79-01-6	Trichloroethene	4.58		0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 410-90352/9

Matrix: Water Lab File ID: CF02S02.D

Analysis Method: 8260D Date Collected:

Sample wt/vol: 25(mL) Date Analyzed: 02/03/2021 12:10

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 90352 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-01-4	Vinyl chloride	4.52		0.50	0.10
1330-20-7	Xylenes, Total	14.0		1.0	0.15

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	107		80-120
460-00-4	4-Bromofluorobenzene (Surr)	98		80-120
1868-53-7	Dibromofluoromethane (Surr)	98		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\10193\20210203-21161.b\CF02S02.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 03-Feb-2021 12:10:30 ALS Bottle#: 8 Worklist Smp#: 9
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0021161-009
Operator ID: SRK36897 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 03-Feb-2021 14:09:50 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1670

First Level Reviewer: knouses Date: 03-Feb-2021 12:33:14

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.898	1.892	0.006	99	294180	5.00	4.34	
3 Chloromethane	50	2.087	2.081	0.006	99	375329	5.00	4.69	
4 Butadiene	39	2.190	2.184	0.006	93	533539	5.00	7.09	
5 Vinyl chloride	62	2.197	2.190	0.007	63	334433	5.00	4.52	
6 Bromomethane	94	2.507	2.501	0.006	91	226704	5.00	4.34	
7 Chloroethane	64	2.581	2.574	0.007	100	194804	5.00	4.26	
8 Dichlorofluoromethane	67	2.812	2.806	0.006	97	279518	5.00	2.82	
9 Trichlorofluoromethane	101	2.873	2.873	0.000	97	388995	5.00	4.04	
11 Ethyl ether	59	3.093	3.093	0.000	92	206852	5.00	4.25	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.184	3.178	0.006	91	276166	5.00	3.87	
13 Acrolein	56	3.263	3.257	0.006	99	224169	37.5	29.8	
14 1,1-Dichloroethene	96	3.385	3.385	0.000	98	223319	5.00	4.60	
16 Acetone	43	3.422	3.422	0.000	100	355704	37.5	44.5	
15 112TCTFE	101	3.428	3.428	0.000	89	215864	5.00	4.37	
17 Iodomethane	142	3.574	3.568	0.006	97	419251	5.00	4.37	
18 Isopropyl alcohol	45	3.593	3.593	0.000	35	76824	37.5	52.8	
19 Ethyl bromide	108	3.599	3.599	0.000	97	190947	5.03	4.73	
20 Carbon disulfide	76	3.672	3.666	0.006	99	777318	5.00	4.53	
22 Methyl acetate	43	3.824	3.818	0.006	97	142656	5.00	4.55	
23 3-Chloro-1-propene	41	3.843	3.836	0.007	93	398575	5.00	4.69	
24 Methylene Chloride	84	4.019	4.019	0.000	96	262552	5.00	4.85	
* 25 t-Butyl alcohol-d10 (IS)	65	4.056	4.056	0.000	0	187890	50.0	50.0	
26 2-Methyl-2-propanol	59	4.172	4.178	-0.006	100	207027	50.0	55.3	
27 Acrylonitrile	53	4.355	4.349	0.006	99	338327	25.0	26.7	
28 Methyl tert-butyl ether	73	4.397	4.403	-0.006	96	716255	5.00	4.55	
29 trans-1,2-Dichloroethene	96	4.410	4.409	0.001	99	256044	5.00	4.51	
30 Hexane	57	4.830	4.830	0.000	93	405690	5.00	5.06	
32 1,1-Dichloroethane	63	5.074	5.074	0.000	96	466411	5.00	4.46	
33 Isopropyl ether	45	5.135	5.135	0.000	95	914577	5.00	4.59	
34 2-Chloro-1,3-butadiene	53	5.184	5.184	0.000	90	407639	5.00	4.14	
35 Tert-butyl ethyl ether	59	5.678	5.671	0.007	98	866120	5.00	4.55	
36 2-Butanone (MEK)	43	5.885	5.885	0.000	100	709016	37.5	37.9	

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	5.921	5.915	0.006	82	295940	5.00	4.59	
38 2,2-Dichloropropane	77	5.928	5.927	0.001	62	374161	5.00	4.15	M
40 Propionitrile	54	5.995	5.982	0.013	98	195794	37.5	41.2	
43 Methacrylonitrile	67	6.196	6.196	0.000	93	649570	37.5	35.3	
44 Chlorobromomethane	128	6.251	6.251	0.000	97	136177	5.00	4.80	
45 Tetrahydrofuran	71	6.263	6.251	0.012	86	134181	25.0	25.3	
46 Chloroform	83	6.409	6.403	0.006	93	457712	5.00	4.42	
$ 47 Dibromofluoromethane (Surr)	113	6.623	6.622	0.001	94	490433	10.0	9.82	
48 1,1,1-Trichloroethane	97	6.629	6.629	0.000	98	392794	5.00	4.21	
49 Cyclohexane	56	6.720	6.720	0.000	91	462027	5.00	4.68	
50 Carbon tetrachloride	117	6.836	6.830	0.006	77	342444	5.00	4.38	
51 1,1-Dichloropropene	75	6.842	6.836	0.006	96	368647	5.00	4.40	
52 Isobutyl alcohol	41	7.019	7.019	0.000	96	182697	125.0	150.6	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.080	7.080	0.000	0	108640	10.0	10.7	
54 Benzene	78	7.104	7.104	0.000	97	1116173	5.00	4.62	
55 1,2-Dichloroethane	62	7.183	7.177	0.006	97	316986	5.00	4.35	
56 Tert-amyl methyl ether	73	7.305	7.305	0.000	98	821833	5.00	4.74	
* 57 Fluorobenzene (IS)	96	7.519	7.513	0.006	99	2102328	10.0	10.0	
58 n-Heptane	43	7.531	7.525	0.006	94	456708	5.00	5.12	
59 n-Butanol	56	7.921	7.909	0.012	90	331584	250.0	329.8	
60 Trichloroethene	95	8.000	7.994	0.006	98	285085	5.00	4.58	
61 Methylcyclohexane	83	8.299	8.299	0.000	91	503767	5.00	5.28	
62 1,2-Dichloropropane	63	8.336	8.336	0.000	95	301280	5.00	4.86	
63 2-ethoxy-2-methyl butane	87	8.348	8.348	0.000	92	463047	5.00	4.80	
65 1,4-Dioxane	88	8.439	8.433	0.006	31	32597	125.0	162.8	M
64 Methyl methacrylate	69	8.433	8.433	0.000	93	163596	5.00	4.17	
66 Dibromomethane	93	8.445	8.445	0.000	94	146997	5.00	4.84	
67 Dichlorobromomethane	83	8.689	8.689	0.000	100	345305	5.00	4.61	
68 2-Nitropropane	41	8.976	8.970	0.006	98	46808	5.00	3.84	
71 1-Bromo-2-chloroethane	63	9.085	9.085	0.000	98	326549	5.00	5.09	
69 2-Chloroethyl vinyl ether	63		9.116				ND	ND	
72 cis-1,3-Dichloropropene	75	9.250	9.250	0.000	96	447799	5.00	4.81	
73 4-Methyl-2-pentanone (MIBK)	43	9.439	9.439	0.000	97	1184420	25.0	21.8	
$ 74 Toluene-d8 (Surr)	98	9.567	9.567	0.000	93	2115954	10.0	10.1	
75 Toluene	92	9.646	9.646	0.000	98	720265	5.00	4.59	
76 trans-1,3-Dichloropropene	75	9.921	9.921	0.000	92	398860	5.00	5.07	
78 Ethyl methacrylate	69	9.988	9.982	0.006	90	348930	5.00	5.26	
79 1,1,2-Trichloroethane	97	10.128	10.128	0.000	90	227001	5.00	5.23	
80 Tetrachloroethene	166	10.207	10.207	0.000	98	327690	5.00	4.67	
81 1,3-Dichloropropane	76	10.293	10.292	0.001	91	385910	5.00	5.05	
82 2-Hexanone	43	10.354	10.353	0.001	97	870439	25.0	22.6	
83 Chlorodibromomethane	129	10.512	10.506	0.006	90	253179	5.00	5.03	
84 Ethylene Dibromide	107	10.622	10.616	0.006	99	215894	5.00	5.04	
* 85 Chlorobenzene-d5 (IS)	117	11.061	11.061	0.000	85	1598280	10.0	10.0	
86 1-Chlorohexane	91	11.073	11.073	0.000	98	396210	5.00	4.42	
87 Chlorobenzene	112	11.085	11.085	0.000	95	856281	5.00	4.83	
89 1,1,1,2-Tetrachloroethane	131	11.170	11.170	0.000	96	289578	5.00	4.80	
90 Ethylbenzene	91	11.177	11.176	0.001	98	1413852	5.00	4.54	
91 m-Xylene & p-Xylene	106	11.292	11.292	0.000	100	1125374	10.0	9.26	
92 o-Xylene	106	11.628	11.628	0.000	97	558432	5.00	4.69	
93 Styrene	104	11.646	11.646	0.000	95	959244	5.00	4.80	
94 Bromoform	173	11.804	11.804	0.000	97	150364	5.00	5.38	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
95 Isopropylbenzene	105	11.932	11.932	0.000	95	1401330	5.00	4.45	
$ 98 4-Bromofluorobenzene (Surr)	95	12.079	12.079	0.000	93	766727	10.0	9.77	
99 1,1,2,2-Tetrachloroethane	83	12.189	12.188	0.001	94	295871	5.00	5.47	
100 Bromobenzene	156	12.195	12.195	0.000	94	372509	5.00	5.01	
101 trans-1,4-Dichloro-2-butene	53	12.213	12.213	0.000	90	212249	25.0	14.2	
102 1,2,3-Trichloropropane	110	12.231	12.231	0.000	83	78175	5.00	5.31	
103 N-Propylbenzene	91	12.268	12.268	0.000	98	1662902	5.00	4.77	
104 2-Chlorotoluene	126	12.341	12.341	0.000	97	351540	5.00	4.93	
105 1,3,5-Trimethylbenzene	105	12.408	12.408	0.000	94	1212679	5.00	4.69	
106 4-Chlorotoluene	126	12.438	12.438	0.000	97	378484	5.00	5.10	
107 tert-Butylbenzene	134	12.652	12.652	0.000	93	286702	5.00	5.10	
108 Pentachloroethane	167	12.682	12.682	0.000	93	216458	5.00	5.16	
109 1,2,4-Trimethylbenzene	105	12.695	12.694	0.001	97	1272993	5.00	4.80	
110 sec-Butylbenzene	105	12.816	12.816	0.000	94	1597028	5.00	4.80	
111 1,3-Dichlorobenzene	146	12.914	12.914	0.000	98	721153	5.00	4.86	
112 4-Isopropyltoluene	119	12.926	12.926	0.000	97	1378056	5.00	4.75	
* 113 1,4-Dichlorobenzene-d4	152	12.969	12.969	0.000	94	866408	10.0	10.0	
114 1,4-Dichlorobenzene	146	12.987	12.987	0.000	95	750802	5.00	4.92	
115 1,2,3-Trimethylbenzene	120	12.999	12.999	0.000	98	588926	5.00	5.06	
116 Benzyl chloride	126	13.073	13.072	0.000	98	137902	5.00	6.41	
119 n-Butylbenzene	92	13.219	13.219	0.000	97	690442	5.00	4.69	
120 1,2-Dichlorobenzene	146	13.255	13.255	0.000	99	685364	5.00	4.89	
118 p-Diethylbenzene	119	13.274	13.274	0.000	86	699569	5.00	4.75	
123 1,2-Dibromo-3-Chloropropane	155	13.804	13.804	0.000	89	45318	5.00	6.11	
124 1,3,5-Trichlorobenzene	180	13.926	13.926	0.000	98	616981	5.00	5.10	
125 1,2,4-Trichlorobenzene	180	14.353	14.353	0.000	94	562226	5.00	5.18	
126 Hexachlorobutadiene	225	14.438	14.438	0.000	96	275634	5.00	5.20	
127 Naphthalene	128	14.536	14.536	0.000	97	1017515	5.00	5.25	
128 1,2,3-Trichlorobenzene	180	14.682	14.682	0.000	95	507680	5.00	5.28	
129 2-Methylnaphthalene	142	15.304	15.304	0.000	92	644168	5.00	4.92	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MSV_Q_QARC_00065	Amount Added:	12.50	Units: uL	
MSV_Q_EE_00003	Amount Added:	12.50	Units: uL	
MSV_Q_QVOA6_00064	Amount Added:	12.50	Units: uL	
MSV_Q_ETBR_00006	Amount Added:	12.50	Units: uL	
MSV_Q_QVOA1_00066	Amount Added:	12.50	Units: uL	
MSV_QGAS_826_00108	Amount Added:	12.50	Units: uL	
MSV_HP25_ISSS_00022	Amount Added:	1.00	Units: uL	Run Reagent

