

Cover Page

Order ID : Q2008

Project ID : Former Schlumberger Site Princeton NJ 2025

Client : JACOBS Engineering Group, Inc.

Lab Sample Number

Q2008-01

Client Sample Number

IDW-AQ-DRUM-633-05092025

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: 5/15/2025

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 #: Q2008

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: SOHIL JODHANI

Date: 05/15/2025

LAB CHRONICLE

OrderID:	Q2008	OrderDate:	5/9/2025 3:21:23 PM
Client:	JACOBS Engineering Group, Inc.	Project:	Former Schlumberger Site Princeton NJ 2025
Contact:	Mary I. Murphy	Location:	L41,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q2008-01	IDW-AQ-DRUM-633-0 5092025	Water	VOC-TCLVOA-10	8260D	05/09/25		05/12/25	05/09/25

Hit Summary Sheet
SW-846

SDG No.: Q2008

Client: JACOBS Engineering Group, Inc.

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID:	IDW-AQ-DRUM-633-05092025							
Q2008-01	IDW-AQ-DRUM-6: Water	Chloromethane		880		32.0	500	ug/L
Q2008-01	IDW-AQ-DRUM-6: Water	Acetone		20100		150	2500	ug/L
Q2008-01	IDW-AQ-DRUM-6: Water	Methylene Chloride		110	J	28.0	500	ug/L
		Total Voc :		21100				
Q2008-01	IDW-AQ-DRUM-6: Water	Sulfur dioxide		* 510	J	0	0	ug/L
		Total Tics :		510				
		Total Concentration:		21600				



QC SUMMARY

Surrogate Summary

SDG No.: **Q2008**

Client: **JACOBS Engineering Group, Inc.**

Analytical Method: **SW8260D**

Lab Sample ID	Client ID	Parameter	Spike	Result	RecoveryQual	Limits	
						Low	High
Q2008-01	IDW-AQ-DRUM-633-05092025	1,2-Dichloroethane-d4	50	53.2	106	70 (74)	130 (125)
		Dibromofluoromethane	50	50.1	100	70 (75)	130 (124)
		Toluene-d8	50	48.8	98	70 (86)	130 (113)
		4-Bromofluorobenzene	50	51.3	103	70 (77)	130 (121)
VX0512WBL01	VX0512WBL01	1,2-Dichloroethane-d4	50	54.2	108	70 (74)	130 (125)
		Dibromofluoromethane	50	50.9	102	70 (75)	130 (124)
		Toluene-d8	50	50.1	100	70 (86)	130 (113)
		4-Bromofluorobenzene	50	49.6	99	70 (77)	130 (121)
VX0512WBS01	VX0512WBS01	1,2-Dichloroethane-d4	50	55.1	110	70 (74)	130 (125)
		Dibromofluoromethane	50	56.2	112	70 (75)	130 (124)
		Toluene-d8	50	54.8	110	70 (86)	130 (113)
		4-Bromofluorobenzene	50	54.9	110	70 (77)	130 (121)
VX0512WBSD0	VX0512WBSD01	1,2-Dichloroethane-d4	50	54.3	109	70 (74)	130 (125)
		Dibromofluoromethane	50	55.9	112	70 (75)	130 (124)
		Toluene-d8	50	55.4	111	70 (86)	130 (113)
		4-Bromofluorobenzene	50	55.4	111	70 (77)	130 (121)

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: Q2008

Client: JACOBS Engineering Group, Inc.

Analytical Method: SW8260D

Datafile : VX046128.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Low	Limits High	RPD
VX0512WBS01	Dichlorodifluoromethane	20	21.8	ug/L	109			40 (69)	160 (116)	
	Chloromethane	20	20.3	ug/L	102			40 (65)	160 (116)	
	Vinyl chloride	20	19.8	ug/L	99			70 (65)	130 (117)	
	Bromomethane	20	19.2	ug/L	96			40 (58)	160 (125)	
	Chloroethane	20	20.7	ug/L	104			40 (56)	160 (128)	
	Trichlorofluoromethane	20	21.8	ug/L	109			40 (73)	160 (115)	
	1,1,2-Trichlorotrifluoroethane	20	21.1	ug/L	106			70 (80)	130 (112)	
	1,1-Dichloroethene	20	20.4	ug/L	102			70 (74)	130 (110)	
	Acetone	100	100	ug/L	100			40 (60)	160 (125)	
	Carbon disulfide	20	18.7	ug/L	94			40 (64)	160 (112)	
	Methyl tert-butyl Ether	20	20.9	ug/L	104			70 (78)	130 (114)	
	Methyl Acetate	20	21.6	ug/L	108			70 (67)	130 (125)	
	Methylene Chloride	20	19.4	ug/L	97			70 (72)	130 (114)	
	trans-1,2-Dichloroethene	20	20.2	ug/L	101			70 (75)	130 (108)	
	1,1-Dichloroethane	20	21.1	ug/L	106			70 (78)	130 (112)	
	Cyclohexane	20	20.3	ug/L	102			70 (75)	130 (110)	
	2-Butanone	100	100	ug/L	100			40 (65)	160 (122)	
	Carbon Tetrachloride	20	21.2	ug/L	106			70 (77)	130 (113)	
	cis-1,2-Dichloroethene	20	20.8	ug/L	104			70 (77)	130 (110)	
	Bromochloromethane	20	23.2	ug/L	116			70 (70)	130 (124)	
	Chloroform	20	21.8	ug/L	109			70 (79)	130 (113)	
	1,1,1-Trichloroethane	20	21.0	ug/L	105			70 (80)	130 (108)	
	Methylcyclohexane	20	20.3	ug/L	102			70 (72)	130 (115)	
	Benzene	20	21.2	ug/L	106			70 (82)	130 (109)	
	1,2-Dichloroethane	20	21.3	ug/L	106			70 (80)	130 (115)	
	Trichloroethene	20	21.0	ug/L	105			70 (77)	130 (113)	
	1,2-Dichloropropane	20	21.7	ug/L	109			70 (83)	130 (111)	
	Bromodichloromethane	20	21.6	ug/L	108			70 (83)	130 (110)	
	4-Methyl-2-Pentanone	100	100	ug/L	100			40 (74)	160 (118)	
	Toluene	20	21.1	ug/L	106			70 (82)	130 (110)	
	t-1,3-Dichloropropene	20	20.0	ug/L	100			70 (79)	130 (110)	
	cis-1,3-Dichloropropene	20	20.6	ug/L	103			70 (82)	130 (110)	
	1,1,2-Trichloroethane	20	21.4	ug/L	107			70 (83)	130 (112)	
	2-Hexanone	100	110	ug/L	110			40 (73)	160 (117)	
	Dibromochloromethane	20	21.1	ug/L	106			70 (82)	130 (110)	
	1,2-Dibromoethane	20	21.3	ug/L	106			70 (81)	130 (110)	
	Tetrachloroethene	20	19.8	ug/L	99			70 (67)	130 (123)	
	Chlorobenzene	20	20.6	ug/L	103			70 (82)	130 (109)	
	Ethyl Benzene	20	21.0	ug/L	105			70 (83)	130 (109)	
	m/p-Xylenes	40	41.9	ug/L	105			70 (82)	130 (110)	
	o-Xylene	20	21.3	ug/L	106			70 (83)	130 (109)	
	Styrene	20	21.4	ug/L	107			70 (80)	130 (111)	
	Bromoform	20	20.1	ug/L	101			70 (79)	130 (109)	
	Isopropylbenzene	20	21.7	ug/L	109			70 (83)	130 (112)	
	1,1,2,2-Tetrachloroethane	20	21.2	ug/L	106			70 (76)	130 (118)	
	1,3-Dichlorobenzene	20	21.3	ug/L	106			70 (82)	130 (108)	
	1,4-Dichlorobenzene	20	20.7	ug/L	104			70 (82)	130 (107)	
	1,2-Dichlorobenzene	20	21.3	ug/L	106			70 (82)	130 (109)	

() = LABORATORY INHOUSE LIMIT

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: Q2008

Client: JACOBS Engineering Group, Inc.

Analytical Method: SW8260D

Datafile : VX046128.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Low	Limits	RPD
									High	
VX0512WBS01	1,2-Dibromo-3-Chloropropane	20	20.8	ug/L	104			40 (68)	160 (112)	
	1,2,4-Trichlorobenzene	20	20.1	ug/L	101			70 (75)	130 (113)	
	1,2,3-Trichlorobenzene	20	20.5	ug/L	103			70 (76)	130 (114)	

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: Q2008

Client: JACOBS Engineering Group, Inc.

Analytical Method: SW8260D

Datafile : VX046129.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Low	Limits High	RPD
VX0512WBSD01	Dichlorodifluoromethane	20	20.9	ug/L	104	5		40 (69)	160 (116)	20 (20)
	Chloromethane	20	19.6	ug/L	98	4		40 (65)	160 (116)	20 (20)
	Vinyl chloride	20	19.5	ug/L	98	1		70 (65)	130 (117)	20 (20)
	Bromomethane	20	18.3	ug/L	92	4		40 (58)	160 (125)	20 (20)
	Chloroethane	20	20.4	ug/L	102	2		40 (56)	160 (128)	20 (20)
	Trichlorofluoromethane	20	21.0	ug/L	105	4		40 (73)	160 (115)	20 (20)
	1,1,2-Trichlorotrifluoroethane	20	20.7	ug/L	104	2		70 (80)	130 (112)	20 (20)
	1,1-Dichloroethene	20	19.8	ug/L	99	3		70 (74)	130 (110)	20 (20)
	Acetone	100	100	ug/L	100	0		40 (60)	160 (125)	20 (20)
	Carbon disulfide	20	18.6	ug/L	93	1		40 (64)	160 (112)	20 (20)
	Methyl tert-butyl Ether	20	21.2	ug/L	106	2		70 (78)	130 (114)	20 (20)
	Methyl Acetate	20	22.8	ug/L	114	5		70 (67)	130 (125)	20 (20)
	Methylene Chloride	20	19.4	ug/L	97	0		70 (72)	130 (114)	20 (20)
	trans-1,2-Dichloroethene	20	19.9	ug/L	100	1		70 (75)	130 (108)	20 (20)
	1,1-Dichloroethane	20	20.6	ug/L	103	3		70 (78)	130 (112)	20 (20)
	Cyclohexane	20	19.9	ug/L	100	2		70 (75)	130 (110)	20 (20)
	2-Butanone	100	110	ug/L	110	10		40 (65)	160 (122)	20 (20)
	Carbon Tetrachloride	20	20.8	ug/L	104	2		70 (77)	130 (113)	20 (20)
	cis-1,2-Dichloroethene	20	20.7	ug/L	104	0		70 (77)	130 (110)	20 (20)
	Bromochloromethane	20	22.6	ug/L	113	3		70 (70)	130 (124)	20 (20)
	Chloroform	20	21.2	ug/L	106	3		70 (79)	130 (113)	20 (20)
	1,1,1-Trichloroethane	20	21.0	ug/L	105	0		70 (80)	130 (108)	20 (20)
	Methylcyclohexane	20	19.8	ug/L	99	3		70 (72)	130 (115)	20 (20)
	Benzene	20	21.3	ug/L	106	0		70 (82)	130 (109)	20 (20)
	1,2-Dichloroethane	20	21.9	ug/L	110	4		70 (80)	130 (115)	20 (20)
	Trichloroethene	20	20.9	ug/L	104	1		70 (77)	130 (113)	20 (20)
	1,2-Dichloropropane	20	22.1	ug/L	111	2		70 (83)	130 (111)	20 (20)
	Bromodichloromethane	20	21.6	ug/L	108	0		70 (83)	130 (110)	20 (20)
	4-Methyl-2-Pentanone	100	110	ug/L	110	10		40 (74)	160 (118)	20 (20)
	Toluene	20	21.4	ug/L	107	1		70 (82)	130 (110)	20 (20)
	t-1,3-Dichloropropene	20	20.6	ug/L	103	3		70 (79)	130 (110)	20 (20)
	cis-1,3-Dichloropropene	20	21.1	ug/L	106	3		70 (82)	130 (110)	20 (20)
	1,1,2-Trichloroethane	20	22.2	ug/L	111	4		70 (83)	130 (112)	20 (20)
	2-Hexanone	100	110	ug/L	110	0		40 (73)	160 (117)	20 (20)
	Dibromochloromethane	20	22.4	ug/L	112	6		70 (82)	130 (110)	20 (20)
	1,2-Dibromoethane	20	21.6	ug/L	108	2		70 (81)	130 (110)	20 (20)
	Tetrachloroethene	20	19.8	ug/L	99	0		70 (67)	130 (123)	20 (20)
	Chlorobenzene	20	20.3	ug/L	102	1		70 (82)	130 (109)	20 (20)
	Ethyl Benzene	20	20.8	ug/L	104	1		70 (83)	130 (109)	20 (20)
	m/p-Xylenes	40	41.8	ug/L	104	1		70 (82)	130 (110)	20 (20)
	o-Xylene	20	20.9	ug/L	104	2		70 (83)	130 (109)	20 (20)
	Styrene	20	21.9	ug/L	110	3		70 (80)	130 (111)	20 (20)
	Bromoform	20	20.4	ug/L	102	1		70 (79)	130 (109)	20 (20)
	Isopropylbenzene	20	21.4	ug/L	107	2		70 (83)	130 (112)	20 (20)
	1,1,2,2-Tetrachloroethane	20	21.4	ug/L	107	1		70 (76)	130 (118)	20 (20)
	1,3-Dichlorobenzene	20	20.9	ug/L	104	2		70 (82)	130 (108)	20 (20)
	1,4-Dichlorobenzene	20	20.4	ug/L	102	2		70 (82)	130 (107)	20 (20)
	1,2-Dichlorobenzene	20	21.5	ug/L	108	2		70 (82)	130 (109)	20 (20)

() = LABORATORY INHOUSE LIMIT

Laboratory Control Sample/Laboratory Control Sample Duplicate Summary

SW-846

SDG No.: Q2008

Client: JACOBS Engineering Group, Inc.

Analytical Method: SW8260D

Datafile : VX046129.D

Lab Sample ID	Parameter	Spike	Result	Unit	Rec	RPD	Qual	Low	Limits High	RPD
VX0512WBSD01	1,2-Dibromo-3-Chloropropane	20	21.2	ug/L	106	2		40 (68)	160 (112)	20 (20)
	1,2,4-Trichlorobenzene	20	20.8	ug/L	104	3		70 (75)	130 (113)	20 (20)
	1,2,3-Trichlorobenzene	20	20.4	ug/L	102	1		70 (76)	130 (114)	20 (20)

VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

VX0512WBL01

Lab Name: CHEMTECH

Contract: JAC005

Lab Code: CHEM Case No.: Q2008

SAS No.: Q2008 SDG NO.: Q2008

Lab File ID: VX046127.D

Lab Sample ID: VX0512WBL01

Date Analyzed: 05/12/2025

Time Analyzed: 10:50

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
VX0512WBS01	VX0512WBS01	VX046128.D	05/12/2025
VX0512WBSD01	VX0512WBSD01	VX046129.D	05/12/2025
IDW-AQ-DRUM-633-05092025	Q2008-01	VX046130.D	05/12/2025

COMMENTS: _____



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

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: JACO05
Lab Code: CHEM Case No.: Q2008 SAS No.: Q2008 SDG NO.: Q2008
Lab File ID: VX046038.D BFB Injection Date: 05/05/2025
Instrument ID: MSVOA_X BFB Injection Time: 09:37
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	22.1
75	30.0 - 60.0% of mass 95	56.2
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.4
173	Less than 2.0% of mass 174	0.5 (0.7) 1
174	50.0 - 100.0% of mass 95	68.8
175	5.0 - 9.0% of mass 174	5 (7.3) 1
176	95.0 - 101.0% of mass 174	66.7 (97) 1
177	5.0 - 9.0% of mass 176	4.6 (6.9) 2

1-Value is % mass 174

2-Value is % mass 176

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTDIC020	VSTDIC020	VX046041.D	05/05/2025	11:35
VSTDIC050	VSTDIC050	VX046042.D	05/05/2025	11:58
VSTDIC100	VSTDIC100	VX046043.D	05/05/2025	12:21
VSTDIC150	VSTDIC150	VX046044.D	05/05/2025	12:45
VSTDIC005	VSTDIC005	VX046046.D	05/05/2025	16:04
VSTDIC001	VSTDIC001	VX046047.D	05/05/2025	16:27



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

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: CHEMTECH Contract: JACO05
Lab Code: CHEM Case No.: Q2008 SAS No.: Q2008 SDG NO.: Q2008
Lab File ID: VX046124.D BFB Injection Date: 05/12/2025
Instrument ID: MSVOA_X BFB Injection Time: 09:30
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	21.8
75	30.0 - 60.0% of mass 95	57.7
95	Base Peak, 100% relative abundance	100
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.5 (0.7) 1
174	50.0 - 100.0% of mass 95	69.1
175	5.0 - 9.0% of mass 174	5.4 (7.8) 1
176	95.0 - 101.0% of mass 174	65.9 (95.4) 1
177	5.0 - 9.0% of mass 176	4.4 (6.6) 2

1-Value is % mass 174

2-Value is % mass 176

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

EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
VSTDCCC050	VSTDCCC050	VX046125.D	05/12/2025	09:59
VX0512WBL01	VX0512WBL01	VX046127.D	05/12/2025	10:50
VX0512WBS01	VX0512WBS01	VX046128.D	05/12/2025	11:13
VX0512WBSD01	VX0512WBSD01	VX046129.D	05/12/2025	11:40
IDW-AQ-DRUM-633-05092025	Q2008-01	VX046130.D	05/12/2025	12:03

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CHEMTECH Contract: JACO05
 Lab Code: CHEM Case No.: Q2008 SAS No.: Q2008 SDG NO.: Q2008
 Lab File ID: VX046125.D Date Analyzed: 05/12/2025
 Instrument ID: MSVOA_X Time Analyzed: 09:59
 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	99352	5.54	165662	6.75	144793	10.05
UPPER LIMIT	198704	6.038	331324	7.251	289586	10.549
LOWER LIMIT	49676	5.038	82831	6.251	72396.5	9.549
EPA SAMPLE NO.						
IDW-AQ-DRUM-633-05092025	68762	5.54	138646	6.76	129122	10.05
VX0512WBL01	69374	5.54	138547	6.76	131027	10.05
VX0512WBS01	93419	5.54	162432	6.76	143385	10.05
VX0512WBSD01	90547	5.54	155274	6.76	138103	10.05

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: CHEMTECH Contract: JACO05
 Lab Code: CHEM Case No.: Q2008 SAS No.: Q2008 SDG NO.: Q2008
 Lab File ID: VX046125.D Date Analyzed: 05/12/2025
 Instrument ID: MSVOA_X Time Analyzed: 09:59
 GC Column: DB-624UI ID: 0.18 (mm) Heated Purge: (Y/N) N

	IS4 AREA #	RT #				
12 HOUR STD	69015	12.018				
UPPER LIMIT	138030	12.518				
LOWER LIMIT	34507.5	11.518				
EPA SAMPLE NO.						
IDW-AQ-DRUM-633-05092025	57082	12.02				
VX0512WBL01	55247	12.02				
VX0512WBS01	66250	12.02				
VX0512WBSD01	65121	12.02				

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:	JACOBS Engineering Group, Inc.	Date Collected:	05/09/25
Project:	Former Schlumberger Site Princeton NJ 2025	Date Received:	05/09/25
Client Sample ID:	IDW-AQ-DRUM-633-05092025	SDG No.:	Q2008
Lab Sample ID:	Q2008-01	Matrix:	Water
Analytical Method:	8260D	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	DB-624UI ID : 0.18	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX046130.D	100		05/12/25 12:03	VX051225

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	22.0	U	22.0	500	ug/L
74-87-3	Chloromethane	880		32.0	500	ug/L
75-01-4	Vinyl Chloride	26.0	U	26.0	500	ug/L
74-83-9	Bromomethane	140	U	140	500	ug/L
75-00-3	Chloroethane	47.0	U	47.0	500	ug/L
75-69-4	Trichlorofluoromethane	33.0	U	33.0	500	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	25.0	U	25.0	500	ug/L
75-35-4	1,1-Dichloroethene	23.0	U	23.0	500	ug/L
67-64-1	Acetone	20100		150	2500	ug/L
75-15-0	Carbon Disulfide	21.0	U	21.0	500	ug/L
1634-04-4	Methyl tert-butyl Ether	16.0	U	16.0	500	ug/L
79-20-9	Methyl Acetate	27.0	U	27.0	500	ug/L
75-09-2	Methylene Chloride	110	J	28.0	500	ug/L
156-60-5	trans-1,2-Dichloroethene	23.0	U	23.0	500	ug/L
75-34-3	1,1-Dichloroethane	23.0	U	23.0	500	ug/L
110-82-7	Cyclohexane	150	U	150	500	ug/L
78-93-3	2-Butanone	98.0	U	98.0	2500	ug/L
56-23-5	Carbon Tetrachloride	25.0	U	25.0	500	ug/L
156-59-2	cis-1,2-Dichloroethene	19.0	U	19.0	500	ug/L
74-97-5	Bromochloromethane	22.0	U	22.0	500	ug/L
67-66-3	Chloroform	25.0	U	25.0	500	ug/L
71-55-6	1,1,1-Trichloroethane	20.0	U	20.0	500	ug/L
108-87-2	Methylcyclohexane	16.0	U	16.0	500	ug/L
71-43-2	Benzene	15.0	U	15.0	500	ug/L
107-06-2	1,2-Dichloroethane	22.0	U	22.0	500	ug/L
79-01-6	Trichloroethene	9.30	U	9.30	500	ug/L
78-87-5	1,2-Dichloropropane	20.0	U	20.0	500	ug/L
75-27-4	Bromodichloromethane	22.0	U	22.0	500	ug/L
108-10-1	4-Methyl-2-Pentanone	68.0	U	68.0	2500	ug/L
108-88-3	Toluene	14.0	U	14.0	500	ug/L

Report of Analysis

Client:	JACOBS Engineering Group, Inc.	Date Collected:	05/09/25
Project:	Former Schlumberger Site Princeton NJ 2025	Date Received:	05/09/25
Client Sample ID:	IDW-AQ-DRUM-633-05092025	SDG No.:	Q2008
Lab Sample ID:	Q2008-01	Matrix:	Water
Analytical Method:	8260D	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	DB-624UI ID : 0.18	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX046130.D	100		05/12/25 12:03	VX051225

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-02-6	t-1,3-Dichloropropene	17.0	U	17.0	500	ug/L
10061-01-5	cis-1,3-Dichloropropene	16.0	U	16.0	500	ug/L
79-00-5	1,1,2-Trichloroethane	21.0	U	21.0	500	ug/L
591-78-6	2-Hexanone	89.0	U	89.0	2500	ug/L
124-48-1	Dibromochloromethane	18.0	U	18.0	500	ug/L
106-93-4	1,2-Dibromoethane	15.0	U	15.0	500	ug/L
127-18-4	Tetrachloroethene	23.0	U	23.0	500	ug/L
108-90-7	Chlorobenzene	12.0	U	12.0	500	ug/L
100-41-4	Ethyl Benzene	13.0	U	13.0	500	ug/L
179601-23-1	m/p-Xylenes	24.0	U	24.0	1000	ug/L
95-47-6	o-Xylene	12.0	U	12.0	500	ug/L
100-42-5	Styrene	15.0	U	15.0	500	ug/L
75-25-2	Bromoform	19.0	U	19.0	500	ug/L
98-82-8	Isopropylbenzene	12.0	U	12.0	500	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	26.0	U	26.0	500	ug/L
541-73-1	1,3-Dichlorobenzene	16.0	U	16.0	500	ug/L
106-46-7	1,4-Dichlorobenzene	19.0	U	19.0	500	ug/L
95-50-1	1,2-Dichlorobenzene	16.0	U	16.0	500	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	53.0	U	53.0	500	ug/L
120-82-1	1,2,4-Trichlorobenzene	20.0	U	20.0	500	ug/L
87-61-6	1,2,3-Trichlorobenzene	20.0	U	20.0	500	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	53.2		70 (74) - 130 (125)	106%	SPK: 50
1868-53-7	Dibromofluoromethane	50.1		70 (75) - 130 (124)	100%	SPK: 50
2037-26-5	Toluene-d8	48.8		70 (86) - 130 (113)	98%	SPK: 50
460-00-4	4-Bromofluorobenzene	51.3		70 (77) - 130 (121)	103%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	68800	5.544			
540-36-3	1,4-Difluorobenzene	139000	6.757			
3114-55-4	Chlorobenzene-d5	129000	10.049			
3855-82-1	1,4-Dichlorobenzene-d4	57100	12.018			

TENTATIVE IDENTIFIED COMPOUNDS

Report of Analysis

Client:	JACOBS Engineering Group, Inc.	Date Collected:	05/09/25
Project:	Former Schlumberger Site Princeton NJ 2025	Date Received:	05/09/25
Client Sample ID:	IDW-AQ-DRUM-633-05092025	SDG No.:	Q2008
Lab Sample ID:	Q2008-01	Matrix:	Water
Analytical Method:	8260D	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	DB-624UI ID : 0.18	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX046130.D	100		05/12/25 12:03	VX051225

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
007446-09-5	Sulfur dioxide	510	J		1.24	ug/L

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\VX051225\
 Data File : VX046130.D
 Acq On : 12 May 2025 12:03
 Operator : JC/MD
 Sample : Q2008-01 100X
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 7 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 IDW-AQ-DRUM-633-05092025

Quant Time: May 13 03:16:12 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
 Quant Title : SW846 8260
 QLast Update : Tue May 06 07:12:22 2025
 Response via : Initial Calibration

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

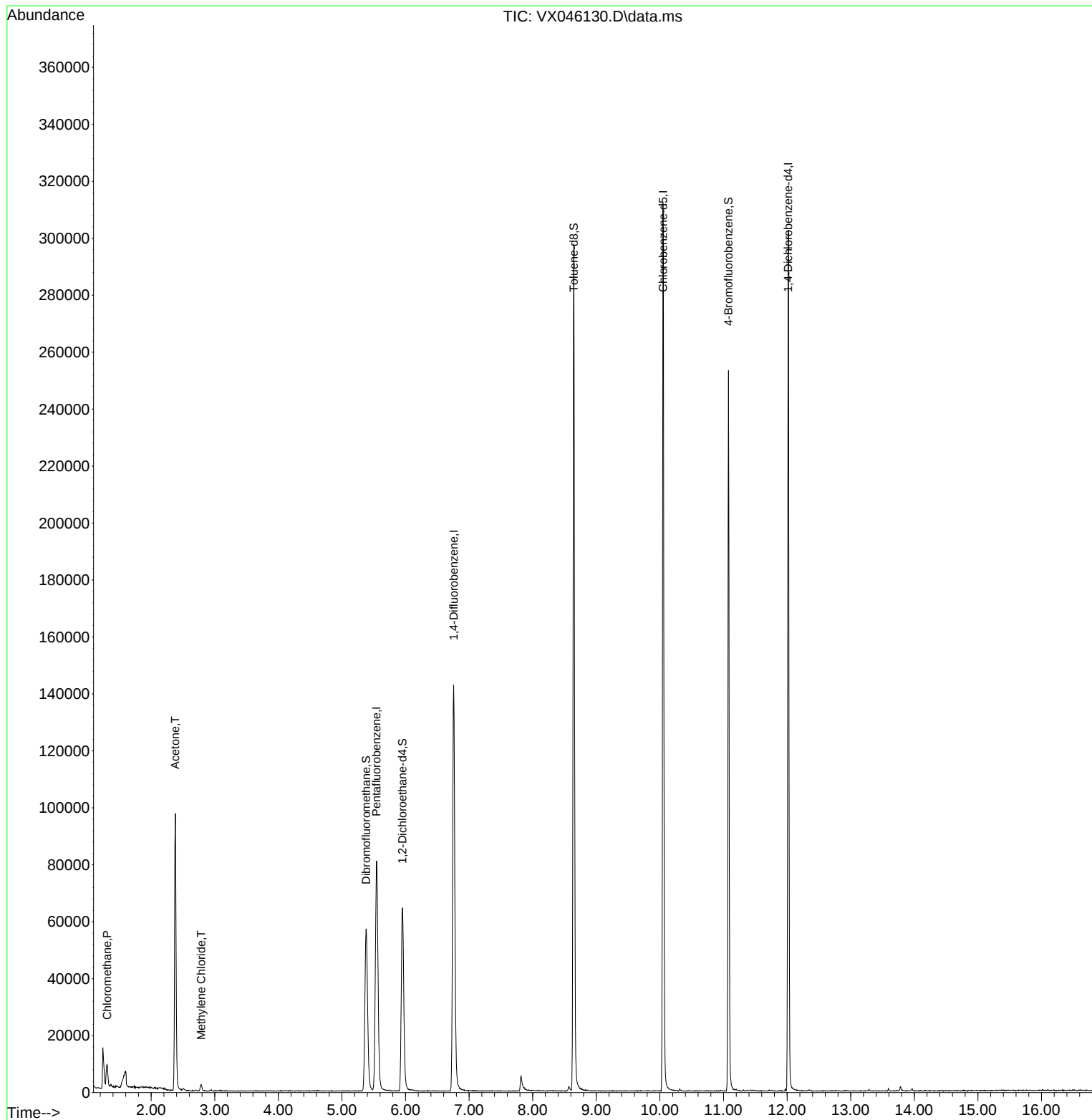
Internal Standards						
1) Pentafluorobenzene	5.544	168	68762	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.757	114	138646	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.049	117	129122	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.018	152	57082	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.952	65	68166	53.174	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 106.340%			
35) Dibromofluoromethane	5.379	113	50035	50.115	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 100.240%			
50) Toluene-d8	8.647	98	168506	48.763	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery = 97.520%			
62) 4-Bromofluorobenzene	11.079	95	67939	51.255	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery = 102.500%			
Target Compounds						Qvalue
3) Chloromethane	1.307	50	8948	8.767	ug/l	100
16) Acetone	2.380	43	103494	201.350	ug/l	98
20) Methylene Chloride	2.788	84	1113	1.130	ug/l #	79

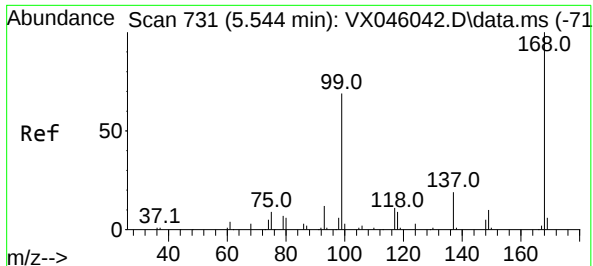
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX051225\
Data File : VX046130.D
Acq On : 12 May 2025 12:03
Operator : JC/MD
Sample : Q2008-01 100X
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
IDW-AQ-DRUM-633-05092025

Quant Time: May 13 03:16:12 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
Quant Title : SW846 8260
QLast Update : Tue May 06 07:12:22 2025
Response via : Initial Calibration



#1
Pentafluorobenzene

Concen: 50.000 ug/l

RT: 5.544 min Scan# 71

Delta R.T. -0.000 min

Lab File: VX046130.D

Acq: 12 May 2025 12:03

Instrument :

MSVOA_X

ClientSampleId :

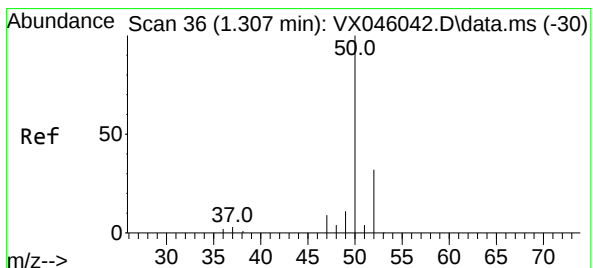
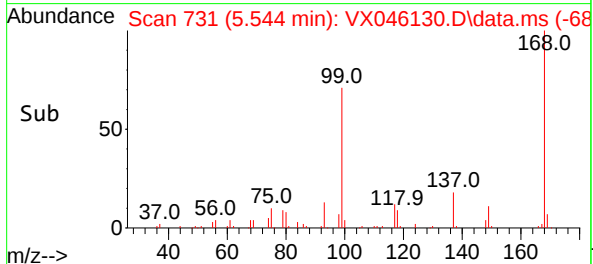
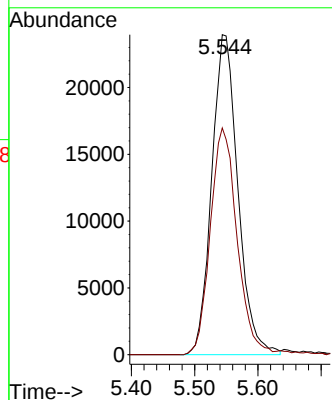
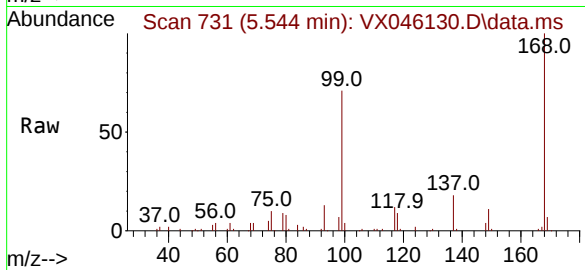
IDW-AQ-DRUM-633-05092025

Tgt Ion:168 Resp: 68762

Ion Ratio Lower Upper

168 100

99 70.9 54.9 82.3



#3

Chloromethane

Concen: 8.767 ug/l

RT: 1.307 min Scan# 36

Delta R.T. -0.000 min

Lab File: VX046130.D

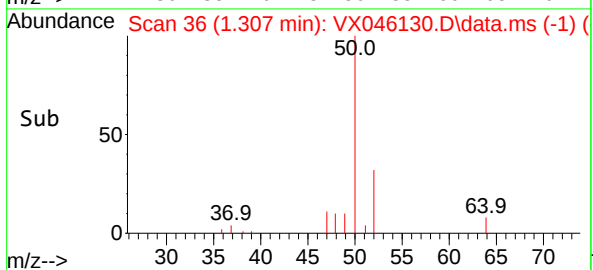
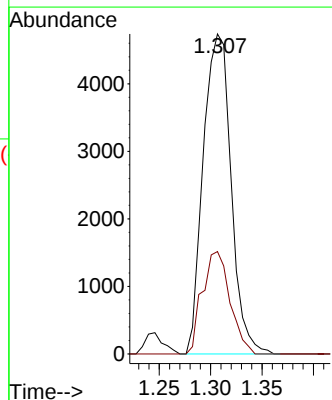
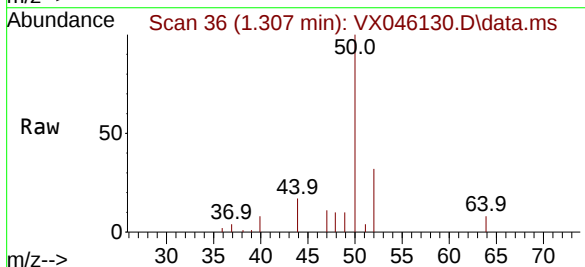
Acq: 12 May 2025 12:03

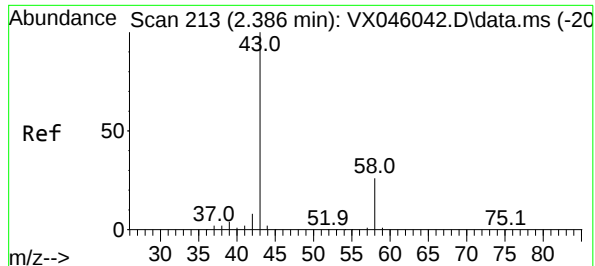
Tgt Ion: 50 Resp: 8948

Ion Ratio Lower Upper

50 100

52 32.0 25.4 38.2

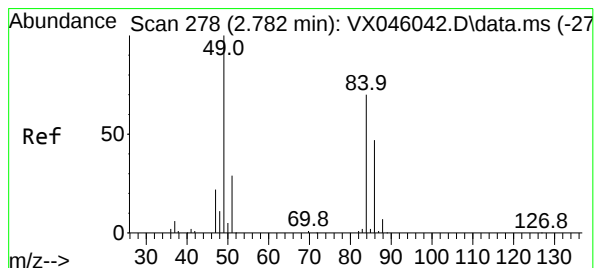
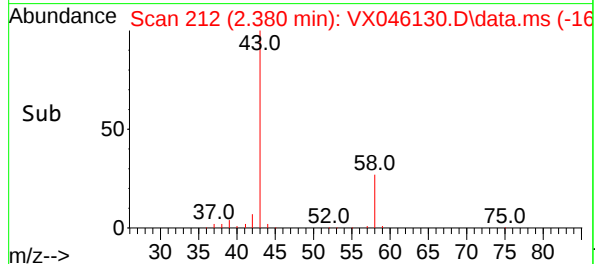
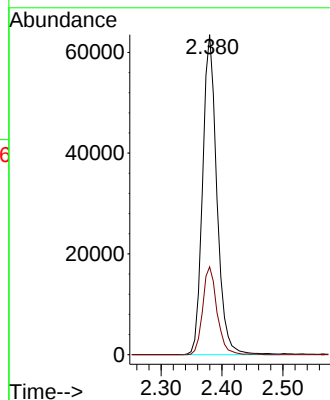
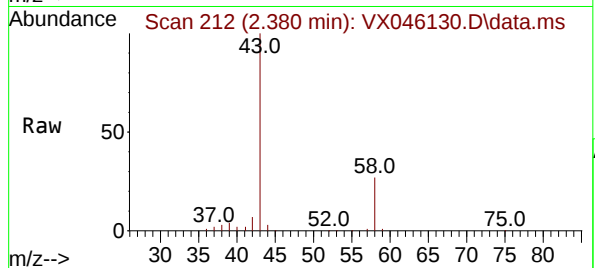




#16
Acetone
Concen: 201.350 ug/l
RT: 2.380 min Scan# 213
Delta R.T. -0.006 min
Lab File: VX046130.D
Acq: 12 May 2025 12:03

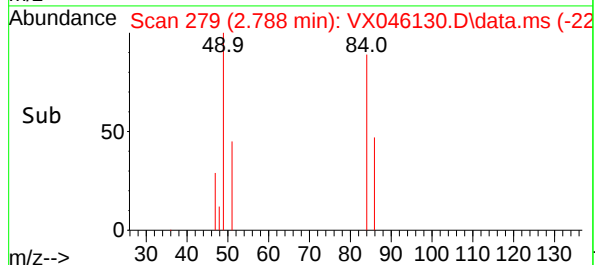
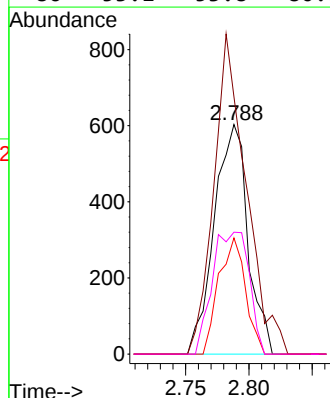
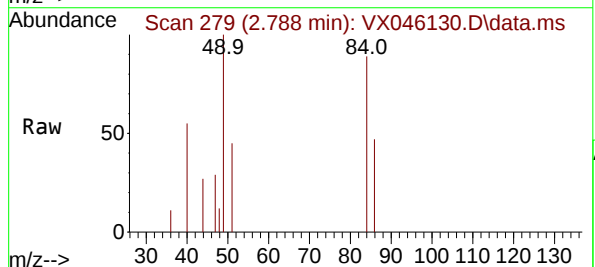
Instrument :
MSVOA_X
ClientSampleId :
IDW-AQ-DRUM-633-05092025

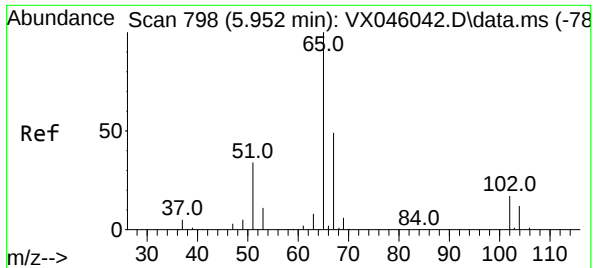
Tgt Ion: 43 Resp: 103494
Ion Ratio Lower Upper
43 100
58 27.4 21.2 31.8



#20
Methylene Chloride
Concen: 1.130 ug/l
RT: 2.788 min Scan# 279
Delta R.T. 0.006 min
Lab File: VX046130.D
Acq: 12 May 2025 12:03

Tgt Ion: 84 Resp: 1113
Ion Ratio Lower Upper
84 100
49 112.1 113.9 170.9#
51 50.6 33.5 50.3#
86 53.1 53.8 80.8#





#33

1,2-Dichloroethane-d4

Concen: 53.174 ug/l

RT: 5.952 min Scan# 798

Delta R.T. -0.000 min

Lab File: VX046130.D

Acq: 12 May 2025 12:03

Instrument :

MSVOA_X

ClientSampleId :

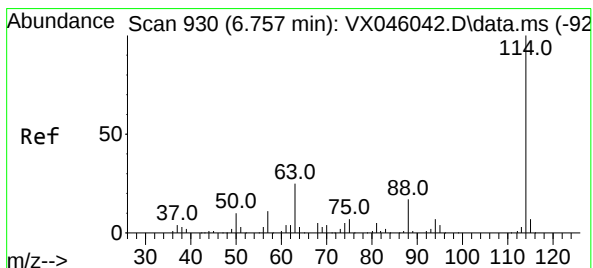
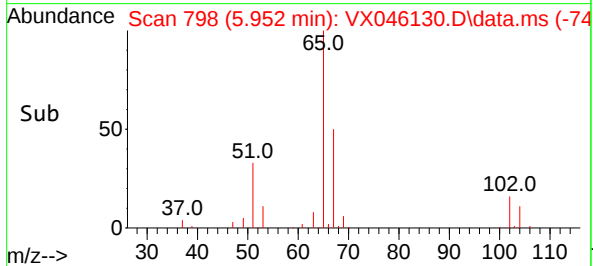
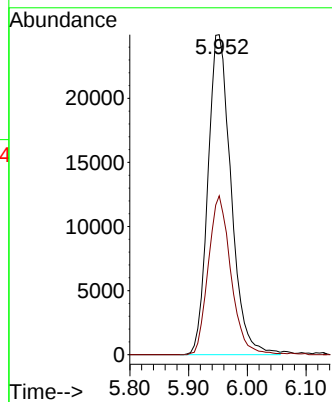
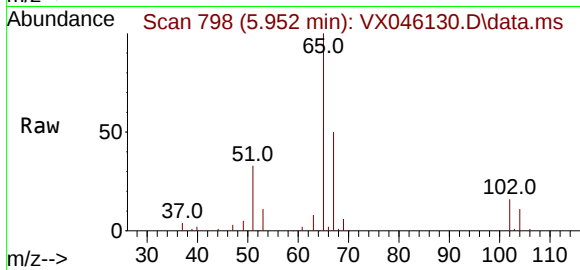
IDW-AQ-DRUM-633-05092025

Tgt Ion: 65 Resp: 68166

Ion Ratio Lower Upper

65 100

67 48.7 0.0 99.0



#34

1,4-Difluorobenzene

Concen: 50.000 ug/l

RT: 6.757 min Scan# 930

Delta R.T. -0.000 min

Lab File: VX046130.D

Acq: 12 May 2025 12:03

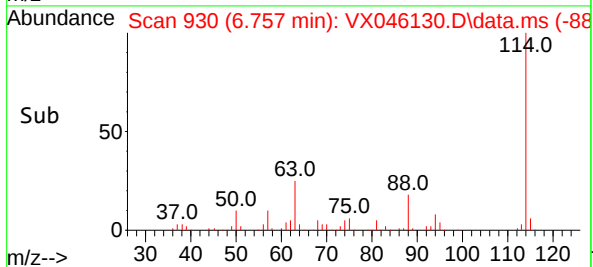
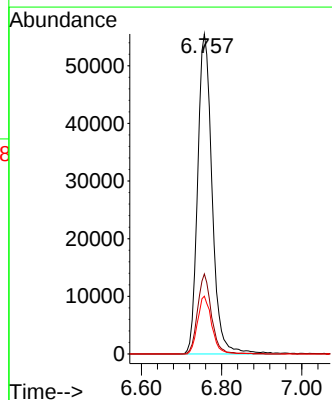
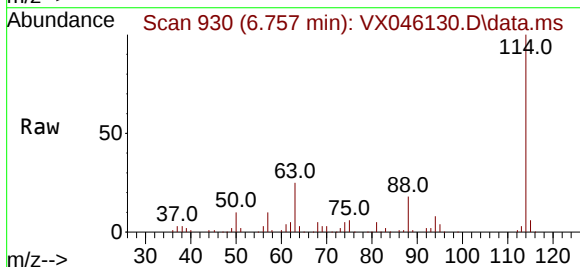
Tgt Ion: 114 Resp: 138646

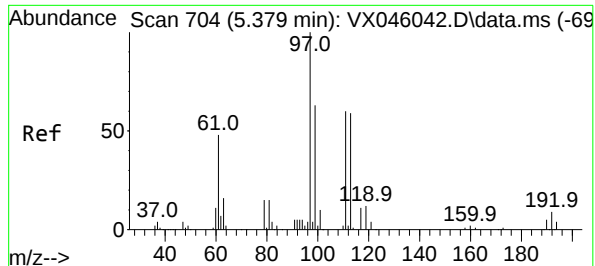
Ion Ratio Lower Upper

114 100

63 25.0 0.0 49.2

88 18.1 0.0 33.6





#35

Dibromofluoromethane

Concen: 50.115 ug/l

RT: 5.379 min Scan# 704

Delta R.T. -0.000 min

Lab File: VX046130.D

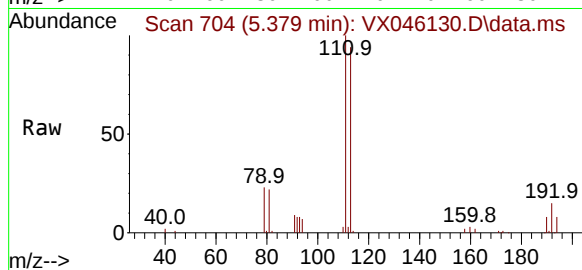
Acq: 12 May 2025 12:03

Instrument :

MSVOA_X

ClientSampleId :

IDW-AQ-DRUM-633-05092025



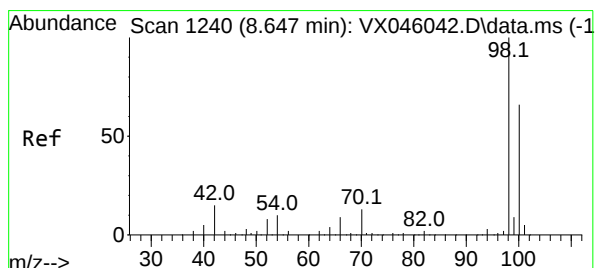
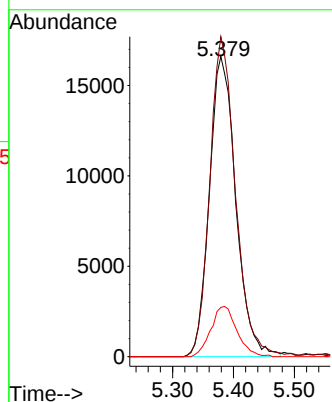
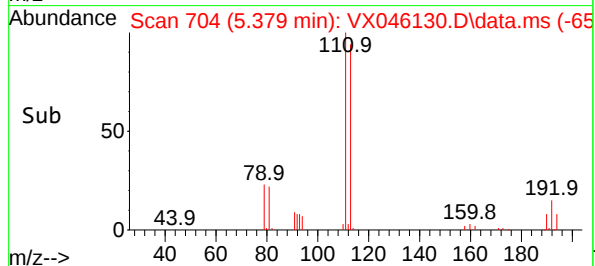
Tgt Ion:113 Resp: 50035

Ion Ratio Lower Upper

113 100

111 103.6 83.1 124.7

192 16.6 13.3 19.9



#50

Toluene-d8

Concen: 48.763 ug/l

RT: 8.647 min Scan# 1240

Delta R.T. -0.000 min

Lab File: VX046130.D

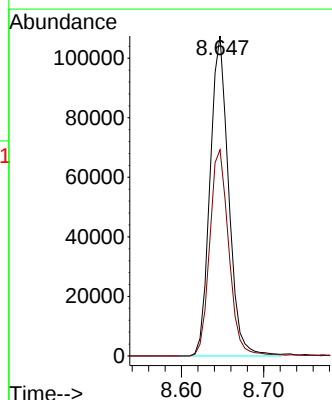
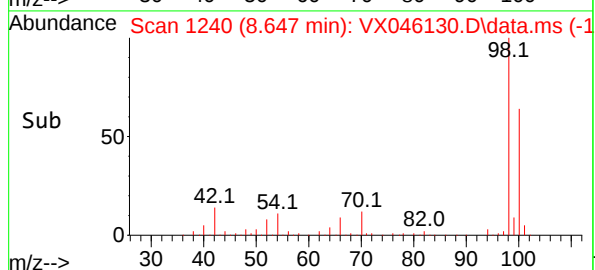
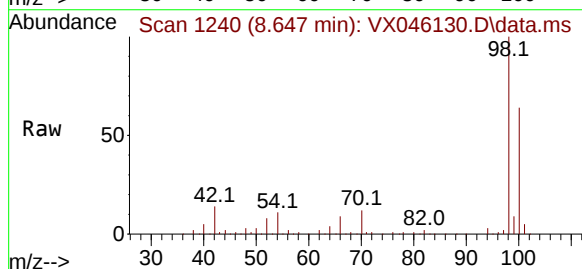
Acq: 12 May 2025 12:03

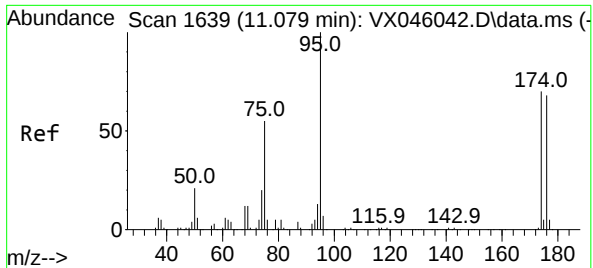
Tgt Ion: 98 Resp: 168506

Ion Ratio Lower Upper

98 100

100 66.6 53.5 80.3

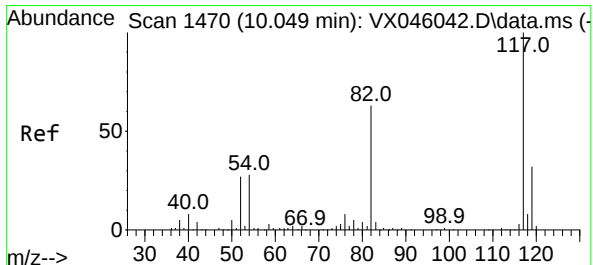
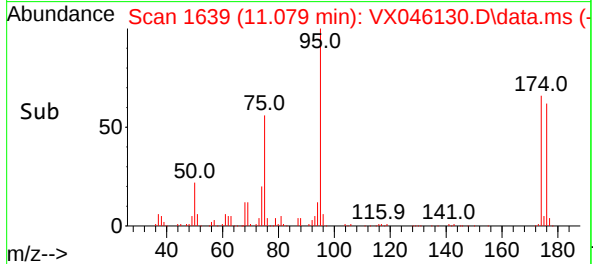
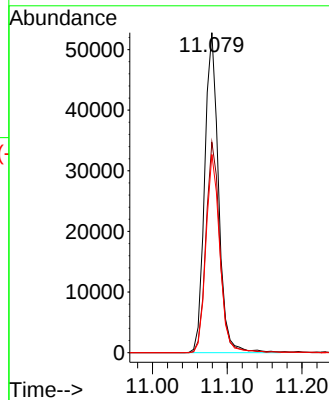
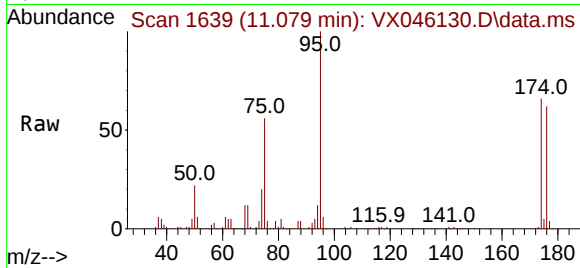




#62
4-Bromofluorobenzene
Concen: 51.255 ug/l
RT: 11.079 min Scan# 1639
Delta R.T. -0.000 min
Lab File: VX046130.D
Acq: 12 May 2025 12:03

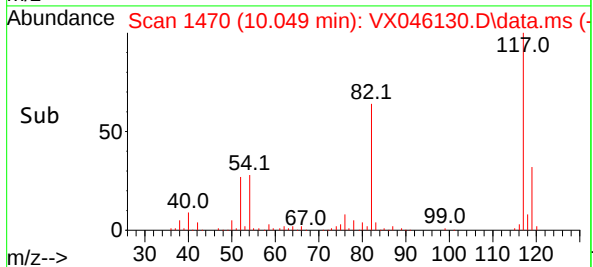
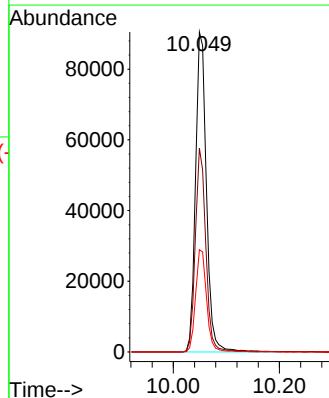
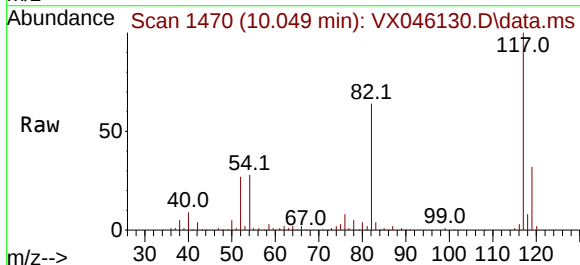
Instrument :
MSVOA_X
ClientSampleId :
IDW-AQ-DRUM-633-05092025

