DATA OF KNOWN QUALITY CONFORMANCE/NON-CONFORMANCE SUMMARY QUESTIONNAIRE

Laboratory Name : Alliance Technical Group LLC

Client : ENTACT

Project Location : Brooklyn, NY

Project Number : E9309

Laboratory Sample ID(s) : Q1523

Sampling Date(s) : 03/06/2025

List DKQP Methods Used (e.g., 8260,8270, et Cetra) **,1030,1311,1311,ZHE,160.4,1664A,6010D,7470A,8081B,8082A,8151A,8260D, 8270E,9012B,9034,9045D,9071B,9095B,ASTM,SM2540 B,SM4500-NH3,SM5220 D,SOP**

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the NJDEP Data of Known Quality performance standards?	☑ Yes ☐ No
1A	Were the method specified handling, preservation, and holding time requirements met?	☐ Yes ☑ No
1B	EPH Method: Was the EPH method conducted without significant modifications (see Section 11.3 of respective DKQ methods)	☐ Yes ☐ No ☑ N/A
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	☑ Yes ☐ No
3	Were samples received at an appropriate temperature (4±2° C)?	☑ Yes ☐ No ☐ N/A
4	Were all QA/QC performance criteria specified in the NJDEP DKQP standards achieved?	☐ Yes ☑ No
5	a)Were reporting limits specified or referenced on the chain-of-custody or communicated to the laboratory prior to sample receipt? b)Were these reporting limits met?	☑ Yes ☐ No ☑ Yes ☐ No ☐ N/A
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the DKQP documents and/or site-specific QAPP?	☑ Yes ☐ No
7	Are project-specific matrix spikes and/or laboratory duplicates included in this data set?	☐ Yes ☑ No

Notes: For all questions to which the response was “No” (with the exception of question #7), additional information should be provided in an attached narrative. If the answer to question #1, #1A, or #1B is “No”, the data package does not meet the requirements for “Data of Known Quality.”

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Cover Page

Order ID : Q1523

Project ID : 540 Degraw St, Brooklyn, NY - E9309

Client : ENTACT

Lab Sample Number	Client Sample Number
Q1523-01	WC-A1-01-G
Q1523-02	WC-A1-01-C
Q1523-03	WC-A1-01-C
Q1523-04	WC-A1-02-G
Q1523-05	WC-A1-02-C
Q1523-06	WC-A1-02-C
Q1523-07	WC-A1-01-C
Q1523-08	WC-A1-02-C

I certify that the data package is in compliance with the terms and conditions of the contract,both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : _____

Date: 3/22/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

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CASE NARRATIVE

ENTACT
Project Name: 540 Degraw St, Brooklyn, NY - E9309
Project # N/A
Chemtech Project # Q1523
Test Name: TCLP VOA

A. Number of Samples and Date of Receipt:
8 Solid samples were received on 03/07/2025.

B. Parameters
According to the Chain of Custody document, the following analyses were requested: ASTM Ammonia, ASTM COD, ASTM Leach Extraction, ASTM Oil and Grease, ASTM TS, Corrosivity, Ignitability, Oil and Grease, Paint Filter, PCB, pH, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP ICP Metals, TCLP Mercury, TCLP Pesticide, TCLP VOA, TCLP ZHE Extraction, TCLP-FULL, TCLPMetals Group2, TS and TVS. This data package contains results for TCLP VOA.

C. Analytical Techniques:
The analysis performed on instrument MSVOA_N were done using GC column Rxi-624SIL MS 30m, 0.25mm, 1.4 um, Cat. #13868.The analysis of TCLP VOA was based on method 8260D and TCLP extraction method was 1311.

D. QA/ QC Samples:
The Holding Times were met for all analysis.

The Surrogate recoveries met the acceptable criteria.
The Internal Standards Areas met the acceptable requirements.
The Retention Times were acceptable for all samples.

The RPD met criteria.
The Blank Spike met requirements for all samples.
The Blank Spike Duplicate met requirements for all samples.
The Blank analysis did not indicate the presence of lab contamination.
The Initial Calibration met the requirements.

The Continuous Calibration File ID VN085928.D met the requirements except for 4-Bromofluorobenzene is failing high which is not our target compound, therefore no corrective action taken.
The Tuning criteria met requirements.

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E. Additional Comments:
Samples for MS/MSD for VOC analysis were not provided with this set of samples. The Blank Spike Duplicate is reported with the data.

Please use %D calculated based on Avg RF and CCRF for all compounds using Average Response Factor when the %RSD value for a compound is <15% for the Initial Calibration curve and use %D calculated based on Amount added and Calculated amount for all compounds using Linear Regression when the %RSD value for a compound is > 15% for the Initial Calibration curve for SW-846 analysis.

F. Manual Integration Comments:
Please refer to the Manual integration Report included with the Run Logs for information on the manual integrations performed.

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature_____

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DATA REPORTING QUALIFIERS- ORGANIC

For reporting results, the following " Results Qualifiers" are used:

Value	If the result is a value greater than or equal to the detection limit, report the value
U	Indicates the compound was analyzed for but was not detected. Report the minimum detection limit for the sample with the U, i.e. "10 U". This is not necessarily the instrument detection limit attainable for this particular sample based on any concentration or dilution that may have been required.
ND	Indicates the analyte was analyzed for, but not detected
J	Indicates an estimated value**.** This flag is used: (1) When estimating a concentration for a tentatively identified compound (library search hits, where a 1:1 response is assumed.) (2) When the mass spectral data indicated the identification, however the result was less than the specified detection limit greater than zero. If the detection limit was 10ug/L and a concentration of 3 ug/L was calculated report as 3 J. This is flag is used when similar situation arise on any organic parameter i.e. Pest, PCB and others.
B	Indicates the analyte was found in the blank as well as the sample report as "12 B".
E	Indicates the analyte 's concentration exceeds the calibrated range of the instrument for that specific analysis.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.
P	This flag is used for Pesticide/PCB target analyte when there is >25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on Form 1 and flagged with a "P".
N	This flag indicates presumptive evidence of a compound. This is only used for tentatively identified compounds (TICs), where the identification is based on a mass spectral library search. It applies to all TIC results. For generic characterization of a TIC, such as chlorinated hydrocarbon, the flag is not used.
A	This flag indicates that a Tentatively Identified Compound is a suspected aldol-condensation product.
Q	Indicates the LCS did not meet the control limits requirements

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APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: **Q1523**

	Completed
For thorough review, the report must have the following:	
GENERAL:	
Are all original paperwork present (chain of custody, record of communication,airbill, sample management lab chronicle, login page)	✓
Check chain-of-custody for proper relinquish/return of samples	✓
Is the chain of custody signed and complete	✓
Check internal chain-of-custody for proper relinquish/return of samples /sample extracts	✓
Collect information for each project id from server. Were all requirements followed	✓
COVER PAGE:	
Do numbers of samples correspond to the number of samples in the Chain of Custody on login page	✓
Do lab numbers and client Ids on cover page agree with the Chain of Custody	✓
CHAIN OF CUSTODY:	
Do requested analyses on Chain of Custody agree with form I results	✓
Do requested analyses on Chain of Custody agree with the log-in page	✓
Were the correct method log-in for analysis according to the Analytical Request and Chain of Castody	✓
Were the samples received within hold time	✓
Were any problems found with the samples at arrival recorded in the Sample Management Laboratory Chronicle	✓
ANALYTICAL:	
Was method requirement followed?	✓
Was client requirement followed?	✓
Does the case narrative summarize all QC failure?	✓
All runlogs and manual integration are reviewed for requirements	✓
All manual calculations and /or hand notations verified	✓

QA Review Signature: **SOHIL JODHANI** **Date:** **03/22/2025**

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LAB CHRONICLE

OrderID:	Q1523	**OrderDate:**	3/7/2025 10:35:00 AM
Client:	ENTACT	**Project:**	540 Degraw St, Brooklyn, NY - E9309
Contact:	Jarod Stanfield	**Location:**	I31

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q1523-01	**WC-A1-01-G**	**TCLP**			**03/06/25**			**03/07/25**
			TCLP VOA	8260D			03/11/25	
Q1523-04	**WC-A1-02-G**	**TCLP**			**03/06/25**			**03/07/25**
			TCLP VOA	8260D			03/11/25	

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Hit Summary Sheet
SW-846

SDG No.: Q1523

Client: ENTACT

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID:	**WC-A1-01-G**							
Q1523-01	WC-A1-01-G	TCLP	Benzene	12.3		0.15	5.00	ug/L
			Total Voc :	12.3				
			Total Concentration:	12.3				
Client ID:	**WC-A1-02-G**							
Q1523-04	WC-A1-02-G	TCLP	Benzene	59.7		0.15	5.00	ug/L
			Total Voc :	59.7				
			Total Concentration:	59.7				

QC SUMMARY

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Surrogate Summary

SDG No.: Q1523

Client: ENTACT

Analytical Method: SW8260D

Lab Sample ID	Client ID	Parameter	Spike	Result	RecoveryQual	Limits Low	Limits High
Q1523-01	WC-A1-01-G	1,2-Dichloroethane-d4	50	58.8	118	70 (74)	130 (125)
		Dibromofluoromethane	50	41.1	82	70 (75)	130 (124)
		Toluene-d8	50	48.5	97	70 (86)	130 (113)
		4-Bromofluorobenzene	50	54.9	110	70 (77)	130 (121)
Q1523-04	WC-A1-02-G	1,2-Dichloroethane-d4	50	55.7	111	70 (74)	130 (125)
		Dibromofluoromethane	50	38.3	77	70 (75)	130 (124)
		Toluene-d8	50	47.6	95	70 (86)	130 (113)
		4-Bromofluorobenzene	50	52.9	106	70 (77)	130 (121)
VN0311WBL01	VN0311WBL01	1,2-Dichloroethane-d4	50	56.1	112	70 (74)	130 (125)
		Dibromofluoromethane	50	49.0	98	70 (75)	130 (124)
		Toluene-d8	50	44.5	89	70 (86)	130 (113)
		4-Bromofluorobenzene	50	42.2	84	70 (77)	130 (121)
VN0311WBS01	VN0311WBS01	1,2-Dichloroethane-d4	50	46.9	94	70 (74)	130 (125)
		Dibromofluoromethane	50	46.9	94	70 (75)	130 (124)
		Toluene-d8	50	46.3	93	70 (86)	130 (113)
		4-Bromofluorobenzene	50	48.7	97	70 (77)	130 (121)
VN0311WBSD0	VN0311WBSD01	1,2-Dichloroethane-d4	50	47.6	95	70 (74)	130 (125)
		Dibromofluoromethane	50	47.6	95	70 (75)	130 (124)
		Toluene-d8	50	46.6	93	70 (86)	130 (113)
		4-Bromofluorobenzene	50	50.2	100	70 (77)	130 (121)

( ) = LABORATORY INHOUSE LIMIT

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Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: Q1523

Client: ENTACT

Analytical Method: SW8260D **Datafile :** VN085931.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Limits Low	Limits High	Limits RPD
VN0311WBS01	Vinyl chloride	20	17.4	ug/L	87			70 (65)	130 (117)	
	1,1-Dichloroethene	20	19.0	ug/L	95			70 (74)	130 (110)	
	2-Butanone	100	96.2	ug/L	96			40 (65)	160 (122)	
	Carbon Tetrachloride	20	19.7	ug/L	99			70 (77)	130 (113)	
	Chloroform	20	19.1	ug/L	96			70 (79)	130 (113)	
	Benzene	20	19.7	ug/L	99			70 (82)	130 (109)	
	1,2-Dichloroethane	20	19.8	ug/L	99			70 (80)	130 (115)	
	Trichloroethene	20	17.7	ug/L	89			70 (77)	130 (113)	
	Tetrachloroethene	20	19.1	ug/L	96			70 (67)	130 (123)	
	Chlorobenzene	20	18.5	ug/L	93			70 (82)	130 (109)	

( ) = LABORATORY INHOUSE LIMIT

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Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: Q1523

Client: ENTACT

Analytical Method: SW8260D **Datafile :** VN085932.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Limits Low	Limits High	Limits RPD
VN0311WBSD01	Vinyl chloride	20	17.7	ug/L	89	2		70 (65)	130 (117)	20 (20)
	1,1-Dichloroethene	20	18.6	ug/L	93	2		70 (74)	130 (110)	20 (20)
	2-Butanone	100	100	ug/L	100	4		40 (65)	160 (122)	20 (20)
	Carbon Tetrachloride	20	20.2	ug/L	101	2		70 (77)	130 (113)	20 (20)
	Chloroform	20	19.0	ug/L	95	1		70 (79)	130 (113)	20 (20)
	Benzene	20	19.8	ug/L	99	0		70 (82)	130 (109)	20 (20)
	1,2-Dichloroethane	20	20.2	ug/L	101	2		70 (80)	130 (115)	20 (20)
	Trichloroethene	20	18.0	ug/L	90	1		70 (77)	130 (113)	20 (20)
	Tetrachloroethene	20	18.4	ug/L	92	4		70 (67)	130 (123)	20 (20)
	Chlorobenzene	20	18.3	ug/L	92	1		70 (82)	130 (109)	20 (20)

( ) = LABORATORY INHOUSE LIMIT

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VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VN0311WBL01

Lab Name: CHEMTECH Contract: ENTA05

Lab Code: CHEM Case No.: Q1523 SAS No.: Q1523 SDG NO.: Q1523

Lab File ID: VN085930.D Lab Sample ID: VN0311WBL01

Date Analyzed: 03/11/2025 Time Analyzed: 14:21

GC Column: RXI-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

Instrument ID: MSVOA_N

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
VN0311WBS01	VN0311WBS01	VN085931.D	03/11/2025
VN0311WBSD01	VN0311WBSD01	VN085932.D	03/11/2025
WC-A1-01-G	Q1523-01	VN085950.D	03/11/2025
WC-A1-02-G	Q1523-04	VN085951.D	03/11/2025

COMMENTS:

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VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: ENTA05

Lab Code: CHEM Case No.: Q1523 SAS No.: Q1523 SDG NO.: Q1523

Lab File ID: VN085771.D BFB Injection Date: 02/18/2025

Instrument ID: MSVOA_N BFB Injection Time: 10:35

GC Column: RXI-624 ID: 0.25 (mm) Heated Purge: Y/N N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.1
75	30.0 - 60.0% of mass 95	49.7
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.5
173	Less than 2.0% of mass 174	1.4 (1.8) 1
174	50.0 - 100.0% of mass 95	81.7
175	5.0 - 9.0% of mass 174	6 (7.4) 1
176	95.0 - 101.0% of mass 174	78.9 (96.5) 1
177	5.0 - 9.0% of mass 176	5.4 (6.9) 2

1-Value is % mass 174

2-Value is % mass 176

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTDICC100	VSTDICC100	VN085772.D	02/18/2025	11:09
VSTDICCC050	VSTDICCC050	VN085773.D	02/18/2025	11:32
VSTDICC010	VSTDICC010	VN085775.D	02/18/2025	12:20
VSTDICC005	VSTDICC005	VN085776.D	02/18/2025	12:43
VSTDICC001	VSTDICC001	VN085777.D	02/18/2025	13:07
VSTDICC020	VSTDICC020	VN085779.D	02/18/2025	14:18

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VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: ENTA05

Lab Code: CHEM Case No.: Q1523 SAS No.: Q1523 SDG NO.: Q1523

Lab File ID: VN085927.D BFB Injection Date: 03/11/2025

Instrument ID: MSVOA_N BFB Injection Time: 12:12

GC Column: RXI-624 ID: 0.25 (mm) Heated Purge: Y/N N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.4
75	30.0 - 60.0% of mass 95	50.2
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	1.1 (1.4) 1
174	50.0 - 100.0% of mass 95	78.8
175	5.0 - 9.0% of mass 174	5.7 (7.3) 1
176	95.0 - 101.0% of mass 174	75.9 (96.3) 1
177	5.0 - 9.0% of mass 176	4.9 (6.5) 2

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

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTDCCC050	VSTDCCC050	VN085928.D	03/11/2025	13:22
VN0311WBL01	VN0311WBL01	VN085930.D	03/11/2025	14:21
VN0311WBS01	VN0311WBS01	VN085931.D	03/11/2025	14:54
VN0311WBSD01	VN0311WBSD01	VN085932.D	03/11/2025	15:28
WC-A1-01-G	Q1523-01	VN085950.D	03/11/2025	22:41
WC-A1-02-G	Q1523-04	VN085951.D	03/11/2025	23:05

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VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: ENTA05

Lab Code: CHEM Case No.: Q1523 SAS No.: Q1523 SDG NO.: Q1523

Lab File ID: VN085928.D Date Analyzed: 03/11/2025

Instrument ID: MSVOA_N Time Analyzed: 13:22

GC Column: RXI-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
12 HOUR STD	193697	8.22	310218	9.10	283255	11.87
UPPER LIMIT	387394	8.724	620436	9.6	566510	12.365
LOWER LIMIT	96848.5	7.724	155109	8.6	141628	11.365
EPA SAMPLE NO.						
WC-A1-01-G	158843	8.22	304534	9.10	277310	11.87
WC-A1-02-G	182677	8.22	343018	9.10	296805	11.87
VN0311WBL01	166099	8.22	319285	9.10	277562	11.87
VN0311WBS01	171959	8.22	282309	9.10	250243	11.87
VN0311WBSD01	166815	8.22	269902	9.10	244088	11.87

IS1 = Pentafluorobenzene
IS2 = 1,4-Difluorobenzene
IS3 = Chlorobenzene-d5

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

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VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: ENTA05

Lab Code: CHEM Case No.: Q1523 SAS No.: Q1523 SDG NO.: Q1523

Lab File ID: VN085928.D Date Analyzed: 03/11/2025

Instrument ID: MSVOA_N Time Analyzed: 13:22

GC Column: RXI-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

	IS4 AREA #	RT #				
12 HOUR STD	153775	13.788				
UPPER LIMIT	307550	14.288				
LOWER LIMIT	76887.5	13.288				
EPA SAMPLE NO.						
WC-A1-01-G	132575	13.79				
WC-A1-02-G	138779	13.79				
VN0311WBL01	106492	13.79				
VN0311WBS01	128349	13.79				
VN0311WBSD01	123338	13.79				

IS4 = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk.
* Values outside of QC limits.

SAMPLE DATA

Raw Data: **VN085950.D**

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Report of Analysis

Client:	ENTACT	Date Collected:	03/06/25
Project:	540 Degraw St, Brooklyn, NY - E9309	Date Received:	03/07/25
Client Sample ID:	WC-A1-01-G	SDG No.:	Q1523
Lab Sample ID:	Q1523-01	Matrix:	TCLP
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	TCLP VOA
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :	SW5035		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN085950.D	1		03/11/25 22:41	VN031125

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-01-4	Vinyl Chloride	0.26	U	0.26	5.00	ug/L
75-35-4	1,1-Dichloroethene	0.23	U	0.23	5.00	ug/L
78-93-3	2-Butanone	0.98	U	0.98	25.0	ug/L
56-23-5	Carbon Tetrachloride	0.25	U	0.25	5.00	ug/L
67-66-3	Chloroform	0.25	U	0.25	5.00	ug/L
71-43-2	Benzene	12.3		0.15	5.00	ug/L
107-06-2	1,2-Dichloroethane	0.22	U	0.22	5.00	ug/L
79-01-6	Trichloroethene	0.090	U	0.090	5.00	ug/L
127-18-4	Tetrachloroethene	0.23	U	0.23	5.00	ug/L
108-90-7	Chlorobenzene	0.12	U	0.12	5.00	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	58.8		70 (74) - 130 (125)	118%	SPK: 50
1868-53-7	Dibromofluoromethane	41.1		70 (75) - 130 (124)	82%	SPK: 50
2037-26-5	Toluene-d8	48.5		70 (86) - 130 (113)	97%	SPK: 50
460-00-4	4-Bromofluorobenzene	54.9		70 (77) - 130 (121)	110%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	159000	8.224			
540-36-3	1,4-Difluorobenzene	305000	9.1			
3114-55-4	Chlorobenzene-d5	277000	11.865			
3855-82-1	1,4-Dichlorobenzene-d4	133000	13.788			

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031125\
Data File : VN085950.D
Acq On : 11 Mar 2025 22:41
Operator : JC\MD
Sample : Q1523-01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 25 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
WC-A1-01-G

Quant Time: Mar 12 01:32:59 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:43:32 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	8.224	168	158843	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.100	114	304534	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.865	117	277310	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.788	152	132575	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.576	65	121127	58.818	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 117.640%			
35) Dibromofluoromethane	8.165	113	81889	41.094	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 82.180%			
50) Toluene-d8	10.565	98	351447	48.474	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery = 96.940%			
62) 4-Bromofluorobenzene	12.847	95	131130	54.895	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery = 109.780%			
Target Compounds						Qvalue
16) Acetone	4.424	43	79751	122.390	ug/l	96
20) Methylene Chloride	5.277	84	7214	3.443	ug/l	84
40) Benzene	8.606	78	111463	12.331	ug/l	99
67) Ethyl Benzene	11.959	91	155826	15.659	ug/l	97
68) m/p-Xylenes	12.065	106	11259	2.979	ug/l	97
69) o-Xylene	12.394	106	9977	2.778	ug/l	97
73) Isopropylbenzene	12.694	105	51020	5.617	ug/l	99
78) n-propylbenzene	13.035	91	36974	3.555	ug/l	97
80) 1,3,5-Trimethylbenzene	13.170	105	15272	2.064	ug/l	99
84) 1,2,4-Trimethylbenzene	13.482	105	77617	10.603	ug/l	100
95) Naphthalene	15.635	128	1410441	243.874	ug/l	100

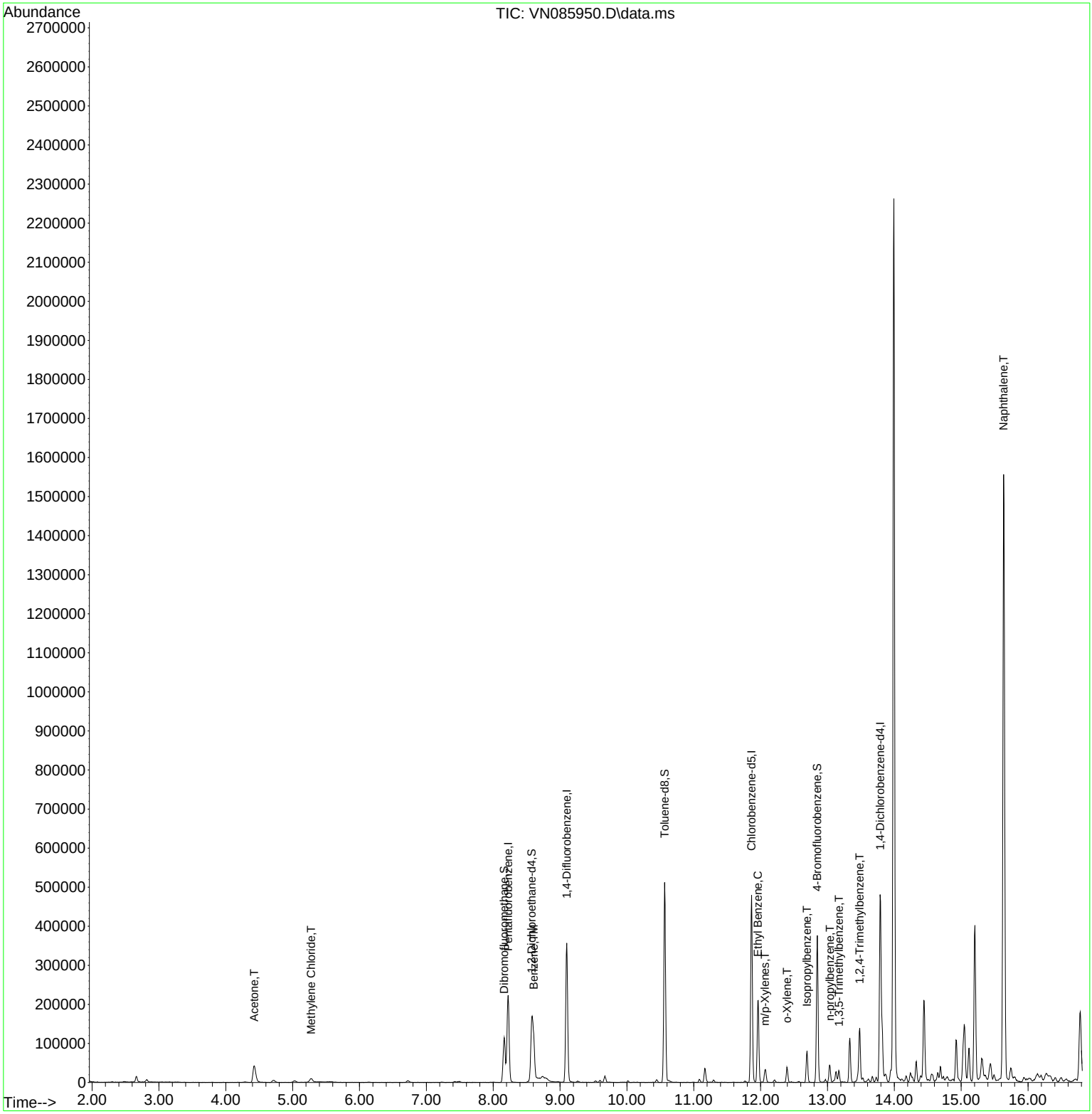
(#) = qualifier out of range (m) = manual integration (+) = signals summed

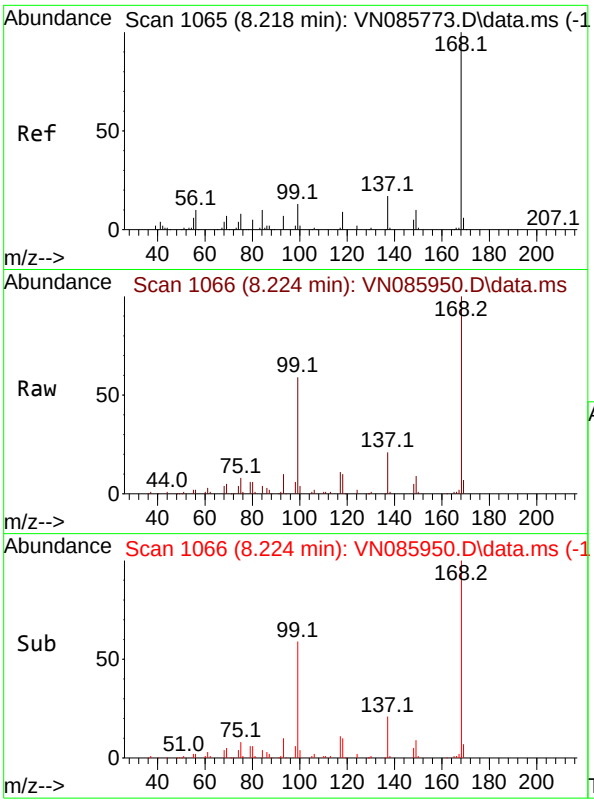
Sample Results: **VN085950.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031125\
Data File : VN085950.D
Acq On : 11 Mar 2025 22:41
Operator : JC\MD
Sample : Q1523-01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 25 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
WC-A1-01-G

Quant Time: Mar 12 01:32:59 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:43:32 2025
Response via : Initial Calibration



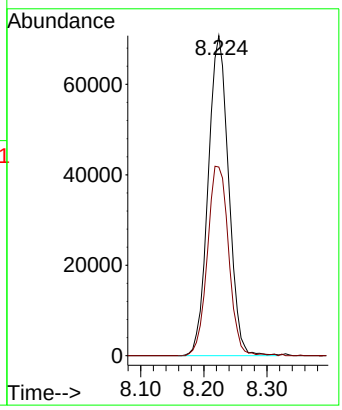


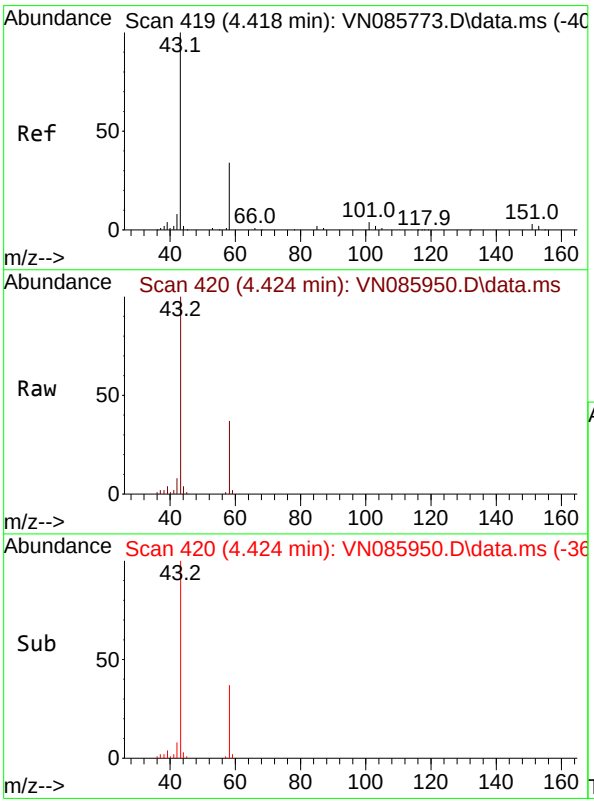
#1
Pentafluorobenzene
Concen: 50.000 ug/l
RT: 8.224 min Scan# 1
Delta R.T. 0.006 min
Lab File: VN085950.D
Acq: 11 Mar 2025 22:41

Instrument :
MSVOA_N
ClientSampleId :
WC-A1-01-G

Tgt Ion:168 Resp: 158843

Ion	Ratio	Lower	Upper
168	100		
99	58.9	47.9	71.9

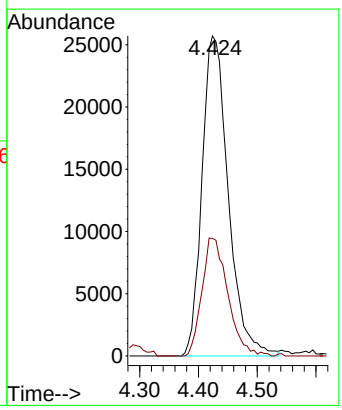


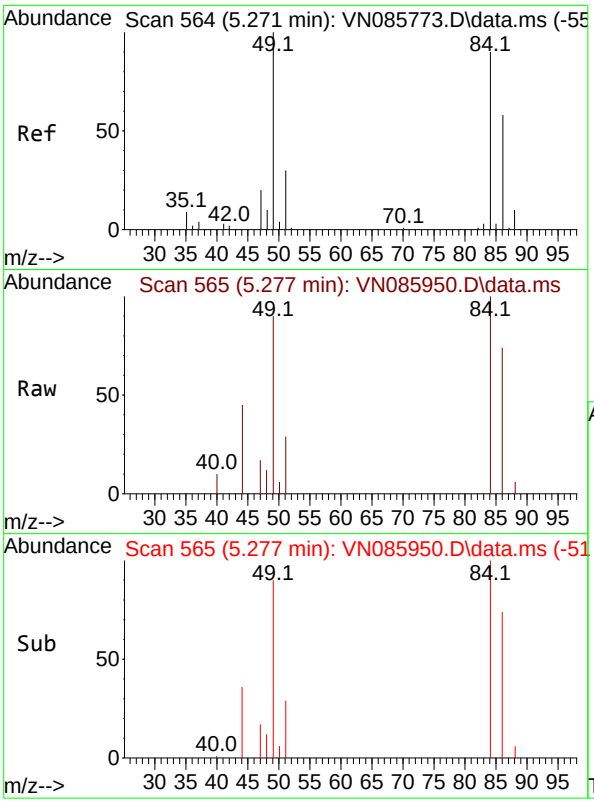


#16
Acetone
Concen: 122.390 ug/l
RT: 4.424 min Scan# 420
Delta R.T. 0.006 min
Lab File: VN085950.D
Acq: 11 Mar 2025 22:41

Tgt Ion: 43 Resp: 79751

Ion	Ratio	Lower	Upper
43	100		
58	36.8	27.5	41.3



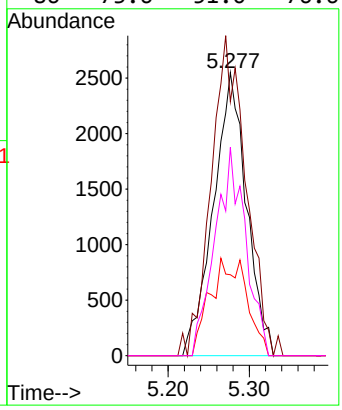


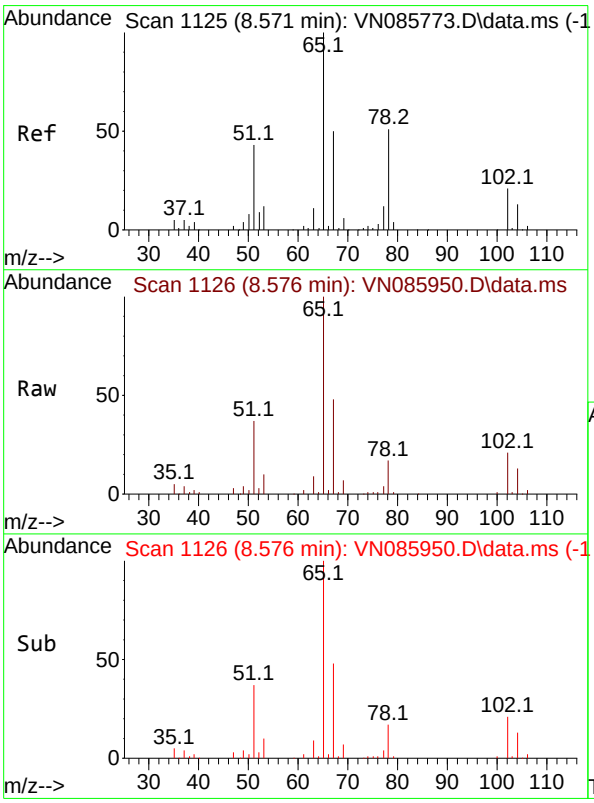
#20
Methylene Chloride
Concen: 3.443 ug/l
RT: 5.277 min Scan# 5
Delta R.T. 0.006 min
Lab File: VN085950.D
Acq: 11 Mar 2025 22:41

Instrument :
MSVOA_N
ClientSampleId :
WC-A1-01-G

Tgt Ion: 84 Resp: 7214

Ion	Ratio	Lower	Upper
84	100		
49	89.8	88.4	132.6
51	28.6	26.6	40.0
86	73.6	51.0	76.6

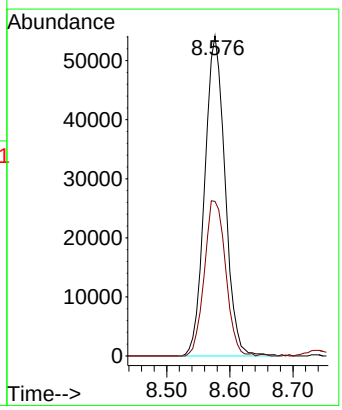


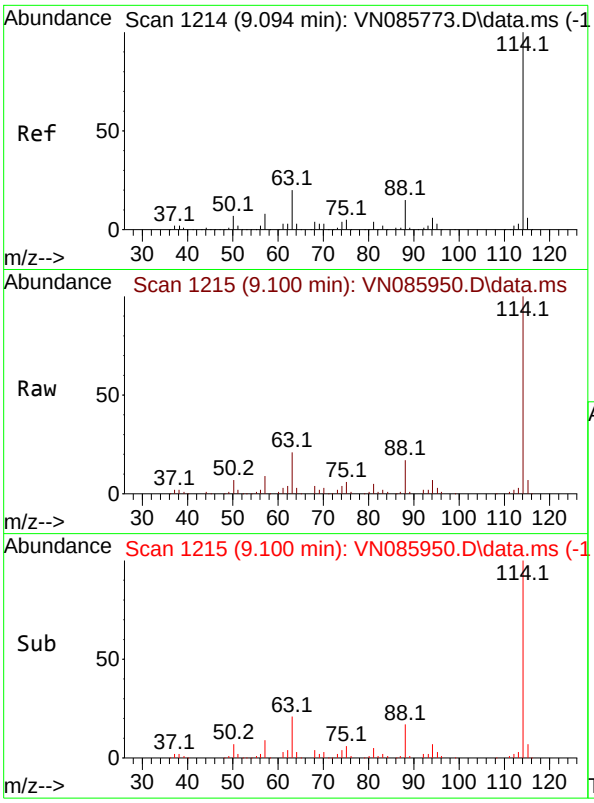


#33
1,2-Dichloroethane-d4
Concen: 58.818 ug/l
RT: 8.576 min Scan# 1126
Delta R.T. 0.006 min
Lab File: VN085950.D
Acq: 11 Mar 2025 22:41

Tgt Ion: 65 Resp: 121127

Ion	Ratio	Lower	Upper
65	100		
67	50.8	0.0	106.2



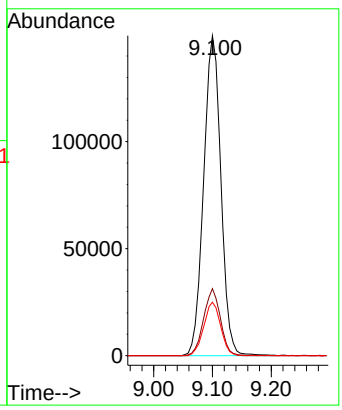


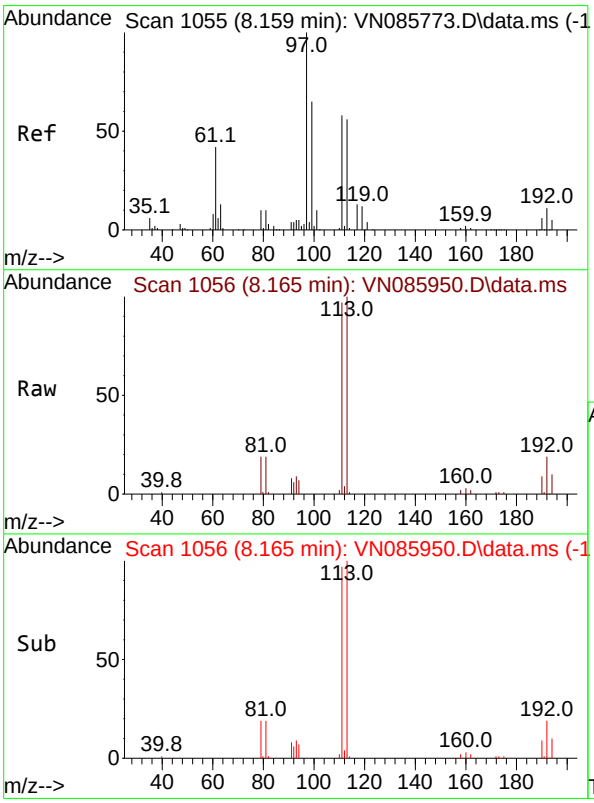
#34
1,4-Difluorobenzene
Concen: 50.000 ug/l
RT: 9.100 min Scan# 1
Delta R.T. 0.006 min
Lab File: VN085950.D
Acq: 11 Mar 2025 22:41

Instrument :
MSVOA_N
ClientSampleId :
WC-A1-01-G

Tgt Ion:114 Resp: 304534

Ion	Ratio	Lower	Upper
114	100		
63	21.0	0.0	39.2
88	16.7	0.0	30.0

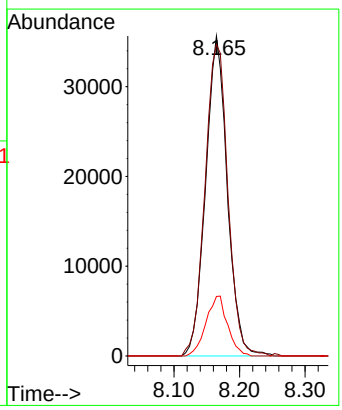


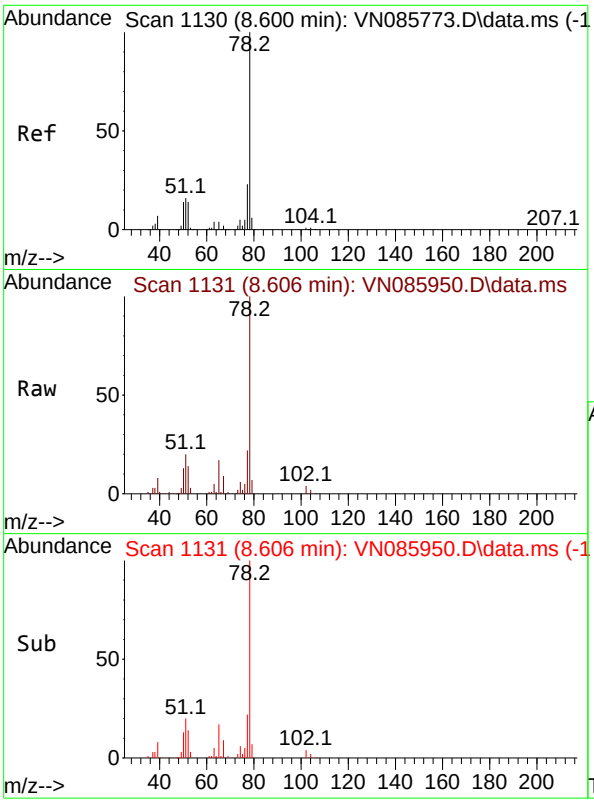


#35
Dibromofluoromethane
Concen: 41.094 ug/l
RT: 8.165 min Scan# 1056
Delta R.T. 0.006 min
Lab File: VN085950.D
Acq: 11 Mar 2025 22:41

Tgt Ion:113 Resp: 81889

Ion	Ratio	Lower	Upper
113	100		
111	102.9	82.2	123.4
192	18.6	14.7	22.1



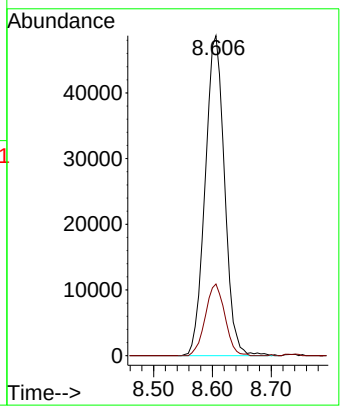


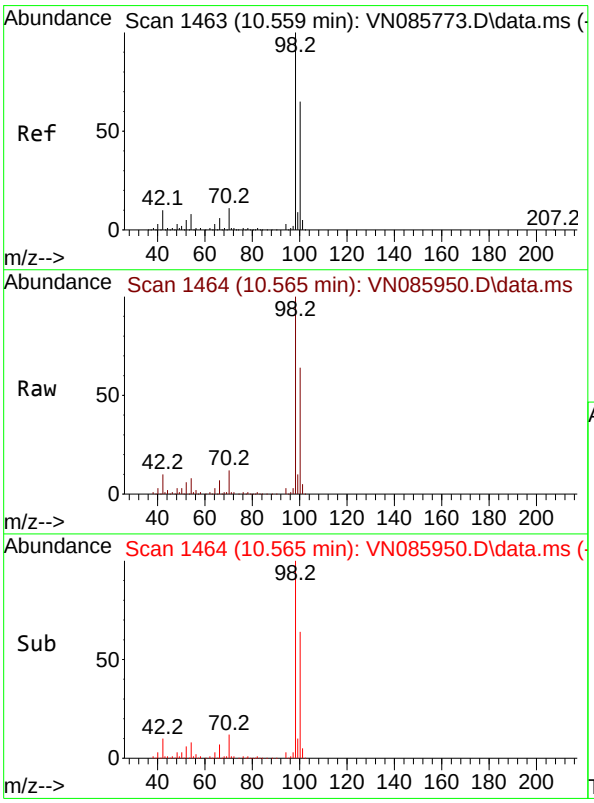
#40
Benzene
Concen: 12.331 ug/l
RT: 8.606 min Scan# 11
Delta R.T. 0.006 min
Lab File: VN085950.D
Acq: 11 Mar 2025 22:41

Instrument :
MSVOA_N
ClientSampleId :
WC-A1-01-G

Tgt Ion: 78 Resp: 111463

Ion	Ratio	Lower	Upper
78	100		
77	22.4	18.3	27.5

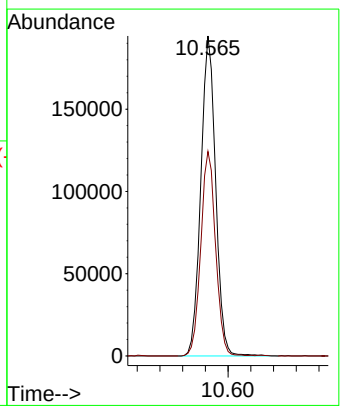


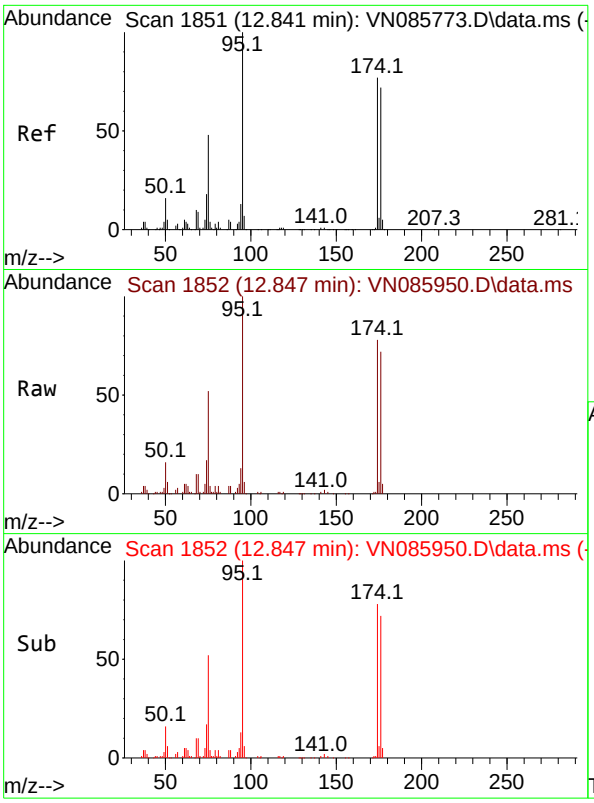


#50
Toluene-d8
Concen: 48.474 ug/l
RT: 10.565 min Scan# 1464
Delta R.T. 0.006 min
Lab File: VN085950.D
Acq: 11 Mar 2025 22:41

Tgt Ion: 98 Resp: 351447

Ion	Ratio	Lower	Upper
98	100		
100	63.8	52.1	78.1



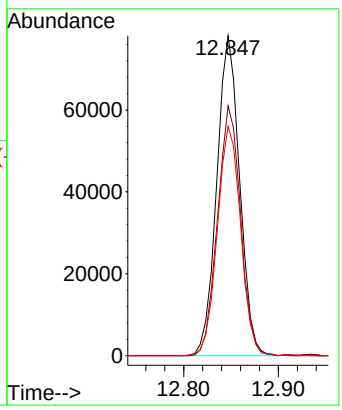


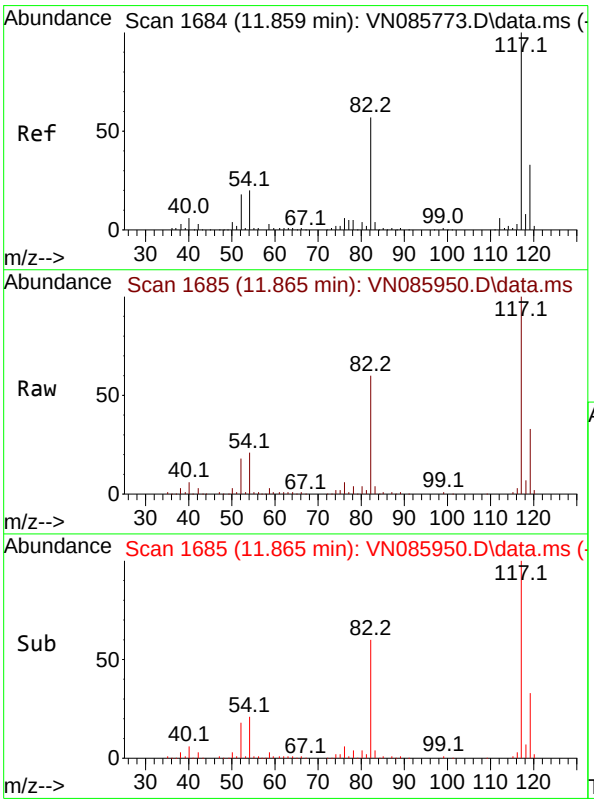
#62
4-Bromofluorobenzene
Concen: 54.895 ug/l
RT: 12.847 min Scan# 1
Delta R.T. 0.006 min
Lab File: VN085950.D
Acq: 11 Mar 2025 22:41

Instrument :
MSVOA_N
ClientSampleId :
WC-A1-01-G

Tgt Ion: 95 Resp: 131130

Ion	Ratio	Lower	Upper
95	100		
174	78.8	0.0	152.4
176	73.0	0.0	146.6

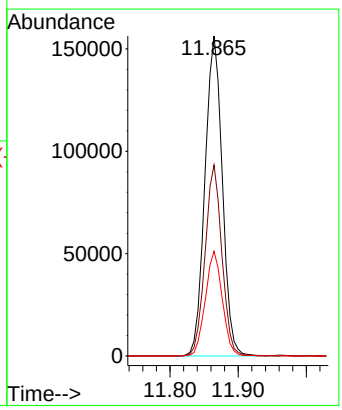


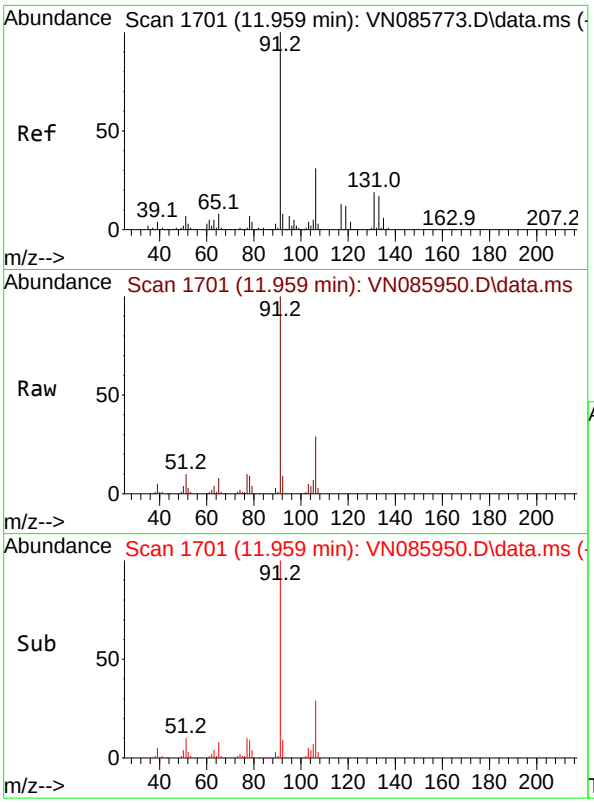


#63
Chlorobenzene-d5
Concen: 50.000 ug/l
RT: 11.865 min Scan# 1685
Delta R.T. 0.006 min
Lab File: VN085950.D
Acq: 11 Mar 2025 22:41

Tgt Ion:117 Resp: 277310

Ion	Ratio	Lower	Upper
117	100		
82	59.7	45.7	68.5
119	32.7	26.2	39.2



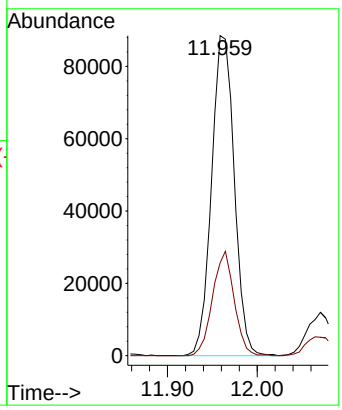


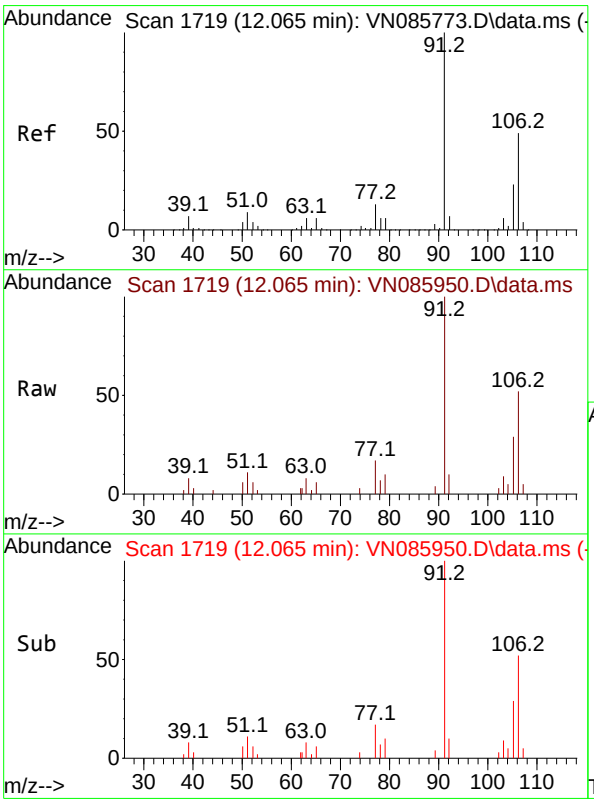
#67
Ethyl Benzene
Concen: 15.659 ug/l
RT: 11.959 min Scan# 1
Delta R.T. -0.000 min
Lab File: VN085950.D
Acq: 11 Mar 2025 22:41

Instrument :
MSVOA_N
ClientSampleId :
WC-A1-01-G

Tgt Ion: 91 Resp: 155826

Ion	Ratio	Lower	Upper
91	100		
106	29.0	24.7	37.1

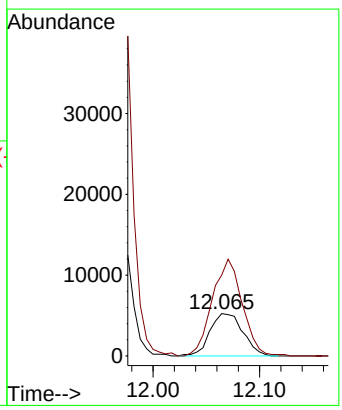


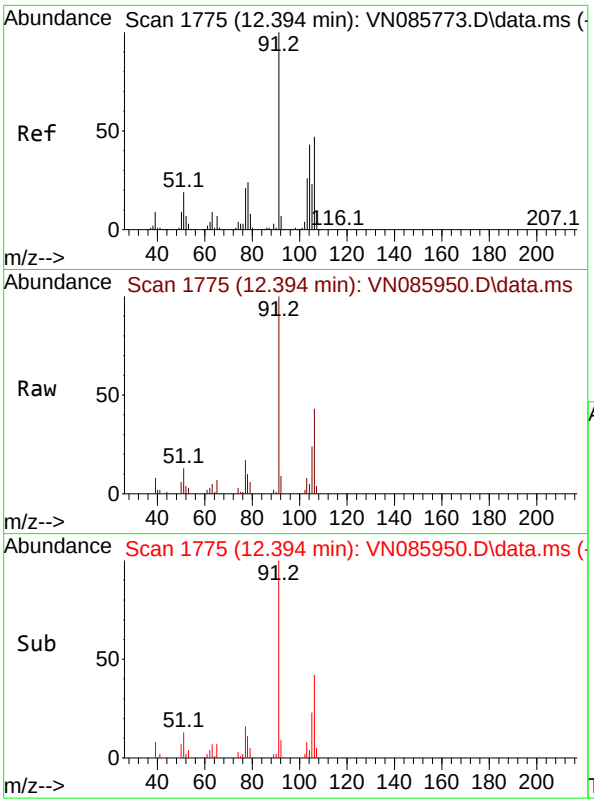


#68
m/p-Xylenes
Concen: 2.979 ug/l
RT: 12.065 min Scan# 1719
Delta R.T. -0.000 min
Lab File: VN085950.D
Acq: 11 Mar 2025 22:41

Tgt Ion:106 Resp: 11259

Ion	Ratio	Lower	Upper
106	100		
91	208.1	163.3	244.9



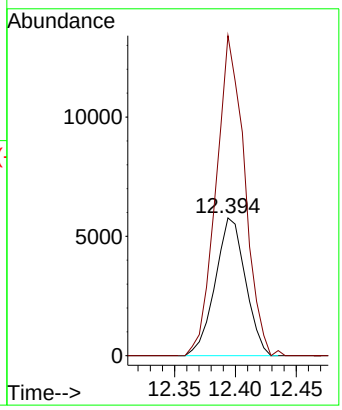


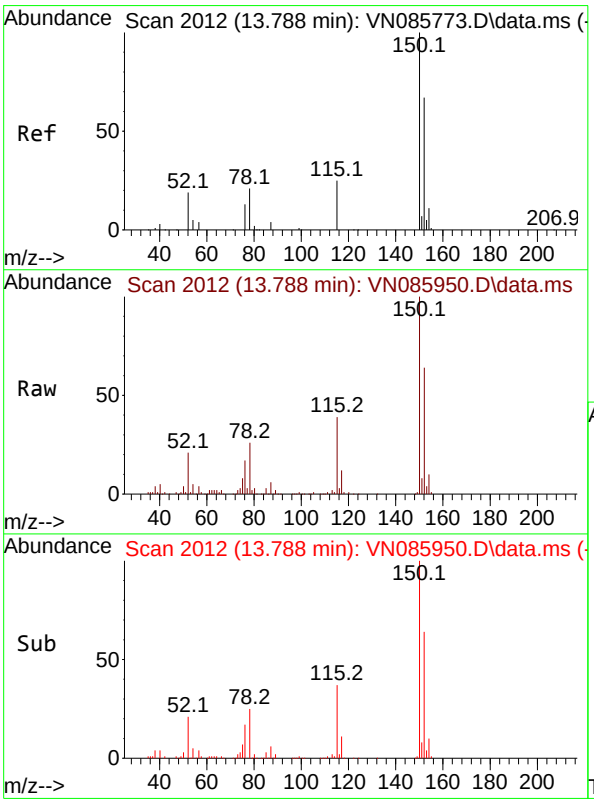
#69
o-Xylene
Concen: 2.778 ug/l
RT: 12.394 min Scan# 1
Delta R.T. -0.000 min
Lab File: VN085950.D
Acq: 11 Mar 2025 22:41

Instrument :
MSVOA_N
ClientSampleId :
WC-A1-01-G

Tgt Ion:106 Resp: 9977

Ion	Ratio	Lower	Upper
106	100		
91	219.3	107.1	321.4

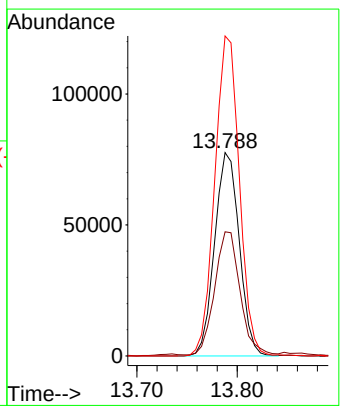


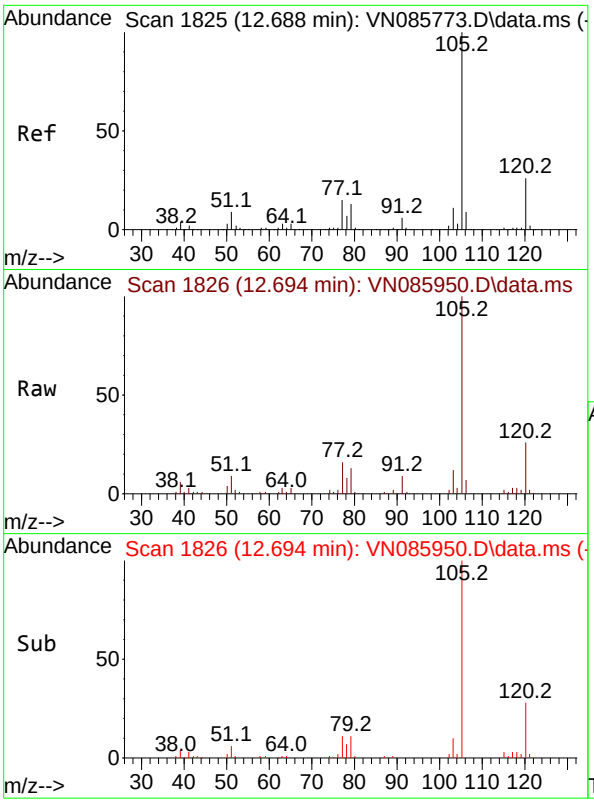


#72
1,4-Dichlorobenzene-d4
Concen: 50.000 ug/l
RT: 13.788 min Scan# 2012
Delta R.T. -0.000 min
Lab File: VN085950.D
Acq: 11 Mar 2025 22:41

Tgt Ion:152 Resp: 132575

Ion	Ratio	Lower	Upper
152	100		
115	61.9	30.4	91.3
150	157.1	0.0	345.4



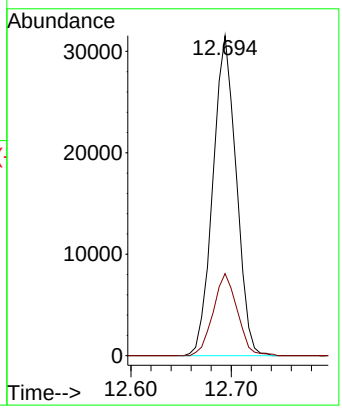


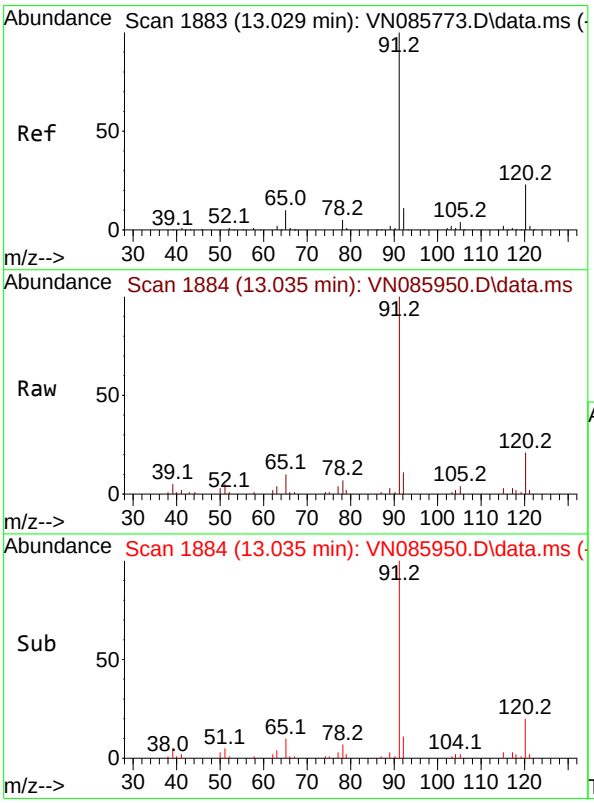
#73
Isopropylbenzene
Concen: 5.617 ug/l
RT: 12.694 min Scan# 1
Delta R.T. 0.006 min
Lab File: VN085950.D
Acq: 11 Mar 2025 22:41

Instrument :
MSVOA_N
ClientSampleId :
WC-A1-01-G

Tgt Ion:105 Resp: 51020

Ion	Ratio	Lower	Upper
105	100		
120	26.5	13.0	39.0

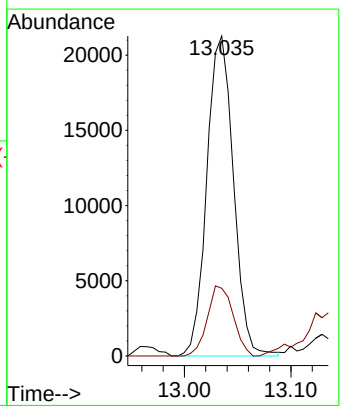


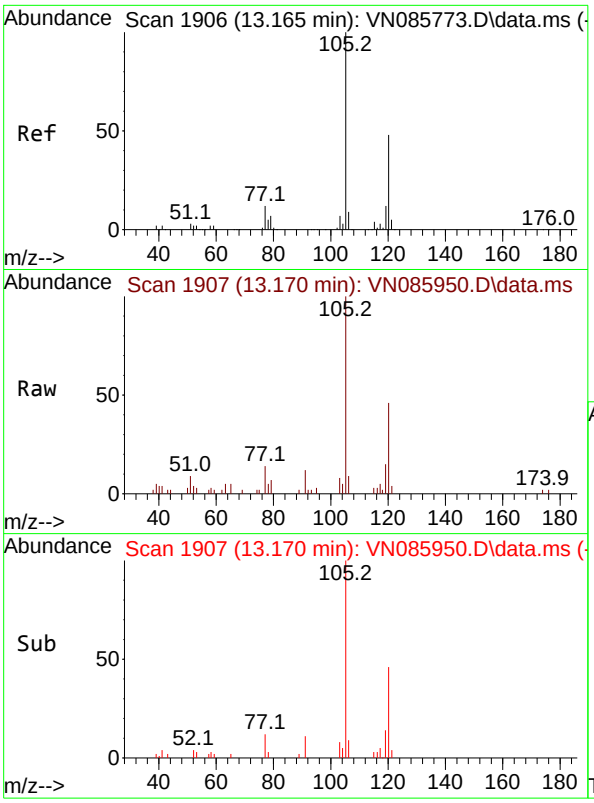


#78
n-propylbenzene
Concen: 3.555 ug/l
RT: 13.035 min Scan# 1884
Delta R.T. 0.006 min
Lab File: VN085950.D
Acq: 11 Mar 2025 22:41

Tgt Ion: 91 Resp: 36974

Ion	Ratio	Lower	Upper
91	100		
120	21.1	11.3	33.8



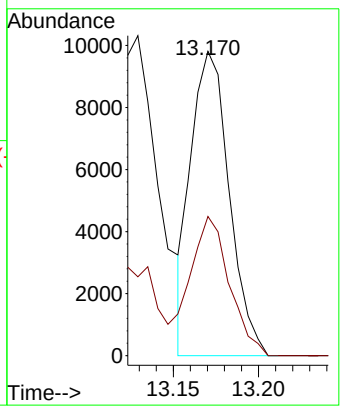


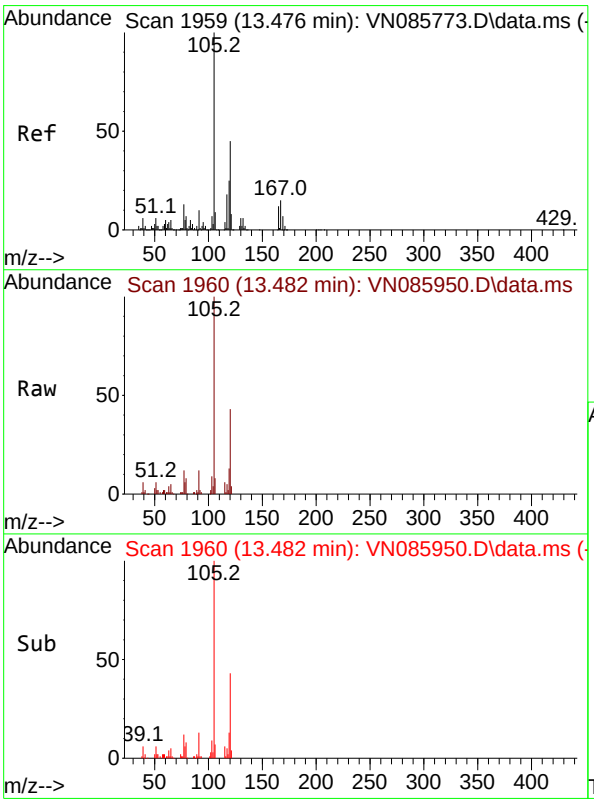
#80
1,3,5-Trimethylbenzene
Concen: 2.064 ug/l
RT: 13.170 min Scan# 1
Delta R.T. 0.006 min
Lab File: VN085950.D
Acq: 11 Mar 2025 22:41

Instrument :
MSVOA_N
ClientSampleId :
WC-A1-01-G

Tgt Ion:105 Resp: 15272

Ion	Ratio	Lower	Upper
105	100		
120	47.7	24.3	72.9

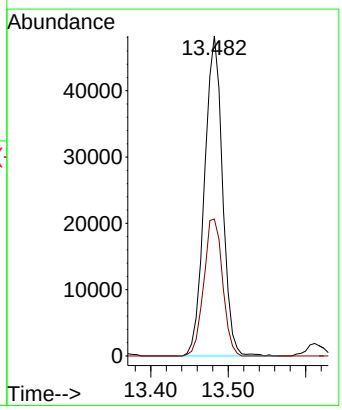


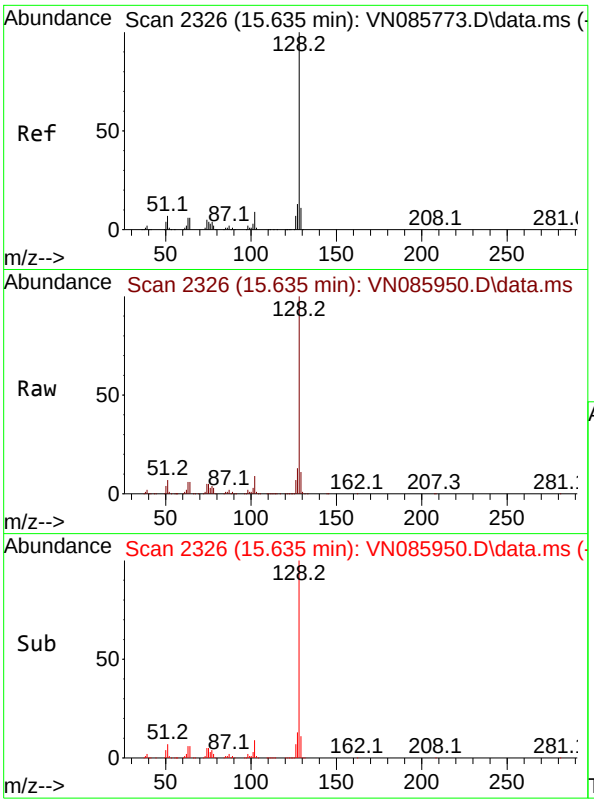


#84
1,2,4-Trimethylbenzene
Concen: 10.603 ug/l
RT: 13.482 min Scan# 1960
Delta R.T. 0.006 min
Lab File: VN085950.D
Acq: 11 Mar 2025 22:41

Tgt Ion:105 Resp: 77617

Ion	Ratio	Lower	Upper
105	100		
120	44.7	22.4	67.3



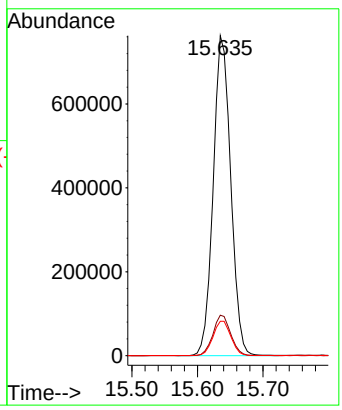


#95
Naphthalene
Concen: 243.874 ug/l
RT: 15.635 min Scan# 2
Delta R.T. -0.000 min
Lab File: VN085950.D
Acq: 11 Mar 2025 22:41

Instrument :
MSVOA_N
ClientSampleId :
WC-A1-01-G

Tgt Ion:128 Resp: 1410441

Ion	Ratio	Lower	Upper
128	100		
127	12.8	10.2	15.2
129	11.0	8.7	13.1



Raw Data: **VN085951.D**

Alliance TECHNICAL GROUP
284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Report of Analysis

Client:	ENTACT	Date Collected:	03/06/25
Project:	540 Degraw St, Brooklyn, NY - E9309	Date Received:	03/07/25
Client Sample ID:	WC-A1-02-G	SDG No.:	Q1523
Lab Sample ID:	Q1523-04	Matrix:	TCLP
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	TCLP VOA
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :	SW5035		

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN085951.D	1		03/11/25 23:05	VN031125

