

Cover Page

Order ID : Q3400

Project ID : NWIRP Northrup Grumman Site – Bethpage, NY

Client : ICE Service Group, Inc.

Lab Sample Number

Q3400-01

Client Sample Number

FRAC-TANK-0760450

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: 10/28/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

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 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

APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: Q3400

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 Custody

✓

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: PRADIP PRAJAPATI

Date: 10/28/2025



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

LAB CHRONICLE

OrderID:	Q3400	OrderDate:	10/20/2025 1:25:31 PM
Client:	ICE Service Group, Inc.	Project:	NWIRP Northrup Grumman Site – Bethpage, NY
Contact:	Dennis D. Morgan, II	Location:	D31,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q3400-01	FRAC-TANK-0760450	Water	VOC-TCLVOA-10	8260-Low	10/20/25		10/21/25	10/20/25

Hit Summary Sheet
SW-846

SDG No.: Q3400

Client: ICE Service Group, Inc.

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	LOD	RDL	Units
Client ID:	FRAC-TANK-0760450								
Q3400-01	FRAC-TANK-0760	Water	Acetone	5.10		1.50	3.80	5.00	ug/L
Q3400-01	FRAC-TANK-0760	Water	cis-1,2-Dichloroethene	9.70		0.19	0.75	1.00	ug/L
Q3400-01	FRAC-TANK-0760	Water	Trichloroethene	86.7		0.090	0.75	1.00	ug/L
Q3400-01	FRAC-TANK-0760	Water	1,2-Dichloropropane	17.2		0.20	0.50	1.00	ug/L
Q3400-01	FRAC-TANK-0760	Water	Tetrachloroethene	6.50		0.23	0.50	1.00	ug/L
Total Voc :					125				
Total Concentration:					125				



QC SUMMARY

Surrogate Summary

SDG No.: Q3400

Client: ICE Service Group, Inc.

Analytical Method: SW8260-Low

Lab Sample ID	Client ID	Parameter	Spike	Result	Recovery (%)	Qual	Limits (%)	
							Low	High
Q3400-01	FRAC-TANK-0760450	1,2-Dichloroethane-d4	50	55.7	111		81	118
		Dibromofluoromethane	50	47.4	95		80	119
		Toluene-d8	50	49.8	100		89	112
		4-Bromofluorobenzene	50	58.0	116	*	85	114
VX1021WBL01	VX1021WBL01	1,2-Dichloroethane-d4	50	52.5	105		81	118
		Dibromofluoromethane	50	47.1	94		80	119
		Toluene-d8	50	46.4	93		89	112
		4-Bromofluorobenzene	50	52.6	105		85	114
VX1021WBS01	VX1021WBS01	1,2-Dichloroethane-d4	50	49.2	98		81	118
		Dibromofluoromethane	50	49.3	99		80	119
		Toluene-d8	50	47.8	96		89	112
		4-Bromofluorobenzene	50	49.7	99		85	114
VX1021WBSD0	VX1021WBSD01	1,2-Dichloroethane-d4	50	46.5	93		81	118
		Dibromofluoromethane	50	48.0	96		80	119
		Toluene-d8	50	47.9	96		89	112
		4-Bromofluorobenzene	50	47.3	95		85	114

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.:	<u>Q3400</u>	Analytical Method:	<u>SW8260-Low</u>
Client:	<u>ICE Service Group, Inc.</u>	Datafile :	<u>VX048255.D</u>

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Low	Limits High	RPD
VX1021WBS01	Dichlorodifluoromethane	20	16.8	ug/L	84			32	152	
	Chloromethane	20	17.8	ug/L	89			50	139	
	Vinyl chloride	20	17.6	ug/L	88			58	137	
	Bromomethane	20	19.3	ug/L	97			53	141	
	Chloroethane	20	18.9	ug/L	95			60	138	
	Trichlorofluoromethane	20	17.7	ug/L	89			65	141	
	1,1,2-Trichlorotrifluoroethane	20	17.6	ug/L	88			70	136	
	1,1-Dichloroethene	20	18.0	ug/L	90			71	131	
	Acetone	100	82.3	ug/L	82			39	160	
	Carbon disulfide	20	16.6	ug/L	83			64	133	
	Methyl tert-butyl Ether	20	17.6	ug/L	88			71	124	
	Methyl Acetate	20	17.5	ug/L	88			56	136	
	Methylene Chloride	20	19.1	ug/L	96			74	124	
	trans-1,2-Dichloroethene	20	17.9	ug/L	90			75	124	
	1,1-Dichloroethane	20	18.4	ug/L	92			77	125	
	Cyclohexane	20	19.2	ug/L	96			71	130	
	2-Butanone	100	85.2	ug/L	85			56	143	
	Carbon Tetrachloride	20	17.0	ug/L	85			72	136	
	cis-1,2-Dichloroethene	20	18.9	ug/L	95			78	123	
	Bromochloromethane	20	21.6	ug/L	108			78	123	
	Chloroform	20	18.8	ug/L	94			79	124	
	1,1,1-Trichloroethane	20	18.1	ug/L	91			74	131	
	Methylcyclohexane	20	17.0	ug/L	85			72	132	
	Benzene	20	18.5	ug/L	93			79	120	
	1,2-Dichloroethane	20	19.1	ug/L	96			73	128	
	Trichloroethene	20	18.1	ug/L	91			79	123	
	1,2-Dichloropropane	20	19.3	ug/L	97			78	122	
	Bromodichloromethane	20	18.6	ug/L	93			79	125	
	4-Methyl-2-Pentanone	100	86.9	ug/L	87			67	130	
	Toluene	20	18.8	ug/L	94			80	121	
	t-1,3-Dichloropropene	20	18.4	ug/L	92			73	127	
	cis-1,3-Dichloropropene	20	18.8	ug/L	94			75	124	
	1,1,2-Trichloroethane	20	19.1	ug/L	96			80	119	
	2-Hexanone	100	85.9	ug/L	86			57	139	
	Dibromochloromethane	20	18.1	ug/L	91			74	126	
	1,2-Dibromoethane	20	18.6	ug/L	93			77	121	
	Tetrachloroethene	20	16.9	ug/L	85			74	129	
	Chlorobenzene	20	18.0	ug/L	90			82	118	
	Ethyl Benzene	20	17.8	ug/L	89			79	121	
	m/p-Xylenes	40	36.8	ug/L	92			80	121	
	o-Xylene	20	18.1	ug/L	91			78	122	
	Styrene	20	18.8	ug/L	94			78	123	
	Bromoform	20	17.0	ug/L	85			66	130	
	Isopropylbenzene	20	17.1	ug/L	86			72	131	
	1,1,2,2-Tetrachloroethane	20	17.3	ug/L	86			71	121	
	1,3-Dichlorobenzene	20	17.2	ug/L	86			80	119	
	1,4-Dichlorobenzene	20	16.6	ug/L	83			79	118	
	1,2-Dichlorobenzene	20	17.2	ug/L	86			80	119	

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: Q3400

Analytical Method: SW8260-Low

Client: ICE Service Group, Inc.

Datafile : VX048255.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Low	Limits	RPD
									High	
VX1021WBS01	1,2-Dibromo-3-Chloropropane	20	14.2	ug/L	71			62	128	
	1,2,4-Trichlorobenzene	20	15.2	ug/L	76			69	130	
	1,2,3-Trichlorobenzene	20	15.5	ug/L	78			69	129	

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.:	<u>Q3400</u>	Analytical Method:	<u>SW8260-Low</u>
Client:	<u>ICE Service Group, Inc.</u>	Datafile :	<u>VX048256.D</u>

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Low	Limits High	RPD
VX1021WBSD01	Dichlorodifluoromethane	20	18.0	ug/L	90	7		32	152	20
	Chloromethane	20	17.3	ug/L	86	3		50	139	20
	Vinyl chloride	20	16.9	ug/L	85	3		58	137	20
	Bromomethane	20	19.0	ug/L	95	2		53	141	20
	Chloroethane	20	19.0	ug/L	95	0		60	138	20
	Trichlorofluoromethane	20	17.9	ug/L	90	1		65	141	20
	1,1,2-Trichlorotrifluoroethane	20	17.7	ug/L	89	1		70	136	20
	1,1-Dichloroethene	20	17.9	ug/L	90	0		71	131	20
	Acetone	100	81.6	ug/L	82	0		39	160	20
	Carbon disulfide	20	16.9	ug/L	85	2		64	133	20
	Methyl tert-butyl Ether	20	18.0	ug/L	90	2		71	124	20
	Methyl Acetate	20	16.9	ug/L	85	3		56	136	20
	Methylene Chloride	20	18.5	ug/L	93	3		74	124	20
	trans-1,2-Dichloroethene	20	18.8	ug/L	94	4		75	124	20
	1,1-Dichloroethane	20	18.8	ug/L	94	2		77	125	20
	Cyclohexane	20	18.4	ug/L	92	4		71	130	20
	2-Butanone	100	85.7	ug/L	86	1		56	143	20
	Carbon Tetrachloride	20	17.2	ug/L	86	1		72	136	20
	cis-1,2-Dichloroethene	20	19.1	ug/L	96	1		78	123	20
	Bromochloromethane	20	21.3	ug/L	106	2		78	123	20
	Chloroform	20	19.0	ug/L	95	1		79	124	20
	1,1,1-Trichloroethane	20	18.3	ug/L	92	1		74	131	20
	Methylcyclohexane	20	18.2	ug/L	91	7		72	132	20
	Benzene	20	18.8	ug/L	94	1		79	120	20
	1,2-Dichloroethane	20	18.5	ug/L	93	3		73	128	20
	Trichloroethene	20	18.3	ug/L	92	1		79	123	20
	1,2-Dichloropropane	20	19.8	ug/L	99	2		78	122	20
	Bromodichloromethane	20	18.8	ug/L	94	1		79	125	20
	4-Methyl-2-Pentanone	100	89.0	ug/L	89	2		67	130	20
	Toluene	20	18.9	ug/L	95	1		80	121	20
	t-1,3-Dichloropropene	20	18.5	ug/L	93	1		73	127	20
	cis-1,3-Dichloropropene	20	18.5	ug/L	93	1		75	124	20
	1,1,2-Trichloroethane	20	19.3	ug/L	97	1		80	119	20
	2-Hexanone	100	87.8	ug/L	88	2		57	139	20
	Dibromochloromethane	20	18.3	ug/L	92	1		74	126	20
	1,2-Dibromoethane	20	18.6	ug/L	93	0		77	121	20
	Tetrachloroethene	20	17.5	ug/L	88	3		74	129	20
	Chlorobenzene	20	18.9	ug/L	95	5		82	118	20
	Ethyl Benzene	20	18.3	ug/L	92	3		79	121	20
	m/p-Xylenes	40	37.5	ug/L	94	2		80	121	20
	o-Xylene	20	18.5	ug/L	93	2		78	122	20
	Styrene	20	19.2	ug/L	96	2		78	123	20
	Bromoform	20	17.7	ug/L	89	5		66	130	20
	Isopropylbenzene	20	18.5	ug/L	93	8		72	131	20
	1,1,2,2-Tetrachloroethane	20	18.4	ug/L	92	7		71	121	20
	1,3-Dichlorobenzene	20	18.2	ug/L	91	6		80	119	20
	1,4-Dichlorobenzene	20	18.2	ug/L	91	9		79	118	20
	1,2-Dichlorobenzene	20	18.6	ug/L	93	8		80	119	20

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.:	<u>Q3400</u>	Analytical Method:	<u>SW8260-Low</u>
Client:	<u>ICE Service Group, Inc.</u>	Datafile :	<u>VX048256.D</u>

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Low	Limits High	RPD
VX1021WBSD01	1,2-Dibromo-3-Chloropropane	20	16.9	ug/L	85	18		62	128	20
	1,2,4-Trichlorobenzene	20	16.8	ug/L	84	10		69	130	20
	1,2,3-Trichlorobenzene	20	17.3	ug/L	86	10		69	129	20

VOLATILE METHOD BLANK SUMMARY

Client ID

VX1021WBL01

Lab Name: Alliance

Contract: ICES02

Lab Code: ACE

SDG NO.: Q3400

Lab File ID: VX048254.D

Lab Sample ID: VX1021WBL01

Date Analyzed: 10/21/2025

Time Analyzed: 09:40

GC Column: DB-624UI ID: 0.18 (mm)

Heated Purge: (Y/N) N

Instrument ID: MSVOA_X

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
VX1021WBS01	VX1021WBS01	VX048255.D	10/21/2025
VX1021WBSD01	VX1021WBSD01	VX048256.D	10/21/2025
FRAC-TANK-0760450	Q3400-01	VX048274.D	10/21/2025

COMMENTS: _____



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VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Alliance

Contract: ICES02

Lab Code: ACE

SDG NO.: Q3400

Lab File ID: VX048226.D

BFB Injection Date: 10/20/2025

Instrument ID: MSVOA_X

BFB Injection Time: 08:15

GC Column: DB-624UI ID: 0.18 (mm)

Heated Purge: Y/N N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.7
75	30.0 - 60.0% of mass 95	50.7
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.3 (0.4) 1
174	50.0 - 100.0% of mass 95	76.5
175	5.0 - 9.0% of mass 174	5.8 (7.5) 1
176	95.0 - 101.0% of mass 174	73.8 (96.4) 1
177	5.0 - 9.0% of mass 176	4.8 (6.5) 2

1-Value is % mass 174

2-Value is % mass 176

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

CLIENT ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTDIC001	VSTDIC001	VX048229.D	10/20/2025	10:59
VSTDIC020	VSTDIC020	VX048231.D	10/20/2025	11:40
VSTDIC050	VSTDIC050	VX048232.D	10/20/2025	12:01
VSTDIC100	VSTDIC100	VX048233.D	10/20/2025	12:22
VSTDIC150	VSTDIC150	VX048234.D	10/20/2025	12:43
VSTDIC005	VSTDIC005	VX048236.D	10/20/2025	13:49



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VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Alliance

Contract: ICES02

Lab Code: ACE

SDG NO.: Q3400

Lab File ID: VX048251.D

BFB Injection Date: 10/21/2025

Instrument ID: MSVOA_X

BFB Injection Time: 08:12

GC Column: DB-624UI ID: 0.18 (mm)

Heated Purge: Y/N N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18
75	30.0 - 60.0% of mass 95	50.3
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	7
173	Less than 2.0% of mass 174	0.6 (0.7) 1
174	50.0 - 100.0% of mass 95	75.8
175	5.0 - 9.0% of mass 174	5.5 (7.2) 1
176	95.0 - 101.0% of mass 174	72.8 (96.1) 1
177	5.0 - 9.0% of mass 176	5 (6.8) 2

1-Value is % mass 174

2-Value is % mass 176

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

CLIENT ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTDCCC050	VSTDCCC050	VX048252.D	10/21/2025	08:43
VX1021WBL01	VX1021WBL01	VX048254.D	10/21/2025	09:40
VX1021WBS01	VX1021WBS01	VX048255.D	10/21/2025	10:06
VX1021WBSD01	VX1021WBSD01	VX048256.D	10/21/2025	10:33
FRAC-TANK-0760450	Q3400-01	VX048274.D	10/21/2025	16:46
VSTDCCC050EC	VSTDCCC050	VX048278.D	10/21/2025	18:09

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Alliance Contract: ICES02
 Lab Code: ACE SDG NO.: Q3400
 Lab File ID: VX048252.D Date Analyzed: 10/21/2025
 Instrument ID: MSVOA_X Time Analyzed: 08:43
 GC Column: DB-624UI ID: 0.18 (mm) Heated Purge: (Y/N) N

	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
12 HOUR STD	144122	5.53	227103	6.74	197016	10.04
UPPER LIMIT	288244	6.031	454206	7.238	394032	10.537
LOWER LIMIT	72061	5.031	113552	6.238	98508	9.537
EPA SAMPLE NO.						
FRAC-TANK-0760450	117685	5.54	236203	6.75	265928	10.04
VX1021WBL01	121915	5.53	240535	6.75	247603	10.04
VX1021WBS01	141199	5.54	230109	6.74	212342	10.04
VX1021WBSD01	137604	5.53	224103	6.74	203364	10.04

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.

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Alliance Contract: ICES02
 Lab Code: ACE SDG NO.: Q3400
 Lab File ID: VX048252.D Date Analyzed: 10/21/2025
 Instrument ID: MSVOA_X Time Analyzed: 08:43
 GC Column: DB-624UI ID: 0.18 (mm) Heated Purge: (Y/N) N

	IS4 AREA #	RT #				
12 HOUR STD	96991	12.00€				
UPPER LIMIT	193982	12.50€				
LOWER LIMIT	48495.5	11.50€				
EPA SAMPLE NO.						
FRAC-TANK-0760450	136752	12.01				
VX1021WBL01	126551	12.01				
VX1021WBS01	110789	12.01				
VX1021WBSD01	101316	12.01				

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

Report of Analysis

Client: ICE Service Group, Inc.
 Project: NWIRP Northrup Grumman Site – Bethpage, NY
 Client Sample ID: FRAC-TANK-0760450
 Lab Sample ID: Q3400-01
 Analytical Method: 8260D
 Sample Wt/Vol: 5 mL

Level : LOW
 Final Vol: 5000 uL

Date Collected: 10/20/25
 Date Received: 10/20/25
 SDG No.: Q3400
 Matrix: Water
 % Solid: 0
 Test: VOC-TCLVOA-10

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Date Ana.	BatchID
TARGETS										
75-71-8	Dichlorodifluoromethane	0.50	U	1	0.22	0.50	1.00	ug/L	10/21/25 16:46	VX102125
74-87-3	Chloromethane	0.50	U	1	0.32	0.50	1.00	ug/L	10/21/25 16:46	VX102125
75-01-4	Vinyl Chloride	0.75	U	1	0.26	0.75	1.00	ug/L	10/21/25 16:46	VX102125
74-83-9	Bromomethane	3.80	U	1	1.40	3.80	5.00	ug/L	10/21/25 16:46	VX102125
75-00-3	Chloroethane	0.75	U	1	0.47	0.75	1.00	ug/L	10/21/25 16:46	VX102125
75-69-4	Trichlorofluoromethane	0.50	U	1	0.33	0.50	1.00	ug/L	10/21/25 16:46	VX102125
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	1	0.25	0.50	1.00	ug/L	10/21/25 16:46	VX102125
75-35-4	1,1-Dichloroethene	0.75	U	1	0.23	0.75	1.00	ug/L	10/21/25 16:46	VX102125
67-64-1	Acetone	5.10		1	1.50	3.80	5.00	ug/L	10/21/25 16:46	VX102125
75-15-0	Carbon Disulfide	0.75	U	1	0.21	0.75	1.00	ug/L	10/21/25 16:46	VX102125
1634-04-4	Methyl tert-butyl Ether	0.50	U	1	0.16	0.50	1.00	ug/L	10/21/25 16:46	VX102125
79-20-9	Methyl Acetate	0.75	U	1	0.27	0.75	1.00	ug/L	10/21/25 16:46	VX102125
75-09-2	Methylene Chloride	0.50	U	1	0.28	0.50	1.00	ug/L	10/21/25 16:46	VX102125
156-60-5	trans-1,2-Dichloroethene	0.50	U	1	0.23	0.50	1.00	ug/L	10/21/25 16:46	VX102125
75-34-3	1,1-Dichloroethane	0.50	U	1	0.23	0.50	1.00	ug/L	10/21/25 16:46	VX102125
110-82-7	Cyclohexane	2.50	U	1	1.50	2.50	5.00	ug/L	10/21/25 16:46	VX102125
78-93-3	2-Butanone	2.50	U	1	0.98	2.50	5.00	ug/L	10/21/25 16:46	VX102125
56-23-5	Carbon Tetrachloride	0.50	U	1	0.25	0.50	1.00	ug/L	10/21/25 16:46	VX102125
156-59-2	cis-1,2-Dichloroethene	9.70		1	0.19	0.75	1.00	ug/L	10/21/25 16:46	VX102125
74-97-5	Bromochloromethane	0.50	U	1	0.22	0.50	1.00	ug/L	10/21/25 16:46	VX102125
67-66-3	Chloroform	0.50	U	1	0.25	0.50	1.00	ug/L	10/21/25 16:46	VX102125
71-55-6	1,1,1-Trichloroethane	0.50	U	1	0.20	0.50	1.00	ug/L	10/21/25 16:46	VX102125
108-87-2	Methylcyclohexane	0.50	U	1	0.16	0.50	1.00	ug/L	10/21/25 16:46	VX102125
71-43-2	Benzene	0.50	U	1	0.15	0.50	1.00	ug/L	10/21/25 16:46	VX102125
107-06-2	1,2-Dichloroethane	0.50	U	1	0.22	0.50	1.00	ug/L	10/21/25 16:46	VX102125
79-01-6	Trichloroethene	86.7		1	0.090	0.75	1.00	ug/L	10/21/25 16:46	VX102125
78-87-5	1,2-Dichloropropane	17.2		1	0.20	0.50	1.00	ug/L	10/21/25 16:46	VX102125
75-27-4	Bromodichloromethane	0.50	U	1	0.22	0.50	1.00	ug/L	10/21/25 16:46	VX102125
108-10-1	4-Methyl-2-Pentanone	2.50	U	1	0.68	2.50	5.00	ug/L	10/21/25 16:46	VX102125
108-88-3	Toluene	0.50	U	1	0.14	0.50	1.00	ug/L	10/21/25 16:46	VX102125
10061-02-6	t-1,3-Dichloropropene	0.50	U	1	0.17	0.50	1.00	ug/L	10/21/25 16:46	VX102125
10061-01-5	cis-1,3-Dichloropropene	0.50	U	1	0.16	0.50	1.00	ug/L	10/21/25 16:46	VX102125
79-00-5	1,1,2-Trichloroethane	0.50	U	1	0.21	0.50	1.00	ug/L	10/21/25 16:46	VX102125
591-78-6	2-Hexanone	2.50	U	1	0.89	2.50	5.00	ug/L	10/21/25 16:46	VX102125
124-48-1	Dibromochloromethane	0.50	U	1	0.18	0.50	1.00	ug/L	10/21/25 16:46	VX102125
106-93-4	1,2-Dibromoethane	0.50	U	1	0.15	0.50	1.00	ug/L	10/21/25 16:46	VX102125
127-18-4	Tetrachloroethene	6.50		1	0.23	0.50	1.00	ug/L	10/21/25 16:46	VX102125
108-90-7	Chlorobenzene	0.50	U	1	0.12	0.50	1.00	ug/L	10/21/25 16:46	VX102125
100-41-4	Ethyl Benzene	0.50	U	1	0.13	0.50	1.00	ug/L	10/21/25 16:46	VX102125
179601-23-1	m/p-Xylenes	1.00	U	1	0.24	1.00	2.00	ug/L	10/21/25 16:46	VX102125
95-47-6	o-Xylene	0.50	U	1	0.12	0.50	1.00	ug/L	10/21/25 16:46	VX102125
100-42-5	Styrene	0.50	U	1	0.15	0.50	1.00	ug/L	10/21/25 16:46	VX102125
75-25-2	Bromoform	0.50	U	1	0.19	0.50	1.00	ug/L	10/21/25 16:46	VX102125



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

Report of Analysis

Client:	ICE Service Group, Inc.	Date Collected:	10/20/25
Project:	NWIRP Northrup Grumman Site – Bethpage, NY	Date Received:	10/20/25
Client Sample ID:	FRAC-TANK-0760450	SDG No.:	Q3400
Lab Sample ID:	Q3400-01	Matrix:	Water
Analytical Method:	8260D	% Solid:	0
Sample Wt/Vol:	5 mL	Test:	VOC-TCLVOA-10
	Level : LOW		
	Final Vol: 5000 uL		

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Date Ana.	BatchID
98-82-8	Isopropylbenzene	0.50	U	1	0.12	0.50	1.00	ug/L	10/21/25 16:46	VX102125
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	1	0.26	0.50	1.00	ug/L	10/21/25 16:46	VX102125
541-73-1	1,3-Dichlorobenzene	0.50	U	1	0.16	0.50	1.00	ug/L	10/21/25 16:46	VX102125
106-46-7	1,4-Dichlorobenzene	0.50	U	1	0.19	0.50	1.00	ug/L	10/21/25 16:46	VX102125
95-50-1	1,2-Dichlorobenzene	0.50	U	1	0.16	0.50	1.00	ug/L	10/21/25 16:46	VX102125
96-12-8	1,2-Dibromo-3-Chloropropane	0.75	U	1	0.53	0.75	1.00	ug/L	10/21/25 16:46	VX102125
120-82-1	1,2,4-Trichlorobenzene	0.50	U	1	0.20	0.50	1.00	ug/L	10/21/25 16:46	VX102125
87-61-6	1,2,3-Trichlorobenzene	0.75	U	1	0.20	0.75	1.00	ug/L	10/21/25 16:46	VX102125

SURROGATES

17060-07-0	1,2-Dichloroethane-d4	55.7			81 - 118		111%	SPK: 50
1868-53-7	Dibromofluoromethane	47.4			80 - 119		95%	SPK: 50
2037-26-5	Toluene-d8	49.8			89 - 112		100%	SPK: 50
460-00-4	4-Bromofluorobenzene	58.0	*		85 - 114		116%	SPK: 50

INTERNAL STANDARDS

INTERNAL STANDARDS		Area Count
363-72-4	Pentafluorobenzene	118000
540-36-3	1,4-Difluorobenzene	236000
3114-55-4	Chlorobenzene-d5	266000
3855-82-1	1,4-Dichlorobenzene-d4	137000

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_X\Data\VX102125\
 Data File : VX048274.D
 Acq On : 21 Oct 2025 16:46
 Operator : JC/MD
 Sample : Q3400-01
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 24 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 FRAC-TANK-0760450

Quant Time: Oct 24 04:28:49 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
 Quant Title : SW846 8260
 QLast Update : Mon Oct 20 14:13:59 2025
 Response via : Initial Calibration

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

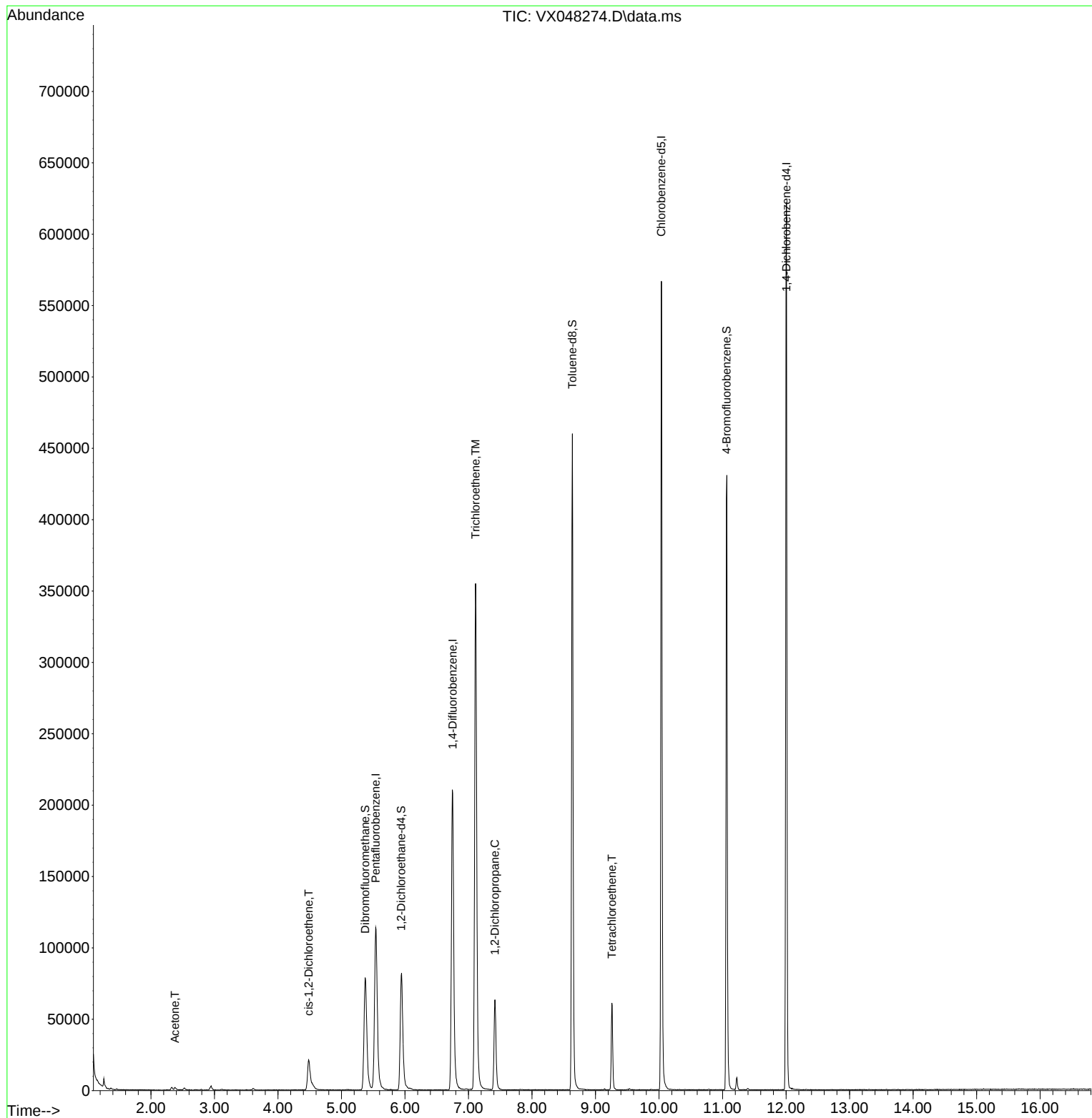
Internal Standards						
1) Pentafluorobenzene	5.538	168	117685	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.751	114	236203	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.037	117	265928	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.006	152	136752	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.940	65	91897	55.694	ug/l	0.00
Spiked Amount	50.000	Range	78 - 117	Recovery	=	111.380%
35) Dibromofluoromethane	5.373	113	76415	47.388	ug/l	0.00
Spiked Amount	50.000	Range	75 - 124	Recovery	=	94.780%
50) Toluene-d8	8.635	98	281369	49.781	ug/l	0.00
Spiked Amount	50.000	Range	92 - 112	Recovery	=	99.560%
62) 4-Bromofluorobenzene	11.061	95	124629	57.961	ug/l	0.00
Spiked Amount	50.000	Range	83 - 123	Recovery	=	115.920%
Target Compounds						
					Qvalue	
16) Acetone	2.380	43	2910	5.141	ug/l	# 84
27) cis-1,2-Dichloroethene	4.483	96	15375	9.707	ug/l	88
44) Trichloroethene	7.111	130	152383	86.725	ug/l	96
45) 1,2-Dichloropropane	7.415	63	27134	17.151	ug/l	99
64) Tetrachloroethene	9.256	164	12958	6.527	ug/l	89

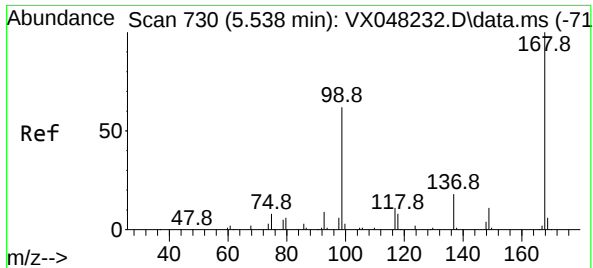
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102125\
Data File : VX048274.D
Acq On : 21 Oct 2025 16:46
Operator : JC/MD
Sample : Q3400-01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 24 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
FRAC-TANK-0760450

Quant Time: Oct 24 04:28:49 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

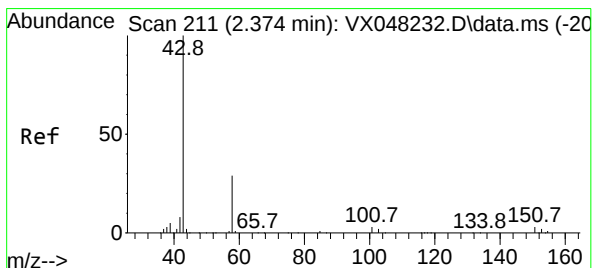
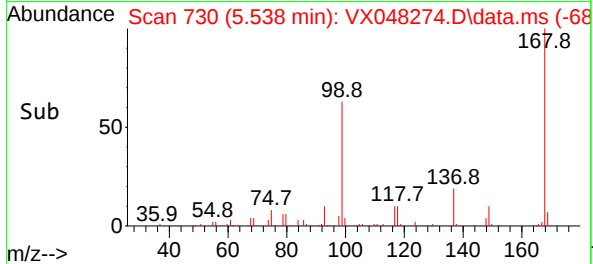
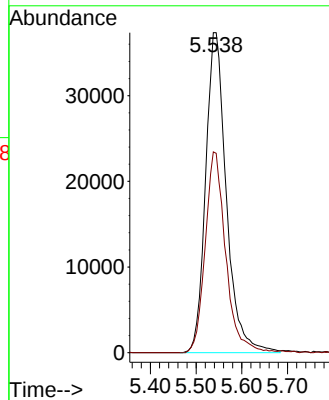
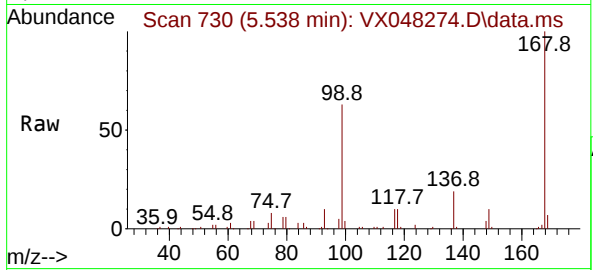




#1
Pentafluorobenzene
Concen: 50.000 ug/l
RT: 5.538 min Scan# 71
Delta R.T. -0.006 min
Lab File: VX048274.D
Acq: 21 Oct 2025 16:46

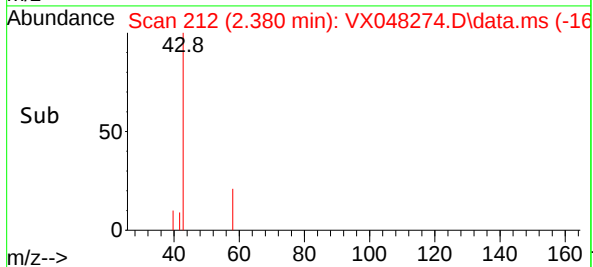
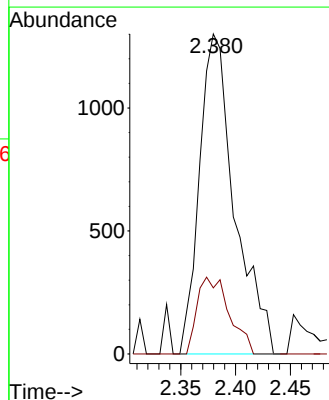
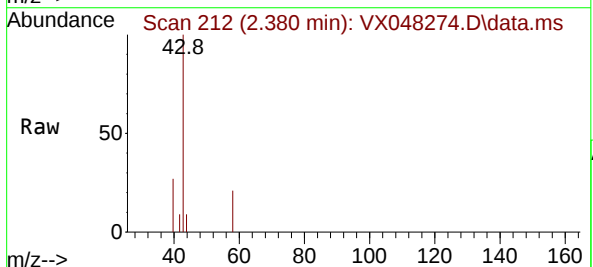
Instrument :
MSVOA_X
ClientSampleId :
FRAC-TANK-0760450

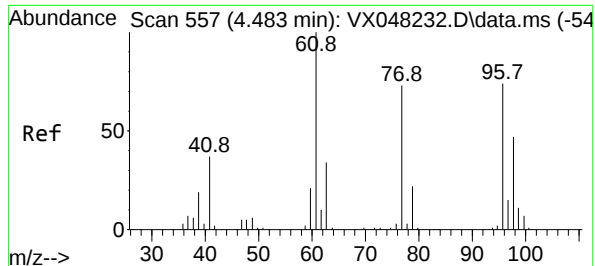
Tgt Ion:168 Resp: 117685
Ion Ratio Lower Upper
168 100
99 62.7 46.4 69.6



#16
Acetone
Concen: 5.141 ug/l
RT: 2.380 min Scan# 212
Delta R.T. 0.006 min
Lab File: VX048274.D
Acq: 21 Oct 2025 16:46

Tgt Ion: 43 Resp: 2910
Ion Ratio Lower Upper
43 100
58 20.7 23.4 35.2#





#27

cis-1,2-Dichloroethene

Concen: 9.707 ug/l

RT: 4.483 min Scan# 51

Delta R.T. -0.000 min

Lab File: VX048274.D

Acq: 21 Oct 2025 16:46

Instrument :

MSVOA_X

ClientSampleId :

FRAC-TANK-0760450

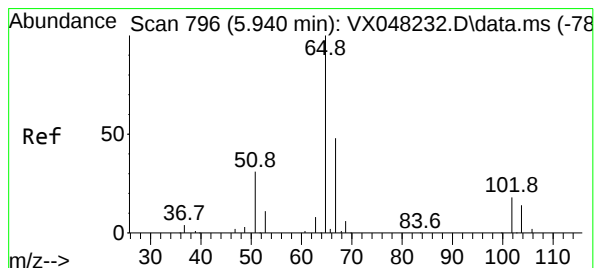
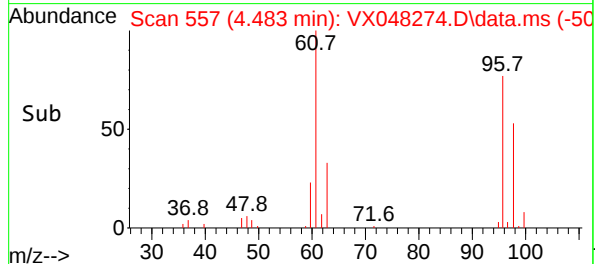
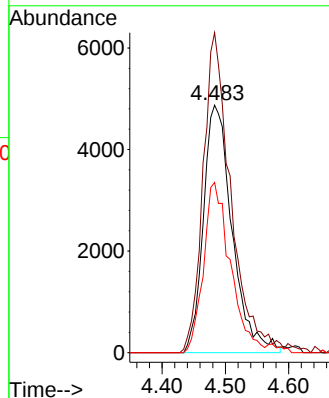
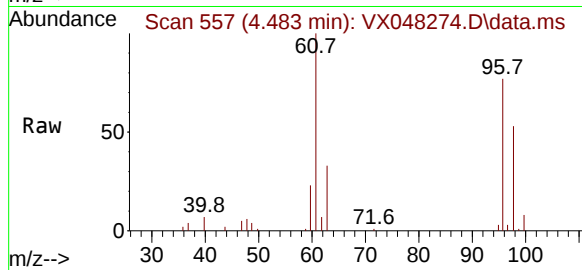
Tgt Ion: 96 Resp: 15375

Ion Ratio Lower Upper

96 100

61 124.8 0.0 294.2

98 64.2 0.0 128.4



#33

1,2-Dichloroethane-d4

Concen: 55.694 ug/l

RT: 5.940 min Scan# 796

Delta R.T. 0.000 min

Lab File: VX048274.D

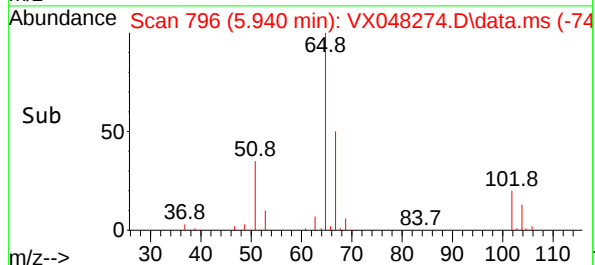
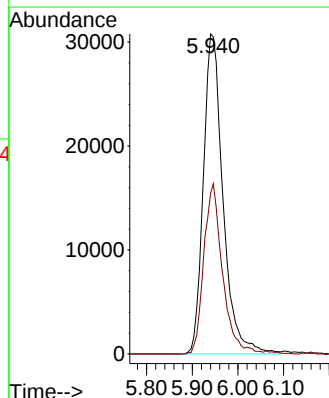
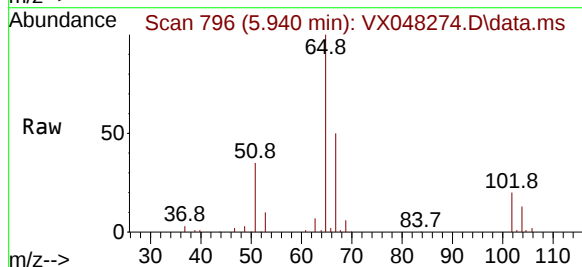
Acq: 21 Oct 2025 16:46

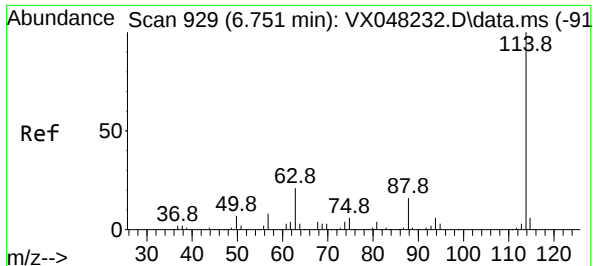
Tgt Ion: 65 Resp: 91897

Ion Ratio Lower Upper

65 100

67 50.5 0.0 105.0

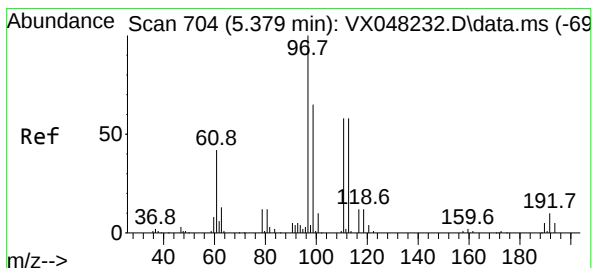
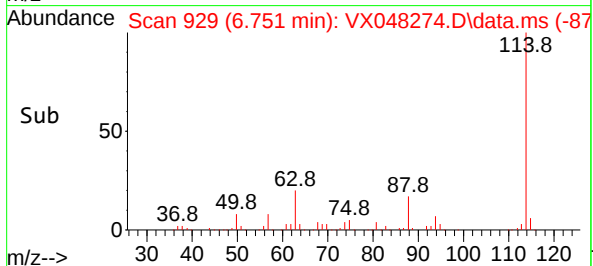
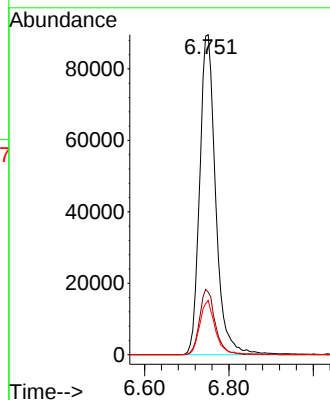
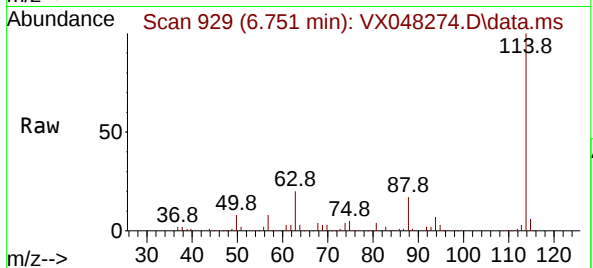




#34
1,4-Difluorobenzene
Concen: 50.000 ug/l
RT: 6.751 min Scan# 91
Delta R.T. 0.006 min
Lab File: VX048274.D
Acq: 21 Oct 2025 16:46

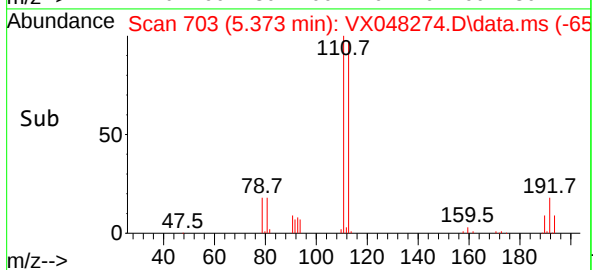
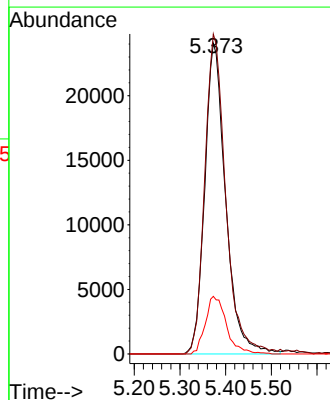
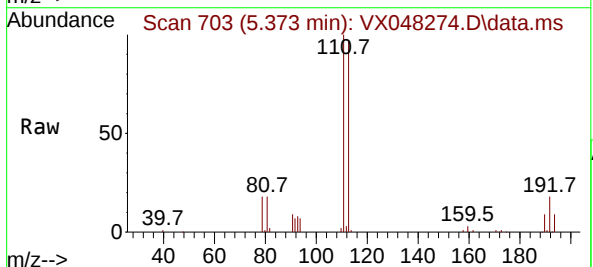
Instrument :
MSVOA_X
ClientSampleId :
FRAC-TANK-0760450

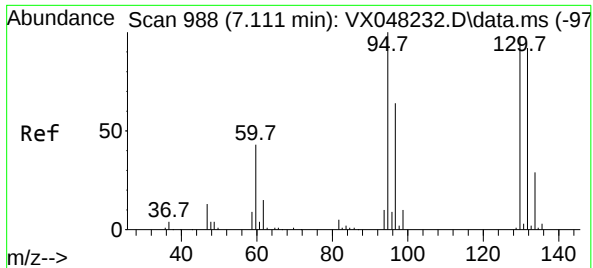
Tgt Ion:114 Resp: 236203
Ion Ratio Lower Upper
114 100
63 19.5 0.0 43.2
88 16.9 0.0 33.6



#35
Dibromofluoromethane
Concen: 47.388 ug/l
RT: 5.373 min Scan# 703
Delta R.T. 0.000 min
Lab File: VX048274.D
Acq: 21 Oct 2025 16:46

Tgt Ion:113 Resp: 76415
Ion Ratio Lower Upper
113 100
111 103.4 82.2 123.4
192 18.8 15.1 22.7

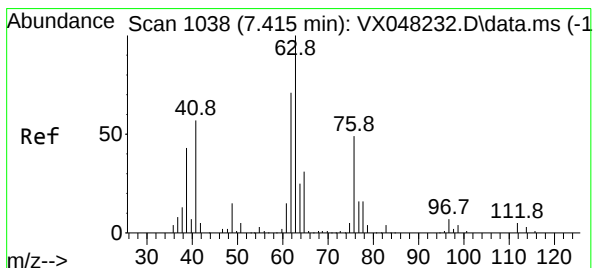
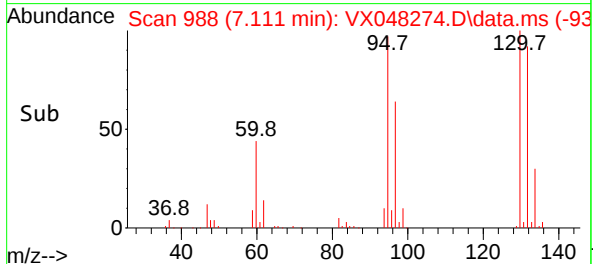
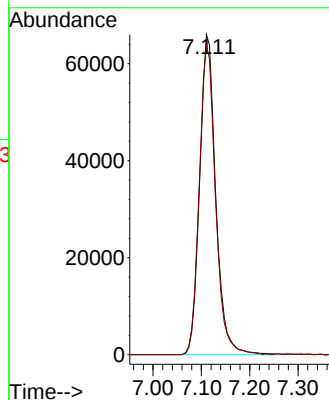
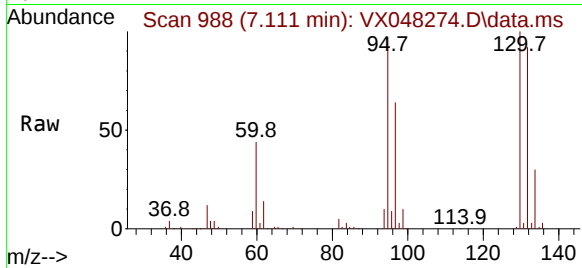




#44
Trichloroethene
Concen: 86.725 ug/l
RT: 7.111 min Scan# 91
Delta R.T. 0.000 min
Lab File: VX048274.D
Acq: 21 Oct 2025 16:46

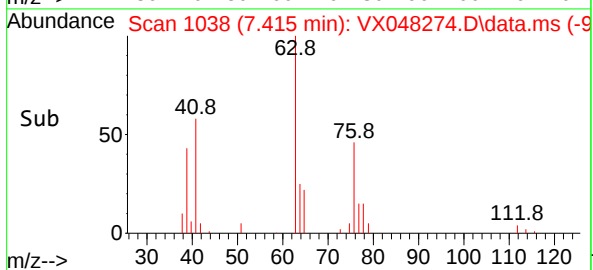
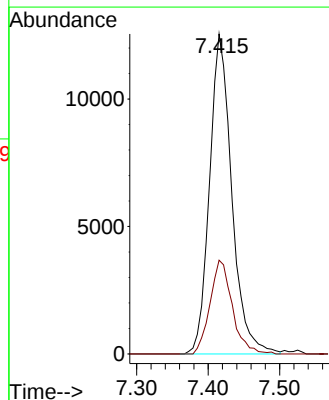
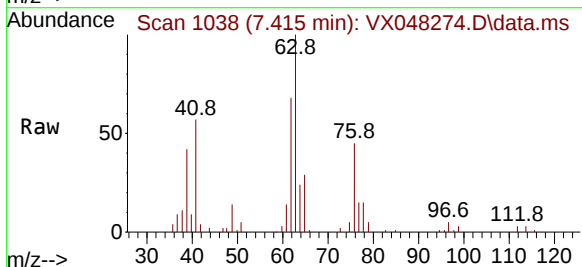
Instrument :
MSVOA_X
ClientSampleId :
FRAC-TANK-0760450

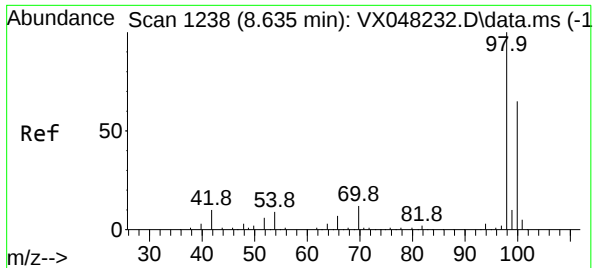
Tgt Ion:130 Resp: 152383
Ion Ratio Lower Upper
130 100
95 96.7 0.0 200.6



#45
1,2-Dichloropropane
Concen: 17.151 ug/l
RT: 7.415 min Scan# 1038
Delta R.T. -0.000 min
Lab File: VX048274.D
Acq: 21 Oct 2025 16:46

Tgt Ion: 63 Resp: 27134
Ion Ratio Lower Upper
63 100
65 29.3 24.1 36.1

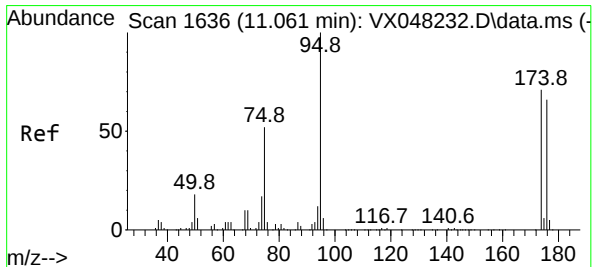
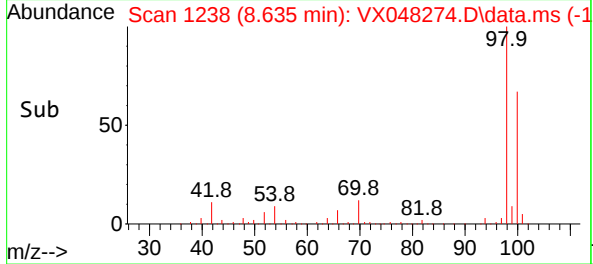
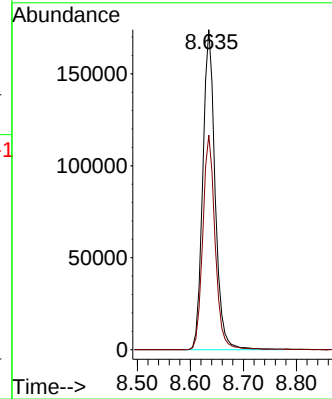
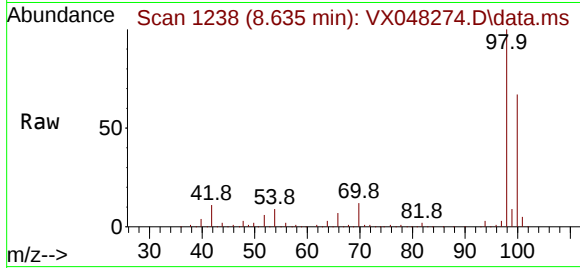




#50
Toluene-d8
Concen: 49.781 ug/l
RT: 8.635 min Scan# 11
Delta R.T. 0.000 min
Lab File: VX048274.D
Acq: 21 Oct 2025 16:46

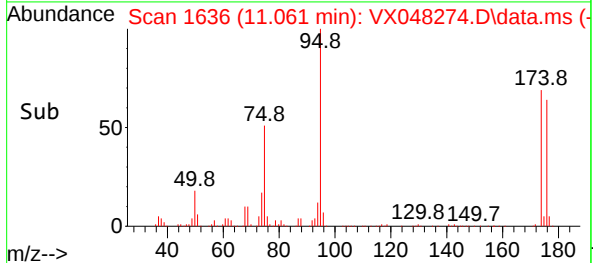
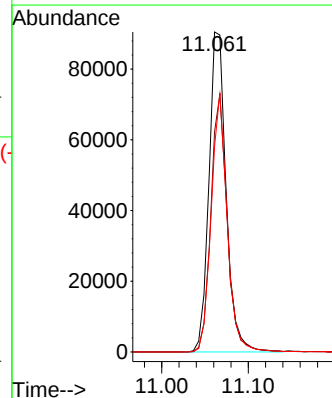
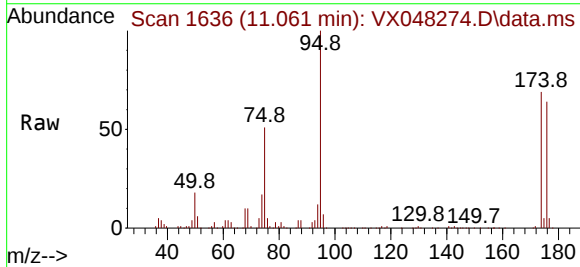
Instrument :
MSVOA_X
ClientSampleId :
FRAC-TANK-0760450

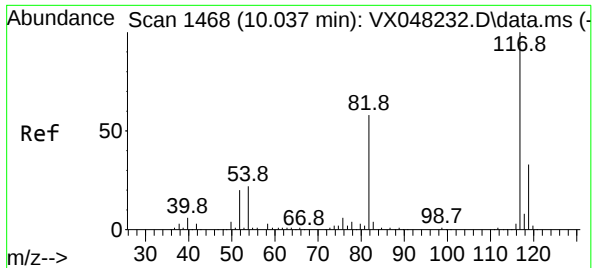
Tgt Ion: 98 Resp: 281369
Ion Ratio Lower Upper
98 100
100 67.0 53.0 79.4



#62
4-Bromofluorobenzene
Concen: 57.961 ug/l
RT: 11.061 min Scan# 1636
Delta R.T. 0.000 min
Lab File: VX048274.D
Acq: 21 Oct 2025 16:46

Tgt Ion: 95 Resp: 124629
Ion Ratio Lower Upper
95 100
174 77.1 0.0 147.8
176 75.2 0.0 142.8

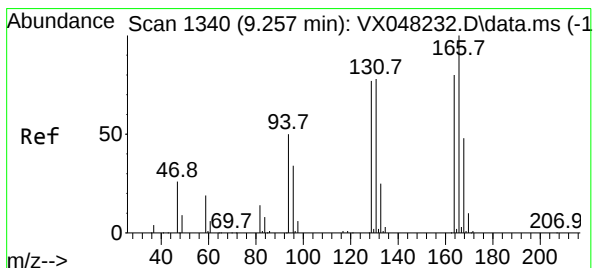
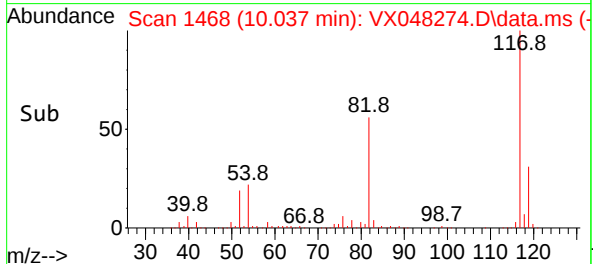
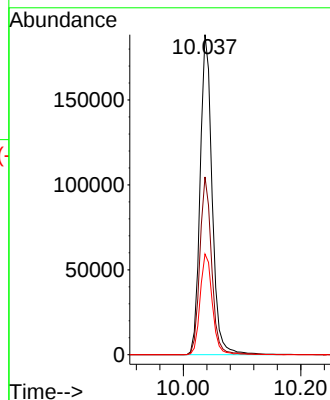
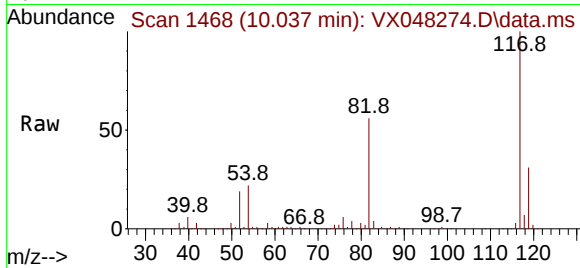




#63
Chlorobenzene-d5
Concen: 50.000 ug/l
RT: 10.037 min Scan# 1468
Delta R.T. -0.000 min
Lab File: VX048274.D
Acq: 21 Oct 2025 16:46

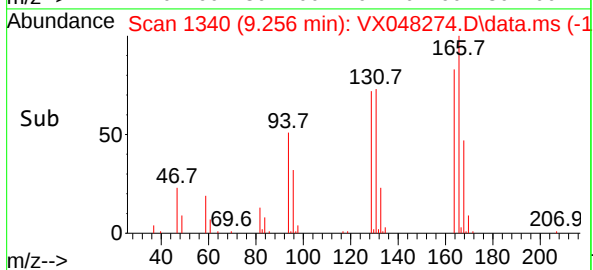
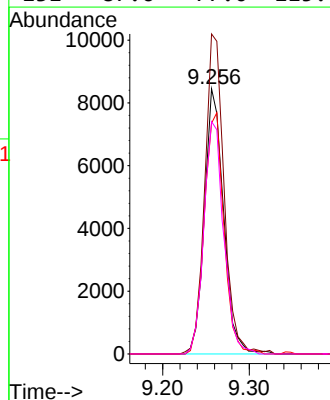
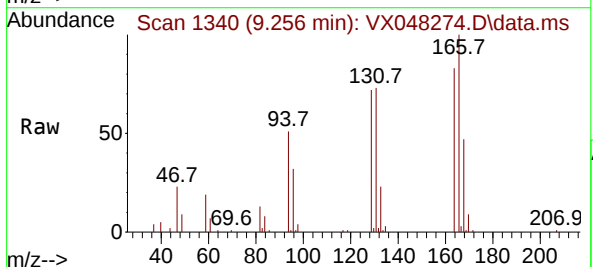
Instrument :
MSVOA_X
ClientSampleId :
FRAC-TANK-0760450

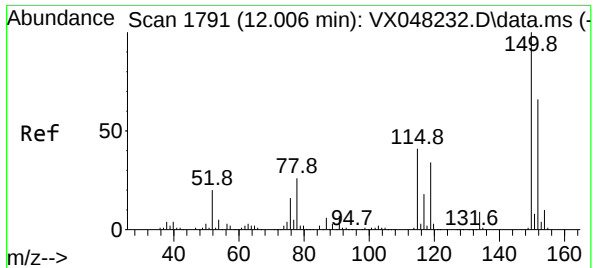
Tgt Ion:117 Resp: 265928
Ion Ratio Lower Upper
117 100
82 55.5 46.5 69.7
119 31.5 25.9 38.9