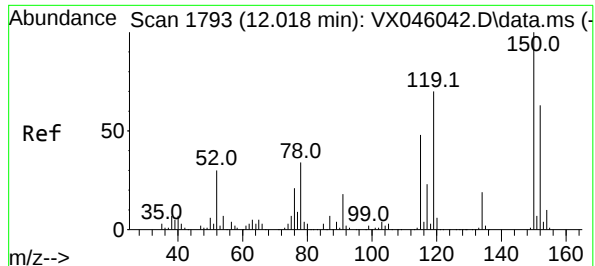
Tgt Ion: 95 Resp: 67939
Ion Ratio Lower Upper
95 100
174 66.7 0.0 135.8
176 62.1 0.0 131.4



#63
Chlorobenzene-d5
Concen: 50.000 ug/l
RT: 10.049 min Scan# 1470
Delta R.T. -0.000 min
Lab File: VX046130.D
Acq: 12 May 2025 12:03

Tgt Ion: 117 Resp: 129122
Ion Ratio Lower Upper
117 100
82 63.7 50.6 76.0
119 32.0 25.8 38.6





#72

1,4-Dichlorobenzene-d4

Concen: 50.000 ug/l

RT: 12.018 min Scan# 11

Delta R.T. -0.000 min

Lab File: VX046130.D

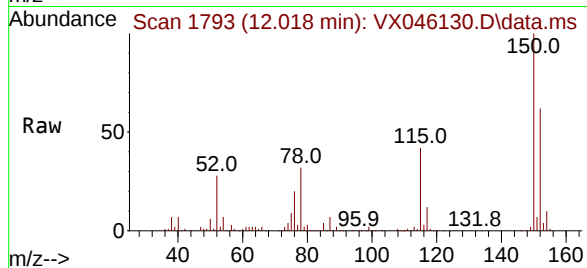
Acq: 12 May 2025 12:03

Instrument :

MSVOA_X

ClientSampleId :

IDW-AQ-DRUM-633-05092025



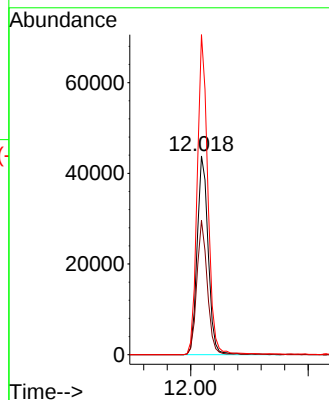
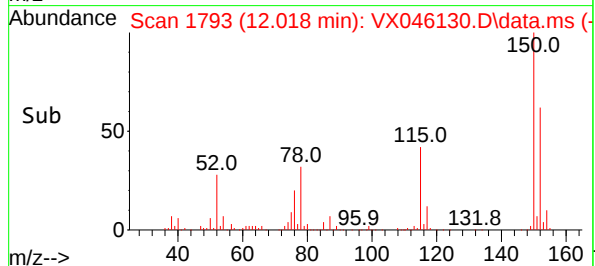
Tgt Ion:152 Resp: 57082

Ion Ratio Lower Upper

152 100

115 64.3 46.9 140.7

150 155.1 0.0 351.0



Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX051225\
 Data File : VX046130.D
 Acq On : 12 May 2025 12:03
 Operator : JC/MD
 Sample : Q2008-01 100X
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 7 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 IDW-AQ-DRUM-633-05092025

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\82X050525W.M
 Title : SW846 8260

Signal : TIC: VX046130.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.240	21	25	32	rBV	14338	23267	4.88%	0.838%
2	1.307	32	36	42	rVB	7792	14978	3.14%	0.540%
3	1.569	69	79	80	rBV5	4270	9028	1.89%	0.325%
4	1.599	80	84	89	rVB6	5179	9207	1.93%	0.332%
5	2.380	205	212	226	rBV	97289	159351	33.39%	5.743%
6	5.379	693	704	721	rBV	56942	169273	35.47%	6.100%
7	5.544	721	731	746	rBV	80494	230095	48.22%	8.292%
8	5.952	789	798	817	rBV	64226	177436	37.18%	6.394%
9	6.757	920	930	946	rBV	142675	349115	73.16%	12.581%
10	7.818	1099	1104	1110	rBV	5221	10851	2.27%	0.391%
11	8.647	1233	1240	1256	rBV	297180	477199	100.00%	17.197%
12	10.049	1465	1470	1483	rBV	311896	436656	91.50%	15.736%
13	11.079	1634	1639	1651	rBV	252991	326330	68.38%	11.760%
14	12.018	1788	1793	1802	rBV	302096	382105	80.07%	13.770%

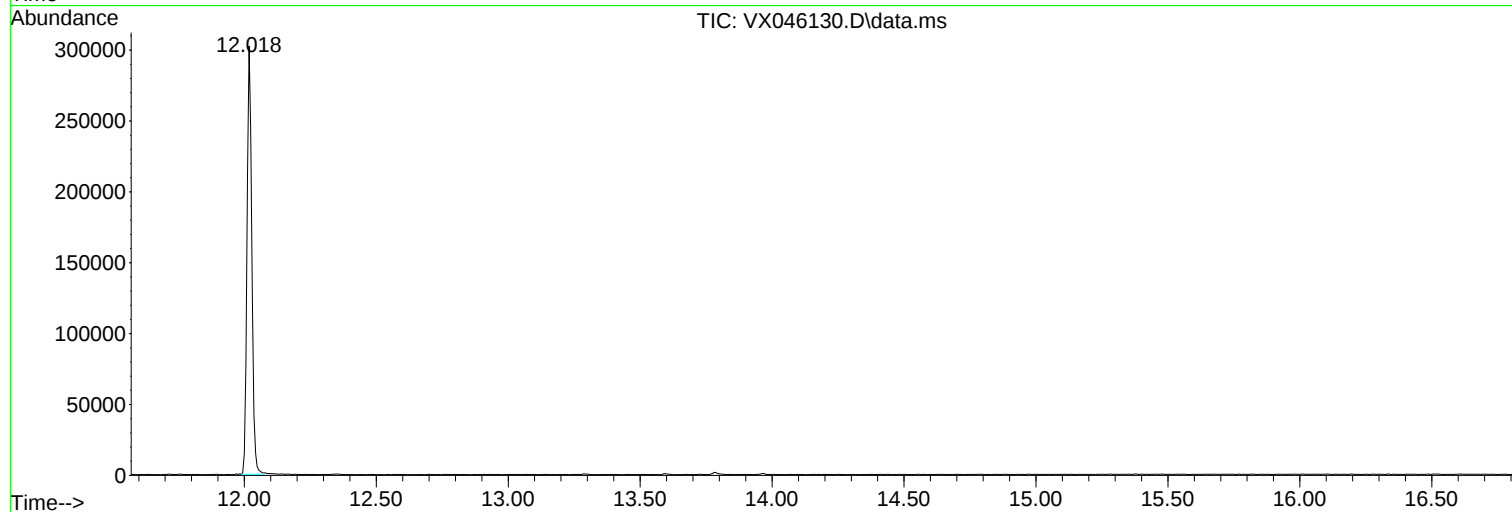
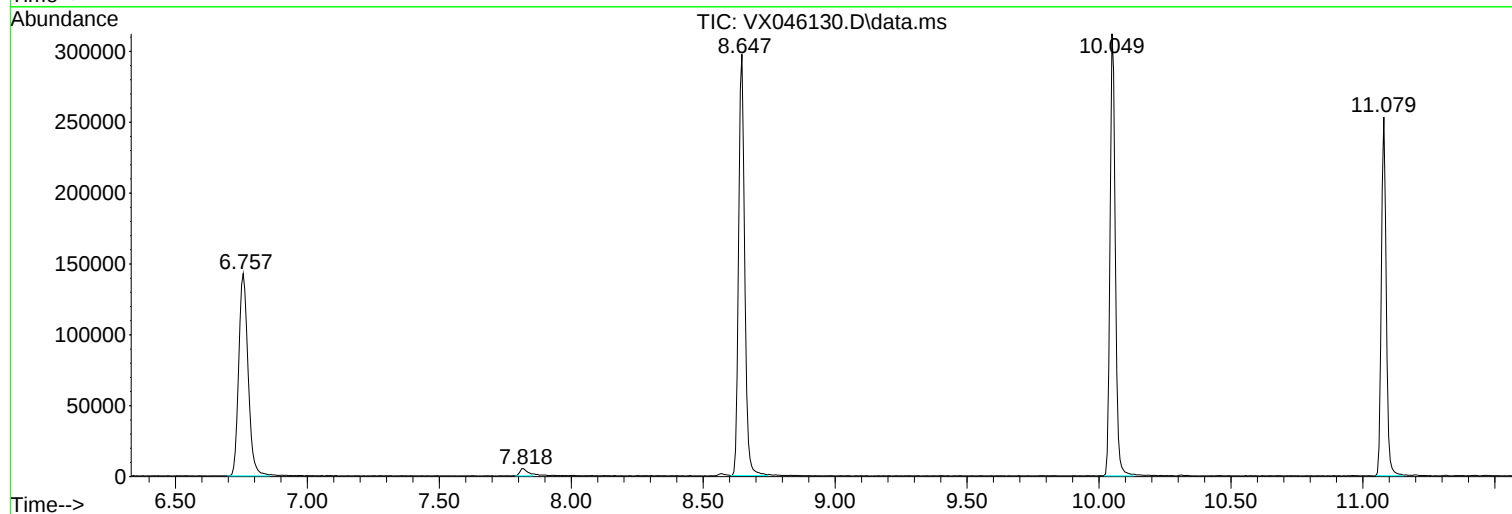
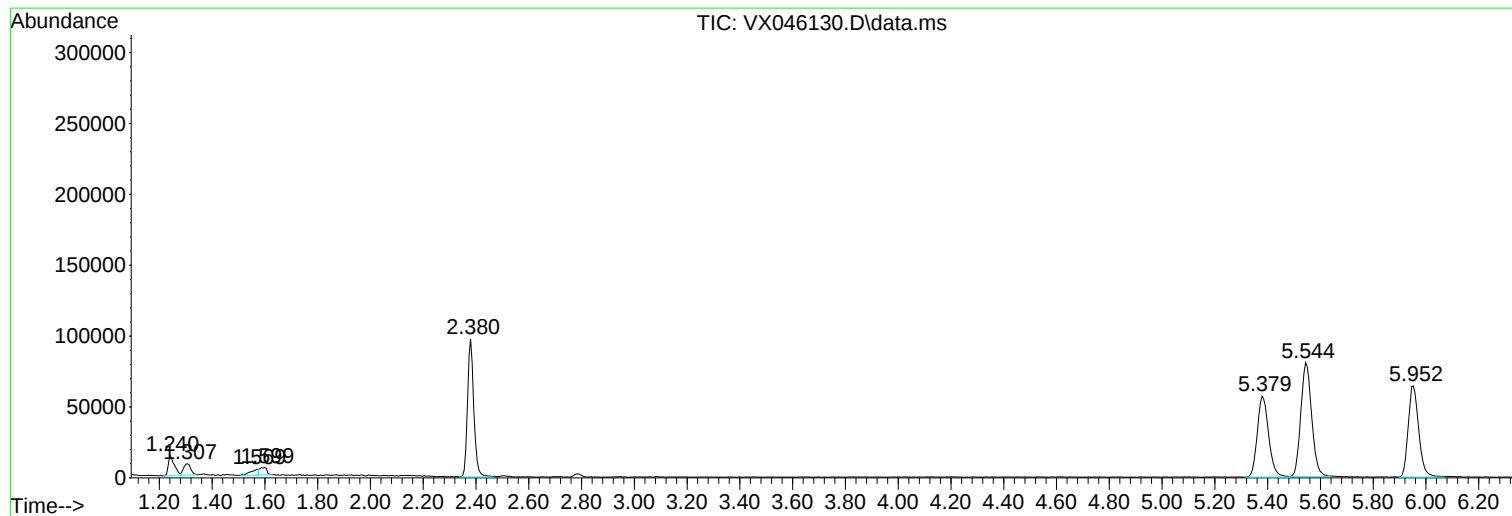
Sum of corrected areas: 2774891

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX051225\
Data File : VX046130.D
Acq On : 12 May 2025 12:03
Operator : JC/MD
Sample : Q2008-01 100X
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
IDW-AQ-DRUM-633-05092025

Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
Quant Title : SW846 8260

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



Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX051225\
Data File : VX046130.D
Acq On : 12 May 2025 12:03
Operator : JC/MD
Sample : Q2008-01 100X
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
IDW-AQ-DRUM-633-05092025

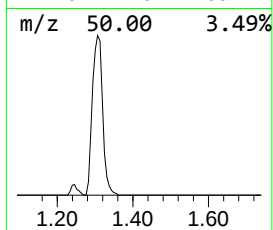
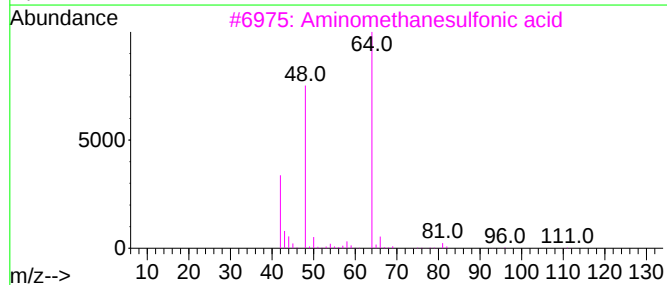
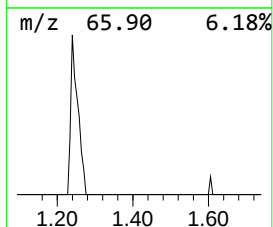
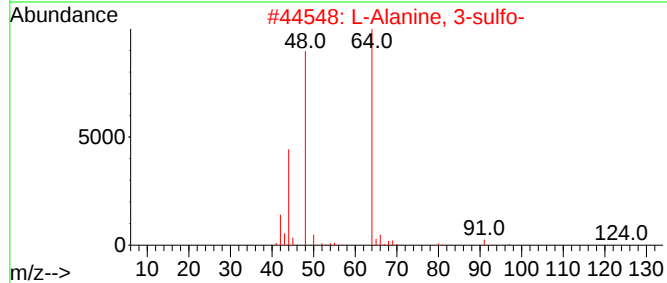
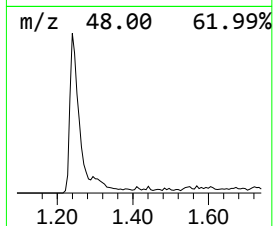
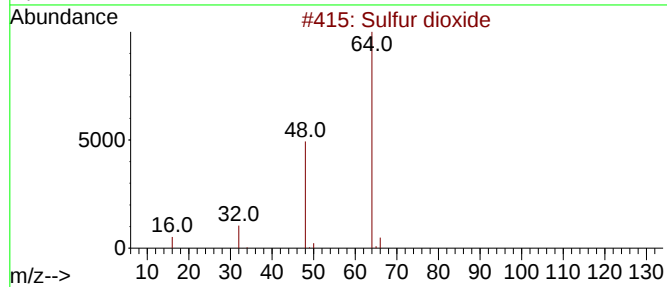
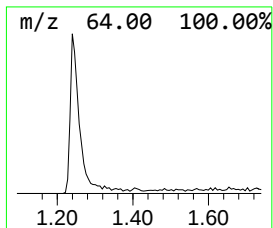
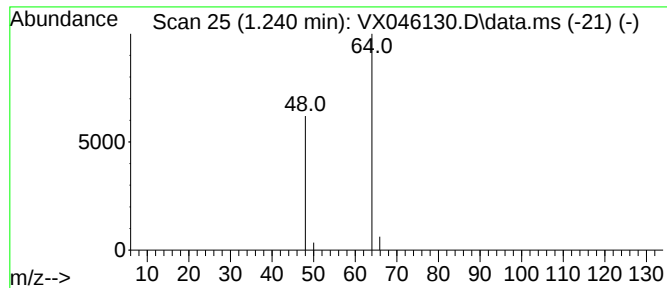
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
Quant Title : SW846 8260

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

Peak Number 1 Sulfur dioxide Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
1.240	5.06 ug/l	23267	Pentafluorobenzene	5.544

Hit#	of	5	Tentative ID	MW	MolForm	CAS#	Qual
1			Sulfur dioxide	64	O2S	007446-09-5	74
2			L-Alanine, 3-sulfo-	169	C3H7NO5S	000498-40-8	64
3			Aminomethanesulfonic acid	111	CH5NO3S	013881-91-9	64
4			Ethene, 1,1-difluoro-	64	C2H2F2	000075-38-7	4
5			Ethyl Chloride	64	C2H5Cl	000075-00-3	3



Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX051225\
Data File : VX046130.D
Acq On : 12 May 2025 12:03
Operator : JC/MD
Sample : Q2008-01 100X
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
IDW-AQ-DRUM-633-05092025

Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.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
Sulfur dioxide	1.240	5.1	ug/l	23267	1	5.544	230095	50.0



CALIBRATION SUMMARY



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

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: CHEMTECH Contract: JAC005
 Lab Code: CHEM Case No.: Q2008 SAS No.: Q2008 SDG No.: Q2008
 Instrument ID: MSVOA_X Calibration Date(s): 05/05/2025 05/05/2025
 Heated Purge: (Y/N) N Calibration Time(s): 11:35 16:27
 GC Column: DB-624UI ID: 0.18 (mm)

LAB FILE ID:	RRF020 = VX046041.D	RRF050 = VX046042.D	RRF100 = VX046043.D					
	RRF150 = VX046044.D	RRF005 = VX046046.D	RRF001 = VX046047.D					
COMPOUND	RRF020	RRF050	RRF100	RRF150	RRF005	RRF001	RRF	% RSD
Dichlorodifluoromethane	0.697	0.864	0.859	0.875	0.639	0.658	0.765	14.6
Chloromethane	0.727	0.775	0.787	0.791	0.679	0.694	0.742	6.6
Vinyl Chloride	0.660	0.710	0.727	0.755	0.619	0.673	0.691	7.2
Bromomethane	0.296	0.326	0.340	0.334	0.305		0.320	5.8
Chloroethane	0.354	0.378	0.329	0.317	0.368	0.467	0.369	14.4
Trichlorofluoromethane	1.035	1.068	0.983	0.985	0.990	1.064	1.021	3.9
1,1,2-Trichlorotrifluoroethane	0.628	0.641	0.629	0.648	0.610	0.633	0.632	2.1
1,1-Dichloroethene	0.565	0.601	0.607	0.625	0.567	0.594	0.593	3.9
Acetone	0.361	0.362	0.361	0.370	0.408	0.380	0.374	4.9
Carbon Disulfide	1.295	1.455	1.522	1.597	1.141	1.423	1.406	11.7
Methyl tert-butyl Ether	2.044	2.160	2.172	2.239	1.908	1.949	2.079	6.4
Methyl Acetate	0.814	0.848	0.845	0.875	0.816	1.006	0.867	8.3
Methylene Chloride	0.689	0.684	0.691	0.691	0.689	0.853	0.716	9.4
trans-1,2-Dichloroethene	0.573	0.610	0.612	0.622	0.557	0.604	0.596	4.3
1,1-Dichloroethane	1.233	1.263	1.263	1.286	1.154	1.116	1.219	5.6
Cyclohexane	1.090	1.128	1.128	1.150	1.059		1.111	3.3
2-Butanone	0.540	0.555	0.558	0.569	0.539	0.495	0.543	4.8
Carbon Tetrachloride	0.528	0.558	0.552	0.577	0.505	0.541	0.544	4.6
cis-1,2-Dichloroethene	0.716	0.737	0.738	0.755	0.642	0.719	0.718	5.5
Bromochloromethane	0.628	0.578	0.595	0.590	0.553	0.576	0.587	4.3
Chloroform	1.287	1.296	1.277	1.300	1.199	1.265	1.271	3
1,1,1-Trichloroethane	1.106	1.131	1.155	1.188	1.013	1.015	1.101	6.6
Methylcyclohexane	0.596	0.641	0.627	0.658	0.587	0.627	0.623	4.3
Benzene	1.426	1.474	1.441	1.477	1.337	1.348	1.417	4.3
1,2-Dichloroethane	0.632	0.627	0.611	0.625	0.594	0.579	0.612	3.5
Trichloroethene	0.344	0.355	0.345	0.362	0.315	0.324	0.341	5.3
1,2-Dichloropropane	0.356	0.371	0.368	0.378	0.324	0.317	0.352	7.4
Bromodichloromethane	0.557	0.577	0.573	0.594	0.498	0.485	0.547	8.2
4-Methyl-2-Pentanone	0.620	0.634	0.630	0.631	0.555	0.561	0.605	6
Toluene	0.884	0.898	0.885	0.904	0.838	0.803	0.869	4.5

* 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.



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

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: CHEMTECH Contract: JAC005
 Lab Code: CHEM Case No.: Q2008 SAS No.: Q2008 SDG No.: Q2008
 Instrument ID: MSVOA_X Calibration Date(s): 05/05/2025 05/05/2025
 Heated Purge: (Y/N) N Calibration Time(s): 11:35 16:27
 GC Column: DB-624UI ID: 0.18 (mm)

LAB FILE ID:	RRF020 = VX046041.D			RRF050 = VX046042.D		RRF100 = VX046043.D		
	RRF150 = VX046044.D			RRF005 = VX046046.D		RRF001 = VX046047.D		
COMPOUND	RRF020	RRF050	RRF100	RRF150	RRF005	RRF001	RRF	% RSD
t-1,3-Dichloropropene	0.468	0.528	0.555	0.591	0.406	0.371	0.487	17.9
cis-1,3-Dichloropropene	0.531	0.578	0.602	0.623	0.469	0.423	0.538	14.6
1,1,2-Trichloroethane	0.349	0.354	0.351	0.356	0.337	0.308	0.343	5.3
2-Hexanone	0.466	0.473	0.477	0.473	0.414	0.385	0.448	8.7
Dibromochloromethane	0.378	0.400	0.415	0.431	0.326	0.306	0.376	13.3
1,2-Dibromoethane	0.359	0.373	0.368	0.381	0.333	0.322	0.356	6.5
Tetrachloroethene	0.390	0.375	0.345	0.344	0.323	0.347	0.354	6.8
Chlorobenzene	1.093	1.098	1.085	1.114	1.046	1.131	1.094	2.7
Ethyl Benzene	1.919	2.022	1.979	2.036	1.816	1.803	1.929	5.2
m/p-Xylenes	0.706	0.740	0.721	0.740	0.678	0.648	0.706	5.2
o-Xylene	0.688	0.727	0.706	0.726	0.639	0.642	0.688	5.7
Styrene	1.135	1.219	1.214	1.230	1.012	0.951	1.127	10.6
Bromoform	0.270	0.304	0.312	0.327	0.236	0.234	0.281	14.2
Isopropylbenzene	3.843	4.130	3.876	4.156	3.562	3.789	3.893	5.7
1,1,2,2-Tetrachloroethane	1.315	1.338	1.284	1.345	1.350	1.552	1.364	7
1,3-Dichlorobenzene	1.633	1.701	1.656	1.730	1.558	1.619	1.649	3.7
1,4-Dichlorobenzene	1.629	1.693	1.639	1.722	1.606	1.817	1.684	4.6
1,2-Dichlorobenzene	1.613	1.696	1.634	1.702	1.577	1.710	1.655	3.3
1,2-Dibromo-3-Chloropropane	0.299	0.322	0.329	0.356	0.248	0.259	0.302	13.9
1,2,4-Trichlorobenzene	0.861	0.981	1.035	1.123	0.842	0.862	0.951	12
1,2,3-Trichlorobenzene	0.921	1.019	1.051	1.107	0.846	0.941	0.981	9.7
1,2-Dichloroethane-d4	0.953	0.910	0.930	0.932	0.935		0.932	1.6
Dibromofluoromethane	0.359	0.355	0.364	0.368	0.354		0.360	1.7
Toluene-d8	1.246	1.223	1.266	1.275	1.221		1.246	2
4-Bromofluorobenzene	0.455	0.470	0.500	0.500	0.464		0.478	4.4

* 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 : 82X050525W.M
 Title : SW846 8260
 Last Update : Tue May 06 07:12:22 2025
 Response Via : Initial Calibration

Calibration Files

1 =VX046047.D 5 =VX046046.D 20 =VX046041.D 50 =VX046042.D 100 =VX046043.D 150 =VX046044.D

	Compound	1	5	20	50	100	150	Avg	%RSD
1) I	Pentafluorobenzene	-----ISTD-----							
2) T	Dichlorodifluo...	0.658	0.639	0.697	0.864	0.859	0.875	0.765	14.62
3) P	Chloromethane	0.694	0.679	0.727	0.775	0.787	0.791	0.742	6.58
4) C	Vinyl Chloride	0.673	0.619	0.660	0.710	0.727	0.755	0.691	7.17#
5) T	Bromomethane		0.305	0.296	0.326	0.340	0.334	0.320	5.84
6) T	Chloroethane	0.467	0.368	0.354	0.378	0.329	0.317	0.369	14.44
7) T	Trichlorofluor...	1.064	0.990	1.035	1.068	0.983	0.985	1.021	3.92
8) T	Diethyl Ether	0.403	0.311	0.340	0.337	0.338	0.355	0.347	8.83
9) T	1,1,2-Trichlor...	0.633	0.610	0.628	0.641	0.629	0.648	0.632	2.10
10) T	Methyl Iodide		0.608	0.767	0.806	0.793	0.763	0.747	10.68
11) T	Tert butyl alc...		0.114	0.122	0.129	0.144	0.146	0.131	10.45
12) CM	1,1-Dichloroet...	0.594	0.567	0.565	0.601	0.607	0.625	0.593	3.94#
13) T	Acrolein		0.117	0.158	0.152	0.154	0.163	0.149	12.33
14) T	Allyl chloride	1.052	1.058	1.127	1.179	1.187	1.196	1.133	5.75
15) T	Acrylonitrile	0.363	0.345	0.378	0.388	0.381	0.390	0.374	4.52
16) T	Acetone	0.380	0.408	0.361	0.362	0.361	0.370	0.374	4.90
17) T	Carbon Disulfide	1.423	1.141	1.295	1.455	1.522	1.597	1.406	11.68
18) T	Methyl Acetate	1.006	0.816	0.814	0.848	0.845	0.875	0.867	8.27
19) T	Methyl tert-bu...	1.949	1.908	2.044	2.160	2.172	2.239	2.079	6.39
20) T	Methylene Chlo...	0.853	0.689	0.689	0.684	0.691	0.691	0.716	9.39
21) T	trans-1,2-Dich...	0.604	0.557	0.573	0.610	0.612	0.622	0.596	4.27
22) T	Diisopropyl ether	2.095	1.924	2.219	2.278	2.295	2.321	2.189	6.97
23) T	Vinyl Acetate	1.660	1.698	1.928	2.048	2.082	2.134	1.925	10.52
24) P	1,1-Dichloroet...	1.116	1.154	1.233	1.263	1.263	1.286	1.219	5.60
25) T	2-Butanone	0.495	0.539	0.540	0.555	0.558	0.569	0.543	4.77
26) T	2,2-Dichloropr...	0.965	0.850	0.910	0.957	1.003	1.039	0.954	7.03
27) T	cis-1,2-Dichlo...	0.719	0.642	0.716	0.737	0.738	0.755	0.718	5.55
28) T	Bromochloromet...	0.576	0.553	0.628	0.578	0.595	0.590	0.587	4.28
29) T	Tetrahydrofuran	0.318	0.318	0.340	0.350	0.351	0.362	0.340	5.36
30) C	Chloroform	1.265	1.199	1.287	1.296	1.277	1.300	1.271	2.95#
31) T	Cyclohexane		1.059	1.090	1.128	1.128	1.150	1.111	3.26
32) T	1,1,1-Trichlor...	1.015	1.013	1.106	1.131	1.155	1.188	1.101	6.60
33) S	1,2-Dichloroet...		0.935	0.953	0.910	0.930	0.932	0.932	1.65
34) I	1,4-Difluorobenzene	-----ISTD-----							
35) S	Dibromofluorom...		0.354	0.359	0.355	0.364	0.368	0.360	1.70
36) T	1,1-Dichloropr...	0.493	0.462	0.463	0.495	0.483	0.505	0.484	3.68
37) T	Ethyl Acetate	0.586	0.582	0.569	0.611	0.609	0.631	0.598	3.83
38) T	Carbon Tetrach...	0.541	0.505	0.528	0.558	0.552	0.577	0.544	4.61
39) T	Methylcyclohexane	0.627	0.587	0.596	0.641	0.627	0.658	0.623	4.34
40) TM	Benzene	1.348	1.337	1.426	1.474	1.441	1.477	1.417	4.30
41) T	Methacrylonitrile	0.233	0.288	0.318	0.346	0.343	0.348	0.313	14.50
42) TM	1,2-Dichloroet...	0.579	0.594	0.632	0.627	0.611	0.625	0.612	3.45
43) T	Isopropyl Acetate	0.764	0.826	0.905	0.963	0.982	1.030	0.912	11.05
44) TM	Trichloroethene	0.324	0.315	0.344	0.355	0.345	0.362	0.341	5.28
45) C	1,2-Dichloropr...	0.317	0.324	0.356	0.371	0.368	0.378	0.352	7.37#
46) T	Dibromomethane	0.263	0.262	0.285	0.287	0.280	0.289	0.278	4.35
47) T	Bromodichlorom...	0.485	0.498	0.557	0.577	0.573	0.594	0.547	8.22
48) T	Methyl methacr...	0.370	0.426	0.465	0.502	0.500	0.531	0.466	12.75
49) T	1,4-Dioxane	0.007	0.009	0.009	0.009	0.009	0.010	0.009	8.45
50) S	Toluene-d8		1.221	1.246	1.223	1.266	1.275	1.246	1.95
51) T	4-Methyl-2-Pen...	0.561	0.555	0.620	0.634	0.630	0.631	0.605	6.04
52) CM	Toluene	0.803	0.838	0.884	0.898	0.885	0.904	0.869	4.54#
53) T	t-1,3-Dichloro...	0.371	0.406	0.468	0.528	0.555	0.591	0.487	17.86
54) T	cis-1,3-Dichlo...	0.423	0.469	0.531	0.578	0.602	0.623	0.538	14.61
55) T	1,1,2-Trichlor...	0.308	0.337	0.349	0.354	0.351	0.356	0.343	5.30
56) T	Ethyl methacry...	0.377	0.508	0.540	0.595	0.617	0.639	0.546	17.58

Method Path : Z:\voasrv\HPCHEM1\MSVOA_X\Method\
 Method File : 82X050525W.M

57)	T	1,3-Dichloropr...	0.610	0.601	0.618	0.623	0.613	0.627	0.615	1.53
58)	T	2-Chloroethyl ...	0.230	0.247	0.270	0.307	0.303	0.313	0.278	12.41
59)	T	2-Hexanone	0.385	0.414	0.466	0.473	0.477	0.473	0.448	8.69
60)	T	Dibromochlorom...	0.306	0.326	0.378	0.400	0.415	0.431	0.376	13.28
61)	T	1,2-Dibromoethane	0.322	0.333	0.359	0.373	0.368	0.381	0.356	6.54
62)	S	4-Bromofluorob...		0.464	0.455	0.470	0.500	0.500	0.478	4.41
63)	I	Chlorobenzene-d5	-----ISTD-----							
64)	T	Tetrachloroethene	0.347	0.323	0.390	0.375	0.345	0.344	0.354	6.84
65)	PM	Chlorobenzene	1.131	1.046	1.093	1.098	1.085	1.114	1.094	2.65
66)	T	1,1,1,2-Tetrac...	0.369	0.341	0.365	0.390	0.382	0.395	0.374	5.22
67)	C	Ethyl Benzene	1.803	1.816	1.919	2.022	1.979	2.036	1.929	5.24#
68)	T	m/p-Xylenes	0.648	0.678	0.706	0.740	0.721	0.740	0.706	5.21
69)	T	o-Xylene	0.642	0.639	0.688	0.727	0.706	0.726	0.688	5.75
70)	T	Styrene	0.951	1.012	1.135	1.219	1.214	1.230	1.127	10.56
71)	P	Bromoform	0.234	0.236	0.270	0.304	0.312	0.327	0.281	14.17
72)	I	1,4-Dichlorobenzen...	-----ISTD-----							
73)	T	Isopropylbenzene	3.789	3.562	3.843	4.130	3.876	4.156	3.893	5.72
74)	T	N-amyl acetate	1.715	1.652	1.846	2.067	2.068	2.192	1.924	11.32
75)	P	1,1,2,2-Tetrac...	1.552	1.350	1.315	1.338	1.284	1.345	1.364	6.97
76)	T	1,2,3-Trichlor...	1.405	1.167	1.151	1.187	1.131	1.181	1.204	8.36
77)	T	Bromobenzene	0.926	0.862	0.896	0.928	0.883	0.928	0.904	3.08
78)	T	n-propylbenzene	4.272	4.186	4.394	4.854	4.583	4.868	4.526	6.45
79)	T	2-Chlorotoluene	3.184	2.748	2.832	2.994	2.805	2.953	2.919	5.45
80)	T	1,3,5-Trimethy...	3.036	3.053	3.275	3.487	3.255	3.405	3.252	5.60
81)	T	trans-1,4-Dich...		0.269	0.335	0.385	0.410	0.449	0.370	18.91
82)	T	4-Chlorotoluene	3.226	2.939	3.196	3.430	3.255	3.379	3.238	5.32
83)	T	tert-Butylbenzene	3.341	3.098	3.115	3.435	3.255	3.411	3.276	4.44
84)	T	1,2,4-Trimethy...	3.150	3.034	3.274	3.522	3.335	3.444	3.293	5.52
85)	T	sec-Butylbenzene	3.708	3.767	3.937	4.282	4.095	4.343	4.022	6.55
86)	T	p-Isopropyltol...	3.025	3.084	3.206	3.555	3.450	3.599	3.320	7.44
87)	T	1,3-Dichlorobe...	1.619	1.558	1.633	1.701	1.656	1.729	1.649	3.71
88)	T	1,4-Dichlorobe...	1.817	1.606	1.629	1.693	1.639	1.722	1.684	4.64
89)	T	n-Butylbenzene	2.443	2.650	2.748	3.147	3.139	3.346	2.912	12.00
90)	T	Hexachloroethane	0.511	0.523	0.551	0.622	0.622	0.680	0.585	11.44
91)	T	1,2-Dichlorobe...	1.710	1.577	1.613	1.696	1.634	1.702	1.655	3.34
92)	T	1,2-Dibromo-3-...	0.259	0.248	0.299	0.322	0.329	0.356	0.302	13.89
93)	T	1,2,4-Trichlor...	0.862	0.842	0.861	0.981	1.035	1.123	0.951	12.03
94)	T	Hexachlorobuta...	0.393	0.414	0.394	0.427	0.418	0.445	0.415	4.79
95)	T	Naphthalene	3.499	2.929	3.204	3.613	3.690	3.984	3.487	10.69
96)	T	1,2,3-Trichlor...	0.941	0.846	0.921	1.019	1.051	1.107	0.981	9.74

(#) = Out of Range

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX050525\
 Data File : VX046041.D
 Acq On : 05 May 2025 11:35
 Operator : JC/MD
 Sample : VSTDICC020
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 5 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDICC020

Manual Integrations
 APPROVED

Reviewed By : John Carlone 05/06/2025
 Supervised By : Mahesh Dadoda 05/06/2025

Quant Time: May 06 06:08:45 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
 Quant Title : SW846 8260
 QLast Update : Tue May 06 06:04:56 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	5.543	168	83671	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.757	114	147096	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.055	117	127829	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.018	152	60503	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.952	65	31909	12.820	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery =	25.640%#		
35) Dibromofluoromethane	5.385	113	21112	12.804	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery =	25.600%#		
50) Toluene-d8	8.646	98	73333	13.200	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery =	26.400%#		
62) 4-Bromofluorobenzene	11.079	95	26760	13.236	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery =	26.480%#		
Target Compounds					Qvalue	
2) Dichlorodifluoromethane	1.166	85	23341	12.638	ug/l	96
3) Chloromethane	1.306	50	24316	13.371	ug/l	98
4) Vinyl Chloride	1.373	62	22096	13.868	ug/l	94
5) Bromomethane	1.593	94	9920	12.279	ug/l	93
6) Chloroethane	1.666	64	11832	14.414	ug/l	95
7) Trichlorofluoromethane	1.873	101	34636	14.271	ug/l	100
8) Diethyl Ether	2.129	74	11392	14.278	ug/l	94
9) 1,1,2-Trichlorotrifluo...	2.324	101	21027	14.499	ug/l	98
10) Methyl Iodide	2.446	142	25661	15.070	ug/l	99
11) Tert butyl alcohol	2.971	59	20370	68.662	ug/l	97
12) 1,1-Dichloroethene	2.312	96	18899	13.385	ug/l	98
13) Acrolein	2.233	56	26427	76.689	ug/l	95
14) Allyl chloride	2.660	41	37708	14.133	ug/l	99
15) Acrylonitrile	3.062	53	63290	71.312	ug/l	98
16) Acetone	2.379	43	60363	70.884	ug/l	99
17) Carbon Disulfide	2.501	76	43348	13.251	ug/l	100
18) Methyl Acetate	2.702	43	27234	13.397	ug/l	99
19) Methyl tert-butyl Ether	3.111	73	68402	13.890	ug/l	100
20) Methylene Chloride	2.782	84	23050	13.362	ug/l	96
21) trans-1,2-Dichloroethene	3.086	96	19161	13.294	ug/l	96
22) Diisopropyl ether	3.763	45	74257	14.896	ug/l	95
23) Vinyl Acetate	3.720	43	322598	73.230	ug/l	100
24) 1,1-Dichloroethane	3.605	63	41257	14.082	ug/l	98
25) 2-Butanone	4.556	43	90331	73.489	ug/l	98
26) 2,2-Dichloropropane	4.470	77	30472	13.729	ug/l	100
27) cis-1,2-Dichloroethene	4.483	96	23970	13.791	ug/l	98
28) Bromochloromethane	4.897	49	21028	13.497	ug/l	99
29) Tetrahydrofuran	5.007	42	56819	71.175	ug/l	100
30) Chloroform	5.086	83	43065	14.144	ug/l	95
31) Cyclohexane	5.458	56	36470	14.769	ug/l	95
32) 1,1,1-Trichloroethane	5.379	97	37003	14.092	ug/l	98
36) 1,1-Dichloropropene	5.684	75	27242	14.231	ug/l	98
37) Ethyl Acetate	4.720	43	33458	13.931	ug/l	98
38) Carbon Tetrachloride	5.671	117	31091	14.137	ug/l	98
39) Methylcyclohexane	7.372	83	35077	14.623	ug/l	99
40) Benzene	6.031	78	83898	14.140	ug/l	97

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX050525\
 Data File : VX046041.D
 Acq On : 05 May 2025 11:35
 Operator : JC/MD
 Sample : VSTDICC020
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 5 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDICC020

Manual Integrations
 APPROVED

Reviewed By : John Carlone 05/06/2025
 Supervised By : Mahesh Dadoda 05/06/2025

Quant Time: May 06 06:08:45 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
 Quant Title : SW846 8260
 QLast Update : Tue May 06 06:04:56 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	4.915	41	18732	14.038	ug/l	95
42) 1,2-Dichloroethane	6.080	62	37203	15.165	ug/l	100
43) Isopropyl Acetate	6.342	43	53275	14.512	ug/l	99
44) Trichloroethene	7.116	130	20239	14.429	ug/l	99
45) 1,2-Dichloropropane	7.427	63	20940	14.204	ug/l	98
46) Dibromomethane	7.580	93	16781	14.439	ug/l	99
47) Bromodichloromethane	7.817	83	32762	14.545	ug/l	94
48) Methyl methacrylate	7.689	41	27374	14.521	ug/l	100
49) 1,4-Dioxane	7.659	88	10585	282.442	ug/l	98
51) 4-Methyl-2-Pentanone	8.573	43	182455	75.775	ug/l	98
52) Toluene	8.713	92	52030	14.788	ug/l	99
53) t-1,3-Dichloropropene	8.976	75	27549	14.566	ug/l	100
54) cis-1,3-Dichloropropene	8.366	75	31226	14.154	ug/l	98
55) 1,1,2-Trichloroethane	9.152	97	20536	14.442	ug/l	96
56) Ethyl methacrylate	9.116	69	31787	14.425	ug/l	98
57) 1,3-Dichloropropane	9.305	76	36341	14.417	ug/l	98
58) 2-Chloroethyl Vinyl ether	8.238	63	79531	80.312	ug/l	100
59) 2-Hexanone	9.427	43	137054	74.997	ug/l	99
60) Dibromochloromethane	9.518	129	22267	14.387	ug/l	99
61) 1,2-Dibromoethane	9.610	107	21113	14.458	ug/l	96
64) Tetrachloroethene	9.268	164	19924	15.263	ug/l	97
65) Chlorobenzene	10.079	112	55863	14.202	ug/l	100
66) 1,1,1,2-Tetrachloroethane	10.158	131	18671	14.231	ug/l	98
67) Ethyl Benzene	10.189	91	98113	14.631	ug/l	100
68) m/p-Xylenes	10.299	106	72202	29.806	ug/l	99
69) o-Xylene	10.640	106	35178	14.408	ug/l	96
70) Styrene	10.652	104	58034	14.853	ug/l	98
71) Bromoform	10.799	173	13825	14.030	ug/l #	100
73) Isopropylbenzene	10.957	105	93013	14.096	ug/l	99
74) N-amyl acetate	10.841	43	44684	13.581	ug/l	99
75) 1,1,2,2-Tetrachloroethane	11.207	83	31830	13.560	ug/l	99
76) 1,2,3-Trichloropropane	11.237	75	27845m	11.039	ug/l	
77) Bromobenzene	11.195	156	21695	14.212	ug/l	96
78) n-propylbenzene	11.298	91	106337	14.376	ug/l	99
79) 2-Chlorotoluene	11.359	91	68534	13.748	ug/l	99
80) 1,3,5-Trimethylbenzene	11.451	105	79261	14.468	ug/l	100
81) trans-1,4-Dichloro-2-b...	11.018	75	8104	13.371	ug/l	91
82) 4-Chlorotoluene	11.451	91	77338	14.116	ug/l	100
83) tert-Butylbenzene	11.713	119	75382	14.011	ug/l	99
84) 1,2,4-Trimethylbenzene	11.750	105	79232	14.480	ug/l	99
85) sec-Butylbenzene	11.890	105	95271	14.263	ug/l	100
86) p-Isopropyltoluene	12.006	119	77599	14.387	ug/l	98
87) 1,3-Dichlorobenzene	11.969	146	39520	13.898	ug/l	98
88) 1,4-Dichlorobenzene	12.036	146	39419	14.146	ug/l	99
89) n-Butylbenzene	12.329	91	66506	14.184	ug/l	99
90) Hexachloroethane	12.536	117	13332	13.287	ug/l	100
91) 1,2-Dichlorobenzene	12.335	146	39031	14.092	ug/l	98
92) 1,2-Dibromo-3-Chloropr...	12.938	75	7232	13.535	ug/l	99
93) 1,2,4-Trichlorobenzene	13.585	180	20846	13.745	ug/l	99
94) Hexachlorobutadiene	13.725	225	9524	13.426	ug/l	97
95) Naphthalene	13.774	128	77542	14.040	ug/l	99
96) 1,2,3-Trichlorobenzene	13.956	180	22301	14.023	ug/l	97

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX050525\
Data File : VX046041.D
Acq On : 05 May 2025 11:35
Operator : JC/MD
Sample : VSTDICC020
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC020

Manual Integrations
APPROVED

Reviewed By :John Carlone 05/06/2025
Supervised By :Mahesh Dadoda 05/06/2025

Quant Time: May 06 06:08:45 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
Quant Title : SW846 8260
QLast Update : Tue May 06 06:04:56 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

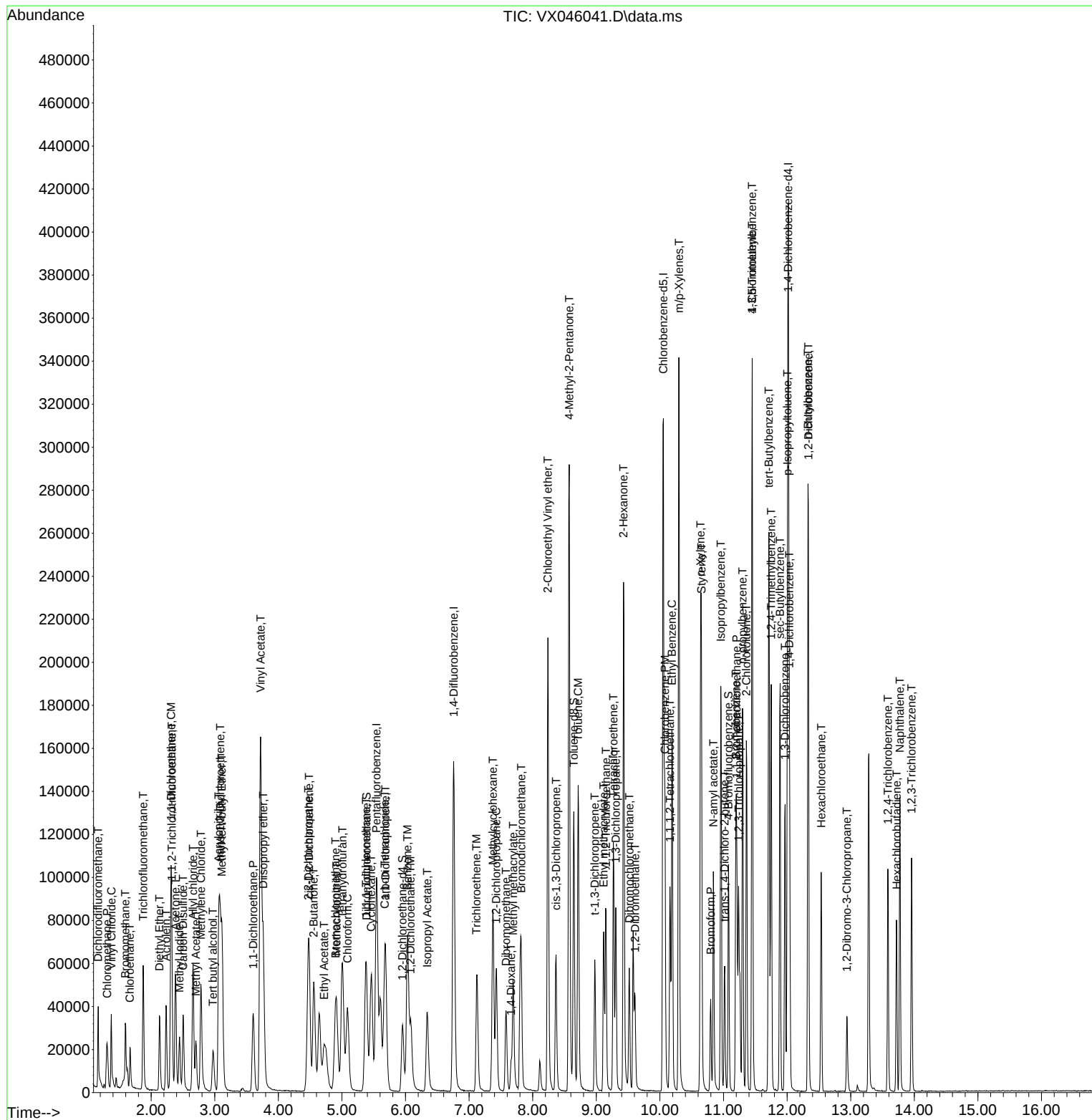
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX050525\
Data File : VX046041.D
Acq On : 05 May 2025 11:35
Operator : JC/MD
Sample : VSTDICC020
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC020

Manual Integrations APPROVED

Reviewed By :John Carlone 05/06/2025
Supervised By :Mahesh Dadoda 05/06/2025

Quant Time: May 06 06:08:45 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
Quant Title : SW846 8260
QLast Update : Tue May 06 06:04:56 2025
Response via : Initial Calibration



Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX050525\
 Data File : VX046042.D
 Acq On : 05 May 2025 11:58
 Operator : JC/MD
 Sample : VSTDICCC050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 6 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDICCC050

Manual Integrations
 APPROVED

Reviewed By : John Carlone 05/06/2025
 Supervised By : Mahesh Dadoda 05/06/2025

Quant Time: May 06 06:09:42 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
 Quant Title : SW846 8260
 QLast Update : Tue May 06 06:04:56 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	5.544	168	97076	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.757	114	167947	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.049	117	146257	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.018	152	67976	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.952	65	88371	30.601	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery =	61.200%#		
35) Dibromofluoromethane	5.379	113	59550	31.633	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery =	63.260%#		
50) Toluene-d8	8.647	98	205479	32.395	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery =	64.780%#		
62) 4-Bromofluorobenzene	11.079	95	79012	34.229	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery =	68.460%#		
Target Compounds					Qvalue	
2) Dichlorodifluoromethane	1.166	85	83826	39.120	ug/l	100
3) Chloromethane	1.307	50	75238	35.658	ug/l	100
4) Vinyl Chloride	1.374	62	68901	37.273	ug/l	100
5) Bromomethane	1.593	94	31648	33.765	ug/l	100
6) Chloroethane	1.666	64	36722	38.558	ug/l	100
7) Trichlorofluoromethane	1.874	101	103693	36.824	ug/l	100
8) Diethyl Ether	2.136	74	32724	35.350	ug/l	100
9) 1,1,2-Trichlorotrifluo...	2.319	101	62251	36.997	ug/l	100
10) Methyl Iodide	2.447	142	78277	39.622	ug/l	100
11) Tert butyl alcohol	2.977	59	62557	181.745	ug/l	100
12) 1,1-Dichloroethene	2.313	96	58334	35.610	ug/l	100
13) Acrolein	2.233	56	73927	184.907	ug/l	100
14) Allyl chloride	2.654	41	114445	36.971	ug/l	100
15) Acrylonitrile	3.062	53	188304	182.874	ug/l	100
16) Acetone	2.386	43	175777	177.910	ug/l	100
17) Carbon Disulfide	2.502	76	141281	37.223	ug/l	100
18) Methyl Acetate	2.703	43	82347	34.915	ug/l	100
19) Methyl tert-butyl Ether	3.111	73	209665	36.695	ug/l	100
20) Methylene Chloride	2.782	84	66412	33.182	ug/l	100
21) trans-1,2-Dichloroethene	3.087	96	59234	35.421	ug/l	100
22) Diisopropyl ether	3.757	45	221172	38.241	ug/l	100
23) Vinyl Acetate	3.721	43	994236	194.528	ug/l	100
24) 1,1-Dichloroethane	3.605	63	122601	36.067	ug/l	100
25) 2-Butanone	4.556	43	269224	188.783	ug/l	100
26) 2,2-Dichloropropane	4.465	77	92857	36.059	ug/l	100
27) cis-1,2-Dichloroethene	4.483	96	71518	35.466	ug/l	100
28) Bromochloromethane	4.898	49	56091	31.031	ug/l	100
29) Tetrahydrofuran	5.001	42	170124	183.679	ug/l	100
30) Chloroform	5.087	83	125850	35.626	ug/l	100
31) Cyclohexane	5.464	56	109459	38.205	ug/l	100
32) 1,1,1-Trichloroethane	5.373	97	109781	36.034	ug/l	100
36) 1,1-Dichloropropene	5.684	75	83215	38.073	ug/l	100
37) Ethyl Acetate	4.715	43	102537	37.394	ug/l	100
38) Carbon Tetrachloride	5.672	117	93712	37.320	ug/l	100
39) Methylcyclohexane	7.373	83	107651	39.307	ug/l	100
40) Benzene	6.031	78	247476	36.530	ug/l	100

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX050525\
 Data File : VX046042.D
 Acq On : 05 May 2025 11:58
 Operator : JC/MD
 Sample : VSTDICCC050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 6 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDICCC050