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-01-4	Vinyl Chloride	0.26	U	0.26	5.00	ug/L
75-35-4	1,1-Dichloroethene	0.23	U	0.23	5.00	ug/L
78-93-3	2-Butanone	0.98	U	0.98	25.0	ug/L
56-23-5	Carbon Tetrachloride	0.25	U	0.25	5.00	ug/L
67-66-3	Chloroform	0.25	U	0.25	5.00	ug/L
71-43-2	Benzene	59.7		0.15	5.00	ug/L
107-06-2	1,2-Dichloroethane	0.22	U	0.22	5.00	ug/L
79-01-6	Trichloroethene	0.090	U	0.090	5.00	ug/L
127-18-4	Tetrachloroethene	0.23	U	0.23	5.00	ug/L
108-90-7	Chlorobenzene	0.12	U	0.12	5.00	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	55.7		70 (74) - 130 (125)	111%	SPK: 50
1868-53-7	Dibromofluoromethane	38.3		70 (75) - 130 (124)	77%	SPK: 50
2037-26-5	Toluene-d8	47.6		70 (86) - 130 (113)	95%	SPK: 50
460-00-4	4-Bromofluorobenzene	52.9		70 (77) - 130 (121)	106%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	183000	8.224			
540-36-3	1,4-Difluorobenzene	343000	9.1			
3114-55-4	Chlorobenzene-d5	297000	11.865			
3855-82-1	1,4-Dichlorobenzene-d4	139000	13.788			

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031125\
Data File : VN085951.D
Acq On : 11 Mar 2025 23:05
Operator : JC\MD
Sample : Q1523-04
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 26 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
WC-A1-02-G

Quant Time: Mar 12 01:33:44 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:43:32 2025
Response via : Initial Calibration

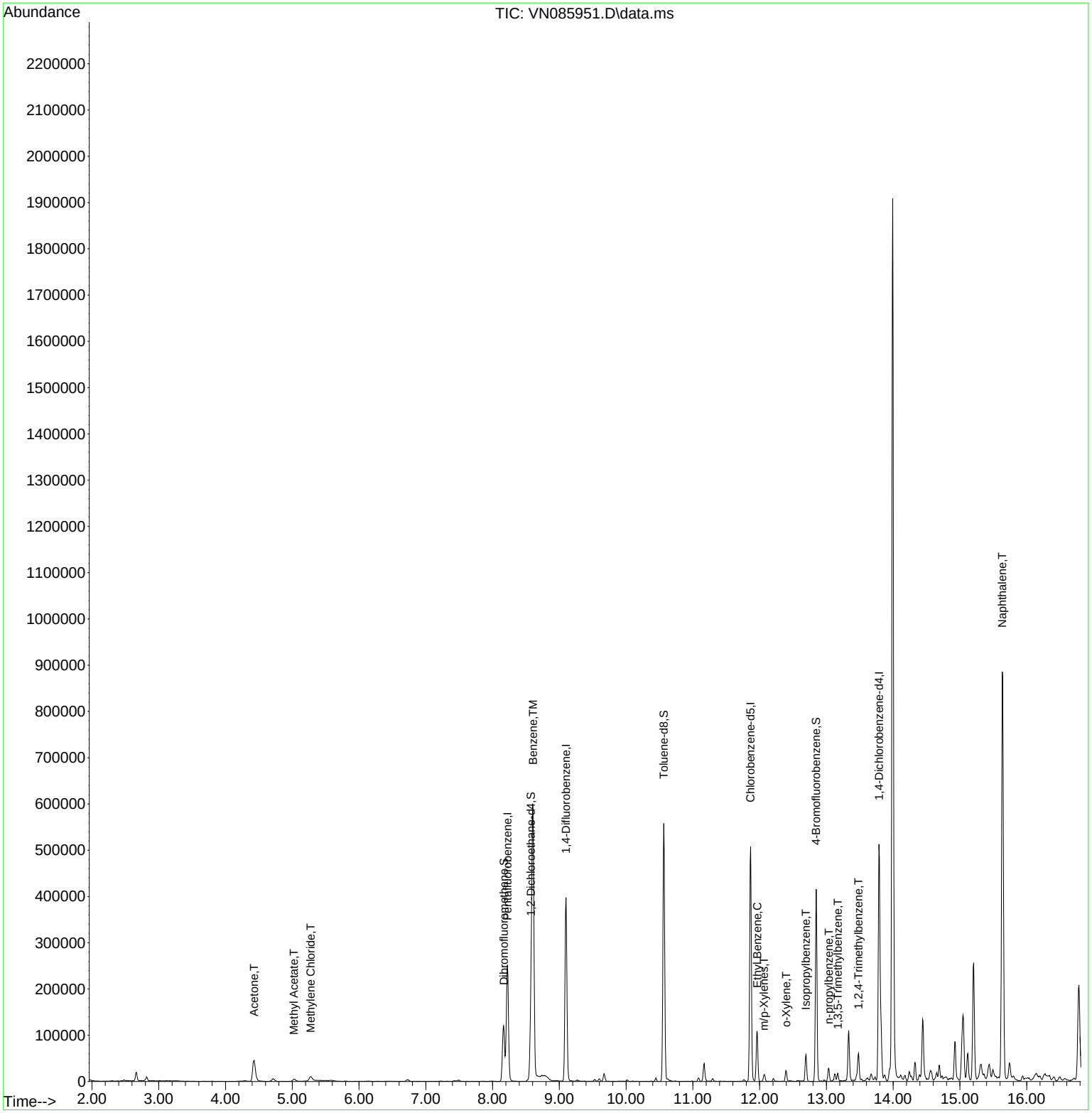
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	8.224	168	182677	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.100	114	343018	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.865	117	296805	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.788	152	138779	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.577	65	131854	55.673	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 111.340%			
35) Dibromofluoromethane	8.171	113	85936	38.287	ug/l	0.01
Spiked Amount 50.000	Range 75 - 124		Recovery = 76.580%			
50) Toluene-d8	10.565	98	388436	47.565	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery = 95.140%			
62) 4-Bromofluorobenzene	12.847	95	142339	52.902	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery = 105.800%			
Target Compounds						Qvalue
16) Acetone	4.430	43	86258	115.105	ug/l	98
18) Methyl Acetate	5.024	43	9937	3.855	ug/l	98
20) Methylene Chloride	5.277	84	7931	3.291	ug/l #	93
40) Benzene	8.606	78	608328	59.749	ug/l	99
67) Ethyl Benzene	11.965	91	78647	7.384	ug/l	97
68) m/p-Xylenes	12.065	106	5297	1.309	ug/l	98
69) o-Xylene	12.400	106	6683	1.738	ug/l	98
73) Isopropylbenzene	12.694	105	36480	3.837	ug/l	99
78) n-propylbenzene	13.035	91	23769	2.183	ug/l	97
80) 1,3,5-Trimethylbenzene	13.170	105	8313	1.073	ug/l	97
84) 1,2,4-Trimethylbenzene	13.482	105	33512	4.373	ug/l	97
95) Naphthalene	15.635	128	842164	139.106	ug/l	99

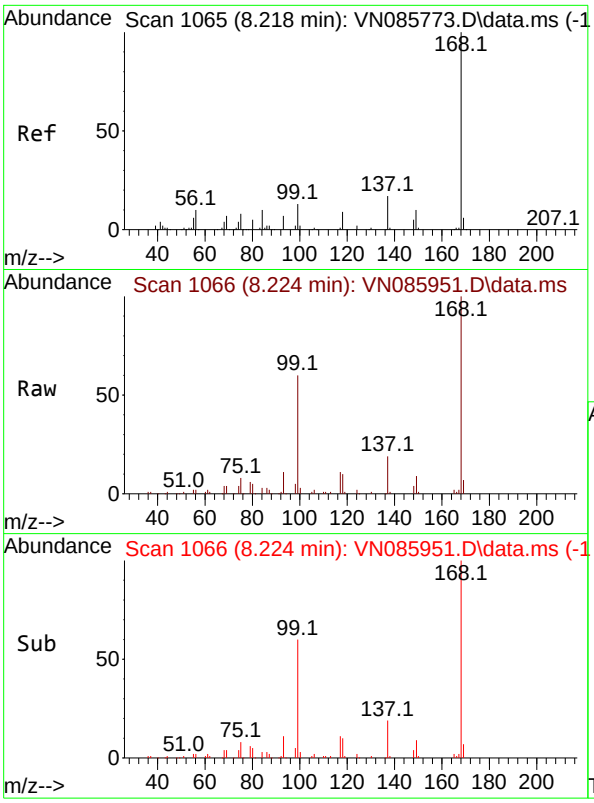
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031125\
Data File : VN085951.D
Acq On : 11 Mar 2025 23:05
Operator : JC\MD
Sample : Q1523-04
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 26 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
WC-A1-02-G

Quant Time: Mar 12 01:33:44 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:43:32 2025
Response via : Initial Calibration



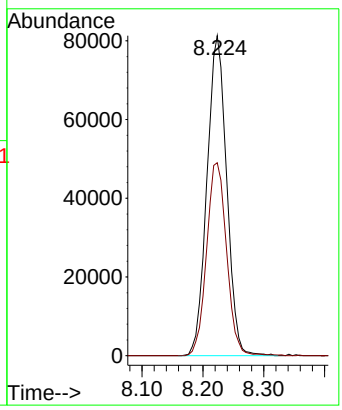


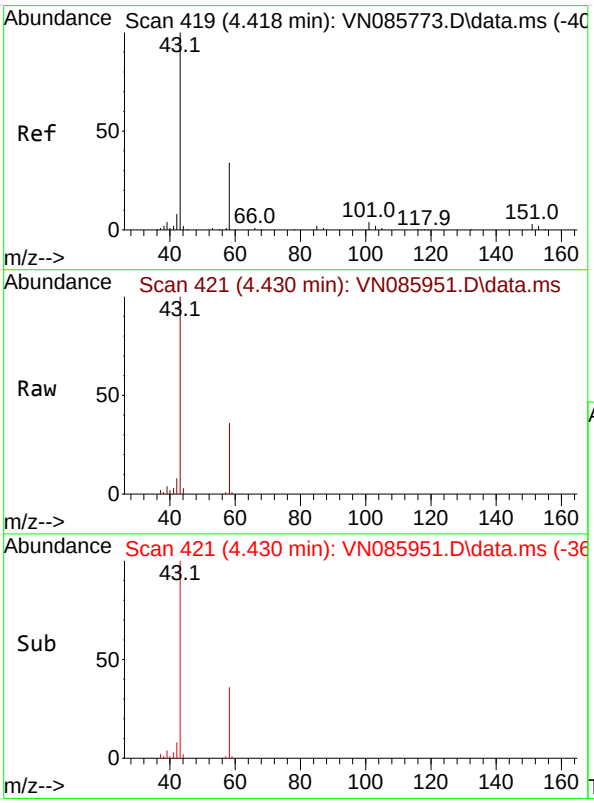
#1
Pentafluorobenzene
Concen: 50.000 ug/l
RT: 8.224 min Scan# 1
Delta R.T. 0.006 min
Lab File: VN085951.D
Acq: 11 Mar 2025 23:05

Instrument :
MSVOA_N
ClientSampleId :
WC-A1-02-G

Tgt Ion:168 Resp: 182677

Ion	Ratio	Lower	Upper
168	100		
99	60.3	47.9	71.9

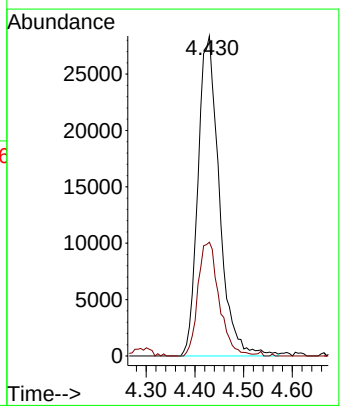


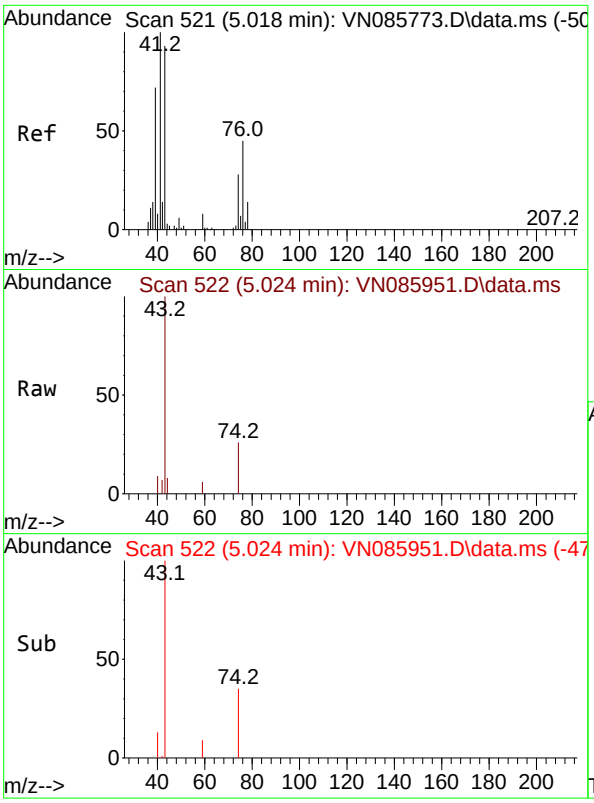


#16
Acetone
Concen: 115.105 ug/l
RT: 4.430 min Scan# 421
Delta R.T. 0.012 min
Lab File: VN085951.D
Acq: 11 Mar 2025 23:05

Tgt Ion: 43 Resp: 86258

Ion	Ratio	Lower	Upper
43	100		
58	35.6	27.5	41.3



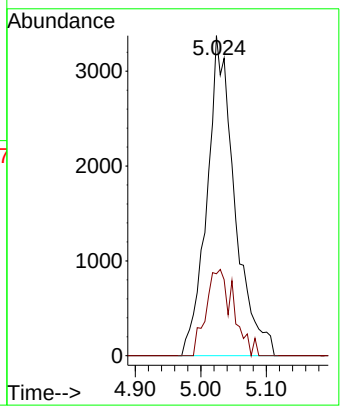


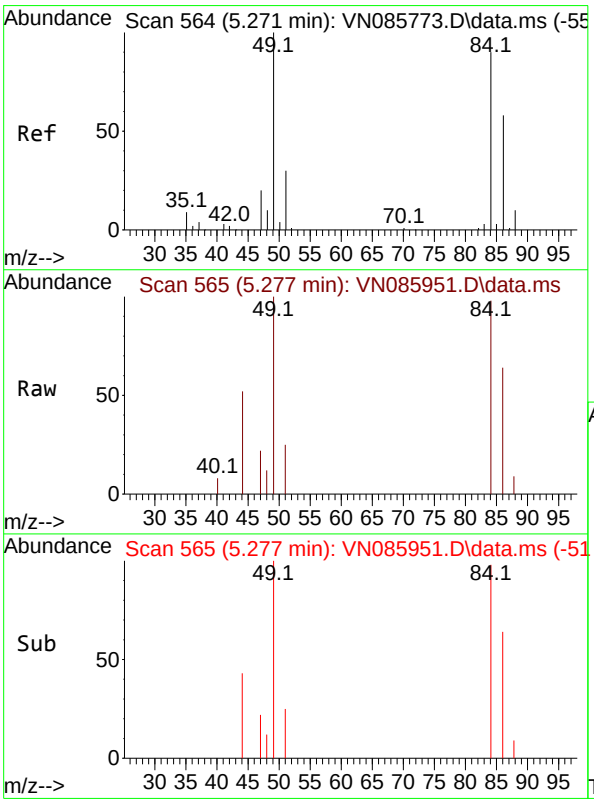
#18
Methyl Acetate
Concen: 3.855 ug/l
RT: 5.024 min Scan# 5
Delta R.T. 0.006 min
Lab File: VN085951.D
Acq: 11 Mar 2025 23:05

Instrument :
MSVOA_N
ClientSampleId :
WC-A1-02-G

Tgt Ion: 43 Resp: 9937

Ion	Ratio	Lower	Upper
43	100		
74	26.6	22.2	33.4

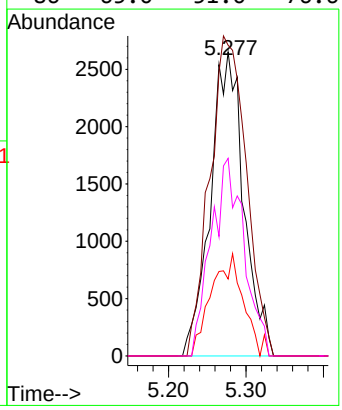


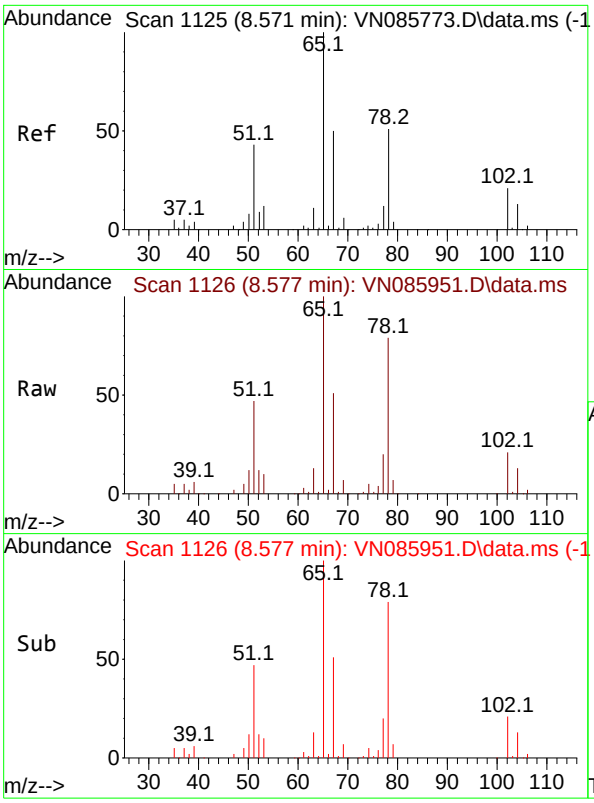


#20
Methylene Chloride
Concen: 3.291 ug/l
RT: 5.277 min Scan# 565
Delta R.T. 0.006 min
Lab File: VN085951.D
Acq: 11 Mar 2025 23:05

Tgt Ion: 84 Resp: 7931

Ion	Ratio	Lower	Upper
84	100		
49	102.2	88.4	132.6
51	25.3	26.6	40.0#
86	65.0	51.0	76.6



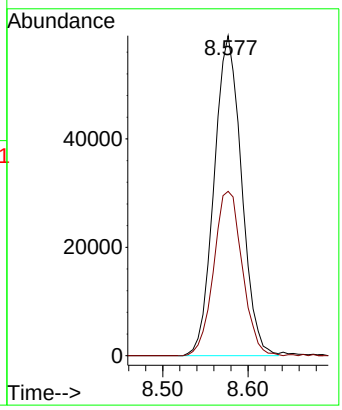


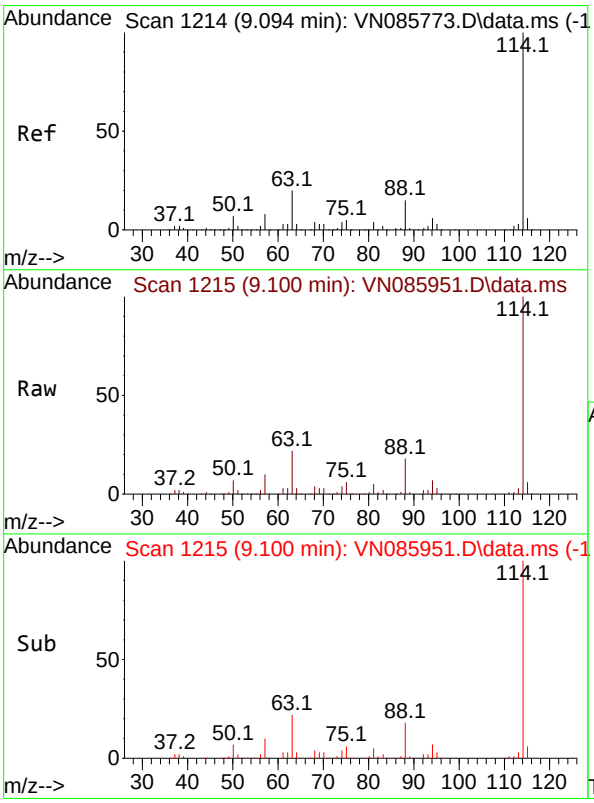
#33
1,2-Dichloroethane-d4
Concen: 55.673 ug/l
RT: 8.577 min Scan# 11
Delta R.T. 0.006 min
Lab File: VN085951.D
Acq: 11 Mar 2025 23:05

Instrument :
MSVOA_N
ClientSampleId :
WC-A1-02-G

Tgt Ion: 65 Resp: 131854

Ion	Ratio	Lower	Upper
65	100		
67	53.5	0.0	106.2

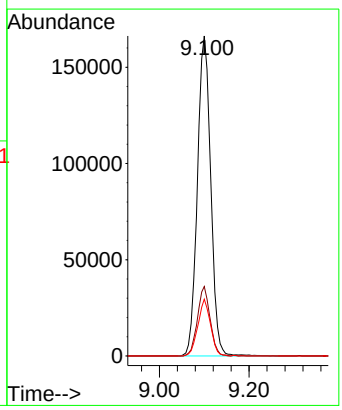


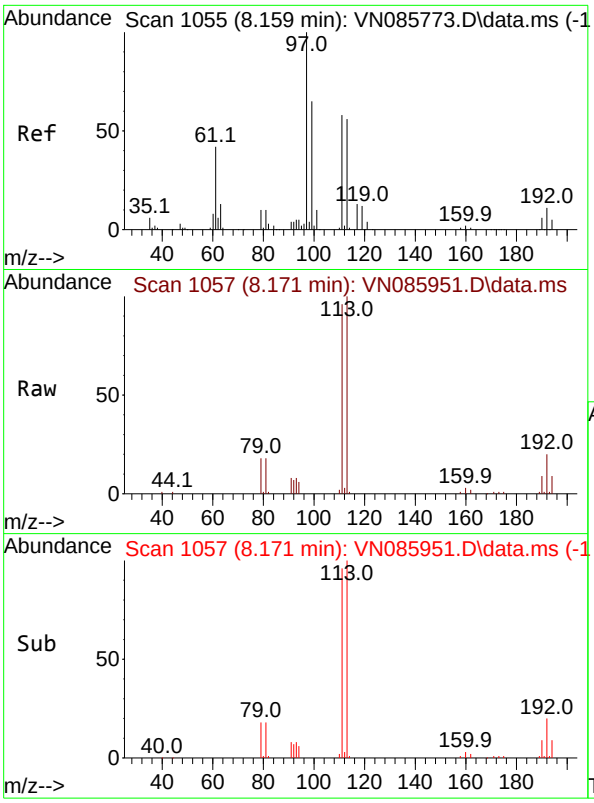


#34
1,4-Difluorobenzene
Concen: 50.000 ug/l
RT: 9.100 min Scan# 1215
Delta R.T. 0.006 min
Lab File: VN085951.D
Acq: 11 Mar 2025 23:05

Tgt Ion:114 Resp: 343018

Ion	Ratio	Lower	Upper
114	100		
63	21.7	0.0	39.2
88	17.7	0.0	30.0



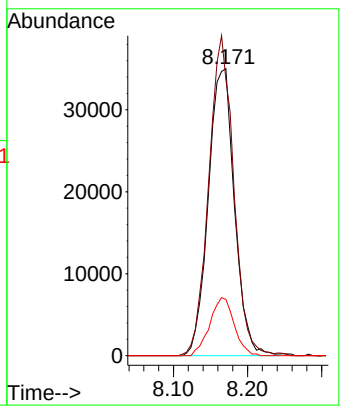


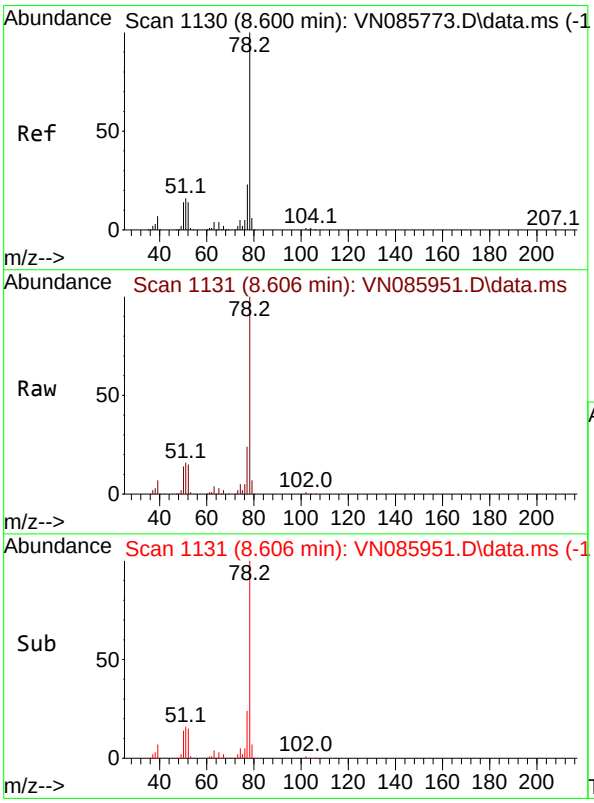
#35
Dibromofluoromethane
Concen: 38.287 ug/l
RT: 8.171 min Scan# 1
Delta R.T. 0.012 min
Lab File: VN085951.D
Acq: 11 Mar 2025 23:05

Instrument :
MSVOA_N
ClientSampleId :
WC-A1-02-G

Tgt Ion:113 Resp: 85936

Ion	Ratio	Lower	Upper
113	100		
111	106.2	82.2	123.4
192	18.9	14.7	22.1

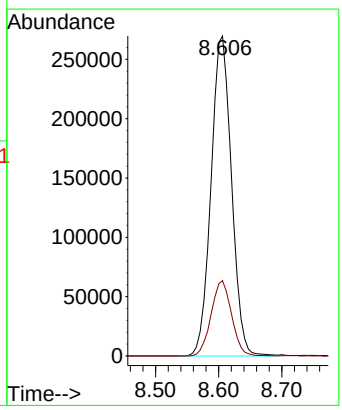


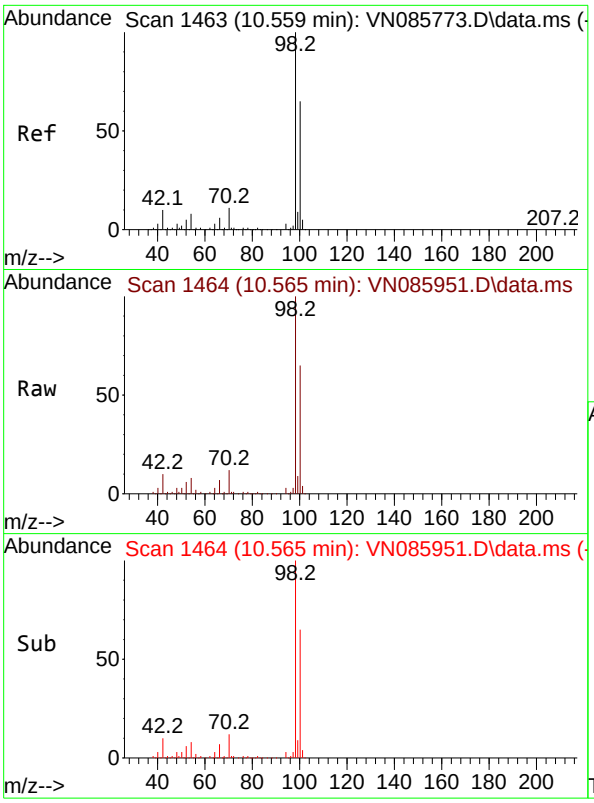


#40
Benzene
Concen: 59.749 ug/l
RT: 8.606 min Scan# 1131
Delta R.T. 0.006 min
Lab File: VN085951.D
Acq: 11 Mar 2025 23:05

Tgt Ion: 78 Resp: 608328

Ion	Ratio	Lower	Upper
78	100		
77	23.6	18.3	27.5



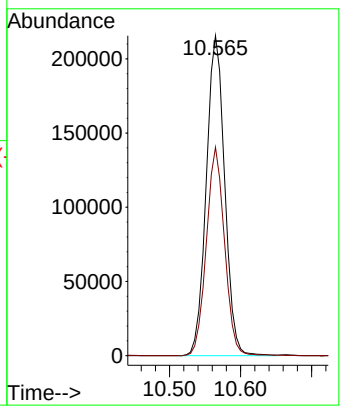


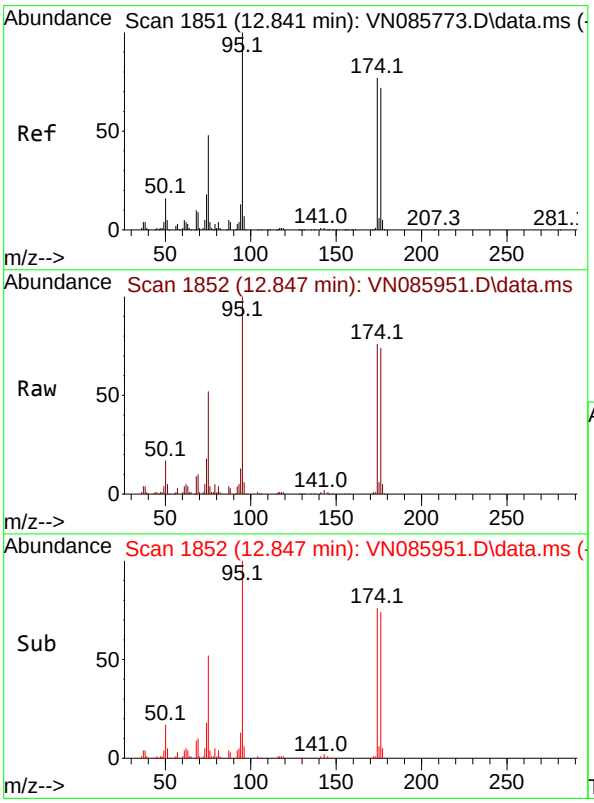
#50
Toluene-d8
Concen: 47.565 ug/l
RT: 10.565 min Scan# 14
Delta R.T. 0.006 min
Lab File: VN085951.D
Acq: 11 Mar 2025 23:05

Instrument :
MSVOA_N
ClientSampleId :
WC-A1-02-G

Tgt Ion: 98 Resp: 388436

Ion	Ratio	Lower	Upper
98	100		
100	64.4	52.1	78.1

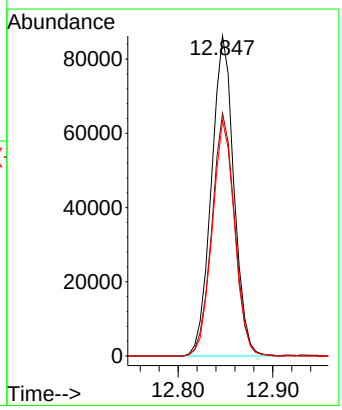


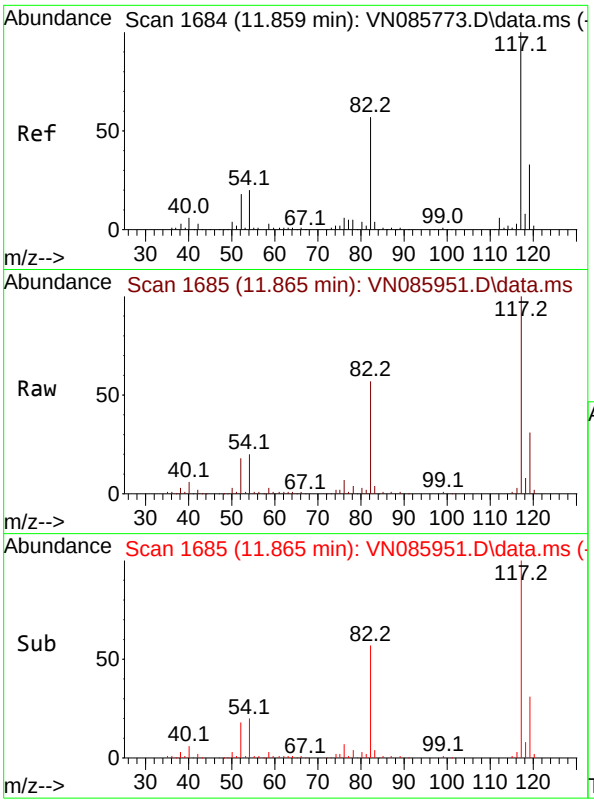


#62
4-Bromofluorobenzene
Concen: 52.902 ug/l
RT: 12.847 min Scan# 1852
Delta R.T. 0.006 min
Lab File: VN085951.D
Acq: 11 Mar 2025 23:05

Tgt Ion: 95 Resp: 142339

Ion	Ratio	Lower	Upper
95	100		
174	76.6	0.0	152.4
176	73.0	0.0	146.6



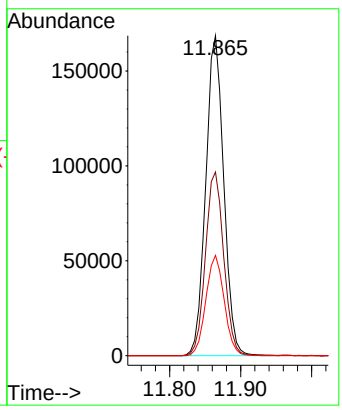


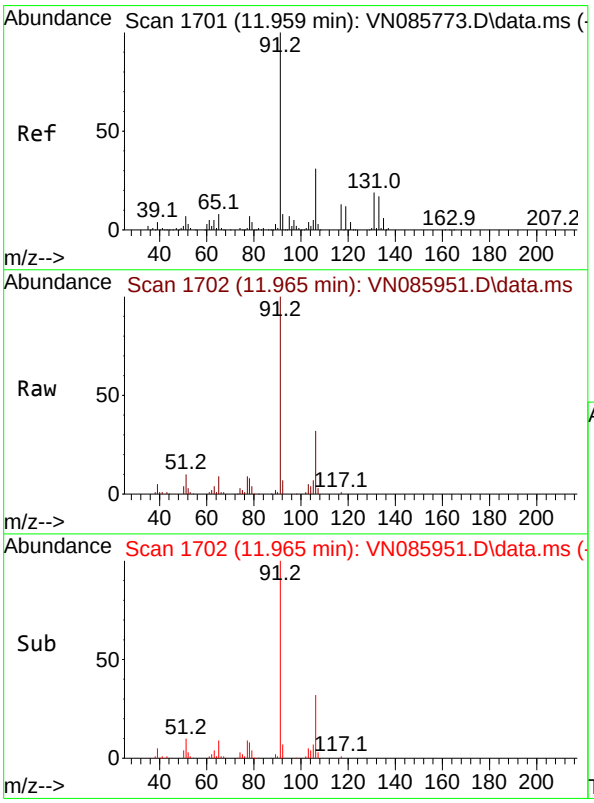
#63
Chlorobenzene-d5
Concen: 50.000 ug/l
RT: 11.865 min Scan# 1
Delta R.T. 0.006 min
Lab File: VN085951.D
Acq: 11 Mar 2025 23:05

Instrument :
MSVOA_N
ClientSampleId :
WC-A1-02-G

Tgt Ion:117 Resp: 296805

Ion	Ratio	Lower	Upper
117	100		
82	57.4	45.7	68.5
119	31.3	26.2	39.2

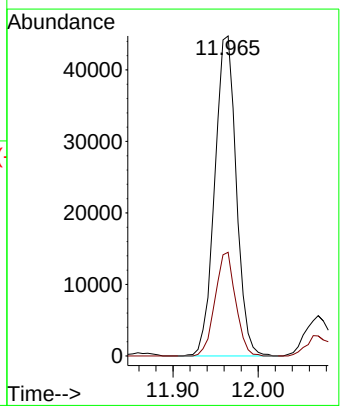


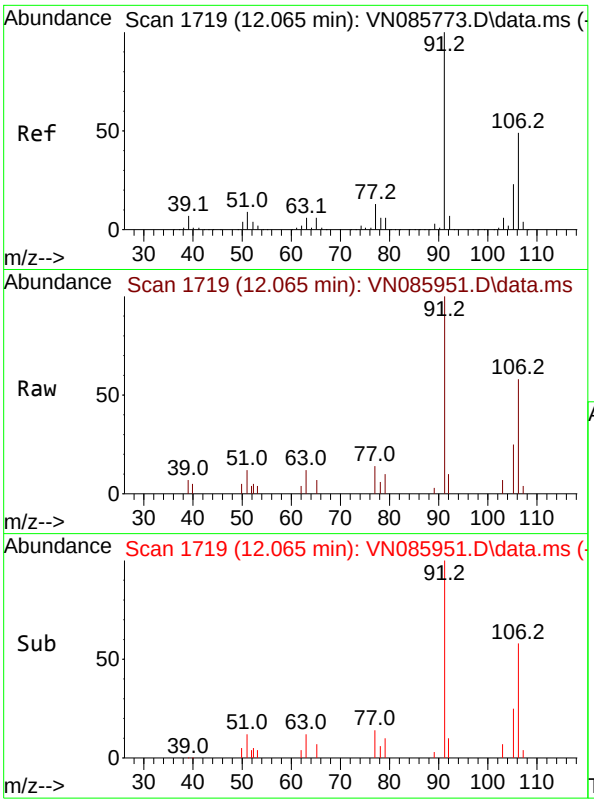


#67
Ethyl Benzene
Concen: 7.384 ug/l
RT: 11.965 min Scan# 1702
Delta R.T. 0.006 min
Lab File: VN085951.D
Acq: 11 Mar 2025 23:05

Tgt Ion: 91 Resp: 78647

Ion	Ratio	Lower	Upper
91	100		
106	32.4	24.7	37.1



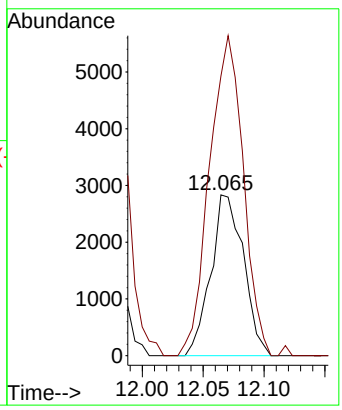


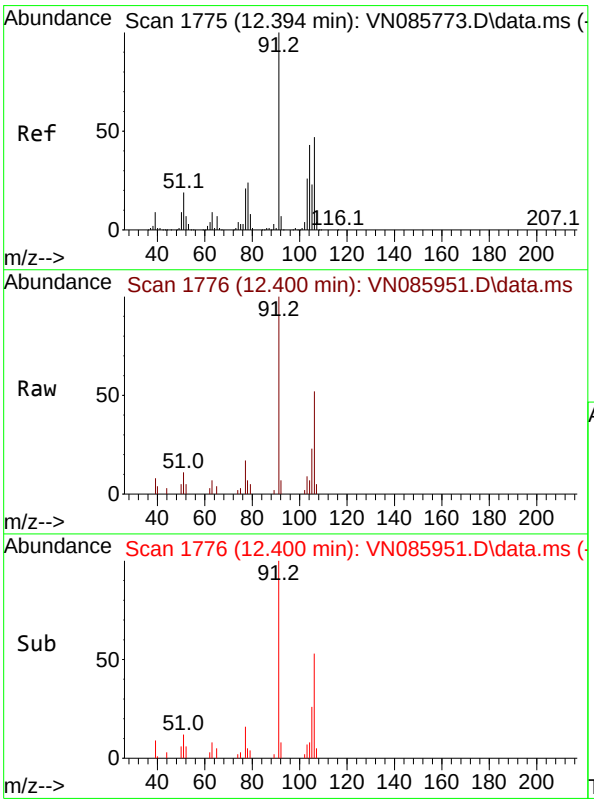
#68
m/p-Xylenes
Concen: 1.309 ug/l
RT: 12.065 min Scan# 1
Delta R.T. -0.000 min
Lab File: VN085951.D
Acq: 11 Mar 2025 23:05

Instrument :
MSVOA_N
ClientSampleId :
WC-A1-02-G

Tgt Ion:106 Resp: 5297

Ion	Ratio	Lower	Upper
106	100		
91	206.5	163.3	244.9

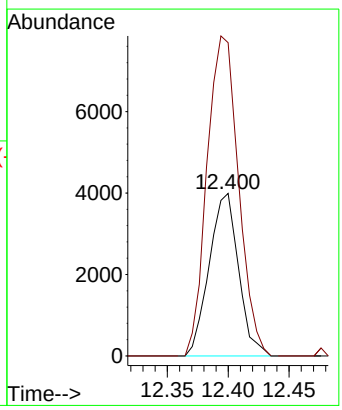


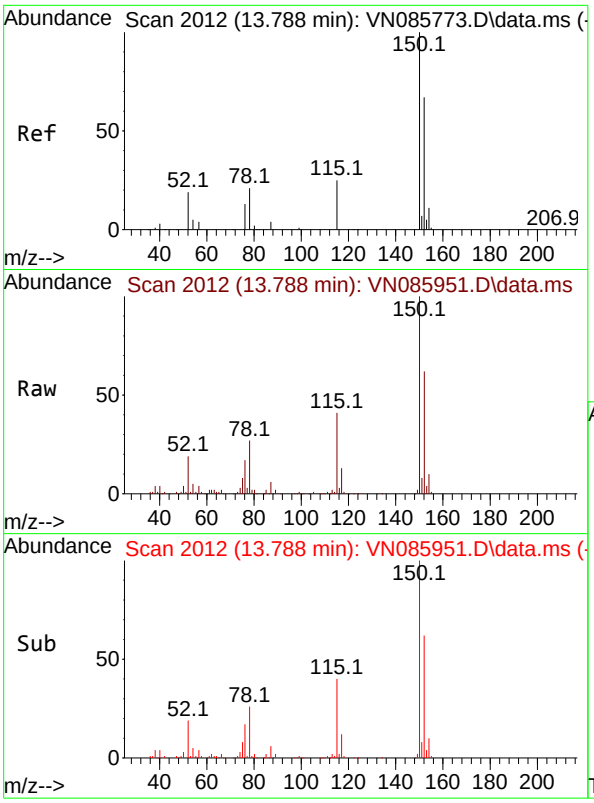


#69
o-Xylene
Concen: 1.738 ug/l
RT: 12.400 min Scan# 1776
Delta R.T. 0.006 min
Lab File: VN085951.D
Acq: 11 Mar 2025 23:05

Tgt Ion:106 Resp: 6683

Ion	Ratio	Lower	Upper
106	100		
91	211.2	107.1	321.4



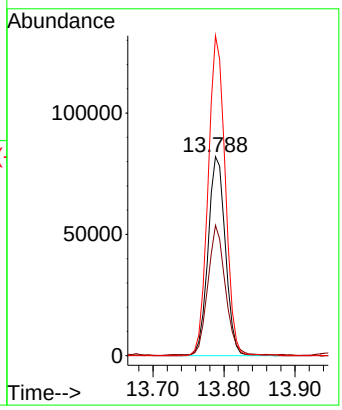


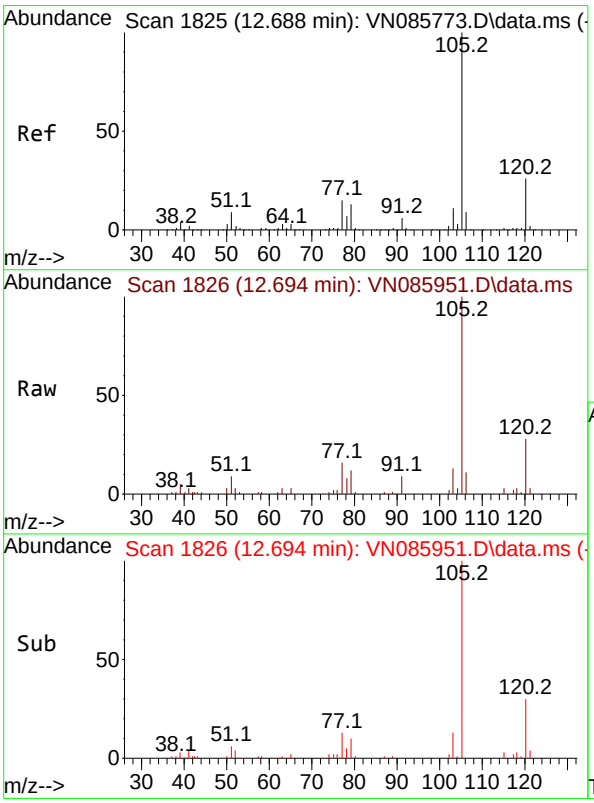
#72
1,4-Dichlorobenzene-d4
Concen: 50.000 ug/l
RT: 13.788 min Scan# 2
Delta R.T. -0.000 min
Lab File: VN085951.D
Acq: 11 Mar 2025 23:05

Instrument :
MSVOA_N
ClientSampleId :
WC-A1-02-G

Tgt Ion:152 Resp: 138779

Ion	Ratio	Lower	Upper
152	100		
115	64.9	30.4	91.3
150	158.6	0.0	345.4

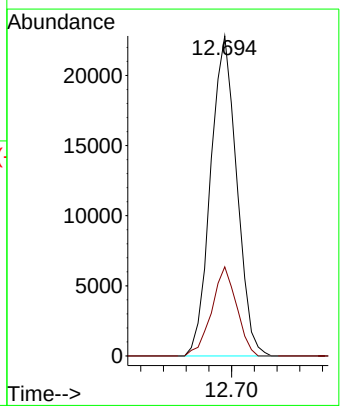


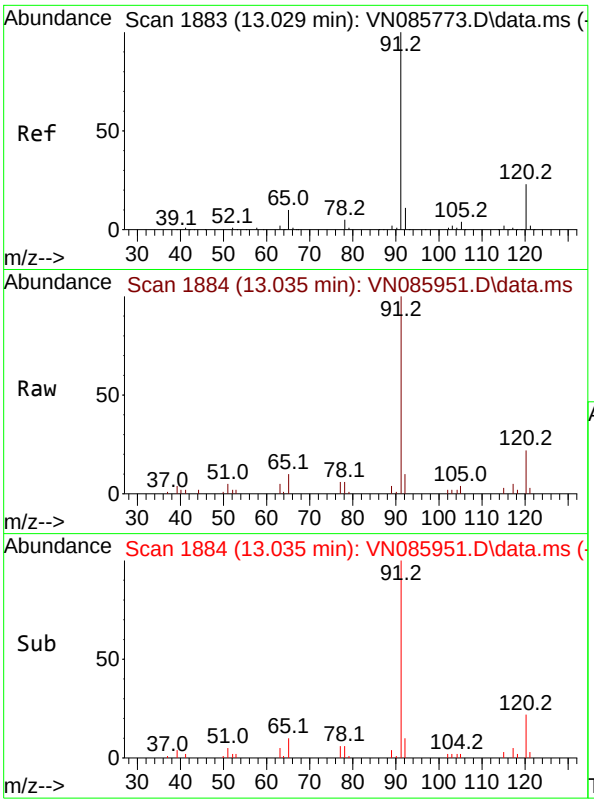


#73
Isopropylbenzene
Concen: 3.837 ug/l
RT: 12.694 min Scan# 1826
Delta R.T. 0.006 min
Lab File: VN085951.D
Acq: 11 Mar 2025 23:05

Tgt Ion:105 Resp: 36480

Ion	Ratio	Lower	Upper
105	100		
120	26.5	13.0	39.0



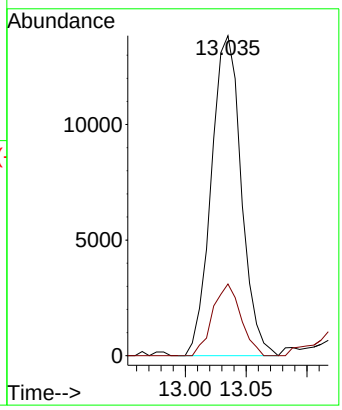


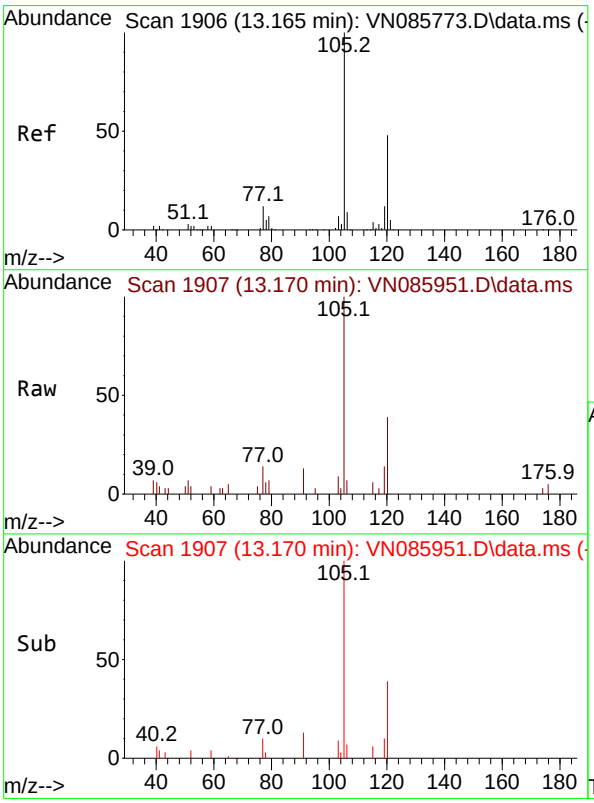
#78
n-propylbenzene
Concen: 2.183 ug/l
RT: 13.035 min Scan# 1
Delta R.T. 0.006 min
Lab File: VN085951.D
Acq: 11 Mar 2025 23:05

Instrument :
MSVOA_N
ClientSampleId :
WC-A1-02-G

Tgt Ion: 91 Resp: 23769

Ion	Ratio	Lower	Upper
91	100		
120	21.1	11.3	33.8

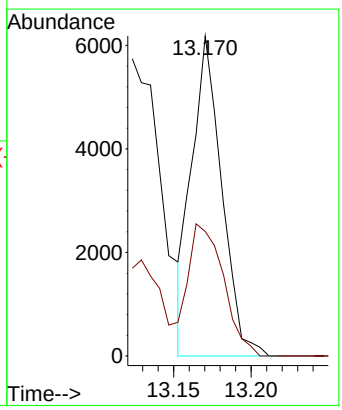


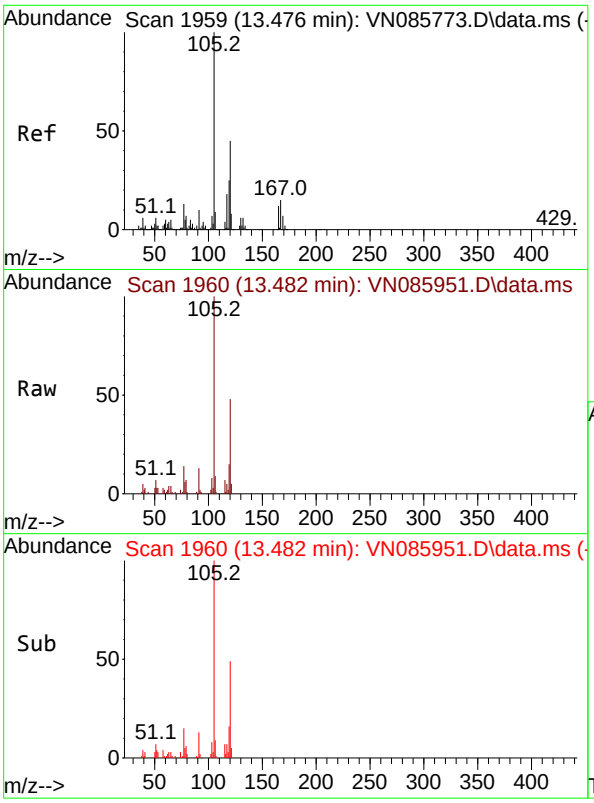


#80
1,3,5-Trimethylbenzene
Concen: 1.073 ug/l
RT: 13.170 min Scan# 1907
Delta R.T. 0.006 min
Lab File: VN085951.D
Acq: 11 Mar 2025 23:05

Tgt Ion:105 Resp: 8313

Ion	Ratio	Lower	Upper
105	100		
120	50.7	24.3	72.9



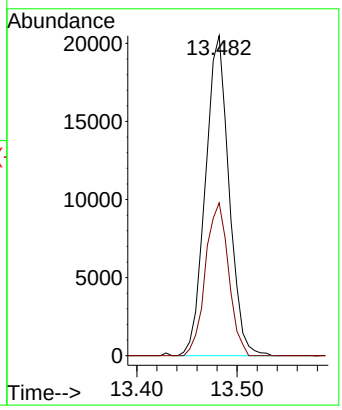


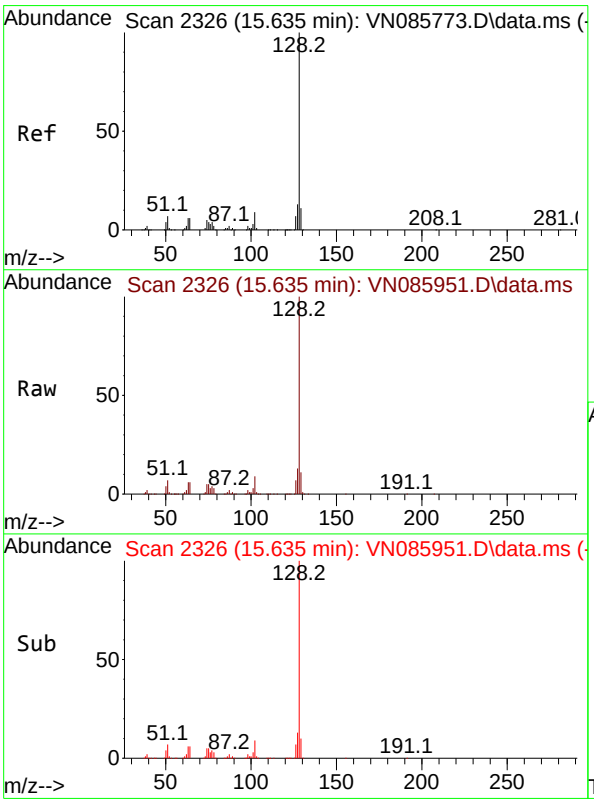
#84
1,2,4-Trimethylbenzene
Concen: 4.373 ug/l
RT: 13.482 min Scan# 1
Delta R.T. 0.006 min
Lab File: VN085951.D
Acq: 11 Mar 2025 23:05

Instrument :
MSVOA_N
ClientSampleId :
WC-A1-02-G

Tgt Ion:105 Resp: 33512

Ion	Ratio	Lower	Upper
105	100		
120	46.6	22.4	67.3

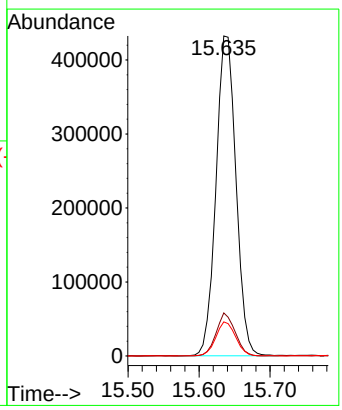




#95
Naphthalene
Concen: 139.106 ug/l
RT: 15.635 min Scan# 2326
Delta R.T. -0.000 min
Lab File: VN085951.D
Acq: 11 Mar 2025 23:05

Tgt Ion:128 Resp: 842164

Ion	Ratio	Lower	Upper
128	100		
127	12.9	10.2	15.2
129	10.5	8.7	13.1



CALIBRATION SUMMARY

Raw Data

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: CHEMTECH Contract: ENTA05

Lab Code: CHEM Case No.: Q1523 SAS No.: Q1523 SDG No.: Q1523

Instrument ID: MSVOA_N Calibration Date(s): 02/18/2025 02/18/2025

Heated Purge: (Y/N) N Calibration Time(s): 11:09 14:18

GC Column: RXI-624 ID: 0.25 (mm)

LAB FILE ID: RRF100 = VN085772.D RRF050 = VN085773.D RRF010 = VN085775.D
RRF005 = VN085776.D RRF001 = VN085777.D RRF020 = VN085779.D

COMPOUND	RRF100	RRF050	RRF010	RRF005	RRF001	RRF020	$\overline{RRF}$	% RSD
Vinyl Chloride	0.698	0.678	0.796	0.729	0.761	0.674	0.723	6.7
1,1-Dichloroethene	0.555	0.527	0.591	0.571	0.514	0.531	0.548	5.3
2-Butanone	0.308	0.294	0.331	0.299	0.279	0.299	0.302	5.6
Carbon Tetrachloride	0.573	0.528	0.583	0.545	0.533	0.538	0.550	4.1
Chloroform	1.120	1.070	1.269	1.164	1.171	1.141	1.156	5.7
Benzene	1.581	1.441	1.568	1.421	1.420	1.474	1.484	4.9
1,2-Dichloroethane	0.499	0.456	0.527	0.464	0.472	0.483	0.483	5.4
Trichloroethene	0.370	0.339	0.384	0.350	0.395	0.348	0.364	6.1
Tetrachloroethene	0.384	0.361	0.420	0.391	0.393	0.375	0.387	5.2
Chlorobenzene	1.183	1.110	1.212	1.139	1.109	1.119	1.145	3.8
1,2-Dichloroethane-d4	0.698	0.613	0.588	0.767		0.575	0.648	12.6
Dibromofluoromethane	0.375	0.317	0.294	0.357		0.293	0.327	11.5
Toluene-d8	1.444	1.199	1.017	1.212		1.080	1.190	13.8
4-Bromofluorobenzene	0.503	0.419	0.323	0.370		0.346	0.392	18.2

* Compounds with required minimum RRF and maximum %RSD values.
All other compounds must meet a minimum RRF of 0.010.
RRF of 1,4-Dioxane = Value should be divide by 1000.

Response Factor Report MSVOA_N_NEW

Method Path : Z:\voasrv\HPCHEM1\MSVOA_N\methods\
Method File : 82N021825W.M
Title : SW846 8260
Last Update : Wed Feb 19 03:43:32 2025
Response Via : Initial Calibration

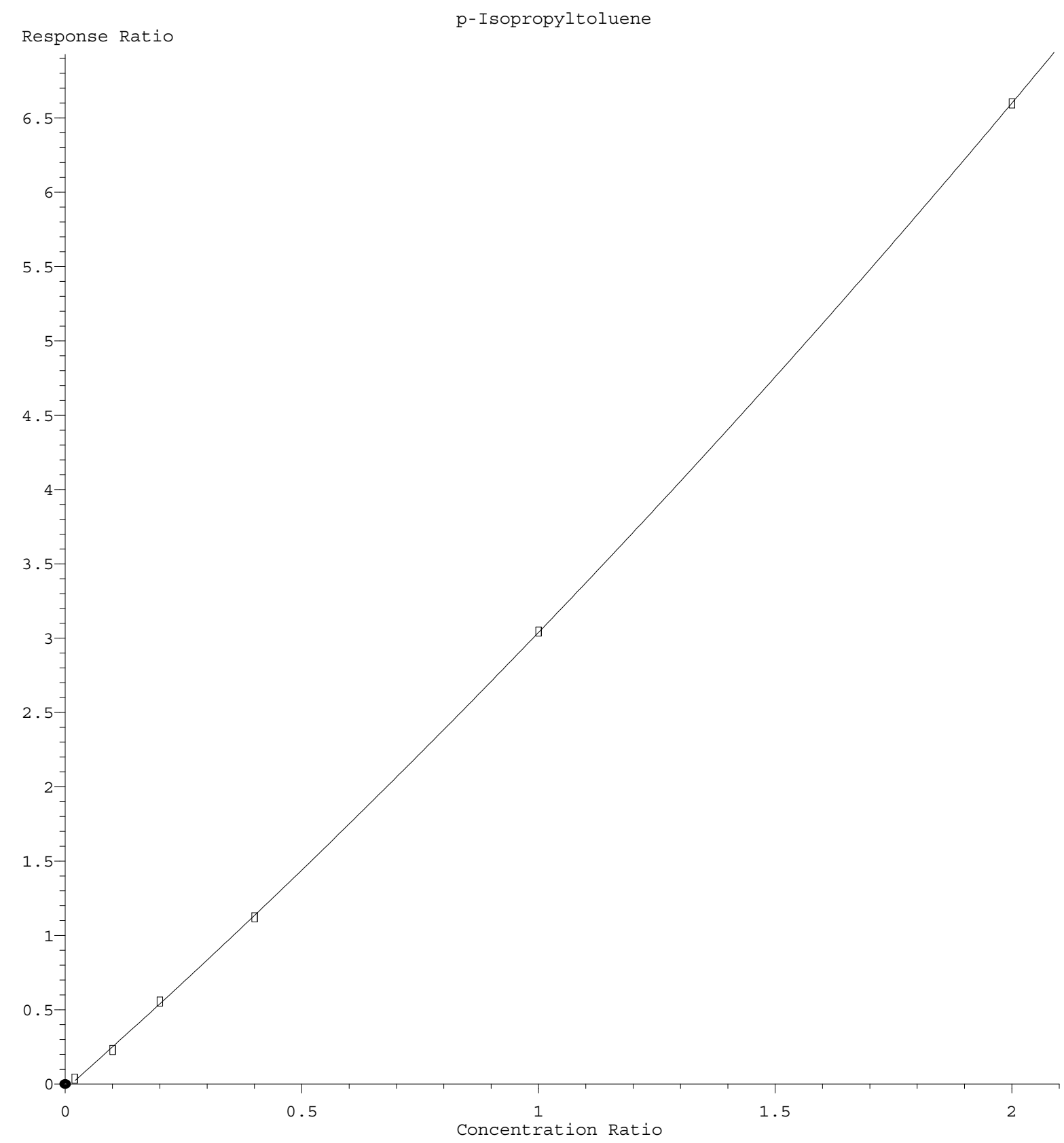
Calibration Files
1 =VN085777.D 5 =VN085776.D 10 =VN085775.D 20 =VN085779.D 50 =VN085773.D 100 =VN085772.D

		Compound	1	5	10	20	50	100	Avg	%RSD
1)	I	Pentafluorobenzene	----------ISTD----------							
2)	T	Dichlorodifluo...	0.660	0.650	0.779	0.628	0.669	0.694	0.680	7.78
3)	P	Chloromethane	0.817	0.662	0.742	0.604	0.622	0.647	0.682	11.93
4)	C	Vinyl Chloride	0.761	0.729	0.796	0.674	0.678	0.698	0.723	6.72#
5)	T	Bromomethane		0.496	0.543	0.413	0.424	0.434	0.462	12.05
6)	T	Chloroethane	0.584	0.470	0.516	0.438	0.417	0.447	0.479	12.88
7)	T	Trichlorofluor...	1.103	1.065	1.134	1.006	0.959	1.010	1.046	6.33
8)	T	Diethyl Ether	0.313	0.353	0.366	0.325	0.331	0.343	0.339	5.72
9)	T	1,1,2-Trichlor...	0.554	0.635	0.674	0.599	0.564	0.602	0.605	7.39
10)	T	Methyl Iodide		0.724	0.806	0.712	0.722	0.764	0.745	5.24
11)	T	Tert butyl alc...		0.083	0.092	0.073	0.078	0.072	0.080	9.91
12)	CM	1,1-Dichloroet...	0.514	0.571	0.591	0.531	0.527	0.555	0.548	5.35#
13)	T	Acrolein		0.126	0.117	0.105	0.126	0.116	0.118	7.35
14)	T	Allyl chloride	0.694	0.724	0.778	0.686	0.691	0.747	0.720	5.13
15)	T	Acrylonitrile	0.255	0.260	0.278	0.256	0.245	0.262	0.259	4.23
16)	T	Acetone	0.227	0.208	0.217	0.198	0.184	0.195	0.205	7.68
17)	T	Carbon Disulfide	1.848	1.604	1.804	1.455	1.473	1.565	1.625	10.22
18)	T	Methyl Acetate	0.853	0.690	0.794	0.625	0.619	0.653	0.705	13.70
19)	T	Methyl tert-bu...	1.438	1.560	1.714	1.659	1.658	1.747	1.629	6.95
20)	T	Methylene Chlo...	0.736	0.666	0.710	0.625	0.593	0.628	0.660	8.34
21)	T	trans-1,2-Dich...	0.623	0.599	0.621	0.566	0.549	0.585	0.590	5.05
22)	T	Diisopropyl ether	1.326	1.567	1.764	1.716	1.643	1.744	1.627	10.09
23)	T	Vinyl Acetate	0.999	1.034	1.189	1.126	1.118	1.218	1.114	7.63
24)	P	1,1-Dichloroet...	1.073	1.125	1.216	1.089	1.035	1.097	1.106	5.59
25)	T	2-Butanone	0.279	0.299	0.331	0.299	0.294	0.308	0.302	5.61
26)	T	2,2-Dichloropr...	0.943	0.987	1.069	0.971	0.946	0.984	0.983	4.68
27)	T	cis-1,2-Dichlo...	0.646	0.685	0.740	0.671	0.661	0.705	0.685	4.91
28)	T	Bromochloromet...	0.483	0.570	0.346	0.402	0.444	0.481	0.454	16.96
29)	T	Tetrahydrofuran	0.167	0.183	0.214	0.204	0.196	0.206	0.195	8.97
30)	C	Chloroform	1.171	1.164	1.269	1.141	1.070	1.120	1.156	5.74#
31)	T	Cyclohexane		1.056	0.977	0.858	0.860	0.878	0.926	9.50
32)	T	1,1,1-Trichlor...	1.030	1.058	1.089	1.012	0.967	1.012	1.028	4.09
33)	S	1,2-Dichloroet...		0.767	0.588	0.575	0.613	0.698	0.648	12.64
34)	I	1,4-Difluorobenzene	----------ISTD----------							
35)	S	Dibromofluorom...		0.357	0.294	0.293	0.317	0.375	0.327	11.46
36)	T	1,1-Dichloropr...	0.426	0.436	0.490	0.458	0.460	0.509	0.463	6.84
37)	T	Ethyl Acetate	0.353	0.376	0.385	0.396	0.375	0.400	0.381	4.47
38)	T	Carbon Tetrach...	0.533	0.545	0.583	0.538	0.528	0.573	0.550	4.11
39)	T	Methylcyclohexane	0.373	0.405	0.446	0.453	0.492	0.560	0.455	14.50
40)	TM	Benzene	1.420	1.421	1.568	1.474	1.441	1.581	1.484	4.89
41)	T	Methacrylonitrile	0.165	0.197	0.211	0.211	0.216	0.222	0.204	10.14
42)	TM	1,2-Dichloroet...	0.472	0.464	0.527	0.483	0.456	0.499	0.483	5.42
43)	T	Isopropyl Acetate	1.354	0.742	0.764	0.670	0.637	0.673	0.807	33.76
44)	TM	Trichloroethene	0.395	0.350	0.384	0.348	0.339	0.370	0.364	6.15
45)	C	1,2-Dichloropr...	0.339	0.344	0.385	0.357	0.347	0.377	0.358	5.25#
46)	T	Dibromomethane	0.242	0.245	0.265	0.256	0.243	0.266	0.253	4.42
47)	T	Bromodichlorom...	0.512	0.533	0.571	0.541	0.518	0.569	0.541	4.62
48)	T	Methyl methacr...	0.236	0.258	0.277	0.294	0.301	0.332	0.283	11.90
49)	T	1,4-Dioxane	0.005	0.005	0.006	0.005	0.006	0.005	0.005	5.54
50)	S	Toluene-d8		1.212	1.017	1.080	1.199	1.444	1.190	13.77
51)	T	4-Methyl-2-Pen...	0.290	0.342	0.392	0.388	0.379	0.414	0.367	12.11
52)	CM	Toluene	0.689	0.820	0.924	0.891	0.902	0.993	0.870	12.03#
53)	T	t-1,3-Dichloro...	0.408	0.471	0.518	0.505	0.521	0.576	0.500	11.31
54)	T	cis-1,3-Dichlo...	0.442	0.513	0.582	0.559	0.566	0.626	0.548	11.58
55)	T	1,1,2-Trichlor...	0.324	0.346	0.370	0.344	0.331	0.361	0.346	5.04
56)	T	Ethyl methacry...	0.264	0.382	0.448	0.457	0.497	0.557	0.434	23.32

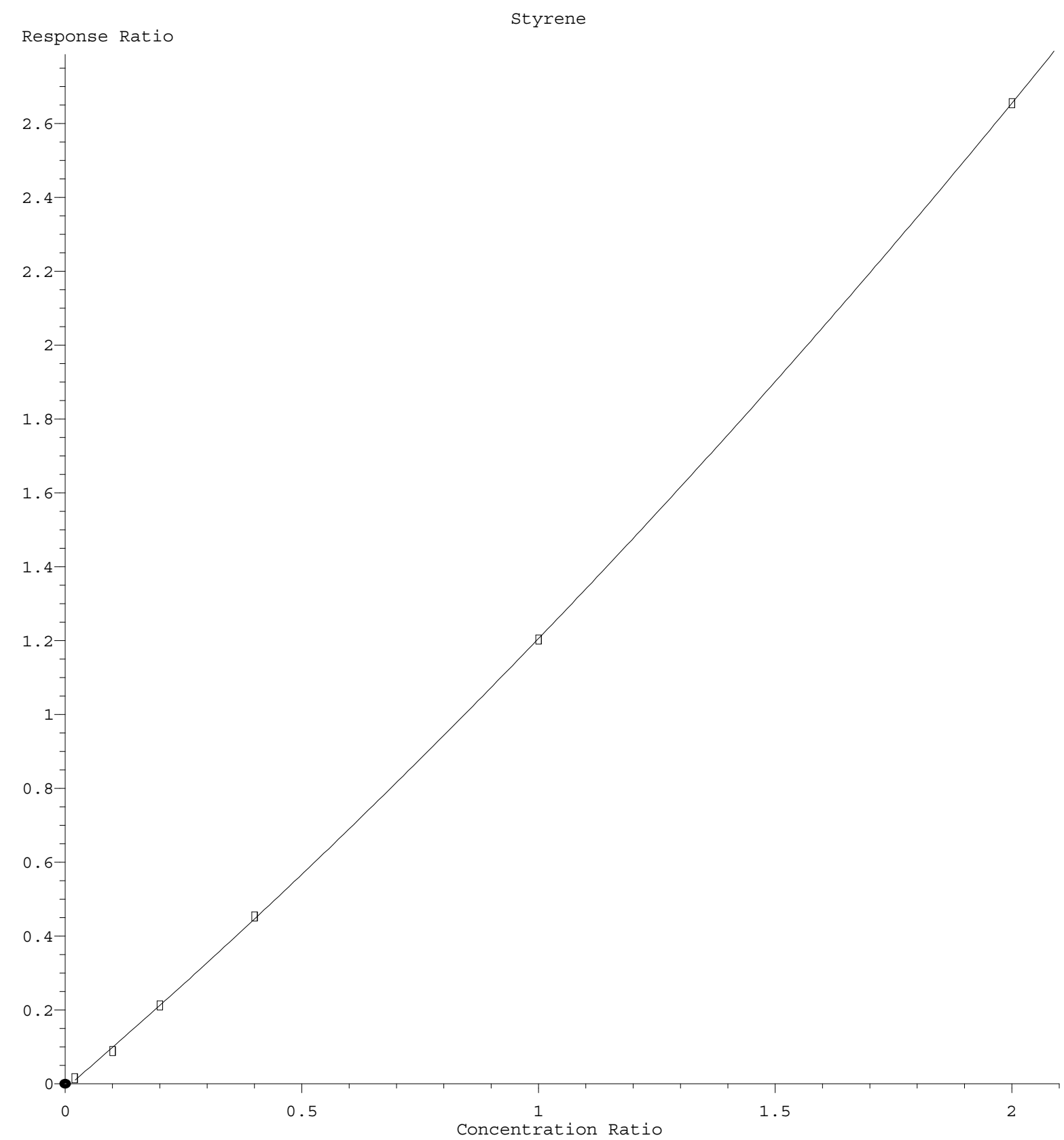
Method Path : Z:\voasrv\HPCHEM1\MSVOA_N\methods\
Method File : 82N021825W.M