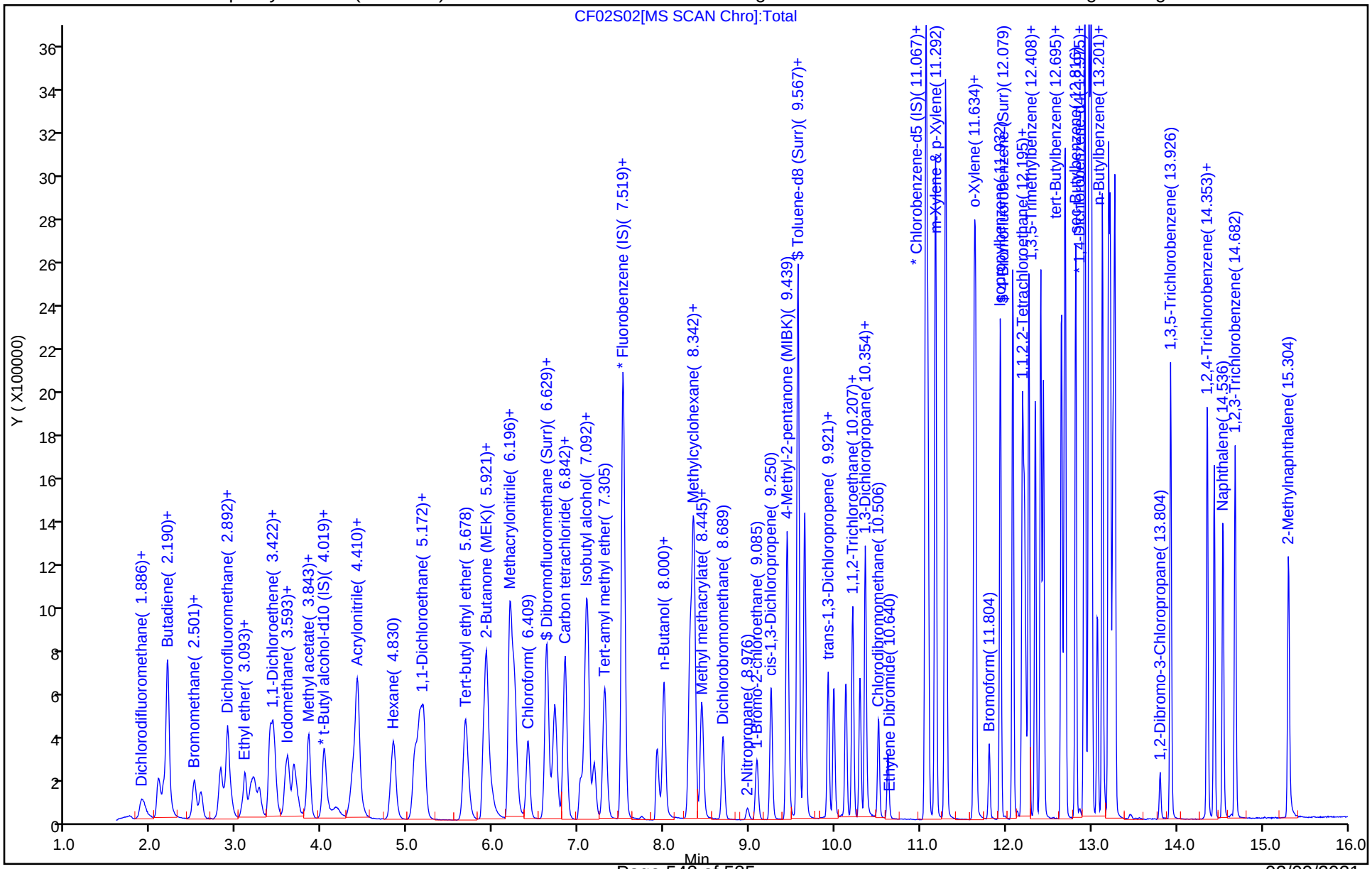
Report Date: 03-Feb-2021 14:09:52 Chrom Revision: 2.3 17-Jan-2021 00:24:10

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S02.D

Injection Date:	03-Feb-2021 12:10:30	Instrument ID:	10193	Operator ID:	SRK36897
Lims ID:	LCSD			Worklist Smp#:	9
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Env, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\CF02S02.D				
Lims ID:	LCSD				
Client ID:					
Sample Type:	LCSD				
Inject. Date:	03-Feb-2021 12:10:30	ALS Bottle#:	8	Worklist Smp#:	9
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0021161-009				
Operator ID:	SRK36897	Instrument ID:	10193		
Method:	\\chromfs\Lancaster\ChromData\10193\20210203-21161.b\MSV_10193_25mL.m				
Limit Group:	MSV - 8260C_D				
Last Update:	03-Feb-2021 14:09:50	Calib Date:	01-Sep-2020 19:09:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1670				

First Level Reviewer: knouses Date: 03-Feb-2021 12:33:14

Compound	Amount Added	Amount Recovered	% Rec.
$ 47 Dibromofluoromethane (Surr)	10.0	9.82	98.17
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.7	106.75
$ 74 Toluene-d8 (Surr)	10.0	10.1	101.37
$ 98 4-Bromofluorobenzene (Surr)	10.0	9.77	97.72

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 410-90807/5

Matrix: Water Lab File ID: CF02X05.D

Analysis Method: 8260D Date Collected:

Sample wt/vol: 25(mL) Date Analyzed: 02/04/2021 12:07

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.: 90807 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	4.87		0.50	0.070
71-55-6	1,1,1-Trichloroethane	4.20		0.50	0.060
79-34-5	1,1,2,2-Tetrachloroethane	5.32		0.50	0.070
79-00-5	1,1,2-Trichloroethane	5.10		0.50	0.060
75-34-3	1,1-Dichloroethane	4.60		0.50	0.070
75-35-4	1,1-Dichloroethene	4.78		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	5.06		0.50	0.060
107-06-2	1,2-Dichloroethane	4.32		0.50	0.050
78-87-5	1,2-Dichloropropane	4.90		0.50	0.060
78-93-3	2-Butanone (MEK)	35.9		5.0	0.60
591-78-6	2-Hexanone	22.3		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	21.2		5.0	0.70
67-64-1	Acetone	41.1		5.0	0.90
71-43-2	Benzene	4.72		0.50	0.050
74-97-5	Bromochloromethane	4.79		0.50	0.050
75-27-4	Bromodichloromethane	4.65		0.50	0.050
75-25-2	Bromoform	5.57		1.0	0.30
74-83-9	Bromomethane	4.30		0.50	0.070
75-15-0	Carbon disulfide	4.63		1.0	0.060
56-23-5	Carbon tetrachloride	4.43		0.50	0.070
108-90-7	Chlorobenzene	4.85		0.50	0.060
75-00-3	Chloroethane	4.19		0.50	0.070
67-66-3	Chloroform	4.43		0.50	0.090
74-87-3	Chloromethane	4.52		0.50	0.060
156-59-2	cis-1,2-Dichloroethene	4.65		0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	4.87		0.50	0.050
124-48-1	Dibromochloromethane	5.11		0.50	0.070
100-41-4	Ethylbenzene	4.60		0.50	0.060
1634-04-4	Methyl tert-butyl ether	4.55		0.50	0.050
75-09-2	Methylene Chloride	4.95		0.50	0.070
100-42-5	Styrene	4.82		0.50	0.050
127-18-4	Tetrachloroethene	4.66		0.50	0.060
108-88-3	Toluene	4.67		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	4.59		0.50	0.060
10061-02-6	trans-1,3-Dichloropropene	5.04		0.50	0.060
79-01-6	Trichloroethene	4.65		0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Client Sample ID: Lab Sample ID: LCSD 410-90807/5

Matrix: Water Lab File ID: CF02X05.D

Analysis Method: 8260D Date Collected:

Sample wt/vol: 25(mL) Date Analyzed: 02/04/2021 12:07

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.: 90807 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-01-4	Vinyl chloride	4.45		0.50	0.10
1330-20-7	Xylenes, Total	14.0		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)	98		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\10193\20210204-21283.b\CF02X05.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 04-Feb-2021 12:07:30 ALS Bottle#: 5 Worklist Smp#: 5
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0021283-005
Misc. Info.: LCSD
Operator ID: kas02648 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20210204-21283.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 04-Feb-2021 13:11:02 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1626