Manual Integrations
 APPROVED

Reviewed By : John Carlone 05/06/2025
 Supervised By : Mahesh Dadoda 05/06/2025

Quant Time: May 06 06:09:42 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
 Quant Title : SW846 8260
 QLast Update : Tue May 06 06:04:56 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	4.916	41	58082	38.123	ug/l	100
42) 1,2-Dichloroethane	6.080	62	105332	37.605	ug/l	100
43) Isopropyl Acetate	6.336	43	161787	38.598	ug/l	100
44) Trichloroethene	7.123	130	59623	37.230	ug/l	100
45) 1,2-Dichloropropane	7.428	63	62387	37.064	ug/l	100
46) Dibromomethane	7.574	93	48201	36.326	ug/l	100
47) Bromodichloromethane	7.818	83	96916	37.685	ug/l	100
48) Methyl methacrylate	7.690	41	84277	39.157	ug/l	100
49) 1,4-Dioxane	7.659	88	30529	713.477	ug/l	100
51) 4-Methyl-2-Pentanone	8.574	43	532388	193.653	ug/l	100
52) Toluene	8.714	92	150757	37.530	ug/l	100
53) t-1,3-Dichloropropene	8.976	75	88655	41.056	ug/l	100
54) cis-1,3-Dichloropropene	8.360	75	97031	38.521	ug/l	100
55) 1,1,2-Trichloroethane	9.147	97	59499	36.648	ug/l	100
56) Ethyl methacrylate	9.116	69	99947	39.726	ug/l	100
57) 1,3-Dichloropropane	9.305	76	104606	36.347	ug/l	100
58) 2-Chloroethyl Vinyl ether	8.238	63	257678	227.902	ug/l	100
59) 2-Hexanone	9.427	43	396784	190.168	ug/l	100
60) Dibromochloromethane	9.519	129	67198	38.027	ug/l	100
61) 1,2-Dibromoethane	9.604	107	62633	37.567	ug/l	100
64) Tetrachloroethene	9.269	164	54853	36.726	ug/l	100
65) Chlorobenzene	10.079	112	160600	35.686	ug/l	100
66) 1,1,1,2-Tetrachloroethane	10.159	131	57066	38.017	ug/l	100
67) Ethyl Benzene	10.189	91	295712	38.543	ug/l	100
68) m/p-Xylenes	10.299	106	216578	78.142	ug/l	100
69) o-Xylene	10.640	106	106335	38.064	ug/l	100
70) Styrene	10.653	104	178313	39.888	ug/l	100
71) Bromoform	10.799	173	44486	39.457	ug/l #	100
73) Isopropylbenzene	10.957	105	280719	37.865	ug/l	100
74) N-amyl acetate	10.842	43	140509	38.012	ug/l	100
75) 1,1,2,2-Tetrachloroethane	11.207	83	90975	34.495	ug/l	100
76) 1,2,3-Trichloropropane	11.238	75	80678m	28.468	ug/l	
77) Bromobenzene	11.195	156	63053	36.763	ug/l	100
78) n-propylbenzene	11.299	91	329981	39.707	ug/l	100
79) 2-Chlorotoluene	11.360	91	203509	36.336	ug/l	100
80) 1,3,5-Trimethylbenzene	11.451	105	237066	38.516	ug/l	100
81) trans-1,4-Dichloro-2-b...	11.018	75	26179	38.445	ug/l	100
82) 4-Chlorotoluene	11.451	91	233172	37.880	ug/l	100
83) tert-Butylbenzene	11.713	119	233468	38.622	ug/l	100
84) 1,2,4-Trimethylbenzene	11.750	105	239433	38.946	ug/l	100
85) sec-Butylbenzene	11.890	105	291074	38.786	ug/l	100
86) p-Isopropyltoluene	12.006	119	241658	39.879	ug/l	100
87) 1,3-Dichlorobenzene	11.969	146	115651	36.199	ug/l	100
88) 1,4-Dichlorobenzene	12.036	146	115097	36.763	ug/l	100
89) n-Butylbenzene	12.329	91	213899	40.603	ug/l	100
90) Hexachloroethane	12.536	117	42314	37.534	ug/l	100
91) 1,2-Dichlorobenzene	12.335	146	115286	37.047	ug/l	100
92) 1,2-Dibromo-3-Chloropr...	12.939	75	21909	36.496	ug/l	100
93) 1,2,4-Trichlorobenzene	13.585	180	66655	39.117	ug/l	100
94) Hexachlorobutadiene	13.725	225	29007	36.395	ug/l	100
95) Naphthalene	13.774	128	245568	39.575	ug/l	100
96) 1,2,3-Trichlorobenzene	13.957	180	69262	38.765	ug/l	100

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX050525\
Data File : VX046042.D
Acq On : 05 May 2025 11:58
Operator : JC/MD
Sample : VSTDICCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDICCC050

Manual Integrations
APPROVED

Reviewed By :John Carlone 05/06/2025
Supervised By :Mahesh Dadoda 05/06/2025

Quant Time: May 06 06:09:42 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
Quant Title : SW846 8260
QLast Update : Tue May 06 06:04:56 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 :
VSTDICCC050

Manual Integrations APPROVED

Reviewed By :John Carlone 05/06/2025
Supervised By :Mahesh Dadoda 05/06/2025



Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX050525\
 Data File : VX046043.D
 Acq On : 05 May 2025 12:21
 Operator : JC/MD
 Sample : VSTDICC100
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 7 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDICC100

Manual Integrations
 APPROVED

Reviewed By : John Carlone 05/06/2025
 Supervised By : Mahesh Dadoda 05/06/2025

Quant Time: May 06 06:10:38 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
 Quant Title : SW846 8260
 QLast Update : Tue May 06 06:04:56 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	5.550	168	87028	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.757	114	152958	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.049	117	135214	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.018	152	66369	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.952	65	161877	62.526	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 125.060%#			
35) Dibromofluoromethane	5.379	113	111455	65.006	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 130.020%#			
50) Toluene-d8	8.647	98	387230	67.031	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery = 134.060%#			
62) 4-Bromofluorobenzene	11.079	95	153085	72.818	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery = 145.640%#			
Target Compounds					Qvalue	
2) Dichlorodifluoromethane	1.166	85	149508	77.828	ug/l	99
3) Chloromethane	1.307	50	136937	72.392	ug/l	98
4) Vinyl Chloride	1.374	62	126609	76.398	ug/l	98
5) Bromomethane	1.593	94	59246	70.507	ug/l	99
6) Chloroethane	1.660	64	57332	67.148	ug/l	99
7) Trichlorofluoromethane	1.867	101	171042	67.754	ug/l	99
8) Diethyl Ether	2.136	74	58762	70.807	ug/l	100
9) 1,1,2-Trichlorotrifluo...	2.319	101	109520	72.604	ug/l	99
10) Methyl Iodide	2.440	142	138045	77.943	ug/l	100
11) Tert butyl alcohol	2.995	59	125094	405.394	ug/l	100
12) 1,1-Dichloroethene	2.306	96	105566	71.884	ug/l	96
13) Acrolein	2.239	56	134456	375.132	ug/l	99
14) Allyl chloride	2.660	41	206519	74.419	ug/l	98
15) Acrylonitrile	3.068	53	331142	358.723	ug/l	97
16) Acetone	2.386	43	314383	354.936	ug/l	98
17) Carbon Disulfide	2.501	76	264956	77.867	ug/l	100
18) Methyl Acetate	2.703	43	147014	69.531	ug/l	96
19) Methyl tert-butyl Ether	3.117	73	378113	73.818	ug/l	100
20) Methylene Chloride	2.782	84	120270	67.030	ug/l	96
21) trans-1,2-Dichloroethene	3.087	96	106606	71.109	ug/l	99
22) Diisopropyl ether	3.763	45	399494	77.048	ug/l	90
23) Vinyl Acetate	3.721	43	1811550	395.363	ug/l	100
24) 1,1-Dichloroethane	3.605	63	219759	72.114	ug/l	99
25) 2-Butanone	4.556	43	485448	379.704	ug/l	100
26) 2,2-Dichloropropane	4.464	77	174579	75.621	ug/l	100
27) cis-1,2-Dichloroethene	4.483	96	128454	71.056	ug/l	99
28) Bromochloromethane	4.891	49	103602	63.932	ug/l	100
29) Tetrahydrofuran	5.001	42	305757	368.234	ug/l	99
30) Chloroform	5.086	83	222253	70.180	ug/l	95
31) Cyclohexane	5.458	56	196302	76.428	ug/l	99
32) 1,1,1-Trichloroethane	5.373	97	201112	73.635	ug/l	98
36) 1,1-Dichloropropene	5.690	75	147873	74.285	ug/l	99
37) Ethyl Acetate	4.714	43	186215	74.565	ug/l	99
38) Carbon Tetrachloride	5.672	117	168946	73.875	ug/l	99
39) Methylcyclohexane	7.372	83	191941	76.952	ug/l	96
40) Benzene	6.031	78	440885	71.457	ug/l	98

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX050525\
 Data File : VX046043.D
 Acq On : 05 May 2025 12:21
 Operator : JC/MD
 Sample : VSTDICC100
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 7 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDICC100

Manual Integrations
 APPROVED

Reviewed By : John Carlone 05/06/2025
 Supervised By : Mahesh Dadoda 05/06/2025

Quant Time: May 06 06:10:38 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
 Quant Title : SW846 8260
 QLast Update : Tue May 06 06:04:56 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	4.916	41	104863	75.574	ug/l	98
42) 1,2-Dichloroethane	6.080	62	187036	73.318	ug/l	99
43) Isopropyl Acetate	6.342	43	300491	78.714	ug/l	100
44) Trichloroethene	7.123	130	105628	72.420	ug/l	98
45) 1,2-Dichloropropane	7.427	63	112554	73.420	ug/l	100
46) Dibromomethane	7.574	93	85728	70.938	ug/l	100
47) Bromodichloromethane	7.818	83	175301	74.845	ug/l	99
48) Methyl methacrylate	7.689	41	153093	78.101	ug/l	99
49) 1,4-Dioxane	7.659	88	57313	1470.687	ug/l	99
51) 4-Methyl-2-Pentanone	8.573	43	963319	384.740	ug/l	100
52) Toluene	8.714	92	270763	74.010	ug/l	100
53) t-1,3-Dichloropropene	8.976	75	169863	86.372	ug/l	100
54) cis-1,3-Dichloropropene	8.366	75	184134	80.264	ug/l	95
55) 1,1,2-Trichloroethane	9.147	97	107264	72.543	ug/l	99
56) Ethyl methacrylate	9.116	69	188717	82.359	ug/l	99
57) 1,3-Dichloropropane	9.305	76	187649	71.590	ug/l	99
58) 2-Chloroethyl Vinyl ether	8.238	63	463169	449.791	ug/l	100
59) 2-Hexanone	9.433	43	729602	383.945	ug/l	100
60) Dibromochloromethane	9.518	129	127012	78.918	ug/l	98
61) 1,2-Dibromoethane	9.610	107	112669	74.200	ug/l	98
64) Tetrachloroethene	9.268	164	93195	67.493	ug/l	96
65) Chlorobenzene	10.079	112	293284	70.490	ug/l	100
66) 1,1,1,2-Tetrachloroethane	10.159	131	103177	74.349	ug/l	99
67) Ethyl Benzene	10.189	91	535122	75.444	ug/l	99
68) m/p-Xylenes	10.299	106	389935	152.181	ug/l	99
69) o-Xylene	10.640	106	190833	73.890	ug/l	97
70) Styrene	10.652	104	328195	79.411	ug/l	100
71) Bromoform	10.799	173	84353	80.927	ug/l #	98
73) Isopropylbenzene	10.957	105	514528	71.083	ug/l	100
74) N-amyl acetate	10.841	43	274553	76.073	ug/l	99
75) 1,1,2,2-Tetrachloroethane	11.213	83	170481	66.207	ug/l	99
76) 1,2,3-Trichloropropane	11.238	75	150182m	54.277	ug/l	
77) Bromobenzene	11.195	156	117151	69.959	ug/l	99
78) n-propylbenzene	11.305	91	608332	74.974	ug/l	100
79) 2-Chlorotoluene	11.360	91	372392	68.100	ug/l	100
80) 1,3,5-Trimethylbenzene	11.451	105	432096	71.903	ug/l	100
81) trans-1,4-Dichloro-2-b...	11.018	75	54398	81.820	ug/l	93
82) 4-Chlorotoluene	11.451	91	432053	71.890	ug/l	100
83) tert-Butylbenzene	11.713	119	432011	73.197	ug/l	99
84) 1,2,4-Trimethylbenzene	11.750	105	442728	73.758	ug/l	100
85) sec-Butylbenzene	11.890	105	543597	74.188	ug/l	100
86) p-Isopropyltoluene	12.006	119	457898	77.393	ug/l	99
87) 1,3-Dichlorobenzene	11.969	146	219753	70.449	ug/l	99
88) 1,4-Dichlorobenzene	12.036	146	217613	71.190	ug/l	99
89) n-Butylbenzene	12.329	91	416602	80.996	ug/l	100
90) Hexachloroethane	12.536	117	82528	74.978	ug/l	100
91) 1,2-Dichlorobenzene	12.335	146	216834	71.367	ug/l	99
92) 1,2-Dibromo-3-Chloropr...	12.939	75	43673	74.512	ug/l	98
93) 1,2,4-Trichlorobenzene	13.585	180	137430	82.605	ug/l	98
94) Hexachlorobutadiene	13.725	225	55494	71.314	ug/l	98
95) Naphthalene	13.774	128	489778	80.842	ug/l	100
96) 1,2,3-Trichlorobenzene	13.957	180	139525	79.981	ug/l	98

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX050525\
Data File : VX046043.D
Acq On : 05 May 2025 12:21
Operator : JC/MD
Sample : VSTDICC100
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC100

Manual Integrations
APPROVED

Reviewed By :John Carlone 05/06/2025
Supervised By :Mahesh Dadoda 05/06/2025

Quant Time: May 06 06:10:38 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
Quant Title : SW846 8260
QLast Update : Tue May 06 06:04:56 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

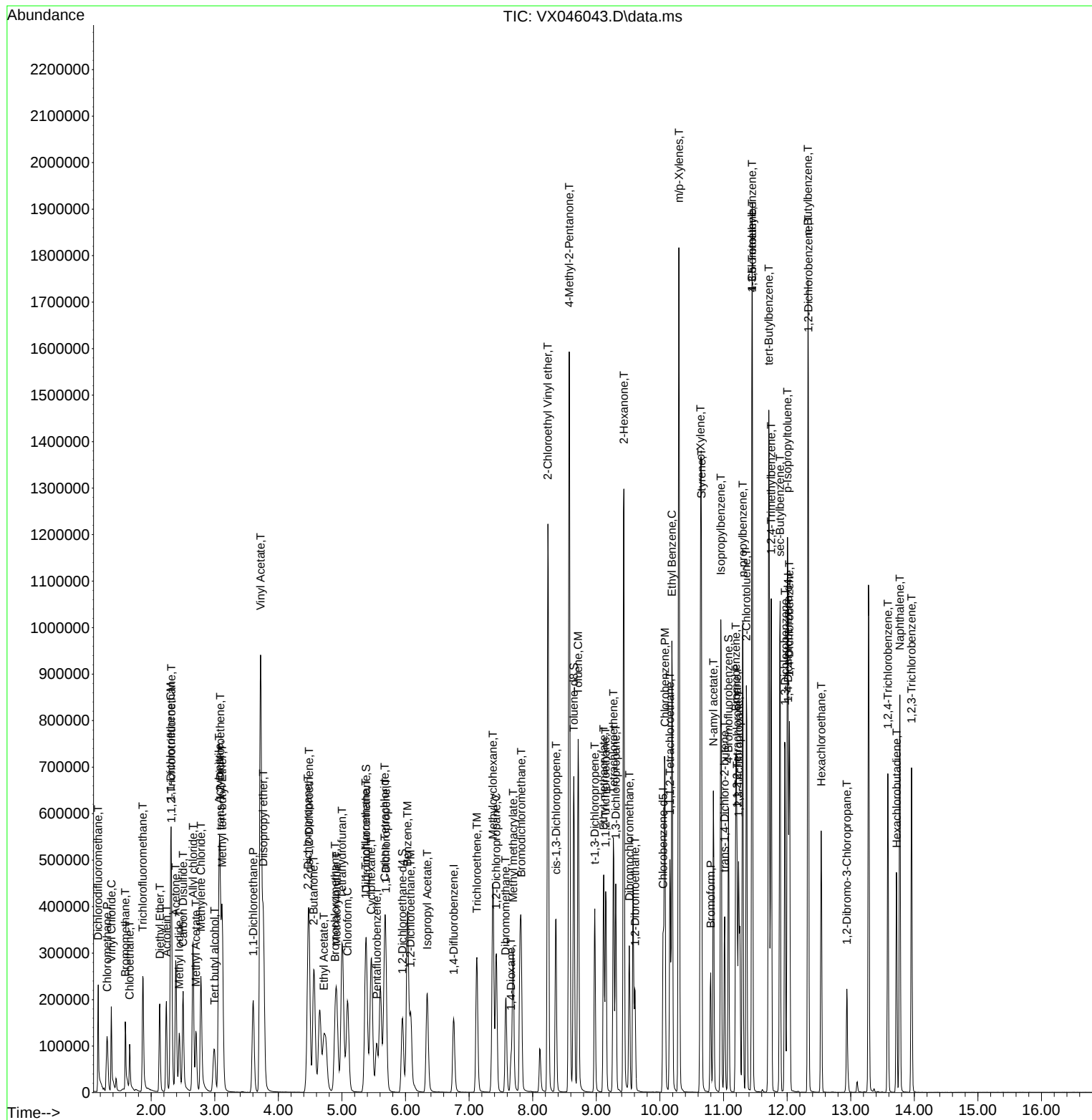
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX050525\
Data File : VX046043.D
Acq On : 05 May 2025 12:21
Operator : JC/MD
Sample : VSTDICC100
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 7 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC100

Manual Integrations APPROVED

Reviewed By :John Carlone 05/06/2025
Supervised By :Mahesh Dadoda 05/06/2025

Quant Time: May 06 06:10:38 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
Quant Title : SW846 8260
QLast Update : Tue May 06 06:04:56 2025
Response via : Initial Calibration



Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX050525\
 Data File : VX046044.D
 Acq On : 05 May 2025 12:45
 Operator : JC/MD
 Sample : VSTDICC150
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 8 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDICC150

Manual Integrations
 APPROVED

Reviewed By :John Carlone 05/06/2025
 Supervised By :Mahesh Dadoda 05/06/2025

Quant Time: May 06 06:11:37 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
 Quant Title : SW846 8260
 QLast Update : Tue May 06 06:04:56 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	5.550	168	82963	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.757	114	144975	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.049	117	128557	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.018	152	60345	50.000	ug/l	# 0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.952	65	231952	93.983	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 187.960%#			
35) Dibromofluoromethane	5.385	113	160168	98.562	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 197.120%#			
50) Toluene-d8	8.647	98	554390	101.252	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery = 202.500%#			
62) 4-Bromofluorobenzene	11.079	95	217536	109.174	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery = 218.340%#			
Target Compounds						
						Qvalue
2) Dichlorodifluoromethane	1.166	85	217793	118.929	ug/l	98
3) Chloromethane	1.307	50	196843	109.161	ug/l	99
4) Vinyl Chloride	1.374	62	187924	118.953	ug/l	100
5) Bromomethane	1.593	94	83008	103.625	ug/l	95
6) Chloroethane	1.660	64	78806	96.822	ug/l	98
7) Trichlorofluoromethane	1.868	101	245108	101.851	ug/l	97
8) Diethyl Ether	2.136	74	88441	111.791	ug/l	95
9) 1,1,2-Trichlorotrifluo...	2.313	101	161404	112.243	ug/l	99
10) Methyl Iodide	2.441	142	189843	112.441	ug/l	100
11) Tert butyl alcohol	3.002	59	181238	616.119	ug/l	100
12) 1,1-Dichloroethene	2.307	96	155451	111.039	ug/l	99
13) Acrolein	2.239	56	203257	594.872	ug/l	98
14) Allyl chloride	2.654	41	297776	112.561	ug/l	98
15) Acrylonitrile	3.069	53	484854	550.973	ug/l	98
16) Acetone	2.392	43	460820	545.754	ug/l	98
17) Carbon Disulfide	2.502	76	397353	122.499	ug/l	100
18) Methyl Acetate	2.709	43	217885	108.099	ug/l	98
19) Methyl tert-butyl Ether	3.117	73	557210	114.112	ug/l	100
20) Methylene Chloride	2.782	84	172035	100.579	ug/l	96
21) trans-1,2-Dichloroethene	3.081	96	154694	108.241	ug/l	96
22) Diisopropyl ether	3.764	45	577610	116.858	ug/l	90
23) Vinyl Acetate	3.721	43	2655751	608.005	ug/l	100
24) 1,1-Dichloroethane	3.605	63	320083	110.182	ug/l	99
25) 2-Butanone	4.562	43	708463	581.292	ug/l	98
26) 2,2-Dichloropropane	4.471	77	258698	117.548	ug/l	100
27) cis-1,2-Dichloroethene	4.483	96	187835	108.994	ug/l	99
28) Bromochloromethane	4.898	49	146923	95.108	ug/l	100
29) Tetrahydrofuran	5.007	42	450456	569.081	ug/l	99
30) Chloroform	5.087	83	323659	107.208	ug/l	95
31) Cyclohexane	5.458	56	286312	116.934	ug/l	99
32) 1,1,1-Trichloroethane	5.373	97	295702	113.572	ug/l	98
36) 1,1-Dichloropropene	5.684	75	219731	116.462	ug/l	99
37) Ethyl Acetate	4.715	43	274312	115.889	ug/l	99
38) Carbon Tetrachloride	5.666	117	250916	115.760	ug/l	99
39) Methylcyclohexane	7.373	83	286311	121.107	ug/l	97
40) Benzene	6.031	78	642178	109.813	ug/l	99

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX050525\
 Data File : VX046044.D
 Acq On : 05 May 2025 12:45
 Operator : JC/MD
 Sample : VSTDICC150
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 8 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDICC150

Manual Integrations
 APPROVED

Reviewed By : John Carlone 05/06/2025
 Supervised By : Mahesh Dadoda 05/06/2025

Quant Time: May 06 06:11:37 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
 Quant Title : SW846 8260
 QLast Update : Tue May 06 06:04:56 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	4.922	41	151424	115.139	ug/l	98
42) 1,2-Dichloroethane	6.080	62	271992	112.492	ug/l	99
43) Isopropyl Acetate	6.342	43	447871	123.780	ug/l	100
44) Trichloroethene	7.117	130	157641	114.032	ug/l	96
45) 1,2-Dichloropropane	7.428	63	164505	113.217	ug/l	99
46) Dibromomethane	7.574	93	125846	109.869	ug/l	100
47) Bromodichloromethane	7.818	83	258326	116.365	ug/l	98
48) Methyl methacrylate	7.690	41	231040	124.356	ug/l	99
49) 1,4-Dioxane	7.665	88	82800	2241.695	ug/l	98
51) 4-Methyl-2-Pentanone	8.574	43	1371275	577.831	ug/l	100
52) Toluene	8.714	92	393323	113.430	ug/l	100
53) t-1,3-Dichloropropene	8.976	75	257233	138.001	ug/l	99
54) cis-1,3-Dichloropropene	8.366	75	271054	124.658	ug/l	95
55) 1,1,2-Trichloroethane	9.147	97	154932	110.551	ug/l	97
56) Ethyl methacrylate	9.116	69	277921	127.968	ug/l	99
57) 1,3-Dichloropropane	9.305	76	272814	109.813	ug/l	99
58) 2-Chloroethyl Vinyl ether	8.244	63	680608	697.344	ug/l	100
59) 2-Hexanone	9.433	43	1028597	571.094	ug/l	99
60) Dibromochloromethane	9.519	129	187497	122.915	ug/l	98
61) 1,2-Dibromoethane	9.604	107	165634	115.087	ug/l	97
64) Tetrachloroethene	9.269	164	132488	100.918	ug/l	96
65) Chlorobenzene	10.080	112	429656	108.615	ug/l	100
66) 1,1,1,2-Tetrachloroethane	10.159	131	152173	115.333	ug/l	99
67) Ethyl Benzene	10.189	91	785121	116.421	ug/l	99
68) m/p-Xylenes	10.299	106	570913	234.349	ug/l	100
69) o-Xylene	10.640	106	279906	113.990	ug/l	99
70) Styrene	10.653	104	474254	120.694	ug/l	99
71) Bromoform	10.799	173	125986	127.128	ug/l #	99
73) Isopropylbenzene	10.957	105	752337	114.312	ug/l	99
74) N-amyl acetate	10.842	43	396877	120.944	ug/l	99
75) 1,1,2,2-Tetrachloroethane	11.213	83	243532	104.018	ug/l	99
76) 1,2,3-Trichloropropane	11.238	75	213744m	84.960	ug/l	
77) Bromobenzene	11.195	156	167934	110.297	ug/l	99
78) n-propylbenzene	11.305	91	881218	119.448	ug/l	100
79) 2-Chlorotoluene	11.360	91	534560	107.514	ug/l	100
80) 1,3,5-Trimethylbenzene	11.451	105	616477	112.825	ug/l	100
81) trans-1,4-Dichloro-2-b...	11.018	75	81372	134.609	ug/l	93
82) 4-Chlorotoluene	11.451	91	611736	111.948	ug/l	100
83) tert-Butylbenzene	11.713	119	617473	115.065	ug/l	100
84) 1,2,4-Trimethylbenzene	11.750	105	623456	114.236	ug/l	99
85) sec-Butylbenzene	11.890	105	786293	118.023	ug/l	99
86) p-Isopropyltoluene	12.006	119	651531	121.113	ug/l	99
87) 1,3-Dichlorobenzene	11.969	146	313100	110.394	ug/l	100
88) 1,4-Dichlorobenzene	12.036	146	311752	112.167	ug/l	100
89) n-Butylbenzene	12.329	91	605783	129.533	ug/l	100
90) Hexachloroethane	12.536	117	123188	123.091	ug/l	100
91) 1,2-Dichlorobenzene	12.335	146	308039	111.506	ug/l	99
92) 1,2-Dibromo-3-Chloropr...	12.939	75	64438	120.915	ug/l	99
93) 1,2,4-Trichlorobenzene	13.585	180	203255	134.366	ug/l	98
94) Hexachlorobutadiene	13.719	225	80558	113.857	ug/l	99
95) Naphthalene	13.774	128	721236	130.929	ug/l	100
96) 1,2,3-Trichlorobenzene	13.957	180	200379	126.331	ug/l	99

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX050525\
Data File : VX046044.D
Acq On : 05 May 2025 12:45
Operator : JC/MD
Sample : VSTDICC150
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC150

Manual Integrations
APPROVED

Reviewed By :John Carlone 05/06/2025
Supervised By :Mahesh Dadoda 05/06/2025

Quant Time: May 06 06:11:37 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
Quant Title : SW846 8260
QLast Update : Tue May 06 06:04:56 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

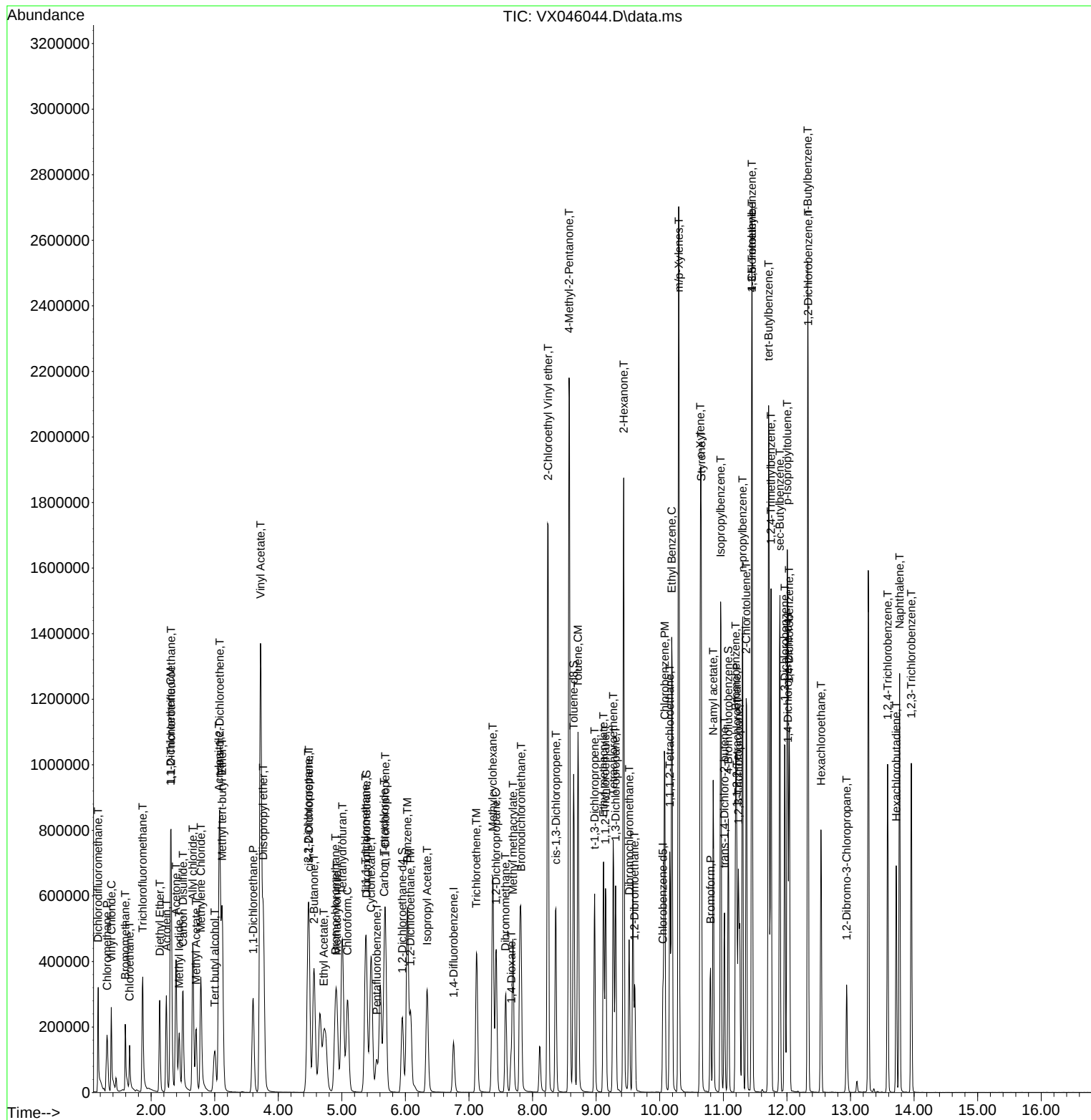
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX050525\
Data File : VX046044.D
Acq On : 05 May 2025 12:45
Operator : JC/MD
Sample : VSTDICC150
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 8 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC150

Manual Integrations APPROVED

Reviewed By :John Carlone 05/06/2025
Supervised By :Mahesh Dadoda 05/06/2025

Quant Time: May 06 06:11:37 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
Quant Title : SW846 8260
QLast Update : Tue May 06 06:04:56 2025
Response via : Initial Calibration



Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX050525\
 Data File : VX046046.D
 Acq On : 05 May 2025 16:04
 Operator : JC/MD
 Sample : VSTDICC005
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 10 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDICC005

Manual Integrations
 APPROVED

Reviewed By : John Carlone 05/06/2025
 Supervised By : Mahesh Dadoda 05/06/2025

Quant Time: May 06 06:12:34 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
 Quant Title : SW846 8260
 QLast Update : Tue May 06 06:04:56 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	5.538	168	96964	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.751	114	168484	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.049	117	147167	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.018	152	67939	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.946	65	9067	3.143	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery =	6.280%#		
35) Dibromofluoromethane	5.373	113	5969	3.161	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery =	6.320%#		
50) Toluene-d8	8.647	98	20566	3.232	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery =	6.460%#		
62) 4-Bromofluorobenzene	11.079	95	7822	3.378	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery =	6.760%#		
Target Compounds					Qvalue	
2) Dichlorodifluoromethane	1.166	85	6195	2.894	ug/l	95
3) Chloromethane	1.307	50	6587	3.125	ug/l	99
4) Vinyl Chloride	1.374	62	5999	3.249	ug/l	96
5) Bromomethane	1.593	94	2962	3.164	ug/l	88
6) Chloroethane	1.666	64	3567	3.750	ug/l	94
7) Trichlorofluoromethane	1.874	101	9599	3.413	ug/l	88
8) Diethyl Ether	2.130	74	3020	3.266	ug/l	95
9) 1,1,2-Trichlorotrifluo...	2.325	101	5911	3.517	ug/l	99
10) Methyl Iodide	2.441	142	5900	2.990	ug/l	99
11) Tert butyl alcohol	2.965	59	5539	16.111	ug/l	98
12) 1,1-Dichloroethene	2.306	96	5496	3.359	ug/l	97
13) Acrolein	2.233	56	5673	14.206	ug/l	95
14) Allyl chloride	2.654	41	10262	3.319	ug/l	98
15) Acrylonitrile	3.062	53	16746	16.282	ug/l	97
16) Acetone	2.380	43	19773	20.036	ug/l	98
17) Carbon Disulfide	2.501	76	11068	2.919	ug/l	96
18) Methyl Acetate	2.703	43	7909	3.357	ug/l	100
19) Methyl tert-butyl Ether	3.111	73	18497	3.241	ug/l	97
20) Methylene Chloride	2.782	84	6680	3.341	ug/l	97
21) trans-1,2-Dichloroethene	3.081	96	5402	3.234	ug/l	100
22) Diisopropyl ether	3.751	45	18657	3.230	ug/l #	65
23) Vinyl Acetate	3.715	43	82328	16.127	ug/l	99
24) 1,1-Dichloroethane	3.605	63	11193	3.297	ug/l	99
25) 2-Butanone	4.562	43	26125	18.340	ug/l	98
26) 2,2-Dichloropropane	4.465	77	8245	3.205	ug/l	96
27) cis-1,2-Dichloroethene	4.483	96	6222	3.089	ug/l	95
28) Bromochloromethane	4.891	49	5360	2.969	ug/l #	100
29) Tetrahydrofuran	5.001	42	15431	16.680	ug/l	98
30) Chloroform	5.080	83	11624	3.294	ug/l	89
31) Cyclohexane	5.458	56	10269	3.588	ug/l	96
32) 1,1,1-Trichloroethane	5.367	97	9827	3.229	ug/l	97
36) 1,1-Dichloropropene	5.678	75	7787	3.551	ug/l	98
37) Ethyl Acetate	4.721	43	9806m	3.565	ug/l	
38) Carbon Tetrachloride	5.659	117	8505	3.376	ug/l	97
39) Methylcyclohexane	7.373	83	9882	3.597	ug/l	93
40) Benzene	6.031	78	22528	3.315	ug/l	100

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX050525\
 Data File : VX046046.D
 Acq On : 05 May 2025 16:04
 Operator : JC/MD
 Sample : VSTDICC005
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 10 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDICC005

Manual Integrations
 APPROVED

Reviewed By : John Carlone 05/06/2025
 Supervised By : Mahesh Dadoda 05/06/2025

Quant Time: May 06 06:12:34 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
 Quant Title : SW846 8260
 QLast Update : Tue May 06 06:04:56 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	4.916	41	4851	3.174	ug/l #	65
42) 1,2-Dichloroethane	6.080	62	10011	3.563	ug/l	100
43) Isopropyl Acetate	6.348	43	13914	3.309	ug/l	96
44) Trichloroethene	7.123	130	5313	3.307	ug/l	94
45) 1,2-Dichloropropane	7.427	63	5451	3.228	ug/l #	89
46) Dibromomethane	7.580	93	4417	3.318	ug/l	98
47) Bromodichloromethane	7.818	83	8394	3.254	ug/l	98
48) Methyl methacrylate	7.696	41	7171	3.321	ug/l	97
49) 1,4-Dioxane	7.659	88	2907	67.721	ug/l	96
51) 4-Methyl-2-Pentanone	8.567	43	46794	16.967	ug/l	98
52) Toluene	8.714	92	14126	3.505	ug/l	97
53) t-1,3-Dichloropropene	8.976	75	6834	3.155	ug/l	100
54) cis-1,3-Dichloropropene	8.366	75	7908	3.129	ug/l	91
55) 1,1,2-Trichloroethane	9.153	97	5685	3.490	ug/l	98
56) Ethyl methacrylate	9.116	69	8555	3.390	ug/l	98
57) 1,3-Dichloropropane	9.305	76	10127	3.508	ug/l	94
58) 2-Chloroethyl Vinyl ether	8.238	63	20809	18.346	ug/l	99
59) 2-Hexanone	9.427	43	34853	16.651	ug/l	97
60) Dibromochloromethane	9.518	129	5500	3.102	ug/l	98
61) 1,2-Dibromoethane	9.604	107	5614	3.356	ug/l	99
64) Tetrachloroethene	9.269	164	4752	3.162	ug/l	96
65) Chlorobenzene	10.079	112	15391	3.399	ug/l	99
66) 1,1,1,2-Tetrachloroethane	10.159	131	5024	3.326	ug/l	99
67) Ethyl Benzene	10.195	91	26732	3.463	ug/l	99
68) m/p-Xylenes	10.299	106	19957	7.156	ug/l	98
69) o-Xylene	10.640	106	9398	3.343	ug/l	95
70) Styrene	10.652	104	14900	3.312	ug/l	99
71) Bromoform	10.799	173	3470	3.059	ug/l #	99
73) Isopropylbenzene	10.957	105	24201	3.266	ug/l	98
74) N-amyl acetate	10.841	43	11224	3.038	ug/l	96
75) 1,1,2,2-Tetrachloroethane	11.207	83	9170	3.479	ug/l	97
76) 1,2,3-Trichloropropane	11.238	75	7928m	2.799	ug/l	
77) Bromobenzene	11.195	156	5857	3.417	ug/l	96
78) n-propylbenzene	11.299	91	28436	3.424	ug/l	100
79) 2-Chlorotoluene	11.360	91	18672	3.336	ug/l	97
80) 1,3,5-Trimethylbenzene	11.451	105	20742	3.372	ug/l	100
81) trans-1,4-Dichloro-2-b...	11.018	75	1828	2.686	ug/l	99
82) 4-Chlorotoluene	11.451	91	19966	3.245	ug/l	98
83) tert-Butylbenzene	11.713	119	21049	3.484	ug/l	98
84) 1,2,4-Trimethylbenzene	11.750	105	20613	3.355	ug/l	97
85) sec-Butylbenzene	11.890	105	25590	3.412	ug/l	99
86) p-Isopropyltoluene	12.006	119	20955	3.460	ug/l	99
87) 1,3-Dichlorobenzene	11.969	146	10585	3.315	ug/l	97
88) 1,4-Dichlorobenzene	12.036	146	10908	3.486	ug/l	90
89) n-Butylbenzene	12.329	91	18004	3.419	ug/l	94
90) Hexachloroethane	12.536	117	3553	3.153	ug/l	94
91) 1,2-Dichlorobenzene	12.335	146	10712	3.444	ug/l	99
92) 1,2-Dibromo-3-Chloropr...	12.945	75	1687	2.812	ug/l	99
93) 1,2,4-Trichlorobenzene	13.585	180	5720	3.359	ug/l	96
94) Hexachlorobutadiene	13.719	225	2816	3.535	ug/l	96
95) Naphthalene	13.774	128	19902	3.209	ug/l	99
96) 1,2,3-Trichlorobenzene	13.957	180	5745	3.217	ug/l	97

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX050525\
Data File : VX046046.D
Acq On : 05 May 2025 16:04
Operator : JC/MD
Sample : VSTDICC005
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 10 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC005

Manual Integrations
APPROVED

Reviewed By :John Carlone 05/06/2025
Supervised By :Mahesh Dadoda 05/06/2025

Quant Time: May 06 06:12:34 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
Quant Title : SW846 8260
QLast Update : Tue May 06 06:04:56 2025
Response via : Initial Calibration

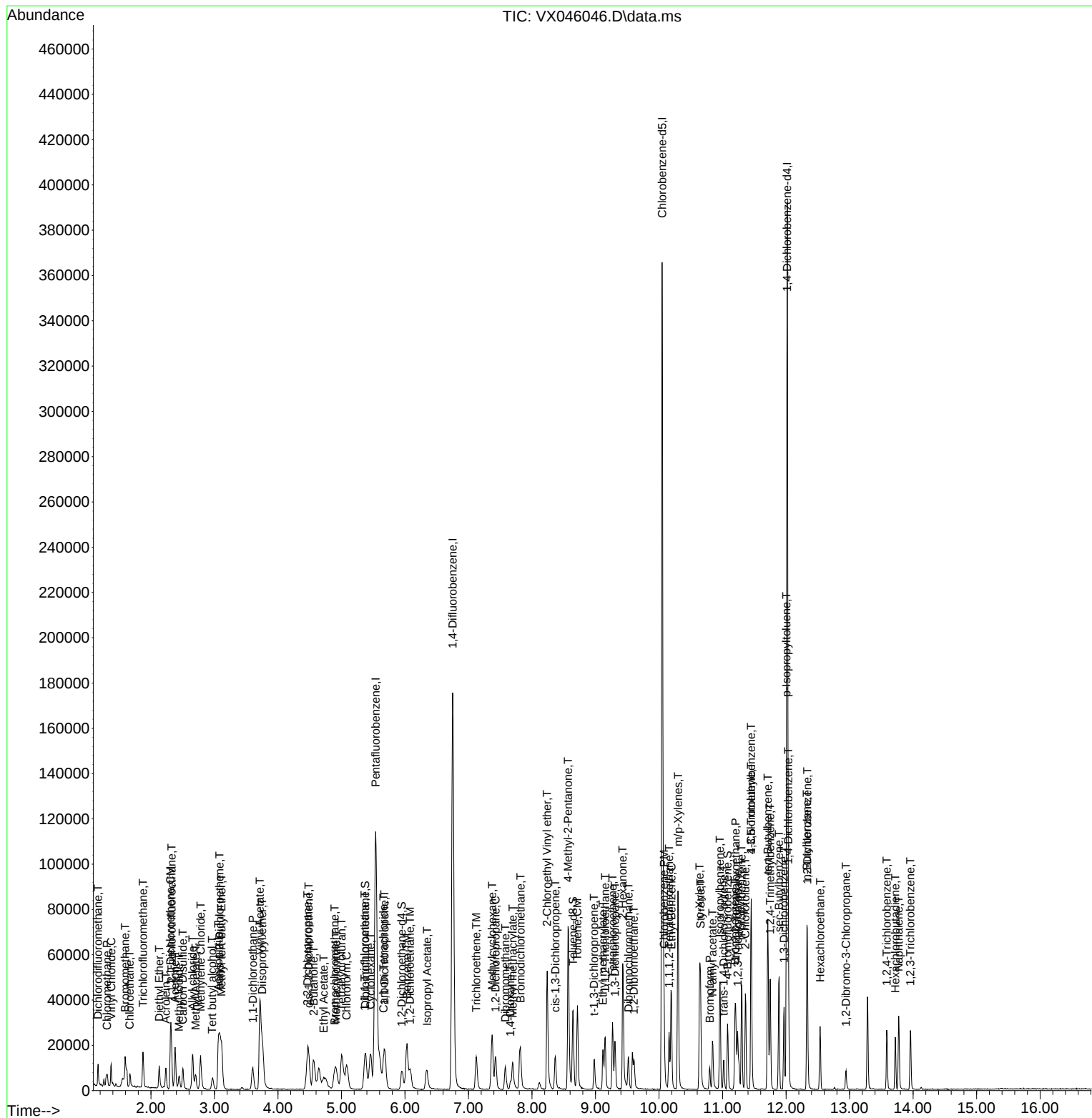
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
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(#) = qualifier out of range (m) = manual integration (+) = signals summed

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC005

Manual Integrations APPROVED

Reviewed By :John Carlone 05/06/2025
Supervised By :Mahesh Dadoda 05/06/2025



Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX050525\
 Data File : VX046047.D
 Acq On : 05 May 2025 16:27
 Operator : JC/MD
 Sample : VSTDIC001
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 11 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDIC001

Manual Integrations
 APPROVED

Reviewed By : John Carlone 05/06/2025
 Supervised By : Mahesh Dadoda 05/06/2025

Quant Time: May 06 06:13:30 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
 Quant Title : SW846 8260
 QLast Update : Tue May 06 06:04:56 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	5.544	168	92040	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.757	114	167022	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.049	117	140108	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.018	152	59123	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	0.000	65	0d	0.000	ug/l	
Spiked Amount	50.000	Range	74 - 125	Recovery	=	0.000%#
35) Dibromofluoromethane	0.000	113	0d	0.000	ug/l	
Spiked Amount	50.000	Range	75 - 124	Recovery	=	0.000%#
50) Toluene-d8	0.000	98	0d	0.000	ug/l	
Spiked Amount	50.000	Range	86 - 113	Recovery	=	0.000%#
62) 4-Bromofluorobenzene	0.000	95	0d	0.000	ug/l	
Spiked Amount	50.000	Range	77 - 121	Recovery	=	0.000%#
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.166	85	1211	0.596	ug/l	98
3) Chloromethane	1.307	50	1278	0.639	ug/l	97
4) Vinyl Chloride	1.374	62	1239	0.707	ug/l #	82
6) Chloroethane	1.678	64	859	0.951	ug/l	91
7) Trichlorofluoromethane	1.880	101	1959	0.734	ug/l	95
8) Diethyl Ether	2.130	74	742	0.845	ug/l	87
9) 1,1,2-Trichlorotrifluo...	2.319	101	1166	0.731	ug/l	96
12) 1,1-Dichloroethene	2.313	96	1093	0.704	ug/l #	87
14) Allyl chloride	2.654	41	1936	0.660	ug/l	89
15) Acrylonitrile	3.075	53	3343	3.424	ug/l	98
16) Acetone	2.380	43	3500	3.736	ug/l	97
17) Carbon Disulfide	2.508	76	2619	0.728	ug/l	98
18) Methyl Acetate	2.709	43	1852	0.828	ug/l	98
19) Methyl tert-butyl Ether	3.117	73	3588	0.662	ug/l	96
20) Methylene Chloride	2.782	84	1571	0.828	ug/l #	90
21) trans-1,2-Dichloroethene	3.081	96	1111	0.701	ug/l #	71
22) Diisopropyl ether	3.757	45	3857	0.703	ug/l #	26
23) Vinyl Acetate	3.727	43	15283	3.154	ug/l	96
24) 1,1-Dichloroethane	3.605	63	2054	0.637	ug/l	97
25) 2-Butanone	4.593	43	4558	3.371	ug/l	92
26) 2,2-Dichloropropane	4.458	77	1777	0.728	ug/l	84
27) cis-1,2-Dichloroethene	4.483	96	1324	0.693	ug/l	91
28) Bromochloromethane	4.910	49	1061m	0.619	ug/l	
29) Tetrahydrofuran	5.019	42	2931	3.338	ug/l	99
30) Chloroform	5.093	83	2328	0.695	ug/l	98
32) 1,1,1-Trichloroethane	5.379	97	1869	0.647	ug/l #	51
36) 1,1-Dichloropropene	5.684	75	1648	0.758	ug/l #	83
37) Ethyl Acetate	4.733	43	1956m	0.717	ug/l	
38) Carbon Tetrachloride	5.678	117	1807	0.724	ug/l #	78
39) Methylcyclohexane	7.373	83	2096	0.770	ug/l	97
40) Benzene	6.044	78	4502	0.668	ug/l #	89
41) Methacrylonitrile	4.946	41	778	0.513	ug/l #	56
42) 1,2-Dichloroethane	6.092	62	1934	0.694	ug/l	81
43) Isopropyl Acetate	6.354	43	2553	0.612	ug/l #	81
44) Trichloroethene	7.135	130	1083	0.680	ug/l	85
45) 1,2-Dichloropropane	7.440	63	1059	0.633	ug/l	89

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX050525\
 Data File : VX046047.D
 Acq On : 05 May 2025 16:27
 Operator : JC/MD
 Sample : VSTDICC001
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 11 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VSTDICC001

Manual Integrations
 APPROVED

Reviewed By : John Carlone 05/06/2025
 Supervised By : Mahesh Dadoda 05/06/2025

Quant Time: May 06 06:13:30 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
 Quant Title : SW846 8260
 QLast Update : Tue May 06 06:04:56 2025
 Response via : Initial Calibration

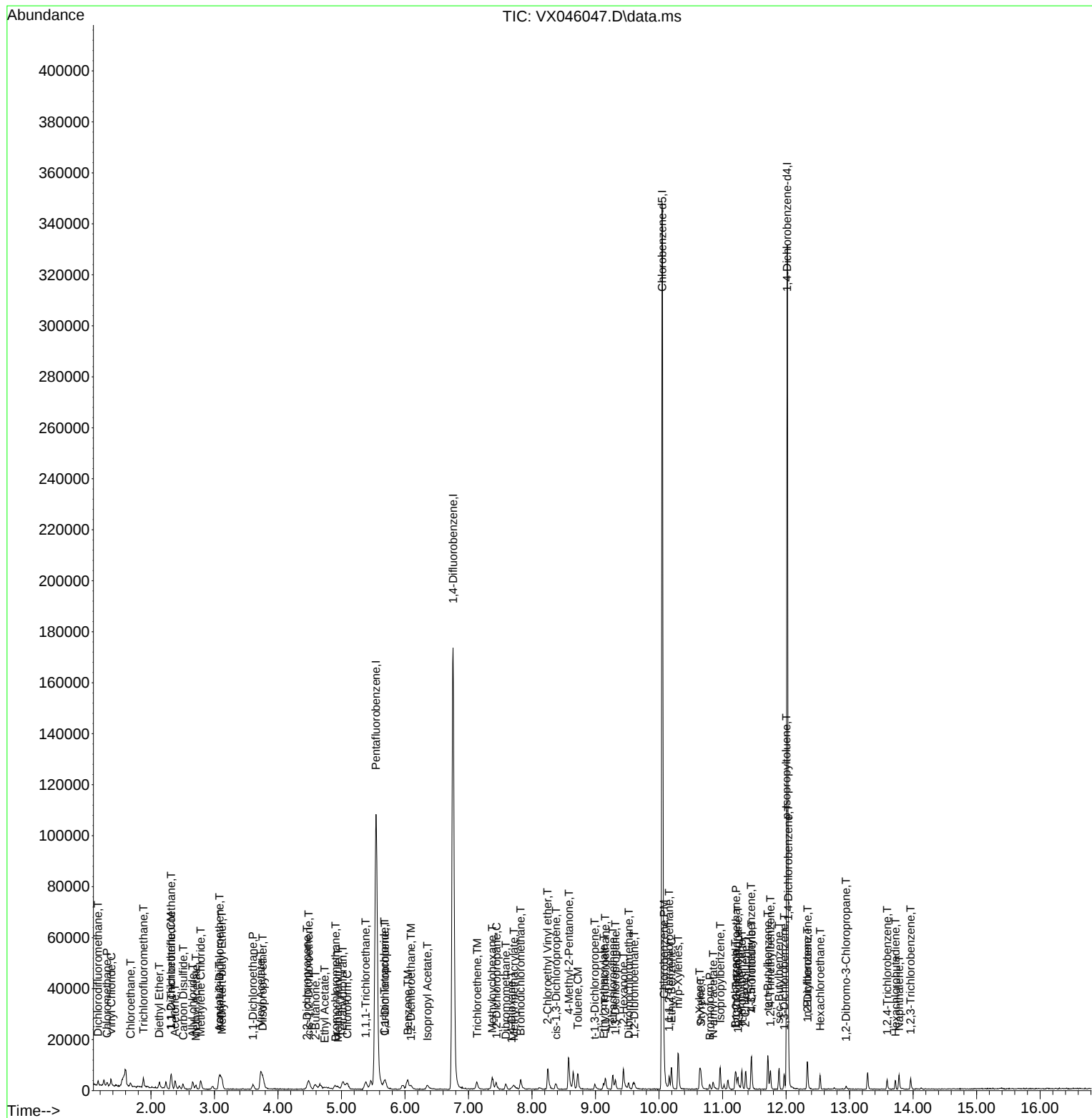
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
46) Dibromomethane	7.586	93	880	0.667	ug/l	97
47) Bromodichloromethane	7.818	83	1620	0.633	ug/l #	91
48) Methyl methacrylate	7.714	41	1235m	0.577	ug/l	
49) 1,4-Dioxane	7.677	88	498	11.703	ug/l #	66
51) 4-Methyl-2-Pentanone	8.580	43	9378	3.430	ug/l	97
52) Toluene	8.720	92	2684	0.672	ug/l	96
53) t-1,3-Dichloropropene	8.988	75	1238	0.576	ug/l #	79
54) cis-1,3-Dichloropropene	8.379	75	1414	0.564	ug/l #	87
55) 1,1,2-Trichloroethane	9.153	97	1029	0.637	ug/l	92
56) Ethyl methacrylate	9.128	69	1260	0.504	ug/l #	76
57) 1,3-Dichloropropane	9.311	76	2036	0.711	ug/l	97
58) 2-Chloroethyl Vinyl ether	8.244	63	3846	3.420	ug/l	94
59) 2-Hexanone	9.439	43	6424	3.096	ug/l	88
60) Dibromochloromethane	9.525	129	1023	0.582	ug/l	93
61) 1,2-Dibromoethane	9.610	107	1077	0.650	ug/l	98
64) Tetrachloroethene	9.275	164	972	0.679	ug/l	95
65) Chlorobenzene	10.079	112	3170	0.735	ug/l	98
66) 1,1,1,2-Tetrachloroethane	10.159	131	1035	0.720	ug/l #	67
67) Ethyl Benzene	10.195	91	5052	0.687	ug/l	94
68) m/p-Xylenes	10.299	106	3630	1.367	ug/l	97
69) o-Xylene	10.640	106	1799	0.672	ug/l	94
70) Styrene	10.659	104	2664	0.622	ug/l	98
71) Bromoform	10.799	173	657	0.608	ug/l #	100
73) Isopropylbenzene	10.963	105	4480	0.695	ug/l	96
74) N-amyl acetate	10.854	43	2028	0.631	ug/l #	91
75) 1,1,2,2-Tetrachloroethane	11.213	83	1835	0.800	ug/l	94
76) 1,2,3-Trichloropropane	11.244	75	1661m	0.674	ug/l	
77) Bromobenzene	11.201	156	1095	0.734	ug/l	96
78) n-propylbenzene	11.305	91	5052	0.699	ug/l	97
79) 2-Chlorotoluene	11.360	91	3765	0.773	ug/l	94
80) 1,3,5-Trimethylbenzene	11.451	105	3590	0.671	ug/l	96
82) 4-Chlorotoluene	11.457	91	3815	0.713	ug/l	97
83) tert-Butylbenzene	11.713	119	3951	0.751	ug/l	97
84) 1,2,4-Trimethylbenzene	11.756	105	3725	0.697	ug/l	97
85) sec-Butylbenzene	11.890	105	4385	0.672	ug/l	100
86) p-Isopropyltoluene	12.006	119	3577	0.679	ug/l	94
87) 1,3-Dichlorobenzene	11.969	146	1914	0.689	ug/l	99
88) 1,4-Dichlorobenzene	12.036	146	2149m	0.789	ug/l	
89) n-Butylbenzene	12.335	91	2889	0.631	ug/l	92
90) Hexachloroethane	12.536	117	604	0.616	ug/l	99
91) 1,2-Dichlorobenzene	12.341	146	2022	0.747	ug/l	95
92) 1,2-Dibromo-3-Chloropr...	12.945	75	306	0.586	ug/l	83
93) 1,2,4-Trichlorobenzene	13.591	180	1019	0.688	ug/l	94
94) Hexachlorobutadiene	13.725	225	465	0.671	ug/l	89
95) Naphthalene	13.780	128	4138	0.767	ug/l	97
96) 1,2,3-Trichlorobenzene	13.963	180	1113	0.716	ug/l	96