#64
Tetrachloroethene
Concen: 6.527 ug/l
RT: 9.256 min Scan# 1340
Delta R.T. -0.000 min
Lab File: VX048274.D
Acq: 21 Oct 2025 16:46

Tgt Ion:164 Resp: 12958
Ion Ratio Lower Upper
164 100
166 120.7 104.5 156.7
129 87.0 81.8 122.6
131 87.6 77.0 115.6





#72

1,4-Dichlorobenzene-d4

Concen: 50.000 ug/l

RT: 12.006 min Scan# 11

Delta R.T. 0.000 min

Lab File: VX048274.D

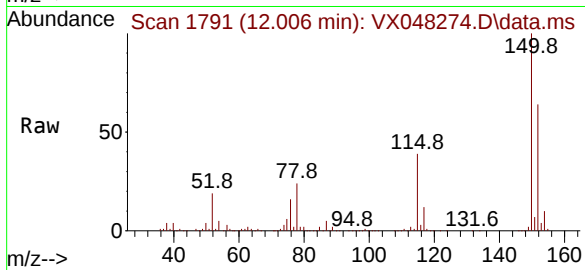
Acq: 21 Oct 2025 16:46

Instrument :

MSVOA_X

ClientSampleId :

FRAC-TANK-0760450



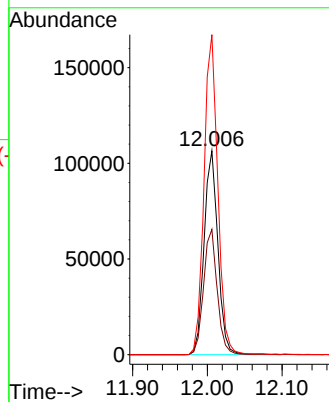
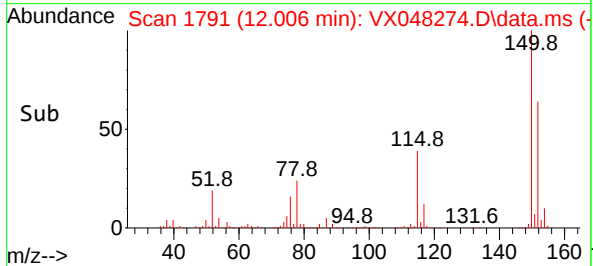
Tgt Ion:152 Resp: 136752

Ion Ratio Lower Upper

152 100

115 61.1 43.1 129.4

150 156.4 0.0 353.0



Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102125\
 Data File : VX048274.D
 Acq On : 21 Oct 2025 16:46
 Operator : JC/MD
 Sample : Q3400-01
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 24 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 FRAC-TANK-0760450

Integration Parameters: RTEINT.P

Integrator: RTE

Smoothing : ON

Filtering: 5

Sampling : 1

Min Area: 3 % of largest Peak

Start Thrs: 0.2

Max Peaks: 100

Stop Thrs : 0

Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >

Peak separation: 5

Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
 Title : SW846 8260

Signal : TIC: VX048274.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.258	25	28	35	rVB	6790	9266	1.12%	0.168%
2	4.483	548	557	586	rBV2	21153	75453	9.11%	1.372%
3	5.373	692	703	720	rBV	78611	248916	30.05%	4.525%
4	5.538	720	730	754	rVB	113531	354573	42.81%	6.446%
5	5.946	786	797	815	rBV	81826	239744	28.95%	4.358%
6	6.745	919	928	945	rBV	210327	544819	65.78%	9.904%
7	7.111	978	988	1012	rBV	354396	828204	100.00%	15.055%
8	7.415	1029	1038	1055	rBV	63070	139972	16.90%	2.544%
9	8.635	1231	1238	1257	rBV	459737	746530	90.14%	13.571%
10	9.256	1332	1340	1354	rBV3	60854	96756	11.68%	1.759%
11	10.037	1462	1468	1490	rBV	566472	799551	96.54%	14.534%
12	11.067	1631	1637	1649	rBV	430550	590624	71.31%	10.736%
13	11.226	1658	1663	1671	rVB	8641	12964	1.57%	0.236%
14	12.006	1785	1791	1800	rBV	621475	813714	98.25%	14.792%

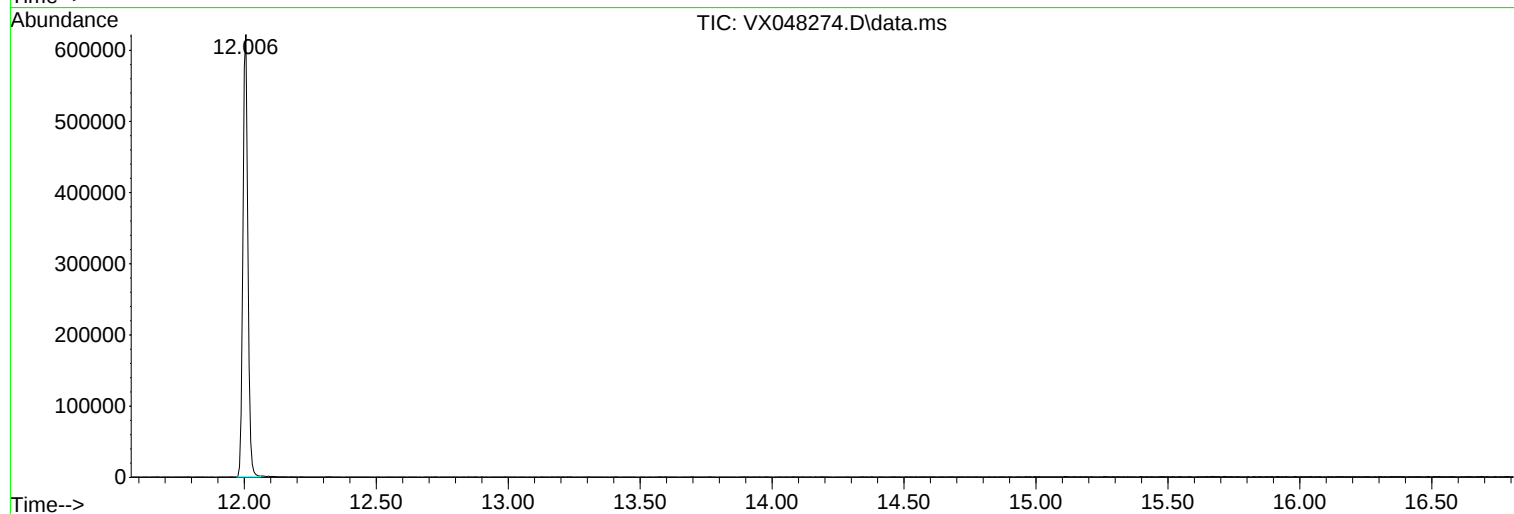
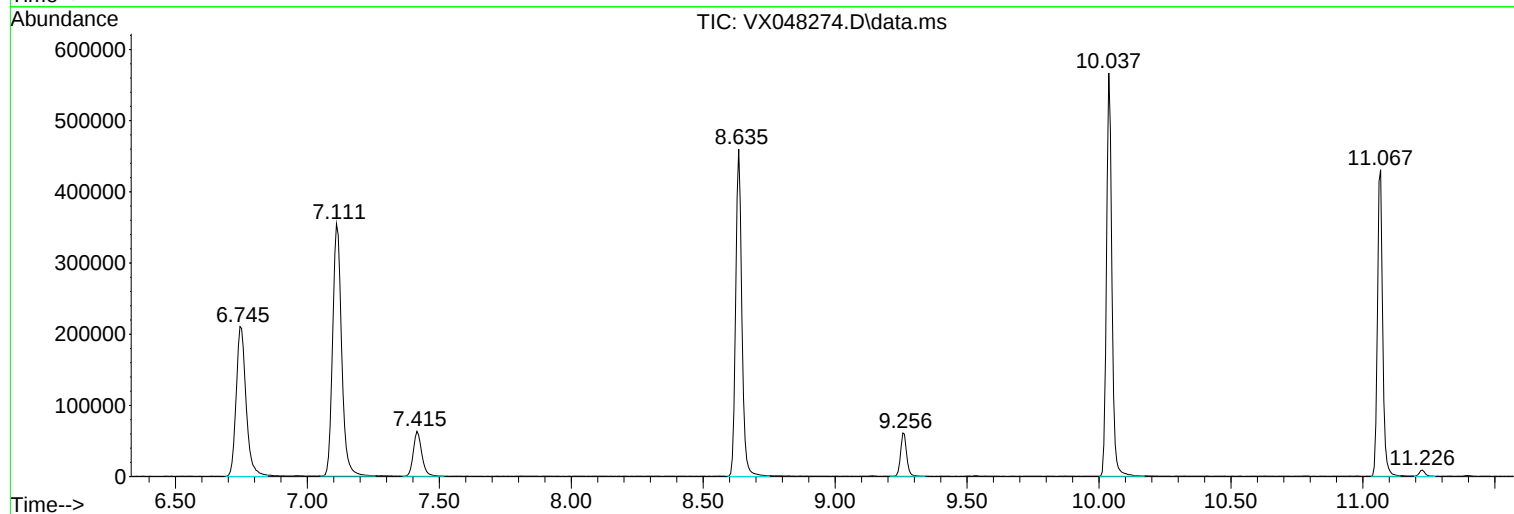
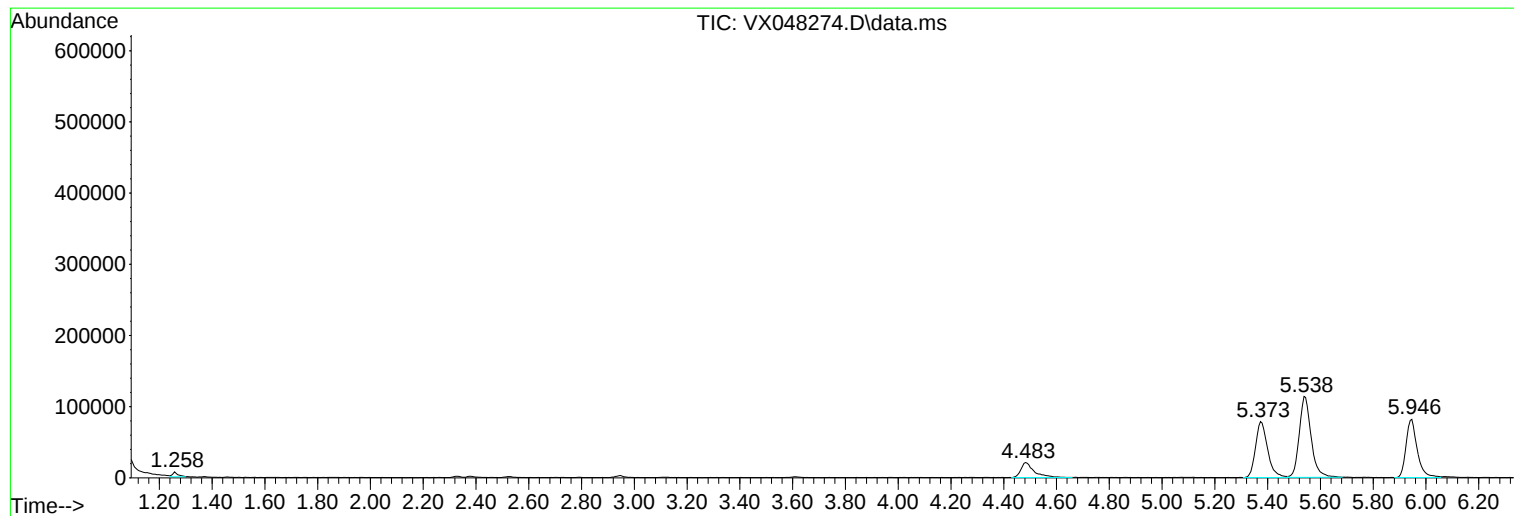
Sum of corrected areas: 5501086

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102125\
Data File : VX048274.D
Acq On : 21 Oct 2025 16:46
Operator : JC/MD
Sample : Q3400-01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 24 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
FRAC-TANK-0760450

Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260

TIC Library : C:\Database\NIST20.L
TIC Integration Parameters: LSCINT.P



Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102125\
Data File : VX048274.D
Acq On : 21 Oct 2025 16:46
Operator : JC/MD
Sample : Q3400-01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 24 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
FRAC-TANK-0760450

Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260

TIC Library : C:\Database\NIST20.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102125\
Data File : VX048274.D
Acq On : 21 Oct 2025 16:46
Operator : JC/MD
Sample : Q3400-01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 24 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
FRAC-TANK-0760450

Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260

TIC Library : C:\Database\NIST20.L
TIC Integration Parameters: LSCINT.P

TIC Top Hit name	RT	EstConc	Units	Response	--Internal Standard--			
					#	RT	Resp	Conc



CALIBRATION SUMMARY



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

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Alliance Contract: ICES02
 Lab Code: ACE SDG No.: Q3400
 Instrument ID: MSVOA_X Calibration Date(s): 10/20/2025 10/20/2025
 Heated Purge: (Y/N) N Calibration Time(s): 10:59 13:49
 GC Column: DB-624UI ID: 0.18 (mm)

LAB FILE ID:		RRF001 = VX048229.D		RRF020 = VX048231.D		RRF050 = VX048232.D			
		RRF100 = VX048233.D		RRF150 = VX048234.D		RRF005 = VX048236.D			
COMPOUND	RRF001	RRF020	RRF050	RRF100	RRF150	RRF005	RRF	% RSD	
Dichlorodifluoromethane	0.522	0.513	0.483	0.540	0.504	0.522	0.514	3.7	
Chloromethane	0.506	0.468	0.449	0.476	0.471	0.508	0.480	4.8	
Vinyl Chloride	0.447	0.437	0.416	0.462	0.445	0.458	0.444	3.7	
Bromomethane		0.323	0.282	0.280	0.276	0.346	0.302	10.4	
Chloroethane	0.233	0.277	0.247	0.282	0.267	0.261	0.261	7.2	
Trichlorofluoromethane	0.776	0.874	0.807	0.907	0.869	0.880	0.852	5.8	
1,1,2-Trichlorotrifluoroethane	0.512	0.540	0.501	0.583	0.549	0.553	0.540	5.5	
1,1-Dichloroethene	0.515	0.548	0.485	0.558	0.531	0.514	0.525	5	
Acetone	0.300	0.250	0.202	0.221	0.206	0.262	0.240	15.7	
Carbon Disulfide	2.034	1.612	1.442	1.617	1.532	1.689	1.654	12.4	
Methyl tert-butyl Ether	1.894	1.909	1.704	1.817	1.764	1.657	1.791	5.7	
Methyl Acetate	0.514	0.551	0.466	0.514	0.504	0.464	0.502	6.6	
Methylene Chloride	0.555	0.651	0.552	0.597	0.567	0.595	0.586	6.4	
trans-1,2-Dichloroethene	0.587	0.585	0.535	0.592	0.558	0.603	0.577	4.4	
1,1-Dichloroethane	1.116	1.085	0.977	1.055	1.019	1.054	1.051	4.6	
Cyclohexane		0.894	0.821	0.926	0.866	0.843	0.870	4.8	
2-Butanone	0.311	0.329	0.281	0.301	0.290	0.315	0.304	5.7	
Carbon Tetrachloride	0.650	0.594	0.553	0.604	0.567	0.622	0.599	5.9	
cis-1,2-Dichloroethene	0.682	0.700	0.626	0.695	0.661	0.673	0.673	4	
Bromochloromethane	0.388	0.404	0.441	0.462	0.452	0.469	0.436	7.5	
Chloroform	1.147	1.208	1.046	1.127	1.067	1.143	1.123	5.2	
1,1,1-Trichloroethane	1.049	1.085	0.973	1.055	1.007	1.041	1.035	3.8	
Methylcyclohexane	0.551	0.548	0.540	0.626	0.582	0.590	0.573	5.7	
Benzene	1.493	1.480	1.301	1.426	1.347	1.405	1.409	5.3	
1,2-Dichloroethane	0.529	0.566	0.500	0.528	0.496	0.499	0.520	5.2	
Trichloroethene	0.400	0.373	0.348	0.380	0.363	0.366	0.372	4.7	
1,2-Dichloropropane	0.309	0.362	0.321	0.347	0.333	0.337	0.335	5.5	
Bromodichloromethane	0.570	0.592	0.538	0.573	0.538	0.567	0.563	3.8	
4-Methyl-2-Pentanone	0.366	0.422	0.377	0.384	0.362	0.374	0.381	5.7	
Toluene	0.881	0.944	0.862	0.910	0.849	0.925	0.895	4.2	

* 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.



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

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Alliance Contract: ICES02
 Lab Code: ACE SDG No.: Q3400
 Instrument ID: MSVOA_X Calibration Date(s): 10/20/2025 10/20/2025
 Heated Purge: (Y/N) N Calibration Time(s): 10:59 13:49
 GC Column: DB-624UI ID: 0.18 (mm)

LAB FILE ID:		RRF001 = VX048229.D		RRF020 = VX048231.D		RRF050 = VX048232.D			
		RRF100 = VX048233.D		RRF150 = VX048234.D		RRF005 = VX048236.D			
COMPOUND	RRF001	RRF020	RRF050	RRF100	RRF150	RRF005	RRF	% RSD	
t-1,3-Dichloropropene	0.477	0.582	0.545	0.574	0.553	0.526	0.543	7	
cis-1,3-Dichloropropene	0.582	0.604	0.572	0.615	0.585	0.556	0.586	3.7	
1,1,2-Trichloroethane	0.318	0.357	0.321	0.333	0.313	0.355	0.333	5.8	
2-Hexanone	0.231	0.298	0.267	0.271	0.256	0.271	0.266	8.3	
Dibromochloromethane	0.482	0.476	0.425	0.442	0.418	0.441	0.447	5.9	
1,2-Dibromoethane	0.346	0.393	0.342	0.359	0.336	0.353	0.355	5.7	
Tetrachloroethene	0.418	0.378	0.328	0.370	0.361	0.385	0.373	7.9	
Chlorobenzene	1.149	1.159	1.045	1.148	1.102	1.145	1.125	3.9	
Ethyl Benzene	1.905	1.954	1.825	2.008	1.922	1.876	1.915	3.3	
m/p-Xylenes	0.647	0.750	0.687	0.750	0.707	0.727	0.712	5.6	
o-Xylene	0.652	0.712	0.664	0.723	0.686	0.684	0.687	3.9	
Styrene	1.054	1.236	1.143	1.247	1.173	1.165	1.170	6	
Bromoform	0.338	0.350	0.308	0.335	0.326	0.325	0.330	4.3	
Isopropylbenzene	3.618	3.656	3.430	3.875	3.754	3.579	3.652	4.2	
1,1,2,2-Tetrachloroethane	0.988	1.065	0.946	1.018	0.992	0.974	0.997	4.1	
1,3-Dichlorobenzene	1.863	1.742	1.550	1.747	1.707	1.750	1.726	5.9	
1,4-Dichlorobenzene	2.143	1.803	1.577	1.724	1.710	1.772	1.788	10.6	
1,2-Dichlorobenzene	1.803	1.631	1.494	1.619	1.588	1.590	1.621	6.3	
1,2-Dibromo-3-Chloropropane	0.167	0.219	0.195	0.224	0.223	0.187	0.202	11.5	
1,2,4-Trichlorobenzene	1.441	0.975	0.959	1.114	1.094	0.994	1.096	16.5	
1,2,3-Trichlorobenzene	1.154	0.942	0.909	1.050	1.033	0.947	1.006	9	
1,2-Dichloroethane-d4		0.709	0.682	0.690	0.698	0.725	0.701	2.4	
Dibromofluoromethane		0.345	0.330	0.346	0.348	0.338	0.341	2.2	
Toluene-d8		1.185	1.185	1.196	1.195	1.221	1.196	1.2	
4-Bromofluorobenzene		0.445	0.444	0.446	0.441	0.500	0.455	5.5	

* 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.

Method Path : Z:\voasrv\HPCHEM1\MSVOA_X\Method\
 Method File : 82X102025W.M
 Title : SW846 8260
 Last Update : Mon Oct 20 14:13:59 2025
 Response Via : Initial Calibration

Calibration Files

1 =VX048229.D 5 =VX048236.D 20 =VX048231.D 50 =VX048232.D 100 =VX048233.D 150 =VX048234.D

	Compound	1	5	20	50	100	150	Avg	%RSD
1) I	Pentafluorobenzene	-----ISTD-----							
2) T	Dichlorodifluo...	0.522	0.522	0.513	0.483	0.540	0.504	0.514	3.74
3) P	Chloromethane	0.506	0.508	0.468	0.449	0.476	0.471	0.480	4.81
4) C	Vinyl Chloride	0.447	0.458	0.437	0.416	0.462	0.445	0.444	3.69#
5) T	Bromomethane		0.346	0.323	0.282	0.280	0.276	0.302	10.42
6) T	Chloroethane	0.233	0.261	0.277	0.247	0.282	0.267	0.261	7.16
7) T	Trichlorofluor...	0.776	0.880	0.874	0.807	0.907	0.869	0.852	5.83
8) T	Diethyl Ether	0.231	0.237	0.257	0.223	0.248	0.242	0.240	5.06
9) T	1,1,2-Trichlor...	0.512	0.553	0.540	0.501	0.583	0.549	0.540	5.48
10) T	Methyl Iodide		0.569	0.636	0.663	0.781	0.742	0.678	12.47
11) T	Tert butyl alc...		0.087	0.069	0.062	0.067	0.064	0.070	14.22
12) CM	1,1-Dichloroet...	0.515	0.514	0.548	0.485	0.558	0.531	0.525	5.03#
13) T	Acrolein		0.079	0.063	0.065	0.074	0.073	0.071	9.21
14) T	Allyl chloride	0.897	0.833	0.909	0.805	0.911	0.874	0.872	5.00
15) T	Acrylonitrile	0.255	0.245	0.267	0.239	0.254	0.246	0.251	3.89
16) T	Acetone	0.300	0.262	0.250	0.202	0.221	0.206	0.240	15.70
17) T	Carbon Disulfide	2.034	1.689	1.612	1.442	1.617	1.532	1.654	12.36
18) T	Methyl Acetate	0.514	0.464	0.551	0.466	0.514	0.504	0.502	6.56
19) T	Methyl tert-bu...	1.894	1.657	1.909	1.704	1.817	1.764	1.791	5.66
20) T	Methylene Chlo...	0.555	0.595	0.651	0.552	0.597	0.567	0.586	6.36
21) T	trans-1,2-Dich...	0.587	0.603	0.585	0.535	0.592	0.558	0.577	4.38
22) T	Diisopropyl ether	1.697	1.701	1.881	1.662	1.787	1.701	1.738	4.69
23) T	Vinyl Acetate	1.261	1.326	1.521	1.348	1.466	1.408	1.389	6.90
24) P	1,1-Dichloroet...	1.116	1.054	1.085	0.977	1.055	1.019	1.051	4.64
25) T	2-Butanone	0.311	0.315	0.329	0.281	0.301	0.290	0.304	5.70
26) T	2,2-Dichloropr...	1.002	0.945	0.973	0.876	0.973	0.924	0.949	4.69
27) T	cis-1,2-Dichlo...	0.682	0.673	0.700	0.626	0.695	0.661	0.673	4.03
28) T	Bromochloromet...	0.388	0.469	0.404	0.441	0.462	0.452	0.436	7.52
29) T	Tetrahydrofuran	0.178	0.183	0.198	0.171	0.184	0.180	0.182	5.00
30) C	Chloroform	1.147	1.143	1.208	1.046	1.127	1.067	1.123	5.22#
31) T	Cyclohexane		0.843	0.894	0.821	0.926	0.866	0.870	4.76
32) T	1,1,1-Trichlor...	1.049	1.041	1.085	0.973	1.055	1.007	1.035	3.83
33) S	1,2-Dichloroet...		0.725	0.709	0.682	0.690	0.698	0.701	2.40
34) I	1,4-Difluorobenzene	-----ISTD-----							
35) S	Dibromofluorom...		0.338	0.345	0.330	0.346	0.348	0.341	2.17
36) T	1,1-Dichloropr...	0.562	0.475	0.491	0.433	0.490	0.460	0.485	8.96
37) T	Ethyl Acetate	0.459	0.396	0.396	0.368	0.410	0.384	0.402	7.71
38) T	Carbon Tetrach...	0.650	0.622	0.594	0.553	0.604	0.567	0.599	5.95
39) T	Methylcyclohexane	0.551	0.590	0.548	0.540	0.626	0.582	0.573	5.73
40) TM	Benzene	1.493	1.405	1.480	1.301	1.426	1.347	1.409	5.30
41) T	Methacrylonitrile	0.192	0.198	0.237	0.205	0.223	0.213	0.211	7.85
42) TM	1,2-Dichloroet...	0.529	0.499	0.566	0.500	0.528	0.496	0.520	5.23
43) T	Isopropyl Acetate	0.659	0.612	0.709	0.635	0.682	0.665	0.661	5.16
44) TM	Trichloroethene	0.400	0.366	0.373	0.348	0.380	0.363	0.372	4.73
45) C	1,2-Dichloropr...	0.309	0.337	0.362	0.321	0.347	0.333	0.335	5.54#
46) T	Dibromomethane	0.267	0.264	0.277	0.247	0.261	0.249	0.261	4.35
47) T	Bromodichlorom...	0.570	0.567	0.592	0.538	0.573	0.538	0.563	3.79
48) T	Methyl methacr...	0.332	0.300	0.356	0.322	0.350	0.340	0.333	6.07
49) T	1,4-Dioxane	0.003	0.004	0.005	0.004	0.005	0.005	0.004	12.99
50) S	Toluene-d8		1.221	1.185	1.185	1.195	1.195	1.196	1.22
51) T	4-Methyl-2-Pen...	0.366	0.374	0.422	0.377	0.384	0.362	0.381	5.71
52) CM	Toluene	0.881	0.925	0.944	0.861	0.910	0.849	0.895	4.15#
53) T	t-1,3-Dichloro...	0.477	0.526	0.582	0.545	0.574	0.553	0.543	7.02
54) T	cis-1,3-Dichlo...	0.582	0.556	0.604	0.572	0.615	0.585	0.586	3.67
55) T	1,1,2-Trichlor...	0.318	0.355	0.357	0.321	0.333	0.313	0.333	5.78
56) T	Ethyl methacry...	0.418	0.451	0.536	0.490	0.524	0.502	0.487	9.17

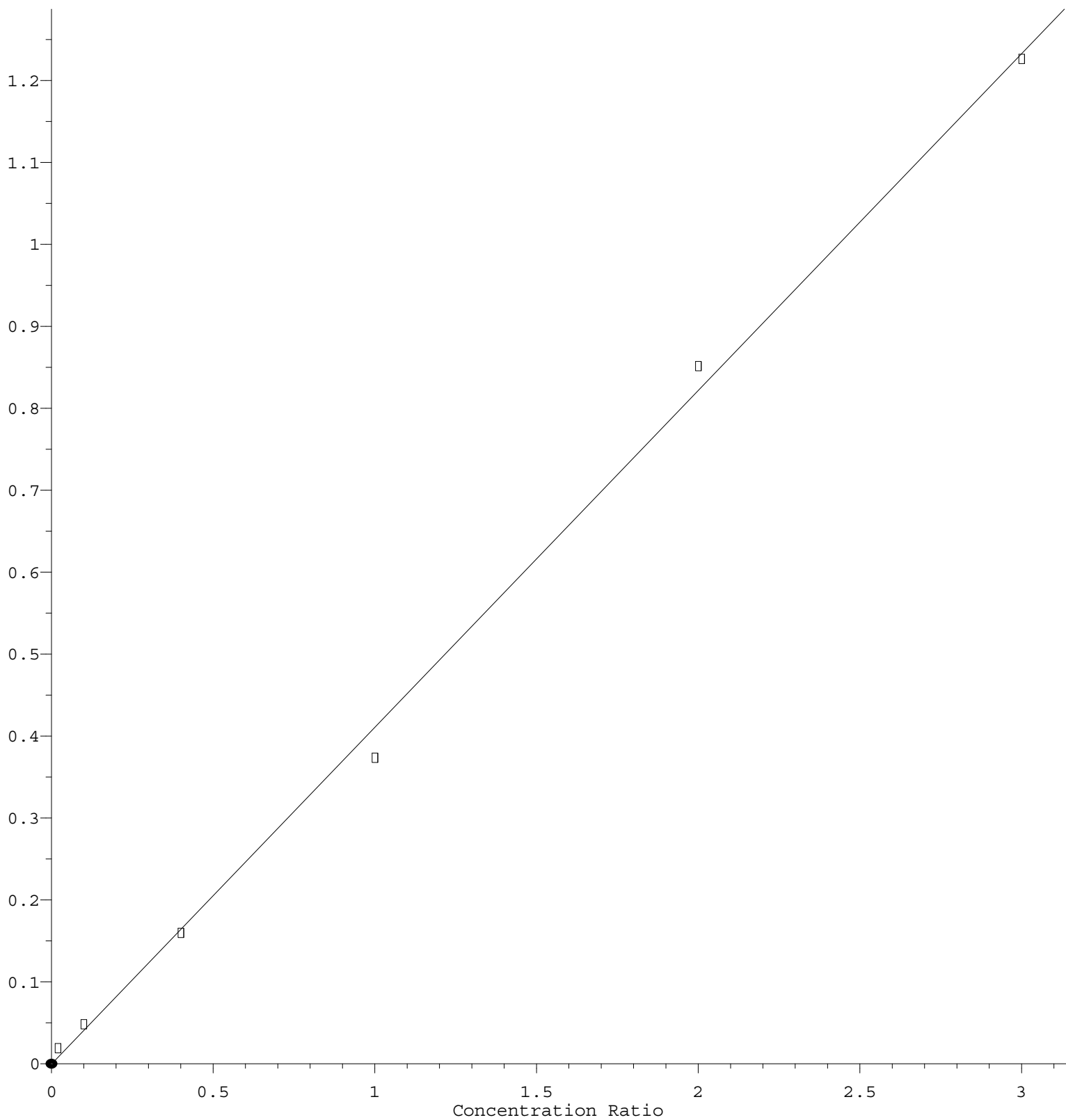
Method Path : Z:\voasrv\HPCHEM1\MSVOA_X\Method\
 Method File : 82X102025W.M

57)	T	1,3-Dichloropr...	0.563	0.572	0.614	0.548	0.572	0.541	0.568	4.51
58)	T	2-Chloroethyl ...	0.154	0.182	0.269	0.260	0.269	0.260	0.232	21.93
59)	T	2-Hexanone	0.231	0.271	0.298	0.267	0.271	0.256	0.266	8.30
60)	T	Dibromochlorom...	0.482	0.441	0.476	0.425	0.442	0.418	0.447	5.89
61)	T	1,2-Dibromoethane	0.346	0.353	0.393	0.342	0.359	0.336	0.355	5.72
62)	S	4-Bromofluorob...	0.500	0.445	0.444	0.446	0.441	0.455		5.51
63)	I	Chlorobenzene-d5	-----ISTD-----							
64)	T	Tetrachloroethene	0.418	0.385	0.378	0.328	0.370	0.361	0.373	7.92
65)	PM	Chlorobenzene	1.149	1.145	1.159	1.045	1.148	1.102	1.125	3.89
66)	T	1,1,1,2-Tetrac...	0.422	0.405	0.423	0.390	0.430	0.409	0.413	3.53
67)	C	Ethyl Benzene	1.905	1.876	1.954	1.825	2.008	1.922	1.915	3.30#
68)	T	m/p-Xylenes	0.647	0.727	0.750	0.687	0.750	0.707	0.712	5.60
69)	T	o-Xylene	0.652	0.684	0.712	0.664	0.723	0.686	0.687	3.93
70)	T	Styrene	1.054	1.165	1.236	1.143	1.247	1.173	1.170	5.98
71)	P	Bromoform	0.338	0.325	0.350	0.308	0.335	0.326	0.330	4.27
72)	I	1,4-Dichlorobenzen...	-----ISTD-----							
73)	T	Isopropylbenzene	3.618	3.579	3.656	3.430	3.875	3.754	3.652	4.17
74)	T	N-amyl acetate	1.229	1.150	1.339	1.248	1.415	1.392	1.295	7.97
75)	P	1,1,2,2-Tetrac...	0.988	0.974	1.065	0.946	1.018	0.992	0.997	4.08
76)	T	1,2,3-Trichlor...	0.929	0.767	0.822	0.735	0.810	0.802	0.811	8.14
77)	T	Bromobenzene	0.940	0.897	0.930	0.858	0.953	0.916	0.916	3.73
78)	T	n-propylbenzene	4.000	4.169	4.255	4.017	4.544	4.385	4.228	5.02
79)	T	2-Chlorotoluene	2.575	2.512	2.615	2.397	2.693	2.590	2.564	3.92
80)	T	1,3,5-Trimethy...	2.988	2.889	3.079	2.861	3.222	3.094	3.022	4.53
81)	T	trans-1,4-Dich...	0.287	0.330	0.316	0.366	0.368	0.333		10.35
82)	T	4-Chlorotoluene	3.097	2.958	3.119	2.883	3.143	3.059	3.043	3.34
83)	T	tert-Butylbenzene	3.128	3.047	3.086	2.915	3.282	3.173	3.105	3.98
84)	T	1,2,4-Trimethy...	2.791	2.991	3.077	2.864	3.247	3.126	3.016	5.61
85)	T	sec-Butylbenzene	3.789	3.690	3.683	3.476	3.969	3.809	3.736	4.39
86)	T	p-Isopropyltol...	3.342	3.222	3.159	2.986	3.399	3.265	3.229	4.53
87)	T	1,3-Dichlorobe...	1.863	1.750	1.742	1.550	1.747	1.707	1.726	5.86
88)	T	1,4-Dichlorobe...	2.143	1.772	1.803	1.577	1.724	1.710	1.788	10.65
89)	T	n-Butylbenzene	3.328	2.869	2.807	2.622	3.073	2.936	2.939	8.22
90)	T	Hexachloroethane	0.680	0.647	0.621	0.569	0.664	0.645	0.638	6.11
91)	T	1,2-Dichlorobe...	1.803	1.590	1.631	1.494	1.619	1.588	1.621	6.25
92)	T	1,2-Dibromo-3-...	0.167	0.187	0.219	0.195	0.224	0.223	0.202	11.51
93)	T	1,2,4-Trichlor...	1.441	0.994	0.975	0.959	1.114	1.094	1.096	16.47
94)	T	Hexachlorobuta...	0.953	0.482	0.399	0.373	0.426	0.409	0.507	43.70
95)	T	Naphthalene	2.942	2.473	2.880	2.776	3.171	3.181	2.904	9.14
96)	T	1,2,3-Trichlor...	1.154	0.947	0.942	0.909	1.050	1.033	1.006	9.04

(#) = Out of Range

Hexachlorobutadiene

Response Ratio



$$\text{Response} = 4.113\text{e-}001 * \text{Amt} - 5.482\text{e-}004$$

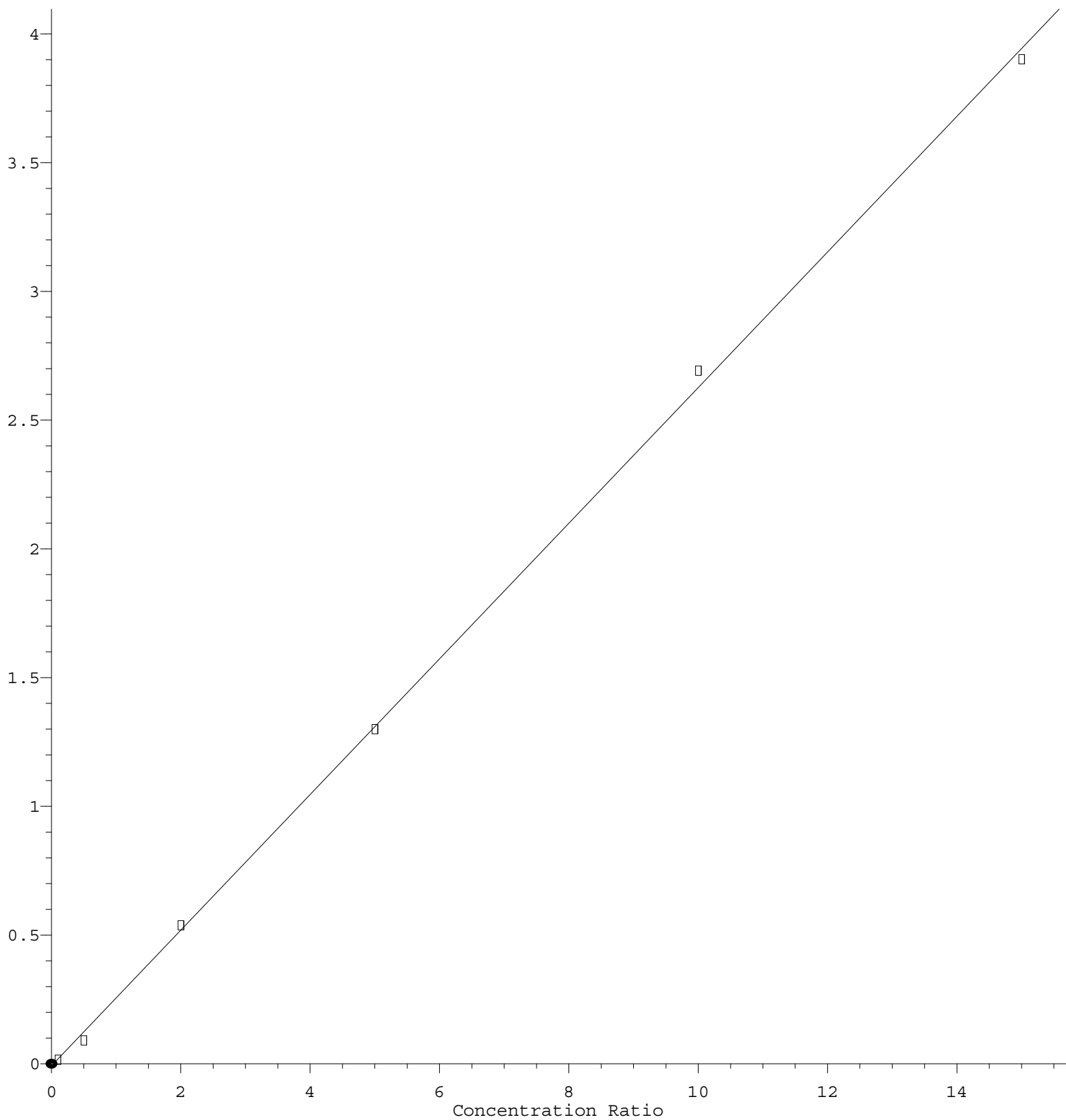
Coef of Det (r^2) = 0.997907 Curve Fit: Linear

Method Name: Z:\voasrv\HPCHEM1\MSVOA X\Method\82X102025W.M

Calibration Table Last Updated: Mon Oct 20 14:13:59 2025

2-Chloroethyl Vinyl ether

Response Ratio



Response = $2.635 \times 10^{-1} \times \text{Amt} - 8.946 \times 10^{-3}$
Coef of Det (r^2) = 0.999382 Curve Fit: Linear
Method Name: Z:\voasrv\HPCHEM1\MSVOA X\Method\82X102025W.M
Calibration Table Last Updated: Mon Oct 20 14:13:59 2025

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
 Data File : VX048229.D
 Acq On : 20 Oct 2025 10:59
 Operator : JC/MD
 Sample : VSTDICC001
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 4 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDICC001

Manual Integrations
 APPROVED

Reviewed By : John Carlone 10/21/2025
 Supervised By : Semsettin Yesilyurt 10/21/2025

Quant Time: Oct 20 12:42:04 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
 Quant Title : SW846 8260
 QLast Update : Mon Oct 20 12:35:14 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	5.544	168	117157	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.745	114	193186	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.037	117	177252	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.006	152	86943	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	78 - 117	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	92 - 112	Recovery	=	0.000%#
62) 4-Bromofluorobenzene	0.000	95	0d	0.000	ug/l	
Spiked Amount	50.000	Range	83 - 123	Recovery	=	0.000%#

Target Compounds

						Qvalue
2) Dichlorodifluoromethane	1.173	85	1223	0.995	ug/l	82
3) Chloromethane	1.301	50	1186	0.796	ug/l #	62
4) Vinyl Chloride	1.380	62	1048	0.668	ug/l	92
6) Chloroethane	1.697	64	545	0.546	ug/l	91
7) Trichlorofluoromethane	1.898	101	1819	0.738	ug/l	98
8) Diethyl Ether	2.142	74	542	0.645	ug/l	81
9) 1,1,2-Trichlorotrifluo...	2.337	101	1199	0.864	ug/l	89
12) 1,1-Dichloroethene	2.325	96	1207	0.889	ug/l	88
14) Allyl chloride	2.666	41	2101	0.860	ug/l	96
15) Acrylonitrile	3.069	53	2984	5.171	ug/l	97
16) Acetone	2.380	43	3519	5.684	ug/l	98
17) Carbon Disulfide	2.520	76	4767	1.141	ug/l #	92
18) Methyl Acetate	2.703	43	1204	0.955	ug/l #	85
19) Methyl tert-butyl Ether	3.111	73	4437	1.085	ug/l	100
20) Methylene Chloride	2.794	84	1301	0.863	ug/l #	76
21) trans-1,2-Dichloroethene	3.099	96	1376	0.980	ug/l	96
22) Diisopropyl ether	3.745	45	3977	0.832	ug/l #	26
23) Vinyl Acetate	3.727	43	14769	4.131	ug/l	95
24) 1,1-Dichloroethane	3.611	63	2615	0.964	ug/l	97
25) 2-Butanone	4.574	43	3638	5.043	ug/l	98
26) 2,2-Dichloropropane	4.465	77	2347	1.012	ug/l	84
27) cis-1,2-Dichloroethene	4.489	96	1598	0.959	ug/l	94
28) Bromochloromethane	4.879	49	908	0.726	ug/l #	69
29) Tetrahydrofuran	5.007	42	2088	4.929	ug/l #	73
30) Chloroform	5.093	83	2688	0.941	ug/l	97
32) 1,1,1-Trichloroethane	5.379	97	2459	1.048	ug/l #	50
36) 1,1-Dichloropropene	5.696	75	2173	1.151	ug/l #	62
37) Ethyl Acetate	4.727	43	1772m	1.174	ug/l	
38) Carbon Tetrachloride	5.672	117	2513m	1.159	ug/l	
39) Methylcyclohexane	7.373	83	2128	0.999	ug/l	94
40) Benzene	6.032	78	5767	1.028	ug/l #	89
41) Methacrylonitrile	4.916	41	741m	0.917	ug/l	
42) 1,2-Dichloroethane	6.080	62	2044	1.017	ug/l	87
43) Isopropyl Acetate	6.336	43	2548	1.006	ug/l #	85
44) Trichloroethene	7.117	130	1547	1.094	ug/l	83
45) 1,2-Dichloropropane	7.422	63	1195	0.842	ug/l	96

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
 Data File : VX048229.D
 Acq On : 20 Oct 2025 10:59
 Operator : JC/MD
 Sample : VSTDICC001
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 4 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDICC001

Manual Integrations
 APPROVED

Reviewed By : John Carlone 10/21/2025
 Supervised By : Semsettin Yesilyurt 10/21/2025

Quant Time: Oct 20 12:42:04 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
 Quant Title : SW846 8260
 QLast Update : Mon Oct 20 12:35:14 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
46) Dibromomethane	7.574	93	1032	1.011	ug/l	95
47) Bromodichloromethane	7.812	83	2204	0.999	ug/l #	79
48) Methyl methacrylate	7.684	41	1283	0.989	ug/l	95
49) 1,4-Dioxane	7.665	88	255	21.840	ug/l #	34
51) 4-Methyl-2-Pentanone	8.562	43	7066	5.011	ug/l	91
52) Toluene	8.708	92	3403	1.010	ug/l	95
53) t-1,3-Dichloropropene	8.970	75	1844	0.892	ug/l #	74
54) cis-1,3-Dichloropropene	8.360	75	2250	0.998	ug/l	90
55) 1,1,2-Trichloroethane	9.147	97	1229	0.977	ug/l #	85
56) Ethyl methacrylate	9.104	69	1616	0.945	ug/l	96
57) 1,3-Dichloropropane	9.299	76	2174	0.989	ug/l	93
58) 2-Chloroethyl Vinyl ether	8.232	63	2970	3.381	ug/l	100
59) 2-Hexanone	9.421	43	4456	4.518	ug/l	92
60) Dibromochloromethane	9.507	129	1862	1.183	ug/l	95
61) 1,2-Dibromoethane	9.598	107	1338	1.037	ug/l	98
64) Tetrachloroethene	9.257	164	1482	1.192	ug/l	92
65) Chlorobenzene	10.067	112	4073	1.051	ug/l	90
66) 1,1,1,2-Tetrachloroethane	10.147	131	1495	1.070	ug/l #	66
67) Ethyl Benzene	10.177	91	6752	1.016	ug/l	97
68) m/p-Xylenes	10.287	106	4589	1.854	ug/l	90
69) o-Xylene	10.628	106	2313	0.993	ug/l	99
70) Styrene	10.640	104	3737	0.932	ug/l	96
71) Bromoform	10.787	173	1198	1.168	ug/l #	99
73) Isopropylbenzene	10.945	105	6291	1.040	ug/l	93
74) N-amyl acetate	10.829	43	2137	0.947	ug/l #	90
75) 1,1,2,2-Tetrachloroethane	11.195	83	1718	1.003	ug/l	90
76) 1,2,3-Trichloropropane	11.220	75	1615m	1.216	ug/l	
77) Bromobenzene	11.183	156	1635	1.080	ug/l	91
78) n-propylbenzene	11.287	91	6956	0.949	ug/l	94
79) 2-Chlorotoluene	11.348	91	4477	1.010	ug/l	97
80) 1,3,5-Trimethylbenzene	11.433	105	5196	1.047	ug/l	97
82) 4-Chlorotoluene	11.439	91	5385	1.034	ug/l	99
83) tert-Butylbenzene	11.695	119	5439	1.085	ug/l	91
84) 1,2,4-Trimethylbenzene	11.738	105	4854	0.982	ug/l	99
85) sec-Butylbenzene	11.872	105	6589	1.075	ug/l	99
86) p-Isopropyltoluene	11.994	119	5812	1.125	ug/l	91
87) 1,3-Dichlorobenzene	11.951	146	3239	1.145	ug/l	96
88) 1,4-Dichlorobenzene	12.024	146	3727m	1.270	ug/l	
89) n-Butylbenzene	12.317	91	5787	1.202	ug/l	98
90) Hexachloroethane	12.518	117	1182	1.084	ug/l	77
91) 1,2-Dichlorobenzene	12.317	146	3135	1.172	ug/l	96
92) 1,2-Dibromo-3-Chloropr...	12.933	75	290	0.926	ug/l	79
93) 1,2,4-Trichlorobenzene	13.573	180	2505	1.587	ug/l	90
94) Hexachlorobutadiene	13.707	225	1658	2.724	ug/l	97
95) Naphthalene	13.762	128	5116	1.230	ug/l	98
96) 1,2,3-Trichlorobenzene	13.945	180	2006	1.377	ug/l	100

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

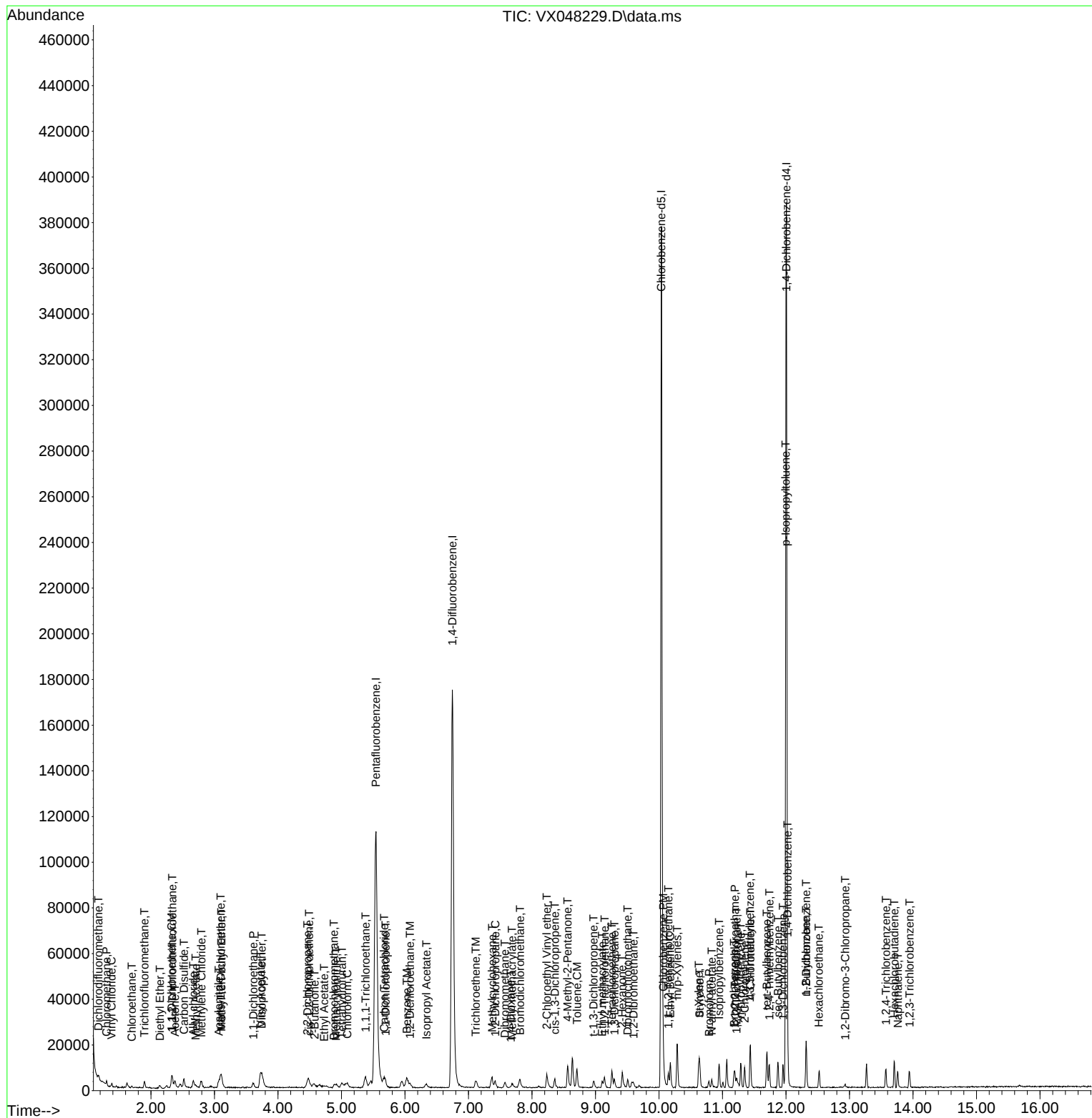
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048229.D
Acq On : 20 Oct 2025 10:59
Operator : JC/MD
Sample : VSTDIC001
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC001

Manual Integrations APPROVED

Reviewed By :John Carlone 10/21/2025
Supervised By :Semsettin Yesilyurt 10/21/2025

Quant Time: Oct 20 12:42:04 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 12:35:14 2025
Response via : Initial Calibration



Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
 Data File : VX048231.D
 Acq On : 20 Oct 2025 11:40
 Operator : JC/MD
 Sample : VSTDICC020
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 6 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDICC020

Manual Integrations
 APPROVED

Reviewed By : John Carlone 10/21/2025
 Supervised By : Semsettin Yesilyurt 10/21/2025

Quant Time: Oct 20 12:37:32 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
 Quant Title : SW846 8260
 QLast Update : Mon Oct 20 12:35:14 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	5.538	168	119626	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.745	114	195028	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.037	117	178975	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.006	152	90972	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.946	65	33936	18.312	ug/l	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery =	36.620%#		
35) Dibromofluoromethane	5.373	113	26897	19.872	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery =	39.740%#		
50) Toluene-d8	8.635	98	92476	18.965	ug/l	0.00
Spiked Amount 50.000	Range 92 - 112		Recovery =	37.920%#		
62) 4-Bromofluorobenzene	11.061	95	34724	19.551	ug/l	0.00
Spiked Amount 50.000	Range 83 - 123		Recovery =	39.100%#		
Target Compounds						
					Qvalue	
2) Dichlorodifluoromethane	1.179	85	24524	19.532	ug/l	98
3) Chloromethane	1.300	50	22401	14.727	ug/l	100
4) Vinyl Chloride	1.380	62	20913	13.048	ug/l	94
5) Bromomethane	1.617	94	15473	14.517	ug/l	100
6) Chloroethane	1.697	64	13249	12.990	ug/l	93
7) Trichlorofluoromethane	1.898	101	41824	16.625	ug/l	98
8) Diethyl Ether	2.136	74	12293	14.325	ug/l	87
9) 1,1,2-Trichlorotrifluo...	2.337	101	25843	18.229	ug/l	96
10) Methyl Iodide	2.459	142	30452	17.934	ug/l	99
11) Tert butyl alcohol	2.947	59	16521	134.353	ug/l	100
12) 1,1-Dichloroethene	2.325	96	26209	18.907	ug/l	92
13) Acrolein	2.239	56	15157	58.651	ug/l	99
14) Allyl chloride	2.666	41	43494	17.443	ug/l	98
15) Acrylonitrile	3.056	53	63931	108.499	ug/l	97
16) Acetone	2.373	43	59884	94.723	ug/l	96
17) Carbon Disulfide	2.520	76	77142	18.087	ug/l	98
18) Methyl Acetate	2.703	43	26374	20.482	ug/l	92
19) Methyl tert-butyl Ether	3.111	73	91349	21.877	ug/l	100
20) Methylene Chloride	2.794	84	31157	20.231	ug/l	88
21) trans-1,2-Dichloroethene	3.093	96	28001	19.525	ug/l	94
22) Diisopropyl ether	3.751	45	90030	18.439	ug/l	87
23) Vinyl Acetate	3.715	43	364009	99.706	ug/l	98
24) 1,1-Dichloroethane	3.605	63	51927	18.746	ug/l	98
25) 2-Butanone	4.544	43	78643	106.774	ug/l	95
26) 2,2-Dichloropropane	4.465	77	46568	19.669	ug/l	99
27) cis-1,2-Dichloroethene	4.483	96	33508	19.688	ug/l	98
28) Bromochloromethane	4.891	49	19339	15.146	ug/l	90
29) Tetrahydrofuran	4.995	42	47457	109.718	ug/l	94
30) Chloroform	5.080	83	57780	19.813	ug/l	99
31) Cyclohexane	5.464	56	42796	18.882	ug/l	95
32) 1,1,1-Trichloroethane	5.373	97	51929	21.672	ug/l	98
36) 1,1-Dichloropropene	5.684	75	38270	20.071	ug/l	99
37) Ethyl Acetate	4.702	43	30904	20.280	ug/l #	95
38) Carbon Tetrachloride	5.666	117	46323	21.166	ug/l	98
39) Methylcyclohexane	7.366	83	42776	19.897	ug/l	94
40) Benzene	6.025	78	115488	20.398	ug/l	99

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
 Data File : VX048231.D
 Acq On : 20 Oct 2025 11:40
 Operator : JC/MD
 Sample : VSTDICC020
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 6 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDICC020

Manual Integrations
 APPROVED

Reviewed By : John Carlone 10/21/2025
 Supervised By : Semsettin Yesilyurt 10/21/2025

Quant Time: Oct 20 12:37:32 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
 Quant Title : SW846 8260
 QLast Update : Mon Oct 20 12:35:14 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	4.916	41	18461	22.621	ug/l	97
42) 1,2-Dichloroethane	6.074	62	44176	21.778	ug/l	100
43) Isopropyl Acetate	6.324	43	55317	21.625	ug/l	96
44) Trichloroethene	7.110	130	29108	20.399	ug/l	90
45) 1,2-Dichloropropane	7.421	63	28242	19.709	ug/l	97
46) Dibromomethane	7.568	93	21605	20.955	ug/l	92
47) Bromodichloromethane	7.805	83	46221	20.743	ug/l	100
48) Methyl methacrylate	7.677	41	27751	21.193	ug/l	94
49) 1,4-Dioxane	7.647	88	7620	646.470	ug/l	91
51) 4-Methyl-2-Pentanone	8.555	43	164708	115.713	ug/l	94
52) Toluene	8.702	92	73623	21.635	ug/l	98
53) t-1,3-Dichloropropene	8.964	75	45416	21.756	ug/l	99
54) cis-1,3-Dichloropropene	8.354	75	47130	20.713	ug/l	96
55) 1,1,2-Trichloroethane	9.134	97	27884	21.961	ug/l	98
56) Ethyl methacrylate	9.104	69	41809	24.210	ug/l	93
57) 1,3-Dichloropropane	9.293	76	47896	21.591	ug/l	100
58) 2-Chloroethyl Vinyl ether	8.226	63	104883	118.278	ug/l	96
59) 2-Hexanone	9.415	43	116268	116.777	ug/l	95
60) Dibromochloromethane	9.506	129	37127	23.361	ug/l	98
61) 1,2-Dibromoethane	9.598	107	30639	23.533	ug/l	96
64) Tetrachloroethene	9.256	164	27043	21.550	ug/l	89
65) Chlorobenzene	10.061	112	83004	21.211	ug/l	99
66) 1,1,1,2-Tetrachloroethane	10.146	131	30278	21.471	ug/l	98
67) Ethyl Benzene	10.177	91	139895	20.852	ug/l	98
68) m/p-Xylenes	10.287	106	107377	42.962	ug/l	100
69) o-Xylene	10.622	106	50950	21.655	ug/l	98
70) Styrene	10.640	104	88481	21.848	ug/l	99
71) Bromoform	10.780	173	25027	24.168	ug/l #	100
73) Isopropylbenzene	10.945	105	133034	21.025	ug/l	99
74) N-amyl acetate	10.829	43	48726	20.642	ug/l	96
75) 1,1,2,2-Tetrachloroethane	11.195	83	38748	21.616	ug/l	98
76) 1,2,3-Trichloropropane	11.219	75	29913m	21.533	ug/l	
77) Bromobenzene	11.183	156	33843	21.374	ug/l	95
78) n-propylbenzene	11.286	91	154839	20.180	ug/l	98
79) 2-Chlorotoluene	11.347	91	95156	20.526	ug/l	99
80) 1,3,5-Trimethylbenzene	11.433	105	112057	21.575	ug/l	100
81) trans-1,4-Dichloro-2-b...	11.000	75	12001	21.154	ug/l	94
82) 4-Chlorotoluene	11.439	91	113495	20.833	ug/l	98
83) tert-Butylbenzene	11.695	119	112305	21.403	ug/l	97
84) 1,2,4-Trimethylbenzene	11.732	105	111976	21.652	ug/l	100
85) sec-Butylbenzene	11.872	105	134014	20.891	ug/l	100
86) p-Isopropyltoluene	11.994	119	114969	21.263	ug/l	99
87) 1,3-Dichlorobenzene	11.951	146	63377	21.403	ug/l	99
88) 1,4-Dichlorobenzene	12.024	146	65612	21.375	ug/l	99
89) n-Butylbenzene	12.317	91	102140	20.281	ug/l	99
90) Hexachloroethane	12.518	117	22609	19.811	ug/l	94
91) 1,2-Dichlorobenzene	12.317	146	59345	21.212	ug/l	99
92) 1,2-Dibromo-3-Chloropr...	12.920	75	7983	24.372	ug/l	94
93) 1,2,4-Trichlorobenzene	13.567	180	35465	21.473	ug/l	98
94) Hexachlorobutadiene	13.707	225	14529	22.810	ug/l	98
95) Naphthalene	13.756	128	104803	24.073	ug/l	99
96) 1,2,3-Trichlorobenzene	13.945	180	34276	22.493	ug/l	99

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048231.D
Acq On : 20 Oct 2025 11:40
Operator : JC/MD
Sample : VSTDICC020
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC020

Manual Integrations
APPROVED

Reviewed By :John Carlone 10/21/2025
Supervised By :Semsettin Yesilyurt 10/21/2025

Quant Time: Oct 20 12:37:32 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 12:35:14 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