First Level Reviewer: spositok Date: 04-Feb-2021 12:42:54

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.898	1.898	0.000	99	294876	5.00	4.25	
3 Chloromethane	50	2.081	2.087	-0.006	98	369477	5.00	4.52	
4 Butadiene	39	2.190	2.196	-0.006	91	477479	5.00	6.21	
5 Vinyl chloride	62	2.190	2.196	-0.006	68	336255	5.00	4.45	
6 Bromomethane	94	2.501	2.513	-0.012	91	229325	5.00	4.30	
7 Chloroethane	64	2.581	2.593	-0.012	100	195941	5.00	4.19	
8 Dichlorofluoromethane	67	2.812	2.824	-0.012	97	285521	5.00	2.82	
9 Trichlorofluoromethane	101	2.873	2.885	-0.012	97	392793	5.00	3.99	M
11 Ethyl ether	59	3.093	3.105	-0.012	92	209993	5.00	4.21	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.190	3.202	-0.012	90	281433	5.00	3.85	
13 Acrolein	56	3.257	3.269	-0.012	99	230691	37.5	30.3	
14 1,1-Dichloroethene	96	3.391	3.397	-0.006	99	237521	5.00	4.78	
16 Acetone	43	3.422	3.428	-0.006	100	332611	37.5	41.1	
15 112TCTFE	101	3.434	3.434	0.000	86	225426	5.00	4.46	
17 Iodomethane	142	3.574	3.580	-0.006	97	447448	5.00	4.56	
18 Isopropyl alcohol	45	3.599	3.599	0.000	38	82802	37.5	55.8	
19 Ethyl bromide	108	3.605	3.611	-0.006	97	229448	5.03	5.56	
20 Carbon disulfide	76	3.666	3.678	-0.012	99	813070	5.00	4.63	
22 Methyl acetate	43	3.812	3.824	-0.012	98	130818	5.00	4.11	
23 3-Chloro-1-propene	41	3.842	3.849	-0.007	93	423217	5.00	4.87	
24 Methylene Chloride	84	4.019	4.031	-0.012	93	273854	5.00	4.95	
* 25 t-Butyl alcohol-d10 (IS)	65	4.050	4.056	-0.006	0	190552	50.0	50.0	
26 2-Methyl-2-propanol	59	4.172	4.172	0.000	99	200690	50.0	52.9	
27 Acrylonitrile	53	4.355	4.367	-0.012	98	332810	25.0	25.9	
28 Methyl tert-butyl ether	73	4.397	4.409	-0.012	95	731710	5.00	4.55	
29 trans-1,2-Dichloroethene	96	4.409	4.422	-0.013	99	266569	5.00	4.59	
30 Hexane	57	4.830	4.842	-0.012	93	405779	5.00	4.95	
32 1,1-Dichloroethane	63	5.074	5.080	-0.006	97	491864	5.00	4.60	
33 Isopropyl ether	45	5.135	5.147	-0.012	95	929338	5.00	4.56	
34 2-Chloro-1,3-butadiene	53	5.178	5.196	-0.018	90	417706	5.00	4.14	
35 Tert-butyl ethyl ether	59	5.671	5.684	-0.013	98	889730	5.00	4.57	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
36 2-Butanone (MEK)	43	5.891	5.897	-0.006	100	681391	37.5	35.9	
37 cis-1,2-Dichloroethene	96	5.915	5.927	-0.012	82	306634	5.00	4.65	
38 2,2-Dichloropropane	77	5.927	5.934	-0.007	86	392255	5.00	4.25	
40 Propionitrile	54	5.988	5.995	-0.007	99	197151	37.5	40.9	
43 Methacrylonitrile	67	6.196	6.202	-0.006	92	652299	37.5	34.9	
44 Chlorobromomethane	128	6.251	6.257	-0.006	93	138879	5.00	4.79	
45 Tetrahydrofuran	71	6.257	6.263	-0.006	79	134983	25.0	25.1	
46 Chloroform	83	6.403	6.409	-0.006	93	469954	5.00	4.43	
$ 47 Dibromofluoromethane (Surr)	113	6.622	6.629	-0.007	94	499487	10.0	9.78	
48 1,1,1-Trichloroethane	97	6.629	6.629	0.000	97	400901	5.00	4.20	
49 Cyclohexane	56	6.720	6.726	-0.006	90	479438	5.00	4.75	
50 Carbon tetrachloride	117	6.836	6.842	-0.006	95	354298	5.00	4.43	
51 1,1-Dichloropropene	75	6.842	6.848	-0.006	96	380405	5.00	4.44	
52 Isobutyl alcohol	41	7.019	7.025	-0.006	95	165187	125.0	134.2	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.074	7.086	-0.012	0	107231	10.0	10.3	
54 Benzene	78	7.104	7.110	-0.006	97	1164506	5.00	4.72	
55 1,2-Dichloroethane	62	7.183	7.183	0.000	97	321763	5.00	4.32	
56 Tert-amyl methyl ether	73	7.299	7.311	-0.012	98	834000	5.00	4.70	
* 57 Fluorobenzene (IS)	96	7.519	7.519	0.000	99	2150094	10.0	10.0	
58 n-Heptane	43	7.519	7.525	-0.006	92	450432	5.00	4.94	
59 n-Butanol	56	7.915	7.915	0.000	89	339829	250.0	333.2	
60 Trichloroethene	95	7.994	8.000	-0.006	97	295763	5.00	4.65	
61 Methylcyclohexane	83	8.299	8.305	-0.006	91	490688	5.00	5.03	
62 1,2-Dichloropropane	63	8.336	8.342	-0.006	97	311041	5.00	4.90	
63 2-ethoxy-2-methyl butane	87	8.348	8.354	-0.006	92	468330	5.00	4.75	
65 1,4-Dioxane	88	8.433	8.433	0.000	32	25789	125.0	127.0	M
64 Methyl methacrylate	69	8.427	8.433	-0.006	92	168765	5.00	4.24	
66 Dibromomethane	93	8.445	8.451	-0.006	95	147305	5.00	4.75	
67 Dichlorobromomethane	83	8.689	8.689	0.000	100	356031	5.00	4.65	
68 2-Nitropropane	41	8.970	8.976	-0.006	98	44384	5.00	3.59	
71 1-Bromo-2-chloroethane	63	9.079	9.085	-0.006	98	320365	5.00	4.88	
69 2-Chloroethyl vinyl ether	63		9.116				ND	ND	
72 cis-1,3-Dichloropropene	75	9.250	9.256	-0.006	96	463035	5.00	4.87	
73 4-Methyl-2-pentanone (MIBK)	43	9.439	9.439	0.000	97	1167158	25.0	21.2	
$ 74 Toluene-d8 (Surr)	98	9.567	9.567	0.000	93	2139868	10.0	10.0	
75 Toluene	92	9.646	9.646	0.000	99	750180	5.00	4.67	
76 trans-1,3-Dichloropropene	75	9.914	9.921	-0.007	93	405601	5.00	5.04	
78 Ethyl methacrylate	69	9.988	9.988	0.000	90	351788	5.00	5.18	
79 1,1,2-Trichloroethane	97	10.128	10.128	0.000	91	225995	5.00	5.10	
80 Tetrachloroethene	166	10.207	10.207	0.000	98	334610	5.00	4.66	
81 1,3-Dichloropropane	76	10.292	10.292	0.000	91	395110	5.00	5.05	
82 2-Hexanone	43	10.353	10.353	0.000	97	867840	25.0	22.3	
83 Chlorodibromomethane	129	10.506	10.506	0.000	91	263126	5.00	5.11	
84 Ethylene Dibromide	107	10.616	10.622	-0.006	98	221545	5.00	5.06	
* 85 Chlorobenzene-d5 (IS)	117	11.061	11.061	0.000	85	1634667	10.0	10.0	
86 1-Chlorohexane	91	11.073	11.073	0.000	98	408617	5.00	4.46	
87 Chlorobenzene	112	11.085	11.085	0.000	95	880296	5.00	4.85	
89 1,1,1,2-Tetrachloroethane	131	11.170	11.176	-0.006	97	300564	5.00	4.87	
90 Ethylbenzene	91	11.176	11.176	0.000	98	1464849	5.00	4.60	
91 m-Xylene & p-Xylene	106	11.292	11.292	0.000	100	1149001	10.0	9.24	
92 o-Xylene	106	11.628	11.628	0.000	96	574995	5.00	4.72	
93 Styrene	104	11.646	11.646	0.000	95	985185	5.00	4.82	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
94 Bromoform	173	11.804	11.804	0.000	97	159167	5.00	5.57	
95 Isopropylbenzene	105	11.932	11.932	0.000	95	1416791	5.00	4.40	
$ 98 4-Bromofluorobenzene (Surr)	95	12.079	12.079	0.000	92	793537	10.0	9.89	
99 1,1,2,2-Tetrachloroethane	83	12.188	12.188	0.000	94	298360	5.00	5.32	
100 Bromobenzene	156	12.195	12.195	0.000	92	386660	5.00	5.03	
101 trans-1,4-Dichloro-2-butene	53	12.213	12.213	0.000	88	289124	25.0	18.6	
102 1,2,3-Trichloropropane	110	12.231	12.231	0.000	82	74997	5.00	4.92	
103 N-Propylbenzene	91	12.268	12.268	0.000	98	1660607	5.00	4.60	
104 2-Chlorotoluene	126	12.341	12.341	0.000	97	360954	5.00	4.89	
105 1,3,5-Trimethylbenzene	105	12.408	12.408	0.000	94	1226570	5.00	4.58	
106 4-Chlorotoluene	126	12.438	12.438	0.000	97	375496	5.00	4.89	
107 tert-Butylbenzene	134	12.646	12.652	-0.006	93	272878	5.00	4.69	
108 Pentachloroethane	167	12.682	12.682	0.000	93	228475	5.00	5.26	
109 1,2,4-Trimethylbenzene	105	12.694	12.694	0.000	97	1297213	5.00	4.72	
110 sec-Butylbenzene	105	12.816	12.816	0.000	94	1612184	5.00	4.68	
111 1,3-Dichlorobenzene	146	12.914	12.914	0.000	98	741810	5.00	4.83	
112 4-Isopropyltoluene	119	12.926	12.926	0.000	97	1455069	5.00	4.84	
* 113 1,4-Dichlorobenzene-d4	152	12.969	12.969	0.000	94	897308	10.0	10.0	
114 1,4-Dichlorobenzene	146	12.987	12.987	0.000	95	768424	5.00	4.86	
115 1,2,3-Trimethylbenzene	120	12.999	12.999	0.000	98	610618	5.00	5.07	
116 Benzyl chloride	126	13.066	13.066	0.000	98	141832	5.00	6.36	
119 n-Butylbenzene	92	13.219	13.219	0.000	96	691972	5.00	4.54	
120 1,2-Dichlorobenzene	146	13.249	13.255	-0.006	99	680823	5.00	4.69	
118 p-Diethylbenzene	119	13.274	13.274	0.000	86	712472	5.00	4.67	
123 1,2-Dibromo-3-Chloropropane	155	13.804	13.804	0.000	88	45372	5.00	5.90	
124 1,3,5-Trichlorobenzene	180	13.926	13.926	0.000	98	623220	5.00	4.97	
125 1,2,4-Trichlorobenzene	180	14.353	14.353	0.000	94	566869	5.00	5.04	
126 Hexachlorobutadiene	225	14.438	14.438	0.000	96	277070	5.00	5.04	
127 Naphthalene	128	14.536	14.536	0.000	97	1002986	5.00	5.00	
128 1,2,3-Trichlorobenzene	180	14.682	14.682	0.000	96	500405	5.00	5.03	
129 2-Methylnaphthalene	142	15.304	15.304	0.000	92	620381	5.00	4.57	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MSV_Q_QVOA1_00066	Amount Added: 12.50	Units: uL	
MSV_Q_QARC_00065	Amount Added: 12.50	Units: uL	
MSV_Q_QVOA6_00064	Amount Added: 12.50	Units: uL	
MSV_Q_EE_00003	Amount Added: 12.50	Units: uL	
MSV_Q_ETBR_00006	Amount Added: 12.50	Units: uL	
MSV_QGAS_826_00108	Amount Added: 12.50	Units: uL	
MSV_HP25_ISSS_00022	Amount Added: 1.00	Units: uL	Run Reagent

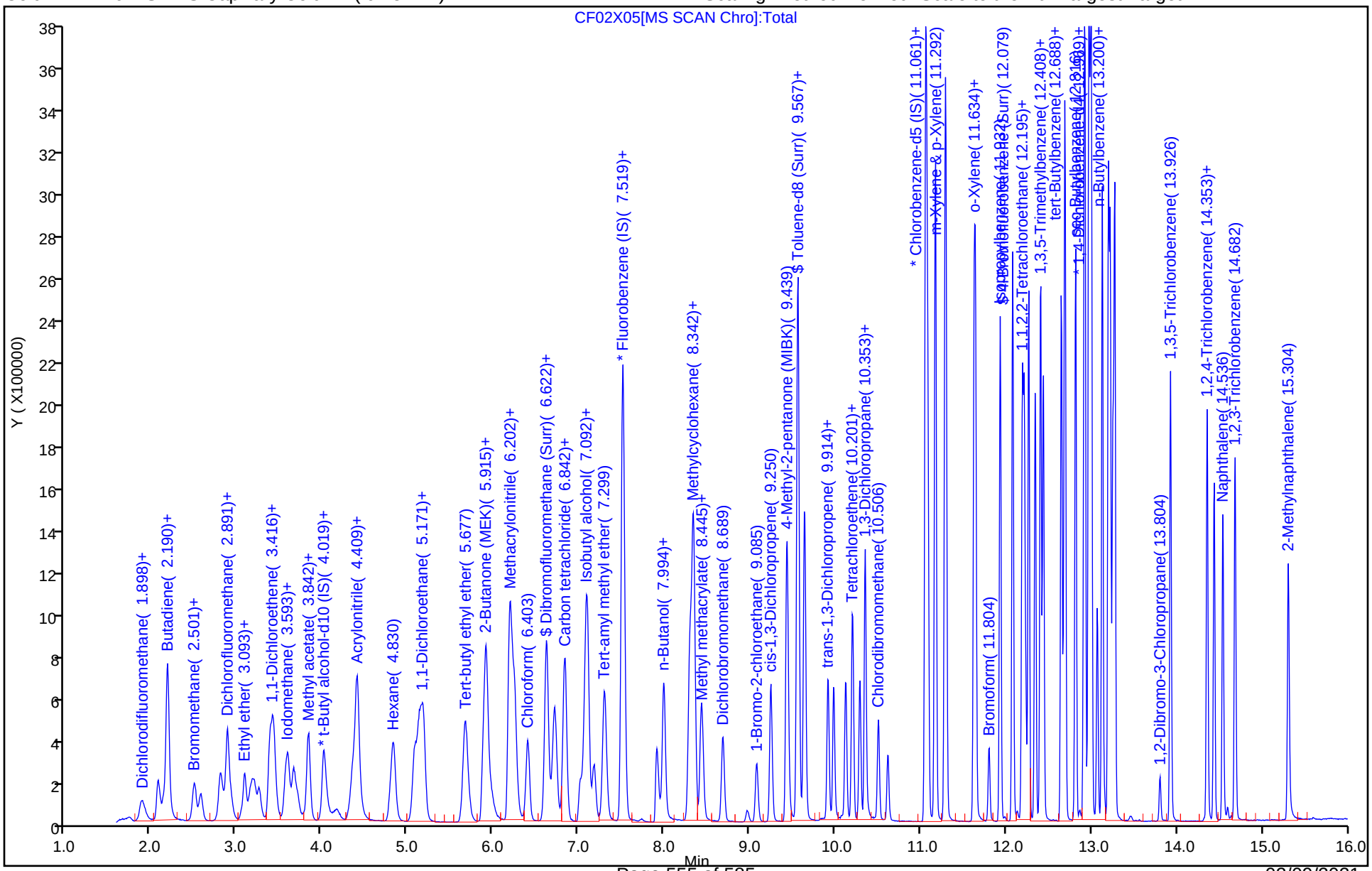
Report Date: 04-Feb-2021 13:11:28 Chrom Revision: 2.3 17-Jan-2021 00:24:10

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20210204-21283.b\CF02X05.D

Injection Date:	04-Feb-2021 12:07:30	Instrument ID:	10193	Operator ID:	kas02648
Lims ID:	LCSD			Worklist Smp#:	5
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Env, LLC

Recovery Report

Data File: \\chromfs\Lancaster\ChromData\10193\20210204-21283.b\CF02X05.D
Lims ID: LCSD
Client ID:
Sample Type: LCSD
Inject. Date: 04-Feb-2021 12:07:30 ALS Bottle#: 5 Worklist Smp#: 5
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0021283-005
Misc. Info.: LCSD
Operator ID: kas02648 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20210204-21283.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 04-Feb-2021 13:11:02 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1626

First Level Reviewer: spositok Date: 04-Feb-2021 12:42:54

Compound	Amount Added	Amount Recovered	% Rec.
$ 47 Dibromofluoromethane (Surr)	10.0	9.78	97.76
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.3	103.02
$ 74 Toluene-d8 (Surr)	10.0	10.0	100.23
$ 98 4-Bromofluorobenzene (Surr)	10.0	9.89	98.89

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Client Sample ID: HD-COD-SW-15-0/1-0 MS Lab Sample ID: 410-27746-6 MS