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

Instrument :
MSVOA_X
ClientSampleId :
VSTDICC001

Manual Integrations APPROVED

Reviewed By :John Carlone 05/06/2025
Supervised By :Mahesh Dadoda 05/06/2025



Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX050525\
 Data File : VX046048.D
 Acq On : 05 May 2025 16:50
 Operator : JC/MD
 Sample : VSTDICV050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 12 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 ICVVX050525

Manual Integrations
 APPROVED

Reviewed By : John Carlone 05/06/2025
 Supervised By : Mahesh Dadoda 05/06/2025

Quant Time: May 06 07:17:12 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
 Quant Title : SW846 8260
 QLast Update : Tue May 06 07:12:22 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	5.544	168	92588	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.757	114	162651	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.049	117	145078	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.018	152	68229	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.952	65	83733	48.509	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery =	97.020%		
35) Dibromofluoromethane	5.379	113	58192	49.683	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery =	99.360%		
50) Toluene-d8	8.647	98	198575	48.984	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery =	97.960%		
62) 4-Bromofluorobenzene	11.079	95	75568	48.596	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery =	97.200%		
Target Compounds					Qvalue	
2) Dichlorodifluoromethane	1.167	85	78783	55.594	ug/l	99
3) Chloromethane	1.307	50	72275	52.592	ug/l	100
4) Vinyl Chloride	1.374	62	65994	51.598	ug/l	98
5) Bromomethane	1.593	94	30033	50.627	ug/l	97
6) Chloroethane	1.666	64	35690	52.271	ug/l	94
7) Trichlorofluoromethane	1.874	101	99352	52.560	ug/l	99
8) Diethyl Ether	2.130	74	31875	49.536	ug/l	97
9) 1,1,2-Trichlorotrifluo...	2.319	101	59451	50.822	ug/l	99
10) Methyl Iodide	2.447	142	73940	53.419	ug/l	99
11) Tert butyl alcohol	2.977	59	61065	252.025	ug/l	99
12) 1,1-Dichloroethene	2.313	96	56097	51.097	ug/l	98
13) Acrolein	2.233	56	64157	232.505	ug/l	99
14) Allyl chloride	2.660	41	108757	51.833	ug/l	100
15) Acrylonitrile	3.063	53	181808	262.412	ug/l	99
16) Acetone	2.380	43	169923	245.518	ug/l	98
17) Carbon Disulfide	2.502	76	132695	50.981	ug/l	99
18) Methyl Acetate	2.703	43	80251	49.968	ug/l	97
19) Methyl tert-butyl Ether	3.111	73	195442	50.777	ug/l	99
20) Methylene Chloride	2.782	84	63369	47.779	ug/l	99
21) trans-1,2-Dichloroethene	3.087	96	55770	50.513	ug/l	99
22) Diisopropyl ether	3.757	45	209946	51.800	ug/l	97
23) Vinyl Acetate	3.715	43	946746	265.585	ug/l	100
24) 1,1-Dichloroethane	3.605	63	114733	50.825	ug/l	98
25) 2-Butanone	4.556	43	258339	257.110	ug/l	97
26) 2,2-Dichloropropane	4.471	77	88229	49.934	ug/l	100
27) cis-1,2-Dichloroethene	4.483	96	67727	50.956	ug/l	100
28) Bromochloromethane	4.891	49	55390	50.975	ug/l	98
29) Tetrahydrofuran	5.001	42	163675	259.958	ug/l	99
30) Chloroform	5.093	83	120782	51.332	ug/l	97
31) Cyclohexane	5.458	56	103158	50.147	ug/l	96
32) 1,1,1-Trichloroethane	5.373	97	104243	51.108	ug/l	100
36) 1,1-Dichloropropene	5.690	75	77931	49.521	ug/l	99
37) Ethyl Acetate	4.715	43	98604	50.714	ug/l	100
38) Carbon Tetrachloride	5.666	117	88100	49.825	ug/l	97
39) Methylcyclohexane	7.373	83	100808	49.757	ug/l	98
40) Benzene	6.031	78	233977	50.759	ug/l	99

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX050525\
 Data File : VX046048.D
 Acq On : 05 May 2025 16:50
 Operator : JC/MD
 Sample : VSTDICV050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 12 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 ICVVX050525

Manual Integrations
 APPROVED

Reviewed By : John Carlone 05/06/2025
 Supervised By : Mahesh Dadoda 05/06/2025

Quant Time: May 06 07:17:12 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
 Quant Title : SW846 8260
 QLast Update : Tue May 06 07:12:22 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	4.916	41	56017	55.076	ug/l	100
42) 1,2-Dichloroethane	6.080	62	101185	50.861	ug/l	98
43) Isopropyl Acetate	6.336	43	154818	52.195	ug/l	99
44) Trichloroethene	7.123	130	55491	50.018	ug/l	100
45) 1,2-Dichloropropane	7.428	63	59582	51.983	ug/l	98
46) Dibromomethane	7.580	93	45181	49.978	ug/l	99
47) Bromodichloromethane	7.818	83	92388	51.889	ug/l	100
48) Methyl methacrylate	7.690	41	82144	54.226	ug/l	98
49) 1,4-Dioxane	7.659	88	30477	1059.599	ug/l	97
51) 4-Methyl-2-Pentanone	8.574	43	510206	259.133	ug/l	100
52) Toluene	8.714	92	144574	51.150	ug/l	100
53) t-1,3-Dichloropropene	8.976	75	83751	52.920	ug/l	100
54) cis-1,3-Dichloropropene	8.360	75	92517	52.892	ug/l	98
55) 1,1,2-Trichloroethane	9.147	97	56713	50.887	ug/l	96
56) Ethyl methacrylate	9.116	69	95772	53.918	ug/l	99
57) 1,3-Dichloropropane	9.305	76	99663	49.793	ug/l	97
58) 2-Chloroethyl Vinyl ether	8.238	63	240681	265.780	ug/l	99
59) 2-Hexanone	9.427	43	390701	268.218	ug/l	100
60) Dibromochloromethane	9.519	129	63738	52.075	ug/l	99
61) 1,2-Dibromoethane	9.610	107	59134	51.050	ug/l	98
64) Tetrachloroethene	9.269	164	48034	46.795	ug/l	98
65) Chlorobenzene	10.073	112	154640	48.699	ug/l	99
66) 1,1,1,2-Tetrachloroethane	10.159	131	53735	49.557	ug/l	100
67) Ethyl Benzene	10.189	91	281239	50.245	ug/l	100
68) m/p-Xylenes	10.299	106	206813	101.022	ug/l	99
69) o-Xylene	10.640	106	101469	50.841	ug/l	99
70) Styrene	10.653	104	169703	51.907	ug/l	99
71) Bromoform	10.799	173	40364	49.583	ug/l #	97
73) Isopropylbenzene	10.957	105	269484	50.733	ug/l	100
74) N-amyl acetate	10.842	43	137559	52.407	ug/l	99
75) 1,1,2,2-Tetrachloroethane	11.207	83	89027	47.827	ug/l	98
76) 1,2,3-Trichloropropane	11.238	75	79763m	48.568	ug/l	
77) Bromobenzene	11.195	156	59871	48.549	ug/l	98
78) n-propylbenzene	11.299	91	312285	50.562	ug/l	100
79) 2-Chlorotoluene	11.360	91	195630	49.107	ug/l	99
80) 1,3,5-Trimethylbenzene	11.451	105	228538	51.500	ug/l	100
81) trans-1,4-Dichloro-2-b...	11.018	75	24857	49.276	ug/l	98
82) 4-Chlorotoluene	11.451	91	223811	50.661	ug/l	100
83) tert-Butylbenzene	11.713	119	225783	50.511	ug/l	99
84) 1,2,4-Trimethylbenzene	11.750	105	231371	51.485	ug/l	100
85) sec-Butylbenzene	11.890	105	280578	51.122	ug/l	99
86) p-Isopropyltoluene	12.006	119	231942	51.198	ug/l	100
87) 1,3-Dichlorobenzene	11.963	146	113146	50.272	ug/l	99
88) 1,4-Dichlorobenzene	12.037	146	111173	48.368	ug/l	99
89) n-Butylbenzene	12.329	91	205858	51.804	ug/l	100
90) Hexachloroethane	12.536	117	39823	49.895	ug/l	99
91) 1,2-Dichlorobenzene	12.335	146	111482	49.361	ug/l	99
92) 1,2-Dibromo-3-Chloropr...	12.939	75	21220	51.458	ug/l	99
93) 1,2,4-Trichlorobenzene	13.585	180	64421	49.662	ug/l	100
94) Hexachlorobutadiene	13.719	225	27425	48.408	ug/l	98
95) Naphthalene	13.774	128	239805	50.404	ug/l	100
96) 1,2,3-Trichlorobenzene	13.957	180	64950	48.525	ug/l	98

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX050525\
Data File : VX046048.D
Acq On : 05 May 2025 16:50
Operator : JC/MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
ICVVX050525

Manual Integrations
APPROVED

Reviewed By :John Carlone 05/06/2025
Supervised By :Mahesh Dadoda 05/06/2025

Quant Time: May 06 07:17:12 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
Quant Title : SW846 8260
QLast Update : Tue May 06 07:12:22 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 :
ICVVX050525

Manual Integrations APPROVED

Reviewed By :John Carlone 05/06/2025
Supervised By :Mahesh Dadoda 05/06/2025



Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX050525\
 Data File : VX046048.D
 Acq On : 05 May 2025 16:50
 Operator : JC/MD
 Sample : VSTDICV050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 12 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 ICSVX050525

Quant Time: May 06 07:17:12 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
 Quant Title : SW846 8260
 QLast Update : Tue May 06 07:12:22 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	95	0.00
2 T	Dichlorodifluoromethane	0.765	0.851	-11.2	94	0.00
3 P	Chloromethane	0.742	0.781	-5.3	96	0.00
4 C	Vinyl Chloride	0.691	0.713	-3.2#	96	0.00
5 T	Bromomethane	0.320	0.324	-1.3	95	0.00
6 T	Chloroethane	0.369	0.385	-4.3	97	0.00
7 T	Trichlorofluoromethane	1.021	1.073	-5.1	96	0.00
8 T	Diethyl Ether	0.347	0.344	0.9	97	0.00
9 T	1,1,2-Trichlorotrifluoroeth	0.632	0.642	-1.6	96	0.00
10 T	Methyl Iodide	0.747	0.799	-7.0	94	0.00
11 T	Tert butyl alcohol	0.131	0.132	-0.8	98	0.00
12 CM	1,1-Dichloroethene	0.593	0.606	-2.2#	96	0.00
13 T	Acrolein	0.149	0.139	6.7	87	0.00
14 T	Allyl chloride	1.133	1.175	-3.7	95	0.00
15 T	Acrylonitrile	0.374	0.393	-5.1	97	0.00
16 T	Acetone	0.374	0.367	1.9	97	0.00
17 T	Carbon Disulfide	1.406	1.433	-1.9	94	0.00
18 T	Methyl Acetate	0.867	0.867	0.0	97	0.00
19 T	Methyl tert-butyl Ether	2.079	2.111	-1.5	93	0.00
20 T	Methylene Chloride	0.716	0.684	4.5	95	0.00
21 T	trans-1,2-Dichloroethene	0.596	0.602	-1.0	94	0.00
22 T	Diisopropyl ether	2.189	2.268	-3.6	95	0.00
23 T	Vinyl Acetate	1.925	2.045	-6.2	95	0.00
24 P	1,1-Dichloroethane	1.219	1.239	-1.6	94	0.00
25 T	2-Butanone	0.543	0.558	-2.8	96	0.00
26 T	2,2-Dichloropropane	0.954	0.953	0.1	95	0.00
27 T	cis-1,2-Dichloroethene	0.718	0.731	-1.8	95	0.00
28 T	Bromochloromethane	0.587	0.598	-1.9	99	0.00
29 T	Tetrahydrofuran	0.340	0.354	-4.1	96	0.00
30 C	Chloroform	1.271	1.305	-2.7#	96	0.00
31 T	Cyclohexane	1.111	1.114	-0.3	94	0.00
32 T	1,1,1-Trichloroethane	1.101	1.126	-2.3	95	0.00
33 S	1,2-Dichloroethane-d4	0.932	0.904	3.0	95	0.00
34 I	1,4-Difluorobenzene	1.000	1.000	0.0	97	0.00
35 S	Dibromofluoromethane	0.360	0.358	0.6	98	0.00
36 T	1,1-Dichloropropene	0.484	0.479	1.0	94	0.00
37 T	Ethyl Acetate	0.598	0.606	-1.3	96	0.00
38 T	Carbon Tetrachloride	0.544	0.542	0.4	94	0.00
39 T	Methylcyclohexane	0.623	0.620	0.5	94	0.00
40 TM	Benzene	1.417	1.439	-1.6	95	0.00
41 T	Methacrylonitrile	0.313	0.344	-9.9	96	0.00
42 TM	1,2-Dichloroethane	0.612	0.622	-1.6	96	0.00
43 T	Isopropyl Acetate	0.912	0.952	-4.4	96	0.00
44 TM	Trichloroethene	0.341	0.341	0.0	93	0.00
45 C	1,2-Dichloropropane	0.352	0.366	-4.0#	96	0.00
46 T	Dibromomethane	0.278	0.278	0.0	94	0.00
47 T	Bromodichloromethane	0.547	0.568	-3.8	95	0.00
48 T	Methyl methacrylate	0.466	0.505	-8.4	97	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX050525\
 Data File : VX046048.D
 Acq On : 05 May 2025 16:50
 Operator : JC/MD
 Sample : VSTDICV050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 12 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 ICVVX050525

Quant Time: May 06 07:17:12 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
 Quant Title : SW846 8260
 QLast Update : Tue May 06 07:12:22 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	0.009	0.009	0.0	100	0.00
50 S	Toluene-d8	1.246	1.221	2.0	97	0.00
51 T	4-Methyl-2-Pentanone	0.605	0.627	-3.6	96	0.00
52 CM	Toluene	0.869	0.889	-2.3#	96	0.00
53 T	t-1,3-Dichloropropene	0.487	0.515	-5.7	94	0.00
54 T	cis-1,3-Dichloropropene	0.538	0.569	-5.8	95	0.00
55 T	1,1,2-Trichloroethane	0.343	0.349	-1.7	95	0.00
56 T	Ethyl methacrylate	0.546	0.589	-7.9	96	0.00
57 T	1,3-Dichloropropane	0.615	0.613	0.3	95	0.00
58 T	2-Chloroethyl Vinyl ether	0.278	0.296	-6.5	93	0.00
59 T	2-Hexanone	0.448	0.480	-7.1	98	0.00
60 T	Dibromochloromethane	0.376	0.392	-4.3	95	0.00
61 T	1,2-Dibromoethane	0.356	0.364	-2.2	94	0.00
62 S	4-Bromofluorobenzene	0.478	0.465	2.7	96	0.00
63 I	Chlorobenzene-d5	1.000	1.000	0.0	99	0.00
64 T	Tetrachloroethene	0.354	0.331	6.5	88	0.00
65 PM	Chlorobenzene	1.094	1.066	2.6	96	0.00
66 T	1,1,1,2-Tetrachloroethane	0.374	0.370	1.1	94	0.00
67 C	Ethyl Benzene	1.929	1.939	-0.5#	95	0.00
68 T	m/p-Xylenes	0.706	0.713	-1.0	95	0.00
69 T	o-Xylene	0.688	0.699	-1.6	95	0.00
70 T	Styrene	1.127	1.170	-3.8	95	0.00
71 P	Bromoform	0.281	0.278	1.1	91	0.00
72 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	100	0.00
73 T	Isopropylbenzene	3.893	3.950	-1.5	96	0.00
74 T	N-amyl acetate	1.924	2.016	-4.8	98	0.00
75 P	1,1,2,2-Tetrachloroethane	1.364	1.305	4.3	98	0.00
76 T	1,2,3-Trichloropropane	1.204	1.169	2.9	99	0.00
77 T	Bromobenzene	0.904	0.878	2.9	95	0.00
78 T	n-propylbenzene	4.526	4.577	-1.1	95	0.00
79 T	2-Chlorotoluene	2.919	2.867	1.8	96	0.00
80 T	1,3,5-Trimethylbenzene	3.252	3.350	-3.0	96	0.00
81 T	trans-1,4-Dichloro-2-butene	0.370	0.364	1.6	95	0.00
82 T	4-Chlorotoluene	3.238	3.280	-1.3	96	0.00
83 T	tert-Butylbenzene	3.276	3.309	-1.0	97	0.00
84 T	1,2,4-Trimethylbenzene	3.293	3.391	-3.0	97	0.00
85 T	sec-Butylbenzene	4.022	4.112	-2.2	96	0.00
86 T	p-Isopropyltoluene	3.320	3.399	-2.4	96	0.00
87 T	1,3-Dichlorobenzene	1.649	1.658	-0.5	98	0.00
88 T	1,4-Dichlorobenzene	1.684	1.629	3.3	97	0.00
89 T	n-Butylbenzene	2.912	3.017	-3.6	96	0.00
90 T	Hexachloroethane	0.585	0.584	0.2	94	0.00
91 T	1,2-Dichlorobenzene	1.655	1.634	1.3	97	0.00
92 T	1,2-Dibromo-3-Chloropropane	0.302	0.311	-3.0	97	0.00
93 T	1,2,4-Trichlorobenzene	0.951	0.944	0.7	97	0.00
94 T	Hexachlorobutadiene	0.415	0.402	3.1	95	0.00
95 T	Naphthalene	3.487	3.515	-0.8	98	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX050525\
Data File : VX046048.D
Acq On : 05 May 2025 16:50
Operator : JC/MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
ICVVX050525

Quant Time: May 06 07:17:12 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
Quant Title : SW846 8260
QLast Update : Tue May 06 07:12:22 2025
Response via : Initial Calibration

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

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
96 T	1,2,3-Trichlorobenzene	0.981	0.952	3.0	94	0.00

(#) = Out of Range

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

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\X050525\
 Data File : VX046048.D
 Acq On : 05 May 2025 16:50
 Operator : JC/MD
 Sample : VSTDICV050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 12 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 ICVVX050525

Quant Time: May 06 07:17:12 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
 Quant Title : SW846 8260
 QLast Update : Tue May 06 07:12:22 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	95	0.00
2 T	Dichlorodifluoromethane	50.000	55.594	-11.2	94	0.00
3 P	Chloromethane	50.000	52.592	-5.2	96	0.00
4 C	Vinyl Chloride	50.000	51.598	-3.2#	96	0.00
5 T	Bromomethane	50.000	50.627	-1.3	95	0.00
6 T	Chloroethane	50.000	52.271	-4.5	97	0.00
7 T	Trichlorofluoromethane	50.000	52.560	-5.1	96	0.00
8 T	Diethyl Ether	50.000	49.536	0.9	97	0.00
9 T	1,1,2-Trichlorotrifluoroeth	50.000	50.822	-1.6	96	0.00
10 T	Methyl Iodide	50.000	53.419	-6.8	94	0.00
11 T	Tert butyl alcohol	250.000	252.025	-0.8	98	0.00
12 CM	1,1-Dichloroethene	50.000	51.097	-2.2#	96	0.00
13 T	Acrolein	250.000	232.505	7.0	87	0.00
14 T	Allyl chloride	50.000	51.833	-3.7	95	0.00
15 T	Acrylonitrile	250.000	262.412	-5.0	97	0.00
16 T	Acetone	250.000	245.518	1.8	97	0.00
17 T	Carbon Disulfide	50.000	50.981	-2.0	94	0.00
18 T	Methyl Acetate	50.000	49.968	0.1	97	0.00
19 T	Methyl tert-butyl Ether	50.000	50.777	-1.6	93	0.00
20 T	Methylene Chloride	50.000	47.779	4.4	95	0.00
21 T	trans-1,2-Dichloroethene	50.000	50.513	-1.0	94	0.00
22 T	Diisopropyl ether	50.000	51.800	-3.6	95	0.00
23 T	Vinyl Acetate	250.000	265.585	-6.2	95	0.00
24 P	1,1-Dichloroethane	50.000	50.825	-1.7	94	0.00
25 T	2-Butanone	250.000	257.110	-2.8	96	0.00
26 T	2,2-Dichloropropane	50.000	49.934	0.1	95	0.00
27 T	cis-1,2-Dichloroethene	50.000	50.956	-1.9	95	0.00
28 T	Bromochloromethane	50.000	50.975	-2.0	99	0.00
29 T	Tetrahydrofuran	250.000	259.958	-4.0	96	0.00
30 C	Chloroform	50.000	51.332	-2.7#	96	0.00
31 T	Cyclohexane	50.000	50.147	-0.3	94	0.00
32 T	1,1,1-Trichloroethane	50.000	51.108	-2.2	95	0.00
33 S	1,2-Dichloroethane-d4	50.000	48.509	3.0	95	0.00
34 I	1,4-Difluorobenzene	50.000	50.000	0.0	97	0.00
35 S	Dibromofluoromethane	50.000	49.683	0.6	98	0.00
36 T	1,1-Dichloropropene	50.000	49.521	1.0	94	0.00
37 T	Ethyl Acetate	50.000	50.714	-1.4	96	0.00
38 T	Carbon Tetrachloride	50.000	49.825	0.3	94	0.00
39 T	Methylcyclohexane	50.000	49.757	0.5	94	0.00
40 TM	Benzene	50.000	50.759	-1.5	95	0.00
41 T	Methacrylonitrile	50.000	55.076	-10.2	96	0.00
42 TM	1,2-Dichloroethane	50.000	50.861	-1.7	96	0.00
43 T	Isopropyl Acetate	50.000	52.195	-4.4	96	0.00
44 TM	Trichloroethene	50.000	50.018	-0.0	93	0.00
45 C	1,2-Dichloropropane	50.000	51.983	-4.0#	96	0.00
46 T	Dibromomethane	50.000	49.978	0.0	94	0.00
47 T	Bromodichloromethane	50.000	51.889	-3.8	95	0.00
48 T	Methyl methacrylate	50.000	54.226	-8.5	97	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\X050525\
 Data File : VX046048.D
 Acq On : 05 May 2025 16:50
 Operator : JC/MD
 Sample : VSTDICV050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 12 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 ICVVX050525

Quant Time: May 06 07:17:12 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
 Quant Title : SW846 8260
 QLast Update : Tue May 06 07:12:22 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	1059.599	-6.0	100	0.00
50 S	Toluene-d8	50.000	48.984	2.0	97	0.00
51 T	4-Methyl-2-Pentanone	250.000	259.133	-3.7	96	0.00
52 CM	Toluene	50.000	51.150	-2.3#	96	0.00
53 T	t-1,3-Dichloropropene	50.000	52.920	-5.8	94	0.00
54 T	cis-1,3-Dichloropropene	50.000	52.892	-5.8	95	0.00
55 T	1,1,2-Trichloroethane	50.000	50.887	-1.8	95	0.00
56 T	Ethyl methacrylate	50.000	53.918	-7.8	96	0.00
57 T	1,3-Dichloropropane	50.000	49.793	0.4	95	0.00
58 T	2-Chloroethyl Vinyl ether	250.000	265.780	-6.3	93	0.00
59 T	2-Hexanone	250.000	268.218	-7.3	98	0.00
60 T	Dibromochloromethane	50.000	52.075	-4.2	95	0.00
61 T	1,2-Dibromoethane	50.000	51.050	-2.1	94	0.00
62 S	4-Bromofluorobenzene	50.000	48.596	2.8	96	0.00
63 I	Chlorobenzene-d5	50.000	50.000	0.0	99	0.00
64 T	Tetrachloroethene	50.000	46.795	6.4	88	0.00
65 PM	Chlorobenzene	50.000	48.699	2.6	96	0.00
66 T	1,1,1,2-Tetrachloroethane	50.000	49.557	0.9	94	0.00
67 C	Ethyl Benzene	50.000	50.245	-0.5#	95	0.00
68 T	m/p-Xylenes	100.000	101.022	-1.0	95	0.00
69 T	o-Xylene	50.000	50.841	-1.7	95	0.00
70 T	Styrene	50.000	51.907	-3.8	95	0.00
71 P	Bromoform	50.000	49.583	0.8	91	0.00
72 I	1,4-Dichlorobenzene-d4	50.000	50.000	0.0	100	0.00
73 T	Isopropylbenzene	50.000	50.733	-1.5	96	0.00
74 T	N-ethyl acetate	50.000	52.407	-4.8	98	0.00
75 P	1,1,2,2-Tetrachloroethane	50.000	47.827	4.3	98	0.00
76 T	1,2,3-Trichloropropane	50.000	48.568	2.9	99	0.00
77 T	Bromobenzene	50.000	48.549	2.9	95	0.00
78 T	n-propylbenzene	50.000	50.562	-1.1	95	0.00
79 T	2-Chlorotoluene	50.000	49.107	1.8	96	0.00
80 T	1,3,5-Trimethylbenzene	50.000	51.500	-3.0	96	0.00
81 T	trans-1,4-Dichloro-2-butene	50.000	49.276	1.4	95	0.00
82 T	4-Chlorotoluene	50.000	50.661	-1.3	96	0.00
83 T	tert-Butylbenzene	50.000	50.511	-1.0	97	0.00
84 T	1,2,4-Trimethylbenzene	50.000	51.485	-3.0	97	0.00
85 T	sec-Butylbenzene	50.000	51.122	-2.2	96	0.00
86 T	p-Isopropyltoluene	50.000	51.198	-2.4	96	0.00
87 T	1,3-Dichlorobenzene	50.000	50.272	-0.5	98	0.00
88 T	1,4-Dichlorobenzene	50.000	48.368	3.3	97	0.00
89 T	n-Butylbenzene	50.000	51.804	-3.6	96	0.00
90 T	Hexachloroethane	50.000	49.895	0.2	94	0.00
91 T	1,2-Dichlorobenzene	50.000	49.361	1.3	97	0.00
92 T	1,2-Dibromo-3-Chloropropane	50.000	51.458	-2.9	97	0.00
93 T	1,2,4-Trichlorobenzene	50.000	49.662	0.7	97	0.00
94 T	Hexachlorobutadiene	50.000	48.408	3.2	95	0.00
95 T	Naphthalene	50.000	50.404	-0.8	98	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX050525\
Data File : VX046048.D
Acq On : 05 May 2025 16:50
Operator : JC/MD
Sample : VSTDICV050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 12 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
ICVVX050525

Quant Time: May 06 07:17:12 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
Quant Title : SW846 8260
QLast Update : Tue May 06 07:12:22 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	48.525	3.0	94	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: CHEMTECH Contract: JAC005

Lab Code: CHEM Case No.: Q2008 SAS No.: Q2008 SDG No.: Q2008

Instrument ID: MSVOA_X Calibration Date/Time: 05/12/2025 09:59

Lab File ID: VX046125.D Init. Calib. Date(s): 05/05/2025 05/05/2025

Heated Purge: (Y/N) N Init. Calib. Time(s): 11:35 16:27

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

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX%D
Dichlorodifluoromethane	0.765	0.819		7.06	20
Chloromethane	0.742	0.738	0.1	-0.54	20
Vinyl Chloride	0.691	0.666		-3.62	20
Bromomethane	0.320	0.303		-5.31	20
Chloroethane	0.369	0.371		0.54	20
Trichlorofluoromethane	1.021	1.041		1.96	20
1,1,2-Trichlorotrifluoroethane	0.632	0.622		-1.58	20
1,1-Dichloroethene	0.593	0.562		-5.23	20
Acetone	0.374	0.357		-4.55	20
Carbon Disulfide	1.406	1.418		0.85	20
Methyl tert-butyl Ether	2.079	2.008		-3.41	20
Methyl Acetate	0.867	0.843		-2.77	20
Methylene Chloride	0.716	0.643		-10.2	20
trans-1,2-Dichloroethene	0.596	0.570		-4.36	20
1,1-Dichloroethane	1.219	1.174	0.1	-3.69	20
Cyclohexane	1.111	1.042		-6.21	20
2-Butanone	0.543	0.506		-6.81	20
Carbon Tetrachloride	0.544	0.557		2.39	20
cis-1,2-Dichloroethene	0.718	0.686		-4.46	20
Bromochloromethane	0.587	0.557		-5.11	20
Chloroform	1.271	1.225		-3.62	20
1,1,1-Trichloroethane	1.101	1.086		-1.36	20
Methylcyclohexane	0.623	0.612		-1.77	20
Benzene	1.417	1.405		-0.85	20
1,2-Dichloroethane	0.612	0.610		-0.33	20
Trichloroethene	0.341	0.339		-0.59	20
1,2-Dichloropropane	0.352	0.360		2.27	20
Bromodichloromethane	0.547	0.578		5.67	20
4-Methyl-2-Pentanone	0.605	0.596		-1.49	20
Toluene	0.869	0.853		-1.84	20
t-1,3-Dichloropropene	0.487	0.519		6.57	20
cis-1,3-Dichloropropene	0.538	0.555		3.16	20
1,1,2-Trichloroethane	0.343	0.346		0.88	20
2-Hexanone	0.448	0.439		-2.01	20
Dibromochloromethane	0.376	0.412		9.57	20
1,2-Dibromoethane	0.356	0.351		-1.4	20
Tetrachloroethene	0.354	0.352		-0.56	20
Chlorobenzene	1.094	1.063	0.3	-2.83	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: CHEMTECH Contract: JACO05

Lab Code: CHEM Case No.: Q2008 SAS No.: Q2008 SDG No.: Q2008

Instrument ID: MSVOA_X Calibration Date/Time: 05/12/2025 09:59

Lab File ID: VX046125.D Init. Calib. Date(s): 05/05/2025 05/05/2025

Heated Purge: (Y/N) N Init. Calib. Time(s): 11:35 16:27

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

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX%D
Ethyl Benzene	1.929	1.941		0.62	20
m/p-Xylenes	0.706	0.710		0.57	20
o-Xylene	0.688	0.691		0.44	20
Styrene	1.127	1.178		4.53	20
Bromoform	0.281	0.302	0.1	7.47	20
Isopropylbenzene	3.893	3.916		0.59	20
1,1,2,2-Tetrachloroethane	1.364	1.243	0.3	-8.87	20
1,3-Dichlorobenzene	1.649	1.648		-0.06	20
1,4-Dichlorobenzene	1.684	1.688		0.24	20
1,2-Dichlorobenzene	1.655	1.616		-2.36	20
1,2-Dibromo-3-Chloropropane	0.302	0.298		-1.33	20
1,2,4-Trichlorobenzene	0.951	0.964		1.37	20
1,2,3-Trichlorobenzene	0.981	0.982		0.1	20
1,2-Dichloroethane-d4	0.932	0.830		-10.94	20
Dibromofluoromethane	0.360	0.350		-2.78	20
Toluene-d8	1.246	1.176		-5.62	20
4-Bromofluorobenzene	0.478	0.462		-3.35	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\VX051225\
 Data File : VX046125.D
 Acq On : 12 May 2025 09:59
 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 :Mahesh Dadoda 05/13/2025
 Supervised By :Semsettin Yesilyurt 05/13/2025

Quant Time: May 13 03:12:52 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
 Quant Title : SW846 8260
 QLast Update : Tue May 06 07:12:22 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	5.538	168	99352	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.751	114	165662	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.049	117	144793	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.018	152	69015	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.946	65	82467	44.523	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery =	89.040%		
35) Dibromofluoromethane	5.379	113	58039	48.652	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery =	97.300%		
50) Toluene-d8	8.641	98	194756	47.169	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery =	94.340%		
62) 4-Bromofluorobenzene	11.079	95	76603	48.367	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery =	96.740%		
Target Compounds					Qvalue	
2) Dichlorodifluoromethane	1.166	85	81417	53.541	ug/l	100
3) Chloromethane	1.300	50	73329	49.726	ug/l	98
4) Vinyl Chloride	1.374	62	66129	48.183	ug/l	100
5) Bromomethane	1.593	94	30131	47.334	ug/l	98
6) Chloroethane	1.666	64	36842	50.285	ug/l	96
7) Trichlorofluoromethane	1.874	101	103416	50.986	ug/l	99
8) Diethyl Ether	2.130	74	32495	47.061	ug/l	97
9) 1,1,2-Trichlorotrifluo...	2.319	101	61799	49.233	ug/l	98
10) Methyl Iodide	2.447	142	66626	44.858	ug/l	97
11) Tert butyl alcohol	2.971	59	57091	219.582	ug/l	99
12) 1,1-Dichloroethene	2.313	96	55847	47.406	ug/l	98
13) Acrolein	2.233	56	88288	298.172	ug/l	99
14) Allyl chloride	2.654	41	111302	49.434	ug/l	98
15) Acrylonitrile	3.062	53	174564	234.803	ug/l	98
16) Acetone	2.380	43	177283	238.713	ug/l	99
17) Carbon Disulfide	2.501	76	140839	50.427	ug/l	98
18) Methyl Acetate	2.703	43	83742	48.592	ug/l	98
19) Methyl tert-butyl Ether	3.111	73	199511	48.305	ug/l	99
20) Methylene Chloride	2.782	84	63911	44.907	ug/l	96
21) trans-1,2-Dichloroethene	3.087	96	56614	47.786	ug/l	99
22) Diisopropyl ether	3.757	45	213952	49.194	ug/l	94
23) Vinyl Acetate	3.715	43	928385	242.704	ug/l	100
24) 1,1-Dichloroethane	3.599	63	116620	48.143	ug/l	98
25) 2-Butanone	4.550	43	251197	232.981	ug/l	99
26) 2,2-Dichloropropane	4.465	77	95049	50.131	ug/l	99
27) cis-1,2-Dichloroethene	4.477	96	68127	47.768	ug/l	100
28) Bromochloromethane	4.891	49	55303	47.430	ug/l	99
29) Tetrahydrofuran	4.995	42	152857	226.248	ug/l	100
30) Chloroform	5.080	83	121699	48.201	ug/l	94
31) Cyclohexane	5.458	56	103511	46.893	ug/l	98
32) 1,1,1-Trichloroethane	5.367	97	107876	49.289	ug/l	99
36) 1,1-Dichloropropene	5.678	75	79771	49.769	ug/l	100
37) Ethyl Acetate	4.708	43	93772	47.352	ug/l	99
38) Carbon Tetrachloride	5.666	117	92339	51.273	ug/l	97
39) Methylcyclohexane	7.373	83	101381	49.130	ug/l	96
40) Benzene	6.025	78	232783	49.583	ug/l	100

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX051225\
 Data File : VX046125.D
 Acq On : 12 May 2025 09:59
 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 :Mahesh Dadoda 05/13/2025
 Supervised By :Semsettin Yesilyurt 05/13/2025

Quant Time: May 13 03:12:52 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
 Quant Title : SW846 8260
 QLast Update : Tue May 06 07:12:22 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	4.910	41	54361	52.476	ug/l	98
42) 1,2-Dichloroethane	6.074	62	100993	49.842	ug/l	99
43) Isopropyl Acetate	6.330	43	151199	50.048	ug/l	99
44) Trichloroethene	7.117	130	56170	49.709	ug/l	97
45) 1,2-Dichloropropane	7.421	63	59635	51.083	ug/l	98
46) Dibromomethane	7.574	93	44562	48.398	ug/l	98
47) Bromodichloromethane	7.818	83	95773	52.812	ug/l	99
48) Methyl methacrylate	7.690	41	77404	50.168	ug/l	100
49) 1,4-Dioxane	7.653	88	28733	980.808	ug/l	99
51) 4-Methyl-2-Pentanone	8.567	43	493940	246.312	ug/l	100
52) Toluene	8.714	92	141232	49.059	ug/l	99
53) t-1,3-Dichloropropene	8.976	75	86052	53.385	ug/l	100
54) cis-1,3-Dichloropropene	8.360	75	92023	51.653	ug/l	97
55) 1,1,2-Trichloroethane	9.147	97	57337	50.512	ug/l	99
56) Ethyl methacrylate	9.110	69	92163	50.943	ug/l	99
57) 1,3-Dichloropropane	9.305	76	98974	48.550	ug/l	99
58) 2-Chloroethyl Vinyl ether	8.238	63	170754	185.133	ug/l	100
59) 2-Hexanone	9.427	43	363896	245.275	ug/l	100
60) Dibromochloromethane	9.519	129	68177	54.689	ug/l	98
61) 1,2-Dibromoethane	9.604	107	58101	49.247	ug/l	98
64) Tetrachloroethene	9.269	164	50928	49.711	ug/l	96
65) Chlorobenzene	10.073	112	153955	48.579	ug/l	100
66) 1,1,1,2-Tetrachloroethane	10.159	131	55159	50.971	ug/l	100
67) Ethyl Benzene	10.189	91	281062	50.312	ug/l	100
68) m/p-Xylenes	10.299	106	205561	100.608	ug/l	98
69) o-Xylene	10.640	106	100039	50.223	ug/l	99
70) Styrene	10.652	104	170510	52.256	ug/l	99
71) Bromoform	10.799	173	43793	53.901	ug/l #	99
73) Isopropylbenzene	10.957	105	270272	50.302	ug/l	100
74) N-amyl acetate	10.841	43	127652	48.079	ug/l	99
75) 1,1,2,2-Tetrachloroethane	11.207	83	85807	45.572	ug/l	100
76) 1,2,3-Trichloropropane	11.238	75	77401m	46.593	ug/l	
77) Bromobenzene	11.195	156	60791	48.734	ug/l	99
78) n-propylbenzene	11.299	91	316546	50.668	ug/l	99
79) 2-Chlorotoluene	11.360	91	196834	48.847	ug/l	100
80) 1,3,5-Trimethylbenzene	11.445	105	226040	50.357	ug/l	99
81) trans-1,4-Dichloro-2-b...	11.012	75	25340	49.662	ug/l	96
82) 4-Chlorotoluene	11.451	91	224968	50.343	ug/l	99
83) tert-Butylbenzene	11.713	119	225281	49.825	ug/l	99
84) 1,2,4-Trimethylbenzene	11.750	105	231314	50.886	ug/l	100
85) sec-Butylbenzene	11.884	105	284243	51.200	ug/l	99
86) p-Isopropyltoluene	12.006	119	235339	51.356	ug/l	100
87) 1,3-Dichlorobenzene	11.963	146	113715	49.950	ug/l	100
88) 1,4-Dichlorobenzene	12.036	146	116484	50.101	ug/l	98
89) n-Butylbenzene	12.329	91	212130	52.774	ug/l	100
90) Hexachloroethane	12.536	117	41857	51.847	ug/l	98
91) 1,2-Dichlorobenzene	12.329	146	111557	48.832	ug/l	99
92) 1,2-Dibromo-3-Chloropr...	12.939	75	20582	49.343	ug/l	99
93) 1,2,4-Trichlorobenzene	13.585	180	66534	50.707	ug/l	99
94) Hexachlorobutadiene	13.719	225	28796	50.249	ug/l	97
95) Naphthalene	13.774	128	229265	47.640	ug/l	100
96) 1,2,3-Trichlorobenzene	13.957	180	67805	50.081	ug/l	99

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX051225\
Data File : VX046125.D
Acq On : 12 May 2025 09:59
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 :Mahesh Dadoda 05/13/2025
Supervised By :Semsettin Yesilyurt 05/13/2025

Quant Time: May 13 03:12:52 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
Quant Title : SW846 8260
QLast Update : Tue May 06 07:12:22 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

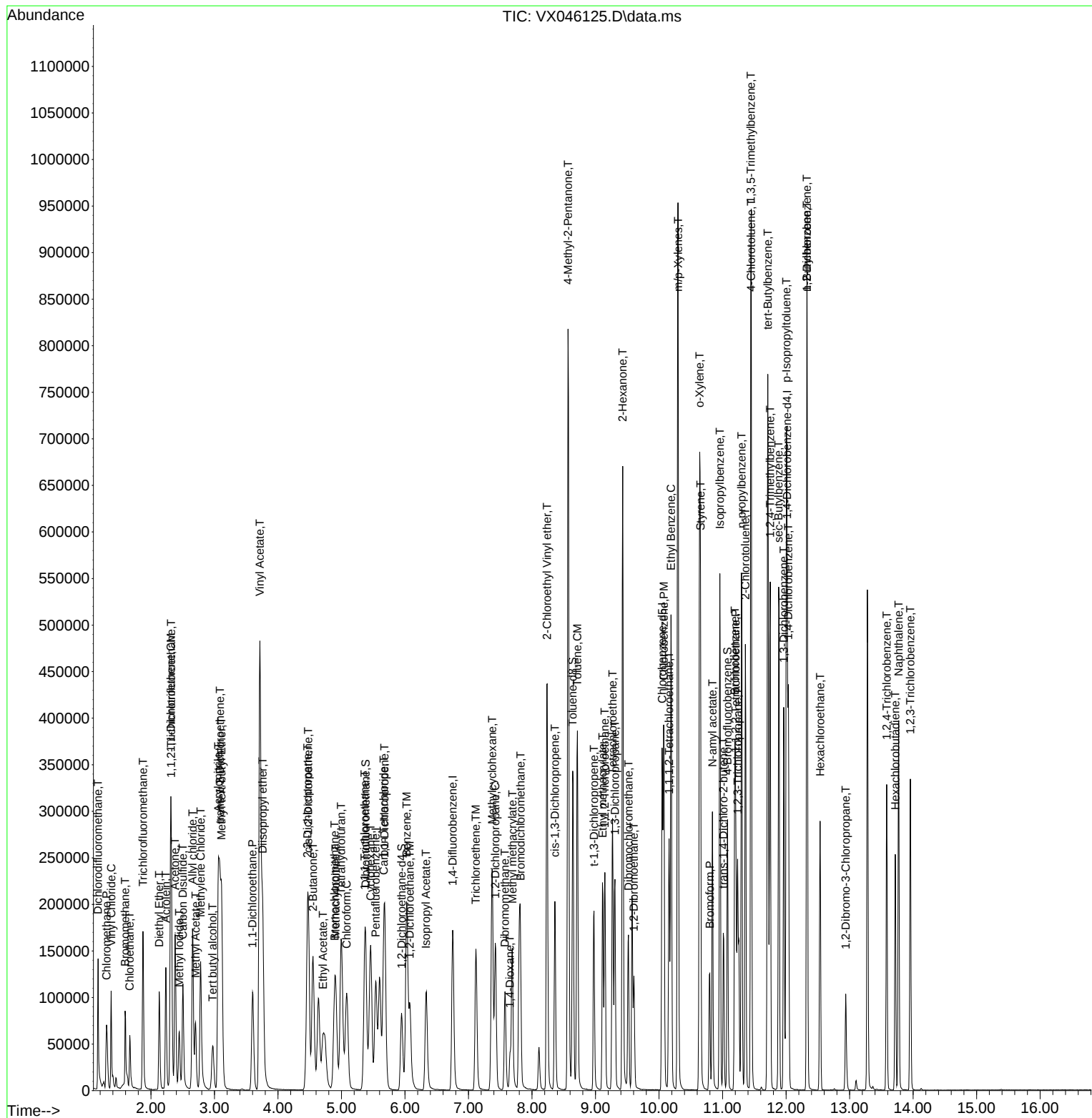
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX051225\
Data File : VX046125.D
Acq On : 12 May 2025 09:59
Operator : JC/MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VSTDCCC050

Manual Integrations APPROVED

Reviewed By :Mahesh Dadoda 05/13/2025
Supervised By :Semsettin Yesilyurt 05/13/2025

Quant Time: May 13 03:12:52 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
Quant Title : SW846 8260
QLast Update : Tue May 06 07:12:22 2025
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Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX051225\
 Data File : VX046125.D
 Acq On : 12 May 2025 09:59
 Operator : JC/MD
 Sample : VSTDCCC050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 2 Sample Multiplier: 1

Instrument :
 MSVOA_X
 LabSampleId :
 VSTDCCC050

Quant Time: May 13 03:12:52 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
 Quant Title : SW846 8260
 QLast Update : Tue May 06 07:12:22 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	102	0.00
2 T	Dichlorodifluoromethane	0.765	0.819	-7.1	97	0.00
3 P	Chloromethane	0.742	0.738	0.5	97	0.00
4 C	Vinyl Chloride	0.691	0.666	3.6#	96	0.00
5 T	Bromomethane	0.320	0.303	5.3	95	0.00
6 T	Chloroethane	0.369	0.371	-0.5	100	0.00
7 T	Trichlorofluoromethane	1.021	1.041	-2.0	100	0.00
8 T	Diethyl Ether	0.347	0.327	5.8	99	0.00
9 T	1,1,2-Trichlorotrifluoroeth	0.632	0.622	1.6	99	0.00
10 T	Methyl Iodide	0.747	0.671	10.2	85	0.00
11 T	Tert butyl alcohol	0.131	0.115	12.2	91	0.00
12 CM	1,1-Dichloroethene	0.593	0.562	5.2#	96	0.00
13 T	Acrolein	0.149	0.178	-19.5	119	0.00
14 T	Allyl chloride	1.133	1.120	1.1	97	0.00
15 T	Acrylonitrile	0.374	0.351	6.1	93	0.00
16 T	Acetone	0.374	0.357	4.5	101	0.00
17 T	Carbon Disulfide	1.406	1.418	-0.9	100	0.00
18 T	Methyl Acetate	0.867	0.843	2.8	102	0.00
19 T	Methyl tert-butyl Ether	2.079	2.008	3.4	95	0.00
20 T	Methylene Chloride	0.716	0.643	10.2	96	0.00
21 T	trans-1,2-Dichloroethene	0.596	0.570	4.4	96	0.00
22 T	Diisopropyl ether	2.189	2.153	1.6	97	0.00
23 T	Vinyl Acetate	1.925	1.869	2.9	93	0.00
24 P	1,1-Dichloroethane	1.219	1.174	3.7	95	0.00
25 T	2-Butanone	0.543	0.506	6.8	93	0.00
26 T	2,2-Dichloropropane	0.954	0.957	-0.3	102	0.00
27 T	cis-1,2-Dichloroethene	0.718	0.686	4.5	95	0.00
28 T	Bromochloromethane	0.587	0.557	5.1	99	0.00
29 T	Tetrahydrofuran	0.340	0.308	9.4	90	0.00
30 C	Chloroform	1.271	1.225	3.6#	97	0.00
31 T	Cyclohexane	1.111	1.042	6.2	95	0.00
32 T	1,1,1-Trichloroethane	1.101	1.086	1.4	98	0.00
33 S	1,2-Dichloroethane-d4	0.932	0.830	10.9	93	0.00
34 I	1,4-Difluorobenzene	1.000	1.000	0.0	99	0.00
35 S	Dibromofluoromethane	0.360	0.350	2.8	97	0.00
36 T	1,1-Dichloropropene	0.484	0.482	0.4	96	0.00
37 T	Ethyl Acetate	0.598	0.566	5.4	91	0.00
38 T	Carbon Tetrachloride	0.544	0.557	-2.4	99	0.00
39 T	Methylcyclohexane	0.623	0.612	1.8	94	0.00
40 TM	Benzene	1.417	1.405	0.8	94	0.00
41 T	Methacrylonitrile	0.313	0.328	-4.8	94	0.00
42 TM	1,2-Dichloroethane	0.612	0.610	0.3	96	0.00
43 T	Isopropyl Acetate	0.912	0.913	-0.1	93	0.00
44 TM	Trichloroethene	0.341	0.339	0.6	94	0.00
45 C	1,2-Dichloropropane	0.352	0.360	-2.3#	96	0.00
46 T	Dibromomethane	0.278	0.269	3.2	92	0.00
47 T	Bromodichloromethane	0.547	0.578	-5.7	99	0.00
48 T	Methyl methacrylate	0.466	0.467	-0.2	92	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX051225\
 Data File : VX046125.D
 Acq On : 12 May 2025 09:59
 Operator : JC/MD
 Sample : VSTDCCC050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 2 Sample Multiplier: 1

Instrument :
 MSVOA_X
 LabSampleId :
 VSTDCCC050

Quant Time: May 13 03:12:52 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
 Quant Title : SW846 8260
 QLast Update : Tue May 06 07:12:22 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	0.009	0.009	0.0	94	0.00
50 S	Toluene-d8	1.246	1.176	5.6	95	0.00
51 T	4-Methyl-2-Pentanone	0.605	0.596	1.5	93	0.00
52 CM	Toluene	0.869	0.853	1.8#	94	0.00
53 T	t-1,3-Dichloropropene	0.487	0.519	-6.6	97	0.00
54 T	cis-1,3-Dichloropropene	0.538	0.555	-3.2	95	0.00
55 T	1,1,2-Trichloroethane	0.343	0.346	-0.9	96	0.00
56 T	Ethyl methacrylate	0.546	0.556	-1.8	92	0.00
57 T	1,3-Dichloropropane	0.615	0.597	2.9	95	0.00
58 T	2-Chloroethyl Vinyl ether	0.278	0.206	25.9#	66	0.00
59 T	2-Hexanone	0.448	0.439	2.0	92	0.00
60 T	Dibromochloromethane	0.376	0.412	-9.6	101	0.00
61 T	1,2-Dibromoethane	0.356	0.351	1.4	93	0.00
62 S	4-Bromofluorobenzene	0.478	0.462	3.3	97	0.00
63 I	Chlorobenzene-d5	1.000	1.000	0.0	99	0.00
64 T	Tetrachloroethene	0.354	0.352	0.6	93	0.00
65 PM	Chlorobenzene	1.094	1.063	2.8	96	0.00
66 T	1,1,1,2-Tetrachloroethane	0.374	0.381	-1.9	97	0.00
67 C	Ethyl Benzene	1.929	1.941	-0.6#	95	0.00
68 T	m/p-Xylenes	0.706	0.710	-0.6	95	0.00
69 T	o-Xylene	0.688	0.691	-0.4	94	0.00
70 T	Styrene	1.127	1.178	-4.5	96	0.00
71 P	Bromoform	0.281	0.302	-7.5	98	0.00
72 I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	102	0.00
73 T	Isopropylbenzene	3.893	3.916	-0.6	96	0.00
74 T	N-amyl acetate	1.924	1.850	3.8	91	0.00
75 P	1,1,2,2-Tetrachloroethane	1.364	1.243	8.9	94	0.00
76 T	1,2,3-Trichloropropane	1.204	1.122	6.8	96	0.00
77 T	Bromobenzene	0.904	0.881	2.5	96	0.00
78 T	n-propylbenzene	4.526	4.587	-1.3	96	0.00
79 T	2-Chlorotoluene	2.919	2.852	2.3	97	0.00
80 T	1,3,5-Trimethylbenzene	3.252	3.275	-0.7	95	0.00
81 T	trans-1,4-Dichloro-2-butene	0.370	0.367	0.8	97	0.00
82 T	4-Chlorotoluene	3.238	3.260	-0.7	96	0.00
83 T	tert-Butylbenzene	3.276	3.264	0.4	96	0.00
84 T	1,2,4-Trimethylbenzene	3.293	3.352	-1.8	97	0.00
85 T	sec-Butylbenzene	4.022	4.119	-2.4	98	0.00
86 T	p-Isopropyltoluene	3.320	3.410	-2.7	97	0.00
87 T	1,3-Dichlorobenzene	1.649	1.648	0.1	98	0.00
88 T	1,4-Dichlorobenzene	1.684	1.688	-0.2	101	0.00
89 T	n-Butylbenzene	2.912	3.074	-5.6	99	0.00
90 T	Hexachloroethane	0.585	0.606	-3.6	99	0.00
91 T	1,2-Dichlorobenzene	1.655	1.616	2.4	97	0.00
92 T	1,2-Dibromo-3-Chloropropane	0.302	0.298	1.3	94	0.00
93 T	1,2,4-Trichlorobenzene	0.951	0.964	-1.4	100	0.00
94 T	Hexachlorobutadiene	0.415	0.417	-0.5	99	0.00
95 T	Naphthalene	3.487	3.322	4.7	93	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX051225\
Data File : VX046125.D
Acq On : 12 May 2025 09:59
Operator : JC/MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_X
LabSampleId :
VSTDCCC050

Quant Time: May 13 03:12:52 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
Quant Title : SW846 8260
QLast Update : Tue May 06 07:12:22 2025
Response via : Initial Calibration

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

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
96 T	1,2,3-Trichlorobenzene	0.981	0.982	-0.1	98	0.00

(#) = Out of Range

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

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX051225\
 Data File : VX046125.D
 Acq On : 12 May 2025 09:59
 Operator : JC/MD
 Sample : VSTDCCC050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 2 Sample Multiplier: 1