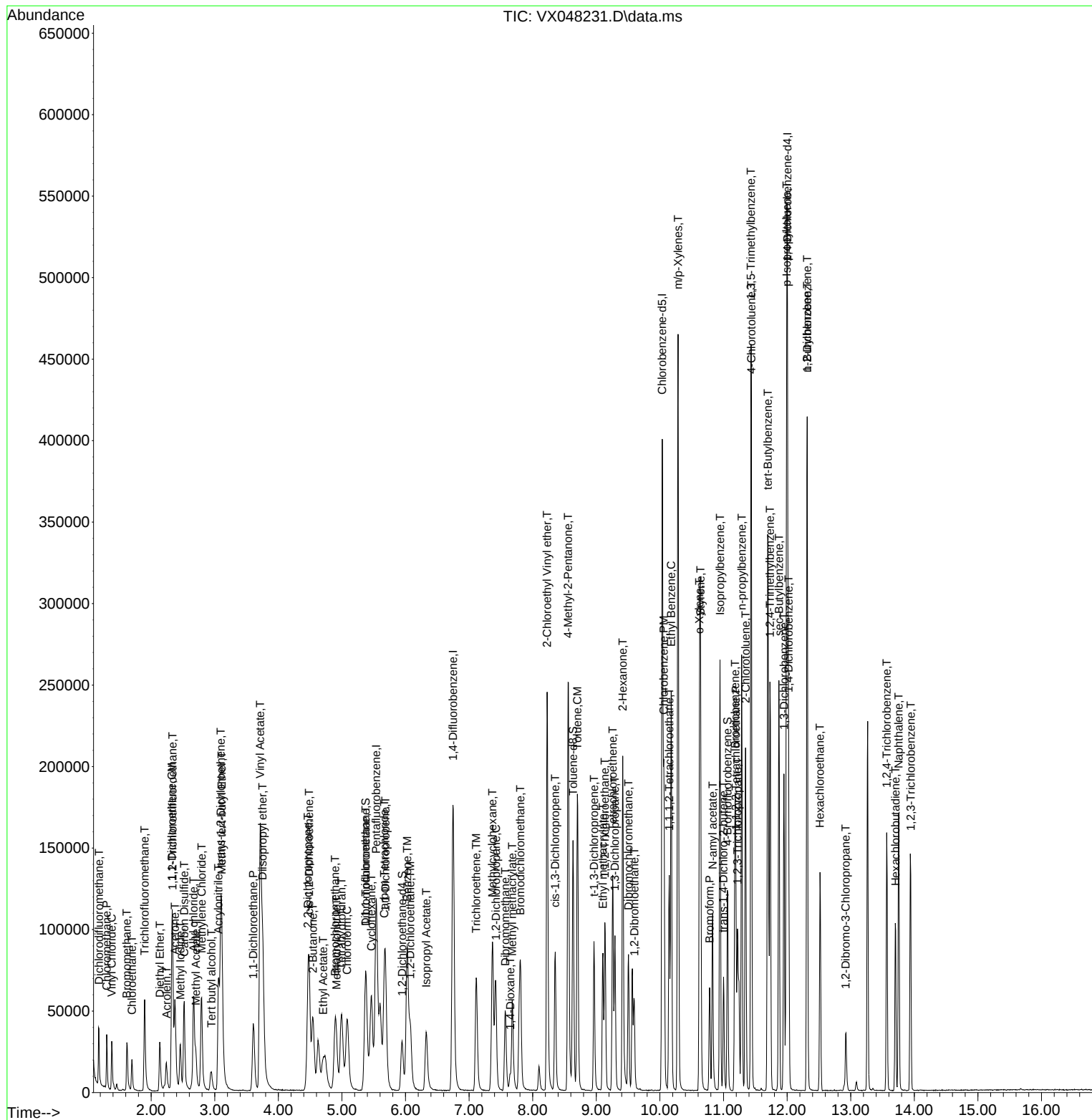
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048231.D
Acq On : 20 Oct 2025 11:40
Operator : JC/MD
Sample : VSTDICC020
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC020

Manual Integrations APPROVED

Reviewed By :John Carlone 10/21/2025
Supervised By :Semsettin Yesilyurt 10/21/2025

Quant Time: Oct 20 12:37:32 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 12:35:14 2025
Response via : Initial Calibration



Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
 Data File : VX048232.D
 Acq On : 20 Oct 2025 12:01
 Operator : JC/MD
 Sample : VSTDICCC050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 7 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDICCC050

Manual Integrations
 APPROVED

Reviewed By : John Carlone 10/21/2025
 Supervised By : Semsettin Yesilyurt 10/21/2025

Quant Time: Oct 20 12:35:48 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
 Quant Title : SW846 8260
 QLast Update : Mon Oct 20 12:35:14 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	5.538	168	124491	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.751	114	201906	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.037	117	184494	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.006	152	92693	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.940	65	84951	44.048	ug/l	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery =	88.100%		
35) Dibromofluoromethane	5.379	113	66593	47.523	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery =	95.040%		
50) Toluene-d8	8.635	98	239295	47.402	ug/l	0.00
Spiked Amount 50.000	Range 92 - 112		Recovery =	94.800%		
62) 4-Bromofluorobenzene	11.061	95	89579	48.719	ug/l	0.00
Spiked Amount 50.000	Range 83 - 123		Recovery =	97.440%		
Target Compounds					Qvalue	
2) Dichlorodifluoromethane	1.173	85	60172	46.052	ug/l	98
3) Chloromethane	1.301	50	55934	35.336	ug/l	100
4) Vinyl Chloride	1.380	62	51819	31.067	ug/l	99
5) Bromomethane	1.618	94	35101	31.646	ug/l	98
6) Chloroethane	1.697	64	30718	28.940	ug/l	95
7) Trichlorofluoromethane	1.898	101	100423	38.358	ug/l	99
8) Diethyl Ether	2.136	74	27723	31.044	ug/l	87
9) 1,1,2-Trichlorotrifluo...	2.337	101	62391	42.290	ug/l	95
10) Methyl Iodide	2.459	142	82552	46.716	ug/l	99
11) Tert butyl alcohol	2.947	59	38534	301.123	ug/l	99
12) 1,1-Dichloroethene	2.325	96	60330	41.821	ug/l	94
13) Acrolein	2.239	56	40536	150.726	ug/l	100
14) Allyl chloride	2.666	41	100234	38.627	ug/l	97
15) Acrylonitrile	3.056	53	149009	243.004	ug/l	100
16) Acetone	2.374	43	126003	191.520	ug/l	100
17) Carbon Disulfide	2.514	76	179492	40.440	ug/l	99
18) Methyl Acetate	2.703	43	58071	43.336	ug/l	91
19) Methyl tert-butyl Ether	3.111	73	212092	48.809	ug/l	96
20) Methylene Chloride	2.788	84	68663	42.841	ug/l	94
21) trans-1,2-Dichloroethene	3.093	96	66608	44.631	ug/l	96
22) Diisopropyl ether	3.757	45	206901	40.720	ug/l	91
23) Vinyl Acetate	3.715	43	839370	220.927	ug/l	97
24) 1,1-Dichloroethane	3.611	63	121657	42.204	ug/l	99
25) 2-Butanone	4.544	43	175075	228.411	ug/l	93
26) 2,2-Dichloropropane	4.471	77	109062	44.264	ug/l	99
27) cis-1,2-Dichloroethene	4.483	96	77911	43.988	ug/l	98
28) Bromochloromethane	4.885	49	54919	41.331	ug/l	85
29) Tetrahydrofuran	4.989	42	106381	236.335	ug/l	93
30) Chloroform	5.087	83	130274	42.925	ug/l	96
31) Cyclohexane	5.465	56	102251	43.351	ug/l	92
32) 1,1,1-Trichloroethane	5.373	97	121090	48.560	ug/l	99
36) 1,1-Dichloropropene	5.684	75	87493	44.323	ug/l	98
37) Ethyl Acetate	4.702	43	74261	47.073	ug/l	97
38) Carbon Tetrachloride	5.666	117	111708	49.302	ug/l	98
39) Methylcyclohexane	7.367	83	109077	49.008	ug/l	94
40) Benzene	6.025	78	262745	44.825	ug/l	98

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
 Data File : VX048232.D
 Acq On : 20 Oct 2025 12:01
 Operator : JC/MD
 Sample : VSTDICCC050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 7 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDICCC050

Manual Integrations
 APPROVED

Reviewed By :John Carlone 10/21/2025
 Supervised By :Semsettin Yesilyurt 10/21/2025

Quant Time: Oct 20 12:35:48 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
 Quant Title : SW846 8260
 QLast Update : Mon Oct 20 12:35:14 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	4.904	41	41293	48.874	ug/l	96
42) 1,2-Dichloroethane	6.074	62	100937	48.064	ug/l	99
43) Isopropyl Acetate	6.324	43	128290	48.444	ug/l	96
44) Trichloroethene	7.111	130	70313	47.597	ug/l	98
45) 1,2-Dichloropropane	7.415	63	64895	43.746	ug/l	99
46) Dibromomethane	7.568	93	49874	46.726	ug/l	94
47) Bromodichloromethane	7.806	83	108671	47.107	ug/l	97
48) Methyl methacrylate	7.678	41	65057	47.990	ug/l	94
49) 1,4-Dioxane	7.647	88	17905	1467.288	ug/l	90
51) 4-Methyl-2-Pentanone	8.555	43	380665	258.320	ug/l	95
52) Toluene	8.702	92	173942	49.373	ug/l	100
53) t-1,3-Dichloropropene	8.964	75	109960	50.880	ug/l	99
54) cis-1,3-Dichloropropene	8.354	75	115534	49.046	ug/l	93
55) 1,1,2-Trichloroethane	9.135	97	64737	49.248	ug/l	96
56) Ethyl methacrylate	9.104	69	98851	55.290	ug/l	94
57) 1,3-Dichloropropane	9.293	76	110709	48.206	ug/l	99
58) 2-Chloroethyl Vinyl ether	8.226	63	262387	285.817	ug/l	95
59) 2-Hexanone	9.415	43	269143	261.113	ug/l	96
60) Dibromochloromethane	9.506	129	85760	52.123	ug/l	98
61) 1,2-Dibromoethane	9.592	107	69022	51.208	ug/l	99
64) Tetrachloroethene	9.257	164	60510	46.776	ug/l	96
65) Chlorobenzene	10.061	112	192841	47.805	ug/l	99
66) 1,1,1,2-Tetrachloroethane	10.147	131	71930	49.482	ug/l	98
67) Ethyl Benzene	10.177	91	336660	48.680	ug/l	99
68) m/p-Xylenes	10.287	106	253662	98.455	ug/l	100
69) o-Xylene	10.622	106	122582	50.542	ug/l	98
70) Styrene	10.640	104	210861	50.508	ug/l	100
71) Bromoform	10.781	173	56874	53.279	ug/l #	100
73) Isopropylbenzene	10.945	105	317974	49.321	ug/l	100
74) N-amyl acetate	10.823	43	115683	48.098	ug/l	96
75) 1,1,2,2-Tetrachloroethane	11.195	83	87705	48.020	ug/l	99
76) 1,2,3-Trichloropropane	11.220	75	68104m	48.115	ug/l	
77) Bromobenzene	11.183	156	79543	49.303	ug/l	94
78) n-propylbenzene	11.287	91	372312	47.621	ug/l	98
79) 2-Chlorotoluene	11.348	91	222217	47.045	ug/l	98
80) 1,3,5-Trimethylbenzene	11.433	105	265174	50.108	ug/l	100
81) trans-1,4-Dichloro-2-b...	11.000	75	29295	50.678	ug/l	98
82) 4-Chlorotoluene	11.439	91	267236	48.142	ug/l	98
83) tert-Butylbenzene	11.695	119	270202	50.539	ug/l	96
84) 1,2,4-Trimethylbenzene	11.732	105	265485	50.381	ug/l	99
85) sec-Butylbenzene	11.872	105	322219	49.298	ug/l	100
86) p-Isopropyltoluene	11.994	119	276821	50.246	ug/l	99
87) 1,3-Dichlorobenzene	11.951	146	143699	47.627	ug/l	99
88) 1,4-Dichlorobenzene	12.024	146	146196	46.744	ug/l	99
89) n-Butylbenzene	12.317	91	243063	47.367	ug/l	99
90) Hexachloroethane	12.518	117	52735	45.350	ug/l	96
91) 1,2-Dichlorobenzene	12.317	146	138489	48.582	ug/l	99
92) 1,2-Dibromo-3-Chloropr...	12.927	75	18059	54.111	ug/l	99
93) 1,2,4-Trichlorobenzene	13.567	180	88920	52.839	ug/l	99
94) Hexachlorobutadiene	13.707	225	34615	53.334	ug/l	97
95) Naphthalene	13.756	128	257281	57.999	ug/l	100
96) 1,2,3-Trichlorobenzene	13.939	180	84279	54.281	ug/l	98

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048232.D
Acq On : 20 Oct 2025 12:01
Operator : JC/MD
Sample : VSTDICCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDICCC050

Manual Integrations
APPROVED

Reviewed By :John Carlone 10/21/2025
Supervised By :Semsettin Yesilyurt 10/21/2025

Quant Time: Oct 20 12:35:48 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 12:35:14 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

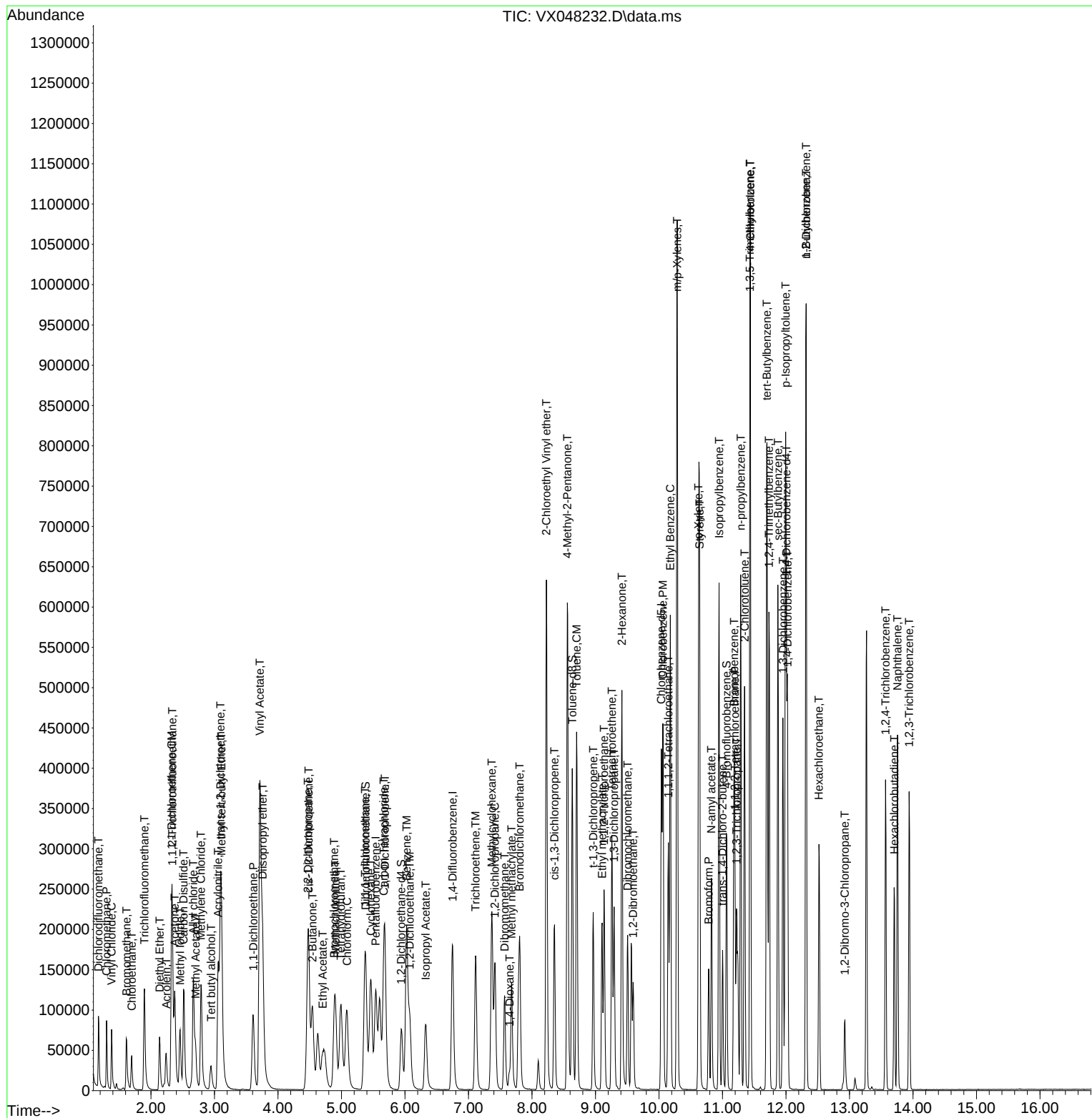
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Data File : VX048232.D
Acq On : 20 Oct 2025 12:01
Operator : JC/MD
Sample : VSTDICCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDICCC050

Manual Integrations APPROVED

Reviewed By :John Carlone 10/21/2025
Supervised By :Semsettin Yesilyurt 10/21/2025

Quant Time: Oct 20 12:35:48 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 12:35:14 2025
Response via : Initial Calibration



Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
 Data File : VX048233.D
 Acq On : 20 Oct 2025 12:22
 Operator : JC/MD
 Sample : VSTDICC100
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 8 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDICC100

Manual Integrations
 APPROVED

Reviewed By : John Carlone 10/21/2025
 Supervised By : Semsettin Yesilyurt 10/21/2025

Quant Time: Oct 20 12:46:16 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
 Quant Title : SW846 8260
 QLast Update : Mon Oct 20 12:35:14 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	5.537	168	117551	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.750	114	187766	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.036	117	163588	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.006	152	80621	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.940	65	162188	89.060	ug/l	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 178.120%#			
35) Dibromofluoromethane	5.373	113	129919	99.697	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 199.400%#			
50) Toluene-d8	8.634	98	448948	95.629	ug/l	0.00
Spiked Amount 50.000	Range 92 - 112		Recovery = 191.260%#			
62) 4-Bromofluorobenzene	11.061	95	167565	97.996	ug/l	0.00
Spiked Amount 50.000	Range 83 - 123		Recovery = 196.000%#			
Target Compounds					Qvalue	
2) Dichlorodifluoromethane	1.172	85	127029	102.960	ug/l	97
3) Chloromethane	1.300	50	111895	74.863	ug/l	100
4) Vinyl Chloride	1.379	62	108564	68.931	ug/l	100
5) Bromomethane	1.605	94	65752	62.780	ug/l	99
6) Chloroethane	1.690	64	66332	66.181	ug/l	92
7) Trichlorofluoromethane	1.892	101	213301	86.283	ug/l	98
8) Diethyl Ether	2.135	74	58302	69.141	ug/l	88
9) 1,1,2-Trichlorotrifluo...	2.337	101	136951	98.309	ug/l	96
10) Methyl Iodide	2.452	142	183697	110.092	ug/l	99
11) Tert butyl alcohol	2.952	59	78284	647.864	ug/l	99
12) 1,1-Dichloroethene	2.324	96	131152	96.282	ug/l	93
13) Acrolein	2.239	56	87244	343.554	ug/l	100
14) Allyl chloride	2.666	41	214290	87.456	ug/l	98
15) Acrylonitrile	3.056	53	298022	514.707	ug/l	100
16) Acetone	2.373	43	260058	418.616	ug/l	99
17) Carbon Disulfide	2.513	76	380127	90.700	ug/l	99
18) Methyl Acetate	2.702	43	120920	95.565	ug/l	93
19) Methyl tert-butyl Ether	3.111	73	427254	104.130	ug/l	97
20) Methylene Chloride	2.788	84	140317	92.718	ug/l	93
21) trans-1,2-Dichloroethene	3.093	96	139080	98.694	ug/l	96
22) Diisopropyl ether	3.751	45	420126	87.566	ug/l	89
23) Vinyl Acetate	3.714	43	1723170	480.325	ug/l	96
24) 1,1-Dichloroethane	3.605	63	248141	91.164	ug/l	99
25) 2-Butanone	4.543	43	353741	488.753	ug/l	98
26) 2,2-Dichloropropane	4.470	77	228643	98.275	ug/l	100
27) cis-1,2-Dichloroethene	4.483	96	163444	97.727	ug/l	98
28) Bromochloromethane	4.885	49	108536	86.505	ug/l	86
29) Tetrahydrofuran	4.989	42	216543	509.471	ug/l	93
30) Chloroform	5.080	83	264966	92.461	ug/l	98
31) Cyclohexane	5.464	56	217717	97.754	ug/l	91
32) 1,1,1-Trichloroethane	5.373	97	248018	105.334	ug/l	98
36) 1,1-Dichloropropene	5.684	75	183932	100.194	ug/l	99
37) Ethyl Acetate	4.702	43	153844	104.863	ug/l	99
38) Carbon Tetrachloride	5.665	117	226976	107.719	ug/l	99
39) Methylcyclohexane	7.366	83	235208	113.637	ug/l	95
40) Benzene	6.025	78	535407	98.221	ug/l	99

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
 Data File : VX048233.D
 Acq On : 20 Oct 2025 12:22
 Operator : JC/MD
 Sample : VSTDICC100
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 8 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDICC100

Manual Integrations
 APPROVED

Reviewed By :John Carlone 10/21/2025
 Supervised By :Semsettin Yesilyurt 10/21/2025

Quant Time: Oct 20 12:46:16 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
 Quant Title : SW846 8260
 QLast Update : Mon Oct 20 12:35:14 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	4.909	41	83790	106.641	ug/l	97
42) 1,2-Dichloroethane	6.074	62	198348	101.562	ug/l	99
43) Isopropyl Acetate	6.324	43	256067	103.976	ug/l	95
44) Trichloroethene	7.110	130	142779	103.931	ug/l	99
45) 1,2-Dichloropropane	7.415	63	130188	94.368	ug/l	96
46) Dibromomethane	7.567	93	98105	98.835	ug/l	94
47) Bromodichloromethane	7.805	83	215302	100.358	ug/l	99
48) Methyl methacrylate	7.677	41	131454	104.272	ug/l	95
49) 1,4-Dioxane	7.647	88	35972	3169.845	ug/l	89
51) 4-Methyl-2-Pentanone	8.561	43	720980	526.103	ug/l	94
52) Toluene	8.701	92	341597	104.263	ug/l	99
53) t-1,3-Dichloropropene	8.963	75	215736	107.341	ug/l	99
54) cis-1,3-Dichloropropene	8.354	75	231037	105.465	ug/l	94
55) 1,1,2-Trichloroethane	9.134	97	124910	102.180	ug/l	98
56) Ethyl methacrylate	9.104	69	196699	118.305	ug/l	94
57) 1,3-Dichloropropane	9.293	76	214853	100.598	ug/l	100
58) 2-Chloroethyl Vinyl ether	8.226	63	505448	592.044	ug/l	96
59) 2-Hexanone	9.415	43	509398	531.416	ug/l	95
60) Dibromochloromethane	9.506	129	166167	108.598	ug/l	100
61) 1,2-Dibromoethane	9.591	107	134662	107.431	ug/l	97
64) Tetrachloroethene	9.256	164	121163	105.633	ug/l	97
65) Chlorobenzene	10.061	112	375532	104.990	ug/l	99
66) 1,1,1,2-Tetrachloroethane	10.146	131	140599	109.080	ug/l	97
67) Ethyl Benzene	10.177	91	656925	107.128	ug/l	98
68) m/p-Xylenes	10.286	106	490879	214.875	ug/l	100
69) o-Xylene	10.622	106	236648	110.042	ug/l	100
70) Styrene	10.640	104	407916	110.197	ug/l	99
71) Bromoform	10.780	173	109613	115.806	ug/l #	98
73) Isopropylbenzene	10.945	105	624767	111.418	ug/l	99
74) N-amyl acetate	10.829	43	228080	109.030	ug/l	95
75) 1,1,2,2-Tetrachloroethane	11.195	83	164207	103.367	ug/l	99
76) 1,2,3-Trichloropropane	11.219	75	130599m	106.083	ug/l	
77) Bromobenzene	11.183	156	153619	109.475	ug/l	93
78) n-propylbenzene	11.286	91	732684	107.747	ug/l	98
79) 2-Chlorotoluene	11.347	91	434217	105.691	ug/l	100
80) 1,3,5-Trimethylbenzene	11.432	105	519549	112.876	ug/l	99
81) trans-1,4-Dichloro-2-b...	11.000	75	59059	117.466	ug/l	98
82) 4-Chlorotoluene	11.439	91	506861	104.983	ug/l	98
83) tert-Butylbenzene	11.695	119	529264	113.817	ug/l	98
84) 1,2,4-Trimethylbenzene	11.731	105	523474	114.214	ug/l	99
85) sec-Butylbenzene	11.871	105	639904	112.562	ug/l	100
86) p-Isopropyltoluene	11.987	119	548119	114.386	ug/l	98
87) 1,3-Dichlorobenzene	11.951	146	281617	107.314	ug/l	99
88) 1,4-Dichlorobenzene	12.024	146	277908	102.163	ug/l	98
89) n-Butylbenzene	12.316	91	495486	111.016	ug/l	99
90) Hexachloroethane	12.518	117	107057	105.851	ug/l	93
91) 1,2-Dichlorobenzene	12.316	146	261022	105.277	ug/l	99
92) 1,2-Dibromo-3-Chloropr...	12.920	75	36087	124.320	ug/l	97
93) 1,2,4-Trichlorobenzene	13.566	180	179562	122.679	ug/l	100
94) Hexachlorobutadiene	13.706	225	68645	121.605	ug/l	98
95) Naphthalene	13.755	128	511355	132.536	ug/l	99
96) 1,2,3-Trichlorobenzene	13.944	180	169248	125.328	ug/l	98

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048233.D
Acq On : 20 Oct 2025 12:22
Operator : JC/MD
Sample : VSTDICC100
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC100

Manual Integrations
APPROVED

Reviewed By :John Carlone 10/21/2025
Supervised By :Semsettin Yesilyurt 10/21/2025

Quant Time: Oct 20 12:46:16 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 12:35:14 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

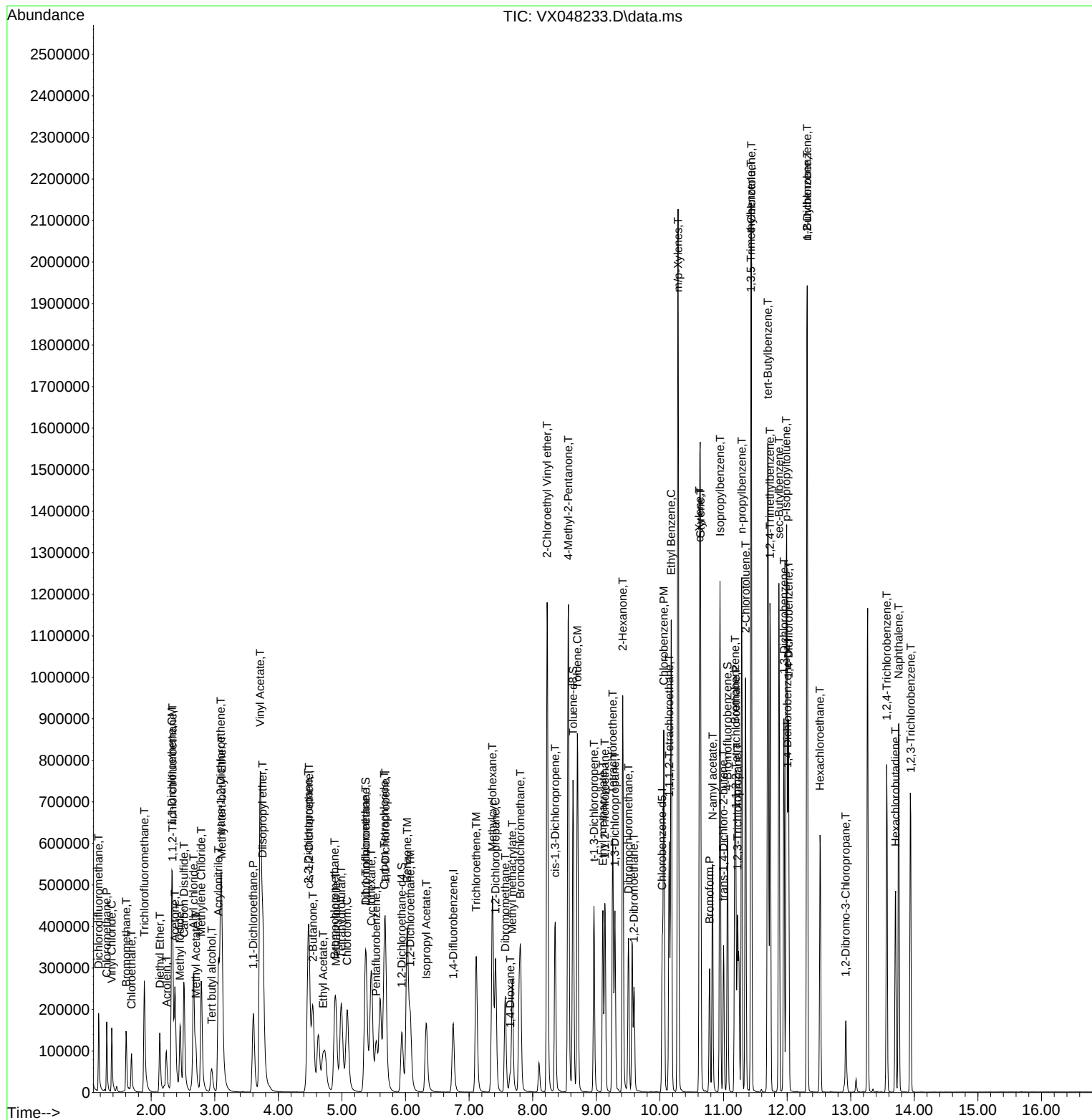
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
 Data File : VX048233.D
 Acq On : 20 Oct 2025 12:22
 Operator : JC/MD
 Sample : VSTDICC100
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 8 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDICC100

Manual Integrations APPROVED

Reviewed By : John Carlone 10/21/2025
 Supervised By : Semsettin Yesilyurt 10/21/2025

Quant Time: Oct 20 12:46:16 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
 Quant Title : SW846 8260
 QLast Update : Mon Oct 20 12:35:14 2025
 Response via : Initial Calibration



Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
 Data File : VX048234.D
 Acq On : 20 Oct 2025 12:43
 Operator : JC/MD
 Sample : VSTDICC150
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 9 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDICC150

Manual Integrations
 APPROVED

Reviewed By :John Carlone 10/21/2025
 Supervised By :Semsettin Yesilyurt 10/21/2025

Quant Time: Oct 20 13:01:04 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
 Quant Title : SW846 8260
 QLast Update : Mon Oct 20 12:35:14 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	5.538	168	112063	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.751	114	180904	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.037	117	155759	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.006	152	75397	50.000	ug/l	# 0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.946	65	234807	135.251	ug/l	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 270.500%#			
35) Dibromofluoromethane	5.373	113	188821	150.393	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 300.780%#			
50) Toluene-d8	8.635	98	648652	143.408	ug/l	0.00
Spiked Amount 50.000	Range 92 - 112		Recovery = 286.820%#			
62) 4-Bromofluorobenzene	11.061	95	239298	145.255	ug/l	0.00
Spiked Amount 50.000	Range 83 - 123		Recovery = 290.520%#			
Target Compounds						
						Qvalue
2) Dichlorodifluoromethane	1.173	85	169514	144.124	ug/l	95
3) Chloromethane	1.301	50	158322	111.112	ug/l	99
4) Vinyl Chloride	1.380	62	149708	99.710	ug/l	99
5) Bromomethane	1.605	94	92946	93.091	ug/l	97
6) Chloroethane	1.685	64	89813	93.997	ug/l	96
7) Trichlorofluoromethane	1.892	101	292007	123.905	ug/l	99
8) Diethyl Ether	2.136	74	81474	101.352	ug/l	88
9) 1,1,2-Trichlorotrifluo...	2.331	101	184438	138.880	ug/l	96
10) Methyl Iodide	2.453	142	249395	156.785	ug/l	100
11) Tert butyl alcohol	2.959	59	107295	931.439	ug/l	100
12) 1,1-Dichloroethene	2.325	96	178408	137.389	ug/l	95
13) Acrolein	2.239	56	123365	509.584	ug/l	99
14) Allyl chloride	2.666	41	293697	125.734	ug/l	98
15) Acrylonitrile	3.062	53	412892	748.019	ug/l	100
16) Acetone	2.380	43	347029	585.970	ug/l	99
17) Carbon Disulfide	2.514	76	515144	128.936	ug/l	100
18) Methyl Acetate	2.697	43	169402	140.438	ug/l	93
19) Methyl tert-butyl Ether	3.111	73	593033	151.611	ug/l	97
20) Methylene Chloride	2.788	84	190483	132.030	ug/l	94
21) trans-1,2-Dichloroethene	3.093	96	187495	139.566	ug/l	98
22) Diisopropyl ether	3.757	45	571951	125.048	ug/l	93
23) Vinyl Acetate	3.715	43	2367511	692.251	ug/l	96
24) 1,1-Dichloroethane	3.605	63	342500	131.992	ug/l	99
25) 2-Butanone	4.544	43	487152	706.046	ug/l	96
26) 2,2-Dichloropropane	4.465	77	310572	140.027	ug/l	100
27) cis-1,2-Dichloroethene	4.483	96	222359	139.465	ug/l	98
28) Bromochloromethane	4.891	49	151812	126.922	ug/l	87
29) Tetrahydrofuran	4.989	42	301745	744.697	ug/l	94
30) Chloroform	5.080	83	358626	131.272	ug/l	98
31) Cyclohexane	5.464	56	291302	137.199	ug/l	91
32) 1,1,1-Trichloroethane	5.373	97	338462	150.785	ug/l	98
36) 1,1-Dichloropropene	5.684	75	249688	141.173	ug/l	99
37) Ethyl Acetate	4.702	43	208614	147.588	ug/l	97
38) Carbon Tetrachloride	5.666	117	307892	151.663	ug/l	100
39) Methylcyclohexane	7.367	83	315911	158.416	ug/l	95
40) Benzene	6.025	78	730908	139.172	ug/l	97

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
 Data File : VX048234.D
 Acq On : 20 Oct 2025 12:43
 Operator : JC/MD
 Sample : VSTDICC150
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 9 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDICC150

Manual Integrations
 APPROVED

Reviewed By :John Carlone 10/21/2025
 Supervised By :Semsettin Yesilyurt 10/21/2025

Quant Time: Oct 20 13:01:04 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
 Quant Title : SW846 8260
 QLast Update : Mon Oct 20 12:35:14 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	4.910	41	115351	152.378	ug/l	97
42) 1,2-Dichloroethane	6.074	62	269245	143.093	ug/l	99
43) Isopropyl Acetate	6.324	43	361084	152.180	ug/l	96
44) Trichloroethene	7.110	130	197244	149.022	ug/l	98
45) 1,2-Dichloropropane	7.415	63	180619	135.890	ug/l	99
46) Dibromomethane	7.568	93	135105	141.273	ug/l	94
47) Bromodichloromethane	7.805	83	292063	141.302	ug/l	97
48) Methyl methacrylate	7.677	41	184354	151.780	ug/l	95
49) 1,4-Dioxane	7.647	88	49895	4563.512	ug/l	88
51) 4-Methyl-2-Pentanone	8.561	43	983125	744.604	ug/l	94
52) Toluene	8.702	92	460742	145.964	ug/l	99
53) t-1,3-Dichloropropene	8.964	75	300251	155.059	ug/l	99
54) cis-1,3-Dichloropropene	8.354	75	317375	150.373	ug/l	94
55) 1,1,2-Trichloroethane	9.135	97	169894	144.250	ug/l	98
56) Ethyl methacrylate	9.104	69	272177	169.911	ug/l	94
57) 1,3-Dichloropropane	9.293	76	293650	142.707	ug/l	99
58) 2-Chloroethyl Vinyl ether	8.232	63	705780	858.056	ug/l	95
59) 2-Hexanone	9.415	43	694736	752.256	ug/l	96
60) Dibromochloromethane	9.506	129	226642	153.740	ug/l	99
61) 1,2-Dibromoethane	9.592	107	182208	150.876	ug/l	99
64) Tetrachloroethene	9.263	164	168581	154.361	ug/l	91
65) Chlorobenzene	10.061	112	514967	151.209	ug/l	99
66) 1,1,1,2-Tetrachloroethane	10.147	131	191186	155.782	ug/l	98
67) Ethyl Benzene	10.177	91	898137	153.825	ug/l	99
68) m/p-Xylenes	10.287	106	661019	303.896	ug/l	99
69) o-Xylene	10.622	106	320334	156.444	ug/l	99
70) Styrene	10.640	104	548149	155.523	ug/l	98
71) Bromoform	10.781	173	152209	168.892	ug/l #	99
73) Isopropylbenzene	10.945	105	849183	161.931	ug/l	100
74) N-amyl acetate	10.829	43	314879	160.952	ug/l	95
75) 1,1,2,2-Tetrachloroethane	11.195	83	224486	151.104	ug/l	99
76) 1,2,3-Trichloropropane	11.220	75	181434m	157.586	ug/l	
77) Bromobenzene	11.183	156	207212	157.899	ug/l	94
78) n-propylbenzene	11.287	91	991960	155.984	ug/l	98
79) 2-Chlorotoluene	11.348	91	585792	152.465	ug/l	99
80) 1,3,5-Trimethylbenzene	11.433	105	699885	162.591	ug/l	100
81) trans-1,4-Dichloro-2-b...	11.000	75	83158	176.858	ug/l	97
82) 4-Chlorotoluene	11.439	91	691903	153.240	ug/l	99
83) tert-Butylbenzene	11.695	119	717642	165.020	ug/l	98
84) 1,2,4-Trimethylbenzene	11.732	105	707074	164.961	ug/l	99
85) sec-Butylbenzene	11.872	105	861466	162.035	ug/l	100
86) p-Isopropyltoluene	11.994	119	738496	164.794	ug/l	99
87) 1,3-Dichlorobenzene	11.951	146	386062	157.307	ug/l	99
88) 1,4-Dichlorobenzene	12.024	146	386885	152.078	ug/l	100
89) n-Butylbenzene	12.311	91	664071	159.098	ug/l	99
90) Hexachloroethane	12.518	117	145813	154.159	ug/l	94
91) 1,2-Dichlorobenzene	12.317	146	359278	154.946	ug/l	99
92) 1,2-Dibromo-3-Chloropr...	12.920	75	50367	185.536	ug/l	98
93) 1,2,4-Trichlorobenzene	13.567	180	247472	180.791	ug/l	100
94) Hexachlorobutadiene	13.707	225	92458	175.138	ug/l	100
95) Naphthalene	13.756	128	719433	199.386	ug/l	100
96) 1,2,3-Trichlorobenzene	13.939	180	233671	185.022	ug/l	97

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048234.D
Acq On : 20 Oct 2025 12:43
Operator : JC/MD
Sample : VSTDICC150
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 9 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC150

Manual Integrations
APPROVED

Reviewed By :John Carlone 10/21/2025
Supervised By :Semsettin Yesilyurt 10/21/2025

Quant Time: Oct 20 13:01:04 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 12:35:14 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC150

Manual Integrations APPROVED

Reviewed By :John Carlone 10/21/2025
Supervised By :Semsettin Yesilyurt 10/21/2025



Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
 Data File : VX048236.D
 Acq On : 20 Oct 2025 13:49
 Operator : JC/MD
 Sample : VSTDICC005
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 12 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDICC005

Manual Integrations
 APPROVED

Reviewed By : John Carlone 10/21/2025
 Supervised By : Semsettin Yesilyurt 10/21/2025

Quant Time: Oct 20 14:07:21 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
 Quant Title : SW846 8260
 QLast Update : Mon Oct 20 13:10:39 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	5.537	168	138374	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.751	114	228619	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.037	117	208481	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.006	152	105998	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.940	65	10036	4.008	ug/l	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery =	8.020%#		
35) Dibromofluoromethane	5.379	113	7733	3.839	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery =	7.680%#		
50) Toluene-d8	8.634	98	27914	3.999	ug/l	0.00
Spiked Amount 50.000	Range 92 - 112		Recovery =	8.000%#		
62) 4-Bromofluorobenzene	11.067	95	11429	4.042	ug/l	0.00
Spiked Amount 50.000	Range 83 - 123		Recovery =	8.080%#		
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.172	85	7219	5.194	ug/l	93
3) Chloromethane	1.300	50	7032	5.531	ug/l	95
4) Vinyl Chloride	1.380	62	6338	5.341	ug/l	98
5) Bromomethane	1.611	94	4789	5.918	ug/l	99
6) Chloroethane	1.691	64	3610	5.085	ug/l	99
7) Trichlorofluoromethane	1.898	101	12170	5.319	ug/l	96
8) Diethyl Ether	2.136	74	3283	5.035	ug/l	87
9) 1,1,2-Trichlorotrifluo...	2.337	101	7656	5.264	ug/l	92
10) Methyl Iodide	2.453	142	7871	4.284	ug/l	98
11) Tert butyl alcohol	2.940	59	5994	33.503	ug/l #	80
12) 1,1-Dichloroethene	2.325	96	7107	4.991	ug/l	91
13) Acrolein	2.233	56	5456	27.637	ug/l	96
14) Allyl chloride	2.666	41	11531	4.839	ug/l	96
15) Acrylonitrile	3.062	53	16982	24.912	ug/l	97
16) Acetone	2.373	43	18141	27.636	ug/l	100
17) Carbon Disulfide	2.520	76	23369	5.270	ug/l	96
18) Methyl Acetate	2.703	43	6418	4.639	ug/l	98
19) Methyl tert-butyl Ether	3.111	73	22931	4.663	ug/l	97
20) Methylene Chloride	2.788	84	8228	5.163	ug/l #	81
21) trans-1,2-Dichloroethene	3.093	96	8343	5.393	ug/l	94
22) Diisopropyl ether	3.757	45	23533	4.984	ug/l #	97
23) Vinyl Acetate	3.721	43	91771	24.336	ug/l #	90
24) 1,1-Dichloroethane	3.605	63	14582	5.126	ug/l #	97
25) 2-Butanone	4.550	43	21808	26.293	ug/l #	89
26) 2,2-Dichloropropane	4.471	77	13077	5.066	ug/l	99
27) cis-1,2-Dichloroethene	4.483	96	9312	5.084	ug/l	96
28) Bromochloromethane	4.885	49	6488	5.474	ug/l #	89
29) Tetrahydrofuran	4.995	42	12637	25.353	ug/l	98
30) Chloroform	5.086	83	15814	5.159	ug/l	96
31) Cyclohexane	5.458	56	11661	4.943	ug/l	98
32) 1,1,1-Trichloroethane	5.367	97	14399	5.115	ug/l	98
36) 1,1-Dichloropropene	5.684	75	10855	5.001	ug/l	99
37) Ethyl Acetate	4.702	43	9058m	4.970	ug/l	
38) Carbon Tetrachloride	5.672	117	14225	5.323	ug/l #	81
39) Methylcyclohexane	7.366	83	13491	5.318	ug/l	97
40) Benzene	6.031	78	32115	5.103	ug/l	99

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
 Data File : VX048236.D
 Acq On : 20 Oct 2025 13:49
 Operator : JC/MD
 Sample : VSTDICC005
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 12 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDICC005

Manual Integrations
 APPROVED

Reviewed By :John Carlone 10/21/2025
 Supervised By :Semsettin Yesilyurt 10/21/2025

Quant Time: Oct 20 14:07:21 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
 Quant Title : SW846 8260
 QLast Update : Mon Oct 20 13:10:39 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	4.922	41	4538m	4.817	ug/l	
42) 1,2-Dichloroethane	6.074	62	11412	4.870	ug/l	100
43) Isopropyl Acetate	6.330	43	13996	4.656	ug/l #	93
44) Trichloroethene	7.110	130	8373	5.009	ug/l	93
45) 1,2-Dichloropropane	7.415	63	7709	5.129	ug/l	99
46) Dibromomethane	7.568	93	6041	5.181	ug/l	91
47) Bromodichloromethane	7.811	83	12974	5.126	ug/l	97
48) Methyl methacrylate	7.683	41	6863	4.542	ug/l	94
49) 1,4-Dioxane	7.659	88	2020	103.402	ug/l	97
51) 4-Methyl-2-Pentanone	8.555	43	42725	24.936	ug/l	97
52) Toluene	8.708	92	21137	5.296	ug/l	97
53) t-1,3-Dichloropropene	8.964	75	12015	4.914	ug/l	98
54) cis-1,3-Dichloropropene	8.354	75	12702	4.820	ug/l	90
55) 1,1,2-Trichloroethane	9.140	97	8113	5.453	ug/l	91
56) Ethyl methacrylate	9.104	69	10320	4.713	ug/l	94
57) 1,3-Dichloropropane	9.293	76	13087	5.112	ug/l	99
58) 2-Chloroethyl Vinyl ether	8.232	63	20764	19.525	ug/l	98
59) 2-Hexanone	9.415	43	30949	25.896	ug/l	96
60) Dibromochloromethane	9.506	129	10082	5.028	ug/l	99
61) 1,2-Dibromoethane	9.592	107	8079	5.075	ug/l	100
64) Tetrachloroethene	9.256	164	8020	5.341	ug/l	92
65) Chlorobenzene	10.061	112	23873	5.236	ug/l	97
66) 1,1,1,2-Tetrachloroethane	10.146	131	8450	5.012	ug/l	98
67) Ethyl Benzene	10.177	91	39121	5.044	ug/l	96
68) m/p-Xylenes	10.287	106	30310	10.586	ug/l	97
69) o-Xylene	10.628	106	14262	5.128	ug/l	98
70) Styrene	10.640	104	24289	5.138	ug/l	98
71) Bromoform	10.780	173	6766	5.031	ug/l #	96
73) Isopropylbenzene	10.945	105	37935	5.082	ug/l	99
74) N-amyl acetate	10.829	43	12188	4.544	ug/l	97
75) 1,1,2,2-Tetrachloroethane	11.195	83	10324	4.992	ug/l	98
76) 1,2,3-Trichloropropane	11.225	75	8134m	4.889	ug/l	
77) Bromobenzene	11.183	156	9508	5.027	ug/l	94
78) n-propylbenzene	11.286	91	44189	5.097	ug/l	99
79) 2-Chlorotoluene	11.347	91	26627	5.032	ug/l	98
80) 1,3,5-Trimethylbenzene	11.433	105	30618	4.910	ug/l	99
81) trans-1,4-Dichloro-2-b...	11.000	75	3038	4.387	ug/l	96
82) 4-Chlorotoluene	11.439	91	31357	5.017	ug/l	97
83) tert-Butylbenzene	11.695	119	32297	5.086	ug/l	96
84) 1,2,4-Trimethylbenzene	11.731	105	31709	5.129	ug/l	100
85) sec-Butylbenzene	11.872	105	39113	5.118	ug/l	99
86) p-Isopropyltoluene	11.994	119	34155	5.185	ug/l	99
87) 1,3-Dichlorobenzene	11.951	146	18546	5.256	ug/l	99
88) 1,4-Dichlorobenzene	12.024	146	18787	5.081	ug/l	91
89) n-Butylbenzene	12.317	91	30409	5.069	ug/l	99
90) Hexachloroethane	12.518	117	6863	5.210	ug/l	98
91) 1,2-Dichlorobenzene	12.317	146	16849	5.076	ug/l	98
92) 1,2-Dibromo-3-Chloropr...	12.926	75	1984	4.680	ug/l	98
93) 1,2,4-Trichlorobenzene	13.573	180	10538	4.693	ug/l	98
94) Hexachlorobutadiene	13.707	225	5113	4.948	ug/l	96
95) Naphthalene	13.756	128	26218	4.374	ug/l	98
96) 1,2,3-Trichlorobenzene	13.944	180	10040	4.906	ug/l	97

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048236.D
Acq On : 20 Oct 2025 13:49
Operator : JC/MD
Sample : VSTDICC005
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC005

Manual Integrations
APPROVED

Reviewed By :John Carlone 10/21/2025
Supervised By :Semsettin Yesilyurt 10/21/2025

Quant Time: Oct 20 14:07:21 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 13:10:39 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

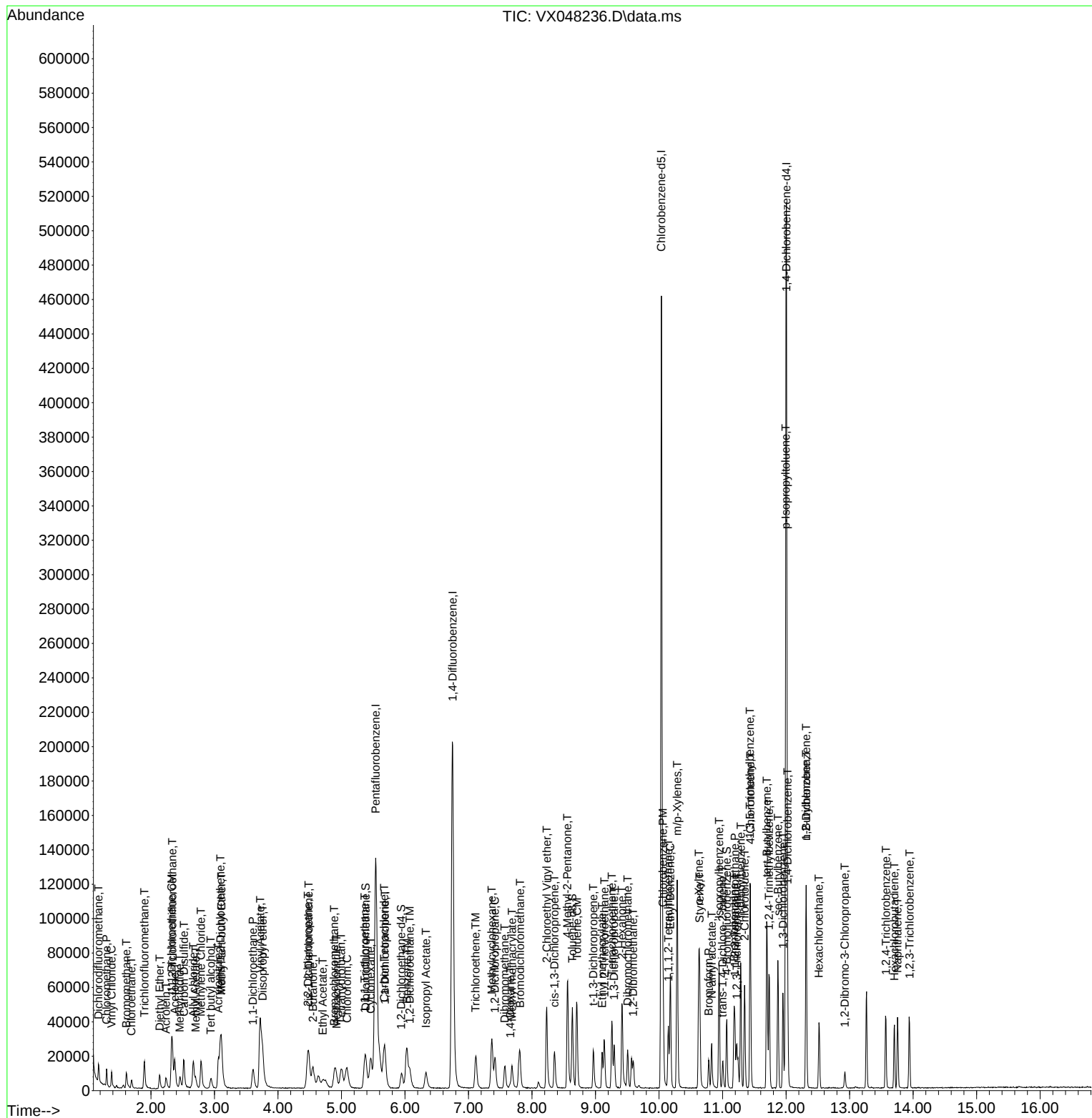
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
 Data File : VX048236.D
 Acq On : 20 Oct 2025 13:49
 Operator : JC/MD
 Sample : VSTDICC005
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 12 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDICC005

Manual Integrations APPROVED

Reviewed By :John Carlone 10/21/2025
 Supervised By :Semsettin Yesilyurt 10/21/2025

Quant Time: Oct 20 14:07:21 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
 Quant Title : SW846 8260
 QLast Update : Mon Oct 20 13:10:39 2025
 Response via : Initial Calibration



Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
 Data File : VX048237.D
 Acq On : 20 Oct 2025 14:28
 Operator : JC/MD
 Sample : VSTDICV050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 13 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 ICVVX102025

Manual Integrations
 APPROVED

Reviewed By : John Carlone 10/21/2025
 Supervised By : Semsettin Yesilyurt 10/21/2025

Quant Time: Oct 20 16:37:21 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
 Quant Title : SW846 8260
 QLast Update : Mon Oct 20 14:13:59 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	5.531	168	144715	50.000	ug/l	-0.01
34) 1,4-Difluorobenzene	6.739	114	229650	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.037	117	201397	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.000	152	99108	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.934	65	92700	45.687	ug/l	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery =	91.380%		
35) Dibromofluoromethane	5.367	113	76746	48.951	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery =	97.900%		
50) Toluene-d8	8.628	98	265898	48.386	ug/l	0.00
Spiked Amount 50.000	Range 92 - 112		Recovery =	96.780%		
62) 4-Bromofluorobenzene	11.061	95	97828	46.795	ug/l	0.00
Spiked Amount 50.000	Range 83 - 123		Recovery =	93.580%		
Target Compounds					Qvalue	
2) Dichlorodifluoromethane	1.172	85	76365	51.331	ug/l	99
3) Chloromethane	1.301	50	74279	53.491	ug/l	99
4) Vinyl Chloride	1.380	62	71290	55.441	ug/l	99
5) Bromomethane	1.611	94	47863	54.847	ug/l	96
6) Chloroethane	1.691	64	42556	56.320	ug/l	95
7) Trichlorofluoromethane	1.892	101	128754	52.209	ug/l	97
8) Diethyl Ether	2.136	74	37292	53.742	ug/l	89
9) 1,1,2-Trichlorotrifluo...	2.331	101	83688	53.589	ug/l	96
10) Methyl Iodide	2.453	142	94222	47.994	ug/l	99
11) Tert butyl alcohol	2.934	59	45064	223.693	ug/l	98
12) 1,1-Dichloroethene	2.319	96	79070	52.043	ug/l	92
13) Acrolein	2.233	56	51257	249.473	ug/l	98
14) Allyl chloride	2.660	41	128896	51.099	ug/l	97
15) Acrylonitrile	3.050	53	182260	250.900	ug/l	100
16) Acetone	2.373	43	152988	219.789	ug/l	96
17) Carbon Disulfide	2.514	76	233630	48.792	ug/l	99
18) Methyl Acetate	2.697	43	71506	49.190	ug/l	94
19) Methyl tert-butyl Ether	3.105	73	254812	49.162	ug/l	98
20) Methylene Chloride	2.782	84	86610	51.066	ug/l	92
21) trans-1,2-Dichloroethene	3.087	96	85000	50.932	ug/l	96
22) Diisopropyl ether	3.745	45	259934	51.665	ug/l	99
23) Vinyl Acetate	3.709	43	1045584	260.168	ug/l	97
24) 1,1-Dichloroethane	3.599	63	150557	49.490	ug/l	99
25) 2-Butanone	4.532	43	209999	238.354	ug/l	97
26) 2,2-Dichloropropane	4.458	77	132433	48.230	ug/l	100
27) cis-1,2-Dichloroethene	4.471	96	98066	50.350	ug/l	96
28) Bromochloromethane	4.879	49	58764	46.587	ug/l	87
29) Tetrahydrofuran	4.977	42	127995	242.572	ug/l	95
30) Chloroform	5.074	83	157397	48.427	ug/l	99
31) Cyclohexane	5.458	56	132594	52.646	ug/l	92
32) 1,1,1-Trichloroethane	5.361	97	144706	48.309	ug/l	98
36) 1,1-Dichloropropene	5.672	75	109957	49.344	ug/l	100
37) Ethyl Acetate	4.690	43	88074	47.684	ug/l	98
38) Carbon Tetrachloride	5.659	117	132590	48.228	ug/l	99
39) Methylcyclohexane	7.360	83	138611	52.670	ug/l	94
40) Benzene	6.019	78	325041	50.241	ug/l	99

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
 Data File : VX048237.D
 Acq On : 20 Oct 2025 14:28
 Operator : JC/MD
 Sample : VSTDICV050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 13 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 ICVVX102025

Manual Integrations
 APPROVED

Reviewed By : John Carlone 10/21/2025
 Supervised By : Semsettin Yesilyurt 10/21/2025

Quant Time: Oct 20 16:37:21 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
 Quant Title : SW846 8260
 QLast Update : Mon Oct 20 14:13:59 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	4.891	41	48846	50.358	ug/l	95
42) 1,2-Dichloroethane	6.068	62	116893	48.963	ug/l	98
43) Isopropyl Acetate	6.318	43	151140	49.816	ug/l	95
44) Trichloroethene	7.104	130	86410	50.582	ug/l	96
45) 1,2-Dichloropropane	7.409	63	78439	50.994	ug/l	98
46) Dibromomethane	7.562	93	58616	48.913	ug/l	94
47) Bromodichloromethane	7.799	83	125388	48.459	ug/l	99
48) Methyl methacrylate	7.671	41	75812	49.519	ug/l	94
49) 1,4-Dioxane	7.635	88	20230	1000.197	ug/l	90
51) 4-Methyl-2-Pentanone	8.555	43	428393	244.897	ug/l	95
52) Toluene	8.702	92	205867	50.088	ug/l	99
53) t-1,3-Dichloropropene	8.958	75	124683	50.004	ug/l	100
54) cis-1,3-Dichloropropene	8.348	75	134360	49.944	ug/l	93
55) 1,1,2-Trichloroethane	9.134	97	75808	49.597	ug/l	98
56) Ethyl methacrylate	9.098	69	111702	49.964	ug/l	94
57) 1,3-Dichloropropane	9.287	76	128519	49.226	ug/l	99
58) 2-Chloroethyl Vinyl ether	8.220	63	290992	242.124	ug/l	96
59) 2-Hexanone	9.409	43	300183	246.102	ug/l	96
60) Dibromochloromethane	9.500	129	97643	47.530	ug/l	99
61) 1,2-Dibromoethane	9.592	107	80363	49.319	ug/l	97
64) Tetrachloroethene	9.256	164	73198	48.686	ug/l	95
65) Chlorobenzene	10.061	112	226953	50.095	ug/l	100
66) 1,1,1,2-Tetrachloroethane	10.140	131	81561	49.014	ug/l	99
67) Ethyl Benzene	10.177	91	391830	50.798	ug/l	99
68) m/p-Xylenes	10.281	106	293516	102.416	ug/l	99
69) o-Xylene	10.622	106	139515	50.424	ug/l	99
70) Styrene	10.634	104	243341	51.651	ug/l	100
71) Bromoform	10.781	173	64170	48.250	ug/l #	99
73) Isopropylbenzene	10.945	105	373948	51.658	ug/l	100
74) N-amyl acetate	10.823	43	131979	51.399	ug/l	96
75) 1,1,2,2-Tetrachloroethane	11.195	83	98715	49.936	ug/l	98
76) 1,2,3-Trichloropropane	11.219	75	81093m	50.456	ug/l	
77) Bromobenzene	11.177	156	91000	50.135	ug/l	94
78) n-propylbenzene	11.287	91	435662	51.980	ug/l	99
79) 2-Chlorotoluene	11.341	91	257936	50.760	ug/l	99
80) 1,3,5-Trimethylbenzene	11.433	105	305027	50.918	ug/l	99
81) trans-1,4-Dichloro-2-b...	11.000	75	33027	49.995	ug/l	96
82) 4-Chlorotoluene	11.433	91	304670	50.507	ug/l	98
83) tert-Butylbenzene	11.695	119	309524	50.288	ug/l	99
84) 1,2,4-Trimethylbenzene	11.732	105	308529	51.607	ug/l	100
85) sec-Butylbenzene	11.872	105	379368	51.230	ug/l	100
86) p-Isopropyltoluene	11.988	119	324425	50.686	ug/l	100
87) 1,3-Dichlorobenzene	11.951	146	165027	48.229	ug/l	98
88) 1,4-Dichlorobenzene	12.024	146	168102	47.423	ug/l	99
89) n-Butylbenzene	12.311	91	289706	49.728	ug/l	99
90) Hexachloroethane	12.518	117	61223	48.437	ug/l	95
91) 1,2-Dichlorobenzene	12.317	146	157812	49.123	ug/l	99
92) 1,2-Dibromo-3-Chloropr...	12.920	75	19691	49.072	ug/l	98
93) 1,2,4-Trichlorobenzene	13.567	180	101983	46.941	ug/l	99
94) Hexachlorobutadiene	13.707	225	39299	48.274	ug/l	99
95) Naphthalene	13.756	128	289882	50.362	ug/l	100
96) 1,2,3-Trichlorobenzene	13.938	180	96139	48.223	ug/l	97