Matrix: Water Lab File ID: CF02X08.D

Analysis Method: 8260D Date Collected: 01/26/2021 11:45

Sample wt/vol: 25(mL) Date Analyzed: 02/04/2021 13:43

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 90807 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	5.25		0.50	0.070
71-55-6	1,1,1-Trichloroethane	4.92		0.50	0.060
79-34-5	1,1,2,2-Tetrachloroethane	5.25		0.50	0.070
79-00-5	1,1,2-Trichloroethane	5.34		0.50	0.060
75-34-3	1,1-Dichloroethane	4.98		0.50	0.070
75-35-4	1,1-Dichloroethene	5.40		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	5.12		0.50	0.060
107-06-2	1,2-Dichloroethane	4.58		0.50	0.050
78-87-5	1,2-Dichloropropane	5.19		0.50	0.060
78-93-3	2-Butanone (MEK)	34.8		5.0	0.60
591-78-6	2-Hexanone	21.5		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	20.5		5.0	0.70
67-64-1	Acetone	38.6		5.0	0.90
71-43-2	Benzene	5.14		0.50	0.050
74-97-5	Bromochloromethane	4.90		0.50	0.050
75-27-4	Bromodichloromethane	4.93		0.50	0.050
75-25-2	Bromoform	5.71		1.0	0.30
74-83-9	Bromomethane	4.62		0.50	0.070
75-15-0	Carbon disulfide	5.18		1.0	0.060
56-23-5	Carbon tetrachloride	5.10		0.50	0.070
108-90-7	Chlorobenzene	5.29		0.50	0.060
75-00-3	Chloroethane	4.60		0.50	0.070
67-66-3	Chloroform	5.06		0.50	0.090
74-87-3	Chloromethane	4.63		0.50	0.060
156-59-2	cis-1,2-Dichloroethene	5.69		0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	5.13		0.50	0.050
124-48-1	Dibromochloromethane	5.24		0.50	0.070
100-41-4	Ethylbenzene	5.12		0.50	0.060
1634-04-4	Methyl tert-butyl ether	4.60		0.50	0.050
75-09-2	Methylene Chloride	5.25		0.50	0.070
100-42-5	Styrene	5.27		0.50	0.050
127-18-4	Tetrachloroethene	7.47		0.50	0.060
108-88-3	Toluene	5.22		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	5.15		0.50	0.060
10061-02-6	trans-1,3-Dichloropropene	5.24		0.50	0.060
79-01-6	Trichloroethene	5.97		0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Client Sample ID: HD-COD-SW-15-0/1-0 MS Lab Sample ID: 410-27746-6 MS

Matrix: Water Lab File ID: CF02X08.D

Analysis Method: 8260D Date Collected: 01/26/2021 11:45

Sample wt/vol: 25(mL) Date Analyzed: 02/04/2021 13:43

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 90807 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-01-4	Vinyl chloride	4.97		0.50	0.10
1330-20-7	Xylenes, Total	15.7		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)	97		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\10193\20210204-21283.b\CF02X08.D
Lims ID: 410-27746-B-6 MS
Client ID: HD-COD-SW-15-0/1-0
Sample Type: MS
Inject. Date: 04-Feb-2021 13:43:30 ALS Bottle#: 8 Worklist Smp#: 8
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0021283-008
Operator ID: kas02648 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20210204-21283.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 04-Feb-2021 19:36:21 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1643

First Level Reviewer: campbellme Date: 04-Feb-2021 19:22:46

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.879	1.898	-0.019	99	335590	5.00	4.92	M
3 Chloromethane	50	2.074	2.087	-0.013	99	372708	5.00	4.63	
4 Butadiene	39	2.184	2.196	-0.012	92	501832	5.00	6.63	
5 Vinyl chloride	62	2.184	2.196	-0.012	98	369669	5.00	4.97	
6 Bromomethane	94	2.489	2.513	-0.024	91	242870	5.00	4.62	
7 Chloroethane	64	2.580	2.593	-0.013	100	211380	5.00	4.60	
8 Dichlorofluoromethane	67	2.800	2.824	-0.024	97	305127	5.00	3.06	
9 Trichlorofluoromethane	101	2.873	2.885	-0.012	96	441016	5.00	4.56	M
11 Ethyl ether	59	3.086	3.105	-0.019	90	198178	5.01	4.04	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.184	3.202	-0.018	92	320074	5.00	4.45	
14 1,1-Dichloroethene	96	3.379	3.397	-0.018	98	264165	5.00	5.40	
16 Acetone	43	3.416	3.428	-0.012	100	313536	37.5	38.6	
15 112TCTFE	101	3.422	3.434	-0.012	91	258727	5.00	5.20	
17 Iodomethane	142	3.568	3.580	-0.012	98	470604	5.00	4.87	
18 Isopropyl alcohol	45	3.592	3.599	-0.007	38	81989	37.5	55.1	
19 Ethyl bromide	108	3.592	3.611	-0.019	98	203217	5.04	5.00	
20 Carbon disulfide	76	3.666	3.678	-0.012	99	894627	5.00	5.18	
22 Methyl acetate	43	3.812	3.824	-0.012	49	128830	5.00	4.03	
23 3-Chloro-1-propene	41	3.830	3.849	-0.019	93	452724	5.00	5.29	
24 Methylene Chloride	84	4.013	4.031	-0.018	92	285949	5.00	5.25	
* 25 t-Butyl alcohol-d10 (IS)	65	4.031	4.056	-0.025	0	191229	50.0	50.0	
26 2-Methyl-2-propanol	59	4.165	4.172	-0.007	99	203963	50.0	53.5	
27 Acrylonitrile	53	4.348	4.367	-0.019	99	319804	25.0	24.8	
28 Methyl tert-butyl ether	73	4.397	4.409	-0.012	89	729026	5.00	4.60	
29 trans-1,2-Dichloroethene	96	4.403	4.422	-0.019	99	294549	5.00	5.15	
30 Hexane	57	4.824	4.842	-0.018	93	482213	5.00	5.98	
32 1,1-Dichloroethane	63	5.068	5.080	-0.012	96	523734	5.00	4.98	
33 Isopropyl ether	45	5.129	5.147	-0.018	94	943392	5.00	4.70	
34 2-Chloro-1,3-butadiene	53	5.171	5.196	-0.025	90	466017	5.00	4.70	
35 Tert-butyl ethyl ether	59	5.671	5.684	-0.013	98	899169	5.00	4.69	
36 2-Butanone (MEK)	43	5.879	5.897	-0.018	99	664239	37.5	34.8	
37 cis-1,2-Dichloroethene	96	5.909	5.927	-0.018	82	369183	5.00	5.69	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
38 2,2-Dichloropropane	77	5.921	5.934	-0.013	62	441344	5.00	4.86	
40 Propionitrile	54	5.982	5.995	-0.013	98	168092	37.5	34.7	
43 Methacrylonitrile	67	6.189	6.202	-0.013	92	643493	37.5	34.3	
44 Chlorobromomethane	128	6.244	6.257	-0.013	94	139965	5.00	4.90	
45 Tetrahydrofuran	71	6.250	6.263	-0.013	78	129265	25.0	24.0	
46 Chloroform	83	6.403	6.409	-0.006	93	527903	5.00	5.06	
$ 47 Dibromofluoromethane (Surr)	113	6.616	6.629	-0.013	94	488042	10.0	9.71	
48 1,1,1-Trichloroethane	97	6.622	6.629	-0.007	98	462202	5.00	4.92	
49 Cyclohexane	56	6.714	6.726	-0.012	91	548276	5.00	5.52	
50 Carbon tetrachloride	117	6.830	6.842	-0.012	78	401846	5.00	5.10	
51 1,1-Dichloropropene	75	6.836	6.848	-0.012	96	426567	5.00	5.06	
52 Isobutyl alcohol	41	7.019	7.025	-0.006	94	177608	125.1	143.8	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.067	7.086	-0.019	0	106364	10.0	10.4	
54 Benzene	78	7.098	7.110	-0.012	97	1248265	5.00	5.14	
55 1,2-Dichloroethane	62	7.177	7.183	-0.006	97	335255	5.00	4.58	
56 Tert-amyl methyl ether	73	7.299	7.311	-0.012	99	840217	5.00	4.81	
* 57 Fluorobenzene (IS)	96	7.512	7.519	-0.007	99	2115645	10.0	10.0	
58 n-Heptane	43	7.518	7.525	-0.007	95	554873	5.00	6.18	
59 n-Butanol	56	7.915	7.915	0.000	88	329120	250.2	321.6	
60 Trichloroethene	95	7.994	8.000	-0.006	97	373817	5.00	5.97	
61 Methylcyclohexane	83	8.299	8.305	-0.006	90	591901	5.00	6.17	
62 1,2-Dichloropropane	63	8.329	8.342	-0.013	97	323866	5.00	5.19	
63 2-ethoxy-2-methyl butane	87	8.348	8.354	-0.006	92	488680	5.00	5.03	
65 1,4-Dioxane	88	8.427	8.433	-0.006	32	37455	125.1	183.8	M
64 Methyl methacrylate	69	8.427	8.433	-0.006	93	158869	5.00	3.97	
66 Dibromomethane	93	8.445	8.451	-0.006	95	150045	5.00	4.91	
67 Dichlorobromomethane	83	8.683	8.689	-0.006	99	371644	5.00	4.93	
68 2-Nitropropane	41	8.969	8.976	-0.007	98	44885	5.00	3.62	
71 1-Bromo-2-chloroethane	63	9.079	9.085	-0.006	98	332773	5.00	5.16	
72 cis-1,3-Dichloropropene	75	9.250	9.256	-0.006	96	479904	5.00	5.13	
73 4-Methyl-2-pentanone (MIBK)	43	9.439	9.439	0.000	97	1134301	25.0	20.5	
$ 74 Toluene-d8 (Surr)	98	9.567	9.567	0.000	94	2119958	10.0	10.1	
75 Toluene	92	9.646	9.646	0.000	98	824134	5.00	5.22	
76 trans-1,3-Dichloropropene	75	9.914	9.921	-0.007	93	414204	5.00	5.24	
78 Ethyl methacrylate	69	9.981	9.988	-0.007	90	349509	5.00	5.24	
79 1,1,2-Trichloroethane	97	10.122	10.128	-0.006	90	232717	5.00	5.34	
80 Tetrachloroethene	166	10.207	10.207	0.000	97	526847	5.00	7.47	
81 1,3-Dichloropropane	76	10.292	10.292	0.000	91	398770	5.00	5.19	
82 2-Hexanone	43	10.353	10.353	0.000	97	842680	25.0	21.5	
83 Chlorodibromomethane	129	10.506	10.506	0.000	91	265159	5.00	5.24	
84 Ethylene Dibromide	107	10.622	10.622	0.000	98	220143	5.00	5.12	
* 85 Chlorobenzene-d5 (IS)	117	11.060	11.061	-0.001	85	1606167	10.0	10.0	
86 1-Chlorohexane	91	11.073	11.073	0.000	99	475820	5.00	5.28	
87 Chlorobenzene	112	11.085	11.085	0.000	96	942728	5.00	5.29	
89 1,1,1,2-Tetrachloroethane	131	11.170	11.176	-0.006	95	317952	5.00	5.25	
90 Ethylbenzene	91	11.176	11.176	0.000	98	1600858	5.00	5.12	
91 m-Xylene & p-Xylene	106	11.292	11.292	0.000	100	1281602	10.0	10.5	
92 o-Xylene	106	11.627	11.628	-0.001	96	619652	5.00	5.18	
93 Styrene	104	11.646	11.646	0.000	95	1058612	5.00	5.27	
94 Bromoform	173	11.804	11.804	0.000	98	160429	5.00	5.71	
95 Isopropylbenzene	105	11.932	11.932	0.000	95	1583795	5.00	5.00	
$ 98 4-Bromofluorobenzene (Surr)	95	12.079	12.079	0.000	93	774568	10.0	9.82	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
99 1,1,2,2-Tetrachloroethane	83	12.188	12.188	0.000	94	291488	5.00	5.25	
100 Bromobenzene	156	12.194	12.195	-0.001	92	404488	5.00	5.31	
101 trans-1,4-Dichloro-2-butene	53	12.213	12.213	0.000	91	300656	25.0	19.6	
102 1,2,3-Trichloropropane	110	12.231	12.231	0.000	82	77366	5.00	5.12	
103 N-Propylbenzene	91	12.268	12.268	0.000	99	1930971	5.00	5.40	
104 2-Chlorotoluene	126	12.341	12.341	0.000	97	392755	5.00	5.37	
105 1,3,5-Trimethylbenzene	105	12.408	12.408	0.000	94	1379502	5.00	5.20	
106 4-Chlorotoluene	126	12.438	12.438	0.000	97	402354	5.00	5.29	
107 tert-Butylbenzene	134	12.652	12.652	0.000	93	302437	5.00	5.25	
108 Pentachloroethane	167	12.682	12.682	0.000	91	234872	5.00	5.46	
109 1,2,4-Trimethylbenzene	105	12.694	12.694	0.000	97	1391968	5.00	5.12	
110 sec-Butylbenzene	105	12.816	12.816	0.000	94	1809322	5.00	5.30	
111 1,3-Dichlorobenzene	146	12.914	12.914	0.000	99	800401	5.00	5.26	
112 4-Isopropyltoluene	119	12.926	12.926	0.000	97	1620188	5.00	5.44	
* 113 1,4-Dichlorobenzene-d4	152	12.969	12.969	0.000	94	888949	10.0	10.0	
114 1,4-Dichlorobenzene	146	12.987	12.987	0.000	95	825890	5.00	5.27	
115 1,2,3-Trimethylbenzene	120	12.999	12.999	0.000	99	650871	5.00	5.45	
116 Benzyl chloride	126	13.072	13.066	0.006	98	144544	5.00	6.55	
119 n-Butylbenzene	92	13.219	13.219	0.000	97	809803	5.00	5.36	
120 1,2-Dichlorobenzene	146	13.255	13.255	0.000	99	743308	5.00	5.17	
118 p-Diethylbenzene	119	13.273	13.274	-0.001	87	803155	5.00	5.31	
123 1,2-Dibromo-3-Chloropropane	155	13.804	13.804	0.000	88	41834	5.00	5.49	
124 1,3,5-Trichlorobenzene	180	13.926	13.926	0.000	98	667560	5.00	5.37	
125 1,2,4-Trichlorobenzene	180	14.359	14.353	0.006	94	596937	5.00	5.36	
126 Hexachlorobutadiene	225	14.438	14.438	0.000	96	319547	5.00	5.87	
127 Naphthalene	128	14.541	14.536	0.005	97	1013374	5.00	5.10	
128 1,2,3-Trichlorobenzene	180	14.682	14.682	0.000	96	519537	5.00	5.27	
129 2-Methylnaphthalene	142	15.310	15.304	0.006	93	609640	5.00	4.54	