Instrument :
 MSVOA_X
 LabSampleId :
 VSTDCCC050

Quant Time: May 13 03:12:52 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
 Quant Title : SW846 8260
 QLast Update : Tue May 06 07:12:22 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	102	0.00
2 T	Dichlorodifluoromethane	50.000	53.541	-7.1	97	0.00
3 P	Chloromethane	50.000	49.726	0.5	97	0.00
4 C	Vinyl Chloride	50.000	48.183	3.6#	96	0.00
5 T	Bromomethane	50.000	47.334	5.3	95	0.00
6 T	Chloroethane	50.000	50.285	-0.6	100	0.00
7 T	Trichlorofluoromethane	50.000	50.986	-2.0	100	0.00
8 T	Diethyl Ether	50.000	47.061	5.9	99	0.00
9 T	1,1,2-Trichlorotrifluoroeth	50.000	49.233	1.5	99	0.00
10 T	Methyl Iodide	50.000	44.858	10.3	85	0.00
11 T	Tert butyl alcohol	250.000	219.582	12.2	91	0.00
12 CM	1,1-Dichloroethene	50.000	47.406	5.2#	96	0.00
13 T	Acrolein	250.000	298.172	-19.3	119	0.00
14 T	Allyl chloride	50.000	49.434	1.1	97	0.00
15 T	Acrylonitrile	250.000	234.803	6.1	93	0.00
16 T	Acetone	250.000	238.713	4.5	101	0.00
17 T	Carbon Disulfide	50.000	50.427	-0.9	100	0.00
18 T	Methyl Acetate	50.000	48.592	2.8	102	0.00
19 T	Methyl tert-butyl Ether	50.000	48.305	3.4	95	0.00
20 T	Methylene Chloride	50.000	44.907	10.2	96	0.00
21 T	trans-1,2-Dichloroethene	50.000	47.786	4.4	96	0.00
22 T	Diisopropyl ether	50.000	49.194	1.6	97	0.00
23 T	Vinyl Acetate	250.000	242.704	2.9	93	0.00
24 P	1,1-Dichloroethane	50.000	48.143	3.7	95	0.00
25 T	2-Butanone	250.000	232.981	6.8	93	0.00
26 T	2,2-Dichloropropane	50.000	50.131	-0.3	102	0.00
27 T	cis-1,2-Dichloroethene	50.000	47.768	4.5	95	0.00
28 T	Bromochloromethane	50.000	47.430	5.1	99	0.00
29 T	Tetrahydrofuran	250.000	226.248	9.5	90	0.00
30 C	Chloroform	50.000	48.201	3.6#	97	0.00
31 T	Cyclohexane	50.000	46.893	6.2	95	0.00
32 T	1,1,1-Trichloroethane	50.000	49.289	1.4	98	0.00
33 S	1,2-Dichloroethane-d4	50.000	44.523	11.0	93	0.00
34 I	1,4-Difluorobenzene	50.000	50.000	0.0	99	0.00
35 S	Dibromofluoromethane	50.000	48.652	2.7	97	0.00
36 T	1,1-Dichloropropene	50.000	49.769	0.5	96	0.00
37 T	Ethyl Acetate	50.000	47.352	5.3	91	0.00
38 T	Carbon Tetrachloride	50.000	51.273	-2.5	99	0.00
39 T	Methylcyclohexane	50.000	49.130	1.7	94	0.00
40 TM	Benzene	50.000	49.583	0.8	94	0.00
41 T	Methacrylonitrile	50.000	52.476	-5.0	94	0.00
42 TM	1,2-Dichloroethane	50.000	49.842	0.3	96	0.00
43 T	Isopropyl Acetate	50.000	50.048	-0.1	93	0.00
44 TM	Trichloroethene	50.000	49.709	0.6	94	0.00
45 C	1,2-Dichloropropane	50.000	51.083	-2.2#	96	0.00
46 T	Dibromomethane	50.000	48.398	3.2	92	0.00
47 T	Bromodichloromethane	50.000	52.812	-5.6	99	0.00
48 T	Methyl methacrylate	50.000	50.168	-0.3	92	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX051225\
 Data File : VX046125.D
 Acq On : 12 May 2025 09:59
 Operator : JC/MD
 Sample : VSTDCCC050
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 2 Sample Multiplier: 1

Instrument :
 MSVOA_X
 LabSampleId :
 VSTDCCC050

Quant Time: May 13 03:12:52 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
 Quant Title : SW846 8260
 QLast Update : Tue May 06 07:12:22 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	980.808	1.9	94	0.00
50 S	Toluene-d8	50.000	47.169	5.7	95	0.00
51 T	4-Methyl-2-Pentanone	250.000	246.312	1.5	93	0.00
52 CM	Toluene	50.000	49.059	1.9#	94	0.00
53 T	t-1,3-Dichloropropene	50.000	53.385	-6.8	97	0.00
54 T	cis-1,3-Dichloropropene	50.000	51.653	-3.3	95	0.00
55 T	1,1,2-Trichloroethane	50.000	50.512	-1.0	96	0.00
56 T	Ethyl methacrylate	50.000	50.943	-1.9	92	0.00
57 T	1,3-Dichloropropane	50.000	48.550	2.9	95	0.00
58 T	2-Chloroethyl Vinyl ether	250.000	185.133	25.9#	66	0.00
59 T	2-Hexanone	250.000	245.275	1.9	92	0.00
60 T	Dibromochloromethane	50.000	54.689	-9.4	101	0.00
61 T	1,2-Dibromoethane	50.000	49.247	1.5	93	0.00
62 S	4-Bromofluorobenzene	50.000	48.367	3.3	97	0.00
63 I	Chlorobenzene-d5	50.000	50.000	0.0	99	0.00
64 T	Tetrachloroethene	50.000	49.711	0.6	93	0.00
65 PM	Chlorobenzene	50.000	48.579	2.8	96	0.00
66 T	1,1,1,2-Tetrachloroethane	50.000	50.971	-1.9	97	0.00
67 C	Ethyl Benzene	50.000	50.312	-0.6#	95	0.00
68 T	m/p-Xylenes	100.000	100.608	-0.6	95	0.00
69 T	o-Xylene	50.000	50.223	-0.4	94	0.00
70 T	Styrene	50.000	52.256	-4.5	96	0.00
71 P	Bromoform	50.000	53.901	-7.8	98	0.00
72 I	1,4-Dichlorobenzene-d4	50.000	50.000	0.0	102	0.00
73 T	Isopropylbenzene	50.000	50.302	-0.6	96	0.00
74 T	N-amyl acetate	50.000	48.079	3.8	91	0.00
75 P	1,1,2,2-Tetrachloroethane	50.000	45.572	8.9	94	0.00
76 T	1,2,3-Trichloropropane	50.000	46.593	6.8	96	0.00
77 T	Bromobenzene	50.000	48.734	2.5	96	0.00
78 T	n-propylbenzene	50.000	50.668	-1.3	96	0.00
79 T	2-Chlorotoluene	50.000	48.847	2.3	97	0.00
80 T	1,3,5-Trimethylbenzene	50.000	50.357	-0.7	95	0.00
81 T	trans-1,4-Dichloro-2-butene	50.000	49.662	0.7	97	0.00
82 T	4-Chlorotoluene	50.000	50.343	-0.7	96	0.00
83 T	tert-Butylbenzene	50.000	49.825	0.3	96	0.00
84 T	1,2,4-Trimethylbenzene	50.000	50.886	-1.8	97	0.00
85 T	sec-Butylbenzene	50.000	51.200	-2.4	98	0.00
86 T	p-Isopropyltoluene	50.000	51.356	-2.7	97	0.00
87 T	1,3-Dichlorobenzene	50.000	49.950	0.1	98	0.00
88 T	1,4-Dichlorobenzene	50.000	50.101	-0.2	101	0.00
89 T	n-Butylbenzene	50.000	52.774	-5.5	99	0.00
90 T	Hexachloroethane	50.000	51.847	-3.7	99	0.00
91 T	1,2-Dichlorobenzene	50.000	48.832	2.3	97	0.00
92 T	1,2-Dibromo-3-Chloropropane	50.000	49.343	1.3	94	0.00
93 T	1,2,4-Trichlorobenzene	50.000	50.707	-1.4	100	0.00
94 T	Hexachlorobutadiene	50.000	50.249	-0.5	99	0.00
95 T	Naphthalene	50.000	47.640	4.7	93	0.00

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX051225\
Data File : VX046125.D
Acq On : 12 May 2025 09:59
Operator : JC/MD
Sample : VSTDCCC050
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 2 Sample Multiplier: 1

Instrument :
MSVOA_X
LabSampleId :
VSTDCCC050

Quant Time: May 13 03:12:52 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
Quant Title : SW846 8260
QLast Update : Tue May 06 07:12:22 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	50.081	-0.2	98	0.00

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



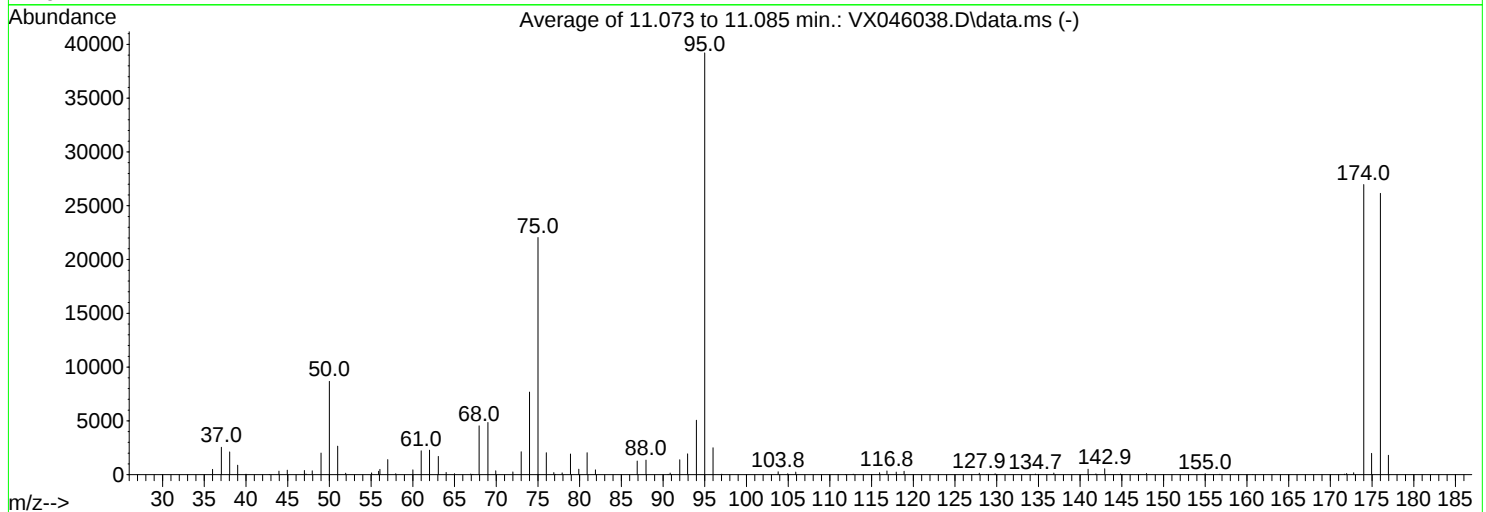
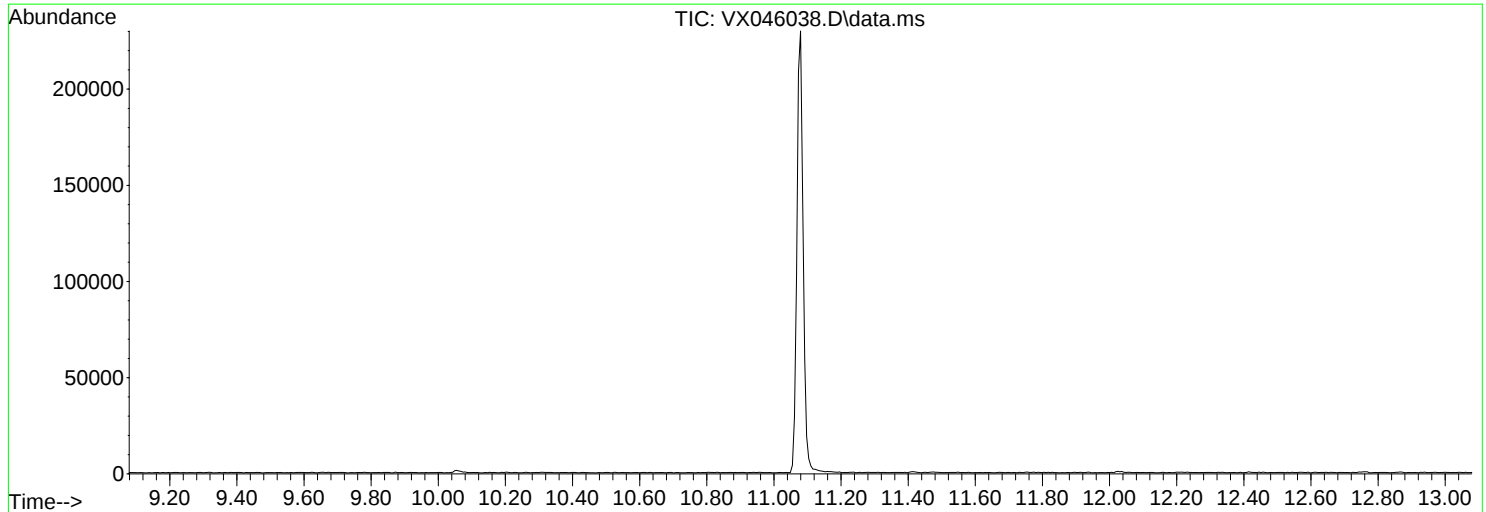
QC SAMPLE DATA

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX050525\
Data File : VX046038.D
Acq On : 05 May 2025 09:37
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\82X050525W.M
Title : SW846 8260
Last Update : Tue May 06 07:12:22 2025



AutoFind: Scans 1638, 1639, 1640; Background Corrected with Scan 1631

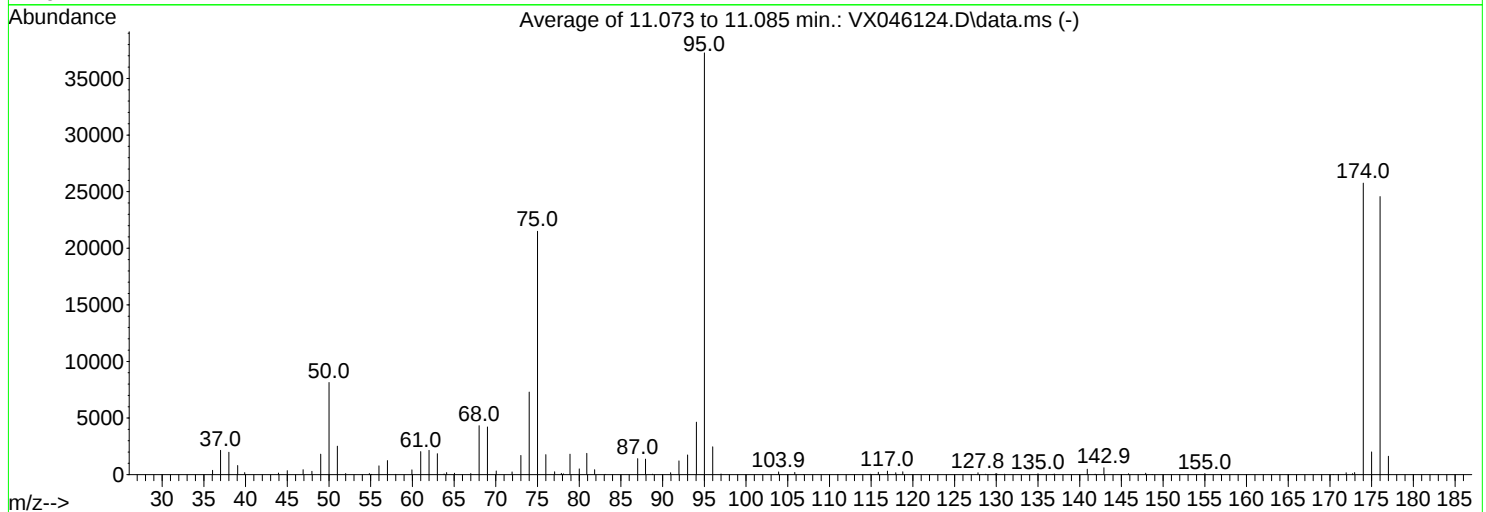
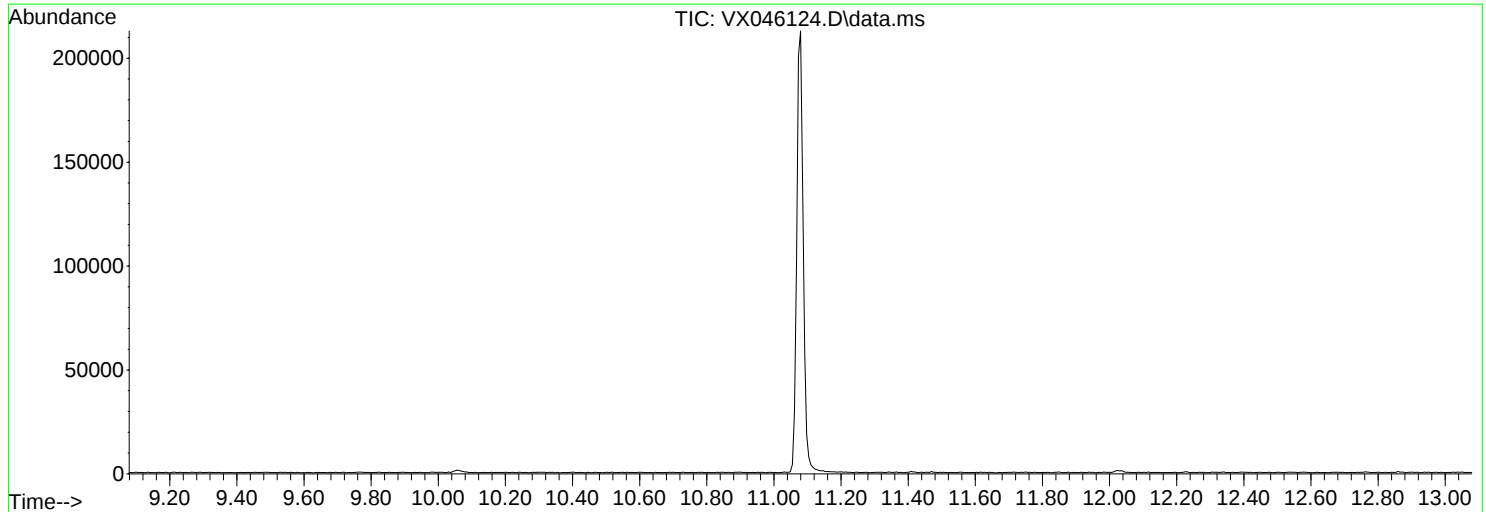
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	22.1	8676	PASS
75	95	30	60	56.2	22052	PASS
95	95	100	100	100.0	39213	PASS
96	95	5	9	6.4	2505	PASS
173	174	0.00	2	0.7	185	PASS
174	95	50	100	68.8	26963	PASS
175	174	5	9	7.3	1980	PASS
176	174	95	101	97.0	26147	PASS
177	176	5	9	6.9	1802	PASS

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX051225\
Data File : VX046124.D
Acq On : 12 May 2025 09:30
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\82X050525W.M
Title : SW846 8260
Last Update : Tue May 06 07:12:22 2025



AutoFind: Scans 1638, 1639, 1640; Background Corrected with Scan 1631

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	21.8	8140	PASS
75	95	30	60	57.7	21492	PASS
95	95	100	100	100.0	37261	PASS
96	95	5	9	6.6	2460	PASS
173	174	0.00	2	0.7	178	PASS
174	95	50	100	69.1	25755	PASS
175	174	5	9	7.8	2012	PASS
176	174	95	101	95.4	24560	PASS
177	176	5	9	6.6	1627	PASS

Report of Analysis

Client:	JACOBS Engineering Group, Inc.	Date Collected:	
Project:	Former Schlumberger Site Princeton NJ 2025	Date Received:	
Client Sample ID:	VX0512WBL01	SDG No.:	Q2008
Lab Sample ID:	VX0512WBL01	Matrix:	Water
Analytical Method:	8260D	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	DB-624UI ID : 0.18	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX046127.D	1		05/12/25 10:50	VX051225

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	0.22	U	0.22	5.00	ug/L
74-87-3	Chloromethane	0.32	U	0.32	5.00	ug/L
75-01-4	Vinyl Chloride	0.26	U	0.26	5.00	ug/L
74-83-9	Bromomethane	1.40	U	1.40	5.00	ug/L
75-00-3	Chloroethane	0.47	U	0.47	5.00	ug/L
75-69-4	Trichlorofluoromethane	0.33	U	0.33	5.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	0.25	U	0.25	5.00	ug/L
75-35-4	1,1-Dichloroethene	0.23	U	0.23	5.00	ug/L
67-64-1	Acetone	1.50	U	1.50	25.0	ug/L
75-15-0	Carbon Disulfide	0.21	U	0.21	5.00	ug/L
1634-04-4	Methyl tert-butyl Ether	0.16	U	0.16	5.00	ug/L
79-20-9	Methyl Acetate	0.27	U	0.27	5.00	ug/L
75-09-2	Methylene Chloride	0.28	U	0.28	5.00	ug/L
156-60-5	trans-1,2-Dichloroethene	0.23	U	0.23	5.00	ug/L
75-34-3	1,1-Dichloroethane	0.23	U	0.23	5.00	ug/L
110-82-7	Cyclohexane	1.50	U	1.50	5.00	ug/L
78-93-3	2-Butanone	0.98	U	0.98	25.0	ug/L
56-23-5	Carbon Tetrachloride	0.25	U	0.25	5.00	ug/L
156-59-2	cis-1,2-Dichloroethene	0.19	U	0.19	5.00	ug/L
74-97-5	Bromochloromethane	0.22	U	0.22	5.00	ug/L
67-66-3	Chloroform	0.25	U	0.25	5.00	ug/L
71-55-6	1,1,1-Trichloroethane	0.20	U	0.20	5.00	ug/L
108-87-2	Methylcyclohexane	0.16	U	0.16	5.00	ug/L
71-43-2	Benzene	0.15	U	0.15	5.00	ug/L
107-06-2	1,2-Dichloroethane	0.22	U	0.22	5.00	ug/L
79-01-6	Trichloroethene	0.090	U	0.090	5.00	ug/L
78-87-5	1,2-Dichloropropane	0.20	U	0.20	5.00	ug/L
75-27-4	Bromodichloromethane	0.22	U	0.22	5.00	ug/L
108-10-1	4-Methyl-2-Pentanone	0.68	U	0.68	25.0	ug/L
108-88-3	Toluene	0.14	U	0.14	5.00	ug/L

Report of Analysis

Client:	JACOBS Engineering Group, Inc.		Date Collected:	
Project:	Former Schlumberger Site Princeton NJ 2025		Date Received:	
Client Sample ID:	VX0512WBL01		SDG No.:	Q2008
Lab Sample ID:	VX0512WBL01		Matrix:	Water
Analytical Method:	8260D		% Solid:	0
Sample Wt/Vol:	5	Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:		uL	Test:	VOC-TCLVOA-10
GC Column:	DB-624UI	ID : 0.18	Level :	LOW
Prep Method :				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX046127.D	1		05/12/25 10:50	VX051225

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-02-6	t-1,3-Dichloropropene	0.17	U	0.17	5.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	0.16	U	0.16	5.00	ug/L
79-00-5	1,1,2-Trichloroethane	0.21	U	0.21	5.00	ug/L
591-78-6	2-Hexanone	0.89	U	0.89	25.0	ug/L
124-48-1	Dibromochloromethane	0.18	U	0.18	5.00	ug/L
106-93-4	1,2-Dibromoethane	0.15	U	0.15	5.00	ug/L
127-18-4	Tetrachloroethene	0.23	U	0.23	5.00	ug/L
108-90-7	Chlorobenzene	0.12	U	0.12	5.00	ug/L
100-41-4	Ethyl Benzene	0.13	U	0.13	5.00	ug/L
179601-23-1	m/p-Xylenes	0.24	U	0.24	10.0	ug/L
95-47-6	o-Xylene	0.12	U	0.12	5.00	ug/L
100-42-5	Styrene	0.15	U	0.15	5.00	ug/L
75-25-2	Bromoform	0.19	U	0.19	5.00	ug/L
98-82-8	Isopropylbenzene	0.12	U	0.12	5.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	0.26	U	0.26	5.00	ug/L
541-73-1	1,3-Dichlorobenzene	0.16	U	0.16	5.00	ug/L
106-46-7	1,4-Dichlorobenzene	0.19	U	0.19	5.00	ug/L
95-50-1	1,2-Dichlorobenzene	0.16	U	0.16	5.00	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	0.53	U	0.53	5.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	0.20	U	0.20	5.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	0.20	U	0.20	5.00	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	54.2		70 (74) - 130 (125)	108%	SPK: 50
1868-53-7	Dibromofluoromethane	50.9		70 (75) - 130 (124)	102%	SPK: 50
2037-26-5	Toluene-d8	50.1		70 (86) - 130 (113)	100%	SPK: 50
460-00-4	4-Bromofluorobenzene	49.6		70 (77) - 130 (121)	99%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	69400	5.544			
540-36-3	1,4-Difluorobenzene	139000	6.757			
3114-55-4	Chlorobenzene-d5	131000	10.049			
3855-82-1	1,4-Dichlorobenzene-d4	55200	12.018			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX046127.D	1		05/12/25 10:50	VX051225

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\VX051225\
 Data File : VX046127.D
 Acq On : 12 May 2025 10:50
 Operator : JC/MD
 Sample : VX0512WBL01
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 4 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VX0512WBL01

Quant Time: May 13 03:14:04 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
 Quant Title : SW846 8260
 QLast Update : Tue May 06 07:12:22 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	5.544	168	69374	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.757	114	138547	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.049	117	131027	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.018	152	55247	50.000	ug/l	0.00

System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.952	65	70108	54.206	ug/l	0.00
Spiked Amount	50.000	Range	74 - 125	Recovery	=	108.420%
35) Dibromofluoromethane	5.379	113	50736	50.854	ug/l	0.00
Spiked Amount	50.000	Range	75 - 124	Recovery	=	101.700%
50) Toluene-d8	8.647	98	173131	50.138	ug/l	0.00
Spiked Amount	50.000	Range	86 - 113	Recovery	=	100.280%
62) 4-Bromofluorobenzene	11.079	95	65707	49.606	ug/l	0.00
Spiked Amount	50.000	Range	77 - 121	Recovery	=	99.220%

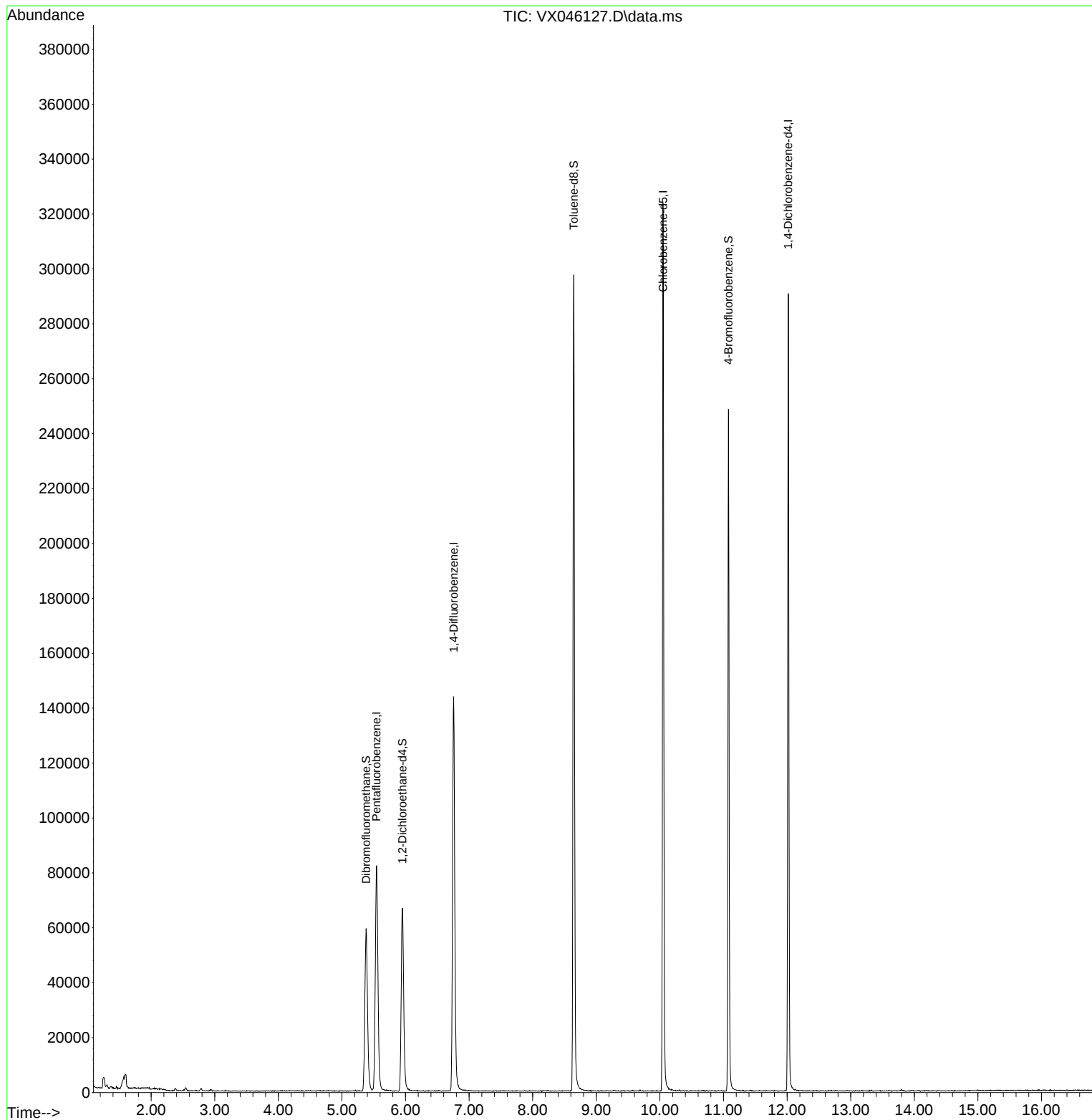
Target Compounds	Qvalue

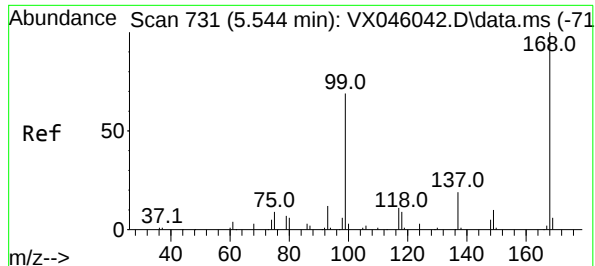
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX051225\
Data File : VX046127.D
Acq On : 12 May 2025 10:50
Operator : JC/MD
Sample : VX0512WBL01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VX0512WBL01

Quant Time: May 13 03:14:04 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
Quant Title : SW846 8260
QLast Update : Tue May 06 07:12:22 2025
Response via : Initial Calibration

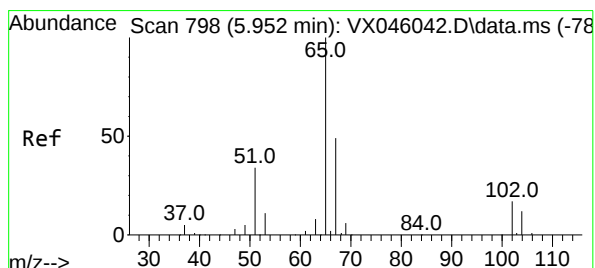
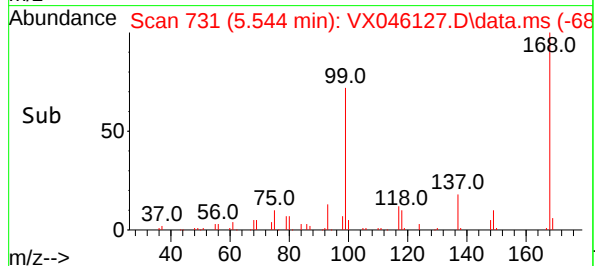
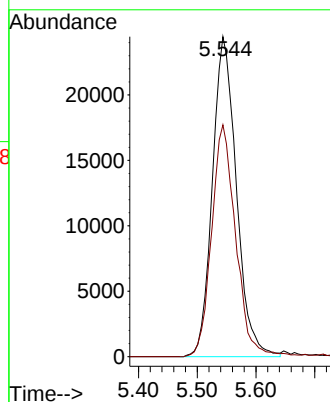
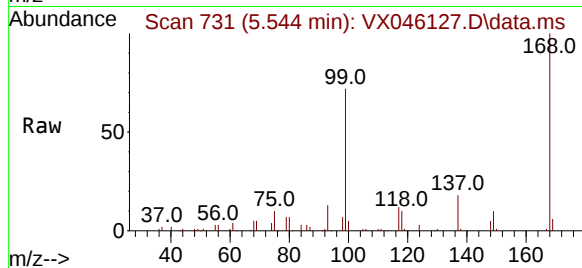




#1
Pentafluorobenzene
Concen: 50.000 ug/l
RT: 5.544 min Scan# 731
Delta R.T. -0.000 min
Lab File: VX046127.D
Acq: 12 May 2025 10:50

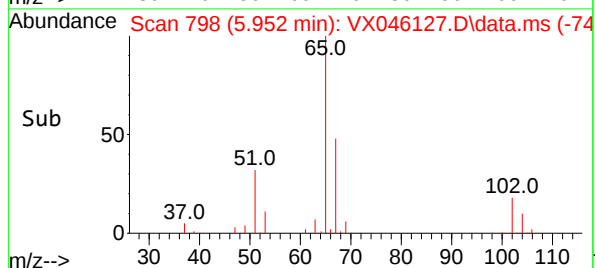
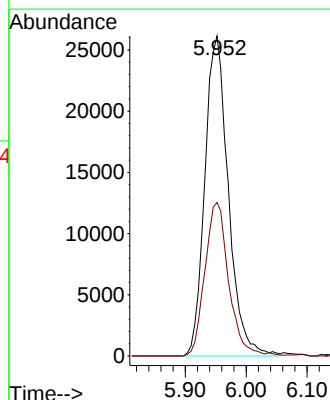
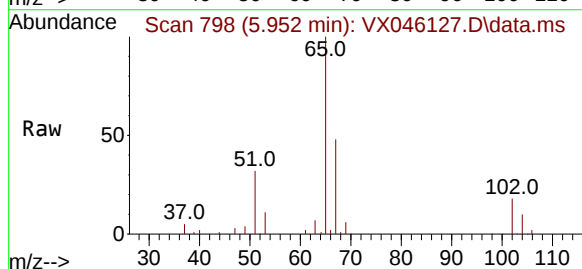
Instrument :
MSVOA_X
ClientSampleId :
VX0512WBL01

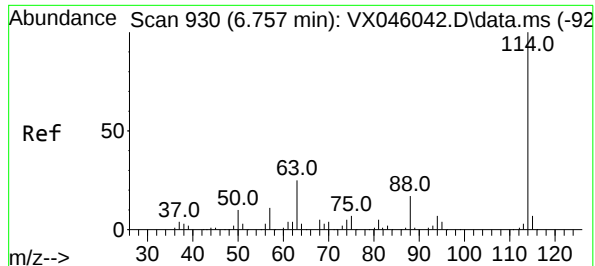
Tgt Ion:168 Resp: 69374
Ion Ratio Lower Upper
168 100
99 72.5 54.9 82.3



#33
1,2-Dichloroethane-d4
Concen: 54.206 ug/l
RT: 5.952 min Scan# 798
Delta R.T. -0.000 min
Lab File: VX046127.D
Acq: 12 May 2025 10:50

Tgt Ion: 65 Resp: 70108
Ion Ratio Lower Upper
65 100
67 48.5 0.0 99.0





#34

1,4-Difluorobenzene

Concen: 50.000 ug/l

RT: 6.757 min Scan# 91

Delta R.T. -0.000 min

Lab File: VX046127.D

Acq: 12 May 2025 10:50

Instrument :

MSVOA_X

ClientSampleId :

VX0512WBL01

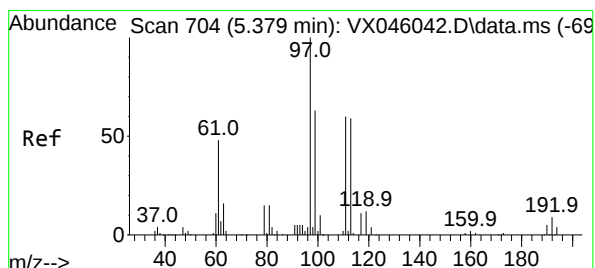
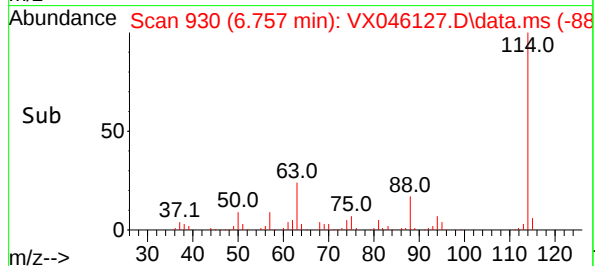
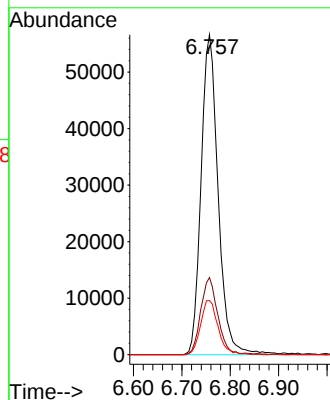
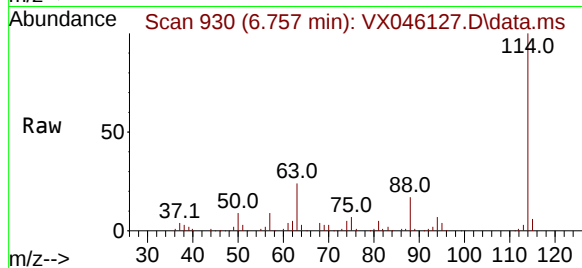
Tgt Ion:114 Resp: 138547

Ion Ratio Lower Upper

114 100

63 24.1 0.0 49.2

88 16.9 0.0 33.6



#35

Dibromofluoromethane

Concen: 50.854 ug/l

RT: 5.379 min Scan# 704

Delta R.T. -0.000 min

Lab File: VX046127.D

Acq: 12 May 2025 10:50

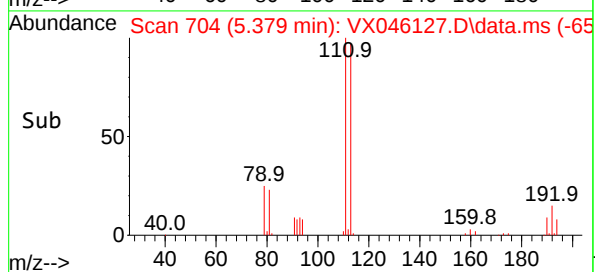
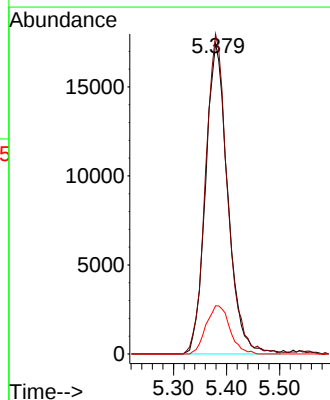
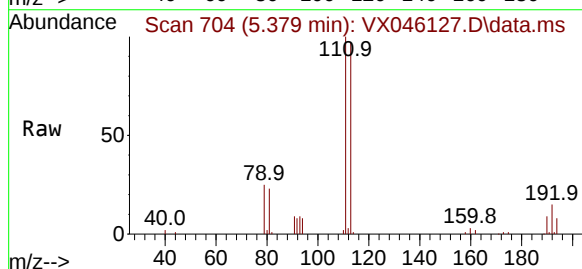
Tgt Ion:113 Resp: 50736

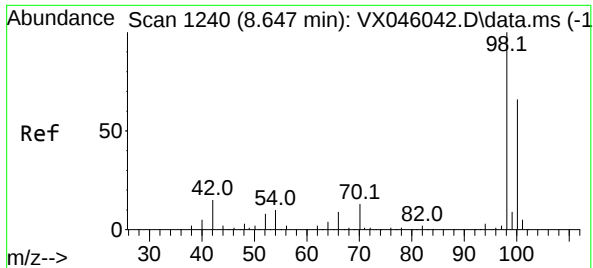
Ion Ratio Lower Upper

113 100

111 102.4 83.1 124.7

192 16.6 13.3 19.9

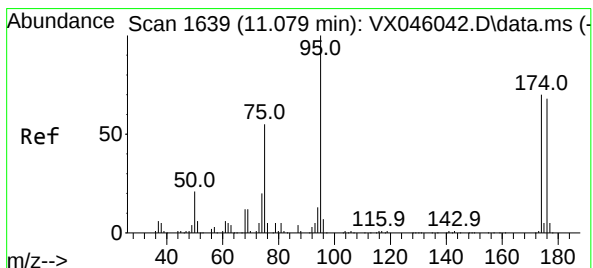
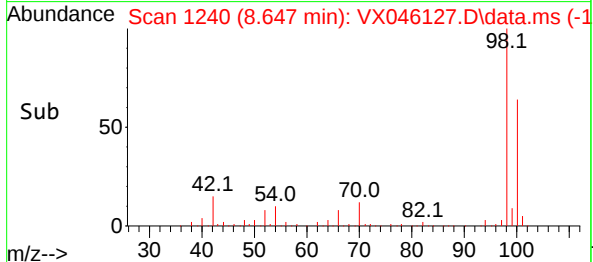
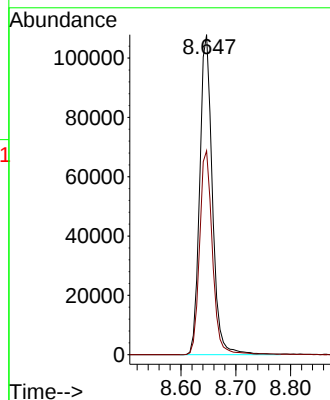
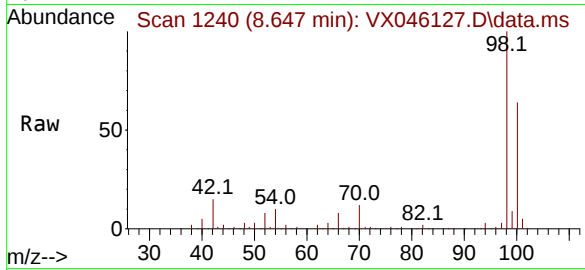




#50
Toluene-d8
Concen: 50.138 ug/l
RT: 8.647 min Scan# 1240
Delta R.T. -0.000 min
Lab File: VX046127.D
Acq: 12 May 2025 10:50

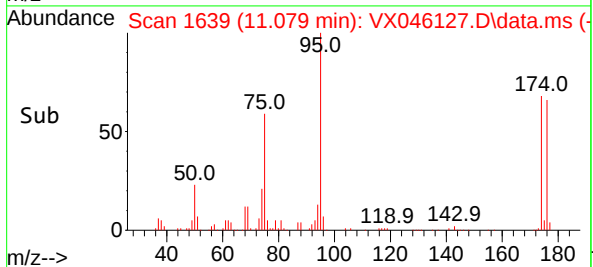
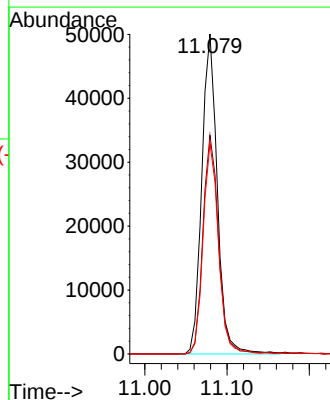
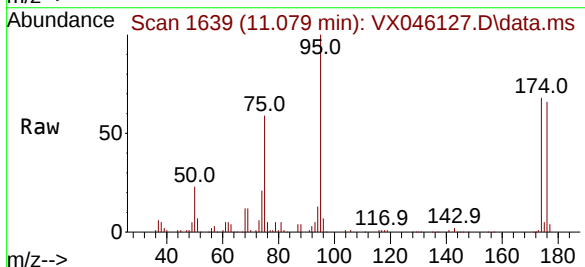
Instrument :
MSVOA_X
ClientSampleId :
VX0512WBL01

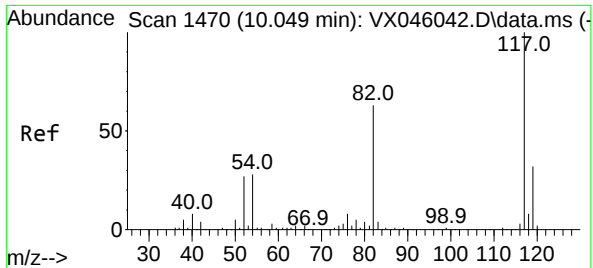
Tgt Ion: 98 Resp: 173131
Ion Ratio Lower Upper
98 100
100 64.5 53.5 80.3



#62
4-Bromofluorobenzene
Concen: 49.606 ug/l
RT: 11.079 min Scan# 1639
Delta R.T. -0.000 min
Lab File: VX046127.D
Acq: 12 May 2025 10:50

Tgt Ion: 95 Resp: 65707
Ion Ratio Lower Upper
95 100
174 68.9 0.0 135.8
176 65.4 0.0 131.4





#63

Chlorobenzene-d5

Concen: 50.000 ug/l

RT: 10.049 min Scan# 1470

Delta R.T. -0.000 min

Lab File: VX046127.D

Acq: 12 May 2025 10:50

Instrument :

MSVOA_X

ClientSampleId :

VX0512WBL01

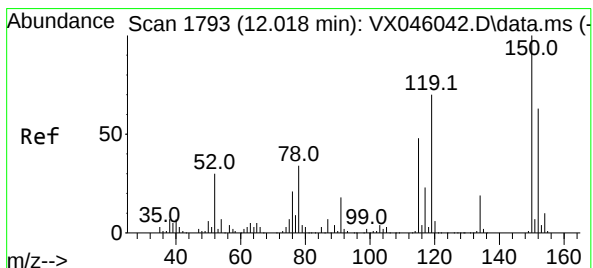
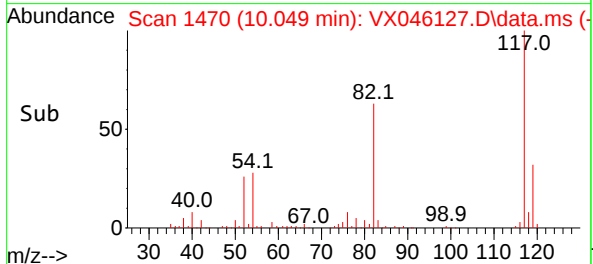
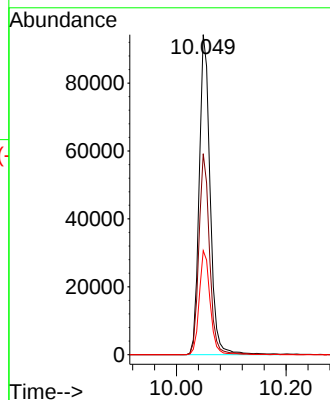
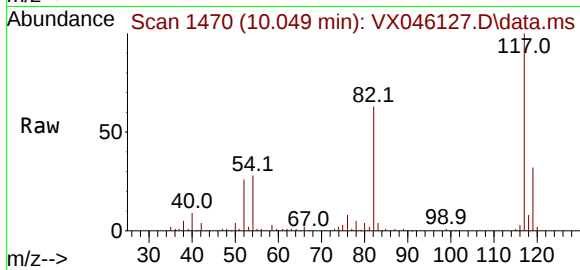
Tgt Ion:117 Resp: 131027

Ion Ratio Lower Upper

117 100

82 62.8 50.6 76.0

119 32.5 25.8 38.6



#72

1,4-Dichlorobenzene-d4

Concen: 50.000 ug/l

RT: 12.018 min Scan# 1793

Delta R.T. -0.000 min

Lab File: VX046127.D

Acq: 12 May 2025 10:50

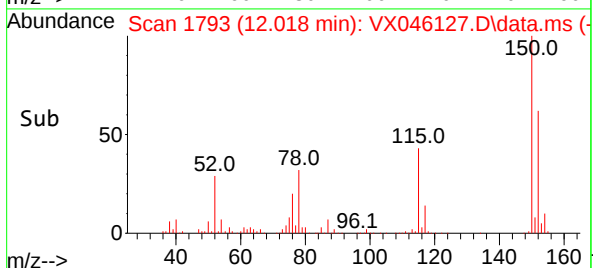
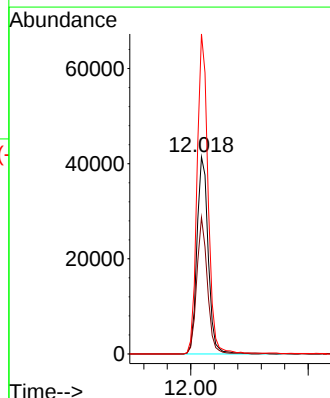
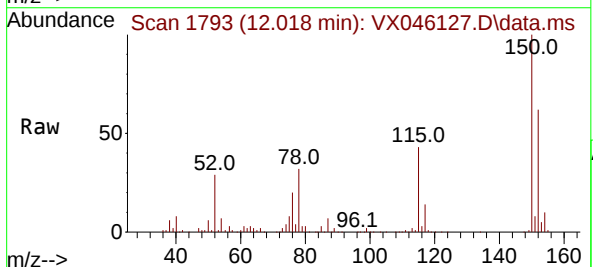
Tgt Ion:152 Resp: 55247

Ion Ratio Lower Upper

152 100

115 65.1 46.9 140.7

150 158.3 0.0 351.0



Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX051225\
 Data File : VX046127.D
 Acq On : 12 May 2025 10:50
 Operator : JC/MD
 Sample : VX0512WBL01
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 4 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VX0512WBL01

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\82X050525W.M

Title : SW846 8260

Signal : TIC: VX046127.D\data.ms

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.252	23	27	32	rBV3	4033	8331	1.73%	0.322%
2	1.569	69	79	80	rBV5	4252	9044	1.88%	0.350%
3	1.593	80	83	88	rVB4	4537	8711	1.81%	0.337%
4	5.379	694	704	719	rBV	59262	172419	35.83%	6.672%
5	5.544	719	731	747	rVV	81831	231519	48.11%	8.959%
6	5.952	788	798	811	rBV	66733	181455	37.71%	7.022%
7	6.757	920	930	948	rBV	143688	351104	72.96%	13.586%
8	8.647	1233	1240	1256	rBV	297212	481240	100.00%	18.622%
9	10.049	1465	1470	1485	rBV	323389	442070	91.86%	17.106%
10	11.079	1634	1639	1658	rBV	248341	324875	67.51%	12.571%
11	12.018	1788	1793	1809	rBV	290407	373455	77.60%	14.451%

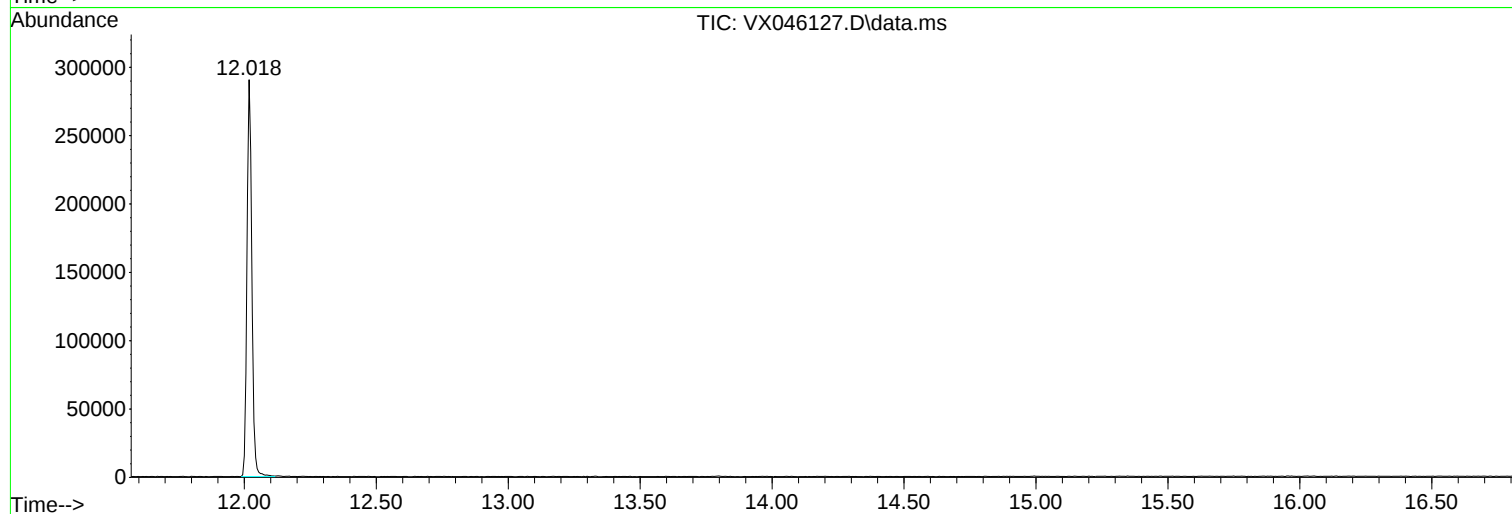
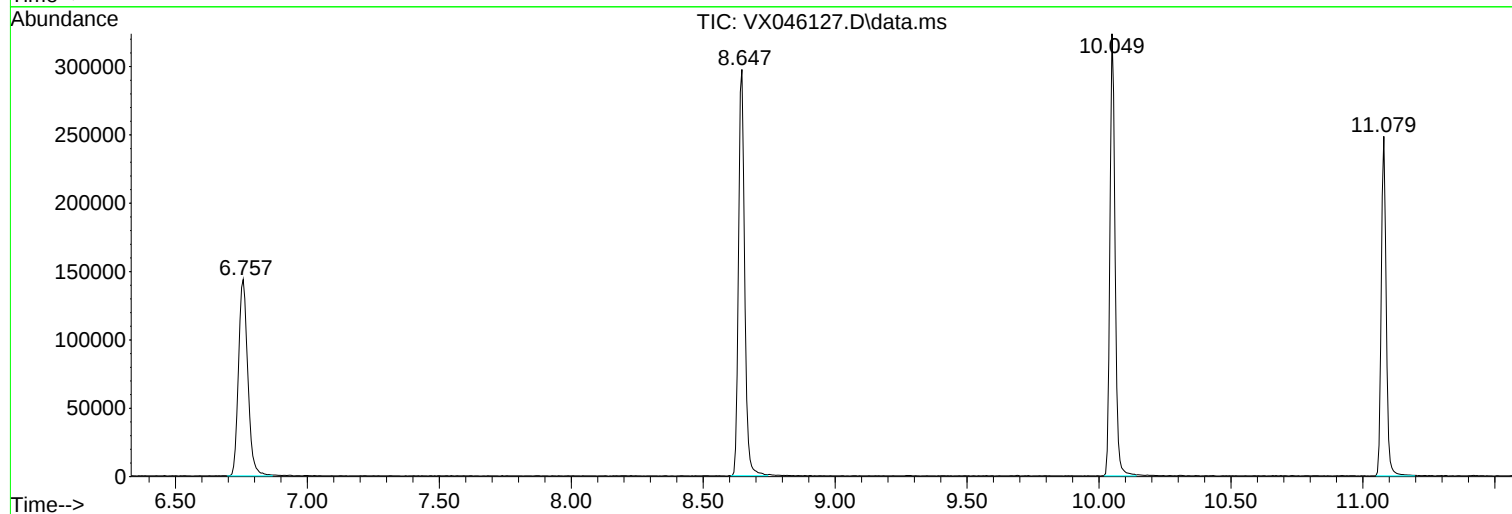
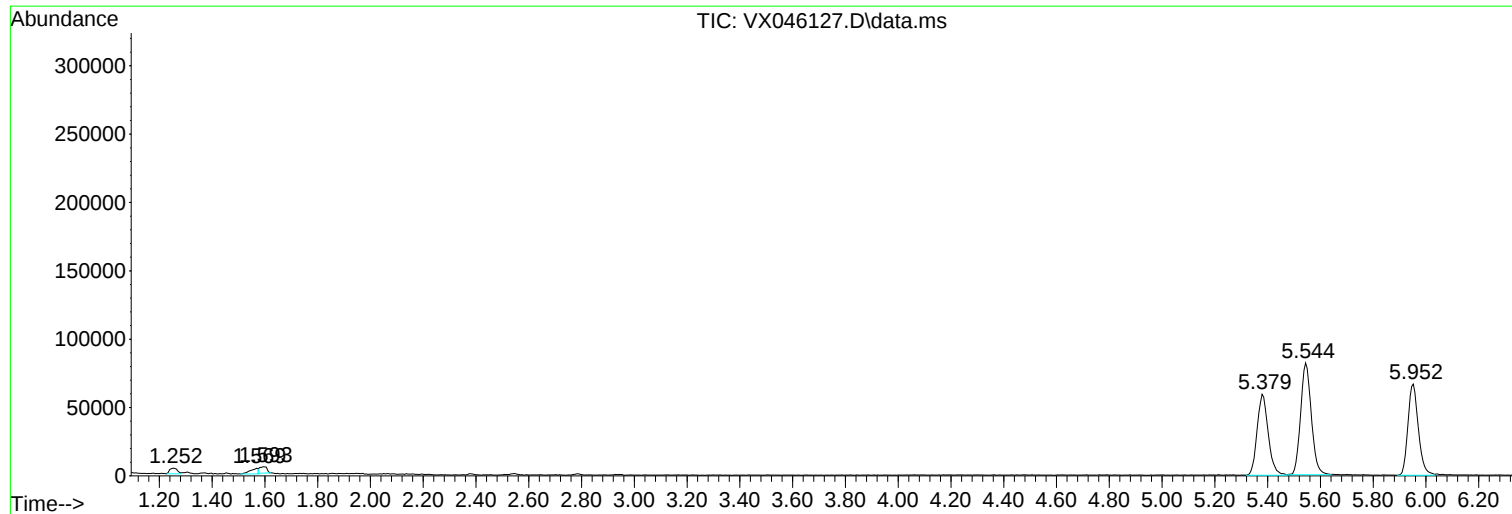
Sum of corrected areas: 2584223