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048237.D
Acq On : 20 Oct 2025 14:28
Operator : JC/MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
ICVVX102025

Manual Integrations
APPROVED

Reviewed By :John Carlone 10/21/2025
Supervised By :Semsettin Yesilyurt 10/21/2025

Quant Time: Oct 20 16:37:21 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

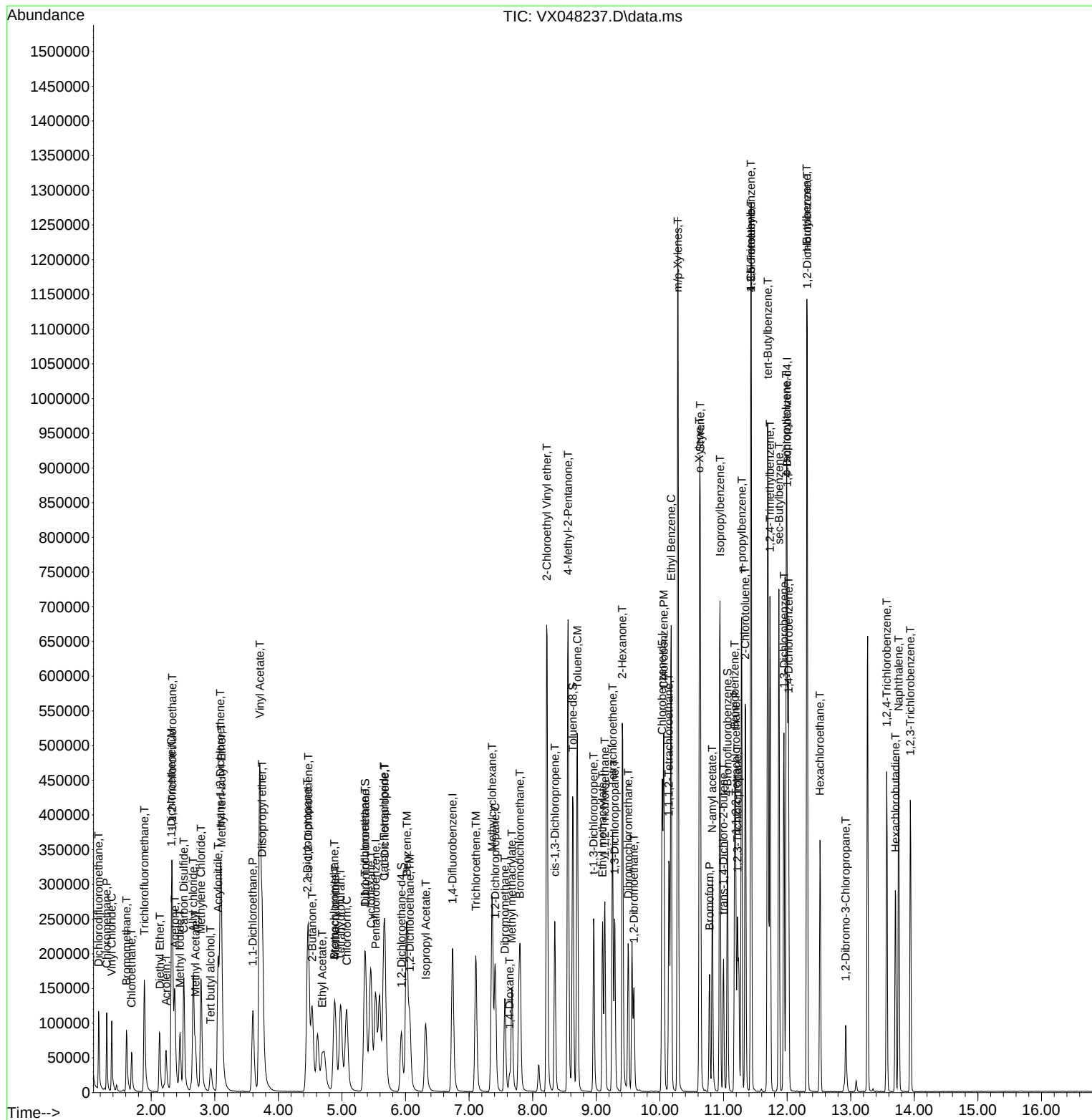
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048237.D
Acq On : 20 Oct 2025 14:28
Operator : JC/MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
ICVVX102025

Manual Integrations
APPROVED

Reviewed By :John Carlone 10/21/2025
Supervised By :Semsettin Yesilyurt 10/21/2025

Quant Time: Oct 20 16:37:21 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration



Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
 Data File : VX048237.D
 Acq On : 20 Oct 2025 14:28
 Operator : JC/MD
 Sample : VSTDICV050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 13 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 ICVVX102025

Quant Time: Oct 20 16:37:21 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
 Quant Title : SW846 8260
 QLast Update : Mon Oct 20 14:13:59 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	116	-0.01
2 T	Dichlorodifluoromethane	0.514	0.528	-2.7	127	0.00
3 P	Chloromethane	0.480	0.513	-6.9	133	0.00
4 C	Vinyl Chloride	0.444	0.493	-11.0#	138	0.00
5 T	Bromomethane	0.302	0.331	-9.6	136	0.00
6 T	Chloroethane	0.261	0.294	-12.6	139	0.00
7 T	Trichlorofluoromethane	0.852	0.890	-4.5	128	0.00
8 T	Diethyl Ether	0.240	0.258	-7.5	135	0.00
9 T	1,1,2-Trichlorotrifluoroeth	0.540	0.578	-7.0	134	0.00
10 T	Methyl Iodide	0.678	0.651	4.0	114	0.00
11 T	Tert butyl alcohol	0.070	0.062	11.4	117	0.00
12 CM	1,1-Dichloroethene	0.525	0.546	-4.0#	131	0.00
13 T	Acrolein	0.071	0.071	0.0	126	0.00
14 T	Allyl chloride	0.872	0.891	-2.2	129	0.00
15 T	Acrylonitrile	0.251	0.252	-0.4	122	0.00
16 T	Acetone	0.240	0.211	12.1	121	0.00
17 T	Carbon Disulfide	1.654	1.614	2.4	130	0.00
18 T	Methyl Acetate	0.502	0.494	1.6	123	0.00
19 T	Methyl tert-butyl Ether	1.791	1.761	1.7	120	0.00
20 T	Methylene Chloride	0.586	0.598	-2.0	126	0.00
21 T	trans-1,2-Dichloroethene	0.577	0.587	-1.7	128	0.00
22 T	Diisopropyl ether	1.738	1.796	-3.3	126	0.00
23 T	Vinyl Acetate	1.389	1.445	-4.0	125	0.00
24 P	1,1-Dichloroethane	1.051	1.040	1.0	124	0.00
25 T	2-Butanone	0.304	0.290	4.6	120	0.00
26 T	2,2-Dichloropropane	0.949	0.915	3.6	121	0.00
27 T	cis-1,2-Dichloroethene	0.673	0.678	-0.7	126	-0.01
28 T	Bromochloromethane	0.436	0.406	6.9	107	0.00
29 T	Tetrahydrofuran	0.182	0.177	2.7	120	-0.01
30 C	Chloroform	1.123	1.088	3.1#	121	0.00
31 T	Cyclohexane	0.870	0.916	-5.3	130	0.00
32 T	1,1,1-Trichloroethane	1.035	1.000	3.4	120	-0.01
33 S	1,2-Dichloroethane-d4	0.701	0.641	8.6	109	0.00
34 I	1,4-Difluorobenzene	1.000	1.000	0.0	114	0.00
35 S	Dibromofluoromethane	0.341	0.334	2.1	115	0.00
36 T	1,1-Dichloropropene	0.485	0.479	1.2	126	-0.01
37 T	Ethyl Acetate	0.402	0.384	4.5	119	0.00
38 T	Carbon Tetrachloride	0.599	0.577	3.7	119	0.00
39 T	Methylcyclohexane	0.573	0.604	-5.4	127	0.00
40 TM	Benzene	1.409	1.415	-0.4	124	0.00
41 T	Methacrylonitrile	0.211	0.213	-0.9	118	-0.01
42 TM	1,2-Dichloroethane	0.520	0.509	2.1	116	0.00
43 T	Isopropyl Acetate	0.661	0.658	0.5	118	0.00
44 TM	Trichloroethene	0.372	0.376	-1.1	123	0.00
45 C	1,2-Dichloropropane	0.335	0.342	-2.1#	121	0.00
46 T	Dibromomethane	0.261	0.255	2.3	118	0.00
47 T	Bromodichloromethane	0.563	0.546	3.0	115	0.00
48 T	Methyl methacrylate	0.333	0.330	0.9	117	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
 Data File : VX048237.D
 Acq On : 20 Oct 2025 14:28
 Operator : JC/MD
 Sample : VSTDICV050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 13 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 ICSVVX102025

Quant Time: Oct 20 16:37:21 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
 Quant Title : SW846 8260
 QLast Update : Mon Oct 20 14:13:59 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	0.004	0.004	0.0	113	0.00
50 S	Toluene-d8	1.196	1.158	3.2	111	0.00
51 T	4-Methyl-2-Pentanone	0.381	0.373	2.1	113	0.00
52 CM	Toluene	0.895	0.896	-0.1#	118	0.00
53 T	t-1,3-Dichloropropene	0.543	0.543	0.0	113	0.00
54 T	cis-1,3-Dichloropropene	0.586	0.585	0.2	116	0.00
55 T	1,1,2-Trichloroethane	0.333	0.330	0.9	117	0.00
56 T	Ethyl methacrylate	0.487	0.486	0.2	113	0.00
57 T	1,3-Dichloropropane	0.568	0.560	1.4	116	0.00
58 T	2-Chloroethyl Vinyl ether	0.232	0.253	-9.1	111	0.00
59 T	2-Hexanone	0.266	0.261	1.9	112	0.00
60 T	Dibromochloromethane	0.447	0.425	4.9	114	0.00
61 T	1,2-Dibromoethane	0.355	0.350	1.4	116	0.00
62 S	4-Bromofluorobenzene	0.455	0.426	6.4	109	0.00
63 I	Chlorobenzene-d5	1.000	1.000	0.0	109	0.00
64 T	Tetrachloroethene	0.373	0.363	2.7	121	0.00
65 PM	Chlorobenzene	1.125	1.127	-0.2	118	0.00
66 T	1,1,1,2-Tetrachloroethane	0.413	0.405	1.9	113	0.00
67 C	Ethyl Benzene	1.915	1.946	-1.6#	116	0.00
68 T	m/p-Xylenes	0.712	0.729	-2.4	116	0.00
69 T	o-Xylene	0.687	0.693	-0.9	114	0.00
70 T	Styrene	1.170	1.208	-3.2	115	0.00
71 P	Bromoform	0.330	0.319	3.3	113	0.00
72 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	107	0.00
73 T	Isopropylbenzene	3.652	3.773	-3.3	118	0.00
74 T	N-amyl acetate	1.295	1.332	-2.9	114	0.00
75 P	1,1,2,2-Tetrachloroethane	0.997	0.996	0.1	113	0.00
76 T	1,2,3-Trichloropropane	0.811	0.818	-0.9	119	0.00
77 T	Bromobenzene	0.916	0.918	-0.2	114	0.00
78 T	n-propylbenzene	4.228	4.396	-4.0	117	0.00
79 T	2-Chlorotoluene	2.564	2.603	-1.5	116	0.00
80 T	1,3,5-Trimethylbenzene	3.022	3.078	-1.9	115	0.00
81 T	trans-1,4-Dichloro-2-butene	0.333	0.333	0.0	113	0.00
82 T	4-Chlorotoluene	3.043	3.074	-1.0	114	0.00
83 T	tert-Butylbenzene	3.105	3.123	-0.6	115	0.00
84 T	1,2,4-Trimethylbenzene	3.016	3.113	-3.2	116	0.00
85 T	sec-Butylbenzene	3.736	3.828	-2.5	118	0.00
86 T	p-Isopropyltoluene	3.229	3.273	-1.4	117	0.00
87 T	1,3-Dichlorobenzene	1.726	1.665	3.5	115	0.00
88 T	1,4-Dichlorobenzene	1.788	1.696	5.1	115	0.00
89 T	n-Butylbenzene	2.939	2.923	0.5	119	0.00
90 T	Hexachloroethane	0.638	0.618	3.1	116	0.00
91 T	1,2-Dichlorobenzene	1.621	1.592	1.8	114	0.00
92 T	1,2-Dibromo-3-Chloropropane	0.202	0.199	1.5	109	0.00
93 T	1,2,4-Trichlorobenzene	1.096	1.029	6.1	115	0.00
94 T	Hexachlorobutadiene	0.507	0.397	21.7	114	0.00
95 T	Naphthalene	2.904	2.925	-0.7	113	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048237.D
Acq On : 20 Oct 2025 14:28
Operator : JC/MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
ICVVX102025

Quant Time: Oct 20 16:37:21 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 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	1.006	0.970	3.6	114	0.00

(#) = Out of Range

SPCC's out = 0 CCC's out = 6

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\WX102025\
 Data File : WX048237.D
 Acq On : 20 Oct 2025 14:28
 Operator : JC/MD
 Sample : VSTDICV050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 13 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
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Quant Time: Oct 20 16:37:21 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
 Quant Title : SW846 8260
 QLast Update : Mon Oct 20 14:13:59 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	116	-0.01
2 T	Dichlorodifluoromethane	50.000	51.331	-2.7	127	0.00
3 P	Chloromethane	50.000	53.491	-7.0	133	0.00
4 C	Vinyl Chloride	50.000	55.441	-10.9#	138	0.00
5 T	Bromomethane	50.000	54.847	-9.7	136	0.00
6 T	Chloroethane	50.000	56.320	-12.6	139	0.00
7 T	Trichlorofluoromethane	50.000	52.209	-4.4	128	0.00
8 T	Diethyl Ether	50.000	53.742	-7.5	135	0.00
9 T	1,1,2-Trichlorotrifluoroeth	50.000	53.589	-7.2	134	0.00
10 T	Methyl Iodide	50.000	47.994	4.0	114	0.00
11 T	Tert butyl alcohol	250.000	223.693	10.5	117	0.00
12 CM	1,1-Dichloroethene	50.000	52.043	-4.1#	131	0.00
13 T	Acrolein	250.000	249.473	0.2	126	0.00
14 T	Allyl chloride	50.000	51.099	-2.2	129	0.00
15 T	Acrylonitrile	250.000	250.900	-0.4	122	0.00
16 T	Acetone	250.000	219.789	12.1	121	0.00
17 T	Carbon Disulfide	50.000	48.792	2.4	130	0.00
18 T	Methyl Acetate	50.000	49.190	1.6	123	0.00
19 T	Methyl tert-butyl Ether	50.000	49.162	1.7	120	0.00
20 T	Methylene Chloride	50.000	51.066	-2.1	126	0.00
21 T	trans-1,2-Dichloroethene	50.000	50.932	-1.9	128	0.00
22 T	Diisopropyl ether	50.000	51.665	-3.3	126	0.00
23 T	Vinyl Acetate	250.000	260.168	-4.1	125	0.00
24 P	1,1-Dichloroethane	50.000	49.490	1.0	124	0.00
25 T	2-Butanone	250.000	238.354	4.7	120	0.00
26 T	2,2-Dichloropropane	50.000	48.230	3.5	121	0.00
27 T	cis-1,2-Dichloroethene	50.000	50.350	-0.7	126	-0.01
28 T	Bromochloromethane	50.000	46.587	6.8	107	0.00
29 T	Tetrahydrofuran	250.000	242.572	3.0	120	-0.01
30 C	Chloroform	50.000	48.427	3.1#	121	0.00
31 T	Cyclohexane	50.000	52.646	-5.3	130	0.00
32 T	1,1,1-Trichloroethane	50.000	48.309	3.4	120	-0.01
33 S	1,2-Dichloroethane-d4	50.000	45.687	8.6	109	0.00
34 I	1,4-Difluorobenzene	50.000	50.000	0.0	114	0.00
35 S	Dibromofluoromethane	50.000	48.951	2.1	115	0.00
36 T	1,1-Dichloropropene	50.000	49.344	1.3	126	-0.01
37 T	Ethyl Acetate	50.000	47.684	4.6	119	0.00
38 T	Carbon Tetrachloride	50.000	48.228	3.5	119	0.00
39 T	Methylcyclohexane	50.000	52.670	-5.3	127	0.00
40 TM	Benzene	50.000	50.241	-0.5	124	0.00
41 T	Methacrylonitrile	50.000	50.358	-0.7	118	-0.01
42 TM	1,2-Dichloroethane	50.000	48.963	2.1	116	0.00
43 T	Isopropyl Acetate	50.000	49.816	0.4	118	0.00
44 TM	Trichloroethene	50.000	50.582	-1.2	123	0.00
45 C	1,2-Dichloropropane	50.000	50.994	-2.0#	121	0.00
46 T	Dibromomethane	50.000	48.913	2.2	118	0.00
47 T	Bromodichloromethane	50.000	48.459	3.1	115	0.00
48 T	Methyl methacrylate	50.000	49.519	1.0	117	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\WX102025\
 Data File : WX048237.D
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 Operator : JC/MD
 Sample : VSTDICV050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 13 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
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Quant Time: Oct 20 16:37:21 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
 Quant Title : SW846 8260
 QLast Update : Mon Oct 20 14:13:59 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	1000.197	-0.0	113	0.00
50 S	Toluene-d8	50.000	48.386	3.2	111	0.00
51 T	4-Methyl-2-Pentanone	250.000	244.897	2.0	113	0.00
52 CM	Toluene	50.000	50.088	-0.2#	118	0.00
53 T	t-1,3-Dichloropropene	50.000	50.004	-0.0	113	0.00
54 T	cis-1,3-Dichloropropene	50.000	49.944	0.1	116	0.00
55 T	1,1,2-Trichloroethane	50.000	49.597	0.8	117	0.00
56 T	Ethyl methacrylate	50.000	49.964	0.1	113	0.00
57 T	1,3-Dichloropropane	50.000	49.226	1.5	116	0.00
58 T	2-Chloroethyl Vinyl ether	250.000	242.124	3.2	111	0.00
59 T	2-Hexanone	250.000	246.102	1.6	112	0.00
60 T	Dibromochloromethane	50.000	47.530	4.9	114	0.00
61 T	1,2-Dibromoethane	50.000	49.319	1.4	116	0.00
62 S	4-Bromofluorobenzene	50.000	46.795	6.4	109	0.00
63 I	Chlorobenzene-d5	50.000	50.000	0.0	109	0.00
64 T	Tetrachloroethene	50.000	48.686	2.6	121	0.00
65 PM	Chlorobenzene	50.000	50.095	-0.2	118	0.00
66 T	1,1,1,2-Tetrachloroethane	50.000	49.014	2.0	113	0.00
67 C	Ethyl Benzene	50.000	50.798	-1.6#	116	0.00
68 T	m/p-Xylenes	100.000	102.416	-2.4	116	0.00
69 T	o-Xylene	50.000	50.424	-0.8	114	0.00
70 T	Styrene	50.000	51.651	-3.3	115	0.00
71 P	Bromoform	50.000	48.250	3.5	113	0.00
72 I	1,4-Dichlorobenzene-d4	50.000	50.000	0.0	107	0.00
73 T	Isopropylbenzene	50.000	51.658	-3.3	118	0.00
74 T	N-amyl acetate	50.000	51.399	-2.8	114	0.00
75 P	1,1,2,2-Tetrachloroethane	50.000	49.936	0.1	113	0.00
76 T	1,2,3-Trichloropropane	50.000	50.456	-0.9	119	0.00
77 T	Bromobenzene	50.000	50.135	-0.3	114	0.00
78 T	n-propylbenzene	50.000	51.980	-4.0	117	0.00
79 T	2-Chlorotoluene	50.000	50.760	-1.5	116	0.00
80 T	1,3,5-Trimethylbenzene	50.000	50.918	-1.8	115	0.00
81 T	trans-1,4-Dichloro-2-butene	50.000	49.995	0.0	113	0.00
82 T	4-Chlorotoluene	50.000	50.507	-1.0	114	0.00
83 T	tert-Butylbenzene	50.000	50.288	-0.6	115	0.00
84 T	1,2,4-Trimethylbenzene	50.000	51.607	-3.2	116	0.00
85 T	sec-Butylbenzene	50.000	51.230	-2.5	118	0.00
86 T	p-Isopropyltoluene	50.000	50.686	-1.4	117	0.00
87 T	1,3-Dichlorobenzene	50.000	48.229	3.5	115	0.00
88 T	1,4-Dichlorobenzene	50.000	47.423	5.2	115	0.00
89 T	n-Butylbenzene	50.000	49.728	0.5	119	0.00
90 T	Hexachloroethane	50.000	48.437	3.1	116	0.00
91 T	1,2-Dichlorobenzene	50.000	49.123	1.8	114	0.00
92 T	1,2-Dibromo-3-Chloropropane	50.000	49.072	1.9	109	0.00
93 T	1,2,4-Trichlorobenzene	50.000	46.941	6.1	115	0.00
94 T	Hexachlorobutadiene	50.000	48.274	3.5	114	0.00
95 T	Naphthalene	50.000	50.362	-0.7	113	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048237.D
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Sample : VSTDICV050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 13 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
ICVVX102025

Quant Time: Oct 20 16:37:21 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 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	48.223	3.6	114	0.00

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



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

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name:	<u>Alliance</u>	Contract:	<u>ICES02</u>
Lab Code:	<u>ACE</u>	SDG No.:	<u>Q3400</u>
Instrument ID:	<u>MSVOA_X</u>	Calibration Date/Time:	<u>10/21/2025 08:43</u>
Lab File ID:	<u>VX048252.D</u>	Init. Calib. Date(s):	<u>10/20/2025 10/20/2025</u>
Heated Purge: (Y/N)	<u>N</u>	Init. Calib. Time(s):	<u>10:59 13:49</u>
GC Column:	<u>DB-624UI</u>	ID:	<u>0.18</u> (mm)

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX%D
Dichlorodifluoromethane	0.514	0.496		-3.5	20
Chloromethane	0.480	0.468	0.1	-2.5	20
Vinyl Chloride	0.444	0.448		0.9	20
Bromomethane	0.302	0.299		-0.99	20
Chloroethane	0.261	0.261		0	20
Trichlorofluoromethane	0.852	0.813		-4.58	20
1,1,2-Trichlorotrifluoroethane	0.540	0.513		-5	20
1,1-Dichloroethene	0.525	0.498		-5.14	20
Acetone	0.240	0.230		-4.17	20
Carbon Disulfide	1.654	1.439		-13	20
Methyl tert-butyl Ether	1.791	1.576		-12	20
Methyl Acetate	0.502	0.411		-18.13	20
Methylene Chloride	0.586	0.556		-5.12	20
trans-1,2-Dichloroethene	0.577	0.538		-6.76	20
1,1-Dichloroethane	1.051	0.952	0.1	-9.42	20
Cyclohexane	0.870	0.788		-9.43	20
2-Butanone	0.304	0.260		-14.47	20
Carbon Tetrachloride	0.599	0.533		-11.02	20
cis-1,2-Dichloroethene	0.673	0.610		-9.36	20
Bromochloromethane	0.436	0.435		-0.23	20
Chloroform	1.123	1.006		-10.42	20
1,1,1-Trichloroethane	1.035	0.920		-11.11	20
Methylcyclohexane	0.573	0.510		-10.99	20
Benzene	1.409	1.280		-9.15	20
1,2-Dichloroethane	0.520	0.466		-10.39	20
Trichloroethene	0.372	0.337		-9.41	20
1,2-Dichloropropane	0.335	0.305		-8.95	20
Bromodichloromethane	0.563	0.510		-9.41	20
4-Methyl-2-Pentanone	0.381	0.302		-20.74	20
Toluene	0.895	0.795		-11.17	20
t-1,3-Dichloropropene	0.543	0.493		-9.21	20
cis-1,3-Dichloropropene	0.586	0.529		-9.73	20
1,1,2-Trichloroethane	0.333	0.291		-12.61	20
2-Hexanone	0.266	0.227		-14.66	20
Dibromochloromethane	0.447	0.388		-13.2	20
1,2-Dibromoethane	0.355	0.307		-13.52	20
Tetrachloroethene	0.373	0.325		-12.87	20
Chlorobenzene	1.125	1.025	0.3	-8.89	20

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



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

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name:	<u>Alliance</u>	Contract:	<u>ICES02</u>
Lab Code:	<u>ACE</u>	SDG No.:	<u>Q3400</u>
Instrument ID:	<u>MSVOA_X</u>	Calibration Date/Time:	<u>10/21/2025 08:43</u>
Lab File ID:	<u>VX048252.D</u>	Init. Calib. Date(s):	<u>10/20/2025 10/20/2025</u>
Heated Purge: (Y/N)	<u>N</u>	Init. Calib. Time(s):	<u>10:59 13:49</u>
GC Column:	<u>DB-624UI</u>	ID:	<u>0.18</u> (mm)

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX%D
Ethyl Benzene	1.915	1.738		-9.24	20
m/p-Xylenes	0.712	0.666		-6.46	20
o-Xylene	0.687	0.625		-9.02	20
Styrene	1.170	1.107		-5.39	20
Bromoform	0.330	0.283	0.1	-14.24	20
Isopropylbenzene	3.652	3.379		-7.47	20
1,1,2,2-Tetrachloroethane	0.997	0.857	0.3	-14.04	20
1,3-Dichlorobenzene	1.726	1.555		-9.91	20
1,4-Dichlorobenzene	1.788	1.551		-13.26	20
1,2-Dichlorobenzene	1.621	1.416		-12.65	20
1,2-Dibromo-3-Chloropropane	0.202	0.163		-19.31	20
1,2,4-Trichlorobenzene	1.096	0.885		-19.25	20
1,2,3-Trichlorobenzene	1.006	0.834		-17.1	20
1,2-Dichloroethane-d4	0.701	0.658		-6.13	20
Dibromofluoromethane	0.341	0.340		-0.29	20
Toluene-d8	1.196	1.150		-3.85	20
4-Bromofluorobenzene	0.455	0.419		-7.91	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_X\Data\VX102125\
 Data File : VX048252.D
 Acq On : 21 Oct 2025 08:43
 Operator : JC/MD
 Sample : VSTDCCC050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 2 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDCCC050

Manual Integrations
 APPROVED

Reviewed By : John Carlone 10/24/2025
 Supervised By : Mahesh Dadoda 10/24/2025

Quant Time: Oct 24 04:21:20 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
 Quant Title : SW846 8260
 QLast Update : Mon Oct 20 14:13:59 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	5.531	168	144122	50.000	ug/l	-0.01
34) 1,4-Difluorobenzene	6.738	114	227103	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.037	117	197016	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.006	152	96991	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.934	65	94847	46.938	ug/l	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery =	93.880%		
35) Dibromofluoromethane	5.361	113	77279	49.844	ug/l	-0.01
Spiked Amount 50.000	Range 75 - 124		Recovery =	99.680%		
50) Toluene-d8	8.628	98	261228	48.070	ug/l	0.00
Spiked Amount 50.000	Range 92 - 112		Recovery =	96.140%		
62) 4-Bromofluorobenzene	11.061	95	95248	46.072	ug/l	0.00
Spiked Amount 50.000	Range 83 - 123		Recovery =	92.140%		
Target Compounds					Qvalue	
2) Dichlorodifluoromethane	1.172	85	71433	48.214	ug/l	96
3) Chloromethane	1.300	50	67413	48.746	ug/l	98
4) Vinyl Chloride	1.380	62	64624	50.463	ug/l	99
5) Bromomethane	1.617	94	43146	49.645	ug/l	97
6) Chloroethane	1.697	64	37653	50.036	ug/l	90
7) Trichlorofluoromethane	1.898	101	117120	47.687	ug/l	99
8) Diethyl Ether	2.129	74	32474	46.991	ug/l	90
9) 1,1,2-Trichlorotrifluo...	2.331	101	73938	47.541	ug/l	96
10) Methyl Iodide	2.453	142	89481	45.766	ug/l	100
11) Tert butyl alcohol	2.934	59	34686	172.886	ug/l	98
12) 1,1-Dichloroethene	2.325	96	71745	47.416	ug/l	88
13) Acrolein	2.233	56	55830	272.848	ug/l	99
14) Allyl chloride	2.666	41	114538	45.594	ug/l	97
15) Acrylonitrile	3.050	53	152721	211.101	ug/l	99
16) Acetone	2.367	43	166093	239.598	ug/l	95
17) Carbon Disulfide	2.514	76	207386	43.489	ug/l	100
18) Methyl Acetate	2.696	43	59246	40.924	ug/l	94
19) Methyl tert-butyl Ether	3.099	73	227127	44.001	ug/l	97
20) Methylene Chloride	2.788	84	80164	47.460	ug/l	92
21) trans-1,2-Dichloroethene	3.087	96	77587	46.681	ug/l	97
22) Diisopropyl ether	3.745	45	232684	46.439	ug/l	95
23) Vinyl Acetate	3.708	43	904806	226.065	ug/l	98
24) 1,1-Dichloroethane	3.599	63	137234	45.296	ug/l	99
25) 2-Butanone	4.531	43	187588	213.793	ug/l	100
26) 2,2-Dichloropropane	4.458	77	122921	44.950	ug/l	100
27) cis-1,2-Dichloroethene	4.471	96	87886	45.309	ug/l	98
28) Bromochloromethane	4.879	49	62707	49.917	ug/l	86
29) Tetrahydrofuran	4.983	42	100043	190.379	ug/l	93
30) Chloroform	5.074	83	145033	44.807	ug/l	98
31) Cyclohexane	5.452	56	113590	45.286	ug/l	95
32) 1,1,1-Trichloroethane	5.361	97	132637	44.462	ug/l	98
36) 1,1-Dichloropropene	5.672	75	97868	44.412	ug/l	100
37) Ethyl Acetate	4.690	43	73825	40.418	ug/l	98
38) Carbon Tetrachloride	5.659	117	120960	44.491	ug/l	96
39) Methylcyclohexane	7.360	83	115804	44.497	ug/l	95
40) Benzene	6.013	78	290616	45.424	ug/l	98

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102125\
 Data File : VX048252.D
 Acq On : 21 Oct 2025 08:43
 Operator : JC/MD
 Sample : VSTDCCC050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 2 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDCCC050

Manual Integrations
 APPROVED

Reviewed By : John Carlone 10/24/2025
 Supervised By : Mahesh Dadoda 10/24/2025

Quant Time: Oct 24 04:21:20 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
 Quant Title : SW846 8260
 QLast Update : Mon Oct 20 14:13:59 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	4.891	41	40965	42.707	ug/l	96
42) 1,2-Dichloroethane	6.062	62	105747	44.791	ug/l	99
43) Isopropyl Acetate	6.318	43	122589	40.859	ug/l	95
44) Trichloroethene	7.104	130	76506	45.286	ug/l	92
45) 1,2-Dichloropropane	7.409	63	69342	45.586	ug/l	100
46) Dibromomethane	7.561	93	52913	44.649	ug/l	94
47) Bromodichloromethane	7.799	83	115823	45.265	ug/l	98
48) Methyl methacrylate	7.671	41	62073	41.000	ug/l	94
49) 1,4-Dioxane	7.641	88	15658	782.834	ug/l	92
51) 4-Methyl-2-Pentanone	8.555	43	343412	198.518	ug/l	95
52) Toluene	8.701	92	180638	44.443	ug/l	100
53) t-1,3-Dichloropropene	8.957	75	111868	45.367	ug/l	100
54) cis-1,3-Dichloropropene	8.348	75	120247	45.199	ug/l	94
55) 1,1,2-Trichloroethane	9.134	97	66141	43.758	ug/l	99
56) Ethyl methacrylate	9.098	69	94033	42.533	ug/l	94
57) 1,3-Dichloropropane	9.287	76	112894	43.726	ug/l	99
58) 2-Chloroethyl Vinyl ether	8.220	63	253467	213.469	ug/l	95
59) 2-Hexanone	9.409	43	257988	213.881	ug/l	95
60) Dibromochloromethane	9.500	129	88005	43.319	ug/l	99
61) 1,2-Dibromoethane	9.592	107	69657	43.228	ug/l	98
64) Tetrachloroethene	9.256	164	64080	43.569	ug/l	98
65) Chlorobenzene	10.061	112	201952	45.568	ug/l	97
66) 1,1,1,2-Tetrachloroethane	10.140	131	73602	45.215	ug/l	98
67) Ethyl Benzene	10.177	91	342357	45.371	ug/l	98
68) m/p-Xylenes	10.280	106	262482	93.624	ug/l	98
69) o-Xylene	10.622	106	123116	45.486	ug/l	98
70) Styrene	10.634	104	218038	47.309	ug/l	100
71) Bromoform	10.780	173	55833	42.915	ug/l #	99
73) Isopropylbenzene	10.945	105	327700	46.258	ug/l	100
74) N-amyl acetate	10.823	43	104260	41.490	ug/l	94
75) 1,1,2,2-Tetrachloroethane	11.195	83	83168	42.990	ug/l	99
76) 1,2,3-Trichloropropane	11.219	75	69389m	44.116	ug/l	
77) Bromobenzene	11.177	156	80981	45.589	ug/l	94
78) n-propylbenzene	11.286	91	383372	46.739	ug/l	98
79) 2-Chlorotoluene	11.347	91	226051	45.456	ug/l	98
80) 1,3,5-Trimethylbenzene	11.433	105	270132	46.077	ug/l	100
81) trans-1,4-Dichloro-2-b...	11.000	75	27826	43.041	ug/l	98
82) 4-Chlorotoluene	11.433	91	271398	45.973	ug/l	98
83) tert-Butylbenzene	11.695	119	269543	44.748	ug/l	98
84) 1,2,4-Trimethylbenzene	11.731	105	270636	46.257	ug/l	99
85) sec-Butylbenzene	11.872	105	324459	44.772	ug/l	99
86) p-Isopropyltoluene	11.987	119	278806	44.510	ug/l	99
87) 1,3-Dichlorobenzene	11.951	146	150857	45.050	ug/l	99
88) 1,4-Dichlorobenzene	12.024	146	150468	43.374	ug/l	99
89) n-Butylbenzene	12.311	91	246692	43.269	ug/l	99
90) Hexachloroethane	12.518	117	53716	43.425	ug/l	96
91) 1,2-Dichlorobenzene	12.317	146	137387	43.698	ug/l	98
92) 1,2-Dibromo-3-Chloropr...	12.920	75	15819	40.283	ug/l	100
93) 1,2,4-Trichlorobenzene	13.566	180	85831	40.369	ug/l	99
94) Hexachlorobutadiene	13.707	225	32869	41.267	ug/l	99
95) Naphthalene	13.755	128	233946	41.531	ug/l	100
96) 1,2,3-Trichlorobenzene	13.938	180	80863	41.446	ug/l	97

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102125\
Data File : VX048252.D
Acq On : 21 Oct 2025 08:43
Operator : JC/MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDCCC050

Manual Integrations
APPROVED

Reviewed By :John Carlone 10/24/2025
Supervised By :Mahesh Dadoda 10/24/2025

Quant Time: Oct 24 04:21:20 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

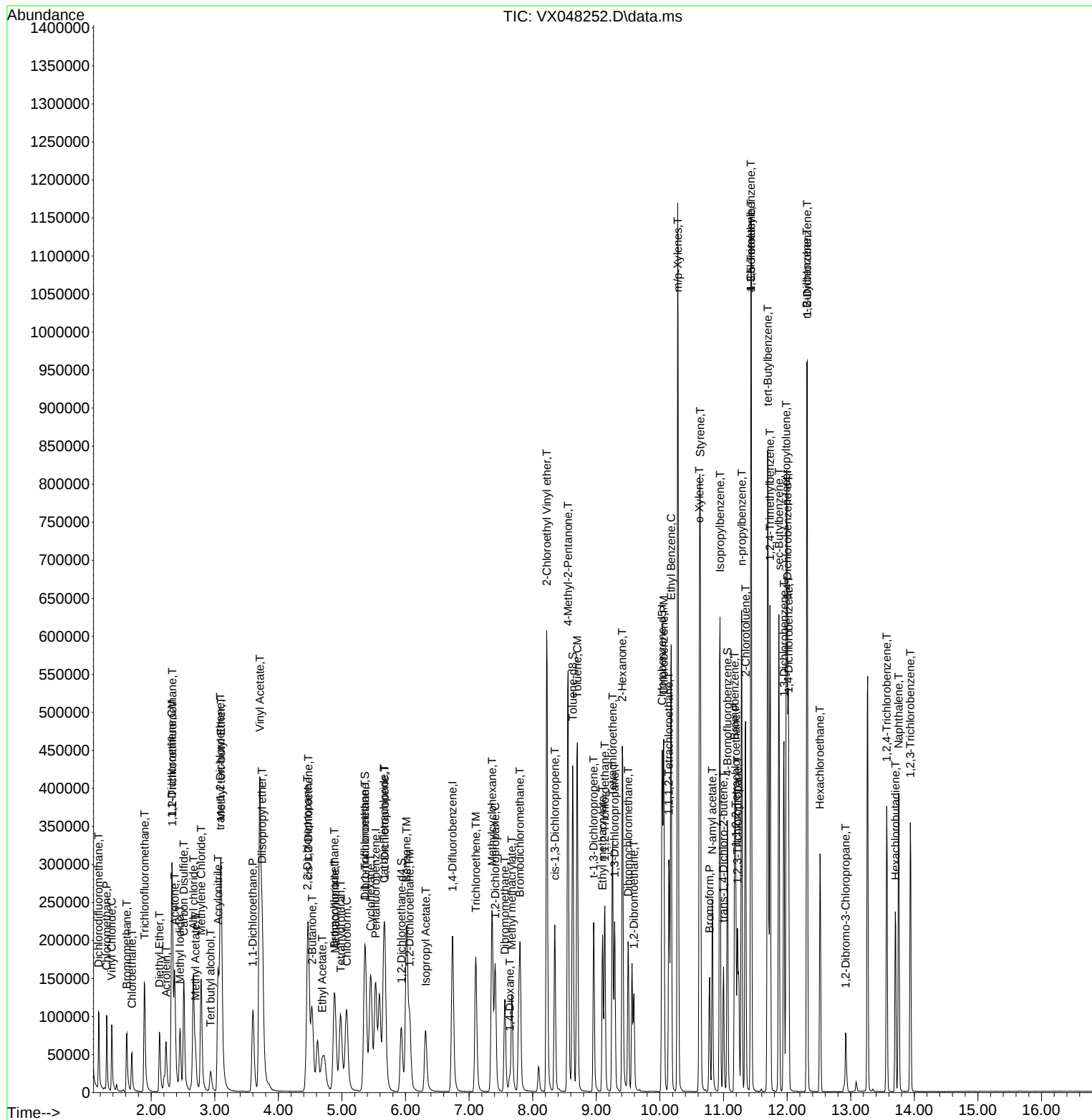
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102125\
 Data File : VX048252.D
 Acq On : 21 Oct 2025 08:43
 Operator : JC/MD
 Sample : VSTDCCC050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 2 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDCCC050

Manual Integrations APPROVED

Reviewed By : John Carlone 10/24/2025
 Supervised By : Mahesh Dadoda 10/24/2025

Quant Time: Oct 24 04:21:20 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
 Quant Title : SW846 8260
 QLast Update : Mon Oct 20 14:13:59 2025
 Response via : Initial Calibration



Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102125\
 Data File : VX048252.D
 Acq On : 21 Oct 2025 08:43
 Operator : JC/MD
 Sample : VSTDCCC050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 2 Sample Multiplier: 1

Instrument :
 MSVOA_X
 LabSampleId :
 VSTDCCC050

Quant Time: Oct 24 04:21:20 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
 Quant Title : SW846 8260
 QLast Update : Mon Oct 20 14:13:59 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	116	-0.01
2 T	Dichlorodifluoromethane	0.514	0.496	3.5	119	0.00
3 P	Chloromethane	0.480	0.468	2.5	121	0.00
4 C	Vinyl Chloride	0.444	0.448	-0.9#	125	0.00
5 T	Bromomethane	0.302	0.299	1.0	123	0.00
6 T	Chloroethane	0.261	0.261	0.0	123	0.00
7 T	Trichlorofluoromethane	0.852	0.813	4.6	117	0.00
8 T	Diethyl Ether	0.240	0.225	6.2	117	0.00
9 T	1,1,2-Trichlorotrifluoroeth	0.540	0.513	5.0	119	0.00
10 T	Methyl Iodide	0.678	0.621	8.4	108	0.00
11 T	Tert butyl alcohol	0.070	0.048	31.4#	90	0.00
12 CM	1,1-Dichloroethene	0.525	0.498	5.1#	119	0.00
13 T	Acrolein	0.071	0.077	-8.5	138	0.00
14 T	Allyl chloride	0.872	0.795	8.8	114	0.00
15 T	Acrylonitrile	0.251	0.212	15.5	102	0.00
16 T	Acetone	0.240	0.230	4.2	132	0.00
17 T	Carbon Disulfide	1.654	1.439	13.0	116	0.00
18 T	Methyl Acetate	0.502	0.411	18.1	102	0.00
19 T	Methyl tert-butyl Ether	1.791	1.576	12.0	107	-0.01
20 T	Methylene Chloride	0.586	0.556	5.1	117	0.00
21 T	trans-1,2-Dichloroethene	0.577	0.538	6.8	116	0.00
22 T	Diisopropyl ether	1.738	1.614	7.1	112	0.00
23 T	Vinyl Acetate	1.389	1.256	9.6	108	0.00
24 P	1,1-Dichloroethane	1.051	0.952	9.4	113	0.00
25 T	2-Butanone	0.304	0.260	14.5	107	0.00
26 T	2,2-Dichloropropane	0.949	0.853	10.1	113	0.00
27 T	cis-1,2-Dichloroethene	0.673	0.610	9.4	113	-0.01
28 T	Bromochloromethane	0.436	0.435	0.2	114	0.00
29 T	Tetrahydrofuran	0.182	0.139	23.6	94	0.00
30 C	Chloroform	1.123	1.006	10.4#	111	0.00
31 T	Cyclohexane	0.870	0.788	9.4	111	0.00
32 T	1,1,1-Trichloroethane	1.035	0.920	11.1	110	-0.01
33 S	1,2-Dichloroethane-d4	0.701	0.658	6.1	112	0.00
34 I	1,4-Difluorobenzene	1.000	1.000	0.0	112	0.00
35 S	Dibromofluoromethane	0.341	0.340	0.3	116	-0.01
36 T	1,1-Dichloropropene	0.485	0.431	11.1	112	-0.01
37 T	Ethyl Acetate	0.402	0.325	19.2	99	0.00
38 T	Carbon Tetrachloride	0.599	0.533	11.0	108	0.00
39 T	Methylcyclohexane	0.573	0.510	11.0	106	0.00
40 TM	Benzene	1.409	1.280	9.2	111	-0.01
41 T	Methacrylonitrile	0.211	0.180	14.7	99	-0.01
42 TM	1,2-Dichloroethane	0.520	0.466	10.4	105	0.00
43 T	Isopropyl Acetate	0.661	0.540	18.3	96	0.00
44 TM	Trichloroethene	0.372	0.337	9.4	109	0.00
45 C	1,2-Dichloropropane	0.335	0.305	9.0#	107	0.00
46 T	Dibromomethane	0.261	0.233	10.7	106	0.00
47 T	Bromodichloromethane	0.563	0.510	9.4	107	0.00
48 T	Methyl methacrylate	0.333	0.273	18.0	95	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102125\
 Data File : VX048252.D
 Acq On : 21 Oct 2025 08:43
 Operator : JC/MD
 Sample : VSTDCCC050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 2 Sample Multiplier: 1

Instrument :
 MSVOA_X
 LabSampleId :
 VSTDCCC050

Quant Time: Oct 24 04:21:20 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
 Quant Title : SW846 8260
 QLast Update : Mon Oct 20 14:13:59 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	0.004	0.003	25.0	87	0.00
50 S	Toluene-d8	1.196	1.150	3.8	109	0.00
51 T	4-Methyl-2-Pentanone	0.381	0.302	20.7	90	0.00
52 CM	Toluene	0.895	0.795	11.2#	104	0.00
53 T	t-1,3-Dichloropropene	0.543	0.493	9.2	102	0.00
54 T	cis-1,3-Dichloropropene	0.586	0.529	9.7	104	0.00
55 T	1,1,2-Trichloroethane	0.333	0.291	12.6	102	0.00
56 T	Ethyl methacrylate	0.487	0.414	15.0	95	0.00
57 T	1,3-Dichloropropane	0.568	0.497	12.5	102	0.00
58 T	2-Chloroethyl Vinyl ether	0.232	0.223	3.9	97	0.00
59 T	2-Hexanone	0.266	0.227	14.7	96	0.00
60 T	Dibromochloromethane	0.447	0.388	13.2	103	0.00
61 T	1,2-Dibromoethane	0.355	0.307	13.5	101	0.00
62 S	4-Bromofluorobenzene	0.455	0.419	7.9	106	0.00
63 I	Chlorobenzene-d5	1.000	1.000	0.0	107	0.00
64 T	Tetrachloroethene	0.373	0.325	12.9	106	0.00
65 PM	Chlorobenzene	1.125	1.025	8.9	105	0.00
66 T	1,1,1,2-Tetrachloroethane	0.413	0.374	9.4	102	0.00
67 C	Ethyl Benzene	1.915	1.738	9.2#	102	0.00
68 T	m/p-Xylenes	0.712	0.666	6.5	103	0.00
69 T	o-Xylene	0.687	0.625	9.0	100	0.00
70 T	Styrene	1.170	1.107	5.4	103	0.00
71 P	Bromoform	0.330	0.283	14.2	98	0.00
72 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	105	0.00
73 T	Isopropylbenzene	3.652	3.379	7.5	103	0.00
74 T	N-amyl acetate	1.295	1.075	17.0	90	0.00
75 P	1,1,2,2-Tetrachloroethane	0.997	0.857	14.0	95	0.00
76 T	1,2,3-Trichloropropane	0.811	0.715	11.8	102	0.00
77 T	Bromobenzene	0.916	0.835	8.8	102	0.00
78 T	n-propylbenzene	4.228	3.953	6.5	103	0.00
79 T	2-Chlorotoluene	2.564	2.331	9.1	102	0.00
80 T	1,3,5-Trimethylbenzene	3.022	2.785	7.8	102	0.00
81 T	trans-1,4-Dichloro-2-butene	0.333	0.287	13.8	95	0.00
82 T	4-Chlorotoluene	3.043	2.798	8.1	102	0.00
83 T	tert-Butylbenzene	3.105	2.779	10.5	100	0.00
84 T	1,2,4-Trimethylbenzene	3.016	2.790	7.5	102	0.00
85 T	sec-Butylbenzene	3.736	3.345	10.5	101	0.00
86 T	p-Isopropyltoluene	3.229	2.875	11.0	101	0.00
87 T	1,3-Dichlorobenzene	1.726	1.555	9.9	105	0.00
88 T	1,4-Dichlorobenzene	1.788	1.551	13.3	103	0.00
89 T	n-Butylbenzene	2.939	2.543	13.5	101	0.00
90 T	Hexachloroethane	0.638	0.554	13.2	102	0.00
91 T	1,2-Dichlorobenzene	1.621	1.416	12.6	99	0.00
92 T	1,2-Dibromo-3-Chloropropane	0.202	0.163	19.3	88	0.00
93 T	1,2,4-Trichlorobenzene	1.096	0.885	19.3	97	0.00
94 T	Hexachlorobutadiene	0.507	0.339	33.1#	95	0.00
95 T	Naphthalene	2.904	2.412	16.9	91	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102125\
Data File : VX048252.D
Acq On : 21 Oct 2025 08:43
Operator : JC/MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_X
LabSampleId :
VSTDCCC050

Quant Time: Oct 24 04:21:20 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 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	1.006	0.834	17.1	96	0.00

(#) = Out of Range

SPCC's out = 0 CCC's out = 6

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102125\
 Data File : VX048252.D
 Acq On : 21 Oct 2025 08:43
 Operator : JC/MD
 Sample : VSTDCCC050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 2 Sample Multiplier: 1

Instrument :
 MSVOA_X
 LabSampleId :
 VSTDCCC050

Quant Time: Oct 24 04:21:20 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
 Quant Title : SW846 8260
 QLast Update : Mon Oct 20 14:13:59 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	116	-0.01
2 T	Dichlorodifluoromethane	50.000	48.214	3.6	119	0.00
3 P	Chloromethane	50.000	48.746	2.5	121	0.00
4 C	Vinyl Chloride	50.000	50.463	-0.9#	125	0.00
5 T	Bromomethane	50.000	49.645	0.7	123	0.00
6 T	Chloroethane	50.000	50.036	-0.1	123	0.00
7 T	Trichlorofluoromethane	50.000	47.687	4.6	117	0.00
8 T	Diethyl Ether	50.000	46.991	6.0	117	0.00
9 T	1,1,2-Trichlorotrifluoroeth	50.000	47.541	4.9	119	0.00
10 T	Methyl Iodide	50.000	45.766	8.5	108	0.00
11 T	Tert butyl alcohol	250.000	172.886	30.8#	90	0.00
12 CM	1,1-Dichloroethene	50.000	47.416	5.2#	119	0.00
13 T	Acrolein	250.000	272.848	-9.1	138	0.00
14 T	Allyl chloride	50.000	45.594	8.8	114	0.00
15 T	Acrylonitrile	250.000	211.101	15.6	102	0.00
16 T	Acetone	250.000	239.598	4.2	132	0.00
17 T	Carbon Disulfide	50.000	43.489	13.0	116	0.00
18 T	Methyl Acetate	50.000	40.924	18.2	102	0.00
19 T	Methyl tert-butyl Ether	50.000	44.001	12.0	107	-0.01
20 T	Methylene Chloride	50.000	47.460	5.1	117	0.00
21 T	trans-1,2-Dichloroethene	50.000	46.681	6.6	116	0.00
22 T	Diisopropyl ether	50.000	46.439	7.1	112	0.00
23 T	Vinyl Acetate	250.000	226.065	9.6	108	0.00
24 P	1,1-Dichloroethane	50.000	45.296	9.4	113	0.00
25 T	2-Butanone	250.000	213.793	14.5	107	0.00
26 T	2,2-Dichloropropane	50.000	44.950	10.1	113	0.00
27 T	cis-1,2-Dichloroethene	50.000	45.309	9.4	113	-0.01
28 T	Bromochloromethane	50.000	49.917	0.2	114	0.00
29 T	Tetrahydrofuran	250.000	190.379	23.8	94	0.00
30 C	Chloroform	50.000	44.807	10.4#	111	0.00
31 T	Cyclohexane	50.000	45.286	9.4	111	0.00
32 T	1,1,1-Trichloroethane	50.000	44.462	11.1	110	-0.01
33 S	1,2-Dichloroethane-d4	50.000	46.938	6.1	112	0.00
34 I	1,4-Difluorobenzene	50.000	50.000	0.0	112	0.00
35 S	Dibromofluoromethane	50.000	49.844	0.3	116	-0.01
36 T	1,1-Dichloropropene	50.000	44.412	11.2	112	-0.01
37 T	Ethyl Acetate	50.000	40.418	19.2	99	0.00
38 T	Carbon Tetrachloride	50.000	44.491	11.0	108	0.00
39 T	Methylcyclohexane	50.000	44.497	11.0	106	0.00
40 TM	Benzene	50.000	45.424	9.2	111	-0.01
41 T	Methacrylonitrile	50.000	42.707	14.6	99	-0.01
42 TM	1,2-Dichloroethane	50.000	44.791	10.4	105	0.00
43 T	Isopropyl Acetate	50.000	40.859	18.3	96	0.00
44 TM	Trichloroethene	50.000	45.286	9.4	109	0.00
45 C	1,2-Dichloropropane	50.000	45.586	8.8#	107	0.00
46 T	Dibromomethane	50.000	44.649	10.7	106	0.00
47 T	Bromodichloromethane	50.000	45.265	9.5	107	0.00
48 T	Methyl methacrylate	50.000	41.000	18.0	95	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102125\
 Data File : VX048252.D
 Acq On : 21 Oct 2025 08:43
 Operator : JC/MD
 Sample : VSTDCCC050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 2 Sample Multiplier: 1

Instrument :
 MSVOA_X
 LabSampleId :
 VSTDCCC050

Quant Time: Oct 24 04:21:20 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
 Quant Title : SW846 8260
 QLast Update : Mon Oct 20 14:13:59 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	782.834	21.7	87	0.00
50 S	Toluene-d8	50.000	48.070	3.9	109	0.00
51 T	4-Methyl-2-Pentanone	250.000	198.518	20.6	90	0.00
52 CM	Toluene	50.000	44.443	11.1#	104	0.00
53 T	t-1,3-Dichloropropene	50.000	45.367	9.3	102	0.00
54 T	cis-1,3-Dichloropropene	50.000	45.199	9.6	104	0.00
55 T	1,1,2-Trichloroethane	50.000	43.758	12.5	102	0.00
56 T	Ethyl methacrylate	50.000	42.533	14.9	95	0.00
57 T	1,3-Dichloropropane	50.000	43.726	12.5	102	0.00
58 T	2-Chloroethyl Vinyl ether	250.000	213.469	14.6	97	0.00
59 T	2-Hexanone	250.000	213.881	14.4	96	0.00
60 T	Dibromochloromethane	50.000	43.319	13.4	103	0.00
61 T	1,2-Dibromoethane	50.000	43.228	13.5	101	0.00
62 S	4-Bromofluorobenzene	50.000	46.072	7.9	106	0.00
63 I	Chlorobenzene-d5	50.000	50.000	0.0	107	0.00
64 T	Tetrachloroethene	50.000	43.569	12.9	106	0.00
65 PM	Chlorobenzene	50.000	45.568	8.9	105	0.00
66 T	1,1,1,2-Tetrachloroethane	50.000	45.215	9.6	102	0.00
67 C	Ethyl Benzene	50.000	45.371	9.3#	102	0.00
68 T	m/p-Xylenes	100.000	93.624	6.4	103	0.00
69 T	o-Xylene	50.000	45.486	9.0	100	0.00
70 T	Styrene	50.000	47.309	5.4	103	0.00
71 P	Bromoform	50.000	42.915	14.2	98	0.00
72 I	1,4-Dichlorobenzene-d4	50.000	50.000	0.0	105	0.00
73 T	Isopropylbenzene	50.000	46.258	7.5	103	0.00
74 T	N-amyl acetate	50.000	41.490	17.0	90	0.00
75 P	1,1,2,2-Tetrachloroethane	50.000	42.990	14.0	95	0.00
76 T	1,2,3-Trichloropropane	50.000	44.116	11.8	102	0.00
77 T	Bromobenzene	50.000	45.589	8.8	102	0.00
78 T	n-propylbenzene	50.000	46.739	6.5	103	0.00
79 T	2-Chlorotoluene	50.000	45.456	9.1	102	0.00
80 T	1,3,5-Trimethylbenzene	50.000	46.077	7.8	102	0.00
81 T	trans-1,4-Dichloro-2-butene	50.000	43.041	13.9	95	0.00
82 T	4-Chlorotoluene	50.000	45.973	8.1	102	0.00
83 T	tert-Butylbenzene	50.000	44.748	10.5	100	0.00
84 T	1,2,4-Trimethylbenzene	50.000	46.257	7.5	102	0.00
85 T	sec-Butylbenzene	50.000	44.772	10.5	101	0.00
86 T	p-Isopropyltoluene	50.000	44.510	11.0	101	0.00
87 T	1,3-Dichlorobenzene	50.000	45.050	9.9	105	0.00
88 T	1,4-Dichlorobenzene	50.000	43.374	13.3	103	0.00
89 T	n-Butylbenzene	50.000	43.269	13.5	101	0.00
90 T	Hexachloroethane	50.000	43.425	13.2	102	0.00
91 T	1,2-Dichlorobenzene	50.000	43.698	12.6	99	0.00
92 T	1,2-Dibromo-3-Chloropropane	50.000	40.283	19.4	88	0.00
93 T	1,2,4-Trichlorobenzene	50.000	40.369	19.3	97	0.00
94 T	Hexachlorobutadiene	50.000	41.267	17.5	95	0.00
95 T	Naphthalene	50.000	41.531	16.9	91	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102125\
Data File : VX048252.D
Acq On : 21 Oct 2025 08:43
Operator : JC/MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_X
LabSampleId :
VSTDCCC050

Quant Time: Oct 24 04:21:20 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 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	41.446	17.1	96	0.00

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



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

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name:	<u>Alliance</u>	Contract:	<u>ICES02</u>
Lab Code:	<u>ACE</u>	SDG No.:	<u>Q3400</u>
Instrument ID:	<u>MSVOA_X</u>	Calibration Date/Time:	<u>10/21/2025 18:09</u>
Lab File ID:	<u>VX048278.D</u>	Init. Calib. Date(s):	<u>10/20/2025 10/20/2025</u>
Heated Purge: (Y/N)	<u>N</u>	Init. Calib. Time(s):	<u>10:59 13:49</u>
GC Column:	<u>DB-624UI</u>	ID:	<u>0.18</u> (mm)

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX%D
Dichlorodifluoromethane	0.514	0.469		-8.76	50
Chloromethane	0.480	0.395	0.1	-17.71	50
Vinyl Chloride	0.444	0.366		-17.57	50
Bromomethane	0.302	0.258		-14.57	50
Chloroethane	0.261	0.231		-11.49	50
Trichlorofluoromethane	0.852	0.801		-5.99	50
1,1,2-Trichlorotrifluoroethane	0.540	0.479		-11.3	50
1,1-Dichloroethene	0.525	0.490		-6.67	50
Acetone	0.240	0.185		-22.92	50
Carbon Disulfide	1.654	1.375		-16.87	50
Methyl tert-butyl Ether	1.791	1.749		-2.35	50
Methyl Acetate	0.502	0.451		-10.16	50
Methylene Chloride	0.586	0.564		-3.75	50
trans-1,2-Dichloroethene	0.577	0.537		-6.93	50
1,1-Dichloroethane	1.051	0.987	0.1	-6.09	50
Cyclohexane	0.870	0.770		-11.49	50
2-Butanone	0.304	0.262		-13.82	50
Carbon Tetrachloride	0.599	0.547		-8.68	50
cis-1,2-Dichloroethene	0.673	0.652		-3.12	50
Bromochloromethane	0.436	0.416		-4.59	50
Chloroform	1.123	1.104		-1.69	50
1,1,1-Trichloroethane	1.035	1.009		-2.51	50
Methylcyclohexane	0.573	0.489		-14.66	50
Benzene	1.409	1.285		-8.8	50
1,2-Dichloroethane	0.520	0.519		-0.19	50
Trichloroethene	0.372	0.348		-6.45	50
1,2-Dichloropropane	0.335	0.311		-7.16	50
Bromodichloromethane	0.563	0.545		-3.2	50
4-Methyl-2-Pentanone	0.381	0.346		-9.19	50
Toluene	0.895	0.860		-3.91	50
t-1,3-Dichloropropene	0.543	0.540		-0.55	50
cis-1,3-Dichloropropene	0.586	0.561		-4.27	50
1,1,2-Trichloroethane	0.333	0.324		-2.7	50
2-Hexanone	0.266	0.244		-8.27	50
Dibromochloromethane	0.447	0.441		-1.34	50
1,2-Dibromoethane	0.355	0.344		-3.1	50
Tetrachloroethene	0.373	0.316		-15.28	50
Chlorobenzene	1.125	1.027	0.3	-8.71	50