QC Flag Legend

Processing Flags

Review Flags

M - Manually Integrated

Reagents:

MSV_Q_EE_00003	Amount Added:	5.38	Units: uL	
MSV_Q_QVOA6_00064	Amount Added:	5.38	Units: uL	
MSV_Q_ETBR_00006	Amount Added:	5.38	Units: uL	
MSV_Q_QVOA1_00066	Amount Added:	5.38	Units: uL	
MSV_QGAS_826_00108	Amount Added:	5.38	Units: uL	
MSV_HP25_ISSS_00022	Amount Added:	1.00	Units: uL	Run Reagent

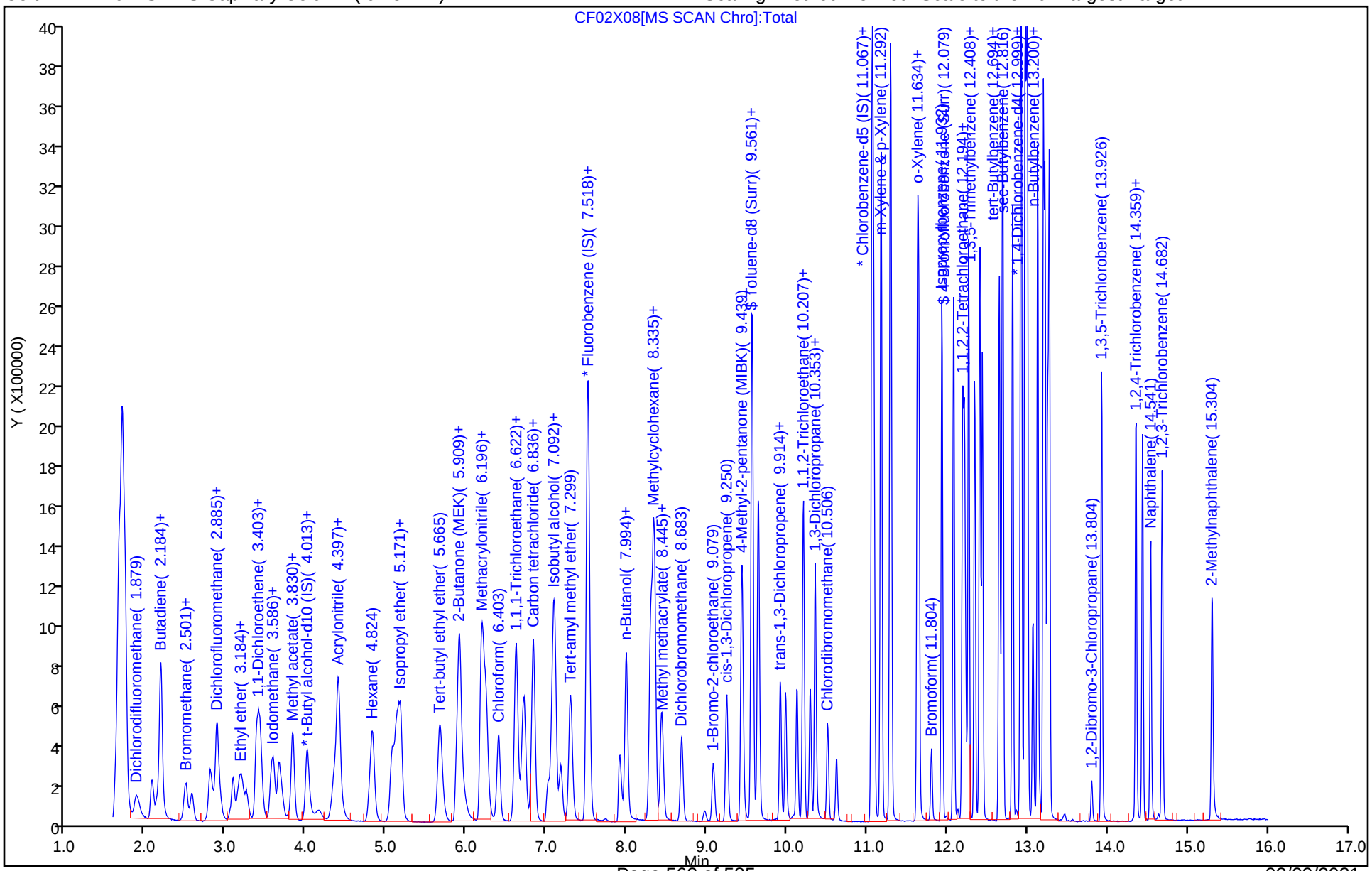
Report Date: 04-Feb-2021 19:36:30 Chrom Revision: 2.3 17-Jan-2021 00:24:10

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20210204-21283.b\CF02X08.D

Injection Date:	04-Feb-2021 13:43:30	Instrument ID:	10193	Operator ID:	kas02648
Lims ID:	410-27746-B-6 MS			Worklist Smp#:	8
Client ID:	HD-COD-SW-15-0/1-0				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Env, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\10193\20210204-21283.b\CF02X08.D				
Lims ID:	410-27746-B-6 MS				
Client ID:	HD-COD-SW-15-0/1-0				
Sample Type:	MS				
Inject. Date:	04-Feb-2021 13:43:30	ALS Bottle#:	8	Worklist Smp#:	8
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0021283-008				
Operator ID:	kas02648	Instrument ID:	10193		
Method:	\\chromfs\Lancaster\ChromData\10193\20210204-21283.b\MSV_10193_25mL.m				
Limit Group:	MSV - 8260C_D				
Last Update:	04-Feb-2021 19:36:21	Calib Date:	01-Sep-2020 19:09:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1643				

First Level Reviewer: campbellme Date: 04-Feb-2021 19:22:46

Compound	Amount Added	Amount Recovered	% Rec.
$ 47 Dibromofluoromethane (Surr)	10.0	9.71	97.08
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.4	103.86
$ 74 Toluene-d8 (Surr)	10.0	10.1	101.06
$ 98 4-Bromofluorobenzene (Surr)	10.0	9.82	98.24

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Client Sample ID: HD-COD-SW-15-0/1-0 MSD Lab Sample ID: 410-27746-6 MSD

Matrix: Water Lab File ID: CF02X09.D

Analysis Method: 8260D Date Collected: 01/26/2021 11:45

Sample wt/vol: 25(mL) Date Analyzed: 02/04/2021 14:05

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 90807 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	5.38		0.50	0.070
71-55-6	1,1,1-Trichloroethane	5.10		0.50	0.060
79-34-5	1,1,2,2-Tetrachloroethane	5.52		0.50	0.070
79-00-5	1,1,2-Trichloroethane	5.69		0.50	0.060
75-34-3	1,1-Dichloroethane	5.20		0.50	0.070
75-35-4	1,1-Dichloroethene	5.74		0.50	0.060
106-93-4	1,2-Dibromoethane (EDB)	5.35		0.50	0.060
107-06-2	1,2-Dichloroethane	4.61		0.50	0.050
78-87-5	1,2-Dichloropropane	5.48		0.50	0.060
78-93-3	2-Butanone (MEK)	40.8		5.0	0.60
591-78-6	2-Hexanone	24.9		5.0	0.60
108-10-1	4-Methyl-2-pentanone (MIBK)	23.9		5.0	0.70
67-64-1	Acetone	48.5		5.0	0.90
71-43-2	Benzene	5.33		0.50	0.050
74-97-5	Bromochloromethane	5.16		0.50	0.050
75-27-4	Bromodichloromethane	5.08		0.50	0.050
75-25-2	Bromoform	5.78		1.0	0.30
74-83-9	Bromomethane	4.80		0.50	0.070
75-15-0	Carbon disulfide	5.41		1.0	0.060
56-23-5	Carbon tetrachloride	5.23		0.50	0.070
108-90-7	Chlorobenzene	5.48		0.50	0.060
75-00-3	Chloroethane	4.64		0.50	0.070
67-66-3	Chloroform	5.25		0.50	0.090
74-87-3	Chloromethane	4.68		0.50	0.060
156-59-2	cis-1,2-Dichloroethene	5.97		0.50	0.050
10061-01-5	cis-1,3-Dichloropropene	5.35		0.50	0.050
124-48-1	Dibromochloromethane	5.48		0.50	0.070
100-41-4	Ethylbenzene	5.34		0.50	0.060
1634-04-4	Methyl tert-butyl ether	4.90		0.50	0.050
75-09-2	Methylene Chloride	5.42		0.50	0.070
100-42-5	Styrene	5.44		0.50	0.050
127-18-4	Tetrachloroethene	7.76		0.50	0.060
108-88-3	Toluene	5.39		0.50	0.070
156-60-5	trans-1,2-Dichloroethene	5.33		0.50	0.060
10061-02-6	trans-1,3-Dichloropropene	5.45		0.50	0.060
79-01-6	Trichloroethene	6.24		0.50	0.060

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-27746-1

SDG No.:

Client Sample ID: HD-COD-SW-15-0/1-0 MSD Lab Sample ID: 410-27746-6 MSD

Matrix: Water Lab File ID: CF02X09.D

Analysis Method: 8260D Date Collected: 01/26/2021 11:45

Sample wt/vol: 25(mL) Date Analyzed: 02/04/2021 14:05

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 90807 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-01-4	Vinyl chloride	5.06		0.50	0.10
1330-20-7	Xylenes, Total	16.2		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)	99		80-120
1868-53-7	Dibromofluoromethane (Surr)	98		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\10193\20210204-21283.b\CF02X09.D
Lims ID: 410-27746-B-6 MSD
Client ID: HD-COD-SW-15-0/1-0
Sample Type: MSD
Inject. Date: 04-Feb-2021 14:05:30 ALS Bottle#: 9 Worklist Smp#: 9
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0021283-009
Operator ID: kas02648 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20210204-21283.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 04-Feb-2021 19:36:21 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1643

First Level Reviewer: campbellme Date: 04-Feb-2021 19:23:51

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.904	1.898	0.006	99	324681	5.00	4.85	M
3 Chloromethane	50	2.087	2.087	0.000	99	369365	5.00	4.68	
4 Butadiene	39	2.197	2.196	0.000	92	538576	5.00	7.26	
5 Vinyl chloride	62	2.197	2.196	0.000	70	368819	5.00	5.06	
6 Bromomethane	94	2.507	2.513	-0.006	90	247326	5.00	4.80	
7 Chloroethane	64	2.587	2.593	-0.006	99	209114	5.00	4.64	
8 Dichlorofluoromethane	67	2.818	2.824	-0.006	97	308586	5.00	3.16	
9 Trichlorofluoromethane	101	2.873	2.885	-0.012	97	448772	5.00	4.73	
11 Ethyl ether	59	3.099	3.105	-0.006	91	205673	5.01	4.28	
12 1,2-Dichloro-1,1,2-trifluoroetha	67	3.202	3.202	0.000	94	327683	5.00	4.65	
13 Acrolein	56	3.269	3.269	0.000	98	229442	37.5	33.6	
14 1,1-Dichloroethene	96	3.397	3.397	0.000	98	275014	5.00	5.74	
16 Acetone	43	3.440	3.428	0.012	100	351770	37.5	48.5	
15 112TCTFE	101	3.434	3.434	0.000	90	258071	5.00	5.29	
17 Iodomethane	142	3.580	3.580	0.000	98	479590	5.00	5.06	
18 Isopropyl alcohol	45	3.593	3.599	-0.006	32	71922	37.5	54.3	
19 Ethyl bromide	108	3.611	3.611	0.000	98	213858	5.04	5.37	
20 Carbon disulfide	76	3.678	3.678	0.000	99	916180	5.00	5.41	
22 Methyl acetate	43	3.830	3.824	0.006	97	137805	5.00	4.84	
23 3-Chloro-1-propene	41	3.849	3.849	0.000	94	452323	5.00	5.39	
24 Methylene Chloride	84	4.032	4.031	0.001	93	289385	5.00	5.42	
* 25 t-Butyl alcohol-d10 (IS)	65	4.050	4.056	-0.006	0	170549	50.0	50.0	
26 2-Methyl-2-propanol	59	4.178	4.172	0.006	100	203268	50.0	59.8	
27 Acrylonitrile	53	4.367	4.367	0.000	100	326201	25.0	28.3	
28 Methyl tert-butyl ether	73	4.409	4.409	0.000	93	759955	5.00	4.90	
29 trans-1,2-Dichloroethene	96	4.422	4.422	0.000	98	298757	5.00	5.33	
30 Hexane	57	4.842	4.842	0.000	92	479662	5.00	6.07	
32 1,1-Dichloroethane	63	5.080	5.080	0.000	96	536135	5.00	5.20	
33 Isopropyl ether	45	5.147	5.147	0.000	94	987282	5.00	5.02	
34 2-Chloro-1,3-butadiene	53	5.190	5.196	-0.006	91	471795	5.00	4.85	
35 Tert-butyl ethyl ether	59	5.684	5.684	0.000	98	925973	5.00	4.93	
36 2-Butanone (MEK)	43	5.891	5.897	-0.006	100	694213	37.5	40.8	