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX051225\
Data File : VX046127.D
Acq On : 12 May 2025 10:50
Operator : JC/MD
Sample : VX0512WBL01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VX0512WBL01

Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
Quant Title : SW846 8260

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



Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX051225\
Data File : VX046127.D
Acq On : 12 May 2025 10:50
Operator : JC/MD
Sample : VX0512WBL01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VX0512WBL01

Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.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\VX051225\
Data File : VX046127.D
Acq On : 12 May 2025 10:50
Operator : JC/MD
Sample : VX0512WBL01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 4 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VX0512WBL01

Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.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

Report of Analysis

Client:	JACOBS Engineering Group, Inc.	Date Collected:	
Project:	Former Schlumberger Site Princeton NJ 2025	Date Received:	
Client Sample ID:	VX0512WBS01	SDG No.:	Q2008
Lab Sample ID:	VX0512WBS01	Matrix:	Water
Analytical Method:	8260D	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	DB-624UI ID : 0.18	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX046128.D	1		05/12/25 11:13	VX051225

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	21.8		0.22	5.00	ug/L
74-87-3	Chloromethane	20.3		0.32	5.00	ug/L
75-01-4	Vinyl Chloride	19.8		0.26	5.00	ug/L
74-83-9	Bromomethane	19.2		1.40	5.00	ug/L
75-00-3	Chloroethane	20.7		0.47	5.00	ug/L
75-69-4	Trichlorofluoromethane	21.8		0.33	5.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	21.1		0.25	5.00	ug/L
75-35-4	1,1-Dichloroethene	20.4		0.23	5.00	ug/L
67-64-1	Acetone	100		1.50	25.0	ug/L
75-15-0	Carbon Disulfide	18.7		0.21	5.00	ug/L
1634-04-4	Methyl tert-butyl Ether	20.9		0.16	5.00	ug/L
79-20-9	Methyl Acetate	21.6		0.27	5.00	ug/L
75-09-2	Methylene Chloride	19.4		0.28	5.00	ug/L
156-60-5	trans-1,2-Dichloroethene	20.2		0.23	5.00	ug/L
75-34-3	1,1-Dichloroethane	21.1		0.23	5.00	ug/L
110-82-7	Cyclohexane	20.3		1.50	5.00	ug/L
78-93-3	2-Butanone	100		0.98	25.0	ug/L
56-23-5	Carbon Tetrachloride	21.2		0.25	5.00	ug/L
156-59-2	cis-1,2-Dichloroethene	20.8		0.19	5.00	ug/L
74-97-5	Bromochloromethane	23.2		0.22	5.00	ug/L
67-66-3	Chloroform	21.8		0.25	5.00	ug/L
71-55-6	1,1,1-Trichloroethane	21.0		0.20	5.00	ug/L
108-87-2	Methylcyclohexane	20.3		0.16	5.00	ug/L
71-43-2	Benzene	21.2		0.15	5.00	ug/L
107-06-2	1,2-Dichloroethane	21.3		0.22	5.00	ug/L
79-01-6	Trichloroethene	21.0		0.090	5.00	ug/L
78-87-5	1,2-Dichloropropane	21.7		0.20	5.00	ug/L
75-27-4	Bromodichloromethane	21.6		0.22	5.00	ug/L
108-10-1	4-Methyl-2-Pentanone	100		0.68	25.0	ug/L
108-88-3	Toluene	21.1		0.14	5.00	ug/L

Report of Analysis

Client:	JACOBS Engineering Group, Inc.	Date Collected:	
Project:	Former Schlumberger Site Princeton NJ 2025	Date Received:	
Client Sample ID:	VX0512WBS01	SDG No.:	Q2008
Lab Sample ID:	VX0512WBS01	Matrix:	Water
Analytical Method:	8260D	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	DB-624UI ID : 0.18	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX046128.D	1		05/12/25 11:13	VX051225

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-02-6	t-1,3-Dichloropropene	20.0		0.17	5.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	20.6		0.16	5.00	ug/L
79-00-5	1,1,2-Trichloroethane	21.4		0.21	5.00	ug/L
591-78-6	2-Hexanone	110		0.89	25.0	ug/L
124-48-1	Dibromochloromethane	21.1		0.18	5.00	ug/L
106-93-4	1,2-Dibromoethane	21.3		0.15	5.00	ug/L
127-18-4	Tetrachloroethene	19.8		0.23	5.00	ug/L
108-90-7	Chlorobenzene	20.6		0.12	5.00	ug/L
100-41-4	Ethyl Benzene	21.0		0.13	5.00	ug/L
179601-23-1	m/p-Xylenes	41.9		0.24	10.0	ug/L
95-47-6	o-Xylene	21.3		0.12	5.00	ug/L
100-42-5	Styrene	21.4		0.15	5.00	ug/L
75-25-2	Bromoform	20.1		0.19	5.00	ug/L
98-82-8	Isopropylbenzene	21.7		0.12	5.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	21.2		0.26	5.00	ug/L
541-73-1	1,3-Dichlorobenzene	21.3		0.16	5.00	ug/L
106-46-7	1,4-Dichlorobenzene	20.7		0.19	5.00	ug/L
95-50-1	1,2-Dichlorobenzene	21.3		0.16	5.00	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	20.8		0.53	5.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	20.1		0.20	5.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	20.5		0.20	5.00	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	55.1		70 (74) - 130 (125)	110%	SPK: 50
1868-53-7	Dibromofluoromethane	56.2		70 (75) - 130 (124)	112%	SPK: 50
2037-26-5	Toluene-d8	54.8		70 (86) - 130 (113)	110%	SPK: 50
460-00-4	4-Bromofluorobenzene	54.9		70 (77) - 130 (121)	110%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	93400	5.544			
540-36-3	1,4-Difluorobenzene	162000	6.757			
3114-55-4	Chlorobenzene-d5	143000	10.049			
3855-82-1	1,4-Dichlorobenzene-d4	66300	12.018			

Report of Analysis

Client:	JACOBS Engineering Group, Inc.	Date Collected:	
Project:	Former Schlumberger Site Princeton NJ 2025	Date Received:	
Client Sample ID:	VX0512WBS01	SDG No.:	Q2008
Lab Sample ID:	VX0512WBS01	Matrix:	Water
Analytical Method:	8260D	% Solid:	0
Sample Wt/Vol:	5	Units:	mL
Soil Aliquot Vol:			uL
GC Column:	DB-624UI	ID :	0.18
Prep Method :		Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX046128.D	1		05/12/25 11:13	VX051225

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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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\VX051225\
 Data File : VX046128.D
 Acq On : 12 May 2025 11:13
 Operator : JC/MD
 Sample : VX0512WBS01
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 5 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VX0512WBS01

Manual Integrations
 APPROVED

Reviewed By :Mahesh Dadoda 05/13/2025
 Supervised By :Semsettin Yesilyurt 05/13/2025

Quant Time: May 13 03:14:31 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
 Quant Title : SW846 8260
 QLast Update : Tue May 06 07:12:22 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	5.544	168	93419	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.757	114	162432	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.049	117	143385	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.018	152	66250	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.946	65	95968	55.102	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 110.200%			
35) Dibromofluoromethane	5.379	113	65762	56.222	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 112.440%			
50) Toluene-d8	8.647	98	221682	54.758	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery = 109.520%			
62) 4-Bromofluorobenzene	11.079	95	85257	54.901	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery = 109.800%			
Target Compounds					Qvalue	
2) Dichlorodifluoromethane	1.166	85	31224	21.837	ug/l	99
3) Chloromethane	1.300	50	28165	20.312	ug/l	100
4) Vinyl Chloride	1.374	62	25586	19.827	ug/l	94
5) Bromomethane	1.593	94	11521	19.248	ug/l	95
6) Chloroethane	1.672	64	14291	20.744	ug/l	99
7) Trichlorofluoromethane	1.880	101	41560	21.791	ug/l	98
8) Diethyl Ether	2.130	74	13139	20.237	ug/l	100
9) 1,1,2-Trichlorotrifluo...	2.319	101	24936	21.127	ug/l	99
10) Methyl Iodide	2.447	142	28106	20.125	ug/l	99
11) Tert butyl alcohol	2.965	59	24329	99.516	ug/l	98
12) 1,1-Dichloroethene	2.312	96	22650	20.447	ug/l	99
13) Acrolein	2.233	56	30200	108.471	ug/l	99
14) Allyl chloride	2.660	41	44059	20.811	ug/l	98
15) Acrylonitrile	3.062	53	73695	105.421	ug/l	98
16) Acetone	2.379	43	70821	101.417	ug/l	100
17) Carbon Disulfide	2.508	76	49120	18.704	ug/l	99
18) Methyl Acetate	2.703	43	34954	21.571	ug/l	98
19) Methyl tert-butyl Ether	3.111	73	81278	20.929	ug/l	99
20) Methylene Chloride	2.782	84	25976	19.411	ug/l	98
21) trans-1,2-Dichloroethene	3.087	96	22545	20.238	ug/l	99
22) Diisopropyl ether	3.757	45	86088	21.052	ug/l	94
23) Vinyl Acetate	3.715	43	374267	104.057	ug/l	99
24) 1,1-Dichloroethane	3.605	63	47973	21.062	ug/l	97
25) 2-Butanone	4.556	43	105323	103.889	ug/l	96
26) 2,2-Dichloropropane	4.471	77	36980	20.743	ug/l	99
27) cis-1,2-Dichloroethene	4.483	96	27933	20.829	ug/l	99
28) Bromochloromethane	4.891	49	25420	23.186	ug/l	99
29) Tetrahydrofuran	4.995	42	66323	104.401	ug/l	99
30) Chloroform	5.086	83	51703	21.778	ug/l	96
31) Cyclohexane	5.464	56	42054	20.261	ug/l	98
32) 1,1,1-Trichloroethane	5.379	97	43213	20.998	ug/l	99
36) 1,1-Dichloropropene	5.684	75	33295	21.186	ug/l	98
37) Ethyl Acetate	4.714	43	39327	20.254	ug/l	99
38) Carbon Tetrachloride	5.665	117	37495	21.234	ug/l	96
39) Methylcyclohexane	7.372	83	40999	20.264	ug/l	97
40) Benzene	6.031	78	97601	21.202	ug/l	100

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX051225\
 Data File : VX046128.D
 Acq On : 12 May 2025 11:13
 Operator : JC/MD
 Sample : VX0512WBS01
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 5 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VX0512WBS01

Manual Integrations
 APPROVED

Reviewed By :Mahesh Dadoda 05/13/2025
 Supervised By :Semsettin Yesilyurt 05/13/2025

Quant Time: May 13 03:14:31 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
 Quant Title : SW846 8260
 QLast Update : Tue May 06 07:12:22 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	4.916	41	23123	22.765	ug/l	98
42) 1,2-Dichloroethane	6.080	62	42246	21.264	ug/l	99
43) Isopropyl Acetate	6.336	43	61149	20.643	ug/l	99
44) Trichloroethene	7.123	130	23267	21.000	ug/l	96
45) 1,2-Dichloropropane	7.427	63	24795	21.662	ug/l	94
46) Dibromomethane	7.580	93	19068	21.121	ug/l	99
47) Bromodichloromethane	7.818	83	38335	21.559	ug/l	95
48) Methyl methacrylate	7.690	41	32031	21.173	ug/l	99
49) 1,4-Dioxane	7.659	88	12305	428.387	ug/l	100
51) 4-Methyl-2-Pentanone	8.567	43	206015	104.776	ug/l	99
52) Toluene	8.714	92	59656	21.135	ug/l	98
53) t-1,3-Dichloropropene	8.976	75	31577	19.979	ug/l	98
54) cis-1,3-Dichloropropene	8.366	75	36051	20.638	ug/l	93
55) 1,1,2-Trichloroethane	9.147	97	23784	21.369	ug/l	98
56) Ethyl methacrylate	9.116	69	37433	21.102	ug/l	99
57) 1,3-Dichloropropane	9.305	76	42210	21.117	ug/l	99
58) 2-Chloroethyl Vinyl ether	8.238	63	97943	108.302	ug/l	99
59) 2-Hexanone	9.427	43	154339	106.097	ug/l	100
60) Dibromochloromethane	9.518	129	25810	21.116	ug/l	99
61) 1,2-Dibromoethane	9.604	107	24637	21.298	ug/l	99
64) Tetrachloroethene	9.268	164	20118	19.830	ug/l	94
65) Chlorobenzene	10.079	112	64648	20.599	ug/l	100
66) 1,1,1,2-Tetrachloroethane	10.159	131	22092	20.615	ug/l	98
67) Ethyl Benzene	10.189	91	116381	21.038	ug/l	100
68) m/p-Xylenes	10.299	106	84785	41.904	ug/l	97
69) o-Xylene	10.640	106	42112	21.349	ug/l	99
70) Styrene	10.652	104	69043	21.367	ug/l	99
71) Bromoform	10.799	173	16161	20.086	ug/l #	99
73) Isopropylbenzene	10.957	105	111727	21.662	ug/l	99
74) N-amyl acetate	10.841	43	51834	20.338	ug/l	99
75) 1,1,2,2-Tetrachloroethane	11.207	83	38349	21.217	ug/l	99
76) 1,2,3-Trichloropropane	11.238	75	32658m	20.479	ug/l	
77) Bromobenzene	11.195	156	24878	20.776	ug/l	100
78) n-propylbenzene	11.299	91	127401	21.244	ug/l	100
79) 2-Chlorotoluene	11.360	91	81157	20.981	ug/l	100
80) 1,3,5-Trimethylbenzene	11.451	105	93220	21.634	ug/l	100
81) trans-1,4-Dichloro-2-b...	11.018	75	8435	17.221	ug/l	95
82) 4-Chlorotoluene	11.451	91	90289	21.048	ug/l	98
83) tert-Butylbenzene	11.713	119	94264	21.718	ug/l	99
84) 1,2,4-Trimethylbenzene	11.750	105	95013	21.774	ug/l	99
85) sec-Butylbenzene	11.890	105	114059	21.403	ug/l	99
86) p-Isopropyltoluene	12.006	119	93897	21.346	ug/l	99
87) 1,3-Dichlorobenzene	11.969	146	46562	21.306	ug/l	98
88) 1,4-Dichlorobenzene	12.036	146	46172	20.688	ug/l	98
89) n-Butylbenzene	12.329	91	79571	20.622	ug/l	99
90) Hexachloroethane	12.536	117	16160	20.852	ug/l	98
91) 1,2-Dichlorobenzene	12.335	146	46746	21.316	ug/l	98
92) 1,2-Dibromo-3-Chloropr...	12.939	75	8309	20.751	ug/l	99
93) 1,2,4-Trichlorobenzene	13.585	180	25375	20.146	ug/l	99
94) Hexachlorobutadiene	13.725	225	11524	20.949	ug/l	98
95) Naphthalene	13.774	128	90281	19.543	ug/l	99
96) 1,2,3-Trichlorobenzene	13.957	180	26686	20.533	ug/l	96

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX051225\
Data File : VX046128.D
Acq On : 12 May 2025 11:13
Operator : JC/MD
Sample : VX0512WBS01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 5 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VX0512WBS01

Manual Integrations
APPROVED

Reviewed By :Mahesh Dadoda 05/13/2025
Supervised By :Semsettin Yesilyurt 05/13/2025

Quant Time: May 13 03:14:31 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
Quant Title : SW846 8260
QLast Update : Tue May 06 07:12:22 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

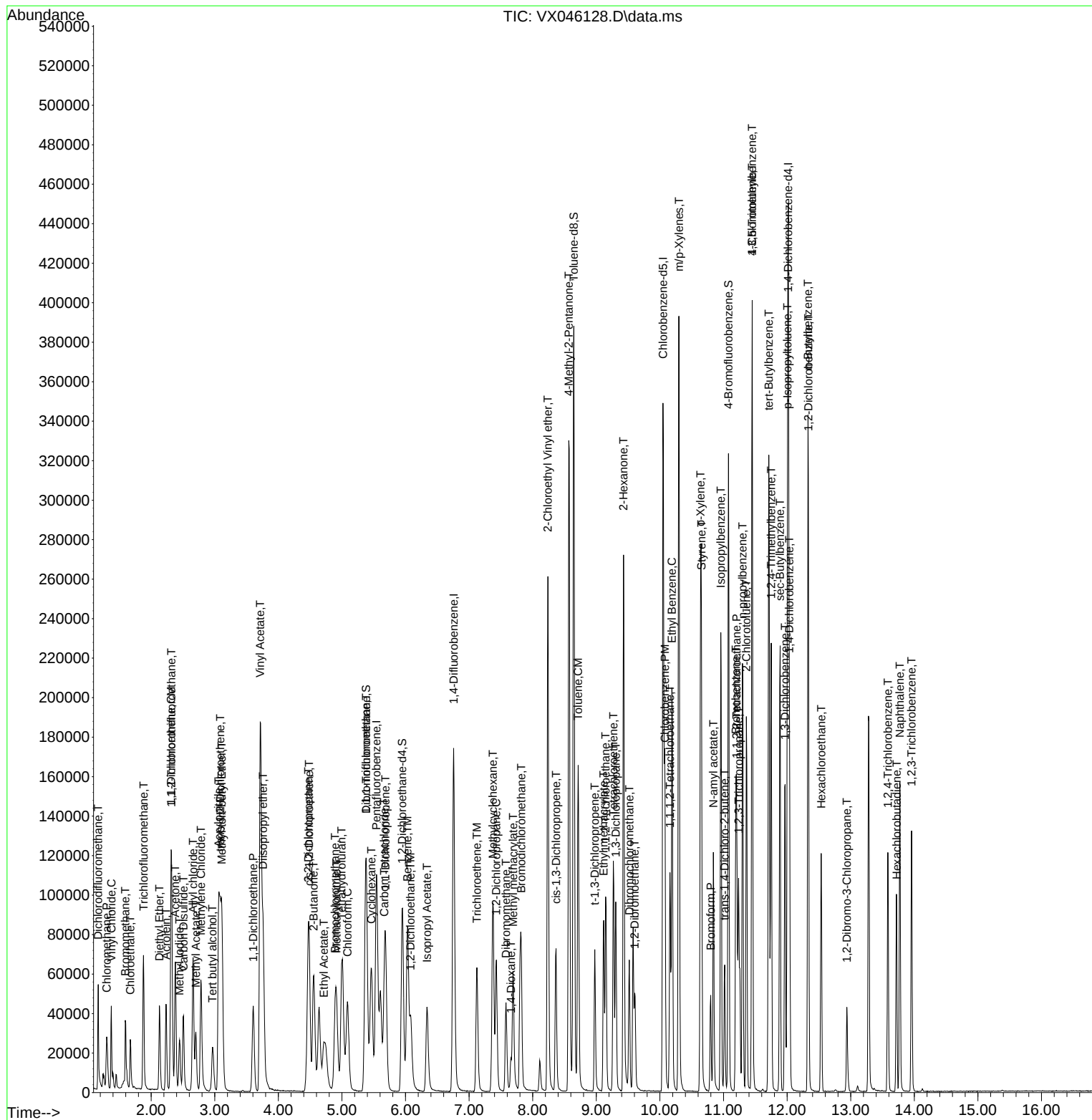
Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX051225\
 Data File : VX046128.D
 Acq On : 12 May 2025 11:13
 Operator : JC/MD
 Sample : VX0512WBS01
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 5 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VX0512WBS01

Manual Integrations APPROVED

Reviewed By :Mahesh Dadoda 05/13/2025
 Supervised By :Semsettin Yesilyurt 05/13/2025

Quant Time: May 13 03:14:31 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
 Quant Title : SW846 8260
 QLast Update : Tue May 06 07:12:22 2025
 Response via : Initial Calibration



Report of Analysis

Client:	JACOBS Engineering Group, Inc.	Date Collected:	
Project:	Former Schlumberger Site Princeton NJ 2025	Date Received:	
Client Sample ID:	VX0512WBSD01	SDG No.:	Q2008
Lab Sample ID:	VX0512WBSD01	Matrix:	Water
Analytical Method:	8260D	% Solid:	0
Sample Wt/Vol:	5	Units:	mL
Soil Aliquot Vol:			uL
GC Column:	DB-624UI	ID :	0.18
Prep Method :		Level :	LOW

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX046129.D	1		05/12/25 11:40	VX051225

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
TARGETS						
75-71-8	Dichlorodifluoromethane	20.9		0.22	5.00	ug/L
74-87-3	Chloromethane	19.6		0.32	5.00	ug/L
75-01-4	Vinyl Chloride	19.5		0.26	5.00	ug/L
74-83-9	Bromomethane	18.3		1.40	5.00	ug/L
75-00-3	Chloroethane	20.4		0.47	5.00	ug/L
75-69-4	Trichlorofluoromethane	21.0		0.33	5.00	ug/L
76-13-1	1,1,2-Trichlorotrifluoroethane	20.7		0.25	5.00	ug/L
75-35-4	1,1-Dichloroethene	19.8		0.23	5.00	ug/L
67-64-1	Acetone	100		1.50	25.0	ug/L
75-15-0	Carbon Disulfide	18.6		0.21	5.00	ug/L
1634-04-4	Methyl tert-butyl Ether	21.2		0.16	5.00	ug/L
79-20-9	Methyl Acetate	22.8		0.27	5.00	ug/L
75-09-2	Methylene Chloride	19.4		0.28	5.00	ug/L
156-60-5	trans-1,2-Dichloroethene	19.9		0.23	5.00	ug/L
75-34-3	1,1-Dichloroethane	20.6		0.23	5.00	ug/L
110-82-7	Cyclohexane	19.9		1.50	5.00	ug/L
78-93-3	2-Butanone	110		0.98	25.0	ug/L
56-23-5	Carbon Tetrachloride	20.8		0.25	5.00	ug/L
156-59-2	cis-1,2-Dichloroethene	20.7		0.19	5.00	ug/L
74-97-5	Bromochloromethane	22.6		0.22	5.00	ug/L
67-66-3	Chloroform	21.2		0.25	5.00	ug/L
71-55-6	1,1,1-Trichloroethane	21.0		0.20	5.00	ug/L
108-87-2	Methylcyclohexane	19.8		0.16	5.00	ug/L
71-43-2	Benzene	21.3		0.15	5.00	ug/L
107-06-2	1,2-Dichloroethane	21.9		0.22	5.00	ug/L
79-01-6	Trichloroethene	20.9		0.090	5.00	ug/L
78-87-5	1,2-Dichloropropane	22.1		0.20	5.00	ug/L
75-27-4	Bromodichloromethane	21.6		0.22	5.00	ug/L
108-10-1	4-Methyl-2-Pentanone	110		0.68	25.0	ug/L
108-88-3	Toluene	21.4		0.14	5.00	ug/L

Report of Analysis

Client:	JACOBS Engineering Group, Inc.		Date Collected:	
Project:	Former Schlumberger Site Princeton NJ 2025		Date Received:	
Client Sample ID:	VX0512WBSD01		SDG No.:	Q2008
Lab Sample ID:	VX0512WBSD01		Matrix:	Water
Analytical Method:	8260D		% Solid:	0
Sample Wt/Vol:	5	Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:		uL	Test:	VOC-TCLVOA-10
GC Column:	DB-624UI	ID : 0.18	Level :	LOW
Prep Method :				

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX046129.D	1		05/12/25 11:40	VX051225

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
10061-02-6	t-1,3-Dichloropropene	20.6		0.17	5.00	ug/L
10061-01-5	cis-1,3-Dichloropropene	21.1		0.16	5.00	ug/L
79-00-5	1,1,2-Trichloroethane	22.2		0.21	5.00	ug/L
591-78-6	2-Hexanone	110		0.89	25.0	ug/L
124-48-1	Dibromochloromethane	22.4		0.18	5.00	ug/L
106-93-4	1,2-Dibromoethane	21.6		0.15	5.00	ug/L
127-18-4	Tetrachloroethene	19.8		0.23	5.00	ug/L
108-90-7	Chlorobenzene	20.3		0.12	5.00	ug/L
100-41-4	Ethyl Benzene	20.8		0.13	5.00	ug/L
179601-23-1	m/p-Xylenes	41.8		0.24	10.0	ug/L
95-47-6	o-Xylene	20.9		0.12	5.00	ug/L
100-42-5	Styrene	21.9		0.15	5.00	ug/L
75-25-2	Bromoform	20.4		0.19	5.00	ug/L
98-82-8	Isopropylbenzene	21.4		0.12	5.00	ug/L
79-34-5	1,1,2,2-Tetrachloroethane	21.4		0.26	5.00	ug/L
541-73-1	1,3-Dichlorobenzene	20.9		0.16	5.00	ug/L
106-46-7	1,4-Dichlorobenzene	20.4		0.19	5.00	ug/L
95-50-1	1,2-Dichlorobenzene	21.5		0.16	5.00	ug/L
96-12-8	1,2-Dibromo-3-Chloropropane	21.2		0.53	5.00	ug/L
120-82-1	1,2,4-Trichlorobenzene	20.8		0.20	5.00	ug/L
87-61-6	1,2,3-Trichlorobenzene	20.4		0.20	5.00	ug/L
SURROGATES						
17060-07-0	1,2-Dichloroethane-d4	54.3		70 (74) - 130 (125)	109%	SPK: 50
1868-53-7	Dibromofluoromethane	55.9		70 (75) - 130 (124)	112%	SPK: 50
2037-26-5	Toluene-d8	55.4		70 (86) - 130 (113)	111%	SPK: 50
460-00-4	4-Bromofluorobenzene	55.4		70 (77) - 130 (121)	111%	SPK: 50
INTERNAL STANDARDS						
363-72-4	Pentafluorobenzene	90500	5.543			
540-36-3	1,4-Difluorobenzene	155000	6.757			
3114-55-4	Chlorobenzene-d5	138000	10.049			
3855-82-1	1,4-Dichlorobenzene-d4	65100	12.018			

Report of Analysis

Client:	JACOBS Engineering Group, Inc.	Date Collected:	
Project:	Former Schlumberger Site Princeton NJ 2025	Date Received:	
Client Sample ID:	VX0512WBSD01	SDG No.:	Q2008
Lab Sample ID:	VX0512WBSD01	Matrix:	Water
Analytical Method:	8260D	% Solid:	0
Sample Wt/Vol:	5 Units: mL	Final Vol:	5000 uL
Soil Aliquot Vol:	uL	Test:	VOC-TCLVOA-10
GC Column:	DB-624UI ID : 0.18	Level :	LOW
Prep Method :			

File ID/Qc Batch:	Dilution:	Prep Date	Date Analyzed	Prep Batch ID
VX046129.D	1		05/12/25 11:40	VX051225

CAS Number	Parameter	Conc.	Qualifier	MDL	LOQ / CRQL	Units
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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\VX051225\
 Data File : VX046129.D
 Acq On : 12 May 2025 11:40
 Operator : JC/MD
 Sample : VX0512WBSD01
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 6 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VX0512WBSD01

Manual Integrations
 APPROVED

Reviewed By :Mahesh Dadoda 05/13/2025
 Supervised By :Semsettin Yesilyurt 05/13/2025

Quant Time: May 13 03:15:21 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
 Quant Title : SW846 8260
 QLast Update : Tue May 06 07:12:22 2025
 Response via : Initial Calibration

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

Internal Standards						
1) Pentafluorobenzene	5.543	168	90547	50.000	ug/l	0.00
34) 1,4-Difluorobenzene	6.757	114	155274	50.000	ug/l	0.00
63) Chlorobenzene-d5	10.049	117	138103	50.000	ug/l	0.00
72) 1,4-Dichlorobenzene-d4	12.018	152	65121	50.000	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	5.946	65	91593	54.258	ug/l	0.00
Spiked Amount 50.000	Range 74 - 125		Recovery = 108.520%			
35) Dibromofluoromethane	5.379	113	62528	55.922	ug/l	0.00
Spiked Amount 50.000	Range 75 - 124		Recovery = 111.840%			
50) Toluene-d8	8.646	98	214247	55.361	ug/l	0.00
Spiked Amount 50.000	Range 86 - 113		Recovery = 110.720%			
62) 4-Bromofluorobenzene	11.079	95	82285	55.430	ug/l	0.00
Spiked Amount 50.000	Range 77 - 121		Recovery = 110.860%			
Target Compounds					Qvalue	
2) Dichlorodifluoromethane	1.166	85	29020	20.940	ug/l	100
3) Chloromethane	1.306	50	26361	19.614	ug/l	94
4) Vinyl Chloride	1.373	62	24378	19.490	ug/l	94
5) Bromomethane	1.599	94	10627	18.318	ug/l	98
6) Chloroethane	1.678	64	13641	20.429	ug/l	99
7) Trichlorofluoromethane	1.879	101	38871	21.027	ug/l	99
8) Diethyl Ether	2.129	74	12896	20.493	ug/l	99
9) 1,1,2-Trichlorotrifluo...	2.324	101	23693	20.711	ug/l	100
10) Methyl Iodide	2.446	142	28141	20.789	ug/l	100
11) Tert butyl alcohol	2.965	59	24712	104.289	ug/l	99
12) 1,1-Dichloroethene	2.312	96	21250	19.792	ug/l	99
13) Acrolein	2.233	56	29090	107.798	ug/l	98
14) Allyl chloride	2.660	41	42771	20.844	ug/l	97
15) Acrylonitrile	3.062	53	72828	107.486	ug/l	99
16) Acetone	2.379	43	68932	101.843	ug/l	96
17) Carbon Disulfide	2.507	76	47298	18.582	ug/l	99
18) Methyl Acetate	2.702	43	35788	22.786	ug/l	100
19) Methyl tert-butyl Ether	3.111	73	79958	21.242	ug/l	100
20) Methylene Chloride	2.782	84	25142	19.384	ug/l	94
21) trans-1,2-Dichloroethene	3.087	96	21507	19.919	ug/l	98
22) Diisopropyl ether	3.757	45	84296	21.267	ug/l	94
23) Vinyl Acetate	3.714	43	370709	106.337	ug/l	100
24) 1,1-Dichloroethane	3.605	63	45533	20.625	ug/l	99
25) 2-Butanone	4.550	43	106215	108.092	ug/l	100
26) 2,2-Dichloropropane	4.470	77	33879	19.606	ug/l	99
27) cis-1,2-Dichloroethene	4.483	96	26937	20.724	ug/l	98
28) Bromochloromethane	4.891	49	23994	22.579	ug/l	98
29) Tetrahydrofuran	5.001	42	65104	105.733	ug/l	100
30) Chloroform	5.086	83	48854	21.231	ug/l	96
31) Cyclohexane	5.470	56	39946	19.856	ug/l	97
32) 1,1,1-Trichloroethane	5.373	97	41800	20.956	ug/l	100
36) 1,1-Dichloropropene	5.684	75	30550	20.335	ug/l	99
37) Ethyl Acetate	4.714	43	39244	21.143	ug/l	98
38) Carbon Tetrachloride	5.665	117	35052	20.765	ug/l	98
39) Methylcyclohexane	7.372	83	38371	19.839	ug/l	91
40) Benzene	6.031	78	93636	21.279	ug/l	98

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX051225\
 Data File : VX046129.D
 Acq On : 12 May 2025 11:40
 Operator : JC/MD
 Sample : VX0512WBSD01
 Misc : 5.0mL/MSVOA_X/WATER
 ALS Vial : 6 Sample Multiplier: 1

Instrument :
 MSVOA_X
 ClientSampleId :
 VX0512WBSD01

Manual Integrations
 APPROVED

Reviewed By :Mahesh Dadoda 05/13/2025
 Supervised By :Semsettin Yesilyurt 05/13/2025

Quant Time: May 13 03:15:21 2025
 Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
 Quant Title : SW846 8260
 QLast Update : Tue May 06 07:12:22 2025
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) Methacrylonitrile	4.915	41	22543	23.217	ug/l	97
42) 1,2-Dichloroethane	6.080	62	41686	21.949	ug/l	100
43) Isopropyl Acetate	6.336	43	61673	21.780	ug/l	99
44) Trichloroethene	7.122	130	22132	20.897	ug/l	96
45) 1,2-Dichloropropane	7.427	63	24163	22.083	ug/l	96
46) Dibromomethane	7.580	93	18327	21.236	ug/l	96
47) Bromodichloromethane	7.817	83	36765	21.630	ug/l	100
48) Methyl methacrylate	7.689	41	31827	22.008	ug/l	99
49) 1,4-Dioxane	7.659	88	12246	445.986	ug/l	97
51) 4-Methyl-2-Pentanone	8.567	43	210654	112.074	ug/l	99
52) Toluene	8.714	92	57683	21.378	ug/l	98
53) t-1,3-Dichloropropene	8.976	75	31059	20.558	ug/l	96
54) cis-1,3-Dichloropropene	8.366	75	35195	21.077	ug/l	97
55) 1,1,2-Trichloroethane	9.152	97	23569	22.152	ug/l	96
56) Ethyl methacrylate	9.116	69	38201	22.528	ug/l	96
57) 1,3-Dichloropropane	9.305	76	41733	21.841	ug/l	98
58) 2-Chloroethyl Vinyl ether	8.238	63	101616	117.544	ug/l	99
59) 2-Hexanone	9.427	43	156206	112.331	ug/l	99
60) Dibromochloromethane	9.518	129	26138	22.370	ug/l	97
61) 1,2-Dibromoethane	9.604	107	23830	21.550	ug/l	95
64) Tetrachloroethene	9.268	164	19389	19.843	ug/l	94
65) Chlorobenzene	10.079	112	61464	20.334	ug/l	98
66) 1,1,1,2-Tetrachloroethane	10.158	131	21905	21.222	ug/l	98
67) Ethyl Benzene	10.189	91	110716	20.779	ug/l	99
68) m/p-Xylenes	10.299	106	81436	41.788	ug/l	97
69) o-Xylene	10.640	106	39735	20.915	ug/l	97
70) Styrene	10.652	104	68081	21.875	ug/l	99
71) Bromoform	10.799	173	15782	20.366	ug/l #	97
73) Isopropylbenzene	10.957	105	108371	21.376	ug/l	100
74) N-amyl acetate	10.841	43	52902	21.117	ug/l	99
75) 1,1,2,2-Tetrachloroethane	11.207	83	37972	21.373	ug/l	98
76) 1,2,3-Trichloropropane	11.237	75	35477m	22.633	ug/l	
77) Bromobenzene	11.195	156	24741	21.020	ug/l	99
78) n-propylbenzene	11.298	91	123711	20.986	ug/l	99
79) 2-Chlorotoluene	11.359	91	79425	20.889	ug/l	100
80) 1,3,5-Trimethylbenzene	11.451	105	90961	21.476	ug/l	100
81) trans-1,4-Dichloro-2-b...	11.018	75	8807	18.292	ug/l	93
82) 4-Chlorotoluene	11.451	91	89660	21.264	ug/l	99
83) tert-Butylbenzene	11.713	119	89957	21.085	ug/l	100
84) 1,2,4-Trimethylbenzene	11.750	105	92554	21.578	ug/l	100
85) sec-Butylbenzene	11.890	105	111541	21.293	ug/l	99
86) p-Isopropyltoluene	12.006	119	92876	21.480	ug/l	99
87) 1,3-Dichlorobenzene	11.969	146	44917	20.910	ug/l	99
88) 1,4-Dichlorobenzene	12.036	146	44793	20.418	ug/l	97
89) n-Butylbenzene	12.329	91	77975	20.559	ug/l	99
90) Hexachloroethane	12.536	117	15809	20.753	ug/l	99
91) 1,2-Dichlorobenzene	12.335	146	46266	21.463	ug/l	99
92) 1,2-Dibromo-3-Chloropr...	12.938	75	8329	21.162	ug/l	98
93) 1,2,4-Trichlorobenzene	13.585	180	25808	20.845	ug/l	95
94) Hexachlorobutadiene	13.725	225	11504	21.275	ug/l	97
95) Naphthalene	13.774	128	91286	20.103	ug/l	99
96) 1,2,3-Trichlorobenzene	13.957	180	26054	20.394	ug/l	98

Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX051225\
Data File : VX046129.D
Acq On : 12 May 2025 11:40
Operator : JC/MD
Sample : VX0512WBSD01
Misc : 5.0mL/MSVOA_X/WATER
ALS Vial : 6 Sample Multiplier: 1

Instrument :
MSVOA_X
ClientSampleId :
VX0512WBSD01

Manual Integrations
APPROVED

Reviewed By :Mahesh Dadoda 05/13/2025
Supervised By :Semsettin Yesilyurt 05/13/2025

Quant Time: May 13 03:15:21 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
Quant Title : SW846 8260
QLast Update : Tue May 06 07:12:22 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