57)	T	1,3-Dichloropr...	0.533	0.553	0.615	0.580	0.565	0.619	0.577	5.91
58)	T	2-Chloroethyl ...	0.133	0.176	0.170	0.249	0.174	0.266	0.195	26.24
59)	T	2-Hexanone	0.184	0.227	0.266	0.270	0.273	0.296	0.253	15.99
60)	T	Dibromochlorom...	0.355	0.384	0.431	0.405	0.402	0.440	0.403	7.70
61)	T	1,2-Dibromoethane	0.273	0.320	0.362	0.330	0.322	0.354	0.327	9.68
62)	S	4-Bromofluorob...		0.370	0.323	0.346	0.419	0.503	0.392	18.22
63)	I	Chlorobenzene-d5	----------ISTD----------							
64)	T	Tetrachloroethene	0.393	0.391	0.420	0.375	0.361	0.384	0.387	5.17
65)	PM	Chlorobenzene	1.109	1.139	1.212	1.119	1.110	1.183	1.145	3.75
66)	T	1,1,1,2-Tetrac...	0.408	0.402	0.444	0.401	0.395	0.420	0.412	4.31
67)	C	Ethyl Benzene	1.424	1.665	1.830	1.838	1.904	2.105	1.794	12.85#
68)	T	m/p-Xylenes	0.481	0.610	0.725	0.722	0.741	0.809	0.682	17.19
69)	T	o-Xylene	0.502	0.584	0.666	0.659	0.704	0.771	0.648	14.48
70)	T	Styrene	0.744	0.885	1.060	1.133	1.203	1.327	1.059	20.15
71)	P	Bromoform	0.274	0.301	0.322	0.309	0.303	0.327	0.306	6.20
72)	I	1,4-Dichlorobenzen...	----------ISTD----------							
73)	T	Isopropylbenzene	2.933	3.067	3.623	3.484	3.596	3.851	3.425	10.31
74)	T	N-amyl acetate	1.072	1.117	1.263	1.245	1.241	1.311	1.208	7.67
75)	P	1,1,2,2-Tetrac...	1.271	1.218	1.304	1.154	1.053	1.073	1.179	8.77
76)	T	1,2,3-Trichlor...	1.324	1.161	1.145	1.122	0.947	0.964	1.111	12.59
77)	T	Bromobenzene	0.862	0.905	1.024	0.908	0.904	0.950	0.925	6.01
78)	T	n-propylbenzene	3.031	3.463	4.126	4.090	4.256	4.572	3.923	14.46
79)	T	2-Chlorotoluene	2.385	2.425	2.842	2.681	2.616	2.779	2.621	7.07
80)	T	1,3,5-Trimethy...	2.032	2.418	2.989	3.004	3.056	3.243	2.790	16.62
81)	T	trans-1,4-Dich...		0.339	0.392	0.367	0.397	0.409	0.381	7.38
82)	T	4-Chlorotoluene	2.201	2.437	2.837	2.643	2.658	2.815	2.598	9.32
83)	T	tert-Butylbenzene	1.802	2.119	2.432	2.421	2.578	2.727	2.346	14.27
84)	T	1,2,4-Trimethy...	1.838	2.387	2.937	3.018	3.078	3.306	2.761	19.75
85)	T	sec-Butylbenzene	2.486	2.938	3.534	3.417	3.653	3.864	3.315	15.40
86)	T	p-Isopropyltol...	1.779	2.288	2.776	2.804	3.045	3.299	2.665	20.58
87)	T	1,3-Dichlorobe...	1.748	1.697	1.876	1.675	1.635	1.772	1.734	4.93
88)	T	1,4-Dichlorobe...	1.921	1.777	1.884	1.684	1.647	1.750	1.777	6.08
89)	T	n-Butylbenzene	2.102	2.032	2.338	2.271	2.551	2.829	2.354	12.58
90)	T	Hexachloroethane	0.707	0.629	0.635	0.589	0.587	0.620	0.628	6.99
91)	T	1,2-Dichlorobe...	1.744	1.642	1.768	1.617	1.574	1.660	1.667	4.48
92)	T	1,2-Dibromo-3-...	0.256	0.222	0.238	0.191	0.193	0.198	0.216	12.42
93)	T	1,2,4-Trichlor...	0.829	0.728	0.827	0.704	0.802	0.877	0.794	8.31
94)	T	Hexachlorobuta...	0.649	0.481	0.503	0.405	0.424	0.435	0.483	18.51
95)	T	Naphthalene	2.397	1.858	2.160	1.821	2.324	2.527	2.181	13.31
96)	T	1,2,3-Trichlor...	0.917	0.736	0.844	0.675	0.789	0.825	0.798	10.65

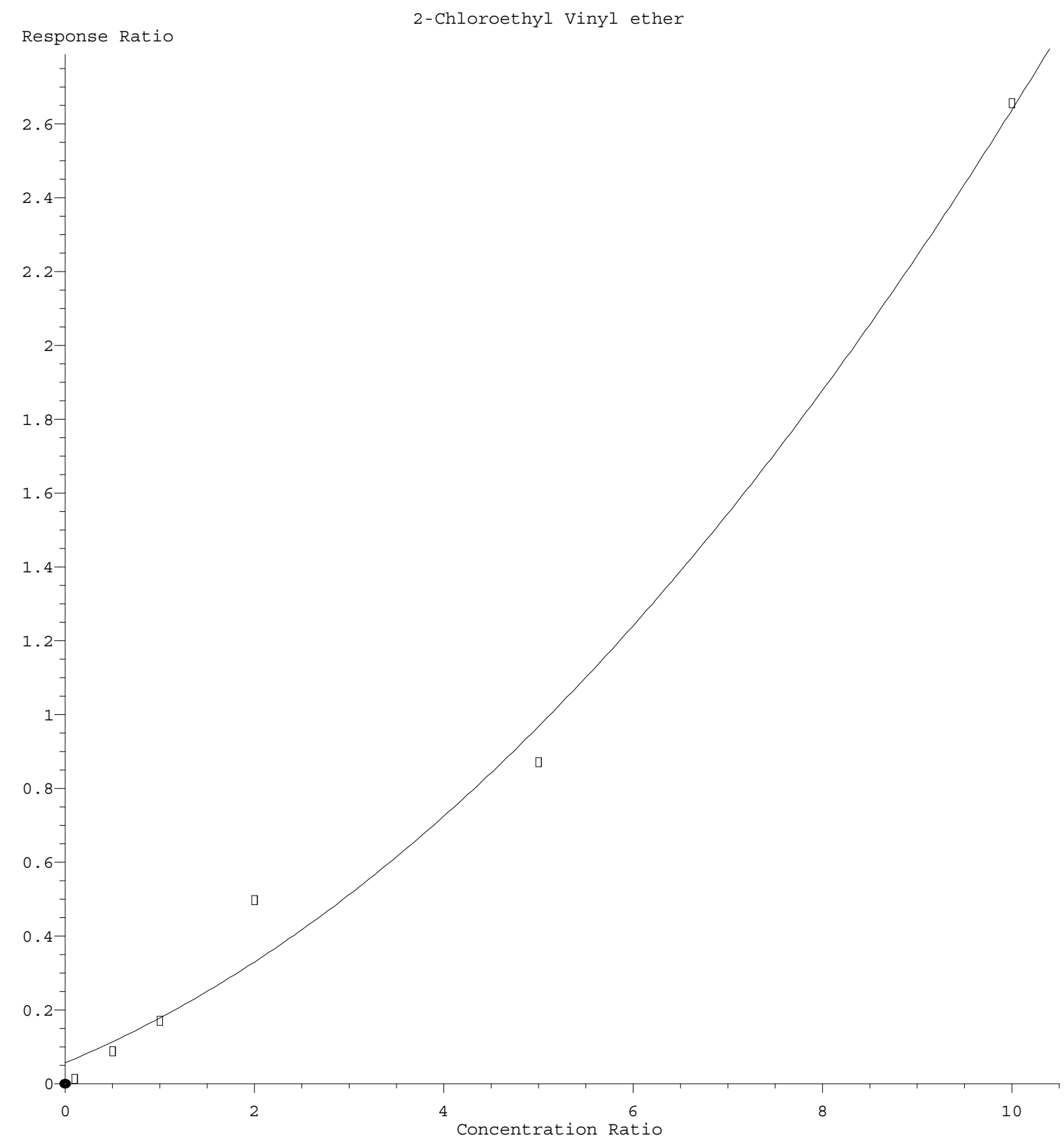
(#) = Out of Range



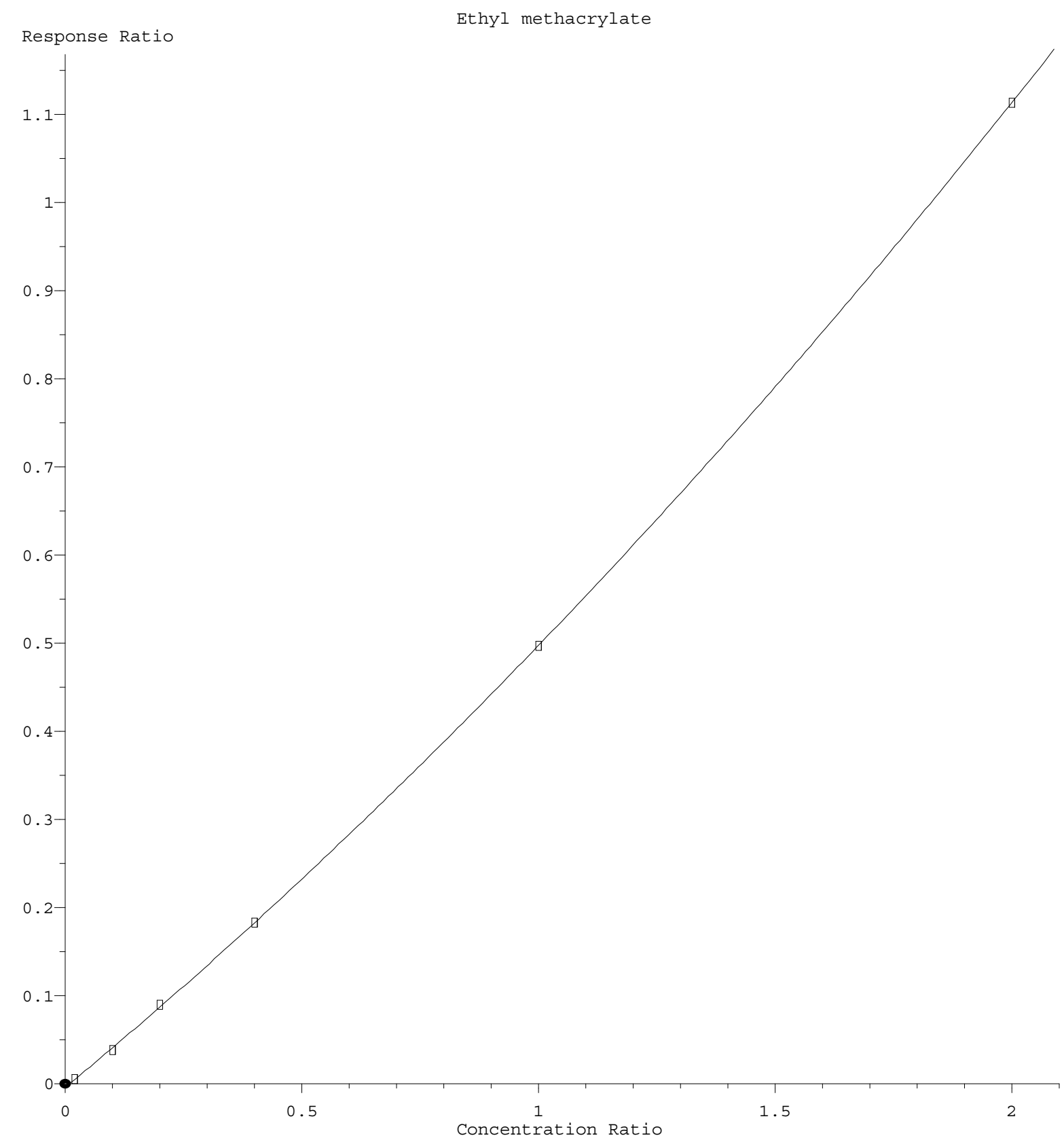
R = 2.438e-001 A*A + 2.829e+000 A - 3.541e-002
Coef of Det (r^2) = 0.999965 Curve Fit: Quadratic
Method Name: Z:\voasrv\HPCHEM1\MSVOA N\methods\82N021825W.M
Calibration Table Last Updated: Wed Feb 19 03:43:32 2025



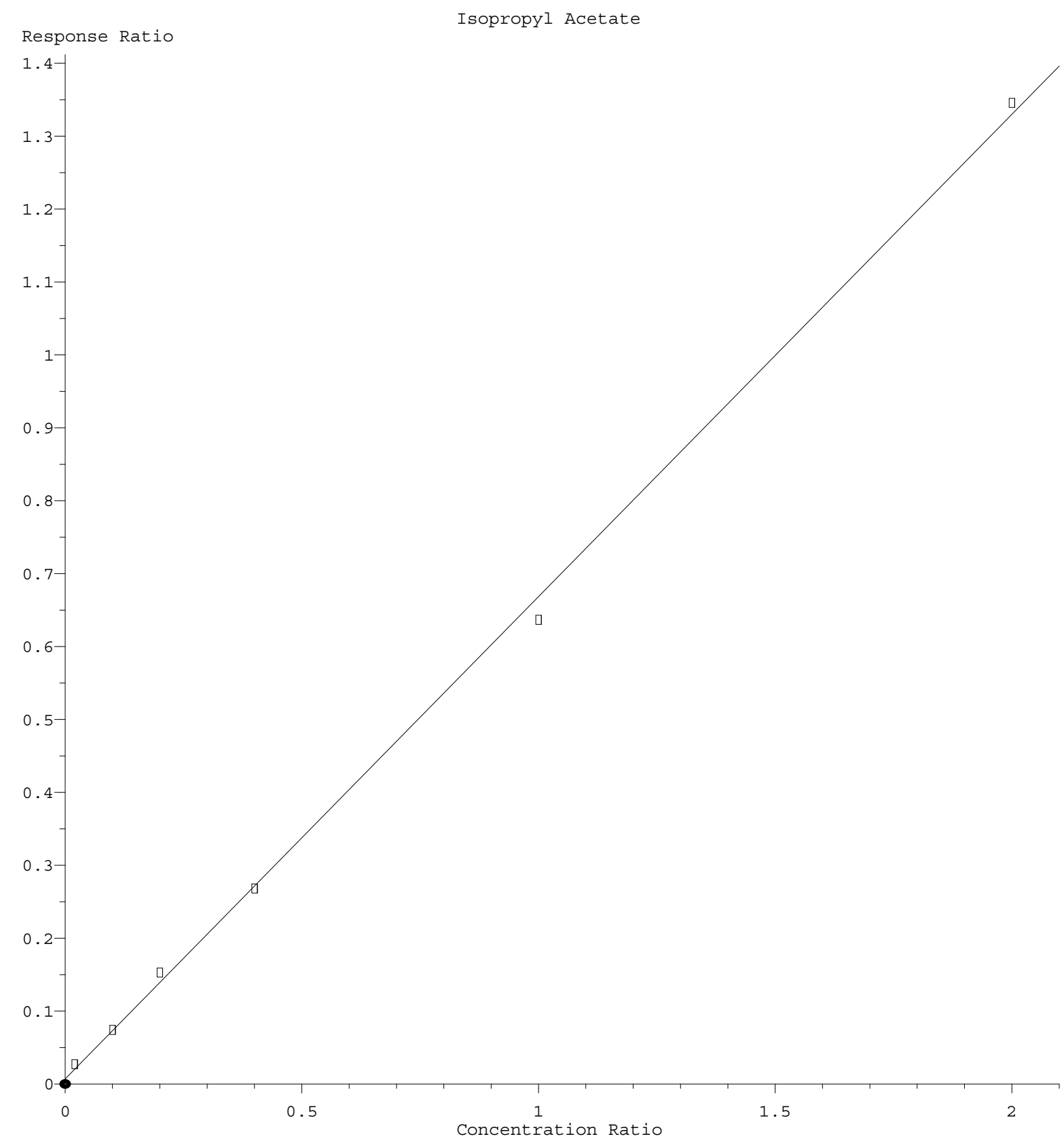
R = 1.156e-001 A*A + 1.102e+000 A - 1.290e-002
Coef of Det (r^2) = 0.999965 Curve Fit: Quadratic
Method Name: Z:\voasrv\HPCHEM1\MSVOA N\methods\82N021825W.M
Calibration Table Last Updated: Wed Feb 19 03:43:32 2025



R = 1.518e-002 A*A + 1.064e-001 A + 5.673e-002
Coef of Det (r^2) = 0.991781 Curve Fit: Quadratic
Method Name: Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Calibration Table Last Updated: Wed Feb 19 03:43:32 2025



R = 5.718e-002 A*A + 4.442e-001 A - 4.090e-003
Coef of Det (r^2) = 0.999984 Curve Fit: Quadratic
Method Name: Z:\voasrv\HPCHEM1\MSVOA N\methods\82N021825W.M
Calibration Table Last Updated: Wed Feb 19 03:43:32 2025



Response = 6.614e-001 * Amt + 7.307e-003
Coef of Det (r^2) = 0.998821 Curve Fit: Linear
Method Name: Z:\voasrv\HPCHEM1\MSVOA N\methods\82N021825W.M
Calibration Table Last Updated: Wed Feb 19 03:43:32 2025

Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN021825\
Data File : VN085772.D
Acq On : 18 Feb 2025 11:09
Operator : JC\MD
Sample : VSTDICC100
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 19 03:15:39 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:03:15 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC100

Manual Integrations APPROVED

Reviewed By :John Carlone 02/19/2025
Supervised By :Mahesh Dadoda 02/19/2025

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	8.218	168	290979	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.094	114	458183	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.859	117	412615	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.788	152	208401	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.571	65	406028	107.630	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 215.260%#			
35) Dibromofluoromethane	8.159	113	343729	114.648	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 229.300%#			
50) Toluene-d8	10.559	98	1323681	121.348	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery = 242.700%#			
62) 4-Bromofluorobenzene	12.841	95	460996	128.269	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery = 256.540%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.124	85	403621	101.979	ug/l	99
3) Chloromethane	2.359	50	376343	94.759	ug/l	99
4) Vinyl Chloride	2.512	62	406434	96.652	ug/l	100
5) Bromomethane	2.948	94	252576	93.935	ug/l	99
6) Chloroethane	3.118	64	260404	93.490	ug/l	97
7) Trichlorofluoromethane	3.495	101	587970	96.574	ug/l	98
8) Diethyl Ether	3.959	74	199406	101.225	ug/l	98
9) 1,1,2-Trichlorotrifluo...	4.365	101	350536	99.604	ug/l	98
10) Methyl Iodide	4.583	142	444531	102.472	ug/l	98
11) Tert butyl alcohol	5.506	59	210616	453.930	ug/l	100
12) 1,1-Dichloroethene	4.336	96	323037	101.234	ug/l	96
13) Acrolein	4.171	56	337091	489.916	ug/l	98
14) Allyl chloride	5.018	41	434760	103.773	ug/l	97
15) Acrylonitrile	5.706	53	761272	504.697	ug/l	99
16) Acetone	4.418	43	567220	475.190	ug/l	99
17) Carbon Disulfide	4.706	76	910987	96.328	ug/l	99
18) Methyl Acetate	5.012	43	379901	92.531	ug/l	99
19) Methyl tert-butyl Ether	5.783	73	1016766	107.229	ug/l	100
20) Methylene Chloride	5.271	84	365222	95.142	ug/l	98
21) trans-1,2-Dichloroethene	5.783	96	340161	99.001	ug/l	96
22) Diisopropyl ether	6.665	45	1015041	107.223	ug/l	99
23) Vinyl Acetate	6.594	43	3542783	548.253	ug/l	100
24) 1,1-Dichloroethane	6.565	63	638203	99.172	ug/l	98
25) 2-Butanone	7.471	43	896027	510.235	ug/l	100
26) 2,2-Dichloropropane	7.483	77	572429	100.033	ug/l	99
27) cis-1,2-Dichloroethene	7.477	96	410066	102.929	ug/l	99
28) Bromochloromethane	7.806	49	280092	105.895	ug/l	97
29) Tetrahydrofuran	7.830	42	599504	528.664	ug/l	100
30) Chloroform	7.959	83	651761	96.914	ug/l	99
31) Cyclohexane	8.253	56	511031	94.843	ug/l	98
32) 1,1,1-Trichloroethane	8.165	97	589206	98.502	ug/l	98
36) 1,1-Dichloropropene	8.365	75	466531	109.949	ug/l	99
37) Ethyl Acetate	7.553	43	366887	105.069	ug/l	99
38) Carbon Tetrachloride	8.353	117	524870	104.105	ug/l	98
39) Methylcyclohexane	9.594	83	513492	123.184	ug/l	98
40) Benzene	8.600	78	1448660	106.522	ug/l	99

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN021825\
Data File : VN085772.D
Acq On : 18 Feb 2025 11:09
Operator : JC\MD
Sample : VSTDICC100
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 19 03:15:39 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:03:15 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC100

Manual Integrations APPROVED

Reviewed By :John Carlone 02/19/2025
Supervised By :Mahesh Dadoda 02/19/2025

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
41) Methacrylonitrile	7.771	41	203689	109.119 ug/l		95
42) 1,2-Dichloroethane	8.665	62	457707	103.326 ug/l		100
43) Isopropyl Acetate	8.683	43	616521	101.163 ug/l		98
44) Trichloroethene	9.347	130	339019	101.529 ug/l		100
45) 1,2-Dichloropropane	9.618	63	345721	105.316 ug/l		99
46) Dibromomethane	9.700	93	243628	105.216 ug/l		100
47) Bromodichloromethane	9.883	83	521496	105.269 ug/l		99
48) Methyl methacrylate	9.677	41	304067	117.252 ug/l		100
49) 1,4-Dioxane	9.688	88	100443	2036.793 ug/l		98
51) 4-Methyl-2-Pentanone	10.441	43	1896777	563.403 ug/l		100
52) Toluene	10.624	92	910251	114.182 ug/l		100
53) t-1,3-Dichloropropene	10.829	75	527815	115.223 ug/l		99
54) cis-1,3-Dichloropropene	10.306	75	573653	114.202 ug/l		99
55) 1,1,2-Trichloroethane	11.012	97	330642	104.317 ug/l		99
56) Ethyl methacrylate	10.871	69	510041	100.007 ug/l		100
57) 1,3-Dichloropropane	11.159	76	567039	107.169 ug/l		100
58) 2-Chloroethyl Vinyl ether	10.153	63	1216927	502.158 ug/l		99
59) 2-Hexanone	11.188	43	1358126	586.394 ug/l		99
60) Dibromochloromethane	11.353	129	402920	109.169 ug/l		99
61) 1,2-Dibromoethane	11.465	107	324747	108.439 ug/l		99
64) Tetrachloroethene	11.100	164	316658	99.063 ug/l		97
65) Chlorobenzene	11.888	112	976337	103.290 ug/l		98
66) 1,1,1,2-Tetrachloroethane	11.959	131	346777	102.068 ug/l		100
67) Ethyl Benzene	11.959	91	1736848	117.301 ug/l		100
68) m/p-Xylenes	12.065	106	1335750	237.496 ug/l		99
69) o-Xylene	12.394	106	635879	118.977 ug/l		99
70) Styrene	12.406	104	1095464	100.012 ug/l		100
71) Bromoform	12.576	173	269816	106.877 ug/l	#	98
73) Isopropylbenzene	12.688	105	1605096	112.422 ug/l		100
74) N-amyl acetate	12.488	43	546485	108.541 ug/l		99
75) 1,1,2,2-Tetrachloroethane	12.935	83	447332	91.050 ug/l		100
76) 1,2,3-Trichloropropane	12.988	75	401864m	87.774 ug/l		
77) Bromobenzene	12.976	156	395882	102.631 ug/l		100
78) n-propylbenzene	13.029	91	1905758	116.552 ug/l		100
79) 2-Chlorotoluene	13.118	91	1158348	106.029 ug/l		100
80) 1,3,5-Trimethylbenzene	13.171	105	1351753	116.226 ug/l		100
81) trans-1,4-Dichloro-2-b...	12.735	75	170494	107.459 ug/l		96
82) 4-Chlorotoluene	13.218	91	1173182	108.322 ug/l		99
83) tert-Butylbenzene	13.435	119	1136802	116.235 ug/l		100
84) 1,2,4-Trimethylbenzene	13.476	105	1378080	119.764 ug/l		100
85) sec-Butylbenzene	13.612	105	1610382	116.540 ug/l		100
86) p-Isopropyltoluene	13.723	119	1374884	99.983 ug/l		100
87) 1,3-Dichlorobenzene	13.729	146	738679	102.213 ug/l		99
88) 1,4-Dichlorobenzene	13.806	146	729470	98.484 ug/l		99
89) n-Butylbenzene	14.053	91	1179057	120.179 ug/l		99
90) Hexachloroethane	14.329	117	258559	98.800 ug/l		97
91) 1,2-Dichlorobenzene	14.100	146	691905	99.562 ug/l		99
92) 1,2-Dibromo-3-Chloropr...	14.717	75	82545	91.495 ug/l		97
93) 1,2,4-Trichlorobenzene	15.388	180	365599	110.404 ug/l		99
94) Hexachlorobutadiene	15.494	225	181264	90.068 ug/l		98
95) Naphthalene	15.635	128	1053414	115.870 ug/l		100
96) 1,2,3-Trichlorobenzene	15.835	180	343936	103.456 ug/l		99

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN021825\
Data File : VN085772.D
Acq On : 18 Feb 2025 11:09
Operator : JC\MD
Sample : VSTDICC100
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC100

Manual Integrations APPROVED

Reviewed By :John Carlone 02/19/2025
Supervised By :Mahesh Dadoda 02/19/2025

Quant Time: Feb 19 03:15:39 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:03:15 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

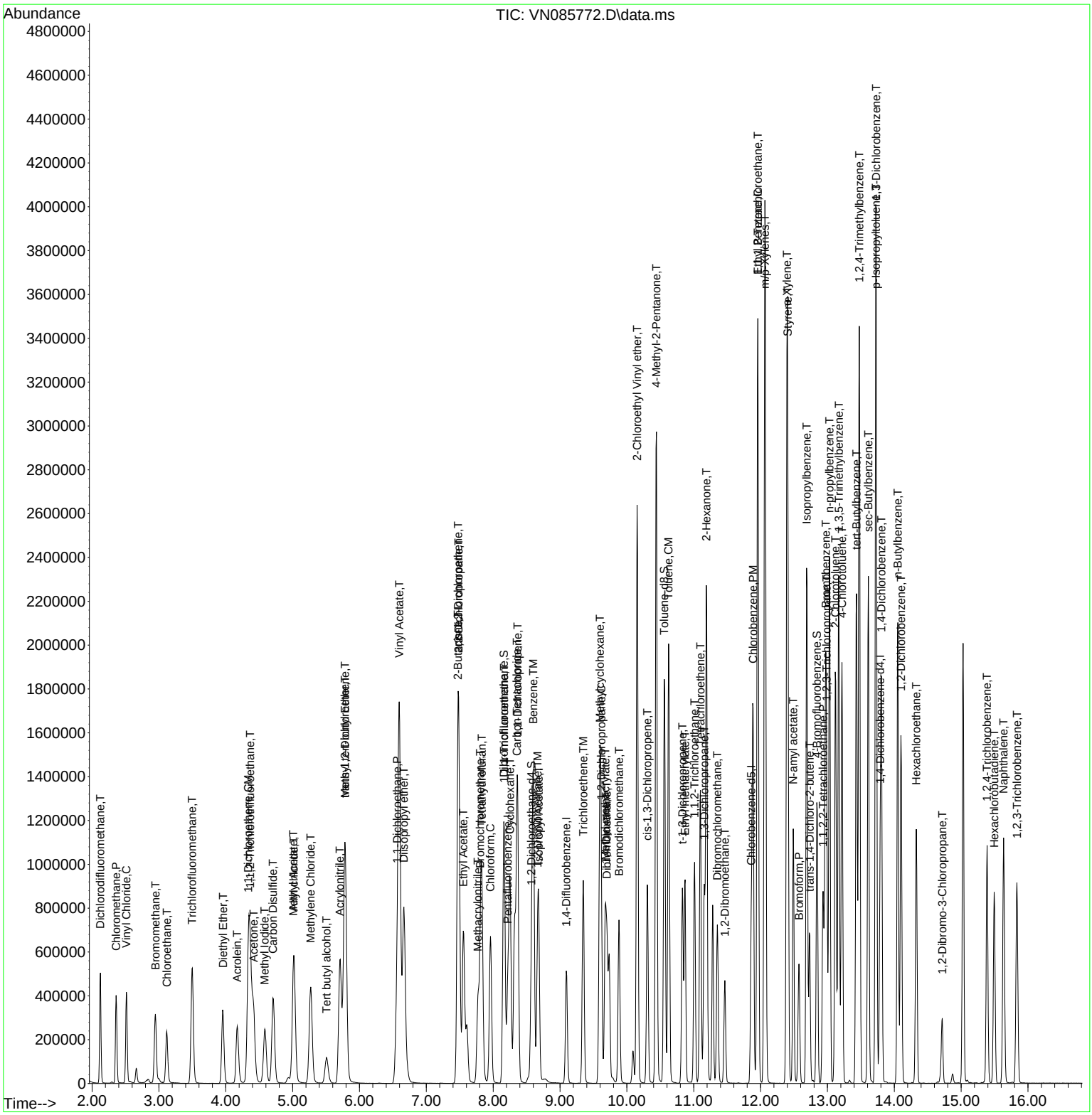
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN021825\
Data File : VN085772.D
Acq On : 18 Feb 2025 11:09
Operator : JC\MD
Sample : VSTDICC100
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Feb 19 03:15:39 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:03:15 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC100

Manual Integrations APPROVED

Reviewed By :John Carlone 02/19/2025
Supervised By :Mahesh Dadoda 02/19/2025



Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN021825\
Data File : VN085773.D
Acq On : 18 Feb 2025 11:32
Operator : JC\MD
Sample : VSTDICCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 19 03:16:32 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:03:15 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VSTDICCC050

Manual Integrations APPROVED

Reviewed By :John Carlone 02/19/2025
Supervised By :Mahesh Dadoda 02/19/2025

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	8.218	168	322407	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.094	114	526945	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.859	117	461653	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.788	152	227499	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.571	65	197726	47.304	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 94.600%			
35) Dibromofluoromethane	8.159	113	167050	48.447	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 96.900%			
50) Toluene-d8	10.559	98	632021	50.380	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery = 100.760%			
62) 4-Bromofluorobenzene	12.841	95	220691	53.393	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery = 106.780%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.124	85	215740	49.195	ug/l	100
3) Chloromethane	2.359	50	200592	45.584	ug/l	100
4) Vinyl Chloride	2.512	62	218675	46.933	ug/l	100
5) Bromomethane	2.953	94	136563	45.838	ug/l	100
6) Chloroethane	3.124	64	134303	43.517	ug/l	100
7) Trichlorofluoromethane	3.501	101	309133	45.825	ug/l	100
8) Diethyl Ether	3.959	74	106634	48.854	ug/l	100
9) 1,1,2-Trichlorotrifluo...	4.365	101	181996	46.673	ug/l	100
10) Methyl Iodide	4.583	142	232889	48.452	ug/l	100
11) Tert butyl alcohol	5.506	59	126538	246.136	ug/l	100
12) 1,1-Dichloroethene	4.336	96	170063	48.100	ug/l	100
13) Acrolein	4.177	56	203891	267.442	ug/l	100
14) Allyl chloride	5.018	41	222754	47.986	ug/l	100
15) Acrylonitrile	5.712	53	394641	236.130	ug/l	100
16) Acetone	4.418	43	297175	224.691	ug/l	100
17) Carbon Disulfide	4.712	76	474860	45.317	ug/l	100
18) Methyl Acetate	5.018	43	199458	43.846	ug/l	100
19) Methyl tert-butyl Ether	5.789	73	534589	50.883	ug/l	100
20) Methylene Chloride	5.271	84	191098	44.929	ug/l	100
21) trans-1,2-Dichloroethene	5.783	96	176973	46.486	ug/l	100
22) Diisopropyl ether	6.665	45	529828	50.512	ug/l	100
23) Vinyl Acetate	6.594	43	1802342	251.727	ug/l	100
24) 1,1-Dichloroethane	6.565	63	333567	46.781	ug/l	100
25) 2-Butanone	7.471	43	474562	243.893	ug/l	100
26) 2,2-Dichloropropane	7.483	77	304840	48.079	ug/l	100
27) cis-1,2-Dichloroethene	7.483	96	213235	48.306	ug/l	100
28) Bromochloromethane	7.806	49	143276	48.888	ug/l	100
29) Tetrahydrofuran	7.830	42	315243	250.894	ug/l	100
30) Chloroform	7.959	83	344841	46.278	ug/l	100
31) Cyclohexane	8.253	56	277254	46.440	ug/l	100
32) 1,1,1-Trichloroethane	8.165	97	311700	47.030	ug/l	100
36) 1,1-Dichloropropene	8.365	75	242144	49.620	ug/l	100
37) Ethyl Acetate	7.553	43	197609	49.206	ug/l	100
38) Carbon Tetrachloride	8.353	117	278306	47.997	ug/l	100
39) Methylcyclohexane	9.594	83	259289	54.085	ug/l	100
40) Benzene	8.600	78	759363	48.551	ug/l	100

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN021825\
Data File : VN085773.D
Acq On : 18 Feb 2025 11:32
Operator : JC\MD
Sample : VSTDICCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 19 03:16:32 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:03:15 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VSTDICCC050

Manual Integrations APPROVED

Reviewed By :John Carlone 02/19/2025
Supervised By :Mahesh Dadoda 02/19/2025

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
41) Methacrylonitrile	7.765	41	113568	52.901	ug/l		100
42) 1,2-Dichloroethane	8.665	62	240115	47.132	ug/l		100
43) Isopropyl Acetate	8.683	43	335482	47.574	ug/l		100
44) Trichloroethene	9.347	130	178742	46.544	ug/l		100
45) 1,2-Dichloropropane	9.618	63	182649	48.379	ug/l		100
46) Dibromomethane	9.700	93	127850	48.010	ug/l		100
47) Bromodichloromethane	9.882	83	272912	47.901	ug/l		100
48) Methyl methacrylate	9.677	41	158375	53.102	ug/l		100
49) 1,4-Dioxane	9.688	88	60759	1071.301	ug/l		100
51) 4-Methyl-2-Pentanone	10.441	43	997906	257.731	ug/l		100
52) Toluene	10.624	92	475069	51.816	ug/l		100
53) t-1,3-Dichloropropene	10.829	75	274791	52.159	ug/l		100
54) cis-1,3-Dichloropropene	10.306	75	298359	51.646	ug/l		100
55) 1,1,2-Trichloroethane	11.012	97	174198	47.788	ug/l		100
56) Ethyl methacrylate	10.871	69	261825	49.960	ug/l		100
57) 1,3-Dichloropropane	11.159	76	297683	48.920	ug/l		100
58) 2-Chloroethyl Vinyl ether	10.153	63	458983	230.774	ug/l		100
59) 2-Hexanone	11.188	43	719870	270.257	ug/l		100
60) Dibromochloromethane	11.353	129	211769	49.890	ug/l		100
61) 1,2-Dibromoethane	11.465	107	169422	49.191	ug/l		100
64) Tetrachloroethene	11.100	164	166710	46.613	ug/l		100
65) Chlorobenzene	11.882	112	512436	48.454	ug/l		100
66) 1,1,1,2-Tetrachloroethane	11.959	131	182537	48.020	ug/l		100
67) Ethyl Benzene	11.959	91	879040	53.062	ug/l		100
68) m/p-Xylenes	12.065	106	684377	108.757	ug/l		100
69) o-Xylene	12.394	106	324948	54.342	ug/l		100
70) Styrene	12.406	104	555269	49.909	ug/l		100
71) Bromoform	12.570	173	139895	49.528	ug/l	#	100
73) Isopropylbenzene	12.688	105	817980	52.482	ug/l		100
74) N-amyl acetate	12.488	43	282288	51.360	ug/l		100
75) 1,1,2,2-Tetrachloroethane	12.935	83	239463	44.649	ug/l		100
76) 1,2,3-Trichloropropane	12.988	75	215451m	43.108	ug/l		
77) Bromobenzene	12.976	156	205754	48.863	ug/l		100
78) n-propylbenzene	13.029	91	968182	54.241	ug/l		100
79) 2-Chlorotoluene	13.118	91	595046	49.895	ug/l		100
80) 1,3,5-Trimethylbenzene	13.165	105	695205	54.757	ug/l		100
81) trans-1,4-Dichloro-2-b...	12.729	75	90255	52.111	ug/l		100
82) 4-Chlorotoluene	13.218	91	604612	51.139	ug/l		100
83) tert-Butylbenzene	13.435	119	586493	54.933	ug/l		100
84) 1,2,4-Trimethylbenzene	13.476	105	700260	55.748	ug/l		100
85) sec-Butylbenzene	13.612	105	831143	55.099	ug/l		100
86) p-Isopropyltoluene	13.723	119	692641	50.103	ug/l		100
87) 1,3-Dichlorobenzene	13.729	146	372004	47.154	ug/l		100
88) 1,4-Dichlorobenzene	13.806	146	374700	46.340	ug/l		100
89) n-Butylbenzene	14.053	91	580445	54.197	ug/l		100
90) Hexachloroethane	14.329	117	133438	46.708	ug/l		100
91) 1,2-Dichlorobenzene	14.100	146	358159	47.211	ug/l		100
92) 1,2-Dibromo-3-Chloropr...	14.712	75	43935	44.611	ug/l		100
93) 1,2,4-Trichlorobenzene	15.388	180	182458	50.473	ug/l		100
94) Hexachlorobutadiene	15.494	225	96444	43.899	ug/l		100
95) Naphthalene	15.635	128	528627	53.265	ug/l		100
96) 1,2,3-Trichlorobenzene	15.835	180	179544	49.473	ug/l		100

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN021825\
Data File : VN085773.D
Acq On : 18 Feb 2025 11:32
Operator : JC\MD
Sample : VSTDICCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VSTDICCC050

Manual Integrations APPROVED

Reviewed By :John Carlone 02/19/2025
Supervised By :Mahesh Dadoda 02/19/2025

Quant Time: Feb 19 03:16:32 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:03:15 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

ICAL Form

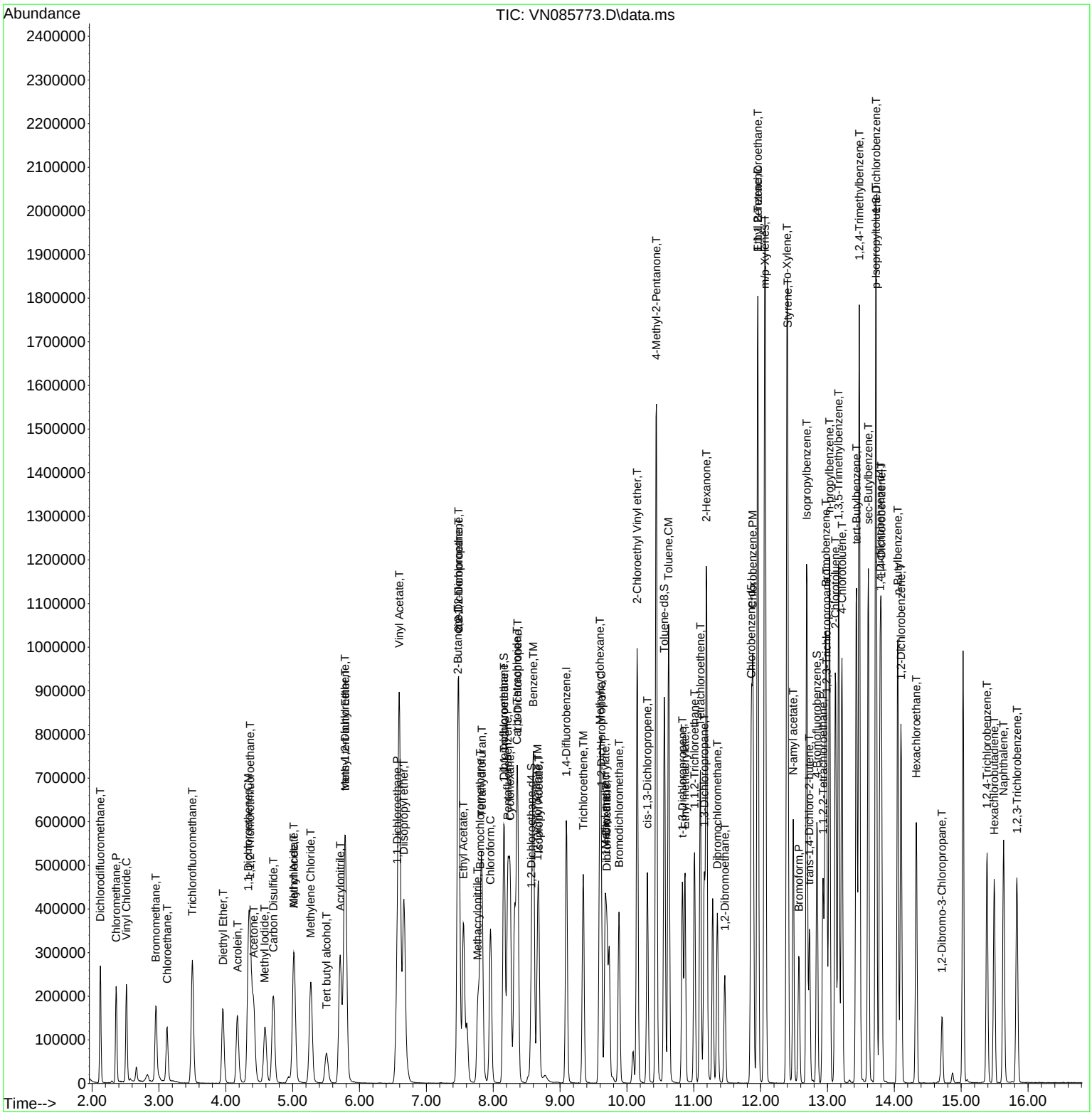
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN021825\
Data File : VN085773.D
Acq On : 18 Feb 2025 11:32
Operator : JC\MD
Sample : VSTDICCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Feb 19 03:16:32 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:03:15 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VSTDICCC050

Manual Integrations APPROVED

Reviewed By :John Carlone 02/19/2025
Supervised By :Mahesh Dadoda 02/19/2025



Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN021825\
Data File : VN085775.D
Acq On : 18 Feb 2025 12:20
Operator : JC\MD
Sample : VSTDICC010
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 19 03:17:27 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:03:15 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC010

Manual Integrations APPROVED

Reviewed By :John Carlone 02/19/2025
Supervised By :Mahesh Dadoda 02/19/2025

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	8.218	168	235331	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.094	114	397776	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.859	117	339681	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.788	152	151740	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.577	65	27654	9.064	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery =	18.120%#		
35) Dibromofluoromethane	8.159	113	23353	8.972	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery =	17.940%#		
50) Toluene-d8	10.565	98	80889	8.542	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery =	17.080%#		
62) 4-Bromofluorobenzene	12.841	95	25697	8.236	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery =	16.480%#		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.124	85	36657	11.452	ug/l	96
3) Chloromethane	2.359	50	34946	10.880	ug/l	97
4) Vinyl Chloride	2.518	62	37462	11.015	ug/l	99
5) Bromomethane	2.965	94	25562	11.755	ug/l	100
6) Chloroethane	3.124	64	24265	10.772	ug/l	95
7) Trichlorofluoromethane	3.500	101	53380	10.841	ug/l	99
8) Diethyl Ether	3.959	74	17236	10.819	ug/l	94
9) 1,1,2-Trichlorotrifluo...	4.371	101	31724	11.146	ug/l	96
10) Methyl Iodide	4.589	142	37913	10.806	ug/l	93
11) Tert butyl alcohol	5.506	59	21584	57.519	ug/l	99
12) 1,1-Dichloroethene	4.342	96	27815	10.778	ug/l	97
13) Acrolein	4.177	56	27644	49.677	ug/l	98
14) Allyl chloride	5.024	41	36624	10.809	ug/l	98
15) Acrylonitrile	5.718	53	65440	53.643	ug/l	99
16) Acetone	4.424	43	51172	53.007	ug/l	97
17) Carbon Disulfide	4.712	76	84915	11.102	ug/l	99
18) Methyl Acetate	5.024	43	37354	11.250	ug/l	98
19) Methyl tert-butyl Ether	5.788	73	80686	10.521	ug/l	96
20) Methylene Chloride	5.271	84	33412	10.762	ug/l	98
21) trans-1,2-Dichloroethene	5.783	96	29226	10.517	ug/l	91
22) Diisopropyl ether	6.671	45	83002	10.841	ug/l	95
23) Vinyl Acetate	6.600	43	279697m	53.519	ug/l	
24) 1,1-Dichloroethane	6.565	63	57247	10.999	ug/l	97
25) 2-Butanone	7.477	43	77791	54.772	ug/l	98
26) 2,2-Dichloropropane	7.482	77	50333	10.876	ug/l	98
27) cis-1,2-Dichloroethene	7.488	96	34806	10.802	ug/l	98
28) Bromochloromethane	7.812	49	16276	7.609	ug/l #	99
29) Tetrahydrofuran	7.835	42	50478	55.039	ug/l	98
30) Chloroform	7.959	83	59719	10.980	ug/l	96
31) Cyclohexane	8.253	56	45995	10.555	ug/l	97
32) 1,1,1-Trichloroethane	8.165	97	51254	10.595	ug/l	98
36) 1,1-Dichloropropene	8.365	75	38983	10.582	ug/l	99
37) Ethyl Acetate	7.553	43	30665	10.115	ug/l	96
38) Carbon Tetrachloride	8.353	117	46420	10.605	ug/l	97
39) Methylcyclohexane	9.594	83	35475	9.803	ug/l #	85
40) Benzene	8.606	78	124704	10.562	ug/l	98

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN021825\
Data File : VN085775.D
Acq On : 18 Feb 2025 12:20
Operator : JC\MD
Sample : VSTDICC010
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 19 03:17:27 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:03:15 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC010

Manual Integrations APPROVED

Reviewed By :John Carlone 02/19/2025
Supervised By :Mahesh Dadoda 02/19/2025

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
41) Methacrylonitrile	7.771	41	16811	10.373	ug/l		99
42) 1,2-Dichloroethane	8.665	62	41912	10.898	ug/l		98
43) Isopropyl Acetate	8.682	43	60794	11.001	ug/l		95
44) Trichloroethene	9.347	130	30561	10.542	ug/l		88
45) 1,2-Dichloropropane	9.618	63	30619	10.744	ug/l		100
46) Dibromomethane	9.706	93	21085	10.489	ug/l		98
47) Bromodichloromethane	9.882	83	45413	10.559	ug/l		95
48) Methyl methacrylate	9.676	41	22058	9.798	ug/l		96
49) 1,4-Dioxane	9.688	88	8936	208.723	ug/l	#	95
51) 4-Methyl-2-Pentanone	10.441	43	155789	53.302	ug/l		98
52) Toluene	10.623	92	73516	10.622	ug/l		98
53) t-1,3-Dichloropropene	10.829	75	41230	10.367	ug/l		100
54) cis-1,3-Dichloropropene	10.306	75	46300	10.617	ug/l		95
55) 1,1,2-Trichloroethane	11.012	97	29408	10.687	ug/l		96
56) Ethyl methacrylate	10.871	69	35641	10.274	ug/l		99
57) 1,3-Dichloropropane	11.159	76	48905	10.647	ug/l		98
58) 2-Chloroethyl Vinyl ether	10.159	63	67791	47.108	ug/l		97
59) 2-Hexanone	11.188	43	105782	52.609	ug/l		97
60) Dibromochloromethane	11.353	129	34267	10.694	ug/l		98
61) 1,2-Dibromoethane	11.465	107	28789	11.073	ug/l		97
64) Tetrachloroethene	11.100	164	28564	10.855	ug/l		92
65) Chlorobenzene	11.888	112	82365	10.585	ug/l		99
66) 1,1,1,2-Tetrachloroethane	11.953	131	30133	10.773	ug/l		99
67) Ethyl Benzene	11.959	91	124323	10.199	ug/l		98
68) m/p-Xylenes	12.065	106	98574	21.290	ug/l		98
69) o-Xylene	12.394	106	45263	10.287	ug/l		100
70) Styrene	12.406	104	72044	9.994	ug/l		98
71) Bromoform	12.576	173	21882	10.529	ug/l	#	98
73) Isopropylbenzene	12.688	105	109944	10.576	ug/l		99
74) N-amyl acetate	12.488	43	38318	10.452	ug/l		97
75) 1,1,2,2-Tetrachloroethane	12.935	83	39575	11.063	ug/l		99
76) 1,2,3-Trichloropropane	12.988	75	34754m	10.425	ug/l		
77) Bromobenzene	12.976	156	31066	11.061	ug/l		98
78) n-propylbenzene	13.029	91	125206	10.517	ug/l		99
79) 2-Chlorotoluene	13.117	91	86237	10.841	ug/l		100
80) 1,3,5-Trimethylbenzene	13.170	105	90718	10.713	ug/l		100
81) trans-1,4-Dichloro-2-b...	12.735	75	11901	10.302	ug/l		97
82) 4-Chlorotoluene	13.217	91	86106	10.919	ug/l		100
83) tert-Butylbenzene	13.435	119	73803	10.364	ug/l		96
84) 1,2,4-Trimethylbenzene	13.476	105	89125	10.638	ug/l		99
85) sec-Butylbenzene	13.611	105	107253	10.660	ug/l		99
86) p-Isopropyltoluene	13.723	119	84249	10.256	ug/l		99
87) 1,3-Dichlorobenzene	13.729	146	56944	10.822	ug/l		97
88) 1,4-Dichlorobenzene	13.806	146	57166	10.600	ug/l		99
89) n-Butylbenzene	14.053	91	70940	9.931	ug/l		96
90) Hexachloroethane	14.329	117	19282	10.119	ug/l		94
91) 1,2-Dichlorobenzene	14.100	146	53647	10.602	ug/l		100
92) 1,2-Dibromo-3-Chloropr...	14.717	75	7223	10.996	ug/l		95
93) 1,2,4-Trichlorobenzene	15.388	180	25090	10.406	ug/l		98
94) Hexachlorobutadiene	15.494	225	15278	10.426	ug/l		95
95) Naphthalene	15.635	128	65549	9.902	ug/l		99
96) 1,2,3-Trichlorobenzene	15.835	180	25612	10.581	ug/l		98

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN021825\
Data File : VN085775.D
Acq On : 18 Feb 2025 12:20
Operator : JC\MD
Sample : VSTDICC010
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC010

Manual Integrations APPROVED

Reviewed By :John Carlone 02/19/2025
Supervised By :Mahesh Dadoda 02/19/2025

Quant Time: Feb 19 03:17:27 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:03:15 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

ICAL Form

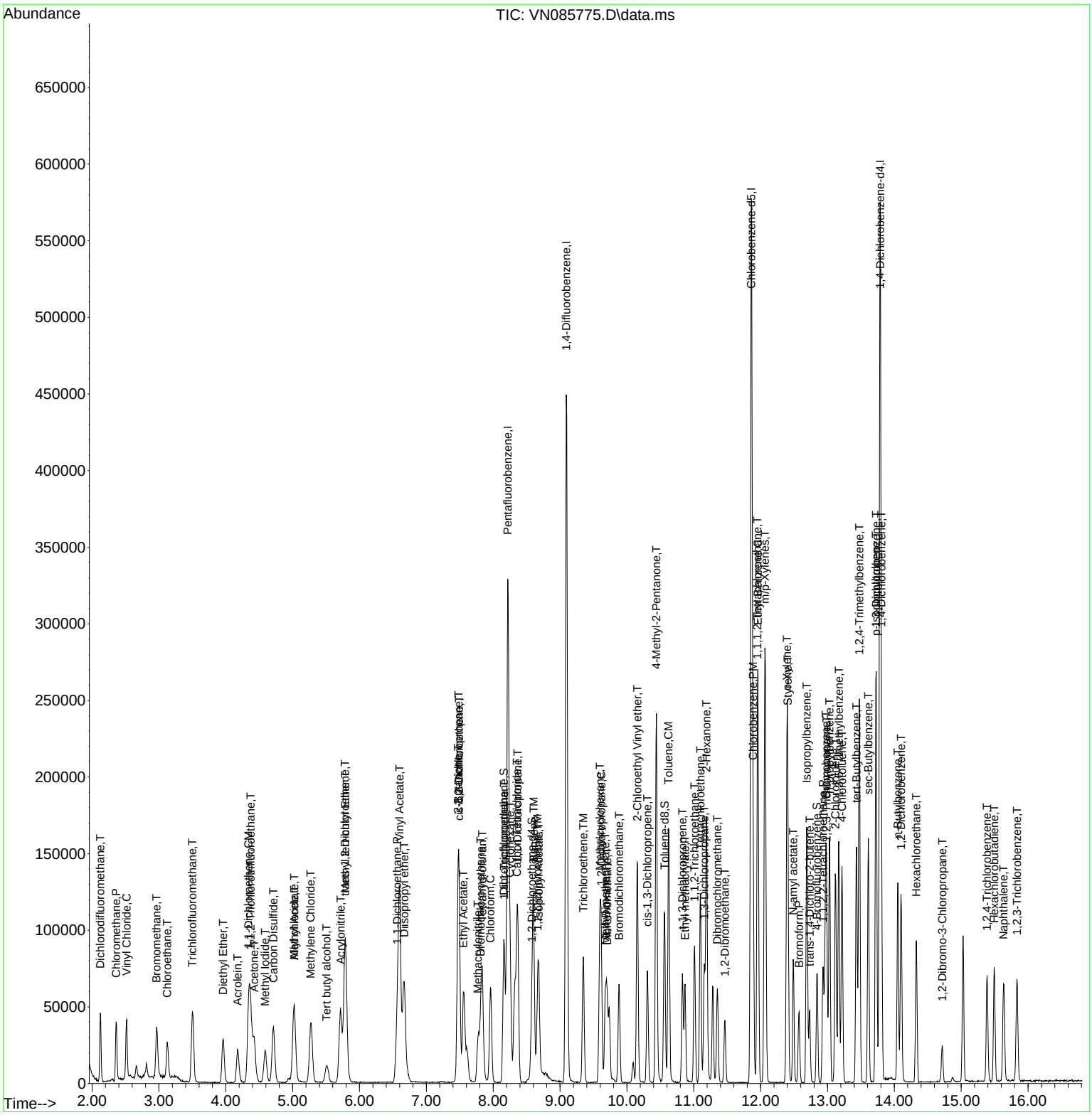
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN021825\
Data File : VN085775.D
Acq On : 18 Feb 2025 12:20
Operator : JC\MD
Sample : VSTDICC010
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Feb 19 03:17:27 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:03:15 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC010

Manual Integrations APPROVED

Reviewed By :John Carlone 02/19/2025
Supervised By :Mahesh Dadoda 02/19/2025



Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN021825\
Data File : VN085776.D
Acq On : 18 Feb 2025 12:43
Operator : JC\MD
Sample : VSTDICC005
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC005

Manual Integrations APPROVED

Reviewed By :John Carlone 02/19/2025
Supervised By :Mahesh Dadoda 02/19/2025

Quant Time: Feb 19 03:18:16 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:03:15 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	8.218	168	272461	50.000	ug/l		0.00
34) 1,4-Difluorobenzene	9.094	114	471970	50.000	ug/l		0.00
63) Chlorobenzene-d5	11.859	117	396883	50.000	ug/l		0.00
72) 1,4-Dichlorobenzene-d4	13.788	152	179241	50.000	ug/l		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4	8.571	65	20906	5.918	ug/l		0.00
Spiked Amount 50.000	Range 74 - 125		Recovery =	11.840%#			
35) Dibromofluoromethane	8.165	113	16866	5.461	ug/l		0.00
Spiked Amount 50.000	Range 75 - 124		Recovery =	10.920%#			
50) Toluene-d8	10.559	98	57180	5.089	ug/l		0.00
Spiked Amount 50.000	Range 86 - 113		Recovery =	10.180%#			
62) 4-Bromofluorobenzene	12.841	95	17484	4.723	ug/l		0.00
Spiked Amount 50.000	Range 77 - 121		Recovery =	9.440%#			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	2.124	85	17717	4.781	ug/l		97
3) Chloromethane	2.359	50	18038	4.850	ug/l		98
4) Vinyl Chloride	2.512	62	19849	5.041	ug/l		93
5) Bromomethane	2.953	94	13523	5.371	ug/l		97
6) Chloroethane	3.118	64	12801	4.908	ug/l		93
7) Trichlorofluoromethane	3.500	101	29008	5.088	ug/l		92
8) Diethyl Ether	3.959	74	9618	5.214	ug/l		96
9) 1,1,2-Trichlorotrifluo...	4.371	101	17299	5.250	ug/l		98
10) Methyl Iodide	4.595	142	19721	4.855	ug/l	#	88
11) Tert butyl alcohol	5.518	59	11272	25.945	ug/l	#	94
12) 1,1-Dichloroethene	4.342	96	15564	5.209	ug/l		96
13) Acrolein	4.177	56	17171	26.652	ug/l		95
14) Allyl chloride	5.012	41	19720	5.027	ug/l		94
15) Acrylonitrile	5.718	53	35404	25.067	ug/l		98
16) Acetone	4.424	43	28402	25.411	ug/l		100
17) Carbon Disulfide	4.706	76	43711	4.936	ug/l		96
18) Methyl Acetate	5.018	43	18793	4.888	ug/l		98
19) Methyl tert-butyl Ether	5.783	73	42491	4.786	ug/l		98
20) Methylene Chloride	5.271	84	18139	5.046	ug/l	#	88
21) trans-1,2-Dichloroethene	5.783	96	16330	5.076	ug/l		93
22) Diisopropyl ether	6.671	45	42703	4.817	ug/l		95
23) Vinyl Acetate	6.594	43	140821m	23.273	ug/l		
24) 1,1-Dichloroethane	6.565	63	30658	5.088	ug/l	#	93
25) 2-Butanone	7.477	43	40795	24.809	ug/l		95
26) 2,2-Dichloropropane	7.488	77	26889	5.018	ug/l		99
27) cis-1,2-Dichloroethene	7.483	96	18673	5.006	ug/l		98
28) Bromochloromethane	7.806	49	15543	6.276	ug/l		91
29) Tetrahydrofuran	7.841	42	24907	23.457	ug/l		98
30) Chloroform	7.959	83	31702	5.034	ug/l		100
31) Cyclohexane	8.247	56	28784	5.705	ug/l		91
32) 1,1,1-Trichloroethane	8.165	97	28815	5.145	ug/l	#	50
36) 1,1-Dichloropropene	8.365	75	20593	4.711	ug/l		98
37) Ethyl Acetate	7.553	43	17768	4.940	ug/l	#	85
38) Carbon Tetrachloride	8.353	117	25734	4.955	ug/l		95
39) Methylcyclohexane	9.594	83	19113	4.451	ug/l		97
40) Benzene	8.600	78	67051	4.786	ug/l		97

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN021825\
Data File : VN085776.D
Acq On : 18 Feb 2025 12:43
Operator : JC\MD
Sample : VSTDICC005
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 19 03:18:16 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:03:15 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC005

Manual Integrations APPROVED

Reviewed By :John Carlone 02/19/2025
Supervised By :Mahesh Dadoda 02/19/2025

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
41) Methacrylonitrile	7.777	41	9296	4.835	ug/l		98
42) 1,2-Dichloroethane	8.665	62	21886	4.796	ug/l		99
43) Isopropyl Acetate	8.682	43	35032	5.059	ug/l		92
44) Trichloroethene	9.347	130	16513	4.801	ug/l		96
45) 1,2-Dichloropropane	9.618	63	16228	4.799	ug/l		97
46) Dibromomethane	9.706	93	11544	4.840	ug/l		98
47) Bromodichloromethane	9.888	83	25152	4.929	ug/l		96
48) Methyl methacrylate	9.677	41	12200	4.567	ug/l		97
49) 1,4-Dioxane	9.688	88	4669	91.913	ug/l	#	89
51) 4-Methyl-2-Pentanone	10.441	43	80666	23.260	ug/l		96
52) Toluene	10.629	92	38701	4.713	ug/l		100
53) t-1,3-Dichloropropene	10.829	75	22215	4.708	ug/l		99
54) cis-1,3-Dichloropropene	10.312	75	24235	4.684	ug/l	#	91
55) 1,1,2-Trichloroethane	11.012	97	16352	5.008	ug/l		94
56) Ethyl methacrylate	10.871	69	18032	4.704	ug/l		99
57) 1,3-Dichloropropane	11.159	76	26117	4.792	ug/l		100
58) 2-Chloroethyl Vinyl ether	10.153	63	41567	14.159	ug/l		97
59) 2-Hexanone	11.188	43	53498	22.424	ug/l		94
60) Dibromochloromethane	11.353	129	18137	4.771	ug/l		98
61) 1,2-Dibromoethane	11.465	107	15097	4.894	ug/l		99
64) Tetrachloroethene	11.100	164	15504	5.043	ug/l		92
65) Chlorobenzene	11.888	112	45215	4.973	ug/l		95
66) 1,1,1,2-Tetrachloroethane	11.959	131	15949	4.880	ug/l		98
67) Ethyl Benzene	11.959	91	66079	4.640	ug/l		99
68) m/p-Xylenes	12.065	106	48412	8.949	ug/l		99
69) o-Xylene	12.394	106	23196	4.512	ug/l		100
70) Styrene	12.406	104	35138	4.557	ug/l		97
71) Bromoform	12.576	173	11934	4.915	ug/l	#	94
73) Isopropylbenzene	12.694	105	54982	4.477	ug/l		99
74) N-amyl acetate	12.488	43	20017	4.623	ug/l		96
75) 1,1,2,2-Tetrachloroethane	12.929	83	21823	5.164	ug/l		98
76) 1,2,3-Trichloropropane	12.988	75	20813m	5.285	ug/l		
77) Bromobenzene	12.976	156	16215	4.888	ug/l		95
78) n-propylbenzene	13.029	91	62073	4.414	ug/l		99
79) 2-Chlorotoluene	13.117	91	43457	4.625	ug/l		99
80) 1,3,5-Trimethylbenzene	13.170	105	43342	4.333	ug/l		97
81) trans-1,4-Dichloro-2-b...	12.729	75	6070	4.448	ug/l		90
82) 4-Chlorotoluene	13.217	91	43684	4.690	ug/l		100
83) tert-Butylbenzene	13.435	119	37975	4.515	ug/l		96
84) 1,2,4-Trimethylbenzene	13.476	105	42792	4.324	ug/l		97
85) sec-Butylbenzene	13.612	105	52659	4.431	ug/l		98
86) p-Isopropyltoluene	13.723	119	41010	4.632	ug/l		97
87) 1,3-Dichlorobenzene	13.729	146	30417	4.894	ug/l		99
88) 1,4-Dichlorobenzene	13.806	146	31847	4.999	ug/l		96
89) n-Butylbenzene	14.053	91	36427	4.317	ug/l		98
90) Hexachloroethane	14.329	117	11276	5.010	ug/l		99
91) 1,2-Dichlorobenzene	14.100	146	29424	4.923	ug/l		98
92) 1,2-Dibromo-3-Chloropr...	14.711	75	3987	5.138	ug/l		89
93) 1,2,4-Trichlorobenzene	15.388	180	13040	4.578	ug/l		96
94) Hexachlorobutadiene	15.494	225	8623	4.982	ug/l		98
95) Naphthalene	15.635	128	33300	4.259	ug/l		100
96) 1,2,3-Trichlorobenzene	15.835	180	13188	4.612	ug/l		98

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN021825\
Data File : VN085776.D
Acq On : 18 Feb 2025 12:43
Operator : JC\MD
Sample : VSTDICC005
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC005

Manual Integrations APPROVED

Reviewed By :John Carlone 02/19/2025
Supervised By :Mahesh Dadoda 02/19/2025

Quant Time: Feb 19 03:18:16 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:03:15 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

ICAL Form

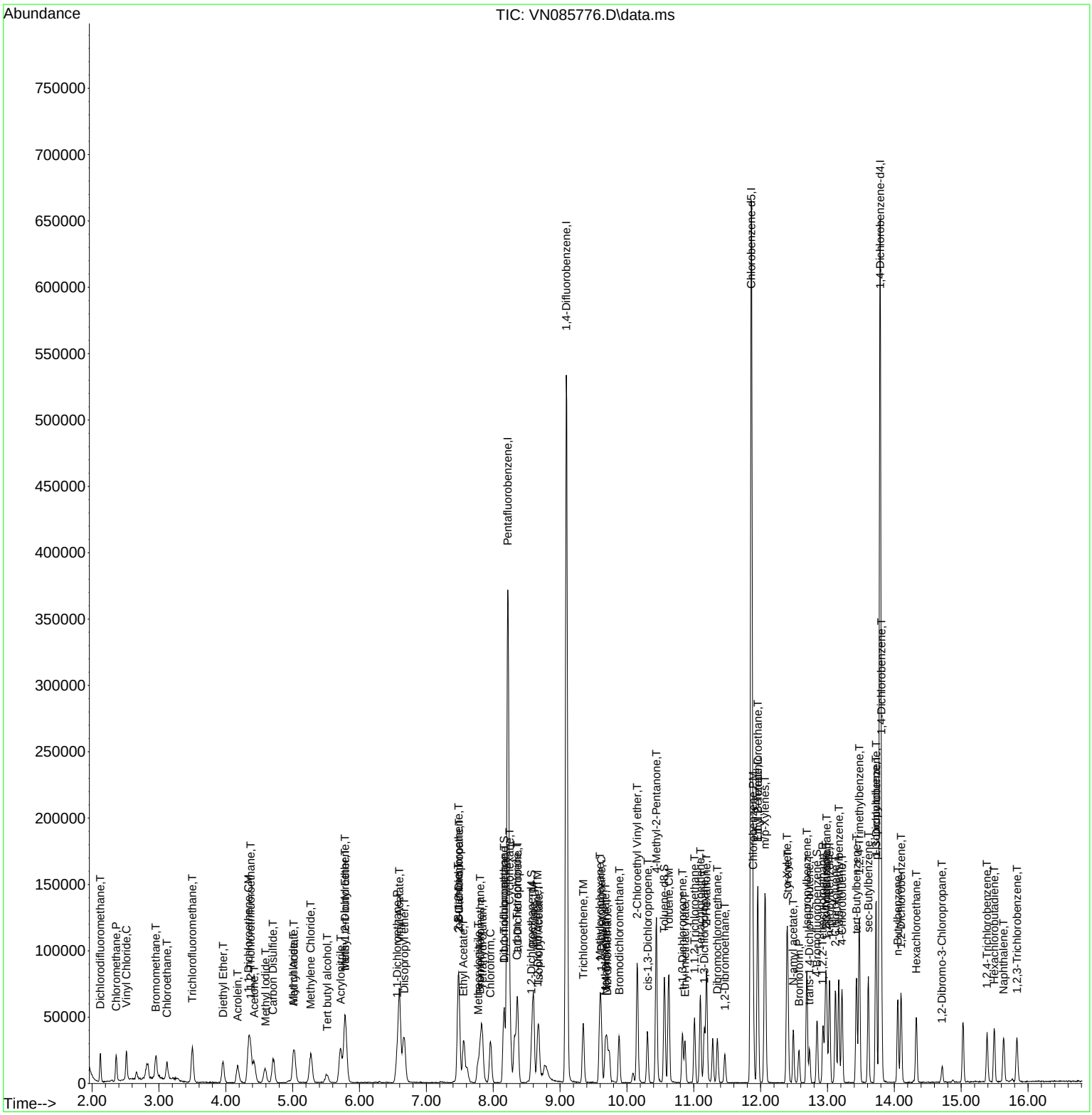
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN021825\
Data File : VN085776.D
Acq On : 18 Feb 2025 12:43
Operator : JC\MD
Sample : VSTDICC005
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Feb 19 03:18:16 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:03:15 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC005

Manual Integrations APPROVED

Reviewed By :John Carlone 02/19/2025
Supervised By :Mahesh Dadoda 02/19/2025



Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN021825\
Data File : VN085777.D
Acq On : 18 Feb 2025 13:07
Operator : JC\MD
Sample : VSTDICC001
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 19 03:01:21 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 02:27:19 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC001

Manual Integrations APPROVED

Reviewed By :John Carlone 02/19/2025
Supervised By :Mahesh Dadoda 02/19/2025

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene	8.224	168	274051	50.000	ug/l		0.00
34) 1,4-Difluorobenzene	9.094	114	476457	50.000	ug/l		0.00
63) Chlorobenzene-d5	11.859	117	394997	50.000	ug/l		0.00
72) 1,4-Dichlorobenzene-d4	13.788	152	152224	50.000	ug/l		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4	0.000	65	0d	0.000	ug/l		
Spiked Amount 50.000	Range 74 - 125		Recovery =	0.000%#			
35) Dibromofluoromethane	0.000	113	0d	0.000	ug/l		
Spiked Amount 50.000	Range 75 - 124		Recovery =	0.000%#			
50) Toluene-d8	0.000	98	0d	0.000	ug/l		
Spiked Amount 50.000	Range 86 - 113		Recovery =	0.000%#			
62) 4-Bromofluorobenzene	0.000	95	0d	0.000	ug/l		
Spiked Amount 50.000	Range 77 - 121		Recovery =	0.000%#			
Target Compounds							Qvalue
2) Dichlorodifluoromethane	2.124	85	3620	0.971	ug/l		84
3) Chloromethane	2.359	50	4478	1.197	ug/l	#	83
4) Vinyl Chloride	2.518	62	4169	1.053	ug/l	#	80
6) Chloroethane	3.124	64	3201	1.220	ug/l		100
7) Trichlorofluoromethane	3.500	101	6048	1.055	ug/l	#	71
8) Diethyl Ether	3.965	74	1716m	0.925	ug/l		
9) 1,1,2-Trichlorotrifluo...	4.371	101	3034	0.915	ug/l		90
12) 1,1-Dichloroethene	4.341	96	2817	0.937	ug/l	#	75
14) Allyl chloride	5.024	41	3802m	0.964	ug/l		
15) Acrylonitrile	5.718	53	6980	4.913	ug/l		98
16) Acetone	4.436	43	6230	5.542	ug/l	#	73
17) Carbon Disulfide	4.712	76	10131	1.137	ug/l		98
18) Methyl Acetate	5.030	43	4677	1.210	ug/l	#	52
19) Methyl tert-butyl Ether	5.794	73	7883	0.883	ug/l		97
20) Methylene Chloride	5.277	84	4036	1.116	ug/l	#	84
21) trans-1,2-Dichloroethene	5.788	96	3415	1.055	ug/l		91
22) Diisopropyl ether	6.659	45	7268	0.815	ug/l	#	80
23) Vinyl Acetate	6.600	43	27376m	4.498	ug/l		
24) 1,1-Dichloroethane	6.571	63	5881	0.970	ug/l	#	82
25) 2-Butanone	7.482	43	7658	4.630	ug/l		92
26) 2,2-Dichloropropane	7.477	77	5170m	0.959	ug/l		
27) cis-1,2-Dichloroethene	7.488	96	3541	0.944	ug/l		92
28) Bromochloromethane	7.812	49	2649	1.063	ug/l	#	98
29) Tetrahydrofuran	7.841	42	4567	4.276	ug/l		93
30) Chloroform	7.959	83	6416	1.013	ug/l		98
32) 1,1,1-Trichloroethane	8.159	97	5643	1.002	ug/l	#	47
36) 1,1-Dichloropropene	8.365	75	4055	0.919	ug/l		93
37) Ethyl Acetate	7.553	43	3365	0.927	ug/l	#	84
38) Carbon Tetrachloride	8.353	117	5079	0.969	ug/l	#	94
39) Methylcyclohexane	9.594	83	3557	0.821	ug/l	#	89
40) Benzene	8.606	78	13536	0.957	ug/l		96
41) Methacrylonitrile	7.771	41	1573	0.810	ug/l	#	85
42) 1,2-Dichloroethane	8.671	62	4497	0.976	ug/l		88
43) Isopropyl Acetate	8.677	43	12901	1.494	ug/l	#	73
44) Trichloroethene	9.347	130	3768	1.085	ug/l		98
45) 1,2-Dichloropropane	9.618	63	3235	0.948	ug/l		91

Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN021825\
Data File : VN085777.D
Acq On : 18 Feb 2025 13:07
Operator : JC\MD
Sample : VSTDICC001
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 19 03:01:21 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 02:27:19 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC001

Manual Integrations APPROVED

Reviewed By :John Carlone 02/19/2025
Supervised By :Mahesh Dadoda 02/19/2025

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
46) Dibromomethane	9.706	93	2304	0.957	ug/l		96
47) Bromodichloromethane	9.882	83	4879	0.947	ug/l	#	92
48) Methyl methacrylate	9.676	41	2247	0.833	ug/l		92
49) 1,4-Dioxane	9.694	88	992	19.344	ug/l	#	76
51) 4-Methyl-2-Pentanone	10.441	43	13832	3.951	ug/l		94
52) Toluene	10.629	92	6568	0.792	ug/l		98
53) t-1,3-Dichloropropene	10.829	75	3884	0.815	ug/l		95
54) cis-1,3-Dichloropropene	10.312	75	4211	0.806	ug/l	#	87
55) 1,1,2-Trichloroethane	11.012	97	3084	0.936	ug/l	#	88
56) Ethyl methacrylate	10.859	69	2517	1.052	ug/l	#	75
57) 1,3-Dichloropropane	11.153	76	5078	0.923	ug/l		93
58) 2-Chloroethyl Vinyl ether	10.153	63	6353	3.424	ug/l		99
59) 2-Hexanone	11.194	43	8780	3.646	ug/l		91
60) Dibromochloromethane	11.353	129	3380	0.881	ug/l		91
61) 1,2-Dibromoethane	11.465	107	2599	0.835	ug/l		89
64) Tetrachloroethene	11.094	164	3108	1.016	ug/l		87
65) Chlorobenzene	11.882	112	8761	0.968	ug/l		92
66) 1,1,1,2-Tetrachloroethane	11.959	131	3222	0.991	ug/l	#	66
67) Ethyl Benzene	11.959	91	11246	0.793	ug/l		100
68) m/p-Xylenes	12.065	106	7606	1.413	ug/l		91
69) o-Xylene	12.394	106	3965	0.775	ug/l		95
70) Styrene	12.406	104	5877	1.257	ug/l		99
71) Bromoform	12.570	173	2161	0.894	ug/l	#	87
73) Isopropylbenzene	12.694	105	8928	0.856	ug/l		95
74) N-amyl acetate	12.488	43	3263	0.887	ug/l	#	91
75) 1,1,2,2-Tetrachloroethane	12.935	83	3870	1.078	ug/l		99
76) 1,2,3-Trichloropropane	12.988	75	4032m	1.206	ug/l		
77) Bromobenzene	12.976	156	2624	0.931	ug/l		76
78) n-propylbenzene	13.029	91	9228	0.773	ug/l		99
79) 2-Chlorotoluene	13.123	91	7260	0.910	ug/l		95
80) 1,3,5-Trimethylbenzene	13.164	105	6185	0.728	ug/l		98
82) 4-Chlorotoluene	13.217	91	6700	0.847	ug/l		99
83) tert-Butylbenzene	13.435	119	5485	0.768	ug/l		93
84) 1,2,4-Trimethylbenzene	13.482	105	5595	0.666	ug/l		96
85) sec-Butylbenzene	13.611	105	7569	0.750	ug/l		99
86) p-Isopropyltoluene	13.723	119	5416	1.252	ug/l		95
87) 1,3-Dichlorobenzene	13.729	146	5321	1.008	ug/l		98
88) 1,4-Dichlorobenzene	13.806	146	5848m	1.081	ug/l		
89) n-Butylbenzene	14.047	91	6398	0.893	ug/l		91
90) Hexachloroethane	14.329	117	2153	1.126	ug/l		91
91) 1,2-Dichlorobenzene	14.100	146	5309	1.046	ug/l		97
92) 1,2-Dibromo-3-Chloropr...	14.711	75	780	1.184	ug/l		93
93) 1,2,4-Trichlorobenzene	15.394	180	2525	1.044	ug/l		95
94) Hexachlorobutadiene	15.494	225	1976	1.344	ug/l		94
95) Naphthalene	15.635	128	7298	1.099	ug/l	#	94
96) 1,2,3-Trichlorobenzene	15.841	180	2791	1.149	ug/l		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

ICAL Form

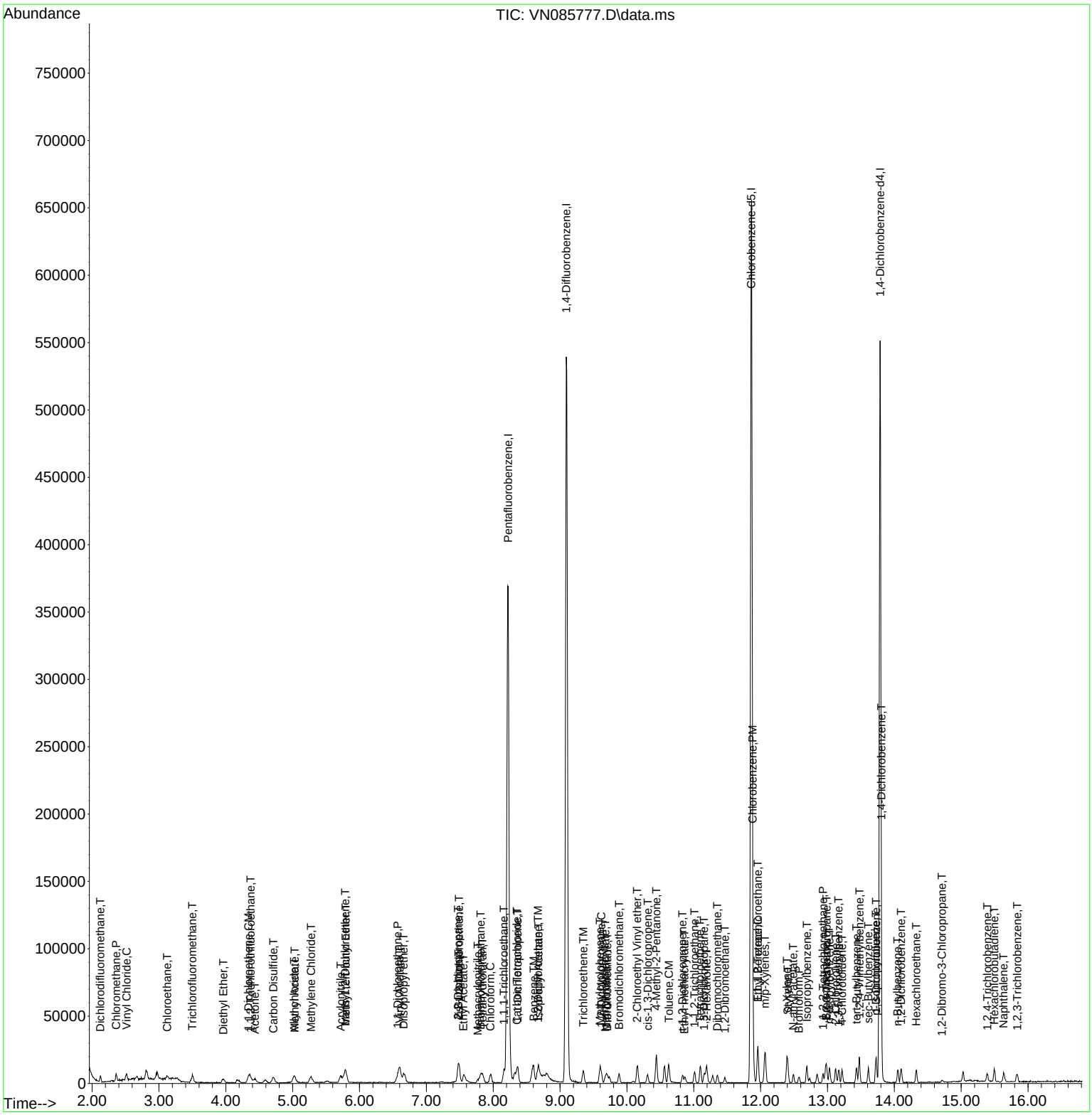
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN021825\
Data File : VN085777.D
Acq On : 18 Feb 2025 13:07
Operator : JC\MD
Sample : VSTDICC001
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Feb 19 03:01:21 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 02:27:19 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC001

Manual Integrations APPROVED

Reviewed By :John Carlone 02/19/2025
Supervised By :Mahesh Dadoda 02/19/2025



Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN021825\
Data File : VN085779.D
Acq On : 18 Feb 2025 14:18
Operator : JC\MD
Sample : VSTDICC020
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC020

Manual Integrations APPROVED

Reviewed By :John Carlone 02/19/2025
Supervised By :Mahesh Dadoda 02/19/2025

Quant Time: Feb 19 03:19:11 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:03:15 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	8.218	168	309026	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.094	114	515996	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.859	117	448882	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.788	152	214863	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.571	65	71117	17.751	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery =	35.500%#		
35) Dibromofluoromethane	8.159	113	60447	17.903	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery =	35.800%#		
50) Toluene-d8	10.559	98	222839	18.140	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery =	36.280%#		
62) 4-Bromofluorobenzene	12.847	95	71343	17.627	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery =	35.260%#		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.124	85	77669	18.478	ug/l	96
3) Chloromethane	2.360	50	74700	17.710	ug/l	98
4) Vinyl Chloride	2.512	62	83284	18.649	ug/l	96
5) Bromomethane	2.954	94	51068	17.884	ug/l	97
6) Chloroethane	3.118	64	54178	18.315	ug/l	98
7) Trichlorofluoromethane	3.501	101	124306	19.225	ug/l	100
8) Diethyl Ether	3.959	74	40213	19.221	ug/l	97
9) 1,1,2-Trichlorotrifluo...	4.377	101	74051	19.813	ug/l	98
10) Methyl Iodide	4.589	142	87963	19.093	ug/l	96
11) Tert butyl alcohol	5.512	59	45305	91.941	ug/l	99
12) 1,1-Dichloroethene	4.336	96	65660	19.375	ug/l	95
13) Acrolein	4.177	56	65092	89.078	ug/l	99
14) Allyl chloride	5.024	41	84778	19.054	ug/l	98
15) Acrylonitrile	5.712	53	158250	98.787	ug/l	99
16) Acetone	4.418	43	122455	96.596	ug/l	97
17) Carbon Disulfide	4.706	76	179885	17.910	ug/l	100
18) Methyl Acetate	5.012	43	77229	17.712	ug/l	99
19) Methyl tert-butyl Ether	5.795	73	205047	20.362	ug/l	97
20) Methylene Chloride	5.271	84	77308	18.963	ug/l	98
21) trans-1,2-Dichloroethene	5.777	96	69924	19.162	ug/l	91
22) Diisopropyl ether	6.665	45	212086	21.095	ug/l	99
23) Vinyl Acetate	6.600	43	695943	101.409	ug/l	99
24) 1,1-Dichloroethane	6.565	63	134620	19.697	ug/l	98
25) 2-Butanone	7.477	43	184659	99.012	ug/l	98
26) 2,2-Dichloropropane	7.489	77	120039	19.752	ug/l	99
27) cis-1,2-Dichloroethene	7.483	96	82886	19.590	ug/l	99
28) Bromochloromethane	7.806	49	49657	17.678	ug/l	95
29) Tetrahydrofuran	7.836	42	125831	104.482	ug/l	100
30) Chloroform	7.959	83	141059	19.750	ug/l	98
31) Cyclohexane	8.253	56	106009	18.525	ug/l	97
32) 1,1,1-Trichloroethane	8.165	97	125061	19.686	ug/l	98
36) 1,1-Dichloropropene	8.365	75	94481	19.772	ug/l	99
37) Ethyl Acetate	7.553	43	81716	20.780	ug/l	99
38) Carbon Tetrachloride	8.359	117	111137	19.574	ug/l	96
39) Methylcyclohexane	9.600	83	93454	19.907	ug/l	99
40) Benzene	8.600	78	304209	19.863	ug/l	99

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN021825\
Data File : VN085779.D
Acq On : 18 Feb 2025 14:18
Operator : JC\MD
Sample : VSTDICC020
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 19 03:19:11 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:03:15 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC020

Manual Integrations APPROVED

Reviewed By :John Carlone 02/19/2025
Supervised By :Mahesh Dadoda 02/19/2025

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
41) Methacrylonitrile	7.771	41	43566	20.724	ug/l		98
42) 1,2-Dichloroethane	8.665	62	99651	19.975	ug/l		99
43) Isopropyl Acetate	8.683	43	138304	19.709	ug/l		99
44) Trichloroethene	9.347	130	71769	19.085	ug/l		97
45) 1,2-Dichloropropane	9.618	63	73743	19.947	ug/l		98
46) Dibromomethane	9.706	93	52878	20.278	ug/l		97
47) Bromodichloromethane	9.883	83	111634	20.010	ug/l		97
48) Methyl methacrylate	9.677	41	60690	20.781	ug/l		99
49) 1,4-Dioxane	9.688	88	21778	392.137	ug/l	#	88
51) 4-Methyl-2-Pentanone	10.441	43	400235	105.563	ug/l		99
52) Toluene	10.624	92	184001	20.495	ug/l		98
53) t-1,3-Dichloropropene	10.830	75	104301	20.218	ug/l		99
54) cis-1,3-Dichloropropene	10.306	75	115451	20.409	ug/l		98
55) 1,1,2-Trichloroethane	11.012	97	71034	19.900	ug/l		97
56) Ethyl methacrylate	10.871	69	94315	20.003	ug/l		97
57) 1,3-Dichloropropane	11.159	76	119649	20.080	ug/l		99
58) 2-Chloroethyl Vinyl ether	10.159	63	256540	146.107	ug/l		99
59) 2-Hexanone	11.188	43	278550	106.794	ug/l		99
60) Dibromochloromethane	11.353	129	83651	20.125	ug/l		100
61) 1,2-Dibromoethane	11.465	107	68205	20.223	ug/l		99
64) Tetrachloroethene	11.100	164	67288	19.350	ug/l		94
65) Chlorobenzene	11.888	112	200885	19.535	ug/l		97
66) 1,1,1,2-Tetrachloroethane	11.959	131	72064	19.497	ug/l		99
67) Ethyl Benzene	11.959	91	330056	20.490	ug/l		97
68) m/p-Xylenes	12.065	106	259251	42.371	ug/l		100
69) o-Xylene	12.394	106	118291	20.345	ug/l		96
70) Styrene	12.406	104	203369	20.270	ug/l		100
71) Bromoform	12.576	173	55518	20.214	ug/l	#	96
73) Isopropylbenzene	12.688	105	299398	20.339	ug/l		100
74) N-amyl acetate	12.488	43	106973	20.608	ug/l		98
75) 1,1,2,2-Tetrachloroethane	12.935	83	99174	19.579	ug/l		99
76) 1,2,3-Trichloropropane	12.988	75	96439m	20.431	ug/l		
77) Bromobenzene	12.976	156	78068	19.630	ug/l		98
78) n-propylbenzene	13.029	91	351518	20.852	ug/l		100
79) 2-Chlorotoluene	13.124	91	230434	20.458	ug/l		99
80) 1,3,5-Trimethylbenzene	13.171	105	258212	21.534	ug/l		99
81) trans-1,4-Dichloro-2-b...	12.729	75	31517	19.267	ug/l		92
82) 4-Chlorotoluene	13.218	91	227177	20.345	ug/l		100
83) tert-Butylbenzene	13.435	119	208096	20.637	ug/l		97
84) 1,2,4-Trimethylbenzene	13.476	105	259373	21.863	ug/l		99
85) sec-Butylbenzene	13.612	105	293653	20.612	ug/l		99
86) p-Isopropyltoluene	13.723	119	240984	19.772	ug/l		99
87) 1,3-Dichlorobenzene	13.729	146	143937	19.318	ug/l		99
88) 1,4-Dichlorobenzene	13.806	146	144744	18.954	ug/l		99
89) n-Butylbenzene	14.053	91	195221	19.300	ug/l		97
90) Hexachloroethane	14.329	117	50599	18.753	ug/l		98
91) 1,2-Dichlorobenzene	14.100	146	138931	19.390	ug/l		99
92) 1,2-Dibromo-3-Chloropr...	14.718	75	16407	17.639	ug/l		98
93) 1,2,4-Trichlorobenzene	15.388	180	60520	17.726	ug/l		98
94) Hexachlorobutadiene	15.500	225	34783	16.763	ug/l		97
95) Naphthalene	15.635	128	156537	16.700	ug/l		99
96) 1,2,3-Trichlorobenzene	15.835	180	57998	16.921	ug/l		98

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN021825\
Data File : VN085779.D
Acq On : 18 Feb 2025 14:18
Operator : JC\MD
Sample : VSTDICC020
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC020

Manual Integrations APPROVED

Reviewed By :John Carlone 02/19/2025
Supervised By :Mahesh Dadoda 02/19/2025

Quant Time: Feb 19 03:19:11 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:03:15 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

ICAL Form

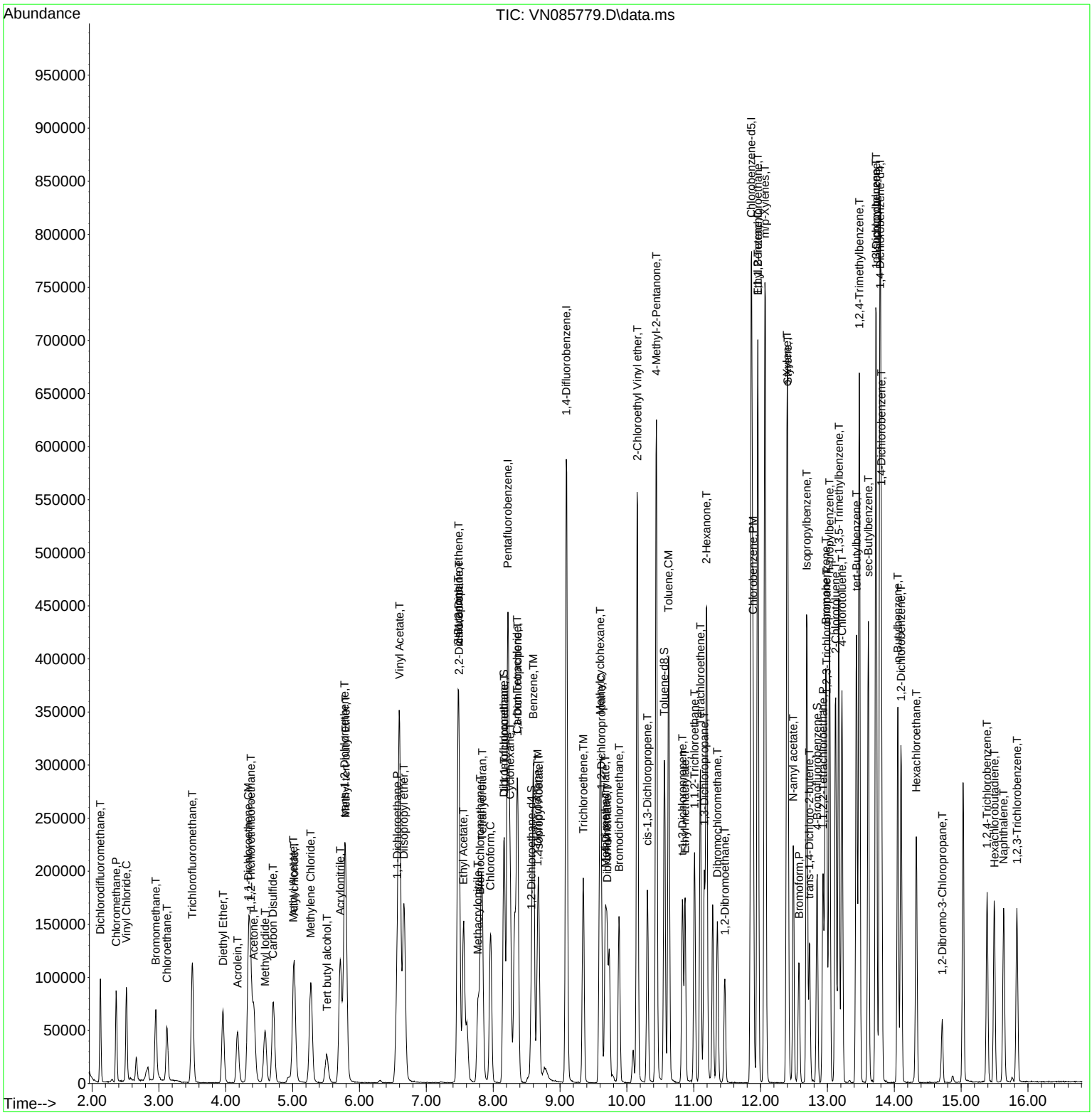
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN021825\
Data File : VN085779.D
Acq On : 18 Feb 2025 14:18
Operator : JC\MD
Sample : VSTDICC020
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Feb 19 03:19:11 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:03:15 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VSTDICC020

Manual Integrations APPROVED

Reviewed By :John Carlone 02/19/2025
Supervised By :Mahesh Dadoda 02/19/2025



Quantitation Report (QT Reviewed)

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN021825\
Data File : VN085780.D
Acq On : 18 Feb 2025 16:28
Operator : JC\MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Feb 19 05:09:13 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:43:32 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
ICVVN021825

Manual Integrations APPROVED

Reviewed By :John Carlone 02/19/2025
Supervised By :Mahesh Dadoda 02/19/2025

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	8.218	168	314015	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.094	114	510764	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.859	117	456487	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.788	152	222696	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.577	65	204064	50.125	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 100.260%			
35) Dibromofluoromethane	8.165	113	170358	50.972	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 101.940%			
50) Toluene-d8	10.559	98	651463	53.575	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery = 107.140%			
62) 4-Bromofluorobenzene	12.841	95	227023	56.665	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery = 113.320%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.124	85	193054	45.199	ug/l	98
3) Chloromethane	2.359	50	181889	42.438	ug/l	98
4) Vinyl Chloride	2.512	62	197171	43.449	ug/l	97
5) Bromomethane	2.953	94	119789	41.282	ug/l	95
6) Chloroethane	3.118	64	122900	40.887	ug/l	95
7) Trichlorofluoromethane	3.500	101	279842	42.592	ug/l	98
8) Diethyl Ether	3.959	74	96415	45.353	ug/l	97
9) 1,1,2-Trichlorotrifluo...	4.371	101	165520	43.582	ug/l	98
10) Methyl Iodide	4.589	142	211559	45.190	ug/l	99
11) Tert butyl alcohol	5.506	59	118845	237.350	ug/l	99
12) 1,1-Dichloroethene	4.336	96	153815	44.667	ug/l	98
13) Acrolein	4.171	56	179054	241.140	ug/l	97
14) Allyl chloride	5.024	41	201442	44.555	ug/l	99
15) Acrylonitrile	5.712	53	378819	232.720	ug/l	99
16) Acetone	4.418	43	279680	217.115	ug/l	99
17) Carbon Disulfide	4.712	76	423019	41.449	ug/l	99
18) Methyl Acetate	5.018	43	194998	44.011	ug/l	100
19) Methyl tert-butyl Ether	5.789	73	491324	48.014	ug/l	99
20) Methylene Chloride	5.277	84	173805	41.955	ug/l	99
21) trans-1,2-Dichloroethene	5.783	96	161205	43.475	ug/l	94
22) Diisopropyl ether	6.665	45	483670	47.344	ug/l	99
23) Vinyl Acetate	6.600	43	1698852	242.867	ug/l	99
24) 1,1-Dichloroethane	6.565	63	301375	43.396	ug/l	99
25) 2-Butanone	7.477	43	456416	240.836	ug/l	100
26) 2,2-Dichloropropane	7.482	77	274082	44.383	ug/l	99
27) cis-1,2-Dichloroethene	7.482	96	190393	44.284	ug/l	99
28) Bromochloromethane	7.812	49	142695	49.991	ug/l	97
29) Tetrahydrofuran	7.830	42	304613	248.913	ug/l	99
30) Chloroform	7.965	83	312547	43.065	ug/l	97
31) Cyclohexane	8.253	56	248433	42.725	ug/l	99
32) 1,1,1-Trichloroethane	8.165	97	281708	43.640	ug/l	99
36) 1,1-Dichloropropene	8.365	75	220335	46.581	ug/l	99
37) Ethyl Acetate	7.553	43	182091	46.779	ug/l	99
38) Carbon Tetrachloride	8.359	117	251949	44.828	ug/l	99
39) Methylcyclohexane	9.600	83	230541	49.612	ug/l	98
40) Benzene	8.600	78	682453	45.016	ug/l	98

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN021825\
Data File : VN085780.D
Acq On : 18 Feb 2025 16:28
Operator : JC\MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Feb 19 05:09:13 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:43:32 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
ICVVN021825

Manual Integrations APPROVED

Reviewed By :John Carlone 02/19/2025
Supervised By :Mahesh Dadoda 02/19/2025

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
41) Methacrylonitrile	7.771	41	105287	50.597	ug/l		99
42) 1,2-Dichloroethane	8.665	62	223798	45.321	ug/l		100
43) Isopropyl Acetate	8.682	43	317074	46.374	ug/l		99
44) Trichloroethene	9.347	130	161430	43.368	ug/l		99
45) 1,2-Dichloropropane	9.618	63	165383	45.194	ug/l		99
46) Dibromomethane	9.700	93	118394	45.867	ug/l		98
47) Bromodichloromethane	9.882	83	245433	44.443	ug/l		96
48) Methyl methacrylate	9.676	41	149072	51.566	ug/l		99
49) 1,4-Dioxane	9.688	88	55529	1010.103	ug/l		98
51) 4-Methyl-2-Pentanone	10.441	43	954888	254.433	ug/l		100
52) Toluene	10.623	92	429445	48.324	ug/l		100
53) t-1,3-Dichloropropene	10.829	75	249572	48.873	ug/l		100
54) cis-1,3-Dichloropropene	10.306	75	269744	48.172	ug/l		98
55) 1,1,2-Trichloroethane	11.012	97	160020	45.289	ug/l		99
56) Ethyl methacrylate	10.871	69	243449	48.142	ug/l		99
57) 1,3-Dichloropropane	11.159	76	272817	46.254	ug/l		99
58) 2-Chloroethyl Vinyl ether	10.153	63	565673	276.203	ug/l		99
59) 2-Hexanone	11.188	43	687507	266.284	ug/l		100
60) Dibromochloromethane	11.353	129	192169	46.707	ug/l		100
61) 1,2-Dibromoethane	11.465	107	157602	47.208	ug/l		99
64) Tetrachloroethene	11.100	164	148840	42.088	ug/l		98
65) Chlorobenzene	11.888	112	464545	44.422	ug/l		98
66) 1,1,1,2-Tetrachloroethane	11.959	131	163676	43.545	ug/l		100
67) Ethyl Benzene	11.959	91	797025	48.655	ug/l		99
68) m/p-Xylenes	12.065	106	619505	99.562	ug/l		100
69) o-Xylene	12.394	106	294679	49.837	ug/l		100
70) Styrene	12.406	104	498501	45.726	ug/l		99
71) Bromoform	12.576	173	130201	46.617	ug/l	#	97
73) Isopropylbenzene	12.694	105	747608	49.002	ug/l		100
74) N-amyl acetate	12.488	43	265786	49.401	ug/l		99
75) 1,1,2,2-Tetrachloroethane	12.935	83	225776	43.005	ug/l		100
76) 1,2,3-Trichloropropane	12.988	75	227901m	46.070	ug/l		
77) Bromobenzene	12.976	156	185833	45.084	ug/l		98
78) n-propylbenzene	13.029	91	872362	49.927	ug/l		99
79) 2-Chlorotoluene	13.123	91	541105	46.350	ug/l		100
80) 1,3,5-Trimethylbenzene	13.170	105	622090	50.055	ug/l		100
81) trans-1,4-Dichloro-2-b...	12.729	75	79943	47.152	ug/l		94
82) 4-Chlorotoluene	13.217	91	548585	47.401	ug/l		99
83) tert-Butylbenzene	13.435	119	521552	49.904	ug/l		98
84) 1,2,4-Trimethylbenzene	13.476	105	633621	51.531	ug/l		99
85) sec-Butylbenzene	13.612	105	737200	49.925	ug/l		100
86) p-Isopropyltoluene	13.723	119	617918	46.012	ug/l		99
87) 1,3-Dichlorobenzene	13.729	146	341228	44.186	ug/l		99
88) 1,4-Dichlorobenzene	13.806	146	338619	42.781	ug/l		100
89) n-Butylbenzene	14.053	91	513863	49.015	ug/l		98
90) Hexachloroethane	14.329	117	119768	42.828	ug/l		98
91) 1,2-Dichlorobenzene	14.100	146	325885	43.883	ug/l		100
92) 1,2-Dibromo-3-Chloropr...	14.717	75	41836	43.396	ug/l		98
93) 1,2,4-Trichlorobenzene	15.388	180	161503	45.640	ug/l		99
94) Hexachlorobutadiene	15.494	225	84060	39.087	ug/l		99
95) Naphthalene	15.635	128	487372	50.167	ug/l		99
96) 1,2,3-Trichlorobenzene	15.835	180	158416	44.593	ug/l		99

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN021825\
Data File : VN085780.D
Acq On : 18 Feb 2025 16:28
Operator : JC\MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
ICVVN021825

Manual Integrations APPROVED

Reviewed By :John Carlone 02/19/2025
Supervised By :Mahesh Dadoda 02/19/2025

Quant Time: Feb 19 05:09:13 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:43:32 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

ICAL Form

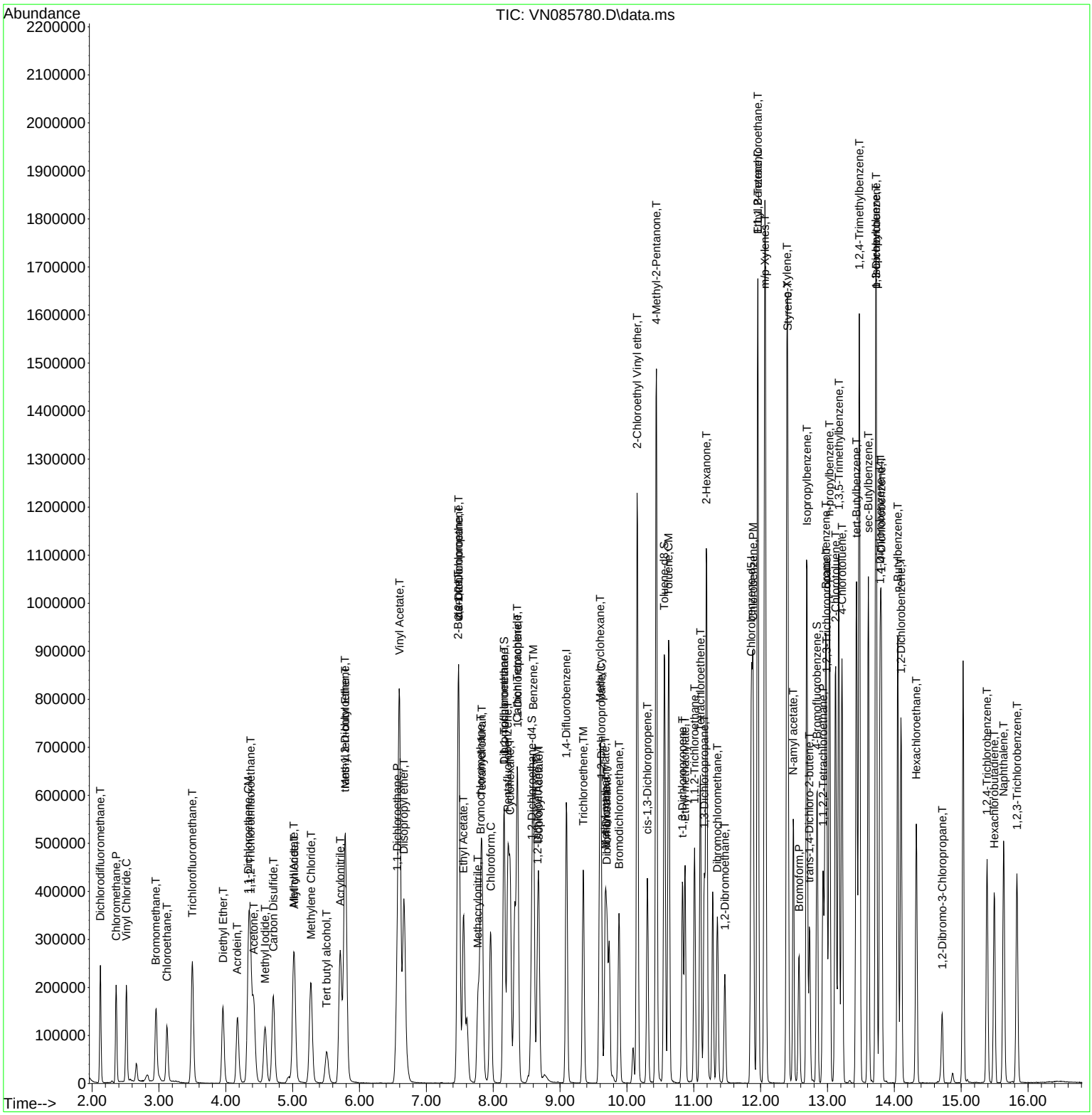
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN021825\
Data File : VN085780.D
Acq On : 18 Feb 2025 16:28
Operator : JC\MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Feb 19 05:09:13 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:43:32 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
ICVVN021825

Manual Integrations APPROVED

Reviewed By :John Carlone 02/19/2025
Supervised By :Mahesh Dadoda 02/19/2025



Evaluate Continuing Calibration Report

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN021825\
Data File : VN085780.D
Acq On : 18 Feb 2025 16:28
Operator : JC\MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
ICVVN021825

Quant Time: Feb 19 05:09:13 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:43:32 2025
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	1.000	1.000	0.0	97	0.00
2	T	Dichlorodifluoromethane	0.680	0.615	9.6	89	0.00
3	P	Chloromethane	0.682	0.579	15.1	91	0.00
4	C	Vinyl Chloride	0.723	0.628	13.1#	90	0.00
5	T	Bromomethane	0.462	0.381	17.5	88	0.00
6	T	Chloroethane	0.479	0.391	18.4	92	0.00
7	T	Trichlorofluoromethane	1.046	0.891	14.8	91	0.00
8	T	Diethyl Ether	0.339	0.307	9.4	90	0.00
9	T	1,1,2-Trichlorotrifluoroeth	0.605	0.527	12.9	91	0.00
10	T	Methyl Iodide	0.745	0.674	9.5	91	0.00
11	T	Tert butyl alcohol	0.080	0.076	5.0	94	0.00
12	CM	1,1-Dichloroethene	0.548	0.490	10.6#	90	0.00
13	T	Acrolein	0.118	0.114	3.4	88	0.00
14	T	Allyl chloride	0.720	0.642	10.8	90	0.00
15	T	Acrylonitrile	0.259	0.241	6.9	96	0.00
16	T	Acetone	0.205	0.178	13.2	94	0.00
17	T	Carbon Disulfide	1.625	1.347	17.1	89	0.00
18	T	Methyl Acetate	0.705	0.621	11.9	98	0.00
19	T	Methyl tert-butyl Ether	1.629	1.565	3.9	92	0.00
20	T	Methylene Chloride	0.660	0.553	16.2	91	0.00
21	T	trans-1,2-Dichloroethene	0.590	0.513	13.1	91	0.00
22	T	Diisopropyl ether	1.627	1.540	5.3	91	0.00
23	T	Vinyl Acetate	1.114	1.082	2.9	94	0.00
24	P	1,1-Dichloroethane	1.106	0.960	13.2	90	0.00
25	T	2-Butanone	0.302	0.291	3.6	96	0.00
26	T	2,2-Dichloropropane	0.983	0.873	11.2	90	0.00
27	T	cis-1,2-Dichloroethene	0.685	0.606	11.5	89	0.00
28	T	Bromochloromethane	0.454	0.454	0.0	100	0.00
29	T	Tetrahydrofuran	0.195	0.194	0.5	97	0.00
30	C	Chloroform	1.156	0.995	13.9#	91	0.00
31	T	Cyclohexane	0.926	0.791	14.6	90	0.00
32	T	1,1,1-Trichloroethane	1.028	0.897	12.7	90	0.00
33	S	1,2-Dichloroethane-d4	0.648	0.650	-0.3	103	0.00
34	I	1,4-Difluorobenzene	1.000	1.000	0.0	97	0.00
35	S	Dibromofluoromethane	0.327	0.334	-2.1	102	0.00
36	T	1,1-Dichloropropene	0.463	0.431	6.9	91	0.00
37	T	Ethyl Acetate	0.381	0.357	6.3	92	0.00
38	T	Carbon Tetrachloride	0.550	0.493	10.4	91	0.00
39	T	Methylcyclohexane	0.455	0.451	0.9	89	0.00
40	TM	Benzene	1.484	1.336	10.0	90	0.00
41	T	Methacrylonitrile	0.204	0.206	-1.0	93	0.00
42	TM	1,2-Dichloroethane	0.483	0.438	9.3	93	0.00
43	T	Isopropyl Acetate	0.807	0.621	23.0	95	0.00
44	TM	Trichloroethene	0.364	0.316	13.2	90	0.00
45	C	1,2-Dichloropropane	0.358	0.324	9.5#	91	0.00
46	T	Dibromomethane	0.253	0.232	8.3	93	0.00
47	T	Bromodichloromethane	0.541	0.481	11.1	90	0.00
48	T	Methyl methacrylate	0.283	0.292	-3.2	94	0.00

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN021825\
Data File : VN085780.D
Acq On : 18 Feb 2025 16:28
Operator : JC\MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
ICVVN021825

Quant Time: Feb 19 05:09:13 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:43:32 2025
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
49	T	1,4-Dioxane	0.005	0.005	0.0	91	0.00
50	S	Toluene-d8	1.190	1.275	-7.1	103	0.00
51	T	4-Methyl-2-Pentanone	0.367	0.374	-1.9	96	0.00
52	CM	Toluene	0.870	0.841	3.3#	90	0.00
53	T	t-1,3-Dichloropropene	0.500	0.489	2.2	91	0.00
54	T	cis-1,3-Dichloropropene	0.548	0.528	3.6	90	0.00
55	T	1,1,2-Trichloroethane	0.346	0.313	9.5	92	0.00
56	T	Ethyl methacrylate	0.434	0.477	-9.9	93	0.00
57	T	1,3-Dichloropropane	0.577	0.534	7.5	92	0.00
58	T	2-Chloroethyl Vinyl ether	0.195	0.222	-13.8	123	0.00
59	T	2-Hexanone	0.253	0.269	-6.3	96	0.00
60	T	Dibromochloromethane	0.403	0.376	6.7	91	0.00
61	T	1,2-Dibromoethane	0.327	0.309	5.5	93	0.00
62	S	4-Bromofluorobenzene	0.392	0.444	-13.3	103	0.00
63	I	Chlorobenzene-d5	1.000	1.000	0.0	99	0.00
64	T	Tetrachloroethene	0.387	0.326	15.8	89	0.00
65	PM	Chlorobenzene	1.145	1.018	11.1	91	0.00
66	T	1,1,1,2-Tetrachloroethane	0.412	0.359	12.9	90	0.00
67	C	Ethyl Benzene	1.794	1.746	2.7#	91	0.00
68	T	m/p-Xylenes	0.682	0.679	0.4	91	0.00
69	T	o-Xylene	0.648	0.646	0.3	91	0.00
70	T	Styrene	1.059	1.092	-3.1	90	0.00
71	P	Bromoform	0.306	0.285	6.9	93	0.00
72	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	98	0.00
73	T	Isopropylbenzene	3.425	3.357	2.0	91	0.00
74	T	N-amyl acetate	1.208	1.193	1.2	94	0.00
75	P	1,1,2,2-Tetrachloroethane	1.179	1.014	14.0	94	0.00
76	T	1,2,3-Trichloropropane	1.111	1.023	7.9	106	0.00
77	T	Bromobenzene	0.925	0.834	9.8	90	0.00
78	T	n-propylbenzene	3.923	3.917	0.2	90	0.00
79	T	2-Chlorotoluene	2.621	2.430	7.3	91	0.00
80	T	1,3,5-Trimethylbenzene	2.790	2.793	-0.1	89	0.00
81	T	trans-1,4-Dichloro-2-butene	0.381	0.359	5.8	89	0.00
82	T	4-Chlorotoluene	2.598	2.463	5.2	91	0.00
83	T	tert-Butylbenzene	2.346	2.342	0.2	89	0.00
84	T	1,2,4-Trimethylbenzene	2.761	2.845	-3.0	90	0.00
85	T	sec-Butylbenzene	3.315	3.310	0.2	89	0.00
86	T	p-Isopropyltoluene	2.665	2.775	-4.1	89	0.00
87	T	1,3-Dichlorobenzene	1.734	1.532	11.6	92	0.00
88	T	1,4-Dichlorobenzene	1.777	1.521	14.4	90	0.00
89	T	n-Butylbenzene	2.354	2.307	2.0	89	0.00
90	T	Hexachloroethane	0.628	0.538	14.3	90	0.00
91	T	1,2-Dichlorobenzene	1.667	1.463	12.2	91	0.00
92	T	1,2-Dibromo-3-Chloropropane	0.216	0.188	13.0	95	0.00
93	T	1,2,4-Trichlorobenzene	0.794	0.725	8.7	89	0.00
94	T	Hexachlorobutadiene	0.483	0.377	21.9	87	0.00
95	T	Naphthalene	2.181	2.189	-0.4	92	0.00

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN021825\
Data File : VN085780.D
Acq On : 18 Feb 2025 16:28
Operator : JC\MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
ICVVN021825

Quant Time: Feb 19 05:09:13 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:43:32 2025
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
96 T	1,2,3-Trichlorobenzene	0.798	0.711	10.9	88	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 6

Evaluate Continuing Calibration Report

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN021825\
Data File : VN085780.D
Acq On : 18 Feb 2025 16:28
Operator : JC\MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
ICVVN021825

Quant Time: Feb 19 05:09:13 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:43:32 2025
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	50.000	50.000	0.0	97	0.00
2	T	Dichlorodifluoromethane	50.000	45.199	9.6	89	0.00
3	P	Chloromethane	50.000	42.438	15.1	91	0.00
4	C	Vinyl Chloride	50.000	43.449	13.1#	90	0.00
5	T	Bromomethane	50.000	41.282	17.4	88	0.00
6	T	Chloroethane	50.000	40.887	18.2	92	0.00
7	T	Trichlorofluoromethane	50.000	42.592	14.8	91	0.00
8	T	Diethyl Ether	50.000	45.353	9.3	90	0.00
9	T	1,1,2-Trichlorotrifluoroeth	50.000	43.582	12.8	91	0.00
10	T	Methyl Iodide	50.000	45.190	9.6	91	0.00
11	T	Tert butyl alcohol	250.000	237.350	5.1	94	0.00
12	CM	1,1-Dichloroethene	50.000	44.667	10.7#	90	0.00
13	T	Acrolein	250.000	241.140	3.5	88	0.00
14	T	Allyl chloride	50.000	44.555	10.9	90	0.00
15	T	Acrylonitrile	250.000	232.720	6.9	96	0.00
16	T	Acetone	250.000	217.115	13.2	94	0.00
17	T	Carbon Disulfide	50.000	41.449	17.1	89	0.00
18	T	Methyl Acetate	50.000	44.011	12.0	98	0.00
19	T	Methyl tert-butyl Ether	50.000	48.014	4.0	92	0.00
20	T	Methylene Chloride	50.000	41.955	16.1	91	0.00
21	T	trans-1,2-Dichloroethene	50.000	43.475	13.0	91	0.00
22	T	Diisopropyl ether	50.000	47.344	5.3	91	0.00
23	T	Vinyl Acetate	250.000	242.867	2.9	94	0.00
24	P	1,1-Dichloroethane	50.000	43.396	13.2	90	0.00
25	T	2-Butanone	250.000	240.836	3.7	96	0.00
26	T	2,2-Dichloropropane	50.000	44.383	11.2	90	0.00
27	T	cis-1,2-Dichloroethene	50.000	44.284	11.4	89	0.00
28	T	Bromochloromethane	50.000	49.991	0.0	100	0.00
29	T	Tetrahydrofuran	250.000	248.913	0.4	97	0.00
30	C	Chloroform	50.000	43.065	13.9#	91	0.00
31	T	Cyclohexane	50.000	42.725	14.5	90	0.00
32	T	1,1,1-Trichloroethane	50.000	43.640	12.7	90	0.00
33	S	1,2-Dichloroethane-d4	50.000	50.125	-0.3	103	0.00
34	I	1,4-Difluorobenzene	50.000	50.000	0.0	97	0.00
35	S	Dibromofluoromethane	50.000	50.972	-1.9	102	0.00
36	T	1,1-Dichloropropene	50.000	46.581	6.8	91	0.00
37	T	Ethyl Acetate	50.000	46.779	6.4	92	0.00
38	T	Carbon Tetrachloride	50.000	44.828	10.3	91	0.00
39	T	Methylcyclohexane	50.000	49.612	0.8	89	0.00
40	TM	Benzene	50.000	45.016	10.0	90	0.00
41	T	Methacrylonitrile	50.000	50.597	-1.2	93	0.00
42	TM	1,2-Dichloroethane	50.000	45.321	9.4	93	0.00
43	T	Isopropyl Acetate	50.000	46.374	7.3	95	0.00
44	TM	Trichloroethene	50.000	43.368	13.3	90	0.00
45	C	1,2-Dichloropropane	50.000	45.194	9.6#	91	0.00
46	T	Dibromomethane	50.000	45.867	8.3	93	0.00
47	T	Bromodichloromethane	50.000	44.443	11.1	90	0.00
48	T	Methyl methacrylate	50.000	51.566	-3.1	94	0.00

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN021825\
Data File : VN085780.D
Acq On : 18 Feb 2025 16:28
Operator : JC\MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
ICVVN021825

Quant Time: Feb 19 05:09:13 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:43:32 2025
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
49	T	1,4-Dioxane	1000.000	1010.103	-1.0	91	0.00
50	S	Toluene-d8	50.000	53.575	-7.2	103	0.00
51	T	4-Methyl-2-Pentanone	250.000	254.433	-1.8	96	0.00
52	CM	Toluene	50.000	48.324	3.4#	90	0.00
53	T	t-1,3-Dichloropropene	50.000	48.873	2.3	91	0.00
54	T	cis-1,3-Dichloropropene	50.000	48.172	3.7	90	0.00
55	T	1,1,2-Trichloroethane	50.000	45.289	9.4	92	0.00
56	T	Ethyl methacrylate	50.000	48.142	3.7	93	0.00
57	T	1,3-Dichloropropane	50.000	46.254	7.5	92	0.00
58	T	2-Chloroethyl Vinyl ether	250.000	276.203	-10.5	123	0.00
59	T	2-Hexanone	250.000	266.284	-6.5	96	0.00
60	T	Dibromochloromethane	50.000	46.707	6.6	91	0.00
61	T	1,2-Dibromoethane	50.000	47.208	5.6	93	0.00
62	S	4-Bromofluorobenzene	50.000	56.665	-13.3	103	0.00
63	I	Chlorobenzene-d5	50.000	50.000	0.0	99	0.00
64	T	Tetrachloroethene	50.000	42.088	15.8	89	0.00
65	PM	Chlorobenzene	50.000	44.422	11.2	91	0.00
66	T	1,1,1,2-Tetrachloroethane	50.000	43.545	12.9	90	0.00
67	C	Ethyl Benzene	50.000	48.655	2.7#	91	0.00
68	T	m/p-Xylenes	100.000	99.562	0.4	91	0.00
69	T	o-Xylene	50.000	49.837	0.3	91	0.00
70	T	Styrene	50.000	45.726	8.5	90	0.00
71	P	Bromoform	50.000	46.617	6.8	93	0.00
72	I	1,4-Dichlorobenzene-d4	50.000	50.000	0.0	98	0.00
73	T	Isopropylbenzene	50.000	49.002	2.0	91	0.00
74	T	N-amyl acetate	50.000	49.401	1.2	94	0.00
75	P	1,1,2,2-Tetrachloroethane	50.000	43.005	14.0	94	0.00
76	T	1,2,3-Trichloropropane	50.000	46.070	7.9	106	0.00
77	T	Bromobenzene	50.000	45.084	9.8	90	0.00
78	T	n-propylbenzene	50.000	49.927	0.1	90	0.00
79	T	2-Chlorotoluene	50.000	46.350	7.3	91	0.00
80	T	1,3,5-Trimethylbenzene	50.000	50.055	-0.1	89	0.00
81	T	trans-1,4-Dichloro-2-butene	50.000	47.152	5.7	89	0.00
82	T	4-Chlorotoluene	50.000	47.401	5.2	91	0.00
83	T	tert-Butylbenzene	50.000	49.904	0.2	89	0.00
84	T	1,2,4-Trimethylbenzene	50.000	51.531	-3.1	90	0.00
85	T	sec-Butylbenzene	50.000	49.925	0.2	89	0.00
86	T	p-Isopropyltoluene	50.000	46.012	8.0	89	0.00
87	T	1,3-Dichlorobenzene	50.000	44.186	11.6	92	0.00
88	T	1,4-Dichlorobenzene	50.000	42.781	14.4	90	0.00
89	T	n-Butylbenzene	50.000	49.015	2.0	89	0.00
90	T	Hexachloroethane	50.000	42.828	14.3	90	0.00
91	T	1,2-Dichlorobenzene	50.000	43.883	12.2	91	0.00
92	T	1,2-Dibromo-3-Chloropropane	50.000	43.396	13.2	95	0.00
93	T	1,2,4-Trichlorobenzene	50.000	45.640	8.7	89	0.00
94	T	Hexachlorobutadiene	50.000	39.087	21.8	87	0.00
95	T	Naphthalene	50.000	50.167	-0.3	92	0.00

ICAL Form

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN021825\
Data File : VN085780.D
Acq On : 18 Feb 2025 16:28
Operator : JC\MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
ICVVN021825

Quant Time: Feb 19 05:09:13 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:43:32 2025
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
96 T	1,2,3-Trichlorobenzene	50.000	44.593	10.8	88	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 6

Alliance TECHNICAL GROUP
284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: CHEMTECH Contract: ENTA05

Lab Code: CHEM Case No.: Q1523 SAS No.: Q1523 SDG No.: Q1523

Instrument ID: MSVOA_N Calibration Date/Time: 03/11/2025 13:22

Lab File ID: VN085928.D Init. Calib. Date(s): 02/18/2025 02/18/2025

Heated Purge: (Y/N) N Init. Calib. Time(s): 11:09 14:18

GC Column: RXI-624 ID: 0.25 (mm)

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX%D
Vinyl Chloride	0.723	0.746		3.18	20
1,1-Dichloroethene	0.548	0.594		8.39	20
2-Butanone	0.302	0.338		11.92	20
Carbon Tetrachloride	0.550	0.625		13.64	20
Chloroform	1.156	1.221		5.62	20
Benzene	1.484	1.669		12.47	20
1,2-Dichloroethane	0.483	0.541		12.01	20
Trichloroethene	0.364	0.369		1.37	20
Tetrachloroethene	0.387	0.405		4.65	20
Chlorobenzene	1.145	1.212	0.3	5.85	20
1,2-Dichloroethane-d4	0.648	0.719		10.96	20
Dibromofluoromethane	0.327	0.367		12.23	20
Toluene-d8	1.190	1.369		15.04	20
4-Bromofluorobenzene	0.392	0.506		29.08	20

All other compounds must meet a minimum RRF of 0.010.
RRF of 1,4-Dioxane = Value should be divide by 1000.

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031125\
Data File : VN085928.D
Acq On : 11 Mar 2025 13:22
Operator : JC\MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 12 01:17:51 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:43:32 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VSTDCCC050

Manual Integrations APPROVED

Reviewed By :John Carlone 03/12/2025
Supervised By :Mahesh Dadoda 03/12/2025

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	8.224	168	193697	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.100	114	310218	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.865	117	283255	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.788	152	153775	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.577	65	139175	55.421	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 110.840%			
35) Dibromofluoromethane	8.165	113	113839	56.081	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 112.160%			
50) Toluene-d8	10.565	98	424670	57.501	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery = 115.000%#			
62) 4-Bromofluorobenzene	12.847	95	156821	64.447	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery = 128.900%#			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.124	85	149052	56.573	ug/l	98
3) Chloromethane	2.359	50	143124	54.136	ug/l	100
4) Vinyl Chloride	2.512	62	144535	51.634	ug/l	100
5) Bromomethane	2.953	94	82079	45.857	ug/l	97
6) Chloroethane	3.118	64	81737	44.083	ug/l	99
7) Trichlorofluoromethane	3.494	101	211138	52.097	ug/l	96
8) Diethyl Ether	3.959	74	70014	53.392	ug/l	96
9) 1,1,2-Trichlorotrifluo...	4.365	101	124057	52.955	ug/l	99
10) Methyl Iodide	4.589	142	150351	52.065	ug/l	97
11) Tert butyl alcohol	5.524	59	74854	242.354	ug/l	100
12) 1,1-Dichloroethene	4.336	96	115016	54.147	ug/l	99
13) Acrolein	4.177	56	96839	211.429	ug/l	97
14) Allyl chloride	5.030	41	150912	54.113	ug/l	95
15) Acrylonitrile	5.712	53	276910	275.784	ug/l	100
16) Acetone	4.424	43	219737	276.540	ug/l	98
17) Carbon Disulfide	4.712	76	349600	55.533	ug/l	100
18) Methyl Acetate	5.018	43	120090	43.940	ug/l	98
19) Methyl tert-butyl Ether	5.788	73	359275	56.919	ug/l	98
20) Methylene Chloride	5.277	84	130189	50.948	ug/l	93
21) trans-1,2-Dichloroethene	5.783	96	124616	54.484	ug/l	93
22) Diisopropyl ether	6.671	45	362103	57.461	ug/l	96
23) Vinyl Acetate	6.600	43	1270226	294.389	ug/l	99
24) 1,1-Dichloroethane	6.565	63	228563	53.355	ug/l	99
25) 2-Butanone	7.482	43	327494	280.150	ug/l	98
26) 2,2-Dichloropropane	7.488	77	203466	53.414	ug/l	99
27) cis-1,2-Dichloroethene	7.482	96	138418	52.194	ug/l	96
28) Bromochloromethane	7.812	49	113720	64.588	ug/l	93
29) Tetrahydrofuran	7.835	42	220221	291.733	ug/l	98
30) Chloroform	7.965	83	236440	52.815	ug/l	100
31) Cyclohexane	8.253	56	200072	55.780	ug/l	94
32) 1,1,1-Trichloroethane	8.165	97	211810	53.194	ug/l	98
36) 1,1-Dichloropropene	8.365	75	165790	57.708	ug/l	99
37) Ethyl Acetate	7.559	43	134008	56.682	ug/l	99
38) Carbon Tetrachloride	8.359	117	193937	56.814	ug/l	94
39) Methylcyclohexane	9.600	83	174606	61.866	ug/l	96
40) Benzene	8.600	78	517879	56.244	ug/l	100

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031125\
Data File : VN085928.D
Acq On : 11 Mar 2025 13:22
Operator : JC\MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 12 01:17:51 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:43:32 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VSTDCCC050

Manual Integrations APPROVED

Reviewed By :John Carlone 03/12/2025
Supervised By :Mahesh Dadoda 03/12/2025

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
41) Methacrylonitrile	7.777	41	75757	59.941	ug/l		97
42) 1,2-Dichloroethane	8.671	62	167949	55.998	ug/l		100
43) Isopropyl Acetate	8.688	43	229745	55.431	ug/l		98
44) Trichloroethene	9.347	130	114319	50.566	ug/l		98
45) 1,2-Dichloropropane	9.618	63	125922	56.656	ug/l		97
46) Dibromomethane	9.706	93	87140	55.583	ug/l		99
47) Bromodichloromethane	9.882	83	184314	54.952	ug/l		100
48) Methyl methacrylate	9.676	41	106445	60.625	ug/l		98
49) 1,4-Dioxane	9.688	88	41048	1229.394	ug/l		98
51) 4-Methyl-2-Pentanone	10.441	43	696920	305.744	ug/l		100
52) Toluene	10.629	92	330401	61.214	ug/l		99
53) t-1,3-Dichloropropene	10.835	75	187593	60.485	ug/l		100
54) cis-1,3-Dichloropropene	10.312	75	200954	59.087	ug/l		97
55) 1,1,2-Trichloroethane	11.012	97	117216	54.621	ug/l		95
56) Ethyl methacrylate	10.870	69	177513	56.615	ug/l		99
57) 1,3-Dichloropropane	11.159	76	203447	56.791	ug/l		99
58) 2-Chloroethyl Vinyl ether	10.159	63	282710	238.868	ug/l		100
59) 2-Hexanone	11.194	43	510866	325.783	ug/l		99
60) Dibromochloromethane	11.359	129	145539	58.241	ug/l		98
61) 1,2-Dibromoethane	11.465	107	117538	57.968	ug/l		99
64) Tetrachloroethene	11.100	164	114845	52.336	ug/l		95
65) Chlorobenzene	11.888	112	343241	52.896	ug/l		98
66) 1,1,1,2-Tetrachloroethane	11.959	131	125659	53.877	ug/l		99
67) Ethyl Benzene	11.959	91	611796	60.189	ug/l		99
68) m/p-Xylenes	12.070	106	484997	125.614	ug/l		100
69) o-Xylene	12.394	106	222427	60.624	ug/l		97
70) Styrene	12.406	104	388800	56.209	ug/l		98
71) Bromoform	12.576	173	99094	57.178	ug/l	#	96
73) Isopropylbenzene	12.694	105	559356	53.095	ug/l		99
74) N-amyl acetate	12.494	43	199571	53.719	ug/l		99
75) 1,1,2,2-Tetrachloroethane	12.935	83	168671	46.527	ug/l		100
76) 1,2,3-Trichloropropane	12.988	75	178136m	52.150	ug/l		
77) Bromobenzene	12.976	156	143525	50.426	ug/l		98
78) n-propylbenzene	13.035	91	682397	56.559	ug/l		99
79) 2-Chlorotoluene	13.123	91	424345	52.640	ug/l		99
80) 1,3,5-Trimethylbenzene	13.170	105	489718	57.065	ug/l		99
81) trans-1,4-Dichloro-2-b...	12.735	75	69980	59.775	ug/l		87
82) 4-Chlorotoluene	13.217	91	436573	54.629	ug/l		100
83) tert-Butylbenzene	13.435	119	392056	54.327	ug/l		96
84) 1,2,4-Trimethylbenzene	13.476	105	505780	59.570	ug/l		99
85) sec-Butylbenzene	13.611	105	567243	55.632	ug/l		100
86) p-Isopropyltoluene	13.729	119	483401	51.591	ug/l		99
87) 1,3-Dichlorobenzene	13.729	146	268224	50.299	ug/l		100
88) 1,4-Dichlorobenzene	13.811	146	267568	48.956	ug/l		100
89) n-Butylbenzene	14.053	91	404902	55.932	ug/l		98
90) Hexachloroethane	14.335	117	93901	48.627	ug/l		99
91) 1,2-Dichlorobenzene	14.106	146	256774	50.074	ug/l		99
92) 1,2-Dibromo-3-Chloropr...	14.717	75	31337	47.074	ug/l		97
93) 1,2,4-Trichlorobenzene	15.388	180	125292	51.276	ug/l		98
94) Hexachlorobutadiene	15.500	225	67213	45.261	ug/l		99
95) Naphthalene	15.641	128	352544	52.553	ug/l		100
96) 1,2,3-Trichlorobenzene	15.841	180	121186	49.402	ug/l		98

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031125\
Data File : VN085928.D
Acq On : 11 Mar 2025 13:22
Operator : JC\MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 12 01:17:51 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:43:32 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VSTDCCC050

Manual Integrations APPROVED

Reviewed By :John Carlone 03/12/2025
Supervised By :Mahesh Dadoda 03/12/2025

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

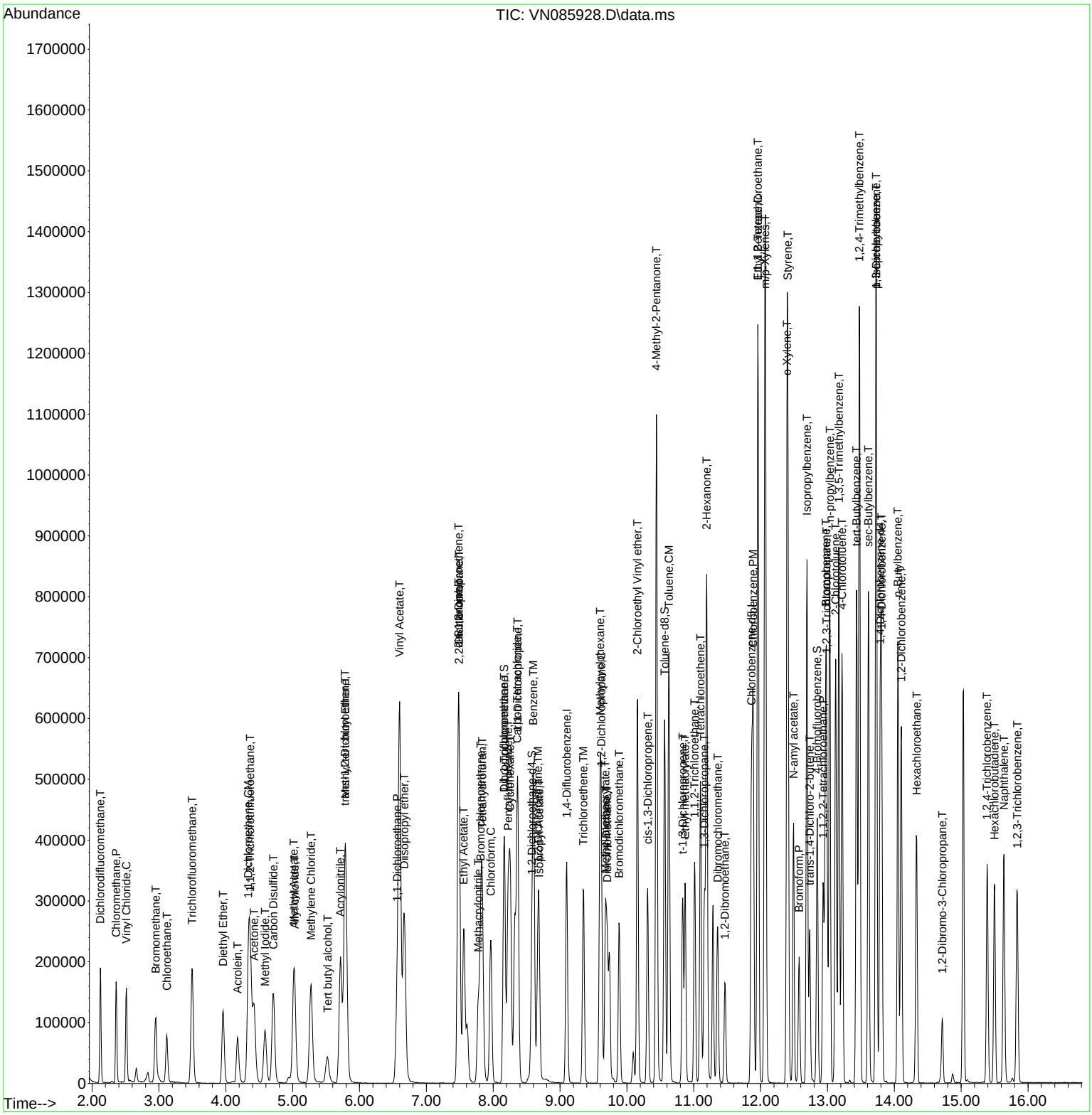
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031125\
Data File : VN085928.D
Acq On : 11 Mar 2025 13:22
Operator : JC\MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 12 01:17:51 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:43:32 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VSTDCCC050

Manual Integrations APPROVED

Reviewed By :John Carlone 03/12/2025
Supervised By :Mahesh Dadoda 03/12/2025



Sample Results: **VN085928.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031125\
Data File : VN085928.D
Acq On : 11 Mar 2025 13:22
Operator : JC\MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_N
LabSampleId :
VSTDCCC050

Quant Time: Mar 12 01:17:51 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:43:32 2025
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	1.000	1.000	0.0	60	0.00
2	T	Dichlorodifluoromethane	0.680	0.770	-13.2	69	0.00
3	P	Chloromethane	0.682	0.739	-8.4	71	0.00
4	C	Vinyl Chloride	0.723	0.746	-3.2#	66	0.00
5	T	Bromomethane	0.462	0.424	8.2	60	0.00
6	T	Chloroethane	0.479	0.422	11.9	61	0.00
7	T	Trichlorofluoromethane	1.046	1.090	-4.2	68	0.00
8	T	Diethyl Ether	0.339	0.361	-6.5	66	0.00
9	T	1,1,2-Trichlorotrifluoroeth	0.605	0.640	-5.8	68	0.00
10	T	Methyl Iodide	0.745	0.776	-4.2	65	0.00
11	T	Tert butyl alcohol	0.080	0.077	3.8	59	0.02
12	CM	1,1-Dichloroethene	0.548	0.594	-8.4#	68	0.00
13	T	Acrolein	0.118	0.100	15.3	47#	0.00
14	T	Allyl chloride	0.720	0.779	-8.2	68	0.01
15	T	Acrylonitrile	0.259	0.286	-10.4	70	0.00
16	T	Acetone	0.205	0.227	-10.7	74	0.00
17	T	Carbon Disulfide	1.625	1.805	-11.1	74	0.00
18	T	Methyl Acetate	0.705	0.620	12.1	60	0.00
19	T	Methyl tert-butyl Ether	1.629	1.855	-13.9	67	0.00
20	T	Methylene Chloride	0.660	0.672	-1.8	68	0.00
21	T	trans-1,2-Dichloroethene	0.590	0.643	-9.0	70	0.00
22	T	Diisopropyl ether	1.627	1.869	-14.9	68	0.00
23	T	Vinyl Acetate	1.114	1.312	-17.8	70	0.00
24	P	1,1-Dichloroethane	1.106	1.180	-6.7	69	0.00
25	T	2-Butanone	0.302	0.338	-11.9	69	0.01
26	T	2,2-Dichloropropane	0.983	1.050	-6.8	67	0.00
27	T	cis-1,2-Dichloroethene	0.685	0.715	-4.4	65	0.00
28	T	Bromochloromethane	0.454	0.587	-29.3#	79	0.00
29	T	Tetrahydrofuran	0.195	0.227	-16.4	70	0.00
30	C	Chloroform	1.156	1.221	-5.6#	69	0.00
31	T	Cyclohexane	0.926	1.033	-11.6	72	0.00
32	T	1,1,1-Trichloroethane	1.028	1.094	-6.4	68	0.00
33	S	1,2-Dichloroethane-d4	0.648	0.719	-11.0	70	0.00
34	I	1,4-Difluorobenzene	1.000	1.000	0.0	59	0.00
35	S	Dibromofluoromethane	0.327	0.367	-12.2	68	0.00
36	T	1,1-Dichloropropene	0.463	0.534	-15.3	68	0.00
37	T	Ethyl Acetate	0.381	0.432	-13.4	68	0.00
38	T	Carbon Tetrachloride	0.550	0.625	-13.6	70	0.00
39	T	Methylcyclohexane	0.455	0.563	-23.7	67	0.00
40	TM	Benzene	1.484	1.669	-12.5	68	0.00
41	T	Methacrylonitrile	0.204	0.244	-19.6	67	0.01
42	TM	1,2-Dichloroethane	0.483	0.541	-12.0	70	0.00
43	T	Isopropyl Acetate	0.807	0.741	8.2	68	0.00
44	TM	Trichloroethene	0.364	0.369	-1.4	64	0.00
45	C	1,2-Dichloropropane	0.358	0.406	-13.4#	69	0.00
46	T	Dibromomethane	0.253	0.281	-11.1	68	0.00
47	T	Bromodichloromethane	0.541	0.594	-9.8	68	0.00
48	T	Methyl methacrylate	0.283	0.343	-21.2	67	0.00

Sample Results: **VN085928.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031125\
Data File : VN085928.D
Acq On : 11 Mar 2025 13:22
Operator : JC\MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_N
LabSampleId :
VSTDCCC050

Quant Time: Mar 12 01:17:51 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:43:32 2025
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
49	T	1,4-Dioxane	0.005	0.007	-40.0#	68	0.00
50	S	Toluene-d8	1.190	1.369	-15.0	67	0.00
51	T	4-Methyl-2-Pentanone	0.367	0.449	-22.3	70	0.00
52	CM	Toluene	0.870	1.065	-22.4#	70	0.00
53	T	t-1,3-Dichloropropene	0.500	0.605	-21.0	68	0.00
54	T	cis-1,3-Dichloropropene	0.548	0.648	-18.2	67	0.00
55	T	1,1,2-Trichloroethane	0.346	0.378	-9.2	67	0.00
56	T	Ethyl methacrylate	0.434	0.572	-31.8#	68	0.00
57	T	1,3-Dichloropropane	0.577	0.656	-13.7	68	0.00
58	T	2-Chloroethyl Vinyl ether	0.195	0.182	6.7	62	0.00
59	T	2-Hexanone	0.253	0.329	-30.0#	71	0.00
60	T	Dibromochloromethane	0.403	0.469	-16.4	69	0.00
61	T	1,2-Dibromoethane	0.327	0.379	-15.9	69	0.00
62	S	4-Bromofluorobenzene	0.392	0.506	-29.1#	71	0.00
63	I	Chlorobenzene-d5	1.000	1.000	0.0	61	0.00
64	T	Tetrachloroethene	0.387	0.405	-4.7	69	0.00
65	PM	Chlorobenzene	1.145	1.212	-5.9	67	0.00
66	T	1,1,1,2-Tetrachloroethane	0.412	0.444	-7.8	69	0.00
67	C	Ethyl Benzene	1.794	2.160	-20.4#	70	0.00
68	T	m/p-Xylenes	0.682	0.856	-25.5#	71	0.00
69	T	o-Xylene	0.648	0.785	-21.1	68	0.00
70	T	Styrene	1.059	1.373	-29.7#	70	0.00
71	P	Bromoform	0.306	0.350	-14.4	71	0.00
72	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	68	0.00
73	T	Isopropylbenzene	3.425	3.637	-6.2	68	0.00
74	T	N-amyl acetate	1.208	1.298	-7.5	71	0.00
75	P	1,1,2,2-Tetrachloroethane	1.179	1.097	7.0	70	0.00
76	T	1,2,3-Trichloropropane	1.111	1.158	-4.2	83	0.00
77	T	Bromobenzene	0.925	0.933	-0.9	70	0.00
78	T	n-propylbenzene	3.923	4.438	-13.1	70	0.00
79	T	2-Chlorotoluene	2.621	2.760	-5.3	71	0.00
80	T	1,3,5-Trimethylbenzene	2.790	3.185	-14.2	70	0.00
81	T	trans-1,4-Dichloro-2-butene	0.381	0.455	-19.4	78	0.00
82	T	4-Chlorotoluene	2.598	2.839	-9.3	72	0.00
83	T	tert-Butylbenzene	2.346	2.550	-8.7	67	0.00
84	T	1,2,4-Trimethylbenzene	2.761	3.289	-19.1	72	0.00
85	T	sec-Butylbenzene	3.315	3.689	-11.3	68	0.00
86	T	p-Isopropyltoluene	2.665	3.144	-18.0	70	0.00
87	T	1,3-Dichlorobenzene	1.734	1.744	-0.6	72	0.00
88	T	1,4-Dichlorobenzene	1.777	1.740	2.1	71	0.00
89	T	n-Butylbenzene	2.354	2.633	-11.9	70	0.00
90	T	Hexachloroethane	0.628	0.611	2.7	70	0.00
91	T	1,2-Dichlorobenzene	1.667	1.670	-0.2	72	0.00
92	T	1,2-Dibromo-3-Chloropropane	0.216	0.204	5.6	71	0.00
93	T	1,2,4-Trichlorobenzene	0.794	0.815	-2.6	69	0.00
94	T	Hexachlorobutadiene	0.483	0.437	9.5	70	0.00
95	T	Naphthalene	2.181	2.293	-5.1	67	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031125\
Data File : VN085928.D
Acq On : 11 Mar 2025 13:22
Operator : JC\MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_N
LabSampleId :
VSTDCCC050