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	5.921	5.927	-0.006	82	379331	5.00	5.97	
38 2,2-Dichloropropane	77	5.940	5.934	0.006	86	453071	5.00	5.09	
40 Propionitrile	54	5.988	5.995	-0.007	98	183572	37.5	42.5	
43 Methacrylonitrile	67	6.202	6.202	0.000	93	656885	37.5	39.3	
44 Chlorobromomethane	128	6.257	6.257	0.000	93	144341	5.00	5.16	
45 Tetrahydrofuran	71	6.263	6.263	0.000	78	132113	25.0	27.5	
46 Chloroform	83	6.415	6.409	0.006	93	537079	5.00	5.25	
$ 47 Dibromofluoromethane (Surr)	113	6.629	6.629	0.000	94	481624	10.0	9.77	
48 1,1,1-Trichloroethane	97	6.635	6.629	0.006	97	469502	5.00	5.10	
49 Cyclohexane	56	6.720	6.726	-0.006	91	561573	5.00	5.77	
50 Carbon tetrachloride	117	6.842	6.842	0.000	91	403972	5.00	5.23	
51 1,1-Dichloropropene	75	6.848	6.848	0.000	96	436799	5.00	5.28	
52 Isobutyl alcohol	41	7.025	7.025	0.000	93	183901	125.1	167.0	
$ 53 1,2-Dichloroethane-d4 (Surr)	102	7.080	7.086	-0.006	0	105016	10.0	10.5	
54 Benzene	78	7.104	7.110	-0.006	97	1270502	5.00	5.33	
55 1,2-Dichloroethane	62	7.183	7.183	0.000	97	331330	5.00	4.61	
56 Tert-amyl methyl ether	73	7.305	7.311	-0.006	99	860370	5.00	5.03	
* 57 Fluorobenzene (IS)	96	7.519	7.519	0.000	99	2073784	10.0	10.0	
58 n-Heptane	43	7.531	7.525	0.006	92	535612	5.00	6.09	
59 n-Butanol	56	7.921	7.915	0.006	88	331840	250.2	363.6	
60 Trichloroethene	95	8.000	8.000	0.000	98	383013	5.00	6.24	
61 Methylcyclohexane	83	8.305	8.305	0.000	91	592040	5.00	6.30	
62 1,2-Dichloropropane	63	8.336	8.342	-0.006	97	334953	5.00	5.48	
63 2-ethoxy-2-methyl butane	87	8.354	8.354	0.000	92	495044	5.00	5.20	
65 1,4-Dioxane	88	8.433	8.433	0.000	32	36388	125.1	200.2	M
64 Methyl methacrylate	69	8.433	8.433	0.000	93	170877	5.00	4.79	
66 Dibromomethane	93	8.451	8.451	0.000	95	155238	5.00	5.19	
67 Dichlorobromomethane	83	8.689	8.689	0.000	99	375249	5.00	5.08	
68 2-Nitropropane	41	8.982	8.976	0.006	97	45576	5.00	4.12	
71 1-Bromo-2-chloroethane	63	9.085	9.085	0.000	98	321568	5.00	5.08	
69 2-Chloroethyl vinyl ether	63		9.116				ND	ND	
72 cis-1,3-Dichloropropene	75	9.250	9.256	-0.006	96	490929	5.00	5.35	
73 4-Methyl-2-pentanone (MIBK)	43	9.439	9.439	0.000	97	1178667	25.0	23.9	
$ 74 Toluene-d8 (Surr)	98	9.567	9.567	0.000	94	2062514	10.0	10.1	
75 Toluene	92	9.646	9.646	0.000	98	829501	5.00	5.39	
76 trans-1,3-Dichloropropene	75	9.921	9.921	0.000	93	419591	5.00	5.45	
78 Ethyl methacrylate	69	9.988	9.988	0.000	90	359057	5.00	5.52	
79 1,1,2-Trichloroethane	97	10.128	10.128	0.000	90	241706	5.00	5.69	
80 Tetrachloroethene	166	10.207	10.207	0.000	97	533184	5.00	7.76	
81 1,3-Dichloropropane	76	10.292	10.292	0.000	92	407552	5.00	5.44	
82 2-Hexanone	43	10.353	10.353	0.000	97	867254	25.0	24.9	
83 Chlorodibromomethane	129	10.512	10.506	0.006	89	270166	5.00	5.48	
84 Ethylene Dibromide	107	10.622	10.622	0.000	99	224601	5.00	5.35	
* 85 Chlorobenzene-d5 (IS)	117	11.061	11.061	0.000	85	1565858	10.0	10.0	
86 1-Chlorohexane	91	11.073	11.073	0.000	98	476814	5.00	5.43	
87 Chlorobenzene	112	11.085	11.085	0.000	95	951622	5.00	5.48	
89 1,1,1,2-Tetrachloroethane	131	11.176	11.176	0.000	96	317941	5.00	5.38	
90 Ethylbenzene	91	11.176	11.176	0.000	98	1629352	5.00	5.34	
91 m-Xylene & p-Xylene	106	11.292	11.292	0.000	100	1284209	10.0	10.8	
92 o-Xylene	106	11.628	11.628	0.000	97	626003	5.00	5.36	
93 Styrene	104	11.646	11.646	0.000	95	1065405	5.00	5.44	
94 Bromoform	173	11.804	11.804	0.000	98	158169	5.00	5.78	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
95 Isopropylbenzene	105	11.932	11.932	0.000	95	1597530	5.00	5.18	
$ 98 4-Bromofluorobenzene (Surr)	95	12.079	12.079	0.000	92	759855	10.0	9.89	
99 1,1,2,2-Tetrachloroethane	83	12.188	12.188	0.000	93	300683	5.00	5.52	
100 Bromobenzene	156	12.195	12.195	0.000	92	414524	5.00	5.54	
101 trans-1,4-Dichloro-2-butene	53	12.213	12.213	0.000	91	278491	25.0	18.5	
102 1,2,3-Trichloropropane	110	12.231	12.231	0.000	82	80026	5.00	5.40	
103 N-Propylbenzene	91	12.268	12.268	0.000	99	1960976	5.00	5.58	
104 2-Chlorotoluene	126	12.341	12.341	0.000	97	404886	5.00	5.64	
105 1,3,5-Trimethylbenzene	105	12.408	12.408	0.000	94	1386515	5.00	5.33	
106 4-Chlorotoluene	126	12.438	12.438	0.000	97	411035	5.00	5.51	
107 tert-Butylbenzene	134	12.652	12.652	0.000	93	308379	5.00	5.45	
108 Pentachloroethane	167	12.682	12.682	0.000	92	240293	5.00	5.69	
109 1,2,4-Trimethylbenzene	105	12.694	12.694	0.000	97	1427195	5.00	5.35	
110 sec-Butylbenzene	105	12.816	12.816	0.000	94	1846834	5.00	5.51	
111 1,3-Dichlorobenzene	146	12.914	12.914	0.000	98	801884	5.00	5.37	
112 4-Isopropyltoluene	119	12.926	12.926	0.000	97	1633463	5.00	5.59	
* 113 1,4-Dichlorobenzene-d4	152	12.969	12.969	0.000	94	872306	10.0	10.0	
114 1,4-Dichlorobenzene	146	12.987	12.987	0.000	96	839595	5.00	5.46	
115 1,2,3-Trimethylbenzene	120	12.999	12.999	0.000	98	649639	5.00	5.55	
116 Benzyl chloride	126	13.072	13.066	0.006	98	142912	5.00	6.60	
119 n-Butylbenzene	92	13.219	13.219	0.000	97	814014	5.00	5.50	
120 1,2-Dichlorobenzene	146	13.255	13.255	0.000	99	750772	5.00	5.33	
118 p-Diethylbenzene	119	13.274	13.274	0.000	87	791305	5.00	5.33	
123 1,2-Dibromo-3-Chloropropane	155	13.804	13.804	0.000	89	44341	5.00	5.94	
124 1,3,5-Trichlorobenzene	180	13.926	13.926	0.000	97	676974	5.00	5.55	
125 1,2,4-Trichlorobenzene	180	14.353	14.353	0.000	94	607334	5.00	5.55	
126 Hexachlorobutadiene	225	14.438	14.438	0.000	96	319021	5.00	5.97	
127 Naphthalene	128	14.542	14.536	0.006	97	1028622	5.00	5.27	
128 1,2,3-Trichlorobenzene	180	14.682	14.682	0.000	95	525594	5.00	5.43	
129 2-Methylnaphthalene	142	15.304	15.304	0.000	92	643422	5.00	4.88	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MSV_Q_QARC_00065	Amount Added:	5.38	Units: uL	
MSV_Q_EE_00003	Amount Added:	5.38	Units: uL	
MSV_Q_QVOA6_00064	Amount Added:	5.38	Units: uL	
MSV_Q_ETBR_00006	Amount Added:	5.38	Units: uL	
MSV_Q_QVOA1_00066	Amount Added:	5.38	Units: uL	
MSV_QGAS_826_00108	Amount Added:	5.38	Units: uL	
MSV_HP25_ISSS_00022	Amount Added:	1.00	Units: uL	Run Reagent

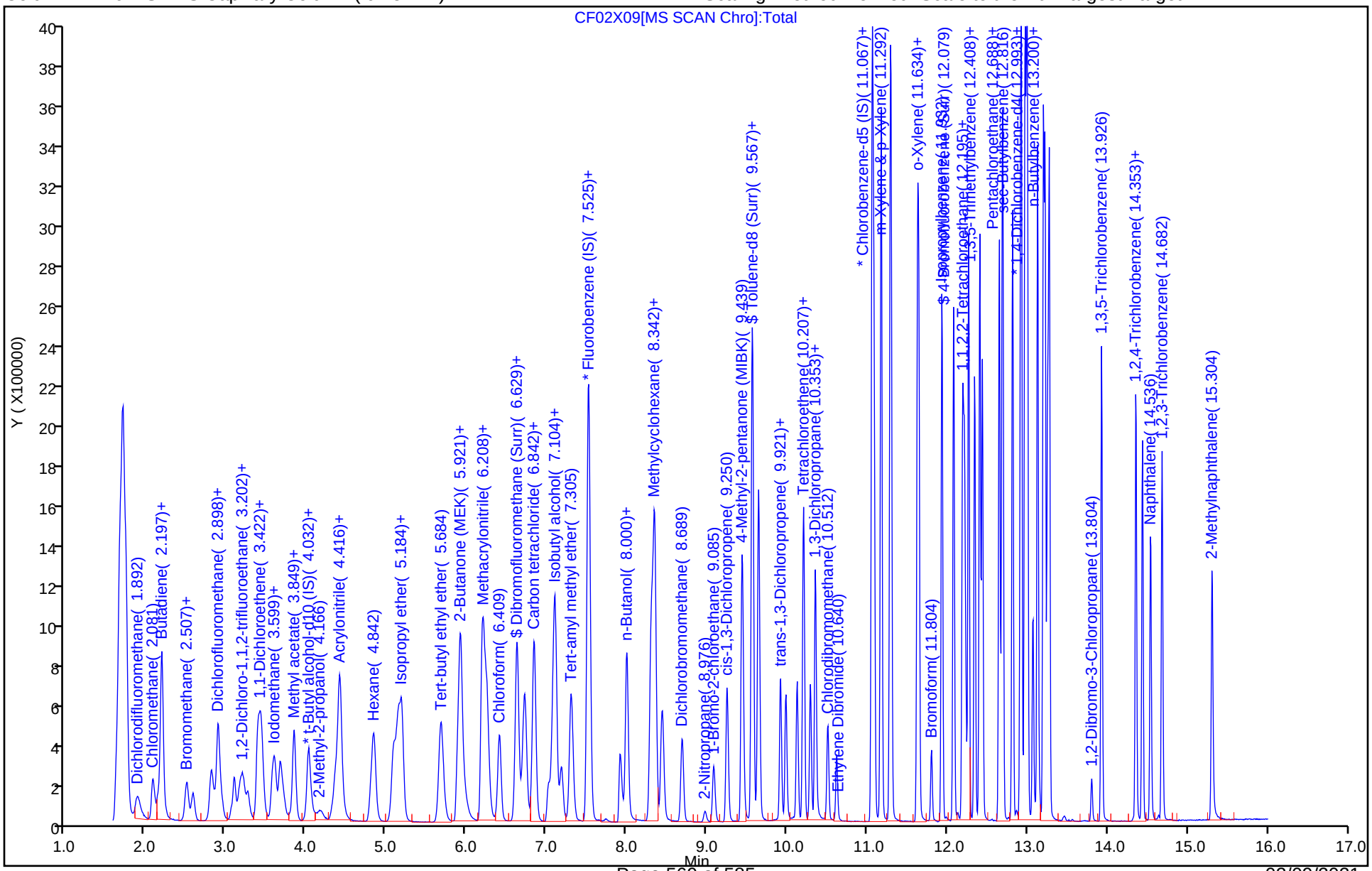
Report Date: 04-Feb-2021 19:36:34 Chrom Revision: 2.3 17-Jan-2021 00:24:10