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



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

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name:	<u>Alliance</u>	Contract:	<u>ICES02</u>
Lab Code:	<u>ACE</u>	SDG No.:	<u>Q3400</u>
Instrument ID:	<u>MSVOA_X</u>	Calibration Date/Time:	<u>10/21/2025</u> <u>18:09</u>
Lab File ID:	<u>VX048278.D</u>	Init. Calib. Date(s):	<u>10/20/2025</u> <u>10/20/2025</u>
Heated Purge: (Y/N)	<u>N</u>	Init. Calib. Time(s):	<u>10:59</u> <u>13:49</u>
GC Column:	<u>DB-624UI</u>	ID:	<u>0.18</u> (mm)

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX%D
Ethyl Benzene	1.915	1.736		-9.35	50
m/p-Xylenes	0.712	0.662		-7.02	50
o-Xylene	0.687	0.645		-6.11	50
Styrene	1.170	1.126		-3.76	50
Bromoform	0.330	0.304	0.1	-7.88	50
Isopropylbenzene	3.652	3.018		-17.36	50
1,1,2,2-Tetrachloroethane	0.997	0.843	0.3	-15.45	50
1,3-Dichlorobenzene	1.726	1.412		-18.19	50
1,4-Dichlorobenzene	1.788	1.440		-19.46	50
1,2-Dichlorobenzene	1.621	1.364		-15.85	50
1,2-Dibromo-3-Chloropropane	0.202	0.166		-17.82	50
1,2,4-Trichlorobenzene	1.096	0.844		-22.99	50
1,2,3-Trichlorobenzene	1.006	0.810		-19.48	50
1,2-Dichloroethane-d4	0.701	0.787		12.27	50
Dibromofluoromethane	0.341	0.360		5.57	50
Toluene-d8	1.196	1.238		3.51	50
4-Bromofluorobenzene	0.455	0.547		20.22	50

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_X\Data\VX102125\
 Data File : VX048278.D
 Acq On : 21 Oct 2025 18:09
 Operator : JC/MD
 Sample : VSTDCCC050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 28 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDCCC050EC

Manual Integrations
 APPROVED

Reviewed By : John Carlone 10/24/2025
 Supervised By : Mahesh Dadoda 10/24/2025

Quant Time: Oct 24 04:30:16 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
 Quant Title : SW846 8260
 QLast Update : Mon Oct 20 14:13:59 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	5.544	168	110260	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.745	114	183155	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.037	117	177679	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.006	152	103139	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.940	65	86809	56.153	ug/l	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery = 112.300%			
35) Dibromofluoromethane	5.373	113	66021	52.800	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 105.600%			
50) Toluene-d8	8.635	98	226656	51.716	ug/l	0.00
Spiked Amount 50.000	Range 92 - 112		Recovery = 103.440%			
62) 4-Bromofluorobenzene	11.061	95	100241	60.121	ug/l	0.00
Spiked Amount 50.000	Range 83 - 123		Recovery = 120.240%			
Target Compounds					Qvalue	
2) Dichlorodifluoromethane	1.172	85	51728	45.636	ug/l	96
3) Chloromethane	1.300	50	43511	41.125	ug/l	100
4) Vinyl Chloride	1.380	62	40381	41.217	ug/l	100
5) Bromomethane	1.617	94	28469	42.818	ug/l	97
6) Chloroethane	1.697	64	25432	44.175	ug/l	92
7) Trichlorofluoromethane	1.898	101	88297	46.992	ug/l	98
8) Diethyl Ether	2.136	74	24255	45.877	ug/l	83
9) 1,1,2-Trichlorotrifluo...	2.337	101	52798	44.374	ug/l	95
10) Methyl Iodide	2.459	142	76908	51.416	ug/l	98
11) Tert butyl alcohol	2.940	59	31351	204.253	ug/l	98
12) 1,1-Dichloroethene	2.325	96	53980	46.632	ug/l	96
13) Acrolein	2.239	56	42126	269.101	ug/l	100
14) Allyl chloride	2.666	41	86002	44.749	ug/l	93
15) Acrylonitrile	3.056	53	127802	230.910	ug/l	100
16) Acetone	2.373	43	101775	191.905	ug/l	97
17) Carbon Disulfide	2.514	76	151626	41.561	ug/l	99
18) Methyl Acetate	2.703	43	49775	44.941	ug/l	91
19) Methyl tert-butyl Ether	3.111	73	192863	48.837	ug/l	96
20) Methylene Chloride	2.788	84	62187	48.124	ug/l	90
21) trans-1,2-Dichloroethene	3.093	96	59217	46.571	ug/l	100
22) Diisopropyl ether	3.751	45	183332	47.827	ug/l #	88
23) Vinyl Acetate	3.715	43	742546	242.501	ug/l	96
24) 1,1-Dichloroethane	3.611	63	108877	46.973	ug/l	99
25) 2-Butanone	4.538	43	144575	215.374	ug/l	96
26) 2,2-Dichloropropane	4.465	77	93655	44.766	ug/l	99
27) cis-1,2-Dichloroethene	4.477	96	71911	48.458	ug/l	97
28) Bromochloromethane	4.891	49	45824	47.680	ug/l #	81
29) Tetrahydrofuran	4.989	42	87839	218.490	ug/l	89
30) Chloroform	5.086	83	121680	49.137	ug/l	98
31) Cyclohexane	5.464	56	84891	44.238	ug/l #	86
32) 1,1,1-Trichloroethane	5.373	97	111254	48.747	ug/l	98
36) 1,1-Dichloropropene	5.678	75	80634	45.371	ug/l	98
37) Ethyl Acetate	4.702	43	63123	42.851	ug/l	97
38) Carbon Tetrachloride	5.666	117	100140	45.671	ug/l	99
39) Methylcyclohexane	7.366	83	89560	42.670	ug/l	96
40) Benzene	6.025	78	235395	45.621	ug/l	99

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102125\
 Data File : VX048278.D
 Acq On : 21 Oct 2025 18:09
 Operator : JC/MD
 Sample : VSTDCCC050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 28 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDCCC050EC

Manual Integrations
 APPROVED

Reviewed By : John Carlone 10/24/2025
 Supervised By : Mahesh Dadoda 10/24/2025

Quant Time: Oct 24 04:30:16 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
 Quant Title : SW846 8260
 QLast Update : Mon Oct 20 14:13:59 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	4.903	41	35543	45.945	ug/l	96
42) 1,2-Dichloroethane	6.074	62	95021	49.906	ug/l	100
43) Isopropyl Acetate	6.324	43	109791	45.374	ug/l	96
44) Trichloroethene	7.110	130	63675	46.735	ug/l	93
45) 1,2-Dichloropropane	7.415	63	57013	46.474	ug/l	95
46) Dibromomethane	7.568	93	45069	47.155	ug/l	93
47) Bromodichloromethane	7.805	83	99888	48.404	ug/l	96
48) Methyl methacrylate	7.677	41	56463	46.243	ug/l	94
49) 1,4-Dioxane	7.647	88	14536	901.119	ug/l	89
51) 4-Methyl-2-Pentanone	8.555	43	317029	227.242	ug/l	94
52) Toluene	8.702	92	157443	48.031	ug/l	97
53) t-1,3-Dichloropropene	8.964	75	98842	49.703	ug/l	99
54) cis-1,3-Dichloropropene	8.354	75	102835	47.929	ug/l	93
55) 1,1,2-Trichloroethane	9.134	97	59379	48.711	ug/l	96
56) Ethyl methacrylate	9.104	69	87411	49.025	ug/l	95
57) 1,3-Dichloropropane	9.293	76	102643	49.295	ug/l	100
58) 2-Chloroethyl Vinyl ether	8.226	63	230656	240.651	ug/l	94
59) 2-Hexanone	9.415	43	223051	229.287	ug/l	95
60) Dibromochloromethane	9.506	129	80763	49.293	ug/l	99
61) 1,2-Dibromoethane	9.592	107	63070	48.532	ug/l	98
64) Tetrachloroethene	9.256	164	56206	42.374	ug/l	98
65) Chlorobenzene	10.061	112	182408	45.637	ug/l	100
66) 1,1,1,2-Tetrachloroethane	10.146	131	67128	45.726	ug/l	98
67) Ethyl Benzene	10.177	91	308525	45.338	ug/l	98
68) m/p-Xylenes	10.287	106	235258	93.046	ug/l	100
69) o-Xylene	10.628	106	114670	46.976	ug/l	99
70) Styrene	10.640	104	200106	48.144	ug/l	99
71) Bromoform	10.780	173	53984	46.009	ug/l #	100
73) Isopropylbenzene	10.945	105	311296	41.323	ug/l	99
74) N-amyl acetate	10.823	43	107536	40.243	ug/l	95
75) 1,1,2,2-Tetrachloroethane	11.195	83	86911	42.247	ug/l	99
76) 1,2,3-Trichloropropane	11.219	75	79495m	47.529	ug/l	
77) Bromobenzene	11.183	156	80549	42.643	ug/l	94
78) n-propylbenzene	11.286	91	365847	41.944	ug/l	98
79) 2-Chlorotoluene	11.347	91	220518	41.700	ug/l	97
80) 1,3,5-Trimethylbenzene	11.433	105	264110	42.365	ug/l	100
81) trans-1,4-Dichloro-2-b...	11.000	75	27633	40.195	ug/l	99
82) 4-Chlorotoluene	11.433	91	265279	42.258	ug/l	98
83) tert-Butylbenzene	11.695	119	269712	42.107	ug/l	96
84) 1,2,4-Trimethylbenzene	11.732	105	264898	42.577	ug/l	100
85) sec-Butylbenzene	11.872	105	314902	40.863	ug/l	99
86) p-Isopropyltoluene	11.988	119	272639	40.931	ug/l	99
87) 1,3-Dichlorobenzene	11.951	146	145669	40.908	ug/l	99
88) 1,4-Dichlorobenzene	12.024	146	148555	40.270	ug/l	100
89) n-Butylbenzene	12.311	91	236982	39.088	ug/l	99
90) Hexachloroethane	12.518	117	50186	38.153	ug/l	92
91) 1,2-Dichlorobenzene	12.317	146	140638	42.066	ug/l	99
92) 1,2-Dibromo-3-Chloropr...	12.920	75	17092	40.930	ug/l	100
93) 1,2,4-Trichlorobenzene	13.567	180	87024	38.490	ug/l	99
94) Hexachlorobutadiene	13.707	225	32660	38.565	ug/l	97
95) Naphthalene	13.756	128	250514	41.822	ug/l	100
96) 1,2,3-Trichlorobenzene	13.938	180	83499	40.246	ug/l	98

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102125\
Data File : VX048278.D
Acq On : 21 Oct 2025 18:09
Operator : JC/MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 28 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDCCC050EC

Manual Integrations
APPROVED

Reviewed By :John Carlone 10/24/2025
Supervised By :Mahesh Dadoda 10/24/2025

Quant Time: Oct 24 04:30:16 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

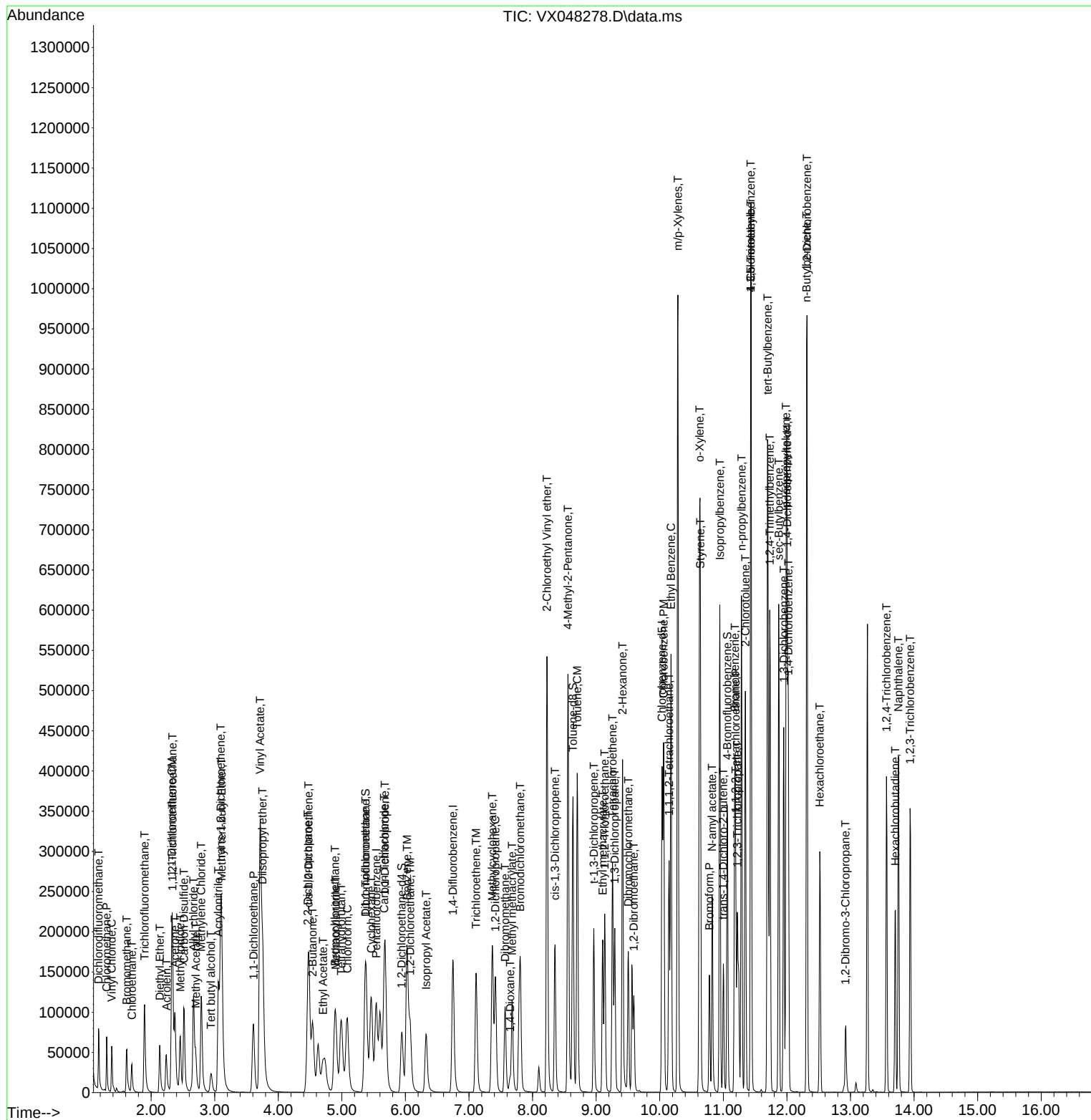
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Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102125\
Data File : VX048278.D
Acq On    : 21 Oct 2025  18:09
Operator  : JC/MD
Sample    : VSTDCCC050
Misc      : 5.0mL/MSVOA_X/WATER
ALS Vial  : 28   Sample Multiplier: 1
```

Instrument :
MSVOA_X
ClientSampleId :
VSTDCCC050EC

Manual Integrations

Reviewed By :John Carlone 10/24/2025
Supervised By :Mahesh Dadoda 10/24/2025

Quant Time: Oct 24 04:30:16 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration



Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102125\
 Data File : VX048278.D
 Acq On : 21 Oct 2025 18:09
 Operator : JC/MD
 Sample : VSTDCCC050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 28 Sample Multiplier: 1

Instrument :
 MSVOA_X
 LabSampleId :
 VSTDCCC050

Quant Time: Oct 24 04:30:16 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
 Quant Title : SW846 8260
 QLast Update : Mon Oct 20 14:13:59 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	89	0.00
2 T	Dichlorodifluoromethane	0.514	0.469	8.8	86	0.00
3 P	Chloromethane	0.480	0.395	17.7	78	0.00
4 C	Vinyl Chloride	0.444	0.366	17.6#	78	0.00
5 T	Bromomethane	0.302	0.258	14.6	81	0.00
6 T	Chloroethane	0.261	0.231	11.5	83	0.00
7 T	Trichlorofluoromethane	0.852	0.801	6.0	88	0.00
8 T	Diethyl Ether	0.240	0.220	8.3	87	0.00
9 T	1,1,2-Trichlorotrifluoroeth	0.540	0.479	11.3	85	0.00
10 T	Methyl Iodide	0.678	0.698	-2.9	93	0.00
11 T	Tert butyl alcohol	0.070	0.057	18.6	81	0.00
12 CM	1,1-Dichloroethene	0.525	0.490	6.7#	89	0.00
13 T	Acrolein	0.071	0.076	-7.0	104	0.00
14 T	Allyl chloride	0.872	0.780	10.6	86	0.00
15 T	Acrylonitrile	0.251	0.232	7.6	86	0.00
16 T	Acetone	0.240	0.185	22.9	81	0.00
17 T	Carbon Disulfide	1.654	1.375	16.9	84	0.00
18 T	Methyl Acetate	0.502	0.451	10.2	86	0.00
19 T	Methyl tert-butyl Ether	1.791	1.749	2.3	91	0.00
20 T	Methylene Chloride	0.586	0.564	3.8	91	0.00
21 T	trans-1,2-Dichloroethene	0.577	0.537	6.9	89	0.00
22 T	Diisopropyl ether	1.738	1.663	4.3	89	0.00
23 T	Vinyl Acetate	1.389	1.347	3.0	88	0.00
24 P	1,1-Dichloroethane	1.051	0.987	6.1	89	0.00
25 T	2-Butanone	0.304	0.262	13.8	83	0.00
26 T	2,2-Dichloropropane	0.949	0.849	10.5	86	0.00
27 T	cis-1,2-Dichloroethene	0.673	0.652	3.1	92	0.00
28 T	Bromochloromethane	0.436	0.416	4.6	83	0.00
29 T	Tetrahydrofuran	0.182	0.159	12.6	83	0.00
30 C	Chloroform	1.123	1.104	1.7#	93	0.00
31 T	Cyclohexane	0.870	0.770	11.5	83	0.00
32 T	1,1,1-Trichloroethane	1.035	1.009	2.5	92	0.00
33 S	1,2-Dichloroethane-d4	0.701	0.787	-12.3	102	0.00
34 I	1,4-Difluorobenzene	1.000	1.000	0.0	91	0.00
35 S	Dibromofluoromethane	0.341	0.360	-5.6	99	0.00
36 T	1,1-Dichloropropene	0.485	0.440	9.3	92	0.00
37 T	Ethyl Acetate	0.402	0.345	14.2	85	0.00
38 T	Carbon Tetrachloride	0.599	0.547	8.7	90	0.00
39 T	Methylcyclohexane	0.573	0.489	14.7	82	0.00
40 TM	Benzene	1.409	1.285	8.8	90	0.00
41 T	Methacrylonitrile	0.211	0.194	8.1	86	0.00
42 TM	1,2-Dichloroethane	0.520	0.519	0.2	94	0.00
43 T	Isopropyl Acetate	0.661	0.599	9.4	86	0.00
44 TM	Trichloroethene	0.372	0.348	6.5	91	0.00
45 C	1,2-Dichloropropane	0.335	0.311	7.2#	88	0.00
46 T	Dibromomethane	0.261	0.246	5.7	90	0.00
47 T	Bromodichloromethane	0.563	0.545	3.2	92	0.00
48 T	Methyl methacrylate	0.333	0.308	7.5	87	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102125\
 Data File : VX048278.D
 Acq On : 21 Oct 2025 18:09
 Operator : JC/MD
 Sample : VSTDCCC050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 28 Sample Multiplier: 1

Instrument :
 MSVOA_X
 LabSampleId :
 VSTDCCC050

Quant Time: Oct 24 04:30:16 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
 Quant Title : SW846 8260
 QLast Update : Mon Oct 20 14:13:59 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	0.004	0.004	0.0	81	0.00
50 S	Toluene-d8	1.196	1.238	-3.5	95	0.00
51 T	4-Methyl-2-Pentanone	0.381	0.346	9.2	83	0.00
52 CM	Toluene	0.895	0.860	3.9#	91	0.00
53 T	t-1,3-Dichloropropene	0.543	0.540	0.6	90	0.00
54 T	cis-1,3-Dichloropropene	0.586	0.561	4.3	89	0.00
55 T	1,1,2-Trichloroethane	0.333	0.324	2.7	92	0.00
56 T	Ethyl methacrylate	0.487	0.477	2.1	88	0.00
57 T	1,3-Dichloropropane	0.568	0.560	1.4	93	0.00
58 T	2-Chloroethyl Vinyl ether	0.232	0.252	-8.6	88	0.00
59 T	2-Hexanone	0.266	0.244	8.3	83	0.00
60 T	Dibromochloromethane	0.447	0.441	1.3	94	0.00
61 T	1,2-Dibromoethane	0.355	0.344	3.1	91	0.00
62 S	4-Bromofluorobenzene	0.455	0.547	-20.2	112	0.00
63 I	Chlorobenzene-d5	1.000	1.000	0.0	96	0.00
64 T	Tetrachloroethene	0.373	0.316	15.3	93	0.00
65 PM	Chlorobenzene	1.125	1.027	8.7	95	0.00
66 T	1,1,1,2-Tetrachloroethane	0.413	0.378	8.5	93	0.00
67 C	Ethyl Benzene	1.915	1.736	9.3#	92	0.00
68 T	m/p-Xylenes	0.712	0.662	7.0	93	0.00
69 T	o-Xylene	0.687	0.645	6.1	94	0.00
70 T	Styrene	1.170	1.126	3.8	95	0.00
71 P	Bromoform	0.330	0.304	7.9	95	0.00
72 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	111	0.00
73 T	Isopropylbenzene	3.652	3.018	17.4	98	0.00
74 T	N-amyl acetate	1.295	1.043	19.5	93	0.00
75 P	1,1,2,2-Tetrachloroethane	0.997	0.843	15.4	99	0.00
76 T	1,2,3-Trichloropropane	0.811	0.771	4.9	117	0.00
77 T	Bromobenzene	0.916	0.781	14.7	101	0.00
78 T	n-propylbenzene	4.228	3.547	16.1	98	0.00
79 T	2-Chlorotoluene	2.564	2.138	16.6	99	0.00
80 T	1,3,5-Trimethylbenzene	3.022	2.561	15.3	100	0.00
81 T	trans-1,4-Dichloro-2-butene	0.333	0.268	19.5	94	0.00
82 T	4-Chlorotoluene	3.043	2.572	15.5	99	0.00
83 T	tert-Butylbenzene	3.105	2.615	15.8	100	0.00
84 T	1,2,4-Trimethylbenzene	3.016	2.568	14.9	100	0.00
85 T	sec-Butylbenzene	3.736	3.053	18.3	98	0.00
86 T	p-Isopropyltoluene	3.229	2.643	18.1	98	0.00
87 T	1,3-Dichlorobenzene	1.726	1.412	18.2	101	0.00
88 T	1,4-Dichlorobenzene	1.788	1.440	19.5	102	0.00
89 T	n-Butylbenzene	2.939	2.298	21.8	97	0.00
90 T	Hexachloroethane	0.638	0.487	23.7	95	0.00
91 T	1,2-Dichlorobenzene	1.621	1.364	15.9	102	0.00
92 T	1,2-Dibromo-3-Chloropropane	0.202	0.166	17.8	95	0.00
93 T	1,2,4-Trichlorobenzene	1.096	0.844	23.0	98	0.00
94 T	Hexachlorobutadiene	0.507	0.317	37.5#	94	0.00
95 T	Naphthalene	2.904	2.429	16.4	97	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102125\
Data File : VX048278.D
Acq On : 21 Oct 2025 18:09
Operator : JC/MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 28 Sample Multiplier: 1

Instrument :
MSVOA_X
LabSampleId :
VSTDCCC050

Quant Time: Oct 24 04:30:16 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 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	1.006	0.810	19.5	99	0.00

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

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102125\
 Data File : VX048278.D
 Acq On : 21 Oct 2025 18:09
 Operator : JC/MD
 Sample : VSTDCCC050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 28 Sample Multiplier: 1

Instrument :
 MSVOA_X
 LabSampleId :
 VSTDCCC050

Quant Time: Oct 24 04:30:16 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
 Quant Title : SW846 8260
 QLast Update : Mon Oct 20 14:13:59 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	89	0.00
2 T	Dichlorodifluoromethane	50.000	45.636	8.7	86	0.00
3 P	Chloromethane	50.000	41.125	17.8	78	0.00
4 C	Vinyl Chloride	50.000	41.217	17.6#	78	0.00
5 T	Bromomethane	50.000	42.818	14.4	81	0.00
6 T	Chloroethane	50.000	44.175	11.7	83	0.00
7 T	Trichlorofluoromethane	50.000	46.992	6.0	88	0.00
8 T	Diethyl Ether	50.000	45.877	8.2	87	0.00
9 T	1,1,2-Trichlorotrifluoroeth	50.000	44.374	11.3	85	0.00
10 T	Methyl Iodide	50.000	51.416	-2.8	93	0.00
11 T	Tert butyl alcohol	250.000	204.253	18.3	81	0.00
12 CM	1,1-Dichloroethene	50.000	46.632	6.7#	89	0.00
13 T	Acrolein	250.000	269.101	-7.6	104	0.00
14 T	Allyl chloride	50.000	44.749	10.5	86	0.00
15 T	Acrylonitrile	250.000	230.910	7.6	86	0.00
16 T	Acetone	250.000	191.905	23.2	81	0.00
17 T	Carbon Disulfide	50.000	41.561	16.9	84	0.00
18 T	Methyl Acetate	50.000	44.941	10.1	86	0.00
19 T	Methyl tert-butyl Ether	50.000	48.837	2.3	91	0.00
20 T	Methylene Chloride	50.000	48.124	3.8	91	0.00
21 T	trans-1,2-Dichloroethene	50.000	46.571	6.9	89	0.00
22 T	Diisopropyl ether	50.000	47.827	4.3	89	0.00
23 T	Vinyl Acetate	250.000	242.501	3.0	88	0.00
24 P	1,1-Dichloroethane	50.000	46.973	6.1	89	0.00
25 T	2-Butanone	250.000	215.374	13.9	83	0.00
26 T	2,2-Dichloropropane	50.000	44.766	10.5	86	0.00
27 T	cis-1,2-Dichloroethene	50.000	48.458	3.1	92	0.00
28 T	Bromochloromethane	50.000	47.680	4.6	83	0.00
29 T	Tetrahydrofuran	250.000	218.490	12.6	83	0.00
30 C	Chloroform	50.000	49.137	1.7#	93	0.00
31 T	Cyclohexane	50.000	44.238	11.5	83	0.00
32 T	1,1,1-Trichloroethane	50.000	48.747	2.5	92	0.00
33 S	1,2-Dichloroethane-d4	50.000	56.153	-12.3	102	0.00
34 I	1,4-Difluorobenzene	50.000	50.000	0.0	91	0.00
35 S	Dibromofluoromethane	50.000	52.800	-5.6	99	0.00
36 T	1,1-Dichloropropene	50.000	45.371	9.3	92	0.00
37 T	Ethyl Acetate	50.000	42.851	14.3	85	0.00
38 T	Carbon Tetrachloride	50.000	45.671	8.7	90	0.00
39 T	Methylcyclohexane	50.000	42.670	14.7	82	0.00
40 TM	Benzene	50.000	45.621	8.8	90	0.00
41 T	Methacrylonitrile	50.000	45.945	8.1	86	0.00
42 TM	1,2-Dichloroethane	50.000	49.906	0.2	94	0.00
43 T	Isopropyl Acetate	50.000	45.374	9.3	86	0.00
44 TM	Trichloroethene	50.000	46.735	6.5	91	0.00
45 C	1,2-Dichloropropane	50.000	46.474	7.1#	88	0.00
46 T	Dibromomethane	50.000	47.155	5.7	90	0.00
47 T	Bromodichloromethane	50.000	48.404	3.2	92	0.00
48 T	Methyl methacrylate	50.000	46.243	7.5	87	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102125\
 Data File : VX048278.D
 Acq On : 21 Oct 2025 18:09
 Operator : JC/MD
 Sample : VSTDCCC050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 28 Sample Multiplier: 1

Instrument :
 MSVOA_X
 LabSampleId :
 VSTDCCC050

Quant Time: Oct 24 04:30:16 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
 Quant Title : SW846 8260
 QLast Update : Mon Oct 20 14:13:59 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	901.119	9.9	81	0.00
50 S	Toluene-d8	50.000	51.716	-3.4	95	0.00
51 T	4-Methyl-2-Pentanone	250.000	227.242	9.1	83	0.00
52 CM	Toluene	50.000	48.031	3.9#	91	0.00
53 T	t-1,3-Dichloropropene	50.000	49.703	0.6	90	0.00
54 T	cis-1,3-Dichloropropene	50.000	47.929	4.1	89	0.00
55 T	1,1,2-Trichloroethane	50.000	48.711	2.6	92	0.00
56 T	Ethyl methacrylate	50.000	49.025	2.0	88	0.00
57 T	1,3-Dichloropropane	50.000	49.295	1.4	93	0.00
58 T	2-Chloroethyl Vinyl ether	250.000	240.651	3.7	88	0.00
59 T	2-Hexanone	250.000	229.287	8.3	83	0.00
60 T	Dibromochloromethane	50.000	49.293	1.4	94	0.00
61 T	1,2-Dibromoethane	50.000	48.532	2.9	91	0.00
62 S	4-Bromofluorobenzene	50.000	60.121	-20.2	112	0.00
63 I	Chlorobenzene-d5	50.000	50.000	0.0	96	0.00
64 T	Tetrachloroethene	50.000	42.374	15.3	93	0.00
65 PM	Chlorobenzene	50.000	45.637	8.7	95	0.00
66 T	1,1,1,2-Tetrachloroethane	50.000	45.726	8.5	93	0.00
67 C	Ethyl Benzene	50.000	45.338	9.3#	92	0.00
68 T	m/p-Xylenes	100.000	93.046	7.0	93	0.00
69 T	o-Xylene	50.000	46.976	6.0	94	0.00
70 T	Styrene	50.000	48.144	3.7	95	0.00
71 P	Bromoform	50.000	46.009	8.0	95	0.00
72 I	1,4-Dichlorobenzene-d4	50.000	50.000	0.0	111	0.00
73 T	Isopropylbenzene	50.000	41.323	17.4	98	0.00
74 T	N-amyl acetate	50.000	40.243	19.5	93	0.00
75 P	1,1,2,2-Tetrachloroethane	50.000	42.247	15.5	99	0.00
76 T	1,2,3-Trichloropropane	50.000	47.529	4.9	117	0.00
77 T	Bromobenzene	50.000	42.643	14.7	101	0.00
78 T	n-propylbenzene	50.000	41.944	16.1	98	0.00
79 T	2-Chlorotoluene	50.000	41.700	16.6	99	0.00
80 T	1,3,5-Trimethylbenzene	50.000	42.365	15.3	100	0.00
81 T	trans-1,4-Dichloro-2-butene	50.000	40.195	19.6	94	0.00
82 T	4-Chlorotoluene	50.000	42.258	15.5	99	0.00
83 T	tert-Butylbenzene	50.000	42.107	15.8	100	0.00
84 T	1,2,4-Trimethylbenzene	50.000	42.577	14.8	100	0.00
85 T	sec-Butylbenzene	50.000	40.863	18.3	98	0.00
86 T	p-Isopropyltoluene	50.000	40.931	18.1	98	0.00
87 T	1,3-Dichlorobenzene	50.000	40.908	18.2	101	0.00
88 T	1,4-Dichlorobenzene	50.000	40.270	19.5	102	0.00
89 T	n-Butylbenzene	50.000	39.088	21.8	97	0.00
90 T	Hexachloroethane	50.000	38.153	23.7	95	0.00
91 T	1,2-Dichlorobenzene	50.000	42.066	15.9	102	0.00
92 T	1,2-Dibromo-3-Chloropropane	50.000	40.930	18.1	95	0.00
93 T	1,2,4-Trichlorobenzene	50.000	38.490	23.0	98	0.00
94 T	Hexachlorobutadiene	50.000	38.565	22.9	94	0.00
95 T	Naphthalene	50.000	41.822	16.4	97	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102125\
Data File : VX048278.D
Acq On : 21 Oct 2025 18:09
Operator : JC/MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 28 Sample Multiplier: 1

Instrument :
MSVOA_X
LabSampleId :
VSTDCCC050

Quant Time: Oct 24 04:30:16 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 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	40.246	19.5	99	0.00

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



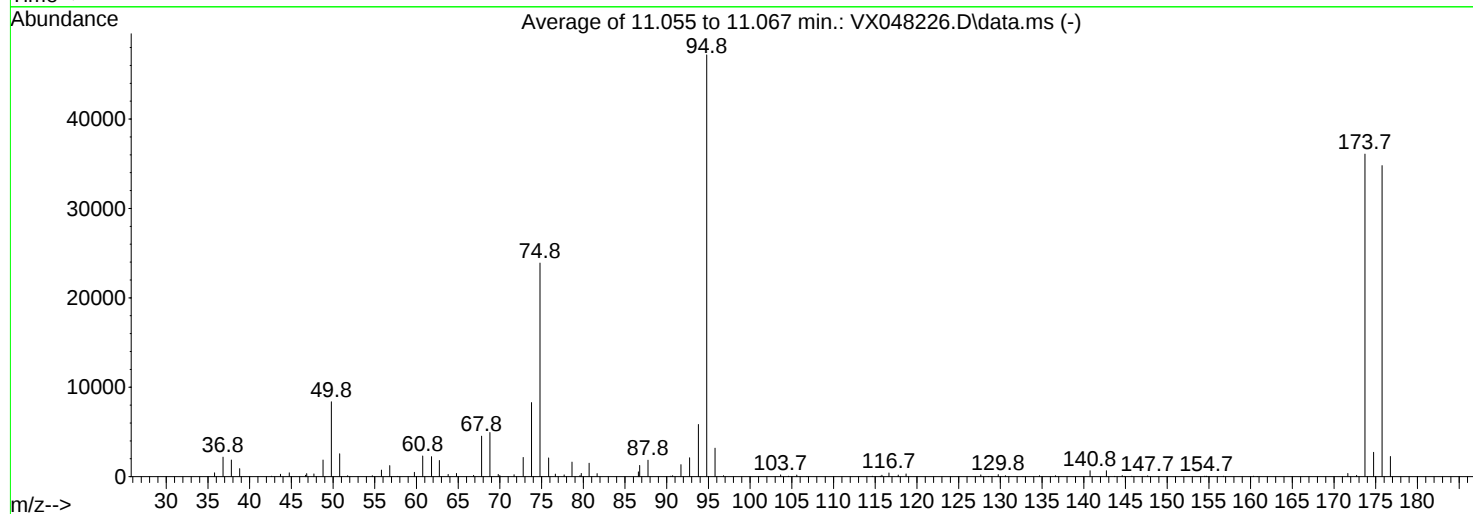
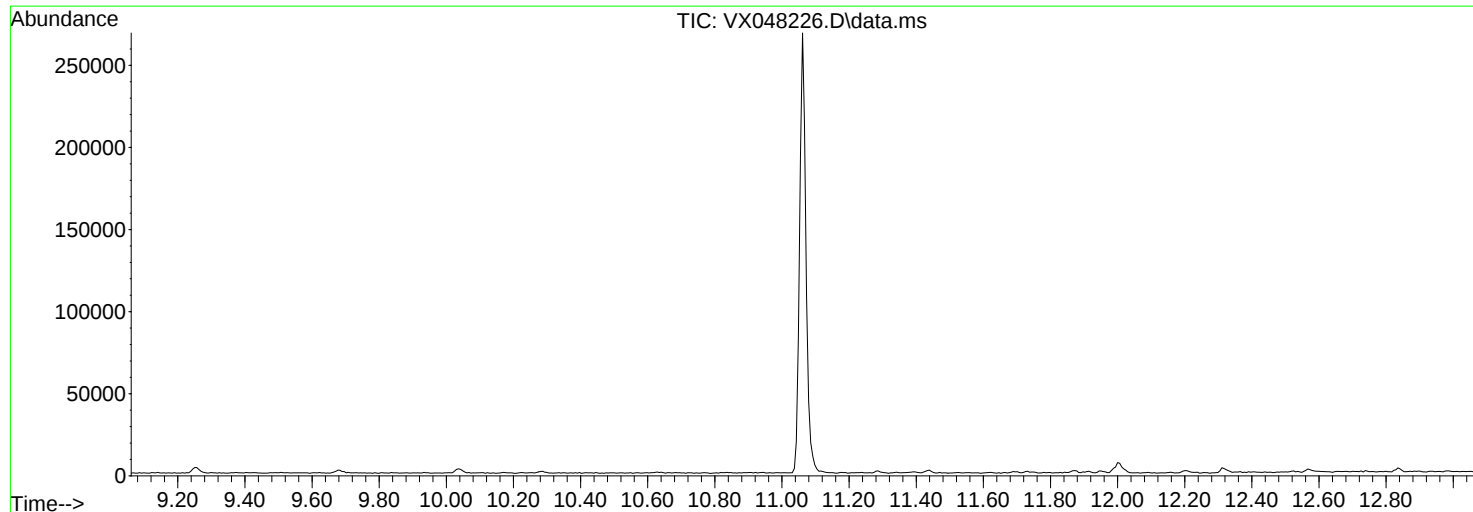
QC SAMPLE DATA

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102025\
Data File : VX048226.D
Acq On : 20 Oct 2025 08:15
Operator : JC/MD
Sample : BFB
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
BFB

Integration File: RTEINT.P

Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Title : SW846 8260
Last Update : Mon Oct 20 14:13:59 2025



AutoFind: Scans 1635, 1636, 1637; Background Corrected with Scan 1629

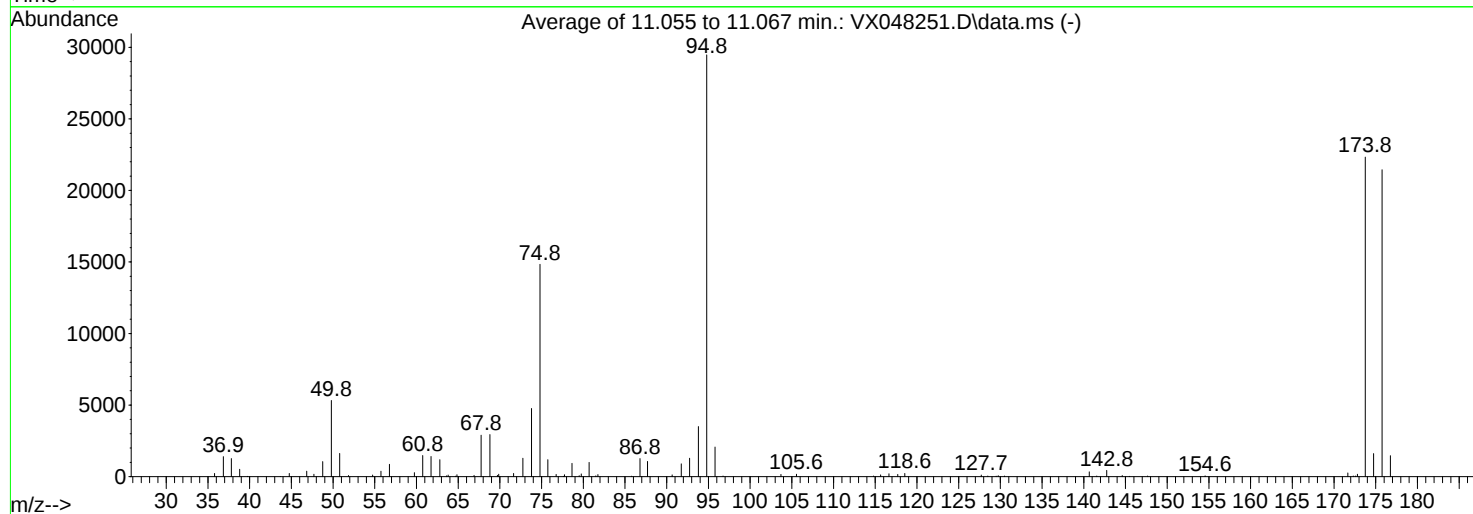
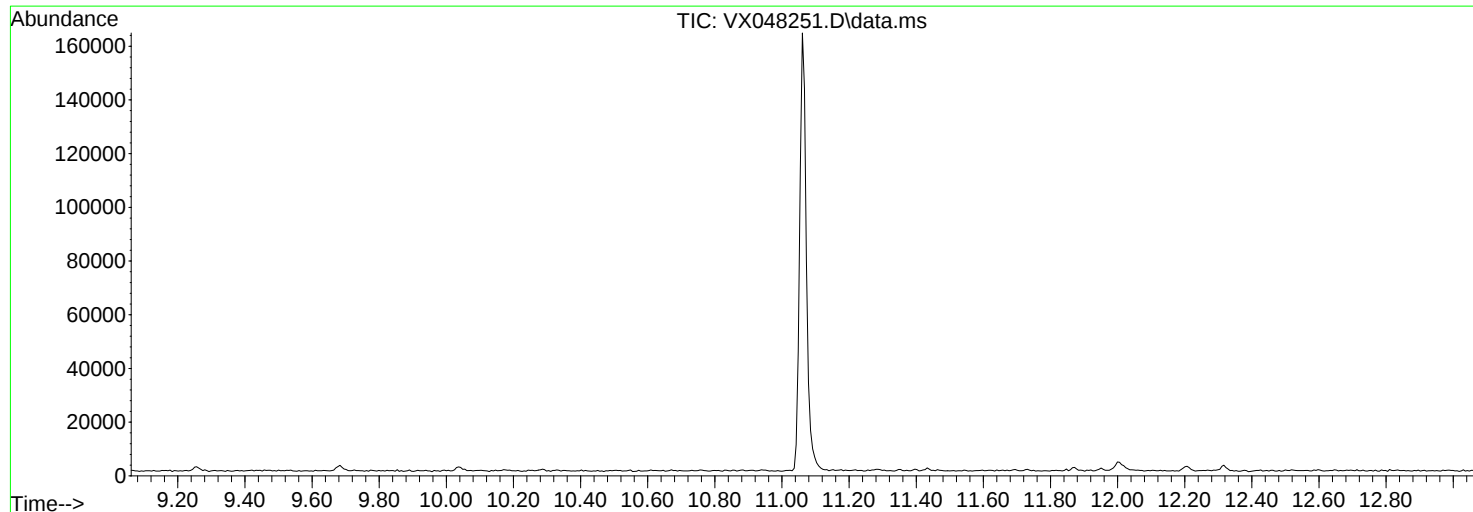
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.7	8374	PASS
75	95	30	60	50.7	23901	PASS
95	95	100	100	100.0	47184	PASS
96	95	5	9	6.8	3185	PASS
173	174	0.00	2	0.4	138	PASS
174	95	50	100	76.5	36091	PASS
175	174	5	9	7.5	2719	PASS
176	174	95	101	96.4	34800	PASS
177	176	5	9	6.5	2253	PASS

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102125\
Data File : VX048251.D
Acq On : 21 Oct 2025 08:12
Operator : JC/MD
Sample : BFB
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 1 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
BFB

Integration File: RTEINT.P

Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Title : SW846 8260
Last Update : Mon Oct 20 14:13:59 2025



AutoFind: Scans 1635, 1636, 1637; Background Corrected with Scan 1629

Target	Rel. to	Lower	Upper	Rel.	Raw	Result
Mass	Mass	Limit%	Limit%	Abn%	Abn	Pass/Fail
50	95	15	40	18.0	5318	PASS
75	95	30	60	50.3	14833	PASS
95	95	100	100	100.0	29475	PASS
96	95	5	9	7.0	2071	PASS
173	174	0.00	2	0.7	166	PASS
174	95	50	100	75.8	22330	PASS
175	174	5	9	7.2	1615	PASS
176	174	95	101	96.1	21451	PASS
177	176	5	9	6.8	1462	PASS

Report of Analysis

Client: ICE Service Group, Inc.
 Project: NWIRP Northrup Grumman Site – Bethpage, NY
 Client Sample ID: VX1021WBL01
 Lab Sample ID: VX1021WBL01
 Analytical Method: 8260D
 Sample Wt/Vol: 5 mL

Level : LOW
 Final Vol: 5000 uL

Date Collected:
 Date Received:
 SDG No.: Q3400
 Matrix: Water
 % Solid: 0
 Test: VOC-TCLVOA-10

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Date Ana.	BatchID
TARGETS										
75-71-8	Dichlorodifluoromethane	0.50	U	1	0.22	0.50	1.00	ug/L	10/21/25 09:40	VX102125
74-87-3	Chloromethane	0.50	U	1	0.32	0.50	1.00	ug/L	10/21/25 09:40	VX102125
75-01-4	Vinyl Chloride	0.75	U	1	0.26	0.75	1.00	ug/L	10/21/25 09:40	VX102125
74-83-9	Bromomethane	3.80	U	1	1.40	3.80	5.00	ug/L	10/21/25 09:40	VX102125
75-00-3	Chloroethane	0.75	U	1	0.47	0.75	1.00	ug/L	10/21/25 09:40	VX102125
75-69-4	Trichlorofluoromethane	0.50	U	1	0.33	0.50	1.00	ug/L	10/21/25 09:40	VX102125
76-13-1	1,1,2-Trichlorotrifluoroethane	0.50	U	1	0.25	0.50	1.00	ug/L	10/21/25 09:40	VX102125
75-35-4	1,1-Dichloroethene	0.75	U	1	0.23	0.75	1.00	ug/L	10/21/25 09:40	VX102125
67-64-1	Acetone	3.80	U	1	1.50	3.80	5.00	ug/L	10/21/25 09:40	VX102125
75-15-0	Carbon Disulfide	0.75	U	1	0.21	0.75	1.00	ug/L	10/21/25 09:40	VX102125
1634-04-4	Methyl tert-butyl Ether	0.50	U	1	0.16	0.50	1.00	ug/L	10/21/25 09:40	VX102125
79-20-9	Methyl Acetate	0.75	U	1	0.27	0.75	1.00	ug/L	10/21/25 09:40	VX102125
75-09-2	Methylene Chloride	0.50	U	1	0.28	0.50	1.00	ug/L	10/21/25 09:40	VX102125
156-60-5	trans-1,2-Dichloroethene	0.50	U	1	0.23	0.50	1.00	ug/L	10/21/25 09:40	VX102125
75-34-3	1,1-Dichloroethane	0.50	U	1	0.23	0.50	1.00	ug/L	10/21/25 09:40	VX102125
110-82-7	Cyclohexane	2.50	U	1	1.50	2.50	5.00	ug/L	10/21/25 09:40	VX102125
78-93-3	2-Butanone	2.50	U	1	0.98	2.50	5.00	ug/L	10/21/25 09:40	VX102125
56-23-5	Carbon Tetrachloride	0.50	U	1	0.25	0.50	1.00	ug/L	10/21/25 09:40	VX102125
156-59-2	cis-1,2-Dichloroethene	0.75	U	1	0.19	0.75	1.00	ug/L	10/21/25 09:40	VX102125
74-97-5	Bromochloromethane	0.50	U	1	0.22	0.50	1.00	ug/L	10/21/25 09:40	VX102125
67-66-3	Chloroform	0.50	U	1	0.25	0.50	1.00	ug/L	10/21/25 09:40	VX102125
71-55-6	1,1,1-Trichloroethane	0.50	U	1	0.20	0.50	1.00	ug/L	10/21/25 09:40	VX102125
108-87-2	Methylcyclohexane	0.50	U	1	0.16	0.50	1.00	ug/L	10/21/25 09:40	VX102125
71-43-2	Benzene	0.50	U	1	0.15	0.50	1.00	ug/L	10/21/25 09:40	VX102125
107-06-2	1,2-Dichloroethane	0.50	U	1	0.22	0.50	1.00	ug/L	10/21/25 09:40	VX102125
79-01-6	Trichloroethene	0.75	U	1	0.090	0.75	1.00	ug/L	10/21/25 09:40	VX102125
78-87-5	1,2-Dichloropropane	0.50	U	1	0.20	0.50	1.00	ug/L	10/21/25 09:40	VX102125
75-27-4	Bromodichloromethane	0.50	U	1	0.22	0.50	1.00	ug/L	10/21/25 09:40	VX102125
108-10-1	4-Methyl-2-Pentanone	2.50	U	1	0.68	2.50	5.00	ug/L	10/21/25 09:40	VX102125
108-88-3	Toluene	0.50	U	1	0.14	0.50	1.00	ug/L	10/21/25 09:40	VX102125
10061-02-6	t-1,3-Dichloropropene	0.50	U	1	0.17	0.50	1.00	ug/L	10/21/25 09:40	VX102125
10061-01-5	cis-1,3-Dichloropropene	0.50	U	1	0.16	0.50	1.00	ug/L	10/21/25 09:40	VX102125
79-00-5	1,1,2-Trichloroethane	0.50	U	1	0.21	0.50	1.00	ug/L	10/21/25 09:40	VX102125
591-78-6	2-Hexanone	2.50	U	1	0.89	2.50	5.00	ug/L	10/21/25 09:40	VX102125
124-48-1	Dibromochloromethane	0.50	U	1	0.18	0.50	1.00	ug/L	10/21/25 09:40	VX102125
106-93-4	1,2-Dibromoethane	0.50	U	1	0.15	0.50	1.00	ug/L	10/21/25 09:40	VX102125
127-18-4	Tetrachloroethene	0.50	U	1	0.23	0.50	1.00	ug/L	10/21/25 09:40	VX102125
108-90-7	Chlorobenzene	0.50	U	1	0.12	0.50	1.00	ug/L	10/21/25 09:40	VX102125
100-41-4	Ethyl Benzene	0.50	U	1	0.13	0.50	1.00	ug/L	10/21/25 09:40	VX102125
179601-23-1	m/p-Xylenes	1.00	U	1	0.24	1.00	2.00	ug/L	10/21/25 09:40	VX102125
95-47-6	o-Xylene	0.50	U	1	0.12	0.50	1.00	ug/L	10/21/25 09:40	VX102125
100-42-5	Styrene	0.50	U	1	0.15	0.50	1.00	ug/L	10/21/25 09:40	VX102125
75-25-2	Bromoform	0.50	U	1	0.19	0.50	1.00	ug/L	10/21/25 09:40	VX102125



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

Report of Analysis

Client: ICE Service Group, Inc.
Project: NWIRP Northrup Grumman Site – Bethpage, NY
Client Sample ID: VX1021WBL01
Lab Sample ID: VX1021WBL01
Analytical Method: 8260D
Sample Wt/Vol: 5 mL

Level : LOW
Final Vol: 5000 uL

Date Collected:
Date Received:
SDG No.: Q3400
Matrix: Water
% Solid: 0
Test: VOC-TCLVOA-10

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Date Ana.	BatchID
98-82-8	Isopropylbenzene	0.50	U	1	0.12	0.50	1.00	ug/L	10/21/25 09:40	VX102125
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U	1	0.26	0.50	1.00	ug/L	10/21/25 09:40	VX102125
541-73-1	1,3-Dichlorobenzene	0.50	U	1	0.16	0.50	1.00	ug/L	10/21/25 09:40	VX102125
106-46-7	1,4-Dichlorobenzene	0.50	U	1	0.19	0.50	1.00	ug/L	10/21/25 09:40	VX102125
95-50-1	1,2-Dichlorobenzene	0.50	U	1	0.16	0.50	1.00	ug/L	10/21/25 09:40	VX102125
96-12-8	1,2-Dibromo-3-Chloropropane	0.75	U	1	0.53	0.75	1.00	ug/L	10/21/25 09:40	VX102125
120-82-1	1,2,4-Trichlorobenzene	0.50	U	1	0.20	0.50	1.00	ug/L	10/21/25 09:40	VX102125
87-61-6	1,2,3-Trichlorobenzene	0.75	U	1	0.20	0.75	1.00	ug/L	10/21/25 09:40	VX102125
SURROGATES										
17060-07-0	1,2-Dichloroethane-d4	52.5			81 - 118		105%	SPK: 50		
1868-53-7	Dibromofluoromethane	47.1			80 - 119		94%	SPK: 50		
2037-26-5	Toluene-d8	46.4			89 - 112		93%	SPK: 50		
460-00-4	4-Bromofluorobenzene	52.7			85 - 114		105%	SPK: 50		
INTERNAL STANDARDS										
		Area Count								
363-72-4	Pentafluorobenzene	122000								
540-36-3	1,4-Difluorobenzene	241000								
3114-55-4	Chlorobenzene-d5	248000								
3855-82-1	1,4-Dichlorobenzene-d4	127000								

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_X\Data\VX102125\
 Data File : VX048254.D
 Acq On : 21 Oct 2025 09:40
 Operator : JC/MD
 Sample : VX1021WBL01
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 4 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VX1021WBL01

Quant Time: Oct 24 04:22:52 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
 Quant Title : SW846 8260
 QLast Update : Mon Oct 20 14:13:59 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	5.532	168	121915	50.000	ug/l	-0.01
34) 1,4-Difluorobenzene	6.745	114	240535	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.037	117	247603	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.006	152	126551	50.000	ug/l	0.00

System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.934	65	89687	52.469	ug/l	0.00
Spiked Amount	50.000	Range	78 - 117	Recovery	=	104.940%
35) Dibromofluoromethane	5.367	113	77294	47.070	ug/l	0.00
Spiked Amount	50.000	Range	75 - 124	Recovery	=	94.140%
50) Toluene-d8	8.629	98	267020	46.391	ug/l	0.00
Spiked Amount	50.000	Range	92 - 112	Recovery	=	92.780%
62) 4-Bromofluorobenzene	11.061	95	115293	52.653	ug/l	0.00
Spiked Amount	50.000	Range	83 - 123	Recovery	=	105.300%

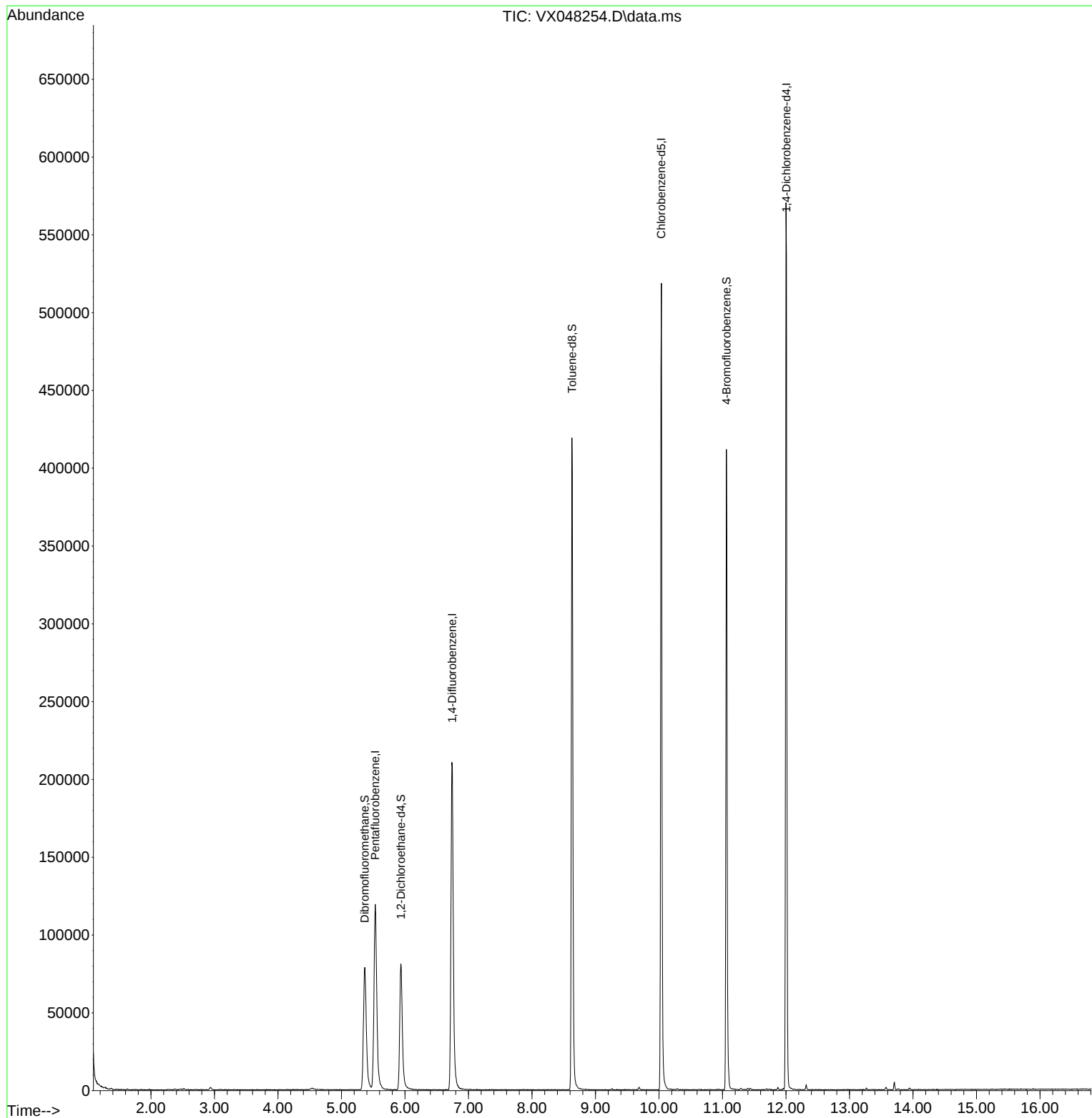
Target Compounds	Qvalue

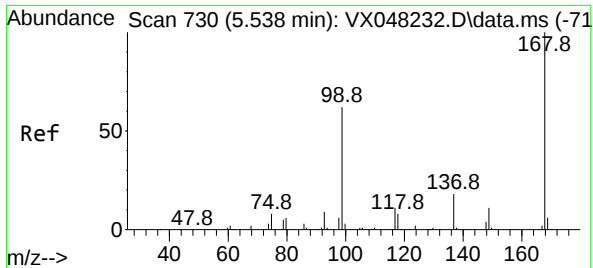
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102125\
Data File : VX048254.D
Acq On : 21 Oct 2025 09:40
Operator : JC/MD
Sample : VX1021WBL01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VX1021WBL01

Quant Time: Oct 24 04:22:52 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration



#1
Pentafluorobenzene

Concen: 50.000 ug/l

RT: 5.532 min Scan# 71

Delta R.T. -0.012 min

Lab File: VX048254.D

Acq: 21 Oct 2025 09:40

Instrument :

MSVOA_X

ClientSampleId :

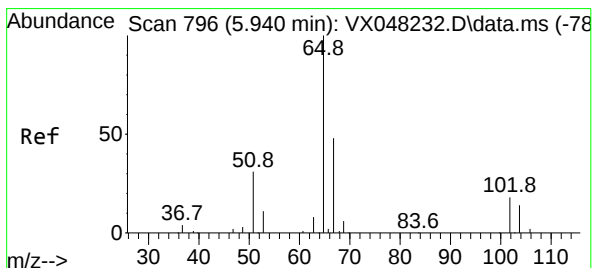
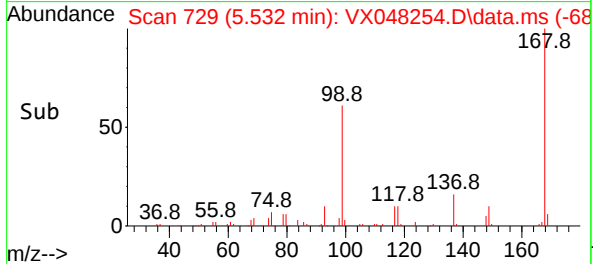
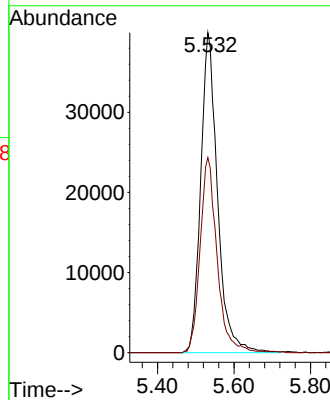
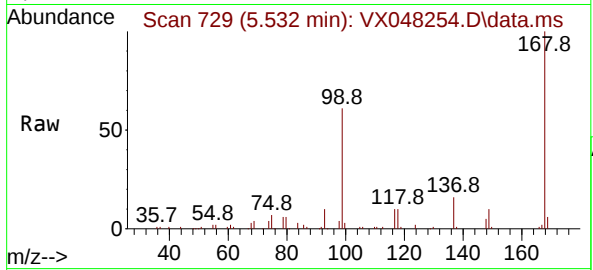
VX1021WBL01

Tgt Ion:168 Resp: 121915

Ion Ratio Lower Upper

168 100

99 60.9 46.4 69.6



#33

1,2-Dichloroethane-d4

Concen: 52.469 ug/l

RT: 5.934 min Scan# 795

Delta R.T. -0.006 min

Lab File: VX048254.D

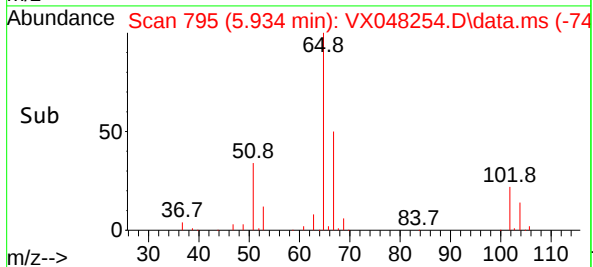
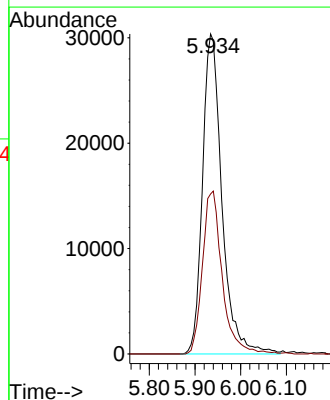
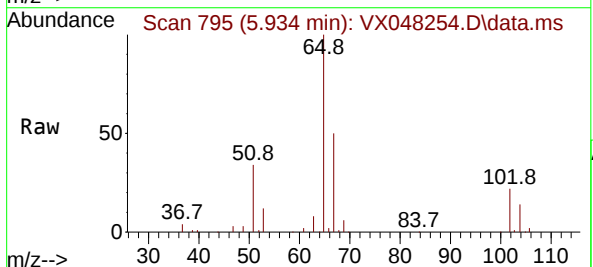
Acq: 21 Oct 2025 09:40

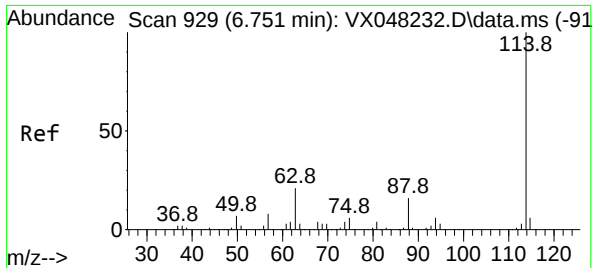
Tgt Ion: 65 Resp: 89687

Ion Ratio Lower Upper

65 100

67 51.7 0.0 105.0





#34

1,4-Difluorobenzene

Concen: 50.000 ug/l

RT: 6.745 min Scan# 91

Delta R.T. -0.000 min

Lab File: VX048254.D

Acq: 21 Oct 2025 09:40

Instrument :

MSVOA_X

ClientSampleId :

VX1021WBL01

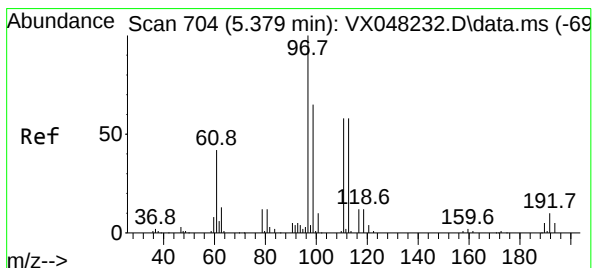
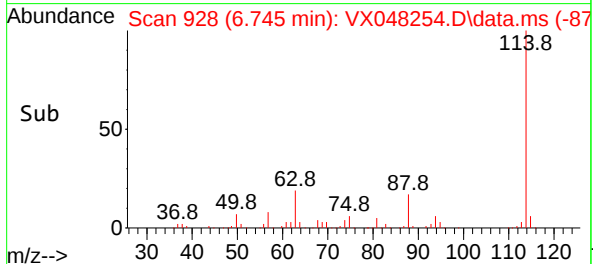
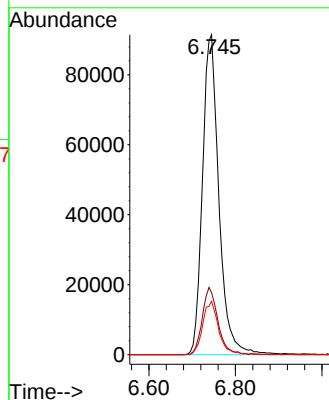
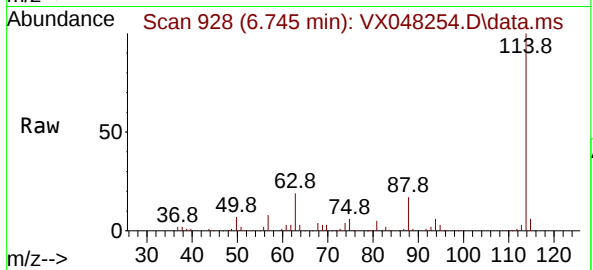
Tgt Ion:114 Resp: 240535

Ion Ratio Lower Upper

114 100

63 19.4 0.0 43.2

88 16.7 0.0 33.6



#35

Dibromofluoromethane

Concen: 47.070 ug/l

RT: 5.367 min Scan# 702

Delta R.T. -0.006 min

Lab File: VX048254.D

Acq: 21 Oct 2025 09:40

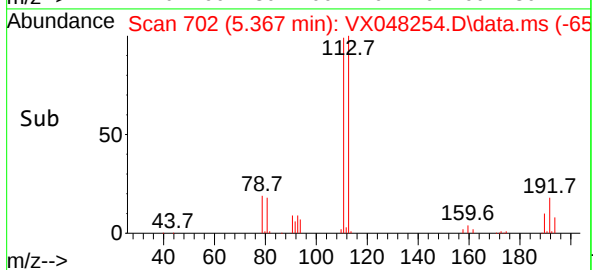
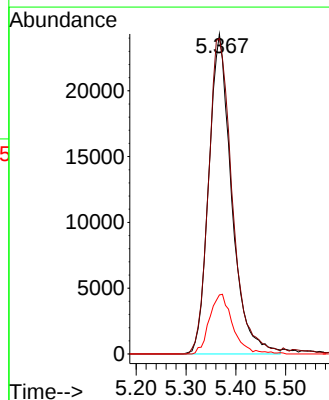
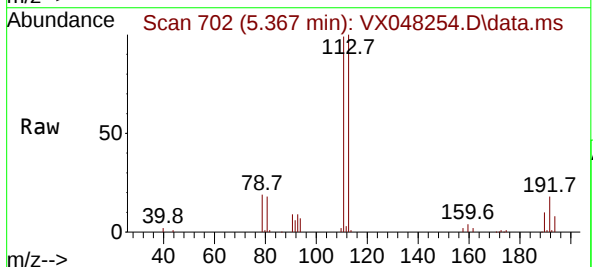
Tgt Ion:113 Resp: 77294

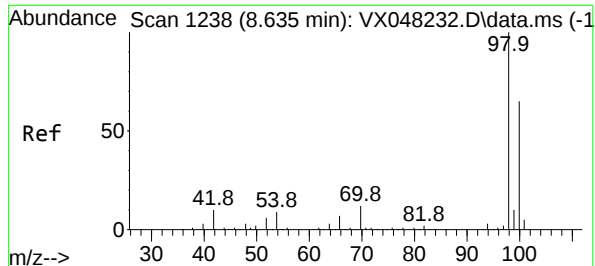
Ion Ratio Lower Upper

113 100

111 102.8 82.2 123.4

192 19.2 15.1 22.7





#50

Toluene-d8

Concen: 46.391 ug/l

RT: 8.629 min Scan# 1

Delta R.T. -0.006 min

Lab File: VX048254.D

Acq: 21 Oct 2025 09:40

Instrument :

MSVOA_X

ClientSampleId :

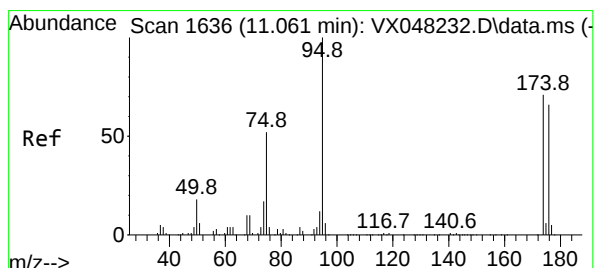
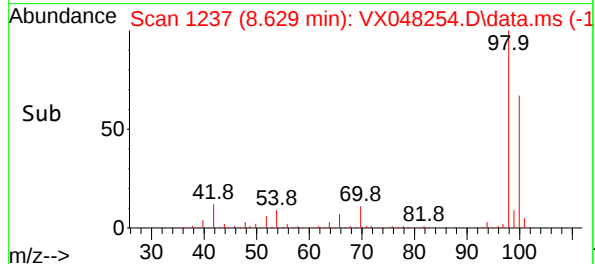
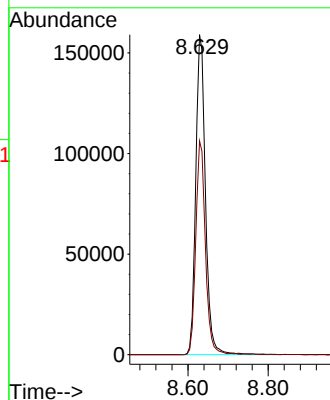
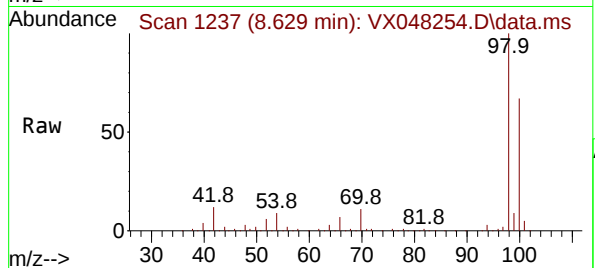
VX1021WBL01

Tgt Ion: 98 Resp: 267020

Ion Ratio Lower Upper

98 100

100 66.3 53.0 79.4



#62

4-Bromofluorobenzene

Concen: 52.653 ug/l

RT: 11.061 min Scan# 1636

Delta R.T. 0.000 min

Lab File: VX048254.D

Acq: 21 Oct 2025 09:40

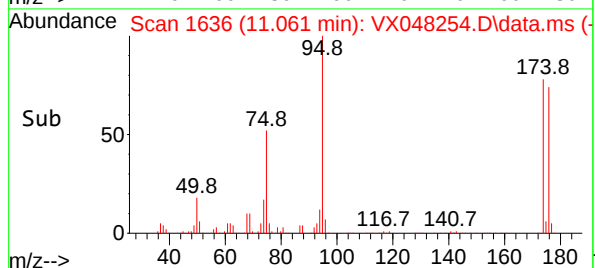
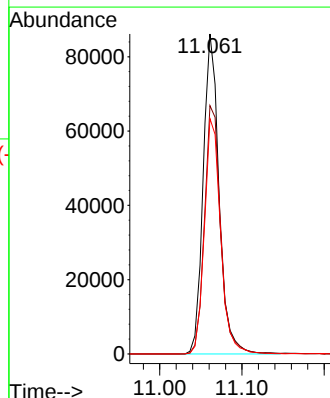
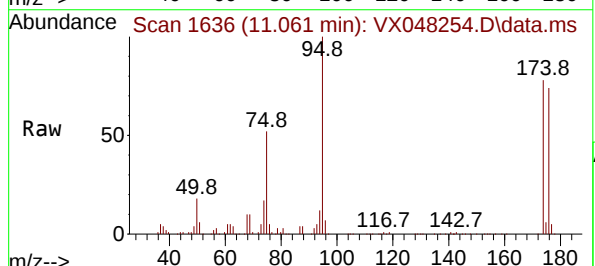
Tgt Ion: 95 Resp: 115293

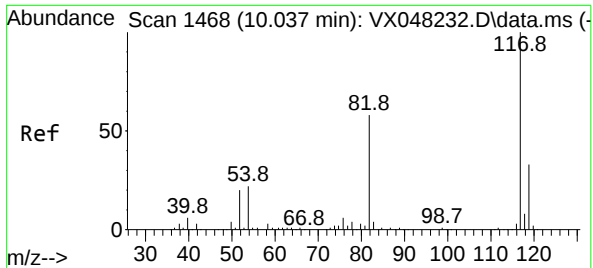
Ion Ratio Lower Upper

95 100

174 79.8 0.0 147.8

176 75.2 0.0 142.8





#63

Chlorobenzene-d5

Concen: 50.000 ug/l

RT: 10.037 min Scan# 1468

Delta R.T. 0.000 min

Lab File: VX048254.D

Acq: 21 Oct 2025 09:40

Instrument :

MSVOA_X

ClientSampleId :

VX1021WBL01

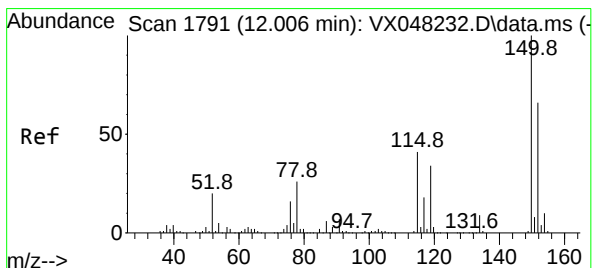
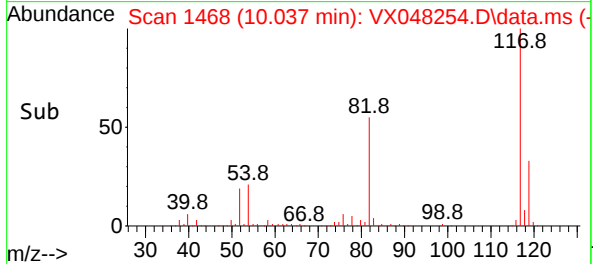
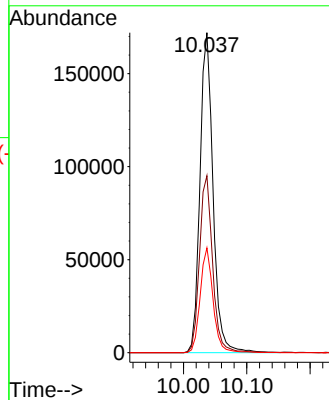
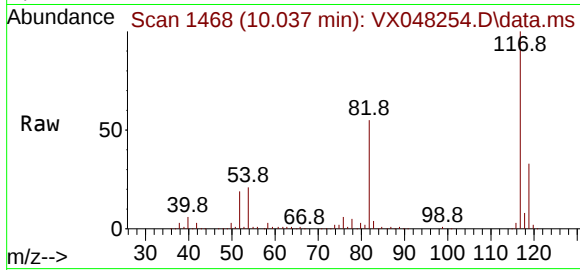
Tgt Ion:117 Resp: 247603

Ion Ratio Lower Upper

117 100

82 55.3 46.5 69.7

119 32.8 25.9 38.9



#72

1,4-Dichlorobenzene-d4

Concen: 50.000 ug/l

RT: 12.006 min Scan# 1791

Delta R.T. 0.000 min

Lab File: VX048254.D

Acq: 21 Oct 2025 09:40

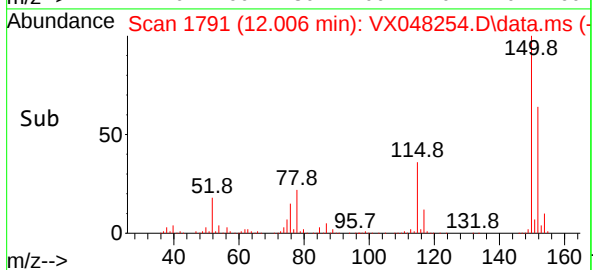
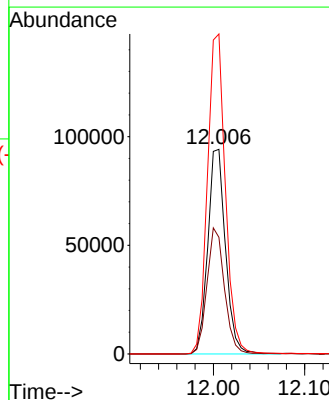
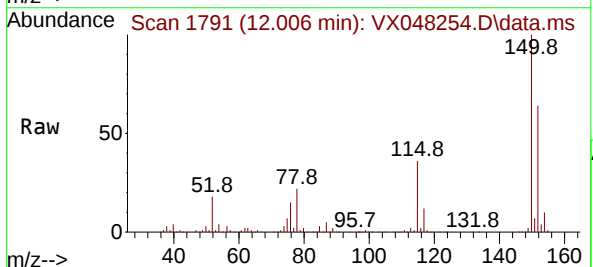
Tgt Ion:152 Resp: 126551

Ion Ratio Lower Upper

152 100

115 61.1 43.1 129.4

150 158.4 0.0 353.0



Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102125\
Data File : VX048254.D
Acq On : 21 Oct 2025 09:40
Operator : JC/MD
Sample : VX1021WBL01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VX1021WBL01

Integration Parameters: RTEINT.P

Integrator: RTE

Smoothing : ON

Sampling : 1

Start Thrs: 0.2

Stop Thrs : 0

Filtering: 5

Min Area: 3 % of largest Peak

Max Peaks: 100

Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >

Peak separation: 5

Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M

Title : SW846 8260

Signal : TIC: VX048254.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	5.367	691	702	718	rBV2	78626	252593	33.18%	6.046%
2	5.532	718	729	756	rVB2	119045	368571	48.41%	8.823%
3	5.934	785	795	820	rBV	80911	237948	31.26%	5.696%
4	6.739	918	927	946	rBV	210443	552273	72.54%	13.220%
5	8.629	1231	1237	1257	rBV	418894	703255	92.38%	16.834%
6	10.037	1462	1468	1486	rBV	518402	749543	98.46%	17.942%
7	11.061	1631	1636	1649	rBV	411591	552091	72.52%	13.216%
8	12.000	1785	1790	1808	rVB	569974	761297	100.00%	18.223%

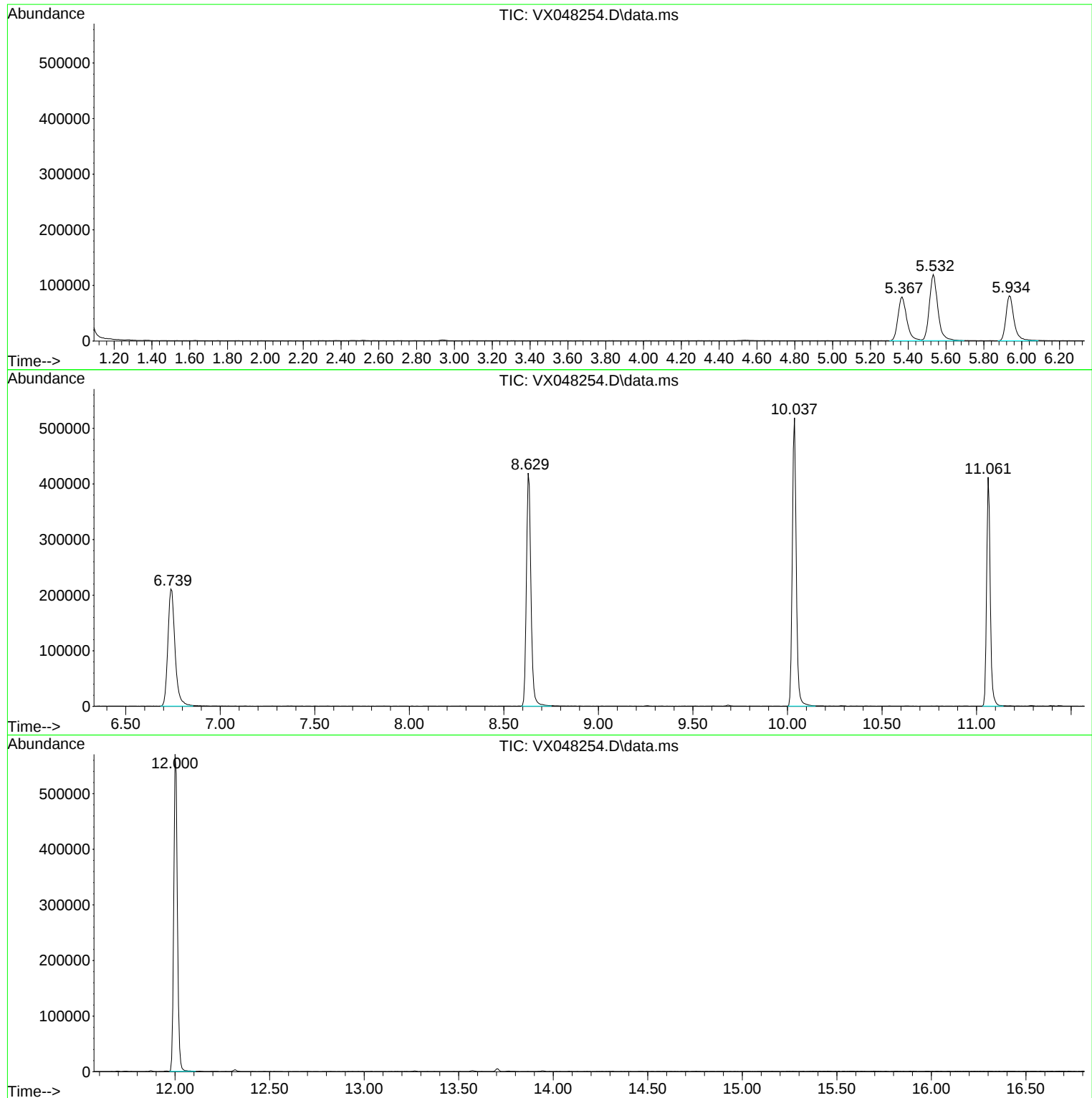
Sum of corrected areas: 4177571

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102125\
Data File : VX048254.D
Acq On : 21 Oct 2025 09:40
Operator : JC/MD
Sample : VX1021WBL01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VX1021WBL01

Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260

TIC Library : C:\Database\NIST20.L
TIC Integration Parameters: LSCINT.P



Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102125\
Data File : VX048254.D
Acq On : 21 Oct 2025 09:40
Operator : JC/MD
Sample : VX1021WBL01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VX1021WBL01

Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260

TIC Library : C:\Database\NIST20.L
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102125\
Data File : VX048254.D
Acq On : 21 Oct 2025 09:40
Operator : JC/MD
Sample : VX1021WBL01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VX1021WBL01

Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260

TIC Library : C:\Database\NIST20.L
TIC Integration Parameters: LSCINT.P

TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
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Report of Analysis

Client: ICE Service Group, Inc.
 Project: NWIRP Northrup Grumman Site – Bethpage, NY
 Client Sample ID: VX1021WBS01
 Lab Sample ID: VX1021WBS01
 Analytical Method: 8260D
 Sample Wt/Vol: 5 mL

Level : LOW
 Final Vol: 5000 uL

Date Collected:
 Date Received:
 SDG No.: Q3400
 Matrix: Water
 % Solid: 0
 Test: VOC-TCLVOA-10

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Date Ana.	BatchID
TARGETS										
75-71-8	Dichlorodifluoromethane	16.8		1	0.22	0.50	1.00	ug/L	10/21/25 10:06	VX102125
74-87-3	Chloromethane	17.8		1	0.32	0.50	1.00	ug/L	10/21/25 10:06	VX102125
75-01-4	Vinyl Chloride	17.6		1	0.26	0.75	1.00	ug/L	10/21/25 10:06	VX102125
74-83-9	Bromomethane	19.3		1	1.40	3.80	5.00	ug/L	10/21/25 10:06	VX102125
75-00-3	Chloroethane	18.9		1	0.47	0.75	1.00	ug/L	10/21/25 10:06	VX102125
75-69-4	Trichlorofluoromethane	17.7		1	0.33	0.50	1.00	ug/L	10/21/25 10:06	VX102125
76-13-1	1,1,2-Trichlorotrifluoroethane	17.6		1	0.25	0.50	1.00	ug/L	10/21/25 10:06	VX102125
75-35-4	1,1-Dichloroethene	18.0		1	0.23	0.75	1.00	ug/L	10/21/25 10:06	VX102125
67-64-1	Acetone	82.3		1	1.50	3.80	5.00	ug/L	10/21/25 10:06	VX102125
75-15-0	Carbon Disulfide	16.6		1	0.21	0.75	1.00	ug/L	10/21/25 10:06	VX102125
1634-04-4	Methyl tert-butyl Ether	17.6		1	0.16	0.50	1.00	ug/L	10/21/25 10:06	VX102125
79-20-9	Methyl Acetate	17.5		1	0.27	0.75	1.00	ug/L	10/21/25 10:06	VX102125
75-09-2	Methylene Chloride	19.1		1	0.28	0.50	1.00	ug/L	10/21/25 10:06	VX102125
156-60-5	trans-1,2-Dichloroethene	17.9		1	0.23	0.50	1.00	ug/L	10/21/25 10:06	VX102125
75-34-3	1,1-Dichloroethane	18.4		1	0.23	0.50	1.00	ug/L	10/21/25 10:06	VX102125
110-82-7	Cyclohexane	19.2		1	1.50	2.50	5.00	ug/L	10/21/25 10:06	VX102125
78-93-3	2-Butanone	85.2		1	0.98	2.50	5.00	ug/L	10/21/25 10:06	VX102125
56-23-5	Carbon Tetrachloride	17.0		1	0.25	0.50	1.00	ug/L	10/21/25 10:06	VX102125
156-59-2	cis-1,2-Dichloroethene	18.9		1	0.19	0.75	1.00	ug/L	10/21/25 10:06	VX102125
74-97-5	Bromochloromethane	21.6		1	0.22	0.50	1.00	ug/L	10/21/25 10:06	VX102125
67-66-3	Chloroform	18.8		1	0.25	0.50	1.00	ug/L	10/21/25 10:06	VX102125
71-55-6	1,1,1-Trichloroethane	18.1		1	0.20	0.50	1.00	ug/L	10/21/25 10:06	VX102125
108-87-2	Methylcyclohexane	17.0		1	0.16	0.50	1.00	ug/L	10/21/25 10:06	VX102125
71-43-2	Benzene	18.5		1	0.15	0.50	1.00	ug/L	10/21/25 10:06	VX102125
107-06-2	1,2-Dichloroethane	19.1		1	0.22	0.50	1.00	ug/L	10/21/25 10:06	VX102125
79-01-6	Trichloroethene	18.1		1	0.090	0.75	1.00	ug/L	10/21/25 10:06	VX102125
78-87-5	1,2-Dichloropropane	19.3		1	0.20	0.50	1.00	ug/L	10/21/25 10:06	VX102125
75-27-4	Bromodichloromethane	18.6		1	0.22	0.50	1.00	ug/L	10/21/25 10:06	VX102125
108-10-1	4-Methyl-2-Pentanone	86.9		1	0.68	2.50	5.00	ug/L	10/21/25 10:06	VX102125
108-88-3	Toluene	18.8		1	0.14	0.50	1.00	ug/L	10/21/25 10:06	VX102125
10061-02-6	t-1,3-Dichloropropene	18.4		1	0.17	0.50	1.00	ug/L	10/21/25 10:06	VX102125
10061-01-5	cis-1,3-Dichloropropene	18.8		1	0.16	0.50	1.00	ug/L	10/21/25 10:06	VX102125
79-00-5	1,1,2-Trichloroethane	19.1		1	0.21	0.50	1.00	ug/L	10/21/25 10:06	VX102125
591-78-6	2-Hexanone	85.9		1	0.89	2.50	5.00	ug/L	10/21/25 10:06	VX102125
124-48-1	Dibromochloromethane	18.1		1	0.18	0.50	1.00	ug/L	10/21/25 10:06	VX102125
106-93-4	1,2-Dibromoethane	18.6		1	0.15	0.50	1.00	ug/L	10/21/25 10:06	VX102125
127-18-4	Tetrachloroethene	16.9		1	0.23	0.50	1.00	ug/L	10/21/25 10:06	VX102125
108-90-7	Chlorobenzene	18.0		1	0.12	0.50	1.00	ug/L	10/21/25 10:06	VX102125
100-41-4	Ethyl Benzene	17.8		1	0.13	0.50	1.00	ug/L	10/21/25 10:06	VX102125
179601-23-1	m/p-Xylenes	36.8		1	0.24	1.00	2.00	ug/L	10/21/25 10:06	VX102125
95-47-6	o-Xylene	18.1		1	0.12	0.50	1.00	ug/L	10/21/25 10:06	VX102125
100-42-5	Styrene	18.8		1	0.15	0.50	1.00	ug/L	10/21/25 10:06	VX102125
75-25-2	Bromoform	17.0		1	0.19	0.50	1.00	ug/L	10/21/25 10:06	VX102125



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

Report of Analysis

Client: ICE Service Group, Inc.
Project: NWIRP Northrup Grumman Site – Bethpage, NY
Client Sample ID: VX1021WBS01
Lab Sample ID: VX1021WBS01
Analytical Method: 8260D
Sample Wt/Vol: 5 mL

Level : LOW
Final Vol: 5000 uL

Date Collected:
Date Received:
SDG No.: Q3400
Matrix: Water
% Solid: 0
Test: VOC-TCLVOA-10

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Date Ana.	BatchID
98-82-8	Isopropylbenzene	17.1		1	0.12	0.50	1.00	ug/L	10/21/25 10:06	VX102125
79-34-5	1,1,2,2-Tetrachloroethane	17.3		1	0.26	0.50	1.00	ug/L	10/21/25 10:06	VX102125
541-73-1	1,3-Dichlorobenzene	17.2		1	0.16	0.50	1.00	ug/L	10/21/25 10:06	VX102125
106-46-7	1,4-Dichlorobenzene	16.6		1	0.19	0.50	1.00	ug/L	10/21/25 10:06	VX102125
95-50-1	1,2-Dichlorobenzene	17.2		1	0.16	0.50	1.00	ug/L	10/21/25 10:06	VX102125
96-12-8	1,2-Dibromo-3-Chloropropane	14.2		1	0.53	0.75	1.00	ug/L	10/21/25 10:06	VX102125
120-82-1	1,2,4-Trichlorobenzene	15.2		1	0.20	0.50	1.00	ug/L	10/21/25 10:06	VX102125
87-61-6	1,2,3-Trichlorobenzene	15.5		1	0.20	0.75	1.00	ug/L	10/21/25 10:06	VX102125
SURROGATES										
17060-07-0	1,2-Dichloroethane-d4	49.2			81 - 118		98%	SPK: 50		
1868-53-7	Dibromofluoromethane	49.3			80 - 119		99%	SPK: 50		
2037-26-5	Toluene-d8	47.8			89 - 112		96%	SPK: 50		
460-00-4	4-Bromofluorobenzene	49.7			85 - 114		99%	SPK: 50		
INTERNAL STANDARDS										
		Area Count								
363-72-4	Pentafluorobenzene	141000								
540-36-3	1,4-Difluorobenzene	230000								
3114-55-4	Chlorobenzene-d5	212000								
3855-82-1	1,4-Dichlorobenzene-d4	111000								

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_X\Data\VX102125\
 Data File : VX048255.D
 Acq On : 21 Oct 2025 10:06
 Operator : JC/MD
 Sample : VX1021WBS01
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 5 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VX1021WBS01

Manual Integrations
 APPROVED

Reviewed By : John Carlone 10/24/2025
 Supervised By : Mahesh Dadoda 10/24/2025

Quant Time: Oct 24 04:23:14 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
 Quant Title : SW846 8260
 QLast Update : Mon Oct 20 14:13:59 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	5.537	168	141199	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.738	114	230109	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.037	117	212342	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.006	152	110789	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.934	65	97363	49.180	ug/l	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery =	98.360%		
35) Dibromofluoromethane	5.367	113	77378	49.256	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery =	98.520%		
50) Toluene-d8	8.628	98	263067	47.776	ug/l	0.00
Spiked Amount 50.000	Range 92 - 112		Recovery =	95.560%		
62) 4-Bromofluorobenzene	11.061	95	104113	49.702	ug/l	0.00
Spiked Amount 50.000	Range 83 - 123		Recovery =	99.400%		
Target Compounds					Qvalue	
2) Dichlorodifluoromethane	1.178	85	24401	16.810	ug/l	98
3) Chloromethane	1.300	50	24074	17.768	ug/l	98
4) Vinyl Chloride	1.380	62	22127	17.636	ug/l	98
5) Bromomethane	1.617	94	16447	19.316	ug/l	99
6) Chloroethane	1.697	64	13922	18.884	ug/l	91
7) Trichlorofluoromethane	1.898	101	42595	17.702	ug/l	99
8) Diethyl Ether	2.136	74	12470	18.418	ug/l	91
9) 1,1,2-Trichlorotrifluo...	2.337	101	26749	17.555	ug/l	96
10) Methyl Iodide	2.453	142	32960	17.207	ug/l	100
11) Tert butyl alcohol	2.940	59	13580	69.088	ug/l #	85
12) 1,1-Dichloroethene	2.325	96	26679	17.997	ug/l	89
13) Acrolein	2.233	56	19860	99.067	ug/l	99
14) Allyl chloride	2.666	41	43917	17.844	ug/l	97
15) Acrylonitrile	3.056	53	59914	84.532	ug/l	99
16) Acetone	2.373	43	55899	82.307	ug/l	97
17) Carbon Disulfide	2.514	76	77662	16.623	ug/l	97
18) Methyl Acetate	2.696	43	24826	17.503	ug/l	97
19) Methyl tert-butyl Ether	3.105	73	89211	17.640	ug/l	95
20) Methylene Chloride	2.788	84	31545	19.062	ug/l	94
21) trans-1,2-Dichloroethene	3.093	96	29134	17.892	ug/l	97
22) Diisopropyl ether	3.745	45	95604	19.476	ug/l	91
23) Vinyl Acetate	3.708	43	367608	93.748	ug/l	97
24) 1,1-Dichloroethane	3.605	63	54562	18.382	ug/l	98
25) 2-Butanone	4.538	43	73253	85.214	ug/l	100
26) 2,2-Dichloropropane	4.464	77	47833	17.854	ug/l	99
27) cis-1,2-Dichloroethene	4.477	96	35928	18.906	ug/l	98
28) Bromochloromethane	4.879	49	26532	21.558	ug/l	88
29) Tetrahydrofuran	4.983	42	43984	85.433	ug/l	97
30) Chloroform	5.074	83	59628	18.803	ug/l	98
31) Cyclohexane	5.452	56	47112	19.171	ug/l	94
32) 1,1,1-Trichloroethane	5.367	97	52848	18.082	ug/l	98
36) 1,1-Dichloropropene	5.678	75	40242	18.023	ug/l	100
37) Ethyl Acetate	4.690	43	32251	17.426	ug/l	98
38) Carbon Tetrachloride	5.665	117	46896	17.024	ug/l	98
39) Methylcyclohexane	7.360	83	44764	16.976	ug/l	95
40) Benzene	6.019	78	120185	18.540	ug/l	99

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102125\
 Data File : VX048255.D
 Acq On : 21 Oct 2025 10:06
 Operator : JC/MD
 Sample : VX1021WBS01
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 5 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VX1021WBS01

Manual Integrations
 APPROVED

Reviewed By : John Carlone 10/24/2025
 Supervised By : Mahesh Dadoda 10/24/2025

Quant Time: Oct 24 04:23:14 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
 Quant Title : SW846 8260
 QLast Update : Mon Oct 20 14:13:59 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	4.897	41	17591	18.099	ug/l	97
42) 1,2-Dichloroethane	6.062	62	45577	19.053	ug/l	99
43) Isopropyl Acetate	6.318	43	52903	17.402	ug/l	96
44) Trichloroethene	7.110	130	30995	18.107	ug/l	99
45) 1,2-Dichloropropane	7.415	63	29673	19.252	ug/l	95
46) Dibromomethane	7.567	93	22037	18.352	ug/l	94
47) Bromodichloromethane	7.799	83	48240	18.606	ug/l	99
48) Methyl methacrylate	7.677	41	26320	17.158	ug/l	94
49) 1,4-Dioxane	7.647	88	5926	292.405	ug/l #	88
51) 4-Methyl-2-Pentanone	8.555	43	152275	86.877	ug/l	96
52) Toluene	8.701	92	77240	18.755	ug/l	99
53) t-1,3-Dichloropropene	8.964	75	46020	18.419	ug/l	99
54) cis-1,3-Dichloropropene	8.348	75	50705	18.810	ug/l	95
55) 1,1,2-Trichloroethane	9.134	97	29313	19.140	ug/l	98
56) Ethyl methacrylate	9.098	69	39990	17.852	ug/l	93
57) 1,3-Dichloropropane	9.293	76	50123	19.160	ug/l	100
58) 2-Chloroethyl Vinyl ether	8.226	63	98096	82.586	ug/l	96
59) 2-Hexanone	9.415	43	104997	85.909	ug/l	96
60) Dibromochloromethane	9.500	129	37288	18.114	ug/l	99
61) 1,2-Dibromoethane	9.592	107	30294	18.554	ug/l	98
64) Tetrachloroethene	9.256	164	26804	16.909	ug/l	99
65) Chlorobenzene	10.061	112	85855	17.974	ug/l	100
66) 1,1,1,2-Tetrachloroethane	10.146	131	30819	17.566	ug/l	98
67) Ethyl Benzene	10.177	91	144956	17.824	ug/l	98
68) m/p-Xylenes	10.287	106	111086	36.763	ug/l	99
69) o-Xylene	10.622	106	52686	18.060	ug/l	97
70) Styrene	10.634	104	93575	18.838	ug/l	99
71) Bromoform	10.780	173	23770	16.952	ug/l #	99
73) Isopropylbenzene	10.945	105	138728	17.144	ug/l	100
74) N-amyl acetate	10.823	43	46339	16.144	ug/l	96
75) 1,1,2,2-Tetrachloroethane	11.195	83	38121	17.251	ug/l	100
76) 1,2,3-Trichloropropane	11.219	75	33965m	18.905	ug/l	
77) Bromobenzene	11.177	156	34669	17.087	ug/l	94
78) n-propylbenzene	11.286	91	161765	17.266	ug/l	98
79) 2-Chlorotoluene	11.347	91	98234	17.293	ug/l	98
80) 1,3,5-Trimethylbenzene	11.433	105	114762	17.137	ug/l	100
81) trans-1,4-Dichloro-2-b...	11.000	75	12207	16.530	ug/l	96
82) 4-Chlorotoluene	11.433	91	115993	17.202	ug/l	97
83) tert-Butylbenzene	11.695	119	117710	17.108	ug/l	95
84) 1,2,4-Trimethylbenzene	11.731	105	114927	17.197	ug/l	100
85) sec-Butylbenzene	11.872	105	138342	16.712	ug/l	99
86) p-Isopropyltoluene	11.987	119	119237	16.665	ug/l	99
87) 1,3-Dichlorobenzene	11.951	146	65615	17.154	ug/l	99
88) 1,4-Dichlorobenzene	12.024	146	65796	16.604	ug/l	98
89) n-Butylbenzene	12.317	91	103383	15.875	ug/l	99
90) Hexachloroethane	12.518	117	22360	15.825	ug/l	96
91) 1,2-Dichlorobenzene	12.317	146	61839	17.219	ug/l	98
92) 1,2-Dibromo-3-Chloropr...	12.926	75	6372	14.205	ug/l	96
93) 1,2,4-Trichlorobenzene	13.566	180	36955	15.216	ug/l	98
94) Hexachlorobutadiene	13.707	225	14253	15.707	ug/l	97
95) Naphthalene	13.755	128	98736	15.345	ug/l	100
96) 1,2,3-Trichlorobenzene	13.944	180	34440	15.454	ug/l	97

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102125\
Data File : VX048255.D
Acq On : 21 Oct 2025 10:06
Operator : JC/MD
Sample : VX1021WBS01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VX1021WBS01

Manual Integrations
APPROVED

Reviewed By :John Carlone 10/24/2025
Supervised By :Mahesh Dadoda 10/24/2025

Quant Time: Oct 24 04:23:14 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

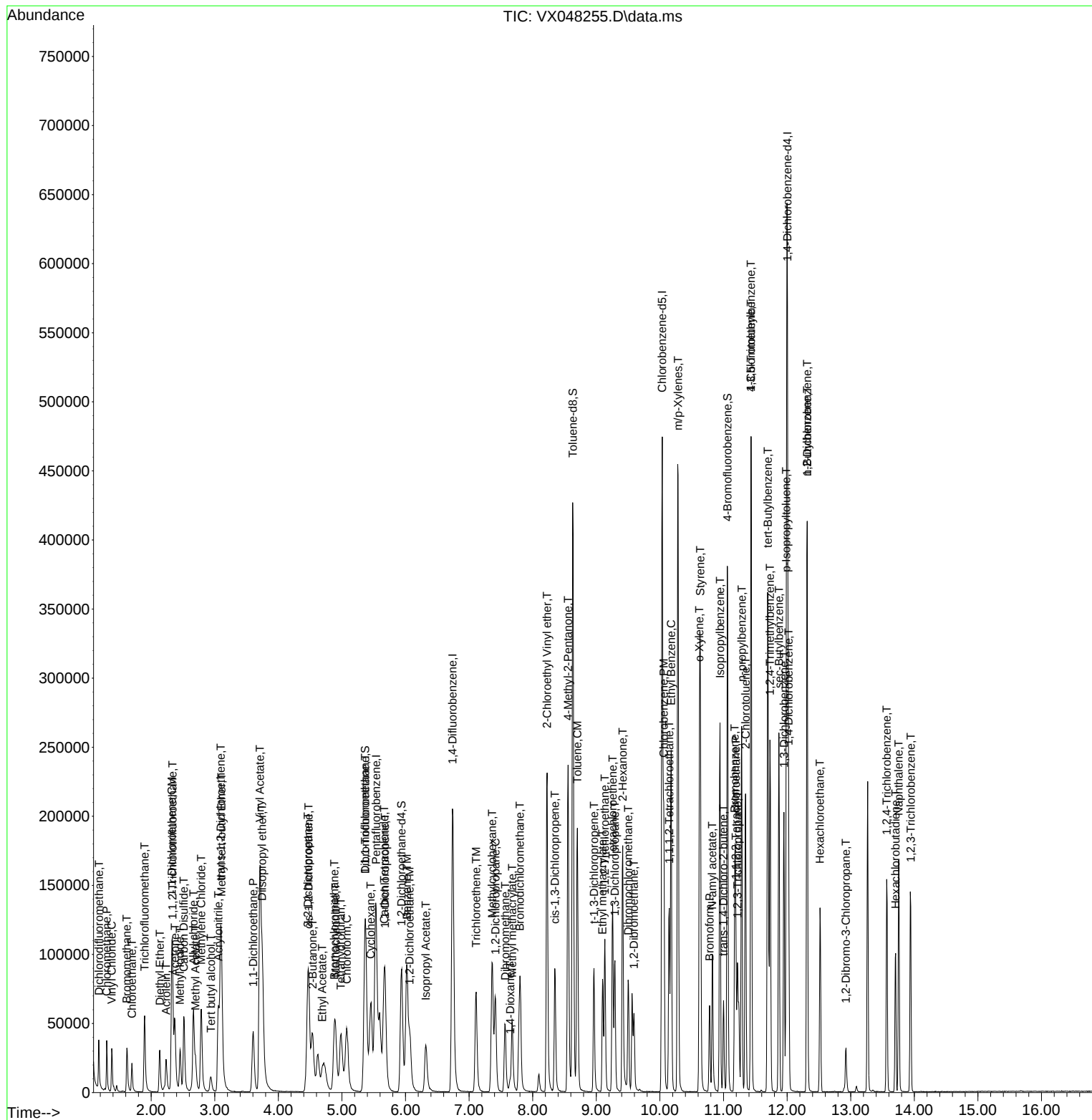
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Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102125\
Data File : VX048255.D
Acq On    : 21 Oct 2025  10:06
Operator  : JC/MD
Sample    : VX1021WBS01
Misc      : 5.0mL/MSVOA_X/WATER
ALS Vial  : 5      Sample Multiplier: 1
```