Quant Time: Mar 12 01:17:51 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:43:32 2025
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
96 T	1,2,3-Trichlorobenzene	0.798	0.788	1.3	67	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 6

Sample Results: **VN085928.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031125\
Data File : VN085928.D
Acq On : 11 Mar 2025 13:22
Operator : JC\MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_N
LabSampleId :
VSTDCCC050

Quant Time: Mar 12 01:17:51 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:43:32 2025
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene	50.000	50.000	0.0	60	0.00
2	T	Dichlorodifluoromethane	50.000	56.573	-13.1	69	0.00
3	P	Chloromethane	50.000	54.136	-8.3	71	0.00
4	C	Vinyl Chloride	50.000	51.634	-3.3#	66	0.00
5	T	Bromomethane	50.000	45.857	8.3	60	0.00
6	T	Chloroethane	50.000	44.083	11.8	61	0.00
7	T	Trichlorofluoromethane	50.000	52.097	-4.2	68	0.00
8	T	Diethyl Ether	50.000	53.392	-6.8	66	0.00
9	T	1,1,2-Trichlorotrifluoroeth	50.000	52.955	-5.9	68	0.00
10	T	Methyl Iodide	50.000	52.065	-4.1	65	0.00
11	T	Tert butyl alcohol	250.000	242.354	3.1	59	0.02
12	CM	1,1-Dichloroethene	50.000	54.147	-8.3#	68	0.00
13	T	Acrolein	250.000	211.429	15.4	47	0.00
14	T	Allyl chloride	50.000	54.113	-8.2	68	0.01
15	T	Acrylonitrile	250.000	275.784	-10.3	70	0.00
16	T	Acetone	250.000	276.540	-10.6	74	0.00
17	T	Carbon Disulfide	50.000	55.533	-11.1	74	0.00
18	T	Methyl Acetate	50.000	43.940	12.1	60	0.00
19	T	Methyl tert-butyl Ether	50.000	56.919	-13.8	67	0.00
20	T	Methylene Chloride	50.000	50.948	-1.9	68	0.00
21	T	trans-1,2-Dichloroethene	50.000	54.484	-9.0	70	0.00
22	T	Diisopropyl ether	50.000	57.461	-14.9	68	0.00
23	T	Vinyl Acetate	250.000	294.389	-17.8	70	0.00
24	P	1,1-Dichloroethane	50.000	53.355	-6.7	69	0.00
25	T	2-Butanone	250.000	280.150	-12.1	69	0.01
26	T	2,2-Dichloropropane	50.000	53.414	-6.8	67	0.00
27	T	cis-1,2-Dichloroethene	50.000	52.194	-4.4	65	0.00
28	T	Bromochloromethane	50.000	64.588	-29.2#	79	0.00
29	T	Tetrahydrofuran	250.000	291.733	-16.7	70	0.00
30	C	Chloroform	50.000	52.815	-5.6#	69	0.00
31	T	Cyclohexane	50.000	55.780	-11.6	72	0.00
32	T	1,1,1-Trichloroethane	50.000	53.194	-6.4	68	0.00
33	S	1,2-Dichloroethane-d4	50.000	55.421	-10.8	70	0.00
34	I	1,4-Difluorobenzene	50.000	50.000	0.0	59	0.00
35	S	Dibromofluoromethane	50.000	56.081	-12.2	68	0.00
36	T	1,1-Dichloropropene	50.000	57.708	-15.4	68	0.00
37	T	Ethyl Acetate	50.000	56.682	-13.4	68	0.00
38	T	Carbon Tetrachloride	50.000	56.814	-13.6	70	0.00
39	T	Methylcyclohexane	50.000	61.866	-23.7	67	0.00
40	TM	Benzene	50.000	56.244	-12.5	68	0.00
41	T	Methacrylonitrile	50.000	59.941	-19.9	67	0.01
42	TM	1,2-Dichloroethane	50.000	55.998	-12.0	70	0.00
43	T	Isopropyl Acetate	50.000	55.431	-10.9	68	0.00
44	TM	Trichloroethene	50.000	50.566	-1.1	64	0.00
45	C	1,2-Dichloropropane	50.000	56.656	-13.3#	69	0.00
46	T	Dibromomethane	50.000	55.583	-11.2	68	0.00
47	T	Bromodichloromethane	50.000	54.952	-9.9	68	0.00
48	T	Methyl methacrylate	50.000	60.625	-21.3	67	0.00

Sample Results: **VN085928.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031125\
Data File : VN085928.D
Acq On : 11 Mar 2025 13:22
Operator : JC\MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_N
LabSampleId :
VSTDCCC050

Quant Time: Mar 12 01:17:51 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:43:32 2025
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
49	T	1,4-Dioxane	1000.000	1229.394	-22.9	68	0.00
50	S	Toluene-d8	50.000	57.501	-15.0	67	0.00
51	T	4-Methyl-2-Pentanone	250.000	305.744	-22.3	70	0.00
52	CM	Toluene	50.000	61.214	-22.4#	70	0.00
53	T	t-1,3-Dichloropropene	50.000	60.485	-21.0	68	0.00
54	T	cis-1,3-Dichloropropene	50.000	59.087	-18.2	67	0.00
55	T	1,1,2-Trichloroethane	50.000	54.621	-9.2	67	0.00
56	T	Ethyl methacrylate	50.000	56.615	-13.2	68	0.00
57	T	1,3-Dichloropropane	50.000	56.791	-13.6	68	0.00
58	T	2-Chloroethyl Vinyl ether	250.000	238.868	4.5	62	0.00
59	T	2-Hexanone	250.000	325.783	-30.3#	71	0.00
60	T	Dibromochloromethane	50.000	58.241	-16.5	69	0.00
61	T	1,2-Dibromoethane	50.000	57.968	-15.9	69	0.00
62	S	4-Bromofluorobenzene	50.000	64.447	-28.9#	71	0.00
63	I	Chlorobenzene-d5	50.000	50.000	0.0	61	0.00
64	T	Tetrachloroethene	50.000	52.336	-4.7	69	0.00
65	PM	Chlorobenzene	50.000	52.896	-5.8	67	0.00
66	T	1,1,1,2-Tetrachloroethane	50.000	53.877	-7.8	69	0.00
67	C	Ethyl Benzene	50.000	60.189	-20.4#	70	0.00
68	T	m/p-Xylenes	100.000	125.614	-25.6#	71	0.00
69	T	o-Xylene	50.000	60.624	-21.2	68	0.00
70	T	Styrene	50.000	56.209	-12.4	70	0.00
71	P	Bromoform	50.000	57.178	-14.4	71	0.00
72	I	1,4-Dichlorobenzene-d4	50.000	50.000	0.0	68	0.00
73	T	Isopropylbenzene	50.000	53.095	-6.2	68	0.00
74	T	N-amyl acetate	50.000	53.719	-7.4	71	0.00
75	P	1,1,2,2-Tetrachloroethane	50.000	46.527	6.9	70	0.00
76	T	1,2,3-Trichloropropane	50.000	52.150	-4.3	83	0.00
77	T	Bromobenzene	50.000	50.426	-0.9	70	0.00
78	T	n-propylbenzene	50.000	56.559	-13.1	70	0.00
79	T	2-Chlorotoluene	50.000	52.640	-5.3	71	0.00
80	T	1,3,5-Trimethylbenzene	50.000	57.065	-14.1	70	0.00
81	T	trans-1,4-Dichloro-2-butene	50.000	59.775	-19.5	78	0.00
82	T	4-Chlorotoluene	50.000	54.629	-9.3	72	0.00
83	T	tert-Butylbenzene	50.000	54.327	-8.7	67	0.00
84	T	1,2,4-Trimethylbenzene	50.000	59.570	-19.1	72	0.00
85	T	sec-Butylbenzene	50.000	55.632	-11.3	68	0.00
86	T	p-Isopropyltoluene	50.000	51.591	-3.2	70	0.00
87	T	1,3-Dichlorobenzene	50.000	50.299	-0.6	72	0.00
88	T	1,4-Dichlorobenzene	50.000	48.956	2.1	71	0.00
89	T	n-Butylbenzene	50.000	55.932	-11.9	70	0.00
90	T	Hexachloroethane	50.000	48.627	2.7	70	0.00
91	T	1,2-Dichlorobenzene	50.000	50.074	-0.1	72	0.00
92	T	1,2-Dibromo-3-Chloropropane	50.000	47.074	5.9	71	0.00
93	T	1,2,4-Trichlorobenzene	50.000	51.276	-2.6	69	0.00
94	T	Hexachlorobutadiene	50.000	45.261	9.5	70	0.00
95	T	Naphthalene	50.000	52.553	-5.1	67	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031125\
Data File : VN085928.D
Acq On : 11 Mar 2025 13:22
Operator : JC\MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 3 Sample Multiplier: 1

Instrument :
MSVOA_N
LabSampleId :
VSTDCCC050

Quant Time: Mar 12 01:17:51 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:43:32 2025
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
96 T	1,2,3-Trichlorobenzene	50.000	49.402	1.2	67	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 6

QC SAMPLE DATA

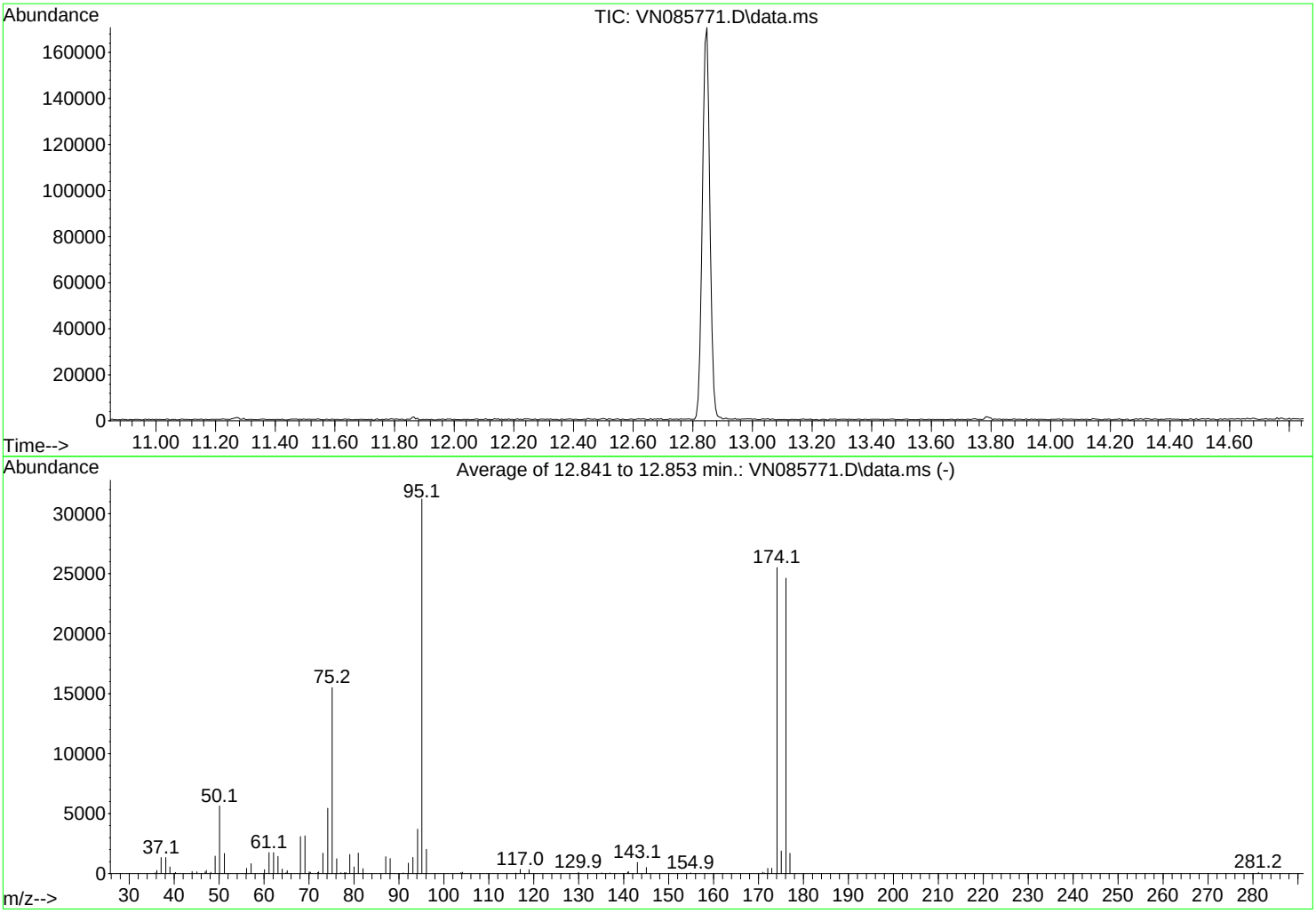
Sample Results: **VN085771.D**

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN021825\
Data File : VN085771.D
Acq On : 18 Feb 2025 10:35
Operator : JC\MD
Sample : BFB
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
BFB

Integration File: RTEINT.P

Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Title : SW846 8260
Last Update : Wed Feb 19 03:43:32 2025



AutoFind: Scans 1851, 1852, 1853; Background Corrected with Scan 1843

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	18.1	5643	PASS
75	95	30	60	49.7	15509	PASS
95	95	100	100	100.0	31224	PASS
96	95	5	9	6.5	2024	PASS
173	174	0.00	2	1.8	452	PASS
174	95	50	100	81.7	25509	PASS
175	174	5	9	7.4	1882	PASS
176	174	95	101	96.5	24621	PASS
177	176	5	9	6.9	1699	PASS

Average of 12.841 to 12.853 min.: VN085771.D\data.ms
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.80	65	48.15	124	64.90	70	76.15	124
36.15	261	49.10	1454	65.15	255	77.10	8
37.10	1338	50.10	5643	68.10	3096	77.90	8
38.15	1335	51.15	1680	69.10	3155	78.20	8
39.05	560	56.10	443	70.05	161	79.05	1595
40.00	21	57.10	824	70.30	106	80.00	557
40.30	99	60.10	333	71.90	80	80.95	1716
44.00	176	61.10	1754	72.15	148	82.00	419
45.05	157	62.10	1754	73.10	1710	87.05	1414
46.90	145	63.10	1428	74.15	5444	88.05	1255
47.15	276	64.05	377	75.15	15509	91.00	59

Instrument :
MSVOA_N
ClientSampleId :
BFB

Average of 12.841 to 12.853 min.: VN085771.D\data.ms
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
92.10	882	135.10	54	174.10	25509		
93.10	1346	136.90	57	175.05	1882		
94.15	3713	140.90	114	176.10	24621		
95.10	31224	141.05	164	177.00	1699		
96.10	2024	143.05	938	281.20	112		
103.80	81	145.05	510				
104.10	121	154.90	54				
116.00	52	170.90	116				
117.00	351	171.30	58				
118.95	331	172.05	440				
129.95	112	172.95	452				

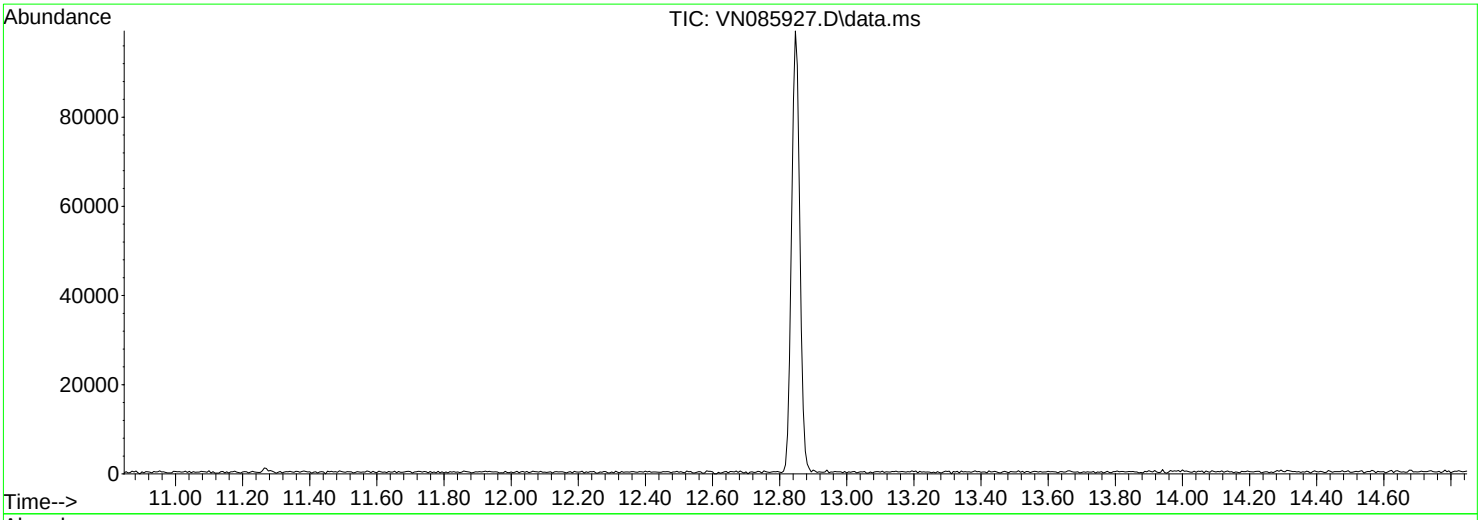
Sample Results: **VN085927.D**

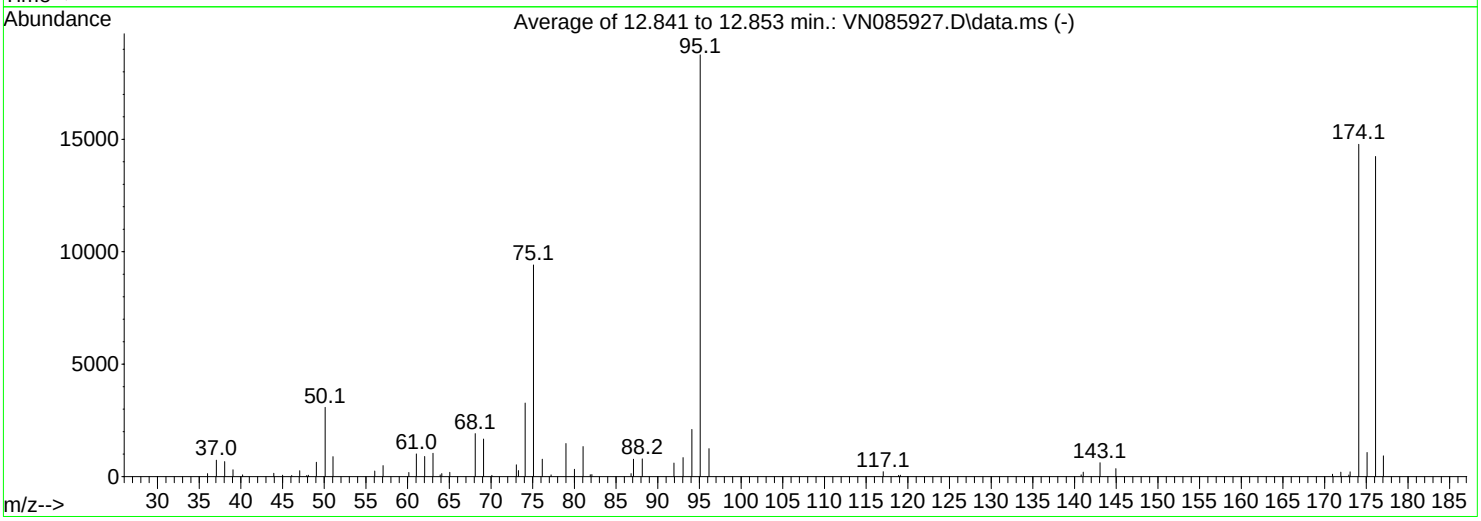
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031125\
Data File : VN085927.D
Acq On : 11 Mar 2025 12:12
Operator : JC\MD
Sample : BFB
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
BFB

Integration File: RTEINT.P

Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Title : SW846 8260
Last Update : Wed Feb 19 03:43:32 2025





AutoFind: Scans 1851, 1852, 1853; Background Corrected with Scan 1844

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	16.4	3078	PASS
75	95	30	60	50.2	9414	PASS
95	95	100	100	100.0	18755	PASS
96	95	5	9	6.6	1247	PASS
173	174	0.00	2	1.4	214	PASS
174	95	50	100	78.8	14780	PASS
175	174	5	9	7.3	1076	PASS
176	174	95	101	96.3	14234	PASS
177	176	5	9	6.5	923	PASS

Average of 12.841 to 12.853 min.: VN085927.D\data.ms
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	136	49.05	643	65.05	193	80.00	32
37.05	733	50.10	3078	68.10	1917	81.05	133
38.05	671	51.05	888	69.10	1669	81.90	8
39.05	309	56.05	249	70.10	57	82.10	9
40.20	75	57.05	488	73.05	525	86.80	136
43.95	149	60.15	182	73.30	268	87.10	777
45.00	66	61.05	1010	74.10	3275	88.15	787
46.10	53	62.05	899	75.10	9414	91.95	607
47.05	266	63.05	1037	76.15	779	93.05	850
47.90	50	63.90	76	77.20	79	94.10	2096
48.10	62	64.10	138	79.00	1472	95.10	18755

Instrument :
MSVOA_N
ClientSampleId :
BFB

Average of 12.841 to 12.853 min.: VN085927.D\data.ms
BFB
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
96.15	1247	173.05	214				
117.05	223	174.10	14780				
118.90	57	175.10	1076				
119.10	64	176.10	14234				
140.80	78	177.05	923				
141.05	199						
143.05	616						
144.95	358						
170.95	108						
171.95	200						
172.90	72						

Raw Data: **VN085930.D**

Alliance TECHNICAL GROUP
284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Report of Analysis

Client:	ENTACT	Date Collected:	
Project:	540 Degraw St, Brooklyn, NY - E9309	Date Received:	
Client Sample ID:	VN0311WBL01	SDG No.:	Q1523
Lab Sample ID:	VN0311WBL01	Matrix:	TCLP
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	TCLP VOA
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN085930.D	1		03/11/25 14:21	VN031125

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-01-4	Vinyl Chloride	0.26	U	0.26	5.00	ug/L
75-35-4	1,1-Dichloroethene	0.23	U	0.23	5.00	ug/L
78-93-3	2-Butanone	0.98	U	0.98	25.0	ug/L
56-23-5	Carbon Tetrachloride	0.25	U	0.25	5.00	ug/L
67-66-3	Chloroform	0.25	U	0.25	5.00	ug/L
71-43-2	Benzene	0.15	U	0.15	5.00	ug/L
107-06-2	1,2-Dichloroethane	0.22	U	0.22	5.00	ug/L
79-01-6	Trichloroethene	0.090	U	0.090	5.00	ug/L
127-18-4	Tetrachloroethene	0.23	U	0.23	5.00	ug/L
108-90-7	Chlorobenzene	0.12	U	0.12	5.00	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	56.1		70 (74) - 130 (125)	112%	SPK: 50
1868-53-7	Dibromofluoromethane	49.0		70 (75) - 130 (124)	98%	SPK: 50
2037-26-5	Toluene-d8	44.5		70 (86) - 130 (113)	89%	SPK: 50
460-00-4	4-Bromofluorobenzene	42.2		70 (77) - 130 (121)	84%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	166000	8.224			
540-36-3	1,4-Difluorobenzene	319000	9.1			
3114-55-4	Chlorobenzene-d5	278000	11.865			
3855-82-1	1,4-Dichlorobenzene-d4	106000	13.788			

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031125\
Data File : VN085930.D
Acq On : 11 Mar 2025 14:21
Operator : JC\MD
Sample : VN0311WBL01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VN0311WBL01

Quant Time: Mar 12 01:19:43 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:43:32 2025
Response via : Initial Calibration

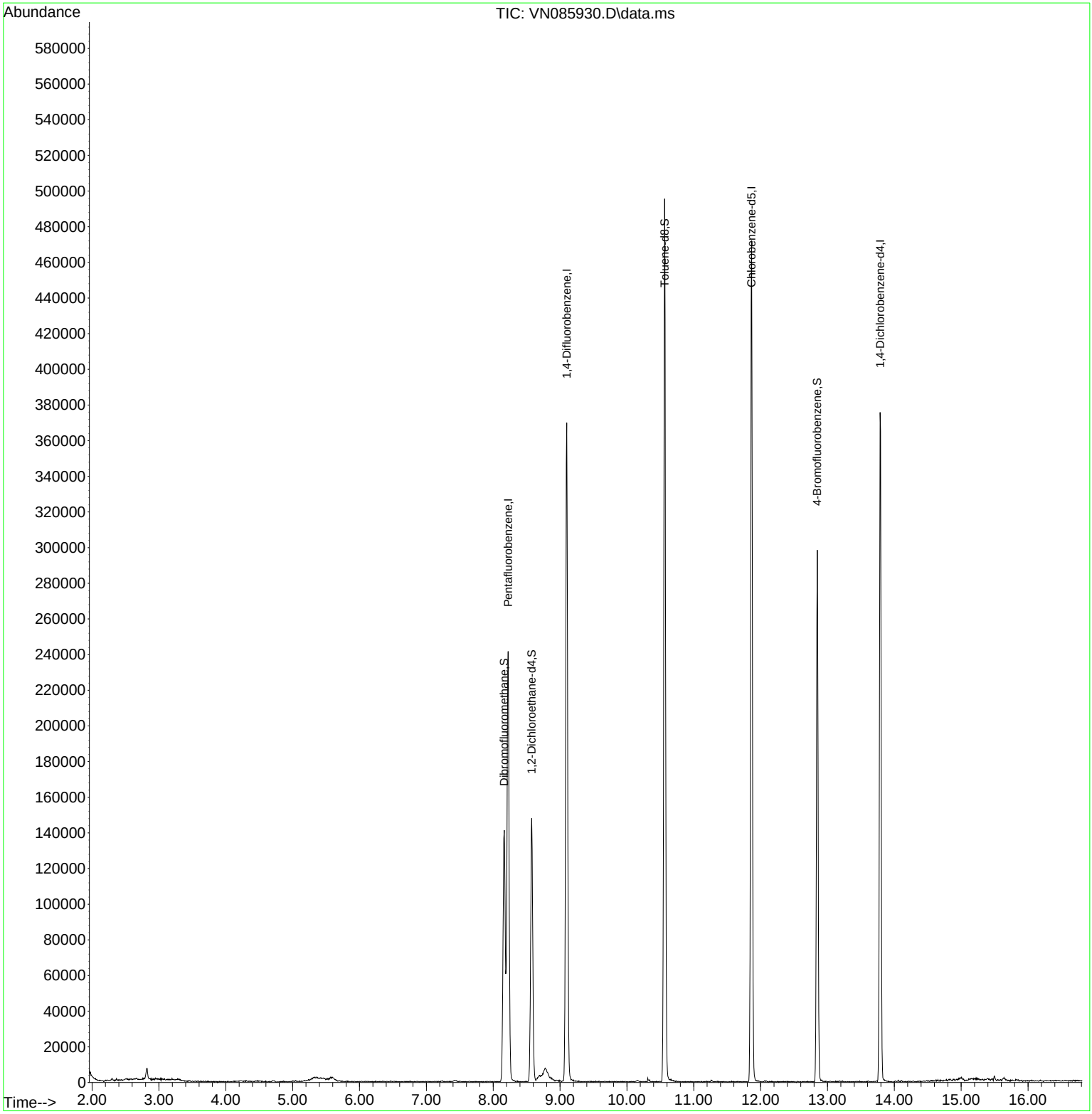
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	8.224	168	166099	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.100	114	319285	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.865	117	277562	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.788	152	106492	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.577	65	120828	56.110	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 112.220%			
35) Dibromofluoromethane	8.165	113	102406	49.016	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 98.040%			
50) Toluene-d8	10.565	98	338496	44.531	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery = 89.060%			
62) 4-Bromofluorobenzene	12.847	95	105788	42.240	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery = 84.480%			
Target Compounds						Qvalue

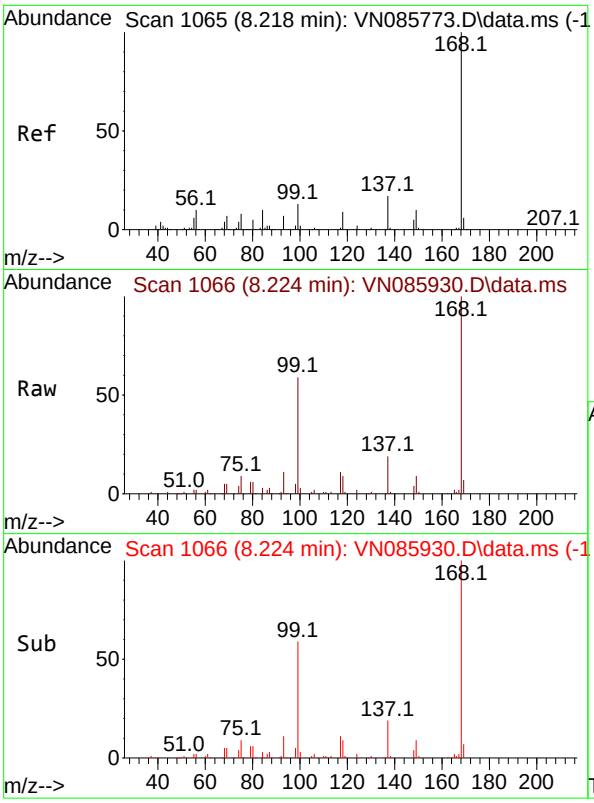
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031125\
Data File : VN085930.D
Acq On : 11 Mar 2025 14:21
Operator : JC\MD
Sample : VN0311WBL01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument :
MSVOA_N
ClientSampleId :
VN0311WBL01

Quant Time: Mar 12 01:19:43 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:43:32 2025
Response via : Initial Calibration



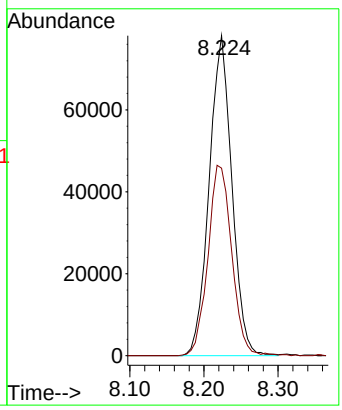


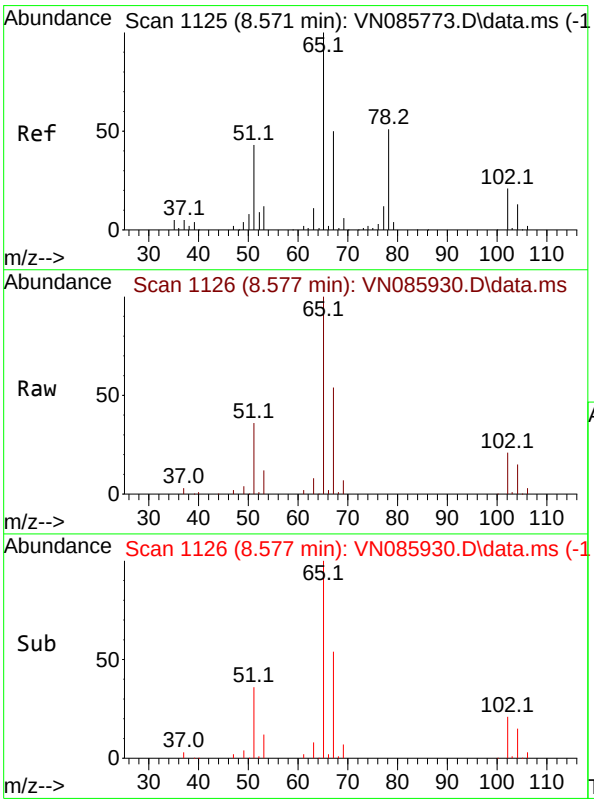
#1
Pentafluorobenzene
Concen: 50.000 ug/l
RT: 8.224 min Scan# 1
Delta R.T. 0.006 min
Lab File: VN085930.D
Acq: 11 Mar 2025 14:21

Instrument :
MSVOA_N
ClientSampleId :
VN0311WBL01

Tgt Ion:168 Resp: 166099

Ion	Ratio	Lower	Upper
168	100		
99	58.6	47.9	71.9

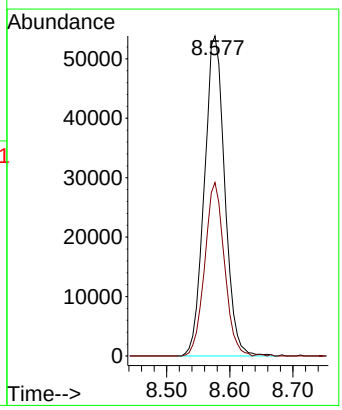


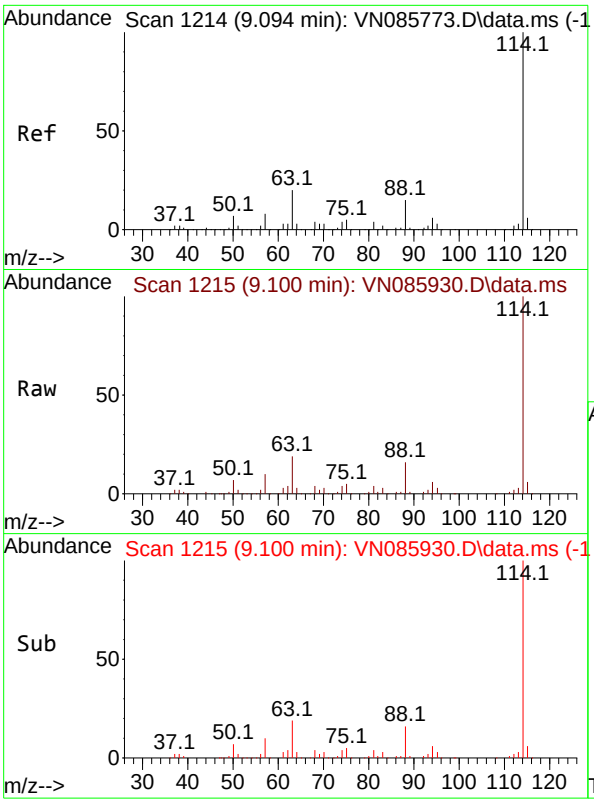


#33
1,2-Dichloroethane-d4
Concen: 56.110 ug/l
RT: 8.577 min Scan# 1126
Delta R.T. 0.006 min
Lab File: VN085930.D
Acq: 11 Mar 2025 14:21

Tgt Ion: 65 Resp: 120828

Ion	Ratio	Lower	Upper
65	100		
67	52.3	0.0	106.2



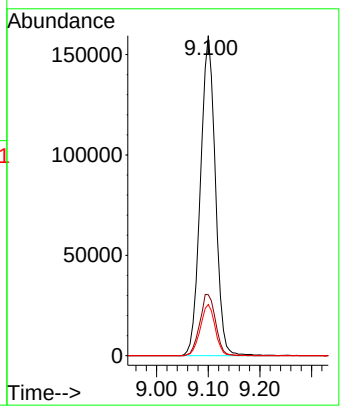


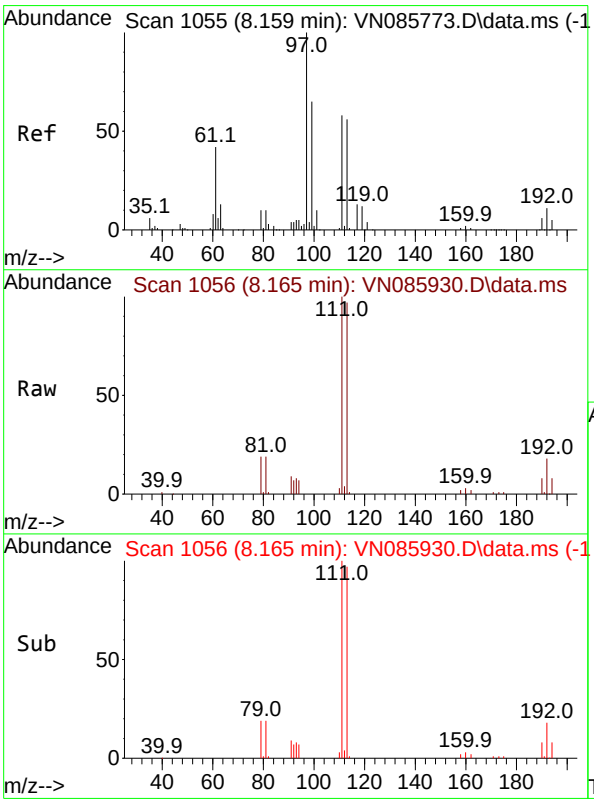
#34
1,4-Difluorobenzene
Concen: 50.000 ug/l
RT: 9.100 min Scan# 1
Delta R.T. 0.006 min
Lab File: VN085930.D
Acq: 11 Mar 2025 14:21

Instrument :
MSVOA_N
ClientSampleId :
VN0311WBL01

Tgt Ion:114 Resp: 319285

Ion	Ratio	Lower	Upper
114	100		
63	19.1	0.0	39.2
88	16.0	0.0	30.0

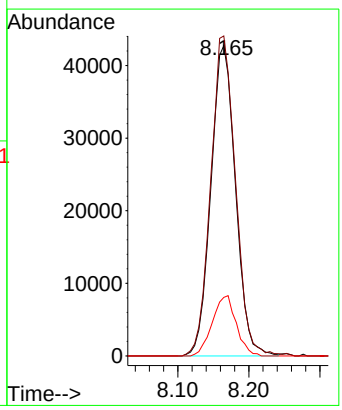


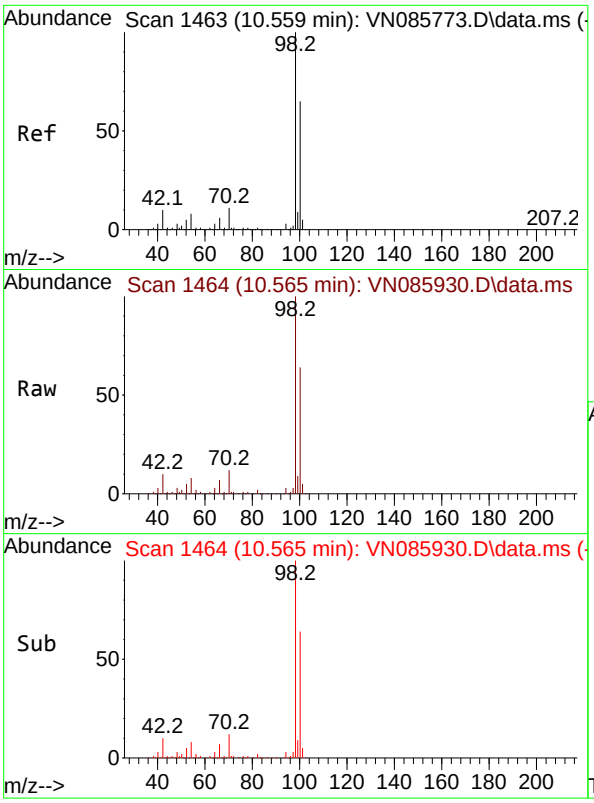


#35
Dibromofluoromethane
Concen: 49.016 ug/l
RT: 8.165 min Scan# 1056
Delta R.T. 0.006 min
Lab File: VN085930.D
Acq: 11 Mar 2025 14:21

Tgt Ion:113 Resp: 102406

Ion	Ratio	Lower	Upper
113	100		
111	104.2	82.2	123.4
192	18.9	14.7	22.1



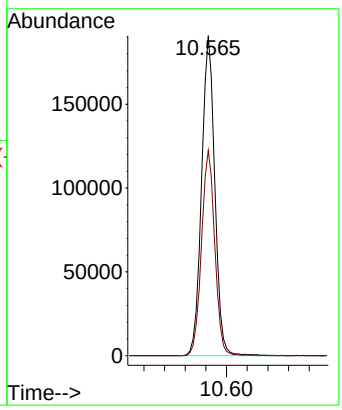


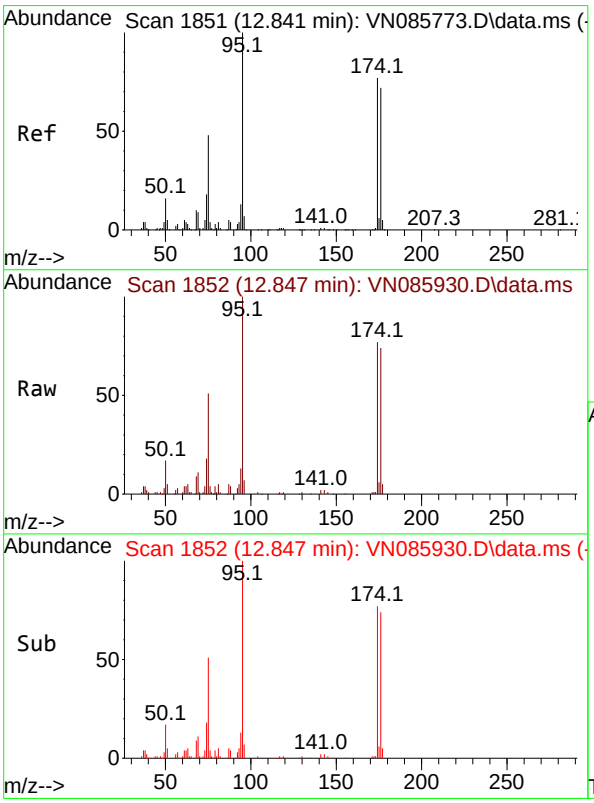
#50
Toluene-d8
Concen: 44.531 ug/l
RT: 10.565 min Scan# 14
Delta R.T. 0.006 min
Lab File: VN085930.D
Acq: 11 Mar 2025 14:21

Instrument :
MSVOA_N
ClientSampleId :
VN0311WBL01

Tgt Ion: 98 Resp: 338496

Ion	Ratio	Lower	Upper
98	100		
100	64.5	52.1	78.1

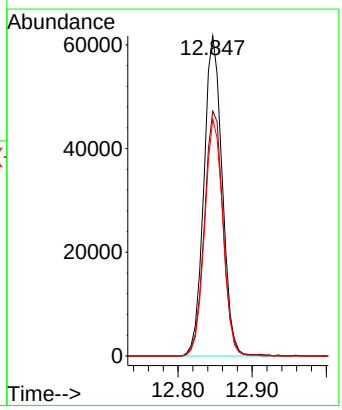


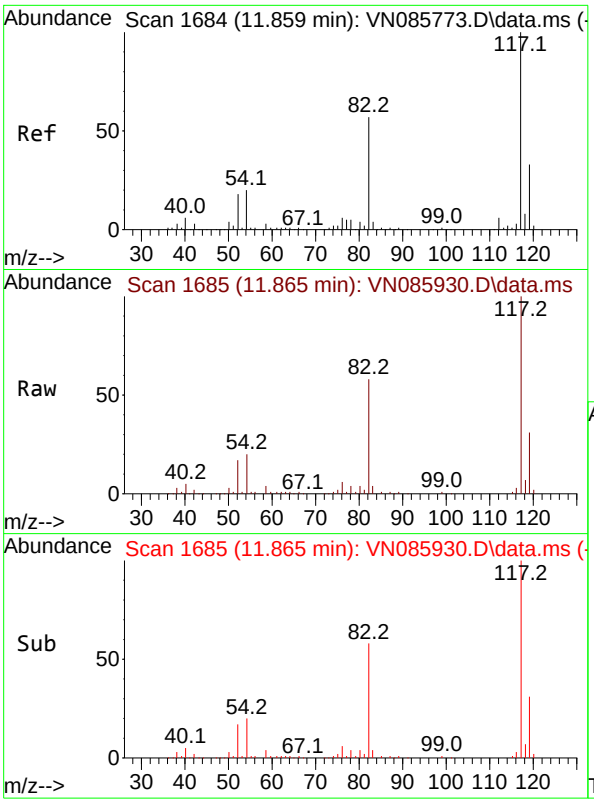


#62
4-Bromofluorobenzene
Concen: 42.240 ug/l
RT: 12.847 min Scan# 1852
Delta R.T. 0.006 min
Lab File: VN085930.D
Acq: 11 Mar 2025 14:21

Tgt Ion: 95 Resp: 105788

Ion	Ratio	Lower	Upper
95	100		
174	78.2	0.0	152.4
176	73.8	0.0	146.6



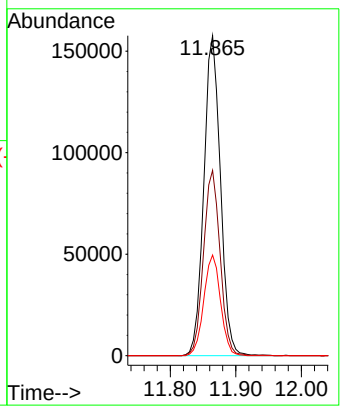


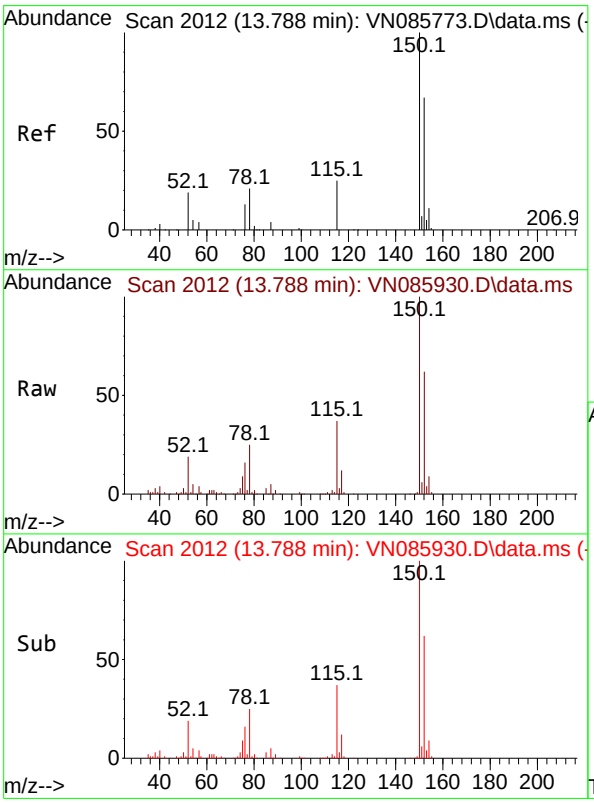
#63
Chlorobenzene-d5
Concen: 50.000 ug/l
RT: 11.865 min Scan# 1
Delta R.T. 0.006 min
Lab File: VN085930.D
Acq: 11 Mar 2025 14:21

Instrument :
MSVOA_N
ClientSampleId :
VN0311WBL01

Tgt Ion:117 Resp: 277562

Ion	Ratio	Lower	Upper
117	100		
82	57.9	45.7	68.5
119	31.5	26.2	39.2

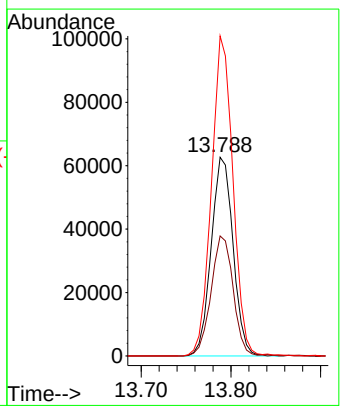




#72
1,4-Dichlorobenzene-d4
Concen: 50.000 ug/l
RT: 13.788 min Scan# 2012
Delta R.T. -0.000 min
Lab File: VN085930.D
Acq: 11 Mar 2025 14:21

Tgt Ion:152 Resp: 106492

Ion	Ratio	Lower	Upper
152	100		
115	60.6	30.4	91.3
150	157.7	0.0	345.4



Raw Data: **VN085931.D**

Alliance TECHNICAL GROUP
284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Report of Analysis

Client:	ENTACT	Date Collected:	
Project:	540 Degraw St, Brooklyn, NY - E9309	Date Received:	
Client Sample ID:	VN0311WBS01	SDG No.:	Q1523
Lab Sample ID:	VN0311WBS01	Matrix:	TCLP
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	TCLP VOA
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN085931.D	1		03/11/25 14:54	VN031125

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-01-4	Vinyl Chloride	17.4		0.26	5.00	ug/L
75-35-4	1,1-Dichloroethene	19.0		0.23	5.00	ug/L
78-93-3	2-Butanone	96.2		0.98	25.0	ug/L
56-23-5	Carbon Tetrachloride	19.7		0.25	5.00	ug/L
67-66-3	Chloroform	19.1		0.25	5.00	ug/L
71-43-2	Benzene	19.7		0.15	5.00	ug/L
107-06-2	1,2-Dichloroethane	19.8		0.22	5.00	ug/L
79-01-6	Trichloroethene	17.7		0.090	5.00	ug/L
127-18-4	Tetrachloroethene	19.1		0.23	5.00	ug/L
108-90-7	Chlorobenzene	18.5		0.12	5.00	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	46.9		70 (74) - 130 (125)	94%	SPK: 50
1868-53-7	Dibromofluoromethane	46.9		70 (75) - 130 (124)	94%	SPK: 50
2037-26-5	Toluene-d8	46.3		70 (86) - 130 (113)	93%	SPK: 50
460-00-4	4-Bromofluorobenzene	48.7		70 (77) - 130 (121)	97%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	172000	8.218			
540-36-3	1,4-Difluorobenzene	282000	9.1			
3114-55-4	Chlorobenzene-d5	250000	11.865			
3855-82-1	1,4-Dichlorobenzene-d4	128000	13.788			

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031125\
Data File : VN085931.D
Acq On : 11 Mar 2025 14:54
Operator : JC\MD
Sample : VN0311WBS01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 12 01:20:14 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:43:32 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VN0311WBS01

Manual Integrations APPROVED

Reviewed By :John Carlone 03/12/2025
Supervised By :Mahesh Dadoda 03/12/2025

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	8.218	168	171959	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.100	114	282309	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.865	117	250243	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.788	152	128349	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.577	65	104493	46.871	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 93.740%			
35) Dibromofluoromethane	8.165	113	86656	46.910	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 93.820%			
50) Toluene-d8	10.565	98	311283	46.315	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery = 92.620%			
62) 4-Bromofluorobenzene	12.847	95	107765	48.665	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery = 97.320%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.124	85	46040	19.684	ug/l	95
3) Chloromethane	2.359	50	43998	18.746	ug/l	100
4) Vinyl Chloride	2.512	62	43138	17.359	ug/l	98
5) Bromomethane	2.954	94	27066	17.033	ug/l	98
6) Chloroethane	3.118	64	25922	15.748	ug/l	98
7) Trichlorofluoromethane	3.495	101	68309	18.985	ug/l	97
8) Diethyl Ether	3.959	74	20408	17.530	ug/l	91
9) 1,1,2-Trichlorotrifluo...	4.371	101	39761	19.118	ug/l	98
10) Methyl Iodide	4.589	142	46990	18.329	ug/l	97
11) Tert butyl alcohol	5.518	59	24987	91.127	ug/l #	90
12) 1,1-Dichloroethene	4.342	96	35866	19.019	ug/l	97
13) Acrolein	4.171	56	36561	89.914	ug/l	95
14) Allyl chloride	5.024	41	45099	18.215	ug/l	94
15) Acrylonitrile	5.718	53	88991	99.833	ug/l	98
16) Acetone	4.424	43	64479	91.405	ug/l	97
17) Carbon Disulfide	4.712	76	110141	19.707	ug/l	99
18) Methyl Acetate	5.024	43	38972	16.062	ug/l	97
19) Methyl tert-butyl Ether	5.789	73	103840	18.531	ug/l	99
20) Methylene Chloride	5.271	84	42432	18.704	ug/l	91
21) trans-1,2-Dichloroethene	5.789	96	37463	18.450	ug/l	88
22) Diisopropyl ether	6.671	45	111397	19.912	ug/l	98
23) Vinyl Acetate	6.600	43	368840	96.289	ug/l	99
24) 1,1-Dichloroethane	6.571	63	72568	19.081	ug/l	98
25) 2-Butanone	7.477	43	99858	96.221	ug/l	99
26) 2,2-Dichloropropane	7.489	77	62578	18.505	ug/l	98
27) cis-1,2-Dichloroethene	7.483	96	42379	18.000	ug/l	97
28) Bromochloromethane	7.812	49	37741	24.145	ug/l	92
29) Tetrahydrofuran	7.841	42	65823	98.221	ug/l	99
30) Chloroform	7.965	83	75940	19.108	ug/l	99
31) Cyclohexane	8.253	56	59584	18.712	ug/l	98
32) 1,1,1-Trichloroethane	8.165	97	67340	19.050	ug/l	97
36) 1,1-Dichloropropene	8.365	75	49565	18.958	ug/l	99
37) Ethyl Acetate	7.553	43	41433	19.258	ug/l	99
38) Carbon Tetrachloride	8.359	117	61348	19.749	ug/l	93
39) Methylcyclohexane	9.600	83	45454	17.697	ug/l	91
40) Benzene	8.600	78	165147	19.709	ug/l	98

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031125\
Data File : VN085931.D
Acq On : 11 Mar 2025 14:54
Operator : JC\MD
Sample : VN0311WBS01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 12 01:20:14 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:43:32 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VN0311WBS01

Manual Integrations APPROVED

Reviewed By :John Carlone 03/12/2025
Supervised By :Mahesh Dadoda 03/12/2025

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
41) Methacrylonitrile	7.777	41	22880	19.893	ug/l		98
42) 1,2-Dichloroethane	8.665	62	54080	19.814	ug/l		98
43) Isopropyl Acetate	8.688	43	72385	18.830	ug/l		99
44) Trichloroethene	9.347	130	36357	17.671	ug/l		99
45) 1,2-Dichloropropane	9.618	63	39742	19.649	ug/l		99
46) Dibromomethane	9.706	93	28013	19.635	ug/l		97
47) Bromodichloromethane	9.883	83	58843	19.278	ug/l		98
48) Methyl methacrylate	9.677	41	30151	18.870	ug/l		98
49) 1,4-Dioxane	9.694	88	12170	400.527	ug/l	#	92
51) 4-Methyl-2-Pentanone	10.441	43	211308	101.867	ug/l		98
52) Toluene	10.630	92	100609	20.483	ug/l		100
53) t-1,3-Dichloropropene	10.835	75	53811	19.065	ug/l		97
54) cis-1,3-Dichloropropene	10.306	75	59621	19.264	ug/l		97
55) 1,1,2-Trichloroethane	11.012	97	38483	19.705	ug/l		97
56) Ethyl methacrylate	10.871	69	47794	18.623	ug/l		97
57) 1,3-Dichloropropane	11.159	76	63091	19.352	ug/l		100
58) 2-Chloroethyl Vinyl ether	10.159	63	90341	96.936	ug/l		100
59) 2-Hexanone	11.194	43	146567	102.707	ug/l		99
60) Dibromochloromethane	11.353	129	44279	19.471	ug/l		98
61) 1,2-Dibromoethane	11.465	107	35743	19.371	ug/l		100
64) Tetrachloroethene	11.100	164	36978	19.074	ug/l		95
65) Chlorobenzene	11.888	112	106130	18.513	ug/l		95
66) 1,1,1,2-Tetrachloroethane	11.959	131	39196	19.022	ug/l		98
67) Ethyl Benzene	11.959	91	168567	18.771	ug/l		99
68) m/p-Xylenes	12.065	106	137476	40.303	ug/l		99
69) o-Xylene	12.394	106	61515	18.978	ug/l		100
70) Styrene	12.412	104	106050	19.044	ug/l		99
71) Bromoform	12.576	173	29845	19.493	ug/l	#	98
73) Isopropylbenzene	12.694	105	153371	17.442	ug/l		100
74) N-amyl acetate	12.494	43	55670	17.953	ug/l		98
75) 1,1,2,2-Tetrachloroethane	12.935	83	53621	17.721	ug/l		99
76) 1,2,3-Trichloropropane	12.988	75	55548m	19.483	ug/l		
77) Bromobenzene	12.976	156	41957	17.661	ug/l		96
78) n-propylbenzene	13.035	91	185851	18.455	ug/l		100
79) 2-Chlorotoluene	13.123	91	119676	17.787	ug/l		100
80) 1,3,5-Trimethylbenzene	13.171	105	135483	18.915	ug/l		99
81) trans-1,4-Dichloro-2-b...	12.735	75	17168	17.570	ug/l		94
82) 4-Chlorotoluene	13.218	91	124042	18.596	ug/l		97
83) tert-Butylbenzene	13.435	119	101170	16.796	ug/l		95
84) 1,2,4-Trimethylbenzene	13.482	105	133778	18.877	ug/l		99
85) sec-Butylbenzene	13.612	105	150326	17.664	ug/l		99
86) p-Isopropyltoluene	13.729	119	121044	16.805	ug/l		98
87) 1,3-Dichlorobenzene	13.729	146	77221	17.350	ug/l		100
88) 1,4-Dichlorobenzene	13.812	146	76516	16.773	ug/l		97
89) n-Butylbenzene	14.053	91	95450	15.797	ug/l		96
90) Hexachloroethane	14.329	117	26658	16.540	ug/l		95
91) 1,2-Dichlorobenzene	14.106	146	74904	17.501	ug/l		99
92) 1,2-Dibromo-3-Chloropr...	14.717	75	8752	15.752	ug/l		98
93) 1,2,4-Trichlorobenzene	15.388	180	31181	15.289	ug/l		99
94) Hexachlorobutadiene	15.500	225	19246	15.528	ug/l		95
95) Naphthalene	15.641	128	78375	13.998	ug/l		99
96) 1,2,3-Trichlorobenzene	15.835	180	30568	14.930	ug/l		98

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031125\
Data File : VN085931.D
Acq On : 11 Mar 2025 14:54
Operator : JC\MD
Sample : VN0311WBS01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 12 01:20:14 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:43:32 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VN0311WBS01

Manual Integrations APPROVED

Reviewed By :John Carlone 03/12/2025
Supervised By :Mahesh Dadoda 03/12/2025

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

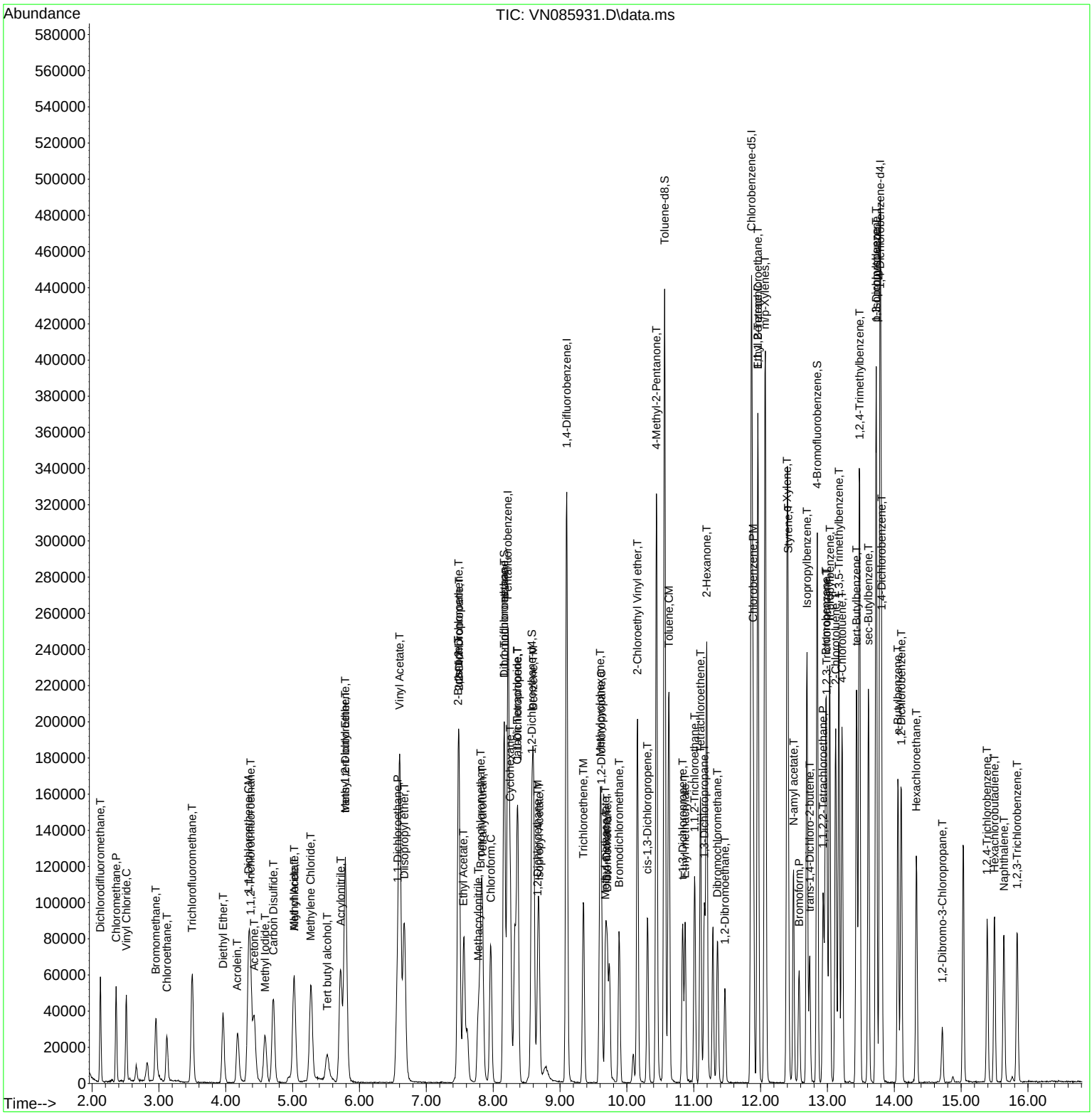
Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031125\
Data File : VN085931.D
Acq On : 11 Mar 2025 14:54
Operator : JC\MD
Sample : VN0311WBS01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 12 01:20:14 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:43:32 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VN0311WBS01

Manual Integrations APPROVED

Reviewed By :John Carlone 03/12/2025
Supervised By :Mahesh Dadoda 03/12/2025



Raw Data: **VN085932.D**

Alliance TECHNICAL GROUP
284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Report of Analysis

Client:	ENTACT	Date Collected:	
Project:	540 Degraw St, Brooklyn, NY - E9309	Date Received:	
Client Sample ID:	VN0311WBSD01	SDG No.:	Q1523
Lab Sample ID:	VN0311WBSD01	Matrix:	TCLP
Analytical Method:	SW8260	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	TCLP VOA
GC Column:	RXI-624 ID : 0.25	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VN085932.D	1		03/11/25 15:28	VN031125

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-01-4	Vinyl Chloride	17.7		0.26	5.00	ug/L
75-35-4	1,1-Dichloroethene	18.6		0.23	5.00	ug/L
78-93-3	2-Butanone	100		0.98	25.0	ug/L
56-23-5	Carbon Tetrachloride	20.2		0.25	5.00	ug/L
67-66-3	Chloroform	19.0		0.25	5.00	ug/L
71-43-2	Benzene	19.8		0.15	5.00	ug/L
107-06-2	1,2-Dichloroethane	20.2		0.22	5.00	ug/L
79-01-6	Trichloroethene	18.0		0.090	5.00	ug/L
127-18-4	Tetrachloroethene	18.4		0.23	5.00	ug/L
108-90-7	Chlorobenzene	18.3		0.12	5.00	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	47.6		70 (74) - 130 (125)	95%	SPK: 50
1868-53-7	Dibromofluoromethane	47.6		70 (75) - 130 (124)	95%	SPK: 50
2037-26-5	Toluene-d8	46.6		70 (86) - 130 (113)	93%	SPK: 50
460-00-4	4-Bromofluorobenzene	50.2		70 (77) - 130 (121)	100%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	167000	8.224			
540-36-3	1,4-Difluorobenzene	270000	9.1			
3114-55-4	Chlorobenzene-d5	244000	11.865			
3855-82-1	1,4-Dichlorobenzene-d4	123000	13.794			

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
E = Value Exceeds Calibration Range
Q = indicates LCS control criteria did not meet requirements
M = MS/MSD acceptance criteria did not meet requirements

J = Estimated Value
B = Analyte Found in Associated Method Blank
N = Presumptive Evidence of a Compound
* = Values outside of QC limits
D = Dilution
() = Laboratory InHouse Limit
A = Aldol-Condensation Reaction Products

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031125\
Data File : VN085932.D
Acq On : 11 Mar 2025 15:28
Operator : JC\MD
Sample : VN0311WBSD01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 12 01:21:25 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:43:32 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VN0311WBSD01

Manual Integrations APPROVED

Reviewed By :John Carlone 03/12/2025
Supervised By :Mahesh Dadoda 03/12/2025

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene	8.224	168	166815	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	9.100	114	269902	50.000	ug/l	0.00
63) Chlorobenzene-d5	11.865	117	244088	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	13.794	152	123338	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	8.576	65	102925	47.591	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 95.180%			
35) Dibromofluoromethane	8.165	113	84117	47.628	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 95.260%			
50) Toluene-d8	10.565	98	299527	46.614	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery = 93.220%			
62) 4-Bromofluorobenzene	12.847	95	106317	50.218	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery = 100.440%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	2.124	85	44409	19.572	ug/l	99
3) Chloromethane	2.359	50	44374	19.489	ug/l	97
4) Vinyl Chloride	2.512	62	42608	17.674	ug/l	97
5) Bromomethane	2.953	94	24991	16.212	ug/l	97
6) Chloroethane	3.118	64	25347	15.873	ug/l	99
7) Trichlorofluoromethane	3.500	101	64484	18.475	ug/l	94
8) Diethyl Ether	3.959	74	20885	18.493	ug/l	92
9) 1,1,2-Trichlorotrifluo...	4.371	101	38431	19.048	ug/l	98
10) Methyl Iodide	4.588	142	45692	18.373	ug/l	94
11) Tert butyl alcohol	5.518	59	27546	103.558	ug/l #	85
12) 1,1-Dichloroethene	4.341	96	34031	18.603	ug/l	90
13) Acrolein	4.183	56	37037	93.894	ug/l	92
14) Allyl chloride	5.018	41	45313	18.866	ug/l	93
15) Acrylonitrile	5.712	53	89670	103.697	ug/l	98
16) Acetone	4.430	43	68828	100.579	ug/l	99
17) Carbon Disulfide	4.712	76	105501	19.459	ug/l	99
18) Methyl Acetate	5.024	43	40057	17.019	ug/l	96
19) Methyl tert-butyl Ether	5.794	73	104432	19.211	ug/l	96
20) Methylene Chloride	5.271	84	42240	19.194	ug/l	99
21) trans-1,2-Dichloroethene	5.783	96	35362	17.952	ug/l	97
22) Diisopropyl ether	6.671	45	110291	20.322	ug/l	96
23) Vinyl Acetate	6.600	43	373467	100.504	ug/l	99
24) 1,1-Dichloroethane	6.571	63	71060	19.261	ug/l	98
25) 2-Butanone	7.482	43	102911	102.220	ug/l	99
26) 2,2-Dichloropropane	7.482	77	59355	18.093	ug/l	97
27) cis-1,2-Dichloroethene	7.482	96	41008	17.955	ug/l	96
28) Bromochloromethane	7.812	49	36994	24.397	ug/l	94
29) Tetrahydrofuran	7.835	42	67190	103.352	ug/l	98
30) Chloroform	7.965	83	73399	19.038	ug/l	100
31) Cyclohexane	8.253	56	58750	19.019	ug/l	99
32) 1,1,1-Trichloroethane	8.165	97	65410	19.074	ug/l	99
36) 1,1-Dichloropropene	8.371	75	47425	18.974	ug/l	96
37) Ethyl Acetate	7.559	43	46512	22.612	ug/l	98
38) Carbon Tetrachloride	8.359	117	60097	20.235	ug/l	97
39) Methylcyclohexane	9.600	83	44632	18.176	ug/l	91
40) Benzene	8.600	78	158231	19.751	ug/l	96

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031125\
Data File : VN085932.D
Acq On : 11 Mar 2025 15:28
Operator : JC\MD
Sample : VN0311WBSD01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 12 01:21:25 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:43:32 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VN0311WBSD01

Manual Integrations APPROVED

Reviewed By :John Carlone 03/12/2025
Supervised By :Mahesh Dadoda 03/12/2025

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
41) Methacrylonitrile	7.782	41	23989	21.816	ug/l		97
42) 1,2-Dichloroethane	8.671	62	52687	20.191	ug/l		99
43) Isopropyl Acetate	8.688	43	73303	19.978	ug/l		99
44) Trichloroethene	9.347	130	35475	18.035	ug/l		97
45) 1,2-Dichloropropane	9.612	63	39256	20.301	ug/l		97
46) Dibromomethane	9.706	93	27667	20.284	ug/l		96
47) Bromodichloromethane	9.882	83	57554	19.722	ug/l		98
48) Methyl methacrylate	9.676	41	31149	20.391	ug/l		99
49) 1,4-Dioxane	9.688	88	12981	446.857	ug/l		97
51) 4-Methyl-2-Pentanone	10.441	43	217937	109.892	ug/l		98
52) Toluene	10.629	92	97359	20.732	ug/l		99
53) t-1,3-Dichloropropene	10.835	75	54176	20.077	ug/l		98
54) cis-1,3-Dichloropropene	10.312	75	59404	20.076	ug/l		93
55) 1,1,2-Trichloroethane	11.012	97	36590	19.597	ug/l		97
56) Ethyl methacrylate	10.870	69	48469	19.676	ug/l		97
57) 1,3-Dichloropropane	11.159	76	62641	20.098	ug/l		99
58) 2-Chloroethyl Vinyl ether	10.159	63	92918	104.180	ug/l		98
59) 2-Hexanone	11.194	43	154345	113.129	ug/l		99
60) Dibromochloromethane	11.359	129	45593	20.971	ug/l		95
61) 1,2-Dibromoethane	11.465	107	35932	20.368	ug/l		99
64) Tetrachloroethene	11.100	164	34886	18.449	ug/l		94
65) Chlorobenzene	11.888	112	102428	18.318	ug/l		96
66) 1,1,1,2-Tetrachloroethane	11.959	131	37980	18.897	ug/l		100
67) Ethyl Benzene	11.959	91	164011	18.725	ug/l		99
68) m/p-Xylenes	12.070	106	132245	39.747	ug/l		99
69) o-Xylene	12.400	106	60408	19.107	ug/l		98
70) Styrene	12.412	104	103470	19.049	ug/l		98
71) Bromoform	12.576	173	30578	20.475	ug/l	#	99
73) Isopropylbenzene	12.694	105	149903	17.740	ug/l		99
74) N-amyl acetate	12.494	43	56542	18.975	ug/l		99
75) 1,1,2,2-Tetrachloroethane	12.935	83	53436	18.378	ug/l		100
76) 1,2,3-Trichloropropane	12.994	75	51299m	18.724	ug/l		
77) Bromobenzene	12.976	156	41022	17.969	ug/l		93
78) n-propylbenzene	13.035	91	179451	18.544	ug/l		99
79) 2-Chlorotoluene	13.123	91	119913	18.546	ug/l		98
80) 1,3,5-Trimethylbenzene	13.170	105	130459	18.953	ug/l		100
81) trans-1,4-Dichloro-2-b...	12.735	75	19541	20.811	ug/l		90
82) 4-Chlorotoluene	13.217	91	122450	19.104	ug/l		99
83) tert-Butylbenzene	13.435	119	102074	17.635	ug/l		96
84) 1,2,4-Trimethylbenzene	13.482	105	131448	19.302	ug/l		99
85) sec-Butylbenzene	13.611	105	145745	17.821	ug/l		99
86) p-Isopropyltoluene	13.729	119	119735	17.268	ug/l		98
87) 1,3-Dichlorobenzene	13.729	146	76798	17.956	ug/l		99
88) 1,4-Dichlorobenzene	13.811	146	77090	17.586	ug/l		100
89) n-Butylbenzene	14.053	91	95229	16.401	ug/l		96
90) Hexachloroethane	14.329	117	26609	17.180	ug/l		100
91) 1,2-Dichlorobenzene	14.106	146	73481	17.866	ug/l		99
92) 1,2-Dibromo-3-Chloropr...	14.717	75	9607	17.993	ug/l		95
93) 1,2,4-Trichlorobenzene	15.394	180	31550	16.098	ug/l		99
94) Hexachlorobutadiene	15.494	225	18407	15.454	ug/l		98
95) Naphthalene	15.635	128	82066	15.252	ug/l		99
96) 1,2,3-Trichlorobenzene	15.841	180	31176	15.845	ug/l		99