Eurofins Lancaster Laboratories Env, LLC

Data File: \\chromfs\Lancaster\ChromData\10193\20210204-21283.b\CF02X09.D

Injection Date:	04-Feb-2021 14:05:30	Instrument ID:	10193	Operator ID:	kas02648
Lims ID:	410-27746-B-6 MSD			Worklist Smp#:	9
Client ID:	HD-COD-SW-15-0/1-0				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MSV_10193_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Env, LLC

Recovery Report

Data File: \\chromfs\Lancaster\ChromData\10193\20210204-21283.b\CF02X09.D
Lims ID: 410-27746-B-6 MSD
Client ID: HD-COD-SW-15-0/1-0
Sample Type: MSD
Inject. Date: 04-Feb-2021 14:05:30 ALS Bottle#: 9 Worklist Smp#: 9
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0021283-009
Operator ID: kas02648 Instrument ID: 10193

Method: \\chromfs\Lancaster\ChromData\10193\20210204-21283.b\MSV_10193_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 04-Feb-2021 19:36:21 Calib Date: 01-Sep-2020 19:09:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\10193\20200901-9503.b\CS01I17.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1643

First Level Reviewer: campbellme Date: 04-Feb-2021 19:23:51

Compound	Amount Added	Amount Recovered	% Rec.
$ 47 Dibromofluoromethane (Surr)	10.0	9.77	97.74
$ 53 1,2-Dichloroethane-d4 (Surr)	10.0	10.5	104.61
$ 74 Toluene-d8 (Surr)	10.0	10.1	100.85
$ 98 4-Bromofluorobenzene (Surr)	10.0	9.89	98.85

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-27746-1

SDG No.:

Instrument ID: 10193 Start Date: 09/01/2020 12:45

Analysis Batch Number: 39724 End Date: 09/01/2020 19:31

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 410-39724/1		09/01/2020 12:45	1	CS01T01.D	R-624SilMS 30m 0.25(mm)
IC 410-39724/3		09/01/2020 13:35	1	CS01I01.D	R-624SilMS 30m 0.25(mm)
ICIS 410-39724/4		09/01/2020 13:57	1	CS01I02.D	R-624SilMS 30m 0.25(mm)
IC 410-39724/5		09/01/2020 14:19	1	CS01I03.D	R-624SilMS 30m 0.25(mm)
IC 410-39724/6		09/01/2020 14:42	1	CS01I04.D	R-624SilMS 30m 0.25(mm)
IC 410-39724/7		09/01/2020 15:04	1	CS01I05.D	R-624SilMS 30m 0.25(mm)
IC 410-39724/8		09/01/2020 15:26	1	CS01I06.D	R-624SilMS 30m 0.25(mm)
IC 410-39724/9		09/01/2020 15:48	1	CS01I07.D	R-624SilMS 30m 0.25(mm)
ICV 410-39724/10		09/01/2020 16:10	1	CS01V01.D	R-624SilMS 30m 0.25(mm)
IC 410-39724/12		09/01/2020 16:55	1		R-624SilMS 30m 0.25(mm)
IC 410-39724/13		09/01/2020 17:17	1		R-624SilMS 30m 0.25(mm)
IC 410-39724/14		09/01/2020 17:39	1		R-624SilMS 30m 0.25(mm)
IC 410-39724/15		09/01/2020 18:02	1		R-624SilMS 30m 0.25(mm)
IC 410-39724/16		09/01/2020 18:24	1		R-624SilMS 30m 0.25(mm)
IC 410-39724/17		09/01/2020 18:46	1		R-624SilMS 30m 0.25(mm)
IC 410-39724/18		09/01/2020 19:09	1		R-624SilMS 30m 0.25(mm)
ICV 410-39724/19		09/01/2020 19:31	1		R-624SilMS 30m 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-27746-1

SDG No.:

Instrument ID: 10193 Start Date: 02/03/2021 08:45

Analysis Batch Number: 90352 End Date: 02/03/2021 20:03

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 410-90352/1		02/03/2021 08:45	1	CF02T01.D	R-624SilMS 30m 0.25(mm)
CCVIS 410-90352/3		02/03/2021 09:34	1	CF02C01.D	R-624SilMS 30m 0.25(mm)
ZZZZZ		02/03/2021 10:42	1		R-624SilMS 30m 0.25(mm)
MB 410-90352/7		02/03/2021 11:04	1	CF02B01.D	R-624SilMS 30m 0.25(mm)
LCS 410-90352/8		02/03/2021 11:48	1	CF02S01.D	R-624SilMS 30m 0.25(mm)
LCSD 410-90352/9		02/03/2021 12:10	1	CF02S02.D	R-624SilMS 30m 0.25(mm)
410-27746-1	HD-COD-SW-6-0/1-0	02/03/2021 13:44	1	CF02S03.D	R-624SilMS 30m 0.25(mm)
410-27746-2	HD-COD-SW-7-0/1-0	02/03/2021 14:06	1	CF02S04.D	R-624SilMS 30m 0.25(mm)
410-27746-3	HD-COD-SW-8-0/1-0	02/03/2021 14:29	1	CF02S05.D	R-624SilMS 30m 0.25(mm)
410-27746-4	HD-COD-SW-9-0/1-0	02/03/2021 14:51	1	CF02S06.D	R-624SilMS 30m 0.25(mm)
410-27746-5	HD-COD-SW-13-0/1-0	02/03/2021 15:13	1	CF02S07.D	R-624SilMS 30m 0.25(mm)
410-27746-6	HD-COD-SW-15-0/1-0	02/03/2021 15:35	1	CF02S08.D	R-624SilMS 30m 0.25(mm)
410-27746-7	HD-COD-SW-16-0/1-0	02/03/2021 16:42	1	CF02S11.D	R-624SilMS 30m 0.25(mm)
410-27746-8	HD-COD-SW-17-0/1-0	02/03/2021 17:04	1	CF02S12.D	R-624SilMS 30m 0.25(mm)
410-27746-9	HD-COD-SW-26-0/1-0	02/03/2021 17:27	1	CF02S13.D	R-624SilMS 30m 0.25(mm)
410-27746-10	HD-COD-SW-27-0/1-0	02/03/2021 17:49	1	CF02S14.D	R-624SilMS 30m 0.25(mm)
410-27746-11	HD-COD-SW-28-0/1-0	02/03/2021 18:12	1	CF02S15.D	R-624SilMS 30m 0.25(mm)
410-27746-12	HD-COD-SW-29-0/1-0	02/03/2021 18:34	1	CF02S16.D	R-624SilMS 30m 0.25(mm)
410-27746-13	HD-QC1-0/1-1	02/03/2021 18:57	1	CF02S17.D	R-624SilMS 30m 0.25(mm)
410-27746-14	HD-QC1-0/1-2	02/03/2021 19:19	1	CF02S18.D	R-624SilMS 30m 0.25(mm)
ZZZZZ		02/03/2021 19:41	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		02/03/2021 20:03	10		R-624SilMS 30m 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Lancaster Laboratories Env Job No.: 410-27746-1

SDG No.:

Instrument ID: 10193 Start Date: 02/04/2021 10:45

Analysis Batch Number: 90807 End Date: 02/04/2021 22:16

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 410-90807/1		02/04/2021 10:45	1	CF02T02.D	R-624SilMS 30m 0.25(mm)
CCVIS 410-90807/3		02/04/2021 11:22	1	CF02X03.D	R-624SilMS 30m 0.25(mm)
LCS 410-90807/4		02/04/2021 11:44	1	CF02X04.D	R-624SilMS 30m 0.25(mm)
LCSD 410-90807/5		02/04/2021 12:07	1	CF02X05.D	R-624SilMS 30m 0.25(mm)
ZZZZZ		02/04/2021 12:29	1		R-624SilMS 30m 0.25(mm)
MB 410-90807/7		02/04/2021 12:51	1	CF02X07.D	R-624SilMS 30m 0.25(mm)
410-27746-6 MS	HD-COD-SW-15-0/1-0 MS	02/04/2021 13:43	1	CF02X08.D	R-624SilMS 30m 0.25(mm)
410-27746-6 MSD	HD-COD-SW-15-0/1-0 MSD	02/04/2021 14:05	1	CF02X09.D	R-624SilMS 30m 0.25(mm)
ZZZZZ		02/04/2021 14:27	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		02/04/2021 14:50	10		R-624SilMS 30m 0.25(mm)
ZZZZZ		02/04/2021 15:12	10		R-624SilMS 30m 0.25(mm)
ZZZZZ		02/04/2021 15:34	10		R-624SilMS 30m 0.25(mm)
ZZZZZ		02/04/2021 15:57	100		R-624SilMS 30m 0.25(mm)
ZZZZZ		02/04/2021 16:19	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		02/04/2021 16:41	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		02/04/2021 17:04	10		R-624SilMS 30m 0.25(mm)
ZZZZZ		02/04/2021 17:26	10		R-624SilMS 30m 0.25(mm)
ZZZZZ		02/04/2021 17:48	10		R-624SilMS 30m 0.25(mm)
ZZZZZ		02/04/2021 18:11	10		R-624SilMS 30m 0.25(mm)
ZZZZZ		02/04/2021 18:33	5		R-624SilMS 30m 0.25(mm)
ZZZZZ		02/04/2021 18:55	5		R-624SilMS 30m 0.25(mm)
ZZZZZ		02/04/2021 19:17	5		R-624SilMS 30m 0.25(mm)
ZZZZZ		02/04/2021 19:40	50		R-624SilMS 30m 0.25(mm)
ZZZZZ		02/04/2021 20:02	5		R-624SilMS 30m 0.25(mm)
ZZZZZ		02/04/2021 20:24	50		R-624SilMS 30m 0.25(mm)
ZZZZZ		02/04/2021 20:47	20		R-624SilMS 30m 0.25(mm)
ZZZZZ		02/04/2021 21:09	200		R-624SilMS 30m 0.25(mm)
ZZZZZ		02/04/2021 21:31	10		R-624SilMS 30m 0.25(mm)
ZZZZZ		02/04/2021 21:54	100		R-624SilMS 30m 0.25(mm)
ZZZZZ		02/04/2021 22:16	1000		R-624SilMS 30m 0.25(mm)

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-27746-1

SDG No.:

Batch Number: 39724 Batch Start Date: 09/01/20 12:45 Batch Analyst: Campbell, Miranda E

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MSV_25_826ISS 00001	MSV_Q_EE 00002	MSV_Q_ETBR 00003	MSV_Q_QARC 00043
BFB 410-39724/1		8260D		1 uL	1 uL				
IC 410-39724/3		8260D		25 mL	25 mL	1 uL			
ICIS 410-39724/4		8260D		25 mL	25 mL	1 uL			
IC 410-39724/5		8260D		25 mL	25 mL	1 uL			
IC 410-39724/6		8260D		25 mL	25 mL	1 uL			
IC 410-39724/7		8260D		25 mL	25 mL	1 uL			
IC 410-39724/8		8260D		25 mL	25 mL	1 uL			
IC 410-39724/9		8260D		25 mL	25 mL	1 uL			
ICV 410-39724/10		8260D		25 mL	25 mL	1 uL	12.5 uL	12.5 uL	12.5 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_Q_QVOA1 00044	MSV_Q_QVOA6 00041	MSV_QGAS_826 00069	MSV_RV1_826 00022	MSV_RV4_826 00024	MSV_RV4GAS826 00072
BFB 410-39724/1		8260D							
IC 410-39724/3		8260D					25 uL	25 uL	25 uL
ICIS 410-39724/4		8260D					10 uL	10 uL	10 uL
IC 410-39724/5		8260D					5 uL	5 uL	5 uL
IC 410-39724/6		8260D					2 uL	2 uL	2 uL
IC 410-39724/7		8260D					2 uL	2 uL	2 uL
IC 410-39724/8		8260D					2 uL	2 uL	2 uL
IC 410-39724/9		8260D					2 uL	2 uL	2 uL
ICV 410-39724/10		8260D		12.5 uL	12.5 uL	12.5 uL			

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_V_BFB 00003					
BFB 410-39724/1		8260D		1 uL					
IC 410-39724/3		8260D							
ICIS 410-39724/4		8260D							
IC 410-39724/5		8260D							
IC 410-39724/6		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.: 410-27746-1