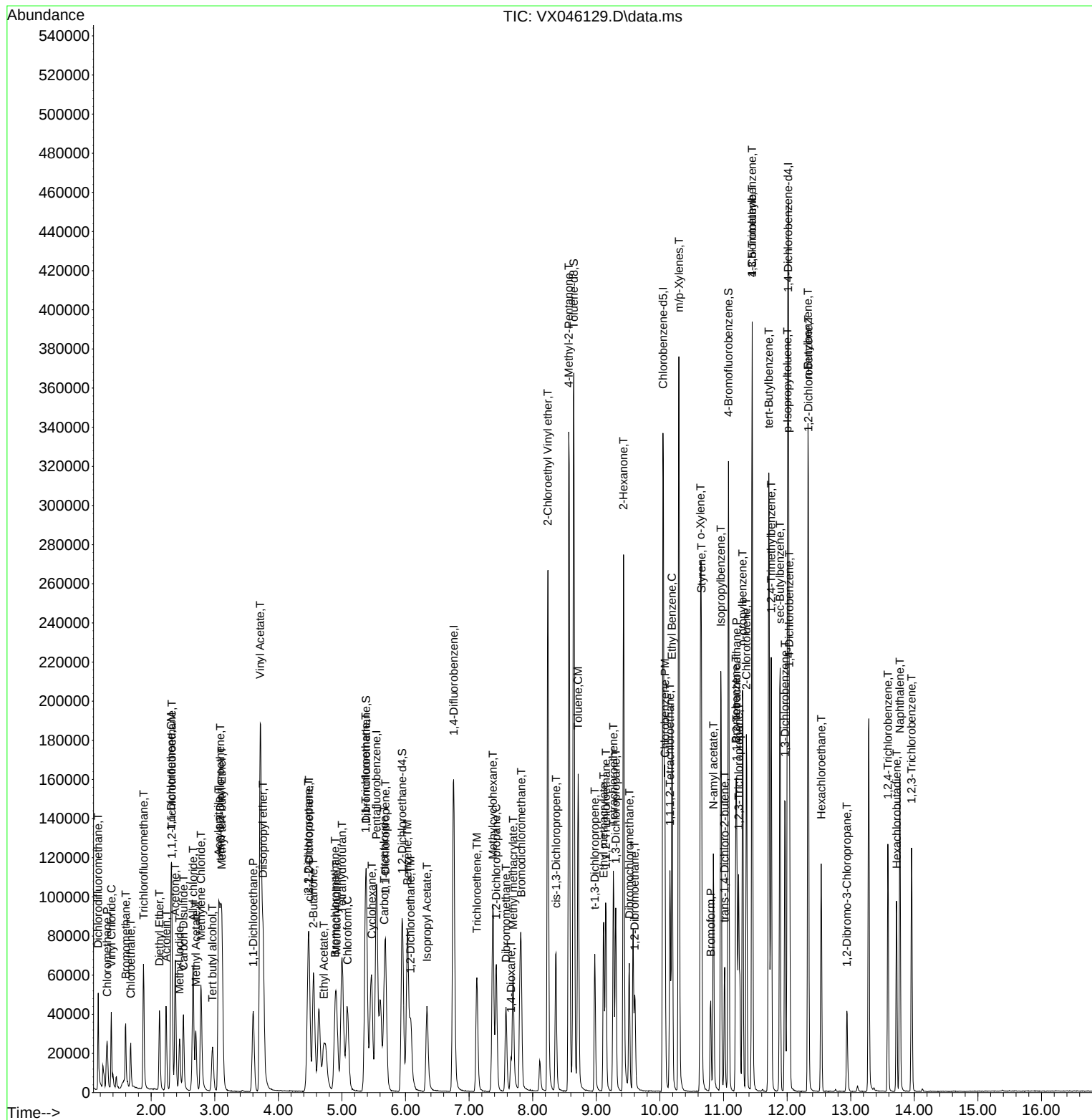
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Data Path : Z:\voasrv\HPCHEM1\MSVOA_X\Data\VX051225\  
Data File : VX046129.D  
Acq On    : 12 May 2025  11:40  
Operator  : JC/MD  
Sample    : VX0512WBSD01  
Misc      : 5.0mL/MSVOA_X/WATER  
ALS Vial  : 6      Sample Multiplier: 1
```

Instrument :
MSVOA_X
ClientSampleId :
VX0512WBSD01

Manual Integrations APPROVED

Reviewed By :Mahesh Dadoda 05/13/2025
Supervised By :Semsettin Yesilyurt 05/13/2025

Quant Time: May 13 03:15:21 2025
Quant Method : Z:\voasrv\HPCHEM1\MSVOA_X\Method\82X050525W.M
Quant Title : SW846 8260
QLast Update : Tue May 06 07:12:22 2025
Response via : Initial Calibration



Manual Integration Report

Sequence:	VX050525	Instrument	MSVOA_x
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Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDICC020	VX046041.D	1,2,3-Trichloropropane	JOHN	5/6/2025 9:53:13 AM	MMDadoda	5/6/2025 12:42:46 PM	Peak Integrated by Software
VSTDICCC050	VX046042.D	1,2,3-Trichloropropane	JOHN	5/6/2025 9:53:18 AM	MMDadoda	5/6/2025 12:42:48 PM	Peak Integrated by Software
VSTDICC100	VX046043.D	1,2,3-Trichloropropane	JOHN	5/6/2025 9:53:22 AM	MMDadoda	5/6/2025 12:42:50 PM	Peak Integrated by Software
VSTDICC150	VX046044.D	1,2,3-Trichloropropane	JOHN	5/6/2025 9:53:27 AM	MMDadoda	5/6/2025 12:42:53 PM	Peak Integrated by Software
VSTDICC005	VX046046.D	1,2,3-Trichloropropane	JOHN	5/6/2025 9:53:32 AM	MMDadoda	5/6/2025 12:42:56 PM	Peak Integrated by Software
VSTDICC005	VX046046.D	Ethyl Acetate	JOHN	5/6/2025 9:53:32 AM	MMDadoda	5/6/2025 12:42:56 PM	Peak Integrated by Software
VSTDICC001	VX046047.D	1,2,3-Trichloropropane	JOHN	5/6/2025 9:53:38 AM	MMDadoda	5/6/2025 12:41:35 PM	Peak Integrated by Software
VSTDICC001	VX046047.D	1,4-Dichlorobenzene	JOHN	5/6/2025 9:53:38 AM	MMDadoda	5/6/2025 12:41:35 PM	Peak Integrated by Software
VSTDICC001	VX046047.D	Bromochloromethane	JOHN	5/6/2025 9:53:38 AM	MMDadoda	5/6/2025 12:41:35 PM	Peak Integrated by Software
VSTDICC001	VX046047.D	Ethyl Acetate	JOHN	5/6/2025 9:53:38 AM	MMDadoda	5/6/2025 12:41:35 PM	Peak Integrated by Software
VSTDICC001	VX046047.D	Methyl methacrylate	JOHN	5/6/2025 9:53:38 AM	MMDadoda	5/6/2025 12:41:35 PM	Peak Integrated by Software
VSTDICV050	VX046048.D	1,2,3-Trichloropropane	JOHN	5/6/2025 9:53:45 AM	MMDadoda	5/6/2025 12:41:37 PM	Peak Integrated by Software



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

Manual Integration Report

Sequence:

VX050525

Instrument

MSVOA_x

Sample ID

File ID

Parameter

Review By

Review On

Supervised
By

Supervised On

Reason

Manual Integration Report

Sequence:

vx051225

Instrument

MSVOA_x

Sample ID	File ID	Parameter	Review By	Review On	Supervised By	Supervised On	Reason
VSTDCCC050	VX046125.D	1,2,3-Trichloropropane	MMDadoda	5/13/2025 10:57:58 AM	Sam	5/13/2025 2:17:29 PM	Peak Integrated by Software
VX0512WBS01	VX046128.D	1,2,3-Trichloropropane	MMDadoda	5/13/2025 10:58:03 AM	Sam	5/13/2025 2:17:28 PM	Peak Integrated by Software
VX0512WBSD01	VX046129.D	1,2,3-Trichloropropane	MMDadoda	5/13/2025 10:58:08 AM	Sam	5/13/2025 2:17:30 PM	Peak Integrated by Software
VSTDCCC050	VX046151.D	1,2,3-Trichloropropane	MMDadoda	5/13/2025 10:58:13 AM	Sam	5/13/2025 2:17:31 PM	Peak Integrated by Software

Instrument ID: **MSVOA_X**

Daily Analysis Runlog For Sequence/QC Batch ID # VX050525

Review By	John Carlone	Review On	5/6/2025 9:53:58 AM
Supervise By	Maresh Dadoda	Supervise On	5/6/2025 12:43:00 PM
SubDirectory	VX050525	HP Acquire Method	HP Processing Method 82X050525W.M
STD. NAME	STD REF.#		
Tune/Reschk	VP133811		
Initial Calibration Stds	VP133832,VP133833,VP133834,VP133835,VP133836,VP133837		
CCC			
Internal Standard/PEM			
ICV/I.BLK	VP133838		
Surrogate Standard			
MS/MSD Standard			
LCS Standard			

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB	VX046038.D	05 May 2025 09:37	JC/MD	Ok
2	VSTDIC001	VX046039.D	05 May 2025 10:49	JC/MD	Not Ok
3	VSTDIC005	VX046040.D	05 May 2025 11:12	JC/MD	Not Ok
4	VSTDIC020	VX046041.D	05 May 2025 11:35	JC/MD	Ok,M
5	VSTDIC050	VX046042.D	05 May 2025 11:58	JC/MD	Ok,M
6	VSTDIC100	VX046043.D	05 May 2025 12:21	JC/MD	Ok,M
7	VSTDIC150	VX046044.D	05 May 2025 12:45	JC/MD	Ok,M
8	IBLK	VX046045.D	05 May 2025 13:08	JC/MD	Ok
9	VSTDIC005	VX046046.D	05 May 2025 16:04	JC/MD	Ok,M
10	VSTDIC001	VX046047.D	05 May 2025 16:27	JC/MD	Ok,M
11	VSTDICV050	VX046048.D	05 May 2025 16:50	JC/MD	Ok,M

M : Manual Integration

Instrument ID: **MSVOA_X**

Daily Analysis Runlog For Sequence/QC Batch ID # VX051225

Review By	John Carlone	Review On	5/13/2025 11:39:13 AM
Supervise By	Maresh Dadoda	Supervise On	5/13/2025 2:15:43 PM
SubDirectory	VX051225	HP Acquire Method	HP Processing Method 82X050525W.M
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	VP133885		
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	VP133891,VP133892		

Sr#	SampleId	Data File Name	Date-Time	Operator	Status
1	BFB	VX046124.D	12 May 2025 09:30	JC/MD	Ok
2	VSTDCCC050	VX046125.D	12 May 2025 09:59	JC/MD	Ok,M
3	VX0512MBL01	VX046126.D	12 May 2025 10:27	JC/MD	Ok
4	VX0512WBL01	VX046127.D	12 May 2025 10:50	JC/MD	Ok
5	VX0512WBS01	VX046128.D	12 May 2025 11:13	JC/MD	Ok,M
6	VX0512WBSD01	VX046129.D	12 May 2025 11:40	JC/MD	Ok,M
7	Q2008-01	VX046130.D	12 May 2025 12:03	JC/MD	Ok
8	Q1983-06	VX046131.D	12 May 2025 12:26	JC/MD	Ok
9	Q1983-12	VX046132.D	12 May 2025 12:49	JC/MD	Ok
10	Q1983-18	VX046133.D	12 May 2025 13:12	JC/MD	Ok
11	Q1983-24	VX046134.D	12 May 2025 13:36	JC/MD	Ok
12	Q1983-30	VX046135.D	12 May 2025 13:59	JC/MD	Ok
13	Q1983-36	VX046136.D	12 May 2025 14:22	JC/MD	Ok
14	Q1983-42	VX046137.D	12 May 2025 14:46	JC/MD	Ok
15	Q1983-48	VX046138.D	12 May 2025 15:09	JC/MD	Ok
16	Q1983-54	VX046139.D	12 May 2025 15:32	JC/MD	Ok
17	Q1986-02	VX046140.D	12 May 2025 15:56	JC/MD	Ok
18	Q1986-04	VX046141.D	12 May 2025 16:19	JC/MD	Ok
19	Q1986-06	VX046142.D	12 May 2025 16:42	JC/MD	Ok
20	Q1986-08	VX046143.D	12 May 2025 17:06	JC/MD	Ok
21	Q1986-10	VX046144.D	12 May 2025 17:29	JC/MD	Ok

Instrument ID: **MSVOA_X**

Daily Analysis Runlog For Sequence/QCBatch ID # VX051225

Review By	John Carlone	Review On	5/13/2025 11:39:13 AM
Supervise By	Mahesh Dadoda	Supervise On	5/13/2025 2:15:43 PM
SubDirectory	VX051225	HP Acquire Method	HP Processing Method 82X050525W.M
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	VP133885		
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	VP133891,VP133892		

22	Q2004-02	VX046145.D	12 May 2025 17:52	JC/MD	Ok
23	Q2004-04	VX046146.D	12 May 2025 18:16	JC/MD	Ok
24	Q2004-06	VX046147.D	12 May 2025 18:39	JC/MD	Ok
25	Q2004-08	VX046148.D	12 May 2025 19:02	JC/MD	Ok
26	Q2004-10	VX046149.D	12 May 2025 19:26	JC/MD	Ok
27	Q2004-12	VX046150.D	12 May 2025 19:49	JC/MD	Ok
28	VSTDCCC050	VX046151.D	12 May 2025 20:13	JC/MD	Ok,M

M : Manual Integration

Instrument ID: MSVOA_X

Daily Analysis Runlog For Sequence/QC Batch ID # VX050525

Review By	John Carlone	Review On	5/6/2025 9:53:58 AM
Supervise By	Maresh Dadoda	Supervise On	5/6/2025 12:43:00 PM
SubDirectory	VX050525	HP Acquire Method	HP Processing Method 82X050525W.M
STD. NAME	STD REF.#		
Tune/Reschk	VP133811		
Initial Calibration Stds	VP133832,VP133833,VP133834,VP133835,VP133836,VP133837		
CCC			
Internal Standard/PEM			
ICV/I.BLK	VP133838		
Surrogate Standard			
MS/MSD Standard			
LCS Standard			

Sr#	Sampled	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	BFB	BFB	VX046038.D	05 May 2025 09:37		JC/MD	Ok
2	VSTDIC001	VSTDIC001	VX046039.D	05 May 2025 10:49	Not used	JC/MD	Not Ok
3	VSTDIC005	VSTDIC005	VX046040.D	05 May 2025 11:12	Not used	JC/MD	Not Ok
4	VSTDIC020	VSTDIC020	VX046041.D	05 May 2025 11:35		JC/MD	Ok,M
5	VSTDIC050	VSTDIC050	VX046042.D	05 May 2025 11:58		JC/MD	Ok,M
6	VSTDIC100	VSTDIC100	VX046043.D	05 May 2025 12:21		JC/MD	Ok,M
7	VSTDIC150	VSTDIC150	VX046044.D	05 May 2025 12:45		JC/MD	Ok,M
8	IBLK	IBLK	VX046045.D	05 May 2025 13:08		JC/MD	Ok
9	VSTDIC005	VSTDIC005	VX046046.D	05 May 2025 16:04		JC/MD	Ok,M
10	VSTDIC001	VSTDIC001	VX046047.D	05 May 2025 16:27		JC/MD	Ok,M
11	VSTDICV050	ICVVX050525	VX046048.D	05 May 2025 16:50		JC/MD	Ok,M

M : Manual Integration

Instrument ID: MSVOA_X

Daily Analysis Runlog For Sequence/QC Batch ID # VX051225

Review By	John Carlone	Review On	5/13/2025 11:39:13 AM
Supervise By	Mahesh Dadoda	Supervise On	5/13/2025 2:15:43 PM
SubDirectory	VX051225	HP Acquire Method	HP Processing Method 82X050525W.M

STD. NAME	STD REF.#
Tune/Reschk Initial Calibration Stds	VP133885
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	VP133891,VP133892

Sr#	SampleID	ClientID	Data File Name	Date-Time	Comment	Operator	Status
1	BFB	BFB	VX046124.D	12 May 2025 09:30		JC/MD	Ok
2	VSTDCCC050	VSTDCCC050	VX046125.D	12 May 2025 09:59	pH#Lot#12668	JC/MD	Ok,M
3	VX0512MBL01	VX0512MBL01	VX046126.D	12 May 2025 10:27		JC/MD	Ok
4	VX0512WBL01	VX0512WBL01	VX046127.D	12 May 2025 10:50		JC/MD	Ok
5	VX0512WBS01	VX0512WBS01	VX046128.D	12 May 2025 11:13		JC/MD	Ok,M
6	VX0512WBSD01	VX0512WBSD01	VX046129.D	12 May 2025 11:40		JC/MD	Ok,M
7	Q2008-01	IDW-AQ-DRUM-633-05	VX046130.D	12 May 2025 12:03	vial A pH<2	JC/MD	Ok
8	Q1983-06	OR-636-COMP-01	VX046131.D	12 May 2025 12:26	vial A pH#5.0	JC/MD	Ok
9	Q1983-12	OR-636-COMP-02	VX046132.D	12 May 2025 12:49	vial A pH#5.0	JC/MD	Ok
10	Q1983-18	OR-636-COMP-03	VX046133.D	12 May 2025 13:12	vial A pH#5.0	JC/MD	Ok
11	Q1983-24	OR-636-COMP-04	VX046134.D	12 May 2025 13:36	vial A pH#5.0	JC/MD	Ok
12	Q1983-30	OR-636-COMP-05	VX046135.D	12 May 2025 13:59	vial A pH#5.0	JC/MD	Ok
13	Q1983-36	OR-636-COMP-06	VX046136.D	12 May 2025 14:22	vial A pH#5.0	JC/MD	Ok
14	Q1983-42	OR-636-COMP-07	VX046137.D	12 May 2025 14:46	vial A pH#5.0	JC/MD	Ok
15	Q1983-48	OR-636-COMP-08	VX046138.D	12 May 2025 15:09	vial A pH#5.0	JC/MD	Ok
16	Q1983-54	OR-636-COMP-09	VX046139.D	12 May 2025 15:32	vial A pH#5.0	JC/MD	Ok
17	Q1986-02	COMP-8	VX046140.D	12 May 2025 15:56	vial A pH#5.0	JC/MD	Ok
18	Q1986-04	COMP-9	VX046141.D	12 May 2025 16:19	vial A pH#5.0	JC/MD	Ok

Instrument ID: MSVOA_X

Daily Analysis Runlog For Sequence/QC Batch ID # VX051225

Review By	John Carlone	Review On	5/13/2025 11:39:13 AM
Supervise By	Maresh Dadoda	Supervise On	5/13/2025 2:15:43 PM
SubDirectory	VX051225	HP Acquire Method	HP Processing Method 82X050525W.M
STD. NAME	STD REF.#		
Tune/Reschk Initial Calibration Stds	VP133885		
CCC Internal Standard/PEM ICV/I.BLK Surrogate Standard MS/MSD Standard LCS Standard	VP133891,VP133892		

19	Q1986-06	COMP-10	VX046142.D	12 May 2025 16:42	vial A pH#5.0	JC/MD	Ok
20	Q1986-08	COMP-11	VX046143.D	12 May 2025 17:06	vial A pH#5.0	JC/MD	Ok
21	Q1986-10	VNJ-218	VX046144.D	12 May 2025 17:29	vial A pH#5.0	JC/MD	Ok
22	Q2004-02	VNJ-220	VX046145.D	12 May 2025 17:52	vial A pH#5.0	JC/MD	Ok
23	Q2004-04	2811	VX046146.D	12 May 2025 18:16	vial A pH#5.0	JC/MD	Ok
24	Q2004-06	R0202	VX046147.D	12 May 2025 18:39	vial A pH#5.0	JC/MD	Ok
25	Q2004-08	205510	VX046148.D	12 May 2025 19:02	vial A pH#5.0	JC/MD	Ok
26	Q2004-10	SOIL-STOCK	VX046149.D	12 May 2025 19:26	vial A pH#5.0	JC/MD	Ok
27	Q2004-12	STONE-STOCK	VX046150.D	12 May 2025 19:49	vial A pH#5.0	JC/MD	Ok
28	VSTDCCC050	VSTDCCC050EC	VX046151.D	12 May 2025 20:13		JC/MD	Ok,M

M : Manual Integration

Prep Standard - Chemical Standard Summary

Order ID : Q2008

Test : VOC-TCLVOA-10

Prepbatch ID :

Sequence ID/Qc Batch ID: vx051225,

Standard ID :

VP131746,VP131767,VP132035,VP132096,VP133174,VP133758,VP133885,VP133887,VP133891,VP133892,

Chemical ID :

V13391,V13457,V13460,V13465,V13466,V13706,V14154,V14289,V14432,V14435,V14503,V14504,V14525,V14526,V14613,V14614,V14615,V14630,V14631,V14632,V14633,V14711,V14717,V14718,V14721,V14749,V14750,V14811,V14812,V14843,V14915,V14916,V14917,V14918,V14921,W3112,

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>
247	8260 Internal Standard, 250PPM	VP131746	11/22/2024	05/18/2025	Semsettin Yesilyurt	None	None	Maresh Dadoda
								11/23/2024

FROM 0.50000ml of V14289 + 49.50000ml of V14154 = 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>
218	BFB, 25PPM	VP131767	11/22/2024	05/18/2025	Semsettin Yesilyurt	None	None	Maresh Dadoda
								11/27/2024

FROM 0.50000ml of V13391 + 49.50000ml of V14154 = 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>
1810	8260 Working Std(2-CVE)-800ppm	VP132035	12/10/2024	06/10/2025	Semsettin Yesilyurt	None	None	Mahesh Dadoda 12/12/2024

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

<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	VP132096	12/12/2024	06/10/2025	Semsettin Yesilyurt	None	None	Mahesh Dadoda 12/19/2024

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

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	VP133174	02/27/2025	08/27/2025	Semsettin Yesilyurt	None	None	Maresh Dadoda
								03/04/2025

FROM 0.40000ml of V13706 + 24.60000ml of V14613 = 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>
51	8260 Working STD (Acrolein) -first source, 800PPM	VP133758	04/24/2025	05/23/2025	Semsettin Yesilyurt	None	None	Maresh Dadoda
								05/07/2025

FROM 1.00000ml of V14915 + 1.00000ml of V14916 + 1.00000ml of V14917 + 1.00000ml of V14918 + 21.00000ml of V14615 = 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	VP133885	05/12/2025	05/13/2025	John Carlone	None	None	Mahesh Dadoda 05/14/2025
<u>FROM</u> 39.98400ml of W3112 + 0.01600ml of VP131767 = Final Quantity: 40.000 ml								

[illegible]



<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	VP133891	05/12/2025	05/13/2025	John Carlone	None	None	Mahesh Dadoda 05/14/2025
<u>FROM</u>	39.94450ml of W3112 + 0.00500ml of VP132096 + 0.00500ml of VP133174 + 0.00800ml of VP131746 + 0.01250ml of VP132035 + 0.01250ml of VP133758 + 0.01250ml of VP133887 = 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	VP133892	05/12/2025	05/13/2025	John Carlone	None	None	Mahesh Dadoda 05/14/2025
<u>FROM</u> 39.94450ml of W3112 + 0.00500ml of VP132096 + 0.00500ml of VP133174 + 0.00800ml of VP131746 + 0.01250ml of VP132035 + 0.01250ml of VP133758 + 0.01250ml of VP133887 = 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	30225 / VOA Mix, bromochloromethane, 2000ug/mL, P&TM, 1mL/ampul	A0193071	06/12/2025	12/12/2024 / SAM	01/27/2023 / SAM	V13457

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

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

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

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

CHEMICAL RECEIPT LOG BOOK

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

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30489 / VOA Mix, 8260B Acetates Mix, P&TM, 1mL	A0209618	09/30/2025	05/12/2025 / SAM	08/15/2024 / SAM	V14432

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30489 / VOA Mix, 8260B Acetates Mix, P&TM, 1mL	A0209618	09/20/2025	03/20/2025 / SAM	08/15/2024 / SAM	V14435

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	11/12/2025	05/12/2025 / SAM	09/17/2024 / SAM	V14503

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	11/12/2025	05/12/2025 / SAM	09/17/2024 / SAM	V14504

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	95319 / Revised Additions Mix (Min = 5)	091724	11/12/2025	05/12/2025 / SAM	09/18/2024 / SAM	V14525

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	11/12/2025	05/12/2025 / SAM	09/18/2024 / SAM	V14526

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

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA9077-02 / Methanol, Purge/Trap (cs=6x1L)	22L0562016	09/19/2025	03/19/2025 / SAM	11/26/2024 / SAM	V14615

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

CHEMICAL RECEIPT LOG BOOK

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

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

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30006 / VOA Mix, CLP method Calibration Std #1 ketones 5000uq/ml, PTM, 1ml	A02110618	11/12/2025	05/12/2025 / SAM	12/17/2024 / SAM	V14711

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30006 / VOA Mix, CLP method Calibration Std #1 ketones 5000uq/ml, PTM, 1ml	A02110618	11/12/2025	05/12/2025 / SAM	12/17/2024 / SAM	V14717

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30006 / VOA Mix, CLP method Calibration Std #1 ketones 5000uq/ml, PTM, 1ml	A02110618	11/12/2025	05/12/2025 / SAM	12/17/2024 / SAM	V14718

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Restek	30006 / VOA Mix, CLP method Calibration Std #1 ketones 5000uq/ml, PTM, 1ml	A02110618	11/12/2025	05/12/2025 / SAM	12/17/2024 / SAM	V14721

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	11/13/2025	05/12/2025 / SAM	12/17/2024 / SAM	V14749

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	11/12/2025	05/12/2025 / SAM	12/17/2024 / SAM	V14750

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	11/12/2025	05/12/2025 / SAM	01/08/2025 / SAM	V14811

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	06/30/2026	05/12/2025 / SAM	01/08/2025 / SAM	V14812

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	11/12/2025	05/12/2025 / SAM	01/21/2025 / SAM	V14843

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)	042325	05/23/2025	04/24/2025 / SAM	04/24/2025 / SAM	V14915

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	91980 / Acrolin Std (Min = 5)	042325	05/23/2025	04/24/2025 / SAM	04/24/2025 / SAM	V14916

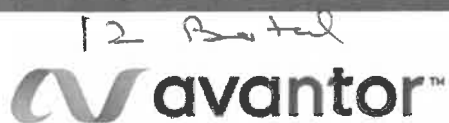
Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	91980 / Acrolin Std (Min = 5)	042325	05/23/2025	04/24/2025 / SAM	04/24/2025 / SAM	V14917

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	91980 / Acrolin Std (Min = 5)	042325	05/23/2025	04/24/2025 / SAM	04/24/2025 / SAM	V14918

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	11/12/2025	05/12/2025 / SAM	05/09/2025 / SAM	V14921

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

Certificate of Analysis

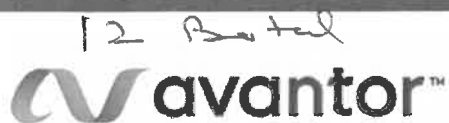
Test	Specification	Result
Assay (CH ₃ OH) (by GC, corrected for water)	≥ 99.9 %	100.0 %
Residue after Evaporation	≤ 1.0 ppm	0.2 ppm
Titration Acid (μeq/g)	≤ 0.3	0.2
Titration Base (μeq/g)	≤ 0.10	0.03
Water (by KF, coulometric)	≤ 0.08 %	< 0.01 %
Volatile Organic Trace Analysis – Below EPA 8260B CRQL	Conforms	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

Jamie Ethier
Vice President Global Quality

Methanol
ULTRA RESI-ANALYZED
For Purge and Trap Analysis



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

Certificate of Analysis

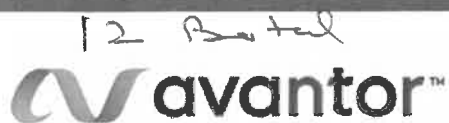
Test	Specification	Result
Assay (CH ₃ OH) (by GC, corrected for water)	≥ 99.9 %	100.0 %
Residue after Evaporation	≤ 1.0 ppm	0.2 ppm
Titration Acid (μeq/g)	≤ 0.3	0.2
Titration Base (μeq/g)	≤ 0.10	0.03
Water (by KF, coulometric)	≤ 0.08 %	< 0.01 %
Volatile Organic Trace Analysis – Below EPA 8260B CRQL	Conforms	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

Jamie Ethier
Vice President Global Quality

Methanol
ULTRA RESI-ANALYZED
For Purge and Trap Analysis



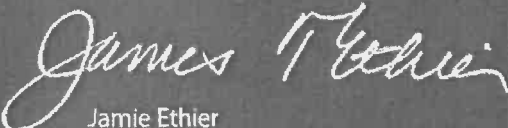
Material No.: 9077-02
Batch No.: 22L0562016
Manufactured Date: 2022-10-26
Expiration Date: 2025-10-25
Revision No.: 0

Certificate of Analysis

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


Jamie Ethier
Vice President Global Quality



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

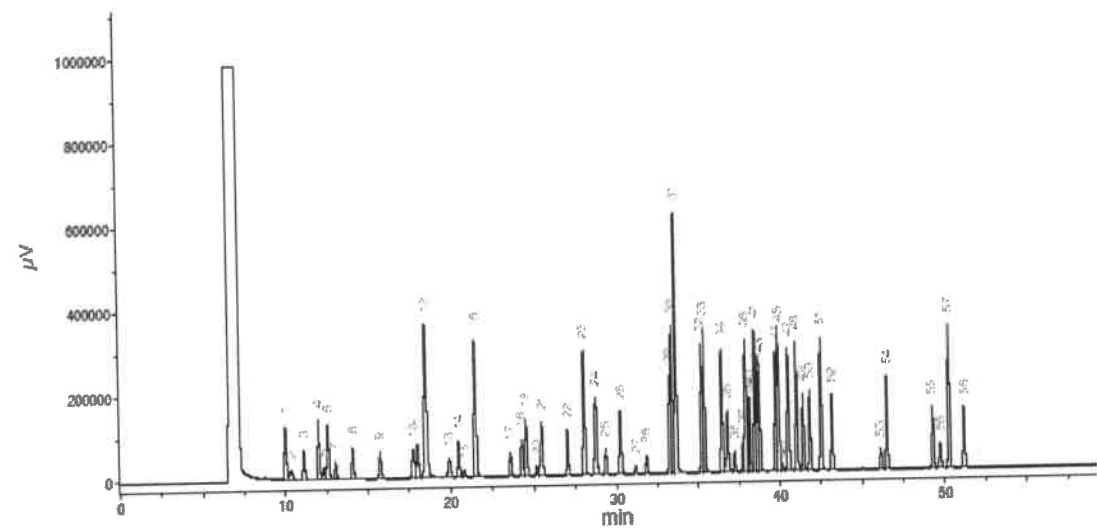
Formulated By:	Prashant Chauhan	021624
Reviewed By:	Pedro L. Renteria	021624
DATE		

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	NA	N/A
5. trans-1,4-Dichloro-2-butene	(0486)	MKBP6041V	NA	NA	NA	2000	96.5	0.2	NA	0.20731	0.20746	2001.7	8.4	110-57-6	NA	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	NA	N/A
7. Ethyl methacrylate	(0381)	06126PX	NA	NA	NA	2000	99	0.2	NA	0.20207	0.20230	2002.3	8.2	97-63-2	NA	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)	14002JX	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	NA	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 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	NA	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	NA	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	NA	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	100 ppm	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	NA	N/A
28. 2,2-Dichloropropane	95321	020724	0.10	10.00	20003.4	2000	NA	NA	0.042	NA	NA	1999.8	20.5	75-34-3	100 ppm	or-rat 725mg/kg
29. Trichloroethene	95321	020724	0.10	10.00	20201.1	2000	NA	NA	0.042	NA	NA	1999.8	20.4	594-20-7	NA	N/A
30. 1,1,1-Trichloroethane	95321	020724	0.10	10.00	20003.0	2000	NA	NA	0.042	NA	NA	2019.8	20.8	127-18-4	25 ppm (170mg/m3/8H) (final)	or-rat 2629mg/kg
31. 1,2-Dibromo-3-chloropropane	35161	112322	0.05	5.00	40018.5	2000	NA	NA	0.017	NA	NA	1999.8	20.5	71-55-6	350 ppm (1900mg/m3/8H)	or-rat 10300mg/kg
32. 1,2-Dibromoethane	35161	112322	0.05	5.00	40024.8	2000	NA	NA	0.017	NA	NA	2000.3	22.9	96-12-8	0.001 ppm	or-rat 170mg/kg
33. 1,2-Dichloroethane	35161	112322	0.05	5.00	40018.0	2000	NA	NA	0.017	NA	NA	2000.7	22.9	106-93-4	20 ppm (8H)	or-rat 108mg/kg
34. 1,2-Dichloropropane	35161	112322	0.05	5.00	40051.0	2000	NA	NA	0.017	NA	NA	2000.4	22.9	107-06-2	50 ppm (8H)	or-rat 670mg/kg
35. 1,3-Dichloropropane	35161	112322	0.05	5.00	40005.9	2000	NA	NA	0.017	NA	NA	2002.0	22.9	78-87-5	75 ppm (350mg/m3/8H)	or-rat 1947mg/kg
36. 1,1-Dichloropropene	35161	112322	0.05	5.00	40012.1	2000	NA	NA	0.017	NA	NA	1999.8	22.9	142-28-9	NA	or-rat 3600mg/kg
37. cis-1,3-Dichloropropene	35161	112322	0.05	5.00	40010.0	2000	NA	NA	0.017	NA	NA	2000.1	28.7	563-58-6	NA	N/A
38. trans-1,3-Dichloropropene	35161	112322	0.05	5.00	40017.6	2000	NA	NA	0.017	NA	NA	2000.0	23.0	10061-01-5	NA	N/A
39. Hexachloro-1,3-butadiene	35161	112322	0.05	5.00	40017.6	2000	NA	NA	0.017	NA	NA	2000.4	23.0	10061-02-6	NA	N/A
40. 1,1,1,2-Tetrachloroethane	35161	112322	0.05	5.00	40011.9	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
41. 1,1,2,2-Tetrachloroethane	35161	112322	0.05	5.00	40007.5	2000	NA	NA	0.017	NA	NA	2000.1	22.9	830-20-6	NA	or-rat 670mg/kg
42. 1,1,2-Trichloroethane	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
43. Trichloroethene	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
44. 1,2,3-Trichloropropane	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
45. Benzene	35162	050823	0.05	5.00	40006.0	2000	NA	NA	0.017	NA	NA	1999.9	22.9	96-18-4	10 ppm (60mg/m3/8H)	or-rat 149.8mg/kg
46. Bromobenzene	35162	050823	0.05	5.00	40006.9	2000	NA	NA	0.017	NA	NA	1999.7	22.9	71-43-2	1 ppm	or-rat 4894mg/kg
47. n-Butyl benzene	35162	050823	0.05	5.00	40003.8	2000	NA	NA	0.017	NA	NA	1999.8	22.9	108-88-1	NA	or-rat 2699mg/kg
48. Ethyl benzene	35162	050823	0.05	5.00	40004.8	2000	NA	NA	0.017	NA	NA	1999.7	22.9	104-51-8	NA	N/A
49. p-Isopropyl toluene	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
50. Naphthalene	35162	050823	0.05	5.00	40005.8	2000	NA	NA	0.017	NA	NA	1999.8	22.9	99-87-6	NA	or-rat 4750mg/kg
51. Styrene	35162	050823	0.05	5.00	40004.8	2000	NA	NA	0.017	NA	NA	1999.8	22.9	91-20-3	10 ppm (50mg/m3/8H)	or-rat 490mg/kg
52. Toluene	35162	050823	0.05	5.00	40006.2	2000	NA	NA	0.017	NA	NA	1999.7	22.9	100-42-5	100 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	1999.8	22.9	108-88-3	200 ppm	or-rat 5000mg/kg
54. 1,2,4-Trichlorobenzene	35162	050823	0.05	5.00	40006.8	2000	NA	NA	0.017	NA	NA	1999.7	22.9	87-81-6	NA	or-rat 1390mg/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	120-82-1	5 ppm (CL) (40mg/m3)	or-rat 756mg/kg
56. 1,3,5-Trimethylbenzene	35162	050823	0.05	5.00	40006.7	2000	NA	NA	0.017	NA	NA	1999.6	23.0	95-63-6	NA	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	108-87-8	NA	or-rat 5000mg/kg
58. tert-Butyl benzene	35163	101923	0.05	5.00	40001.2	2000	NA	NA	0.017	NA	NA	1999.8	22.9	108-38-3	100 ppm (435mg/m3/8H)	or-rat 5g/kg
59. sec-Butyl benzene	35163	101923	0.05	5.00	40002.4	2000	NA	NA	0.017	NA	NA	1999.8	22.9	96-06-6	NA	N/A
60. Chlorobenzene	35163	101923	0.05	5.00	40003.8	2000	NA	NA	0.017	NA	NA	1999.8	22.9	135-98-6	NA	or-rat 2240mg/kg
61. 2-Chlorotoluene	35163	101923	0.05	5.00	40003.3	2000	NA	NA	0.017	NA	NA	1999.7	22.9	108-90-7	75 ppm (350mg/m3/8H)	or-rat 2290mg/kg
62. 4-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
63. 1,2-Dichlorobenzene	35163	101923	0.05	5.00	40003.3	2000	NA	NA	0.017	NA	NA	1999.7	22.9	106-43-4	NA	or-rat 2100mg/kg
64. 1,3-Dichlorobenzene	35163	101923	0.05	5.00	40001.7	2000	NA	NA	0.017	NA	NA	1999.7	22.9	95-50-1	50 ppm (300mg/m3) (CL)	or-rat 500mg/kg
65. 1,4-Dichlorobenzene	35163	101923	0.05	5.00	40											

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-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	33.05
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	42.52
52	1,2-Dichlorobenzene	42.58
53	1,2-Dibromo-3-chloropropane	46.12
54	Nitrobenzene	46.40
55	1,2,4-Trifluorobenzene	49.28
56	Hexachlorobutadiene	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)
UN number: 1230 Class: 3 Packing group: II
Proper shipping name: Methanol

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

Section XV. REGULATORY INFORMATION

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

Section XVI. Misc. INFORMATION

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



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	Initial	Nominal	Purity	Purity	Uncertainty	Target	Actual	Actual	Expanded	SDS Information		
														(Solvent Safety Info. On Attached pg.)	OSHA PEL (TWA)	LD50
	Part Number	Number	Factor	Vol. (mL)	Conc.(µg/mL)	Conc (µg/mL)	(%)	Uncertainty	Pipette (mL)	Weight(g)	Weight(g)	Conc (µg/mL)	Uncertainty	CASE		
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)	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	1478-11-5	NA	N/A
5. trans-1,4-Dichloro-2-butene	(0486)	MKBP6041V	NA	NA	NA	2000	96.5	0.2	NA	0.20731	0.20746	2001.7	8.4	110-57-6	NA	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	NA	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	NA	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 76mg/kg
9. 2-Methyl-1-propanol	(0445)	15241EB	NA	NA	NA	2000	99.5	0.2	NA	0.20106	0.20120	2001.4	8.1	78-83-1	50 ppm (150mg/m3/8H)	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 (30mg/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	NA	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 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	NA	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	NA	N/A
20. trans-1,2-Dichloroethene	35171	101623	0.05	5.00	40003.2	2000	NA	NA	0.017	NA	NA	1999.6	22.9	156-60-5	NA	N/A
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 1235mg/kg
22. 1,1-Dichloroethane	32261	102023	0.10	10.00	20001.6	2000	NA	NA	0.042	NA	NA	1999.8	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	78-25-2	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	20002.9	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	100 ppm	or-rat 108mg/kg
27. 1,1-Dichloroethane	95321	020724	0.10	10.00	20003.4	2000	NA	NA	0.042	NA	NA	1999.8	20.5	75-34-3	100 ppm	or-rat 725mg/kg
28. 2,2-Dichloropropane	95321	020724	0.10	10.00	20003.4	2000	NA	NA	0.042	NA	NA	1999.8	20.4	594-20-7	NA	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	40018.5	2000	NA	NA	0.017	NA	NA	2000.3	22.9	86-12-8	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 1947mg/kg
35. 1,3-Dichloropropane	35161	112322	0.05	5.00	40005.9	2000	NA	NA	0.017	NA	NA	1999.8	22.9	142-28-9	NA	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	NA	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	NA	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	NA	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	NA	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	1999.7	22.9	104-51-8	NA	or-rat 2699mg/kg
47. n-Butyl 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
48. Ethyl benzene	35162	050823	0.05	5.00	40005.8	2000	NA	NA	0.017	NA	NA	1999.8	22.9	99-87-6	NA	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	NA	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	NA	or-rat 5g/kg
55. 1,2,4-Trimethylbenzene	35162	050823	0.05	5.00	40001.6	2000	NA	NA	0.017	NA	NA	1999.8	22.9	108-88-3	200 ppm	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	23.0	95-63-6	NA	or-rat 756mg/kg
57. m-Xylene	35162	050823	0.05	5.00	40005.8	2000	NA	NA	0.017	NA	NA	1999.8	22.9	108-87-8	NA	or-rat 5000mg/kg
58. tert-Butyl benzene	35163	101923	0.05	5.00	40001.2	2000	NA	NA	0.017	NA	NA	1999.8	22.9	108-38-3	100 ppm (435mg/m3/8H)	or-rat 5g/kg
59. sec-Butyl benzene	35163	101923	0.05	5.00	40002.4	2000	NA	NA	0.017	NA	NA	1999.8	22.9	96-06-6	NA	N/A
60. Chlorobenzene	35163	101923	0.05	5.00	40002.4	2000	NA	NA	0.017	NA	NA	1999.8	22.9	135-98-8	NA	or-rat 2240mg/kg
61. 2-Chlorotoluene	35163	101923	0.05	5.00	40003.8	2000	NA	NA	0.017	NA	NA	1999.5	22.9	108-90-7	75 ppm (350mg/m3/8H)	or-rat 2290mg/kg
62. 4-Chlorotoluene	35163	101923	0.05	5.00	40003.3	2000	NA	NA	0.017	NA	NA	1999.7	22.9	95-49-8	50 ppm (250mg/m3/8H)	or-rat 3900mg/kg
63. 1,2-Dichlorobenzene	35163	101923	0.05	5.00	40003.8	2000	NA	NA	0.017	NA	NA	1999.7	22.9	106-43-4	NA	or-rat 2100mg/kg
64. 1,3-Dichlorobenzene	35163	101923	0.05	5.00	40001.7	2000	NA	NA	0.017	NA	NA	1999.7	22.9	95-50-1	50 ppm (300mg/m3) (CL)	or-rat

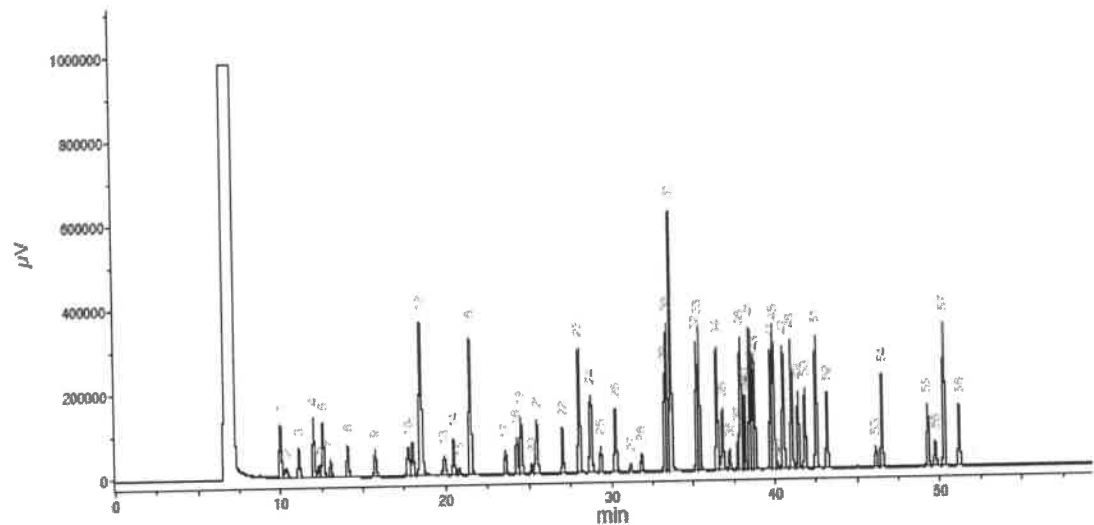


Run 16, "P95317 L021624 (2000µg/mL in MeOH)"

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	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	Methoxyvinyltoluene/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	33.05
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-Isopropyltoluene	41.02
49	1,3-Dichlorobenzene	41.42
50	1,4-Dichlorobenzene	41.83
51	n-Butylbenzene	42.52
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	Hexachlorobutadiene	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



CERTIFIED WEIGHT REPORT

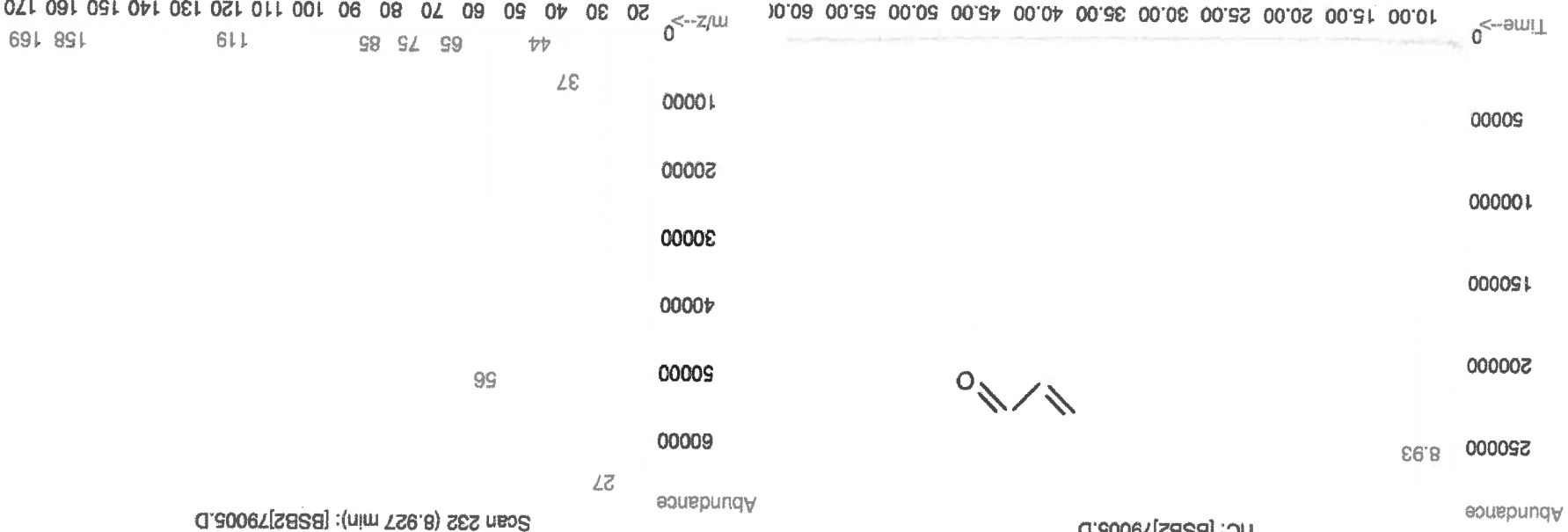
Part Number: 91980
Lot Number: 042325
Description: Acrolein
Expiration Date: 052325
Recommended Storage: Refrigerate (4 °C)
Nominal Concentration (µg/mL): 5000
NIST Test ID#: 6UTB
Weight(s) shown below were combined and diluted to (mL): 10.0

Solvent(s): Water
Lot# 072324Q
SE-05 Balance Uncertainty 0.001
Flask Uncertainty

Formulated By: Eli Allaga	Reviewed By: Pedro L. Rentas
DATE 042325	DATE 042325

Compound	Lot	Nominal	Purity	Target	Actual	Conc (µg/mL)	Expanded Uncertainty	CAS#	OSHA PEL (TWA)	LD50
1. Acrolein	5	103755V10F	97	0.5	0.05166	0.05178	5011.8	52.6	107-02-8	0.1 ppm or rat 46mg/kg

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



- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated 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 1.0, 2/25/2025

Safety Data Sheet (SDS)

GHS/OSHA Compliant

Section I Product and Company Identification

IDENTITY ANALYTICAL STANDARD DISSOLVED IN WATER

Manufacturer's Name ABSOLUTE STANDARDS INC
Address 44 Rossotto Dr.
Hamden CT, 06514

Emergency Telephone USA & CANADA 1-800-535-5053
Emergency Telephone International 1-352-323-3500
Date Prepared/Revised January 1, 2025

Section II - Hazards Identification

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



Signal Word: DANGER

Section III - Composition

Components (Specific Chemical Identity; Common Name(s))
Water

CAS#: 7732-18-5

% (optional)
> 97

See Certified Weight Report For Other Analytes Present At Trace Quantities.
INTENDED USE: REFERENCE MATERIAL

Section IV. FIRST AID MEASURES

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

Section V. FIREFIGHTING MEASURES

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

Section VI. ACCIDENTAL RELEASE MEASURES

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

Section VII. HANDLING AND STORAGE

Precautions for safe handling Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
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

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

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

Section IX - PHYSICAL/CHEMICAL CHARACTERISTICS

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

Vapor Density (AIR = 1)	NA	Evaporation rate (Butyl Acetate = 1)	0°C
Solubility in Water	Completely miscible	NA	NA

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

Section X. STABILITY AND REACTIVITY

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

Section XI. TOXICOLOGICAL INFORMATION

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

Section XII. ECOLOGICAL INFORMATION

LC50	NA
EC50	NA

Section XIII. DISPOSAL CONSIDERATIONS

Dispose with normal Laboratory Solvent Waste.

Section XIV. TRANSPORT INFORMATION

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

Section XV. REGULATORY INFORMATION

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

Section XVI. Misc. INFORMATION

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



Certified Reference Material CRM



CERTIFIED WEIGHT REPORT

Part Number: 91980
Lot Number: 042325
Description: Acrolein
Expiration Date: 052325
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
SE-05 Balance Uncertainty 0.001
Flask Uncertainty

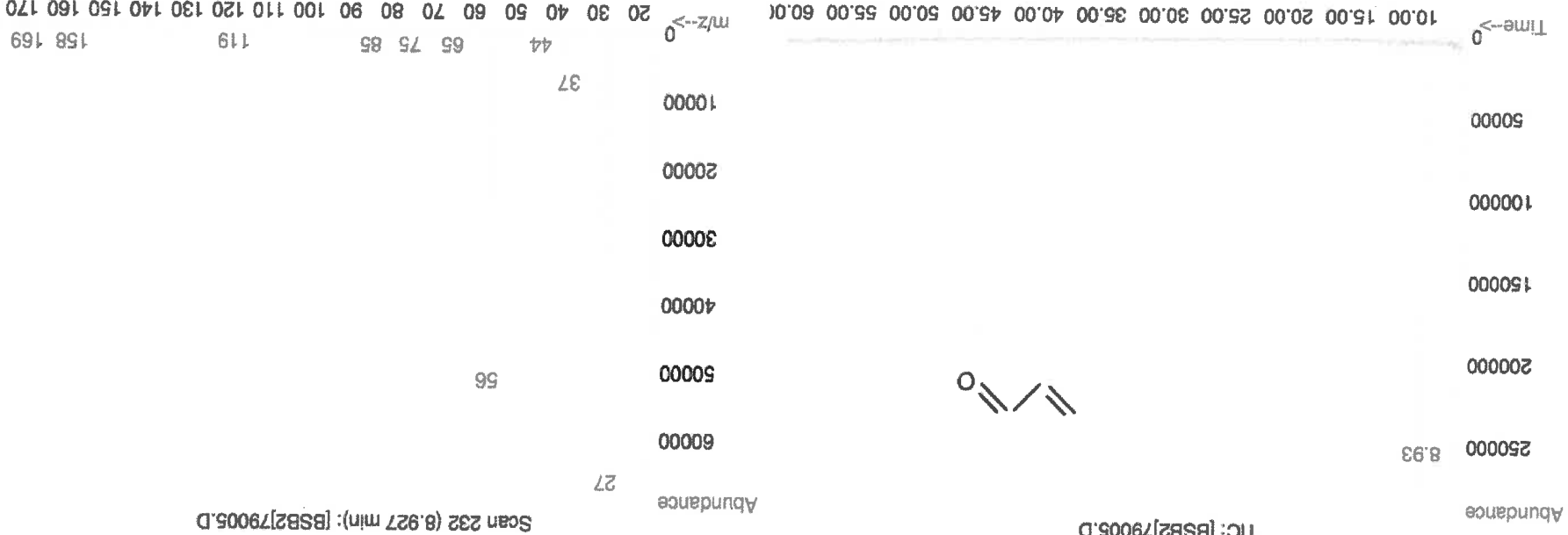
Solvent(s): Water
Lot# 072324Q

✓ 114914 to
✓ 114918

Formulated By: Eli Allaga	Reviewed By: Pedro L. Rentas
DATE 042325	DATE 042325

Compound	Lot	Nominal	Purity	Target	Actual	Conc (µg/mL)	Expanded Uncertainty	CAS#	OSHA PEL (TWA)	LD50
1. Acrolein	5	103755V10F	97	0.5	0.05166	0.05178	5011.8	52.6	107-02-8	0.1 ppm or rat 46mg/kg

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



- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated 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 1.0, 2/25/2025

Safety Data Sheet (SDS)

GHS/OSHA Compliant

Section I Product and Company Identification

IDENTITY ANALYTICAL STANDARD DISSOLVED IN WATER

Manufacturer's Name ABSOLUTE STANDARDS INC
Address 44 Rossotto Dr.
Hamden CT, 06514

Emergency Telephone USA & CANADA 1-800-535-5053
Emergency Telephone International 1-352-323-3500
Date Prepared/Revised January 1, 2025

Section II - Hazards Identification

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



Signal Word: DANGER

Section III - Composition

Components (Specific Chemical Identity; Common Name(s))
Water

CAS#: 7732-18-5

% (optional)
> 97

See Certified Weight Report For Other Analytes Present At Trace Quantities.
INTENDED USE: REFERENCE MATERIAL

Section IV. FIRST AID MEASURES

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

Section V. FIREFIGHTING MEASURES

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

Section VI. ACCIDENTAL RELEASE MEASURES

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

Section VII. HANDLING AND STORAGE

Precautions for safe handling Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
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

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

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

Section IX - PHYSICAL/CHEMICAL CHARACTERISTICS

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

Vapor Density (AIR = 1)	NA	Evaporation rate (Butyl Acetate = 1)	0°C
Solubility in Water	Completely miscible	NA	NA

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

Section X. STABILITY AND REACTIVITY

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

Section XI. TOXICOLOGICAL INFORMATION

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