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031125\
Data File : VN085932.D
Acq On : 11 Mar 2025 15:28
Operator : JC\MD
Sample : VN0311WBSD01
Misc : 5.0mL/MSVOA_N/WATER
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 12 01:21:25 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_N\methods\82N021825W.M
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:43:32 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VN0311WBSD01

Manual Integrations APPROVED

Reviewed By :John Carlone 03/12/2025
Supervised By :Mahesh Dadoda 03/12/2025

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA_N\Data\VN031125\
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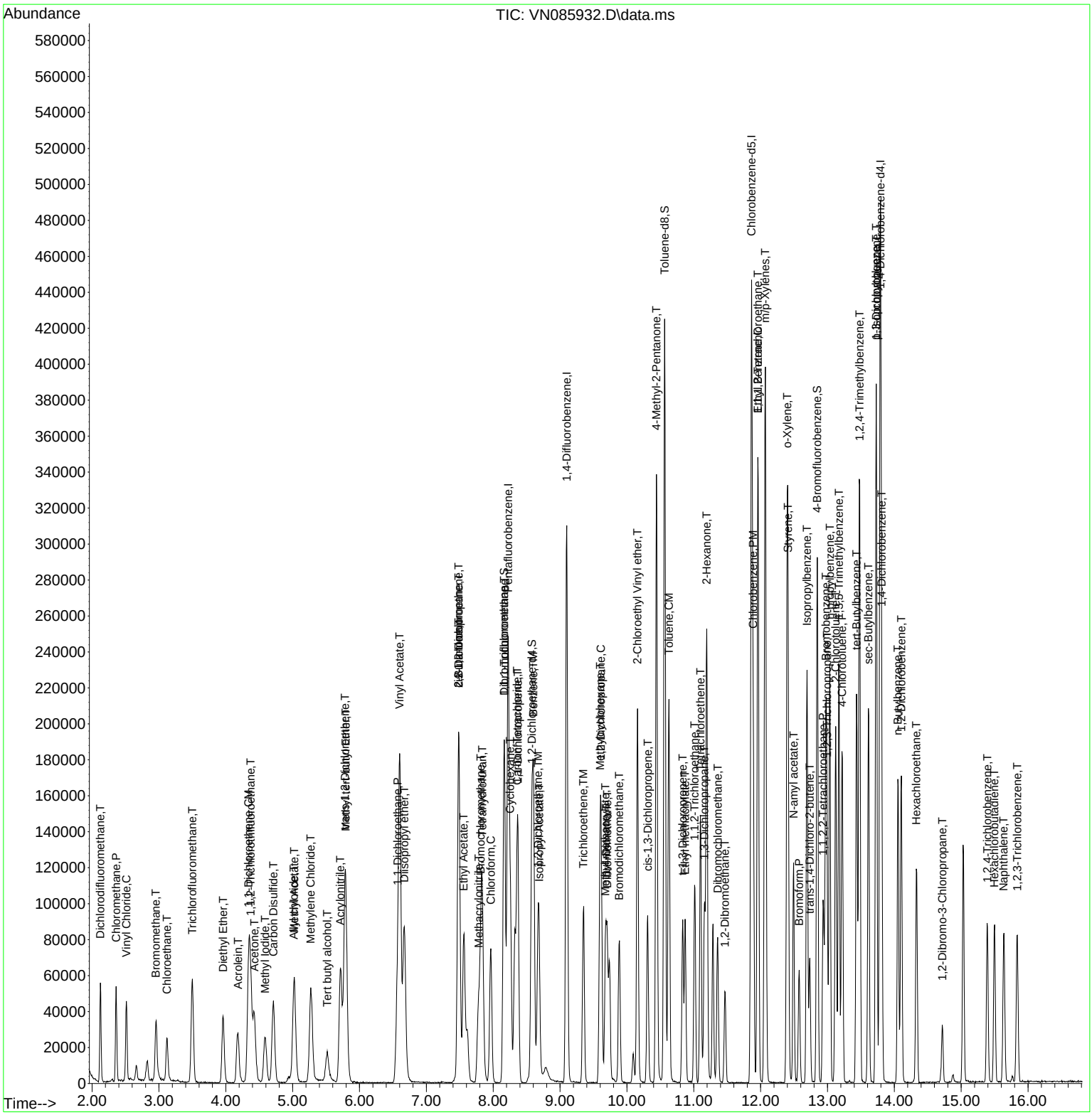
Quant Title : SW846 8260
QLast Update : Wed Feb 19 03:43:32 2025
Response via : Initial Calibration

Instrument :
MSVOA_N
ClientSampleId :
VN0311WBSD01

Manual Integrations APPROVED

Reviewed By :John Carlone 03/12/2025
Supervised By :Mahesh Dadoda 03/12/2025



284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900, Fax : 908 789 8922

Manual Integration Report

Sequence:	VN021825	Instrument	MSVOA_n

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDICC100	VN085772.D	1,2,3-Trichloropropane	JOHN	2/19/2025 9:44:09 AM	MMDadoda	2/19/2025 12:44:43 PM	Peak Integrated by Software
VSTDICCC050	VN085773.D	1,2,3-Trichloropropane	JOHN	2/19/2025 9:44:14 AM	MMDadoda	2/19/2025 12:44:47 PM	Peak Integrated by Software
VSTDICC010	VN085775.D	1,2,3-Trichloropropane	JOHN	2/19/2025 9:44:23 AM	MMDadoda	2/19/2025 12:44:56 PM	Peak Integrated by Software
VSTDICC010	VN085775.D	Vinyl Acetate	JOHN	2/19/2025 9:44:23 AM	MMDadoda	2/19/2025 12:44:56 PM	Peak Integrated by Software
VSTDICC005	VN085776.D	1,2,3-Trichloropropane	JOHN	2/19/2025 9:44:27 AM	MMDadoda	2/19/2025 12:45:01 PM	Peak Integrated by Software
VSTDICC005	VN085776.D	Vinyl Acetate	JOHN	2/19/2025 9:44:27 AM	MMDadoda	2/19/2025 12:45:01 PM	Peak Integrated by Software
VSTDICC001	VN085777.D	1,2,3-Trichloropropane	JOHN	2/19/2025 9:44:33 AM	MMDadoda	2/19/2025 12:45:05 PM	Peak Integrated by Software
VSTDICC001	VN085777.D	1,4-Dichlorobenzene	JOHN	2/19/2025 9:44:33 AM	MMDadoda	2/19/2025 12:45:05 PM	Peak Integrated by Software
VSTDICC001	VN085777.D	2,2-Dichloropropane	JOHN	2/19/2025 9:44:33 AM	MMDadoda	2/19/2025 12:45:05 PM	Peak Integrated by Software
VSTDICC001	VN085777.D	Allyl chloride	JOHN	2/19/2025 9:44:33 AM	MMDadoda	2/19/2025 12:45:05 PM	Peak Integrated by Software
VSTDICC001	VN085777.D	Diethyl Ether	JOHN	2/19/2025 9:44:33 AM	MMDadoda	2/19/2025 12:45:05 PM	Peak Integrated by Software
VSTDICC001	VN085777.D	Vinyl Acetate	JOHN	2/19/2025 9:44:33 AM	MMDadoda	2/19/2025 12:45:05 PM	Peak Integrated by Software
VSTDICC020	VN085779.D	1,2,3-Trichloropropane	JOHN	2/19/2025 9:44:37 AM	MMDadoda	2/19/2025 12:45:09 PM	Peak Integrated by Software

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900, Fax : 908 789 8922

Manual Integration Report

Sequence:	VN021825	Instrument	MSVOA_n

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDICV050	VN085780.D	1,2,3-Trichloropropane	JOHN	2/19/2025 9:44:42 AM	MMDadoda	2/19/2025 12:45:13 PM	Peak Integrated by Software

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900, Fax : 908 789 8922

Manual Integration Report

Sequence:	VN031125	Instrument	MSVOA_n

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDCCC050	VN085928.D	1,2,3-Trichloropropane	JOHN	3/12/2025 9:46:21 AM	MMDadoda	3/12/2025 3:16:48 PM	Peak Integrated by Software
VN0311WBS01	VN085931.D	1,2,3-Trichloropropane	JOHN	3/12/2025 9:46:26 AM	MMDadoda	3/12/2025 3:16:49 PM	Peak Integrated by Software
VN0311WBSD01	VN085932.D	1,2,3-Trichloropropane	JOHN	3/12/2025 9:46:30 AM	MMDadoda	3/12/2025 3:16:50 PM	Peak Integrated by Software
VSTDCCC050	VN085952.D	1,2,3-Trichloropropane	JOHN	3/12/2025 9:46:55 AM	MMDadoda	3/12/2025 3:16:58 PM	Peak Integrated by Software

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Instrument ID: MSVOA_N

Daily Analysis Runlog For Sequence/QCBatch ID # VN021825

Review By	John Carlone	Review On	2/19/2025 9:44:55 AM		
Supervise By	Mahesh Dadoda	Supervise On	2/19/2025 1:34:51 PM		
SubDirectory	VN021825	HP Acquire Method		HP Processing Method	82N021825W.M

STD. NAME	STD REF.#
Tune/Reschk	VP133068
Initial Calibration Stds	VP133070,VP133071,VP133072,VP133073,VP133074,VP133075
CCC	
Internal Standard/PEM	
ICV/I.BLK	VP133076
Surrogate Standard	
MS/MSD Standard	
LCS Standard	

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB	VN085771.D	18 Feb 2025 10:35	JC\MD	Ok
2	VSTDICC100	VN085772.D	18 Feb 2025 11:09	JC\MD	Ok,M
3	VSTDICCC050	VN085773.D	18 Feb 2025 11:32	JC\MD	Ok,M
4	VSTDICC020	VN085774.D	18 Feb 2025 11:56	JC\MD	Not Ok
5	VSTDICC010	VN085775.D	18 Feb 2025 12:20	JC\MD	Ok,M
6	VSTDICC005	VN085776.D	18 Feb 2025 12:43	JC\MD	Ok,M
7	VSTDICC001	VN085777.D	18 Feb 2025 13:07	JC\MD	Ok,M
8	IBLK	VN085778.D	18 Feb 2025 13:54	JC\MD	Ok
9	VSTDICC020	VN085779.D	18 Feb 2025 14:18	JC\MD	Ok,M
10	VSTDICV050	VN085780.D	18 Feb 2025 16:28	JC\MD	Ok,M

M : Manual Integration

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Instrument ID: MSVOA_N

Daily Analysis Runlog For Sequence/QCBatch ID # VN031125

Review By	John Carlone	Review On	3/12/2025 9:49:06 AM		
Supervise By	Mahesh Dadoda	Supervise On	3/12/2025 3:17:04 PM		
SubDirectory	VN031125	HP Acquire Method		HP Processing Method	82N021825W.M

STD. NAME	STD REF.#
Tune/Reschk	VP133247
Initial Calibration Stds	
CCC	VP133248,VP133249
Internal Standard/PEM	
ICV/I.BLK	
Surrogate Standard	
MS/MSD Standard	
LCS Standard	

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BLK2	BLK2.D	12 Mar 2025 00:41	JC\MD	
2	BFB	VN085927.D	11 Mar 2025 12:12	JC\MD	Ok
3	VSTDCCC050	VN085928.D	11 Mar 2025 13:22	JC\MD	Ok,M
4	VN0311MBL01	VN085929.D	11 Mar 2025 13:56	JC\MD	Ok
5	VN0311WBL01	VN085930.D	11 Mar 2025 14:21	JC\MD	Ok
6	VN0311WBS01	VN085931.D	11 Mar 2025 14:54	JC\MD	Ok,M
7	VN0311WBSD01	VN085932.D	11 Mar 2025 15:28	JC\MD	Ok,M
8	PB167050TB	VN085933.D	11 Mar 2025 15:52	JC\MD	Ok
9	Q1514-09	VN085934.D	11 Mar 2025 16:16	JC\MD	Ok
10	PB167050ZHE#02	VN085935.D	11 Mar 2025 16:40	JC\MD	Ok
11	PB167050ZHE#03	VN085936.D	11 Mar 2025 17:04	JC\MD	Ok
12	PB167050ZHE#04	VN085937.D	11 Mar 2025 17:28	JC\MD	Ok
13	PB167050ZHE#05	VN085938.D	11 Mar 2025 17:52	JC\MD	Ok
14	PB167050ZHE#06	VN085939.D	11 Mar 2025 18:16	JC\MD	Ok
15	PB167050ZHE#07	VN085940.D	11 Mar 2025 18:40	JC\MD	Ok
16	PB167050ZHE#08	VN085941.D	11 Mar 2025 19:04	JC\MD	Ok
17	PB167050ZHE#09	VN085942.D	11 Mar 2025 19:29	JC\MD	Ok
18	Q1534-06	VN085943.D	11 Mar 2025 19:53	JC\MD	Ok,M
19	Q1534-12	VN085944.D	11 Mar 2025 20:17	JC\MD	Ok,M
20	Q1534-18	VN085945.D	11 Mar 2025 20:41	JC\MD	Ok,M
21	Q1534-24	VN085946.D	11 Mar 2025 21:05	JC\MD	Ok,M

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Instrument ID: MSVOA_N

Daily Analysis Runlog For Sequence/QCBatch ID # VN031125

Review By	John Carlone	Review On	3/12/2025 9:49:06 AM		
Supervise By	Mahesh Dadoda	Supervise On	3/12/2025 3:17:04 PM		
SubDirectory	VN031125	HP Acquire Method		HP Processing Method	82N021825W.M

STD. NAME	STD REF.#
Tune/Reschk	VP133247
Initial Calibration Stds	
CCC	VP133248,VP133249
Internal Standard/PEM	
ICV/I.BLK	
Surrogate Standard	
MS/MSD Standard	
LCS Standard	

22	Q1514-02	VN085947.D	11 Mar 2025 21:29	JC\MD	Ok
23	Q1514-04	VN085948.D	11 Mar 2025 21:53	JC\MD	Ok
24	Q1514-06	VN085949.D	11 Mar 2025 22:17	JC\MD	Ok
25	Q1523-01	VN085950.D	11 Mar 2025 22:41	JC\MD	Ok
26	Q1523-04	VN085951.D	11 Mar 2025 23:05	JC\MD	Ok
27	VSTDCCC050	VN085952.D	11 Mar 2025 23:29	JC\MD	Ok,M

M : Manual Integration

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Instrument ID: MSVOA_N

Daily Analysis Runlog For Sequence/QCBatch ID # VN021825

Review By	John Carlone	Review On	2/19/2025 9:44:55 AM		
Supervise By	Mahesh Dadoda	Supervise On	2/19/2025 1:34:51 PM		
SubDirectory	VN021825	HP Acquire Method		HP Processing Method	82N021825W.M

STD. NAME	STD REF.#
Tune/Reschk	VP133068
Initial Calibration Stds	VP133070,VP133071,VP133072,VP133073,VP133074,VP133075
CCC	
Internal Standard/PEM	
ICV/I.BLK	VP133076
Surrogate Standard	
MS/MSD Standard	
LCS Standard	

Sr#	SampleId	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	BFB	BFB	VN085771.D	18 Feb 2025 10:35		JC\MD	Ok
2	VSTDICC100	VSTDICC100	VN085772.D	18 Feb 2025 11:09	Comp.#43 is on Linear Regression	JC\MD	Ok,M
3	VSTDICCC050	VSTDICCC050	VN085773.D	18 Feb 2025 11:32	Comp.#56,58,70,86 is on Quadratic Regression	JC\MD	Ok,M
4	VSTDICC020	VSTDICC020	VN085774.D	18 Feb 2025 11:56	Not used	JC\MD	Not Ok
5	VSTDICC010	VSTDICC010	VN085775.D	18 Feb 2025 12:20		JC\MD	Ok,M
6	VSTDICC005	VSTDICC005	VN085776.D	18 Feb 2025 12:43	%D failed for Comp. #58 in 01PPB, 05PPB and 20PPB	JC\MD	Ok,M
7	VSTDICC001	VSTDICC001	VN085777.D	18 Feb 2025 13:07		JC\MD	Ok,M
8	IBLK	IBLK	VN085778.D	18 Feb 2025 13:54		JC\MD	Ok
9	VSTDICC020	VSTDICC020	VN085779.D	18 Feb 2025 14:18		JC\MD	Ok,M
10	VSTDICV050	ICVVN021825	VN085780.D	18 Feb 2025 16:28	ICV Failed for comp. #95	JC\MD	Ok,M

M : Manual Integration

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Instrument ID: MSVOA_N

Daily Analysis Runlog For Sequence/QCBatch ID # VN031125

Review By	John Carlone	Review On	3/12/2025 9:49:06 AM		
Supervise By	Mahesh Dadoda	Supervise On	3/12/2025 3:17:04 PM		
SubDirectory	VN031125	HP Acquire Method		HP Processing Method	82N021825W.M

STD. NAME	STD REF.#
Tune/Reschk	VP133247
Initial Calibration Stds	
CCC	VP133248,VP133249
Internal Standard/PEM	
ICV/I.BLK	
Surrogate Standard	
MS/MSD Standard	
LCS Standard	

Sr#	SampleId	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	BLK2	BLK2	BLK2.D	12 Mar 2025 00:41		JC\MD	
2	BFB	BFB	VN085927.D	11 Mar 2025 12:12		JC\MD	Ok
3	VSTDCCC050	VSTDCCC050	VN085928.D	11 Mar 2025 13:22	pH#Lot#V12668	JC\MD	Ok,M
4	VN0311MBL01	VN0311MBL01	VN085929.D	11 Mar 2025 13:56		JC\MD	Ok
5	VN0311WBL01	VN0311WBL01	VN085930.D	11 Mar 2025 14:21		JC\MD	Ok
6	VN0311WBS01	VN0311WBS01	VN085931.D	11 Mar 2025 14:54		JC\MD	Ok,M
7	VN0311WBSD01	VN0311WBSD01	VN085932.D	11 Mar 2025 15:28		JC\MD	Ok,M
8	PB167050TB	PB167050TB	VN085933.D	11 Mar 2025 15:52		JC\MD	Ok
9	Q1514-09	FB03062025	VN085934.D	11 Mar 2025 16:16	vial B pH<2 FB	JC\MD	Ok
10	PB167050ZHE#02	PB167050ZHE#02	VN085935.D	11 Mar 2025 16:40		JC\MD	Ok
11	PB167050ZHE#03	PB167050ZHE#03	VN085936.D	11 Mar 2025 17:04		JC\MD	Ok
12	PB167050ZHE#04	PB167050ZHE#04	VN085937.D	11 Mar 2025 17:28		JC\MD	Ok
13	PB167050ZHE#05	PB167050ZHE#05	VN085938.D	11 Mar 2025 17:52		JC\MD	Ok
14	PB167050ZHE#06	PB167050ZHE#06	VN085939.D	11 Mar 2025 18:16		JC\MD	Ok
15	PB167050ZHE#07	PB167050ZHE#07	VN085940.D	11 Mar 2025 18:40		JC\MD	Ok
16	PB167050ZHE#08	PB167050ZHE#08	VN085941.D	11 Mar 2025 19:04		JC\MD	Ok
17	PB167050ZHE#09	PB167050ZHE#09	VN085942.D	11 Mar 2025 19:29		JC\MD	Ok
18	Q1534-06	OR-636-COMP-16	VN085943.D	11 Mar 2025 19:53	vial A pH#5.0	JC\MD	Ok,M

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Instrument ID: MSVOA_N

Daily Analysis Runlog For Sequence/QCBatch ID # VN031125

Review By	John Carlone	Review On	3/12/2025 9:49:06 AM		
Supervise By	Mahesh Dadoda	Supervise On	3/12/2025 3:17:04 PM		
SubDirectory	VN031125	HP Acquire Method		HP Processing Method	82N021825W.M

STD. NAME	STD REF.#
Tune/Reschk	VP133247
Initial Calibration Stds	
CCC	VP133248,VP133249
Internal Standard/PEM	
ICV/I.BLK	
Surrogate Standard	
MS/MSD Standard	
LCS Standard	

19	Q1534-12	OR-636-COMP-17	VN085944.D	11 Mar 2025 20:17	vial A pH#5.0	JC\MD	Ok,M
20	Q1534-18	OR-636-COMP-18	VN085945.D	11 Mar 2025 20:41	vial A pH#5.0	JC\MD	Ok,M
21	Q1534-24	OR-636-COMP-19	VN085946.D	11 Mar 2025 21:05	vial A pH#5.0	JC\MD	Ok,M
22	Q1514-02	ENV-105-SB01	VN085947.D	11 Mar 2025 21:29	vial A pH#5.0	JC\MD	Ok
23	Q1514-04	ENV-105-SB02	VN085948.D	11 Mar 2025 21:53	vial A pH#5.0	JC\MD	Ok
24	Q1514-06	ENV-103-SB01	VN085949.D	11 Mar 2025 22:17	vial A pH#5.0	JC\MD	Ok
25	Q1523-01	WC-A1-01-G	VN085950.D	11 Mar 2025 22:41	vial A pH#5.0	JC\MD	Ok
26	Q1523-04	WC-A1-02-G	VN085951.D	11 Mar 2025 23:05	vial A pH#5.0	JC\MD	Ok
27	VSTDCCC050	VSTDCCC050EC	VN085952.D	11 Mar 2025 23:29		JC\MD	Ok,M

M : Manual Integration

Alliance TECHNICAL GROUP

TCLP EXTRACTION LOGPAGE

PB167050

SOP ID : M1311-TCLP-15

SDG No : N/A

Weigh By : JP

Balance ID : WC SC-7

pH Meter ID : WC PH METER-1

Extraction By : JP

Filter By : JP

Pippete ID : WC

Tumbler ID : ZHE-1

TCLP Filter ID : 50223706

Start Prep Date : 03/10/2025 **Time :** 15:30

End Prep Date : 03/11/2025 **Time :** 09:45

Combination Ratio : 20

ZHE Cleaning Batch : ~~N/A~~ JP VN031125.

Initial Room Temperature: 24 °C

Final Room Temperature: 22 °C

TCLP Technician Signature : JP

Supervisor By : JZ

Standared Name	MLS USED	STD REF. # FROM LOG
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Chemical Used	ML/SAMPLE U	Lot Number
TCLP-FLUID-1	N/A	WP110802
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
40ml VOA Vials	23237	N/A

Extraction Conformance/Non-Conformance Comments:

ALL ZHE samples are extracted and given as vial A & B. Leak checked after 10 mintues of tumbling. TUMBLER ZHE-1 checked,30 rpm.

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
03/11/25 10:30	JP TCLP Room	1 ODC Lab
	Preparation Group	**Analysis Group**

Alliance TECHNICAL GROUP

TCLP EXTRACTION LOGPAGE

PB167050

Sample ID	ClientID	ZHE Vessel ID	Sample Wt (g)	Volume Extraction Fluid #1 (mL)	Multi phasic	Phase Miscible	Phases Combined	Final Leachate PH	Metals Leachate Adj. PH	Prep Pos
PB167050TB	LEB050	10	N/A	500	N/A	N/A	N/A	4.94	N/A	ZHE-1
Q1514-02	ENV-105-SB01	01	25.02	500	N/A	N/A	N/A	N/A	N/A	ZHE-1
Q1514-04	ENV-105-SB02	02	25.03	500	N/A	N/A	N/A	N/A	N/A	ZHE-1
Q1514-06	ENV-103-SB01	03	25.02	500	N/A	N/A	N/A	N/A	N/A	ZHE-1
Q1523-01	WC-A1-01-G	04	25.01	500	N/A	N/A	N/A	N/A	N/A	ZHE-1
Q1523-04	WC-A1-02-G	05	25.02	500	N/A	N/A	N/A	N/A	N/A	ZHE-1
Q1534-06	OR-363-COMP-16	06	25.03	500	N/A	N/A	N/A	N/A	N/A	ZHE-1
Q1534-12	OR-363-COMP-17	07	25.02	500	N/A	N/A	N/A	N/A	N/A	ZHE-1
Q1534-18	OR-363-COMP-18	08	25.03	500	N/A	N/A	N/A	N/A	N/A	ZHE-1
Q1534-24	OR-363OR-363-COMP-19-	09	25.02	500	N/A	N/A	N/A	N/A	N/A	ZHE-1

SampleID	ClientID	Sample Weight (g)	Filter Weight (g)	Filtrate (mL)	Filter + Solid (After 100°C)	% solids	% Dry Solids
PB167050TB	LEB050	N/A	N/A	N/A	N/A	N/A	N/A
Q1514-02	ENV-105-SB01	N/A	N/A	N/A	N/A	100	N/A
Q1514-04	ENV-105-SB02	N/A	N/A	N/A	N/A	100	N/A
Q1514-06	ENV-103-SB01	N/A	N/A	N/A	N/A	100	N/A
Q1523-01	WC-A1-01-G	N/A	N/A	N/A	N/A	100	N/A
Q1523-04	WC-A1-02-G	N/A	N/A	N/A	N/A	100	N/A
Q1534-06	OR-363-COMP-16	N/A	N/A	N/A	N/A	100	N/A
Q1534-12	OR-363-COMP-17	N/A	N/A	N/A	N/A	100	N/A
Q1534-18	OR-363-COMP-18	N/A	N/A	N/A	N/A	100	N/A
Q1534-24	OR-363OR-363-COMP-19-	N/A	N/A	N/A	N/A	100	N/A

WORKLIST(Hardcopy Internal Chain)

WorkList Name : TCLP ZHW Q1534 **WorkList ID :** 188162 **Department :** TCLP Extraction **Date :** 03-10-2025 13:43:59

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1514-02	ENV-105-SB01	Solid	TCLP ZHE Extraction	Cool 4 deg C	PORT06	I31	03/05/2025	1311 ZHE
Q1514-04	ENV-105-SB02	Solid	TCLP ZHE Extraction	Cool 4 deg C	PORT06	I31	03/05/2025	1311 ZHE
Q1514-06	ENV-103-SB01	Solid	TCLP ZHE Extraction	Cool 4 deg C	PORT06	I31	03/05/2025	1311 ZHE
Q1523-01	WC-A1-01-G	Solid	TCLP ZHE Extraction	Cool 4 deg C	PORT06	I31	03/05/2025	1311 ZHE
Q1523-04	WC-A1-02-G	Solid	TCLP ZHE Extraction	Cool 4 deg C	ENTA05	I31	03/06/2025	1311 ZHE
Q1534-06	OR-363-COMP-16	Solid	TCLP ZHE Extraction	Cool 4 deg C	ENTA05	I31	03/06/2025	1311 ZHE
Q1534-12	OR-363-COMP-17	Solid	TCLP ZHE Extraction	Cool 4 deg C	PSEG03	H31	03/07/2025	1311 ZHE
Q1534-18	OR-363-COMP-18	Solid	TCLP ZHE Extraction	Cool 4 deg C	PSEG03	H31	03/07/2025	1311 ZHE
Q1534-24	OR-363OR-363-COMP-19-	Solid	TCLP ZHE Extraction	Cool 4 deg C	PSEG03	H31	03/07/2025	1311 ZHE

Date/Time 03/10/25 13:55

Raw Sample Received by:

Raw Sample Relinquished by:

Date/Time 03/10/25 17:30

Raw Sample Received by:

Raw Sample Relinquished by:

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Prep Standard - Chemical Standard Summary

Order ID : Q1523

Test : TCLP VOA

Prepbatch ID :

Sequence ID/Qc Batch ID: VN031125,

Standard ID :
VP131746,VP131767,VP132035,VP132096,VP133036,VP133174,VP133178,VP133247,VP133248,VP133249,

Chemical ID :
V13391,V13457,V13460,V13465,V13466,V13706,V14154,V14175,V14176,V14289,V14433,V14439,V14521,V14522,V14613,V14614,V14624,V14630,V14631,V14632,V14633,V14722,V14723,V14724,V14744,V14754,V14809,V14814,V14842,V14872,V14873,V14874,V14875,W3112,

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VOC STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
247	8260 Internal Standard, 250PPM	VP131746	11/22/2024	05/18/2025	Semsettin Yesilyurt	None	None	Mahesh Dadoda 11/23/2024

FROM 0.50000ml of V14289 + 49.50000ml of V14154 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
218	BFB, 25PPM	VP131767	11/22/2024	05/18/2025	Semsettin Yesilyurt	None	None	Mahesh Dadoda 11/27/2024

FROM 0.50000ml of V13391 + 49.50000ml of V14154 = Final Quantity: 50.000 ml

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VOC STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1810	8260 Working Std(2-CVE)-800ppm	VP132035	12/10/2024	06/10/2025	Semsettin Yesilyurt	None	None	Mahesh Dadoda 12/12/2024

FROM 1.00000ml of V14630 + 1.00000ml of V14631 + 1.00000ml of V14632 + 1.00000ml of V14633 + 46.00000ml of V14614 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
719	8260 Working STD (BCM)-First source, 400PPM	VP132096	12/12/2024	06/10/2025	Semsettin Yesilyurt	None	None	Mahesh Dadoda 12/19/2024

FROM 1.00000ml of V13465 + 1.00000ml of V13466 + 1.50000ml of V13457 + 1.50000ml of V13460 + 20.00000ml of V14614 = Final Quantity: 25.000 ml

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VOC STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
51	8260 Working STD (Acrolein) -first source, 800PPM	VP133036	02/14/2025	03/13/2025	Semsettin Yesilyurt	None	None	Mahesh Dadoda 02/18/2025

FROM 1.00000ml of V14872 + 1.00000ml of V14873 + 1.00000ml of V14874 + 1.00000ml of V14875 + 21.00000ml of V14624 = Final Quantity: 25.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
617	8260 Surrogate, 400PPM	VP133174	02/27/2025	08/27/2025	Semsettin Yesilyurt	None	None	Mahesh Dadoda 03/04/2025

FROM 0.40000ml of V13706 + 24.60000ml of V14613 = Final Quantity: 25.000 ml

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VOC STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
257	8260 Calibration Working STD Mix-First source, 160PPM	VP133178	02/27/2025	03/31/2025	Semsettin Yesilyurt	None	None	Mahesh Dadoda 03/04/2025

FROM 0.40000ml of V14842 + 1.00000ml of V14175 + 1.00000ml of V14176 + 1.00000ml of V14433 + 1.00000ml of V14439 + 1.00000ml of V14521 + 1.00000ml of V14522 + 1.00000ml of V14724 + 1.00000ml of V14744 + 1.00000ml of V14754 + 1.00000ml of V14809 + 1.00000ml of V14814 + 1.50000ml of V14722 + 1.50000ml of V14723 + 10.60000ml of V14613 = Final Quantity: 25.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
589	BFB TUNE CHECK	VP133247	03/11/2025	03/12/2025	John Carlone	None	None	Romaben Patel 03/11/2025

FROM 39.98400ml of W3112 + 0.01600ml of VP131767 = Final Quantity: 40.000 ml

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VOC STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
620	50 PPB CCC, 8260-Water	VP133248	03/11/2025	03/12/2025	John Carlone	None	None	Romaben Patel 03/11/2025

FROM 39.94450ml of W3112 + 0.00500ml of VP132096 + 0.00500ml of VP133174 + 0.00800ml of VP131746 + 0.01250ml of VP132035 + 0.01250ml of VP133036 + 0.01250ml of VP133178 = Final Quantity: 40.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
620	50 PPB CCC, 8260-Water	VP133249	03/11/2025	03/12/2025	John Carlone	None	None	Romaben Patel 03/11/2025

FROM 39.94450ml of W3112 + 0.00500ml of VP132096 + 0.00500ml of VP133174 + 0.00800ml of VP131746 + 0.01250ml of VP132035 + 0.01250ml of VP133036 + 0.01250ml of VP133178 = Final Quantity: 40.000 ml

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30067 / BFB tuneing solution	A0191805	11/22/2025	11/22/2024 / SAM	01/13/2023 / SAM	V13391

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30225 / VOA Mix, bromochloromethane, 2000ug/mL, P&TM, 1mL/ampul	A0193071	06/12/2025	12/12/2024 / SAM	01/27/2023 / SAM	V13457

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30225 / VOA Mix, bromochloromethane, 2000ug/mL, P&TM, 1mL/ampul	A0193071	06/12/2025	12/12/2024 / SAM	01/27/2023 / SAM	V13460

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30225 / VOA Mix, bromochloromethane, 2000ug/mL, P&TM, 1mL/ampul	A0193071	06/12/2025	12/12/2024 / SAM	01/27/2023 / SAM	V13465

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30225 / VOA Mix, bromochloromethane, 2000ug/mL, P&TM, 1mL/ampul	A0193071	06/12/2025	12/12/2024 / SAM	01/27/2023 / SAM	V13466

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	555582 / Custom Mixture, 8260 A/B Surrogate Mix [CS 5179-2]	A0196865	02/27/2026	02/27/2025 / SAM	04/12/2023 / SAM	V13706

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Fax : 908 789 8922

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA9077-02 / Methanol, Purge/Trap (cs=6x1L)	22L0562016	05/18/2025	11/18/2024 / pedro	02/06/2024 / SAM	V14154

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	95317 / Universal VOA Mega Mix (Min order = 5)	021624	07/10/2025	01/10/2025 / SAM	02/20/2024 / SAM	V14175

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	95317 / Universal VOA Mega Mix (Min order = 5)	021624	07/10/2025	01/10/2025 / SAM	02/20/2024 / SAM	V14176

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	555581 / Custom Standard, 8260 Internal Std [CS 5179-1]	A0210184	11/22/2025	11/22/2024 / SAM	04/15/2024 / SAM	V14289

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30489 / VOA Mix, 8260B Acetates Mix, P&TM, 1mL	A0209618	07/10/2025	01/10/2025 / SAM	08/15/2024 / SAM	V14433

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30489 / VOA Mix, 8260B Acetates Mix, P&TM, 1mL	A0209618	07/10/2025	01/10/2025 / SAM	08/15/2024 / SAM	V14439

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	95319 / Revised Additions Mix (Min = 5)	091724	07/10/2025	01/10/2025 / SAM	09/18/2024 / SAM	V14521

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	95319 / Revised Additions Mix (Min = 5)	091724	07/10/2025	01/10/2025 / SAM	09/18/2024 / SAM	V14522

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA9077-02 / Methanol, Purge/Trap (cs=6x1L)	22L0562016	08/27/2025	02/27/2025 / SAM	11/26/2024 / SAM	V14613

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA9077-02 / Methanol, Purge/Trap (cs=6x1L)	22L0562016	06/10/2025	12/10/2024 / SAM	11/26/2024 / SAM	V14614

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA9077-02 / Methanol, Purge/Trap (cs=6x1L)	23I0762004	07/13/2025	01/13/2025 / SAM	11/26/2024 / SAM	V14624

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	/ 2-Chloroethyl vinyl ether	120524	06/10/2025	12/10/2024 / SAM	12/06/2024 / SAM	V14630

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	/ 2-Chloroethyl vinyl ether	120524	06/10/2025	12/10/2024 / SAM	12/06/2024 / SAM	V14631

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	/ 2-Chloroethyl vinyl ether	120524	06/10/2025	12/10/2024 / SAM	12/06/2024 / SAM	V14632

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	/ 2-Chloroethyl vinyl ether	120524	06/10/2025	12/10/2024 / SAM	12/06/2024 / SAM	V14633

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30006 / VOA Mix, CLP method Calibration Std #1 ketones 5000uq/ml, PTM, 1ml	A02110618	07/10/2025	01/10/2025 / SAM	12/17/2024 / SAM	V14722

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30006 / VOA Mix, CLP method Calibration Std #1 ketones 5000uq/ml, PTM, 1ml	A02110618	07/10/2025	01/10/2025 / SAM	12/17/2024 / SAM	V14723

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30006 / VOA Mix, CLP method Calibration Std #1 ketones 5000uq/ml, PTM, 1ml	A02110618	07/10/2025	01/10/2025 / SAM	12/17/2024 / SAM	V14724

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30042 / VOA Mix,500 series method 502.2 Calibration Std #1 gases, 2000uq/ml, PTM, 1ml	A0216826	08/27/2025	02/27/2025 / SAM	12/17/2024 / SAM	V14744

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30042 / VOA Mix,500 series method 502.2 Calibration Std #1 gases, 2000uq/ml, PTM, 1ml	A0216826	05/31/2031	01/10/2025 / SAM	12/17/2024 / SAM	V14754

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	555408 / Custom Standard, Vinyl Acetate Standard w/ Grav [CS 5066-6] TWO SEPARATE LOTS	A0220471	07/10/2025	01/10/2025 / SAM	01/08/2025 / SAM	V14809

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	555408 / Custom Standard, Vinyl Acetate Standard w/ Grav [CS 5066-6] TWO SEPARATE LOTS	A0220471	07/10/2025	01/10/2025 / SAM	01/08/2025 / SAM	V14814

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30470 / VOA Stock Solution, tert-butanol std, 1mL, P&TM	A0217535	08/27/2025	02/27/2025 / SAM	01/21/2025 / SAM	V14842

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	91980 / Acrolin Std (Min = 5)	021325	03/13/2025	02/14/2025 / SAM	02/14/2025 / SAM	V14872

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	91980 / Acrolin Std (Min = 5)	021325	03/13/2025	02/14/2025 / SAM	02/14/2025 / SAM	V14873

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	91980 / Acrolin Std (Min = 5)	021325	03/13/2025	02/14/2025 / SAM	02/14/2025 / SAM	V14874

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	91980 / Acrolin Std (Min = 5)	021325	03/13/2025	02/14/2025 / SAM	02/14/2025 / SAM	V14875

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	07/03/2029	07/03/2024 / Iwona	07/03/2024 / Iwona	W3112

Methanol
ULTRA RESI-ANALYZED
For Purge and Trap Analysis

avantor™ | J.T.Baker®

Material No.: 9077-02
Batch No.: 2310762004
Manufactured Date: 2023-08-11
Expiration Date: 2026-08-10
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (CH_3OH) (by GC, corrected for water)	≥ 99.9 %	100.0 %
Residue after Evaporation	≤ 1.0 ppm	0.5 ppm
Titrable Acid (µeq/g)	≤ 0.3	0.2
Titrable Base (µeq/g)	≤ 0.10	0.01
Water (by KF, coulometric)	≤ 0.08 %	< 0.01 %
Volatile Organic Trace Analysis – Below EPA 8260B CRQL	Conforms	Conforms

For Laboratory,Research,or Manufacturing Use
Performance Tested for Use in EPA Methods
500 Series for Drinking Water
600 Series for Wastewater
846 for Solid Waste

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Ken Koehnlein
Sr. Manager, Quality Assurance

Methanol
ULTRA RESI-ANALYZED
For Purge and Trap Analysis

12 Bottles

avantor™ | J.T.Baker®

Material No.: 9077-02
Batch No.: 22L0562016
Manufactured Date: 2022-10-26
Expiration Date: 2025-10-25
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (CH_3OH) (by GC, corrected for water)	≥ 99.9 %	100.0 %
Residue after Evaporation	≤ 1.0 ppm	0.2 ppm
Titrable Acid (µeq/g)	≤ 0.3	0.2
Titrable Base (µeq/g)	≤ 0.10	0.03
Water (by KF, coulometric)	≤ 0.08 %	< 0.01 %
Volatile Organic Trace Analysis – Below EPA 8260B CRQL	Conforms	Conforms

For Laboratory,Research,or Manufacturing Use
Performance Tested for Use in EPA Methods
500 Series for Drinking Water
600 Series for Wastewater
846 for Solid Waste

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

James Ethier

Jamie Ethier
Vice President Global Quality

Methanol
ULTRA RESI-ANALYZED
For Purge and Trap Analysis

12 Bottles

avantor™ | J.T.Baker®

Material No.: 9077-02
Batch No.: 22L0562016
Manufactured Date: 2022-10-26
Expiration Date: 2025-10-25
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (CH_3OH) (by GC, corrected for water)	≥ 99.9 %	100.0 %
Residue after Evaporation	≤ 1.0 ppm	0.2 ppm
Titrable Acid (µeq/g)	≤ 0.3	0.2
Titrable Base (µeq/g)	≤ 0.10	0.03
Water (by KF, coulometric)	≤ 0.08 %	< 0.01 %
Volatile Organic Trace Analysis – Below EPA 8260B CRQL	Conforms	Conforms

For Laboratory,Research,or Manufacturing Use
Performance Tested for Use in EPA Methods
500 Series for Drinking Water
600 Series for Wastewater
846 for Solid Waste

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

James Ethier

Jamie Ethier
Vice President Global Quality

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

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Dec 02/14/25

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT

Part Number: 91980
Lot Number: 021325
Description: Acrolein

Expiration Date: 031325
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 5000
NIST Test ID#: 6UTB

Solvent(s): **Lot#**
Water 072324Q

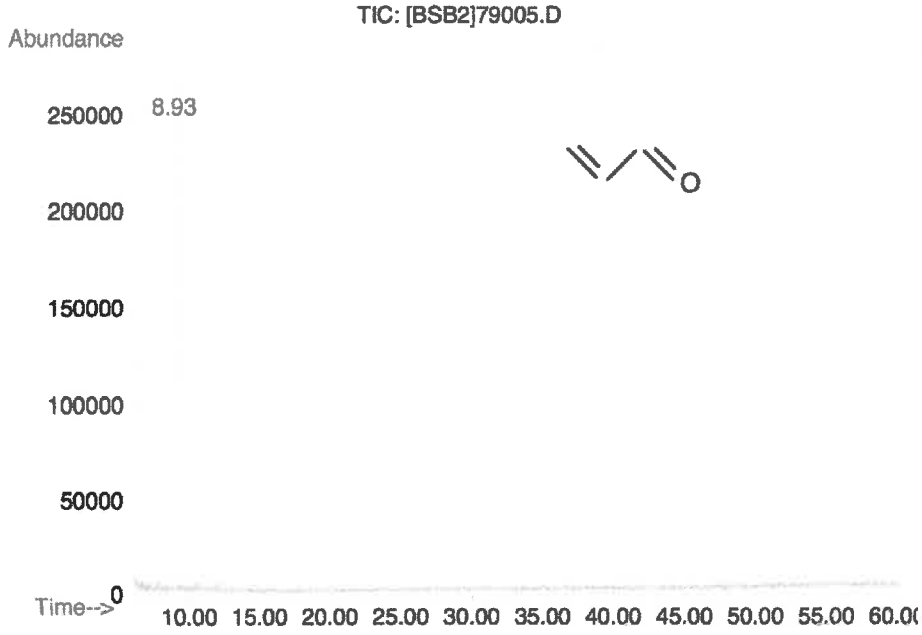
V14872 to
V14876

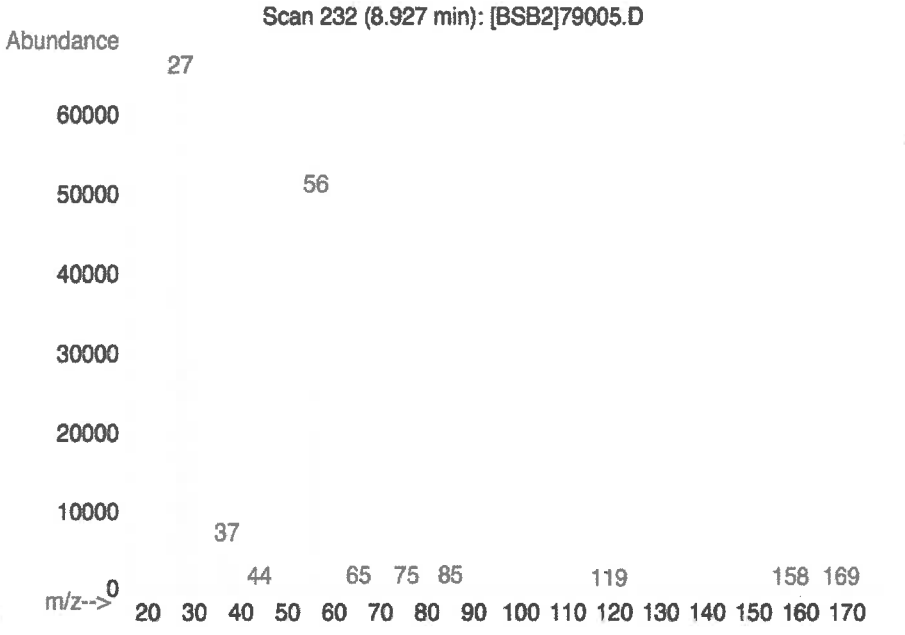
		021325
Formulated By:	Anthony Mahoney	DATE
		021325
Reviewed By:	Pedro L. Rentas	DATE

5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 10.0 0.001 Flask Uncertainty

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. Acrolein	5	103755V10F	5000	97	0.5	0.05166	0.05178	5011.8	52.6	107-02-8	0.1 ppm	orl-rat 46mg/kg

Method: GC6MSD-1. **Detector:** Mass Selective Detector (Scan mode). **Column:** Vocol (60m X 0.25mm ID X 1.5µm film thickness). **Oven Profile:** Temp. 1 = 35°C (Time 1 = 10min.), Temp. 2=200°C (Time 2 = 8.75 min.) Rate = 4°C/min., Injector Temp. = 200°C, Detector Temp. = 220°C. **Analyst:** Pedro Rentas. **NOTE:** Due to the instability of acrolein in solution, all solutions of acrolein, and any dilutions thereof, should be used immediately Long term storage is not recommended. Please contact our technical department if further information is required.





- **The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.**
- **Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).**
- **Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.**
- **All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.**
- **Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).**

Absolute Standards Inc.

PO Box 5585
Hamden, CT 06518-0585

Phone: 203-281-2917
FAX: 203-281-2922

Safety Data Sheet (SDS) GHS/OSHA Compliant

Section I Product and Company Identification

IDENTITY **ANALYTICAL STANDARD DISSOLVED IN WATER**

Manufacturer's Name	ABSOLUTE STANDARDS INC	Emergency Telephone USA & CANADA	**1-800-535-5053**
Address	44 Rossotto Dr. Hamden CT, 06514	Emergency Telephone International	**1-352-323-3500**
		Date Prepared/Revised	January 1, 2024

Section II - Hazards Identification

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

P271	**Use in ventilated area**	**H315**	**Causes skin and eye irritation.**
P302,332	**If on skin, wash with soap and water**	**P280**	**Use gloves, eye protection/face sheild**
		P305,351,338	**If in eyes, remove contacts, rinse with water**

Signal Word: DANGER

Section III - Composition

Components (Specific Chemical Identity; Common Name(s))		% (optional)
Water	CAS#: 7732-18-5	> 97

See Certified Weight Report For Other Analytes Present At Trace Quantities.

INTENDED USE: REFERENCE MATERIAL

Section IV. FIRST AID MEASURES

General advice	Consult a physician. Show this safety data sheet to the doctor in attendance.Move to safe area.
If inhaled	If inhaled, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact	Wash with soap and water. Consult a physician.
In case of eye contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed	Do NOT induce vomiting. Rinse mouth with water. Consult a physician.

Section V. FIREFIGHTING MEASURES

Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Protective equipment for fire	Wear self contained breathing apparatus for fire fighting if necessary.
Hazardous Decomposition products	Carbon oxides

Section VI. ACCIDENTAL RELEASE MEASURES

Personal precautions	Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Vapours accumulate to form explosive concentrations.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Clean up	Contain spillage, and then collect and place in container for disposal according to local regulations (see section 13).

Section VII. HANDLING AND STORAGE

Precautions for safe handling	Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use ventilation Keep away from sources of ignition. No smoking. Prevent the build up of electrostatic charge.
Storage Conditions	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Section VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

Water CAS#: 7732-18-5 TWA: 500 ppm

Personal protective equipment Respiratory protection Handle with gloves. Gloves must be inspected prior to use. Eye protection.
Avoid contact with skin, eyes and clothing. Wash hands thoroughly after handling the product.

Section IX - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point	100°C	Specific Gravity (H2O = 1)	1
Vapor Pressure (mm Hg)		Melting Point	

	NA		0°C
Vapor Density (AIR = 1)	NA	Evaporation rate (Butyl Acetate = 1)	NA

Solubility in Water Completely miscible

Appearance and Odor CLEAR, COLORLESS LIQUID WITH SLIGHT CHEMICAL ODOR.

Section X. STABILITY AND REACTIVITY

Chemical stability Stable under recommended storage conditions.
Possibility of hazardous reactions NA
Conditions to avoid NA
Materials to avoid NA
Hazardous decomposition products - No data available

Section XI. TOXICOLOGICAL INFORMATION

LD50 Oral - Rat NA
LC50 Inhalation - Rat NA
LD50 Dermal - Guinea pig NA
Causes skin irritation.
Eye irritation

Section XII. ECOLOGICAL INFORMATION

LC50 NA
EC50 NA

Section XIII. DISPOSAL CONSIDERATIONS

Dispose with normal Laboratory Solvent Waste.

Section XIV. TRANSPORT INFORMATION

DOT (US)
Not dangerous goods
Proper shipping name: Water

IATA
Not dangerous goods
Proper shipping name: Water

Section XV. REGULATORY INFORMATION

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

Section XVI. Misc. INFORMATION

The information in this Material Safety Data Sheet meets the requirements of the United States Occupational Safety and Health Act and regulations promulgated thereunder (29 CFR 1910.1200 et. seq.) and Global Harmonized System (GHS). This document is intended only as a guide to the appropriate precautionary handling of the material by trained personnel, or supervised by a person trained in chemical handling. The user is responsible for determining the precautions and dangers of this chemical for his or her particular application. Depending on usage, protective clothing including eye and face guards and respirators must be used to avoid contact with material or breathing chemical vapors/fumes. Exposure to this product may have serious adverse health effects. This chemical may interact with other substances. Since the potential uses are so varied, ABSOLUTE STANDARDS INC. cannot warn of all the potential dangers of use or interaction with other chemicals or substances. ABSOLUTE STANDARDS INC. warrants that the chemical meets the specifications set forth on the label. ABSOLUTE STANDARDS INC DISCLAIMS ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED WITH REGARD TO THE PRODUCT SUPPLIED HEREUNDER, ITS MERCHANTABILITY OR ITS FITNESS FOR A PARTICULAR APPLICATION. The user should recognize that this product can cause severe injury or death, especially if improperly handled or the known dangers of use are not heeded. READ ALL PRECAUTIONARY INFORMATION. As new documented general safety information becomes available, Absolute Standards Inc. will periodically revise this Material Safety Data Sheet. If you have any questions, please call Technical Service at 1-203-281-2917 for assistance.

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

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Dec 02/14/25

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT

Part Number: 91980
Lot Number: 021325
Description: Acrolein

Expiration Date: 031325
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 5000
NIST Test ID#: 6UTB

Solvent(s): **Lot#**
Water 072324Q

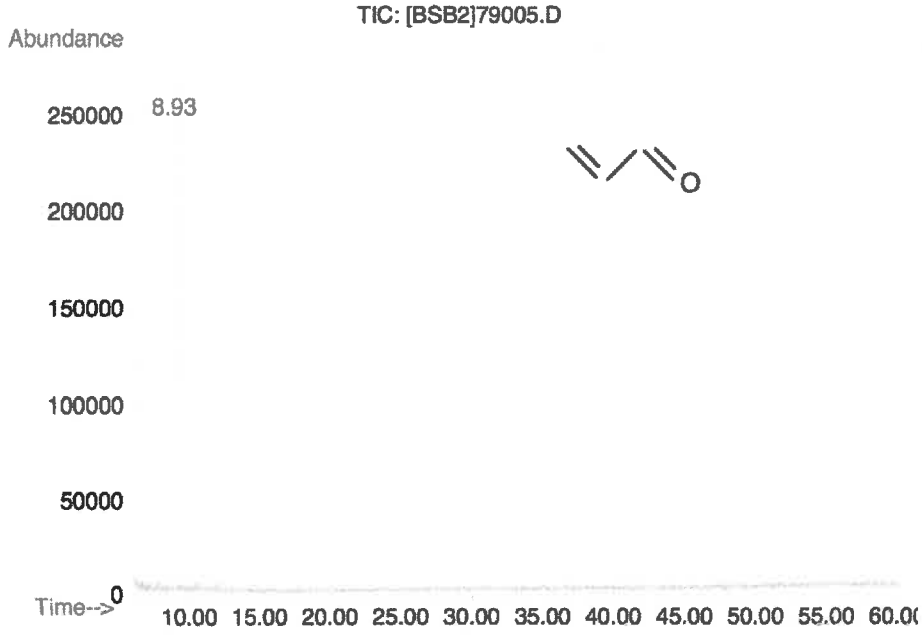
V14872 to
V14876

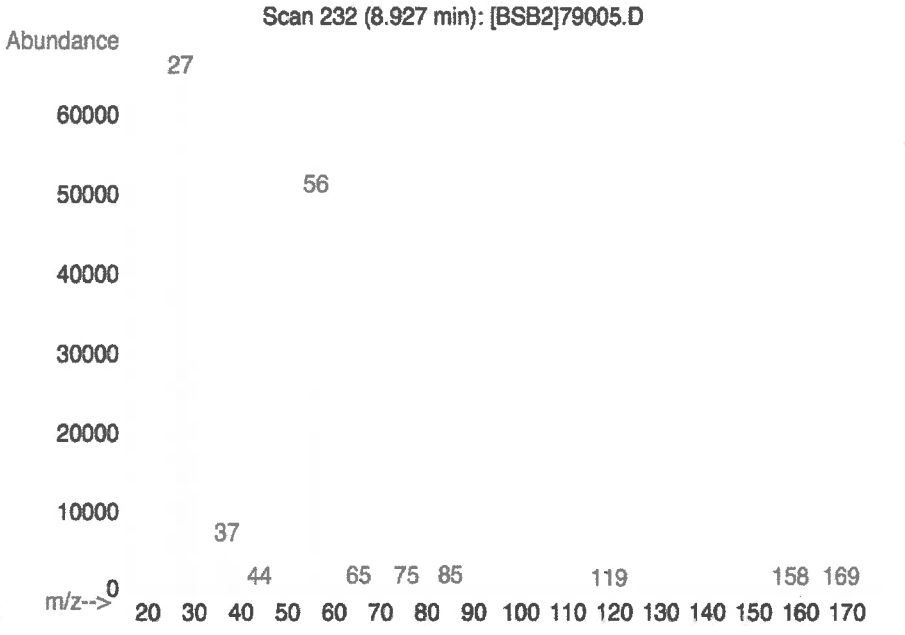
		021325
Formulated By:	Anthony Mahoney	DATE
		021325
Reviewed By:	Pedro L. Rentas	DATE

5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 10.0 0.001 Flask Uncertainty

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. Acrolein	5	103755V10F	5000	97	0.5	0.05166	0.05178	5011.8	52.6	107-02-8	0.1 ppm	orl-rat 46mg/kg

Method: GC6MSD-1. **Detector:** Mass Selective Detector (Scan mode). **Column:** Vocol (60m X 0.25mm ID X 1.5µm film thickness). **Oven Profile:** Temp. 1 = 35°C (Time 1 = 10min.), Temp. 2=200°C (Time 2 = 8.75 min.) Rate = 4°C/min., Injector Temp. = 200°C, Detector Temp. = 220°C. **Analyst:** Pedro Rentas. **NOTE:** Due to the instability of acrolein in solution, all solutions of acrolein, and any dilutions thereof, should be used immediately Long term storage is not recommended. Please contact our technical department if further information is required.





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Safety Data Sheet (SDS) GHS/OSHA Compliant

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Manufacturer's Name	ABSOLUTE STANDARDS INC	Emergency Telephone USA & CANADA	**1-800-535-5053**
Address	44 Rossotto Dr. Hamden CT, 06514	Emergency Telephone International	**1-352-323-3500**
		Date Prepared/Revised	January 1, 2024

Section II - Hazards Identification

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

P271	**Use in ventilated area**	**H315**	**Causes skin and eye irritation.**
P302,332	**If on skin, wash with soap and water**	**P280**	**Use gloves, eye protection/face sheild**
		P305,351,338	**If in eyes, remove contacts, rinse with water**

Signal Word: DANGER

Section III - Composition

Components (Specific Chemical Identity; Common Name(s))		% (optional)
Water	CAS#: 7732-18-5	> 97

See Certified Weight Report For Other Analytes Present At Trace Quantities.

INTENDED USE: REFERENCE MATERIAL

Section IV. FIRST AID MEASURES

General advice	Consult a physician. Show this safety data sheet to the doctor in attendance.Move to safe area.
If inhaled	If inhaled, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact	Wash with soap and water. Consult a physician.
In case of eye contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed	Do NOT induce vomiting. Rinse mouth with water. Consult a physician.

Section V. FIREFIGHTING MEASURES

Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Protective equipment for fire	Wear self contained breathing apparatus for fire fighting if necessary.
Hazardous Decomposition products	Carbon oxides

Section VI. ACCIDENTAL RELEASE MEASURES

Personal precautions	Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Vapours accumulate to form explosive concentrations.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Clean up	Contain spillage, and then collect and place in container for disposal according to local regulations (see section 13).

Section VII. HANDLING AND STORAGE

Precautions for safe handling	Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use ventilation Keep away from sources of ignition. No smoking. Prevent the build up of electrostatic charge.
Storage Conditions	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Section VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

Water CAS#: 7732-18-5 TWA: 500 ppm

Personal protective equipment Respiratory protection Handle with gloves. Gloves must be inspected prior to use. Eye protection.
Avoid contact with skin, eyes and clothing. Wash hands thoroughly after handling the product.

Section IX - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point	100°C	Specific Gravity (H2O = 1)	1
Vapor Pressure (mm Hg)		Melting Point	

	NA		0°C
Vapor Density (AIR = 1)	NA	Evaporation rate (Butyl Acetate = 1)	NA

Solubility in Water Completely miscible

Appearance and Odor CLEAR, COLORLESS LIQUID WITH SLIGHT CHEMICAL ODOR.

Section X. STABILITY AND REACTIVITY

Chemical stability Stable under recommended storage conditions.
Possibility of hazardous reactions NA
Conditions to avoid NA
Materials to avoid NA
Hazardous decomposition products - No data available

Section XI. TOXICOLOGICAL INFORMATION

LD50 Oral - Rat NA
LC50 Inhalation - Rat NA
LD50 Dermal - Guinea pig NA
Causes skin irritation.
Eye irritation

Section XII. ECOLOGICAL INFORMATION

LC50 NA
EC50 NA

Section XIII. DISPOSAL CONSIDERATIONS

Dispose with normal Laboratory Solvent Waste.

Section XIV. TRANSPORT INFORMATION

DOT (US)
Not dangerous goods
Proper shipping name: Water

IATA
Not dangerous goods
Proper shipping name: Water

Section XV. REGULATORY INFORMATION

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

Section XVI. Misc. INFORMATION

The information in this Material Safety Data Sheet meets the requirements of the United States Occupational Safety and Health Act and regulations promulgated thereunder (29 CFR 1910.1200 et. seq.) and Global Harmonized System (GHS). This document is intended only as a guide to the appropriate precautionary handling of the material by trained personnel, or supervised by a person trained in chemical handling. The user is responsible for determining the precautions and dangers of this chemical for his or her particular application. Depending on usage, protective clothing including eye and face guards and respirators must be used to avoid contact with material or breathing chemical vapors/fumes. Exposure to this product may have serious adverse health effects. This chemical may interact with other substances. Since the potential uses are so varied, ABSOLUTE STANDARDS INC. cannot warn of all the potential dangers of use or interaction with other chemicals or substances. ABSOLUTE STANDARDS INC. warrants that the chemical meets the specifications set forth on the label. ABSOLUTE STANDARDS INC DISCLAIMS ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED WITH REGARD TO THE PRODUCT SUPPLIED HEREUNDER, ITS MERCHANTABILITY OR ITS FITNESS FOR A PARTICULAR APPLICATION. The user should recognize that this product can cause severe injury or death, especially if improperly handled or the known dangers of use are not heeded. READ ALL PRECAUTIONARY INFORMATION. As new documented general safety information becomes available, Absolute Standards Inc. will periodically revise this Material Safety Data Sheet. If you have any questions, please call Technical Service at 1-203-281-2917 for assistance.

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

5 J14

Dec 02/14/25

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT

Part Number: 91980
Lot Number: 021325
Description: Acrolein

Expiration Date: 031325
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 5000
NIST Test ID#: 6UTB

Solvent(s): **Lot#**
Water 072324Q

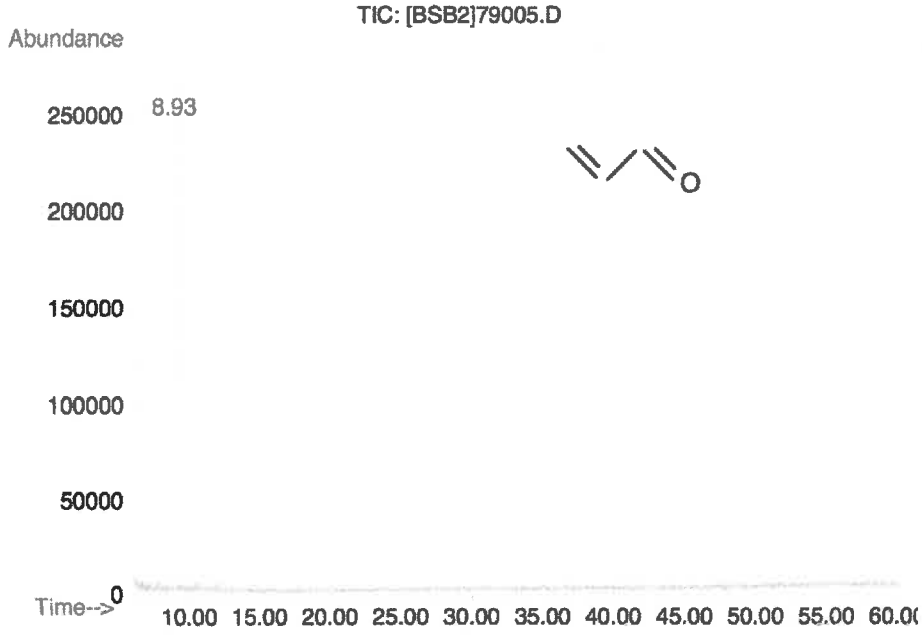
V14872 to
V14876

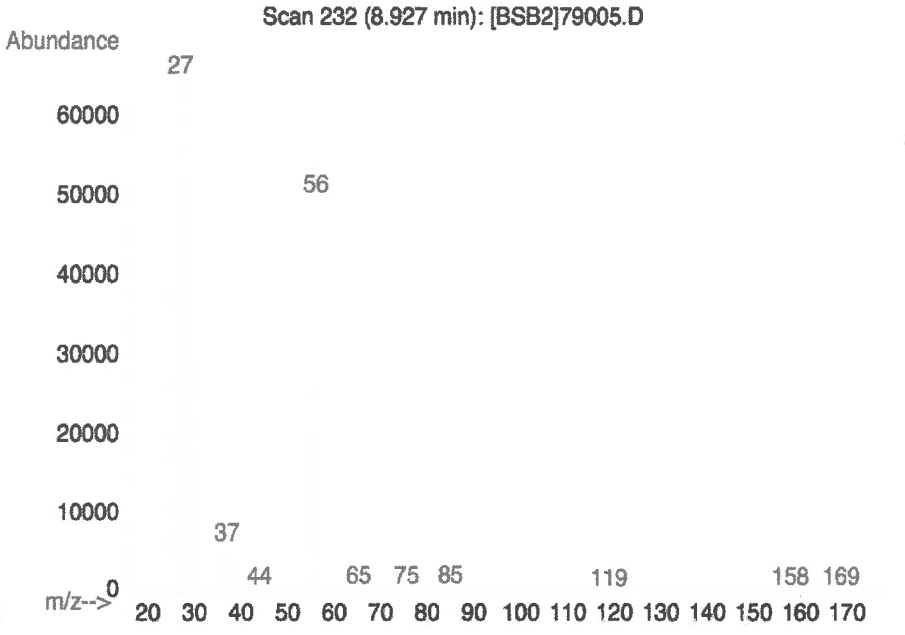
		021325
Formulated By:	Anthony Mahoney	DATE
		021325
Reviewed By:	Pedro L. Rentas	DATE

5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 10.0 0.001 Flask Uncertainty

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. Acrolein	5	103755V10F	5000	97	0.5	0.05166	0.05178	5011.8	52.6	107-02-8	0.1 ppm	orl-rat 46mg/kg

Method: GC6MSD-1. **Detector:** Mass Selective Detector (Scan mode). **Column:** Vocol (60m X 0.25mm ID X 1.5µm film thickness). **Oven Profile:** Temp. 1 = 35°C (Time 1 = 10min.), Temp. 2=200°C (Time 2 = 8.75 min.) Rate = 4°C/min., Injector Temp. = 200°C, Detector Temp. = 220°C. **Analyst:** Pedro Rentas. **NOTE:** Due to the instability of acrolein in solution, all solutions of acrolein, and any dilutions thereof, should be used immediately Long term storage is not recommended. Please contact our technical department if further information is required.





- **The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.**
- **Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).**
- **Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.**
- **All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.**
- **Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).**

Absolute Standards Inc.

PO Box 5585
Hamden, CT 06518-0585

Phone: 203-281-2917
FAX: 203-281-2922

Safety Data Sheet (SDS) GHS/OSHA Compliant

Section I Product and Company Identification

IDENTITY **ANALYTICAL STANDARD DISSOLVED IN WATER**

Manufacturer's Name	ABSOLUTE STANDARDS INC	Emergency Telephone USA & CANADA	**1-800-535-5053**
Address	44 Rossotto Dr. Hamden CT, 06514	Emergency Telephone International	**1-352-323-3500**
		Date Prepared/Revised	January 1, 2024

Section II - Hazards Identification

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

P271	**Use in ventilated area**	**H315**	**Causes skin and eye irritation.**
P302,332	**If on skin, wash with soap and water**	**P280**	**Use gloves, eye protection/face sheild**
		P305,351,338	**If in eyes, remove contacts, rinse with water**

Signal Word: DANGER

Section III - Composition

Components (Specific Chemical Identity; Common Name(s))		% (optional)
Water	CAS#: 7732-18-5	> 97

See Certified Weight Report For Other Analytes Present At Trace Quantities.

INTENDED USE: REFERENCE MATERIAL

Section IV. FIRST AID MEASURES

General advice	Consult a physician. Show this safety data sheet to the doctor in attendance.Move to safe area.
If inhaled	If inhaled, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact	Wash with soap and water. Consult a physician.
In case of eye contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed	Do NOT induce vomiting. Rinse mouth with water. Consult a physician.

Section V. FIREFIGHTING MEASURES

Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Protective equipment for fire	Wear self contained breathing apparatus for fire fighting if necessary.
Hazardous Decomposition products	Carbon oxides

Section VI. ACCIDENTAL RELEASE MEASURES

Personal precautions	Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Vapours accumulate to form explosive concentrations.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Clean up	Contain spillage, and then collect and place in container for disposal according to local regulations (see section 13).

Section VII. HANDLING AND STORAGE

Precautions for safe handling	Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use ventilation Keep away from sources of ignition. No smoking. Prevent the build up of electrostatic charge.
Storage Conditions	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Section VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

Water CAS#: 7732-18-5 TWA: 500 ppm

Personal protective equipment Respiratory protection Handle with gloves. Gloves must be inspected prior to use. Eye protection.
Avoid contact with skin, eyes and clothing. Wash hands thoroughly after handling the product.

Section IX - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point	100°C	Specific Gravity (H2O = 1)	1
Vapor Pressure (mm Hg)		Melting Point	

	NA		0°C
Vapor Density (AIR = 1)	NA	Evaporation rate (Butyl Acetate = 1)	NA

Solubility in Water Completely miscible

Appearance and Odor CLEAR, COLORLESS LIQUID WITH SLIGHT CHEMICAL ODOR.

Section X. STABILITY AND REACTIVITY

Chemical stability Stable under recommended storage conditions.
Possibility of hazardous reactions NA
Conditions to avoid NA
Materials to avoid NA
Hazardous decomposition products - No data available

Section XI. TOXICOLOGICAL INFORMATION

LD50 Oral - Rat NA
LC50 Inhalation - Rat NA
LD50 Dermal - Guinea pig NA
Causes skin irritation.
Eye irritation

Section XII. ECOLOGICAL INFORMATION

LC50 NA
EC50 NA

Section XIII. DISPOSAL CONSIDERATIONS

Dispose with normal Laboratory Solvent Waste.

Section XIV. TRANSPORT INFORMATION

DOT (US)
Not dangerous goods
Proper shipping name: Water

IATA
Not dangerous goods
Proper shipping name: Water

Section XV. REGULATORY INFORMATION

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Section XVI. Misc. INFORMATION

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Certified Reference Material CRM

5 J14

Dec 02/14/25

ANAB ISO 17034 Accredited
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CERTIFIED WEIGHT REPORT

Part Number: 91980
Lot Number: 021325
Description: Acrolein

Expiration Date: 031325
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 5000
NIST Test ID#: 6UTB

Solvent(s): **Lot#**
Water 072324Q

V14872 to
V14876

		021325
Formulated By:	Anthony Mahoney	DATE
		021325
Reviewed By:	Pedro L. Rentas	DATE

5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 10.0 0.001 Flask Uncertainty

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
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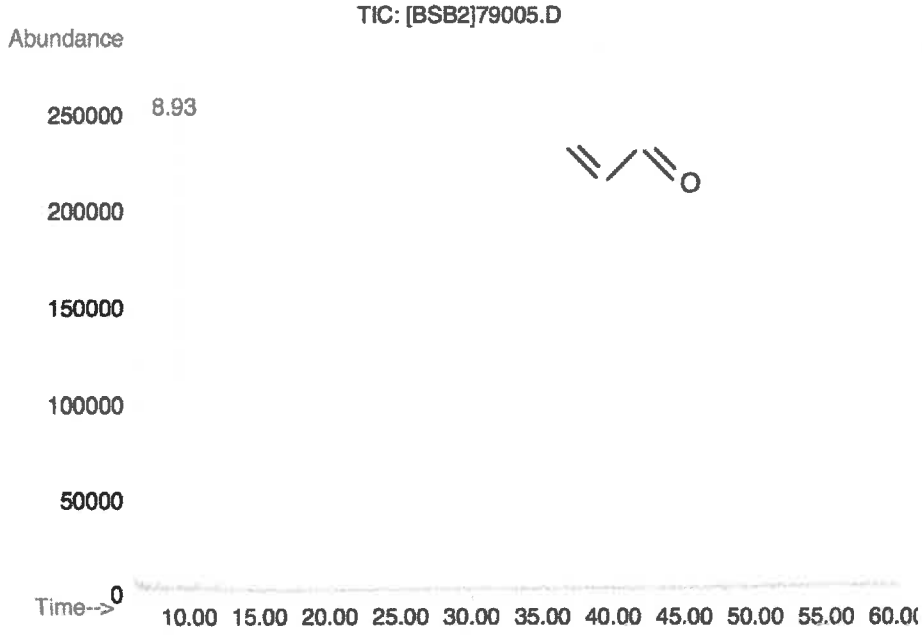
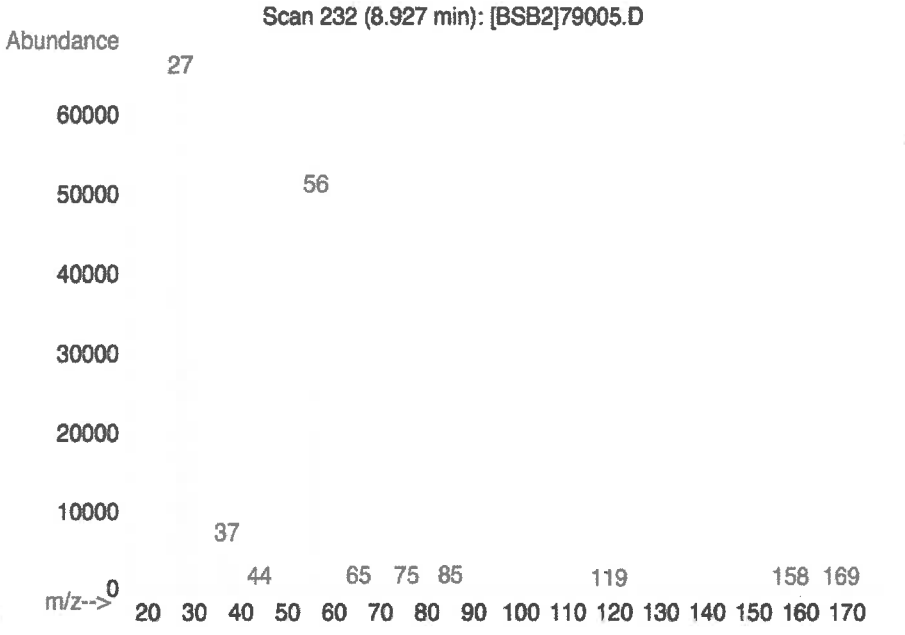
Method: GC6MSD-1. **Detector:** Mass Selective Detector (Scan mode). **Column:** Vocol (60m X 0.25mm ID X 1.5µm film thickness). **Oven Profile:** Temp. 1 = 35°C (Time 1 = 10min.), Temp. 2=200°C (Time 2 = 8.75 min.) Rate = 4°C/min., Injector Temp. = 200°C, Detector Temp. = 220°C. **Analyst:** Pedro Rentas. **NOTE:** Due to the instability of acrolein in solution, all solutions of acrolein, and any dilutions thereof, should be used immediately Long term storage is not recommended. Please contact our technical department if further information is required.