SDG No.:

Batch Number: 39724 Batch Start Date: 09/01/20 12:45 Batch Analyst: Campbell, Miranda E

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_V_BFB 00003					
IC 410-39724/7		8260D							
IC 410-39724/8		8260D							
IC 410-39724/9		8260D							
ICV 410-39724/10		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.: 410-27746-1

SDG No.:

Batch Number: 90352 Batch Start Date: 02/03/21 08:45 Batch Analyst: Sposito, Kevin A

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	ResidualChloCheck	Headspace	Lot#Vial
BFB 410-90352/1		8260D		1 uL	1 uL				
CCVIS 410-90352/3		8260D		25 mL	25 mL				0126201f
MB 410-90352/7		8260D		25 mL	25 mL				0126201f
LCS 410-90352/8		8260D		25 mL	25 mL				0126201f
LCSD 410-90352/9		8260D		25 mL	25 mL				0126201f
410-27746-A-1	HD-COD-SW-6-0/1-0	8260D	T	25 mL	25 mL	<2 SU	N	N	
410-27746-A-2	HD-COD-SW-7-0/1-0	8260D	T	25 mL	25 mL	<2 SU	N	N	
410-27746-A-3	HD-COD-SW-8-0/1-0	8260D	T	25 mL	25 mL	<2 SU	N	N	
410-27746-A-4	HD-COD-SW-9-0/1-0	8260D	T	25 mL	25 mL	<2 SU	N	N	
410-27746-A-5	HD-COD-SW-13-0/1-0	8260D	T	25 mL	25 mL	<2 SU	N	N	
410-27746-A-6	HD-COD-SW-15-0/1-0	8260D	T	25 mL	25 mL	<2 SU	N	N	
410-27746-A-7	HD-COD-SW-16-0/1-0	8260D	T	25 mL	25 mL	<2 SU	N	N	
410-27746-A-8	HD-COD-SW-17-0/1-0	8260D	T	25 mL	25 mL	<2 SU	N	N	
410-27746-A-9	HD-COD-SW-26-0/1-0	8260D	T	25 mL	25 mL	<2 SU	N	N	
410-27746-A-10	HD-COD-SW-27-0/1-0	8260D	T	25 mL	25 mL	<2 SU	N	N	
410-27746-A-11	HD-COD-SW-28-0/1-0	8260D	T	25 mL	25 mL	<2 SU	N	N	
410-27746-A-12	HD-COD-SW-29-0/1-0	8260D	T	25 mL	25 mL	<2 SU	N	N	
410-27746-A-13	HD-QC1-0/1-1	8260D	T	25 mL	25 mL	<2 SU	N	N	
410-27746-A-14	HD-QC1-0/1-2	8260D	T	25 mL	25 mL	<2 SU	N	N	

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_HP25_ISSS 00022	MSV_Q_EE 00003	MSV_Q_ETBR 00006	MSV_Q_QARC 00065	MSV_Q_QVOA1 00066	MSV_Q_QVOA6 00064
BFB 410-90352/1		8260D							
CCVIS 410-90352/3		8260D		1 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.

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-27746-1

SDG No.:

Batch Number: 90352 Batch Start Date: 02/03/21 08:45 Batch Analyst: Sposito, Kevin A

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_HP25_ISSS 00022	MSV_Q_EE 00003	MSV_Q_ETBR 00006	MSV_Q_QARC 00065	MSV_Q_QVOA1 00066	MSV_Q_QVOA6 00064
MB 410-90352/7		8260D		1 uL					
LCS 410-90352/8		8260D		1 uL	12.5 uL	12.5 uL	12.5 uL	12.5 uL	12.5 uL
LCSD 410-90352/9		8260D		1 uL	12.5 uL	12.5 uL	12.5 uL	12.5 uL	12.5 uL
410-27746-A-1	HD-COD-SW-6-0/1-0	8260D	T	1 uL					
410-27746-A-2	HD-COD-SW-7-0/1-0	8260D	T	1 uL					
410-27746-A-3	HD-COD-SW-8-0/1-0	8260D	T	1 uL					
410-27746-A-4	HD-COD-SW-9-0/1-0	8260D	T	1 uL					
410-27746-A-5	HD-COD-SW-13-0/1-0	8260D	T	1 uL					
410-27746-A-6	HD-COD-SW-15-0/1-0	8260D	T	1 uL					
410-27746-A-7	HD-COD-SW-16-0/1-0	8260D	T	1 uL					
410-27746-A-8	HD-COD-SW-17-0/1-0	8260D	T	1 uL					
410-27746-A-9	HD-COD-SW-26-0/1-0	8260D	T	1 uL					
410-27746-A-10	HD-COD-SW-27-0/1-0	8260D	T	1 uL					
410-27746-A-11	HD-COD-SW-28-0/1-0	8260D	T	1 uL					
410-27746-A-12	HD-COD-SW-29-0/1-0	8260D	T	1 uL					
410-27746-A-13	HD-QC1-0/1-1	8260D	T	1 uL					
410-27746-A-14	HD-QC1-0/1-2	8260D	T	1 uL					

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_QGAS_826 00108	MSV_RV1_826 00036	MSV_RV4_826 00043	MSV_RV4GAS826 00111	MSV_V_BFB 00004	
BFB 410-90352/1		8260D						1 uL	
CCVIS 410-90352/3		8260D			10 uL	10 uL	10 uL		
MB 410-90352/7		8260D							
LCS 410-90352/8		8260D		12.5 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.: 410-27746-1

SDG No.:

Batch Number: 90352 Batch Start Date: 02/03/21 08:45 Batch Analyst: Sposito, Kevin A

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_QGAS_826 00108	MSV_RV1_826 00036	MSV_RV4_826 00043	MSV_RV4GAS826 00111	MSV_V_BFB 00004	
LCSD 410-90352/9		8260D		12.5 uL					
410-27746-A-1	HD-COD-SW-6-0/1-0	8260D	T						
410-27746-A-2	HD-COD-SW-7-0/1-0	8260D	T						
410-27746-A-3	HD-COD-SW-8-0/1-0	8260D	T						
410-27746-A-4	HD-COD-SW-9-0/1-0	8260D	T						
410-27746-A-5	HD-COD-SW-13-0/1-0	8260D	T						
410-27746-A-6	HD-COD-SW-15-0/1-0	8260D	T						
410-27746-A-7	HD-COD-SW-16-0/1-0	8260D	T						
410-27746-A-8	HD-COD-SW-17-0/1-0	8260D	T						
410-27746-A-9	HD-COD-SW-26-0/1-0	8260D	T						
410-27746-A-10	HD-COD-SW-27-0/1-0	8260D	T						
410-27746-A-11	HD-COD-SW-28-0/1-0	8260D	T						
410-27746-A-12	HD-COD-SW-29-0/1-0	8260D	T						
410-27746-A-13	HD-QC1-0/1-1	8260D	T						
410-27746-A-14	HD-QC1-0/1-2	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.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-27746-1

SDG No.:

Batch Number: 90807 Batch Start Date: 02/04/21 10:45 Batch Analyst: Campbell, Miranda E

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	ResidualChloCheck	Headspace	Lot#Vial
BFB 410-90807/1		8260D		1 uL	1 uL				
CCVIS 410-90807/3		8260D		25 mL	25 mL				0126201F
LCS 410-90807/4		8260D		25 mL	25 mL				0126201F
LCSD 410-90807/5		8260D		25 mL	25 mL				0126201F
MB 410-90807/7		8260D		25 mL	25 mL				0126201F
410-27746-B-6 MS	HD-COD-SW-15-0/1-0	8260D	T	25 mL	25 mL	<2 SU	N	N	
410-27746-B-6 MSD	HD-COD-SW-15-0/1-0	8260D	T	25 mL	25 mL	<2 SU	N	N	

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_HP25_ISSS 00022	MSV_Q_EE 00003	MSV_Q_ETBR 00006	MSV_Q_QARC 00065	MSV_Q_QVOA1 00066	MSV_Q_QVOA6 00064
BFB 410-90807/1		8260D							
CCVIS 410-90807/3		8260D		1 uL					
LCS 410-90807/4		8260D		1 uL	12.5 uL	12.5 uL	12.5 uL	12.5 uL	12.5 uL
LCSD 410-90807/5		8260D		1 uL	12.5 uL	12.5 uL	12.5 uL	12.5 uL	12.5 uL
MB 410-90807/7		8260D		1 uL					
410-27746-B-6 MS	HD-COD-SW-15-0/1-0	8260D	T	1 uL	5.38 uL	5.38 uL		5.38 uL	5.38 uL
410-27746-B-6 MSD	HD-COD-SW-15-0/1-0	8260D	T	1 uL	5.38 uL	5.38 uL	5.38 uL	5.38 uL	5.38 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_QGAS_826 00108	MSV_RV1_826 00036	MSV_RV4_826 00043	MSV_RV4GAS826 00111	MSV_V_BFB 00004	
BFB 410-90807/1		8260D						1 uL	
CCVIS 410-90807/3		8260D			10 uL	10 uL	10 uL		
LCS 410-90807/4		8260D		12.5 uL					
LCSD 410-90807/5		8260D		12.5 uL					
MB 410-90807/7		8260D							
410-27746-B-6 MS	HD-COD-SW-15-0/1-0	8260D	T	5.38 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.: 410-27746-1

SDG No.:

Batch Number: 90807 Batch Start Date: 02/04/21 10:45 Batch Analyst: Campbell, Miranda E

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_QGAS_826 00108	MSV_RV1_826 00036	MSV_RV4_826 00043	MSV_RV4GAS826 00111	MSV_V_BFB 00004	
410-27746-B-6 MSD	HD-COD-SW-15-0/1 -0	8260D	T	5.38 uL					

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

Environmental Analysis Re stody

410-27746 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 / Erin Peeling	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 8260D (low level - 25 ml purge)	Preservation Codes: H
HD-COD-SW-6-0/1-0	1/26/21	1050	X					X					3	X	
HD-COD-SW-7-0/1-0		1130	X					X					3	X	
HD-COD-SW-8-0/1-0		0925	X					X					3	X	
HD-COD-SW-9-0/1-0		1250	X					X					3	X	
HD-COD-SW-13-0/1-0		0945	X					X					3	X	
HD-COD-SW-15-0/1-0		1145	X					X					3	X	
HD-COD-SW-15-0/1-0 MS		1145	X					X					3	X	
HD-COD-SW-15-0/1-0 MSD		1145	X					X					3	X	
HD-COD-SW-16-0/1-0		1010	X					X					3	X	
HD-COD-SW-17-0/1-0		1020	X					X					3	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
Erin	1/26/21	15:30	Christopher D. O'Neil GSC	1/26/21	15:30
Christopher O'Neil	1/27/21	11:45		1/27/21	1145
	1/27/21	1742			
				1-27-2021	1755

Relinquished by Commercial Carrier:

UPS FedEx Other

Temperature upon receipt 0.3 °C

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 / Erin Peeling	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: Trip Blank	Total # of Containers	Analyses Requested: Aqueous VOCs via 8260D (low level - 25 ml purge)	Preservation Codes: H
HD-COD-SW-26-0/1-0	1/26/21	1110	X					X					3	X	
HD-COD-SW-27-0/1-0		1140	X					X					3	X	
HD-COD-SW-28-0/1-0		1305	X					X					3	X	
HD-COD-SW-29-0/1-0		0910	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]	1/26/21	15:30	[signature] D.O'Neil GSC	1/26/21	15:30
[signature] D.O'Neil	1/27/21	11:45	[signature]	1/27/21	11:45
[signature]	1/27/21	1742	[signature]	Date	Time
[signature]	Date	Time	[signature]	Date	Time
[signature]	Date	Time	[signature]	Date	Time

Relinquished by Commercial Carrier:

UPS FedEx Other

Temperature upon receipt 0.3 °C

Login Sample Receipt Checklist

Client: Groundwater Sciences Corporation

Job Number: 410-27746-1

Login Number: 27746
List Number: 1
Creator: Barns, Christopher

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.	False	Refer to Job Narrative for details.
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.	True	

Login Sample Receipt Checklist

Client: Groundwater Sciences Corporation

Job Number: 410-27746-1

Login Number: 27746
List Number: 2
Creator: Barns, Christopher

List Source: Eurofins Lancaster Laboratories Env

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.		
The cooler's custody seal, if present, is intact.		
Sample custody seals, if present, are intact.		
The cooler or samples do not appear to have been compromised or tampered with.		
Samples were received on ice.		
Cooler Temperature is acceptable.		
Cooler Temperature is recorded.		
COC is present.		
COC is filled out in ink and legible.		
COC is filled out with all pertinent information.		
Is the Field Sampler's name present on COC?		
There are no discrepancies between the containers received and the COC.		
Samples are received within Holding Time (excluding tests with immediate HTs)		
Sample containers have legible labels.		
Containers are not broken or leaking.		
Sample collection date/times are provided.		
Appropriate sample containers are used.		
Sample bottles are completely filled.		
Sample Preservation Verified.		
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs		
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").		
Multiphasic samples are not present.		
Samples do not require splitting or compositing.		
Residual Chlorine Checked.		