Section XII. ECOLOGICAL INFORMATION

LC50	NA
EC50	NA

Section XIII. DISPOSAL CONSIDERATIONS

Dispose with normal Laboratory Solvent Waste.

Section XIV. TRANSPORT INFORMATION

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

Section XV. REGULATORY INFORMATION

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

Section XVI. Misc. INFORMATION

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



Certified Reference Material CRM



CERTIFIED WEIGHT REPORT

Part Number:

91980

Lot Number:

042325

Description:

Acrolein

Expiration Date:

052325

Recommended Storage:

Refrigerate (4 °C)

NIST Test ID#:

6UTB

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

10.0

SE-05 Balance Uncertainty

0.001 Flask Uncertainty

Solvent(s):

Water

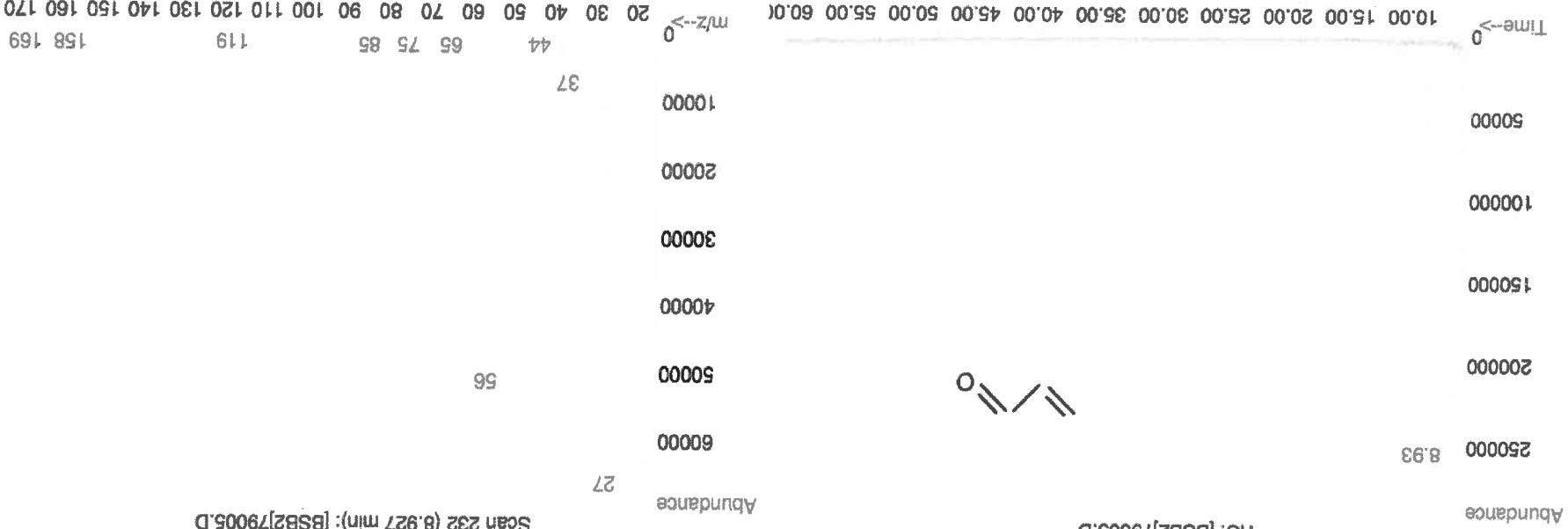
Lot# 072324Q

114914 to
114918

Formulated By: <i>Ell Allaga</i>	Reviewed By: <i>Pedro L. Rentas</i>
DATE 042325	DATE 042325

Compound	Lot	Nominal	Purity	Target	Actual	Conc (µg/mL)	Expanded Uncertainty	CAS#	OSHA PEL (TWA)	LD50
1. Acrolein	5	103755V10F	97	0.5	0.05166	0.05178	5011.8	52.6	107-02-8	0.1 ppm or rat 46mg/kg

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



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

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- Standards are certified (+/-) 0.5% of the stated value, unless otherwise stated.
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- Rev 1.0, 2/25/2025

Safety Data Sheet (SDS)

GHS/OSHA Compliant

Section I Product and Company Identification

IDENTITY ANALYTICAL STANDARD DISSOLVED IN WATER

Manufacturer's Name ABSOLUTE STANDARDS INC
Address 44 Rossotto Dr.
Hamden CT, 06514

Emergency Telephone USA & CANADA 1-800-535-5053
Emergency Telephone International 1-352-323-3500
Date Prepared/Revised January 1, 2025

Section II - Hazards Identification

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



Signal Word: DANGER

Section III - Composition

Components (Specific Chemical Identity; Common Name(s))
Water

CAS#: 7732-18-5

% (optional)
> 97

See Certified Weight Report For Other Analytes Present At Trace Quantities.
INTENDED USE: REFERENCE MATERIAL

Section IV. FIRST AID MEASURES

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

Section V. FIREFIGHTING MEASURES

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

Section VI. ACCIDENTAL RELEASE MEASURES

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

Section VII. HANDLING AND STORAGE

Precautions for safe handling Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
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

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

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

Section IX - PHYSICAL/CHEMICAL CHARACTERISTICS

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

Vapor Density (AIR = 1)	NA	Evaporation rate (Butyl Acetate = 1)	0°C
Solubility in Water	Completely miscible	NA	NA

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

Section X. STABILITY AND REACTIVITY

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

Section XI. TOXICOLOGICAL INFORMATION

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

Section XII. ECOLOGICAL INFORMATION

LC50	NA
EC50	NA

Section XIII. DISPOSAL CONSIDERATIONS

Dispose with normal Laboratory Solvent Waste.

Section XIV. TRANSPORT INFORMATION

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

Section XV. REGULATORY INFORMATION

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

Section XVI. Misc. INFORMATION

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



Certified Reference Material CRM



CERTIFIED WEIGHT REPORT

Part Number:

91980

Lot Number:

042325

Description:

Acrolein

Expiration Date:

052325

Recommended Storage:

Refrigerate (4 °C)

NIST Test ID#:

6UTB

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

10.0

SE-05 Balance Uncertainty

0.001 Flask Uncertainty

Solvent(s):

Water

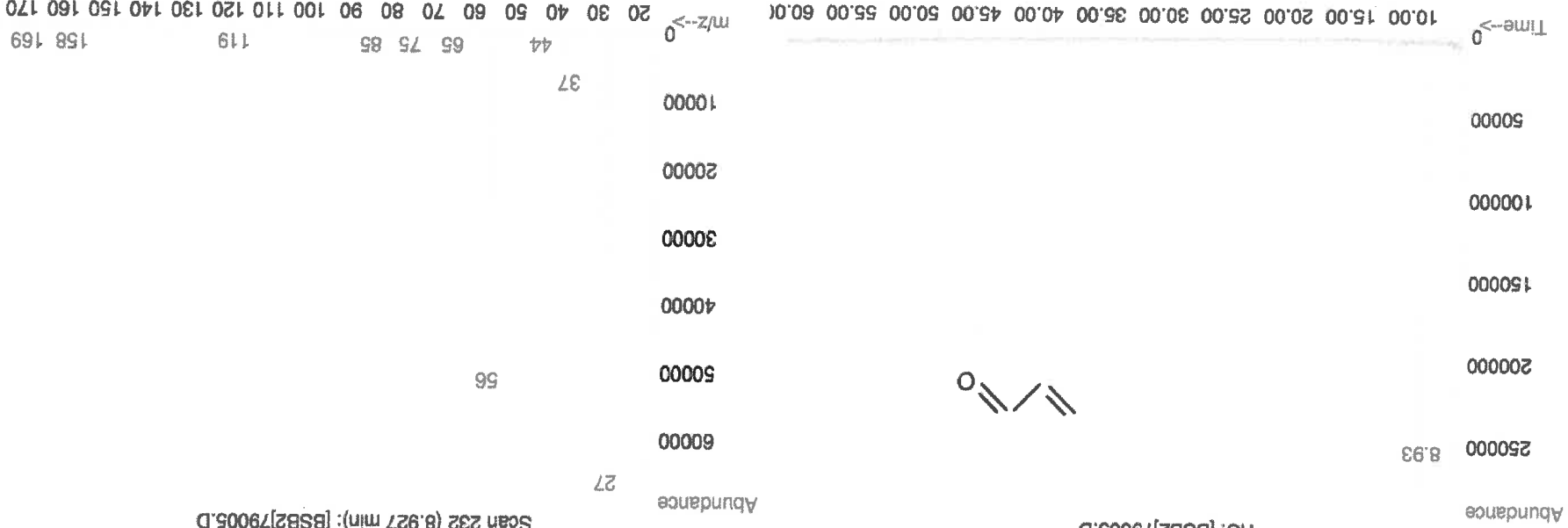
Lot# 072324Q

114914 to 114918

Formulated By: <i>Ell Allaga</i>	Reviewed By: <i>Pedro L. Rentas</i>
DATE 042325	DATE 042325

Compound	Lot	Nominal	Purity	Target	Actual	Conc (µg/mL)	Expanded Uncertainty	CAS#	OSHA PEL (TWA)	LD50
1. Acrolein	5	103755V10F	97	0.5	0.05166	0.05178	5011.8	52.6	107-02-8	0.1 ppm or rat 46mg/kg

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



- The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- Standards are prepared gravimetrically using balances that are calibrated 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 1.0, 2/25/2025

Safety Data Sheet (SDS)

GHS/OSHA Compliant

Section I Product and Company Identification

IDENTITY ANALYTICAL STANDARD DISSOLVED IN WATER

Manufacturer's Name ABSOLUTE STANDARDS INC
Address 44 Rossotto Dr.
Hamden CT, 06514

Emergency Telephone USA & CANADA 1-800-535-5053
Emergency Telephone International 1-352-323-3500
Date Prepared/Revised January 1, 2025

Section II - Hazards Identification

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



Signal Word: DANGER

Section III - Composition

Components (Specific Chemical Identity; Common Name(s))
Water

CAS#: 7732-18-5

% (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

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

Section VI. ACCIDENTAL RELEASE MEASURES

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

Section VII. HANDLING AND STORAGE

Precautions for safe handling Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
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

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

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

Section IX - PHYSICAL/CHEMICAL CHARACTERISTICS

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

Vapor Density (AIR = 1)	NA	Evaporation rate (Butyl Acetate = 1)	0°C
Solubility in Water	Completely miscible	NA	NA

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

Section X. STABILITY AND REACTIVITY

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

Section XI. TOXICOLOGICAL INFORMATION

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

Section XII. ECOLOGICAL INFORMATION

LC50	NA
EC50	NA

Section XIII. DISPOSAL CONSIDERATIONS

Dispose with normal Laboratory Solvent Waste.

Section XIV. TRANSPORT INFORMATION

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

Section XV. REGULATORY INFORMATION

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

Section XVI. Misc. INFORMATION

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



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

5E-05 Balance Uncertainty

0.001 Flask Uncertainty

10.0

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

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
----------	-----	------------	----------------------	------------	-------------	------------------	------------------	---------------------	------------------------------------	--	------	----------------	------

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

56

150000

40000

30000

100000

20000

50000

10000

Time-->

10.00 15.00 20.00 25.00 30.00 35.00 40.00 45.00 50.00 55.00 60.00

m/z-->

20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170

44 65 75 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 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

5E-05 Balance Uncertainty

0.001 Flask Uncertainty

10.0

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

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
----------	-----	------------	----------------------	------------	-------------	------------------	------------------	---------------------	------------------------------------	--	------	----------------	------

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
-------------	---	------------	------	----	-----	---------	---------	--------	------	----------	---------	-----------------

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

40000

30000

100000

20000

50000

10000

Time-->

10.00 15.00 20.00 25.00 30.00 35.00 40.00 45.00 50.00 55.00 60.00

m/z-->

20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170

44 65 75 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).



See 1216124
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):

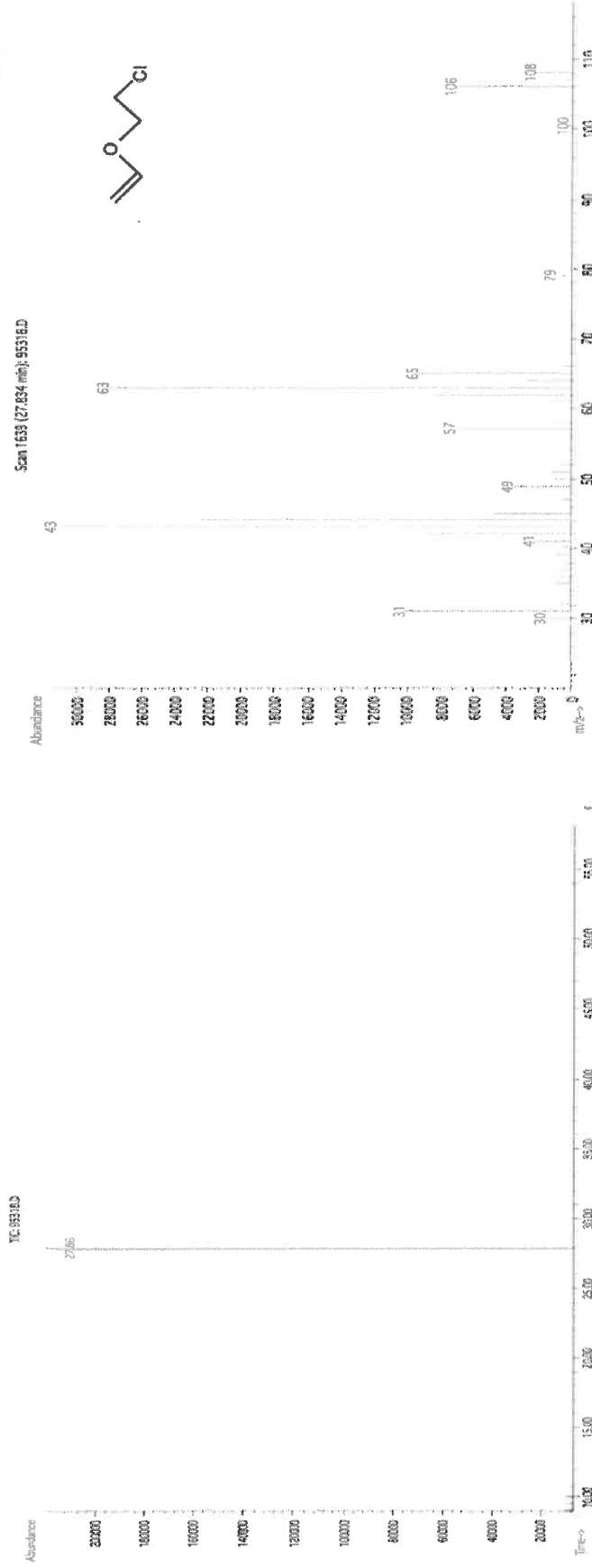
5E-05 Balance Uncertainty
0.001 Flask Uncertainty

Expanded Uncertainty (Solvent Safety Info. On Attached pg.)
Uncertainty (±) (µg/mL) CAS# OSHA PEL (TWA) LDSO

SDS Information

Compound	RM#	Lot Number	Nominal Conc (µg/mL)	Purity (%)	Uncertainty Purity	Target Weight (g)	Actual Weight (g)	Actual Conc (µg/mL)	or-rat 250mg/kg
1. 2-Chloroethyl vinyl ether	74	MKCD0033	10000	99	0.2	0.50536	0.50550	10002.9	N/A

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

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 Rosotto Dr. Hamden CT. 06514	Emergency Telephone International Date Prepared/Revised	1-352-323-3500 January 1, 2024

Section II - Hazards Identification

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

H225	Highly Flammable Liquid and Vapor	H301, 311, 331	Toxic if swallowed, skin contact, inhaled
H370	Cause damage to organs	H351	Suspected of causing cancer
P271	Use in ventilated area	P280	Use gloves, eye protection/face 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))	CAS#	% (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 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.



Rec 1216124
20 vial

CERTIFIED WEIGHT REPORT

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

Solvent(s): Lot#
Methanol EJ143-US

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

✓ 14630 to
✓ 14649

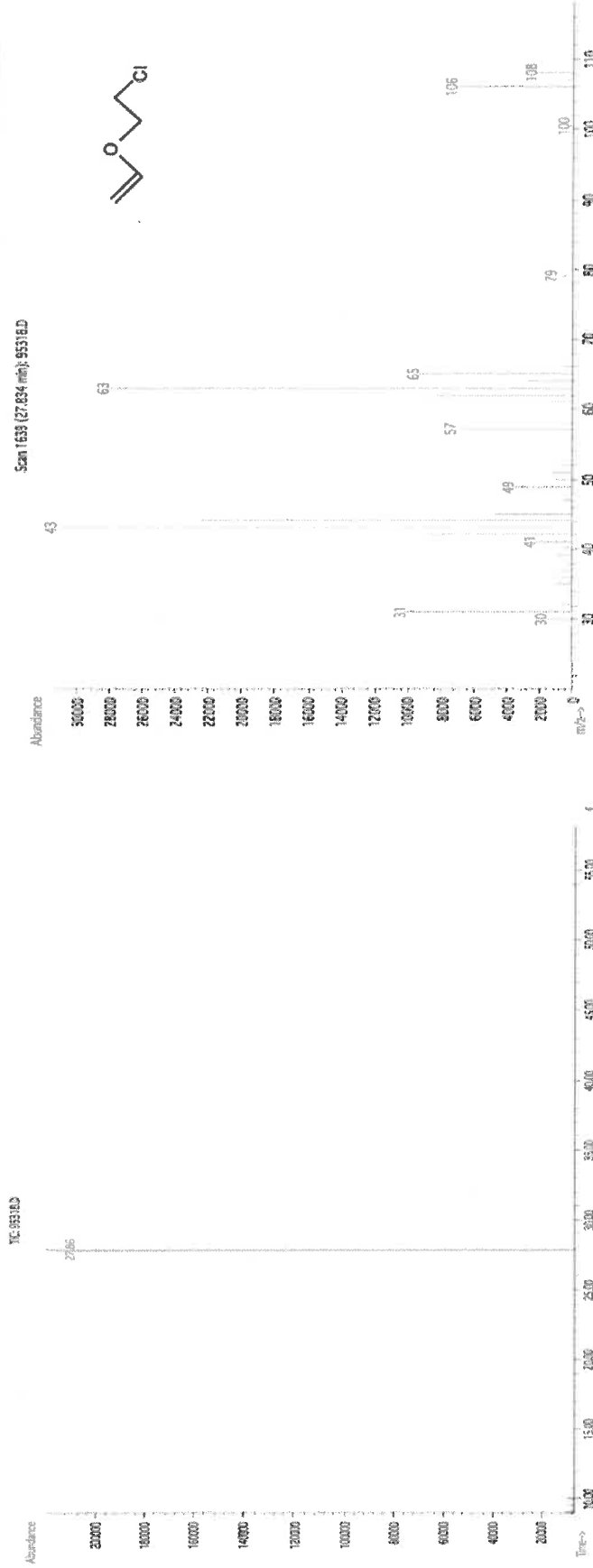
Weight(s) shown below were combined and diluted to (mL):

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)	(Solvent Safety Info. On Attached pg.)	OSHA PEL (TWA)	LD50
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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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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.



Rec 1216124
20 vial

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

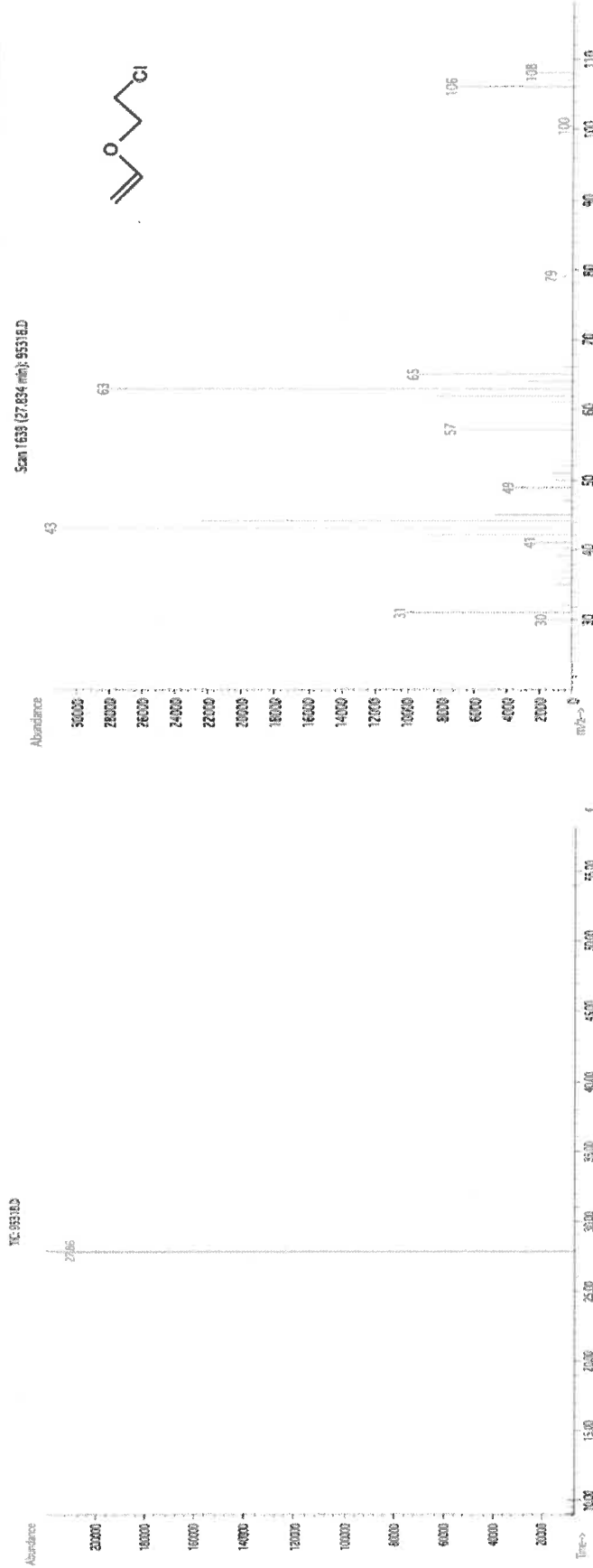
Weight(s) shown below were combined and diluted to (mL):

5E-05 Balance Uncertainty
0.001 Flask Uncertainty

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

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).

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

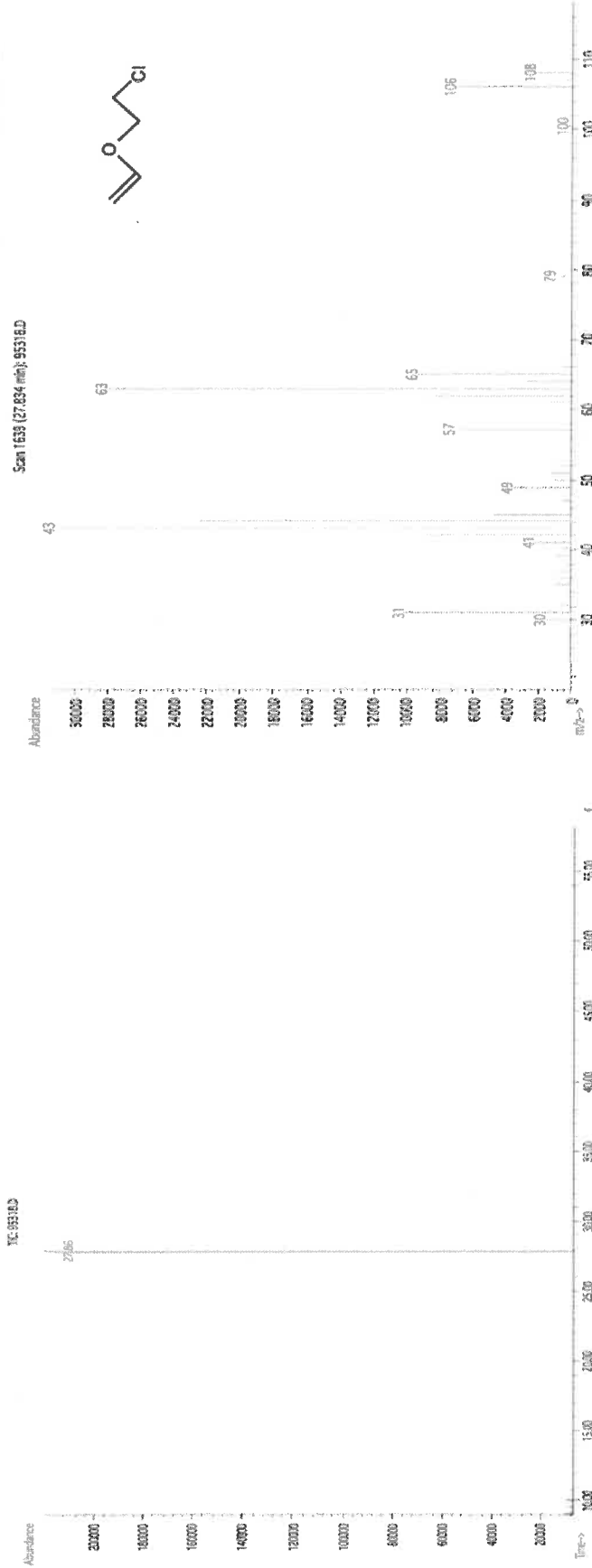
Weight(s) shown below were combined and diluted to (mL): 50.0

5E-05 Balance Uncertainty
0.001 Flask Uncertainty

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

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.
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GHS/OSHA Compliant

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Address	44 Rosotto Dr. Hamden CT. 06514	Emergency Telephone International Date Prepared/Revised	1-352-323-3500 January 1, 2024

Section II - Hazards Identification

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

H225	Highly Flammable Liquid and Vapor	H301, 311, 331	Toxic if swallowed, skin contact, inhaled
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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))	CAS#	% (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.
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Clean up	Contain spillage, and then collect and place in container for disposal according to local regulations (see section 13).

Section VII. HANDLING AND STORAGE

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

Section VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

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

Section IX - Physical/Chemical Characteristics

Boiling Point	65°C	Specific Gravity (H ₂ O = 1)	0.79
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Section XIII. DISPOSAL CONSIDERATIONS

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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.

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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:

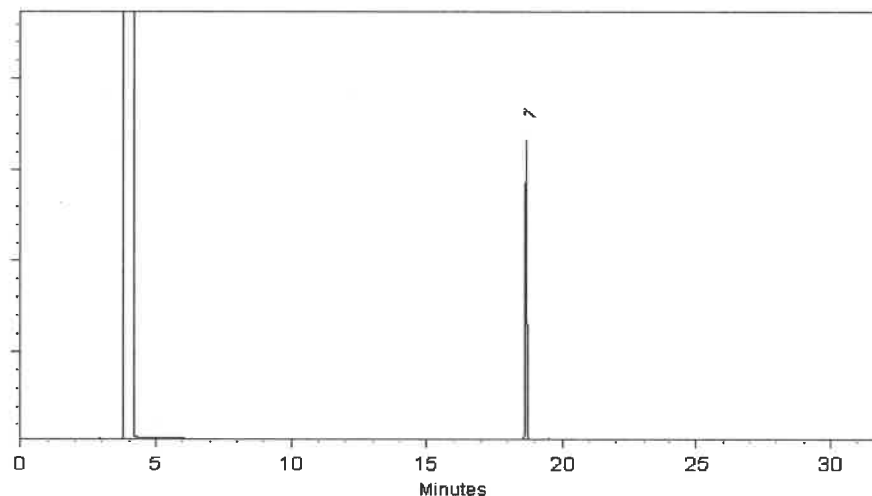
FID

Split Vent:

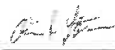
40 ml/min

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. : 30225 **Lot No.:** A0193071

Description : Bromochloromethane Standard

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

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

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

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Bromochloromethane	74-97-5	00008541	99%	2,018.0 µg/mL	+/- 113.3890

* Expanded Uncertainty displayed in same units as Grav. Conc.

Solvent: P&T Methanol

CAS # 67-56-1

Purity 99%

Quality Confirmation Test

Column:

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

Carrier Gas:

hydrogen-constant pressure 11.0 psi.

Temp. Program:

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

Inj. Temp:

200°C

Det. Temp:

250°C

Det. Type:

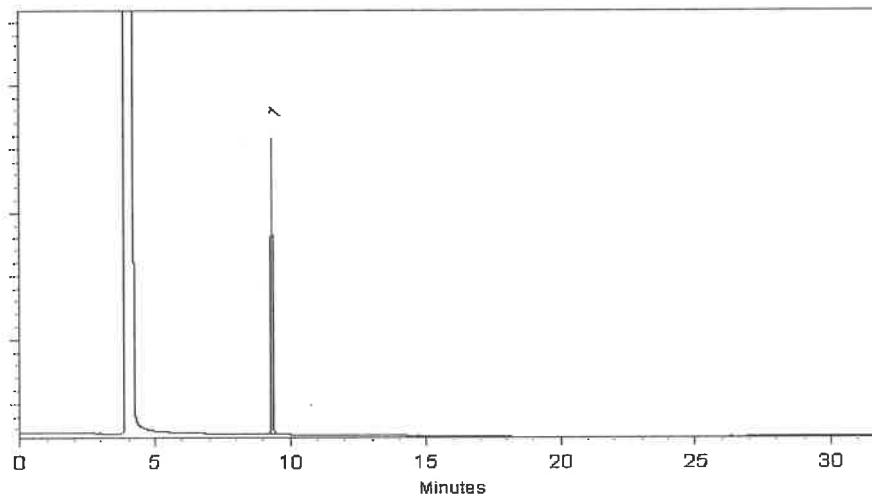
FID

Split Vent:

40 ml/min

Inj. Vol

1µl



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


Tom Suckar - Mix Technician

Date Mixed: 29-Dec-2022 Balance Serial # B707717271


Christie Mills - Operations Tech II - ARM QC

Date Passed: 03-Jan-2023

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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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chromatographic plus



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

Catalog No. : 30225 **Lot No.:** A0193071
Description : Bromochloromethane Standard
Bromochloromethane 2000µg/mL, P&T Methanol, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : December 31, 2027 **Storage:** 0°C or colder
Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Bromochloromethane	74-97-5	00008541	99%	2,018.0 µg/mL	+/- 113.3890

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

Column:

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

Carrier Gas:

hydrogen-constant pressure 11.0 psi.

Temp. Program:

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

Inj. Temp:

200°C

Det. Temp:

250°C

Det. Type:

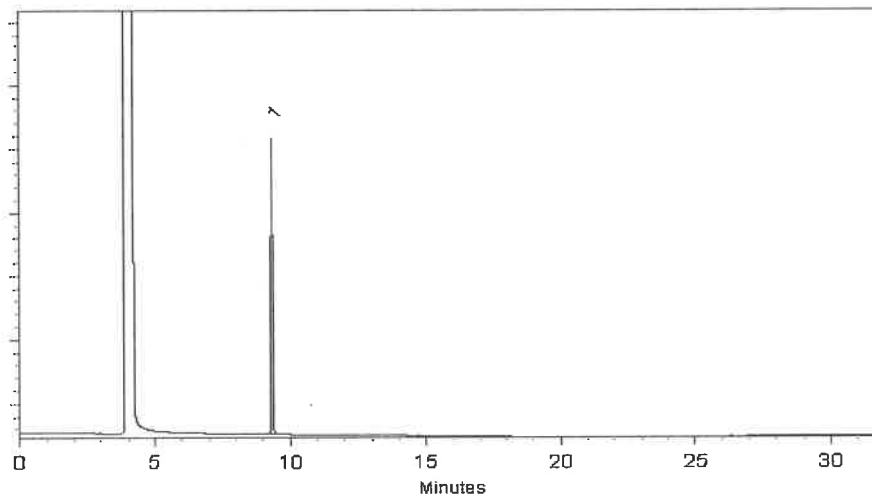
FID

Split Vent:

40 ml/min

Inj. Vol

1µl



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


Tom Suckar - Mix Technician

Date Mixed: 29-Dec-2022 Balance Serial # B707717271


Christie Mills - Operations Tech II - ARM QC

Date Passed: 03-Jan-2023

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

General Certified Reference Material Notes

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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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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. : 30225 **Lot No.:** A0193071

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

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

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

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Bromochloromethane	74-97-5	00008541	99%	2,018.0 µg/mL	+/- 113.3890

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

Column:

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

Carrier Gas:

hydrogen-constant pressure 11.0 psi.

Temp. Program:

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

Inj. Temp:

200°C

Det. Temp:

250°C

Det. Type:

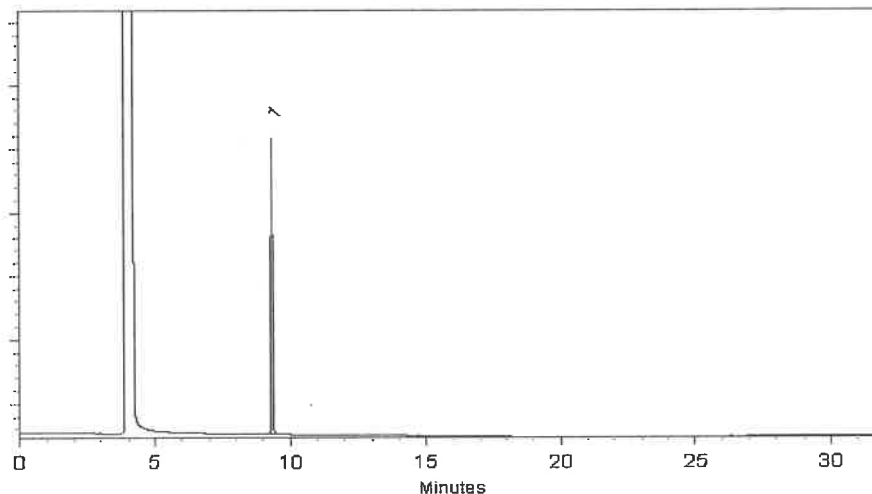
FID

Split Vent:

40 ml/min

Inj. Vol

1µl



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


Tom Suckar - Mix Technician

Date Mixed: 29-Dec-2022 Balance Serial # B707717271


Christie Mills - Operations Tech II - ARM QC

Date Passed: 03-Jan-2023

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

Catalog No. : 30225 **Lot No.:** A0193071
Description : Bromochloromethane Standard
Bromochloromethane 2000µg/mL, P&T Methanol, 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : December 31, 2027 **Storage:** 0°C or colder
Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Bromochloromethane	74-97-5	00008541	99%	2,018.0 µg/mL	+/- 113.3890

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

Column:

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

Carrier Gas:

hydrogen-constant pressure 11.0 psi.

Temp. Program:

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

Inj. Temp:

200°C

Det. Temp:

250°C

Det. Type:

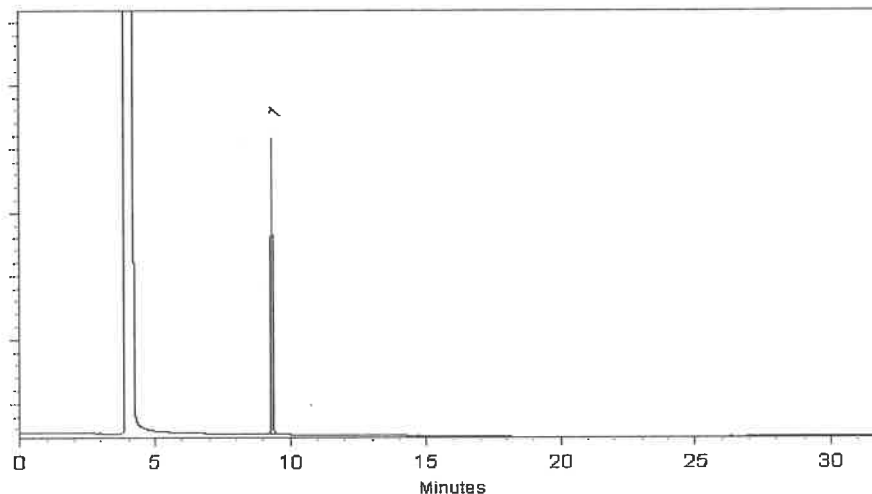
FID

Split Vent:

40 ml/min

Inj. Vol

1µl



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


Tom Suckar - Mix Technician

Date Mixed: 29-Dec-2022 Balance Serial # B707717271


Christie Mills - Operations Tech II - ARM QC

Date Passed: 03-Jan-2023

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

Manufacturing Notes:

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

Handling Notes:

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 555582 **Lot No.:** A0196865

Description : Custom 8260A/B Surrogate Mix
Custom 8260A/B Surrogate Mix 25,000µg/mL, P&T Methanol,
1mL/ampul

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

Expiration Date : April 30, 2026 **Storage:** 10°C or colder

Ship: Ambient

CERTIFIED VALUES

Component #	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	1,2-Dichloroethane-d4	17060-07-0	PR-32845	99%	25,036.0 µg/mL	+/- 1,417.9179
2	1-Bromo-4-fluorobenzene (BFB)	460-00-4	184975	99%	25,132.0 µg/mL	+/- 1,423.3549
3	Dibromofluoromethane	1868-53-7	022013	99%	25,040.0 µg/mL	+/- 1,418.1445
4	Toluene-d8	2037-26-5	PR-33397	99%	25,028.0 µg/mL	+/- 1,417.4648

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

Russ Bookhamer - Operations Technician I

Date Mixed: 11-Apr-2023

Balance: 1127510105

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

- Purity and/or chemical identity are determined by one or more of the following techniques: GC/FID, HPLC, GC/μECD, GC/MS, LC/MS, RI, and/or melting point.
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- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

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

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

Manufacturing Notes:

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

Handling Notes:

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 30489 **Lot No.:** A0209618

Description : 8260B Acetates Mix

8260B Acetates Mix 2,000 µg/mL, P&T Methanol, 1mL/ampul

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

Expiration Date : September 30, 2025 **Storage:** -20°C or colder

Handling: This product is photosensitive. **Ship:** On Ice

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Methyl acetate	79-20-9	SHBP3100	99%	2,019.3 µg/mL	+/- 69.7974
2	Vinyl acetate	108-05-4	RP231030CTH	98%	2,016.8 µg/mL	+/- 69.7112
3	Ethyl acetate	141-78-6	SHBQ9682	99%	2,010.7 µg/mL	+/- 69.4979
4	Isopropyl acetate	108-21-4	BCCG7069	99%	2,016.0 µg/mL	+/- 69.6822
5	Propyl acetate	109-60-4	P8XLN	99%	2,008.0 µg/mL	+/- 69.4057
6	Butyl acetate	123-86-4	SHBP6314	99%	2,007.3 µg/mL	+/- 69.3826
7	Amyl acetate	628-63-7	41325/1	97%	2,004.7 µg/mL	+/- 69.2905

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Tech Tips:

Vinyl acetate is a volatile organic ester included in the target lists of several US EPA and other methods. Under acidic conditions, esters react with alcohols to form new esters (transesterification). Methanol-based mixes containing halogenated compounds are slightly acidic, so it is important to minimize exposure of vinyl acetate to mixes of halogenated compounds in methanol. For this

reason, we offer vinyl acetate in individual solution, and suggest that it be introduced into the working level calibration solution immediately before use. This will minimize problems and ensure more consistent results.

Quality Confirmation Test

Column:

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

Carrier Gas:

hydrogen-constant pressure 11.0 psi.

Temp. Program:

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

Inj. Temp:

200°C

Det. Temp:

250°C

Det. Type:

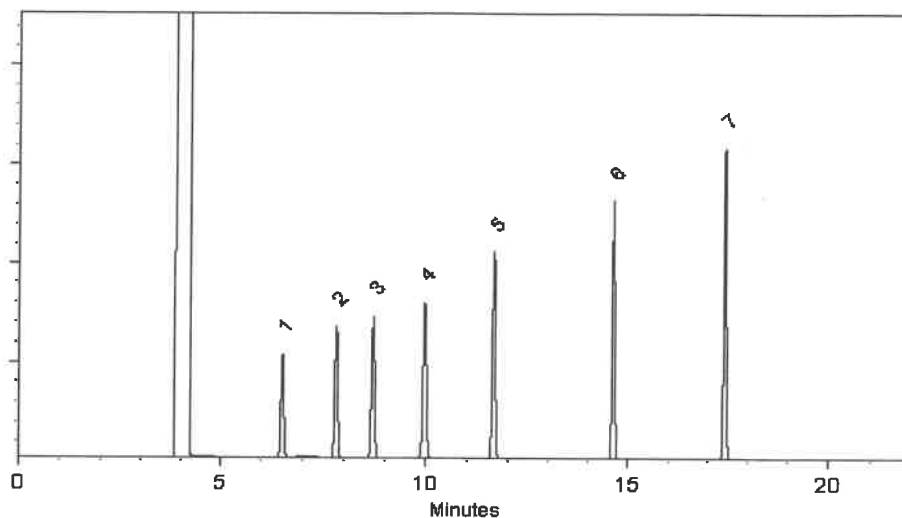
FID

Split Vent:

40 ml/min

Inj. Vol

1µl



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

Sam Moodler
Sam Moodler - Operations Tech I

Date Mixed: 28-Mar-2024

Balance Serial # B707717271

Dillon Murphy
Dillon Murphy - Operations Technician I

Date Passed: 01-Apr-2024

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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. : 30489 **Lot No.:** A0209618

Description : 8260B Acetates Mix
8260B Acetates Mix 2,000 µg/mL, P&T Methanol, 1mL/ampul

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

Expiration Date : September 30, 2025 **Storage:** -20°C or colder

Handling: This product is photosensitive. **Ship:** On Ice

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Methyl acetate	79-20-9	SHBP3100	99%	2,019.3 µg/mL	+/- 69.7974
2	Vinyl acetate	108-05-4	RP231030CTH	98%	2,016.8 µg/mL	+/- 69.7112
3	Ethyl acetate	141-78-6	SHBQ9682	99%	2,010.7 µg/mL	+/- 69.4979
4	Isopropyl acetate	108-21-4	BCCG7069	99%	2,016.0 µg/mL	+/- 69.6822
5	Propyl acetate	109-60-4	P8XLN	99%	2,008.0 µg/mL	+/- 69.4057
6	Butyl acetate	123-86-4	SHBP6314	99%	2,007.3 µg/mL	+/- 69.3826
7	Amyl acetate	628-63-7	41325/1	97%	2,004.7 µg/mL	+/- 69.2905

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Tech Tips:

Vinyl acetate is a volatile organic ester included in the target lists of several US EPA and other methods. Under acidic conditions, esters react with alcohols to form new esters (transesterification). Methanol-based mixes containing halogenated compounds are slightly acidic, so it is important to minimize exposure of vinyl acetate to mixes of halogenated compounds in methanol. For this

reason, we offer vinyl acetate in individual solution, and suggest that it be introduced into the working level calibration solution immediately before use. This will minimize problems and ensure more consistent results.

Quality Confirmation Test

Column:

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

Carrier Gas:

hydrogen-constant pressure 11.0 psi.

Temp. Program:

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

Inj. Temp:

200°C

Det. Temp:

250°C

Det. Type:

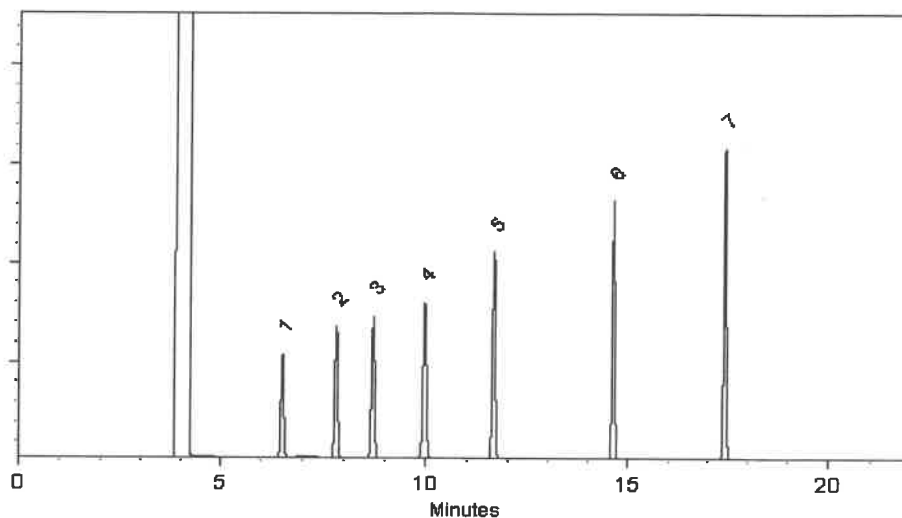
FID

Split Vent:

40 ml/min

Inj. Vol

1µl



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

Sam Moodler
Sam Moodler - Operations Tech I

Date Mixed: 28-Mar-2024

Balance Serial # B707717271

Dylan Murphy
Dylan Murphy - Operations Technician I

Date Passed: 01-Apr-2024

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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Manufacturing Notes:

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

Handling Notes:

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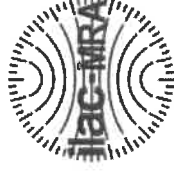
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This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No.: 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:

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

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

Catalog No. : 30006 **Lot No.:** A0210618
Description : VOA Calibration Mix #1
VOA Calibration Mix #1 5,000µg/mL, P&T Methanol/Water(90:10), 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : July 31, 2027 **Storage:** 0°C or colder
Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Acetone	67-64-1	SHBQ8504	99%	5,014.8 µg/mL	+/- 173.2883
2	2-Butanone (MEK)	78-93-3	SHBQ4704	99%	5,012.4 µg/mL	+/- 173.2054
3	4-Methyl-2-pentanone (MIBK)	108-10-1	SHBP9200	99%	5,011.6 µg/mL	+/- 173.1777
4	2-Hexanone	591-78-6	MKCQ6663	99%	5,013.0 µg/mL	+/- 173.2261

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

Column:

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

Carrier Gas:

hydrogen-constant pressure 11.0 psi.

Temp. Program:

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

Inj. Temp:

200°C

Det. Temp:

250°C

Det. Type:

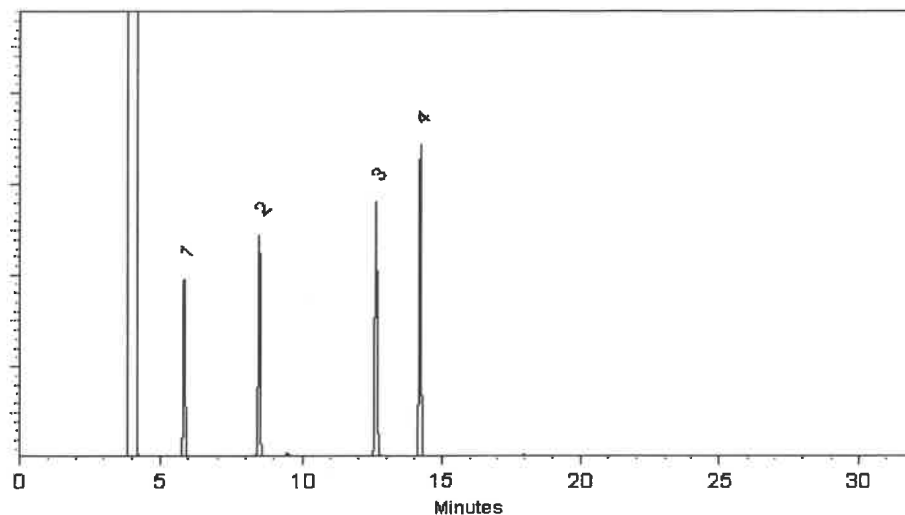
FID

Split Vent:

40 ml/min

Inj. Vol

1µl

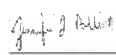


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


Dakota Parson - Operations Technician I

Date Mixed: 22-Apr-2024

Balance Serial # B707717271


Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 24-Apr-2024

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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. : 30006 **Lot No.:** A0210618

Description : VOA Calibration Mix #1

VOA Calibration Mix #1 5,000µg/mL, P&T Methanol/Water(90:10), 1mL/ampul

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

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

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Acetone	67-64-1	SHBQ8504	99%	5,014.8 µg/mL	+/- 173.2883
2	2-Butanone (MEK)	78-93-3	SHBQ4704	99%	5,012.4 µg/mL	+/- 173.2054
3	4-Methyl-2-pentanone (MIBK)	108-10-1	SHBP9200	99%	5,011.6 µg/mL	+/- 173.1777
4	2-Hexanone	591-78-6	MKCQ6663	99%	5,013.0 µg/mL	+/- 173.2261

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

Column:

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

Carrier Gas:

hydrogen-constant pressure 11.0 psi.

Temp. Program:

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

Inj. Temp:

200°C

Det. Temp:

250°C

Det. Type:

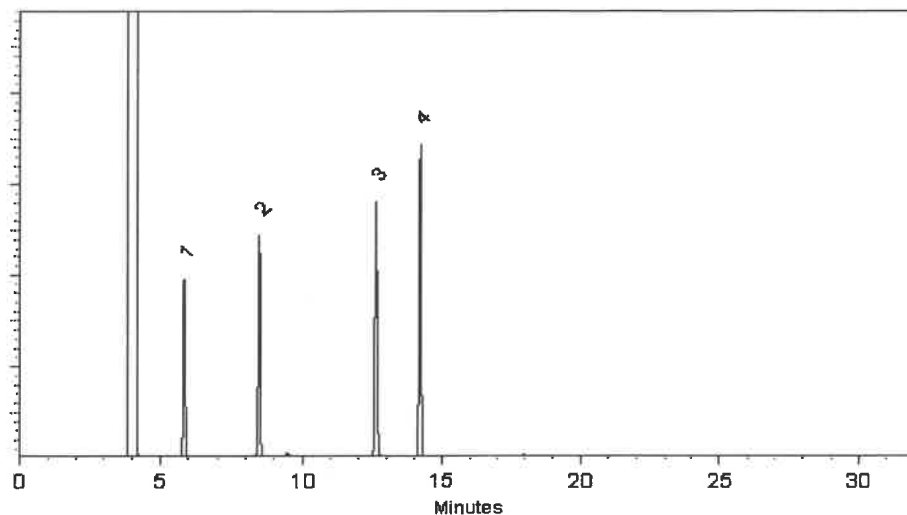
FID

Split Vent:

40 ml/min

Inj. Vol

1µl

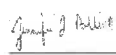


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


Dakota Parson - Operations Technician I

Date Mixed: 22-Apr-2024

Balance Serial # B707717271


Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 24-Apr-2024

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

Manufacturing Notes:

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

Handling Notes:

- Stability of the unopened product, when stored in compliance with the recommended conditions, is guaranteed through the expiration displayed on the product label and certificate. Contact Restek for additional opened product stability information, with the knowledge/understanding that open product stability is subject to the specific handling and environmental conditions to which the product is exposed. For your convenience Restek supplies deactivated vials with most standards packed in 2mL ampuls. Larger volume deactivated vials are available through Restek as a custom ordered item. Additionally, Restek sells DMDCS for the purpose of glassware deactivation as catalog number 31861, which includes complete instructions.
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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 30006 **Lot No.:** A0210618

Description : VOA Calibration Mix #1

VOA Calibration Mix #1 5,000µg/mL, P&T Methanol/Water(90:10), 1mL/ampul

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

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

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Acetone	67-64-1	SHBQ8504	99%	5,014.8 µg/mL	+/- 173.2883
2	2-Butanone (MEK)	78-93-3	SHBQ4704	99%	5,012.4 µg/mL	+/- 173.2054
3	4-Methyl-2-pentanone (MIBK)	108-10-1	SHBP9200	99%	5,011.6 µg/mL	+/- 173.1777
4	2-Hexanone	591-78-6	MKCQ6663	99%	5,013.0 µg/mL	+/- 173.2261

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

Column:

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

Carrier Gas:

hydrogen-constant pressure 11.0 psi.

Temp. Program:

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

Inj. Temp:

200°C

Det. Temp:

250°C

Det. Type:

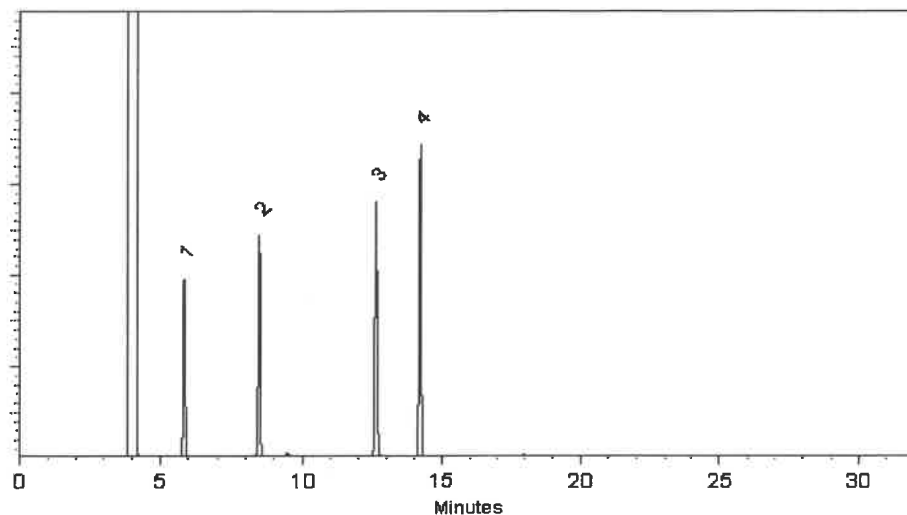
FID

Split Vent:

40 ml/min

Inj. Vol

1µl

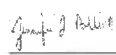


This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.


Dakota Parson - Operations Technician I

Date Mixed: 22-Apr-2024

Balance Serial # B707717271


Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 24-Apr-2024

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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. : 30006 **Lot No.:** A0210618
Description : VOA Calibration Mix #1
VOA Calibration Mix #1 5,000µg/mL, P&T Methanol/Water(90:10), 1mL/ampul
Container Size : 2 mL **Pkg Amt:** > 1 mL
Expiration Date : July 31, 2027 **Storage:** 0°C or colder
Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	CAS #	Lot #	Purity	Grav. Conc. (weight/volume)	Expanded Uncertainty * (95% C.L.; K=2)
1	Acetone	67-64-1	SHBQ8504	99%	5,014.8 µg/mL	+/- 173.2883
2	2-Butanone (MEK)	78-93-3	SHBQ4704	99%	5,012.4 µg/mL	+/- 173.2054
3	4-Methyl-2-pentanone (MIBK)	108-10-1	SHBP9200	99%	5,011.6 µg/mL	+/- 173.1777
4	2-Hexanone	591-78-6	MKCQ6663	99%	5,013.0 µg/mL	+/- 173.2261

* Expanded Uncertainty displayed in same units as Grav. Conc.

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

Quality Confirmation Test

Column:

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

Carrier Gas:

hydrogen-constant pressure 11.0 psi.

Temp. Program:

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

Inj. Temp:

200°C

Det. Temp:

250°C

Det. Type:

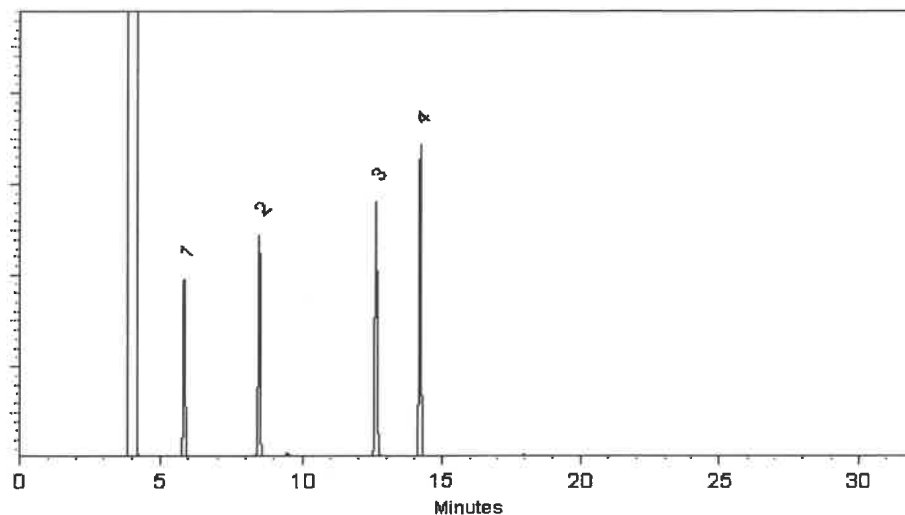
FID

Split Vent:

40 ml/min

Inj. Vol

1µl

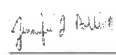


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Dakota Parson - Operations Technician I

Date Mixed: 22-Apr-2024

Balance Serial # B707717271


Jennifer Pollino - Operations Tech III - ARM QC

Date Passed: 24-Apr-2024

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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. : 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:

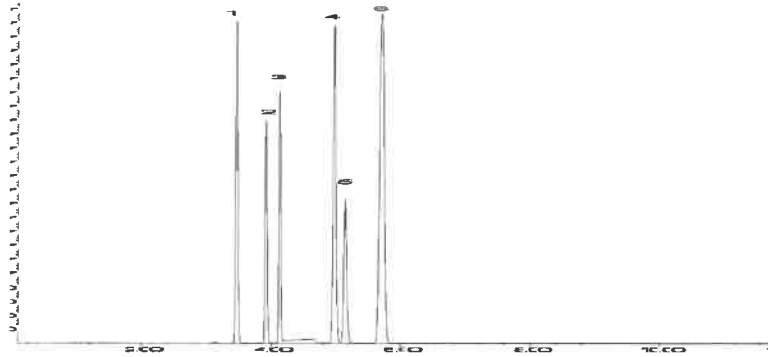
MSD

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.
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- Purity values are rounded to the nearest whole number.

Certified Uncertainty Value Notes:

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

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

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

Manufacturing Notes:

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

Handling Notes:

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



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

www.restek.com

Rec 12/17/24
CERTIFIED REFERENCE MATERIAL

30 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:

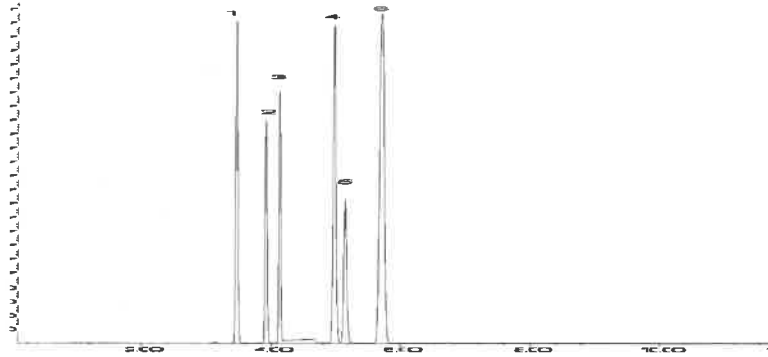
MSD

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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Fax: 1-814-353-1309

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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:

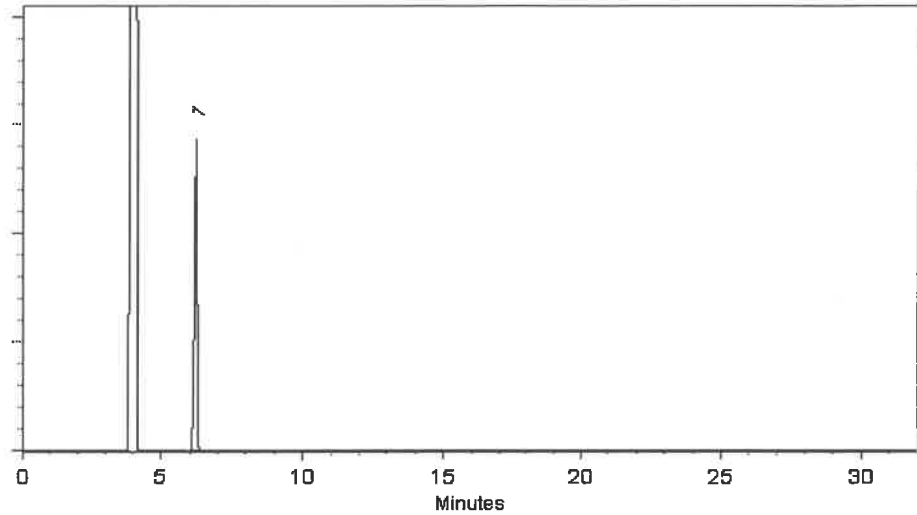
FID

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.
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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:

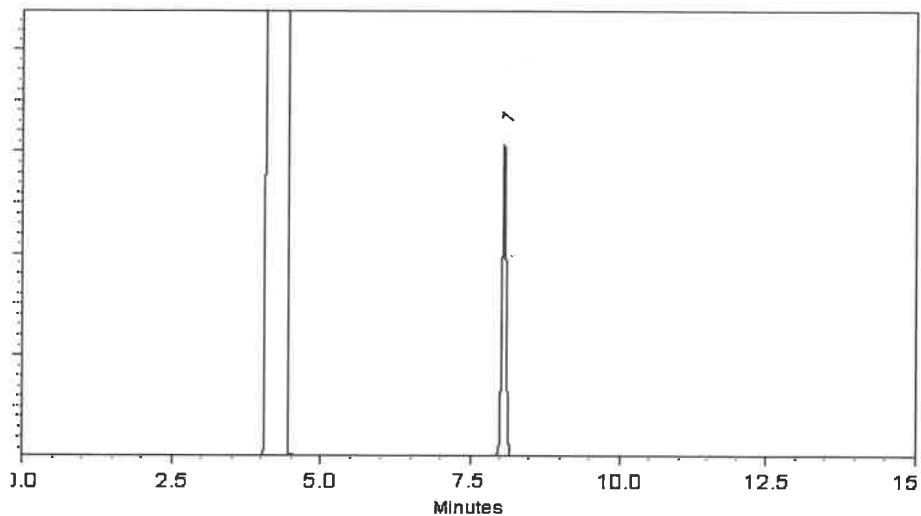
FID

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.
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- Purity of isomeric compounds is reported as the sum of the isomers.
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Certified Uncertainty Value Notes:

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

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

Manufacturing Notes:

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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:

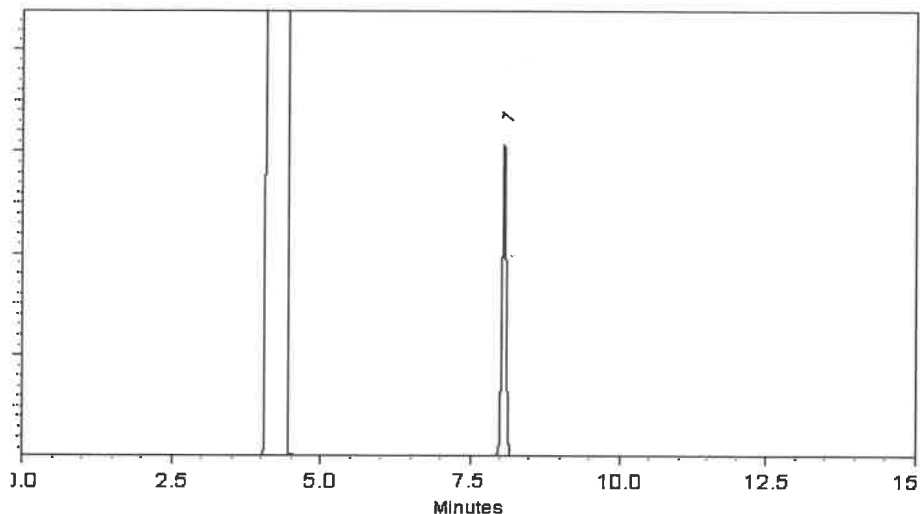
FID

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:

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- Purity of isomeric compounds is reported as the sum of the isomers.
- Purity values are rounded to the nearest whole number.

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

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Manufacturing Notes:

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Handling Notes:

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- 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



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

Certificate of Analysis

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

Jamie Ethier
Vice President Global Quality

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 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



SHIPPING DOCUMENTS

CLIENT INFORMATION

REPORT TO BE SENT TO:

COMPANY: JACOBS
ADDRESS: 412 MT KEMBLE AVE, SUITE 100
CITY MORRISTOWN STATE: NJ ZIP: 07960
ATTENTION: JOHN YAFANTE
PHONE: 281-414-1719 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: STC PRINCETON
PROJECT NO.: D386822 LOCATION: PRINCETON JUNCTION NJ
PROJECT MANAGER: MARY MURPHY
e-mail: MARY.MURPHY@JACOBS.COM
PHONE: 201-936-0586 FAX:

CLIENT BILLING INFORMATION

BILL TO: MARY.MURPHY@JACOBS.COM
ADDRESS:
CITY STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX (RUSH) DAYS*
HARDCOPY (DATA PACKAGE) DAYS*
EDD: RIBA 2 DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS

DATA DELIVERABLE INFORMATION

☐ 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 SWR TCL 8015M
2 DRO 8015M
3 REBC 8015M
4 FLASH OXIDIZING LIX 1010B
5 PH 9040C 8260
6 VOC TCL 8015M
7 GRO 8015M
8 METALS 1010B
9

PRESERVATIVES

COMMENTS

ALLIANCE SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES	PRESERVATIVES									COMMENTS	
			COMP	GRAB	DATE	TIME		E	E	E	E	E	A/E	A/E	B/E			
1.	IDW-AQ-DRUM-633-05092025	AQ		X	5/9/25	1230	10	X	X	X	X	X	X	X	X	X		
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. [Signature]	DATE/TIME: 5/9/25 15:05	RECEIVED BY: [Signature]	5-4-25	Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP 3.0 °C
RELINQUISHED BY SAMPLER: 2. [Signature]	DATE/TIME:	RECEIVED BY: 2. [Signature]		Comments: LEVEL 2 EDD REQUESTED Temp 3.0 °C adjustment factor + DIR Gun #1, PH 1.3 LOT# 80A0441
RELINQUISHED BY SAMPLER: 3. [Signature]	DATE/TIME: 5-9-25	RECEIVED BY: 3. [Signature]		Page ____ of CLIENT: ☐ Hand Delivered ☐ Other Shipment Complete ☐ YES ☐ NO

Laboratory Certification

Certified By	License No.
CAS EPA CLP Contract	68HERH20D0011
Connecticut	PH-0830
DOD ELAP (ANAB)	L2219
Maine	2024021
Maryland	296
New Hampshire	255424 Rev 1
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	525-24-234-08441
Texas	T104704488

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q2008 JACO05

Order Date : 5/9/2025 3:21:23 PM

Project Mgr :

Client Name : JACOBS Engineering Grou

Project Name : Former Schlumberger Site I

Report Type : Level 4

Client Contact : Mary I. Murphy

Receive DateTime : 5/9/2025 12:00:00 AM

EDD Type : CH2MHILL

Invoice Name : JACOBS Engineering Grou

Purchase Order : 14:50

Hard Copy Date :

Invoice Contact : Mary I. Murphy

Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q2008-01	IDW-AQ-DRUM-633-05092025	Water	05/09/2025	12:30	VOC-TCLVOA-10		8260D		2 Bus. Days

Relinquished By : 

Date / Time : 5/12/25 1000

Received By : 

Date / Time : 5/12/25 10:00

Page 5

Storage Area : VOA Refridgerator Room