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		Date Prepared/Revised	January 1, 2024

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GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

P271	**Use in ventilated area**	**H315**	**Causes skin and eye irritation.**
P302,332	**If on skin, wash with soap and water**	**P280**	**Use gloves, eye protection/face sheild**
		P305,351,338	**If in eyes, remove contacts, rinse with water**

Signal Word: DANGER

Section III - Composition

Components (Specific Chemical Identity; Common Name(s))		% (optional)
Water	CAS#: 7732-18-5	> 97

See Certified Weight Report For Other Analytes Present At Trace Quantities.

INTENDED USE: REFERENCE MATERIAL

Section IV. FIRST AID MEASURES

General advice	Consult a physician. Show this safety data sheet to the doctor in attendance.Move to safe area.
If inhaled	If inhaled, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact	Wash with soap and water. Consult a physician.
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If swallowed	Do NOT induce vomiting. Rinse mouth with water. Consult a physician.

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Storage Conditions	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Section VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

Water CAS#: 7732-18-5 TWA: 500 ppm

Personal protective equipment Respiratory protection Handle with gloves. Gloves must be inspected prior to use. Eye protection.
Avoid contact with skin, eyes and clothing. Wash hands thoroughly after handling the product.

Section IX - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point	100°C	Specific Gravity (H2O = 1)	1
Vapor Pressure (mm Hg)		Melting Point	

	NA		0°C
Vapor Density (AIR = 1)	NA	Evaporation rate (Butyl Acetate = 1)	NA

Solubility in Water Completely miscible

Appearance and Odor CLEAR, COLORLESS LIQUID WITH SLIGHT CHEMICAL ODOR.

Section X. STABILITY AND REACTIVITY

Chemical stability Stable under recommended storage conditions.
Possibility of hazardous reactions NA
Conditions to avoid NA
Materials to avoid NA
Hazardous decomposition products - No data available

Section XI. TOXICOLOGICAL INFORMATION

LD50 Oral - Rat NA
LC50 Inhalation - Rat NA
LD50 Dermal - Guinea pig NA
Causes skin irritation.
Eye irritation

Section XII. ECOLOGICAL INFORMATION

LC50 NA
EC50 NA

Section XIII. DISPOSAL CONSIDERATIONS

Dispose with normal Laboratory Solvent Waste.

Section XIV. TRANSPORT INFORMATION

DOT (US)
Not dangerous goods
Proper shipping name: Water

IATA
Not dangerous goods
Proper shipping name: Water

Section XV. REGULATORY INFORMATION

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

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CERTIFIED WEIGHT REPORT

Part Number: 95317
Lot Number: 021624
Description: Universal VOA Megamix
69 components
Expiration Date: 021627
Recommended Storage: Freezer (0 °C)
Nominal Concentration (µg/mL): 2000
NIST Test ID#: 6UTB

Solvent(s): Lot#
Methanol EG359-USQ12

Formulated By: Prashant Chauhan 021624 DATE

Reviewed By: Pedro L. Rentas 021624 DATE

Weight(s) shown below were combined and diluted to (mL):	100.0	0.021	Flask Uncertainty
		5E-05	Balance Uncertainty

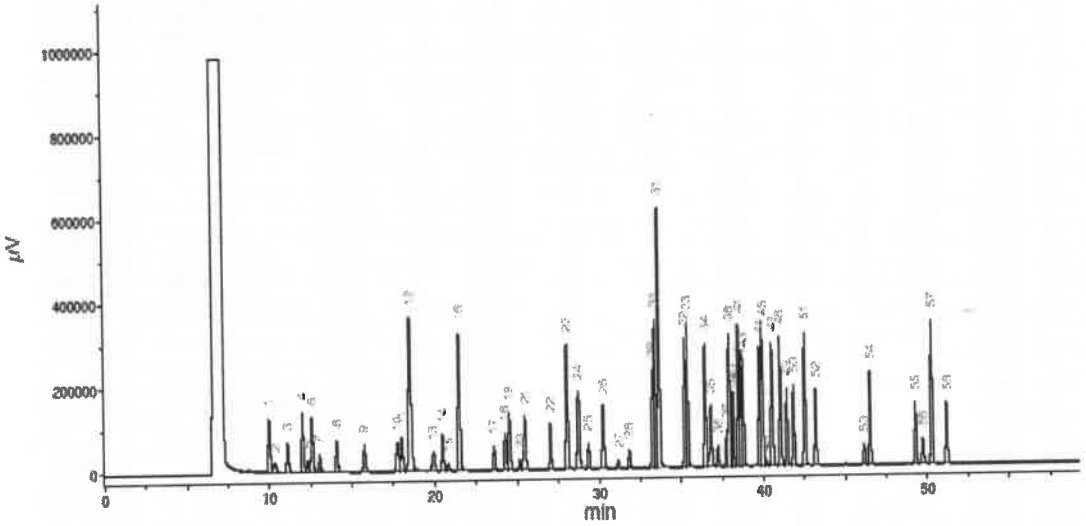
Compound	(RM#) Part Number	Lot Number	Dil. Factor	Initial Vol. (mL)	Initial Conc.(ug/mL)	Nominal Conc (µg/mL)	Purity (%)	Purity Uncertainty	Uncertainty Pipette (mL)	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. Acetonitrile	(0324)	021644	NA	NA	NA	2000	99.99	0.2	NA	0.20007	0.20020	2001.3	8.1	75-05-8	40 ppm (70mg/m3/8H)	orl-rat 2460mg/kg
2. Allyl chloride (3-Chloropropene)	(0325)	102396	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20221	2001.4	8.2	107-05-1	1 ppm (3mg/m3/8H)	orl-rat 700mg/kg
3. Carbon disulphide	(0060)	MKCR8561	NA	NA	NA	2000	99.99	0.2	NA	0.20007	0.20023	2001.6	8.1	75-15-0	4 ppm (12mg/m3) (skin)	orl-rat 1200mg/kg
4. cis-1,4-Dichloro-2-butene	(1196)	14718EF	NA	NA	NA	2000	95	0.2	NA	0.21058	0.21069	2001.1	8.5	1476-11-5	N/A	N/A
5. trans-1,4-Dichloro-2-butene	(0486)	MKBP6041V	NA	NA	NA	2000	96.5	0.2	NA	0.20731	0.20748	2001.7	8.4	110-57-6	N/A	N/A
6. Diethyl ether	(0153)	IK18CAS000(	NA	NA	NA	2000	99.9	0.2	NA	0.20025	0.20040	2001.5	8.1	60-29-7	N/A	N/A
7. Ethyl methacrylate	(0361)	06126PX	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20230	2002.3	8.2	97-63-2	N/A	orl-rat 14800mg/kg
8. Iodomethane	(0489)	SHBF8718V	NA	NA	NA	2000	99.5	0.2	NA	0.20106	0.20121	2001.5	8.2	74-88-4	5 ppm(28mg/m3/8H)(skin)	orl-rat 76mg/kg
9. 2-Methyl-1-propanol	(0445)	15241EB	NA	NA	NA	2000	99.5	0.2	NA	0.20106	0.20120	2001.4	8.1	78-83-1	50 ppm (150mg/m3/8H)	orl-rat 2460mg/kg
10. Methacrylonitrile	(0442)	00427ET	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20221	2001.4	8.2	126-98-7	1 ppm (3mg/m3/8H)(skin)	orl-rat 120mg/kg
11. Methyl acrylate	(1075)	SHBK0679	NA	NA	NA	2000	99.9	0.2	NA	0.20025	0.20040	2001.5	8.1	96-33-3	10 ppm(35mg/m3/8H)(skin)	orl-rat 277mg/kg
12. Methyl methacrylate	(0404)	MKBW5137V	NA	NA	NA	2000	99.9	0.2	NA	0.20025	0.20041	2001.6	8.1	80-62-6	100 ppm (410mg/m3/8H)	orl-rat 7872mg/kg
13. Nitrobenzene	(0228)	01213TV	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20220	2001.3	8.2	98-95-3	1 ppm (5mg/m3/8H)(skin)	orl-rat 780mg/kg
14. 2-Nitropropane	(0461)	14002JX	NA	NA	NA	2000	97.3	0.2	NA	0.20560	0.20577	2001.6	8.3	79-46-9	10 ppm (35mg/m3/8H)	orl-rat 720mg/kg
15. Pentachloroethane	(0450)	HGA01	NA	NA	NA	2000	98	0.2	NA	0.20413	0.20430	2001.6	8.3	76-01-7	N/A	N/A
16. 1,1,2-Trichlorotrifluoroethane	(0474)	18930	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20225	2001.8	8.2	76-13-1	1000 ppm (7600mg/m3/8H)	orl-rat 43g/kg
17. Bromodichloromethane	35171	101623	0.05	5.00	40001.7	2000	NA	NA	0.017	NA	NA	1999.6	22.9	75-27-4	N/A	orl-rat 916mg/kg
18. Dibromochloromethane	35171	101623	0.05	5.00	40002.1	2000	NA	NA	0.017	NA	NA	1999.6	23.0	124-48-1	N/A	orl-rat 848mg/kg
19. cis-1,2-Dichloroethene	35171	101623	0.05	5.00	40003.1	2000	NA	NA	0.017	NA	NA	1999.7	22.9	156-59-2	N/A	N/A
20. trans-1,2-Dichloroethene	35171	101623	0.05	5.00	40002.4	2000	NA	NA	0.017	NA	NA	1999.6	23.0	156-60-5	N/A	orl-rat 1235mg/kg
21. Methylene chloride	35171	101623	0.05	5.00	40002.8	2000	NA	NA	0.017	NA	NA	1999.6	22.9	75-09-2	500 ppm	orl-rat 820mg/kg
22. 1,1-Dichloroethene	32251	102023	0.10	10.00	20001.6	2000	NA	NA	0.042	NA	NA	1999.7	20.4	75-35-4	1 ppm (4mg/m3/8H)	orl-rat 200mg/kg
23. Bromoform	95321	020724	0.10	10.00	20003.2	2000	NA	NA	0.042	NA	NA	1999.8	20.5	75-25-2	0.5 ppm (5mg/m3) (skin)	orl-rat 933mg/kg
24. Carbon tetrachloride	95321	020724	0.10	10.00	20003.4	2000	NA	NA	0.042	NA	NA	1999.8	20.4	56-23-5	2 ppm (12.6mg/m3/8H)	orl-rat 2350mg/kg
25. Chloroform	95321	020724	0.10	10.00	20024.0	2000	NA	NA	0.042	NA	NA	2001.9	20.5	67-66-3	50 ppm (240mg/m3) (CL)	orl-rat 908mg/kg
26. Dibromomethane	95321	020724	0.10	10.00	20002.9	2000	NA	NA	0.042	NA	NA	1999.8	20.5	74-95-3	N/A	orl-rat 108mg/kg
27. 1,1-Dichloroethane	95321	020724	0.10	10.00	20003.4	2000	NA	NA	0.042	NA	NA	1999.8	20.5	75-34-3	100 ppm	orl-rat 725mg/kg
28. 2,2-Dichloropropane	95321	020724	0.10	10.00	20003.4	2000	NA	NA	0.042	NA	NA	1999.8	20.4	594-20-7	N/A	N/A
29. Tetrachloroethene	95321	020724	0.10	10.00	20201.1	2000	NA	NA	0.042	NA	NA	2019.6	20.6	127-18-4	25 ppm (170mg/m3/8H)(final)	orl-rat 2629mg/kg
30. 1,1,1-Trichloroethane	95321	020724	0.10	10.00	20003.0	2000	NA	NA	0.042	NA	NA	1999.8	20.5	71-55-6	350 ppm (1900mg/m3/8H)	orl-rat 10300mg/kg
31. 1,2-Dibromo-3-chloropropane	35161	112322	0.05	5.00	40016.5	2000	NA	NA	0.017	NA	NA	2000.3	22.9	96-12-8	0.001 ppm	orl-rat 170mg/kg
32. 1,2-Dibromoethane	35161	112322	0.05	5.00	40024.8	2000	NA	NA	0.017	NA	NA	2000.7	22.9	106-93-4	20 ppm (8H)	orl-rat 108mg/kg
33. 1,2-Dichloroethane	35161	112322	0.05	5.00	40018.0	2000	NA	NA	0.017	NA	NA	2000.4	22.9	107-06-2	50 ppm (8H)	orl-rat 670mg/kg
34. 1,2-Dichloropropane	35161	112322	0.05	5.00	40051.0	2000	NA	NA	0.017	NA	NA	2002.0	22.9	78-87-5	75 ppm (350mg/m3/8H)	orl-rat 1947mg/kg
35. 1,3-Dichloropropane	35161	112322	0.05	5.00	40005.9	2000	NA	NA	0.017	NA	NA	1999.8	22.9	142-28-9	N/A	unr-mus 3600mg/kg
36. 1,1-Dichloropropene	35161	112322	0.05	5.00	40012.1	2000	NA	NA	0.017	NA	NA	2000.1	29.7	563-58-6	N/A	N/A
37. cis-1,3-Dichloropropene	35161	112322	0.05	5.00	40010.0	2000	NA	NA	0.017	NA	NA	2000.0	23.0	10061-01-5	N/A	N/A
38. trans-1,3-Dichloropropene	35161	112322	0.05	5.00	40017.8	2000	NA	NA	0.017	NA	NA	2000.4	23.0	10061-02-6	N/A	N/A
39. Hexachloro-1,3-butadiene	35161	112322	0.05	5.00	40021.9	2000	NA	NA	0.017	NA	NA	2000.6	29.7	87-68-3	0.02 ppm (0.24mg/m3/8H)	orl-rat 82mg/kg
40. 1,1,1,2-Tetrachloroethane	35161	112322	0.05	5.00	40011.9	2000	NA	NA	0.017	NA	NA	2000.1	22.9	630-20-6	N/A	orl-rat 670mg/kg
41. 1,1,2,2-Tetrachloroethane	35161	112322	0.05	5.00	40007.5	2000	NA	NA	0.017	NA	NA	1999.9	22.9	79-34-5	5 ppm (35mg/m3/8H)(skin)	orl-rat 800mg/kg
42. 1,1,2-Trichloroethane	35161	112322	0.05	5.00	40006.6	2000	NA	NA	0.017	NA	NA	1999.8	23.0	79-00-5	10 ppm (46mg/m3/8H)(skin)	orl-rat 836mg/kg
43. Trichloroethene	35161	112322	0.05	5.00	40029.0	2000	NA	NA	0.017	NA	NA	2000.9	22.9	79-01-6	50 ppm (270mg/m3/8H)	orl-mus 2402mg/kg
44. 1,2,3-Trichloropropane	35161	112322	0.05	5.00	40007.5	2000	NA	NA	0.017	NA	NA	1999.9	22.9	96-18-4	10 ppm (60mg/m3/8H)	orl-rat 149.6mg/kg
45. Benzene	35162	050823	0.05	5.00	40005.0	2000	NA	NA	0.017	NA	NA	1999.7	22.9	71-43-2	1 ppm	orl-rat 4894mg/kg
46. Bromobenzene	35162	050823	0.05	5.00	40006.9	2000	NA	NA	0.017	NA	NA	1999.8	22.9	108-86-1	N/A	orl-rat 2699mg/kg
47. n-Butyl benzene	35162	050823	0.05	5.00	40003.8	2000	NA	NA	0.017	NA	NA	1999.7	22.9	104-51-8	N/A	N/A
48. Ethyl benzene	35162	050823	0.05	5.00	40004.8	2000	NA	NA	0.017	NA	NA	1999.7	22.9	100-41-4	100 ppm (435mg/m3/8H)	orl-rat >2000mg/kg
49. p-Isopropyl toluene	35162	050823	0.05	5.00	40005.8	2000	NA	NA	0.017	NA	NA	1999.8	22.9	99-87-6	N/A	orl-rat 4750mg/kg
50. Naphthalene	35162	050823	0.05	5.00	40006.2	2000	NA	NA	0.017	NA	NA	1999.8	22.9	91-20-3	10 ppm (50mg/m3/8H)	orl-rat 490mg/kg
51. Styrene	35162	050823	0.05	5.00	40004.8	2000	NA	NA	0.017	NA	NA	1999.7	22.9	100-42-5	100 ppm	orl-rat 5000mg/kg
52. Toluene	35162	050823	0.05	5.00	40006.2	2000	NA	NA	0.017	NA	NA	1999.8	22.9	108-88-3	200 ppm	orl-rat 5000mg/kg
53. 1,2,3-Trichlorobenzene	35162	050823	0.05	5.00	40003.1	2000	NA	NA	0.017	NA	NA	1999.7	22.9	87-61-6	N/A	ipr-mus 1390mg/kg
54. 1,2,4-Trichlorobenzene	35162	050823	0.05	5.00	40006.8	2000	NA	NA	0.017	NA	NA	1999.8	22.9	120-82-1	5 ppm (CL) (40mg/m3)	orl-rat 756mg/kg
55. 1,2,4-Trimethylbenzene	35162	050823	0.05	5.00	40001.6	2000	NA	NA	0.017	NA	NA	1999.6	23.0	95-63-6	N/A	orl-rat 5g/kg
56. 1,3,5-Trimethylbenzene	35162	050823	0.05	5.00	40006.7	2000	NA	NA	0.017	NA	NA	1999.8	22.9	108-67-8	N/A	orl-rat 5000mg/kg
57. m-Xylene	35162	050823	0.05	5.00	40005.8	2000	NA	NA	0.017	NA	NA	1999.8	22.9	108-38-3	100 ppm (435mg/m3/8H)	orl-rat 5g/kg
58. tert-Butyl benzene	35163	101923	0.05	5.00	40001.2	2000	NA	NA	0.017	NA	NA	1999.6	22.9	98-06-6	N/A	N/A
59. sec-Butyl benzene	35163	101923	0.05	5.00	40002.4	2000	NA	NA	0.017	NA	NA	1999.6	22.9	135-98-8	N/A	orl-rat 2240mg/kg
60. Chlorobenzene	35163	101923	0.05	5.00	40003.8	2000	NA	NA	0.017	NA	NA	1999.7	22.9	108-90-7	75 ppm (350mg/m3/8H)	orl-rat 2290mg/kg
61. 2-Chlorotoluene	35163	101923	0.05	5.00	40000.3	2000	NA	NA	0.017	NA	NA	1999.5	22.9	95-49-8	50 ppm (250mg/m3/8H)	orl-rat 3900mg/kg
62. 4-Chlorotoluene	35163	101923	0.05	5.00	40003.3	2000	NA	NA	0.017	NA	NA	1999.7	22.9	106-43-4	N/A	orl-rat 2100mg/kg
63. 1,2-Dichlorobenzene	35163	101923	0.05	5.00	40003.8	2000	NA	NA	0.017	NA	NA	1999.7	22.9	95-50-1	50 ppm (300mg/m3) (CL)	orl-rat 500mg/kg
64. 1,3-Dichlorobenzene	35163	101923	0.05	5.00	40001.7	2000	NA	NA	0.017	NA	NA	1999.6	23.0	541-73-1	N/A	ipr-mus 1062mg/kg
65. 1,4-Dichlorobenzene	35163	101923	0.05	5.00	40001.8	2000	NA	NA	0.017	NA	NA	1999.6	22.9	106-46-7	75 ppm (450mg/m3/8H)	orl-rat 500mg/kg
66. Isopropylbenzene	35163	101923	0.05	5.00	40000.8	2000	NA	NA	0.017	NA	NA	1999.5	22.9	98-82-8	50 ppm (245mg/m3/8H)	orl-rat 1400mg/kg
67. n-Propylbenzene	35163	101923	0.05	5.00	40003.4	2000	NA	NA	0.017	NA	NA	1999.7	23.0	103-65-1	N/A	orl-rat 6040mg/kg
68. o-Xylene	35163	101923	0.05	5.00	40040.8	2000	NA	NA	0.017	NA	NA	2001.5	23.0	95-47-6	100 ppm (435mg/m3/8H)	ipr-mus 1364mg/kg
69. p-Xylene	35163	101923	0.05	5.00	40000.6	2000	NA	NA	0.017	NA	NA	1999.5	22.9	106-42-3	100 ppm (435mg/m3/8H)	orl-rat 5g/kg

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening sample, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty References: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

Run 16, "P95317 L021624 [2000µg/mL in MeOH]"

Run Length: 60.00 min, 35998 points at 10 points/second.
Created: Sat, Feb 17, 2024 at 8:56:46 AM.
Sampled: Sequence "021624-GC5M1", Method "GC5-M1".
Analyzed using Method "GC5-M1".

Comments
GC5-M1 Analysis by Candice Warren
Column ID SPB-Vocol 105 meter X 0.53mm X 3.0µm film thickness
Flow rates: Total flow=290mL/min., Helium (carrier)=10mL/min.,
Helium(make-up)=10mL/min., Hydogen(make-up)=40mL/min., Air(make-up)=230mL/min.
Oven Profile: Temp. 1=35°C (Time 1=10 min.), Temp 2=200°C (Time 2=8.75 min.),
Rate = 4°C/min., Total run time=60 min. Injector temp.=200°C, FID Temp.=200°C.
FID Signal = Edaq Channel 1
Standard injection = 0.5µL, Range=3



Peak #	Name	FID RT (min.)
1	Ether	9.97
2	1,1,2-Trichloro-1,2,2-trifluoroethane	10.33
3	1,1-Dichloroethene	11.10
4	Acetonitrile	12.00
5	Iodomethane	12.31
6	Allyl chloride	12.56
7	Carbon disulfide/Methylene chloride	13.04
8	trans-1,2-Dichloroethene	14.07
9	1,1-Dichloroethane	15.74
10	2,2-Dichloropropane	17.74
11	cis-1,2-Dichloroethene	18.00
12	Methacrylonitrile/Methyl acrylate/Chloroform	18.46
13	Isobutanol/1,1,1-Trichloroethane	19.91
14	1,1-Dichloropropene	20.46
15	Carbon tetrachloride	20.79
16	Benzene/1,2-Dichloroethane	21.49
17	Trichloroethene	23.58
18	1,2-Dichloropropane	24.28
19	Methyl methacrylate	24.52
20	Bromodichloromethane	25.13
21	Dibromomethane/2-Nitropropane	25.46
22	cis-1,3-Dichloropropene	27.02
23	Toluene	28.05
24	Ethyl methacrylate/trans-1,3-Dichloropropene	28.73
25	1,1,2-Trichloroethane	29.34
26	Tetrachloroethene/1,3-Dichloropropane	30.24
27	Dibromochloromethane	31.16
28	1,2-Dibromoethene	31.84
29	Chlorobenzene	33.26
30	Ethylbenzene/1,1,1,2-Tetrachloroethane	33.40
31	m-Xylene/p-Xylene	33.88
32	o-Xylene	35.22
33	Styrene	35.38
34	Isopropylbenzene/Bromoform	36.18
35	cis-1,4-Dichloro-2-Butene	36.80
36	1,1,2,2-Tetrachloroethane	37.23
37	1,2,3-Trichloropropane	37.77
38	n-Propylbenzene	37.93
39	trans-1,4-Dichloro-2-Butene	38.05
40	Bromobenzene	38.14
41	1,3,5-Trimethylbenzene	38.80
42	2-Chlorotoluene	38.82
43	4-Chlorotoluene	38.77
44	tert-Butylbenzene	39.76
45	1,2,4-Trimethylbenzene	39.91
46	Pentachloroethane	40.17
47	sec-Butylbenzene	40.52
48	p-Isopropyltoluene	41.02
49	1,3-Dichlorobenzene	41.42
50	1,4-Dichlorobenzene	41.83
51	n-Butylbenzene	42.53
52	1,2-Dichlorobenzene	43.18
53	1,2-Dibromo-3-chloropropane	46.12
54	Nitrobenzene	46.46
55	1,2,4-Trichlorobenzene	49.26
56	Hexachlorobutadiene	49.72
57	Naphthalene	50.26
58	1,2,3-Trichlorobenzene	51.16

Absolute Standards Inc.
PO Box 5585
Hamden, CT 06518-0585
Phone: 203-281-2917
FAX: 203-281-2922

Safety Data Sheet (SDS) GHS/OSHA Compliant

Section I Product and Company Identification

IDENTITY **ANALYTICAL STANDARD DISSOLVED IN METHANOL**

Manufacturer's Name	ABSOLUTE STANDARDS INC	Emergency Telephone USA & CANADA	**1-800-535-5053**
Address	44 Rossotto Dr. Hamden CT, 06514	Emergency Telephone International	**1-352-323-3500**
		Date Prepared/Revised	January 1, 2023

Section II - Hazards Identification

GHS Classification In accordance with 29 CFR 1910 (OSHA HCS)

H225	**Highly Flammable Liquid and Vapor**	**H301, 311, 331**	**Toxic if swallowed, skin contact, inhaled**
H370	**Cause damage to organs**	**H351**	**Suspected of causing cancer**
P271	**Use in ventilated area**	**P280**	**Use gloves, eye protection/face sheild**
P302,332	**If on skin, wash with soap and water**	**P305,351,338**	**If in eyes, remove contacts, rinse with water**

Signal Word: DANGER

Section III - Composition

Components (Specific Chemical Identity; Common Name(s))			% (optional)
Methanol	METHYL ALCOHOL	CAS#: 67-56-1	> 97

See Certified Weight Report For Other Analytes Present At Trace Quantities.

INTENDED USE: REFERENCE MATERIAL

Section IV. FIRST AID MEASURES

General advice	Consult a physician. Show this safety data sheet to the doctor in attendance.Move to safe area.
If inhaled	If inhaled, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact	Wash with soap and water. Consult a physician.
In case of eye contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed	Do NOT induce vomiting. Rinse mouth with water. Consult a physician.

Section V. FIREFIGHTING MEASURES

Flammability	Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface. No smoking.
Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Protective equipment for fire	Wear self contained breathing apparatus for fire fighting if necessary.

Section VI. ACCIDENTAL RELEASE MEASURES

Personal precautions	Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Vapours accumulate to form explosive concentrations.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Clean up	Contain spillage, and then collect and place in container for disposal according to local regulations (see section 13).

Section VII. HANDLING AND STORAGE

Precautions for safe handling	Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use ventilation Keep away from sources of ignition. No smoking. Prevent the build up of electrostatic charge.
Storage Conditions	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Section VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

Methanol 67-56-1 TWA 200 ppm
Skin notation TWA 200 ppm
Potential for skin absorption , ingestion and inhalation.
Personal protective equipment Respiratory protection Handle with gloves. Gloves must be inspected prior to use. Eye protection.
Avoid contact with skin, eyes and clothing. Wash hands thoroughly after handling the product.

Section IX - Physical/Chemical Characteristics

Boiling Point	65°C	Specific Gravity (H2O = 1)	0.79
Vapor Pressure (mm Hg)	96	Melting Point	-98°C
Vapor Density (AIR = 1)	1.11	Evaporation rate (Butyl Acetate = 1)	4.6

Solubility in Water COMPLETE

Appearance and Odor CLEAR, COLORLESS LIQUID WITH CHARACTERISTIC PUNGENT ODOR.

Section X. STABILITY AND REACTIVITY

Chemical stability — Stable under recommended storage conditions.
Possibility of hazardous reactions — Vapours may form explosive mixture with air.
Conditions to avoid — Heat, flames, sparks, extreme temperature and sunlight.
Materials to avoid — Acid chlorides, Acid anhydrides, Oxidizing agents, Alkali metals, Reducing agents, Acids
Hazardous decomposition products formed under fire conditions. - Carbon oxides

Section XI. TOXICOLOGICAL INFORMATION

LD50 Oral - rat - 5,628 mg/kg
LC50 Inhalation - rat - 4 h - 64000 ppm
LD50 Dermal - rabbit - 15,800 mg/kg
Toxic if absorbed through skin. Causes skin irritation.
Eye damage/eye irritation
Toxic if inhaled. Causes respiratory tract irritation.
Toxic if swallowed.

Section XII. ECOLOGICAL INFORMATION FOR REPORTABLE QUANTITY OF 5000 lbs.

LC50	15,400 mg/l - 96 h
EC50	24,500.00 mg/l - 48 h
EC100	10,000.00 mg/l - 24 h

Section XIII. DISPOSAL CONSIDERATIONS

Dispose with normal Laboratory Solvent Waste.

Section XIV. TRANSPORT INFORMATION

DOT (US)
UN number: 1230 Class: 3 Packing group: II
Proper shipping name: Methanol

IATA
UN number: 1230 Class: 3 Packing group: II
Proper shipping name: Methanol

Section XV. REGULATORY INFORMATION

OSHA Hazards Flammable liquid, Target Organ Effect, Toxic by inhalation., Toxic by ingestion, Toxic by skin absorption, Irritant
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

Section XVI. Misc. INFORMATION

The information in this Material Safety Data Sheet meets the requirements of the United States Occupational Safety and Health Act and regulations promulgated thereunder (29 CFR 1910.1200 et. seq.) and Global Harmonized System (GHS). This document is intended only as a guide to the appropriate precautionary handling of the material by trained personnel, or supervised by a person trained in chemical handling. The user is responsible for determining the precautions and dangers of this chemical for his or her particular application. Depending on usage, protective clothing including eye and face guards and respirators must be used to avoid contact with material or breathing chemical vapors/fumes. Exposure to this product may have serious adverse health effects. This chemical may interact with other substances. Since the potential uses are so varied, ABSOLUTE STANDARDS INC. cannot warn of all the potential dangers of use or interaction with other chemicals or substances. ABSOLUTE STANDARDS INC. warrants that the chemical meets the specifications set forth on the label. ABSOLUTE STANDARDS INC DISCLAIMS ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED WITH REGARD TO THE PRODUCT SUPPLIED HEREUNDER, ITS MERCHANTABILITY OR ITS FITNESS FOR A PARTICULAR APPLICATION. The user should recognize that this product can cause severe injury or death, especially if improperly handled or the known dangers of use are not heeded. READ ALL PRECAUTIONARY INFORMATION. As new documented general safety information becomes available, Absolute Standards Inc. will periodically revise this Safety Data Sheet. If you have any questions, please call Technical Service at 1-203-281-2917 for assistance.

CERTIFIED WEIGHT REPORT

Part Number: 95317
Lot Number: 021624
Description: Universal VOA Megamix
69 components
Expiration Date: 021627
Recommended Storage: Freezer (0 °C)
Nominal Concentration (µg/mL): 2000
NIST Test ID#: 6UTB

Solvent(s): Lot#
Methanol EG359-USQ12

Formulated By: Prashant Chauhan 021624 DATE

Reviewed By: Pedro L. Rentas 021624 DATE

Weight(s) shown below were combined and diluted to (mL):	100.0	0.021	Flask Uncertainty
		5E-05	Balance Uncertainty

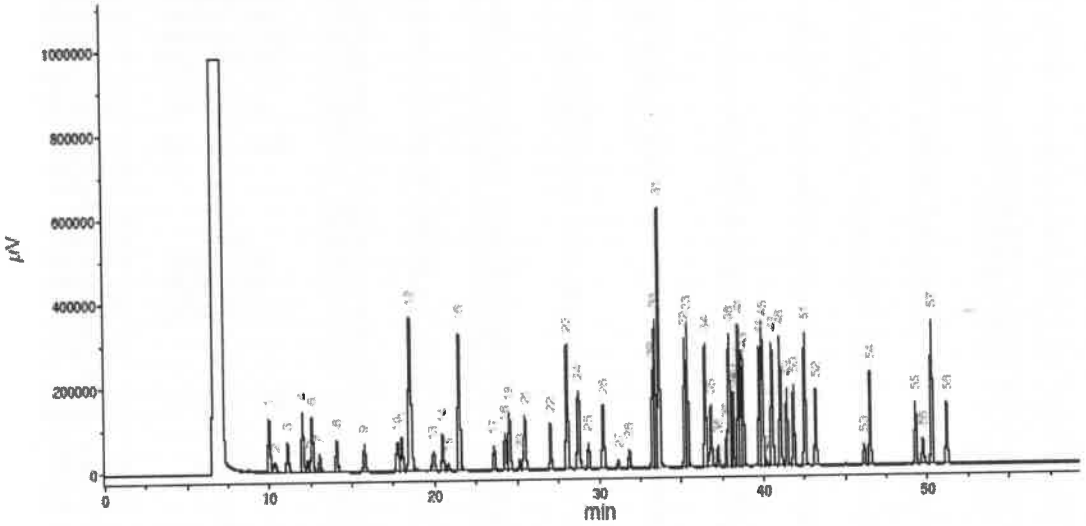
Compound	(RM#) Part Number	Lot Number	Dil. Factor	Initial Vol. (mL)	Initial Conc.(ug/mL)	Nominal Conc (µg/mL)	Purity (%)	Purity Uncertainty	Uncertainty Pipette (mL)	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. Acetonitrile	(0324)	021644	NA	NA	NA	2000	99.99	0.2	NA	0.20007	0.20020	2001.3	8.1	75-05-8	40 ppm (70mg/m3/8H)	orl-rat 2460mg/kg
2. Allyl chloride (3-Chloropropene)	(0325)	102396	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20221	2001.4	8.2	107-05-1	1 ppm (3mg/m3/8H)	orl-rat 700mg/kg
3. Carbon disulphide	(0060)	MKCR8561	NA	NA	NA	2000	99.99	0.2	NA	0.20007	0.20023	2001.6	8.1	75-15-0	4 ppm (12mg/m3) (skin)	orl-rat 1200mg/kg
4. cis-1,4-Dichloro-2-butene	(1196)	14718EF	NA	NA	NA	2000	95	0.2	NA	0.21058	0.21069	2001.1	8.5	1476-11-5	N/A	N/A
5. trans-1,4-Dichloro-2-butene	(0486)	MKBP6041V	NA	NA	NA	2000	96.5	0.2	NA	0.20731	0.20748	2001.7	8.4	110-57-6	N/A	N/A
6. Diethyl ether	(0153)	IK18CAS000(	NA	NA	NA	2000	99.9	0.2	NA	0.20025	0.20040	2001.5	8.1	60-29-7	N/A	N/A
7. Ethyl methacrylate	(0361)	06126PX	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20230	2002.3	8.2	97-63-2	N/A	orl-rat 14800mg/kg
8. Iodomethane	(0489)	SHBF8718V	NA	NA	NA	2000	99.5	0.2	NA	0.20106	0.20121	2001.5	8.2	74-88-4	5 ppm(28mg/m3/8H)(skin)	orl-rat 76mg/kg
9. 2-Methyl-1-propanol	(0445)	15241EB	NA	NA	NA	2000	99.5	0.2	NA	0.20106	0.20120	2001.4	8.1	78-83-1	50 ppm (150mg/m3/8H)	orl-rat 2460mg/kg
10. Methacrylonitrile	(0442)	00427ET	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20221	2001.4	8.2	126-98-7	1 ppm (3mg/m3/8H)(skin)	orl-rat 120mg/kg
11. Methyl acrylate	(1075)	SHBK0679	NA	NA	NA	2000	99.9	0.2	NA	0.20025	0.20040	2001.5	8.1	96-33-3	10 ppm(35mg/m3/8H)(skin)	orl-rat 277mg/kg
12. Methyl methacrylate	(0404)	MKBW5137V	NA	NA	NA	2000	99.9	0.2	NA	0.20025	0.20041	2001.6	8.1	80-62-6	100 ppm (410mg/m3/8H)	orl-rat 7872mg/kg
13. Nitrobenzene	(0228)	01213TV	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20220	2001.3	8.2	98-95-3	1 ppm (5mg/m3/8H)(skin)	orl-rat 780mg/kg
14. 2-Nitropropane	(0461)	14002JX	NA	NA	NA	2000	97.3	0.2	NA	0.20560	0.20577	2001.6	8.3	79-46-9	10 ppm (35mg/m3/8H)	orl-rat 720mg/kg
15. Pentachloroethane	(0450)	HGA01	NA	NA	NA	2000	98	0.2	NA	0.20413	0.20430	2001.6	8.3	76-01-7	N/A	N/A
16. 1,1,2-Trichlorotrifluoroethane	(0474)	18930	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20225	2001.8	8.2	76-13-1	1000 ppm (7600mg/m3/8H)	orl-rat 43g/kg
17. Bromodichloromethane	35171	101623	0.05	5.00	40001.7	2000	NA	NA	0.017	NA	NA	1999.6	22.9	75-27-4	N/A	orl-rat 916mg/kg
18. Dibromochloromethane	35171	101623	0.05	5.00	40002.1	2000	NA	NA	0.017	NA	NA	1999.6	23.0	124-48-1	N/A	orl-rat 848mg/kg
19. cis-1,2-Dichloroethene	35171	101623	0.05	5.00	40003.1	2000	NA	NA	0.017	NA	NA	1999.7	22.9	156-59-2	N/A	N/A
20. trans-1,2-Dichloroethene	35171	101623	0.05	5.00	40002.4	2000	NA	NA	0.017	NA	NA	1999.6	23.0	156-60-5	N/A	orl-rat 1235mg/kg
21. Methylene chloride	35171	101623	0.05	5.00	40002.8	2000	NA	NA	0.017	NA	NA	1999.6	22.9	75-09-2	500 ppm	orl-rat 820mg/kg
22. 1,1-Dichloroethene	32251	102023	0.10	10.00	20001.6	2000	NA	NA	0.042	NA	NA	1999.7	20.4	75-35-4	1 ppm (4mg/m3/8H)	orl-rat 200mg/kg
23. Bromoform	95321	020724	0.10	10.00	20003.2	2000	NA	NA	0.042	NA	NA	1999.8	20.5	75-25-2	0.5 ppm (5mg/m3) (skin)	orl-rat 933mg/kg
24. Carbon tetrachloride	95321	020724	0.10	10.00	20003.4	2000	NA	NA	0.042	NA	NA	1999.8	20.4	56-23-5	2 ppm (12.6mg/m3/8H)	orl-rat 2350mg/kg
25. Chloroform	95321	020724	0.10	10.00	20024.0	2000	NA	NA	0.042	NA	NA	2001.9	20.5	67-66-3	50 ppm (240mg/m3) (CL)	orl-rat 908mg/kg
26. Dibromomethane	95321	020724	0.10	10.00	20002.9	2000	NA	NA	0.042	NA	NA	1999.8	20.5	74-95-3	N/A	orl-rat 108mg/kg
27. 1,1-Dichloroethane	95321	020724	0.10	10.00	20003.4	2000	NA	NA	0.042	NA	NA	1999.8	20.5	75-34-3	100 ppm	orl-rat 725mg/kg
28. 2,2-Dichloropropane	95321	020724	0.10	10.00	20003.4	2000	NA	NA	0.042	NA	NA	1999.8	20.4	594-20-7	N/A	N/A
29. Tetrachloroethene	95321	020724	0.10	10.00	20201.1	2000	NA	NA	0.042	NA	NA	2019.6	20.6	127-18-4	25 ppm (170mg/m3/8H)(final)	orl-rat 2629mg/kg
30. 1,1,1-Trichloroethane	95321	020724	0.10	10.00	20003.0	2000	NA	NA	0.042	NA	NA	1999.8	20.5	71-55-6	350 ppm (1900mg/m3/8H)	orl-rat 10300mg/kg
31. 1,2-Dibromo-3-chloropropane	35161	112322	0.05	5.00	40016.5	2000	NA	NA	0.017	NA	NA	2000.3	22.9	96-12-8	0.001 ppm	orl-rat 170mg/kg
32. 1,2-Dibromoethane	35161	112322	0.05	5.00	40024.8	2000	NA	NA	0.017	NA	NA	2000.7	22.9	106-93-4	20 ppm (8H)	orl-rat 108mg/kg
33. 1,2-Dichloroethane	35161	112322	0.05	5.00	40018.0	2000	NA	NA	0.017	NA	NA	2000.4	22.9	107-06-2	50 ppm (8H)	orl-rat 670mg/kg
34. 1,2-Dichloropropane	35161	112322	0.05	5.00	40051.0	2000	NA	NA	0.017	NA	NA	2002.0	22.9	78-87-5	75 ppm (350mg/m3/8H)	orl-rat 1947mg/kg
35. 1,3-Dichloropropane	35161	112322	0.05	5.00	40005.9	2000	NA	NA	0.017	NA	NA	1999.8	22.9	142-28-9	N/A	unr-mus 3600mg/kg
36. 1,1-Dichloropropene	35161	112322	0.05	5.00	40012.1	2000	NA	NA	0.017	NA	NA	2000.1	29.7	563-58-6	N/A	N/A
37. cis-1,3-Dichloropropene	35161	112322	0.05	5.00	40010.0	2000	NA	NA	0.017	NA	NA	2000.0	23.0	10061-01-5	N/A	N/A
38. trans-1,3-Dichloropropene	35161	112322	0.05	5.00	40017.8	2000	NA	NA	0.017	NA	NA	2000.4	23.0	10061-02-6	N/A	N/A
39. Hexachloro-1,3-butadiene	35161	112322	0.05	5.00	40021.9	2000	NA	NA	0.017	NA	NA	2000.6	29.7	87-68-3	0.02 ppm (0.24mg/m3/8H)	orl-rat 82mg/kg
40. 1,1,1,2-Tetrachloroethane	35161	112322	0.05	5.00	40011.9	2000	NA	NA	0.017	NA	NA	2000.1	22.9	630-20-6	N/A	orl-rat 670mg/kg
41. 1,1,2,2-Tetrachloroethane	35161	112322	0.05	5.00	40007.5	2000	NA	NA	0.017	NA	NA	1999.9	22.9	79-34-5	5 ppm (35mg/m3/8H)(skin)	orl-rat 800mg/kg
42. 1,1,2-Trichloroethane	35161	112322	0.05	5.00	40006.6	2000	NA	NA	0.017	NA	NA	1999.8	23.0	79-00-5	10 ppm (46mg/m3/8H)(skin)	orl-rat 836mg/kg
43. Trichloroethene	35161	112322	0.05	5.00	40029.0	2000	NA	NA	0.017	NA	NA	2000.9	22.9	79-01-6	50 ppm (270mg/m3/8H)	orl-mus 2402mg/kg
44. 1,2,3-Trichloropropane	35161	112322	0.05	5.00	40007.5	2000	NA	NA	0.017	NA	NA	1999.9	22.9	96-18-4	10 ppm (60mg/m3/8H)	orl-rat 149.6mg/kg
45. Benzene	35162	050823	0.05	5.00	40005.0	2000	NA	NA	0.017	NA	NA	1999.7	22.9	71-43-2	1 ppm	orl-rat 4894mg/kg
46. Bromobenzene	35162	050823	0.05	5.00	40006.9	2000	NA	NA	0.017	NA	NA	1999.8	22.9	108-86-1	N/A	orl-rat 2699mg/kg
47. n-Butyl benzene	35162	050823	0.05	5.00	40003.8	2000	NA	NA	0.017	NA	NA	1999.7	22.9	104-51-8	N/A	N/A
48. Ethyl benzene	35162	050823	0.05	5.00	40004.8	2000	NA	NA	0.017	NA	NA	1999.7	22.9	100-41-4	100 ppm (435mg/m3/8H)	orl-rat >2000mg/kg
49. p-Isopropyl toluene	35162	050823	0.05	5.00	40005.8	2000	NA	NA	0.017	NA	NA	1999.8	22.9	99-87-6	N/A	orl-rat 4750mg/kg
50. Naphthalene	35162	050823	0.05	5.00	40006.2	2000	NA	NA	0.017	NA	NA	1999.8	22.9	91-20-3	10 ppm (50mg/m3/8H)	orl-rat 490mg/kg
51. Styrene	35162	050823	0.05	5.00	40004.8	2000	NA	NA	0.017	NA	NA	1999.7	22.9	100-42-5	100 ppm	orl-rat 5000mg/kg
52. Toluene	35162	050823	0.05	5.00	40006.2	2000	NA	NA	0.017	NA	NA	1999.8	22.9	108-88-3	200 ppm	orl-rat 5000mg/kg
53. 1,2,3-Trichlorobenzene	35162	050823	0.05	5.00	40003.1	2000	NA	NA	0.017	NA	NA	1999.7	22.9	87-61-6	N/A	ipr-mus 1390mg/kg
54. 1,2,4-Trichlorobenzene	35162	050823	0.05	5.00	40006.8	2000	NA	NA	0.017	NA	NA	1999.8	22.9	120-82-1	5 ppm (CL) (40mg/m3)	orl-rat 756mg/kg
55. 1,2,4-Trimethylbenzene	35162	050823	0.05	5.00	40001.6	2000	NA	NA	0.017	NA	NA	1999.6	23.0	95-63-6	N/A	orl-rat 5g/kg
56. 1,3,5-Trimethylbenzene	35162	050823	0.05	5.00	40006.7	2000	NA	NA	0.017	NA	NA	1999.8	22.9	108-67-8	N/A	orl-rat 5000mg/kg
57. m-Xylene	35162	050823	0.05	5.00	40005.8	2000	NA	NA	0.017	NA	NA	1999.8	22.9	108-38-3	100 ppm (435mg/m3/8H)	orl-rat 5g/kg
58. tert-Butyl benzene	35163	101923	0.05	5.00	40001.2	2000	NA	NA	0.017	NA	NA	1999.6	22.9	98-06-6	N/A	N/A
59. sec-Butyl benzene	35163	101923	0.05	5.00	40002.4	2000	NA	NA	0.017	NA	NA	1999.6	22.9	135-98-8	N/A	orl-rat 2240mg/kg
60. Chlorobenzene	35163	101923	0.05	5.00	40003.8	2000	NA	NA	0.017	NA	NA	1999.7	22.9	108-90-7	75 ppm (350mg/m3/8H)	orl-rat 2290mg/kg
61. 2-Chlorotoluene	35163	101923	0.05	5.00	40000.3	2000	NA	NA	0.017	NA	NA	1999.5	22.9	95-49-8	50 ppm (250mg/m3/8H)	orl-rat 3900mg/kg
62. 4-Chlorotoluene	35163	101923	0.05	5.00	40003.3	2000	NA	NA	0.017	NA	NA	1999.7	22.9	106-43-4	N/A	orl-rat 2100mg/kg
63. 1,2-Dichlorobenzene	35163	101923	0.05	5.00	40003.8	2000	NA	NA	0.017	NA	NA	1999.7	22.9	95-50-1	50 ppm (300mg/m3) (CL)	orl-rat 500mg/kg
64. 1,3-Dichlorobenzene	35163	101923	0.05	5.00	40001.7	2000	NA	NA	0.017	NA	NA	1999.6	23.0	541-73-1	N/A	ipr-mus 1062mg/kg
65. 1,4-Dichlorobenzene	35163	101923	0.05	5.00	40001.8	2000	NA	NA	0.017	NA	NA	1999.6	22.9	106-46-7	75 ppm (450mg/m3/8H)	orl-rat 500mg/kg
66. Isopropylbenzene	35163	101923	0.05	5.00	40000.8	2000	NA	NA	0.017	NA	NA	1999.5	22.9	98-82-8	50 ppm (245mg/m3/8H)	orl-rat 1400mg/kg
67. n-Propylbenzene	35163	101923	0.05	5.00	40003.4	2000	NA	NA	0.017	NA	NA	1999.7	23.0	103-65-1	N/A	orl-rat 6040mg/kg
68. o-Xylene	35163	101923	0.05	5.00	40040.8	2000	NA	NA	0.017	NA	NA	2001.5	23.0	95-47-6	100 ppm (435mg/m3/8H)	ipr-mus 1364mg/kg
69. p-Xylene	35163	101923	0.05	5.00	40000.6	2000	NA	NA	0.017	NA	NA	1999.5	22.9	106-42-3	100 ppm (435mg/m3/8H)	orl-rat 5g/kg

- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening sample, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty References: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

Run 16, "P95317 L021624 [2000µg/mL in MeOH]"

Run Length: 60.00 min, 35998 points at 10 points/second.
Created: Sat, Feb 17, 2024 at 8:56:46 AM.
Sampled: Sequence "021624-GC5M1", Method "GC5-M1".
Analyzed using Method "GC5-M1".

Comments
GC5-M1 Analysis by Candice Warren
Column ID SPB-Vocol 105 meter X 0.53mm X 3.0µm film thickness
Flow rates: Total flow=290mL/min., Helium (carrier)=10mL/min.,
Helium(make-up)=10mL/min., Hydogen(make-up)=40mL/min., Air(make-up)=230mL/min.
Oven Profile: Temp. 1=35°C (Time 1=10 min.), Temp 2=200°C (Time 2=8.75 min.),
Rate = 4°C/min., Total run time=60 min. Injector temp.=200°C, FID Temp.=200°C.
FID Signal = Edaq Channel 1
Standard injection = 0.5µL, Range=3



Peak #	Name	FID RT (min.)
1	Ether	9.97
2	1,1,2-Trichloro-1,2,2-trifluoroethane	10.33
3	1,1-Dichloroethene	11.10
4	Acetonitrile	12.00
5	Iodomethane	12.31
6	Allyl chloride	12.56
7	Carbon disulfide/Methylene chloride	13.04
8	trans-1,2-Dichloroethene	14.07
9	1,1-Dichloroethane	15.74
10	2,2-Dichloropropane	17.74
11	cis-1,2-Dichloroethene	18.00
12	Methacrylonitrile/Methyl acrylate/Chloroform	18.46
13	Isobutanol/1,1,1-Trichloroethane	19.91
14	1,1-Dichloropropene	20.46
15	Carbon tetrachloride	20.79
16	Benzene/1,2-Dichloroethane	21.49
17	Trichloroethene	23.58
18	1,2-Dichloropropane	24.28
19	Methyl methacrylate	24.52
20	Bromodichloromethane	25.13
21	Dibromomethane/2-Nitropropane	25.46
22	cis-1,3-Dichloropropene	27.02
23	Toluene	28.05
24	Ethyl methacrylate/trans-1,3-Dichloropropene	28.73
25	1,1,2-Trichloroethane	29.34
26	Tetrachloroethene/1,3-Dichloropropane	30.24
27	Dibromochloromethane	31.16
28	1,2-Dibromoethene	31.84
29	Chlorobenzene	33.26
30	Ethylbenzene/1,1,1,2-Tetrachloroethane	33.40
31	m-Xylene/p-Xylene	33.88
32	o-Xylene	35.22
33	Styrene	35.38
34	Isopropylbenzene/Bromoform	36.18
35	cis-1,4-Dichloro-2-Butene	36.80
36	1,1,2,2-Tetrachloroethane	37.23
37	1,2,3-Trichloropropane	37.77
38	n-Propylbenzene	37.93
39	trans-1,4-Dichloro-2-Butene	38.05
40	Bromobenzene	38.14
41	1,3,5-Trimethylbenzene	38.80
42	2-Chlorotoluene	38.82
43	4-Chlorotoluene	38.77
44	tert-Butylbenzene	39.76
45	1,2,4-Trimethylbenzene	39.91
46	Pentachloroethane	40.17
47	sec-Butylbenzene	40.52
48	p-Isopropyltoluene	41.02
49	1,3-Dichlorobenzene	41.42
50	1,4-Dichlorobenzene	41.83
51	n-Butylbenzene	42.53
52	1,2-Dichlorobenzene	43.18
53	1,2-Dibromo-3-chloropropane	46.12
54	Nitrobenzene	46.46
55	1,2,4-Trichlorobenzene	49.26
56	Hexachlorobutadiene	49.72
57	Naphthalene	50.26
58	1,2,3-Trichlorobenzene	51.16

Absolute Standards Inc.
PO Box 5585
Hamden, CT 06518-0585
Phone: 203-281-2917
FAX: 203-281-2922

Safety Data Sheet (SDS) GHS/OSHA Compliant

Section I Product and Company Identification

IDENTITY **ANALYTICAL STANDARD DISSOLVED IN METHANOL**

Manufacturer's Name	ABSOLUTE STANDARDS INC	Emergency Telephone USA & CANADA	**1-800-535-5053**
Address	44 Rossotto Dr. Hamden CT, 06514	Emergency Telephone International	**1-352-323-3500**
		Date Prepared/Revised	January 1, 2023

Section II - Hazards Identification

GHS Classification In accordance with 29 CFR 1910 (OSHA HCS)

H225	**Highly Flammable Liquid and Vapor**	**H301, 311, 331**	**Toxic if swallowed, skin contact, inhaled**
H370	**Cause damage to organs**	**H351**	**Suspected of causing cancer**
P271	**Use in ventilated area**	**P280**	**Use gloves, eye protection/face sheild**
P302,332	**If on skin, wash with soap and water**	**P305,351,338**	**If in eyes, remove contacts, rinse with water**

Signal Word: DANGER

Section III - Composition

Components (Specific Chemical Identity; Common Name(s))			% (optional)
Methanol	METHYL ALCOHOL	CAS#: 67-56-1	> 97

See Certified Weight Report For Other Analytes Present At Trace Quantities.

INTENDED USE: REFERENCE MATERIAL

Section IV. FIRST AID MEASURES

General advice	Consult a physician. Show this safety data sheet to the doctor in attendance.Move to safe area.
If inhaled	If inhaled, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact	Wash with soap and water. Consult a physician.
In case of eye contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed	Do NOT induce vomiting. Rinse mouth with water. Consult a physician.

Section V. FIREFIGHTING MEASURES

Flammability	Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface. No smoking.
Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Protective equipment for fire	Wear self contained breathing apparatus for fire fighting if necessary.

Section VI. ACCIDENTAL RELEASE MEASURES

Personal precautions	Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Vapours accumulate to form explosive concentrations.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Clean up	Contain spillage, and then collect and place in container for disposal according to local regulations (see section 13).

Section VII. HANDLING AND STORAGE

Precautions for safe handling	Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use ventilation Keep away from sources of ignition. No smoking. Prevent the build up of electrostatic charge.
Storage Conditions	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Section VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

Methanol 67-56-1 TWA 200 ppm
Skin notation TWA 200 ppm
Potential for skin absorption , ingestion and inhalation.
Personal protective equipment Respiratory protection Handle with gloves. Gloves must be inspected prior to use. Eye protection.
Avoid contact with skin, eyes and clothing. Wash hands thoroughly after handling the product.

Section IX - Physical/Chemical Characteristics

Boiling Point	65°C	Specific Gravity (H2O = 1)	0.79
Vapor Pressure (mm Hg)	96	Melting Point	-98°C
Vapor Density (AIR = 1)	1.11	Evaporation rate (Butyl Acetate = 1)	4.6

Solubility in Water COMPLETE

Appearance and Odor CLEAR, COLORLESS LIQUID WITH CHARACTERISTIC PUNGENT ODOR.

Section X. STABILITY AND REACTIVITY

Chemical stability — Stable under recommended storage conditions.
Possibility of hazardous reactions — Vapours may form explosive mixture with air.
Conditions to avoid — Heat, flames, sparks, extreme temperature and sunlight.
Materials to avoid — Acid chlorides, Acid anhydrides, Oxidizing agents, Alkali metals, Reducing agents, Acids
Hazardous decomposition products formed under fire conditions. - Carbon oxides

Section XI. TOXICOLOGICAL INFORMATION

LD50 Oral - rat - 5,628 mg/kg
LC50 Inhalation - rat - 4 h - 64000 ppm
LD50 Dermal - rabbit - 15,800 mg/kg
Toxic if absorbed through skin. Causes skin irritation.
Eye damage/eye irritation
Toxic if inhaled. Causes respiratory tract irritation.
Toxic if swallowed.

Section XII. ECOLOGICAL INFORMATION FOR REPORTABLE QUANTITY OF 5000 lbs.

LC50	15,400 mg/l - 96 h
EC50	24,500.00 mg/l - 48 h
EC100	10,000.00 mg/l - 24 h

Section XIII. DISPOSAL CONSIDERATIONS

Dispose with normal Laboratory Solvent Waste.

Section XIV. TRANSPORT INFORMATION

DOT (US)
UN number: 1230 Class: 3 Packing group: II
Proper shipping name: Methanol

IATA
UN number: 1230 Class: 3 Packing group: II
Proper shipping name: Methanol

Section XV. REGULATORY INFORMATION

OSHA Hazards Flammable liquid, Target Organ Effect, Toxic by inhalation., Toxic by ingestion, Toxic by skin absorption, Irritant
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

Section XVI. Misc. INFORMATION

The information in this Material Safety Data Sheet meets the requirements of the United States Occupational Safety and Health Act and regulations promulgated thereunder (29 CFR 1910.1200 et. seq.) and Global Harmonized System (GHS). This document is intended only as a guide to the appropriate precautionary handling of the material by trained personnel, or supervised by a person trained in chemical handling. The user is responsible for determining the precautions and dangers of this chemical for his or her particular application. Depending on usage, protective clothing including eye and face guards and respirators must be used to avoid contact with material or breathing chemical vapors/fumes. Exposure to this product may have serious adverse health effects. This chemical may interact with other substances. Since the potential uses are so varied, ABSOLUTE STANDARDS INC. cannot warn of all the potential dangers of use or interaction with other chemicals or substances. ABSOLUTE STANDARDS INC. warrants that the chemical meets the specifications set forth on the label. ABSOLUTE STANDARDS INC DISCLAIMS ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED WITH REGARD TO THE PRODUCT SUPPLIED HEREUNDER, ITS MERCHANTABILITY OR ITS FITNESS FOR A PARTICULAR APPLICATION. The user should recognize that this product can cause severe injury or death, especially if improperly handled or the known dangers of use are not heeded. READ ALL PRECAUTIONARY INFORMATION. As new documented general safety information becomes available, Absolute Standards Inc. will periodically revise this Safety Data Sheet. If you have any questions, please call Technical Service at 1-203-281-2917 for assistance.

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800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

Rec 09/16/24 2 Vials

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT

Part Number: 91980
Lot Number: 091424
Description: Acrolein

Expiration Date: 101424
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 5000
NIST Test ID#: 6UTB

Solvent(s): **Lot#**
Water 072324Q

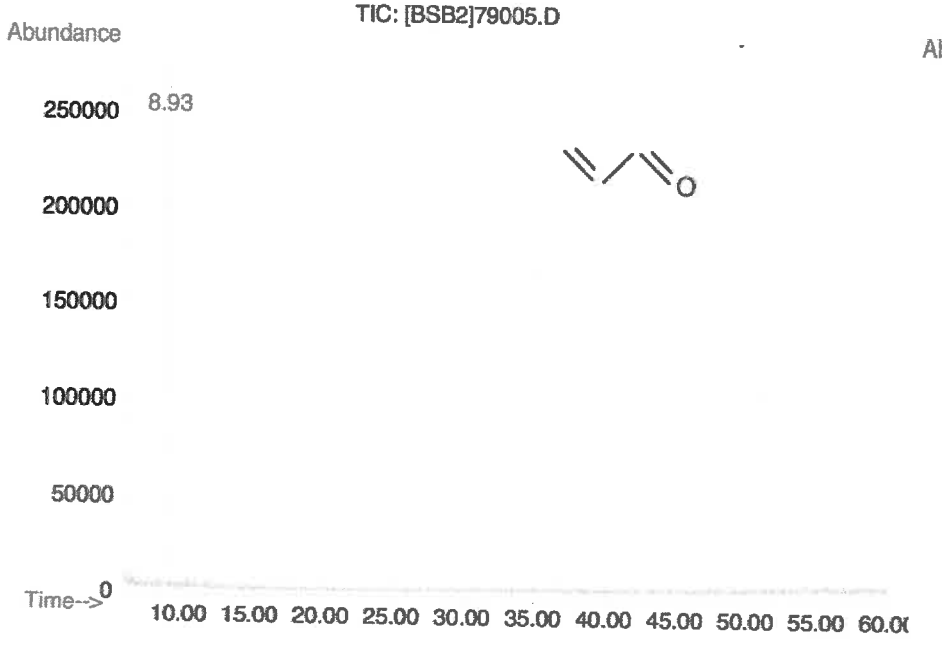
5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 10.0 0.001 Flask Uncertainty

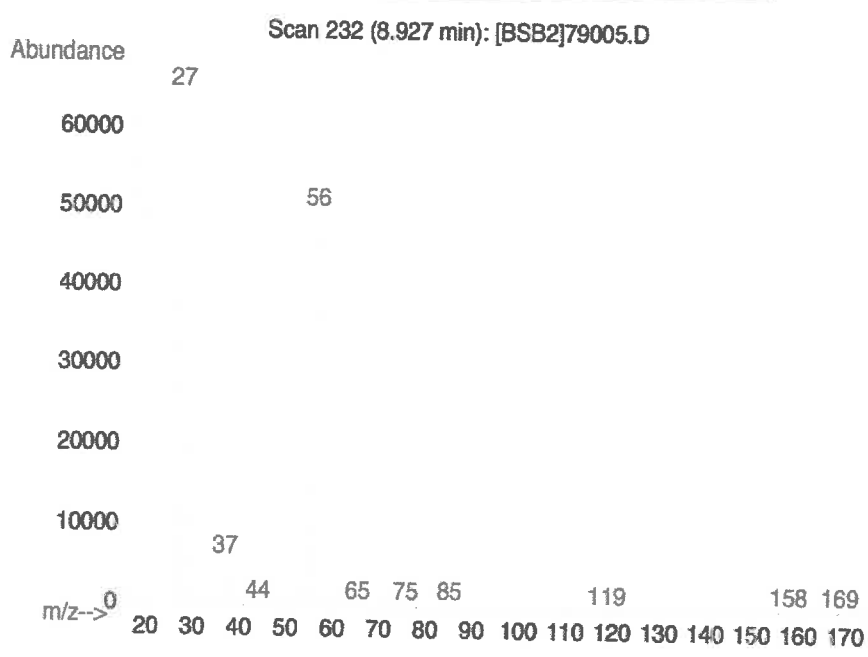
Formulated By: Justin Dippold 091424 DATE

Reviewed By: Pedro L. Rentas 091424 DATE

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. Acrolein	5	103755V10F	5000	97	0.5	0.05166	0.05175	5008.9	52.5	107-02-8	0.1 ppm	orl-rat 46mg/kg

Method: GC6MSD-1. **Detector:** Mass Selective Detector (Scan mode). **Column:** Vocol (60m X 0.25mm ID X 1.5µm film thickness). **Oven Profile:** Temp. 1 = 35°C (Time 1 = 10min.), Temp. 2=200°C (Time 2 = 8.75 min.). Rate = 4°C/min., Injector Temp. = 200°C, Detector Temp. = 220°C. **Analyst:** Pedro Rentas. **NOTE:** Due to the instability of acrolein in solution, all solutions of acrolein, and any dilutions thereof, should be used immediately Long term storage is not recommended. Please contact our technical department if further information is required.





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CERTIFIED WEIGHT REPORT

Part Number: 91980
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Description: Acrolein

Expiration Date: 101424
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 5000
NIST Test ID#: 6UTB

Solvent(s): **Lot#**
Water 072324Q

5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 10.0 0.001 Flask Uncertainty

Formulated By: Justin Dippold 091424 DATE

Reviewed By: Pedro L. Rentas 091424 DATE

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
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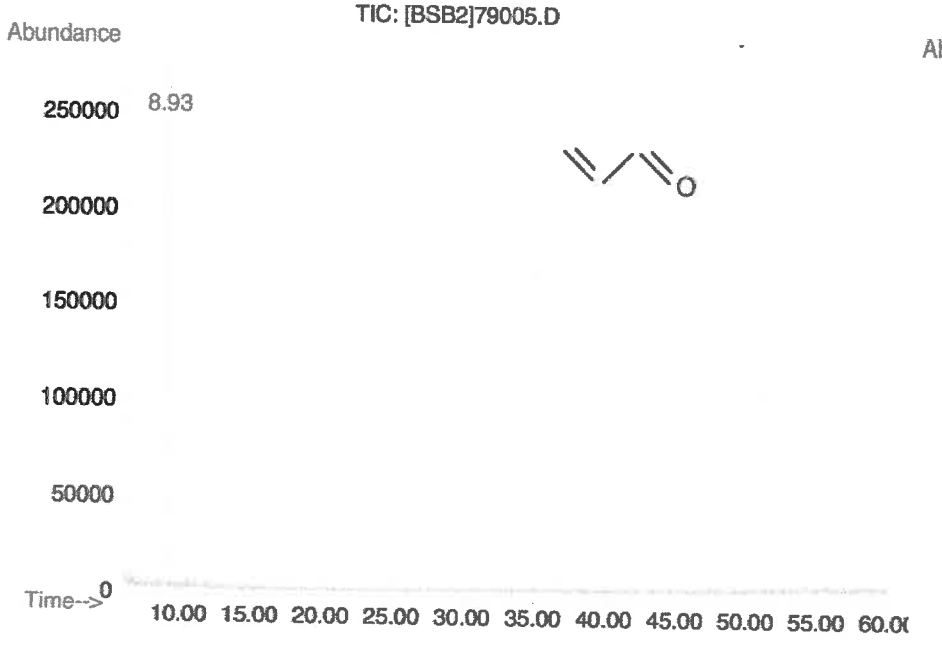

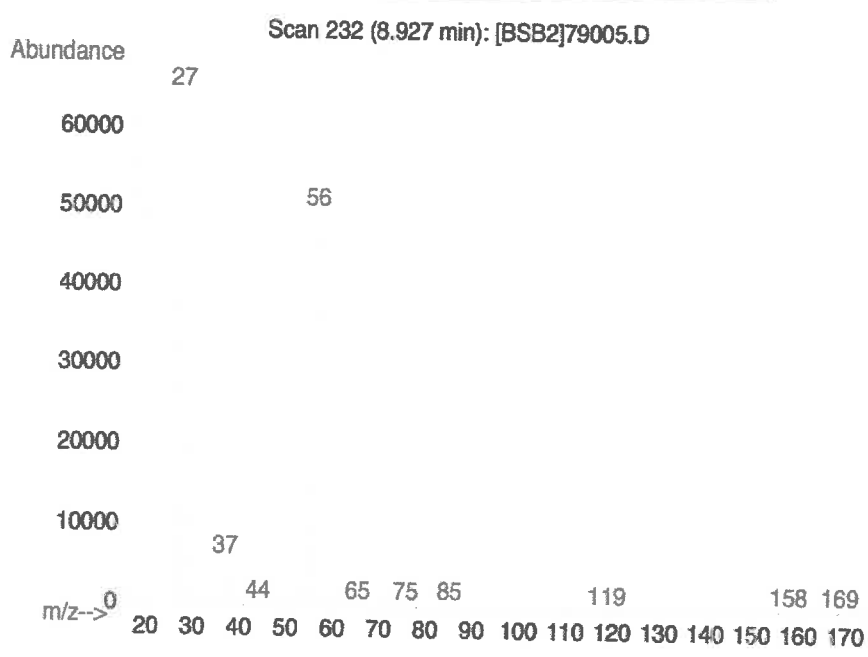

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Rec 12/6/24
20 vial

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CERTIFIED WEIGHT REPORT

Part Number: 95318
Lot Number: 120524
Description: 2-Chloroethyl vinyl ether

Expiration Date: 120527
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 10000
NIST Test ID#: 6UTB

Solvent(s): Methanol **Lot#** EJ143-US

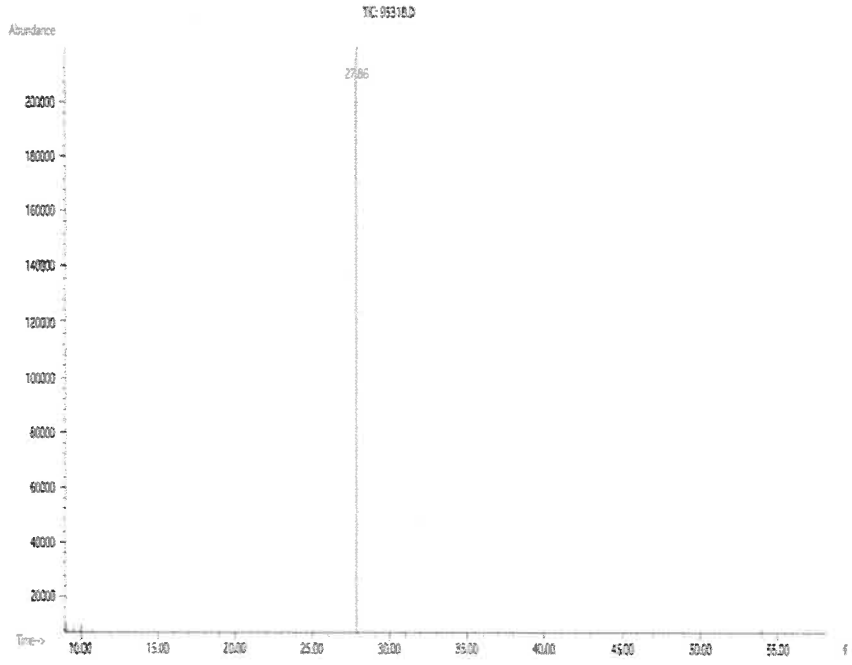
V14630 to V14649

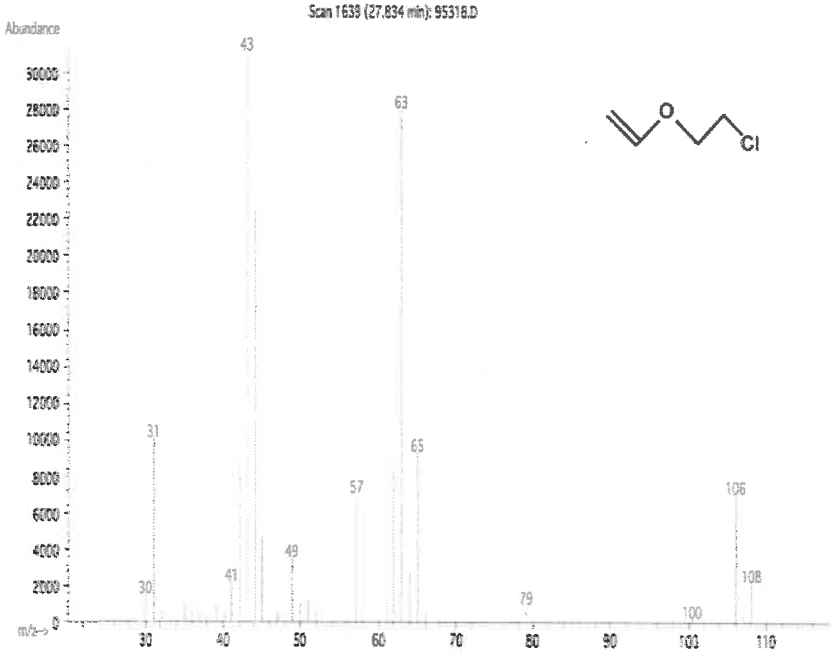
5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 50.0 0.001 Flask Uncertainty

Prashant Chauhan	120524
Formulated By: Prashant Chauhan	DATE
Pedro L. Rentas	120524
Reviewed By: Pedro L. Rentas	DATE

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight (g)	Actual Weight (g)	Actual Conc(µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. 2-Chloroethyl vinyl ether	74	MKCD0033	10000	99	0.2	0.50536	0.50550	10002.9	40.5	110-75-8	N/A	ori-rat 250mg/kg

Method: GC6MSD-1.M. **Detector:** MSD. **Column:** (60m X 0.25mm X 1.5 µm). **Oven Profile:** Temp 1 = 35°C (Time 1=10min.), Temp 2 = 200°C (Time 2=8.75 min.), Rate = 4°C/min., Injector B Temp.= 200°C, Detector B Temp. = 220°C. **Analyst:** Candice Warren.