Instrument :
MSVOA_X
ClientSampleId :
VX1021WBS01

Manual Integrations APPROVED

Reviewed By :John Carlone 10/24/2025
Supervised By :Mahesh Dadoda 10/24/2025

Quant Time: Oct 24 04:23:14 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration



Report of Analysis

Client: ICE Service Group, Inc.
 Project: NWIRP Northrup Grumman Site – Bethpage, NY
 Client Sample ID: VX1021WBSD01
 Lab Sample ID: VX1021WBSD01
 Analytical Method: 8260D
 Sample Wt/Vol: 5 mL

Level : LOW
 Final Vol: 5000 uL

Date Collected:
 Date Received:
 SDG No.: Q3400
 Matrix: Water
 % Solid: 0
 Test: VOC-TCLVOA-10

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Date Ana.	BatchID
TARGETS										
75-71-8	Dichlorodifluoromethane	18.0		1	0.22	0.50	1.00	ug/L	10/21/25 10:33	VX102125
74-87-3	Chloromethane	17.3		1	0.32	0.50	1.00	ug/L	10/21/25 10:33	VX102125
75-01-4	Vinyl Chloride	16.9		1	0.26	0.75	1.00	ug/L	10/21/25 10:33	VX102125
74-83-9	Bromomethane	19.0		1	1.40	3.80	5.00	ug/L	10/21/25 10:33	VX102125
75-00-3	Chloroethane	19.0		1	0.47	0.75	1.00	ug/L	10/21/25 10:33	VX102125
75-69-4	Trichlorofluoromethane	17.9		1	0.33	0.50	1.00	ug/L	10/21/25 10:33	VX102125
76-13-1	1,1,2-Trichlorotrifluoroethane	17.7		1	0.25	0.50	1.00	ug/L	10/21/25 10:33	VX102125
75-35-4	1,1-Dichloroethene	17.9		1	0.23	0.75	1.00	ug/L	10/21/25 10:33	VX102125
67-64-1	Acetone	81.6		1	1.50	3.80	5.00	ug/L	10/21/25 10:33	VX102125
75-15-0	Carbon Disulfide	16.9		1	0.21	0.75	1.00	ug/L	10/21/25 10:33	VX102125
1634-04-4	Methyl tert-butyl Ether	18.0		1	0.16	0.50	1.00	ug/L	10/21/25 10:33	VX102125
79-20-9	Methyl Acetate	16.9		1	0.27	0.75	1.00	ug/L	10/21/25 10:33	VX102125
75-09-2	Methylene Chloride	18.5		1	0.28	0.50	1.00	ug/L	10/21/25 10:33	VX102125
156-60-5	trans-1,2-Dichloroethene	18.8		1	0.23	0.50	1.00	ug/L	10/21/25 10:33	VX102125
75-34-3	1,1-Dichloroethane	18.8		1	0.23	0.50	1.00	ug/L	10/21/25 10:33	VX102125
110-82-7	Cyclohexane	18.4		1	1.50	2.50	5.00	ug/L	10/21/25 10:33	VX102125
78-93-3	2-Butanone	85.7		1	0.98	2.50	5.00	ug/L	10/21/25 10:33	VX102125
56-23-5	Carbon Tetrachloride	17.2		1	0.25	0.50	1.00	ug/L	10/21/25 10:33	VX102125
156-59-2	cis-1,2-Dichloroethene	19.1		1	0.19	0.75	1.00	ug/L	10/21/25 10:33	VX102125
74-97-5	Bromochloromethane	21.3		1	0.22	0.50	1.00	ug/L	10/21/25 10:33	VX102125
67-66-3	Chloroform	19.0		1	0.25	0.50	1.00	ug/L	10/21/25 10:33	VX102125
71-55-6	1,1,1-Trichloroethane	18.3		1	0.20	0.50	1.00	ug/L	10/21/25 10:33	VX102125
108-87-2	Methylcyclohexane	18.2		1	0.16	0.50	1.00	ug/L	10/21/25 10:33	VX102125
71-43-2	Benzene	18.8		1	0.15	0.50	1.00	ug/L	10/21/25 10:33	VX102125
107-06-2	1,2-Dichloroethane	18.5		1	0.22	0.50	1.00	ug/L	10/21/25 10:33	VX102125
79-01-6	Trichloroethene	18.3		1	0.090	0.75	1.00	ug/L	10/21/25 10:33	VX102125
78-87-5	1,2-Dichloropropane	19.8		1	0.20	0.50	1.00	ug/L	10/21/25 10:33	VX102125
75-27-4	Bromodichloromethane	18.8		1	0.22	0.50	1.00	ug/L	10/21/25 10:33	VX102125
108-10-1	4-Methyl-2-Pentanone	89.0		1	0.68	2.50	5.00	ug/L	10/21/25 10:33	VX102125
108-88-3	Toluene	18.9		1	0.14	0.50	1.00	ug/L	10/21/25 10:33	VX102125
10061-02-6	t-1,3-Dichloropropene	18.5		1	0.17	0.50	1.00	ug/L	10/21/25 10:33	VX102125
10061-01-5	cis-1,3-Dichloropropene	18.5		1	0.16	0.50	1.00	ug/L	10/21/25 10:33	VX102125
79-00-5	1,1,2-Trichloroethane	19.3		1	0.21	0.50	1.00	ug/L	10/21/25 10:33	VX102125
591-78-6	2-Hexanone	87.8		1	0.89	2.50	5.00	ug/L	10/21/25 10:33	VX102125
124-48-1	Dibromochloromethane	18.3		1	0.18	0.50	1.00	ug/L	10/21/25 10:33	VX102125
106-93-4	1,2-Dibromoethane	18.6		1	0.15	0.50	1.00	ug/L	10/21/25 10:33	VX102125
127-18-4	Tetrachloroethene	17.5		1	0.23	0.50	1.00	ug/L	10/21/25 10:33	VX102125
108-90-7	Chlorobenzene	18.9		1	0.12	0.50	1.00	ug/L	10/21/25 10:33	VX102125
100-41-4	Ethyl Benzene	18.3		1	0.13	0.50	1.00	ug/L	10/21/25 10:33	VX102125
179601-23-1	m/p-Xylenes	37.5		1	0.24	1.00	2.00	ug/L	10/21/25 10:33	VX102125
95-47-6	o-Xylene	18.5		1	0.12	0.50	1.00	ug/L	10/21/25 10:33	VX102125
100-42-5	Styrene	19.2		1	0.15	0.50	1.00	ug/L	10/21/25 10:33	VX102125
75-25-2	Bromoform	17.7		1	0.19	0.50	1.00	ug/L	10/21/25 10:33	VX102125



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

Report of Analysis

Client: ICE Service Group, Inc.
Project: NWIRP Northrup Grumman Site – Bethpage, NY
Client Sample ID: VX1021WBSD01
Lab Sample ID: VX1021WBSD01
Analytical Method: 8260D
Sample Wt/Vol: 5 mL

Level : LOW
Final Vol: 5000 uL

Date Collected:
Date Received:
SDG No.: Q3400
Matrix: Water
% Solid: 0
Test: VOC-TCLVOA-10

CAS Number	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Date Ana.	BatchID
98-82-8	Isopropylbenzene	18.5		1	0.12	0.50	1.00	ug/L	10/21/25 10:33	VX102125
79-34-5	1,1,2,2-Tetrachloroethane	18.4		1	0.26	0.50	1.00	ug/L	10/21/25 10:33	VX102125
541-73-1	1,3-Dichlorobenzene	18.2		1	0.16	0.50	1.00	ug/L	10/21/25 10:33	VX102125
106-46-7	1,4-Dichlorobenzene	18.2		1	0.19	0.50	1.00	ug/L	10/21/25 10:33	VX102125
95-50-1	1,2-Dichlorobenzene	18.6		1	0.16	0.50	1.00	ug/L	10/21/25 10:33	VX102125
96-12-8	1,2-Dibromo-3-Chloropropane	16.9		1	0.53	0.75	1.00	ug/L	10/21/25 10:33	VX102125
120-82-1	1,2,4-Trichlorobenzene	16.8		1	0.20	0.50	1.00	ug/L	10/21/25 10:33	VX102125
87-61-6	1,2,3-Trichlorobenzene	17.3		1	0.20	0.75	1.00	ug/L	10/21/25 10:33	VX102125
SURROGATES										
17060-07-0	1,2-Dichloroethane-d4	46.5			81 - 118		93%	SPK: 50		
1868-53-7	Dibromofluoromethane	48.0			80 - 119		96%	SPK: 50		
2037-26-5	Toluene-d8	47.9			89 - 112		96%	SPK: 50		
460-00-4	4-Bromofluorobenzene	47.3			85 - 114		95%	SPK: 50		
INTERNAL STANDARDS										
		Area Count								
363-72-4	Pentafluorobenzene	138000								
540-36-3	1,4-Difluorobenzene	224000								
3114-55-4	Chlorobenzene-d5	203000								
3855-82-1	1,4-Dichlorobenzene-d4	101000								

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_X\Data\VX102125\
 Data File : VX048256.D
 Acq On : 21 Oct 2025 10:33
 Operator : JC/MD
 Sample : VX1021WBSD01
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 6 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VX1021WBSD01

Manual Integrations
 APPROVED

Reviewed By : John Carlone 10/24/2025
 Supervised By : Mahesh Dadoda 10/24/2025

Quant Time: Oct 24 04:24:18 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
 Quant Title : SW846 8260
 QLast Update : Mon Oct 20 14:13:59 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	5.531	168	137604	50.000	ug/l	-0.01
34) 1,4-Difluorobenzene	6.738	114	224103	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.036	117	203364	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.006	152	101316	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.933	65	89758	46.523	ug/l	0.00
Spiked Amount 50.000	Range 78 - 117		Recovery =	93.040%		
35) Dibromofluoromethane	5.367	113	73394	47.972	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery =	95.940%		
50) Toluene-d8	8.628	98	256689	47.867	ug/l	0.00
Spiked Amount 50.000	Range 92 - 112		Recovery =	95.740%		
62) 4-Bromofluorobenzene	11.061	95	96462	47.283	ug/l	0.00
Spiked Amount 50.000	Range 83 - 123		Recovery =	94.560%		
Target Compounds					Qvalue	
2) Dichlorodifluoromethane	1.178	85	25428	17.976	ug/l	97
3) Chloromethane	1.300	50	22848	17.304	ug/l	97
4) Vinyl Chloride	1.379	62	20627	16.870	ug/l	94
5) Bromomethane	1.623	94	15738	18.966	ug/l	96
6) Chloroethane	1.696	64	13651	19.000	ug/l	92
7) Trichlorofluoromethane	1.898	101	42048	17.931	ug/l	97
8) Diethyl Ether	2.135	74	12151	18.416	ug/l	94
9) 1,1,2-Trichlorotrifluo...	2.337	101	26272	17.693	ug/l	94
10) Methyl Iodide	2.452	142	33915	18.168	ug/l	99
11) Tert butyl alcohol	2.934	59	14617	76.307	ug/l	96
12) 1,1-Dichloroethene	2.324	96	25810	17.866	ug/l	96
13) Acrolein	2.233	56	19717	100.924	ug/l	99
14) Allyl chloride	2.666	41	43150	17.990	ug/l	97
15) Acrylonitrile	3.050	53	60796	88.017	ug/l	99
16) Acetone	2.373	43	53983	81.562	ug/l	98
17) Carbon Disulfide	2.513	76	76828	16.874	ug/l	100
18) Methyl Acetate	2.696	43	23399	16.928	ug/l	91
19) Methyl tert-butyl Ether	3.105	73	88912	18.041	ug/l	98
20) Methylene Chloride	2.788	84	29832	18.498	ug/l	89
21) trans-1,2-Dichloroethene	3.086	96	29850	18.810	ug/l	87
22) Diisopropyl ether	3.745	45	93736	19.594	ug/l	88
23) Vinyl Acetate	3.708	43	360854	94.430	ug/l	96
24) 1,1-Dichloroethane	3.605	63	54330	18.782	ug/l	97
25) 2-Butanone	4.537	43	71780	85.682	ug/l	94
26) 2,2-Dichloropropane	4.464	77	46208	17.698	ug/l	100
27) cis-1,2-Dichloroethene	4.476	96	35291	19.056	ug/l	98
28) Bromochloromethane	4.879	49	25497	21.258	ug/l	85
29) Tetrahydrofuran	4.982	42	43202	86.106	ug/l	93
30) Chloroform	5.074	83	58812	19.030	ug/l	100
31) Cyclohexane	5.452	56	44037	18.388	ug/l	92
32) 1,1,1-Trichloroethane	5.373	97	52248	18.344	ug/l	97
36) 1,1-Dichloropropene	5.671	75	38187	17.561	ug/l	99
37) Ethyl Acetate	4.696	43	32528	18.047	ug/l	99
38) Carbon Tetrachloride	5.659	117	46209	17.224	ug/l	99
39) Methylcyclohexane	7.360	83	46866	18.249	ug/l	95
40) Benzene	6.025	78	118391	18.752	ug/l	96

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102125\
 Data File : VX048256.D
 Acq On : 21 Oct 2025 10:33
 Operator : JC/MD
 Sample : VX1021WBSD01
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 6 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VX1021WBSD01

Manual Integrations
 APPROVED

Reviewed By : John Carlone 10/24/2025
 Supervised By : Mahesh Dadoda 10/24/2025

Quant Time: Oct 24 04:24:18 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
 Quant Title : SW846 8260
 QLast Update : Mon Oct 20 14:13:59 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	4.903	41	16538	17.472	ug/l	97
42) 1,2-Dichloroethane	6.068	62	43164	18.528	ug/l	100
43) Isopropyl Acetate	6.318	43	52017	17.569	ug/l	96
44) Trichloroethene	7.110	130	30449	18.265	ug/l	98
45) 1,2-Dichloropropane	7.409	63	29710	19.793	ug/l	99
46) Dibromomethane	7.561	93	21708	18.563	ug/l	94
47) Bromodichloromethane	7.805	83	47421	18.781	ug/l	95
48) Methyl methacrylate	7.677	41	26520	17.751	ug/l	95
49) 1,4-Dioxane	7.640	88	6381	323.294	ug/l #	86
51) 4-Methyl-2-Pentanone	8.555	43	151895	88.982	ug/l	96
52) Toluene	8.701	92	75829	18.906	ug/l	100
53) t-1,3-Dichloropropene	8.963	75	45008	18.497	ug/l	99
54) cis-1,3-Dichloropropene	8.348	75	48675	18.541	ug/l	95
55) 1,1,2-Trichloroethane	9.134	97	28743	19.271	ug/l	97
56) Ethyl methacrylate	9.098	69	39428	18.073	ug/l	94
57) 1,3-Dichloropropane	9.293	76	48237	18.933	ug/l	99
58) 2-Chloroethyl Vinyl ether	8.226	63	97758	84.467	ug/l	97
59) 2-Hexanone	9.415	43	104512	87.804	ug/l	98
60) Dibromochloromethane	9.500	129	36743	18.328	ug/l	100
61) 1,2-Dibromoethane	9.591	107	29504	18.555	ug/l	99
64) Tetrachloroethene	9.256	164	26555	17.492	ug/l	97
65) Chlorobenzene	10.061	112	86348	18.875	ug/l	99
66) 1,1,1,2-Tetrachloroethane	10.146	131	30678	18.258	ug/l	99
67) Ethyl Benzene	10.177	91	142694	18.320	ug/l	97
68) m/p-Xylenes	10.286	106	108512	37.497	ug/l	100
69) o-Xylene	10.622	106	51598	18.468	ug/l	98
70) Styrene	10.640	104	91270	19.185	ug/l	98
71) Bromoform	10.780	173	23785	17.711	ug/l #	100
73) Isopropylbenzene	10.945	105	136638	18.464	ug/l	100
74) N-amyl acetate	10.829	43	45310	17.261	ug/l	95
75) 1,1,2,2-Tetrachloroethane	11.195	83	37185	18.401	ug/l	99
76) 1,2,3-Trichloropropane	11.219	75	32912m	20.032	ug/l	
77) Bromobenzene	11.183	156	34541	18.615	ug/l	94
78) n-propylbenzene	11.286	91	160675	18.753	ug/l	98
79) 2-Chlorotoluene	11.347	91	97491	18.767	ug/l	98
80) 1,3,5-Trimethylbenzene	11.432	105	114521	18.700	ug/l	99
81) trans-1,4-Dichloro-2-b...	11.000	75	11571	17.134	ug/l	99
82) 4-Chlorotoluene	11.439	91	115393	18.713	ug/l	97
83) tert-Butylbenzene	11.695	119	117357	18.651	ug/l	95
84) 1,2,4-Trimethylbenzene	11.731	105	114561	18.745	ug/l	99
85) sec-Butylbenzene	11.871	105	139017	18.364	ug/l	100
86) p-Isopropyltoluene	11.993	119	118663	18.135	ug/l	100
87) 1,3-Dichlorobenzene	11.951	146	63730	18.219	ug/l	99
88) 1,4-Dichlorobenzene	12.024	146	65963	18.203	ug/l	99
89) n-Butylbenzene	12.316	91	106210	17.834	ug/l	98
90) Hexachloroethane	12.518	117	22528	17.435	ug/l	96
91) 1,2-Dichlorobenzene	12.316	146	61124	18.612	ug/l	98
92) 1,2-Dibromo-3-Chloropr...	12.920	75	6932	16.899	ug/l	97
93) 1,2,4-Trichlorobenzene	13.566	180	37218	16.758	ug/l	98
94) Hexachlorobutadiene	13.706	225	14700	17.706	ug/l	98
95) Naphthalene	13.755	128	100059	17.005	ug/l	99
96) 1,2,3-Trichlorobenzene	13.944	180	35212	17.277	ug/l	97