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Absolute Standards Inc.
PO Box 5585
Hamden, CT 06518-0585
Phone: 203-281-2917
FAX: 203-281-2922

Safety Data Sheet (SDS) GHS/OSHA Compliant

Section I Product and Company Identification

IDENTITY **ANALYTICAL STANDARD DISSOLVED IN METHANOL**

Manufacturer's Name	ABSOLUTE STANDARDS INC	Emergency Telephone USA & CANADA	**1-800-535-5053**
Address	44 Rossotto Dr. Hamden CT, 06514	Emergency Telephone International Date Prepared/Revised	**1-352-323-3500** January 1, 2024

Section II - Hazards Identification

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

H225	**Highly Flammable Liquid and Vapor**	**H301, 311, 331**	**Toxic if swallowed, skin contact, inhaled**
H370	**Cause damage to organs**	**H351**	**Suspected of causing cancer**
P271	**Use in ventilated area**	**P280**	**Use gloves, eye protection/face sheild**
P302,332	**If on skin, wash with soap and water**	**P305,351,338**	**If in eyes, remove contacts, rinse with water**

Signal Word: DANGER

Section III - Composition

Components (Specific Chemical Identity; Common Name(s))			% (optional)
Methanol	METHYL ALCOHOL	CAS#: 67-56-1	> 97

See Certified Weight Report For Other Analytes Present At Trace Quantities.

INTENDED USE: REFERENCE MATERIAL

Section IV. FIRST AID MEASURES

General advice	Consult a physician. Show this safety data sheet to the doctor in attendance.Move to safe area.
If inhaled	If inhaled, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact	Wash with soap and water. Consult a physician.
In case of eye contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed	Do NOT induce vomiting. Rinse mouth with water. Consult a physician.

Section V. FIREFIGHTING MEASURES

Flammability	Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface. No smoking.
Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Protective equipment for fire	Wear self contained breathing apparatus for fire fighting if necessary.

Section VI. ACCIDENTAL RELEASE MEASURES

Personal precautions	Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Vapours accumulate to form explosive concentrations.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Clean up	Contain spillage, and then collect and place in container for disposal according to local regulations (see section 13).

Section VII. HANDLING AND STORAGE

Precautions for safe handling	Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use ventilation Keep away from sources of ignition. No smoking. Prevent the build up of electrostatic charge.
Storage Conditions	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Section VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

Methanol 67-56-1 TWA 200 ppm
Skin notation TWA 200 ppm
Potential for skin absorption , ingestion and inhalation.
Personal protective equipment Respiratory protection Handle with gloves. Gloves must be inspected prior to use. Eye protection.
Avoid contact with skin, eyes and clothing. Wash hands thoroughly after handling the product.

Section IX - Physical/Chemical Characteristics

Boiling Point	65°C	Specific Gravity (H2O = 1)	0.79
Vapor Pressure (mm Hg)	96	Melting Point	-98°C
Vapor Density (AIR = 1)	1.11	Evaporation rate (Butyl Acetate = 1)	4.6

Solubility in Water COMPLETE

Appearance and Odor CLEAR, COLORLESS LIQUID WITH CHARACTERISTIC PUNGENT ODOR.

Section X. STABILITY AND REACTIVITY

Chemical stability Stable under recommended storage conditions.
Possibility of hazardous reactions Vapours may form explosive mixture with air.
Conditions to avoid Heat, flames, sparks, extreme temperature and sunlight.
Materials to avoid Acid chlorides, Acid anhydrides, Oxidizing agents, Alkali metals, Reducing agents, Acids
Hazardous decomposition products formed under fire conditions. - Carbon oxides

Section XI. TOXICOLOGICAL INFORMATION

LD50 Oral - rat - 5,628 mg/kg
LC50 Inhalation - rat - 4 h - 64000 ppm
LD50 Dermal - rabbit - 15,800 mg/kg
Toxic if absorbed through skin. Causes skin irritation.
Eye damage/eye irritation
Toxic if inhaled. Causes respiratory tract irritation.
Toxic if swallowed.

Section XII. ECOLOGICAL INFORMATION FOR REPORTABLE QUANTITY OF 5000 lbs.

LC50	15,400 mg/l - 96 h
EC50	24,500.00 mg/l - 48 h
EC100	10,000.00 mg/l - 24 h

Section XIII. DISPOSAL CONSIDERATIONS

Dispose with normal Laboratory Solvent Waste.

Section XIV. TRANSPORT INFORMATION

DOT (US)
UN number: 1230 Class: 3 Packing group: II
Proper shipping name: Methanol

IATA
UN number: 1230 Class: 3 Packing group: II
Proper shipping name: Methanol

Section XV. REGULATORY INFORMATION

OSHA Hazards Flammable liquid, Target Organ Effect, Toxic by inhalation., Toxic by ingestion, Toxic by skin absorption, Irritant
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

Section XVI. Misc. INFORMATION

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Certified Reference Material CRM

Rec 12/6/24
20 vial

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT

Part Number: 95318
Lot Number: 120524
Description: 2-Chloroethyl vinyl ether

Expiration Date: 120527
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 10000
NIST Test ID#: 6UTB

Solvent(s): Methanol **Lot#** EJ143-US

V14630 to V14649

5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 50.0 0.001 Flask Uncertainty

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Formulated By: Prashant Chauhan	DATE
Pedro L. Rentas	120524
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Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight (g)	Actual Weight (g)	Actual Conc(µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
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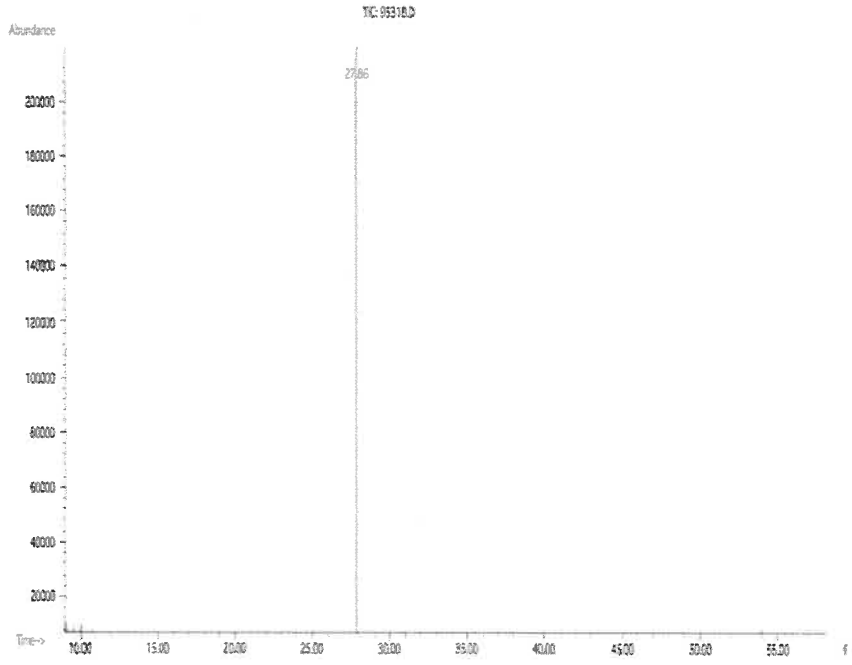

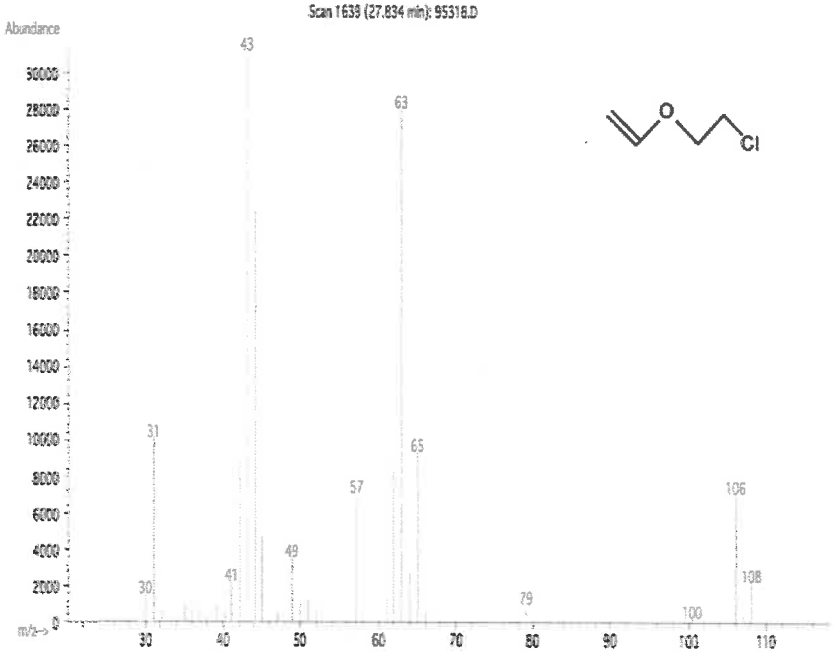

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Signal Word: DANGER

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Components (Specific Chemical Identity; Common Name(s))			% (optional)
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Section XIII. DISPOSAL CONSIDERATIONS

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Section XIV. TRANSPORT INFORMATION

DOT (US)
UN number: 1230 Class: 3 Packing group: II
Proper shipping name: Methanol

IATA
UN number: 1230 Class: 3 Packing group: II
Proper shipping name: Methanol

Section XV. REGULATORY INFORMATION

OSHA Hazards Flammable liquid, Target Organ Effect, Toxic by inhalation., Toxic by ingestion, Toxic by skin absorption, Irritant
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Nominal Concentration (µg/mL): 10000
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Solvent(s): Methanol **Lot#** EJ143-US

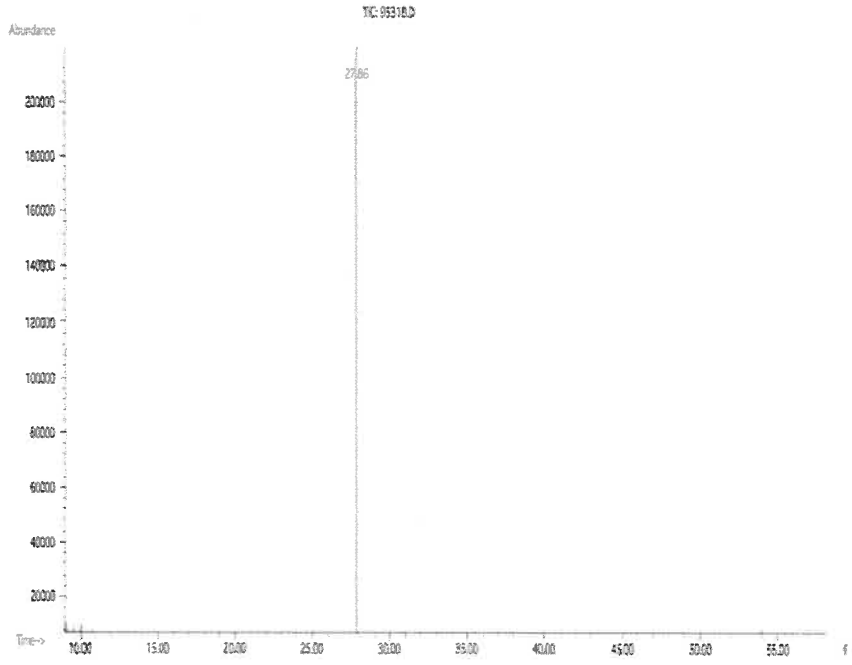
V14630 to V14649

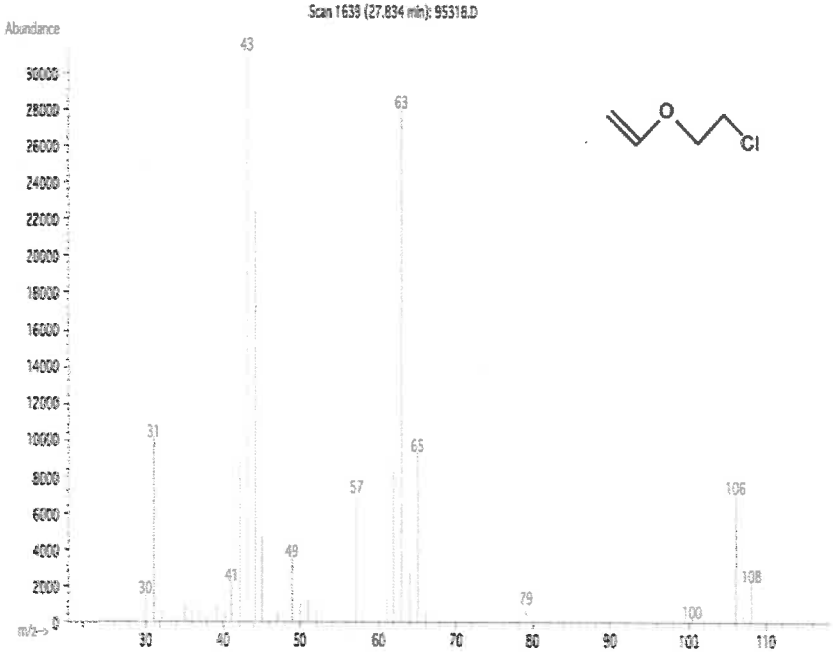
5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 50.0 0.001 Flask Uncertainty

Prashant Chauhan	120524
Formulated By: Prashant Chauhan	DATE
Pedro L. Rentas	120524
Reviewed By: Pedro L. Rentas	DATE

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight (g)	Actual Weight (g)	Actual Conc(µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. 2-Chloroethyl vinyl ether	74	MKCD0033	10000	99	0.2	0.50536	0.50550	10002.9	40.5	110-75-8	N/A	ori-rat 250mg/kg

Method: GC6MSD-1.M. **Detector:** MSD. **Column:** (60m X 0.25mm X 1.5 µm). **Oven Profile:** Temp 1 = 35°C (Time 1=10min.), Temp 2 = 200°C (Time 2=8.75 min.), Rate = 4°C/min., Injector B Temp.= 200°C, Detector B Temp. = 220°C. **Analyst:** Candice Warren.





- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
- All Standards, after opening ampule, should be stored with caps tight and under appropriate laboratory conditions.
- Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, DC, (1994).

Absolute Standards Inc.
PO Box 5585
Hamden, CT 06518-0585
Phone: 203-281-2917
FAX: 203-281-2922

Safety Data Sheet (SDS) GHS/OSHA Compliant

Section I Product and Company Identification

IDENTITY **ANALYTICAL STANDARD DISSOLVED IN METHANOL**

Manufacturer's Name	ABSOLUTE STANDARDS INC	Emergency Telephone USA & CANADA	**1-800-535-5053**
Address	44 Rossotto Dr. Hamden CT, 06514	Emergency Telephone International Date Prepared/Revised	**1-352-323-3500** January 1, 2024

Section II - Hazards Identification

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

H225	**Highly Flammable Liquid and Vapor**	**H301, 311, 331**	**Toxic if swallowed, skin contact, inhaled**
H370	**Cause damage to organs**	**H351**	**Suspected of causing cancer**
P271	**Use in ventilated area**	**P280**	**Use gloves, eye protection/face sheild**
P302,332	**If on skin, wash with soap and water**	**P305,351,338**	**If in eyes, remove contacts, rinse with water**

Signal Word: DANGER

Section III - Composition

Components (Specific Chemical Identity; Common Name(s))			% (optional)
Methanol	METHYL ALCOHOL	CAS#: 67-56-1	> 97

See Certified Weight Report For Other Analytes Present At Trace Quantities.

INTENDED USE: REFERENCE MATERIAL

Section IV. FIRST AID MEASURES

General advice	Consult a physician. Show this safety data sheet to the doctor in attendance.Move to safe area.
If inhaled	If inhaled, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact	Wash with soap and water. Consult a physician.
In case of eye contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed	Do NOT induce vomiting. Rinse mouth with water. Consult a physician.

Section V. FIREFIGHTING MEASURES

Flammability	Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface. No smoking.
Suitable extinguishing media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Protective equipment for fire	Wear self contained breathing apparatus for fire fighting if necessary.

Section VI. ACCIDENTAL RELEASE MEASURES

Personal precautions	Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Vapours accumulate to form explosive concentrations.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Clean up	Contain spillage, and then collect and place in container for disposal according to local regulations (see section 13).

Section VII. HANDLING AND STORAGE

Precautions for safe handling	Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use ventilation Keep away from sources of ignition. No smoking. Prevent the build up of electrostatic charge.
Storage Conditions	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Section VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

Methanol 67-56-1 TWA 200 ppm
Skin notation TWA 200 ppm
Potential for skin absorption , ingestion and inhalation.
Personal protective equipment Respiratory protection Handle with gloves. Gloves must be inspected prior to use. Eye protection.
Avoid contact with skin, eyes and clothing. Wash hands thoroughly after handling the product.

Section IX - Physical/Chemical Characteristics

Boiling Point	65°C	Specific Gravity (H2O = 1)	0.79
Vapor Pressure (mm Hg)	96	Melting Point	-98°C
Vapor Density (AIR = 1)	1.11	Evaporation rate (Butyl Acetate = 1)	4.6

Solubility in Water COMPLETE

Appearance and Odor CLEAR, COLORLESS LIQUID WITH CHARACTERISTIC PUNGENT ODOR.

Section X. STABILITY AND REACTIVITY

Chemical stability Stable under recommended storage conditions.
Possibility of hazardous reactions Vapours may form explosive mixture with air.
Conditions to avoid Heat, flames, sparks, extreme temperature and sunlight.
Materials to avoid Acid chlorides, Acid anhydrides, Oxidizing agents, Alkali metals, Reducing agents, Acids
Hazardous decomposition products formed under fire conditions. - Carbon oxides

Section XI. TOXICOLOGICAL INFORMATION

LD50 Oral - rat - 5,628 mg/kg
LC50 Inhalation - rat - 4 h - 64000 ppm
LD50 Dermal - rabbit - 15,800 mg/kg
Toxic if absorbed through skin. Causes skin irritation.
Eye damage/eye irritation
Toxic if inhaled. Causes respiratory tract irritation.
Toxic if swallowed.

Section XII. ECOLOGICAL INFORMATION FOR REPORTABLE QUANTITY OF 5000 lbs.

LC50	15,400 mg/l - 96 h
EC50	24,500.00 mg/l - 48 h
EC100	10,000.00 mg/l - 24 h

Section XIII. DISPOSAL CONSIDERATIONS

Dispose with normal Laboratory Solvent Waste.

Section XIV. TRANSPORT INFORMATION

DOT (US)
UN number: 1230 Class: 3 Packing group: II
Proper shipping name: Methanol

IATA
UN number: 1230 Class: 3 Packing group: II
Proper shipping name: Methanol

Section XV. REGULATORY INFORMATION

OSHA Hazards Flammable liquid, Target Organ Effect, Toxic by inhalation., Toxic by ingestion, Toxic by skin absorption, Irritant
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

Section XVI. Misc. INFORMATION

The information in this Material Safety Data Sheet meets the requirements of the United States Occupational Safety and Health Act and regulations promulgated thereunder (29 CFR 1910.1200 et. seq.) and Global Harmonized System (GHS). This document is intended only as a guide to the appropriate precautionary handling of the material by trained personnel, or supervised by a person trained in chemical handling. The user is responsible for determining the precautions and dangers of this chemical for his or her particular application. Depending on usage, protective clothing including eye and face guards and respirators must be used to avoid contact with material or breathing chemical vapors/fumes. Exposure to this product may have serious adverse health effects. This chemical may interact with other substances. Since the potential uses are so varied, ABSOLUTE STANDARDS INC. cannot warn of all the potential dangers of use or interaction with other chemicals or substances. ABSOLUTE STANDARDS INC. warrants that the chemical meets the specifications set forth on the label. ABSOLUTE STANDARDS INC DISCLAIMS ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED WITH REGARD TO THE PRODUCT SUPPLIED HEREUNDER, ITS MERCHANTABILITY OR ITS FITNESS FOR A PARTICULAR APPLICATION. The user should recognize that this product can cause severe injury or death, especially if improperly handled or the known dangers of use are not heeded. READ ALL PRECAUTIONARY INFORMATION. As new documented general safety information becomes available, Absolute Standards Inc. will periodically revise this Safety Data Sheet. If you have any questions, please call Technical Service at 1-203-281-2917 for assistance.

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

Rec 12/6/24
20 vial

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT

Part Number: 95318
Lot Number: 120524
Description: 2-Chloroethyl vinyl ether

Expiration Date: 120527
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 10000
NIST Test ID#: 6UTB

Solvent(s): Methanol **Lot#** EJ143-US

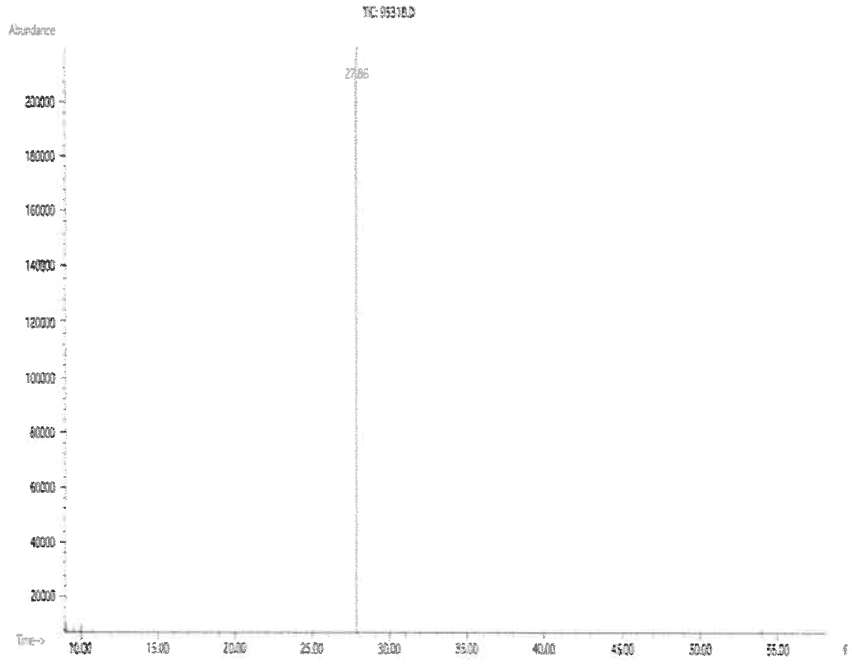
V14630 to V14649

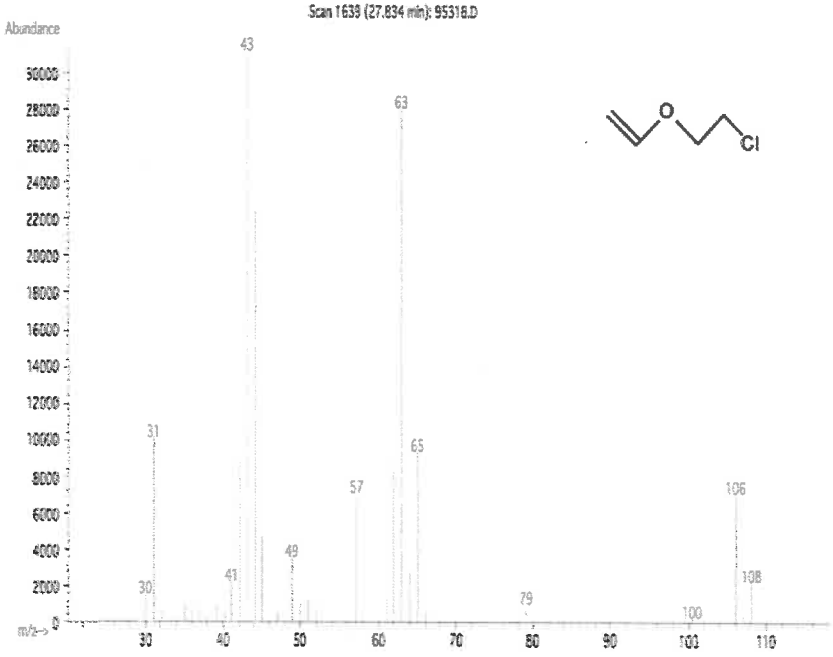
5E-05 Balance Uncertainty
Weight(s) shown below were combined and diluted to (mL): 50.0 0.001 Flask Uncertainty

Prashant Chauhan	120524
Formulated By: Prashant Chauhan	DATE
Pedro L. Rentas	120524
Reviewed By: Pedro L. Rentas	DATE

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight (g)	Actual Weight (g)	Actual Conc(µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50
1. 2-Chloroethyl vinyl ether	74	MKCD0033	10000	99	0.2	0.50536	0.50550	10002.9	40.5	110-75-8	N/A	ori-rat 250mg/kg

Method: GC6MSD-1.M. **Detector:** MSD. **Column:** (60m X 0.25mm X 1.5 µm). **Oven Profile:** Temp 1 = 35°C (Time 1=10min.), Temp 2 = 200°C (Time 2=8.75 min.), Rate = 4°C/min., Injector B Temp.= 200°C, Detector B Temp. = 220°C. **Analyst:** Candice Warren.





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Signal Word: DANGER

Section III - Composition

Components (Specific Chemical Identity; Common Name(s))			% (optional)
Methanol	METHYL ALCOHOL	CAS#: 67-56-1	> 97

See Certified Weight Report For Other Analytes Present At Trace Quantities.

INTENDED USE: REFERENCE MATERIAL

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General advice	Consult a physician. Show this safety data sheet to the doctor in attendance.Move to safe area.
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Methanol 67-56-1 TWA 200 ppm
Skin notation TWA 200 ppm
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Solubility in Water COMPLETE

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Section XIII. DISPOSAL CONSIDERATIONS

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Section XIV. TRANSPORT INFORMATION

DOT (US)
UN number: 1230 Class: 3 Packing group: II
Proper shipping name: Methanol

IATA
UN number: 1230 Class: 3 Packing group: II
Proper shipping name: Methanol

Section XV. REGULATORY INFORMATION

OSHA Hazards Flammable liquid, Target Organ Effect, Toxic by inhalation., Toxic by ingestion, Toxic by skin absorption, Irritant
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

Section XVI. Misc. INFORMATION

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RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

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. : 30067 **Lot No.:** A0191805

Description : 4-Bromofluorobenzene Standard

4-Bromofluorobenzene Standard 2,500µg/mL, P&T Methanol, 1mL/ampul

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

Expiration Date : November 30, 2027 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1-Bromo-4-fluorobenzene (BFB)	460-00-4	184975	99%	2,483.9 µg/mL	+/- 139.5488

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

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.)

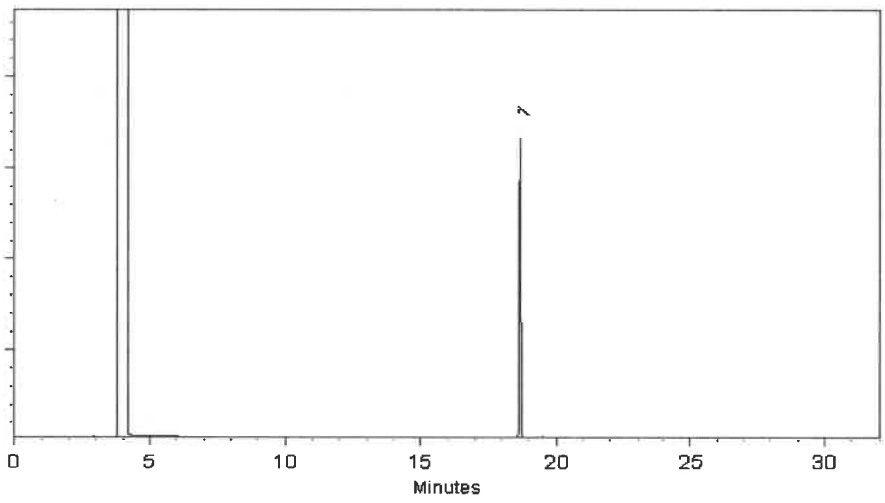
Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID

Split Vent:
40 ml/min

Inj. Vol
1µl



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.

Alicia Leathers - Operation Technician I **Date Mixed:** 17-Nov-2022 **Balance Serial #** B251644995

Jennifer Pollino - Operations Tech III - ARM QC **Date Passed:** 21-Nov-2022

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 expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls 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 ampuls. 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.

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
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www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

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ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 30225 **Lot No.:** A0193071

Description : Bromochloromethane Standard

Bromochloromethane 2000µg/mL, P&T Methanol, 1mL/ampul

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

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

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Bromochloromethane	74-97-5	00008541	99%	2,018.0 µg/mL	+/- 113.3890

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

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.)

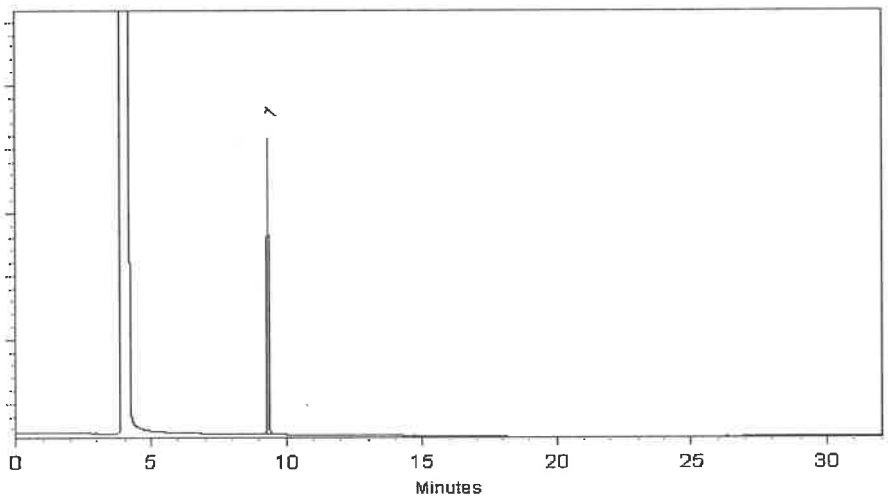
Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID

Split Vent:
40 ml/min

Inj. Vol
1µl



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: 29-Dec-2022 **Balance Serial #** B707717271

Christie Mills - Operations Tech II - ARM QC

Date Passed: 03-Jan-2023

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.
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- 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 expanded 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%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls 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 ampuls. 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.

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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. : 30225 **Lot No.:** A0193071

Description : Bromochloromethane Standard

Bromochloromethane 2000µg/mL, P&T Methanol, 1mL/ampul

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

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

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Bromochloromethane	74-97-5	00008541	99%	2,018.0 µg/mL	+/- 113.3890

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

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.)

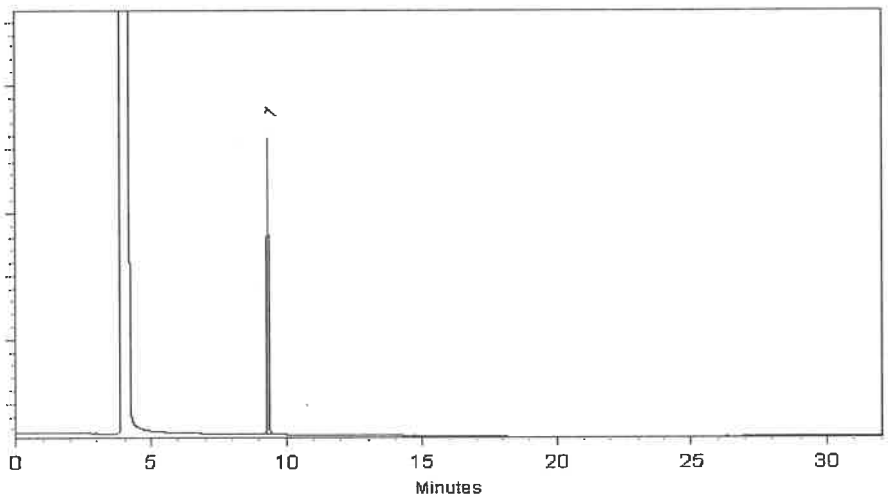
Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID

Split Vent:
40 ml/min

Inj. Vol
1µl



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: 29-Dec-2022 **Balance Serial #** B707717271

Christie Mills - Operations Tech II - ARM QC

Date Passed: 03-Jan-2023

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 expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls 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 ampuls. 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.
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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 30225 **Lot No.:** A0193071

Description : Bromochloromethane Standard

Bromochloromethane 2000µg/mL, P&T Methanol, 1mL/ampul

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

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

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Bromochloromethane	74-97-5	00008541	99%	2,018.0 µg/mL	+/- 113.3890

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

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.)

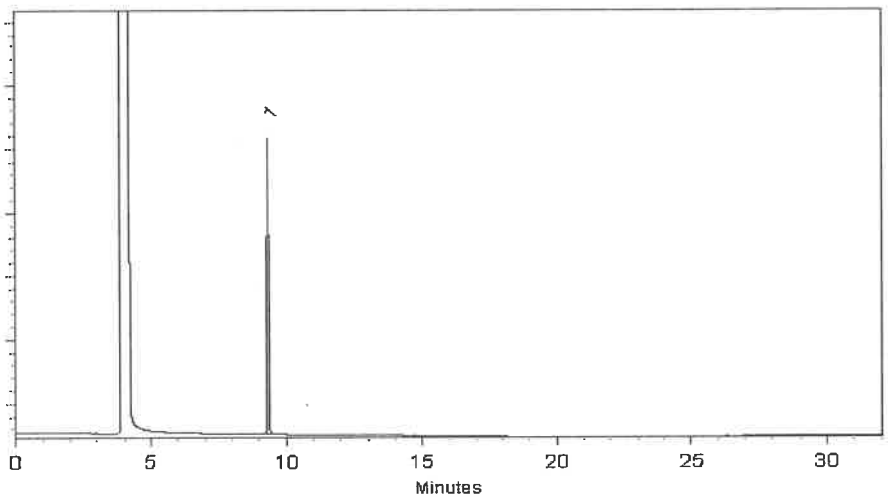
Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID

Split Vent:
40 ml/min

Inj. Vol
1µl



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: 29-Dec-2022 **Balance Serial #** B707717271

Christie Mills - Operations Tech II - ARM QC

Date Passed: 03-Jan-2023

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 expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls 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 ampuls. 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.
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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 30225 **Lot No.:** A0193071

Description : Bromochloromethane Standard

Bromochloromethane 2000µg/mL, P&T Methanol, 1mL/ampul

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

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

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Bromochloromethane	74-97-5	00008541	99%	2,018.0 µg/mL	+/- 113.3890

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

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.)

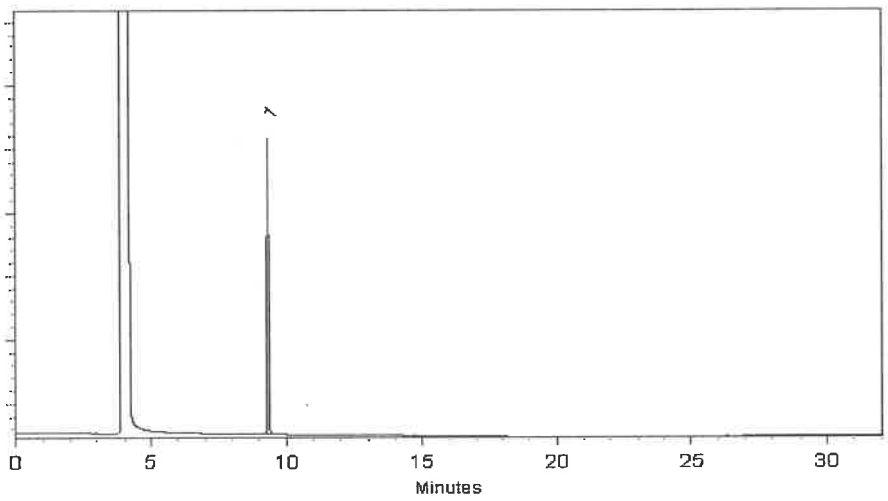
Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID

Split Vent:
40 ml/min

Inj. Vol
1µl



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: 29-Dec-2022 **Balance Serial #** B707717271

Christie Mills - Operations Tech II - ARM QC

Date Passed: 03-Jan-2023

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 expanded 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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Manufacturing Notes:

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Handling Notes:

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 555582 **Lot No.:** A0196865

Description : Custom 8260A/B Surrogate Mix

Custom 8260A/B Surrogate Mix 25,000µg/mL, P&T Methanol, 1mL/ampul

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

Expiration Date : April 30, 2026 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Component #	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1,2-Dichloroethane-d4	17060-07-0	PR-32845	99%	25,036.0 µg/mL	+/- 1,417.9179
2	1-Bromo-4-fluorobenzene (BFB)	460-00-4	184975	99%	25,132.0 µg/mL	+/- 1,423.3549
3	Dibromofluoromethane	1868-53-7	022013	99%	25,040.0 µg/mL	+/- 1,418.1445
4	Toluene-d8	2037-26-5	PR-33397	99%	25,028.0 µg/mL	+/- 1,417.4648

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

Russ Bookhamer - Operations Technician I

Date Mixed: 11-Apr-2023 **Balance:** 1127510105

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

Manufacturing Notes:

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Handling Notes:

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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. : 30489 **Lot No.:** A0209618

Description : 8260B Acetates Mix

8260B Acetates Mix 2,000 µg/mL, P&T Methanol, 1mL/ampul

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

Expiration Date : September 30, 2025 **Storage:** -20°C or colder

Handling: This product is photosensitive. **Ship:** On Ice

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Methyl acetate	79-20-9	SHBP3100	99%	2,019.3 µg/mL	+/- 69.7974
2	Vinyl acetate	108-05-4	RP231030CTH	98%	2,016.8 µg/mL	+/- 69.7112
3	Ethyl acetate	141-78-6	SHBQ9682	99%	2,010.7 µg/mL	+/- 69.4979
4	Isopropyl acetate	108-21-4	BCCG7069	99%	2,016.0 µg/mL	+/- 69.6822
5	Propyl acetate	109-60-4	P8XLN	99%	2,008.0 µg/mL	+/- 69.4057
6	Butyl acetate	123-86-4	SHBP6314	99%	2,007.3 µg/mL	+/- 69.3826
7	Amyl acetate	628-63-7	41325/1	97%	2,004.7 µg/mL	+/- 69.2905

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Tech Tips:

Vinyl acetate is a volatile organic ester included in the target lists of several US EPA and other methods . Under acidic conditions, esters react with alcohols to form new esters (transesterification). Methanol-based mixes containing halogenated compounds are slightly acidic, so it is important to minimize exposure of vinyl acetate to mixes of halogenated compounds in methanol. For this

reason, we offer vinyl acetate in individual solution, and suggest that it be introduced into the working level calibration solution immediately before use. This will minimize problems and ensure more consistent results.

Quality Confirmation Test

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.)

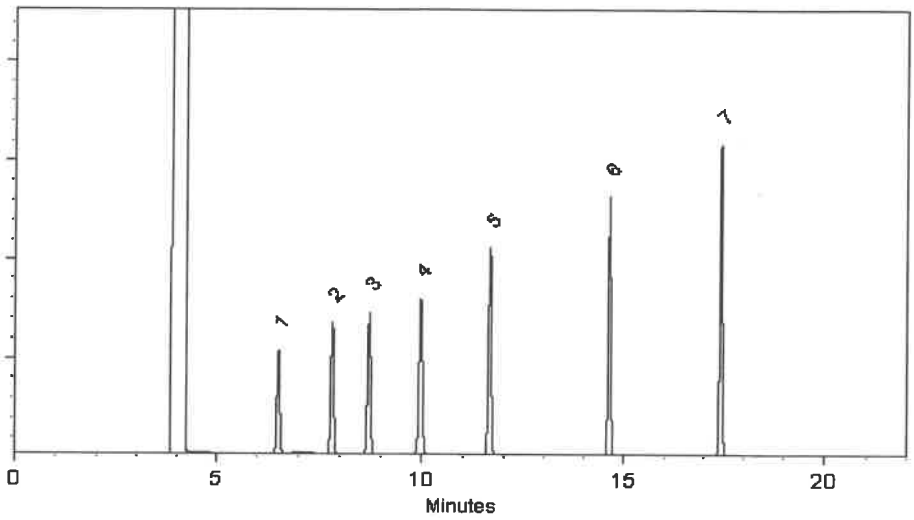
Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID

Split Vent:
40 ml/min

Inj. Vol
1µl



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.

Sam Moodler - Operations Tech I

Date Mixed: 28-Mar-2024 **Balance Serial #** B707717271

Dillan Murphy - Operations Technician I

Date Passed: 01-Apr-2024

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls 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 ampuls. 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.
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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. : 30489 **Lot No.:** A0209618

Description : 8260B Acetates Mix

8260B Acetates Mix 2,000 µg/mL, P&T Methanol, 1mL/ampul

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

Expiration Date : September 30, 2025 **Storage:** -20°C or colder

Handling: This product is photosensitive. **Ship:** On Ice

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Methyl acetate	79-20-9	SHBP3100	99%	2,019.3 µg/mL	+/- 69.7974
2	Vinyl acetate	108-05-4	RP231030CTH	98%	2,016.8 µg/mL	+/- 69.7112
3	Ethyl acetate	141-78-6	SHBQ9682	99%	2,010.7 µg/mL	+/- 69.4979
4	Isopropyl acetate	108-21-4	BCCG7069	99%	2,016.0 µg/mL	+/- 69.6822
5	Propyl acetate	109-60-4	P8XLN	99%	2,008.0 µg/mL	+/- 69.4057
6	Butyl acetate	123-86-4	SHBP6314	99%	2,007.3 µg/mL	+/- 69.3826
7	Amyl acetate	628-63-7	41325/1	97%	2,004.7 µg/mL	+/- 69.2905

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Tech Tips:

Vinyl acetate is a volatile organic ester included in the target lists of several US EPA and other methods . Under acidic conditions, esters react with alcohols to form new esters (transesterification). Methanol-based mixes containing halogenated compounds are slightly acidic, so it is important to minimize exposure of vinyl acetate to mixes of halogenated compounds in methanol. For this

reason, we offer vinyl acetate in individual solution, and suggest that it be introduced into the working level calibration solution immediately before use. This will minimize problems and ensure more consistent results.

Quality Confirmation Test

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.)

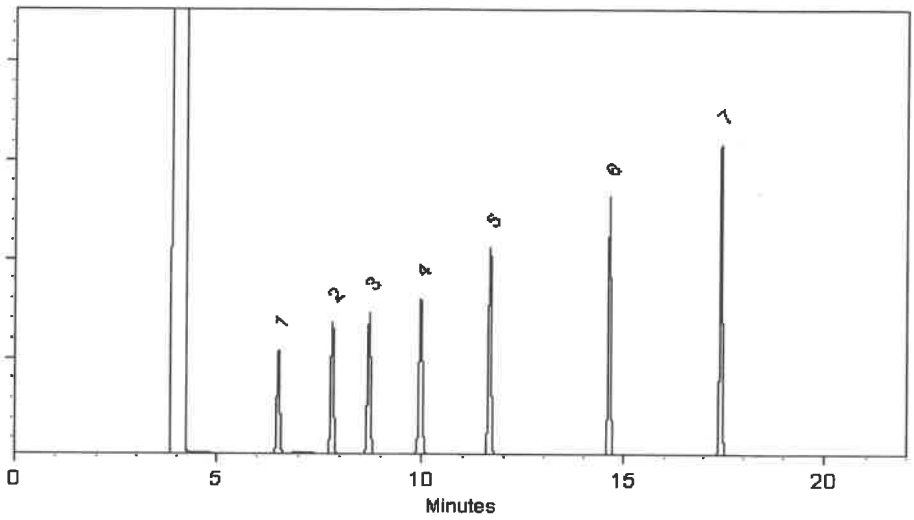
Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID

Split Vent:
40 ml/min

Inj. Vol
1µl



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.

Sam Moodler - Operations Tech I

Date Mixed: 28-Mar-2024 **Balance Serial #** B707717271

Dillan Murphy - Operations Technician I

Date Passed: 01-Apr-2024

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 expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls 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 ampuls. 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.

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Certificate of Analysis

gravimetric

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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. : 555581 **Lot No.:** A0210184

Description : Custom 8260 Internal Standard Mix

Custom 8260 Internal Standard Mix 25,000µg/mL, P&T Methanol, 1mL/ampul

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

Expiration Date : April 30, 2027 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Component #	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1,4-Dichlorobenzene-d4	3855-82-1	PR-30447	99%	25,212.0 µg/mL	+/- 1,427.8857
2	1,4-Difluorobenzene	540-36-3	MKCS8657	99%	25,220.0 µg/mL	+/- 1,428.3388
3	Chlorobenzene-d5	3114-55-4	PR-31132	99%	25,116.0 µg/mL	+/- 1,422.4487
4	Pentafluorobenzene	363-72-4	MKCR9383	99%	25,180.0 µg/mL	+/- 1,426.0734

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

John Friedline - Operations Technician I

Date Mixed: 11-Apr-2024 **Balance:** 1127510105

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 expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

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

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls 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 ampuls. 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.
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CERTIFIED REFERENCE MATERIAL

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 30006 **Lot No.:** A0210618

Description : VOA Calibration Mix #1

VOA Calibration Mix #1 5,000µg/mL, P&T Methanol/Water(90:10), 1mL/ampul

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

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

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Acetone	67-64-1	SHBQ8504	99%	5,014.8 µg/mL	+/- 173.2883
2	2-Butanone (MEK)	78-93-3	SHBQ4704	99%	5,012.4 µg/mL	+/- 173.2054
3	4-Methyl-2-pentanone (MIBK)	108-10-1	SHBP9200	99%	5,011.6 µg/mL	+/- 173.1777
4	2-Hexanone	591-78-6	MKCQ6663	99%	5,013.0 µg/mL	+/- 173.2261

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

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.)

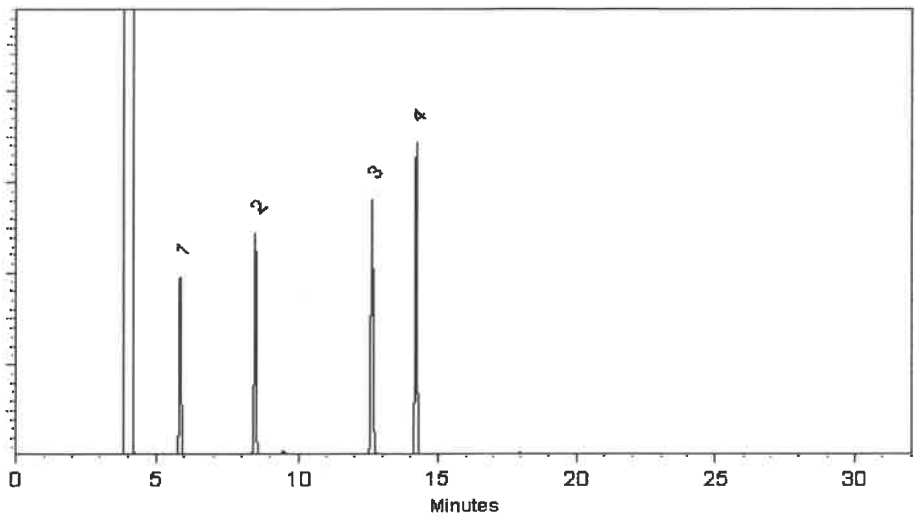
Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID

Split Vent:
40 ml/min

Inj. Vol
1µl



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.

Dakota Parson - Operations Technician I

Date Mixed: 22-Apr-2024 **Balance Serial #** B707717271

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 24-Apr-2024

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 expanded 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%.

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls 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 ampuls. 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.
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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. : 30006 **Lot No.:** A0210618

Description : VOA Calibration Mix #1

VOA Calibration Mix #1 5,000µg/mL, P&T Methanol/Water(90:10), 1mL/ampul

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

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

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Acetone	67-64-1	SHBQ8504	99%	5,014.8 µg/mL	+/- 173.2883
2	2-Butanone (MEK)	78-93-3	SHBQ4704	99%	5,012.4 µg/mL	+/- 173.2054
3	4-Methyl-2-pentanone (MIBK)	108-10-1	SHBP9200	99%	5,011.6 µg/mL	+/- 173.1777
4	2-Hexanone	591-78-6	MKCQ6663	99%	5,013.0 µg/mL	+/- 173.2261

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

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.)

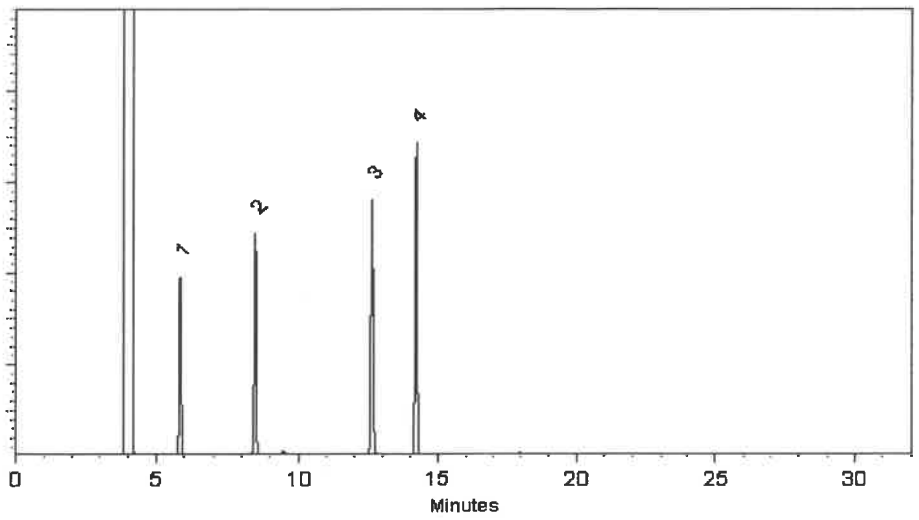
Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID

Split Vent:
40 ml/min

Inj. Vol
1µl



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.

Dakota Parson - Operations Technician I

Date Mixed: 22-Apr-2024 **Balance Serial #** B707717271

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 24-Apr-2024

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 expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

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

- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls 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 ampuls. 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.
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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. : 30006 **Lot No.:** A0210618

Description : VOA Calibration Mix #1

VOA Calibration Mix #1 5,000µg/mL, P&T Methanol/Water(90:10), 1mL/ampul

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

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

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Acetone	67-64-1	SHBQ8504	99%	5,014.8 µg/mL	+/- 173.2883
2	2-Butanone (MEK)	78-93-3	SHBQ4704	99%	5,012.4 µg/mL	+/- 173.2054
3	4-Methyl-2-pentanone (MIBK)	108-10-1	SHBP9200	99%	5,011.6 µg/mL	+/- 173.1777
4	2-Hexanone	591-78-6	MKCQ6663	99%	5,013.0 µg/mL	+/- 173.2261

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

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.)

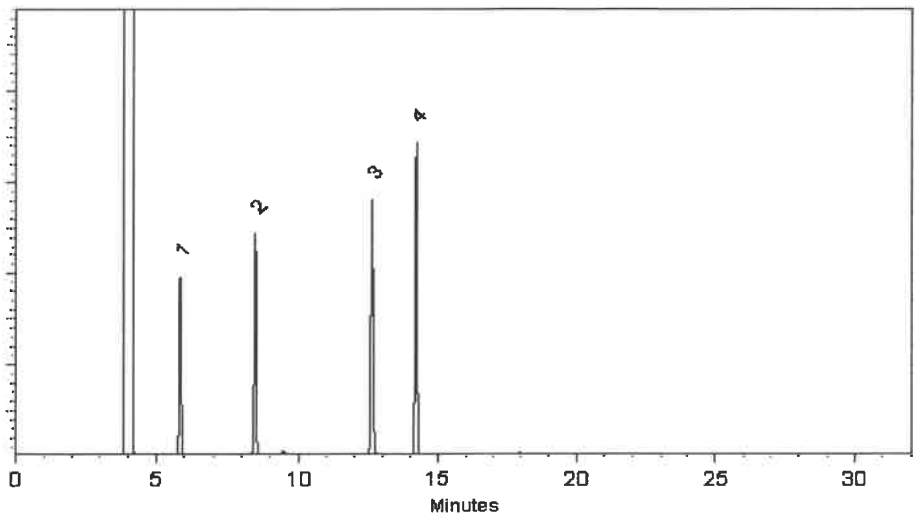
Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID

Split Vent:
40 ml/min

Inj. Vol
1µl



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.

Dakota Parson - Operations Technician I

Date Mixed: 22-Apr-2024 **Balance Serial #** B707717271

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 24-Apr-2024

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

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Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. 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.
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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. : 30042 **Lot No.:** A0216826

Description : 502.2 Calibration Mix #1

502.2 Calibration Mix #1 2,000µg/mL, P&T Methanol, 1mL/ampul

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

Expiration Date : May 31, 2031 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Dichlorodifluoromethane (CFC-12)	75-71-8	00022922	99%	2,000.9 µg/mL	+/- 112.4144
2	Chloromethane (methyl chloride)	74-87-3	00022694	99%	2,000.7 µg/mL	+/- 112.3998
3	Vinyl chloride	75-01-4	00015559	99%	2,000.3 µg/mL	+/- 112.3779
4	Bromomethane (methyl bromide)	74-83-9	00017022	99%	2,001.8 µg/mL	+/- 112.4650
5	Chloroethane (ethyl chloride)	75-00-3	107-401039114-1	99%	2,000.1 µg/mL	+/- 112.3700
6	Trichlorofluoromethane (CFC-11)	75-69-4	MKCJ8658	99%	2,000.7 µg/mL	+/- 112.3992

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

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.

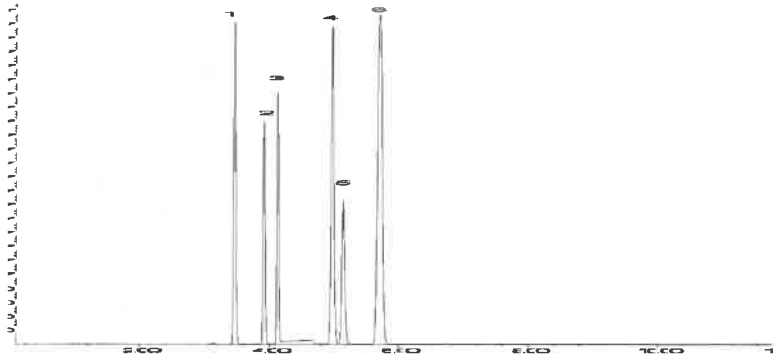
Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD

Split Vent:
Split ratio 10:1

Inj. Vol
1µl



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Tom Suckar - Mix Technician

Date Mixed: 23-Sep-2024 **Balance Serial #** B707717271

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 04-Oct-2024

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
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- 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 expanded 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%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls 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:

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

RESTEK
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309

www.restek.com

Rec 12/17/24

CERTIFIED REFERENCE MATERIAL

30 Vial

Certificate of Analysis

chromatographic plus

V14727 to
V14756

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. : 30042 **Lot No.:** A0216826

Description : 502.2 Calibration Mix #1

502.2 Calibration Mix #1 2,000µg/mL, P&T Methanol, 1mL/ampul

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

Expiration Date : May 31, 2031 **Storage:** 0°C or colder

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Dichlorodifluoromethane (CFC-12)	75-71-8	00022922	99%	2,000.9 µg/mL	+/- 112.4144
2	Chloromethane (methyl chloride)	74-87-3	00022694	99%	2,000.7 µg/mL	+/- 112.3998
3	Vinyl chloride	75-01-4	00015559	99%	2,000.3 µg/mL	+/- 112.3779
4	Bromomethane (methyl bromide)	74-83-9	00017022	99%	2,001.8 µg/mL	+/- 112.4650
5	Chloroethane (ethyl chloride)	75-00-3	107-401039114-1	99%	2,000.1 µg/mL	+/- 112.3700
6	Trichlorofluoromethane (CFC-11)	75-69-4	MKCJ8658	99%	2,000.7 µg/mL	+/- 112.3992

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

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.

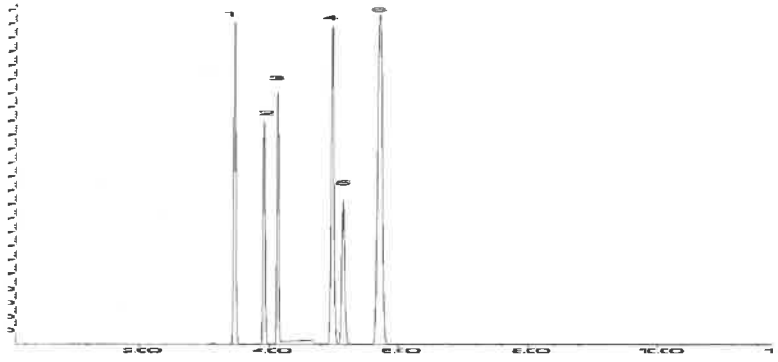
Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD

Split Vent:
Split ratio 10:1

Inj. Vol
1µl



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: 23-Sep-2024 **Balance Serial #** B707717271

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 04-Oct-2024

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 expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls 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 ampuls. 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.
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RESTEK

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Fax: 1-814-353-1309

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

J14842 to 14846

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. : 30470 **Lot No.:** A0217535

Description : tert-Butanol Standard

tert-Butanol Std 50,000µg/mL, P&T Methanol, 1mL/ampul

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

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

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	tert-Butanol (TBA)	75-65-0	SHBQ8002-1	99%	50,007.5 µg/mL	+/- 717.6137

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

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.)

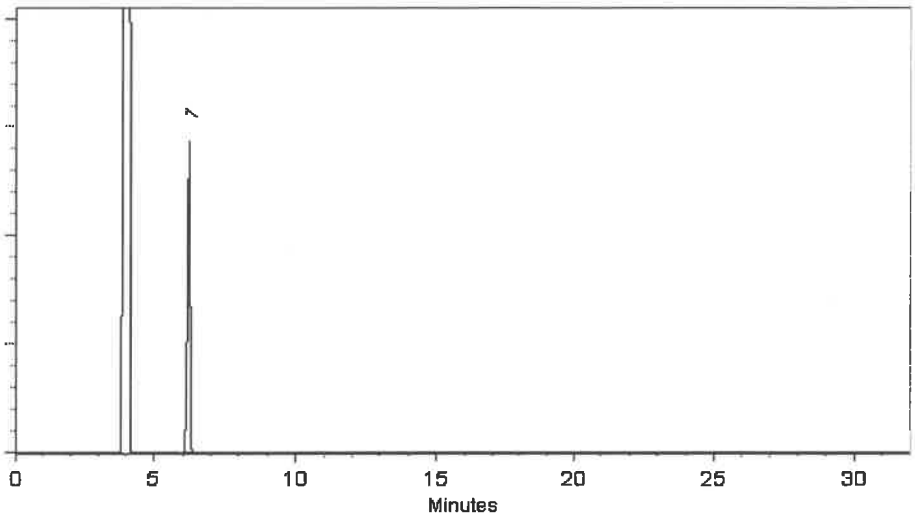
Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID

Split Vent:
40 ml/min

Inj. Vol
1µl



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.

Aaron Enyart - Operations Tech I

Date Mixed: 07-Oct-2024 **Balance Serial #** B251644995

Brittany Federinko - Operations Tech I

Date Passed: 09-Oct-2024

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 expanded uncertainty value includes gravimetric uncertainty, homogeneity between-ampul uncertainty, storage stability uncertainty and shipping stability uncertainty and were combined using the following formula:

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

  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
- The packaged amount is the minimum sample size for which uncertainty is valid. The ampuls 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 ampuls. 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.
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Zoviny Rec 01/08/21

RESTEK
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Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic

V14803 - V14822

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. : 555408-SL **Lot No.:** A0220471

Description : Custom Vinyl Acetate Standard

Custom Vinyl Acetate Standard 8,000µg/mL, P&T Methanol, 1mL/ampul

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

Expiration Date : June 30, 2026 **Storage:** -20°C or colder

Handling: This product is photosensitive. **Ship:** On Ice

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Vinyl acetate	108-05-4	RD240423RSR	99%	8,066.0 µg/mL	+/- 278.7979

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Tech Tips:

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

Quality Confirmation Test

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.)

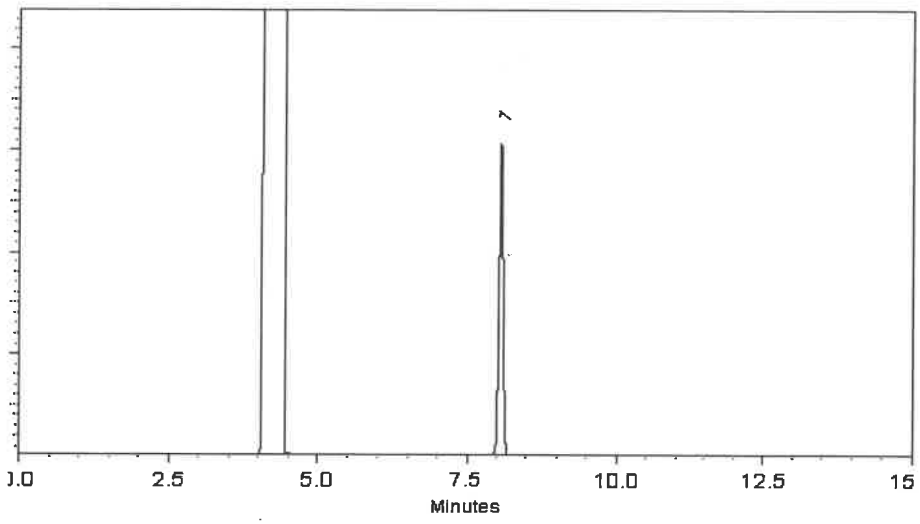
Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID

Split Vent:
40 ml/min

Inj. Vol
1µl



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.

Ethan Winiarski - Operations Tech I

Date Mixed: 24-Dec-2024 **Balance Serial #** 1127510105

Dillan Murphy - Operations Technician I

Date Passed: 02-Jan-2025

REVIEWED

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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  k is a coverage factor of 2, which gives a level of confidence of approximately 95%.
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Zoviny Rec 01/08/21

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic

V14803 - V14822

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.

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Catalog No. : 555408-SL **Lot No.:** A0220471

Description : Custom Vinyl Acetate Standard

Custom Vinyl Acetate Standard 8,000µg/mL, P&T Methanol, 1mL/ampul

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

Expiration Date : June 30, 2026 **Storage:** -20°C or colder

Handling: This product is photosensitive. **Ship:** On Ice

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Vinyl acetate	108-05-4	RD240423RSR	99%	8,066.0 µg/mL	+/- 278.7979

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Tech Tips:

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

Quality Confirmation Test

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.)

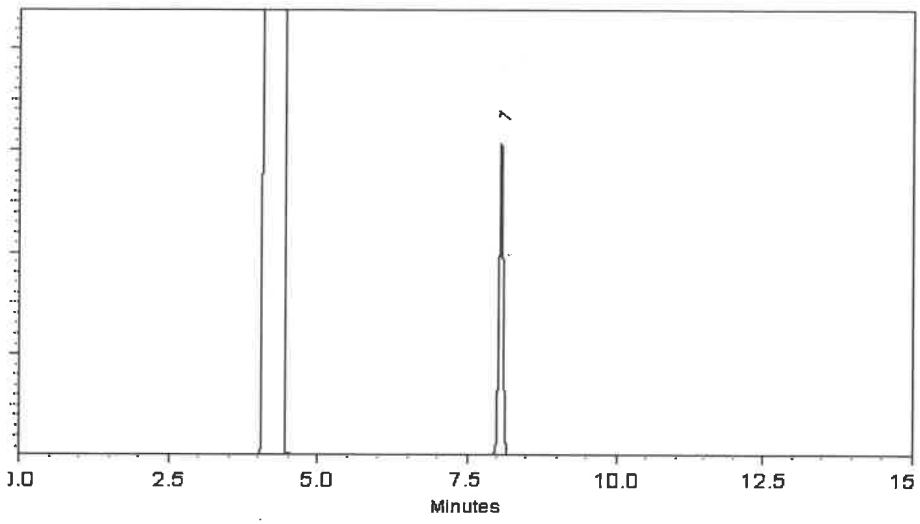
Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID

Split Vent:
40 ml/min

Inj. Vol
1µl



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Ethan Winiarski - Operations Tech I

Date Mixed: 24-Dec-2024 **Balance Serial #** 1127510105

Dillan Murphy - Operations Technician I

Date Passed: 02-Jan-2025

REVIEWED

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

General Certified Reference Material Notes

Expiration Notes:

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

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Methanol
ULTRA RESI-ANALYZED
For Purge and Trap Analysis

avantor™ | J.T.Baker®

Material No.: 9077-02
Batch No.: 22L0562016
Manufactured Date: 2022-10-26
Expiration Date: 2025-10-25
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (CH_3OH) (by GC, corrected for water)	≥ 99.9 %	100.0 %
Residue after Evaporation	≤ 1.0 ppm	0.2 ppm
Titrable Acid (µeq/g)	≤ 0.3	0.2
Titrable Base (µeq/g)	≤ 0.10	0.03
Water (by KF, coulometric)	≤ 0.08 %	< 0.01 %
Volatile Organic Trace Analysis - Below EPA 8260B CRQL	Conforms	Conforms

For Laboratory,Research,or Manufacturing Use
Performance Tested for Use in EPA Methods
500 Series for Drinking Water
600 Series for Wastewater
846 for Solid Waste

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

James T Ethier

Jamie Ethier
Vice President Global Quality

SHIPPING DOCUMENTS

Alliance TECHNICAL GROUP

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax: (908) 788-9222
www.chemtech.net

CHAIN OF CUSTODY RECORD

Alliance Project Number: Q1523

COC Number: 2042110

CLIENT INFORMATION

COMPANY: ENTACT, LLC
ADDRESS: 150 Bay Street, Suite 806
CITY: Jersey City STATE: NJ ZIP: 07302
ATTENTION: Jarod Stanfield
PHONE: 570-886-0442 FAX:

PROJECT INFORMATION

PROJECT NAME: 540 Degraw St Brooklyn, NY
PROJECT #: E9309 LOCATION: Brooklyn, NY
PROJECT MANAGER: Jarod Stanfield
E-MAIL: jstanfield@entact.com
PHONE: 570-886-0442 FAX:

BILLING INFORMATION

BILL TO: ENTACT, LLC PO# E9309
ADDRESS: 999 Oakmont Plaza Drive, Suite 300
CITY: Westmont STATE: IL ZIP: 60559
ATTENTION: Wendy Murray PHONE: 800-936-8228

DATA TURNAROUND INFORMATION

FAX: 5 DAYS*
HARD COPY: _____ DAYS*
EDD 5 DAYS*
* TO BE APPROVED BY ALLIANCE
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

- ☐ RESULTS ONLY
- ☐ RESULTS + QC
- ☐ New Jersey REDUCED
- ☐ New Jersey CLP
- ☐ USEPA CLP
- ☐ New York State ASP "B"
- ☐ New York State ASP "A"
- ☐ Other _____
- ☐ EDD Format _____

ANALYSIS

1	2	3	4	5	6	7	8	9
TCLP VOCs	TCLP ICP Metals	TCLP Herb	TCLP Pest	TCLP SVOCs	TCLP pH	I/C/R	PCBs	Oil & Grease

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# of Bottles	PRESERVATIVES 1	2	3	4	5	6	7	8	9	COMMENTS
1.	WC-A1-01-G	Soil		X	3/6	10:00	1	X									<-- Specify Preservatives A-HCl B-HNO3 C-H2SO4 D-NaOH E-ICE F-Other
2.	WC-A1-01-C	Soil	X		3/6	10:00	11		X	X	X	X	X	X	X	X	
3.	WC-A1-02-G	Soil		X	3/6	11:00	1	X									
4.	WC-A2-02-C	Soil	X		3/6	11:00	11		X	X	X	X	X	X	X	X	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE PROSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY
1. Jarod Stanfield	3/6 15:31	1. 3-7-25 0700
RELINQUISHED BY 2.	DATE/TIME	RECEIVED BY 2.
RELINQUISHED BY 3.	DATE/TIME	RECEIVED FOR LAB BY 3.

Conditions of bottles or coolers at receipt: ☐ Compliant ☐ Non Compliant ☐ Cooler Temp 5.3°C ☐ Ice in Cooler?: _____

Comments:

Page _____ of _____

SHIPPED VIA: CLIENT: ☐ Hand Delivered ☐ Overnight
ALLIANCE: ☐ Picked Up ☐ Overnight

Shipment Complete ☐ YES ☐ NO

WHITE - ALLIANCE COPYFOR RETURN TO CLIENT YELLOW - ALLIANCE COPY PINK - SAMPLER COPY

Alliance TECHNICAL GROUP

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www.chemtech.net

CHAIN OF CUSTODY RECORD

Alliance Project Number: Q1523

COC Number: 2042110

CLIENT INFORMATION

COMPANY: **ENTACT, LLC**
ADDRESS: **150 Bay Street, Suite 806**
CITY **Jersey City** STATE: **NJ** ZIP: **07302**
ATTENTION: **Jarod Stanfield**
PHONE: **570-886-0442** FAX:

PROJECT INFORMATION

PROJECT NAME: **540 Degraw St Brooklyn, NY**
PROJECT #: **E9309** LOCATION: **Brooklyn, NY**
PROJECT MANAGER: **Jarod Stanfield**
E-MAIL: **jstanfield@entact.com**
PHONE: **570-886-0442** FAX:

BILLING INFORMATION

BILL TO: **ENTACT, LLC** PO# **E9309**
ADDRESS: **999 Oakmont Plaza Drive, Suite 300**
CITY: **Westmont** STATE: **IL** ZIP: **60559**
ATTENTION: **Wendy Murray** PHONE: **800-936-8228**

DATA TURNAROUND INFORMATION

FAX: 5 DAYS*
HARD COPY: DAYS*
EDD 5 DAYS*
* TO BE APPROVED BY ALLIANCE
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

- ☐ RESULTS ONLY
- ☐ RESULTS + QC
- ☐ New Jersey REDUCED
- ☐ New Jersey CLP
- ☐ USEPA CLP
- ☐ New York State ASP "B"
- ☐ New York State ASP "A"
- ☐ Other
- ☐ EDD Format

ANALYSIS

10	11	12	13	14	15	16		
ASTM COD	ASTM Ammonia-Nitrogen	ASTM O&G	ASTM TS	TS, TVS	pH	Paint Filter		

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# of Bottles	PRESERVATIVES 1	2	3	4	5	6	7	8	9	COMMENTS
								E	E	E	E	E	E	E			<-- Specify Preservatives A-HCl B-HNO3 C-H2SO4 D-NaOH E-ICE F-Other
1.	WC-A1-01-G	Soil		X	3/6	10:00	1										
2.	WC-A1-01-C	Soil	X		3/6	10:00	11	X	X	X	X	X	X	X			
3.	WC-A1-02-G	Soil		X	3/6	11:00	1										
4.	WC-A2-02-C	Soil	X		3/6	11:00	11	X	X	X	X	X	X	X			
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE PROSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY
1. **Jarod Stanfield**	3/6 15:31	1. 3-7-25 0700
RELINQUISHED BY 2.	DATE/TIME	RECEIVED BY 2.
RELINQUISHED BY 3.	DATE/TIME	RECEIVED FOR LAB BY 3.

Conditions of bottles or coolers at receipt: ☐ Compliant ☐ Non Compliant ☐ Cooler Temp 5.3°C ☐ Ice in Cooler?:

Comments:

Page of

SHIPPED VIA: CLIENT: ☐ Hand Delivered ☐ Overnight
ALLIANCE: ☐ Picked Up ☐ Overnight

Shipment Complete ☐ YES ☐ NO

WHITE - ALLIANCE COPYFOR RETURN TO CLIENT **YELLOW** - ALLIANCE COPY **PINK** - SAMPLER COPY

284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Laboratory Certification

Certified By	License No.
CAS EPA CLP Contract	68HERH20D0011
Connecticut	PH-0830
DOD ELAP (ANAB)	L2219
Maine	2024021
Maryland	296
New Hampshire	255424 Rev 1
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	525-24-234-08441
Texas	T104704488

QA Control Code: A2070148