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102125\
Data File : VX048256.D
Acq On : 21 Oct 2025 10:33
Operator : JC/MD
Sample : VX1021WBSD01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VX1021WBSD01

Manual Integrations
APPROVED

Reviewed By :John Carlone 10/24/2025
Supervised By :Mahesh Dadoda 10/24/2025

Quant Time: Oct 24 04:24:18 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

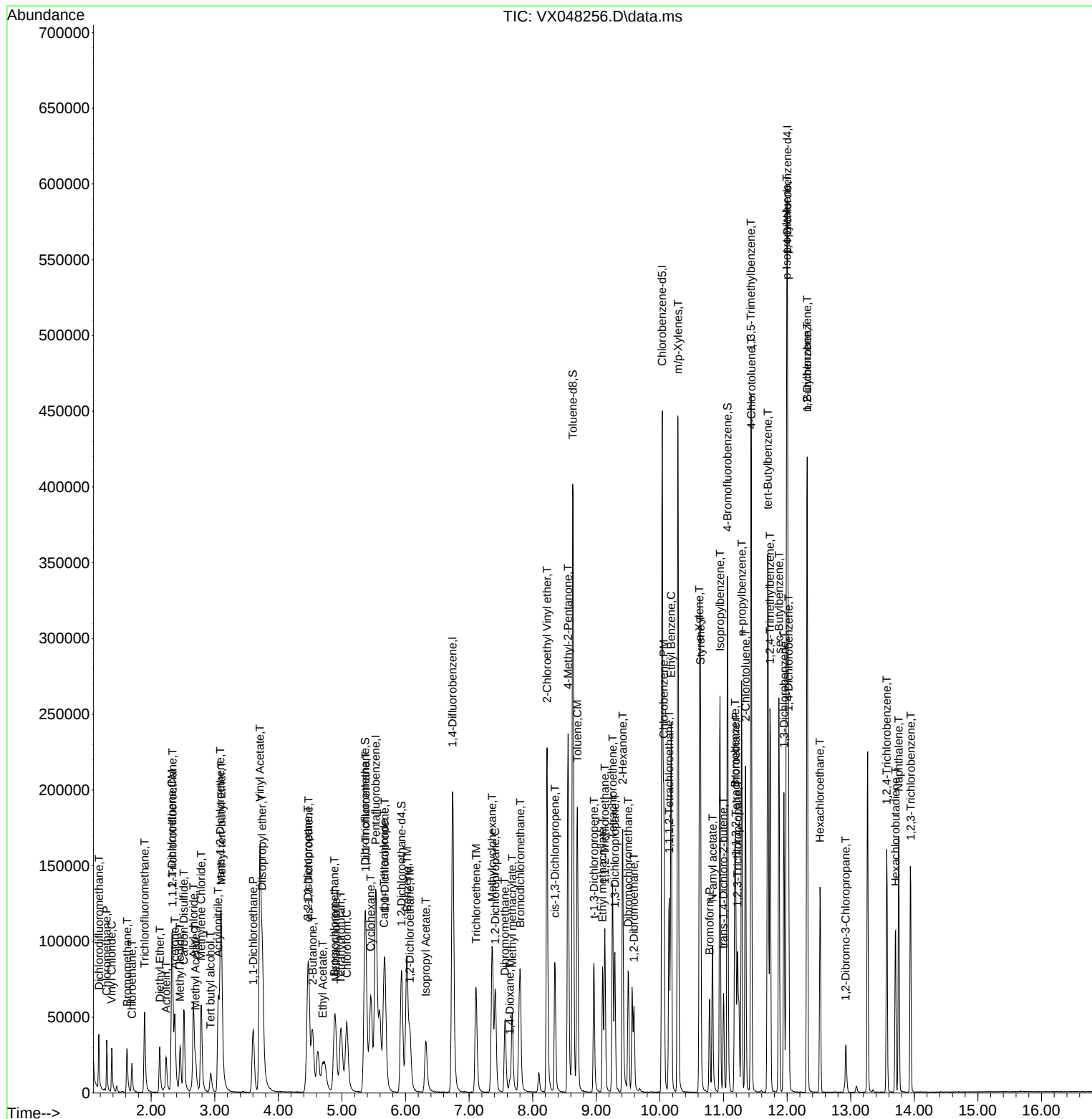
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Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX102125\  
Data File : VX048256.D  
Acq On    : 21 Oct 2025  10:33  
Operator  : JC/MD  
Sample    : VX1021WBSD01  
Misc      : 5.0mL/MSVOA_X/WATER  
ALS Vial  : 6      Sample Multiplier: 1
```

Instrument :
MSVOA_X
ClientSampleId :
VX1021WBSD01

Manual Integrations APPROVED

Reviewed By :John Carlone 10/24/2025
Supervised By :Mahesh Dadoda 10/24/2025

Quant Time: Oct 24 04:24:18 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X102025W.M
Quant Title : SW846 8260
QLast Update : Mon Oct 20 14:13:59 2025
Response via : Initial Calibration



Manual Integration Report

Sequence:	VX102025	Instrument	MSVOA_x
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Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDICC001	VX048229.D	1,2,3-Trichloropropane	JOHN	10/21/2025 8:03:22 AM	sam	10/21/2025 10:41:22 AM	Peak Integrated by Software
VSTDICC001	VX048229.D	1,4-Dichlorobenzene	JOHN	10/21/2025 8:03:22 AM	sam	10/21/2025 10:41:22 AM	Peak Integrated by Software
VSTDICC001	VX048229.D	Carbon Tetrachloride	JOHN	10/21/2025 8:03:22 AM	sam	10/21/2025 10:41:22 AM	Peak Integrated by Software
VSTDICC001	VX048229.D	Ethyl Acetate	JOHN	10/21/2025 8:03:22 AM	sam	10/21/2025 10:41:22 AM	Peak Integrated by Software
VSTDICC001	VX048229.D	Methacrylonitrile	JOHN	10/21/2025 8:03:22 AM	sam	10/21/2025 10:41:22 AM	Peak Integrated by Software
VSTDICC020	VX048231.D	1,2,3-Trichloropropane	JOHN	10/21/2025 8:03:30 AM	sam	10/21/2025 10:41:32 AM	Peak Integrated by Software
VSTDICCC050	VX048232.D	1,2,3-Trichloropropane	JOHN	10/21/2025 8:03:35 AM	sam	10/21/2025 10:41:38 AM	Peak Integrated by Software
VSTDICC100	VX048233.D	1,2,3-Trichloropropane	JOHN	10/21/2025 8:03:40 AM	sam	10/21/2025 10:42:36 AM	Peak Integrated by Software
VSTDICC150	VX048234.D	1,2,3-Trichloropropane	JOHN	10/21/2025 8:03:49 AM	sam	10/21/2025 10:43:04 AM	Peak Integrated by Software
VSTDICC005	VX048236.D	1,2,3-Trichloropropane	JOHN	10/21/2025 8:03:55 AM	sam	10/21/2025 10:41:42 AM	Peak Integrated by Software
VSTDICC005	VX048236.D	Ethyl Acetate	JOHN	10/21/2025 8:03:55 AM	sam	10/21/2025 10:41:42 AM	Peak Integrated by Software
VSTDICC005	VX048236.D	Methacrylonitrile	JOHN	10/21/2025 8:03:55 AM	sam	10/21/2025 10:41:42 AM	Peak Integrated by Software
VSTDICV050	VX048237.D	1,2,3-Trichloropropane	JOHN	10/21/2025 8:03:59 AM	sam	10/21/2025 10:41:51 AM	Peak Integrated by Software



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

Manual Integration Report

Sequence:

VX102025

Instrument

MSVOA_x

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDCCC050	VX048250.D	1,2,3-Trichloropropane	JOHN	10/21/2025 8:04:26 AM	sam	10/21/2025 10:42:06 AM	Peak Integrated by Software

Manual Integration Report

Sequence:

Vx102125

Instrument

MSVOA_x

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDCCC050	VX048252.D	1,2,3-Trichloropropane	JOHN	10/24/2025 8:49:54 AM	MMDadoda	10/24/2025 2:32:07 PM	Peak Integrated by Software
VX1021WBS01	VX048255.D	1,2,3-Trichloropropane	JOHN	10/24/2025 8:50:00 AM	MMDadoda	10/24/2025 2:32:10 PM	Peak Integrated by Software
VX1021WBSD0 1	VX048256.D	1,2,3-Trichloropropane	JOHN	10/24/2025 8:50:04 AM	MMDadoda	10/24/2025 2:32:14 PM	Peak Integrated by Software
VSTDCCC050	VX048278.D	1,2,3-Trichloropropane	JOHN	10/24/2025 8:50:16 AM	MMDadoda	10/24/2025 2:32:21 PM	Peak Integrated by Software

Instrument ID: **MSVOA_X**

Daily Analysis Runlog For Sequence/QC Batch ID # VX102025

Review By	John Carlone	Review On	10/21/2025 8:15:04 AM
Supervise By	Semsettin Yesilyurt	Supervise On	10/21/2025 10:44:02 AM
SubDirectory	VX102025	HP Acquire Method	HP Processing Method 82X102025W.M
STD. NAME	STD REF.#		
Tune/Reschk	VP135849		
Initial Calibration Stds	VP135851,VP135852,VP135853,VP135854,VP135855,VP135856		
CCC	VP135850		
Internal Standard/PEM			
ICV/I.BLK			
Surrogate Standard			
MS/MSD Standard			
LCS Standard			

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB	VX048226.D	20 Oct 2025 08:15	JC/MD	Ok
2	VSTDCCC050	VX048227.D	20 Oct 2025 10:13	JC/MD	Ok
3	IBLK	VX048228.D	20 Oct 2025 10:38	JC/MD	Not Ok
4	VSTDICC001	VX048229.D	20 Oct 2025 10:59	JC/MD	Ok,M
5	VSTDICC005	VX048230.D	20 Oct 2025 11:20	JC/MD	Not Ok
6	VSTDICC020	VX048231.D	20 Oct 2025 11:40	JC/MD	Ok,M
7	VSTDICCC050	VX048232.D	20 Oct 2025 12:01	JC/MD	Ok,M
8	VSTDICC100	VX048233.D	20 Oct 2025 12:22	JC/MD	Ok,M
9	VSTDICC150	VX048234.D	20 Oct 2025 12:43	JC/MD	Ok,M
10	IBLK	VX048235.D	20 Oct 2025 13:04	JC/MD	Ok
11	VSTDICC005	VX048236.D	20 Oct 2025 13:49	JC/MD	Ok,M
12	VSTDICV050	VX048237.D	20 Oct 2025 14:28	JC/MD	Ok,M
13	VX1020MBL01	VX048238.D	20 Oct 2025 14:56	JC/MD	Ok
14	VX1020WBL01	VX048239.D	20 Oct 2025 15:23	JC/MD	Ok
15	VX1020WBS01	VX048240.D	20 Oct 2025 15:50	JC/MD	Ok,M
16	Q3371-03	VX048241.D	20 Oct 2025 16:18	JC/MD	ReRun
17	Q3371-06	VX048242.D	20 Oct 2025 16:38	JC/MD	ReRun
18	Q3371-01	VX048243.D	20 Oct 2025 16:59	JC/MD	ReRun
19	Q3371-02	VX048244.D	20 Oct 2025 17:20	JC/MD	ReRun
20	Q3371-04	VX048245.D	20 Oct 2025 17:41	JC/MD	Ok
21	Q3371-05	VX048246.D	20 Oct 2025 18:02	JC/MD	Ok

Instrument ID: **MSVOA_X**

Daily Analysis Runlog For Sequence/QC Batch ID # VX102025

Review By	John Carlone	Review On	10/21/2025 8:15:04 AM
Supervise By	Semsettin Yesilyurt	Supervise On	10/21/2025 10:44:02 AM
SubDirectory	VX102025	HP Acquire Method	HP Processing Method 82X102025W.M
STD. NAME	STD REF.#		
Tune/Reschk	VP135849		
Initial Calibration Stds	VP135851,VP135852,VP135853,VP135854,VP135855,VP135856		
CCC	VP135850		
Internal Standard/PEM			
ICV/I.BLK			
Surrogate Standard			
MS/MSD Standard			
LCS Standard			

22	VX1020WBSD01	VX048247.D	20 Oct 2025 18:22	JC/MD	Ok,M
23	VX1020MBS01	VX048248.D	20 Oct 2025 18:43	JC/MD	Ok,M
24	Q3390-01	VX048249.D	20 Oct 2025 19:04	JC/MD	Ok
25	VSTDCCC050	VX048250.D	20 Oct 2025 19:25	JC/MD	Ok,M

M : Manual Integration

Instrument ID: **MSVOA_X**

Daily Analysis Runlog For Sequence/QC Batch ID # VX102125

Review By	John Carlone	Review On	10/23/2025 1:52:10 PM
Supervise By	Maresh Dadoda	Supervise On	10/24/2025 2:32:28 PM
SubDirectory	VX102125	HP Acquire Method	HP Processing Method 82X102025W.M
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	VP135868		
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	VP135869,VP135870		

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB	VX048251.D	21 Oct 2025 08:12	JC/MD	Ok
2	VSTDCCC050	VX048252.D	21 Oct 2025 08:43	JC/MD	Ok,M
3	VX1021MBL01	VX048253.D	21 Oct 2025 09:12	JC/MD	Ok
4	VX1021WBL01	VX048254.D	21 Oct 2025 09:40	JC/MD	Ok
5	VX1021WBS01	VX048255.D	21 Oct 2025 10:06	JC/MD	Ok,M
6	VX1021WBSD01	VX048256.D	21 Oct 2025 10:33	JC/MD	Ok,M
7	Q3371-03	VX048257.D	21 Oct 2025 10:54	JC/MD	Ok
8	Q3371-01	VX048258.D	21 Oct 2025 11:15	JC/MD	Ok
9	Q3371-02	VX048259.D	21 Oct 2025 11:35	JC/MD	Ok
10	Q3371-06	VX048260.D	21 Oct 2025 11:56	JC/MD	Ok
11	Q3413-02	VX048261.D	21 Oct 2025 12:17	JC/MD	Ok
12	PB170148TB	VX048262.D	21 Oct 2025 12:37	JC/MD	Ok
13	Q3369-04	VX048263.D	21 Oct 2025 12:58	JC/MD	Ok
14	Q3369-08	VX048264.D	21 Oct 2025 13:19	JC/MD	Ok
15	Q3374-04	VX048265.D	21 Oct 2025 13:40	JC/MD	Ok,M
16	Q3374-08	VX048266.D	21 Oct 2025 14:00	JC/MD	Ok
17	Q3381-02	VX048267.D	21 Oct 2025 14:21	JC/MD	Ok
18	Q3381-04	VX048268.D	21 Oct 2025 14:42	JC/MD	Ok
19	Q3381-06	VX048269.D	21 Oct 2025 15:02	JC/MD	Ok
20	Q3381-08	VX048270.D	21 Oct 2025 15:23	JC/MD	Ok
21	Q3392-04	VX048271.D	21 Oct 2025 15:44	JC/MD	Ok

Instrument ID: **MSVOA_X**

Daily Analysis Runlog For Sequence/QC Batch ID # VX102125

Review By	John Carlone	Review On	10/23/2025 1:52:10 PM
Supervise By	Mahesh Dadoda	Supervise On	10/24/2025 2:32:28 PM
SubDirectory	VX102125	HP Acquire Method	HP Processing Method 82X102025W.M
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	VP135868		
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	VP135869,VP135870		

22	Q3392-08	VX048272.D	21 Oct 2025 16:04	JC/MD	Ok
23	IBLK	VX048273.D	21 Oct 2025 16:25	JC/MD	Ok
24	Q3400-01	VX048274.D	21 Oct 2025 16:46	JC/MD	Ok
25	Q3361-01DL	VX048275.D	21 Oct 2025 17:07	JC/MD	Ok
26	IBLK	VX048276.D	21 Oct 2025 17:27	JC/MD	Ok
27	Q3376-07	VX048277.D	21 Oct 2025 17:48	JC/MD	Ok
28	VSTDCCC050	VX048278.D	21 Oct 2025 18:09	JC/MD	Ok,M

M : Manual Integration

Instrument ID: MSVOA_X

Daily Analysis Runlog For Sequence/QC Batch ID # VX102025

Review By	John Carlone	Review On	10/21/2025 8:15:04 AM
Supervise By	Semsettin Yesilyurt	Supervise On	10/21/2025 10:44:02 AM
SubDirectory	VX102025	HP Acquire Method	HP Processing Method 82X102025W.M

STD. NAME	STD REF.#
Tune/Reschk Initial Calibration Stds	VP135849 VP135851,VP135852,VP135853,VP135854,VP135855,VP135856
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	VP135850

Sr#	SampleID	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	BFB	BFB	VX048226.D	20 Oct 2025 08:15		JC/MD	Ok
2	VSTDCCC050	VSTDCCC050	VX048227.D	20 Oct 2025 10:13		JC/MD	Ok
3	IBLK	IBLK	VX048228.D	20 Oct 2025 10:38		JC/MD	Not Ok
4	VSTDICC001	VSTDICC001	VX048229.D	20 Oct 2025 10:59	LR-58,94	JC/MD	Ok,M
5	VSTDICC005	VSTDICC005	VX048230.D	20 Oct 2025 11:20		JC/MD	Not Ok
6	VSTDICC020	VSTDICC020	VX048231.D	20 Oct 2025 11:40		JC/MD	Ok,M
7	VSTDICCC050	VSTDICCC050	VX048232.D	20 Oct 2025 12:01		JC/MD	Ok,M
8	VSTDICC100	VSTDICC100	VX048233.D	20 Oct 2025 12:22		JC/MD	Ok,M
9	VSTDICC150	VSTDICC150	VX048234.D	20 Oct 2025 12:43		JC/MD	Ok,M
10	IBLK	IBLK	VX048235.D	20 Oct 2025 13:04		JC/MD	Ok
11	VSTDICC005	VSTDICC005	VX048236.D	20 Oct 2025 13:49		JC/MD	Ok,M
12	VSTDICV050	ICVVX102025	VX048237.D	20 Oct 2025 14:28	pH#Lot#V12668	JC/MD	Ok,M
13	VX1020MBL01	VX1020MBL01	VX048238.D	20 Oct 2025 14:56		JC/MD	Ok
14	VX1020WBL01	VX1020WBL01	VX048239.D	20 Oct 2025 15:23		JC/MD	Ok
15	VX1020WBS01	VX1020WBS01	VX048240.D	20 Oct 2025 15:50		JC/MD	Ok,M
16	Q3371-03	VPB184-HYD-2025101	VX048241.D	20 Oct 2025 16:18	vial A pH<2 Surrogate Fail	JC/MD	ReRun
17	Q3371-06	VPB184-HYD-2025101	VX048242.D	20 Oct 2025 16:38	vial A pH<2 Surrogate Fail	JC/MD	ReRun
18	Q3371-01	BP-VPB-184-TB-20251	VX048243.D	20 Oct 2025 16:59	vial A pH<2 TB; Surrogate Fail	JC/MD	ReRun

Instrument ID: MSVOA_X

Daily Analysis Runlog For Sequence/QC Batch ID # VX102025

Review By	John Carlone	Review On	10/21/2025 8:15:04 AM
Supervise By	Semsettin Yesilyurt	Supervise On	10/21/2025 10:44:02 AM
SubDirectory	VX102025	HP Acquire Method	HP Processing Method 82X102025W.M
STD. NAME	STD REF.#		
Tune/Reschk	VP135849		
Initial Calibration Stds	VP135851,VP135852,VP135853,VP135854,VP135855,VP135856		
CCC	VP135850		
Internal Standard/PEM			
ICV/I.BLK			
Surrogate Standard			
MS/MSD Standard			
LCS Standard			

19	Q3371-02	BP-VPB-184-EB-20251	VX048244.D	20 Oct 2025 17:20	vial A pH<2 EB; Surrogate Fail; Hit of com.#16	JC/MD	ReRun
20	Q3371-04	BP-VPB-184-GW-915-9	VX048245.D	20 Oct 2025 17:41	vial A pH<2	JC/MD	Ok
21	Q3371-05	BP-VPB-184-GW-920-9	VX048246.D	20 Oct 2025 18:02	vial A pH<2	JC/MD	Ok
22	VX1020WBSD01	VX1020WBSD01	VX048247.D	20 Oct 2025 18:22		JC/MD	Ok,M
23	VX1020MBS01	VX1020MBS01	VX048248.D	20 Oct 2025 18:43		JC/MD	Ok,M
24	Q3390-01	4174	VX048249.D	20 Oct 2025 19:04	cloth material	JC/MD	Ok
25	VSTDCCC050	VSTDCCC050EC	VX048250.D	20 Oct 2025 19:25		JC/MD	Ok,M

M : Manual Integration

Instrument ID: MSVOA_X

Daily Analysis Runlog For Sequence/QC Batch ID # VX102125

Review By	John Carlone	Review On	10/23/2025 1:52:10 PM
Supervise By	Maresh Dadoda	Supervise On	10/24/2025 2:32:28 PM
SubDirectory	VX102125	HP Acquire Method	HP Processing Method 82X102025W.M

STD. NAME	STD REF.#
Tune/Reschk Initial Calibration Stds	VP135868
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	VP135869,VP135870

Sr#	SampleID	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	BFB	BFB	VX048251.D	21 Oct 2025 08:12		JC/MD	Ok
2	VSTDCCC050	VSTDCCC050	VX048252.D	21 Oct 2025 08:43	pH#Lot#V12668	JC/MD	Ok,M
3	VX1021MBL01	VX1021MBL01	VX048253.D	21 Oct 2025 09:12		JC/MD	Ok
4	VX1021WBL01	VX1021WBL01	VX048254.D	21 Oct 2025 09:40		JC/MD	Ok
5	VX1021WBS01	VX1021WBS01	VX048255.D	21 Oct 2025 10:06		JC/MD	Ok,M
6	VX1021WBSD01	VX1021WBSD01	VX048256.D	21 Oct 2025 10:33		JC/MD	Ok,M
7	Q3371-03	VPB184-HYD-2025101	VX048257.D	21 Oct 2025 10:54	vial B pH<2	JC/MD	Ok
8	Q3371-01	BP-VPB-184-TB-20251	VX048258.D	21 Oct 2025 11:15	vial B pH<2 TB	JC/MD	Ok
9	Q3371-02	BP-VPB-184-EB-20251	VX048259.D	21 Oct 2025 11:35	vial B pH<2 EB	JC/MD	Ok
10	Q3371-06	VPB184-HYD-2025101	VX048260.D	21 Oct 2025 11:56	vial B pH<2	JC/MD	Ok
11	Q3413-02	BP-VPB-184-TB-20251	VX048261.D	21 Oct 2025 12:17	vial A pH<2 TB	JC/MD	Ok
12	PB170148TB	PB170148TB	VX048262.D	21 Oct 2025 12:37		JC/MD	Ok
13	Q3369-04	MH-22	VX048263.D	21 Oct 2025 12:58	vial A pH#5.0	JC/MD	Ok
14	Q3369-08	MH-21	VX048264.D	21 Oct 2025 13:19	vial A pH#5.0	JC/MD	Ok
15	Q3374-04	TP-4-WC	VX048265.D	21 Oct 2025 13:40	vial A pH#5.0	JC/MD	Ok,M
16	Q3374-08	TP-5-WC	VX048266.D	21 Oct 2025 14:00	vial A pH#5.0	JC/MD	Ok
17	Q3381-02	VNJ-222	VX048267.D	21 Oct 2025 14:21	vial A pH#5.0	JC/MD	Ok
18	Q3381-04	VNJ-245	VX048268.D	21 Oct 2025 14:42	vial A pH#5.0	JC/MD	Ok

Instrument ID: MSVOA_X

Daily Analysis Runlog For Sequence/QC Batch ID # VX102125

Review By	John Carlone	Review On	10/23/2025 1:52:10 PM
Supervise By	Maresh Dadoda	Supervise On	10/24/2025 2:32:28 PM
SubDirectory	VX102125	HP Acquire Method	HP Processing Method 82X102025W.M
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	VP135868		
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	VP135869,VP135870		

19	Q3381-06	RBR200059	VX048269.D	21 Oct 2025 15:02	vial A pH#5.0	JC/MD	Ok
20	Q3381-08	VNJ-255	VX048270.D	21 Oct 2025 15:23	vial A pH#5.0	JC/MD	Ok
21	Q3392-04	MH-20	VX048271.D	21 Oct 2025 15:44	vial A pH#5.0	JC/MD	Ok
22	Q3392-08	MH-19	VX048272.D	21 Oct 2025 16:04	vial A pH#5.0	JC/MD	Ok
23	IBLK	IBLK	VX048273.D	21 Oct 2025 16:25		JC/MD	Ok
24	Q3400-01	FRAC-TANK-0760450	VX048274.D	21 Oct 2025 16:46	vial A+B pH<2	JC/MD	Ok
25	Q3361-01DL	VOA 251015111-01DL	VX048275.D	21 Oct 2025 17:07	vial B pH#6.0	JC/MD	Ok
26	IBLK	IBLK	VX048276.D	21 Oct 2025 17:27		JC/MD	Ok
27	Q3376-07	PR132-FB01-20251016	VX048277.D	21 Oct 2025 17:48	vial A pH<2	JC/MD	Ok
28	VSTDCCC050	VSTDCCC050EC	VX048278.D	21 Oct 2025 18:09		JC/MD	Ok,M

M : Manual Integration

Prep Standard - Chemical Standard Summary

Order ID : Q3400

Test : VOC-TCLVOA-10

Prepbatch ID :

Sequence ID/Qc Batch ID: Vx102125,

Standard ID :

VP134142,VP134149,VP134933,VP134956,VP134957,VP135552,VP135834,VP135868,VP135869,VP135870,

Chemical ID :

V13391,V14200,V14204,V14205,V14290,V14509,V14510,V14531,V14532,V14625,V14626,V14636,V14637,V14638,V14639,V14668,V14671,V14673,V14675,V14727,V14728,V14803,V14815,V14844,V14906,V14928,V14929,V14951,V14952,V15073,V15074,V15075,W3112,



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
719	8260 Working STD (BCM)-First source, 400PPM	VP134142	06/06/2025	12/06/2025	Semsettin Yesilyurt	None	None	Mahesh Dadoda 06/10/2025
<u>FROM</u> 1.00000ml of V14668 + 1.00000ml of V14671 + 1.00000ml of V14673 + 1.00000ml of V14675 + 16.00000ml of V14929 = Final Quantity: 20.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1810	8260 Working Std(2-CVE)-800ppm	VP134149	06/06/2025	12/06/2025	Semsettin Yesilyurt	None	None	Mahesh Dadoda 06/10/2025
<u>FROM</u> 1.00000ml of V14636 + 1.00000ml of V14637 + 1.00000ml of V14638 + 1.00000ml of V14639 + 46.00000ml of V14929 = Final Quantity: 50.000 ml								

VOC STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
617	8260 Surrogate, 400PPM	VP134933	07/29/2025	01/29/2026	Semsettin Yesilyurt	None	None	Maresh Dadoda
								08/19/2025

FROM 0.40000ml of V14906 + 24.60000ml of V14625 = Final Quantity: 25.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
247	8260 Internal Standard, 250PPM	VP134956	08/01/2025	11/09/2025	Semsettin Yesilyurt	None	None	Maresh Dadoda
								08/06/2025

FROM 0.25000ml of V14290 + 24.75000ml of V14626 = Final Quantity: 25.000 ml

VOC STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
218	BFB, 25PPM	VP134957	08/01/2025	11/22/2025	Semsettin Yesilyurt	None	None	Maresh Dadoda
								08/06/2025

FROM 0.50000ml of V13391 + 49.50000ml of V14625 = Final Quantity: 50.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
257	8260 Calibration Working STD Mix-First source, 160PPM	VP135552	09/22/2025	11/03/2025	Semsettin Yesilyurt	None	None	Maresh Dadoda
								09/26/2025

FROM 0.40000ml of V14844 + 1.00000ml of V14200 + 1.00000ml of V14509 + 1.00000ml of V14510 + 1.00000ml of V14531 + 1.00000ml of V14532 + 1.00000ml of V14727 + 1.00000ml of V14728 + 1.00000ml of V14803 + 1.00000ml of V14815 + 1.00000ml of V14951 + 1.00000ml of V14952 + 1.50000ml of V14204 + 1.50000ml of V14205 + 10.60000ml of V14928 = Final Quantity: 25.000 ml

VOC STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
51	8260 Working STD (Acrolein) -first source, 800PPM	VP135834	10/17/2025	11/16/2025	Semsettin Yesilyurt	None	None	Maresh Dadoda
								10/17/2025

FROM 1.00000ml of V15073 + 1.50000ml of V15074 + 1.50000ml of V15075 + 21.00000ml of V14928 = Final Quantity: 25.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
589	BFB TUNE CHECK	VP135868	10/21/2025	10/22/2025	John Carlone	None	None	Maresh Dadoda
								10/21/2025

FROM 39.98400ml of W3112 + 0.01600ml of VP134957 = Final Quantity: 40.000 ml

VOC STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
620	50 PPB CCC, 8260-Water	VP135869	10/21/2025	10/22/2025	John Carlone	None	None	Mahesh Dadoda 10/21/2025
<u>FROM</u>	39.94450ml of W3112 + 0.00500ml of VP134142 + 0.00500ml of VP134933 + 0.00800ml of VP134956 + 0.01250ml of VP134149 + 0.01250ml of VP135552 + 0.01250ml of VP135834 = Final Quantity: 40.000 ml							

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
620	50 PPB CCC, 8260-Water	VP135870	10/21/2025	10/22/2025	John Carlone	None	None	Mahesh Dadoda 10/21/2025
<u>FROM</u>	39.94450ml of W3112 + 0.00500ml of VP134142 + 0.00500ml of VP134933 + 0.00800ml of VP134956 + 0.01250ml of VP134149 + 0.01250ml of VP135552 + 0.01250ml of VP135834 = Final Quantity: 40.000 ml							

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	30006 / VOA Mix, CLP method Calibration Std #1 ketones 5000uq/ml, PTM, 1ml	A0200785	03/22/2026	09/22/2025 / sam	02/28/2024 / SAM	V14200

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	A0200785	03/22/2026	09/22/2025 / sam	02/28/2024 / SAM	V14204

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	A0200785	03/22/2026	09/22/2025 / sam	02/28/2024 / SAM	V14205

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	12/12/2025	12/12/2024 / SAM	04/15/2024 / SAM	V14290

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	03/22/2026	09/22/2025 / sam	09/17/2024 / SAM	V14509

CHEMICAL RECEIPT LOG BOOK

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	03/22/2026	09/22/2025 / sam	09/17/2024 / SAM	V14510

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	03/22/2026	09/22/2025 / sam	09/18/2024 / SAM	V14531

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	03/22/2026	09/22/2025 / sam	09/18/2024 / SAM	V14532

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)	2310762004	01/29/2026	07/29/2025 / SAM	11/26/2024 / SAM	V14625

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)	2310762004	11/09/2025	05/09/2025 / SAM	11/26/2024 / SAM	V14626

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	/ 2-Chloroethyl vinyl ether	120524	12/06/2025	06/06/2025 / SAM	12/06/2024 / SAM	V14636

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	12/06/2025	06/06/2025 / SAM	12/06/2024 / SAM	V14637

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	/ 2-Chloroethyl vinyl ether	120524	12/06/2025	06/06/2025 / SAM	12/06/2024 / SAM	V14638

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	/ 2-Chloroethyl vinyl ether	120524	12/06/2025	06/06/2025 / SAM	12/06/2024 / SAM	V14639

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	A0214960	12/06/2025	06/06/2025 / SAM	12/09/2024 / SAM	V14668

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	A0214960	12/06/2025	06/06/2025 / SAM	12/09/2024 / SAM	V14671

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	A0214960	12/06/2025	06/06/2025 / SAM	12/09/2024 / SAM	V14673

CHEMICAL RECEIPT LOG BOOK

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	A0214960	12/06/2025	06/06/2025 / SAM	12/09/2024 / SAM	V14675

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	03/22/2026	09/22/2025 / sam	12/17/2024 / SAM	V14727

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	03/22/2026	09/22/2025 / sam	12/17/2024 / SAM	V14728

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	A0220471	03/22/2026	09/22/2025 / sam	01/08/2025 / SAM	V14803

LOTS

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	A0220471	03/22/2026	09/22/2025 / sam	01/08/2025 / SAM	V14815

LOTS

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	03/22/2026	09/22/2025 / sam	01/21/2025 / SAM	V14844

CHEMICAL RECEIPT LOG BOOK

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]	A0223904	07/29/2026	07/29/2025 / SAM	03/24/2025 / SAM	V14906

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)	24G0262002	03/22/2026	09/22/2025 / sam	05/09/2025 / SAM	V14928

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)	24G0262002	12/06/2025	06/06/2025 / SAM	05/09/2025 / SAM	V14929

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	A0222076	03/22/2026	09/22/2025 / sam	05/19/2025 / SAM	V14951

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	A0222076	03/22/2026	09/22/2025 / sam	05/19/2025 / SAM	V14952

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	91980 / Acrolin Std (Min = 5)	101625	11/16/2025	10/17/2025 / sam	10/17/2025 / sam	V15073

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)	101625	11/16/2025	10/17/2025 / sam	10/17/2025 / sam	V15074

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	91980 / Acrolin Std (Min = 5)	101625	11/16/2025	10/17/2025 / sam	10/17/2025 / sam	V15075

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 / lwona	07/03/2024 / lwona	W3112

Methanol
ULTRA RESI-ANALYZED
For Purge and Trap Analysis



Material No.: 9077-02
Batch No.: 23I0762004
Manufactured Date: 2023-08-11
Expiration Date: 2026-08-10
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (CH ₃ OH) (by GC, corrected for water)	≥ 99.9 %	100.0 %
Residue after Evaporation	≤ 1.0 ppm	0.5 ppm
Titration Acid (μeq/g)	≤ 0.3	0.2
Titration 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



Material No.: 9077-02
Batch No.: 23I0762004
Manufactured Date: 2023-08-11
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Certificate of Analysis

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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



Ree 03117/24

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#: BUTB

Solvent(s): Lot#
Methanol EG359-USQ12Weight(s) shown below were combined and diluted to (mL): 100.0 0.021 Balance Uncertainty
Flask Uncertainty

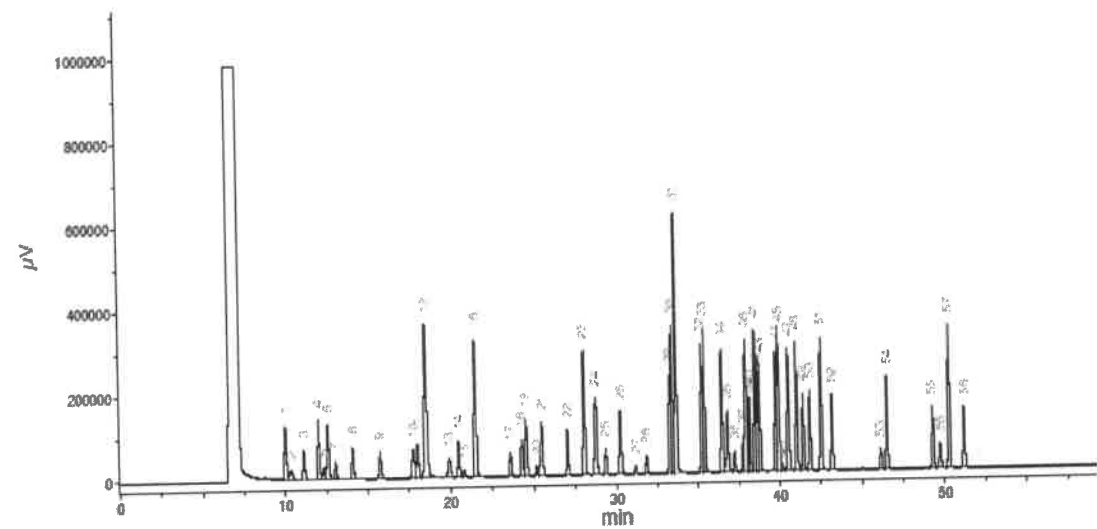
Formulated By:	Prashant Chauhan	021624
Reviewed By:	Pedro L. Renteria	021624
DATE		

Compound	(KME)	Lot	DIL	Initial Vol. (mL)	Initial Conc. (µg/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.)		
														CASE	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)	or-rat 2450mg/kg
2. Allyl chloride (3-Chloropropene)	(0325)	102366	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20221	2001.4	8.2	107-05-1	1 ppm (3mg/m3/8H)	or-rat 700mg/kg
3. Carbon disulfide	(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)	or-rat 1200mg/kg
4. cis-1,4-Dichloro-2-butene	(1196)	14718EF	NA	NA	NA	2000	95	0.2	NA	0.21056	0.21069	2001.1	8.5	1478-11-5	N/A	N/A
5. trans-1,4-Dichloro-2-butene	(0486)	MKBP9041V	NA	NA	NA	2000	96.5	0.2	NA	0.20731	0.20746	2001.7	8.4	110-57-6	N/A	N/A
6. Diethyl ether	(0153)	IK18CAS000C	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	(0381)	06128PX	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20230	2002.3	8.2	97-63-2	N/A	or-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)	or-rat 75mg/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)	or-rat 2460mg/kg
10. Methacrylonitrile	(0442)	00427ET	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20221	2001.4	8.2	128-98-7	1 ppm (3mg/m3/8H)(skin)	or-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)	or-rat 277mg/kg
12. Methyl methacrylate	(0404)	MKGW6137V	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)	or-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)	or-rat 780mg/kg
14. 2-Nitropropane	(0461)	14002JK	NA	NA	NA	2000	97.3	0.2	NA	0.20560	0.20577	2001.6	8.3	78-46-9	10 ppm (35mg/m3/8H)	or-rat 720mg/kg
15. Perchloroethane	(0460)	HGA01	NA	NA	NA	2000	98	0.2	NA	0.20413	0.20430	2001.6	8.3	78-01-7	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)	or-rat 435g/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	or-rat 915mg/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	or-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	or-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	or-rat 820mg/kg
22. 1,1-Dichloroethane	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)	or-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)	or-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)	or-rat 2350mg/kg
25. Chloroform	95321	020724	0.10	10.00	20004.0	2000	NA	NA	0.042	NA	NA	1999.8	20.5	67-68-3	60 ppm (240mg/m3) (CL)	or-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	or-rat 106mg/kg
27. 1,1-Dichloroethane	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
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. Trichloroethene	95321	020724	0.10	10.00	20201.1	2000	NA	NA	0.042	NA	NA	2019.8	20.8	127-18-4	25 ppm (170mg/m3/8H)(final)	or-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)	or-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	or-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)	or-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)	or-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)	or-rat 1847mg/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	or-rat 3600mg/kg
36. 1,1-Dichloropropene	35161	112322	0.05	5.00	40012.1	2000	NA	NA	0.017	NA	NA	2000.1	28.7	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	40017.6	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)	or-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	830-20-6	N/A	or-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)	or-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 (45mg/m3/8H)(skin)	or-rat 936mg/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)	or-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)	or-rat 149.8mg/kg
45. Benzene	35162	050823	0.05	5.00	40006.0	2000	NA	NA	0.017	NA	NA	1999.7	22.9	71-43-2	1 ppm	or-rat 4894mg/kg
46. Bromobenzene	35162	050823	0.05	5.00	40003.8	2000	NA	NA	0.017	NA	NA	1999.8	22.9	108-88-1	N/A	or-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)	or-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	or-rat 4750mg/kg
50. Naphthalene	35162	050823	0.05	5.00	40005.2	2000	NA	NA	0.017	NA	NA	1999.8	22.9	91-20-3	10 ppm (50mg/m3/8H)	or-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	or-rat 5000mg/kg
52. Toluene	35162	050823	0.05	5.00	40008.2	2000	NA	NA	0.017	NA	NA	1999.8	22.9	108-88-3	200 ppm	or-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	87-81-6	N/A	or-rat 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)	or-rat 756mg/kg
55. 1,2,4-Trimethylbenzene	35162	050823	0.05	5.00	40001.8	2000	NA	NA	0.017	NA	NA	1999.6	23.0	95-63-6	N/A	or-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	108-87-8	N/A	or-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)	or-rat 5g/kg
58. tert-Butyl benzene	35163	101923	0.05	5.00	40001.2	2000	NA	NA	0.017	NA	NA	1999.8	22.9	96-06-6	N/A	N/A
59. sec-Butyl benzene	35163	101923	0.05	5.00	40002.4	2000	NA	NA	0.017	NA	NA	1999.8	22.9	135-98-8	N/A	or-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)	or-rat 2290mg/kg
61. 2-Chlorotoluene	35163	101923	0.05	5.00	40003.3	2000	NA	NA	0.017	NA	NA	1999.5	22.9	95-49-8	50 ppm (250mg/m3/8H)	or-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	or-rat 2100mg/kg
63. 1,2-Dichlorobenzene	35163	101923	0.05	5.00	40003.3	2000	NA	NA	0.017	NA	NA	1999.6	23.0	95-50-1	50 ppm (300mg/m3) (CL)	or-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	or-mus 1063mg/kg
65. 1,4-Dichlorobenzene	35163	101923	0.05	5.00	40001.8	2										

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., Hydrogen(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	10.53
3	1,1-Dichloroethane	11.10
4	Acetonitrile	12.60
5	Iodomethane	12.91
6	Allyl chloride	13.56
7	Carbon disulfide/Methylene chloride	13.94
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	Methoxyvinylbenzene/Methyl acrylate/Chloroform	18.49
13	Isobutene/1,1,1-Trichloroethane	18.91
14	1,1-Dichloropropane	20.46
15	Carbon tetrachloride	20.79
16	Benzene/1,2-Dichloroethane	21.48
17	Trichloroethene	23.88
18	1,2-Dichloropropane	24.52
19	Methyl methacrylate	25.13
20	Bromochloropropane	25.46
21	Dibromomethane/2-Pentopropane	27.07
22	cis-1,2-Dichloroethene	28.03
23	Toluene	28.73
24	Ethyl methacrylate/Trans-1,2-Dichloropropane	29.34
25	1,1,2-Trichloroethane	30.34
26	Tetrachloroethane/1,2-Dichloropropane	31.16
27	Dibromochloromethane	31.84
28	1,2-Dibromomethane	33.06
29	Chlorobenzene	33.40
30	Ethylbenzene/1,1,1,2-Tetrachloroethane	33.85
31	m-Xylene/p-Xylene	35.33
32	o-Xylene	35.70
33	Styrene	35.70
34	Isopropylbenzene/Bromofarm	36.48
35	cis-1,4-Dichloro-3-butene	36.80
36	1,1,2-Trichloropropane	37.23
37	1,2,2-Trichloropropane	37.77
38	n-Propylbenzene	37.92
39	trans-1,4-Dichloro-3-butene	38.05
40	Bromobenzene	38.14
41	1,3,5-Trimethylbenzene	38.50
42	Chlorobenzene	38.63
43	4-Chlorobenzene	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-Isopropylbenzene	41.02
49	1,3-Trichlorobenzene	41.42
50	1,4-Dichlorobenzene	41.83
51	n-Butylbenzene	42.18
52	1,2-Dichlorobenzene	42.18
53	1,2-Dibromo-3-chloropropane	46.12
54	Nitrobenzene	46.40
55	1,2,4-Trifluorobenzene	49.28
56	Hexachlorocyclopentadiene	49.72
57	Naphthalene	50.56
58	1,2,3-Trichlorobenzene	51.16

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, 2024

Section II - Hazards Identification

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

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

Section III - Composition

Components (Specific Chemical Identity; Common Name(s))		
Methanol	METHYL ALCOHOL	CAS#: 67-56-1
		% (optional) > 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.
Storage Conditions	Use ventilation. Keep away from sources of ignition. No smoking. Prevent the build up of electrostatic charge. 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 (H ₂ O = 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)	IATA
UN number: 1230 Class: 3 Packing group: II	UN number: 1230 Class: 3 Packing group: II
Proper shipping name: Methanol	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.



Ree 03117/24

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#: BUTB

Solvent(s): Lot#
Methanol EG359-USQ12Weight(s) shown below were combined and diluted to (mL): 100.0 0.021 Balance Uncertainty
Flask Uncertainty

Formulated By:	Prashant Chauhan	021624
Reviewed By:	Pedro L. Renteria	021624
DATE		

Compound	(KMe) Part Number	Lot Number	Dir. Factor	Initial Vol. (mL)	Initial Conc. (µg/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)	or-rat 2400mg/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)	or-rat 700mg/kg
3. Carbon disulfide	(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)	or-rat 1200mg/kg
4. cis-1,4-Dichloro-2-butene	(1196)	14718EF	NA	NA	NA	2000	95	0.2	NA	0.21056	0.21069	2001.1	8.5	1478-11-6	N/A	N/A
5. trans-1,4-Dichloro-2-butene	(0486)	MKBP9041V	NA	NA	NA	2000	96.5	0.2	NA	0.20731	0.20746	2001.7	8.4	110-57-6	N/A	N/A
6. Diethyl ether	(0153)	IK18CAS000C	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	(0381)	06128PX	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20230	2002.3	8.2	97-63-2	N/A	N/A
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)	or-rat 14800mg/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)	or-rat 3460mg/kg
10. Methacrylonitrile	(0472)	00427ET	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20221	2001.4	8.2	128-98-7	1 ppm (3mg/m3/8H) (skin)	or-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)	or-rat 277mg/kg
12. Methyl methacrylate	(0404)	MKGW6137V	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)	or-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)	or-rat 780mg/kg
14. 2-Nitropropane	(0461)	HG002JK	NA	NA	NA	2000	97.3	0.2	NA	0.20560	0.20577	2001.6	8.3	78-46-9	10 ppm (35mg/m3/8H)	or-rat 720mg/kg
15. Pentachloroethane	(0460)	HGA01	NA	NA	NA	2000	98	0.2	NA	0.20413	0.20430	2001.6	8.3	78-01-7	N/A	N/A
16. 1,1,2-Trichlorotrifluoroethane	(0474)	18990	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20225	2001.8	8.2	78-13-1	1000 ppm (7600mg/m3/8H)	or-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	NA	or-rat 915mg/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	or-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	40003.1	2000	NA	NA	0.017	NA	NA	1999.6	23.0	156-60-5	N/A	or-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	or-rat 820mg/kg
22. 1,1-Dichloroethane	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)	or-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)	or-rat 930mg/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)	or-rat 2350mg/kg
25. Chloroform	95321	020724	0.10	10.00	20004.0	2000	NA	NA	0.042	NA	NA	1999.8	20.5	67-68-3	60 ppm (240mg/m3) (CL)	or-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	or-rat 106mg/kg
27. 1,1-Dichloroethane	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
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. Trichloroethene	95321	020724	0.10	10.00	20201.1	2000	NA	NA	0.042	NA	NA	2019.8	20.8	127-18-4	25 ppm (170mg/m3/8H) (final)	or-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)	or-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	or-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)	or-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)	or-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)	or-rat 1847mg/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	or-rat 3600mg/kg
36. 1,1-Dichloropropene	35161	112322	0.05	5.00	40012.1	2000	NA	NA	0.017	NA	NA	2000.1	28.7	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	40017.6	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)	or-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	830-20-6	N/A	or-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)	or-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 (45mg/m3/8H) (skin)	or-rat 936mg/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)	or-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)	or-rat 149.8mg/kg
45. Benzene	35162	050823	0.05	5.00	40007.5	2000	NA	NA	0.017	NA	NA	1999.7	22.9	71-43-2	1 ppm	or-rat 4894mg/kg
46. Bromobenzene	35162	050823	0.05	5.00	40006.0	2000	NA	NA	0.017	NA	NA	1999.7	22.9	104-51-8	N/A	N/A
47. n-Butyl benzene	35162	050823	0.05	5.00	40003.8	2000	NA	NA	0.017	NA	NA	1999.7	22.9	100-41-4	100 ppm (435mg/m3/8H)	or-rat >2000mg/kg
48. Ethyl benzene	35162	050823	0.05	5.00	40004.8	2000	NA	NA	0.017	NA	NA	1999.8	22.9	99-87-6	N/A	or-rat 4750mg/kg
49. p-Isopropyl toluene	35162	050823	0.05	5.00	40005.8	2000	NA	NA	0.017	NA	NA	1999.8	22.9	91-20-3	10 ppm (50mg/m3/8H)	or-rat 490mg/kg
50. Naphthalene	35162	050823	0.05	5.00	40004.8	2000	NA	NA	0.017	NA	NA	1999.7	22.9	100-42-5	100 ppm	or-rat 5000mg/kg
51. Styrene	35162	050823	0.05	5.00	40004.8	2000	NA	NA	0.017	NA	NA	1999.8	22.9	108-98-3	200 ppm	or-rat 5000mg/kg
52. Toluene	35162	050823	0.05	5.00	40006.2	2000	NA	NA	0.017	NA	NA	1999.7	22.9	87-81-6	N/A	or-rat 1390mg/kg
53. 1,2,3-Trichlorobenzene	35162	050823	0.05	5.00	40003.1	2000	NA	NA	0.017	NA	NA	1999.8	22.9	120-82-1	5 ppm (CL) (40mg/m3)	or-rat 756mg/kg
54. 1,2,4-Trichlorobenzene	35162	050823	0.05	5.00	40006.8	2000	NA	NA	0.017	NA	NA	1999.6	23.0	95-63-6	N/A	or-rat 5g/kg
55. 1,2,4-Trimethylbenzene	35162	050823	0.05	5.00	40001.8	2000	NA	NA	0.017	NA	NA	1999.8	22.9	108-87-8	N/A	or-rat 5000mg/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	108-38-3	100 ppm (435mg/m3/8H)	or-rat 5g/kg
57. m-Xylene	35162	050823	0.05	5.00	40005.8	2000	NA	NA	0.017	NA	NA	1999.8	22.9	96-06-6	N/A	N/A
58. tert-Butyl benzene	35163	101923	0.05	5.00	40001.2	2000	NA	NA	0.017	NA	NA	1999.8	22.9	135-98-8	N/A	or-rat 2240mg/kg
59. sec-Butyl benzene	35163	101923	0.05	5.00	40002.4	2000	NA	NA	0.017	NA	NA	1999.7	22.9	108-90-7	75 ppm (350mg/m3/8H)	or-rat 2290mg/kg
60. Chlorobenzene	35163	101923	0.05	5.00	40003.8	2000	NA	NA	0.017	NA	NA	1999.5	22.9	95-49-8	50 ppm (250mg/m3/8H)	or-rat 3900mg/kg
61. 2-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	or-rat 2100mg/kg
62. 4-Chlorotoluene	35163	101923	0.05	5.00	40003.3	2000	NA	NA	0.017	NA	NA	1999.7	22.9	95-50-1	50 ppm (300mg/m3) (CL)	or-rat 500mg/kg
63. 1,2-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	or-mus 1062mg/kg
64. 1,3-Dichlorobenzene	35163	101923	0.05	5.00	40001.7	2000	NA	NA	0.017	NA	NA	1999.6	22.9	108-46-7	75 ppm (450mg/m3/8H)	or-rat

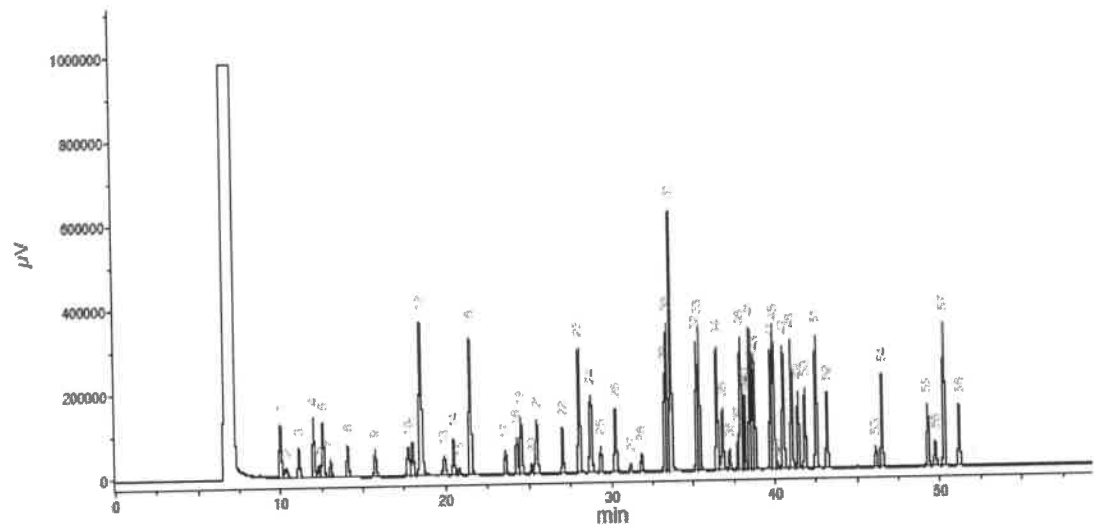


Run 16, "P95317 L021624 (2000µg/mL in MeOH)"

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., Hydrogen(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	10.53
3	1,1-Dichloroethane	11.10
4	Acetonitrile	12.60
5	Iodomethane	12.91
6	Allyl chloride	12.96
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	Methoxyvinylbenzene/Methyl acrylate/Chloroform	18.49
13	Isobutene/1,1,1-Trichloroethane	18.91
14	1,1-Dichloropropane	20.46
15	Carbon tetrachloride	20.79
16	Benzene/1,2-Dichloroethane	21.48
17	Trichloroethene	23.88
18	1,2-Dichloropropane	24.52
19	Methyl methacrylate	25.13
20	Bromochloropropane	25.46
21	Dibromomethane/2-Pentene	27.07
22	cis-1,2-Dichloroethene	28.03
23	Toluene	28.73
24	Ethyl methacrylate/trans-1,2-Dichloroethene	29.34
25	1,1,2-Trichloroethane	30.34
26	Tetrachloroethane/1,2-Dichloropropane	31.16
27	Dibromochloromethane	31.84
28	1,2-Dibromomethane	33.06
29	Chlorobenzene	33.40
30	Ethylbenzene/1,1,1,2-Tetrachloroethane	33.85
31	m-Xylene/p-Xylene	35.33
32	o-Xylene	35.70
33	Styrene	35.70
34	Isopropylbenzene/Bromofarm	36.48
35	cis-1,4-Dichloro-3-butene	36.80
36	1,1,2-Trichloropropane	37.23
37	n-Propylbenzene	37.77
38	trans-1,4-Dichloro-3-butene	37.92
39	Bromobenzene	38.05
40	1,3,5-Trimethylbenzene	38.14
41	1,3,5-Trimethylbenzene	38.50
42	Chlorobenzene	38.63
43	4-Chlorobenzene	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-Isopropylbenzene	41.02
49	1,3-Dichlorobenzene	41.42
50	1,4-Dichlorobenzene	41.83
51	n-Butylbenzene	42.52
52	1,2-Dichlorobenzene	42.58
53	1,2-Dibromo-3-chloropropane	46.12
54	Nitrobenzene	46.40
55	1,2,4-Trifluorobenzene	49.26
56	Hexachlorocyclopentadiene	49.72
57	Naphthalene	50.56
58	1,2,3-Trichlorobenzene	51.16

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, 2024

Section II - Hazards Identification

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

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

Section III - Composition

Components (Specific Chemical Identity; Common Name(s))	CAS#	% (optional)
Methanol METHYL ALCOHOL	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.
Storage Conditions	Use ventilation. Keep away from sources of ignition. No smoking. Prevent the build up of electrostatic charge. 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 (H ₂ O = 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)	IATA
UN number: 1230 Class: 3 Packing group: II	UN number: 1230 Class: 3 Packing group: II
Proper shipping name: Methanol	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 Reference Material CRM



Dec 09/17/24

CERTIFIED WEIGHT REPORT

Part Number:

91980

Lot Number:

091424

Description:

Acrolein

Solvent(s):

Water

Lot#

072324Q

Expiration Date:

101424

Recommended Storage:

Refrigerate (4 °C)

5000

Nominal Concentration (µg/mL):

6UTB

NIST Test ID#:

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	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (±) (µg/mL)	(Solvent Safety Info. On Attached pg.)	OSHA PEL (TWA)	LD50
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1. Acrolein	5	103755V10F	5000	97	0.5	0.05186	0.05175	5008.9	52.5	107-02-8	0.1 ppm	ori-rat 46mg/kg
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Method: GC/MSD-1, Detector: Mass Selective Detector (Scan mode). Columns: Vocol (60m X 0.25mm ID X 1.5µm film thickness), Oven Profile: Temp. 1 = 35°C (Time 1 = 0min.), 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 thereof, should be used immediately. Long term storage is not recommended. Please contact our technical department if further information is required.

TIC: [BSB2]79005.D

Scan 232 (8.927 min): [BSB2]79005.D

Abundance 27

250000 8.93



200000 56

150000

100000

50000

Time-->

10.00 15.00 20.00 25.00 30.00 35.00 40.00 45.00 50.00 55.00 60.00 65.00 70.00 75.00 80.00 85.00 90.00 100.00 110.00 120.00 130.00 140.00 150.00 160.00 170.00

- 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 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).



Certified Reference Material CRM



Dec 09/17/24

CERTIFIED WEIGHT REPORT

Part Number:

91980

Lot Number:

091424

Description:

Acrolein

Solvent(s):

Water

Lot#

072324Q

Expiration Date:

101424

Recommended Storage:

Refrigerate (4 °C)

Nominal Concentration (µg/mL):

5000

NIST Test ID#:

6UTB

Weight(s) shown below were combined and diluted to (mL):

10.0

5E-05 Balance Uncertainty

0.001 Flask Uncertainty

Formulated By:	Justin Dippold	DATE	091424
Reviewed By:	Pedro L. Rentas	DATE	091424

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	Solvent Safety Info. On Attached pg.)	CAS#	OSHA PEL (TWA)	LD50
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1. Acrolein	5	103755V10F	5000	97	0.5	0.05166	0.05175	5008.9	52.5	107-02-8	0.1 ppm	ori-rat 46mg/kg
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Method: GC/MSD-1, Detector: Mass Selective Detector (Scan mode). Columns: Vocol (60m X 0.25mm ID X 1.5µm film thickness), Oven Profile: Temp. 1 = 35°C (Time 1 = 0min.), 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 thereof, should be used immediately. Long term storage is not recommended. Please contact our technical department if further information is required.

TIC: [BSB2]79005.D

Scan 232 (8.927 min): [BSB2]79005.D

Abundance

27

250000

8.93

200000

50000

56

150000

40000

30000

100000

20000

50000

10000

Time-->

0

10.00 15.00 20.00 25.00 30.00 35.00 40.00 45.00 50.00 55.00 60.00

m/z-->

0

20

30

40

50

60

70

80

85

119

158

169

* 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 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).



CERTIFIED WEIGHT REPORT

Part Number:
Lot Number:
Description:

95318
120524
2-Chloroethyl vinyl ether

Solvent(s): Lot#
Methanol EJ143-US

Expiration Date:
Recommended Storage:
Nominal Concentration (µg/mL):
NIST Test ID#:

120527
Refrigerate (4 °C)
10000
6UTB

Weight(s) shown below were combined and diluted to (mL):

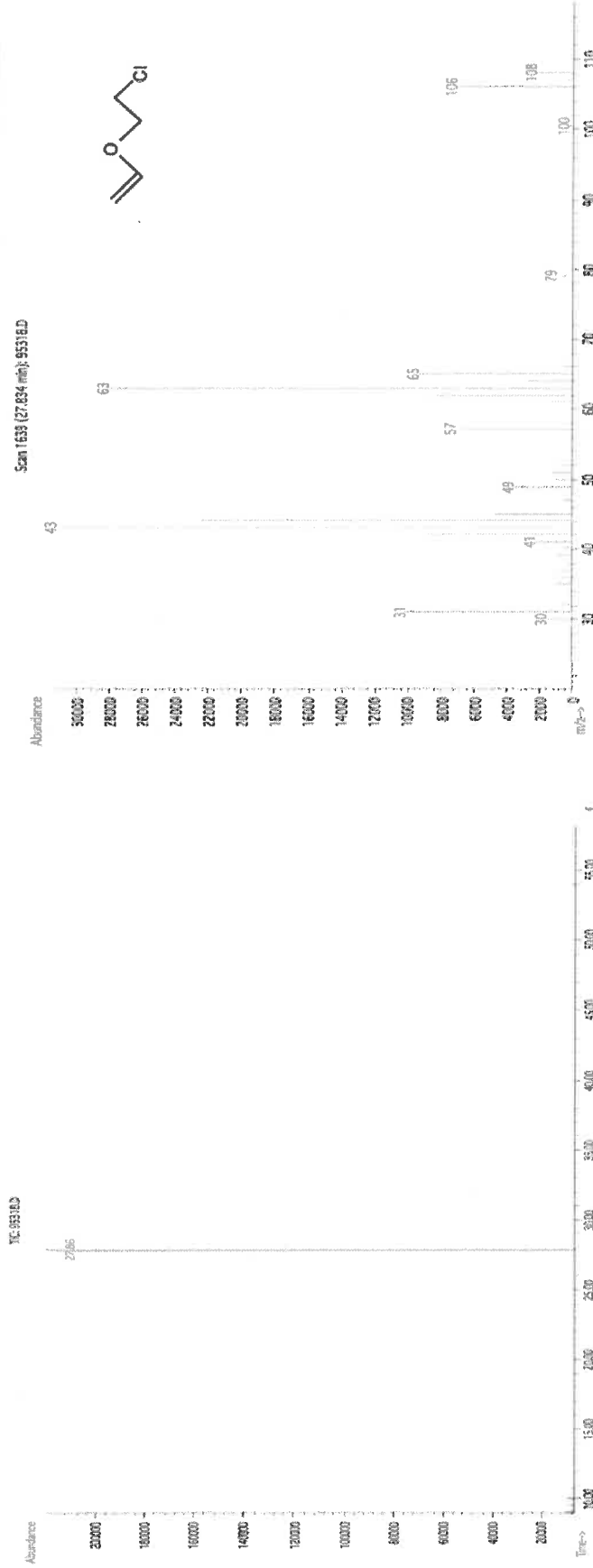
5E-05 Balance Uncertainty
0.001 Flask Uncertainty

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

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.)	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	or-rat 250mg/kg
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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 certified (+/-) 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).

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.	Emergency Telephone International	1-352-323-3500
	Hamden CT, 06514	Date Prepared/Revised	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 shield
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	> 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	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 (H ₂ O = 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)	IATA
UN number: 1230 Class: 3 Packing group: II	UN number: 1230 Class: 3 Packing group: II
Proper shipping name: Methanol	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.



Dec 12/16/24
20 vial

CERTIFIED WEIGHT REPORT

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

Solvent(s): Lot#
Methanol EJ143-US

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

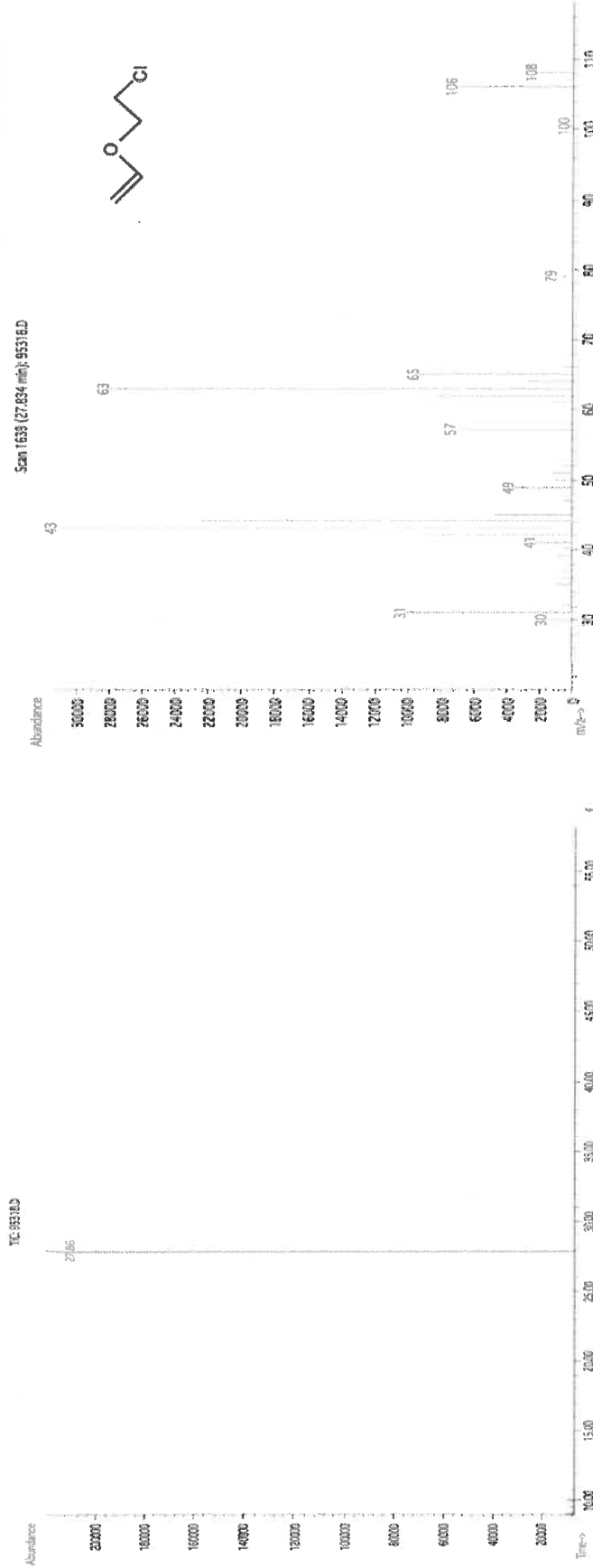
✓ 14630 to
✓ 14649

Weight(s) shown below were combined and diluted to (mL):

5E-05 Balance Uncertainty
0.001 Flask Uncertainty

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Purity Uncertainty	Target Weight (g)	Actual Weight (g)	Actual Conc (µg/mL)	Expanded Uncertainty (±) (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.)
1. 2-Chloroethyl vinyl ether	74	MKCD0033	10000	99	0.2	0.50536	0.50550	10002.9	40.5	110-75-8 N/A or-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 certified (±) 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).

GHS/OSHA Compliant

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

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 shield
P302,332	If on skin, wash with soap and water	P305,351,338	If in eyes, remove contacts, rinse with water



Signal Word: DANGER

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

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

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.

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.

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).

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.

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 (H ₂ O = 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)	IATA
UN number: 1230 Class: 3 Packing group: II	UN number: 1230 Class: 3 Packing group: II
Proper shipping name: Methanol	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.



Dec 12/6/24
20 vial

CERTIFIED WEIGHT REPORT

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

Solvent(s): Lot#
Methanol EJ143-US

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

Weight(s) shown below were combined and diluted to (mL):

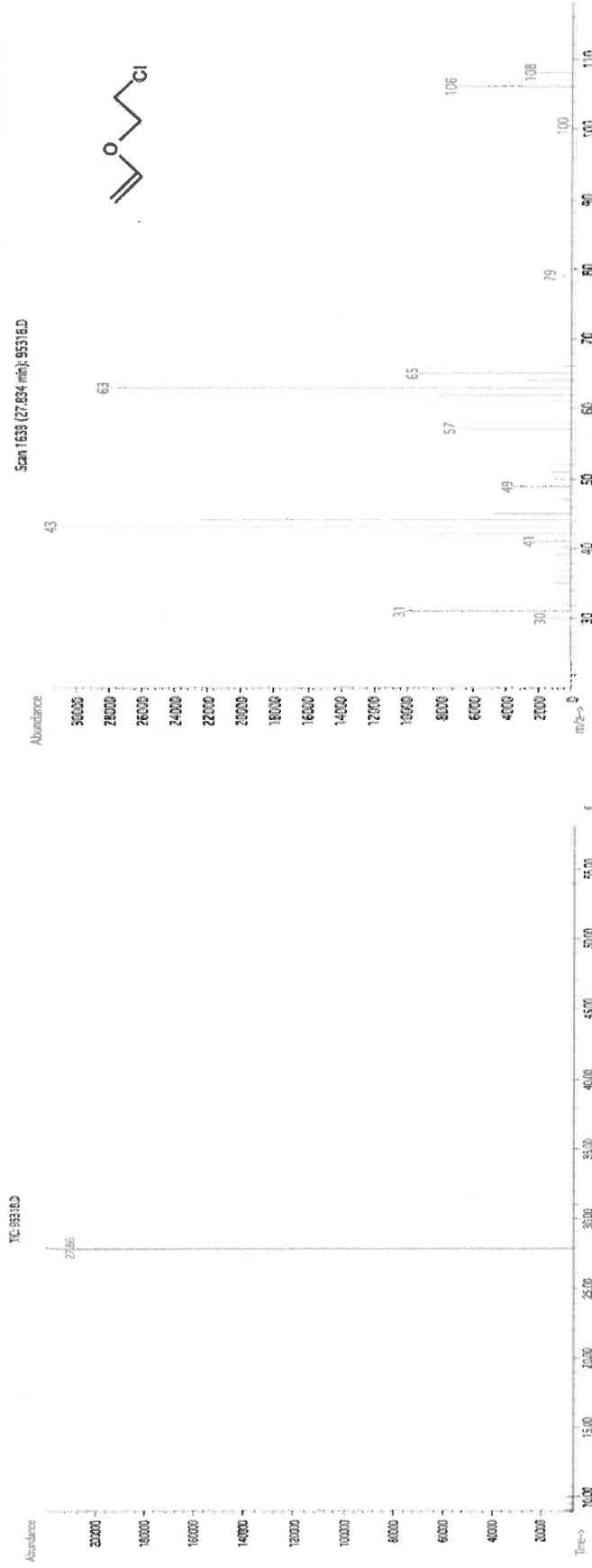
5E-05 Balance Uncertainty
0.001 Flask Uncertainty

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

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.)	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	or-rat 250mg/kg
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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 certified (+/-) 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).

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.	Emergency Telephone International	1-352-323-3500
	Hamden CT, 06514	Date Prepared/Revised	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 shield
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	> 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	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 (H ₂ O = 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)	IATA
UN number: 1230 Class: 3 Packing group: II	UN number: 1230 Class: 3 Packing group: II
Proper shipping name: Methanol	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.



Dec 12/16/24
20 vial

CERTIFIED WEIGHT REPORT

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Lot Number: 120524
Description: 2-Chloroethyl vinyl ether

Solvent(s): Lot#
Methanol EJ143-US

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

Weight(s) shown below were combined and diluted to (mL):

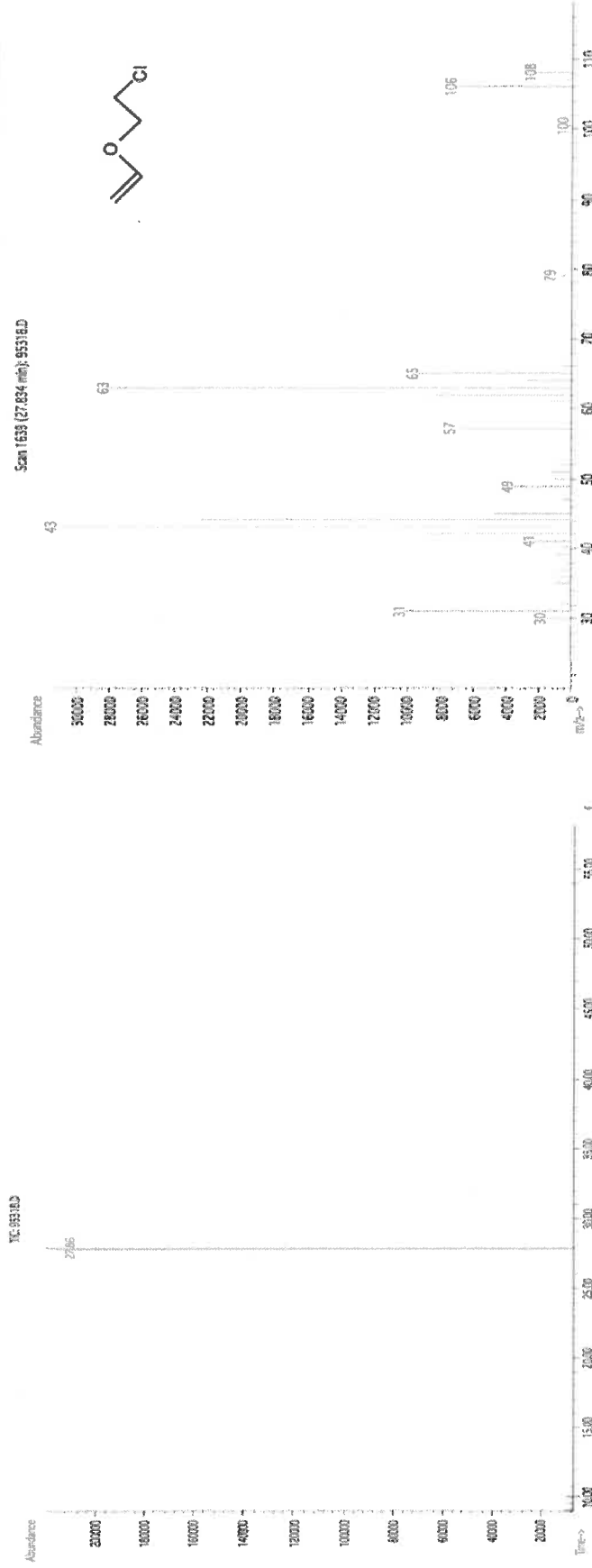
5E-05 Balance Uncertainty
0.001 Flask Uncertainty

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

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	
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1. 2-Chloroethyl vinyl ether	74	MKCD0033	10000	99	0.2	0.50536	0.50550	10002.9	40.5	110-75-8	N/A	or-rat 250mg/kg
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DOT (US)	IATA
UN number: 1230 Class: 3 Packing group: II	UN number: 1230 Class: 3 Packing group: II
Proper shipping name: Methanol	Proper shipping name: Methanol

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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



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:

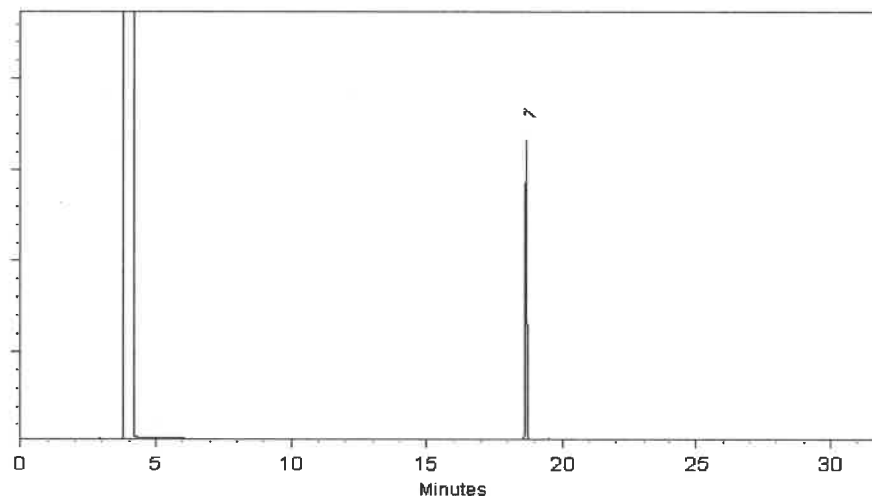
FID

Split Vent:

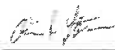
40 ml/min

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:

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

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

- 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.



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



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.:** A0200785

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 : November 30, 2026 **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	SHBP8774	99%	5,018.5 µg/mL	+/- 173.4162
2	2-Butanone (MEK)	78-93-3	SHBL5543	99%	5,016.0 µg/mL	+/- 173.3298
3	4-Methyl-2-pentanone (MIBK)	108-10-1	SHBP4724	99%	5,010.7 µg/mL	+/- 173.1455
4	2-Hexanone	591-78-6	MKCQ6663	99%	5,015.0 µg/mL	+/- 173.2952

* 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:

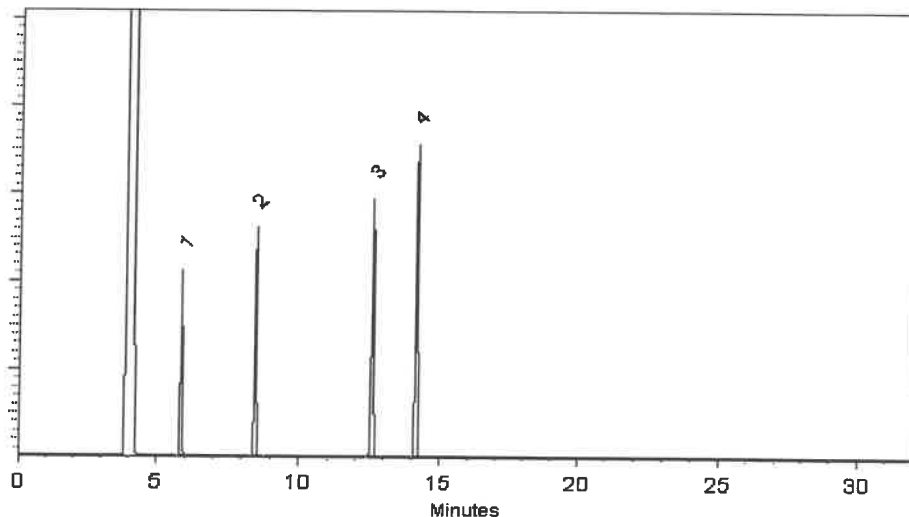
FID

Split Vent:

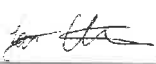
40 ml/min

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.


Laith Clemente - Operations Technician I

Date Mixed: 09-Aug-2023

Balance Serial # B707717271


Marlina Cowan - Operations Tech II ARM QC

Date Passed: 16-Aug-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:

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

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

- 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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chromatographic plus



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.:** A0200785

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 : November 30, 2026 **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	SHBP8774	99%	5,018.5 µg/mL	+/- 173.4162
2	2-Butanone (MEK)	78-93-3	SHBL5543	99%	5,016.0 µg/mL	+/- 173.3298
3	4-Methyl-2-pentanone (MIBK)	108-10-1	SHBP4724	99%	5,010.7 µg/mL	+/- 173.1455
4	2-Hexanone	591-78-6	MKCQ6663	99%	5,015.0 µg/mL	+/- 173.2952

* 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:

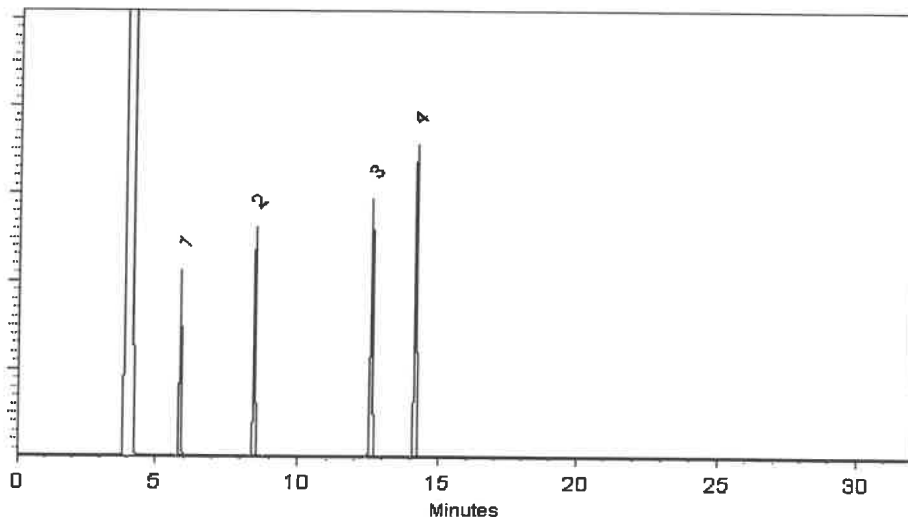
FID

Split Vent:

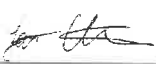
40 ml/min

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.


Laith Clemente - Operations Technician I

Date Mixed: 09-Aug-2023

Balance Serial # B707717271


Marlina Cowan - Operations Tech II ARM QC

Date Passed: 16-Aug-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:

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

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

- 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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chromatographic plus



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.:** A0200785

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 : November 30, 2026 **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	SHBP8774	99%	5,018.5 µg/mL	+/- 173.4162
2	2-Butanone (MEK)	78-93-3	SHBL5543	99%	5,016.0 µg/mL	+/- 173.3298
3	4-Methyl-2-pentanone (MIBK)	108-10-1	SHBP4724	99%	5,010.7 µg/mL	+/- 173.1455
4	2-Hexanone	591-78-6	MKCQ6663	99%	5,015.0 µg/mL	+/- 173.2952

* 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:

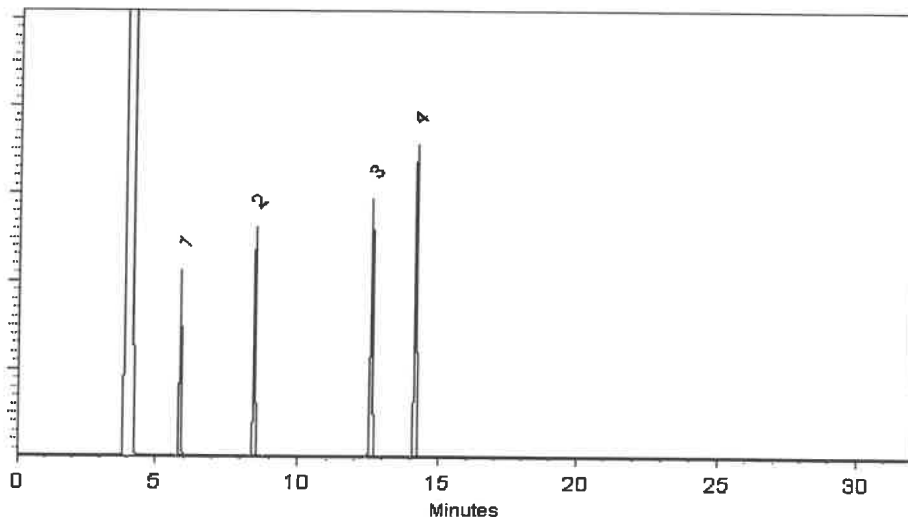
FID

Split Vent:

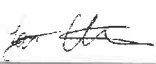
40 ml/min

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.


Laith Clemente - Operations Technician I

Date Mixed: 09-Aug-2023

Balance Serial # B707717271


Marlina Cowan - Operations Tech II ARM QC

Date Passed: 16-Aug-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:

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

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

- 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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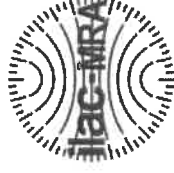
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gravimetric



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: 11275.10105



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:

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

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

- 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.:** A0214960
Description : Bromochloromethane Standard
Bromochloromethane 2000µg/mL, P&T Methanol, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : August 31, 2029 **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	SYN240416CTH	99%	2,012.0 µg/mL	+/- 113.0519

* 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:

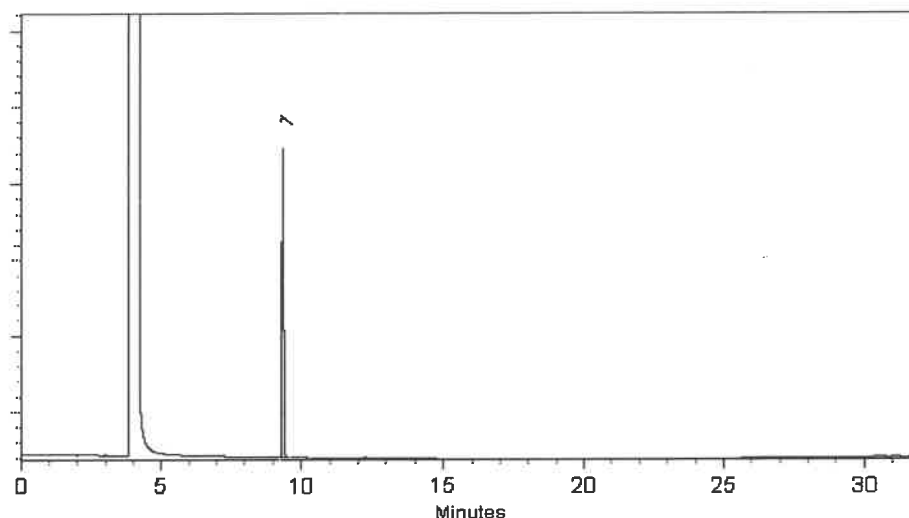
FID

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.

Stacey Wanner - Operations Technician I

Date Mixed: 08-Aug-2024

Balance Serial # 1127510105

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 14-Aug-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/ μ ECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

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

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

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

- 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.:** A0214960
Description : Bromochloromethane Standard
Bromochloromethane 2000µg/mL, P&T Methanol, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : August 31, 2029 **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	SYN240416CTH	99%	2,012.0 µg/mL	+/- 113.0519

* 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:

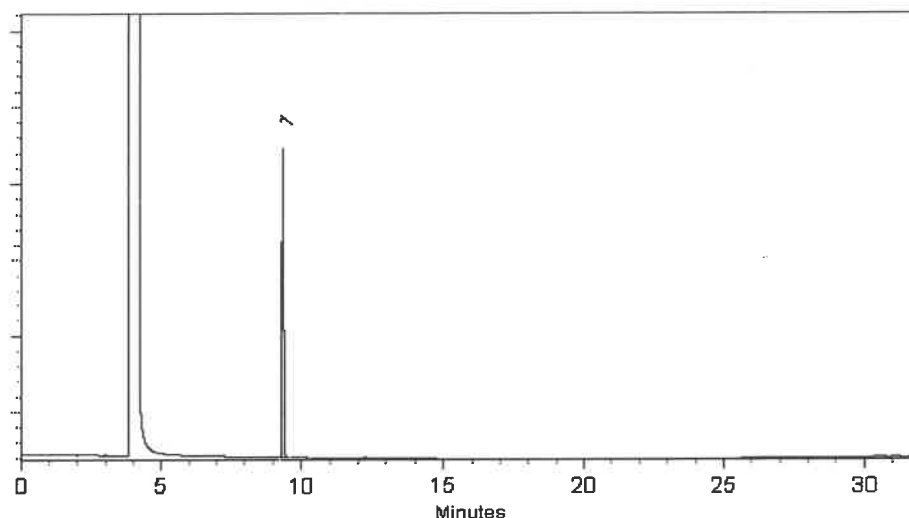
FID

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.

Stacey Wanner - Operations Technician I

Date Mixed: 08-Aug-2024

Balance Serial # 1127510105

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 14-Aug-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/ μ ECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

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

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

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

- 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.:** A0214960

Description : Bromochloromethane Standard

Bromochloromethane 2000µg/mL, P&T Methanol, 1mL/ampul

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

Expiration Date : August 31, 2029 **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	SYN240416CTH	99%	2,012.0 µg/mL	+/- 113.0519

* 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:

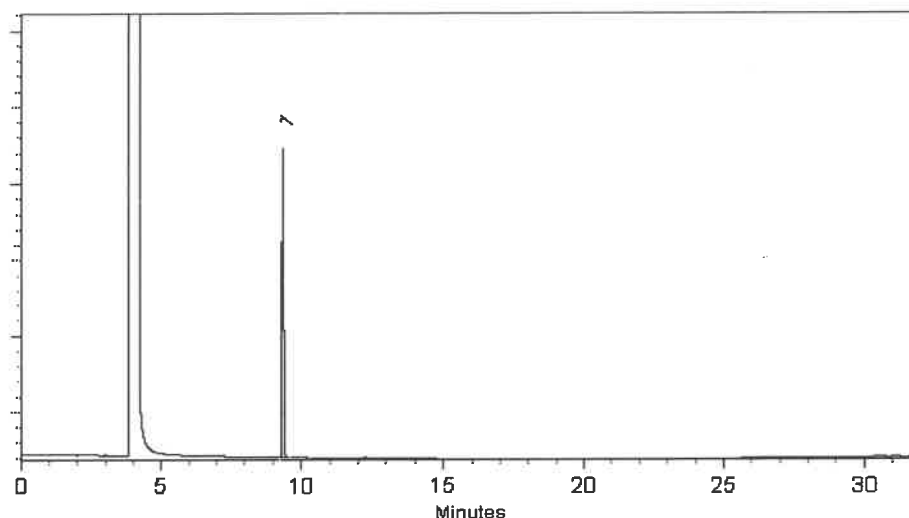
FID

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.

Stacey Wanner - Operations Technician I

Date Mixed: 08-Aug-2024

Balance Serial # 1127510105

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 14-Aug-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/ μ ECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

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

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

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

- 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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10 vial.
Dec: 12/09/24
CERTIFIED REFERENCE MATERIAL

Certificate of Analysis
chromatographic plus
V14667
V14676



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.:** A0214960
Description : Bromochloromethane Standard
Bromochloromethane 2000µg/mL, P&T Methanol, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : August 31, 2029 **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	SYN240416CTH	99%	2,012.0 µg/mL	+/- 113.0519

* 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:

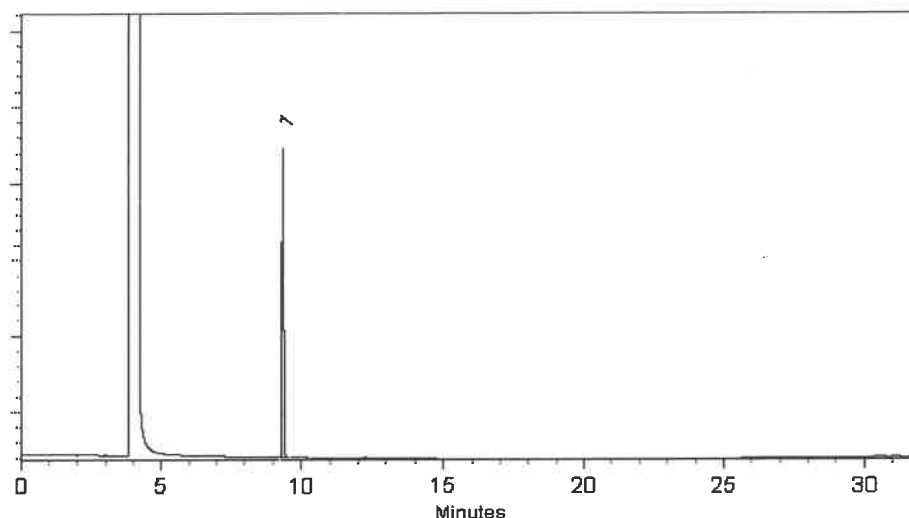
FID

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.

Stacey Wanner - Operations Technician I

Date Mixed: 08-Aug-2024

Balance Serial # 1127510105

Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 14-Aug-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/ μ ECD, GC/MS, LC/MS, RI, and/or melting point.
- Compounds with a listed purity of less than 99% have been weight corrected to compensate for impurities and/or salts. A correction factor is used to calculate the amount of compound necessary to achieve the desired concentration of the parent compound in solution.
- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

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

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

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

- 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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Rec 12/17/24
CERTIFIED REFERENCE MATERIAL

30 ml
Certificate of Analysis
chromatographic plus

V14727 to
V14756



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:

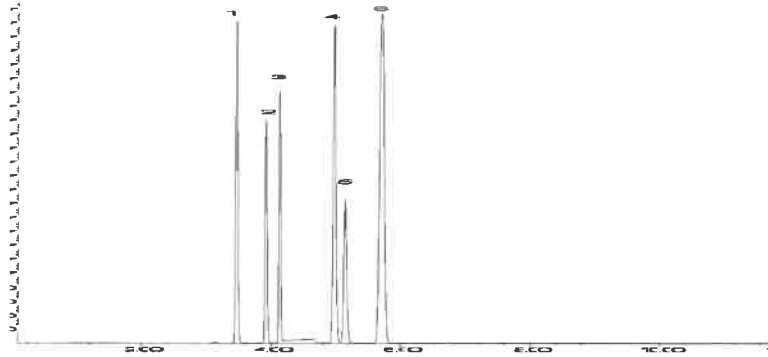
MSD

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 Suckal - 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:

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

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

- 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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Rec 12/17/24
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30 ml
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chromatographic plus

V14727 to
V14756



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:

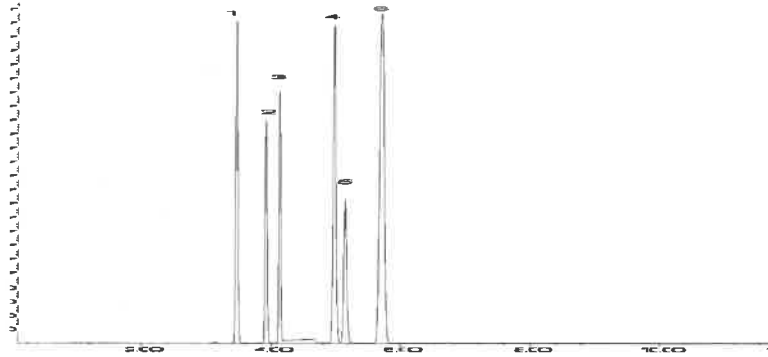
MSD

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 Suckal - 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:

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

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

- 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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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic plus

✓ 14842 to 14846



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:

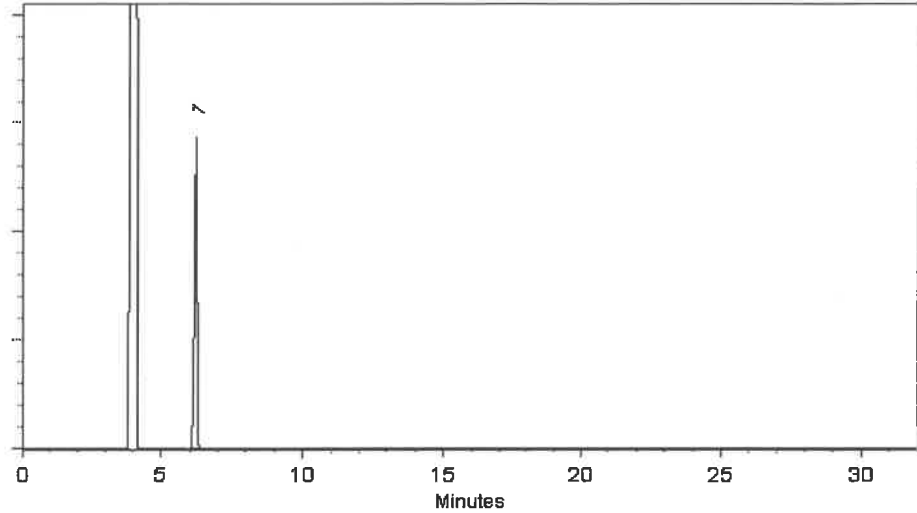
FID

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.

A. O. E.
Aaron Enyart - Operations Tech I

Date Mixed: 07-Oct-2024

Balance Serial # B251644995

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

Certified Uncertainty Value Notes:

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

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

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

- 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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2014 Dec 01/08/21
CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic

V14803 - V14822



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:

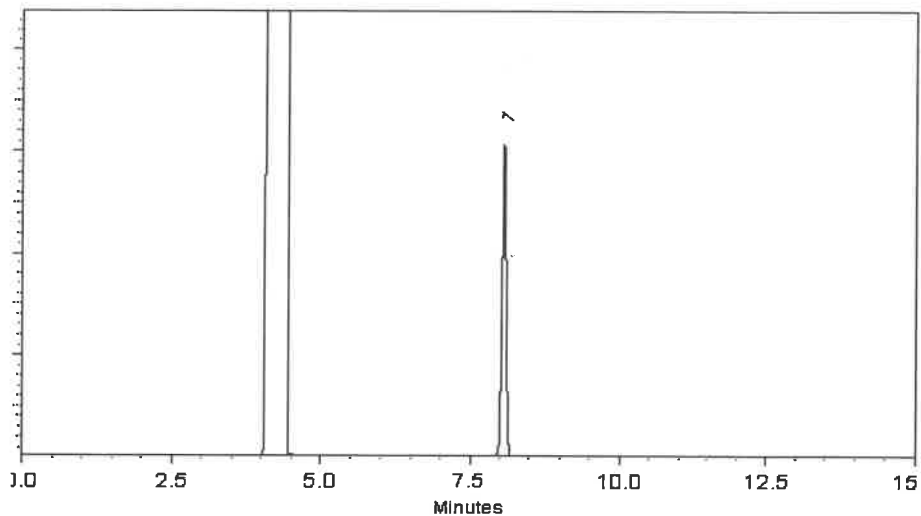
FID

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
By Jennifer Pollock at 7:12 am, Jan 05, 2025

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:

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

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

- 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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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

chromatographic

V14803 - V14822



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:

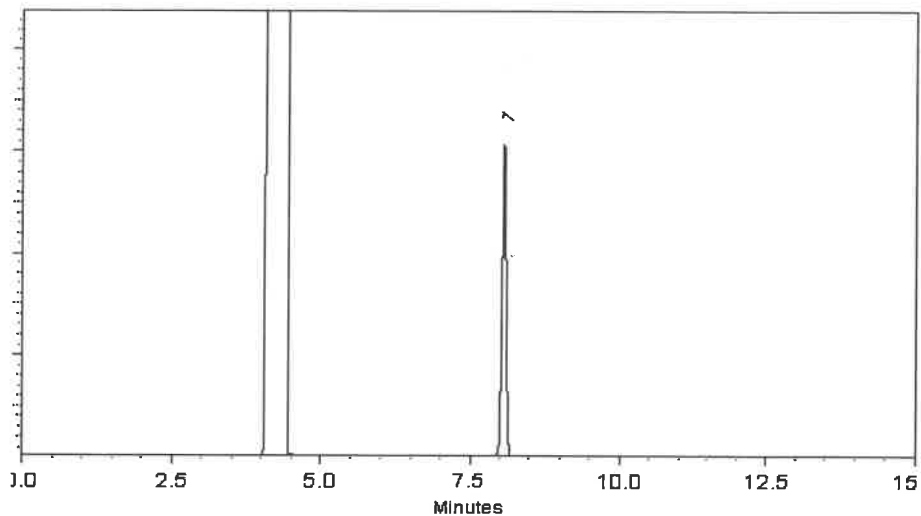
FID

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
By Jennifer Pollock at 7:12 am, Jan 05, 2025

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:

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

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

- 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.



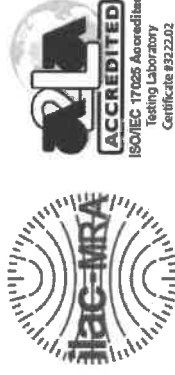
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

gravimetric



10 vial
See 03/31/25
V14904 to V14913

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.: A0223904

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: March 31, 2028 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-33313	99%	25,108.0 µg/mL	+/- 1,421.9957
2	1-Bromo-4-fluorobenzene (BFB)	460-00-4	0000268853	99%	25,108.0 µg/mL	+/- 1,421.9957
3	Dibromofluoromethane	1868-53-7	VENKAT02	99%	25,232.0 µg/mL	+/- 1,429.0184
4	Toluene-d8	2037-26-5	PR-34141	99%	25,156.0 µg/mL	+/- 1,424.7141

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

Brittany Federlino

Brittany Federlino - Operations Tech I

Date Mixed: 27-Mar-2025

Balance: B251644995

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:

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

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

- 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.

Methanol
ULTRA RESI-ANALYZED
For Purge and Trap Analysis



V14921 to
V14938

Material No.: 9077-02
Batch No.: 24G0262002
Manufactured Date: 2024-05-14
Expiration Date: 2027-05-14
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (CH ₃ OH) (by GC, corrected for water)	≥ 99.9 %	100.0 %
Residue after Evaporation	≤ 1.0 ppm	0.3 ppm
Titration Acid (μeq/g)	≤ 0.3	0.3
Titration 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

Mark
Jamie Croak
Director Quality Operations, Bioscience Production

Methanol
ULTRA RESI-ANALYZED
For Purge and Trap Analysis

Rec 05/09/25
Avantor™



*V14921 to
V14938*

Material No.: 9077-02
Batch No.: 24G0262002
Manufactured Date: 2024-05-14
Expiration Date: 2027-05-14
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (CH ₃ OH) (by GC, corrected for water)	≥ 99.9 %	100.0 %
Residue after Evaporation	≤ 1.0 ppm	0.3 ppm
Titration Acid (μeq/g)	≤ 0.3	0.3
Titration Base (μeq/g)	≤ 0.10	0.03
Water (by KF, coulometric)	≤ 0.08 %	< 0.01 %
Volatile Organic Trace Analysis - Below EPA 82608 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

Mark
Jamie Croak
Director Quality Operations, Bioscience Production



110 Benner Circle
Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309
www.restek.com

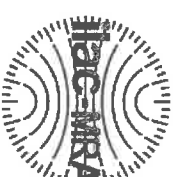
CERTIFIED REFERENCE MATERIAL

22 05113125
20 vial

Certificate of Analysis

chromatographic plus

✓ 149516 ✓ 14970



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.: A0222076

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 : August 31, 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	Methyl acetate	79-20-9	SHBR1889	99%	2,004.0 µg/mL	+/- 69.2674
2	Vinyl acetate	108-05-4	RD240423RSR	99%	2,010.0 µg/mL	+/- 69.4748
3	Ethyl acetate	141-78-6	SHBS3323	99%	2,019.3 µg/mL	+/- 69.7974
4	Isopropyl acetate	108-21-4	BCCG7069	99%	2,008.0 µg/mL	+/- 69.4057
5	Propyl acetate	109-60-4	P8XLN	99%	2,008.0 µg/mL	+/- 69.4057
6	Butyl acetate	123-86-4	SHBR2024	99%	2,008.0 µg/mL	+/- 69.4057
7	Amyl acetate	628-63-7	BCBT7442	99%	2,006.7 µg/mL	+/- 69.3596

* 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



110 Benner Circle
Bellefonte, PA 16823-8812
Tel: 1-814-353-1300
Fax: 1-814-353-1309
www.restek.com

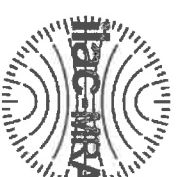
CERTIFIED REFERENCE MATERIAL

22 05113125
20 vial

Certificate of Analysis

chromatographic plus

✓ 149516 ✓ 14970



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.: A0222076

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 : August 31, 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	Methyl acetate	79-20-9	SHBR1889	99%	2,004.0 µg/mL	+/- 69.2674
2	Vinyl acetate	108-05-4	RD240423RSR	99%	2,010.0 µg/mL	+/- 69.4748
3	Ethyl acetate	141-78-6	SHBS3323	99%	2,019.3 µg/mL	+/- 69.7974
4	Isopropyl acetate	108-21-4	BCCG7069	99%	2,008.0 µg/mL	+/- 69.4057
5	Propyl acetate	109-60-4	P8XLN	99%	2,008.0 µg/mL	+/- 69.4057
6	Butyl acetate	123-86-4	SHBR2024	99%	2,008.0 µg/mL	+/- 69.4057
7	Amyl acetate	628-63-7	BCBT7442	99%	2,006.7 µg/mL	+/- 69.3596

* 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



Certified Reference Material CRM



Re 101625 5100

CERTIFIED WEIGHT REPORT

Part Number:
Lot Number:
Description:

91980
101625
Acrolein

Solvent(s):
Water

Lot#
041725Q

Expiration Date:
Recommended Storage:
Nominal Concentration (µg/mL):
NIST Test ID#:

111625
Refrigerate (2°C to 8°C)
5000
6UTB

5E-05 Balance Uncertainty
0.001 Flask Uncertainty

Weight(s) shown below were combined and diluted to (mL):

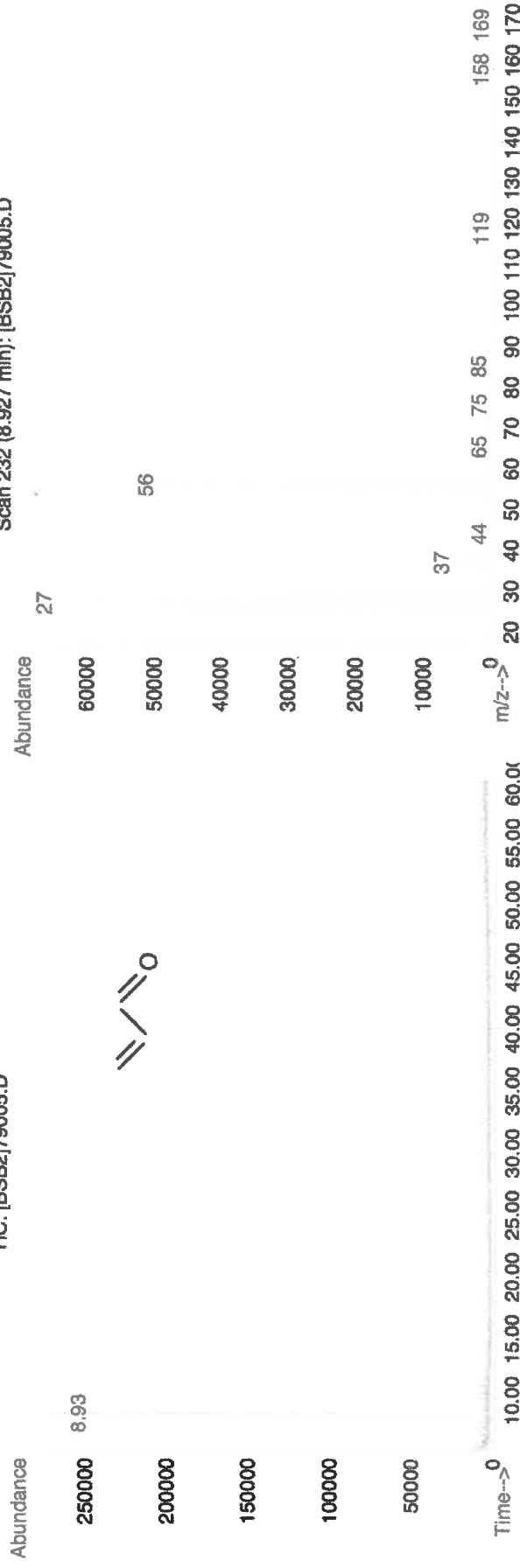
10.0

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (±) (µg/mL)	CAS#	OSHA PEL (TWA)	LD50
----------	-----	------------	----------------------	------------	-------------	------------------	------------------	---------------------	----------------------------------	------	----------------	------

1. Acrolein 5 103755V10F 5000 97 0.5 0.05166 0.05180 5013.7 52.6 107-02-8 0.1 ppm or-rat 48mg/kg

Method: GC6MSD-1. Detector: Mass Selective Detector (Scan mode). Columns: Vool (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 Renteria. 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.

TIC: [BSB2]79005.D



• The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
• Standards are prepared gravimetrically using balances that are calibrated by an ISO 17025 certified organization with weights traceable through NIST to the SI Kilogram (see above).
• Standards are certified (±) 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).
Rev 1A, 2/25/2025



Certified Reference Material CRM



Rec 10/16/25 5:10p

CERTIFIED WEIGHT REPORT

Part Number:
Lot Number:
Description:

91980
101625
Acrolein

Solvent(s):
Water

Lot#
041725Q

Expiration Date:
Recommended Storage:
Nominal Concentration (µg/mL):
NIST Test ID#:

111625
Refrigerate (2°C to 8°C)
5000
6UTB

115071-115075

5E-05 Balance Uncertainty
0.001 Flask Uncertainty

Weight(s) shown below were combined and diluted to (mL):

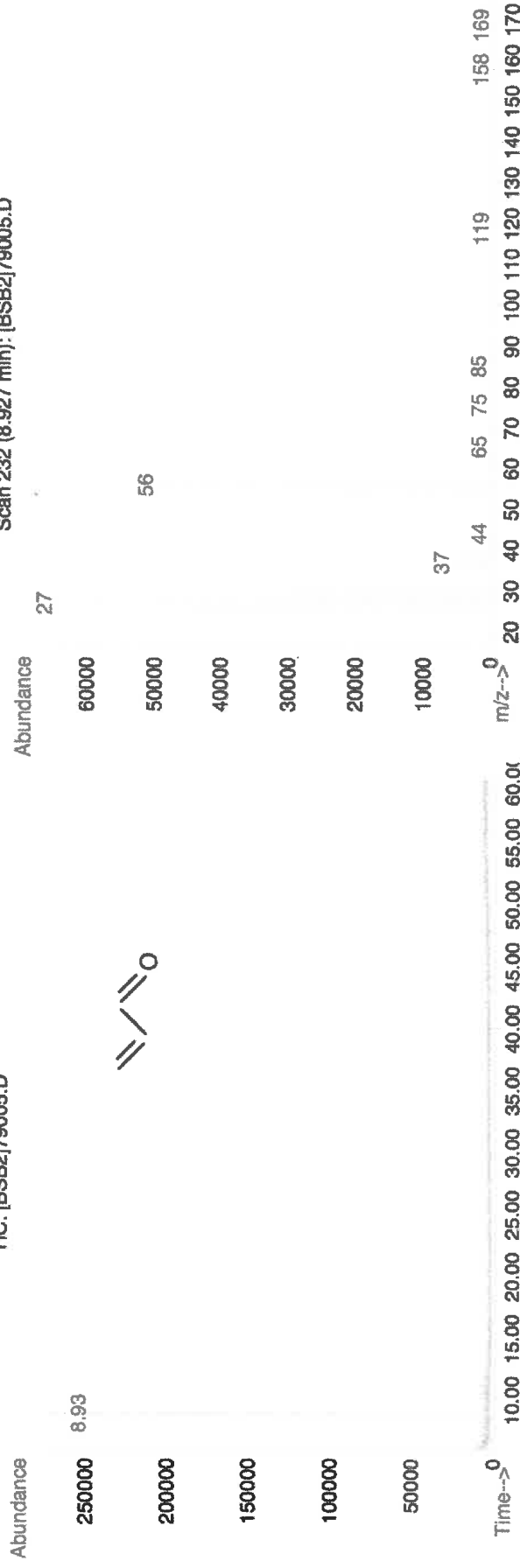
10.0

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (±) (µg/mL)	CAS#	OSHA PEL (TWA)	LD50
----------	-----	------------	----------------------	------------	-------------	------------------	------------------	---------------------	----------------------------------	------	----------------	------

1. Acrolein 5 103755V10F 5000 97 0.5 0.05166 0.05180 5013.7 52.6 107-02-8 0.1 ppm orl-rat 48mg/kg

Method: GC6MSD-1. Detector: Mass Selective Detector (Scan mode). Column: Vool (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 Renteria. 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.

TIC: [BSB2]79005.D



• The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
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• Standards are certified (±) 0.5% of the stated value, unless otherwise stated.
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• 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).
Rev 1A, 2/25/2025



Certified Reference Material CRM



Re 101625 5100

CERTIFIED WEIGHT REPORT

Part Number:
Lot Number:
Description:

91980
101625
Acrolein

Solvent(s):
Water

Lot#
041725Q

Expiration Date:
Recommended Storage:
Nominal Concentration (µg/mL):
NIST Test ID#:

111625
Refrigerate (2°C to 8°C)
5000
6UTB

5E-05 Balance Uncertainty
0.001 Flask Uncertainty

Weight(s) shown below were combined and diluted to (mL):

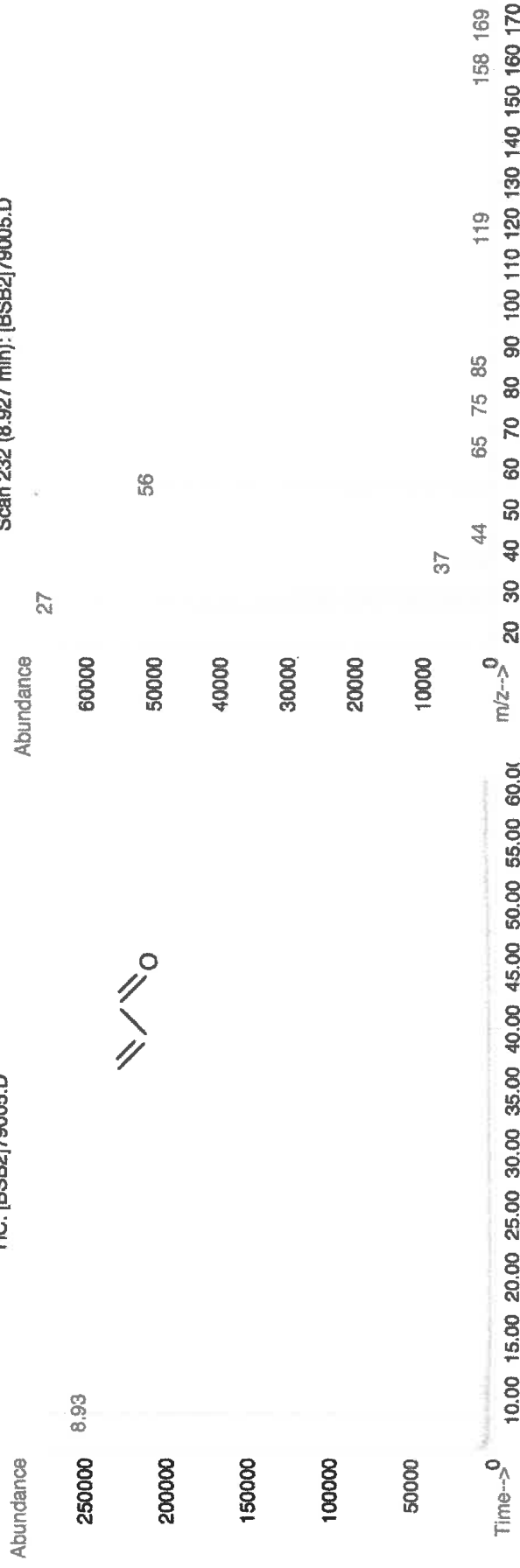
10.0

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty	Target Weight(g)	Actual Weight(g)	Actual Conc (µg/mL)	Expanded Uncertainty (+/-) (µg/mL)	CAS#	OSHA PEL (TWA)	LD50
----------	-----	------------	----------------------	------------	-------------	------------------	------------------	---------------------	------------------------------------	------	----------------	------

1. Acrolein 5 103755V10F 5000 97 0.5 0.05166 0.05180 5013.7 52.6 107-02-8 0.1 ppm orl-rat 48mg/kg

Method: GC6MSD-1. Detector: Mass Selective Detector (Scan mode). Columns: Vool (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 Renteria. 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.

TIC: [BSB2]79005.D



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• Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
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Rev 1A, 2/25/2025



SHIPPING DOCUMENTS

CLIENT INFORMATION

CLIENT PROJECT INFORMATION

CLIENT BILLING INFORMATION

REPORT TO BE SENT TO:

COMPANY: ICE Service Group, Inc.
ADDRESS: 125 Bloomingdale Rd
CITY Levittown STATE: NJ ZIP:
ATTENTION: Dennis d. morgan, ii
PHONE: FAX:

PROJECT NAME: ICES02
PROJECT NO.: LOCATION:
PROJECT MANAGER:
e-mail:
PHONE: FAX:

BILL TO: PO#:
ADDRESS:
CITY Samuel STATE: ZIP:
ATTENTION: PHONE:
ANALYSIS

DATA TURNAROUND INFORMATION

DATA DELIVERABLE INFORMATION

FAX (RUSH) DAYS*
HARDCOPY (DATA PACKAGE): 72 HR TAT DAYS*
EDD: DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS

☐ Level 1 (Results Only) ☐ Level 4 (QC + Full Raw Data)
☐ Level 2 (Results + QC) ☐ NJ Reduced ☐ US EPA CLP
☐ Level 3 (Results + QC) ☐ NYS ASP A ☐ NYS ASP B
+ Raw Data ☐ Other
☐ EDD FORMAT

1: 2: 3: 4: 5: 6: 7: 8: 9:
PCB SVOC-TL-BNA-20 PH Vol-TL-Vol-10 Mercury TSS

PRESERVATIVES

COMMENTS

ALLIANCE SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES										COMMENTS
			COMP	GRAB	DATE	TIME		1	2	3	4	5	6	7	8	9	
1.	<u>Frac Tank - 0760450</u>	<u>AQ</u>		<u>X</u>	<u>10-20-25</u>	<u>12:30</u>	<u>7</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>	<u>X</u>				<u>PID = 0.7</u>
2.																	
3.																	
4.																	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER: 1. <u>[Signature]</u>	DATE/TIME: <u>1300</u> <u>10-20-2025</u>	RECEIVED BY: 1. <u>[Signature]</u>	Conditions of bottles or coolers at receipt: ☒ COMPLIANT ☐ NON COMPLIANT COOLER TEMP: <u>3.2</u> °C Comments: <u>*PID Meter Calibrated 10-20-2025 +</u>
RELINQUISHED BY SAMPLER: 2. <u>[Signature]</u>	DATE/TIME: <u>[Signature]</u>	RECEIVED BY: 2. <u>[Signature]</u>	
RELINQUISHED BY SAMPLER: 3. <u>[Signature]</u>	DATE/TIME: <u>1754</u> <u>10-20-2025</u>	RECEIVED BY: 3. <u>[Signature]</u>	

Page ____ of CLIENT: ☐ Hand Delivered ☐ Other Shipment Complete ☐ YES ☐ NO

CHEMTECH

Environmental Laboratory

www.chemtech.net | EMAIL: PM@chemtech.net

Project Name: ICES 02

Chemtech Order ID: _____

Service Order #:

Sampler Name: Advence Catu

Work Order #:

Client Project Coordinator & Phone:

Labor WBS #:

Facility/Site:

Page #: 1 of 1

Site Address:

Date: 10.20.2025

125 Bloomingdale
RD. Hewittown, N.Y.

Arrive Time: 11:28 am

Depart Time: 1300

Waste Stream (circle one): drum /roll-off

soil pile / in-situ / linear construction / frac-tank

Sample Matrices (circle all that apply): Water / Solid / NAPL / Concrete / Wipe / AQ

Collection Depths:

Temp (range):

°C PID Readings (range):

Dimensions/CY:

PPM

Odor: Y / N Color: Y / N

Sample Description:

Water Soil Soil water Bender, Brown & Q.

Field Observations:

Sampled, RB47191RT, RBR 2520555, Fractank 0760450

Grid / Area Composite Map:

QA Control # A3041134

Fractank
0760450
PID = 0.7
AQ

RB47191RT
PID = 1.3
CARB-VOC
X X X X X

RBR 2520555
PID = 0.7
X X X X X

Collect & Composite samples

Comp Roll off samples

Sampler Signature:

[Signature]

10.20.2025

Supervisor Review/Date:

Client Signature:

[Signature]

Date/Time Analysis:

Laboratory Certification

Certified By	License No.
Connecticut	PH-0830
DOD ELAP (ANAB)	L2219
Maine	2024021
Maryland	296
New Hampshire	255425
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	525-24-234-08441
Texas	TX-C25-00189
Virginia	460312

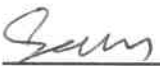
LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q3400	ICES02	Order Date : 10/20/2025 1:25:31 PM	Project Mgr :
Client Name : ICE Service Group, Inc.		Project Name : NWIRP Northrup Grumman	Report Type : NYS ASP A
Client Contact : Dennis D. Morgan, II		Receive DateTime : 10/20/2025 12:00:00 AM <i>at 5:54 PM</i>	EDD Type : NYSDEC EDD V-4
Invoice Name : ICE Service Group, Inc.		Purchase Order :	Hard Copy Date :
Invoice Contact : Dennis D. Morgan, II			Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q3400-01	FRAC-TANK-0760450	Water	10/20/2025	12:30	VOC-TCLVOA-10		8260-Low		3 Bus. Days

Relinquished By : 

Date / Time : 10/21/25 1020

Received By : 

Date / Time : 10/21/25 10:20 Ref # 4

Storage Area : VOA Refridgerator Room